

SEWER PUMP STATION ELECTRICAL ENCLOSURES



City Council Workshop
April 20, 2017

Sewer System Summary

- The City operates 43 sewage pump stations.
- Fifteen stations constructed between 1955 and 1983 due for replacement
- Ten stations constructed in the 1990s due for upgrades or replacement
- Eighteen stations rebuilt since 2000
- Four stations in design for 2017 and 2018 replacement

Pump Station Varieties



4802 Ocean Beach Highway



1900 33rd



4711 Merlin



2725 32nd



1403 Midland



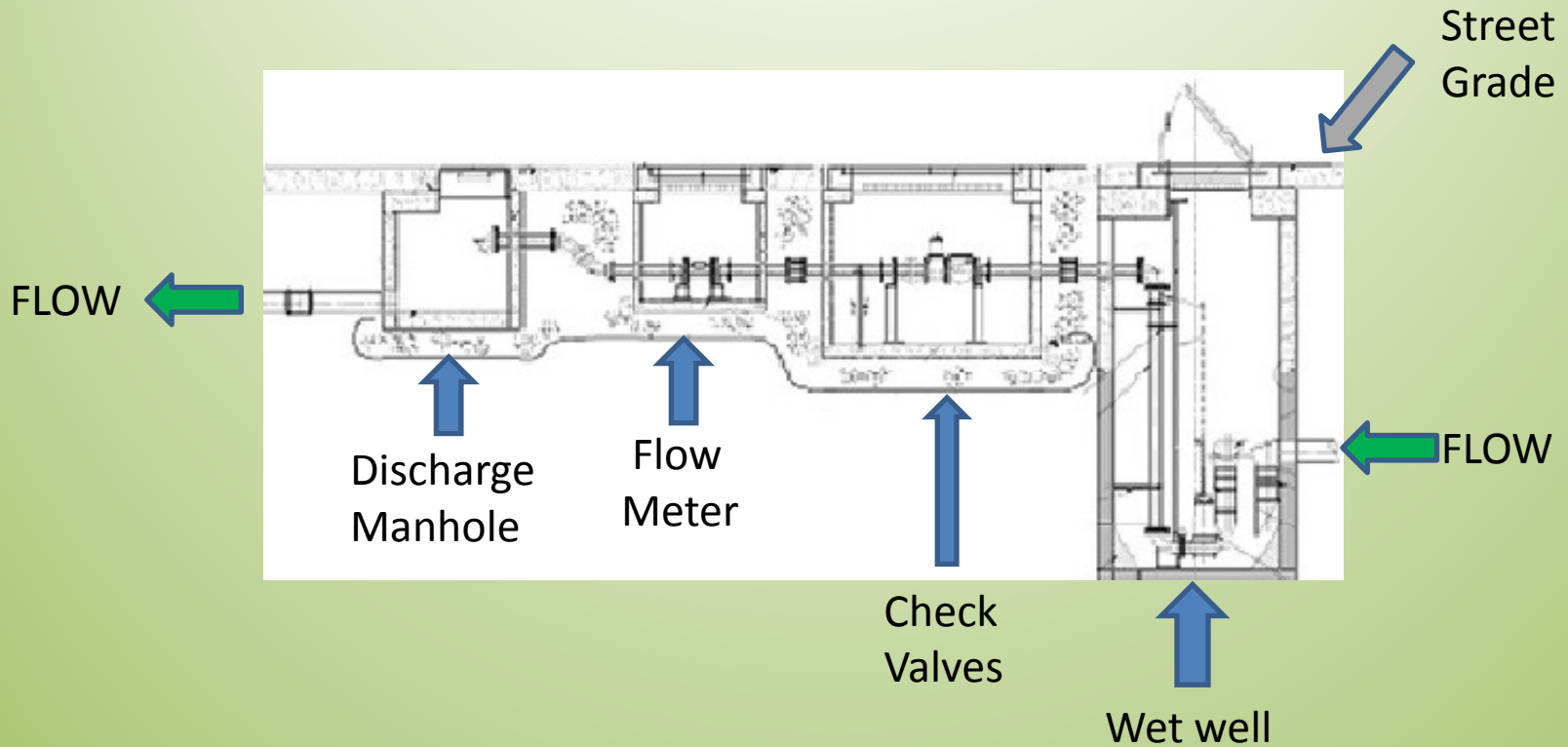
5345 Oriole



38th & Oak – Controls in vault

Small Pump Station

Below Grade Components



Small Pump Station

Above Grade Components

- Weatherproof electrical control cabinet
- Electrical air gap enclosure
- SCADA antenna
- Water supply backflow device
- Emergency power connection
- PUD meter
- Optional security and weather enclosure



Electrical Enclosure Siting Challenges

- Proximity to residence
- Line of sight between window and street
- Occupy notable portion of a property's street frontage
- Driveway line of sight
- Utility Conflicts
- Traffic safety during PS maintenance
- Worker safety during PS maintenance

➤ Six pump stations identified as challenging locations:

2725 32 nd	2626 38 th	4711 Merlin
2277 48 th	4014 Oak	2506 50th



Electrical Enclosure Siting Challenges



2725 32nd



2277 48th



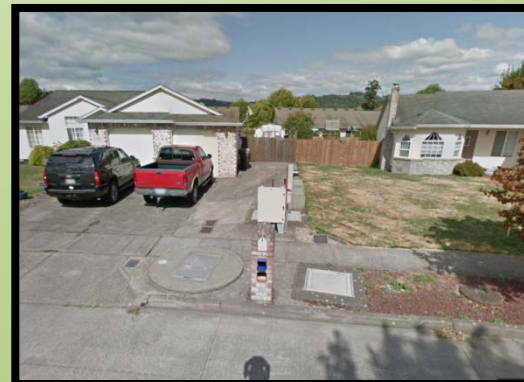
2626 38th



4014 Oak



4711 Merlin



2506 50th

Concrete Block Enclosure Pros and Cons

PROS

- Improves worker safety
- Increases component life
- Improves security
- Less industrial appearance

CONS

- Increased facility footprint
- Increased height and width of visual barrier
- Additional expense – average cost \$20,000

RECOMMENDATIONS

- Use three-sided masonry enclosures
- Omit enclosures where homeowners object or space is inadequate
- Landscape vegetation may be added to reduce visual impact of enclosure
- Enclosure color may be changed