



Design Considerations for Esports Environments

Essential Elements from Middle School through Collegiate



About Spectrum Industries:

Scott Dorn
Executive Vice President
Spectrum Industries, Inc.

- Sales, Marketing, Product Development
- Business & Market Development
- Management, Board of Directors
- 28 Years w/ Spectrum
- Lifelong Gaming Enthusiast
- Esports Advocate
- Wisconsin Athletics Fan
- Music Enthusiast



About Spectrum Industries: Commitment to Excellence

Spectrum's Values

RESPECT | SAFETY | INTEGRITY | QUALITY | INNOVATION

Spectrum's Mission

- Deliver high quality products and services when our customers need them
- Develop employees' potential and ability to meet new and existing challenges
- Be an ethical and community minded corporate citizen through sustainable practices that balance economic, environmental, and social needs of our stakeholders

Spectrum's Vision

Maximize our design and manufacturing capabilities with a passion for finding the best solutions for the way our world works and learns

Spectrum's Legacy

Founded in 1968. Privately held with an entrepreneurial and customer focus.



"We guarantee complete customer satisfaction."

– **David Hancock, Founder**



About Spectrum Industries: Commitment to Excellence



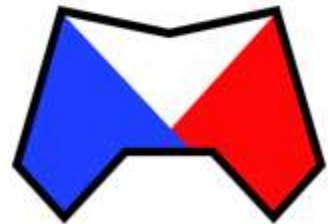
About Spectrum Industries: Commitment to Instructional Excellence



About Spectrum Industries: Commitment to Athletics Excellence



About Spectrum Industries: Esports Partnerships



Design Considerations for Esports Environments

Overview

Why Invest In A Dedicated Space

Career Considerations

Physical Considerations

Focused Spaces Within An Arena

Esports Environment Examples

Design Examples

Spectrum Portfolio

Design Considerations for Esports Environments

Why Invest in Esports?

Why Invest in an Esports Spaces?

Design Considerations for Esports Environments

Why Invest in Esports Spaces?

 **Mike Hilmer**
@HilmerMike

Northeast baseball field - best kept field I have seen this year! Emaculate field right down to the bullpen area. Love schools that take pride in their facilities to show the community and kids how important they are! Very impressed with the field, team & coaches from Northeast!



 **Justin Van Fleet**
@lancercoachv

Proud to be a Lancer. Academically ranked one of the best school districts in the state, incredible theater program, state championship marching band, athletic championships in multiple programs every season, and providing opportunities to every student after graduation. #pride



 **Mishawaka Athletics**
@cavemensports

We couldn't be more proud of our Mishawaka Girls Basketball team! You worked hard and represented your school with great pride. This season is just the beginning for Cavemen Hoops!!! The foundation is set. Thank you Coach Blasko and all of our hard working coaches & players.



Sources: Twitter @HilmerMike, @LancerCoachV, @CavemenSports

Design Considerations for Esports Environments

Why Invest in Esports Spaces?

 **Crestwood HS Band**
@crestwood_band

Working on pregame music with 8th grade band and the Lazy song with 7th grade band!! A good day in the Middle school band room!



...  **WarriorProudMoBro**
@RTMonson
Henry Sibley High School Winter Band Concert

Band students are making us all proud! Ms. Powers is beaming with PRIDE! Congratulations!

Special music accentuated by light choreography.

#WarriorPride



...  **Kratos**
@IamXolileMaluka

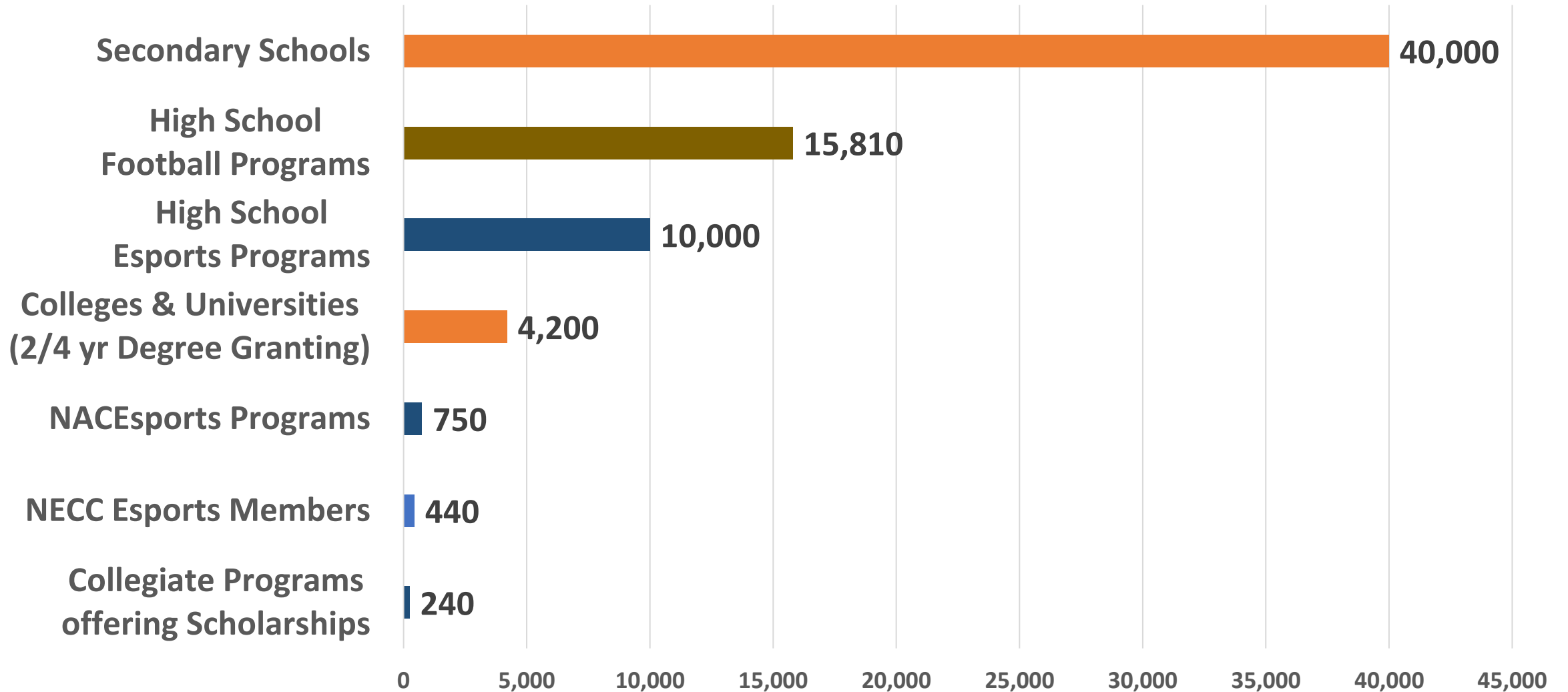
Celebrating 10 years of inception, Inner City High School Drama festival will host their final theatre round today!!!



Sources: Twitter @Crestwood_Band, @RTMonson @IamXolileMaluka

Design Considerations for Esports Environments

Education Market



Source: NCES/Dept of Ed, NFHS, HSEL, PlayVS, State HS Esports Orgs, ESPN

Design Considerations for Esports Environments

Why Invest in Esports Spaces?



Did You Know?

Benefits of dedicated esports space reach far beyond simply providing technology and stations for gaming, gaming skills development and competing.

Source: Spectrum, NASEF, NAECAD, Many Others

Design Considerations for Esports Environments

Career Development: More Than Just Gaming



Source: Generation Esports

Design Considerations for Esports Environments

Career Development: More Than Just Gaming

[100 Jobs in Esports - Start Planning Your Career Path in Esports](#)



Design Considerations for Esports Environments

Career Development: More Than The Controller

Reminder: Intentional Design to Promote Skills Development

Design Considerations for Esports Environments

**Using Visual Elements to
Support Marketing of Esports Environments**

Design Considerations for Esports Environments

Facility Considerations

Outside the Arena

Design Considerations for Esports Environments



Hallways:
Outside
Arena
Branding



Design Considerations for Esports Environments



**Outside
Arena
Branding**



Design Considerations for Esports Environments

Outside Arena Branding



Dana Hustedt
@DanaHustedt

...

Daily routine- Walk over wooden bridge in the botanical gardens to get to my office + center, then BAM there it is. New sign. Let's go! Great day to have a great day. Love this view, but even more excited to head back home to Iowa tonight for [@TheNAECAD!](#)



9:44 AM · Mar 3, 2022 · Twitter for iPhone

Design Considerations for Esports Environments

Outside
Arena
Branding



Design Considerations for Esports Environments

Facility Considerations

Inside the Arena

Design Considerations for Esports Environments



Design Considerations for Esports Environments



Design Considerations for Esports Environments

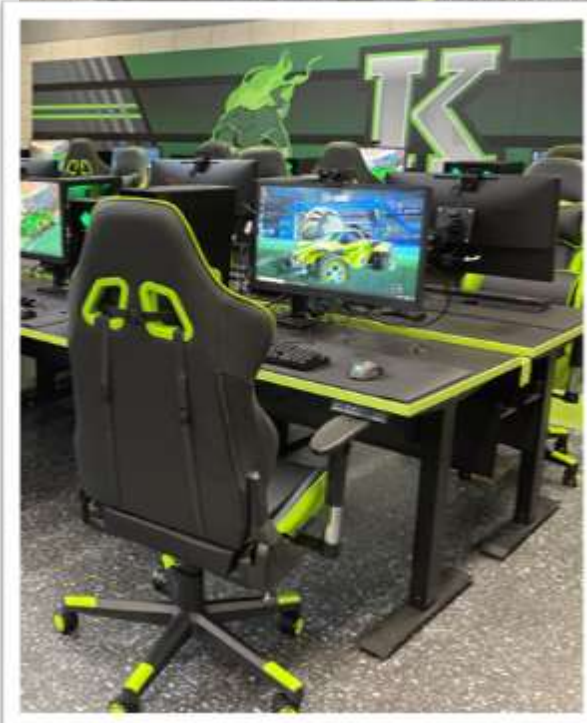
Program Motto



Design Considerations for Esports Environments

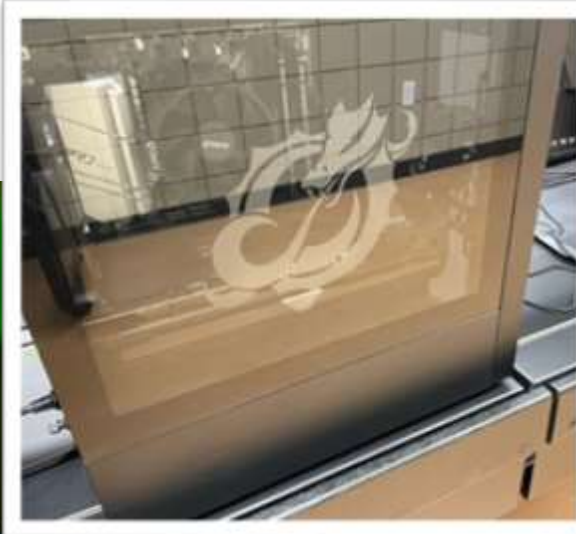


Design Considerations for Esports Environments



Design Considerations for Esports Environments

PC Branding



Design Considerations for Esports Environments



Design Considerations for Esports Environments

Program Pillars/Values



Design Considerations for Esports Environments

Design Tie-Ins



Design Considerations for Esports Environments

Program Sponsors



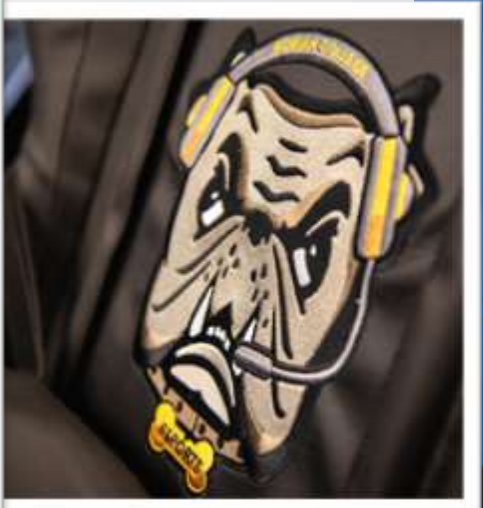
Design Considerations for Esports Environments

On Camera Visibility



Design Considerations for Esports Environments

On Chair Branding



Design Considerations for Esports Environments

On Chair Branding



Design Considerations for Esports Environments



In Arena Branding



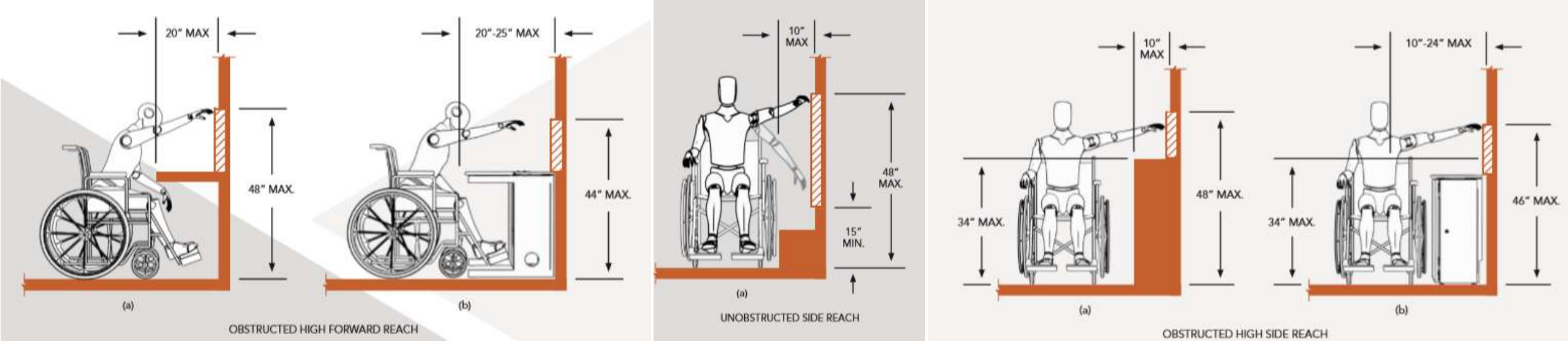
Design Considerations for Esports Environments

Accessibility for Esports Environments



Design Considerations for Esports Environments

Accessibility for Esports Athletes



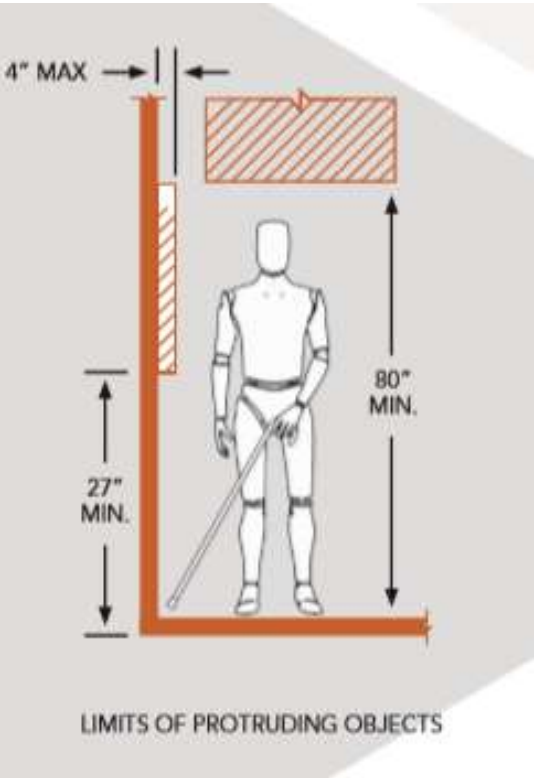
Did You Know? Forward reach and side reach are core elements of ensuring reasonable accommodate of the Americans with Disabilities Act. Plan for no more than **20"** in **forward reach** and **10"** of **side reach** wherever possible.

Source: Jones, Spectrum



Design Considerations for Esports Environments

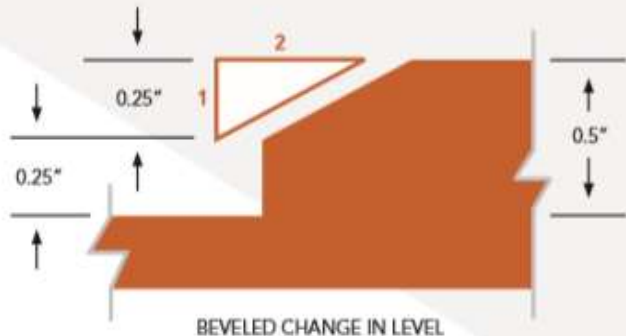
Accessibility for Esports Athletes



FLOOR BOXES AND RACEWAYS

303.3 Beveled. Changes in level between 1/4" high minimum and 1/2" high maximum shall be beveled with a slope not steeper than 1:2.

Advisory 303.3 Beveled. A change in level of 1/2" is permitted to be 1/4" vertical plus 1/4" beveled. However, in no case may the combined change in level exceed 1/2". Changes in level exceeding 1/2" must comply with 405 (Ramps) or 406 (Curb Ramps).



COMMON OVERSIGHTS



Measuring exterior dimensions of furniture not Internal



Additions of keyboard trays and drawers



Surface mounted items installed out of reach – i.e. monitor arms, connectivity controls



Under surface AV Equipment – Cables or Connections

Did You Know?

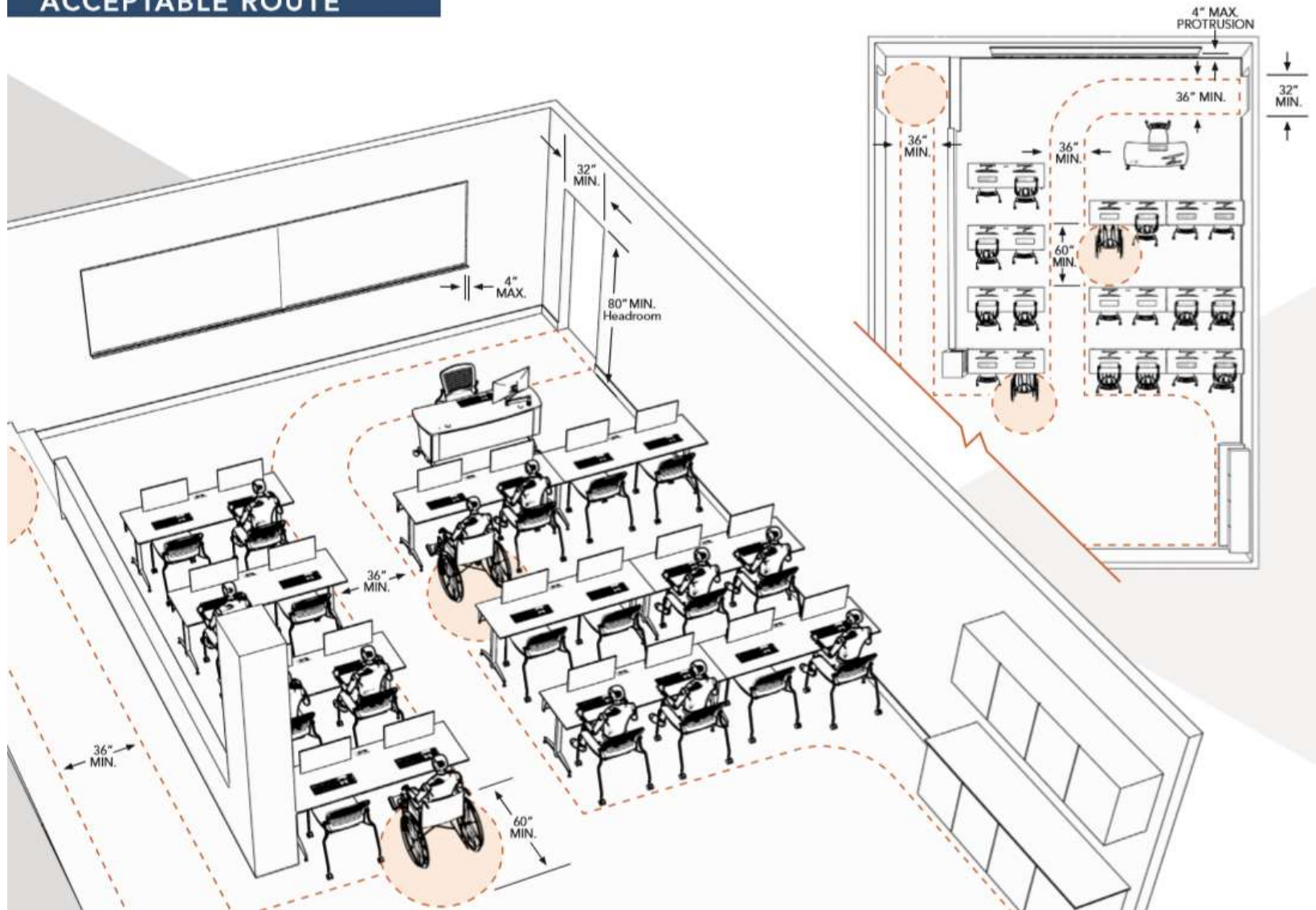
Wall Mounted Displays, or any wall mounted items, which protrude more than 4" require a protective barrier/structure below?

Source: Jones, Spectrum



Design Considerations for Esports Environments

BASIC FEATURES OF AN ACCEPTABLE ROUTE



Accessibility for Esports Athletes

Did You Know:

Plan for **5%** of all esports gaming stations to be ADA-compliant. If less than 20, plan for a minimum of **1** ADA-compliant station.

Source: Jones, Spectrum, ADA



Design Considerations for Esports Environments

Accessibility for Esports Athletes



Source: Spectrum

Design Considerations for Esports Environments



Accessibility for Esports Athletes

SPACE PLANNING CHECKLIST

- Purpose and Traffic Flow
- Room or Space Obstructions (columns, casework, stairs)
- Identify Electrical or other fixed utilities (water, gas, electrical)
- Aisle Widths
- Turn Radius
- Distance from Walls
- Distance from Door Openings
- Lines of Sight
- Furniture Dimensions
- Accessory/Integration and review Impacts (Monitor Arms, CPU Slings, Power)



Still Have Questions?

- **Disability Services (Campus/School)**
- **Facilities**
- **Campus Planning**
- **Architects / Designers**
- **Americans w/ Disabilities Act**

<https://www.ada.gov>

- **Vendors**

(ADA Standards Space Planning Guidebook)

<https://www.spectrumfurniture.com/en/special/ada-guidebook/>



Design Considerations for Esports Environments

Adaptive Technology for Esports Environments

Design Considerations for Esports Environments

Adaptive Technology for Esports Athletes



Light touch buttons

Four sensitive, light-pressure buttons with a 12-mm height can activate with low force.



Variable triggers

Pressure-sensitive triggers can function like gas pedals, ideal for racing games or other applications. Force tune them for optimum control



Small buttons

Built with mechanical switches, 1.4-inch buttons offer durable and consistent actuation while allowing for quick, easy presses.



Large buttons

Larger 2.5-inch buttons built with mechanical switches are reinforced with stabilizer bars for consistent actuation across the full surface.

Design Considerations for Esports Environments

Considerations for Students with Sensory Processing Sensitivity

20+ disorders that can
impact sensory
processing

Auditory
Visual
Tactile
Olfactory
Gustatory
Vestibular
Proprioception
Interoception

Large Abstract Graphics
Moving Graphics
Loud CPU Fans
Loud Mechanical Keyboards
Bright LED Lights
CPU Lights/Motion
Food/Cooking
Rubber Mats/Mousepads

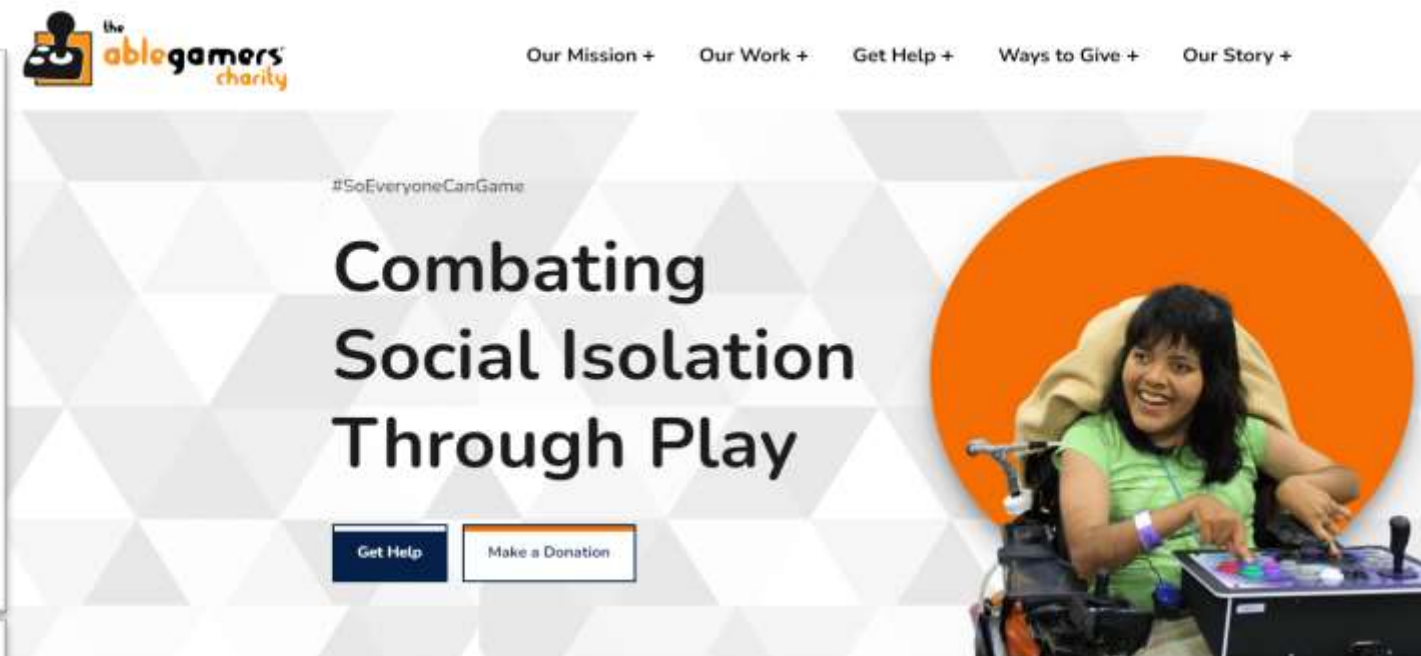
Did You Know?

Up to 1 in 20 children may be affected by a Sensory Processing Disorder.

*Sources: Next Level Collaboration
SPD Foundation*

Design Considerations for Esports Environments

Inclusionary Gaming Resources



Source: Special Olympics, AbleGamers.org, AbleNet.com, NextLevelCollaboration.com

Design Considerations for Esports Environments

Inclusionary Gaming Resources

STAR Division



**is proud to announce the addition of the Star Division for the 2023-24 school year!
Compete in online seasons versus other Missouri schools!**

The Star Division is for Missouri students grades 6-12 with physical disabilities or learning differences that affect how they game.

Players will be paired with a student trainer at their school for coaching and/or team play. More details on registration, rules, and assistance getting started will be available later this summer!

Fall Season: Switch Sports Chambara (solo sport for student player and trainer pairs)

Winter Season: Mario Kart Time Trials (duo sport for a student player and trainer teamup)

Spring Season: Switch Sports Tennis (solo sport for student player and trainer pairs)

Featuring a spring in-person event to celebrate all of our players and trainers!

Design Considerations for Esports Environments

Electrical & Network Considerations

Design Considerations for Esports Environments

Electrical & Network Considerations

Evaluate Gaming System Power Requirements

- Displays
- Gaming PC/Laptop
- Consoles
- Peripherals

(PC Gaming Stations could range from 1.5 to 7 amps)



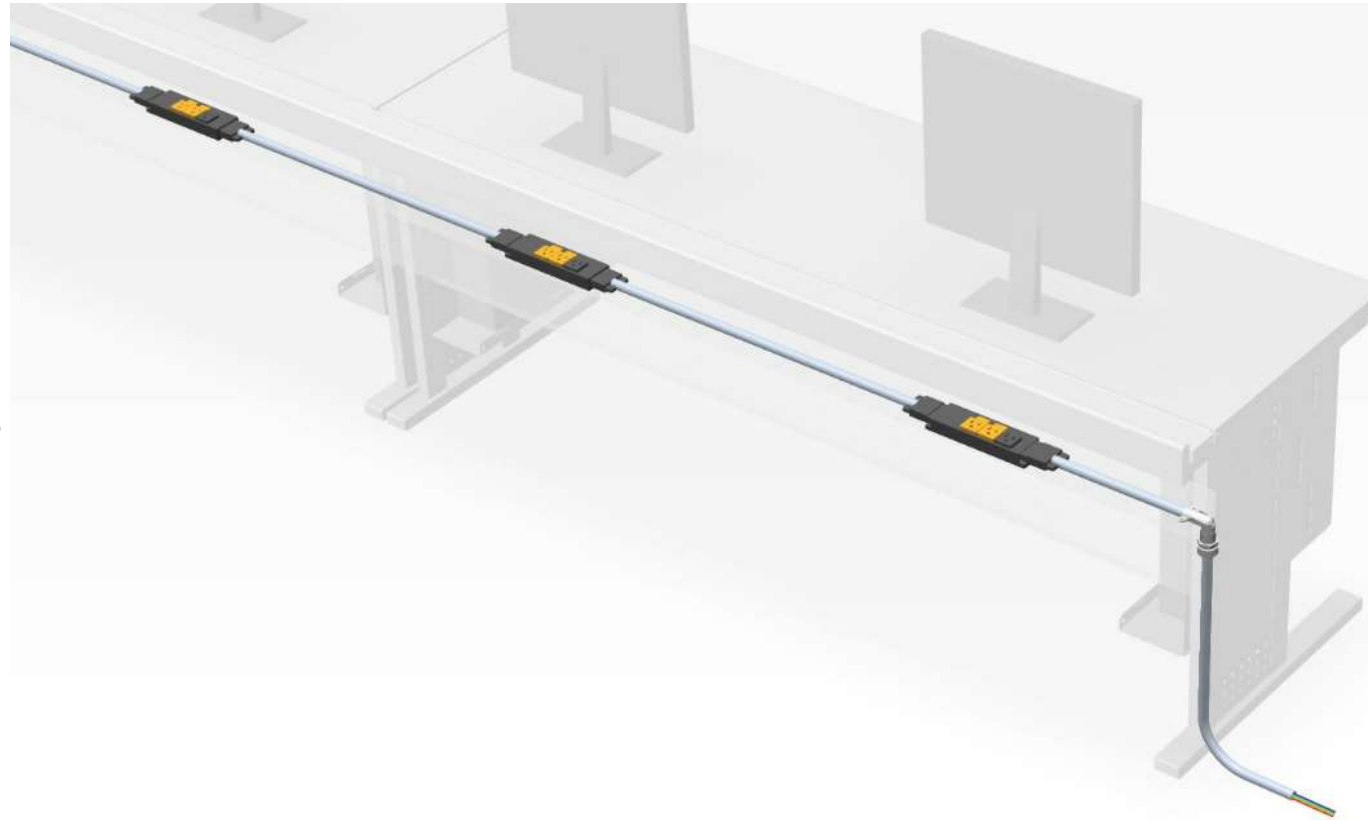
Design Considerations for Esports Environments

Electrical & Network Considerations

When reviewing physical environments for esports programs be sure to understand either how you will use existing electrical and network infrastructure. Some budgets may restrict your ability to easily rewire an area.

- **Electrical Code** – Define what the electrical codes are for your municipality.
- **Electrical Requirements** – Define labor and electrical standards for your institution.
- **Electrical Stakeholders** – Facilities, Campus Planning Electrical or Building Engineers, Electrical Contractors
- **Electrical Solutions**
 - Hard-wired
 - Flexible (in floor)
 - Modular electrical system (plug & play)
 - 1:1 gaming station directly to outlets
 - Utilize surge protected circuits or power strips
 - Avoid daisy chaining

Have a Plan – Finalize layouts before running electrical



Design Considerations for Esports Environments

Ergonomics for Esports Environments

Design Considerations for Esports Environments

Ergonomics for Esports Athletes Desirable Chair Attributes

Rugged Weight Capacity

Height Adjustment

Arm Rest Height Adjustment

Arm Rest Rotational Adjustment

Swivel Rotation

Recline Adjustment

Headrest, Neck & Lumbar Support

Mobility

Ease of Cleaning



Design Considerations for Esports Environments

Ergonomics for Esports Athletes



Did You Know?

Avoid "Leaning In" to the display. Try to maintain an optimal viewing distance of **20"** from the monitor whenever possible.

*Source: Spectrum,
USMA West Point*

Design Considerations for Esports Environments

Ergonomics for Esports Athletes



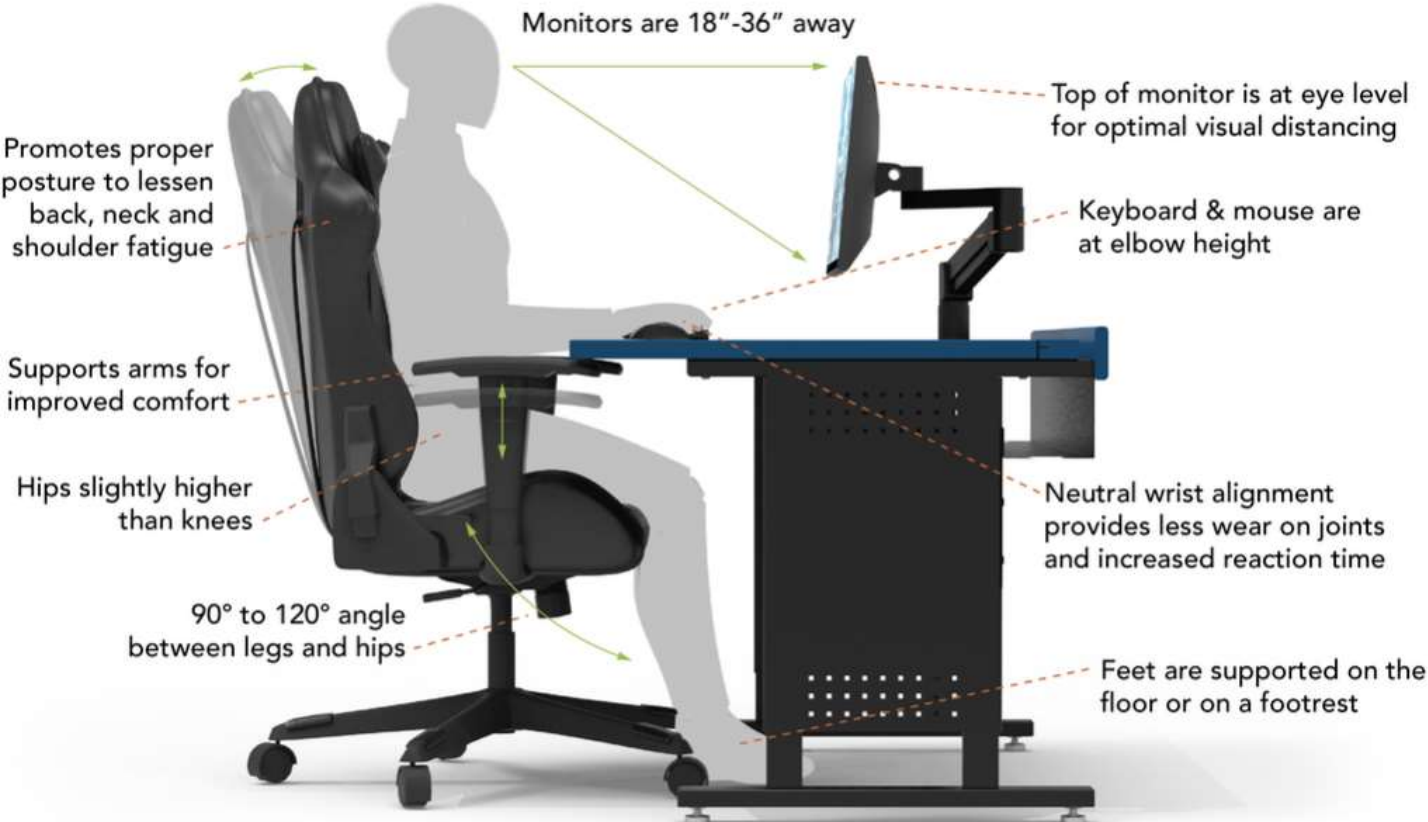
Source: Spectrum,
USMA West Point

Design Considerations for Esports Environments

Ergonomics for Esports Athletes

PROPER ERGONOMIC SETUP

for Esports Game Play



REFERENCE: EWI Works. Retrieved May 2020, from www.ewiworks.com

Design Considerations for Esports Environments

Unique Elements of Esports Spaces

Design Considerations for Esports Environments

Varsity / Competition Stage

Design Considerations for Esports Environments

Varsity / Competition Stage



Design Considerations for Esports Environments

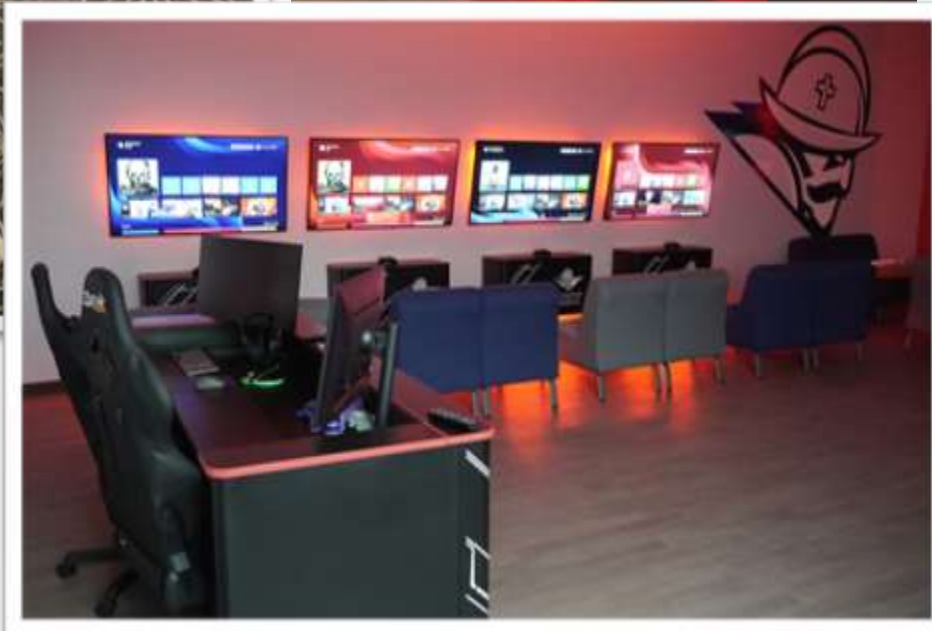
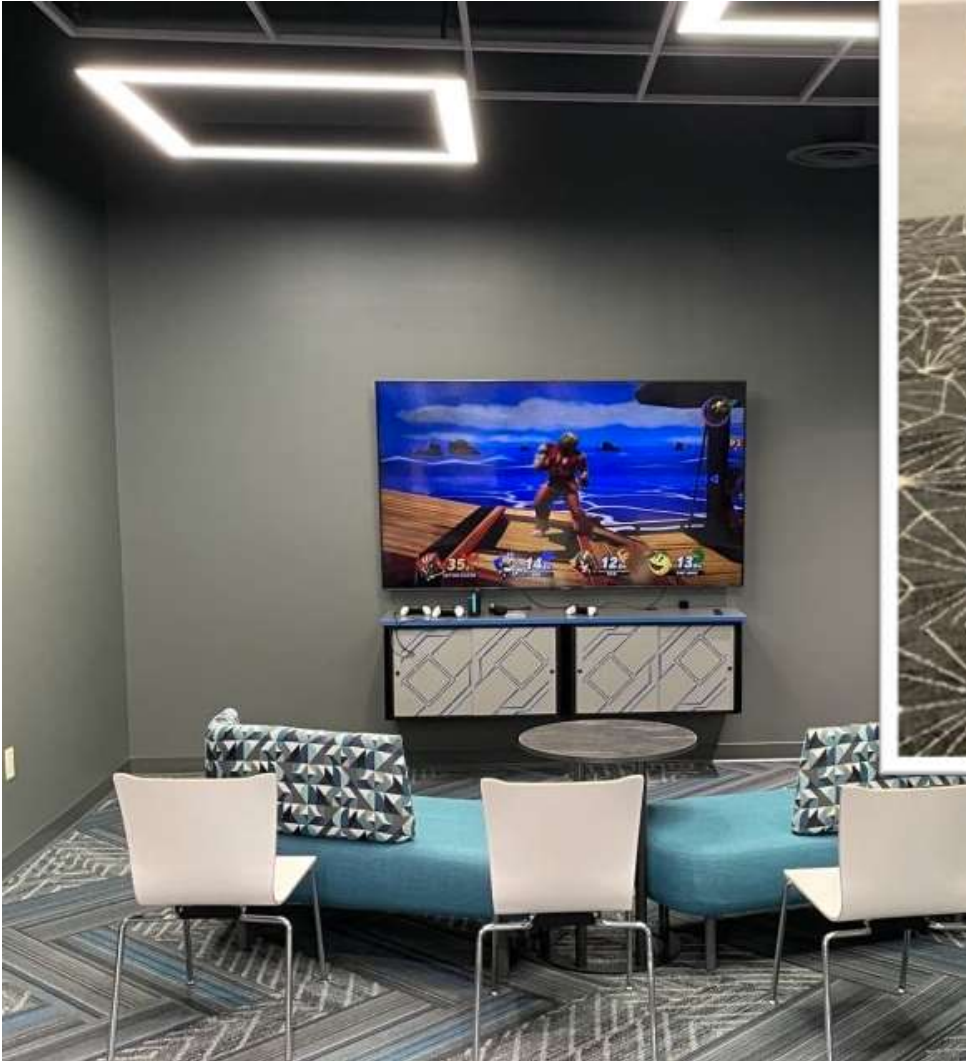
Varsity / Competition Stage



Design Considerations for Esports Environments

Console Gaming

Design Considerations for Esports Environments



Design Considerations for Esports Environments



Considerations:

- Security
- Varsity/Casual
- Current/Retro
- Wall Mounted
- Stationary
- Mobile

Did You Know?

A common barrier to console gaming can be the willingness to add consoles to a primary institutional network.

Design Considerations for Esports Environments

Shoutcasting / Broadcasting

Design Considerations for Esports Environments



Design Considerations for Esports Environments



Design Considerations for Esports Environments

Podcasting & Streaming

Design Considerations for Esports Environments



Design Considerations for Esports Environments



Design Considerations for Esports Environments

Lounge / Study / Cafe

Design Considerations for Esports Environments



Lounge/Study/Cafe

Design Considerations for Esports Environments

Lounge/Study/Cafe



Design Considerations for Esports Environments



Lounge/Study/Cafe



Design Considerations for Esports Environments

Coaching, Huddle, Collaboration, Film Study

Design Considerations for Esports Environments



Design Considerations for Esports Environments



Design Considerations for Esports Environments

Flexible Environments

Design Considerations for Esports Environments

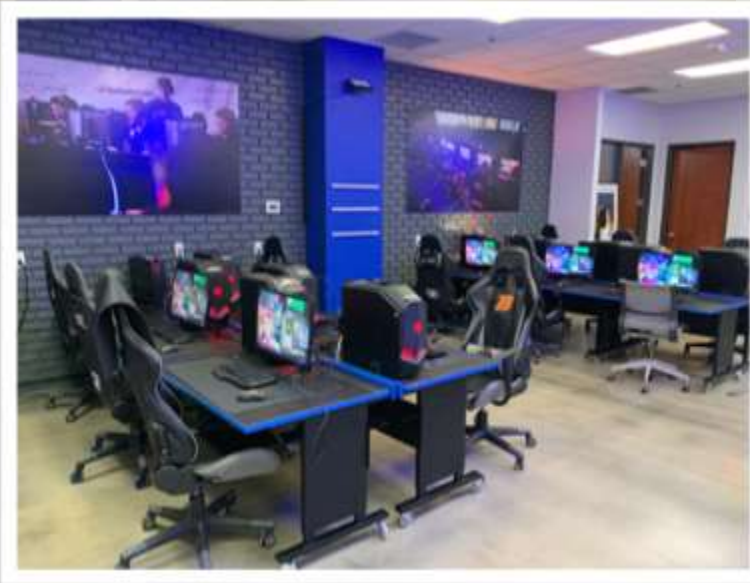
Furniture for Multi-Use & Multi-Disciplinary Spaces



Design Considerations for Esports Environments



Mobility



Design Considerations for Esports Environments

Mobility



Design Considerations for Esports Environments

Laptops & Esports Carts



Design Considerations for Esports Environments

What About Sharing Space for Esports Environments

Design Considerations for Esports Environments

Classroom Learning

Computing / Gaming



Shared Space



Did You Know? Shared Space can help reduce expenses when starting an esports program. However, conflict can arise when scholastic program projects, labs, or assignments arise. There can also be concerns about noise in classrooms as well as responsibility for device upkeep, among others.

Design Considerations for Esports Environments

Storage

Design Considerations for Esports Environments



Design Considerations for Esports Environments

Production

Design Considerations for Esports Environments



Design Considerations for Esports Environments



Design Considerations for Esports Environments

Other Elements

Design Considerations for Esports Environments

Team Honors & Team Merch Store



Design Considerations for Esports Environments

Outdoor Space



Design Considerations for Esports Environments

Visualize Your Esports Space

Design Considerations for Esports Environments

Visualize Your Esports Space

Resources

School/Campus Interior Designer

Campus Planning

Facilities

Architects/Interior Designers

IT/AV Integrators

Furniture Manufacturers & Dealers

Design Considerations for Esports Environments

Visualize Your Esports Space

Identify Location of Esports Space

Measure Space

- Include location and dimensions of doors (and swing), windows, pillars, angles & curves.
- Include location of protrusions into space (heat registers, a/c, interactive panels, displays)
- Include location of power & network outlets (wall outlets, floor boxes, power poles).

Define Uses of Space and Number of Stations/Participants

- Competition or varsity esports stations. This may be in prominent spot (front, riser, stage)
- Practice and general access esports stations.
- Dedicated console gaming spaces.
- Shoutcasting or streaming stations used to broadcast live action and interviews.
- Team meeting, huddle, lounge/study spaces.
- Spectator seating, benches, or bleachers.

Design Considerations for Esports Environments

Visualize Your Esports Space

Note Visual Elements

Include wall location and size of displays, display wall and interactive touch panels

Include wall location and size of graphics/branding for esports program, titles or sponsors

Include projector and projection screen location



Design Considerations for Esports Environments

Visualize Your Esports Space

Identify Preferred Locations, Flow, Design Requirements and Layout Style

Location of front of room and any requirements (lectern, display cart, whiteboard)

Aisles and walkways (perimeter aisle, center aisle)

Social distancing, protective barriers and sanitization equipment

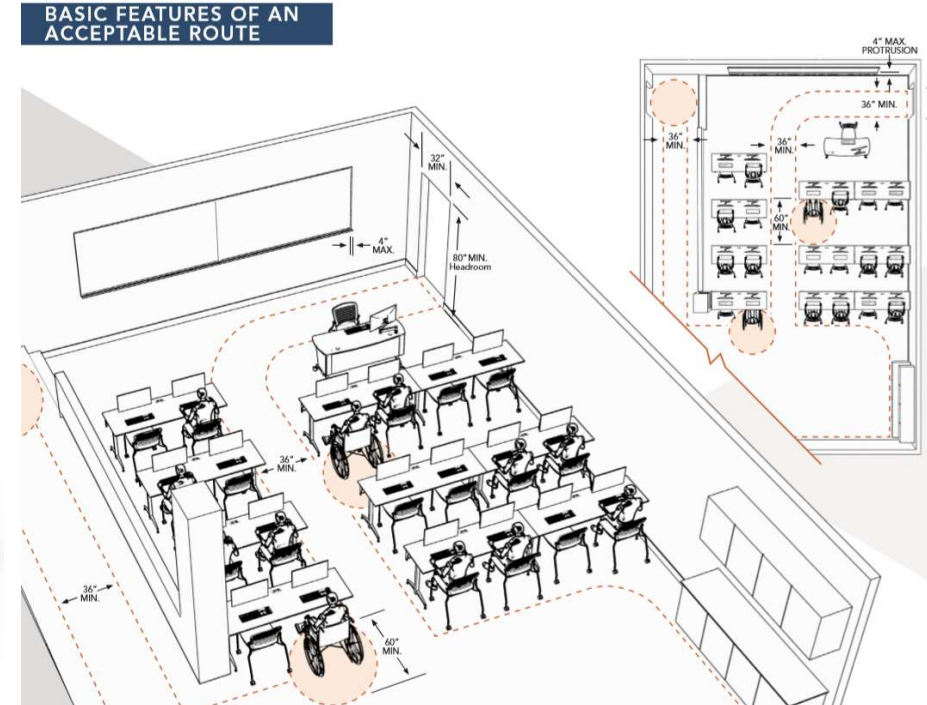
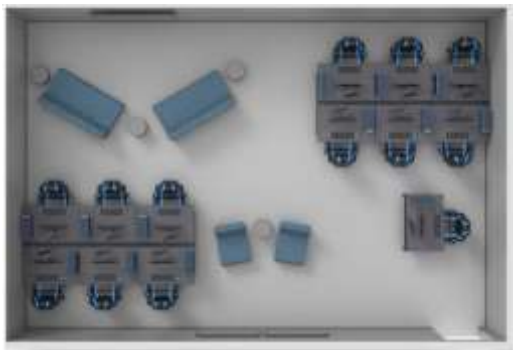
Preferred layout styles

Back-to-back or row-by-row

Perimeter or Peninsula

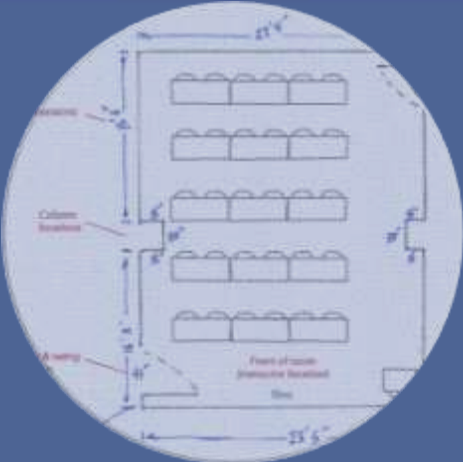
Pods of stations

(perhaps by game title or team size)



Design Considerations for Esports Environments

Visualize Your Esports Space



A hand-drawn architectural sketch of an esports arena layout. It shows a rectangular room with four rows of desks, each with a computer monitor. Dimensions are indicated with lines and numbers. Labels include 'Columns', 'Front of room', and 'Back of room'. The sketch is contained within a circular frame on a dark blue background.

Customer Sketch



A detailed 2D CAD floor plan of the esports arena. It shows the layout of desks, monitors, and seating areas with precise dimensions and technical annotations. The plan is contained within a circular frame on a light blue background.

2D CAD Layout

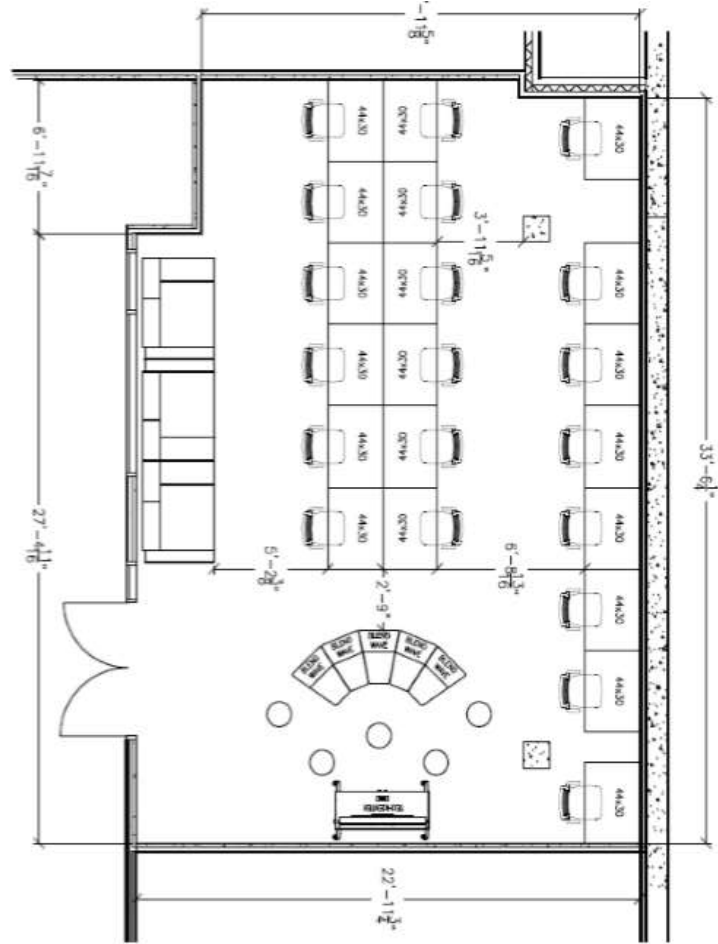
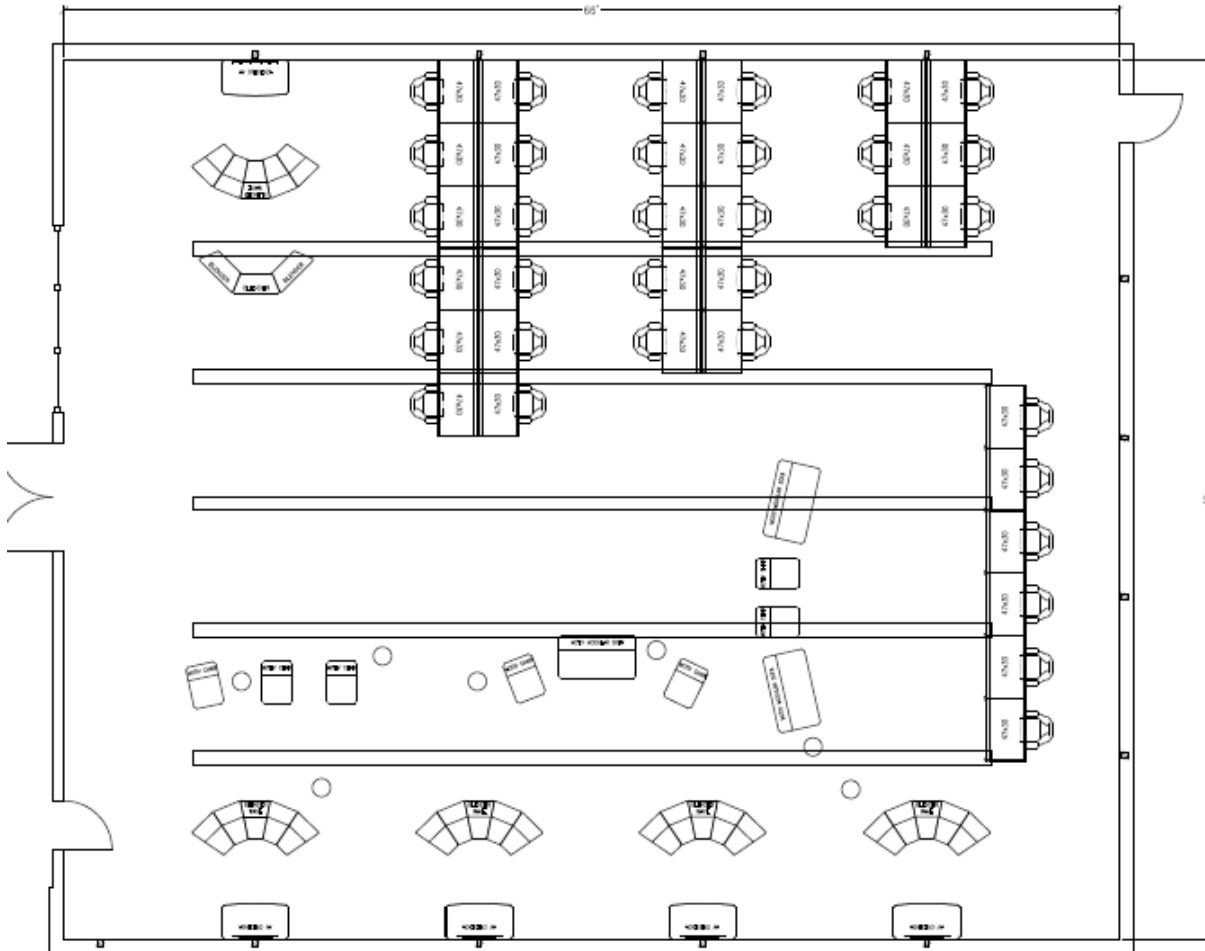
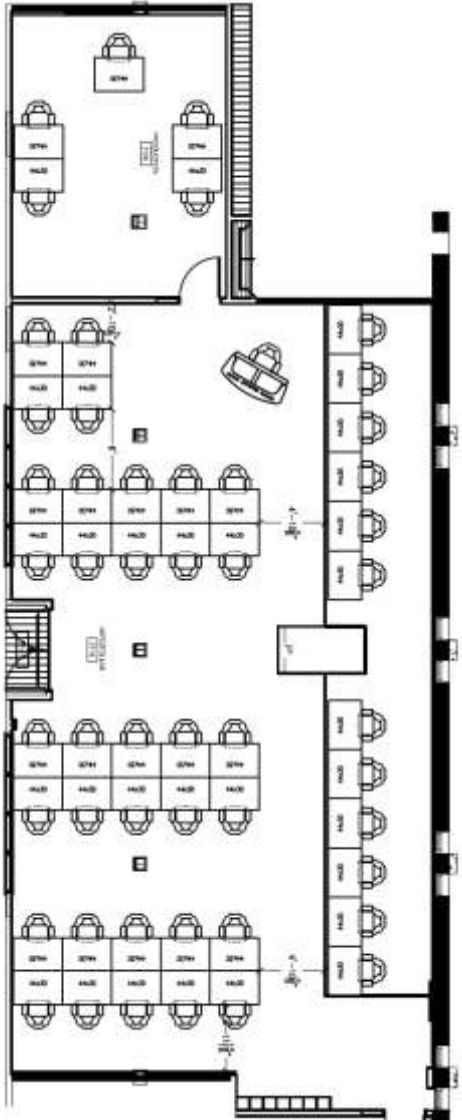


A 3D perspective rendering of the esports arena. It shows the desks, monitors, and seating areas in a realistic, shaded environment. The rendering is contained within a circular frame on a light gray background.

3D Rendering



Design Considerations for Esports Environments



Design Considerations for Esports Environments



Design Considerations for Esports Environments

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QUALITY SOLUTIONS by design



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Design Considerations for Esports Environments



Design Considerations for Esports Environments

Visualize Your Esports Space



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Design Considerations for Esports Environments

Visualize Your Esports Space



SPECTRUM ROOM LAYOUT REQUEST CHECKLIST

1 BASIC INFO NEEDED FOR ALL ROOM LAYOUTS:

Institution name: _____
City: _____ State: _____ Date: _____
Requester name: _____

2 ROOM DETAILS:

Requested Spectrum Product(s)	Size	Qty.	Product #

Instructor workstation? No Yes
 ADA workstation(s)? No Yes
 Peripheral workstation(s)? No Yes
(for printer, copier, JD printer etc.)
 Seating needed chairs? No Yes
 Furniture electrical requirements? No Yes
(p.e. Ampi wood power)

3 SKETCH OR CAD FILE SHOWING:

Room name(s) / number(s)
 Room / wall dimensions
 Door location(s) and swing direction
 Layout type (rows, perimeter, peninsula, collaborative grouping, back to back, clusters, etc.)
 Room purpose (Classroom, Collaborative, Media, Training, Makerpace, Video conferencing, Lecture, Office, other)
 Seating

Product type and preferred size
 Ideal number of students in room
 Location of the "front" of the room
 Instructor workstation, and ADA location(s)
 Peripheral workstation (printer, copier, JD printer etc.)
 Location(s) / size of existing objects in room
(cabinets, cubicles, bookshelves, wall features, power poles, electrical outlets etc.)

4 ROOM DETAILS:

Information needed:

Spectrum furniture colors (materials, upholstery, and metal)
 Whiteboards and other wall-mounted objects (size & location)
 Wall material and colors)
 Floor material and color (Concrete, tile, carpet, wood, vinyl)
 Window size and locations (if any)
 Chair sockets)
 Existing built-ins (Cabinets and materials)

Additional sketches re: _____

Note: 3D rendered layouts take more time to depend on number of rooms, room size information above and be clear about (_____)



Complimentary Assistance
No Obligation



Design Considerations for Esports Environments

Esports Resources & Info

RESOURCES:

NAECAD Guidebook / LRP

<https://naecad.org/guide-to-esports/>

NASEF Resources

<https://www.nasef.org/>

Scholastic Esports Organizations

Existing Esports Teams/Programs

Podcasts/Interviews/Webinars

EVENTS:

Coaches Clinics

(NAECAD, HS State Orgs)

Esports Events (CECC, Uconnect, NACE Convention, EsportsNEXT, LevelNEXT Showcase, HS State Championships, Invitationals, etc.)

Education Conferences

(ISTE, Educause, TCEA, PETEC, FETC, FAEDS, Brainstorm, etc)

SPECTRUM RESOURCES:

Esports Guidebook

<https://www.spectrumfurniture.com/en/special/esports-guidebook-download/>

Esports Ideabook

<https://www.spectrumfurniture.com/en/special/esports-idea-book/>



Design Considerations for Esports Environments

Questions?

Design Considerations for Esports Environments

For questions and/or
space visualization assistance, contact:

Spectrum Industries, Inc.
www.spectrumfurniture.com

Scott Dorn
sdorn@spectrumfurniture.com
715-944-9293



About Spectrum Industries: Nationwide Representation

PROJECT REGISTRATION CONTACT **FIND A REP** CAREERS LANGUAGES LIVE CHAT   SEARCH



PRODUCTS RESOURCES COMMUNITY ABOUT

Find A Local Representative

Your Geographic Location: Your Market Type:

Or, you can click on the map below to see all local sales representatives in your area.



Spectrum's team of experienced Territory Managers are located throughout the United States. They are prepared to answer questions and assist you as you explore options for your esports space.

Spectrum Industries, Inc.
www.spectrumfurniture.com



Design Considerations for Esports Environments

THANK YOU!