

UPDATES ASSOCIATED WITH CAMERA SYSTEMS FOR CITY PARKS, CIP GG 22-35 AND TRAFFIC TECHNOLOGY, CIP PS 23-01

CITY COUNCIL REGULAR MEETING | DECEMBER 11, 2023 | ITEM: 2.2



PS 23-01 TRAFFIC TECHNOLOGY BACKGROUND



- ❑ On July 11, 2022, City Council approved the creation of CIP 23-01 for City-Wide Traffic Systems and Safety Upgrades for various upgrades that maintain and improve the reliability, safety and function of various traffic control devices in the City.
- ❑ With this CIP, staff has upgraded the technology at all 24 traffic signals in the City, connected the signals to the City's network and purchased software, which all facilitate the goal of improving the reliability, safety and function of the City's traffic network.

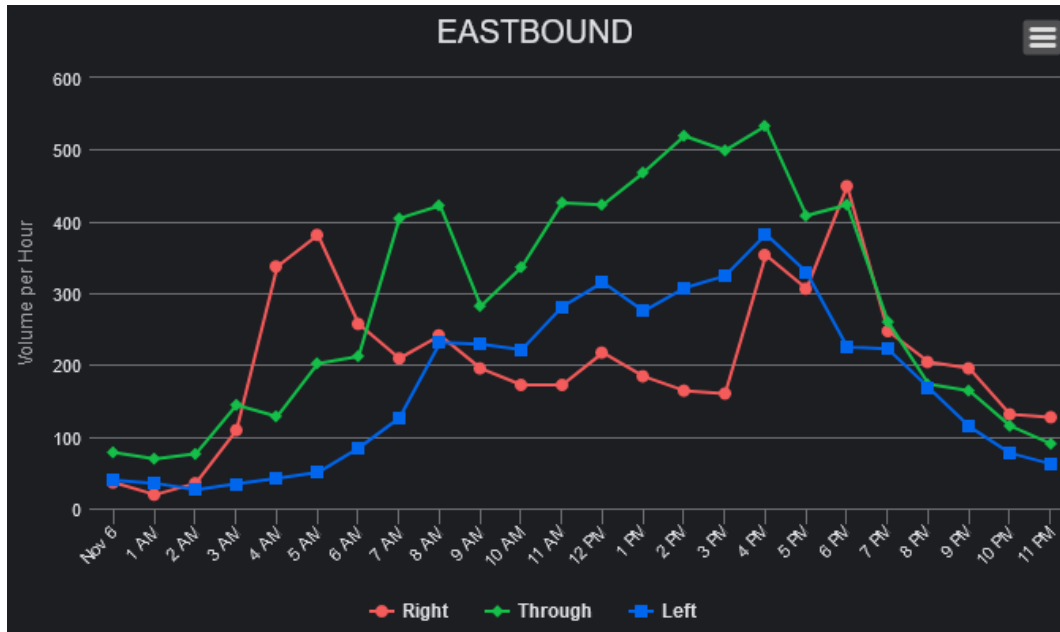
PS 23-01 TRAFFIC TECHNOLOGY SIGNAL DETECTION UPGRADE



- Hybrid radar and video detection systems installed
 - Detect vehicles, bicycles, and pedestrians
 - Highly adjustable and has built in artificial intelligence to adapt to the environment
 - Can detect vehicles up to 500 feet before the intersection to implement advanced safety features such as red light protection
 - Collects data for vehicle, pedestrian and bicycle counts and speeds



PS 23-01 TRAFFIC TECHNOLOGY SIGNAL DETECTION UPGRADE



Vehicles - Yesterday

Top 5 Intersections By Volume

Intersection	Volume
Louise Ave & Harlan Rd	34,907
W Lathrop Rd & S Harlan Rd	29,973
River Islands & Golden Valley Pkwy	20,328
Golden Valley Parkway & Spartan ...	13,102
Golden Valley Parkway & Marketpl...	11,259

Pedestrians - Yesterday		Mode Share - Yesterday			
Top 5 Intersections By Volume		Top 5 Intersections By Mode Share			
Intersection	Volume	Intersection	%	%	%
W Lathrop Rd & S Harlan Rd	172	River Islands & Golde...	98.3	1.2	0.5
Golden Valley Parkway & Somervill...	103	Golden Valley Parkwa...	98.4	0.1	1.5
Golden Valley Parkway & Marketpl...	89	Golden Valley Parkwa...	98.7	0.3	1
Louise Ave & Harlan Rd	86	Golden Valley Parkwa...	98.7	0.6	0.7
River Islands & Golden Valley Pkwy	70	W Lathrop Rd & S Harl...	98.8	0.4	0.8

PS 23-01 TRAFFIC TECHNOLOGY SIGNAL CONTROLLER UPGRADE



- New controllers were installed at 15 traffic signals with 9 more being installed soon
 - Advanced technology with the most flexibility and features available
 - Network connectivity allows for in-office monitoring and adjustments
 - Software creates a central system which connects all of the signals into one user interface which provides alerts, monitoring, adjustments, and coordination



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RG1 2Y RG2 6Y   Tue Nov-07-2023 11:59:43
YEL3.1 YEL3.1   1234567890ABCDEF STDBY
MAX    MAX     O/N  ON  0          PAT254
                VEH CRCCC   CYC
                PED         OFF
                OVL        MCT
FREE   COMMD  POV         LCT
SP FO  H/O     H/O         PRE
    
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MAIN MENU

- | | |
|-----------------|---------------------|
| 1. UNIT | 7. PREEMPTION |
| 2. PHASES | 8. TRANSIT PRIORITY |
| 3. OVERLAPS | 9. LOGS |
| 4. DETECTORS | 0. STATUS |
| 5. COORDINATION | A. COMMUNICATION |
| 6. TIME BASE | B. MISCELLANEOUS |

y=YES n=NO End=NEXT

PS 23-01 TRAFFIC TECHNOLOGY SIGNAL CONTROLLER UPGRADE



PS 23-01 TRAFFIC TECHNOLOGY SIGNAL NETWORK UPGRADE



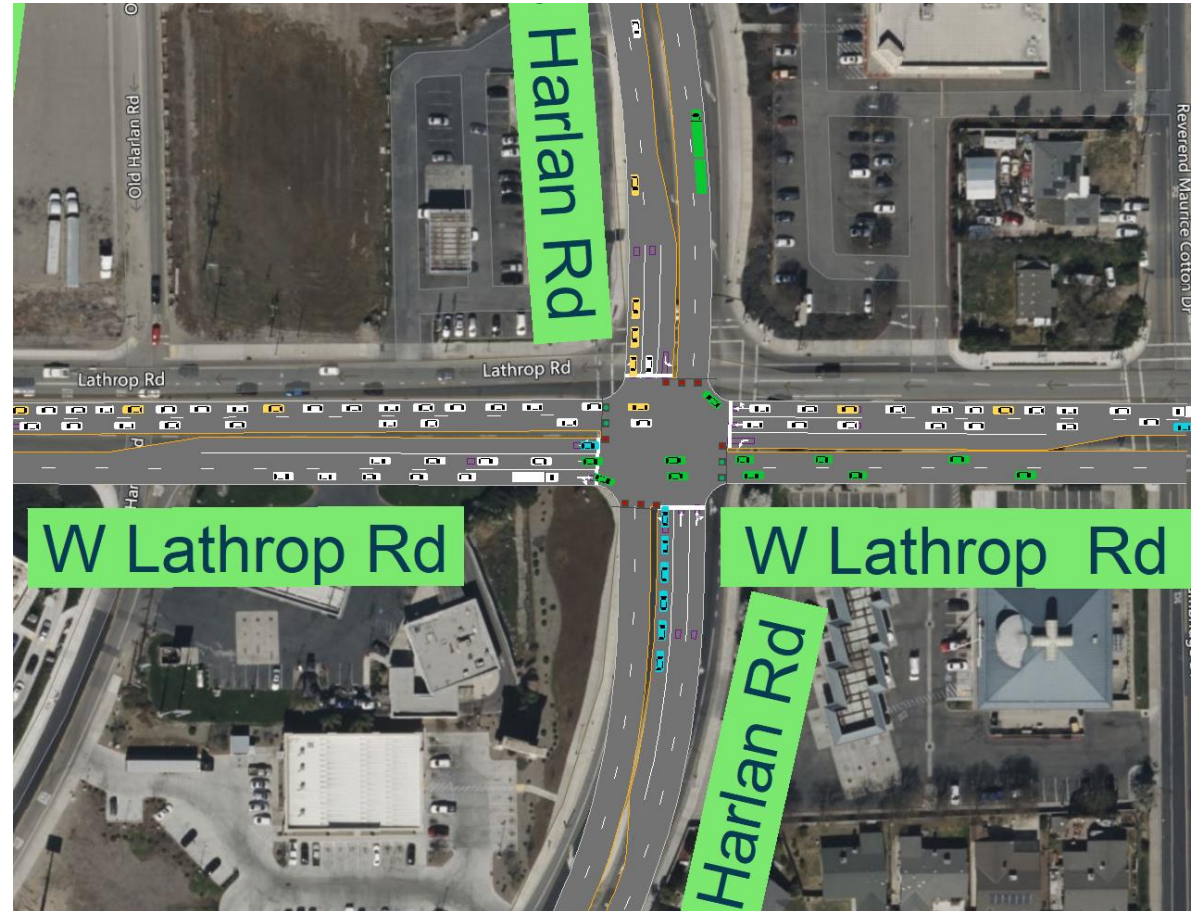
- Traffic Signal Network Cabinets installed at 18 traffic signals
 - Provides secure isolation for the City's fiber optic network and connection of the traffic signal, surveillance and LPR equipment



PS 23-01 TRAFFIC TECHNOLOGY TRAFFIC SOFTWARE UPGRADE



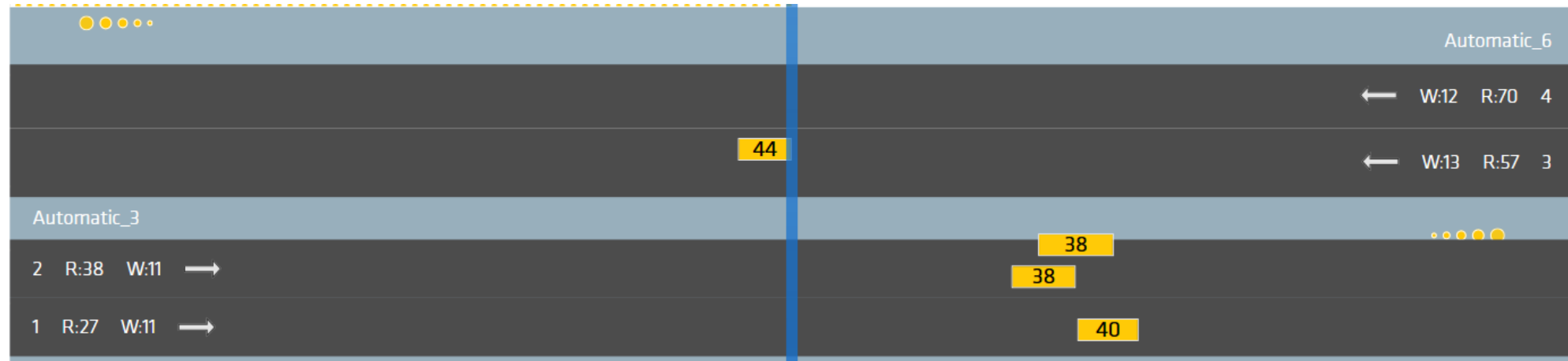
- Traffic modelling software
 - Assists with the development of traffic signal coordination plans
 - Optimizes signal timing
 - Traffic modelling to predict deficiencies



PS 23-01 TRAFFIC TECHNOLOGY MID-BLOCK DATA COLLECTION



- Mid-Block Radar
 - Collects speed, count and classification data 24/7
 - Data is used to measure the effectiveness of changes to the traffic control features or measure the health of a roadway segment
 - Can be moved to any location within the City



GG 22-35 CAMERA SURVEILLANCE BACKGROUND



- ❑ On September 13, 2021, City Council approved the creation of Capital Improvement Project (CIP) GG 22-35 for Camera Surveillance Systems for Major City Parks.
- ❑ On September 12, 2022, the City Council approved a budget of \$224,500 to install camera surveillance systems in Phase I of CIP GG 22-35

GG 22-35 CAMERA SURVEILLANCE BACKGROUND



Phase I – Major Park Installation Locations:

- Apolinar Sangalang Park – 13470 Slate Street
- Manual Valverde Park – 15557 5th Street
- Woodfield Park – 801 Lathrop Road

GG 22-35 CAMERA SURVEILLANCE EQUIPMENT & INSTALLATION RECOMMENDATIONS



Apolinar Sangalang Park

- 270° Multisensor Camera (Quantity 3)
 - \$36,000 Cost for cameras, licensing, installation & configuration
 - \$ 1,000 Communications costs, including wiring (Quantity 2)
 - \$ 4,000 Communications costs, wireless (Quantity 1)

- 360° PTZ Pan-Tilt-Zoom Camera (Quantity 2)
 - \$24,000 Cost for cameras, licensing, installation and configuration
 - \$ 1,000 Communications costs, including wiring

Total Estimated Cost : \$66,000

Actual Cost : \$65,920

GG 22-35 CAMERA SURVEILLANCE APOLINAR SANGALANG PARK



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GG 22-35 CAMERA SURVEILLANCE EQUIPMENT AND INSTALLATION



Manuel Valverde Park (page 1 of 2)

☐ 270° Multisensor Camera (Quantity 2)

- \$24,000 Cost for cameras, licensing, installation & configuration
- \$ 0 No cost for communication as City ran conduit and wiring

☐ 360° PTZ Pan-Tilt-Zoom Camera (Quantity 2)

- \$24,000 Cost for cameras, licensing, installation & configuration
- \$ 7,500 Communications costs, including wiring, Wireless
- \$ 7,500 Costs for new light poles
- \$ 5,000 Cost for electrical upgrade/installation

GG 22-35 CAMERA SURVEILLANCE EQUIPMENT AND INSTALLATION



Manuel Valverde Park (page 2 of 2)

☐ 360° PTZ Pan-Tilt-Zoom Camera(Quantity 2)

- \$24,000 Cost for cameras, licensing, installation & configuration
- \$ 3,500 Communications costs, including wiring
- \$ 7,500 Cost for new light pole (Quantity 1)
- \$ 5,000 Cost for electrical upgrade/installation (Quantity1)

☐ Automatic License Plate Readers - ALPR (Quantity 2)

- \$ 4,500 Annual cost

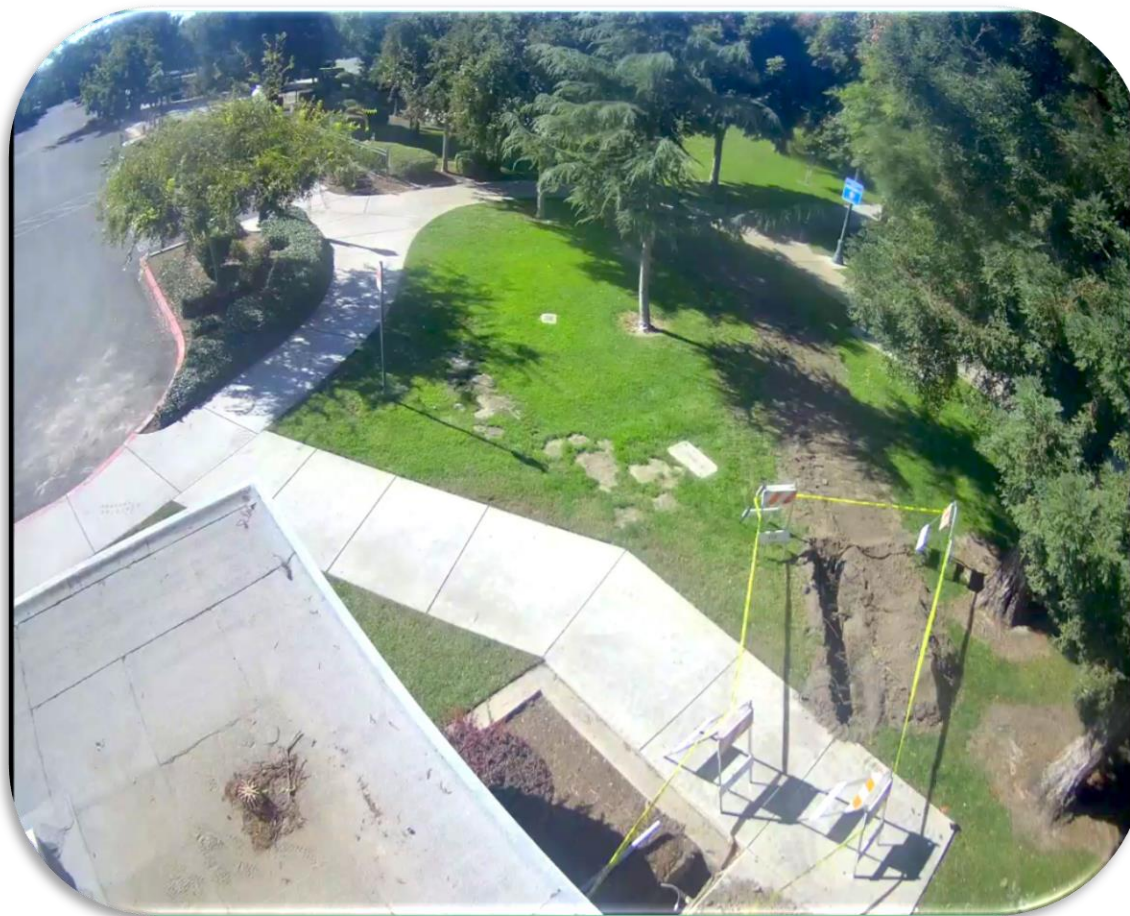
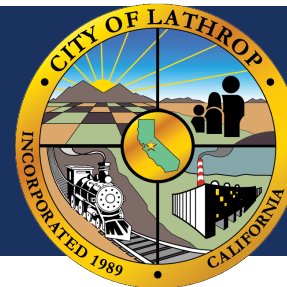
Total Estimated Cost : \$112,500

Actual Cost : \$61,027

GG 22-35 CAMERA SURVEILLANCE MANUEL VALVERDE PARK



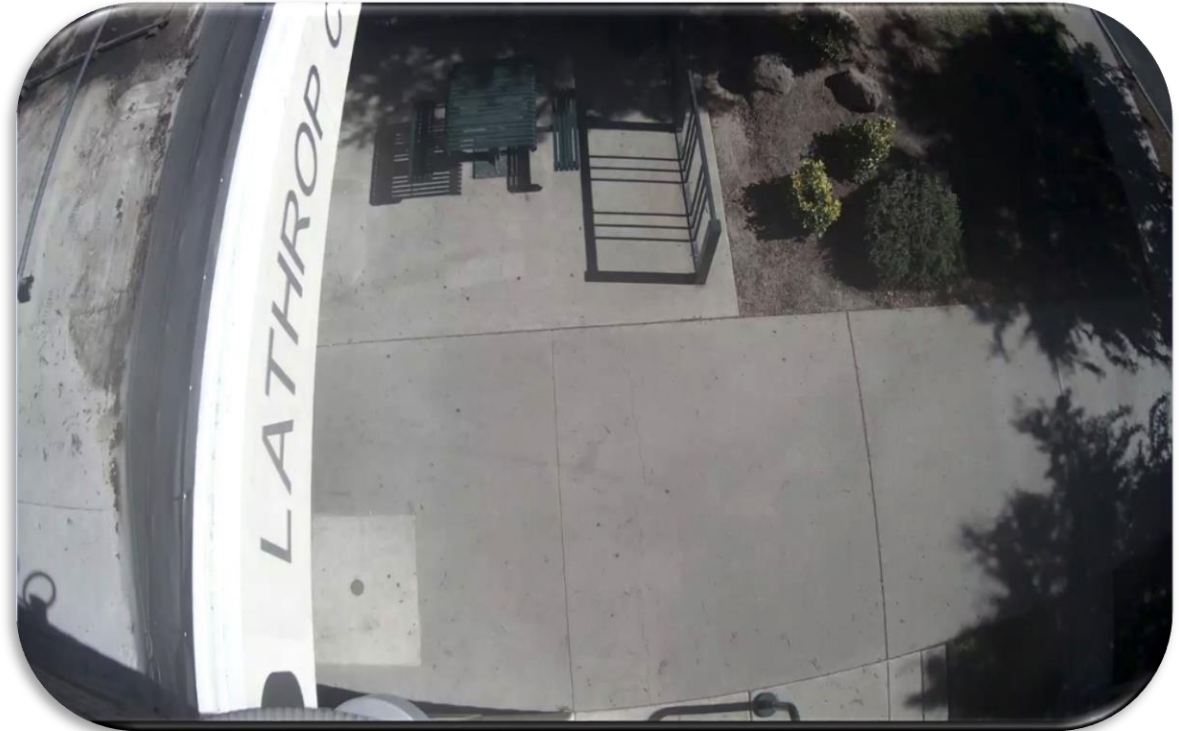
GG 22-35 CAMERA SURVEILLANCE MANUEL VALVERDE PARK



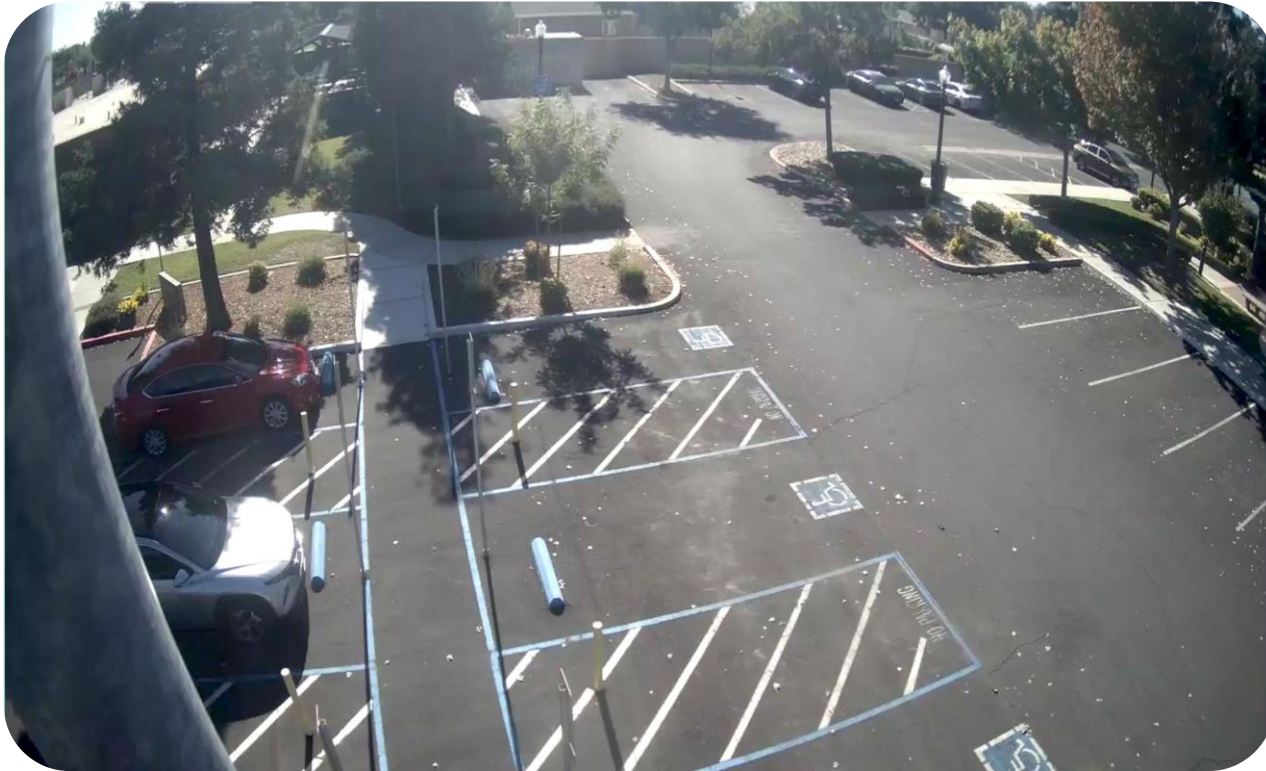
GG 22-35 CAMERA SURVEILLANCE MANUEL VALVERDE PARK



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GG 22-35 CAMERA SURVEILLANCE EQUIPMENT AND INSTALLATION



Woodfield Park

- ❑ 270° Multisensor Camera (Quantity 1)
 - \$12,000 Cost for cameras, licensing, installation & configuration
 - \$ 4,000 Communications costs, including wiring
 - \$ 4,000 Cost for electrical upgrade/installation

- ❑ 360° PTZ Pan-Tilt-Zoom Camera(Quantity 2)
 - \$24,000 Cost for cameras, licensing, installation & configuration
 - \$ 1,000 Communications cost, including wiring

Total Cost : \$46,000

Actual Cost : \$47,741

GG 22-35 CAMERA SURVEILLANCE WOODFIELD PARK



GG 22-35 CAMERA SURVEILLANCE WOODFIELD PARK



GG 22-35 CAMERA SURVEILLANCE WOODFIELD PARK



GG 22-35 CAMERA SURVEILLANCE WOODFIELD PARK



GG 22-35 CAMERA SURVEILLANCE WOODFIELD PARK



**GG 22-35 CAMERA SURVEILLANCE
TOTAL PROJECT COST**



**Total Estimated Project Costs is
\$249,000**

Which includes a 10% contingency estimation of
\$24,500

**Actual cost of project
\$174,688**

Staff saved \$98,800 by utilizing internal resources