Office of the City Manager

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To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Savita Chaudhary, Director, Information Technology

Subject: Contract No. 10414B Amendment: Geographic Technologies Group (GTG) for Geographic Information System (GIS) Master Plan

RECOMMENDATION
Adopt a Resolution authorizing the City Manager to amend Contract No. 10414B with Geographic Technologies Group (GTG) for Geographic Information System (GIS) Master Plan, for a total not to exceed $95,451 and for a total contract value of $399,411 from September 14, 2016 to June 30, 2022.

FISCAL IMPACTS OF RECOMMENDATION
One-time funding for this project in the amount of, $95,451 is available in the Department of Information Technology's FY20 Cost Allocation budget. Funding for this contract amendment for ongoing, maintenance and support in future fiscal years is subject to Council's approval of the proposed citywide budget and annual appropriation ordinances.

$95,451	FY 2020: 680-35-363-000-6002-000-412-612990 (IT Cost Allocation, GIS, IT Professional Services)
$95,451	**Total FY 2020 Professional Services**

CURRENT SITUATION AND ITS EFFECTS

The GIS Master Plan development and planning process is a citywide effort involving key staff representing multiple departments. Geographic Technologies Group (GTG) has provided reliable consulting services and has proven to be a strong partner in this development and planning process. This project is an extension of the existing project to add the Parks Irrigation Inventory using the GIS Services. GTG will create and implement a City of Berkeley GIS Irrigation database design. This task includes database design and database design revisions to finalize the design.

GTG will georeference the digital drawings provided by the City that are required to digitize the irrigation assets for the provided City irrigation locations which includes 52 parks and 9 miles of median. GTG will review, evaluate and digitize the irrigation

infrastructure available on these 110 digital drawings provided to GTG (Per direction from City of Berkeley Parks, recreation, and Waterfront staff, Grove Park and the Rose Garden will not be included in this project). Where available on the digital drawings the GIS irrigation data will include the following feature types:

- Water Meters
- Backflow Devices
- Irrigation Controllers
- Valve Boxes
- Sprinkler Heads
- Water Lines

GTG will visit all 26 parks and the 9 miles of median that are not covered by the existing As-Built drawings and inventory all irrigation features. GTG will provide three (3) weeks of onsite GPS field verification to confirm and improve the accuracy of the as many irrigation features digitized from drawings as possible. The final product of this data will be used for integration with the new Work Order System (NEXGEN).

This software is a Strategic Plan Priority Project, advancing our goal to provide state-of-the-art, well-maintained infrastructure.

BACKGROUND
In May 2016, the City issued a Request for Proposals (RFP) for a Geographical Information Systems (GIS) Master Plan under Specification No.16-11041-C. Of the nine responses, Geographic Technology Group (GTG) best met the City's operational, technology, and fiscal requirements.

The GIS Master Plan development and planning process was a citywide effort involving key staff representing many departments. GTG conducted surveys, interviews and onsite workshops with city staff to do an assessment and analysis of the City's current Enterprise GIS. GTG evaluated the readiness of existing system infrastructure (hardware, software, and network) to support enterprise GIS and maintain service during disasters, assessed parcels and address data sets to meet GIS business needs and Enterprise authoritative source requirements, and developed a governance plan that outlines the administration, maintenance, and support for the enterprise GIS.

In June 2017, Council approved a GTG recommendation that added seven additional GIS projects to compliment the strategy developed in 2016. All projects completed as of June 30, 2019.

1. **Conduct a Comprehensive GIS Data Assessment:** GTG conducted an assessment and analysis of the City's current Enterprise GIS system. GTG evaluated the readiness of existing system infrastructure (hardware, software, and network) to support enterprise GIS and maintain service during disasters, assessed parcels and address data sets to meet GIS business needs and Enterprise authoritative source requirements, and developed a governance plan

that outlines the administration, maintenance, and support for the enterprise GIS. The assessment allows the City to have a comprehensive snapshot of the quality and completeness of all GIS data and establish a benchmark of data accuracy. It also allows the City to plan and prioritize improvements to its extensive data repository.

2. **Plan, Design, and Deploy a Public Portal Solution:** The GIS Community Portal, https://www.cityofberkeley.info/gisportal/ , launched to the public in January 2019. The existing GIS web page had a legacy product known as "Parcel Popper" which allowed citizens to enter an address and receive information for a given property including regulations. The new portal features a custom widget that mimics the functionality of Parcel Popper but also includes additional features. The GIS Community Portal allows community members, businesses, city officials, and developers the ability to better understand what zoning and land use policies apply to properties of interest to them.

3. **Assessment of Current GIS Policies and Procedures:** Standard operating procedures (SOP) and policies detail the ways in which GIS technologies utilized within the City in order to meet user needs. SOPs prevent redundancy in data compilation, promote standardization and scalability of the enterprise GIS, and decreases organizational liability.

4. **Develop a Mobile GIS Plan:** The mobility of GIS and the use of mobile technology to view, edit and analyze geospatial data, as well as make critical decisions in the field is a critical factor in building a true citywide, enterprise-wide, scalable, and enduring GIS. Multiple City departments indicated the business need to use GIS in the field as a data query tool. The mobile plan identified the mobile device needs for the upcoming projects for work order, fleet and facilities management.

5. **Develop Key Performance Indicators (KPIs) for GIS:** In May 2018, City of Berkeley developed a Key Performance Indicators (KPIs) or measures for GIS. Measuring and monitoring the progress and success of the tasks associated with an enterprise GIS system is best practice. Developing organizational KPI's based on each GIS task outlined in the 2017 GIS Master Plan allows the City of Berkeley to accurately measure GIS performance, quantify the City's accomplishments, and articulate the benefits GIS provides to the community.

6. **Establish City of Berkeley GIS Newsletter:** The inaugural issue of the GIS Newsletter, The Pin Drop, debuted earlier this year and next issue is due later this summer. Topics will include the launch of the GIS Community Portal and the Esri Disaster Preparedness Workshop. The GIS newsletter markets the program's successes and services and, in general, increases communications around GIS among the City departments. It provides transparency and accountability by keeping stakeholders and community members in the loop through easily accessible media.

7. **Develop GIS Training Curriculum:** A formal ongoing GIS training plan is an approved outline of steps, schedules, and costs for continuing to train the City's employees. The GIS SharePoint portal offers the links to free resources for GIS training available to employees. It is important to have an ongoing training plan, considering that GIS is a rapidly evolving technology, and organizational needs are ever changing.

In September 2019, Council approved the staff recommendation based on which GTG started working on a project called GreenCity GIS for Park Inventory. This project includes a comprehensive inventory of the City of Berkeley's parks system. This project will document the field inventory of all infrastructure, buildings, such as bathrooms, benches and newly planted trees in the city parks system. The City's existing tree inventory will need updates as a part of this project. This contract amendment is an extension of the existing project to add the Parks Irrigation Management Inventory.

ENVIRONMENTAL SUSTAINABILITY
Geographic Technologies Group will conduct some of their work remotely, and when they do come on-site for face-to-face meetings, they will cluster those visits over multiple days to minimize both travel costs and greenhouse gas emissions related to travel

RATIONALE FOR RECOMMENDATION

Geographic Technologies Group is well versed in the requirements for public sector GIS. GTG has created and implemented over 200 comprehensive GIS Master Plans for local government. Clients include the California cities of Concord, Pasadena, West Sacramento, West Hollywood and Roseville. GTG has developed the GIS Community Portal for our city and the staff is recommending continuing using their services for the expansion of the functionality of the existing portal.

GIS technologies are powerful tools for improving the quality, accuracy, efficiency, and responsiveness of government services provided by the City of Berkeley. An Enterprise GIS guides a citywide approach to GIS, focused on:

- Using mutually accepted standards, policies, and business practices;
- Encouraging collaborative GIS efforts among City, government, and related organizations;
- Integrating GIS technologies into City business operations;
- Supporting emergency and disaster planning, response, and recovery; and
- Maximizing the cost-effectiveness of GIS investments.

The GIS Steering Committee established the Enterprise GIS Program in 2008 provides central shared resources to support these goals. The program currently includes the following GIS services: Data Services, Online Mapping Services, Applications, Software License Management, and Training and Support

ALTERNATIVE ACTIONS CONSIDERED
Staff considered planning and executing these projects without GTG, however the staff considered it would be beneficial to get an outside perspective that could bring with them industry best practices and experience working with other local municipalities to help setup a framework that the City can use for the next three years and beyond.

CONTACT PERSON
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Attachments:
1: Resolution

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

CONTRACT NO. 10414A AMENDMENT: GEOGRAPHIC TECHNOLOGIES GROUP FOR GEOGRAPHICAL INFORMATION SYSTEM (GIS) MASTER PLAN

WHEREAS, on May 12, 2016, the City issued a Request for Proposals (RFP) for a Geographical Information Systems (GIS) Master Plan (Specification No.16-11041-C) and received nine qualifying vendor responses; and

WHEREAS, the RFP review committee evaluated each proposal and determined that the Geographic Technologies Group proposal best met the City's operational, technological, and fiscal requirements; and

WHEREAS, on November 02, 2016, the original contract was signed to develop a GIS Master Plan; and

WHEREAS, on September 08, 2017, the original contract was amended to include additional tasks to conduct a comprehensive GIS data assessment, deploy a web-based public facing GIS portal, develop GIS policies and SOPs for the City, and establish a one-year GIS work plan; and

WHEREAS, on September 10, 2019, the contract was amended to add two additional projects to enhance the functionality of recently deployed GIS Community portal, and a comprehensive inventory of the City of Berkeley's parks system to prepare for upcoming work order system; and

WHEREAS, this project is expanding the scope and GTG will review, evaluate, and georeference the digital drawings provided by the City that are required to digitize the irrigation assets for the provided 26 City irrigation locations of the City of Berkeley's parks system to prepare for upcoming work order system; and

WHEREAS, funding for this project in the amount of, $95,451 is available in the Department of Information Technology's FY20 Cost Allocation budget, and for this contract amendment for ongoing, maintenance and support in future fiscal years is subject to Council's approval of the proposed citywide budget and annual appropriation ordinances.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is authorized to execute an amendment to Contract No. 10414B with Geographic Technologies Group for Geographical Information Systems (GIS) Master Plan, for a total not to exceed $95,451 and for a total contract value of $399,411 from September 14, 2016 to June 30, 2022.