



Welcome

THURSDAY, August 7
Luncheon Program

www.same.org/BlueRidge

STEM Celebration



COL Christopher Klein

Commander
USACE Middle East
District

**Maritime Expeditionary
Operations Center** (1 PDH)



Dr. Paula Loomis

Dir. of Research
Urban Collaborative

Pledge of Allegiance

I pledge allegiance to the Flag of the United States of America, and to the Republic, for which it stands, one Nation, under God, indivisible, with liberty and justice for all.





Agenda

- 12:00 pm – Welcome, 2024 Streamers, & Buffet Lunch
- 12:30 pm – STEM Celebration
- 1:15 pm – “Maritime Expeditionary Operations Center”
- 2:15 pm – Event concludes w/ group photo in courtyard

Look for a **“DOCUMENT DELIVERY”** email from events@sameblueridgepost.org with your:

- Program Slides
- Opt-in Attendee List
- 1 Hour PDH Certificate

Featured Keynote Speaker

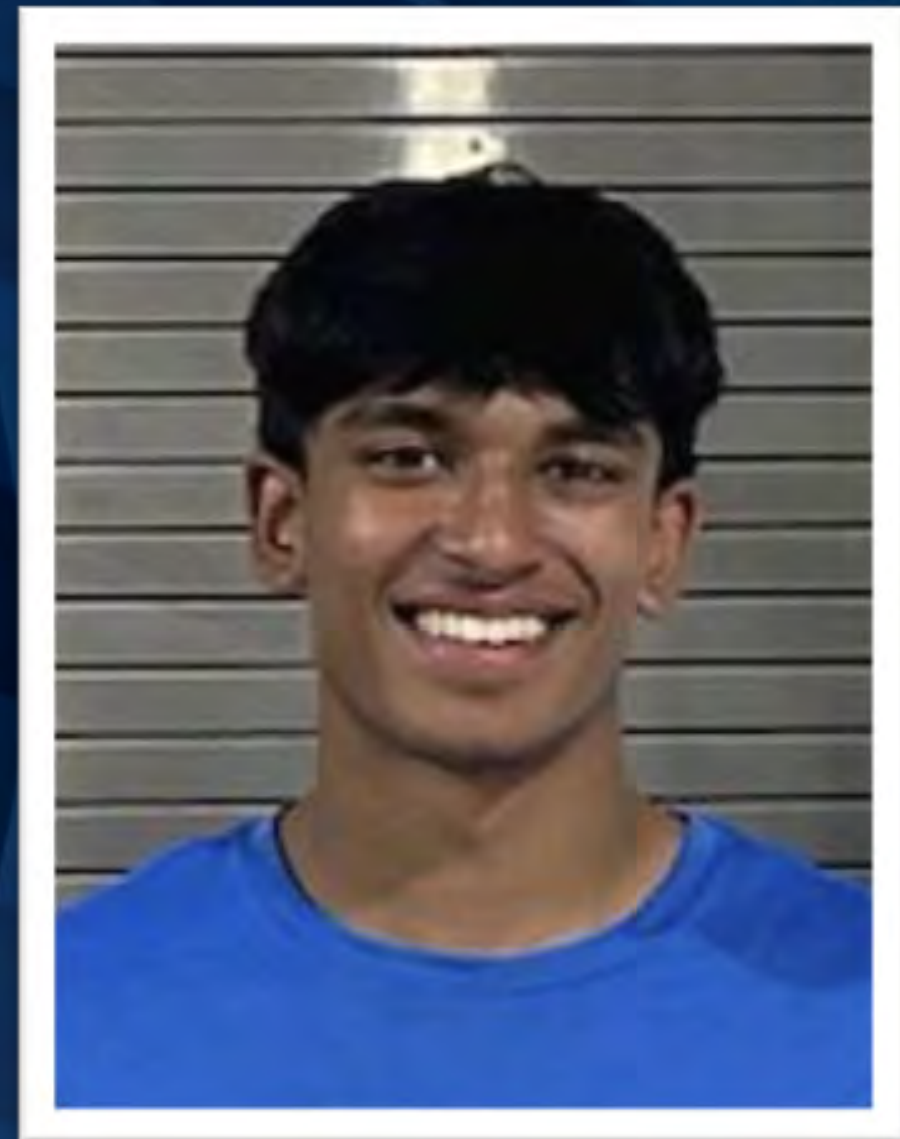
Colonel Christopher D. Klein
Commander
USACE Middle East District



Engineering & Construction Camper Program

Neil Jani

Air Force Academy Camp



- River Hill Highschool
- Class of 2027
- #1 College Choice: Undecided
- Major: Biomedical Engineering
- Fun Fact #1: I play Soccer and Tennis
- Fun Fact #2: Placed 2nd in State HOSA Competition

“ In addition to being competitive and educational, this camp was one of the most enjoyable experiences I have ever had.”

Neil Jani

USAFA Camp, 22-28 June



Peony Kang

US Army Camp



- Liberty High School
- Class of 2027
- US Naval Academy
- Major: Aerospace Engineering
- Fun Fact #1: I Played soccer for 11 years
- Fun Fact #2: I've Flown a plane before driving a car

“ It was amazing to have so many hands-on experiences with the different fields of engineering.”

Peony Kang US Army Camp, 8-14 June





Engineering & Construction Camper Program

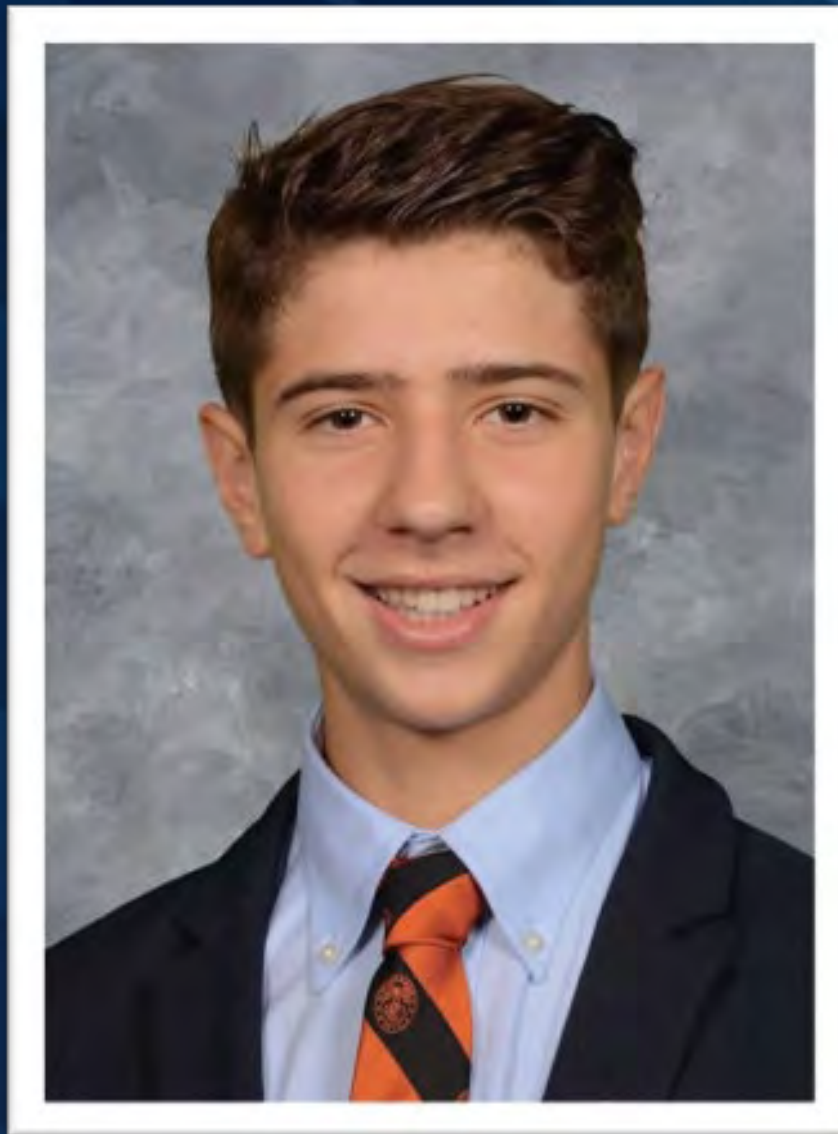
Jake Klein

Navy Jacksonville SAME
Engineering & Construction Camp

Jake Klein
Class of 2028

Jake Klein

Navy Jacksonville SAME Engineering & Construction Camp



- McDonogh High School
- Class of 2028
- Naval Academy or UPenn
- Major: Mechanical Engineering
- Fun Fact #1: I Own a business (Tagzify.com)
- Fun Fact #2: I am a 3D printing geek

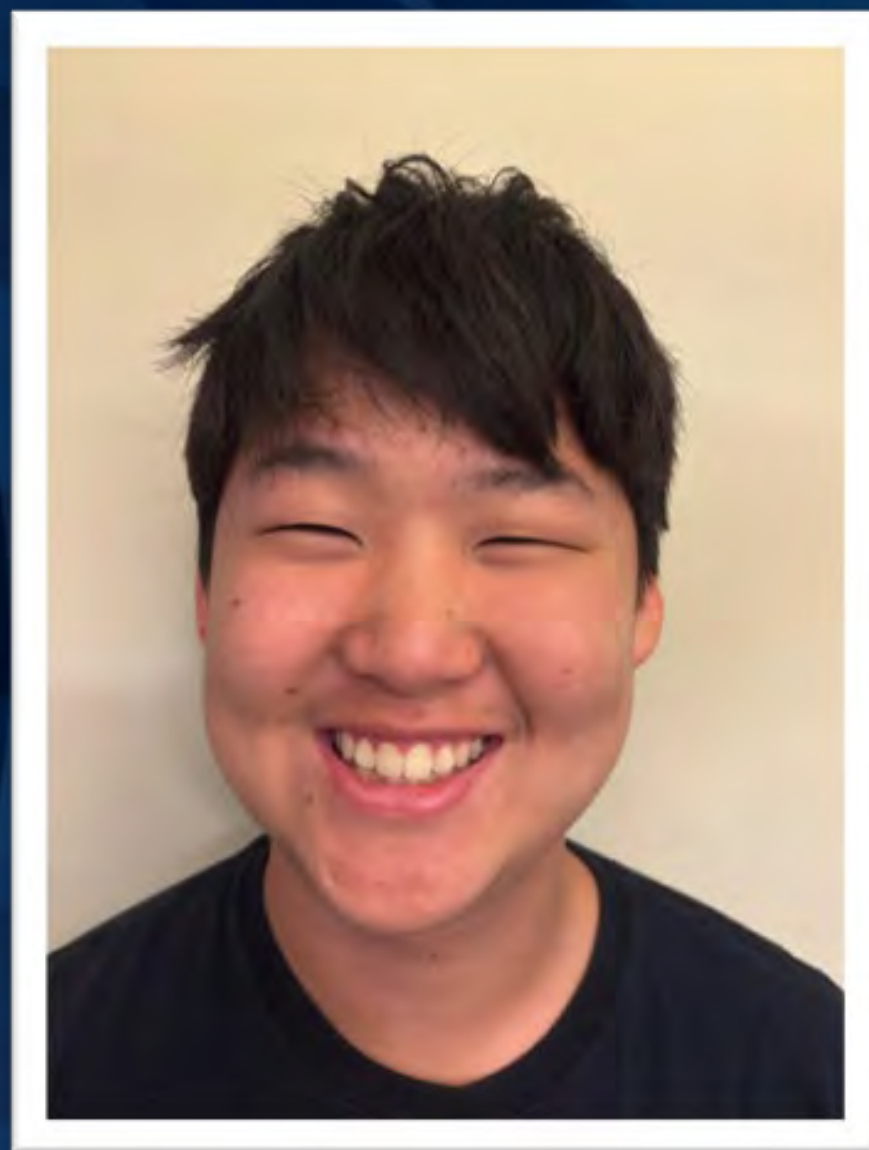
“ In a single week, I connected with more people and learned more practical knowledge than I have in years.”

Jake Klein, Navy Jacksonville SAME Engineering & Construction Camp, 22-28 June



Emmanuel Ryu

USMC Camp



- Chantilly High School
- Class of 2027
- United States Coast Guard Academy
- Major: Civil & Environmental Engineering
- Fun Fact #1: I play Lacrosse
- Fun Fact #2: I went to Nicaragua

“ It was an amazing camp and allowed me to grow in many ways, including how to be a leader”

Emmanuel Ryu USMC Camp, 22-28 June



Annalina Pickens

USAF Camp



- Bishop O'Connell High School
- Class of 2027
- William and Mary
- Major: Physics
- Fun Fact #1: I am an officer of my school's Engineering Club
- Fun Fact #2: I am a member of the Seaperch (Sub) Club at my school

“STEM Camp at USAFA was amazing! I can't believe how many activities we did in one week. Thank you to the Winchester Post and SAME for making this camp possible!”



Annalina Pickens

USAFA Camp, 23–27 June

Day 1 Activities:

- Icebreakers
- Bucket of Junk
- Rock Support Structure
- How to Trap a Bear in a Dumpster Stations

Day 2 Activities:

- Concrete Beam Construction
- USAFA Campus and Labs Tour
- Nail Relay and Three Legged Chair

Day 3 Activities:

- Dog House Construction
- Sprinkler System Activity

Day 4 Activities:

- Water Treatment Activity
- Engineering Reaction Course

Day 5 Activities:

- Cardboard Canoe
- Construction Site Tours
- Young Engineers Panel

Day 6 Activities:

- Construction Site Tours Garden of the Gods Visit
- Talent Competition
- Volleyball Tournament

Day 7 Activities:

- Concrete Beam Destruction
- Graduation



Annalina Pickens
USAFA Camp, 23–27 June



Raqib Fasuyi

USMC Camp



- Landon High School
- Class of 2028
- MIT
- Major: Electrical Engineering
- Fun Fact #1: I am a competitive swimmer
- Fun Fact #2: I Built my own Computer

“ I enjoyed the hands on experience of actually making things happen instead of scaled down versions of cool things.”

Raqib Fasuyi USMC Camp, 23–27 June



Science, Technology, Engineering, and Math (STEM) Scholarship Program



| Blue Ridge Post's Scholarship Program

Six recipients from six universities were awarded \$19,700 this year (a 10% increase from 2024):

Jackson Healy

- Nuclear Energy, Purdue University

Nolan Robertson

- Mechanical Engineering, University of Virginia

Brayden Hulsey

- Mechanical Engineering, West Virginia University

Odin Kulp

- Civil Engineering, Geneva College

Elijah Lott

- Civil Engineering, North Carolina State University

Thomas Gudz

- Environmental & Sustainability Science, The George Washington University



Jackson Healy

Nuclear Engineering

Purdue University

“ I am honored and incredibly grateful for this opportunity. I feel immense pride in the acknowledgment of my efforts throughout high school, and I envision this scholarship being of immense value to me in my pursuits in college. Thank you!”



Nolan Robertson

Mechanical Engineering

University of Virginia

“ I greatly appreciate the Blue Ridge Post's continued support of me. You sponsored me to the SAME Engineering and Construction Camp in Vicksburg while I was in high school and supported me with the scholarship last year. Last year the scholarship allowed me to focus solely on my coursework, enabling me to take two 17 credit semesters, in addition to several clubs, including UVA's Rocketry Team. In addition, I was able to use this summer to continue to take advanced coursework, instead of primarily focusing on working. This upcoming year your generous support will continue to support me in focusing upon my academic work, and engagement on Grounds. Without the scholarship I would not be able to focus so much on my coursework and would not be able to take summer classes.



Brayden Hulsey

Mechanical Engineering

West Virginia University

“ I want to thank everyone involved with the SAME Blue Ridge Post for the extremely generous scholarship that I have been awarded. This scholarship will greatly assist me in paying for school and will go a long way in funding this year’s school projects. Thank you all again for this award! Unfortunately, our family vacation coincided with the award ceremony, and I am unable to be in attendance to accept this in person.



Odin Kulp

Civil Engineering

Geneva College

“ Receiving this scholarship will continue to provide me flexibility in what opportunities I participate in while at college. This past spring I got to study abroad in Ireland thanks to SAME's generosity. While I may not be abroad this year, I hope to explore job shadowing opportunities and continue work in my engineering department. Thank you for your amazing generosity this year, it has truly changed my college experience for the better.



Elijah Lott

Civil Engineering

North Carolina State University

“ From the bottom of my heart I would like to thank you for the scholarship that I received. This Scholarship has helped make my dream of studying engineering (at one of the top engineering programs in the country) a reality. Because of this scholarship I am not only able to follow my dreams but I am also able to feed my intellectual curiosity and explore other fields that I am interested in.

I would again like to thank the Blue Ridge post and each and every one of its members for making this possible and assisting me on my educational journey.

Technical Presenter

Dr. Paula Loomis FAIA, F.SAME, AICP, SAP,
LEED AP, USAF (Ret.)

Director of Research
Urban Collaborative



Maritime Expeditionary Operations Center

NAVY EXPEDITIONARY COMBAT FORCE EXPEDITIONARY MARITIME OPERATIONS COMPLEX CUSTOMER CONCEPT DOCUMENT



The Customer

Information



Pool Program Requirements

- Primary Pool
- Pool Equipment
- Mock-Up Ship
- Lock-Out Chamber
- Cut and Weld Pools
- Retainer Pond
- Wet Room and Drying Racks
- Audio-Visual Room
- Classrooms
- Locker Rooms



Training Type	Turbidity	Fresh VS Salt	Area	Temp	Noise	Depth	Bottom Type	Access	In Pool Lighting	Overhead Lighting	Mock Ship	Active Water (Wave, Current)
Unmanned Systems, Service Path MK@ or MK18	N	-	50ft x 30ft Could Vary	No	Min Sonar Reflection (padded Walls)	30ft	Sand	Hoist - 2 Hooks 15klbs	-	Dimmable	Yes, ROV inspections MK18 ATFP	-
MK-16 SUP	N	Fresh	50ft x 30ft @ 55ft - 300 ft2	No	-	55ft	Any	No Special	Bottom	Dimmable	No	Yes
MCM	N	-	50ft x 30ft 800 ft2	No	Min Sonar Reflection	55ft	Sand	Hoist	Bottom	Dimmable	Yes, (Above Water)	Yes
UW - Under Water	N	Fresh	(Ship Size) Platform 8ft Deep, 12ftx12ft	No	Ability to Add Noise	Platform @ 3ft	-	No Special	-	Dimmable	Yes, (Under Water)	Yes
MAR OPS	N	Fresh	100m 20ft Deep	No	Ability to Recall	20ft	-	Ship	Bottom	Lighting Control	Yes	Yes
ESS	N	Fresh	400 ft2	No	No	55ft / 12ft – 15ft Weld Pool	-	Hoist - Hook Extends 55ft	Bottom	Dimmable	Yes	Yes
Advanced Diving	N	Fresh	400 ft2	No	No	55ft / 12ft – 15ft Weld	-	Hoist	Bottom	Dimmable	Yes	Yes

Case Studies



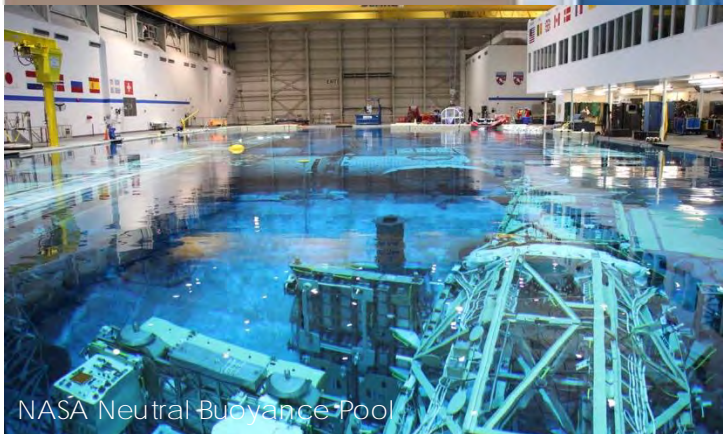
Special Operations Forces Pool



Coast Guard Rescue Swimmer Pool



Y-40 Deep Joy Pool



NASA Neutral Buoyance Pool



Joint Aquatic Pool

In order to understand the pool requirements, the design team visited or studied 13 case studies. Key studies are below:

Q-966 Special Operations Forces TRADET

- Coronado, California
- 19'-8" to 20'-0" deep
- Diving skills, water entry/exit, water orientation, climbing

NASA Neutral Buoyance

- Houston, Texas
- 23m liters (6.2 m gallons), 62m (203ft) x 31m (102ft)
- Life size replica of the International Space Station

Coast Guard Rescue Swimmer Pool

- Elizabeth City, North Carolina
- 1 million gallons of water (164'x82'x12' pool)
- Hoist w/ helicopter mock-up w/ wave machine

Joint Aquatic Diver

- Panama City, Florida
- 3,000 sf (75'x40'), overhead 60-ton gantry crane

P-1509 Navy Submersible Pool

- JEBLCFS, Virginia

K-26

- Gapyeong, South Korea
- 2.6 million liters of water
- 26 meters (m) (85 ft) deep – Asia's deepest

Deep Dive

- Dubai, UAE
- 14.0 million liters of fresh water
- 60 meters (m) (197 ft) deep – deepest in world

Y-40 Deep Joy

- Montegrotto Terme, Italy
- 4.3 million liters of water
- 42 meters (m) (138 ft) deep, deepest thermal water pool

Dive Cube

- Taichung, Taiwan
- 2.1 million liters of water
- 21 meters (m) (69 ft) deep, five depth levels

Abysssea

- Civaux, France

Adaptive Field House

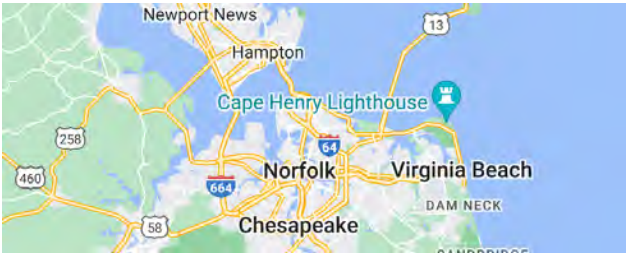
- Boise, Idaho

Southwest Aqua Sports

- Lubbock, Texas

San Jacinto College Maritime Training Center

Proposed Site Plan



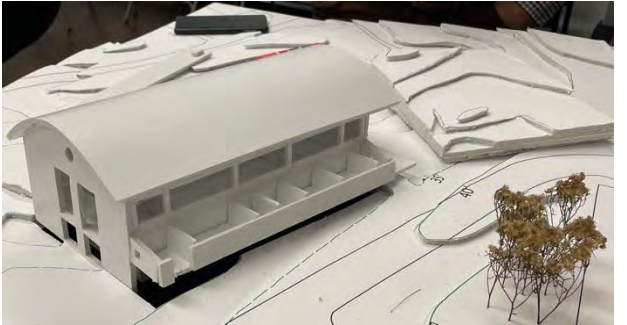
EMOC Site at Fort Story, Virginia



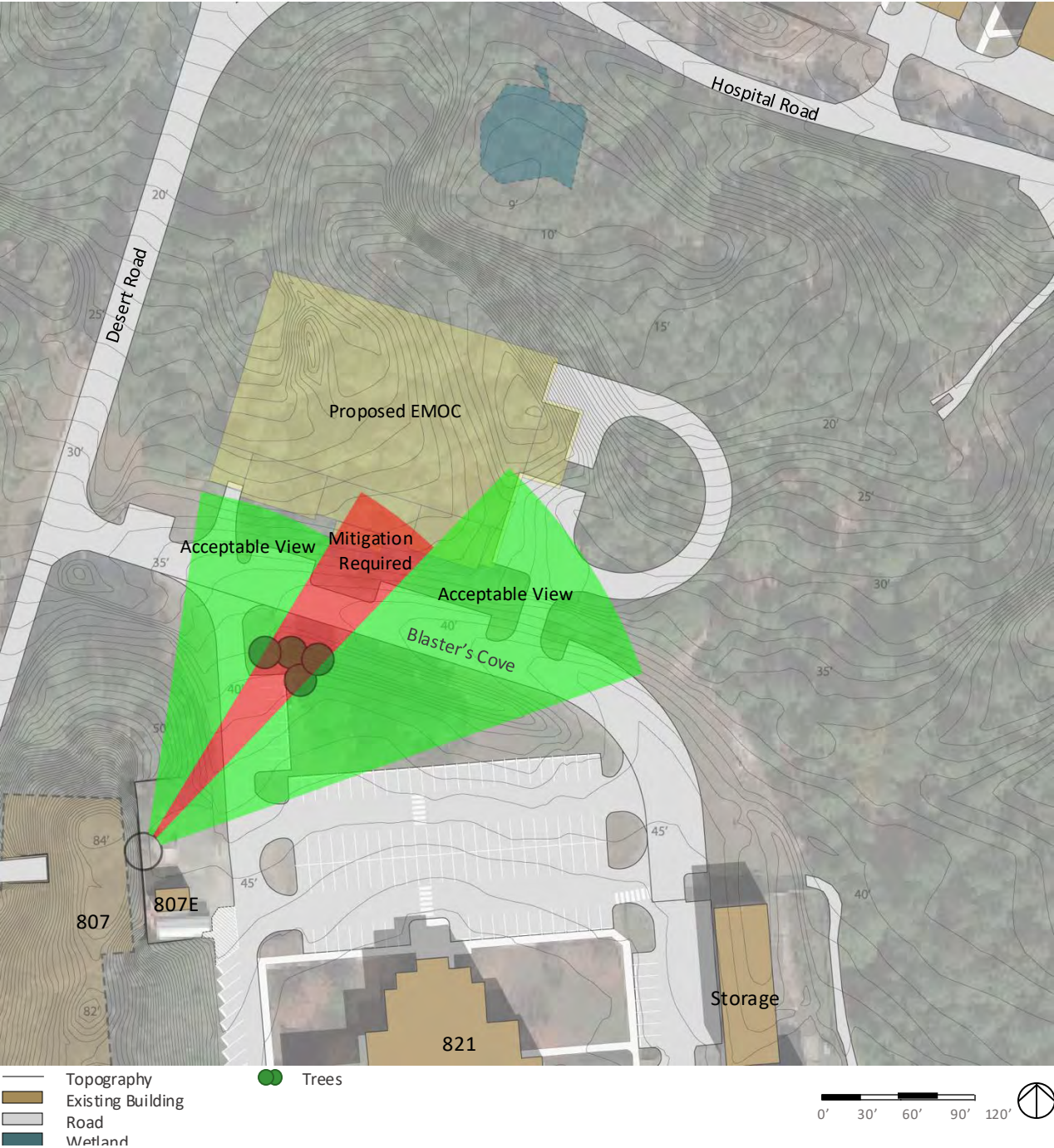
Historic Bunker 807 at Fort Story, Virginia



EMOC fits into the site natural slope



Cultural/Historic Resources Analysis



Historic View Shed Analysis



Ft Story Historic Lighthouses: All construction must protect their viewsheds



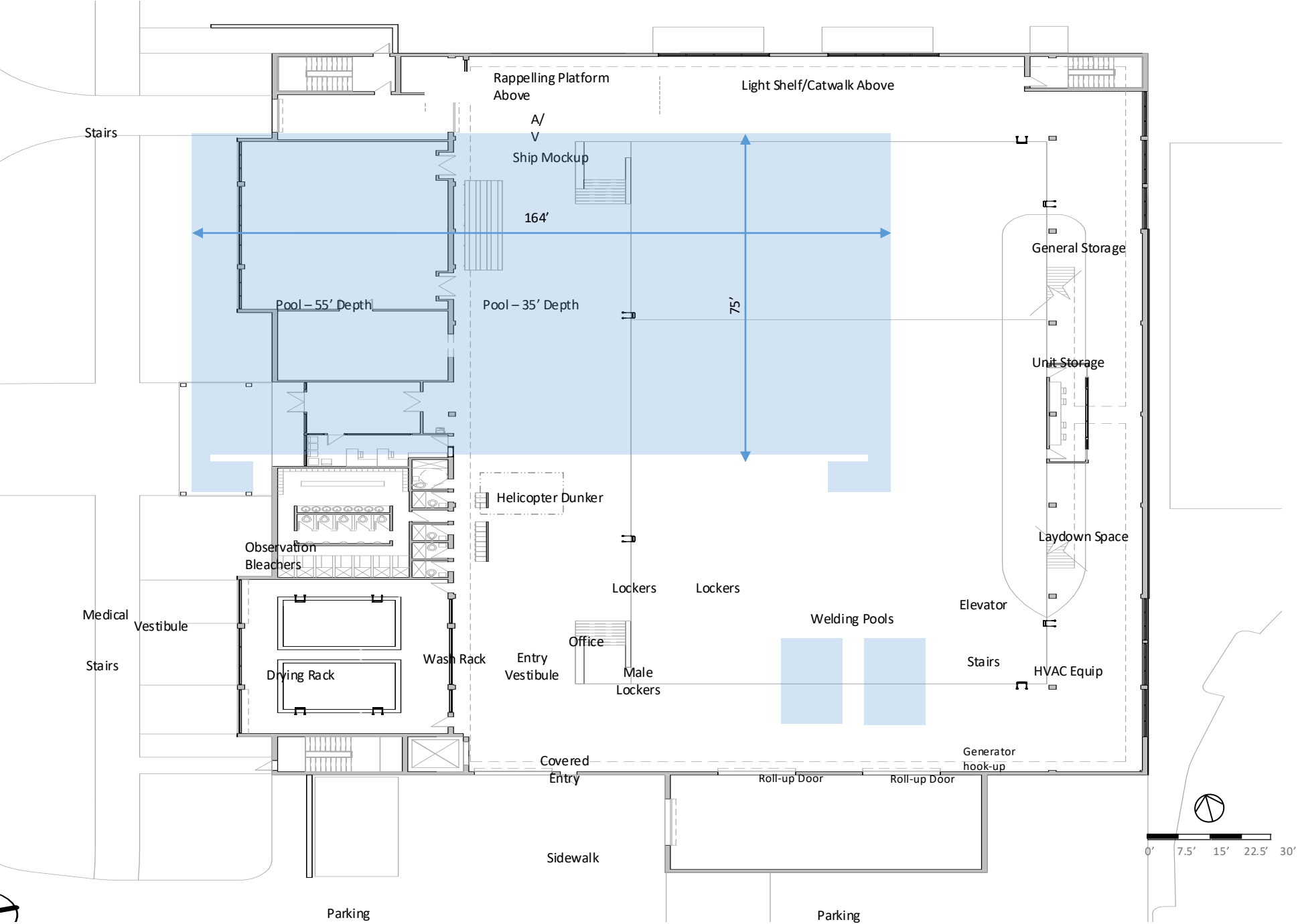
Ft Story Cold Era Bunker: All construction must protect their viewsheds to and from the bunker

The diagram illustrates a ship deck layout with various functional areas and their interconnections. The central area is the **Primary Pool** (blue oval). Surrounding it are several other spaces:

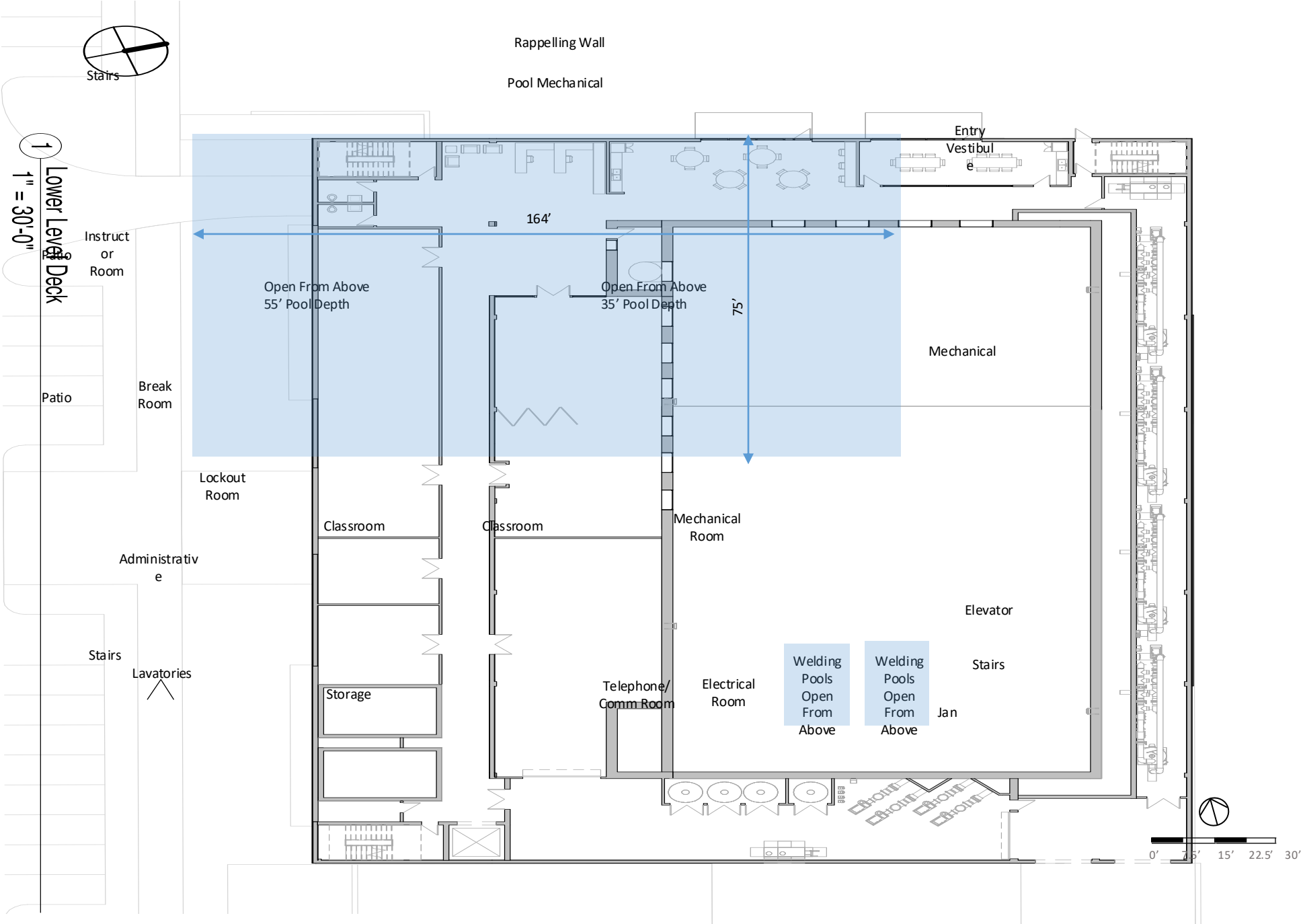
- Welding Tanks** (red circle) and **Storage** (green circle) are connected to the **Pool Deck Space** (grey oval) by dashed arrows.
- Lockers** (brown circle) and **Drying Rack** (orange circle) are connected to the **Pool Deck Space** by dashed arrows.
- Wash Rack** (dark grey circle) is connected to the **Pool Deck Space** by a dashed arrow and to the **Drying Rack** by a solid double-headed arrow.
- Viewing Stands** (yellow circle) is connected to the **Pool Deck Space** by a dashed arrow and to the **Classrooms** (blue circle) by a dashed arrow.
- Classrooms** (blue circle) are connected to the **Open Office/Breakroom** (teal circle) by a dashed arrow, with the note "Can be on separate floors" nearby.
- Mechanical Space** (large grey oval) is connected to the **Primary Pool** by a dashed arrow, with the note "Can be on separate floors" nearby.
- Ship Mockup** (dark blue oval) is located at the bottom of the **Primary Pool**.
- A/V** (small green circle) is located below the **Ship Mockup**.

The diagram uses different colors and shapes to represent various functional areas, and dashed arrows indicate potential connections or separations between these spaces.

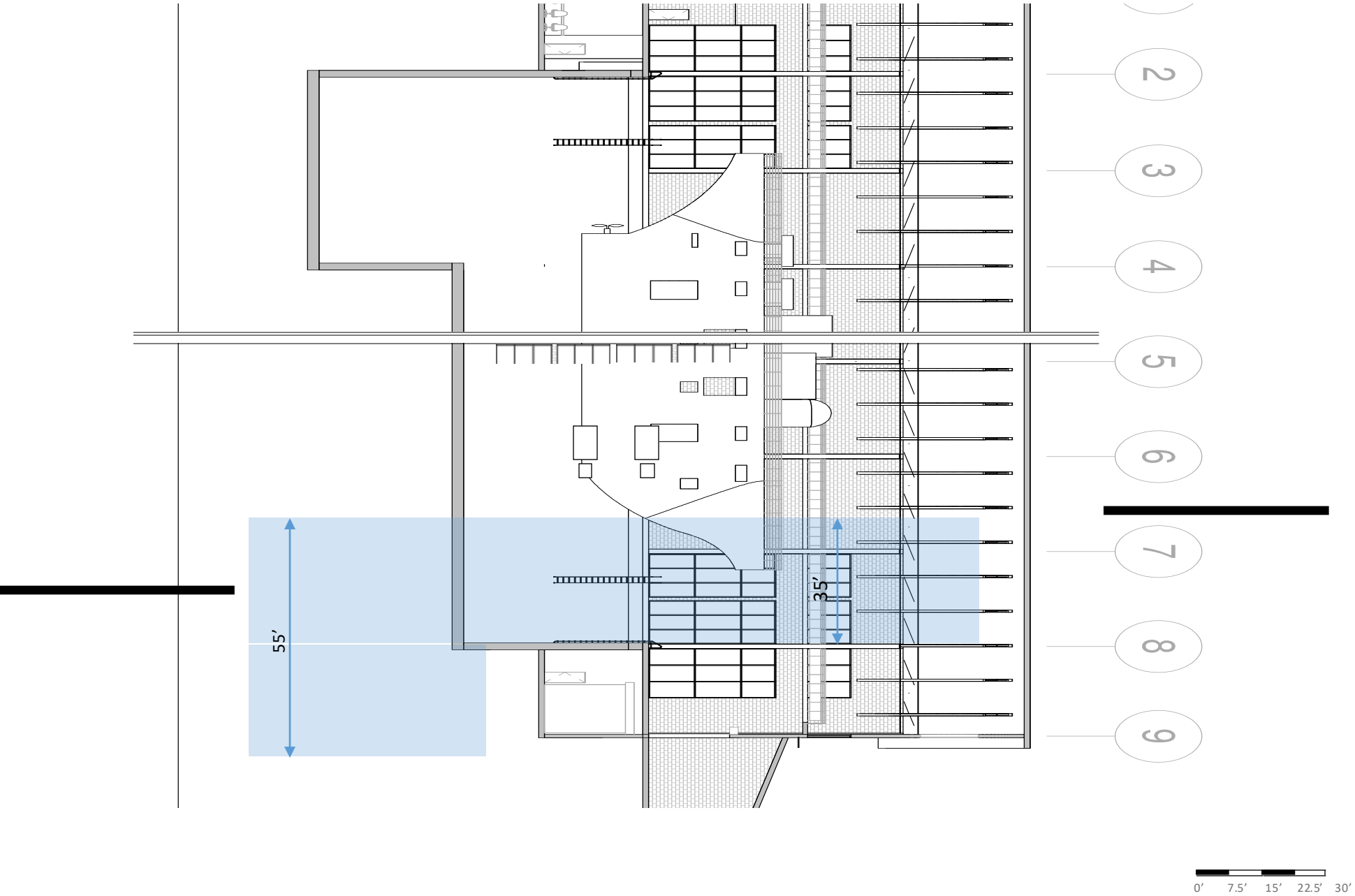
EMOC Pool Deck Level Floor Plan



EMOC Basement Level Floor Plan



EMOC Section



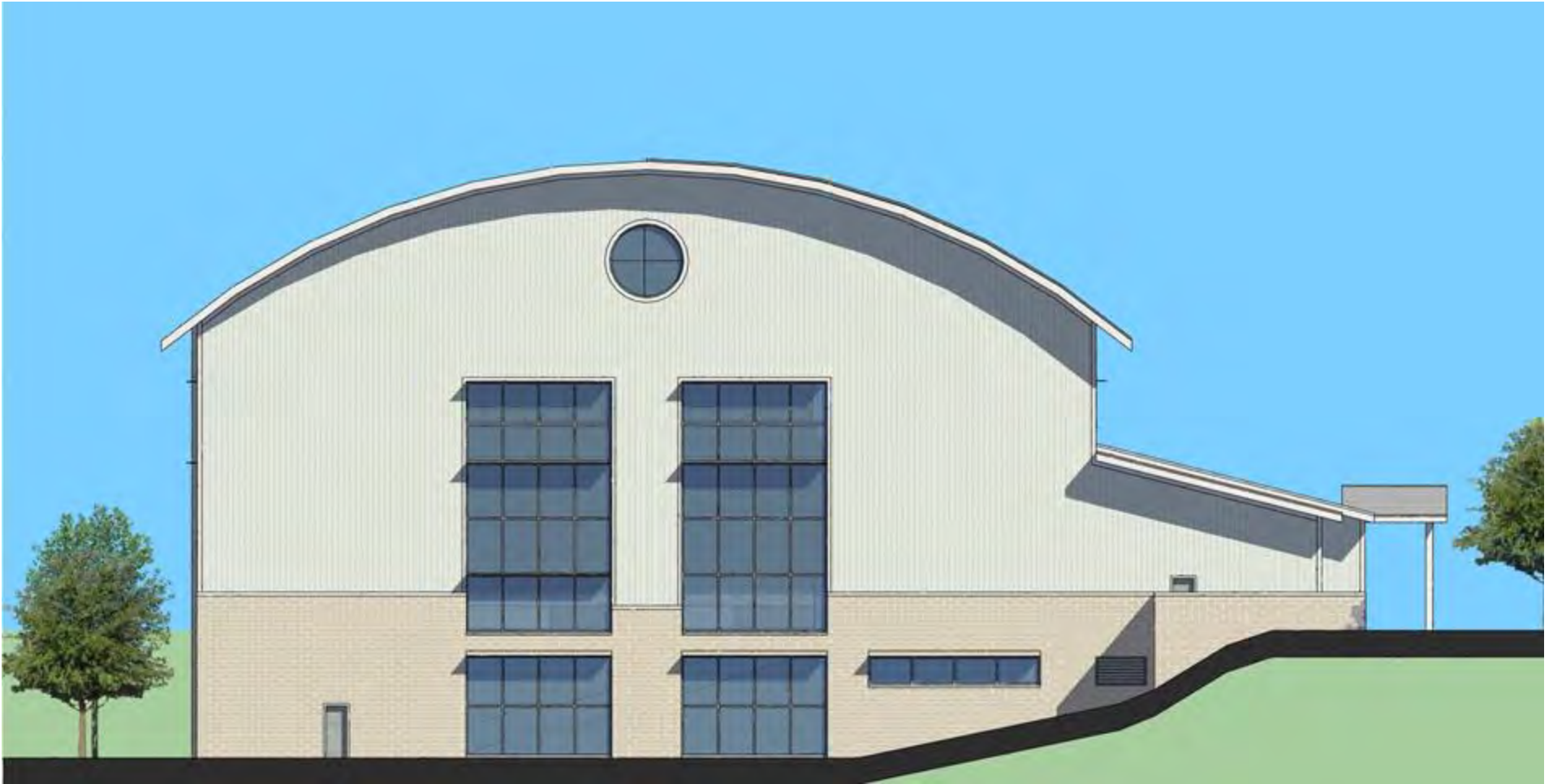
Elevations



The South Elevation is inviting with easy access for personnel and equipment. There are large access doors on the east and west.

30'

Elevations



The West Elevation provides a pleasing view of the EMOC approaching from Desert Drive and Blaster's Cove.

30'

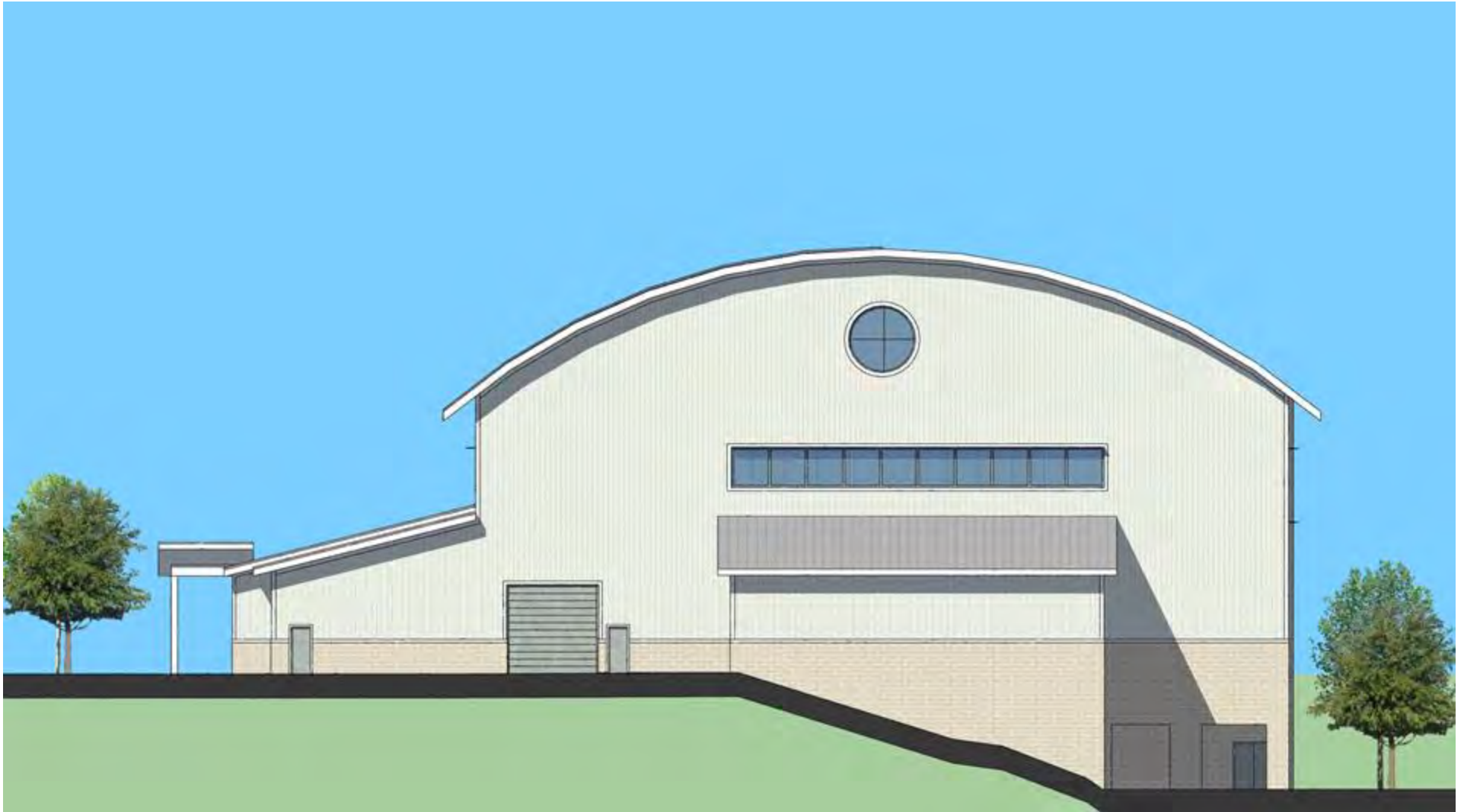
Elevations



The North Elevation provides a pleasing view of the EMOC and rappelling/climbing wall approaching from Hospital Road and Desert Drive. The wall is accessed from the observation deck.

30'

Elevations



The East Elevation provides access for equipment and pool supplies on two levels.

30'

Perspective



Model



National Events

www.sameindopacific.org





National Events

www.samesbc.org



Register today *...Book your hotel ASAP!*



Upcoming BRP Events

Sept. TBD

Luncheon Program (GW Hotel)

Aligning with Policy: Insights on Legislative, Executive, and FAR Reforms Shaping GovCon
(1 PDH), presented by: Sam Le, Sam Le Law PLLC

October 23

USACE Middle East Industry Day
w/ SAME BRP Networking Event (Shenandoah Univ)

October 24

Annual STEM Scholarship Golf Tournament
& BBQ Dinner (Rock Harbor Golf Course)
www.samebrpgolf.org

December 5

3rd Annual B2B and Holiday Social (GW Hotel)

Upcoming BRP Events



Society of
SAME
American Military Engineers
Blue Ridge Post

ANNUAL STEM

& BBQ Fundraiser
GOLF TOURNAMENT

Sponsorships are Available!

Drive for STEM, Putt for a Purpose

Join the SAME Blue Ridge Post for a day of golf, BBQ,
and giving back to support future STEM leaders
through scholarship and camp programs.

 **FRIDAY, OCTOBER 24, 2025**

 Rock Harbor Golf Course
Winchester, VA

 www.samebrpgolf.org



Thank you

See you again, soon!

www.same.org/BlueRidge