This newsletter is about basic photography. Although photography is not accident reconstruction, the documentation of physical evidence with still (and now moving) images is a universally accepted occurrence.

The most widely used format for still photography is 35 mm, which refers to the width of the film strip. (One inch is 25.4 mm.) The standard image on the film in a 35 mm still camera is 24 mm high by 36 mm wide. Many single-lens-reflex (SLR) 35 mm cameras are in use. For these cameras, a mirror is present behind the lens and allows the photographer to view what is going to be recorded through that lens; when the photograph is taken, the mirror pivots up as the shutter opens, allowing the image to be recorded on the film.

The typical 35 mm camera can be used with a wide variety of available lenses. The most basic aspect of a lens is its focal length, which is the distance from the focal point of the lens to the image plane (strip of film) inside the body of the camera. For a 35 mm camera, a 50 mm lens is considered "normal," because the perspectives in a photograph are close to the perceptions of the original scene by typical human viewers. Lenses with significantly shorter focal lengths are called wide-angle lenses, and lenses with significantly longer focal lengths are called telephoto lenses.

The photographs above were taken on the same day from the same point on the driveway using the same camera and same roll of film but with four different lenses. The photograph on the left was taken with a 20 mm lens; the next was taken with a 28 mm lens; the next, with a 50 mm lens; and the rightmost photograph was taken with a 100 mm lens.

Two aspects concern exposure: the aperture (like 2.8 or 5.6 or 16) and the shutter speed (1/60, 1/125, 1/250, etc. of a second). An interesting aspect of aperture is that the smaller the aperture—i.e., the higher the number—the greater the depth of field. Depth of field refers to the portion of the image which is in good focus. A photographer who wants good depth of field will use a smaller aperture with a correspondingly slower shutter speed; one who desires narrow depth of field will use a larger aperture with a higher shutter speed. Another point about depth of field is that, the shorter the focal length of the lens, the greater the depth of field at a given aperture. To get a vibration-free exposure, the shutter speed should be at least the inverse of the focal length: taking a photograph with a 200 mm lens requires a minimum shutter speed of 1/250 of a second, but the ambient light may require an aperture of f/4, resulting in a long-view photograph with shallow depth of field.

If you would like more information on this topic, please write your name plus your telephone number or email address:_____

Or, you may contact me directly with your questions, by the method of your choosing.

If you have any comments, questions, or suggestions regarding content of this or future newsletters, I welcome them. You may use this form to comment by filling in the lines and mailing it, or, as always, you are welcome to contact me by any method of your convenience:_____