



**ICA Sports**  
Design. Build. Renovate.

# Statement of Qualifications



April 7, 2011

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## ABOUT ICA

Founded in 1983 in suburban Kansas City, ICA began as a provider of state of the art insulation products and services for various commercial structures. Among its key early clients were AMC Entertainment, who retained ICA to insulate its movie theaters across the country, and Strohs Brewing, whose beverage distribution centers were sorely in need of a proven climate control solution. As the years and projects passed, ICA continued to perfect its insulation process. Two patents were subsequently obtained (U.S. Patent No. 5,564,250 – 1996; and U.S. Patent No. 5,357,722 – 1994) for its Energy Miser<sup>®</sup> ceiling and wall insulation systems.

A love of the game led the company to tennis facilities – structures that were well suited to the insulation system that ICA had developed. After years of working in tennis facilities as insulators, the firm ultimately became an expert resource to the industry for lighting, netting, equipment and facility components.

By 1989, ICA was the provider of choice for renovation services to the tennis industry. In 1996 ICA began providing design-build new construction services to the tennis industry. This turnkey approach provided to club owners a single-source solution to their facility needs. Butler pre-engineered steel buildings became the centerpiece of ICA's design, providing to owners a cost-effective and high-quality structure in which to house their tennis operations. In 1997, ICA expanded its expertise from tennis to include all indoor sports, recreation, commercial and aviation facilities.

ICA maintains a second office in New York, from which we offer professional design, construction, renovation, planning and consulting services to our clients in the Northeast. ICA's professional services include:

- **Design** – conceptual, schematic, construction documents, RFPs, turnkey design/build services, architectural and engineering services
- **Construction** – turnkey design, construction management, critical path method (CPM) computerized scheduling, permitting, project management, budgeting
- **Renovations** – court/facility conversions for change of revenue stream, modernization, energy efficiency upgrades, lighting, equipment and other mechanical upgrades
- **Consulting** – conceptual design and estimating, planning and design, lighting evaluations, pre-construction services, architectural services, coordination with other engineering disciplines, e.g. civil, geotechnical, MES

Not only can ICA design and build award-winning, state-of-the-art facilities on time and within budget, ICA's signature product line provides precisely the right finishing touch to the interior. ICA's signature product line currently includes:

- **Energy Miser<sup>®</sup> Insulated Ceiling & Wall System** – the product upon which ICA was founded, the Energy Miser<sup>®</sup> system, developed in partnership with Owens Corning Fiberglas, reduces heating and cooling costs, controls condensation when used with ventilation, improves aesthetics, enhances lighting output, and is tough enough to withstand the impact of even the fastest traveling but misguided tennis ball, hockey puck, or any other projectile.



- **Elite® Lighting Systems** –As the industry’s performance leader, Elite Lighting provides the maximum output and durability at a reduced cost. Designed around the 2005 National Electric Code compliant 1000-watt protected lamp, the Elite fixture uses a polished reflector inside a spun steel fixture to deliver the highest output ratings of any indirect fixture.
- **Butler Builder** – ICA is a certified Butler Builder. As such, we can design, specify and construct the state of the art pre-engineered steel structures. Exterior and interior finish options provide unlimited design potential to customize the appearance of the building for a variety of uses and settings.
- **SportsFlex® Air Supported Structures** – through acquisition and joint development efforts with Thermo-flex, the SportsFlex air-supported structures, often referred to as “bubbles,” offer season-extending (and revenue-generating) solutions to outdoor facilities.
- **SportsFrame® Building Systems** – developed in conjunction with Butler Manufacturing Co., the framing systems allow for more recreation area with cost-effective structural spans and adequate loads to carry all necessary sports equipment.
- **Carrier® Custom Heating & Cooling Systems** – developed jointly by ICA and Carrier, this high-efficiency HVAC system features a unique package of Carrier components designed to control both temperature and moisture in sports facilities.
- **Court Equipment** – strategic alliances with key manufacturers of sporting goods ensure that ICA gets the highest quality components and equipment at competitive prices. Excel curtains and dividers, high-tension wire, safety pads, basketball goals, volleyball equipment, nets, posts and goals are just the beginning.
- **Feasibility Studies** ICA takes the guesswork out of new projects by providing Demographic Studies, Financial Feasibility Analysis, and Construction Feasibility Analysis, including Zoning Envelope Studies. These studies have allowed clients to avoid poor locations, obtain financing for projects, and improve profitability of new and existing facilities.

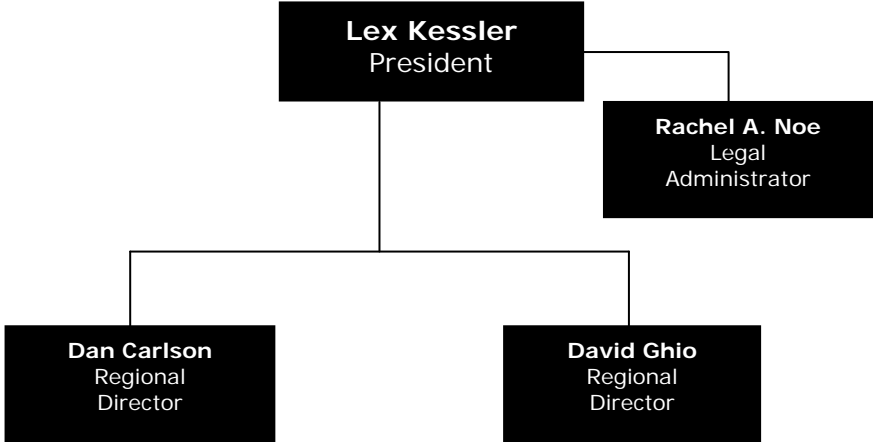
### Affiliations

ICA is a proud member of the following industry organizations:

USTC&TBA – United States Tennis Court & Track Builders Association  
 USTA – United States Tennis Association  
 IHRSA – International Health, Racquet & Sportsclub Association  
 DBIA – Design/Build Institute of America  
 AIA – American Institute of Architects  
 DCEDC – Dutchess County (NY) Economic Development Corporation  
 International Tennis Hall of Fame



# ICA MANAGEMENT TEAM



**Lex Kessler**, President and owner of ICA, Inc., founded the company in 1983. As such, he has been involved in the design, construction and renovation of more than 500 indoor sports and other facilities in more than 39 states and seven countries. Among Kessler's other interests are Sports & Wellness, a group of tennis clubs located in Conn. Sports & Wellness clubs are among the first to offer fitness, multi-sport, and indoor and outdoor tennis within one facility.

Kessler has patented two insulation systems for indoor facilities – U.S. Patent No. 5,564,250 (1996) and U.S. Patent No. 5,357,722 (1994). Kessler also has registered various trade names for the specialty components developed and used in Indoor Courts of America's projects. These include Caindle®, TurboCaindle®, Energy Miser®, SportsFrame®, and SportsFlex®

Kessler is a long-standing member of the USTA and served as chair of its technical committee from 2000-2002. He was recently recognized by the USTA for ten consecutive years of service and continues to actively serve the organization as a National Volunteer and as vice chair of its Technical committee.

**Rachel A. Noe**, Legal Administrator for ICA. She graduated from Pace Law School with a Juris Doctorate degree and certificate in Environmental Law. She was an associate in private practice and worked for seven (7) years at the Westchester County Attorney's Office as an Assistant County Attorney. She specializes in environmental, municipal, construction and corporate law.

**Dan Carlson**, Regional Director, has been with ICA since 1997. He provides project management of sports and commercial renovation projects. His expertise in the areas of estimating and scheduling ensure on-time, within-budget completion of ICA's renovation projects across the country. Dan has an Associates of Applied Science degree in Carpentry and Construction Management.

**David Ghio**, Northeast Regional Director for ICA. He graduated from Central Connecticut State University with a BS in Construction Management. Dave has fulfilled roles as Project Manager, Director of Purchasing and Estimating and Operations Manager with several top 10 national builders. He also has extensive knowledge with Federal Contract Procurement.

# ICA SPORTS CLIENTS, REFERENCES & AWARDS



## ICA CLIENTS

Since its founding more than 20 years ago, ICA has established a proven track record of successful on time and within budget design, construction and renovation of sports and recreation facilities. As such, ICA understands firsthand the unique challenges and requirements of tennis facilities – aesthetics, both indoors and out, lighting, surfaces, equipment, operations, member retention and revenue generation. ICA has experience in both collegiate and private revenue-generating tennis facilities. ICA is committed to delivering the highest quality tennis facilities to its collegiate and private clients across the country. ICA also has provided professional renovation services for clients in the commercial, aviation and institutional sectors. A representative list includes the following:

### Collegiate Athletic Clients

United States Military Academy  
Harvard University  
University of Kentucky  
Yale University  
University of Missouri  
University of Arkansas  
Duke University  
Baylor University  
Ohio State University  
Swarthmore College  
Columbia University  
College of William & Mary  
Northwestern University

### Aviation Clients

Flight Options  
Raytheon Aircraft Services  
G&J Aircraft Service  
Andrews Air Force Base  
Volume Shoe  
Groome Hangars  
Atlantic City National Guard  
MAPS Air Museum  
Skytrails Aviation

### Institutional Clients

Parkersburg Baptist Church  
Cleveland Baptist Church  
Savannah (MO) Methodist Church  
St. Stephen Protomartyr Catholic Church  
St. Norbert Church  
Solomon Schechter Day School

### Private Athletic Clients

Fairfax Racquet Club  
Tennis Corporation of America  
Riverwinds Tennis Center  
Sportime  
Camp Pontiac  
Solaris Sports Club  
Reston Ice Forum  
Piping Rock Country Club  
Old Mystic Club  
Sport & Wellness  
Bally Total Fitness  
Missouri Athletic Club  
Westside Tennis Club  
Snowmass Tennis Center  
Indian Creek Racquet Club  
Leawood Country Club  
Chevy Chase Club  
Muncie YMCA  
Rappahannock YMCA

### Commercial Clients

AMC Theaters  
Stroh's Brewing  
Epic Metals  
The Auto Clinic



## ICA REFERENCES

### Contact

**Mr. Sam Nussbam, Executive Director  
Solomon Schechter Day School of  
Long Island**

27 Cedar Swamp Road  
Glen Cove, NY 11542  
516/656-9820

**Mr. Dave Fish, Tennis Coach  
Harvard University\***

60 North Harvard Street  
Boston, MA 02163-1009  
617/495-3676

**Mr. Richard Szymczyk, President  
Fairfax Racquet Club\***

9860 Lee Highway  
Fairfax, VA 22030-1798  
703/273-9276

**Arret Dobson  
Riverwinds Tennis Center\***

1251 Riverwinds Drive  
Thorofare, NJ 08086  
856/697-8900

**Mr. Paul Peck, Men's Tennis Coach  
United States Military Academy  
Lichtenberg Tennis Center\***

Stoney Lonesome Road  
West Point, NY 10996  
914/938-6011

**Dan Beccaria, Owner  
Sportime\***

320 Abrahams Path  
Amagansett, NY 11930  
631/267-1039

\*Award winning facilities

### Project Description

- Design and construction of basketball facility for private day school
- Features coaching offices, locker rooms, ADA accessibility and one full-court or two half-court basketball playing areas
- \$1.65 million
- Interior finish-out of six-court collegiate indoor facility
- Currently designing new four-court air structure addition to existing facility
- Budget approx \$1 million
- Design-build four-court SportsFrame addition – 26,000 square-foot
- Renovated two additional tennis buildings
- Budget \$1.1 million
- Design-build five-court 46,000 square-foot commercial facility
- Budget \$2.7 million
- Design-build seven-court 57,000 square-foot collegiate facility
- Budget \$4.2 million
- Multi-club owner
- Various projects including indoor tennis renovations and multiple air structure design and construction
- Ranging in size from two to eight courts
- Budgets from \$100,000 to \$800,000



## Contact

### **Joe Curto**

#### **Sport & Wellness**

59 Chestnut Street  
Cold Spring, NY 10516  
845/265-6524

### **Jeff Goecke**

#### **Old Mystic Club**

90 Welles Road  
Mystic, CT 06355  
860/572-0632

\*Award winning facilities

## Project Description

- Multi-club owner
  - Various renovations and court conversions
  - Construction of new facility pending
  - Budgets ranging from \$100,000 to \$1 million
- 
- Design-build two-court air structure with hydro courts – \$300,000 budget
  - Design-build four-court, 25,000 square-foot “Daybreak” covered court building
  - Budget \$1.15 million



## ICA AWARDS

**Boar's Head Sports Club**  
Charlottesville, VA

**American Sports Builders Association  
Indoor Tennis Facility of the Year 2006**

**Boar's Head Sports Club**  
Charlottesville, VA

**American Sports Builders Association  
Distinguished Indoor Tennis Facility Award 2006**

**Solomon Schechter Day School – Lion's Gym**  
Glen Cove, NY

**Design Build Institute of America  
2004 Project Excellence**

**Solomon Schechter Day School – Lion's Gym**  
Glen Cove, NY

**American Sports Builders Association  
2004 Outstanding Indoor Multi-Purpose Facility Award**



**Rowe Tennis Center at the Rappahannock Area Y.M.C.A.**  
Rappahannock, NY

**Outstanding Tennis Facility 2003**  
USTA

**Lichtenberg Tennis Center**  
United States Military Academy, West Point, New York

**Collegiate Facility of the Year 1999**  
USTA

**Court of the Year 1999**  
*Tennis Industry Magazine*

**Outstanding Tennis Facility 1999**  
**In recognition of excellence in design & construction**  
USTC&TBA

**Outstanding Tennis Facility 2003**

**Fairfax Racquet Club**  
Fairfax, Virginia

**Court of the Year 1999**  
*Tennis Industry Magazine*

**Outstanding Tennis Facility 1997**  
**In recognition of excellence in design & construction**  
USTC&TBA

**McCormack-Nagelsen Tennis Center**  
College of William & Mary, Williamsburg, Virginia

**Tennis Facility of the Year 1996**  
USTA

**Owen Brown Tennis Center**  
Columbia, Maryland

**Court of the Year – Club Category 1998**  
*Tennis Industry Magazine*

**Premier Athletic Club**  
Montrose, New York

**Outstanding Tennis Facility 1996**  
**In recognition of excellence in design & construction**  
USTC&TBA



# ICA SPORTS PROJECT PROFILES



## LICHTENBERG TENNIS CENTER U.S. MILITARY ACADEMY

### THE CHALLENGE

To design and build a collegiate tennis center on the U.S. Military Academy Campus at West Point. The multi-purpose facility was also to be used for the Academy's summer camp programs and by the local community. The site, located on the side of a mountain, would require extensive blasting to carve the facility into the mountain. Preservation of the natural beauty of the site was imperative and the facility had to be completed in a six-month timeframe. The site was also under heightened security and required security clearance for site access.

### THE SOLUTION

A state-of-the-art collegiate facility utilizing a sports frame building design for the seven-court area. Due to the size of the tennis court area, the site was excavated to set the building in the existing natural profile of the area. Split-face masonry and glass were selected for the entry area, which was combined with a cost-effective pre-engineered structure to enclose the playing area. Successful blasting allowed the facility to be nestled into the mountainside, resulting in a beautiful surrounding with landscaping at the entry and in the courtyard to further enhance the natural setting. Design/build construction services facilitated meeting fast-track deadlines as well as substantial cost savings for the project.

### THE RESULT

A national award winning "Court of the Year" facility was built for the Academy. The Army Men's and Women's tennis teams now have an indoor facility in which to play, practice and compete.

Lichtenberg Tennis Center is now home to a number of collegiate-level competitive matches, and the Army Tennis banners adorning the walls further enhances team spirit. The project was completed in 1999 ahead of schedule and under budget. The courtyard

accommodates alumni events, and a 120-stall parking lot accommodates players, competitors, spectators and visitors.

The project was completed in 1999 ahead of schedule and under budget. The U.S. Army Corps of Engineers rated ICA's performance on this project as "Outstanding". ICA's "quality control on the project was excellent resulting in a very high quality facility."

### Project Data

- \$3.6 million
- 4-acre site
- 7 side-by-side tennis courts
- 55,000 total square feet
- Bleacher viewing area
- Trophy room
- Locker rooms
- Coach's office
- Team room
- Lobby
- Sports lighting system with highly reflective ceiling resulting in 125 foot candles of indirect light over playing surface
- Flooring – VCT, DecoTurf court surface
- Exterior walls – split-face masonry, metal panels
- Interior walls – CMU



## FAIRFAX RACQUET CLUB FAIRFAX, VIRGINIA

### THE CHALLENGE

ICA had to erect a permanent, four-court building on the court footprint of an existing 13-year-old air structure. The club owner wanted to maximize interior playing area while staying within a 120-foot wall-to-wall design. To ensure overhead space in the facility, the new structure would have two floor elevations with a common ridge. Minimal interruption to club operations, and revenue generation, were key considerations in the construction of this facility. In addition, the roof had to be guaranteed watertight for 20 years and energy efficiency of all interior components were of paramount concern for the owner.

### THE SOLUTION

ICA provided complete design/build services to meet expedited construction schedules, thereby opening for play (and revenue generation) as quickly as possible. Several innovative design techniques were implemented to meet the program requirements, including:

- Pre-engineered SportsFrame structure was specified and erected to enclose the playing area
- A delta joint system was employed to meet the wide bay design criteria
- By using 59-foot joists, each court was a separate 50-by 120-foot area with no mainframe supports behind the baseline, resulting in more usable space in each court area
- The frames in each two-court area were set at different elevations to achieve a common roofline
- The joists were ganged together on the ground, making a quicker and safer installation
- A Butler MR-24 standing seam roof – with a 20-year watertight guarantee – was specified and installed

### THE RESULT

A structure that is energy efficient, purpose built for optimal tennis play, built on a fast-track schedule on time and within budget. The state of the art Fairfax Racquet Club was a Court-of-The-Year award winner in the annual *Tennis Industry* magazine competition.

### Facility Features

- \$1.1 million
- The Energy Miser insulated ceiling system was installed to meet thermal and energy efficiency requirements, and the highly reflective ceiling surface enhanced lighting output
- TurboCaindle lighting was installed throughout the court area, ensuring maximum foot candles over the court surfaces
- Teal-on-white Excel backdrop curtains were selected to provide court access, privacy and minimize visual distractions between courts
- Custom-designed Carrier high-efficiency HVAC systems were installed to ensure maximum output with minimum energy use
- Playing areas feature DecoTurf II court surfaces



## **MICHAEL MULLEN TENNIS CENTER SWARTHMORE COLLEGE**

### **THE CHALLENGE**

To develop and design an indoor tennis complex that included three tennis courts, 43-station fitness area and two staff offices. Leading the design/build team, ICA completed pre-design planning, which included estimating and a geotechnical investigation. The steeply sloped site, an underground spring, and the need to integrate the new facility with the existing campus architecture presented some unique design challenges.

### **THE SOLUTION**

After the design was finalized, ICA was retained to provide materials for the interior finish. ICA's Energy Miser insulated ceiling system was specified to ensure energy efficiency and aesthetic appeal in the facility. ICA's TurboCaindle lighting system provided an energy efficient lighting solution resulting in a glare-free and well-lit playing surface. The Excel backdrop curtains provided a superior hitting background for the players. ICA also furnished tennis net posts, ground sleeves, center strap anchors, nets and center straps.

### **THE RESULT**

The Michael Mullen Tennis Center opened for play in April 2000 and was the recipient of the 2000 Outstanding Tennis Facility Award from both the USTA and the USTC&TBA. The 28,300 square-foot facility includes:

- 3 tennis courts
- Above-court viewing for 100 spectators
- 4,000 square-foot fitness center
- Championship caliber court surfaces and lighting



# RIVERWINDS TENNIS CENTER THOROFARE, NEW JERSEY

## THE CHALLENGE

The owner's criteria included five championship-level indoor tennis courts designed for USTA sectional and regional events, lessons, leagues, and private court time. The indoor courts and viewing areas were of utmost importance to the owner, while the facility's exterior needed to comply with local architectural controls and codes. The site was composed of spoils from a nearby river that had been dredged 40 years prior. Mandatory setbacks to adjacent wetlands severely limited the construction area. The project had to be completed under an aggressive schedule and within a lump sum contract budget.

## THE SOLUTION

A floating slab foundation was designed for the building to accommodate the challenging wetland site. By using a floating slab, footings were not required, which resulted in significant cost savings to the owner. The completed project included a control desk, manager's office, lobby, pro shop, childcare center, locker rooms, fitness area, staff room, and mechanical room on the ground level and a 2,500-square-foot mezzanine for viewing.

## THE RESULT

The project was completed within budget and ahead of schedule. The only change orders were those initiated by the owner. The facility is fully compliant with all ADA requirements and life safety codes, and meets performance requirements for a top-tier indoor tennis facility. The \$2.5 million facility won the "Outstanding Tennis Facility Award" from the USTC&TBA in 2002.

## Facility Features

- \$2.5 million
- Five-court, 41,000 square-foot award winning facility
- Butler pre-engineered steel structure with standing seam roof
- Energy Miser insulated ceiling system was installed to meet thermal and energy efficiency requirements, and the highly reflective ceiling surface enhanced lighting output
- TurboCaindle lighting was installed throughout the court area, ensuring maximum foot candles over playing surfaces
- Playing areas feature DecoTurf II court surfaces



## OLD MYSTIC TENNIS CLUB MYSTIC, CONNECTICUT

### THE CHALLENGE

To expand a two-court air-supported facility into a six-court facility within a tight schedule and budget, while optimizing the playing environment and keeping operating costs at a minimum. The club had limited space for expansion and needed four additional courts to compete for membership with other clubs in the area. The club also plans a second expansion for multi-sport courts in the future so the site design had to accommodate a third structure on the property.

### THE SOLUTION

A pre-engineered steel “Daybreak” Covered Court system with fabric end wall panels was selected for this project. The Daybreak allows the club to take advantage of Connecticut’s mild summer weather for the enjoyment of members, while also minimizing operating costs for the owners. The Daybreak does not require air conditioning.

### THE RESULT

Old Mystic’s new tennis building was delivered on time and under budget at \$1 million. The new facility allows for year-round play for members while maximizing revenue for the owner. Since the expansion, club membership has increased significantly.

### Facility Features

- \$1 million
- 4 court Daybreak building
- Butler pre-engineered steel structure with standing seam roof
- Energy Miser Insulated Ceiling & Wall system
- TurboCaindle 90+ foot candle lighting system
- Excel backdrop curtains
- Fabric panel end walls
- Pro Purple and teal cushioned court surface



## CAMP PONTIAC – PONTIAC PALACE COPAQUE, NEW YORK

### THE CHALLENGE

To design and construct a multi-purpose facility for a summer camp site in upstate New York. The officials at Camp Pontiac desired to provide site work and served as GC for the project. The wooded setting and location of the camp posed site challenges, as did the fast-track schedule. The facility had to be constructed during the camp's off-season – ground-breaking took place during the winter – and needed to be ready for occupancy by campers by summer.

### THE SOLUTION

A multi-purpose facility was designed and built by ICA. The pre-engineered steel structure measured 75 feet by 175 feet with 18-foot sidewalls and a 31-foot ridge. ICA provided design drawings, specifications, and interior finishes. The camp provided concrete, electrical and carpentry work, which resulted in significant financial savings. The highly efficient Energy Miser® insulated ceiling and wall system was installed to help keep ongoing operational costs manageable. The facility features two retractable basketball goals, six stationary goals, two complete volleyball standards, and deck hockey boards

### THE RESULT

The project, completed in mid-May, was up and running in time for summer campers to partake of all the new facility had to offer. The camp now offers basketball, volleyball, recreational and social activities, rain or shine, and meets all ADA requirements and life safety codes.

### Facility Features

- \$1 million
- 13,125-square-foot multi-purpose facility
- Basketball court
- In-line hockey rink
- Trophy room
- Poured concrete foundation
- Metal standing seam roof
- Poured concrete with Latexite coating
- Energy Miser insulation with GymGuard facing
- TurboCaindle® indirect sports lighting system



## SOLARIS SPORTS CLUB YORKTOWN HEIGHTS, NEW YORK

### THE CHALLENGE

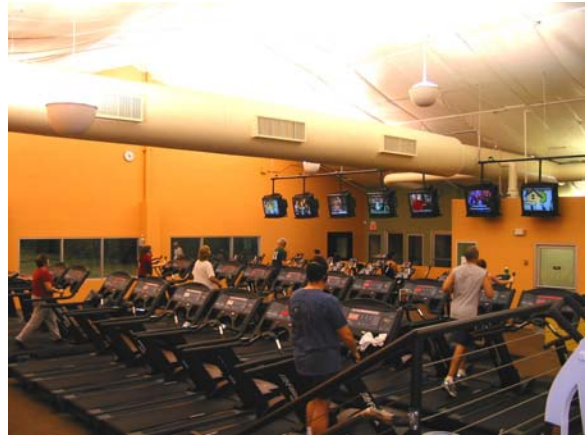
To convert an existing six-court tennis facility into a multi-sport club with expanded amenities, fitness offerings and programming for its ever-changing membership base. The club retained an active tennis membership. Consequently, two of the existing tennis courts had to remain operational during a majority of the construction.

### THE SOLUTION

ICA provided design and construction management services for this court conversion project, which entailed demolition of four of the six courts to allow space for new sports and fitness facilities. A basketball court and gymnasium, indoor soccer, and baseball batting cages were incorporated on the main level. A new mezzanine level was constructed above the gymnasium to accommodate a cardio center and fitness training center and an aerobics studio. A juice bar and new reception area were also incorporated into the design.

### THE RESULTS

Formerly Match Point Tennis & Fitness, the new multi-sport Solaris Sports Club is positioned to meet the demands of its increasingly diverse membership. The renovation incorporated a vibrant and energizing color scheme throughout, and the Solaris Café provides an additional revenue stream for the owners while appeasing thirsty members. The club expanded its membership base – and thereby its revenue – pursuant to the greater variety of sports and fitness programs now available. Solaris gained more than 1,000 new members in the 12 months following the grand re-opening.



# GROSS OLYMPIC CENTER U.S. MILITARY ACADEMY

## THE CHALLENGE

ICA was retained to design and construct a collegiate gymnastics and multi-sport center on the U.S. Military Academy Campus at West Point. The multi-purpose facility was also to be used for the Academy's summer camp programs and by the local community. The site, located on the side of a mountain, required extensive blasting, as the facility was designed to nest into the side of the mountain atop the Hudson River. Preservation of the natural beauty of the site was imperative and the facility had to be completed on a fast-track schedule. The site was also under heightened security and required security clearance for site access.

## THE SOLUTION

A state-of-the-art collegiate facility utilizing a SportsFrame building design to house a full spectrum of gymnastics facilities for both practice and competition, as well as a basketball court, coaching staff offices, locker facilities, spectator bleachers and separate team practice/warm-up areas. Design/build construction services facilitated meeting fast-track deadlines as well as substantial cost savings for the project.

## THE RESULT

"One of the jewels of Army's 'margin of excellence' athletic facilities enhancement project, the state-of-the-art Gross Center officially opened on Feb. 14, 2002, hosting a triangular gymnastics meet with Air Force and James Madison," according to the Office of Army Athletics. The 23,000-square-foot facility is the permanent home of Army's nationally ranked men's gymnastics team and also serves as a practice site for the men's and women's basketball teams.



## SOLOMON SCHECTER DAY SCHOOL GLEN COVE, NEW YORK

### THE CHALLENGE

Solomon Schechter is a growing private school that endeavors to provide the highest quality academic experience to its students. Expanding the school's physical education facilities enables Solomon Schechter to offer a wider range of learning experiences in the students' physical, social and recreational lives.

Among the design challenges of the new gymnasium were how to situate the new building on the property in such a way as to maximize parking, allow for future expansion of the school, and create an attachment site between the gymnasium and the school. The gym also had to accommodate public viewing during events. Because of the geographic location and architecture of the existing school, the gym's exterior had to be complementary in design. Site work, parking expansion, sidewalks, curbs, site drainage, utility connections and site preparation had to be completed in time for the first day of the 2003-2004 school year (less than six weeks). These challenges each had to be met within a very tight budget and on a fast-track schedule.

### THE SOLUTION

ICA constructed for Solomon Schechter an ADA-compliant gymnasium that featured tournament quality basketball courts; team/student athlete facilities and separate public facilities; and expandable bleacher viewing area. To minimize the footprint of the building, which also reduced costs, a second-floor loft accommodates training, storage, and coaching office areas. A custom-designed high-efficiency HVAC system incorporated fabric duct, resulting in significant cost savings during construction and in maintenance and operations. A state-of-the-art wireless A/V system allows maximum flexibility in facility uses and a motorized curtain in the center of the gym allows multiple activities to run concurrently. The building's exterior features a combination of split-face block and pre-engineered steel siding to complement the existing school's brick façade.

### THE RESULT

The design/build project, which is nearing completion within budget and ahead of schedule by 5 weeks, will serve as home to the Solomon Schechter Lions in time for the second semester of the 2003-04 school year. Dubbed "The Lion's Den" by students and faculty, the new gymnasium will provide Solomon Schechter student athletes a state of the art facility in which to learn, practice and compete for decades to come. "We have found ICA to be a wonderful and professional organization to work with. They do high quality work, and, most importantly, they complete the work on time and on budget. We would highly recommend them in any sports-related facility," said Sam Nussbaum, Executive Director Solomon Schechter Day School of Nassau County and Solomon Schechter High School of Long Island.



Groundbreaking Ceremony Sept. 2003



Interior Finish Nov. 2003



Flooring Installation Nov. 2003

# GOODFRIENDS RESIDENTIAL TENNIS CENTER LONG ISLAND, NEW YORK

## THE CHALLENGE

A group of good friends who live on Long Island wanted a private indoor tennis facility in which to play and socialize. The building was to be situated on eastern Long Island in a wooded setting with difficult access and rocky soil conditions. The design had to meet stringent local energy codes, hurricane force winds, and heavy snow loads. The building's exterior had to blend into an upscale residential setting, and the building's interior had to exceed all industry standards for indoor tennis and incorporate energy-efficient lighting and insulation systems. A HarTru court surface was specified, which requires daily watering, which required that ventilation and climate control were suitably designed to prevent rust and condensation. And finally, the building had to be competitively priced since it was not to be a revenue generating facility.

## THE SOLUTION

Working with a local architect and general contractor, ICA approached the building design from the inside out. To maximize interior space, the building was designed with a unique roofing joist capable of spanning a full court width (60'), which eliminated the need for intermediate main frames. The results is an open usable court area measuring a full 60' x 120' without obstructions. And because fewer structural frames were required, concrete costs were reduced. Installation costs were reduced because the roof joists were assembled on the ground, ganged together, and lifted to the roof in 20'x 60' sections. The building was designed and built to meet all local wind, snow, seismic loads and codes.

The interior was finished out with the Energy Miser Insulated Ceiling & Wall System that not only provides energy efficiency, but also protects structural steel from exposure to moisture. TurboCaindle lighting provides ultra-pure, glare-free, indirect light over the playing surface. Excel backdrop curtains surround the court, and a ventilation system was designed to provide up to eight air changes per hour.

The exterior was finished with an attractive stucco wall panel that passed the community architectural review. A Butler VSR architectural grade standing seam roof was selected, which is pleasing to the eye, blends in well with other structures in the vicinity, and comes with a 20-year watertight warranty, thereby minimizing maintenance.

## THE RESULT

These good friends now have a great place to play tennis – Goodfriends. The facility met and exceeded design requirements while offering a state-of-the-art private facility in which to play and socialize, right in their own backyard.



## RESTON ICE FORUM RENOVATION RESTON, VIRGINIA

### The Challenge

Reston Ice Forum is home to a number of local amateur hockey teams and serves as both a practice and competitive facility. The community also uses the facility for recreational activities and figure skating. Years of use and abuse by players and spectators resulted in a well-worn facility in need of renovation.

### The Solution

ICA provided a comprehensive evaluation of the facility, levels of play, amenities, usage patterns, etc., and developed a program to renovate the entire facility with minimal impact to hours of operation. The facility was insulated with the Energy Miser® ceiling system, which resulted in reduced operational costs resulting from reduced solar load and condensation control. The improved aesthetics of the new ceiling resulted in a clean, bright, reflective surface, which enhanced the overall appearance as well as lighting effectiveness. The ceiling's enhanced durability – rated at 55 lbs/inch (ASTM-828) – can withstand impact of high-flying hockey pucks.



A new sports lighting system also was installed throughout the arena. The metal halide, high-performance and high-purity lighting fixtures improved surface visibility for players. The lighting system also offers increased energy efficiency and reduced utility costs – maximum foot-candle output with flexible illumination levels. The durable fixture design can withstand impact of hockey pucks, minimizing maintenance labor and expenses, but more importantly offering improved safety – the fixture design protects bulbs from impact and prevents broken glass on the playing surface.



Before

After

### The Result

Reston Ice Forum owners have a more energy efficient and attractive facility. And players of all levels have a place in which they're proud to practice and compete.



# KINGS PARK LONG ISLAND, NEW YORK

## THE CHALLENGE

Kings Park, a fitness and recreation club located on New York’s Long Island, underwent a \$2.5 million renovation to upgrade the facilities, expand program offerings and amenities, and enhance the club’s overall appearance. As part of the renovation, Kings Park added four new outdoor Har-Tru courts covered by a bubble during winter months. Among the challenges of the site was an unusual corner on the grade beam along the property line, which required an 18-foot angle instead of the typical 3-foot, 45-degree corners.

## THE SOLUTION

ICA designed the new air structure to safely accommodate the angled corner on the property line. The bubble was designed with steeper end-walls to allow more room at the baseline while accommodating the unusual footprint of the structure. Additionally, the ballasts for the lighting were adapted to allow for installation of both indoor and outdoor lighting fixtures, resulting in cost savings to the club’s owners. ICA also designed an underground plenum, or vault, for the inflation and heating units. Siting the units underground allows heat and make-up air to move more efficiently, with less noise and without blowing directly on the players.

## THE RESULT

The bubble, which is dismantled seasonally, allows the club to extend both its playing season and its revenue generation. Kings Park has seen an increase in membership, particularly in its juniors tennis program, which has nearly doubled in size. The new clay courts have been well received by the players, and members are spending more time at the club.



# PREMIER ATHLETIC CLUB MONTROSE, NEW YORK

## THE CHALLENGE

A 1994 fire shut down the Club at Montrose. The club's owner, Val Santucci, retained ICA to develop a three-phase plan to rebuild the existing facility and add additional courts. The challenge was to develop a new look, incorporating state-of-the-art technology and optimum energy efficiency into all phases of the work. The new club would operate under the name *Premier Athletic Club*, which presented a challenge in itself – a club of that name had to be top-notch.

## THE SOLUTION

Phase One entailed renovation of the existing three-court building. The renovation included structural steel repair, installation of the Energy Miser Insulated Ceiling & Wall System, new TurboCandle Lighting throughout, and Excel backdrop curtains. New HVAC was also installed. At the same time, the main clubhouse and locker rooms were redesigned and rebuilt, as were the fitness and dining areas.

Upon completion of the renovation, ICA then rebuilt the gymnasium. The gymnasium included new basketball equipment, a vertical stack motorized divider curtain, wall padding with new logos and a new Energy Miser Ceiling.

Phase Three of the project entailed the design and construction of two new fast-dry tennis courts with underground watering enclosed in a SportsFlex air-supported structure. The new courts, situated behind the permanent building, are connected to the main building by an elevated covered walkway. All mechanical equipment for the structure is located in a 20' x 32' Butler Building furnished by ICA. An underground vault was constructed to house air supply and heating systems for the structure.

TurboCandle lighting was installed throughout.

## THE RESULT

The Premier Athletic Club is just that – one of the premier indoor/outdoor clubs in the Northeast. The three-phased project, completed on time and within budget, enabled the club owner to expand and improve his facility, thereby positioning it to increase membership and revenues in the future. By housing the mechanical systems for the air-supported structure underground, the structure maintains optimal climate control with minimal noise and airflow interference on the courts.



# ICA SPORTS PROJECT APPROACH





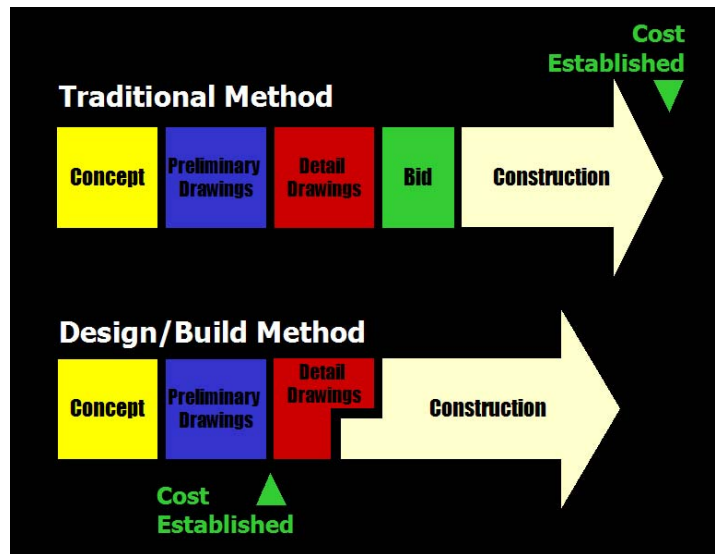
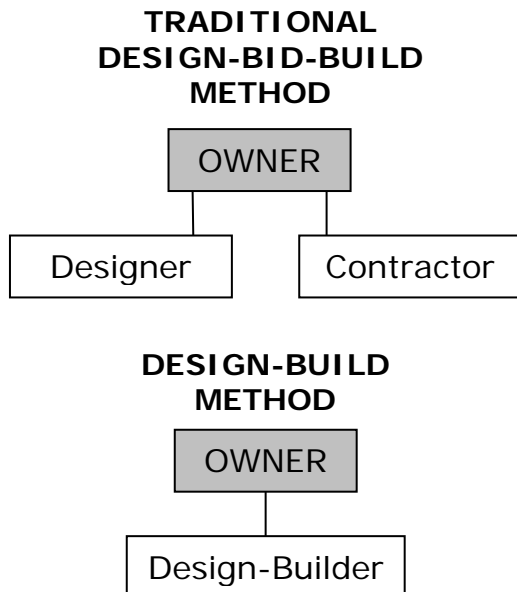
### DESIGN/BUILD

ICA is well versed in the successful use of design/build delivery methods. With the design/build delivery method, owners award a single contract to an architect and contractor team. This team then assumes complete responsibility for designing and constructing the project. Because the architect and contractor are working together under a single contract, the potential for conflict is greatly reduced. And the ability to overlap the design and construction phases of the project can save both time and money. Additionally, the sooner the project is completed, the sooner it can be occupied and begin generating revenue for owners and value for consumers.

### Benefits of Design/Build Delivery

- Single-source responsibility
- Integrated design & construction team
- Partnership in completion
- Assured quality
- Faster project completion
- Early known cost
- Reduced change orders
- Reduced owner risks
- Lower overall project cost
- Increased owner satisfaction
- More efficient facility operations

ICA is a long-standing member of the Design-Build Institute of America (DBIA) and adheres to industry-established methods of professional practice and codes of conduct in its delivery of design/build services. We will submit for your review in a separate enclosure our Pre-Construction Services Manual. This document describes in detail the ICA process from concept through groundbreaking.





## Design/Build Phases

ICA Sports

DESIGN. BUILD. RENOVATE.

<b>Conceptual Design</b>	Preliminary design; consulting; studies; programming; Pre-Construction Services (PCS); conceptual design, scope, schedule & budget.
<b>Design Development</b>	Finalization of design; structural & civil engineering underway; design drawings to 30% completion.
<b>Construction Documents</b>	Construction drawings; approvals/permitting continues; civil design completed; budget finalized; permitting for site work; subcontractors.
<b>Groundbreaking / Construction</b>	Site work & foundation; steel erection; court construction; interior finish; court surfacing.

### Typical Construction Schedule

DESIGN	BUILD										
	Month 1	Month 2	Month 3	Month 4	Month 5						
Pre-Construction	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Groundbreaking</div> <div style="width: 90%; text-align: center;"> <table border="1" style="width: 100%;"> <tr> <td style="width: 33%;">Site Work</td> <td style="width: 33%;">Court Construction</td> <td style="width: 33%;">Court Surface</td> </tr> <tr> <td>Steel Fabrication</td> <td>Steel Erection</td> <td>Interior Finish</td> </tr> </table> </div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Occupancy</div> </div>					Site Work	Court Construction	Court Surface	Steel Fabrication	Steel Erection	Interior Finish
Site Work						Court Construction	Court Surface				
Steel Fabrication	Steel Erection	Interior Finish									
Conceptual Design											
Design Development											
Construction Documents	On-site construction management and supervision of all trades and sub-contractors for duration of project.										





The better the plan, the better the outcome. Pre-Construction Services results in that plan – a conceptual scope, schedule and budget – to get your project off the conference room table and in the ground. It is a critical first step in bringing any project to life. PCS Deliverables can be used for presentations to planning boards, investors, committees, donors, stakeholders, municipal building departments, etc.

### Deliverables

- **Program Meeting** – Facilitated by ICA, the Program Meeting defines the use(s) of the building; space requirements for each specific use; possible site locations and considerations; exterior appearance, and accessibility. The project owner(s), the ICA project manager, and an architect attend this meeting. Other engineering disciplines may attend as warranted by the scope of project.
- **Conceptual Drawings** – Based on the Program Meeting results, these drawings will show the location of the proposed structure on the owner's site plan; a schematic floor plan showing spatial relationships for the various use areas within the structure; and elevations showing the exterior appearance of the building.
- **Preliminary Scope/Outline Specification** – This is a brief narrative description of the scope of work, broken down into 16 divisions in accordance with Construction Specifications Institute (CSI) format.
- **Preliminary Budget** – A projected budget based on the conceptual drawings and outline specification, broken down by CSI division
- **Schedule** – A proposed timeline for development, permitting and the actual construction.
- **Follow-up Meeting** – Participants in the Program Meeting reconvene to review drawings, specifications, budget and schedule. An action plan for proceeding with additional work is determined at this time.

### Benefits

- Provides overall project parameters with respect to uses, services/operations, materials, finished size, configuration, budget and schedule
- ICA-facilitated Program Meeting helps determine project needs vs. wants
- Can be developed with use, size &/or budget constraints in mind
- Conceptual budget is accurate within 10% +/- as a result of years of budgeting and job-cost tracking
- Conceptual schedule helps in planning, fundraising/financing, and planning for future use
- PCS deliverables are tangible. The PCS process results in an actual plan that brings together the mountain of ideas that arise during those early stages of the project.
- Seeing is believing – conceptual elevations allow owner/stakeholders to see the shape and configuration of the spaces relative to the site and the specific areas within the structure.
- Allows for consideration of design alternatives on paper rather than on the ground, where the bill can really add up.
- Serves as an investment in the total project cost – all deliverables are used during final design and construction phases.
- PCS can be completed relatively quickly (4-6 weeks), allowing the project to keep momentum.