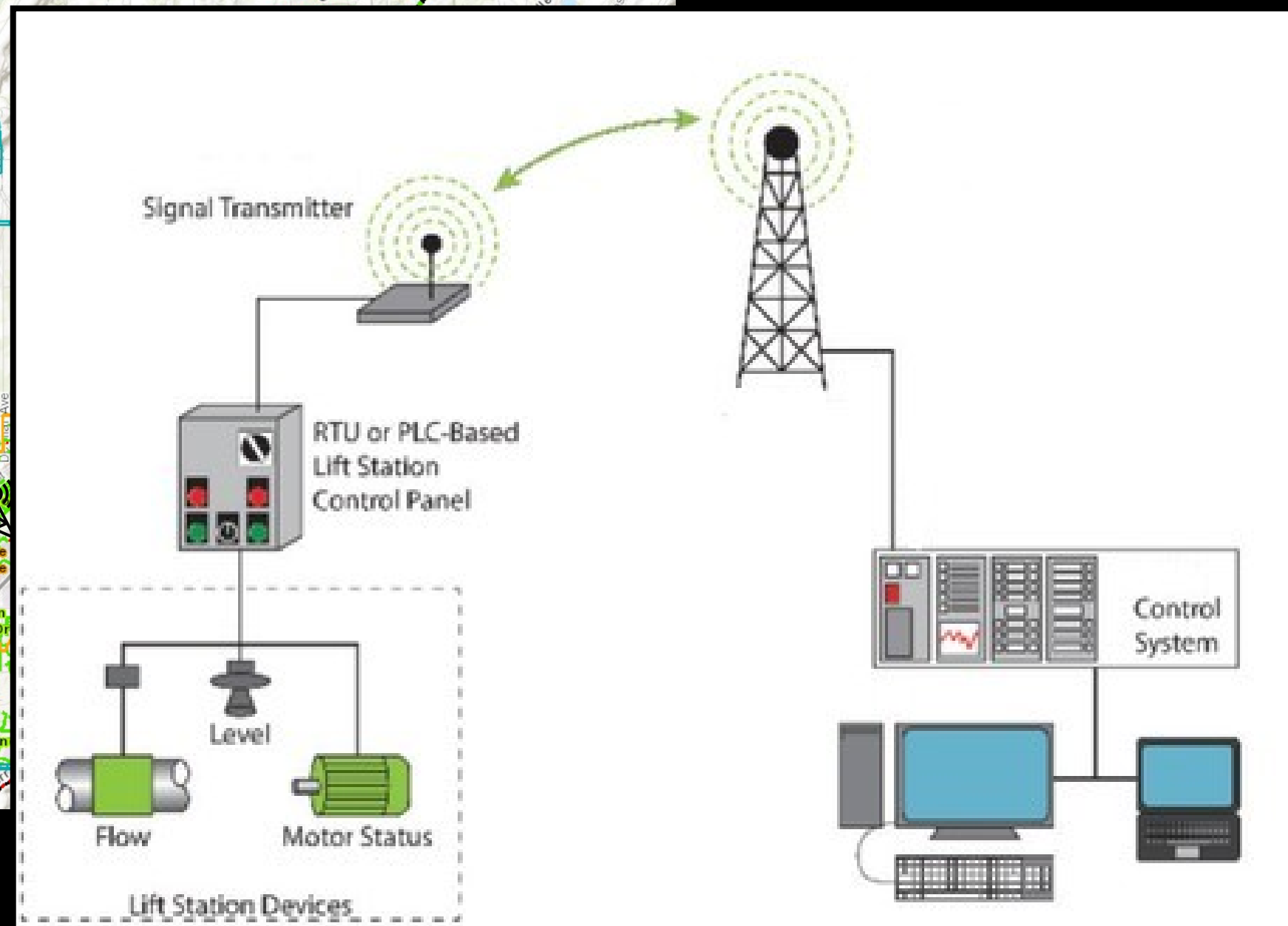
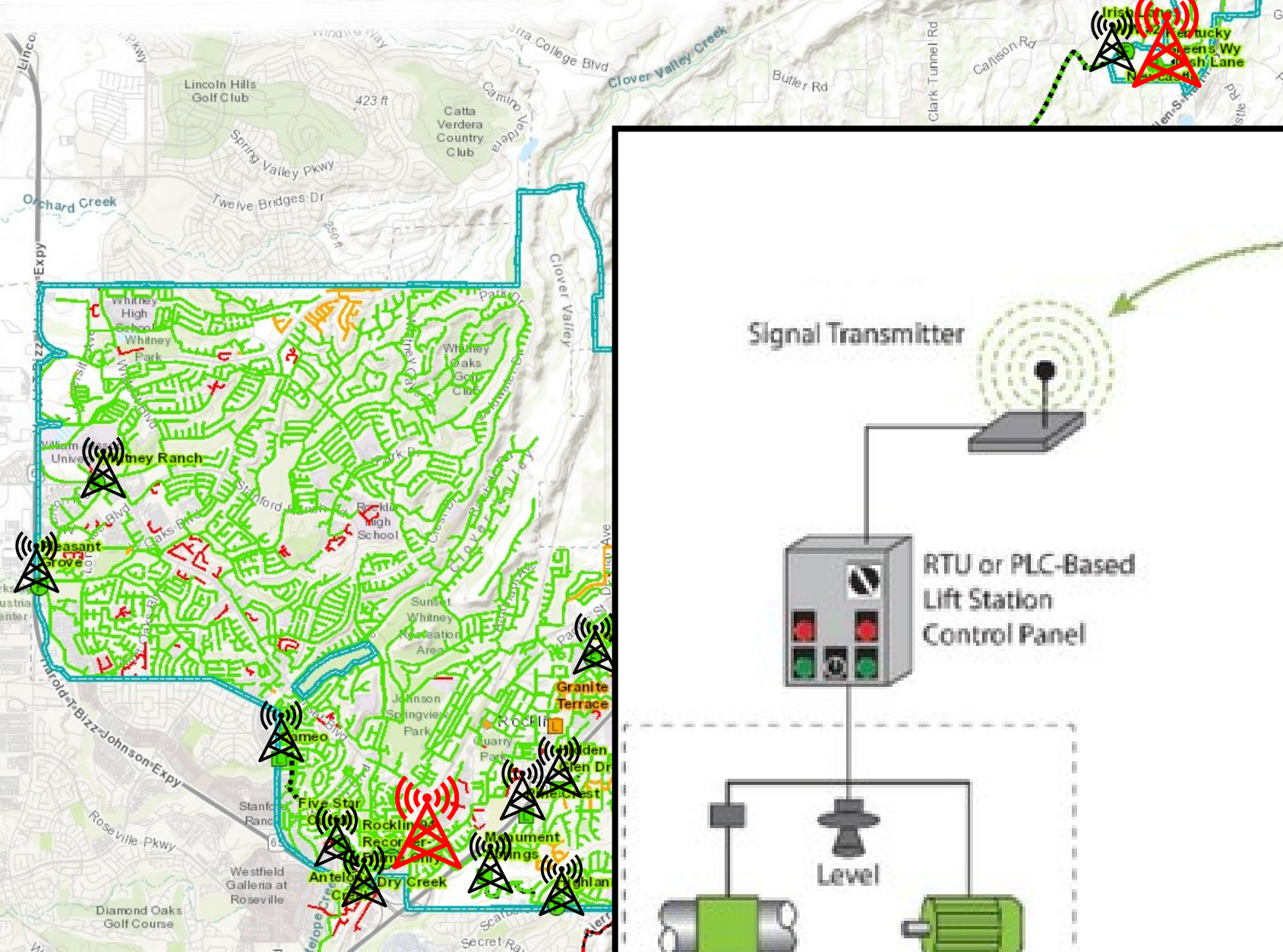


SCADA Improvements

September 5, 2024

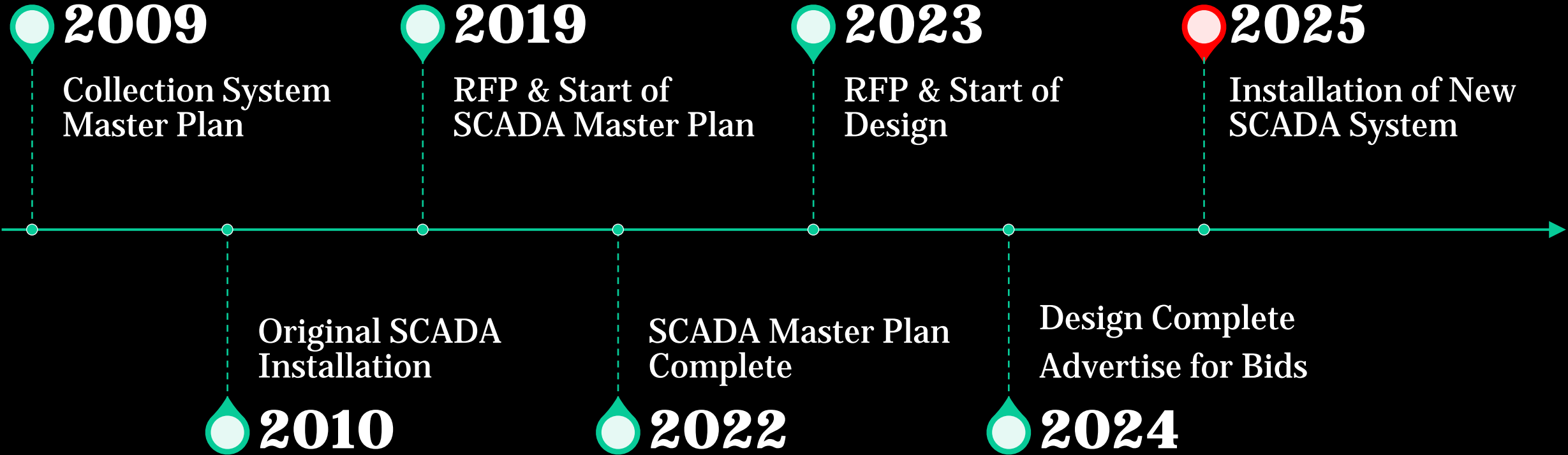




Benefits of SCADA

- **Supervisory Control**
 - Improved, efficient response to emergencies
- **Data Acquisition**
 - Optimize lifespan of equipment
 - Historian/Trending
- **Alarming**
 - Monitor high-risk facilities

Timeline

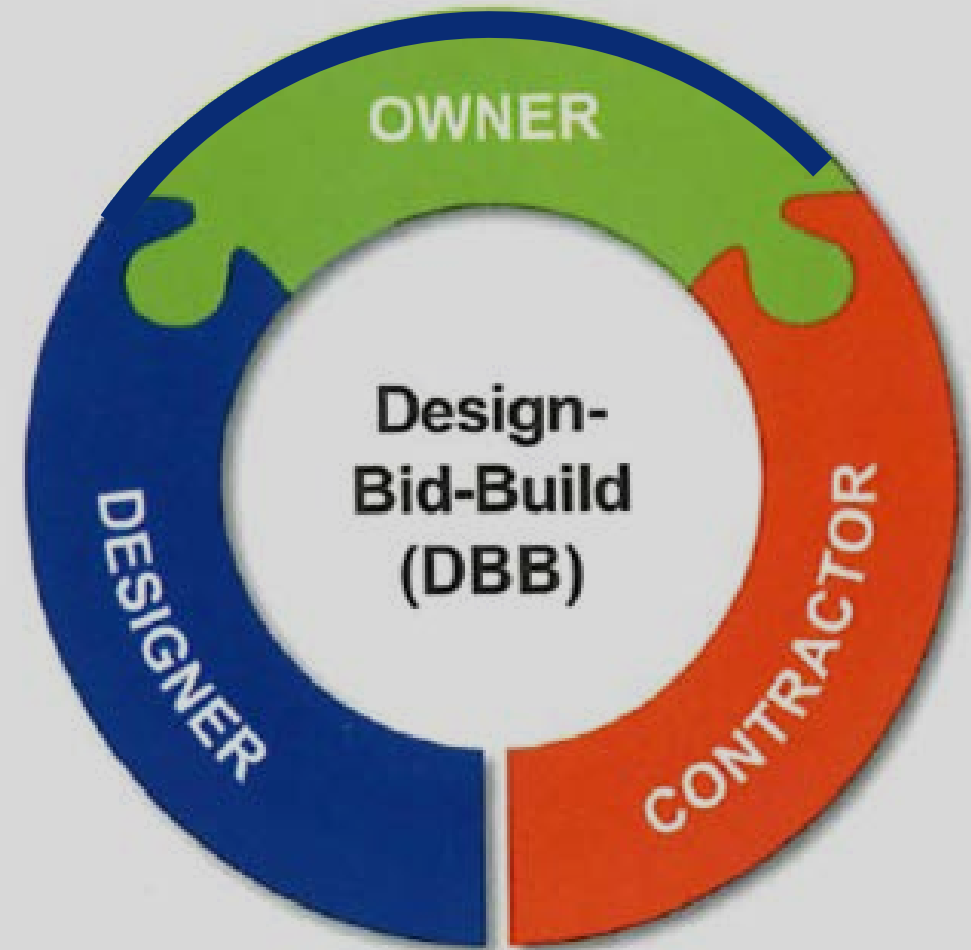


Project Delivery Methods



Courtesy: Water Design-Build Council. *Water and Wastewater Design-Build Handbook, Fifth Edition*

- Most widely used and legally tested procurement process
- No contractual relationship between designer and contractor
 - Owner acts as adjudicator
- ESDC brings on designer in an “Owner’s Advisor” role



Master Plan Costs

| Phase 1 | (Estimated Duration 18 months) |
|--|-----------------------------------|
| Project Management, Engineering Design | \$429,000 |
| Central PCS/SCADA (hardware, software, services) | \$705,000 |
| Network + Radio Telemetry | \$230,000 |
| Phase 1 Sites (Corp Yard, Repeater, Flow Recorder) | \$871,000 |
| Field Deployment, Spare Parts, Electrical | \$275,000 |
| Shipping, Bonds, Insurance, Tax, Contingency | \$370,000 |
| SUBTOTAL | ~ \$ 2.9 M |

Master Plan Costs

| | |
|--|-----------------------------------|
| Phase 2 | (Estimated Duration 18 months) |
| Project Management, Engineering Support | \$80,000 |
| Phase 2 Sites (Lift Stations) | \$2,673,000 |
| Field Deployment, Spare Parts, Electrical | \$300,000 |
| Shipping, Bonds, Insurance, Tax, Contingency | \$502,000 |
| SUBTOTAL | ~ \$ 3.6 M |
| TOTAL | ~ \$ 6.5 M |

Master Plan vs. Actual

| Prof. Services Tasks | Master Plan | Actual* |
|--|--------------------|-------------------------|
| Project Management, Engineering Design | \$429,000 | \$654,100 |
| Network + Radio Telemetry | \$230,000 | |
| Central PCS/SCADA (hardware, software, services) | \$705,000 | \$667,060 + \$70,000 |
| Constr. Management, Engineering Support | \$80,000 | |
| SUBTOTAL | ~ \$ 1.44 M | ~ \$ 1.39 M |
| TOTAL | ~ \$ 6.5 M | ~ \$ 3.8 M |

Eng. Services During Construction

| Task | Cost | % of Est. Constr. Cost |
|-------------------------|-------------------|------------------------|
| Construction Management | \$276,640 | 11% |
| Inspection | \$195,032 | 8% |
| Programming | \$195,388 | 8% |
| TOTAL | \$ 667,060 | |

Questions & Discussion