

Facility Program for:

Private University

Athletic Facility

Oakdale, NY



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Introduction

Project Vision:

Private University will create an athletic facility, providing opportunities for members of the university to embrace an active lifestyle on campus. The facility will provide recreational spaces for students and faculty while encouraging campus involvement.

Overview:

The athletic facility is a health and social facility geared towards exercise, sports, and other physical activities. It will provide an opportunity to improve the recreational opportunity of the university as a place to be. A successful facility will accommodate both the serious athlete and the occasional recreational user.

The goals to locate and construct a campus athletic facility are:

- Provide students and faculty an opportunity to focus on personal health, as well as provide athletic courts for organized clubs and teams.
- Compliment the main building of the campus, Bourne Mansion, and help emphasize the importance of the structure.
- Supporting the growth and practice of specific disciplines involved in current and future sporting activities
- Enhance the health and wellness of the students and faculty on campus

Existing Hall



Programming Issues

Collection

- The athletic facility will provide a weight room that supplies free weights, stretching equipment, as well as strength and conditioning machinery for all students as well as sport teams. The weight room should provide at least 50 SQ.FT. per machine as well as room for circulation and rest areas.
- The loading dock should be strategically positioned to allow for quick and easy unloading while not disrupting pedestrian circulation.
- An area is necessary for the storing and organization of athletic and club equipment and accessories

Gathering

- The proposed athletic facility should be accommodated for high volumes of pedestrian traffic during events that it may hold
- The gym should be accommodated to seat approximately 814 people for assembly purposes

Estimated Maximum Occupancy per the International Commercial Code

<i>Function</i>	<i>Estimated Total Area</i>	<i>S.F. Per Occupant (per ICC)</i>	<i>Max. Occupancy</i>
<i>(4) Offices</i>	480	100 gross	4
<i>Gym</i>	5700	7 net	814
<i>Fencing Studio</i>	226	100 gross	2
<i>(2) Racquetball Courts</i>	1184	100 gross	12
<i>Weight Room</i>	600	100 gross	6
<i>Hydrotherapy Area</i>	120	100 gross	1
<i>(2)Locker Rooms</i>	1200	13 gross	60
<i>Lobby</i>	500	5 net	100
		Maximum Occupancy	= 1028

Site Factors

Zoning Issues

The site is located in a AAA district. The site is also part of a Planned Landmark Preservation Overlay District (PLP) which requires extra permits and approvals for any changes in the landscape or structures of the site. The Town of Islip prohibits the structure from being any larger than 35 feet or 2.5 stories and must have a Floor Area Ratio of 0.25. The Islip Town Board and the Planning department must approve all changes to the existing site. The goals of the Planned Landmark Preservation Overlay District require each design:

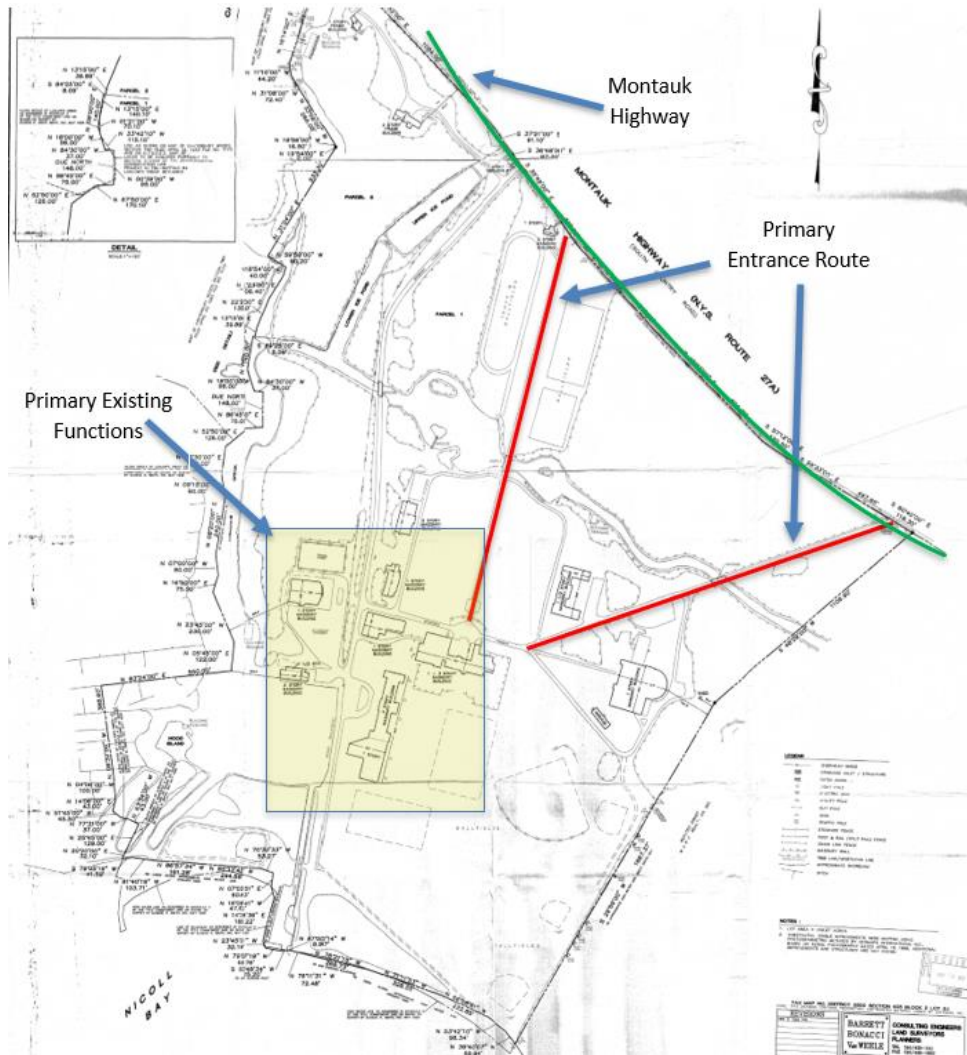
- (a) To eliminate existing incongruous uses or structures or other blighting factors and to prevent the creation of any new such conditions.
- (b) To preserve significant landscape features.
- (c) To strengthen the environmental setting of the overlay district.
- (d) To assure architectural compatibility, such as aesthetic, historical and architectural values, architectural style, design, arrangement, texture, material and color.
- (e) To provide controls for signs, outdoor lighting and utility services.
- (f) To establish appropriate protective interests, such as easements, covenants or similar agreements.
- (g) To employ, where justified, the use of special techniques or policies such as cluster development, or transfer of development rights so as to improve the quality of the area; or where economic assistance is warranted, to provide such aids as tax abatement or other incentives so that privately owned projects may realize a reasonable economic return.

Any new structure being constructed must be approved by the Town Board before given a permit. The design of the athletic facility should complement Bourne Mansion and the existing structures to preserve the historical importance and receive approval from the Town of Islip.

Circulation Issues

The existing campus has 2 main entrances into the property along Montauk Highway, a major road for transportation, that can confuse visitors upon arrival to the site. One of the main entrances lead straight to the front of Bourne Mansion, which leads to traffic in front of the main structure of the campus, and the other main entrance leading to a major intersection. This intersection consists of 4 roads, however only one allows access to the proposed site.

- Pedestrian Circulation should include ease of access to the other major structures on site, including future additions to the campus. It should be convenient to reach at any time throughout the day
- Pedestrian circulation should be kept separate from equipment circulation.
- Provide 100 parking spaces as requested by the client although Islip Town Code requires a minimum of 51 spaces. Parking should provide at least 4 handicap accessible spots no further than



Environmental Issues

Flooding

- The location of the proposed structure should be located on the east side of Bourne Mansion due to the floodplain of the site. The site is approximately 6 feet above sea level. The FEMA map below shows a 7 foot flood elevation and showing the 1 foot floodplain of the proposed site.



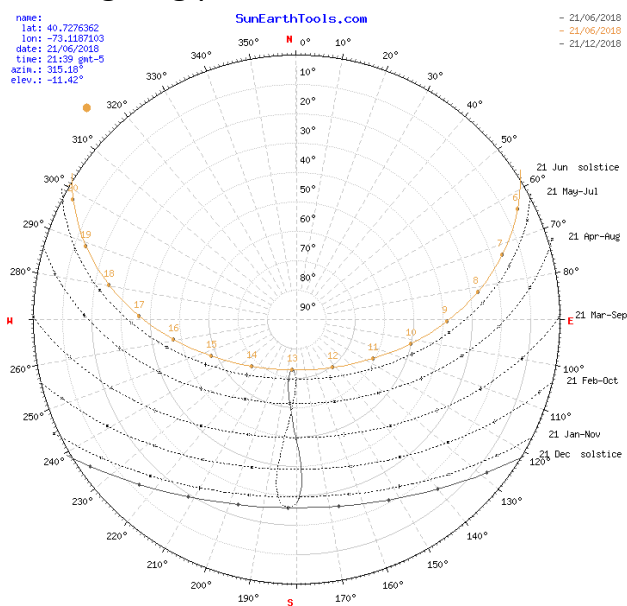
Wind

- The proposed site has coastal exposure located on the south shore of Long Island. Although average wind speeds are relatively low, they can become violent in the event of a storm or hurricane. The structure should be able to withstand wind speeds of 108 mph as required by New York State Code. The athletic facility should also be designed to withstand the average wind forces monthly.

Month of year	Jan 01	Feb 02	Mar 03	Apr 04	May 05	Jun 06	Jul 07	Aug 08	Sep 09	Oct 10	Nov 11	Dec 12	Year 1-12
Dominant wind direction	➤	➤	➤	➤	➤	➤	➤	➤	➤	➤	➤	➤	➤
Wind probability >= 4 Beaufort (%)	1	1	1	1	0	0	0	1	1	1	1	1	1
Average Wind speed (mph)	3	3	5	5	3	3	2	2	3	2	3	2	2
Average air temp. (°F)	34	36	41	52	64	72	77	75	70	59	48	41	55

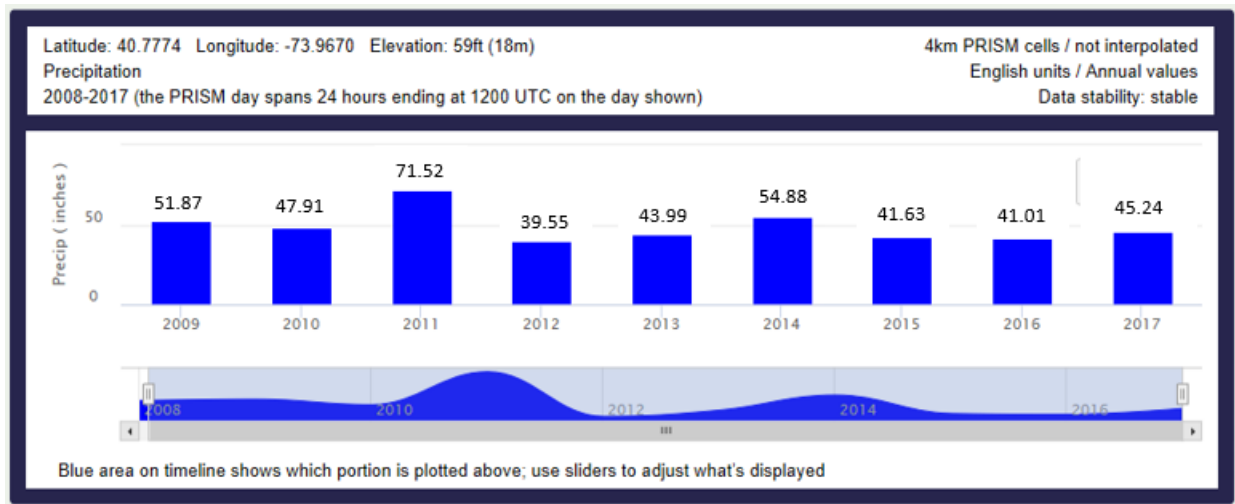
Sun

- The proposed site has constant light from the southern exposure during the day. There is no existing landscape to protect pedestrians and occupants from strong sunlight in the summer. The building should utilize the natural light available but should not be overused to affect the health and wellness of the occupants inside. Having a skylight or a clerestory can give a sense of association to the outside.
- In a few locales, spring and summer can bring high temperatures, making debilitating conditions for outdoor play. To assist athletes remain cool while off the field, shaded dugouts or other screened structures can give relief. Shaded trees planted along the field's edge are an effective way of giving protection from the sun.



Precipitation

- The site and structure will require a substantial amount of drainage as the site averages approximately 49 inches of precipitation each year. The site will have to be designed to avoid flooding of athletic fields as well as the pedestrian path of egress. The proposed facility should strategically be positioned to avoid the flood zone as well as allow efficient drainage away from the structure.



Community Scale

- The structure should correlate with the existing buildings on site. The focus of the campus is Bourne Mansion, a 2 story

Facility Concept Narrative

Architectural Issues

- The proposed site for the St. John's athletic facility is adjacent to Bourne Mansion and St. Joseph's Hall. The structure should complement Bourne Mansion and help emphasize the importance of the existing structure. The site is under the Planned Landmark Preservation Overlay District to ensure any new site changes or structures do not affect the historical context of Bourne Mansion.
- The entrance to the building should be easily recognizable but not take away from the importance of the Bourne Mansion, and should not lead pedestrians across roadways in order to access the athletic facility.
- The athletic facility should be incorporated into the surrounding landscape and preserve the existing site as much as possible.

Technical Issues

- The proposed athletic facility should consist of a Type I construction. With an assembly functional use, the structure should consist of non-combustible materials.

Durability/Lifespan

Layer	Components	Useful life (years)
Site	Geographical setting	“eternal”
Structure	Foundations & Load Bearing elements	30-300 years
Skin	Exterior surfaces	Average 20 years
Services	Technical Installations	7-15 years
Space plan	Interior walls, ceilings, floors, doors	3-years
Equipment and Accessories	Furniture/gym equipments	(Weeks-10 years)

Lighting needs for indoor and open air settings differ. Large interior spaces like gymnasiums require lighting that underpins different designs. Pleasing interchange employments with suitable installations and controls is basic to making a exceedingly adaptable, well-functioning space. It’s vital to consider the potential for natural lighting; such as, skylights and clerestory windows can give a sense of association to the outside

When evaluating flooring material, consider structural resiliency, surface hardness, surface texture, and ball bounce, as well as safety requirements, budget and aesthetics. The most common hardwood system for gymnasiums is made of tongue-and-groove maple strips laid over a plywood subfloor set on plywood sleepers.

Deciding the right turf for playing fields either natural or synthetic turf. In spite of the fact that artificial fields are to some degree simpler to preserve, both require critical support. Natural grass needs standard watering, cutting, reseeding and bug control. Artificial turf requires brushing, cleaning, bug control and will inevitably get to be repaired or replaced.

Flexibility

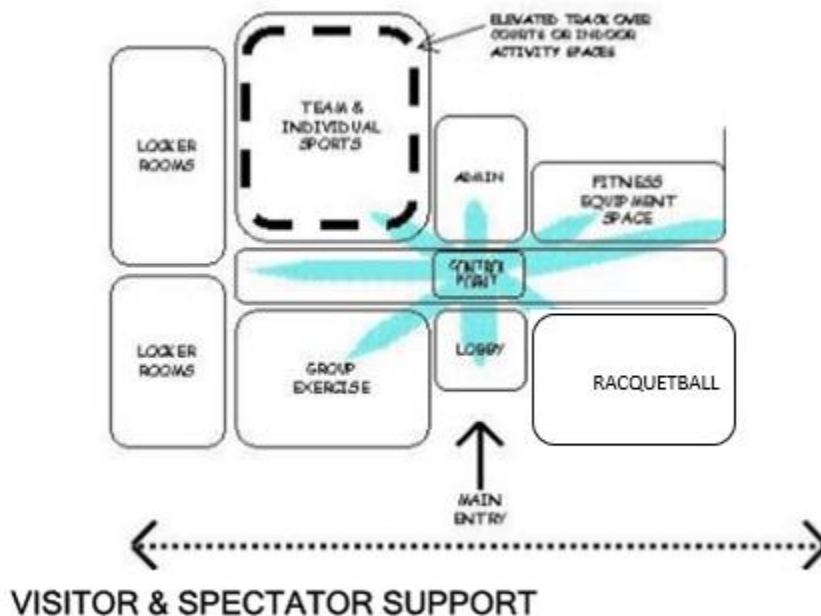
The proposed building should be designed for the ease of modifications and reconfiguration in order for it to be used far beyond its planned life span. The structure of the building should be designed to allow for future additions and renovations. Modification of interior arrangement and furniture is necessary in order to adjust to new functional requirements that may change over-time.

Key Program Adjacencies

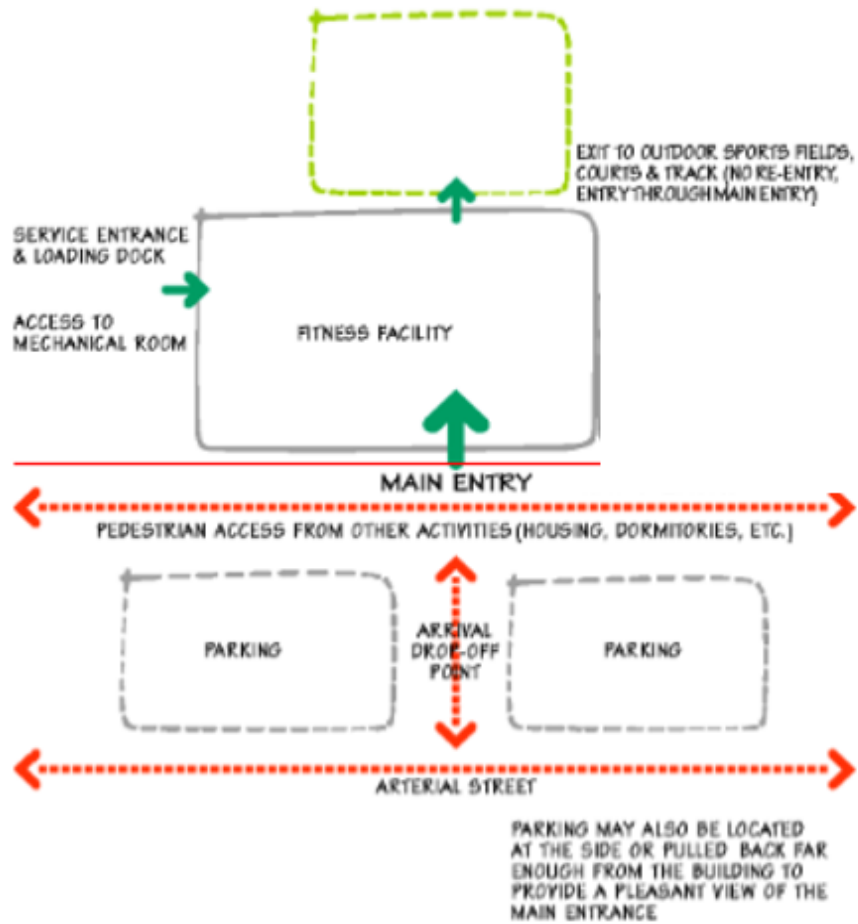
- The athletic facility should have similarly sized functions placed adjacent to each other. By placing similar functions adjacent to each other it will allow for the flexibility in the design for future proposals.
- Public restrooms should be located near the gymnasium and accessible for after school events.
- A training room may be provided adjacent to the locker rooms.

Facility Concept Diagrams

Figure 4-2 Fitness Center Functional Diagram



Facility Concept Diagrams (cont.)



Space Requirements

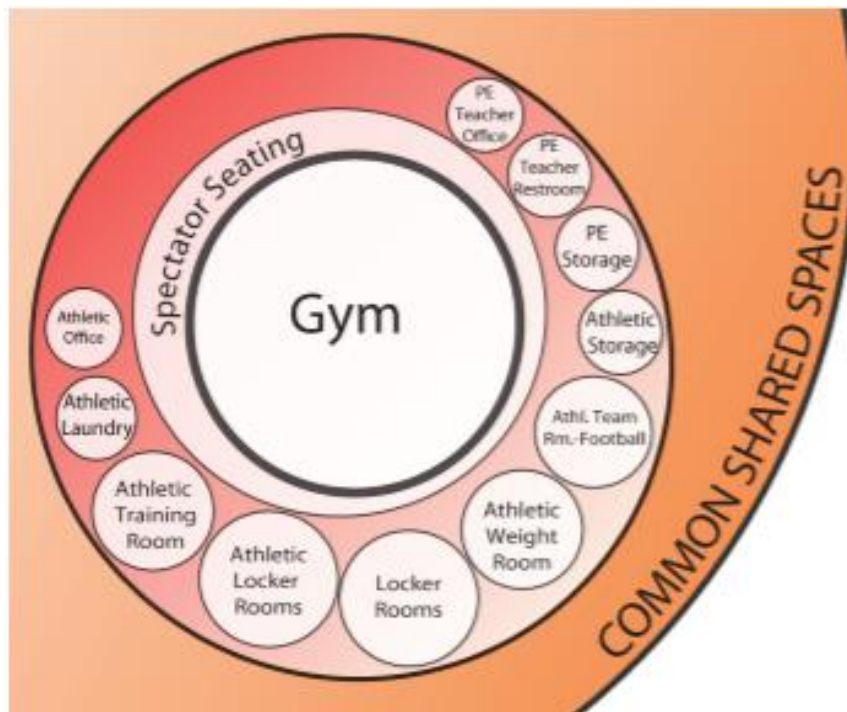
Interior functions:

- Multipurpose gymnasium building with spectator seating
- Racquetball courts (2)
- Fencing studio (1)
- Weight training room (1)
- Hydrotherapy area (1 station)
- Locker/shower/toilet facilities (male and female)
- Administrative offices
- Storage area

Outdoor functions:

- Football/soccer field
- Baseball field
- Cricket field
- Handball courts
- Basketball courts

Common Shared Spaces



<i>Room</i>	<i>Approx. S.F.</i>	<i>Gross S.F.</i>	<i>Public Access</i>
<i>(4) Offices</i>	120	480	
<i>Gym</i>	5700	5700	✓
<i>Fencing Studio</i>	226	226	✓
<i>(2) Racquetball Courts</i>	592	1184	✓
<i>Weight Room</i>	600	600	✓
<i>Hydrotherapy Area</i>	120	120	✓
<i>(2)Locker Rooms</i>	600	1200	✓
<i>Lobby</i>	500	500	✓
	Total Net Area -	10,010 SQ.FT.	
	Net-Gross Ratio -	1.35	
	Approximate Gross Area	13,514 SQ.FT.	

Multi-Purpose Gymnasium:

This space will be used for dancing classes, exercise, gymnastics, table tennis, wrestling, and other activities. The gymnasium provides a dedicated space for physical education. Provide a clear ceiling height. Windows, light fixtures, and mechanical equipment. A divider curtain is desirable to allow two or more activities to occur simultaneously.

A small amount of seating in the gymnasium allows for community use of the facility. A minimum of 400 seats of telescoping bleachers shall be provided in all gymnasiums. Where no additional area is provided in the Planning Requirements table, the pull-out bleachers seating will extend onto the court area when open. In gymnasiums intended for competition sports, additional area for spectator seating is indicated and the bleachers may not encroach on the

safety area of the court when fully extended. Seating should be made of a durable material for use to the public.

Locker Rooms:

Locker rooms provide space for students to change clothing and store personal belongings while engaging in physical education or athletic events. Provide separate facilities for male and female students. Access the locker rooms directly from the court area or a supervised corridor. The locker rooms should also provide easy access to the exterior play fields. Consider privacy as well as easy supervision in the layout of the whole space. Locker Rooms should be well vented as well as durable. Lockers and finish materials should be durable for daily use from the public.

- The locker rooms will accommodate 60 lockers in the male locker and 30 lockers for the female. this includes the showers and toilets bases off the locker calculation table.
- Provide a 12 inch X 12 inch athletic locker size in each locker room

Weight Training Room:

The weight room contains weight lifting apparatus and fitness equipment. Weight training consists of iron weights, barbells, dumbbells, flat benches, incline benches, squat machines, and other equipment. Fitness area consists of treadmills, stationary bikes, step machines, floor mats for stretching, calisthenics and aerobics, and other equipment. Free weight training or heavy lifting is delimited apart from fitness and may be in separate spaces. Provide adequate maneuvering clearance around equipment for safety. Seismic loads

Administrative Office:

Provide a shared office space for coaching staff.

Storage:

This storage area provides storage for equipment used by the athletic programs. The room may be divided with wire mesh partitions for separate storage areas for different sports. Additional storage may be provided at the concession/restroom facility near the athletic fields. This storage should be easily accessible to the athletic coaches.

Summary Recommendations

- The main entrance should be located on the existing road to eliminate excess landscape design costs as well as maintain the current path of circulation on the site.
- Consider acoustic control by reducing the noise impact created by physical activity, by including sound baffles.
- All materials should be non-combustible for Type I to allow for high volumes of people to have time in the event of a fire.
- The loading dock should be adjacent to storage and mechanical facilities to prevent equipment circulation from crossing pedestrian circulation.

Cost Summary

Project Budget Planning				10/16/2018	
Preliminary Budget Allocation				ARC 376	
Group 1				Farmingdale State College	
		Net Square Area	Gross Square Area	Cost per GSF	Cost by Task/Facility
RENOVATION					
Assembly	0	x1.45	0	\$ 276	\$ -
Business	0	x1.50	0	\$ 267	\$ -
Other:	0	LS	0	\$ -	\$ -
Demolition	0	x1.50	0	\$ 21	\$ -
		Net Square Area	Gross Square Area	Cost per NSF	Cost by Task/Facility
NEW CONSTRUCTION					
Assembly	6200	x1.35	8680	\$ 296	\$ 2,570,753.90
Business	3810	x1.35	5715	\$ 285	\$ 1,631,168.89
Other:		x1.50	0	\$ -	\$ -
Parking Lot, New	350	100	35000	\$ 27	\$ 952,560.00
Concrete Sidewalk		na	1800	\$ 21	\$ 37,179.00
Landscaping		na	43520	\$ 14	\$ 599,270.40
			Net Square Area	Cost per NSF	Cost by Task/Facility
EQUIPMENT					
Interior Equipment - Gymnasium			12000	\$ 47	\$ 567,000.00
Interior Equipment - Office			500	\$ 27	\$ 13,500.00
Exterior Equipment - Walks and Yards			43520	\$ 26	\$ 1,131,520.00
Subtotal, Project Construction, Fees, and Contingency					\$ 7,502,952.19
			Subtotal	x Factor	
FACTORS					
Project Costs - Less than \$1 million			\$ -	5%	\$ -
Project Costs - More than \$1 million			\$ 7,502,952.19	-3%	\$ (225,088.57)
Labor availability - Slow Market			\$ -	-5%	\$ -
Labor availability - Tight Market			\$ 7,502,952.19	7%	\$ 525,206.65
Labor - prevailing wage			\$ 7,502,952.19	15%	\$ 1,125,442.83
Location - Incorporated Area			\$ -	2%	\$ -
Location - Unincorporated Area			\$ 7,502,952.19	-2%	\$ (150,059.04)
Job site - Business Area			\$ 7,502,952.19	-2%	\$ (150,059.04)
Job site - Residential Area			\$ -	5%	\$ -
Job site - Limited Staging			\$ -	5%	\$ -
Job site - Occupied by Owner			\$ -	7%	\$ -
Renovation - No Intrusive Tests			\$ -	10%	\$ -
Renovation - Intrusive Exploration			\$ 7,502,952.19	-3%	\$ (225,088.57)
Project Fees - Simple Project			\$ 7,502,952.19	-1%	\$ (75,029.52)
Project Fees - Complex Project			\$ -	5%	\$ -
NYS Building Code Transition - simple project			\$ 7,502,952.19	5%	\$ 375,147.61
NYS Building Code Transition - complex project			\$ -	7%	\$ -
FACTORS, subtotal					\$ 1,200,472.35
Design Contingency		7.5% of subtotals			\$ 652,756.84
Subtotal, Construction+Fees+Factors+Contingency					\$ 9,356,181.39
Escalation		Previous Subtotal x 4% x no. of years to		1.0	\$ 374,247.26
TOTAL PROJECT ESTIMATE=					\$ 9,730,428.64

Project Budget Planning			16-Oct-18
Budget Allocation			ARC 376
Group 1			Farmingdale State College
Allocations			Comments
Project Total		\$ 9,730,429	cost escalated 1.5 years
	% Project	% Construction	
Construction	75%		\$ 7,297,821
Design Contingency	4%	5%	\$ 364,891
Project Contingency	7.5%	10%	\$ 729,782
Architects Fees	5.3%	7%	\$ 510,848
Feasibility Study	0.5%	LS	\$ 50,000
DCR Fee	2.0%	2%	\$ 194,609
OSR	1.5%	2%	\$ 145,956
Reimbursable Expenses	0.8%	1%	\$ 72,978
Equipment	3.8%	5%	\$ 364,891
	100%		\$ 9,731,776
	GSF	cost per GSF	
Project construction cost per GSF	14,395	\$ 507	
Project costs per GSF	14,395	\$ 676	

Cost Summary (cont.)

Appendix A – Space Requirements

enrollment range	# of lockers (single - M or F)	type of lockers	locker size	approximate room dimensions	sf/locker area (single - M or F)	ttv/urinal count (single - M or F)	sf/toilet (single - M or F)	shower count (single - M or F)	sf/shower (single - M or F)	sf/locker-toilet-shower (total of shaded columns)	Single Locker Room Total (rounded up to nearest 25 sf)	Locker Room Total sf Male and Female	Locker Room Total m ² Male and Female
0-99	60	30 double tier	12x12	23x8	184	2	105	2	105	394	400	800	74
100-199	120	60 double tier	12x12	23x16	368	3	145	3	150	663	675	1350	125
200-299	180	(36) 5-tier/full	(2)12x12	26x16	416	4	185	4	195	796	800	1600	149
300-399	240	(48) 5-tier/full	(2)12x12	34x16	544	5	225	5	240	1009	1025	2050	190
400-499	300	(30) 5-tier/5-tier/full	(3)12x12	33x16	528	6	265	6	285	1078	1100	2200	204
500-599	360	(36) 5-tier/5-tier/full	(3)12x12	26x24	624	8	345	8	375	1344	1350	2700	251
600-699	420	(42) 5-tier/5-tier/full	(3)12x12	33x24	792	9	385	9	420	1597	1600	3200	297
700-799	480	(48) 5-tier/5-tier/full	(3)12x12	36x24	864	10	425	10	465	1754	1775	3550	330
800-899	540	(54) 5-tier/5-tier/full	(3)12x12	39x24	936	11	465	11	510	1911	1925	3850	358
900-999	600	(60) 5-tier/5-tier/full	(3)12x12	42x24	1008	12	505	12	555	2068	2075	4150	386

Plumbing fixtures shall be provided based on applicable building codes - calculations shown are based on 1:50 of the locker count

SECTION 403 OCCUPANT LOAD

403.1 Occupant load.

Where bench seating is used, the number of persons shall be based on one person for each 18 inches (457 mm) of length of the bench. Where individual seats are provided, the occupant load shall be based on one person per seat. The occupant load of reviewing stands and press boxes shall be based on 5 square feet (0.465 m²) per person for standing space and 7 square feet (0.65 m²) per person for movable chair seating space. The occupant load for security, audio and camera platforms shall be based on the actual number of occupants.

FC 4-740-02F
26 September 2006
Including Change 1, 1 May 2013

TABLE 4-1. ENTRY/LOBBY and WAITING/DISPLAY

Description/ Usage	The lobby serves as the primary entrance to the facility for patrons, visitors, and spectators. The lobby should be open and friendly in design and serve to introduce the rest of the facility. Immediately adjacent to the lobby is the waiting/display area which provides an area for customers to relax and for the facility to display trophies and special activities and programs.
Min. Ceiling Ht.	10 ft. (3.05 m) minimum.
Finishes	<p>Walls. Provide a low-maintenance, durable finish with a wainscot. Consider painted gypsum wallboard or the use of vinyl wall covering where budget and practical considerations allow.</p> <p>Floor. Provide a low-maintenance, durable, moisture and slip-resistant finish suitable for this high traffic area. Consider stained concrete, stone, terrazzo, or quarry tile. Provide a walk-off mat/area at the entrance door. Provide a base that matches the flooring or a vinyl or rubber base.</p> <p>Ceiling. Provide a decorative ceiling. Consider exposed, painted structure with an acoustical spray paint.</p>
Plumbing	Provide drinking fountain(s).
HVAC	68 F (20 C) minimum, 78 F (26 C) maximum.
Fire Protection	Provide system per the section entitled, "Fire Protection".
Power	Provide outlets per code.
Lighting	40 ft. candles (430 lux). General ambient lighting. Consider decorative and task lighting.
Communication	<p>CCTV. Provide at least one outlet.</p> <p>CATV/Internal Video. Provide a CATV outlet.</p> <p>PA/Audio. Provide a speaker.</p> <p>Telephone. Provide one line.</p> <p>Data. Provide an outlet in the waiting/display area.</p> <p>Security. None required.</p>
Casework/ Built-in Equipment	Provide display cases in this space.
Furnishings Fixtures & Equip. (FF&E)	<p>Provide CCTV cameras per the outlet count.</p> <p>Floor mat at entrance.</p> <p>Waiting/display area should include durable, easy to clean, and moisture-resistant furniture; tables; magazine and brochure rack; tack surfaces; wall art; trophy case (if not built-in); and a wall clock. Provide a means to display installation and staff information.</p> <p>Consider providing a self-use blood-pressure monitor, a computer with Internet connectivity, and a pay phone.</p>
Special Req.	Provide an airlock at the main entrance. Provide a grated snow-trap for northern tier bases. Signage.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m² (ft²)	

FC 4-740-02F
26 September 2006
Including Change 1, 1 May 2013

TABLE 4-2. CONTROL COUNTER/EQUIPMENT ISSUE/STORAGE.

Description/ Usage	<p>The control counter is often referred to as the front desk or reception desk. It's the focal point of information exchange within the building and is the check-in location for patrons; the check-in method may be located at the facility entrance or in the lobby to ensure all patrons check-in at entry. Do not use check-in/counting methods that restrict rapid access/egress to/from the facility, such as a turnstile.</p> <p>Equipment such as towels, balls, and racquetball rackets will be issued from the control desk. It must provide for direct supervision of the facility and greeting, informing, and directing patrons to their particular activity area. Additionally, the control desk serves as the focal point for safety and emergency situations.</p> <p>In smaller facilities, vending functions can be provided as an over-the-counter service at the control counter. Also see Table 4-3.</p>
Min. Ceiling Ht.	9 ft. (2.74 m) minimum.
Finishes	<p>Walls. Painted gypsum wallboard. Consider vinyl wall coverings.</p> <p>Floor. In front of counter: Provide a low-maintenance, durable, moisture and slip-resistant finish suitable for this high traffic area. Consider stained concrete, stone, terrazzo, or quarry tile. Provide a base that matches the flooring or a vinyl or rubber base.</p> <p>Behind counter: Provide stained concrete, stone or quarry tile, vinyl composition tile (VCT), or carpet. Provide vinyl or rubber base.</p> <p>Ceiling. Acoustical Ceiling Panels (ACP). Consider using the ceiling to define and separate this area from the Lobby, i.e., a dropped gypsum board soffit over the control desk and gypsum board false beams.</p>
Plumbing	None required.
HVAC	68 F (20 C) minimum, 78 F (26 C) maximum. Provide an emergency shut-off control per AT requirements.
Fire Protection	Provide system per the section entitled, "Fire Protection".
Power	Provide power for all equipment. Perform a power requirement survey as this area's power requirements are extremely site- and locale-specific.
Lighting	40 ft. candles (540 lux). General ambient lighting. Provide task lighting; consider decorative fixtures.
Communication	<p>CCTV. All monitors must be viewable from this area.</p> <p>CATV/Internal Video. None required.</p> <p>PA/Audio. PA controls. Provide a speaker.</p> <p>Telephone. Provide one line per two points of sale (POS). Provide at least two additional general purpose phone lines.</p> <p>Data. Provide one outlet per POS. Provide additional outlets, as needed, for associated hardware.</p> <p>Security. Consider providing duress alarm control next to the POS units.</p>

FC 4-740-02F
26 September 2006
Including Change 1, 1 May 2013

TABLE 4-2. CONTROL COUNTER/EQUIPMENT ISSUE/STORAGE.

Casework/ Built-in Equipment	<p>Provide a 24-in- (610-mm-) deep counter with built-in cabinets. Provide file drawers and storage drawers with a minimum of two lockable drawers for each POS. The counter should be dual height for standing transactions, seated office functions, and ADA customer service. Note that ADA-height counter should have knee-hole space on both sides of the counter. The counter must be a durable solid surface material such as granite, concrete, or solid plastic—laminated is not permitted. Modesty panels and apron must be of durable materials. Provide a towel return drop opening in the counter top with space for a laundry cart below. The staff access to the counter must permit access to the free weight area for emergency response.</p> <p>Consider supports such as steel angle braces for counters with knee-hole space. Consider providing wall and base cabinets and an equipment counter.</p> <p>Storage must accommodate towels, small athletic equipment such as balls and rackets, and juice bar/vending supplies (if provided at the control counter). Consider if clean towels will be provided by a service or if they will be in laundry carts and provide storage space accordingly.</p>
Furnishings Fixtures & Equip. (FF&E)	<p>POS units, desktop computer for administrative functions. CCTV monitors. Printers. Chairs and stools. Scanner or swipe-card check-in device (optional for Air Force). PA controls. Consider providing an automatic external defibrillator (AED).</p>
Special Req.	<p>Attendants at the control desk must have direct line-of-sight visual control over the following: the main entrance, the free weight area, the gymnasium entrance, the locker room entrance, and the climbing wall (if provided). Attendants should also have visual control (via line of sight or CCTV) over the unit PT/group exercise rooms, the selectorized equipment, the cardio equipment, and structured activity areas. \1\ Air Force permits /1/ visual control of the locker room entrance via CCTV.</p> <p>Consider providing a gate between the desk and surrounding area. Consider providing a coiling door or grille at the counter to serve as a security screen.</p>
For use during project execution by the appropriate Service agency	
Occupancy	<p>Staff. Customers.</p>
Min. net m² (ft²)	

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TABLE 4-5. PUBLIC TOILETS/JANITOR'S CLOSET

Description/ Usage	These toilet rooms are used primarily by visitors, spectators, and persons not using the locker and shower rooms. They should be adjacent to the lobby and gymnasium. Provide separate male and female restrooms.
Min. Ceiling Ht.	9 ft. (2.74 m) minimum.
Finishes	Walls. Epoxy or enamel painted, moisture-resistant gypsum wall board with a ceramic tile wainscot. Consider full ceramic tile walls with integral patterns. Use a dark-colored epoxy grout. Floor. Ceramic tile with integral patterns. Use a dark-colored epoxy grout. Ceiling. Epoxy or enamel painted, moisture-resistant gypsum board. None needed for janitor's closet.
Plumbing	Provide wall-hung water closets, wall-hung urinals \1\ /1/ and lavatories based on the applicable code for the calculated occupancy of the gymnasium. Provide a floor drain. Provide a keyed hose bibb.
HVAC	68 F (20 C) minimum, 78 F (26 C) maximum. Ventilate to the exterior per code. Provide eight to 12 air changes per hour.
Fire Protection	Provide system per the section entitled, "Fire Protection".
Power	Provide outlets per code.
Lighting	50 ft. candles (540 lux).
Communication	CCTV. None required. CATV/Internal Video. None required. PA/Audio. Provide a speaker. Telephone. None required. Data. None required. Security. None required.
Casework/ Built-in Equipment	Solid-surface countertop with either underhung or integral sink. Solid composite toilet and urinal partitions. Consider permanent ceramic-tile partitions. Toilet accessories: toilet paper dispensers, paper towel dispenser with integral trash receptacle, robe hooks, grab bars, sanitary napkin disposal (female water closet stalls), seat cover dispensers, and soap dispensers. Mirror. Fold-down diaper changing table/station in both the male and female toilets.
Furnishings Fixtures & Equip. (FF&E)	
Special Req.	Provide a Janitor's closet associated with or in proximity of these toilets. This closet includes a floor mop sink with hot and cold water and a hose connection, a floor drain, and storage for pails, mops, vacuums, and related cleaning supplies and equipment. Include a lockable door, (which can be opened from the inside) with a vision panel. Provide lockable cabinets for cleaning supplies. Provide exhaust ventilation directly to the outside.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m² (ft²)	

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TABLE 4-8 ADMINISTRATIVE OFFICES

Description/ Usage	The administrative offices consist of a mix of private and open office space. The quantity and type of offices are facility specific. Generally speaking, the following office spaces are provided: Director's office, Program Managers' office(s), and support staff workstations. The offices should be free from frequent distraction, have a professional appearance, and provide a sense of work place.
Min. Ceiling Ht.	9 ft. (2.74 m) minimum.
Finishes	Walls. Painted gypsum wall board or vinyl wall covering. Floor. Carpet with vinyl or rubber base Ceiling. ACP
Plumbing	None required.
HVAC	68 F (20 C) minimum, 78 F (26 C) maximum.
Fire Protection	Provide system per the section entitled, "Fire Protection".
Power	Ensure an adequate number of circuits to power all equipment. Provide a minimum of one quad outlet in closed offices on at least three walls. Gang outlets with data and telephone. Workstations should provide at least one quad outlet per staff. Provide additional outlets as necessary to operate shared equipment such as printers, fax, etc.
Lighting	50 ft. candles (540 Lux). General ambient fixtures.
Communication	CCTV. None required. CATV/Internal Video: None required. PA/Audio: Provide a speaker. Provide controls in the Director's office. Telephone. Provide one line per staff plus one additional line for fax and copier. Data. Provide one outlet per staff plus one outlet for each printer, copier, scanner, etc. Security. None required.
Casework/ Built-in Equipment	None required.
Furnishings Fixtures & Equipment (FF&E)	Private Offices—provide furniture for 120 ft. ² (11 m ²) or 100 ft. ² (9.3 m ²) office: desk, credenza, filing cabinet, desk chair, and two side chairs. Workstations—provide furniture for 64 ft. ² (6 m ²) workstation: desk chair and side chair for open offices. Workstation systems furniture must provide adequate space for filing and overhead storage. Provide dry-erase boards in select offices and workstations.
Special Requirements	Locate offices on exterior wall and provide windows for natural light admission. Provide side lights next to the office doors for supervision and security.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m² (ft²)	

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TABLE 4-11. MEN'S AND WOMEN'S LOCKERS/DRESSING

Description/ Usage	Separate men's and woman's locker/dressing rooms will be used by those participating in fitness/sports activities for changing, dressing, and securing personal effects. It is open and directly adjacent to the toilet/shower facilities. As such, moisture and humidity must be addressed in the locker/dressing rooms.
Min. Ceiling Ht.	10 ft. (3.05 m) minimum except where furred down.
Finishes	Walls. Epoxy or enamel painted concrete masonry units (CMU) or moisture-resistant gypsum wall board. Floor. Slip-resistant tile with dark grout. Ceiling. High humidity-rated, ceramic-faced ACP. Provide a corrosion-resistant supporting grid.
Plumbing	Provide a floor drain. Consider providing a water fountain.
HVAC	70 F (21 C) minimum, 78 F (26 C) maximum. Provide for air flow from the dry side of this space (opposite the adjacent toilet/shower wet side) to the exhaust intakes in the wet area. Provide eight to 12 air changes per hour with supply by air dump to decrease air velocities, negative pressure, and 0.50 CFM/ft. ² . Limit relative humidity to under 50% through the use of humidistats. Humidistats may also be used to throttle back air changes as long as temperature and humidity remain within limits.
Fire Protection	Provide system per the section entitled, "Fire Protection".
Power	Provide outlets per code. Provide counter-height outlets at the vanity area.
Lighting	40 ft. candles (430 lux). General ambient lighting. Lighting fixtures should have translucent, moisture resistant, nonbreakable, protective covers. Minimize shadowing at face of lockers.
Communication	CCTV. None required. CATV/Internal Video. Consider providing an outlet. PA/Audio. Provide a speaker. Provide an emergency call/alarm. Telephone. Provide one line. Data. Consider providing outlets to support personal fitness tracking devices. Security. None required.
Casework/ Built-in Equipment	Provide lockers and benches. Typically provide a mix of full- and half-sized Z-shaped lockers. However, consider the location's climate when determining the ratio of half- to full-sized lockers: Colder climates will require a higher percentage (or 100%) of full-sized lockers to accommodate bulkier cold weather gear. Provide integral benches (usually part of the locker system) at least 16 in. (406 mm) wide. Solid composite plastic lockers are strongly preferred. Mount lockers at a level above the floor which provides reachable operating hardware. Provide a vanity area with a counter and mirror. Provide wall-mounted hair dryers adjacent to this area. Provide one hair dryer for every three shower heads for men and one hair dryer for every two shower heads for women. Provide shelves and hooks for coats and hats. Provide a full-height wall mirror. \1\1/ Provide multi-speed ceiling fans.
Furnishings Fixtures & Equip. (FF&E)	Provide a scale. Consider providing a blood pressure monitor.

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TABLE 4-12. MEN'S AND WOMEN'S SHOWERS

Description/ Usage	These separate male and female areas are directly adjacent to (and may be open to) the corresponding gender's locker/dressing and toilet areas and include private shower/drying stalls. Several other functions may be provided in this space such as sauna, steam room, and/or hot tub.
Min. Ceiling Ht.	9 ft. (2.74 m) minimum
Finishes	Walls. Full height ceramic tile with a dark-colored epoxy grout. Floor. Mud set, non-slip ceramic tile. Use dark-colored, epoxy grout in the shower floor tiling. Ceiling. Moisture-resistant gypsum board with a veneer plaster (level 5) finish and epoxy paint.
Plumbing	Provide minimum 42-in.- (1068-mm-) wide private shower/drying stalls for men and women. Provide proper drainage (i.e., floor drains and/or perimeter trench drains).
HVAC	70 F (21 C) minimum, 78 F (26 C) maximum. Provide for air flow from the dry side (adjacent locker/dressing area) to the exhaust intakes in the wet (toilet/shower) area. Provide 20-30 air changes per hour with negative pressure and supply by air dump to decrease air velocities.
Fire Protection	Provide system per the section entitled, "Fire Protection".
Power	Provide outlets per code.
Lighting	40 ft. candles (430 lux). General ambient lighting. Lighting fixtures should have translucent, moisture resistant, nonbreakable, protective covers. In the showers, provide recessed fixtures with sealed lenses, rated for wet applications.
Communication	CCTV. None required. CATV/Internal Video. None required. PA/Audio. Provide a speaker. Provide an emergency call/alarm. Telephone. None required. Data. None required. Security. None required.
Casework/ Built-in Equipment	Phenolic or solid composite shower partitions secured at floor and ceiling.
Furnishings Fixtures & Equip. (FF&E)	
Special Req.	Do not allow direct views into the shower room areas. Provide a privacy screen at the entrance to this area. Consider providing natural light via frosted skylights or translucent wall building materials (such as insulated glass block). \\ \\ /1/ If DV locker rooms are provided (see Table 4-11), provide associated, separate male and female toilet and shower facilities. When funds are limited, consider providing DV lockers and dressing area separate from the main locker room with access to the shower and toilet areas.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m² (ft²)	

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TABLE 4-13. MEN'S AND WOMEN'S TOILETS

Description/ Usage	Separate men's and women's toilet facilities are open and directly adjacent to the corresponding gender's locker/dressing and shower areas.
Min. Ceiling Ht.	9 ft. (2.74 m) minimum
Finishes	Walls. Full height ceramic tile with dark-colored epoxy grout at wet walls and ceramic tile wainscots at fixture areas. Epoxy or enamel painted, moisture-resistant gypsum wall board elsewhere. Floor. Mud set, non-slip ceramic tile with dark-colored epoxy grout. Ceiling. Moisture-resistant gypsum board with a veneer plaster (level 5) finish and epoxy paint.
Plumbing	Provide lavatories, urinals, and water closets. \1\1/ Provide proper drainage (i.e., floor drains and/or perimeter trench drains).
HVAC	68 F (20 C) minimum, 78 F (26 C) maximum. Provide for air flow from the dry side (adjacent locker/dressing area) to the exhaust intakes in the wet (toilet/shower) area. Provide 15 to 20 air changes per hour with supply by air dump to decrease air velocities, negative pressure. Limit relative humidity to under 50% through the use of humidistats. Humidistats may also be used to throttle back air changes as long as temperature and humidity remain within limits.
Fire Protection	Provide system per the section entitled, "Fire Protection".
Power	Provide outlets per code. Provide GFCI outlets at lavatory at counter height.
Lighting	40 ft. candles (430 lux). General ambient lighting. Lighting fixtures should have translucent, moisture resistant, nonbreakable, protective covers. Provide lighting directly over lavatories and grooming counters and minimize reflection glare in the mirrors in the overall lighting design.
Communication	CCTV. None required. CATV/Internal Video. None required. PA/Audio. Provide a speaker. Provide an emergency call/alarm. Telephone. None required Data. None required. Security. None required.
Casework/ Built-in Equipment	Solid-surface countertop supported at both ends and with the front edge supported by galvanized angle reinforcing. The sink may be either underhung or integral with the counter. Phenolic or solid composite water closet and urinal partitions secured at floor and ceiling. Toilet accessories: toilet paper dispensers, paper towel dispenser with integrated trash receptacle, robe and towel hooks, grab bars, feminine hygiene receptacles in women's water closets, seat cover dispensers, and soap dispensers at lavatories. Provide wall-mounted shelves and full-width mirror at the lavatories. Provide a full-length mirror.
Furnishings Fixtures & Equip. (FF&E)	

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TABLE 4-20. GYMNASIUM/BASKETBALL/VOLLEYBALL COURTS

Description/ Usage	This space is used for team activities and sports competitions such as basketball and volleyball. Multiple court gymnasiums with divider curtains can accommodate simultaneous activities. The gymnasium can also support instructional functions, informal, intramural, and extramural sports as well as community events.
Min. Ceiling Ht.	28 ft. (8.53 m) clear height below structure and lights.
Finishes	Walls. CMU with glazed wall coating or heavy-duty epoxy up to 12 ft. (3.66 m). Above 12 ft. (3.66 m), use semi-gloss enamel and consider acoustic panels. Floor. Multipurpose, resilient, athletic flooring—typically wood. Flooring must meet "DIN" standards for the specified function per ACSM. Ceiling. Exposed, painted structure. Provide acoustical banners.
Plumbing	No plumbing fixtures in the gymnasium. Consider access to nearby drinking fountains.
HVAC	68 F (20 C) minimum, 74 F (23 C) maximum; 20 cfm/person outside air, with CO ₂ sensors or other type of energy conservation system; 10 air changes/hour; less than 50% relative humidity. Provide durable air grill covers and do not place air grills in line with basketball nets.
Fire Protection	Provide system per the section entitled, "Fire Protection". Provide protection for sprinkler heads, exit signs, manual pull stations, and other exposed components; minimize equipment that protrudes into activity space or raise it above 6 ft. (1.83 m) for safety considerations. Provide 1-hour fire separation from core areas of building.
Power	Provide outlets per code. Provide power for the scoreboard; shot clocks; and a high, wall-mounted clock. Consider power requirements for other functions such as retractable backboards, divider curtain, and stage sound and lighting.
Lighting	Metal halide, 50 ft. candles (540 lux) minimum, adjustable up to 80 ft. candles (860 lux). If the program dictates, consider providing up to 100 ft. candles (1080 lux). Provide perimeter compact fluorescents multi-level switched for non-sport activities. Provide keyed light switches. Provide protection for all fixtures. Do not locate fixtures directly above basketball backboards. Do not install high-pressure sodium lighting.
Communication	CCTV. Provide at least one outlet in each divided space. CATV/Internal Video. None required. PA/Audio. Provide speakers with proper spacing. Telephone. Provide one line with internal two-way communication. Data. Consider providing data outlets in recessed floor boxes, centered under the anticipated scoring table location, but outside the court boundaries. Security. None required.
Casework/ Built-in Equipment	None required.
Furnishings Fixtures & Equip. (FF&E)	Provide CCTV cameras per the outlet count. Provide wrestling mat, exercise mat, protective floor coverings, seating, scoring table, elevated judge's stand, and chairs.

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TABLE 4-20. GYMNASIUM/BASKETBALL/VOLLEYBALL COURTS

Special Req.	<p>Provide acoustical control with sound baffles, banners, acoustical materials, etc.</p> <p>Built-in equipment:</p> <ul style="list-style-type: none"> • Provide retractable basketball nets/backboards at two per half court or six per full court. Breakaway rims must be installed on all goals. • Provide volleyball stanchions and net with built-in flush floor insert sleeves. Consider floor inserts for gymnastics standards. • Motor-operated, vertical-acting, divider curtain with manual override. • Electronic scoreboard—provide control for scoreboard and divider curtain on side of room opposite of bleachers. • Bleachers. Use telescoping bleachers to maximize the flexibility of the space and to allow sideline space for gymnasium events. Provide for accessible seating. \1\ /1/ • Provide game lines on flooring for full- and half-court basketball and volleyball. • Provide attached safety padding on all walls to 6 ft. (1830 mm) minimum above finished floor. • Provide one pair of 30-second timing clocks for the main court. <p>Other special requirements:</p> <ul style="list-style-type: none"> • Provide wood entrance doors with vision panels into the gym and ensure visual access from the control counter. • Provide a minimum 10 ft. (3.05 m) unobstructed floor space safety zone between the outer edge of the playing area and any feature or obstruction. • Consider moisture control and prevention of condensation on floor surface. Consider under-floor ventilation requirements, under-slab vapor barrier, estimated dew point occurrence, local water table, and local soil conditions. • Provide exterior double doors with removable latch post for equipment access. • Provide natural light through the use of windows and/or overhead skylights. Mitigate glare on the play and spectator areas. Any glass panels should be a minimum of 18 ft. (5.49 m) above finished floor and .5 in. (13 mm) thick, tempered, laminated safety glass. • Ensure no glazing or lighting can create glare or distraction on the play areas. Also consider cross-court play.
For use during project execution by the appropriate Service agency	
Occupancy	<p>Staff.</p> <p>Customers.</p> <p>Participants.</p> <p>Spectators.</p>
Min. net m² (ft²)	

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TABLE 4-21. GYMNASIUM EQUIPMENT STORAGE

Description/ Usage	A room for the storage of equipment and supplies, e.g., roll-away basketball goals, volleyball standards, gymnasium floor protective covering, and telescopic platform for maintenance/repair, needed for program support. Coordinate with overhead storage.
Min. Ceiling Ht.	10 ft. (3.05 m) minimum
Finishes	Walls. CMU or painted gypsum wall board. Floor. Sealed concrete. Ceiling. None required.
Plumbing	None required. Consider providing a connection for an ice maker and a floor drain. \1\ /1/
HVAC	65 F (18 C) minimum, 85 F (29 C) maximum.
Fire Protection	Provide system per the section entitled, "Fire Protection".
Power	Provide outlets per code.
Lighting	20 ft. candles (215 lux).
Communication	CCTV. None required. CATV/Internal Video. None required. PA/Audio. None required. Telephone. None required. Data. None required. Security. None required.
Casework/ Built-in Equipment	None required.
Furnishings Fixtures & Equip. (FF&E)	Shelving and storage cabinets.
Special Req.	Area must be accessible from both interior and exterior through lockable double doors with kick-plates. Consider providing "dutch" doors at interior for equipment issue. \1\ /1/ Provide a vision panel in the door. Provide ramp at exterior door to facilitate equipment issue/delivery, if necessary. The area must be at least 8 ft.(2.44 m) wide. In addition to the gym storage room, a separate storage area accessible from the exterior may be provided for exterior sports and athletic equipment, e.g., bleachers and soccer goals.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.

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TABLE 4-23. RACQUETBALL COURTS

Description/ Usage	Racquetball courts generally consist of one or more enclosed courts within a larger space that allows circulation, waiting, and spectator viewing. Courts are sized and specified specifically for the game of racquetball (see Special Requirements).
Min. Ceiling Ht.	20 ft. (6.1 m).
Finishes	Walls. .5 in. (13 mm) thick high density resin core panels over .5 in. (13 mm) sound cushion layer. Consider providing a shatterproof, tempered glass back wall/door for viewing and officiating. Minimum calculated wall reflectance must be 0.65. Floor. Multipurpose, resilient, wood athletic flooring designed for racquetball courts. Flooring must meet "DIN" standards for the specified function per ACSM. Ceiling. .5 in. (13 mm) thick high density resin core panels
Plumbing	None Required. Consider access to drinking fountains and bathrooms.
HVAC	60 F (16 C) minimum, 68 F (20 C) maximum; 15 cfm/person outside air, with CO ₂ sensors or other type of energy conservation system; 10 air changes/hour, less than 50% relative humidity. Ventilating ducts must be installed flush with the ceiling or wall surfaces. Supply and return vents should be located in the rear one-third of the ceiling and/or the upper one-third of the back wall.
Fire Protection	Provide system per the section entitled, "Fire Protection". Any fire suppression or detection equipment must be protected and flush with the wall or ceiling surface.
Power	None required in courts. Provide convenience outlets per code in the waiting/viewing area.
Lighting	70 ft. candles (970 lux) minimum. Provide 100 ft. candles (1,076 lux) for competition play. Use translucent, impact resistant, nonbreakable, flush mounted protective covers specifically designed for racquetball courts. Light should be evenly distributed throughout the court. Metal halide fixtures are preferred. For courts with glass walls, the lighting level shall be the same on both sides of the glass wall. This feature will reduce glare and allow players to follow the ball as it plays off the glass wall.
Communication	CCTV. Provide at least one outlet in the waiting/viewing area. CATV/Internal Video. None required. PA/Audio. Provide a speaker in each court (upper end of back wall preferred) and in the waiting/viewing area. Telephone. None required. Data. None required. Security. None required.
Casework/ Built-in Equipment	Provide mounting sockets and netting for wally ball games on 50% of the courts or per local demand. Provide recessed wallet lock boxes in one sidewall of each court. Consider providing a large, recessed walk-off mat outside the entrance to the courts.
Furnishings Fixtures & Equip. (FF&E)	Provide CCTV cameras per the outlet count. If a waiting/viewing area is included, provide seating for spectators.
Special Req.	Court striping and dimensions must comply with U.S. Racquetball Association rules. Consider providing one court with a movable front or rear wall to allow one racquetball court to be converted into a squash court.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers. Participants. Spectators.

TABLE 4-25. FITNESS AREA

Description/ Usage	<p>This area is typically the focal point of the facility. The area is divided into four sections: stretching/warm up/cool down, free/plate-loaded weights, selectorized (machine) equipment, and cardiovascular equipment. The stretching/warm-up/cool-down area is open space within the larger room. It can also serve as transition areas between the other sections. The cardiovascular equipment area can be located in multiple areas throughout the facility. Consider locations such as balconies, alcoves, etc. The criteria in this table will apply regardless of equipment location. This area is adjacent to the equipment repair/receiving area.</p> <p>The free/plate-loaded weights area includes dumbbells, plate racks and plate-loaded equipment, and benches. The selectorized (machine) equipment consists of pin-selected weight equipment. The cardiovascular equipment consists of items such as treadmills, stationary bikes, stair climbers, etc.</p>
Min. Ceiling Ht.	12 ft.(3.66 m) minimum. 14 ft.(4.27 m) is preferred.
Finishes	<p>Walls. CMU with glazed wall coating or heavy-duty epoxy. Provide wall protection up to 18 in. above finished floor in the free weight area.</p> <p>Floor. In the stretching/warm up/cool down and free weights areas use permanently adhered impact flooring with a nonporous, high-density rubber/elastic surface. Composite products such as recycled rubber may be used; however, the top layer should be virgin (unrecycled) material chemically bonded to the sublayers. Avoid the use of interlocking impact flooring tiles.</p> <p>For the selectorized equipment and cardiovascular equipment areas use multipurpose, resilient, athletic flooring.</p> <p>For the circuit training equipment, consider using the impact flooring detailed above. All flooring must meet "DIN" standards for the specified function per ACSM.</p> <p>Ceiling. Exposed, painted structure. Consider providing ACP or other acoustical banners and treatments.</p>
Plumbing	None required. Provide a minimum of two drinking fountains.
HVAC	68 F (20 C) minimum, 74 F (23 C) maximum; 12 to 18 air changes per hour; negative pressure; less than 50% relative humidity; 25 cfm/person outside air, with CO ₂ sensors or other type of energy conservation system. Provide for multi-speed ceiling fans.
Fire Protection	Provide system per the section entitled, "Fire Protection".
Power	<p>Provide outlets per code.</p> <p>Free weight area: Consider providing outlets for wall- or ceiling-mounted television monitors.</p> <p>Selectorized equipment area: Coordinate equipment outlets with the specific equipment selected. Provide flush-floor outlets for commercial-grade equipment in a grid pattern sized appropriately for equipment spacing and to accommodate fitness tracking systems. Consider providing a raised floor system for power distribution. Consider providing outlets for wall- or ceiling-mounted television monitors.</p> <p>Cardiovascular equipment area: Coordinate equipment outlets with the specific equipment selected. Provide flush-floor outlets for commercial-grade equipment in a grid pattern sized appropriately for equipment spacing and to accommodate fitness tracking systems. Consider providing a raised floor system for power distribution. Provide 220v dedicated circuits for all treadmills. Provide outlets for wall- or ceiling-mounted television monitors.</p>
Lighting	50 ft. candles (540 lux) uniform lighting. Use 80% indirect and 20% direct. Consider the possibilities for glare affecting equipment users—particularly those using equipment with horizontal benches. Mitigate glare as necessary.

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TABLE 4-25. FITNESS AREA

Communication	<p>CCTV. Provide outlets as needed for coverage.</p> <p>CATV/Internal Video. Provide outlets for wall or ceiling mounted television monitors. Mount at proper viewing height for cardiovascular exercise machines. Consider FM broadcast of video monitors.</p> <p>PA/Audio. Provide speakers as needed.</p> <p>Telephone. None required.</p> <p>Data. Consider providing data outlets in recessed floor boxes in the cardiovascular and selectorized equipment areas.</p> <p>Security. None required.</p>
Casework/ Built-in Equipment	<p>Provide 6 ft. (1830 mm) tall mirrors on at least two walls at a minimum of 18 in (450 mm) above the floor. One of the two walls must be in the free weight area.</p> <p>Provide toe bars (for sit-ups) in the stretching area(s).</p> <p>Provide multi-speed ceiling fans. Provide self-serve equipment cleaning supply stations throughout that include disinfectant spray bottles and disposable or reusable towels.</p>
Furnishings Fixtures & Equip. (FF&E)	<p>Provide CCTV cameras per the outlet count.</p> <p>Provide bulletin boards, exercise mats, wall clocks, and trash containers.</p> <p>Sample equipment lists for each area (cardio, free weights, and selectorized) are provided in Appendix C. Address accessibility issues in equipment selection.</p> <p>Consider providing an AED.</p>
Special Req.	<p>Provide storage either within the room or with a direct adjacency to store items such as mats, spare equipment, and other sports equipment.</p> <p>Provide natural light through the use of windows and/or overhead skylights. Mitigate glare.</p> <p>Provide attractive, color coordinated décor that projects a friendly environment. Avoid bland treatments such as a black floor and tan walls. Color selection should coordinate with equipment selected for the space.</p> <p>Consider providing a help desk within this space in larger facilities. If provided, locate it within the space in areas not well served by the Control Counter.</p>
For use during project execution by the appropriate Service agency	
Occupancy	<p>Staff.</p> <p>Customers.</p>
Min. net m² (ft²)	

SPACE PROGRAM

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FIGURE B-1. SPACE PROGRAM STANDARDS

Functional Component	Space Allocation Standard			
	m ²	ft. ²	Standard	Description
Fitness Spaces				
Lobby/Reception				
Entry Lobby	9.29	100	Vestibule/Lobby Module(s) (for 2-3 ppl)	Vestibule and/or space for 2 to 3 ppl to queue
Control Counter	11.81	125	Counter Module(s)	Space for counter, space behind, space in front
Equipment issue storage	16.26	175	Storage Module(s)	Equipment storage at/behind gear issue
Vending	1.86	20	Vending Machine(s)	per vending machine
Waiting/Display	8.36	90	Seating/Display Module(s) (for 4 ppl)	Space for seating for 4 ppl and display area
Spectator peak-time circulation	27.87	300	Circulation Module(s)	Per one-side bleachers - driven by gym size
Public restrooms/phones	0.00		Public Restroom(s)	Option - Driven by gym size
Gymnasium				
Basketball/volleyball Court	826.07	8,892	One-court/200-seat Module(s)	NCAA Court + 10' safety + 200 seats (one side)
Two Court Module	1630.95	17,556	Two-court/200-seat Module(s)	Two courts + 10' safety, 16' between cts, + 200 seats
Arena-style Two-Court Module	1708.62	18,392	Arena-style Two-Court Module(s)	Provides space for arena-style seating for center, longitudinal ct.
Additional Spectator seating	84.71	912	Additional 200-seat Module(s)	Four rows of seats (one ea. side) = 200 ppl.
Basic storage/support	65.03	700	Storage Module(s)	Roughly 8% of base gym area
Additional court storage	32.52	350	Additional storage module(s)	Storage space per additional court
Unit PT/Group Exercise				
Partitionable Room(s)	4.65	50	people at 4.6 m ² (50 ft. ²)/person	116.1 m ² (1,250 ft. ²) (25 ppl) minimum size
Storage/support	0.46	5	10% of partitionable room area	11.6 m ² (125 ft. ²) minimum (10% of room area)
Fitness Spaces				
Stretching	4.65	50	people at 4.6 m ² (50 ft. ²)/person	50 sf per person - min. 2 ppl
Cardiovascular Equipment	4.65	50	items at 4.6 m ² (50 ft. ²)/item	50 sf per station
Selectorized (machine) weights	4.65	50	items at 4.6 m ² (50 ft. ²)/item	50 sf per station
Free/Plate-loaded weights	8.04	85	items at 6.0 m ² (65 ft. ²)/item	65 sf per station
Fitness Program Manager's Office	11.81	125	Office	Private office that may include fitness testing equipment
Fitness Assessment Room	11.81	125	Office(s)	1 piece fitness equip for testing, computer desk, chairs, stretching
Structured Activities				
Structured Activity Space	74.32	800	Flexible space Module(s)	Based on size of a single racquetball court
Racquetball Courts	74.32	800	Racquetball Court(s)	Single court size, Minimum of two courts
Spectator/officiating	18.58	200	Spectator/officiating Module(s)	Two rows of 10 seats for one ct. Max of two cts (400 sf)
Structured activity storage	7.43	80	10% of Structured Activity Space	Based on Structured activity space (10% of room area)
Locker Rooms				
Men's Locker Room				
Locker/changing area	0.74	8	Lockers	Per slot (2 double lockers or 1 single locker)
Shower/drying area	2.79	30	Showers	Per shower & integral drying area at 22 lockers/shower
Toilet area	4.18	45	Water closets/lavatory modules	Per wc and lav. at 30 lockers per wclav
Woman's Locker Room				
Locker/changing area	0.74	8	Lockers	Per slot (2 double lockers or 1 single locker)
Shower/drying area	2.79	30	Showers	Per shower & integral drying area at 22 lockers/shower
Toilet area	4.18	45	Water closets/lavatory modules	per wc and lav. at 20 lockers per wclav
Sauna and cool-down area			M/F (2) Saunas/cool-down area	small = 6 ppl, med = 8-9, lg = 12 ppl (+ cool down space)
Steam Room and cool-down area			M/F (2) Steam Rooms/cool-down area	small = 6-7 ppl, med = 8-9, lg = 12-14 (+ cool down space)
Hot Tub			Unisex Hot Tub	small = 5 ppl, med = 8, lg = 12-14 ppl
Support Areas				
Laundry	18.58	200	Laundry Room	Per one-washer/two-dryer room
Equipment repair and receiving			Repair/receiving Room	Fixed receiving area + variable repair (10% of Fitness)
Storage			Storage Room	Variable lockable storage room (5% of fitness)
Additional Programmatic Storage			sf Additional Storage	To be filled-in by programmer and justified based on item stored.
Core HAWC Spaces				
Lobby/Reception	27.87	300	Lobby/Reception Module(s)	per area
Director's Office	11.15	120	Office	per office
Program Managers' Offices	9.29	100	Office(s)	per office
Support Staff Workstations	5.95	64	Workstation(s)	per workstation
Classrooms/Training rooms	58.53	630	Classroom/Training Module(s)	per room
Resource Room/Computer Lab	23.23	250	Resource/Computer Lab Module(s)	per room
Storage/support	7.43	80	Storage/support Module(s)	per area
Ergometry and Fitness Testing *	7.43	80	Testing Cubicle(s)	per testing cubicles
Wellness Assessment *	13.94	150	Assessment Room(s)	per room
Administrative Spaces (required or optional)				
Director's Office	11.15	120	Office	per office
Program Managers' Offices	9.29	100	Office(s)	per office
Support Staff Workstations	5.95	64	Workstation(s)	per office
Copy/file/work/break Room	7.43	80	Workroom Module(s)	per room
Classroom/Training Room	39.02	420	15-person Classroom/Training Module(s)	small training room (15 ppl)
Classroom/Training Storage	5.57	60	Storage Module(s)	per 15-person Training Room

* Service-specific space.

¹ If contract service, verify area with contractor.

FC 4-740-02F
26 September 2006
Including Change 1, 1 May 2013

FIGURE B-1. SPACE PROGRAM STANDARDS (continued)

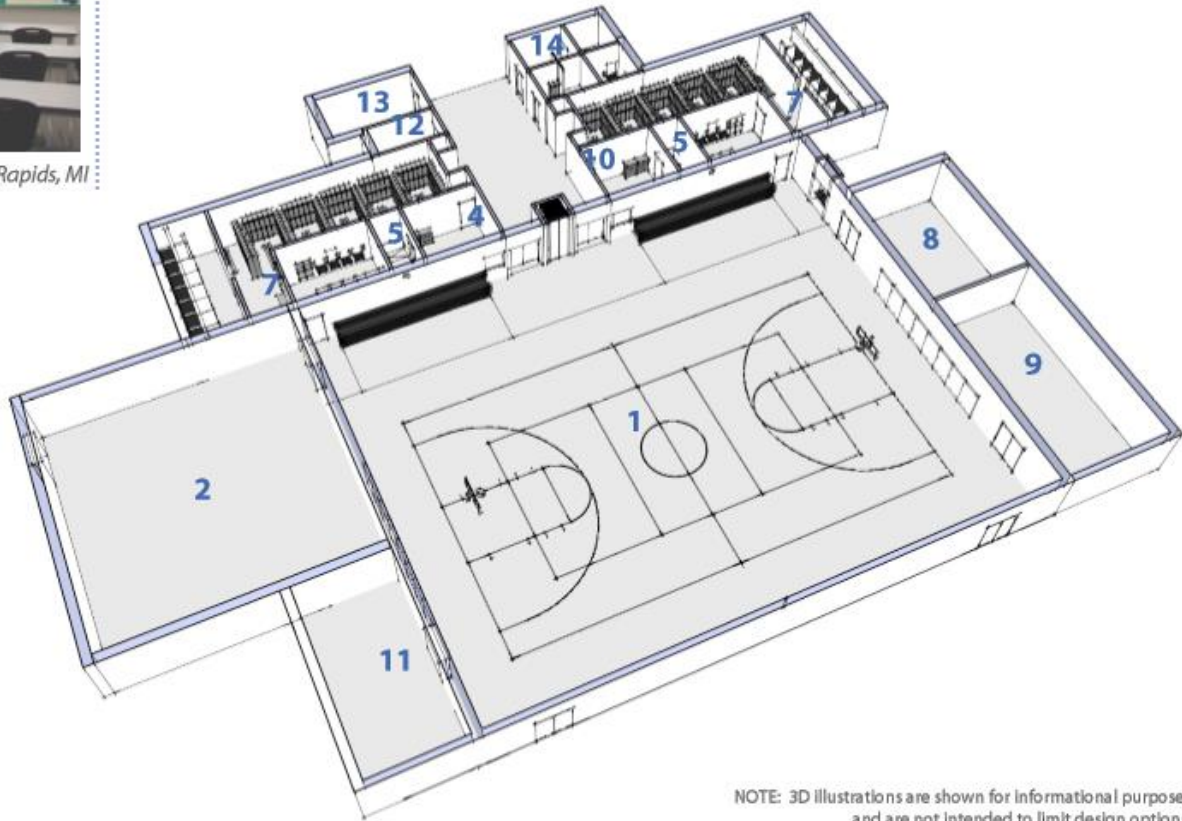
Functional Component	Space Allocation Standard		
	m ²	ft. ²	Description
Optional or Service-specific Program Spaces			
Indoor Track			
Indoor Track			need to include corners
1/14th-mile Indoor Track	310.01	3,337	1/14th-mile, 2-lane Indoor Track (754 linear ft.)
1/12th-mile Indoor Track	523.03	5,630	1/12th-mile, 3-lane Indoor Track (1284 linear ft.)
1/11th-mile Indoor Track	556.75	5,993	1/11th-mile, 3-lane Indoor Track (1440 linear ft.)
1/8th-mile Indoor Track	989.11	10,647	1/8th-mile, 4-lane Indoor Track (2640 linear ft.)
Indoor track lobby	13.38	144	Indoor track lobby(ies)
Additional Group Exercise Room	118.13	1,250	Additional Group Exercise Room
Massage Room	11.15	120	Massage Room(s)
Physical Therapy Training	11.81	125	Physical Therapy Training Room(s)
Expanded Retail ¹	9.29	100	Expanded Retail Module(s)
Expanded Juice Bar ¹	13.94	150	Expanded Juice Bar Module(s)
Expanded Juice Bar Seating	13.94	150	Two-table seating Module(s)
Family Changing Room	10.22	110	Family Changing Room(s)
Male DV Locker Room *	46.45	500	Male DV Locker Room
Female DV Locker Room *	23.23	250	Female DV Locker Room
Child Play Area/Parent Child Area *	74.32	800	Parent/child Module(s)
HAWC Demonstration Kitchen	46.45	500	Kitchen Module(s)
HAWC Relaxation Room *	9.29	100	Relaxation Room(s)
Site Spaces			
Staff Parking	41.81	450	Parking Spaces
Loading dock	8.36	90	Loading Dock
Service Drive/trash	69.68	750	Service Drive Module
Customer Parking	41.81	450	Parking Spaces
Bicycle Rack Area	14.86	160	10-bike Rack(s)
Patio	2.32	25	Patio Module(s)
* Service-specific space.			
¹ If contract service, verify area with contractor.			

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Appendices: Appendix B



and Rapids, MI



NOTE: 3D illustrations are shown for informational purposes and are not intended to limit design options.



BASKETBALL

MEN'S COLLEGE



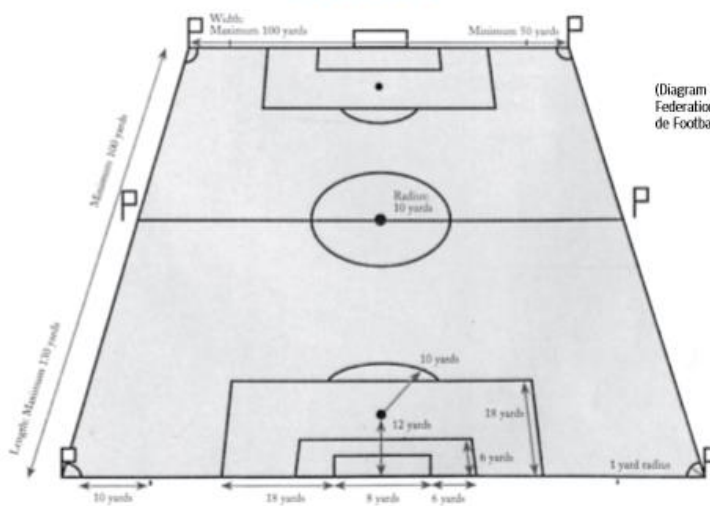
WOMEN'S COLLEGE



(Diagrams courtesy of the NCAA.)

SOCCER

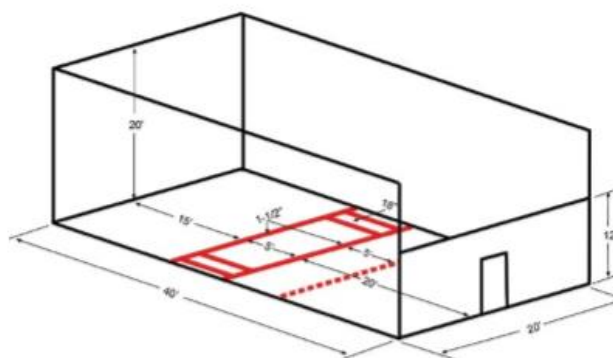
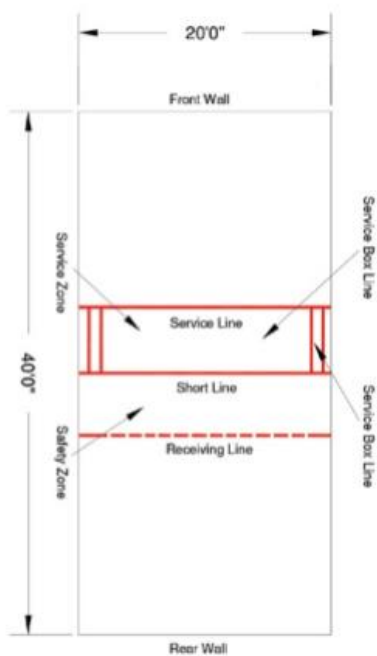
OUTDOOR



(Diagram courtesy of the Federation Internationale de Football Association.)

Note: The length of the touch line must be greater than the length of the goal line. For players under 16 years old, the size of the field of play, as well as the width between the goal posts and the height of the crossbar from the ground, may be modified.

RACQUETBALL/HANDBALL



(Diagrams courtesy of USA Racquetball.)

**FOR MORE
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www.usaracquetball.com

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