

**TOWN OF RIDGEFIELD
Office of the Town Engineer**

RIDGEFIELD, CONNECTICUT

SITE DEVELOPMENT PROGRAM

***Former Schlumberger Property Site Development
36 Old Quarry Road
Rebid***

December, 2017

DETAILED SPECIFICATIONS:

BIDDING REQUIREMENTS
CONDITIONS OF AGREEMENT
CONSTRUCTION SPECIFICATIONS
PLANS



RUDY MARCONI
FIRST SELECTMAN

CHARLES R. FISHER, P.E., L.S.
TOWN ENGINEER

Bid No. 2018-17

LEGAL NOTICE

INVITATION to BID

The **Town of Ridgefield** invites all interested parties to submit sealed bids on the following:

BID DUE DATE: February 2, 2018
BID DUE TIME: 11:00 AM
BID ITEM: Energy Conservation & Building
Maintenance, Former Schlumberger
Property Site Development, 36 Old Quarry
Road, Ridgefield CT
BID NUMBER: 2018-17

Terms and conditions as well as the description of items being bid are stated in the specifications. **Specifications may be obtained at the following address:**

**Town of Ridgefield
Kenneth Sandberg
400 Main Street
Ridgefield, CT. 06877
203 - 431 – 2720**

The return bid envelope must be marked and addressed to the following:

**TOWN OF RIDGEFIELD
DIRECTOR OF PURCHASING
BID NUMBER: 2018-17
400 MAIN STREET
RIDGEFIELD, CT. 06877**

Bids must be received no later than the date and time stated above at the Purchasing Director's office on the second floor. **For further information,** please call **Kenneth Sandberg** at (203) 431-2720 or E-Mail at **purchasing@ridgefieldct.org**

Bid Documents available at www.ridgefieldct.org in the Purchasing section under Departments

Results may be viewed at www.ridgefieldct.org in the Purchasing Section under Departments after the bid opening.



The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.

Former Schlumberger Property Site Development, Location Plan

6/26/2017 2:59:13 PM



1:2400
1"=200'



TOWN OF RIDGEFIELD CONNECTICUT

BOARD OF SELECTMEN

INSTRUCTIONS TO BIDDERS

1. Submit proposals in a sealed envelope plainly marked with bid number to identify this particular proposal.
2. Withdrawals of or amendments to bids received later than the time and date specified for bid opening will not be considered.
3. The Board of Selectmen of the Town of Ridgefield reserves the right to accept or reject any or all options, bids or proposals; to waive any technicality in any bid or part thereof, and to accept any bid deemed to be in the best interest of the Town of Ridgefield, Connecticut.
4. Bidders may be present at the opening of bids.
5. Bids may be held by the Town of Ridgefield for a period not to exceed sixty (60) days from the opening of bids for the purpose of reviewing the bids and investigating the qualifications of bidders prior to the awarding of the contract.
6. Insurance requirements, if any, must be submitted with the bid. This includes any Hold Harmless requirements as well as Certificates of Insurance for the full amounts specified. **Unauthorized changes** to these forms, i.e. adding, striking out and/or changing any words, language or limits **will cause the bidder to be disqualified**.

Please Note: Certificates of Insurance, if required, MUST name the Town of Ridgefield as **Additional Insured**. Failure to do so will mean disqualification from the Bid. There will no exceptions.

7. **Permits:** It is the Contractor's responsibility to obtain any necessary permits prior to the start of construction. All work shall be completed in compliance with the latest edition of the prevailing fire prevention and building codes in effect in the State of Connecticut, the latest edition of the State of Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Town of

Ridgefield Road Construction Standards, or as set forth in these specifications.

8. **Emergency Work:** The Contractor shall file with the Engineer a telephone number of a person authorized by him who may be contacted regarding emergency work at the job site that may be required during non-working hours for reasons of public safety. The person shall be readily available and have full authority to deal with any emergency that may occur.
9. **Sales Tax:** In accordance with the provisions of Special Act No. 77-98, as amended, and Section 12-412(a) of the Connecticut General Statutes, sales of tangible personal property and services to the Town are not subject to the Connecticut Sales and Use Tax, and such tax shall not be included as part of the bid.
12. **Contractor's Qualification Statement:** The Contractor's Qualification Statement must be filled out as part of the bid package and the experience and references listed therein will be one to the determining factors in the awarding of the bid.
13. **Hold Harmless Agreement:** In order for the bid to be considered valid, the Contractor **must** sign the enclosed hold harmless agreement. Bids submitted without the signed hold harmless agreement will be rejected.
14. **Prevailing Wage Rates:** This project **is not** subject to the State of Connecticut's prevailing wage rates.
15. **SBE/MBE and Contract Compliance Requirements:** This project **is** subject to the State of Connecticut SBE/MBE set aside and contract compliance requirements. The Contractor is to refer to Appendix A, State of Connecticut SBE/MBE requirements.
16. **Time of Completion:** All work must be completed within **90 days** from receipt of the notice to proceed
17. **Bonds:** A Payment and Performance bond in the full amount of the Proposal will be required of the successful bidder. The bond must be in the form of a surety bond of a type satisfactory to the Town of Ridgefield. All sureties must be listed on the most recent IRS Circular 570. The bond shall be delivered to the Office of the Town Engineer before commencing the work.
18. **Bid Bond:** A Bid Bond in the amount 5% of the base bid in a format similar to that required for both the payment and performance bonds is required.

19. **Project Location:** The project is located on Town of Ridgefield property at 36 Old Quarry Road, Ridgefield, Connecticut.
20. Questions regarding bid procedures should be directed to Kenneth Sandberg, Director of Purchasing at 203-431-2720. Technical questions should be submitted to Steven Sullivan, P.E., CCA, LLC at 203-775-6207.
21. **Bid Submissions:** The following items shall be submitted for a bid to be considered complete:
 - (a) Executed proposal sheets, Forms 004113, 004322, and 004323
 - (b) Executed Hold Harmless Agreement
 - (c) Certificates of Insurance in conformance to Item 6 above
 - (d) Contractor's List of Subcontractor's (if none, state none)
 - (e) Contractor's Qualification Statement
 - (f) Bid Bond in the amount of 5% of the base bid
 - (g) A break-down of the lump sum price bid under section a, form 004113 above

Supplemental Information for Bidders and General Contract Provisions**1. PREPARATION OF PROPOSALS**

Proposals must be made upon forms contained herein or as directed elsewhere. The blank spaces in the Proposal must be filled in correctly where indicated. The Bidder must state the prices for which he proposes to do each item of the work contemplated. In case of discrepancy where both words and the numerals are requested, the words shall govern. Ditto marks are not considered writing or printing and shall not be used. The Bidder shall sign his Proposal correctly. If the Proposal is made by an individual, his name, post office addresses and telephone number must be shown. If made by a firm, partnership, or corporation, the Proposal must be signed by an official of the firm, partnership, or corporation authorized to sign contracts, and must show the post office address and telephone number of the firm, partnership, or corporation. Failure to do so may disqualify the bid.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the Bidder, post office address, bid number, and 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 to: The Purchasing Director, Town Hall, 400 Main Street, Ridgefield, CT 06877.

All information shall be entered in ink or by typewriter. Mistakes may be crossed out and corrections inserted before submission of your bid. The person signing the bid shall initial corrections in ink.

Corrections and/or modifications received after the closing time specified will not be accepted.

2. SUBMISSION OF PROPOSALS

Descriptive literature containing complete specifications must accompany each bid. If a bidder wishes to furnish additional information, more sheets may be added.

3. INCURRING COSTS

The Town of Ridgefield is not liable for any cost incurred for the preparation of proposals or submission of samples by the firms submitting proposals for the work requested in this bid document or request for proposals.

4. FAMILIARITY WITH THE WORK

Each bidder is considered to have examined the work to fully acquaint him with the exact existing conditions relating to the work and has fully informed himself as to the work involved and the difficulties and restrictions attending the performance of this bid. The submission of a bid will be considered as conclusive evidence that the bidder has made such examination.

5. CONSIDERATION OF PRIOR SERVICE

Previous performance, quality of service and merchandise will be considered.

6. ADDENDA AND INTERPRETATIONS & ALTERNATE PROPOSALS

At the time of the opening of bids each bidder will be presumed to have inspected the work and to have read and to be thoroughly familiar with all of the Contract Documents (including all addenda). The failure or omission of any bidder to receive or examine any form, instruction or document shall in no way relieve any bidder from any obligation in respect to his bid.

If any person contemplating submitting a proposal is in doubt as to the true meaning of any part of these specifications, he may submit a written request for an interpretation to the Purchasing Director. No interpretations as to the meaning of the plans, specifications or other Contract Documents will be made to any bidder orally. Every request for such interpretation should be in writing addressed to the Town of Ridgefield, Purchasing Director, 400 Main Street, Ridgefield, Connecticut 06877, and to be given consideration, must be received at least five (5) days prior to the date fixed for the opening of Bids. Any and all such interpretations and any supplementary instructions will be in the form of written Addenda to the Specifications which, if issued, will be mailed by Registered Mail with Return Receipt Requested to all prospective bidders at the respective addresses furnished for such purposes, not later than three (3) days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such Addendum or interpretations shall not relieve any bidder from any obligations under his bid as submitted. All Addenda so issued shall become part of the Contract Documents. Oral explanations will not be binding on the Town.

The specifications listed are to be interpreted as meaning the minimum acceptable by the Town of Ridgefield. Bidders are requested to submit quotations on the basis of these specifications. Alternative bids providing a broader scope and/or services than requested in these specifications may receive consideration providing such equipment and/or service is clearly explained. Any exceptions to the specifications requested herein must be clearly noted in writing and are to be included as a part of your bid proposal. If none are included it will be assumed that there are none.

Definition of the word "complete" means that each unit of the equipment proposed shall include all appurtenances, fasteners, parts, accessories, and services ordinarily catalogued.

An item equal to that named or described in the specifications may be furnished by the Bidder, except where expressly noted as "no substitutions." The naming of any commercial name, trademark, or other identification shall not be construed to exclude any item of any manufacturer not mentioned by name, nor limit competition, but shall establish a standard of equality only. An item shall be considered equal to the item so

named or described if:

- a. It is at least equal in quality, durability, appearance, strength and design.
- b. It will perform at least equally the function imposed by the design for the work being contracted for or the material being purchased.
- c. It conforms substantially, even with deviations, to the detailed requirements for the item in the specifications.

The Bidder shall hold the Town of Ridgefield, its officers, agents, servants, and employees, harmless from liability of any nature or kind because of use of any copyrighted or uncopyrighted compositions, secret process, patented or unpatented inventions, articles or appliances furnished or used under this bid, and agrees to defend, at his own expense, any and all actions brought against the Town of Ridgefield or himself because of the unauthorized use of such articles.

7. QUOTATION LIMITATION

Bidders shall offer only **ONE ITEM AND PRICE** for each line item bid. If an or-equal item is to be bid, the bidder is to select the brand and model that meets or exceeds the specified item, and submit his bid for that item.

8. ESTIMATE OF WORK

For bidding purposes, the work has been subdivided into unit price items. The quantities shown are to be considered as approximate only. The Purchasing Agent does not expressly or by implication agree that the actual quantity will correspond therewith, but reserves the right to increase or decrease the amount of any item or portion of the work as deemed necessary.

9. SAMPLES

Samples of articles, when required shall be furnished free of cost of any sort to the Town of Ridgefield. Samples received may be retained by the Town for future comparison. Samples which are not destroyed by testing, or which are not retained for future comparison will be returned upon request at the bidder's expense.

10. WITHDRAWAL OF BID

Bidders may withdraw their proposals at any time prior to the bid date. No agent/broker shall withdraw or cancel their proposal for a period of sixty (60) days after the bid closing date. The successful agent/broker shall not withdraw, cancel or modify their proposal.

11. POWER OF ATTORNEY

Attorneys-in-fact who sign contract bonds must file, with each bond, a certified and effectively dated copy of their power of attorney.

12. SUBCONTRACTORS

Each bidder contemplating the use of any subcontractor shall submit a list of subcontractors as listed on the Bid Form. The apparent low bidder shall file with the Town of Ridgefield, within five (5) days after the date of bid opening, a complete list of the names and addresses of competent, responsible and qualified subcontractors who are actually to perform major portions of the work. This in no way restricts or limits the requirement that all subcontractors must be approved by the Town. Subcontractors listed on the Bid Form or those previously approved may not be changed without the approval of the Town of Ridgefield. Local subcontractors, material suppliers, and labor in the Town of Ridgefield should be considered and sought insofar, as is practical in the performance of this project.

13. QUALIFICATION OF BIDDER

In determining the qualifications of a bidder, the Town may consider his record in the performance of any contracts for similar work into which he may have previously entered; and the Town expressly reserves the right to reject the bid of such bidder if such record discloses that such bidder, in the opinion of the Town, has not properly performed such contracts or has habitually, and without just cause, neglected the payment of bills or has otherwise disregarded his obligations to subcontractors, suppliers, state or local codes, men or employees of subcontractors. The Town may make such investigation as he deems necessary to determine the ability of the bidder to perform the work and the bidder shall furnish to the Town all such information and data for this purpose as the Town may request. The Town reserves the right to reject any bid if the evidence submitted by or the investigation of such bidder fails to satisfy the Town that such bidder is properly qualified, or that such bidder misrepresented material facts in the bid documents.

14. DISQUALIFICATION OF BIDDERS

More than one proposal from an individual, firm, partnership, corporation, or an association under the same or different names will not be considered. Reasonable grounds for believing that any Bidder is interested in more than one proposal for the work contemplated will cause the rejection of all proposals in which such Bidder is interested. Any or all proposals in which such Bidder is interested will be rejected if there is reason for believing that collusion exists among the Bidders and all participants in such collusion will not be considered in future proposals for the same work. Proposals in which the prices are obviously unbalanced may be rejected. No Contract will be awarded except to competent Bidders capable of performing the class of work contemplated.

15. DELIVERY

Inasmuch as this work concerns a needed public improvement, the provisions of this bid relating to the time of delivery, performance and completion of the work are of the essence of this bid. Accordingly, the successful bidder shall commence work **upon receipt of the signed Purchase Order** unless the Town shall authorize or direct a further

delay. Time of delivery shall be stated as the number of calendar days following receipt of the Purchase Order by the Bidder to receipt of the goods or services by the Town of Ridgefield. Prices quoted must include delivery to the Town of Ridgefield as specified on the Purchase Order. No charges will be allowed for parking, crating, freight, express or cartage unless specifically stated and included in this bid.

Time of delivery may be considered in the award.

16. PAYMENT

The Town, after inspection and acceptance of workmanship, and in consideration of the faithful performance by the Bidder of all and singular his covenants, promises, and agreements contained herein, agrees to pay the Bidder for the full completion by him of the work embraced in this Contract, within (30) Thirty Days of the receipt of the final invoice. When subcontractors or suppliers are utilized, the successful Bidder for this project shall be required to submit a Mechanics Lien Waiver, acceptable to the Town, with each progress payment and/or at time of final payment prior to any payment being made.

Time, in connection with any discount offered, will be computed from the date of delivery to the Town or from the date a correct invoice is received by the Town's Finance Department, if the latter date is later than the date of delivery. Prices will be considered as **NET**, if no cash or payment discount is shown.

The successful bidder shall submit invoices to the following address:

Town of Ridgefield
Office of the Town Engineer
66 Prospect Street
Ridgefield, CT 06877

IT IS UNDERSTOOD AND AGREED THAT SHOULD A BID BE ACCEPTED, IT WILL AUTOMATICALLY BECOME THE CONTRACT OR AN ADDENDUM TO ANY CONTRACT AGREED UPON.

Notification of the bid award will be made by issuance of a purchase order. Bidders are to list their bids on the appropriate attached sheets. Bidders may attach a letter of explanation. A clear notification should be made on the standard bid sheets at the appropriate point of explanation that there is a letter of explanation attached. All bids must be NET prices.

The successful bidder shall submit an itemized invoice to the Town of Ridgefield for the work as described herein.

The bidder shall be required to submit a Mechanics Lien Waiver, acceptable to the Town of Ridgefield, with each progress payment and at time of final payment prior to any

payment being made.

At the time of award the successful bidder shall be required to supply the Town of Ridgefield a Certificate of Good Standing, certifying that the corporation is in fact a valid corporation and presently licensed to conduct business in the State of Connecticut.

17. SALES TAX

Certain materials and supplies incorporated in the work of this project are exempt from Connecticut Sales Tax. The Bidder shall familiarize himself with current regulations of the State Tax Department. The tax on materials or supplies exempted by such regulations shall not be included as part of the bid. The Town will furnish the successful Bidder sales tax exemption authorization.

18. CARE AND PROTECTION OF PROPERTY

The Bidder shall take particular care to avoid damages to all private and public property and to private or public improvements within the Town's right of way. He shall make good any damages to the satisfaction of the Town. There shall be no additional compensation for the repair or restoration of private or public property improvements.

19. COMPLIANCE WITH FEDERAL, STATE AND LOCAL CODES

The Bidder shall be responsible for full compliance with any Federal, State and/or Local codes, laws, regulations and standards, as applicable.

20. AWARD

The Town of Ridgefield reserves the right to accept or reject any bid to best serve its interests, or to hold the bids for sixty (60) days before decision.

The Town reserves the right to reject any and all bids (or any part thereof), to waive defects in proposals, or to accept any proposal deemed to be in its best interest.

Exceptions will be considered to the specification provided, providing they are listed and fully explained on a separate page entitled "EXCEPTIONS TO SPECIFICATIONS"

Each exception will be considered as to its degree of impact and total effect on the bid. The purchaser shall determine which (if any taken) exceptions are acceptable, and this determination shall be final.

The Town of Ridgefield reserves the right:

- a. To award bids received on the basis of individual items, or groups of items, or on the entire list of items.
- b. To reject any or all bids, or any part thereof.

- c. To waive any informality in the bids.
- d. To accept the bid that is in the best interest of the Town of Ridgefield. The Purchasing Agent's decision shall be final.

21. INSURANCE

Insurance requirements are detailed under the attached "Insurance Requirements."

22. GUARANTEE

The bidder shall unconditionally guarantee for a period of one (1) year, except as specifically noted within these documents, from the date of acceptance, all materials, supplies, equipment, and services; including but not limited to its workmanship, delivery and installation. If within the guarantee period there are any defects or signs of deterioration the bidder shall repair, adjust or replace the item(s) to the complete satisfaction of the Town. These repairs, adjustments, or replacements are at the sole expense of the bidder and shall be made at such times that are agreeable to the Purchasing Agent so that it is least detrimental to instructional programs.

23. PERMITS

When required all licenses and permits for complying with any applicable Federal, State, and Municipal laws, codes, regulations in connection with the prosecution of the work shall be obtained by the Bidder, at no additional cost to the Town.

24. NONDISCRIMINATION IN EMPLOYMENT

The successful bidder shall agree and warrant that, in the performance of this contract, he will not discriminate or permit discrimination against any person or group of persons on the grounds of race, color, sex, religion, or national origin in any manner prohibited by State, Federal, County, or Municipal law. A certification of Non-segregated Facilities and a Certification Regarding Equal Employment Opportunity shall be considered a part of this contract.

25. MECHANICS LIEN WAIVERS

The successful Bidder shall be required to submit a Mechanics Lien Waiver, acceptable to the Town of Ridgefield, with each progress payment, and/or at time of final payment, prior to any payment made.

Purchasing Department, Town of Ridgefield, 400 Main Street, Ridgefield, CT.
06877
203-431-2720 & purchasing@ridgefieldct.org

APPENDIX - INSURANCE REQUIREMENTS

Each bidder shall carry and maintain the following insurance coverage during the period of the contract : The Certificate of Insurance for the Limits of Liability stated below should be submitted with your bid to the Purchasing Department at Town Hall. **Bidders may not perform any work until all insurance requirements are met.**

1. **Comprehensive General Liability Insurance** as will protect him, the Town, and any subcontractor performing work covered by this Contract, from claims for damages for personal injury, including accidental or wrongful death, as well as claims for property damages, which may arise from operations under this Contract whether such operations be by himself or by any subcontractor or by anyone directly or indirectly employed by either of them. Liability insurance shall include premises and operations, products, contractual, owners, and contractors protective. The minimum amounts of such insurance shall be as follows:
 - Bodily Injury Liability and Property Damage Liability:
\$1,000,000 each occurrence.
 - **The Town shall be named as an Additional Insured**
This **MUST** be stated explicitly on the Certificate or you will be **disqualified**
2. **Worker's Compensation Insurance and Employer's Liability** for all of his employees, employed at the site and in case any work is sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation Insurance for all employees of the later unless such employees are covered by the protection afforded by the Contractor.
 - Worker's Compensation and Employer Liability:
Statutory Limits
3. **Comprehensive Auto Liability Insurance:**
 - **Bodily Injury Insurance and Property Damage Insurance** covering the operation of all Motor Vehicles owned, hired and/or non-owned by the Contractor, or used by the Contractor in the Prosecution of the work under the Contract, shall be in the minimum of **\$1,000,000 each occurrence.**

All policies relating to this Contract shall be so written so that the Town shall be notified of cancellation or change at least thirty (30) days prior to the effective date for each policy and type of coverage except for nonpayment which shall be ten (10) days prior to the cancellation. Renewal certificate covering the renewal of all policies expiring during the life of the Contract shall be filed with the Town not less than ten (10) days before the expiration of such policies. Failure to do so will result in work stoppage and possible contract cancellation.

THE AMERICAN INSTITUTE OF ARCHITECTS



AIA Document A310

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we

(Here insert full name and address or legal title of Contractor)

as Principal, hereinafter called the Principal, and

(Here insert full name and address or legal title of Surety)

a corporation duly organized under the laws of the State of
as Surety, hereinafter called, the Surety, are held and firmly bound unto

(Here insert full name and address or legal title of Owner)

as Obligee, hereinafter called the Obligee, in the sum of

Dollars (\$),

for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for

(Here insert full name, address and description of project)

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this _____ day of _____ 19__

_____	{	_____	(Seal)
(Witness)		(Principal)	
		_____	(Title)
_____	{	_____	(Seal)
(Witness)		(Surety)	
		_____	(Title)



THE AMERICAN INSTITUTE OF ARCHITECTS



AIA Document A312

Performance Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Principal Place of Business):

OWNER (Name and Address):

CONSTRUCTION CONTRACT

Date:

Amount:

Description (Name and Location):

BOND

Date (Not earlier than Construction Contract Date):

Amount:

Modifications to this Bond:

☐ None

☐ See Page 3

CONTRACTOR AS PRINCIPAL

Company:

(Corporate Seal)

SURETY

Company:

(Corporate Seal)

Signature: _____

Name and Title:

Signature: _____

Name and Title:

(Any additional signatures appear on page 3)

(FOR INFORMATION ONLY—Name, Address and Telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE (Architect, Engineer or other party):

1 The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2 If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except to participate in conferences as provided in Subparagraph 3.1.

3 If there is no Owner Default, the Surety's obligation under this Bond shall arise after:

3.1 The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Construction Contract. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default; and

3.2 The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the contract. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Subparagraph 3.1; and

3.3 The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Construction Contract or to a contractor selected to perform the Construction Contract in accordance with the terms of the contract with the Owner.

4 When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

4.1 Arrange for the Contractor, with consent of the Owner, to perform and complete the Construction Contract; or

4.2 Undertake to perform and complete the Construction Contract itself, through its agents or through independent contractors; or

4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and the contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default; or

4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

.1 After investigation, determine the amount for

which it may be liable to the Owner and, as soon as practicable after the amount is determined, tender payment therefor to the Owner; or

.2 Deny liability in whole or in part and notify the Owner citing reasons therefor.

5 If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Subparagraph 4.4, and the Owner refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

6 After the Owner has terminated the Contractor's right to complete the Construction Contract, and if the Surety elects to act under Subparagraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. To the limit of the amount of this Bond, but subject to commitment by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Construction Contract, the Surety is obligated without duplication for:

6.1 The responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

6.2 Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 4; and

6.3 Liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

7 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators or successors.

8 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

9 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation avail-

able to sureties as a defense in the jurisdiction of the suit shall be applicable.

10 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page.

11 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12 DEFINITIONS

12.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made, including allowance to the Con-

tractor of any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

12.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

12.3 Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Construction Contract.

12.4 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

MODIFICATIONS TO THIS BOND ARE AS FOLLOWS:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

Company: _____ (Corporate Seal)

SURETY

Company: _____ (Corporate Seal)

Signature: _____
Name and Title: _____
Address: _____

Signature: _____
Name and Title: _____
Address: _____

THE AMERICAN INSTITUTE OF ARCHITECTS



AIA Document A312

Payment Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Principal Place of Business):

OWNER (Name and Address):

CONSTRUCTION CONTRACT

Date:

Amount:

Description (Name and Location):

BOND

Date (Not earlier than Construction Contract Date):

Amount:

Modifications to this Bond:

☐ None

☐ See Page 6

CONTRACTOR AS PRINCIPAL

Company:

(Corporate Seal)

SURETY

Company:

(Corporate Seal)

Signature: _____

Name and Title:

Signature: _____

Name and Title:

(Any additional signatures appear on page 6)

(FOR INFORMATION ONLY—Name, Address and Telephone)

AGENT or BROKER:

OWNER'S REPRESENTATIVE (Architect, Engineer or other party):

1 The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner to pay for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.

2 With respect to the Owner, this obligation shall be null and void if the Contractor:

2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and

2.2 Defends, indemnifies and holds harmless the Owner from claims, demands, liens or suits by any person or entity whose claim, demand, lien or suit is for the payment for labor, materials or equipment furnished for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety, and provided there is no Owner Default.

3 With respect to Claimants, this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.

4 The Surety shall have no obligation to Claimants under this Bond until:

4.1 Claimants who are employed by or have a direct contract with the Contractor have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2 Claimants who do not have a direct contract with the Contractor:

- 1 Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and
- 2 Have either received a rejection in whole or in part from the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has indicated the claim will be paid directly or indirectly; and
- 3 Not having been paid within the above 30 days, have sent a written notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.

5 If a notice required by Paragraph 4 is given by the Owner to the Contractor or to the Surety, that is sufficient compliance.

6 When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:

6.1 Send an answer to the Claimant, with a copy to the Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.

6.2 Pay or arrange for payment of any undisputed amounts.

7 The Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

8 Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

9 The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10 The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.

11 No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Subparagraph 4.1 or Clause 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12 Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this

Bond shall be construed as a statutory bond and not as a common law bond.

14 Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15 DEFINITIONS

15.1 Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the

Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

15.2 Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

MODIFICATIONS TO THIS BOND ARE AS FOLLOWS:

:

(Space is provided below for additional signatures of added parties, other than those appearing on the cover page.)

CONTRACTOR AS PRINCIPAL

Company:

(Corporate Seal)

SURETY

Company:

(Corporate Seal)

Signature: _____

Name and Title:

Address:

Signature: _____

Name and Title:

Address:

HOLD HARMLESS AGREEMENT

The undersigned covenants and agrees to and shall at all times indemnify, protect and save harmless the Town of Ridgefield from and against all costs or expenses resulting from any and all losses, damages, detriments, claims, demands, cost and charges including attorneys fees the Town of Ridgefield may directly or indirectly suffer, sustain or be subjected to by reason or on account of the work to be performed pursuant to this Contract or any activities in connection with said Contract whether such losses and damages be suffered or sustained by the Town of Ridgefield directly or by its employees, licenses or invitees or be suffered or sustained by other persons or corporations who may seek to hold the Town of Ridgefield liable therefore.

The Contractor shall comply with the Provisions of the Immigration Reform and Control Act of 1986 effective and enforceable as of June 6, 1987 which Act makes unlawful the hiring for employment or subcontracting individuals failing to provide documentation of legal eligibility to work in the United States. The Contractor shall hold the Town of Ridgefield harmless for the failure of the Contractor to comply with the provisions of said Act.

IN WITNESS WHEREOF, the parties hereto have set their hand and seal this on the _____ day of _____

Signed, Seated and Delivered in the
Presence of:

Signed:

Notary Public

CONTRACTOR'S QUALIFICATION STATEMENT

List below references for similar projects, including all information requested. This page must be completed and submitted with the bid.

1. Client: _____

Project Address: _____

Approximate Value: _____ Date: Started _____ Completed _____

Contact: Name _____ Telephone _____

2. Client: _____

Project Address: _____

Approximate Value: _____ Date: Started _____ Completed _____

Contact: Name _____ Telephone _____

3. Client: _____

Project Address: _____

Approximate Value: _____ Date: Started _____ Completed _____

Contact: Name _____ Telephone _____

4. Client: _____

Project Address: _____

Approximate Value: _____ Date: Started _____ Completed _____

Contact: Name _____ Telephone _____

Company: _____ Bid Title: _____

Street: _____ Bid No.: _____

City, State: _____ Telephone No.: _____

CONTRACTOR'S LIST OF SUBCONTRACTORS

List below the subcontractors intended to be utilized for this project. This page must be completed and submitted with the bid.

1. Firm: _____

Firm's Address: _____

Contact: Name _____ Telephone _____

Type of Work to be Performed: _____

2. Firm: _____

Firm's Address: _____

Contact: Name _____ Telephone _____

Type of Work to be Performed: _____

3. Firm: _____

Firm's Address: _____

Contact: Name _____ Telephone _____

Type of Work to be Performed: _____

4. Firm: _____

Firm's Address: _____

Contact: Name _____ Telephone _____

Type of Work to be Performed: _____

Company: _____

Bid Title: _____

Street: _____

Bid No.: _____

City, State: _____

Telephone No.: _____

CONTRACTOR'S LIST OF SUBTRACTORS

Q-2

Town of Ridgefield**Former Schlumberger Property Site Development****Scope of Work****12/11/17**

The following is a list to clarify the construction items to be included in the base bid. This is a general list to aid the bidders and not intended to include all construction items. The bidder is responsible for thoroughly reviewing the bid documents to ensure that they include all items required to complete the project.

1. Demolition and utility modifications.
2. Storm Drainage
3. Site grading including up to and including the base course for walks, roads, drives and parking areas.
4. Landscaping, top soiling and seeding.
5. Lighting and signs.
6. Retaining walls.
7. Guiderails and fencing.
8. Erosion Controls.

The following is a list of Add Alternate requests for pricing:

1. Removal of 130 tons of Asbestos Containing Materials
2. Reinstall new bituminous concrete walks in area of existing walks including detectable warning panels. 5,058 s.f.
3. Remove and reinstall new bituminous concrete curb in same location of existing. 3,560 l.f.
4. Mill and overlay existing bituminous concrete roads, drives and parking areas. 6,380 s.y.
5. Restripe existing parking spaces. 1,500 l.f.
6. Install five new landscape islands with bituminous concrete curbing in area of existing parking lot. 1,152 s.f. and 244 l.f. of curbing.
7. Install 30 concrete tire stops at the 14 new parking spaces west of the Philip Johnson building, all handicap spaces and the 10 existing spaces as noted in sheet C2.
8. Install bituminous concrete surface, curbing and striping for all new walks, roads, drives and parking areas including detectable warning panels. Paved Areas = 4,565 s.y. , Curbing=1,832 l.f., Striping = 1,100 l.f.
9. Install bluestone terrace and deduct concrete patio. 780 s.f.

Bidders are responsible for confirming the quantities.

DOCUMENT 004113 - BID FORM - STIPULATED SUM (SINGLE-PRIME CONTRACT)

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Project Name: Former Schlumberger Property Site Development.
- C. Project Location: 36 Old Quarry Road.
- D. Owner: Town of Ridgefield.
- E. Owner Project Number: Bid Number 2018-17.
- F. Architect: CCA, LLC.
- G. Architect Project Number: N/A.

1.2 CERTIFICATIONS AND BASE BID

- A. Base Bid, Single-Prime (All Trades) Contract: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by the Town of Ridgefield and CCA, Inc, its Architect and Architect's consultants, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:
 - 1. _____ Dollars (\$_____).
 - 2. The above amount may be modified by amounts indicated by the Bidder on the attached Document 004322 "Unit Prices Form" and Document 004323 "Alternates Form."
- B. Base Bid: The base bid submitted shall cover all labor, materials, tools, and equipment necessary to complete all work as shown on the plans or specified herein. All costs associated with the removal of asbestos containing materials shall be covered under Alternate No. 1, Removal of Asbestos Containing Materials, form 004323.

1.3 BID GUARANTEE

- A. The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within (7), seven days after a written Notice of Award, if offered within (90) Ninety days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5%) of the Base Bid amount above:
 - 1. _____ Dollars (\$_____).

- B. In the event Owner does not offer Notice of Award within the time limits stated above, Owner will return to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.

1.4 SUBCONTRACTORS AND SUPPLIERS

- A. The following companies shall execute subcontracts for the portions of the Work indicated:

1. Concrete Work: _____
2. Masonry Work: _____
3. Site Work: _____
4. Paving Work: _____
5. Other Work: _____
6. Electrical Work: _____
7. Hazardous Materials Removal: _____

1.5 TIME OF COMPLETION

- A. The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by Architect, and shall fully complete the Work within ninety (90) calendar days.

1.6 ACKNOWLEDGEMENT OF ADDENDA

- A. The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

1. Addendum No. 1, dated _____.
2. Addendum No. 2, dated _____.
3. Addendum No. 3, dated _____.
4. Addendum No. 4, dated _____.

1.7 BID SUPPLEMENTS

- A. The following supplements are a part of this Bid Form and are attached hereto.

1. Bid Form Supplement, Form 004323 - Alternates.
2. Bid Form Supplement, Form 004322 - Unit Prices.

1.8 CONTRACTOR'S LICENSE

- A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, in the State of Connecticut, and that all fees, permits, etc., pursuant to submitting this proposal have been paid in full.
- B. It is the Contractor's responsibility to obtain all required permits prior to the start of construction.

- 1.9 The Town reserves the right to eliminate any item or portion of the work that it deems to be in the best interest of the Town.
- 1.10 Any inconsistencies between the plans and specifications shall be reported to the Town Engineer. The Town Engineer shall make the final decision on any inconsistency and its intent.
- 1.11 By submitting a bid, the Bidder acknowledges that he has visited the site.
- 1.12 **CONTRACT AWARD:** The contract will be awarded to the lowest qualified bidder based on the total of the base bid and the adjustment noted under the schedule of alternates.

DOCUMENT CONTINUES

1.13 SUBMISSION OF BID

Respectfully submitted this ____ day of _____, 2018

Submitted By: _____
(Name of bidding firm or corporation)

Authorized
Signature: _____
(Handwritten signature)

Signed By: _____
(Type or print name)

Title: _____
(Owner/Partner/President/Vice President)

Witness By: _____
(Handwritten signature)

Attest: _____
(Handwritten signature)

By: _____
(Type or print name)

Title: _____
(Corporate Secretary or Assistant Secretary)

Street Address: _____

City, State, Zip _____

Phone: _____

License No.: _____

Federal ID No.: _____

(Affix Corporate Seal Here)

END OF DOCUMENT 004113

DOCUMENT 004322 - UNIT PRICES FORM

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Prime Contract: Former Schlumberger Property Site Development.
- C. Project Name: Former Schlumberger Property Site Development.
- D. Project Location: 36 Old Quarry Road, Ridgefield, CT 06877.
- E. Owner: Town of Ridgefield.
- F. Owner Project Number: 2018-017.
- G. Architect: CCA, LLC.
- H. Architect Project Number: N/A.
- I. Construction Manager: N/A.

1.2 BID FORM SUPPLEMENT

- A. This form is required to be attached to the Bid Form.
- B. The undersigned Bidder proposes the amounts below be added to or deducted from the Contract Sum on performance and measurement of the individual items of Work and for adjustment of the quantity given in the Unit-Price Allowance for the actual measurement of individual items of the Work.
- C. If the unit price does not affect the Work of this Contract, the Bidder shall indicate "NOT APPLICABLE."

1.3 UNIT PRICES

<u>Item</u>	<u>Unit</u>	<u>Unit Cost</u>
A. 6" Perf. PVC Underdrain System	L.F.	\$ _____
B. 12" CPEP-S	L.F.	\$ _____
C. 15" CPEP-S	L.F.	\$ _____
D. 12" Perf. CPEP-S	L.F.	\$ _____
E. 15" Perf. CPEP-S	L.F.	\$ _____

F.	Catch Basin, Type "C"	EA.	\$ _____
G.	Catch Basin, Type "CL"	EA	\$ _____
H.	Drainage Manhole	EA.	\$ _____
I.	Sanitary Sewer Manhole	EA.	\$ _____
J.	Rock & Boulder Removal	C.Y.	\$ _____
K.	Excavation & Disposal of unsuitable material	C.Y.	\$ _____
L.	Modified Rip Rap (w/gravel fill, fabric)	TN.	\$ _____
M.	Bank Run Gravel	C.Y.	\$ _____
N.	Processed Gravel Surface	C.Y.	\$ _____
O.	Processed Aggregate Base	C.Y.	\$ _____
P.	Common Fill	C.Y.	\$ _____
Q.	¾" Crushed Stone (No. 6)	C.Y.,	\$ _____
R.	1 ¼" Crushed Stone (No. 4)	C.Y.	\$ _____
S.	Milling & Overlay	S.Y.	\$ _____
T.	Class 1 Bituminous Concrete	TN.	\$ _____
U.	Class 2 Bituminous Concrete	TN.	\$ _____
V.	Bituminous Concrete Curbing	L.F.	\$ _____
W.	Bituminous Concrete Sidewalk	S.Y.	\$ _____
X.	Bluestone Terrace	S.F.	\$ _____
Y.	Geotextile Silt Fence	L.F.	\$ _____
Z.	"Silt Sak"	EA.	\$ _____
AA.	Timber Guiderail	L.F.	\$ _____
BB.	Parking Lot Light	EA.	\$ _____
CC.	Bollard Light	EA.	\$ _____
DD.	Electrical Conduit and Conductors	L.F.	\$ _____
EE.	Building Mounted Light	EA.	\$ _____

FF.	Retaining Wall	S.F.	\$ _____
GG.	Test pits	C.Y.	\$ _____
HH.	Topsoil	C.Y.	\$ _____
II.	Canopy Tree	EA.	\$ _____
JJ.	Evergreen Tree	EA.	\$ _____
KK.	Understory Tree	EA.	\$ _____
LL.	Perennials	EA.	\$ _____
MM.	Shrub	EA.	\$ _____
NN.	Topsoil & Seed (Lawn Mix)	S.Y.	\$ _____
OO.	Topsoil & Seed (Erosion Control Mix)	S.Y.	\$ _____
PP.	Hazardous Material Removal	Tn.	\$ _____
QQ.	Ornamental Fencing	L.F.	\$ _____

1.4 NOTICE TO CONTRACTOR

- A. Please be advised that proposals are to be evaluated primarily on the basis of total contract value. The information below is requested for use in evaluating payment schedules, extra work, change orders, etc.

1.5 SUBMISSION OF BID SUPPLEMENT

Respectfully submitted this ____ day of _____, 2018

Submitted By: _____
(Insert name of bidding firm or corporation)

Authorized
Signature: _____
(Handwritten signature)

Signed By: _____
(Type or print name)

Title: _____
(Owner/Partner/President/Vice President)

END OF DOCUMENT 004322

UNIT PRICES FORM

004322 - 3

DOCUMENT 004323 - ALTERNATES FORM

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Prime Contract: _____.
- C. Project Name: Former Schlumberger Property Site Development.
- D. Project Location: 36 Old Quarry Road, Ridgefield, CT 06877.
- E. Owner: Town of Ridgefield.
- F. Owner Project Number: Bid Number 2018-17.
- G. Architect: CCA, LLC.
- H. Architect Project Number: N/A.
- I. Construction Manager: N/A.

1.2 BID FORM SUPPLEMENT

- A. This form is required to be attached to the Bid Form.

1.3 DESCRIPTION

- A. The undersigned Bidder proposes the amounts below be added to or deducted from the Base Bid if particular alternates are accepted by Owner. Amounts listed for each alternate include costs of related coordination, modification, or adjustment.
 - 1. Cost-Plus-Fee Contract: Alternate price given below includes adjustment to Contractor's Fee.
- B. If the alternate does not affect the Contract Sum, the Bidder shall indicate "NO CHANGE."
- C. If the alternate does not affect the Work of this Contract, the Bidder shall indicate "NOT APPLICABLE."
- D. The Bidder shall be responsible for determining from the Contract Documents the effects of each alternate on the Contract Time and the Contract Sum.
- E. Owner reserves the right to accept or reject any alternate, in any order, and to award or amend the Contract accordingly within 90 days of the Notice of Award unless otherwise indicated in the Contract Documents.

- F. Acceptance or non-acceptance of any alternates by the Owner shall have no effect on the Contract Time unless the "Schedule of Alternates" Article below provides a formatted space for the adjustment of the Contract Time.

1.4 SCHEDULE OF ALTERNATES

A. Alternate No. 1: Removal of 130 tons of Asbestos Containing Materials:

1. ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.
2. _____ Dollars (\$_____).
3. ADD____ DEDUCT____ calendar days to adjust the Contract Time for this alternate.

B. Alternate No. 2: Construction of 5,058 SF of Bituminous Concrete Sidewalks:

1. ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.
2. _____ Dollars (\$_____).
3. ADD____ DEDUCT____ calendar days to adjust the Contract Time for this alternate.

C. Alternate No. 3: Removal and Construction of 3,560 LF of Bituminous Concrete Lip Curbing:

1. ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.
2. _____ Dollars (\$_____).
3. ADD____ DEDUCT____ calendar days to adjust the Contract Time for this alternate.

D. Alternate No. 4: Mill and Overlay 6,380 SY of Existing Bituminous Concrete Roads, Drives, and Parking Areas:

1. ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.
2. _____ Dollars (\$_____).
3. ADD____ DEDUCT____ calendar days to adjust the Contract Time for this alternate.

E. Alternate No. 5: Restripe 1,500 LF Existing Parking Spaces:

1. ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.
2. _____ Dollars (\$_____).
3. ADD____ DEDUCT____ calendar days to adjust the Contract Time for this alternate.

F. Alternate No. 6: Construct New Landscape Islands with Bituminous Concrete Lip Curbing Where Shown, 1,152 SF of Landscaped Islands, 244 LF of Bituminous Concrete Lip Curbing:

1. ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.

2. _____ Dollars (\$_____).
3. ADD____ DEDUCT____ calendar days to adjust the Contract Time for this alternate.
- G. Alternate No. 7: Install 30 EA Concrete Tire Stops at 14 New and 10 Existing Parking Spaces Where Shown on Sheet C2:
1. ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.
2. _____ Dollars (\$_____).
3. ADD____ DEDUCT____ calendar days to adjust the Contract Time for this alternate.
- H. Alternate No. 8: Install 4,565 SY Bituminous Concrete Surface, 1,832 LF Bituminous Concrete Lip Curbing, And 1,100 LF Striping for All New Roads, Drives, and Parking Areas:
1. ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.
2. _____ Dollars (\$_____).
3. ADD____ DEDUCT____ calendar days to adjust the Contract Time for this alternate.
- I. Alternate No. 9: Install 780 SF Bluestone Terrace and Deduct Concrete Patio Where Shown:
1. ADD____ DEDUCT____ NO CHANGE____ NOT APPLICABLE____.
2. _____ Dollars (\$_____).
3. ADD____ DEDUCT____ calendar days to adjust the Contract Time for this alternate.

1.5 SUBMISSION OF BID SUPPLEMENT

Respectfully submitted this ____ day of _____, 2018.

Submitted By: _____
(Name of bidding firm or corporation)

Authorized
Signature: _____
(Handwritten signature)

Signed By: _____
(Type or print name)

Title: _____
(Owner/Partner/President/Vice President)

END OF DOCUMENT 004323

GENERAL CONDITIONS

1. CONTRACTOR'S UNDERSTANDING:

It is understood and agreed that the Contractor has, by careful examination, satisfied himself as to the nature and location of the work, the conformation of the ground, the character quality and quantity of materials to be encountered, the character of equipment and facilities needed preliminary to and during the prosecution of the work, the general and local conditions, and all other matters which can in any way affect the work under this Contract. No verbal agreement or conversation with any officer, agent or employee of the Owner, either before or after the execution of this contract, shall affect or modify any of the terms or obligations herein contained.

2. DEFINITIONS:

OWNER:

The word "Owner" when it appears in the Contract Documents shall mean The Town of Ridgefield, Connecticut.

ENGINEER:

The word "Engineer" when it appears in the contract Documents shall mean: Charles R. Fisher, P.E., L.S. Town Engineer, or his specifically designated Agent.

CONTRACTOR:

The word "Contractor" when it appears in the Contract Documents shall mean the party to whom the Contract has been awarded.

3. MATERIALS, APPLIANCES AND EMPLOYEES:

Unless otherwise stipulated, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation and other facilities necessary for the execution and completion of the work. Unless otherwise specified, all materials shall be new and both workmanship and materials shall be of good quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

The Contractor shall at all times endorse strict discipline and good order among his employees, and shall not employ on the work any unfit person or any one not skilled in the work assigned to him.

4. PROTECTION OF WORK AND PROPERTY:

The Contractor shall continuously maintain adequate protection of all his work from damage and shall protect the Owner's property from injury or loss arising in connection with this Contract. He shall make good any such damage, injury or loss, except such as may be directly due to errors in the Contract Documents or caused by agents or employees of the Owner. He shall adequately protect adjacent property as provided by law and the Contract Documents. He shall provide and maintain all passageways, guard fences, lights and other facilities for protection required by public authority or local conditions.

In an emergency affecting the safety of life or of the work or of adjoining property, the Contractor, without special instruction or authorization from the Engineer, is hereby permitted to act at his discretion, to prevent such threatened loss or injury, and he shall so act, without appeal, if so instructed or authorized. Any compensation claimed by the Contractor on account of emergency work, shall be determined by agreement or arbitration.

5. CHANGES IN THE WORK:

The Owner, without invalidating the Contract, may order extra work or make changes by altering, adding to or deducting from the work, the Contract Sum being adjusted accordingly. All such work shall be executed under the conditions of the original Contract except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such change.

In giving instructions, the Engineer shall have authority to make minor changes in the work, not involving extra cost, and not inconsistent with the purposes of the work, but otherwise, except in an emergency, endangering life or property, no extra work or change shall be made unless in pursuance of a written order by the Engineer, and no claim for an addition to the Contract Sum shall be valid unless so ordered.

The value of any such extra work or change shall be determined in one or more of the following ways:

- (a) By estimate and acceptance in a lump sum.
- (b) By unit prices named in the Contract subsequently agreed upon.
- (c) By cost and percentage or by cost and a fixed fee.

If none of the above methods is agreed upon, the Contractor, provided he receives an order as above, shall proceed with the work. In such case, and also under case (c), he shall keep and present in such form as the Engineer may direct, a correct account of the net cost of labor and materials, together with

vouchers. In any case, the Engineer shall certify to the amount, including reasonable allowance for overhead and profit, due to the Contractor. Pending final determination of value, payments on account of changes shall be made on the Engineer's estimate.

6. CLAIMS FOR EXTRA COST:

If the Contractor claims that any instructions by drawings or otherwise involve extra cost under this Contract, he shall give the Engineer written notice thereof within a reasonable time after the receipt of such instructions and in any event before proceeding to execute the work, except in emergency endangering life or property, and the procedure shall then be as provided for changes in the work. No such claim shall be valid unless so made.

7. SUSPENSION OF WORK:

The Owner may at any time suspend the work, or any part thereof by giving 24 hours notice to the Contractor in writing. The work shall be resumed by the Contractor within ten (10) days after the date fixed in the written notice from the owner to the Contractor to do so. The Owner shall reimburse the Contractor for expense incurred by the Contractor in connection with the work under this contract as a result of such suspension.

8. THE OWNER'S RIGHT TO DO WORK:

If the Contractor should neglect to prosecute the work properly or fail to perform any provision of this Contract, the Owner, after three days written notice to the Contractor may, without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor.

9. PAYMENTS WITHHELD:

The Owner may withhold or, on account of subsequently discovered evidence, nullify the whole or part of any certificate to such extent as may be necessary to protect him from loss on account of the following:

- (a) Defective work not remedied.
- (b) Claims filed or reasonable evidence indicating probable filing of claims.
- (c) Failure of the Contractor to make payments properly to subcontractors or for material or labor.
- (d) A reasonable doubt that the Contract can be completed for the balance then unpaid.
- (e) Damage to another Contractor.

When the above grounds are removed, payment shall be made for amount withheld because of them.

10. CONTRACTOR'S LIABILITY INSURANCE:

The Contractor shall maintain such insurance as will protect him from claims under workmen's compensation acts and from any other claims for damages for personal injury, including death, which may arise from operations under this Contract, whether such operations be by himself or by any subcontractor or anyone directly or indirectly employed by either of them. Certificates of such insurance shall be filed with the engineer, if he so requires and shall be subject to his approval for adequacy of protection.

11. INDEMNITY:

The Contractor shall indemnify and save harmless the Owner from and against all losses and all claims, demands, payments, suits, actions, recoveries and judgments of every nature and description brought or recovered against him, by reason of any act or omission of the said Contractor, his agents or employees, in the execution of the work or in the guarding of it.

The Contractor shall, and is hereby authorized to maintain and pay for such insurance, issued in the name of the Owner, as will protect the Owner from his contingent liability under this Contract, and the Owner's right to force against the Contractor any provision of this article shall be contingent upon the full compliance by the Owner with the terms of such insurance policy or policies, a copy of which shall be deposited with the Owner.

12. DAMAGES:

Any claim for damage arising under this Contract shall be made in writing to the party liable within a reasonable time of the first observance of such damage and not later than the time of final payment, except as expressly stipulated otherwise in the case of faulty work or materials, and shall be adjusted by agreement or arbitration.

13. ASSIGNMENT:

Neither party to the Contract shall assign the Contract or sublet it as a whole without the written consent of the other, nor shall the Contractor assign any moneys due to or to become due to him hereunder, without the previous written consent of the Engineer.

14. ENGINEER'S STATUS:

The Engineer shall have general supervision and direction of the work. He has authority to stop the work whenever such stoppage may be necessary to insure the proper execution of the Contract. He shall also have authority to reject all work and materials which do not conform to the Contract, to direct the application of forces to any portion of the work, as in his judgment is required, and to order the force increased or diminished, and to decide questions which arise in the execution of the work.

15. METHOD OF PAYMENT:

At the end of each calendar month, the Contractor shall submit to the Engineer a requisition for payment which requisition shall be based upon the actual amount of the work performed during the previous month. The requisition may include materials stored on the site but not installed. The Engineer shall, within ten (10) days, check the requisition against his review of the work which has been done and submit it to the Owner, a written statement as to the validity of the requisition. The Owner shall then pay to the Contractor one **hundred percent (100%)** of the amount stated in the Engineer's report. **No payment shall be made until the Contractor has satisfied all prevailing wage reporting requirements if prevailing wages are a part of this contract.**

In the event that this contract is subject to the State of Connecticut SBE/MBE set aside and contract compliance requirements, the Contractor's attention is directed to Appendix "A", State of Connecticut SBE/MBE requirements regarding the withholding of 2% of the State Funded portion of the contract value each month, pending the review and approval of the Contractor's Affirmative Action Plan by CHRO.

16. FINAL PAYMENT:

When the Contract has been completed, the Contractor shall notify the Engineer in writing. Upon receipt of this notification, the Engineer shall proceed to make final measurements of the work done under the provisions of this Contract. The Engineer shall then submit to the Owner a written statement setting forth these final measurements and the amount due the Contractor consistent with the unit prices and lump sum bid in the Proposal. The Owner shall within sixty (60) days pay to the Contractor this sum except that he may deduct any moneys which are to be retained under the terms of the Contract for repairs or otherwise.

17. ORDER OF THE WORK:

The order of the work shall be subject to the approval of the Engineer in all cases. The Contractor may be required to submit a work schedule in writing to the Engineer for his approval.

18. (OMITTED)

19. PROTECTION TO PUBLIC:

The Contractor shall conduct the work in such a manner as to offer minimum disturbance to the traveling public. He shall not close off traffic without specific permission of the Engineer and shall provide flagmen if such becomes necessary, in the opinion of the Engineer. Proper barricades, lights, and other protective devices shall be supplied at the Contractor's expense and properly maintained during the entire course of the work.

20. GUARANTEE:

The Contractor guarantees that the work to be done under this Contract and the materials furnished by him and used in the construction of the project are free from defects or flaws. The guarantee is for a term of one (1) year from and after the date upon which the final estimate of the Engineer is formally approved by the party of the first part. It is hereby agreed and understood that this guarantee shall not include any repairs made necessary by any cause or causes other than defective materials furnished by or defective work done by the Contractor.

21. RATE OF PROGRESS AND TIME OF COMPLETION:

The Contractor shall commence work within seven (7) days after receipt of the Notice to Proceed and, unless an extension of time shall be made in the manner herein provided, shall progress therewith to final completion within ***ninety (90) consecutive calendar days*** after receipt of the Notice to Proceed.

22. EXTENSION OF TIME:

The Contractor expressly covenants and agrees that, in undertaking to complete the work within the time specified, he has taken into consideration and made allowance for all of the ordinary delays and hindrances incident to such work, whether growing out of delays in securing materials, workmen, or otherwise. Should the Contractor, however, be substantially delayed in the prosecution and completion of the work by any changes, additions, or omissions therein ordered in writing by the engineer, or by fire, lightning, earthquake, tornado, cyclone, riot, insurrection of war, or by the abandonment of the work by the workmen engaged therein, through no fault of the Contractor, or by the discharge of all or any material number of workmen in consequence of difficulties arising between the Contractor and such workmen, or by the neglect, delay, or default of any other contractor of the town, then the Contractor may, within five (5) days after the occurrence of the delay for which he claims allowance, notify the Engineer in writing, and thereupon, and otherwise, the Contractor shall be allowed such additional time for the completion of the work, as the Engineer in his discretion shall award in writing, and his decision shall be final and conclusive upon the parties. Such additional time shall be the sole and exclusive remedy for any delay claimed by the Contractor.

23. SALES TAX:

In accordance with the provisions of Special Act No. 77-98, as amended, and Section 12-412(a) of the Connecticut General Statutes, sales of tangible personal property and services to the Town are not subject to the Connecticut Sales and Use Tax, and such tax shall not be included as part of the bid.

24. Termination of the Contract:

If the Owner fails to make payment thereon for a period of 30 days, the Contractor may, upon seven additional days written notice to the Owner,

terminate the Contract and recover from the Owner payment for work executed and for proven loss with respect to materials, equipment tools, and construction equipment and machinery, including reasonable overhead, profit and damages applicable to the project.

If the contractor defaults or persistently fails or neglects to carry out the work in accordance with the Contract Documents or fails to perform a provision of the Contract, the Owner, after seven days written notice to the Contractor and without prejudice to any other remedy the Owner may have, may make good such deficiencies and may deduct the cost thereof, including compensation for the Engineer's services and expenses made necessary thereby, from the payment then or thereafter due the Contractor. Alternatively, at the Owner's option, and upon certification by the Engineer that sufficient cause exists to justify such action, the Owner may terminate the Contract and take possession of the site and of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor and may finish the Work by whatever method the Owner may deem expedient. If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Engineer's services and expenses made necessary thereby, such excess shall be paid to the Contractor, but if such costs exceed such unpaid balance, the Contractor shall pay the difference to the Owner.

SPECIAL CONDITIONS

1. Contract Documents and Working Drawings:

The work is shown on the attached appendices, if any, or the accompanying Contract Drawings. Such additional working drawings as are required because of changes or to provide greater detail will be provided by the Engineer.

2. Planimeter:

The use of the planimeter shall be considered satisfactory for estimating quantities where geometric and analytic methods would be comparatively laborious.

3. Soil and Groundwater Conditions:

The Town assumes no responsibility whatsoever with respect to ascertaining for the Contractor such facts concerning physical characteristics at the site of the project. The Contractor agrees that he will make no claim for and has no right to additional payment or extension of time for completion of the work, or any other concession because of any interpretations or misunderstanding on his part of this Contract, or because of any failure on his part to fully acquaint himself with all conditions relating to the work.

4. Existing Structures:

All known surface structures immediately adjacent to the work, are shown on the Plans. This information is shown for the convenience of the contractor in accordance with the best information available, but is not guaranteed to be correct or complete. Underground structures in the path of the project are **not** shown. The Contractor shall explore the route ahead of trenching and shall uncover all known obstructing pipes sufficiently to determine their location. Necessary changes in location may be made by the Engineer to avoid unanticipated obstruction.

The Contractor shall, at his own expense, sustain in their places and protect from direct or indirect injury all utilities, pipes, poles, conduits, walls, buildings, and other structures, utilities, and property in the vicinity of his work. Such sustaining and protecting shall be done carefully by the Contractor and as required by the party owning or controlling the structure. Before proceeding with such work, the Contractor shall satisfy the Engineer that the methods and procedures to be used have been approved by the party owning said structure. The Contractor shall take all risks attending the presence or proximity of pipes, poles, conduits, walls, buildings, wires, or other structures, utilities, and property in the vicinity of his work, and he shall be responsible for all damage and assume all expense for direct or indirect injury caused by his work to any of them or to any person or property by reason of injury to them.

The Contractor must notify “Call Before You Dig” at 1-800-922-4455 prior to start of construction.

5. Dust Control:

The Contractor shall take all necessary precautions to prevent and abate nuisance caused by dust arising from his operation, by the application of water spray.

6. Sedimentation and Erosion Control:

The Contractor shall control sedimentation and erosion in accordance with the publication entitled, “Erosion and Sedimentation Control Handbook,” latest edition, U. S. Department of Agriculture, Soil Conservation Service, Storrs, Connecticut, and as approved by the Engineer.

7. Payment for Miscellaneous Work:

No direct or separate payment will be made for furnishing and providing miscellaneous temporary works, plant and services, including Contractor’s office, sanitary requirements, water supply, power, tools, equipment, lighting, telephone systems, store houses, store yards, safety devices, and watchmen, or other items specified under these special conditions. Compensation for all such services and materials shall be considered as having been included in the prices stipulated for the Items of the Contract.

8. Clean-up of Site:

During the progress of the work, the Contractor shall keep the site in a generally neat condition. Lunch papers, bottles, lumber cut-offs, drinking cups, and like rubbish shall be removed from the site daily. The work shall be cleaned up as the various portions of the project are completed.

Upon completion of the work and before acceptance and final payment will be made, the Contractor shall, except as otherwise expressly directed or permitted in writing, clean and remove from the site all surplus and discarded materials, rubbish, and temporary structures. He shall restore in an acceptable manner all property, both public and private, which has been damaged during the prosecution of the work, and leave the whole in a neat and presentable condition. He shall also remove all plant, surplus, and waste materials from the site.

9. Emergency Work:

The Contractor shall file with the Engineer a telephone number of a person authorized by him who may be contacted regarding emergency work at the job site that may be required during non-working hours for reasons of public safety. The person shall be readily available and have full authority to deal with any emergency that may occur.

10. Work in Bad Weather:

During freezing, stormy, or inclement weather, no work shall be done except that which can be done satisfactory and in a manner as to secure first-class construction throughout.

11. Night, Saturday, and Sunday Work:

Unless otherwise permitted or stipulated under a State or Town encroachment permit, no work shall be done between the hours of 6:00 p.m. and 7:00 am, nor on Saturday or Sunday, except as necessary for the proper care and protection of the work already performed. If it shall become absolutely necessary to perform work at night or on Saturday or Sunday, the Engineer shall be informed at least twenty-four (24) hours in advance of the beginning of performance or such work. Only such work shall be done at night as can be done satisfactorily and in a first-class manner. Good light and other necessary facilities for performing and inspecting the work shall be provided and maintained at all points where such work is being done.

12. Explosives and Blasting:

Explosives for blasting shall be stored, handled, and used in accordance with the laws, ordinances, and regulations of the State of Connecticut, all local regulations, and with such additional regulations as the Engineer may require. Blasting shall be conducted so as not to endanger persons or property and, unless otherwise permitted, shall be covered or otherwise satisfactorily confined. The Contractor shall be responsible and shall make good any damage of whatever nature caused by blasting or accidental explosions. It shall be the Contractor's responsibility to obtain all required permits for blasting.

13. Traffic Control:

The Contractor shall maintain traffic during the progress of the work. Barricades, flagmen, uniformed police officers on any other type of traffic control necessary to ensure the safety of the public shall be utilized by the Contractor. All methods of traffic control are subject to the approval of the Chief of Police who may direct other methods to be employed. No direct payment for traffic control will be made other than payment for uniformed police officers **at cost** and only when directed by the Chief of Police or as required as a condition of approval by the State or Town encroachment permit. It is the Contractor's responsibility to schedule all uniformed police officers as may be required. Payment for all traffic control other than uniformed police officers shall be covered under the various items of these specifications.

14. Material Disposal:

The Contractor shall be responsible for the disposal of all construction debris generated by the project. The Town cannot accept the disposal of any material at this time.

17. Wage Rates:

This project IS NOT subject to prevailing wage rates.

18. Permits:

It is the Contractor's responsibility to obtain all necessary building or construction permits, including those that may be required from either the Town of Ridgefield or the State of Connecticut, prior to the start of construction. All work shall be completed in compliance with the latest edition of the prevailing fire prevention and building codes in effect in the State of Connecticut or the State of Connecticut department of Transportation Standard Specifications, latest edition, as applicable.

19. Concrete Testing:

Concrete testing **is** required.

20. Materials:

Materials normally delivered labeled shall be received with manufacturer's original label and instruction, or else shall be subject to rejection. Materials shall be stored under adequately clean and dry condition, and all work shall be preformed according to the best practice of the trades. Manufacturer's specifications and instructions for products specified herein or approved equals, become part of these specifications and all such instructions are to be followed accordingly.

21. Lines and Grades:

It is the intent of these plans and specifications to illustrate the approximate location of the proposed sidewalk. It is the Contractor's responsibility to locate in the field the project's location according to the constraints as shown on the plans or listed under these specifications.

22. Accommodation of Traffic:

During the progress of the work, all roads shall be kept open for the passage of traffic and pedestrians and shall not be unnecessarily obstructed unless authorized by the authority having jurisdiction over same. Driveways, sidewalks and crossings shall be closed as short a time as possible while pipe is being placed, and passage shall be restored as soon as possible thereafter by properly placed backfill or approved bridging. The Contractor shall take such measures at his own expense as may be necessary to keep the roads open for traffic, and shall give advance notice to the Department of Transportation (D.O.T.), town public works department, local police and state police as required.

Warning signs shall be provided along all roads where work is in progress. The Contractor shall notify and make all arrangements with the D.O.T., town public works department, local police and state police for direction of traffic past the equipment, machinery, or construction operations. Barricades and lights shall be provided to protect traffic. Where trenches have been cut in road shoulders on which traffic may pass at times, warning signs shall be placed at frequent intervals and maintained until the shoulder is safe for travel. All such work and operations shall be in accordance with the requirements of the D.O.T., public works department, local police and state police.

Should the Contractor or his employees neglect to set out and maintain barricades or lights, as required in these Specifications, the Engineer may immediately and without notice, arrange for furnishing, installing and maintaining barricades or lights, and any other precaution deemed necessary. The cost thereof shall be borne by the Contractor and may be deducted from any amount due or to become due to the Contractor under this Contract.

The Contractor shall be held responsible for any damages that may have to be paid as a consequence of the Contractor's failure to protect the public.

SPECIMEN CONTRACT

This Agreement made as of the _____ day of _____
the year _____ by and between the Town of Ridgefield, 400 Main
Street, Ridgefield, Connecticut, (herein after called the Owner), and
_____, doing business at
_____, (herein after called the
Contractor).

Witnesseth that the Owner and the Contractor in consideration of the mutual
covenants herein after set forth, agree as follows:

Article 1. Work:

The contractor will perform all work as shown in the Contract Documents for the
completion of the Project generally described as follows:

Former Schlumberger Property Site Development

The work to be done consists of the furnishing of all labor, materials, tools, and
equipment necessary to construct the project as shown on the plans and as
described in the specifications prepared by Charles R. Fisher, P.E.,L.S., Town
Engineer and CCA, LLC..

Article 2. Engineer:

Charles R. Fisher, P.E.,L.S., Town Engineer, will act as the Engineer in
connection with completion of the Project in accordance with the Contract
Documents.

Article 3. Contract Time:

The work shall be completed within **ninety (90) calendar days** after the date which the Contractor is to start the work as provided in the Contract Documents.

Article 4. Contract Price:

The Owner will pay the Contractor for performance of the Work and completion of the Project in accordance with the Contract Documents subject to adjustment by modifications as provided therein in current funds as follows:

Article 5. Progress and Final Payments:

The Owner will make progress payments on account of the Contract Price as provided in the General Conditions. Progress and final payments will be on the basis of the Contractor's application for payment as approved by the Engineer.

Article 6. Contract Documents:

The Contract Documents which comprise the contract between the Owner and the Contractor are attached hereto and made a part hereof and consist of the following:

- A. This agreement
- B. Exhibits to this Agreement
- C. Contractor's Bid and Bid Bonds
- D. Specifications
- E. Drawings as referenced by the Specifications or attached hereto
- F. Addenda numbers: _____
- G. Any modifications, including change orders, duly delivered after execution of this agreement.

Article 7. Miscellaneous:

- A. Terms used in this Agreement which are defined in Article 1 of the General Conditions shall have the meanings indicated in the General Conditions.
- B. Neither the Owner nor the Contractor shall, without the prior written consent of the other, assign or sublet in whole or in part his interest under any of the Contract Documents and, specifically, the Contractor shall not assign any moneys due or to become due without the prior written consent of the Owner.
- C. The Owner and the Contractor each binds himself, his partners, successors, assigns and legal representatives to the other party hereto in respect of all covenants, agreements and obligations contained in the Contract Documents.
- D. The Contract Documents constitute the entire agreement between the Owner and the Contractor and may only be altered, amended or repealed by a duly executed written instrument.

In witness whereof, the said parties hereto have caused this instrument to be signed by their respective duly constituted officers, attested, and sealed pursuant to proper resolutions.

Signed and sealed in
the presence of:

Town of Ridgefield

By _____

Date _____

Contractor

By _____

Date _____

SECTION 02050 – SITE DEMOLITION**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

A. The work includes all labor, material, equipment and incidentals required to demolish, modify, remove and dispose of work shown on the Drawings and as specified herein. This specification is for the site only and not the building.

B. Included, but not limited to, are demolition, modifications and removal of existing materials, equipment or work necessary to install the new work as shown on the Drawings and as specified herein and to connect with existing work in approved manner.

C. Demolition and modifications include:

1. Disconnecting, capping or sealing, excavating and removing, and abandoning site utilities.
2. Protection of identified existing utilities to remain in operation during demolition.
3. Protection of adjoining and adjacent structures, facilities and surfaces during the work and warranty periods
4. Removal and storage of equipment and materials that will remain the property of the Owner.

E. Blasting and the use of explosives will not be permitted for any demolition work.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

CLEARING, GRUBBING AND STRIPPING	SECTION 02130
CUTTING AND PATCHING	SECTION 02230
ROCK AND BOULDER REMOVAL	SECTION 02211

1.4 CODES

A. Wherever reference is made to the D.O.T. Specifications, it shall mean the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 (2004), as modified by Supplemental Specifications issued by the Connecticut Department of Transportation.

1.5 JOB CONDITIONS

A. Protection

1. Execute the demolition and removal work to prevent damage or injury to structures, occupants thereof and adjacent features which might result from falling debris or other causes, and so as not to interfere with the use, and free and safe passage to and from adjacent structures.

2. Closing or obstructing of roadways, sidewalks and passageways adjacent to the work by the placement or storage of materials will not be permitted and all operations shall be conducted with a minimum interference to traffic on these ways.

B. Conditions of Structures

1. The Owner, Architect and the Engineer assume no responsibility for the actual condition of the structures to be demolished or modified.
2. Conditions existing at the time of inspection for bidding purposes will be maintained by the Owner insofar as practicable. However, variations within a structure may occur prior to the start of demolition work.

C. Repairs to Damage

1. Promptly repair damage caused to adjacent facilities by demolition operation when directed by Engineer and at no cost to the Owner. Repairs shall be made to a condition at least equal to that which existed prior to construction.

D. Traffic Access

1. Conduct demolition and modification operations and the removal of equipment and debris to ensure minimum interference with roads, streets, walks both onsite and offsite and to ensure minimum interference with occupied or used facilities.
2. Do not close or obstruct streets, walks or other occupied or used facilities without permission from the Engineer. Furnish alternate routes around closed or obstructed traffic in access ways.

1.6 DISPOSAL OF MATERIAL

- A. Salvageable material and equipment listed hereinafter shall become the property of the Owner. Dismantle all such items to a size that can be readily handled and deliver them to a designated storage area.
- B. The following materials and items of equipment shall remain the property of the Owner and stored where directed on the site. Any such material damaged due to improper handling will not be accepted and the replacement value of the material deducted from the payment to the Contractor.
- C. All other material and items of equipment shall become the Contractor's property and must be removed from the site.
- D. The storage or sale of removed items on the site will not be allowed.

PART 2 - PRODUCTS

2.1 MATERIALS- Not applicable

PART 3 - EXECUTION

3.1 GENERAL

- A. All materials and equipment removed from existing work, shall become the property of the Contractor, except for those which the Owner has identified and marked for their use. All materials and equipment marked by the Owner to remain shall be carefully removed, so as not to be damaged, cleaned and stored on or adjacent to the site in a protected place specified by the Engineer or loaded onto trucks provided by the Owner.

- B. Dispose of all demolition materials, equipment, debris and all other items not marked by the Owner to remain, off the site and in conformance with all existing applicable laws and regulations.
- C. Pollution Controls
 - 1. Use water sprinkling, temporary enclosures and other suitable methods to limit the amount of dust and dirt rising and scattering in the air to the lowest practical level. Comply with governing regulations pertaining to environmental protection.
 - a. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding and pollution.
 - b. Clean adjacent structures, facilities, and improvements of dust, dirt and debris caused by demolition operations. Return adjacent areas to conditions existing prior to the start of the work.

3.2 MECHANICAL REMOVALS

- A. Mechanical removals shall consist of dismantling and removing of existing septic systems, piping, equipment and other appurtenances as specified, shown, or required for the completion of the work.
- B. When underground piping is to be altered or removed, the remaining piping shall be properly capped. Abandoned underground piping may be left in place unless it interferes with new work or is shown or specified to be removed.
- C. Any changes to potable water piping shall be made in conformance with all applicable codes and under the same requirements as other underground piping. All portions of the potable water system that have been altered or opened shall be pressure tested and disinfected in accordance with local codes.

3.3 ELECTRICAL REMOVALS

- A. Electrical removals shall consist of the removal of existing transformers, distribution switchboards, control panels, motors, conduits and wires, poles and overhead wiring, panelboards, lighting fixtures and miscellaneous electrical equipment all as shown on the Drawings, specified herein, or required to perform the work.
- B. All existing electrical equipment and fixtures to be removed shall be removed with such care as may be required to prevent unnecessary damage, to keep existing systems in operation and to maintain the integrity of the grounding systems.
- C. Where shown, direct-burial cable shall be abandoned. Such cable shall be disconnected at both ends of the run. Where it enters a building or structure the cable shall be cut back to the point of entrance. All opening in buildings for entrance of abandoned direct-burial cable shall be patched and made watertight.
- D. Poles and overhead wiring shall be abandoned as shown and specified. Contractor shall coordinate removal with the appropriate utility.
- E. Lighting fixtures shall be removed or relocated as shown. Fixtures not relocated shall be removed from the site. Relocated fixtures shall be carefully removed from their present location and rehung where shown.

3.4 CLEAN-UP

- A. Remove from the site all debris resulting from the demolition operations as it accumulates. Upon completion of the work, all materials, equipment, waste and debris of every sort shall be removed and premises shall be left, clean, neat and orderly.

END OF SECTION 02050

SECTION 02130 – CLEARING, GRUBBING AND STRIPPING**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

A. The work includes all labor, material, equipment and incidentals required to do all clearing, grubbing and stripping of topsoil complete as shown on the Drawings and/or specified herein.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

TRENCHING, BACKFILLING AND COMPACTING	SECTION 02221
CUTTING AND PATCHING	SECTION 02230
ROCK AND BOULDER REMOVAL	SECTION 02211

1.4 SUBMITTALS AND CODES

A. Wherever reference is made to the D.O.T. Specifications, it shall mean the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 (2004) , as modified by Supplemental Specifications issued by the Connecticut Department of Transportation.

PART 2 - PRODUCTS**2.1 MATERIALS-Not applicable****PART 3 - EXECUTION****3.1 CLEARING AND GRUBBING**

Except as otherwise directed, cut, grub, remove and dispose (off-site) of all trees, stumps, brush, shrubs, roots, and any other objectionable material within the limits defined on the Drawings. All stumps, brush and roots shall be grubbed and removed from areas to be occupied by structures, roads, pipelines and any other areas to be stripped.

Protect areas shown on the Drawings and any trees or groups of trees designated by the Engineer to remain, from damage by any construction operation by erecting suitable barriers, or by other approved means. Clearing operations shall be conducted in a manner to prevent falling trees from damaging trees designated to remain.

Areas outside the contract limits as shown on the Drawings shall be protected and no equipment or materials shall be stored or allowed to damage these areas.

Where found on the project, foundations or buildings shall be demolished, removed and disposed of off-site in accordance with the law.

No stumps, trees, limbs, or brush shall be buried, anywhere on-site, or burned.

3.2. STRIPPING

Strip topsoil from all areas to be occupied by structures, roadways, and all areas to be excavated or filled. Avoid mixing topsoil with subsoil and stockpile it in areas on the site as approved by the Engineer. Erosion and sedimentation controls to be placed as soon as possible after stripping.

Topsoil shall be stockpiled free from brush, trash, large stones and other extraneous material and protected until it is placed. The Contractor as directed by the Engineer shall dispose of any topsoil remaining after all work is in place.

3.3. DISPOSAL OF MATERIALS

All tree trunks, limbs, roots, stumps, brush, foliage and other vegetation shall become the property of the Contractor and removed and disposed of by him off the project site, no burning shall be allowed.

END OF SECTION 02130

SECTION 02211 – ROCK AND BOULDER REMOVAL**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

A. The work includes all labor, material, equipment and incidentals required for the excavation and disposal of rock encountered in the construction of work on the project.

Rock excavation shall mean solid ledge rock, which required for its removal drilling and blasting, wedging, sledging or barring. No hardpan, soft or disintegrated rock or shale which can be removed or backhoed. Surface and subsurface boulders over one cubic yard in size, which cannot be moved with ordinary heavy equipment, shall be considered Rock Excavation.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

CLEARING, GRUBBING AND STRIPPING	SECTION 02130
TRENCHING, BACKFILLING AND COMPACTING	SECTION 02221
CUTTING AND PATCHING	SECTION 02230

1.4 SUBMITTALS AND CODES

A. Wherever reference is made to the D.O.T. Specifications, it shall mean the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 (2004), as modified by Supplemental Specifications issued by the Connecticut Department of Transportation.

B. The Contractor shall meet the requirements of all local, state and federal laws and ordinances relating to the handling and use of explosives. Contractor shall obtain a blasting permit from the Ridgefield Fire Marshall. A blaster licensed in the State of Connecticut shall do all the blasting work.

1.5 INSURANCE

A. No explosives shall be brought onto, stored or used on the site by the Contractor unless and until he shall have furnished the Engineer with a satisfactory certificate of insurance showing that the risks arising from the presence and use of explosives and blasting are included within the insurance provided by the Contractor to secure his obligations to the Owner.

1.6 LIABILITY

A. The Contractor shall be fully liable for all damage or nuisance caused by his blasting operations, including damage to utilities, structures, private wells, outbuildings, etc. and shall promptly repair all damage at his own expense.

B. The Contractor shall be solely responsible for defending any claims resulting from his rock elevation operations including blasting and shall make whatever adjustments is required at his own expense.

PART 2 - PRODUCTS

- 2.1 MATERIALS- Not applicable

PART 3 - EXECUTION

- 3.1 PRE-BLAST SURVEY

A pre-blast survey conducted by a registered professional engineer experienced in this work is required for structures within blasting zone as determined by the Ridgefield Fire Marshal. It is recommended that the survey be done for structures and wells outside the above limits if they are judged by the Contractor to have claim potential, with special emphasis on structures with pre-blast damage.

- 3.2. METHODS OF BLASTING

The Contractor shall provide complete data on the proposed method of blasting, including type of explosives, maximum charge, spacing, delay devices and type of blasting mat or cover.

All Utilities with work in the general vicinity of areas to be blasted shall be contacted before blasting and any procedures or requirements they may have shall be followed.

- 3.3. PROTECTION

In rock excavation, it is especially required that blasting shall be conducted with all possible care so as to injury to persons and property.

Rock shall be well covered with effective appliances.

Sufficient warning shall be given to all persons in vicinity of work before blasting.

Excavations shall be protected by shoring, bracing, sheet piling, underpinning, or other methods required to prevent cave-in or loose soil from falling into excavation.

Adjacent structures, which may be damaged by excavation work, shall be underpinned including service utilities and pipe chases.

Caps or other primers shall not be kept in same place in which dynamite or other explosives are stored.

The charges used shall not make the excavation unduly large or irregular nor shatter the rock upon, or against which, masonry is to be built, or injury existing structures at the site or in the vicinity thereof. Blasting shall not be carried on within 300 feet of any radio transmitter or radio frequency emission equipment, such as high- frequency welders, and blasting caps shall be kept in closed, all-metal cans when in the vicinity of such equipment.

- 3.4 FIELD PROCEDURES

The Contractor shall notify the Engineer of unexpected subsurface conditions and discontinue work in affected area until notification to resume work.

If blasting operations cause significant damage in the judgment of the Engineer, removal of remaining rock shall be by other approved method.

In the event blasting is prohibited, the Contractor shall make no claim for any additional compensation for rock excavation by other method.

3.5 RECORDS

The magazine keeper shall keep accurate daily records and account for each piece of explosive, detonator and equipment from the time of delivery at the magazine until used or removed from the site.

3.6 METHOD OF MEASUREMENT

The contractor shall expose all rock areas prior to blasting and contact a licensed land surveyor registered in the State of Connecticut to cross-section the rock for measurement. After blasting the licensed land surveyor shall cross section the area to determine the amount of rock removed.

Excess rock removed will be deducted from the total amount.

3.7 BASIS FOR PAYMENT

Rock excavation shall be paid for at the contract unit price per cubic yard. The fees for the licensed land surveyor shall be in addition to the contractor's price to remove the material and will be provided to the owner or owner's representative prior to blasting or removal for approval.

Necessary rock excavation shall include all limits of rock removal and/or grading shown on the plans. Necessary trench rock removal shall include all rock within six (6) inches of the bottom and sides of the specified trench.

No payment shall be made for unnecessary rock removal. It shall be the contractor's responsibility to obtain approval from the engineer for rock removal prior to removal so all parties agree to what rock removal is determined as necessary.

END OF SECTION 02211

SECTION 02212 – GRADING**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

A. The work includes all labor, material, equipment and incidentals necessary to accomplish the excavating, filling, grading and testing required to attain the rough and final grades for the project as shown on the Drawings or as approved by the Engineer. This work may include but is not necessarily limited to attaining subgrade for roadways, parking areas, buildings and all other areas within the contract limits.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

CLEARING, GRUBBING AND STRIPPING	SECTION 02130
ROCK AND BOULDER REMOVAL	SECTION 02211
TRENCHING, BACKFILLING AND COMPACTING	SECTION 02221

1.4 SUBMITTALS AND CODES

A. Wherever reference is made to the D.O.T. Specifications, it shall mean the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 (2004), as modified by Supplemental Specifications issued by the Connecticut Department of Transportation.

B. Material:

Representative samples of all materials, which require approval of the Engineer, shall be submitted five (5) days prior to the date of anticipated use.

C. Drainage work:

All surface water encountered on the site shall be accommodated by satisfactory drainage. Where the Contract Documents do not specifically provide for a drainage problem encountered during the progress of work, the method and details for providing for such drainage shall be submitted to the Engineer for approval prior to beginning this work.

PART 2 - PRODUCTS**2.1 MATERIALS**

All fill materials shall be as specified or as indicated on the Drawings. They shall be unfrozen and free of organic material, trash, ice or other objectionable material. The Contractor shall remove excess or unsuitable material from the job site.

Unsuitable soils material shall mean unstable or poor-quality soils such as peat, muck, highly organic material, fill with debris, unconsolidated fill, soft fine-grained soil or as otherwise determined by the engineer.

Common fill material shall be of the composition and gradation specified under Section 02221, Trenching, Excavation and Backfill.

PART 3 - EXECUTION

3.1 GENERAL

A. Familiarization:

Become thoroughly familiar with the site, the site conditions and all portions of the work falling within this Section before beginning the work.

B. Preparation:

Confirm the finish elevations and lines are adequately set and staked out prior to doing any grading.

Ascertain that all areas of the site where the Drawings indicate that existing physical features will be changed have been cleared, grubbed and stripped in accordance with Section 02130-Clearing, Grubbing and Stripping; and are ready for grading.

3.2 GRADING

1. Grading areas to be paved or loamed and seeded:

A. Perform all rough grading required to attain the elevations indicated on the Drawings or as required.

B. Excavate to grades shown on the Drawings or as required to accommodate the installation of the plant site landscaping and amenities. Backfill and compact all over excavated areas at no additional cost to the Owner.

C. Remove all material, including rocks and boulders to a point at least 4 inches below the finished grade of landscaped areas to be loamed and seeded.

D. Remove all ruts, hummocks and other uneven surfaces by surface grading prior to placement of fill. Do not place, spread or compact any fill material during unfavorable weather conditions and do not conduct further fill operations until compaction tests indicate acceptable results in previous layers. Do not use frozen materials or place a successive layer of fill on frozen materials. Use only approved fill material, free of stumps, trees, trash or other unsuitable material.

E. Spread in approved fill material in uniform layers not exceeding 10 inches thickness per layer and compact with heavy machinery as required. Begin the fill layers at the deepest part of the fill. Fill should extend to the point where a relatively uniform layer of topsoil or loam not less than 4 inches deep will produce final grade.

2. Grading areas to be surfaced:

A. Perform all rough grading, including excavation, formation of embankments, shaping, sloping, compaction, construction of ditches, disposal of surplus or unsuitable material, and any work necessary to prepare the subgrades of all roadways, walk, and parking areas. Grading shall be brought to the bottom of the base course under paved or surfaced areas and to within a minimum of 4 inches of finished grade under side slopes and/or embankment areas to receive loam along roadways, walks or parking areas.

B. Accomplish all excavation and fill within the slope and grade lines as indicated on the Drawings unless otherwise authorized in writing by the Engineer. The roadway shall be graded to full cross section width at subgrade before placing any type of subbase except that partial width construction is permissible where necessary for the maintenance of traffic.

C. Do not use frozen material in the construction of embankments and do not place embankments of successive

layers of embankment upon frozen material. Placement of material shall stop when the sustained air temperature, below 32 degrees Fahrenheit, prohibits the obtaining of the required compaction. If the material is otherwise acceptable, it shall be stockpiled and reserved for future use when its condition is acceptable to the Engineer for use in embankments.

- D. Place all material being placed in embankments in horizontal layers of uniform thickness across the full width of embankment except when it is impractical to construct full width of the embankment and partial width layers are authorized by the Engineer.
- E. Do not allow or place stumps, trees, rubbish or other unsuitable material in embankments. Begin layers of embankment at the deepest part of the fill.
- F. Areas of soft, yielding or otherwise unsuitable material that will not meet compaction requirements shall be removed, replaced with suitable material and properly compacted. In any building area where unsuitable fill is found the Structural / Geotechnical Engineer of Record shall be contacted and shall determine what action is required.
- G. Place embankments for surfaced areas in horizontal layers of depths that will result in layers of compacted material not exceeding 6 inches. Compact each layer as specified before placing each new layer. Use effective spreading equipment on each layer to obtain uniform thickness prior to compacting. Each layer shall be kept crowned to shed water to the outside edges of embankment and continuous leveling and manipulating will be required to assure uniform density. Construction equipment shall be routed uniformly over the entire surface of each layer.
- H. If during the construction of the embankments, there is any indication that serious bulging, cracking, or unstable movement may occur, the placing of fill shall be stopped or retarded to allow the material to stabilize.
- I. All ditches and drains shall be constructed so they will effectively drain the roadway or parking lot before any subbase or surface course material is placed. In handling materials, tools and equipment, the Contractor shall protect the subgrade from damage. In no case shall vehicles be allowed to travel in a single track and form ruts. If ruts are formed, the subgrade shall be reshaped and compacted and any pockets of clay, sand, or soft material that may have been left in the subgrade shall be removed, replaced with approved material, and properly compacted at the Contractor's expense. The subgrade shall be kept in such condition that it will drain. Subbase, base or surface material shall not be deposited on the subgrade until the subgrade has been checked and approved by the Engineer. After the subgrade has been approved, hauling shall not be done nor equipment moved over the subgrade which will distort the cross section.

3.3 COMPACTION

1. Compaction under surfaced areas:

- A. The entire area of each layer shall be uniformly compacted to at least the required minimum density by use of compaction equipment consisting of rollers, compactors, or a combination thereof. Compact subgrades by proof rolling which will consist of a minimum 8 passes over the subgrade with a vibratory roller having a minimum operating weight of 10 tons. Earth-moving and other equipment not specifically manufactured for compaction purposes will not be considered as compaction equipment. Each layer for its full width shall be compacted to not less than 95 percent of the maximum dry density as determined by the Standard Methods of Test for Moisture-Density Relations of Soils, ASTM-D698, Method C, except that the material in the top two feet of any embankment, immediately below the subgrade shall be compacted to not less than 95% of the maximum dry density. The field density determination will be made in accordance with the Standard Method of Test for Density of Soil In-Place by either the Sand-Cone Method, ASTM D1556, the Rubber-Balloon Method, ASTM D2167, or Nuclear Densometer.
- B. In no case shall the moisture content in each layer under construction vary more than 3 percent from the optimum moisture content.

- C. When the moisture content of the material in the layer under construction is less than the amount necessary to obtain satisfactory compaction by mechanical compaction methods, water shall be added. Water may also be added in excavation or borrow pits.
- D. In areas inaccessible to power rolling, the embankment material shall be placed in uniform horizontal layers of not more than 4 inches in depth and compacted by means of approved mechanical tampers to the density requirements herein specified.
- E. Contractor shall include in their bids the cost for obtaining compaction testing by a qualified laboratory testing company.

2. Compaction under loamed and seeded areas:

- A. In areas to be loamed and seeded, except for roadway embankments and slopes, a minimum 92% compaction shall be accomplished by heavy machinery or mechanical tamps.

END OF SECTION 02212

SECTION 02221 – TRENCHING, BACKFILLING AND COMPACTING**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

A. The work includes all labor, material, equipment and incidentals necessary to excavate trenches to depths and widths shown or directed, backfill, compact, testing and dispose of surplus material. Provide drainage to make the bottom of the excavation dry and firm. Excavate unsuitable material below grade and backfill.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

CUTTING AND PATCHING	SECTION 02230
ROCK AND BOULDER REMOVAL	SECTION 02211
GRADING	SECTION 02212
STORM DRAINAGE SYSTEM	SECTION 02730

1.4 SUBMITTALS AND CODES

A. Wherever reference is made to the D.O.T. Specifications, it shall mean the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 (2004), as modified by Supplemental Specifications issued by the Connecticut Department of Transportation.

B. Material:

Representative samples of all materials, which require approval of the Engineer, shall be submitted five (5) days prior to the date of anticipated use.

1.5 JOB CONDITIONS

A. Dust Control:

Use all means necessary to control dust on and near the work. Apply water and/or calcium chloride to prevent dust from being a nuisance to the public or workers.

B. Protection:

Use all means necessary to protect all materials, living matter, utilities, pavements and structures. Particular care shall be exercised to protect tree root systems and tree trunks. In the event of damage, immediately make all repairs and replacement necessary to the approval of the Engineer and at no additional cost to the Owner.

C. Traffic Control:

Direct traffic throughout project by warning signs and flagmen to provide maximum safety for workmen, residents and traffic.

PART 2 - PRODUCTS**2.1 MATERIALS****A. Common Fill:**

Common fill shall not contain stones, rock, concrete or other rubble larger than ten (10) inches in diameter.

It shall have physical properties that allow it to be easily spread and compacted.

Common fill shall be unfrozen and free of organics, trash, ice, wood, wet or soft plastic soils and other objectionable material which may be compressible or which cannot be compacted properly and shall consist of one or more of the following Unified soil types GW, GP, GM, SW, SP, and SM.

B. Free Draining Material:

Connecticut DOT Specification Form 816-M.02.07.

C. Sand:

Sand shall consist of clean mineral aggregate with particle size limits as follows:

<u>US Sieve Size</u>	<u>Percent Passing by Weight</u>
No. 4	100
No. 100	0 - 13
No. 200	0 - 12

D. Bank run gravel:

Connecticut DOT Specification Form 816 Section M.02.01, grading A.

E. Processed Aggregate Base:

Connecticut DOT Specification Form 816 Section M.05.01.

F. Crushed Stone:

Clean, sound, crusher run or natural stone, conforming to Connecticut DOT specifications M.01.01.

G. Other Material:

All other material required for completion of the work, but not specified herein, shall conform to the Connecticut DOT Standard specifications for Roads and Bridges and Incidental Construction, Form 816 and shall meet with the Engineer's approval.

PART 3 - EXECUTION**3.1 INSPECTION**

- A. Become thoroughly familiar with the site, the site conditions and all portions of the work falling under this Section. Inspect all physical features within and adjacent to the project and report to Engineer all deviations or discrepancies from information shown on the Drawings.

3.2 PREPARATION

A. Field Measurements:

Establish centerline of trenches.

Set elevations for work.

Perform all necessary clearing and grubbing.

Strip topsoil from all areas that will be substantially disturbed by or during construction. Avoid mixing topsoil with subsoil and stockpile it in areas on the site as approved by the Engineer. Topsoil shall be stockpiled free from brush, trash, stones and other extraneous material and protected until it is placed. The Contractor as directed by the Engineer shall dispose of any topsoil remaining after all work is in place.

All pavements shall be cut prior to removal with saws or approved power tools.

3.3 PERFORMANCE

A. Trenching:

Excavation shall be made to the widths and depths necessary for sheeting, bracing, pumping, draining and for all other work required. The Engineer must approve any deviations from the trench dimensions shown on the Drawings.

Where sand or screened or crushed gravel is used for bedding, the trench may be excavated by machinery to, or just below, the designated subgrade provided that the material remaining in the bottom of the trench is no more than slightly disturbed.

Where pipe is to be laid directly on the trench bottom, the lower part of the trenches shall not be excavated to grade by machinery, the last of the material being excavated manually in such a manner that will give a flat bottom true to grade so that pipe can be evenly supported on undisturbed material. Bell holes shall be made as required.

Excavated material shall be stockpiled in such a manner as to prevent nuisance conditions. Surface drainage shall not be hindered.

When utilities are noted on the drawings as being extended 5' outside the building by either the electrical, plumbing, fire protection or HVAC contractor, it shall be the responsibility of the contractor to do all excavation and backfill up to the face of the building.

B. Below Grade Excavation and Refill:

If the material at or within 8 inches below the normal grade of the bottom of the trench is unsuitable for foundation, it shall be removed as directed by the Engineer and replaced by screened or bank-run gravel.

If the Contractor excavates below grade through error or for his own convenience, or through failure to properly dewater the trench, or disturbs the subgrade before dewatering is sufficiently complete, he may be directed by the Engineer to excavate below grade as set forth in the preceding paragraph, in which case the work of excavating below grade and furnishing and placing the refill shall be performed at his own expense.

If the material at the level of trench bottom consists of fine sand, sand and silt or soft earth, the subgrade material shall be removed to the extent directed and the excavation refilled with bank-run gravel for bedding of the pipe.

C. Drainage:

The Contractor shall at all times during construction provide and maintain proper equipment and facilities to remove promptly and dispose of properly all water entering excavations, and keep such excavations dry so as to obtain a

satisfactory undisturbed subgrade foundation condition. The dewatering method used shall prevent disturbance of earth below grade.

All water pumped or drained from the work shall be disposed of in a suitable manner without damage to surrounding property, and in accordance with pertinent rules and regulations.

No construction, including pipe laying, shall be allowed in water. No water shall be allowed to contact masonry or concrete within 24 hours after being placed.

The Contractor shall constantly guard against damage due to water and floatation and take full responsibility for all damage resulting from his failure to do so.

Any and all costs associated with dewatering that may be required for the installation of buildings foundations and site elements shall be included in the contractor's bid. This will include the installation of crushed stone as specified. The contractor shall carefully review all recommendations of the geotechnical report which are part of the contract documents. The contractor will be responsible for all dewatering required in the building footprints until such time as all slabs on grade are complete. The contractor will be responsible for dewatering on the site elements for the duration of the project.

D. Backfilling and Compacting:

As soon as practicable after pipe has been positioned, jointed, tested and approved by the Engineer for backfilling, backfilling shall begin and continue expeditiously. Should any of the work be backfilled prior to approval, it shall be uncovered for inspection at no cost to the Owner.

From the bottom of the trench to mid-diameter of the pipe, backfill shall be as noted on the drawings thoroughly compacted (95% of maximum density) by hand tamping.

From mid-diameter to 1 foot above top of pipe, backfill shall be as noted on the drawings placed in 8-inch layers compacted to 95% maximum density.

From 1 foot above top of pipe to subgrade for paved or gravel surfaces (or within 2 feet of surface), backfill shall be granular backfill placed in 8 inch layers compacted to 92% maximum density.

For subgrade or for 1 foot below traveled surface, backfill shall be gravel placed in 8-inch layers compacted to 95% maximum density. Compact subgrades by proof rolling which will consist of a minimum 8 passes over the subgrade with a vibratory roller having a minimum operating weight of 10 tons.

Backfilling shall be completed to original grades or as indicated on the Drawings. Settlements shall be corrected.

3.4 FIELD QUALITY CONTROL

A. Soil Compaction Tests:

Field determination will be made in accordance with the Standard Method of Testing for Density of soil in place by either the Sand-Cone Method ASTM 1556 the Rubber-Balloon Method ASTM D2167, or Nuclear Densometer. Contractor shall include in their bids the cost for obtaining compaction testing by a qualified laboratory testing company.

3.5 ADJUSTMENT AND CLEANING

A. Disposal of Excess Material:

Segregate excavated material for suitability for use in backfilling.

Do not excavate material from the site except as authorized. Stockpile surplus material suitable for backfill until fill requirements are satisfied. Excess material including paving, rock and boulders shall be the Contractor's responsibility for disposal: first at municipal sites designated by the Owner and secondly at approved sites chosen by the Contractor.

B. Restoring Trench Surface:

Trench surfaces shall be maintained constantly as work progresses. All areas of settlement shall be refilled immediately.

Surfaces other than paved traveled ways disturbed by trenching shall be restored by the Contractor to a condition at least equal to that was existing before work began.

Trenches in grassed area may be restored with either conserved loam or loam borrow at the Contractor's expense. Minimum depth of loam shall be 4 inch.

END OF SECTION 02221

SECTION 02230 – CUTTING AND PATCHING**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

A. Execute cutting (including excavating), fitting or patching of Work.

B. In addition to contract requirements, upon written instructions of Engineer:

Uncover work to provide for Engineer's examination of covered work.
Remove samples of installed materials for testing.
Remove work to provide for alteration of existing work.

C. Do not endanger any work by cutting or altering work or any part thereof.

D. Do not cut or alter work of another contractor without written consent of Engineer.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

TRENCHING, BACKFILLING AND COMPACTING

SECTION 02221

1.4 SUBMITTALS AND CODES

A. Wherever reference is made to the D.O.T. Specifications, it shall mean the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 (2004), as modified by Supplemental Specifications issued by the Connecticut Department of Transportation.

B. Prior to cutting which affects structural integrity or safety of Project, or work of another Contractor, submit written notice to Engineer, requesting consent to proceed with cutting, including:

- Identification of Project.
- Description of affected work.
- Necessity for cutting.
- Affect on other work, on structural integrity of Project.

C. Description of proposed work. Designate:

- Scope of cutting and patching.
- Contractor and trades to execute work.
- Products proposed to be used.
- Extent of refinishing.

D. Alternatives to cutting and patching:

- Designation of party responsible for cost of cutting and patching.
- Prior to cutting and patching done on instruction of Engineer, submit cost estimate.

E. Should conditions of Work, or schedule, indicate change of materials or methods, submit written recommendation to Engineer, including:

- Conditions indicating change.
- Recommendations for alternative materials or methods.
- Submittals as required for Substitutions.
- Estimate of cost.
- Submit written notice to Engineer, designating timework will be uncovered, to provide for observation.

1.5 PAYMENT FOR COSTS

Costs caused by ill-times or defective work, or work not conforming to Contract Documents, including costs for additional services to Engineer: shall be borne entirely by the party responsible for the ill-timed, rejected or nonconforming work.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Materials for replacement of work removed shall comply with specifications or instructions of Engineer for type of work to be done.

PART 3 - EXECUTION

3.1 INSPECTION

A. Inspect existing conditions of work including elements subject to movement or damage during:

- Cutting and patching.
- Excavating and backfilling.

B. After uncovering work, inspect conditions affecting installation of new products.

3.2 PREPARATION PRIOR TO CUTTING

A. Provide shoring, bracing and support as required to maintain safety and structural integrity of project.

B. Provide protection for other portions of Project.

C. Provide protection from elements.

3.3 PERFORMANCE

A. Execute fitting and adjacent of projects to provide finished installation to comply with specified tolerances, finishes.

B. Execute cutting and demolition by methods that will prevent damage to other work, and will provide proper surfaces to receive installation of repairs and new work.

C. Execute excavating and backfilling by methods that will prevent damage to other work, and will repairs and new work.

D. Restore work that has been cut or removed; install new products to provide completed work in accordance with requirements of Contract Documents and the instructions of the Engineer.

E. Refinish entire surfaces as necessary to provide an even finish.

F. Continuous Surfaces: To nearest intersections.

G. Assembly: Entire refinishing.

END OF SECTION 02230

SECTION 02261 – RIPRAP**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Attention is directed to the Contract, General Conditions, Modifications to General Conditions, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

- A. The work includes all labor, material, equipment and incidentals required to furnish and place riprap complete as shown on the Drawings and/or specified herein. Riprap shall be placed to protect slopes, waterways, and culvert outlets from water damage at locations shown on the plans.

1.3 RELATED WORK

- A. Examine Contract Documents for requirements that affect work of this Section. Other Specifications Sections that directly relate to work of this Section include, but are not limited to:

TRENCHING, BACKFILLING AND COMPACT
STORM DRAINAGE SYSTEM

SECTION 02221
SECTION 02730

1.4 SUBMITTALS AND CODES

- A. Certifications and/or manufacturers product data of materials listed in part 2.
- B. Wherever reference is made to the D.O.T. Specifications, it shall mean the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 (2004), as modified by Supplemental Specifications issued by the Connecticut Department of Transportation.

PART 2 - PRODUCTS**2.1 MATERIALS**

- A. Stone shall be the type called for on the plans and shall conform to the requirements of the Connecticut D.O.T. Specifications Article M.12.02.
- B. Bedding material for riprap shall conform to the specification of the material indicated on the plans.

PART 3 - EXECUTION

- A. Construction methods shall conform to the plans and to Connecticut D.O.T. Specification Article 7.03.03.

END OF SECTION 02261

SECTION 02270 – SEDIMENTATION AND EROSION CONTROL**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

A. The work includes all labor, material, equipment and incidentals necessary to intercept and filter overground water flows to prevent the movement of silt from the construction area.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

GRADING	SECTION 02212
RIPRAP	SECTION 02261

1.4 SUBMITTALS AND CODES

A. Certifications and/or manufacturers product data of materials listed in part 2.

B. Wherever reference is made to the D.O.T. Specifications, it shall mean the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 (2004), as modified by Supplemental Specifications issued by the Connecticut Department of Transportation.

C. Connecticut Guidelines for Soil Erosion and Sediment Control – 2002.

D. The Contractor's attention is directed to the erosion and sedimentation control narrative contained within the plans which specifies minimum control methods required and specific project phasing.

PART 2 - PRODUCTS**2.1 HAY BALES AND STAKES**

A. Hay Bales: Forty pounds minimum weight and 120 pounds maximum weight.

B. Wood Stakes:
- Two per bale for securing bales.
- Two inches by two inches by a minimum of three feet long.

2.2 MATERIALS FOR SILT FENCE

A. Filter Fabric: Sub-article M.08.01-26, DOT Specifications. Obtain manufacturer's certification that filter fabric is suitable for the intended purpose. Do not use fabric susceptible to deterioration in sunlight. Submit 2-foot square sample and technical data sheet for acceptance by the Engineer. Submit manufacturer's installation instructions for acceptance by the Engineer.

B. Posts: Wood. Three-foot minimum length as shown on the Drawings. Cross-section dimensions as

recommended by filter fabric manufacturer.

C. Other Suitable Mounting: As recommended by the manufacturer.

Provide materials as required by the manufacturer, for attaching fabric to posts.

2.3 WOODCHIPS

A. Wood Chips: Shall be the type called for on the plans and shall conform to the requirements of the Connecticut D.O.T. Specifications Article M.13.05.1.

2.4 CATCH BASIN SILT SACK

A. Silt Sack: Shall be the type called for on the plans or equal.

PART 3 - EXECUTION

3.1 PERFORMANCE

A. Place silt fence, silt sacks and haybales at locations shown on plan prior to construction. Observe maintenance requirements specified on plans. Protect all catch basins from erosion with a ring of hay bales.

B. Remove silt fences at completion of project unless Engineer directs otherwise.

END OF SECTION 02270

SECTION 02280 – SEGMENTAL RETAINING WALL SYSTEM**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

B. Segmental Retaining Wall Units

1. **ASTM C 140** - Sampling and Testing Concrete Masonry Units
2. **ASTM C 1372** – Standard Specification for Dry-Cast Segmental Retaining Wall Units

C. Geosynthetic Reinforcement

1. **ASTM D 4595** – Standard Test Method for Tensile Properties of Geotextiles by the Wide-Width Strip Method
2. **ASTM D 5262** – Standard Test Method for Evaluating the Unconfined Tension Creep and Creep Rupture Behavior of Geosynthetics
3. **ASTM D 5321** – Standard Test Method for Determining the Coefficient of Soil and Geosynthetic or Geosynthetic and Geosynthetic by Direct Shear Method
4. **ASTM D 5818** - Standard Practice for Exposure and Retrieval of Samples to Evaluate Installation Damage of Geosynthetics
5. **ASTM D 6706** – Standard Test Method for Measuring Geosynthetic Pullout Resistance in Soil

D. Soils

1. **ASTM D 698** – Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort
2. **ASTM D 2487** – Standard Practice for Classification of Soils for Engineering Purposes
3. **ASTM D 422** – Standard Test Method for Particle-Size Analysis of Soils
4. **ASTM D 4318** – Standard Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils
5. **ASTM G 51** – Standard Test Method for Measuring pH of Soil for Use in Corrosion Testing

E. Drainage Pipe

1. **ASTM F 758**– Standard Specification for Smooth-Wall Polyvinyl Chloride (PVC) Plastic Underdrain Systems for Highway, Airport or Similar Drainage
2. **ASTM F 405** – Standard Specification for Corrugated Polyethylene (PE) Pipe and Fittings

F. Engineering Design

1. "NCMA Design Manual for Segmental Retaining Walls," Third Edition

G. Where specifications and reference documents conflict, the Wall Design Engineer shall make the final determination of applicable document.

1.2 WORK INCLUDED

A. Work shall consist of furnishing materials, labor, equipment and supervision to install a segmental retaining wall system in accordance with plans and specifications and in reasonably close conformity with

the lines, grades, design and dimensions shown on plans. Walls requiring engineering shall be designed by a licensed professional engineer registered in the State of Connecticut. Costs for the engineered plans shall be included in the bids.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

GRADING

SECTION 02212

1.3 SUBMITTALS AND CODES

A. Materials Submittals: The Contractor shall submit manufacturers' certifications two weeks prior to start of work stating that the SRW units and geosynthetic reinforcement meet the requirements of Section 2 of this specification.

B. Wherever reference is made to the D.O.T. Specifications, it shall mean the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 (2004), as modified by Supplemental Specifications issued by the Connecticut Department of Transportation.

C. Prior to construction, the contractor shall submit shop drawings of the wall system designed by a professional engineer registered in the State of Connecticut. The Owner reserves the right to reject the wall system design.

D. Building Permit Submittal: The Contractor shall obtain a building permit with the Town of Ridgefield Building Department and include these costs in their bid.

E. The professional engineer that designed the wall shall inspect the retaining wall footing subgrades to verify the following:

1. The wall's leveling pad is set on naturally occurring virgin soil and that it is adequately compacted.

F. Compaction tests shall be taken as the wall is installed. The minimum number of tests shall be determined by the State of Connecticut licensed professional engineer that designed the wall. Compaction tests shall be done by a qualified soil testing laboratory. The laboratory shall submit their findings to the professional engineer that designed the wall for their review for conformance.

PART 2 – MATERIALS

2.01 Segmental Retaining Wall Units

A. SRW units shall be machine formed, Portland Cement concrete blocks specifically designed for retaining wall applications. SRW units currently approved for this project are:

Versa-Lok Standard Retaining Wall Units as manufactured by Versa-Lok Of New England, 5 Northern Blvd., Amherst NH 03031. Telephone number is 800-523-2937 or equal.

B. Color of SRW units shall be submitted to the Owner for approval.

C. Finish of SRW units shall be split-face.

D. SRW unit faces shall be of straight geometry.

E. SRW unit height shall be 8 inches, unit width shall be 18 inches, and unit depth shall be 12 inches.

- F. SRW units (not including aggregate fill in unit voids) shall provide a minimum weight of 85 psf wall face area.
- G. SRW units shall be interlocked with connection pins, designed with setback options of 1-inch setback or ¼-inch setback (near vertical) for each 8-inch high course of units to provide cant of approximately 7 degrees and 2 degrees, respectively.
- H. SRW units shall be sound and free of cracks or other defects that would interfere with the proper placing of the unit or significantly impair the strength or permanence of the structure. Any cracks or chips observed during construction shall fall within the guidelines outlined in ASTM C 1372.
- I. SRW units shall be capable of being erected with the horizontal gap between adjacent units not exceeding 1/8 inch.
- J. SRW units shall be capable of providing overlap of units on each successive course so that walls meeting at corner are interlocked and continuous. SRW units that require corners to be mitered shall not be allowed.
- K. SRW units shall be capable of providing a split-face, textured surface for all vertical surfaces that will be exposed after completion of wall, including any exposed sides and backs of units.
- L. SRW units shall be sound and free of cracks or other defects that would interfere with the proper placing of the unit or significantly impair the strength or permanence of the structure. Any cracks or chips observed during construction shall fall within the guidelines outlined in ASTM C 1372.
- M. Concrete SRW units shall conform to the requirements of ASTM 1372 and have a minimum net average 28 days compressive strength of 3000 psi. Compressive strength test specimens shall conform to the saw-cut coupon provisions of ASTM C140.
- O. SRW units' molded dimensions shall not differ more than $\pm 1/8$ inch from that specified, as measured in accordance with ASTM C 140. This tolerance does not apply to architectural surfaces, such as split faces.

2.02 Segmental Retaining Wall Unit Connection Pins

- A. SRW units shall be interlocked with VERSA-Tuff connection pins. The pins shall consist of glass-reinforced nylon made for the expressed use with the SRW units supplied.

2.03 Geosynthetic Reinforcement

- A. Geosynthetic reinforcement shall consist of high-tenacity PET geogrids, HDPE geogrids, or geotextiles manufactured for soil reinforcement applications. The type, strength and placement of the geosynthetic reinforcement shall be determined by procedures outlined in this specification and the NCMA Design Manual for Segmental Retaining Walls (3rd Edition 2009) and materials shall be specified by Wall Design Engineer in their final wall plans and specifications. The manufacturers/suppliers of the geosynthetic reinforcement shall have demonstrated construction of similar size and types of segmental retaining walls on previous projects.

Geosynthetic types currently approved for this project are:

STRATAGRID Geogrids

- B. The type, strength and placement of the reinforcing geosynthetic shall be as determined by the Wall Design Engineer, as shown on the final, P.E.-stamped retaining wall plans.

2.04 Leveling Pad

- A. Material for leveling pad shall consist of compacted sand, gravel, or combination thereof (USCS soil types GP, GW, SP, & SW) and shall be a minimum of 6 inches in depth. Lean concrete with a strength of 200-300 psi and 3 inches thick maximum may also be used as a leveling pad material. The leveling pad should extend laterally at least a distance of 6 inches from the toe and heel of the lowermost SRW unit.

2.05 Drainage Aggregate

- A. Drainage aggregate shall be angular, clean stone or granular fill meeting the following gradation as determined in accordance with ASTM D422:

<u>Sieve Size</u>	<u>Percent Passing</u>
1 inch	100
3/4 inch	75-100
No. 4	0-60
No. 40	0-50
No. 200	0-5

2.06 Drainage Pipe

- A. The drainage collection pipe shall be a perforated or slotted PVC, or corrugated HDPE pipe. The drainage pipe may be wrapped with a geotextile to function as a filter.
- B. Drainage pipe shall be manufactured in accordance with ASTM F 405 or ASTM F 758.

2.07 Reinforced Backfill Soil

- A. The reinforced soil material shall be free of debris. Unless otherwise noted on the final, P.E.-sealed, retaining wall plans prepared by the Wall Design Engineer, the reinforced material shall consist of the inorganic USCS soil types GP, GW, SW, SP, SM, meeting the following gradation, as determined in accordance with ASTM D422:

<u>Sieve Size</u>	<u>Percent Passing</u>
1 inch	100
No. 4	20-100
No. 40	0-60
No. 200	0-35

- B. The maximum particle size of poorly-graded gravels (GP) (no fines) should not exceed 3/4 inch unless expressly approved by the Wall Design Engineer and the long-term design strength (LTDS) of the geosynthetic is reduced to account for additional installation damage from particles larger than this maximum.
- C. The plasticity of the fine fraction shall be less than 20.
- D. The pH of the backfill material shall be between 3 and 9 when tested in accordance with ASTM G 51.

PART 3: DESIGN PARAMETERS**3.01 Soil**

- A. The wall design engineer shall determine the following soil parameters for the preparation of the final design:

	Unit Weight (pcf)	Internal Friction Angle (degrees)	Cohesion (c)
Reinforced Fill	_____	_____	_____
Retained Soil	_____	_____	_____

Foundation Soil

(If internal friction angles are not available for the above section, the specifier can provide the USCS soil type classification for the reinforced, retained, and foundation soils and/or attach the geotechnical investigation report for this project.)

- B. Should the actual soil conditions observed during construction differ from those assumed for the design, design shall be reviewed by the Wall Design Engineer.

3.02 Design

- A. The design analysis for the final, P.E.-stamped retaining wall plans prepared by the Wall Design Engineer shall consider the external stability against sliding and overturning, internal stability and facial stability of the reinforced soil mass, and shall be in accordance with acceptable engineering practice and these specifications. The internal and external stability analysis shall be performed in accordance with the "NCMA Design Manual for Segmental Retaining Walls, 3rd Edition" using the recommended minimum factors of safety in this manual.
- B. External stability analysis for bearing capacity, global stability, and total and differential settlement shall be the responsibility of the Wall Design Engineer.
- C. While vertical spacing between geogrid layers may vary, it shall not exceed 2.0 feet maximum in the wall design.
- D. The geosynthetic placement in the wall design shall have 100% continuous coverage parallel to the wall face. Gapping between horizontally adjacent layers of geosynthetic (partial coverage) will not be allowed.

PART 4: CONSTRUCTION**4.01 Inspection**

- A. The Contractor is responsible for retaining a licensed professional engineer registered in the State of Connecticut to verify that the Contractor meets all the requirements of the specification and proper installation of the wall system.
- B. Contractor's field construction supervisor shall have demonstrated experience and be qualified to direct all work at the site.

4.02 Excavation

- A. Contractor shall excavate to the lines and grades shown on the project grading plans. Contractor shall take precautions to minimize over-excavation. Over-excavation shall be filled with compacted infill material, or as directed by the Engineer, at the Contractor's expense.
- B. Contractor shall verify location of existing structures and utilities prior to excavation. Contractor shall ensure all surrounding structures are protected from the effects of wall excavation. Excavation support, if required, is the responsibility of the Contractor.

4.03 Foundation Preparation

- A. Following the excavation, the foundation soil shall be examined by the Contractor's Geotechnical Engineer to assure actual foundation soil strength meets or exceeds the assumed design bearing strength. Soils not meeting the required strength shall be removed and replaced with infill soils, as directed by the wall design engineer.
- B. Foundation soil shall be proof-rolled and compacted to 95% standard Proctor density and inspected by the Wall Design Engineer prior to placement of leveling pad materials.

4.04 Leveling Pad Construction

- A. Leveling pad shall be placed as shown on the final, P.E.-sealed retaining wall plans with a minimum thickness of 6 inches. The leveling pad should extend laterally at least a distance of 6 inches from the toe and heel of the lowermost SRW unit.

- B. Granular leveling pad material shall be compacted to provide a firm, level bearing surface on which to place the first course of units. Well-graded sand can be used to smooth the top 1/4 inch to 1/2 inch of the leveling pad. Compaction will be with mechanical plate compactors to achieve 95% of maximum standard Proctor density (ASTM D 698).

4.05 SRW Unit Installation

- A. All SRW units shall be installed at the proper elevation and orientation as shown on the final, P.E.-sealed wall plans and details or as directed by the Wall Design Engineer. The SRW units shall be installed in general accordance with the manufacturer's recommendations. The specifications and drawings shall govern in any conflict between the two requirements.
- B. First course of SRW units shall be placed on the leveling pad. The units shall be leveled side-to-side, front-to-rear and with adjacent units, and aligned to ensure intimate contact with the leveling pad. The first course is the most important to ensure accurate and acceptable results. No gaps shall be left between the front of adjacent units. Alignment may be done by means of a string line or offset from base line to the back of the units.
- C. The voids within the base-course SRW units shall be filled with crushed gravel. The cores of additional courses shall be filled with angular free-draining aggregate.
- D. All excess debris shall be cleaned from the top of units and the next course of units installed on top of the units below.
- E. Two VERSA-Tuff connection pins shall be installed through pin holes of each upper course unit into receiving slots in lower course units. Pins shall be fully seated in the pin slot below. Units shall be pushed forward to remove any looseness in the unit-to-unit connection and then check alignment. Level and alignment of the units shall be checked and corrected (if required) before proceeding.
- F. Lay out of curves and corners shall be installed in accordance with the plan details or in general accordance with SRW manufacturer's installation guidelines. Walls meeting at corners shall be interlocked by overlapping successive courses.
- G. The above procedures shall be repeated to the extent of wall height.
- H. The wall face cant shall not differ more than ± 2 degrees from that specified.

4.06 Geosynthetic Reinforcement Placement

- A. All geosynthetic reinforcement shall be installed at the proper elevation and orientation as shown on the final P.E.-sealed retaining wall plan profiles and details, or as directed by the Wall Design Engineer.
- B. At the elevations shown on the final plans, (after the units, drainage material and backfill have been placed to this elevation) the geosynthetic reinforcement shall be laid horizontally on compacted infill and on top of the concrete SRW units, to within 1 inch of the front face of the unit below. Embedment of the geosynthetic in the SRW units shall be consistent with SRW manufacturer's recommendations.

Correct orientation of the geosynthetic reinforcement shall be verified by the Contractor to be in accordance with the geosynthetic manufacturer's recommendations. The highest-strength direction of the geosynthetic must be perpendicular to the wall face.
- C. Geosynthetic reinforcement layers shall be one continuous piece for their entire embedment length. Splicing of the geosynthetic in the design-strength direction (perpendicular to the wall face) shall not be permitted. Along the length of the wall, horizontally adjacent sections of geosynthetic reinforcement shall be butted in a manner to assure 100% coverage parallel to the wall face.
- D. Tracked construction equipment shall not be operated directly on the geosynthetic reinforcement. A minimum of 6 inches of backfill is required prior to operation of tracked vehicles over the geosynthetic. Turning should be kept to a minimum. Rubber-tired equipment may pass over the geosynthetic reinforcement at slow speeds (less than 5 mph).

- E. The geosynthetic reinforcement shall be free of wrinkles prior to placement of soil fill. The nominal tension shall be applied to the reinforcement and secured in place with staples, stakes or by hand tensioning until reinforcement is covered by 6 inches of fill.

4.07 Drainage Aggregate and Drainage Material Placement

- A. Drainage aggregate shall be installed to the line, grades and sections shown on the final P.E.-sealed retaining wall plans. Drainage aggregate shall be placed to the minimum thickness shown on the construction plans between and behind units (a minimum of 1 cubic foot for each exposed square foot of wall face unless otherwise noted on the final wall plans).
- B. Drainage collection pipes shall be installed to maintain gravity flow of water outside the reinforced-soil zone. The drainage collection pipe shall be installed at the locations shown on the final construction drawings. The drainage collection pipe shall daylight into a storm sewer or along a slope, at an elevation below the lowest point of the pipe within the aggregate drain. Drainage laterals shall be spaced at a maximum 50-foot spacing along the wall face.

4.08 Backfill Placement

- A. The reinforced backfill shall be placed as shown in the final wall plans in the maximum compacted lift thickness of 8 inches and shall be compacted to a minimum of 95% of standard Proctor density (ASTM D 698) at a moisture content within -1% to +3% points of optimum. The backfill shall be placed and spread in such a manner as to eliminate wrinkles or movement of the geosynthetic reinforcement and the SRW units.
- B. Only hand-operated compaction equipment shall be allowed within 3 feet of the back of the wall units. Compaction within the 3 feet behind the wall units shall be achieved by at least three passes of a lightweight mechanical tamper, plate, or roller.
- C. At the end of each day's operation, the Contractor shall slope the last level of backfill away from the wall facing and reinforced backfill to direct water runoff away from the wall face.
- D. At completion of wall construction, backfill shall be placed level with final top of wall elevation. If final grading, paving, landscaping and/or storm drainage installation adjacent to the wall is not placed immediately after wall completion, temporary grading and drainage shall be provided to ensure water runoff is not directed at the wall nor allowed to collect or pond behind the wall until final construction adjacent to the wall is completed.

4.09 SRW Caps

- A. SRW caps shall be properly aligned and glued to underlying units with VERSA-LOK adhesive, a flexible, high-strength concrete adhesive. Rigid adhesive or mortar are not acceptable.
- B. Caps shall overhang the top course of units by 3/4 inch to 1 inch. Slight variation in overhang is allowed to correct alignment at the top of the wall.

4.10 Construction Adjacent to Completed Wall

- A. The Contractor is responsible for ensuring that construction by others adjacent to the wall does not disturb the wall or place temporary construction loads on the wall that exceed design loads, including loads such as water pressure, temporary grades, or equipment loading. Heavy paving or grading equipment shall be kept a minimum of 3 feet behind the back of the wall face. Equipment with wheel loads in excess of 150 psf live load shall not be operated within 10 feet of the face of the retaining wall during construction adjacent to the wall. Care should be taken by the General Contractor to ensure water runoff is directed away from the wall structure until final grading and surface drainage collection systems are completed.

END OF SECTION 02280

SECTION 02481 – LANDSCAPING**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

A. The work includes all labor, material, equipment and incidentals required to do all landscaping work complete as shown on the Drawings and/or specified herein.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

TRENCHING, BACKFILLING AND COMPACTING
LOAMING & SEEDING

SECTION 02221
SECTION 02900

1.4 SUBMITTALS AND CODES

- A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specifications Sections.
- B. Product certificates signed by manufacturers certifying that their products comply with specified requirements.
 - 1. Manufacturer's certified analysis for standard products.
 - 2. Analysis for other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.
- C. Qualification data for firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and address of architects and owners, and other information specified.
- D. Planting schedule indicating anticipated dates and locations for each type of planting.
- E. Maintenance instructions recommend procedures to be established by Owner for maintenance of landscape work during entire year. Submit before expiration of required maintenance periods.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who has completed landscaping work similar in material, design, and extent to the indicated for this Project and with a record of successful tree and shrub establishment.
 - 1. Installer's Field Supervisions: Require Installer to maintain an experienced full-time supervisor on the Project site during times that tree and shrub planting is in progress.
- B. Testing Agency Qualifications: To qualify for acceptance, an independent testing agency must demonstrate to Engineer's satisfaction, based on evaluation of agency-submitted criteria conforming to ASTM E 699, that it has the experience and capability to satisfactorily conduct the testing indicated without delaying the Work.
- C. Provide quality, size, genus, species, and variety of trees and shrubs indicated, complying with applicable requirements of ANSI Z60.1 "American Standard for Nursery Stock."

1. Selection of trees and shrubs purchased under allowances, if any, will be made by Engineer, who will tag stock at their place of growth before they are prepared for transplanting.
- D. Topsoil Analysis: Furnish a soil analysis made by a qualified independent soil-testing agency stating percentages of organic matter, inorganic matter (silt, clay, and sand), deleterious material, pH, soluble salts and mineral and plant-nutrient content of topsoil.
 1. Report suitability of topsoil for growth of applicable planting material. State recommended quantities of nitrogen, phosphorus, and potash nutrients and any limestone, aluminum sulfate or other soil amendments to be added to produce satisfactory topsoil.
- E. Measurements: Measure trees and shrubs according to ANSI Z60.1 with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements 6 inches (150mm) above ground for trees up to 4-inch (100mm) caliper size, and 12 inches (300mm) above ground for larger sizes. Measure main body of tree or shrub for height and spread: do not measure branches or roots tip-to-tip.
- F. Observation: The Engineer may observe trees and shrubs either at place of growth or at site before planting for compliance with requirements for genus, species, variety, size and quality. Engineer retains right to observe trees and shrubs further for size and condition of balls and root systems, insects, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site and replace.
- G. Preinstallation Conference: Conduct conference at Project site to comply with requirements of Divisions 1 Section "Project Meetings."

1.6 DELIVERY, STORAGE & HANDLING

- A. Deliver freshly dug trees and shrubs. Do not prune before delivery, except as approved by Engineer. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy natural shape. Provide protective covering during delivery. Do not drop trees and shrubs during delivery.
- B. Handle balled and burlapped material by the root ball.
- C. Deliver trees and shrubs after preparations for planting have been completed and install immediately. If planting is delayed more than 6 hours after delivery, set trees and shrubs in shade, protect from weather and mechanical damage, and keep roots moist.
 1. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
 2. Do not remove container-grown stock from containers before time of planting.
 3. Water root systems of trees and shrubs stored on site with a fine-mist spray. Water as often as necessary to maintain root systems in a moist condition.

1.7 COORDINATION AND SCHEDULING

- A. Coordinate planting of trees and shrubs during normal planting seasons for such work in location of Project.
 1. Plant frost-tender trees and shrubs during normal planting seasons for such work in location of Project.
- B. Coordination with Lawns: Plant trees and shrubs after finish grades are established and before planting lawns, unless otherwise acceptable to Engineer.
 1. When planting trees and shrubs after lawns, protect lawn areas and promptly repair damage caused by planting operations.

1.8 WARRANTY

- A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.

- B. Special Warranty: Warrant living trees and shrubs for a period of one year after date of Substantial Completion, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by Owner, abnormal weather conditions unusual for warranty period, or incidents which are beyond Contractor's control.
- C. Remove and replace dead trees and shrubs immediately unless required to plant in the succeeding planting season.
- D. Replace trees and shrubs that are more than 25 percent dead or in an unhealthy condition at end to warranty period.
- E. A limit of one replacement of each tree and shrub will be required, except for losses or replacements due to failure to comply with requirements.

1.9 MAINTENANCE

- A. Maintain trees and shrubs during warranty period by pruning, cultivating, watering, weeding, fertilizing, restoring planting saucers, tightening and repairing stakes and guy supports, and resetting to proper grades or vertical position, as required to establish healthy, viable plantings. Spray as required to keep trees and shrubs free of insects and disease. Maintain trees and shrubs for the following period:
 - 1. Maintenance Period: 90 days following Substantial Completion.

PART 2 - PRODUCTS

2.1 TREE AND SHRUB MATERIAL

- A. General: Unless otherwise indicated, furnish nursery-grown trees and shrubs conforming to ANSI Z60.1, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- B. Grade: Provide trees and shrubs of sizes and grades conforming to ANSI Z60.1 for type of trees and shrubs required. Trees and shrubs of a larger size may be used if acceptable to Architect, with a proportionate increase in size of roots or balls.
- C. Label at least 1 tree and 1 shrub of each variety and caliper with a securely attached, waterproof tag bearing legible designation of botanical and common name.
 - 1. Where formal arrangements or consecutive order of trees or shrubs are shown, select stock for uniform height and spread, and number label to assure symmetry in planting.

2.2 BALLED AND BURLAPPED STOCK MATERIAL

- A. Provide trees and shrubs dug with firm, natural ball of earth in which they are grown.
- B. Ball Size: Not less than sizes indicated.
- C. Ball Size: Not less than diameter and depth recommended by ANSI Z60.1 for type and size of trees or shrub requires. Increase ball size or modify ratio of depth to diameter to encompass enough fibrous and feeding-root system necessary for full recovery of trees and shrubs.
- D. Wrap, tie, and rigidly support earth ball as recommended by ANSI Z60.1 for size of balls required. Drum-lace balls with a diameter of 30 inches (760 mm) or greater.

2.3 CONTAINER GROWN STOCK MATERIAL

- A. Provide healthy, vigorous, well-rooted trees or shrubs established in container. Provide balled and burlapped stock when required trees or shrubs exceed maximum size recommended by ANSI Z60.1 for container-grown stock.
 - 1. Established container stock is defined as a tree or shrub transplanted into container and grown long enough to develop new fibrous roots, so that root mass will retain its shape and hold together when removed from container.
- B. Containers: Rigid containers that will hold ball shape and protect root mass during shipping. Provide trees and shrubs established in containers of not less than minimum sizes recommended by ANSI Z60.1 for kind, type, and size of trees and shrubs required.

2.4 PLANTING MATERIAL

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of six (6%) percent organic material content; free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.
 - 1. Topsoil Source: Reuse surface soil stockpiled on-site and supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient. Verify suitability of stockpiled surface soil to produce topsoil.
 - 2. Topsoil Source: Amend existing in-place surface soil to produce topsoil. Verify suitability of surface soil to produce topsoil. Surface soil may be supplemented with imported or manufactured topsoil from off-site sources.
- B. Organic Soil Amendments:
 - 1. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 3/4-inch sieve.
- C. Fertilizer:
 - 1. Bone meal: Commercial, raw or steamed, finely ground; a minimum of one (1%) percent nitrogen and ten (10%) percent phosphoric acid.
 - 2. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20% available phosphoric acid.
 - 3. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
 - a. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 4% phosphorous, and 2% potassium, by weight.
 - 4. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - a. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
- D. Mulches:
 - 1. Organic Mulch: Shredded pine bark.
 - 2. Compost Mulch: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch sieve.
- E. Weed-Control Barriers:
 - 1. Nonwoven Fabric: Polypropylene or polyester fabric, 3 oz./sq. yd. minimum.

2. Composite Fabric: Woven, needle-punched polypropylene substrate bonded to a nonwoven polypropylene fabric, 4.8 oz./sq. yd.

2.5 STAKES

- A. Upright and Guy Stakes: Rough-sawn, sound, new hardwood, redwood, or pressure-preservative-treated softwood, free of knots, holes, cross grain, and other defects, 2 by 2 inches (50 by 50 mm) by length indicated, pointed at one end.
- B. Tie Wire: ASTM A 641 (ASTM A 641M), Class 1, galvanized-steel wire, 2-strand, twisted, 0.106 inch (2.7 mm) in diameter.
- C. Hose Chafing Guard: Reinforced rubber or plastic hose at least 1.2 inch (13 mm) in diameter, black, cut to length required to protect tree trunks from damage.
 1. Edging Size: As indicated
 2. Stakes: Aluminum, ASTM B 221 (ASTM B 221M), alloy 6061-T6, approximately 1-1/2 inches (38 mm) wide by 12 inches (300 mm) long.
 3. Finish: Standard black-paint finish.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive trees and shrubs for compliance with requirements and for conditions affecting performance of work of this Section. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Lay out individual tree and shrub locations and areas for multiple plantings. Stake locations, outline areas, adjust locations when requested, and obtain Engineer's acceptance of layout before planting. Make minor adjustments as may be required.

3.3 PLANTING SOIL ESTABLISHMENT

- A. Before mixing, clean topsoil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
- B. Mix soil amendments and fertilizers with topsoil at rates indicated below. Delay mixing fertilizer if planting does not follow placing of planting soil within a few days.

2 parts topsoil, 1 part organic amendment, 1 part excavated soil

- C. For tree pit and trench backfill, mix planting soil before backfilling and stockpile at site.

3.4 EXCAVATION

- A. Pits and Trenches: Excavate with sloped sides and with bottom of excavations slightly raised at center to assist drainage. Loosen hard subsoil in bottom of excavation.
 1. Balled and Burlapped Trees and Shrubs: Excavate approximately 3 times as wide as ball diameter and equal to ball depth, plus the following setting layer depth:

- a. Setting Layer: Allow 3 inches (75 mm) of planting soil.
2. Container-Grown Trees and Shrubs: Excavate 3 times as wide as container diameter and equal to container depth, plus the following setting layer depth:
 - a. Setting Layer: Allow 3 inches (75 mm) of planting soil.
- B. Dispose of Excess subsoil removed from landscape excavations. Do not mix with planting soil or use as backfill.
- C. Obstructions: Notify Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
 1. Hardpan Layer: Drill 6-inch (150 mm) diameter holes into free-draining strata or to a depth of 10 feet (3 m), whichever is less, and backfill with free-draining material.
- D. Drainage: Notify Engineer if subsoil conditions evidence unexpected water seepage or retention in tree of shrub pits.
- E. Fill excavations with water and allow to percolate out, before placing setting layer and positioning trees and shrubs.

3.5 PLANTING TREES AND SHRUBS

- A. Set balled and burlapped stock plumb and in center of pit or trench with top of ball raised above adjacent finish grades as indicated.
 1. Place stock on setting layer of compacted planting soil.
 2. Remove burlap and wire baskets from tops of balls and partially form sides, but do not remove from under balls. Remove pallets, if any, before setting. Do not use planting stock if ball is cracked or broken before or during planting operation.
 3. Place backfill around ball in layers, tamping to settle backfill and eliminate voids and air pockets. When pit is approximately 1/2 backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more is absorbed. Water again after placing and tamping final layer of backfill.
- B. Set container-grown stock plumb and in center of pit or trench with top of ball raised above adjacent finish grades as indicated.
 1. Carefully remove containers so as not to damage root balls.
 2. Place stock on setting layer of compacted planting soil.
 3. Place backfill around ball in layers, tamping to settle backfill and eliminate voids and air pockets. When pit is approximately 1/2 backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more is absorbed. Water again after placing and tamping final layer of backfill.
- C. Dish and tamp top of backfill to form a 3-inch (75 mm) high mound around the rim of the pit. Do not cover top of root ball with backfill
- D. Wrap trees of 2-inch (50 mm) caliper and larger with trunk-wrap tape. Start at base of trunk and spiral cover trunk to height of first branches. Overlap wrap, exposing half the width, and securely attach without causing girdling. Inspect tree trunks for injury, improper pruning, and insect infestation and take corrective measures requires before wrapping.
- E. Planting Periods: All plant material (B&B, Container shrubs and Perennials) is to be installed from Mid-

March to Mid July and September 1st to November 15th.

3.6 CONTINUOUS GROUND COVER & PERENNIAL BEDS

- A. Till the planting bed topsoil area to a minimum depth of 6" Spread humus to a minimum depth of 2" and add soil amendments as called for by topsoil tests. Rototill to a depth of 6" to obtain a uniform, continuous planting mixture.

3.7 MULCHING

- A. Mulch backfilled surfaces of pits, trenches, and other areas indicated.
- B. Organic Mulch: Apply the following average thickness of organic mulch and finish level with adjacent finish grades. Do not place mulch against trunks or stems.
 - 1. Thickness: 2-inches (50mm).

3.8 CLEANUP & PROTECTION

- A. During tree and shrub work, keep pavements clean and work area in an orderly condition.
- B. Protect trees and shrubs from damage due to landscape operations, operations by other contractors and trades, and trespassers. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged landscape work as directed.

3.9 DISPOSAL OF SURPLUS & WASTE MATERIAL

- A. Disposal: Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash and debris, and legally dispose of it off the Owner's property.

END OF SECTION 02481

SECTION 02513 – BITUMINOUS CONCRETE PAVEMENT AND CURBING**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

A. The work includes all labor, material, equipment and incidentals required to construct bituminous concrete paving and curbing, complete in place as shown on the Drawings and as specified.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

GRADING

SECTION 02212

PAVEMENT MARKINGS AND SIGNS

SECTION 02577

1.4 SUBMITTALS AND CODES

A. Certifications and/or manufacturer's product data of materials listed in part 2.

B. Wherever reference is made to the D.O.T. Specifications, it shall mean the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 (2004), as modified by Supplemental Specifications issued by the Connecticut Department of Transportation.

1.5 QUALITY ASSURANCE

A. Qualifications of Workmen: Provide at least one person who shall be thoroughly trained and experienced in the skills required, who shall be completely familiar with the design and application of work described for this Section, and who shall be present at all times during progress of the work of this Section and shall direct all work performed under this Section.

B. For actual finishing of bituminous concrete and curbing and operation of the required equipment, use only personnel who are thoroughly trained and experienced in the skills required.

1.6 JOB CONDITIONS

A. Apply prime and tack coats when ambient temperature is above 50 degrees F and when temperature has not been below 35 degrees F for 12 hours immediately prior to application.

B. Construct bituminous concrete courses when atmospheric temperature is above 40 degrees F and when base course is dry and frost free. Base and sub-base courses may be placed when air temperature is above 30 degrees F.

C. Grade control: establish and maintain required lines and elevations.

PART 2 - PRODUCTS**2.1 MATERIALS - Specifications unless specified on the plans.**

- A. Sub-Base: 3" Minus Controlled Fill conforming to the requirements of Section M.02.06, Grading B of the DOT Specifications.
- B. Base: Processed Aggregate Base conforming to the requirements of Section M.05.01-1, 2, &3 of the DOT Specifications.
- C. Gravel Surfaces: Processed Gravel conforming to the requirements of Section M.02.06, Grading C of the DOT Specifications.
- D. Pavement Materials: Bituminous concrete mixtures conforming to the requirements of Section M.04 of the DOT Specifications.
- E. In Section M.04, reference is made to the Chief, Materials Testing Section, to the Materials Testing Section, and to the Laboratory; none of which will be involved in this work. The Contractor shall do the work of the Chief, the Section, and the Laboratory; or arrange for the producer of the bituminous concrete to do this work. Make the determinations, verifications, rejections, approvals, tests, and inspections as specified by Section M.04 and as necessary to produce satisfactory bituminous mixtures.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine the areas and conditions under which work of this Section will be installed. Correct conditions detrimental to proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 FINAL PREPARATION OF SUBGRADE

A. After preparation of subgrade as shown in these plans, thoroughly scarify and sprinkle the entire area to be paved, and then compact by rolling to a smooth, hard, even surface of 95 percent compaction to receive sub-base. Finish to the required grades, with due allowance for the thickness of base and bituminous concrete courses to be placed thereon.

B. Equipment: Compact by rolling with an accepted power roller having minimum compression of 300 pounds per inch of tread width on the rear wheel and weighing not less than 7 tons, except that equivalent vibratory roller or compactor may be used when specifically accepted by the Engineer.

3.3 CONSTRUCTION OF SUBBASE AND BASE COURSE

A. Construct processed aggregate base in accordance with the requirements of Article 3.04.03 of the DOT Specifications. This will include placing, compacting, wetting, and brooming of one course of the processed aggregate base material.

B. Make final compacted depth of processed aggregate base as shown on the Drawings with tolerances as specified under Article 3.04.04 of the DOT Specifications.

3.4 CONSTRUCTION OF BITUMINOUS CONCRETE PAVEMENT AND CURBING

A. Construct pavement in courses as called for on the Drawings. Use a class of bituminous concrete for each course as indicated on the Drawings. Thickness of each course: As shown on the Drawings.

Construct the bituminous concrete pavement in accordance with Article 4.06.03 and Article 8.15.03 for curbing of the DOT Specifications.

C Article 4.06.03-1 Samples: Samples will not be taken by Materials Testing Section. Arrange for the producing plant to take its own samples to ascertain that mixtures are proper. Provide certifications. The Contractor will have the ultimate responsibility. Owner reserves rights to conduct referee testing, as he in his sole opinion deems appropriate.

D. Article 4.06.03-2 Mixing Plant Inspection: Inspections, verifications, determinations, and approvals at the mixing plants will not be made by the Chief, Materials Testing Section. The Contractor will be responsible for mixtures and shall take whatever steps are required to ensure production of satisfactory mixtures. He shall certify that mixtures do meet specifications. Weights of completed mixtures will not be required.

E. Article 4.06.03-3 Mixing Plant Inspection - Field Laboratory: Delete in its entirety.

F. Article 4.06.03-3: In the fourth paragraph on Sheet 6, delete "Chief, Materials Testing Section" and substitute "Contractor."

G. Article 4.06.03-5: Delete "Chief, Materials Testing Section" wherever it appears and substitute "Contractor."

H. Certifications: Furnish certified test reports, material certificates, and certificates of compliance in accordance with the requirements of Article 1.06.07 of the DOT Specifications.

3.5 CONSTRUCTION OF GRAVEL SURFACES

A. Examine the subgrade and the conditions under which the gravel surfaces are to be installed. Do not install gravel surfaces until any unsatisfactory conditions have been corrected.

B. Subgrade preparation and Processed Aggregate Base: grade subgrade and base to required elevations and firmly compact.

C. Gravel Surface: Place processed gravel and compact by rolling with a 600-pound roller.

3.6 PROTECTION

A. Protect from traffic during all operations.

3.7 FINISH TOLERANCES

A. Finish surfaces to the following tolerances.

B. Processed Aggregate Base: Plus 0.00 feet to minus 0.05 feet from line grade shown on the Drawings.

C. Bituminous Concrete Surface Course: Plus or minus 0.05 feet at any point from line and grade shown on the Drawings.

D. Painting: Apply the marking paint in strict accordance with the manufacturer's published recommendations, using all means necessary to protect the painted surfaces until dry. Width: 4 inches unless otherwise indicated on the Drawings.

END OF SECTION 02513

SECTION 02540 – SITE CONCRETE BACKFILL**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

A. The work includes all labor, material, equipment and incidentals required to install concrete backfill in postholes or other areas as indicated on the plans. Work includes earth excavation, preparation of subgrade, support and dewatering of excavation and backfill by placement of portland cement concrete.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

CONCRETE AND REINFORCING STEEL

SECTION 02550

1.3 SUBMITTALS AND CODES

A. Certifications and/or manufacturer's product data of materials listed in part 2.

B. Wherever reference is made to the D.O.T. Specifications, it shall mean the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 (2004), as modified by Supplemental Specifications issued by the Connecticut Department of Transportation.

PART 2 – PRODUCTS-**2.1 MATERIALS**

A. Materials for this work shall conform to the requirements of Section M.03, of the CT. D.O.T. Specifications "Portland Cement Concrete".

PART 3 - EXECUTION**3.1 PERFORMANCE**

A. Construction methods shall be in accordance with the requirements of Section 6.01 of the DOT Specifications, "Concrete for Structures", except that concrete may be mixed on-site.

END OF SECTION 02540

SECTION 02577 – PAVEMENT MARKINGS AND SIGNS**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

A. The work includes all labor, material, equipment and incidentals required to install the pavement markings, reflectors and signs as indicated on the plans. Signs shall include all posts and hardware required to install each sign. The furnishing of all labor and materials for this work is included.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

BITUMINOUS CONCRETE PAVING

SECTION 02513

1.4 SUBMITTALS AND CODES

A. Certifications and/or manufacturer's product data of materials listed in part 2.

B. Wherever reference is made to the D.O.T. Specifications, it shall mean the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 (2004), as modified by Supplemental Specifications issued by the Connecticut Department of Transportation.

C. U.S. Department of Transportation "Manual on Uniform Traffic Control Devices", latest edition.

PART 2 - PRODUCTS**2.1 MATERIALS - Specifications unless specified on the plans.**

A. All painted pavement markings shall conform to the requirements of Section 12.09 of the DOT Specifications. This material shall be used in the site unless OWNER requests otherwise.

B. All epoxy resin painted pavement markings shall conform to the requirements of Section 12.10 of the DOT Specifications.

C. Signs, etc. shall conform to the requirements of Section 12.08 of the DOT Specifications.

PART 3 - EXECUTION**3.1 INSPECTION**

A. Inspect the areas to receive painted pavement markings, Sweep and clean surfaces to completely eliminate loose material and dust.

B. Submit a detailed drawing of proposed pavement markings indication of colors, line types, etc. for review by the Engineer. Do not proceed with painting until final approval from the Engineer has been received.

3.2 APPLICATION

- A. Parking stalls: Paint 4" wide lines to delineate all parking stalls as shown on the drawings. Painted lines shall be for the full depth of the parking stall.
- B. Other pavement markings: Paint to delineate all other pavement markings (arrows, cross-hatching, handicap symbols, centerlines, fire lanes, etc.) as shown on the drawings.

3.3. FIELD QUALITY CONTROL

- A. Apply waterborne pavement marking paint in accordance with applicable requirements of CDOT Form 816, Section 12.09, Articles 12.09.01 through 12.09.03.
- B. Apply epoxy resin pavement marking paint in accordance with applicable requirements of CDOT Form 816, Section 12.10, Articles 12.10.01 through 12.10.03.

3.4 PROTECTION

- A. Protect all painted pavement markings from both vehicular and pedestrian traffic until completely dry.

3.5 CLEAN-UP

- A. Keep grounds clean of rubbish caused by work and of unused materials at all times. Dispose of rubbish off-site.
- B. Remove unused materials and equipment. Leave clean area.

END OF SECTION 02577

SECTION 02700 – SITE LIGHTING**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

A. The work includes all design, labor, material, equipment and incidentals required to install electrical power and parking lot lighting, bollard lighting and building mounted lighting complete as shown on the project plans and/or specified herein. This work shall include design, permitting, piping, trenching, backfilling, compacting, bedding and required connections to make the lighting operable.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

TRENCHING, BACKFILLING AND COMPACTING	SECTION 02221
CUTTING AND PATCHING	SECTION 02230
ROCK AND BOULDER REMOVAL	SECTION 02211

1.4 SUBMITTALS AND CODES

- A. Certifications and/or manufacturers product data of materials listed in part 2.
- B. Conduit layout plan showing electrical connections and materials shall be submitted by the contractor for approval prior to construction by the Engineer and Building Department.
- C. Wherever reference is made to the D.O.T. Specifications, it shall mean the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 (2004), as modified by Supplemental Specifications issued by the Connecticut Department of Transportation.
- D. State of Connecticut Building Code, Electric Code, Fire Code.
- E. Installers shall be licensed by the State of Connecticut for said work and for each trade.

PART 2 - PRODUCTS**2.1 MATERIALS**

- A. All products shall meet the applicable codes.
- B. Electrical Conduits and appurtenant materials. Size and material per Electric Code.
- C. Lighting Fixtures per Photometric Plan prepared by Hubbell Lighting, Inc.
 - 1. Promenade Series LED-PRMN, no alternates will be considered unless requested by owner.
 - 2. Fresno Series FN1, no alternates will be considered unless requested by owner.
 - 3. Litepak Series LNC2, no alternates will be considered unless requested by owner.
 - 4. Architectural Area Lighting Decorative Pole DB6, no alternates will be considered unless requested by owner. Color to be black.

- D. See specification section 02221 for earth materials and 02540 for concrete.
- E. Underground warning tape shall be durable magnetic indicating tape, designed to withstand underground exposure, red in color, and printed with an appropriate warning message.

PART 3 - EXECUTION

3.1 Site Lighting

- A. All work shall conform to the above referenced codes and be performed by licensed electricians.
- B. The conduit shall be placed on 6 inches of sand fill and covered with 6 inches of sand fill. Depth of bury shall be minimum two feet, six inches.
- C. Construct concrete foundations per specification section 02540.
- D. It is the contractor's responsibility to assure protection of the work from weather.
- E. Schedule of Inspections:
 - 1. The following is a nominal number of required inspections to be conducted by the following parties:

Building Inspector
 - a. Inspection 1 - Trench excavation and bedding placement.
 - b. Inspection 2 - Conduit and pull wire installation.
 - c. Inspection 3 - Backfilling pipe.
 - d. Inspection 4 - Wire installation.
 - 2. Work may not be back filled or otherwise covered until all have completed inspections or measurements as required to satisfy the intent of this section.
- F. Power can come from the Philip Johnson building. See electrical note on sheet C3 of Site Development Plans.

END OF SECTION 02700

SECTION 02708 – TIMBER GUIDE RAIL**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Attention is directed to the Contract, General Conditions, Modifications to General Conditions, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

- A. The work includes all labor, material, equipment and incidentals required to furnish and install timber guide rail complete as shown on the Drawings and/or specified herein including driving posts or excavation of post holes and backfilling such holes.

1.3 RELATED WORK

- A. Examine Contract Documents for requirements that affect work of this Section. Other Specifications Sections that directly relate to work of this Section include, but are not limited to:

TRENCHING, BACKFILLING AND COMPACTION
SITE CONCRETE BACKFILL

SECTION 02221
SECTION 02540

1.4 SUBMITTALS AND CODES

- A. Certifications and/or manufacturers product data of materials listed in part 2. Shop drawing is to be provided to Engineer.
- B. Wherever reference is made to the D.O.T. Specifications, it shall mean the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 (2004), as modified by Supplemental Specifications issued by the Connecticut Department of Transportation.

1.5 QUALIFICATIONS

- A. All workmen shall be experienced in the handling and construction of guiderail. Work shall be performed in accordance with good workmanship practices.

1.6 EQUIPMENT

- A. All equipment for driving and handling shall be in good condition and capable of setting materials plumb and true to line and grade.

PART 2 - PRODUCTS**2.1 MATERIALS**

- A. Bolts and nuts shall be galvanized steel conforming to ASTM A 153, Class C and ASTM A 307.
- B. Wooden guide rails and post shall be construction grade (stress grade of 1,200 psi or more) and shall conform to AASHTO M 168. The length and cross sections shall be made to match the dimensions as shown on the plans.

- C. All wood material shall receive a preservation treatment in accordance with AASHTO M 133.

PART 3 - EXECUTION

- A. Posts shall be set plumb. The posts shall be backfilled with acceptable material and thoroughly compacted to the satisfaction of the Engineer. Any damage to the posts, railing, adjacent pavement or gravel driveway, or adjacent slopes resulting from any aspect of material storage or installation shall be repaired at the expense of the Contractor.
- B. The rail element length and cross sections shall be made to match the dimensions as they currently exist on site.

END OF SECTION 02708

SECTION 02720 – SANITARY SEWER SYSTEM**PART 1 - GENERAL****1.01 RELATED DOCUMENTS**

- A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.02 WORK INCLUDED

- A. The work includes the complete installation of sanitary sewer systems as indicated on the plans. The removal of existing manholes, placement of new manholes and piping, all related trench excavation, bedding material, compaction, dewatering, line and grade, testing and the furnishing of all labor and materials for this work is included.

1.03 RELATED WORK

- A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

GRADING	SECTION 02212
TRENCHING, BACKFILLING AND COMPACTING	SECTION 02221
CUTTING AND PATCHING	SECTION 02230
SEDIMENTATION AND EROSION CONTROL	SECTION 02270
STORM DRAINAGE SYSTEM	SECTION 02730

1.04 SUBMITTALS & CODES

- A. Certifications and/or manufacturers product data of materials listed in part 2.
- B. Wherever reference is made to the D.O.T. Specifications, it shall mean the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 (2004), as modified by Supplemental Specifications issued by the Connecticut Department of Transportation.
- C. Town of Ridgefield Engineering Department Regulations and Standards.

PART 2 - PRODUCTS**2.01 MATERIALS-Specifications unless specified on the plans.**

- A. Sewer Pipe - Polyvinyl Chloride Pipe; ASTM Standard D3034 / SDR 35 with gasketed push-on type bell and spigot joints for gravity sanitary sewer lines.
- B. Manholes - to be precast reinforced concrete manufactured in accordance with ASTM c478-64T. Joints shall be formed entirely in concrete with a round rubber gasket installed in accordance with manufacture's recommendations. Base sections shall be furnished by the manufacturer with a flexible rubber sleeves or approved alternate. Invert shall be formed in the field and conform to the shape and size of the pipe. Benches shall be monolithically concrete and drain toward the invert. Manholes to be reinforced for HS-20 traffic loading. Heavy duty cast iron manholes frames to grade. All openings to be precast, no cutting of tanks will be permitted. Shall be precast
- C. Mortar- Shall conform to the requirements of Section M.11.04 of the D.O.T. specifications.

- D. All other materials as per details on project plans.

PART 3 - EXECUTION

3.01 SANITARY SEWER SYSTEM, GENERAL

- A. All work shall conform to the above referenced codes and be performed by licensed plumbers.
- B. The sewer piping shall be placed in trenches in accordance with the details on the plans. It is the contractor's responsibility to assure protection of the work during inclement weather. Install all piping per the lines, grades and slopes shown on the plans.
- C. Manholes shall be constructed in accordance with the plans and Section 5.07 of the D.O.T. specifications. Inlet and outlet pipes shall be flushed with the inside of the manhole and be watertight. All concrete and reinforcement shall be in accordance with Sections 6.01 and 6.02 of the D.O.T. specifications. Previous material shall be used for backfill the upper portion of the excavation.
- D. The system shall be inspected for leakage in accordance with the Town of Ridgefield Engineering Department requirements and any leaks found shall be corrected at the contractor's expense.
- E. Job safety shall be the responsibility of the Contractor. Contractor shall be responsible for following all O.S.H.A requirements and all other local, State and Federal requirements. The design Engineer or their representatives shall not be responsible for any working conditions that occur during the construction of this project.

END OF SECTION 02720

SECTION 02730 – STORM DRAINAGE SYSTEM**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

- A. The work includes the complete installation of storm drainage systems as indicated on the plans. The placement of pipe culvert, culvert ends, construction of catch basins, U-drains (curtain drains), manholes, detention system, hydrodynamic separators, all related trench excavation, bedding material, compaction, dewatering, line and grade and the furnishing of all labor and materials for this work is included.

1.3 RELATED WORK

- A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

TRENCHING, BACKFILLING AND COMPACTING	SECTION 02221
CUTTING AND PATCHING	SECTION 02230
RIPRAP	SECTION 02261
ROCK AND BOULDER REMOVAL	SECTION 02211

1.4 SUBMITTALS AND CODES

- A. Certifications and/or manufacturers product data of materials listed in part 2.
- B. Wherever reference is made to the D.O.T. Specifications, it shall mean the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 (2004), as modified by Supplemental Specifications issued by the Connecticut Department of Transportation.

PART 2 - PRODUCTS**2.1 MATERIALS-Specifications unless specified on the plans.**

- A. Bedding material shall be sand which passes a 3/8 inch sieve, and not more than 10% passes a No. 200 sieve. When "Fine Aggregate is used on the plans it shall mean Bedding Material. When ground water is encountered the use of 3/4 inch stone conforming to Section M.01.01 of the D.O.T. Specifications may be permitted upon approval of the Engineer. All material shall conform to Section M.08.0121.
- B. Bank Run Gravel shall conform to Grading "A" of Section M.02.06 of the D.O.T. Specifications.
- C. Pipe culverts shall be the type, size and class as specified on the plans. PVC shall be Polyvinyl Chloride Plastic Pipe in accordance with Article M.08.02.27 of the D.O.T. Specifications. RCP shall mean Reinforced Concrete Pipe in accordance with Article M.08.01.6. When no class is specified on the plans class IV or better shall be used. CPEP-S shall mean corrugated polyethylene pipe with smooth interior culvert in accordance with Article M.08.01.25 as manufactured by Hancor "Hi-Q" or ADS "N-12" or approved equivalent. All structures shall meet Connecticut DOT specifications.
- D. Gaskets shall be preformed plastic gaskets or flexible, watertight, rubber-type gaskets conforming to Article M.08.01 of the D.O.T. Specifications.

- E. Concrete and reinforcement shall conform to Article M.03.01, Class “C” and M.06.01 of the D.O.T. Specifications.
- F. Mortar: Shall conform to the requirements of Section M.11.04 of the D.O.T. Specifications.
- G. 1” Stone: Shall conform to the requirements of Section M.01.01, grading No.4 of the D.O.T. Specifications.
- H. 1/2” Stone: Shall conform to the requirements of Section M.01.01, grading No.6 of the D.O.T. Specifications.
- I. Filter Fabric: Shall be non-woven with minimum physical properties of 1.5 ounce per square yard (per ASTM D-3776) and a flux of 100 gallons per square foot minimum (per ASTM D-4491).
- J. Catch basins and manholes shall conform to the requirements of Section M.08.02 of the D.O.T. Specifications.
- K. Contech Engineered Solutions – CDS Hydrodynamic Separators.

PART 3 - EXECUTION

3.1 STORM DRAINAGE CONSTRUCTION, GENERAL

- A. Construction Methods for this work shall generally conform to the requirements of Section 2.05, Section 5.07, Section 6.01, Section 6.02, Section 6.51 and Section 6.52 of the D.O.T. Specifications.
- B. Trench excavation shall be to the depths as indicated on the plans. When a drainage structure or pipe is to be eliminated it shall be completely removed and all pipes plugged with cement masonry or removed completely and the excavation backfilled. All excavation and backfilling shall be in accordance with Section 2.05 of the D.O.T. Specifications
- C. Pipe bedding shall be placed in accordance with the details on the plans. Bedding material under the pipe shall be four inches and pre-shaped to 10 % of the pipe diameter. After the pipe is installed bedding material shall be placed in accordance with the details on the plan. When poor foundation material is encountered installation shall be in accordance with Section 6.51.03 of the D.O.T. Specifications
- D. Pipe installation shall start at the downstream end and progress upstream. Pipe shall be installed true to lines and grade as shown on the plans. Hubs shall be upgrade with the spigot ends fully entered into the adjacent hubs. Pipe installation under the building shall conform to the plumbing.
- E. Install plastic marker tape 12” above all storm drains and culverts.
- F. Concrete Culvert Ends shall be placed on a six inch bank run gravel base. They shall be accurately aligned and the joints sealed as specified in Article 6.51.03 of the D.O.T. Specifications.
- F. Catch basins and manholes shall be constructed in accordance with the plans and Section 5.07 of the D.O.T. Specifications. Inlet and outlet pipes shall be flushed with the inside of the catch basin/manhole and be watertight. All concrete and reinforcement shall be in accordance with Sections 6.01 and 6.02 of the D.O.T. Specifications. Previous material shall be used for backfill the upper portion of the excavation.
- G. All catch basins, culverts, manholes, tanks etc. shall be completely cleaned of sediment or other debris prior to contractor vacating the site.

END OF SECTION 02730

SECTION 02785 – BLUESTONE PAVEMENT**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

A. The work includes all labor, material, equipment and incidentals required to construct bluestone paving, complete in place as shown on the Drawings and as specified.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

GRADING	SECTION 02212
SITE CONCRETE	SECTION 02540
TRENCHING, BACKFILL AND COMPACTION	SECTION 02221

1.4 SUBMITTALS AND CODES

A. Certifications and/or manufacturer's product data of materials listed in part 2.

B. Wherever reference is made to the D.O.T. Specifications, it shall mean the Connecticut Department of Transportation Standard Specifications for Roads, Bridges and Incidental Construction, Form 816 (2004), as modified by Supplemental Specifications issued by the Connecticut Department of Transportation.

C. In accordance with the General Requirements, submit copies of materials certificates signed and certified that the material item complies with, or exceeds, specified requirements.

D. Samples: submit samples for initial selection purposes in the form of actual units or sections of units showing full range of colors, textures, and patterns available.

E. Qualification data: submit qualification data for firms to demonstrate their capabilities and experience in installing bluestone pavements and steps. Include a list of completed projects with project names, addresses, names of Architects and Owners, plus other information as appropriate.

1.5 QUALITY ASSURANCE

A. Installer qualifications: engage an experienced installer who has successfully completed bluestone pavement installations similar in material, design, and extent to that indicated for this project.

B. Single-source responsibility: obtain each color, type and variety of paver units and jointing materials from a single source with resources to provide products and materials of consistent quality in appearance and physical properties without delaying the progress of the work.

C. Field-constructed mock-ups: construct a 10' x 10' (minimum) area of bluestone pavement at a location as approved by the Engineer. Demonstrate quality of workmanship that will be produced in the final unit of work. Obtain the Engineer's approval of mock-up before continuing with the work. Approved mock-ups, if approved and in undisturbed condition at the time of substantial completion, may become part of the completed work.

1.6 JOB CONDITIONS

- A. Protection: protect materials during storage and construction against wetting by rain, snow or groundwater and against damage or contamination from earth and other materials.
- B. Weather: do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds. Remove and replace paver work damaged by frost or freezing.
- C. Grade control: establish and maintain required lines and elevations.

PART 2 - PRODUCTS2.1 MATERIALS - Specifications unless specified on the plans.

- A. General: use locally available materials and gradations which exhibit a satisfactory record of previous installations.
- B. Bluestone pavers: shall be durable, rectangular, bluestone pavers conforming to the following;
1. Size: thickness of pavers shall be 2-1/2" nominal. (2" minimum) Face size of pavers shall be as required to create patterns as shown on the drawings. Edges of pavers shall be sawn.
 2. Finish: shall be natural cleft.
 3. Color: pavers shall be grey to blue in color. No red or green colored pavers shall be used.
- C. Bedding sand: clean, non-plastic sand manufactured from crushed rock. Do not use limestone screenings, stone dust or other materials with particles that pass the No. 200 sieve. Bedding sand shall conform to the following gradation when tested in accordance with ASTM C 136.

<u>Sieve Size</u>	<u>Percent Passing</u>
3/8 in. (9.5 mm)	100
No. 4 (4.75 mm)	95 - 100
No. 8 (2.36 mm)	85 - 100
No. 16 (1.18 mm)	50 - 85
No. 30 (0.600 mm)	25 - 60
No. 50 (0.300 mm)	10 - 30

- D. Joint sand: clean, non-plastic sand manufactured from crushed rock. Joint sand shall conform to the following gradation when tested in accordance with ASTM C 136.

<u>Sieve Size</u>	<u>Percent Passing</u>
No. 4 (4.75 mm)	100
No. 8 (2.36 mm)	95 - 100
No. 16 (1.18 mm)	70 - 100
No. 30 (0.600 mm)	40 - 100
No. 50 (0.300 mm)	20 - 40
No. 100 (0.150 mm)	10 - 25
No. 200 (0.075 mm)	0 - 10

- E. Base course: processed aggregate conforming to the requirements of CTDOT Form 816, Section M.05, Article M.05.01.

PART 3 - EXECUTION**3.1 INSPECTION**

A. Examine the existing slab to remain and areas and conditions under which work of this Section will be installed. Correct conditions detrimental to proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 EXISTING CONCRETE SLAB

A. Place processed aggregate base over existing concrete slab to proper elevation.

3.3 INSTALLATION OF BLUESTONE PAVEMENTS - GENERAL

A. Do not use unit pavers with chips, cracks, voids, discolorations, and other defects that might be visible or cause staining in the finished work.

B. Cut pavers with motor-driven masonry saw equipment to provide clean, sharp, unchipped edges. Cut units to provide pattern indicated and to fit adjoining work neatly. Use full units without cutting where possible. Hammer cutting is not acceptable.

C. Lay pavers in joint pattern shown. Set pavers with hand-tight (buted) joints to 1/4" maximum joint spacing.

3.4 INSTALLATION OF BLUESTONE PAVEMENTS

A. Bluestone pavers: set pavers by hand in setting bed to create pattern as shown on the Drawings. Trim pavers as necessary to achieve desired pattern and joint spacing.

B. Select pavers to achieve a uniform appearance throughout the pavement area.

C. Align paver pattern with the existing building face.

D. Spread joint sand and fill joints immediately after setting pavers into setting bed. Brush sand until joints are completely filled, then remove surplus sand.

E. Do not allow traffic onto installed pavers until joints have been filled.

3.6 REPAIR, CLEAN-UP AND PROTECTION

A. Protect from traffic during all operations.

3.7 FINISH TOLERANCES

A. Remove and replace pavers that are loose, chipped, broken, stained, or otherwise damaged or if units do not match adjoining units as intended. Provide new units to match adjoining units and install in same manner as original units with same joint treatment to eliminate evidence of replacement.

B. Provide final protection and maintain conditions in a manner acceptable to installer, which ensures paver work being without damage or deterioration at time of substantial completion.

END OF SECTION 02785

SECTION 02825 – ORNAMENTAL FENCING**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

The contractor shall provide all labor, materials and other items necessary for installation of the ornamental aluminum fence system defined herein.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

GRADING	SECTION 02212
TRENCHING, BACKFILLING AND COMPACTING	SECTION 02221
SITE CONCRETE BACKFILL	SECTION 02540

1.4 SYSTEM DESCRIPTION

A. The manufacturer shall supply a total ornamental aluminum fence system of the style, strength, size, and color defined herein. The system shall include all components (pickets, posts, rails, gates, hardware, and accessories) as required, and shall be fabricated, coated, and assembled in the United States.

1.5 QUALITY ASSURANCE

A. The contractor shall provide laborers and supervisors who are familiar with the type of construction involved, and the materials and techniques specified.

B. Manufacturer of fence system must have ten (10) years of documented experience in manufacturing the products specified in this section.

1.6 REFERENCES

A. AAMA 2604 – Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels

B. AAMA 2603 – Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels

C. ASTM B117 – Practice for Operating Salt Spray (Fog) Apparatus

D. ASTM D2247 – Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity

E. ASTM B221 – Specification for Aluminum Alloy Extruded Bars, Shapes, and Tubes

F. ASTM B85 – Standard Specification for Aluminum-Alloy Die Castings

1.6 SUBMITTALS

A. Qualification of Workmen:

1. All workmen shall be experienced in the handling and construction of extruded polyvinyl chloride (pvc). Work shall be performed in accordance with good workmanship practices.

B. Shop Drawings: Contractor shall prepare a shop drawing for the proposed fence installations, and submit same to the owner and the engineer for approval prior to construction. Shop drawing shall include and specify all items required for construction. All hardware, caps and other appurtenances shall be rounded and otherwise fabricated and erected to point any protruding edges away from pedestrian access. Layout of fence and gates with dimensions, details and finishes of component accessories and post foundations.

1.7 STANDARDS

A. Provide fencing as complete units with each produced by a single manufacturer, including all necessary erection accessories, fittings and fasteners.

B. Installer: shall be fully experienced in fence installations.

C. All fencing and ADA compliant material is to meet all applicable building and Accessibility codes.

1.8 PRODUCT HANDLING AND STORAGE

A. Upon receipt, materials should be checked for damage that may have occurred in shipping to the job site.

B. Each package shall bear the name of the manufacturer.

C. Store products in manufacturer's unopened packaging.

D. Store materials in a secure and dry area to protect against damage, weather, vandalism, and theft.

E. Transport, handle and store products with care to protect against damage before installation.

PART 2 - PRODUCTS2.1 ORNAMENTAL FENCING

A. The fencing system shall be Residential Strength Aluminum Ornamental Fence as manufactured by Jerith Manufacturing LLC, 14400 McNulty Road, Philadelphia, PA 19154. Telephone: 800-344-2242; Fax: 215-676-9756; email: sales@jerith.com.

B. Substitutions: Only if approved by the owner.

C. Fence shall be Jerith Style # 202.

D. Fence height shall be 54 inches.

E. Color shall be Black.

2.2 MATERIALS

A. Aluminum Extrusions: All posts and rails used in the fence system shall be extruded from HS-35™ aluminum alloy having a minimum yield strength of 35,000 psi. All pickets shall have a minimum yield strength

of 25,000 psi. 6063-T5 and 6063-T52 Alloys (in accordance with ASTM B221) are not acceptable for any components.

B. Fasteners: All fasteners shall be stainless steel. Hidden spring clip shall be used to connect the pickets to the horizontal rails. Rail to post connections shall be made using stainless steel screws with heads painted to match the color of the fence.

C. Accessories: Aluminum sand and die castings shall be used for all scrolls, post caps, finials, and miscellaneous hardware. Die castings shall be made from Alloy A360.0 as per ASTM B85 for superior corrosion resistance. Alloy A380.0 is not acceptable.

2.3 FINISH

A. Pretreatment: A three stage non-chrome pretreatment shall be applied. The first step shall be a chemical cleaning, followed by a water rinse. The final stage shall be a dry-in-place activator which produces a uniform chemical conversion coating for superior adhesion.

B. Coating: Fence materials shall be coated with FencCoat™, a Super-Durable TGIC polyester powder-coat finish system applied by Jerith Manufacturing LLC. Epoxy powder coatings, baked enamel or acrylic paint finishes are not acceptable. The FencCoat finish shall have a cured film thickness of at least 2.0 mils.

C. Tests: The cured finish shall meet or exceed AAMA 2604, which includes the following requirements:

1. Humidity resistance of 3,000 hours using ASTM D2247.
2. Salt-spray resistance of 3,000 hours using ASTM B117.
3. Outdoor weathering shall show no adhesion loss, checking or crazing, with only slight fade and chalk when exposed for 5 years in Florida facing south at a 45-degree angle.

D. Finishes that only meet AAMA 2603 (or the previous version - AAMA 603) are not acceptable.

2.4 FABRICATION

A. Horizontal rails shall be 1" channels formed in a modified "U" shape. Pickets shall pass through holes punched in the top of the rail. The top wall shall be .055" thick and the side walls .082" thick for superior vertical load strength. There shall be 3 horizontal rails (4 rails for 72" high fence) in each section.

B. Pickets shall be fastened to the rails using stainless steel spring clips that are hidden inside the rails. Pickets shall be 5/8" square and have a wall thickness of .050". Plastic clips and screws, whether hidden or visible, are not acceptable. Welding the pickets to the rails is not permitted.

C. Posts shall be 2" square extrusions with pre-punched holes which allow the fence section rails to slide in. Posts shall be spaced 72½" on center and have [.060" or .125"] walls. Gate posts shall be [2" or 4"] square with .125" walls and used on both sides of a gate. Die cast aluminum caps shall be provided with all posts.

D. Gates shall have welded frames and shall support a 250-lb. vertical load on the latch side of the gate without collapsing. Walk gates shall be self-closing and self-latching.

E. Assembled sections shall support a 350-lb. vertical load at the midpoint of any horizontal rail.

F. The Jerith logo shall appear on all post caps, gates, and horizontal rails of the fencing system.

2.5 WARRANTY

A. The entire fence system shall have a written Limited Lifetime Warranty against rust and defects in workmanship and materials. In addition, the FencCoat finish shall be warranted not to crack, chip, peel, or blister for the same period.

PART 3 - EXECUTION**3.1 PREPARATION**

- A. Verify areas to receive fencing are completed to final grades and elevations.
- B. Ensure property lines and legal boundaries are clearly established.
- C. Remove any surface irregularities which may cause interference with the installation of the aluminum fence.

3.2 FENCE INSTALLATION

- A. Install fence in accordance with the manufacturer's instructions.
- B. Excavate post holes to proper depth to suit local conditions for stability and support of the fence system without disturbing the underlying materials. Excavate deeper as required for adequate support in soft and loose soils.
- C. Set fence posts in concrete footers at 72½" on center maximum. For installations on a slope, the post spacing must be measured along the grade.
- D. Insert notched horizontal rails in pre-punched holes in post and fasten in place.
- E. Center and align posts in holes to required depth. Place concrete around posts and tamp for consolidation. After tamping, check alignment of posts, and make necessary corrections before the concrete hardens.

3.3 GATE INSTALLATION

- A. Set gate posts plumb and level for gate openings specified in construction drawings.
- B. Install gates to allow full opening without interference after concrete has hardened around gate posts. Adjust hardware for smooth operation. Install one drop rod for double gates.

3.4 ACCESSORIES

- A. Install post caps and other accessories to complete fence.

3.5 CLEANING

- A. Contractor shall clean site of debris and excess materials. Post hole excavations shall be scattered uniformly away from posts.
- B. If necessary, clean fence system with mild household detergent and clean water. Excess concrete must be removed from posts and other fencing material before it hardens.

END OF SECTION 02825

SECTION 02900 – LOAMING AND SEEDING**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

- A. Furnish all labor, materials, equipment and incidentals necessary to loam, fertilize, seed, mulch and maintain all seeded areas as shown on the Drawings and/or specified herein, and any other areas disturbed by the Contractor's operations.

1.3 RELATED WORK

- A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

CLEARING AND GRUBBING	SECTION 02130
GRADING	SECTION 02212
TRENCHING, BACKFILLING AND COMPACTING	SECTION 02221
LANDSCAPING	SECTION 02481

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Engage experienced trained personnel in this type of work.

1.5 DELIVERY, STORAGE & HANDLING

- A. Fertilizer shall be delivered to the site in the original unopened containers each showing the manufacturers guaranteed analysis, and stored so that when used it shall be dry and free flowing.
- B. Lime shall be delivered and maintained in a dry, free flowing condition.
- C. Seed shall be delivered in sealed containers bearing the dealer's guaranteed analysis and stored in a dry, protected place.

1.6 WARRANTY

- A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.
- B. Special Warranty: Warrant all lawn areas where seed is installed for a period of one year after date of Substantial Completion, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by Owner, abnormal weather conditions unusual for warranty period, or incidents which are beyond Contractor's control.
- C. If the Engineer deems an area of seeding to be unsatisfactory, the contractor shall rake and reseed and mulch as required for proper germination.

PART 2 - PRODUCTS**2.1 MATERIALS**

- A. Loam shall be fertile, natural soil, typical of the locality, substantially free of stones, roots, sticks, clay, peat, weeds and sod, and obtained from naturally well-drained areas.
 - 1. It shall not be excessively acid or alkaline, nor contain toxic material harmful to plant growth. Any topsoil stockpiled as a result of operations under Section 02212 may be used, but the Contractor shall furnish any additional loam at his own expense.
- B. Fertilizer shall be complete commercial fertilizer, 10-10-10 grade.
- C. Lime shall be ground limestone containing not less than 85% calcium and magnesium carbonates.
- D. Seed shall be from the same or previous year's crop and shall have not more than 1% weed content. Seed shall also meet the following requirements:
 - 1. Grass seed of the specified mixture shall be furnished in fully labeled, standard, sealed containers.
 - 2. Percentage and germination of each seed type in the mixture, purity, and weed seed content of the mixture shall be clearly stated on the label.
- E. Hay mulch shall consist of mowed and properly cured grass or legume mowings, free from swamp grass, weeds, twigs, debris or other deleterious material. It shall be free from rot or mold.

PART 3 - EXECUTION**3.1 GENERAL**

- A. Rake the subgrade of all areas to be loamed for seed or ground cover and remove all rubbish, sticks, roots and stones larger than 2 inches. Spread and lightly compact the loam to finished grade as shown on the Drawings. When finished grades are not indicated, they shall be uniform between the points to existing grades, except that the top and bottom of slopes shall be rounded.
- B. After the loam is placed and before it is raked to true lines and rolled, spread limestone evenly over loam surface and thoroughly incorporate into the loam by heavy raking to at least one-half the depth of the loam.
- C. Uniformly spread fertilizer and immediately mix with the upper 2 inches of loam. Immediately following this preparation, uniformly apply the seed and lightly rake the seed into the surface. Lightly roll the surface and water with a fine spray.
- D. Seeding and fertilizing shall be done between April 1 and June 1, between August 15 and October 15, or as directed or permitted. Seeding shall not be done during windy weather or when the ground is frozen, excessively wet, or otherwise untillable. Promptly thereafter, or within 24 hours after the seeding operation, lightly and uniformly mulch the area with hay.
- E. Protect against washouts by an approved method. Any washout which occurs shall be regarded and reseeded at the Contractor's expense until a good sod is established.

3.2 APPLICATION RATES

Place loam to a minimum depth of 6 inches.
Apply lime at the rate of 50 to 100 lbs. per 1,000 square feet.
Apply fertilizer at the rate of 30 pounds per square feet.
Seed shall be applied at the rate of 4-6 pounds per 1,000 square feet.

Apply mulch at the rate of 90 lbs. per 1,000 square feet.

3.3 MAINTENANCE

- A. Keep all seeded areas watered and in good condition, reseeding if and when necessary until a good, healthy, uniform growth is established over the entire area seeded, and maintain these areas in an approved condition until final acceptance of growth by the Engineer. The maintenance shall include repairs for damage caused by erosion.
- B. Inspection of the work of seeding will be made upon the establishment of the specified growth. Notice requesting inspection shall be submitted to the Engineer at least five days prior to the anticipated date.

END OF SECTION 02900

SECTION 02989 – MISCELLANEOUS WORK AND CLEAN UP**PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

A. Attention is directed to the Contract, General Conditions, Modifications, and all Sections within Division 1, General Requirements, which are hereby made a part of this Specification Section.

1.2 WORK INCLUDED

Furnish all labor, materials, equipment and incidentals required to do all miscellaneous work and cleaning up not otherwise specified. The work of the Section includes, but is not limited to, the following:

1. Continual clean up of site.
2. Cleaning up.
3. Incidental work.

1.3 RELATED WORK

A. Examine Contract Documents for requirements that affect work of this Section. Other Specification Sections that directly relate to work of this Section include, but are not limited to:

GRADING

SEDIMENTATION AND EROSION CONTROL

SECTION 02212

SECTION 02270

PART 2 – PRODUCTS-**2.1 MATERIALS-Not applicable****PART 3 - EXECUTION****3.1 CLEANUP**

A. Maintain the site of the work as neat as possible, free of debris and rubbish. At the conclusion of the work, the Contractor shall remove all construction material, excess excavation, equipment and all other debris remaining on the job as a result of construction operations unless otherwise specified herein or directed by the Engineer.

3.2 INCIDENTAL WORK

A. Do all incidental work not otherwise specified but obviously necessary to the proper completion of the Contract as specified and as shown on the Drawings.

END OF SECTION 02989

SECTION 16010 - ELECTRICAL GENERAL PROVISIONS**PART 1 GENERAL****1.01 RELATED DOCUMENTS**

- A. This Division is a part of the entire set of Contract Documents and shall be coordinated with the applicable provisions of the other parts. The following requirements clarify, amend or are in addition to the requirements set forth under the General Conditions and Division 1.
- B. In case of any discrepancy between the various Drawings, or between parts of the Specifications or between Drawings and Specifications, the matter shall immediately be submitted to the Engineer and, for Contractual purposes, the most expensive condition shall apply.

1.02 INTENT

- A. It is the intention of the Specification and Drawings to call for finished work, tested and ready for operation.
- B. Any apparatus, material, incidental accessories or work not shown on the Drawings or itemized in the Specification, but reasonably implied and necessary to make the Work complete and perfect in all respects and ready for operation, shall be provided by the Contractor without additional expense to the Owner.
- C. Major items of equipment are specified on the Drawings or in the Specifications and shall be furnished complete with all accessories normally supplied.
- D. Minor details not shown nor specified, but necessary for the proper installation and operation, shall be included in the Work and in the Contractor's estimate, the same as if herein specified.
- E. With submission of bid, Contractor shall give written notice of any materials or apparatus believed inadequate or unsuitable, in violation of laws, ordinances, rules or regulations of authorities having jurisdiction, and any necessary items of work omitted. In the absence of such written notice, it is mutually agreed that the Contractor has included the cost of all required items in his proposal.

1.03 DEFINITIONS

- A. "Engineer" is the person lawfully licensed to practice engineering or an entity lawfully practicing engineering as identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Engineer" means the Engineer or the Engineer's authorized representative.
- B. "Furnish" means to supply and deliver to the project site or appropriate trade.
- C. "Install" means to unpack, assemble, erect, fit up and connect in the specified or appropriate manner so as to be complete and ready for intended use.
- D. "Provide" means to furnish and install.

1.04 DRAWINGS

- A. Drawings when issued with these specifications are diagrammatic and indicate the general arrangement of systems and approximate location of apparatus to be provided. Exact locations of all equipment are to be coordinated by the Contractor and are subject to approval of the Engineer and Owner.

- B. The general runs of raceways, feeders, branch circuits, etc., are indicated on the drawings. It is not intended that the exact routing of these items be determined there from. Maintain maximum headroom and space conditions at all points.
- C. The locations of panels and other equipment indicated on the drawings are approximately correct, but they are understood to be subject to such revision as may be found necessary or desirable at the time the work is installed in order to meet field conditions or to simplify the work. The Contractor shall verify that all minimum distance and access requirements are met.
- D. The Contractor shall take special care in the installation of raceways where same is concealed to ensure that it does not project beyond the finish lines of floors, ceilings and walls.
- E. The Owner reserves the right to make reasonable changes before installation of equipment, without additional cost.

1.05 INSPECTION OF SITE

- A. The Contractor shall visit the site, examine and verify the conditions under which the work must be conducted before submitting a proposal.
- B. The submission of a Proposal implies that the Contractor and all Subcontractors as necessary have visited the site and are familiar with the conditions under which the work must be conducted.

1.06 WORK INVOLVING OTHER TRADES

- A. The Contractor is responsible for compliance with all local, state and federal licensing regulations, union jurisdictions, labor laws, etc., and shall engage qualified and licensed individuals to perform all aspects of the Work.

1.07 CODES, PERMITS & FEES

- A. The Contractor shall give all necessary notice, apply for all permits, coordinate with the Utility Company and pay all company governmental taxes, fees and other costs in connection with his work; file all necessary plans, all documents and obtain all necessary approvals from state and local departments having jurisdiction; obtain all required certificates of inspection for his work and deliver same to the Owner with copies to the Architect and Engineer before request for acceptance and final payment for the Work.
- B. All work shall be executed in accordance with the rules and regulations set forth in local, state and federal codes and the requirements of the local utility companies. Where the Drawings or Specifications indicate materials or construction in excess of code requirements, the Drawings or Specifications shall govern.

PART 2 PRODUCTS

2.01 MATERIALS & WORKMANSHIP

- A. All equipment and materials shall be new and in unblemished condition and shall be standard products of manufacturers regularly engaged in the production of electrical equipment.
- B. All equipment shall be UL listed and labeled and shall conform to the latest edition of the NEC Code.
- C. All material shall conform to the requirements of all applicable codes and shall be trademarked and/or grade-marked.

- D. All major items of equipment shall be furnished complete with all accessories normally supplied with the catalog items listed and all other accessories necessary for a complete, properly operating system.
- E. The drawing arrangements are based on the manufacturers listed, either in these specifications or on the schedules on the Drawings.
- F. If any other equipment is considered for approval it shall be equal in quality, durability, appearance, capacity and efficiency through all ranges of operation, shall fulfill the requirements of equipment arrangement and space limitations of the equipment shown on the Drawings and/or specified and shall be compatible with the other components of the system.

2.02 DEVIATIONS

- A. The Drawings and/or Specifications indicate the name, model number or type of equipment or materials to be used as a standard for the materials specified.
- B. Where the Contractor proposes to use an item of equipment other than that specified or detailed on the drawings, which requires any redesign, new drawings shall be prepared at his own expense after approval of the substitution is granted.
- C. Where such approved deviations require a different quantity and arrangement of raceways, supports, wiring, conduit and equipment from that specified or indicated on the drawings, the Contractor shall furnish and install any such raceways, structural supports, insulation, electrical wiring and conduits, or any other additional equipment required by the system at no additional cost to the Owner for this and any other trade affected by the change.
- D. Whether expressly specified or otherwise noted, no materials, products or equipment shall be incorporated in the new work without written approval.
- E. A satisfactory review of a submittal by the Engineer shall not be construed as an acceptance of a deviation unless that deviation is flagged as a deviation by the Contractor on the submittal.
- F. In cases where more than one manufacturer, material or product is specified by name, the Contractor has the option to use any one named, but he must notify the Engineer of his choice on the proposed submittal schedule.
- G. In cases where a single manufacturer, material, or product is specified with the words "or approved equal", or words of similar intent, the Contractor must prove to the Engineer's satisfaction that the material or product proposed is essentially equal in quality, design, capacity, size, availability, durability or other criteria to that specified. A complete installation of the proposed substitution shall have been in satisfactory use for a sufficient period of time to establish its value as equal.
- H. The Engineer shall have the final authority as to the acceptance of any substitutions. Any claims by the Contractor for extension of time or increase in cost as a result of such substitutions will not be accepted.

2.03 SUBMITTALS

- A. The materials, workmanship, design and arrangement of all work installed under the Contract shall be subject to the approval of the Engineer.
- B. No later than 15 days after the Contract Award, the Contractor shall submit to the Engineer a list of proposed manufacturers of equipment and materials with a submittal schedule for approval. Contractor's intent to use the exact equipment or material specified does not relieve him of the responsibility of submitting such a schedule.

- C. Submittals shall be provided in a timely manner and shall allow sufficient time for the Engineer to adequately review the submissions without delay to the scheduling of the Work.
- D. The Contractor shall review all submittals prior to submission to the Engineer to ensure the following:
 - 1. Specific conformance with each detail of the Drawings and Specifications.
 - 2. Accuracy of dimensions and completeness.
 - 3. Conformance with safe and sound practices.
 - 4. Proper coordination and fit with adjacent work of other trades.
- E. Submittals shall bear stamped evidence of checking by the Contractor when submitted to the Engineer's office.
- F. Submittals shall be clearly labeled with the following:
 - 1. Project name.
 - 2. Contractor's name and phone number.
 - 3. Specification Section number.
 - 4. Corresponding symbols and numbers from the drawings (ex. LP-1, for Lighting Panel, No. 1).
 - 5. All pertinent information, including intended use, service, voltage, dimensions, capacities, etc.
 - 6. Equipment cuts shall be project specific, and shall be Factory Drawings. Standard catalog and/or price sheet photocopies are not acceptable.
- G. Review by the Engineer shall not relieve the Contractor from responsibility of errors, deviation from Contract Documents or violation of sound practices.
- H. Should changes be indicated on the returned submittals, the Contractor shall provide revised submittals promptly until final acceptance by the Engineer. Any subsequent changes made to the submittals after initial review by the Engineer shall be indicated as such by the Contractor.
- I. Upon final acceptance of the submittals, the Contractor shall distribute copies as required for proper coordination or as directed by the Engineer.
- J. The Contractor shall keep one copy of each approved submittal in the field office at all times.
- K. The Contractor shall provide additional shop fabrication and field installation shop drawings as required by the Engineer during construction.

PART 3 EXECUTION

3.01 SAFETY

- A. In accordance with generally accepted construction practices and in particular Federal Regulation Part 1926, Subpart K and Subpart S (Occupational Safety and Health Act), latest edition (OSHA), the Contractor will be solely and completely responsible for conditions of the job site, including safety of

all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours.

3.02 SCHEDULING OF WORK

- A. Carefully examine the Drawings and Specifications, visit the site, and be fully informed as to all existing conditions, dimensions and limitations before starting the work.
- B. Once work is started, the Contractor shall complete the work without interruptions so as to return work areas to the Owner as soon as possible.
- C. The Contractor shall adequately protect and preserve all existing and newly installed work. The Contractor at his expense shall promptly repair any damage to facilities.
- D. Covering Work: No raceways, conductors, fittings, outlets or other work of any kind shall be covered up or hidden from view before it has been examined or approved by the Engineer and any authority having jurisdiction over same. Any imperfect work or material, which may be discovered shall be removed and corrected immediately after being rejected.
- E. The Contractor shall consult with the Owner as to the methods of carrying on the work so as not to interfere with the owner's operation any more than absolutely necessary; accordingly, all service lines shall be kept in operation as long as possible and the services shall only be interrupted at such times as will be designated by the Owner.
- F. The Contractor shall take all necessary precautions to protect the Owner's equipment and personnel from damage or injury due to his carrying on of the work. The area in which the Contractor is working must be kept as clean as possible at all times, with only a minimum amount of construction material at the site at one time.
- G. Materials and equipment must be placed to avoid interferences with the Owner's operation and shall be moved when directed by the Owner.

3.03 COORDINATION

- A. Before any work is installed, and before any equipment is fabricated or purchased, the Contractor shall carefully check the Drawings, and all job conditions. Any lack of coordination between the Work, the Drawings, Utility Company and/or job conditions shall be immediately reported to the Engineer in writing.
- B. Field Measurements: Verify the dimensions governing the work at the site. No extra compensation shall be claimed or will be allowed on account of differences between actual dimensions and those indicated on the Drawings.
- C. Examine adjoining work on which this work is dependent and report any work, which must be corrected. No waiver of responsibility for defective work shall be claimed or will be allowed due to the failure to report unfavorable conditions affecting this work.
- D. Exact locations of all equipment are to be coordinated by the Contractor and are subject to approval of the Engineer and the Owner.
- E. Generally, all work shall be installed so as to be readily accessible for operation, maintenance and repair. Such spaces and clearances shall, however, be kept to the minimum size required.
- F. Any rearrangement of conduits, panels or other such departures from the Drawings and the reasons there of, shall be submitted to the Engineer for approval, in the form of detailed drawings showing the proposed changes. No such changes shall be made without the prior approval of the Engineer.

3.04 PROTECTION OF PROPERTY

- A. In all occupied buildings, the Contractors shall be responsible for performing the work in a manner that will not affect the School's operation or harm existing equipment.
- B. This includes dust or dirt contamination, temperature or humidity fluctuations, production of noxious odors, disturbing noise or other disruptive conditions.
- C. Restore to its original condition, without expense to the Owner, any of the Owner's property that shall become damaged due to the negligence and/or work of the Contractor's employees or subcontractors.

3.05 REMOVALS

- A. In general, equipment to be removed is indicated on the Drawings. The Contractor shall legally dispose of these materials. **All bulbs shall remain the property of the Town of Ridgefield and shall be transported to a storage facility as designated.**
- B. Work that has been cut or partially removed shall be protected against damage until covered by permanent construction.

3.06 INTERRUPTIONS

- A. Where new work is to be connected to existing systems or equipment, the work shall be installed so as to minimize downtime or disruption of services. The Contractor shall schedule the work as directed by the Owner's field representative.
- B. Where temporary shutdown of essential systems is required the contractor shall make provisions to return the systems to normal operation at the end of each workday.

3.07 CUTTING AND PATCHING

- A. All cutting, patching and repair work caused by Contractor shall be the Contractors responsibility and shall be done by personnel skilled in the trade of the repair work. All such repairs shall be subject to the approval of the Engineer and Owner.

3.08 WALL, FLOOR AND ROOF PENETRATIONS

- A. Penetrations, if required, at building walls, partitions, floors and roofs shall be located in the field by the Contractor, and are subject to approval by the Engineer.

3.09 MAINTENANCE AND PROTECTION

- A. The Contractor shall be responsible for work and equipment until finally inspected, tested and accepted.
- B. Equipment and materials shall be protected from theft, injury or damage.
- C. Protect equipment outlets, conductors, conduit openings, etc. with temporary plugs or caps.
- D. Provide adequate storage for all equipment and materials delivered to the job site. Equipment set in place in unprotected areas must be provided with temporary protection.

3.10 CLEANING

- A. Remove rubbish and surplus materials from the job site each day and leave premises and work in a clean condition.

3.11 TESTS

- A. Conduct all tests and adjustments of equipment as specified or necessary to verify performance requirements of as required by authorities having jurisdiction. Submit data taken during such tests to Engineer. Pay all fees involved in required testing of equipment.

END OF SECTION

SECTION 16110 - CONDUITS AND FITTINGS**PART 1 GENERAL****1.01 CONDUIT AND FITTINGS**

- A. Conduit to be UL labeled and sized in accordance with NEC minimum size 1/2". Conduit to be UL approved for purpose or location in which it is to be used.
- B. All wiring for low tension, controls, communications and all other systems shall be in raceway specified for branch circuits unless specifically noted in other sections.

1.02 TYPES AND APPLICATIONS

- A. Types of conduit to be as follows for all feeders and distribution circuits, unless otherwise noted:

<u>Application</u>	<u>Types of Conduit</u>
Surface Mounted indoors	EMT
Exposed Outdoors	RGS
Grounding Conductor	RGS

1.03 CONTINUITY AND GROUNDING

- A. Fasten all conduits to each adjacent section and to all boxes, fittings, and equipment with firm clean metallic contact so that the entire conduit system is well and continuously grounded.

1.04 BUSHINGS AND LOCKNUTS

- A. Provide insulating bushings or connectors on all conduits. Install capped bushings on all conduits as soon as installed and remove only when wires are pulled. Conduit terminations within sheet metal enclosures and outlet boxes shall be secured by two locknuts, one on the inside and one on the outside. Provide an insulating bushing for each conduit or flexible conduit where entering a panel, pull box or outlet box. Locknuts and bushings shall be steel body.

1.05 RACEWAYS

- A. Install raceways from box or terminations as shown on the drawings or as required to effect circuiting described with circuit numbers adjacent to equipment. Grouping home runs or combining wires in common raceways will be allowed, with a maximum of four single pole branch circuits in a raceway. Increase wire sizes and raceways where required to avoid loss of ampacity as required by National Electrical Code.

1.06 EXPOSED CONDUIT

- A. Run conduit parallel or at right angle with building lines. Secure conduit to masonry material with toggle bolts, expansion bolts, or steel inserts. Do not install conduit on steel construction.

1.07 CONDUIT SPACING

- A. Maintain at least 1/4" air space between conduit and supporting wall. Conduit supports shall not be spaced further apart than permitted by NEC. Conduit shall not be supported by wires or from pipes, mechanical equipment and other conduits. Set anchors for supporting exposed conduits on waterproofed walls with waterproof cement.

PART 2 PRODUCTS**CONDUIT AND FITTINGS****16110-1**

2.01 CONDUIT

- A. Rigid Steel Conduit: Straight lengths, couplings, elbows, bends, and nipples shall be hot-dipped galvanized rigid steel complying with U/L Standard UL6 and ANSI Standard C80.1.
- B. Electrical Metallic Tubing: Straight lengths, elbows and offsets shall be electro-galvanized thin wall conduit complying with U/L Standard UL 797.
- C. Securely fasten conduits to sheet metal outlet, junction and pull boxes with galvanized double locknuts and insulating bushings, for rigid conduit, and with insulated throat steel set screw connectors for EMT.
- D. Provide pull boxes where required by Code to facilitate proper pulling of wires and cables. No more than Three (3) 90° bends shall be permitted between pull boxes. Vertical runs of conduit shall be equipped with pull boxes and cable supports, as required by Article 300-19 of the N.E.C.
- E. Unless otherwise noted, all UL listed manufacturers are approved provided they subscribe to UL reinspection services for the type of conduit or fittings indicated and/or specified.

2.02 PENETRATIONS

- A. Penetrations through walls, floor slabs and partitions shall be accomplished by using threaded conduit sleeves. Provide nipples or sleeves where prepared slots are not provided, prior to concrete placing, or core drill concrete as required. Prior to core drillings, submit a dimensioned sketch indicating the proposed penetration locations for approval by the Engineer. Provide approved fire stopping compounds on all penetrations and core drillings.
- B. Escutcheon plates shall be installed on all exposed conduit penetrations through the ceilings, wall, and floor into finished areas.
- C. Approved expansion fittings shall be used wherever conduit crosses the expansion joints shown on the architectural drawings. Expansion fittings shall be furnished with a suitable bonding jumper.

PART 3 EXECUTION**3.01 INSTALLATION**

- A. Install in accordance with the applicable provisions of the National Electrical Code, manufacturer's recommendations and the drawings.
- B. Take final field measurements prior to release for fabrication to assure coordination with other trades.

3.02 CLEANING OF CONDUIT

- A. Clear conduit of all obstructions and dirt prior to pulling in wires or cables.

END OF SECTION

SECTION 16452 - GROUNDING AND BONDING**PART 1 GENERAL****1.01 SCOPE**

- A. The Contractor shall provide all the equipment specified herein, in conformance with the terms and conditions stated. The contractor shall coordinate and verify the interface between each component provided to assure they are compatible and will operate properly in conjunction with each other.
- B. Provide grounding and associated equipment in accordance with the NEC, including but not limited to:
Equipment Grounds
Bonding jumpers
- D. The Contractor shall install the specified equipment, and shall provide all incidental materials noted or reasonably implied in these specifications or on the drawings. The Contractor shall make all connections and perform all installation procedures in accordance with the manufacturer's instructions.

PART 2 PRODUCTS**2.01 GENERAL**

- A. Ground terminations, clamps, bushings, etc. shall be listed for the purpose and shall be installed in accordance with manufacturer's recommendations.
- B. Provide grounding electrode sized as per NEC and terminate at building steel.
- C. Provide RGS ground conduit to protect bare copper conductor.

PART 3 EXECUTION**3.01 EQUIPMENT GROUNDING**

- A. Wire raceway, cable armor, panelboards, switches, and other non-current carrying metal parts shall be mechanically joined to form a continuous conduction metallic path and assure electrical continuity of the grounding circuits.
- B. In addition, an Equipment Grounding Conductor commonly described as a "green wire", shall be provided for feeders and branch circuits protected by over-current devices rated 30 amps and over. Also, such grounding conductors shall be provided for all motor circuits and raceways buried in the earth or using flexible conduit.
- C. The equipment grounding conductor shall be in the same raceway as the phase conductors and shall be insulated. When multiple raceways are required provide a separate grounding conductor for each raceway. The size of the equipment ground conductor shall be in accordance with the plans in multiple raceways. At pull boxes, panelboards and switchboards connect the grounding conductor to the ground bus and/or ground lug.
- D. Test all ground cables for continuity. Bare or insulated ground cables for electrical system and/or equipment enclosures shall be tested between ground sources and power equipment ground busses and between ground busses and individual equipment enclosures or transformer neutrals. Investigate and take remedial action when continuity values exceed 1 OHM.

END OF SECTION

SECTION 260923 - LIGHTING CONTROL DEVICES**PART 1 - GENERAL****1.1 SECTION REQUIREMENTS**

- A. Submittals: Product Data.

PART 2 - PRODUCTS**2.1 PERFORMANCE REQUIREMENTS**

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.2 DEVICES

- A. Electromechanical-Dial Time Switches: Comply with UL 917.
1. Contact Configuration: SPST.
 2. Contact Rating: 30-A inductive or resistive, 240-V ac.
 3. Circuitry: Allow connection of a photoelectric relay as substitute for on-off function of a program.
 4. Astronomical time dial.
 5. Eight-Day Program: Uniquely programmable for each weekday and holidays.
 6. Skip-a-day mode.
 7. Wound-spring reserve carryover mechanism to keep time during power failures, minimum of 16 hours.
- B. Outdoor Photoelectric Switches: Solid state, with SPST dry contacts rated for 1800-VA tungsten or 1000-VA inductive, to operate connected relay, contactor coils, and microprocessor input; complying with UL 773A.
1. Products:
 - a. **Tork DTS 400BP**
 2. Light-Level Monitoring Range: 1.5 to 10 fc, with an adjustment for turn-on and turn-off levels within that range.
 3. Time Delay: 15-second minimum.
 4. Surge Protection: Metal-oxide varistor.

PART 3 - EXECUTION**3.1 INSTALLATION**

- A. Install and aim sensors in locations to achieve at least 90 percent coverage of areas indicated. Do not exceed coverage limits specified in manufacturer's written instructions.
- B. Install field-mounting transient voltage suppressors for lighting control devices in Category A locations that do not have integral line-voltage surge protection.
- C. Label time switches and contactors with a unique designation.
- D. Verify actuation of each sensor and adjust time delays.

END OF SECTION 260923

SECTION 262726 - WIRING DEVICES**PART 1 - GENERAL****1.1 SECTION REQUIREMENTS**

- A. Submittals: Product Data.

PART 2 - PRODUCTS**2.1 PERFORMANCE REQUIREMENTS**

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with NFPA 70.

2.2 COMMERCIAL-GRADE DEVICES

- A. Devices that are manufactured for use with modular plug-in connectors may be substituted under the following conditions:
 - 1. Connectors shall comply with UL 2459 and shall be made with stranding building wire.
 - 2. Devices shall comply with the requirements in this Section.
- B. Device Color:
 - 1. Wiring Devices Connected to Normal Power System: Ivory unless otherwise indicated or required by NFPA 70 or device listing.
 - 2. Wiring Devices Connected to Emergency Power System: Red.
- C. Convenience Receptacles: NEMA WD 1, NEMA WD 6, Configuration 5-20R, and UL 498.
- D. Duplex GFCI Convenience Receptacles: 125 V, 20 A, straight blade, **feed** -through type. NEMA WD 1, NEMA WD 6, UL 498, and UL 943, Class A, and include indicator light that is lighted when device is tripped.
- E. Toggle Switches: NEMA WD 1 and UL 20. Single-pole, 120/277 V, 20 A.
- F. Momentary Contact Toggle Switches: NEMA WD 1 and UL 20. Single-pole, double-throw, momentary contact, center-off switches, 120/277 V, 20 A; for use with mechanically held lighting contactors.
- G. Pilot-Light Switches, 20 A: Single pole, with neon-lighted handle, illuminated when switch is "off."

2.3 DECORATOR-STYLE DEVICES

- A. Device Color:

1. Wiring Devices Connected to Normal Power System: Ivory unless otherwise indicated or required by NFPA 70 or device listing.
 2. Wiring Devices Connected to Emergency Power System: Red.
- B. Convenience Receptacles: Square face, 125 V, 15 A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-15R, and UL 498.
- C. Tamper-Resistant and Tamper-Resistant and Weather-Resistant Convenience Receptacles: Square face, 125 V, 15 A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-15R, and UL 498.: Labeled to comply with NFPA 70, "Receptacles, Cord Connectors, and Attachment Plugs (Caps)" Article, "Tamper-Resistant Receptacles in Dwelling Units" Section.
- D. GFCI, Feed-Through Type, Convenience Receptacles: Square face, 125 V, 15 A; comply with NEMA WD 1, NEMA WD 6 Configuration 5-15R, UL 498, and UL 943 Class A.
- E. Toggle Switches, Square Face, 120/277 V, 15 A: Comply with NEMA WD 1, UL 20, and FS W-S-896.
- F. Lighted Toggle Switches, Square Face, 120 V, 15 A: Comply with NEMA WD 1 and UL 20. With neon-lighted handle, illuminated when switch is "off."

2.4 RESIDENTIAL DEVICES

- A. Device Color: Ivory unless otherwise indicated or required by NFPA 70 or device listing.
- B. Tamper-Resistant and Tamper-Resistant and Weather-Resistant Convenience Receptacles, 125 V, 15 A: Comply with NEMA WD 1, NEMA WD 6 Configuration 5-15R, and UL 498.: Labeled to comply with NFPA 70, "Receptacles, Cord Connectors, and Attachment Plugs (Caps)" Article, "Tamper-Resistant Receptacles in Dwelling Units" Section.
- C. Fan Speed Controls: 120-V, full-wave, solid-state units with integral, quiet on-off switches and audible frequency and EMI/RFI filters. Comply with UL 1917.
1. Continuously adjustable rotary knob, 5 A.
 2. Three-speed adjustable rotary knob, 1.5 A.

2.5 WALL-BOX DIMMERS

- A. Dimmer Switches: Modular, full-wave, solid-state units with integral, quiet on-off switches, with audible frequency and EMI/RFI suppression filters.
- B. Control: Continuously adjustable rotary knob; with single-pole or three-way switching. Comply with UL 1472.
- C. Fluorescent Lamp Dimmer Switches: Modular; compatible with dimmer ballasts; trim potentiometer to adjust low-end dimming; dimmer-ballast combination capable of consistent dimming with low end not greater than 20 percent of full brightness.

2.6 WALL PLATES

- A. Wall Plates, Finished Areas: Smooth, high-impact thermoplastic, fastened with metal screws having heads matching plate color.

- B. Wall Plates, Unfinished Areas: Smooth, high-impact thermoplastic with metal screws.
- C. Wall Plates, Damp Locations: Thermoplastic with spring-loaded lift cover, and listed and labeled for use in wet locations.

2.7 FLOOR SERVICE FITTINGS

- A. Modular, above-floor, dual-service units suitable for wiring method used.
- B. Compartments: Barrier separates power from voice and data communication cabling.
- C. Service Plate: Rectangular, with satin finish.
- D. Power Receptacle: NEMA WD 6, Configuration 5-20R, gray finish, unless otherwise indicated.

2.8 MULTIOUTLET ASSEMBLIES

- A. Components produced by a single manufacturer designed for use as a complete, matching assembly of raceways and receptacles. Metal, with manufacturer's standard finish raceway with No. 12 AWG wire. One receptacle per 12 inches.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with NECA 1, including the mounting heights listed in that standard, unless otherwise noted.
- B. Do not use oversized or extra-deep plates. Repair wall finishes and remount outlet boxes when standard device plates do not fit flush or do not cover rough wall opening.
- C. Select device colors and wall plates as follows:
 - 1. For plastic covers, match device color.
 - 2. In dark-paneled walls, use brown devices.
 - 3. Above kitchen counters, use white devices with stainless-steel wall plates.
- D. Install unshared neutral conductors on line and load side of dimmers.
- E. Mount devices flush, with long dimension vertical, and grounding terminal of receptacles on top unless otherwise indicated. Group adjacent devices under single, multigang wall plates.

END OF SECTION 262726

Appendix A
State of Connecticut SBE/MBE Requirements

BID LANGUAGE (for DAS Contracting Portal Bid Notice)

This contract is subject to state contract compliance requirements, including non-discrimination statutes and set-aside requirements. State law requires a minimum of twenty-five (25%) percent of the state-funded portion of the contract be set aside for award to subcontractors holding current certification from the Connecticut Department of Administrative Services. The contractor must demonstrate good faith effort to meet the 25% set-aside goals.

BID NOTICE LANGUAGE (for print media)

This contract is subject to state set-aside and contract compliance requirements.

BID LANGUAGE (for bid documents)

The contractor who is selected to perform this State project must comply with CONN. GEN. STAT. §§ 4a-60, 4a-60a, 4a-60g, and 46a-68b through 46a-68f, inclusive, as amended by June 2015 Special Session Public Act 15-5.

State law requires a minimum of twenty-five (25%) percent of the state-funded portion of the contract for award to subcontractors holding current certification from the Connecticut Department of Administrative Services (“DAS”) under the provisions of CONN. GEN. STAT. § 4a-60g. (25% of the work with DAS certified Small and Minority owned businesses and 25% of that work with DAS certified Minority, Women and/or Disabled owned businesses.) The contractor must demonstrate good faith effort to meet the 25% set-aside goals.

For municipal public works contracts and quasi-public agency projects, the contractor must file a written or electronic non-discrimination certification with the Commission on Human Rights and Opportunities. Forms can be found at:

http://www.ct.gov/opm/cwp/view.asp?a=2982&q=390928&opmNav_GID=1806

Non-Discrimination and Affirmative Action Provisions

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

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

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

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

(Revised 09/3/15)

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

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

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

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

INSTRUCTIONS AND OTHER INFORMATION

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

1) Definition of Small Contractor

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

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

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

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

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

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

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

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

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

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

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

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

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

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

PART I - Bidder Information

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

PART II - Bidder Nondiscrimination Policies and Procedures

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

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

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

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

Yes__ No__

PART IV - Bidder Employment Information

Date:

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

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

PART V - Bidder Hiring and Recruitment Practices

(Page 5)

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

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

(Signature)	(Title)	(Date Signed)	(Telephone)
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Appendix B
Hazardous Material Removal

ASBESTOS WASTE REMOVAL PROCEDURES

- A. An abatement plan must be written for submission to the Connecticut Department of Health (CTDPH) and include layout of regulated area/Exclusion Zone (EZ).
- B. Asbestos work area signage will be posted in both English and Spanish at all perimeter barriers to the EZ.
- C. Asbestos dumpsters will be labeled #9 for asbestos waste and placarded with #2212 per Department of Transportation (DOT) regulation, and waste labeled in accordance with NESHAP, 40 CFR, Part 61.150 requirements, with warning signs posted on the dumpster in accordance with Sections 29 CFR 1926.1101 of the OSHA regulations.
- D. Notifications and fees are the responsibility of the asbestos abatement contractor.
- E. Amended water will be used to wet down the contaminated contents of the pile within the EZ.
- F. The contaminated wastes will remain covered while on-site with 2 layers of 6 mil polyurethane sheeting until abatement work activities are completed.
- G. A Remote 3-Stage Decontamination unit (including shower assembly) is required at the edge of the EZ at all times during work hours.
- H. Workers removing asbestos materials shall don proper Personal Protective Equipment (PPE), including Tyvek coveralls, half face respirators with particulate filters and rubber gloves. PPE will be disposed of as asbestos after each use while exiting the work area remote decontamination units.
- I. Wetting of Waste: A fine water spray shall be used to keep the top layers of the contaminated materials of the pile thoroughly wet at all times.
- J. Tools and equipment used during the removal activities shall be properly decontaminated prior to removal from the EZ.
- K. The asbestos abatement contractor, upon completion of the project, will submit all supporting documentation as specified for the purposes of the legal transport and disposal of the Asbestos waste.

ASBESTOS WASTE DISPOSAL

A. The Contractor shall live load the entirety of the onsite soil and asphalt/brick/concrete (ABC) rubble pile contaminated/co-mingled with known asbestos cement pipe and felt paper/damp-proofing mastic/coating on concrete and brick rubble as asbestos waste from the EZ in accordance with CTDEHP and Connecticut Department of Energy and Environmental Protection (CTDEEP) regulations, and all other applicable regulations as specified within. Live loading shall be accomplished in a manner that minimizes waste volume, but insures the double 10-mil waste dumpster liners shall not tear or break. All waste shall be transported in leak tight dumpsters.

Waste Transportation and Disposal

- 1. It is the responsibility of the Contractor to determine and insure that the Contractor and his/her subcontractor are complying with: 1) current waste handling regulations; and 2) the current regulations for transporting and disposing waste at the ultimate disposal landfill. The Contractor must comply fully with these regulations, and with all U.S. Department of Transportation, State, local, and EPA requirements.
- 2. The Contractor's waste hauler and disposal contractor shall maintain a valid hazardous waste transporter's permit and identification number; and obtain complete, and fully comply with any other local hazardous waste manifesting requirements.

GENERAL REQUIREMENTS

- 1. A Connecticut-licensed Asbestos Project Designer should prepare the asbestos materials abatement plan for the removal of identified asbestos-containing materials.
- 2. A Connecticut-licensed asbestos abatement contractor must be retained to remove the asbestos soil pile and contaminated ABC rubble.
- 3. A Connecticut-licensed asbestos Project Monitor must be retained to conduct full time project monitoring and continual visual inspection of the regulated area/EZ and associated soils beneath the footprint of the asbestos-contaminated pile.
- 4. It is the selected contractor's responsibility to accurately qualify/quantify the waste stream of materials to be removed/disposal prior to abatement.

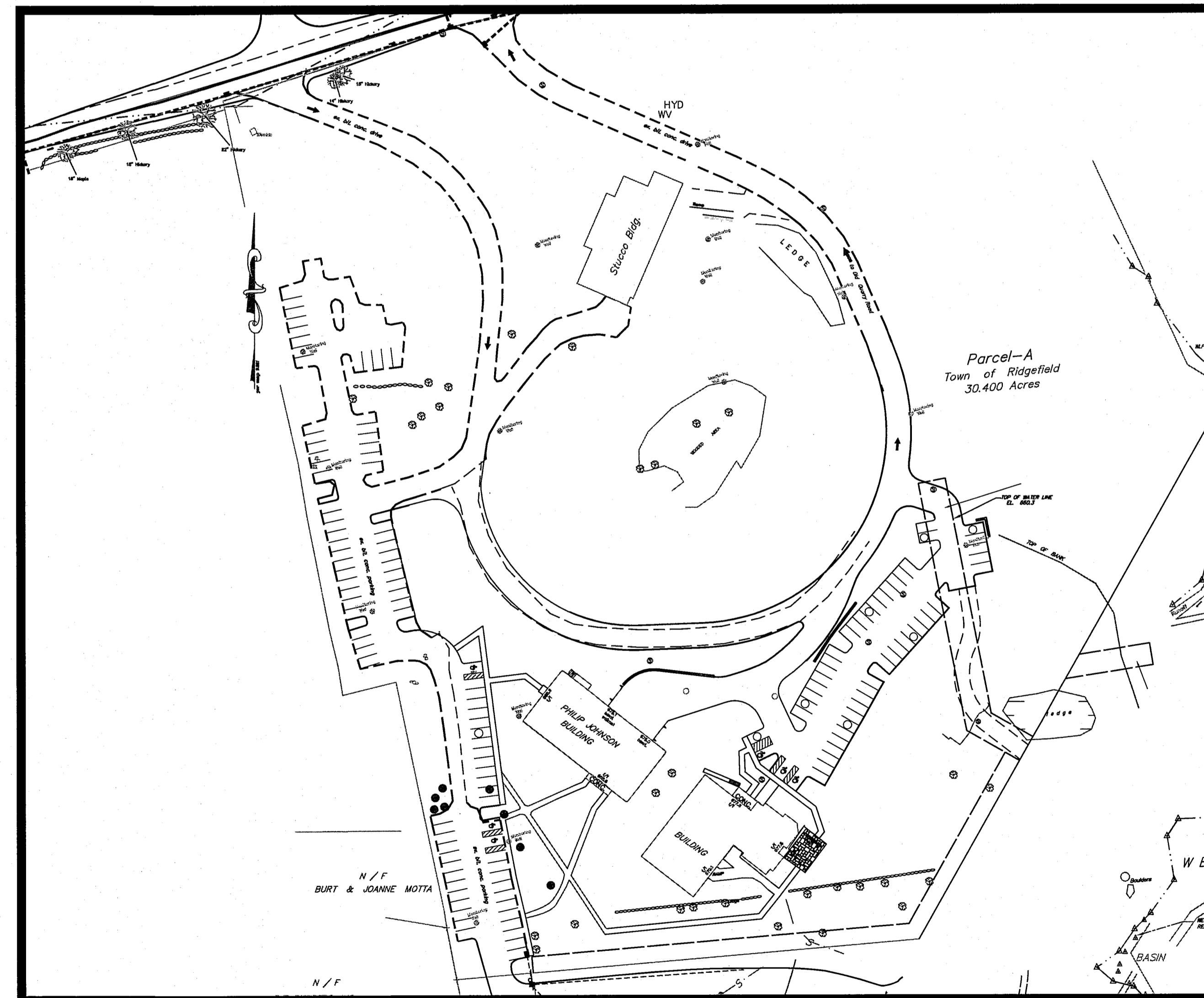
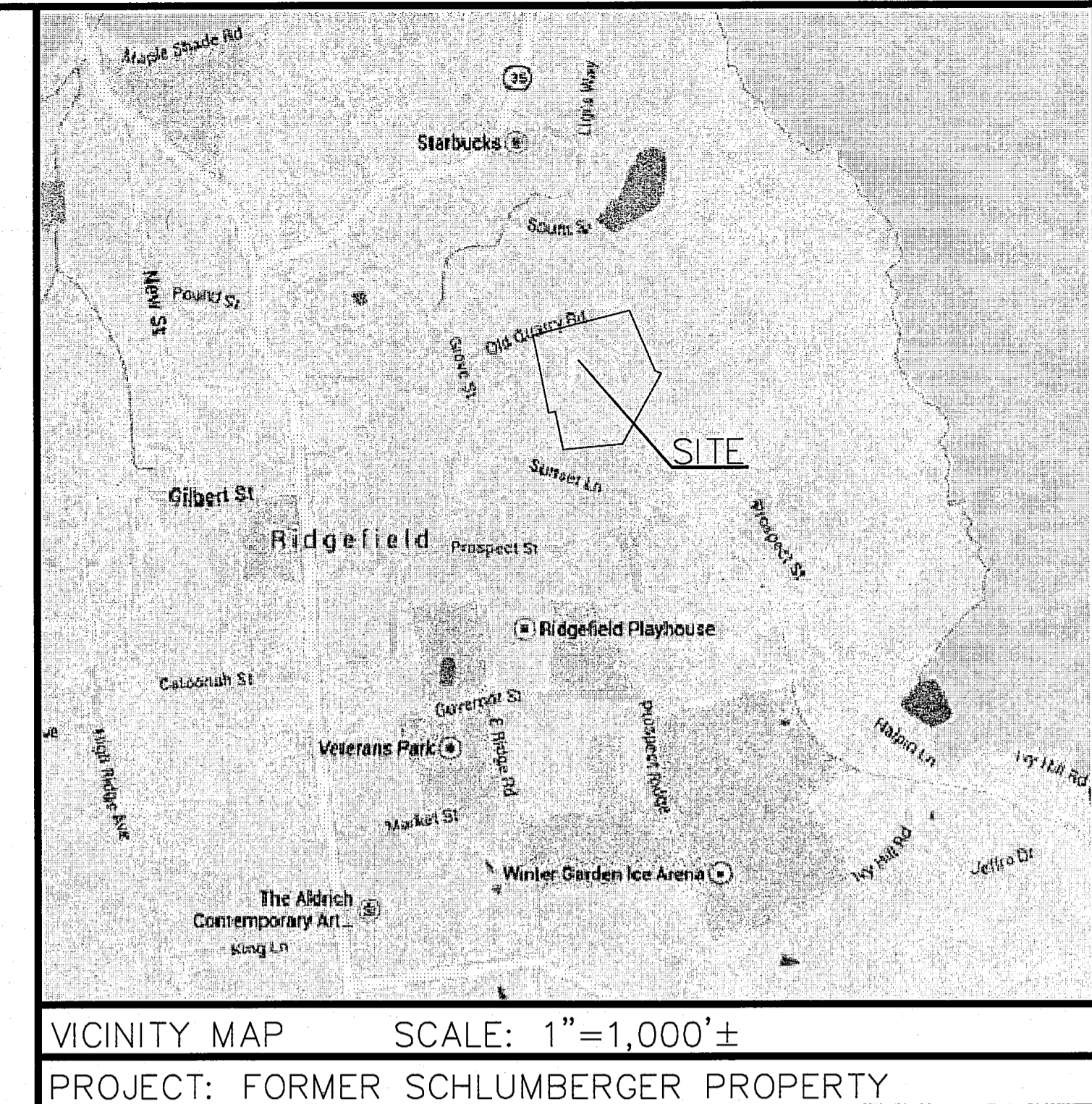
SITE DEVELOPMENT PLANS

PREPARED FOR

TOWN OF RIDGEFIELD

FORMER SCHLUMBERGER PROPERTY

36 OLD QUARRY ROAD



LIST OF DRAWINGS

SHEET	TITLE
N1	GENERAL LEGEND, NOTES & ABBREVIATIONS
1 OF 1	EXISTING CONDITIONS SURVEY PREPARED BY RKW
	LAND SURVEYING
C1	DEMOLITION PLAN
C2	LAYOUT & MATERIALS PLAN
C3	GRADING & DRAINAGE PLAN
C4	LANDSCAPE PLAN
C5	EROSION CONTROL PLAN
C6	ROAD IMPROVEMENT PLAN
C7	SITE LIGHTING PLAN
D1-D3	NOTES & DETAILS
ES1	SEDIMENTATION & EROSION CONTROL DETAILS

OWNER:
TOWN OF RIDGEFIELD
400 MAIN STREET
RIDGEFIELD, CT 06877
APPLICANT/DEVELOPER
TOWN OF RIDGEFIELD
400 MAIN STREET
RIDGEFIELD, CT 06877

CIVIL ENGINEER & LANDSCAPE ARCHITECT

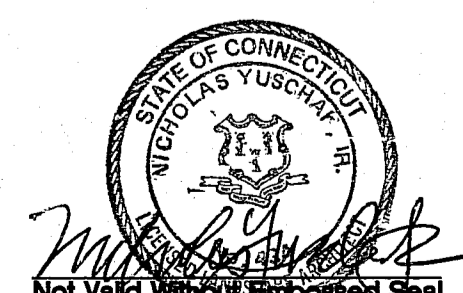


40 OLD NEW MILFORD ROAD
BROOKFIELD, CONNECTICUT



JUNE 5, 2017

7-13-17 REVISIONS PER CONS. COMM., BID PLANS
7-20-17 ISSUED FOR BID
7-24-17 ADDED GRADING FOR ROAD WIDENING
8-22-17 ADDENDUM #1
9-25-17 REDUCE SCOPE OF WORK
12-11-17 REBID DOCUMENTS



Not Valid Without Embossed Seal
(SEAL AND SIGNATURE LIMITED TO PLANS PREPARED BY CCA, LLC)

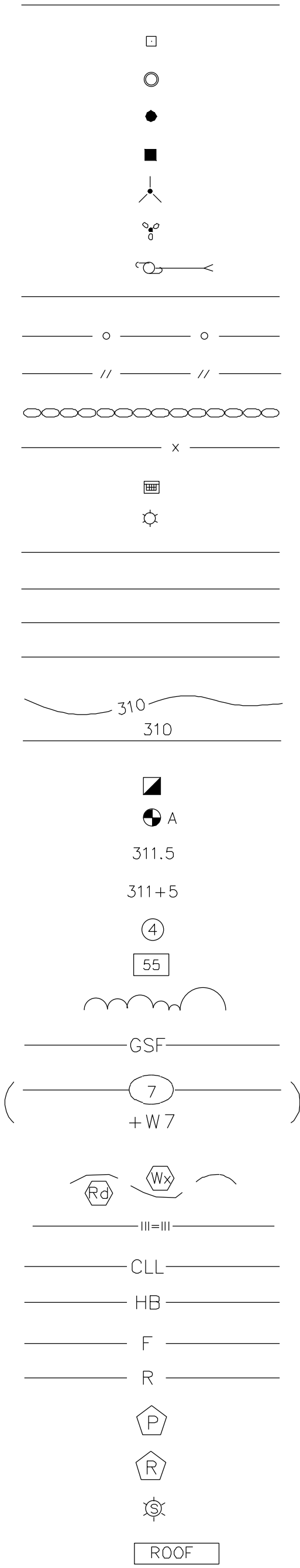


Not Valid Without Embossed Seal
(SEAL AND SIGNATURE LIMITED TO PLANS PREPARED BY CCA, LLC)

ABBREVIATIONS

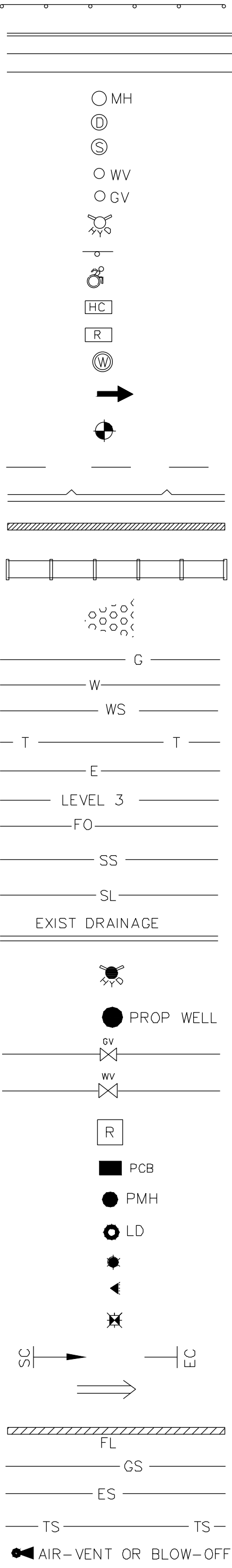
APPROX	APPROXIMATE
BF	BASEMENT FLOOR
BM	BENCH MARK
BCLC	BITUMINOUS CONCRETE LIP CURB
BLDG	BUILDING
CIP	CAST IRON PIPE
CB	CATCH BASIN
CD	CURTAIN DRAIN
Ch	CHORD
CLL	CONSTRUCTION LIMIT LINE
CONC	CONCRETE
CONST	CONSTRUCT
CMP	CORRUGATED METAL PIPE
CPEP-S	CORRUGATED POLYETHYLENE PIPE WITH SMOOTH INTERIOR
CULV	CULVERT
DOT	DEPARTMENT OF TRANSPORTATION
DB	DISTRIBUTION BOX
DMH	DRAINAGE MANHOLE
DH	DEEP HOLE
DR	DRIVEWAY
DIP	DUCTILE IRON PIPE
EOP	EDGE OF PAVEMENT
ELEC	ELECTRIC
ELEV	ELEVATION
EXIST, EX	EXISTING
EG	EXISTING GRADE
FE	FLARED END
FF	FIRST FLOOR
FG	FINISH GRADE
FND	FOUNDATION
GPD	GALLONS PER DAY
GAR	GARAGE
GND	GROUND
GSF	GEOTEXTILE SILT FENCE
GV	GAS VALVE
HW	HEADWALL
HC	HANDICAP
HWY	HIGHWAY
HYD	HYDRANT
IN	INLET
INV	INVERT
IP	IRON PIPE
L	LENGTH
LF	LINEAR FEET
LP	LIGHT POLE
MH	MANHOLE
MAX	MAXIMUM
MET	METAL
MBR	METAL BEAM RAIL
MIN	MINIMUM
MISC	MISCELLANEOUS
MON	MONUMENT
NO	NUMBER
OUT	OUTLET
P-#	PERCOLATION TEST
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PV	PERMANENT VEGETATION
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVRC	POINT OF VERTICAL REVERSE CURVE
PVC	POLYVINYL CHLORIDE PIPE
PROJ	PROJECT
PL	PROPERTY LINE
PROP, PR	PROPOSED
PS	PUMP STATION
R	RADIUS
RR	RAILROAD
RCP	REINFORCED CONCRETE PIPE
RELOC	RELOCATION
REQ'D	REQUIRED
RET	RETAINING
ROW	RIGHT OF WAY
RD	ROAD
RD	ROOF DRAIN
SAN	SANITARY
SSMH	SANITARY SEWER MANHOLE
ST	SEPTIC TANK
SPEC	SPECIFICATION
SPK	SPIKE
STK	STAKE
STD	STANDARD
STA	STATION
SW	STONE WALL
SS	SANITARY SEWER
STY	STORY
ST	STREET
TAN	TANGENT
TEL	TELEPHONE
TEMP	TEMPORARY
TF	TOP OF FRAME
U-DRAIN	UNDER DRAIN
VERT	VERTICAL
WV	WATER VALVE
W/	WITH
YD	YARD DRAIN

PROPERTY LINE
EXISTING MONUMENT
EXISTING IRON PIN OR PIPE
PROPOSED IRON PIN OR PIPE
PROPOSED MONUMENT
DRILL HOLE
STONE BOUND
UTILITY POLE W/ANCHOR
EASEMENT LINE
CHAIN FENCE
WOOD FENCE
STONE WALL
WIRE FENCE
CATCH BASIN
LIGHT POLE
BLDG. SETBACK LINE
WATERCOURSE
FLOODWAY
FLOODPLAIN
EXISTING CONTOUR
PROPOSED CONTOUR
PROPOSED TEST PIT
PERCOLATION TEST
EXISTING SPOT ELEVATION
PROPOSED SPOT ELEVATION
LOT NUMBER
STREET NUMBER
TREE LINE
GEOTEXTILE SILT FENCE (GSF)
FLAGGED WETLANDS
SOIL BOUNDARY
ROCK OUTCROP
CONSTRUCTION LIMIT LINE
HAY BALES (HB)
FOOTING DRAIN (F)
ROOF DRAIN (R)
PRIMARY SEPTIC SYSTEM AREA
RESERVE SEPTIC SYSTEM AREA
SOLAR ACCESS
ROOF RECHARGE GALLERY



GENERAL LEGEND

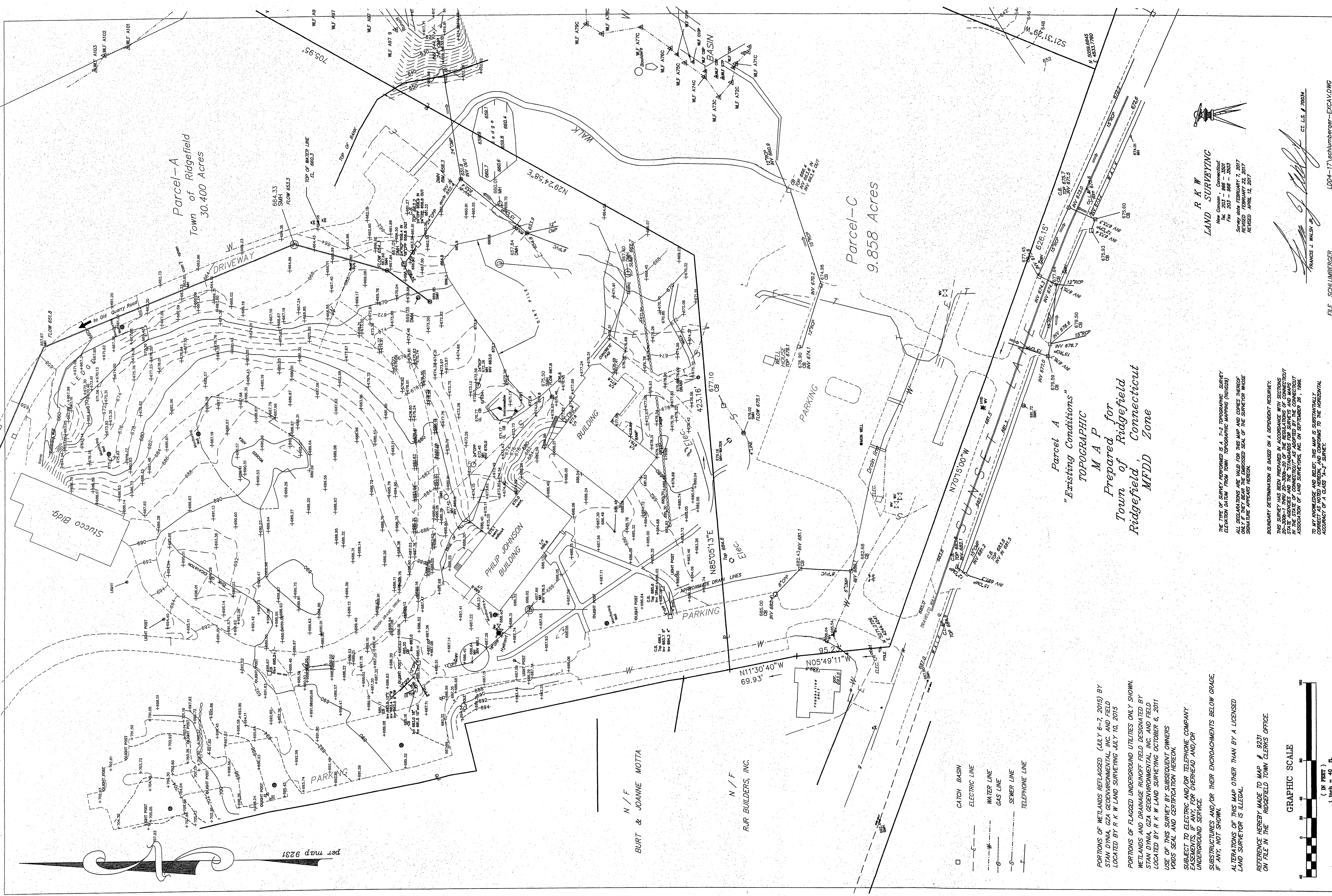
GUIDE RAIL
EXISTING CURB
GRAVEL ROAD
EXISTING MANHOLE
EXISTING STORM DRAINAGE MANHOLE
EXISTING SANITARY SEWER MANHOLE
EXISTING WATER VALVE
EXISTING GAS VALVE
EXISTING FIRE HYDRANT
EXISTING SIGN
HANDICAP PARKING SPACE
HANDICAP RAMP
REFUSE AREA
EXISTING WELL
TRAFFIC FLOW DIRECTION
MONITORING WELL
SWALE, GRADE TO DRAIN
EXISTING RETAINING WALL
PROPOSED RETAINING WALL
RAILROAD TRACKS
RIPRAP PAD
EXIST. GAS MAIN
EXIST. WATER MAIN
EXIST. WATER SERVICE
EXIST. TELEPHONE LINE
EXIST. ELECTRIC SERVICE
EXIST. LEVEL 3 COMMUNICATION LINE
EXIST. FIBER OPTIC LINE
EXIST. SANITARY SEWER
EXIST. SANITARY SEWER LATERAL
EXIST. DRAINAGE
PROPOSED FIRE HYDRANT
PROPOSED WELL
PROPOSED GAS VALVE
PROPOSED WATER VALVE
SCREENED REFUSE AREA
PROPOSED CATCH BASIN
PROPOSED MANHOLE
PROPOSED LAWN DRAIN
PROPOSED LIGHT POLE
PROPOSED BUILDING LIGHT
PROPOSED BOLLARD LIGHT
START / END CURBING
TEMPERORY SWALE
PROPOSED FIRE LANE
PROPOSED GAS MAIN
PROPOSED ELECTRIC SERVICE
PROPOSED TELEPHONE LINE
PROPOSED AIR VENT OR BLOW-OFF



GENERAL NOTES

1. HOLD PRE-CONSTRUCTION MEETING WITH OWNER, EXCAVATION AND WALL CONTRACTORS, ENGINEER AND TOWN STAFF.
2. ALL WORK TO MEET TOWN OR CITY, STATE AND FEDERAL CODES, REGULATIONS AND STANDARDS AS APPLICABLE.
3. DISCREPANCIES IN THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY FOR RESOLUTION.
4. ALL PERMITS SHALL BE OBTAINED PRIOR TO CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING REQUIRED PERMITS AND NOTIFYING THE TOWN OR CITY DEPARTMENTS AND THE ENGINEER FOR INSPECTIONS.
6. THE TOWN AND PROJECT ENGINEER SHALL INSPECT THE PROPERTY REGULARLY. IMPROVEMENTS TO THE SITE BASED ON THOSE INSPECTIONS ARE INTENDED TO BE COMPLETED WITHIN 48 HOURS OR BEFORE THE NEXT STORM WHICHEVER IS EARLIER. CHANGES TO THE SEQUENCE PLANS SHALL BE NOTED ON THE PLANS AND SUBMITTED TO THE TOWN FOR STAFF REVIEW PRIOR TO IMPLEMENTATION.
7. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL MEET CONNECTICUT D.O.T. STANDARDS FOR ITEMS NOT SPECIFIED IN THE TOWN OR CITY REGULATIONS.
8. ALL CATCH BASINS, MANHOLES, PIPING AND OTHER UTILITY COMPONENTS WITHIN TRAFFIC AREAS SHALL BE CAPABLE OF SUPPORTING H-20 LOADING.
9. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL ON-SITE AND OFF-SITE FIELD CONDITIONS AND VERIFY THAT NO CHANGES HAVE OCCURRED SINCE THE ISSUANCE OF THIS PLAN. THE DESIGN ENGINEER IS TO BE NOTIFIED OF ANY CHANGES WHICH CONFLICT WITH THIS PLAN.
10. THE EROSION CONTROL LINE (GSF) IS TO BE CONSIDERED AS THE LIMIT OF CONSTRUCTION UNLESS OTHERWISE NOTED.
11. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND QUANTITIES SHOWN ON THESE PLANS PRIOR TO PROCEEDING WITH CONSTRUCTION AND ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER WHOM SHALL HAVE FINAL SAY AS TO THE ACTUAL DIMENSIONS TO CONSTRUCT BY.
12. STRICT ADHERENCE TO ALL OSHA, TOWN OR CITY AND STATE OF CONNECTICUT REGULATIONS REGARDING CONSTRUCTION IS REQUIRED AT ALL TIMES.
13. CONTRACTOR SHALL NOTIFY CALL-BEFORE-YOU-DIG (1-800-922-4455) FOR UTILITY MARKOUT PRIOR TO CONSTRUCTION.
14. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR JOB SAFETY.
15. ALL UTILITIES TO BE INSTALLED UNDERGROUND.
16. UTILITY LOCATIONS WILL BE AS DETERMINED BY THE UTILITY COMPANIES.
17. THE LOCATION AND ELEVATION OF UNDERGROUND UTILITIES IS UNKNOWN. IF THEY ARE INDICATED AT ALL ON THESE PLANS, THEY ARE APPROXIMATE AND CCA, LLC, IT'S PRINCIPALS OR EMPLOYEES, SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES AND/OR ADDITIONAL COSTS WHICH MIGHT RESULT FROM THE EXISTENCE OF SAID UTILITIES.
18. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING ANY WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
19. ALL GRADING SHALL BE PERFORMED TO ELIMINATE LOW POINTS AND DEPRESSIONS WHICH WOULD TRAP SURFACE WATER. CONTACT THE DESIGN ENGINEER IF CHANGES ARE WARRANTED.
20. GRADING TO BE TO ALL APPLICABLE REGULATIONS AND NORMAL STANDARDS OF GOOD PRACTICE.
21. MINOR GRADING CHANGES ARE PERMITTED TO MEET FIELD CONDITIONS PROVIDED PRIOR APPROVAL IS OBTAINED FROM THE ENGINEER.
22. GRADING SHALL MAINTAIN EXISTING RUNOFF CONDITIONS.
23. ALL BACKFILL FOR BUILDINGS, TRENCHES, STRUCTURES, PARKING, DRIVEWAY AND SIDEWALK ETC. SHALL BE ADEQUATELY COMPACTED TO PREVENT EXCESSIVE SETTLEMENT. CONTACT THE ENGINEER SHOULD ADDITIONAL CLARIFICATION BE NECESSARY.
24. CONTRACTOR TO MATCH INTO EXISTING CONDITIONS AT ALL POINTS WHERE CONSTRUCTION MUST MATCH SUCH EXISTING CONDITIONS.
25. ALL DRAINAGE AND SANITARY SEWER STRUCTURE FRAMES SHALL BE CONSTRUCTED SO THAT THEY MAY BE ADJUSTED DOWN AT LEAST 12". USE GRADE RINGS OR BRICK TO CONSTRUCT TOP 12".
26. NO SILTY WATER SHALL BE PERMITTED TO DISCHARGE INTO THE DETENTION SYSTEMS. STORMWATER SYSTEMS SHALL BE CLEANED PRIOR TO CONNECTION TO THE DETENTION SYSTEMS. SILT SACKS SHALL BE MAINTAINED IN CATCH BASINS UNTIL PROJECT IS COMPLETED.

7-13-17	
REVISIONS PER CONS. COMM., BID PLANS	
DATE	DESCRIPTION
GENERAL LEGEND, NOTES & ABBREVIATIONS	
PREPARED FOR	
TOWN OF RIDGEFIELD	
FORMER SCHLUMBERGER PROPERTY	
36 OLD QUARRY ROAD	
RIDGEFIELD, CONNECTICUT	
	Date: 06-5-17
	Scale: 1"=40'
	Proj. No: 17-711
	File No: 3734
	Acad No: 17711SP
Sheet: NI	
Drawn by: KT/BS	
40 Old New Milford Road Brookfield, CT 06804 (203)775-6207 www.ccaengineering.com	
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Parcel-A
Town of Ridgefield
30.400 Acres

Parcel-B
9.858 Acres

Parcel A
"Existing Conditions"
TOPOGRAPHIC
M A P
Prepared for
Town of Ridgefield,
Connecticut
MFDD Zone

R K W
LAND SURVEYING
New Canaan, Connecticut
P.O. Box 203 - 888 - 3303
Survey from February 7, 2017
Revised February 22, 2017
Revised April 12, 2017

FRANCIS L. WALSH JR.
CT. L.S. # 70034

FILE SCHLUMBERGER
LDD4-171 Schlumberger-EXCAV.DWG

THE TYPE OF SURVEY PERFORMED IS A T-2 TOPOGRAPHIC SURVEY
ELEVATION DATUM FROM TOWN TOPOGRAPHIC MAPPING (NAD83)
ALL DECLARATIONS ARE VALID FOR THIS MAP AND COPIES THEREOF
ONLY IF THEY BEAR THE EMBOSSED SEAL OF THE SURVEYOR WHOSE
SIGNATURE APPEARS HEREON.

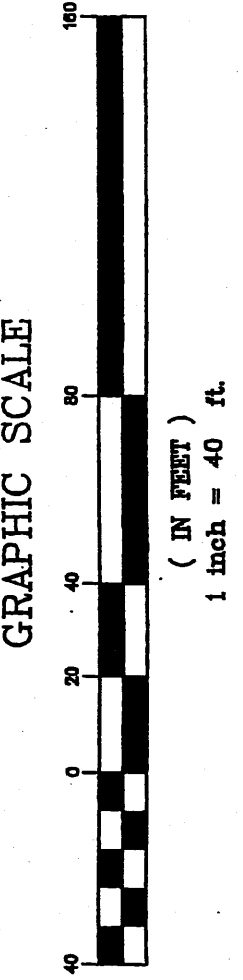
BOUNDARY DETERMINATION IS BASED ON A DEPENDENT RESURVEY.
THIS SURVEY HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS
1-10 OF THE CONN. GEN. STAT. AND THE STANDARDS FOR SURVEYS AND MAPS
IN THE STATE OF CONNECTICUT AS ADOPTED BY THE CONNECTICUT
ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.
TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY
CORRECT AS NOTED HEREON, AND COMPARES TO THE HORIZONTAL
ACCURACY OF A CLASS "A-2" SURVEY.

PORTIONS OF WETLANDS REFLAGGED (JULY 6-7, 2015) BY
STAN DYMA, GZA GEOTECHNICAL, INC. AND FIELD
LOCATED BY R K W LAND SURVEYING JULY 10, 2015

PORTIONS OF FLAGGED UNDERGROUND UTILITIES ONLY SHOWN.
WETLANDS AND DRAINAGE RUNOFF FIELD DESIGNATED BY
STAN DYMA, GZA GEOTECHNICAL, INC. AND FIELD
LOCATED BY R K W LAND SURVEYING OCTOBER 6, 2011
USE OF THIS SURVEY BY SUBSEQUENT OWNERS
VOIDS SEAL AND CERTIFICATION HEREON.
SUBJECT TO ELECTRIC AND/OR TELEPHONE COMPANY
EASEMENTS, IF ANY, FOR OVERHEAD AND/OR
UNDERGROUND SERVICE.

ALTERATIONS OF THIS MAP OTHER THAN BY A LICENSED
LAND SURVEYOR IS ILLEGAL.

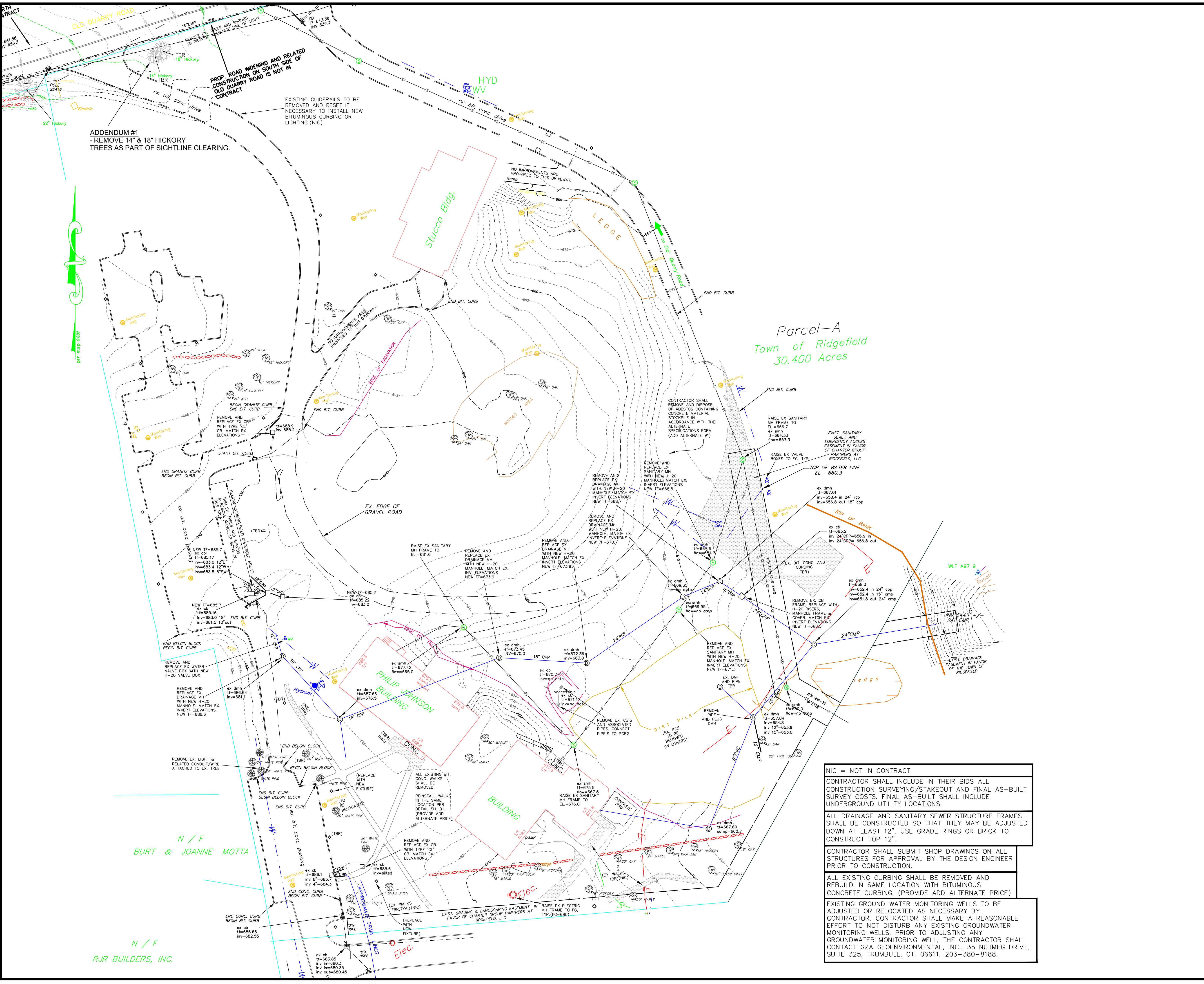
REFERENCE HEREBY MADE TO MAP # 9231
ON FILE IN THE RIDGEFIELD TOWN CLERKS OFFICE.



- CATCH BASIN
- ELECTRIC LINE
- WATER LINE
- GAS LINE
- SEWER LINE
- TELEPHONE LINE

BURT & JOANNE MOTTA

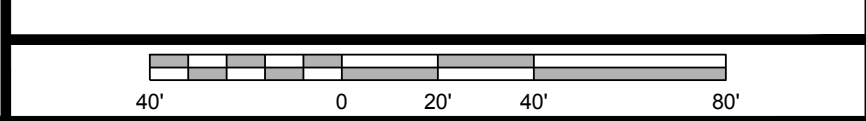
RUR BUILDERS, INC.



- NOTES:
1. BOUNDARY & TOPOGRAPHIC DATA PREPARED RKW LAND SURVEYING.
 2. "TBR" IS TO BE REMOVED.
 3. ANY WALKS, CONCRETE OR ASPHALT AREAS SHALL BE GRADED IN KIND, TOPSOILED AND SEED.
 4. EXISTING MONITORING WELL LOCATIONS ARE APPROXIMATE AND WERE PROVIDED BY OTHERS.

12-11-17	REBID DOCUMENTS
9-25-17	REDUCE SCOPE OF WORK
8-22-17	ADDENDUM #1
7-20-17	ISSUED FOR BID
7-13-17	REVISIONS PER CONS. COMM., BID PLANS
DATE	DESCRIPTION

SITE DEMOLITION PLAN
PREPARED FOR
TOWN OF RIDGEFIELD
FORMER SCHLUMBERGER PROPERTY
36 OLD QUARRY ROAD
RIDGEFIELD, CONNECTICUT



	Date:	06-6-17
	Scale:	1"=40'
	Proj. No:	17-711
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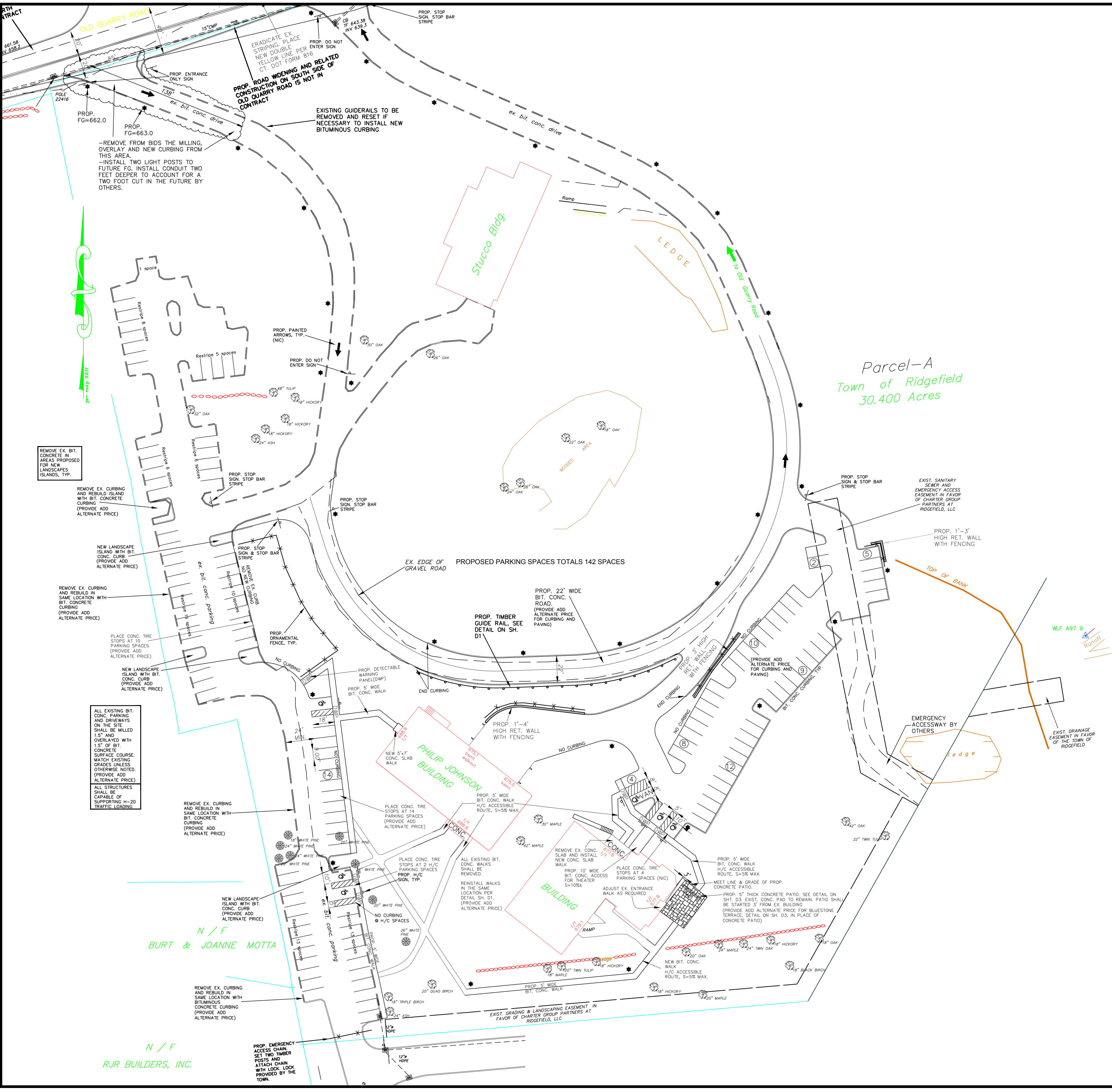
NIC = NOT IN CONTRACT
CONTRACTOR SHALL INCLUDE IN THEIR BIDS ALL CONSTRUCTION SURVEYING/STAKEOUT AND FINAL AS-BUILT SURVEY COSTS. FINAL AS-BUILT SHALL INCLUDE UNDERGROUND UTILITY LOCATIONS.

ALL DRAINAGE AND SANITARY SEWER STRUCTURE FRAMES SHALL BE CONSTRUCTED SO THAT THEY MAY BE ADJUSTED DOWN AT LEAST 12". USE GRADE RINGS OR BRICK TO CONSTRUCT TOP 12".

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL STRUCTURES FOR APPROVAL BY THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.

ALL EXISTING CURBING SHALL BE REMOVED AND REBUILD IN SAME LOCATION WITH BITUMINOUS CONCRETE CURBING. (PROVIDE ADD ALTERNATE PRICE)

EXISTING GROUND WATER MONITORING WELLS TO BE ADJUSTED OR RELOCATED AS NECESSARY BY CONTRACTOR. CONTRACTOR SHALL MAKE A REASONABLE EFFORT TO NOT DISTURB ANY EXISTING GROUNDWATER MONITORING WELLS. PRIOR TO ADJUSTING ANY GROUNDWATER MONITORING WELL, THE CONTRACTOR SHALL CONTACT GZA GEOTECHNICAL, INC., 35 NUTMEG DRIVE, SUITE 325, TRUMBULL, CT. 06611, 203-380-8188.



- NOTES:
- OWNER OF RECORD: TOWN OF RIDGEFIELD.
 - APPLICANT: TOWN OF RIDGEFIELD.
 - BOUNDARY & TOPOGRAPHIC DATA BY RKW LAND SURVEYING.
 - VERTICAL DATUM IS BASED ON NGVD 1929 DATUM.
 - PARCEL IS NOT LOCATED IN A FEMA FLOOD ZONE OR PUBLIC WATER SUPPLY WATERSHED OR AQUIFER PROTECTION DISTRICT.
 - STRICT ADHERENCE TO ALL OSHA, TOWN OF RIDGEFIELD AND STATE OF CONNECTICUT REGULATIONS REGARDING CONSTRUCTION IS REQUIRED AT ALL TIMES.
 - CONSTRUCTION IS EXPECTED TO BEGIN UPON RECEIPT OF PROPER PERMITS.
 - ALL UTILITIES TO BE INSTALLED UNDERGROUND AND IN THE LOCATIONS AS TO BE DETERMINED BY EACH UTILITY COMPANY.
 - ALL DRAINAGE PIPE TO BE CORRUGATED POLYETHYLENE PIPE, WITH SMOOTH INTERIOR OR AS OTHERWISE SPECIFIED.
 - ALL LANDSCAPED AREAS TO BE MULCHED.
 - CONTRACTOR IS RESPONSIBLE TO CONTACT "CALL BEFORE YOU DIG".
 - DISCREPANCIES IN THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY FOR RESOLUTIONS.
 - SPARE EROSION CONTROLS SHALL BE STORED ON SITE FOR EMERGENCY USE.
 - ALL DISTURBED AREAS TO BE TOPSOIL AND SEEDED.
 - ANY RETAINING WALLS OVER 3' IN HEIGHT ARE TO BE DESIGNED AND CONSTRUCTED UNDER THE SUPERVISION OF A STATE OF CT. LICENSED PROFESSIONAL ENGINEER.
 - NO WOOD RETAINING WALLS OVER 3' IN HEIGHT ARE ALLOWED.
 - UNDERGROUND UTILITIES, STRUCTURES, AND FACILITIES NOT FIELD LOCATED. THE SIZE, LOCATION, EXISTENCE OR NONEXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES. CONTACT "CALL BEFORE YOU DIG" AT 1-800-922-4455.
 - UNDERGROUND UTILITIES SHOWN AS MARKED IN THE FIELD BY "CALL BEFORE YOU DIG". LOCATIONS TO BE VERIFIED BY APPROPRIATE AGENCIES PRIOR TO CONSTRUCTION. CONTACT "CALL BEFORE YOU DIG" AT 1-800-922-4455 BEFORE ANY SITE WORK.
 - THE EROSION CONTROL LINE (GSF) IS THE LIMIT OF CONSTRUCTION UNLESS OTHERWISE NOTED.
 - THE ON-SITE DRAINAGE SYSTEM WILL REMAIN PRIVATE AND THAT REGULAR MAINTENANCE IS CRUCIAL FOR THE SYSTEM TO CONTINUE TO FUNCTION AS INTENDED. THE PROPERTY OWNER WILL HAVE THE LIABILITY AND RESPONSIBILITY TO MAINTAIN SYSTEM.
 - CARE SHOULD BE TAKEN WHEN PAVING TO PROPERLY GRADE THE DRIVEWAY/PARKING AREAS IN ORDER TO AVOID PONDING AND PROVIDE ADEQUATE DRAINAGE PATTERNS.
 - ADEQUATE COMPACTION OF FILL IS TO BE PROVIDED.
 - ALL PORTIONS OF THE PROPOSED STORM DRAINAGE SYSTEM SHALL BE CAPABLE OF HANDLING H-20 LOADINGS.
 - UNDERGROUND UTILITIES SHOWN AS MARKED IN THE FIELD BY "CALL BEFORE YOU DIG". LOCATIONS TO BE VERIFIED BY APPROPRIATE AGENCIES PRIOR TO CONSTRUCTION. CONTACT "CALL BEFORE YOU DIG" AT 1-800-922-4455 BEFORE ANY SITE WORK.
 - HOURS OF OPERATION FOR ALL EARTH EXCAVATION/PLACEMENT TO OCCUR IN ACCORDANCE WITH TOWN OF RIDGEFIELD ZONING REGULATIONS.
 - NO LIGHTING IS TO BE DIRECTED OUTSIDE THE PROPERTY LIMITS.
 - CROSS SLOPE ON SIDEWALKS SHALL BE A MIN. 2% FROM BUILDING.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING REQUIRED PERMITS AND NOTIFYING THE TOWN DEPARTMENTS AND THE ENGINEER FOR INSPECTIONS.
 - METHODS OF CONSTRUCTION SHALL MEET TOWN OF RIDGEFIELD AND CONNECTICUT D.O.T. STANDARDS.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL ON-SITE AND OFF-SITE FIELD CONDITIONS AND VERIFY THAT NO CHANGES HAVE OCCURRED SINCE THE ISSUANCE OF THIS PLAN. THE DESIGN ENGINEER IS TO BE NOTIFIED OF ANY CHANGES WHICH CONFLICT WITH THIS PLAN.

IMPERVIOUS AREA INFORMATION	
EXISTING IMPERVIOUS AREA	4.38± ACRES (14.4%)
PROPOSED IMPERVIOUS AREA	3.05± ACRES (10%)

PARKING SPACE INFORMATION	
THEATRE:	1 SPACE PER 4 SEATS 1704±43 SPACES
FURNITURE SHOP:	15 SPACES
TOTAL SPACES PROVIDED:	142 SPACES
TOTAL HANDICAP SPACES:	6 SPACES

CONTRACTOR SHALL INCLUDE IN THEIR BIDS ALL CONSTRUCTION SURVEYING/STAKEOUT AND FINAL AS-BUILT SURVEY COSTS. FINAL AS-BUILT SHALL INCLUDE UNDERGROUND UTILITY LOCATIONS.

PROVIDE AN ADD ALTERNATE PRICE FOR ALL PAVING, CURBING, AND STRIPING.

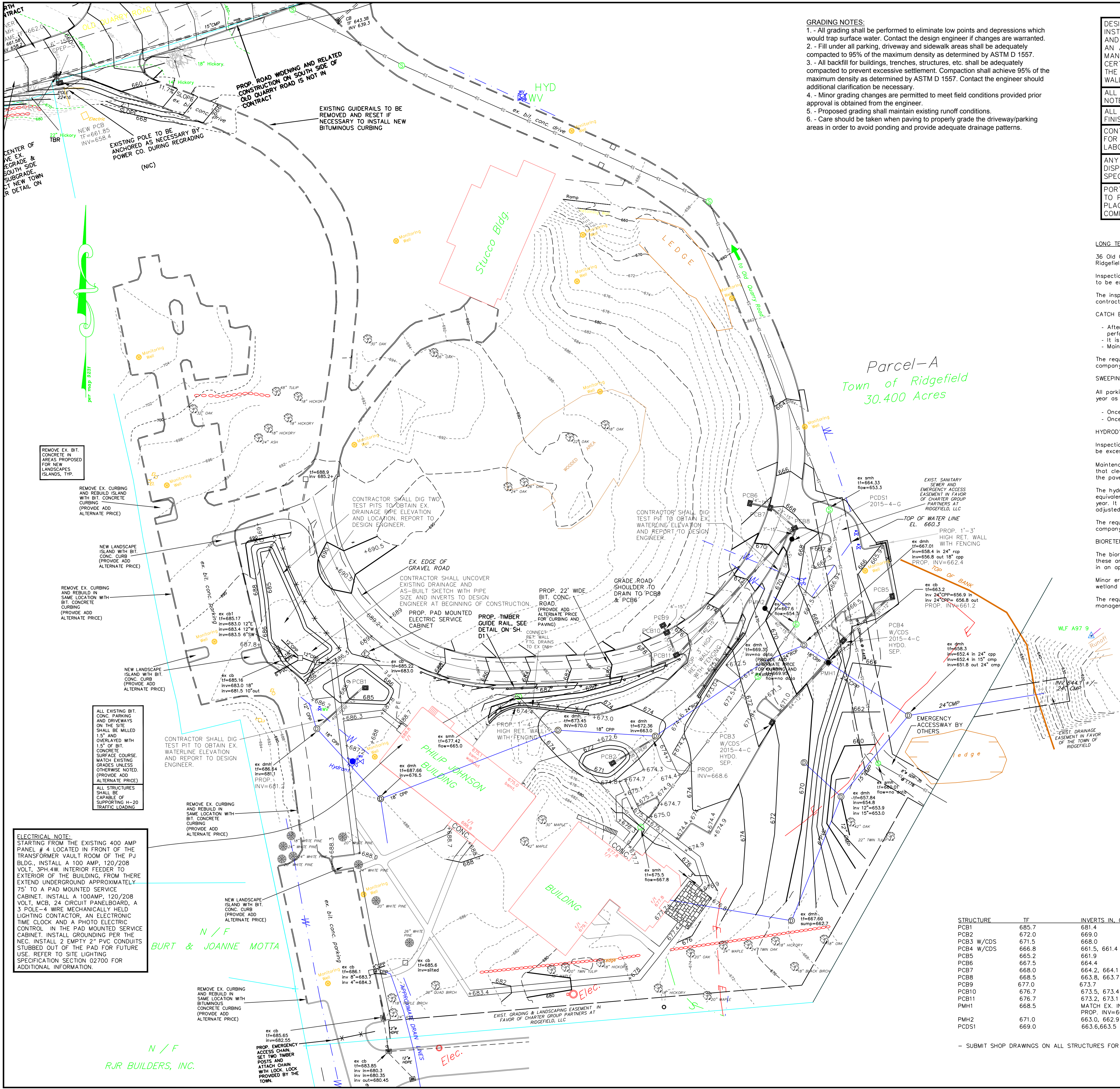
12-11-17	REBID DOCUMENTS
9-25-17	REDUCE SCOPE OF WORK
6-22-17	ADDENDUM #1
7-20-17	ISSUED FOR BID
7-13-17	REVISIONS PER CONS. COMM., BID PLANS
DATE	DESCRIPTION

LAYOUT & MATERIALS PLAN
PREPARED FOR
TOWN OF RIDGEFIELD
FORMER SCHLUMBERGER PROPERTY
36 OLD QUARRY ROAD
RIDGEFIELD, CONNECTICUT

	Date:	06-5-17
	Scale:	1"=40'
	Proj. No:	17-711
	File No:	3734
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	Drawn by:	KT/SS

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- GRADING NOTES:
1. - All grading shall be performed to eliminate low points and depressions which would trap surface water. Contact the design engineer if changes are warranted.
 2. - Fill under all parking, driveway and sidewalk areas shall be adequately compacted to 95% of the maximum density as determined by ASTM D 1557.
 3. - All backfill for buildings, trenches, structures, etc. shall be adequately compacted to prevent excessive settlement. Compaction shall achieve 95% of the maximum density as determined by ASTM D 1557. Contact the engineer should additional clarification be necessary.
 4. - Minor grading changes are permitted to meet field conditions provided prior approval is obtained from the engineer.
 5. - Proposed grading shall maintain existing runoff conditions.
 6. - Care should be taken when paving to properly grade the driveway/parking areas in order to avoid ponding and provide adequate drainage patterns.

- DESIGN ENGINEER SHALL SUPERVISE THE CONSTRUCTION AND INSTALLATION OF THE STORMWATER MANAGEMENT SYSTEM AND RETAINING WALLS. UPON COMPLETION OF THE PROJECT, AN AS-BUILT SURVEY OF THE COMPLETED STORMWATER MANAGEMENT SYSTEM SHALL BE SUBMITTED ALONG WITH A CERTIFICATION LETTER FROM THE DESIGN ENGINEER THAT THE STORMWATER MANAGEMENT SYSTEM AND RETAINING WALLS WERE CONSTRUCTED AS DESIGNED.
- ALL STORM SEWER PIPING SHALL BE CPEP-S UNLESS NOTED OTHERWISE.
- ALL UTILITY STRUCTURES SHALL BE ADJUSTED TO THE NEW FINISHED GRADES.
- CONTRACTOR SHALL INCLUDE IN THEIR BIDS THE COST FOR OBTAINING COMPACTION TESTING BY A QUALIFIED LABORATORY TESTING COMPANY.
- ANY EXCESS MATERIAL SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AS DESCRIBED IN SPECIFICATION SECTION 02221 3.5 A.
- PORTION OF NEW LOOP ROAD AND SERVICE DRIVEWAY TO PHILIP JOHNSON BUILDING BASE MATERIAL HAS BEEN PLACED AND WILL NEED TO BE CHECKED FOR ELEVATION, COMPACTED AND TESTED.

- ALL DRAINAGE AND SANITARY SEWER STRUCTURE FRAMES SHALL BE CONSTRUCTED SO THAT THEY MAY BE ADJUSTED DOWN AT LEAST 12". USE GRADE RINGS OR BRICK TO CONSTRUCT TOP 12".
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL STRUCTURES FOR APPROVAL BY THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.
- RETAINING WALLS TO BE VERSA-LOK OR EQUAL. COLOR PER OWNER. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION.
- COMPACT SUBGRADES BY PROOFROLLING WHICH WILL CONSIST OF MIN. 8 PASSES OVER SUBGRADE WITH A VIBRATORY ROLLER HAVING MIN. OPERATING WEIGHT OF 10 TONS.
- ANY SOIL THAT PUMPS OR WEAVES UNDER THE INFLUENCE OF ROLLER MUST BE REMOVED AND REPLACED WITH SUITABLE FILL.
- ALL CURBING TO BE BACKED UP.
- CONTRACTOR SHALL INCLUDE IN THEIR BIDS ALL CONSTRUCTION SURVEYING/STAKEOUT AND FINAL AS-BUILT SURVEY COSTS. FINAL AS-BUILT SHALL INCLUDE UNDERGROUND UTILITY LOCATIONS.

LONG TERM MAINTENANCE PROCEDURES

36 Old Quarry Road
Ridgefield, Connecticut

Inspection of the stormwater management system shall generally be performed on a semi-annual basis. More frequent inspections shall occur if sediment levels are deemed to be excessive after major storm events and after any type of spill.

The inspector shall keep a permanent log of inspections including date of inspection, any noted sediment levels, accumulation of oils, notation of any irregularities, name of contractor, etc. An annual report shall be submitted to the Town indicating the conditions observed and any measures taken to repair or refresh irregularities.

CATCH BASINS:

- After the site has been stabilized, monthly monitoring shall occur for the first year of a new installation. After the first year, semi-annual inspections shall generally be performed.
- It is best to schedule maintenance based on the solids collected in the sump. Optimally, the structure should be cleaned when the sump is half full.
- Maintenance is best achieved with a vacuum truck.

The requirements for disposal of materials removed from the basins are similar to that of any other BMP. Disposal should be by a Connecticut licensed waste management company and discharged to a Connecticut DEEP approved location.

SWEEPING:

All parking areas, sidewalks and driveways and other impervious surfaces (except roofs) are swept clean of sand, litter and any other possible pollutants at least twice a year as described below, and at other times as may be necessary.

- Once between November 14 and December 15 (i.e., after leaf fall)
- Once during the month of April (i.e., after snow melt)

HYDRODYNAMIC SEPARATORS:

Inspection of the hydrodynamic separator units shall generally be performed on a semi-annual basis. More frequent inspections shall occur if sediment levels are deemed to be excessive after major storm events and after any type of spill.

Maintenance of the hydrodynamic separator type units is performed using vacuum and/or pumping trucks. This industry is a well-established sector of the service industry that cleans tanks, sewers and catch basins. The use of a vacuum or pumping truck and hose will allow maintenance personnel to repair the unit while the truck is parked on the paved parking lot, thereby not disturbing the adjacent areas.

The hydrodynamic separator unit is sized based on the appropriate guidelines provided in the technical documentation. A CONTECH Hydrodynamic separator was selected. An equivalent may be substituted. Based on this data approximately 15% of the total sediment capacity will be utilized per year. Therefore the unit should be cleaned each year. It is suggested that the cleaning take place in the spring of each year. Based on the accumulated sediment levels the cleaning and monitoring schedule may be adjusted accordingly but not less than once per year.

The requirements for disposal of materials removed from the unit are similar to that of any other BMP. Disposal should be by a Connecticut licensed waste management company and discharged to a Connecticut DEEP approved location.

BIORETENTION AREAS:

The bioretention area provides efficient water quality improvements to the stormwater before discharge to the catch basins and hydrodynamic separators. Maintenance of these areas will include removing by hand shoveling of any visible accumulated sediment on a semi-annual basis. Also, excessive litter should be removed and disposed of in an appropriate location. The bioretention area is to be heavily vegetated and will not require maintenance other than replacing any plantings that have not taken.

Minor erosion shall be repaired and the area replanted in accordance with the plans. Should major erosion occur within these areas the inspector shall notify the inland wetland enforcement officer. Repairs shall be performed as specified thereafter.

The requirements for disposal of materials removed from the bioretention areas are similar to that of any other BMP. Disposal should be by a Connecticut licensed waste management company and discharged to a Connecticut DEEP approved location.

STRUCTURE	TF	INVERTS IN, OUT	SUMP DEPTH	FRAME TYPE
PCB1	685.7	681.4	2'	CL
PCB2	672.0	669.0	2'	CL
PCB3 W/CDS	671.5	668.0	2'	CL
PCB4 W/CDS	666.8	661.5, 661.4	2'	CL
PCB5	665.2	661.9	2'	C
PCB6	667.5	664.4	2'	CG
PCB7	668.0	664.2, 664.1	2'	C
PCB8	668.5	663.8, 663.7	2'	C
PCB9	677.0	673.7	2'	CG
PCB10	676.7	673.5, 673.4	2'	C
PCB11	676.7	673.2, 673.1	2'	C
PMH1	668.5	MATCH EX. INV		MH-4" DIAMETER
PMH2	671.0	663.0, 662.9		MH-5" DIAMETER
PCDS1	669.0	663.6, 663.5		MH-4" DIAMETER

- SUBMIT SHOP DRAWINGS ON ALL STRUCTURES FOR APPROVAL PRIOR TO CONSTRUCTION.

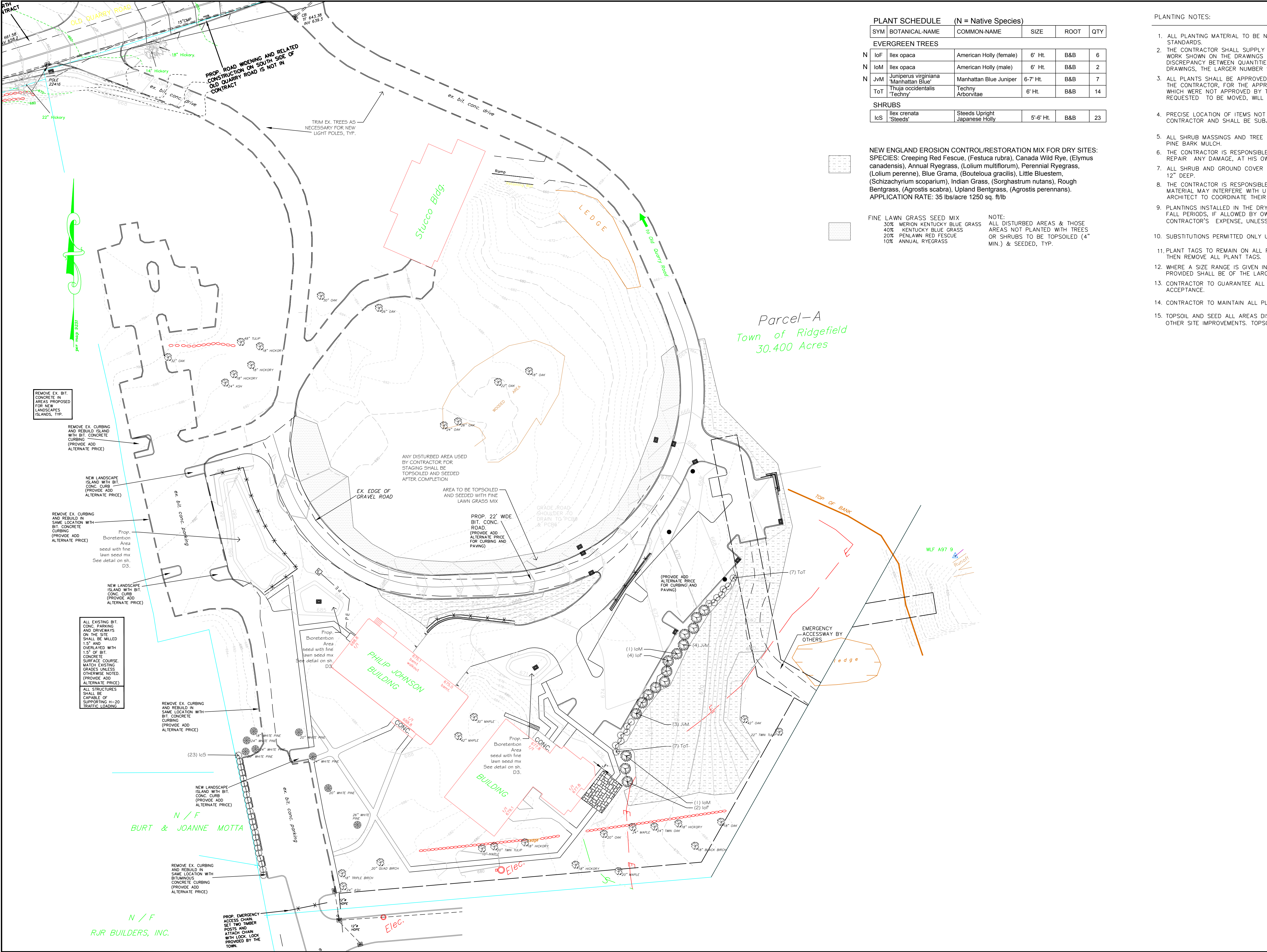
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7-20-17	ISSUED FOR BID
7-13-17	REVISIONS PER CONS. COMM., BID PLANS
DATE	DESCRIPTION

GRADING & DRAINAGE PLAN
PREPARED FOR
TOWN OF RIDGEFIELD
FORMER SCHLUMBERGER PROPERTY
36 OLD QUARRY ROAD
RIDGEFIELD, CONNECTICUT

	Date: 06-05-17
	Scale: 1"=40'
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PLANT SCHEDULE		(N = Native Species)			
SYM	BOTANICAL-NAME	COMMON-NAME	SIZE	ROOT	QTY
EVERGREEN TREES					
N loF	Ilex opaca	American Holly (female)	6' Ht.	B&B	6
N loM	Ilex opaca	American Holly (male)	6' Ht.	B&B	2
N JvM	Juniperus virginiana 'Manhattan Blue'	Manhattan Blue Juniper	6-7' Ht.	B&B	7
ToT	Thuja occidentalis 'Techny'	Techny Arborvitae	6' Ht.	B&B	14
SHRUBS					
icS	Ilex crenata 'Steeds'	Steeds Upright Japanese Holly	5'-6' Ht.	B&B	23

NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DRY SITES:
SPECIES: Creeping Red Fescue, (Festuca rubra), Canada Wild Rye, (Elymus canadensis), Annual Ryegrass, (Lolium multiflorum), Perennial Ryegrass, (Lolium perenne), Blue Grama, (Bouteloua gracilis), Little Bluestem, (Schizachyrium scoparium), Indian Grass, (Sorghastrum nutans), Rough Bentgrass, (Agrostis scabra), Upland Bentgrass, (Agrostis perennans).
APPLICATION RATE: 35 lbs/acre 1250 sq. ft/lb

FINE LAWN GRASS SEED MIX
30% MERION KENTUCKY BLUE GRASS
40% KENTUCKY BLUE GRASS
20% PENLAWN RED FESCUE
10% ANNUAL RYEGRASS

NOTE: ALL DISTURBED AREAS & THOSE AREAS NOT PLANTED WITH TREES OR SHRUBS TO BE TOPSOILED (4" MIN.) & SEEDED, TYP.

- PLANTING NOTES:
- ALL PLANTING MATERIAL TO BE NURSERY GROWN STOCK SUBJECT TO APPLICABLE A.A.N. STANDARDS.
 - THE CONTRACTOR SHALL SUPPLY ALL PLANTS IN QUANTITIES SUFFICIENT TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND LISTED IN THE PLANT LIST. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN IN THE PLANT LIST AND THOSE REQUIRED BY THE DRAWINGS, THE LARGER NUMBER SHALL APPLY.
 - ALL PLANTS SHALL BE APPROVED PRIOR TO INSTALLATION AND SHALL BE LOCATED ON SITE BY THE CONTRACTOR, FOR THE APPROVAL OF THE LANDSCAPE ARCHITECT. ANY INSTALLATIONS WHICH WERE NOT APPROVED BY THE LANDSCAPE ARCHITECT AND WHICH ARE SUBSEQUENTLY REQUESTED TO BE MOVED, WILL BE DONE AT THE CONTRACTORS EXPENSE.
 - PRECISE LOCATION OF ITEMS NOT DIMENSIONED ON THE PLAN ARE TO BE FIELD STAKED BY THE CONTRACTOR AND SHALL BE SUBJECT TO THE REQUIREMENTS SPECIFIED IN THE PREVIOUS NOTE.
 - ALL SHRUB MASSINGS AND TREE PITS SHALL BE MULCHED TO A DEPTH OF 3" WITH SHREDDED PINE BARK MULCH.
 - THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGED VEGETATION AND SHALL REPLACE OR REPAIR ANY DAMAGE, AT HIS OWN EXPENSE.
 - ALL SHRUB AND GROUND COVER PLANTING AREAS SHALL HAVE CONTINUOUS BEDS OF TOPSOIL, 12" DEEP.
 - THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES IN THE FIELD. WHERE PLANT MATERIAL MAY INTERFERE WITH UTILITIES, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT TO COORDINATE THEIR INSTALLATION.
 - PLANTINGS INSTALLED IN THE DRY SUMMER MONTHS AND /OR LAWN SEEDED OUT OF SPRING OR FALL PERIODS, IF ALLOWED BY OWNER, WILL REQUIRE AGGRESSIVE IRRIGATION PROGRAMS AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE DIRECTED BY THE OWNER.
 - SUBSTITUTIONS PERMITTED ONLY UPON WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
 - PLANT TAGS TO REMAIN ON ALL PLANT MATERIAL UNTIL FINAL ACCEPTANCE. CONTRACTOR TO THEN REMOVE ALL PLANT TAGS.
 - WHERE A SIZE RANGE IS GIVEN IN THE PLANT SCHEDULE, AT LEAST 50% OF THE PLANTS PROVIDED SHALL BE OF THE LARGER SIZE.
 - CONTRACTOR TO GUARANTEE ALL PLANT MATERIAL FOR ONE YEAR AFTER DATE OF FINAL ACCEPTANCE.
 - CONTRACTOR TO MAINTAIN ALL PLANT MATERIAL UNTIL 60 DAYS AFTER FINAL ACCEPTANCE.
 - TOPSOIL AND SEED ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES AND NOT COVERED BY OTHER SITE IMPROVEMENTS. TOPSOIL SHALL BE A MINIMUM DEPTH OF 4".

12-11-17 REBID DOCUMENTS
9-25-17 REDUCE SCOPE OF WORK
6-22-17 ADDENDUM #1
7-20-17 ISSUED FOR BID
7-13-17 REVISIONS PER CONS. COMM., BID PLANS
DATE DESCRIPTION

LANDSCAPE PLAN
PREPARED FOR
TOWN OF RIDGEFIELD
FORMER SCHLUMBERGER PROPERTY
36 OLD QUARRY ROAD
RIDGEFIELD, CONNECTICUT

40' 0 20' 40' 80'

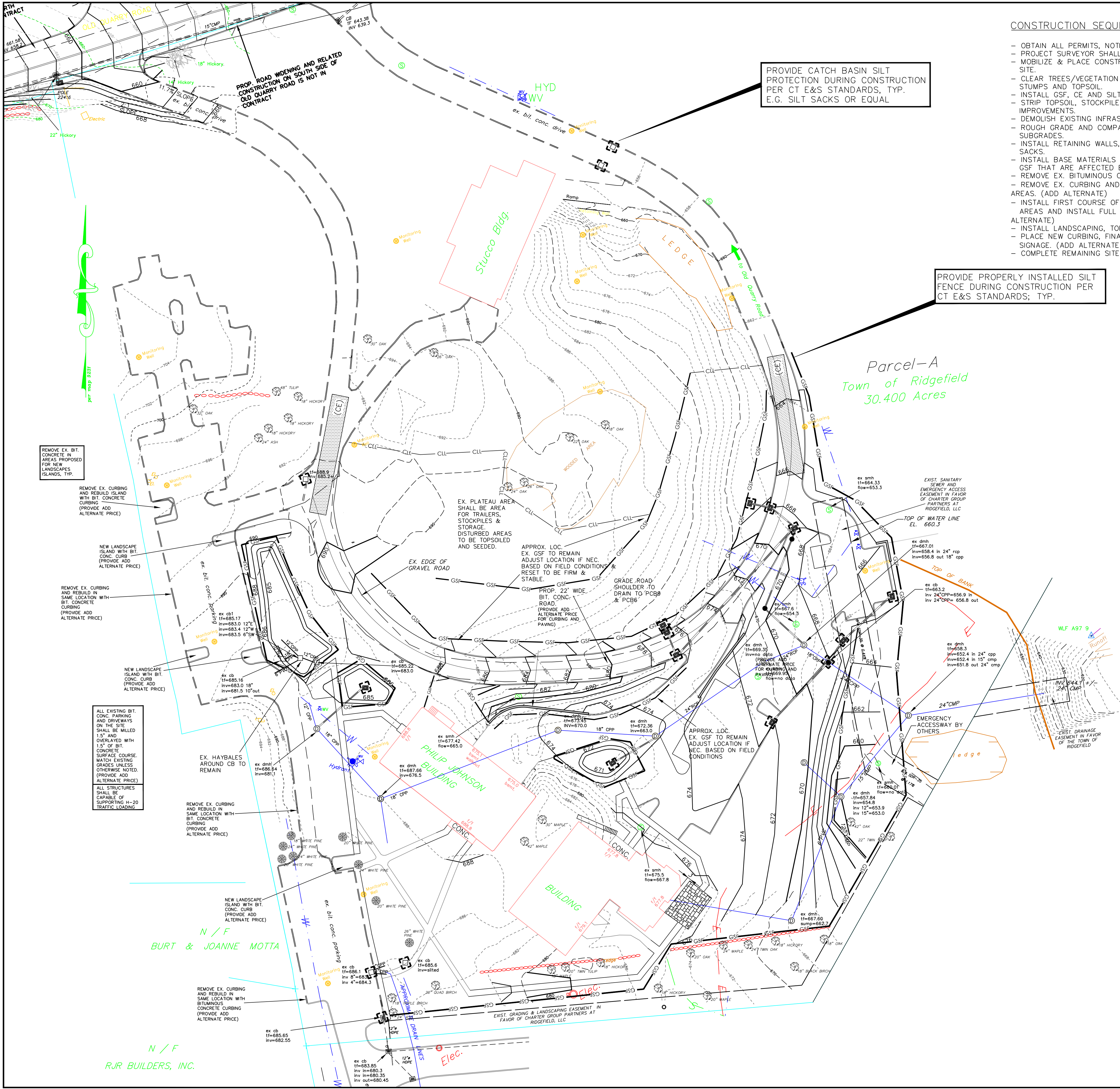
ENVIRONMENTAL - CIVIL - ENGINEERING
CCA
LLC
SURVEYING

Date: 06-05-17
Scale: 1"=40'
Proj. No: 17-711
File No: 3734
Acad No: 1771SP
Sheet: C4
Drawn by: KT/SS/NY

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CONSTRUCTION SEQUENCE:

- OBTAIN ALL PERMITS, NOTIFY CBYD AND TOWN OFFICIALS.
- PROJECT SURVEYOR SHALL STAKE OUT IMPROVEMENTS.
- MOBILIZE & PLACE CONSTRUCTION TRAILER AND STORAGE CONTAINERS ON SITE.
- CLEAR TREES/VEGETATION FROM PROPOSED IMPROVEMENT AREAS. DO NOT REMOVE STUMPS AND TOPSOIL.
- INSTALL GSF, CE AND SILT SACKS.
- STRIP TOPSOIL, STOCKPILE AND REMOVE STUMPS IN THE AREA OF PROPOSED IMPROVEMENTS.
- DEMOLISH EXISTING INFRASTRUCTURE AND REPLACE WITH NEW INFRASTRUCTURE.
- ROUGH GRADE AND COMPACT NEW PARKING/DRIVEWAY AREAS TO THE PROPOSED SUBGRADES.
- INSTALL RETAINING WALLS, UNDERGROUND DRAINAGE, UTILITIES, LIGHTING & SILT SACKS.
- INSTALL BASE MATERIALS FOR DRIVEWAY, PARKING AND SIDEWALKS AND REMOVE ANY GSF THAT ARE AFFECTED BY THIS PROCESS.
- REMOVE EX. BITUMINOUS CONCRETE SIDEWALKS.
- REMOVE EX. CURBING AND MILL EX. BITUMINOUS CONCRETE PARKING/DRIVEWAY AREAS. (ADD ALTERNATE)
- INSTALL FIRST COURSE OF BITUMINOUS CONCRETE ON THE NEW PARKING/DRIVEWAY AREAS AND INSTALL FULL DEPTH OF BITUMINOUS CONCRETE FOR SIDEWALKS. (ADD ALTERNATE)
- INSTALL LANDSCAPING, TOPSOIL AND SEED ALL DISTURBED AREAS.
- PLACE NEW CURBING, FINAL COURSE OF BITUMINOUS CONCRETE, STRIPING AND SIGNAGE. (ADD ALTERNATE)
- COMPLETE REMAINING SITE CLEAN UP AND REMOVE EROSION CONTROLS.

THE CONTRACTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROLS WEEKLY, BEFORE AN ANTICIPATED STORM GREATER THAN 0.5 INCHES, AND FOLLOWING A SIGNIFICANT STORM EVENT. A FIELD REPORT SHALL BE PREPARED IDENTIFYING THE PROGRESS OF SITE DEVELOPMENT, EFFECTIVENESS OF THE MEASURES AND REMEDIAL ACTIONS OR FIELD CHANGES TO THE PLAN.

NO SILTY WATER SHALL BE PERMITTED TO DISCHARGE FROM THE SITE INTO THE ANY WETLANDS, ADJACENT PROPERTIES OR ONTO OLD QUARRY ROAD DURING CONSTRUCTION.

CONTRACTOR SHALL CONSIDER PENDING WEATHER CONDITIONS WHEN SCHEDULING CRITICAL CONSTRUCTION EARTH WORK ITEMS. CONTRACTOR SHALL ATTEMPT TO PERFORM THESE ACTIVITIES DURING DRY WEATHER FORECASTS.

ADDITIONAL EROSION CONTROL MEASURES SHALL BE KEPT ON SITE FOR REPAIRS

ANY SEDIMENTATION DISCHARGED INTO THE BIOTENTION AREAS SHALL BE REMOVED AND THE AREA SHALL BE RESTORED BY CONTRACTOR.

12-11-17	REBID DOCUMENTS
9-25-17	REDUCE SCOPE OF WORK
8-22-17	ADDENDUM #1
7-20-17	ISSUED FOR BID
7-13-17	REVISIONS PER CONS. COMM., BID PLANS
DATE	DESCRIPTION

EROSION CONTROL PLAN
PREPARED FOR
TOWN OF RIDGEFIELD
FORMER SCHLUMBERGER PROPERTY
36 OLD QUARRY ROAD
RIDGEFIELD, CONNECTICUT

40' 0' 20' 40' 80'



Date: 06-05-17
Scale: 1"=40'
Proj. No: 17-711
File No: 3734
Acad No: 17711SP
Sheet: C5
Drawn by: KT/SS

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GRADING NOTES:
1. - All grading shall be performed to eliminate low points and depressions which would trap surface water. Contact the design engineer if changes are warranted.
2. - Fill under all parking, driveway and sidewalk areas shall be adequately compacted to 95% of the maximum density as determined by ASTM D 1557.
3. - All backfill for buildings, trenches, structures, etc. shall be adequately compacted to prevent excessive settlement. Compaction shall achieve 95% of the maximum density as determined by ASTM D 1557. Contact the engineer should additional clarification be necessary.
4. - Minor grading changes are permitted to meet field conditions provided prior approval is obtained from the engineer.
5. - Proposed grading shall maintain existing runoff conditions.
6. - Care should be taken when paving to properly grade the driveway/parking areas in order to avoid ponding and provide adequate drainage patterns.

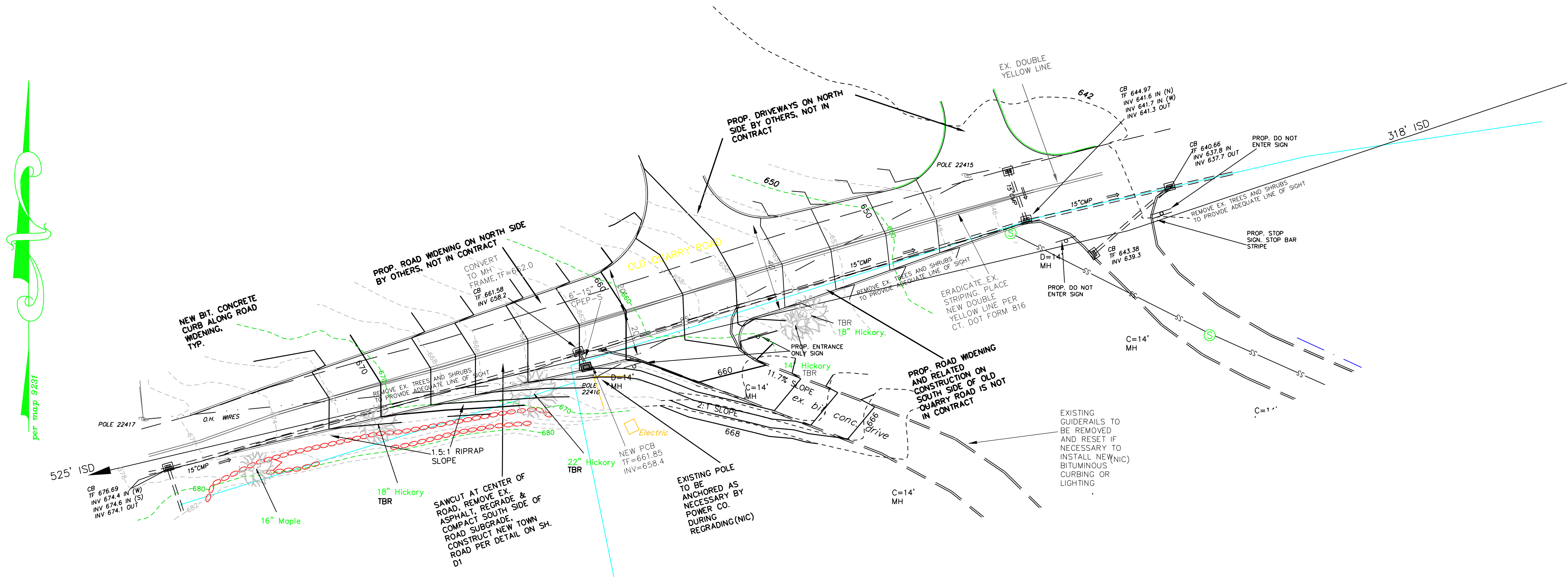
ALL STORM SEWER PIPING SHALL BE CPEP--S UNLESS NOTED OTHERWISE.

ALL UTILITY STRUCTURES SHALL BE ADJUSTED TO THE NEW FINISHED GRADES.

ROAD WIDENING SHALL NOT BE INCLUDED IN THE BID. TO BE DONE AT A LATER DATE. SIGHTLINE CLEARING, TREE REMOVAL AND PROPOSED SIGNS AND STRIPING ON SITE DRIVEWAYS SHALL BE INCLUDED ON THE BIDS.

ALL DRAINAGE AND SANITARY SEWER STRUCTURE FRAMES SHALL BE CONSTRUCTED SO THAT THEY MAY BE ADJUSTED DOWN AT LEAST 12". USE GRADE RINGS OR BRICK TO CONSTRUCT TOP 12".

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL STRUCTURES FOR APPROVAL BY THE DESIGN ENGINEER PRIOR TO CONSTRUCTION.



12-11-17	REBID DOCUMENTS
9-25-17	REDUCE SCOPE OF WORK
8-22-17	ADDENDUM #1
9-20-17	ISSUED FOR BID
7-13-17	REVISIONS PER CONS. COMM., BID PLANS
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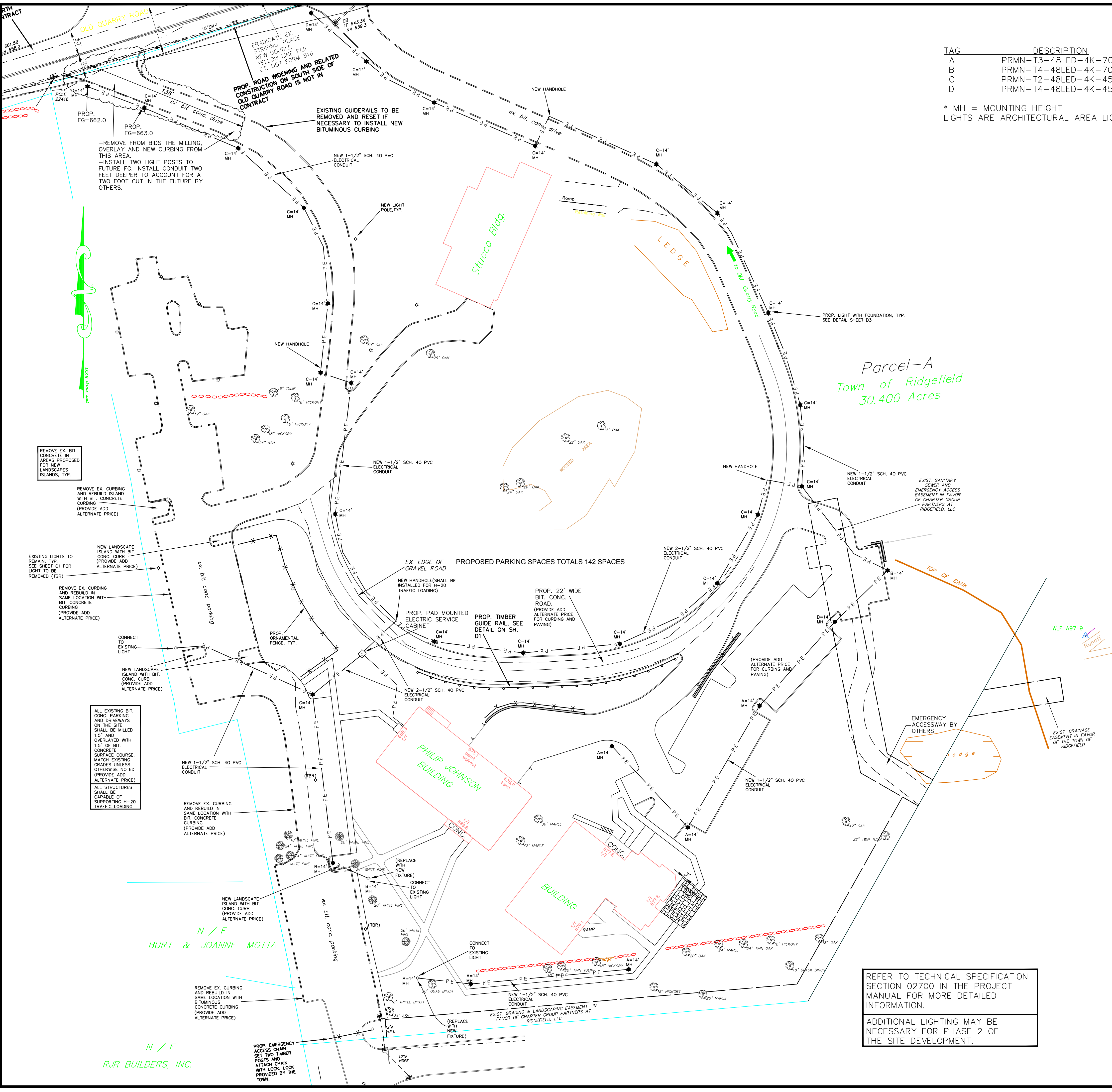
ROAD IMPROVEMENT PLAN
PREPARED FOR
TOWN OF RIDGEFIELD
FORMER SCHLUMBERGER PROPERTY
36 OLD QUARRY ROAD
RIDGEFIELD, CONNECTICUT

40' 0' 20' 40' 80'

	Date: 07-13-17
	Scale: 1"=30'
	Proj. No.: 17-711
	File No.: 3734
	Acad No.: 1771BP
Sheet: C6	
Drawn by: KT/SS	


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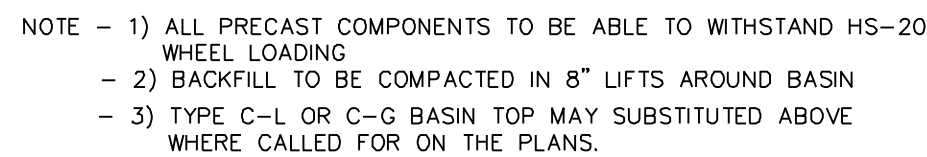
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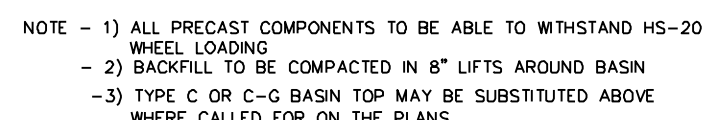
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B	PRMN-T4-48LED-4K-700
C	PRMN-T2-48LED-4K-450
D	PRMN-T4-48LED-4K-450

* MH = MOUNTING HEIGHT
LIGHTS ARE ARCHITECTURAL AREA LIGHTING PROMENADE SERIES LED.

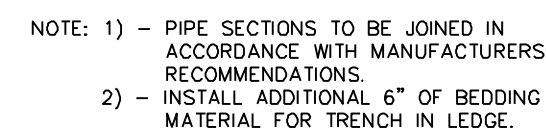
DATE		DESCRIPTION
SITE LIGHTING PLAN		
PREPARED FOR		
TOWN OF RIDGEFIELD		
FORMER SCHLUMBERGER PROPERTY		
36 OLD QUARRY ROAD		
RIDGEFIELD, CONNECTICUT		
40' 0' 20' 40' 80'		
	Date:	12-11-17
	Scale:	1"=40'
	Proj. No:	17-711
	File No:	3734
	Acad No:	1771ISP
Sheet:	C7	
Drawn by:	KT/SS	
40 Old New Milford Road Brookfield, CT 06804 (203)775-6207 www.ccaengineering.com		
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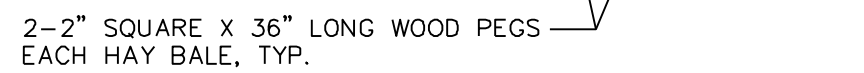
PRECAST CATCH BASIN WITH TYPE "C" TOP
N.T.S.



DETAIL - PRECAST CATCH BASIN
WITH TYPE CL CATCH BASIN TOP
N.T.S.

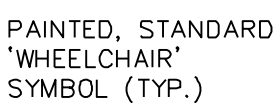


TYPICAL TRENCH SECTION
NTS

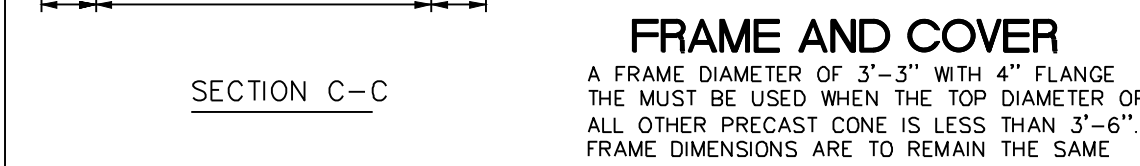


NOTE: SEDIMENT FENCE MAY BE SUBSTITUTED FOR HAY BALES.

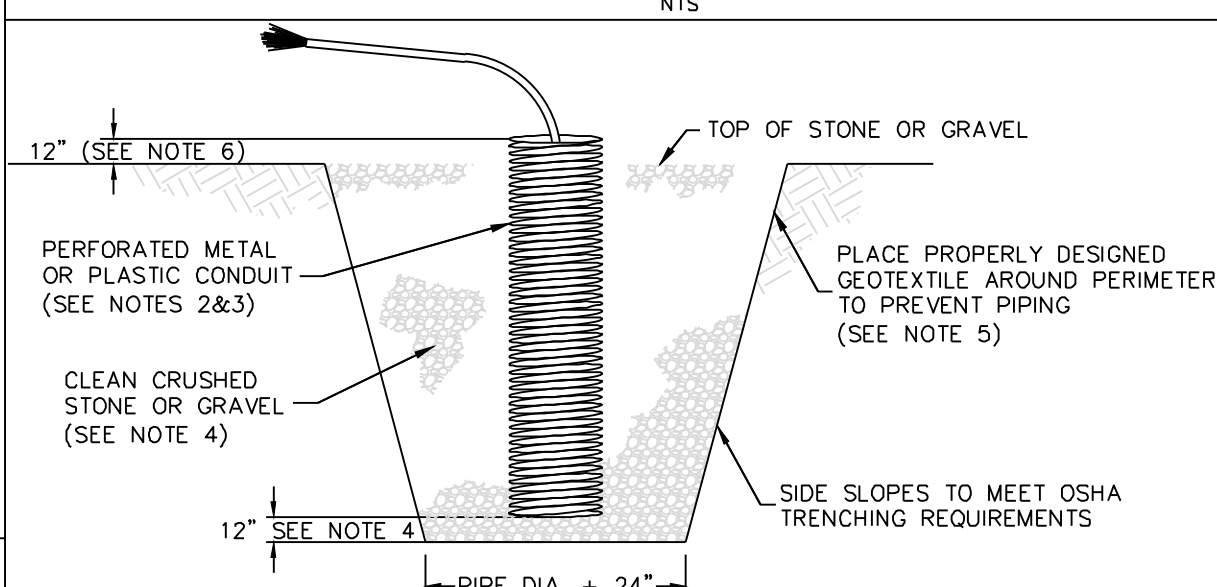
TYPICAL DETAIL - PLAN VIEW
EROSION CONTROL AT CATCH BASIN
N.T.S.



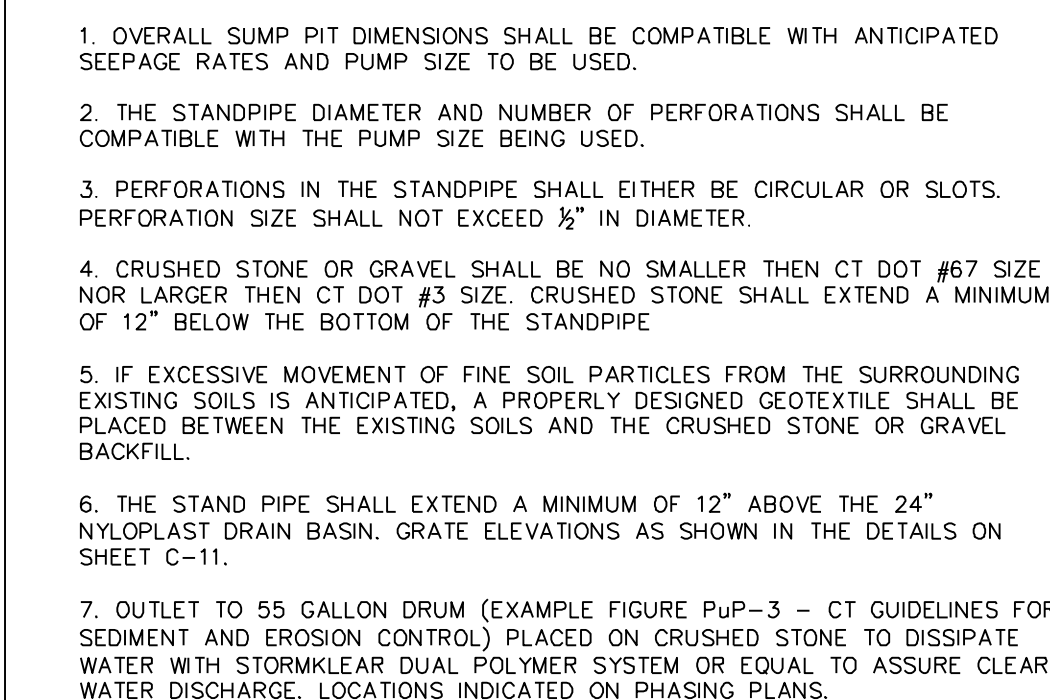
HANDICAP SPACE MARKINGS
N.T.S.



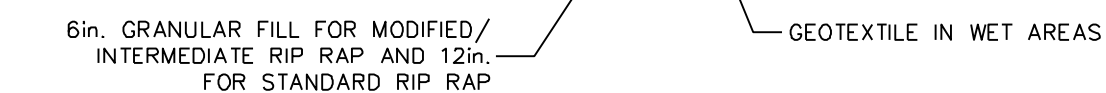
DETAIL OF SEAT



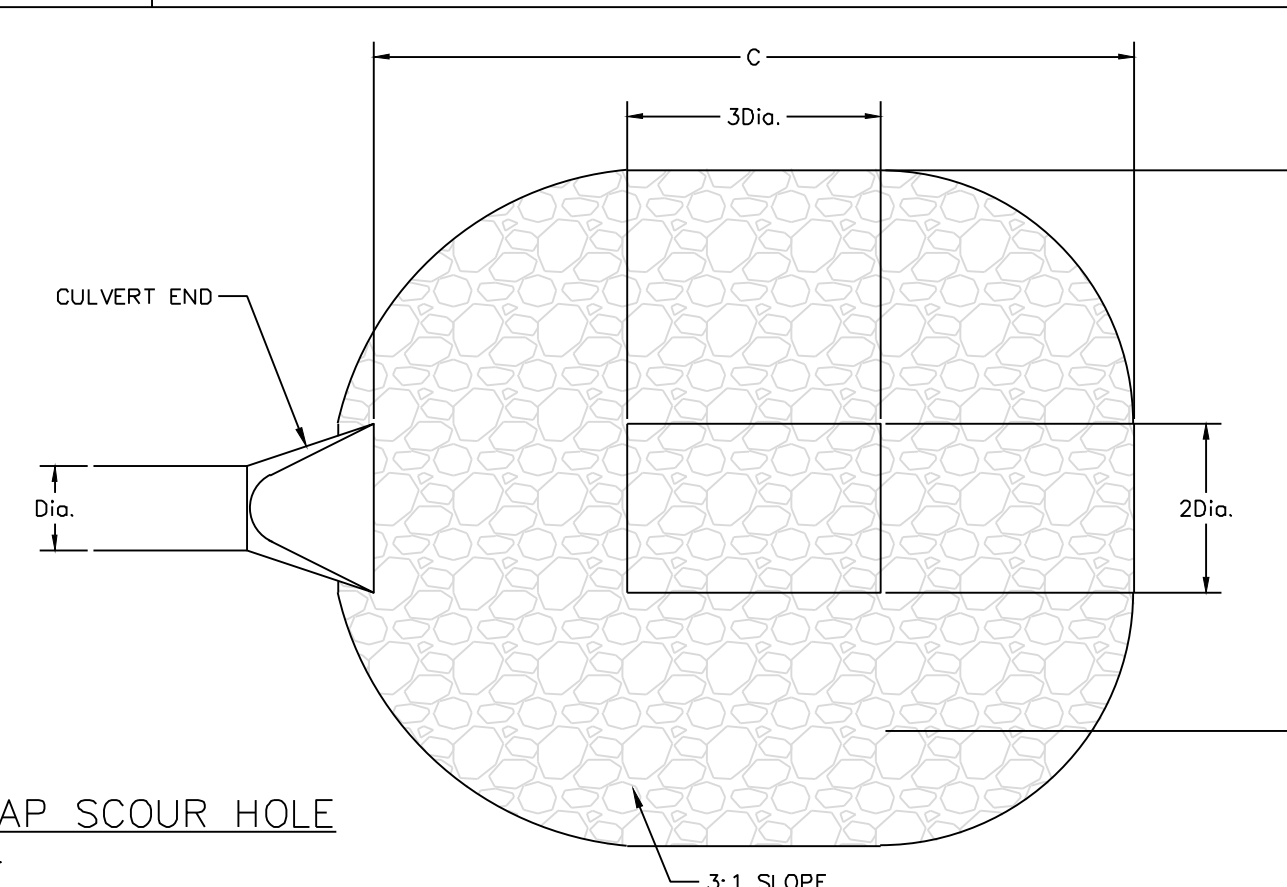
TYPICAL SECTION OF SUMP PIT
(N.T.S.)



PROPOSED
TIMBER GUIDE RAIL
NTS



PREFORMED RIP RAP SCOUR HOLE
N.T.S.



3/4" COMPACTED STONE BEDDING, 12" THICK
PLACE MIRAFI 140N FILTER FABRIC OR EQUAL
ON TOP OF SUBGRADE

12-11-17	REBID DOCUMENTS
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NOTES & DETAILS

PREPARED FOR
TOWN OF RIDGEFIELD
FORMER SCHLUMBERGER PROPERTY
36 OLD QUARRY ROAD
RIDGEFIELD, CONNECTICUT



Date: 06-05-17

Scale: 1"=40'

Proj No: 17-711

File No. 8704

File No. 0704

Acad No: 177115F

Sheet: D1

Drawn by: KT/SS

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FRAME & COVER DIMENSIONS

STANDARD MANHOLE
COVER
STANDARD PATTERN

SPECIAL PICKHOLE DETAIL

SANITARY PRECAST REINFORCED
CONCRETE MANHOLE ASSEMBLY

INVERT DETAIL

VARIES
KNOCKOUT DETAIL

- ### DRAINAGE SYSTEM NOTES:
1. UNLESS OTHERWISE NOTED ON THE PLANS, ALL DRAINAGE PIPE SHALL BE CONNECTICUT DOT APPROVED, CPEP(6) PIPE TO BE JOINED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
 2. ALL CATCH BASINS SHALL CONFORM TO THE REQUIREMENTS OF TOWN OF RIDGEFIELD STANDARD DETAIL FOR PRECAST DRAINAGE STRUCTURES.
 3. CATCH BASIN TOPS SHALL CONFORM TO TOWN OF RIDGEFIELD STANDARD.
 4. ALL CATCH BASIN FRAMES AND GRATES SHALL CONFORM TO TOWN OF RIDGEFIELD STANDARD.
 5. DRAINAGE MANHOLES SHALL CONFORM TO TOWN OF RIDGEFIELD STANDARD FOR PRECAST MANHOLES.
 6. CRUSHED STONE FOR UNDERDRAINS (PERFORATED PIPE) SHALL BE 3/4" STONE CONFORMING TO SEC'N M.01-01-FORM 816 CT. D.O.T. STANDARD SPECIFICATIONS. FILTER FABRIC SHALL BE MIRAFI 140N OR EQUIVALENT.
 7. RIP-RAP SHALL CONFORM TO SEC'N M.12-02-FORM 816, CT. D.O.T. STANDARD SPECIFICATIONS.
 8. ALL FOOTING AND CURB/RAIN DRAIN SHALL BE CONNECTED TO A PROPOSED CATCH BASIN OR DRAINAGE MANHOLE EXCEPT FOR UNIT 11 & 12.
 9. GROUNDWATER (CURTAIN) DRAINS MAY BE REQUIRED IN EXCAVATION AREAS BY THE ENGINEER DURING CONSTRUCTION.
 10. ALL ROOF DRAINS SHALL BE 4" SDR 35 D3034 PVC.
 11. CONTRACTOR IS TO SUPPLY CIVIL ENGINEER WITH SHOP DRAWINGS/PRODUCT SUBMITTALS FOR ALL DRAINAGE SYSTEM PRODUCTS.

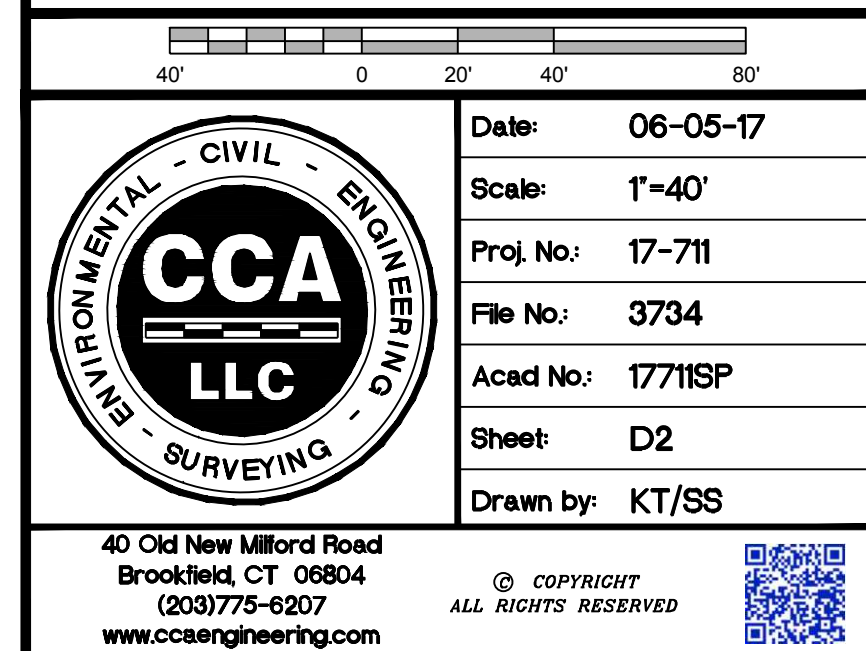
NOTE: THE SILTSACK® WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 USIEV
FLOW RATE	ASTM D-4481	40 GAL/MIN/50 FT
PERMEVITY	ASTM D-4481	0.65 SEC

- SANITARY SEWER SYSTEM NOTES:**
- A. BUILDING SEWER CONNECTION TO BE 6-INCH DIAMETER SDR 35 ASTM D3034 PVC AND HAVE A MINIMUM SLOPE OF 1/4" PER FOOT.
 - B. SIX-INCH WYES TO BE USED FOR BUILDING SEWER CONNECTION.
 - C. SANITARY SEWER TO BE CONSTRUCTED IN ACCORDANCE WITH THE "STANDARD DETAILS" AND THE "SEWER USE REGULATIONS" OF THE RIDGEFIELD WPCA.
 - D. BUILDING SEWERS TO BE EXTENDED TO WITHIN FIVE FEET OF THE BUILDING OUTLET BY OTHERS.
 - E. IF BASE INFORMATION TAKEN FROM SURVEY DATA PREPARED BY RWK
NO DEVIATION FROM THESE DOCUMENTS WILL BE PERMITTED WITHOUT PRIOR APPROVAL OF THE DESIGN. AMBIGUITIES AND INCONSISTENCIES IN THE SEWERAGE SYSTEM SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. CLARIFICATION OF CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION.
 - F. NOTIFY "CALL-BEFORE-YOU-DIG" AT 1-800-922-4455 FOR MARK-OUT OF EXISTING UTILITIES IN ALL ADJOINING ROADS BEFORE COMMENCEMENT OF WORK. THE OWNER SHALL OBTAIN ALL APPLICABLE PERMITS FROM THE TOWN OF RIDGEFIELD.
 - J. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND QUANTITIES SHOWN ON THESE PLANS PRIOR TO PROCEEDING WITH CONSTRUCTION AND ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF ALL DIMENSIONS. THE CONTRACTOR SHALL HAVE FINAL SAY AS TO THE ACTUAL DIMENSIONS TO CONSTRUCT BY.
 - K. THE LOCATION AND ELEVATION OF UNDERGROUND UTILITIES IS UNKNOWN. IF ANY UTILITIES ARE DISCOVERED DURING THE CONSTRUCTION, THE CONTRACTOR, HIS PRINCIPLES OR EMPLOYEES, SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES, AND/OR ADDITIONAL COSTS WHICH MIGHT RESULT FROM THE EXISTENCE OF SAID UTILITIES.
 - L. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING ANY WORK AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
 - M. NO PIPE CONNECTION CAN BE MADE TO ANY EXISTING BACKFILLED UNLESS A RIDGEFIELD W.P.C.A. REPRESENTATIVE IS PRESENT.
 - N. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH TESTING NEW SANITARY SEWER INFRASTRUCTURE, i.e. PRESSURE AIR TESTING, VACUUM TESTING ETC.

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NOTES & DETAILS
PREPARED FOR
TOWN OF RIDGEFIELD
FORMER SCHLUMBERGER PROPERTY
36 OLD QUARRY ROAD
RIDGEFIELD, CONNECTICUT



PLANTING NOTES:

ALL PLANTING MATERIAL TO BE NURSERY GROWN STOCK SUBJECT TO APPLICABLE A.A.N. STANDARDS.
THE CONTRACTOR SHALL SUPPLY ALL PLANTS IN QUANTITIES SUFFICIENT TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND LISTED IN THE PLANT LIST. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN IN THE PLANT LIST AND THOSE REQUIRED BY THE DRAWINGS, THE LARGER NUMBER SHALL APPLY.
ALL PLANTS SHALL BE APPROVED PRIOR TO INSTALLATION AND SHALL BE LOCATED ON SITE BY THE CONTRACTOR, FOR THE APPROVAL OF THE LANDSCAPE ARCHITECT. ANY INSTALLATIONS WHICH WERE NOT APPROVED BY THE LANDSCAPE ARCHITECT AND WHICH ARE SUBSEQUENTLY REQUESTED TO BE MOVED, WILL BE DONE AT THE CONTRACTORS EXPENSE.

PRECISE LOCATION OF ITEMS NOT DIMENSIONED ON THE PLAN ARE TO BE FIELD STAKED BY THE CONTRACTOR AND SHALL BE SUBJECT TO THE REQUIREMENTS SPECIFIED IN THE PREVIOUS NOTE.

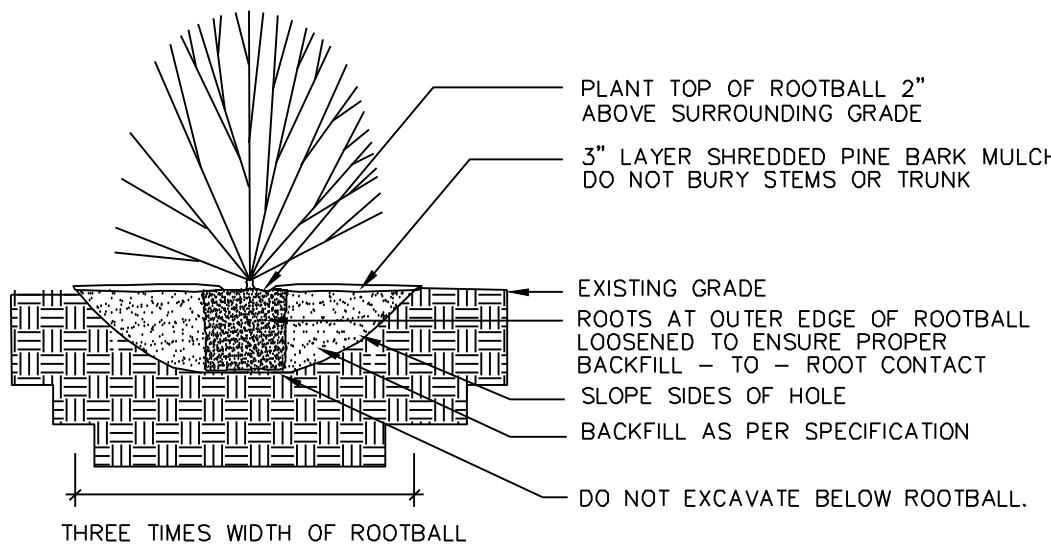
ALL SHRUB MASSINGS AND TREE PITS SHALL BE MULCHED TO A DEPTH OF 3" WITH SHREDDED PINE BARK MULCH.
THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGED VEGETATION AND SHALL REPLACE OR REPAIR ANY DAMAGE, AT HIS OWN EXPENSE.

ALL SHRUB AND GROUND COVER PLANTING AREAS SHALL HAVE CONTINUOUS BEDS OF TOPSOIL, 12" DEEP.

THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES IN THE FIELD. WHERE PLANT MATERIAL MAY INTERFERE WITH UTILITIES, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT TO COORDINATE THEIR INSTALLATION.

PLANTINGS INSTALLED IN THE DRY SUMMER MONTHS AND /OR LAWN SEEDED OUT OF SPRING OR FALL PERIODS, IF ALLOWED BY OWNER, WILL REQUIRE AGGRESSIVE IRRIGATION PROGRAMS AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE DIRECTED BY THE OWNER.

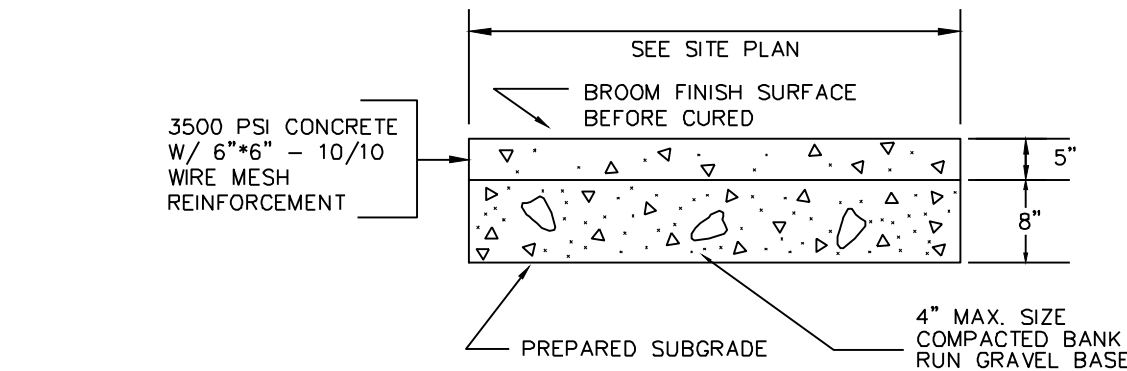
10. SUBSTITUTIONS PERMITTED ONLY UPON WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
11. PLANT TAGS TO REMAIN ON ALL PLANT MATERIAL UNTIL FINAL ACCEPTANCE. CONTRACTOR TO THEN REMOVE ALL PLANT TAGS.
12. WHERE A SIZE RANGE IS GIVEN IN THE PLANT SCHEDULE, AT LEAST 50% OF THE PLANTS PROVIDED SHALL BE OF THE LARGER SIZE.
13. CONTRACTOR TO GUARANTEE ALL PLANT MATERIAL FOR ONE YEAR AFTER DATE OF FINAL ACCEPTANCE.
14. CONTRACTOR TO MAINTAIN ALL PLANT MATERIAL UNTIL 60 DAYS AFTER FINAL ACCEPTANCE.
15. TOPSOIL AND SEED ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES AND NOT COVERED BY OTHER SITE IMPROVEMENTS.



SHRUB PLANTING

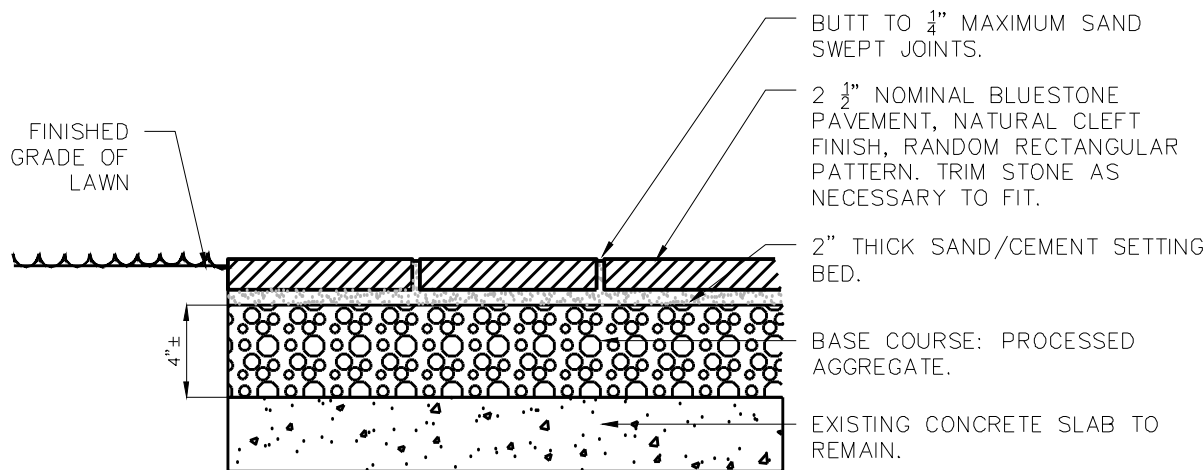
DETAIL

NOT TO SCALE



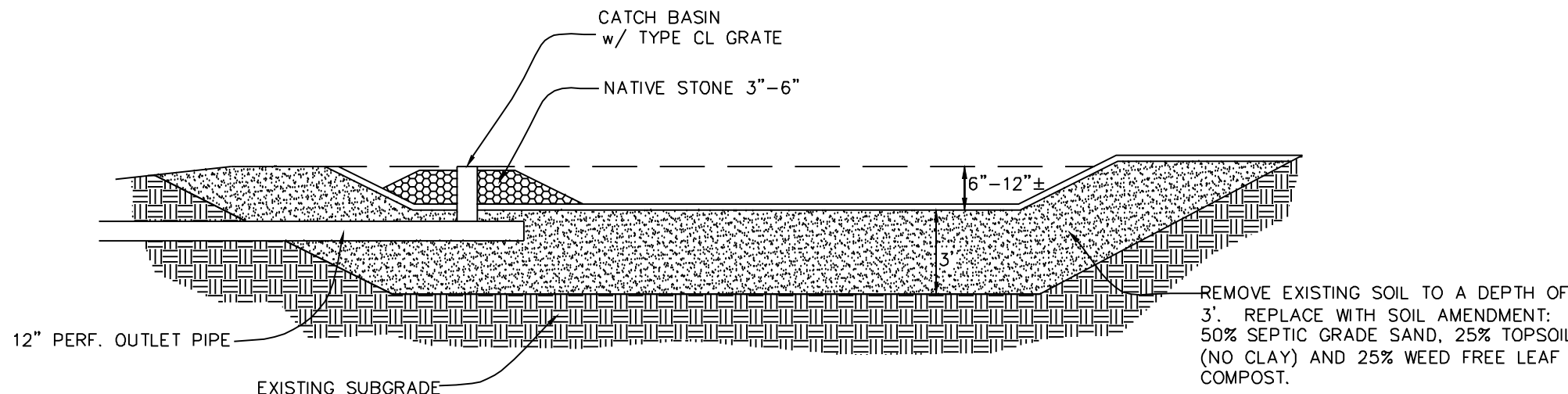
CONCRETE PATIO

N.T.S.



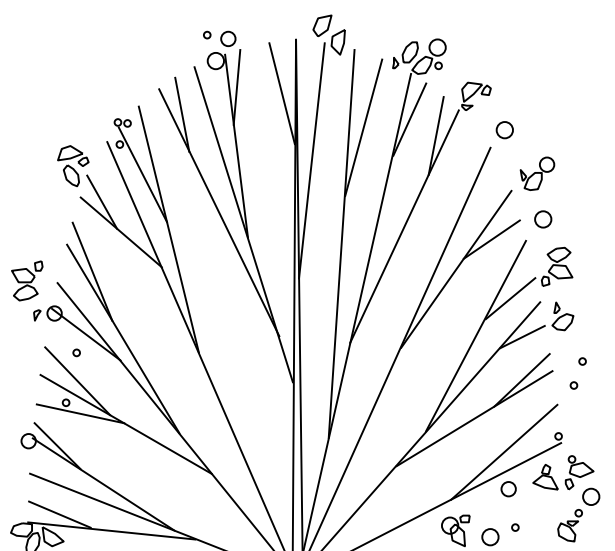
DETAIL
BLUESTONE TERRACE

N.T.S.
(PROVIDE ADD ALTERNATE PRICE IN PLACE OF CONCRETE PATIO)



BIORETENTION SECTION

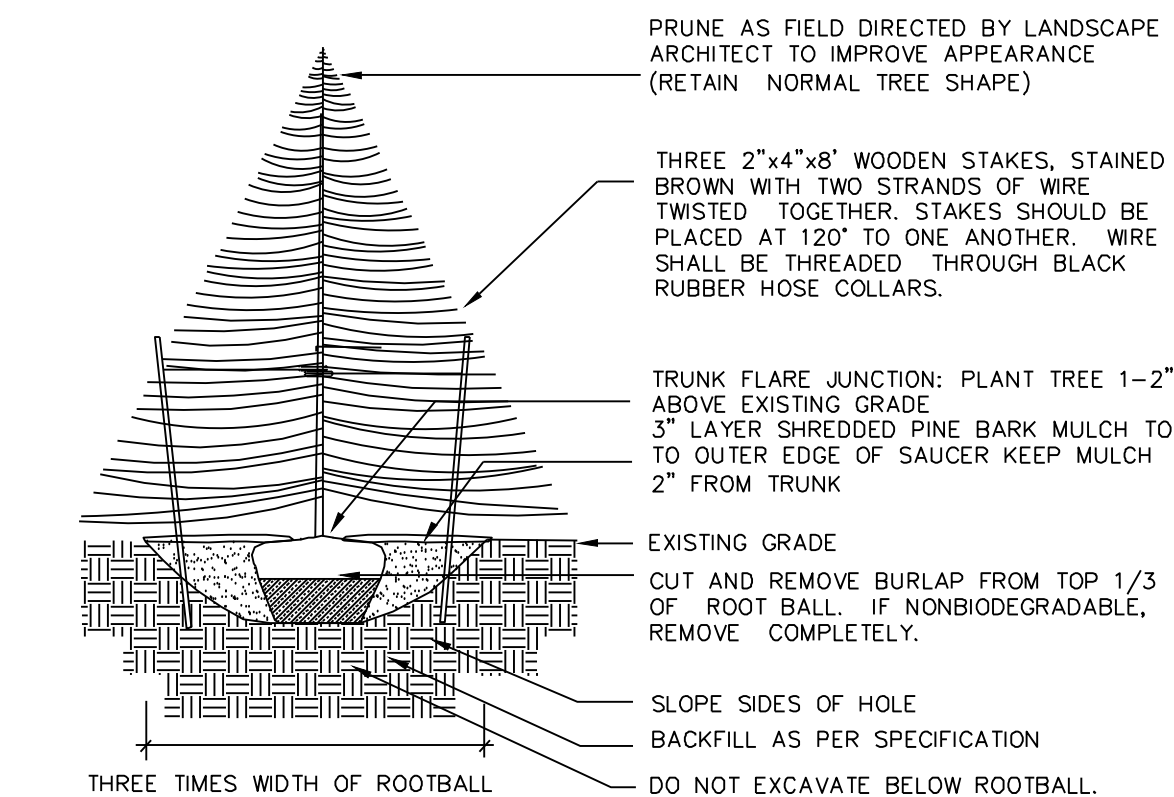
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DECIDUOUS TREE PLANTING

DETAIL

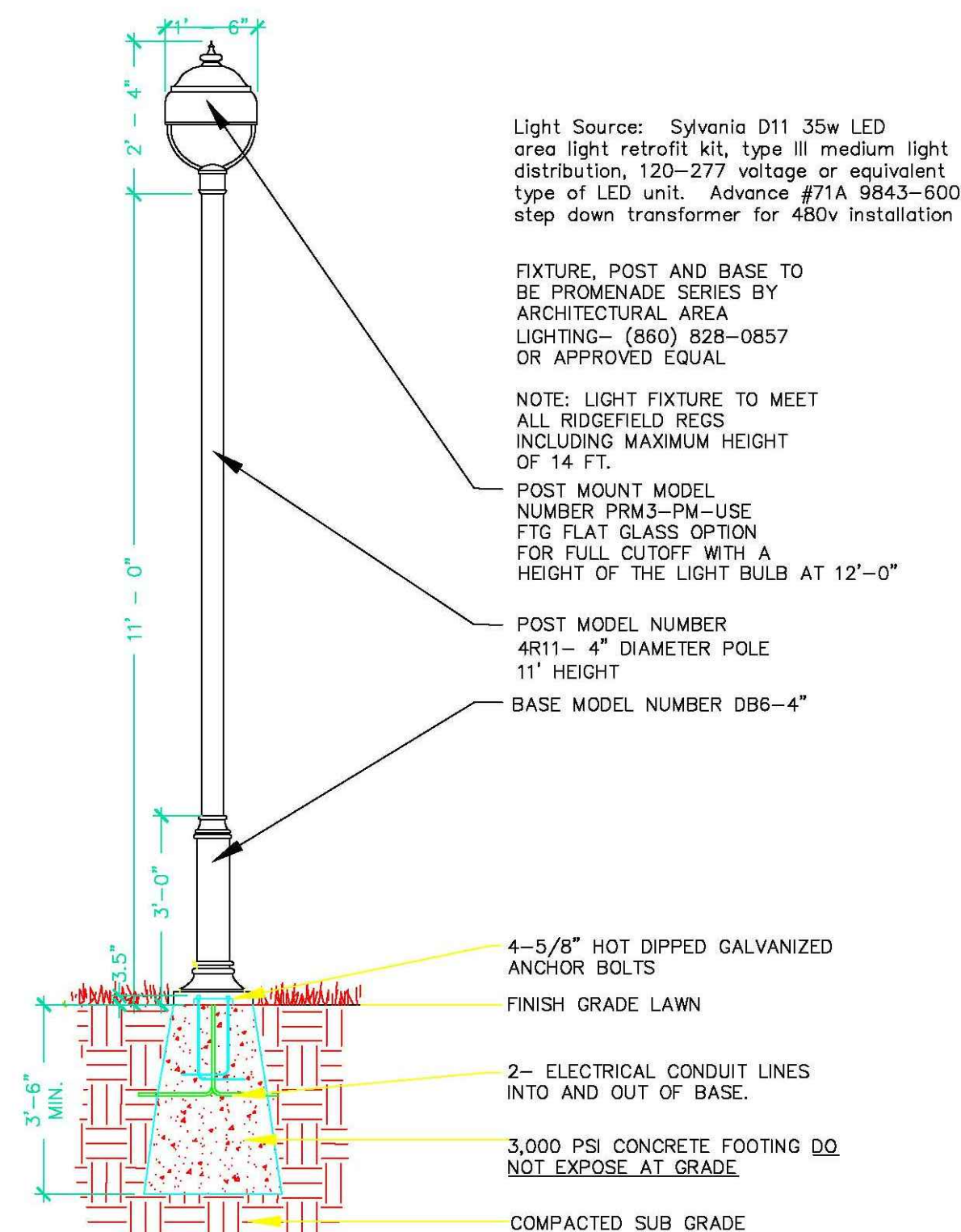
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EVERGREEN TREE PLANTING

DETAIL

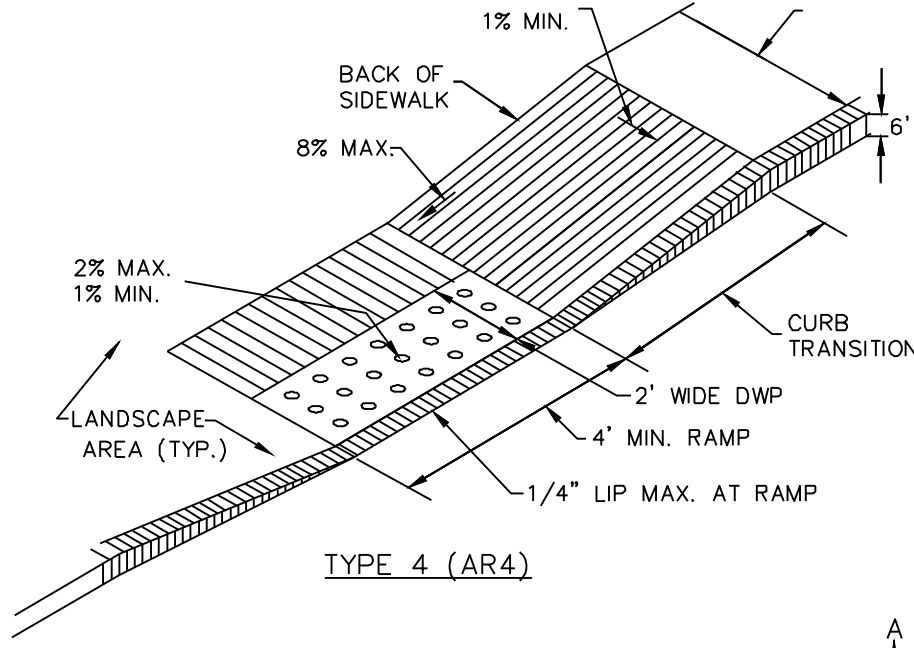
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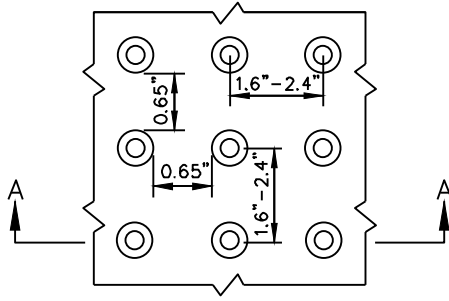
LIGHT POLE DETAIL

N.T.S.

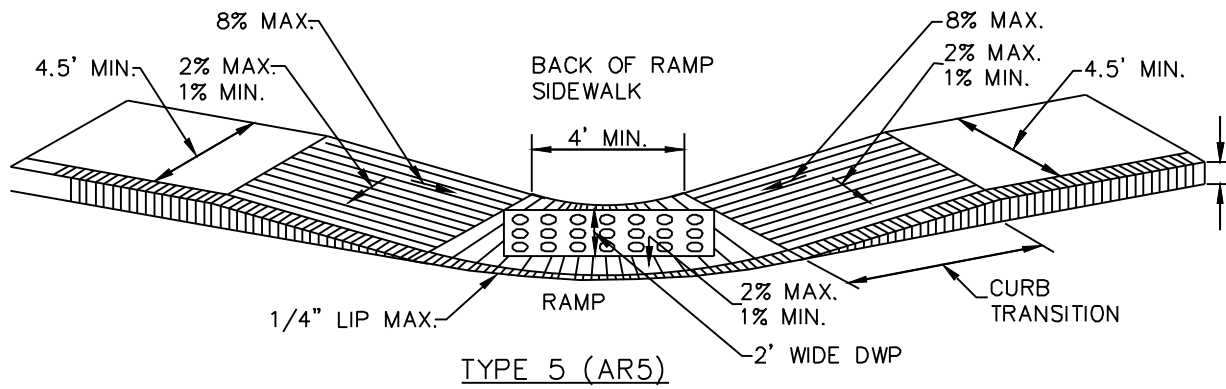
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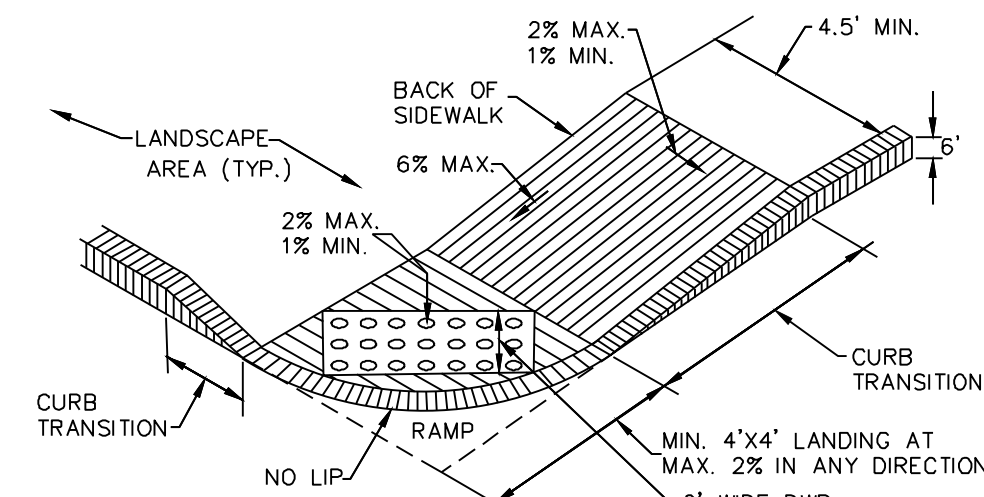
TYPE 4 (AR4)



DETECTABLE WARNING PANEL (DWP)
CAST IRON



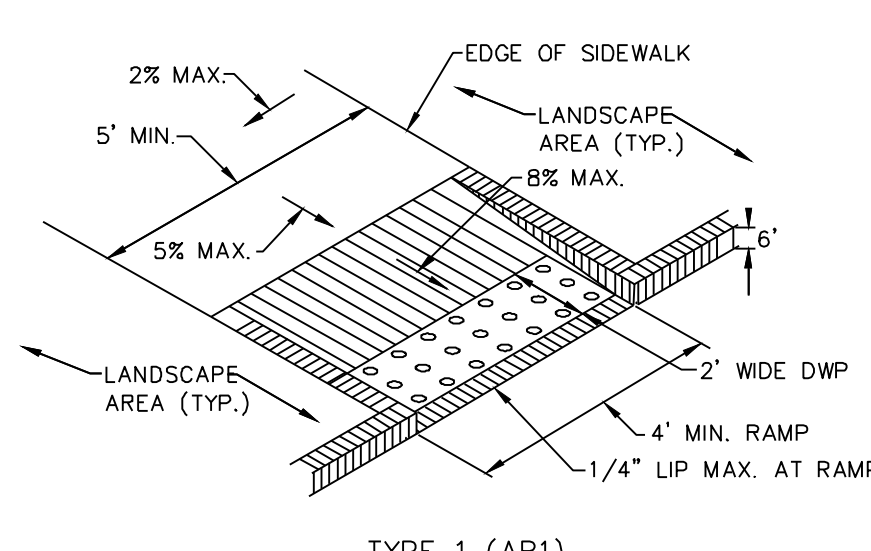
TYPE 5 (AR5)



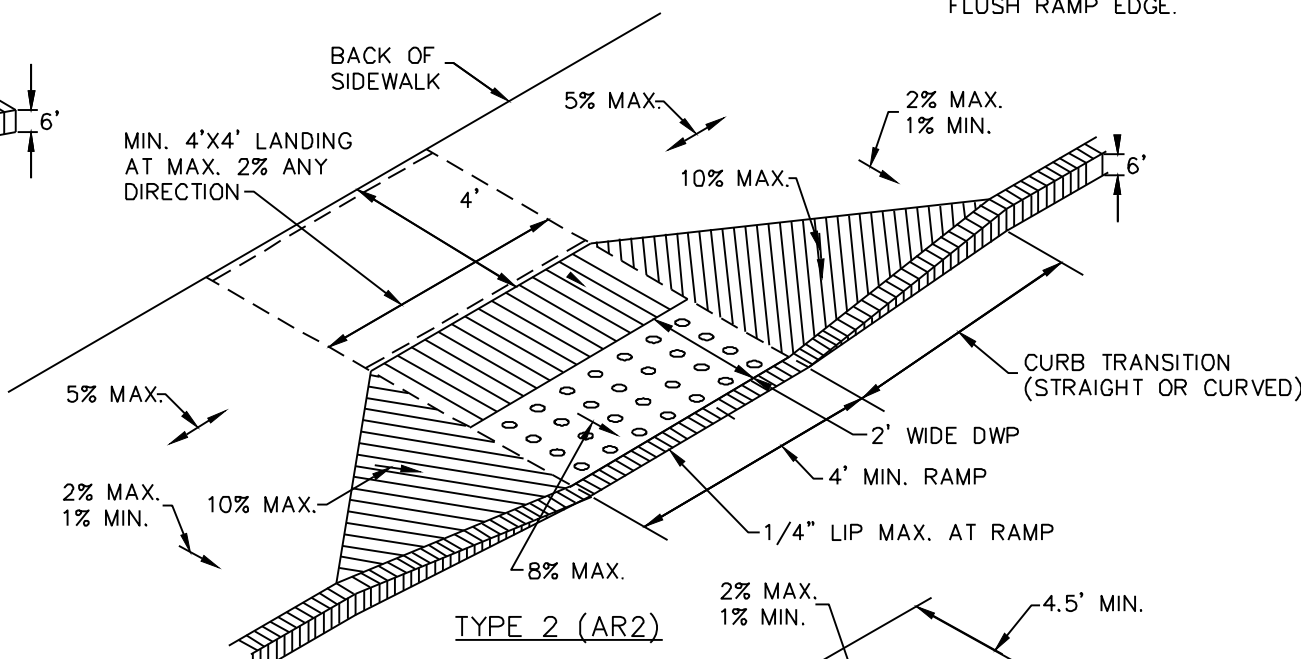
TYPE 6 (AR6)

ACCESSIBLE CURB RAMP DETAILS

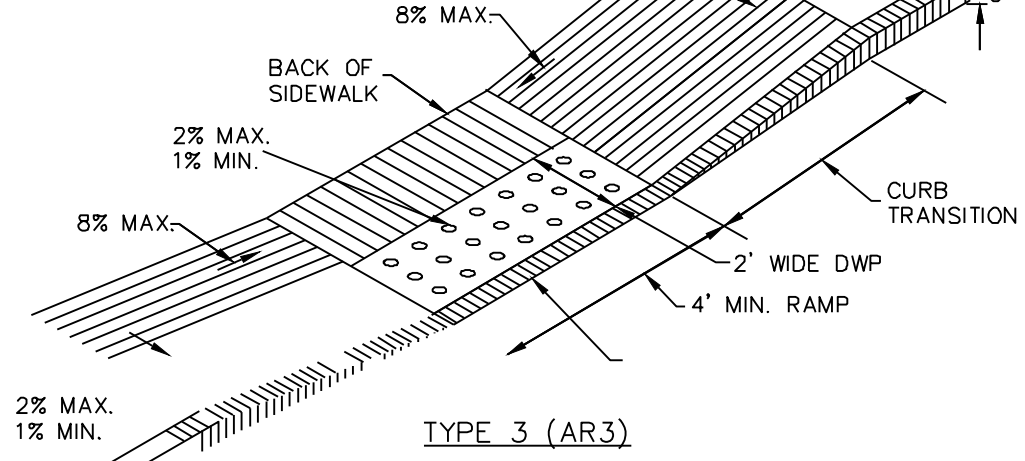
N.T.S.



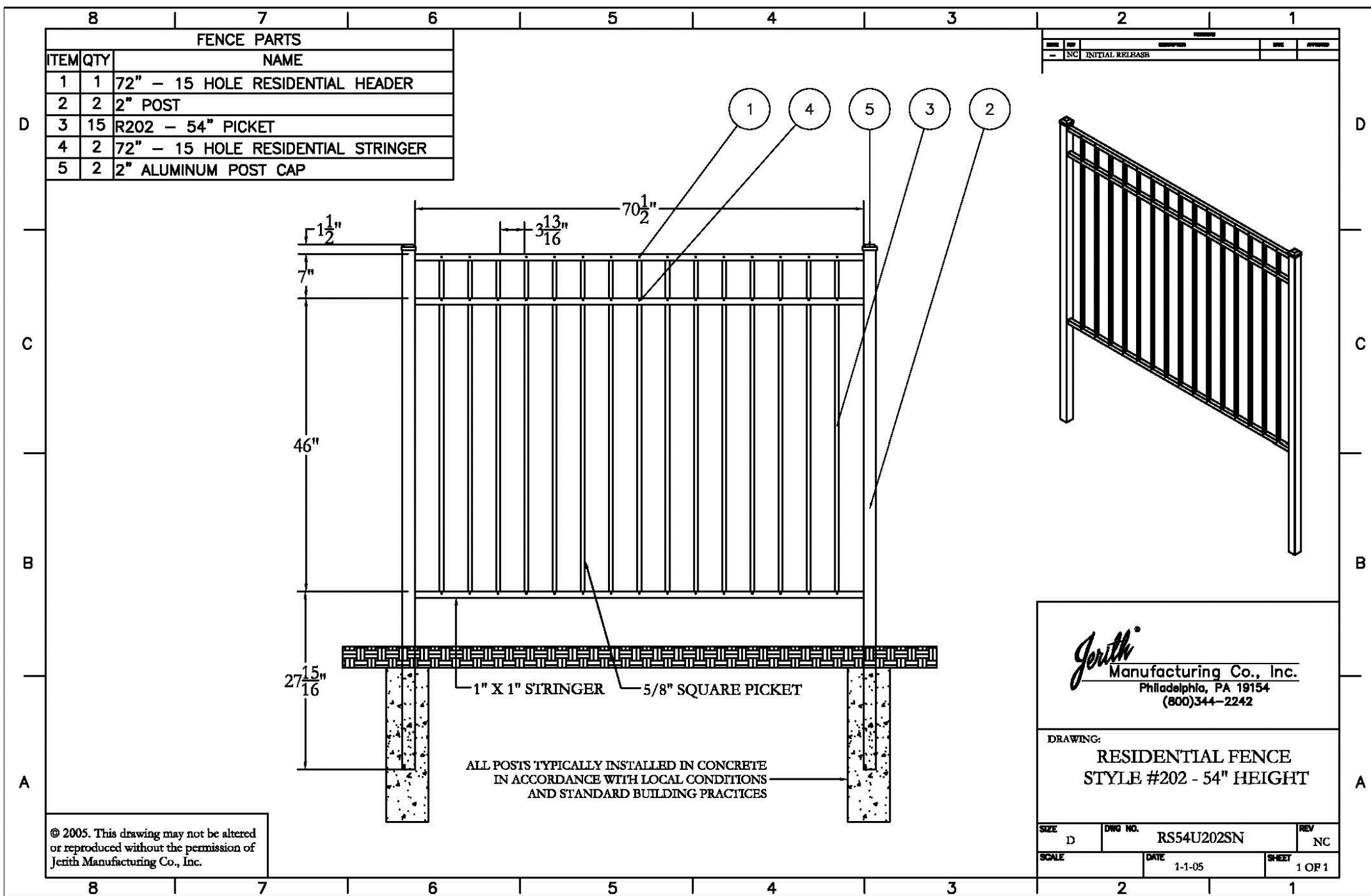
TYPE 1 (AR1)



TYPE 2 (AR2)



TYPE 3 (AR3)



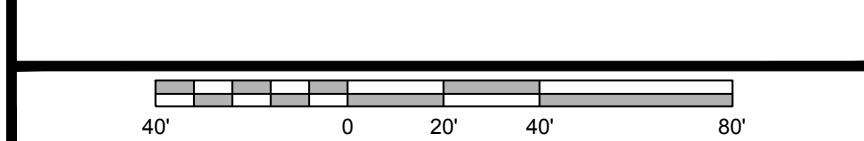
ALL FOOTINGS ARE TO BE 3000 PSI CONCRETE
54" HT FENCE POST FOOTING: 12" Ø X 42" DEPTH

ORNAMENTAL FENCING

N.T.S.

12-11-17	REBO DOCUMENTS
9-25-17	REDUCE SCOPE OF WORK
8-22-17	ADDENDUM #1
7-20-17	ISSUED FOR BID
7-13-17	REVISIONS PER CONS. COMM., BID PLANS
DATE	DESCRIPTION

NOTES & DETAILS
TOWN OF RIDGEFIELD
FORMER SCHLUMBERGER PROPERTY
36 OLD QUARRY ROAD
RIDGEFIELD, CONNECTICUT



CCA ENVIRONMENTAL - CIVIL - ENGINEERING LLC SURVEYING	Date: 06-05-17 Scale: 1"=40' Proj. No.: 17-711 File No.: 3734 Acad No.: 1771ISP Sheet: D3 Drawn by: KT/SS
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40 Old New Milford Road
Brookfield, CT 06804
(203)775-6207
www.ccsengineering.com

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