

SECTION 02620  
SUBSURFACE DRAINAGE  
(SYNTHETIC DRAINAGE SYSTEM)

PART 1 – GENERAL

1.01 SUMMARY

- A. Section includes: Underdrain for Synthetic Turf System
  
- B. Related Sections:
  - 1. Section 02610 – Pipe and Fittings
  - 2. Section 02720 – Storm Sewer Systems

1.02 REFERENCES

- A. American Standard for Testing and Materials (ASTM)
  - 1. ASTM D-1621 Standard Test Method for Compressive Strength of Drainage Core
  - 2. ASTM D-4716 Standard Test Method for Determining Flow Rate of Underdrain
  - 3. ASTM D-4491 Standard Test Method for Determining Permeability of Geotextile
  - 4. ASTM D-4833 Standard Test Method for Determining Puncture Resistance of Geotextile
  - 5. ASTM D-3786 Standard Test Method for Determining Burst Strength of Geotextile
  - 6. ASTM D-4751 Standard Test Method for Determining Apparent Opening Size of Geotextile
  - 7. ASTM D-4355 Standard Test Method for Determining Ultraviolet Resistance of Geotextile

1.03 DEFINITIONS

- A. Terms – Taken from ASTM D-4439
  - 1. Geotextile: Any permeable textile used with foundations, soil, rock, earth, or any other geotechnical material, as an integral part of man-made product, structure, or system.
  - 2. Normal Direction: Direction perpendicular to the plane of a geotextile.
  - 3. Permittivity: Volumetric flow rate of water per unit cross sectional area per unit head under laminar flow conditions, in the normal direction through a geotextile.
  - 4. Permeability: Rate of flow of a liquid under a differential pressure through a material.
  - 5. Transmissivity: Flow or amount of liquid water per foot of material width passing through composite system at certain maximum soil pressure against geotextile at defined hydraulic gradient.

1.04 SUBMITTALS

- A. Product Data: Manufacturer's product data and installation instructions.
  - 1. Contact Manufacturer for installation instructions specific for field base.

- B. Samples: Submit minimum 12" x 12" product sample.
- C. Test Reports: Submit test reports from an independent testing laboratory to verify that product meets or exceeds specified physical properties.

#### 1.05 QUALITY ASSURANCE

- A. Prior to installation of J-DRain Turfcore, review all installation instructions and details with an authorized representative of JDR ENTERPRISES, INC.
- B. Installation to be performed by certified installer or factory representative present.

#### 1.06 DELIVERY, STORAGE, AND HANDLING

- A. Packaging and shipping: Provide materials in original unopened containers with manufacturer's labels intact and legible.
- B. Acceptance at site:
  - 1. Unload materials and check for damage.
  - 2. Damaged materials determined by visual inspection will not be accepted.
  - 3. Remove rejected materials from site immediately.
- C. Storage and protection.
  - 1. Store materials in dry area in manufacturer's protective packaging.
  - 2. Store materials under cover, off ground and protect from extended sunlight.

### PART 2 – PRODUCTS

#### 2.01 MANUFACTURED UNITS

- A. Acceptable manufacturers:
  - 1. Products specified as standard of quality (J-DRain Turfcore) manufactured by:  
JDR ENTERPRISES, INC., 292 South Main Street, Suite 200,  
Alpharetta, Georgia 30009. Telephone: 800-843-7569 or  
770-442-1461. Fax: 770-664-7951. Website: [www.j-drain.com](http://www.j-drain.com)
  - 2. J-DRain Accessories:
    - a. Splice Sheet: For splicing J-DRain Turfcore end to end.
    - b. Splice Fabric: For covering butt joint splices and overlap splices
    - c. Double sided tape: For securing overlapping fabric to create a monolithic surface with J-Drain Turfcore.
    - d. Anchor Pins: For holding J-DRain Turfcore in place for installation of turf.
  - 3. Physical Properties – Drainage Core
    - a. Polypropylene dimple core heat bonded to non-woven geotextile.
    - b. Flow Rate: 23 gpm/ft width @ gradient = .1
    - c. Compressive Strength: 21,000 psf
      - 1. Support fully loaded Emergency Vehicle (16,000 lbs.) with point load of 85 psi.
    - d. Drainage blanket will have core incorporating flex control joints

4. Physical Properties – Geotextile
  - a. Puncture: 65 lbs.
  - b. Mullen Burst: 210 psi
  - c. AOS: 70 U.S. Sieve
  - d. Permeability of geotextile: 140 gpm/sf
  - e. Ultraviolet resistance: 70% at 500 hours
  
5. Roll properties:
  - a. Roll Length: made to order up to 275 ft.
  - b. Roll Width: 4 ft. or 8 ft.
  - c. Roll Weight: .2 lbs/square ft. – TBD by roll size

## PART 3 – EXECUTION

### 3.01 EXAMINATION

- A. Verifications of site conditions:
  1. Verify that site is properly prepared for installation of J-DRain Turfcore.
  2. Complete all excavation, fill, filter fabric placement, sideline trenches and headers, placement of course and fine aggregates, and leveling and compaction.

### 3.02 INSTALLATION

- A. All installation details and instructions are in strict accordance with the details and instructions of JDR ENTERPRISES, INC.

### 3.03 TURF INSTALLATION

- A. Turf installation should be in strict accordance with details and instructions of Turf Manufacturer.
- B. Minimum of 4-6 lbs. per square foot of infill required.