



Addendum No. 1
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DATE: May 3, 2016

Joliet Junior College
1215 Houbolt Road
Joliet, IL 60431

TO: Prospective Bidders
SUBJECT: Addendum No. 1
PROJECT NAME: Multipurpose Center Synthetic Turf
JJC PROJECT NO.: B16018

This Addendum forms a part of the Bidding and Contract Documents and modifies the original bidding document as posted on the JJC website. Acknowledge receipt of this addendum in the space provided on the Bid Form. FAILURE TO DO SO MAY SUBJECT BIDDER TO DISQUALIFICATION.

Bid Document Modification:

1. The synthetic turf specifications are included in this addendum.

End of addendum #1

SECTION 325200 - SYNTHETIC TURF

PART 1 - GENERAL

1.1 WORK

- A. Section includes: Furnishing, delivery, installation and warranty of a complete synthetic turf system.

1.2 REFERENCES

- A. ATSM Standard Test Methods
 1. D1577 – Standard Test Method for Linear Density of Textile Fiber
 2. D5848 – Standard Test Method for Mass Per Unit Area of Pile Yarn Floor Covering
 3. D418 – Standard Test Method for Testing Pile Yarn Floor Covering Construction
 4. D1338 – Standard Test Method for Tuft Bind of Pile Yarn Floor Coverings
 5. D1682 – Standard Method of Test for Breaking Load and Elongation of Textile Fabrics
 6. D5034 – Standard Test Method of Breaking Strength and Elongation of Textile Fabrics (Grab Test)
 7. F1015 – Standard Test Method for Relative Abrasiveness of Synthetic Turf Playing Surfaces
 8. F1551 – Standard Test Methods for Water Permeability
 9. D2859 – Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials
 10. F355 – Standard Test Method for Shock-Absorbing Properties of Playing Surfaces
 11. F1936 – Standard Test Method for Shock-Absorbing Properties of North American Football Field Playing Systems as Measured in the Field
 12. D1557 – Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort.
- B. ASBA Sports Fields Contractor Manual
- C. Carpet & Rug Institute suggested guidelines.
- D. STC Suggested Guidelines for the Essential Elements of Synthetic Turf Systems

1.3 SITE EXAMINATION

- A. A 24 Hour Relaxation Period is recommended before gluing down turf to prevent shrinking and /or expanding after glue down. IDEAL temperatures should be above 70 degrees.
- B. When turf is delivered: Check its texture, color, and style; make sure there are no visible defects before installation. Be sure the installer will adhere to the CRI 105 installation methods. Among other things, it requires for proper installation that turf must be power-stretched to minimize wrinkling and rippling. Seam edges must be sealed with appropriate

adhesive to prevent delaminating and edge ravel.

- C. Floor Preparation (when not using seaming tape): Each subfloor shall be inspected to determine the special care required to make it a suitable foundation for turf. All cracks 1/8 inch (3 mm) wide or protrusions over 1/32 inch (.8 mm) should be filled or leveled.
- D. Temperature and Humidity: The environment in which the turf is to be installed must be controlled with the temperature between 65* F and 95* F and the relative humidity between 10% and 65%. If installing over concrete, the slab temperature should not be less than 65* F. These conditions must be maintained for at least 48 hours before, during, and 48 hours after the installation.
- E. Concrete:
 - 1. Concrete shall be steel troweled smooth to a tolerance of 1/4" in any 10' radius. High spots shall be ground level, and low spots filled in with approved leveling compound to the full approval of the flooring contractor.
 - 2. Concrete shall be cured, clean, and dry. If the turf is to be installed using an adhesive, the concrete shall be free of paint, dirt, grease, oil, curing or parting agents, and other contaminants, including sealers, that may interfere with the bonding of the adhesive. Whenever a powdery or porous surface is encountered, a primer compatible with the adhesive shall be used to provide a suitable surface for the glue-down installation.
 - 3. Patching of cracks and depressions shall be made with appropriate and compatible latex or polymer fortified patching compound. Do not exceed manufacturer's recommendations for patch thickness. Large patched areas must be primed.
- F. Moisture Testing (when not using seaming tape): Concrete floors, even with adequate curing time, can present an unacceptable moisture condition by allowing excessive amounts of moisture vapor to pass through to the surface. This can be a problem even on suspended concrete floors. All concrete floors should be tested for moisture emission rate by utilizing an anhydrous calcium chloride moisture test kit available from installation supplies and accessories distributors. This quantitative method is very precise and must be conducted carefully, with strict attention to the test kit manufacturer's detailed instructions. Moisture emission rate is expressed in lbs/1000 sq. ft. /24 hours. Because the calcium chloride test for emission rate requires 3 days to conduct, proper installation planning is a must. As a general guideline, an emission rate of 3 lbs (1.4 kg) or less is acceptable for most turf. In the range from 3 lbs to 5 lbs (1.4 to 2.3 kg), carpet with porous backings can usually be installed successfully; but the risk of moisture-related problems increases. Since some floor covering products are less tolerant of moisture than others, always consult the individual manufacturer to determine the emission rate for specific products. When any or all corrective procedures have been completed, the finished sub-floor surface must be re-inspected, with the same representatives attending as the initial inspection. If required, additional repair and inspections are to be conducted until the sub-floor surface is deemed acceptable by the Engineer and Synthetic Turf Installer.
- G. Once the sub-floor surface has been deemed acceptable, the Contractor shall submit a written certificate indicating the acceptance of:
 - 1. The sub-floor construction finished surface as totally suitable for the application of the selected synthetic turf system, and;
 - 2. The sub-floor construction as totally suitable for work under this section to proceed with the final installation and fully warrant the athletic surface installation for the period and conditions specified herein.

- H. Commencement of work under this section shall constitute acceptance of the work completed under other sections by the Contractor, acceptance of dimensions of the sub-floor, and hence, no claims for extra work based upon these conditions will be permitted.

1.4 ENVIRONMENTAL CONDITIONS

- A. The environment in which the turf is to be installed must be controlled with the temperature between 65* F and 95* F and the relative humidity between 10% and 65%. If installing over concrete, the slab temperature should not be less than 65* F. These conditions must be maintained for at least 48 hours before, during, and 48 hours after the installation
- B. Install product only when prepared sub-floor is suitably free of dirt, dust, and petroleum products, is moisture free and sufficiently secured to prevent unwanted pedestrian and vehicular access.

1.5 QUALITY CONTROL

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section. The Turf Manufacturer:
 - 1. Must be experienced in the manufacturing of synthetic grass systems with the same fiber as specified.
 - 2. Manufacturer must be a member in good standing with the STC.
 - 3. Manufacturer must utilize best practices as certified by ISO-9001 and ISO-14001.
- B. Installer Qualifications: Company specializing in performing the work of this section.
 - 1. The Synthetic Turf Installer must provide competent workmen skilled in this type of synthetic grass installation. All technicians must have installed tall pile synthetic turf.
 - 2. The designated Supervisory Personnel on the project must be certified, in writing by the Turf Manufacturer, as competent in the installation of this material, including seaming and proper installation of the infill mixture.
 - 3. Installer to follow CRI (Carpet and Rug Institute) guidelines.
- C. Prior to the beginning of installation, the Synthetic Turf Installer shall inspect the sub-floor. The installer will accept the sub-floor in writing when the general contractor provides test results that are in compliance with the synthetic turf manufacturer's recommendations and as stated herein.
 - 1. The Synthetic Turf Installer shall provide the necessary testing data to the Owner that the finished field meets the required initial shock attenuation, as per ASTM F1936.
 - 2. Remove defective Work, whether the result of poor workmanship, defective products or damage, which has been rejected by the Engineer as unacceptable. Replace defective work in conformance with the Contract Documents.

1.6 SUBMITTALS

- A. Sub-floor Conditions Acceptance:

1. Prior to installation of the synthetic turf system, the Contractor is to submit in writing an acceptance of the sub-floor as being acceptable by the turf manufacturer and suitable for the successful installation of the proprietary synthetic turf system, as described under article 1.3 - Site Examination.
- B. Product Data:
1. Submit the exact product name/description.
 2. Submit manufacturer's recommended installation information.
 3. A letter and specification sheet certifying that the products of this section meet or exceed specified requirements.
 4. Certified copies of independent (third-party) laboratory reports on ASTM tests as follows (ASTM test submittals may vary by no more than ¼" and 6 oz. of the specified basis-of-design product):
 - a. Pile Height, Face Width & Total Fabric Weight, ASTM D418 or D5848
 - b. Primary & Secondary Backing Weights, ASTM D418 or D5848
 - c. Tuft Bind, ASTM D1335
 - d. Grab Tear Strength, ASTM D1682 or D5034
 - e. Verification that product meets Pill test minimums for ASTM D-2859 for life of installation.
- C. LEED Submittals:
1. Product Data for Credit IEQ 4.1: For adhesives and sealants, documentation including printed statement of VOC content.
- D. Samples:
1. Submit three (3) samples, 12"x12" minimum size, illustrating details of finished product.
 2. Fiber Colors: Submit (3) samples of the full available color palette for selection.
- E. Quality Control:
1. Name and experience of the designated supervisory personnel assigned to this project shall be submitted with the proposal. Changes to this assignment after contract can only be made if approved in writing by the Owner. Include a listing of other on-site personnel and their experience.
- F. Sample Warranty:
1. The Synthetic Turf Installer and the Turf Manufacturer shall provide complete information on its warranty/insurance policy and coverage. Provide a complete sample copy of all warranty documentation.
- G. Shop Drawings:
1. Shop drawings are to be submitted for review by the Architect prior to manufacture of product and are to contain information regarding locations of seams, anchorage details, goal post/insert details, line and event marking locations and dimensions, turf roll widths and dimensions.
- H. Maintenance Data:

1. Submit Maintenance Manuals, which will include all necessary instructions for the proper care and preventative maintenance of the synthetic turf system.
 2. Include descriptions of all equipment recommended for the maintenance and repair of turf product, as well as a list of any activities not recommended relative to the warranty.
- I. Project Record Documents:
1. Record actual locations of seams, drains or other pertinent information.
- J. Maintenance Contract:
1. Enter into a contract with the Owner to provide annual operations and maintenance assistance for two (2) years. Provide contract, contact information and schedule first visit. Quarterly each year provide operations and maintenance that includes:
 - a. On-site inspection analysis of seams, infill, inlay, edge, and field inserts.
 - b. The contractor shall sweep and groom the field at each quarterly visit.
 - c. Synthetic turf report with results of inspection analysis, photos, results of cleaning process, recommendations for future cleaning/maintenance.
 - d. The Contractor must execute an annual operations and maintenance assistance contract before substantial completion can be approved.
- K. Test Results:
1. Submit test certifications issued by an independent testing agency that the synthetic surface meets with the requirements of the ASTM tests noted herein.

1.7 WARRANTY

- A. The Contractor shall provide a minimum five (5) year warranty policy by the manufacturer, against defects in materials and workmanship. Defects shall include, but not be limited to ultraviolet ray fading, degradation, or excessive wear of fiber.
- B. Limited Warranty shall be for replacement of any damaged product within the warranty period. Warranty shall be comprehensive and sufficient to replace entire field if necessary.
- C. Warranty shall become effective from the date of substantial completion.
- D. The Warranty shall contain no usage limits for warranted field.
- E. Submit Manufacturer Warranty and ensure that forms have been completed in Owner's name and registered with Manufacturer.
- F. Supply Insurance Certificate with complete information on contacting the Insurance Carrier should a claim need to be made. Product/Warranty insurance policy shall have the Owner listed as insured.

PART 2 - PRODUCTS

2.1 SUPPLIER QUALIFICATIONS

- A. The Synthetic Turf Installer shall have been in business for at least 5 years, actively selling, installing and maintaining sports flooring.
- B. The Synthetic Turf Installer must provide a list of references based on previous installations.
- C. The Synthetic Turf Installer must be a member in good standing with the ASBA (Athletic Sports Builders Association).
- D. Installation team shall be established, insured installation firm experienced as a premium turf installer with suitable equipment and supervisory personnel, with a minimum of 5 years' experience.
- E. Installation team shall be trained and certified, in writing, by the turf manufacturer, as competent in the installation of the specified material, including seaming and proper installation of the infill mixture.

2.2 PRODUCT

- A. Basis-of-design Product: Subject to compliance with requirements, provide Sporturf; Fast Grass AT755 synthetic turf system, or comparable product by one of the following:
 - 1. A-Turf, Inc.; SportTurf Cushion Supreme.
 - 2. AstroTurf, LLC; Puregrass 8mm.
 - 3. Synthetic Turf International; Pro Ball Turf.
- B. The Owner shall make the final determination as to whether any product submitted will be accepted as comparable to the basis-of-design product listed.

2.3 SYNTHETIC TURF SYSTEM DESIGN PARAMETERS

- A. Provide a synthetic turf system with the following:
 - 1. Non-infill system.
 - 2. Coating Type: minimum 5mm polyurethane foam.
 - 3. Fabric Construction: Tufted.
 - 4. Fibers: Using slit-film yarn.
 - a. Primary yarn: Polyethylene, Polypropylene, or Nylon.
 - b. Secondary yarn: texturized, nylon or polypropylene.
 - 5. Roll widths: Minimum 12' wide.
 - 6. A portion of the turf area (as shown on Drawings) must be removable, using velcro attachments, to accommodate telescoping bleachers.

2.4 TURF SYSTEM

- A. Turf Fiber:
 - 1. The turf fiber shall be non-abrasive and a minimum of 100 microns thick.
 - 2. The turf fiber must contain less than 100 ppm of lead in all colors.
 - 3. The turf fibers must be from the same dye lots.
 - 4. The turf fibers must be guaranteed for a period of Eight Years not to fade or fail (as distinguished from a change in texture) or have a pile height decrease to 50% of pile height as result of UV degradation.
 - 5. The turf fiber must retain a minimum of 75% of its original fibril width after 10,000 cycles on the Lisport Studded Roll Test Machine.
- B. Turf roll seams: to be glued on site so that no openings larger than the porous backing mat openings are created. All turf fabric edges to be securely bound as per the perimeter detail design.
- C. Fabric surface: shall be constructed and installed in minimum widths of 12 feet with no longitudinal or transverse seams. Seams shall be minimum 12'-0" apart. Rolls that do not comply with the proper length or conform to the seaming diagram, as approved prior to installation, shall be rejected from the site. No fitted pieces shall be allowed to true alignment. Parallel seams only are acceptable in the main playing areas.
- D. The entire system shall be resistant to weather, including ultra-violet light and heat degradation; insects, rot, mildew and fungus growth and be non-allergenic and non-toxic.
- E. The turf material shall be non-combustible and pass the DIN standard Pill Burn test or ASTM D 2859.

2.5 SYNTHETIC GLUE MATERIAL

- A. Adhesives shall meet the VOC limits set in LEED IEQ credit 4.1 for New Construction.
- B. Adhesives for joining seams of turf together shall be product recommended in writing by synthetic turf manufacturer.
- C. Any adhesive products required for the installation of a proposed turf system shall be purpose-suited to the system. The material and application methods shall be as recommended by the adhesive manufacturer.
- D. Disposal of adhesive containers and unused adhesives as well as any fees resulting from such disposal shall be the responsibility of the installing contractor.

PART 3 - EXECUTION

3.1 GENERAL

- A. Installation of the synthetic turf system is to comply with the manufacturer's recommendations, requirements and the reviewed and approved shop drawings.

- B. Perform all work in strict accordance with the Contract Documents and the manufacturer's specifications and instructions. Only those skilled technicians proposed in the bid phase are to be assigned to this project by the Contractor.
- C. The designated Supervisor for the Synthetic Turf Installer must be present during any and all construction activity associated with the field installation, including testing, cleanup and training.
- D. All products and equipment are to be from sources approved by the authorized turf manufacturer and conform to the specifications.

3.2 PRODUCT DELIVERY, STORAGE & HANDLING

- A. Deliver products to site in original containers and wrappers as agreed between the Engineer and Contractor. Inspect products upon delivery for damage.
- B. Store products in a location and in a position that protects them from crush damage or any other defects.
- C. Handle and store (on and off site) all materials safely to ensure their physical properties are not adversely affected and that they are not subject to vandalism or damage.
- D. Adhesives shall arrive in dry, sealed containers.

3.3 TURF INSTALLATION

- A. Install synthetic turf system in accordance with the manufacturer's written installation instructions.
- B. All inlaid areas shall have full fastenings and no loose areas. At no time can pulling on the section separate the material.
- C. Turf shall be attached to the perimeter edge as shown in the construction plans and as per the manufacturer.
- D. All terminations shall be as detailed and approved in the shop drawings.

3.4 CLEANING AND COMPLETION

- A. Protect all installed work from other construction activities as installation progresses.
- B. The Contractor shall keep the area clean throughout the construction period and free from the installation process.
- C. Upon completion of the installation, thoroughly clean surfaces and site of all refuse resulting from the installation process.
- D. Any damage to existing fixtures or facilities resulting from the installation of the synthetic turf system shall be repaired to original condition at the Contractor's expense prior to Substantial Completion and commencement of the Warranty Period.

- E. A deficiency list will be produced by the Architect at the conclusion of the project. All installation project deficiencies not in dispute must be remedied by the Contractor prior to the issuance of a certificate of Substantial Completion.
- F. Contractor to provide a written acceptance by the Turf Manufacturer that the turf and base system is installed in accordance with their recommendations prior to final completion.