

Annual Report of General Assembly
Approved Jail Projects
October 1, 2020

Prepared by the
Compliance, Certification and Accreditation Unit of the
Virginia Department of Corrections
The Department of Criminal Justice Services and the Department of the Treasury

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Introduction

Chapter 1289, Item 398 B. of the 2020-2022 Biennium Budget Bill requires that “The Department of Corrections shall provide an annual report on the status of jail construction and renovation projects as approved for funding by the General Assembly. The report shall be limited to those projects which increase bed capacity. The report shall include a brief summary description of each project, the total capital cost of the project and the approved state share of the capital cost, the number of beds approved, along with the net number of new beds if existing beds are to be removed, and the closure of any existing facilities, if applicable. The report shall include the six-year population forecast, as well as the double-bunking capacity compared to the rated capacity for each project listed. The report shall also include the general fund impact on community corrections programs as reported by the Department of Criminal Justice Services, and the recommended financing arrangements and estimated general fund requirements for debt service as provided by the State Treasurer. Copies of the report shall be provided by October 1 of each year to the Chairmen of the Senate Finance and House Appropriations Committees and to the Director, Department of Planning and Budget.”

Projects approved by the Board of Local and Regional Jails in 2020 included a Minor Renovation Project for upgrades to the Virginia Peninsula Regional Jail, a Minor Renovation Project to upgrade the master security control system at the Virginia Beach Correctional Center, a Minor Renovation Project at the Montgomery County Jail to renovate and upgrade the facility dormitory areas, and a 400-bed expansion and renovation of the Middle River Regional Jail.

Currently Approved Projects by the General Assembly

The following projects have been approved by the General Assembly, and are either completed or under construction.

Central Virginia Regional Jail – Added 200 new beds – Completed August, 2016.

Chesapeake City Jail – Added 192 new beds – Completed September, 2018

Henry County Jail – Rated capacity 400 beds – Date of completion projected for November, 2022

Pamunkey Regional Jail – Added 12 new beds – Completed August, 2016

Prince William-Manassas Regional ADC – will add 204 new beds – date of completion projected for July, 2020.

Richmond City Jail – Rated capacity 1,032 beds – Main facility opened July, 2014
Community Custody facility opened December, 2014

RSW Regional Jail – Rated capacity 375 beds – Opened June, 2014

Southwest Virginia Regional Jail – Added 512 new beds – Completed February, 2015

Approved Funding

Funding included in the 2020-2022 Biennial Budget for the Commonwealth's reimbursement of a portion of the approved capital costs as determined by the Board of Local and Regional Jails and other interest costs as provided in §§ 53.1-80 through 53.1-82.2 of the Code of Virginia, for the following:

Commonwealth's Share of Approved Capital Costs

Project

Prince William-Manassas Regional ADC <i>(204-Bed Expansion)</i>	\$21,032,421
Henry County Jail <i>(400-Bed New Jail)</i>	\$18,759,878
Chesapeake City Jail <i>(192-Bed Expansion)</i>	\$6,860,886
Piedmont Regional Jail <i>(Renovation and Addition of Intake Area)</i>	\$2,139,464
Prince William - Manassas Regional Jail Expansion <i>(Buildout Work Release)</i>	\$678,387
Riverside Regional Jail	\$807,447
<hr/>	
Total Approved Capital Costs	\$50,278,483

Middle River Regional Jail

The Middle River Regional Jail Authority is seeking Board of Local and Regional Jail approval of its Community-Based Corrections Plan (CBCP) and Planning Study to justify construction of a 400-bed expansion and renovation of the regional jail facility. The current CBCP and Planning Study have undergone inter-agency reviews and are in compliance with Board standards. The MRRJ Authority is requesting reimbursement from the Commonwealth based on Priority 3 Funding: “Expansion of an existing local or regional jail facility experiencing overcrowding which is expected to continue based upon factors described in the Community-Based Corrections Plan.”

Current Facility

The Middle River Regional Jail is located at 350 Technology Drive on 28 acres in Staunton, Virginia. The original jail opened in 2006 with a rated capacity of 396 inmates. Both adult male and female detainees are incarcerated there under the direction of Middle River Regional Jail Authority representing the cities of Staunton, Waynesboro and Harrisonburg, and the counties of Augusta and Rockingham. The facility is approximately 212,000 square feet in area and functions as the only jail for the localities of Staunton, Augusta and Waynesboro, and serves as a second jail for Rockingham and Harrisonburg. The current inmate population averages in excess of 900 inmates. The projected inmate population is 1244 – 1283 by the year 2029. This project consists of the construction of a 400-bed minimum custody addition, expansion of kitchen storage, laundry facilities, new medical infirmary, as well as renovations and equipment replacement in the existing jail.

Jail-Based Programs and Services

The crowding of the jail and the lack of program space severely constrains the capability of the MRRJ to deliver inmate program services. However, the jail does provide detainees with basic program participation opportunities and operates a work release program, community work force program and a small Home Electronic Monitoring (H.E.M) program.

Work Release (WR) Program:

Nearly all jails in the Commonwealth operate work release. There is presently no space available to operate a program. Work Release programs offer inmates the opportunity to maintain employment or seek new employment while incarcerated. Many programs work with employers, probation officers, family members and the court system. Global positioning system (GPS) units and random drug testing are used to monitor inmates on the program may be component of the program. Often participants are required to attend programs such as AA, NA and various life skills classes, and have other responsibilities as assigned by the Court.

Public Work Force Program:

Many jails in the Commonwealth maintain a Work Force Program consisting of inmates who have been screened and meet the criteria to perform community-based work under the supervision of correctional officers. Daily work activity for the Work Force may include such activities as seasonal mowing, landscaping, painting and maintenance projects. Some programs are responsible for some janitorial services in the County or City as well as trash pickup details along roadways.

Community Programs Process and Structure Overview:

Jails provide the judicial system with two types of confinement services. Jails provide secure confinement for individuals awaiting trial on criminal charges, and offenders sentenced by the court to serve time as a part of their sentences. Alternative detention and diversion programs are designed to provide these services in a manner other than by confinement in jail. These programs can be conceptually divided into: (1) pretrial programs, and (2) post-sentence alternative programs. Both provide the system with options other than secure confinement.

Recognizing the high cost of secure confinement and the potential cost effectiveness of alternatives, the 1994 Special Session of the Virginia General Assembly enacted the Pretrial Services Act, and the Comprehensive Community Corrections Act for Local Responsible Offenders. Each of these Acts provide the statutory framework and funding pipeline for local development of “alternatives to incarceration” programs. Program options can be implemented that target both pre- and post-trial populations.

Non-confinement Alternatives

Pretrial Programs:

Pretrial services programs perform two important functions in the effective administration of local criminal justice systems:

- They gather and present information about newly arrested defendants and about available release options for use by judicial officers in deciding what (if any) conditions are to be set for defendants’ release before trial.
- They supervise the defendants released from custody during the pretrial period by monitoring their compliance with release conditions and helping ensure they appear for scheduled court events.

When both functions are performed well, localities can minimize “unnecessary” pretrial detention, reduce jail crowding, protect the public and ensure appearance at court hearings.

Pretrial services programs are specifically designed to reduce the number of individuals held in jail awaiting trial. The only reasons for holding an individual in secure confinement until trial are: (1) to ensure that the individual appears for all scheduled court appearances, or (2) to remove an accused from society if that individual poses a threat to the public safety, or to himself. Persons considered a threat to themselves include those individuals who are intoxicated

or under the influence of drugs. This type of threat to oneself is normally a short term condition, and is generally followed by release on a non-secure or secure bond. The threat to public safety is a subjective determination that is initially established by the magistrate and reviewed by the bench. For the individuals in this category (flight risk/nonappearance for future court dates), pretrial services programs provide valuable information that may assist a judge in reviewing the magistrate's bail decision.

With a pretrial services program, newly arrested persons are interviewed and information is collected. After investigating and verifying the employment and family status, evidence of community ties and criminal history, recommendations are made to the court concerning the conditions of bail. These conditions may range from release on personal recognizance or on secure bond, or release under the supervision of the pretrial program. Statewide, the level of pretrial supervision may range from electronic monitoring, house arrest, or periodic visits to the home and place of employment. Additionally, pretrial programs can assist in assuring court appearances by individuals released on their own recognizance by reminding an individual of their scheduled court appearance by post card or phone contact.

Pretrial Services:

The Rockingham-Harrisonburg Court Services Program provides local pretrial supervision for the County of Rockingham and City of Harrisonburg. Services are primarily targeted toward those arrested for non-violent crimes or those offenders who receive a bail but remain detained in jail following an initial bond hearing. Supervision includes substance abuse testing, assessment, and weekly contact with pretrial officers.

Population Forecast

As a result of COVID-19 and response policies implemented specifically to reduce the spread of the virus, Virginia experienced dramatic reductions in the confined offender populations beginning in March 2020, and, in September, it remained unclear as to when, and to what extent, the populations would return to pre-pandemic levels or trends. The full impact of the COVID-19 pandemic on the confined populations may not yet be known. Forecasting criminal justice populations in such circumstances would be particularly challenging. The effects of the COVID-19 pandemic were not factored into the population forecasting analysis below.

- Significant Finding: Augusta, Waynesboro and Staunton MRRJ beds are projected increase from 610 in 2022, to 737 in 2029 – an average annual increase of 2.7% per year; the total Rockingham-Harrisburg inmate population is projected to increase from 646 in 2022, to 841 in 2029 – an average annual increase of 3.7% per year.

In general, jail populations increase or decline based on two key factors: (1) the number of persons admitted to jail, and (2) the amount of time they remain confined (length of stay). For example, if admissions decline and length of stay remains unchanged, capacity needs decrease. Historical jail population data reflect a set of conditions that existed during a given time. A cautionary note is that a number of things outside of mathematical changes in monthly jail population figures influence changes in jail populations. The sentencing practices, sentence guidelines, correctional policy, community attitudes towards non-incarceration alternatives, state

and local responsibility definitions, for example, may be significantly different from the conditions experienced in the future.

Forecast Database

The following table displays the historical monthly average populations for Augusta, Staunton and Waynesboro inmates housed in MRRJ. The forecast database for the Augusta, Staunton and Waynesboro inmate population is displayed below. This database was the only database used to project the proportion of the total MRRJ inmate population from those localities. The number of inmates was compiled for each month between July 2006 – May 2019.

Monthly Inmate Population: Augusta, Staunton, Waynesboro Only:

Date	Fiscal Year												
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Jul	355	416	352	375	424	389	396	427	480	489	527	552	605
Aug	364	400	355	371	409	399	398	426	481	490	555	557	594
Sep	386	390	341	385	399	387	388	428	481	499	557	555	593
Oct	397	375	365	390	394	387	402	437	514	504	546	566	616
Nov	398	379	355	400	386	378	401	423	523	506	537	583	612
Dec	400	356	359	409	376	367	401	419	512	482	534	577	609
Jan	406	357	349	421	396	374	397	432	492	476	548	580	602
Feb	408	363	346	425	401	393	405	447	478	474	555	588.5	602
Mar	399	366	370	425	399	410	401	440	486	477	544	594	575
April	387	360	385	425	398	400	399	441	464	495	539	608	552
May	396	346	382	438	395	393	407	448	466	522	540	591	532
Jun	407	359	374	439	387	410	408	452	488	525	552	595	--
Average	392	372	361	409	397	391	400	435	489	495	545	579	590
Min	355	346	341	371	376	367	388	419	464	474	527	552	532
Max	408	416	385	439	424	410	408	452	523	525	557	608	616
Change													
Percent	--	-5.0%	-3.0%	13.2%	-2.8%	-1.6%	2.5%	8.7%	12.4%	1.3%	10.0%	6.3%	2.0%
Number		-19.7	-11.2	47.5	-11.6	-6.4	9.7	34.8	53.8	6.2	49.6	34.4	11.3

- In the projected year 2029, the average projected Jail population for the three models under consideration was 738, with the range from a low of 732 and a high of 745.
- Monthly projected inmate populations for Augusta, Staunton and Waynesboro are displayed in the table that follows for the years 2020 through 2029.

Selected Forecast

Forecast of Augusta, Waynesboro and Staunton Inmates:

	Fiscal Year									
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029

Jul	529	556	602	617	635	653	671	689	707	725
Aug	529	556	606	621	639	657	675	693	711	729
Sep	527	558	609	624	642	660	678	696	714	732
Oct	522	556	608	623	641	659	677	695	713	731
Nov	526	560	617	631	650	668	686	704	722	740
Dec	518	559	616	630	649	667	685	703	721	739
Jan	514	551	609	623	642	660	678	696	714	732
Feb	520	557	610	625	643	661	679	697	715	733
Mar	526	564	614	629	648	666	684	702	720	738
Apr	537	576	613	629	647	665	683	701	719	737
May	534	582	610	627	645	663	681	699	717	735
Jun	548	594	611	629	647	665	683	701	719	737

Average	528	564	610	626	644	662	680	698	716	734
Minimum	514	551	602	617	635	653	671	689	707	725
Maximum	548	594	617	631	650	668	686	704	722	740
Change										
Percent	--	6.9%	8.2%	2.5%	2.9%	2.8%	2.7%	2.6%	2.6%	2.5%
Number	--	37	46	15	18	18	18	18	18	18

Forecast Database

- The number of inmates confined in both the MRRJ and the Rockingham facility was calculated for each month and summed together to produce a total Rockingham-Harrisonburg inmate population database. The number of inmates was compiled for each month between January 2010 – May 2019.

Rockingham-Harrisonburg Inmates Confined in the Local Jail Monthly Inmate Population: Rockingham and Harrisonburg Inmates Housed in the Local Jail Only:

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Jan	308	307	353	277	329	342	319	339	318	329
Feb	309	307	341	283	332	332	322	338	332	324
Mar	286	313	336	303	331	323	312	335	327	292
Apr	280	324	342	297	327	323	318	330	339	284
May	306	314	347	326	322	322	302	326	324	288
Jun	309	298	321	321	315	294	306	320	324	277
Jul	336	299	334	323	320	283	314	308	335	--

Aug	324	332	334	341	324	291	308	326	327	--
Sep	310	345	325	343	328	300	314	313	331	--
Oct	366	335	312	337	333	294	315	321	325	--
Nov	302	313	298	338	337	301	322	314	320	--
Dec	283	321	288	332	342	308	322	315	314	--
Average	310	317	328	318	328	309	314	324	326	299
Maximum	366	345	353	343	342	342	322	339	339	329
Minimum	280	298	288	277	315	283	302	308	314	277
Change										
Number	--	7	10	-9	10	-19	5	9	3	-27
Percent		2.4%	3.2%	-2.8%	3.1%	-5.7%	1.6%	3.0%	0.8%	-8.4%

Rockingham-Harrisonburg Inmates Confined in the MRRJ
Monthly Inmate Population: Rockingham and Harrisonburg Inmates Housed In MRRJ:

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Jan	26	31	41	17	90	93	169	197	195	235
Feb	26	32	40	19	100	102	178	207	203	261
Mar	28	30	43	20	106	107	185	219	212.55	306
Apr	27	31	45	18	123	113	184	238	213	306
May	23	39	39	18	125	132	192	233	229	292
Jun	20	40	56	19	114	154	196	232	222	
Jul	17	41	46	21	109	157	186	222	235	
Aug	14	40	30	26	116	157	174	218	243	
Sep	12	39	28	47	106	160	179	215	255	
Oct	25	45	25	44	93	157	179	204	278	
Nov	29	41	21	45	92	156	179	201	277	
Dec	26	40	17	63	89	155	186	192	251	
Average	23	37	36	30	105	137	182	215	234	280
Maximum	29	45	56	63	125	160	196	238	278	306
Minimum	12	30	17	17	89	93	169	192	195	235
Change										
Number	--	15	-2	-6	76	32	45	33	20	46
Percent		64.5%	-4.0%	-17.2%	253.8%	30.1%	33.1%	17.9%	9.1%	19.4%

- Two separate forecasts were completed: one for Augusta, Waynesboro and Staunton inmates housed in MRRJ, and one for total Rockingham-Harrisonburg inmates housed in the local jail and MRRJ.
- An assumption was made that Rockingham-Harrisonburg will continue to house 300 locally, and all others will be in MRRJ.

- The two forecasts were summed to generate the MRRJ planning forecast.
- Augusta, Waynesboro and Staunton MRRJ beds are projected increase from 610 in 2022, to 737 in 2029 – an average annual increase of 2.7% per year
- The total Rockingham-Harrisburg inmate population is projected to increase from 646 in 2022, to 841 in 2029 – an average annual increase of 3.7% per year.

Forecast of MRRJ Total Population Assuming
Assuming Rockingham-Harrisonburg Jail Holds 300 Inmates:

	Fiscal Year								
	2022	2023	2024	2025	2026	2027	2028	2029	
Jul	935	976	1,021	1,065	1,110	1,155	1,199	1,244	
Aug	942	984	1,029	1,073	1,118	1,162	1,207	1,251	
Sep	950	991	1,036	1,080	1,125	1,170	1,214	1,259	
Oct	953	995	1,039	1,084	1,129	1,173	1,218	1,262	
Nov	953	994	1,039	1,084	1,128	1,173	1,218	1,262	
Dec	945	985	1,031	1,075	1,120	1,164	1,209	1,254	
Jan	951	991	1,037	1,081	1,126	1,171	1,215	1,260	
Feb	962	1,003	1,048	1,092	1,137	1,182	1,226	1,271	
Mar	970	1,012	1,057	1,102	1,146	1,191	1,236	1,280	
Apr	973	1,016	1,060	1,105	1,149	1,194	1,239	1,283	
May	971	1,015	1,059	1,104	1,149	1,193	1,238	1,282	
Jun	966	1,011	1,056	1,100	1,145	1,189	1,234	1,278	
Average	956	998	1,043	1,087	1,132	1,176	1,221	1,266	
Minimum	935	976	1,021	1,065	1,110	1,155	1,199	1,244	
Maximum	973	1,016	1,060	1,105	1,149	1,194	1,239	1,283	
Change									
Percent	--	4.4%	4.5%	4.3%	4.1%	3.9%	3.8%	3.6%	
Number	--	42	45	44	45	45	45	44	

The final MRRJ planning forecast projects the MRRJ population to increase from 956 in 2022, to 1,278 in 2029 – a total of 310 inmates, 44 per year and an average of 4.1% per year.

Forecast Methodology

A number of different forecast models were developed for projecting the future confined population. Forecasts were generated using Exponential Smoothing models (Holt and Winters) and a number of different ARIMA models (commonly called Box Jenkins models). Using

available diagnostic information, the three best models were selected and compared. In addition, a linear regression model was generated to provide a graphic long-term trend line. All models used to project the population are based upon the assumption that long term historical trends in population levels can be extrapolated into the future. The various models were developed using a software program titled Forecast Pro, developed by Business Forecast Systems.

A series of criteria were reviewed in selecting a method and then a specific model for forecasting the inmate population. These criteria included the Adjusted R-squared value, the Durbin-Watson and the BIC (Schwarz Information Criterion), with primary emphasis on the BIC.

Interpretation of Comparative Statistical Measures

Adjusted R-Square: higher values are desired; this statistic measures “how certain” we can be in making predictions with a model; the proportion of variability in the data set that is accounted for by a model.

MAD (Mean Absolute Deviation): lower values are desired; this statistic measures the size of error (the difference between the predicted and actual historical monthly population in the database); measures “how accurate” a model predicts historical data; unlike the forecast error, this statistic does not take into account positive (+) and negative (-) signs.

Durban-Watson (DW): values close to 2.0 are desired; this statistic measures problems with a model’s capacity to result in good projections (it measures serial correlation problems); as a rule of thumb values of less than 1.2, or greater than 3.7 indicate serial correlation issues; however, empirical research seems to indicate that making a model more complex in order to obtain a non-significant Durbin-Watson statistic does not result in increased forecasting accuracy.

Standardized BIC: lower values are desired; rewards goodness of fit to the historical data and penalizes model complexity; the model with a lower BIC will generally be the more accurate. For criminal justice data, the BIC is generally a more appropriate statistic upon which to base a selection, due to the less stable aspects in the criminal justice data series caused by one-time events and other factors.

To develop the overall MRRJ forecast, historical monthly inmate population figures were provided by Jail personnel. Two separate forecasts were completed and the results were summed to produce the planning projections: (1) a forecast of detainees from Augusta, Waynesboro and Staunton housed in MRRJ, and (2) a forecast of total Rockingham-Harrisonburg inmates housed both locally and the Regional Jail. An assumption was made that 300 inmates would continue to be held locally and the projected population over 300 would reside in MRRJ.

Forecast #1: Augusta, Staunton and Waynesboro Inmate Population

Forecast Database

The following table displays the historical monthly average populations for Augusta, Staunton and Waynesboro inmates housed in MRRJ. The forecast database for the Augusta, Staunton and Waynesboro inmate population is displayed below. This database was the only database used to project the proportion of the total MRRJ inmate population from those localities. The number of inmates was compiled for each month between July 2006 – May 2019.

Monthly Inmate Population: Augusta, Staunton, Waynesboro Only:

Date	Fiscal Year												
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Jul	355	416	352	375	424	389	396	427	480	489	527	552	605
Aug	364	400	355	371	409	399	398	426	481	490	555	557	594
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Oct	397	375	365	390	394	387	402	437	514	504	546	566	616
Nov	398	379	355	400	386	378	401	423	523	506	537	583	612
Dec	400	356	359	409	376	367	401	419	512	482	534	577	609
Jan	406	357	349	421	396	374	397	432	492	476	548	580	602
Feb	408	363	346	425	401	393	405	447	478	474	555	588.5	602
Mar	399	366	370	425	399	410	401	440	486	477	544	594	575
April	387	360	385	425	398	400	399	441	464	495	539	608	552
May	396	346	382	438	395	393	407	448	466	522	540	591	532
Jun	407	359	374	439	387	410	408	452	488	525	552	595	--
Ave	392	372	361	409	397	391	400	435	489	495	545	579	590
Min	355	346	341	371	376	367	388	419	464	474	527	552	532
Max	408	416	385	439	424	410	408	452	523	525	557	608	616
Change													
Percent	--	-5.0%	-3.0%	13.2%	-2.8%	-1.6%	2.5%	8.7%	12.4%	1.3%	10.0%	6.3%	2.0%
Number		-19.7	-11.2	47.5	-11.6	-6.4	9.7	34.8	53.8	6.2	49.6	34.4	11.3

Forecast Model Diagnostics

Diagnostic information associated with three ARIMA (Box Jenkins) models is presented below. These three models displayed superior diagnostic information and represent the three “best” models. For comparison purposes, information associated with a linear regression model is also presented. It should be stressed that the statistical properties associated with the regression model are extremely weak, and this model was not given any serious consideration. It is displayed in tables that follow merely to illustrate the long-term straight trend in the historical data.

Augusta, Staunton and Waynesboro Inmate Population:

Forecast Model Options

Statistic	Linear Regression	Box-Jenkins		
		Alternate 1 (0,1,1)*(1,1,3)	Alternate 2 (1,1,2)*(1,1,3)	Alternate 3 (0,1,1)*(1,1,1)
Adj. R-Square	0.82	0.98	0.98	0.98
Durbin-Watson	0.12	1.94	1.99	2

Forecast Error	34.01	10.3	10.18	11.01
MAD	28.59	7.49	7.49	8.21
Standardized BIC	34.89	10.98	11.14	11.44

- Based on the comparative diagnostic statistics in the above table, the Box-Jenkins (0,1,1)*(1,1,3) model (Alternate 1) demonstrated the superior diagnostic statistics; this model demonstrated the highest R-Square value (tied with other Alternates), the second smallest forecast error, the smallest MAD value, as well as the smallest BIC statistic.
- The resulting forecasts for each of the models are presented in three-year intervals (for June of the year identified) in the table that follows.

Comparison of Model Forecasts

Projected Augusta, Staunton and Waynesboro Jail Population:

June Each Year	Linear Regression	Box-Jenkins			Average
		Alternate 1 (0,1,1)*(1,1,3)	Alternate 2 (1,1,2)*(1,1,3)	Alternate 3 (0,1,1)*(1,1,1)	
2020	589	548	547	561	552
2023	646	629	634	617	627
2026	702	683	689	674	682
2029	759	737	745	732	738

- In the projected year 2029, the average projected Jail population for the three models under consideration was 738, with the range from a low of 732 and a high of 745.
- Monthly projected inmate populations for Augusta, Staunton and Waynesboro are displayed in the table that follows for the years 2020 through 2029.

Selected Forecast of Augusta, Waynesboro and Staunton Inmates:

	Fiscal Year									
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Jul	529	556	602	617	635	653	671	689	707	725
Aug	529	556	606	621	639	657	675	693	711	729
Sep	527	558	609	624	642	660	678	696	714	732
Oct	522	556	608	623	641	659	677	695	713	731
Nov	526	560	617	631	650	668	686	704	722	740
Dec	518	559	616	630	649	667	685	703	721	739
Jan	514	551	609	623	642	660	678	696	714	732
Feb	520	557	610	625	643	661	679	697	715	733
Mar	526	564	614	629	648	666	684	702	720	738
Apr	537	576	613	629	647	665	683	701	719	737
May	534	582	610	627	645	663	681	699	717	735

Jun	548	594	611	629	647	665	683	701	719	737
Average	528	564	610	626	644	662	680	698	716	734
Minimum	514	551	602	617	635	653	671	689	707	725
Maximum	548	594	617	631	650	668	686	704	722	740
Change										
Percent	--	6.9%	8.2%	2.5%	2.9%	2.8%	2.7%	2.6%	2.6%	2.5%
Number	--	37	46	15	18	18	18	18	18	18

Forecast: Rockingham and Harrisonburg Inmate Population

Forecast Database

- The number of inmates confined in both the MRRJ and the Rockingham facility was calculated for each month and summed together to produce a total Rockingham-Harrisonburg inmate population database. The number of inmates was compiled for each month between January 2010 – May 2019.

Rockingham-Harrisonburg Inmates Confined in the Local Jail Monthly Inmate Population: Rockingham and Harrisonburg Inmates House in the Local Jail Only:

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Jan	308	307	353	277	329	342	319	339	318	329
Feb	309	307	341	283	332	332	322	338	332	324
Mar	286	313	336	303	331	323	312	335	327	292
Apr	280	324	342	297	327	323	318	330	339	284
May	306	314	347	326	322	322	302	326	324	288
Jun	309	298	321	321	315	294	306	320	324	277
Jul	336	299	334	323	320	283	314	308	335	--
Aug	324	332	334	341	324	291	308	326	327	--
Sep	310	345	325	343	328	300	314	313	331	--
Oct	366	335	312	337	333	294	315	321	325	--
Nov	302	313	298	338	337	301	322	314	320	--
Dec	283	321	288	332	342	308	322	315	314	--
Average	310	317	328	318	328	309	314	324	326	299
Maximum	366	345	353	343	342	342	322	339	339	329
Minimum	280	298	288	277	315	283	302	308	314	277
Change										
Number	--	7	10	-9	10	-19	5	9	3	-27
Percent		2.4%	3.2%	-2.8%	3.1%	-5.7%	1.6%	3.0%	0.8%	-8.4%

Monthly Inmate Population: Rockingham and Harrisonburg Inmates House In MRRJ:

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Jan	26	31	41	17	90	93	169	197	195	235
Feb	26	32	40	19	100	102	178	207	203	261
Mar	28	30	43	20	106	107	185	219	212.55	306
Apr	27	31	45	18	123	113	184	238	213	306
May	23	39	39	18	125	132	192	233	229	292
Jun	20	40	56	19	114	154	196	232	222	
Jul	17	41	46	21	109	157	186	222	235	
Aug	14	40	30	26	116	157	174	218	243	
Sep	12	39	28	47	106	160	179	215	255	
Oct	25	45	25	44	93	157	179	204	278	
Nov	29	41	21	45	92	156	179	201	277	
Dec	26	40	17	63	89	155	186	192	251	
Average	23	37	36	30	105	137	182	215	234	280
Maximum	29	45	56	63	125	160	196	238	278	306
Minimum	12	30	17	17	89	93	169	192	195	235
Change										
Number	--	15	-2	-6	76	32	45	33	20	46
Percent		64.5%	-4.0%	-17.2%	253.8%	30.1%	33.1%	17.9%	9.1%	19.4%

- The two tables above were combined to produce a combined database of the total Rockingham and Harrisburg inmate population. The table that follows displays the final database.

Monthly Inmate Population: Rockingham and Harrisonburg
Inmates Housed in MRRJ and the Local Jail:

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Jan	334	338	394	294	419	435	488	536	513	564
Feb	335	339	381	302	432	434	500	545	535	585
Mar	314	343	379	323	437	430	497	554	540	598
Apr	307	355	387	315	450	436	502	568	552	590
May	329	353	386	344	447	454	494	559	553	580
Jun	329	338	377	340	429	448	502	552	546	--
Jul	353	340	380	344	429	440	500	530	570	--
Aug	338	372	364	367	440	448	482	544	570	--
Sep	322	384	353	390	434	460	493	528	586	--
Oct	391	380	337	381	426	451	494	525	603	--
Nov	331	354	319	383	429	457	501	515	597	--

Dec	309	361	305	395	431	463	508	507	565	--
Average	333	355	364	348	433	446	497	539	561	583
Maximum	391	384	394	395	450	463	508	568	603	598
Minimum	307	338	305	294	419	430	482	507	513	564
Change										
Number	--	22	9	-15	85	13	50	42	22	22
Percent		6.6%	2.5%	-4.2%	24.5%	3.0%	11.3%	8.4%	4.1%	4.0%

Forecast Model Diagnostics

As with the previous forecast, diagnostic information associated with three ARIMA (Box Jenkins) models is presented below. These three models displayed superior diagnostic information and represent the three “best” models. Again, for comparison purposes, information associated with a linear regression model is also presented.

Rockingham and Harrisonburg Inmate Population Forecast Model Options:

Statistic	Linear Regression	Box-Jenkins		
		Alternate 1 (0,1,1)*(0,1,1)	Alternate 2 (0,1,3)*(1,1,3)	Alternate 3 (1,1,3)*(1,1,3)
Adj. R-Square	0.89	0.98	0.98	0.98
Durbin-Watson	0.3	1.7	1.86	1.88
Forecast Error	29.39	13.32	12.69	12.86
MAD	21.71	10.4	9.01	9.03
Standardized BIC	30.37	13.77	14.22	14.66

The resulting forecasts for each of the models are presented in three-year intervals (for June of the year identified) in the table that follows.

Comparison of Model Forecasts Projected Augusta, Staunton and Waynesboro Jail Population:

June Each Year	Linear Regression	Box-Jenkins			Average
		Alternate 1 (0,1,1)*(0,1,1)	Alternate 2 (0,1,3)*(1,1,3)	Alternate 3 (1,1,3)*(1,1,3)	
2020	613	602	579	579	587
2023	705	682	639	638	653
2026	797	762	698	695	718
2029	888	841	757	753	784

- In the projected year 2029, the average projected Jail population for the three models under consideration was 784, with the range from a low of 753 and a high of 841.
- Monthly projected inmate populations for Rockingham and Harrisonburg are displayed in the table that follows for the years 2020 through 2029.
- Based on the comparative diagnostic statistics in the above table, the Box-Jenkins 0,1,2)*(1,1,3) model (Alternate 1) and (0,1,3)*(1,1,3) model (Alternate 2) demonstrated the superior diagnostic statistics with respect to forecast errors, MAD statistics and Standardized BIC measures. Since the comparative statistics were quite close and the Alternate 1 model had the highest BIC statistic, this model was selected as preferred.
- Monthly projected inmate populations are displayed in the table that follows for the years 2020 through 2029.

Forecast of Total Rockingham-Harrisonburg Inmate Population:

	Fiscal Year							
	2022	2023	2024	2025	2026	2027	2028	2029
Jul	633	659	686	712	739	766	792	819
Aug	636	663	690	716	743	769	796	822
Sep	641	667	694	720	747	774	800	827
Oct	645	672	698	725	752	778	805	831
Nov	636	663	689	716	742	769	796	822
Dec	629	655	682	708	735	761	788	815
Jan	642	668	695	721	748	775	801	828
Feb	652	678	705	731	758	785	811	838
Mar	656	683	709	736	762	789	816	842
Apr	660	687	713	740	766	793	820	846
May	661	688	714	741	768	794	821	847
Jun	655	682	709	735	762	788	815	841
Average	646	672	699	725	752	778	805	832
Minimum	629	655	682	708	735	761	788	815
Maximum	661	688	714	741	768	794	821	847
Change								
Percent	--	4.1%	4.0%	3.8%	3.7%	3.5%	3.4%	3.3%
Number	--	27	27	26	27	27	27	26

- The total Rockingham-Harrisonburg inmate population is projected to increase from 633 inmates at the beginning of FY-22, to 841 inmates at the end of FY-29; this represents an increase of 208 inmates and 32.9% growth.

Total MRRJ Inmate Population Planning Forecast

- Two separate forecasts were completed: one for Augusta, Waynesboro and Staunton inmates housed in MRRJ, and one for total Rockingham-Harrisonburg inmates housed in the local jail and MRRJ.
- An assumption was made that Rockingham-Harrisonburg will continue to house 300 locally, and all others will be in MRRJ.
- The two forecasts were summed to generate the MRRJ planning forecast.
- Augusta, Waynesboro and Staunton MRRJ beds are projected increase from 610 in 2022, to 737 in 2029 – an average annual increase of 2.7% per year
- The total Rockingham-Harrisburg inmate population is projected to increase from 646 in 2022, to 841 in 2029 – an average annual increase of 3.7% per year.

Forecast of MRRJ Total Population Assuming Assuming Rockingham-Harrisonburg Jail Holds 300 Inmates:

	Fiscal Year							
	2022	2023	2024	2025	2026	2027	2028	2029
Jul	935	976	1,021	1,065	1,110	1,155	1,199	1,244
Aug	942	984	1,029	1,073	1,118	1,162	1,207	1,251
Sep	950	991	1,036	1,080	1,125	1,170	1,214	1,259
Oct	953	995	1,039	1,084	1,129	1,173	1,218	1,262
Nov	953	994	1,039	1,084	1,128	1,173	1,218	1,262
Dec	945	985	1,031	1,075	1,120	1,164	1,209	1,254
Jan	951	991	1,037	1,081	1,126	1,171	1,215	1,260
Feb	962	1,003	1,048	1,092	1,137	1,182	1,226	1,271
Mar	970	1,012	1,057	1,102	1,146	1,191	1,236	1,280
Apr	973	1,016	1,060	1,105	1,149	1,194	1,239	1,283
May	971	1,015	1,059	1,104	1,149	1,193	1,238	1,282
Jun	966	1,011	1,056	1,100	1,145	1,189	1,234	1,278
Average	956	998	1,043	1,087	1,132	1,176	1,221	1,266
Minimum	935	976	1,021	1,065	1,110	1,155	1,199	1,244
Maximum	973	1,016	1,060	1,105	1,149	1,194	1,239	1,283

Change								
Percent	--	4.4%	4.5%	4.3%	4.1%	3.9%	3.8%	3.6%
Number	--	42	45	44	45	45	45	44

- The final MRRJ planning forecast projects the MRRJ population to increase from 956 in 2022, to 1,278 in 2029 – a total of 310 inmates, 44 per year and an average of 4.1% per year.

Planning Study

- The Planning Study proposes the construction of a 400-bed expansion and renovation of the Middle River Regional Jail facility. The two-story addition will be dormitory style housing pods not currently used at the facility. It will be designed to operate using the direct supervision management concept in its proposed minimum-security dormitories and maximum-security mental health special purpose housing pods. This project includes expanded laundry facilities and administration areas, a new medical infirmary, and expansion of kitchen storage. Also included is the expansion of the existing maintenance building with additional square footage for an expanded warehouse. Additionally, the existing MD pod will be expanded to serve as a mental health housing that will consist of two 12-bed housing units. Work will also include renovations and equipment replacement in the existing jail.
- A staffing analysis based on the project’s schematic design and planned operating program indicates a staffing level of 158 employees will be required consisting of 128 security and 30 non-security positions. Planned staffing for the new facility requires the creation of new additional positions and the utilization of existing personnel. The jail will utilize 12-hour shifts for most of the security posts, and a standard 8-hour shift for those administrative and support posts that are not primarily security posts.
- The project will undergo a Value Engineering Analysis (VMA) at the end of the design development stage to further address cost and design efficiency.
- The project’s cost estimates have been reviewed, and approved funding for the eligible cost of \$96,501,722 of which 25% or up to \$24,125,430 would be reimbursable, is recommended.
- The project as proposed is efficiently designed with a projected cost per bed of \$241,254.

Double Bunking

Double bunking is an operational decision of the locality. It is not mandated by Standards, and therefore, double bunking capacity is only an estimate. The 400-bed rated capacity addition is sized to accommodate an additional 400 beds through double bunking. This will result in a total double bunking capacity for the facility to be 1,196 beds.

General Fund Impact on Community Corrections Program Comprehensive Community Corrections Act for Local-Responsible Offenders (§§ 9.1-173 through 9.1-183 Code of Virginia) and the Pretrial Services Act (§§ 19.2-152.2 through 19.2-152.7, Code of Virginia)

Pursuant to § 53.1-82.1 of the Code of Virginia, there are requirements to submit a community-based corrections plan to the Board of Local and Regional Jails for approval of a jail project. Item 398.A6 of the Appropriation Act states that:

“If the Board of Local and Regional Jails approves a request, the Department of Criminal Justice Services shall submit to the Department of Planning and Budget by October 1, a summary of the alternatives to incarceration included in the community-based corrections plan approved for the project, along with a projection of the state funds needed to implement these programs.”

A total of four projects were approved by the Board in 2020. One project is for a 400-bed expansion and renovation to the Middle River Regional Jail which will increase rated bed capacity as well as staffing requirements. A community-based corrections plan was presented to the Board in September 2020. The following summary is in response to the above requirement.

Middle River Regional Jail

The Middle River Regional Jail is served by two pretrial services and local community-based local probation agencies, Blue Ridge Court Services and Rockingham-Harrisonburg Court Services Unit. Given the existing pretrial and community-based local probation services outlined below, there is no projected need for state funds to implement additional programs.

Blue Ridge Court Services:

Blue Ridge Court Services provides pretrial services to Augusta, Staunton, Waynesboro, and Highland. Local community-based probation services to Augusta, Staunton, Waynesboro, Highland, Rockbridge, Lexington, and Buena Vista. At this time Rockbridge, Lexington, and Buena Vista are not provided pretrial services.

Since fiscal year 2016, the Blue Ridge Court Services agency had a 21% increase in average daily caseload. The Blue Ridge Court Services pretrial program had a 27% increase in pretrial investigations and a 24% increase in average daily caseload.

Rockingham-Harrisonburg Court Services Unit:

The Rockingham-Harrisonburg Court Services Unit provides pretrial services to the City of Harrisonburg and Rockingham County.

Since 2016, Rockingham-Harrisonburg Court Services Unit has had a 24% decrease in average daily caseload. The Rockingham-Harrisonburg Court Services Unit's pretrial services program had a 29% increase in pretrial investigations and a 21% increase in average daily caseload.

Community Programs Process and Structure Overview:

Jails provide the judicial system with two types of confinement services. Jails provide secure confinement for individuals awaiting trial on criminal charges, and offenders sentenced by the court to serve time as a part of their sentences. Alternative detention and diversion programs are designed to provide these services in a manner other than by confinement in jail. These programs can be conceptually divided into: (1) pretrial programs, and (2) post-sentence alternative programs. Both provide the system with options other than secure confinement.

Recognizing the high cost of secure confinement and the potential cost effectiveness of alternatives, the 1994 Special Session of the Virginia General Assembly enacted the Pretrial Services Act, and the Comprehensive Community Corrections Act for Local Responsible Offenders. Each of these Acts provide the statutory framework and funding pipeline for local development of “alternatives to incarceration” programs. Program options can be implemented that target both pre- and post-trial populations.

Non-confinement Alternatives

Pretrial Programs:

Pretrial services programs perform two important functions in the effective administration of local criminal justice systems:

- They gather and present information about newly arrested defendants and about available release options for use by judicial officers in deciding what (if any) conditions are to be set for defendants’ release before trial.
- They supervise the defendants released from custody during the pretrial period by monitoring their compliance with release conditions and helping ensure they appear for scheduled court events.

When both functions are performed well, localities can minimize “unnecessary” pretrial detention, reduce jail crowding, protect the public and ensure appearance at court hearings.

Pretrial services programs are specifically designed to reduce the number of individuals held in jail awaiting trial. The only reasons for holding an individual in secure confinement until trial are: (1) to ensure that the individual appears for all scheduled court appearances, or (2) to remove an accused from society if that individual poses a threat to the public safety, or to himself. Persons considered a threat to themselves include those individuals who are intoxicated or under the influence of drugs. This type of threat to oneself is normally a short term condition, and is generally followed by release on a non-secure or secure bond. The threat to public safety is a subjective determination that is initially established by the magistrate and reviewed by the bench. For the individuals in this category (flight risk/nonappearance for future court dates), pretrial services programs provide valuable information that may assist a judge in reviewing the magistrate's bail decision.

With a pretrial services program, newly arrested persons are interviewed and information is collected. After investigating and verifying the employment and family status, evidence of community ties and criminal history, recommendations are made to the court concerning the conditions of bail. These conditions may range from release on personal recognizance or on secure bond, or release under the supervision of the pretrial program. Statewide, the level of pretrial supervision may range from electronic monitoring, house arrest, or periodic visits to the home and place of employment. Additionally, pretrial programs can assist in assuring court appearances by individuals released on their own recognizance by reminding an individual of their scheduled court appearance by post card or phone contact.

Alternative Detention Programs:

For some crimes, sanctions that involve community service, restitution, continuation of employment and maintenance of family connections are acceptable to the public and are more cost effective than jail incarceration. Alternative-to-confinement programs provide the judiciary with sentencing options.

After an offender has been found guilty, the bench has a number of sentencing options. If the individual is found guilty of a felony, sentencing is normally delayed until completion of the pre-sentence investigation (PSI) report. Often the pretrial conditions of bail/incarceration are continued until the completion of the pre-sentence report. PSI reports generally take approximately 60 days to complete and, upon completion, a sentence is normally imposed. The sentence may involve incarceration, a suspended sentence, some level of probation, fines, restitution or any combination of the aforementioned.

If designed to allow continuation of employment, provide some level of community service, provide counseling and/or provide an opportunity for victim restitution, alternatives can be effective in providing the desired level of punishment while ensuring that the public safety function is not compromised. These programs can be effective in assisting those convicted of nonviolent crimes in maintaining family and community ties. If an offender's sentence involves incarceration, normally that individual will be released back to society at some future date. Transition services, job training programs, halfway houses and residential programs can assist in the return to society and can have a positive impact on released inmates remaining "crime free" after release.

The Comprehensive Community Corrections Act for Local-Responsible Offenders provides the legal authority and funding authorization for establishing a community-based probation program. For localities that establish a community corrections program and seek state funding for the operation of such a program, the Act mandates the provision of certain services and programs. The mandated programs and services are:

- community service,
- home incarceration with or without electronic monitoring,
- electronic monitoring, and
- substance abuse assessment, testing and treatment.

In addition, the Act provides for the establishment of optional programs that are identified below:

- local day reporting center programs and services
- local halfway house programs and services for the temporary care of adults placed on probation, and
- law enforcement diversion into detoxification center programs

Localities, establishing community corrections programs, are required to establish a community criminal justice board, and submit biennial plans to the Department of Criminal Justice Services identifying the components of the local correctional program and specifying the funding required to operate them.

An overview of community-based programs available within the Regional Jail Service Area is displayed in the table that follows:

Program/Service	Administrative Responsibility
Pretrial Services	Rockingham-Harrisonburg Court Services Unit Blue Ridge Court Services
Community Corrections	Rockingham-Harrisonburg Court Services Unit Blue Ridge Court Services
Electronic Monitoring (EM)	Rockingham-Harrisonburg Court Services Unit Blue Ridge Court Services
Home Incarceration	Not Available
	<u>Local</u> Rockingham-Harrisonburg Court Services Unit
Probation Supervision/ substance abuse assessment, testing & treatment	Blue Ridge Court Services
	<u>State</u> P&P District 39 P&P District 12
Day Reporting Center (optional)	Rockingham-Harrisonburg Court Services
Halfway House Programs and Services (optional)	Not available

Law Enforcement Diversion -
Detox Center Programs (optional)

Not available

Adult Drug Court

Blue Ridge Court Services
Rockingham-Harrisonburg Court Services

Reentry Programming

Local
Local Reentry Council

State
Department of Corrections

Recommended Financing Arrangements and Estimated General Fund Requirements for Debt Service as Provided by the Department of Treasury

Prince William – Manassas Regional ADC, 204-Bed Expansion - Based on approved costs of \$42,064,842, maximum annual debt service for the VPBA’s reimbursement of the \$21,032,421 State share would be approximately \$1,530,200 each year for 20 years.

Henry County Jail, 400-Bed New Jail - Based on approved costs of \$75,039,512, maximum annual debt service for the VPBA’s reimbursement of the \$18,759,878 State share would be approximately \$1,364,500 each year for 20 years.

Chesapeake City Jail, 192-Bed Expansion - Based on approved costs of \$27,443,544, maximum annual debt service for the VPBA’s reimbursement of the \$6,860,886 State share would be approximately \$500,800 each year for 20 years.

Piedmont Regional Jail, Renovation and Addition of Intake Area - Based on approved costs of \$4,278,928, maximum annual debt service for the VPBA’s reimbursement of the \$2,139,464 State share would be approximately \$158,200 each year for 20 years.

Prince William – Manassas Regional Jail Expansion, Buildout of shell space for Work Release - Based on approved costs of \$2,713,549, maximum annual debt service for the VPBA’s reimbursement of the \$678,387 State share would be approximately \$51,700 each year for 20 years.

Riverside Regional Jail, Facility Upgrades - Based on approved costs of \$3,229,787, maximum annual debt service for the VPBA’s reimbursement of the \$807,447 State share would be approximately \$13,000 each year for 20 years.

All estimates were computed using a budgeted interest rate assumption of 4.00%. The actual interest rate will be based on market conditions at the time of the transaction. Also the estimates only relate to reimbursement of approved project costs and do not include reimbursement of the state's share of the regional authorities' financing (interest) costs from construction midpoint through completion, which will also be determined and at completion based on the timing and terms of their respective financings.

Since Board of Local and Regional Jails approval has been obtained, the Department of Treasury will establish a file for each of these and monitor for General Assembly reimbursement authorization during future sessions after which they will be added to our list of authorized jail projects.