Invitation for Bid
Project Manual and Specifications
December 1, 2016

2017 Sunset Valley Golf Course Renovation Project

Site Location: Sunset Valley Golf Course
1390 Sunset Road
Highland Park, IL 60035

MANDATORY PRE-BID MEETING: Thursday, December 8, 2016, 1:00 PM

BID OPENING: Tuesday, January 10, 2017, 1:00 PM
1390 Sunset Road, Highland Park, IL 60035

OWNER:
Park District of Highland Park
636 Ridge Road
Highland Park, IL 60035

GOLF COURSE ARCHITECT:
Jacobson Golf Course Design, Inc.
838 Furlong Drive
Libertyville, IL 60048

PROJECT ENGINEER:
Gewalt Hamilton Associates, Inc.
625 Forest Edge Drive
Vernon Hills, IL 60061
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The Park District of Highland Park is accepting sealed bids for the 2017 Sunset Valley Golf Course Renovation Project. Questions regarding specific sections of this bid should be directed to the appropriate contact person as follows: Existing Golf Course – Ryan Ochs (Superintendent) at 847.579.4158 or by email at rochs@pdhp.org, Golf Course Design – Rick Jacobson (Jacobson Golf Course Design, Inc.) at 847.918.1361 or by email at rick@jacobsongolfcoursedesign.com, Project Engineer – Tom Rychlik (Gewalt Hamilton Associates, Inc.) at 847.478.9700 or by email at trychlik@gha-engineers.com, Irrigation Design – Tom Emmerich (TJ Emmerich Associates, Inc.) at 262.538.2776 or by email at temmerich@wi.rr.com.

The bid packet, specifications and plans are available on our website at http://www.pdhp.org/bids-rfps/. Please note that if you intend to submit a bid for this project, then it is your responsibility to register with Mr. Dan Malartsik via dmalartsik@pdhp.org or (847) 579-3105. This will identify that you have downloaded the bid documents, and you will then be considered a registered plan holder. Sealed bids for these items will be received no later than 1:00 PM on Tuesday, January 10, 2017, at which time they will be publicly opened and read aloud at the Sunset Valley Golf Course, 1390 Sunset Road, Highland park, IL 60035.

Completed bids must be submitted in sealed envelopes and marked as follows:

2017 Sunset Valley Golf Course Renovation Project

Completed bids must be mailed or delivered to the following address:

Park District of Highland Park
636 Ridge Road
Highland Park, IL 60035
ATTN: Dan Malartsik, Director of Facilities & IT

The Park Board of the Park District of Highland Park reserves the right to reject any or all bids in full or in part, if it shall deem it in the public interest to do so. In submitting a bid, Contractor acknowledges that Contractor must, to the extent that it applies, comply with all requirements of the Illinois Prevailing Wage Act and all other applicable Illinois laws.

PARK DISTRICT OF HIGHLAND PARK

/s/ Liza McElroy
Secretary of the Board of
Park Commissioners
Park District of Highland Park
2017 Sunset Valley Golf Course Renovation Project

INVITATION FOR BID

The Park District of Highland Park is seeking sealed bids for the following scope of work: Golf course construction per plans and specifications for the renovation of the golf course at Sunset Valley Golf Course, Highland Park, Illinois. The scope of work includes all necessary workmanship to satisfactorily complete the work as required by the contract documents. Work will start April 15, 2017 and conclude by September 8, 2017.

Refer to the following site schedule/scope of work:

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Contractor is required at the time of Bid for Contract to provide a more detailed breakdown of the proposed Construction Schedule (spreadsheet format), relative to dates, areas of work and milestones. The Proposed Schedule shall be in compliance with dates as referenced above. **Contractor shall meet the schedule of completion if any or all of the Bid Alternates are included as a part of this contract.**

Note: The Owner has submitted documents for the required permits and they are currently under review by the governing agencies. It is anticipated that all permits will be approved prior to the construction commencement date.

Contractors bidding on the project must be a member of the Golf Course Builders Association of America (GCBAA).

The bid packet, specifications and plans are available on our website at http://www.pdhp.org/bids-rfps/. Please note that if you intend to submit a bid for this project, then it is your responsibility as a potential contractor to register with Mr. Dan Malartsik via dmalartsik@pdhp.org or (847) 579-3105. This will identify that you have downloaded the bid documents, and you will then be considered a registered plan holder. Sealed bids for these items will be received no later than 1:00 PM, Tuesday, January 10, 2017, at which time they will be publicly opened and read aloud. Completed bids must be submitted in sealed envelopes marked “2017 Sunset Valley Golf Course Renovation Project” and mailed or brought into the Park District of Highland Park, 636 Ridge Road, Highland Park, Illinois; Attention: Dan Malartsik, Director of Facilities & IT.

All bids must be submitted on the forms included in the bid documents and accompanied by cash, a certified bank draft, or a bid bond from an accredited surety company – payable to: Park District of Highland Park for an amount equal to 10% of the bid submitted.

All contracts for work herein are subject to the provisions of all Park District of Highland Park regulations.

To the extent that the Illinois Prevailing Wage Act applies, Contractor must pay and require all subcontractors to pay the prevailing rate of wages to all related laborers, workers, and mechanics involved in the project. As established by the Illinois Department of Labor for each craft or type
of work needed to execute the contract in accordance with 820 ILCS 130/.01 et seq. Current prevailing wage rates are published at: http://www.state.il.us/agency/idol/rates/Rates.htm. The Contractor shall prominently post the current schedule of prevailing wages at the Contract site and shall notify immediately in writing all of its Subcontractors, of all changes in the schedule of prevailing wages. Any increases in costs to the Contractor due to changes in the prevailing rate of wage during the terms of any contract shall be at the expense of the Contractor and not at the expense of the Owner. The change order shall be computed using the prevailing wage rates applicable at the time the change order work is scheduled to be performed. The Contractor shall be solely responsible to maintain accurate records as required by the prevailing wage statute and to obtain and furnish all such certified records to the District as required by Statute. In lieu of certified payroll, Contractor shall submit a letter setting forth the basis upon which Contractor has concluded the Act does not apply. The Contractor shall be solely liable for paying the difference between prevailing wages and any wages actually received by laborers, workmen and/or mechanics engaged in the Work and in every way defend and indemnify the District against any claims arising under or related to the payment of wages in accordance with the Prevailing Wage Act. Likewise, Contractor shall comply with all applicable laws, regulations, and rules promulgated by any Federal, State, County, Municipal and or other governmental unit or regulatory body now in effect during the performance of the work. By way of example, the following are included within the scope of the laws, regulations and rules referred to in this paragraph, but in no way to operate as a limitation on the laws, regulations and rules with which Contractor must comply, are all forms of Workers Compensation Laws, all terms of the Equal Employment Opportunity Clause of the Illinois Fair Employment Practices Commission, the Illinois Preference Act, the Social Security Act, Statutes relating to contracts let by units of government, all applicable Civil Rights and Anti-Discrimination Laws and Regulations, and traffic and public utility regulations.

The Contractor, before commencing the Work, shall furnish a Performance Bond and a Labor and Material (aka Payment) Bond. The Performance Bond shall be in an amount equal to 100% of the full amount of the Contract Sum as security for the faithful performance of the obligation of the Contract Documents, and the Labor and Material Payment Bond shall be in an amount equal to 100% of the full amount of the Contract Sum as security for the payment of all persons performing labor and furnishing materials in connection with the Contract Documents. Such bonds shall be on standard AIA Documents, issued by the American Institute of Architects, shall be issued by a surety satisfactory to the Owner, and shall name the Owner as a primary co-obligee. The cost of the bonds is to be included in the Bid. The Performance Bond and Labor and Material Payment Bond will become a part of the Contract. Each Bidder shall list the name of the surety company that will be furnishing the Bonds on its Bid. The failure of a Bidder to list the name of its surety company on its Bid shall be a non-responsive bid. The failure of the successful Bidder to enter into a Contract and supply the required Bonds within ten (10) calendar days after the Notice of Award or within such extended period as the Owner may grant if the forms do not meet its approval shall constitute a default, and the Owner may either award the Contract to the next responsible, responsive Bidder or re-advertise for bids. A charge against the defaulting Bidder may be made for the difference between the amount of the bid and the amount for which a contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the bid guarantee.

All bids will remain firm for 90 calendar days after the bid opening. The Park District of Highland Park reserves the right to reject any or all bids or to accept any bid, which in its judgment, will be in the best interest of the public or to waive any informalities in bidding. Only bids in compliance
with the provisions of the Contract Documents will be considered. No bids shall be withdrawn after the opening of the bids for a period of ninety (90) calendar days after the bid date opening.

The Park District of Highland Park encourages small and minority businesses and women’s business firms to submit bids on the approved project and successful contract bidders to utilize small and minority businesses and women’s businesses as sub-contractors for supplies, equipment, services, and construction.
INSTRUCTIONS TO BIDDERS

For the purpose of these specifications, "Owner" shall refer to the Park District of Highland Park, and "Contractor" shall refer to the party entering into the contract for the performance of the specified work, and his or her legal representatives or agents. Upon award of the Contract, these instructions shall become a part of the Contract Documents.

1. PLANS AND SPECIFICATIONS
The bid packet, specifications and plans are available on our website at http://www.pdhp.org/BidsRFPs. Please note that if you intend to submit a bid for this project, then it is your responsibility as a potential contractor to register with Mr. Dan Malartsik via dmalartsik@pdhp.org or (847) 579-3105. This will identify that you have downloaded the bid documents, and you will then be considered a registered plan holder.

2. BID FORM
Bidders shall submit the bid form provided which shall be filled out completely and addressed as follows: Park District of Highland Park, 636 Ridge Rd., Highland Park, IL 60035.

On the outside of the bid envelope, each sealed bid shall also contain the notation “SEALED BID” along with

A) Title of Project
B) Bidder’s Company Name
C) Date and Time of Bid Opening

Bids for 2017 Sunset Valley Golf Course Renovation Project shall be received at or before 1:00 PM on Tuesday, January 10, 2017 at which time they will be opened and read publicly.

3. ACCEPTANCE OR REJECTION OF BID
The Park District of Highland Park will accept or reject bids within sixty (60) calendar days after analysis of the bids, and reserves the right to accept or reject any or all bids. In determining the lowest responsive and responsible bidder, the Park District further reserves the right to combine or separate or delete any section of work or alternates or items in the bid if it is in the best interest of the District.

4. BIDDER EXPERIENCE
The Contractor bidding the project shall be actively engaged in work of the nature described in the plans and specifications, must be a member of the Golf Course Builders Association of America (GCBAA), and must be able to demonstrate that adequate persons and materials are available to perform the work. The Contractor shall submit with the bid no less than three (3) references for which the Contractor has completed work similar to that described in the plans and specifications. Contractor shall enclose the following information with his bid:

A. Representative literature on Contractor including a list of completed projects and the Owner's name and telephone number for the three (3) most recently completed golf course construction projects that are open for play and which were constructed by Contractor.

B. Name of General Superintendent that would be assigned to this project and the Owner's name and telephone number for the three (3) most recently completed golf course construction projects that this individual was assigned as General Superintendent.
C. Name of the Lead Shaper that would be assigned to this project and the Golf Course Architect's name and telephone number for the three most recently completed golf course construction projects that this individual was assigned as Lead Shaper.

5. NON-BARRED BIDDING
The Bidder must certify that it is not barred from bidding on this contract as a result of a conviction for the violation of state laws prohibiting bid-rigging or bid-rotating by executing the included certification.

   *The Bidder, by signing the Bid Form, acknowledges, understands and abides by all of the above "General Terms."

6. EXAMINATION OF SITE AND DRAWINGS
Before submitting a bid, bidders shall carefully examine the drawings and specifications, visit the site, and fully inform themselves as to all conditions and limitations. The failure or omission of any bidder to receive or examine any form or document, or to visit the site and become acquainted with existing conditions shall in no way relieve the bidder from any obligation with respect to their bid. By submitting a bid, the bidder warrants that he / she has examined the site, specifications, and drawings, and that where the specifications require that a given result be produced, the specifications and drawings are adequate and the required result can be produced using the specifications and drawings. If applicable, the bidder shall also attend any mandatory pre-bid meetings.

7. BID SURETY
A bid surety in an amount equal to ten percent (10%) of the bid price shall accompany each sealed bid. The surety can be in the form of a bid bond, cash or certified check and should be made payable, to: Park District of Highland Park. The bid surety of all bidders, except the successful Contractor(s), shall be returned within ten (10) calendar days after the District's decision to accept and/or reject bids. The successful Contractor's bid surety shall be returned upon receipt of an acceptable Performance Bond, Payment Bond, and Certificate of Insurance with Endorsement(s).

8. PERFORMANCE BOND
If contract sum is equal or above $50,000, then the Contractor, before commencing the Work, shall furnish a Performance Bond and a Labor and Material Payment Bond. Contract amounts below $50,000 may still require a bond at the discretion of the Park District and will be identified in the bid or proposal form. The Performance Bond shall be in an amount equal to 100% of the full amount of the Contract Sum as security for the faithful performance of the obligation of the Contract Documents, and the Labor and Material Payment Bond shall be in an amount equal to 100% of the full amount of the Contract Sum as security for the payment of all persons performing labor and furnishing materials in connection with the Contract Documents. Such bonds shall be on standard AIA Documents, shall be issued by a surety satisfactory to the Owner, and shall name the Owner as a primary co-obligee. The cost of the bonds is to be included in the Bid Proposal. The Performance Bond and Labor and Material Payment Bond will become a part of the Contract. The failure of the successful Bidder to enter into a Contract and supply the required Bonds within ten (10) days after the Notice of Award or within such extended period as the Owner may grant if the forms do not meet its approval shall constitute a default, and the Owner may either award the Contract to the next responsible, responsive Bidder or re-advertise for bids. A charge against the defaulting Bidder may be made for the difference between the amount of the bid and the amount...
for which a contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the bid guarantee.

9. LIENS
Waivers of lien shall be submitted with all payment applications. Waivers shall be supplied from all subcontractors and suppliers involved in the contract work. Neither final payment nor any part of the retained percentages shall become due until the contractor delivers to the Owner a complete release of all liens arising out of this contract.

10. ASSIGNMENT AND SUBCONTRACTORS
The Contractor shall not assign any part of this contract, or award any work under this contract to any Subcontractor without prior written approval from the Owner. Nothing contained in the contract documents shall create any contractual relation between any Subcontractor and the Owner.

11. INSURANCE
NOTE: Bidders’ attention is directed to the insurance requirements set forth in the Contract Documents and below. It is highly recommended that bidders confer with their respective insurance carriers or brokers to determine in advance of bid submission, the availability of insurance certificates and endorsements as prescribed and provided herein. If an apparent low bidder fails to comply strictly with the insurance requirements, that bidder may be disqualified from award of the contract.

12. FEDERAL LABOR STANDARDS AND EQUAL EMPLOYMENT REQUIREMENTS
In the event the Contractor does not comply with any provision of the Illinois Prevailing Wage Act, Equal Employment Opportunity Clause, the Illinois Fair Employment Practices Act or the Fair Employment Practices Commission's Rules and Regulations for Public Contracts, the Contractor may be declared non-responsible and therefore ineligible for future contracts with the State of Illinois or any of its political subdivisions, and the contract may be canceled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation.

Contractor agrees to the following:

A. Contractor shall not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. Contractor shall take affirmative action to insure applicants are employed, and the employees are treated during employment, without regard to race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training including apprenticeship.

B. Solicitation or advertisements for employees placed by or on behalf of Contractor shall state that applicants receive consideration for employment without regard to race, creed, color, or national origin.
13. **PREVAILING WAGE LAW**

The Park District of Highland Park is a public body that is subject to the Prevailing Wage Act, Illinois Revised Statutes, Chapter 48, Paragraph 39s-1, et seq. Contractor shall comply at all times with the provisions of the Act to the extent that the Act applies. Failure of Contractor to comply with the Act, including, but not limited to the inspection of records, and any rules or regulations promulgated by the State of Illinois with regard to the Act, will result in the cancellation of the Contract. Contractor expressly waives any right for recovering damages due to Contract cancellation. Contractor’s bonds shall include such provision and will guarantee the faithful performance of such prevailing wage clause as provided by this contract.

Contractor shall maintain accurate records of the names, occupations, and wages paid to each laborer, worker, and mechanic employed in connection with the work. Contractor shall allow the District access to these records for inspection purposes at any reasonable hour and upon reasonable notice.

14. **CERTIFIED PAYROLL:**

Where the Prevailing Wage Act applies, the Contractor and each subcontractor shall follow Illinois Public Act 094-0515 concerning Certified Payroll. This includes making and keeping records for a period of 3 years of all laborers, mechanics, and other workers employed by them on the project; the records shall include each worker's name, address, telephone number when available, social security number, classification or classifications, the hourly wages paid in each pay period, the number of hours worked each day and the starting and ending times of work each day; and submit monthly, in person, by mail, or electronically a certified payroll to the public body in charge of the project (Park District of Highland Park at 636 Ridge Road, Highland Park, Illinois, 60035, Attn. Director of Planning and Projects). The certified payroll shall consist of a complete copy of the records identified above. The certified payroll shall be accompanied by a statement signed by the contractor or subcontractor which avers that (i) such records are true and accurate: (ii) the hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required by the Prevailing Wage Act: and (iii) the contractor or subcontractor is aware that filing a certified payroll that he or she knows to be false is a Class B misdemeanor.

Upon two (2) business days' notice, the contractor and each subcontractor shall make available for inspection the records identified above to the public body in charge of the project, its officers and agents, and to the Director of Labor and his deputies and agents.

Where the Prevailing Wage Act does not apply, the Contractor or Subcontractor shall provide a letter in lieu of certified payroll stating that the Act does not apply.

15. **COMPLIANCE WITH AMERICANS WITH DISABILITIES ACT (ADA)**

The Contractor shall not discriminate on the basis of disability, and shall comply with pertinent sections of the Americans with Disabilities Act.

16. **COMPLIANCE WITH ALL APPLICABLE LAWS**

Contractor shall comply with all applicable laws, regulations, and rules promulgated by any Federal, State, County, Municipal and or other governmental unit or regulatory body now in effect during the performance of the work. By way of example, the following are included within the scope of the laws, regulations and rules referred to in this paragraph, but in no way to operate as a limitation on the laws, regulations and rules with which Contractor must comply, are all forms of Workers Compensation Laws, all terms of the Equal Employment Opportunity Clause of the
Illinois Fair Employment Practices Commission, the Social Security Act, the Substance Abuse Prevention on Public Works Act, Statutes relating to contracts let by units of government, all applicable Civil Rights and Anti-Discrimination Laws and Regulations, and traffic and public utility regulations. Contractor shall also furnish without charge any affidavit or Certificate in connection with the work covered by this agreement as required by law.

17. **CHANGES IN THE WORK**

After the award of the contract, the Contractor shall be advised who the Owner's Representative shall be on this project. Minor field changes that are in the best interest of the Owner may be made by the Owner's Representative, with the understanding of both parties that no change in contract price is involved. Where adjustment of contract price is made, a written "Change Order" shall be submitted to and accepted by the Park District of Highland Park before any change is made.

18. **PAYMENT**

For projects extending longer than a month, payment request shall be made monthly for that portion of the project which has been completed. Payment request are due no later than the 1st of the month with all necessary documentation to the Owners Representative. An amount equal to ten percent (10%) shall be withheld from each payment until sixty (60) calendar days after final acceptance by the Owner. Payment by the Park District may be by credit card.

19. **SCHEDULE OF WORK**

The Contractor shall commence work on or just prior to April 15, 2017 and work shall be completed by September 8, 2017. The Park District shall pre-approve start date of project. Work shall be completed in accordance with the following site schedule:

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Contractor is required at the time of Bid for Contract to provide a more detailed breakdown of the proposed Construction Schedule (spreadsheet format), relative to dates, areas of work and milestones. The Proposed Schedule shall be in compliance with dates as referenced above. **Contractor shall meet the schedule of completion if any or all of the Bid Alternates are included as a part of this contract.**

Note: The Owner has submitted documents for the required permits and they are currently under review by the governing agencies. It is anticipated that all permits will be approved prior to the construction commencement date.

20. **GUARANTEE**

Except as otherwise specified, the Contractor shall guarantee all workmanship and materials, including plant material for a period of one (1) year from date of final completion and acceptance. Neither the final payment nor termination of the guarantee period, nor any provision in the contract document, shall relieve the Contractor of the responsibility for negligence, faulty materials or workmanship within the extent and period provided by law. Upon written notice, the contractor shall remedy any defects, and shall pay all expenses for damage to other work resulting from that defect.
If the drawings and/or specifications provide for methods of construction and installation, or materials which cannot be guaranteed by the Contractor for the indicated period, the Contractor shall so inform the Owner in writing prior to submitting a bid. Otherwise, the Contractor shall guarantee all methods of construction and installation, and materials for the indicated period of time.
GENERAL TERMS

In addition to all other requirements of the Contract Documents (including but not limited to the General and Supplementary Conditions that may be contained within or referred to in other Contract Documents (e.g., AIA A201, General Conditions, as modified by Park District “Supplementary Conditions”) and the Drawings and Specifications and other portions of the Project Manual), the following general terms also apply:

1. TERMS:
"Owner" shall refer to the Park District of Highland Park. "Contractor" shall refer to the party entering into the contract for the performance of the specified work, and his or her legal representatives or agents. “Architect” shall refer to Jacobson Golf Course Design, Inc., the firm that prepared construction documents and is undertaking construction observation. "Owner's Representative" shall refer to a designated employee or employees of Jacobson Golf Course Design, Inc.

2. LAWS AND PERMITS:
Contractor shall at all times observe and comply with federal, state and local laws, regulations and ordinances which in any manner affect the conduct of the work. Complaints, claims or actions brought against Contractor for failure to observe or comply with any law, ordinance or regulation shall be the sole responsibility of Contractor and shall in no way extend to or expose the Owner or to liability. Contractor shall perform all work and use only those materials conforming to city, county, state and federal codes regarding health, safety and welfare. The Owner and Architect shall not be held responsible for failure of work or materials that do not conform to codes. Prior to beginning the work, Contractor shall obtain permits and licenses, pay charges and fees, and give notices necessary and incident to the due and lawful prosecution of the work.

3. INTENT OF CONTRACT DOCUMENTS:
The Contract Documents are intended to include all items necessary to complete the Work. Contractor shall perform the work and incidental construction in the manner specified in the Contract and shall furnish all materials, labor, tools, equipment and incidentals necessary to complete the work. Plans and specifications are intended to be complimentary. Work or materials called for by one shall be binding as if called for by all.

4. PLANS & SPECIFICATION DIMENSIONS:
Drawings are fully figured and dimensioned. Figures shall be followed without regard to scaled measurement from plans. When figures have been omitted, or when a marked discrepancy exists between figures and scale, the question shall be referred to the Owner's Representative for a final decision or interpretation.

5. ERRORS AND DISCREPANCIES
If the Contractor, during work, finds discrepancies between the plans and the physical conditions or any errors or omissions, it shall be his duty to notify Architect immediately. Architect shall verify such findings and determine the course of action, if any, necessary. Any work done after such discovery and without approval to commence from the Owner's Representative, shall be done at the Contractors risk. Architect reserves the right to prepare supplementary plans showing any additional or revised details for construction purposes not show on the Contract plans when necessary.
When information concerning underground, subsurface or other concealed conditions, borings, soil analysis, utility locations or conditions, test pits, buried structures, condition of existing structures and other investigations have been provided to Contractor such information has been made available for Contractor's convenience and is not part of the Contract. Neither Owner nor Architect shall be responsible for the accuracy of such information. A guarantee is not expressed or implied that indicated conditions are representative of those existing throughout the work, or at any particular location, or that the indicated condition may not change or that unanticipated conditions may not be present.

6. SUBSTITUTIONS
Each bid or bid shall be based upon the material and equipment called for in the plans and specifications. Items called for in the plans and specifications are done so to establish a standard. Only prior written approval from Architect shall allow any substitution of material, furnishing or article in place of the item specified. References to the term "equal" or "approved equal" shall mean that an item used in place shall be of equal or greater quality and shall be approved in the manner described in this section as a substitute to the specified material, furnishing or article.

Requests for substitutions shall be made five (5) calendar days prior to bid opening date to Architect. Each substitution request shall include a complete description of the proposed substitute, the name of the material or equipment for which it is to be substituted, all specifications for requested substitute including drawings with dimensions and any other data or information necessary for a complete evaluation. Any substitution accepted by Architect shall be done so in a written addendum to the bid documents: no other substitution shall be granted.

7. CONTRACTOR NOTIFICATION RESPONSIBILITIES & TIMELY DEMAND FOR INSTRUCTIONS
Contractor shall have a complete copy of specifications and plans at the work site whenever work is in progress. Contractor shall notify Architect, in writing, a minimum of 48 hours in advance of beginning the work, and shall notify Architect a minimum of 48 hours in advance by phone when approvals are needed including: layout staking, all grading, drainage, and other major items of construction for field checking of construction. Copies of material delivery tickets shall be furnished to Architect.

All work and materials shall be open to the inspection of Architect and the Owner at all times. The Contractor shall also furnish upon request of Architect at his expense, a person or persons familiar with the project to review work on site and discuss any matters with Architect about the work or Contract when Architect gives 48 hours notice for such a meeting or whenever Contractor's staff is present at the site.

8. SUBCONTRACTORS AND SUPPLIERS
Contractor shall provide a list of subcontractors and suppliers to Architect for approval prior to commencing the work. When any subcontractor or supplier fails to perform the work in accordance with the Contract, Contractor shall terminate such subcontractor or supplier upon written notice by Architect. Contractor shall have no claim for damages, compensation in excess of Contract price or an extension of Contract time as a result of any such termination. The Contractor shall not let or transfer this contract or any part thereof without the written consent of the Owner and Architect. Contractor shall not be relieved from any liability or obligation under this Contract when work is assigned to others.
9. OWNER'S RIGHT TO DO WORK:
The Owner reserves the right to perform or have performed other work at the project site. Contractor shall afford the Owner and other contractors reasonable opportunity for the execution of other work and shall properly coordinate the work with other work.

10. RIGHT TO SUSPEND WORK:
Architect or the Owner will notify contractor in writing when the work is to be suspended wholly or in part for such periods deemed necessary. Where due work may be suspended for unsuitable weather, other conditions unsuitable for the prosecution of the work, any condition deemed to be in the public's best interest, failure of Contractor to carry out provisions of the Contract, or failure of the Contractor to carry out orders. Contractor shall maintain work site safety and protect the Work as provided in the General Conditions. No additional compensation shall be paid to Contractor because of such suspension. Contractor shall not suspend the Work without written authority of Architect or the Owner.

11. ALTERATIONS, EXTENSIONS AND DEDUCTIONS:
The Owner reserves the right to extend or shorten the work, alter the plans, add incidental work, and increase or decrease quantities of work to be performed in accord with these changes, including the cancellation or deduction of any one or more of the work items. Changes shall not be considered as a waiver of Contract conditions.

Alterations, extensions and deductions shall be authorized by a written change order issued by Architect and signed by Contractor and Owner before work is started. Change orders shall state the items of work involved, changes in Contract amount, and any extension in completion time. Claims for extra work, which have not been authorized by a written change order, will be rejected.

In the case of work specified by the Owner or Architect to be completed by the Contractor, but not indicated on the plans or specifications, or not susceptible to classification under the Schedule of Unit Prices in the bid, the Contractor shall and will perform such work and furnish such materials as may be required. An agreement to the costs of such work and necessary materials shall be agreed upon before commencement of work, and shall be in writing.

The Owner shall have the right to increase or diminish all or any Contract amount or items without impairing the volume or scope of this Contract so long as these alterations do not change the amount of the contract price more than thirty-five percent (35%).

12. DISCHARGE OF EMPLOYEES:
When any person employed by Contractor fails to perform the work according to the Contract, appears to be incompetent or exhibits disorderly conduct or improper manner, such person shall be immediately removed from the work on written request. Contractor shall have no claim for damages or extension of time as a result of such termination. Should Contractor fail to remove such person or persons as required above, or fail to furnish suitable and sufficient personnel for the proper prosecution of the work, Owner's Representative may suspend the work.

13. USE OF SITE
Contractor shall confine equipment, material storage and workers operations to limits indicated by law, ordinances, plans, permits or directions of the Owner and as per plans. Contractor shall not unreasonably encumber the site with materials or cause inconvenience to the Owner, public or other contractors. Contractor's responsibilities for usage of the site shall include:
1. **Utilities:** Contractor shall obtain permits, provide and make payment for such utilities as water, electricity, heat/air, telephone and waste disposal when necessary in performing the work.

2. **Buildings:** Contractor shall obtain permits, provide and make payment for temporary structures such as offices, sheds, trailers, and sanitary facilities, and necessary maintenance of structures in performing the work.

3. **Pumping:** When during construction, standing water caused by heavy rains or poor drainage becomes a hazard to the work, Contractor shall provide and make payment for removal of water to existing drainage swales, storm sewers or other natural or manufactured drainage ways. See Erosion and Sediment Control in Specifications in Special Provisions.

4. **Temporary Roads and Turnarounds:** Contractor shall provide for temporary roads as necessary or access to and within the site during the construction. All temporary roads or turnaround points shall be approved prior to construction.

5. **Storage:** Materials and equipment shall be stored in a manner that preserves their quality. When necessary, materials and equipment shall be placed under cover, on wooden platforms or other hard, clean surfaces, and not on the ground. Private property shall not be used for storage purposes without written permission from the owner of the property. Location of any storage area is subject to approval by the Owner.

6. **Parking** Contractor's construction vehicles parked on the site shall not inhibit construction or prevent access for emergency or other official vehicles. Parking areas are subject to Owner's Representative's approval. Parking is prohibited under the dripline of trees to be saved.

14. **WORK SITE SAFETY**

Contractor shall be solely responsible for providing and maintaining safe conditions at the work site, including the safety of persons and property and shall comply with applicable laws and safety regulations to prevent injury to persons or damage to property. The Contractor is responsible for protecting public from dangerous situations on the site during Construction. This requirement shall apply continuously and shall not be limited to normal working hours.

Whenever public or private property is damaged, Contractor shall at his/her own expense, restore such property to a condition equal to that existing before the damage was done. Contractor shall also be responsible for damage to the work by actions of the elements or from any other cause whatsoever and shall restore the work at his/her own expense. A registered Land Surveyor at the Contractor's expense shall replace existing property corners disturbed or lost during construction. When the site is opened for usage after final acceptance, damage to the work shall not be due to the Contractor's fault or negligence.

Contractor shall have no claim against the Owner or Architect because of any damage or loss to the work or to Contractor's equipment, materials or supplies from any cause, including damage or loss due to simultaneous work by others.

When Owner's Representative deems any operation, condition or practice to be unsafe Contractor shall take corrective action before affected work is resumed. Contractor shall protect public and adjacent properties including roadways and shall use necessary precautions to prevent damage or injury thereto. Contractor shall prevent damage to pipes, conduits, and other underground structures as well as fences, monuments or other aboveground structures. Vegetation not marked for removal shall not be cut, trimmed or damaged except with the approval and under the direction
of Owner's Representative: Contractor shall provide on-site traffic patterns away from existing vegetation, provide necessary ramps and shall not park vehicles near or under existing vegetation. Contractor shall not park or maneuver equipment or stockpile materials within ten (10) feet of tree drip lines or plants to be protected. Vegetation damaged during construction is subject to replacement at Contractor's expense. Contractor shall protect the Owner's employees and the public by maintaining barricades, warning signs, flags, lights and temporary passageways around construction areas, covering holes, properly storing materials and equipment and providing other suitable methods for the protection of said persons.

15. LABOR, EQUIPMENT AND METHODS
Contractor shall at all times employ sufficient labor and equipment for prosecuting the work in the manner and time specified. Workers shall have sufficient experience and skill to properly perform the Work and operate the equipment.

Equipment used shall be of such type, size and amount and in such mechanical condition as to meet the requirements of the work and produce a satisfactory quality of work. Contractor shall replace unsatisfactory equipment and furnish additional equipment when deemed necessary by Owner's Representative.

The specified methods and equipment shall be used in the prosecution of the work unless otherwise authorized by Owner's Representative. Contractor may make a written request to Owner's Representative to use a method or type of equipment other than those specified. The request shall include a description of the proposed methods, equipment and an explanation of the reasons for the substitution. When Owner's Representative authorizes trial use of the substitution, Contractor shall be responsible for producing the work in conformance with the Contract. If Owner's Representative determines that the trial method or equipment does not conform to the Contract requirements, Contractor shall discontinue use of the substitute method or equipment and shall complete the remaining work with the specified methods or equipment. Contractor shall remove defective work and replace it with work meeting the Contract requirements or take other corrective action as directed by Owner's Representative. No increase will be made in payment or in contract time as a result of authorizing a change in methods or equipment under these provisions.

16. INSPECTION AND TESTING
Materials and equipment to be used in the work shall be subject to testing at all times during fabrication as specified or designated by Owner's Representative. Contractor shall give advance notice to permit tests or inspections to be performed prior to incorporating materials or equipment into the work. Without charge to the Owner, the Contractor shall furnish such amounts of materials needed for testing and shall afford the inspector such facilities required for collecting samples and making inspections. Unless otherwise specified, the Owner will bear the cost of inspections and testing of materials.

17. SUBMITTALS
Contractor shall submit to Owner's Representative required shop drawings (three sets each), product data and samples concerning materials and equipment. Owner's Representative's review and approval of required submittal shall be for the sole purpose of examining the general details and design of the proposed work and shall not be regarded as an assumption of risk or liability. Equipment and materials installed or used without such review shall be at risk of rejection and replacement by Contractor at no cost to the Owner. Submittals shall become part of the Contract
Documents. Contractor shall be responsible for any delay in the work due to a delay in providing required submittals.

Unless otherwise specified, equipment and materials are to be new and of best quality. Materials, equipment or work having a well-known, technical or trade meaning but not specifically defined in the Contract Documents, shall be construed in accordance with such well-known meaning recognized by Architects, Architect and Tradesmen.

18. REMOVAL OF DEFECTIVE WORK
Architect may reject and require correction of any work that does not conform to the Contract Documents. Contractor shall correct condemned workmanship and immediately remove and replace rejected materials and equipment without additional cost to the Owner. When Contractor fails to correct condemned work and remove rejected materials and equipment from the site, the Owner reserves the right to refuse payment for such work and perform such work or hire others to perform such work and the expense thereof shall be deducted from the amount to be paid the Contractor.

Until final payment, all work shall be subject to inspection and testing, which includes removing or uncovering finished work when necessary. Contractor shall provide access and assistance required for such inspection and testing and shall furnish necessary facilities, labor and materials for such removal and approved replacement. Nothing in this Contract shall be construed to mean that the Owner or Architect waives the right to later complain about defective materials or workmanship even after final acceptance.

When questioned work is found to be defective due to fault of Contractor, subcontractor, suppliers or their employees, Contractor shall pay for the cost of such inspection and reconstruction. When questioned work is found to meet Contract requirements, Owner shall pay actual cost of labor and materials involved in inspection and reconstruction, plus the Owner shall allow Contractor 10%.

19. COMPLETION DATE
Contractor warrants that the commencement and completion dates specified in the Instructions to Bidders is reasonable time for completion of the work for the Contract price taking into consideration natural and manufactured conditions that may affect the work.

20. CLEANING UP
Contractor shall keep the project site and adjoining premises and thoroughfares free from accumulation of waste material or rubbish caused by the work on a daily basis. Upon completion of the work, Contractor shall remove equipment, rubbish, tools, and surplus materials from the site and adjoining premises. When Contractor fails to do so within five (5) calendar days of a written request by the Owner's Representative, the Owner may remove the items and deduct the cost of such removal from Contractor's final payment.

Dust shall be kept to a minimum during construction by means of wetting the site or other approved methods. The Contractor shall wash down all existing sidewalks and roadways on and off site once a week during construction to keep the area clean. See also Restoration of Disturbed Areas / Site Cleanup in Special Provisions.

21. PAYMENT
Contractor may request partial payments based on estimates of work completed. Payment requests shall be submitted to Architect and the Owner for approval in duplicate on AIA Documents G702 and G703, Application and Certificate for Payment. The estimate shall be a sworn statement of work completed to date, shall list each item completed with reference to the bid item number and quantity, and include waiver of liens as specified in the Instructions to Bidders. The Owner shall retain ten percent (10%) of each payment. The Owner reserves the right to temporarily withhold payment from any pay request submitted by Contractor due to the delay in the progress or completion of the work.

The Park District of Highland Park pays invoices on the third Monday of each month. In order to receive payment in the same month, all invoices should be submitted to Architect by the first business day of the month for Architect review and then submittal to the Park District of Highland Park.

Architect and the Owner shall make a final inspection of work after Contractor notifies the District that work is substantially complete. The Contractor will be notified in writing of all punch list items, if any, to be corrected or completed before final acceptance is granted. Following Contractors completion of all punch list work, Architect shall provide a written notice of final acceptance to Contractor. The date of the final acceptance letter shall be the beginning date of the one-year guarantee or work as stated in the Instructions to Bidders.

Upon written final acceptance, the Contractor shall submit final waivers of lien, and a final request for payment, including retained monies. Final payment shall be made to the Contractor within sixty (60) calendar days after receipt of the above items. Contractor may request a reduction of the percentage of retainage during the one hundred twenty-day period and a payment of a portion of the retainage may be made at the Owner's discretion.

22. OWNERSHIP OF PLANS, SPECIFICATIONS
All Plans and Specifications and copies thereof furnished by or purchased are properties of (Park District of Highland Park / Jacobson Golf Course Design, Inc.) and are not to be used on other work. With the exception of one complete set, all documents are to be returned upon contract completion.

23. FREEDOM OF INFORMATION ACT REQUESTS
Contractor agrees to maintain, without charge to the Owner, all records and documents for projects of the Owner in compliance with the Freedom of Information Act, 5 ILCS 140/1 et seq. In addition, Contractor shall produce records which are responsive to a request received by the Owner under the Freedom of Information Act so that the Owner may provide records to those requesting them within the time frames required. If additional time is necessary to compile records in response to a request, then Contractor shall so notify the Owner and if possible, the Owner shall request an extension so as to comply with the Act. In the event that the Owner is found to have not complied with the Freedom of Information Act due to Contractor’s failure to produce documents or otherwise appropriately respond to a request under the Act, then Contractor shall indemnify and hold the Owner harmless, and pay all amounts determined to be due including but not limited to fines, costs, attorneys’ fees and penalties.
24. INSURANCE

A. To keep in force, to the satisfaction of the Owner, at all times during the performance of any work referred to above, Workers Compensation and Employer’s Liability Insurance, Commercial General Liability Insurance, and Automobile Insurance in at least the type and amounts as follows:

1. Workers’ Compensation:
   a. State: Statutory
   b. Applicable Federal (e.g., Longshoremen’s): Statutory
   c. Employer’s Liability
      - $1,000,000.00 Per Accident
      - $1,000,000.00 Disease, Policy Limit
      - $1,000,000.00 Disease, Each Employee

2. Commercial General Liability:
   1. $2,000,000.00 General Aggregate
   2. $1,000,000.00 Products Completed Operations Aggregate
   3. $1,000,000.00 Personal and Advertising Injury
   4. $1,000,000.00 Each Occurrence
   5. $50,000.00 Fire Damage (any one fire)
   6. $5,000.00 Medical Expense (any one person)

3. Business Automobile Liability (including owned, non-owned and hired vehicles):
   a. Bodily Injury:
      - $1,000,000.00 Per Person
      - $1,000,000.00 Per Accident
   b. Property Damage:
      - $1,000,000.00 Per Occurrence

4. Umbrella Excess Liability:
   - $2,000,000.00 over Primary Insurance

B. Deductibles and Self-Insured Retentions. Any deductibles or self-insured retention’s must be declared to and approved by the District. At the option of the District either: the insurer shall reduce or eliminate such deductibles or self-insured retention's as respects the District, its officers, officials, employees, volunteers and agents; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

C. Other Insurance Provisions. The policies are to contain, or be endorsed to contain, the following provisions:

1. Regarding General Liability and Automobile Liability Coverage
   a. The District, its officers, officials, employees and volunteers, its officers, officials, employees, and volunteers, Jacobson Golf Course Design, Inc., its officers, officials, employees, and volunteers are to be covered as additional insured as respects: liability arising out of activities performed by or on behalf of the Contractor, including the
insured's general supervision of the Contractor; products and completed operations of the contractor; premises owned, occupied or used by the Contractor; or automobiles owned, leased, hired or borrowed by the contractor. Coverage shall contain no special limitations on scope of protection afforded to the District, its officers, officials, employees, volunteers, or agents.

b. The Contractor's insurance coverage shall be primary insurance as respect to the District, its officers, officials, employees, volunteers, and agents. Any insurance or self-insurance maintained by the District, its officers, officials, employees, volunteers or agents shall be excess of the Contractor's insurance and shall not contribute with it.

c. Any failure to comply with reporting provisions of the policies shall not affect coverage to the District, its officers, officials, employees, volunteers, or agents.

d. The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

2. Workers' Compensation and Employers Liability Coverage

a. The insurer shall agree to waive all rights of subrogation against the District, its officers, officials, employees, volunteers, and agents for losses arising from work performed by the contractor for the District.

3. All Coverage

a. Each insurance policy required by this clause shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) calendar days' prior written notice by certified mail, return receipt requested, has been given to the District.

D. Acceptability of Insurers. Insurance is to be placed with insurers with a Best's rating of no less than A: VII and licensed to do business in the State of Illinois.

E. Verification of Coverage. Contractor shall furnish the District with certificates of insurance and with original endorsements if applicable effecting coverage required by this clause. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates and endorsements are to be received and approved by the District before work commences. The District reserves the right to require complete, certified copies of all required insurance policies, at any time.

F. Subcontractors. Contractor shall include all subcontractors as insured's under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverage for subcontractors shall be subject to all of the requirements stated herein.

G. Indemnification Clause. Contractor shall protect, defend, indemnify and hold harmless, the Park District of Highland Park, Jacobson Golf Course Design, Inc, Gewalt Hamilton Associates, Inc., TJ Emmerich Associates, Inc., their officers, employees, and agents, from and against all claims, actions, suits, judgments, costs, losses, and expenses, including attorneys' fees and administrative expenses, and liabilities of whatsoever kind or nature arising out of:
A. Contractor's performance of, or failure to perform, the work in accordance with the terms of the Contract.

B. Infringement (actual or claimed) on patents, copyrights or trade names by reason of any work performed or to be performed by Contractor under the Contract or by reason of anything to be supplied by Contractor pursuant to the Contract;

C. Bodily injury, including death, to any person or persons (including Contractor's officers, employees, agents and servants) or damage to or destruction of property, including the loss of use thereof;

1. Caused in whole or in part by any act, error or omissions by Contractor, subcontractor or anyone directly or indirectly employed by any of them regardless of whether or not it is caused in part by a party to be indemnified hereunder,

2. Arising directly or indirectly out of the presence of any person in or about any part of the project site or in the streets, sidewalks and property adjacent thereto;

3. Arising directly or indirectly out of the use, misuse or failure of any machinery or equipment used directly or indirectly in the performance of the Contract.

H. An endorsement containing the following: "Solely as respects to work done by and on behalf of the named insured for the Park District of Highland Park, it is agreed that the Park District of Highland Park, its officers, officials, employees, volunteers, and agents, Jacobson Golf Course Design, Inc, Gewalt Hamilton Associates, Inc., TJ Emmerich Associates, Inc. are added as additional insured under this policy."
**ACKNOWLEDGEMENT OF DOCUMENTS**

1. Receipt of Documents: Bidder has received a complete set of specifications and plans and understands the meaning of their content, and shall willingly comply with the guidelines set forth in these documents.

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<tr>
<th>Yes</th>
<th>No</th>
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2. Identification of Documents Received: The following is a checklist of documents that should appear in the Bid Documents. Please complete the checklist and contact the Park District if any of the documents have been omitted.

<table>
<thead>
<tr>
<th>ADVERTISEMENT FOR BID</th>
<th>Yes</th>
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<tr>
<td>INVITATION TO BID</td>
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<tr>
<td>INSTRUCTIONS TO BIDDERS</td>
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<tr>
<td>GENERAL TERMS</td>
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<tr>
<td>ACKNOWLEDGEMENT OF DOCUMENTS</td>
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<td>BID FORM</td>
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<td>CONTRACTOR REFERENCES</td>
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<tr>
<td>STATEMENT OF QUALIFICATIONS</td>
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<tr>
<td>CERTIFICATION</td>
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<td>SAMPLE CONTRACT</td>
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<tr>
<td>PREVAILING WAGE</td>
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<tr>
<td>LIST OF DRAWINGS</td>
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<tr>
<td>GENERAL SCOPE OF WORK</td>
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<tr>
<td>SPECIFICATIONS</td>
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<tr>
<td>JACOBSON GOLF COURSE DESIGN, INC. PLANS/SPECS</td>
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<tr>
<td>GEWALT HAMILTON ASSOCIATES, INC. PLANS / SPECS</td>
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<td>TJ EMMERICH ASSOCIATES, INC. PLANS/SPECS</td>
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TO: Park District of Highland Park  
636 Ridge Road  
Highland Park, IL 60035

The undersigned bidder has carefully examined the plans and specifications for the 2017 Sunset Valley Golf Course Renovation Project as prepared by the Park District of Highland Park and Jacobson Golf Course Design, Inc. and having carefully examined the site and completely familiarized him/herself with local conditions affecting the cost of the work: hereby states that he/she will provide all necessary labor, equipment, tools, machinery, apparatus and all other means of construction, do all the work and furnish all materials, called for by said plans and specification and drawings: and will accept as full and complete payment therefore the base bid amount which is the summation of the cost of the items of work and is equal to the summation of the extension of the unit prices.

Note: See EXHIBIT ‘A’ – GOLF COURSE BID FORM  
EXHIBIT ‘B’ – IRRIGATION BID FORM  
EXHIBIT ‘C’ – SESC & STORM IMPROVEMENTS BID FORM

SUBCONTRACTORS: List Name, Address, Phone and Work Assignment

1. 

2. 

3.
Receipt of Addenda: The receipt of the following addenda is hereby acknowledged:

Addendum No.________________________, Dated________________________
Addendum No.________________________, Dated________________________
Addendum No.________________________, Dated________________________

BY: ______________________________________________________________
    (Company)

______________________________
    (Authorized Signature)

______________________________
    (Address)

______________________________
    (City, State, Zip)

______________________________
    (Phone)

______________________________
    (Date)

______________________________
    (Tax I.D. No.)
CONTRACTOR REFERENCES

COMPANY NAME:__________________________________________________________

CONTACT:___________________________ SIGNATURE:__________________________

PHONE:_____________________________ FAX:_____________

_____________________________

ADDRESS:_________________________________________________________________

Contractor References:
Please include three references with which the Contractor has completed similar work and approximate magnitude required under this contract in the past two years

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Contact Person</th>
<th>Phone Number</th>
<th>Completion Date</th>
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STATEMENT OF QUALIFICATIONS

BIDDER'S INFORMATION

A. Bidder’s organization has been in business under its present business name for ____ years, from _________ to _________.

B. Bidder’s organization has had experience in work comparable with that required under the proposed contract:

   as a prime contractor ________________ years;

   as a subcontractor ________________ years.

C. Work similar in character to that required in the proposed Contract (see above) which Bidder’s organization has completed as a prime contractor:

<table>
<thead>
<tr>
<th>Year Completed</th>
<th>Type and Location of Work and for Whom Performed</th>
<th>Approximate Contract Amount</th>
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D. The following bidder’s employees will be involved with the proposed contract:

<table>
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<tr>
<th>NAME</th>
<th>TITLE</th>
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E. Contractor may attach additional project detail to demonstrate ability to successfully complete work comparable with that required under the proposed contract.
CONTRACTOR’S CERTIFICATION OF ELIGIBILITY

In Compliance 720 ILCS 5/33E-11:

_________________________________________, a(n) ________________________________
Print name of Contractor Individual, Partnership, Corporation

as part of his bid or proposal on the above referenced Contract, hereby certifies that the Contractor
is not barred from bidding on the above referenced contract or entering into a contract with the
Park District of Highland Park as a result of a violation of either Section 33E-3 Bid-rigging or
33E-4 Bid-stating of Article 33E of the Illinois Criminal Code, 720 ILCS 5/33E-1, et. seq., as
amended.

__________________________________________
Date

 Contractor

By:___________________________

Its:_________________________

Title

STATE OF ILLINOIS )
COUNTY OF )

I, the undersigned, a notary public in and for the State and County aforesaid, hereby certify that
appeared before me this day in person and, being first duly sworn on oath, acknowledged that
he/she is authorized to act on behalf of Contractor, and that he/she executed the foregoing
certificate as his/her free act and deed and as the act and deed of Contractor.

DATED: ______________________, 2016 Notary
Public_____________________________________

[Notary Seal]
SAMPLE CONTRACT

The Park District of Highland Park executes an Independent Contractor Agreement for all work. A sample of the Independent Contractor Agreement is provided on the following pages.

INDEPENDENT CONTRACTORS AGREEMENT

THIS AGREEMENT entered into by and between _____________ (hereafter "CONTRACTOR") and the PARK DISTRICT OF HIGHLAND PARK (hereafter "AGENCY").

WHEREAS, CONTRACTOR will be performing services and work for the AGENCY as set forth in the Bid Form <NAME OF SERVICES REQUESTED> dated <DATE (long form i.e. July, 25, 2011)> --which incorporates by express reference the Project Manual, Invitation for Bids, Instructions to Bidders, Sample Contract for Construction, General Requirements, Specifications and Drawings (collectively the "Project Documents") and which is attached hereto and incorporated herein as Exhibit A; and

WHEREAS, CONTRACTOR may have subcontractors, material suppliers and one or more employees engaged in the performance of said work; and

WHEREAS, the Bid Form, the Project Documents, and this Agreement comprise the terms of the engagement of the CONTRACTOR by the AGENCY and are hereby incorporated into this Agreement;

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained, and other good and valuable consideration received and to be received, the CONTRACTOR hereby agrees:

1. To comply with all applicable laws, regulations, and rules promulgated by any Federal, State, County, Municipal and or other governmental unit or regulatory body now in effect during the performance of the work. By way of example, the following are included within the scope of the laws, regulations and rules referred to in this paragraph, but in no way to operate as a limitation on the laws, regulations and rules with which CONTRACTOR must comply, are all forms of Workers Compensation Laws, all terms of the Equal Employment Opportunity Clause of the Illinois Fair Employment Practices Commission, the Illinois Preference Act, the Social Security Act, Statutes relating to contracts let by units of government, all applicable Civil Rights and Anti-Discrimination Laws and Regulations, and traffic and public utility regulations.

2. To the fullest extent permitted by law, to waive any and all rights of contribution against AGENCY and to indemnify and hold harmless AGENCY and its officers, officials, employees, volunteers and agents from and against all claims, damages, losses and expenses, including, but not limited to, legal fees (attorney’s and paralegal’s fees, expert fees and court costs) arising out of or resulting from the performance of the CONTRACTOR’s work, provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or injury to or destruction of property, other than the work itself, including the loss of use resulting therefrom, or is attributable to misuse or improper use of trademark or copyright protected material or otherwise protected intellectual property, to the extent it is caused in whole or in part by any wrongful or negligent act or omission of the CONTRACTOR, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right to indemnity which AGENCY would otherwise have. CONTRACTOR shall similarly, protect, indemnify and hold and save
harmless, AGENCY, its officers, officials, employee, volunteers and agents against and from any and all claims, costs, causes, actions and expenses, including, but not limited to, legal fees, incurred by reason of CONTRACTOR’s breach of any of its obligations under, or CONTRACTOR’s default of any provisions of the Contract. The indemnification obligations under this paragraph shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for CONTRACTOR or any subcontractor under Workers’ Compensation or Disability Benefit Acts or Employee Benefit Acts.

3. To keep in force, to the satisfaction of AGENCY, at all times during the performance of any work referred to above, Workers Compensation and Employer’s Liability Insurance, Commercial General Liability Insurance, and Automobile Insurance in at least the type and amounts as follows:
   a. Workers’ Compensation:
      i. State: Statutory
      ii. Applicable Federal (e.g., Longshoremen’s): Statutory
      iii. Employer’s Liability
           - $1,000,000.00 Per Accident
           - $1,000,000.00 Disease, Policy Limit
           - $1,000,000.00 Disease, Each Employee

   b. Commercial General Liability:
      - $2,000,000.00 General Aggregate
      - $1,000,000.00 Products Completed Operations Aggregate
      - $1,000,000.00 Personal and Advertising Injury
      - $1,000,000.00 Each Occurrence
      - $50,000.00 Fire Damage (any one fire)
      - $5,000.00 Medical Expense (any one person)

   c. Business Automobile Liability (including owned, non-owned and hired vehicles):
      i. Bodily Injury:
         - $1,000,000.00 Per Person
         - $1,000,000.00 Per Accident
      ii. Property Damage:
         - $1,000,000.00 Per Occurrence
      iii. Umbrella Excess Liability:
         - $2,000,000.00 over Primary Insurance

4. To have all policies of insurance purchased or maintained in fulfillment hereof name AGENCY as an additional insured thereunder and the CONTRACTOR shall provide AGENCY with Certificates of Insurance and applicable policy endorsement(s), executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements set forth above. No such policy of insurance shall have a deductible or self-insurance retention amount in excess of $5,000.00 per occurrence. All insurance shall be written on an “occurrence” basis rather than a “claims-made” basis. Failure of AGENCY to demand any certificate, endorsement or other evidence of full compliance with these insurance requirements or failure of AGENCY to identify a deficiency from evidence that is provided shall not be construed as a waiver of CONTRACTOR’s obligation to maintain such insurance. The CONTRACTOR agrees that the obligation to provide the insurance required by these documents is solely its responsibility and that this is a requirement which cannot be waived by any conduct, action, inaction or omission by the AGENCY. Upon
request, the CONTRACTOR will provide copies of any or all policies of insurance maintained in fulfillment hereof.

AGENCY shall have the right, but not the obligation, of prohibiting CONTRACTOR or any subcontractor from entering the project site until such certificates or other evidence that insurance has been placed in complete compliance with these requirements is received and approved by AGENCY.

Failure to maintain the required insurance may result in termination of this Contract at AGENCY’s option.

5. CONTRACTOR shall cause each consultant employed by CONTRACTOR to purchase and maintain insurance of the type specified above. When requested by the AGENCY, CONTRACTOR shall furnish copies of certificates of insurance evidencing coverage for each consultant.

6. For any claims related to this contract, CONTRACTOR insurance coverage shall be primary insurance as respects the AGENCY, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the AGENCY, its officers, officials, employees, or volunteers shall be excess of the CONTRACTOR insurance and shall not contribute with it.

7. Nothing contained in this contract is to be construed as limiting the liability of the CONTRACTOR, the liability of any Subcontractor or any tier or either of their respective insurance carriers. The AGENCY does not, in any way, represent that the coverages or limits of insurance specified is sufficient or adequate to protect the AGENCY, or CONTRACTOR, but are merely minimums. The obligations of CONTRACTOR to purchase insurance shall not, in any way, limit its obligations to the AGENCY in the event that the AGENCY should suffer an injury or loss in excess of the amount recoverable through insurance, or any loss or portion of a loss which is not covered by FIRM's insurance.

8. CONTRACTOR shall maintain commercial general liability (CGL) and commercial umbrella liability insurance with a limit of not less than limits outlined herein for at least three years following substantial completion of the work.

9. All insurance provided by CONTRACTOR shall be placed with insurers with a current A.M. Best’s rating of no less than A: VII using the most recent edition of the A.M. Best’s Key Rating Guide. If the Best’s rating is less than A VII or a Best’s rating is not obtained, AGENCY has the right to reject insurance written by an insurer it deems unacceptable.

10. All certificates shall provide for 30 days written notice to owner prior to the cancellation or material change of any insurance referred to therein written notice to AGENCY shall be certified mail, return receipt requested.

11. AGENCY reserves the right to modify these requirements herein, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other special circumstance.
12. CONTRACTOR hereby grants to AGENCY a waiver of any right to subrogation which any insurer of said CONTRACTOR may acquire against the AGENCY by virtue of the payment of any loss under such insurance. CONTRACTOR agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation, but this provision applies regardless of whether or not the AGENCY has received a waiver of subrogation endorsement from the insurer.

13. To furnish any affidavit or Certificate in connection with the work covered by this agreement as required by law.

14. AGENCY may terminate this Agreement for cause upon 24 hours written notice of breach to CONTRACTOR and for convenience and without cause upon not less than seven days’ written notice to CONTRACTOR. In the event of termination for other than cause, CONTRACTOR shall be compensated for services performed prior to termination (applying a pro-rata apportionment to the anticipated schedule of services) together with Reimbursable Expenses then due.

15. To the extent that the Prevailing Wage Act applies, to pay and require every Subcontractor to pay prevailing wages as established by the Illinois Department of Labor for each craft or type of work needed to execute the contract in accordance with 820 ILCS 130/01 et seq. The CONTRACTOR shall prominently post the current schedule of prevailing wages at the Contract site and shall notify immediately in writing all of its Subcontractors, of all changes in the schedule of prevailing wages. Any increases in costs to the CONTRACTOR due to changes in the prevailing rate of wage during the terms of any contract shall be at the expense of the CONTRACTOR and not at the expense of the Owner. The change order shall be computed using the prevailing wage rates applicable at the time the change order work is scheduled to be performed. The CONTRACTOR shall be solely responsible to maintain accurate records as required by the prevailing wage statute and to obtain and furnish all such certified records to the AGENCY as required by Statute. In lieu of certified payroll, CONTRACTOR shall submit a letter setting forth the basis upon which CONTRACTOR has concluded the Act does not apply. The CONTRACTOR shall be solely liable for paying the difference between prevailing wages and any wages actually received by laborers, workmen and/or mechanics engaged in the Work and in every way defend and indemnify the AGENCY against any claims arising under or related to the payment of wages in accordance with the Prevailing Wage Act.

16. If contract sum is equal or above $50,000, then the CONTRACTOR, before commencing the Work, shall furnish a Performance Bond and a Labor and Material Payment Bond. Contract amounts below $50,000 may still require a bond at the discretion of the AGENCY and will be identified in the bid or proposal form. The Performance Bond shall be in an amount equal to 100% of the full amount of the Contract Sum as security for the faithful performance of the obligation of the Contract Documents, and the Labor and Material Payment Bond shall be in an amount equal to 100% of the full amount of the Contract Sum as security for the payment of all persons performing labor and furnishing materials in connection with the Contract Documents. Such bonds shall be on standard AIA Documents, shall be issued by a surety satisfactory to the AGENCY, and shall name the AGENCY as a primary co-obligee. The cost of the bonds is to be included in the Bid Proposal. The Performance Bond and Labor and Material Payment Bond will become a part of the Contract. The failure of the successful Bidder to enter into a Contract and supply the required Bonds within ten (10) days after the Notice of Award or within such
extended period as the AGNCY may grant if the forms do not meet its approval shall constitute a default, and the AGNCY may either award the Contract to the next responsible, responsive Bidder or re-advertise for bids. A charge against the defaulting Bidder may be made for the difference between the amount of the bid and the amount for which a contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the bid guarantee.

17. CONTRACTOR agrees to maintain, without charge to the AGNCY, all records and documents for projects of the AGNCY in compliance with the Freedom of Information Act, 5 ILCS 140/1 et seq. In addition, CONTRACTOR shall produce records which are responsive to a request received by the AGNCY under the Freedom of Information Act so that the Owner may provide records to those requesting them within the time frames required. If additional time is necessary to compile records in response to a request, then CONTRACTOR shall so notify the AGNCY and if possible, the AGNCY shall request an extension so as to comply with the Act. In the event that the AGNCY is found to have not complied with the Freedom of Information Act due to CONTRACTOR’s failure to produce documents or otherwise appropriately respond to a request under the Act, then CONTRACTOR shall indemnify and hold the AGNCY harmless, and pay all amounts determined to be due including but not limited to fines, costs, attorneys’ fees and penalties.

IT IS MUTUALLY UNDERSTOOD AND AGREED that the CONTRACTOR shall have the full control of the ways and means of performing the work referred to above and that the CONTRACTOR or its employees, representatives or subcontractors are in no sense employees of the AGNCY, it being specifically agreed that the CONTRACTOR bears the relationship of an independent contractor to the AGNCY.

This agreement shall be in full force and effect from the ___________ day of ___________ 20________ until such time as it is terminated by the AGNCY.

IN WITNESS WHEREOF, THE PARTIES have executed this Agreement this ___________ day of ___________ 20________.

PARK DISTRICT OF HIGHLAND PARK <NAME OF CONTRACTOR>

Print Name

Signature

Title Date

Print Name

Signature

Title Date

Page 5 of 5
PREVAILING WAGE

Current prevailing wage rates are published at:
http://www.state.il.us/agency/idol/rates/Rates.htm.

LIST OF DRAWINGS

Jacobson Golf Course Design Plans (Sheets 1-15) Dated December 1, 2016
Gewalt Hamilton Associates, Inc. Plan Set (Sheets C1 – C11) Dated December 1, 2016
SCOPE OF WORK

Golf Course Specifications, Irrigation Specifications and Special Provisions are as follows:

GOLF COURSE SPECIFICATIONS

SURVEYS AND LAYOUT OF WORK

The Owner shall be responsible for the initial setting of benchmarks for vertical control on the project site. The Contractor shall fully familiarize himself with the existing conditions and confirm survey control network prior to any work being performed. The Contractor is responsible for staking the center of tees, greens and turning points with vertical control at tees, turning points and greens. The Contractor shall be responsible for preserving and maintaining all initial staking throughout the construction process. The Contractor shall also provide additional centerline staking as necessary between the turning points, greens and tees. Owner shall be responsible for establishing the location of any applicable utilities, wetland delineations, easements, property lines, gas lines and right-of-ways.

NOTE: The tee, turning point and green centerline points shall be marked with 4-inch PVC pipe. Above ground height of PVC pipe should be at least 8-foot. The PVC pipe should be color-coded based upon the point it represents. The top 18-inches of pipe should be painted and visibly flagged as follows: Tee Point – Black, 1st and 2nd Turning Points – Yellow, and Green Points – Green. The hole number, point location (i.e. Tee, 1st TP, 2nd TP or Green) and existing survey elevation should be printed on PVC pipe in permanent ink.

The Contractor shall have available at the job site a survey crew for the purpose of providing all other survey and layout work necessary for construction of the golf course per Plans, Specifications and permit requirements.

PROJECT RECORD DOCUMENTS

Contractor will be responsible for the preparation of accurate Project Record Document Drawings, to be prepared and updated, of all irrigation components and drainage installed in greens, bunkers and fairways, and shall submit such “As Built” drawings with any application for payment involving such Work. In addition, Contractor shall also provide layout diagrams of all tees, greens, bunkers, fairways and cart paths using a GPS system or equivalent.

Contractor will be responsible for furnishing detailed Project Record Documents on a reproducible medium or electronic file updated on a weekly basis; and an updated Project Record Document must be attached for each of the following listed categories with each Application for Payment:

- Irrigation Components (pipe, wire, sprinkler heads, quick couplers, valve boxes etc.)
- Drainage components (pipe, inlets, manholes, outfall structures, etc.)
- Golf course features (tees, greens, bunkers, fairways, cart paths, etc.)

SUBMITTALS

Contractor shall provide submittals for all imported materials specified for renovation of the golf course including but not limited to:
- Greensmix
- Topdressing Sand
- Drain gravel and drain rock
- Bunker sand
- Perforated drain pipe
- Non-perforated drain pipe
- Irrigation Materials
- Drain inlets, end caps, tees and other related drainage appurtenances
- Fertilizers, lime, gypsum and other specified soil amendments
- Seed and sod certificates
- Rock walls and steps
- Cart path and curbing

NOTE: Greensmix, tee mix, bunker sand and drain gravel are to be submitted to USGA approved soil testing laboratory for analysis and recommendations for suitability in green, tee and bunker construction.

All materials testing is to be performed prior to delivery of any materials on site with laboratory analysis in writing attached. Source or local distributor of material(s) shall also be documented at that time, with address, telephone number, and contact person. The bunker sand, greensmix and tee mix must meet USGA Specifications after being placed in the bunkers and/or on the green and tee surfaces prior to grassing. A sample from greens, tees or bunkers that have been constructed may be requested for testing, at no additional cost to the Owner (not to exceed 10 tests).

All of the above items are to be listed with:
- Agent and/or local distributor
  Local address, phone number and contact person
- Manufacturer’s product data, literature and warranty certificates, etc.
- Laboratory Analysis and recommendations

All submittals are to be forwarded in triplicate to Owner and Designer for written approval by Owner.

The Owner and Designer reserve(s) the right to reject any and all materials that have been installed but have not been approved.

**EROSION AND SEDIMENT CONTROL**

Note: See Project Engineer’s (Gewalt Hamilton Associates, Inc.) plans and specifications.

**CLEARING, TURF REMOVAL AND DEMOLITION**

Note: Mass clearing and grubbing shall be completed by Owner. Contractor shall provide selective clearing on an as needed basis as directed by the Owner or Designer. The Bid Form includes a line item for existing tree removal unit pricing.

**GENERAL**

Review all Drawings and all sections of the Specifications for provisions therein affecting the work of this section.
SCOPE

The work covered in this section of the Specifications consists of furnishing all materials, labor and equipment for the clearing and grubbing of the golf course, including the removal and satisfactory disposal of all trees, down timber, brush, projecting roots, stumps, all other objectionable material within the clearing lines indicated on the Plans and/or those areas designated by the Designer on-site, in strict accordance with this section of the Specifications and subject to the terms and conditions of the Contract. Work also includes the tilling of existing turf areas with a rotadairon and removal of all other obstructions that interfere with the renovation of the golf course as drawn, specified, and directed.

LIMITS OF WORK

It is important that no areas be disturbed outside the limits of work. All equipment traffic shall be maintained within these limits, unless alternate routes are approved by Owner or Designer. Any alternate routes shall be repaired in accordance with the Grading and Grassing Specifications at the expense of the Contractor.

Prior to the removal of turf in any designated area within the golf course, the Contractor shall ascertain the limits of the golf course renovation work so as not to remove any trees or turf that may be located in the adjacent property. This responsibility shall rest solely with the Contractor, and any damage caused by him as a result of such negligence shall be at his own risk. The Contractor must confine the operation of this equipment to within the golf course limits, easements and approved haul roads. Any damage occurring outside these areas shall be repaired at the Contractor's expense.

NOTE: The Contractor shall be responsible for identifying the limits of work no less than one week prior to the commencement of work on April 15, 2017. The identification shall be made with Turf Marking Paint clearly identifying the proposed areas of work. The Owner will make an application Roundup or Basamid per manufacturer’s recommendations prior tilling of existing turf areas with rotadairon by the Contractor in areas as delineated by the Contractor.

TREE CLEARING METHOD AND DISPOSAL

The areas designated herein shall be cleared and grubbed of all trees, stumps, roots, buses, vines, hedgerows and other obstructions. All unsound or decayed stumps shall be removed to a depth of thirty-six inches (36”) below the original ground. No stumps or other growth will remain under any fill area, unless otherwise designated by the Owner or Designer.

During the clearing, grubbing and stump removal operation, topsoil shall be protected at all times.

Selective clearing and under brushing shall be limited to the removal and disposal of plant material less than four inches (4”) in diameter, including stumps, 30' beyond the outermost clearing limit or to golf course property boundary; however, the Designer may designate certain smaller trees of exceptional form or value to remain or direct larger than four inch (4”) trees to be cleared. All of the fallen trees and debris within these areas shall be removed. The selective clearing shall be cleared in such a manner that light golf course equipment can carry out the maintenance of the rough area.

Disposal of all trees, branches, hedgerows, snags, brush, stumps, etc., resulting from the clearing and grubbing shall be the responsibility of the Contractor. All costs in connection with disposing of the material will be at the Contractor's expense. All liability of any nature, resulting from the disposal of the cleared and grubbed material shall become the responsibility of the Contractor. The disposal of all materials cleared and grubbed will be in accordance with the laws of the city, county or state and the securing of permits shall be the responsibility of the Contractor. Debris remaining after clearing, and
grubbing and disposal shall be either chipped or buried in non-play areas as identified by the Owner or Designer with a minimum cover of six feet (6’) of compacted fill. Where such materials are buried, the Contractor shall strip and stockpile any topsoil present on the burying area for future re-spreading to a compacted depth of 4”.

Fences, power lines, abandoned utilities, structures, concrete paving and foundations and other obstructions shall be demolished as directed. Debris generated through this operation shall be disposed of off-site in accordance with local regulations. Cost of such Work shall be included in the Proposal price for clearing, grubbing and demolition unless otherwise called for on the Plans and on the Proposal Form.

EXISTING PLANT PROTECTION

All plants on the site, where applicable, will be saved, except those marked specifically to be removed on the Plans and those marked on the site by the Designer during inspection. No plants, either those marked for removal on the site or any other plants, may be removed near work areas from the site prior to the Designer’s inspection. All plants not to be removed will be protected by the contractor from injury to their roots and to their canopy for a distance of three feet (3’) beyond the drip-line and no grading, trenching, pruning or storage of materials may take place in this area, except as approved by the Designer. The Designer and/or Owner shall designate trees to be protected with orange construction fence and the cost for labor, equipment and materials for installation of the fence shall be included in the overall Bid for Contract.

The Contractor will pay a penalty for any plant removed from the site which has not specifically been marked on the site by the Designer for removal; Contractor also will pay for any plant which dies due to damage during construction. The penalty for plant loss is as determined by the American Arborist Association. Plants will be graded by an independent Arborist approved by the Owner and paid for by the Contractor, as to variety, condition and site importance with the American Arborist Association's figures acting as maximum penalties. This applies to all plants shown on the Plans and all plants on the site which may not be shown on the Plans.

GRADING FOR GOLF COURSE

GENERAL

Contractor must follow Illinois State Law and call J.U.L.I.E. prior to any excavation.

In general the golf course construction site is balanced between the cuts and fills. If additional fill is required for grading the golf course features, it shall be obtained from on-site borrow areas as directed by the Designer or Owner. Fill materials to be used in construction of the golf course features shall be suitable so that it can be easily shaped and properly compacted. Material containing peat, muck or extensive organic matter will not be allowed as fill for the construction of features except when approved by Owner. Note: Contractor is responsible for all de-watering of the lakes required for the excavation of lake expansion areas.

Where fill material is obtained from borrow areas, such areas shall be graded to provide positive surface drainage and to blend with the surrounding contours to the satisfaction of the Designer. Topsoil shall be stripped prior to excavation and replaced after all borrow material has been removed in these areas as directed by Owner and/or Designer. NOTE: The Contractor is responsible for final seedbed preparation and re-grassing the “borrow” areas with turf varieties approved by the Owner and consistent with the project grassing specifications.
Fill for greens, tees and bunkers shall be placed at the location shown on plans and shaped and graded within the guidelines under this section, and "Feature Construction". All fill material used in feature construction shall be clean and free of organic matter and rock so that it can be properly shaped and compacted.

All slopes around tees, greens, bunkers, and mounds shall not be greater than 3:1 unless otherwise shown or directed by the Designer.

Cut and fill slopes in fairways, roughs, and non-play areas shall not exceed 3:1 unless otherwise directed by the Designer. All cut/fill slopes shall taper into the surrounding grades so as to blend naturally.

The Contractor shall take all necessary precautions in grading to prevent any damage to existing plant materials and property of the Owner outside the area of disturbance under this section, particularly those areas of real estate adjacent to the golf course.

The Designer reserves the right to adjust any proposed grades or green, tee, bunker and landform locations to meet field conditions or to enhance the character of the golf course.

**Note: For permit compliance the Contractor must follow the process for grading and earthwork approval as outlined below:**

1. Contractor shall fully familiarize himself with the existing conditions and confirm survey control network prior to any work being performed.
2. After subgrade is achieved for each portion of the mass grading, within the limits of the City floodplain, the Contractor shall field verify that subgrade elevations are in conformance with the plans and the design cross sections prior to placement of topsoil. Cross section locations are included within the construction documents Floodplain sheets. The Contractor shall provide copies of the subgrade cross sections to the Owner and Project Engineer along with a written certification that the area has been graded in accordance with the plans and specifications.
3. Once final grade is achieved, within the limits of the City floodplain, the Project Engineer will conduct an as built survey to reconfirm conformance with the plans and specifications. Project conformance with the design compensatory storage calculations is required prior to owner acceptance of the mass earthwork and topsoil management. Conformance shall be confirmed by the Project Engineer within a maximum of 7 calendar days from the date of request of conformance confirmation from the Contractor. If regrading is necessary to bring areas into compliance prior to seeding, any subsequent earthwork, topsoil management and as built surveys will be paid for by the Contractor.

**ROCK**

If riprap rock is encountered during the excavation process in the lake expansion areas, the Contractor shall make every effort to excavate the rock utilizing normal excavation methods. The rock may be deposited in the bottom of the lake expansion areas. The lake depth per the Grading Plans must be maintained therefore, over-excavation will be required if rock is deposited in the bottom of lake expansion areas.

**COMPACTION REQUIREMENTS**

**General:** Control soil compaction of all embankments and other designated areas to provide the required soil density specified.

Density Requirements: All references to compaction or density throughout the Plans, Technical Specifications, Addendums, and supporting documents shall be in accordance with ASTM D 1557
(AASHTOT-180). Minimum compaction for all fill or backfill areas shall be 85 percent of maximum density. Field moisture should be kept within a tolerance of minus 3 percent and plus 2 percent of the optimum moisture at maximum density as determined by the Moisture Density Curve for that material. Granular materials may be compacted at lower moisture contents using a smooth steel wheeled vibratory roller if approved by the Project Engineer.

**Embankments:** Wherever the height of an embankment is to exceed ten feet (10’), compaction of all lifts of fill materials shall be to a minimum of 95 percent maximum density to within 12 inches of designated finish grade per Project Engineer’s specifications. Each layer of material shall be compacted to not less than the required density before the next layer is placed thereon. As the compaction of each layer progresses, continuous blading or dozing will be required to level the surface and to ensure uniform compaction.

**Placing Rock in Earth Embankment:** When earth, stone, rock, concrete, or asphalt fragments are mixed in the embankment, all stones or rock fragments exceeding the thickness of the compacted lift shall be disposed of by being incorporated into the embankment outside the limits of proposed pavements, buildings, or utility trenches. The thickness of the layer in these areas may be increased if necessary to accommodate the rocks, but shall not exceed 15 inches in thickness (loose state). The stones or rock fragments are to be placed so there will be no nesting or voids.

The Contractor must supply his own testing for compaction control to assure compliance with the Specifications and shall submit test reports to the Owner and Designer. The Owner reserves the right to contract for additional quality control testing and inspection to confirm compliance with the plans and specifications.

**ROCK PLATING**

In areas that rip rap rock has been deposited, a 24” layer of clean fill material shall cover the rock for installation of drainage and irrigation piping. Topsoil will then be spread to minimum compacted depth of 4” over the approved sub-grade for finish grading.

**TOPSOIL**

The full depth of topsoil shall be stripped from all areas to be graded on the golf course as required to meet specified quantities. The topsoil shall be stockpiled in convenient non-construction areas before shaping. Topsoil stockpiling shall be completed as to minimize the amount of disturbed area. (An allowance for construction disturbance re-grassing is provided in the Bid Form). Topsoil shall be stockpiled in areas that do not impede sight lines into the bunkers from the appropriate tee or TP control points on that hole. When shaping is completed and approved by the Designer, the topsoil shall be re-spread over the sub-grade areas except green, bunker and tee surfaces. Minimum depth of topsoil shall be four inches (4”) of compacted material (85 percent) on all fairways, tee slopes, green shoulder slopes, bunker slopes, roughs and landforms. Any topsoil imported from off-site should be consistent in structure with the native soil.

**NOTE:** Contractor should organize his work in such a manner that minimizes the need to double-handle the topsoil.

**FAIRWAY AND ROUGHS**

**Sub-grading** - All cuts and fills shall closely follow the Designer’s Grading Plan. Filled areas shall be sufficiently compacted as specified to prevent future settling, and all grading shall be done in such a manner that no water-holding pockets are produced. Natural drainage swales shall be used wherever possible. All stones two inches (2”) in diameter and larger shall be removed from un-topsoiled areas to be
grassed. This removal shall be accomplished with stone pickers, rakes or any other devices which do not disturb finished sub-grade. If some areas of the site contain significant amounts of rock in the subsoil, plating with material over the rocky sub-grade will be required prior to the re-spreading of topsoil, at no additional cost to the Owner.

**Fine Grading and Topsoil Cleaning** - After topsoil is re-spread, all stones, roots and debris greater than three-fourth inch (3/4") in diameter shall be removed by stone pickers, rakes or other devices which do not disturb the finished grade or create water-holding pockets. Every effort to remove all rocks of (3/4") in diameter and larger shall be taken and final acceptance of Fine Grading by the Owner and Designer shall occur prior to the application of any soil amendments.

**LAKE BANK STABILIZATION**

**GENERAL**

The contractor shall install Pec-Mat Erosion Control Blanket (or approved equal) per the Manufacturer’s recommendations for the proposed lake expansions on holes #4, #12 and #16. The blanket shall be installed after the grading has been approved and the topsoil has been spread to the appropriate depth. Fertilization and seeding shall occur prior to laying the blanket. If area is to be sodded, the blanket shall be installed prior to the placement of sod. Note: Contractor is responsible for all de-watering of the lakes required for the installation of Pec-Mat Erosion Control Blanket.

**TYPICAL INSTALLATION**

An anchor trench at a minimum depth of 12” shall be utilized to stabilize the top of the erosion control blanket that shall begin no less than 24 vertical inches above normal water level. Note: if the slope is graded at 3:1, the blanket will extend 6’ on top of the ground. The erosion control blanket shall also extend to a minimum of 24 vertical inches below normal water level. Staking and pinning shall be completed in accordance with Manufacturer’s recommendations.

**CLAY LAKE LINER**

Per Project Engineer’s specifications, Clay Liner shall be 24" thick, constructed of select cohesive soil in 8" lifts to a minimum modified proctor density of 95%, and moisture content 1-3% above optimum.

**FEATURE CONSTRUCTION**

**NEW TEES**

**Sub-grading and Compaction** - Tees shall be built to follow the Designer’s Grading Plan to ensure that tee forms blend well into the surrounding natural terrain. All filled areas shall be compacted to 95 percent as specified so that no future settling shall occur. Fill soil will be tracked or sheepfooted with adequate moisture added throughout the grading process. The last three feet (3’) will be placed on six inch (6”) lifts with necessary tracking, sheepfooting, etc., and moisture to achieve the mandatory compaction of 95 percent. The sub-grade of all tees shall be sloped at 1% in a direction approved by the Designer and consistent with the slope of the tee surface.

An Owner approved 7:2:1 (sand/peat humus/sphagnum) tee mix blend shall be installed on the tee surfaces at a compacted minimum depth of 4” during the fine grading process. The subgrade of the tees
shall be sloped at 1% in a direction approved by the Designer. The 4” of tee mix shall be sloped in the same direction as the subgrade to provide a uniform minimum 4” layer.

NOTE: No rocks or boulders larger than 2” shall be included in the fill within 12” of the finish sub-grade.

**Fine Grading and Topsoil** - Care shall be exercised that no water shall be trapped around the tee complex. A laboratory approved 7:2:1 (sand, peat moss and sphagnum) tee mix blend shall be spread to a minimum depth of four inches (4”) when compacted and floated. The shoulder slopes shall blend naturally into the tee surface in a pleasing manner. To assure proper grading, Contractor will be subject to "stringlining" of all tee surfaces. Sub-grades will be constructed with sufficient pitch (one percent) to allow positive surface flow and the finished surface grades shall be pitched in the same direction to preserve a uniform minimum 4” depth of the tee mix blend. Tile shall be installed per unit prices if necessary, and as directed by the Owner or designer, to complete proper tee sub-drainage.

**EXPANDED TEES**

The tees that are to expanded shall have the new portion of the tee constructed to the same specifications as a New Tee (See above). The existing tee shall be stripped of its turf by the Contractor so that the entire tee can be graded uniformly as one surface. The stripped turf shall be buried on non-play areas under proposed landforms with a minimum cover of 24” of clean fill material and 4” of topsoil. The final slope or pitch of the tee shall follow the grading plan spot elevations.

**TURF NURSERIES**

The turf nursery near holes #11 and #12 shall be constructed with the same approved sand/organic mix to be used for Tee Construction at a 2” compacted depth.

**GREENS - NEW USGA CONSTRUCTION**

**General** - The Designer’s instructions regarding the design of greens shall be closely followed according to the Green Detail Drawings. The method of construction will conform to current United States Golf Association's (hereafter known as USGA) "Recommendations for a Method of Putting Green Construction". Slope on the pinnable areas of the green shall not exceed two point seven five percent (2.75%) slope.

*NOTE: All putting green sizes as indicated on the Green Detail Plans include the 30" wide collar.*

**GREENS - USGA CONSTRUCTION**

**USGA Recommendations** – The Contractor is responsible for strictly following the most recent USGA Recommendations for A Method of Putting Green Construction. Recommendations can be found by following this link: [USGAGreensConstGuidelines2004.pdf](#)

**Plastic Interface** - To prevent capillary water movement between the greens mix and surrounding site soils, a PVC or PE interface shall be installed to "ring" the putting surface. The PVC or PE shall be thirty (30) mil. in thickness and 18 inches (16” if no sand choker layer is required) in height. The PVC or PE shall be placed vertically around the cored sub-grade so that the top coincides with the height of the
finished grade. The sheet shall be staked at ten foot (10’) intervals to ensure that it remains in vertical position while greens mix is installed.

**Testing** - The Contractor is responsible for coordinating and paying for all testing. Prior to delivery of material to the project site all test results shall be presented by the Contractor to the Owner verifying that all materials meet the USGA Recommendations. It may also be requested after the materials have been installed that further testing occur. A maximum of three (3) total tests may be requested by the Owner. The gravel, greensmix “root zone” sand, and organic material may be tested at one of the following testing laboratories:

**N.W. Hummel**  
Contact: Mr. Norm Hummel  
35 King Street  
Trumansburg, NY 14886 USA  
Tel: (607)387-5694  
Fax: (607)387-9499  
Email: soildr1@capital.net

**Thomas Turf Services, Inc.**  
Contact: Mr. Jim Thomas  
2151 Harvey Mitchell Pkwy. Ste.302  
College Station, Texas 77840 USA  
Tel: (979)764-2050  
Fax: (979)764-2152  
Email: soiltest@thomasturf.com

**Turf & Soil Diagnostics**  
Contact: Mr. Sam Ferro  
310-A North Winchester  
Olathe, Kansas 66062 USA  
Tel: (913)780-6725  
Fax: (913)780-6759  
Email: turfdiag@turfdiag.com

**New Mix Lab, LLC**  
Contact: Mr. Bob Oppold  
1530 East Kansas City Rd.,Ste. 110  
Olathe, Kansas 66061 USA  
Tel: (800)362-8873  
Fax: (913)829-4013  
Email: istre@worldnet.att.net

A QUALITY CONTROL PROGRAM DURING CONSTRUCTION IS STRONGLY RECOMMENDED. Arrangements should be made with a competent laboratory to routinely check gravel and root zone mixtures during production and blending. It is imperative that these materials conform to the recommendations approved by the laboratory in all respects. Care should be taken to avoid overshredding the peat, since it may influence performance of the mix in the field. Peat should be moist during the mixing stage to ensure uniform mixing and to minimize peat and sand separation.

Note: The following is an outline of suggested procedures for testing greens mix sand, organic materials, and the gravel.

Identify potentially suitable sand for rootzone mix, peat moss as the organic amendment, gravel as the drainage blanket, and if required, choker sand. Samples of each of the components must be sent to one of the recommended USGA, capable labs for analysis and recommendations based on the current **USGA RECOMMENDATIONS** for putting green construction.

Once the materials have been deemed suitable by the lab, the lab will then proceed with a **MIX DESIGN**, which will meet the **USGA RECOMMENDATIONS** based on regional site information. After the **MIX DESIGN** has been established, the same lab shall perform a calibration test when blending starts. Upon determination by the lab that the calibration meets the **MIX DESIGN** parameters, production can proceed.

After the first **200 tons**, a full analysis of the mix should be performed by the same lab to verify the production mix against the **MIX DESIGN**. Vehicles used to haul the mix must be washed to avoid contamination.

Thereafter, as long as the first production mix is judged by the lab to be within the **MIX DESIGN** parameters, future sampling and testing for quality control should be done every **1,500 tons**. The quality control test consists of a particle size delineation and organic content only. A lab statement should
accompany the test to determine whether it matches the MIX DESIGN.

The gravel should be tested at the **50% mark** of total gravel consumption for the project to verify consistency against the MIX DESIGN.

All costs associated with testing shall be the responsibility of the Contractor.

**Monitoring the Greens** - It is strongly recommended that the Owner test the greens to monitor the aging process at six-month intervals for a period of two years following the grow-in. The monitoring process shall utilize the patented ISTRC SYSTEM™, or comparable process. The monitoring report shall analyze substantially undisturbed core samples for infiltration/percolation, total porosity (%), air porosity (%), water porosity (% at -40 cm tension), solids (%), water holding (% at -40 cm tension), textural & particle size distribution by inch, and organic content by inch. Each sample's layering and water release characteristics shall be documented with time lapse photography.

*Note: The Designer shall have no responsibility for the failure of the greens to meet either the physical or the performance specifications of the USGA.*

**BUNKERS**

**Fairway Bunkers** - The bunkers shall follow the Designer’s design in size, shape and depth, and shall be clearly visible from tees and/or landing area. Drainage trenches shall extend into the low area of each bunker bay. The trench shall be eight inches (8") in width by one foot (1’) in depth, the bottom of which shall produce a constant grade of not less than zero point five percent (0.5%) slope. The drainage trench shall extend to lakes, streams or other non-play areas. The drainage trench inside the bunker cavity shall be lined with a 2” gravel blanket. Upon the gravel blanket shall be laid the same 4" perforated pipe used in greens subsurface drainage. The trenches shall then be covered with filter fabric to prevent soil movement and silting prior to completion and placement of sand. (This is a temporary means of preventing any silt or soil from contaminating the gravel trenches). All exit drain lines beyond the perimeter of the bunkers shall be non-perforated with trenches backfilled and compacted with approved fill soil and a minimum of four inches (4") of topsoil. A flushout line shall be installed beyond the upstream side of the bunker and an observation riser shall be installed beyond the downstream side of the bunker on the conduit pipe. The flushout riser and observation riser shall be capped with a 4” grate set flush with the finished grade. The flushout riser must extend a minimum of three feet (3’) beyond the edge of the bunker.

**Greenside Bunkers** – Greenside bunkers shall follow the Designer’s design in size, shape and depth. They shall be drained in the same manner as fairway bunkers except wherever feasible, the bunker pipe shall intercept the green conduit pipe outside the putting surface. No bunker pipe shall be drained through the putting surface.

**Bunker Drainage** - Washed gravel of one-fourth inch (1/4") to three-eighth inch (3/8") in diameter (as approved by USGA recommended testing lab) shall be evenly spread two inches (2") deep in the bottom of all trenches. No soft limestone, sandstone or shales are acceptable. Upon the gravel blanket shall be laid four inch (4”) diameter perforated drain pipe. Pipe shall be either SDR-35 or corrugated exterior with smooth wall interior plastic pipe (ADS or equivalent) with perforations. The pipe shall be installed with perforation holes on the bottom side. **No single wall corrugated pipe is to be used.** All pipe joints shall be connected by impervious sleeves.

After the pipe has been installed on the two-inch (2") bed of gravel in all the trenches, the trenches shall then be filled with gravel. All four inch (4") pipe beyond the perimeter of the tee (“Conduit Pipe”) leading to sump locations, streams, or lakes shall be solid pipe.
Bunker Sand - Proposed bunker sands shall be evaluated for textural and particle size distribution, infiltration/percolation, shape, color, and resistance to fried egg lies simulating the conditions on a bunker’s slope and base. The textural and particle size distribution and infiltration rate analyses shall be conducted in the same manner required of proposed root zone materials. The selected sand (Antioch Root Zone Sand or equivalent) shall meet the recommendations set forth by the USGA for bunker sand.

A penetrometer shall be used to evaluate proposed bunker sand's resistance to golf ball burying ("fried egg lie"). The particle size distribution of the tested material shall be determined utilizing sieve sizes - #18, #35, #60, #80, #100, #140, & #270. The USGA recommends the following testing requirements:

A. Textural Analysis
   1. Soil textural components shall be as follows:

<table>
<thead>
<tr>
<th>% of Whole</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 92%</td>
<td>Sand 0.05-2.0</td>
</tr>
<tr>
<td>&lt; 5%</td>
<td>Silt 0.002-0.05</td>
</tr>
<tr>
<td>&lt; 3%</td>
<td>Clay &lt; 0.002</td>
</tr>
<tr>
<td>&lt; 5%</td>
<td>Gravel 2.0</td>
</tr>
</tbody>
</table>

B. Sand Particle Size Specification
   1. Particle size distribution shall be as follows:

<table>
<thead>
<tr>
<th>% Retained</th>
<th>mm</th>
<th>US Sieve</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 5%*</td>
<td>Gravel 2.0</td>
<td>10</td>
</tr>
<tr>
<td>&lt; 7%*</td>
<td>V. Coarse 1.0</td>
<td>18</td>
</tr>
<tr>
<td>&gt; 60%</td>
<td>Coarse 0.5</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Medium 0.25</td>
<td>60</td>
</tr>
<tr>
<td>&lt; 20%</td>
<td>Fine 0.15</td>
<td>100</td>
</tr>
<tr>
<td>&lt; 5%</td>
<td>V. Fine 0.05</td>
<td>270</td>
</tr>
</tbody>
</table>

   *#10 + #18 < 10% combined

C. Penetrometer Value
   Penetrometer value shall be ≥ 2.0 kg/cm2

The testing shall simulate the condition of the proposed sand on the face of a bunker as-well-as the condition of the sand at the base of a bunker. Each measurement shall be reported as a range. The first value in each range shall be the amount of force (kg/cm²) required to bury a golf ball to its midpoint. The second value in each range shall be the amount of force (kg/cm²) required to bury a golf ball past its midpoint.

The results of the bunker sand testing should be made available for the Designer to review. The selected bunker sand should have a textural/particle size distribution that would not create a layer that is a significant impediment to air/water permeability. The bunker sand should have a minimum test result of 2.0 kg/cm² at the simulated bunker base, and a minimum test result of 2.0 kg/cm² at the simulated bunker slope. Bunker sand samples are to be sent to the following laboratories (or equivalent USGA approved) for testing:

**N.W. Hummel**  
Contact: Mr. Norm Hummel  
35 King Street

**Thomas Turf Services, Inc.**  
Contact: Mr. Jim Thomas  
2151 Harvey Mitchell Pkwy. Ste.302
The testing laboratory's report shall include the tested material's resistance to fried egg lies at a bunker's base and on its slope, drainage, color, shape, and likelihood of sand causing a layer on the surface of a green that is capable of impeding air permeability and water penetration/percolation.

**Sand Installation** – The approved sand shall be installed in all sand bunkers by the Contractor prior to the seeding / sodding of the golf course. The compacted depth of the sand shall be a minimum of 4” throughout the bunker. It is the responsibility of the Contractor to use a small vibratory compactor to compact the sand after placement.

**BUNKER LINER**

Prior to installation of bunker liner, the Contractor shall insure that all bunker subsurface drainage is functioning properly. Drains which do not work shall be opened up, flushed out, or replaced prior to the placement of bunker liner and sand within the bunker.

The “face” of each bunker subgrade area shall be lined with Sandtrapper II (ST-II) (or approved equal) bunker liner as manufactured by Indian Valley Industries, Inc., per the direction of the Designer. The liner shall cover all steeper (5:1 or greater) slopes within the bunker at the direction of the Owner or Designer but shall not cover the flatter bottom of the bunker. Any loss of material (waste) due to trimming or cutting during the installation of the product shall be included in the quantity provided by the Contractor in the Bid Form.

The bunker liner shall be a highloft nonwoven geotextile consisting of durable polyester fibers, resin bonded, with non water soluble polymer to form an evenly distributed, U.V. stable, three dimensional blanket matrix specifically intended for bunker stabilization and drainage conforming to the following specifications.

The bunker liner rolls shall be 90” (228.6cm) or 56” (142.2cm) wide and will have a permeability of no less than 6.0 cm/sec under a 50 psf load. Product specification sheets must be submitted to the Owner and Designer for review.

If the bunker liner will not be installed for more than (30) thirty days after the installation of the gravel trench and perforated drain pipe, or if the weather conditions are such that the pipe could clog, the Contractor shall also cover all drain lines with filter fabric to prevent clogging prior to the placement of the bunker liner.

The Contactor shall secure the bunker liner to the subgrade using 6” (15cm) long, 11 gauge steel staples as supplied by Indian Valley Industries, Inc., or equal. Staples shall be placed in accordance with the manufacturer’s recommendations and as shown in the Bunker Liner Cross Section drawing. Regular ‘sod staples’ shall not be accepted. Longer staples may be required if subgrade soil conditions are sandy.
Adjacent bunker liner panels shall be overlapped a minimum of 2” (5cm).

The bunker liner shall be terminated around the perimeter of the top of all bunkers by securing the liner a minimum of 10” (25cm) laterally back into the surrounding soil at such an elevation that the finished bunker sand level adequately covers the bunker liner, and as shown in the Bunker Liner Edge Detail drawing. Previously placed topsoil surrounding the bunkers may need to be temporarily removed such that an adequate shelf is built to accommodate lateral anchorage of the bunker. Care shall be taken to avoid spillage of topsoil on to the bunker liner. Bunker liner shall be terminated at the bottom of the bunker slope by being tucked a minimum of 8” into a perpendicular perforated drain line trench. Avoid placing liner seams above gravel drain lines.

The bunker liner shall be covered with bunker sand within thirty (30) days following installation of the bunker liner (ideally within twenty four (24) hours). If the bunker liner is not to be covered by sand within thirty (30) days following installation, the Contractor shall cover the bunker liner with an opaque plastic liner until sand is available.

GOLF COURSE DRAINAGE

Contractor must follow Illinois State Law and call J.U.L.I.E. prior to any trenching/excavation.

Golf Course Drainage shall be installed as indicated in the locations delineated on the drainage plans and approved by the project engineer. All pipe shall be rigid corrugated exterior, smooth wall interior piping such as ADS N-12 or equivalent. This pipe shall conform with the requirements of Type III, with a maximum density of 0.960, Class "C", Category 3, Grade P33. Drain inlets shall be constructed per the Construction Details using Nyloplast Cast Iron Grates or equivalent.

Provide pipes of the materials and of the weight/class indicated on the plans. Provide pipe fittings and accessories of same material and weight/class as pipes, with joining method as specified by the manufacturer.

All drain lines that terminate into a water feature shall enter under the normal water level and not be visible from the golf course.

Any damage or cause for repair to the existing irrigation system due to the installation of the drainage system shall be repaired by the Contractor at the Contractor’s expense. Identification of the existing system shall be the responsibility of the Contractor with assistance from the Owner.

It is the contractor's responsibility to keep an accurate up-to-date record of the size, type, and quantity of all pipe installed. This information shall be drafted onto a reproducible “as-built” plan (or Autocad file), drawn at a scale of 1” = 100', and submitted with each application for payment and with the final plan submitted to the owner at the conclusion of the project with all other required “as-built” drawings.

Tie-ins – where tying into an existing drain inlet, the proposed piping shall enter the structure at an elevation above the existing exiting pipe. Many of the existing structures are shallow and care must be taken to assure the proper invert elevations are achieved. The entrance of the new drainage piping shall be sealed using grout or foam to create a water tight inlet.

STORM DRAINAGE

See Project Engineers (Gewalt Hamilton Associates, Inc. Plans and Specifications for storm drainage system design.

LANDSCAPING
Landscape tree planting shall be bid directly to the Owner and is not a part of this contract.

IRRIGATION

IRRIGATION REPAIR

It is anticipated that existing irrigation piping, wiring, valves and sprinklers heads will need adjusting to accommodate the grading and feature construction. All repairs and irrigation additions shall follow the plans and specifications prepared by T.J. Emmerich Associates, Inc. (262-538-2776) and approved by the Owner prior to installation.

PROCESS

The Owner shall be responsible for removing, storing and preserving all potentially impacted irrigation items that will get re-used including but are not limited to: sprinkler heads, quick couplers, valves, valve boxes and air relief valves. The Contractor shall be responsible for re-installing all irrigation components per the plans and specifications prepared by T.J. Emmerich Associates, Inc.

TESTING

Upon completion of irrigation repair, the Contractor is responsible for testing the system for proper operation. All air and silt shall be flushed from the system and all components will be checked for proper operation by the Contractor with approval from the Owner.

NOTE: All efforts shall be made by the Contractor to prevent silt and debris from infiltrating the irrigation system. If improper functioning of the system occurs after grassing, the Contractor shall be responsible for watering the seeded or sodded area to the satisfaction of the Owner and Designer by any means necessary. If any erosion occurs due to improper installation of the irrigation system (such as weeping or stuck sprinkler heads) or settling due to irrigation adjustments the Contractor shall repair at no additional cost to the Owner. All repairs shall be made within 3 calendar days of the Owner’s request.

GRASSING

SCOPE

The work covered by this Section consists in furnishing all labor, equipment, and materials, and in performing all operations in connection with seeding, and completion thereof, in strict accordance with the Specifications and applicable drawings, and subject to the terms and conditions of the Contract.

Summary of Operations -

a) Limits of all seeded/sodded areas per Grassing Plan and/or staked by Designer.
b) Tillage of compacted areas, floating to reshape desired contours
c) Application of fertilizer (by Owner).
d) Disking, dragging and floating
e) Removal of stones to three-fourths inch (3/4”) diameter
f) Hand rake around heads, valve boxes, paths, bunker faces, etc.
g) Seeding, sodding and installation of Erosion Control Blanket when specified.
h) Irrigate seeded or sodded areas
MATERIALS

Seed shall be labeled in accordance with United States Department of Agriculture Rules and Regulations under the Federal Seed Act and State seed laws. Seed shall be furnished in sealed standard containers unless exception is granted in writing by the Contracting Agency. Each seed container shall bear the date of the last germination, which date shall be within a period of six (6) months prior to commencement of planting operations. Seed which has become wet, moldy, or otherwise damaged in transit or in storage will not be acceptable. The type and minimum percentage-by-weight of pure, live seed shall be as follows:

<table>
<thead>
<tr>
<th>Purity, minimum</th>
<th>97.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germination, minimum</td>
<td>85.00%</td>
</tr>
<tr>
<td>Inert, maximum</td>
<td>1.50%</td>
</tr>
<tr>
<td>Weed Seed, maximum</td>
<td>0.00%</td>
</tr>
<tr>
<td>Poa Trivialis</td>
<td>0.00%</td>
</tr>
<tr>
<td>Poa Annua</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

INSPECTION AND TESTS

**Seed** - The Designer and Owner shall be furnished with triplicate signed copies of the vendor's statement certifying that each container of seed delivered is fully labeled in accordance with the Federal Seed Act, and is at least equal to the requirement for seed in the Materials paragraph of these Specifications. This certification shall appear on or with all copies of invoices for the seed. A 50 gram (1/3 pound) sample of each seed type and seed lot should be shipped to Sand Tech, Post Office Box 397, 1383 Columbus Avenue, Marysville, Ohio 43040. Sampling and testing will be in accordance with the latest Rules and Regulations under the Federal Seed Act and state seed laws.

Note: Bentgrass testing shall be based on a 2.5 gram sample.

PREPLANT FERTILITY (TO BE COMPLETED BY THE OWNER)

After the finish grading and before seeding or sodding, the commercial fertilizer as specified shall be applied at the rates specified and thoroughly incorporated into the top two inches of surface soil. The area shall then be lightly raked until the finished grade is smooth, loose and pulverized.

Fertilizer shall be manufactured from quality materials, be free from impurities, be uniform in composition, free flowing and suitable for application with approved equipment. Fertilizer that has been exposed to high humidity and moisture, has become caked or otherwise damaged making it unsuitable for use will not be acceptable.

Preplant fertilization shall include the following products and rates:

<table>
<thead>
<tr>
<th>Product/Analysis</th>
<th>Required Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Greens</strong> - Starter Fertilizer 19-25-5/35% SAN</td>
<td>8.0 lbs./1,000 sq.ft.</td>
</tr>
<tr>
<td>0-0-45 Polymer coated potassium sulfate</td>
<td>8.8 lbs./1,000 sq.ft.</td>
</tr>
<tr>
<td>A-TEP Hi-Mag (micronutrients)</td>
<td>12.0 lbs./1,000 sq.ft.</td>
</tr>
<tr>
<td>21-0-20/100% Poly-S</td>
<td>5.3 lbs./1,000 sq.ft.</td>
</tr>
<tr>
<td><strong>Tees</strong> - Starter Fertilizer 19-25-5/35% SAN</td>
<td>8.0 lbs./1,000 sq.ft.</td>
</tr>
</tbody>
</table>
### PREPARATION OF SEEDBED

**General** - The areas of disturbance and their respective requirements for seed, fertilizer, soil amendments and other tillage treatments shall be as indicated on the Drawings. Equipment necessary for the proper preparation of the ground surface and for handling and placing all required materials shall be on hand, in good condition, and shall be approved before the work is started.

**Clearing** - Prior to grading and tillage operations, existing and emergent vegetation on the site that might interfere with grading, tillage, or seeding operations shall be mowed, grubbed, raked, or removed from the site or, when suitable, shall be used for mulch as directed. Prior to or during grading and tillage operations, the ground surface shall be cleared of stumps, stones larger than three-fourth inch (3/4") in diameter, roots, cable, wire, grade stakes, and other materials that might hinder proper grading, tillage, seeding, or subsequent maintenance operations.

**Grading** - Previously established and approved grades for areas to be prepared shall be maintained in a true and even condition. Maintenance shall include necessary repairs to previously graded areas which subsequently have been disturbed. When grades have not been established, areas shall be graded as shown on the Drawings, and surfaces shall be left at the prescribed grades in an even and properly compacted condition so as to prevent the formation of depressions where water will stand.

**Tillage** - After areas to be prepared have been topsoiled and brought to the grades shown on the Drawings, they shall be thoroughly tilled to a depth of eight to ten inches (8-10") by plowing, disk, harrowing, or other approved methods until the condition of the soil is acceptable by the Owner and Designer. Variation in depth of tillage is required to achieve a minimum two inch (2") interface of topsoil layer with the underlying sub-grade. Work shall be performed only during periods when beneficial results are likely to be obtained. When conditions are not beneficial by reason of drought, excessive moisture, or other factors, and satisfactory results are not likely to be achieved, the Contractor shall refrain from such work. After tillage the ground surface shall be cleared of stumps, roots, debris, stones larger than three-fourth inch (3/4") in diameter, and any other deleterious material that would interfere with subsequent operations. Undulations or irregularities in the surface shall be leveled and "floated out" before the next specified operation.

**Drainage** - All green, tee, bunker, fairway and grass hollow drains will be tested by flushing out with a hose prior to seeding or sodding by the Contractor.

**Leveling** - Undulations or irregularities in the surface resulting from tillage with rotadairon, fertilizing, soil amendment applications, or other operations shall be leveled before seeding operations are begun. All areas are to be floated to a smooth, finished grade with no water-holding pockets.

**Cleanup** - After completion of the above operations the surface shall be cleared of stones, stumps, or other objects larger than three-fourth inch (3/4") in thickness or diameter and of roots, brush, wire, grade...

### Fertilizers

<table>
<thead>
<tr>
<th>Fertilizer Description</th>
<th>Rate (lbs./1,000 sq.ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-0-45 Polymer coated potassium sulfate</td>
<td>8.8 lbs.</td>
</tr>
<tr>
<td>A-TEP Hi-Mag (micronutrients)</td>
<td>12.0 lbs.</td>
</tr>
<tr>
<td>21-0-20/100% Poly-S</td>
<td>5.3 lbs.</td>
</tr>
</tbody>
</table>

**Fairways - Starter Fertilizer**

- 19-25-5/35% SAN: 348 lbs./acre
- 21-0-20/100% Poly-S: 240 lbs./acre

**Roughs - Starter Fertilizer**

- 16-25-12/70% Poly-S: 248 lbs./acre

The fertilizers shall be delivered to the site in bags or other convenient containers, each fully labeled, conforming to applicable state fertilizer laws, bearing the grade and the trade name of the producer.
stakes, and other deleterious material that might be a hindrance to seeding and maintenance operations.

**FINAL SEED-BED PREPARATION GREENS & TEES**

**STARTER FERTILIZATION (TO BE COMPLETED BY OWNER)**

After the specified areas have been fertilized, all ridges and ditches shall be made smooth and all surfaces then "floated out" with a grading type tractor, followed by a Sand-Pro, or equal, with drag mat. The Contractor shall exercise extreme caution in this operation so as not to bring unsterilized soil or foreign matter into the area. The Contractor shall be prepared to have 4 greens floated per day. Designer shall inspect and approve final grades.

The final planting bed must be smooth and firm in order for the seeds to be planted therein. The final surfaces must be free from water-holding depressions or pockets.

**GRASSING - GREENS AND TEES**

After all specified areas have been amended and fertilized, these areas shall then be "floated out", and put in a soft condition for planting. The final seedbed must be smooth and sufficiently soft in order for the seeds to be planted therein. The condition of the seedbed in all areas must be approved by the Designer and Superintendent prior to planting.

**Seed** - All seed under this Section of the Specifications shall be certified as to ninety-eight percent (98%) genetic purity and eighty-five percent (85%) germination by the United States Department of Agriculture, or other agency approved by the Designer and superintendent. All seed must be approved by the Designer or Superintendent prior to planting.

**Grass Types and Rates** -

The grass type for all tee surfaces shall be:  

Crystal Blue Links Bentgrass

Planted at a rate of 1.5 lbs per 1,000 square feet

The grass type for all putting greens (including the collar) shall be:

Pure Distinction Bentgrass

Planted at a rate of 1.5 lbs per 1,000 square feet

**Planting dates** - All seeding shall be done at such times that the climatic conditions are favorable for the proper growth of the specified types of turfgrass. All seeding for tees must be completed by September 8, 2017 and greens seeding must be completed by September 8, 2017. All sodding of surrounds shall be completed by September 8, 2017.

**Maintenance of the Planted Areas** - Immediately after all greens and tees have been planted, the Contractor will water the planted areas sufficiently to seal the soil around the sod and seed. After the initial watering and approval of the entire golf hole by the Owner, it shall be the Owner's responsibility to maintain the planted areas.

No maintenance of the golf course of any type shall be required of the Contractor other than the initial watering of an approved entire golf hole. Erosion damage or any other type of damage not caused directly by the Contractor after planting an entire golf hole is the responsibility of Owner.

Any area not demonstrating satisfactory sprouting will be replanted (seed or sod) by the
Contractor at the Contractor's expense. *Satisfactory sprouting shall be defined as a uniform germination as it relates to the specified seeding rate and uniform satisfactory establishment of healthy sod as determined by the Owner or Designer.*

Seeded areas or other areas outside the coverage area of the irrigation system shall not be expected to demonstrate satisfactory sprouting if sufficient rainfall has not occurred. The Owner shall be responsible for periodic watering after the initial watering by the Contractor.

Since the proper growth and cultivation of turfgrass is dependent upon a variety of factors beyond the control of the Contractor, the Contractor will not be responsible for failure of planted areas to demonstrate satisfactory sprouting if his operations are impared by Acts of God, extremely unusual weather conditions (meaning 20% beyond normal range in temperature and 200% beyond normal range in rainfall) and/or unusual or uncontrollable disease or insect attacks.

The Contractor shall take all necessary precautions to prevent any damage to existing trees, foliage, plant materials and property of the Owner outside the area of work under this Section.

**GRASSING – FAIRWAYS and ROUGHS**

**PLANTING SEED - GRADED FAIRWAYS**

**General** - All seeding work shall be completed by September 8, 2017. A satisfactory method of sowing shall be employed, making use of approved mechanical power-drawn seeders, mechanical hand-seeders, or other approved methods. When delays in operations carry the work beyond the most favorable planting season for the specified turfgrass, or when conditions are such, by reason of drought, high winds, excessive moisture, or other factors, that satisfactory results are not likely to be obtained, the work will be stopped by the Owner or Designer and shall be resumed only when directed. If an inspection, either during seeding operations or after seeding emergence, shows that strips have been left unplanted, or other areas skipped, the Owner or Designer shall require the Contractor to prepare and reseed these areas at the expense of the contractor.

**Equipment** - Drop Gandy (type) on fairways only (must not drop seed in non-fairway areas when closed) or slit seeder - three (3) directions with no turns in rough. Furthermore, seed must be loaded while the seeder is in the fairways and a drop cloth used to surround the seeder in transport from one fairway to another.

**NOTE:** It is very important to prevent contamination of the rough by bentgrass. If contamination does occur due to negligence of the contractor, the contractor will be responsible for removing the contaminated area and replanting with the appropriate seed and fertilizer, at no expense to the Owner.

**PLANTING SEED - UNDISTURBED FAIRWAYS**

The work covered in this section of the technical specifications consists of furnishing all materials, labor and equipment required for the re-grassing of the existing fairways. The re-grassing process is as follows:

- Designer delineates contour of fairway (i.e. limits of re-grassing)
- Owner Applies herbicide such as Round Up per manufacturer’s specifications
- Owner shall scalp the fairway as much as possible 3 days after herbicide application.
- Contractor roto-tills fairway with rotodairon and proceeds with final seedbed preparation functions.
- Owner shall apply Tenacity at a rate of 5 ounces per acre one day prior to the fairways being seeded by the Contractor.
Owner shall apply soil amendments and/or pre-plant fertilization per lab test analysis and specifications.
Contractor shall drop seed or slit seed Crystal Blue Links Bentgrass in two (2) directions at a cumulative rate of 90 lbs. per acre.
Initial watering of fairway to saturation shall occur immediately after seeding by the Contractor.

PLANTING DATES

All seeding shall be done at such times that the climatic conditions are favorable for the proper growth of the specified turfgrass.

NOTE: NO GRASSING WILL COMMENCE UNTIL THE IRRIGATION SYSTEM IS FULLY OPERATIONAL (ie., Automatic) IN THE AREA TO BE GRASSED (Seeded or Sodded).

After all areas to be planted have been amended and fertilized, these areas shall then be "floated out" in preparation for planting. The final seedbed must be smooth and sufficiently soft in order for the grass to be planted therein (85% compaction or less). The condition of the seedbed in all areas must be approved by the Owner, Designer or golf course Superintendent prior to planting.

GRASS TYPES AND RATES

All seed under this Section of the Specifications shall be certified as to 98 percent genetic purity and 90 percent germination by the United States Department of Agriculture, or other agency approved by the Designer. All seed and sod must be approved by the Owner and Designer prior to planting.

The grass type for all fairways shall be: __Crystal Blue Links Bentgrass__
Seeding Rate at 90 lbs./Acre

Note: the existing turf nursery shall be re-seeded with Crystal Blue Links bentgrass by Owner.

PLANTING SEED – WET MEADOW AREAS

The work covered in this section of the technical specifications consists of furnishing all materials, labor and equipment required for the planting of the wet meadow areas as delineated on the grassing plan.

The seed type for all wet meadow areas shall be:

<table>
<thead>
<tr>
<th>Golf Wet-to-Mesic Seed Mix</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Botanical Name</strong></td>
</tr>
<tr>
<td>Permanent Grasses:</td>
</tr>
<tr>
<td><em>Calamagrostis canadensis</em></td>
</tr>
<tr>
<td><em>Carex spp.</em></td>
</tr>
<tr>
<td><em>Carex lupulina</em></td>
</tr>
<tr>
<td><em>Elymus virginicus</em></td>
</tr>
</tbody>
</table>
GUARANTEE OF SEEDED WET MEADOW

The Contractor shall guarantee seeded areas will meet or exceed the following performance requirement one full growing season after completion of seeding: 70% plant cover, seedlings of five (5) planted native species present and widely distributed.

If seeded areas greater than ten (10) square feet fail to meet the terms of the guarantee, the Contractor will develop and submit to the Owner for approval, a remedial re-seeding action plan that takes into
consideration the site goals and specific deficiencies causing the remedial action. The cost for all materials, labor and equipment required for re-seeding shall be at the Contractor’s expense.

PLANTING SEED - ROUGHS

The work covered in this section of the technical specifications consists of furnishing all materials, labor and equipment required for the grassing of the roughs.

EQUIPMENT

Drop Gandy (type) or slit seeder making two (2) passes adjacent to fairways, tee surfaces and green collars. Broadcast (type) can then be used on remaining area - two (2) perpendicular directions for seeding minimum.

**Broadcast Seeding** - Seed shall be broadcast or drop seeded as designated by the Designer or Superintendent by approved sowing equipment, at the rates and types listed above. The seed shall be uniformly distributed over the designated areas. On areas such as fairways, the seed shall be sown in three (3) different directions. The seed shall be covered to an average depth of one-half inch (1/2") by means of a cultipacker or other approved device. Broadcast seeding shall not be done during windy weather (over 5 miles per hour). The Contractor will be required to repair, at his cost, any areas outside of the specified locations that are contaminated with seed not specified for said location due to his negligence.

The grass type for all seeded roughs shall be:

95% RTF fescue / 5% HGT bluegrass from Barenburg Seed, Inc.

Seeding rate 240 lbs. /acre

COMPACTING

Immediately after seeding, the entire area shall be compacted either with a cultipacker or a roller weighing 60 to 90 pounds per linear foot. If seeding is performed with a cultipacker-type seeder, compacting can be eliminated.

PLANTING FESCUE SEED - UNDISTURBED ROUGHS

**Note:** The Owner is responsible for converting undisturbed rough areas into fescue. The Contractor is responsible to seed all fescue areas in disturbed (earthwork/shaping) areas with the same fescue blend per specifications.

The work covered in this section of the technical specifications consists of furnishing all materials, labor and equipment required for the re-grassing of undisturbed rough areas with a fescue blend. The re-grassing process is as follows:

- Scalp area delineated for fescue conversion as short as possible (e.g. use Wiedenmann Super 600 or equivalent to cut grooves into the soil).
- Apply Glyphosate + Fusilade II at labeled rates 10-14 days before seeding.
- August 15 – September 1 Seed Fescue blend
- Use sand pro to knob-in seed for enhanced soil contact
- Apply starter fertilizer per specifications
- Install straw erosion control blanket if no irrigation is present
The grass type for all fescue areas shall be:
Jacklin Seed - 1/3 Ecostar / 1/3 Marco Polo / 1/3 Rescue 911
Seeding rate 3 lbs./ 1,000 s.f.

PLANTING PLUGS – WETLAND AREAS

The work covered in this section of the technical specifications consists of furnishing all materials, labor and equipment required for the planting of the wetland areas as delineated on the grassing plan. Contractor is responsible for all dewatering for the planting of the wetland shelf. Plants shall be installed approximately 24” on center and planting areas will be bordered by anti-herbivory enclosures. Enclosures will consist of 2”x 2” x 4’ stakes with 24” poultry netting attached.

The plug types for all wetland areas shall be: 10% Sweet flag / 15% Blue flag iris / 5% Pickeral weed / 11% Arrowhead / 13% Soft-stem bulrush / 7% Prairie cord grass / 3% Common boneset / 2% Joe-pye weed / 3% Swamp milkweed / 3% Ditch stone crop / 3% Wool grass / 3% Blue joint grass / 11% Common bur reed / 11% Common rush.

GUARANTEE OF WETLAND PLUGS

Provided the Owner maintains the recommended lake water levels for proper plug establishment, the Contractor shall guarantee seeded areas will meet or exceed the following performance requirement one full growing season after completion of seeding: 70% survivorship of all planted plugs. No less then 50% survival of any one species.

If plugged areas greater than ten (10) square feet fail to meet the terms of the guarantee, the Contractor will develop and submit to the Owner for approval, a remedial re-planting action plan that takes into consideration the site goals and specific deficiencies causing the remedial action. The cost for all materials, labor and equipment required for re-planting plugs shall be at the Contractor’s expense.

ROUGH SOD INSTALLATION

The prepared surface shall be moistened and have been fertilized immediately prior to laying sod. Sod must be laid within 24 hours after harvesting to prevent deterioration. Any excessively dried sod, as determined by the Owner or Superintendent, may be rejected by the Owner and replaced with new sod, at no additional cost to the Owner. Only sod secured from sources approved by Designer and Owner shall be used.

Sod shall consist of Healthy Grass Technology (HGT) Kentucky bluegrass sod (H & E Sod) for rough areas and construction disturbance areas designated to be sodded. Sod for the 36” perimeter around all bunkers shall be Rhizomatous Tall Fescue (RTF) from Payne Sod Farm. All sod is to be certified and proof of certification shall be presented to Owner and Designer prior to sod purchase and installation.

Lay sod tight, with no open joints visible, and no overlapping; stagger end joints 12 inches minimum. Do not stretch or overlap sod pieces. Lay smooth, with the finish grade of sod root zone flush with the finish grade of the adjacent areas to be seeded. On slopes of 4:1 and greater, lay sod perpendicular to the slope and stake per sod nursery recommendations.

NOTE: The contractor shall be responsible for thoroughly watering sodded areas immediately after installation. Saturating to a three inch (3”) depth in the soil must be accomplished by the Contractor through repeated irrigation (repeat cycles or hand-soaking). After sod and soil have firmed up, the Contractor shall roll the sodded areas to ensure a good bond between the sod and soil, and to remove
minor, ridges, depressions and irregularities. After rolling, the Owner shall immediately water the sod by saturating again to a three inch (3") depth in the soil.

HYRDRO MULCH

This section specifies a Hydraulically-applied Erosion Control Product (HECP) to accommodate site conditions and project needs that may be encountered on disturbed areas in need of erosion control and revegetation. HECP shall be made in the United States, 100% biodegradable, and contain 100% recycled, thermally refined (within a pressurized vessel) virgin wood fibers derived from clean, whole wood chips. The HECPs shall be phytosanitized and upon application form an intimate bond with the soil surface to create continuous, porous, absorbent and flexible erosion resistant blankets that allow for rapid germination and accelerated plant growth.

All areas that are to be seeded, with the exception of greens, tees, turf nurseries, wet meadow and wetland areas shall receive Profile® Hydraulic Mulch (HM) Wood with Tack at a rate of 2,500 lbs per acre. The fairways shall be applied at a rate of 2,000 lbs per acre.

The wood fiber mulch shall be dyed green to aid in visual metering during application. The dye shall be biodegradable and not inhibit plant growth.

EROSION CONTROL MATTING (Bid Alternate)

Futerra F4 Netless Erosion Blanket (or approved equal) is included as a Bid Alternate to replace sod. After areas to be blanketed have been seeded and approved, Contractor shall install a light weight non-woven erosion control / revegetation blanket such as Futerra Erosion Control Blanket or approved equal, comprised primarily of virgin wood fiber. It shall be manufactured by blending thermal mechanically-defibrated wood fiber with a small percentage of recycled synthetic fibers and forming into a drape able blanket. An accelerated photodegradable polypropylene netting is laminated to the surface of the blanket. The mat shall completely degrade on-site as the grass grows through the blanket fibers (the mat should take no longer than 30 days to degrade).

The mat shall be placed in accordance with the manufacturer's recommendations (www.profileproducts.com) and biodegradable stakes shall be used to pin the mat to the prepared surface.

STRAW MULCH (Bid Alternate)

Straw mulch is included as a Bid Alternate to replace hydro-mulch. All fairway and rough areas that are to be seeded and not specified to be covered with sod or erosion control blanket shall receive straw mulch applied at a uniform rate of 1.5 tons/acre. Straw or hay shall be in air dry condition, free of noxious weeds and objectionable foreign matter. Use of marsh hay is not acceptable. Mulch shall cover a minimum 80% of the surface to an applied thickness of approximately 0.5 inches. Immediately after spreading, anchor mulch using a crimper or equivalent to impress mulch to a depth of 1 to 2 inches.

POST-PLANT RESPONSIBILITIES

PROTECTION

Immediately after seeding or sodding, the area shall be protected by the Contractor against traffic or other use by erecting stakes/rope and barricades as needed, and by placing approved warning signs at appropriate intervals.
MAINTENANCE OF PLANTED AREAS

Immediately after all areas have been planted, the Contractor will water to saturation (daytime water only) the seeded areas. Immediately following the completion of the sod installation, the Contractor shall thoroughly water the sod as specified under the “Grassing-Fairways and Roughs” section, roll the sod with rollers capable of ensuring adequate contact between the sod and the moist soil. After this watering, rolling and approval of the entire golf hole by the Designer and Owner, it shall be the Owner’s responsibility to maintain the planted areas.

No maintenance of the golf course of any type shall be required of the Contractor other than the requirement of the above for an approved golf hole. Erosion damage or any other type of damage not caused by the Contractor after planting and initial watering is the responsibility of the Owner.

SATISFACTORY GERMINATION OF SEEDED AREAS

Satisfactory survival will be evidence when a solid stand of seedlings are produced, free of all foreign materials and erosion. Any rough areas that do not produce sufficient growth within 21 days of planting shall be replanted. Any tee, green or fairway areas that do not produce sufficient growth within 14 days of planting shall be replanted at no cost to Owner.

Since the proper growth and cultivation of turfgrass is dependent upon a variety of factors beyond the control of the Contractor, the Contractor will not be responsible for failure of planted areas to demonstrate satisfactory germination if his operations are impaired by Acts of God, extremely unusual weather conditions (meaning 20 percent beyond normal range in temperature and 200 percent beyond normal range in rainfall), and/or unusual or uncontrollable disease or insect attacks.

The Contractor shall take all necessary precautions to prevent any damage to existing trees, foliage, plant materials and property of the Owner outside the area of work under this Section.

CART PATH & CURBING

Note: The following cart path and curbing specifications are approved by the Project Engineer (Gewalt Hamilton Associates, Inc.).

GENERAL

In general work consists of new cart paths, new curbing, existing gravel path to be re-surfaced and existing asphalt path to be re-surfaced. Any existing cart path to be removed shall be disposed of off-site by the Contractor, at the Contractor’s expense, in accordance with all governing agency regulations.

Do not work during temperatures below 40 degrees Fahrenheit or on wet or frozen subgrade or sub-base.

Water, if required, may be had from facilities, and shall be used only as directed. Do not fill directly from fire hydrants without the knowledge and permission of the Park District of Highland Park and City of Highland Park.
If work cannot be completed because of weather, then base course shall be placed and surface course placed when directed. Fill ruts of base course. Bring to correct grade, clean, prime before applying binder or surface courses.

Protect exteriors and equipment from splatter of or spray of asphalt.

Standards of Materials shall conform to the Illinois Department of Transportation, Standard Specifications for Road and Bridge Construction (SSRBC) as referred to in these specifications. Items, Measurement of, and Basis of Payment shall not apply.

Paving and grading work shall include final sub-grade shaping and preparation, forming, placement of base course materials, patching, and subsequent surface course, final clean-up and all related work.

All pavement dimensions are to be 8’ wide, unless otherwise noted.

A static roller is required for the breakdown passes and the finish course. Weights per IDOT specifications.

In accordance with previous sections, the sub base must be compacted with a sheepsfoot, CAT 815 or larger, and must be proof rolled. Approval of the Project Engineer is required prior to the placement of any stone base or asphalt.

Cart and maintenance paths indicated on the Plans are in reference to general locations only. All locations shall be staked in the field and verified by the Architect prior to excavation and installation.

Cart paths must be sloped to prevent any water holding areas and to promote proper surface drainage across paths. If a cart path is used for surface drainage diversion then a cart path drain shall be installed per plans and connected with the golf course drainage system. The grading adjacent to the cart paths shall be completed in such a way as to blend the path with surrounding slopes. The Contractor shall be responsible for repairing any water holding areas at their own expense.

Prior to grassing the contractor shall clean all cart paths of all debris such as rocks, dirt and/or branches.

MATERIALS AND WORKMANSHIP


SUB-BASE PREPARATION AND AGGREGATE BASE COURSE

Subgrade Preparation: see Section Earthwork.

Crushed Gravel or Crushed Stone Base Course: Aggregate base course shall be IDOT Aggregate Base Course, Type B; all crushed gravel or crushed limestone, CA6, to the thickness shown on the plans after compaction.
BITUMINOUS CONCRETE SURFACE COURSE

Bituminous Surface Course shall be accordance with IDOT SSRBC: Hot Mix Asphalt Surface Course, Mix ‘C’, N50, AC type PG 64 -22, 4% voids at 50 Gyrations, 15% maximum recycled content.

CART PATH TYPES

*New Cart Path* - Constructed of a compacted 4” aggregate base and 2” of compacted Bituminous Concrete Surface Course. The cart path core shall be tamped and compacted to per Engineering Specifications prior to the application of the base. The aggregate base shall be placed 1’ wider (6” on both sides) than the planned width of the asphalt. This will serve as a shoulder and prevent sluffing of the asphalt.

*Existing Gravel Path to be Re-Surfaced* – The existing path shall be graded in a manner so that a new 2” layer of asphalt may be placed on top of the existing stone with no water holding pockets or inconsistent slopes existing on or around the path. If it is required that gravel be removed, the gravel may be utilized in other portions of the cart path installation or buried at an approve location on site. Any additional gravel required to comply with the specified width or depth shall be at the expense of the Contractor. The width of the aggregate base shall be in accordance with the specifications for New Cart Path and shall be installed prior to the placement of asphalt. The asphalt shall be Bituminous Concrete Surface Course with a compacted depth of no less than 2”.

*Existing Asphalt Path to be Re-Surfaced* – The existing path shall have the existing asphalt removed and disposed of in accordance with local regulations. The existing gravel base shall be modified if necessary to conform to the specifications of New Cart Path. Any additional gravel required to comply with the specified width or depth shall be at the expense of the Contractor. The asphalt shall be Bituminous Concrete Surface Course with a compacted depth of no less than 2”.

CURBING

**Note: Removal of existing curbing by Owner.**

The concrete to be utilized in the construction of the curbing shall conform to IDOT Class SI concrete and be formed in place. The depth of the concrete pour shall be no less than 12” with a width of no less than 6”. The sub-grade of the concrete pour shall be compacted to no less than 95% density. Two paralleling horizontal rows of #4 rebar shall be secured in place prior to forming at 4” above the subgrade and 4” below the top surface. #4 rebar vertical installation shall also be installed no more than three (3) feet of linear foot of curb.

NOTE: The curb width of 6” shall NOT be included in the minimum required 8’ width of the cart path.

CART PATH SEALANT (Bid Alternate)

**Seal Coat – Asphalt Based**

General: This specification applies to seal coat intended to be used for sealing miscellaneous areas such as asphalt cart paths, parking lots, and similar areas. Seal coat material shall be a plant-blended product composed of mineral aggregates uniformly distributed in a petroleum-based asphalt emulsion. The seal coat material shall contain non-asbestos fibers.
Testing Requirements. Seal coat materials, undiluted except as noted, shall conform to the following requirements.

<table>
<thead>
<tr>
<th>Test</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight grams per liter (lbs. Per gallon)</td>
<td>1139 (9.5) min.</td>
</tr>
<tr>
<td>Nonvolatile component (%)</td>
<td>60% min. by weight</td>
</tr>
<tr>
<td>Mineral aggregate component</td>
<td>850 um (No. 20) sieve – 100% passing</td>
</tr>
<tr>
<td>Working viscosity, diluted 4 part</td>
<td></td>
</tr>
<tr>
<td>products to 1 part water – ASTM D 562</td>
<td>75 KREMS Min.</td>
</tr>
<tr>
<td>Dried film color</td>
<td>Black</td>
</tr>
<tr>
<td>Asphalt Content</td>
<td>25% - 35% of nonvolatiles by weight</td>
</tr>
</tbody>
</table>

1. Weight 10 grams of homogeneous product into a previously tarred, small ointment can lid. Place in a constant temperature oven at 163°C (325°F) for 1-1/2 hours. Cool, reweigh, and calculate nonvolatile components.

Seal Coat for Miscellaneous Areas

Materials. Before incorporation in the Work, the Contractor shall submit a 2 Liter (2-quart) sample of undiluted seal coat at no cost to the Owner.

Application

General. The work shall consist of spreading seal coat material on the pavement where shown on the Plans. The seal coat material shall be applied in two applications. Unless otherwise specified, the total quantity applied shall be 2.0 L/m² (50 gallons per 1,000 square feet).

Seal coat material shall be diluted per manufacturer’s recommendations using clean, potable water in an amount not to exceed 20 percent of the total volume.

A tack coat, if required by Contract Documents, shall consist of three parts clean, potable water and one part SS-1h emulsion and shall be applied at the rate of 0.25L/m² (0.05 gallon per square yard).

Seal coat material shall not be placed over new asphalt pavement until the pavement has cured for 30 days or as required by the Engineer.

Spreading. Seal coat shall only be applied when the atmospheric temperature is greater than 13°C (55°F) and if rain is not forecast for the period of 24 hours after application.

Prior to applying seal coat material, all cracked and broken pavement shall be removed and patched in accordance with the plans and specifications. Cracks wider than 1/8 inch shall be cleaned, treated with weed killer, and filled with asphalt-based crack filler. The pavement surface shall be clean and free from dirt, oil and grease deposits.
When ambient temperatures are over 27º C (80º F) or the pavement is excessively aged or porous, the surface shall be sprayed with a mist of water in an amount that will leave the surface damp, but with no visible puddles of water. This procedure is not required if a tack coat has been applied.

Seal coat material shall be applied using a truck-mounted tank or wheeled container in continuous parallel lines and spread by means of brooms or rubber-faced squeegees wither by hand or machine and in such a manner as to eliminate all ridges, lap marks and air pockets. Raised pavement markers, valve box covers and manhole covers shall be protected and kept free of seal coat material.

Seal coat material shall be homogeneous prior to spreading, with no visible separation of solids and liquids.

The second coat of seal coat material shall not be applied until the first coat has dried to the touch.

The Contractor shall exercise care to prevent seal coat material from being deposited on other than specified surfaces and shall remove seal coat material from surfaces not designated to be sealed, at no cost to the Owner.

**HARDSCAPE**

**ROCK WALL**

Rock Wall installation includes the materials, equipment and labor to install the rock wall on Hole #4 per Rosetta (www.rosettahardscapes.com) plans and specifications and GHA approved Construction Detail. The wall shall be from the Rosetta Outcropping Collection with the Fond du Lac finish.

**ROCK STEPS**

Rock Step installation includes the materials, equipment and labor to install the rock steps on Holes #9 and #11 per Rosetta (www.rosettahardscapes.com) plans and specifications and GHA approved Construction Detail. The Rosetta Steps shall be irregular steps with the Fond du Lac finish. The new steps shall replace the existing steps and reflect the same size and location.

**END OF SECTION**
IRRIGATION SPECIFICATIONS

1.01 SPRINKLER EQUIPMENT

1. The new golf course sprinkler heads shall be automatic, valve-in-head construction with normally closed, electric actuation at 24 volts AC.

2. The sprinkler nozzle assembly shall be gear-driven by a water lubricated gear train. All sprinkler heads shall be full circle 360-degree operation except as noted on the plans.

3. The gear drive and valve assembly shall be removable from the top of the sprinkler body without disturbing the in-ground installation or connection to irrigation piping system.

4. The electric solenoid, actuator assembly and wire splice shall be accessible by removing the top cover of the sprinkler head. The actuator shall include a pressure regulation assembly to control the valve in the base of the head and limit nozzle pressure, as required.

5. The solenoid shall be operated with nominal 24 VAC, 60 cycle current and not exceed 0.42 amps inrush and 0.21 amps holding, at 24 VAC.

6. The performance of all the sprinkler heads shall be as indicated on the plans.

7. All golf course sprinkler heads shall be encased in high impact, molded cycolac plastic bodies with either a 1-1/2 inch IPS female acme thread inlet connection.

8. New Quick Coupler valves shall be bronze body with a 1 inch, IPS, female thread inlet.

B. Materials

1. New sprinkler heads shall be as specified on the irrigation bid form

2. New quick coupler valves shall be as specified on the irrigation bid form.

C. Installation

1. All sprinkler heads shall be installed per the manufacturer's instructions and the plan details.

2. The quick coupler valves shall be installed per the plan details.
1.02 CONTROL SYSTEM

A. General

1. The existing irrigation control system consists of a Toro Site Pro central computer hard wired to 15 Network LTC Plus field satellites.

2. The existing irrigation control system will continue to be used with the renovated irrigation system.

3. The contractor shall install the components required to increase the station capacity of the existing field satellites.

1.03 WIRE AND FITTINGS

A. General

1. All valve control wire shall be single conductor and insulated with U. L. listed low density, high molecular weight polyethylene.

2. Wire size for 24 volt valve control wire from the satellite controllers to the sprinklers shall be #14 minimum. The 24 volt valve common wire shall be #12 minimum. The 24-volt valve control wire shall be color-coded yellow and the 24-volt common wire shall be color-coded orange.

3. A single wire shall be installed from each new sprinkler head to the field satellite.

4. All wire splices are to be made with full size wire nuts and moisture proof splice kits for use with three (3) wires maximum.

5. All wire and cable shall be furnished in minimum 2,500 foot reels.

B. Materials

1. The valve control and communication wire shall be as manufactured by Paige Electric, Regency Wire and Cable or approved equal.

2. The moisture proof wire splice kits shall be 3M DBY/R or approved equal.

C. Installation

1. Control wire, between field satellites and 24 VAC valve solenoids, may be laid in the open cut trench, down fed in the pipe pulling operation, or in a separate pulling operation. Control wire, when laid with pipe pulling operation, must be "down fed" to minimize any tendency to stretch wire or the insulation.

2. Allow 12" of free wire at all sprinkler splice locations for future service.

3. Slack must be provided for expansion or contraction and tensile stress must be avoided during installation.
4. In the event any wiring must be routed under a roadway or cart path, a minimum 2-inch diameter schedule 40 PVC sleeve should be used to protect against compressive loads. Paved roads and cart paths must be bored for installation of wire.

5. Wire splices shall be made at the sprinkler head or inside the field satellites. When the field wire must be spliced at another location, the splices shall be contained in a separate 10 inch valve pit with a black cover and located on the "Drawings of Record. Wire splices shall not be installed with the isolation valves.

1.05 PIPE AND FITTINGS

A. General

1. The new PVC lateral piping shall be manufactured from virgin polyvinyl chloride resin, and meet ASTM D1784, ASTM D2241 and Product Standard 22 for PVC pipe.

2. All irrigation system pipe shall be pressure rated @ 200# (PSI) for continuous service @ 73 ° F., and meet SDR-21 dimension ratio for wall thickness.

3. Pipe sizes 3 through 2-inches shall be furnished in minimum 40-foot lengths. All 3 through 2-inch pipe shall have one end belled for solvent weld connection.

4. All change of direction fittings for 3 through 2-inch PVC pipe, shall be ductile iron bituminous coated for push-joint attachment to pipe. Gaskets shall be for IPS PVC O.D. dimensions, pressure rated @ 200# (PSI). PVC gasketed slip joint repair couplings may be used on 3 through 2-inch pipe.

5. Service tees for connection of the sprinkler heads to the lateral pipe can be gasket joint PVC. Gaskets shall be for IPS PVC O.D. dimension. The fitting shall be pressure rated @ 200 PSI and utilize an o-ring sealed acme thread connection for the sprinkler head swing joint.

6. Lateral pipe ends shall be completed using a solvent weld schedule 80 side outlet tapped cap per the plan details.

7. Three elbow swing joints shall be utilized for connecting the golf course sprinkler heads and quick coupler valves to the service tees.

8. The swing joints shall be the same size as the inlet to the sprinkler head or quick coupler valve. All swing joint assemblies shall be pre-assembled with full 360-degree adjustment in three planes.

9. The swing joints shall be manufactured from full bore, schedule 80 components with a working pressure of 315 PSI and double O-ring seals at the buttress threaded connections.
B. Materials

1. All PVC pipe shall be as manufactured by Cresline, Hastings, Northern, Vinylplex, JM or an approved equal.

2. The ductile iron fittings shall be as manufactured by Harrington Corporation.

3. The PVC gasket joint service tees shall be Harrington Corporation 151 series.

4. The sprinkler head and quick coupler swing joint assemblies shall be Spears model 5807 or approved equal.

5. The Schedule 80 side outlet tapped cap shall be Harco Model 147-206.

C. Installation

1. Installation for all 3, 2-1/2 and 2-inch PVC irrigation pipe shall be via the vibratory plow method wherever possible.

2. All 3, 2-1/2 and 2-inch piping shall be installed a minimum of 16-inches between surface grade and the top of the pipe.

3. The pulling operation must utilize PVC gasket joint service tees for sprinkler connections except at the end of the lines. End of the line connection of sprinkler heads shall be accomplished with a PVC gasket-joint service tee PVC thrust plug.

4. All change of direction fittings must be gasket-joint ductile iron.

5. All solvent weld joints are to be completed using a high etch PVC primer and a heavy body PVC cement.

6. All piping, valves and fittings are to be adequately supported, anchored, braced or strapped to withstand hydraulic thrust even though such supports are not shown on the drawings. Special attention shall be performed to ensure that the thrust block mass is adequate to restrain pipe, fitting, or valve movement.

7. All horizontal bends on main lines shall be buttressed with either poured concrete or concrete block at all changes of direction. Concrete buttress dimensions shall be determined in the field by the Contractor.

8. Additional supports, as recommended by the pipe manufacturer, shall be installed to the Manufacturer’s requirements.

9. Pipe interiors must be cleaned before and kept clean during installation by the use of test plugs or duct tape.

10. All pipe installed without control wiring shall be equipped with a 14-gauge trace wire.
11. It shall be the responsibility of the Contractor to provide adequate protection to compensate for expansion or contraction of the plowed pipe during installation. Plowed pipe should be provided with adequate time to adjust to ground temperature before any connections are made.

12. Paved cart paths and roadways may be saw cut to facilitate the installation wire and pipe 4-inch and larger. Saw cuts are to be back filled with stone, compacted and repaired with a minimum of 2.5 inches of cold patch asphalt.

13. Paved cart paths and roadways must be bored to facilitate the installation wire and pipe 3-inch and Owner. All leaks must be identified and repaired by the Contractor, re-tested and accepted by the Owner.

16. Paved cart paths and roadways may be saw cut to facilitate the installation wire and pipe 4-inch and larger. Saw cuts are to be back filled with stone, compacted and repaired with a minimum of 2.5 inches of cold patch asphalt.

17. Paved cart paths and roadways must be bored to facilitate the installation wire and pipe 3-inch and smaller.

1.06 VALVES, AND VALVE ACCESS BOXES

A. General

1. The new isolation valve shall be AWWA approved, cast iron conduit type, bronze fitted, resilient seal wedge disc, non-rising stem with 2” square nut and belled hub connections for IPS PVC pipe.

2. Valve boxes shall be sized for specific valve application and depth of bury. Valve box covers shall be identified with the words "irrigation valve" on the cover. All covers shall be located at grade surface.

B. Materials

1. All new isolation valves shall be as manufactured by Waterous, Kennedy, Clow, Nibco or approved equal.

2. Access boxes shall be 10" valve pits per the plan details and as manufactured by Carson, Highline or approved equal.

3. Isolation valve covers shall be color coded green.

4. Electrical Splice box covers shall be color coded black.

C. Installation

1. All isolation valves shall be installed per the plan details.

2. Isolation valve box extensions shall be constructed in the field of 6-inch ADS pipe.
3. Isolation valve box extensions shall be notched to fit over the pipe.

1.07 BACKFILL

A. General

1. Backfill shall be suitable excavated material free from rock and debris.

2. Backfill shall be placed in the trench and removed from the existing turf using a minimum 60-inch rotary broom attached to a minimum 50 HP tractor / trencher.

3. All trenches shall be settled by compacting, in six-inch layers, immediately after the backfill has been placed. Care shall be taken not to disturb the pipe or its foundation.

4. All trenches shall be filled and turf restored the same day as they are opened with the exception of where and open excavation is required for continuation of work the following day. The open trench and the pipe shall be protected for safety and damage from vandalism.

1.09 CONCRETE

A. General

1. All horizontal and vertical bends on main lines shall be buttressed with poured concrete thrust blocks.

2. All horizontal and vertical bends on lateral lines shall be buttressed with poured concrete or prefabricated concrete block.

B. Materials

1. Concrete used for pipe buttresses, supports and field terminal mounting pads, shall be Class E, 6 bag mix.

C. Installation

1. Use of unmixed sackcrete bags for thrust blocks will not be accepted.

END OF SECTION
1.00 PURPOSE

A. The purpose of these specifications is to provide assembled and installed improvements to the existing irrigation system at Sunset Valley Golf Course. These improvements shall prove satisfactory in all aspects to the Park District of Highland Park hereafter referred as the Owner.

B. These specifications and Plan #2016130 sheets 1 and 2 dated November 16, 2016 as provided by T. J. Emmerich Associates, Inc., hereafter referred to as the Consultant, are to be considered part of the contract and are incorporated herein.

C. The Contractor shall follow the specifications with due perseverance.

1.01 SCOPE OF WORK

A. The contractor shall provide all required delivery, equipment, fuel, labor, materials, transportation, trucks, vehicles, lodging, meals and any/all other costs associated with the work described and required by this specification for completion of the work contained on the plans and in these specifications.

B. The work shall include all required pipe and fittings, isolation valves, sprinkler heads, field wiring and other related items or instrumentation, as required to meet the provisions of this specification and the plans for this project.

C. The existing irrigation system consists of tee, green, green perimeter and double row electric valve in head sprinklers. The irrigation piping is PVC.

D. The control system is Toro Site Pro with hard wired LTC plus field satellites. The existing control system shall continue to be used with the addition of field satellite expansion board as indicated on sheet 2 of the plans.

E. Unless otherwise specified, the plans and specifications are intended to include everything obviously requisite and necessary for the proper installation and completion of the work, whether each necessary item is mentioned herein or not.

F. These plans and specifications are intended to be complimentary and any item called for in one and not the other shall be as binding as if called for in both. If a discrepancy exists between an item called for in the plans and the specifications, the Owner shall designate which is to be installed.

G. By submitting a bid, the Contractor acknowledges that the plans and specifications are complete and sufficient to allow the Contractor to complete the project for the amount bid.

H. All work herein specified or called for on the drawings will be executed in accordance with all governing ordinances, laws and regulations that meet all local, state and national conditions and codes. Additionally, any changes and/or additions in the work
necessary to meet these ordinances, laws, regulations, and/or conditions will be made without additional cost to the Owner.

1.02 DESCRIPTION OF THE SYSTEM

Layout of the system shall be as shown on the drawing #2016130 sheets 1 and 2, dated November 16, 016 as prepared by T. J. Emmerich Associates, Inc., which forms a part of these specifications.

1.03 SITE INSPECTION

A. The Contractor shall fully acquaint themselves with the existing conditions relating to the installation of this system. They should fully inform themselves as to the facilities involved, or any difficulties and restrictions attending the performance of the contract.

C. The Contractor, by the execution of the bid form, shall in no way be relieved of any obligation under it due to their failure to receive or examine any form or legal document or to visit the site and acquaint themselves with the existing conditions. The Owner will be justified in rejecting any claim thereof.

D. By executing the bid form, the Contractor acknowledges that they have fully completed the foregoing investigations and are fully familiar with the project.

1.03 IRRIGATION CONTRACTOR QUALIFICATIONS

A. It is required that irrigation contractor for this project be actively engaged in the business of installing golf course irrigation systems and that they have completed no less than five, 18-hole, multiple row irrigation systems on existing turf within the past 5 years.

1.04 HANDLING OF CONTRACTOR'S MATERIAL AND EQUIPMENT

A. The Contractor shall provide and pay for all transportation required to deliver and remove from the site all materials and equipment, as required for all the work shown and specified.

B. All materials delivered to the job site will be the responsibility of the Contractor until installed and accepted by the Owner.

C. The Contractor shall be responsible for the protection and storage of all equipment and material delivered to the site.

1.05 EQUIPMENT, TOOLS AND LABOR

A. The Contractor shall furnish all such equipment, tools, and labor necessary to complete the work in an acceptable manner and to a speedy completion. This contract is based on the Contractor furnishing equipment, tools and labor, which are suitable to carry out this contract in a professional manner.
1.06 CODES AND INSPECTIONS

A. The entire installation shall fully comply with all local, state and national laws and ordinances and with all the established codes applicable thereto.

A. The Contractor shall be responsible for and take out all required permits, arrange for all necessary inspections and shall pay any fees and expenses in conjunction with the same as a part of the work under this contract.

1.07 OWNER’S SUPERVISION

A. The Owner and the Consultant assume no responsibility in the safety or supervision of the work involved in the execution of this contract beyond insuring, to the Owner's satisfaction, that the plans and specifications are being properly interpreted.

B. This supervision will not relieve the Contractor of any responsibility for the performance of their work in accordance with the plans and these specifications.

C. The Contractor shall employ a competent job site Supervisor and necessary assistants who shall be in attendance at the project site during the progress of the work. The job site Supervisor must have satisfactory experience and be approved by the Consultant. The successful bidder will submit a resume for review and approval.

D. The job site supervisor shall have a cellular phone and the telephone number shall be provided to the Owner and the Consultant.

1.08 CHANGES IN THE WORK

A. The Owner shall have the right to require alterations of, additions to, and deductions from, the work shown on the drawings or described in the specifications, from time to time, without rendering the contract void.

B. All such items will be covered in the form of a written change order issued by the Owner to the Contractor. Additions to or deductions from the contract amount that result from changes in the work, will be calculated per the unit price schedule on the bid form.

1.09 PROGRAMMING AND DRAWINGS OF RECORD

A. Drawing of record and programming of the central control system computer shall be the responsibility of the Irrigation Consultant.

1.10 WARRANTY

A. The Contractor warrants to the Owner that the materials used and furnished for the project will be new and that the work will be of good quality and free from defects.
B. System components carrying an extended warranty from their manufacturer shall be afforded to the Owner, through the Contractor. Successful bidder shall provide copies of any applicable manufactures' extended warranties.

C. For a period of one year, from the date of final acceptance of the work performed under this contract, the Contractor shall promptly furnish, without cost to the Owner, any and all parts and labor which prove defective in material or workmanship.

END OF SECTION
GENERAL SPECIFICATIONS

1.1 Summary of Work

1.1.1 The Work under the Contract shall consist of those items designated in the drawings and as specified in the Agreement between Owner and Contractor and as also specified in the following Divisions (specifications).

1.1.2 It is the intention of these specifications to supply the Contractor with the basic information necessary for a complete and operational park and recreational facility.

1.1.3 Specifications may make reference to specific product model numbers by specific manufacturers or they may make reference to specific performance requirements. The specifications used throughout these documents are absolute minimum requirements and under no circumstances will bids be accepted which do not meet these absolute minimum requirements.

1.3 Project Meetings

1.3.1 Prior to the execution of the Agreement between Owner and Contractor, a meeting will be scheduled in order that the Owner and Contractor may discuss any requirements of the Contract Documents which may need clarification, and to discuss the construction schedule.

1.3.2 Various other meetings may be scheduled by the Owner throughout the duration of the contract in order to discuss or to point out certain aspects of the work under the contract.

1.5 Submittals and Substitutions

1.5.1 Manufacturer's Literature pertaining to:

1) Installation Procedures  2) Maintenance Information  3) Warranty/Guaranty Information prior to installation shall be supplied by Contractor when asked for by Owner.

1.5.2 Shop Drawings may be required by Owner for the installation of manufacturer's equipment or materials. Shop drawings shall be approved by Owner prior to installation and "as built" drawings shall be supplied to the Owner by the Contractor as required by the Owner.

1.5.3 Unit Prices shall be submitted to the Owner prior to execution of the Agreement and shall include all materials and labor included in the Contract Documents. These Unit Prices shall be used as a basis for adjusting the contract sum by Change Order subsequent to execution of the Contract. In the event that the Contractor fails to include Unit Prices
or fails to submit Unit Prices or fails to submit Unit Price list before execution of the Contract, the Owner shall adjust the contract sum by Change Order in the amount he deems necessary for the materials and labor supplied by the Contractor.

1.5.4 Substitutions may be made only upon the Contractor's receiving written approval from the Owner for such substitutions. This requirement applies to those items specified as "or equal" in the drawings.

1.5.5 Timing of Submittals shall be made far enough in advance for Owner's review, approval and/or Contractor's revisions and resubmittals and for placing orders and securing deliveries. Allow ten days for Owner's review of all items.

1.5.5.1 Construction Timeline shall be as follows: April 1, 2017 through September 8, 2017.

1.5.6 Delays which occur as a result of tardiness in receipt of materials will not be an acceptable basis for extension of the Contract completion date.

1.5.7 Owner's Review shall not constitute a complete check but shall endeavor to guard the Owner against errors and omissions in the work under the Contract. It shall in no way relieve the Contractor of his responsibilities under the Contract.

1.7 Protection of Existing Facilities

1.7.1 Locating Existing Utilities shall be the responsibility of the Contractor. He shall notify all utilities of his intention to perform contracted work on the site. He shall not commence work until all utilities have been located.

1.7.2 Responsibility for Injury, Damage or Death as a result of disruption of existing utilities shall be the Contractor's. He shall have adequate insurance coverage as specified in the Agreement between Owner and Contractor, and he shall replace or repair utilities at his own expense if disruption occurs.

1.7.3 Existing Facilities shall not be disturbed in any way during work under the Contract except as specified in these Contract Documents. It shall be the responsibility of the Contractor to replace or repair any damage which may accidentally occur at his own expense. All repairs and/or replacement shall occur before final acceptance.

1.7.4 Existing Landscaping, including trees, shrubs, lawns shall be adequately protected by the Contractor so as to avoid destruction or damage to them as a result of operations under this Contract. Trees or shrubs damaged or destroyed by negligence of the Contractor or any of his employees shall be replaced at Contractor's expense. Replacement stock shall be of similar
size and age, shall be planted during the proper season and shall be subject
to the approval of the Owner.

1.9 Measurement

1.9.1 Dimensions of new facilities have been indicated in the drawings or have
been specified in the Contract Documents. For all practical purposes,
these shall be the exact dimensions of the facilities as build unless
otherwise approved by the Owner. All new construction shall be square
and/or level where appropriate and only the most precise and accurate
craftsmanship shall be accepted for all work.

1.9.2 Land Elevations may have been specified throughout the Contract
Documents. These shall be met in order to assure that the most precise
installation possible has been completed. The Contractor shall use only
the most precise surveyor's equipment for all elevation measurements.
The Owner may deem it necessary to check these elevations during the
course of construction.

1.11 Cleaning

1.11.1 Safety and Progress Cleaning - The Contractor shall be responsible for
safety cleaning and for progress cleaning which shall include, but is not
necessarily limited to the following:

A. Keep work free of dirt, rubbish, debris and scrap.

B. Backfill progressively after any underground utility installation.

C. Remove spills of oil, grease or other liquids immediately and
sprinkle with sand.

1.11.2 Final Cleaning shall occur prior to final inspection by the Owner. The
Contractor shall perform a thorough cleaning so as to put all work and
surroundings in a neat, finished condition which is ready for final
acceptance and for the use intended.

1.13 Final Inspection

1.13.1 The Work shall be inspected by the Owner. The Contractor shall give at
least 48 hours notice before final inspection is to occur. The finished work
shall comply with all of the requirements of these Contract Documents
and the facilities shall be ready for the Owner to use in the manner in
which it was intended.

1.13.2 A Punch List shall be prepared by the Owner in order that the Contractor
is made aware of any items which do not comply with the Contract
Documents. All of the items designated on the Punch List shall be
remedied prior to final payment.
1.15 **Final Payment** shall be made only after the following items have been completed by the Owner or the Contractor:

1) Contractor shall complete all work in accordance with the Contract Documents.

2) Contractor shall notify the Owner that the work has been completed in accordance with the Contract Documents and that it is ready for final inspection.

3) The Owner shall prepare a Punch List identifying any work items which do not comply with the Contract Document.

4) The Contractor shall submit to the Owner a request for payment (Form shall be supplied by Owner) and all of the required items shall be completed on the Form including: a) Waivers of Lien, b) Affidavits, c) any other requirements which the Owner may request. The Contractor shall submit completed forms and other requirements to the Owner at least ten (10) days prior to a regularly scheduled meeting of the Park District Board of Commissioners.

5) The Board of Commissioners of the Park District of Highland Park shall approve payment to the Contractor at one of their regularly scheduled meetings.

6) The Contractor shall demonstrate to the Owner that all items identified on the Punch List have been remedied and that all requirements of the Contract Documents have been met.

7) All payments shall be subject to the Park District's review and approval. Contractor shall submit payment requests to Owner with sufficient time to complete such review.

8) Waivers of Lien shall be supplied by the Contractor to the Owner using Chicago Title and Trust Form No. 1722 or Tops Form No. 3463.

9) Notarization of all documents shall be required.

1.17 All work under this contact shall be installed in strict compliance with the building code for the City of Highland Park, Illinois, whether or not the requirements stated therein have been mentioned specifically in the Contract Documents. The code which the Contractor is to follow shall be:

The BOCA Building Code (most current edition)
Building Officials & Code Administrator's International, Inc.
17926 South Halsted Street
Homewood, Illinois  60430
A copy of the building code shall be kept on-site by the Contractor and he shall refer to the code regarding all types of construction under this contract. The Contractor shall bring any non-compliance to the attention of the Owner. No additional compensation shall be given to the Contractor for work which is changed under this contract in order to comply with the building code.

1.18 Applicable Standards

1.18.1 Description:

1.18.1.1 Throughout the Contract Documents, reference is made to codes and standards which establish methods for testing and reporting on the pertinent characteristics.

1.18.1.2 Where materials or workmanship are required by these Contract Documents to meet or exceed the specifically named code or standard, it is the Contractor's responsibility to provide materials and workmanship which meet or exceed the specifically named code or standard.

1.18.1.3 It is also the Contractor's responsibility, when so required by the Contract Documents or by written request from the Architect or Owner's representative to deliver to the Architect or Owner's representative all required proof that the materials or workmanship, or both, meet or exceed the requirements of the specifically named code or standard. Such proof shall be in the form requested in writing by the Architect or Owner's representative and generally will be required to be copies of a certified report of tests conducted by a testing agency approved for that purpose by the Architect or Owner's representative.

1.18.1.4 Related work described elsewhere: Specific naming of codes of standards occurs on the drawings and in other sections of these specifications.

1.18.2 Quality Assurance

1.18.2.1 Familiarity with pertinent codes and standards: In procuring all items used in this work it is the Contractor's responsibility to verify the detailed requirements of the specifically named codes and standards and to verify that the items procured for use in this work meet or exceed the specified requirements.

1.18.2.2 Rejection of non-complying items: The Architect or Owner's representative reserves the right to reject items incorporated into the work which fail to meet the specified minimum requirements. The Architect or Owner's representative may take, to accept non-complying items subject to an adjustment in the contract amount as approved by the Architect or Owner's representative and the Owner.
Applicable standards listed in these specifications include, but are not necessarily limited to, standards promulgated by the following agencies and organizations:

AASHTO American Association of State Highway and Transportation Officials, 341 National Press Building, Washington, D.C. 20004

ACI American Concrete Institute, Box 19150, Redford Station, Detroit, Michigan 48219

AISC American Institute of Steel Construction, Inc., 1221 Avenue of the Americas, New York, NY 10020

ANSI American National Standards Institute (successor to USASI and ASA) 1430 Broadway, New York, NY 10018


AWWA American Water Works Association, Inc., 666 West Quincy Avenue, Denver, Colorado 80235

CRSI Concrete Reinforcing Steel Institute, 228 North LaSalle Street, Chicago, Illinois 60610

UL Underwriters' Laboratories, Inc. 207 East Ohio Street, Chicago, IL 60611

END OF SECTION
GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS

Wherever used in the General Conditions or in the other Contract Documents, the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

Addenda. Written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the bidding documents or the Contract Documents.

Agreement. The written agreement between OWNER and CONTRACTOR covering the Work to be performed, other Contract Documents are attached to or referenced by the Agreement and made a part thereof as provided therein.

Application for Payment. The form accepted by ENGINEER which is to be used by CONTRACTOR in requesting progress or final payment and which is to include such supporting documentation as is required by the Contract Documents.

Bidder. Any person, firm or corporation submitting a bid for all or any designated portion of the Work.

Bid. The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

Bonds. Bid, performance and payment bonds and other instruments of security.

Change Order. A written order to CONTRACTOR signed by OWNER authorizing an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time issued-after the effective date of the Agreement.

Contract Documents. The Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR'S Bid (including documentation accompanying the Bid and any post-Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Bond, these General Conditions, the Supplementary Conditions, the Specifications, the Drawings as the same are more specifically identified in the Agreement, together with all Modifications issued after the execution of the Agreement.

Contract Price. The moneys payable by OWNER to CONTRACTOR under the Contract Documents as stated in the Agreement.

Contract Time. The number of days (computed as provided in paragraph 17.2) or the date stated in the Agreement for the completion of the Work.

CONTRACTOR. The person, firm or corporation with whom OWNER has entered into the Agreement.

Day. A calendar day of twenty-four hours measured from midnight to the next midnight.
Defective. An adjective which, when modifying the word Work, refers to Work that is unsatisfactory, faulty or deficient, or does not conform to Contract Documents or does not meet the requirements of any inspection, test or approval referred to in the Contract Documents, or has been damaged prior to final payment.

DESIGNER. The person, firm or corporation named as such in the Agreement.

Drawings. The drawings which show the character and scope of the Work to be performed and which have been prepared or approved by DESIGNER or ENGINEER and are referred to in the Contract Documents.

Effective Date of the Agreement. The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

ENGINEER. The person, firm or corporation named as such in the Agreement.

Field Order. A written order issued by DESIGNER which orders minor changes in the Work in accordance with paragraph 10.2 but which does not involve a change in the Contract Price or the Contract Time.

Lump Sum. An amount stated in the Bid as a total price for all components of a particular construction item or project.

Modification. (a) A written amendment of the Contract Documents signed by both parties, (b) a Change Order, or (c) a Field Order. A modification may only be issued after the effective date of the Agreement.

Notice of Acceptance. Written notice from the Owner accepting the Project or portion thereof and stating the date upon which the Contractor's project warranty will begin.

Notice of Award. The written notice by OWNER to the apparent successful Bidder stating that upon compliance by the apparent successful Bidder with the conditions precedent enumerated therein, within the time specified, OWNER will sign and deliver the Agreement.

Notice to Proceed. The written notice by OWNER to CONTRACTOR (with a copy to Designer) fixing the date on which the Contract Time will commence to run and on which CONTRACTOR shall start to perform his obligation under the Contract Documents.

Owner. The public body or authority, corporation, association, partnership, or individual with whom CONTRACTOR has entered into the Agreement and for whom the Work is to be provided.

Product Data. Illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other printed information furnished by the Contractor to illustrate a material, product or system of some portion of the Work.

Project. The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.
Resident Project Representative. The authorized representative of DESIGNER who is assigned to the site or any part thereof.

Shop Drawings. All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by CONTRACTOR, a Subcontractor, manufacturer, fabricator, supplier or distributor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a manufacturer, fabricator, supplier or distributor and submitted by CONTRACTOR to illustrate material or equipment for some portion of the Work.

Specifications. Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative details applicable thereto, including descriptions, standards and requirements incorporated by reference in the Contract Documents.

Subcontractor. An individual, firm or corporation having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the site.

Substantial Completion. The Work (or a specified part thereof) has progressed to the point where it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it was intended. The terms "substantially complete" and "substantially completed" as applied to any Work refer to Substantial Completion thereof.

Supplementary Conditions. Supplements or modifications to these General Conditions as agreed by the parties, in writing. In case of any conflict between the terms or provisions of such Supplementary Conditions and these General Conditions, the Supplementary Conditions shall be controlling.

Supplier. Any person or organization who supplies materials or equipment for the Work including that fabricated to a special design, but does not perform labor at the site.

Unit Price. An amount stated in the Bid as a price per unit of measurement for materials or services as described in the Contract Documents.

Work. The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

ARTICLE 2 - PRELIMINARY MATTERS

2.1 Delivery of Bonds. When CONTRACTOR delivers executed Agreements to OWNER, with a copy to DESIGNER, CONTRACTOR shall also deliver to OWNER, with a copy to DESIGNER, such Bonds as CONTRACTOR may be required to furnish in accordance
with Paragraph 5.1.

2.2 OWNER shall furnish to CONTRACTOR up to three (3) copies (unless otherwise specified in the Agreement) of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.

2.3 Commencement of Contract Time: Notice to Proceed. The Contract Time will commence to run on the thirtieth day after the effective date of the Agreement, or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed; but in no event shall the Contract Time commence to run later than the ninetieth (90th) day after the day of Bid opening or the thirtieth (30th) day after the effective date of the Agreement. A Notice to Proceed may be given at any time within thirty (30) days after the effective date of the Agreement.

2.4 Starting the Project. CONTRACTOR shall start to perform the Work on the date when the Contract time commences to run, but no Work shall be done at the site prior to the date on which the Contract Time commences to run.

2.5 Before Starting Construction. Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and the reports and tests of sub-surface and latent physical conditions referenced therein, and check and verify pertinent figures shown thereon and all applicable field measurements. CONTRACTOR shall promptly report in writing to DESIGNER and ENGINEER any conflict, error or discrepancy which CONTRACTOR may discover.

2.6 Within ten (10) days after the effective date of the Agreement (unless otherwise specified in the Agreement), CONTRACTOR shall submit to DESIGNER for review and consultation an estimated progress schedule indicating the starting and completion dates of the various stages of the Work, a preliminary schedule of Shop Drawings submissions, and a preliminary schedule of values of the Work. The Progress Schedule shall include the following components: 1) A Precedence Diagram; 2) A schedule of values coordinated with the Precedence Diagram; and 3) A Methods Statement. CONTRACTOR shall clearly indicate construction methods and production rates for each critical or significant activity upon which timely completion of the project is dependent (each, a "Salient Feature"), and shall furnish satisfactory evidence of sufficient equipment, materials and labor to guarantee the completion of the project in accordance with the Contract Documents and within the time set forth in the Agreement.

The Precedence Diagram and coordinated schedule of values shall:

(i) Show the order in which the CONTRACTOR proposes to carry out the work, and the time span of activities for each Salient Feature;

(ii) Show the relationship in production vs. time of Salient Features to other Salient Features, the status of when a Salient Feature is controlling and when it is not, by difference descriptive plotting methods and the total time required to complete all work in the Contract Documents; and

(iii) Provide space on the original submission for at least one revision, and
space for insertion of actual work performed for each Salient Feature.

2.7 Before any Work at the site is started, CONTRACTOR shall deliver to OWNER, with a copy to DESIGNER, certificates (and other evidence of insurance requested by OWNER) which CONTRACTOR is required to purchase and maintain in accordance with paragraphs 5.3 and 5.4, and OWNER shall deliver to CONTRACTOR, with copies to DESIGNER certificates (and other evidence of insurance requested by CONTRACTOR) which OWNER is required to purchase and maintain in accordance with paragraphs 5.6.

2.8 Preconstruction Conference. Within twenty (20) days after the effective date of the Agreement, but before CONTRACTOR starts the Work at the site, a conference will be held for review and acceptance by OWNER of the schedules referred to in paragraph 2.6, to establish procedures for handling Shop Drawings and other submissions and for processing Applications for Payment, and to establish a working understanding among the parties as to the Work.

ARTICLE 3 - CONTRACT DOCUMENTS; INTENT AND REUSE

3.1 Intent. The Contract Documents comprise the entire Agreement between OWNER and CONTRACTOR concerning the Work. They may be altered only by a Modification. The CONTRACTOR may be furnished additional instructions and detail drawings by the DESIGNER and/or ENGINEER as necessary to carry out the Work required by the Contract Documents. The additional drawings and instructions thus supplied will become a part of the Contract Documents and will be subject to all of the terms and conditions thereof. The CONTRACTOR shall carry out the Work in accordance with the additional detail drawings and instructions.

3.2 The Contract Documents are complementary; what is called for by one is as binding as if called for by all. In case of conflicts between the Agreement and the General Conditions, the Agreement shall govern. In case of conflicts between the Drawings and Specifications, the Specifications shall govern. Figure dimensions on Drawings shall govern over scale dimensions and detail Drawings shall govern over General Drawings. Any discrepancies found between the Drawings and Specifications and site conditions or any inconsistencies conflicts, errors or ambiguities in the Contract Documents shall be reported immediately to the OWNER in writing, with copies to DESIGNER and ENGINEER. Any work performed by CONTRACTOR prior to receiving a written revision of the Contract Documents shall be done at CONTRACTOR'S sole risk and expense, assuming total responsibility for correction of the Work as required to conform to the revised Documents.

3.3 It is the intent of the Specifications and Drawings to describe a complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work that may be reasonably inferred from the Specifications or Drawings as being required to produce the intended result shall be supplied whether or not it is specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials or equipment, such words shall be interpreted in accordance with such meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the code of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual or code in effect at the time of opening of Bids (or, on the effective date of the Agreement if there were no Bids), except as may be
otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall change the duties and responsibilities of OWNER, CONTRACTOR, DESIGNER, or ENGINEER, or any of their agents or employees from those set forth in the Contract Documents. Clarifications and interpretations of the Contract Documents shall be issued by DESIGNER as provided for in paragraph 9.3.

3.4 The Contract Documents will be governed by the law of the place of the Project.

3.5 Reuse of Documents. Neither DESIGNER, ENGINEER, CONTRACTOR nor any Subcontractor, manufacturer, fabricator, supplier or distributor shall have or acquire any title to or ownership rights in any of the Drawings, Specifications or other documents (or copies of any thereof) prepared by DESIGNER or ENGINEER; and they shall not reuse any of them on extensions of the Project or any other Project.

ARTICLE 4 - AVAILABILITY OF LANDS: PHYSICAL CONDITIONS; REFERENCE POINTS

4.1 OWNER shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights--of-way for access thereto, and such other lands which are designated for the use of CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by OWNER, unless otherwise provided in the Contract Documents. If CONTRACTOR believes that any delay in OWNER's furnishing these lands or easements entitles him to an extension of the Contract Time, CONTRACTOR may make a claim there for as provided in Article 12. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.2 In preparation of the Drawings and Specifications, the DESIGNER and ENGINEER have relied upon such reports and tests of subsurface and latent physical conditions at the site or otherwise affecting cost, progress or performance of the Work as are specifically referred to in the Agreement. These reports are available at the OWNER's office and may be obtained during working hours for a nominal printing charge. These reports have been used solely for informational purposes during the preparation of Contract Documents. Such reports are not guaranteed as to accuracy or completeness and do not constitute in any way a part of said Contract Documents.

4.3 Reference Points. OWNER shall provide engineering surveys for construction to establish reference points which in his judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work (unless otherwise specified in the Contract Documents), shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to DESIGNER and ENGINEER whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for replacement or relocation of such reference points by
professionally qualified personnel.

ARTICLE 5 - BONDS AND INSURANCE

5.1 Performance and Other Bonds. CONTRACTOR shall furnish performance and payment Bonds, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all CONTRACTOR’S obligations under the Contract Documents. These Bonds shall remain in effect at least until one year after the date of final payment, except as otherwise provided by law. CONTRACTOR shall also furnish such other Bonds as are required by the Supplementary Conditions. All Bonds shall be in the forms prescribed by the bidding documents or Supplementary Conditions and be executed by such Sureties as (i) are licensed to conduct business in the state where the Project is located, and (ii) are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of the authority to act.

5.2 If the Surety on any Bond furnished by CONTRACTOR is declared a bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of clauses (i) and (ii) of paragraph 5.1, CONTRACTOR shall within five (5) days thereafter at CONTRACTOR’S sole cost, substitute another Bond and Surety, both of which shall be acceptable to OWNER.

5.3 Contractor Liability Insurance. CONTRACTOR shall purchase and maintain such comprehensive general liability and other insurance as will provide protection from claims set forth below which may arise out of or result from CONTRACTOR's performance of the Work and CONTRACTOR's other obligations under the Contract Documents, whether such performance is by CONTRACTOR, by any Subcontractor, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

5.3.1 Claims under worker's or workmen's compensation, disability benefits and other similar employee benefit acts;

5.3.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR's employees;

5.3.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR's employees;

5.3.4 Claims for damages insured by personal injury liability coverage which are sustained (i) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR, or (ii) by any other person for any other reason;

5.3.5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting there from; and
5.3.6 Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

The insurance required by this paragraph 5.3 shall include the specific coverage and be written for not less than the limits of liability and coverage provided in the Section 15 of the Agreement, or required by law, whichever is greater. The comprehensive general liability insurance shall include completed operations insurance. All such insurance shall contain a provision that the coverage afforded will not be cancelled, materially changed or renewal refused until at least thirty (30) days' prior written notice has been given to OWNER and DESIGNER. All such insurance shall remain in effect until final payment and at all times thereafter when CONTRACTOR may be correcting, removing or replacing defective Work in accordance with paragraph 13.11. In addition, CONTRACTOR shall maintain such completed operations insurance for at least two (2) years after final payment and furnish OWNER with evidence of continuation of such insurance at final payment and one year thereafter.

The OWNER, DESIGNER, and ENGINEER shall all be named as additional insured on the CONTRACTOR'S policies, and CONTRACTOR expressly acknowledges that a portion of the Contract Price constitutes full and adequate consideration for naming OWNER, DESIGNER and ENGINEER as additional insured’s. Such insurance shall be non-contributory and primary to any other insurance available to OWNER, DESIGNER and ENGINEER, regardless of its coverage or limits.

5.4 Contractual Liability Insurance. The comprehensive general liability insurance required by paragraph 5.3 will include contractual liability insurance applicable to CONTRACTOR's obligations under paragraphs 6.29 and 6.30. CONTRACTOR shall, in the event professional design services or certifications are required of CONTRACTOR, secure and maintain Professional errors and Omissions insurance coverage as required by the contract documents during the performance of the Contract and during any applicable statute of repose following the completion of the Contract.

5.5 Owner's Liability Insurance. OWNER shall be responsible for purchasing and maintaining his own liability insurance and, at his option, may purchase and maintain such insurance as will protect OWNER against claims which may arise from operations under the Contract Documents.

5.6 Property Insurance. Unless otherwise provided in the Agreement, OWNER shall purchase and maintain property insurance upon the Work at the site to the full insurable value thereof (subject to $10,000 deductible per incident). This insurance shall include the interests of OWNER, DESIGNER, CONTRACTOR and Subcontractors in the Work, shall insure against the perils of fire and extended coverage and shall include "all risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and such other perils as may be provided in the Agreement, and shall include damages, losses and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including fees and charges of engineers, architects, attorneys and other professionals). If not covered under the "all risk" insurance or otherwise provided in the Agreement, CONTRACTOR shall purchase and maintain similar property insurance on portions of the Work stored on and off the site or in transit when such portions of the work are to be included in an Application for Payment. The policies of insurance required to be purchased and
maintained by OWNER in accordance with paragraphs 5.5 and 5.6 shall contain a provision that the coverage afforded will not be canceled or materially changed until at least thirty (30) days' prior written notice has been given to CONTRACTOR.

5.8 OWNER shall not be responsible for purchasing and maintaining any property insurance to protect the interests of CONTRACTOR or Subcontractors in the Work to the extent of any deductible amounts that are provided in the Agreement. If CONTRACTOR wishes property insurance coverage within the limits of such amounts, CONTRACTOR may purchase and maintain it at his own expense.

5.9 If CONTRACTOR requests in writing that other special insurance be included in the property insurance policy, OWNER shall, if possible, include such insurance, and the cost thereof shall be charged to CONTRACTOR by appropriate Change Order. Prior to commencement of the Work at the site, OWNER will in writing, advise the CONTRACTOR whether or not such other insurance has been procured by OWNER.

5.10 Waiver of Rights. OWNER and CONTRACTOR waive all rights against each other and the Subcontractors and their agents and employees and against DESIGNER, ENGINEER and separate contractors (if any) and their subcontractors' agents and employees, for damages caused by fire or other perils to the extent covered by insurance provided under paragraphs 5.5 and 5.6, inclusive, or any other property insurance applicable to the Work, except such rights as they may have to the proceeds of such insurance held by OWNER as trustee. OWNER shall require similar written waivers from DESIGNER, ENGINEER and each separate contractor, and CONTRACTOR shall require similar written waivers from each Subcontractor (in accordance with paragraph 6.11 as applicable); each such waiver will be in favor of all other parties enumerated in this paragraph 5.10.

5.11 Receipt and Application of Proceeds. Any insured loss under the policies of insurance required by paragraphs 5.5 and 5.6 shall be adjusted with OWNER and made payable to OWNER as trustee for the insured's, as their interests may appear, subject to the requirements of any applicable financing documents covering the Work and of paragraph 5.12. OWNER shall deposit in a separate account any money so received, and he shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof and the Work and the cost thereof covered by an appropriate Change Order.

5.12 OWNER as trustee shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing fifteen (15) days after the occurrence of loss to OWNER's exercise of this power. If such objection be made, OWNER as trustee shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach.

5.13 Partial Utilization - Property Insurance. If OWNER finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, such use or occupancy may be accomplished in accordance with paragraph 14.10; provided that no such use or occupancy shall commence before the insurers providing the property insurance have acknowledged notice thereof and in writing effected the changes in coverage necessitated thereby. The Insurers providing the property insurance shall consent by endorsement on the
policy or policies, but the property insurance shall not be canceled or lapse on account of any such partial use or occupancy.

**ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES**

6.1 **Supervision and Superintendence.** CONTRACTOR shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction. CONTRACTOR shall be responsible to see that the finished Work complies accurately with the Contract Documents.

6.2 **CONTRACTOR shall keep on the Work at all times during its progress a competent resident Superintendent, who must be acceptable to Owner and shall not be replaced without written notice to OWNER, DESIGNER and ENGINEER except under extraordinary circumstances by another Superintendent who is acceptable to Owner. The Superintendent will be CONTRACTOR'S representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications given to the Superintendent shall be as binding as if given to CONTRACTOR.**

6.3 **Labor, Materials and Equipment.** CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Supplementary Conditions, all Work at the site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday without OWNER'S written consent given after prior written notice to OWNER and DESIGNER.

6.4 **CONTRACTOR shall furnish all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel power, light, heat, telephone, water and sanitary facilities and all other facilities and incidentals necessary for the execution, testing, initial operation and completion of WORK.**

6.5 **All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If requested by OWNER, DESIGNER, or ENGINEER, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment.**

6.6 **Equivalent Materials and Equipment.** Whenever materials or equipment are specified or described in the Drawings or Specifications by using the name of a proprietary item or the name of a particular manufacturer, fabricator, supplier or distributor, the naming of the item is intended to require the use of such item. If the name is followed by words expressly indicating that substitution is permitted, materials or equipment of other manufacturers, fabricators, suppliers or distributors may be accepted by OWNER, DESIGNER and ENGINEER to allow OWNER to determine that the material or equipment proposed is equivalent to that

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Requests for review of substitute items of material or equipment will not be accepted by OWNER from anyone other than CONTRACTOR. OWNER will be the sole judge of acceptability, and no substitute will be ordered or installed without OWNER's prior written acceptance. OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guarantee or other surety with respect to any substitute approved by OWNER. Whether or not OWNER accepts a proposed substitute, CONTRACTOR shall reimburse OWNER for the charges of DESIGNER and ENGINEER and their consultants for evaluating any proposed substitute.

6.8 CONTRACTOR shall not employ any Subcontractor or other person or organization (including those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, against whom OWNER, DESIGNER or ENGINEER may have reasonable objection. To that end, the Contractor shall supply to the OWNER in writing at the pre-construction conference, a complete list of all proposed subcontractors and major suppliers. A Subcontractor or other person or organization identified in writing to OWNER, DESIGNER and ENGINEER by CONTRACTOR prior to the Notice of Award and not objected to in writing by OWNER, DESIGNER or ENGINEER prior to the Notice of Award will be deemed acceptable to OWNER, DESIGNER and ENGINEER. Acceptance of any Subcontractor, other person or organization by OWNER, DESIGNER or ENGINEER shall not constitute a waiver of any right of OWNER to reject defective Work. If OWNER, DESIGNER or ENGINEER after due investigation has reasonable objection to any Subcontractor, other person or organization proposed by CONTRACTOR after the Notice of Award, CONTRACTOR shall submit an acceptable substitute and the Contract Price shall be increased or decreased by the difference in cost occasioned by such substitution, and an appropriate Change Order shall be issued. CONTRACTOR shall not be required to employ any Subcontractor, other person or organization against whom CONTRACTOR has reasonable objection.

6.9 CONTRACTOR shall be fully responsible for all acts and omissions of his Subcontractors and of persons and organizations directly or indirectly employed by them and of persons and organizations for whose acts any of them may be liable to the same extent that CONTRACTOR is responsible for the acts and omissions of persons directly employed by CONTRACTOR. Nothing in the Contract Documents shall create any contractual relationship between OWNER, DESIGNER or ENGINEER and any Subcontractor or other person or organization having an direct contract with CONTRACTOR, nor shall it create any obligation on the part of OWNER, DESIGNER or ENGINEER to pay or to see to the payment of any moneys due any Subcontractor or other person or organization, except as may otherwise be required by law. OWNER may furnish to any Subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to CONTRACTOR on account of specific Work done.

6.10 The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors of delineating the Work to be performed by any specific trade.

6.11 All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of OWNER, DESIGNER and ENGINEER and contains waiver provisions as required by
paragraph 5.10. CONTRACTOR shall pay each Subcontractor a just share of any insurance moneys received by CONTRACTOR on account of losses under policies issued pursuant to paragraphs 5.6 through 5.8.

6.12 **Patent Fees and Royalties.** CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or in the incorporation in the Work of any invention, design, process, product or devise which is the subject of patent rights or copyrights held by others. If a particular invention, design, product or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of OWNER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by OWNER in the Contract Documents. CONTRACTOR shall indemnify and hold harmless OWNER, DESIGNER and ENGINEER and anyone directly or indirectly employed by any of them from and against all claims, damages, losses and expenses (including attorneys' fees) arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device, and shall defend all such claims in connection with any alleged infringement of such rights.

6.13 **Laws and Regulations:** CONTRACTOR shall give all notices and comply with all laws, ordinances, rules and regulations applicable to the Work. If CONTRACTOR observes that the Specifications or Drawings are at variance therewith, CONTRACTOR shall give DESIGNER and ENGINEER prompt written notice thereof, and any necessary changes shall be adjusted by an appropriate Modification. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to such laws, ordinances, rules and regulations, and without such notice to DESIGNER and ENGINEER, CONTRACTOR shall bear all costs arising therefrom; however, ENGINEER shall assume joint and several responsibility to make certain that any of the Specifications and Drawings prepared or approved by ENGINEER are in accordance with such laws, ordinances, rules and regulations.

6.14 **Taxes:** CONTRACTOR shall pay all sales, consumer, use and other similar taxes required to be paid by him in accordance with the law of the place of the Project.

6.15 **Use of Premises:** CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workmen to areas permitted by law, ordinances, permits or the requirements of the Contract Documents, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment.

6.16 **During the progress of the Work,** CONTRACTOR shall keep the premises from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work, CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by OWNER. CONTRACTOR shall restore to their original condition those portions of the site not designated for alteration by the Contract Documents.

6.17 **CONTRACTOR shall not load nor permit any part of any structure to be loaded** in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.
6.18 **Record Documents:** CONTRACTOR shall keep one record copy of all Specifications, Drawings, Addenda, Modifications, Shop Drawings and samples at the site, in good order and annotated to show all changes made during the construction process. These shall be available to DESIGNER, ENGINEER and Owner’s Representative for examination and shall be delivered to OWNER upon completion of the Work.

6.19 **Safety and Protection:** CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

6.19.1 all employees on the Work and other persons who may be affected thereby,

6.19.2 all the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and

6.19.3 other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

CONTRACTOR shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and utilities when prosecution of the Work may affect them. All damage, injury or loss to any property referred to in paragraph 6.19.2 or 6.19.3 caused, directly or indirectly, in whole or in part, by CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them or anyone for those acts any of them may be liable, shall be remedied by CONTRACTOR (except damage or loss attributable solely to the fault of Drawings or Specifications or to the acts or omissions of OWNER, DESIGNER or ENGINEER or anyone employed by either of them or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of CONTRACTOR). CONTRACTOR’S duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and has delivered a Notice of Acceptance to CONTRACTOR.

6.20 **Emergencies:** In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, CONTRACTOR without special instruction or authorization from DESIGNER, ENGINEER, or OWNER, is obligated to act to prevent threatened damage, injury or loss. CONTRACTOR shall give ENGINEER and OWNER prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby.

6.22 **Shop Drawings and Samples:** After checking and verifying all field measurements, CONTRACTOR shall submit to DESIGNER AND ENGINEER for review and
approval, in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 2.6), five copies (unless otherwise specified in the Contract Documents) of all Shop Drawings, which shall have been checked and stamped with the approval of CONTRACTOR and identified as DESIGNER may require. The data shown on the Shop Drawings will be complete with respect to dimensions, design criteria, materials of construction and like information to enable DESIGNER and ENGINEER to review the information as required.

6.23 CONTRACTOR shall also, with such promptness as to cause no delay in Work, submit to DESIGNER and ENGINEER for review and approval all samples required by the Contract Documents. All samples will have been checked by and stamped with the approval of CONTRACTOR, identified clearly as to material, manufacturer, any pertinent catalog numbers and the use for which intended.

6.24 At the time of each submission, CONTRACTOR shall in writing call DESIGNER and ENGINEER'S attention to any deviations that the Shop Drawings or samples may have from the requirements of the Contract Documents.

6.25 DESIGNER or ENGINEER will review and approve with reasonable promptness Shop Drawings and samples, but DESIGNER'S review and approval shall be only for conformance with the design concept of the Project and for compliance with the design information given in the Contract Documents and ENGINEER'S review and approval shall only be for conformance with the engineering requirements of the Contract Documents. The review and approval of DESIGNER and ENGINEER shall not extend to means, methods, sequences, technique or procedures of construction or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in when the item functions. CONTRACTOR shall make any corrections requested by DESIGNER or ENGINEER, shall return the required number of corrected copies of Shop Drawings and resubmit new samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections requested by DESIGNER or ENGINEER on previous submissions. CONTRACTOR'S stamp of approval on any Shop Drawing or sample shall constitute a representation to OWNER, DESIGNER and ENGINEER that CONTRACTOR has either determined and verified all quantities, dimension, field construction criteria, materials, catalog numbers, and similar data or assumes full responsibility for doing so, and that CONTRACTOR has reviewed or coordinated each Shop Drawing or sample with the requirements of the Work and the Contract Documents.

6.26 Where a Shop Drawings or sample is required by the Specifications, no related Work shall be commenced until the submission has been reviewed and approved by DESIGNER or ENGINEER.

6.27 DESIGNER and ENGINEER'S review and approval of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any deviations from the Contract Documents unless CONTRACTOR has in writing called DESIGNER and ENGINEER'S attention to such deviation at the time of submission and DESIGNER and ENGINEER have given written concurrence and approval to the specific deviation, nor shall any concurrence or approval by DESIGNER or ENGINEER relieve CONTRACTOR from responsibility for errors or omissions in the Shop Drawings.
6.28 **Continuing the Work.** CONTRACTOR shall carry on the Work and maintain the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as CONTRACTOR and OWNER may otherwise agree in writing.

6.29 **Indemnification.** To the fullest extent permitted by law, CONTRACTOR shall indemnify and hold harmless OWNER, DESIGNER, and ENGINEER and their agents and employees, without contribution or apportionment of liability to such persons, from and against all claims, damages, losses and expenses, including, but not limited to, attorneys' fees arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of CONTRACTOR, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

6.30 In any and all claims against OWNER, DESIGNER or ENGINEER, or any of their agents or employees, by any employee of CONTRACTOR, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.29 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for CONTRACTOR or any Subcontractor under workers’ or workmen's compensation acts, disability benefit acts or other employee benefit acts.

6.31 The CONTRACTOR’S obligations under Section 6.29 include, without limitation, any cost and expense incurred by any of the Indemnified Parties (including reasonable attorneys’ fees) to enforce any of the Contractor’s indemnity or hold harmless obligations under this Contract.

**ARTICLE 7 - WORK BY OTHERS**

7.1 OWNER may perform additional work related to the Project by himself, or have additional work performed by utility service companies, or let other direct contracts there for which shall contain General Conditions similar to these. CONTRACTOR shall afford the utility service companies and the other contractors who are parties to such direct contracts (or OWNER, if OWNER is performing the additional work with OWNER'S employees) reasonable opportunity for the introduction and storage of materials and equipment and the execution of work, and shall properly connect and coordinate his Work with theirs.

7.2 If any part of CONTRACTOR'S Work depends for proper execution or results upon the work of any such other contractor or utility service company (or OWNER), CONTRACTOR shall inspect and promptly report to OWNER, DESIGNER and ENGINEER in writing any defects or deficiencies in such work that render it unsuitable for such proper execution and results. CONTRACTOR'S failure so to report shall constitute an acceptance of the other work as fit and proper for integration with CONTRACTOR'S Work.
7.3 CONTRACTOR shall do all cutting, fitting and patching of his Work that may be required to make its several parts come together properly and integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of OWNER and the others whose work will be affected. CONTRACTOR shall be responsible for any damage to work previously installed by any other Contractor, and in the event of any such damage, CONTRACTOR shall repair and/or replace such work to the satisfaction of OWNER and DESIGNER.

7.4 If the performance of additional work by other contractors or utility service companies or OWNER was not noted in the Contract Documents, written notice thereof shall be given to CONTRACTOR prior to starting any such additional work. If CONTRACTOR believes that the performance of such additional work by OWNER or others involves additional expense to CONTRACTOR or requires an extension of the Contract Time, CONTRACTOR may make a claim therefore as provided in Articles 11 and 12.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.1 OWNER shall provide DESIGNER with copies of all communications issued to CONTRACTOR, and shall advise DESIGNER regarding all oral communications to CONTRACTOR.

8.2 In case of termination of the employment of DESIGNER or ENGINEER, OWNER shall appoint a successor against whom CONTRACTOR makes no reasonable objection, whose status under the Contract Documents shall be that of the former DESIGNER or ENGINEER. Any dispute in connection with such appointment shall be subject to arbitration.

8.3 DESIGNER shall furnish Application for Progress Payments and Final Payment to the OWNER under the Contract Documents promptly and OWNER shall make payments to CONTRACTOR promptly after they are due as provided in paragraphs 14.4 and 14.13.

8.4 OWNER'S duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.1 and 4.4. Paragraph 4.2 refers to OWNER'S identifying and making available to CONTRACTOR copies of reports of investigations and tests of subsurface and latent physical conditions at the site or otherwise affecting performance of the Work which have been relied upon by DESIGNER or ENGINEER in preparing the Drawings and Specifications.

8.5 OWNER'S responsibilities in respect of purchasing and maintaining liability and property insurance are set forth in paragraphs 5.5 through 5.6.

8.6 In connection with OWNER'S rights to request changes in the Work in accordance with Article 10, OWNER (especially in certain instances as provided in paragraph 10.4) is obligated to execute Change Orders.

8.7 OWNER'S responsibility in respect of certain inspections, tests and approvals is set forth in paragraph 13.4.
8.8 In connection with OWNER'S right to stop Work or suspend Work, see paragraph 13.9 and 15.1. Paragraph 15.2 deals with OWNER'S right to terminate services of CONTRACTOR under certain circumstances.

8.9 Owner's Representative. OWNER shall designate in writing an individual to serve as its representative in connection with the performance of the Work and administration of the Contract Documents. Such Owner's Representative shall be duly authorized and empowered to execute documents and to take such other actions on behalf of OWNER as may be required by the Contract Documents. DESIGNER, ENGINEER and CONTRACTOR shall be entitled to rely upon the authority of the Owner's Representative unless notified in writing to the contrary by OWNER, and DESIGNER, ENGINEER and CONTRACTOR shall not be liable to OWNER for acts taken by them in reliance upon such authority, unless they have actual knowledge of any limitations on such authority.

ARTICLE 9 - DUTIES OF DESIGNER AND ENGINEER

9.1 During the construction process, DESIGNER will be responsible for assuring the integrity of the original design concepts of the golf course as set forth in the Contract Documents, and ENGINEER will be responsible for assuring the integrity of the engineering concepts as approved by ENGINEER in the Contract Documents. DESIGNER and ENGINEER will serve as consultants to OWNER in connection with the construction process and shall advise and assist the parties as provided in this Article 9. The duties and responsibilities of DESIGNER and ENGINEER as set forth in the Contract Documents shall not be extended without written consent of OWNER, DESIGNER and ENGINEER.

9.2 Visits to Site. DESIGNER and ENGINEER will be on site during various stages of construction as reasonably requested by Owner to observe the progress and quality of the executed Work and to determine if the Work is proceeding in accordance with the Contract Documents. DESIGNER’S and ENGINEER'S efforts will be directed toward providing for OWNER a greater degree of confidence that the completed work will conform to the Contract Documents. DESIGNER and ENGINEER will keep OWNER informed of the progress of the Work and will use their best efforts to inform OWNER regarding defects and deficiencies in the Work.

9.3 Clarifications and Interpretations. DESIGNER and ENGINEER will issue with reasonable promptness such written clarifications or interpretations of the Contract Documents (in the form of Drawings or otherwise) as the parties my reasonably request. The rights of the parties with respect to any such clarification or interpretation shall be governed by Paragraph 10.2, below.

9.4 Rejecting Defective Work. DESIGNER or ENGINEER may recommend that OWNER disapprove or reject Work which is defective, and may recommend that OWNER require special inspection or testing of the Work as provided in paragraph 13.8, whether or not the Work is fabricated, installed or completed.
9.5 Shop Drawings, Change Orders and Pavements. In connection with DESIGNER'S and ENGINEER'S responsibility for Shop Drawings and samples, see paragraphs 6.22 through 6.27 inclusive.

9.6 In connection with DESIGNER'S and ENGINEER'S responsibilities as to Change Orders see Article 10, 11 and 12.

9.7 In connection with DESIGNER'S AND ENGINEER'S responsibilities in respect of Applications for Payment, etc., see Article 14.

9.8 DESIGNER will be the initial interpreter of the requirements of the Contract Documents and shall, upon request, advise the parties concerning his judgment regarding the acceptability of the Work thereunder.

9.9 Limitations on Responsibilities. Neither the grant of authority to act under this Article or elsewhere in the Contract Documents to DESIGNER or ENGINEER nor any action or inaction by DESIGNER or ENGINEER in good faith in performance of their duties to OWNER shall give rise to any duty or responsibility of DESIGNER or ENGINEER to CONTRACTOR, any Subcontractor, any manufacturer, fabricator, supplier or distributor, or any of their agents or employees or any other person performing any of the Work.

9.10 Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed", or terms of the like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper" or "satisfactory" or adjectives of like effect or import are used to describe requirement, direction, review or judgment of DESIGNER or ENGINEER as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective never indicates that DESIGNER or ENGINEER shall have authority to supervise or direct performance of the Work or authority to undertake responsibility contrary to the provisions of paragraphs 9.12 or 9.13.

9.11 Neither DESIGNER nor ENGINEER will be responsible for CONTRACTOR'S means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto.

9.12 Neither DESIGNER nor ENGINEER will be responsible for the acts or omissions of CONTRACTOR or of any Subcontractors, or of the agents or employees of any CONTRACTOR or Subcontractor, or of any other persons at the site or otherwise performing any of the Work, but Designer and Engineer shall be responsible for inspecting and verifying, to the best of his knowledge, that the work conforms to the specifications.

ARTICLE 10 - CHANGES IN THE WORK

10.1 Without invalidating the Agreement, OWNER may, at any time or from time to time, order additions, deletions or revisions in the Work; these will be authorized by Change Orders. Upon receipt of a Change Order, CONTRACTOR shall proceed with the Work involved.
All such Work shall be executed under the applicable conditions of the Contract Documents. If any Change Order causes an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, the change order shall so provide.

10.2 DESIGNER may authorize minor changes in the Work not involving an adjustment in the Contract Price or the Contract Time, which are consistent with the overall design concept as set forth in the Contract Documents. These may be accomplished by a Field Order and shall be binding on OWNER, and also on CONTRACTOR, who shall perform the change promptly. However, in the event that the CONTRACTOR believes that a Field Order would justify an increase in the Contract Price or Contract Time or would be inconsistent with any part of the Contract Documents, CONTRACTOR shall notify OWNER and obtain OWNER'S written consent to the Field Order prior to performing such Order and shall thereafter apply for a Change Order as provided in Article 11 and Article 12. The Designer does not have the authority to request the CONTRACTOR to do any work contrary to requirements of the Contract Documents or to authorize any increase in the Contract price or Contract time without the written consent of OWNER. CONTRACTOR shall be solely responsible for all expenses, losses or damages incurred or caused by CONTRACTOR in reliance upon requests of the DESIGNER in the event that such requests exceed the limited authority granted by the OWNER under this section 10.2.

10.3 Additional Work performed without authorization of a Change Order will not entitle CONTRACTOR to an increase in the Contract price or an extension of the Contract time, except in the case of an emergency as provided in paragraph 6.21 and except as provided in paragraphs 10.2 and 13.9.

10.4 OWNER shall execute appropriate Change Orders prepared by DESIGNER or ENGINEER covering changes in the Work which are required by OWNER, or required because of unforeseen physical conditions or emergencies, or as otherwise specifically provided in the Contract Documents.

10.5 If notice of any change affecting the general scope of the Work or change in the Contract Price is required by the provisions of any Bond to be given to the Surety, it will be CONTRACTOR'S responsibility to so notify the Surety and the amount of each applicable Bond shall be adjusted accordingly. CONTRACTOR shall furnish proof of such adjustment to OWNER.

**ARTICLE 11 - CHANGE OF CONTRACT PRICE**

11.1 The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for performing the Work including all state and local sales and use taxes. All duties, responsibilities and obligations assigned to or undertaken by CONTRACTOR shall be at his expense without change in the Contract Price. All Work to be furnished by CONTRACTOR shall be on a "Turn Key" basis to OWNER, with CONTRACTOR furnishing all Work contemplated by any and all of the Contract Documents, including such Additional Work as may be reasonably inferred from the Contract Documents in order to deliver the Work to OWNER as a finished product. CONTRACTOR shall make such adaptations or adjustments in his Work as may reasonably be required to make its several parts fit together properly and suitable to receive or be received by work of other parties as shown in or implied.
from the Contract Documents. The foregoing shall apply, without limitation, to drainage work, sewer work, road work and any other work outside the golf course boundaries which affects the Work as described in the Contract Documents.

11.1.1 Where payment for an activity is stated as being on a "lump sum" basis, the Contract Price will be paid for completion of that activity as per the Contract Documents, including any Additional Work as needed for completion of the project.

11.1.2 Where payment for an activity is stated as being on a "unit price" basis, the Contract Price will be paid per unit actually performed, in place and in accordance with the requirements of the Contract Documents. Layout work, clearing and grubbing, grading, and all "burden" items identified in the specifications are considered as incidental to the Work and to be included proportionately in the Unit Price; no additional payment will be made for such items. CONTRACTOR will be expected to install the work at the unit prices quoted regardless of field changes which may become necessary as the Work progresses. DESIGNER reserves the right to add or deduct quantities of work or cut and fill locations, and CONTRACTOR agrees to install the Work at the unit prices quoted regardless of quantity or placement, except as provided in paragraph 11.4, below.

11.1.3 Any costs or expenses caused by defective or ill-timed Work shall be borne by the CONTRACTOR as part of the Contract Price, provided however, that this provision shall not impair any of CONTRACTOR'S rights against the person responsible for such Work. Neither OWNER nor DESIGNER shall be subject to any claim by CONTRACTOR or any subcontractor or supplier of CONTRACTOR arising out of defective or ill-timed Work by any person, and CONTRACTOR hereby agrees to indemnify and hold OWNER and DESIGNER harmless from any such claim. CONTRACTOR shall notify OWNER and DESIGNER of any potential cost, expense or claim due to the above causes as soon as possible, and CONTRACTOR shall not adjust the Work of any person without the prior written consent of OWNER.

11.2 The Contract Price may only be changed by a Change Order. Any claim for an increase in the Contract Price shall be based on written notice delivered to OWNER, with a copy to DESIGNER, within seven (7) days of the occurrence of the event giving rise to the claim. Notice of the amount of the claim with supporting data shall be delivered within thirty (30) days of such occurrence unless OWNER allows an additional period of time to ascertain accurate cost data. All claims for adjustment in the Contract Price shall be determined by OWNER after consultation with DESIGNER. Any change in the Contract Price resulting from any such claim shall be incorporated in a Change Order.

11.3 The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

11.3.1 Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved (subject to the provisions of paragraph 11.4); or otherwise
11.3.2 By mutual acceptance of a lump sum equitably related to the overall Contract Price.

11.4 Adjustment of Unit Prices. When the character or cost of the work covered by unit prices is materially altered (as defined in paragraph 11.4.1) from that stated in the original Contract Documents, the original unit bid prices may be adjusted by Change Order to compensate for either increased or decreased direct costs of performing the work. If, in the opinion of the CONTRACTOR or OWNER, the character of the Work or the unit costs thereof are materially changed, either party may submit a written request for adjustment to the other party, with a copy to DESIGNER, within the time allowed for submission of claims under Paragraph 11.2, above. The CONTRACTOR will furnish such documentation in support of or opposition to such claim as reasonably may be requested by OWNER within the time period allowed for documentation under Paragraph 11.2.

11.4.1 For purposes of determining the materiality of an alteration under paragraph 11.4, above, no adjustment shall be allowed unless the total quantity of an item required in connection with the entire Work, as altered, is in excess of one hundred twenty percent (120%) or less than eighty percent (80%) of a major contract item. For purposes of this section, a major contract item shall be any item of where the total bid price (consisting of the total original quantities of that item required by the Contract Documents multiplied by the original unit price stated in the bid) is in excess of five percent (5%) of the total Contract Price for all items of Work required by the Agreement.

11.4.2 Any adjustment of a unit price shall apply to all units of the adjusted item accepted by OWNER under the Agreement, and the CONTRACTOR shall accept as payment in full, so far as such items are concerned, payment at the adjusted contract unit prices for the accepted quantities of work done.

11.4.3 Except as provided in paragraphs 11.3 and 11.4, no allowance will be made by OWNER for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the CONTRACTOR, from unbalanced allocation of overhead expense among the contract items, or from any other cause. CONTRACTOR shall have no claim against OWNER by reason of any variation between the approximate quantities stated in the Contract Documents and the quantities of an item actually accepted by OWNER, except as specifically provided in paragraphs 11.3 and 11.4.

11.5 Cash Allowances. It is understood that CONTRACTOR has included in the Contract Price all cash allowances so named in the Contract Documents and shall cause the Work so covered to be done by such Subcontractors, manufacturers, fabricators,, suppliers or distributors and for such sums within the limit of the allowances as may be acceptable to OWNER. CONTRACTOR agrees that the original Contract Price includes such sums as CONTRACTOR deems proper for costs and profit on account of cash allowances. No demand for additional cost or profit in connection therewith will be allowed by OWNER.

ARTICLE 12 - CHANGE OF THE CONTRACT TIME
12.1 The Contract Time may only be changed by a Change Order. Any claim for an extension in the Contract Time shall be based on written notice delivered to OWNER, with a copy to DESIGNER, within seven (7) days of the occurrence of the event giving rise to the claim. Notice of the extent of the claim with supporting data shall be delivered to OWNER, with a copy to DESIGNER, within thirty (30) days of such occurrence unless OWNER allows an additional period of time to ascertain more accurate data. All claims for adjustment in the Contract Time shall be determined by OWNER after consultation with DESIGNER. Any change in the Contract Time resulting from any such claim shall be incorporated in a Change Order.

12.2 The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of CONTRACTOR if a claim is made therefore as provided in paragraph 12.1. Such delays shall include, but not be limited to, acts or neglect by OWNER or others performing additional Work as contemplated by Article 7, or to fires, floods, labor disputes, epidemics, abnormal weather conditions, or acts of God.

12.3 All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions of this Article 12 shall not exclude recovery for damages (including compensation for additional professional services) for delay by either party.

ARTICLE 13 - WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.1 Warranty and Guarantee. CONTRACTOR warrants and guarantees to OWNER and DESIGNER that all Work will be in accordance with the Contract Documents and will not be defective. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article 13.

13.2 Access to Work. OWNER, DESIGNER, ENGINEER and their representatives, and testing agencies and governmental agencies with jurisdictional interests, will have access to the Work at reasonable times for observation, inspection and testing of the Work or any part thereof. CONTRACTOR shall provide proper and safe conditions for such access.

13.3 Tests and Inspections. CONTRACTOR shall give OWNER and DESIGNER timely notice of readiness of the Work for all required inspections, tests or approvals.

13.4 If any law, ordinance, rule, regulation, code or order of any public body having jurisdiction requires any Work (or part thereof) to specifically be inspected, tested or approved, CONTRACTOR shall assume full responsibility therefore, pay all costs in connection therewith and furnish OWNER and DESIGNER the required certificates of inspection, testing or approval. CONTRACTOR shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with OWNER's acceptance of a manufacturer, fabricator, supplier or distributor of materials or equipment proposed to be incorporated in the Work, or of materials or equipment submitted for approval prior to CONTRACTOR's purchase thereof for incorporation in the Work. The cost of all other inspections, tests and approvals required by the Contract Documents shall be paid by OWNER (unless otherwise specified).
13.5 All inspections, tests or approvals other than those required by law, ordinance, rule, regulation, code or order of any public body having jurisdiction shall be performed by organizations acceptable to OWNER, DESIGNER and CONTRACTOR (or by ENGINEER if so specified).

13.6 If any Work that is to be inspected, tested or approved according to the Contract Documents is covered without written concurrence of OWNER and DESIGNER, it must, if requested by OWNER or DESIGNER, be uncovered for observation. Such uncovering shall be at CONTRACTOR's expense unless CONTRACTOR has given OWNER and DESIGNER timely notice of CONTRACTOR's intention to cover such Work and OWNER and DESIGNER have not acted with reasonable promptness in response to such notice. If any other Work is covered contrary to a written request by OWNER or DESIGNER to delay such covering in order to allow inspection or observation, it must be uncovered by CONTRACTOR upon demand of OWNER or DESIGNER for such inspection or observation, and such covering shall thereafter be replaced, all at CONTRACTOR's expense.

13.7 Neither observations by DESIGNER or ENGINEER nor inspections, tests or approvals by others shall relieve CONTRACTOR from his obligations to perform the Work in accordance with the Contract Documents.

13.8 Notwithstanding the absence of a prior request to delay the covering of any Work for observation, inspection or testing, CONTRACTOR shall uncover, expose or otherwise make available for observation, inspection or testing as OWNER, DESIGNER or ENGINEER may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, CONTRACTOR shall bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, including compensation for additional professional services, and an appropriate Change Order shall be issued to deduct such expenses from the Contract Price. If, however, such Work is not found to be defective, CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction if he makes a claim therefore as provided in Articles 11 and 12.

13.9 Owner May Stop the Work. If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workmen or suitable materials or equipment, OWNER may order CONTRACTOR to stop the Work or any portion thereof, until the cause for such order has been eliminated; however, that right of OWNER to stop the Work shall not give rise to any duty on the part of the OWNER to exercise this right for the benefit of CONTRACTOR or any other party.

13.10 Correction or Removal of Defective Work. If required by OWNER, CONTRACTOR shall promptly, without cost to OWNER, either correct any defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by OWNER, remove it from the site and replace it with non-defective Work.

13.11 One Year Correction Period. If within one (1) year after the date of Substantial Completion or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of
the Contract Documents, any Work is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions, either correct such defective Work, or, if it has been rejected by OWNER, remove it from the site and replace it with non defective Work. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or the rejected Work removed and replaced, and all direct and indirect costs of such removal and replacement, including compensation for additional professional services, shall be paid by CONTRACTOR.

13.12 Acceptance of Defective Work. If, instead of requiring correction or removal and replacement of defective Work, OWNER prefers to accept it, OWNER may do so, provided that such defect does not materially interfere with the design or aesthetic quality of the Work as created by DESIGNER. In such case, if acceptance occurs prior to final payment, a Change Order shall be issued incorporating the necessary revisions in the Contract Documents, including appropriate reduction in the Contract Price, or, if the acceptance occurs after such final payment, an appropriate amount shall be paid by CONTRACTOR to OWNER.

13.13 OWNER May Correct Defective Work. If CONTRACTOR fails within a reasonable time after written notice of ENGINEER to proceed to correct and to correct defective Work or to remove and replace rejected Work as required by OWNER in accordance with paragraph 13.10, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents (including any requirements of the progress schedule), OWNER may, after seven (7) days' written notice to CONTRACTOR, with a copy to DESIGNER, correct and remedy any such deficiency. In exercising his rights under this paragraph OWNER shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend CONTRACTOR's services related thereto, take possession of CONTRACTOR's tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER's employees, agents and representatives, such access to the site as may be necessary to enable OWNER to exercise his rights under this paragraph. All direct and indirect costs of OWNER in exercising such rights shall be charged against CONTRACTOR, and a Change Order shall be issued incorporating the necessary revisions in the Contract Documents and a reduction in the Contract Price. Such direct and indirect costs shall include, in particular, but without limitation, compensation for additional professional services required and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of CONTRACTOR's defective Work. CONTRACTOR shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by OWNER of OWNER's rights hereunder.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.1 Schedules. The CONTRACTOR shall be solely responsible for maintaining the Progress Schedule during the course of the Work. CONTRACTOR shall provide OWNER and DESIGNER with a copy of an updated Progress Schedule on a weekly basis, which updated
Schedule shall indicate the status of Work actually completed to date. Such updated Schedule may be provided by OWNER or DESIGNER to other persons involved with the Work as deemed appropriate. CONTRACTOR will notify OWNER and DESIGNER immediately of any cessation of the Work, stating the cause thereof. If the prosecution of the Work ceases for any reason, CONTRACTOR shall give OWNER and DESIGNER at least 24 hours advance notice of the resumption of its operations. Representatives of CONTRACTOR, OWNER and DESIGNER shall meet on a weekly basis to discuss CONTRACTOR's updated Progress Schedule and plan the current week's activities. Such representatives shall discuss all problems encountered with respect to the Progress Schedule, including any requests for deviations from such Schedule. At any time when CONTRACTOR is behind the planned Progress Schedule, the parties shall discuss appropriate methods for returning to the planned Schedule, including the commitment by CONTRACTOR to short term Progress Schedules designed to return to the original Progress Schedule.

14.2 Application for Progress Payment. At least ten (10) days after each progress payment falls due (but not more often than once a month), CONTRACTOR shall submit to DESIGNER for review an Application for Payment, filled out and signed by CONTRACTOR, covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents, including, without limitation, "as built" drawings required by the Agreement or Specifications. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by such data, satisfactory to OWNER, as will establish OWNER's title to the material and equipment and protect OWNER's interest therein, including applicable insurance. Each subsequent Application for Payment shall include an affidavit of CONTRACTOR stating that all previous progress payments received on account of the Work have been applied to discharge in full all of CONTRACTOR's obligations reflected in prior Applications for Payment. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

14.3 CONTRACTOR's Warranty of Title. CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER as the time of payment free and clear of all liens, claims, security interests and encumbrances (hereinafter in these General Conditions referred to as "Liens").

14.4 Review of Applications for Progress Payment. DESIGNER will, within ten (10) days after receipt of each Application for Payment, will present the Application to OWNER, with either a recommendation of payment or a written statement of DESIGNER's reasons for refusing to recommend payment. In the latter case, a copy of DESIGNER's statement shall be sent to CONTRACTOR, who may make any requested corrections and resubmit the Application to DESIGNER. OWNER shall, within ten days of presentation to him of the Application for Payment with DESIGNER's comments, either (i) pay CONTRACTOR the amount requested, or (ii) furnish CONTRACTOR and DESIGNER with a written statement for refusing such payment, which may incorporate such comments of DESIGNER as OWNER, in its sole discretion, may deem appropriate.

14.5 DESIGNER's recommendation of or refusal to recommend any payment requested in an Application for Payment shall be of an advisory nature only, and is intended to
indicate, to the best of DESIGNER's knowledge, information and belief, that the Work has
generated to the point indicated and that the quality and quantity of the Work corresponds to the
design concepts set forth in the Contract Documents (subject to an evaluation of the Work as a
functioning Project upon Substantial Completion, to the results of any subsequent tests called for
in the Contract Documents and any qualifications stated in the recommendation). However, by
recommending any such payment DESIGNER will not thereby be deemed to have represented
that the means, methods, techniques, sequences, and procedures of construction have been
reviewed or that any examination has been made to ascertain how or for what purpose
CONTRACTOR has used the moneys paid or to be paid to CONTRACTOR on account of the
Contract Price, or that title to any Work, materials or equipment has passed to OWNER free and
clear of any Liens. OWNER shall be responsible for calling to the attention of DESIGNER any
problems or deficiencies relating to the Work or to the performance of CONTRACTOR which
may become known to OWNER during the course of construction.

14.6 DESIGNER's recommendation of final payment shall indicate, to the best of
DESIGNER's knowledge, information and belief, that the conditions precedent to
CONTRACTOR's being entitled to final payment as set forth in paragraph 14.13 have been
fulfilled.

14.7 DESIGNER may refuse to recommend the whole or any part of any payment in
its absolute discretion if, in its opinion, such payment would not be justified under the
circumstances known to or believed by DESIGNER. Without limiting the generality of the
foregoing, DESIGNER may refuse to recommend any payment, or withdraw his prior
recommendation of any payment on the basis of newly discovered information, in a good faith
attempt to protect OWNER from loss which may arise in the event that:

14.7.1 the Work is defective, or completed Work has been damaged requiring correction
or replacement.

14.7.2 written claims have been made against OWNER or Liens have been filled in
connection with the Work,

14.7.3 the Contract Price has been reduced because of Modifications,

14.7.4 OWNER has been required to correct defective Work or complete the Work in
accordance within paragraph 13.13,

14.7.5 CONTRACTOR fails to satisfactorily prosecute the Work in accordance with the
Contract Documents, or

14.7.6 CONTRACTOR fails to make payment to Subcontractors, or for labor, materials
or equipment.

OWNER shall not be bound by any refusal of DESIGNER to recommend payment or
withdrawal of a prior recommendation, it being understood that OWNER may make payment
voluntarily at any time upon such representations or evidence of progress as it may deem to be
satisfactory. DESIGNER shall not be liable to CONTRACTOR or any person claiming by or
through CONTRACTOR for any refusal to recommend payment made pursuant to this paragraph
14.7.
14.8 Substantial Completion. When CONTRACTOR considers the entire Work ready for its intended use CONTRACTOR shall, in writing to OWNER and DESIGNER, certify that the entire Work is substantially complete and request that OWNER issue a certificate of Substantial Completion. Within a reasonable time thereafter, OWNER, CONTRACTOR, DESIGNER and ENGINEER shall make an inspection of the Work to determine the status of completion. If OWNER does not consider the Work substantially complete, OWNER will notify CONTRACTOR in writing giving his reasons therefore. If OWNER considers the Work substantially complete, OWNER shall, after consultation with DESIGNER and ENGINEER, deliver to CONTRACTOR a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to this certificate a tentative list of items to be completed or corrected before final payment. CONTRACTOR shall have seven days after receipt of the tentative certificate during which he may make written objection to OWNER, with a copy to DESIGNER and ENGINEER, as to any provisions of the certificate or attached list. Such objections shall be considered by OWNER and, after consultation with DESIGNER and ENGINEER, OWNER shall issue a definitive Certificate incorporating such changes as OWNER may deem appropriate under the circumstances. At the time of delivery of the certificate of Substantial Completion, DESIGNER will deliver to OWNER and CONTRACTOR a written recommendation as to division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, heat, utilities and insurance. OWNER and CONTRACTOR shall agree in writing as to the division of such responsibilities prior to the delivery by OWNER of a definitive certificate of Substantial Completion.

14.9 OWNER shall have the right to exclude CONTRACTOR from the Work after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the tentative list.

14.10 Partial Utilization. Use by OWNER of completed portions of the Work may be accomplished prior to Substantial Completion of all the Work subject to the following:

14.10.1 OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any part of the Work which OWNER believes to be substantially complete and which may be so used without significant interference with construction of the other parts of the Work. If CONTRACTOR agrees, CONTRACTOR will certify to OWNER and ENGINEER that said part of the Work is substantially complete and a certificate of Substantial Completion for that part of the Work will be prepared according to the procedure set forth in paragraph 14.8, above. OWNER shall have the right to exclude CONTRACTOR from any part of the Work which has been certified to be substantially complete, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items in the tentative list.

14.10.2 In lieu of the issuance of a certificate of Substantial Completion as to part of the Work, OWNER may take over operation of a facility constituting part of the Work whether or not it is substantially complete if such facility is functionally and separately usable; provided that prior to any such takeover, OWNER and CONTRACTOR have agreed in writing to the division of responsibilities between OWNER and CONTRACTOR for security, operation, safety, maintenance, correction period, heat, utilities and insurance with respect to such facility.
14.10.3 No occupancy of a part of the Work or taking over of operations of a facility will be accomplished prior to compliance with requirements of paragraph 5.14 in respect of property insurance.

14.11 Final Inspection. Upon written notice from CONTRACTOR that the Work is complete, OWNER, DESIGNER and ENGINEER will make a final inspection with CONTRACTOR, and OWNER will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies.

14.12 Final Application for Payment. After CONTRACTOR has completed all such corrections to the satisfaction of OWNER and delivered to OWNER all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents and all other documents required by the Contract Documents, and after OWNER has indicated that the Work is acceptable (subject to the provisions of paragraph 14.16), CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents and such other data and schedules as OWNER, DESIGNER or ENGINEER may reasonably require, together with complete and legally effective releases or waivers (satisfactory to OWNER) of all liens arising out of or filed in connection with the Work. In lieu thereof and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full; an affidavit of CONTRACTOR that the releases and receipts include all labor, services, material and equipment for which a Lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or his property might in any way be responsible, have been paid or otherwise satisfied; and consent of the Surety, if any, to final payment. If any Subcontractor, manufacturer, fabricator, supplier or distributor fails to furnish a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

14.13 Final Payment and Acceptance. If, upon presentation of CONTRACTOR's final application for payment by DESIGNER, OWNER is satisfied that the Work has been completed and CONTRACTOR has fulfilled all of his obligations under the Contract Documents, OWNER will, within ten (10) days after receipt of the final Application for Payment, send a notice of Acceptance to CONTRACTOR and DESIGNER stating the amount of the final payment to be made and that the Work is acceptable subject to the provisions of paragraph 14.16. Otherwise, OWNER will return the Application to CONTRACTOR, indicating in writing (with a copy to DESIGNER) the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application. OWNER shall pay CONTRACTOR the amount stated in the Notice of Acceptance within thirty (30) days of the date such Notice is given. If the CONTRACTOR overruns the contract time plus authorized extensions thereof, the cost to the OWNER of providing design, engineering and project management services, observation of construction, testing and inspection, and supervision of the Contract during the time overrun will be deducted from the final payment to the CONTRACTOR.

14.14 If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed, and if OWNER agrees, OWNER shall have the option, upon receipt of CONTRACTOR's final Application for payment and recommendation of ENGINEER, and without terminating the Agreement, to make payment of the balance due for that portion of the
Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.1, the written consent of the Surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to DESIGNER with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

14.15 Contractor's Continuing Obligations. CONTRACTOR's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by DESIGNER, nor the issuance of a certificate of Substantial Completion, nor any payment by OWNER to CONTRACTOR under the Contract Documents, nor any use or occupancy of the Work or any part thereof by OWNER, nor any act of acceptance by OWNER nor any failure to do so, nor the issuance of a notice of acceptance by OWNER pursuant to paragraph 14.13, nor any correction of defective Work by OWNER shall constitute an acceptance of Work not in accordance with the Contract Documents on a release of CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents.

14.16 Waiver of Claims. The making and acceptance of final payment shall constitute:

14.16.1 a waiver of all claims by OWNER against CONTRACTOR, except claims previously made in writing and still unsettled and claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to paragraph 14.11 or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, however, it shall not constitute a waiver by OWNER of any rights in respect of CONTRACTOR's continuing obligations under the Contract Documents, including but not limited to CONTRACTOR'S obligations to indemnify defend and hold OWNER, DESIGNER and ENGINEER harmless and to maintain all insurance required hereunder; and

14.16.2 a waiver of all claims by CONTRACTOR against OWNER other than those previously made in writing and still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.1 Owner May Suspend Work. OWNER may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety (90) days by notice in writing to CONTRACTOR and DESIGNER which shall fix the date on which Work shall be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR will be allowed an increase in the Contract Price or on extension of the Contract Time, or both, directly attributable to any suspension if he makes a claim therefore as provided in Articles 11 and 12.

15.2 Owner May Terminate. Upon the occurrence of any one or more of the following events:

15.2.1 if CONTRACTOR is adjudged a bankrupt or insolvent, 15.2.2 if CONTRACTOR makes a general assignment for the benefit of creditors,
15.2.3 if a trustee or receiver is appointed for CONTRACTOR or for any of CONTRACTOR's property.

15.2.4 if CONTRACTOR files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or similar laws,

15.2.5 if CONTRACTOR repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment,

15.2.6 if CONTRACTOR repeatedly fails to make prompt payments to Subcontractors or for labor, materials or equipment,

15.2.7 if CONTRACTOR disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction,

15.2.8 if CONTRACTOR disregards the authority of OWNER, or

15.2.9 if CONTRACTOR otherwise violates in any substantial way any provisions of the Contract Documents

OWNER may, after giving CONTRACTOR and his Surety seven (7) days' written notice, terminate the services of CONTRACTOR, exclude CONTRACTOR from the site and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site, or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Work, including compensation for additional professional services, such excess shall be paid to CONTRACTOR. If such costs exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such costs incurred by OWNER shall be incorporated in a Change Order, but in finishing the Work OWNER shall not be required to obtain the lowest figure for the Work performed.

15.3 Where CONTRACTOR's services have been so terminated by OWNER, the termination shall not affect any rights of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

15.4 Upon seven (7) days' written notice to CONTRACTOR, DESIGNER and ENGINEER, OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such case, CONTRACTOR shall be paid for all Work executed and any expense sustained plus reasonable termination expenses.

15.5 Contractor May Stop Work or Terminate. If, through no act or fault of CONTRACTOR, the Work is suspended for a period of more than ninety (90) days by OWNER or under an order of court or other public authority, or OWNER fails to act on any Application for Payment within thirty (30) days after it is submitted, then CONTRACTOR may, upon seven (7) days' written
notice to OWNER and DESIGNER, terminate the Agreement and recover from OWNER payment for all Work executed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Agreement, if OWNER has failed to act on any Application for Payment as aforesaid, CONTRACTOR may upon seven (7) days' notice to OWNER and DESIGNER stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve CONTRACTOR of his obligations under paragraph 6.28 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with OWNER.

ARTICLE 16 - ARBITRATION

16.1 All claims, disputes and other matters in question between OWNER and CONTRACTOR arising out of, or relating to the Contract Documents or the breach thereof, except for claims which have been waived by the making or acceptance of final payment as provided by paragraph 14.16, shall be decided by arbitration by a single arbitrator in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association then obtaining, subject to the limitations of this Article 16. Such arbitration shall take place in Washington County, Pennsylvania. The parties may utilize the services of the American Arbitration Association or any other alternative dispute resolution service to administer and conduct the arbitration. This agreement so to arbitrate and any other agreement or consent to arbitrate entered into as provided in this Article 16 will be specifically enforceable under the prevailing arbitration law of any court having jurisdiction.

16.2 Notice of the demand for arbitration shall be filed in writing with the other party to the Agreement and with the American Arbitration Association, and a copy shall be sent to DESIGNER for information. The demand for arbitration shall be made within a reasonable time after the claim, dispute or other matter in question has arisen, and in no event shall any such demand be made after institution of legal or equitable proceedings based on such claim, dispute or other matter in question would be barred by the applicable statute of limitations.

16.3 No arbitration arising out of or relating to the Contract Documents shall include by consolidation, joinder or in any other manner any other person or entity (including DESIGNER and ENGINEER, and their agents, employees or consultants) who is not a party to the Agreement (a "Third Party") unless:

16.3.1 the inclusion of such third party is necessary if complete relief is to be afforded among those who are already parties to the arbitration,

16.3.2 the OWNER or CONTRACTOR is involved in an existing dispute with such Third Party arising from a separate Agreement between OWNER or CONTRACTOR and such Third Party, which dispute involves a question of law or fact which is common to the arbitration proceedings commenced under paragraph 16.2, above, and which will arise in such proceedings, and

16.3.3 the written consent of the other person or entity sought to be included and of OWNER and CONTRACTOR has been obtained for such inclusion, which consent shall make specific reference to this paragraph; but no such consent shall constitute consent to arbitration of any dispute not specifically described in such
consent or to arbitration with any party not specifically identified in such consent.

The foregoing shall not prevent a party from compelling the attendance of DESIGNER, ENGINEER or their agents or employees as witnesses before the arbitration tribunal in accordance with its rules, provided however, OWNER and CONTRACTOR shall be jointly liable for reimbursement of the expenses of attendance of such persons and for payment for professional fees lost in connection with such attendance at a reasonable Per diem or hourly rate.

16.4 The award rendered by the arbitrators will be final; judgment may be entered upon it in any court having jurisdiction thereof, and will not be subject to modification or appeal except to the extent permitted by Sections 10 and 11 of the Federal Arbitration Act (9 U.S.C. SS10,11).

ARTICLE 17 - MISCELLANEOUS

17.1 Giving Notice. OWNER, CONTRACTOR, DESIGNER and ENGINEER shall each designate in writing the name and business address of an individual officer or agent to whom all written notices and other correspondence required under the Contract Documents may be directed. Whenever any provision of the Contract Documents requires the giving of notices, it shall be deemed to have been validly given if delivered by hand, or sent prepaid by overnight courier or certified mail, to the designated person at the designated address. The parties may change the designated name or address at any time upon ten (10) days written notice given to the other parties as provided herein.

17.2 Computation of Time. When any period of time is referred to in the Contract Documents by days, it shall be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day shall be omitted from the computation.

17.3 The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular, but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR by paragraphs 6.29, 13.1, 13.11, 13.14, 14.3 and 15.2 and all of the rights and remedies available to OWNER, DESIGNER and ENGINEER thereunder, shall be in addition to, and shall not be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by law or contract, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph shall be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. All representations, warranties and guarantees made in the Contract Documents shall survive final payment and termination or completion of this Agreement.

17.4 Taxes and Charges. The CONTRACTOR shall pay all state and local sales and use taxes on such items, and in such manner as required by the laws and statutes of the State where the Project is located and its political subdivisions, and shall be responsible for payment such other levies, duties, fees, sales or excise taxes or charges as may be applied by any government authority to any purchase made by CONTRACTOR in connection with the Work. The CONTRACTOR shall withhold and pay any and all withholding taxes, whether state or federal,
and pay all Social Security charges and also all state unemployment compensation charges, and pay or cause to be withheld, as the case may be, any and all taxes, charges, or fees or sums whatsoever, which are now or may hereafter be required to be paid or withheld under any laws applicable to CONTRACTOR, its business or the Work to be performed.

END OF SECTION