



---

# Fundamentals of Field Events

## The Vertical Jumps

John Lilygren

Master Official, Vertical Jumps

Pacific Association



# Outline

- Overview of Vertical Jumps: High Jump & Pole Vault
  - High Jump and Pole Vault Basic Rules
  - Time Limits for initiating an attempt
  - Definitions of Foul Attempts
- Safety
  - Venue inspection and preparation
- Venue Set-Up Procedures
- Procedures for conducting a safe competition
- How to score a Vertical Jump competition
  - Tie Breaking procedures
  - Jump-Off procedures



# Comparison of HJ & PV Venues



**HIGH JUMP**

**POLE VAULT**





# High Jump & Pole Vault Basics

	High Jump			Pole Vault		
Crossbar Length	4.0 meters			4.5 meters		
Number of Attempts	Unlimited until 3 misses in row			Unlimited until 3 misses in row		
Opening height	Athlete's choice			Athlete's choice		
Height progression	Set by Games Committee			Set by Games Committee		
Height increments	IAAF/USATF	NCAA	High School	IAAF/USATF	NCAA	High School
Open	5 cm	5 cm	2 in	15 cm	15 cm	6 in
Combined Events	3 cm	3 cm		10 cm	10 cm	
Standards	IAAF/USATF	NCAA	High School	IAAF/USATF	NCAA	High School
	NA	NA	NA	0 – 80 cm	45-80 cm	45-80 cm
Passes	Pass height	Pass attempt	Pass attempt	Pass height	Pass attempt	Pass attempt



# Time Limits for Initiating an Attempt

	High Jump			Pole Vault		
Time Limits (minutes)	IAAF/ USATF	NCAA	High School	IAAF/ USATF	NCAA	High School
> 3 athletes	1	1	1	1	1	1.5
2 – 3 athletes	1.5	2	3	2	3	4
1 athlete	3	4	5	5	5	6
Consecutive attempts	2	2	2	3	3	3
Warning: Raise yellow flag	15 sec	15 sec	No rule	15 sec	15 sec	No rule



---

# It is a foul if ...

- When the crossbar is displaced in an attempt to clear it;
  - Exception: If, in the judgment of the official, the wind blew the pole into the crossbar causing it to fall.
- When a competitor touches the ground or landing area beyond the plane of the crossbar or the crossbar extended without first clearing the bar.
  - It is not a foul if the athlete's arm or pole breaks the plane without touching the ground or landing area beyond the plane.
- If a competitor fails to initiate a trial within the time limit.
- If, during or after the jump, the competitor deliberately steadies or replaces the bar.
- If the pole is touched when it is falling toward the bar or uprights such that, without the intervention, the bar would have been knocked off.
- If a competitor violates the warm-up restrictions.



# It is a foul if ... (cont.)

- High School only:
  - If, after successfully clearing the bar, a competitor accidentally bumps the standards and displaces the bar while exiting the pit.
  - If the competitor uses a pole that is rated below his/her weight; the competitor will also be disqualified from the event.
  - If the competitor leaves the ground in an attempt and fails to clear the bar.
    - **EXCEPTION:** The competitor aborts the approach and in stopping plants the pole.
- **Note:** *It shall not be counted as a trial or failure if a competitor's pole breaks during an attempt to clear the bar. The vaulter shall be awarded a new trial.*

# A proper set-up helps produce ...

- A safe competition
- A legal competition
- A fair competition



Courtesy of Mike Armstrong  
Arkansas Association



# Setting up the Pit

## Position

- Wind
- Width & Length
  - Surfaces
  - Traffic
- “Reference Points”
- Sight Lines



Courtesy of Mike Armstrong  
Arkansas Association

# Setting up the Pit

## Safety Issues

- Change of surface
- Condition of surface
  - Curbing
  - Obstacles
  - Traffic
- Condition of Pad
  - Signage
  - Media



Courtesy of Mike Armstrong  
Arkansas Association



# Standards



## Spacing

- Positioned so that there is clearance of at least 10cm between them and the landing area. (IAAF 182.10; USATF 181.10)

Courtesy of Mike Armstrong  
Arkansas Association



---

# Standards

## Spacing

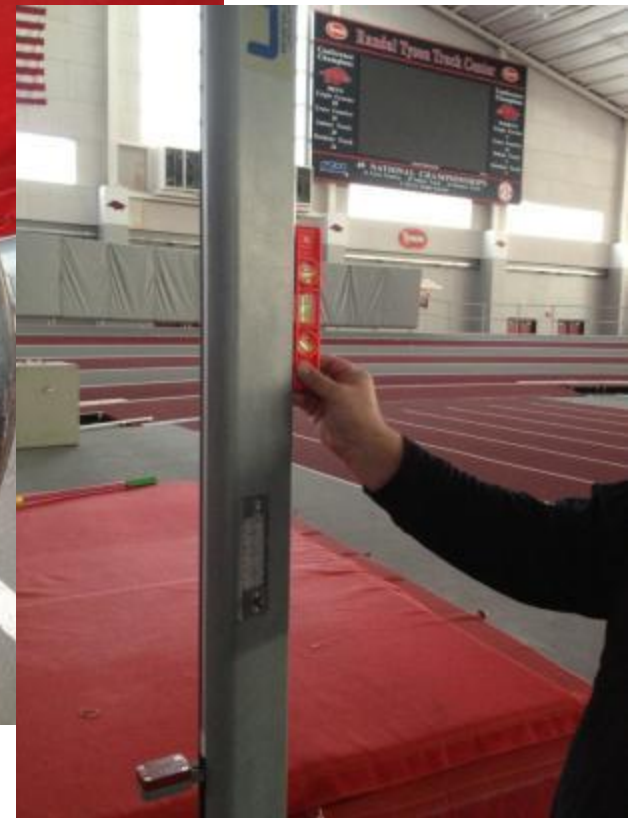
- The distance between the uprights shall be 4.00-4.04m. (IAAF 182.6; USATF 181.13; NCAA 2.5.2) For NFHS, at least 12 feet. (NFHS 7.4.5)
- A space of at least 1cm between the ends of the crossbar and the uprights. (IAAF 182.9; USATF 181.17; NCAA 2.5.3)
- Make sure the standards are even with each other.

Courtesy of Mike Armstrong  
Arkansas Association

# Standards

## Verticality

- Screw all of the adjusters all of the way in.
- Using a level, make sure standards are vertical.



Courtesy of Mike Armstrong  
Arkansas Association



# Crossbar

**Midpoint: It may not be in the middle of label**

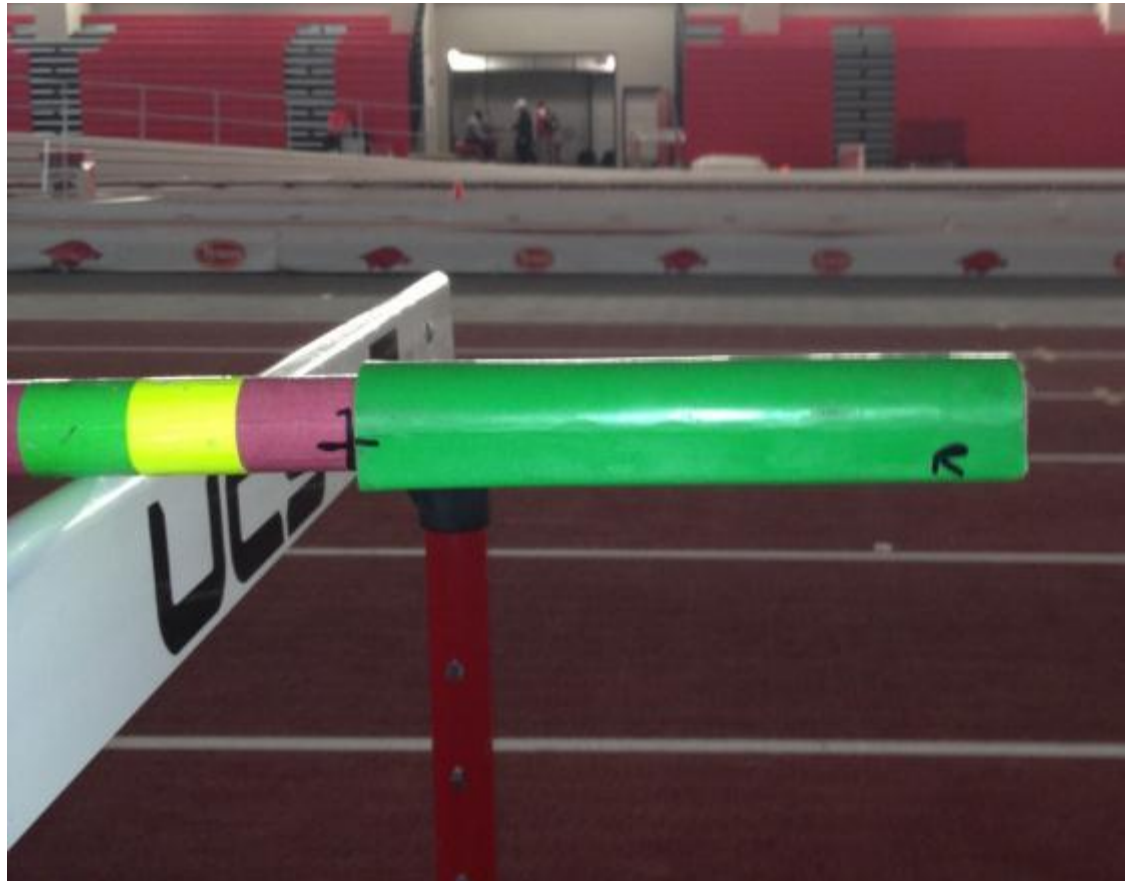


Courtesy of Mike Armstrong  
Arkansas Association

# Crossbar

## Ends

- Align and mark end pieces (NCAA 6.5.2)



Courtesy of Mike Armstrong  
Arkansas Association

# Standards

## Calibration





# Standards

## Mark

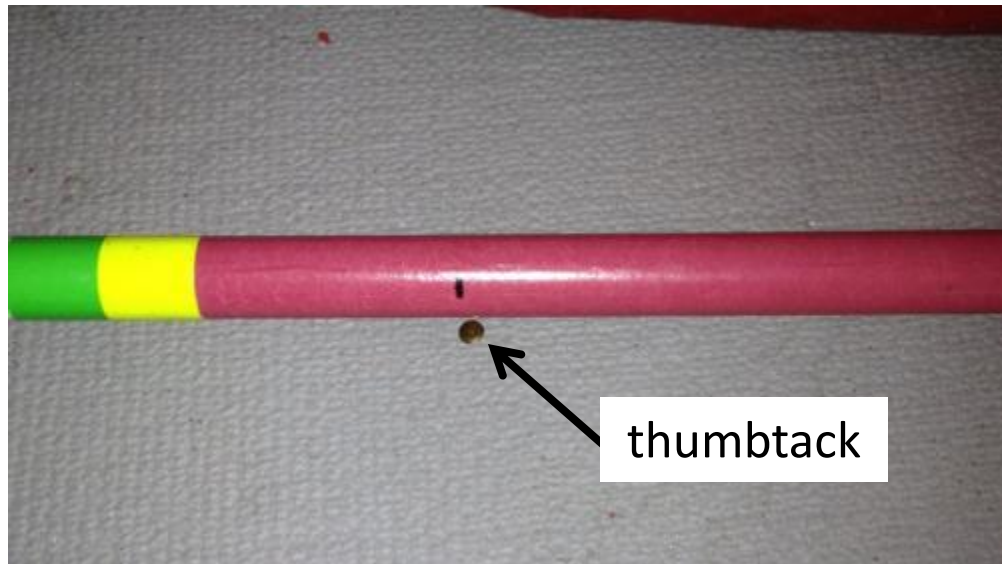
- Once the standards are adjusted and properly spaced mark their position on the ground.



# Standards

## Mark

- Put down a center point to aid in measuring and in identifying the plane of the crossbar.





# Pole Vault Venue Set Up

- Cover hard surfaces such as concrete, metal, wood or asphalt with a minimum of 2 inches of dense foam or other suitable material
- Remove movable objects such as hurdles





# NCAA & high school competitions: verify there is a box collar





# Inspect the Box & Landing Area

- Check the area around the box
  - Remove debris & water from the box
  - Verify adequate clearance for poles to the pads
- Verify that the pits are properly connected and the top cover is in place
- Observe the condition of the pit
- Verify the pegs are the proper length
  - 55 mm for USATF & NCAA
  - 76 mm for High School
- Install extenders if necessary

# Mark 0 to 80 cm scale on bases



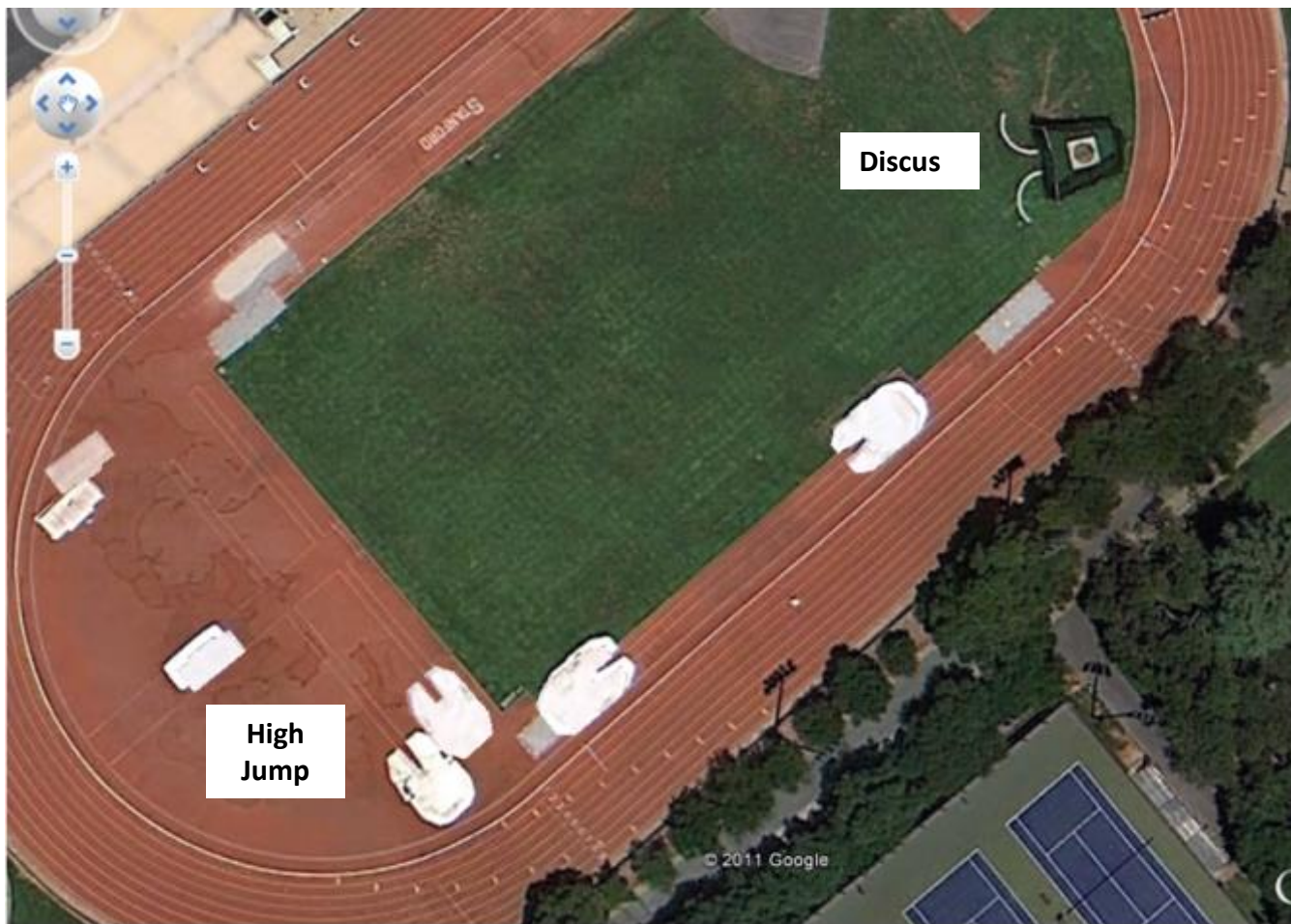


# Align standards with 0 line





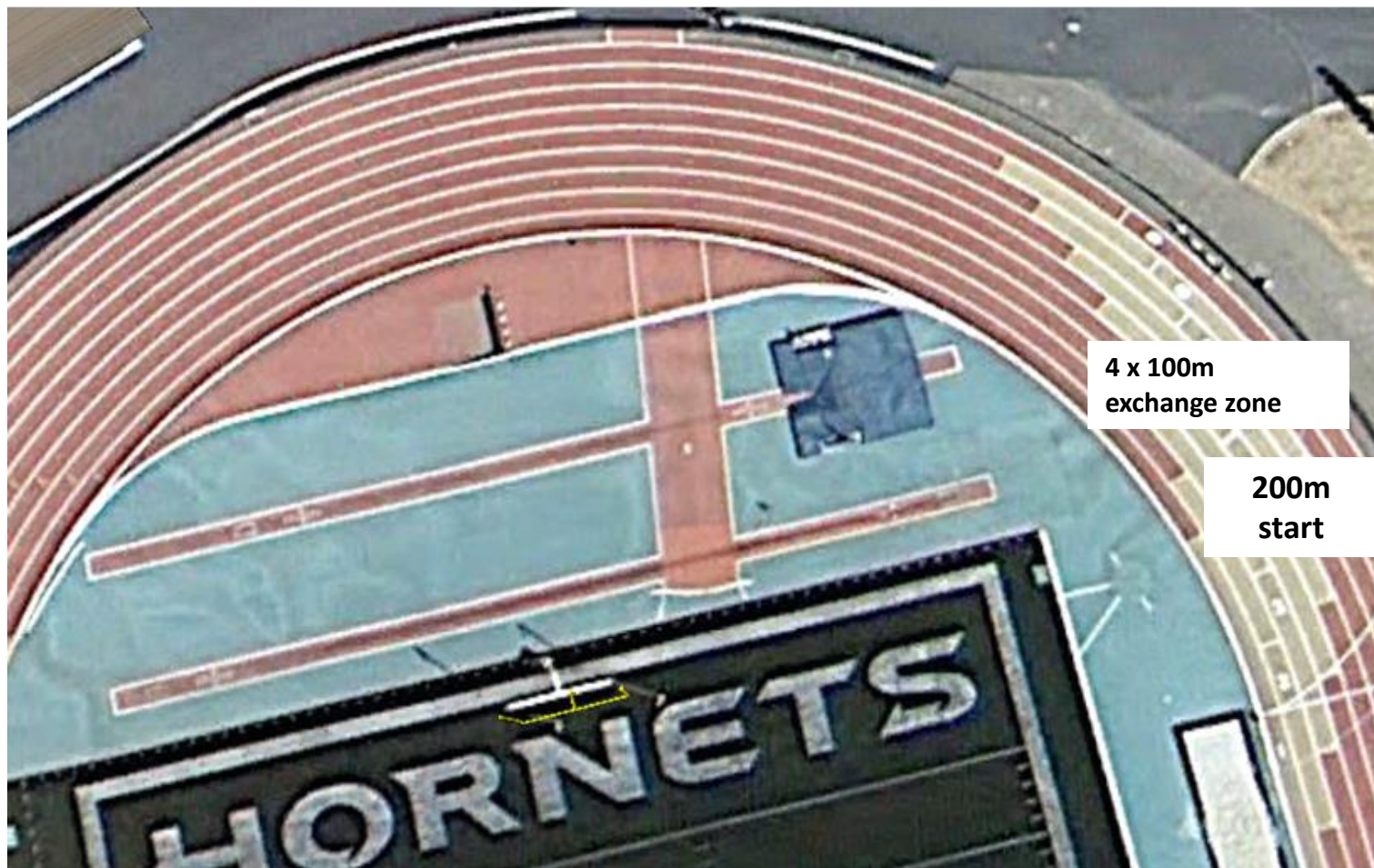
# Observe the surroundings & anticipate problems you may encounter:







# Anticipate Potential Problems from adjacent events





---

# Conducting a Competition

- Read the rules the night before (from correct book)
- Arrive early to allow time for venue set-up and warm-ups
  - High Jump: At least 45 minutes before event start
  - Pole Vault: At least 1 hour before event start
- Pick up 2 copies of entry sheets
- Make sure you have necessary equipment & helpers
- Make sure the venue is safe
- Have fun!



# Scoring

X = Miss/Fail

O = Cleared

P = Pass

NCAA and High School: Record a “P” for each attempt that is passed.

- Be sure to ask athlete if they are passing, the attempt or the height.

USATF - a pass is a pass of the height.

Places are determined by 1) fewest attempts at a height; 2) fewest total misses throughout the competition.

- If the tie still remains for first place, the tying athletes must jump off.

Bib #	Name	Imper.																		BEST MARK	Jumps Tied Ht Total Misses	PLACE
		Metric 3.30			3.45			3.60			3.70			3.80			3.90					
1	Adams	P	P	P	X	O	-	P	P	P	O	-	-	X	X	X	-	-	-	3.70	1 / 1	3
2	Bradley	O	-	-	X	O	-	X	O	-	X	X	X	-	-	-	-	-	-	3.60	2 / 2	5
3	Crane	P	P	P	P	P	P	P	P	P	X	X	O	X	O	-	X	X	X	3.80	-	1
4	Douglas	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N/H	-	-
5	Edwards	P	P	P	P	P	P	O	-	-	X	O	-	X	X	X	-	-	-	3.70	2 / 1	4
6	Graham	O	-	-	O	-	-	O	-	-	O	-	-	X	X	X	-	-	-	3.70	1 / 0	2
7	Howe	X	O	-	X	X	O	X	O	-	X	X	X	-	-	-	-	-	-	3.60	2 / 4	6 Tie
8	Irons	X	X	O	X	O	-	X	O	-	X	X	X	-	-	-	-	-	-	3.60	2 / 4	6 Tie
9	Jackson	O	-	-	X	O	-	X	X	O	X	X	X	-	-	-	-	-	-	3.60	3 / 3	8



# Jump Off Procedures

	High Jump			Pole Vault		
	IAAF/ USATF	NCAA	High School	IAAF/ USATF	NCAA	High School
Starting Height	Next ht. in progression above tie	Next ht. in progression above tie	Lowest final failing ht.	Next ht. in progression above tie	Next ht. in progression above tie	Lowest final failing ht.
Increment	2 cm	2 cm	1 inch	5 cm	5 cm	3 inches

High School High Jump Example											
Athlete	Height and Performance						Total Fails	Jump Off			Place
	5'10"	6'	6' 2"	6' 4"	6' 6"	6' 8"		6' 8"	6' 7"	6' 8"	
A	O	XO	O	XO	PPP	XXX	2	X	O	X	2
B	XO	O	PPP	XO	PPP	XXX	2	X	O	O	1
C	PPP	XO	XO	XO	PPP	XXX	3				3

NCAA, USATF and IAAF High Jump Example											
Athlete	Height and Performance						Total Fails	Jump Off			Place
	1.75	1.80	1.83	1.86	1.88	1.90		1.88	1.86	1.88	
A	O	XO	O	XO	P	XXX	2	X	O	X	2
B	XO	O	P	XO	P	XXX	2	X	O	O	1
C	P	XO	XO	XO	P	XXX	3				3



# Best Practices

[www.usatf.org/groups/officials/resources/best-practices/](http://www.usatf.org/groups/officials/resources/best-practices/)

The screenshot shows a web browser window displaying the USA Track & Field website. The page title is "Best Practices Summary List". The main content area features a "Note" from the Best Practices Editor, Rich Schornstein, and a list of documents under the heading "Combined Events - Planning". The documents listed are "Coordinator Event Sheets" and "Officials Briefing", both updated in September 2009. Each document has links for PDF and Word formats. To the right of the main content is a "SHOP" section with a "SHOP NOW" button and an image of a USA Track & Field backpack. Below the shop is a banner for "MARK SET... SHOP". The website header includes the USA Track & Field logo, navigation links (ABOUT, NEWS, EVENTS/CALENDAR, STATS, ATHLETE BIOS, PRODUCTS/SERVICES, SPORTS, RESOURCES FOR...), and a search bar. The footer shows the system tray with various application icons and the date/time (9:10 PM, 11/27/2011).