

# Toll Technology Choices

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# Purpose of Report

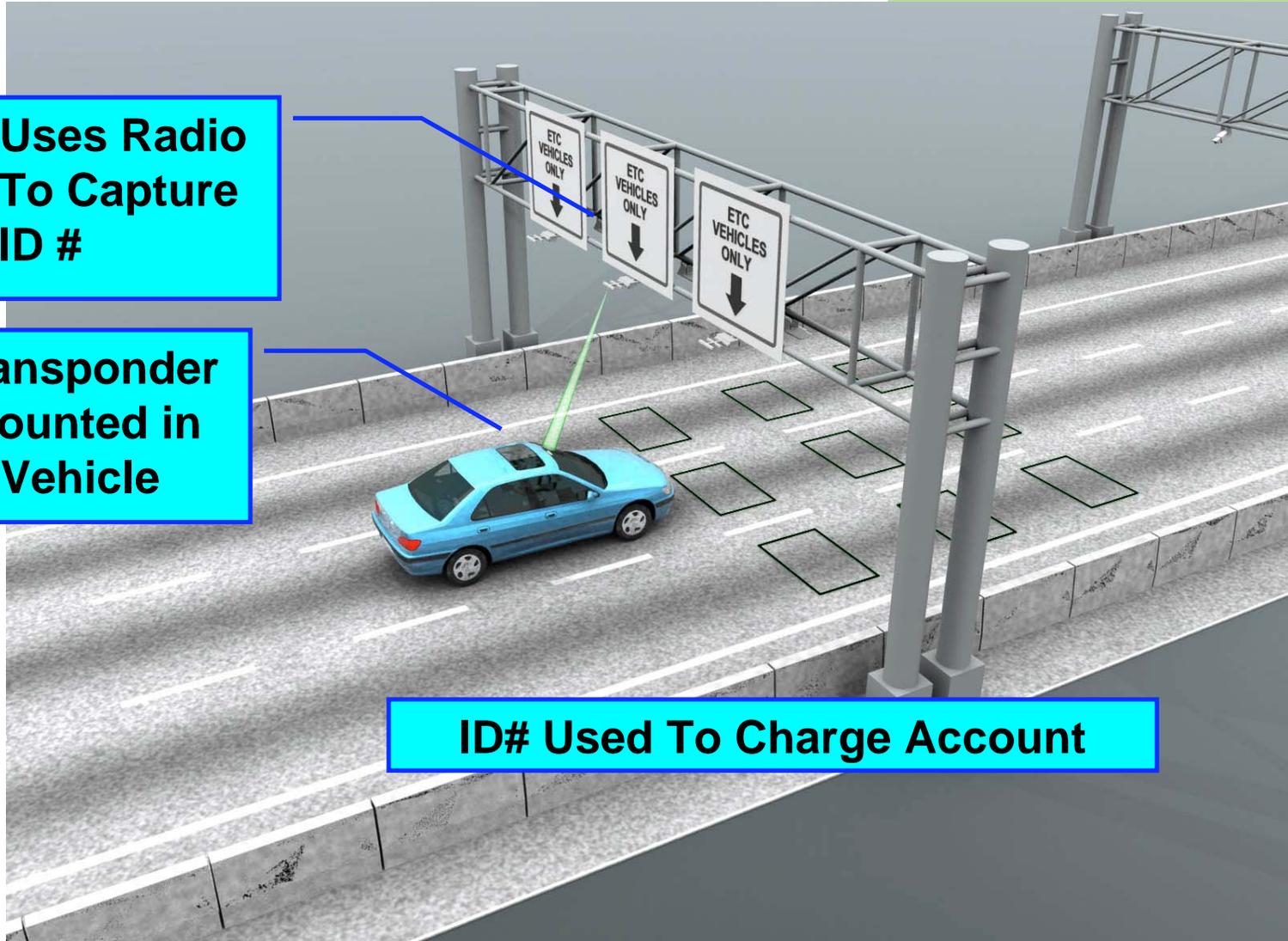
- Future Transponder Requirements
  - Prepared for WSDOT
- Why?
  - SR 520 Tolling and Beyond
  - Anticipated Increase in Demand for Transponders
  - Tolling Based on Vehicle Occupancy

# How It Works

**Reader Uses Radio Waves To Capture ID #**

**Transponder Mounted in Vehicle**

**ID# Used To Charge Account**



# Transponder

- 915 MHz and 5.9 GHz
- With and Without Battery
- Multiple Dedicated Short Range Communication Protocols (DSRC)



# Considerations

- SR 520 tolling in 2010
- Technical Considerations
- Industry Request for Information
- Future Express Toll Lanes
  - Occupancy Based Tolling

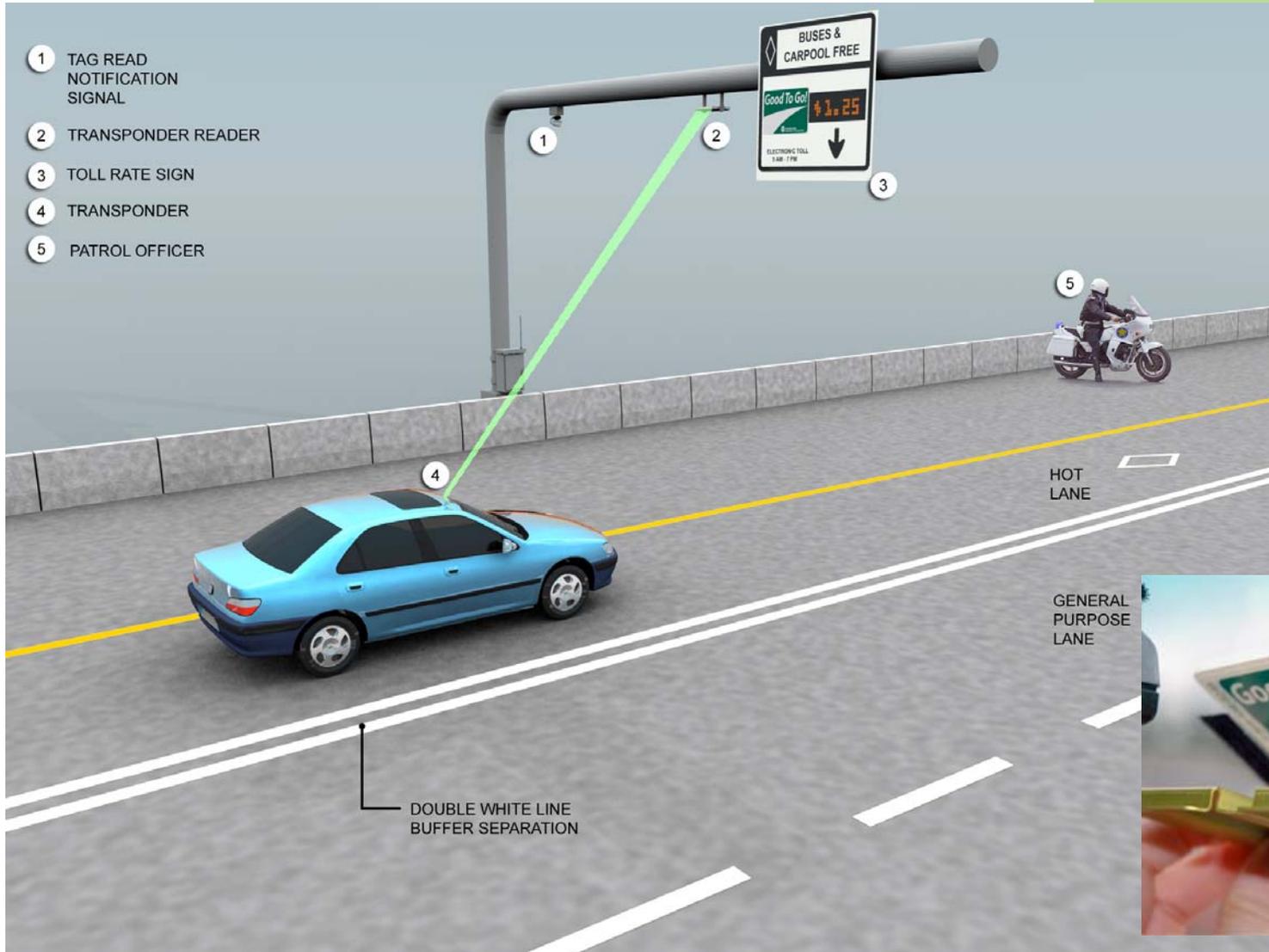
# Technical Considerations

- Open Road Tolling
- In Use
- Provides Security
- Read/Write Capabilities
- HOV Self Declare Capability
- Enforcement
- Multiple Suppliers
- Ease of Migration
- Supports Advanced Transportation Technology
- Form Factor
- Notional Cost

# Tolling Based on Vehicle Occupancy

1. Transponders for SOVs Only
2. Transponders for SOVs with SOV/HOV Declaration Lanes
3. Transponders for All with SOV/HOV Declaration Lanes
4. SOV/HOV Declaration Transponder
5. HOV License Plate Registration

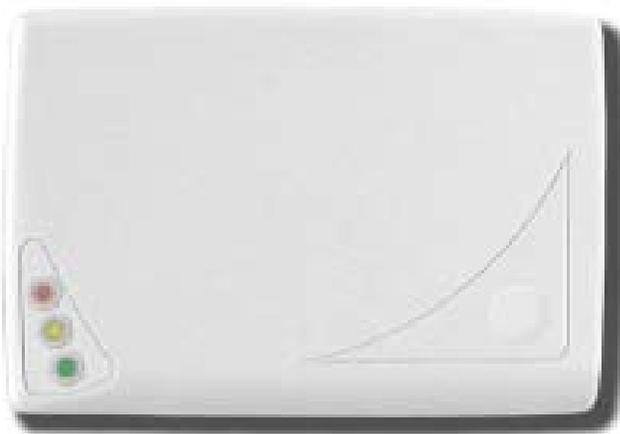
# Transponders for SOVs Only



# SOV/HOV Declaration Lanes



# SOV/HOV Declaration Transponder



# HOV License Plate Registration

- HOV's Pre-register
- Periodic Validation
- Field Verification



# Other Efforts

- Reason Foundation
- San Diego Association of Governments (SANDAG)
- Bay Area Toll Authority (BATA)
- Los Angeles County Metro
- Miami I-95 Express

# Technology Considered

1. *Good To Go!* eGo™ sticker tag
2. WSDOT CVISN Time Division Multiple Access (TDMA)
3. Interagency Group (IAG) under E-ZPass program
4. Title 21 (California standard)
5. 5.9 GHz (emerging national standard)

# Recommendations

- Low cost tag
- Movable tag
  - Some with self declare capabilities

# Questions?

## Contact Information

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