

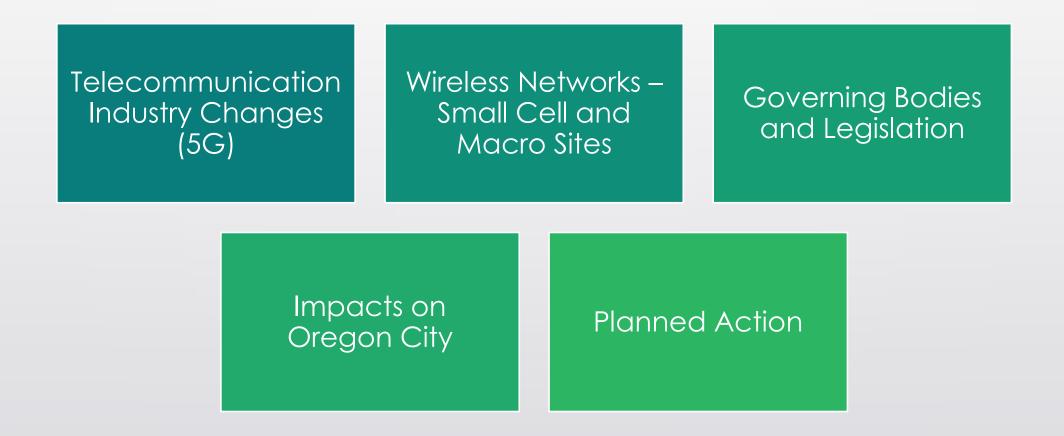
Small Cell Wireless/5G An Oregon City Perspective

Presented by Dante Posadas

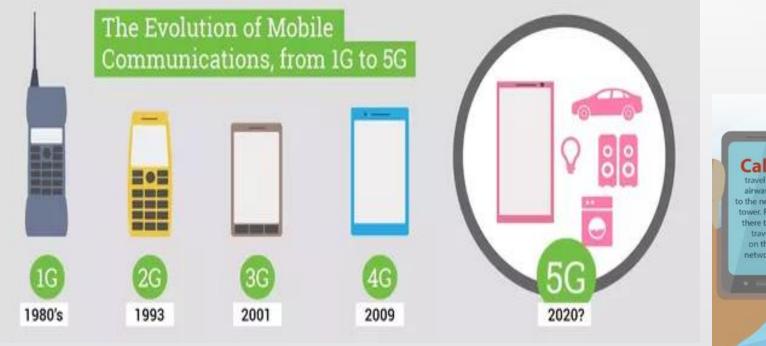
ROW and Construction Services

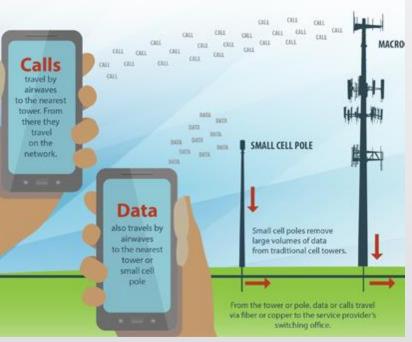
September 19, 2018

Major Points

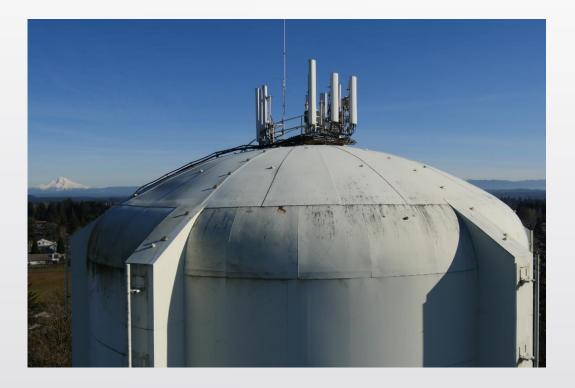


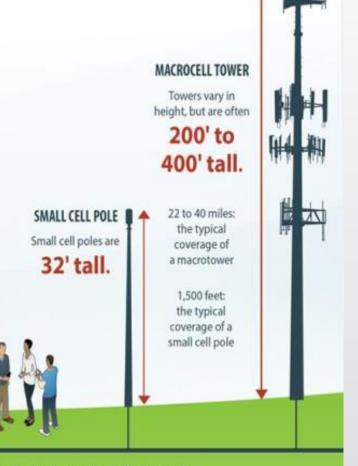
5G Capabilities and Needs





Macro Cells vs. Small Cell





Small cell poles remove data traffic to provide better cell phone service in locations with heavy traffic such as, arenas, theaters and other large gathering venues.

Wireless Network Growth

The Way Oregon Communicates is Changing...

50000 From 2000-2016, Oregon has seen: 4,500,000 235% increase in wireless phone 4,000,000 subscribers¹ 3,500,000 5,960% increase in broadband 3,000,000 subscribers² 2,500,000 66% decrease in switched access lines³ 200000 1,500,000 20% increase in population⁴ 1,000,000 500,000 0 Wireless B road band Wirelne Population 20 00 20 16

1 FCC Local Competition Report May 2001 (as of 12/31/00), Table 9; FCC Voice Telephone Services Report April 2017 (as of 06/30/16), Supplemental Table 1. 2 FCC High-Speed Services for Internet Access: Status as of December 2000 (Table 7); FCC Internet Access Service Report April 2017 (as of 06/30/16), *Connections/lines over 200 Kbps. 3 FCC Local Competition Report May 2001 (as of 12/31/00), For the Voice Telephone Services Report April 2017 (as of 06/30/16), Supplemental Table 1.

5

Wireless Networks in Oregon City

Current ROW users

- AT&T
- Verizon
- Comcast
- CenturyLink

Current Private Property Macro site users

- AT&T
- Verizon
- Sprint
- T-Mobile
- Cricket Wireless



Small Cell Legislation

United States Congress

• June 28, 2018--S.3157-Streamline Small Cell Deployment Act

Federal Communications Commission

- January 31, 2017- Broadband Deployment Advisory
 <u>Committee</u>
- September 5, 2018- Accelerating Wireless Broadband
 deployment

National Conference of State Legislatures

• <u>20 States have enacted legislation</u>

National Governors Association

• July 27, 2018--https://www.nga.org/letters-nga/streamlinesmall-cell-deployment/

National League of Cities

Model code August 2018

National Association of Telecommunication Officers and Advisors







NATIONAL LEAGUE OF CITIES CITIES STRONG TOGETHER

Oregon City Code

Oregon City Municipal Code 13.24 - Telecommunication Facilities

- Permit and manage access to City's ROW
- Fair and reasonable compensation
- Public safety, health and welfare
- Encourage competitive and advancing utility services
- Comply with Oregon City Code, State, and Federal Law

Oregon City Municipal Code 17.80 - Communication Facilities

- Promote maximum utilization and colocation
- Minimal impacts on community, views, and historical areas
- Existing infrastructure use
- Encourage location in non-residential areas

Small Cell Installations



Primary Electricity Distribution

Electrical Transformers

Secondary Electrical or Communications Zone Also known as the "comm zone," which typically features cables used for cable TV, landline telephone, & various fiber-optic cable providers

Cobra Head Streetlight operated by PG&E

Proposed Transmitting & Receiving Antenna

Typically mounted on a sidearm extension either midway down the pole (as shown), or an extension arm directly above the top of the pole.

Equipment Enclosures

Cabinets or radio relay units which provide signal processing, akin to computers, and route power and signals through cables to the antenna(s). These enclosures do not transmit radio-frequency energy into the air around them.

Disconnect Switch

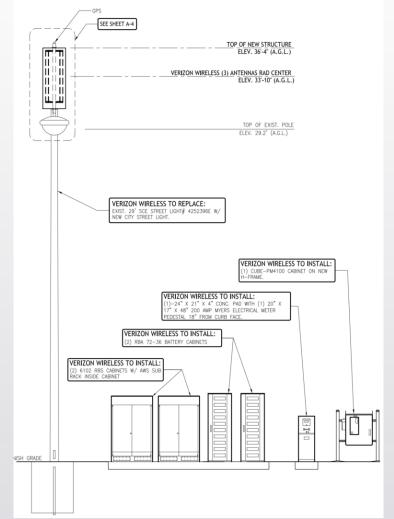
Smaller enclosure which allows line workers, wireless carrier, or emergency responders to shut down power to the antenna.

Electric Meter

Allows electric utility to monitor and bill wireless carrier for electricity usage.

Standards

- Location
- Zoning
- Street classifications
- Infrastructure
- Permissions
- Permits
- Removal





Typical Installations









Portland, Oregon

Antenna Canister

Monopole Shrouded

Usage Fees

Oregon City Current

Communications 5% gross revenue Attachment Fee \$5,000

Other Agency Fees

San Jose, California \$2,600 - \$17,750 annual; 3% annual escalation

<u>Eugene, Oregon</u> \$600 quarterly; 5 yr. term; 3% annual escalation <u>Portland General Electric</u> – Attachment Fee

Oregon City Considerations for Future Fees

Communications 5% Gross Revenue

Attachment Fee

- Municipality Comparison
- Antenna & Ground Equipment Size
- Capacity Output
- Radio Frequency Propagation Maps
- Residential Zone Classification
- Review & Processing Permit Fee

Oregon City – Next Steps 6-12 months

Implement Reasonable, Fair Management of the ROW

Establish Small Cell Code

Establish Small Cell Standards within ROW

Establish Usage Fee Resolution Consistent with Neighboring Oregon Municipalities

Questions?