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CITY OF **VANCOUVER**

ADMINISTRATIVE REPORT

CITY OF VANCOUVER

Report Date:	May 20, 2008
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VanRIMS No.:	03-2400-10
Meeting Date:	May 27, 2008

TO: Vancouver City Council

FROM: Chief Constable
General Manager of Engineering Services

SUBJECT: VPD Emergency Response Team Vehicle Requirements

RECOMMENDATION

THAT Council approve the addition of one (1) armoured rescue vehicle to the Vancouver Police Department (VPD) fleet at a total cost of $345,000, and that Council approve funding of this purchase by an acceptance of a donation, at a minimum of $250,000, from the Vancouver Police Foundation and an allocation of up to $95,000 from the Truck and Equipment Plant Account toward the capital cost of this unit.

FURTHER THAT the annual capital and operating costs of the vehicle be repaid to the Truck and Plant account through annual charges of $14,500 (reduced from $40,200 by the donation), funding to be provided by an increase to the VPD Operating Budget starting in 2009, subject to annual budget review.

COUNCIL POLICY

Council approves expenditures from Reserves, including the Truck and Equipment Plant Account.

Council approves all increases in service levels, including the addition of vehicles and equipment to the fleet.

Council received for information the VPD Management Process Flowchart for Vehicle and Equipment Additions (City & Donated) as part of RTS No. 06433 Vancouver Police Department Vehicles Pending Review on November 6, 2007.

PURPOSE

The purpose of this report is to address the ballistic and transport vehicle requirements of the VPD Emergency Response Team (ERT) and to seek Council approval to add a vehicle to the VPD ERT fleet and to accept a donation from the Vancouver Police Foundation toward this vehicle purchase.

BACKGROUND

The VPD Emergency Response Team (ERT) was established in 1992 and is mandated to provide specialized law enforcement tactics and equipment to deal with critical incidents in the City of Vancouver. As part of the VPD joint Operational Review, the ERT identified a need for increased ballistic protection that a specialized armoured vehicle may provide. To mitigate the financial impact of purchasing such a vehicle, the VPD Operational Review recommended that an armoured vehicle be purchased through donated funds. The Operational Review Steering Committee requested that VPD and Equipment Services review the ballistic and transport requirements and determine what the best vehicle is to meet these needs. This review is now complete. To date the Vancouver Police Foundation has raised $250,000 for the purchase of an armoured vehicle.

DISCUSSION

a) Current Practice and Experience

The ERT currently responds to approximately 300 calls per year. These include persons with knives and guns, active shooters, barricaded suspects, and hostage situations. The team also plans and carries out high risk arrest warrants, provides security for high risk prisoner transportation and performs both witness and VIP escort/protection duties. In the case of barricaded suspects, especially those who are armed with firearms, ERT is called upon to work to resolve the situation without injury to citizens, police officers, or the suspect involved.

The VPD currently has limited options to perform a safe rescue or actively confront a suspect armed with a weapon capable of defeating the ballistic protection provided by individually issued vests and shields. In order to better respond to these types of calls the VPD requires improved ballistic protection against various types of firearms.

Currently, the ERT uses a wide range of equipment and vehicles to respond to calls. These include various lethal and less lethal weapons, personal ballistic protection equipment, rappel gear, and various means of transport.

ERT vehicles include 6 specially outfitted trucks, an equipment van, and a command vehicle. The team also has marine capability with the assistance of the VPD Marine Squad. None of the existing ERT vehicles are equipped to provide ballistic protection.

Current ballistic protection for VPD officers is restricted to vests, and ballistic shields. These are effective against handguns and some shotgun ammunition, but provide limited protection

against rifle fire. There is currently no protection against ammunition which strikes outside the area covered by either the vest or shields.

A standard vehicle provides very little in the way of ballistic protection. Rifle and pistol rounds are capable of penetrating all components of the vehicle except the engine block. Police officers are currently trained to 'take cover' behind this part of the vehicle in the event they are confronted with gunfire while near their cars. However, this is strictly a defensive move, which leaves police officers vulnerable to enfilade or ricochet fire, and in the case of an elevated shooter position, provides very little cover.

b) Utilization Rate

The Emergency Response Team analyzed calls attended between November 2004 and June 2007 and estimates that they would have benefited from additional ballistic protection and transport capacity in approximately 58 incidents. Of these incidents, 28 involved guns, some of which were high calibre rifles. Using this analysis, additional ballistic protection would be required for approximately 20 incidents per year translating to an annual vehicle usage of approximately 3,000 km (including approximately 800 kms for ballistic needs, 1000 kms for training operations and 1000 kms for transport opportunities this vehicle may provide).

c) Operational Requirements

The following specifications were developed for an ERT armoured vehicle:

- *9 Passenger Transport*: VPD requires transport of a complete ERT tactical team of 9 officers and their equipment.
- *4WD Drivetrain:* Vehicle must be able to operate on and off-road. This allows ERT to appropriately position the vehicle on or off-road so that they can respond to the incident while minimizing the risk to officers, victims, and suspects.
- *Ballistic Capability:* Vehicle must have the ability to protect officers or the public either behind or inside the vehicle from rifle rounds.
- *Seamless Side Armour:* The vehicle should not have gaps in ballistic protection.
- *Skip Fire Shielding:* Ballistic protection on the underside of the vehicle to protect occupants if rounds are skipped off of the ground surface into the underside of the vehicle
- *Operationally Effective Enter/Egress Options:* The VPD requires a minimum of three options for entering and exiting the vehicle. A minimum of one egress option is required for each of the driver side, passenger side, and rear of the vehicle. This allows ERT officers to select the egress option that meets there tactical objectives without repositioning the vehicle. Egress options should also be sized and positioned to minimize the effort required to enter and exit the vehicle, and rescue injured persons.
- *Urban Manoeuvrability:* Vehicle width and wheelbase should allow for easy manoeuvring on City streets, including the downtown core.
- *Class 5 Vehicle Licensing*: Vehicle preferred to be operated with a Class 5 Vehicle License to allow for multiple drivers, and to remove the need for additional operator training.
- *Original Equipment Manufacturer Chassis (OEM)*: a vehicle built on an OEM chassis is beneficial as Equipment Services would be able to perform engine and chassis maintenance and repairs to minimize downtime and costs. OEMs also have a larger network of parts distribution centres compared to custom vehicle manufacturers.

d) Developing Practices by Other Agencies

A growing trend among police agencies in North America is to equip tactical firearms units similar to ERT with armoured rescue vehicles. Calgary, Edmonton, Toronto, and Victoria already have or are in the process of acquiring such vehicles. These vehicles range from purpose built armoured rescue vehicles to specialized military vehicles (see vehicle descriptions in alternative section below). The VPD's ERT Team specifically identified these types of vehicles as a desired solution to its ballistic and transport requirements.

e) Donation Opportunity

The Vancouver Police Foundation has raised $250,000 for the purchase of a purpose built armoured vehicle. Though this funding is available, the VPD/City Vehicle Donation Policy (outlined in Appendix A) requires that donated vehicles can only be accepted if need can be demonstrated. Only if Council approves the addition of an armoured vehicle to the VPD fleet can this donation be accepted.

ALTERNATIVES

A variety of vehicle alternatives were reviewed in the process of selecting a solution to meet the ERT operational and ballistic requirements described above. These alternatives are detailed below.

Purpose Built Vehicle

A new purpose built armoured vehicle is designed and built to provide 360^{o} ballistic protection to persons in the vehicle, to provide on and off-road transport for persons and emergency equipment to and from incident locations, to have side and rear egress points to allow for easy enter and exiting, and to provide tactical features, such as gun and view ports. This vehicle meets all of the operational requirements of the VPD. This vehicle is similar in size to a Cash-In-Transit vehicle.

New and Used Military Vehicles

The Canadian Military has two vehicles, the Grizzly and the Armoured Patrol Vehicle, which were considered for use as an armoured rescue vehicle for the VPD.

The Grizzly and the Armoured Patrol Vehicle (APV) are both armoured vehicles designed to provide on and off-road transport to military personnel while providing 360^{o} ballistic and mine protection to persons in the vehicle. Both vehicles have armouring that exceeds the ballistic requirements of the VPD. These vehicles are equipped with turrets and gun ports and their armament also includes machine guns and grenade launchers.

In the case of the Grizzly, military personnel enter and exit the Grizzly through a hatch on the top of the vehicle, while on the APV personnel enter through overhead hatches or a raised door at the rear of the vehicle. This makes entering, exiting, and performing rescues difficult. These vehicles are also custom manufactured, making City maintenance difficult, which increases the downtime potential and costs. The Edmonton Police Service has a Grizzly in use by their ERT, but the size of the vehicle has limited its use because it is not easy to manoeuvre on city streets.

Cash-In-Transit Vehicles

The design of Cash-In-Transit vehicles, such as those used by banks, is aimed at transporting and preventing access to monetary items or high valued objects in the rear of the vehicle.

These vehicles are designed to run on maintained streets and highways, and are generally built on 2WD OEM chassis. This vehicle is therefore not as capable off-road as a 4WD based chassis. These vehicles also have the cargo and cab areas separated by a bulkhead and thus do not allow access from the front to the rear of the vehicle, therefore there is one egress point from the cargo area. Ballistic protection on these vehicles is below that required by the VPD. Tactical features such as gun and view ports are also not incorporated into the vehicle design.

Up Armoured SUV

An "up armoured" SUV is a passenger vehicle on an OEM chassis with armouring added to the interior of the vehicle to provide occupants with ballistic protection. These vehicles are designed to carry 4 to 5 passengers. These vehicles can be driven on and off-road, but are designed to be used primarily on maintained roadways.

Ballistic protection and passenger capacity on these vehicles is below that required by the VPD. Multiple vehicles would also be required as the passenger capacity is lower than required. The configuration of this vehicle does not allow for a passenger to lie down if unconscious or injured and equipment carrying capacity is limited.

Table 1 summarizes the information above and compares the various vehicles by indicating with a dot (·) requirements met by that vehicle. The capital purchase price of each option is also listed, along with the estimated annual budgetary requirements.

Table 1 Summary of Armoured Rescue Vehicle Options

	Purpose Built	Used Military Vehicle	New Military Vehicle	Up-Armoured SUV	Cash-In Transit
Transports 9 People - ERT Tactical Team	•	•	•		•
Meets VPD Ballistic Requirements	•	•	•		
4WD	•	•	•	•	
Seamless Side Armour	•	•	•		
Skip Fire Shielding	•	•	•		
Operationally Effective Enter/Egress	•			•	
Urban Maneouverability	•			•	•
Class 5 License Required to Operate	•	•	•	•	•
OEM Chassis	•			•	•
City Maintained	•			•	•
Vehicle Life	15 years	10 years	20 years	3 years	8 years
Expected Annual Usage	3,000 kms	500 kms	500 kms	12,000 kms	3,000 kms
Price	$345,000	$345,000	$750,000	$135,000	$180,000
Total Annual Budget Requirement	$40,200	$40,800	$70,600	$42,100	$31,600

*Usage has been adjusted for each vehicle based on probable operational need.

Sharing a vehicle or vehicles(s) between Lower Mainland police organizations was also investigated. This is currently not available as at this time as there are no other organizations in the Lower Mainland that own an armoured vehicle that meets the ballistic requirements of the VPD. There is some discussion that the RCMP might acquire a vehicle for this region, but no definite plans have been made as of yet.

RECOMMENDED OPTION

Based on the analysis of the vehicle options listed above, the purpose built armoured vehicle is the best vehicle selection. The figure below shows a possible configuration of a purpose built armoured rescue vehicle.

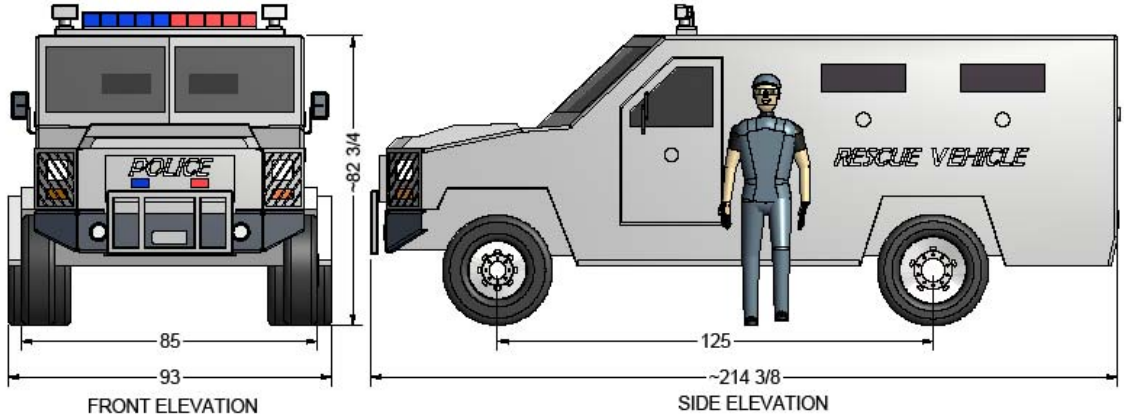

Figure 1 Possible configuration of a purpose built armoured rescue vehicle.

The VPD will establish a protocol over the use of this vehicle and an accountability process for its use. Specifically, this vehicle is not to be used for general patrol purposes but rather it is to be available for responding to serious incidents or pre-planned raids that are suspected of involving firearms.

The City's Risk Management Department and the City's automobile insurance broker have been consulted as to the insurance requirements for a purpose built armoured rescue vehicle. Insurance would be classed based on the chassis selected, and like the rest of the VPD fleet, would be rated for emergency use, with no additional insurance requirements. A class 5 vehicle license would be required to operate the vehicle and no additional driver training would be required.

Though providing the best fit, the armoured vehicle has a very low utilization rate at approximately 3000 km per year. The vehicle would provide improved ballistic and transport capacity to the VPD, however, its overall need based on utilization would typically not warrant such a large capital investment. Given these technical benefits, however, the addition of the armoured vehicle is presented for Council's consideration.

FINANCIAL IMPLICATIONS

As demonstrated above, the armoured rescue vehicle provides the best technical solution to meet the VPD's ballistic needs. The required capital investment at $345,000 is material relative to the anticipated utilization of this vehicle for ballistic protection purposes (800

kms/year). The vehicle, therefore, is being recommended as an addition to the VPD fleet on the basis of technical fit and the availability of an outside donation to offset the needed capital contribution. The specific financial implications are detailed below.

The estimated cost for a new purpose built armored rescue vehicle is $345,000. The Vancouver Police Foundation has agreed to donate $250,000 toward this purchase. The donation would be made in accordance with the VPD Management Process Flowchart for Vehicle and Equipment Additions (City & Donated) that was approved by Council on November 6, 2007 (RTS No. 06433). This process is outlined in Appendix A.

As the Vancouver Police Foundation will pay for a portion of the capital costs for the first vehicle, annual capital charges will be reduced and the VPD will only be responsible for payment of the unfunded capital costs and the annual operating costs. After subtracting the $250,000 donation there will be an estimated one-time charge to the Truck and Equipment Plant Account of $95,000 for the armored rescue vehicle. This will be repaid over the 15 year economic life of the unit through annual capital rates estimated at $9,800 ($35,500 prior to the donation). The annual operating cost of the unit is estimated to be $4,700 and includes maintenance, fuel, and insurance. The total annual capital and operating cost for the unit is estimated to be $14,500 ($40,200 prior to the donation) and will be funded by an increase to the VPD Operating Budget starting in 2009, subject to annual budget review.

Funding for all future replacement vehicles will be provided for from the Truck and Equipment Plant Account and will be repaid over the economic life of the unit through annual capital rates as described above. If no donation is received for future vehicle purchases, the full cost will be incurred as outlined above.

A number of companies produce this type of vehicle for sale. If this fleet addition is approved, Equipment Services and Purchasing will determine the appropriate process for acquisition, (Tender, RFP, or Sole Source) and will report back to Council to approve the final purchase.

ENVIRONMENTAL IMPLICATIONS

The armoured rescue vehicle will be powered by a diesel engine. New diesel engines have low emissions, are very durable, and are more fuel efficient when compared to gasoline engines.

SOCIAL IMPLICATIONS

If Council approves the addition of an armoured rescue vehicle to the VPD fleet, there will be an increase in the level of police presence in the City of Vancouver. A key objective for this increased police presence is safety and security of all people in Vancouver. As discussed above, the VPD will establish protocols to ensure that the vehicle is appropriately used under prescribed circumstances and will not be used for general patrol purposes.

COMMUNICATIONS PLAN

Upon approval, a media briefing and press release will be arranged by the VPD Public Affairs and Marketing Department to present the armoured rescue vehicle to the public, and to outline its role in performing victim rescues and protecting VPD officers during planned raids. The safety benefits to both the public and police will be highlighted during the briefing.

Upon receipt, the vehicle will be available for media to photograph and to inspect its various operational features.

A preliminary introduction of the armoured rescue vehicle was presented to the public at the Beyond the Call: Roast & Toast to Chief Jamie Graham, where the Vancouver Police Foundation raised public funding to put toward the vehicle purchase. This event and the fundraising efforts were covered by the media, and the public was invited to attend.

CONCLUSION

To meet the VPD ERT's operational requirements, the best vehicle option is a purpose built armoured vehicle. The addition of this vehicle to the VPD fleet would require a funding allocation of $345,000 from the Truck and Equipment Plant account. The Vancouver Police Foundation has agreed to donate a portion toward the first vehicle purchase. If approved, replacement vehicles will be funded from the Truck and Equipment Plant account and repaid from the VPD Operating Budget through annual capital rates estimated at $35,500. The annual operating costs of the vehicle are estimated at $4,700.

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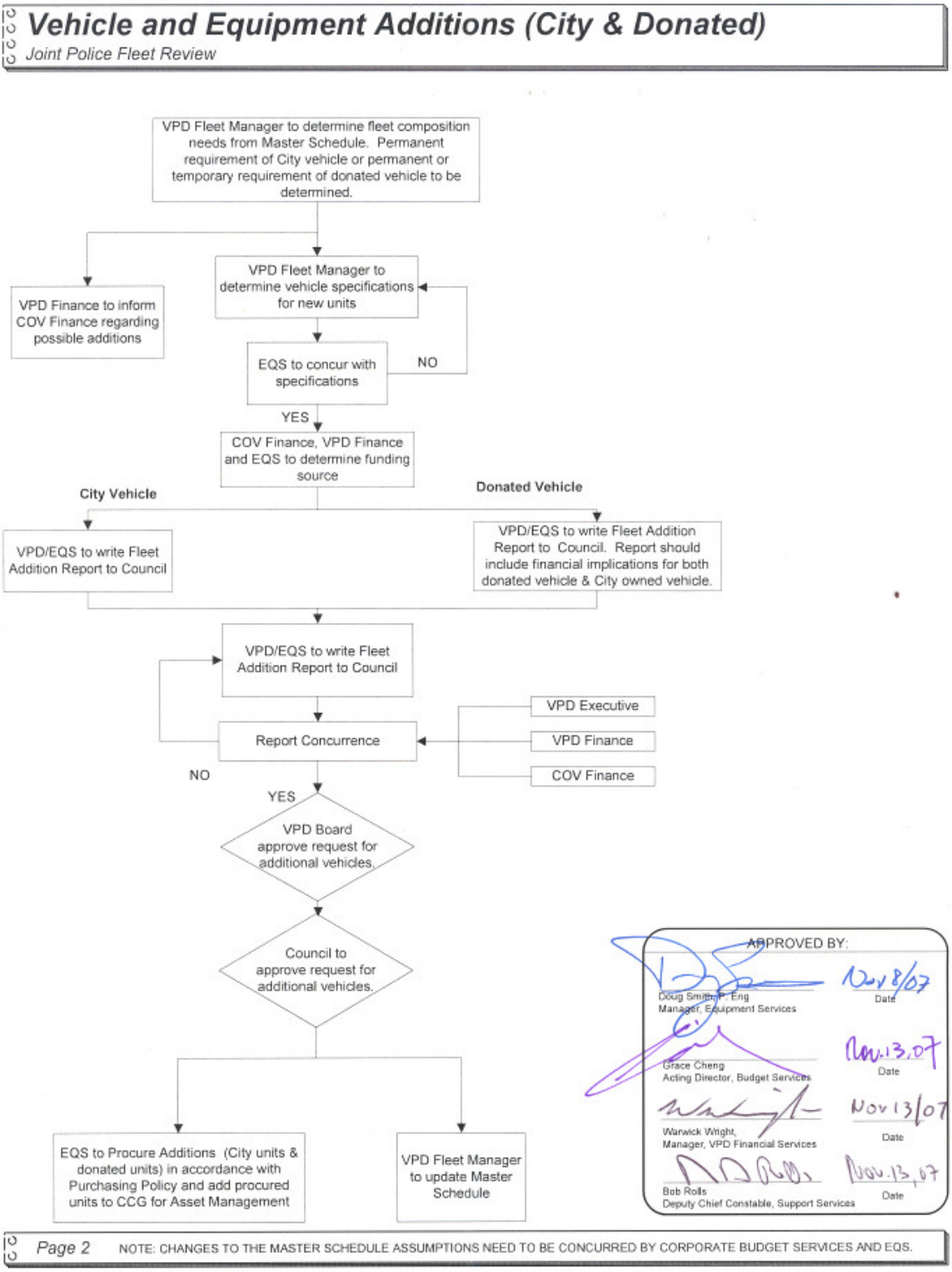
APPENDIX A: VEHICLE AND EQUIPMENT ADDITION PROCESS (CITY & DONATED)



DISPUTE RESOLUTION: Disagreements in respect to process will be addressed by the Assistant City Engineer of Departmental Services and the Deputy Chief Constable of Support Services.