

MS State Univ - Center for Advanced Vehicular Systems Post Office Box 5405, MS State, MS 39762

Dr. Mark E. Keenum

AGENCY		ADDRESS		CHIEF EXECUTIVE OFFICER		
		Actual Expenses June 30,2021	Estimated Expenses June 30,2022	Requested For June 30,2023	Requested Over/(Under) Estimated	
					AMOUNT	PERCENT
<b>I. A. PERSONAL SERVICES</b>						
1. Salaries, Wages & Fringe Benefits (Base)		3,048,823	2,595,248	2,812,086		
a. Additional Compensation						
b. Proposed Vacancy Rate (Dollar Amount)						
c. Per Diem						
<b>Total Salaries, Wages &amp; Fringe Benefits</b>		<b>3,048,823</b>	<b>2,595,248</b>	<b>2,812,086</b>	<b>216,838</b>	<b>8.36%</b>
2. Travel						
a. Travel & Subsistence (In-State)		2,139	32,000	32,000		
b. Travel & Subsistence (Out-Of-State)		712				
c. Travel & Subsistence (Out-Of-Country)						
<b>Total Travel</b>		<b>2,851</b>	<b>32,000</b>	<b>32,000</b>		
<b>B. CONTRACTUAL SERVICE S (Schedule B)</b>						
a. Tuition, Rewards & Awards		1,740	6,072	6,072		
b. Communications, Transportation & Utilities		5,385	16,000	16,000		
c. Public Information		2,020				
d. Rents		10,476	21,000	21,000		
e. Repairs & Service		120,522	64,500	64,500		
f. Fees, Professional & Other Services		6,838	2,500	2,500		
g. Other Contractual Services		174,686	628,000	628,000		
h. Data Processing		68,187	63,520	63,520		
i. Other						
<b>Total Contractual Services</b>		<b>389,854</b>	<b>801,592</b>	<b>801,592</b>		
<b>C. COMMODITIES (Schedule C)</b>						
a. Maintenance & Construction Materials & Supplies						
b. Printing & Office Supplies & Materials		86,932	109,700	109,700		
c. Equipment, Repair Parts, Supplies & Accessories		31,732	32,500	32,500		
d. Professional & Scientific Supplies & Materials		155,795	74,900	74,900		
e. Other Supplies & Materials		122,564	72,600	72,600		
<b>Total Commodities</b>		<b>397,023</b>	<b>289,700</b>	<b>289,700</b>		
<b>D. CAPITAL OUTLAY</b>						
<b>1. Total Other Than Equipment (Schedule D-1)</b>						
<b>2. Equipment (Schedule D-2)</b>						
b. Road Machinery, Farm & Other Working Equipment						
c. Office Machines, Furniture, Fixtures & Equipment						
d. IS Equipment (Data Processing & Telecommunications)						
e. Equipment - Lease Purchase						
f. Other Equipment		27,691				
<b>Total Equipment (Schedule D-2)</b>		<b>27,691</b>				
<b>3. Vehicles (Schedule D-3)</b>						
<b>4. Wireless Comm. Devices (Schedule D-4)</b>						
<b>E. SUBSIDIES, LOANS &amp; GRANTS (Schedule E)</b>		<b>516,020</b>	<b>904,879</b>	<b>904,879</b>		
<b>TOTAL EXPENDITURES</b>		<b>4,382,262</b>	<b>4,623,419</b>	<b>4,840,257</b>	<b>216,838</b>	<b>4.69%</b>
<b>II. BUDGET TO BE FUNDED AS FOLLOWS:</b>						
Cash Balance-Unencumbered						
General Fund Appropriation (Enter General Fund Lapse Below)		4,239,480	4,480,637	4,697,475	216,838	4.84%
State Support Special Funds		142,782	142,782	142,782		
Federal Funds						
Other Special Funds (Specify)						
Less: Estimated Cash Available Next Fiscal Period						
<b>TOTAL FUNDS (equals Total Expenditures above)</b>		<b>4,382,262</b>	<b>4,623,419</b>	<b>4,840,257</b>	<b>216,838</b>	<b>4.69%</b>
GENERAL FUND LAPSE						
<b>III: PERSONNEL DATA</b>						
Number of Positions Authorized in Appropriation Bill						
a.) Perm Full	59	59	59			
b.) Perm Part						
c.) T-L Full						
d.) T-L Part	2	2	2			
Average Annual Vacancy Rate (Percentage)						
a.) Perm Full						
b.) Perm Part						
c.) T-L Full						
d.) T-L Part						

Approved by: Don Zant

Official of Board or Commission

Submitted by: Lynn Wyman

Date : 7/19/2021 2:14 PM

Budget Officer: Mr. Don Zant / dzant@budgetplan.msstate.edu

Phone Number: 662-325-2231

Title : Business Manager II

REQUEST BY FUNDING SOURCE

Name of Agency : MS State Univ - Center for Advanced Vehicular Systems

Specify Funding Sources As Shown Below	FY 2021 Actual Amount	% of Line Item	% of Total Budget	FY 2022 Estimated Amount	% of Line Item	% of Total Budget	FY 2023 Requested Amount	% of Line Item	% of Total Budget
1. General _____ State Support Special (Specify) _____	2,906,041	95.32%		2,452,466	94.50%		2,669,304	94.92%	
2. Budget Contingency Fund									
3. Education Enhancement Fund	142,782	4.68%		142,782	5.50%		142,782	5.08%	
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Capital Expense Fund									
7. Working Cash Stabilization Reserve Fund									
8. BP Settlement Fund									
9. Gulf Coast Restoration Fund									
10. Back To Business Mississippi Grant Fund									
11. MS COVID-19 Relief Payment Fund									
12. DFA CARES Act COVID-19 Fund									
13. MS Tourism Recovery Fund									
14. MS Nonprofit Museums Recovery Fund									
15. Equity in Distance Learning Fund									
16. Postsecondary Education COVID-19 Relief Grant Fund									
17. Independent Schools' COVID-19 Assistance Grant Fund									
18. MS Pandemic Response Broadband Availability Grant Program Fund									
19. MS Emergency Management Agency COVID-19 Fund									
20. MS Electric Cooperatives Broadband COVID-19 Grant Program Fund									
21. COVID-19 Broadband Provider Grant Program Fund									
22. Rental Assistance Grant Program Fund									
23. ICU Infrastructure Fund									
24. Poultry Farmer Stabilization Grant Program Fund									
25. Mississippi Supplemental CFAP Grant Program Fund									
26. Sweet Potato Farm Sustainment Grant Program Fund									
27. Coronavirus Local Fiscal Recovery Fund									
28. Coronavirus State Fiscal Recovery Fund									
29. Federal _____ Other Special (Specify) _____									
30.									
31.									
32.									
33.									
<b>Total Salaries</b>	<b>3,048,823</b>		<b>69.57%</b>	<b>2,595,248</b>		<b>56.13%</b>	<b>2,812,086</b>		<b>58.10%</b>

REQUEST BY FUNDING SOURCE

Name of Agency : MS State Univ - Center for Advanced Vehicular Systems

Specify Funding Sources As Shown Below	FY 2021 Actual Amount	% of Line Item	% of Total Budget	FY 2022 Estimated Amount	% of Line Item	% of Total Budget	FY 2023 Requested Amount	% of Line Item	% of Total Budget
1. General _____ State Support Special (Specify) _____	2,851	100.00		32,000	100.00		32,000	100.00	
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Capital Expense Fund									
7. Working Cash Stabilization Reserve Fund									
8. BP Settlement Fund									
9. Gulf Coast Restoration Fund									
10. Back To Business Mississippi Grant Fund									
11. MS COVID-19 Relief Payment Fund									
12. DFA CARES Act COVID-19 Fund									
13. MS Tourism Recovery Fund									
14. MS Nonprofit Museums Recovery Fund									
15. Equity in Distance Learning Fund									
16. Postsecondary Education COVID-19 Relief Grant Fund									
17. Independent Schools' COVID-19 Assistance Grant Fund									
18. MS Pandemic Response Broadband Availability Grant Program Fund									
19. MS Emergency Management Agency COVID-19 Fund									
20. MS Electric Cooperatives Broadband COVID-19 Grant Program Fund									
21. COVID-19 Broadband Provider Grant Program Fund									
22. Rental Assistance Grant Program Fund									
23. ICU Infrastructure Fund									
24. Poultry Farmer Stabilization Grant Program Fund									
25. Mississippi Supplemental CFAP Grant Program Fund									
26. Sweet Potato Farm Sustainment Grant Program Fund									
27. Coronavirus Local Fiscal Recovery Fund									
28. Coronavirus State Fiscal Recovery Fund									
29. Federal _____ Other Special (Specify) _____									
30.									
31.									
32.									
33.									
<b>Total Travel</b>	<b>2,851</b>		<b>0.07%</b>	<b>32,000</b>		<b>0.69%</b>	<b>32,000</b>		<b>0.66%</b>

REQUEST BY FUNDING SOURCE

Name of Agency : MS State Univ - Center for Advanced Vehicular Systems

Specify Funding Sources As Shown Below	FY 2021 Actual Amount	% of Line Item	% of Total Budget	FY 2022 Estimated Amount	% of Line Item	% of Total Budget	FY 2023 Requested Amount	% of Line Item	% of Total Budget
1. General _____ State Support Special (Specify) _____	389,854	100.00		801,592	100.00		801,592	100.00	
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Capital Expense Fund									
7. Working Cash Stabilization Reserve Fund									
8. BP Settlement Fund									
9. Gulf Coast Restoration Fund									
10. Back To Business Mississippi Grant Fund									
11. MS COVID-19 Relief Payment Fund									
12. DFA CARES Act COVID-19 Fund									
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14. MS Nonprofit Museums Recovery Fund									
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21. COVID-19 Broadband Provider Grant Program Fund									
22. Rental Assistance Grant Program Fund									
23. ICU Infrastructure Fund									
24. Poultry Farmer Stabilization Grant Program Fund									
25. Mississippi Supplemental CFAP Grant Program Fund									
26. Sweet Potato Farm Sustainment Grant Program Fund									
27. Coronavirus Local Fiscal Recovery Fund									
28. Coronavirus State Fiscal Recovery Fund									
29. Federal _____ Other Special (Specify) _____									
30.									
31.									
32.									
33.									
<b>Total Contractual</b>	<b>389,854</b>		<b>8.90%</b>	<b>801,592</b>		<b>17.34%</b>	<b>801,592</b>		<b>16.56%</b>

REQUEST BY FUNDING SOURCE

Name of Agency : MS State Univ - Center for Advanced Vehicular Systems

Specify Funding Sources As Shown Below	FY 2021 Actual Amount	% of Line Item	% of Total Budget	FY 2022 Estimated Amount	% of Line Item	% of Total Budget	FY 2023 Requested Amount	% of Line Item	% of Total Budget
1. General _____ State Support Special (Specify) _____	397,023	100.00		289,700	100.00		289,700	100.00	
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Capital Expense Fund									
7. Working Cash Stabilization Reserve Fund									
8. BP Settlement Fund									
9. Gulf Coast Restoration Fund									
10. Back To Business Mississippi Grant Fund									
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14. MS Nonprofit Museums Recovery Fund									
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16. Postsecondary Education COVID-19 Relief Grant Fund									
17. Independent Schools' COVID-19 Assistance Grant Fund									
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21. COVID-19 Broadband Provider Grant Program Fund									
22. Rental Assistance Grant Program Fund									
23. ICU Infrastructure Fund									
24. Poultry Farmer Stabilization Grant Program Fund									
25. Mississippi Supplemental CFAP Grant Program Fund									
26. Sweet Potato Farm Sustainment Grant Program Fund									
27. Coronavirus Local Fiscal Recovery Fund									
28. Coronavirus State Fiscal Recovery Fund									
29. Federal _____ Other Special (Specify) _____									
30.									
31.									
32.									
33.									
<b>Total Commodities</b>	<b>397,023</b>		<b>9.06%</b>	<b>289,700</b>		<b>6.27%</b>	<b>289,700</b>		<b>5.99%</b>

Name of Agency : MS State Univ - Center for Advanced Vehicular Systems

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1. General _____ State Support Special (Specify) _____									
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Capital Expense Fund									
7. Working Cash Stabilization Reserve Fund									
8. BP Settlement Fund									
9. Gulf Coast Restoration Fund									
10. Back To Business Mississippi Grant Fund									
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14. MS Nonprofit Museums Recovery Fund									
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17. Independent Schools' COVID-19 Assistance Grant Fund									
18. MS Pandemic Response Broadband Availability Grant Program Fund									
19. MS Emergency Management Agency COVID-19 Fund									
20. MS Electric Cooperatives Broadband COVID-19 Grant Program Fund									
21. COVID-19 Broadband Provider Grant Program Fund									
22. Rental Assistance Grant Program Fund									
23. ICU Infrastructure Fund									
24. Poultry Farmer Stabilization Grant Program Fund									
25. Mississippi Supplemental CFAP Grant Program Fund									
26. Sweet Potato Farm Sustainment Grant Program Fund									
27. Coronavirus Local Fiscal Recovery Fund									
28. Coronavirus State Fiscal Recovery Fund									
29. Federal _____ Other Special (Specify) _____									
30.									
31.									
32.									
33.									
Total Capital Other Than Equipment									

Name of Agency : MS State Univ - Center for Advanced Vehicular Systems

Specify Funding Sources As Shown Below	FY 2021 Actual Amount	% of Line Item	% of Total Budget	FY 2022 Estimated Amount	% of Line Item	% of Total Budget	FY 2023 Requested Amount	% of Line Item	% of Total Budget
1. General _____ State Support Special (Specify) _____	27,691	100.00							
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Capital Expense Fund									
7. Working Cash Stabilization Reserve Fund									
8. BP Settlement Fund									
9. Gulf Coast Restoration Fund									
10. Back To Business Mississippi Grant Fund									
11. MS COVID-19 Relief Payment Fund									
12. DFA CARES Act COVID-19 Fund									
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14. MS Nonprofit Museums Recovery Fund									
15. Equity in Distance Learning Fund									
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17. Independent Schools' COVID-19 Assistance Grant Fund									
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20. MS Electric Cooperatives Broadband COVID-19 Grant Program Fund									
21. COVID-19 Broadband Provider Grant Program Fund									
22. Rental Assistance Grant Program Fund									
23. ICU Infrastructure Fund									
24. Poultry Farmer Stabilization Grant Program Fund									
25. Mississippi Supplemental CFAP Grant Program Fund									
26. Sweet Potato Farm Sustainment Grant Program Fund									
27. Coronavirus Local Fiscal Recovery Fund									
28. Coronavirus State Fiscal Recovery Fund									
29. Federal _____ Other Special (Specify) _____									
30.									
31.									
32.									
33.									
Total Capital Equipment	27,691		0.63%						

REQUEST BY FUNDING SOURCE

Name of Agency : MS State Univ - Center for Advanced Vehicular Systems

Specify Funding Sources As Shown Below	FY 2021 Actual Amount	% of Line Item	% of Total Budget	FY 2022 Estimated Amount	% of Line Item	% of Total Budget	FY 2023 Requested Amount	% of Line Item	% of Total Budget
1. General _____ State Support Special (Specify) _____									
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Capital Expense Fund									
7. Working Cash Stabilization Reserve Fund									
8. BP Settlement Fund									
9. Gulf Coast Restoration Fund									
10. Back To Business Mississippi Grant Fund									
11. MS COVID-19 Relief Payment Fund									
12. DFA CARES Act COVID-19 Fund									
13. MS Tourism Recovery Fund									
14. MS Nonprofit Museums Recovery Fund									
15. Equity in Distance Learning Fund									
16. Postsecondary Education COVID-19 Relief Grant Fund									
17. Independent Schools' COVID-19 Assistance Grant Fund									
18. MS Pandemic Response Broadband Availability Grant Program Fund									
19. MS Emergency Management Agency COVID-19 Fund									
20. MS Electric Cooperatives Broadband COVID-19 Grant Program Fund									
21. COVID-19 Broadband Provider Grant Program Fund									
22. Rental Assistance Grant Program Fund									
23. ICU Infrastructure Fund									
24. Poultry Farmer Stabilization Grant Program Fund									
25. Mississippi Supplemental CFAP Grant Program Fund									
26. Sweet Potato Farm Sustainment Grant Program Fund									
27. Coronavirus Local Fiscal Recovery Fund									
28. Coronavirus State Fiscal Recovery Fund									
29. Federal _____ Other Special (Specify) _____									
30.									
31.									
32.									
33.									
<b>Total Vehicles</b>									



REQUEST BY FUNDING SOURCE

Name of Agency : MS State Univ - Center for Advanced Vehicular Systems

Specify Funding Sources As Shown Below	FY 2021 Actual Amount	% of Line Item	% of Total Budget	FY 2022 Estimated Amount	% of Line Item	% of Total Budget	FY 2023 Requested Amount	% of Line Item	% of Total Budget
1. General _____ State Support Special (Specify) _____									
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Capital Expense Fund									
7. Working Cash Stabilization Reserve Fund									
8. BP Settlement Fund									
9. Gulf Coast Restoration Fund									
10. Back To Business Mississippi Grant Fund									
11. MS COVID-19 Relief Payment Fund									
12. DFA CARES Act COVID-19 Fund									
13. MS Tourism Recovery Fund									
14. MS Nonprofit Museums Recovery Fund									
15. Equity in Distance Learning Fund									
16. Postsecondary Education COVID-19 Relief Grant Fund									
17. Independent Schools' COVID-19 Assistance Grant Fund									
18. MS Pandemic Response Broadband Availability Grant Program Fund									
19. MS Emergency Management Agency COVID-19 Fund									
20. MS Electric Cooperatives Broadband COVID-19 Grant Program Fund									
21. COVID-19 Broadband Provider Grant Program Fund									
22. Rental Assistance Grant Program Fund									
23. ICU Infrastructure Fund									
24. Poultry Farmer Stabilization Grant Program Fund									
25. Mississippi Supplemental CFAP Grant Program Fund									
26. Sweet Potato Farm Sustainment Grant Program Fund									
27. Coronavirus Local Fiscal Recovery Fund									
28. Coronavirus State Fiscal Recovery Fund									
29. Federal _____ Other Special (Specify) _____									
30.									
31.									
32.									
33.									
<b>Total Wireless Communication Devs.</b>									

REQUEST BY FUNDING SOURCE

Name of Agency : MS State Univ - Center for Advanced Vehicular Systems

Specify Funding Sources As Shown Below	FY 2021 Actual Amount	% of Line Item	% of Total Budget	FY 2022 Estimated Amount	% of Line Item	% of Total Budget	FY 2023 Requested Amount	% of Line Item	% of Total Budget
1. General _____ State Support Special (Specify) _____	516,020	100.00		904,879	100.00		904,879	100.00	
2. Budget Contingency Fund									
3. Education Enhancement Fund									
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Capital Expense Fund									
7. Working Cash Stabilization Reserve Fund									
8. BP Settlement Fund									
9. Gulf Coast Restoration Fund									
10. Back To Business Mississippi Grant Fund									
11. MS COVID-19 Relief Payment Fund									
12. DFA CARES Act COVID-19 Fund									
13. MS Tourism Recovery Fund									
14. MS Nonprofit Museums Recovery Fund									
15. Equity in Distance Learning Fund									
16. Postsecondary Education COVID-19 Relief Grant Fund									
17. Independent Schools' COVID-19 Assistance Grant Fund									
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19. MS Emergency Management Agency COVID-19 Fund									
20. MS Electric Cooperatives Broadband COVID-19 Grant Program Fund									
21. COVID-19 Broadband Provider Grant Program Fund									
22. Rental Assistance Grant Program Fund									
23. ICU Infrastructure Fund									
24. Poultry Farmer Stabilization Grant Program Fund									
25. Mississippi Supplemental CFAP Grant Program Fund									
26. Sweet Potato Farm Sustainment Grant Program Fund									
27. Coronavirus Local Fiscal Recovery Fund									
28. Coronavirus State Fiscal Recovery Fund									
29. Federal _____ Other Special (Specify) _____									
30.									
31.									
32.									
33.									
<b>Total Subsidies</b>	<b>516,020</b>		<b>11.78%</b>	<b>904,879</b>		<b>19.57%</b>	<b>904,879</b>		<b>18.69%</b>

REQUEST BY FUNDING SOURCE

Name of Agency : MS State Univ - Center for Advanced Vehicular Systems

Specify Funding Sources As Shown Below	FY 2021 Actual Amount	% of Line Item	% of Total Budget	FY 2022 Estimated Amount	% of Line Item	% of Total Budget	FY 2023 Requested Amount	% of Line Item	% of Total Budget
1. General _____ State Support Special (Specify) _____	4,239,480	96.74%		4,480,637	96.91%		4,697,475	97.05%	
2. Budget Contingency Fund									
3. Education Enhancement Fund	142,782	3.26%		142,782	3.09%		142,782	2.95%	
4. Health Care Expendable Fund									
5. Tobacco Control Fund									
6. Capital Expense Fund									
7. Working Cash Stabilization Reserve Fund									
8. BP Settlement Fund									
9. Gulf Coast Restoration Fund									
10. Back To Business Mississippi Grant Fund									
11. MS COVID-19 Relief Payment Fund									
12. DFA CARES Act COVID-19 Fund									
13. MS Tourism Recovery Fund									
14. MS Nonprofit Museums Recovery Fund									
15. Equity in Distance Learning Fund									
16. Postsecondary Education COVID-19 Relief Grant Fund									
17. Independent Schools' COVID-19 Assistance Grant Fund									
18. MS Pandemic Response Broadband Availability Grant Program Fund									
19. MS Emergency Management Agency COVID-19 Fund									
20. MS Electric Cooperatives Broadband COVID-19 Grant Program Fund									
21. COVID-19 Broadband Provider Grant Program Fund									
22. Rental Assistance Grant Program Fund									
23. ICU Infrastructure Fund									
24. Poultry Farmer Stabilization Grant Program Fund									
25. Mississippi Supplemental CFAP Grant Program Fund									
26. Sweet Potato Farm Sustainment Grant Program Fund									
27. Coronavirus Local Fiscal Recovery Fund									
28. Coronavirus State Fiscal Recovery Fund									
29. Federal _____ Other Special (Specify) _____									
30.									
31.									
32.									
33.									
<b>TOTAL</b>	<b>4,382,262</b>		<b>100.00%</b>	<b>4,623,419</b>		<b>100.00%</b>	<b>4,840,257</b>		<b>100.00%</b>

## SPECIAL FUNDS DETAIL

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

S. STATE SUPPORT SPECIAL FUNDS		(1) Actual Revenues FY 2021	(2) Estimated Revenues FY 2022	(3) Requested Revenues FY 2023
Source (Fund Number)	Detailed Description of Source			
Budget Contingency Fund	BCF - Budget Contingency Fund			
Education Enhancement Fund	EEF - Education Enhancement Fund	142,782	142,782	142,782
Health Care Expendable Fund	HCEF - Health Care Expendable Fund			
Tobacco Control Fund	TCF - Tobacco Control Fund			
Capital Expense Fund	CEF - Capital Expense Fund			
Working Cash Stabilization Reserve Fund	WCSRF - Working Cash Stabilization Reserve Fund			
BP Settlement Fund	BPSF - BP Settlement Fund			
Gulf Coast Restoration Fund	GCRF - Gulf Coast Restoration Fund			
Back To Business Mississippi Grant Fund	BTBMGF - Back To Business Mississippi Grant Fund			
MS COVID-19 Relief Payment Fund	MCRPF - MS COVID-19 Relief Payment Fund			
DFA CARES Act COVID-19 Fund	DCACF - DFA CARES Act COVID-19 Fund			
MS Tourism Recovery Fund	MTRF - MS Tourism Recovery Fund			
MS Nonprofit Museums Recovery Fund	MNMRF - MS Nonprofit Museums Recovery Fund			
Equity in Distance Learning Fund	EIDLF - Equity in Distance Learning Fund			
Postsecondary Education COVID-19 Relief Grant Fund	PECMRGF - Postsecondary Education COVID-19 Relief Grant Fund			
Independent Schools' COVID-19 Assistance Grant Fund	ISCAGF - Independent Schools' COVID-19 Assistance Grant Fund			
MS Pandemic Response Broadband Availability Grant Program Fund	MPRBAGPF - MS Pandemic Response Broadband Availability Grant Program Fund			
MS Emergency Management Agency COVID-19 Fund	MEMACF - MS Emergency Management Agency COVID-19 Fund			
MS Electric Cooperatives Broadband COVID-19 Grant Program Fund	MECBCGPF - MS Electric Cooperatives Broadband COVID-19 Grant Program Fund			
COVID-19 Broadband Provider Grant Program Fund	CBPGPF - COVID-19 Broadband Provider Grant Program Fund			
Rental Assistance Grant Program Fund	RAGPF - Rental Assistance Grant Program Fund			
ICU Infrastructure Fund	IIF - ICU Infrastructure Fund			
Poultry Farmer Stabilization Grant Program Fund	PFSGPF - Poultry Farmer Stabilization Grant Program Fund			
Mississippi Supplemental CFAP Grant Program Fund	MSCGPF - Mississippi Supplemental CFAP Grant Program Fund			
Sweet Potato Farm Sustainment Grant Program Fund	SPFSGPF - Sweet Potato Farm Sustainment Grant Program Fund			
Coronavirus Local Fiscal Recovery Fund	CLFRF - Coronavirus Local Fiscal Recovery Fund			
Coronavirus State Fiscal Recovery Fund	CSFRF - Coronavirus State Fiscal Recovery Fund			
State Support Special Fund TOTAL		142,782	142,782	142,782
STATE SUPPORT SPECIAL FUND LAPSE				

A. FEDERAL FUNDS *		Percentage Match Requirement FY 2022 FY 2023	(1) Actual Revenues FY 2021	(2) Estimated Revenues FY 2022	(3) Requested Revenues FY 2023
Source (Fund Number)	Detailed Description of Source				
	Cash Balance-Unencumbered				
Federal Fund TOTAL					

## SPECIAL FUNDS DETAIL

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

<b>B. OTHER SPECIAL FUNDS (NON-FED'L)</b>		<b>(1) Actual Revenues FY 2021</b>	<b>(2) Estimated Revenues FY 2022</b>	<b>(3) Requested Revenues FY 2023</b>
<b>Source (Fund Number)</b>	<b>Detailed Description of Source</b>			
	Cash Balance-Unencumbered			
<b>Other Special Fund TOTAL</b>				

<b>SECTIONS S + A + B TOTAL</b>	<b>142,782</b>	<b>142,782</b>	<b>142,782</b>
---------------------------------	----------------	----------------	----------------

<b>C. TREASURY FUND/BANK ACCOUNTS *</b>			<b>(1) Reconciled Balance as of 6/30/21</b>	<b>(2) Balance as of 6/30/22</b>	<b>(3) Balance as of 6/30/23</b>
<b>Name of Fund/Account</b>	<b>Fund/Account Number</b>	<b>Name of Bank (If Applicable)</b>			

\* Any non-federal funds that have restricted uses must be identified and narrative of restrictions attached.

**NARRATIVE OF SPECIAL FUNDS DETAIL AND TREASURY  
FUND/BANK ACCOUNTS**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

---

Name of Agency

**STATE SUPPORT SPECIAL FUNDS**

In CAVS' new focus area, funds will also be used to support major initiatives in the use of autonomous vehicles. New research and outreach activities are needed to help industry integrate autonomous vehicles into industrial applications. With the state's emphasis on manufacturing jobs it is critical to develop an understanding of how autonomous vehicles can help with productivity gains within the controlled spaces of Mississippi's manufacturing enterprise. Due to an expanding need for the use of autonomous vehicles in Mississippi and the rest of the country, industrial outreach efforts will be needed to assist MDOT, MDA, and Mississippi industry in preparing for this change in manufacturing practice and assist the state in workforce development and changes to manufacturing protocols.

CONTINUATION AND EXPANDED TOTAL REQUEST

MS State Univ - Center for Advanced Vehicular Systems (252-01)

SUMMARY OF ALL PROGRAMS

Name of Agency

Program

	FY 2021 Actual				
	(1) General	(2) State Support Special	(3) Federal	(4) Other Special	(5) Total
Salaries,Wages & Fringe	2,906,041	142,782			3,048,823
Travel	2,851				2,851
Contractual Services	389,854				389,854
Commodities	397,023				397,023
Other Than Equipment					
Equipment	27,691				27,691
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants	516,020				516,020
<b>Total</b>	<b>4,239,480</b>	<b>142,782</b>			<b>4,382,262</b>
No. of Positions (FTE)	61.00				61.00

	FY 2022 Estimated				
	(6) General	(7) State Support Special	(8) Federal	(9) Other Special	(10) Total
Salaries,Wages & Fringe	2,452,466	142,782			2,595,248
Travel	32,000				32,000
Contractual Services	801,592				801,592
Commodities	289,700				289,700
Other Than Equipment					
Equipment					
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants	904,879				904,879
<b>Total</b>	<b>4,480,637</b>	<b>142,782</b>			<b>4,623,419</b>
No. of Positions (FTE)	61.00				61.00

	FY 2023 Increase/Decrease for Continuation				
	(11) General	(12) State Support Special	(13) Federal	(14) Other Special	(15) Total
Salaries,Wages & Fringe	216,838				216,838
Travel					
Contractual Services					
Commodities					
Other Than Equipment					
Equipment					
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants					
<b>Total</b>	<b>216,838</b>				<b>216,838</b>
No. of Positions (FTE)					

Note: FY2023 Total Request = FY2022 Estimated + FY2023 Incr(Decr) for Continuation + FY2023 Expansion/Reduction of Existing Activities + FY2023 New Activities.

**CONTINUATION AND EXPANDED TOTAL REQUEST**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

SUMMARY OF ALL PROGRAMS

Name of Agency	Program				
	FY 2023 Expansion/Reduction of Existing Activities				
	(16) General	(17) State Support Special	(18) Federal	(19) Other Special	(20) Total
Salaries,Wages & Fringe					
Travel					
Contractual Services					
Commodities					
Other Than Equipment					
Equipment					
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants					
<b>Total</b>					
No. of Positions (FTE)					
	FY 2023 New Activities (*)				
	(21) General	(22) State Support Special	(23) Federal	(24) Other Special	(25) Total
Salaries,Wages & Fringe					
Travel					
Contractual Services					
Commodities					
Other Than Equipment					
Equipment					
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants					
<b>Total</b>					
No. of Positions (FTE)					
	FY 2023 Total Request				
	(26) General	(27) State Support Special	(28) Federal	(29) Other Special	(30) Total
Salaries,Wages & Fringe	2,669,304	142,782			2,812,086
Travel	32,000				32,000
Contractual Services	801,592				801,592
Commodities	289,700				289,700
Other Than Equipment					
Equipment					
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants	904,879				904,879
<b>Total</b>	<b>4,697,475</b>	<b>142,782</b>			<b>4,840,257</b>
No. of Positions (FTE)	61.00				61.00

Note: FY2023 Total Request = FY2022 Estimated + FY2023 Incr(Decr) for Continuation + FY2023 Expansion/Reduction of Existing Activities + FY2023 New Activities.



**SUMMARY OF PROGRAMS**  
**FORM MBR-1-03sum**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

FUNDING REQUESTED FISCAL YEAR 2023

	PROGRAM	GENERAL	ST. SUPP. SPECIAL	FEDERAL	OTHER SPECIAL	TOTAL
1.	Research	3,573,860	142,782			3,716,642
2.	Public Service	1,123,615				1,123,615
	Summary of All Programs	4,697,475	142,782			4,840,257

CONTINUATION AND EXPANDED REQUEST

Program 1 of 2

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Research

Name of Agency

Program

	FY 2021 Actual				
	(1) General	(2) State Support Special	(3) Federal	(4) Other Special	(5) Total
Salaries,Wages & Fringe	2,434,774	142,782			2,577,556
Travel	914				914
Contractual Services	297,873				297,873
Commodities	374,541				374,541
Other Than Equipment					
Equipment	27,691				27,691
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants	86,391				86,391
<b>Total</b>	<b>3,222,184</b>	<b>142,782</b>			<b>3,364,966</b>
No. of Positions (FTE)	54.29				54.29

	FY 2022 Estimated				
	(6) General	(7) State Support Special	(8) Federal	(9) Other Special	(10) Total
Salaries,Wages & Fringe	1,717,188	142,782			1,859,970
Travel	10,000				10,000
Contractual Services	718,594				718,594
Commodities	211,577				211,577
Other Than Equipment					
Equipment					
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants	750,000				750,000
<b>Total</b>	<b>3,407,359</b>	<b>142,782</b>			<b>3,550,141</b>
No. of Positions (FTE)	54.29				54.29

	FY 2023 Increase/Decrease for Continuation				
	(11) General	(12) State Support Special	(13) Federal	(14) Other Special	(15) Total
Salaries,Wages & Fringe	166,501				166,501
Travel					
Contractual Services					
Commodities					
Other Than Equipment					
Equipment					
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants					
<b>Total</b>	<b>166,501</b>				<b>166,501</b>
No. of Positions (FTE)					

Note: FY2023 Total Request = FY2022 Estimated + FY2023 Incr(Decr) for Continuation + FY2023 Expansion/Reduction of Existing Activities + FY2023 New Activities.

CONTINUATION AND EXPANDED REQUEST

Program 1 of 2

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Research

Name of Agency

Program

	FY 2023 Expansion/Reduction of Existing Activities				
	(16) General	(17) State Support Special	(18) Federal	(19) Other Special	(20) Total
Salaries,Wages & Fringe					
Travel					
Contractual Services					
Commodities					
Other Than Equipment					
Equipment					
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants					
<b>Total</b>					
No. of Positions (FTE)					

	FY 2023 New Activities (*)				
	(21) General	(22) State Support Special	(23) Federal	(24) Other Special	(25) Total
Salaries,Wages & Fringe					
Travel					
Contractual Services					
Commodities					
Other Than Equipment					
Equipment					
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants					
<b>Total</b>					
No. of Positions (FTE)					

	FY 2023 Total Request				
	(26) General	(27) State Support Special	(28) Federal	(29) Other Special	(30) Total
Salaries,Wages & Fringe	1,883,689	142,782			2,026,471
Travel	10,000				10,000
Contractual Services	718,594				718,594
Commodities	211,577				211,577
Other Than Equipment					
Equipment					
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants	750,000				750,000
<b>Total</b>	<b>3,573,860</b>	<b>142,782</b>			<b>3,716,642</b>
No. of Positions (FTE)	54.29				54.29

Note: FY2023 Total Request = FY2022 Estimated + FY2023 Incr(Decr) for Continuation + FY2023 Expansion/Reduction of Existing Activities + FY2023 New Activities.

CONTINUATION AND EXPANDED REQUEST

Program 2 of 2

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Public Service

Name of Agency

Program

	FY 2021 Actual				
	(1) General	(2) State Support Special	(3) Federal	(4) Other Special	(5) Total
Salaries,Wages & Fringe	471,267				471,267
Travel	1,937				1,937
Contractual Services	91,981				91,981
Commodities	22,482				22,482
Other Than Equipment					
Equipment					
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants	429,629				429,629
<b>Total</b>	<b>1,017,296</b>				<b>1,017,296</b>
No. of Positions (FTE)	6.71				6.71

	FY 2022 Estimated				
	(6) General	(7) State Support Special	(8) Federal	(9) Other Special	(10) Total
Salaries,Wages & Fringe	735,278				735,278
Travel	22,000				22,000
Contractual Services	82,998				82,998
Commodities	78,123				78,123
Other Than Equipment					
Equipment					
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants	154,879				154,879
<b>Total</b>	<b>1,073,278</b>				<b>1,073,278</b>
No. of Positions (FTE)	6.71				6.71

	FY 2023 Increase/Decrease for Continuation				
	(11) General	(12) State Support Special	(13) Federal	(14) Other Special	(15) Total
Salaries,Wages & Fringe	50,337				50,337
Travel					
Contractual Services					
Commodities					
Other Than Equipment					
Equipment					
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants					
<b>Total</b>	<b>50,337</b>				<b>50,337</b>
No. of Positions (FTE)					

Note: FY2023 Total Request = FY2022 Estimated + FY2023 Incr(Decr) for Continuation + FY2023 Expansion/Reduction of Existing Activities + FY2023 New Activities.

CONTINUATION AND EXPANDED REQUEST

Program 2 of 2

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Public Service

Name of Agency

Program

	FY 2023 Expansion/Reduction of Existing Activities				
	(16) General	(17) State Support Special	(18) Federal	(19) Other Special	(20) Total
Salaries,Wages & Fringe					
Travel					
Contractual Services					
Commodities					
Other Than Equipment					
Equipment					
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants					
<b>Total</b>					
No. of Positions (FTE)					

	FY 2023 New Activities (*)				
	(21) General	(22) State Support Special	(23) Federal	(24) Other Special	(25) Total
Salaries,Wages & Fringe					
Travel					
Contractual Services					
Commodities					
Other Than Equipment					
Equipment					
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants					
<b>Total</b>					
No. of Positions (FTE)					

	FY 2023 Total Request				
	(26) General	(27) State Support Special	(28) Federal	(29) Other Special	(30) Total
Salaries,Wages & Fringe	785,615				785,615
Travel	22,000				22,000
Contractual Services	82,998				82,998
Commodities	78,123				78,123
Other Than Equipment					
Equipment					
Vehicles					
Wireless Communication Devices					
Subsidies, Loans & Grants	154,879				154,879
<b>Total</b>	<b>1,123,615</b>				<b>1,123,615</b>
No. of Positions (FTE)	6.71				6.71

Note: FY2023 Total Request = FY2022 Estimated + FY2023 Incr(Decr) for Continuation + FY2023 Expansion/Reduction of Existing Activities + FY2023 New Activities.

PROGRAM DECISION UNITS

MS State Univ - Center for Advanced Vehicular Systems

1 - Research

Name of Agency	Program Name							
	A	B	C	D	E	F		
EXPENDITURES	FY 2022 Appropriated	Escalations By DFA	Non-Recurring Items	SREB Salary Increase	Total Funding Change	FY 2023 Total Request		
<b>SALARIES</b>	1,859,970			166,501	166,501	2,026,471		
GENERAL	1,717,188			166,501	166,501	1,883,689		
ST. SUP. SPECIAL	142,782					142,782		
FEDERAL								
OTHER								
<b>TRAVEL</b>	10,000					10,000		
GENERAL	10,000					10,000		
ST. SUP.SPECIAL								
FEDERAL								
OTHER								
<b>CONTRACTUAL</b>	718,594					718,594		
GENERAL	718,594					718,594		
ST. SUP. SPECIAL								
FEDERAL								
OTHER								
<b>COMMODITIES</b>	211,577					211,577		
GENERAL	211,577					211,577		
ST. SUP. SPECIAL								
FEDERAL								
OTHER								
<b>CAPTITAL-OTE</b>								
GENERAL								
ST. SUP. SPECIAL								
FEDERAL								
OTHER								
<b>EQUIPMENT</b>								
GENERAL								
ST. SUP. SPECIAL								
FEDERAL								
OTHER								
<b>VEHICLES</b>								
GENERAL								
ST. SUP. SPECIAL								
FEDERAL								
OTHER								
<b>WIRELESS DEV</b>								
GENERAL								
ST. SUP. SPECIAL								
FEDERAL								
OTHER								
<b>SUBSIDIES</b>	750,000					750,000		
GENERAL	750,000					750,000		
ST. SUP. SPECIAL								
FEDERAL								
OTHER								
<b>TOTAL</b>	3,550,141			166,501	166,501	3,716,642		
<b>FUNDING</b>								
GENERAL FUNDS	3,407,359			166,501	166,501	3,573,860		
ST. SUP .SPCL FUNDS	142,782					142,782		
FEDERAL FUNDS								
OTHER SP. FUNDS								
<b>TOTAL</b>	3,550,141			166,501	166,501	3,716,642		
<b>POSITIONS</b>								
GENERAL FTE	54.29					54.29		
ST. SUP. SPCL. FTE								
FEDERAL FTE								
OTHER SP. FTE								
<b>TOTAL</b>	54.29					54.29		
<b>PRIORITY LEVEL :</b>								
				1				

PROGRAM DECISION UNITS

MS State Univ - Center for Advanced Vehicular Systems

2 - Public Service

Name of Agency Program Name

	A	B	C	D	E	F		
EXPENDITURES	FY 2022 Appropriated	Escalations By DFA	Non-Recurring Items	SREB Salary Increase	Total Funding Change	FY 2023 Total Request		
<b>SALARIES</b>	735,278			50,337	50,337	785,615		
GENERAL	735,278			50,337	50,337	785,615		
ST. SUP. SPECIAL								
FEDERAL								
OTHER								
<b>TRAVEL</b>	22,000					22,000		
GENERAL	22,000					22,000		
ST. SUP.SPECIAL								
FEDERAL								
OTHER								
<b>CONTRACTUAL</b>	82,998					82,998		
GENERAL	82,998					82,998		
ST. SUP. SPECIAL								
FEDERAL								
OTHER								
<b>COMMODITIES</b>	78,123					78,123		
GENERAL	78,123					78,123		
ST. SUP. SPECIAL								
FEDERAL								
OTHER								
<b>CAPTITAL-OTE</b>								
GENERAL								
ST. SUP. SPECIAL								
FEDERAL								
OTHER								
<b>EQUIPMENT</b>								
GENERAL								
ST. SUP. SPECIAL								
FEDERAL								
OTHER								
<b>VEHICLES</b>								
GENERAL								
ST. SUP. SPECIAL								
FEDERAL								
OTHER								
<b>WIRELESS DEV</b>								
GENERAL								
ST. SUP. SPECIAL								
FEDERAL								
OTHER								
<b>SUBSIDIES</b>	154,879					154,879		
GENERAL	154,879					154,879		
ST. SUP. SPECIAL								
FEDERAL								
OTHER								
<b>TOTAL</b>	1,073,278			50,337	50,337	1,123,615		

FUNDING

GENERAL FUNDS	1,073,278			50,337	50,337	1,123,615		
ST. SUP .SPCL FUNDS								
FEDERAL FUNDS								
OTHER SP. FUNDS								
<b>TOTAL</b>	1,073,278			50,337	50,337	1,123,615		

POSITIONS

GENERAL FTE	6.71					6.71		
ST. SUP. SPCL. FTE								
FEDERAL FTE								
OTHER SP. FTE								
<b>TOTAL</b>	6.71					6.71		

PRIORITY LEVEL :

				1				
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**PROGRAM NARRATIVE**

Program Data Collected in Accordance with the Mississippi Performance Budget and Strategic Planning Act of 1994  
(To Accompany Form MBR-1-03)

MS State Univ - Center for Advanced Vehicular Systems

1 - Research

Name of Agency

Program Name

**I. Program Description:**

The Center for Advanced Vehicular Systems (CAVS) at Mississippi State University is an interdisciplinary center comprised of engineering, research, development, and technology transfer teams focused on enhancing human and payload mobility. The CAVS activities are clustered around material science, manufacturing process modeling, computational mechanics, computational fluid dynamics, multi-scale modeling, logistics and supply chain, vehicular systems engineering, design optimization, human factors and ergonomics, alternative powered systems, and intelligent electronic systems. Research activities include efforts on life cycle costs, additive manufacturing, combustion engine technologies, autonomous vehicle control (robotics) as well as advances in improved diagnostics, manufacturing, human interface, and computational design technologies. While CAVS projects generate timely solutions relevant to regional manufacturers, CAVS research seeks to expand knowledge that is essential for sustained economic development. Through direct involvement in various activities at CAVS, students gain valuable experience that leverages on their classroom learning.

**II. Program Objective:**

The objective of CAVS is to serve Mississippi State University, government, and industry through research and development of advanced computational modeling, simulation, and design of physical systems to solve real world problems. CAVS houses multiple research groups that provide cross-disciplinary research capabilities to address advancing technologies to solve complex problems for industry and our customers. As a result of CAVS' application-driven, team-oriented approach to basic and applied research on complex industrially-relevant engineering problems, we have contributed to:

- new products for existing Mississippi industry;
- retention and creation of new manufacturing jobs;
- improved vehicle performance and reduced design cycle time and cost; including manufacturing lead-time.
- timely generation of knowledge on the behavior and capabilities of missile, flight, naval vessels and other physical systems;
- analysis of behavior and performance of engineering systems (including humans) under adverse or catastrophic conditions;
- development of high-fidelity simulation tools and training;
- simulation and design systems to both enable and support designers and manufacturers of land, sea, air and space vehicular systems.

**III. Current program activities as supported by the funding in Columns 6-15 (FY 2022 & FY 2023 Increase/Decrease for continuations) of MBR-1-03 and designated Budget Unit Decisions columns of MBR-1-03-A:****(D) SREB Salary Increase:**

Board approved 1/6th SREB salary increase. Funds to be allocated through the allocation model.



**PROGRAM NARRATIVE**

Program Data Collected in Accordance with the Mississippi Performance Budget and Strategic Planning Act of 1994  
(To Accompany Form MBR-1-03)

MS State Univ - Center for Advanced Vehicular Systems

2 - Public Service

Name of Agency

Program Name

**I. Program Description:**

CAVS has proven to be a leading economic development engine for the State of Mississippi. In addition to the CAVS MSU campus facility, in support of its mission, CAVS also offers a direct interface to manufacturers and industries throughout the state and region via the CAVS Engineering Extension, located in Canton, Mississippi. To better serve CAVS' statewide clientele new extension offices have been opened in Biloxi and Starkville, MS. The services offered by the CAVS Engineering Extension include discrete event simulation, professional training in such topics as Six Sigma, lean manufacturing, and metrology. Mississippi's automotive industry and its suppliers are in a global labor competition, so securing lasting jobs is an important activity. Further, there is an increased demand for engineers and technologists to support the increasingly complex problems. According to surveys conducted by the Manufacturing Extension Partnership of Mississippi in the period of 2006-2021, CAVS has had more than \$6.22 billion economic impact on the state and is responsible for over 6,400 jobs created or retained. Similar projects on behalf of other Mississippi companies help secure jobs throughout the state.

**II. Program Objective:**

Although CAVS research, development, and extension activities are important to the automotive industry and its suppliers in attaining its goals, it is also clear CAVS has a broader impact. We have significant project work in support of major industry within the state – e.g., Toyota, Nissan, PACCAR, Taylor Power, Viking Range, Baxter Healthcare, and Huntington Ingalls. . . We are also initiating a more focused activity to support the manufacturing industry on the Gulf coast. CAVS current efforts have touched on many manufacturers and hundreds of employees in the State, especially via our workforce training efforts. From this foundation, CAVS brings the promise for enhanced productivity to further grow the employment base. Thus, the financial support for growing CAVS and its cadre of skilled technologists has significant and long-term implications to the State.

**III. Current program activities as supported by the funding in Columns 6-15 (FY 2022 & FY 2023 Increase/Decrease for continuations) of MBR-1-03 and designated Budget Unit Decisions columns of MBR-1-03-A:****(D) SREB Salary Increase:**

Board approved 1/6th SREB salary increase. Funds to be allocated through the allocation model.

**Elements of Quality Program Design**

For the Evaluation of Requests to Fund New Programs or New Activity in an Existing Program  
(To Accompany Form MBR-1-03A)

**PROGRAM PERFORMANCE MEASURES**

Program Data Collected in Accordance with the Mississippi Performance Budget and Strategic Planning Act of 1994

MS State Univ - Center for Advanced Vehicular Systems (252-01)

1 - Research

Name of Agency

PROGRAM NAME

PROGRAM OUTPUTS: (This is the measure of the process necessary to carry on the goals and objectives of this program. This is the volume produced, i.e., how many people served, how many documents generated.)

	FY 2021 APPRO	FY 2021 ACTUAL	FY 2022 ESTIMATED	FY 2023 PROJECTED
1 # Agency Proposals	76.00	83.00	76.00	76.00
2 # Company Proposals	25.00	11.00	25.00	26.00
3 \$ Agency Proposals (in millions)	51.00	103.00	51.10	52.00
4 \$ Company Proposals (in millions)	7.40	2.00	7.50	7.50
5 Expenditures - Internal (in millions)	7.50	8.30	7.50	7.50
6 Expenditures - Agencies (in millions)	18.50	21.40	18.60	18.60
7 Expenditures - Company (in millions)	1.00	0.00	1.00	1.00
8 Awards - Agencies	50.00	76.00	51.00	51.00
9 Awards - Company	21.00	8.00	21.00	21.00
10 \$ Agency Awards (in millions)	13.00	26.00	13.00	13.00
11 \$ Company Awards (in millions)	2.20	0.20	2.25	2.25
12 # Managers	4.00	4.00	4.00	4.00
13 # Academic Faculty	58.00	103.00	59.00	59.00
14 # Research Professionals	120.00	111.00	120.00	120.00
15 # Support Staff	32.00	27.00	32.00	32.00
16 # Post Docs	25.00	18.00	25.00	25.00
17 # PhD Students Employed	130.00	88.00	130.00	130.00
18 # MS Students Employed	58.00	64.00	58.00	58.00
19 # Undergraduate Students Employed	175.00	225.00	175.00	180.00
20 # Books/Articles Submitted or Awaiting Publication	7.00	15.00	7.00	8.00
21 # Conf Papers Submitted or Awaiting Publication	1.00	3.00	1.00	1.00
22 # Authors of Proposals	66.00	53.00	67.00	67.00

PROGRAM EFFICIENCIES: (This is the measure of the cost, unit cost or productivity associated with a given outcome or output. This measure indicates linkage between services and funding, i.e., cost per investigation, cost per student or number of days to complete investigation.)

	FY 2021 APPRO	FY 2021 ACTUAL	FY 2022 ESTIMATED	FY 2023 PROJECTED
1 # Proposals / # Faculty & Managers	2.30	23.50	2.40	2.50
2 \$ Proposals / # Faculty & Managers (in millions)	1.45	26.30	1.45	1.50
3 Expenditures / # Faculty & Managers (in millions)	1.10	7.40	1.15	1.15
4 # Awards / # Faculty & Managers	2.25	21.00	2.25	2.30
5 Expenditures / # Support Staff and Others (in millions)	0.06	0.06	0.07	0.70
6 # Books-Chapters-Articles/# Faculty & Mgrs	1.60	0.48	1.60	1.60
7 # Peer-reviewed Conf Papers/# Faculty & Mgrs	0.88	0.23	0.88	0.88
8 # Tech Reports / # Faculty & Mgrs	0.48	0.17	0.49	0.49

**PROGRAM PERFORMANCE MEASURES**

Program Data Collected in Accordance with the Mississippi Performance Budget and Strategic Planning Act of 1994

MS State Univ - Center for Advanced Vehicular Systems (252-01)

1 - Research

Name of Agency

PROGRAM NAME

**PROGRAM OUTCOMES:** (This is the measure of the quality or effectiveness of the services provided by this program. This measure provides an assessment of the actual impact or public benefit of your agency's actions. This is the results produced, i.e., increased customer satisfaction by x% within a 12-month period, reduce the number of traffic fatalities due to drunk drivers within a 12-month period.

	FY 2021 APPRO	FY 2021 ACTUAL	FY 2022 ESTIMATED	FY 2023 PROJECTED
1 Books/Book Chapters Published	4.50	4.00	4.50	4.50
2 Articles Published in Trade Journals	4.00	2.00	4.00	4.00
3 Articles Published in Peer-reviewed Journals	80.00	45.00	80.00	80.00
4 Peer-reviewed Conference Papers	42.00	25.00	42.00	42.00
5 Peer-reviewed Conference Abstracts & Posters	21.00	25.00	21.00	21.00
6 Theses/Dissertations	7.00	2.00	7.00	7.00
7 Technical Reports	20.00	18.00	20.00	20.00
8 Awards/Recognitions	8.00	7.00	8.00	8.00
9 Non-refereed Conf Papers/Abstracts/Posters	20.00	0.00	20.00	20.00

**PROGRAM PERFORMANCE MEASURES**

Program Data Collected in Accordance with the Mississippi Performance Budget and Strategic Planning Act of 1994

MS State Univ - Center for Advanced Vehicular Systems (252-01)

2 - Public Service

Name of Agency

PROGRAM NAME

**PROGRAM OUTPUTS:** (This is the measure of the process necessary to carry on the goals and objectives of this program. This is the volume produced, i.e., how many people served, how many documents generated.)

	FY 2021 APPRO	FY 2021 ACTUAL	FY 2022 ESTIMATED	FY 2023 PROJECTED
1 # Agency Proposals	8.00	4.00	8.50	8.50
2 # Company Proposals	6.00	5.00	6.50	6.50
3 \$ Agency Proposals (in millions)	4.20	10.50	4.20	4.25
4 \$ Company Proposals (in millions)	0.40	0.50	0.50	0.50
5 Expenditures - Internal (in millions)	1.00	1.00	1.00	1.00
6 Expenditures - Agencies (in millions)	0.45	0.50	0.46	0.47
7 Expenditures - Company (in millions)	0.25	0.00	0.25	0.25
8 Awards - Agencies	9.00	1.00	9.00	9.00
9 Awards - Company	6.00	1.00	6.50	6.50
10 \$ Agency Awards (in millions)	1.50	0.80	1.50	1.50
11 \$ Company Awards (in millions)	0.30	0.05	0.30	0.30
12 # Managers	2.00	4.00	2.00	2.00
13 # Academic Faculty	2.00	0.00	2.50	2.50
14 # Research Professionals	28.00	27.00	28.00	28.00
15 # Support Staff	4.50	8.00	4.50	4.50
16 # Undergraduate Students Employed	6.00	1.00	6.00	6.00
17 # Books/Articles Submitted or Awaiting Publication	1.00	0.00	1.00	1.00
18 # Conf Papers Submitted or Awaiting Publication	1.00	11.00	1.00	1.00
19 # Authors of Proposals	19.00	15.00	19.00	19.00

**PROGRAM EFFICIENCIES:** (This is the measure of the cost, unit cost or productivity associated with a given outcome or output. This measure indicates linkage between services and funding, i.e., cost per investigation, cost per student or number of days to complete investigation.)

	FY 2021 APPRO	FY 2021 ACTUAL	FY 2022 ESTIMATED	FY 2023 PROJECTED
1 # Proposals / # Faculty & Managers	5.50	2.25	5.50	5.50
2 \$ Proposals / # Faculty & Managers (in millions)	1.05	2.75	1.05	1.05
3 Expenditures / # Faculty & Managers (in millions)	0.80	0.36	0.80	0.80
4 # Awards / # Faculty & Managers	3.30	0.50	3.30	3.30
5 Expenditures / # Support Staff and Others (in millions)	0.25	0.04	0.25	0.25
6 # Books-Chapters-Articles/# Faculty & Mgrs	0.01	1.00	0.01	0.01
7 # Peer-reviewed Conf Papers/# Faculty & Mgrs	1.20	0.50	1.20	1.20
8 # Tech Reports / # Faculty & Mgrs	10.00	6.00	10.00	10.00

**PROGRAM PERFORMANCE MEASURES**

Program Data Collected in Accordance with the Mississippi Performance Budget and Strategic Planning Act of 1994

MS State Univ - Center for Advanced Vehicular Systems (252-01)

2 - Public Service

Name of Agency

PROGRAM NAME

**PROGRAM OUTCOMES:** (This is the measure of the quality or effectiveness of the services provided by this program. This measure provides an assessment of the actual impact or public benefit of your agency's actions. This is the results produced, i.e., increased customer satisfaction by x% within a 12-month period, reduce the number of traffic fatalities due to drunk drivers within a 12-month period.

	FY 2021 APPRO	FY 2021 ACTUAL	FY 2022 ESTIMATED	FY 2023 PROJECTED
1 Awards/Recognitions	0.00	0.00	0.00	0.00
2 Technical Reports	0.00	2.00	0.00	2.00
3 Peer-reviewed Conference Abstracts & Posters	0.00	0.00	0.00	0.00
4 Peer-reviewed Conference Papers	0.00	1.00	0.00	1.00
5 Articles Published in Peer-reviewed Journals	0.00	0.00	0.00	0.00
6 Articles Published in Trade Journals	55.00	12.00	55.00	55.00
7 Books/Book Chapters Published	1.00	2.00	1.00	1.00

**PROGRAM 3% GENERAL FUND REDUCTION AND NARRATIVE EXPLANATION**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

	Fiscal Year 2022 Funding			FY 2022 GF PERCENT REDUCED
	Total Funds	Reduced Amount	Reduced Funding Amount	

<b>Program Name:</b> (1) Research					
General	3,407,359	(103,215)	3,304,144	(3.03%)	
State Support Special	142,782		142,782		
Federal					
Other Special					
<b>TOTAL</b>	<b>3,550,141</b>	<b>(103,215)</b>	<b>3,446,926</b>		

**Narrative Explanation:**

A 3% reduction in funding would be absorbed by covering more contractual costs with discretionary funding.

<b>Program Name:</b> (2) Public Service					
General	1,073,278	(31,204)	1,042,074	(2.91%)	
State Support Special					
Federal					
Other Special					
<b>TOTAL</b>	<b>1,073,278</b>	<b>(31,204)</b>	<b>1,042,074</b>		

**Narrative Explanation:**

A 3% reduction in funding would be absorbed by covering more contractual costs with discretionary funding.

<b>Program Name:</b> (99) Summary of All Programs					
General	4,480,637	(134,419)	4,346,218	(3.00%)	
State Support Special	142,782		142,782		
Federal					
Other Special					
<b>TOTAL</b>	<b>4,623,419</b>	<b>(134,419)</b>	<b>4,489,000</b>		

**BOARD OF TRUSTEES OF STATE INSTITUTIONS OF HIGHER LEARNING MEMBERS**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

**A. Explain Rate and manner in which board members are reimbursed:**

Board members are reimbursed through the Institutions of Higher Learning System Administration budget with a per diem of \$40 plus expenses.

**B. Estimated number of meetings FY 2022:**

12 (twelve)

<b>C. Board Members</b>	<b>City, Town, Residence</b>	<b>Appointed By</b>	<b>Date Appointed</b>	<b>Length of Term</b>
1. Dr. Alfred E. McNair, JR	Ocean Springs, MS	Bryant	05/08/2015	9 years
2. Dr. J. Walt Starr	Columbus, MS	Bryant	05/08/2015	9 years
3. Mr. Chip Morgan	Leland, MS	Bryant	05/08/2015	9 years
4. Mr. Thomas Duff	Hattiesburg, MS	Bryant	05/08/2015	9 years
5. Dr. Steven Cunningham	Hattiesburg, MS	Bryant	05/08/2018	9 years
6. Mr. Bruce Martin	Meridian, MS	Bryant	05/08/2018	9 years
7. Mr. Powell Gee Ogletree Jr.	Ridgeland, MS	Bryant	05/08/2018	9 years
8. Ms. Jeanne Carter Luckey	Ocean Springs, MS	Bryant	05/08/2018	9 years
9. Dr. Ormella Cummings, PhD	Tupelo, MS	Reeves	05/18/2021	9 years
10. Mr. Gregory Rader	Columbus, MS	Reeves	05/18/2021	9 years
11. Mr. Hal Parker	Bolton, MS	Reeves	05/18/2021	9 years
12. Ms. Teresa Hubbard	Oxford, MS	Reeves	05/18/2021	9 years

Identify Statutory Authority (Code Section or Executive Order Number)\*

*Constitutional Amendment 213A of the Constitution of the State of Mississippi.*

\*If Executive Order, please attach copy.



**SCHEDULE B  
CONTRACTUAL SERVICES**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

MINOR OBJECT OF EXPENDITURE	(1) Actual Expenses FY Ending June 30, 2021	(2) Estimated Expenses FY Ending June 30, 2022	(3) Requested for FY Ending June 30, 2023
<b>A. Tuition, Rewards &amp; Awards (61050xxx-61080xxx)</b>			
61010 Tuition		2,500	2,500
61020 Employee Training	1,740	3,572	3,572
<b>Total</b>	<b>1,740</b>	<b>6,072</b>	<b>6,072</b>
<b>B. Transportation &amp; Utilities (61100xxx-61200xxx)</b>			
61110 Postage, Box Rental, etc	2,093		
611XX Transportation of Goods (61180-61190)	2,025	15,000	15,000
61210 Electricity	1,267	1,000	1,000
<b>Total</b>	<b>5,385</b>	<b>16,000</b>	<b>16,000</b>
<b>C. Public Information (61300xxx-6131xxxx)</b>			
61310 Advertising & Public Information	2,020		
<b>Total</b>	<b>2,020</b>		
<b>D. Rents (61400xxx-61490xxx)</b>			
61420 Building and Floor Space		1,000	1,000
61490 Other Rentals	10,476	20,000	20,000
<b>Total</b>	<b>10,476</b>	<b>21,000</b>	<b>21,000</b>
<b>E. Repairs &amp; Service (61500xxx)</b>			
61500 Grounds, Walks, Fences, & Lots	57,322	32,000	32,000
61520 Buildings	58,763	31,000	31,000
61540 Motor Vehicles	4,437	1,500	1,500
<b>Total</b>	<b>120,522</b>	<b>64,500</b>	<b>64,500</b>
<b>F. Fees, Professional &amp; Other Services (6161xxxx-61699xxx)</b>			
XXX Laboratory & Testing Fees		2,500	2,500
XXX OnCampus Visitor Parking Permits - Non-gated	38		
XXX Installation labor	1,800		
XXX Advertising Video Production	5,000		
<b>Total</b>	<b>6,838</b>	<b>2,500</b>	<b>2,500</b>
<b>G. Other Contractual Services (61700xxx-61790xxx, 61900xxx)</b>			
61710 Insurance & Fidelity Bonds	2,995	1,200	1,200
61720 Membership Dues	750		
61721 Subscriptions		500	500
61730 Laundry, Dry Cleaning, & Towel Service		150	150
XXX Custodial Services	43,840	45,000	45,000

**SCHEDULE B  
CONTRACTUAL SERVICES**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

MINOR OBJECT OF EXPENDITURE	(1) Actual Expenses FY Ending June 30, 2021	(2) Estimated Expenses FY Ending June 30, 2022	(3) Requested for FY Ending June 30, 2023
XXX Software Maintenance	55,190	60,000	60,000
XXX Maintenance Contracts - Equipment	56,164	100,000	100,000
XXX Garbage Disposal	6,473	3,000	3,000
XXX Contractual Services - HPC Retainage		407,650	407,650
XXX Other Misc Contractual Services (includes MTA)	252	1,000	1,000
XXX Pest Control	2,303	2,000	2,000
XXX Hazardous Waste	6,719	7,500	7,500
<b>Total</b>	<b>174,686</b>	<b>628,000</b>	<b>628,000</b>
<b>H. Information Technology (61800xxx-61890xxx)</b>			
61902 IT Professional Fees - Outside Vendor	622	1,500	1,500
61921 Software Acquisition, Installation and Maintenance	22,887		
61923 Basic Telephone Monthly	37,383	38,000	38,000
61924 Long Distance Charges - Outside Vendor	2,969	15,000	15,000
61925 Long Distance Charges - ITS	4,326	5,000	5,000
61928 Private Network Access Charges - Outside Vendor		4,020	4,020
<b>Total</b>	<b>68,187</b>	<b>63,520</b>	<b>63,520</b>
<b>Grand Total</b> <i>(Enter on Line 1-B of Form MBR-1)</i>	<b>389,854</b>	<b>801,592</b>	<b>801,592</b>
<b>Funding Summary:</b>			
General Funds	389,854	801,592	801,592
State Support Special Funds			
Federal Funds			
Other Special Funds			
<b>Total Funds</b>	<b>389,854</b>	<b>801,592</b>	<b>801,592</b>

**SCHEDULE C  
COMMODITIES**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

MINOR OBJECT OF EXPENDITURE	(1) Actual Expenses FY Ending June 30, 2021	(2) Estimated Expenses FY Ending June 30, 2022	(3) Requested for FY Ending June 30, 2023
<b>A. Maintenance &amp; Constr. Materials &amp; Supplies (62000xxx, 62015xxx)</b>			
62040 Lumber Parts			
62060 Paints			
<b>Total</b>			
<b>B. Printing &amp; Office Supplies &amp; Materials (62010xxx, 62085xxx, 62100xxx, 62125xxx, 62400xxx)</b>			
62110 Printing, Binding, & Padding	237	3,200	3,200
62120 Duplication and Reproduction	936		
62130 Office Supplies and Materials	23,045	15,000	15,000
62140 Paper Supplies		1,500	1,500
62160 Office Equipment (not capital outlay)	62,714	90,000	90,000
<b>Total</b>	<b>86,932</b>	<b>109,700</b>	<b>109,700</b>
<b>C. Equipment Repair Parts, Supplies &amp; Acces. (6205xxxx, 62072xxx, 62110xxx, 62115xxx, 62120xxx, 62130xxx)</b>			
62210 Fuels - Gasoline	135	2,500	2,500
62290 Other Equipment Repair Parts	31,597	30,000	30,000
<b>Total</b>	<b>31,732</b>	<b>32,500</b>	<b>32,500</b>
<b>D. Professional &amp; Sci. Supplies and Materials (62025xxx, 62030xxx, 62070xxx, 62095xxx, 62105xxx, 6212xxxx)</b>			
62330 Photographic Supplies	303	400	400
62340 Drugs Chemicals - Medical and Lab Use	22,223	22,000	22,000
62390 Other Professional Scientific	133,269	52,500	52,500
<b>Total</b>	<b>155,795</b>	<b>74,900</b>	<b>74,900</b>
<b>E. Other Supplies &amp; Materials (62005xxx, 62015xxx, 62020xxx, 62035xxx, 62040xxx, 62045xxx, 62060xxx, 62065xxx, 62075xxx-62080xxx, 62090xxx, 62115xxx, 62135xxx, 62140xxx, 62405xxx, 62415xxx, 62500xxx-62999xxx)</b>			
62420 Hardware, Plumbing, and Electrical	296	1,000	1,000
62450 Janitor Supplies and Cleaning	3,598	4,500	4,500
62460 Wearing Material	165	100	100
6247X Food			
62590 Other Supplies and Materials	19,154	15,000	15,000
62595 Other Equipment - Comp	99,351	52,000	52,000
<b>Total</b>	<b>122,564</b>	<b>72,600</b>	<b>72,600</b>
<b>Grand Total</b> (Enter on Line 1-C of Form MBR-1)	<b>397,023</b>	<b>289,700</b>	<b>289,700</b>
<b>Funding Summary:</b>			
General Funds	397,023	289,700	289,700
State Support Special Funds			

SCHEDULE C  
COMMODITIES

MS State Univ - Center for Advanced Vehicular Systems (252-01)  
Name of Agency

MINOR OBJECT OF EXPENDITURE	(1) Actual Expenses FY Ending June 30, 2021	(2) Estimated Expenses FY Ending June 30, 2022	(3) Requested for FY Ending June 30, 2023
Federal Funds			
Other Special Funds			
Total Funds	397,023	289,700	289,700

SCHEDULE D-1  
CAPITAL OUTLAY  
OTHER THAN EQUIPMENT

MS State Univ - Center for Advanced Vehicular Systems (252-01)  
Name of Agency

MINOR OBJECT OF EXPENDITURE	(1) Actual Expenses FY Ending June 30, 2021	(2) Estimated Expenses FY Ending June 30, 2022	(3) Requested for FY Ending June 30, 2023
Grand Total <i>(Enter on Line 1-D-1 of Form MBR-1)</i>			
Funding Summary:			
General Funds			
State Support Special Funds			
Federal Funds			
Other Special Funds			
Total Funds			

**SCHEDULE D-2  
CAPITAL OUTLAY EQUIPMENT**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

EQUIPMENT BY ITEM	Act. FY Ending June 30, 2021		Est. FY Ending June 30, 2022		Req. FY Ending June 30, 2023	
	No. of Units	Total Cost	No. of Units	Total Cost	No. of Units	Total Cost

<b>F. Other Equipment (63200xxx)</b>						
EVS KNEE MILL - Two Elk Inv	1	21,316				
BAND SAW - Gulf States	1	6,375				
<b>Total</b>		<b>27,691</b>				

<b>Grand Total</b> <i>(Enter on Line 1-D-2 of Form MBR-1)</i>		<b>27,691</b>		
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<b>Funding Summary:</b>			
General Funds	27,691		
State Support Special Funds			
Federal Funds			
Other Special Funds			
<b>Total Funds</b>	<b>27,691</b>		

**SCHEDULE D-3**  
**PASSENGER/WORK VEHICLES**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

MINOR OBJECT OF EXPENDITURE	Vehicle Inventory June 30, 2021	Act. FY Ending June 30, 2021		Est. FY Ending June 30, 2022		Req. FY Ending June 30, 2023	
		No. of Units	Total Cost	No. of Units	Total Cost	No. of Units	Total Cost

<b>GRAND TOTAL</b> <i>(Enter on Line 1-D-3 of Form MBR-1)</i>			
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<b>Funding Summary:</b>			
General Funds			
State Support Special Funds			
Federal Funds			
Other Special Funds			
<b>Total Funds</b>			

**SCHEDULE D-4  
WIRELESS COMMUNICATION DEVICES**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

MINOR OBJECT OF EXPENDITURE	Device Inventory June 30, 2021	Act. FY Ending June 30, 2021		Est. FY Ending June 30, 2022		Req. FY Ending June 30, 2023	
		No. of Devices	Actual Cost	No. of Devices	Estimated Cost	No. of Devices	Requested Cost

<b>Grand Total</b> <i>(Enter on Line 1-D-4 of Form MBR-1)</i>			
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<b>Funding Summary:</b>			
General Funds			
State Support Special Funds			
Federal Funds			
Other Special Funds			
<b>Total Funds</b>			



**SCHEDULE E**  
**SUBSIDIES, LOANS & GRANTS**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

MINOR OBJECT OF EXPENDITURE	(1) Actual Expenses FY Ending June 30, 2021	(2) Estimated Expenses FY Ending June 30, 2022	(3) Requested for FY Ending June 30, 2023
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<b>E. Other, Transfers (67000xxx-67199xxx, 67998xxx, 68500xxx-68860xxx, 70045xxx-70080xxx, 80000xxx-80500xxx)</b>			
Cost Share on Joint Industrial/University/Federal	516,020	780,000	780,000
Fellowships		12,000	12,000
Start-up Commitments		112,879	112,879
<b>Total</b>	<b>516,020</b>	<b>904,879</b>	<b>904,879</b>
<b>Grand Total</b> <i>(Enter on Line 1-E of Form MBR-1)</i>	<b>516,020</b>	<b>904,879</b>	<b>904,879</b>
<b>Funding Summary:</b>			
General Funds	516,020	904,879	904,879
State Support Special Funds			
Federal Funds			
Other Special Funds			
<b>Total Funds</b>	<b>516,020</b>	<b>904,879</b>	<b>904,879</b>

**NARRATIVE**  
**2023 BUDGET REQUEST**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

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Name of Agency

The Center for Advanced Vehicular Systems (CAVS) at Mississippi State University is an interdisciplinary center comprised of engineering, research, development, and technology transfer teams focused on enhancing human and payload mobility. The CAVS activities are clustered around material science, manufacturing process modeling, computational mechanics, computational fluid dynamics, multi-scale modeling, human factors, vehicular systems engineering, design optimization, human factors and ergonomics, alternative powered systems, and autonomous vehicular systems. Research activities include efforts on life cycle costs, additive manufacturing, high strength steel research, structural integrity, systems engineering, data sciences, as well as advances in improved diagnostics, manufacturing, training systems, and computational design technologies. While CAVS projects generate timely solutions relevant to regional manufacturers, CAVS research seeks to expand knowledge that is essential for sustained economic development. Through direct involvement in various activities at CAVS, students gain valuable experience that leverages on their classroom learning.

The research groups within CAVS are dynamic with the ability to maximize the utilization of advancing technologies. In recognition that today's complex problems facing manufacturing competitiveness and product safety and reliability must be addressed by cross-disciplinary teams, CAVS researchers approach the problems from diverse viewpoints to arrive at appropriate solutions. Each group at CAVS shares a passion for helping industry realize and sustain a competitive advantage within the global economy.

In support of its mission, CAVS also offers a direct interface to manufacturers and industries throughout the state and region via the CAVS Engineering Extension, located in Canton, Mississippi. The services offered by the CAVS Engineering Extension include manufacturing plant simulation, Six Sigma, advanced maintenance engineering, lean manufacturing, facility layout, virtual reality, and quality engineering. With a staff of about 300 faculty, research staff, postdocs, and students, the engineering enterprise of the Center for Advanced Vehicular Systems is well situated to support the research needs of industry.

CAVS is continuing to serve as a regional resource for the recruiting of automotive and related industries. The recruitment of Continental Tire to the state of Mississippi was facilitated by the core competencies in research, extension, and automotive related academic prowess at CAVS. As the US economy is turning around, the manufacturing enterprise of the state of Mississippi will be in need of support from CAVS for a multitude of research, design, training, and warranty issues. CAVS has also been proven to be a leading economic development engine for the State of Mississippi. According to surveys conducted by the Manufacturing Extension Partnership of Mississippi in the 15-year period of 2006-2021, CAVS has had more than \$6.22 billion economic impact on the state and is responsible for over 6,054 jobs created or retained. In a new focus area, funds will also be used to support the transportation industry's move toward autonomous vehicles and additive manufacturing. New research and outreach activities are needed to help the state compete and to develop policies for nurturing this burgeoning industry. This support will link to efforts across the university and state agencies (e.g., MDOT, MDEQ, MDA). Because of the expanding petroleum industry in Mississippi and the rest of the country, industrial outreach efforts will also be continued to assist this growing industry which has the potential to significantly add to job growth in Mississippi.

CAVS represents a commitment by the State of Mississippi to work with and support Mississippi industry through project-based activities. The management at CAVS and the research team in general, recognize the need to generate economic development via technological and scientific discovery. This means CAVS serves as a knowledge resource for existing and future Mississippi industries. As with all academic research centers, CAVS is dependent on stable infrastructure support to ensure the best and brightest engineering talent is brought to bear on the regional growth initiatives and development of a strong R&D infrastructure to support the emerging Southern Automotive Corridor. CAVS serves as an active member of the Mississippi Manufactures Association as well as a board member of the Mississippi Automotive Manufacturers Association (MAMA). It has established a close working relationship with the Nissan assembly facility in Canton, Toyota in Blue Springs, Yokohama Tire in West Point, Taylor Machine in Louisville, Viking Range in Greenwood, Huntington Ingalls in Pascagoula, Hol-Mac Corporation in Bay Springs, and PACCAR Engines in Columbus, to name a few. CAVS faculty and staff are continuing to work closely with MDA and local economic development authorities throughout the state in recruiting new industry to the state and in supporting the existing industries. The State infrastructure funds allow CAVS to build toward its basic mission, with already much evidence of impact via an effective engineering capability to support Mississippi industry. Having access to knowledgeable researchers and providing leading edge capabilities is an important asset for the State.

Recurring State funding for CAVS is required as the foundation continues to be built via the development of the facilities, staff, and knowledge base. Current state funding is critical to supporting the infrastructure while seeding new research initiatives, student activities, and engineering extension. Further, many recent activities have helped Mississippi industry via workforce training, short

**NARRATIVE**  
**2023 BUDGET REQUEST**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

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Name of Agency

courses, and partnerships designed to attract federal and industrial funding. At present, the State support is providing less than 20 percent of the total CAVS operating funds. Continued leveraging of the State funding is critical to building a self-sustaining organization satisfying the obligations of CAVS to our partners, the state, and the university.

According to the most recent information, on average, Mississippi State University's salaries are approximately 80% of our SREB (Southern Regional Education Board) Peers. In order to remain competitive and retain the world class staff necessary to provide the State of Mississippi with a leading research University, MSU requests additional salary funding for FY 2023 consistent with the 1/6th SREB salary request approved by the IHL Board of Trustees. The FY 2023 request is intended to begin narrowing the average salary gap between IHL institutions and SREB. The allocation methodology to campuses will be determined by the Board at a future date.

**OUT-OF-STATE TRAVEL**  
**FISCAL YEAR 2023**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

Note: All expenditures recorded on this form must be totaled and said total must agree with the out-of-state travel amount indicated for FY 2021 on Form Mbr-1, line 1.A.2.b.

Employee's Name	Destination	Purpose	Travel Cost	Funding Source
Murray, Steven	Pensacola, Florida	to receive training to become certified CPR/AED instructor for CAVS safety group	656	General Funds
Newman, Michael	Pensacola, Florida	to receive training to become certified CPR/AED instructor for CAVS safety group	56	General Funds
			<hr/>	
			<b>Total Out of State Cost</b>	<b>\$ 712</b>

# FEES, PROFESSIONAL AND OTHER SERVICES

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

TYPE OF FEE AND NAME OF VENDOR	Retired w/ PERS	(1) Actual Expenses FY Ending June 30, 2021	(2) Estimated Expenses FY Ending June 30, 2022	(3) Requested Expenses FY Ending June 30, 2023	Fund Source
XXX Laboratory & Testing Fees					
Laboratory & Testing Fees/Testing					
Comp. Rate: 15.00/hour			2,500	2,500	General Funds
<b>Total XXX Laboratory &amp; Testing Fees</b>			<b>2,500</b>	<b>2,500</b>	
XXX OnCampus Visitor Parking Permits - Non-gated					
OnCampus Visitor Parking Permits - Non-gated/allowed visitors to					
Comp. Rate: \$1.50 per pass	No	38			General Funds
<b>Total XXX OnCampus Visitor Parking Permits - Non-gated</b>		<b>38</b>			
XXX Installation labor					
XXX Installation labor/installation of new door on dynamometer					
Comp. Rate: \$150 per hour	No	1,800			General Funds
<b>Total XXX Installation labor</b>		<b>1,800</b>			
XXX Advertising Video Production					
Video Production/created advertising vignette for new CAVS					
Comp. Rate: \$7,750 per video	No	5,000			General Funds
<b>Total XXX Advertising Video Production</b>		<b>5,000</b>			
<b>GRAND TOTAL</b>		<b>6,838</b>	<b>2,500</b>	<b>2,500</b>	

## VEHICLE PURCHASE DETAILS

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

Year	Model	Person(s) Assigned To	Vehicle Purpose/Use	Replacement Or New?	FY2023 Req. Cost
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TOTAL VEHICLE REQUEST

**VEHICLE INVENTORY  
AS OF JUNE 30, 2021**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

Vehicle Type	Vehicle Description	Model Year	Model	Person(s) Assigned To	Purpose/Use	Tag Number	Mileage on 6-30-2021	Average Miles per Year	Replacement Proposed	
									FY2022	FY2023

**VEHICLE POOL MEMBER LIST**  
**2023 BUDGET REQUEST**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

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Name of Agency



**PRIORITY OF DECISION UNITS  
FISCAL YEAR 2023**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

Program	Decision Unit	Object	Amount
<b>Priority # 1</b>			
	Program # 1: Research		
	SREB Salary Increase		
		Salaries	166,501
		<b>Totals</b>	166,501
		General Funds	166,501
	Program # 2: Public Service		
	SREB Salary Increase		
		Salaries	50,337
		<b>Totals</b>	50,337
		General Funds	50,337

## CAPITAL LEASES

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

VENDOR/ ITEM LEASED	Original Date of Lease	Original No. of Months of Lease	No. of Months Remaining on 6-30-21	Last Payment Date	Interest Rate	Amount of Each Payment			Total of Payments To Be Made					
						Actual FY 2021			Estimated FY 2022			Requested FY 2023		
						Principal	Interest	Total	Principal	Interest	Total	Principal	Interest	Total

**Summary of 3% General Fund Program Reduction to FY 2022 Appropriated Funding by Major Object**

MS State Univ - Center for Advanced Vehicular Systems (252-01)

Name of Agency

<b>Major Object</b>	<b>FY2022 General Fund Reduction</b>	<b>EFFECT ON FY2022 STATE SUPPORT SPECIAL FUNDS</b>	<b>EFFECT ON FY2022 FEDERAL FUNDS</b>	<b>EFFECT ON FY2022 OTHER SPECIAL FUNDS</b>	<b>TOTAL 3% REDUCTIONS</b>
<b>SALARIES, WAGES, FRINGE</b>					
<b>TRAVEL</b>					
<b>CONTRACTUAL</b>	(134,419)				(134,419)
<b>COMMODITIES</b>					
<b>OTHER THAN EQUIPMENT</b>					
<b>EQUIPMENT</b>					
<b>VEHICLES</b>					
<b>WIRELESS COMM. DEVS.</b>					
<b>SUBSIDIES, LOANS, ETC</b>					
<b>TOTALS</b>	(134,419)				(134,419)



## Center for Advanced Vehicular Systems Clayton T. Walden, Executive Director

**Human Factors**  
Reuben Burch  
Associate Director

- Human Factors
- Ergonomics
- Biomechanics
- Product Lifecycle Management
- Cyberinfrastructure
- Augmented Reality
- Visualization
- Athlete Engineering

**Engineering Mechanics & Materials Science**  
Hongjoo Rhee  
Associate Director

- Multi-scale Experimental Characterization
- Materials Processing
- Lightweight Materials
- Steel Alloy Design and Manufacturing
- Bio-materials
- Additive Manufacturing
- V&V

**Computational Engineering Mechanics**  
Tonya Stone  
Associate Director

- Multi-scale Modeling
- Material Models
- Theoretical Mechanics
- Computational Simulations
- Design Optimization
- Uncertainty Analysis
- Bio-inspired Design
- Process Modeling

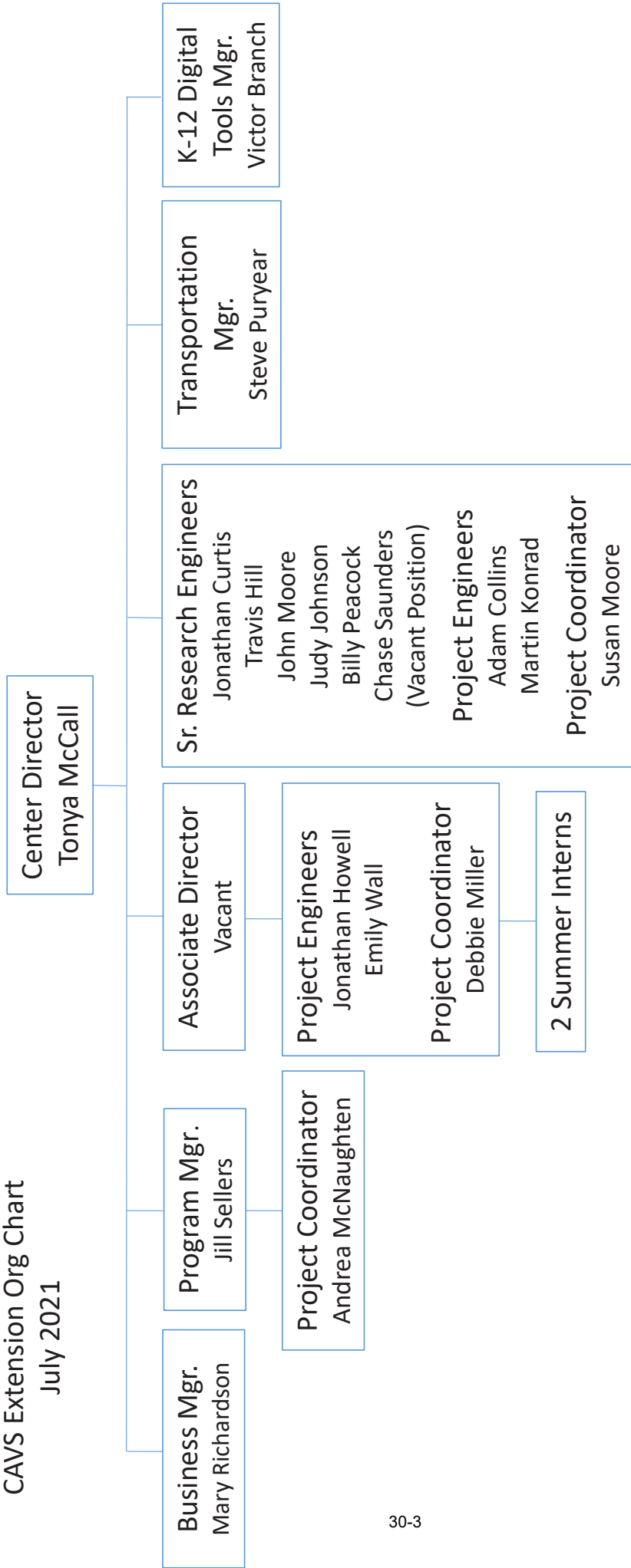
**Computational Fluid Dynamics**  
Shanti Bhushan  
Associate Director

- Mesh Generation
- Simulation Tools
- Energetics
- Thermal Mgt.
- Aerodynamics
- Chemically reacting flow
- Multidisciplinary design optimization
- Fluid-structure interaction

**Advanced Vehicle Systems**  
Daniel Carruth  
Associate Director

- Automotive Electronics
- Hybrid Technologies
- IC Engines
- Dynamometer
- Noise, Vibration & Harshness
- Emissions
- Mobility
- Autonomy

# CAVS Extension Org Chart July 2021



**BOARD OF TRUSTEES OF STATE  
INSTITUTIONS OF HIGHER LEARNING  
STATE OF MISSISSIPPI**

Schedule A  
Salaries and Wages

Agency: MSU - CENTER FOR ADVANCED VEHICULAR SYSTEMS 252-01

	Actual Expenses FY Ending 30-Jun-21		Estimated Expenses FY Ending 30-Jun-22		Required for FY Ending 1-Jul-23	
	FTE	Dollars	FTE	Dollars	FTE	Dollars
CURRENT POSITIONS:						
1100 - Exec, Admin & Managerial	3.85	460,289	3.85	391,811	3.85	424,548
1200 - Faculty						
9 month	2.30	129,413	2.30	110,160	2.30	119,364
12 month	9.25	540,034	9.25	459,694	9.25	498,102
Other	0.00	0	0.00	0	0.00	0
Total Faculty	15.40	669,447	15.40	569,854	15.40	617,466
1300 - Professional Non-faculty	21.00	648,462	21.00	551,990	21.00	598,109
1400 - Clerical and Secretarial	17.60	198,899	17.60	169,309	17.60	183,455
1500 - Technical & Paraprofessional	5.00	149,232	5.00	127,031	5.00	137,645
1600 - Skilled Crafts	0.00	0	0.00	0	0.00	0
1700 - Services/Maintenance	0.00	0	0.00	0	0.00	0
1800 - Students	2.00	205,428	2.00	174,866	2.00	189,477
TOTAL	61.00	2,331,757	61.00	1,984,861	61.00	2,150,700
NEW POSITIONS REQUIRED FOR FY 2022:					FTE	Dollars
1100 - Exec, Admin & Managerial					0.00	0
1200 - Faculty						
9 month					0.00	0
12 month					0.00	0
Other					0.00	0
1300 - Professional Non-faculty					0.00	0
1400 - Clerical and Secretarial					0.00	0
1500 - Technical & Paraprofessional					0.00	0
1600 - Skilled Crafts					0.00	0
1700 - Services/Maintenance					0.00	0
1800 - Students					0.00	0
TOTAL					0.00	0
PROMOTIONS, REALIGNMENTS, RECLASSIFICATIONS FOR FY 2022:						Dollars
1100 - Exec, Admin & Managerial						0
1200 - Faculty						
9 month						0
12 month						0
Other						0
1300 - Professional Non-faculty						0
1400 - Clerical and Secretarial						0
1500 - Technical & Paraprofessional						0
1600 - Skilled Crafts						0
1700 - Services/Maintenance						0
1800 - Students						0
TOTAL						0
GRAND TOTAL Salaries and Wages						
	61.00	2,331,757	61.00	1,984,861	61.00	2,150,700

**BOARD OF TRUSTEES OF STATE  
INSTITUTIONS OF HIGHER LEARNING  
STATE OF MISSISSIPPI**

Schedule A-1  
Fringe Benefits

Agency: MSU - CENTER FOR ADVANCED VEHICULAR SYSTEMS 252-01

	Actual Expenses FY Ending 30-Jun-21	Estimated Expenses FY Ending 30-Jun-22	Required for FY Ending 1-Jul-23
<b>CURRENT POSITIONS:</b>			
3910 - Employees' Retirement Matching	390,801	298,296	323,220
3920 - SSI Matching & FICA	160,251	133,065	144,182
3930 - Workers' Compensation	8,012	9,766	10,582
3940 - Health Insurance Contribution	133,524	103,827	112,502
3950 - Group Life Insurance	2,267	1,953	2,116
3960 - Civil Service (Agriculture Units)	0	0	0
3970 - Unemployment Tax	1,728	1,648	1,786
3980 - Remission of Fees	6,599	34,792	37,699
3990 - Terminal Leave Expense	13,884	27,040	29,299
<b>TOTAL Fringe Benefits for Continuing Employees</b>	<b>717,066</b>	<b>610,387</b>	<b>661,386</b>
<b>ESTIMATED FRINGE BENEFITS REQUIRED FOR NEW POSITIONS FOR FY 2022:</b>			
3910 - Employees' Retirement Matching			0
3920 - FICA Matching			0
3930 - Workers' Compensation			0
3940 - Health Insurance Contribution			0
3950 - Group Life Insurance			0
3960 - Civil Service (Agriculture Units)			0
3970 - Unemployment Tax			0
3980 - Remission of Fees			0
<b>TOTAL Fringe Benefits for New Positions</b>			<b>0</b>
<b>FRINGE BENEFITS FOR PROMOTIONS, REALIGNMENTS, RECLASSIFICATIONS FOR FY 2022:</b>			
3910 - Employees' Retirement Matching			0
3920 - FICA Matching			0
3930 - Workers' Compensation			0
3940 - Health Insurance Contribution			0
3950 - Group Life Insurance			0
3960 - Civil Service (Agriculture Units)			0
3970 - Unemployment Tax			0
3980 - Remission of Fees			0
<b>TOTAL Fringe Benefits for Promotions, etc.</b>			<b>0</b>
<b>GRAND TOTAL Fringe Benefits</b>	<b>717,066</b>	<b>610,387</b>	<b>661,386</b>
		<b>610,388</b>	<b>661,387</b>
<b>SUBTOTAL SALARIES, WAGES &amp; FRINGE BENEFITS</b>	<b>3,048,823</b>	<b>2,595,248</b>	<b>2,812,086</b>
<b>LESS VACANCY RATE</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
<b>TOTAL SALARIES, WAGES &amp; FRINGE BENEFITS</b>	<b>3,048,823</b>	<b>2,595,248</b>	<b>2,812,086</b>



# Agency Revenue Source Report - FY21 Data

As Required by HB 831, 2015 Legislative Session

And SB 2387, 2016 Legislative Session

Agency Name MS State Univ - Center for Advanced Vehicular Systems (252-01)

Budget Year 2021

State Support Sources Amount Received  
General Funds \$ 4,239,480

State Support Special Funds Amount Received  
Education Enhancement Funds \$ 142,782  
Health Care Expendable Funds   
Tobacco Control Funds   
Capital Expense Funds   
Budget Contingency Funds   
Working Cash Stabilization Reserve Funds

Special Funds Amount Received  
Sample Special Fund #1   
Sample Special Fund #2   
*Add Rows for Additional Special Funds*

List all Federal Funds at its most specific level, such as an office or division, not the federal department.

<u>Federal Funds</u>	Amount Received	Action or results promised in order to receive funds
Sample Federal Fund #1	Fund Summaries should be available October 1, 2021.	
Sample Federal Fund #2		
Description of any Maintenance of Effort agreements entered into with any federal agency or subdivision thereof		

*Add Rows for Additional Special Funds*

## Revenue from Tax, Fine or Fee Assessed

Sample Tax, Fine, Fee #1	Amount Assessed	Amount Collected	Authority to Collect	Method of Determining Assessment	Method of Collection	Amt. & Purpose for which Expended	Amount	Purpose
<i>Copy Entire Section to Add New Item</i>							Fund Summaries should be available October 1, 2021.	

Amount Transferred to General Fund	
Authority for Transfer to General Fund	
Amount Transferred to Another Entity	
Authority for Transfer to Other Entity	
Name of Other Entity	
Fiscal Year-Ending Balance	