DATE: **May 23, 2016**

TO: **Watershed Conservation Authority Governing Board**

FROM: **Johnathan Perisho, Project Manager**

THROUGH: **Mark Stanley, Executive Officer**

SUBJECT: **Item 14: Consideration of a resolution to award a contract to the Cal Poly Pomona Foundation, to secure professional services of Dr. Weimin Li, to perform geospatial analyses consultation for the Gateway Cities and Rivers Urban Greening Master Plan**

RECOMMENDATION: That the WCA Governing Board approve the award of a contract to the Cal Poly Pomona Foundation, to secure professional services of Dr. Weimin Li, to provide geospatial analyses consultation for the Gateway Cities and Rivers Urban Greening Master Plan in an amount not to exceed $30,360.

PROJECT DESCRIPTION: The WCA has received funding to develop an Urban Greening Master Plan for the Gateway Cities region in the Los Angeles Basin (Exhibit A) through the Urban Greening Planning Grant Program granted by the California Natural Resources Agency—together with a North East Trees grant from the Rivers and Mountains Conservancy (RMC) and in-kind contributions from the Gateway Cities Council of Governments (COG).

Staff is currently strategically planning analysis methods, and recognizes that the intellectual property, experience, and resources Dr. Weimin Li possesses present significant assets for not only the Gateway Greening Plan, but in developing original data and making powerful tools available for partners, agencies, and future projects in the region. Staff recommends approval to award a contract for the proposal for services (Exhibit B) for Phase 1 to be conducted through September 1, 2017, and the option to continue services for Phase 2 through January 1, 2018.

BACKGROUND: The Gateway Cities and Rivers Urban Greening Master Plan (Gateway Greening Plan) seeks to expand, develop, and enhance greenways, parks, open space, and green infrastructure both along our river corridors and throughout our urban communities. The plan will—incorporating existing plans and public input—identify opportunities for parks, trails, bikeways, water conservation and capture, living streets, tree cover, habitat, and interpretation and wayfinding within the Gateway Cities study area. This plan is envisioned as a living document hosted on an online platform for the empowerment of the public, cities, agencies, and professionals.

To date the team has hosted community workshops, maintained a presence at events and through parallel planning initiatives including the AB530 Lower LA River Working Group, and has collected an extensive inventory of geospatial data, as well as local and regional plans and project lists under review. The team is in the process of strategically planning analyses, as well as engaging in city and community outreach to be compatible with AB530 efforts and other active regional plans.

To empower cities and communities the WCA has interests to conduct a feasibility assessment to identify what space may be available for green infrastructure, and to develop a better understanding of what the best approaches may be to achieve greening benefits cost-effectively. A comprehensive on-the-ground inventory of all prevailing conditions would be prohibitively costly. However, as technology continues to develop there are increasingly new ways to employ tools and develop new tools to both collect and to represent more comprehensive and accurate information.

Dr. Weimin Li is an Assistant Professor of Landscape Architecture at California State Polytechnic University, Pomona, specializing in advanced geospatial technologies. This work includes geospatial data integration, geospatial analysis, geoprocessing modeling, high resolution remote sensing imagery processing and 3D landscape construction, and their application in a wide range of landscape design and planning practices. In addition to Geodesign, Dr. Li also researches the environmental and social impacts of contemporary landscape design and planning on different dimensions of sustainability and quality of life in urban settings, including storm water management, wildlife habitat conservation, and planning for urban green space, multimodal transportation, neighborhood safety, public health, and environmental justice.

Dr. Li has been working on innovative approaches to planning and modeling, which includes developing applications for remote sensing for landscape and planning purposes (Exhibit C), and the "connectivity-suitability landscape model" that has been employed through the Cal Poly Pomona Department of Landscape Architecture 606 Studio in partnership with the WCA in the East San Gabriel Valley CCRC project (Exhibit D), City of LA Bureau of Sanitation on the Greenways to Arterials Stormwater System (GRASS II) project, and the City of Garden Grove in the Re:imagine Garden Grove project.

Remote sensing through detailed aerial photography and laser detection present profound opportunities to represent available space, and to conduct further comprehensive measures of potential projects and greening benefits. Applications are particularly effective for large areas, and may be employed to great effect across the expansive WCA territory. These measures can help to more effectively plan projects, and to better represent the value of interventions. Additionally, there are many complimentary models and innovative approaches that may be applied to better identify specific benefits, such as water capture and optimal routes for active transportation.

The intellectual property, experience, and resources Dr. Li possesses may be instrumental in the development of the Gateway Greening Plan, and additionally in developing original data and making powerful tools available for partners, agencies, and future projects in the region. Staff recommends that a sole source contract is the most beneficial and economical course of action to realize the project vision and approved scope of work, and to employ proprietary resources unique to Dr. Li's work. Staff recommends approval to award a contract for the proposal for services (Exhibit B) for Phase 1 to be conducted through September 1, 2017 for an estimated value of $13,800, and based on the outcomes of Phase 1 the option to continue services for Phase 2 through January 1, 2018, with a 10% owner-held contingency for a total not-to-exceed value of $30,360. The proposal for services is within the planned budget, and development is time-sensitive. The deliverables for each phase are expected to coincide with the design development and web launch of the plan for completion on-time and within budget.

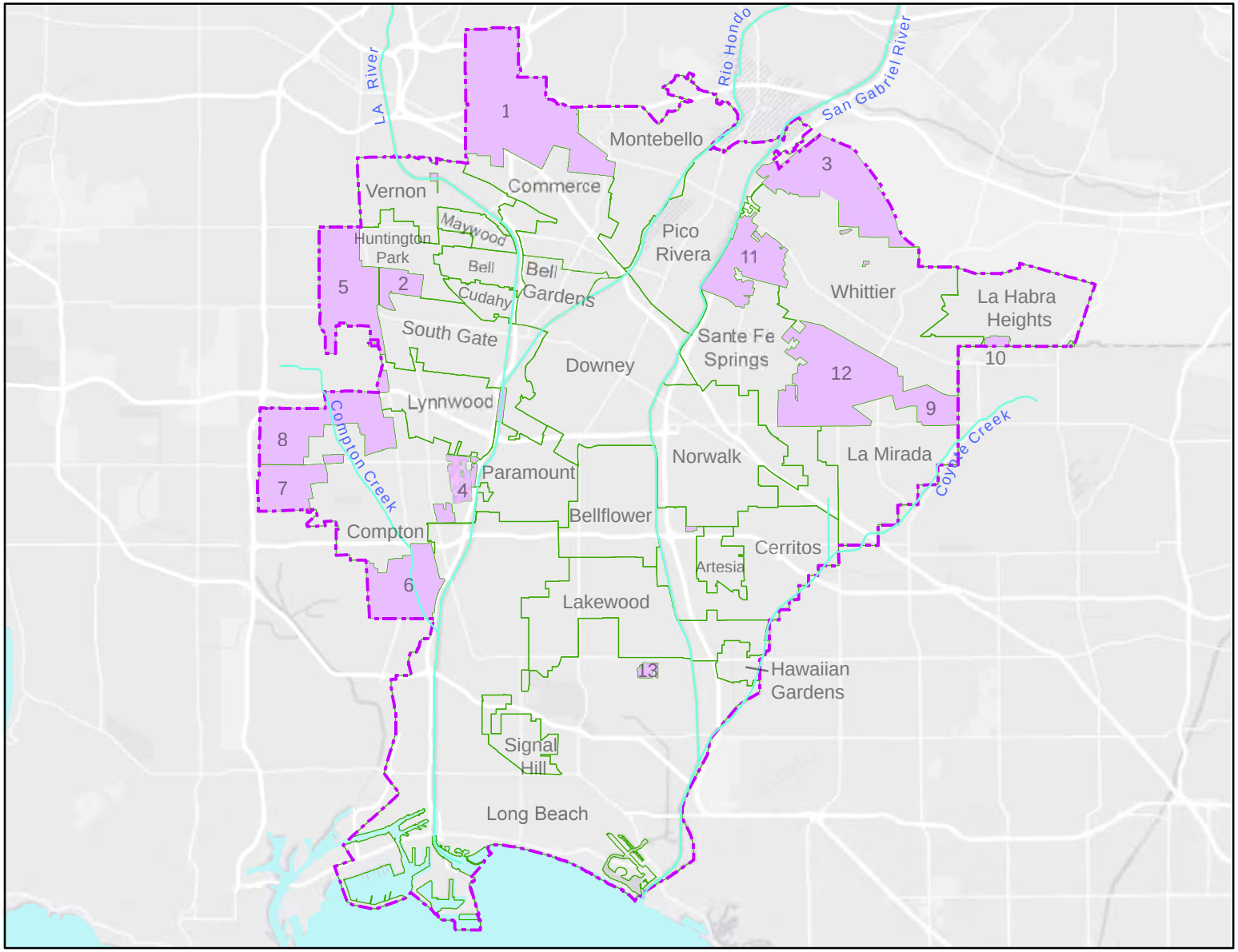
FISCAL INFORMATION: The not to exceed $30,360 sole source contract for this effort is within the budgetary limit for this line item and is fully funded by a Prop 84 Urban Greening Planning Grant through the California Natural Resources Agency.

Gateway Cities and River Urban Greening Plan

Gateway Cities Study Area

Cities Comprising Study Area
i. Artesia
ii. Bell
iii. Bellflower
iv. Bell Gardens
v. Cerritos
vi. Commerce
vii. Compton
viii. Cudahy
ix. Downey
x. Hawaiian Gardens
xi. Huntington Park
xii. La Habra Heights
xiii. La Mirada
xiv. Lakewood
xv. Long Beach
xvi. Lynwood
xvii. Maywood
xiii. Montebello
xix. Norwalk
xx. Paramount
xxi. Pico Rivera
xxii. Santa Fe Springs
xxiii. Signal Hill
xxiv. South Gate
xxv. Vernon
xxvi. Whittier

Unincorporated Communities
1. East Los Angeles
2. Walnut Park
3. Northwest Whittier (portion)
4. East Rancho Dominguez
5. Florence/Graham
6. Rancho Dominguez
7. Rosewood
8. Willowbrook
9. East La Mirada
10. East Whittier
11. Los Nietos/West Whittier
12. South Whittier
13. Long Beach Islands



Legend

- Study Area
- City Boundaries
- Unincorporated Areas
- Major Rivers

Data: Base Map Service from ESRI and its data provides. Study area boundary based on the County of Los Angeles Department of Public Works city boundary data. Hydrologic feature data from the National Hydrography Database, USGS.

0 2 4 8

Title: Research Consulting and Technical Data Support for the Gateway Cities and Rivers Urban Greening Master Plan (Gateway Greening Plans)

Client:
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Mark Stanley, Executive Officer
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Work:
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Principal Investigator:

Dr. Weimin Li, Department of Landscape Architecture, Cal Poly Pomona

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Office of Research and Sponsored Programs Contract Representative:
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Office of Research and Sponsored Programs (ORSP)
3801 West Temple Avenue, Pomona, CA 91768-2557
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Email: plbaltazar@cpp.edu

Note: all correspondence related to the official contract including final signed contract should be submitted to ORSP for transmittal to the CPP Foundation

Cal Poly Pomona Foundation, Inc. Signatory: G. Paul Storey, Executive Director

Project Goal: Provide research consulting and technical data support as well as general advice for the Green Space Feasibility Assessment and other components of the Gateway cities and Rivers Urban Greening Master Plan

Objectives:

1. Identify appropriate research methods for the measurement of feasible land spaces and landscape settings for urban greening efforts.

2. Identify public and private sources of geospatial data that are appropriate for the measurement of feasible land spaces and landscape settings to address the focuses of the Gateway Greening Plan.
3. Develop GIS/Remote Sensing procedures and tools for the mapping, analyzing and measuring of land use types and landscape settings that are feasible for the development of future green space in the Gateway City study area.
4. Create an inventory of land use types and landscape settings in geospatial data formats to support a comprehensive feasibility assessment of future green space in the Gateway City study area.
5. Provide recommendations on criteria development toward community input for the Gateway Greening plan.
6. Provide technical guidance and assistance on the "connectivity-suitability landscape model", application examples can be found in the 606 CCRC, Re:imagine Garden Grove, and GRASSII projects, Department of Landscape Architecture, Cal Poly Pomona.
7. Conduct a comparable study on selected storm water assessment computer programs and provide recommendations for the feasibility assessment component of the Gateway Greening Plan.

Scope of Work:

a) Tasks are dependent on the availability of required data as identified in the proposal. Both the client and the PI together decide what specific technical terms mean and what specific data under different technical terms refers to. The PI may facilitate and/or secure data from other relevant sources. However, the client is ultimately responsible for ensuring the required data is available. Resolution of source data may limit the technical possibility to detect and measure certain characteristics described below.

Following are a list of tasks to be completed in correspondence to the Gateway Greening Plan Analysis Profile provided by the client.

1. Phase 1

1.1 – 1.5 serve B. Feasibility Analysis 1a Space between Structures (excluding streets)

1.1. Conduct literature review to study relevant research methods for the measurement of feasible land spaces and landscape settings for urban greening efforts
1.2. Review appropriate precedents of research and planning and design documents centered on the identification, measurement and evaluation of land space and landscape settings for future green spaces, especially in highly disturbed urban areas.
1.3. Conduct data mining to identify sources of available public/private data that are appropriate for the measurement of land cover, land uses, and landscape settings related to the focuses of the Gateway Greening Plan. See appendix 2 for a preliminary list of data sources.

1.4. Collect available geospatial data in both Vector and Raster formats, such as regional street network and high resolution orthoimagery, from a wide variety of data sources, including LAR-IAC, for the measurement of feasible green spaces in the Gateway City study area.
1.5. Build a geodatabase of available raw data for the measurement of feasible green spaces in the Gateway City study area.

1.6 – 1.10 serve B. Feasibility Analysis 1b Space between Structures : Streets

1.6. Develop GIS/Remote Sensing procedures and tools to measure the width and area of right of ways in-between properties on both sides of transit corridors in the Gateway City study area.
1.7. Measure width and area of right of way right of ways in-between properties on both sides of transit corridors in the Gateway City study area.
1.8. Create deliverable GIS layer (line) containing right of way width and area attributes for the Gateway City Study area.
1.9. Develop GIS/Remote Sensing procedures and tools to measure street width (for traffic), sidewalk width (for pedestrian) respectively using LAR-IAC 4 LiDAR data along with other available GIS/remote sensing data.
1.10. Measure the street width (for traffic), sidewalk width (for pedestrian) respectively using LAR-IAC4 LiDAR data along with other GIS/remote sensing data in the Gateway City study area.
1.11. Create preliminary deliverables GIS layer (line) containing street width (for traffic) and sidewalk width (for pedestrian) for the Gateway City Study area where LAR-IAC 4 LiDAR data is available.

1.12 serve C. Outcome Assessment 1. Water Calculation

1.12. Collect and download required data, test and compare available storm water assessment computer programs such as the EPA Stormwater Management Module (SWMM), Modflow (Surface Model) with Green-Ampt (infiltration model), GSFLOW (USGS groundwater and surface flow model), Infoworks (ICM), and identify the strengths and weaknesses of them.

1.13-1.17. serve Item C. Outcome Assessment 3. Greening

1.13. Collect a GIS inventory of existing parks and open spaces from existing public data sources.
1.14. Develop a priority system for potential (not currently existing) green space.
1.15. Collect a GIS inventory for potential green space such as vacant land, public land, utility easements, land uses conductive to greening options, e.g., parking lots, and Transit Station Areas and Park & Ride Lots (Metro Opportunity Analysis).
1.16. Identify and measure additional space opportunity for greening practice in different land use types other than transit right of way, for instance pocket areas, silver areas that currently not dedicated to specific usages and functions.
1.17. Create deliverable GIS layer for additional transformable space for greening practice in the Gateway City Study Area.

2. Phase 2

Phase 2 is dependent on the following conditions:

b) LAR-IAC4 LiDAR data to be provided by the client in digital format.
c) Availability of near infrared remote sensing or airborne imagery either through data purchased from DigitalGlobe or LARIAC 5 membership. Currently Cal Poly Pomona has not signed up for the LARIAC 5 program, neither has secured any funding for DigitalGlobe data. The client may need to invest in data cost if such scope of work will be pursued.
d) Resolution of source data may limit the technical possibility to detect and measure certain characteristics described below. Data outputs will be limited by the resolution of the raw data input.

2.1 – 2.9 serve B. Feasibility Analysis 1b Space between Structures: Streets

2.1. Improve the measurement of the street width (for traffic), sidewalk width (for pedestrian) respectively using LAR-IAC4 LiDAR data along with other GIS/remote sensing data in the Gateway City study area.
2.2. Create updated deliverable GIS layers (line) containing street width (for traffic) and sidewalk width (for pedestrian) for the entire Gateway City Study area.
2.3. Develop GIS/Remote Sensing procedure and tools to measure the number of lanes on streets using high-resolution orthoimagery, LiDAR data, and supplementary GIS and attribute data.
2.4. Measure the number of lanes on streets using high-resolution orthoimagery, LiDAR data and supplementary GIS and attribute data.
2.5. Create deliverables GIS layers (line) containing the number of street lanes for the entire Gateway City Study area.
2.6. Measure available street space for urban greening effort using above-mentioned street data extracted.
2.7. Develop GIS/Remote Sensing procedures and tools to measure additional characteristics, such as curb ramps, parkways, medians, and islands, of right of ways between boundaries of properties on both sides of transit corridors in the Gateway City study area.
2.8. Measure additional characteristics, such as curb ramps, parkways, medians, and islands, of right of ways between boundaries of properties on both sides of transit corridors in the Gateway City study area.
2.9. Create deliverable GIS layers measuring additional characteristics such as curb ramps, parkways, medians, and islands of right of way between boundaries of properties on both sides of transit corridors in the Gateway City study area.

2.10 – 2.11 serve C. Outcome Assessment 2. Mobility

2.10. Build a geodatabase to support digital auditing with the following data related for active mobility assessment: Land Use, public transit stops, and places to walk and bicycle.

2.11. Provide technical guidance and assistance on the "connectivity-suitability landscape model", application examples can be found in the 606 CCRC, Re:imagine Garden Grove, and GRASSII projects, Department of Landscape Architecture, Cal Poly Pomona.

2.12 serves C. Outcome Assessment 4. DAC Impacted by Greening

2.12. Provide recommendations on criteria development toward community input for the Gateway Greening plan.

Client Responsibilities

1. WCA staffs will provide necessary assistance in identifying and acquiring data from public/private data sources especially those that are only accessible and available to WCA and its collaborating agencies and organizations.
2. WCA staffs will respond to questions and meeting requests in a timely manner.
3. WCA staffs will attend at least two meetings during the entire project progress. Meeting schedules and agenda are TBA.
4. WCA staffs will provide necessary updates on the progress and timelines of the Gateway Greening Plan.
5. WCA staffs will provide timely feedback and comment in written format on project outcomes and deliverables within two weeks of the submissions.

Project Deliverables

1. **Phase 1 deliverables:**
    a. Traffic Corridor Right of way (between property boundaries on both side of the corridor) width and area attributes stored in a street layer inside a geodatabase for the Gateway City Study area.
    b. Preliminary street width (for traffic) and sidewalk width (for pedestrian) stored in a street layer inside a geodatabase for the Gateway City Study area where LAR-IAC4 LiDAR data is available.
    c. A geodatabase containing the following layers for active mobility assessment: Land Use, public transit stops, and places to walk and bicycle.
    d. A geodatabase containing the following layers for green space opportunities assessment:
    existing park and open spaces as measured by public data sources, vacant land, public land, utilities easements, parking lots, Transit Station Areas and Park & Ride Lots, and additional left over spaces currently not dedicated to specific usages and functions.
    e. A technical report covering the methods, procedures and tools developed and applied in stage 1 activities and the comparable study on selected storm water assessment computer programs.
2. **Phase 2 deliverables:**
    a. Street width (for traffic) and sidewalk width (for pedestrian) stored in a street layer for the entire Gateway City Study area.

b. Street lanes (number) attribute data stored in a street layer for the entire Gateway City Study area.
c. GIS layers measuring additional characteristics such as curb ramps, parkways, medians, and islands, of right of way between boundaries of properties on both sides of transit corridors in the Gateway City study area.
d. A technical report covering the methods, procedures and tools developed and applied in stage 2 activities.

Timeline:

The following timeline is developed based on goodwill and estimation. It is both parties' common goal and interest in meeting such timeline. The PI and the client agree to communicate at a monthly basis to update each other about their progress and the timeline may be adjusted due to unexpected conditions such as delay of data provision etc.

Phase 1: Summer 2017 (September 1st, 2017)
Phase 2: Winter 2018 (January 1st 2018)

Technology and Software

Technologies applied in this project include but not limited to geospatial data integration, Geo-processing, spatial analyst, spatial modeling, 3D analyst, and object-based imagery processing and classification (see Appendix 3).

Major computer software used include ESRI ArcGIS 10.x package and Trimble eCognition Developer 9.1 and so on.

Inclusions

The study area is defined by the shapefile boundary provided by the Watershed Conservation Authority. See Appendix 1 for details. Unless otherwise specified, the geographic regions of the data deliverables will be defined by the Gateway Greening Plan Boundary.

While there is no cost for certain LARIAC data and software licenses listed in the budget, such cost existed and were covered by the PI's other funding costs.

As of August 25, 2016, the client has agreed to provide the LAR-IAC 4 LiDAR data for the usage in the project and the PI agrees to limit the usage of the data only in this project.

Exclusions:

The scope of work does not include any manual digitizing work related to the transformation of data from plans, planning and other types of technical documents that are in hard copy or pdf formats. If such work is necessary, the client will provide manpower

to complete the task or provide additional funding for hiring research assistants to work on such tasks.

The scope of work provides research and data support for the feasibility assessment but does not include the carryout of feasibility assessment.

The quality and accuracy of geospatial data generated through the contracted effort are dependent on the quality and accuracy of original raw data, which are either provided by the client or obtained from public data sources. The client understands the limitation of available data and uncertainty involved in them.

No hardcopy report or deliverables will be provided. All deliverables will be in digital formats delivered through the Internet. No source copy will be provided for those data items, usage rights of which are limited to Cal Poly Pomona due to data, software and hardware license restriction.

PI Profiles:

Dr. Weimin Li, ASLA, Associate Professor of Landscape Architecture at California State Polytechnic University, Pomona. Dr. Li specializes in advanced geospatial technologies e.g., geospatial data integration, geospatial analysis, geo-processing modeling, high-resolution remote sensing imagery processing and 3D landscape construction, and their application in a wide range of landscape design and planning practice, a.k.a. geodesign. In addition to geodesign, Dr. Li also researches the environmental and social impacts of contemporary landscape design and planning on different dimensions of sustainability and quality of life in urban settings, including storm water management, urban green space, wildlife habitat conservation, multimodal transportation, neighborhood safety, public health, and environmental justice. Dr. Li's teaching echoes her research interests and includes introductory and advanced GIS, intermediate landscape design, environmental analysis and advanced eco-systematic landscape design. Dr. Li has a B.S. in Urban and Resource Planning, a M.S. in Physical Geography, and a Ph.D. in Landscape Architecture and Environmental Planning from University of California at Berkeley. For more information about Dr. Li, go to URL: https://env.cpp.edu/la/faculty/weimin-li

Budget

Contract Type: Cost reimbursable
Dates of Contract: October 1st, 2016 to December 30th, 2017
Scope of work: Research consulting and technical data service
Deliverables: GIS data (in Geodatabase or other GIS formats) and Project Report (in pdf format)

Phase 1 and Phase 2 Budget
Budget below was developed for phase 1 and 2. A new budget will be developed accordingly if the phases currently listed are modified and updated.

Personnel: Principal Investigator summer salary	Dr. Weimin Li or approved alternate faculty (professional rate, landscape architecture principal $12,000/work month or $75/hour)	Divided between Summer 2016 and Fall 2017 including fringe	$24,000 (320 hours) (The total hours are based on the estimated hours for each tasks listed on the scope of work)
Total Salaries		**Including fringe**	**$24,000**
Indirect CPP 15% Indirect Rate	On salaries only	15%	$3,600
Contingency			$2,760
Total			**$30,360**

Appendix 1 Gateway Cities and Rivers Urban Greening Master Plan Study Area


Legend
Gateway Cities Study Area

Appendix 2 Potential Raw Data List

The list is a preliminary collection and will be updated once the project is officially started.

Item No.	Data Name	Format	Source	Availability
1	Parking Lot Boundaries 2014	Vector	LARIAC	YES
2	Zoning and Land Use	Vector	LA County GIS	YES
3	Land Types (Public Domain)	Vector	LA County GIS	YES
4	Assessor Parcels - 2015	Vector	LA County GIS	YES
5	Gateway City Boundary	Vector	WCA	YES
6	CAMS data (Street and Address)	Vector	LA County GIS	YES
7	Buildings Outline – 2014	Vector	LA County GIS	YES
8	Trial LiDAR	Vector	LARIAC 4	YES
9	LiDAR (Covering the entire study area)	Vector	LARIAC 4	to be provided by the client
10	Detailed Street Type (Classification)	Vector	N/A	NO
11	Metro's Active Transportation Strategic Plan (ATSP)	Vector	WCA	YES/NO?
12	Gateway Cities Strategic Transportation Plan (STP)	Vector	WCA	YES/NO?
13	Metro GIS Data	Vector	LAC Metro	YES
14	High Resolution Aerial Imagery 2014	Raster	LARIAC	YES
15	Oblique Imagery 2014	Raster	LARIAC	YES
16	LiDAR DSM (10 feet)	Raster	USGS	YES
17	Tree Cover	Raster	LARIAC	YES
18	Others			

Appendix 3 Measuring Detailed Urban Vegetation with Multi-source High-Resolution Remote Sensing Imagery for Environmental Design and Planning

Measuring Detailed Urban Vegetation with Multi-source High-Resolution Remote Sensing Imagery for Environmental Design and Planning *

Weimin Li[1], John Radke[2], Desheng Liu[3], and Peng Gong[4]

June 25, 2011

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*This research was funded by the Beatrix Farrand Research Fund, University of California at Berkeley and the National Science Foundation research grant DEB 04-21530, USA.

Abstract

The availability of high resolution remote sensing imagery brings both opportunity and challenge to environmental designers and planners in obtaining high quality landscape information for better design and planning decision-making. To meet the challenge, this paper introduces a comprehensive approach to measuring urban vegetation data detailed to single patches of trees or shrubs and single patches of lawn or grass with multi-soure remote sensing imageries. Methodologically, the approach integrates advanced geospatial technologies to achieve the research objective. First, an automatic registration algorithm is applied to align an unorthorectificed QuickBird multi-spectral imagery to a high resolution USGS orthoimage. Next, an image segmentation process extracts landscape objects from such multi-source data for further object-based image classification. Third, the approach takes advantage of the strong power of a group of prioritized spectral, geometric, topological, and thematic image object features to produce satisfactory classification results. The approach was tested in the Oakland metropolitan area in California, USA and was assessed with both groundtruthing and imagetruthing data. The paper concludes with a discussion on the potential applications of both the approach and the generated data in environmental design and planning.

8.1 GREEN NETWORK

Figure 8.1-3 CCRC project analysis sequence

The final green network and recommendations are the result of a comprehensive analysis. The major factors for network connections were existing and proposed infrastructure, preferred destinations, and the project program. These factors were processed through layering and modeling in a sequence that directly produced the final green network (Figures 8.1-3 and 8.1-4).

Existing and Planned Network

Current and planned trails were digitized and combined with road infrastructure and creek rights-of-way to create a baseline network for modeling. Unincorporated communities and areas beyond creek-adjacent communities were also considered through an analysis of Los Angeles County regional bike and trail plans. The extents, space, and speed limitations of potential corridors were also considered.

Destinations

Destinations were inventoried and prioritized using the project goals and program. Areas with the highest concentrations of preferred destinations were prioritized during modeling to generate the preliminary baseline network.

Alternatives

Alternatives ran the same network suitability model used to generate the preliminary baseline network. Different sets of internal connection points were grouped and linked to assure maximum coverage of issues identified as important to stakeholders and communities. These results were layered with the preliminary baseline network and program to create the revised baseline network.

Program

The analysis model results were prioritized through a comparison with program findings. In addition, inventory and the program informed infrastructure requirements, destination prioritization, and the alternatives. Stakeholder feedback, community surveys, CCRC group interpretation, and project goals were also considered.

Synthesis

The revised baseline network and program were combined in the project synthesis. This included determining the extents of corridors selected to balance and facilitate safety and accessibility with direct access to major destinations. Corridors perceived to be unsafe or more difficult to traverse were eliminated, and those that were most direct and had the highest ratings were adopted. Additional connections with the wider area and open space were also considered. The result was the final green network.

NETWORK SYNTHESIS

Figure 8.1-4 CCRC project synthesis

NETWORK CONNECTIONS

The CCRC project is concerned with connectivity and green network creation. Through the project process some of the creek corridors and many other areas were found to be important in terms of meeting project goals and supporting community interests. The major corridors maximize access to planned local connections through communities (Figure 8.1-9), as well as interface with the most important and most frequently visited destinations.

At project inception, major creek corridors and rights-of-way were conceived as linear spaces with potential for linking communities as well as addressing social and environmental issues. These were the stakeholder-driven basis for project exploration. However, through inventory, community outreach, and analysis, the CCRC group recognized that not all creek corridors were suitable. Other corridors were identified to maximize local connections found to be most significant for community interest.

The proposed corridors were selected for optimal access to existing and planned city and county trails and bikeways (Figure 8.1-9). A focus on improving safe access between these and future developments is key to facilitating efficient and equitable circulation. Major destinations that also drove network selection included regional parks and open space access (Figure 8.1-5), creek and existing trail access (Figure 8.1-6), downtowns, civic spaces, services (Figure 8.1-7), and transit hubs (Figure 8.1-8).

Figure 8.1-5 Skyline-Antonovich Trail through Schabarum Regional Park

Figure 8.1-6 Skyline-Antonovich Trail along San Jose Creek in the City of Industry

Figure 8.1-7 Downtown Covina

Figure 8.1-8 Pomona Metrolink Station

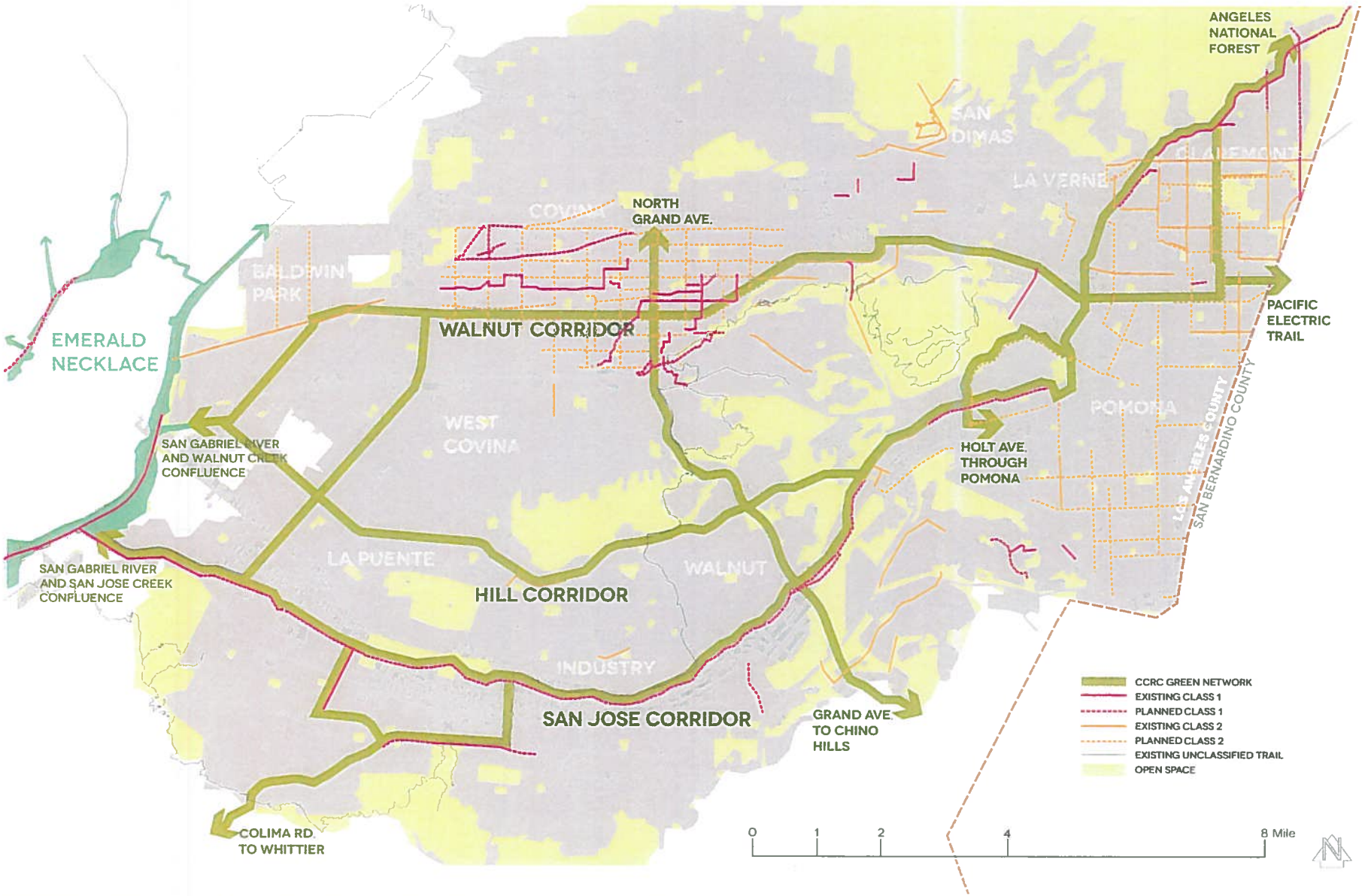

Figure 8.1-9 CCRC final green network with currently existing and planned trails and bikeways

September 15, 2016 - Item 14

RESOLUTION 2016-36

RESOLUTION TO AWARD A CONTRACT TO THE CAL POLY POMONA FOUNDATION, TO SECURE PROFESSIONAL SERVICES OF DR. WEIMIN LI, TO PERFORM GEOSPATIAL ANALYSES CONSULTATION FOR THE GATEWAY CITIES AND RIVERS URBAN GREENING MASTER PLAN

WHEREAS, the Watershed Conservation Authority (WCA) has been established as a joint powers agency between the Rivers and Mountains Conservancy and the Los Angeles County Flood Control District; and

WHEREAS, the Watershed Conservation Authority (WCA) has further been established to focus on projects which will provide open space, habitat restoration, and watershed improvement projects in both the San Gabriel and Lower Los Angeles Rivers watershed; and

WHEREAS, this action will approve the WCA entering into a sole source contract to secure professional services of Dr. Weimin Li, to perform geospatial analyses consultation for the Gateway Cities and Rivers Urban Greening Master Plan; and

WHEREAS, the proposed action is exempt from the provisions of the California Environmental Quality Act (CEQA); NOW

Therefore be it resolved that the WCA hereby:

1. **FINDS** that this action is consistent with the purposes and objectives of the WCA.
2. **FINDS** that the actions contemplated by this resolution are exempt from the environmental impact report requirements of the California Environmental Quality Act (CEQA).
3. **ADOPTS** the staff report dated September 15, 2016.
4. **APPROVES** a sole source contract with the Cal Poly Pomona Foundation in an amount not to exceed $30,360 to secure professional services of Dr. Weimin Li, to perform geospatial analyses consultation for the Gateway Cities and Rivers Urban Greening Master Plan.

~ End of Resolution ~

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Motion: _____ Second: _____

Ayes: _____ Nays: _____ Abstentions: _____

Resolution 2016-36

Passed and Adopted by the Board of the
WATERSHED CONSERVATION AUTHORITY
On September 15, 2016

_____
Brian Mejia, Chairperson

ATTEST:_____
Terry Fujimoto
Deputy Attorney General