Surveillance Impact Report

Time Lapse Camera

City Planning Department

As required by San Francisco Administrative Code, Section 19B, departments must submit a Surveillance Impact Report for each surveillance technology to the Committee on Information Technology ("COIT") and the Board of Supervisors.

The Surveillance Impact Report details the benefits, costs, and potential impacts associated with the Department's use of Time Lapse Cameras.

DESCRIPTION OF THE TECHNOLOGY

The Department's mission is to play a central role in guiding the growth and development of our City. We work with other City agencies and the community to help balance the needs of residents, businesses, and civic leaders to protect the environment and historical resources, create inspiring and livable urban spaces, cultivate neighborhood resilience, and enforce good land use practices.

In line with its mission, the Department uses Time Lapse Cameras. When promoting innovative design it is important to monitor a site's existing conditions and performance. A time-lapse camera is an instrument that has been used by planners and architects since the late 1960s to observe pattern of use and adjust design solutions based on this use.

The Department shall use Time Lapse Cameras only for the following authorized purposes:

- Used to capture video or time lapse still photography for evaluation of projects in various public space / urban design programs:
    - Groundplay Program support. Groundplay.org -The Groundplay Program used time lapse camera technology to record traffic patterns when a street closure or changes to the road geometry were proposed. Time lapse camera technology allowed at-a-glance analysis of the project impact on traffic circulation patterns.
    - Shared Spaces Program support sf.gov/shared-spaces - Shared Spaces Program used time lapse camera technology to record sidewalk and parking lane uses (as needed) in order to evaluate the feasibility of building new structures and replacing parking on specific streets.
    - Public Life Studies support https://sfplanning.org/project/public-space-and-public-life-studies - Public Life Studies are strongly supported by time lapse camera technology to record pattern of use at a macro-aerial scale. Camera recordings can capture patterns of use over an extended stretch of time, allowing researchers to analyse successes and flaw of specific built public space designs.

Any use(s) not identified in the Authorized Use(s) above are strictly prohibited.

Surveillance Oversight Review Dates

COIT Review: TBD

Board of Supervisors Review: TBD

Department technology is located citywide in San Francisco. Projects are neighborhood-based. Sites are neighborhood public spaces such as streets, plazas, and open spaces. In the upcoming fiscal years, applications of this technology will be focusing on equity neighborhoods.

Technology Details

The following is a product description of Time Lapse Cameras:

The Brinno TLC200 Pro offers a high dynamic range sensor (HDR) while retaining exceptionally long battery life (up to 3 months on a set of AA batteries). The HDR sensor improves high contrast scenes and is great for indoor or outdoor work:

- (with the ATH 120 housing) & 1.3MP 1/3" HDR Image Sensor
- HD Time Lapse Videos at 1280x 720
- Accepts Interchangeable CS Mount Lenses
- Includes 19mm Lens (35mm Equivalent)
Fast Aperture: f/2.0
- 1.44" LCD Monitor
- 120° Lens Tilt
- Time Interval: 0.3 sec (ASAP) - 24 hr
- Powered by 4 AA Batteries
- Includes 4GB SDHC Card

Wingscapes Timelapse Cam 8 Video Camera is weatherproof, digital, and boasting high def capture, this 8.0Mp video camera can be set as close as 8" to any subject. The long battery life lets you go for days, weeks, or even months without having to change the batteries. Files record to an inserted SD memory card.

A. How It Works

To function, Time Lapse Camera uses a technique in which the frequency at which frames are captured (the frame rate is much lower than the frequency used to view the sequence. When played at normal speed, time appears to be moving faster and thus lapsing. For example, an image of a scene may be captured at 1 frame per second but then played back at 30 frames per second; the result is an apparent 30 times speed increase. Similarly, film can also be played at a much lower rate than at which it was captured, which slows down an otherwise fast action, as in slow motion or high-speed photography.

Data collected or processed by Time Lapse Cameras will not be handled or stored by an outside provider or third-party vendor on an ongoing basis. The Department will remain the sole Custodian of Record.

IMPACT ASSESSMENT

The impact assessment addresses the conditions for surveillance technology approval, as outlined by the Standards of Approval in San Francisco Administrative Code, Section 19B:

1. The benefits of the surveillance technology outweigh the costs.
2. The Department's Policy safeguards civil liberties and civil rights.

3. The uses and deployments of the surveillance technology are not based upon discriminatory or viewpoint-based factors and do not have a disparate impact on any community or Protected Class.

The Department's use of the surveillance technology is intended to support and benefit the residents of San Francisco while minimizing and mitigating all costs and potential civil rights and liberties impacts of residents.

A. Benefits

The Department's use of Time Lapse Cameras has the following benefits for the residents of the City and County of San Francisco:

As mentioned, by monitoring pedestrien flow and patterns of use, the time lapse camera analysis allows for a better design to be delivered to San Francisco residents.

- Community Development- the camera allows to record patterns of use of a specific space in a neighborhood. The resulting analysis can help residents and businesses to draft development strategies that are more rooted in real needs (based on observations) instead of generic policy decisions (based on average data).
- Safety- the camera allows to record circulation patterns (peds, cars and bicyclists). The analysis of the recorded data allows designers and traffic engineers to implement the best solutions to road geometry alterations and/ or street closures strategies. This results in increased pedestrian and bicycle safety at a neighborhood block scale.
- Health- the camera allows for analysis of existing neighborhood conditions that can pose hazard to the health of a neighborhood. The data based on camera observations can help planners and designers to introduce solutions with focused on public health priorities.

B. Civil Rights Impacts and Safeguards

The Department has considered the potential impacts and has identified the technical, administrative, and physical protections as mitigating measures:

None of time-lapse data can infringe upon Civil Liberties categories listed above. none of the imagery captured by the hardware is consumed externally. the technology is leveraged only to count volumes and paths of travel of people and vehicles within a given public space; allowing us to design safer and more efficient streets, sidewalks, and open spaces. Should imagery unintentionally captured be infringing upon Civil Liberties, project management team will proceed to scrub the specific footage by cutting it out in the editing process before the data is finalized for internal analysis.

- Physical Safeguards - On-site, time lapse cameras are securely mounted to poles, buildings or balconies. They are enclosed in locked security boxes to deter thefts. Off-site, time lapse camera data is saved on the secured city server managed by the IT team in the Planning Department. All raw data and analysis data is considered property of the Planning Department and it is not shared in its raw format by any entity outside the department.

C. Fiscal Analysis of Costs and Benefits

The Department's use of Time Lapse Cameras yields the following business and operations benefits:

- Financial Savings: Other recording methods are very staff time intensive, requiring sizable commitments of staff time working in the field. The technology allows us to automate data collection and therefore save time and funds.
- Staff Safety: Staff is no longer required to spend long (multi-hour) shifts standing in the field to record use patterns. The time-lapse camera records 24/7 and can be programmed according to a project-by-project basis without impacting significantly staff time used.
- Improved Data Quality: Accurate visual records captured by the technology also support better accuracy of counts and analyses of movements of people through public spaces; as compared with analog pen-and-paper in-field recording methodologies.

The fiscal cost, such as initial purchase, personnel and other ongoing costs, include:

- Number of FTE (new & existing): 0.05 FTE Planner II and/or Planner I

The Department funds its use and maintenance of the surveillance technology through the City General Fund.

COMPARISON TO OTHER JURISDICTIONS

Time Lapse Cameras are currently utilized by other governmental entities for similar purposes.