

LEGISLATIVE OVERSIGHT COMMISSION ON EDUCATION ACCOUNTABILITY

Senate Finance Committee Room
November 15, 2010 @ 5:00 P.M.

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West Virginia
Higher Education
Policy Commission



West Virginia Higher Education Policy Commission

**Report to the Legislative Oversight Commission
on Education Accountability**

November 15, 2010

Annual Report of State Advisory Council of Students

State Advisory Council of Students



- General Education Courses
- Financial Aid
- Online Courses
- Retention
- Higher Education Health Care

General Education Courses



- Don't always transfer
- Students don't graduate on time
- Students decide to not continue their education

Financial Aid



- FAFSA acceptance problems
- Retention after refunds are issued
- Book vouchers (not all schools do this)
- Professors assigning expensive books they do not plan to utilize efficiently
 - ▣ Books should not be almost as much as tuition - Its especially hard for a student who is going to a community college for the lower tuition prices due to other obligations
 - ▣ Try renting books as opposed to buying them straight out.

Online Courses



- Strong move in this direction
- Class room of tomorrow
- Where is the assurance of academic integrity?

Retention



- Retention rates are low
- Students can help
- Students are not being utilized

Higher Education Health Care



- Insurance?
 - Many schools do not offer
 - Those who do don't offer effective programs
- Clinics?
 - Ineffective
 - Not convenient
- Students are largely unaware of programs offered by those institutions that do offer them

Council Members (2010-2011)

- Adam Walls, Shepherd University
- Alicia Nieman, Fairmont State University / Pierpont Community & Technical College
- Carrie Toeman, Blue Ridge Community & Technical College
- David Syrylo, West Liberty University
- Derick Wolfe, WVU at Parkersburg
- Erica Meade, Bluefield State College
- Eva March, New River Community & Technical College
- Henry Marlon, Glenville State College
- Jacob Curnutte, WVU Institute of Technology
- Jaschar Shakuri-Rad, WV School of Osteopathic Medicine
- Joshua Lawson, Concord University (Chair)
- Joshua Strachan, Potomac State College of WVU
- Keith Coleman, Southern WV Community & Technical College
- Kristopher Casdorff, West Virginia State University
- Megan Thomas, Bridgemont Community & Technical College
- Michelle Turner, Eastern WV Community & Technical College
- Patrick Murphy, Marshall University
- Ron Cheng, West Virginia University
- Sigourney Tabor, WV Northern Community College

Contact Information



- Joshua Lawson
- Concord University
- Email: lawsonj03@concord.edu
- Phone: 304-320-1730



**Report to the Legislative Oversight Commission
on Education Accountability**

November 15, 2010

**COMMUNITY AND TECHNICAL COLLEGE SYSTEM
ENROLLMENT REPORT, FALL 2010**

WV COMMUNITY AND TECHNICAL COLLEGE SYSTEM

Credit Headcount Enrollment - Early Fall 2004 to Early Fall 2010

Institution	2004	2005	2006	2007	2008	2009	2010	% Change
								2004-10
Blue Ridge CTC	1,524	1,711	1,953	2,192	2,466	3,248	3,813	150.2%
Bridgemont CTC	658	671	677	758	702	921	930	41.3%
Eastern WV CTC	694	882	766	540	546	636	645	-7.1%
Kanawha Valley CTC	1,614	1,590	1,717	1,634	1,737	2,227	1,995	23.6%
Mountwest CTC	2,402	2,510	2,515	2,363	2,449	2,999	3,067	27.7%
New River CTC	1,666	1,767	1,677	2,234	2,338	2,766	3,014	80.9%
Pierpont CTC	3,294	2,999	2,815	2,735	2,646	2,730	2,946	-10.6%
Southern WV CTC	2,593	2,495	2,297	2,264	2,269	2,575	2,475	-4.6%
WV Northern CC	2,837	2,841	2,844	3,128	2,921	3,150	3,363	18.5%
WVU at Parkersburg	3,722	3,772	3,884	3,743	3,753	4,231	4,444	19.4%
Total	21,004	21,238	21,145	21,591	21,827	25,483	26,692	27.1%

WV COMMUNITY AND TECHNICAL COLLEGE SYSTEM

Credit Headcount Enrollment - Early Fall 2009 to Early Fall 2010

Institution	2009 Headcount	2010 Headcount	# Increase / Decrease	% Change
Blue Ridge CTC	3,248	3,813	565	17.4%
Bridgemont CTC	921	930	9	1.0%
Eastern WV CTC	636	645	9	1.4%
Kanawha Valley CTC	2,227	1,995	-232	-10.4%
Mountwest CTC	2,999	3,067	68	2.3%
New River CTC	2,766	3,014	248	9.0%
Pierpont CTC	2,730	2,946	216	7.9%
Southern WV CTC	2,575	2,475	-100	-3.9%
WV Northern CC	3,150	3,363	213	6.8%
WVU at Parkersburg	4,231	4,444	213	5.0%
Total	25,483	26,692	1,209	4.7%

WV COMMUNITY AND TECHNICAL COLLEGE SYSTEM

Credit Headcount Enrollment - Early Fall 2009 to Early Fall 2010

Institution	Full-Time			Part-Time			Total		
	2009	2010	% Change	2009	2010	% Change	2009	2010	% Change
Blue Ridge CTC	920	1,057	14.9%	2,328	2,756	18.4%	3,248	3,813	17.4%
Bridgemont CTC	439	493	12.3%	482	437	-9.3%	921	930	1.0%
Eastern WV CTC	182	244	34.1%	454	401	-11.7%	636	645	1.4%
Kanawha Valley CTC	619	1,088	75.8%	1,608	907	-43.6%	2,227	1,995	-10.4%
Mountwest CTC	1,635	1,596	-2.4%	1,364	1,471	7.8%	2,999	3,067	2.3%
New River CTC	1,675	1,901	13.5%	1,091	1,113	2.0%	2,766	3,014	9.0%
Pierpont CTC	1,765	1,939	9.9%	965	1,007	4.4%	2,730	2,946	7.9%
Southern WV CTC	1,424	1,501	5.4%	1,151	974	-15.4%	2,575	2,475	-3.9%
WV Northern CC	1,590	1,762	10.8%	1,560	1,601	2.6%	3,150	3,363	6.8%
WVU at Parkersburg	2,753	2,945	7.0%	1,478	1,499	1.4%	4,231	4,444	5.0%
Total	13,002	14,526	11.7%	12,481	12,166	-2.5%	25,483	26,692	4.7%

WV COMMUNITY AND TECHNICAL COLLEGE SYSTEM

Credit Headcount Enrollment - Early Fall 2009 to Early Fall 2010

Institution	Age 25 and Above								
	Full-Time			Part-Time			Total		
	2009	2010	% Change	2009	2010	% Change	2009	2010	% Change
Blue Ridge CTC	355	492	38.6%	1,779	2,094	17.7%	2,134	2,586	21.2%
Bridgemont CTC	81	132	63.0%	298	268	-10.1%	379	400	5.5%
Eastern WV CTC	74	115	55.4%	206	176	-14.6%	280	291	3.9%
Kanawha Valley CTC	278	517	86.0%	734	557	-24.1%	1,012	1,074	6.1%
Mountwest CTC	685	763	11.4%	1,064	993	-6.7%	1,749	1,756	0.4%
New River CTC	796	956	20.1%	475	504	6.1%	1,271	1,460	14.9%
Pierpont CTC	540	661	22.4%	361	347	-3.9%	901	1,008	11.9%
Southern WV CTC	368	390	6.0%	395	366	-7.3%	763	756	-0.9%
WV Northern CC	676	819	21.2%	812	835	2.8%	1,488	1,654	11.2%
WVU at Parkersburg	1,195	1,343	12.4%	688	748	8.7%	1,883	2,091	11.0%
Total	5,048	6,188	22.6%	6,812	6,888	1.1%	11,860	13,076	10.3%

WV COMMUNITY AND TECHNICAL COLLEGE SYSTEM

Credit Headcount Enrollment - Early Fall 2009 to Early Fall 2010

Institution	First-Time Freshmen Headcount								
	Full-Time			Part-Time			Total		
	2009	2010	% Change	2009	2010	% Change	2009	2010	% Change
Blue Ridge CTC	317	269	-15.1%	82	121	47.6%	399	390	-2.3%
Bridgemont CTC	142	140	-1.4%	56	27	-51.8%	198	167	-15.7%
Eastern WV CTC	69	75	8.7%	33	34	3.0%	102	109	6.9%
Kanawha Valley CTC	226	185	-18.1%	130	26	-80.0%	356	211	-40.7%
Mountwest CTC	461	514	11.5%	67	109	62.7%	528	623	18.0%
New River CTC	495	471	-4.8%	77	56	-27.3%	572	527	-7.9%
Pierpont CTC	509	628	23.4%	64	65	1.6%	573	693	20.9%
Southern WV CTC	452	518	14.6%	92	94	2.2%	544	612	12.5%
WV Northern CC	438	452	3.2%	103	123	19.4%	541	575	6.3%
WVU at Parkersburg	709	682	-3.8%	82	124	51.2%	791	806	1.9%
Total	3,818	3,934	3.0%	786	779	-0.9%	4,604	4,713	2.4%

WV COMMUNITY AND TECHNICAL COLLEGE SYSTEM

Full-Time Equivalent Enrollment - Early Fall 2009 to Early Fall 2010

Institution	2009 FTE	2010 FTE	% Change
Blue Ridge CTC	1,502	1,705	13.5%
Bridgemont CTC	583	612	4.9%
Eastern WV CTC	312	358	14.8%
Kanawha Valley CTC	1,133	1,323	16.8%
Mountwest CTC	1,879	1,825	-2.9%
New River CTC	1,897	2,054	8.3%
Pierpont CTC	1,953	2,120	8.5%
Southern WV CTC	1,746	1,757	0.6%
WV Northern CC	2,028	2,196	8.3%
WVU at Parkersburg	3,053	3,232	5.9%
Total	16,085	17,182	6.8%



**Report to the Legislative Oversight Commission
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November 15, 2010

**COMMUNITY AND TECHNICAL COLLEGE SYSTEM
STUDENT FINANCIAL AID PARTICIPATION RATE**

Participation in Any Aid (Federal, State, Institutional, or Other)

ALL STUDENTS

Institution	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Blue Ridge Community and Technical College	13.4%	15.1%	15.5%	17.1%	21.2%	28.3%
Bridgemont Community and Technical College	48.8%	38.1%	24.6%	45.9%	43.9%	35.3%
Eastern WV Community and Technical College	21.5%	13.5%	15.6%	21.2%	25.9%	39.9%
Kanawha Valley Community and Technical College	42.3%	50.8%	51.5%	59.3%	58.6%	42.8%
Mountwest Community and Technical College	32.3%	31.6%	31.2%	39.2%	41.3%	39.8%
New River Community and Technical College	51.1%	44.8%	40.4%	41.2%	43.4%	52.9%
Pierpont Community and Technical College	37.7%	36.7%	43.6%	42.8%	44.9%	49.7%
Southern WV Community and Technical College	53.8%	46.9%	44.7%	51.0%	52.4%	49.6%
WV Northern Community College	43.4%	44.4%	46.1%	36.1%	40.2%	40.5%
WVU at Parkersburg	39.9%	43.0%	35.6%	42.7%	44.2%	51.3%
Total	39.5%	38.7%	37.5%	39.9%	42.0%	43.8%
U.S. Two-Year Public Institutions, 2007-08	42.5%					
WV Four-Year Public Institutions, 2008-09	56.8%					

FULL-TIME STUDENTS

Institution	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Blue Ridge Community and Technical College	33.6%	41.9%	29.7%	39.3%	44.2%	56.8%
Bridgemont Community and Technical College	60.5%	52.0%	30.3%	62.6%	65.1%	64.8%
Eastern WV Community and Technical College	70.5%	64.3%	53.0%	57.7%	66.7%	76.3%
Kanawha Valley Community and Technical College	58.3%	64.5%	62.2%	70.1%	69.1%	63.0%
Mountwest Community and Technical College	48.3%	50.6%	48.0%	56.3%	60.0%	51.7%
New River Community and Technical College	70.9%	65.0%	63.8%	69.5%	69.6%	74.8%
Pierpont Community and Technical College	60.6%	59.1%	60.0%	59.7%	66.2%	69.8%
Southern WV Community and Technical College	69.3%	67.6%	65.8%	67.8%	70.5%	73.4%
WV Northern Community College	66.9%	65.0%	65.2%	68.7%	66.6%	73.1%
WVU at Parkersburg	60.1%	61.1%	50.9%	60.3%	62.6%	67.8%
Total	60.7%	60.4%	55.6%	62.5%	64.5%	67.1%
U.S. Two-Year Public Institutions, 2007-08	59.1%					
WV Four-Year Public Institutions, 2008-09	66.5%					

PART-TIME STUDENTS

Institution	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Blue Ridge Community and Technical College	8.1%	8.3%	9.7%	11.3%	13.1%	18.1%
Bridgemont Community and Technical College	29.7%	21.3%	16.1%	20.4%	20.7%	11.2%
Eastern WV Community and Technical College	17.1%	10.0%	12.1%	16.6%	16.9%	26.1%
Kanawha Valley Community and Technical College	27.0%	34.7%	39.8%	46.2%	46.8%	33.2%
Mountwest Community and Technical College	16.0%	14.4%	15.2%	23.6%	21.8%	23.6%
New River Community and Technical College	27.8%	23.3%	21.9%	20.4%	22.0%	26.1%
Pierpont Community and Technical College	18.2%	17.5%	18.9%	16.9%	17.8%	20.1%
Southern WV Community and Technical College	40.8%	30.1%	27.6%	36.0%	39.1%	31.2%
WV Northern Community College	28.1%	29.8%	30.8%	23.1%	26.8%	25.5%
WVU at Parkersburg	25.5%	28.8%	25.2%	27.6%	27.1%	32.2%
Total	23.7%	22.5%	22.6%	23.4%	24.8%	25.6%
U.S. Two-Year Public Institutions, 2007-08	39.0%					
WV Four-Year Public Institutions, 2008-09	36.5%					

STUDENTS AGE 18 to 24

Institution	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Blue Ridge Community and Technical College	19.8%	24.5%	20.7%	22.0%	29.5%	39.7%
Bridgemont Community and Technical College	57.5%	45.0%	29.7%	55.2%	55.1%	53.4%
Eastern WV Community and Technical College	38.4%	15.8%	19.8%	26.2%	34.7%	44.3%
Kanawha Valley Community and Technical College	44.8%	49.9%	52.2%	56.2%	55.8%	35.4%
Mountwest Community and Technical College	42.8%	45.0%	43.2%	49.0%	50.9%	47.3%
New River Community and Technical College	52.4%	44.9%	44.8%	46.6%	44.7%	50.3%
Pierpont Community and Technical College	42.5%	41.9%	43.0%	44.7%	48.4%	52.8%
Southern WV Community and Technical College	56.5%	53.9%	51.5%	56.7%	57.6%	55.6%
WV Northern Community College	40.7%	39.4%	38.0%	38.6%	40.0%	41.9%
WVU at Parkersburg	42.9%	43.2%	38.2%	44.7%	44.0%	50.8%
Total	44.8%	43.5%	41.1%	45.1%	46.6%	47.3%
WV Four-Year Public Institutions, 2008-09	60.6%					

STUDENTS AGE 25 and above

Institution	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Blue Ridge Community and Technical College	12.1%	11.5%	12.8%	12.8%	14.8%	19.4%
Bridgemont Community and Technical College	34.5%	30.1%	19.5%	36.4%	36.7%	22.8%
Eastern WV Community and Technical College	41.5%	30.4%	35.7%	31.8%	36.9%	53.9%
Kanawha Valley Community and Technical College	40.1%	49.9%	52.7%	61.4%	59.9%	47.1%
Mountwest Community and Technical College	24.7%	21.6%	23.8%	30.3%	33.2%	31.1%
New River Community and Technical College	56.0%	52.9%	44.8%	50.0%	53.5%	62.2%
Pierpont Community and Technical College	42.6%	43.7%	45.0%	42.1%	45.0%	53.2%
Southern WV Community and Technical College	56.4%	49.9%	45.8%	50.9%	53.9%	61.3%
WV Northern Community College	53.6%	54.5%	58.0%	37.3%	45.1%	40.3%
WVU at Parkersburg	42.5%	49.1%	39.7%	47.3%	49.5%	57.4%
Total	40.3%	39.9%	38.7%	38.9%	41.3%	42.9%
WV Four-Year Public Institutions, 2008-09	47.3%					

Total PROMISE Recipients and Awards by Institution, 2008-09

	Recipients	% of Total Recipients	Awards
Community and Technical College System	388	4.2%	\$824,743
Blue Ridge CTC	11	0.1%	\$24,480
Bridgemont CTC	19	0.2%	\$56,265
Eastern WV CTC	0	0.0%	\$0
Kanawha Valley CTC	21	0.2%	\$43,470
Marshall CTC	9	0.1%	\$22,096
New River CTC	23	0.2%	\$57,708
Pierpont CTC	51	0.5%	\$142,409
Southern WV CTC	67	0.7%	\$123,840
WV Northern CC	27	0.3%	\$44,759
WVU at Parkersburg	160	1.7%	\$309,716
Total	9,333	100.0%	\$42,493,534

Total HEGP Recipients and Awards by Institution, 2008-09

	Recipients	% of Total Recipients	Awards
Community and Technical College System	3168	19.6%	\$6,307,097
Blue Ridge CTC	126	0.8%	\$281,759
Bridgemont CTC	185	1.1%	\$428,427
Eastern WV CTC	25	0.2%	\$39,050
Kanawha Valley CTC	311	1.9%	\$686,546
Mountwest CTC	272	1.7%	\$594,816
New River CTC	487	3.0%	\$1,093,615
Pierpont CTC	478	3.0%	\$1,104,840
Southern WV CTC	372	2.3%	\$604,392
WV Northern CC	326	2.0%	\$509,463
WVU at Parkersburg	586	3.6%	\$964,189
Total	16,132	100.0%	\$35,285,378

**Total HEAPS Part-Time Component Recipients and Awards by Institution,
2008-09**

	Recipients	% of Total Recipients	Awards
Community and Technical College System	1,965	52.4%	\$1,707,295
Blue Ridge CTC	178	4.7%	\$147,223
Bridgemont CTC	48	1.3%	\$64,089
Eastern WV CTC	93	2.5%	\$82,374
Kanawha Valley CTC	214	5.7%	\$204,720
Marshall CTC	171	4.6%	\$212,613
New River CTC	131	3.5%	\$144,293
Pierpont CTC	213	5.7%	\$165,555
Southern WV CTC	296	7.9%	\$186,896
WV Northern CC	249	6.6%	\$199,593
WVU at Parkersburg	372	9.9%	\$299,939
Total	3751	100.0%	\$3,388,230

Total HEAPS Workforce Development Component Recipients and Awards by Institution, 2008-09

		% of Total	
	Recipients	Recipients	Awards
Community and Technical College System	1,141	63.4%	\$1,037,851
Blue Ridge CTC	133	7.4%	\$163,025
Bridgemont CTC	51	2.8%	\$102,000
Eastern CTC	113	6.3%	\$131,622
Kanawha Valley CTC	146	8.1%	\$174,343
Mountwest CTC	13	0.7%	\$20,239
Pierpont CTC	179	9.9%	\$154,721
Southern WV CTC	373	20.7%	\$118,092
WV Northern CC	32	1.8%	\$33,624
WVU at Parkersburg	101	5.6%	\$140,186
Total	1,801	100.0%	\$2,248,563

Net College Cost per Student at CTCS Institutions, 2004-05 to 2008-09

Institution	2004-05	2005-06	2006-07	2007-08	2008-09
Blue Ridge Community and Technical College	\$2,820	\$2,867	\$2,732	\$2,527	\$2,267
Bridgemont Community and Technical College	\$2,243	\$2,314	\$3,218	\$2,231	\$2,252
Eastern WV Community and Technical College	\$901	\$1,206	\$1,133	\$981	\$839
Kanawha Valley Community and Technical College	\$1,900	\$1,711	\$1,705	\$1,448	\$1,501
Mountwest Community and Technical College	\$2,433	\$2,361	\$2,552	\$2,204	\$2,053
New River Community and Technical College	\$1,176	\$1,343	\$1,488	\$1,307	\$1,004
Pierpont Community and Technical College	\$2,241	\$2,305	\$2,258	\$2,244	\$2,036
Southern WV Community and Technical College	\$342	\$423	\$456	\$486	\$402
WV Northern Community College	\$596	\$591	\$648	\$831	\$792
WVU at Parkersburg	\$708	\$655	\$851	\$748	\$633
Community and Technical College System	\$1,398	\$1,396	\$1,515	\$1,391	\$1,274



**Report to the Legislative Oversight Commission
on Education Accountability**

November 15, 2010

**COMMUNITY AND TECHNICAL COLLEGE SYSTEM
GRANT / SCHOLARSHIP PROGRAM**

General Provisions

COMMUNITY AND TECHNICAL COLLEGE SYSTEM GRANT/SCHOLARSHIP PROGRAM

General Provisions

Initiative to Attract Students into Occupational-Technical Programs

ALLOCATION PER YEAR

- To be determined.

PURPOSE

- To assist in attracting students into occupational-technical programs at West Virginia's public community and technical colleges.

GRANT/SCHOLARSHIP AWARD

- 100% of community and technical college tuition and fees at the college of attendance.

QUESTION

- *Limit the program to those students pursuing any technical program, certain technical programs, or make available to all community and technical college students?*

ELIGIBILITY

1. Must be a West Virginia resident as defined by the institution of attendance.
2. May be an adult student or recent high school graduate.
3. Must attend a minimum of six credit hours per semester.
4. Must be admitted and attend a public West Virginia community and technical college as defined in WV Code 18B-1-2.
5. A student must be pursuing a certificate or associate degree as defined in WV Code 18B-1-1.
6. Must comply with all State and Federal requirements to receive assistance through Title IV Student Financial Aid Programs.

QUESTIONS

- *Should there be a high school grade point and ACT requirement?*
- *Should transfer students be eligible for the grant/scholarship? If so, what are the academic requirements?*

RETENTION OF AWARDS

1. A student must have completed a minimum of 12 credit hours from a public West Virginia community and technical college the prior academic year with a cumulative grade point average (GPA) of 2.50; the credit hour requirement includes developmental education courses.
2. A student must continue to meet the enrollment requirements.
3. A student will no longer be eligible for an award once an associate degree is earned.
4. A student earning a certificate degree may continue to be eligible if pursuing an associate degree, but may not be awarded a grant for more than 68 credit hours.

QUESTIONS

- *Should a student be required to maintain continuous enrollment to maintain the grant/scholarship?*
- *What are the timeframe requirements for program completion?*
- *Should there be a provision for personal or medical leave of absence, military obligation, etc?*



West Virginia Higher Education Policy Commission

**Report to the Legislative Oversight Commission
on Education Accountability**

November 15, 2010

West Virginia Education, Research and Technology Park

*Development Planning for the Eastern
Energy Commercialization Center
(EECC)/West Virginia Education,
Research & Technology Park (WVERT)*

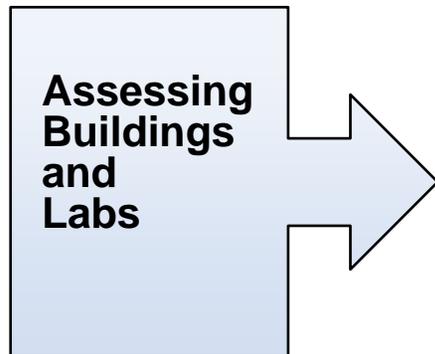
Phase II Planning Discussion

Today's Presentation

- Recap on Project Activities
- Review of Key Drivers for the Park and Proposed Vision for WVERT
- Proposed Development Plan
 - Proposed Program Activities
 - Proposed Funding Mechanism
 - Proposed Operations and Management
 - Proposed Facility Development Approach and Requirements

Project Activities

Phase I: Assessment



Subcommittee Deliberations

Discussions with
Subcommittee on Program
Development

Discussions with
Subcommittee on
Management & Governance

Phase II: Development Planning



Vision and Rationale for WVERT

Vision Statement:

WVERT will become a signature center enabling West Virginia to be among the national leaders on the global stage of commercialization and growing companies in innovative areas of traditional and bio-based energy, chemicals and materials

Rationale:

- WV's Energy, Chemicals & Materials industry clusters stand out as the state's most developed technology-based industries
- Like other states, West Virginia must continue to energize and advance commercialization, innovation and talent to stay competitive in these leading industry clusters.

Key Facts:

WV is **3x** more concentrated in its Chemicals and Materials industry cluster than the nation, and nearly **8x** more concentrated in its Energy industry cluster.

Plus, growing Engineering, Commercial R&D and Testing industry cluster closely integrated with Energy, Chemicals and Materials industries in WV

Key source of high paying jobs:

\$69,481 average wages for 49,297 jobs in WV Energy, Chemicals & Materials, Eng/R&D/Testing

Versus \$35,189 average wages in all WV private sector industry

Review of Targeted Development Opportunities for WVERT (1 of 2)

WV Chemicals & Materials Industry Cluster

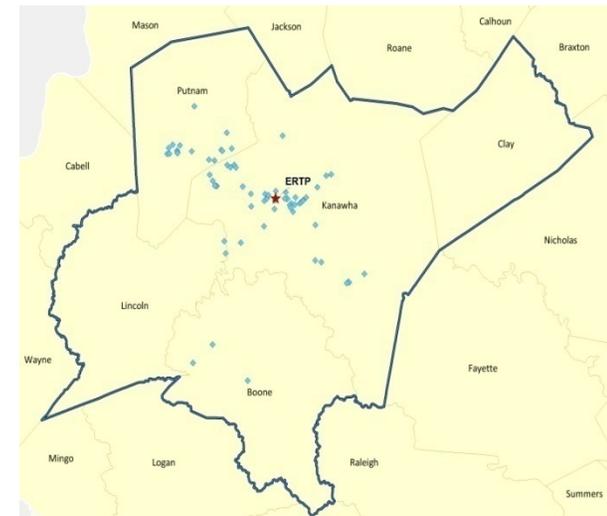
- **Hard hit in recent years – 30% decline in WV from 2001-2007**
- Significant growth niches in:
 - Specialty Chemicals
 - Fertilizers & Agricultural Chemicals
 - Renewable Chemicals
- **West Virginia making the shift towards high growth niches, but the pace is slow**
- **Opportunity to leverage pilot production capabilities at WVERT to establish a commercialization driver in high growth niches**

WV Energy Industry Cluster

- **Faring well in recent years – grew 12.9% from 2001-2007 and grew in first year of the recession**
 - Strong growth in coal mining, natural gas extraction,
- Direct employment opportunities at the Park limited because extraction activities and power plants need to be tied to dedicated sites and so cannot be co-located
- **Opportunities to advance engineering, commercial R&D and testing services in support of WV's thriving energy industries.**

WV Engineering, Commercial R&D and Testing Services

- **Grew from 5,591 jobs in 2001 to 7,076 jobs in 2008.**
- **Strongly linked to both Chemicals & Materials and Energy industry clusters**
- **Charleston stands as a key hub – 27% of statewide employment.**
- **Opportunity to leverage state associated testing services**



Review of Targeted Development Opportunities for WVERT (2 of 2)

University and National Lab Research Activities

- **NETL is a unique federal lab, with focus on fossil energy from basic research through technology demonstration**
 - But facing declining funding
- **Universities have ongoing research centers and new grants in energy, chemicals & materials science, but overall research funding is small and flat in key fields involved with energy, chemicals and materials.**
 - Drop from \$12.7 m in 2004 to \$12.1 m in 2008 in fields of chemical engineering, chemistry and material engineering while U.S. grew by 17.3% -- WV makes up less than 1/2 of 1% of US university research in these fields
- **Opportunity for WVERT to partner with NETL, WVU and Marshall in identifying and pursuing research programs**

Existing Tenants at WVERT & Other Technology Drivers in Charleston Region

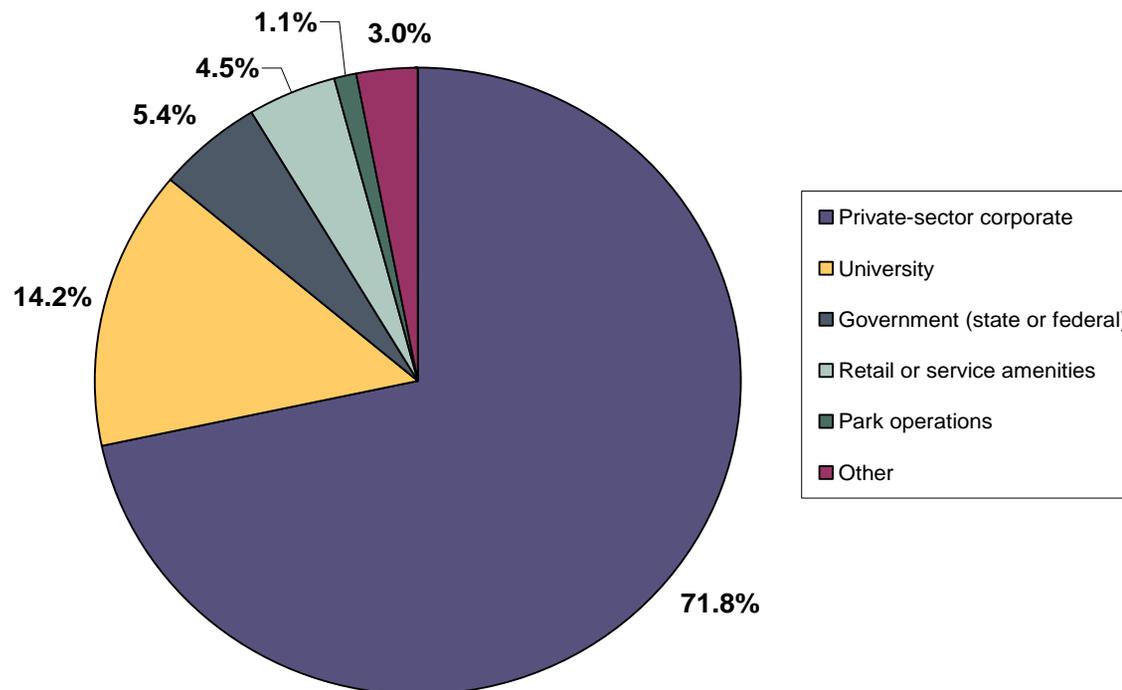
- **Retention at the Park of 550 jobs across 13 companies and organizations**
 - Growth outlook for space limited with exception of MATRIC and continued incubator growth
 - Interest in pilot production
- Other technology-based industry clusters in Charleston:
 - 2,073 jobs in Digital services – growing sectors of computer systems design services and data processing and hosting
 - 1,972 jobs in Business Management & Services
- **Opportunity to advance 1 or 2 additional data centers at WVERT tied to data processing and customer service**

Workforce Development

- **Battelle interviews with regional firms at the identified need for 90 new chemical and process technicians annually for next 4-5 years**
- **Detailed look at WV project job openings finds significant needs for replacement workers in key fields:**
 - 284 mfg installation, maintenance and repair workers
 - 226 metal and plastic workers
 - 112 engineers per year through 2016
- **Opportunity to meet industry demand for more hands-on skill training in process technologies using pilot production capabilities at the Park linked to its Advantage Valley Technology Training Center**

Going Forward: There will be a Mix of Tenants at WVERT

- While WVERT will serve as a key driver for Energy, Chemicals and Materials industry cluster development, the likely development opportunities suggest it will be home to a variety of tenants.
- This is characteristic of nearly all research parks, even those with specific defined focus areas:



Source: 2007 AURP Study of North American Research Parks conducted by Battelle

By Sustaining the Park, the State Retains an Important Economic Engine

550 Jobs in Key Export Industries & Firms

- New Product Development Innovation and Related Talent
- Average salary and wage \$88,500 – 25% higher than Statewide average for chemicals manufacturing
- Total direct income greater than \$40M
- With multiplier effects, this translates into ~\$100M income for region and state
- Positive Revenue Impacts for State Government

Note: Battelle is completing an economic impact analysis based on existing tenants at WVERT

Proposed Program Development at WVERT

- Four key program activities proposed:
 - 1. Providing facilities & financing to fill critical commercialization gap of pilot production**
 - 2. Pro-actively marketing and delivering entrepreneurial growth services to recruit and build innovative, emerging growth companies** in niche areas of energy, chemicals & materials and related engineering, commercial R&D and testing services
 - 3. Generating needed talent through hands-on skill training in processing technologies**
 - 4. Establishing a World Class Energy, Chemicals and Materials Applied Research Institute**
- Together, these program activities address how WVERT can be a catalyst and resource leading to technology-based economic development in energy, chemicals and materials

Proposed Program Activity: Pilot Production

• Rationale

- Addresses key stumbling block to commercialization by focus on demonstrated scale-up
- From Battelle outreach significant interest by emerging companies out-of-state as well as selected in-state companies
- Independent expert, Dr. Randall Powell, validated potential of the Park facilities:
 - “In combination, the assets represent an exceptional, if not unique, opportunity to provide domestic process technology development and implementation across the full range of process scale (bench top to small commercial production) at a single location.”

Technology	ERTP Asset Capabilities				
	Batch/continuous Processing	Liquid Handling	Solids Handling	Other Asset Issues	Feedstock Synergies
Reactive chemistries	HA, Segregated cells suited for custom fit-out; B-707 vertical design provides installation efficiency	HA, Facilities well-suited for liquid material handling and processing	N, B-707 cell footprint may limit solids equipment installation	A, Cells designed for energetic reactions, but not desirable for multi-clients	N, Local co-product streams could be feedstocks
Biochemical processes	HA, Segregated cells suited for fermenter installation; B-707 vertical design & utilities well suited	HA, Aqueous processing; B-707 vertical design & utilities well suited	N, May require solid/liquid separations and solid product handling	A, Process isolation provided by cells, which may require enclosure	A, Proximity to woody biomass feedstocks as sugar source
Thermochemical processes	A, Cells suitable for small gasifiers and continuous reactor installation; utilities well-suited	A, Liquid products; some requiring purification	N, Mostly solids feedstocks; material handling appropriate for facilities size	A, Verticle cells allow fixed bed reactors and distillation of product mixtures	A, Proximity to coal and lignocellulosic biomass as gasification feedstocks
Purification technologies	A, Cells suitable for both batch and continuous purification equipment installation	HA, Facilities well-suited for liquid material handling and processing	N, May require solid/liquid separations and solid product handling	A, B-707 cell design advantaged for liquids; footprint may limit solids equipment installation	A, Lignocellulosic feedstocks for fractionation; local co-product streams for purification
Physical processing	D, Continuous processing equipment can be bulky	N, Mostly solids processing	D, Solids material handling for industrial processing could be limited by cell footprint	D, Facilities not well-suited for clean rooms or controlled environment processing	N, None apparent

*HA-Highly advantaged; A-Advantaged; N-Neutral; D-Disadvantaged

Proposed Program Activity: Pilot Production

Program Design:

- Update existing pilot plant facilities
- Identify through an RFP process an operator with technical expertise to operate a shared-use facility
- Key parameters:
 - Finance the renovation of the physical plant and initial equipment costs for basic operations and measurement.
 - The operator would lease the facility from the Park and be responsible for costs of staffing. The leasing period is open for negotiation but should allow for milestones to be reached, and not bind the Park for too long a period of time without clear performance being met.
 - Marketing of the facility would be done jointly by the operator and the Park.
 - The selection of users would involve collaboration between the operator and the Park in which the operator would be responsible for all the terms and conditions in line with its profit and loss responsibilities in managing the pilot production plants, and the Park would reserve the right be able to approve or disapprove a user before a final agreement is reached.
 - WVERT would seek to negotiate a profit sharing relationship with the operator.
 - At the end of the lease period, the facility would remain under Park ownership and lease renewals can be negotiated.

• **Best Practice Model: Michigan Biotechnology Center**

- Focus on pilot plant for ag/industrial biotech – 25,000 sq ft
- Formed a for-profit subsidiary, Grand River Technologies, to form new start-ups
- Created a business incubator
- Generated 10 companies in through early 2000s
- Now focused on more collaborations with industry to address process development and scale-up needs to “de-risk” commercialization
 - Recent clients include: DuPont, Cargill, Gene-TRAK

• **Resources Required:**

- Rehabilitation of Pilot Production Facilities
- Equipment Allowance

Proposed Program Activity: Pro-Active Recruitment of Emerging Growth Companies

- **Rationale:**

- Not sufficient demand for expansion space in R&D, product development, engineering or testing from existing companies in West Virginia’s energy, chemicals & materials and related engineering/testing industries
- Leverage value of pilot production, together with presence of existing industry cluster and talent base in West Virginia

- **Program Design:**

- Critical to have in place available multi-tenant space for R&D of all types – including chemistry, biological and dry labs, able to handle air handling requirements, weight loads and height needs.
- Leverage “institutional” anchor tenants to support multi-tenant buildings
- Establish a pilot production equipment and working capital financing program to attract out-of-state emerging growth companies
- Hire marketing staff
- Ensure entrepreneurial growth services such as mentoring, access to professional services, connections to higher education and access to capital

- **Resources:**

- Rehab of multi-tenant R&D space – target approximately 50,000 sq ft for next five years
- Revolving loan fund for pilot production equipment and working capital – start with \$5 to \$10 million
- Operating costs of ~\$600,000 for marketing services, business services and due diligence for financing

Best Practice Models:

- **MA Biotech Research Park**

- Former mental health hospital → conveyed by state in early 1980s as part of revitalizing depressed cities
- Worcester Business Development Corporation began speculative development leveraging value of land
- Formed a commercialization/incubator arm, MA Biotech Research Institute with an affiliated commercial venture arm
- 1 million square feet developed

- **Philadelphia Navy Yard**

- 81 acre “Clean Energy Campus” with speculative multi-tenant buildings & reuse of existing buildings
- Consortium of Penn State, PIDC and Ben Franklin Technology Partners of SE PA leading development
- Attracted federal funding from DoE, including Mid-Atlantic Clean Energy Applications Center, Energy Innovation Hub for Energy Efficient Buildings
- Leverages state Keystone Innovation Zone benefits

Proposed Program Activity: Hands-on Skill Training in Process Technologies

- **Rationale:**

- Ensuring a pool of talent in processing technologies from technician to engineering to scientist levels is essential for the long-term competitiveness of West Virginia’s energy, chemicals & materials and related engineering/testing industries
- Documented need in WV for process technicians
- Proven models of Targeted Skill Centers tied to specific industry clusters

- **Program Design:**

- Form an industry consortium for chemical process technicians
- Strong outreach to K-12 system involving teacher training and perhaps development of a “chemical process” bus that can travel around the state and offer hands-on experience
- Pursue federal funding opportunities – whether NSF or DOL
 - Recent example of Oak Ridge National Labs research park being the home to a new advanced materials technician training program of Roane State Community College funded by U.S. DOL Community-based Job Training Grant.
- Establish an internship program for BS, MS and PhD students in engineering in chemical process engineering and technology development.

- **Resources:**

- Start-up of chemical process training program involving faculty recruitment, pilot plant curriculum development and outreach activities -- \$1 million then generate revenues from industry and students.
- Additional annual support for K-12 outreach and internships of \$250,000 – seek to leverage federal funding

Best Practice Models:

- **Innovation Park at Penn State**

- Home to Penn State’s Nanofabrication Facility, part of the federal NNI Network
- Back in 1998, PA economic development agency established a Nanofabrication Manufacturing Technology Partnership for skilled micro- and nanofabrication workers across community colleges and universities.
- Nation’s first associate degree in nanofabrication.
- Garnered NSF Advanced Technology Education funding – now a national center
- By 2007 had trained 508 students of whom 75% working in industry and other 25% full-time students pursuing higher degrees

Proposed Program Activity: World Class Energy, Chemicals and Materials (ECM) Applied Research Institute

- **Rationale:**

- Fill gap of declining industry R&D
- Partner with NETL, WVU and Marshall to reverse declining R&D funding and jumpstart new R&D initiatives
- Create a high powered innovation driver in energy, chemicals and materials for West Virginia

- **Program Design:**

- Established HEPC should lead a planning effort with majority industry representation along with NETL, WVU and Marshall
- Focus on establishing sustained funding for:
 - Lead “star” faculty with highest academic credentials along with proven record of working with industry
 - Shared use facilities
- Applied industry-university research grants

- **Resources:**

- \$300,000 to \$500,000 for planning study that identifies technology focus in alignment with industry and research institutions, design of center and identify likely research leaders and partner organization in and outside of WV
- Funding commitment (state/federal/private sector) for \$10 million annually for 5+ years in line with sustained funding for Michigan’s Life Science Corridor Initiative, Arizona’s TGEN, Florida’s Moffitt Center

Best Practice Models:

- **Research Triangle Institute**

- Established back in 1959 to ensure a research driver for Research Triangle Park
- Governed by UNC System and Duke
- Emerged as a leading non-profit R&D organization, now with more than 2,800 staff

- **Fraunhofer Centers**

- Focuses on applied R&D to bridge academic research and industry needs
- Subsidiary of a German applied research organization with six centers in the U.S. in collaboration with universities, including Universities of MD, DE, MI, Michigan State and Boston U
- Each center has its own technology focus area, such as sustainable energy, laser technology, software engineering, digital media

Going from Concept to Implementation: Benchmarking of Best Practices

- **Battelle identified 5 benchmarks to inform:**
 - Governance plan for WVERT and Eastern Energy Commercialization Center (E2C2) involving how best to engage State, WV universities, NETL and industry
 - Development structures needed to ensure the financing to support the growth of the park, including how to ensure that facilities can be modernized and customized
 - Management approach for WVERT including who will be responsible for the property and facility management as well as for business development, including operation of the pilot plants.
- **Selection Criteria** (seek one or more of these key features):
 1. Some form of special authority, powers and or support provided by State Government
 2. Signature status and strategic role in transitioning a region or state to a new economy
 3. Explicit commercialization and/or pilot plant and scale-up services
 4. Need to transition from a single user to multi-tenant site
 5. Location away from major research institution or university drivers

Overview of Selected Benchmarks

Research Park - Program Entity(s)	Special authority, powers and or support provided by State Government	Preceding use and property profile	Proximity of site to major research University drivers	Regional Setting; State Capital	Commercialization and/or pilot plant and scale-up services
Illinois Medical District Commission and Chicago Technology Park	State funding provided for initial land purchase	Urban redevelopment area within 560 acre medical district with 100 acre core; CTP consists of 600 ksf of wet lab and office space	Hospital complex and U Chicago linkages	Major Metro	Yes – enterprise centers have successful track record, with 25+ graduates, including Amgen
Centennial Campus at North Carolina State	Integrated campus development with commercial component	New development	New Campus	Mid-sized metro	Being further developed
Virginia Biotechnology Park and Virginia BioTech Park Research Authority	2 linked entities; statewide program authority and Park Development organization	NA – new development	Limited R&D Base nearby	Small Metro; State capital	Extensive linkage with partners, university and statewide program
Delaware Technology Park	No special powers per se, but the Park effort ; 501(c) (3) corporation originated from Governor’s Task Force	NA – 40 acres under long term lease from the University of Delaware	Adjacent to University of Delaware campus	Small Metro within Major Metro	Commercialization program linked to regional and university resources, as well as Delaware Biotechnology Institute and Fraunhofer Institute
University of Arizona Science & Technology Park	Arizona Board of Regents involved in negotiations and issuance of bonds for acquiring the property	Yes, 1,345 acres of land transferred from IBM to the University, with IBM continuing to stay on as anchor tenant as well as managing property, including a centralized steam loop.	Direct link to U of A but not adjacent	Mid-sized metro	incubation program and facility

Need for a Funding Mechanism

- Proposed program activities would involve a significant set of funding needs over the next 5 to 10 years to establish the WVERT Park as a catalyst and resource for advancing WV's Energy, Chemicals & Materials industries
 - Facilities:
 - Pilot Plant: TBD
 - Available Multi-tenant Space: TBD (initial phase of 50,000 sq ft)
 - Program Activities to consider:
 - Core staff for Research Park: CEO, administrative, financial
 - Pilot Production Equipment and Working Capital -- \$5 to \$10 million revolving loan fund
 - Outreach Marketing: ~\$350,000/year for staff and direct marketing expenses
 - Business Services: ~\$150,000 for staff and program support expenses
 - Talent Generation: One time \$1M/year for Skills Training Center + Ongoing funding for K-12 outreach and internships
 - World Class ECM Applied Research Center: with federal/state/private funding on the order of \$5M to \$10M/ year for 5-10 years

Approach of Benchmarks for Funding Mechanism

Research Park - Program Entity(s)	Financial Models	Operational Scope and Budget Range	Financing Powers & Sources	Other Special Powers
Illinois Medical District and Chicago Technology Park	Revenue bonds supported by tenants organization income; Recent use of General Obligation bonds	Apart from capital expenditures, annual operating budget is @\$200k	Development now principally done at the individual institution and project level	
Centennial Campus at North Carolina State	Originally by the university itself, starting with academic and multifunction buildings, and recently moving to single-use commercial buildings (either wet-lab, or office)	Part of an integrated campus development	Not separate from the University	
Virginia Biotechnology Park and Virginia BioTech Park Research Authority	Created a specialized state financing authority as a political subdivision of the state; Park Corp. is a 501(c) (3) corporation	Targeted to the development of the park(s); Board and staff of the Authority manage daily operations of the Park Annual operating budget of \$3.0 to \$3.7M	Finances the development and construction of buildings through bonding and other debt instruments	Ability to receive resources from all levels of government including land; Assembles and sells land with the Park; Partnerships with adjacent counties
Delaware Technology Park	Buildings are generally financed as individual LLC's with private investors	All operating costs are supported by lease and rental income	University City Science Center (Philadelphia partner) guaranteed early developments until track record established	–
University of Arizona Science & Technology Park	Although Park Development entity is a 501(c) (3), it is indirectly supported by the university	Except for subsidized incubator, operating costs are supported by lease and rental income Operating Budget	Cash flow from anchor tenant (IBM) bond payments generate cash flow to support additional operations	

Proposed Approach for WVERT

- **Establish a predictable and sustained source of funding for program activities**
 - Provide the funding mechanism be a catalyst and resource for West Virginia's leading Energy, Chemicals and Materials sector
- **This requires state authorization to support this initiative**
 - Seek bonding authority (as in VA and IL)
 - Pursue more innovative financing from state revenues generated by industry, such as done by Kansas (see best practice model)
 - Dedicate an existing revenue source

Best Practice Model: Kansas Biosciences Authority

- Statewide industry cluster (bioscience) initiative and entity that guides the state's investment.
- Predictable, innovative funding mechanism based on the growth of state income-tax withholdings from employees of bioscience-related companies.
- Does not run programs, but invests and evaluates performance, tracks results to:
 - Increase high-quality research with commercial relevance
 - Expand the availability of investment capital needed to form and grow new companies;
 - Grow and nurture an increasingly experienced pool of entrepreneurial management talent supported by organized systems of services and networking;
 - Facilitate bioscience corporate expansion and attract new-to-Kansas bioscience corporate activity that grows and strengthens specific clusters of excellence.

Approach to Management and Operations

- Need to address both how to access state funding with clear oversights and accountability as well as how to manage the day-to-day activities of WVERT
- Selected Lessons and Practices Drawn from Benchmarks

Research Park - Program Entity(s)	Mission & Role of Organizations	Composition of Board(s)	Appointing Authority and Accountability	Organizational Links & Subsidiaries
Illinois Medical District and Chicago Technology Park	IMDC's state charter enables it to serve and land acquisition, management and development organization for special development district in city of Chicago	Park Corp is being dissolved and functions absorbed by IMDC with Board of 7	4 state appointees; 2 city and one county appointee with staggered 5 year terms	CTP originally subsidiary to IMD Commission, now a "brand."
Centennial Campus at North Carolina State	Development of industry oriented research park within larger campus to advance mission of the University through a "campus of the future"	Co-terminus with university board	No separate governance in this case – park integrated with larger campus and university functions	NA
Virginia Biotechnology Park and Virginia BioTech Park Research Authority	Authority has state industry cluster mandate; Park is both signature site and regional driver-joint initiative of VCU, state & City	Different roles for Boards; but shared staff; 3 common ex officio's on both boards	Authority has 9-15 members for Authority w/ 3 ex officio; balance governor appointed; Park BoD self-renewing	Park Corp. has strong city, multi-county and university links
Delaware Technology Park	Development of 40 acre park adjacent to main campus of U of Delaware	Ex officio seats for State Director of Development, and University President; Governor appoints 6 directors from the private sector	Blend of ex officio and Governor appointed slots	NA – 501c3 corp., but with strong partnering relationships
University of Arizona Science & Technology Park	Following initial support through IBM financing and land transfer, focus on job creation and economic impact for region while advancing industry collaboration w/ university	Park Corp has 3-15 member board with strong links to U of A	University controlled with further staffing by University	Campus Research Corp – a 501(c)3- is essentially a subsidiary of the UoA's ED office with links to the Foundation

Proposed Management and Operations Approach

- **Role of Funding Mechanism Entity**
 - Develops and oversees implementation of statewide strategy for ECM cluster advancement
 - Promotes engagement and collaboration among industry, federal labs and higher education (community colleges, 4 year and research universities)
 - Grants making organization, not an operating organization – focus on accountability and due diligence
 - Funds pilot plant rehab and multi-tenant space
 - Funds program activities of WVERT Park Corporation beyond direct tenant services
 - Responsible for RFP process to select operator for the shared use pilot plant facility to work collaboratively with WVERT Park Corporation
 - Awards pilot production equipment and working capital loans
- **Role & Functions of Park Corporation, a 501c3 entity with a C-Level Board:**
 - Conducts its affairs “at the speed of business”
 - Manages property and campus wide services, supports tenants
 - Manages the delivery of commercialization services
 - Recruits and sells the Park to attracts and grow tech based businesses
 - Markets and develops customers for pilot plants in concert with operator and other organizations
 - Develops new facilities and structures financing
 - Puts together financing packages for Park developments and pilot plant projects
 - Undertakes strategic initiatives in collaboration with others to build and support applied research institutes in the Park as well as linkages beyond

Governance Options

- Funding Mechanism Entity
 - Can be new authorization for HEPC or a new statewide authority or some hybrid in collaboration with WV Department of Commerce
 - Should have representation from state economic development, ECM industry and higher education institutions
- WVERT Park Corporation
 - Some overlapping board with Funding Mechanism Entity – i.e. HEPC, WV Department of Commerce
 - Higher education representation
 - Charleston region economic development representation
 - C Level industry leaders
- Staffing Options
 - To the extent feasible, have a shared staff between WVERT Park Corporation and the Funding Mechanism Entity.
 - Of particular importance is having a shared CEO – suggest that the WVERT Park Corporation be responsible for the selection and hiring, with approval from the Funding Mechanism Entity
 - This is similar to how VA Biotechnology Park and its related VA Biotech Research Park Authority operate.

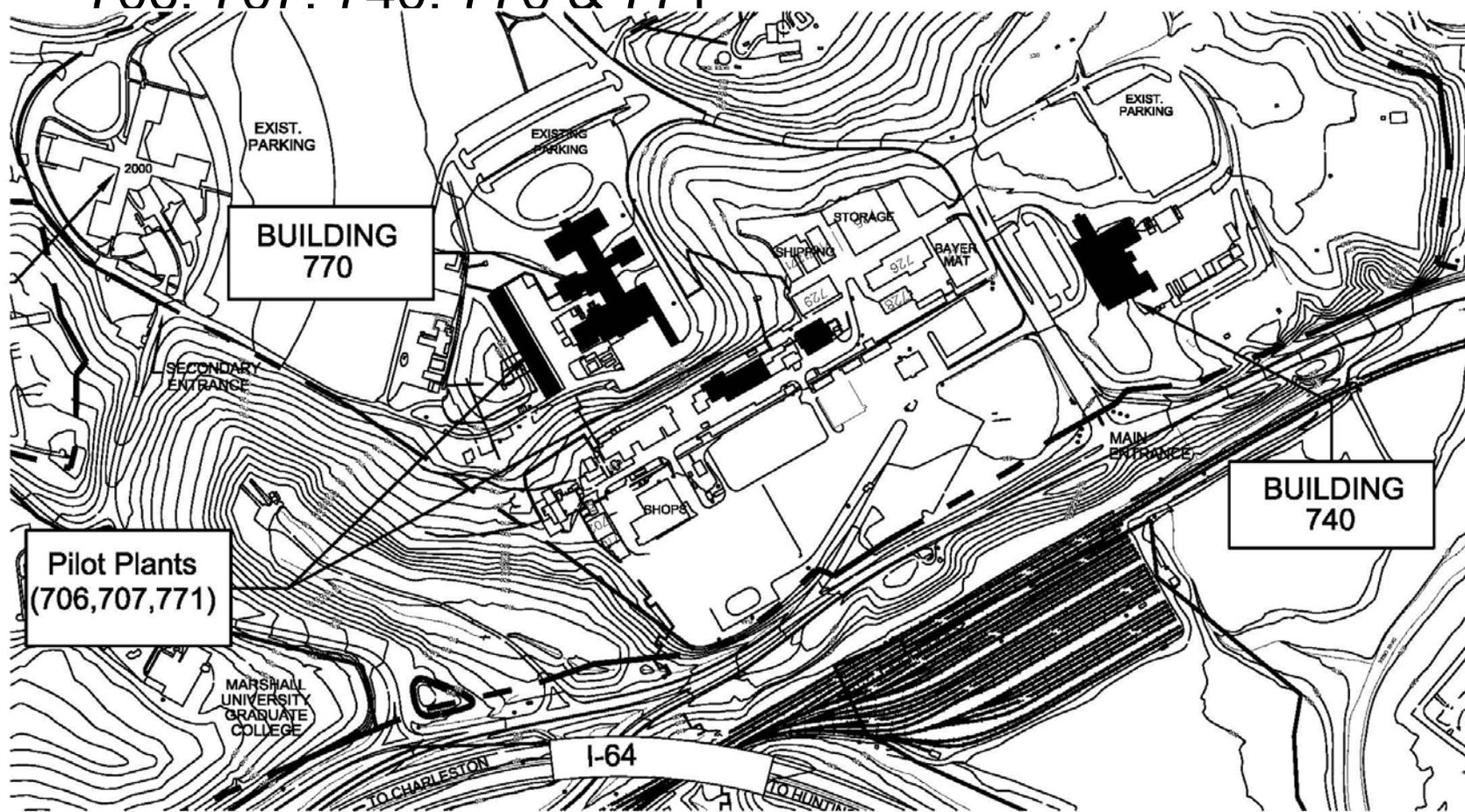
Facility Development: Recommended Baseline Scenario – “Work with What You Have”

- **Pilot Plants:**
 - Complete basic infrastructure and systems upgrades for Building 707 to make ready for marketing for specific customers and projects
 - Do same for Building 706 based upon demand
 - Decommission Building 771 as a pilot plant
- **Building 740** - Continue to accommodate current tenants and short term growth until 770 is ready
- **Building 770** - Renovate building wide systems and segments of while still vacant to them accommodate current and new tenants and future growth

Site Plan

- Site Plan & Issues

– 706. 707. 740. 770 & 771



Pilot Plants

- Building 771

- Decommission as Pilot Plant

- Difficult to secure; Small cells
 - Exposure to main portion of the site for explosion relief
 - Could repurpose for other type of research space



- Buildings 706 and 707 (Powell Report)

- Cosmetic Upgrades

- Cleanup and label,
 - Validate and specify service levels,
 - Upgrade one ground floor annex w/ Model control room

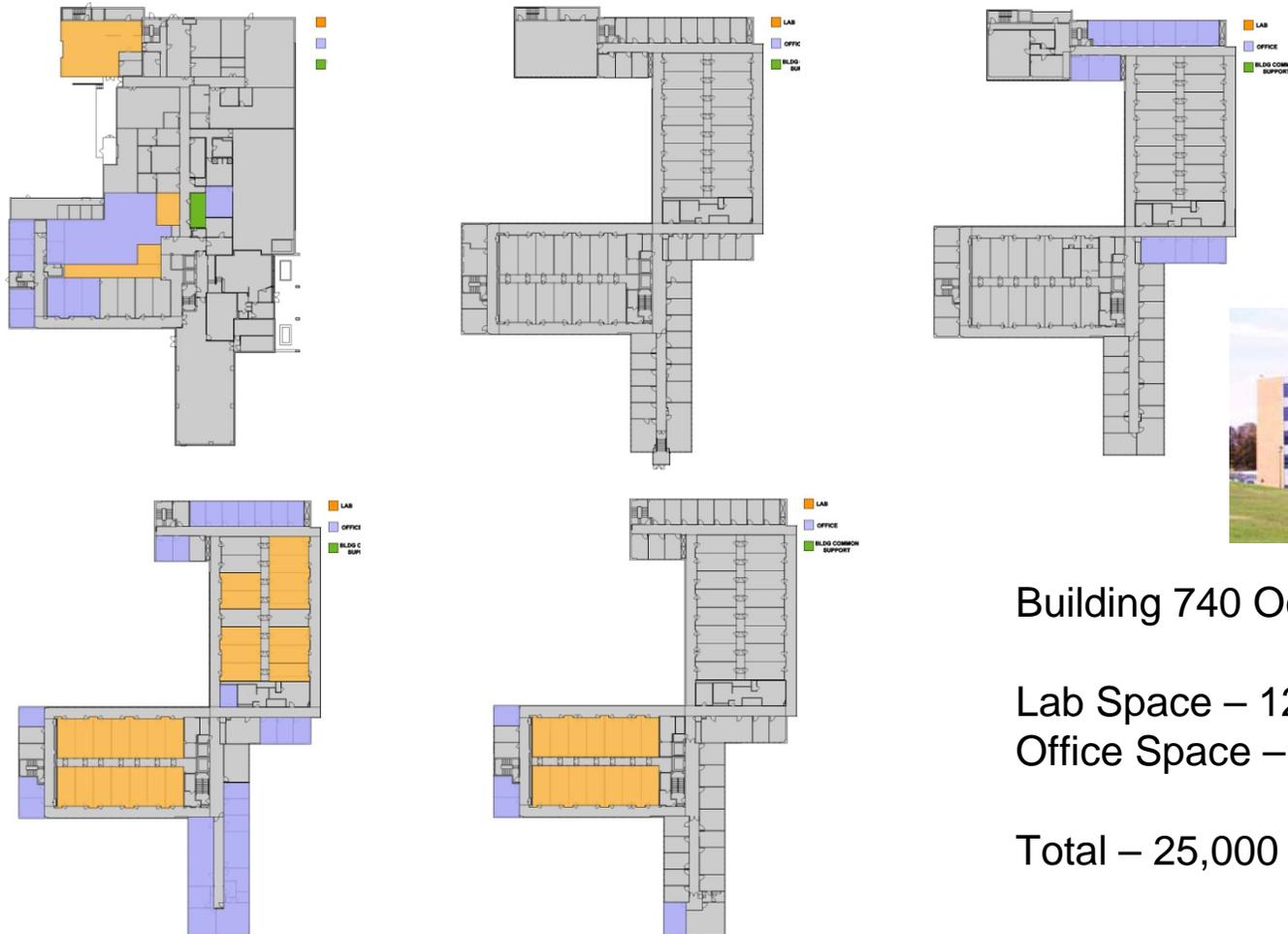
- Capabilities enhancements

- Investments in general facility infrastructure prioritized to high fit targets
 - Sets stage for project specific equipment



Current Lab/Office Building

- Building 740 Occupancy



Building 740 Occupied Space

Lab Space – 12,000 sf
Office Space – 13,000 sf

Total – 25,000 sf

Future Lab/Office - Building 770

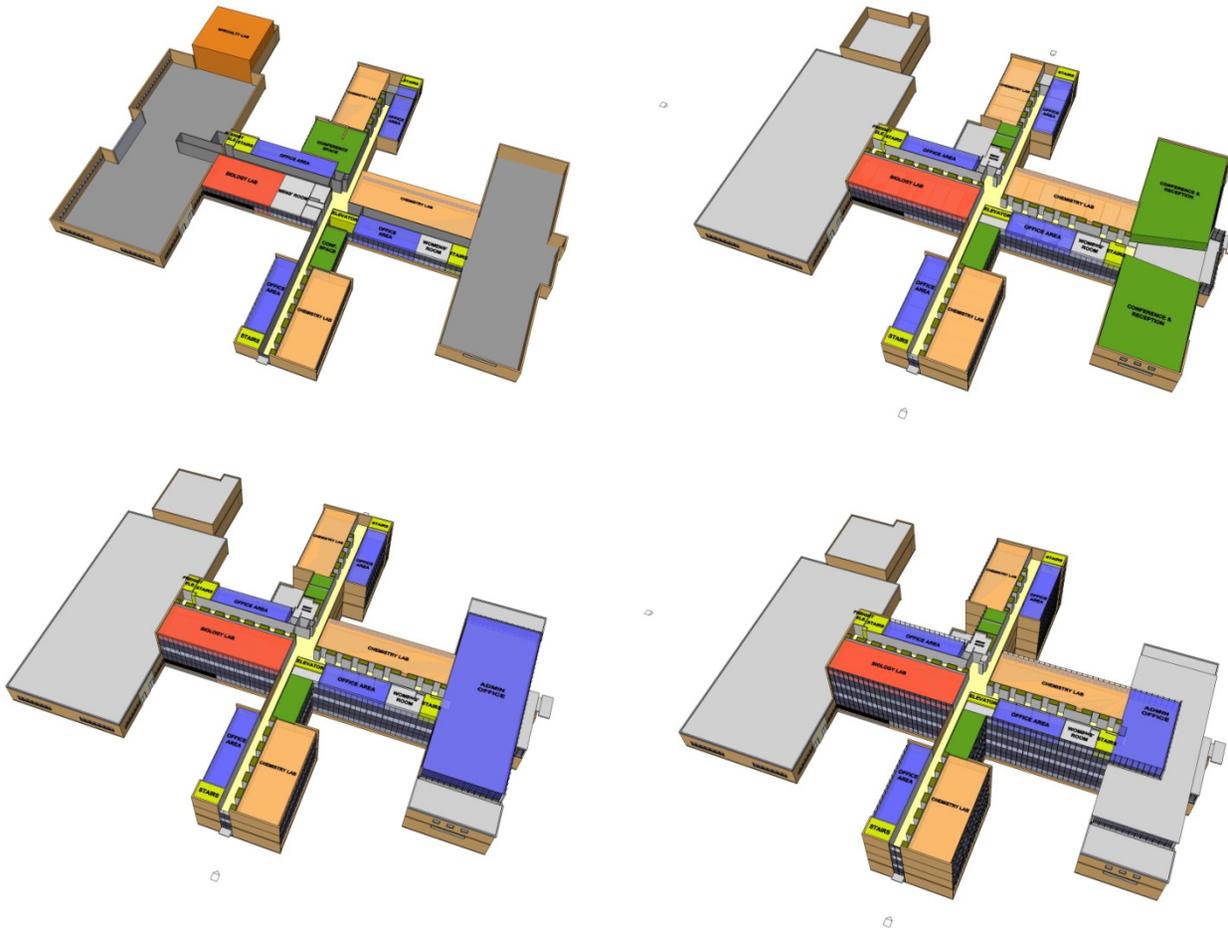
- 770 Area by Space Type

Building 770 Available Space (net)

Lab Space – 38,000 sf

Office Space – 22,000 sf

Total – 60,000 sf



Building 770: Upgrade Approach

- Maintain Space Types and Location
 - Circulation to remain
 - Lab Office Ratio
 - Lab Module – 11'-0"
- Flexible Space Fit-out
 - Modular Lab Casework System
 - Subdivide Spaces based on Tenant Needs
 - Minimal Cost to Building Systems to Retrofit for New Tenants
- Air Systems to be Variable Volume to meet Fluctuating Needs
- Upgrade/add Systems before First Tenant Moves in
 - Tenant renovation isolated to tenant space, not systems
 - Minimizes future renovations for existing tenants



Building 770 Renovation – Building-wide

- **System Breakdown**

- Building Envelope-Curtainwall – 21 ksf – no insulation, single glazing
- General Spaces-Upgrade Lighting and Finishes
- Laboratory Spaces-New Finishes and Fit-out
- Building Automation System
- Air Supply
- Air Exhaust-Multiple Fan Manifold System
- Emergency Life Safety Power-Emergency Lighting and Critical Systems
- Backup Power-Research Equipment
- Security-Building Wide and Individual Tenants



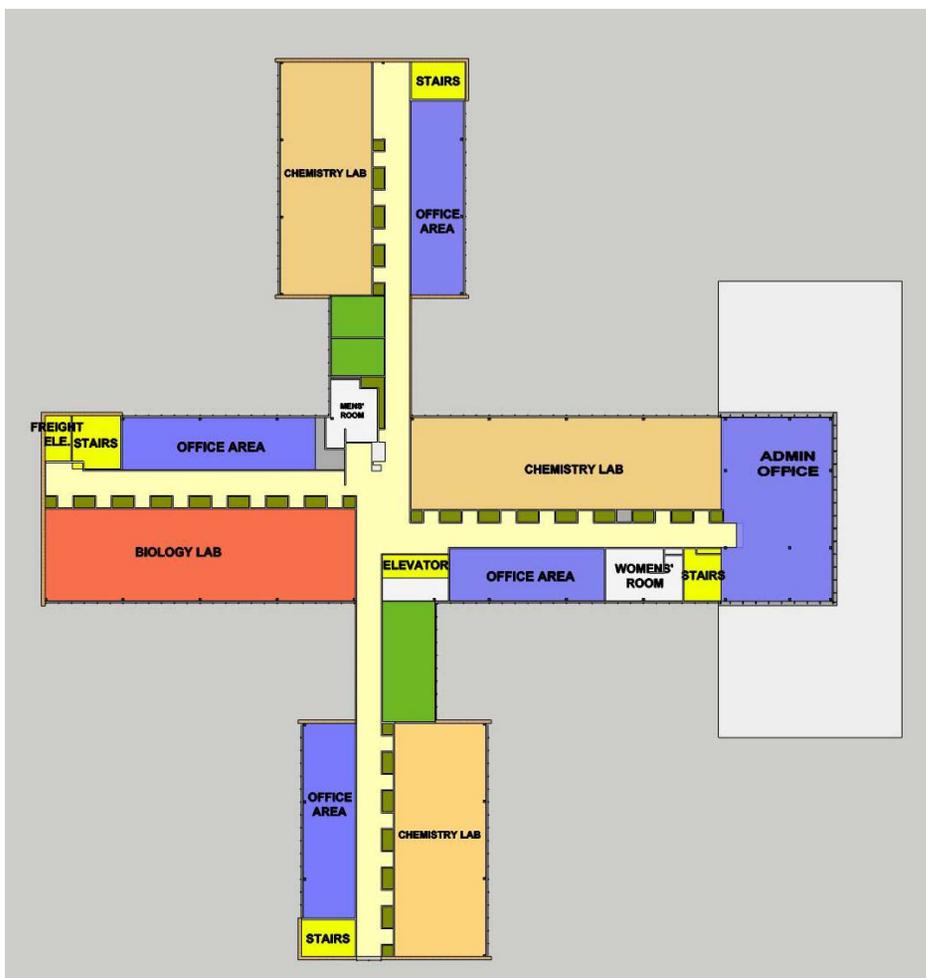
- **General Spaces-Upgrade Lighting and Finishes**

- New Energy Efficient Lighting Fixtures Throughout
- Repaint walls
- New Carpet/Floor Finishes
- Replace Lay-in Ceilings

Laboratory Building 770

- **Building Automation System**
 - Provides for Variable Volume of required Air to Spaces
- **Air Supply**
 - New Lab 100 % OA AHU, one per Wing
 - New Re-circulating RTU serving non-lab spaces
 - Reduces outside air to code minimums
- **Air Exhaust-Multiple Fan Manifold System**
 - Volume varies with demand on system. Eliminates individual fans in penthouse
 - Multiple fans for redundancy
 - Can be designed for incremental fans increase
- **Emergency Life Safety Power-Emergency Lighting and Critical Systems**
 - Single generator and distribution for code required items
- **Backup Power-Research Equipment**
 - Single generator for critical lab equipment, freezers, etc.
- **Security-Building Wide and Individual Tenants**

Building 770: Typical Floor



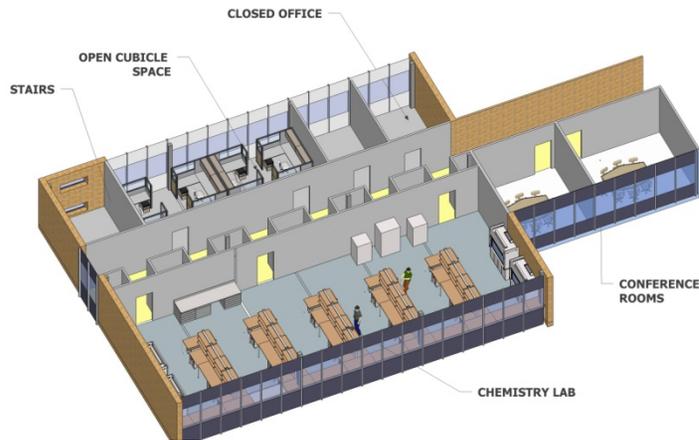
Chem. Lab Space – 6,000 sf

Bio. Lab Space – 2,000 sf

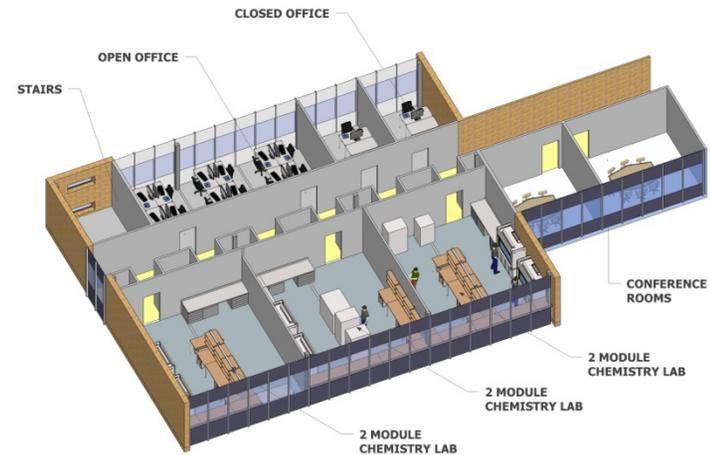
Office Space – 5,000 sf

Building 770: Typical Chemical Lab Layouts

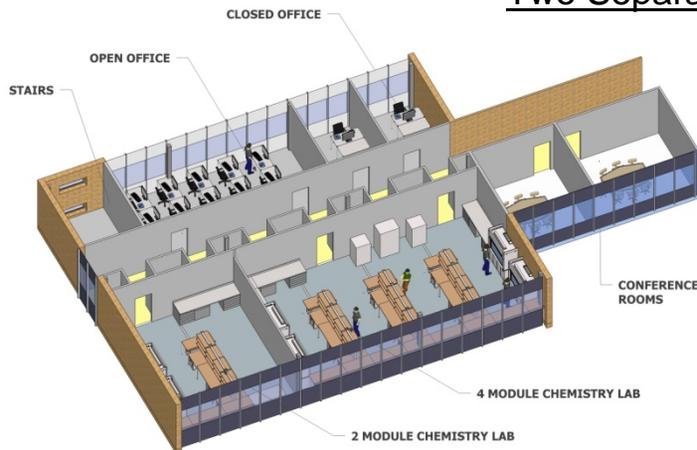
Single Large Suite



Three Separate Labs



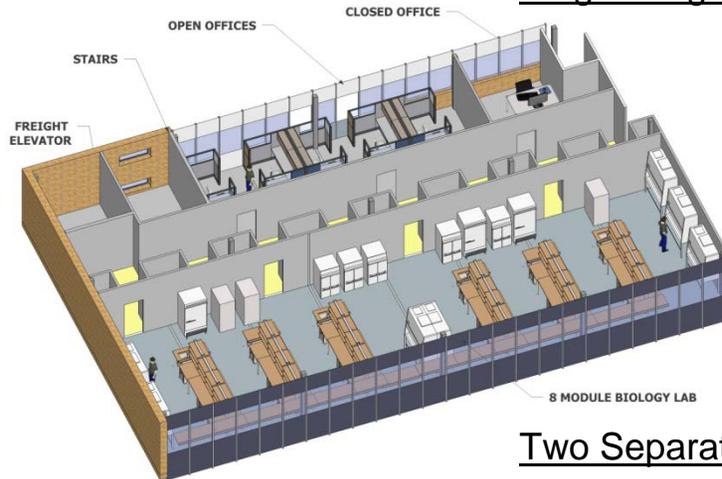
Two Separate Labs



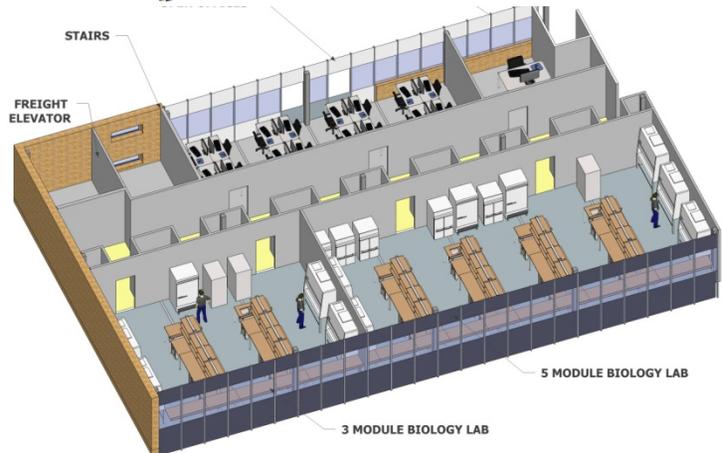
Lab Gases & Electrical Service from Ceiling Distribution

Building 770 Typical Biological Lab Layouts

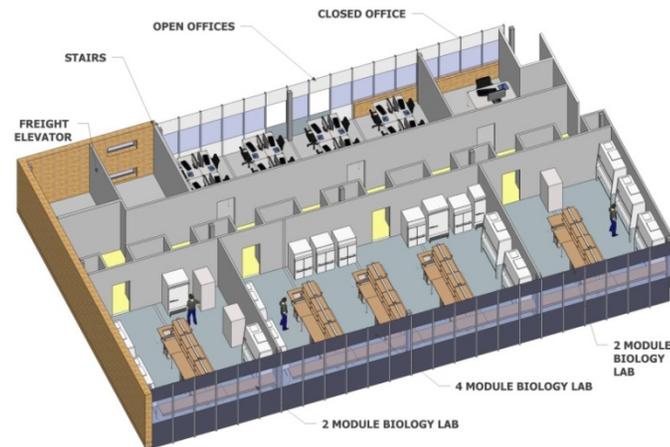
Single Large Suite



Two Separate Labs



Three Separate Labs



Lab Gases & Electrical Service from Ceiling Distribution

Plans for Building 770 After Renovation

- **Occupancy After Renovation**

- ***Relocate Existing Tenants from Building 740***

- Lab Space - 12,000 sf
 - Office Space - 13,000 sf

- ***Potential for Agriculture Department***

- Chem. Lab Space - 6,000 sf
 - Bio Lab Space – 2,000 sf
 - Office Space – 5,000 sf

- ***Total Potential:***

- Lab Space - 19,000 sf Approximate Remaining Lab: 19,000 sf
 - Office Space – 18,000 sf Approximate Remaining Office: 4,000 sf

- **Timeline for Upgrades**

- Design – 6 months
 - Construction 12-20 months

Contacts



Battelle Technology Partnership Practice

Mitch Horowitz

Vice President & Managing Director

Phone: 240-462-5456

E-mail: horowitzm@battelle.org

Steve Andrade

Program Manager

Phone: 508-669-5560

E-mail: andrades@battelle.org



Sam Sutton, AIA

Project Manager

CH2M HILL

Pittsburgh Office

Phone: 412-249-6495

E-mail: sam.sutton@ch2m.com



West Virginia Higher Education Policy Commission

**Report to the Legislative Oversight Commission
on Education Accountability**

November 15, 2010

Enrollment Trends in Higher Education

Enrollment Trends in Higher Education



Presented to the
Legislative Oversight Commission on Education Accountability

November 15, 2010

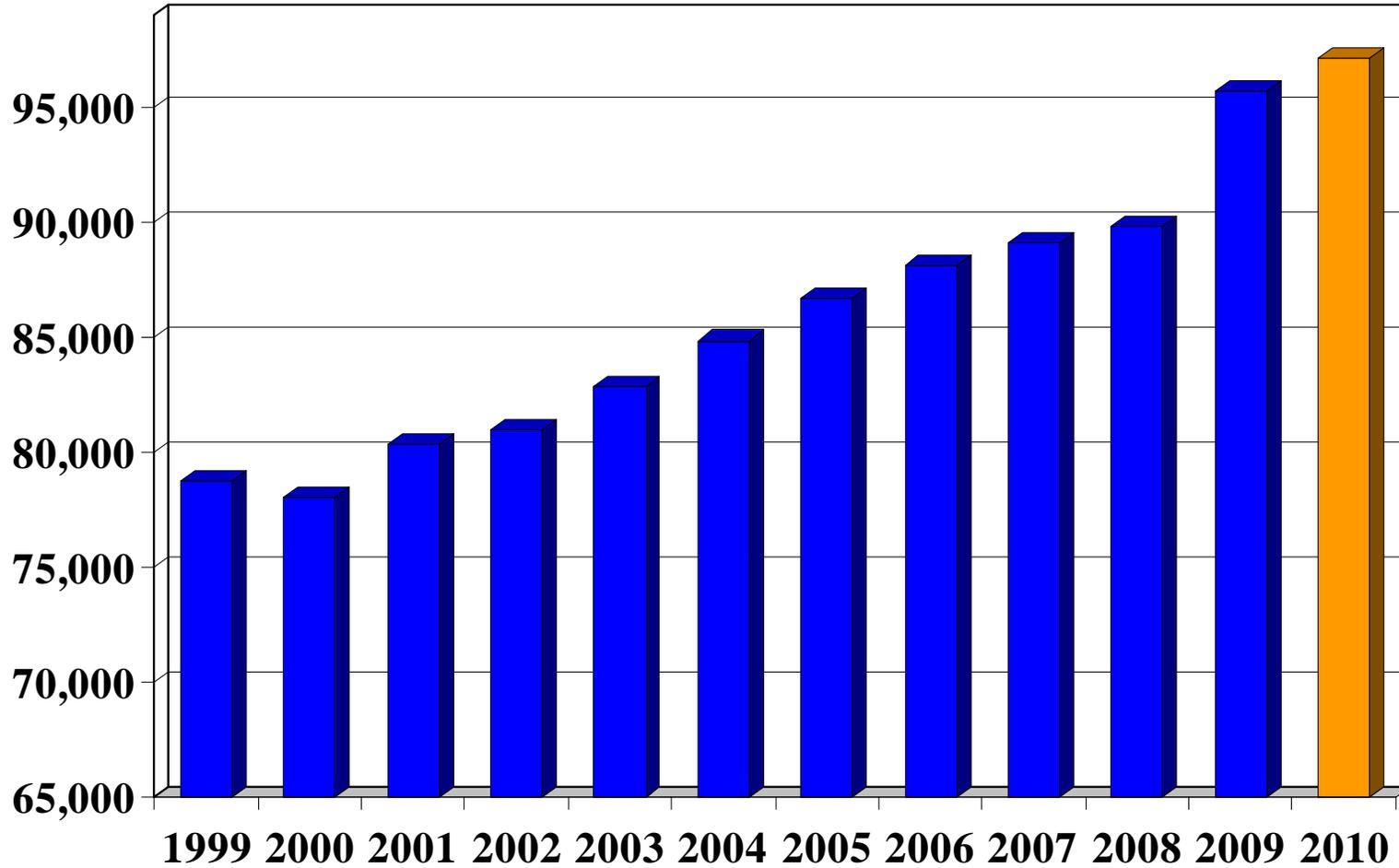


The Recession & Enrollment Trends

- The National Association for College Admission Counseling (NACAC) 2009 State of College Admissions survey found that the current recession has had a number of effects on the enrollment pipeline nationwide, including:
 - Students were more likely to forego ‘dream’ schools in favor of more affordable options, including reported shifts in preferences from private to public institutions
 - Students applied to more schools and were more likely to submit financial aid applications
 - Institutions admitted a higher proportion of students, but yields were down
 - Students were more likely to turn down offers of acceptance, citing insufficient aid to attend

Total Headcount Enrollment

Fall 2010 Census



Total headcount enrollment: **95,118**

Headcount increased **2%** over fall 2009, and **10.5%** over fall 2006.



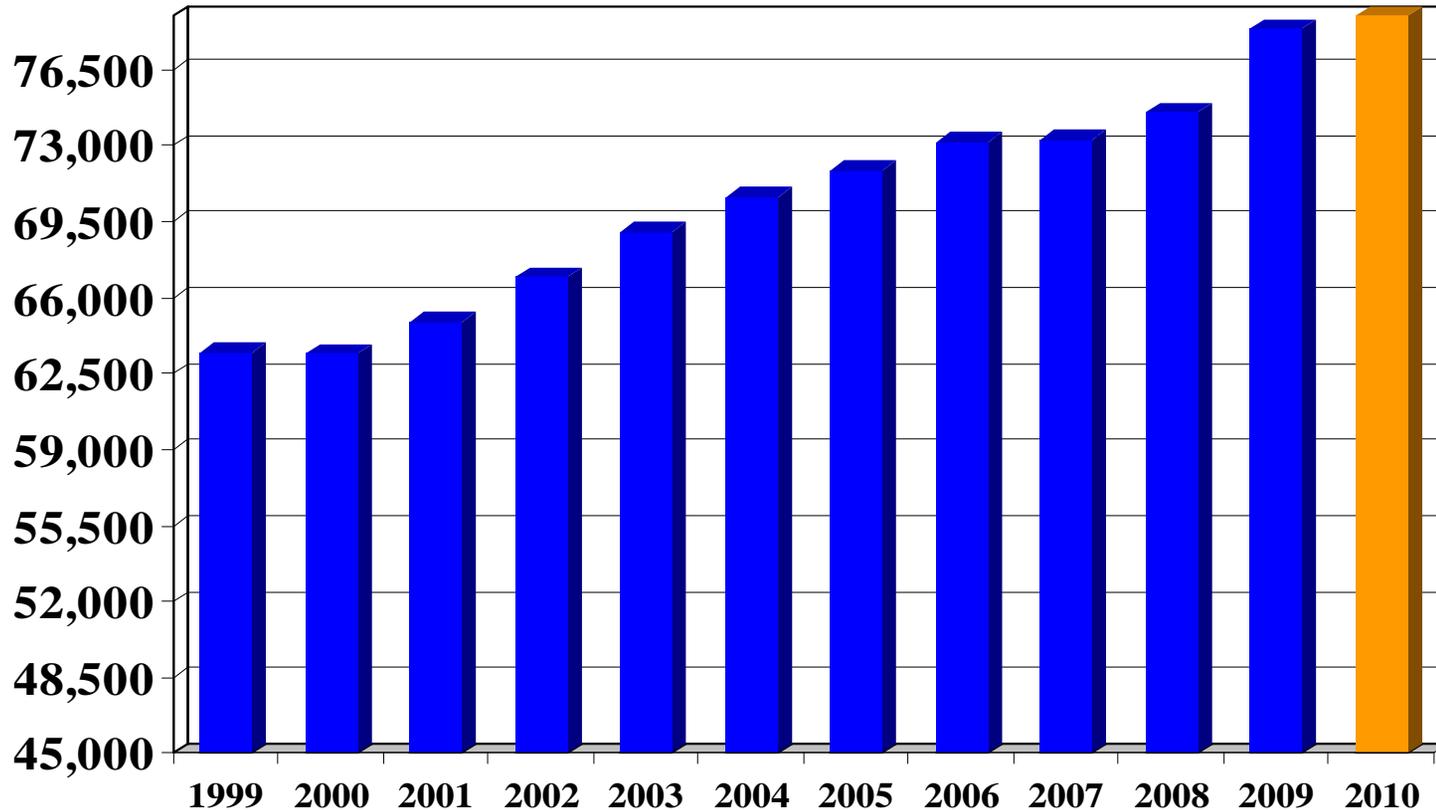
Headcount Enrollment by Institution

Institution	2004	2005	2006	2007	2008	2009	2010	% Change	
								2009-10	2006-10
Total Headcount									
Bluefield State College	1,840	1,710	1,788	1,804	1,868	1,989	2,063	3.7%	15.4%
Concord University	2,946	2,958	2,928	2,735	2,812	2,882	2,822	-2.1%	-3.6%
Fairmont State University	4,163	4,710	4,602	4,331	4,546	4,572	4,709	3.0%	2.3%
Glenville State College	1,319	1,392	1,381	1,441	1,443	1,721	1,828	6.2%	32.4%
Marshall University	13,602	13,805	13,810	13,659	13,282	13,434	13,717	2.1%	-0.7%
Potomac State College	1,304	1,279	1,485	1,608	1,582	1,810	1,836	1.4%	23.6%
Shepherd University	3,682	3,901	4,091	4,119	4,185	4,256	4,234	-0.5%	3.5%
West Liberty University	2,338	2,246	2,272	2,404	2,500	2,642	2,733	3.4%	20.3%
West Virginia School of Osteopathic Medicine	363	397	503	598	691	778	806	3.6%	60.2%
WV State University	3,344	3,491	3,502	3,218	3,003	4,003	3,190	-20.3%	-8.9%
West Virginia University	25,255	26,051	27,115	28,113	28,840	28,898	29,306	1.4%	8.1%
WVU Institute of Technology	1,685	1,535	1,466	1,445	1,224	1,244	1,209	-2.8%	-17.5%
Total 4 Yr	61,841	63,475	64,943	65,475	65,976	68,229	68,453	0.3%	5.4%
Total 2 Yr	21,004	21,238	21,145	21,591	21,827	25,483	26,665	4.6%	26.1%
Grand Total	82,845	84,713	86,088	87,066	87,803	93,712	95,118	1.5%	10.5%

Source: West Virginia Higher Education Policy Commission

Total FTE Enrollment

Fall 2010 Census



Total FTE enrollment: 78,570

FTE enrollment increased 3% over fall 2009 and 10% over fall 2005.

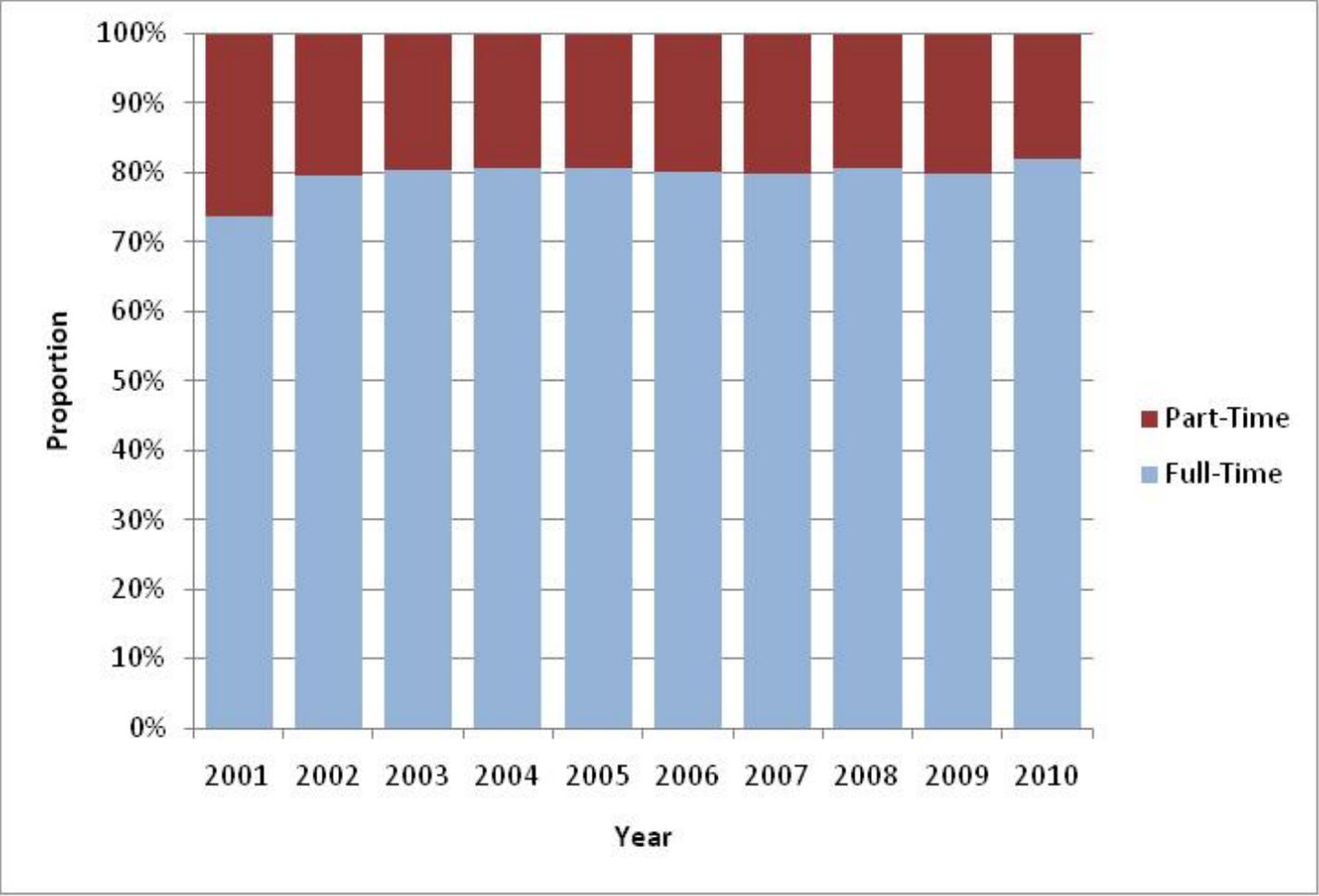
Full-Time Equivalent Enrollment

Institution	2004	2005	2006	2007	2008	2009	2010	% Change	
								2009-10	2006-10
Total FTE									
Bluefield State College	1,563	1,486	1,530	1,561	1,632	1,730	1,729	-0.1%	13.0%
Concord University	2,757	2,770	2,646	2,558	2,705	2,753	2,706	-1.7%	2.3%
Fairmont State University	3,770	4,220	4,045	3,647	3,956	4,031	4,121	2.2%	1.9%
Glenville State College	1,207	1,277	1,216	1,207	1,262	1,356	1,468	8.3%	20.7%
Marshall University	10,836	10,922	10,803	10,778	10,599	10,843	11,422	5.3%	5.7%
Potomac State College	1,017	1,013	1,154	1,266	1,242	1,468	1,524	3.8%	32.1%
Shepherd University	3,183	3,330	3,467	3,512	3,569	3,721	3,748	0.7%	8.1%
West Liberty University	2,379	2,251	2,246	2,293	2,408	2,546	2,636	3.5%	17.4%
West Virginia School of Osteopathic Medicine	363	397	503	598	691	778	806	3.6%	60.2%
WV State University	2,649	2,694	2,727	2,569	2,337	2,739	2,459	-10.2%	-9.8%
West Virginia University	23,652	24,601	25,678	26,287	26,997	27,212	27,704	1.8%	7.9%
WVU Institute of Technology	1,363	1,227	1,297	1,208	1,044	1,104	1,056	-4.3%	-18.6%
Total 4 Yr	54,739	56,188	57,312	57,485	58,443	60,282	61,377	1.8%	7.1%
Total 2 Yr	13,918	13,659	13,831	13,768	14,089	16,085	17,193	6.9%	24.3%
Grand Total	68,657	69,847	71,143	71,253	72,532	76,367	78,570	2.9%	10.4%

Source: West Virginia Higher Education Policy Commission



Intensity of Enrollment Composition at Bachelor's Degree Granting Institutions



Source: West Virginia Higher Education Policy Commission



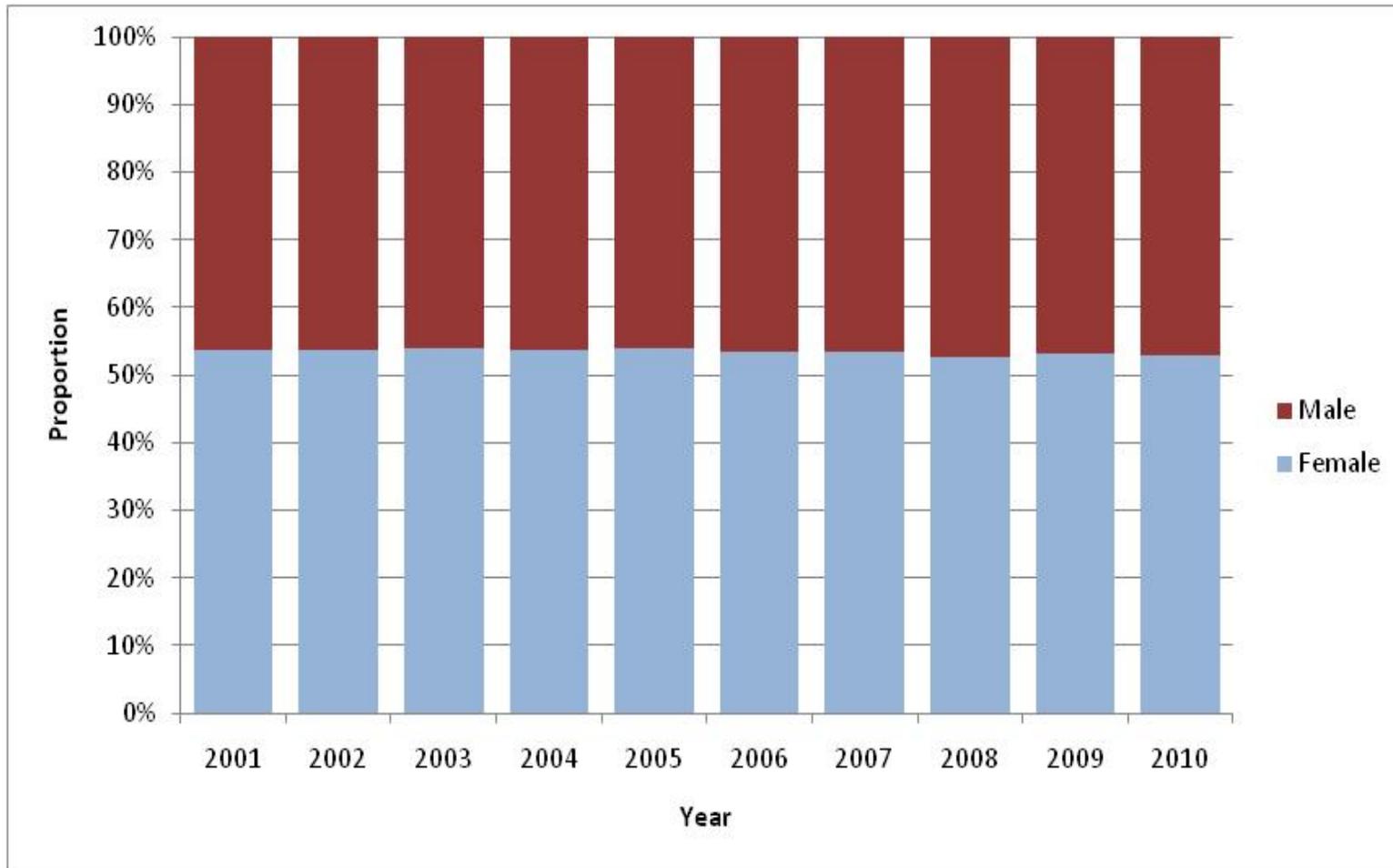
First-Time Freshmen Headcount Enrollment by Institution

Institution	2006	2007	2008	2009	2010	% Change	
						2009-10	2006-10
Total First-Time Freshmen Headcount							
Bluefield State College	261	307	283	314	301	-4.1%	15.3%
Concord University	603	627	719	611	575	-5.9%	-4.6%
Fairmont State University	649	618	771	820	776	-5.4%	19.6%
Glenville State College	268	291	303	331	416	25.7%	55.2%
Marshall University	1,549	1,686	1,690	1,885	1,961	4.0%	26.6%
Potomac State College	541	616	639	723	710	-1.8%	31.2%
Shepherd University	699	706	707	801	769	-4.0%	10.0%
West Liberty University	473	475	507	578	534	-7.6%	12.9%
WV State University	415	391	372	455	358	-21.3%	-13.7%
West Virginia University	4,828	4,731	5,135	4,589	5,034	9.7%	4.3%
WVU Institute of Technology	212	253	232	291	260	-10.7%	22.6%
Total 4 Yr	10,498	10,701	11,358	11,398	11,694	2.6%	11.4%
Total 2 Yr	3,958	3,921	3,928	4,604	4,714	2.4%	19.1%
Grand Total	14,456	14,622	15,286	16,002	16,408	2.5%	13.5%

Source: West Virginia Higher Education Policy Commission



Gender Composition of Enrollments at BA Degree Granting Institutions



Source: West Virginia Higher Education Policy Commission



Female Enrollment in Public Institutions

Institution	2004	2005	2006	2007	2008	2009	2010	% Change	
								2009-10	2006-10
Total Headcount									
Bluefield State College	1,095	1,021	1,049	1,067	1,117	1,205	1,301	8.0%	24.0%
Concord University	1,727	1,742	1,707	1,616	1,639	1,705	1,606	-5.8%	-5.9%
Fairmont State University	2,302	2,650	2,588	2,423	2,562	2,576	2,674	3.8%	3.3%
Glenville State College	701	663	662	699	630	743	818	10.1%	23.6%
Marshall University	8,135	8,283	8,275	8,151	7,942	7,977	8,092	1.4%	-2.2%
Potomac State College	691	692	812	864	832	952	945	-0.7%	16.4%
Shepherd University	2,124	2,236	2,341	2,374	2,391	2,427	2,440	0.5%	4.2%
West Liberty University	1,275	1,289	1,323	1,367	1,412	1,498	1,578	5.3%	19.3%
West Virginia School of Osteopathic Medicine	180	186	241	295	331	369	371	0.5%	53.9%
WV State University	1,981	2,041	2,061	1,847	1,697	2,400	1,847	-23.0%	-10.4%
West Virginia University	12,310	12,716	13,037	13,710	13,768	13,919	14,049	0.9%	7.8%
WVU Institute of Technology	660	648	626	579	461	472	451	-4.4%	-28.0%
Total 4 Yr	33,181	34,167	34,722	34,992	34,782	36,243	36,172	-0.2%	4.2%
Total 2 Yr	12,694	12,895	12,924	13,229	13,556	15,333	16,046	4.7%	24.2%
Grand Total	45,875	47,062	47,646	48,221	48,338	51,576	52,218	1.2%	9.6%

Source: West Virginia Higher Education Policy Commission



Age 24 or Younger Undergraduate Enrollment in Public Institutions

Institution	2004	2005	2006	2007	2008	2009	2010	% Change	
								2009-10	2006-10
Total Headcount									
Bluefield State College	977	954	990	1,036	1,114	1,169	1,191	1.9%	20.3%
Concord University	2,361	2,312	2,293	2,208	2,288	2,221	2,206	-0.7%	-3.8%
Fairmont State University	2,970	3,281	3,089	2,873	3,001	3,015	3,020	0.2%	-2.2%
Glenville State College	1,071	1,096	1,114	1,135	1,088	1,175	1,226	4.3%	10.1%
Marshall University	8,089	8,018	7,745	7,540	7,372	7,601	7,839	3.1%	1.2%
Potomac State College	1,114	1,116	1,274	1,366	1,387	1,549	1,567	1.2%	23.0%
Shepherd University	2,634	2,764	2,887	2,911	2,960	3,009	3,010	0.0%	4.3%
West Liberty University	1,960	1,894	1,926	2,072	2,197	2,287	2,336	2.1%	21.3%
WV State University	2,077	2,181	2,184	1,987	1,932	2,465	2,027	-17.8%	-7.2%
West Virginia University	17,304	18,132	19,182	19,613	20,394	20,208	20,620	2.0%	7.5%
WVU Institute of Technology	1,214	1,093	1,052	1,024	909	967	924	-4.4%	-12.2%
Total 4 Yr	41,771	42,841	43,736	43,765	44,642	45,666	45,966	0.7%	5.1%
Total 2 Yr	11,757	11,645	11,592	12,159	12,364	13,623	13,586	-0.3%	17.2%
Grand Total	53,528	54,486	55,328	55,924	57,006	59,289	59,552	0.4%	7.6%

Source: West Virginia Higher Education Policy Commission



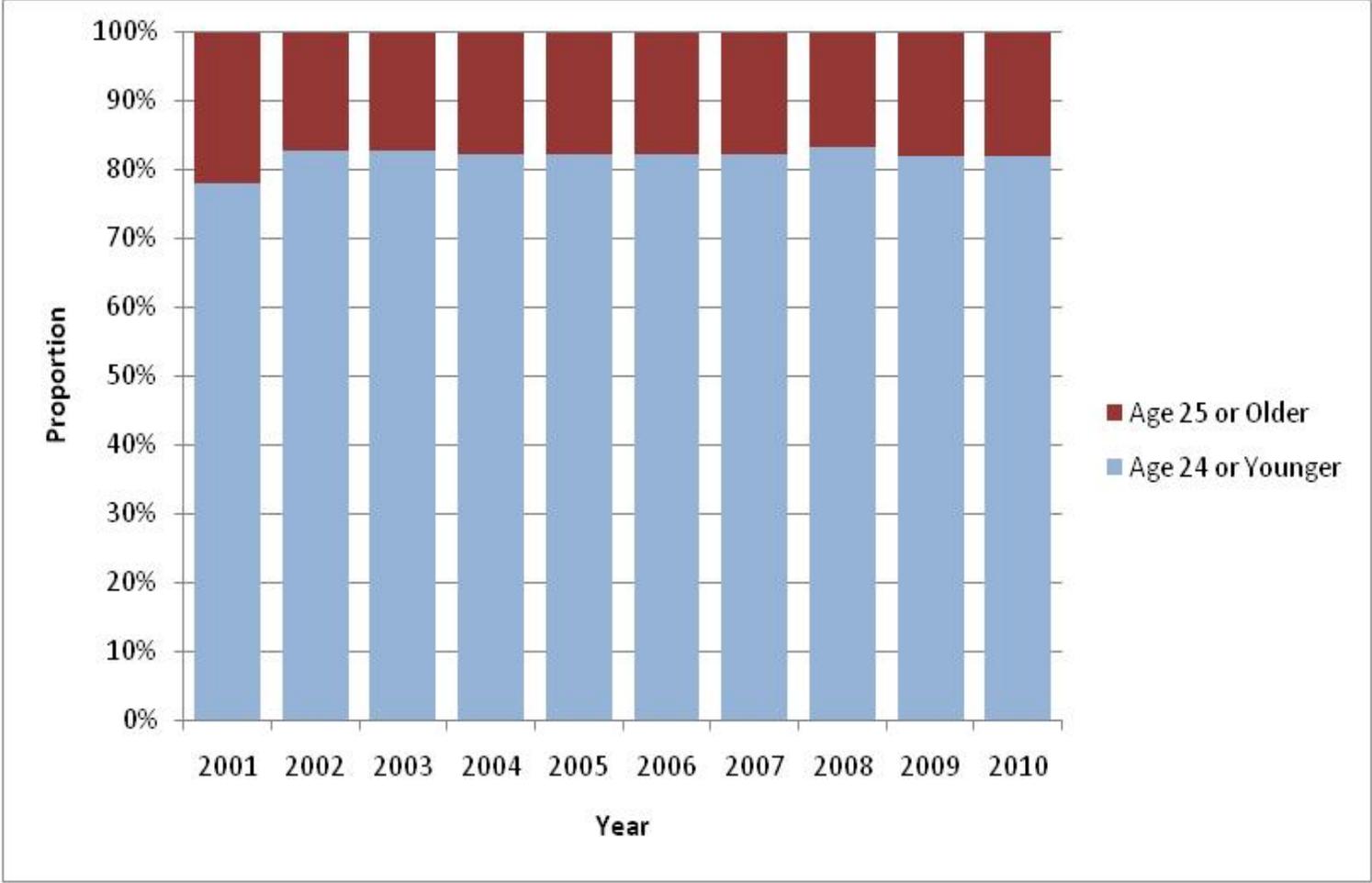
Age 25 or Older Undergraduate Enrollment in Public Institutions

Institution	2004	2005	2006	2007	2008	2009	2010	% Change	
								2009-10	2006-10
Total Headcount									
Bluefield State College	863	756	798	768	754	820	872	6.3%	9.3%
Concord University	486	516	512	423	431	429	471	9.8%	-8.0%
Fairmont State University	1,060	1,203	1,163	1,103	1,113	1,208	1,342	11.1%	15.4%
Glenville State College	248	296	267	306	355	546	602	10.3%	125.5%
Marshall University	1,750	1,831	2,005	2,068	1,948	2,040	2,152	5.5%	7.3%
Potomac State College	190	163	211	242	195	261	269	3.1%	27.5%
Shepherd University	983	1,045	1,083	1,054	1,084	1,093	1,070	-2.1%	-1.2%
West Liberty University	378	347	339	329	287	308	347	12.7%	2.4%
WV State University	1,241	1,274	1,281	1,188	1,029	1,488	1,118	-24.9%	-12.7%
West Virginia University	1,349	1,378	1,408	1,532	1,536	1,512	1,683	11.3%	19.5%
WVU Institute of Technology	441	426	407	419	315	277	285	2.9%	-30.0%
Total 4 Yr	8,989	9,235	9,474	9,432	9,047	9,982	10,211	2.3%	7.8%
Total 2 Yr	9,247	9,593	9,553	9,432	9,463	11,860	13,079	10.3%	36.9%
Grand Total	18,236	18,828	19,027	18,864	18,510	21,842	23,290	6.6%	22.4%

Source: West Virginia Higher Education Policy Commission



Age Composition of Undergraduate Students at Bachelor's Degree Granting Institutions



Source: West Virginia Higher Education Policy Commission



In-State Student Enrollment in Public Institutions

Institution	2004	2005	2006	2007	2008	2009	2010	% Change	
								2009-10	2006-10
Total Headcount									
Bluefield State College	1,739	1,602	1,663	1,625	1,638	1,753	1,821	3.9%	9.5%
Concord University	2,523	2,526	2,462	2,283	2,304	2,371	2,299	-3.0%	-6.6%
Fairmont State University	3,868	4,394	4,326	4,071	4,188	4,237	4,330	2.2%	0.1%
Glenville State College	1,196	1,259	1,260	1,281	1,263	1,545	1,643	6.3%	30.4%
Marshall University	11,256	11,271	11,165	10,875	10,426	10,390	10,469	0.8%	-6.2%
Potomac State College	1,036	1,036	1,155	1,162	1,173	1,379	1,385	0.4%	19.9%
Shepherd University	2,243	2,339	2,323	2,309	2,325	2,455	2,530	3.1%	8.9%
West Liberty University	1,675	1,626	1,600	1,662	1,708	1,846	1,887	2.2%	17.9%
West Virginia School of Osteopathic Medicine	220	216	217	213	219	221	202	-8.6%	-6.9%
WV State University	3,035	3,167	3,143	2,866	2,690	3,575	2,866	-19.8%	-8.8%
West Virginia University	14,917	14,942	15,224	15,709	15,654	15,669	15,524	-0.9%	2.0%
WVU Institute of Technology	1,483	1,404	1,325	1,292	1,078	1,066	1,065	-0.1%	-19.6%
Total 4 Yr	45,191	45,782	45,863	45,348	44,666	46,507	46,021	-1.0%	0.3%
Total 2 Yr	19,218	19,362	19,357	19,867	20,144	23,452	24,298	3.6%	25.5%
Grand Total	64,409	65,144	65,220	65,215	64,810	69,959	70,319	0.5%	7.8%

Source: West Virginia Higher Education Policy Commission



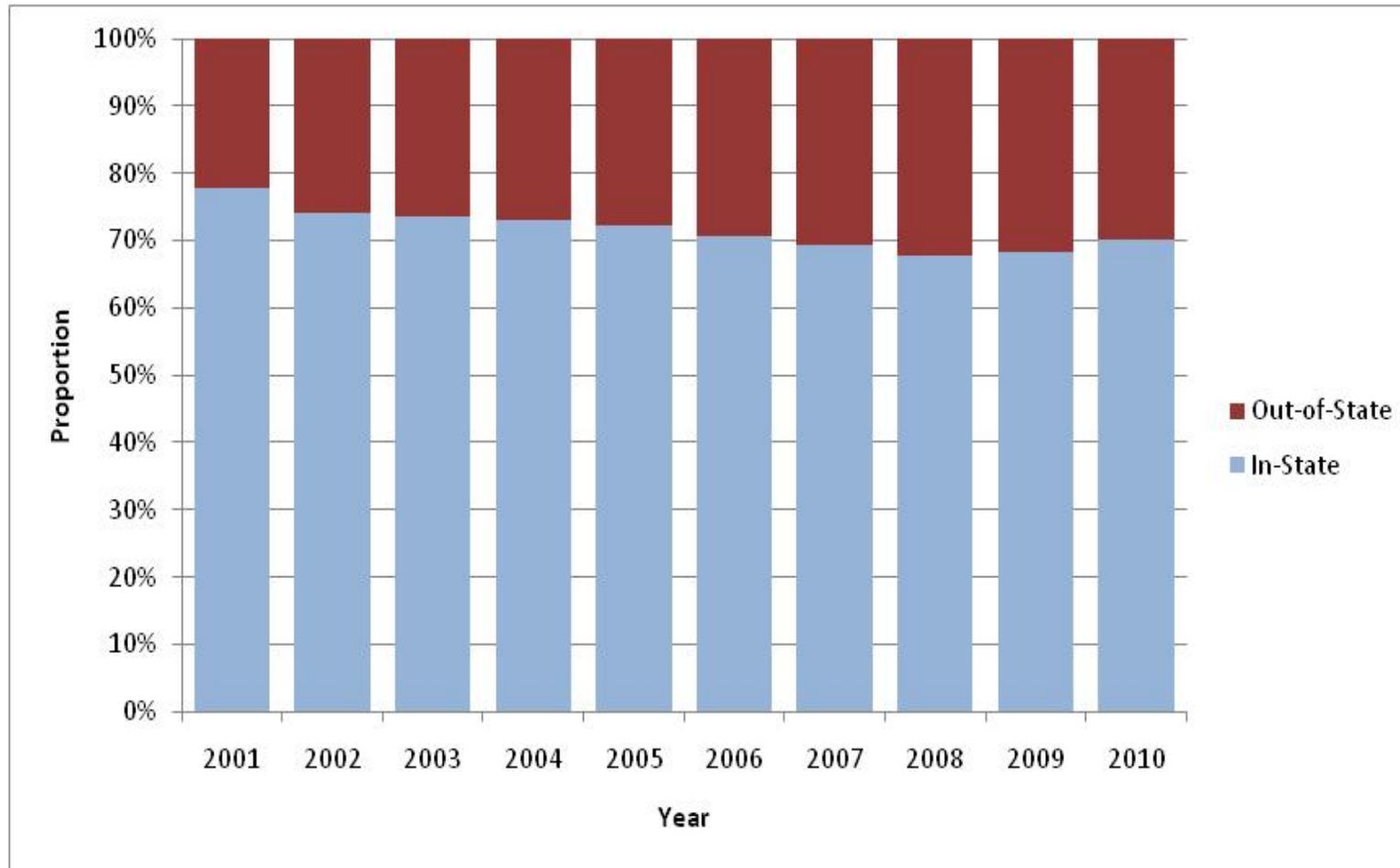
Out-of-State Student Enrollment in Public Institutions

Institution	2004	2005	2006	2007	2008	2009	2010	% Change	
								2009-10	2006-10
Total Headcount									
Bluefield State College	101	108	125	179	230	236	90	-61.9%	-28.0%
Concord University	423	432	466	452	508	511	523	2.3%	12.2%
Fairmont State University	295	316	276	260	358	335	368	9.9%	33.3%
Glennville State College	123	133	121	160	180	176	137	-22.2%	13.2%
Marshall University	2,346	2,534	2,645	2,784	2,856	3,044	2,032	-33.2%	-23.2%
Potomac State College	268	243	330	446	409	431	298	-30.9%	-9.7%
Shepherd University	1,439	1,562	1,768	1,810	1,860	1,801	1,395	-22.5%	-21.1%
West Liberty University	663	620	672	742	792	796	846	6.3%	25.9%
West Virginia School of Osteopathic Medicine	143	181	286	385	472	557	604	8.4%	111.2%
WV State University	309	324	359	352	313	428	271	-36.7%	-24.5%
West Virginia University	10,338	11,109	11,891	12,404	13,186	13,229	12,963	-2.0%	9.0%
WVU Institute of Technology	202	131	141	153	146	178	136	-23.6%	-3.5%
Total 4 Yr	16,650	17,693	19,080	20,127	21,310	21,722	19,663	-9.5%	3.1%
Total 2 Yr	1,786	1,876	1,788	1,724	1,683	2,031	1,137	-44.0%	-36.4%
Grand Total	18,436	19,569	20,868	21,851	22,993	23,753	20,800	-12.4%	-0.3%

Source: West Virginia Higher Education Policy Commission



Residency Composition of Enrollment at Bachelor's Degree Granting Institutions



Source: West Virginia Higher Education Policy Commission

Members

David K. Hendrickson, Chairman

Dr. Bruce Berry, Vice Chairman

Kathy Eddy, Secretary

Jenny Allen

Bob Brown

John Estep

Kay H. Goodwin

Dr. John Leon

Dr. Steven L. Paine

David R. Tyson



West Virginia Higher Education Policy Commission

1018 Kanawha Blvd E Ste 700

Charleston WV 25301-2800

voice 304.558.2101

fax 304.558.5719

