

# CITY OF ENCINITAS

## INFRASTRUCTURE NEEDS & FUTURE PROJECTS

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# AGENDA

- 1. Intro IT Overview**
- 2. Software Assets - Software and Geographic Information Systems (GIS)**
- 3. Fiber Infrastructure**
- 4. Cybersecurity Initiatives**

# **INFORMATION TECHNOLOGY OVERVIEW**

# MISSION STATEMENT

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**To provide innovative and secure technical solutions and support that promote efficient delivery of public service to enhance the quality of life for residents, visitors, and our communities.**



## AGENCIES SUPPORTED

- City of Encinitas
- San Dieguito Water District
- San Elijo Joint Powers Authority
- Encinitas Fire
- Del Mar Fire
- Solana Beach Fire

# Information Technology Functional Areas

Business Applications	Operations and Engineering	Multimedia	Cybersecurity
Geographic Information Systems Administration	Network and Data Center Administration	Digital Content Innovation	Cyber Incident Response
Enterprise Resource Planning Application Administration	Help Desk Operations	Website Administration	Risk Mitigation
Business Process Analysis	Emergency Operations	Video Production	Audits and Penetration Testing
Data Analytics	Telephony and Radio Communications	Audio Visual Engineering	Lead Cybersecurity Compliance Committee (C3)
System Integration	Fiber Interconnectivity and Smart City Infrastructure	Knowledge Transfer Outreach	Security Policy Development
Online Customer Service Portal	Capital Project Management	Evolving Communications Using Technology	Cybersecurity Awareness Training
Software Customization	Inventory Management	Public Meeting Broadcasting and Support	Electronic Discovery Forensics
Database Administration			Federal and Regional Cybersecurity Collaboration

# The i-Tree

Applications



What you see on your screen

Operations and Engineering

Often, what you don't see

# SOFTWARE AND ASSET MANAGEMENT



# ENTERPRISE ASSET MANAGEMENT – The Role of Software

## ENTERPRISE FIXED ASSETS – PROJECT BUDGET \$109,000

- Software plays a key role:
  - Maintenance tracking /condition
  - Physical location 'mapping'
  - Financial Reporting
- Software ages out:
  - Rapid change in technology
  - Isolated system
  - No longer secure
- Processes become out-of-date
- What has worked in the past:
  - May not be best fit for future
  - Best Practices evolve along with technology

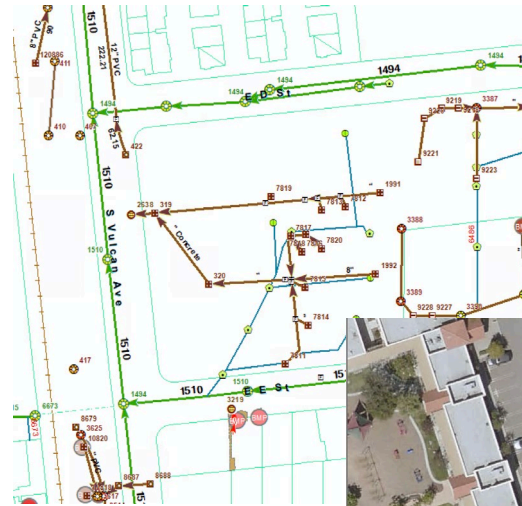


# ENTERPRISE ASSET MANAGEMENT – The Role of GIS

## GIS = Geographic Information System

- GIS:
  - Land Assets – easements
    - Ongoing mapping effort
  - Precise locations 'all' assets
  - Comprehensive inventory
  - Over 141 layers of infrastructure
    - Ongoing maintenance \$
  - GIS data supportive role
    - NASCCO\* rating values
    - Industry standard codes
  - GIS vital visualization tool, example:
    - Road Pavement Condition
    - Pipe condition

\*NASCCO = National Association of Sewer Service Companies



Sewer and Storm  
Drain Infrastructure  
GIS Layers

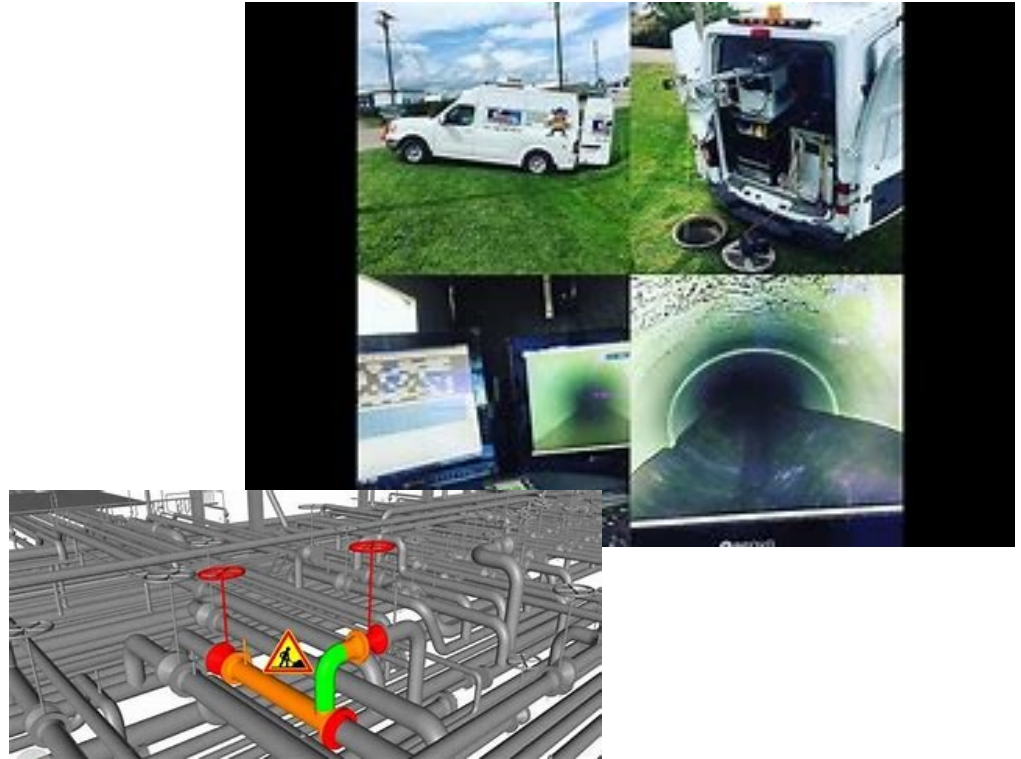


Sewer Pipe within Sewer Easement

# ENTERPRISE ASSET MANAGEMENT – Multi-year effort

## ENTERPRISE ASSET MANAGEMENT

- FY24 \$109,000 (Year 1)
  - Software & Hardware
  - Identify Ongoing Needs and System Improvements
- Year 1 Goals
  - Discovery
  - Immediate Priorities
  - Review across enterprise
  - Identify Best Practices
- Future
  - Modern
  - Predictive
  - Dashboard
  - Scenarios
  - Cross Integration



# FIBER INFRASTRUCTURE

# SWAMI'S LIFEGUARD TOWER = \$200K



### CONSTRUCTION NOTES

- TERMINATE AND INSTALL 2" RPE CONDUIT.
- FINISH AND INSTALL 48 FULL BOX PER CALTRANS STANDARD ES-6A. REPAIR EXISTING SIDEWALK IN KIND AS NECESSARY.
- EXISTING ORIGINATOR FULL BOX. FINISH AND INSTALL 48 FULL BOX PER CALTRANS STANDARD ES-6A.
- TERMINATE AND INSTALL 1/2" STRAND FIBER. WELDED EPIC. AND TRAPEZ EPIC.
- FINISH AND INSTALL UNPOLISHED AND PERFORM UNPOLISH PER FIBER UNPOLISH DRAWING. COIL 20' OF NEW FIBER. TEST AND DOCUMENT CABLE AND ALL SPLICES.
- FINISH AND INSTALL 1/2" WELDED EPIC. FIBER DISTRIBUTION UNIT IN LIFEGUARD TOWER AND TERMINATE EXISTING 1/2" STRAND FIBER. TEST AND DOCUMENT CABLE AND ALL SPLICES.

## PROJECT BUDGET \$200,000

Design: Complete

Integrate Swami's Lifeguard Tower with existing fiber optic connection at Encinitas Blvd. and F St.

Replace wireless connection for Traffic Control Box at Swami's/Santa Fe Ped Xing



# STREETSCAPE – B ST. to LA COSTA= \$200K



## PROJECT BUDGET \$200,000

Conduit & pullbox installation included in initial construction phases

Fiber optic cable installation and termination still needed

Replaces wireless connections for Traffic Control Boxes at Leucadia and La Costa

Connectivity points for future fiber splices and tech projects

# GRANDVIEW LIFEGUARD TOWER = \$250K



## PROJECT BUDGET \$250,000

- 0% Design
- Prerequisite - Streetscape Fiber complete
- Provides computer and phone connectivity for Marine Safety staff



# CYBERSECURITY INITIATIVES

# ZERO TRUST ARCHITECTURE = \$200K



## PROJECT BUDGET \$200,000

Hybrid workforce security -  
Expands security beyond the  
network perimeter

Continuous authentication and  
verification

Large professional services  
overhead while permission levels  
are reviewed and planned

# FUTURE SECURITY CONTROLS = \$50K - \$100K Annually



## PROJECT BUDGET \$50,000 - \$100,000

Increased funding for new security tools each year

Threats are increasing in scope, quantity, and complexity

Increased use of Automation in security tools

Partnerships with other SOCs, CISOs, and Security teams

Training and Incident Response Exercises

**QUESTIONS?**