11000 - EQUIPMENT

I. DESIGN

A. Specify gas clothes dryers whenever gas service is available, subject to using Agency concurrence. Voltage for clothes dryers shall be 208/277.

B. Coordinate voltages for washing machines and dryers between electrical plans, specifications, schedules, and disconnects.

C. Commercial washing machines and dryers must be bolted to a minimum of a 4" level concrete pad; and will be provided with vibration isolators, as required. Any washing machines which are to be located on an elevated, structural slab must be analyzed for harmonic impacts in conjunction with the structural plans, and the appropriate vibration isolation or dampening provided.

D. Coordinate design of exhaust flues for dryers with dryer manufacturer.

E. Direct exhaust fumes away from air conditioning intakes.

F. Provide floor drains at all public toilet rooms, laundry rooms, equipment rooms and janitors closets. Design floors to provide positive drainage to floor drains.

G. Equipment plans for any kitchen equipment must be closely coordinated with electrical power drawings to ensure consistency between power requirements and power provided. Use gas kitchen appliances when gas service is available, subject to using Agency concurrence.

H. Ranges

1. Gas fired ranges shall use an electric spark ignition – no standing pilot lights.

2. Provide 30" ADA pull-in access adjacent to range

I. In Type I kitchen hoods, the A/E shall specify the following:

1. A heat sensor shall serve as an interlock between the kitchen hood exhaust fan and the cooking appliances to automatically activate the exhaust hood system whenever cooking operations occur.

2. Any make-up air systems that are required for the hood exhaust system shall be interlocked with the kitchen hood exhaust fan to automatically operate whenever the exhaust fan is energized.

3. A solenoid valve shall serve as an interlock between the gas piping supplying the cooking appliances below the kitchen exhaust hood and the hood fire suppression system, to automatically activate gas shutoff in the event of a fire. The valve installation shall meet the Fire Marshal requirements.

4. The gas fired ranges shall use a spark ignition with no standing pilot light. (Relocate this paragraph with Ranges)

5. Electric ranges shall comply with similar ventilation requirements as noted for gas ranges.

J. All fixed equipment and appliances shall be high-energy efficiency and carry the Energy Star® label, where available.

K. Design of dividing partitions in meeting rooms must be carefully reviewed to accommodate life safety requirements for exiting from all areas as required. Use of automatically operated partitions is acceptable however, must be reviewed with the room conditions to determine if necessary for the size and height of the room.

L. Security Systems

1. The A/E shall coordinate with the County Project Manager for security requirements applicable per project.

2. The design shall incorporate the principals of Crime Prevention Through Environmental Design (CEPTED), or equivalent.

3. Exterior cameras, if included, must not be blocked by trees when mature.

4. Exterior cameras, if use, must be coordinated with site lighting to ensure ample night time ambient light and not create hot spots.

5. Site Surveillance System Requirements

Site surveillance will be accomplished using fixed and/or Pan Tilt Zoom (PTZ) Closed Circuit Television (CCTV) cameras. Video from the Visual stations will be routed to the Digital Video Recording (DVR) System. The CCTV system should be designed to provide remote visual surveillance of the building and grounds from the local control post within the building and from offsite locations through the County's communications infrastructure.

a. Site Surveillance Cameras
Fixed and PTZ cameras will be dome type cameras with smoked, high impact polycarbonate lower sections. The cameras should be visible to gain the deterrent factor; but not obtrusive when being located. The smoked lower section also

prevents people from knowing the field of view of the camera, increasing its effectiveness as a deterrent. The cameras will be wall, pole or ceiling mounted.

b. Digital Video Recording System

The system will be designed to digitally record, store and retrieve video images. The capture and storage of video data will be designed with minimum frame rates and resolution settings as established herein. Storage capacity requirements are driven by the frame rates and the resolution of the recording. The current standard for digital video recording systems is the Integral Technologies solution. Integral Technologies Digital Sentry Network Video Recorder (NVR) will accommodate the 4 CIF resolutions at up to 15 ips per camera. This is a network based product that will offer adequate performance locally and allow enterprise functions such as remote (off site) viewing and playback.

c. Security Cameras

The County only uses Pelco, Sony, and Axis for their security cameras. These are generally not sole sourced, but specified as limited procurement; no equal products. It is imperative that the equipment be compatible with the existing security cameras in the County, which is made up of exacqVision DVR's and NVR's, and has the capability of switching components and be interchangeable with existing video equipment to assure operability of the existing monitoring and recording systems. Also spare parts will be available in the existing stock and time to troubleshoot and perform maintenance will be minimized. The County also uses Onssi Systems for the software controlling the security cameras in larger facilities.

Fixed cameras should be high resolution, color, ¼" interline transfer CCD cameras with 470 TV lines horizontal (NTSC) minimum resolution in both day and night modes, .45 fc minimum illumination, automatic backlight compensation, automatic gain control, and provided with mounts/housings appropriate to the locations and environmental conditions in which they are mounted.

Pan, tilt and zoom (PTZ) dome cameras should be high resolution, color, 1/4" interline transfer CCD cameras with a minimum of 18X optical zoom lens with up to 12X digital zoom magnification, continuous fulltime auto-focus, day/night operational modes, minimum resolution of 470 TV lines horizontal (NTSC) in both day and night modes, better than 0.25 lux (slow shutter off) and 0.016 lux (slow shutter on) in day mode, better than 0.031 lux (slow shutter off) and 0.002 lux (slow shutter on) in night mode, and capable of providing detailed images when video frame encompasses areas of bright light and darkness. The pan/tilt drive should be variable speed and capable of 360-degree continuous rotation. Tilt range should be greater than 95 degrees minimum and pan speed, at minimum, 120 degrees per second. The pan/tilt drives should have the ability to store presets. Each preset shall have a preprogrammed position for, at minimum, the pan angle, tilt angle, and zoom lens angle of view.

A darkened distortion-free outer dome to preclude visibility of which way camera is oriented should protect the entire camera's field of view. The housing must completely enclose the surveillance device. Housings should be wall, ceiling, parapet, pole, and/or column mountable. Mounts should have a load capacity of at least twice the combined load of the mounted components including the mount itself. Outdoor cameras should be provided with and installed in weather-proof housings equipped with heater/blower and capable of operating up to 122 degrees F and 100% relative, condensing humidity. The digital video recorders being used in the county are exacqVision DVRs (Digital Video Recorders, made by Pelco), which has the capability of handling 32 cameras.

II. PRODUCTS

A. Device and Manufacturer Information for Camera Systems. Verify with the County Security Manager for most current manufacturers and models.

	Device Description	**Manufacturer**
1.	Pan Tilt Zoom Camera	Pelco
2.	Fixed Dome Camera	Pelco
3.	Camera Power Supply	Pelco
4.	Network Video Recorder	Exacq Technologies (exacqVision)
5.	Video Encoder	Exacq Technologies (exacqVision)
6.	Video Decoder	Exacq Technologies (exacqVision)
7.	Video Acquisition Unit	Exacq Technologies (exacqVision)
8.	Ethernet Switch	Cisco
9.	System Manager	Exacq Technologies (exacqVision)
10.	Client Work Station	Exacq Technologies (exacqVision)
11.	Analog Video Monitor	Pelco