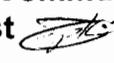


**MOORPARK CITY COUNCIL
AGENDA REPORT**

TO: The Honorable City Council

FROM: Mary Lindley, Parks, Recreation & Community Services Director 

Prepared by: Shaun Kroes, Management Analyst 

DATE: January 5, 2007 (CC meeting of January 17, 2007)

SUBJECT: Consider Metrolink Security Camera System Specification and Design Plans

SUMMARY

The City Council is being asked to approve Schirmer Engineering Corporation's (SEC) proposed system specification and design plans (Attachments A-D) for the Metrolink Station security camera system. If approved, the system specification and design plans will be included in a formal Request for Proposal (RFP) for installation of the security camera system.

BACKGROUND

The City Council expressed a desire for a security camera system in the Metrolink Station (Goals and Objectives for FY 2005/06, B-10). To meet that goal, on March 1, 2006, the City Council awarded an agreement to SEC to design a digital security camera system. Between May and June, City staff, along with Moorpark Police and Metrolink representatives, met with David Gallegos, Senior Security Consultant for SEC to discuss the security needs of the City, availability of current hardware at the Metrolink Station, and coordination needs with Metrolink. On July 19, 2006, the City Council approved SEC's design "Option A", and directed staff to proceed with construction plans and specifications. Staff is now presenting the construction plans and specifications for the Council's consideration.

The City has obtained \$250,000 in funding for the security camera system project (\$200,000 FTA; \$50,000 Local TDA). This funding may vary a bit, as a portion of the funding (\$32,500) is part of the FY 2006/07 Federal Transit Program of Projects, which could be adjusted later this year, depending on actual Federal funding. A portion of the total funding will be used to pay for SEC (\$23,400). The proposed security camera system

is estimated to cost approximately \$195,637.34, which, when added to SECs cost of \$23,400, will be within the budget.

DISCUSSION

Attachments A through C are the proposed full system specification and drawings that will be used in the City's RFP for installation of the security camera system. The proposed security camera system will include:

- Four, 30-foot monopoles installed in the South Parking Lot for cameras and motion detectors. Two, 30-foot monopoles installed in the North Parking Lot for cameras and motion detectors.
- A 1,000 foot trench in the South Parking Lot and a 200 foot trench in the North Parking Lot will be used for power supply to the cameras and image feed to the Metrolink communications room, located in the northeast corner of the South Parking Lot.
- Six cameras, four in the South Parking Lot and two in the North Parking Lot. The cameras will be able to function in both the day and night, and will be capable of facial imaging.
- The cameras will record both parking lots and the Metrolink platform.
- All images will be recorded in the Metrolink communications room using a digital video recorder (DVR).
- The DVR will store two weeks (14 days) of footage at 30 frames per second before re-recording. This will provide enough time to review scenes when vandalism or a crime is reported.
- The DVR will be connected to the Moorpark Police Services Center via radio frequency (RF) technology.
- Although the cameras will not be actively monitored at the Police Services Center, real-time images can be viewed and personnel can control the cameras if an on-going incident is observed. Recorded images at the DVR can be downloaded to the computer at the Police Services Center.

As mentioned, the proposed DVR will be able to record 14 days of footage. When an incident is reported, staff will be able to go to the Police Services Center and connect to the DVR through a RF frequency to look up the reported incident. Footage will be downloaded onto the Police Services Center computer (specifically designated for the security camera system) and can be saved onto a CD. This CD can be saved for any length of time that the City deems necessary for prosecution and/or records retention requirements. Although a particular incident can be downloaded from the communications room to the DVR, it is technologically and economically infeasible to download and store a full years worth of footage onto the computer system stored at the Police Services Center. Attachment E

provides greater detail regarding this determination, citing California Public Utilities Code 99164 and Government Code 34090.8. Regular footage on the DVR (non-incident footage) will be automatically re-recorded over after 14 days. The automatic re-recording system is cost effective by reducing the number of hard drives required to save millions of images of empty parking lot. The DVR located in the Metrolink Communications building is designed to be self sustaining and virtually maintenance free, reducing the number of times that staff would need access to the communications room. In the event that access to the DVR is required, staff would contact personnel at Metrolink to gain access.

The typical warranty on security camera systems is one year. Thereafter, staff intends to secure a maintenance service agreement. The cost of an annual maintenance agreement is estimated to be \$6,000. The costs will vary depending on the terms negotiated. Typical maintenance agreements include materials, time, and labor for repairs attributable to equipment malfunction, excluding vandalism.

City staff has also developed the Project Manual and Technical Specifications to bid the project construction. A copy of the Bid Documents has been previously placed in Council Chambers for review. The Bid Documents will be ready for release shortly after the City Council approves the plans and specifications. Bidders will have six weeks to respond to the bid. After bids are submitted and evaluated, staff will return to the Council with a recommended vendor and request authorization to award the bid for construction. Once awarded and a Notice to Proceed is issued, the vendor will have 120 days to complete the project.

STAFF RECOMMENDATION

Approve:

1. The Metrolink security system construction plans and specifications and direct staff to proceed with finalizing Bid Documents and bid the project construction, and
2. Approve the security system recorded data retention findings in Attachment E of the agenda report consistent with the requirements of California Public Utilities Code 99164 and Government Code 34090.8.

Attachment A: System Specification
Attachment B: Camera Pole/Trench Locations
Attachment C: Camera and Pole Diagram
Attachment D: Electrical Site Plan
Attachment E: Record Retention

DIVISION 2. SYSTEM SPECIFICATION

In the event of a conflict between this specification and the plans, this specification will take first precedence.

A. GENERAL

1. System Description

- 1.1 The surveillance system herein shall allow for video recording upon a digital video recorder (DVR) on the site with video scenes and camera control through radio frequency (RF) transceivers from a remote site located at the Moorpark Police Station (MPS) and the server therein.
- 1.2 Cameras separated by the pedestrian platform and tracks shall transmit alarm signals from their motion detectors through the unshielded twisted pair (UTP) technology to the DVR.
- 1.3 The Contractor shall provide programming, facility graphic mapping, and camera assignments for the CCTV system under this scope of work.
- 1.4 The client software for the control, display, editing, and for file manipulation shall be compatible with the digital video recorder specified herein, and be provided in conjunction with the DVR.
- 1.5 The Contractor shall provide a subterranean infrastructure to support the system specified herein utilizing the contract drawings.

2. Confidentiality

- 2.1 Drawings and specifications involving the security system represent a vulnerability to the security of the city of Moorpark, and are to be considered confidential information.
- 2.2 Permission by the city of Moorpark is required prior to dispersal

B. PRODUCTS

1. Camera

1.1 General:

- 1.1.1 The exterior pendent heavy duty camera dome shall be a discreet, miniature camera dome unit consisting of a dome drive with a variable speed/high speed pan and tilt drive unit with continuous 360° rotation, 1/4-inch high resolution color/black-white CCD camera, motorized zoom lens with optical and digital zoom and auto-focus; and an enclosure consisting of a environmental back box, heavy duty clear lower dome with dome liner and cage, and a quick-install mounting. The exterior pendent heavy duty camera dome shall be a model SD53CBW-HCPE1 as manufactured by Pelco.

1.2 Variable Speed:

- 1.2.1 Pan Speed – Variable between 360° per second continuous pan to 0.1° per second.
- 1.2.2 Vertical Tilt – Unobstructed tilt of +2° to -92°.
- 1.2.3 Manual Control Speed – Pan speed of 0.1° to 80° per second, and pan at 150° per second in turbo mode. Tilt operation shall range from 0.1° to 40° per second.
- 1.2.4 Automatic Preset Speed – Pan speed of 360° and a tilt speed of 200° per second.
- 1.2.5 Presets – Eighty preset positions with a 20-character label available for each position; programmable camera settings, including selectable auto-focus modes, iris level, Low-Light limit, and backlight compensation, for each preset; command to copy camera settings from one preset to another; preset programming through control keyboard or through dome system on-screen menu.
- 1.2.6 Preset Accuracy – +/- 0.1°
- 1.2.7 Proportional Pan/Tilt Speed – Speed decreases in proportion to the increasing depth of zoom.
- 1.2.8 Automatic Power-Up – User selectable to the mode of operation the dome will assume when power is cycled, including automatically returning to position or function occurring before power outage.
- 1.2.9 Zones – Eight zones with up to 20-character labeling for each, with ability to blank the video in the zone.
- 1.2.10 Motor Drive - Cogged belt with 0.9° stepper motor.
- 1.2.11 Motor Operating Mode – Microstep to 0.015° steps.
- 1.2.12 Motor – Continuous duty, variable speed, operating at 18 to 30 VAC, 24 VAC nominal.
- 1.2.13 Limit Stops – Programmable for manual panning, auto/random scanning, and frame scanning.
- 1.2.14 Inner Liner – Rotating black ABS liner inside sealed lower dome.
- 1.2.15 Alarm Inputs – Seven N.O./N.C. dry contacts.
- 1.2.16 Alarm Outputs – One auxiliary Form C relay output and one open collector auxiliary output.
- 1.2.17 Alarm Output Programming – Auxiliary outputs can be alternately programmed to operate on alarm.
- 1.2.18 Alarm Action – Individually programmed for three priority levels, initiating a stored pattern or going to a pre-assigned preset position.
- 1.2.20 Resume after Alarm – After completion of alarm, dome returns to previous programmed state or its previous position.
- 1.2.21 Window Blanking – Eight four-sided, user-defined shapes, with each side being of different lengths; window blanking setting to turn off at user-defined zoom ratio; window blanking set to opaque gray or translucent smear; blank all video above user-defined tilt angle; blank all video below user-defined tilt angle.
- 1.2.22 Patterns – Four user-defined programmable patterns including pan, tilt, zoom, and preset functions; pattern programming through control keyboard or through dome system on-screen menu.

- 1.2.23 Pattern Length – Four patterns of user-defined length, based on dome memory.
 - 1.2.24 Auto-sensing – Automatically sense and respond to protocol utilized for controlling unit whether Coaxitron® or RS-422 P or D protocols; accept competitors' control protocols with the use of optional translator cards.
 - 1.2.25 Menu System – Built-in for setup of programmable functions; multilingual, including English, French, Italian, Spanish, Portuguese, and German, and alternative languages in Russian, Turkish, Polish, and Czechoslovakian.
 - 1.2.26 Auto Flip – Rotates dome 180° at bottom of tilt travel.
 - 1.2.27 Password Protection – Programmable settings with optional password protection.
 - 1.2.28 Clear – Clear individual, grouped, or all programmed settings.
 - 1.2.29 Diagnostics – On-screen diagnostic system information.
 - 1.2.30 Freeze Frame – Freeze current scene of video during preset movement.
 - 1.2.31 Display Setup – User-definable locations of all labels and displays; user-selectable time duration of each display.
 - 1.2.32 Azimuth/Elevation/Zoom – On-screen display of pan and tilt locations and zoom ratio.
 - 1.2.33 Compass Display – On-screen display of compass heading; user-definable compass setup.
 - 1.2.34 Video Output Level – User-selectable: Normal or high to compensate for long video wire runs.
 - 1.2.35 Dome Drive Compatibility – All dome drives are compatible with all back box configurations.
 - 1.2.36 RJ-45 Jack – Plug-in jack on dome drive for control and setup of unit and for uploading new operating code and language file updates. Compatible with personal computers, and PDA's such as Palm and iPAQ.
 - 1.2.37 Remote Data Port Compatibility – Ability to control and setup unit and to upload new operating code and language file updates through optional remote data port that is located in area with easy access. Compatible with personal computers, and PDA's such as Palm and iPAQ.
 - 1.2.38 UTP Compatibility – Ability to plug into back box an optional board that converts video output to passive, unshielded twisted pair transmission.
 - 1.2.39 Fiber Optic Compatibility – Ability to plug into back box an optional third-party board that converts video output and control input to fiber optic transmission.
 - 1.2.40 Third-Party Control Systems – Ability to plug in optional board that converts control signals from selected third-party controllers.
 - 1.2.41 Power Consumption - Maximum 70 VA.
- 1.3 Color/Black-White Optic System:
- 1.3.1 Image Sensor – 1/4-inch
 - 1.3.2 Scanning System – 2:1 interlaced output.
 - 1.3.3 Effective Pixels – NTSC, 724 X 494
 - 1.3.4 Horizontal Resolution – NTSC, >470 TVL.
 - 1.3.5 Lens – F1.6 (f = 3.6-82.8 mm optical, 23X optical zoom, 10X electronic zoom).
 - 1.3.6 Programmable Zoom Speeds – 2.9, 4.2, or 5.8 seconds.
 - 1.3.7 Horizontal Angle of View – 54° at 3.6 mm wide zoom – 2.5° at 82.8 mm telephoto zoom.

- 1.3.8 Focus – Automatic with manual override
 - 1.3.9 Sensitivity at 35 IRE – NTSC, color: 0.08 lux at 1/2 sec shutter speed; B-W: 0.013 lux at 1/2 sec shutter speed; B-W: 0.3 lux at 1/60 sec shutter speed.
 - 1.3.10 Synchronization System – Internal/AC line lock phase adjustable via remote control, V-sync.
 - 1.3.11 White Balance – Automatic with manual override
 - 1.3.12 Shutter Speed – NTSC, 1/2-1/30,000
 - 1.3.13 Iris Control – Automatic with manual override.
 - 1.3.14 Gain Control – Automatic/ off.
 - 1.3.15 Video Output – 1 volt peak to peak, 75 ohms.
 - 1.3.16 Video Signal-to-Noise – >50 dB.
 - 1.3.17 Type of Lighting – Menu selection of indoor or outdoor lighting for optimum camera performance.
 - 1.3.18 Wide Dynamic Range – 80X.
 - 1.3.19 Motion Detection – User-definable motion detection settings for each preset scene; can activate auxiliary outputs; three sensitivity levels per zone.
 - 1.3.20 Alarm Transmission – Via optional card, model VC-UTP.
- 1.4 Back box and Lower Dome:
- 1.4.1 Connection to Dome Drive – Quick, positive mechanical and electrical disconnect without the use of any tools.
 - 1.4.2 Trap Door – Easy-access trap door that allows complete access to the installation wiring and, when closed, provides complete separation of the wiring from the dome drive mechanics.
 - 1.4.3 Terminal Strips – Removable terminal strips with screw-type terminals for use with a wide range of wire gauge sizes.
 - 1.4.4 Auxiliary Connections – One Form-C relay output at <40 V, 2 A maximum, and a second open collector output at 32 VDC maximum at 30 mA.
 - 1.4.5 Alarm Inputs – Seven alarm inputs.
 - 1.4.6 Installation – Quick-mount wall, corner, pole, parapet, or ceiling adapter.
 - 1.4.7 Cable Entry – Through a 1.5-inch NPT fitting.
 - 1.4.8 Environmental Features – Factory-installed heaters, blowers, and sun shroud.
 - 1.4.9 Operating Temperatures – Maximum temperature range of -60° to 140°F (-51.1° to 60°C) for two hours, and a continuous operating range of -50° to 122°F (-51.1° to 50°C) continuous operation.
 - 1.4.10 Memory – Built-in memory storage of camera and location- specific dome settings such as presets and patterns. If new dome drive is installed in back box, all settings to download automatically into new dome drive.
 - 1.4.11 Color – Gray, baked-on enamel powder coat.
 - 1.4.12 Construction – Tough, dual wall aluminum enclosure with a 0.090-inch thick, clear polycarbonate lower dome and aluminum trim ring.
 - 1.4.13 Trim Ring Connection – Barrel type key locks.
 - 1.4.14 Lower Dome Protection – Provide with stainless steel cage around lower dome. Bars of cage not to interfere with picture at medium to high zoom rates.

- 1.5 Dome Dimensions:
 - 1.5.1 Diameter of Bubble – Maximum of 5.9 inches.
 - 1.5.2 Pendant – 10.76-inch (27.33 cm) overall length (including dome) by 9.7-inch (24.7 cm) diameter.
- 1.6 Dome Weight: 11.0 lb (5.0 kg).
- 1.7 Certifications and Ratings:
 - 1.7.1 Certifications: UL and cUL, FCC Class B, and CE Class B.
 - 1.7.2 Ratings: Meets NEMA Type 4X, IP66 standards.

2. Camera Mount and Pole

- 2.1 The heavy duty pendent camera shall be supported by a gooseneck pole mount constructed of aluminum with a 1-1/2" pipe thread on the end for camera dome mounting. The unit shall capable of supporting up to 60lbs of camera weight, and be finished in powder coat. The gooseneck pole mount shall be a model WM20G as manufactured by Videolarm, Inc.
- 2.2 The gooseneck pole mount shall be attached to a camera pole. The pole and its concrete foundation shall be constructed and installed in compliance with the drawings as depicted in the Metrolink Station Digital Security / Camera System ESO.1.

3. Digital Video Recorder:

3.1 General:

- 3.1.1 The digital video recorder (DVR) shall be a high-quality recorder capable of storage and playback of images from 1 to 16 cameras. The unit shall be fully self-contained with connection to a computer for video retrieval and playback of images previously recorded. The DVR shall have the capacity to store up to 14 days of video recording at 30 fps when in active alarm state whether by integral video motion or external motion detector. The DVR shall be a model DX8016-750CD as manufactured by Pelco.

3.2 Performance:

- 3.2.1 The unit shall have Inputs at a simultaneous refreshing recording rate of up to 480 images per second (NTSC) at CIF resolution with a CD-RW as standard equipment. Additional frame rates are given below for total frame rates at 2 CIF and 4 CIF resolutions. The DVR shall possess a watchdog system, triplex operation, Windows® 2000 operating system with Service Pack 4 with the latest security updates from Microsoft, watermarking of each frame, inputs for external alarms, video motion detection, and scheduled event recording. The processor shall be a Pentium® 4, 2.8 GHz capacity with 256 MB of RAM, and recording in continuous, motion detection, alarm activation, or scheduled recording modes. The hard drive shall be a 750 GB of storage capacity. The signal

format shall be NTSC, with a resolution of 720 x 480 pixels. The compression method shall be compatible with the unit. The unit shall operate as a recorder and full duplex multiplexer, and have simultaneous playback and live viewing, while recording live images with pan/tilt/zoom control through an integral RS-422 communications "P" protocol. The unit shall be capable of monitor cameo displays in full screen, 4, 9, 12, or 16 cameras, or custom-designed display views. The DVR shall be equipped with 24 individual schedules programmable schedules with program modes in the event of motion event, alarm input, or continuous recording. The unit shall be equipped with a feature known as "hardware watchdog" that have a hardware device to monitor the system clock for Windows lockup. Upon lockup of the system the recorder shall automatically reboot without losing any of the programmed settings. The DVR shall come with password protection with 4 levels for setup functions, operation, and system exiting. Built-in motion detection for each camera to start recording, or to increase the recording rate of the system shall be provided with selectable detection areas and sensitivity for each camera. Alarm/Motion Activation shall cause the input to start the unit recording, or if already recording, increase the recording rate and image quality. Either pre-alarm, or pre-motion shall cause the unit to record images for up to 60 seconds before the alarm sensor has been activated. When the unit is transmitting, it shall be capable of bandwidth throttling for network transmission of video signals. An alarm historical log shall be made available through software query. The unit shall be capable of recording when a motion or an alarm is activated whether the unit is in schedule time mode. There shall be 16 alarm outputs for external activated devices. Remote control of pan/tilt/zoom functions shall be possible through TCP/IP protocol and RS-422 interface. Each unit shall be capable of LAN/WAN connection for remote control over the network. A backup management system capacity shall be provided to external data devices (not included in scope) without interruption to the hard disk recording function. Each unit shall be capable of on-screen programming and operation through a PC keyboard or PS/2 Mouse. The unit shall have the capacity to provide digital zoom of images on the screen during playback modes. Authentication of video recording shall be provided with software enhancement. The unit shall be capable of operation in English, Spanish, German, French, Italian, and Portuguese languages.

3.4 Specifications

3.4.1 Input Voltage: 100-240 VAC, 50/60Hz, auto ranging

3.4.2 Mounting: EIA-standard 19-inch rack

3.4.3 Connectors:

3.4.3.1 Sixteen BNC video inputs plus sixteen looping video outputs with automatic termination.

3.4.3.2 Two 9-pin, D-type connectors for COM 1 and COM 2 ports (disabled).

3.4.3.3 Two 6-pin, mini-DIN connectors for a PS/2 mouse and keyboard.

3.4.3.4 One 15-pin, D-type port for a PC monitor connection.

3.4.3.5 One 25-pin D-type port for Printer connection.

- 3.4.3.6 One S-video jack for analog monitor output (disabled).
 - 3.4.3.7 Two multiplexed analog video outputs (optional).
 - 3.4.3.8 One RJ-45 connector for network connection.
 - 3.4.3.9 Four RJ-45 ports for RS485/RS422 support.
 - 3.4.3.10 Sixteen push-in connectors for alarm inputs and sixteen push-in connectors for relay outputs.
 - 3.4.3.11 Six high-speed USB 2.0 ports.
- 3.4.5 Rack Mount Dimensions: 7.0 (H) x 19.0 (W) x 22.0 (D) inches (17.78 x 48.26 x 55.88 cm).
 - 3.4.6 Operating Temperature: 50°F to 95°F (10° to 35°C)
 - 3.4.7 Relative Humidity: Maximum 80% non-condensing
 - 3.4.8 Optical Drive: CD-RW
 - 3.4.9 Frame Rate:
 - 3.4.9.1 CIF 480 ips
 - 3.4.9.2 2CIF 112 ips
 - 3.4.9.3 4CIF 80 ips
 - 3.4.10 Color Palettes: Minimum of 16 million color palettes
 - 3.4.11 Gray Scale: 256 shades
 - 3.4.12 Certifications:
 - 3.2.12.1 CE
 - 3.2.12.2 FCC: Class B
 - 3.4.13 Required Upgrade:
 - 3.2.13.1 DX8000-UP250 – 250 GB hard drive upgrade kit
 - 3.2.13.2 DX8000-RMK – Rack mount kit with rack ears and rails.

4. Code Distribution Unit

- 4.1 The code distribution unit (CDU) shall be used to control 16 independent pan-tilt-zoom cameras from a single location. The unit shall allow the connection in a star or home run configuration, thus allowing multiple camera control. Each unit shall be capable of a three 3 wire terminal connection via RS-422 transmit only code signals. The unit shall have 2 eight position RJ-45 parallel connectors providing an input from a controller and an output to an additional daisy-chained CDU unit. The unit shall be powered by 120 VAC circuit, and be 60 Hz. Auto-ranging. The code distribution unit shall be a model CM9760-CDU-T as manufactured by Pelco.

5. Video Transmission System

- 5.1 Video signals between the DVR and the computer with resident application software shall be connected via radio frequency transmission (RF) in duplex form. The locations of the RF transceivers shall be located as shown on the drawings.
- 5.2 A transceiver and associated materials shall be located on the roof of the existing police station structure and shall be attached to an existing tower thereupon. The Contractor as part of the scope of work shall provide the transceivers and

make connections to an Owner supplied switch located in the building equipment room.

5.3 A second transceiver shall be located at a camera pole closest to the DVR, and be attached with the use of a pole mount adapter atop the pole along with associated materials.

5.4 As part of this work, the contractor shall align the antennas between transceiver locations for optimum level transmission speeds. The contractor shall inform the owner who shall remove city owned obstructions such as trees to assure optimum transmission.

5.5 Transceiver

5.5.1 The transceiver mesh nodes shall provide Ethernet connectivity over a high-performance, self-forming wireless mesh backbone. The mesh nodes shall be encased in a NEMA 4X/1PP-rated cast aluminum enclosure with two (2) weatherproof 10/100 Mbps Ethernet ports for connecting components. The unit shall deliver up to twenty-five (25) Mbps throughout and operate at five (5) GHz for maximum range and penetration with minimum interference from other wireless devices. The unit shall be equipped with a high-power, 400 mW radios, and be supplied with two (2) 5 dBi Omni-directional antennas for staging purpose. These shall be replaced with high-gain antennas and mounting brackets as noted below. The unit shall be protected by a removable sun-shield, and be capable of encryption rated at 40 bit, 104 bit WEP keys and 128 bit, 256 bit AES keys. Frequency range and transmit power shall be rated at 5.725-5.850 Ghz, up to 400mW with receive sensitivity of 6 Mbps: -93dBm, 54: Mbps: -72 dBm to include dynamic frequency selection (DFS). The transceiver mesh node shall be a model HotPort 3600-2400 as manufactured by FireTide, Inc., no known equal. Each unit shall include and meet the following:

- 5.5.1.1 Directional Patch Antenna, 10 degree, 19 dBi rated.
- 5.5.1.2 Polyphaser with Rptnc Male to N-F connector.
- 5.5.1.3 LMR400 – 4" Semi-Rigid Jumper Cables N-Male to N-Male.
- 5.5.1.4 Pole Mounting Straps.
- 5.5.1.5 3' Lattice Standoff Mounting Kit (police tower only).
- 5.5.1.6 Andrews Weatherization Kit.
- 5.5.1.7 Compliance: IEEE 802.3af
- 5.5.1.8 Certification: FCC Part 15

6. UTP Transceiver

6.1 The unshielded twisted pair video transceiver shall be capable of transmitting and receiving baseband monochrome or color video signals over unshielded twisted-pair (UTP) telephone wire to a passive transceiver up to a distance of 750 feet (225 m) without requiring power at either end. Distances up to 3,000 feet (1,000 m) shall be supported when used in conjunction with an amplified (active) receiver. The unit shall accept a baseband video signal from a 75-ohm source and deliver a baseband video signal capable of driving a 75-ohm load. "Up the Coax" Pan/Tilt/Zoom controls shall be supported up to 750 feet (225 m) when using this transceiver to transmit the signal to a passive receiver. The unit shall have built-in transient protection without the need for a ground connection, and be equipped with screw less terminals for connection to UTP wire. The screw less terminals shall be composed of such material as to prevent corrosion of UTP connection. The unit shall be equipped with an inline male BNC for 75-ohm camera connection. The unit shall support signals operating in the same wire bundle as telephone, data, low voltage or other video signals, without interference. The unit shall have typical common-mode rejection of 60 dB between the frequencies of 15 KHz to 5 MHz with a frequency response from DC to 5 MHz. The unit shall have a typical attenuation of 0.5 dB or better with a provision for transient immunity of per ANSI/IEEE 587C62.41. The unit shall be constructed for indoor use or for use in an environmental enclosure and allow a maximum operating temperature range of -20 to 75 degrees Celsius. The unit shall be capable of utilizing 24-16 AWG (solid or stranded) UTP wire, and be capable of utilizing Category 2 or better UTP without compromising interference immunity or transmission distances. The unshielded twisted pair video transceiver shall be a model NV-208A-M or equal, and meeting or exceed the following:

6.1.1 Dimensions:

- 6.1.1.1 Length: 1.7in (43mm)
- 6.1.1.2 Height: 0.8in (21mm)
- 6.1.1.3 Width: 0.6in (14.5mm).

6.1.2 Listing and Compliance:

- 6.1.2.1 UL and cUL listed.
- 6.1.2.2 CE Compliant.
- 6.1.2.3 Weight: 1.1oz (34 g).

7. UTP Receiver

7.1 The unshielded twisted pair video receiver shall be capable of receiving baseband monochrome or color video signals over unshielded twisted-pair (UTP) telephone wire up to a distance of 3,000 feet (1 km) when used with a passive transceiver. The unit shall have continuously adjustable sharpness and brightness trimpot control knobs. The unit shall have built-in ground lifting and built-in transient protection, with an earth-ground screw connection. The unit shall be equipped with a screw terminal block for connection to UTP telephone wire, low voltage power, and ground. The unit shall be equipped with a female

BNC for 75-ohm connections, and be powered by 12-24 Volts, AC or DC, 100 milliamps maximum. The unit shall have a Blue "Power-On" LED with a Green "Active" LED, when a video signal is present. The unit shall have the ability to operate in the same wire bundle as telephone, data, low voltage or other video signals. The receiving device shall be capable of utilizing 24-16 AWG (solid or stranded) UTP wire, and be capable of utilizing category 2 or better UTP without compromising interference immunity or transmission distances. The unit shall have a typical common-mode rejection of 60 dB between the frequencies of 15 KHz to 5 MHz, and have a frequency response from DC to 5 MHz. The unit shall provide transient immunity of 6,000V 1.2uS x 50 uS and 3,000A 8uS x 20 uS when ground screw terminal is bonded to earth ground, per ANSI/IEEE 587C62.41 B3. The receiving unit shall be constructed for indoor use or for use in an environmental enclosure and allow a maximum operating temperature range of 0 to 50 degrees Celsius. Mounting shall be accomplished with the use of two 0.175 in. (4, 4 mm) diameter holes spaced 2.5 in. (63, 5mm) apart for the purpose of surface or rack mounting. The untwisted pair video receiver shall be a model NV-652R as manufactured by Network Video Technologies, Inc., or equal, and shall meet or exceed the following:

- 7.1.1 Listing and Compliance:
 - 7.1.1.1 UL and CUL listed
 - 7.1.1.2 CE Compliant
- 7.1.2 Weight: 0.17 lbs (0.08 kg).

8. Video Motion Detector

- 8.1 The outdoor motion detector shall be designed to detect personnel movement for a complete and operating passive infrared detection zone, which shall be designed to detect an unauthorized intruder penetrating the area monitored by the zone. The passive infrared detection unit shall contain completely solid-state circuitry that is capable of discriminating between natural environmental conditions and intrusion related disturbances. The passive infrared detector shall have a minimum of four pyro-electric elements to assist in the avoidance of false activation. The optical system shall use a combination of a fresnel lenses and reflective surfaces to gather information. The complete optical section shall be hermetically sealed to prevent water and insect ingress. The passive infrared detector shall include integral brackets to allow mounting to pillars or walls. Access to the adjustments of these brackets shall be electronically anti-tamper protected. The external housing of the passive infrared detector shall be constructed of aluminum and have a white powder-coat finish. The unit shall be capable of being powered from an external power source providing either 24vac or 12vdc – 16vdc and a minimum of 50mA. The system sensitivity will not be field adjustable. The passive infrared detection system shall be capable of internal heating for areas where temperatures are regularly below -10 degrees Celsius. The sensors' electronic circuitry shall provide isolated and/or supervised intrusion alarm relay contact output, normally open (N.O.) or normally closed (N.C.). The tamper alarm will continue until tamper is corrected. Alignment shall be accomplished with the use of an optical alignment followed by an audio walk tester supplied by the manufacturer. The outdoor motion detector shall be a

model MegaRed LRP180Q as manufactured by Security Enclosures Limited, and be distributed by Optex or equal, and meet the following:

- 8.1.1 Required: MR230 Controller; LRP1020 Walk Tester
- 8.1.2 Supply Voltage: 11-16VDC (12V nominal)
- 8.1.3 Range: 590 x 13 feet
- 8.1.4 Protection Zones: 6 Quad with twin processors

9. Rack Mount Power Supply

9.1 The RM Series rack mountable power supply provides power for cameras, and is intended for rack mounting in a standard EIA 19" inch space with a vertical space requirement of 2 RU units. The unit is designed for interior use and shall not be use outdoors. The power supply is a single phase, and features a plug-in cord with a computer style power entry module for power. The unit shall be either 24 or 28vac configurable with 24vac as the default. The outputs shall be protected by power tripped circuits (PTC) that shall be resettable by switching primary power master on/off switch to the off position. Each output shall be feature a plug-in field wiring terminal strip. The entire unit shall be provided with enhanced surge and transient protection, and shall be designed to maintain camera synchronization. The power supply shall be listed as a class 2 power-limited unit with a chassis constructed of 16 gauge galvanized steel. The rack mountable power supply shall be a model RM-2816-600 as manufactured by AlarmSaf or equal. The unit shall feature the following:

9.1.1 Primary Power: 120vac, 2.5 amperes

9.1.2 Secondary Power:

9.1.2.1 12.5 amperes at 24vac

9.1.2.2 10 amperes at 28vac

9.1.3 Total Outputs: 16 at 1.6 amperes each

9.1.4 Visual Indicators:

9.1.4.1 AC Presence: Lighted AC Switch (Unit Rear)

9.1.4.2 Zone Output: Green LED per Zone (Front Face)

9.1.5 Dimensions: 3.25" H X 19.125" W X 10" D



CITY OF MOORPARK

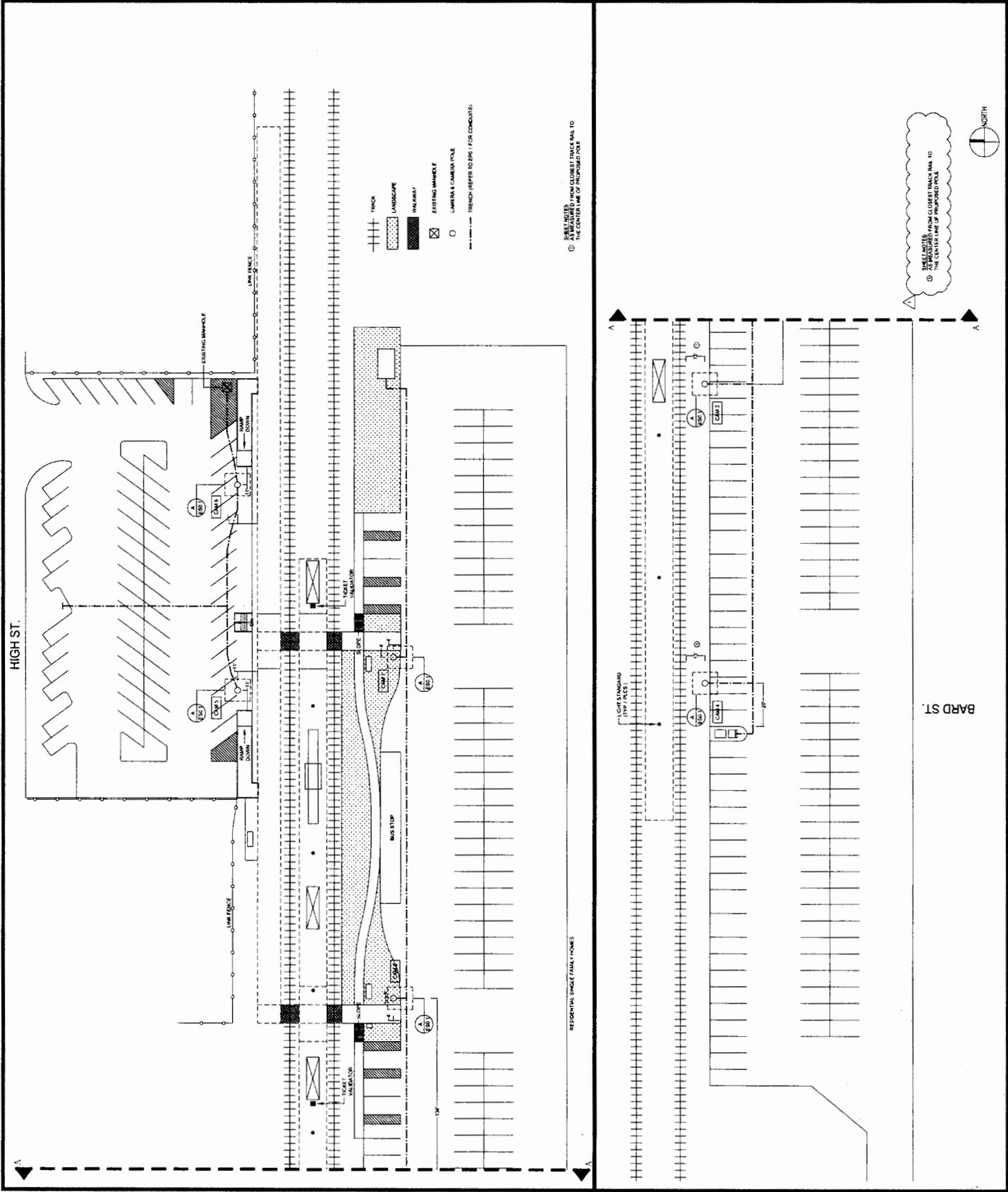
SCHRAMER ENGINEERING
 1500 SHERIDAN ROAD, SUITE 100
 CHANDLER, CALIFORNIA 94501
 PHONE: 925.835.1100 FAX: 925.835.1199

METROLINK STATION DIGITAL SECURITY / CAMERA SYSTEM

NO.	DATE	DESCRIPTION
1	08/21/08	FOR CONSTRUCTION

SECURITY SITE PLAN

PROJECT: METROLINK STATION
 DRAWN BY: D. GALLEGOS
 CHECKED BY: []
 DATE: 08/21/08
 SCALE: 1/8" = 1'-0"
 SHEET NO.: ES1.1
 TOTAL SHEETS: 100003.0-000



000125



SCHMERSER
 2700 AMERICAN AVENUE
 ST. LOUIS, MISSOURI 63103
 (314) 241-1000
 WWW.SCHMERSER.COM



REVISIONS	DATE	BY	DESCRIPTION

SHEET TITLE
ELECTRICAL SITE PLAN

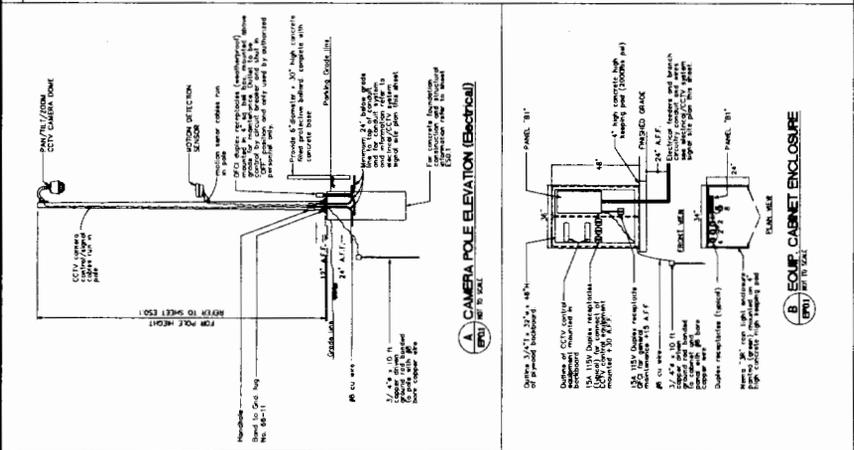
SHEET NUMBER
EP01

ELECTRICAL SYMBOLS

SPKON: SPEAKER SYMBOL
 SW: SWITCH SYMBOL
 J: JUNCTION SYMBOL
 T: TERMINAL SYMBOL
 ...

GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS.
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WIRING PANEL AND SIGNAL SYSTEM DATA

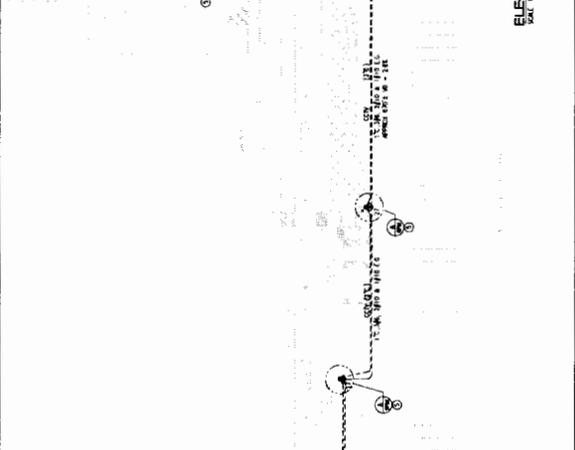
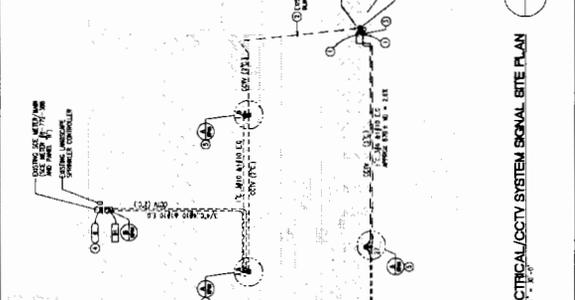
Panel No.	Panel Name	Panel Type	Panel Location	Panel Dimensions	Panel Weight	Panel Material	Panel Finish	Panel Notes
1	Camera Pole Elevation	Vertical	Camera Pole	48" x 36" x 12"	15 lbs	Aluminum	Paint	See Notes
2	Equipment Cabinet Enclosure	Horizontal	Equipment Room	36" x 24" x 48"	25 lbs	Steel	Paint	See Notes

WIRING PANEL AND SIGNAL SYSTEM DATA (Continued)

Panel No.	Panel Name	Panel Type	Panel Location	Panel Dimensions	Panel Weight	Panel Material	Panel Finish	Panel Notes
3	Camera Pole Elevation	Vertical	Camera Pole	48" x 36" x 12"	15 lbs	Aluminum	Paint	See Notes
4	Equipment Cabinet Enclosure	Horizontal	Equipment Room	36" x 24" x 48"	25 lbs	Steel	Paint	See Notes

REFERENCE NOTES

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WIRING PANEL AND SIGNAL SYSTEM DATA

Panel No.	Panel Name	Panel Type	Panel Location	Panel Dimensions	Panel Weight	Panel Material	Panel Finish	Panel Notes
5	Camera Pole Elevation	Vertical	Camera Pole	48" x 36" x 12"	15 lbs	Aluminum	Paint	See Notes
6	Equipment Cabinet Enclosure	Horizontal	Equipment Room	36" x 24" x 48"	25 lbs	Steel	Paint	See Notes

WIRING PANEL AND SIGNAL SYSTEM DATA (Continued)

Panel No.	Panel Name	Panel Type	Panel Location	Panel Dimensions	Panel Weight	Panel Material	Panel Finish	Panel Notes
7	Camera Pole Elevation	Vertical	Camera Pole	48" x 36" x 12"	15 lbs	Aluminum	Paint	See Notes
8	Equipment Cabinet Enclosure	Horizontal	Equipment Room	36" x 24" x 48"	25 lbs	Steel	Paint	See Notes

Summary

This attachment recommends security camera record retention policies for the Moorpark Metrolink Train Station. The attachment cites California Public Utilities Code (PUC) 99164 and Government Code (GC) 34090.8 as justification for the determined policies for the Metrolink Security Camera System.

Metrolink Security Camera System

Although the security camera system can be designed for hard disk exchanges, it will require gaining access to the Metrolink Communication's Building, where the DVR is stored, about once a month. This would require coordination with Metrolink. Metrolink stated that it could not guarantee routine access to the Communication's Building for monthly hard disk exchanges. At present, Schirmer Engineering's recommendation is for a 750 gigabyte hard disk that will store 14 days worth of footage (recording at 30 frames per second). This would provide for enough time for an incident to be reported and to record the incident from the DVR to a DVD for longer record retention.

PUC 99164 and GC 34090.8	City Response
a) When installing new security systems, a transit agency operated by an operator as defined in PUC Section 99210 shall only purchase and install equipment capable of storing recorded images for at least one year, unless all of the following conditions apply:	See below for responses to each condition.
a.1) The transit agency has made a diligent effort to identify a security system that is capable of storing recorded data for one year.	The City, after discussing the topic with Schirmer Engineering (Security Camera Consultant), determined that the Metrolink security camera system would need to have exchangeable hard drives to accommodate the one year storage requirement.
a.2) The transit agency determines that the technology to store recorded data in an economically and technologically feasible manner for one year is not available.	It would require 19.5 terabytes worth of data storage in order to retain a full year's worth of footage. A terabyte storage system of this size would cost \$195,000 if kept at the Police Services Station. Metrolink cannot guarantee access to the Communications Room to ensure that removable hard disks could be exchanged frequently enough to maintain proper storage requirements.
a.3) The transit agency purchases and installs the best available technology with respect to storage capacity that is both economically and technologically feasible at that time.	The current, proposed storage capacity of 14 days worth of footage at 30 frames/second, appears to be the most realistic and economical.

<p>b) Notwithstanding any other provision of law, videotapes or recordings made by security systems operated as part of a public transit system shall be retained for one year, unless one of the following conditions applies:</p>	<p>If an incident occurs at the station, staff can transfer the particular image from the security camera hard disk to another computer system and onto a DVD for record retention.</p>
<p>b.1) The videotapes or recordings are evidence in any claim filed or any pending litigation, in which case the videotapes or recordings shall be preserved until the claim or the pending litigation is resolved.</p>	<p>Once an incident has been recorded onto a DVD, it can be stored for as long as it is required to be stored.</p>
<p>b.2) The videotapes or recordings recorded an event that was or is the subject of an incident report, in which case the videotapes or recordings shall be preserved until the incident is resolved.</p>	<p>Once an incident has been recorded onto a DVD, it can be stored for as long as it is required to be stored.</p>
<p>b.3) The transit agency utilizes a security system that was purchased or installed prior to January 1, 2004, or that meets the requirements of subdivision (a), in which case the videotapes or recordings shall be preserved for as long as the installed technology allows.</p>	<p>The security camera system is proposed to be installed in 2007 and meets the requirements of subdivision (a) of PUC 99164 and GC 34090.8.</p>

PUC 99164 and Government Code 34090.8 Findings

Pursuant to subdivision (a) of Public Utilities Code Section 99164 and Government Code Section 34090.8, the City Council shall adopt the following findings:

- (1) The City has made a diligent effort to identify a transit security system that is capable of storing recorded data for one year.
- (2) The technology to store recorded transit security data in an economically and technologically feasible manner for one year is not currently available, and such videotapes or recordings shall be preserved for as long as the installed technology allows.
- (3) The City is purchasing and installing the best available technology with respect to storage capacity that is both economically and technologically feasible at this time.
- (4) The transit security videotapes or recordings that are evidence in any claim filed or any pending litigation shall be preserved until the claim or the pending litigation is resolved.
- (5) The transit videotapes or recordings that recorded an event that was or is the subject of an incident report shall be preserved until the incident is resolved.