



Office of the City Manager

CONSENT CALENDAR
July 26, 2022

To: Honorable Mayor and Members of the City Council
 From: Dee Williams-Ridley, City Manager
 Submitted by: Liam Garland, Director, Public Works,
 Michael Sinor, Interim Director, Information Technology
 Subject: Contract No. 32100072 Amendment: CycloMedia Technology, Inc. for
 Geographic Information System Infrastructure Data

RECOMMENDATION

Adopt a Resolution authorizing the City Manager to execute an amendment to Contract No. 32100072 with CycloMedia Technology Inc. for Geographic Information System Infrastructure asset data acquisition and ongoing data access to increase the contract amount by \$100,000 for an amount not to exceed \$287,401, adopt the use policy, and extend the contract term through December 30, 2025.

FISCAL IMPACTS OF RECOMMENDATION

Funding is available in the FY 2023 budget in the following funds:

Department / Fund	ERMA Account Code	Amount FY 2023
Public Works – Street Light Fund	142-54-621-654-0000-000-426-612990	\$8,000
Public Works – Clean Storm Fund	616-54-623-675-0000-000-472-612990	\$8,000
Public Works – State Transportation Tax (SB1) Fund	127-54-622-668-0000-000-431-612990	\$2,000
Public Works – On Street Parking Fund	631-54-622-666-0000-000-473-651110-	\$8,000
Information Technology – IT Cost Allocation Fund	680-35-362-377-0000-000-472-612990	\$16,000
Total FY 2023 Amount		\$42,000

The first year of data renewal is \$41,100, and the annual license access fee for subsequent years will be \$4,110 per year. Additional funding for the remaining contract term will be appropriated in future fiscal years.

CURRENT SITUATION AND ITS EFFECTS

In December 2020, CycloMedia Technology, Inc. (CycloMedia) collected 360-degree imagery data and imported the information into the Nexgen work order and asset management system. The dataset resulted in high definition, three-dimensional maps, and related data showing precise measurements for distances, clearances, elevations, and other aspects of critical infrastructure. Staff currently use images to perform bike lane assessments, identify damaged infrastructure, inventory city trees, adjust parking lines and signage, as well as inventory city traffic signals. To see the usefulness of the software, a screenshot of transportation-related assets was extracted from CycloMedia and imported into the NexGen system (Attachment 2). CycloMedia also offers Street Smart software which is the interactive web viewer for all Cyclomedia content and allows staff to access the City's collected data, as shown in Attachment 3.

The asset information collected by CycloMedia is utilized by staff for remote verification of City assets and infrastructure.

Several city projects and strategic initiatives now benefit from having access to high-quality and accurate street-level imagery including:

- Improved emergency operations situational awareness
- Improved planning and development using imagery
- Remote asset condition assessment (building faces and road surfaces)
- Improved remediation planning (accurate measurements of repair and replace operations)
- Improved community engagement for planning, proposals, and visualization
- Improved communication across internal stakeholders with common access to imagery and associated data.

The CycloMedia contract supports the Strategic Plan goal of providing state-of-the-art, well-maintained infrastructure, amenities, and facilities.

BACKGROUND

The City maintains a vast portfolio of public infrastructure assets in the public right-of-way: 142 traffic lights, over 8,000 street lights with 3,200 city-owned street light poles, 214 miles of streets, 400 miles of sanitary sewers, 78 miles of storm sewers, 2500 street signs, 35,000 trees, 300+ miles of walkways, 325 retaining walls, and over 3,750 parking meters.

Geographic Information Systems (GIS) support the activities of the City and its community. The City of Berkeley Enterprise GIS empowers staff and the community to make decisions that impact the future of the City of Berkeley in a conversant and logical approach by allowing access to geospatial data.

On November 02, 2016, the City Manager signed the original contract with Geographic Technologies Group (GTG) to develop a GIS Master Plan. On September 08, 2017, the

City Manager amended the original contract to include additional tasks including conducting a comprehensive GIS data assessment.

On August 15, 2019, the City issued a Request for Proposals (RFP) for 360-degree street-level imagery under Specification No.19-11279-C. CycloMedia Technology, Inc. met the City's operational, technology, and fiscal requirements.

On June 24, 2020, after review and discussion of the Street Level Imagery Acquisition Report and Use Policy (Attachment 4), the Police Review Commission unanimously recommended proceeding with CycloMedia Technology.

On June 30, 2020, City Council Resolution 69,482-N.S. authorized the City Manager to execute a contract with CycloMedia in an amount not to exceed \$187,401.

On May 10, 2022, City Council Resolution 70,353-N.S. accepted the Surveillance Technology Report, and the street level imagery was processed through an object detection privacy filter to permanently blur faces and license plates including reflections.

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

Staff can view detailed images from throughout the city on their computers rather than going out into the field thus saving significant staff time and reducing the need for travel to address an issue which consequently reduces greenhouse gas emissions. The data is hosted remotely so there is no hardware overhead. This supports the reduction of carbon footprint and the goals of the City's Climate Action Plan.

RATIONALE FOR RECOMMENDATION

CycloMedia Technology, Inc. has over 30 years of professional experience and innovation in street-level imagery collection and analysis, including Light Detection and Ranging (LiDAR) and asset extraction. CycloMedia Technology, Inc. has served clients similar in population to the City of Berkeley and has provided statewide services to Pacific Gas & Electric (PG&E).

The imagery and extracted data enable staff to better serve the public by:

- Saving time, effort, and money by doing virtual inspections and automated asset management
- Optimizing asset inventory & condition assessment (Public Works)
- Optimizing and updating building and zoning review processes (Planning)
- Responding to emergencies with knowledge and confidence through better situational awareness (Fire)
- Monitoring, analyzing, and documenting existing street conditions (Transportation)

The collected data also addresses a series of requirements from the City's insurer, the California Joint Powers Insurance Authority.

ALTERNATIVE ACTIONS CONSIDERED

None. This service allows City staff continued access to data that would otherwise be unavailable to inform decisions about asset management and GIS layers.

CONTACT PERSON

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Attachments:

- 1: Resolution
2. CycloMedia – Street Smart Screen Shot
3. NexGen Screen Shot of CycloMedia Captured and Imported Assets
4. Street Level Imagery Use Policy

RESOLUTION NO. ##,###-N.S.

CONTRACT NO. 32100072 AMENDMENT: CYCLOMEDIA TECHNOLOGY, INC. FOR
GEOGRAPHIC INFORMATION SYSTEM INFRASTRUCTURE DATA

WHEREAS, the City of Berkeley needs access to its 360-degree street-level imagery and infrastructure assets to support data inventories in Geographic Information Systems; and

WHEREAS, on August 15, 2019, the City issued a Request for Proposals (RFP) for 360-degree street-level imagery under Specification No.19-11279-C. CycloMedia Technology, Inc. met the City's operational, technology, and fiscal requirements; and

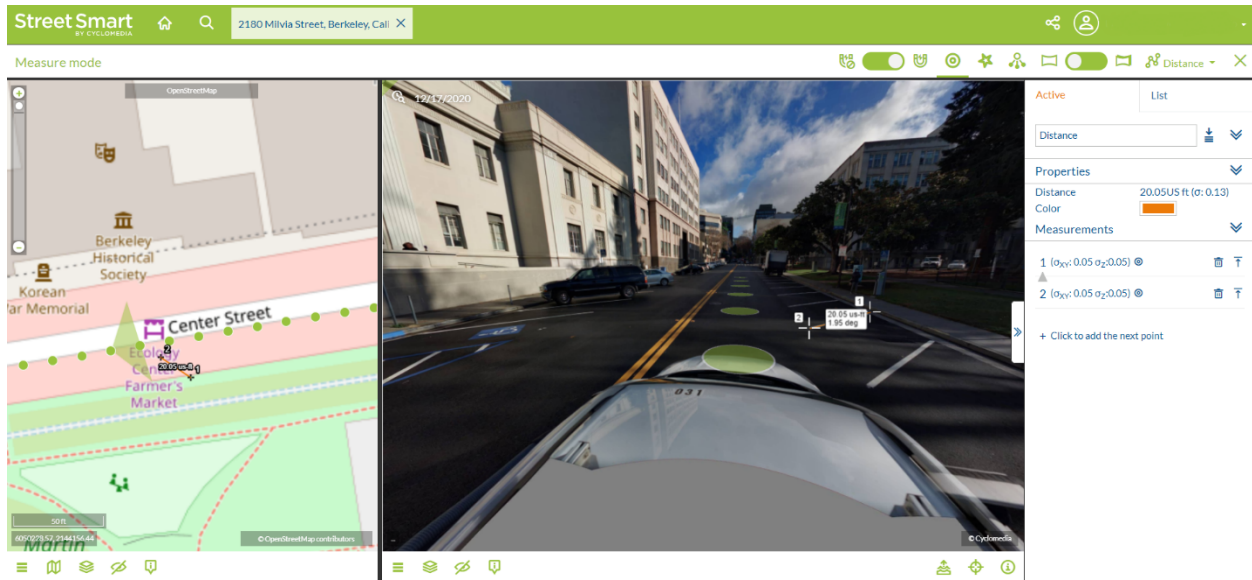
WHEREAS, on June 24, 2020, after review and discussion of the Street Level Imagery Acquisition Report and Use Policy, the Police Review Commission unanimously recommended proceeding with CycloMedia Technology; and

WHEREAS, on June 30, 2020, City Council Resolution 69,482-N.S. authorized the City Manager to execute a contract with CycloMedia Technology, Inc. in an amount not to exceed \$187,401; and

WHEREAS, funding for this contract amendment is available in the FY 2023 budget in the Street Light Fund 142, Clean Storm Fund 616, State Transportation Tax (SB1) Fund 127, On Street Parking Fund 631, and IT Cost Allocation Fund 680.

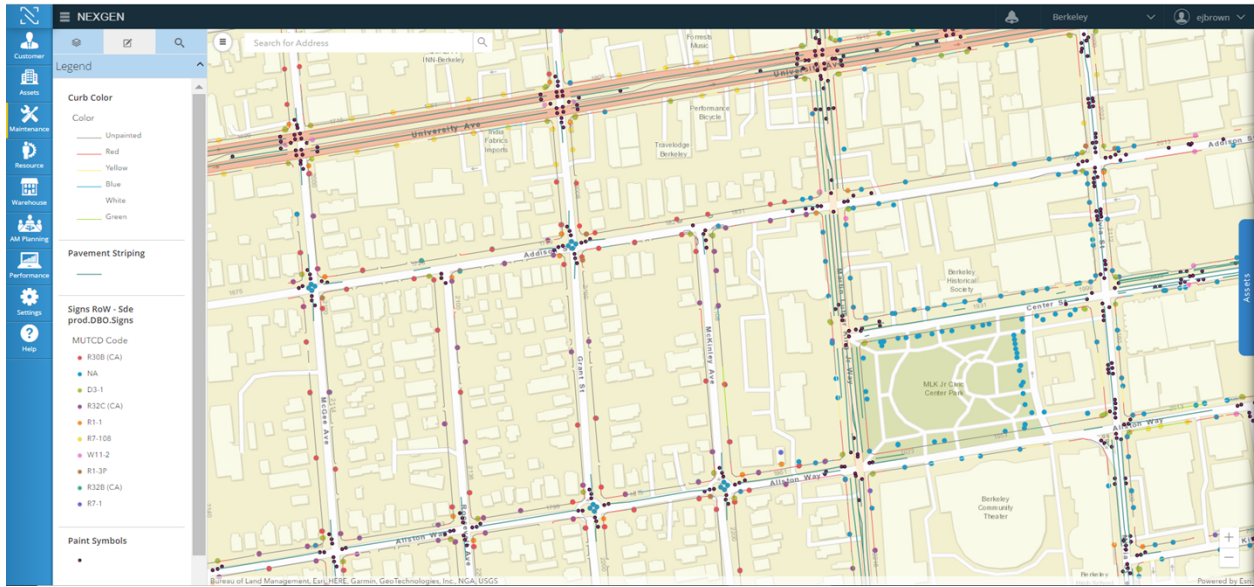
NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is hereby authorized to execute an amendment to Contract No. 32100072 with CycloMedia Technology, Inc. for Geographic Information System infrastructure data to increase the contract amount by \$100,000 for an amount not to exceed \$287,401, adopt the use policy, and extend the contract term through December 30, 2025.

Attachment 2: Cyclomedia Technology, Inc. – Street Smart Screen Shot



The screenshot shows geospatial data (12/17/2020) which informs staff of where city assets are located and provide historical records.

Attachment 3: NexGen Screen Shot of CycloMedia Captured and Imported Assets



Berkeley Information
Technology

Surveillance Use Policy Street Level Imagery Project

A. PURPOSE

The City desires to hire a contractor, CycloMedia, to provide the City with location based 360-degree street level imagery of the City's infrastructure assets in the Public Right of Way including, but not limited to, street signs, traffic signals, pavement marking, trees, and storm drain infrastructure. CycloMedia will also provide the City with an application, Street Smart™, to access the street level imagery that is collected.

Street level imagery will be utilized exclusively by authorized City staff for infrastructure asset management and planning activities. The street level imagery of City infrastructure assets in the Public Right of Way that is provided to the City will not consist of information that is capable of being associated with any individual or group.

This policy identifies the information that is collected, how it will be used, by whom, and what precautions will be taken to ensure that any information that is capable of being associated with any individual or group is properly disposed of or protected.

B. AUTHORIZED USE

The 360-degree street level imagery that will be provided to the City will be used exclusively only by authorized City staff to create an accurate and current inventory for the following infrastructure assets:

- Bus pads / stops
- Pavement marking
- Maintenance Access Holes
- Storm drains
- Pavement Striping
- Signs
- Curb paint color
- Street trees
- Parking meters
- Traffic lights
- Pedestrian Signal

The information that is provided to the City consists of a high definition, three-dimensional map that provides precise measurements for distances, clearances and elevations to enable the City to remotely inspect the City's infrastructure assets in the Public Right of Way. Street level imagery will be incorporated into the City's Geographic Information System (GIS) and work order and asset management system and can be viewed from the desktop of only authorized City staff through the Street Smart™ application.