SUCCESSFUL ATHLETIC FACILITY DESIGN
What is driving our investment in Athletic Facilities?
The Student

- Character development and self esteem
- Promotes health and physical activity
- Improves teamwork and leadership skills
- College admission and scholarships
- Opportunities for fine arts, graphics production, culinary
The Community

- Community Pride
- Economic Development
- Multipurpose Facility Needs
- Keeping up with the Joneses
Codes and Regulations

- Americans with Disabilities Act (ADA)
- Title IX
- Safety
- Overhead and Maintenance
10 Issues to Consider Regardless of Project Type

- Baseball and Softball
- Natatoriums
- Gymnasiums
- Practice Facilities
- Stadiums
10 Issues to Consider Regardless of Project Type

Who are the users?
10 Issues to Consider Regardless of Project Type

Multipurpose and Community Use?
10 Issues to Consider Regardless of Project Type

District-wide or single campus facility?
10 Issues to Consider Regardless of Project Type

**Budget and Funding Sources**
- Bond
- Naming Rights
- Suites
- Season Tickets
- Concessions
  - (Who controls it?)
10 Issues to Consider Regardless of Project Type

Site Selection

- Site Access
- Lights
- Drainage
- Loud Noise
- Geotech
- Survey
- Parking - Public Access
10 Issues to Consider Regardless of Project Type

ADA, Building Codes, and Title IX

Title IX of the Education Amendment of 1972

“No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving federal financial assistance.”
10 Issues to Consider Regardless of Project Type

Student / Spectator Separation & Safety
10 Issues to Consider Regardless of Project Type

Sight Lines / Visibility
10 Issues to Consider Regardless of Project Type

Maintenance
10 Issues to Consider Regardless of Project Type

Phasing/Expandability And Future Renovations
Project Types:
Baseball and Softball Complexes
Planning: Acreage

Allow for:

- (2) acres for each softball field
- (4) acres for each baseball field
Planning:
Orientation
Planning:
Parking

Site Issues:
Drainage
Orientation
Parking
Acreage
Car Damage
Planning: Concessions and Restrooms

- High cost due to extensive plumbing
- Cluster with other Facilities

Alvin ISD, Shadow Creek High School
Planning:

Support Functions

• Water and Power in Dugouts
• Helmets and Bat Racks
• Cages
• Bull Pen Location
• Storage and access for ground keeping and practice equipment
Sightlines

- Dugouts at Grade / Too Tall
- Lighting obstruction
Project Types:
Natatoriums
Getting Started

• Design team. Insist on a strong experienced Aquatics consultant

• Who are the users

• Budget

• Maintenance and Staff

• Corrosive Environment

Westside Aquatics Center, Lewisville Independent School District
Program Requirements

- Competition Swimming
  - Long Course
  - Short Course
  - Spring Board Diving
  - Spectator Seating
- Recreation Swimming
  - Age Groups
  - Features/Amenities
- Organized Water Sports
  - Water Polo
  - Synchronized Swimming
- Lap Swimming (Fitness)
- Swimming Instruction/Life Safety
- Water Aerobics
- Club Activities
  - Kayak
  - Scuba
  - Triathlon
  - Diving
- Wellness/Rehabilitation
- Summer Camps
- Social Functions
Design Considerations

- Spectator Seating Configurations
- Separation of Swimmers and Spectators
- Deck Arrangement, Deck Space for Meets
- Meet Support: Timing Booth location, Timing Systems, Meet Management Room
- Daylighting/Safety
- Mechanical Systems: Ventilation and Water Treatment
- Light fixture placement

Stantec

Rockwall Aquatics Center, Rockwall Independent School District
Pool Configurations

**Short Course 25 Yard**
(6) Lanes – 3,375 sf.
(8) Lanes – 4,500 sf.

**25 Yard x 25 Meter**
6,200 sf.
(10) 25 Yard Lanes
(8-10) 25 Meter Lanes
Pool Configurations

25 Meter Stretch

50 Meter x 25 yard
12,600 sf.
(8-10) 50 Meter Lanes
(17-22) Cross Course 25 Yard Lanes
## Operating Costs
(costs include HVAC, chemicals, electricity, maintenance funds)

<table>
<thead>
<tr>
<th></th>
<th>1 District-Wide Facility to Serve 2-3 High Schools (Stretch Pool Configuration)</th>
<th>2 Facilities to serve 2 High Schools (Smaller 25Mx25Y Pool)</th>
<th>3 Facilities to serve 3 High Schools (Smaller 25Mx25Y Pool)</th>
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New Caney District Natatorium

- 25 yard stretch pool with moveable bulkhead
- 8 competition lanes, 16 practice lanes,
- 1 and 3 meter diving
- Raised seating for 400
- Lockers, trainer, storage, and services below seating
- Offices, concessions, access to seating and public restrooms off of lobby.
Project Types:
Performance Gyms and Arenas
Multipurpose Facility

- Athletics
- Conventions
- Concerts
- District Staff Training
- Graduations
- Banquets

Duncanville ISD, Sandra Meadows Memorial Arena
Arena Design Considerations

Acoustics, Flooring, Lighting, Flexible Seating, Storage
Performance Gyms

Alvin ISD, Shadow Creek High School
Project Types:
Indoor Practice Facilities
Coppell HD Multi-purpose Facility
Project Types:
Stadiums
What sports are accommodated?

- Football
- Track
- Soccer
- Lacrosse
- Field Hockey
- Rugby
Other Programs

- Band
- ROTC
- Fine Arts
- Community Events
- Graduation
- Tournaments
Single Campus or District Facility

McKinney ISD District Stadium
How much land?

- 12,000 seats - 60 acres
- 10,000 seats - 55 acres
- 8,000 seats - 50 acres
- 6,000 seats - 45 acres
How much land?
Solar Orientation
Seating Options

- Aluminum
- Composite
- Concrete
Structural Considerations

• Recess the field as much as possible to reduce cost and improve stadium feel.
• Use cast in place on grade seating for lower bowl.
• Shallower riser heights at lower bowl
• Elevated Concourse
• Coordination of Aluminum Bleacher Systems
• Foundation Uncertainty
Support Facilities

- Concessions
- Restrooms
- Crowd Separation
- Efficiency
Press box

- Film deck location
- Operable Windows
- Multi-Level vs Single Level
- Sight Lines
Community Rooms

- Game Day Events
- Banquets
- Education Foundation Events
- Board Meetings
- Weddings
New Caney ISD
District Stadium

Technology

• Score Board/Sound
• Ribbon Boards
• Concourse Monitors
• Security
• Public Wifi
Technology

Student Programs
- Video / Instant Replay
- Video Production
- Scoreboard Operation
- Sound Operation
Tracks

- Typically constructed with asphalt
- Extreme soil conditions could require post tension concrete on pier
- Place spare conduit for future use
- Create designated areas for truck and ambulance access
School Identity

Alvin ISD District Stadium
Other Project Concerns:

- Master plan the entire facility
- Think beyond current needs and budget
- Consider athletic, academic, and community needs
Questions?

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Principal

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Senior Designer

Resources:
David Nardone
Sports Surfaces
Stantec

Bart Miller
Structural
Walter P. Moore

Darren Bevard
Aquatics
Counsilman Hunsaker