

TENNESSEE HIGH SCHOOL ATHLETIC FACILITY

TRACK & FIELD DRAINAGE — 300 LINEAR FEET INSTALLED

SWIFTDRAIN 6" PRE-SLOPED TRENCH DRAIN | ADA-COMPLIANT GRATES | COMPLETED 2021



[K-12 Athletic Infrastructure](#) | [6" Channel](#) | [Pre-Sloped & Neutral Sections](#) | [Tennessee, USA](#)

Athletic facilities require drainage systems capable of managing high-volume stormwater runoff while maintaining safe, accessible surfaces for athletes, coaches, and spectators. Running tracks present a unique set of drainage challenges — large exposed surface areas, curved geometry, synthetic surfacing, and constant foot traffic all demand a purpose-built solution. In 2021, Swift Drain supplied 300 linear feet of its 6-inch pre-sloped trench drain system to a Tennessee high school athletic facility, providing durable stormwater management along the track perimeter.

PROJECT OVERVIEW

Project: High School Track & Field Drainage
Location: Tennessee, USA
Facility: K-12 Athletic Track & Field Facility
Industry: K-12 Athletic Infrastructure
System: Swift Drain 6" Pre-Sloped Trench Drain
Total Drainage: 300 Linear Feet
Channel Width: 6 Inches
Configuration: Pre-sloped channels with neutral sections
Grates: ADA-compliant pedestrian grates
Completed: 2021

THE DRAINAGE CHALLENGE

Running tracks present drainage conditions that standard commercial systems are not designed to handle:

- Large unobstructed surface areas generate high-volume runoff during rainfall
- Synthetic track surfaces must remain safe and traction-ready for athletes
- Curved oval geometry requires flexible or linear drain configurations
- Heavy maintenance equipment creates load demands on grate surfaces
- ADA accessibility must be maintained throughout the facility
- Year-round outdoor exposure demands long-term structural durability

INSTALLED — TRACK PERIMETER DRAINAGE



Swift Drain 6" pre-sloped trench drain installed along the inner edge of the running track — Tennessee high school athletic facility, 2021

SWIFTDRAIN SYSTEM SUPPLIED

Swift Drain configured a modular linear trench drain system tailored to the track's perimeter drainage requirements, combining pre-sloped channels, neutral sections, and ADA-compliant grates.

SYSTEM SPECIFICATIONS

Product: Swift Drain 6" Pre-Sloped Trench Drain
Channel Width: 6 inches
Slope Type: Factory pre-sloped + neutral channel sections
Total Installed: 300 linear feet
Configuration: Linear drainage run — track perimeter
Grate Type: ADA-compliant pedestrian grates
Radius Option: Radius couplers available for curved installations
Project Year: 2021

TENNESSEE HIGH SCHOOL TRACK — SYSTEM DESIGN & PRODUCT DETAIL

Swift drain 6" Pre-Sloped Trench Drain | ADA Grates | Radius Coupler System | design@swift drain.com

INSTALLED DRAIN — TRACK EDGE DETAIL



Athletes at the Tennessee high school track — Swift drain trench drain visible in background, bottom-right

LINEAR PRE-SLOPED CONFIGURATION

The Tennessee installation used a straight linear drainage run positioned along the track perimeter. This configuration combined two channel types to achieve efficient water management:

PRE-SLOPED CHANNELS

Factory-manufactured with a built-in internal pitch that directs water toward the outlet without any field grading:

- Predictable, consistent hydraulic performance
- No manual slope adjustment required during installation
- Faster installation — grade is engineered at manufacture
- Reliable water flow velocity toward outlet points

NEUTRAL CHANNELS

Flat-bottom sections that extend the drainage run once the required elevation has been established by the pre-sloped sections:

- Maintain correct system elevation along extended runs
- Allow the drainage line to continue at consistent grade
- Compatible with pre-sloped sections in the same run

RADIUS COUPLER SYSTEM — PRODUCT DETAIL



Swift drain radius coupler system — flexible connections between channel sections allow trench drain to follow curved track geometry

RADIUS COUPLERS FOR CURVED TRACKS

While this Tennessee project used a linear drainage configuration, Swift drain systems can be fully adapted for curved track installations using radius couplers — providing approximately 3° of angular adjustment at each connection point.

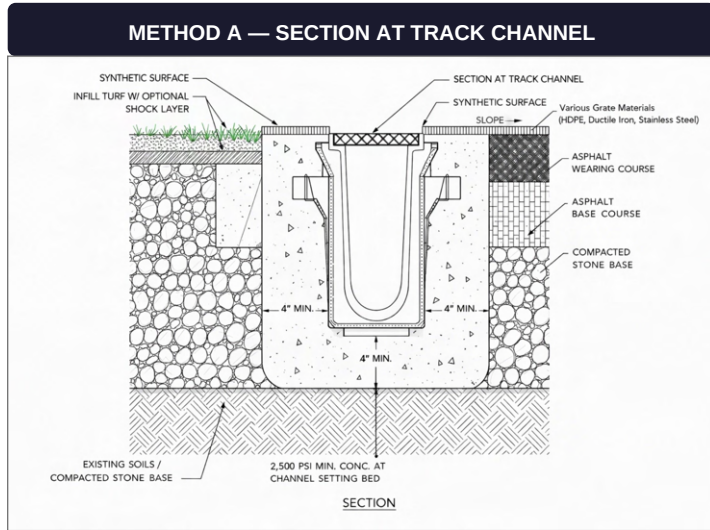
- ~3° of angular adjustment per coupler connection
- Multiple couplers chain together for greater curvature
- 10 couplers = 30° of arc | 30 couplers = 90° of arc
- Full 400-meter oval perimeter drainage achievable
- Same channel sections used for both straight and curved runs

FLEXIBLE SYSTEM — TWO INSTALLATION MODES

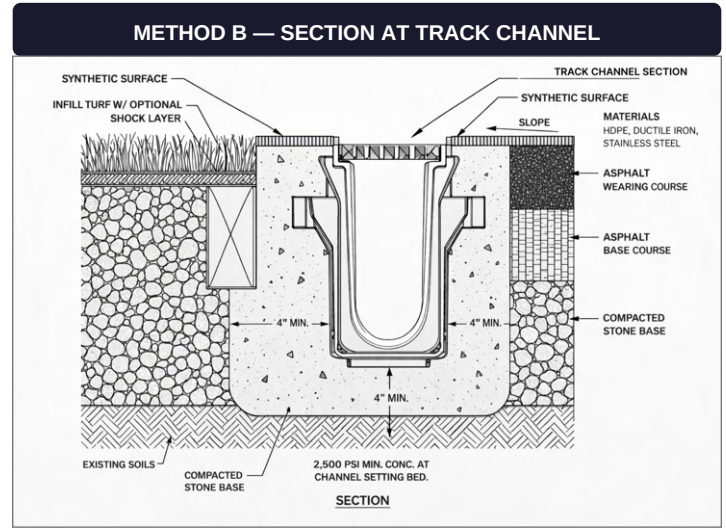
The Swift drain 6" pre-sloped system is engineered for both linear and curved track drainage. The linear configuration intercepts runoff along straight sections or perimeter edges. With radius couplers added, the same system follows the semicircular ends of a 400-meter running track — providing complete perimeter drainage without switching products.

SWIFTDRAIN TRACK CHANNEL — INSTALLATION CROSS-SECTIONS

The following engineering section drawings illustrate the two standard installation configurations for Swift drain trench drains in athletic track applications. Both methods embed the channel in a 2,500 PSI minimum concrete setting bed with 4" minimum clearance on all sides, and integrate flush with the synthetic track surface and adjacent asphalt layers.



Color-rendered section: synthetic track surface, infill turf, asphalt wearing & base course, compacted stone base, and 2,500 PSI concrete channel setting bed — Swift drain track drain installation standard



Engineering line-drawing section: HDPE/ductile iron/stainless steel grate options, synthetic surface integration, compacted stone base, and concrete surround dimensions

INSTALLATION REQUIREMENTS

- 2,500 PSI minimum concrete at channel setting bed
- 4" minimum concrete clearance on all sides of channel
- Channel top flush with synthetic track surface finish
- Compacted stone base beneath concrete surround
- Slope directed toward channel from adjacent surface

COMPATIBLE GRATE MATERIALS

- HDPE (High-Density Polyethylene) — lightweight, corrosion-resistant
- Ductile Iron — heavy-duty load rating for maintenance vehicles
- Stainless Steel — premium corrosion resistance for outdoor exposure
- ADA-compliant slot profiles across all grate material options

CONCRETE SURROUND — WHY IT MATTERS

- Locks the channel in position — prevents movement under load
- Transfers surface loads around the channel body to the subbase
- Ensures flush finish between grate top and synthetic track surface
- Minimum 2,500 PSI spec prevents cracking under maintenance equipment

TENNESSEE HIGH SCHOOL TRACK — RESULTS & SWIFTDRAIN CAPABILITIES

Pre-Sloped Trench Drain | ADA Grates | Athletic Infrastructure | design@swift drain.com

INSTALLED SYSTEM — TRACK PERIMETER



300 linear feet of Swift Drain 6" pre-sloped trench drain — ADA-compliant grates flush with track surface, Tennessee, 2021

PROJECT RESULTS

The Swift Drain trench drain installation delivered a complete stormwater management solution for the Tennessee track facility:

- ✓ 300 linear feet of 6" pre-sloped trench drain installed
- ✓ ADA-compliant grates — safe for athletes, coaches, spectators
- ✓ Pre-sloped channels — consistent drainage without field adjustment
- ✓ Neutral channel sections extending system at correct elevation
- ✓ Linear configuration intercepting track perimeter runoff
- ✓ Durable construction for outdoor year-round athletic use
- ✓ Radius coupler system available for future curved installations

ADA COMPLIANCE — BUILT IN

Every Swift Drain grate supplied for the Tennessee project meets ADA accessibility standards. Narrow slot openings prevent wheels, heels, and mobility devices from becoming trapped — ensuring safe pedestrian access for athletes, coaches, and spectators throughout the facility at all times.

WHY SWIFTDRAIN FOR ATHLETIC TRACKS

The Tennessee project showcases Swift Drain's core advantages for K-12 and collegiate athletic track drainage:

- Factory pre-sloped channels — reliable drainage, no field grading
- ADA-compliant grates — pedestrian and athlete safe
- Modular design — install exactly where drainage is needed
- Radius coupler option — curved track perimeter drainage
- 6" channel width — handles high-volume track surface runoff
- Polymer construction — weather, UV, and chemical resistant

SWIFTDRAIN SERVES INDUSTRIES INCLUDING:

- * **K-12 Athletic Facilities:** Tracks, fields, courts, gymnasiums
- * **Collegiate & University:** Stadiums, sports complexes, rec centers
- * **Municipal & Parks:** Public parks, recreation facilities, trails
- * **Retail & Commercial:** Big-box retail, shopping centers, parking
- * **Healthcare & Veterinary:** Hospitals, clinics, animal care facilities
- * **Industrial & Warehouse:** Loading docks, manufacturing, distribution

SWIFTDRAIN — BUILT FOR ATHLETIC PERFORMANCE

- Pre-sloped and radius coupler systems for any track geometry
- ADA-compliant grates standard across all athletic applications
- 300+ LF single-project capacity — ships nationwide
- Trusted by K-12, collegiate, and municipal athletic facilities

400M RUNNING TRACK — SWIFTDRAIN TRENCH DRAIN SHOP DRAWING

World Athletics / IAAF Standard | Outer & Inner Perimeter Drain Placement | Radius Coupler System | design@swift drain.com

IAAF / WORLD ATHLETICS STANDARD 400M TRACK — DRAINAGE LAYOUT REFERENCE

The following shop drawing illustrates Swift drain 6" pre-sloped trench drain placement for a standard 400-meter running track per World Athletics / IAAF specifications. The system can be configured as a straight linear run (as installed at this Tennessee project) or as a full perimeter radius system using radius couplers (~3° per joint). Drain placement shown at outer perimeter (primary) and optional inner infield edge. Most surface manufacturers shown for reference — Swift drain is compatible with most polyurethane and rubber track systems.



Typical end cap is cut to size and placed at high side of run



Cap to be placed at channel #1 in sequence

