Initial Meeting of Safety and Security Committee Summary and Action Plan

The initial meeting of the Safety and Security Committee was held at 10:30 am, Sunday, August 27, 2017, in the community clubhouse.

The purpose of this meeting was to put together an action plan to: 1) Research and gather information about additional lighting, video surveillance and gate facilities under consideration for common areas and limited common areas; 2) Increase timely flows of information to raise community awareness of safety and security issues, incidents and appropriate actions for residents to take; and 3) Start a neighborhood watch program.

Ten homeowners attended the meeting, during which everyone contributed valuable comments and suggestions. And it quickly became apparent that potential solutions for improving safety and security in Parkwood are numerous and will require substantial time and effort to research and evaluate, go through the usual review process with the board, and then, if approved, implement.

However, because Parkwood has existing lighting and video surveillance facilities, as well as communications capabilities, a number of possible improvements is currently being researched and may be implemented in the more immediate future:

Lighting:

Carriage lights with light sensors for garage exteriors Increased nightly usage of garage-apron lights by all homeowners Motion-sensor lights for limited common areas (front and back patios/decks)

Video surveillance:

High definition cameras to replace existing common-area cameras

Communications:

Email forwarder to disseminate information about scheduled committee meetings, meeting summaries, action plans, and observed or reported safety/security incidents

An Internet app that allows users to track local police activity

Responsibilities for researching and gathering information on the above improvements were divided among committee participants. As work on these potential improvements is completed, reports will be submitted to Parkwood's board of directors for review, discussion and/or decision making at subsequent board meetings and appropriate action.

Research and information gathering on other items on the agenda may be discussed at future meetings. The next meeting is scheduled at 4:00 pm on Sunday, September 17, in the clubhouse. Any and all who are interested in improved safety and security in Parkwood are invited to attend, whether to participate in the meeting, help out with committee work, or simply observe and listen in on the discussions.

Safety and Security Committee Meeting: Summary and Action Items Sunday, September 17, 2017

The purpose of this meeting was to report and discuss information gathered on potential upgrades or supplements to existing lighting and video surveillance facilities that can be purchased at relatively low cost and installed by Parkwood's maintenance staff, and communications and communications channels that can help homeowners to stay informed about safety and security matters.

Based on research and information gathered by the committee, and consideration of available alternatives meeting the above criteria, the committee plans to take the following actions:

- 1. For garage exteriors in limited common areas including front entryways and garage aprons facing the streets, submit to the board of directors a proposal to purchase and install carriage lights that produce white light and are activated by add-on photo cells, or light sensors. This upgraded lighting system automatically turns lights on at sunset and automatically turn lights off at sunrise, thereby keeping electricity costs to a minimum. The frosted-glass panels in these new carriage lights produce a white light for brighter illumination than existing carriage lights with amber glass panels.
- 2. For limited common areas including front patios and rear patios or decks, submit to the board of directors a proposal to recommend motion-activated spot lights or flood lights. These LED systems are either battery operated—which would allow placement at strategic locations depending on patio size and layout—or hard-wired. These one-, two- and three-light systems offer different features that would satisfy a range of security preferences, including how long the light stays on.
- 3. For the two main street entrances—north and south ends of Millbrook—and areas surrounding the pool and clubhouse, the committee will submit to the board of directors a proposal to purchase and install a 4K (ultra high-definition), color and night vision, 12-camera system that includes a 4K network video recorder with a 4-terabyte hard disk drive. This new system would supplement the non-high-definition black-and white camera system currently being used for video surveillance of those common areas. This state-of-the-art system upgrade would substantially improve identification and better facilitate follow-up action by Reno Police Department.
- 4. For the recreational vehicle (RV) lot, submit to the board of directors a proposal to purchase and install two solar-powered, motion record and alert, night-vision cameras that operate wirelessly to allow monitoring via Wifi connection. These additions to the cameras already in use would provide improved, total surveillance coverage of the entire RV lot.
- 5. Recommend that the board inform homeowners about a Safety and Security Email forwarder that has been created to disseminate information about scheduled committee meetings, receive committee meeting summaries and action plans, report safety/security incidents and concerns. Homeowners may sign up by submitting their Email addresses; all Email addresses will remain undisclosed and confidential.
- 6. Recommend that the board inform homeowners about a free Internet app that allows users to track Reno Police Department's call activity. Use of this app would enable a homeowner to not only monitor police activity, such as what and where crimes are being reported, but also report safety and security concerns to Reno police.
- 7. Recommend that the board prepare and distribute to homeowners flyers about safety and security in Parkwood. The flyers would increase awareness of safety and security issues, offer suggestions to improve safety and security conditions, and keep homeowners informed about potential future improvements under consideration and which may be made.

The next meeting of the Safety and Security Committee is scheduled for 4:00 pm on Sunday, October 15, 2017, in the clubhouse. An agenda will be available prior to the meeting.

Safety and Security Committee Meeting October 15, 2017

Summary and Action Items

The majority of the meeting was spent outlining a proposal to supplement and upgrade the community's video surveillance capabilities with a new 4K ultra-HD system featuring 12 4K, night-vision cameras and a 4K, 16-channel network video recorder (NVR) with a 4-terabyte hard disk drive.

The new cameras and NVR would supplement and upgrade Parkwood's current HD surveillance capability by allowing more cameras to cover key common areas and producing clearer images for more accurate identification of facial features, other personal characteristics, vehicles and license plate numbers.

The new surveillance system would provide state-of-the-art technology while meeting the committee's requirements that include the ability to capture facial features and license plate characters, relatively low cost and ease of installation by Parkwood's maintenance staff.

However, several questions and concerns, largely technical and operational, were raised during the meeting that may require additional research and fact finding. A proposal has been submitted to Parkwood's board of directors with the outstanding questions and concerns to be discussed at the next board meeting on November 14.

Also discussed was the need for improvements for the RV lot, not only in video surveillance but also in fencing and lighting. Since the types of potential improvements closely parallel maintenance activities and responsibilities, Parkwood's maintenance staff will follow-up with more research.

Below is an updated list of action items including status, disposition and subject of future committee meetings:

Lighting:

- 1. Motion-sensor white carriage lights for street-facing garage exteriors—Approved Oct. 10
- 2. Motion-sensor carriage lights for front patios and entry ways
- 3. Motion-sensor LED spot lights or LED flood lights for rear patios and decks

Video surveillance:

- 4. Ultra HD 4K 12-camera system (with night vision) to replace/supplement existing cameras at main entrances to Millbrook, club house and pool areas—Proposal submitted to Board
- 5. Wireless, solar-powered, motion-record and alert, night vision cameras for the RV lot

Communications:

- 6. Email forwarder to provide information about safety and security activities and concerns
- 7. Internet app that allows users to track Reno Police Department call activity and report safety/security incidents to RPD
- 8. More informational flyers about safety and security issues
- 9. Add safety and security topics to board meeting agendas—begins with November agenda

The committee's safety and security priorities and projects range from more immediate, relatively low-cost enhancements of current facilities to larger, more complex and more costly replacements of or additions to the community's total capabilities. For the present, the committee is focusing on the former but continues to research and gather information about longer-horizon improvements; for example, security gates for the main entrances to Millbrook.

<u>Safety and Security Committee Meeting – Summary and Action Items</u>

Sunday, November 19, 2017

Most of the meeting was spent discussing the features and performance of a Lorex-brand "super HD" 8-camera video surveillance system (four 8-megapixel cameras and four 4-megapixel cameras) with an 8-channel, 2-terabyte (TB) digital video recorder (DVR) for an approximate cost of \$1,500 to \$2,000.

The reason for considering a high-definition camera system instead of, or in addition to, a 4K UHD system is that HD cameras may be better suited to low light and night time conditions. While 4K would be very well suited to daytime and normal light conditions, it may not be the optimal choice for surveillance during low-light and night time conditions, which is when criminal activity is more likely to occur.

A proposal with more details and specifications of this HD camera system, compared to the 4K system, will be prepared for discussion and evaluation at the next committee meeting.

Coincidentally, during the meeting, it was reported that a home in Parkwood was burglarized, and various personal possessions and an automobile were stolen. A notice will be prepared and distributed to homeowners.

As a follow-up to the October committee meeting, Parkwood's maintenance department contacted independent contractors who submitted fencing bids for the RV lot. At the November 14 board meeting, the bid from Artistic Fence was approved, and an installation timetable is expected soon.

Related to fencing improvements, Parkwood maintenance is also seeking bids from contractors for new electronic (security) gates.

Common area lighting is also being discussed in response to homeowner complaints about inadequate light from a solar powered light at the end of her street. Parkwood maintenance will install a battery pack as a cost-effective solution, not only for solar-powered street lights but potentially for illuminating common areas where there is no lighting and installation of hard-wired lighting might be extremely difficult and overly expensive.

The next committee meeting is scheduled at 4 pm on Sunday, December 17, in the club house.

Safety and Security Committee Meeting: December 17, 2017

Summary and Action Items

The meeting began with updates on action items from our November 19 meeting:

- 1) The notice about the burglary of a Parkwood home, including an advisory about prevention, was distributed to homeowners and occupants;
- 2) A battery-power backup for the solar light at the end of Clyde Court was installed and is serving as a test case for further use of battery power to improve common area lighting;
- 3) Installation of the new fence for the RV lot is scheduled for January 25, 2018;
- 4) A second contractor for electronic gates is expected to visit Parkwood to discuss his recommendations and give us an estimate; however he informed us that at present he has a nine-month backlog of work.

The remaining item on the agenda was to discuss, evaluate and decide what specific system and/or components would significantly improve video surveillance for the club house, pool, maintenance area and north and south entrances to Millbrook. Key improvements were to include: 1) Video images that are clear enough to identify faces, other personal features, vehicle characteristics and license plates; 2) The ability to capture clear images in daylight, low-light conditions and nighttime; preferably in infrared; and 3) A recording/playback device with high-capacity memory and flexibility to use all camera types, from UHD to HD.

Since it was learned that no one type of camera would be best in all light conditions, a Lorex video surveillance system capable of using 4K, 2K and HD cameras was suggested. Specifications were evaluated with respect to desired key improvements, and a comparative report (see attached) was prepared by Tim York to highlight key specifications: resolution; pixel count, and light sensitivity with and without infra-red. This multi-camera system includes: 1) A network video recorder (NVR) with sufficient memory capacity to utilize as many as eight cameras: 2) Modular, plug-and-play flexibility to change camera types to meet changing needs; and 3) Color images, with infra-red for night vision.

Following open discussion, and questions and answers, the committee reached a consensus that this system would be effective for Parkwood's video surveillance needs. The eight-camera system would be installed in the club house, pool, maintenance area and the south entrance to Millbrook; and the HD system now being used in the club house would replace the obsolete video surveillance system at the north entrance to Millbrook. The estimated budget of up to \$2,500 would include the new system, accessories and installation, relocation of the current HD system to the north entrance to Millbrook, and camera additions or upgrades if needed.

A proposal as outlined above will be prepared and submitted to Parkwood's board of directors for consideration and vote at the next scheduled board meeting on January 9, 2018.

Clubhouse Video Surveillance System Outline

A suggestion for a new video surveillance system was recently submitted to Safety and Security Committee for evaluation. Research has indicated that the originally specified unit and its cameras may not result in a satisfactory video surveillance system. Some background information is in order. The specified cameras, known as 4k, are the latest development in surveillance systems, and can provide wonderful resolution in good light. Unfortunately, their development has not quite matched the existing HD cameras in both frame rate and low light capabilities, which are measured in Lux. The chart below illustrates the standards and light requirements of several camera types.

Camera Model	Туре	Camera Comparisons					
		Horizontal	Vertical	Total mpxl	Lux, w/o IR	Lux, w/ IR	FPS
LNB8111B	4k	3840	2160	8.294	0.5	0.3	15
LNB4421B	2k	2688	1520	4.085	0.38	0.28	20
LNB3143B	HD	1922	1088	2.091	0.1	0	25/30

As can be seen, the 4k camera is not yet as capable as the 1080 HD counterpart. The frame rate for most of the 4k cameras is limited to 15 frames per second, and low light performance is definitely inferior to the HD cameras. Currently, there are at least two 4k cameras capable of 30 fps, but they now cost between \$1,000 and \$2,000 each. The heart of the surveillance system is the recorder, known as the NVR. The recorder originally specified had a bitrate of 320fps, but as this is a 16 channel recorder, the result is a nominal 20fps maximum rate for each channel. The Lorex NR9082, which is an 8 channel recorder, has a specified bitrate of 240fps, thus all channels should be capable of recording at 30 fps if improved 4k cameras become available in the future. Since the modern NVR connects the cameras via RJ-45 connectors, like the ones used to connect a computer to a router, the modern NVR is a truly modular, plug and play system. Therefore, cameras of differing capabilities can be mixed and matched, which will result in a system tailored to the particular requirements of this application.





Lorex

Lorex 8 channel NR9082 4K home security system with 2 8MP 4K LNB8111B Bullet Cameras and 2 4MP 2K LNB4421B Bullet Cameras

Be the first to review this item

Available from these sellers.

- Real-time recording up to 8MP on all channels 4× the detail of 1080p
- 4K video recording provides ultraHD quality even when zoomed, offering clearer identification in video evidence
- IR night vision range up to 130ft (40m) in ambient lighting and 90ft (27m) in total
 darkness.
- H.265 offers significant bandwidth and video storage savings over older compression technologies, extending the amount of video stored on the hard drive
- Weatherproof for outdoor & indoor installation (IP66 Rated)

Compare with similar items

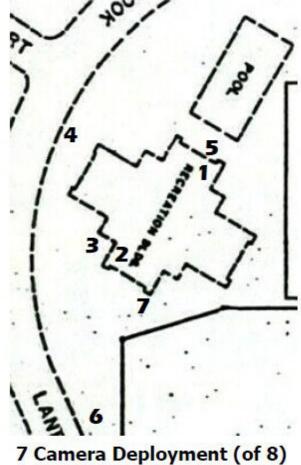
New (1) from \$959.95 & FREE shipping.

While this particular system is currently unavailable from Amazon itself, Lorex is still offering it for about \$200 more. It should not be difficult to obtain it for a better price through others if the decision to purchase is made. An HD camera has been identified:



Camera Deployment

An eight camera system should be more than adequate to cover the clubhouse, the pool, and the south side of Millbrook. The graphic at the right illustrates a seven camera deployment, with one left over. Presently, the clubhouse and the exercise room are covered by one camera each in Areas 1 & 2, with the other two cameras outside next to each other in Area 3. The new system would replace Area 1 & 2 cameras with the two 2k cameras inside, and only one HD camera outside in Area 3. One HD camera would be deployed outside to cover the pool, and another HD camera would be mounted in Area 7. One of the 4k cameras would be mounted on the lightpole in Area 4, and the other 4k camera would be deployed in Area 6. As a low position is desired for a better angle of view, this is where the camera could be mounted inside a fake boulder, or else be mounted on an 8 foot pole. The last HD camera could be mounted in the same area for improved low light performance.



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Power to the cameras is supplied over the ethernet cables, which is known as PoE. While each camera comes with 100 feet of cat 5 cable, the outdoor installations will be a greater distance, thus extra cable is required. For these longer runs, an outdoor rated cat 6 cable is recommended, since it is more efficient for power distribution, and the cable can be buried. 200 foot long outdoor rated cat 6 cables have been found:



A 1920x1080 capable monitor will be necessary to complete the system. Many HP and other brand monitors are available for less than the \$100 cited below. A refurbished, and therefore less expensive, yet fully capable monitor can be found with some luck.

Total 0				
Item	number	cost each	Total Cost	
Lorex 8 Ch System				
with 2 2k & 2 4k Cameras	1	\$1,159.00	\$1,159.00	
LNB 3143B HD Cameras	4	\$139.00	\$556.00	
200 feet cat 6 outdoor cable	3	\$75.00	\$225.00	
1920x1080 refurb HP monitor	1	\$100.00	\$100.00	
			\$2,040.00	

It must be noted that the prices above for the system and the HD cameras are the list prices from Lorex. There is currently a discount being offered by Lorex, but this is not reflected in the current estimates. Lower prices through Amazon, Ebay and other online merchants are available for these components. There may be other expenses, such as the fake boulder or pole to mount the camera or cameras in position #6, but there should be no unpleasant surprises with this estimate. Another possibility would be to investigate the availability of wireless cameras for the interior of the clubhouse in lieu of 2 of the HD cameras to reduce the unsightly cat 5 wiring. The two 2k cameras would then be deployed to the pool in Area 5 and the shop yard in Area 7.