

NASA REQUEST FOR INFORMATION

West Virginia Space Academy Response

November 2026

Patrick Morrisey
Office of the Governor

November 6, 2026

National Aeronautics and Space Administration
Office of Strategic Infrastructure
300 E Street SW
Washington, DC 20546

RE: NASA-USSA-RFI, Designation of Responding Entity and State Selecting Official

To the Office of Strategic Infrastructure:

As your Request for Information requires, I am designating in writing the Responding Entity and the State Selecting Official for West Virginia's official State-sponsored response.

Responding Entity: I designate the West Virginia Department of Commerce, an executive branch department of the State of West Virginia (W. Va. Code § 5F-1-2), as the Responding Entity to prepare and submit West Virginia's official response. Its primary point of contact is Daniel Linville, Director of Special Projects in the Office of the Governor.

State Selecting Official: I also designate Mr. Linville as the State Selecting Official to coordinate and formally endorse the Responding Entity's response and to serve as the State's authoritative point of contact on which response carries West Virginia's official endorsement. For both designations, he can be reached at:

Office of the Governor, State Capitol
1900 Kanawha Boulevard East, Charleston, WV 25305
Email: daniel.s.linville@wv.gov | Telephone: (304) 558-2000

Sincerely,

Patrick Morrisey
Governor



New River Gorge, West Virginia: The Mountain State's breathtaking natural beauty reflects the spirit of exploration, discovery, and adventure that will inspire the next generation of American space leaders.

The National Aeronautics And Space Administration's Office Of Strategic Infrastructure Requests Information On The United States Space Academy

Responding Entity Identification

The State of West Virginia is eager to submit this proposal to host the United States Space Academy (Academy or USSA) in Bridgeport, WV, along the I-79 Corridor or in Sugar Grove, WV (alternate site). The West Virginia Department of Commerce, a department of the state government, is the official Responding Entity. The State Selecting Official and primary point of contact is Daniel Linville, Director of Special Projects, West Virginia Office of the Governor Patrick Morrisey (See Attached Letter).

The State of West Virginia officials' contact information:
Primary Contact and State Selecting Official: Daniel Linville, Director of Special Projects at the Office of the Governor, 304-558-2000, Daniel.S.Linville@wv.gov
Matt Herridge, Secretary, West Virginia Department of Commerce, 304-558-2234, Matt.Herridge@wv.gov

West Virginia will leverage assets, expertise, and partnerships across our state to ensure a smooth launch and operations of the Academy. Partnerships include: the West Virginia Governor's Office, West Virginia Higher Education Policy Commission, West Virginia Council for Community and Technical College Education, West Virginia Department of Commerce, West Virginia University (WVU), Marshall University (Marshall), West Virginia State University (WVSU), West Virginia University Institute of Technology (WVU Tech), Fairmont State University (Fairmont), Pierpont Community and Technical College (Pierpont CTC), West Virginia Manufacturers Association (WVMA), and West Virginia Space Grant Consortium (WVSGC). This response was prepared by the West Virginia Department of Commerce (led by Secretary Matt Herridge) and the West Virginia Higher Education Policy Commission (led by Chancellor Sarah Armstrong Tucker).

Executive Summary

West Virginia stands out because of its dedication to national service and ability to unite partners, mobilize resources, and turn vision into action. West Virginia operates at the speed of business, with a development-focused approach that prioritizes decisive action. The state's commitment to cutting through red tape and aligning sectors creates an environment where projects can move swiftly from vision to execution. Through a statewide alliance, the Academy will have immediate access to specialized expertise, established infrastructure, workforce pipelines, and real-world mission applications. A $50 million commitment from the state will cover the "greatest needs" of the project as it develops. This model allows for a rapid launch, efficient operations, and the ability to scale with evolving needs of NASA and the U.S. Space Force, while advancing America's talent pipeline, technological leadership, and national security.

West Virginia proposes locating the Academy in North Central West Virginia, along the I-79 corridor. The region boasts NASA's Katherine Johnson Independent Verification and Validation Facility, the FBI's Criminal Justice Information Services Division, and the West Virginia Robotic

Technology Center, with connections to Charleston's West Virginia Regional Technology Park and the Mid-Atlantic Aerospace Complex. One potential parcel, Charles Pointe, consists of 305 acres and could be developed by 2031.

For the 2028 inaugural class of 300 students, a phased approach will use existing facilities at WVU while developing a permanent campus. Together, with Marshall, WVSU, Pierpont CTC, Fairmont and WVU Tech, this higher education consortium will contribute complementary academic instruction, specialized training, and workforce pathways, supported by federal, military, and industry partners.

Grounded in the Mountaineer spirit of service, discovery, and innovation, West Virginia offers more than a location. It offers an interconnected statewide partnership capable of moving quickly, mobilizing existing assets, and building a scalable model for space education and mission readiness.

A. Location Plan – Permanent USSA Campus

From moving a new nation West to discovering worlds beyond our own, West Virginia has been integral to the United States forging new frontiers. West Virginia coal powered trains towards the Pacific Coast and has kept the lights on in homes that stretch from sea to sea ever since. But the state has also been essential in the fight for America's freedom and its future. During World War II, the state's steel production ran around the clock to outfit our troops with weapons. During the Space Race, it was West Virginia's own Katherine Johnson that John Glenn trusted to make the calculations to bring him home safely. With the country once again looking beyond our earthly limits, West Virginia is prepared to rise to the occasion.

The Governor's Office will convene the West Virginia Space Academy Launch Council to oversee the creation of a Space Academy that will shape leaders resolute with purpose and imbued with character, leaders who will envision the next great discoveries and achieve what may now seem unimaginable. The Launch Council will be comprised of the Governor's Office, university Presidents, and notable West Virginians, including Homer Hickam. Hickam is himself a former NASA engineer, Vietnam War Veteran, and author of *Rocket Boys.*

The Launch Council will work closely with NASA to create an Academy with unique coursework that elevates leadership skills and emphasizes civic responsibility alongside world-class academics. The Academy will leverage the pre-existing collaboration among higher-education institutions to provide workforce development beyond the classroom, giving tomorrow's leaders real-world experience. Working with statewide partners, West Virginia will expand beyond the Academy to create a pipeline of students eager and prepared for aerospace careers from engineer to pilot, astronaut to Space Force officer. We will leverage the state's existing ties to NASA and the Federal Government's investment in supporting Northrop Grumman's production expansion in WV, including a $1.6 billion investment by the Department of War.

West Virginians are known for their independence and perseverance, but we come together to achieve great things—the largest steel span bridge in the Western Hemisphere, cantilevered over

a gorge in mountains that are older than bones; tunnels through those same mountains that were constructed by hand, well before machines could drive us through the stone. Grit and perseverance are characteristic of West Virginia's people and the hallmark of anyone who achieves great things. They will be the bedrock of West Virginia's Space Academy, launching it beyond the mountains to the stars.

1. Proposed Land and Site Control

Table 1. Charles Pointe Parcel Location Information

Charles Pointe Parcel, Harrison County	
Street Address	Developer's Office - 600 Marketplace Ave Ste 350, Bridgeport, WV 26330
Geographic Coordinates	39.311947, -80.247094
Jurisdiction	Simpson District, Bridgeport, WV
County, State	Harrison County, WV
Total Acreage	305 Developable Acres
Proposed Expansion Areas (as applicable)	Potential expansion within the total acres available within the Master Planned Development if needed.
Parcels	Multiple contiguous parcels
Current Ownership	Ownership is held through multiple structures (HLC, LP and the Julia C. Compton Trust 2003), but all are under common ownership.
Acquisition/Conveyance Cost	$45.75 million to $61 million
Encumbrances, Easements, Leases, Deed Restrictions, Reversionary Interests, or Other Limits.	Identified and considered in the Master Planned Development, much of the acreage is raw land. No leases, deed restrictions, or other limits are known at this time.
Earliest Date USSA Could Gain Access or Control	As early as needed (site is development-ready)
Existing Buildings with Sq. Foot.	No existing areas on identified acres. Areas of the Master Planned Development are currently built out consistent with approved Planned Unit Development (residential, commercial, recreation, open space, etc.) Built out areas are not included in the Total Acreage.

Existing Infrastructure	Core Infrastructure is in place to support buildout of the Master Planned Development, permitting from all utilities is in place
Current or Planned Occupants	No current or planned occupants or this site, land is undeveloped

The West Virginia Department of Commerce has identified multiple parcels of land in Harrison County, WV, adjacent to Interstate 79 (I-79) that can serve as the permanent location for the Academy to host students no later than 2031. The Charles Pointe Parcel, which contains at least eight connected parcels, is one potential permanent site, coordinates 39.311947, -80.247094.

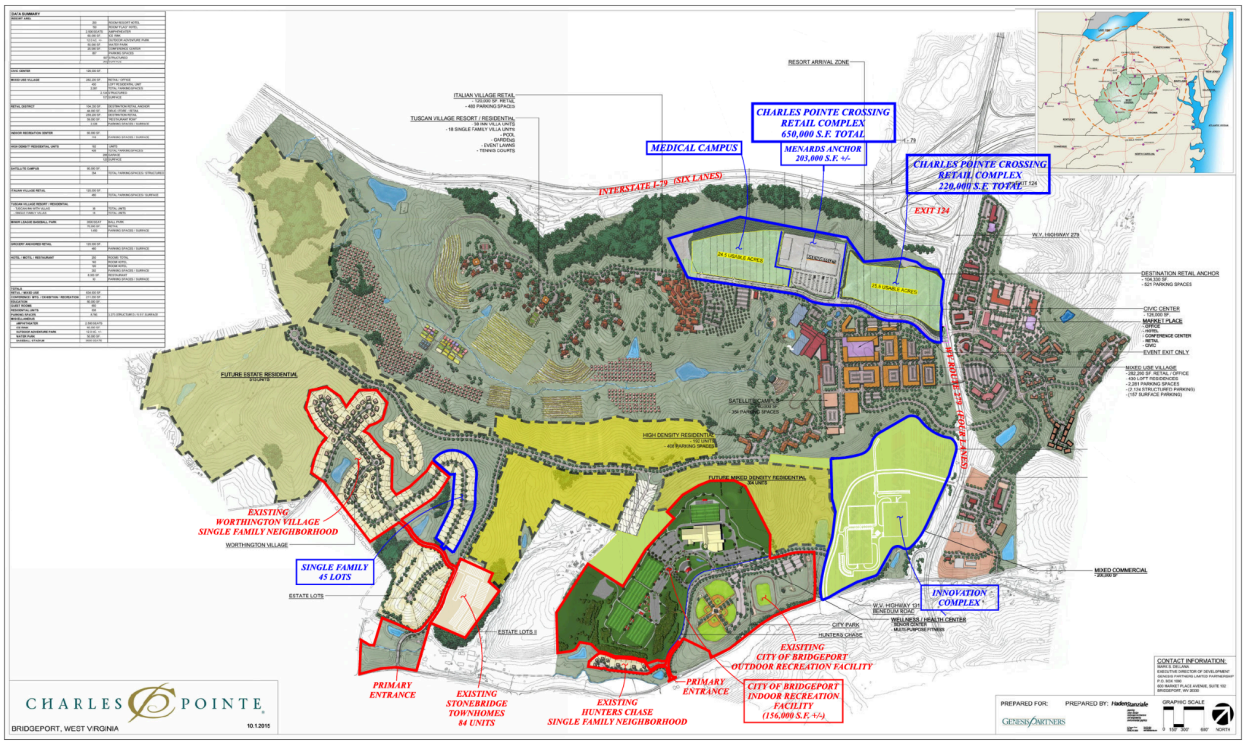
The site is situated within a master-planned development. Of the total development, 305 developable acres have been identified for use under this project. The estimated acquisition cost for this acreage is $45.75 million to $61 million, depending on the final configuration. Additional acres within the overall development are also available in contiguous parcels, providing flexibility to accommodate future growth.

The property ownership is divided across structures with common ownership, depending on the specific plots within the master development. The parcels currently identified for this project are owned by HLC, LP and Julia C. Compton Trust 2003. The estimated value of the proposed site has not yet been determined, but will be determined once the final footprint is selected.

The Charles Pointe Parcel is development-ready, with site access and availability that can be accommodated as needed. Core infrastructure is already in place, providing a foundation for developing the permanent campus. Portions of the Charles Pointe South Master Planned Development have been built out in accordance with approved Planned Unit Development (PUD) documents. Existing development includes residential, commercial, recreational, and open-space uses. These built-out areas are excluded from the acreage identified as available for the USSA campus. PUD documentation and development information are available to support further evaluation of the site and its surrounding uses. The earliest estimated date for the Academy to gain site access or control will be based on the campus's development schedule and the completion of any required acquisition, conveyance, or other site-control agreements.

The West Virginia Department of Commerce has also identified an alternate permanent site location in Sugar Grove, West Virginia. Details on this site are provided in the attached “Alternate Site” document.

2. Site Readiness and Infrastructure



Charles Pointe Parcel: Aerial view of Charles Pointe in Bridgeport, West Virginia, the proposed location for the permanent United States Space Academy campus. The site offers substantial acreage for academic, research, residential, and training facilities, with opportunities for future expansion within North Central West Virginia's growing aerospace and national security ecosystem.

Charles Pointe Parcel offers the Academy a development-ready location within an established master-planned development in Bridgeport, Harrison County, WV. The proposed Academy will be anchored on approximately 305 acres, with surrounding properties available to accommodate supporting operations and future expansion. Charles Pointe has invested in the electrical, natural gas, water, wastewater, stormwater, telecommunications, and transportation infrastructure necessary to support substantial institutional, commercial, and residential development. Major off-site infrastructure improvements are complete, initial on-site infrastructure is installed, and subsequent phases have approved construction plans, providing a strong foundation for the Academy's development.

Electrical service is provided by Harrison Rural Electrification Association (HREA) through a dedicated substation adjacent to the development and redundant, underground looped distribution systems serving Charles Pointe Parcel. The Charles Pointe Substation was originally designed with a capacity of 20 megawatts (MW) to support the master-planned development. This infrastructure was designed to accommodate the development's planned build-out and provides an established foundation for the Academy's electrical requirements. Natural gas service is available through a master service agreement with Hope Gas. Campus-specific electrical distribution, transformers, building connections, and backup power systems will be incorporated

into the Academy's construction plans, allowing operational resilience and continuity requirements to be addressed from the outset.

The City of Bridgeport provides water and sanitary sewer service to Charles Pointe. Existing infrastructure includes gravity and force sewer trunk mains, two major lift stations, and water distribution mains connected to a network with multiple storage tanks. Documented water infrastructure supporting Charles Pointe includes 12-inch and 16-inch distribution mains, two 500,000-gallon storage tanks providing a combined 1 million gallons of storage, and a booster pumping station rated at 700 gallons per minute. The Clarksburg Water Board, which supplies Bridgeport, has a reported treatment capacity of 12 million gallons per day. The City of Bridgeport's wastewater treatment system has a reported permitted capacity of 3.01 million gallons per day, with a surge-design capacity of 6 million gallons per day. These systems were designed to support the development's planned build-out and provide established infrastructure for the Academy's anticipated water and wastewater requirements. These figures describe existing development-level and regional infrastructure capacities; available capacity for the proposed Academy parcels and any required utility extensions will be confirmed during site-specific engineering. Of the 16 stormwater management structures planned for Charles Pointe Parcel, 13 have been constructed and are operational, serving the vast majority of the development. The remaining three are secondary structures associated with peripheral residential areas and will be constructed as those areas develop. The Academy will be incorporated into the existing master stormwater management system. No specific drought, water allocation, or treatment constraints have been identified.

Charles Pointe has underground fiber-to-the-premises infrastructure supporting speeds of up to 10 gigabits per second, with multiple gigabit service providers available. Dedicated fiber is already in use within Charles Pointe Parcel, and the infrastructure can support a private network separate from public internet traffic. These capabilities will allow the Academy to establish secure instructional, administrative, residential, and research networks, with dedicated cybersecurity controls, redundant communications, and campus-specific network architecture incorporated into new construction.

Transportation access is provided through West Virginia Route 279, Interstate 79 at Exit 124, and West Virginia Route 131. Improvements to Route 279 undertaken through the West Virginia Division of Highways are complete and fully operational. Six primary access points into Charles Pointe are in place, with capacity to support the development's full build-out. Internal campus roads, parking, pedestrian connections, and emergency access will be incorporated into Academy construction. North Central West Virginia Airport, operated by the Benedum Airport Authority, provides nearby commercial and general aviation access. The Airport Authority has expressed its willingness and capacity to expand its infrastructure to support the Academy's operational needs, including potential aviation-related instruction, transportation, and supporting activities.

Charles Pointe operates under an approved Planned Unit Development with established land-use, infrastructure, roadway, and drainage provisions. Environmental studies and development approvals have addressed streams, wetlands, protected species, historic resources, and related requirements. The Charles Pointe Parcel is development-ready, with no significant demolition, remediation, drainage, or extraordinary site-preparation requirements identified. Routine grading,

building-pad preparation, utility connections, and internal infrastructure will be incorporated into campus construction.

The Harrison-Taylor County 911 Center is located within Charles Pointe, providing an established regional emergency communications resource. The City of Bridgeport provides police, fire, and emergency medical services throughout the development, supported by a new public safety substation adjacent to United Hospital Center. West Virginia University (WVU) Medicine United Hospital Center, located in Bridgeport less than three miles from Charles Pointe, provides comprehensive hospital and emergency care and is designated as a Level IV Trauma Center. Additional advanced trauma care is available through WVU Medicine J.W. Ruby Memorial Hospital in nearby Morgantown, WV, which operates a Level I adult trauma center and Level II pediatric trauma center. Healthcare resources within Charles Pointe also include Community Care of West Virginia and Vandalia Harrison Neighborhood Hospital.

Charles Pointe's redundant underground electrical distribution, telecommunications backup systems, and existing building-level backup power provide a foundation for operational resilience. Because the Academy would be constructed as a new campus, campus-wide backup power, emergency communications, controlled access, security monitoring, and continuity-of-operations capabilities could be incorporated into the initial design. This combination of established infrastructure, nearby emergency services, and purpose-built campus systems will support the Academy's long-term operational and security requirements.

3. Environmental / Regulatory Considerations

The proposed Charles Pointe campus would occupy a portion of the acreage identified for potential Academy use. This permanent site location is unique, as many environmental constraints have already been considered, identified, and appropriately planned for. Multiple environmental services have also been previously completed on the site, including Aquatic and Terrestrial Habitat Surveys, Clean Water Act, Section 401/404 Permitting and NEPA, Fish and Macroinvertebrate Surveys, Threatened and Endangered Species Surveys/Wildlife Surveys, Wetland and Stream Mitigation Design-Build Services, Wetlands and Water Delineations, Performance Monitoring, and Vegetation Management. Additionally, an approved Stream and Wetland Mitigation Plan has been implemented and fully constructed for the entire site area. Additional environmental assessments will be conducted as needed and as required by federal and state laws.

Protected species and habitat studies have been completed and protective conservation easements are in place throughout the permanent site location. Periodic Phase I Environmental Studies have been conducted on the Charles Pointe area to determine any potential contamination, and historic and cultural resource clearances for the development area have been obtained following the required Phase 1 and Phase 2 studies. The site has previously received United States Fish and Wildlife Service (USFWS) Authorization, West Virginia State Historical Preservation Office (WVSHPO) Authorization, and State of West Virginia Individual Water Quality Certification Approval. Existing studies, permits, and agency correspondence would be matched to the selected Academy parcels to confirm their coverage, conditions, and applicability to the proposed campus. Conservation easements and mitigation areas would be incorporated into the

site plan, with net developable acreage and continuing monitoring or maintenance obligations documented before final design.

There are minimal floodplain areas within the Charles Pointe site area and are addressed within both a Master Drainage Plan and a Stream and Wetland Mitigation Plan. The development's Master Stormwater Plan includes 16 management structures, of which 13 are constructed and operational. The Academy's drainage requirements would be integrated into this system, with engineering review confirming capacity and any additional facilities needed for the selected campus footprint. The flood-zone designations of the selected campus parcels, building footprints, critical utilities, and access routes would be confirmed against current FEMA mapping during site planning. This review would guide facility placement and identify any applicable floodplain-development requirements.

The proposed site has multiple backup energy and telecommunication resources, ensuring that the site will be resilient in the case of extreme weather conditions. This has been considered thoughtfully, as flooding and severe storms are documented hazards in Harrison County. The site's exposure depends on its terrain, drainage, and the location of road and stream crossings. All Federal and State regulatory requirements that apply will be followed to ensure the site is compliant with all applicable laws and requirements. The development of this site will be a priority of the State of West Virginia, therefore all involved parties will work together effectively and efficiently to remain on track to meet NASA's operational timeline, ensuring administrative delays do not create a barrier to successful and timely site development. Additionally, a Section 106 review of a federal campus including consultation with tribes that attach significance to affected historic properties will be conducted as required by law.

4. Proximity and Supporting Ecosystem

Known as the Mountain State, West Virginia's rugged peaks and wide-open skies create a landscape as inspiring as the people who call it home. Here, the impossible seems possible, creating a reflecting spirit of resilience and ambition that knows no limits.

With its awe-inspiring natural beauty, West Virginia's location is in the heart of the eastern United States, offering a distinct strategic advantage for the establishment of the Academy. The state is within one day's drive of major metropolitan, federal, military, aerospace, and research centers, including Washington, D.C., Pittsburgh, Columbus, Nashville, New York City, and Atlanta. This proximity provides access to the nation's defense and aerospace industries, federal agencies, academic institutions, technology partners, and a highly skilled workforce. The convenient location offers the space, infrastructure, and environment necessary to support a focused, mission-driven educational institution. West Virginia provides the connectivity of a major regional hub without the congestion and competing demands of larger metropolitan areas. Bridgeport's location in North Central West Virginia offers a strategic advantage for the Academy, providing a central point of access to the state's communities, educational institutions, workforce, and supporting infrastructure.



NASA's Katherine Johnson Independent Verification and Validation IV&V Facility in Fairmont, West Virginia, demonstrates the state's established role in supporting NASA missions and offers opportunities for future collaboration, experiential learning, and professional development for United States Space Academy cadets.

Positioned along Interstate 79 and U.S. Route 50 (Corridor D), the site offers convenient north-south connectivity to Morgantown, Pittsburgh, and Charleston, as well as east-west access toward Ohio and Maryland. Its proximity to North Central West Virginia Airport further enhances regional and national accessibility. This central location provides an opportunity to build strong partnerships across West Virginia while maintaining convenient connections to neighboring states and major transportation corridors. For an institution seeking to draw students, faculty, military partners, industry leaders, and visitors from across the country, the site offers a location that is both accessible and strategically positioned to serve as a statewide and regional center for space education, innovation, and workforce development. Nearby Clarksburg has a public and military airport with other airports an easy drive away including: Morgantown's MGW (public) 40 miles; Pittsburgh's PIT (international) 113 miles; Charleston's CRW (international) 123 miles; and Maryland's Cumberland CBE (public) 111 miles.

Further supporting why West Virginia is a good fit is the fact that NASA is already in West Virginia through its Independent Verification and Validation (IV&V) Program at the Katherine Johnson Independent Verification and Validation Facility in nearby Fairmont. In addition, while not a NASA facility, the Green Bank Observatory is one of the world's premier radio astronomy facilities and is located only two hours away from the permanent proposed site.

North Central West Virginia is also home to many federal partnerships including the FBI's Criminal Justice Information Services Division, a high tech hub serving the law enforcement, national security, and intelligence communities and NOAA's Environmental Security Computing Center.

West Virginia also is home to Allegany Ballistics Laboratory (Mineral County), a U.S. Navy-owned federal facility operated by Northrop Grumman. This site will be relevant to propulsion, advanced materials, energetic systems, and missile/defense technologies. Shepherd Field/Air National Guard Base in Martinsburg and McLaughlin Air National Guard Base, in Charleston are critical assets to this mission. West Virginia Army National Guard's Camp Dawson is a significant military training and national-security asset, which has 3,000 acres of maneuver area, classrooms, computer labs and other training infrastructure. Home to Ridge Runner, a multinational training program, innovation laboratory and U.S. Special Operations Forces validation platform, Camp Dawson provides additional training options for cadets.

These assets and partners stand ready to support the creation and launch of the Academy.

The Mountain State offers more than just a potential location for the Academy. It offers an existing statewide network of federal, academic, research, and industry assets that would be mobilized to support the Academy from its earliest stages and grow with its mission. As a small state and nationally known for its collaborative nature, West Virginia leaders will cut through bureaucratic red tape to move quickly to support the Academy's mission.

Bridgeport is strategically positioned within an interconnected network of aerospace, aviation, defense, science, engineering, advanced manufacturing, and research assets that directly align with the mission of the Academy. The region offers immediate access to significant federal and research capabilities, including the West Virginia Robotic Technology Center and the growing aerospace and advanced manufacturing sectors. These resources provide opportunities for real-time cooperative projects with federal agencies, university researchers, technology companies, and specialized industry partners.

Beyond these regional industry assets, West Virginia offers an exceptional higher education partnership network that would serve as a foundation for the Academy's academic programming, research, technical training, and workforce development. West Virginia University (WVU), the State's land grant and R1 research institution, brings nationally recognized aerospace engineering, robotics, space systems, satellite servicing, and space exploration research. WVU's Center for Innovation in Space Exploration and Research exemplifies these subjects.

A strong R2 research institution, Marshall University (Marshall) brings together expertise in engineering, computer science, cybersecurity, FAA-aligned Aviation and Aviation Maintenance Technology (AMT) programs, unmanned aircraft systems, and advanced manufacturing through its academic programs, College of Engineering, Division of Aviation, and Institute for Cyber Security. A particularly significant asset is the nationally renowned and partner with the U.S. Departments of Labor and War, Marshall Advanced Manufacturing Center (MAMC) provides specialized capabilities in robotics, additive manufacturing, precision machining, prototyping,

welding, and customized industry training. MAMC's experience translating advanced technologies into practical aerospace applications includes NASA-related composites technology development, aerospace manufacturing, technical training, and technology transfer. Through NASA cooperative agreements, MAMC helped develop composite manufacturing capabilities and transfer NASA technologies to manufacturers. In partnership with NASA's Goddard Space Flight Center, MAMC also contributed to the design, prototyping, manufacturing, testing, and delivery of the Super Lightweight Interchangeable Carrier used in servicing the Hubble Space Telescope.

Equally important to the Academy's mission is Marshall's ability to address the growing cybersecurity challenges associated with space communications. Through its state-supported, $45 million state-of-the-art Institute for Cyber Security and expertise in electromagnetic spectrum, wireless technologies, computer science, and engineering, Marshall can contribute to protecting the communication systems that connect satellites, spacecraft, ground stations, and mission control operations. This includes addressing vulnerabilities involving unauthorized access, signal interception, spoofing, jamming, and other threats to the integrity and reliability of radio frequency transmissions. MAMC complements this expertise by providing applied manufacturing, prototyping, testing, and equipment-integration capabilities to help develop, evaluate, and refine secure communications technologies and supporting hardware. Together, Marshall's cybersecurity expertise along with MAMC's hands-on engineering and manufacturing capabilities offer the Academy a distinctive opportunity to connect cyber defense with the physical technologies that enable secure, resilient space operations.

West Virginia State University (WVSU) offers additional strength in engineering, computer science, cybersecurity, mathematics, chemistry, biology, and biotechnology, which align closely with the Academy's anticipated curriculum. The university also has a record of NASA-supported work through the West Virginia Space Grant Consortium, including research on plant resilience in simulated Martian environments.

Fairmont State University (Fairmont) brings a strong aviation and STEM foundation to West Virginia's application. Its Bachelor of Science in Aviation, FAA Part 107 certificate, and growing work with unmanned aircraft systems provide hands-on training, simulation, and industry-connected preparation for careers in aviation and aerospace. Complementary degrees in Engineering Technology, computer science, mathematics, the natural sciences, and Engineering Management align with the Academy's technical needs.

In 2028, the university's aviation programs will expand into new facilities that could be made available for shared or dedicated Academy use through a lease or memorandum of understanding. With these assets, the university is well positioned to serve as an instructional partner for the inaugural class and a long-term collaborator on curriculum design, faculty exchange, and joint degree programs.

Pierpont Community and Technical College (Pierpont CTC), nearby in Fairmont, brings applied technical training in the fields that support aerospace operations. Its FAA Part 147 Aviation Maintenance Technology program, taught by FAA-certificated instructors, is complemented by training in cybersecurity, electronics, instrumentation and controls, and welding and fabrication.

The school maintains strong, direct relationships with aerospace employers including Pratt & Whitney, Lockheed Martin, and Aurora Flight Sciences. When its new $23 million, 65,000-square-foot aviation maintenance facility opens at the West Virginia AeroTech Park in Fall 2028, the college would serve 50 Academy students in technical-training coursework, growing to 75-150 by Fall 2031. Online general education courses could serve the full inaugural cohort. Located in Bridgeport, in Harrison County, the facility is well placed to support the Academy's permanent campus and to supply it with a long-term pipeline of skilled technicians.

West Virginia University Institute of Technology (WVU Tech) in Beckley brings applied engineering and laboratory-based STEM expertise to West Virginia's application. Its bachelor's programs in mechanical, civil, and electrical engineering, computer science, chemistry, and biology, along with coursework in mathematics and cybersecurity, align with the Academy's anticipated curriculum. Faculty can provide instruction, mentoring, and experiential learning, supported by engineering and physics laboratories with room for additional use. The university's relationships with employers such as American Electric Power, Toyota, and state agencies would support internships, project-based learning, and workforce pathways. It would also contribute to curriculum design, faculty exchange, and joint programs as the permanent campus develops.

Together with the 258-acre West Virginia Regional Technology Park in Charleston, NASA, and other federal facilities in north-central West Virginia, and the state's public higher education institutions, these resources create opportunities for the Academy to develop a collaborative model that connects students with university research, hands-on technical instruction, industry experience, federal partnerships, and emerging technologies. Rather than functioning as an isolated institution, the Academy would become the centerpiece of a statewide ecosystem that leverages West Virginia's existing investments, expertise, and infrastructure to prepare the next generation of aerospace, space, defense, and national security professionals.

For cadets, their families and staff, Central West Virginia Transit Authority (CENTRA) offers fixed-route bus service and ADA-compliant paratransit throughout the Harrison County area. There are 16 primary branded hotels and motels clustered conveniently, within seven miles, around the I-79 Corridor.

Within 10 miles is United Hospital Center, which features more than 40 specialties and Highland-Clarksburg Hospital, offering behavioral and mental health services. Within 20 miles is Vandalia Health Mon Marion Neighborhood Hospital. Morgantown, only a 30 minute drive, offers two major acute-care and specialized medical centers, J.W. Ruby Memorial Hospital, the flagship facility of the WVU Health System, providing advanced specialty and trauma care, and Vandalia Health Mon Medical Center, offering a 189-bed capacity and Level IV trauma care.

B. Interim Academic Instruction Plan for 2028

1. Narrative of Credible 2028 Capacity

From deep inside the coal seams of the Appalachian Mountains to battles fought on foreign soil, West Virginians have always served a purpose greater than ourselves. Our coal powered the nation and fueled the industry that carried America through wars and into the modern era. In

1939, West Virginia State College, now University, became the first Historically Black College or University (HBCU) authorized to run a civilian pilot training program, laying the groundwork for the Tuskegee Institute in Alabama and the legendary efforts of the Tuskegee Airmen in World War II.

In 1947, Chuck Yeager, from Hamlin, West Virginia, became the first person to fly faster than the speed of sound, achieving Mach 1.06 in a 14-minute flight over the Mojave Desert. Beginning in 1953, Katherine Johnson, a West Virginia native and a graduate of what is now known as WVSU, worked as a human computer for the organization that would become NASA. Over her 33 year career, she calculated the first American Space flight, Apollo 11's successful trip to the moon, and the path for Apollo 13's safe return home when the mission was aborted.

At nearly the same time, in a small community called Coalwood, Homer Hickam and the Rocket Boys looked beyond the mountains and toward the stars, turning homemade rockets into a science fair gold medal that became a story of determination that inspired a generation. On October 17th, 1957, just as Hickam found inspiration in a satellite launch, the National Radio Astronomy Observatory in Green Bank, WV, broke ground, but West Virginians have been looking and listening to the inspiration from the stars since long before that day. Just as the Green Bank community agreed to forgo modern conveniences like cell phones and wifi to serve the needs of the country, we are ready to once again look to the skies and come together for an effort that exceeds any individual reach.

Placing the Academy in the state that carved passages through mountains ensures rigorous academics will be paired with a cultural attitude that barriers are opportunities. Rarely has there been a more exciting, barrier breaking opportunity than this, an opportunity to prepare a new generation of scientists, engineers, aviators, and leaders for a new era of innovation and discovery.

West Virginia, also known as the Mountain State, is already working collaboratively to leverage our rich resources and world-class minds, making the state particularly mission ready. For the 2028 inaugural class, a broad coalition led by the Governor's Office, coordinated by the West Virginia Higher Education Policy Commission (HEPC) brings together WVU, Marshall, WVSU, Fairmont, WVU Tech, and Pierpont CTC to prepare the curriculum for the inaugural class and coordinate updates with WVU, a campus ready for an exciting new challenge. The USSA culture and programs established at the interim site will provide a strong foundation on which to build the permanent Academy and cultivate the next generation of aerospace leaders.

Table 2. West Virginia University Location Information

West Virginia University (Temporary Site)	
Street Address	1067 Evansdale Drive, Morgantown WV 26506
Geographic Coordinates	39.647898, -79.966404
Jurisdiction	Morgantown, WV

County, State	Monongalia County, WV
Total Acreage	1.257 deeded acres; 1.43 calculated acres for the shared parcel
Parcels	One
Current Ownership	West Virginia University Board of Governors
Estimated Value	$12,160,300 total 2026 parcel appraisal, including land and improvements; $7,620,700 for the building
Earliest Date USSA Could Gain Access or Control	January 1, 2028
Existing Buildings with Sq. Foot.	146,156 gross square feet according to WVU Facilities Planning. Tax assessment lists 216,320 square feet for the parcel's assessed building record.
Existing Infrastructure	Residence hall with electricity, water, Internet access, elevators/building circulation, bathrooms, laundry, study and common spaces, internet, and air conditioning.
Current or Planned Occupants	Active Student housing 424, building has 234 units

WVU will provide the initial site for the 2028 Space Academy cohort at its facilities located in Morgantown, WV (Monongalia County). The site will act as a temporary location for the Academy while the permanent location is secured and developed. WVU is an R1 research and land grant university with state-of-the-art research and lab facilities, providing the robust infrastructure, buildings, and classrooms for cadets during the start-up period. Additional information is provided below.

WVU proposes the use of Lyon Tower for first year cadet housing. The site is owned by the West Virginia University Board of Governors and is located at 1067 Evansdale Drive, Morgantown, West Virginia 26506 (39.647898, -79.966404). The property is under Parcel ID 31-15-0011-0026-0000 and contains 1.257 deeded acres, with a calculated area of approximately 1.43 acres. The property is also shared with Bennett Tower, which is not included in the proposed site. The initial temporary use will be limited to the Lyon Tower facilities, though WVU has the ability to house each subsequent cohort at residential facilities throughout campus, up to a complement of 1,200 cadets.

Lyon Tower is an existing residence hall comprising 146,156 square feet, according to WVU Facilities Planning; however, the West Virginia Real Estate Assessment for the property lists the building at 216,320 square feet. The facility includes elevators/building circulation, bathrooms, laundry facilities, study and common spaces, internet, and air conditioning. The building currently provides active student housing, with 234 units and a capacity of 424 students.

The 2026 parcel appraisal identifies a total assessed value of $12,160,300 for the land and improvements associated with the shared parcel, and the Real Estate Assessment shows the value of the building at $7,620,700.

Lyon Tower will require some renovations, including new bathrooms and plumbing. WVU Facilities estimates these renovations will take approximately 7-8 months.

a. Institutions willing to support the USSA and the extent of their proposed support
From the Governor's Office to our universities, West Virginia is ready to come together to support the USSA (also referred to as the Academy or Space Academy). To coordinate the effort, the Launch Council, the West Virginia Department of Commerce, and HEPC will establish a cross-functional committee to work alongside NASA to design the program, stand up the temporary campus at WVU, and facilitate the build-out of the permanent site. The Governor's Office will chair this committee; it will include representatives from the West Virginia Legislature, the higher education institutions and partners listed in this application. Institutional commitments are summarized below but detailed further in attached letters.

West Virginia University, the state's flagship, land-grant, and R1 university is prepared to support the inaugural class through faculty expertise, academic programming, laboratory access, research opportunities, student services, and residential infrastructure. WVU can provide access to instructional laboratories, computing resources, simulation capabilities, research facilities, academic support services, and existing campus infrastructure. WVU also offers residential capacity, with the ability to house the full 1,200 complement of anticipated cadets. However, the university is proposing Lyon Tower as a more dedicated location, particularly for first year cadets, with 424 beds. Lyon Tower would also house USSA specific student support services, health and wellness resources, academic assistance, dining, recreation, transportation, and campus engagement opportunities that can support Academy participants from their arrival through graduation.

As the academy grows beyond its initial two-year period, WVU looks forward to working with the State of West Virginia and academy leadership to plan for its evolving housing and academic needs, including classroom space and instructional staffing. This planning will take into account projected enrollment, faculty requirements, available campus capacity, and appropriate resources to sustain the program, helping ensure that this support grows in step with enrollment.

Marshall University, West Virginia's R2 research institution, is a leading partner in West Virginia's proposed USSA. For the inaugural class, the university is committing expertise and programs as well as curriculum development, as needed, in Cybersecurity, Science, Engineering, Aviation, Advanced Manufacturing, Applied and Advanced Research, and Executive Leadership Training. The university can provide faculty-mentored research, internships, industry partnerships, innovation-focused learning, and applied technology projects. Resources committed may include cybersecurity and advanced manufacturing laboratories and prototyping capabilities, experiential learning through live simulations, faculty-mentored research, and internships. Key assets include the state-supported Institute for Cyber Security and the nationally recognized Marshall Advanced Manufacturing Center.

Marshall also brings a strong partnership with the National Youth Science Academy (NYSA), located in Tucker County and only 65 miles from Bridgeport, to engage and develop the next generation of STEM leaders through immersive, hands-on learning, mentorship, and opportunities to explore scientific discovery and innovation. By connecting students with leading scientists, researchers, and industry professionals, NYSA helps cultivate the talent, curiosity and technical skills essential to advancing the future workforce and strengthening the nation's scientific and technological competitiveness.

West Virginia State University is committing faculty expertise and curriculum development capabilities. WVSU can support research experiences, faculty mentorship, STEM outreach programs, workforce preparation initiatives, and career development opportunities that encourage student success and professional growth. Past the inaugural year, WVSU is offering, as needed, access to residential facilities, laboratories, and other physical assets should the Space Academy team decide to offer site-specific opportunities to cadets.

West Virginia University Institute of Technology's expertise, and commitments to the Space Academy initiative, are grounded in applied engineering education, problem-solving, laboratory-based instruction, and experiential learning; the university is prepared to leverage this expertise to develop specialized coursework and USSA-focused educational pathways that address emerging workforce and industry needs.

Fairmont State University is committed to supporting the inaugural USSA class in West Virginia through academic programs, educational resources, and practical training. Fairmont will offer these supports through its Aviation Center of Excellence (ACE), which aims to educate aspiring pilots to be well-rounded aviation professionals, flight simulation technology, aviation instructional facilities, and expertise in flight operations, aviation safety, and unmanned aircraft systems. Additionally, Fairmont will connect USSA to the Robert C. Byrd National Aerospace Education Center and NASA's Katherine Johnson Independent Verification and Validation facility through existing partnerships. Fairmont's resources are particularly useful as the university is essentially co-located with WVU, the interim site for the 2028 inaugural class, situated just over 20 miles away from WVU's main Morgantown campus.

Pierpont Community and Technical College will support the inaugural class through technical education, workforce-focused programming, industry-aligned curriculum, and hands-on learning opportunities. The college–located 21 miles from WVU's main campus and 5.5 miles from Fairmont State University—will provide access to technical training facilities, instructional laboratories, specialized equipment, and coursework designed to prepare students for careers supporting aerospace, aviation, manufacturing, and related industries.

West Virginia Manufacturers Association (WVMA) will support West Virginia's USSA initiative from facilities development to advanced manufacturing programming, workforce development, experiential learning, and industry engagement and advocacy. WVMA is committed to working with its member companies to identify capabilities, facilities and technical expertise and will encourage them to offer internships, apprenticeships, applied learning projects, and mentorship to academy cadets while assisting Academy faculty in aligning technical curricula with industry needs. Finally, WVMA will provide industry perspective and data to

USSA, convene member organizations, regional partners, and community leaders to support the project.

West Virginia Space Grant Consortium, the Mountain State's link to NASA's national Space Grant College and Fellowship Program, a network of 52 consortia across all 50 states, D.C., and Puerto Rico, is committed to developing West Virginia's competitiveness in NASA-relevant, research, education, and industrial and entrepreneurial activities. For the USSA, WVSGC will connect academic faculty, identify facilities, expertise, and partners that complement NASA's mission for the Academy. They will explore ways to extend student fellowship and research opportunities to cadets. Even before matriculation, WVSGC will work to leverage their K-12 and public outreach programs to advance STEM throughout the state and create a pipeline of ready applicants.

b. Proposed model for first-year instruction

Homer Hickam went from Coalwood, WV, to NASA engineer through what he calls the three P's of success: Passion, Planning, and Perseverance. Through its curriculum, West Virginia's United States Space Academy will fan the passion of students and encourage them to persevere. The state's partnering institutions–with collective expertise and proven programs—will bring the plan for their success. The model suggested below is based on current Armed Forces institutions of higher education at the United States Naval and Air Force Academies, the Military Academy West Point, and civilian aviation focused programs; the model will be refined with NASA to ensure it meets their unique standards.

Overall instruction will be broken into Core Courses that all students will need to complete, major specific courses, and a selection of courses with special labels, faculty, and course requirements to ensure cadets are engaging in critical thinking and research, data, and media literacy throughout their USSA academic career.

Each cadet will choose a track of study (national service, general aviation, or further academic study) at the end of Year One that can help focus their coursework. Within each track, students will select a specific major of study, from a broad selection; pilot will be a selection under both the national service and general aviation track. Every graduate will receive a bachelor of science degree. However, most students will cover the same courses in Year One, as these will largely be required Core Courses as outlined below.

Each year will be broken into fall and spring semesters. Over the summer, USSA will offer shorter, more intensive coursework and research opportunities. In fall of Year One, all students will need to complete coursework in Math (Precalculus or higher); Science (e.g., Chemistry, Physical Meteorology), English (e.g., English 101, Composition & Rhetoric), Critical Thinking (Foundational Course), and Leadership (Foundational Course).

Spring of Year one will follow the same general model, with appropriate follow-on selections (e.g., if a student takes Calculus I in Fall of Year One, they will take Calculus II in Spring of Year One).

Cadets may also choose one to two elective courses, provided their semester schedule remains between 12-20 credit hours (12 credit hours is the minimum for full-time and 20 is the maximum number of credit hours one can take in a semester). Physical Fitness will be optional in Year One, but highly encouraged for students considering the national service track or with intentions to become a pilot under the general aviation track; once either intention is declared, physical fitness will be required. Physical Fitness offerings in Fall of Year One will be basic physical training and skills, with one credit split into two quarters of focus (Swimming, Basic Physical Training). Other Year One electives may be foreign languages or humanities courses such as philosophy, civics, or American history.

Classes will be delivered through the support of the partnering institutions, utilizing extant programs (explored more fully below), programs and/or coursework built for the USSA, curriculum, materials, and expert educators.

Each semester cadets will complete at least four-hours of service work, beginning in the first semester. Cadets will also engage with leadership opportunities, running for and selecting cohort representatives, volunteering to serve on faculty senate boards, and participating in WVU's broader campus activities including relevant clubs and academic, honors, volunteer, or similar organizations. (These efforts are further detailed below.)

WVU, as the interim site, will utilize existing infrastructure such as classrooms and laboratories to offer courses. Cadets will be folded into existing classes but specific USSA faculty may be hired to deliver USSA developed classes to cadets only. Cadets will have a unique experience, in which they have a significant relationship with core faculty and their fellow students while benefiting from WVU's rich campus life and student support, including access to WV's vibrant outdoor recreation offerings, at no cost, through the Ascend WV program (detailed further under part C.)

c. Academic programs and courses that could support the inaugural class; and
The supporting institutions have a wide range of programs and courses to support the inaugural class. These offerings cover flight simulation, space operations, artificial intelligence, leadership, cybersecurity, engineering, advanced technologies, as well as supply chain and logistics training as well as foreign languages, communications, and technical writing. These programs are already established and ready to implement on day one, as the USSA develops its customized academic and accreditation pathway. Detailed below is a non-exhaustive list of current program offerings and selected classes which can be deployed for the inaugural class as well as offerings the supporting partners can develop specifically for USSA.

West Virginia University: Between the Eberly College of Arts and Science and the Benjamin M. Statler College of Engineering and Mineral Programs, WVU has a full complement of programs and courses to leverage for the inaugural USSA class. These colleges include degrees in everything from a Bachelor of Science in Aerospace Engineering (B.S.A.E.) and Animal and Nutritional Sciences (B.S./B.S. in Agriculture) to Data Science (B.S). and Biomedical Engineering (B.S.Bme). WVU also offers coursework in History, Government, Communications, and English that build the critical thinking skills needed for the next generation of leaders.

The Aerospace Engineering (B.S.A.E.) which offers courses in Aircraft and Spacecraft design. In Aircraft Design courses, students participate in the UAV Design/Build/Fly Competition that involves aircraft design and construction, while the Spacecraft Design 1 and 2 courses address space system design and design and construction of small satellite systems.

WVU offers ABET-certified bachelors of engineering degrees in Chemical (B.S.Che), Civil (B.S.C.E), Computer (B.S.CpE), Electrical, (B.S.E.E.), Mechanical (B.S.M.E.); Robotics (BS); Mining (BSMinE); and Petroleum and Natural Gas engineering (B.S.P.N.G.E.) to ensure students are prepared for the variety of expertise required in space exploration–from designing a rocket to creating its fuel. WVU also offers a Bachelor of Applied Science (B.A.S.) in Computer Information Systems, B.S./B.S.C.S. in Computer Science, and a B.S. both in Applied AI and Data Analytics and Cybersecurity that are agile enough to stay paced with rapidly changing technological fields.

Bachelor's degrees in foundational sciences like Biochemistry, Biology, Chemistry, and Physics will set cadets up for further studies to prepare as mission specialists in future space mission while the B.S./ Bachelor of Science in Business Administration (BSBA) in Supply Chain Management will serve students in a variety of industries and pathways, including National Service. WVU also offers a robust Forensics program, wide-ranging health sciences degrees that include Nursing, and one of the few accredited Strength and Conditioning programs (B.S.), essential for those who will go on to be in National Service roles from Park Ranger to Navy Midshipman.

The university also offers unique programs like Entrepreneurship and Innovation, B.S.B.A., and Scientific and Technical Writing, B.S. WVU has minors in Astronomy, through the Department of Physics and Astronomy, as well as language minors in Arabic, Spanish, Chinese, and French. The university offers Army and Air Force Reserve Officers Training Corps (ROTC).

WVU has additional graduate-level programs that can inform the development of USSA programs and curriculum, including the Aerospace Engineering, Master of Science in Aerospace Engineering (M.S.A.E) and Aerospace Engineering Doctor of Philosophy (Ph.D.) which can be achieved through an M.S.-Ph.D. pathway; a Master of Science in Biomedical Engineering (M.S.B.M.E) and Ph.D; Masters Degrees and Ph.D.s in Chemical, Civil, Computer, Industrial, Mechanical, Mining, Electrical, and Petroleum and Natural Gas Engineering.; and a Geographic Information Systems (GIS) and Spatial Analysis M.S. WVU also offers Certificate Programs relevance to the career pathways and USSA coursework including such as the GIS and Spatial Analysis Certificate, the Midstream Petroleum Engineering Graduate Certificate, which is also an M.S. degree program. WVU also has both a medical and a Pharmacy School.

Marshall University: Marshall's relevant academic programs span a number of disciplines including English, History, and communications and more science and technology focused programs covering engineering, cybersecurity, aviation, computer and data science, supply chains, geographic information systems, flight simulation, and unmanned aircraft systems. A selection of relevant academic programs include the Professional Pilot, B.S. with courses intended to develop critical thinking and communication skills alongside Flight School, Aviation Law and Regulation, Aerodynamics and Performance, and Aircraft Systems. Additional, relevant

degree programs include Mechanical Engineering B.S.M.E. with an Aerospace Engineering area of emphasis; Aviation Management B.B.A.; Biological Sciences, B.S. Biomedical Engineering, B.S.; Chemical Sciences, B.S.; Computer and Information Technology B.S., Computer Science, B.S.; Physics, B.S.; Nursing B.S.N., Communication Studies B.A.; and English, B.A.

Marshall's Department of Modern Languages offers a Japanese B.A. and a Spanish B.A. as well as minors in French, German, Japanese, and Spanish. Marshall is offering its expertise in executive leadership to develop USSA specific courses to strengthen cadets leadership capabilities. The university's ROTC program offers military science extra curricular activities, summer training, and a Ranger Challenge which hones Army skills such as marksmanship, land navigation/orienteering, rope bridge, hand grenades, patrolling, physical fitness, and ruck marching as a Cadet Command Varsity Sport.

Marshall has additional graduate and Ph.D. level offerings that would inform USSA programming. Master's level programs include Biomedical Research; Civil, Environmental and Mechanical Engineering; Chemistry; Biological Sciences; Data Science; Physics; Cybersecurity, Computer Science, Data Science, and Information Systems. Doctoral Programs offered at Marshall and relevant to the USSA initiative include Biomedical Research or Sciences, and Engineering. Marshall also has both a Medical and a Pharmacy School. Graduate Certificates at Marshall include GIS and Digital Forensics.

West Virginia State University: WVSU's relevant academic programs broadly cover disciplines in engineering, computer science, cybersecurity, mathematics, chemistry, biology, and biotechnology. A representative selection of the degree programs are Communication, B.A.; English, B.A.; Health Science, B.S.; Biology, B.S.; Chemistry, B.S.; Computer Science, B.S.; Engineering, B.S.; Civil Engineering, B.S.; and Chemical Engineering, B.S.; Mathematics, B.S.; and Nursing, B.S.. WVSU offers language courses in French, German, and Spanish. The university also maintains established 2+2 engineering partnerships with WVU in Civil, Industrial, and Mechanical Engineering, providing an existing foundation for coordinated academic pathways between the institutions.

WVSU has additional graduate level programs in Biotechnology and Computer Science that can inform USSA programming.

Fairmont State University: Key academic programs from Fairmont focus on aviation, administered under their College of Business and Aviation's University Aviation Center of Excellence (ACE). Under this program a student can receive a Bachelor of Science in Aviation with concentrations in Professional Flight and Aviation Management. This is a certified Pilot School. Other relevant programs include Civil Engineering Technology B.S.; Chemistry, B.S.; Communications B.S.; Computer Science, B.S.; Electronics Engineering Technology, B.S.; Mechanical Engineering Technology, B.S.; and a National Security and Intelligence, B.A.

Fairmont also offers minors-only programs in Data Science, Automation and Robotics, Geographic Information Science, and ROTC Army and Air Force programs. Graduate level programming that can inform the development of USSA coursework includes the Cybersecurity

and Risk Management, M.S.; Engineering Management, M.S.; Instructional Design and Technology, M.S.; Master of Architecture; and the National Security and Intelligence, M.A. In January 2025, the State of West Virginia announced a $2 million investment to strengthen Fairmont State's aviation program through aircraft acquisitions, engine improvements, and expanded training capacity.

West Virginia University Institute of Technology: The School of Arts and Sciences and Leonard C. Nelson School of Engineering at WVU Tech maintains most of the relevant programs and classes WVU Tech can offer in support of the USSA. At the school of Arts and Sciences, students prepare for bachelors degrees in Biology, Chemical Forensics, and History and Government. At the Engineering School, students can choose from B.S. degrees in Aerospace (a 2+2 pathway that finishes at WVU), Chemical, Civil, Electrical, Mechanical, or Computer Engineering; Construction Management, Information Systems, and Computer Science. The B.S. in Aviation Management (B.S.A.M.) is offered through WVU Tech's School of Business.

Pierpont Community and Technical College: With over 70 degree, certificate, and skill set programs, Pierpont CTC is unique in its offerings and the way it can inform the USSA in its development. In Pierpont CTC's School of Business, Aviation, and Technology, relevant academic offerings include Associates of Applied Science (A.A.S.) degrees in Aviation Maintenance and Technology, Advanced Welding, Health Sciences, Applied Process Technology with a concentration in Energy Systems Operations or Instrumentation and Controls, and Information Systems Technology CyberSecurity Concentration or Systems Specialists Concentration. Professional Certificate Programs include two categories: Advanced Skill Set and Skill Set. Under the Advanced Skill Set, Pierpont CTC offers Electrical Machinery and Electronics; under the Skill Set Certificate level, the school offers Advanced Instrumentation and Controls, Basic Hydraulic and Pneumatic Circuits, Energy Fundamentals and Components, Energy Systems I and II, Industrial Print Reading, and Power Plant Simulation. The *Aviation Maintenance Technology A.A.S*. prepares students to troubleshoot, maintain, repair, and replace aircraft components and systems using approved procedures. The program prepares graduates to take applicable Federal Aviation Administration examinations.

d. Existing laboratory or technical training capabilities or plans for acquiring/leasing interim facilities.

WVU's main campus in Morgantown, WV, is prepared to support the inaugural Space Academy class as the interim campus. WVU's Morgantown site has three campuses: Downtown, Evansdale, and Health Sciences.

The Downtown campus has 13 facilities, including the Life Sciences Buildings; the Evansdale Campus has 15 facilities, including the proposed residential tower for the cadets (Lyon Tower) and the more science-specific classrooms and labs (listed below). Key facilities on the Evansdale Campus include the Advanced Engineering Research Building, Engineering Sciences Building, the Mineral Resources Building, the Physical Activity and Sports Science Building, and the National Research Center for Coal and Energy Buildings. The Morgantown Health Sciences

Campus at WVU offers 63 degree and certificate programs and 81 residency and fellowship programs across its dental, medical, nursing, pharmacy and public health schools.

Classroom sizes across campus vary, with large classrooms seating between 100 to more than 450 students, utilized for large lectures or events, and small classrooms seating 12-50.

The school employs more than 2,000 full- and part-time faculty, who perform nationally recognized work in multiple disciplines.

Laboratories

WVU's Mechanical, Materials, and Aerospace Engineering Labs on the Evansdale Campus have 21 distinct labs (with some off-site lab locations) and additional Robotics Facilities with state of the art equipment and capabilities, in addition Evansdale has labs for foundation sciences like Chemistry and Biology. Below is a selection of the more technical laboratories.

Aerodynamics with three wind tunnels for both teaching and research. The Environmental Wind Tunnel has both a fetch and a test section. The test section is just like in any other subsonic wind tunnel but the fetch section is the portion of the tunnel that makes it an "environmental" wind tunnel; that is, to simulate atmospheric flow. The floor can be replaced with different substrates to simulate atmospheric boundary layer flow over different materials.

Aircraft Simulation which has a fixed-wing Part Task Mission Trainer (PTMT), donated in 2022; it is the same system deployed at a military base in Spain, where it is used to train NATO combat pilots.

Engine and Emissions (off-campus location) equipped to perform engine tests according to federal test procedures in accordance with the Code of Federal Regulations requirements for engine certification, the lab has 550-horsepower and 400-horsepower engine dynamometers for performing EPA heavy-duty engine emissions certification tests and numerous water brake and eddy current dynamometers for the broad range of engine sizes and types.

Reedsville Proving Grounds, a six-acre range used for projectile launching and testing. Projectiles are launched using the Pneumatic Actuated Universal Launch Apparatus (PAULA), which uses a push-rod system to launch projectiles of varying geometry with a muzzle energy of approximately 4.5 kJ. The Reedsville Proving Ground can be outfitted with up to seventy cameras (VICON Vantage V5 Motion Capture) plus six high-speed cameras for accurate time-dependent motion capture.

Indoor Motion Capture Lab featuring a 30-camera infrared camera-based motion capture system to provide real-time accurate pose estimation of robots and drones for testing. The testing volume includes a terrain pit for testing robot mobility systems.

Robotics Manipulators Lab used for industrial robotics courses and research on robotic manipulation. It features several state-of-the-art robotic arms, several of which are collaborative robots (co-bots) allowing for human-robot interaction.

Mobile Robotics Lab focuses on the fundamentals of mobile robotics, including navigation, estimation, path planning, and manipulation. Students perform labs and conduct a semester design project using an educational robot that can be programmed to conduct autonomous missions.

Intelligent Cyber Physical Systems Lab (F1Tenth) focuses on research in machine learning, computer vision, and sensor fusion. Advances the development of intelligent, safe, and secure robotic and cyber-physical systems through cutting-edge AI technologies and real-world applications.

Computer Labs throughout the Morgantown campus seat between 36-44 students each.

WVU's David and Jo Ann Shaw Center for Simulation, Training, and Education for Patient Safety (STEPS), on WVU's Health Science Campus, offers a variety of simulation labs including a training lab with individual stations for patients, low-fidelity manikins, or task trainers containing dual angle video recording, computer stations, ultrasound technology, and video screens and a simulated operating room with high-fidelity manikins, anesthesia machines, da Vinci robotic-assisted surgical system and the ability to record sessions. Additional rooms in the space include an ICU Simulation Room, Angiography Simulation, Surgical Education Unit/Endoscopy Simulator, Exam Rooms, Classroom Space, Debrief Rooms, and a Physical assessment lab.

<u>High-Powered Computing</u>
Cadets will have opportunities for research and classroom experiences with High-Powered Computing (HPC), thanks to the capabilities WVU has to offer. WVU's compute for AI infrastructure has four key locations: Spruce Knob, with 2500 Central Processing Unit (CPU) cores and 34 GPU Nvidia cards, which serve to execute processes and compute results, has been re-provisioned for this purpose; it is the default entry point for coursework, training, and first projects requiring HPC. Work that outgrows the Spruce Knob capabilities escalates by peer review to Thorny Flat–with "1000 times more computing power than a desktop computer" (Casto, 2019), Dolly Sods–already focused on AI and machine learning as it is an only GPU based system, or Harpers Ferry with a total of 9984 CPU cores and 33 Terabytes (TB) of Random Access Memory (RAM)--IBM's famous Watson computer that competed on *Jeopardy!* in 2011 only had 16TB (Fisher, 2025)–allowing for even faster operations than Thorny Flat. Each site is sized for a different class of job. Below are the more detailed technical specifications for each site.

Harpers Ferry entered service in 2026, funded in part through a NASA Congressionally Directed Spending award. It is the consortium's CPU capacity: 39 compute nodes providing 9,984 cores, alongside dedicated login and management nodes. Thirty-seven general-purpose nodes carry 768 GB of memory each and two high-memory nodes carry 3 TB each, all on dual-socket 4th-generation AMD EPYC 9754 processors at 128 cores per socket and 256 cores per node. The system has no accelerators. Slurm partitions run from six hours to one week, and the software environment includes GNU, NVIDIA HPC SDK, and Intel oneAPI toolchains compiled for the EPYC architecture. Large MPI simulations, ensemble work, and memory-bound analysis run here.

Dolly Sods entered service in July 2023 under NSF MRI award OAC-2117575. It is the accelerated system: 37 compute nodes, 1,248 cores, and 155 NVIDIA accelerators made up of 30 nodes of four A30 24 GB cards, four nodes of four A40 48 GB cards, two nodes of eight A100 40 GB cards, and three A40 cards on the login node. Workload management is Slurm. The two eight-way A100 nodes give the largest coherent accelerator memory pool in the state at 320 GB, which is the ceiling on any single training job, and the A30 partition carries the teaching and inference load.

Thorny Flat entered service in February 2019 under NSF MRI award OAC-1726534. It has 108 compute nodes and four management nodes on dual-socket Intel Xeon Gold processors totaling 4,208 cores, with 21 NVIDIA Quadro P6000 accelerators across seven nodes. Node memory runs from 96 GB to 768 GB, the interconnect is Intel Omni-Path at 100 Gbps, and the system reaches 115 TeraFLOPS on the HPL Linpack benchmark. Phase 0 of the system is hosted at the Pittsburgh Supercomputing Center under a co-location arrangement, which is why part of WVU's fleet sits outside the state.

Spruce Knob has been refurbished and returned to service, and contributes 3,376 cores and 19 accelerators. It is the entry point for the consortium: a member institution's students and faculty begin here and move to Thorny Flat or Dolly Sods when a course or a project needs capability this system does not have. *Thorny Flat large-memory nodes* will add 2,560 cores at 12 GB of memory per core for work bound by memory rather than by cores. That system is built and opens shortly.

Counting the four research systems in service, WVU provides 18,816 CPU cores and 195 accelerators today, and 21,376 cores once the large-memory nodes open.

Other WVU Facilities

Cadets will have access to WVU’s libraries, which include 10 facilities, including the Wise Library Downtown. Together, the university's libraries house over 3 million volumes, microfilms, special collections, and online databases that can be accessed from any computer on campus at any time.

The Student Recreation Center (SRC) houses the Aquatics Centers, a 50-foot Climbing Wall, indoor track, as well as Racquetball, Squash, Basketball, and Volleyball Courts. The Aquatics Center is equipped with both a leisure pool and a fitness pool. The Fitness pool is six lanes wide and 25 yards long, running from four to nine feet deep. The SRC Aquatics Area also features a cloverleaf-shaped hot tub with 14 jets and a 20-person capacity.

The Downtown Fitness Center in Reynolds Hall offers 7,000 square feet of weight and fitness equipment.

The Mountainlair is WVU’s Student Union; it provides several large meeting rooms, a 300-seat theater, an 800-seat ballroom, a cafeteria, full-service Post Office, fast-food restaurants, and recreational facilities that include video games, bowling lanes, billiards, and table tennis.

Cadets will get around campus using WVU's Personal Rapid Transit (PRT) system, a unique people-mover, responsible for connecting students, faculty, staff, and community members to their destination on campus.

Other Facilities & Training Capabilities
Additional laboratory and technical training capabilities for the inaugural class are located within 25 miles at Fairmont and Pierpont CTC. These capabilities include flight simulation technology and aviation instructional facilities such as the Robert C. Byrd National Aerospace Education Center, located in the North Central West Virginia Airport at 1050 Industrial Road East, Bridgeport WV, 26330.

In September 2026, Pierpont CTC and its state higher education partners broke ground on an approximately 65,000-square-foot Aviation Maintenance Technology Educational Facility at West Virginia AeroTech Park in Bridgeport, near North Central West Virginia Airport. Scheduled for completion in 2028, the facility is designed to meet FAA Part 147 standards and will provide specialized instructional space for aircraft systems and powerplant laboratories, FAA certification testing, welding, fabrication, and related technical disciplines.The new facility is planned to expand Pierpont CTC's general Aviation Maintenance Technology enrollment capacity from approximately 130 to 230 students.

Each of the partnering institutions has also offered their facilities for use, as would be feasible or needed.

2. Narrative of Cohesive and Distinct USSA Experience

West Virginia proposes a distinctive undergraduate Academy experience that prepares cadets for aerospace careers, advanced education, and national service through rigorous academic instruction, applied research, technical practice, leadership development, discipline, and civic responsibility. Beginning in fall 2028, approximately 300 inaugural cadets will live and study at the interim Academy located on WVU's main Morgantown, WV, campus.

A consortium convened by the Launch Council, in collaboration with West Virginia's Higher Education Policy Commission (HEPC), including partner higher education institutions, the Governor's Office, and affiliated state and federal organizations, will work with NASA to establish foundational USSA educational objectives, academic pathways, institutional culture, and standards for cadet performance. Together, WVU and Marshall will lead development of the central academic partnership supporting cadet instruction. WVU will serve as the host institution and principal academic anchor for the inaugural class while Marshall will contribute distinctive strengths in cybersecurity, aviation, advanced manufacturing, supply chain, applied research, leadership, public administration, and workforce-aligned technical education. WVSU, Fairmont, WVU Tech, and Pierpont CTC will contribute complementary academic expertise, applied research opportunities, and specialized technical training and facilities. Outside of the core group of supporting colleges and universities, all 19 state higher education institutions have pledged support of the Academy through specialized faculty, programming and use of their facilities as feasible.

In addition, the HEPC will work directly with NASA, WVU and appropriate institutional and programmatic accrediting bodies, such as the Higher Learning Commission, to ensure a pathway to full accreditation for the Academy once it is established. The Academy will be able to leverage significant in-state expertise and longstanding relationships with accreditors to help guide onboarding and ensure academic excellence. The interim model will establish a distinct Academy identity through a common cadet cohort, progressive leadership responsibilities, shared expectations for conduct and service, and coordinated technical experiences.

The Mountain State's contribution extends beyond its colleges and universities. The state and surrounding region have established aerospace manufacturing, advanced materials production, aviation facilities, federal research and technology operations, and industrial infrastructure. These resources create opportunities for USSA to connect academic instruction with the scientific, engineering, manufacturing, and operational systems on which the aerospace sector depends.

a. Rigorous Technical Education, Leadership Development, Discipline, and Public Service

The USSA experience will unite demanding technical study with progressively responsible leadership, disciplined residential and laboratory expectations, and sustained civic engagement. All USSA graduates who complete the four-year program will receive a bachelor's degree. The framework for the full four-year program will be the same, no matter which pathways and majors cadets ultimately declare. Through intention, rigorous standards and oversight, West Virginia's Space Academy will produce cadets that are prepared to lead and innovate, advancing America's interest within our borders and beyond. The path toward that outcome is outlined below.

Framework Overview: During the first year, cadets will establish a foundation in mathematics, science, computing, and other subjects relevant to their prospective academic pathways while developing the habits of personal accountability, teamwork, physical readiness, and public service expected of USSA students. During the second year, cadets will advance into more specialized coursework and supervised laboratory experiences, with opportunities to explore the aerospace applications of their studies and assume greater responsibilities within the Academy community. The third year will emphasize increasingly complex technical assignments, faculty-supervised research, multidisciplinary projects, and appropriate internships or specialized experiences available through participating institutions and industry partners. During the fourth year, cadets will apply their accumulated knowledge through advanced coursework, capstone projects, research, or other discipline-appropriate assignments while demonstrating greater independence in technical judgment, project leadership, and professional communication. Cadets will be expected to complete four hours of community service each semester, for a cumulative total of at least 32 hours. Throughout all four years, cadets will remain part of a common experience grounded in discipline, ethical responsibility, civic service, and preparation for careers or advanced education in the aerospace sector. This progression will allow the Academy to develop a cohesive institutional culture while providing the flexibility necessary to accommodate different academic disciplines and professional pathways.

Educator Qualifications, Preparedness, and Expectations: To deliver education at high standards, it will require that USSA instructors are themselves not only subject-matter experts but that they receive ongoing continuing education and professional development. The Academy will hire full-time and adjunct faculty with an eye not just to their academic qualifications but to their own history of service.

Courses suggested below combine subject-matter learning with intensive critical and ethical thinking as well as with skills training in data, research, and media literacy. Certain classes will have a special title denoting that professors have received further training and coursework has been designed to prioritize a specialized skill, ensuring that leadership and critical thinking are skills that are explicitly taught and practiced ensuring a future of civic-minded aerospace leaders. This is discussed further, below, under Cadet Experience. Faculty also will engage in research and service to their community, including hosting academic clubs or formally advising other cadet-led organizations.

Program Assurance: USSA will ensure technical education rigor by modeling curriculum on award-winning and nationally certified programs being delivered at the named partnering institutions; having rigorous evaluation and assessment; establishing standards and policies for all programs; and creating a map towards accreditation.

Once established, USSA faculty (comprising faculty from WVU, Marshall, WVSU, Fairmont, WVU Tech and Pierpont CTC, alongside Academy-specific hires) will form committees within a faculty senate to provide academic guidance for the Academy. All committees, except Admissions, will have student representatives (one from each class on each committee e.g., Class of 2032, Class of 2033, etc.). Each Cadet Committee Representative will be a volunteer and separate from the Class Leadership discussed below.

Proposed below are the initial committees deemed necessary, but more could be added to meet Academy needs. The responsibilities as described are not comprehensive. Prior to establishing committees, and specifically as the USSA's interim campus and inaugural campus are launched, topics below will be addressed by the partnering agencies and institutions under guidance of the Governor's Office and the Launch Council.

<u>Initial Proposed Faculty Senate Committees for the USSA:</u>
The *Academic Policy Committee* will initially comprise representatives of the partnering institutions, transitioning to faculty, students, and other USSA administration and staff. The Academic policy committee will create the academic policies of the USSA (e.g. AI use and consequences for plagiarism, policies guiding cadet professional behavior).

The *Accreditation Committee* which comprises the Assessment and Curriculum Committees (below) along with additional identified faculty, with NASA's guidance, will set goals for accreditation such as general accreditation by the Higher Learning Commission and ABET accreditation for Applied and Natural Science, Computing, and Engineering Programs. WVU, Marshall, and Fairmont all have ABET-accredited programs, providing the basis on which similar degrees at USSA should be modeled as well as a path toward accreditation. This

committee will set goals for accreditation, outline what is needed to achieve accreditation, oversee the applications and, eventually, re-accreditation processes.

The *Admissions Committee,* initially to comprise representatives of the partnering institutions, will determine the qualifications required for admission, such as GPA, standardized testing scores, etc. Once parameters are established and the committee is staffed by USSA faculty, this committee will reassess standards as needed and review applications for admissions to USSA.

The *Curriculum Committee* will work closely with NASA to develop new courses. They will also review curriculum to ensure academic rigor and appropriateness over time and during the development of new curriculum.

The *Cadet Research and Service Committee* will match cadets with both out-of-class research and service opportunities, establish an Academy specific online board to track and inform cadets of these opportunities. This committee will have final approval for cadet-proposed service activities. This committee will establish the tracking measure for hours-served and reassess standards and practices for cadet service (e.g. 4-hours per semester) periodically.

The *Assessment Committee* will create and/or analyze student and faculty surveys (internal and from accrediting bodies). The committee will ensure internal evaluations are focused on stated learning objectives. They will identify areas of success and for improvement, reporting those to the Curriculum Committee which can then address changes.

The *Cadet Affairs Committee* will work closely with administration to identify and make recommendations about recognized student organizations, serve as a place to share feedback from cadets to leaders, and explore all aspects of the cadet experience outside of the classroom (e.g. residences, clubs, etc.). The Cadet Affairs committee may or may not include elected class leaders as either voting or non-voting members.

The *Faculty Affairs Committee* will determine which committees are required as part of the Faculty Senate, who sits on each committee (e.g. number of faculty, deans, academic advisors, undergraduate students), who are voting and non-voting members of the committee, and how long individuals may serve on each committee. This committee will create the by-laws for the Faculty Senate, oversee revisions to the faculty handbook (created by the partnering institutions prior to year one of the interim academy). The Faculty Affairs committee will establish annual faculty awards as well as a proposal and voting process and otherwise address the needs and concerns of the faculty.

The *Physical Facilities and Planning Committee* will work closely with NASA, the Governor's Office, the Launch Council, West Virginia Department of Commerce, and other relevant partners to ensure plans for the permanent campus have the needed classrooms, laboratories, equipment, and faculty and student facilities. Once the permanent campus is established, this committee will oversee maintenance, improvement, and proposed additions to the campus facilities.

The Cadet Experience: Student-specific experiences will include challenging, cross-cutting coursework, Leadership Development, and Service Experiences. Coursework across the

Academy, in every degree program, will integrate subject matter and technical components with critical thinking; cadets will engage in mapping relationships and impact across disciplines and into communities. Academy Cadets will take at least three classes labeled as Journal Club based on Marshall's Pharmacy School proposed Journal Club sequence. Each class with that label will spend time having cadets studying epistemology, learning how to identify and utilize reliable sources, data, and other media literacy skills. Similarly, certain courses will be labeled as critical thinking courses, with a focus on developing higher-order thinking and engaging in ethical questions around the work being done in that field. USSA cadets will take at least three of these courses. The model is based on similar programs at Marshall and will benefit from both WVU and Marshall's political science, philosophy, and scientific and technical writing offerings.

Cadets planning to enter national service or become pilots will enroll in physical fitness and basic medical classes and/or become certified in first aid.

Cadets will have research opportunities, discussed further in part C of this section. Opportunities may include embedded classroom research introductions, one-on-one faculty research mentoring, research certificates which require cadets to formally present their research; summer research opportunities; and internships at universities and with public partners.

Leadership development will be deeply integrated into the Academy undergraduate experience, with Marshall creating the core program that will include ethics and critical thinking. All USSA students will be required to enroll in this program. Civic responsibility and public service will be required elements of the Academy experience and the leadership development program created by Marshall. These activities may take a variety of pre-approved forms and include outreach to public schools, community improvement, or volunteering at assisted-living facilities. Cadets would serve four hours each semester within their school community and with individuals outside of their peer group, gaining a deeper understanding of the needs and difficulties faced by those they will eventually serve in their future roles as scientists, astronauts, pilots, and innovators.

Additionally, Academy cadets will elect class leadership for each cohort, each year. A faculty member will be assigned as an advisor to each class. These student cadet leaders will advocate for student interests, organize wellness initiatives and fundraising activities, and sit on a review board handling matters regarding cadets who fail to adhere to the Academy's professional standards.

The Academy will establish appropriate academic, leadership, and volunteer fraternities or similar organizations such as Phi Kappa Phi, established in 1897 with 300 campuses in the United States and its territories with a mission to "cultivate a community that celebrates and advances the love of learning." Through such organizations, cadets will grow to become leaders among their peers, take advantage of learning and networking provided by the societies, gain access to further career development resources, and be recognized for their contributions to society while they matriculate at the Academy.

b. Development of a Professional Corps of Civically Grounded Aerospace Leaders

From Neil Armstrong setting foot on the moon to the recent Artemis Mission, NASA has embodied inspiration for the American people. It has led the way in creating innovative solutions to problems faced in space exploration that have gone on to revolutionize the daily lives of mothers and children, teachers and construction workers. Whether that daily change has been in the form of safely stored foods or cordless tools, NASA continues to impact everyday citizens in ways they do not even realize. With technology once again experiencing a rapid revolution and the creation of the U.S. Space Force, seizing the opportunity to raise generational leaders, scientists, and inventors to meet the moment is imperative.

The interim Academy model proposed by the Mountain State will support the development of a professional corps of civically grounded leaders prepared to advance American interests in aerospace by building on proven academics at institutions throughout the state, incorporating an intentional leadership program and service opportunities; and requiring professional behavior from the day they enroll. The Space Academy will lean into the values of its founding institutions. WVU's university values of Service, Curiosity, Respect, Accountability, and Appreciation and Marshall's vision "To inspire learning and creativity that ignites the mind, nurtures the spirit, and fulfills the promise of a better future" infuse the state's vision of the USSA.

The curriculum of West Virginia's proposed Academy will focus on Science, Technology, Engineering, and Mathematics (STEM), providing the knowledge base and skills necessary for the next generation of aerospace professionals. However, leadership requires more than knowledge, it requires thoughtful vision, clear communication, and curiosity. It is best when those characteristics are also paired with a service-oriented mindset as well as interest and concern for the community, from small towns to the largest cities in the United States. With this in mind, USSA's out-of-classroom activities will immerse cadets in the community where they live and learn, helping them understand experiences and challenges different from their own. These activities will be paired with classroom discussions that raise ethical questions about the impact of the fields cadets are studying.

The Academy cadets will be encouraged to discover what inspires them as they chart their career paths. Resources to support this journey include West Virginia University's Purpose Center, which offers students and faculty a variety of self-discovery and connection opportunities, such as workshops and one-on-one coaching sessions. Cadets will also have opportunities to learn about and practice resilience, knowing that the careers cadets will enter after graduation can be intense and even dangerous. These offerings will be informed by the work done at Marshall's Center of Excellence for Recovery and WVU's Carruth Center for Counseling and Psychological Services. The resources will be available at the interim site and be the basis for building out robust offerings once the USSA is transitioned to its permanent home.

Cadet leaders will learn to advocate for their classmates when the need arises through their service as class leaders and Faculty Senate Committee members. By serving on Faculty Senate committees, cadets will also learn how decisions are made and take part in the process, serving as the voice in the room for their cohort's needs and interests. Cohorts will be held accountable through elected class leadership.

Leadership is demonstrated through action, and the Academy will give its cadet scholars opportunities to witness it and practice it. Through curriculum, classroom learning, research, intentional character development, and community service activities, West Virginia's Space Academy will shape servant-leaders with vision and understanding, curiosity, and drive.

c. Research and Development Training Programs

WVU, Marshall, WVSU, Fairmont, WVU Tech and Pierpont CTC all prioritize experiential learning, and that commitment will carry over to the Space Academy. Experiential research and development training will range from class assignments and institution-led research opportunities to internships with institutional centers and public partners. Academy cadets will be prepared for the workforce not only through theoretical coursework but also through real-world experience, applying what they learn in the classroom. Moreover, development opportunities are not solely about the subject matter expertise they will learn, but also applying their skills in communication, team building, professionalism, and problem-solving.

Research: Research will be organized as a progressive continuum, beginning with introductory laboratory and computational work, moving to faculty-supervised research, leading to multidisciplinary design, build, test, and evaluation projects; internships and industry-based assignment, and advanced capstone work. WVU and partnering institutions will organize appropriate projects using existing faculty expertise, laboratories, research programs, and technical resources. The consortium of partnering institutions will leverage their own undergraduate research offices and programs to provide research opportunities to the Academy's inaugural class.

The partnering institutions represent West Virginia’s Carnegie Classification identified research institutions: WVU (R1), Marshall (R2), and WVSU (RCU). Additionally, faculty at Fairmont participate in research and provide research opportunities for their students. With each university having rigorous undergraduate research opportunities, the Mountain State’s USSA will create a unique model based on proven efforts to engage cadets in research. Cadets will have access to the WVU Undergraduate Research Office, which posts opportunities online and embedded opportunities in the classroom. Modeling elements of WVSU’s Research Rookies, the Academy will create a program to pair cadets with a faculty member in their field of interest for an innovative research experience. Cadets will apply for the program and be selected based on their merit. Cadets may also opt to complete a Research Certificate which will require a minimum G.P.A., completing specific laboratory science or research courses and an elective with their faculty mentor. The Research Certificate will also be a public presentation of the cadet’s work (e.g., a poster or speaking engagement).

The interim program can leverage, and the eventual full model can duplicate, WVU’s National Science Foundation (NSF) Established Program to Stimulate Competitive Research (EPSCoR) Program which offers research opportunities for undergraduate students. (Both Marshall and WVSU also have EPSCoR programs, including Research Rookies, on which to model undergraduate research opportunities).

The Academy cadets may also be able to apply to participate in a Summer Undergraduate Research Experience (SURE) at WVU, Marshall, or WVSU. If accepted, Cadets will spend 8-10 weeks in the summer at their hosting institution. They will complete their research under the direction of a faculty research mentor and a graduate or post-doctoral mentor. Participating students receive a stipend and are expected to research full-time (average of 40 hours per week). Applicants must identify a faculty research mentor upon application to each SURE program.

Additionally, USSA will create a system to identify opportunities and recruit faculty for the proposed research projects to replace the infrastructure the interim program will leverage while housed at WVU. For instance, potential research opportunities, based on current research at WVU, may be identified at the various centers across WVU doing profound and award-winning science. These Centers include the Innovation for Space Exploration and Research, Space Systems Operations Laboratory, West Virginia Robotic Technology Center which has a longstanding research partnership supporting satellite servicing technologies at NASA's Goddard Space Flight Center; the Navigation Laboratory, and the Center for Gravitational Waves and Cosmology.

Internships: WVU and the partnering institutions can leverage existing industry partners for internship placement, an invaluable, real-world experience for cadets. MAMC provides a unique opportunity for internships where cadets can work with advanced materials, fabrication, prototyping, manufacturing processes, technical inspection, and quality assurance. WVU recently placed student interns with Aurora Flight Sciences, Summit Point, the Civil-Military Innovation Institute, and the WVU Innovation Corporation.

Industries and businesses will be identified to approach for student internships as well. For instance, the Cadet Affairs Committee and/or administration at the Academy could approach Constellium as a potential internship site. Constellium's Ravenswood, WV, facility produces advanced aluminum products for aerospace and defense applications while TIMET, also in Ravenswood, has titanium operations that provide complementary expertise in aerospace materials and manufacturing.

Workforce Development: By expanding speaker programs into the state's K-12 schools, increasing cooperative education opportunities, and working with the WVMA to scale intern and extern placements at manufacturers large and small, West Virginia will build a strong pipeline of talent for the nation's workforce. Paired with the state's national apprenticeship hub, MAMC, and national access to future scientists through the NYSA, these initiatives can quickly position West Virginia as a leader in space workforce development.

West Virginia is committed to ensuring the academy has the skilled workforce it needs to open on schedule and operate successfully for decades to come. Beyond preparing students, the state will provide dedicated workforce development support for the academy's own needs, from construction and facilities operations to instruction, technical support, and administration. Through the West Virginia Department of Commerce, Workforce West Virginia, the community and technical college system, and all of our college and university partners, the state will deliver customized training and curriculum aligned to the Academy's real positions, equipment, and standards.

West Virginia will also model its highly successful Learn and Earn program, a 50-50 wage match in which the state and employers share the cost of paying students for paid work experience in their field while they complete their degree programs. Since its start with our community colleges, Learn and Earn has served hundreds of employers, and the state budgets nearly $2.8 million each year to support student intern wages. We will customize a similar program for the Academy.

The state is committed to building a robust pipeline of talent to support the growing space industry through its Space Academy Launch Council, coordinating partnerships across industry, higher education, government and workforce development sectors. Together, these efforts will connect students to meaningful educational and hands-on experiences, strengthen career pathways, and ensure West Virginia is prepared to meet the evolving workforce demands of the nation's space economy.

Other Development Opportunities: Faculty will engage with students to establish academic clubs and participate in collegiate competitions that provide hands-on learning opportunities. While at the interim site, cadets can participate in WVU student clubs like the Student Partnership for the Advancement of Cosmic Exploration (SPACE) Club which supports student engagement with space science and exploration. Once the USSA moves to its permanent locations, experienced students and their professors can establish academic clubs, providing cadets that are part of the interim campus a unique voice in shaping the Academy experience for future cohorts.

Professors will be encouraged to establish teams for relevant academic competitions. For instance, WVSU students have participated in RockSat-C and RockSat-X programs, developing experimental payloads for sounding-rocket missions launched from NASA's Wallops Flight Facility. To participate, students must undertake the design, construction, testing, integration, and analysis of experiments flown aboard NASA-supported sounding rockets.

Additionally, MAMC can expand opportunities for cadets by offering workshops or short-term summer camps.

3. Transition Plan to Permanent USSA Campus

West Virginia's USSA will have an ambitious timeline, but one the Mountain State and the team rallying around the Academy are prepared to meet. Hosting the Space Academy would be an extraordinary honor for West Virginia. Through this opportunity, the state can build upon its existing aerospace legacy while helping shape the future of American national security, space exploration, and leadership. It is not only the state that will benefit, however; West Virginia will not simply welcome the Academy, but rather embrace it. The Mountain State understands *Ad Astra Per Aspera* at its core, believing that adversity builds character and anything worth achieving will be hard. It is these values that commit West Virginia's people to serving America, through voluntary enlistment or taking on the dangerous but necessary work of coal mining. These values, the passion for this project, and the resolve to achieve great things will be seeded into cadets at WVU and continue to grow at the Academy's permanent site in Harrison County.

The proposed model of temporarily hosting the Space Academy at WVU will deliver a foundation for a comprehensive and executable transition to the permanent campus by creating the internal systems needed to stand up a new academic institution from administrative infrastructure to academic programs, allowing the supports in place from WVU and the partnering institutions to travel with the Academy, and beginning the transition plan from the first day of planning for the USSA at the interim site. In fact, USSA is being built not unlike NASA readying a rocket for launch, with ground supports in place until the rocket is ready to fly.

In addition to the Launch Council and the built-in planning and support from interim to permanent USSA campus, a Transition Team will be established with NASA, the Governor's office, the Department of Commerce, HEPC, and the partnering academic institutions. The Transition Team will be fully convened shortly after the Academy begins enrolling students for 2028 and stay in place until the transition is complete, approximately 18 months after Academy operations are shifted to the permanent site. Though many of the entities comprising the Transition Team will already be working toward the Academy's launch or groundbreaking of the new campus, Transition Team work will be focused on managing oversight of the new campus buildout and furnishing facilities from residence halls to classrooms and laboratories, creating milestones and timelines for additional activities, developing fully realized independent academic programs for the Academy, and hiring for the permanent location.

Administrative & Academic Infrastructure: First, by creating an Academy-specific Faculty Senate and Cadet Class Leadership alongside the development of the academic programs, the Academy infrastructure created at WVU will be easily ported to the new, permanent location. Each committee will be staffed by seasoned academic leaders and tasked with an eye not just on creating temporary measures and policies, but thinking through how those will look during a transition period and explicitly outlining how policies may flex or address transition needs, as well as after the Academy stands alone. Anything concerning the transition itself will be reviewed by the Transition Team.

As academic hiring processes are not short-term projects but often take months, positions from Academy President to Department Chair will be determined in the year leading up to the Academy's transition to a permanent site. This will be accomplished utilizing the resources WVU has in place for hiring and by leveraging the partnering institutions' experience with national searches for high-level and distinguished candidates.

WVU's hiring, screening, and training processes can also be utilized for initial staff hires through the transition period, then duplicated and refined once the permanent site is fully independent.

After moving to the permanent site and before becoming completely independent, collaborating organizations will become the "ground crew" for the newly launched Academy, with some faculty teaching specialized course-work at the Space Academy as well as their home institution, as needed, and/or serving in an advisory capacity to the degree programs or Faculty Senate Committees in the initial years of USSA's independence.

Cadets who matriculate at the interim site will also be surveyed, during the 2029-2030 Academic Year, to gain insights on what they want to see become part of cadet life at the Academy such as

which clubs they want to establish and which supports they would like to see duplicated as well as identifying what might not exist on WVU's campus that cadets have identified as a need during their tenure.

WVU's Purpose Center, Carruth Center for Counseling and Psychological Services, and Marshall's Center of Excellence for Recovery will collaborate to create research-based programming suited for those entering the high-pressure careers Academy cadets are preparing for. The unique program will be realized on the permanent site and based on the experience each brings to the table as well as the cadet-specific needs they will identify over the course of the interim Academy experience.

Academic Programming: As previously mentioned, the Faculty Senate Accreditation Committee will work closely with NASA, HEPC, the Launch Council, and the Governor's Office to establish a path toward accreditation. This path will allow for the potential for USSA's earliest entrants to graduate with a degree backed by WVU or one of the partnering institutions, but with a goal of achieving an Early Initial Accreditation through the Higher Learning Commission or other similar fast-track program through a notable accrediting body. As accreditation can take four-years, that process will be a priority for all partners assisting in standing up West Virginia's Space Academy. Additional accreditation through ABET for engineering programs can take from 1-3 years, so will be the second-highest priority with the Accreditation Committee also setting a timeline that includes milestones; the timeline will be set by the first quarter of the first year of Academy programming.

Permanent Academy Site: The *Physical Facilities and Planning Committee* will act as an intermediary to the Transition Team and those responsible for the completion of the Academy facilities. As the educators teaching the course, faculty will be essential to ensuring that the right equipment is installed in the Academy's newly built classrooms and laboratories. The Physical Facilities and Planning Committee will facilitate surveys and conversations, provide additional oversight and capacity for the Transition Team during the build out. Once the Academy is transitioned, they will be the key in determining changes, upkeep, and equipment upgrades over the life of the Academy with a unique insight as they were key to establishing the new campus.

C. Financial Capability – Cost and Partnership Interest

West Virginia's strategic geographic position makes it the nation's premier location for the Space Academy. The state offers the ideal balance between proximity and isolation: the proposed site for the USSA–the Charles Pointe Parcel–is close to Washington, D.C., enabling rapid transit and communication between the two locations while remaining outside the capital's immediate high-density target zones and urban bottlenecks. This section provides an initial rough order-of-magnitude estimate for constructing a new permanent USSA campus at the Charles Pointe Parcel, using cost assumptions based on standard higher education facilities and advanced laboratory construction, on a per-student cost basis. The proposed cost model distinguishes core academic facilities, student housing, specialized instructional and research facilities, campus infrastructure, and other supporting facilities. Cost estimates and information for an alternate site–Sugar Grove–are included in an attachment.

The State of West Virginia recognizes the national significance of this initiative and the scale of resources required to establish and operate a permanent USSA campus. As such, the West Virginia Department of Commerce is approaching this opportunity as a development partner–rather than simply as a host location–with a commitment to absorb site acquisition and preparation costs, while providing up to $50 million through a flexible, dedicated "greatest needs" fund to support unique infrastructure requirements, campus needs, and student support initiatives that may arise during establishment and early operations. Table 4 includes a detailed list of financial commitments from the State of West Virginia, totaling approximately $127 million over a four-year period. State programs such as the recently launched Mountain State Site Readiness Grant, a $15 million funding opportunity designed to help communities prepare sites for development, will also be leveraged to improve the Charles Pointe Parcel's readiness for development. Funds may be used for testing, engineering work, grading, improved road access, or extensions of water, sewer, natural gas, and electrical service.

To reduce the initial financial burden of campus development and align with the RFI requirements, the state carried out a month-long statewide call for responses to identify potential site(s) for the permanent campus, submitted through a dedicated website created to support this effort (https://wvspaceacademy.com/). Factors considered in the site selection process included the availability of contiguous acres of infrastructure-ready and permitted land; available infrastructure and regional assets; proximity to higher education institutions, including those that offer related programs/courses, quality healthcare facilities, airports, and other relevant federal operations; as well as access to world-class outdoor recreation resources. Based on these selection criteria, the Charles Pointe Parcel in Bridgeport, Harrison County, WV, rose to the top as the preferred location for the permanent USSA campus.

The Charles Pointe Parcel has 305 infrastructure-ready, permitted acres, located along the I-79 High Tech Corridor, an economic and technological development region along Interstate 79 that houses major federal and research operations, including the NASA IV&V Facility, NOAA Environmental Security Computing Center, the FBI CJIS Division, the National Energy Technology Laboratory (NETL), as well as high-performance computing infrastructure. The Charles Pointe Parcel is located near WVU, an R1 research university that will host the 2028 inaugural class, allowing a smooth transition to the permanent campus; it is also close to quality regional healthcare facilities through the WVU Medicine system and a surrounding environment that supports the Academy's broader educational mission.

A conservative all-in cost estimate for the Charles Pointe Parcel for development of large-area pad-ready projects, including earthwork, roadways, wet and dry utilities, curb and gutter, sidewalks, streetlights, and soft costs (planning, design engineering, construction phase engineering, permitting, project management, etc.), ranges between $400,000 and $425,000 per pad-ready acre, and the State of West Virginia is committed to providing up to $15 million toward that cost. These figures represent a high-end estimate that conservatively assumes substantial earthwork quantities, which will vary throughout the site. As-is land costs range from $150,000 to $200,000 per gross acre, or $45.75 million to $61 million, although the actual selling price will be negotiated with the property owner once the final footprint is selected. The State of West Virginia commits to covering the cost of purchasing the property.

Table 3 includes rough order-of-magnitude estimates for building the permanent USSA campus at Charles Pointe by 2031, with capacity to host up to 1,200 students and 240 staff and faculty members, totaling approximately $2.43 billion in construction costs. Cost estimates include $300 million for each of the following campus spaces: (1) academic, administrative, engineering, science, and research facilities; (2) student residence halls; (3) dining, student-life, healthcare, and institutional support facilities; (4) research facilities and infrastructure; and (5) major sporting venues with associated athletic and physical-fitness facilities. The budget also allocates $36 million for leadership development, ceremonial, and indoor/outdoor experiential-learning spaces, and $36 million for administration, security, information technology, and other institutional support.

Table 3. Charles Pointe Parcel 305-Acre Campus New Construction Cost Estimate – 1,200 Students

PRELIMINARY CONSTRUCTION COST ESTIMATE WORKSHEET				
Item	**Description**	**Unit**	**Students / Staff**	**Cost**
1.0	CM Preconstruction Services Fee (lump sum)	Lump Sum		**$300,000**
2.0	**Cost of Work**			
	Academic, Administrative, Engineering, Science, and Research Facilities for 1,200 Students	$250,000	1,200	$300,000,000
	Student Residence Halls for 1,200 Students	$250,000	1,200	$300,000,000
	Dining, Student-Life, Healthcare, & Institutional Support Facilities for 1,200 Students	$250,000	1,200	$300,000,000
	Research Facilities and Infrastructure for 1,200 Students	$250,000	1,200	$300,000,000
	Major Sporting Venues with Accompanying Athletic and Physical-Fitness Facilities	$250,000	1,200	$300,000,000
	Administration, Security, Information Technology, and other Institutional Support	$150,000	240	$36,000,000
	Leadership-Development, Ceremonial, Formation, and Indoor/Outdoor Experiential-Learning Spaces	$150,000	240	$36,000,000
	Total Trade Bid Packages (Owner's Estimated Cost of Work)			included in below
	General Requirements (CM self perform or Subcontract)			included in below
	General & Liability (G&L) Insurance			included in below
	Optional Subcontractor Default Insurance			included in below
	Builder's Risk (for value of contract)			included in below

		Total 2.0		$1,572,000,000
		Subtotal A:		**$1,572,300,000**
3.0	**Furniture, fixtures and equipment (FFE) Packages For Above New Buildings**	30% Sub Total 2.0		$471,600,000
		Subtotal B:		**$2,043,900,000**
4.0	**CM Job Site Management Staff Cost of Work (Salaries + related expenses)**	Lump Sum		$92,055,000
		Subtotal C:		**$2,135,955,000**
5.0	**CM Contingency** (Applied to Subtotal C)	5.00%		$106,797,750
		Subtotal D:		**$2,242,752,750**
6.0	**CM Fee for Overhead and Profit** (Shown as a percentage applied to Subtotal D)	5.00%		$112,137,638
		Subtotal E:		**$2,354,890,388**
7.0	**Performance and Payment Bonds** (Shown as a percentage applied to Subtotal E)	1.00%		$23,548,904
		Subtotal F:		**$2,378,439,291**
8.0	**B&O Tax** (2% of Total Contract value applied to Subtotal F)	2.00%		$47,568,786
		Subtotal G:		**$2,426,008,077**
9.0	**Preliminary Construction Cost Estimate**	**Overall Total:**		**$2,426,008,077**
10.0	**Land Purchase (Covered by the State of West Virginia)**	**305 Acres**		**$61,000,000**
11.0	**Overall Project Cost**	**Overall Total:**		**$2,487,008,077**

Additionally, the State of West Virginia commits to covering the cost of a two-year outdoor recreation package for all 300 students in the USSA inaugural class. West Virginia is home to breathtaking views, mountain landscapes, and some of the best natural resources and recreational assets on the East Coast, attracting visitors from across the U.S. and around the world. The state has more than 2,032 miles of whitewater, 1,500 miles of hiking trails, and over 4,000 rock-climbing routes and bouldering problems in the New River Gorge National Park and Preserve. In Morgantown alone, where the inaugural class will be held, there are 257 miles of

whitewater, 23 climbing locations, 171 climbing routes, 443 boulder problems, and 277 miles of mountain bike trails.

The two-year outdoor recreation package includes a Country Roads Tour valued at $1,500 per student, a Discovery Pass valued at $800, and socials and activities valued at $800, all hosted by Ascend WV, a premier talent attraction and remote work relocation program created to bring remote professionals, entrepreneurs, and outdoor enthusiasts to live and work in West Virginia. The Country Roads Tour is Ascend WV's flagship, multi-day annual gathering and all-access, all-inclusive social tour. The Discovery Pass provides two years of free curated outdoor adventures, access to regional activities, and free outdoor gear rental. The socials and activities are featured group experiences, including fly fishing, mountain biking, e-bike rides, horseback riding, local live music, and community social programming across the region. The two-year outdoor recreation package is valued at $3,100 per student, for a total of $930,000 in additional contributions from the State of West Virginia.

Table 4. Financial Support Provided by the State of West Virginia

Type of Support	Financial Commitment	Disbursement Schedule
Land Acquisition	$61,000,000	Spring 2027
Site Readiness	Up to $15,000,000	Spring 2027
"Greatest Needs" Fund	$50,000,000	Spring 2027 - Fall 2030
Outdoor Recreation Package	$930,000	Fall 2027 - Spring 2028
Total Commitment	**Up to $126,930,000**	

In essence, the State of West Virginia proposes a partnership in which it carries the early, front-loaded costs and risks by acquiring the property, preparing the site for development, and funding unique infrastructure needs and student wraparound support. This strategy enables NASA and federal partners to concentrate their resources exclusively on constructing the Academy's facilities, developing programs, and managing operations.

Construction Cost for Permanent USSA Campus at Full Operating Capacity

Table 5 includes rough order-of-magnitude estimates for building new campus facilities to accommodate an additional 2,800 students and 560 staff and faculty members when the Academy is operating at full capacity. Construction costs total approximately $5.67 billion and include $700 million for each of the following campus spaces: (1) academic, administrative, engineering, science, and research facilities; (2) student residence halls; (3) dining, student-life, healthcare, and institutional support facilities; (4) research facilities and infrastructure; and (5) major sporting venues with associated athletic and physical-fitness facilities. The budget also allocates $84 million for leadership development, ceremonial, and indoor/outdoor experiential-learning spaces, and $84 million for administration, security, information technology, and other institutional support.

Table 5. Charles Pointe Parcel 305-Acre Campus New Construction Cost Estimate – Additional 2,800 Students

Preliminary Construction Cost Estimate Worksheet

Item	Description	Unit	Students / Staff	Cost
1.0	CM Preconstruction Services Fee (lump sum)	Lump Sum		**$700,000**
2.0	**Cost of Work**			
	Academic, Administrative, Engineering, Science, and Research Facilities for 2,800 Students	$250,000	2,800	$700,000,000
	Student Residence Halls for 2,800 Students	$250,000	2,800	$700,000,000
	Dining, Student-Life, Healthcare, & Institutional Support Facilities for 2,800 Students	$250,000	2,800	$700,000,000
	Research Facilities and Infrastructure for 2,800 Students	$250,000	2,800	$700,000,000
	Major Sporting Venues with Accompanying Athletic and Physical-Fitness Facilities	$250,000	2,800	$700,000,000
	Administration, Security, Information Technology, and other Institutional Support	$150,000	560	$84,000,000
	Leadership-Development, Ceremonial, Formation, and Indoor/Outdoor Experiential-Learning Spaces	$150,000	560	$84,000,000
	Total Trade Bid Packages (Owner's Estimated Cost of Work)			included in below
	General Requirements (CM self perform or Subcontract)			included in below
	General & Liability (G&L) Insurance			included in below
	Optional Subcontractor Default Insurance			included in below
	Builder's Risk (for value of contract):			included in below
		Total 2.0		$3,668,000,000
		Subtotal A:		**$3,668,700,000**
3.0	**Furniture, fixtures and equipment (FFE) Packages For Above New Buildings**	30% Sub Total 2.0		$1,100,400,000
		Subtotal B:		**$4,769,100,000**
4.0	**CM Job Site Management Staff Cost of Work (Salaries + related expenses)**	Lump Sum		$214,795,000
		Subtotal C:		**$4,983,895,000**

5.0	**CM Contingency** (Applied to Subtotal C)	5.00%		$249,194,750
		Subtotal D:		**$5,233,089,750**
6.0	**CM Fee for Overhead and Profit** (Shown as a percentage applied to Subtotal D)	5.00%		$261,654,488
		Subtotal E:		**$5,494,744,238**
7.0	**Performance and Payment Bonds** (Shown as a percentage applied to Subtotal E)	1.00%		$54,947,442
		Subtotal F:		**$5,549,691,680**
8.0	**B&O Tax** (2% of Total Contract value applied to Subtotal F)	2.00%		$110,993,834
		Subtotal G:		**$5,660,685,513**
9.0	**Overall Project Cost**	**Overall Total:**		**$5,660,685,513**

Operating Costs for the Space Academy: 2028-2029 to 2031-2032

This section includes high-level cost estimates for operating the Space Academy, largely based on the annual cost of attendance for out-of-state, non-resident students at West Virginia University (WVU). The primary rationale for solely using cost of attendance is that several currently unknown variables may impact actual operating costs, including (1) the cost of instruction will vary dramatically from program to program; (2) how to account for federal revenue that supports operating costs; (3) how to account for state appropriations that support operating costs; (4) auxiliary services, such as housing and dining, actually generate revenue above operating costs and are figured into the total operating cost for the university; and (5) the consideration of whether NASA would be looking at WVU wholly as a contractor or would operate the Academy itself using WVU facilities and faculty from across the state.

Given these factors, Table 6 includes the estimated cost of attendance at WVU for out-of-state, non-resident students for academic years 2028-2029 through 2031-2032, without making any cost assumptions regarding the variables listed above. Starting in academic year 2029-2030, calculations include a 4 percent escalation rate to account for potential annual increases in tuition and fees. Enrollment is expected to grow by 300 students per academic year, leading to 1,200 students by 2031. Additionally, 2028-2029 uses 2026-2027 numbers, as WVU has yet to establish tuition for that academic year. Furthermore, costs related to stipends, travel, internships, summer operations, inflation beyond the stated assumption (i.e., 4 percent), and host-site indirect-cost negotiations require separate treatment. Lastly, scholarships and negotiated discounts, as shown in the examples listed in the paragraph below, may reduce the cost of attendance but are not taken into consideration in Table 6. The total cost of attendance (high-level operating costs) is $14,644,800 for cohort 1, $30,461,184 for cohort 2, $47,519,447 for cohort 3, and $65,893,633 for cohort 4.

Table 6. West Virginia University 2028-2029 to 2031-2032 Estimated Cost of Attendance for Out-of-State Non-Resident Students

	Academic Year			
Annual Cost Line Item	**2028-2029**	**2029-2030**	**2030-2031**	**2031-2032**
Enrollment	300	600	900	1,200
Out-of-State Tuition and Fees	$32,256	$33,546	$34,888	$36,284
Representative Undergraduate CLASS College Tuition: Non-Resident	$1,032	$1,073	$1,116	$1,161
Housing and Food Cost	$15,028	$15,629	$16,254	$16,904
Mountaineer Athletics Advantage Fee	$500	$520	$541	$562
Total Cost Per Student	$48,816	$50,769	$52,799	$54,911
Annual Cost for Entire Cohort	**$14,644,800**	**$30,461,184**	**$47,519,447**	**$65,893,633**

The Academy also would be eligible for existing state higher education grant programs, which support development of academic courses and instructional and research equipment. If the Space Academy were to locate in West Virginia, it would be eligible for the state's Research Challenge Fund (RCF), a state program to build research capacity, develop students and faculty, and leverage federal and private dollars. The Academy could compete for the Research Challenge Grant (up to $1,955,000 over four years to build research centers aligned with the state's Vision 2030 platforms), as well as the Instrumentation Grant (up to $20,000) and Innovation Grant (about $40,000) for teaching labs, equipment, and curriculum. Awards are competitive and not guaranteed, but these programs offer a defined path to the workforce development, partnerships, and federally aligned funding the Academy would need from its host state.

Rationale for Campus Construction Rough Order-of-Magnitude Cost Estimate

In the absence of defined facility programming, gross square footage, laboratory and specialty-space requirements, detailed site conditions and utility infrastructure requirements, and other project-specific design criteria, this cost estimate is provided solely for preliminary, order-of-magnitude planning purposes.

The estimate is based on projected student capacity and per-student capital-cost benchmarks informed by discussions with capital project and facilities management professionals at baccalaureate institutions in the Southeast region of the United States. This estimate applies a preliminary allowance of approximately $250,000 per major facility per student served for new construction and $150,000 per major facility per faculty/staff member. Table 7 includes capital ranges for different campus construction options.

The costing formula considers:

- Acquisition and preparation of a greenfield 305 acre site
- Major utility, road, communications, resilience, and security infrastructure

- Student housing, dining, recreation, administration, health, and support services
- Academic buildings and specialized engineering or research facilities
- Athletic venues and public-facing ceremonial/event facilities
- Contingency, escalation, design, federal compliance, and acceleration costs for the aggressive 2027–2031 timeline

Table 7. Campus Construction Options: Basis for Rough Order-of-Magnitude Cost Estimate

Campus Construction Options	Capital Range
Lean campus, shared local research/athletics infrastructure, phased growth	$2B–$4B
Full residential academy with robust engineering facilities	$4B–$6B
Fully built-out greenfield flagship campus with expensive research, security, infrastructure, and accelerated delivery	$6B–$8B+

This methodology is intended to provide a reasonable basis for preliminary planning in response to the RFI. It does not constitute a detailed cost estimate, bid, guaranteed maximum price, or commitment to deliver the proposed facilities at the stated amount.

Actual project costs may vary materially based on subsequent programming, scope definition, design development, specialized instructional or laboratory requirements, site and utility conditions, applicable codes and standards, sustainability, security, phasing, procurement approach, prevailing market conditions, construction escalation, and other project-specific factors.

Works Cited

Casto, N. (2019, April 3). *West Virginia University revs up computer resources to help move the region forward*. West Virginia Press Association. https://wvpress.org/breaking-news/west-virginia-university-revs-up-computer-resources-to-help-move-region-forward/

Fisher, T. (2025, September 22). *How big is a Terabyte, a Tetabyte, or an Exabyte? Here's the real answer: An understandable guide to everything from Bytes to Yottabytes*. Lifewire. https://www.lifewire.com/terabytes-gigabytes-amp-petabytes-how-big-are-they-4125169