

# GIS and the City of San Diego

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NR/RIR

## REQUEST FOR PROPOSAL (RFP)

**FOR**

**STREET LIGHT CONVERSION PROJECT DESIGN-  
BUILD CONTRACT**

SPECIFICATION NO.: 5235DB

IO NO.: 21002317

CLIENT DEPARTMENT: 2115

PROJECT TYPE: IH



35,311 cobra head streetlights out of total of 50,000. Converting HPS and LPS to Induction.  
City of SD 300 something square miles.



## ***Evvari GIS Consulting***

- As-needed GIS Support
- We specialize in 3 Core Competencies
  - Cartography & Regulatory Support
    - Biologists, environmental planners, geologists, expert witness testimony, soil remediation
  - CAD standards and CAD/GIS integration
    - Enabling CAD users to work better together and use GIS as a way to share CAD linework
  - Enterprise Solutions
    - Enabling non-GIS professionals to update GIS data

A day, a few days, a week, a month, on a project basis.

# Try it out during this Presentation

## How to Use

- You must have Windows Phone, Android, iOS device (iPad or iPhone)
- Download Esri app from your respective store
- Log in as:
  - evari\_client
  - evari
- Group “Evari GIS Consulting”
- StreetLight Playground

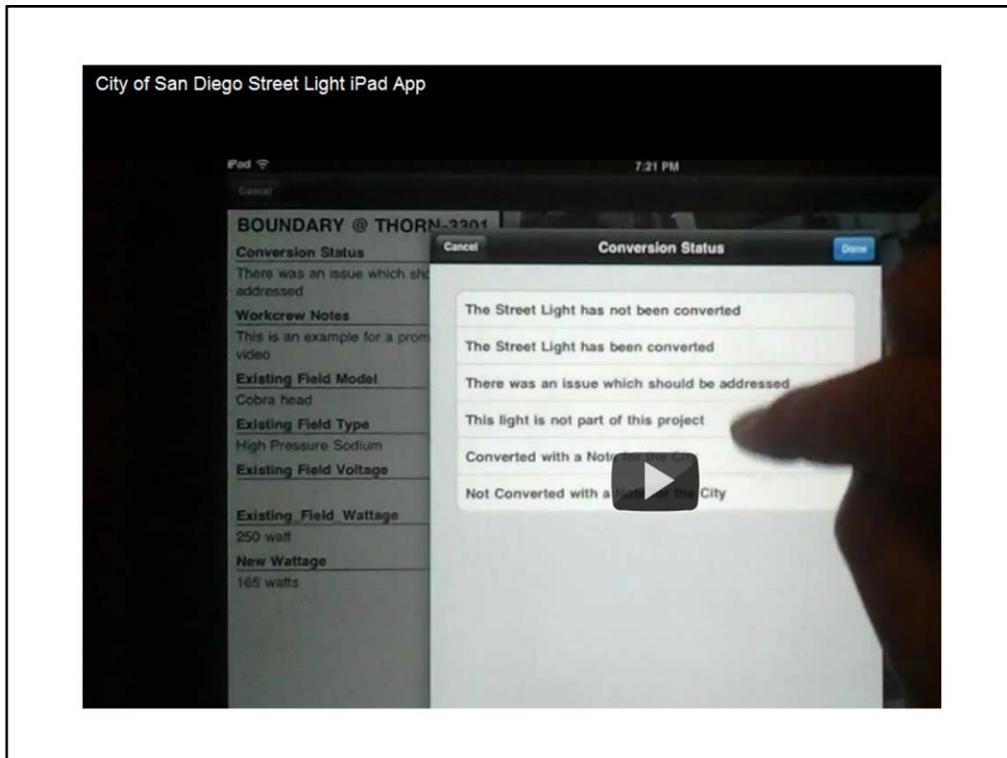
## System Architecture

- Running in Amazon Cloud. Northern California Region. Windows Server 2008 R2.
- Uses Esri ArcGIS Server 10.0 Service Pack 2 (May 2011). Standard Workgroup. (SqlServer Express limitation: 10 concurrent editors)
  - Verizon 4gLTE cards
  - Apple iPad 2 (restrictions enabled)

This is going to be a bit interactive.

If you want to try out the app we have set up an area where you can try this out.

Evari\_client login will only work when environment is turned on. Contact us if you want it on to show.

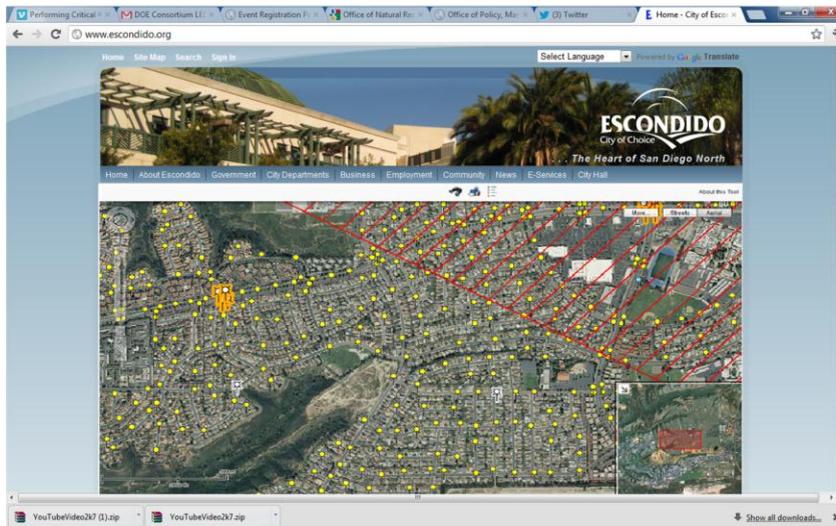


In the field, the prime workcrew (not GIS folks, not IT folks, not engineers) are collecting data about each light.

Collect information about MODEL , EXISTING TYPE , EXISTING WATTAGE, EXISTING VOLTAGE, NEW TYPE, NEW WATTAGE, NEW CCT. They write freehand notes about each light and associate pictures with each light. Their not only editing data about points. They are moving, adding and delete points.

User Interface Video: <http://www.youtube.com/watch?v=hznMLqzeW0Q>

# “Public” read-only Flash Website



This website is hosted by Evari GIS Consulting. There is no reason it can't be hosted at- City of Escondido website: for example. Evari can handle the mapping service and interface with the contractor. The municipality could manage the web application.

<http://50.18.177.135/southernwebmap/> - only available during working hours. Real time. Production environment.

Promotional streetlight video: [http://www.youtube.com/watch?v=B6jVqJ3E0\\_w](http://www.youtube.com/watch?v=B6jVqJ3E0_w)

# Reconciling SDGE Data

- 3 original Data Sources
  - Street\_Light data from SanGIS/SanDag (EquiptID)
  - Table from the City (EquiptID)
  - Table from SDGE (Textual description: BRENTWOOD ST @ BURBANK ST @ CRV E/S)
    - Using custom Excel Macros manipulated text to locate intersection
      - “Brentwood Street & Burbank Street, San Diego, California”
    - GeoCoded intersections using 10.0 US Streets Geocode Service + manually addressing unmatched intersections using review/rematch.
    - Labeled as original description and manually moved point onto City Point (snapping)
    - Spatial Join

A bit more to it but this is the basic workflow.

All this is going on while workcrews are editing the feature service through iPads = truly “enterprise” system

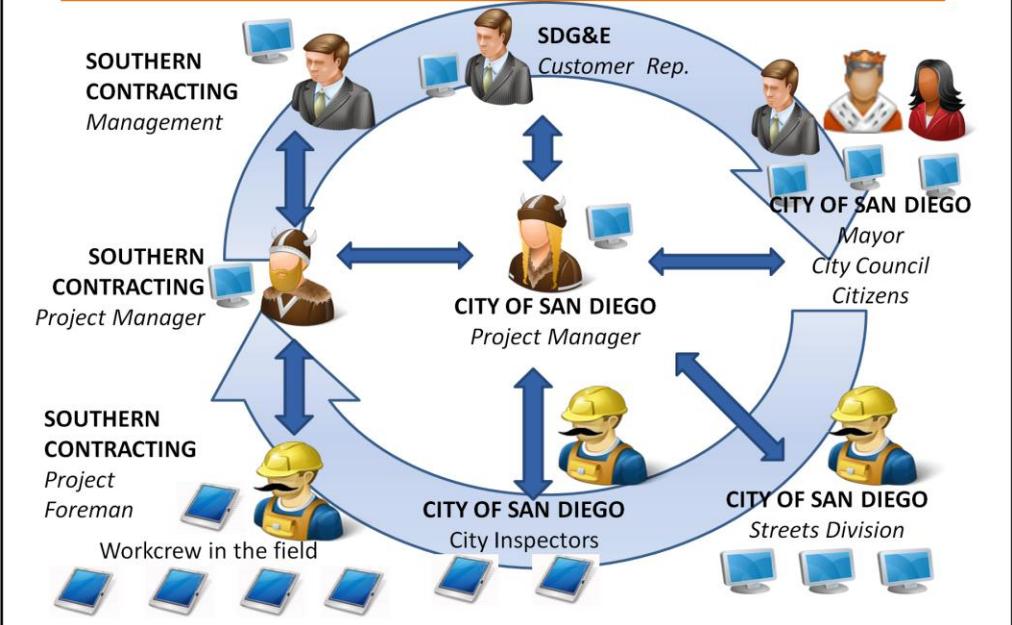
# Get the Converted Street Light Paid

GIS\SQL Speak: When Conversion Status = Converted

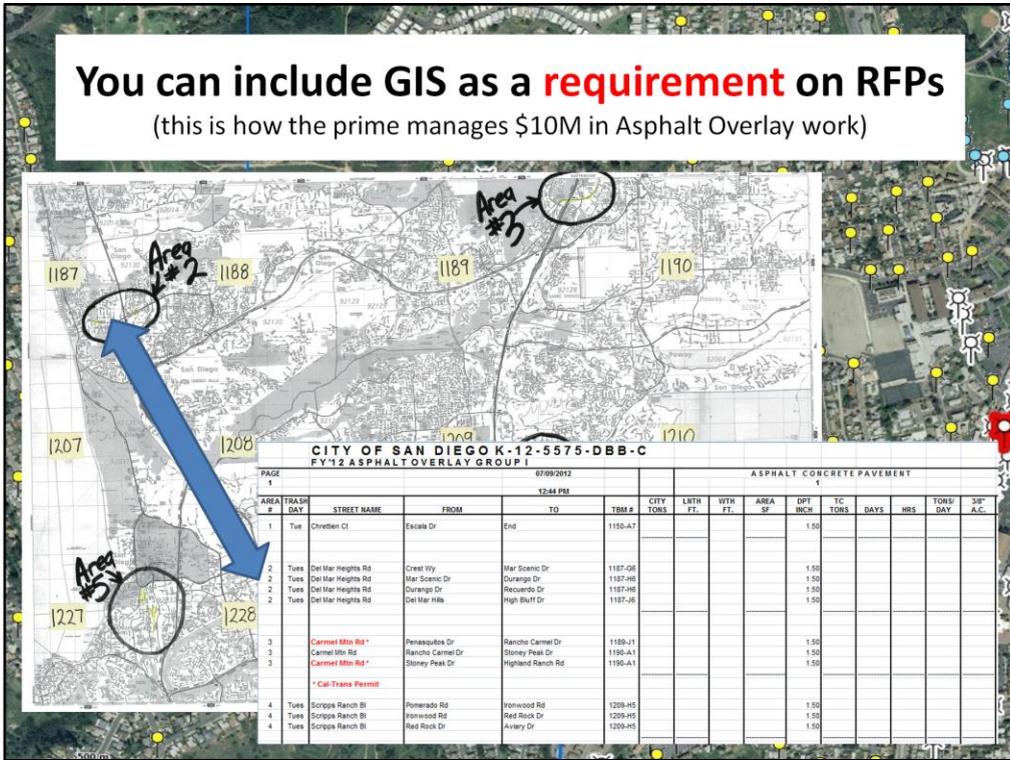
- **Required Items**
  - SDGE SL (unique) ★
  - SDGE LOCATION DESCRIPTION ★
  - EQUIP ID (unique) ★
  - CITY SAP-ID ★
  - CITY LOCATION DESCRIPTION ★
  - EXISTING FIELD MODEL ★
  - EXISTING FIELD TYPE ★
  - EXISTING FIELD WATTAGE ★
  - EXISTING FIELD VOLTAGE ★
  - NEW TYPE ★
- **Optional Items**
  - NEW WATTAGE ★
  - NEW CCT ★
  - DATE OF CONVERSION ★
  - Contractor Invoice #
  - POINT\_X ★
  - POINT\_Y ★
  - Notes ★
  - Pictures ★

- 1) Blue Stars – Collected by field crews through the iPad
- 2) Orange – City data given to us at the beginning of the project
- 3) Green – Sdge data
- 4) Red- Batch files and geoprocessing services

# Stakeholder Benefits



You can include GIS as a **requirement** on RFPs  
 (this is how the prime manages \$10M in Asphalt Overlay work)



- How would this process work without GIS? Stack of papers. These are your lights for the day. Papers would be filled out and someone in the office would create a spreadsheet with which lights have been converted.
- This is how \$10M in asphalt overlay is being managed by the prime.
  - Highlighted road segments
  - photocopied and rectified Thomas Brothers pages
  - Post it notes with TB page numbers
  - Areas identified and spreadsheet with questionable width and length data. Cul-de-sacs ect.
- 1% of this job is \$100,000. The prime could have a great GIS program for that.
- Already investing money in solving these issues.
- Evri can make the sale to benefit the contractor, but it is hard if GIS is not identified in RFP.
- Municipality won't benefit.



**Final Thoughts and Questions?**

**Contact us**

***Evari GIS Consulting***

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858.633.6447

***“Evari Makes GIS Easy”***

We are eager to help you make the case to construction managers.

I worked at the Port for 4 years. No one came to Malcolm and I and said, “we are doing a regional fiber project, are you interested in using GIS to help manage the workflow/troubleshoot problems/create a common operational picture.”