

Model Policy

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I. PURPOSE

It is the purpose of this policy to provide guidance on the use, utility, and deployment of police bicycles and the general management of police bicycle operations.¹

II. POLICY

Bicycle patrol officers, also referred to as police cyclists, are an important component of this department's strategy for accomplishing its enforcement objectives due to their mobility and stealth, as well as their ability to facilitate a variety of law enforcement and crime prevention operations.

III. PROCEDURES

A. Deployment

1. Police bicycles are intended for and their use is authorized to conduct the following primary deployment functions:
 - a. Police cyclists may be dispatched to or may initiate response to all calls for service in which their response time is comparable to or better than that of a motorized patrol vehicle, unless otherwise indicated by this policy.
 - b. Police cyclists should not normally be dispatched or initiate response to incidents in which their reduced emergency equipment capabilities (e.g., emergency warning devices) may present service problems or dangers. These include but are not limited to
 - (1) traffic accidents in which a vehicle is not moveable;
 - (2) high-risk felony motor vehicle stops; and
 - (3) situations in which the lack of cover typ-

ically afforded by a motor vehicle would be dangerous. Response to such situations may be permitted where exigent circumstances exist and motorized units are not readily available, or as back up where patrol vehicles are already on scene.

- c. Police cyclists may be used for targeted patrol operations based on specific crimes, geographic areas, or crime targets.
- d. Police cyclists may be given preference where appropriate in response to the following:
 - (1) Off-road emergencies, to include search and rescue, enforcement, and preventive patrol as required on trails designated for nature walks; mountain bike use; horses; and/or walking, hiking, and biking.
 - (2) Medical emergencies, if police cyclists are properly equipped and trained, and if their proximity and/or response time to the incident may be advantageous.
 - (3) Incidents in which the location or the volume of vehicle and/or pedestrian traffic may inhibit the response of police motor vehicles.
 - (4) Special events, such as parades, festivals, fairs, runs/races, sports, and other indoor and outdoor events.
 - (5) Demonstrations, events that attract protestors, and other crowd situations.
 - (6) Disaster situations in which movement by conventional motorized emergency response vehicles is limited or impossible.

- e. Police cyclists may initiate traffic stops, giving particular attention to motorist and officer safety.
 - (1) Physical contact with a moving vehicle is not recommended unless exigent or related emergency circumstances dictate.
 - (2) Police bicycles should be kept out of traffic and should not be positioned in front of or behind the stopped vehicle. When possible, the bicycle should be placed on the ground next to the vehicle.
 - (3) Bicycle patrol officers are encouraged to make passenger side approaches and to utilize available cover when present.
 - (4) Marked patrol units should be requested where appropriate to provide emergency lighting and cover from traffic.
 - 2. The deployment of police cyclists is subject to the following procedures.
 - a. Prior to initiating bicycle patrol, police cyclists shall inspect their equipment to ensure that it is in proper working order. If a problem is discovered that the police cyclist cannot fix, notice shall be given to the shift supervisor.
 - b. Police cyclists and supervisors shall exercise discretion in determining whether or not to use a bicycle on patrol when excessively high or low temperatures or other weather conditions may make the use of bicycles inadvisable or hazardous.
 - c. While operating a bicycle, bicycle patrol officers should wear an approved helmet, shatter-resistant protective eyewear, and cycling gloves and utilize approved pedal retention devices.
 - d. While patrolling at night, unless employing stealth, police cyclists should use lights that meet the legal mandate or current standard for public safety cycling, whichever is greater, and any legally mandated reflective equipment and high-visibility attire.
 - e. Whenever possible, police cyclists should give an audible warning of their approach from the rear, maintain reasonable speeds, and exercise caution when patrolling on sidewalks and other locations where pedestrians are present. They should not operate where prohibited by local ordinance, unless emergency circumstances dictate otherwise.
 - f. When possible, police cyclists shall notify communications of all potential enforcement contacts, to include their exact location.
 - g. In arrest situations, police cyclists shall request a motorized transport unit for the prisoner.
 - (1) A police cyclist shall not secure a prisoner to an object and leave him or her unattended, unless an emergency exists that requires immediate action by the police cyclist.
 - (2) The police cyclist shall respond to the appropriate facility to process the arrestee at the earliest convenience or in accordance with normal procedure.
 - h. When leaving bicycles unattended, police cyclists shall, whenever possible, do the following:
 - (1) Secure their bicycles with a locking device to an immovable stationary object in an easily monitored location unless engaged in emergency situations, such as foot pursuits, that preclude this requirement.
 - (2) Take reasonable precautions to ensure that the bicycle does not obstruct pedestrian or vehicular traffic.
 - i. If minor damage to the bicycle is sustained during the shift, the police cyclist shall notify the shift supervisor by the end of the shift. If substantial damage to the bike or injury to the officer or a civilian is sustained, the bicycle patrol officer shall immediately notify the shift supervisor and request appropriate medical assistance.
 - j. When not in use, all police bicycle equipment shall be stored and locked in the designated area.
 - 3. Police cyclists shall utilize their department bicycles for off-duty assignments only with a commander's prior approval.
- B. Personnel Selection
- 1. In order to reduce the risk of exercise-induced medical problems, pre-screening of candidates is recommended.
 - 2. Any physical fitness testing should be conducted by a qualified fitness and/or medical professional.
- C. Training
- 1. Selected officers must attend and pass a nationally recognized and standardized basic police cycling course.
 - 2. Advanced and specialty training is authorized only for those who have attended the standard basic course and who demonstrate above-average competency. All advanced and specialized training shall be authorized in accordance with the department selection application policy and as dictated by operational objectives.
 - 3. Documented, periodic training is required; quarterly training is highly recommended. Training can be refresher to advanced, as deter-

mined by the unit supervisor in conjunction with a qualified instructor.

4. Any bike officer who is absent from bike patrol for an extended period should be evaluated by a qualified instructor. Based upon the instructor's assessment, refresher training ranging from an 8-hour course to a 32-hour course should be provided.

IV. PERSONNEL RESPONSIBILITIES

A. Bicycle Unit Supervisor

The unit supervisor shall oversee recruitment, pre-qualification, training (initial and ongoing), cycling standards, uniforms and equipment, maintenance, and deployment. The unit supervisor shall ensure the following:

1. All bicycle-mounted operations are conducted in accordance with this policy.
2. All prospective bicycle unit members complete the screening process and are selected according to the established criteria.
3. Bicycle patrol officers sign for, maintain, and are held accountable for all bicycle-related equipment in their care.
4. A written inventory of all departmental equipment, including bicycle serial numbers, is maintained, and that monthly inventories of all issued equipment are conducted.
5. Sufficient cleaning and maintenance supplies are available.
6. Bicycles are stored properly when not in use.
7. Ensure incident report forms are completed for any injuries sustained on bike duty.

Acknowledgment

This document was developed by the IACP National Law Enforcement Policy Center in cooperation with the International Police Mountain Bike Association (IPMBA) and the American College of Sports Medicine (ACSM).

Every effort has been made by the IACP National Law Enforcement Policy Center staff and advisory board to ensure that this model policy incorporates the most current information and contemporary professional judgment on this issue. However, law enforcement administrators should be cautioned that no "model" policy can meet all the needs of any given law enforcement agency. Each law enforcement agency operates in a unique environment of federal court rulings, state laws, local ordinances, regulations, judicial and administrative decisions and collective bargaining agreements that must be considered. In addition, the formulation of specific agency policies must take into account local political and community perspectives and customs, prerogatives and demands; often divergent law enforcement strategies and philosophies; and the impact of varied agency resource capabilities among other factors.

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ENDNOTE

¹ This policy provides general guidance related to bicycle patrol. For more specific recommendations for physical fitness and training requirements, please consult the accompanying Concepts & Issues Paper.

Bicycle Patrol

Concepts and Issues Paper

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I. INTRODUCTION

A. Purpose of Document

This paper is designed to accompany the *Model Policy on Bicycle Patrol* established by the IACP National Law Enforcement Policy Center. It provides essential background material and supporting documentation to provide greater understanding of the developmental philosophy and implementation requirements for the model policy. This material will assist law enforcement executives in their efforts to tailor the model policy to the requirements and circumstances of their communities and their law enforcement agencies.

B. Background

One of the continuing trends in law enforcement is the use of bicycles by patrol officers. In 2007, 32 percent of the nation's approximately 12,575 local police departments reported using bicycle patrol on a routine basis, including a majority of departments serving 25,000 or more residents and 100 percent of those serving at least 500,000 residents.¹ Departments with bicycle units range in size from fewer than 10 to over 35,000 sworn personnel.² A wide variety of agencies use bicycle patrol officers, also referred to as police cyclists, including city, county, and state police; campus public safety departments; numerous federal agencies; military bases; hospitals; parks; and private security firms.³ Bicycle patrol officers can be used seasonally or year-round depending on the location and climate of the department. Approximately 45 percent of bicycle units operate year-round, while the rest operate only during the summer months.⁴ The differences in policing tactics between officers on foot, in patrol cars, and on bicycles have produced a need to develop specific policies, protocols, and tactics for these specialized units.

C. Advantages of Bicycle Patrol

Bicycle patrols have several advantages over other modes of patrol that make them appealing to departments in protecting communities and preventing crime.

Awareness. Police cyclists are better able to use all of their senses to detect crime, public disorder, or calls for help. Officers on bicycles are more aware of their surroundings and can employ their senses of smell and hearing to full advantage. They can use

these senses to detect situations that would be overlooked by personnel in motor vehicles.

Accessibility and Maneuverability. In congested areas, the police cyclist can respond quickly to priority calls for service because the officer can maneuver easily between vehicles, take shortcuts through alleys and parks, and travel on sidewalks (where legal). The ability to navigate through areas inaccessible to motor vehicles can be critical in reducing response time and meeting operational objectives.

In addition, bicycles have easy access to parks, nature trails, multi-use pathways, sporting/event complexes, and numerous similar venues. Bicycle patrol officers in parking lots and structures are able to ride virtually unnoticed among parked motor vehicles, gaining easy visual access to vehicle interiors and serving as an effective deterrent to vehicle break-ins.

Approachability. Police officers who patrol residential areas, mobile home communities, apartment complexes, business districts, schools, and campuses on bicycles are far more approachable to the public than those in cars. This often leads to improved communication between officers and civilians, which may include information pertaining to recent criminal activity. A civilian who is approached by a bicycle patrol officer in a common enforcement capacity is less likely to feel apprehensive and is often more communicative and cooperative. Business owners often develop personal connections with the police cyclists who patrol their districts, creating an atmosphere of safety that helps attract and retain patrons.

Cost Efficiency. A cost-benefit analysis comparing bicycles to motor vehicles would show that the benefits provided by bicycles come at a lower cost when considering purchase price of the bicycle and accessories, maintenance costs, fuel cost, and life expectancy. Seven to ten bicycle patrol personnel can be equipped with bicycles and full uniforms for the price of one patrol car. Bicycles do not require costly fuel to operate, which can offer substantial savings.

Environmental Benefits. Bicycles do not create air or noise pollution, do not add to traffic congestion, and take up few, if any, parking spaces. They can be carried on bicycle racks and used to supplement motorized vehicles, reducing the amount of shift time the car engine is running and emitting pollutants.

Stealth. Bicycles are quiet and have a low profile, providing officers with stealth not afforded by other transportation devices.

This stealth enhances the officer's ability to conduct surveillance by providing easy access to unconventional viewpoints. By using a silent and often unexpected approach to crimes in progress, officer safety is enhanced and the element of surprise is increased.

D. Bicycle Patrol Applications

Community Service/Bicycle-Pedestrian Safety Education. Bicycle patrol officers are particularly well suited to fostering closer police-citizen interaction and engagement. This can be accomplished during daily patrol operations as well as through community service functions such as bicycle rodeos, helmet giveaways, school bicycle demonstrations, bicycle safety presentations, and bicycle registration programs. Police cyclists can promote helmet use and bicycle/pedestrian safety to the community and its children.⁵ Police cyclists can also serve as positive role models to at-risk youths through involvement with cycling and other outdoor-oriented clubs.

School resource officers (SROs) who ride bicycles on duty and officers involved with Police Explorer cycle teams are uniquely positioned to mentor youths and model safe cycling behaviors. Programs such as the Minneapolis Police Department's Bike Cops for Kids demonstrate the positive impact of a partnership between the police and the private sector that uses bicycle helmets to break down the barriers between at-risk youths and their community officers.

A knowledgeable police cyclist may be able to work with transportation officials and traffic engineers to incorporate bicycle facilities into transportation plans. Police cyclists, particularly SROs, can assist communities in meeting goals set for the federal Safe Routes to School program. If a bicycle patrol officer obtains instructor certification, he or she can offer educational classes to the public on safe and effective cycling. Police cyclists, especially police cyclist instructors, can foster healthy relationships with local cycling associations by providing educational sessions on bicycle and pedestrian traffic laws to both civilians and other law enforcement officers, using National Highway Traffic Safety Administration (NHTSA) resources such as *Enhancing Bicycle Safety: Law Enforcement's Role and Enforcing Laws for Bicycle/Pedestrian Safety*.⁶

Disaster Response. During natural and manmade disasters, bicycle-mounted personnel are often the first responders because accessibility is limited and maneuverability is essential. During the tragic events of 9/11, in New York city, bicycle messengers provided supplies, emergency equipment, first aid, and food and water to victims as well as rescue workers. Bicycle patrol officers and paramedics were the first to respond to the 2005 London subway bombings, and bicycle officers are frequently deployed in the wake of hurricanes and other weather emergencies.⁷

Public Order. During peaceful civil demonstrations, police cyclists can monitor the crowd from a slightly elevated position and move quickly around and through the crowd as necessary. During times of civil disobedience, properly trained officers can utilize their bicycles to effectively contain, control, and move a crowd. Bicycle Response Teams (BRTs) have been deployed with great success during events such as the Democratic and Republican National Conventions and numerous summits (including NATO and G-20), supplementing traditional mobile field forces.

Bicycles can be extremely effective during special events, including small- and large-scale amateur and professional athletic events, festivals, street fairs, carnivals, parades, concerts, or

any potential crowd management/control situation. Crimes at these special events—such as disorderly conduct, theft, and security breaches—as well as medical emergencies, often occur in areas that are not accessible by patrol car and can be too far away to quickly reach on foot.

Search and Rescue. Bicycles can be integrated into search and rescue operations, using properly trained personnel equipped with global positioning systems (GPS) and enhanced radio systems. Mountain bicycles are well suited for hasty searches, in which the objectives are to swiftly survey and inspect areas of high probability for clues or information of the subject's whereabouts, as well as to gain familiarity with the area.

In residential areas, the frequent disappearance of children or the elderly suffering from Alzheimer's disease and related dementias calls for an effective and innovative approach to searches. In rural areas, the bicycle can be effective on trails and in wilderness settings. Bicycles permit first responders to quickly access emergency routes, locate and assist victims, and either guide more advanced life support to the scene or assist the victim in moving to a more easily accessible area.

Surveillance and Undercover Operations. Bicycle patrol officers can be employed for surveillance, either in the midst of criminal activity using plainclothes officers or by positioning observation officers away from the activity. Specific targets can be followed and observed undetected by a police cyclist, even if he or she is wearing a police bicycle uniform.

Traffic Enforcement. Police cyclists can actively engage in traffic enforcement, including stop sign violations and speeding, especially in residential areas, business districts, and campus environments. During post-event traffic jams, police cyclists can easily travel between lines of cars and visually note the presence of alcohol, drugs, and weapons inside vehicles, as well as observe other types of illegal behavior. Violations of open container, seat-belt, child restraint, and other occupant protection regulations are easily detected.

Private Security and Enforcement Officers. Patrolling properties with defined boundaries, parking lots, alleyways, and parking ramps is often quicker, easier, and more economical on a bicycle than any other type of patrol vehicle. Bicycles are frequently used by security personnel in shopping malls, amusement parks, casinos, hospitals, sports and entertainment complexes, campgrounds, gated communities, corporate campuses, and many other venues. Bicycles can also be used effectively by parking, code enforcement, and animal control officers.

Emergency Medical Services (EMS). In departments with police officers who also serve as emergency medical personnel, bicycles can enhance the delivery of EMS in congested areas and during special events. An EMS cyclist equipped for basic life support can help sustain life and provide time to get advanced life support to the victim. Additional training and certification in EMS are necessary, as are specific EMS cycling training and equipment.

II. POLICY RECOMMENDATIONS

A. Limitations and Restrictions

Police bicycles offer an effective means of service delivery in many situations; however, certain factors must be taken into consideration during operational planning.

Geography. Although police cyclists have a distinct advantage in congested and relatively small geographical areas, they are

limited when responding to emergency calls for service more than a mile away. Therefore, a police cyclist working a larger geographical beat is usually not dispatched to emergency calls, but may elect to respond if in close proximity, or if motorized units are unavailable. Employing the “park-and-ride” concept (mounting the bicycle onto a patrol car and riding portions of a shift) can effectively expand the scope of the bicycle patrol.

Patrol Area. Bicycle patrol officers should be intimately familiar with their patrol areas, especially the various obstacles, stairways, paths, parking blocks, and all other objects that could result in injury or even death if unexpectedly encountered during a pursuit or while taking a shortcut to an emergency call. It is beneficial to assign police cyclists to a specific beat both for this reason and in keeping with principles of community-oriented policing.

Weather/Environmental Conditions. Weather-related deployment restrictions may be warranted. Bicycles are best deployed when the temperature range is between 40 and 90 degrees Fahrenheit. However, elevation and humidity as well as rider factors, such as endurance, may increase or decrease this zone of operation. Agencies may also restrict bicycle deployment during times of heavy or prolonged rain, lightning, snow, sleet, high winds, or when road or weather conditions are perceived as dangerous by the officer or the supervisor.

Communications. Communication is essential. Police cyclists do not have vehicle locators, and if officers become engaged in an incident, other units may be unable to find them unless their position has been verbally communicated. Backup motorized units are often accustomed to looking for other police vehicles and may not notice a bicycle patrol officer, especially in recessed areas of buildings, alleys, and parking lots—and particularly after dark. Therefore, prior to any enforcement action or related contact, bicycle patrol officers should relay their precise position, preferably using both cross streets and fixed objects, such as an alley, building entrance, garage, or other landmark for reference.

Police cyclists may lack access to the more powerful and reliable vehicle-mounted radios, so they should be equipped with alternate means of communications, such as a mobile communication device, in addition to their portable radios. Police cyclists should utilize an ear microphone compatible with their portable radio. Police radio sounds travel easily, particularly after dark and in quiet areas, and suspects can be tipped off to an officer’s location and approach if the sound is not contained.

Communication between bicycle officers working together as a team is also important. Officers riding in pairs need to remain aware of one another’s location whenever separated, particularly when riding after dark.

Traffic Stops. Traffic stops require both creativity and tactical awareness. A bicycle patrol officer must gain the attention of the driver without the use of standard emergency equipment, and without personal endangerment. Riding next to or in front of a motor vehicle is potentially dangerous, and physical contact with a moving vehicle must be avoided. Some type of audible signal, such as a bicycle-mounted bell or siren or a police whistle secured to the officer’s uniform, should be used to get the driver’s attention.

Once the vehicle is stopped, the police cyclist must consider visibility of the vehicle to approaching traffic, as well as personal and equipment safety. Thus, a bicycle should not be placed behind a stopped vehicle, since the bicycle affords no visibility to approaching traffic or protection for the officer. Nor should the bicycle be placed in front of the vehicle in case the driver should

attempt to flee. Instead, the bicycle should be placed on the rear side of the vehicle away from traffic, or next to the vehicle, and the officer should approach from the passenger side. This approach offers distinct tactical advantages as well as some protection from approaching traffic. The bicycle patrol officer should conduct computer checks citations, etc., from a safe location that provides cover from occupants as well as from traffic.⁸

Felony Vehicle Stops. Because police cyclists lack cover, public address equipment, shoulder-mounted weapons, and emergency lights, they should not initiate felony vehicle stops. However, bicycle officers should be permitted to assist with felony stops in progress, provided that cover is available either from an on-scene patrol vehicle or in the immediate environment.

Vehicle Crashes. Bicycle patrol officers may respond to and investigate vehicle crashes. However, where emergency lighting is required for safety purposes and to divert traffic, backup motorized units are required. When investigating a bicycle-motor vehicle crash, trained bicycle patrol officers can offer a comprehensive perspective as to the laws that pertain to cyclists, as well as bicycle-related factors and conditions involved.

Tactical Considerations. There are certain tactical issues that are unique to police cyclists. The lack of cover typically afforded by a patrol car requires that bicycle patrol officers constantly scan for available cover and be able to recall, under stress, the location of the nearest cover. The lack of shoulder-mounted weapons may require a different approach to certain incidents and crimes. They also usually do not have mobile data terminals (MDTs), secondary flashlights, high-intensity emergency warning equipment, or independent capability to perform arrest transport.

Defensive Measures. The police bicycle can, under certain circumstances, function as a defensive tool by serving as a barrier when positioned between the officer and a suspect. A bicycle may also be used in an offensive mode when other options are not reasonably appropriate or adequate. However, offensive use of the bicycle should be the subject of departmental training by a qualified instructor in the context of other weapons available to the officer and consistent with the department’s use of force policy.⁹

Prisoner Transport. Since police cyclists cannot transport arrestees, they must request a patrol car to do so. It is essential to have an established protocol for prisoner transport of arrestees.

Equipment Security. Due to the bicycle patrol officer’s riding position—leaning forward with arms outstretched—weapons and equipment worn on the duty belt are exposed and therefore vulnerable, particularly when riding through crowds. Officers must be constantly aware of this possibility and be particularly guarded with their sidearms. As such, weapons retention training specific to bicycle officers is highly recommended.

Pedestrian Facilities. Police cyclists can often be more effective while patrolling on sidewalks and other pedestrian facilities (e.g., auto-free zones) rather than in the street. Officers riding in the street must maintain sufficient speed so as not to impede traffic; as a result, it can be more difficult for them to engage in proactive patrol techniques.

Bicycle patrol officers must keep in mind that pedestrians have the right of way and should give an audible warning when approaching from the rear. Unless circumstances dictate otherwise, bicycle patrol officers should ride to the outside of a sidewalk to avoid persons entering and exiting buildings and should patrol at slow speeds that do not endanger persons or property.

Bicycle patrol officers should not patrol on sidewalks in areas where prohibited, or in designated pedestrian-only zones, unless otherwise authorized by tactical or strategic circumstances, or

exempted from the prohibition due to their status as emergency vehicles.

Sidewalk riding presents some tactical opportunities, especially during darkness. Police cyclists can utilize shadows, building entrance recesses, light poles, mailboxes, and other structures located on the sidewalk as concealment and sometimes cover, allowing for more effective surveillance.

Night Patrol. Since over 90 percent of police cyclists spend some time patrolling at night, precautions should be taken to avoid accident and injury under these conditions.¹⁰

Because of their stealthy nature, which contributes to the element of surprise, and their ability to go places inaccessible to back-up vehicles, it is recommended that police cyclists patrol in pairs when practical.

During late night hours, police cyclists are encouraged to stay out of the street because of poor visibility and the danger of impaired drivers. However, because it is hard to avoid riding in the street, bicycle patrol officers must be visible to motorists approaching from the rear. By using a combination of active and passive lighting on their bodies and their bicycles, police cyclists can help ensure they are both seen and recognized.

Retro-reflective seams and lettering across the back of a police cyclist uniform and high-visibility clothing enhance visibility, as do bicycle-mounted reflectors and flashing LED taillights. The retro-reflective material on police bicycle uniforms does not give away a bicycle patrol officer's position under ambient lighting—a common concern to officers working at night. In contrast, metal badges will flash wildly under a streetlight. Therefore, police cyclists are encouraged to use a badge patch affixed to the cycling uniform shirt.

All police bicycles should be equipped with a headlight system that produces 42 lumens at 10 feet and 9 lumens at 20 feet.¹¹ The light should be bright enough that it is visible to traffic approaching on a perpendicular angle at intersections, to warn motorists that a cyclist is present. For stealth purposes, nighttime bicycle patrols can be conducted without the headlight activated, but never in situations in which the lack of lighting will unduly increase the risk of a crash or being struck by a vehicle. Even while patrolling in stealth mode, it is usually advisable to maintain the flashing taillight.

Bicycle lighting systems not only light the officer's path, they also enhance officer safety when used for suspect identification and control. A good headlight can provide as much illumination as a standard rechargeable flashlight. Bicycle patrol officers should be aware, however, that headlights can cause similar problems with backlighting as those caused by patrol car spotlights and flashlights.

Accidents and Injury. Police cyclists are at risk of injury from collisions with vehicles and other objects. Police cyclists are also more vulnerable to sniper fire and ambush due to the absence of a motor vehicle for cover or quick exit. Additionally, since bicycle patrol officer can easily access areas that are not accessible to motorized units, the probability of encountering criminal activity is greater. While utilizing a bicycle provides some advantages for the police and greater opportunities for enforcement action, it simultaneously can increase the risk of injury in some situations. For these and related reasons, officers should work in pairs whenever possible.

Preventive measures should be taken to avoid the common cycling discomforts and injuries that can result from improper technique; inferior, absent, or inappropriate equipment; and incorrect equipment adjustment, especially improper bicycle fit.

Proper training that includes obstacle-avoidance techniques and bicycle handling skill development will reduce the risk of crashes and related injuries. Bicycle-specific patrol procedures and tactics will teach the officer how to enhance his or her safety during contacts of varying threat levels.

B. Physical Qualifications

Physical fitness is important to police cyclists, as they are subject to greater levels of exertion than officers operating motor vehicles, both during general patrol and in special situations, such as pursuits. In order to reduce the risk of exercise-induced medical problems, pre-screening is recommended.¹² Any physical fitness testing should be conducted by a qualified fitness and/or medical professional.

A basic pre-screening tool is the Physical Activity Readiness Questionnaire (PAR-Q), developed by the Canadian Society for Exercise Physiology.¹³ A "yes" to any of the questions on the self-administered questionnaire triggers a medical screening to detect underlying risk factors. Common screening methods related to heart rate recovery are the three-minute step test¹⁴ and the cycle ergometer sub-maximal test.¹⁵ A basic cycling skills assessment (e.g., three-mile or one kilometer time trial and a simple cone course) may also be incorporated to assess cycling aptitude.¹⁶

C. Training

Initial and In-Service Training. A certified instructor using a certified training course should conduct initial police cyclist training, preferably on a course sanctioned by a nationally recognized organization such as the International Police Mountain Bike Association (IPMBA).¹⁷ The minimum standard for the initial course of instruction recommended by IPMBA is 32 hours.

In-service training should consist of at least eight hours of bicycle-specific training annually; however, quarterly training is highly recommended. Seasonal police cyclists will benefit from refresher training at the beginning of the bicycle patrol season. Any bicycle patrol officer who is absent from bicycle patrol for an extended period should be evaluated by a qualified instructor. Based upon the instructor's assessment, refresher training ranging from 8 hours to the 32-hour course should be provided.

Training should incorporate physical cycling skills, a review of departmental bicycle policy, and advanced and/or mission-specific training. Advanced training programs should be developed by nationally certified police cyclist instructors who also hold instructor certification in that particular discipline (e.g., firearms, scenarios, defensive tactics). If such a resource is not available, training development should follow a team approach, involving a nationally certified police cyclist instructor and an instructor with the appropriate specialized qualifications.

Advanced and Specialty Training. The following types of training, provided by IPMBA, are encouraged for both officer preparedness and long-term cost savings.

- Bicycle Maintenance Officer Certification
- Cyclist Instructor Certification
- Public Safety Cyclist II
- Bicycle Response Team Training
- EMS Cyclist and EMS Cyclist II Training
- Search and Rescue
- Core Skills and Scenarios Training
- Annual IPMBA Conference Seminars and Workshops

Firearms Training. Firearms training designed specifically for police cyclists should be required annually, at a minimum, preferably in addition to regular firearms training. Departmental firearms qualification performed in full bicycle patrol uniform (helmet, gloves, cycling eyewear, shorts, etc.) is also strongly recommended. Bicycle-specific firearms training will prepare officers to overcome environmental and equipment factors unique to bicycle patrol. Experiencing these issues in training will develop the officers' ability to operate their bicycles and handle their firearms with competence.

U.S. Supreme Court and federal court decisions¹⁸ have guided the development of police deadly force training by finding agencies liable for failure to train officers for firearms-related use of force incidents. These cases have dictated that all training be recent and ongoing, relevant to the environment in which the officers work, and realistic regarding the situations officers encounter. In light of this mandate, it is essential to provide bicycle patrol officers with training that reflects the conditions in which they operate.

Weapon retention and unconventional shooting positions are among the most important aspects of bicycle-specific firearms training. While in the cycling position, an officer's duty belt is exposed, necessitating heightened awareness. To guard against weapon grabs, bicycle patrol officers must practice retention techniques while riding through crowds (an exercise known as the "gauntlet drill") and while disengaging from the bicycle.

A bicycle patrol officer may inadvertently or intentionally dismount the bicycle, landing on the ground in a potentially awkward position. Because of this likelihood, firearms training must incorporate shooting from unconventional positions, such as lying on the ground with feet in the pedal retention, followed by disengagement from the bicycle and moving to cover. Shooting drills should involve rapid dismounts and moving around the bicycle to the firing position.

Police cyclists must also be constantly aware of opportunities for cover and concealment. Because they lack the mobile cover afforded by a motor vehicle, they must practice using alternative cover and firing from unconventional positions while at the range.

The positional aspect of a threat coming from different angles is another factor to be considered. How officers engage the threat and disengage from the bicycle to confront the threat should be addressed and practiced.

Firing from a moving bicycle should be neither encouraged nor practiced. There are no tactical benefits to firing from a moving bicycle and the risks to the officer and others are heightened.

Police cyclists should be encouraged to determine the level of exertion they can sustain during emergency responses so that when they arrive on a call, they are physically capable of accurately firing their weapons and taking other necessary enforcement actions.

Research shows that a percentage of deadly force encounters in police cycling occur during low-light conditions.¹⁹ Therefore, training should incorporate low- and no-light drills. The various modes of bicycle lighting (flashing white or colored lights, steady beam) and the positioning of the bicycle patrol officer relative to the light after dismounting may affect shooting and should be experienced in training. The selection of flashlights and how to carry and access them needs to be explored as do similar issues, such as the use of a weapon-mounted light or a light carried on the duty belt or the bicycle. An officer carrying a large flashlight attached to the rear pack bag, for instance, must know how

quickly it can be accessed. Firing techniques utilizing flashlights are a difficult prospect at best; that difficulty can be exacerbated by lack of practice. How can lights be utilized to enhance the officers' abilities and safety rather than compromising them? This question should be answered in a training environment rather than on the street.

In addition to environmental factors, firearms training for police cyclists must also address equipment issues. Police cyclists utilize some equipment that officers in cars do not. Conversely, officers in motor vehicles have access to equipment that bicycle patrol officers lack.

Padded cycling gloves and the helmet are the two cycling-specific articles of equipment most likely to affect shooting accuracy and weapon handling; therefore, it is essential to wear them during training. The padding on a glove can alter the grip of a firearm, shift the point of impact, and cause difficulty during reloading. Indexing of different pieces of equipment may be impacted by the presence of cloth between the skin and the equipment. Therefore, live-fire exercises should include not only drawing and firing, but also stoppage clearing, magazine exchange, and weapon transitioning.

A bicycle helmet, while an absolute necessity for bicycle safety, could prove to be an impediment in certain situations. The ability to fire from a prone position could be negatively affected by the helmet's visor. An officer trying to peek around corners should know how much extra width the helmet adds and adjust his or her techniques accordingly.

Police cyclists may have to be more creative with regard to where they will carry a secondary weapon, as uniform design limits some of the more common locations for hiding a back-up weapon. Practice with these secondary weapons and range certification should be required.

When riding a bicycle, officers do not have ready access to shoulder-mounted weapons for long-range threats. Therefore, police cyclists should be given opportunities to shoot at longer distances than may usually be considered for handguns.²⁰

Fitness and Wellness Training. Certain types of ongoing physical training, such as interval and anaerobic threshold training, can improve an officer's physical capacity. As such, bicycle patrol officers should take advantage of training and physical wellness opportunities that will permit them to achieve and maintain optimal physical performance. Officers should also develop an understanding of their physiological limitations and stay within those limits.

In training, the officers should do cycle sprints of varying distances, some up to a mile in length, to learn how to adjust their effort level and technique. The muscles used for cycling are different than the ones used for running or walking; therefore, they should be trained in moving dismounts to become familiar with the speed of travel at which they can dismount without injuring themselves.

Along with being physically fit and appropriately trained, officers must be knowledgeable of relevant health and nutrition issues. Police cyclists generally exert a tremendous amount of energy during a shift. Replenishing this spent energy is essential to muscle and system recovery, and for avoiding chronic fatigue and injury.

Police cyclists lose substantial amounts of water through physical exertion; therefore, hydration is essential. Bicycle patrol officers should be educated as to proper hydration habits and how to recognize the signs of both dehydration and hyponatremia (low sodium levels). On-bicycle water storage (e.g., bicy-

cle-mounted water bottle cages) should be a mandatory part of every bicycle patrol officer's equipment.

In certain climates, officers risk heat exhaustion and heat stroke. In such areas, in-service training should include the prevention, recognition, and treatment of heat exhaustion and related problems. The use of moisture-wicking material for uniforms, while appropriate in all situations, is essential in warm climates. Similarly, officers who ride in cold weather should be properly educated as to clothing material selection; the proper technique for layering clothing; adequate skin coverage; and the prevention, recognition, and treatment of frostbite and related ailments.

Riders in all climates must be made aware of the dangers of skin damage from the sun's rays. Application of sunscreen year-round should be required; agencies should consider making sunscreen available as a protective measure against skin cancer. Wearing long-sleeved uniform shirts and long pants year-round is also an option.

D. Equipment

Bicycles. Police cycling equipment must be able to withstand the rigors of constant use in order to be cost-effective and minimize the chances of officer injury. Inferior equipment wears and breaks more easily and quickly, so police departments that support bicycle units should be prepared to purchase the best possible equipment. Only bicycles authorized by the police department and a certified mechanic should be used for police service. A list of suitable police bicycle equipment is included in Appendix A of this document. If possible, each rider should be assigned his or her own bicycle, and be held responsible for its general maintenance and operational integrity.

Bicycle patrol officers should be required to inspect their equipment prior to the start of their shifts or when left unattended for a significant period of time, to ensure that it is in good, safe, working condition. The ABC Quick Check should be conducted prior to any ride.²¹ This is a brief overview of the major components of the bicycle, including air, brakes, cranks, and quick releases.

A program of preventive maintenance should be established and followed. All related repair paperwork must be updated every time maintenance is performed on the bicycle.²² To avoid misuse and theft, all tools should be secured in a locked maintenance section of the bicycle storage area or mechanics shop.²³

Duty Gear. Most bicycle patrol officers use either a traditional duty belt or a vest carrier system to carry their weapons and other equipment. Bicycle patrol officers who use a duty belt have a choice between standard leather gear and gear constructed of nylon or similar synthetic material. Synthetic duty gear is typically the more practical option. Many bicycle patrol officers transition from leather duty gear to synthetic material for bicycle season, or depending on which uniform they are wearing. Consistency of equipment placement on the two duty belts is of the utmost importance, giving priority to the setup that does not interfere with the pedal stroke. If it is not possible to achieve an identical set-up, the most important factor in consistency is the holster. The holster, its placement, and the retention system should be identical on both gun belts because it is unrealistic to expect an officer to remember a different position and/or draw technique in a high-stress situation.

Vest carriers have become popular among bicycle patrol officers because they can be designed and cut to be comfortable while cycling. The pouches and pockets can be customized to hold an electronic control weapon, radio, OC spray, batons, mag-

azines, handcuffs, and other equipment. Armed officers will still need to wear a gun belt and security holster with one of these carrier systems. Nevertheless, carrying equipment on the vest spreads the weight of the equipment across the shoulders, reducing the lower back discomfort that can result from cycling with a fully equipped belt. In addition, the ballistic panels between the officer and his or her equipment affords protection from the equipment should the officer fall.

Equipment Security. Police cyclists should secure their police bicycles and equipment when left unattended whenever reasonably possible and in a manner that does not obstruct pedestrian or vehicular traffic. The bicycle should be secured by the frame, not the wheel or seat. If the bicycle is to be left for a longer period of time, such as a meal break, the officer should secure it in an easily monitored location. When an officer is not on duty, the bicycle should be stored inside a secure location.

Safety Equipment. Police cyclists should be required to utilize the following pieces of safety equipment: a high-quality mountain bicycle that is serviced regularly and fits the rider, a properly fitted bicycle helmet that meets the current safety rating, shatter-resistant protective eyewear for day and nighttime use, and pedal retention devices. Gloves, either padded or unpadded, are strongly recommended. These requirements should remain the same while performing plainclothes duties on a bicycle.

E. Uniforms and Personal Protective Equipment

Uniforms and Footwear. The level of physical activity coupled with exposure to varied weather conditions, makes uniform material selection essential to the health and comfort of the bicycle patrol officer. Appropriate clothing can contribute to optimal performance without undue risk to health. Uniforms designed specifically for use by police cyclists are strongly recommended. They are available in a range of styles, from casual to Class A. Uniforms should be consistent in color and features of standard uniforms to enhance recognition. A sample uniform package is included in Appendix B.

Officers must wear suitable footwear on patrol to prevent injury caused by the pressure exerted on the bottom of the foot during the pedaling motion. The force that is applied in pedaling is concentrated into an area the size of the pedal, unless a hard-soled shoe is worn to disperse it. If a soft-soled shoe is worn, the foot will "bend" over the pedal, causing pain and eventually damaging the ligaments in the bottom of the foot. Plantar fasciitis is a common overuse injury resulting from improper footwear.

Body Armor. Body armor should be mandatory while engaged in field activities both on duty and during off-duty employment. Body armor protects the officer not only from projectiles and slashing movements of edged weapons, but also from blunt force trauma. Body armor that is lighter in weight, but equal to or greater in threat level than standard-issue body armor, is available. However, all body armor must be approved by the department and must comply with protective and related requirements prescribed under current standards of the National Institute of Justice.²⁴

Endnotes

¹ International Police Mountain Bicycle Association (IPMBA), *USDOJ-BJS Bicycle Patrol Statistics Summary* (Baltimore: IPMBA, 2012) <http://ipmba.org/images/uploads/USDOJ-BJS-BicycleStatSummary2012.pdf> (accessed October 30, 2013).

² International Police Mountain Bicycle Association (IPMBA). Fact Sheet ©2006. IPMBA, #583 Frederick Road, Suite 5B, Baltimore, MD 21228.

³ *Ibid.*

⁴ *Ibid.*

⁵ *The Complete Guide to Public Safety Cycling* (Baltimore: IPMBA, 2008), 164-171.

⁶ *Enhancing Bicycle Safety: Law Enforcement's Role*, NHTSA, interactive video, 2 hours; and *Enforcing Laws for Bicycle/Pedestrian Safety*, NHTSA, see <http://www.nhtsa.gov/Driving+Safety/Bicycles/Enhancing+Bicycle+Safety:+Law+Enforcement%27s+Role> (accessed October 30, 2013).

⁷ Gary Raulerson, "Hurricane Season Is Busy One for Bicycle Cops," *IPMBA News* 14 no. 3 (Summer 2005), 33-34, http://ipmba.org/images/uploads/IPMBA_News_Summer_2005_WebR.pdf (accessed October 30, 2013); Brooks, Karen, *Bicycles to the Rescue*. Bicycle Times, Issue 21, 2013.

⁸ Neil Gallivan, "Traffic Stops: An Essential Bicycle Patrol Function," *IPMBA News* 18, no. 4 (Fall 2009) 5-7, http://ipmba.org/images/uploads/Fall_IPMBA_News_2009_WebR.pdf (accessed October 30, 2013).

⁹ Michael Wear, "Use of Force: The Impact of Your Bicycle," *IPMBA News* 21, no. 1 (Winter 2012), 1, 6, http://ipmba.org/images/uploads/IPMBA_News_Winter_2012-WEB.pdf (accessed October 30, 2013).

¹⁰ International Police Mountain Bicycle Association (IPMBA). Fact Sheet 2006

¹¹ "Watt's" It All About?" *IPMBA News* 14, no. 3 (Summer 2005), 1, 27, http://ipmba.org/images/uploads/IPMBA_News_Summer_2005_WebR.pdf (accessed October 30, 2013)

¹² An example of a comprehensive pre-screening developed by the London (UK) Ambulance Service Cycle Response Unit and the Crystal Palace Sports Medicine Centre and other pre-qualification programs can be found at <http://www.ipmba.org>; Thomas Lynch, "London Ambulance Service CRU Health and Fitness Screening," *IPMBA News* 14, no. 2 (Spring 2004), <http://ipmba.org/blog/comments/london-ambulance-service-cru-health-fitness-screening> (accessed October 30, 2013); Scott Picquet, "Chandler Police Department Bicycle Team Testing Process," *IPMBA News* 22, no. 1 (Winter 2013), 1, 26, http://ipmba.org/images/uploads/IPMBA_News_-_Winter_2013-Web-Reduced.pdf (accessed October 30, 2013); Neil Blackington, "Spring Tryouts: Boston EMS," *IPMBA News* 14, no. 2 (Spring 2004), 7, http://ipmba.org/images/uploads/IPMBA_News_Spring_2004_WebR.pdf (accessed October 2013); Robert Ricciardi, "Three-Mile Time Trial," *IPMBA News* 10, no. 4 (Fall 2001) 15, 18, http://ipmba.org/images/uploads/IPMBA_News_Fall_2001_Web.pdf (accessed October 30, 2013); Dan Ganzel, "Physical Fitness Standards for Police Cyclists," *IPMBA News* 11, no. 3 (Summer 2002), 7-8, http://ipmba.org/images/uploads/IPMBA_News_Summer_2002_WebR.pdf (accessed October 30, 2013)

¹³ The PAR-Q can be obtained by visiting <http://www.csep.ca/english/view.asp?x=698>.

¹⁴ "YMCA Fitness Assessment," <http://www.exrx.net/Testing/YMCATesting.html#anchor81473> (accessed October 30, 2013).

¹⁵ "The YMCA Cycle Ergometer Submaximal Test," citing *The Y's Way to Physical Fitness: The Complete Guide to Fitness Testing and Instruction* (Lawrence A. Golding et al., 1989) and ACSM's *Metabolic Calculations Handbook* (American College of Sports Medicine, 2007), http://www.csep.ca/cmfiles/certifications/cpaflainsert/09_YMCA_Cycle_Ergometer_Submaximal_Test.pdf (accessed October 30, 2013).

¹⁶ A time trial (e.g., three miles or one kilometer) consists of a designated course, preferably flat and with minimal turns, free from traffic interference or other safety issues.

¹⁷ Advanced and specialized training is available through IPMBA, www.ipmba.org, and other sources.

¹⁸ See *Canton v. Harris*, 489 US 378 (1989); *Popov v. City of Margate*, 476 F. Supp. 1237 (D NJ 1979), *Zuchel v. City and County of Denver*, 997 F.2d 730 (1993), and *Young v. City of Killeen*, 775 F.2d 1349 (5th Cir. 1985).

¹⁹ *The Complete Guide to Public Safety Cycling*, IPMBA ©2008, page 199.

²⁰ <http://www.ipmba.org/newsletter-0010-airman.htm>.

²¹ *The Complete Guide to Public Safety Cycling*, 113-115.

²² The International Police Mountain Bicycle Association has written repair and replacement guidelines that can be used to determine maintenance and replacement schedules.

²³ T.J. Richardson, "Designing Two-Wheeled Fleets," *NAFA Fleet Executive* (August 2002): 14-15, <http://ipmba.org/images/uploads/DesigningTwo-WheeledFleets.pdf> (accessed October 30, 2013).

²⁴ See the IACP *Model Policy on Body Armor*, IACP National Law Enforcement Policy Center, Alexandria, VA.

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Every effort has been made by the IACP National Law Enforcement Policy Center staff and advisory board to ensure that this document incorporates the most current information and contemporary professional judgment on this issue. However, law enforcement administrators should be cautioned that no "model" policy can meet all the needs of any given law enforcement agency. Each law enforcement agency operates in a unique environment of federal court rulings, state laws, local ordinances, regulations, judicial and administrative decisions and collective bargaining agreements that must be considered. In addition, the formulation of specific agency policies must take into account local political and community perspectives and customs, prerogatives and demands; often divergent law enforcement strategies and philosophies; and the impact of varied agency resource capabilities among other factors.

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Appendix A Police Bicycle Equipment

Bicycle & Components

- High-quality “police package” mountain bicycle from a reputable manufacturer, properly sized to the rider, well-constructed of one of the following materials and marked according to department policy:
 - High quality aluminum
 - High quality double-butted chromoly steel
- Front suspension forks: Reputable brand, minimum 80 mm travel, mid-level model or better
- Drivetrain: Shimano LX, SLX, or SRAM 7.0, X7 or better
- Brakes: Shimano LX, SLX, or SRAM 7.0, X7 or better
- Wheels: reputable brand, 26-29", comprised of mid-level components or better; silent rear hub, 22 mm width (min.) x 36-hole rim, stainless-straight 14-gauge spokes, brass nipples
- Handlebar stem adjusted to rider’s comfort
- Reputable brand threadless headset
- Shifters: SRAM “Grip Shift” “trigger” 7.0, X7 or better, or Shimano LX, SLX “Rapid Fire” shifters or better
- Quick releases: front and rear wheels, seat post (optional)
- Saddle: traditional or alternative as per rider preference and comfort (see the National Institute for Occupational Safety and Health recommendations)
- Pedal retention
 - Clips and straps or similar
 - Clipless (at officer expense; if properly trained and approved for use)
- Bar ends (for leverage, additional hand positioning)
- Tires: street/combo tires (size 26-29" x 1.5" - 26-29" x 2.1"; no knobbies)

Bicycle Accessories

- Two lightweight, durable, and functional water bottle cages affixed to frame of bicycle
- High-quality rear rack
- Rack bag
- Basic on-bicycle tool kit, including hex wrenches 2 mm – 8 mm, Phillips and flathead screwdriver, chain tool, blade (e.g., multi-tool), tire levers
- Two spare tubes (Presta or Schrader valves as required by wheel rim type)
- CO² dispenser and CO² cartridges, mini-pump, or other air source (tube compatible)
- Locking cable or other bicycle-locking device
- Headlight: Reputable brand, high-light output of 42 lumens (measured at 10 ft) or more, and rechargeable
- Taillight: Reputable brand, integrated or independent flashing LED taillight
- Legally mandated reflectors
- Rear-mount or two-legged kickstand
- Cycle computer

Maintenance Supplies

The following supplies and equipment are usually made available to all police cyclists in agencies where officers perform their own basic maintenance:

- Bicycle repair stand
- Chain cleaner
- Degreaser
- Dish soap
- Assorted, stiff-bristled brushes
- Rags and bucket
- Chain lubricant
- Waterproof grease
- Spray bottle for degreaser solution
- Frame polish
- Tubes
- Patch kit
- Floor pump with psi gauge
- Headset wrenches
- Spoke wrenches or one multi-size wrench

- Tire levers
- Pedal wrench
- Allen wrenches (4 mm, 5 mm, 6 mm, 8 mm)
- Gear brushes
- Chains
- Chain checker or ruler
- Cables, housing, ferrules, caps

The following supplies and equipment are reserved for use by certified mechanics in those departments with one or more personnel trained as maintenance officers:

- Bottom bracket tool
- Free wheel lockring tool
- Professional grade ball end hex wrenches
- Cable/housing cutter
- Torque wrench
- Ratchet
- Large crescent wrench
- Cone wrenches
- Crank puller
- Complete set of screwdrivers, Phillips and flathead
- Chain whip
- Full-sized chain rivet tool
- Pliers

Appendix B

Clothing and Equipment

Uniform

- Three long-sleeved, cold weather cycling shirts, appropriately sized, technical fabric (wickable, breathable, designed for comfort during exertion), with hidden zipper with exposed fake buttons so as not to limit secondary weapon options, custom department badge patch, microphone tab on shoulders, standard shirt pockets similar to those on a Class A uniform (or golf-style shirt for a more relaxed appearance)
- Three short-sleeved, warm weather cycling shirts, appropriately sized, technical fabric, with hidden zipper and exposed fake buttons so as not to limit secondary weapon options, customized department badge patch, microphone tab on shoulders, standard shirt pockets similar to those on a Class A uniform (or golf-style shirt for a more relaxed appearance)
- Three pair uniform cycling shorts, appropriately sized, technical fabric
- Cold weather/rain cycling jacket, appropriately sized, with "POLICE" in retro-reflective four-inch letters across the back, retro-reflective seams, badge patch on left chest area, exterior pen slots
- Cold weather/rain cycling pants, appropriately sized, technical fabric
- Cold/wet weather accessories, such as headbands, ear warmers, neck warmers, full-fingered winter gloves
- Undershirts, short- and long-sleeved, technical fabric
- Padded cycling shorts
- Cycling socks, technical fabric, of approved color and style
- Cycling shoes, appropriately sized, designed for public safety cycling or otherwise meeting uniform requirements

Personal Protective Equipment

- Helmet that meets current safety rating, appropriately sized and marked in accordance with departmental policy
- Wraparound, shatter resistant eye protection, clear and tinted lenses.
- Padded cycling gloves, half- and full-fingered (Some brands employ smaller gel pads over the fatty portion of the hand only, and do not encompass the entire palm. This lessens the effect of the padded glove on weapons manipulation and shooting accuracy.)
- Body armor lighter in design, but equal to or greater in threat level, than standard-issue body armor

Other Equipment

- Ear microphone
- Rechargeable flashlight worn on the belt
- Nylon duty gear, set up in an identical fashion and with the same model retention holster as road patrol duty gear (The placement of equipment and the draw of the pistol should remain consistent so that muscle memory will not be hindered if the officer must draw the weapon under stress.)
- Equipment vest carrier