

PROCUREMENT OF NEW DUTY RIFLES FOR DEPARTMENTAL ISSUANCE

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Submitted To: Chief of Police

1. EXECUTIVE SUMMARY

This report recommends the procurement of 432 duty rifles in 5.56 NATO caliber for departmental issuance to certified patrol officers. This quantity will equip all officers who do not currently possess personally owned rifles, with an additional 15% operational buffer for training, maintenance, and tactical flexibility. The 5.56 NATO caliber is recommended based on its superior terminal ballistics at typical law enforcement engagement distances, proven track record in police deployments, compatibility with short-barreled AR-15 platforms, and favorable over-penetration characteristics compared to traditional service pistol calibers.

The total procurement of 432 rifles represents a strategic investment in officer safety and operational capability. When combined with the 50% of officers already equipped with personally owned rifles, this acquisition will ensure every certified officer has access to a patrol rifle by the end of 2026, in accordance with department certification objectives.

2. INTRODUCTION

The purpose of this report is to provide a comprehensive recommendation for the procurement of departmental-issue patrol rifles to support the department's officer certification program. The department is authorized to staff up to 750 sworn officers, with the objective of having all officers rifle-certified by the end of 2026. This initiative represents a significant enhancement to officer safety and tactical capabilities in the field.

Currently, approximately 50% of officers carry personally owned rifles, while the remaining certified officers require department-issued weapons. The procurement plan must account for this existing distribution, projected staffing levels, certification timelines, and operational requirements. Additionally, the selection of caliber requires careful consideration of terminal ballistics, barrier penetration, over-penetration concerns, compatibility with existing weapon platforms, and long-term cost-effectiveness.

3. RIFLE QUANTITY ANALYSIS

The recommended quantity of 432 rifles is derived from a methodical analysis of staffing levels, current carry rates, and operational requirements. The following step-by-step breakdown illustrates the calculation methodology:

Calculation Step	Figure	Explanation
Authorized Staffing	750 officers	Maximum authorized sworn personnel
Personal Rifle Ownership Rate	50%	Officers currently carrying personally owned rifles
Officers Requiring Department Rifles	375 officers	$750 \times 50\% = 375$ officers without rifles
Operational Buffer	15%	Training, maintenance, and flexibility reserve
Buffer Rifles Needed	57 rifles	$375 \times 15\% = 56.25$, rounded up to 57
TOTAL RECOMMENDED PROCUREMENT	432 rifles	375 base rifles + 57 buffer rifles

The 15% operational buffer is essential for maintaining operational readiness and flexibility. This reserve will accommodate:

- Training academy rifles for initial certification courses
- In-service training and qualification exercises
- Maintenance rotations and repair cycles
- Tactical team reserve and special assignment requirements
- Unexpected personnel increases or emergency deployments

4. TERMINAL BALLISTICS EVALUATION & CALIBER JUSTIFICATION

Caliber selection is based on FBI ballistic testing protocols, typical law enforcement engagement distances, barrier penetration requirements, over-penetration concerns, platform compatibility, and practical considerations including cost and availability.

4.1 Typical Law Enforcement Engagement Distances

Statistical analysis of law enforcement shootings indicates that the overwhelming majority of engagements occur at distances under 100 yards, with the vast majority occurring at 25 yards or less. At these typical operational ranges, terminal ballistics performance is governed primarily by bullet design and velocity rather than long-range ballistic coefficient. The 5.56 NATO caliber maintains excellent terminal performance throughout this critical operational envelope, with energy transfer and wound channel characteristics optimized for incapacitation at close to intermediate ranges.

4.2 FBI Ballistic Protocol Compliance

The FBI ballistic gelatin testing protocol evaluates ammunition through eight distinct test scenarios, including bare gelatin and various intermediate barriers such as heavy clothing, sheet steel, wallboard, plywood, and laminated automotive glass. Current generation 5.56 NATO duty ammunition, particularly 62-grain bonded and controlled expansion designs, consistently meets FBI protocol requirements for penetration depth (12-15 inches) while maintaining acceptable expansion characteristics. These rounds demonstrate reliable performance through common intermediate barriers encountered in law enforcement operations.

4.3 Over-Penetration Considerations

Contrary to common misconceptions, properly designed 5.56 NATO ammunition typically exhibits less over-penetration potential than traditional service pistol calibers. The high-velocity 5.56 bullet is prone to fragmentation upon impact with soft tissue, which dissipates energy and reduces penetration depth. Independent testing has demonstrated that quality 5.56 duty loads typically penetrate between 5.5 and 15 inches—within or below the FBI's maximum recommended penetration of 15 inches. This fragmentation characteristic enhances officer safety by reducing the risk of errant rounds striking unintended targets beyond the immediate threat.

4.4 Platform Compatibility

The 5.56 NATO caliber is native to the AR-15 weapon platform, which has become the standard patrol rifle platform for American law enforcement. Short-barreled AR-15 variants (10.5-14.5 inches) are widely adopted by police departments and function reliably with 5.56 NATO ammunition. While the .300 AAC Blackout caliber offers similar platform compatibility with reduced muzzle blast and suppressed performance, it provides marginal advantages for typical law enforcement applications at significantly increased cost. The 5.56 NATO platform is universally supported by firearms manufacturers, armorers, and training organizations, ensuring long-term sustainability and support.

4.5 Comparative Analysis: 5.56 NATO vs. .300 AAC Blackout

Factor	5.56 NATO	.300 AAC Blackout
Terminal Ballistics (0-200 yards)	Superior	Good
Barrier Penetration	Excellent	Good
Over-Penetration Risk	Lower (fragmentation)	Higher (heavier bullet)
Ammunition Cost	Low (~\$0.30/round)	High (~\$1.00/round)
Ammunition Availability	Widely available	Limited selection
Platform Support	Universal	Good
Training Adoption	Industry standard	Limited
Long-Range Performance	Superior (>200 yards)	Limited

4.6 Caliber Recommendation

Based on the foregoing analysis, the 5.56 NATO caliber is recommended for the procurement of departmental duty rifles. This recommendation is supported by:

- Superior terminal performance at typical law enforcement engagement distances
- Compliance with FBI ballistic testing protocols through common intermediate barriers
- Lower over-penetration risk due to fragmentation characteristics
- Universal platform compatibility with short-barreled AR-15 variants
- Significant cost advantages in ammunition procurement and training
- Widespread industry adoption and proven track record in law enforcement deployments
- Established training infrastructure and nationwide availability of qualified instructors

The .300 AAC Blackout caliber was evaluated but not recommended due to significantly higher ammunition costs (approximately 3-4 times the cost of 5.56), limited ammunition availability, and minimal tactical advantages for typical patrol rifle applications. The .300 Blackout's primary advantages—suppressed performance and reduced muzzle blast—are not critical requirements for the department's patrol rifle deployment.

5. CONCLUSION & FINAL RECOMMENDATION

This report recommends the procurement of 432 duty rifles in 5.56 NATO caliber for departmental issuance. This recommendation is founded on a comprehensive analysis of staffing requirements, certification objectives, operational needs, and ballistic performance criteria.

The recommended quantity of 432 rifles will ensure that all 750 authorized officers have access to a patrol rifle by the end of 2026, with a 15% operational buffer providing essential flexibility for training, maintenance, and tactical contingencies. When combined with the existing personal rifle inventory, this procurement will achieve the department's certification objectives while maintaining operational readiness.

The selection of 5.56 NATO caliber provides optimal performance for law enforcement applications, offering superior terminal ballistics at typical engagement distances, reliable barrier penetration, reduced over-penetration risk, and exceptional platform compatibility. The widespread adoption of 5.56 NATO in law enforcement ensures long-term sustainability, cost-effectiveness, and access to comprehensive training resources.

This procurement represents a strategic investment in officer safety and operational capability. The combination of appropriate equipment quantity and caliber selection will enhance the department's ability to protect officers and the community while maintaining fiscal responsibility and operational efficiency.

FINAL RECOMMENDATION:

Parameter	Recommendation
Total Rifles to Procure	432 rifles
Caliber	5.56 NATO
Platform	AR-15 Style Patrol Rifle
Operational Buffer	15% (57 rifles)

Respectfully submitted,

Firearms Training Coordinator