



# Small Cell Deployments in Roseville – An Exciting New Frontier in Wireless Technology

# Background

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- 4.5B cell phone users worldwide
- 90+% of Americans own a cell phone
- Unprecedented demand for wireless network service - 5G is coming
- Wireless Carriers retain utility status, therefore, by law, have access to the public right of way
- Local Government cannot prohibit but do retain control over some aspects such as location, aesthetics and permit process

# What is a Small Cell?

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- “Small cell” is a broad term for low-powered wireless network equipment
- Part of 5<sup>th</sup> Generation (5G) of mobile communication technology
- Used to support emerging technology such as driverless cars and smart city technology
- 10x faster than today’s 4G technology
- Limited capacity and coverage area

# Small Cell Project Background

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- In 2017, the City contracted with XG Communities to develop a small cell program to prepare for small cell implementations
- In April, the City Council adopted a lease rate of \$150 per month per attachment to City assets
- City Council approved two Ordinances regulating small cells
  - Public Facilities Ordinance
  - Private Facilities in the right of way
- To start, City will only allow small cell attachments to arterial road streetlights









Verizon Mico-Cell in Sacramento



AT&T Pico-Cell in Sacramento





T-Mobile Small Cell in Sacramento



Sprint Small Cell in Sacramento





Verizon 5G Site in Sacramento

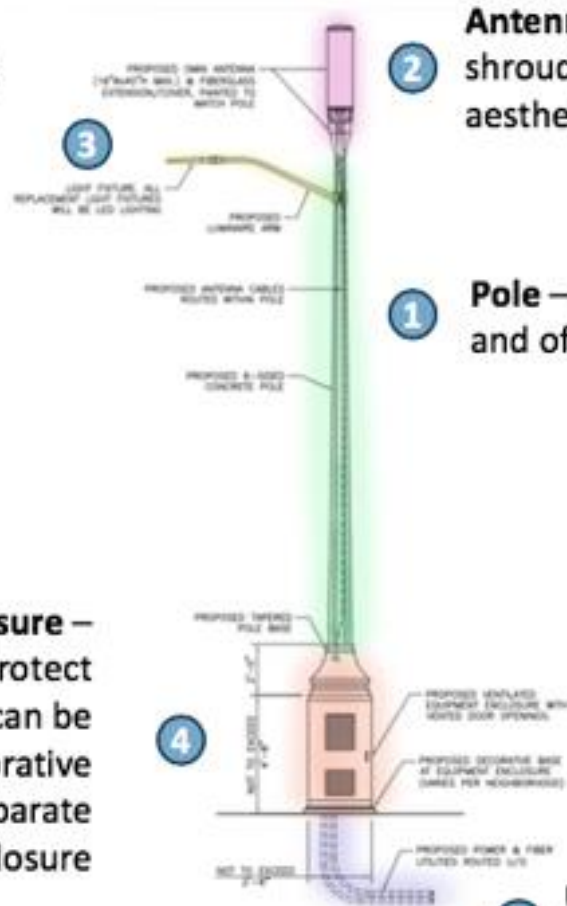


Small Cell attached to Traffic Control Pole  
in Dana Point

# Illustration of Design Specifications and Components

**Lighting** – refers to both lighting fixtures and luminaire arm (shaft attaching light to pole)

**Equipment Enclosure** – encases equipment to protect and hide it from view; can be concealed in a decorative base, side mount, or separate ground enclosure



**Antenna** – transmits signal; usually shrouded for protection and aesthetics

**Pole** – provides height for broadcasting and often conceals cables

**Utilities Router** – connects to power and backhaul (fiber)

# Benefits of the Small Cell Program

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- Determine existing and forecasted wireless coverage conditions
- Streamlined, reliable small cell implementations
- Establish design and implementation standards
- Minimize planning impacts and aesthetic issues
- Long-term revenues from pole attachment lease rates
- Comply with state and federal regulations
- Provide citizens with better, more reliable wireless service

# Next Steps

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- Finalize application standards and procedures
- Begin taking pole reservations from carriers in Fall 2018
- Accept permits for building/electrical review and approval
- First small cell installations expected by end of 2018



