

**Request for Proposal
Diamond Hill Park Baseball Field Reconstruction Project
BID # 2021-0903-01**

**Town of Cumberland
45 Broad Street
Cumberland, RI 02864**

Date issued: August 19, 2021

Date due: September 3, 2021 12:00 pm

Town of Cumberland, Finance Department

45 Broad Street

Cumberland, RI 02864

Phone: 401-728-2400

SCOPE OF WORK

The Town of Cumberland in partnership with Tom Irwin Advisors has developed the following scope of work and supporting the reconstruction and transition of the baseball field to a natural turf athletic field. The Project Specification and One Year Athletic Field Maintenance Program (Both located in the appendix section of this RFP) will improve the playing conditions of the Diamond Hill Baseball Athletic Fields located at 4097 Diamond Hill Rd, Cumberland, RI 02864.

The Town is seeking a Sports Turf professional contract company that is qualified and experienced to carry out the reconstruction and transition of the baseball field to a natural turf athletic field, including but not limited to; removal of the warning track, fencing and infield materials, stripping of existing vegetation, excavation and stockpiling of existing rootzone, irrigation installation, amending and blending of existing rootzone with approved sand, replacement of existing amended rootzone, laser grading and seed bed preparation, seeding and turf maintenance (Grow in and establishment) and other methods as outlined in the RFP and associated accompanying specifications. The successful contractor will also implement the Year One targeted maintenance program for the following:

- | | | |
|-------------------|------|-----------------------|
| 1. Baseball Field | Area | 90,000ft ² |
|-------------------|------|-----------------------|

Reconstruction of the Baseball Field

The General scope of work for the reconstruction of the baseball field Project is as follows, **A detailed Specification and One-Year Maintenance Program** can be found in the appendix section of this RFP document:

Sequence of Operations

1. Removal of Warning Track, Fencing and Infield Skin Materials
2. Stripping of Existing Vegetation
3. Excavation and Stockpile of Existing Rootzone
4. Irrigation Installation
5. Amending and Blending of Existing Rootzone with Approved Sand
6. Replacement of Existing Rootzone
7. Final laser Grade/Seed Bed Preparation
8. Seeding
9. Turf Maintenance (Grow in and Establishment)

1. Removal of Warning Track and Infield Skin Materials

To remove the warning track and infield skin materials, to such that the field can be reconstructed, and a transition created from the current baseball field to the multi-use athletic field. All materials will need to be removed from site and disposed of in a safe and environmentally sensitive manner. Removal operations shall be completed prior to the start of excavation, trenching, or grading operations.

2. Stripping of Existing Vegetation

Remove existing turf to a depth of +/- one and a half (1 ½) inches (+/-1/2") utilizing LGP turf tractor mounted "Koro Field Top maker" or Utilize LGP dual plane laser equipped crawler Bulldozer fitted with low ground pressure (LGP) tracks equivalent at one (1) inch plus/minus one-eighth (1/8) inch pass.

3. Excavation and Stockpile of Existing Rootzone.

Excavation of existing topsoil material down to +/- seven inches (+/-7") depth and/or to the existing subbase material. Rough grade within 1 in. of finish subgrade to mirror final surface grades. Remove any existing stone and other debris from *subgrade* to a depth of Three (3) in that would inhibit the grading process.

4. Irrigation Installation.

Remove all existing irrigation system components and replace with new. All irrigation piping and components shall be bedded and backfilled with clean and stone/rock free material. In the event of on-site soil materials not being suitable for this purpose, clean Rootzone material or sand shall be imported and used for bedding and backfill.

Irrigation heads shall not be installed within areas of soil amendment, tilling and blending until after the seed surface preparation process has been completed and the finish grade established. Swing joint assemblies must be sealed with a suitable drilled cap. Upon completion of finish grading, the system will be turned on to dampen areas of burial and indicated head locations.

5. Amending and Blending of Existing Rootzone with Approved Sand.

Amend existing rootzone with Two (2) mm sand or equal and screen to Three-Eighths (3/8)" using a Trommel mixing and screening plant. A volume equivalent to Seven (7) inches of the existing rootzone and required amendment material (2mm sand) will be required. Remove all and any material, stones, roots, contamination above Three-Eighths (3/8) "in average diameter.

6. Replacement of Existing Rootzone.

Shall be placed around the Subbase as so to allow effective distribution and placement by LGP equipment Haul, backfill, laser grade and consolidate a minimum of Seven-inch (7") uniform layer of rootzone over the established subbase layer to meet the required slopes and elevations of finish grade. The replaced amended topsoil layer must be laser graded and consolidated to meet the required slopes and elevations of finish grade elevations.

7. Final laser Grade/Seed Bed Preparation.

The entire site to be seeded shall be laser graded and consolidated to predetermined finish grade elevations utilizing a fully automated dual plane laser grader and ground preparation equipment.

All edges, corners, and material transition areas shall be graded by manual labor if necessary, to insure consistent elevation control with surface stabilization and firmness throughout the site.

At the completion of finish grading and consolidation, the irrigation system will be tested, and sprinkler heads installed. To carry out and apply specified amendment and nutrition products, to assist in the germination and establishment of the performance turf grasses to re-establish the multi-use athletic field playing surface to required surface quality and provide safe high-quality playing conditions

8. Seeding.

To carry out seeding of the multi-use athletic field surface, using a seeder with disc action to make sure seed is inserted a minimum of ¼” depth into the soil profile. To reestablish a high-quality athletic field surface, with the most up to date high performance turf grass

9. Turf Maintenance (Grow-In and Establishment Program).

To assist with the germination and establishment of the multi-use athletic field turf. This program provides all cultural, nutritional and plant protection products, timing and application methods. (A detailed view of the approach can be found in the specification located in the appendix to this RFP document.)

10. One Year Maintenance Program

To assist in the continued establishment and maintenance of the Athletic field surface, this program provides all cultural, nutritional and plant protection products, timing and application methods. (A detailed view of the approach can be found in the appendix located in this RFP document.)

REQUIRMENTS

- Contractors **MUST** read the baseball field reconstruction specification and 1-year maintenance plan attached to this RFP to fully familiarize them to the requirements of this project and to be able to provide a suitable pricing budget to carry out and complete the project to the required standards.
- Any sizes or estimates of quantities are **APPROXIMATE** and are not **GUARANTEED** in any respect. Prospective Contractors are to visit the site on the agreed contractor walk through date to verify scope of the work, measurements, quantities, etc., prior to submitting the bid.
- Contractor estimate **MUST** include all labor, required materials tools, equipment, plans, mobilization, permits, insurances, etc. as per the specification required to properly complete the Project.
- The successful contractor **MUST NOT** discriminate, nor permit discrimination, against any person on the grounds of race, color, national origin, religion, sex, handicap, or veteran status, in their employment practices, in any of their contractual arrangements, in all service and accommodations they offer to the public, and in any of their other business operations.
- The successful contractor **MUST** have completed at least **FIVE (5)** Projects of similar scope per year for FIVE (5) consecutive years
- The successful contractor **MUST** secure if required, all licenses and permits (local, state, federal) prior to commencing work on the site. Evidence of certification, permits, and licenses must be presented prior to commencement of work.
- The successful contractor should have staff that possess adequate experience in the use and operation of the equipment and machinery as specified.
- The successful contractor will have access to the baseball field W/C...September 16 2021

.....and all work **MUST** be completed in a timely manner. All work **MUST** be coordinated with the Owner or Athletic Field Consultant.

- All work **MUST** be completed **NO LATER** than **.....October 20 2021** this is subject to adverse climatic conditions which could affect this date. Any/all delays **MUST** be communicated with the Owner or Athletic Field Consultant as soon as possible.

SITE VISITS

The Town will conduct ONE pre-bid site visit to enable bidders to gain familiarity with the site, scope of work and all measurements required. The pre-bid site visit is scheduled for...10:00 August 26 2021 Attendance for this pre-bid site visit is mandatory and any contractors who do not attend will be disqualified from bidding

Site visit will start at Cumberland Recreation Department located at 4097 Diamond Hill Road, Cumberland, RI

Regardless if a bidder participates in a site visit, submission of a proposal will constitute an acknowledgement that the respondent is aware of existing conditions at the Property.

RECEIPT AND OPENING OF PROPOSALS

Sealed proposals will be accepted and time-stamped upon receipt in the Office of the Finance Director, Cumberland Town Hall, 45 Broad St., Cumberland, Rhode Island. **All sealed envelopes must be clearly marked with the title of the RFP and the bid number.**

Bids Due: 12:00 pm ...Friday September 3 2021

Bid Opening: Bids will be publicly opened and read at the bid opening to immediately follow the submission deadline.

FORM OF BID

Proposals shall be submitted in duplicate, on the form provided, with supplemental information, warranties, licenses, and other required documentation, literature and material to be provided, with the bid, on the bidders' own form. Athletic Field Renovation Project of Fraise mowing, core aeration, linear aeration and sand injection, deep tine aeration, and other methods as outlined in the RFP and also implement the Year One targeted maintenance program to improve the following Athletic Fields:

SUBMISSION OF BIDS

1. Envelopes containing bids must be sealed and addressed to the Office of the Finance Director, Cumberland Town Hall, 45 Broad St., Cumberland, RI, 02864, and must be marked with the name and address of the bidder and labeled with the bid number and title of the RFP.
2. The Finance Director will open bids immediately after the 12:00 p.m. deadline for submission in Town Council Chambers, 2nd Floor, 45 Broad Street, Cumberland, RI.
3. Any bidder may withdraw his bid by written request at any time prior to the advertised time for opening. Telephonic bids, amendments, or withdrawals will not be accepted.
4. Unless otherwise specified, no bid may be withdrawn for a period of ninety (90) days from time of bid opening.
5. Negligence on the part of the bidder in preparing the bid confers no rights for the withdrawal of the bid after it has been opened.
6. Proposals received prior to the time opening will be securely kept, unopened. No responsibility will be attached to an officer or person for the premature opening of a proposal not properly addressed and identified.
7. Any deviation from the specifications must be noted in writing and attached as part of the bid proposal. The bidder shall indicate the item or part with the deviation and indicate how the bid will deviate from specifications.

QUALIFICATION OF BIDDERS:

The owner may make such investigations as it deems necessary to determine the ability of the bidder to perform the work. The bidder shall furnish the Town with all such information and data for this purpose as may be requested.

All work must conform to Rhode Island State, Federal and local laws for the application of fertilizers, pesticides and herbicides or similar products to turf areas at schools and parks.

The successful bidder must supply Certificates of Liability for minimum of \$1,000,000 and Workers Compensation Insurances, and a certificate of insurance to conduct application of pesticides and herbicides prior to beginning contracted work.

The successful bidder must also supply a copy of Supervisory License of Applicator to complete work.

ADDENDA AND INTERPRETATIONS:

No interpretation on the meaning of the Plans, Specifications or other Contract Document will be made to any bidder orally. Every request for such interpretations should be in writing, addressed to the Finance Director, Cumberland Town Hall, 45 Broad St., Cumberland, RI, 02864, and to be given consideration must be received at least seven (7) days prior to the date fixed for the opening of the bids.

All questions pertaining to the specifications or proposal procedure should be first directed to the Finance Director. Where information from the Finance Director differs from information from any other source, the information from the Finance Director prevails. The Town is not responsible for information obtained from any other source.

AWARD OF BIDS:

The Town reserves the right to award in whole or in part.

HOLD HARMLESS:

The contractor shall be responsible for his work and every part thereof, and for all materials, tools, appliances, and property of every description used in connection therewith. The contractor agrees to indemnify and save harmless the Town of Cumberland, its employees and agents, against loss or expense by reason of the liability imposed by law upon the contractor, all sub-contractors, or owner for damage because of bodily injuries, including person or persons or on account of damage to property arising out of or in consequence of the performance of this work whether such injuries to persons or damage to property are due or claimed to be due to any negligence, including gross negligence, of a sub-contractor, the owner, the general contractor, his or their employees or agents, or any other person

Appendix A

ANTI-KICKBACK ACKNOWLEDGMENT

ALL BIDDERS/OFFERORS MUST ATTEST TO THE FOLLOWING:

The vendor acknowledges, under the pains and penalties of perjury, that he/she has not been offered, paid, or solicited for any contribution or compensation, nor has he/she been granted a gift, gratuity, or other consideration, either directly or indirectly by any officer, employee or member of the governing body of the Town of Cumberland who exercises any functions or responsibilities in connection with either the award or execution of the project to which this contract pertains.

Further, the vendor acknowledges, under the pains and penalties of perjury, that he/she has not offered, paid, or solicited by way of any contribution or compensation, nor has he/she granted a gift, gratuity or other consideration either directly or indirectly to any officer, employee, or member of the governing body of the Town of Cumberland who exercises any functions or responsibilities in connection with either the award or execution of the project to which this project or contract pertains.

Signature of Officer

Date

Title

Company

Title of RFP

ORIGINAL: OCTOBER 2018

REVISED: N/A

Appendix B

TOWN OF CUMBERLAND

GENERAL TERMS AND CONDITIONS OF PURCHASE

The Town of Cumberland's Finance Office may, from time to time, make amendments to the General Terms and Conditions when the Town of Cumberland's Finance Director determines that such amendments are in the best interest of the Town of Cumberland. Amendments shall be made available for public inspection at the Purchasing Office located in Cumberland Town Hall but shall not require formal public notice and hearing. Copies of the Terms and Conditions shall be provided to any individual or firm requesting them.

TOWN OF CUMBERLAND'S PURCHASING OFFICE GENERAL CONDITIONS OF PURCHASE

All Town of Cumberland purchase orders, contracts, solicitations, delivery orders and service requests shall incorporate and be subject to the provisions of Rhode Island General Laws 8-15-4 and the Town of Cumberland purchasing rules and regulations adopted pursuant thereto, all other applicable provisions of the Rhode Island General Laws, the Cumberland Town Charter, specific requirements described in the Request or Contract, and the following General Conditions of Purchase:

1. GENERAL

All purchase orders, contracts, solicitations, delivery orders, and service requests are for specified goods and services, in accordance with express terms and conditions of purchase, as defined herein. For the purposes of this document, the terms "bidder" and "contractor" refer to any individual, firm, corporation, or other entity presenting a proposal indicating a desire to enter into contracts with the Town of Cumberland, or with whom a contract is executed by the Town of Cumberland's Finance Director, and the term "contractor" shall have the same meaning as "vendor".

2. ENTIRE AGREEMENT

The Town of Cumberland's Purchase Order, or other Town of Cumberland contract endorsed by the Town of Cumberland Finance Office, shall constitute the entire and exclusive agreement between the Town of Cumberland and any contractor receiving an award. In the event any conflict between the bidder's standard terms of sale, these conditions or more specific provisions contained in the solicitation shall govern.

All communication between the Town of Cumberland and any contractor pertaining to any award or contract shall be accomplished in writing.

- A) Each proposal will be received with the understanding that the acceptance, in writing, by contract or Purchase Order by the Town of Cumberland Finance Director of the offer to do work or to furnish any or all the materials, equipment, supplies or services described therein shall constitute a contract between the bidder and the Town of Cumberland. This shall bind the bidder on his part to furnish and deliver at the prices and in accordance with the conditions of said accepted proposal and detailed specifications and the Town of Cumberland on its part to order from such contractor (except in case of emergency) and to pay for at the agreed prices, all materials, equipment, supplies or services specified and delivered. A contract shall be deemed executory only to the extent of funds available for payment of the amounts shown on Purchase Orders issued by the Town of Cumberland to the contractors.
- B) No alterations or variations of the terms of the contract shall be valid or binding upon the Town of Cumberland unless submitted in writing and accepted by the Town of Cumberland Finance Director. All orders and changes thereof must emanate from the Town of Cumberland Purchasing Office: no oral agreement or arrangement made by a contractor with a department or employee will be considered to be binding on the Town of Cumberland Finance Director, and may be disregarded.
- C) Contracts will remain in force for the contract period specified or until all articles or services ordered before date of termination shall have been satisfactorily delivered or rendered and accepted and thereafter until all terms and conditions have been met, unless:
- i) terminated prior to expiration date by satisfactory delivery against orders of entire quantities, or
 - ii) extended upon written authorization of the Town of Cumberland Finance Director and accepted by the contractor, to permit ordering of the unordered balances or additional quantities at the contract price and in accordance with the contract terms, or
 - iii) canceled by the Town of Cumberland in accordance with other provisions stated herein.
- D) It is mutually understood and agreed that the contractor shall not assign, transfer, convey, sublet or otherwise dispose of this contract or his right, title or interest therein, or his power to execute such contract, to any other person, company or corporation, without the previous consent, in writing, of the Town of Cumberland Finance Director.
- E) If, subsequent to the submission of an offer or issuance of a purchase order or execution of a contract, the bidder or contractor shall merge with or be acquired by another entity, the contract may be terminated, except as a corporate resolution prepared by the contractor and the new entity ratifying acceptance of the original bid or contract terms, condition, and pricing is submitted to the Town of Cumberland Purchasing Office, and expressly accepted.
- F) The contractor or bidder further warrants by submission of an offer or acceptance of a purchase order or other contract that he has no knowledge at the time of such action of any outstanding and delinquent or otherwise unsettled debt owed by him to the Town of Cumberland, and agrees that later discovery by the Town of Cumberland Finance Director that this warranty was given in spite of such knowledge, except where the matter is pending in hearing or from any appeal therefrom, shall form reasonable grounds for termination of the contract.

3. SUBCONTRACTS

No subcontracts or collateral agreements shall be permitted, except with the Town of Cumberland's express written consent. Upon request, contractors must submit to the Town of Cumberland Purchasing Office a list of all subcontractors to be employed in the performance of any Purchase Order or other contract arising from this Request.

4. RELATIONSHIP OF PARTIES

The contractor or bidder warrants, by submission of an offer or acceptance of a purchase order or other contract, that he is not an employee, agent, or servant of the Town of Cumberland, and that he is fully qualified and capable in all material regards to provide the specified goods and services. Nothing herein shall be construed as creating any contractual relationship or obligation between the Town of Cumberland and any sub-bidder, subcontractor, supplier, or employee of the contractor or offeror.

5. COSTS OF PREPARATION

All costs associated with the preparation, development, or submission of bids or other offers will be borne by the offeror. The Town of Cumberland will not reimburse any offeror for such costs.

6. SPECIFIED QUANTITY REQUIREMENT

Except where expressly specified to the contrary, all solicitations and contracts are predicated on a specified quantity of goods or services, or for a specified level of funding.

- A) The Town of Cumberland reserves the right to modify the quantity, scope of service, date of delivery or completion, or funding of any contract, with no penalty or charge, by written notice to the contractor, except where alternate terms have been expressly made a part of the contract.
- B) The Town of Cumberland shall not accept quantities in excess of the specified quantity except where the item is normally sold by weight (where sold by weight, the Town of Cumberland will not accept quantities greater than ten per cent [10%] of the specified quantity), or where the Request or Contract provides for awards for other than exact quantities.
- C) Purchase Orders or other contracts may be increased in quantity or extended in term without subsequent solicit with the mutual consent of the contractor and the Town of Cumberland, where determined by the Town of Cumberland Finance Director to be in the Town of Cumberland's best interest.

7. TERM AND RENEWAL

Where offers have been requested or contracts awarded for terms exceeding periods of twelve (12) months, it is mutually understood and agreed that the Town of Cumberland's commitment is limited to a base term not to exceed twelve (12) months, subject to renewal annually at the Town of Cumberland's sole option for successive terms as otherwise described, except where expressly specified to the contrary. Purchase orders appearing to commit to obligations of funding or terms of performance may be executed for administrative convenience, but are otherwise subject to this provision, and in such cases the Town of Cumberland's renewal shall be deemed to be automatic, conditional on the continued availability of appropriated funds for the purpose, except as written notice of the Town of Cumberland's intent not to renew is served.

8. FOREIGN CORPORATIONS

In accordance with Title 7 Chapter 1.1 (“Business Corporations”) of the General Laws of Rhode Island, no foreign corporation shall have the right to transact business in this state until it shall have procured a certificate of authority so to do from the Secretary of State.

9. PRICING

All pricing offered or extended to the Town of Cumberland is considered firm and fixed unless expressly provided for to the contrary. All prices shall be quoted F.O.B. Destination with freight costs included in the unit cost to be paid by the Town of Cumberland, except, where the Request or Contract permits, offers reflecting F.O.B. Shipping Point will be considered, and freight costs may then be prepaid and added to the invoice.

10. COLLUSION

Bidder or contractor warrants that he has not, directly or indirectly, entered into any agree participated in any collusion or otherwise taken any action in restraint of full competitive bidding. In special circumstances, an executed affidavit will be required as a part of the bid.

11. PROHIBITION AGAINST CONTINGENT FEES AND GRATUITIES

Bidder or contractor warrants that he has not paid, and agrees not to pay, any bonus, commission, fee, or gratuity to any employee or official of the Town of Cumberland for the purpose of obtaining any contract or award issued by the Town of Cumberland. Bidder or contractor further warrants that no commission or other payment has been or will be received from or paid to any third party contingent on the award of any contract by the Town of Cumberland, except as shall have been expressly communicated to the Town of Cumberland Finance Director in writing prior to acceptance of the contract or award in question. Subsequent discovery by the Town of Cumberland of non-compliance with these provisions shall constitute sufficient cause for immediate termination of all outstanding contracts and suspension or debarment of the bidder(s) or contractor(s) involved.

12. AWARDS

Awards will be made with reasonable promptness and by written notice to the successful bidder (only); bids are considered to be irrevocable for a period of ninety (90) days following the bid opening unless expressly provided for to the contrary in the Request, and may not be withdrawn during this period without the express permission of the Town of Cumberland Finance Director.

- A) Awards shall be made to the bidder(s) whose offer(s) constitutes the lowest responsive price offer (or lowest responsive price offer on an evaluated basis) for the item(s) in question or for the Request as a whole, at the option of the Town of Cumberland. The Town of Cumberland reserves the right to determine those offers which are responsive to the Request, or which otherwise serve its best interests.
- B) The Town of Cumberland reserves the right, before making award, to initiate investigations as to whether or not the materials, equipment, supplies, qualifications or facilities offered by the bidder meet the requirements set forth in the proposal and specification, and are ample and sufficient to insure the proper performance of the contract in the event of award. If upon such examination it is found that the conditions of the proposal are not complied with or that articles or equipment proposed to be furnished do not meet the requirements called for, or that the qualifications or facilities are not satisfactory, the Town of Cumberland may reject such a bid. It is distinctly understood, however, that nothing in the foregoing shall mean or imply that it is obligatory upon the Town of Cumberland to make any examinations before awarding a contract; and it is further understood that if such examination is made, it in no way relieves the contractor from fulfilling all requirements and conditions of the contract.
- C) Qualified or conditional offers which impose limitations of the bidder's liability or modify the requirements of the bid, offers for alternate specifications, or which are made subject to different terms and conditions than those specified by the Town of Cumberland may, at the option of the Town of Cumberland, be
 - i) rejected as being non-responsive, or
 - ii) set aside in favor of the Town of Cumberland's terms and conditions (with the consent of the bidder), or
 - iii) accepted, where the Town of Cumberland Finance Director determines that such acceptance best serves the interests of the Town of Cumberland.

Acceptance or rejection of alternate or counter-offers by the Town of Cumberland shall not constitute a precedent which shall be considered to be binding on successive solicitations or procurements.

- D) Bids submitted in pencil, or which do not bear an original signature, in ink, by an owner or authorized agent thereof, will not be accepted.
- E) Bids must be extended in the unit of measure specified in the Request. In the event of any discrepancy between unit prices and their extensions, the unit price will govern.

- F) The Town of Cumberland Finance Director reserves the right to determine the responsibility of any bidder for a particular procurement.
- G) The Town of Cumberland Finance Director reserves the right to reject any and all bids in whole or in part, to waive technical defects, irregularities, and omissions, and to give consideration to past performance of the offerors where, in his judgment the best interests of the Town of Cumberland will be served by so doing.
- H) The Town of Cumberland Finance Director reserves the right to make awards by items, group of items or on the total low bid for all the items specified as indicated in the detailed specification, unless the bidder specifically indicates otherwise in his bid.
- I) Preference may be given to bids on products raised or manufactured in the Town of Cumberland or State of Rhode Island, other things being equal.
- J) The impact of discounted payment terms shall not be considered in evaluating responses to any Request.
- K) The Town of Cumberland Finance Director reserves the right to act in the Town of Cumberland's best interests regarding awards caused by clerical errors by the Town of Cumberland Purchasing Office.

13. SUSPENSION AND DEBARMENT

The Town of Cumberland Finance Director may suspend or debar any vendor or potential bidder, for good cause shown:

- A) A debarment or suspension against a part of a corporate entity constitutes debarment or suspension of all of its divisions and all other organizational elements, except where the action has been specifically limited in scope and application, and may include all known corporate affiliates of a contractor, when such offense or act occurred in connection with the affiliate's performance of duties for or on behalf of the contractor, or with the knowledge, approval, or acquiescence of the contractor or one or more of its principals or directors (or where the contractor otherwise participated in, knew of, or had reason to know of the acts).
- B) The fraudulent, criminal or other serious improper conduct of any officer, director, shareholder, partner, employee, or any other individual associated with a contractor may be imputed to the contractor when the conduct occurred in connection with the individual's performance of duties for or on behalf of the contractor, or with the contractor's knowledge, approval or acquiescence. The contractor's acceptance of benefits derived from the conduct shall be evidence of such knowledge, approval, or acquiescence.
- C) A vendor or contractor who knowingly engages as a subcontractor for a contract awarded by the Town of Cumberland to a vendor or contractor then under a ruling of suspension or debarment by the Town of Cumberland shall be subject to disallowance of cost, annulment or termination of

award, issuance of a stop work order, or debarment or suspension, as may be judged to be appropriate by the Town of Cumberland's Finance Director.

14. PUBLIC RECORDS

Contractors and bidders are advised that certain documents, correspondence, and other submissions to the Town of Cumberland's Purchasing Office may be voluntarily made public by the Town of Cumberland absent specific notice that portions of such submittals may contain confidential or proprietary information, such that public access to those items should be withheld.

15. PAYMENT

Unless otherwise provided for by the Request or Contract, payment shall not be made until delivery has been made, or services performed, in full, and accepted. Payment shall not be due prior to thirty (30) working days following the latest of completion, acceptance, or the rendering of a properly submitted invoice.

- A) Payment terms other than the foregoing may be rejected as being nonresponsive.
- B) No partial shipments, or partial completion will be accepted, unless provided for by the Request or Contract.
- C) Where a question of quality is involved, or failure to complete a project by the specified due date, payment in whole or part against which to charge back any adjustment required, shall be withheld at the direction of the Town of Cumberland Finance Director. In the event a cash discount is stipulated, the withholding of payments, as herein described, will not deprive the Town of Cumberland from taking such discount.
- D) Payments for used portion of inferior delivery or late delivery will be made by the Town of Cumberland on an adjusted price basis.
- E) Payments on contracts under architectural or engineering supervision must be accompanied by a Certificate of Payment and Statement of Account signed by the architect or engineer and submitted to the Town of Cumberland Purchasing Office for approval.

16. THIRD-PARTY PAYMENTS

The Town of Cumberland recognizes no assigned or collateral rights to any purchase agreement except as may be expressly provided for in the bid or contract documents, and will not accede to any request for third party or joint payment(s), except as provided for in specific orders by a court of competent jurisdiction, or by express written permission of the Town of Cumberland's Finance Director. Where an offer is contingent upon such payment(s), the offeror is obligated to serve affirmative notice in his bid submission.

17. SET-OFF AGAINST PAYMENTS

Payments due the contractor may be subject to reduction equal to the amount of unpaid and delinquent state taxes (or other just debt owed to the State), except where notice of delinquency has not been served or while the matter is pending in hearing or from any appeal therefrom.

18. CLAIMS

Any claim against a contractor may be deducted by the Town of Cumberland from any money due him in the same or other transactions. If no deduction is made in such fashion, the contractor shall pay the Town of Cumberland the amount of such claim on demand. Submission of a voucher and payment, thereof, by the Town of Cumberland shall not preclude the Town of Cumberland's Finance Director from demanding a price adjustment in any case when the commodity delivered is later found to deviate from the specifications and proposal.

- A) The Town of Cumberland's Finance Director may assess dollar damages against a vendor or contractor determined to be non-performing or otherwise in default of their contractual obligations equal to the cost of remedy incurred by the Town of Cumberland, and make payment of such damages a condition for consideration for any subsequent award. Failure by the vendor or contractor to pay such damages shall constitute just cause for disqualification and rejection, suspension, or debarment.

19. CERTIFICATION OF FUNDING

The Director of Finance shall provide certification as to the availability of funds to support the procurement for the current fiscal year ending June 30th only. Where delivery or service requirements extend beyond the end of the current fiscal year, such extensions are subject to both the availability of appropriated funds and a determination of continued need.

20. UNUSED BALANCES

Unless otherwise specified, all unused Blanket Order quantities and/or unexpended funds shall be automatically canceled on the expiration of the specified term. Similarly, for orders encompassing more than one fiscal year, unexpended balances of funding allotted for an individual fiscal year may be liquidated at the close of that fiscal year, at the Town of Cumberland's sole option.

21. MINORITY BUSINESS ENTERPRISES

Pursuant to the provisions of Title 37 Chapter 14.1 of the General Laws, the Town of Cumberland reserves the right to apply additional consideration to offers, and to direct awards to bidders other than the responsive bid representing the lowest price where:

- A) the offer is fully responsive to the terms and conditions of the Request, and
- B) the price offer is determined to be within a competitive range (not to exceed 5% higher than the lowest responsive price offer) for the product or service, and
- C) the firm making the offer has been certified by the R.I. Department of Economic Development to be a small business concern meeting the criteria established to be considered a Minority Business Enterprise.

22. PREVAILING WAGE REQUIREMENT

In accordance with Title 37 Chapter 13 of the General Laws of Rhode Island, payment of the general prevailing rate of per diem wages and the general prevailing rate for regular, overtime and other working conditions existing in the locality for each craft, mechanic, teamster, or type of workman needed to execute this work is a requirement for both contractors and subcontractors for all public works.

23. EQUAL OPPORTUNITY COMPLIANCE, HANDICAPPED ACCESS AND AFFIRMATIVE ACTION

Contractors of the Town of Cumberland are required to demonstrate the same commitment to equal opportunity as prevails under federal contracts controlled by Federal Executive Orders 11246, 11625, 11375 and 11830, and Title 28 Chapter 5.1 of the General Laws of Rhode Island.

Affirmative action plans shall be submitted by the contractor for review by the State Equal Opportunity Office. A contractor's failure to abide by the rules, regulations, contract terms and compliance reporting provisions as established shall be grounds for forfeiture and penalties as shall be established, including but not limited to suspension.

24. DRUG-FREE WORKPLACE REQUIREMENT

Contractors who do business with the Town of Cumberland and their employees shall abide by the State's drug-free workplace policy and the contractor shall so attest by signing a certificate of compliance.

25. TAXES

The Town of Cumberland is exempt from payment of excise, transportation and sales tax imposed by the Federal or State Government. These taxes should not be included in the proposal price. Exemption Certificates will be furnished upon request.

26. INSURANCE

All construction contractors, independent tradesmen, or firms providing any type of maintenance, repair, or other type of service to be performed on Town of Cumberland premises, buildings, or grounds are required to purchase and maintain coverage with a company or companies licensed to do business in the state as follows:

- A) Comprehensive General Liability Insurance
Combined Single Limit not less than \$1,000,000 each occurrence for bodily Injury and property damage.
 - i) Independent Contractors;
 - ii) Contractual - including construction hold harmless and other types of contracts or agreements in effect for insured operations;
 - iii) Products and Completed Operations;
 - iv) Personal Injury (with employee exclusion deleted)

- B) Automobile Liability Insurance
Combined Single Limit not less than \$1,000,000 each occurrence for bodily Injury and property damage including non-owned and/or hired vehicle coverage.

OR

Bodily Injury, per person, \$500,000/ Bodily Injury, \$1,000,000 per accident/ Property Damage, \$500,000 per accident including non-owned and/or hired vehicle coverage.

C) Workers' Compensation Insurance
As required by the General Laws of Rhode Island.

D) Employers liability \$500,000

The Town of Cumberland shall be named as an additional insured on the vendor's Comprehensive General Liability Policy and Automobile Liability Policy.

The Town of Cumberland's Finance Director reserves the right to consider and accept alternate forms and plans of insurance or to require additional or more extensive coverage for any individual requirement. Successful bidders shall provide certificates of coverage, reflecting the Town of Cumberland as an additional insured, to the Town of Cumberland Purchasing Office, forty-eight (48) hours prior to the commencement of work, as a condition of award. Failure to comply with this provision shall result in rejection of the offeror's bid.

27. BID SURETY

When requested, a bidder must furnish a Bid Bond or Certified Check for 5% of his bid, or for the stated amount shown in the solicitation. Bid Bonds must be executed by a reliable Surety Company authorized to do business in the State of Rhode Island. Failure to provide Bid Surety with bid may be cause for rejection of bid. The Bid Surety of any three bidders in contention will be held until an award has been made according to the specifications of each proposal. All others will be returned by mail within 48 hours following the bid opening. Upon award of a contract, the remaining sureties will be returned by mail unless instructed to do otherwise.

28. PERFORMANCE AND LABOR AND PAYMENT BONDS

A performance bond and labor and payment bond of up to 100% of an award may be required by the Town of Cumberland's Finance Director. Bonds must meet the following requirements:

- A) Corporation: The Bond must be signed by an official of the corporation above his/her official title and the corporate seal must be affixed over his/her signature.
- B) Firm or Partnership: The Bond must be signed by all of the partners and must indicate that they are "Doing Business As (name of firm)."
- C) Individual: The Bond must be signed by the individual owning the business and indicate "Owner."

- D) The Surety Company executing the Bond must be licensed to do business in the State of Rhode Island or Bond must be countersigned by a company so licensed.
- E) The Bond must be signed by an official of the Surety Company and the corporate seal must be affixed over his signature.
- F) Signatures of two witnesses for both the principal and the Surety must appear on the Bond.
- G) A Power of Attorney for the official signing of the Bond for the Surety Company must be submitted with the Bond.

29. SUSPENSION, DEFAULT AND TERMINATION

A) Suspension of a Contract by the Town of Cumberland

The Town of Cumberland reserves the right at any time and for any reason to suspend all or part of this contract, for a reasonable period, not to exceed sixty days, unless the parties agree to a longer period. The Town of Cumberland shall provide the contractor with written notice of the suspension order signed by the Finance Director or his or her designee, which shall set forth the date upon which the suspension shall take effect, the date of its expiration, and all applicable instructions. Upon receipt of said order, the contractor shall immediately comply with the order and suspend all work under this contract as specified in the order. The contractor shall take all reasonable steps to mitigate costs and adverse impact to the work specified in the contract during the suspension period. Before the order expires, the Town of Cumberland shall either:

- i. cancel the suspension order;
- ii. extend the suspension order for a specified time period not to exceed thirty (30) days; or
- iii. terminate the contract as provided herein.

The contractor shall resume performance once a suspension order issued under this section is canceled or expires. If as a result of the suspension of performance, there is a financial or schedule impact upon the contract, an appropriate adjustment may be made by, or with the approval of, the Town of Cumberland's Finance Director. Any adjustment shall be set forth in writing. After a suspension order has been canceled or expires, the contractor shall provide any request for adjustment to the Town of Cumberland's Finance Director within thirty (30) days after resuming work performance.

B) Termination of a Contract by the Town of Cumberland

i. Termination for Default or Nonperformance

If, for any reason, the contractor breaches the contract by failing to satisfactorily fulfill or perform any obligations, promises, terms, or conditions, and having been given reasonable notice of and opportunity to cure such default, fails to take satisfactory corrective action within the time specified by the Town of Cumberland, the Town of Cumberland may terminate the contract, in whole or in part, the termination of all outstanding contracts or sub-contracts held

by the contractor, and the suspension or debarment of the contractor from future procurements by giving written notice to the contractor specifying the date for termination. The Town of Cumberland shall endeavor to provide such notice at least seven (7) calendar days before the effective date of the termination.

A contractor who fails to commence within the time specified or complete an award made for repairs, alterations, construction, or any other service will be considered in default of contract. If contractor consistently fails to deliver quantities or otherwise perform as specified, the Town of Cumberland's Finance Director reserves the right to terminate the contract and contract for completion of the work with another contractor and seek recourse from the defaulting contractor or his surety. In the event of a termination for default or nonperformance, in whole or in part, the Town of Cumberland may procure similar goods or services in a manner and upon terms it deems appropriate, and the contractor shall be liable for the excess costs incurred by the Town of Cumberland as a result of the contractor's default. The contractor, or its surety, agrees to promptly reimburse the Town of Cumberland for the excess costs, but shall have no claim to the difference should the replacement cost be less.

ii. Termination Without Cause

The Town of Cumberland may terminate the contract in whole or in part without cause at any time by giving written notice to the contractor of such termination at least thirty (30) days before the effective date of such termination. The notice shall specify the part(s) of the contract being terminated and the effective termination date.

Within thirty (30) days of the effective date of the termination of the contract the contractor shall compile and submit to the Town of Cumberland an accounting of the work performed up to the date of termination. The Town of Cumberland may consider the following claims in determining reasonable compensation owed to the contractor for work performed up to the date of termination:

- a. contract prices for goods or services accepted under the contract;
- b. costs incurred in preparing to perform and performing the terminated portion of the contract; or
- c. any other reasonable costs incurred by the contractor as a result of the termination.

The total sum to be paid to the contractor shall not exceed the total contract price, less any payments previously made to the contractor, the proceeds from any sales of goods or manufacturing materials, and the contract price for work not terminated.

iii. Contractor's Obligations in the Event of Termination

If the contract is terminated for any reason, or expires pursuant to its terms, the contractor shall transfer and deliver to the Town of Cumberland in the manner and to the extent directed by the Town of Cumberland:

- a. all finished or unfinished material prepared by the contractor; and
- b. all material, if any, provided to the contractor by the Town of Cumberland.

For the purposes of the contract, “material” shall include, but is not limited to, goods, supplies, parts, tools, machinery, equipment, furniture, fixtures, information, data, reports, summaries, tables, maps, charts, photographs, studies, recommendations, files, audiotapes, videotapes, records, keys, security badges, and documents.

If the contract is terminated for cause, the contractor shall not be relieved of liability to the Town of Cumberland for damages sustained because of any breach by the contractor. In such event, the Town of Cumberland may retain any amounts which may be due and owing to the contractor until such time as the exact amount of damages due the Town of Cumberland from the contractor has been determined by the Town of Cumberland Finance Director. The Town of Cumberland may also set off any damages so determined against the amounts retained.

Upon termination of the contract, the contractor shall stop performance on the date specified, terminate any outstanding orders and subcontracts applicable to the terminated portion of the contract, and shall incur no further commitments or obligations in connection with the terminated performance. The contractor shall settle all liabilities and claims arising out of the termination of subcontracts and order generating from the terminated performance. The Town of Cumberland may direct the contractor to assign the contractor’s right, title and interest under terminated orders or subcontracts to the Town of Cumberland or a third party.

Terminations of Purchase Order Contracts or Master Pricing Agreements shall require the signature of the Town of Cumberland Finance Director or his designee. Notice of termination by either party shall be submitted in writing to the other party in accordance with the termination clause of the contract, or where no specific termination clause is included, written notice shall be provided no later than thirty (30) days before the expiration of the contract.

30. INDEMNITY

The contractor guarantees:

- A) To save the Town of Cumberland, its agents and employees, harmless from any liability imposed upon the Town of Cumberland arising from the negligence, either active or passive, of the contractor, as well as for the use of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, article or appliance furnished or used in the performance of the contract of which the contractor is not the patentee, assignee or licensee.
- B) To pay for all permits, licenses and fees and give all notices and comply with all laws, ordinances, rules and regulations of the Town of Cumberland and of the State of Rhode Island.
- C) That the equipment offered is standard new equipment, latest model of regular stock product with all parts regularly used with the type of equipment offered; also, that no attachment or part has been substituted or applied contrary to manufacturer's recommendations and standard practice.

31. FORCE MAJEURE

All orders shall be filled by the contractor with reasonable promptness, but the contractor shall not be held responsible for any losses resulting if the fulfillment of the terms of the contract shall be delayed or prevented by wars, acts of public enemies, strikes, fires, floods, acts of God, or for any other acts not within the control of the contractor and which by the exercise of reasonable diligence, the contractor is unable to prevent.

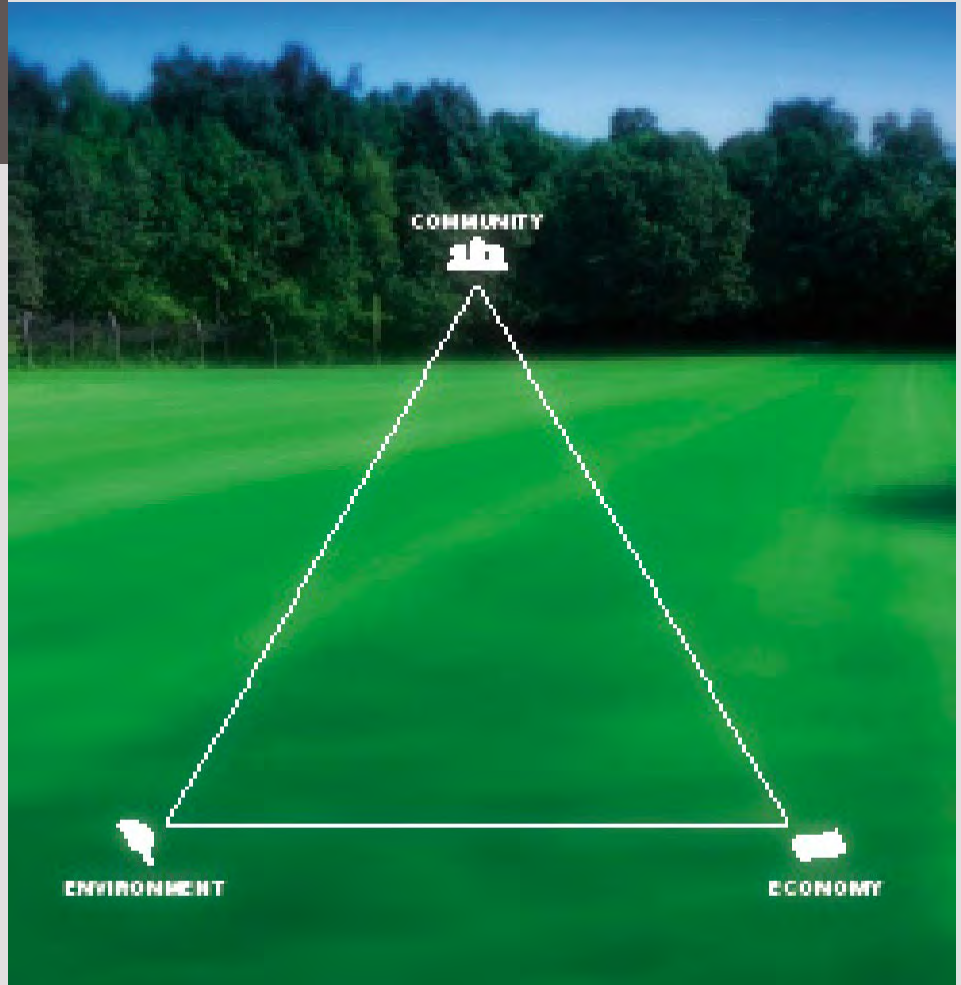
TOWN OF CUMBERLAND

RHODE ISLAND

JUNE 2021

REVISED AUGUST 2021

TOM IRWIN ADVISORS, INC.



**DIAMOND HILL PARK
BASEBALL RECONSTRUCTION
PROJECT
1 YEAR MAINTENANCE PROGRAM**

ONE YEAR MAINTENANCE PROGRAM- BASEBALL RECONSTRUCTION PROJECT

Baseball Field Total Area – 90,000 SQ/FT

Product solutions supplier requirements – Must make Bi-weekly visits to assist maintenance team on fertility, performance turf establishment and product effectiveness.

SECTION INCLUDES:

- 4.1 TURF CULTURAL PRACTICES
- 4.2 TURF NUTRITION AND PLANT HEALTH
- 4.3 SATISFACTORY TURF

4.1 – TURF CULTURAL PRACTICES

- A. Apply treatments as required to keep turf and soil free of pests, including surface and subsurface insects, weeds, and all turf and soil disease pathogens. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.
- B. If an “or equivalent” product is to be used, product descriptions and specification must be submitted to the Owner for prior approval. No unapproved products shall be spread on the Athletic Field areas due to the risk of damage/turf death.
- C. All mechanical equipment used on the Athletic Field must be considered Low Ground Pressure (LGP) Equipment and outfitted with the proper flotation type turf tires.
- D. All operators of mechanical equipment on the Athletic Field must be properly trained to operate the equipment with the appropriate settings, at the appropriate speed, and in such a manner to not jeopardize the surrounding infrastructure, the underlying turf grass, and the safety of the operator or bystanders.
- E. All required personal protective equipment (PPE) must be used as required by the equipment manual, relevant Safety Plan, and any product labels or Safety Data Sheets (SDS).
- F. All irrigation heads and other obstructions (e.g. temporary structure anchor points) must be properly marked.
- G. Care, including use of any necessary protective equipment, must be employed when traversing any hardscape with mechanical equipment to prevent marking, chipping, or other damage.
- H. Mechanical equipment must not be fueled or otherwise maintained on either natural grass or hardscape surfaces.
- I. All mechanized turf grass equipment must have factory noise control (e.g. mufflers) installed and shall only be utilized between the hours of 8 am and 4 pm.

Irrigating:

- A. Schedule irrigation to prevent wilting, puddling, erosion, and displacement of seed.
- B. Irrigate turf with fine spray at a minimum rate of 1/8 inch at 4 am, 8 am, 11am, 2 pm, 5 pm, and 10 pm, unless rainfall precipitation is adequate.
- C. 2 times a week the maintenance team MUST monitor Volumetric Moisture Content (VMC) with a moisture probe such as a POGO Pro Plus or equivalent to assure that rootzone reads a VMC of 30-40 percent

Mowing: (This is to be carried out by the Town of Cumberland)

- A. Mowing to commence once the turf is established (Minimum root depth of 2").
- B. Mow turf once top growth reaches an average height of two and a quarter (2.25) inches. Mow to the height of one and three quarter (1.75) inches.
- C. All clippings MUST be removed and disposed of in a designated area.
- D. Mow turf using a ride on rotary or reel mower with a collection system, with properly sharpened blades. Total working weight not exceeding 1250 lbs.
- E. Mowers must be thoroughly cleaned prior to mowing operations.
- F. Repeat mowing to maintain specified height. As growth requires to maintain an average of one and three quarter (1.75) inches
- G. Remove no more than 1/3 of grass-leaf growth in initial or subsequent mowing's.
- H. Do not delay mowing until grass blades bend over and become matted.
- I. Do not mow when grass is wet. Schedule initial and subsequent mowing's to maintain the following grass height:
- J. Continue mowing practices at desired height of one and three quarter (1.75 to 2 inches) until the end of the growing season.

Aeration:

- A. Core aeration to commence once root to soil contact has been established and a root depth of Two (2) Inch has been established.
- B. Carry out core aeration to a depth of five (5) inches at two (2) x two (2) inch spacing pattern, using a ride on vertical action aerator with half (1/2) inch diameter tines able to penetrate to a depth of at least five (5) inches.
- C. Cores should be collected using a core collection system or by hand and removed to a designated composting area or site.
- D. Core aeration should occur in provided that the natural Turf grass has reached a proper level of establishment as defined as firmly rooted (Minimum Two (2)" depth consistently) and at least three mowing events.
- E. Core aerations must not occur during times of plant stress including drought, water logging pest infestation, disease, or temperature extremes such as below fifty (50) ° F and above eighty (80) ° F.

- F. Core aeration must not occur when the soil is excessively wet, excessively dry, or frozen. The soil should be moist, defined as having received 1" or rain or irrigation in the previous 48 hours.
- G. Beginning with the first aeration the holes remaining after the cores should be filled by top dressing.

Over Seeding

- A. Over Seeding should be carried out utilizing a disc seeding implement with 1" disc spacing
- B. Over seeding material must be matched up to the existing seed and be of compatible nature. All proposed material must be analyzed to confirm compatibility.
- C. If a different material is proposed to be introduced then this should be tested prior to application,
- D. Over seeding should be carried out after core aeration.

Top-Dressing

- E. Top-dressing should be carried out using a spinning disc or drop spreader type action.
- F. Top dressing material must be matched up to the existing rootzone and be of compatible nature. All proposed material must be laboratory tested and analyzed to confirm compatibility.
- G. If a different material is proposed to be introduced then this should be tested prior to application, through a qualified laboratory.
- H. Top dressing should be carried out after core aeration if required after the initial three (3) month period. And should be carried out only during active growth (May-November).
- I. No more than one quarter (1/4) inch of top dressing should be applied in one pass.
- J. All top dressing must be worked into the turf surface using a pedestrian drag brush, drag mat or equal.

4.2 TURF NUTRITION AND PLANT HEALTH

Baseball Reconstruction Project Total Area – 90,000 SQ/FT

Product solutions supplier requirements – Must make Bi-weekly visits to assist maintenance team on fertility, performance turf establishment and product effectiveness.

Spring 2022-Nutrition

- A. Nutrient application – Evenly apply nutrient amendment "Sili-Cal SS or equal at the rate of 20 lbs./1,000 Sq. Ft. Using a tractor mounted spinning disc or drop applicator or equal.
- B. "Myco-Replenish 5-4-5 SG or equal at the rate of 10 lbs./1,000 Sq. Ft. Using a tractor mounted spinning disc or drop applicator or equal

SPRING 2022 - CULTURAL OPERATION

Deep Tine Aeration

- A. Deep Tine aeration to the turf once established. The turf should not break free from the soil when pulled from above.
- B. Carry out deep tine aeration to a depth of five (5) inches at two (2) x two (2) inch spacing pattern, using a tractor mounted vertical action aerator with half (3/4) inch diameter tines able to penetrate to a depth of at least five (5) inches.
- C. Deep tine aeration must not occur during times of plant stress including drought, waterlogging pest infestation, disease, or temperature extremes such as below fifty (50) ° F and above eighty (80) ° F.
- D. Deep tine aeration must not occur when the soil is excessively wet, excessively dry, or frozen. The soil should be moist, defined as having received 1" or rain or irrigation in the previous 48 hours.

Spring 2022 - Nutrition (Exact dates will depend on turf health and development and may be subject to change)

- A. Nutrient application – Evenly apply nutrient amendment "Myco-Replenish 8:2:2 SG or equal at a rate of 12.50lbs /1000 ft2 Using a tractor mounted spinning disc or drop applicator.

6/14/22-Cultural (Provisional Date for planning and budget purposes only)

Core Aeration

- A. Core aeration to commence once root to soil contact has been established and a root depth of Two (2) Inch has been established.
- B. Carry out core aeration to a depth of five (5) inches at two (2) x two (2) inch spacing pattern, using a ride on vertical action aerator with half (1/2) inch diameter tines able to penetrate to a depth of at least five (5) inches.
- C. Core aeration should provided that the natural turfgrass has reached a proper level of establishment as defined as firmly rooted (Minimum Two (2)" depth consistently) and at least three mowing events.
- D. Core aerations must not occur during times of plant stress including drought, waterlogging pest infestation, disease, or temperature extremes such as below fifty (50) ° F and above eighty (80) ° F.
- E. Core aeration must not occur when the soil is excessively wet, excessively dry, or frozen. The soil should be moist, defined as having received 1" or rain or irrigation in the previous 48 hours.
- F. Beginning with the first aeration in May 2021, the holes remaining after the cores should be filled by top dressing.

Core Collection

- A. Cores should be collected using a core collection system or by hand and removed to a designated composting area or site.

Over Seeding

- A. Evenly apply to the **Athletic Field Seed Mix** at the rate of 6 lbs./1,000 Sq. Ft. in Two (2) directions utilizing a disc seeding implement at 1" spacing towed behind a LGP turf tractor or equal.
- B. Over Seeding should be carried out utilizing a disc seeding implement with 1" disc spacing
- C. Over seeding material must be matched up to the existing seed and be of compatible nature. All proposed material must be analyzed to confirm compatibility.
- D. If a different material is proposed to be introduced then this should be tested prior to application,
- E. Over seeding should be carried out after core aeration.

Top-Dressing

- F. Top-dressing should be carried out using a spinning disc or drop spreader type action.
- G. Top dressing material must be matched up to the existing rootzone and be of compatible nature. All proposed material must be laboratory tested and analyzed to confirm compatibility.
- H. If a different material is proposed to be introduced then this should be tested prior to application, through a qualified laboratory.
- I. Top dressing should be carried out after core aeration if required after the initial three (3) month period. And should be carried out only during active growth (May-November).
- J. No more than one quarter (1/4) inch of top dressing should be applied in one pass.
- K. All top dressing must be worked into the turf surface using a pedestrian drag brush, drag mat or equal.

6/21/22-Nutrition and Plant Protection (Provisional Date for planning and budget purposes only)

- A. Nutrient application–Evenly apply 5.17 lbs. of nutrient Proscap 20:0:5 + 0.067 Acelepryn or equal at the rate of 5.17 lbs./1,000 Sq. Ft. Using a tractor mounted spinning disc or drop applicator or equal.
- B. Nutrient application–Evenly apply nutrient amendment "Sili-Cal SS or equal at the rate of 20 lbs./1,000 Sq. Ft. Using a walk behind spinning disc or drop applicator or equal apply to sod

8/16/22-Nutrition (Provisional Date for planning and budget purposes only)

- A. Nutrient application – Evenly apply nutrient amendment “Myco-Replenish 16:0:5 SG or equal at the rate of 6.25 lbs./1,000 Sq. Ft. Using a tractor mounted spinning disc or drop applicator.

Note: An Application of a suitable Selective Herbicide will need to be applied within the month of August 2022. Exact timing will be dependent on growing conditions and the current condition of the field.

- A. Selective Herbicide application – Evenly apply Q4 Plus selective herbicide at a rate of 3oz./1000 Sq. Ft. using suitable spray application equipment.

Evenly apply Border 2.0 Drift Control Agent and Deposition Aid, at a rate of 0.291/1000 Sq. Ft.

Over Seeding - A Further Overseeding application should be carried out in Late August/Early September as per below and after evaluation of current turf cover and health.

- A. Evenly apply to the Athletic Field Seed Mix at the rate of 6 lbs./1,000 Sq. Ft. in Two (2) directions.
- B. Over Seeding should be carried out utilizing a disc seeding implement with 1” disc spacing
- C. Over seeding material must be matched up to the existing seed and be of compatible nature.

4.3 SATISFACTORY TURF

Turf installations shall meet the following criteria as determined by Owners Representative/advocate:

Satisfactory Turf: At end of the maintenance period Twelve (12) months, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding ninety-five (95) percent over any ten (10) sq. ft. (0.92 sq. m)

Use specified materials to reestablish turf that does not comply with requirements and continue maintenance until turf is satisfactory



CONTACT
TOM IRWIN ADVISORS

Speak with Ian Lacy at **781-999-4320** or
give us the details of your project at
www.tomirwinadvisors.com/engage-with-us

TOM IRWIN ADVISORS, INC.

Tom
IRWIN

TOWN OF CUMBERLAND

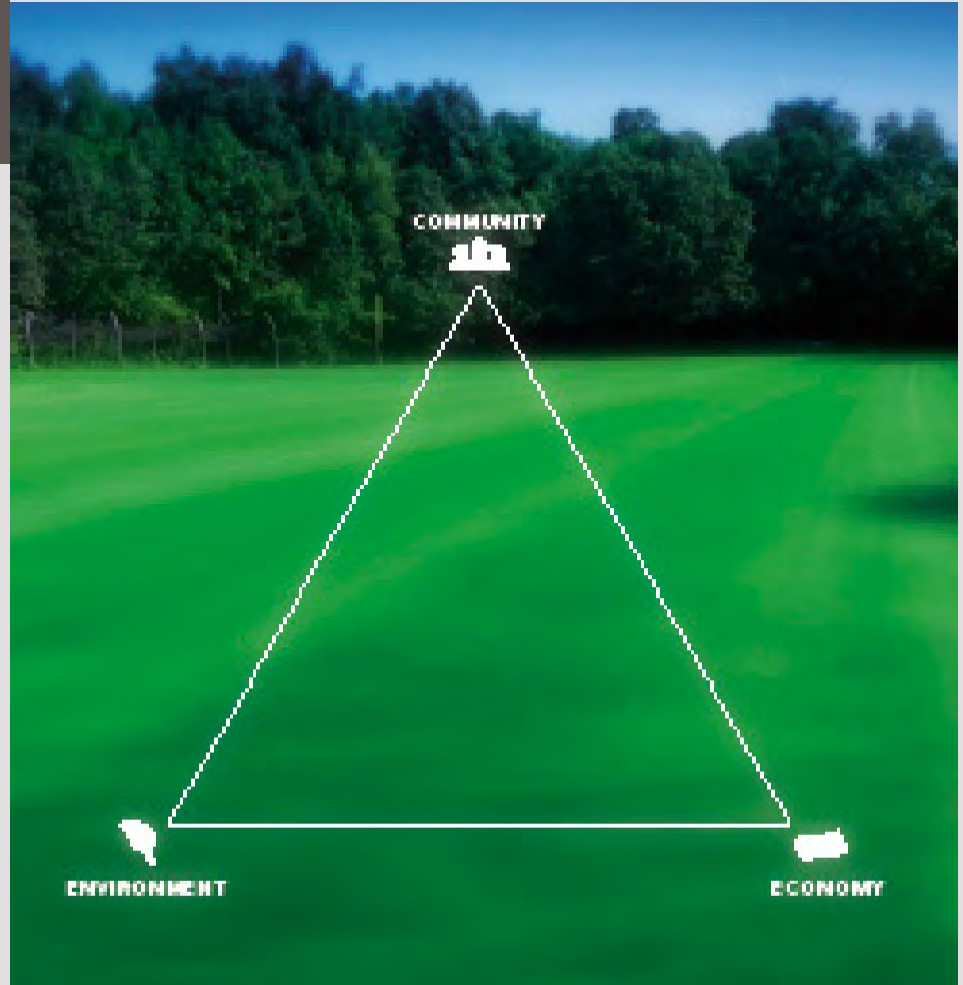
RHODE ISLAND

JUNE 2021

REVISED AUGUST 2021

TOM IRWIN ADVISORS, INC.

Tom
IRWIN



**DIAMOND HILL PARK
BASEBALL FIELD
RECONSTRUCTION
PROJECT SPECIFICATION**

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

- A. Include GENERAL CONDITIONS and all other General Requirements as part of this Section.
- B. Examine all other Sections of the Specifications for requirements, which affect work of this Section whether or not such work is specifically mentioned in this Section.
- C. Coordinate work with trades affecting, or affected by, work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.

1.02 RELATED DOCUMENTS

General provisions of the Contract, including General and Supplementary Conditions apply to this Section

1.03 SCOPE OF WORK

- A. It is the intent of this specification is to remove the current baseball infield and transition the baseball field to provide a high-quality athletic field consisting of a sand amended existing rootzone material and the highest quality performance turf grass seed species.
- B. The work in this section consists of an athletic field re-construction using an amended existing rootzone material and related work required herein and includes, but is not limited to the following:
 - 1. Mobilize Equipment
 - 2. Land Survey
 - 3. Site Protection
 - 4. Removal of Warning Track and Infield Skin Materials
 - 5. Stripping of Existing Vegetation
 - 6. Excavation and Stockpile of Existing Rootzone
 - 7. Irrigation Installation
 - 8. Amending and Blending of Existing Rootzone with Approved Sand
 - 9. Replacement of Existing Rootzone
 - 10. Final laser Grade/Seed Bed Preparation
 - 11. Seeding
 - 12. Turf Maintenance
 - 13. Site Clean Up
 - 14. Substantial Completion-Field Testing

1.04 REQUIREMENTS

- A. Any sizes or estimates of quantities are approximate and are not guaranteed in any respect. Prospective bidders are to visit the site to carry out a full field grading engineering survey and provide drawings, verify scope of the work, measurements, quantities, etc., prior to bidding. The Owner reserves the right at all times to increase or decrease the amount of work if deemed in its best interest.
- B. Price to include all labor, required materials, tools, equipment, grading plans, mobilization, contractor expenses (other than those identified in this specification), all testing requirements and permits.
- C. The Contractor must secure all required licenses and permits (local, state, federal) prior to commencing work on the site. Evidence of, permits, and licenses must be presented to the Athletic Field Consultant prior to commencement of work.
- D. The Contractor must have staff that possess adequate experience (Minimum Five (5) years and Five (5) consecutive years of projects similar to this.) and if required, correct licenses and permits which are up-to-date, appropriate to state regulations and active in the use and operation of the equipment and machinery identified in these specifications, must be presented to the Athletic Field Consultant prior to commencement of work.
- E. The Contractor shall complete all work in a timely manner. All work must be coordinated with the Athletic Field Consultant.
- F. Completion of work is subject to adverse climatic conditions, which could affect the date of substantial completion. Any/all delays must be communicated with the Athletic Field Consultant as soon as possible.
- G. Any changes to the means and methods of the athletic field construction and/or materials, must be approved by the Athletic Field Consultant
- H. Upon award, all proposal-pricing documents shall constitute a legal contract.

1.05 GENERAL

- A. The Contractor must provide all labor, equipment, field protection and incidentals required to prepare the site for Athletic Field re-construction, excavation and stockpile of existing rootzone material, regrading of subgrade surfaces, installation of irrigation systems, reinstallation of stockpiled rootzone, addition of sand amendments, of the Athletic Fields surfaces.

- B. The Contractor must amend the rootzone with proposed quantities of specified nutrients to improve the quality of the rootzone composition according to the soil testing results as directed by the Athletic Field Consultant.
- C. The Contractor must correct the rootzone material and surface elevations to the new grading plans to provide an improved functional and sustainable Athletic Field surface.
- D. The Contractor must provide all labor, equipment and incidentals required to prepare the worksite, excavate, transport and install materials, blend and process rootzone, remove stone and undesirable materials from existing rootzone, laser grade at specified intervals, install perimeter catch water drain, provide satisfactory and acceptable surface water movement.
- E. The Contractor must construct an acceptable field perimeter transition (acceptable slopes, grades, surface consistency, obstructions, debris, and other elements comprising athletic field building best practices) from the new playing surface to the existing field surrounds (may include but not limited to drainage catch basins, valve boxes etc.) restore any large scale or localized site damage caused by the reconstruction process.
- F. The Contractor must ensure that existing erosion control and dust control measures are appropriate. If new erosion control and dust mitigation measures are needed, it is the responsibility of the Contractor to install such measures in accordance with current standards and industry best practices. The Athletic Field Consultant must be notified of any proposed erosion control and dust mitigation measures and must approve them prior to commencing work.
- G. The Contractor must be able to provide proof that they have all LGP (low ground pressure – a maximum of six (6) psi) construction and renovation equipment or equivalent as listed and specified in **Appendix A - Site Work Equipment by Use for Low Ground Pressure (LGP) Construction Equipment.**

1.06 SEQUENCE OF WORK TO BE PERFORMED (With Relevant Section)

- (3.01) Mobilize Equipment
- (3.02) Land Survey
- (3.03) Site Protection
- (3.04) Removal of Warning Track and Infield Skin Materials
- (3.05) Stripping of Existing Vegetation
- (3.06) Excavation and Stockpile of Existing Rootzone
- (3.07) Irrigation Installation
- (3.08) Amending and Blending of Existing Rootzone with Approved Sand
- (3.09) Replacement of Existing Rootzone
- (3.10) Final laser Grade/Seed Bed Preparation
- (3.11) Seeding
- (3.12) Turf Maintenance
- (3.13) Site Clean Up

(3.14) Substantial Completion-Field Testing

1.07 MATERIAL TESTING

- A. Approved Soil Testing Laboratories: Testing of the existing Rootzone Material and washed screened sand shall be performed only by:

Turf & Soil Diagnostics
Trumansburg, NY 14886
(607) 387-5694

Logan Labs, LLC
620 North Main Street
Lakeview, OH 43331
(937) 842-2433

- B. The cost of all testing shall be borne by the Contractor.
- C. The Owner reserves the right to perform their own testing of all materials.

1.08 SUBMITTALS TO BE INCLUDED WITH BID

1. Provide proof and information of all other requirements of the bid terms and package.
2. Acknowledgement of specifications and addenda/request for interpretation form
3. OSHA 10-Hour Construction Safety Training Certificates for all workers
4. Required LGP equipment form
5. Certificate of Insurance in amounts prescribed herein naming the Town of Cumberland as additionally insured
6. Minimum of Five (5) client references. Provide company/agency name, contact name, telephone number and email address and descriptions of project with start/end dates
7. List of subcontractors with references for each subcontractor
8. Quality control-project supervisor identification form
9. Work Site/examination release form
10. Site preparation/elevation control/quantities of Two (2) mm sand and specified topsoil to meet finish grade requirements/field protection and restoration plan
11. Specified materials
12. Workmanship warranty form

1.09 SUBMITTALS TO BE PROVIDED DURING PROJECT

- A. Sample Authentication: The Athletic Field Consultant must be present during the sampling of amendment material. Each sample shall consist of a sub-sample taken from a composite of samples taken from cross sections from the top, bottom, and sides of the corresponding stockpile or truck load (A truck load shall be considered a Tri-axel). A one-gallon (1) sample of material in an appropriately labeled and sealed plastic bag or container shall be packaged and sent to Turf and Soil Diagnostics. A copy of each transmittal and a corresponding split sample shall be delivered to the Athletic Field Consultant.
- B. The Contractor shall provide adequate time in the schedule to account for the sampling, testing and Consultant's subsequent review of all materials prior to spreading operations. Failure of the Contractor to provide materials in a timely manner which meets the specification will not constitute a reason for additional costs or changes to the schedule.

Rootzone Analysis:

The Contractor shall submit to an Approved Soil Testing Laboratory a one-gallon (1) sample for each Five Hundred (500) cubic yards of amendment sand material. A copy of each transmittal and corresponding split sample shall be delivered to the Consultant.

Testing shall consist of:

1. Particle size, which will include:
 - a. Soil Separation (Percentage of sand, silt and clay)
 - b. Percentage of sand fractions
 - c. Particle Shape
 - d. pH
 - e. Particle size parameters
 - f. Coefficient uniformity
 - g. USDA soil classification
2. Physical performance, which will include:
 - a. Particle Density
 - b. Bulk Density
 - c. Infiltration Rate
 - d. Total porosity
 - e. Aeration porosity
 - f. Capillary porosity
 - g. Degree of saturation
 - h. Organic matter analysis.
 - i. A fertility analysis shall be provided for the first approved sample.

3. Rootzone Material analysis tests shall show recommendations for soil additives to correct soils deficiencies as necessary, and for additives necessary to accomplish particular Sportsturf management objectives noted.
 4. All tests shall be performed in accordance with the current standards of the American Society of Testing and Materials (ASTM).
 5. All reports and fertility program recommendations shall be submitted to the Athletic Field Consultant for approval prior to application. All chemical tests shall be performed in accordance to Recommended Chemical Soil Test Procedures for the Northeast Region.
 6. All testing and analysis reports shall be submitted to the Athletic Field Consultant for approval prior to Application.
- C. Provide compaction test results (ASTM D698) for subgrade and Rootzone as requested for approval by Athletic Field Consultant. The cost of all testing shall be borne by the Contractor.
- D. Carry out, record and submit a Thirty (30)' grid survey of finished subgrade for approval prior to spreading of rootzone.
- E. Carry out, record and submit a Thirty (30)' grid survey of finished grades for approval prior to seeding operations.
- F. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture:
1. Stating the botanical and common name,
 2. Percentage by weight of each species and variety, and
 3. Percentage of purity, germination, and weed seed.
 4. The year of production and date of packaging.
- G. Provide product Certificates: For soil fertilizers, soil amendments, from manufacturer for approval by Athletic Field Consultant
- H. Submit fertilizer recommendation for the rootzone and product information on all rootzone additives for approval by Athletic Field Consultant
- J. No materials, rootzone, or amendments shall be applied without prior approval of the Athletic Field Consultant.
- K. Provide product Certificates: For topdressing materials, soil fertilizers, soil amendments, from manufacturer for approval by Athletic Field Consultant

- L. Submit fertilizer recommendation for the rootzone and product information on all soil additives for approval by Athletic Field Consultant

1.10 CLOSEOUT SUBMITTALS

- A. Maintenance Data: Recommended procedures to be established by Contractor for maintenance of natural grass Athletic Field turf, during a calendar year. Submit before expiration of required maintenance periods this must be reviewed and agreed with by Athletic Field Consultant before commencement of any maintenance operations.
- B. All documents related to products used in the project necessary to pursue any product warranty claims. (Warranty documents, product labels, installation instructions, purchase receipts, etc.)
- C. All Documents related to and documenting successful Quality Assurance milestones as outlined in this specification.
- D. Provide Proof of Experience Criteria as outlined in QUALITY ASSURANCE below. Contractor shall provide project name, project start and completion date, contact name, address and telephone number for each project to enable such data to be validated prior to the Contract Award.
- E. Provide proof and information of all other requirements of the bid terms and package.

1.11 QUALITY ASSURANCE

- A. Contractor Qualifications- Contractors shall possess the necessary expertise including equipment and staff experience necessary to construct a high-performance sports field. Shall have membership of one (1) or more of the following Professional associations for minimum of the last Ten (10) consecutive years.
 - 1. New England Sports Turf Managers Association (NESTMA)
 - 2. Sports Turf Managers Association (STMA)
- B. As part of the bid submission, relevant projects, project references and equipment lists shall be included. The Owner intends to fully investigate the credentials and capacity of the prospective bidder to ensure compliance with all project requirements. The Contractor shall provide reports of Athletic Field projects as to the type of projects involved in, including but not limited to: start and end dates, adherence to set targets and key performance indicators, scope of works completed. The Contractor shall also provide testimonies from previous clients, including but not limited to quality of work, staff/employee interactions, tidiness of site, timekeeping and punctuality and overall client satisfaction levels to the Athletic Field Consultant
- C. The Contractor must have completed at least Ten (10) projects per year of similar scope over the past Five (5) consecutive years.

- D. The Contractor shall have a supervisor on the site at all times during the project duration who is experienced in the construction of Athletic Fields. Supervisor's name and experience shall be submitted to the Athletic Field Consultant for approval.
- E. The Contractor shall submit the names of all subcontractors for Athletic Field Consultant for approval to the Athletic Field Consultant prior their engagement with the project.
- F. Work under this Section shall be completed by skilled workers who are completely familiar with the specific requirements and methods needed for the proper completion of the work.
- G. The Contractor shall furnish all labor, materials, equipment, and incidentals, required to complete the work as shown in the Contract Drawings and specified herein. All work must be complete by Sixty (60) days after the Notice to Proceed is issued.
- H. The scope of work is specified in detail in the appropriate sections of the Technical Specifications.
- I. Completion of work is subject to adverse climatic conditions which could affect the date of substantial completion. Any/all delays must be communicated with the Athletic Field Consultant as soon as possible
- J. Any changes to the means and methods of the athletic field construction, and/or materials, must be approved by the Athletic Field Consultant.
- K. The contractor must be able to prove that they have all LGP (low ground pressure – at a maximum of six (6) psi) construction and renovation equipment or equivalent as listed and specified in **Appendix A - Site Work Equipment by Use for Low Ground Pressure (LGP) Construction Equipment**
- L. Any materials that are proposed as "equivalent" or "equal" must be approved by the Athletic Field Consultant in advance. All documentation, including specification sheets, such materials must be submitted at least Fourteen (14) days prior to the date of intended use. **As provided in Appendix B - Materials**
- M. The contractor must provide a project plan identifying all key indicator/target points and deadlines for meeting each target point, which clearly shows an integrated approach to quality control and quality assurance to the Athletic Field Consultant
- N. The contractor must provide a detailed methodology of how the required works will be carried out, this should be inclusive and synced to the reconstruction schedule/project plan.
- O. The contractor is required to submit samples, test results and/or certification of all material prior to delivery to the site. All materials are to be approved by the Athletic

Field Consultant prior to their use. These certifications shall comply with specifications and scope of project and where applicable, with any standards that may be implied.

- P. The contractor is required to submit samples, test results and/or certification of all material prior to delivery to the site. All materials are to be approved by the Athletic Field Consultant prior to their use. These certifications shall comply with specifications and scope of project and where applicable, with any standards that may be implied.

1.12 JOB CONDITIONS AND UTILITIES

- A. Utilities: Contractor is responsible for contacting Call Before You Dig (CBYD) before commencement of work or arranging with the owner for this to be carried out and must be approved by the Athletic Field Consultant.
- B. Contractor is responsible for having all utilities clearly marked and having all appropriate protections of marked utilities and must be approved by the Athletic Field Consultant.
- C. Contactor is responsible for damage to any marked utilities.
- D. Excavation: must not take place when conditions are detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Athletic Field Consultant before spreading Rootzone.
- E. All work shall be performed between the hours of Seven (7) am and Five (5) pm unless otherwise agreed between the contractor and the Athletic Field Consultant.
- F. Before the project commences, If necessary, all personnel on site must present evidence of a successful CORI check suitable for work in a school zone if required.
- G. Seeding Restrictions: Apply seed during one of the following periods. Coordinate seeding periods with initial maintenance periods to provide required maintenance from date of Substantial Completion.
 - 1. Spring Planting: March 15th to June 15th.
 - 2. Fall Planting: August 15th to October 15th.
- H. Weather Limitations: Proceed with seeding only when existing and forecasted weather conditions permit seeding to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

PART 2 - PRODUCTS

2.01 FIELD CONSTRUCTION EQUIPMENT

(See Appendix A for complete list of approved equipment.)

- A. Tractors and other Vehicles:
 - 1. All vehicles trafficking the sand, and rootzone, for finished athletic field grades shall be LGP or equal to minimize compaction of the athletic field subgrade and surface.

- B. Laser Grader:
 - 1. The final Rootzone surface shall be graded to the specified tolerances set out with a machine meeting the following requirements:
 - a. Remote laser controlled, via the use of a GPS positioning survey system, hydraulically operated dual slope grading apparatus with self-correcting blade and dual angle sensors adequate to calculate the cross-slope of the blade
 - b. The tolerance of the machine shall be able to grade to +/- 1/8" accuracy with processed material.
 - c. Maximum machine weight of 3300 lbs
 - d. Maximum ground pressure of 6 psi.

2.02 AMENDED ROOTZONE

(See Appendix B - Materials for a complete list of recommend materials and amendments)

- A. Rootzone shall consist of a sand amended existing rootzone material.

- B. Final Rootzone shall be natural, fertile, friable sandy loam containing not less than Three (3)% or more than Six (6) % by weight, of decayed organic matter (humus), as determined by ASTM F- 1647.

- C. The Rootzone shall contain Eighty-Four (84) – Eighty-Nine (89)% sand with no less than Sixty (60)% of the total sand falling into the medium through very coarse sand fractions, no more than Fifteen (15)% fine sand, and no more than Ten (10)% very fine sand, as determined by ASTM F1632 or D422.

- D. Rootzone shall be free of sub-soil, large stones, earth clods, sticks, stumps, clay lumps, roots or other objectionable, extraneous matter or debris larger than three eighths inches (3/8) in diameter.

- E. Rootzone shall also be free of Quack grass rhizomes, (*Agropyron repens*), and the nut-like tubers of Nutsedge (*Cyperus esculentus*), and all other primary noxious weeds.

- F. Rootzone shall not have a pH factor of less than 6.0 or greater than 7.0 Rootzone Material not to be delivered or used while in a frozen or muddy condition.

2.03 ROOTZONE AMENDMENTS

- A. The Contractor shall provide appropriate quantities of specified rootzone amendments to meet the application rates in Section 3.11:E, 3.12:D, E.

2.04 HERBICIDES, PESTICIDES AND FUNGICIDES

- A. Herbicides, fungicides, and other pesticides may be used subject to the approval of the Athletic Field Consultant and handled by State Licensed operators only.

2.05 SEED

(See Appendix B-Materials for a complete list of recommend seed)

- A. Schedule for seeding: sow grass seed prior to October Twenty (20), except as otherwise approved by the Athletic Field Consultant in writing
- B. Grass seed shall be Certified (Blue Tag) seed that is clean, new crop seed, composed of a mixture of varieties, mixed in proportion by weight and tested for minimum percentages of purity and germination. Submit proposed mixture to the Athletic Field Consultant
- C. Hash Mark Sports Turf Mix:
 - 1. The seed shall be fresh, clean seed from the latest year's crop. The seed shall consist of: Fifty (50) % Turf Type Tall Fescue, Twenty (20) % Kentucky Blue Grass, and Thirty (30) % Perennial Ryegrass.
 - a. Turf Type Tall Fescue varieties shall include Amity and Zigzag.
 - b. Kentucky Blue Grass variety shall include Mazama Kentucky Blue Grass.
 - c. Perennial Ryegrass varieties shall include Double Time GLS and Metolius Perennial Ryegrass.
 - d. The percentage of weed seed shall not exceed 1%, and other crop seed One (1) % by weight of the mixture. Any variety substitutions or deviations from these specifications must be approved by the Athletic Field Consultant

2.06 PRODUCT HANDLING

A. Delivery and storage:

1. Deliver all items to the job site in their original containers with all labels intact and legible at time to the Athletic Field Consultants review.
2. Immediately remove from the site all materials, which are not true to name, and all materials that do not comply with the specified requirements.
3. Use all means necessary to protect materials from theft, tampering, and weather before, during and after installation, and to protect the work and materials of all other trades.
4. All materials must be stored or stockpiled in such a manner so as not to present a threat to the environment. Erosion controls and run off protection must be implemented. All materials must be stored in accordance with relevant protection plans.
5. All materials must be inspected prior to acceptance and such inspection shall be documented with, at a minimum, the name of the inspector, the material inspected, the person or company delivering the materials, the results of the inspection, and the date and time of acceptance.
6. Contamination: Immediately remove from the site all materials that have been contaminated. In the case of contamination of stockpiled items, confer with the Athletic Field Consultant and if directed remove entire stockpile from site immediately at no cost to the Owner.
7. Repair and Replacement: in the event of damage, immediately make all repairs and replacements necessary to the approval of the Athletic Field Consultant and at no additional cost to the Owner.

B. Grass Seed and Other Packaged Materials:

1. Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of conformance with state and federal laws, as applicable.

C. Bulk Materials:

1. Do not place or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
3. Accompany each delivery of bulk fertilizers, lime, and soil amendments with appropriate certificates.
4. Fertilizers, lime, and soil amendments must be stored in a secure, locked area, and must be protected from the elements.

PART 3 – EXECUTION

SEQUENCE OF WORK TO BE PERFORMED

- 3.01 Mobilize Equipment
- 3.02 Land Survey
- 3.03 Site Protection
- 3.04 Removal of Warning Track and Infield Skin Materials
- 3.05 Stripping of Existing Vegetation
- 3.06 Excavation and Stockpile of Existing Rootzone
- 3.07 Irrigation Installation 3.08 Amending and Blending of Existing Rootzone with Approved Sand
- 3.09 Replacement of Existing Rootzone
- 3.10 Final laser Grade/Seed Bed Preparation
- 3.11 Seeding
- 3.12 Turf Maintenance
- 3.13 Site Clean Up
- 3.14 Substantial Completion-Field Testing

3.01 MOBILIZE EQUIPEMNT

- A. Mobilization will require a Forty-Eight (48) HR. notice of intent prior to the delivery of any construction equipment to be left on site. Notify the Athletic Field Consultant

3.02 LAND SURVEY

- A. Prior to the use of any construction equipment, the contractors proposed field layout and elevation control strategies shall be determined and marked.
- B. Materials stockpile areas shall be identified and marked with stakes.
- C. Field protection equipment shall be on site ready for installation.
- D. Prior to the bid award, the contractor is responsible for examining the site, to determine and submit a written plan of site preparations to the Athletic Field Consultant for review and approval.
- E. Written plans must include elevation strategies with quantities of specified Rootzone Material required to meet the specification described under general provisions as constructing an acceptable field perimeter transition from the new playing surface to the existing field surrounds while providing satisfactory and acceptable surface water movement off the playing surface to the proposed perimeter drain and catch basins and field perimeters.
- F. Prior to use of construction equipment Contractor must locate all underground utilities via "Dig Safe" and the depths of all irrigation lines must be confirmed.

- G. Remove all existing irrigation equipment such as but not limited to; heads, quick couplers, controller, pumps, and valve boxes prior to removal of existing turf. Irrigation equipment is to be held by Contractor until reinstallation prior to seed application if deemed reusable by the Athletic Field Consultant. All irrigation lines from the fence line in to be removed and disposed.
- H. The Contractor is to provide equipment to load and haul all debris material away from designated stockpile area. Proper stockpiling procedures must be used.
- J. The Contractor is responsible for off-site disposal costs and haulage fees of organic material. Composting the organic material is preferable.
- K. All survey and layout should be provided by the contractor.
- L. The contractor will provide As-built plans and drawings on the completion of the project and present to the owner.

3.03 SITE PROTECTION

A. SITE PROTECTION

1. DESCRIPTION

- a. This Section specifies requirements for site preparation including removals of existing stripped turf.
- b. Protection of existing structures and vegetation to remain, including provision of construction fence.
- c. Stripping and stockpiling of topsoil/loam.
- d. Disposal of material from clearing and removals in approved off-site disposal areas.
- e. Filling of voids and excavations resulting from the work.
- f. Clearing and removals, including removal of existing stripped surface vegetation
- g. Erosion Control and Storm Water Protection Plan

B. PROTECTION

- 1. The Contractor shall flag the limits of clearing shown on the drawings by accurate field survey with marked stakes or other means acceptable to the Athletic Field Consultant. The Athletic Field Consultant shall be notified a minimum of five (5) working days prior to scheduled commencement of clearing operations to review the flagged limits. Adjust the clearing limits as directed by the Athletic Field Consultant.
- 2. Before clearing begins, all erosion and sedimentation control elements shall have been installed.

C. TEMPORARY CONSTRUCTION FENCING

1. Temporary Construction Fencing to be placed for entirety of project .
2. Construction Fence shall be constructed from galvanized steel, corrosion-resistant zinc coating, be a minimum of Six (6)' in height and be free standing with use of stands and be compliant with ASTM A392-06.

D. EROSION AND SEDIMENTATION CONTROLS

1. This Section specifies requirements for temporary and permanent erosion and sedimentation control provisions as they relate to the construction process.
2. Providing and maintaining all temporary erosion and sedimentation control measures shown on the Drawings, described in the project Specifications, and required during the life of the Contract to control soil erosion and water pollution.
3. The installation and maintenance of additional silt fence, berms, ditches, sedimentation basins, construction exits, fiber mats, catch basin filters, straw, netting, gravel, trenches, mulches, grasses, slope drains, and other approved erosion control devices or methods, needed to protect any areas on or off site in accordance with the Storm Water Pollution Prevention Plan (SWPPP) to be developed by the Contractor which is required by the EPA or its locally designated agency the Athletic Field Consultant must see sight of this and approve.
4. **See Appendix C for information on obtaining a required EPA NPDES General Permit for Construction Activities.**

E. DEFINITION AND COORDINATION OF EROSION AND SEDIMENTATION CONTROL PROVISIONS

1. Permanent erosion and sedimentation control measures are defined as those elements that are to be incorporated into the final project product, including but not necessarily limited to such items as: finish paving and landscape, detention basin forebays, sedimentation control structures (Vortechs, Stormceptor, catch basins, etc.), swales and ditches, berms, and other such items.
2. Temporary erosion and sedimentation control measures are defined as those elements that are required by permit approvals and necessary to be installed by the Contractor to meet federal, state and local regulations for the construction program, including, but not necessarily limited to, such items as: compost filler tubes, silt fences, berms, portable sedimentation basins, straw bales, check

dams, and other such items, all of which shall be removed by the Contractor after installation of permanent erosion and sedimentation control measures, stabilization of the site, and prior to final completion of the project.

3. The temporary control provisions shall be coordinated with the permanent erosion and sedimentation control features to the extent practical to ensure economical, effective, and continuous erosion and sedimentation controls throughout the construction and post-construction periods.

F. LAWS AND REGULATIONS

1. Compliance with the EPA NPDES Storm Water Regulations as described in **Appendix C - EPA NPDES GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES** is a responsibility of the Contractor.

G. PRIOR TO CONSTRUCTION

1. Prior to the start of the construction, the Contractor shall submit to the Athletic Field Consultant the following: schedules for the construction of temporary and permanent erosion and sediment control work, clearing and grubbing, grading, and construction. No work shall be started until control schedules and methods of operations have been submitted and approved by Athletic Field Consultant.
2. Proof of submittal and receipt of an acknowledgement of the Notice of Intent (NOI) for an NPDES General Permit for Construction Activities under EPA Regulations 40 CFR Parts 9, 122, 123, and 124 as further outlined under this Section.

H. CONSTRUCTION OPERATIONS— EROSION AND SEDIMENTATION CONTROLS

1. When in the opinion of the Athletic Field Consultant it becomes necessary, the Athletic Field Consultant will inform the Contractor of construction procedures and operations that jeopardize erosion and sedimentation control provisions. If these construction procedures and operations are not corrected promptly, the Owner may suspend the performance of any or all construction until corrections have been made, and such suspension shall not be the basis of any claim by the Contractor for additional compensation from the Owner nor for an extension of time to complete the Work.

I. MATERIALS

1. Erosion Control Barrier: Erosion control barrier shall be composed of a compost-filled biodegradable silt sock, in combination with Silt Fence.

- a. Silt sock shall be Siltsoxx, twelve (12)" diameter, with Filter Media compost filler, as manufactured by Filtrex, Akron Ohio, telephone 877-542-7699, web site www.filtrex.com
- 2. Stakes shall be wood stakes, sized as indicated on the Drawings, and as recommended by the manufacturer.
- 3. Temporary erosion control seed for quick growing grasses such as wheat, rye or oats shall be planted only when permanent grasses cannot be planted due to the growing season. All permanent grass areas planted with temporary erosion control seed shall be replaced with permanent seed Apply seed mixture at a rate of One Hundred (100) pounds per acre.

Seed	Percent by Weight	Percent Germination Minimum	
Winter Rye	80	Minimum	85
Red Fescue (Creeping)	4	Minimum	80
Perennial Rye Grass	3	Minimum	90
Red Clover	3	Minimum	90
Other Crop Grass	0.5	Maximum	
Noxious Weed Seed	0.5	Maximum	
Inert Matter	1.0	Maximum	

- 4. Erosion Control Blanket/Fabric Netting
 - a. Curlex blankets, as manufactured by American Excelsior Company
 - b. Erosion Control Blankets SC150BN for embankments equal to or steeper than Two (2) to One (1) or C125BN for drainage swales where stone is not used as manufactured by North American Green
- 5. Straw bale sediment traps consisting of straw bales banded with wire or nylon tape (minimum two bands for bale) approximately two-feet, six-inches in length
 - a. Stakes for straw bales shall be One and a half (1-1/2) inch by One and a half (1-1/2) inch by Four (4) feet long, or approved equal
- 6. Silt fence fabric shall be One Hundred (100X), as manufactured by Mirafi
- 7. Filter fabric at construction entrance shall be Six Hundred (600X), as manufactured by Mirafi
- 8. Silt Sacks and Sediment Control Devices
 - a. Silt sacks shall be a woven polypropylene geotextile fabric with strength per ASTM D4884 manufactured to fit the opening of the catch basin. Silt

sacks shall be Siltsack[®] as manufactured by ACF Environmental, Inc., or approved equal.

- b. Silt sacks shall be manufactured with a high flow bypass weir for large inflow events. Field modification, including cutting or puncturing of the fabric, will not be allowed.
- c. Install at locations indicated on the Drawings.

J. EROSION AND SEDIMENTATION CONTROL – COMPOST FILLER TUBES

- 1. Compost filler tubes shall be installed at the locations, shown on the Drawings and in general as follows:
 - a. Toe of slope of embankment construction to filter all runoff flowing to off-site discharges
 - b. Toe of temporary earthwork stockpile slopes
 - c. Across construction ditches prior to entry into drainage system or waterway, and at Fifty (50) -foot intervals along the remainder of the ditch
 - d. Surrounding completed drainage inlets.
 - e. Other locations shown on the Contract Drawings and required by laws, regulations, and permits.
- 2. Compost filler tubes shall be installed in line with each tube segment installed tight against the previous tube segment to form a continuous barrier. Secure tubes in place with two (2) stakes per bale. The tubes shall be set in a trench approximately Four (4) inches into the ground. Soil shall be placed on the upside slope of the tubes. Deteriorated, destroyed, or rotted tubes shall be replaced immediately. Sediment shall be removed and disposed of periodically from behind the compost filler tubes. The accumulated sediment shall not be allowed to rise above the mid-height of the bale. All sediment, compost filler tubes, and appurtenances shall be removed and disposed of at the completion of the Contract, and were located within athletic field grass area, grass surface shall be repaired by loaming and re-seeding.

K. TEMPORARY EROSION CONTROL MATS

- 1. Erosion control mats shall be installed in accordance with the manufacturer's recommendations.

2. Areas to receive mats shall be smooth graded and remove all rocks, dirt clods, vegetation, and other obstructions that may cause damage to the mats.
3. Unroll mats parallel to the direction of water flow and lay flat against the ground. Overlap roll ends a minimum of 1 foot with upslope mat on the top to prevent uplift of mat end by water flow. Overlay adjacent edges of mat by six (6) inches. Extend mat a minimum of Two (2) feet above the crest of steep slopes and anchor by excavating a Six (6)-inch-deep trench, and secure end of mat in trench using staples or pins furnished by manufacturer of mat. After securing mat end in place, backfill and compact trench.

L. SILT FENCE

1. Silt fence shall be installed at locations as shown on the Drawings.
2. Supporting posts shall be spaced Four (4) feet on center and driven at least One (1) foot into the ground. Posts shall be One and a Half (1-1/2) inch square or heavier wood posts or standard steel posts.
3. Fabric shall be anchored in a Four (4) - inch deep trench dug on the upslope side of the posts. The trench shall be at least Four (4) inches wide. The fabric shall be laid in the trench, backfilled.
4. Fabric rolls shall be spliced at posts. The fabric shall be overlapped Six (6) inches, folded over, and then securely fastened to posts.
5. Silt fences shall be inspected immediately after each storm event and at least daily during prolonged rainfall.

M. CONSTRUCTION REQUIREMENTS - TEMPORARY EROSION AND SEDIMENTATION CONTROLS

1. The Contractor shall construct all erosion and sedimentation control features at the earliest practical time as outlined in the accepted schedule. Temporary erosion and sedimentation control measures shall be used to correct conditions that develop during construction which were unforeseen but are needed prior to installation of permanent erosion and sedimentation control features, or that are needed temporarily to control erosion or sedimentation which develops during construction operations.
2. Where erosion is likely to be a problem, clearing and grubbing operations shall be scheduled and performed so that grading operations and permanent erosion and sedimentation control features can follow immediately thereafter, if conditions permit; otherwise, temporary erosion and sedimentation control measures will be required between successive construction stages.

3. Contractor shall be responsible for controlling erosion within the project area and retaining sediment on-site away from sensitive environmental resources. Any fines, construction delays, remedial actions, or incarceration resulting from the Contractor's failure to comply with these provisions shall be the responsibility of the Contractor and not the Owner.
4. Failure by the Contractor to control erosion, pollution, and siltation shall be cause for the Owner to employ outside assistance to provide the necessary corrective measures. The cost of such assistance, including Athletic Field Consulting costs, will be charged to the Contractor and appropriate deductions made from the Contractor's monthly progress payment.
5. The Contractor shall remove and properly dispose of sediment from control facilities as required by the Athletic Field Consultant. The Contractor shall modify and improve erosion and sedimentation control facilities and replace deteriorated straw bales and other degraded erosion control devices.
6. Minimum temporary and permanent erosion and sedimentation control measures are shown on the Drawings. The Contractor shall strictly adhere to the minimum provisions shown. Additionally, temporary measures shall be selected and constructed by the Contractor in consultation with the Athletic Field Consultant to accommodate changing field conditions that develop during construction.
7. The temporary sedimentation basins shall be maintained from the start of construction until construction of the permanent detention basins and/or storm water system is completed, and perimeter areas are stabilized. A temporary outlet shall be constructed above the expected sediment levels. Construction of the basins shall be sequenced so that the temporary outlet is installed, and basin embankment is constructed with the material available from the initial site excavations.
8. Per NPDES Permit requirements, in disturbed areas where construction has permanently or temporarily ceased, the area must be stabilized within Fourteen (14) days. If earth-disturbing activities will resume within Fourteen (14) days, temporary stabilization is not required.
9. All disturbed areas shall be re-vegetated by loaming and seeding unless otherwise noted on the approved plan.

N. MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES

1. The Contractor shall check the condition of erosion and sedimentation control devices daily and maintain them in good operating condition. Straw bales shall be replaced when deteriorated.
2. The Contractor shall inspect the condition of diversion dikes and ditches, filter berms, interceptor dikes, sediment basins, and other erosion and sedimentation control devices after each rainstorm and during major storm events. Repairs shall be made as necessary.
3. During construction, temporary outlets of the drainage systems shall direct the flow to temporary or permanent sedimentation basins.
4. Temporary soil erosion and sedimentation control devices shall be removed and adjacent areas outside the limits of grading restored upon completion of the work or when required by the Athletic Field Consultant.

3.04 REMOVAL OF WARNING TRACK AND INFIELD SKIN MATERIALS

1. Remove from site, all materials resulting from site clearing and demolition operations.
2. The Contractor shall take all necessary precautions to prevent other excavated material or other objectionable material from becoming intermixed, either before or after the removal operation. Removal operations shall be completed prior to the start of excavation, trenching, or grading operations.
3. The Contractor shall submit the following information to the Athletic Field Consultant for review before commencing work:
 - a. All permits, and notices required by municipal and local authorities authorizing site clearing.
 - b. Permits for transport and disposal of debris if required
4. No burning of any material will be allowed

3.05 STRIP EXISTING VEGATATION

- A. Remove existing turf to a depth of +/- one and a half (1 ½) inches (+/-1/2") utilizing LGP turf tractor mounted "Koro Field Top maker" or Utilize LGP dual plane laser equipped crawler Bulldozer fitted with low ground pressure (LGP) tracks equivalent at one (1) inch plus/minus one-eighth (1/8) inch pass.
- B. Transport pulverized turf and organic material to designated stockpile holding area for removal from site by others, utilizing LGP dump trailers or equivalent attached to LGP turf tractors or equivalent.

- C. The Contractor is to provide equipment to load and haul all debris material away from designated stockpile area. Proper stockpiling procedures must be used.
- D. The Contractor is responsible for off-site disposal costs and haulage fees where applicable. Composting the organic material is preferable to landscaping.

3.06 EXCAVATION OF EXISTING ROOTZONE AND STOCKPILING

- A. The contractor shall provide all labor, materials and equipment (including LGP equipment) required to provide earthmoving and subgrade elevations.
- B. Utilize LGP dual plane laser equipped crawler dozer for excavation of existing topsoil material down to +/- seven inches (+/-7") depth and/or to the existing subbase material. Utilize LGP dual plane laser equipped crawler dozer for rough grade within 1 in. of finish subgrade to mirror final surface grades.
- C. Remove any existing stone and other debris from **subgrade** to a depth of Three (3) in. utilizing a hydraulic power angle mounted power rake grading and blending implement attached to LGP compact track and multi terrain skid steer or equal.
- D. Transport all stone and debris material to stockpile holding area utilizing LGP hydraulic dump box trailers or equal attached to LGP tractors.
- F. Laser grade subbase to +/- three quarters of an inch (0.75)" of finish subbase elevation as proposed by Grading Plan with a compact motorized cross slope dual laser grader or equal. **Refer to Appendix A for LGP equipment specification.**

3.07 IRRIGATION INSTALLATION

- A. The Contractor shall provide all labor, materials, equipment and incidentals required to construct and finalize the irrigation.
- B. The Contractor or sub-contractor must submit irrigation system design plans to the Athletic Field Consultant for approval prior to award. System shall meet minimum flow requirements noted.
- C. The Contractor must have at least Ten (10) years of experience in work of this type and size required by this section and which is acceptable to the owner
- D. The Contractor must supply five (5) references for work of this type (Athletic Fields) with their bid including names and phone numbers of reference contacts.
- E. The Contractor shall maintain an accurate and complete record drawing of the system as built and specify any changes of location or installation procedures which deviate from original plan and specifications. All valve box locations shall be recorded with reference to a minimum of two permanent locations.

- F. Upon completion, the Contractor shall supply the as-built plan as a clean and clear document as well as all product manuals and warranties to the town of Cumberland for review and approval prior to acceptance and payment.
- G. All materials to be used in the system shall be new and without flaws or defects and of quality and performance as specified to meet the requirements of the system.
- H. PVC irrigation pipe shall be Class 200 Type 1120 SDR 21 Solvent-Weld PVC conforming to ASTM No. D2241 and D3036 as manufactured by Crestline or approved equal.
- I. PVC irrigation fittings except nipples shall be schedule 40 solvent weld fittings as manufactured by Spears or equal. All threaded PVC nipples shall be schedule 80 fittings as manufactured by Spears or equal. All PVC cement shall be IPS/weld-on used in conjunction with the appropriate primer or equal.
- J. Sprinklers shall be Hunter I-25-06-SS series full and part circle pop up rotaries with check valve 6" stainless steel riser and nozzles as indicated on Irrigation Guidance Plan (##). Sprinkler heads shall be manufactured by Hunter Industries or equal. Swing joint risers shall be 3 ell unitized pre-fabricated double O-ring PVC as manufactured by Spears or equal.
- K. Electric control valves shall be Hunter ICV series diaphragm type fiberglass body plastic valves equipped with P/N 458 200 DC latching solenoid at locations as indicated on Sheet 3. Electric control valves shall be manufactured by Hunter Industries or equal. Valve boxes for electric valves shall be 12-inch standard valve box as manufactured by Carson or equal.
- L. Quick coupling valves shall be Hunter model HQ-SRC 1" NPT brass one piece body with thermoplastic cover, H-55 key and swivel as manufactured by Hunter Industries or equal.
- M. Swing joint riser for quick coupling valves shall be 1" unitized PVC with brass inserts as manufactured by Dura or equal. Valve boxes for quick coupling valves shall be 6" round as manufactured by Carson or equal.
- N. Manual isolation gate valves for main line use shall be brass body high-pressure upright screw type as manufactured by Hammond or equal. Manual valves for electric valve isolation shall be bronze body full port chrome plated ball valve 7010810 series as manufactured by Apollo or equal.
- O. Valve control wire shall be minimum #14 single conductor direct burial UL – and UF – approved and meet all state and local codes for this service. Individual wires must be used for each zone. Common wire shall be white; zone power wires shall be red. All wire shall be manufactured by Paige Electric or equal.

- P. The battery-operated or hard-wired controller shall be Hunter model XCH-1200-SS 12 station stainless outdoor controller with XCHS Pole stainless steel mounting pole and XCHSPB mounting bracket as manufactured by Hunter Industries or equal.
- Q. Rain sensor shall be mini-clik model SGM as manufactured by Hunter Industries or equal. Controller shall be grounded with 5/8 in. x 10 ft. long copper clad grounding rod connected with #6 bare copper wire and cadweld connector or equal. Cover grounding rod with 6-inch economy valve box.
- R. SEQUENCING OF WORK TO BE PERFORMED
1. Installation: Prior to the installation of the rootzone, the Contractor must coordinate the installation of the irrigation service lines which are located within the boundaries of the area of reconstruction. This is necessary to prevent disruption of the finished grade surface, which shall be installed after all other work within the area has been completed.
 2. All irrigation piping and components shall be bedded and backfilled with clean and stone/rock free material. In the event of on-site soil materials not being suitable for this purpose, clean Rootzone material or sand shall be imported and used for bedding and backfill. All valves both isolation and electric require a firm foundation of a 4" base layer of 3/8" drainage stone for valve and valve box support and cleanliness for future access.
 3. Irrigation heads shall not be installed within areas of soil amendment, tilling and blending until after the seed surface preparation process has been completed and the finish grade established. Swing joint assemblies must be sealed with a suitable drilled cap and placed with the cap facing up and buried below the 12" seeding surface. Upon completion of finish grading, the system will be turned on to dampen areas of burial and indicated head locations. *Prior to acceptance, the entire irrigation system shall be tested and adjusted for approval by the Athletic Field Consultant.

Note: Upon completion of the installation of the irrigation system the site shall be inspected by the Owner or Athletic Field Consultant, or a designee for approval and acceptance of the irrigation installation.

- S. System Testing and Final Assembly
1. At the completion of finish rootzone grading and compaction, the irrigation system will be activated to locate sprinkler head swing joint assemblies. Head location areas can then be excavated by hand to expose the swing joint for cap removal and head installation.

2. All sprinkler heads shall be installed, set to specific grade, backfilled and tamped. The entire system will then be tested zone by zone to ensure proper function, coverage, adjustment and soil saturation limits.
3. The entire system shall be used for hydraulic saturation and settling of the root zone profile prior to the final preparations for seeding.

Note: The site shall be inspected for acceptance of sprinkler head installation and irrigation system efficiency by the Owner, Athletic Field Consultant, or designee for approval.

3.08 AMENDING AND BLENDING OF EXISTING ROOTZONE WITH APPROVED SAND

- A. Amend existing rootzone with Two (2) mm sand or equal and screen to Three-Eighths (3/8)" using a Trommel mixing, and screening plant equipment as listed in **Appendix A or equal**
- b. A volume equivalent to Seven (7) inches of the existing rootzone and required amendment material (2mm sand) will be required.
- C. Remove all and any material, stones, roots, contamination above Three-Eighths (3/8) "in average diameter.

3.09 REPLACEMENT OF AMENDED ROOTZONE

- A. Shall be placed around the Subbase as so to allow effective distribution and placement by LGP equipment as listed in **Appendix A or equal.**
- B. Haul, backfill, laser grade and consolidate a minimum of Seven-inch (7") uniform layer of topsoil over the established subbase layer to meet the required slopes and elevations of finish grade. Utilize hauling, backfilling, grading, finish grading and compaction equipment as listed in **Appendix A or equal.**
- C. The replaced amended topsoil layer must be laser graded and consolidated to meet the required slopes and elevations of finish grade elevations utilizing power raking, and ground preparation equipment as listed in **Appendix A or equal.**

Note: The site shall be inspected for acceptance of existing rootzone replacement and grading by the Owner, Athletic Field Consultant, for approval prior to final laser grade and seed bed preparation

3.10 FINAL LASER GRADE AND SEEDBED PREPARATION

- A. The entire site to be seeded shall be laser graded and consolidated to predetermined finish grade elevations utilizing a fully automated dual plane laser grader and ground preparation equipment as listed in **Appendix A .**
- B. All edges, corners, and material transition areas shall be graded by manual labor if necessary, to insure consistent elevation control with surface stabilization and firmness

throughout the site. The site shall be inspected for acceptable finish grade and compaction by the Athletic Field Consultant

- C. At the completion of finish grading and consolidation, the irrigation system will be tested, and sprinkler heads installed as described in **Section 3.07**

Note: The site shall be inspected for acceptance of sprinkler head installation and irrigation system efficiency by the Owner, Athletic Field Consultant, or designee for approval.

- D. The seed surface shall be prepared utilizing seed preparation equipment as listed in Appendix A or equal.
- E. NUTRIENT APPLICATION - Utilizing an oscillating arm fertilizer broadcast spreader mounted on a LGP tractor as listed in **Appendix A or equal:**
 - 1. Evenly spread nutrient soil amendment "Renovate Plus" or equal as specified in **Appendix B** at the rate of Twenty-Five (25) lbs./1,000 Sq. Ft.
 - 2. Evenly spread soil amendment "Cool Terra Organic" or equal as specified in **Appendix B** at the rate of Seventeen (17) lbs./1000 Sq. Ft.
 - 3. Evenly Spread nutrient soil amendment "Myco-Replenish 3-3-3 SG" or equal as specified in **Appendix B** at the rate of 15 lbs./1000 Sq. Ft.
 - 4. Lightly scarify and incorporate into the top One-Two (1"-2") of new rootzone profile utilizing a super rake surface preparation machine or equal as specified in **Appendix A.**
- F. The seed surface shall be smooth and free of any debris larger than Three-Eighths (3/8) inch. Any irregularities in the surface resulting from construction operations shall be corrected in order to prevent the formation of depressions or crowns. The seeding surface shall be able to provide seed to soil contact.

Note: The site shall be inspected for acceptance of final seed bed preparation by the Owner, Athletic Field Consultant, or designee for approval, prior to seeding operation.

3.11 SEEDING (Inclusive of Grow-In)

- A. Evenly apply "Hash Mark Sports Turf Mix" seed as specified in Appendix B or equal at the rate of Eight (8) lbs./1,000 Sq. Ft. in two directions Four (4) lbs. in each direction) utilizing seed injection drum spike seeding implement at 1" x 1" spacing towed behind a LGP turf tractor as in Appendix A or equal.

NOTE:

A follow- up Application duplicating the above should be carried out in late spring (Mid May 2022) at a rate of Six (6) lbs./100Sq.Ft. in two directions Three (3) lbs in each direction.

- B. Hash Mark Sports Turf Mix
1. 25% 'Amity' Tall Fescue
 2. 25% 'Zigzag' Tall Fescue
 3. 20% 'Mazama' Kentucky Bluegrass
 4. 20% 'Metolius' Perennial Ryegrass
 5. 10% 'Double Time' GLS Tetraploid Perennial Ryegrass
- C. Irrigate as required to fulfill turf establishment specifications as stated in **Section 3.11, D.**
- D. Fall 2020 Applications: All dates and timing to be approved by the Athletic Field Consultant, based on actual commencement of project, environmental and surface conditions. Products and rates may be adjusted with the approval of the Athletic Field Consultant based on soil tests and specific growth requirements. Apply fertilizer to dry turf and water in post application. See **Appendix B** for recommended product labels.
1. **Ten (10) days** after seeding, evenly apply "Country Club 13-25-12 SGN 195" or equal at the rate of Four (4) lbs./1,000 Sq. Ft. to the surface.
 2. **Ten (10) days** after seeding, evenly apply "Vivax Plus Fertilizer 0-0-20 at the rate of Five (5) lbs./1,000 Sq. Ft. to the surface.
 3. **Forty (40) days** after seeding, evenly apply "Country Club 13-25-12 SGN 195" or equal at the rate of Four (4) lbs./1,000 Sq. Ft. to the surface.
 4. Product solutions supplier requirements – Must make bi-weekly visits to assist Contractor on fertility, performance turf establishment and product effectiveness.
- E. **Spring 2021** Applications: All dates and timing to be approved by the Athletic Field Consultant, based on environmental and surface conditions. Products and rates may be adjusted with the approval of the Athletic Field Consultant based on soil tests and specific growth requirements. Apply fertilizer to dry turf and water in post application.
1. **Granular Application (4/13/21 Approximate):** evenly apply:
"Replenish 8-2-2 SG" or equal at the rate of Eleven and a Half (11.5) lbs./1,000 Sq. Ft. to the surface. Apply as specified and water in with Quarter ($\frac{1}{4}$ ") of irrigation.
 2. **Spray Foliar Application (5/11/21 Approximate):** evenly apply the following
"Vivax" or equal at the rate of 3.67 oz/1,000 Sq. Ft.,
"Fame SC" or equal at the rate of 0.36 oz/1,000 Sq. Ft.,

“Phos-Fight 0-29-26” or equal at the rate of 3.67 oz/1,000 Sq. Ft.,
“Sea-3” or equal at the rate of 3.67 oz/1,000 Sq. Ft.,
“TurfRx Micro+” or equal at the rate of 3.67 oz/1,000 Sq. Ft.,
“TurfRx K+ Micro Crystal” or equal at the rate of 1.84 oz/1,000 Sq. Ft. to the surface. Apply as specified and water in with ½” of irrigation.

3. **Spray Foliar Application (6/15/21 Approximate):** evenly apply the following:

“Vivax” or equal at the rate of 3.67 oz/1,000 Sq. Ft.,
“Fame SC” or equal at the rate of 0.36 oz/1,000 Sq. Ft.,
“Phos-Fight 0-29-26” or equal at the rate of 3.67 oz/1,000 Sq. Ft.,
“Sea-3” or equal at the rate of 3.67 oz/1,000 Sq. Ft., “TurfRx Green” or equal at the rate of 3.67 oz/1,000 Sq. Ft.,
“TurfRx K+ Micro Crystal” or equal at the rate of 1.84 oz/1,000 Sq. Ft. to the surface. Apply as specified and water in with ½” of irrigation.

4. **Granular Application (6/22/21):** evenly apply “Nutrite 28:0:10 SGN 200” at the rate of 2.69 lbs/1,000 Sq. Ft. to the surface. Apply as specified and water in with ¼” of irrigation.

5. Product solutions supplier requirements – Must make bi-weekly visits to assist Contractor on fertility, performance turf establishment and product effectiveness.

3.12 TURF MAINTENANCE (Establishment)

- A. Maintain and establish turf for a minimum of one (1) calendar year from completion of substantial completion by utilizing proper irrigation, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, re-grade, and replant bare or eroded areas to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.
- B. Fill in as necessary soil subsidence; with a Rootzone Material that is consistent with the existing materials, that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
- C. Apply treatments as required to keep turf and soil free of pests, including surface and subsurface insects, weeds, and all turf and soil disease pathogens. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.

D. IRRIGATION:

1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed.
2. Water turf with fine spray at a minimum rate of 1/8 inch at 4 am, 8 am, 11am, 2 pm, 5 pm, and 10 pm, unless rainfall precipitation is adequate.
3. 2 times a week the Contractor MUST monitor Volumetric Water Content (VWC) with a moisture probe such as a POGO TurfPro+ or equivalent to assure that rootzone reads a VWC of 30-40 percent.

E. MOWING:

1. Mow turf for Six (6) mowing's at times when top growth reaches an average height of two (2") inches. Mow to the height of two (2") inches.
2. All clippings MUST be removed.
3. Mow turf using a collection system, with properly sharpened rotary blades.
4. Repeat mowing to maintain specified height without cutting more than One-Third (1/3) of grass height.
5. Remove no more than One-Third (1/3) of grass-leaf growth in initial or subsequent mowing's.
6. Do not delay mowing until grass blades bend over and become matted.
7. Do not mow when grass is wet. Schedule initial and subsequent mowing's to maintain the following grass height.
8. Continue mowing practices at desired height Two and a Quarter (2 ¼) to Three (3) inches until the end of the growing season.

F. SATISFACTORY TURF

1. Turf installations shall meet the following criteria as determined by Athletic Field Consultant.
2. Satisfactory Seeded Turf: At the end of the maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding Ninety-Five (95) percent over any Ten (10) sq. ft. (0.92 sq. m).
3. Use specified materials to reestablish turf that does not comply with requirements and continue maintenance until turf is satisfactory.

G. RESTORATION OF SETTLED GRADES

1. At the end, twelve (12) months after the date of substantial completion of the rootzone installation work, inspect the site and restore any areas where the grades have settled beyond the elevations shown on the drawings.
2. Athletic Field areas: Remove the turf using mechanical sod cutter from the settled area and add rootzone material. Re sod the area using the sod cut from the athletic field. In the event that the sod cannot be reused, install new sod that matches the seed mix on the lawn.

H. MAINTENANCE SERVICE

1. Turf Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Begin maintenance immediately after each area is seeded and continue until acceptable turf is established but for not less than the following periods:
2. Seeded Turf: One Hundred and Seventy-Five (175) days from date of Substantial Completion.
3. When maintenance period has not elapsed before end of planting season, or if turf is not fully established, continue maintenance during next planting season.

3.13 SITE CLEAN UP AND PROTECTION

- A. At the completion of all construction work the contractor shall clean and remove all debris, excess soils and construction related items from the project site. The contractor is responsible for all restoration of the grounds back to their original condition previous to the start of the project. The contractor shall follow his predetermined site restoration plan and supplement with additional damage repair procedures if required. In the event of the need for re-seeding and turf re-establishment, the contractor shall be obligated to fulfil the specifications prior to final inspection and acceptance.
- B. Erect temporary fencing or barricades and warning signs as required to protect newly seeded areas from traffic. Maintain fencing and barricades throughout maintenance period and remove after plantings are established.
- C. Remove all erosion-control measures after grass establishment period.

3.14 Substantial Completion Field Testing:

- A. Structural consolidation readings at the Three (3) inch depth must be a minimum of One Hundred (100) psi and a maximum of two hundred (200) psi using a digital penetrometer or equivalent. The readings will be taken at Thirty (30) designated points on the field as per the attached drawing/diagram

- B. Surface Impact Levels must be a minimum of forty (40) Gravities to a maximum of sixty (60) Gravities using a Clegg Surface Impact Tester or equivalent. The readings will be taken at thirty (30) designated points on the field as per the attached drawing/diagram
- C. Infiltration rate of water into the rootzone must achieve a minimum of three (3) inches per hour. The reading will be taken at five (5) designated points on the Athletic Field as per the attached drawing/diagram
- D. If any of the above readings are outside of the agreed tolerances, then corrective action may need to be carried out. This would be following consultation between the Athletic Field Consultant, and Contractor.

Appendices

A: Site Work Equipment to be Used for Low Ground Pressure (LGP) Construction Equipment

B: Materials (Seed, Product Labels)

C: EPA NPDES General Permit for Construction Activities

APPENDIX A

Site Work Equipment to be Used for Low Ground Pressure (LGP) Construction Equipment.

A. Excavation, Earth Moving, and Grading

1. Utilize Model D3K2 Crawler Dozer as manufactured by CAT equipment or equivalent, which meets the following specifications:
 - a. Net power – 80 hp. at 2200 rpm
 - b. Maximum speed (forward and reverse) 6.2 mph
 - c. Track gauge – 6 ft.
 - d. Length of track on ground – 7 ft. 5 in.
 - e. Ground contact area – 5340 sq. in.
 - f. Maximum ground pressure – 6.2 psi
 - g. Number of track rollers – 6
 - h. Track shoes, each side – 38
 - i. Blade width – 10 ft. 9 in.
 - j. Blade height – 3 ft. 3 in.
 - k. Digging depth – 22.5 in.
 - l. SAE operating weight – 17,465 lbs.

2. Utilize Model 309 CR Mini Excavator as manufactured by CAT or equivalent, which meets the following specifications:
 - a. Net power – 70.3 hp. at 2,500 rpm
 - b. Weight – 20,731 lbs.
 - c. Speed – 1.6 to 3.1 mph
 - d. Track – rubberized 18 in.
 - e. Maximum ground pressure – 4.49 psi
 - f. Ground clearance – 13 in.
 - g. Front grading blade width – 97 in.
 - h. Grade ability – 30”
 - i. Maximum digging reach – 273 in.
 - j. Maximum digging depth – 160 in.
 - k. Maximum cutting height – 149 in.
 - l. Maximum vertical wall – 116 in.

B. Stripping of Existing Grass Surface:

1. Utilize Model FTM 2000 Koro Field Top Maker as Manufactured by Pols International, Stationsweg 36, 3214 VK Zuidland, Netherlands or equivalent that meets the following specifications:
 - a. Working width – 78 in.
 - b. Working depth – 1.75 in.
 - c. Weight – 2448 lbs.
 - d. Horsepower requirements – 70 hp.
 - e. Number of cutting blades – 64
 - f. Side conveyor extension

2. Utilize Model 6430 Turf Tractor as manufactured by John Deere Equipment or equivalent, which meets the following specifications:

- a. Engine power – 125 hp.
- b. PTO power – 114 hp.
- c. Wheelbase – 94.5 in.
- d. Weight – 10,064 lbs.
- e. Rear lift – 5,100 lbs.
- f. Front tire – 10.00 – 16 low ground pressure high floatation turf tire
- g. Rear tire – 16.9 – 30 low ground pressure high floatation turf tire

C. Hauling of Stripped Material off Field:

1. Utilize Dirtcub Hydraulic Dump-box as manufactured by TYCROP Manufacturing or equivalent that meets the following specifications:
 - a. Bed size – 60 13/16" x 70 1/8' L
 - b. Unit Size – 68 1/8" W x 45 9/16" H
 - c. Weight – 956 lbs.
 - d. Payload: 3000 lbs.
 - e. Suspension – Low ground pressure (maximum 5 psi) 4 wheel4-wheel walking beam evenly distributing

2. Utilize Model 4720 Turf Tractor as Manufactured by John Deere Equipment or equivalent that meets the following requirements:
 - a. Engine power – 58 hp.
 - b. PTO power – 56 hp.
 - c. Wheelbase – 71.5 in.
 - d. Weight – 3,860 lbs.
 - e. Rear lift – 2,500 lbs.
 - f. Front tire – 8.00 – 16 low ground pressure high floatation turf tire
 - g. Rear tire – 13.6 – 28 low ground pressure high floatation turf tire

D. Rootzone Amending and Screening

1. Utilize Trommel Model TR521 Screener as Manufactured by Vermeer Equipment or equivalent that meets the following requirements:
 - a. Make and Model – Cummings QSB 3.8l Tier 4 Final
 - b. Engine Power – 120hp
 - c. Number of Cylinders-4
 - d. Weight – 39700lbs
 - e. Operation Length – 86ft
 - f. Operation Width – 102 Inches
 - g. Capacity – 150 cu yd
 - h. Hopper capacity – 5 cu yd
 - i. Conveyor length – 15ft
 - j. Conveyor Width – 42"

E. Loading, Backfilling, Power Raking Specifications:

1. Utilize Model 287 Compact Track and Multi Terrain Loader as manufactured by Caterpillar Inc, or equivalent that meets the following specifications:
 - a. Net Power – 82 HP
 - b. Operating Weight – 10,275 lb.
 - c. Maximum speed (forward and reverse) – 7 mph
 - d. Length of Track on Ground – 73 in.
 - e. Ground contact area – 2,610 sq. in.
 - f. Maximum ground pressure – 3.8 psi
 - g. Ground clearance – 11 in.
 - h. Vehicle width – 77 in.
 - i. Clearance at maximum lift/dump – 94 in.
 - j. Quick connect accessory and implement capability

2. Utilize Model MX7H Hydraulic Power Angle Mounted Grading and Blending Implement as manufactured by Harley Rake or equivalent and meets the following specifications:
 - a. Front attachment plate for track and multi terrain loader
 - b. Working width to cover multi terrain loader trucks
 - c. Aggressor pointed carbide teeth
 - d. Dual independently adjustable gauge wheels
 - e. Weight – 1050 lb.
 - f. Length – 64 in.
 - g. Width (overall) – 93 in.
 - h. Raking width – 84 in.
 - i. Raking width (full range) – 79 in.
 - j. Angle roll - 20°
 - k. Removable/reversible end plates

3. Utilize Model TD – 460 low ground pressure large area top dresser as manufactured by Tycrop Manufacturing or equivalent, which meets the following specifications:
 - a. Weight – 3,400 lbs.
 - b. Length – 167 in.
 - c. Height – 63 in.
 - d. Width – 89 in.
 - e. Hopper load capacity – 75 cu. ft.
 - f. Capability to spread wet or dry materials including soil mixes, sand, stone, gravel, Inorganic material, composted products and wood chips.
 - g. Capability to perform as multifunctional trailer for material handling and relocation tasks with an unloading time of 30 seconds
 - h. Low ground pressure four-wheel walking beam suspension
 - i. Unlockable metering gate to float freely during bulk unloading operations
 - j. Removable metering gate for hauling construction and landscape materials
 - k. Independent control valves for adjusting the speed of floor conveyor belt and the finishing brush

- l. 72" widespread and distribution of material
- 4. Utilize Model 170 Ground preparation machine as manufactured by Redexim or equivalent which meets the following specifications:
 - a. Working width – 67 in.
 - b. Working depth – 6 in.
 - c. Gear box – single speed 540 RPM
 - d. No. of blades – 36
 - e. Overload safety – friction multi-plate clutch
 - f. Maximum working output/hr. 5300 sq. yd.
 - g. Maximum 1.5 mph working speed – 2.0 mph
 - h. 3 point hitch – cat 2
 - i. Weight – 1560 lbs.
 - j. Length – 70 in.
 - k. Height – 44 in.
 - l. Width – 67 in.
- 5. Utilize Model 5425 Turf Tractor as manufactured by John Deere Equipment or equivalent which meets the following specifications:
 - a. Engine power – 81 hp.
 - b. PTO power – 65 hp.
 - c. Wheelbase – 85.7 in.
 - d. Weight – 7,385 lbs.
 - e. Rear lift – 3,374 lbs.
 - f. Front tire – 7.50 – 16 low ground pressure high floatation turf tire
 - g. Rear tire – 16.9 – 30 low ground pressure high floatation turf tire
- F. Finish Grading:
 - 1. Utilize Model 106 P Compact Motorized Cross Slope Dual Laser Grader as manufactured by Laser-Grader Manufacturing or equivalent that meets the following specifications:
 - a. Weight – 3,200 lbs.
 - b. Length – 11 ft. 6 in.
 - c. Height – 7 ft. 2 in.
 - d. Width (excluding blades) – 4 ft.
 - e. Front pusher blade width – 5 ft.
 - f. Mold board width – 6 ft.
 - g. Mold board height – 12 in.
 - h. Variable speed: 0 – 10 mph
 - i. Outside turning radius – 9 ft.
 - j. Inside turning radius – 5 ft.
 - k. Mold board functions –
 - l. Left and right manual raise and lower
 - m. Side shift and blade rotation
 - n. Grading tolerance - +/- 1/8 in. accuracy equipped with Trimble GCS 600 Grande Control System with two LR410 laser receivers monitored by dual LED grade

displays as programmed through a CB420 control box providing the ability to calculate angle, slope and cross slope

- o. Trimble control package plumbed into hydraulics for “automatic” laser control
- p. 6 wheel6-wheel drive via hydraulic wheel motors
- q. Power steering
- r. ROPS certified roll bar

G. Seedbed Preparation:

1. Utilize Model 3040 Sand Pro as manufactured by Toro or equivalent that meets the following specifications:
 - a. Power – 16 hp.
 - b. Weight – 930 lbs.
 - c. Configuration – 3-wheel tricycle rear engine placement
 - d. Drive – direct drive hydrostatic
 - e. Speed – 0 – 10 mph
 - f. Tires – 10.50 x 12 turf tires
 - g. Length – 67.5 in.
 - h. Width – 58 in.
 - i. Height – 45.25 in.
 - j. Wheelbase – 47 in.
 - k. Equipped with center mounted sand cultivator
 - l. Equipped with rear mounted sand rake assembly
 - m. Equipped with rear mounted 6 ft. wide steel mesh drag mat

H. Seeding:

1. Utilize Model 1575 Over-seeder as manufactured by Redexim North America or equivalent that meets the following specifications:
 - a. Weight – 2,293 lbs.
 - b. Working width – 62.2 in.
 - c. Working depth: 0.19 in. – 0.78 in.
 - d. Seeding speed – 7.5 mph
 - e. Seeding row spacing – 2.9 in.
 - f. Disk quantity – 21
 - g. Seed tray capacity – 7.9 cu. ft.
 - h. Seeding density per 1,000 sq. ft.: 0.44 lbs. – 8.82 lbs.
 - i. Water fillable back roller with scraper
 - j. Individual seed planting
 - k. Twin discs to contour with ground undulations
 - l. Integrated seed spreading tray

APPENDIX B

Grow In and Establishment Product Information Materials (Rootzone, Soil Amendments, Seed, Product Labels)

Please refer to separate information on Product Requirements.

APPENDIX C

EPA NPDES General Permit for Construction Activities

EPA NPDES GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES

PART 1 - GENERAL

1.01 DESCRIPTION

- A. This Section applies to construction projects where greater than 1-acre of land disturbance will occur. This section specifies requirements for the individuals that are in control of the site activities during construction (identified as the “operator(s)”) to apply for a National Pollution Discharge Elimination System General Permit for Construction Activities and to prepare and implement the Stormwater Pollution Prevention Plan (SWPPP) required by the Construction General Permit (CGP).

This section does not include the full requirements of the CGP. It is the Contractor’s responsibility to understand the requirements of the permit, obtain permit coverage and implement the activities required.

The permit and details for implementation can be found on the EPA Construction General Permit Website at:

<https://www.epa.gov/npdes/stormwater-discharges-construction-activities - cgp>

- B. When there are multiple contractors (“operators”) associated with construction activities at the project site, they, and the owner are all required to obtain permit coverage under the requirements of the CGP and all operators must file separate Notice of Intent with the EPA. One SWPPP may be coordinated for the project and implemented by the overall site Operator in coordination with the other operators. The Contractor(s)/(operators) are also responsible for submitting the Notice of Termination (see Section H).
- C. The stormwater pollution prevention measures contained on the site drawings are the minimum required. The Contractor is required to provide additional plans, documents and details to implement measures to prevent pollution from stormwater discharges in full compliance with the EPA CGP permit and all other local, state, and federal requirements. These minimum plans must be modified and/or replaced for inclusion in the SWPPP and must be updated as site construction activities occur by the operator in accordance with the CGP Permit. The Contractor is fully responsible for selecting and implementing the appropriate sedimentation and erosion controls in accordance with the SWPPP and for continual updates as necessary.
- D. For construction areas greater than one acre in size, the Contractor shall prepare a SWPPP before submitting a Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity under the CGP. The Contractor shall not begin construction without submitting evidence that the NOI has been filed electronically and has been acknowledged by the EPA at least fourteen (14) days prior to beginning of earth disturbing activities at the project site.

The NOI can be filed at: <http://www.epa.gov/npdes/electronic-notice-intent-enoi>

It is the Contractor's responsibility to complete the SWPPP, file an NOI, assist the Owner and other contractors in filing separate NOIs, and receiving copies of the EPA acknowledgements of the NOI filings at least fourteen (14) days prior to commencing work on-site.

- E. The Contractor is responsible for ensuring that all personnel associated with the project activities understand the requirements of the CGP that may affect their work. The Contractor is ultimately responsible for ensuring that all the activities on the site comply with the requirements of the permit. Part 5.1 of the SWPPP requires documentation that required personnel were trained on the applicable components of the SWPPP implementation. The operator must sign and date the SWPPP and a copy of the NOI, EPA authorization, SWPPP, and complete Construction General Permit must be available at the construction site.
- F. The Contractor shall conduct the stormwater management practices in accordance with local regulations and governing authorities, the CGP Permit requirements, and any enforcement action taken or imposed by federal, state, or local agencies. The cost of any fines, construction delays, and/or remedial actions resulting from the Contractor's failure to comply with all provisions of local regulations and CGP requirements shall be paid for by the Contractor at no additional cost to the Owner.
- G. As a requirement of the CG Program, the permit must post a sign or other notice conspicuously at a safe publicly accessible location in close proximity to the project site with the following information: Project Name, NPDES permit tracking number, contact name and contact phone number for project information. The sign must be in a large enough font that it is visible from the right of way, and must be visible from the closest adjacent public road.
- H. When the site is fully stabilized, as defined in the CGP and no additional exposed soil will be present on the site, the respective Contractor(s)(operators) who filed an NOI shall prepare and file a Notice of Termination (NOT) of coverage under an NPDES General Permit for Stormwater Discharges Associated with Construction Activity (NOT Form).

1.02 REFERENCES

- A. EPA NPDES General Permit for Construction Activities (Construction General Permit [CGP])

<https://www.epa.gov/npdes/epas-2017-construction-manual-general-permit-cgp-and-related-documents>

- B. EPA NPDES Construction General Permit website: <https://www.epa.gov/npdes/stormwater-discharges-constuction-activities#cgp>
- C. Massachusetts Stormwater Regulations (2008) and associated Stormwater Handbook
- D. Appendix A –WPA Form 2 - Determination of Applicability

1.03 SUBMITTALS

- A. Submit a copy of the operator finalized SWPPP prior to submitting the Notice of Intent.
- B. Submit a copy of each NOI submitted to the EPA for each operator and the owner, along with any related correspondence with EPA.
- C. Submit a copy of the response from the eNOI system assigning the permit tracking number (or a copy of the Acknowledgement Letter received from the NOI processing center if not electronically filed)
- D. Submit a copy of the Notice of Termination (NOT) Form filed with the EPA at completion of project by each operator.

1.04 INSPECTIONS

- A. The Contractor shall inspect disturbed areas of the site at least once per week and 24 hours of a storm of 0.25 inch or greater and in compliance with all the requirements of the CGP and associated SWPPP for the project.
- B. A SWPPP-compliant maintenance inspection report shall be prepared after each inspection. The Contractor shall identify one individual who will be responsible for conducting inspections and preparing the reports in compliance with the permit. The Contractor shall also designate a person who will fill in for the inspector during absences. These individuals shall be trained in all maintenance and inspection practices very specifically outlined in the permit.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

3.01 EROSION CONTROL DEVICES

- A. Erosion control devices shall be constructed as specified in the SWPPP and as specified in Section titled EROSION AND SEDIMENTATION CONTROLS.

3.02 STORMWATER POLLUTION PREVENTION PRINCIPLES

- A. The following general principles shall be followed by the Contractor in preparing the SWPPP and during the construction phase:
 - 1. Protect and maintain existing vegetation wherever possible.
 - 2. Minimize the area of disturbance.
 - 3. To the extent possible, route unpolluted flows around disturbed areas.

4. Install mitigation devices as early as possible.
5. Minimize the time disturbed areas are left unstabilized.
6. Maintain erosion and siltation control devices in proper condition.

3.03 CONTRACTOR'S STORMWATER POLLUTION PREVENTION PLAN

- A. The Contract Drawings and Specifications identify only a portion of the required temporary erosion and sedimentation control devices. The Contractor shall prepare a complete SWPPP in accordance with Permit requirements which identifies the resource on the Site and the erosion and sedimentation control measures as required to minimize pollution.
- B. Reproducible copies of one or more of the Contract Drawings will be provided to the Contractor to serve as a base for the Contractor to develop a SWPPP and modify as necessary as construction proceeds.