

# Yolanda

**Santa Rosa City Council**

March 26, 2024

**Aaron DeLaO, Centerline Communications**

**Yvonne Pinto, Verizon Wireless**

**Pablo Sanchez, Verizon Wireless RF Engineer**

**Dave Cotton, Waterford Consultants RF Compliance Expert**

**Paul Albritton, Verizon Legal Counsel**



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# Application Timeline

<b>2020</b>	Verizon Wireless identified a gap in service in southeast Santa Rosa
<b>2020-2022</b>	Investigated multiple alternatives and designs
<b>April 2023</b>	Prepared CUP application
<b>June 19, 2023</b>	City accepted CUP application
<b>November 17, 2023</b>	Notice of Application sent by City
<b>December 1, 2023</b>	Notice of Public Hearing sent by City
<b>December 14, 2023</b>	First Planning Commission hearing, continued
<b>December 28, 2023</b>	First Design Review Board hearing, continued
<b>January 11, 2024</b>	Second Planning Commission hearing - Unanimously Approved by Commission
<b>January 18, 2024</b>	Design Review Board hearing - Unanimously Approved with change to a Monopole
<b>March 26, 2024</b>	City Council hearing

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# Facility Design

- **69-foot tall monopole**
- **Verizon Wireless antennas at 65-foot centerline**
- **Space underneath for collocation of future carrier antennas**
- **Tower and equipment enclosed within a 900-square foot lease area**
- **Lease area enclosed by 6-foot tall chain link fence with tan colored vinyl slats**

# Photosimulations

*Looking South along Colgan Avenue, Near Closest Residence*



# Photosimulations

*Looking Southeast from Santa Rosa Avenue (View requested by City)*



# Photosimulations

*Looking East from Petaluma Hill Road (View requested by City)*



# Complies with FCC Guidelines

- Engineer with Waterford Consultants confirmed that radio frequency exposure will be less than FCC public limit
  - 11.8% at ground level
- Denial based on RF exposure concerns preempted by federal law (47 U.S.C. § 332(c)(7)(B)(iv))



Radio Frequency Emissions Compliance Report for Verizon Wireless			
Site Name:	Yolanda Ave	Site Structure Type:	Monopole
Address:	244 Colgan Avenue Santa Rosa CA, 95404	Latitude:	38.429554
Report Date:	May 18, 2023	Longitude:	-122.711361
		Project:	New Build

**Compliance Statement**  
Based on information provided by Verizon Wireless and predictive modeling, the Yolanda Ave installation proposed by Verizon Wireless will be compliant with Radiofrequency Radiation Exposure Limits of 47 C.F.R. §§ 1.1307(b)(3) and 1.1310. The proposed operation will not expose members of the General Public to hazardous levels of RF energy at ground level or in adjacent buildings. As predicted, RF power densities will not exceed the FCC General Population limits, no mitigation action other than restricting access to the tower is required to achieve or maintain compliance.

**Certification**  
I, David C. Cotton, Jr., am the reviewer and approver of this report and am fully aware of and familiar with the Rules and Regulations of both the Federal Communications Commissions (FCC) and the Occupational Safety and Health Administration (OSHA) with regard to Human Exposure to Radio Frequency Radiation, specifically in accordance with FCC's CEI Bulletin 65. I have reviewed this Radio Frequency Exposure Assessment report and believe it to be both true and accurate to the best of my knowledge.



David Charles Cotton, Jr.  
Registered Professional Engineer (Electrical)  
State of California, 19836

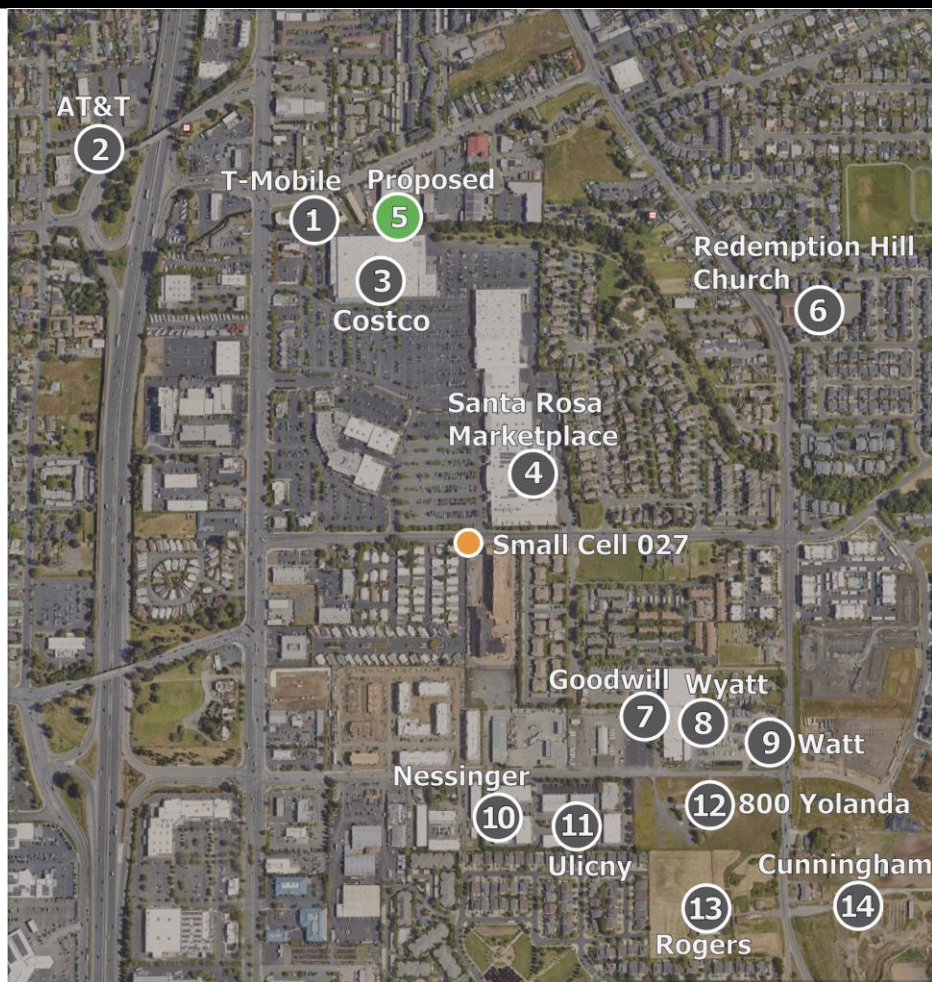
**General Summary**  
The compliance framework is derived from the Federal Communications Commission (FCC) Rules and Regulations for preventing human exposure in excess of the applicable Maximum Permissible Exposure ("MPE") limits. At any location at this site, the power density resulting from each transmitter may be expressed as a percentage of the frequency-specific limits and added to determine if 100% of the exposure limit has been exceeded. The FCC Rules define two tiers of permissible exposure differentiated by the situation in which the exposure takes place and/or the status of the individuals who are subject to exposure. General Population / Uncontrolled exposure limits apply to those situations in which persons may not be aware of the presence of electromagnetic energy, where exposure is not employment-related, or where persons cannot exercise control over their exposure. Occupational / Controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment, have been made fully aware of the potential for exposure, and can exercise control over their exposure. Based on the criteria for these classifications, the FCC General Population limit is considered to be a level that is safe for continuous exposure time. The FCC General Population limit is 5 times more restrictive than the Occupational limit.

In situations where the predicted MPE exceeds the General Population threshold in an accessible area as a result of emissions from multiple transmitters, FCC licensees that contribute greater than 5% of the aggregate MPE share responsibility for mitigation.



# Best of 14 Alternatives

- Other alternatives discounted because:
  - Cannot serve gap (1-4, 7-14)
  - Residential proximity/prohibition (6, 13)



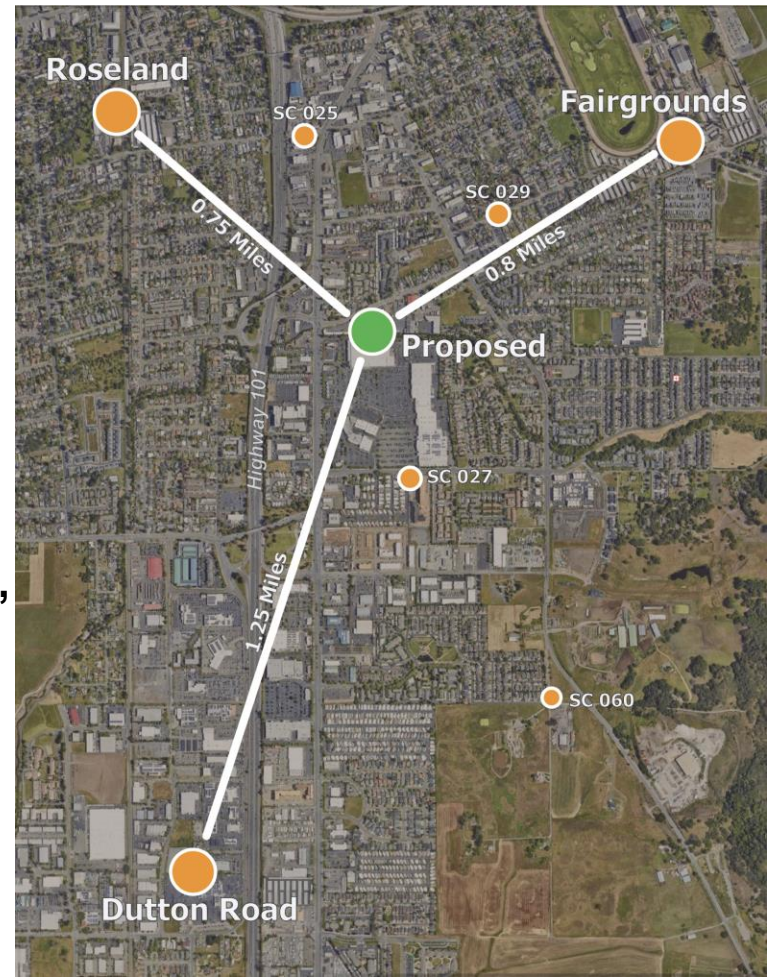


# Principal Factors to Discount Alternatives

	Address	Cannot fill service gap	No landlord interest	Residential proximity/prohibition
1	T-Mobile Collocation – 1800 Santa Rosa Ave.	X		
2	AT&T Collocation – 1726 Corby Ave.	X		
3	Costco Rooftop – 1900 Santa Rosa Ave.	X		
4	Santa Rosa Marketplace – 1950-2100 Santa Rosa Ave.	X		
5	Proposed Facility – 244 Colgan Ave.			
6	Redemption Hill Church – 2100 Petaluma Hill Rd.			X
7	Goodwill – 463-467 Yolanda Ave.	X	X	
8	Wyatt Family Trust – 747 Yolanda Ave.	X		
9	Watt – 2823 Petaluma Hill Rd.	X		
10	Nessinger Properties – 444 Yolanda Ave.	X		
11	Ulicny – 468 Yolanda Ave.	X		
12	800 Yolanda LLC – 800 Yolanda Ave.	X		
13	Rogers – 3015 Petaluma Hill Rd.			X
14	Cunningham – 3018 Petaluma Hill Rd.	X		

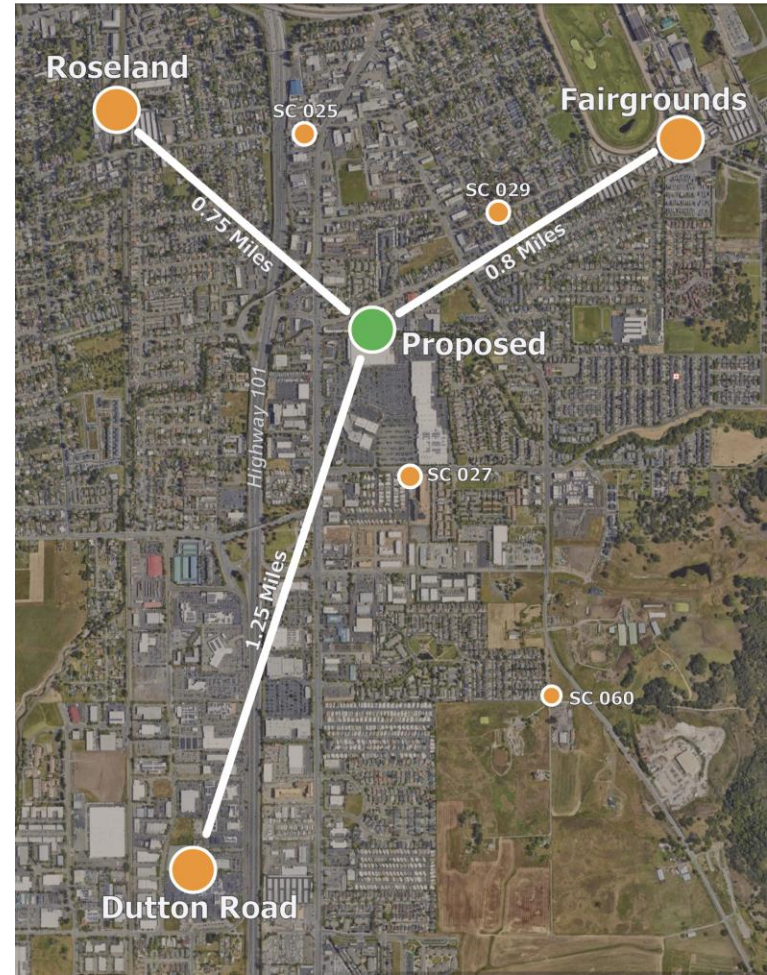
# Increasing Demand

- Rapidly-escalating demand for data in southeast Santa Rosa
- Gap area includes Santa Rosa Marketplace (540,000 square feet of retail) and Santa Rosa Avenue business corridor
- Includes residential areas north, east, and south
- Includes Highway 101 (140,000 vehicles daily), Santa Rosa Avenue, and other streets



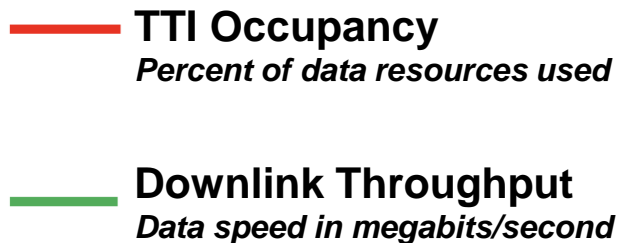
# Gap in Network Capacity

- Existing Verizon Wireless macro facilities are overburdened: Roseland, Fairgrounds, and Dutton Road facilities
- High demand on data resources results in slow data speeds and poor service for many users
- Proposed facility will provide strong new dominant signal to gap area, relieving demand on existing facilities

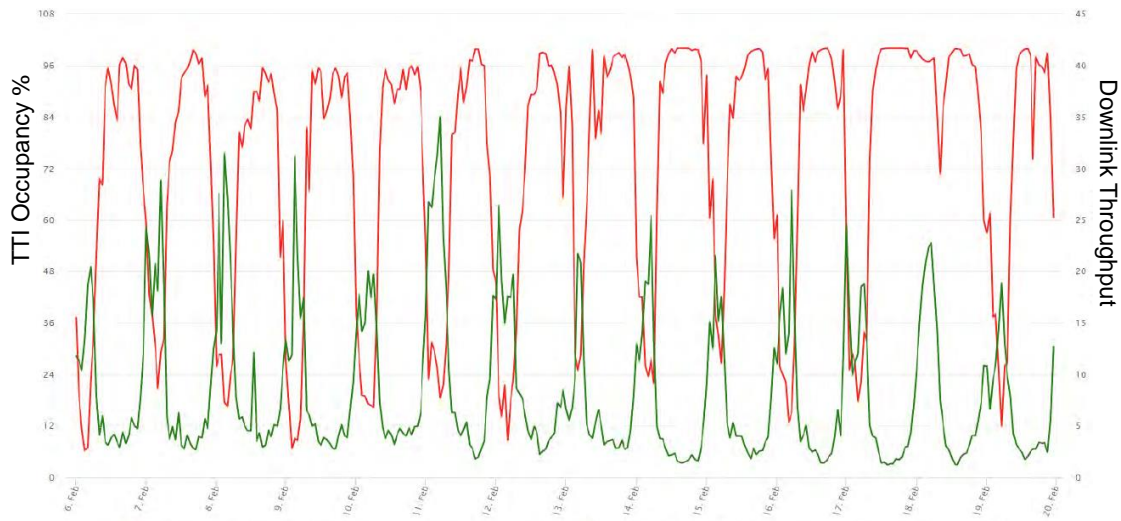


# Network Exhaustion

- As TTI occupancy increases, data throughput drops

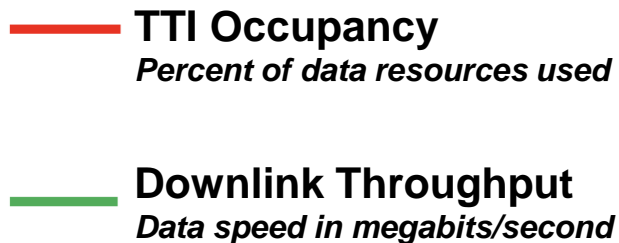


**Roseland Facility**  
South-Facing Antenna Sector  
Low-Band 700 MHz Frequency  
February 6-19, 2024



# Network Exhaustion

- As TTI occupancy increases, data throughput drops

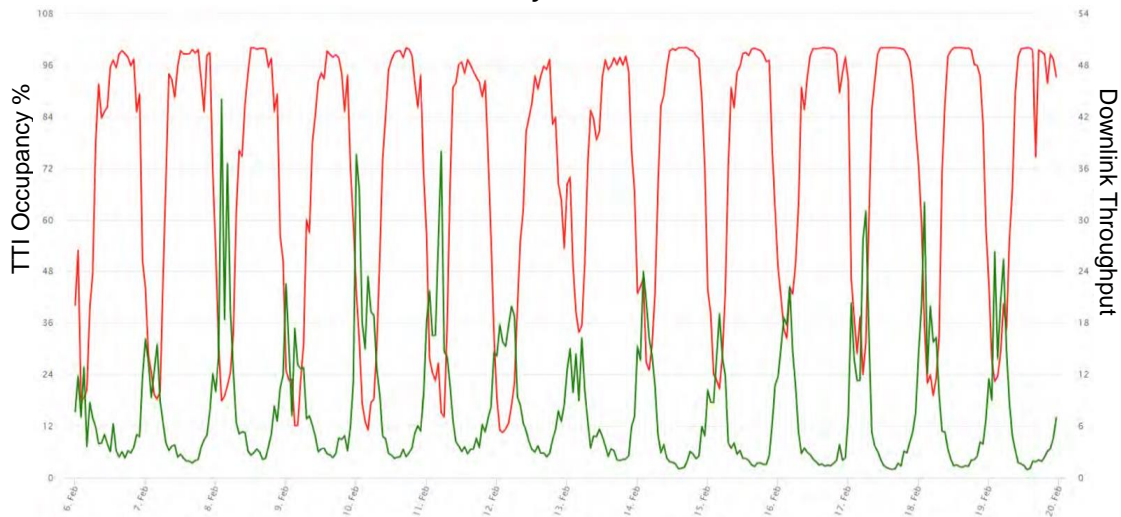


## Fairgrounds Facility

Southwest-Facing Antenna Sector

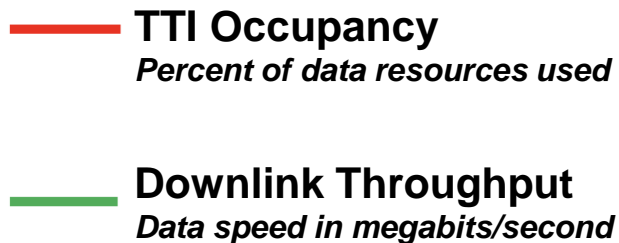
Low-Band 700 MHz Frequency

February 6-19, 2024



# Network Exhaustion

- As TTI occupancy increases, data throughput drops

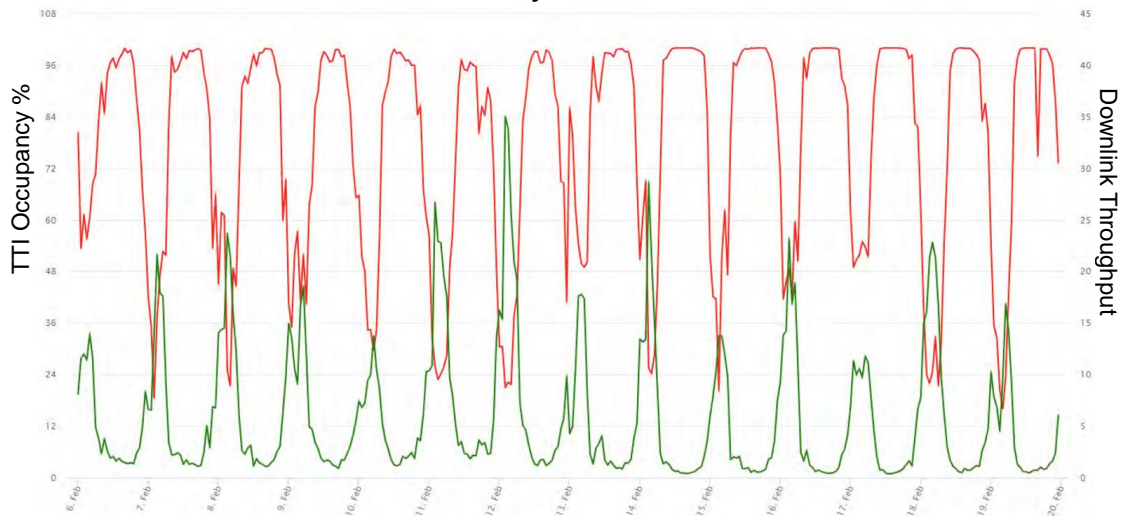


## Dutton Road Facility

Northeast-Facing Antenna Sector

Low-Band 700 MHz Frequency

February 6-19, 2024



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# Response to Appeal

- **Complies with General Plan: No impact to Light Industrial designation**
- **Complies with Code:**
  - **Located on rear half of property**
  - **Over 300 feet from homes (four times the required distance)**
- **Qualifies for CEQA exemption, with no impact to surface water quality**
- **Proliferation of wireless facilities not a Code factor; collocation is not feasible**
- **Code does not require demonstration of need; nonetheless, Verizon Wireless RF engineers provided evidence of significant gap in network capacity**
- **Complies with FCC's RF exposure limits, with power mitigation for two antennas**

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# Response to Appeal

- **Building Division will confirm and inspect structural integrity of monopole**
- **Fire Department will review building permit application for fire safety compliance**
- **Proposed facility is least intrusive, feasible alternative of 14 locations reviewed**
- **Design Review Board approved monopole design, with minimal aesthetic impact on industrial/commercial surroundings**
- **Future increase in size not a factor for present application; monopole will include space for future collocation of antennas by another carrier**
  
- **No substantial evidence for denial as required by federal law** (47 U.S.C. § 332(c)(7)(B)(iii))
- **Denial would constitute an unlawful prohibition of service** (47 U.S.C. § 332(c)(7)(B)(i)(II))



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# Conclusion: Affirm Staff Recommendation

- **New facility needed for reliable service and public safety in southeast Santa Rosa**
  
- **Complies with all City requirements for approval**
  
- **Experts available for questions:**
  - **Aaron DeLaO, Centerline Communications**
  - **Yvonne Pinto, Verizon Wireless**
  - **Pablo Sanchez, Verizon Wireless RF Engineer**
  - **Dave Cotton, Waterford Consultants RF Compliance Expert**
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