

Sewer Pump Station Renovation plans for

- Channing - Aughinbaugh**
- Yorkshire/Franciscan**
- Pond/Otis –
Grand/Shoreline
Eighth/Portola Stations**

Community Meeting #1

January 24, 2013

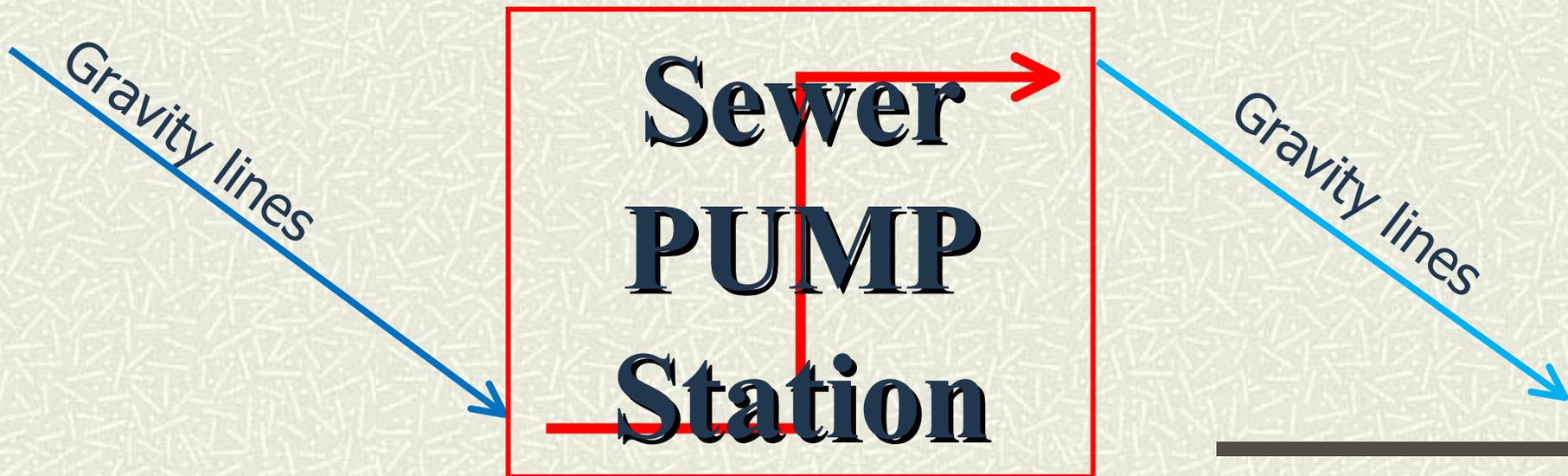
City Hall Of Alameda

Agenda

- # Welcome/introductions
 - # Basic information on sewer pump stations
 - # Presentation of the six projects
 - # Concerns, questions, comments and discussion
 - # Meeting summary/follow-up actions
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Why do we need Sewer PUMP STATIONS?

- Most sewer pipes are gravity lines where the water flows down slope.
- The Pump Station pumps the water “up” to a new higher elevation level so it can continue to flow by gravity down hill to the next “Lift” Station.



EPA's concerns with existing Pump stations

- Handle the peak flow during storms
 - Installation of software to notify City in the event of a power failure
 - Back up equipment –pumps and power supply that turn on during an electrical outage.
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Upgrading for reliability and redundancy per a Stipulated Order from EPA.

Four ways to increase the reliability of a pump station

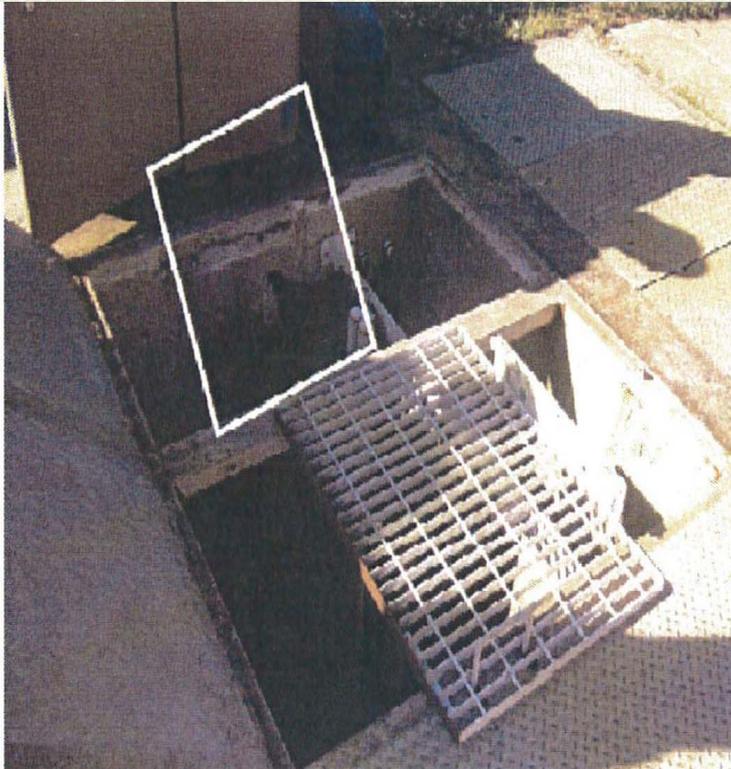
- Add an emergency generator.
 - Have a back up pump.
 - Have an optional place for flow to be stored until the system is restored to normal.
 - Have floats and SCADA software equip to alert City staff.
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Major Components of Pump stations

Below Ground	Above Ground
Hatches	Motor Controls and Pedestal Cabinets
Valves	Generators with vents
Wet wells	Fences with gates
Dry wells	Back flow device
Pumps	Hatch Covers
Pipes	SCADA pole
Pull boxes	Landscaping

Pump station parts – Hatches and Valves

Hatches and Valves

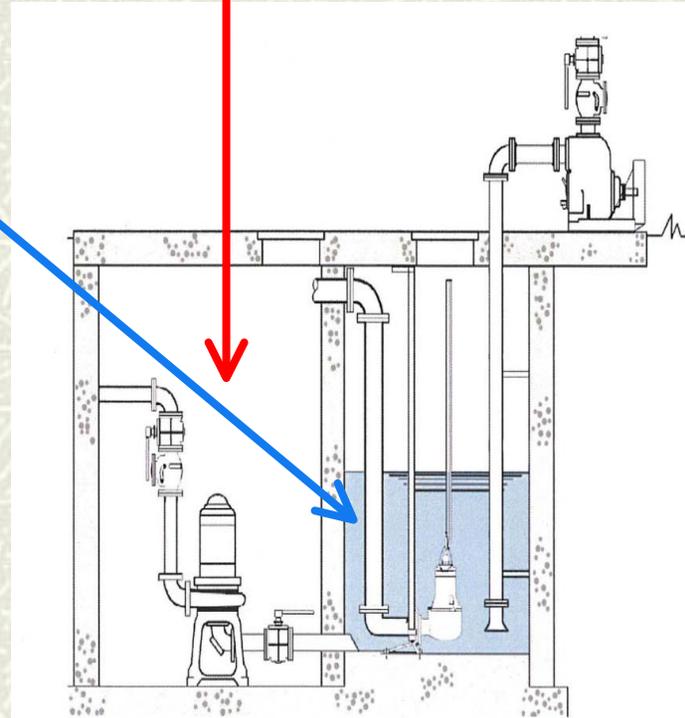


Pump station parts – Pumps in an underground well

Wet wells and Dry wells



Looking down into a wet well



A conventional centrifugal is on the left. A submersible (the industry "standard") is in the middle,

Pump station parts -

Generators

Motor Control Cabinets (MC)

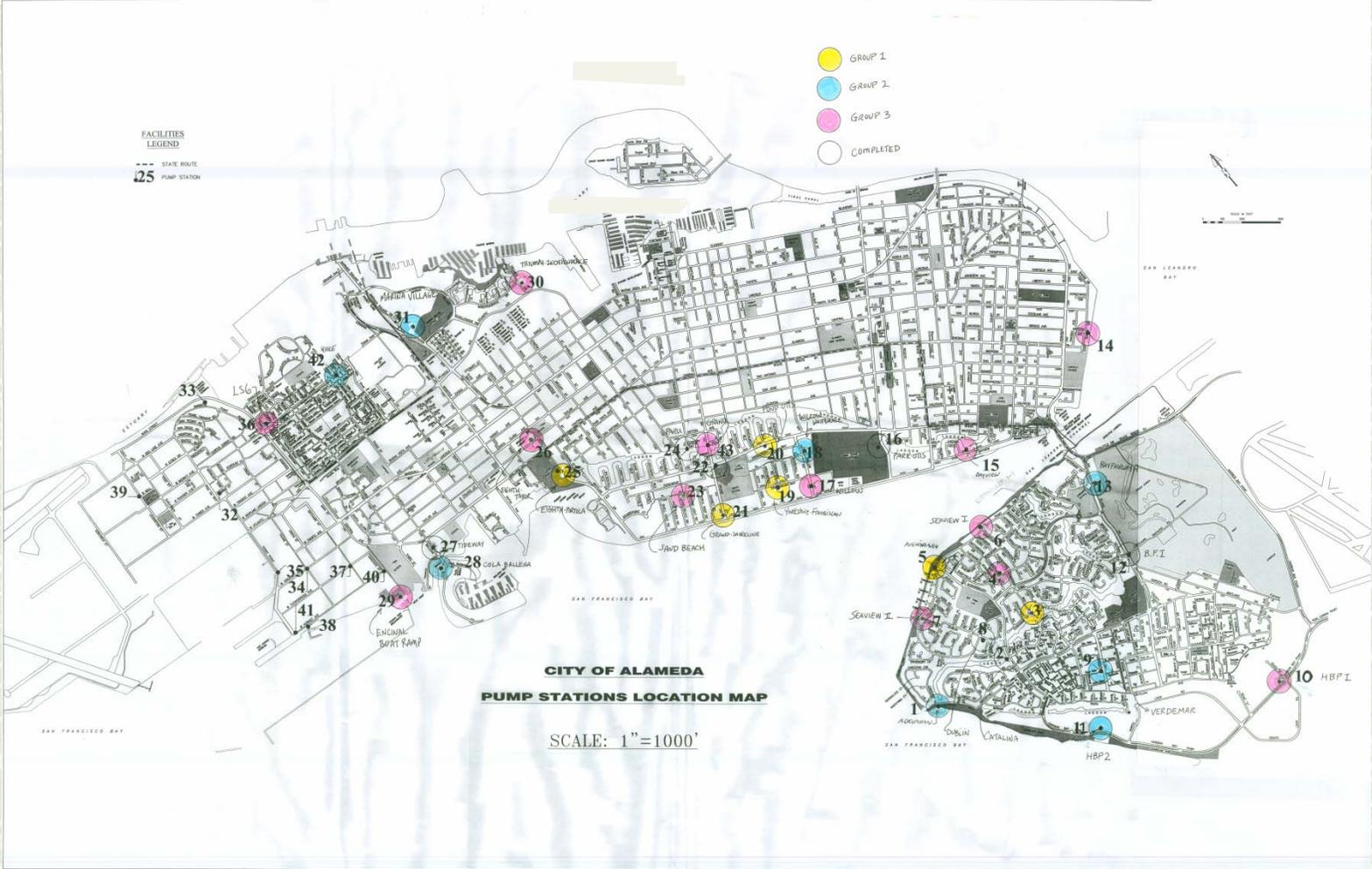


Wet well hatch (WW)

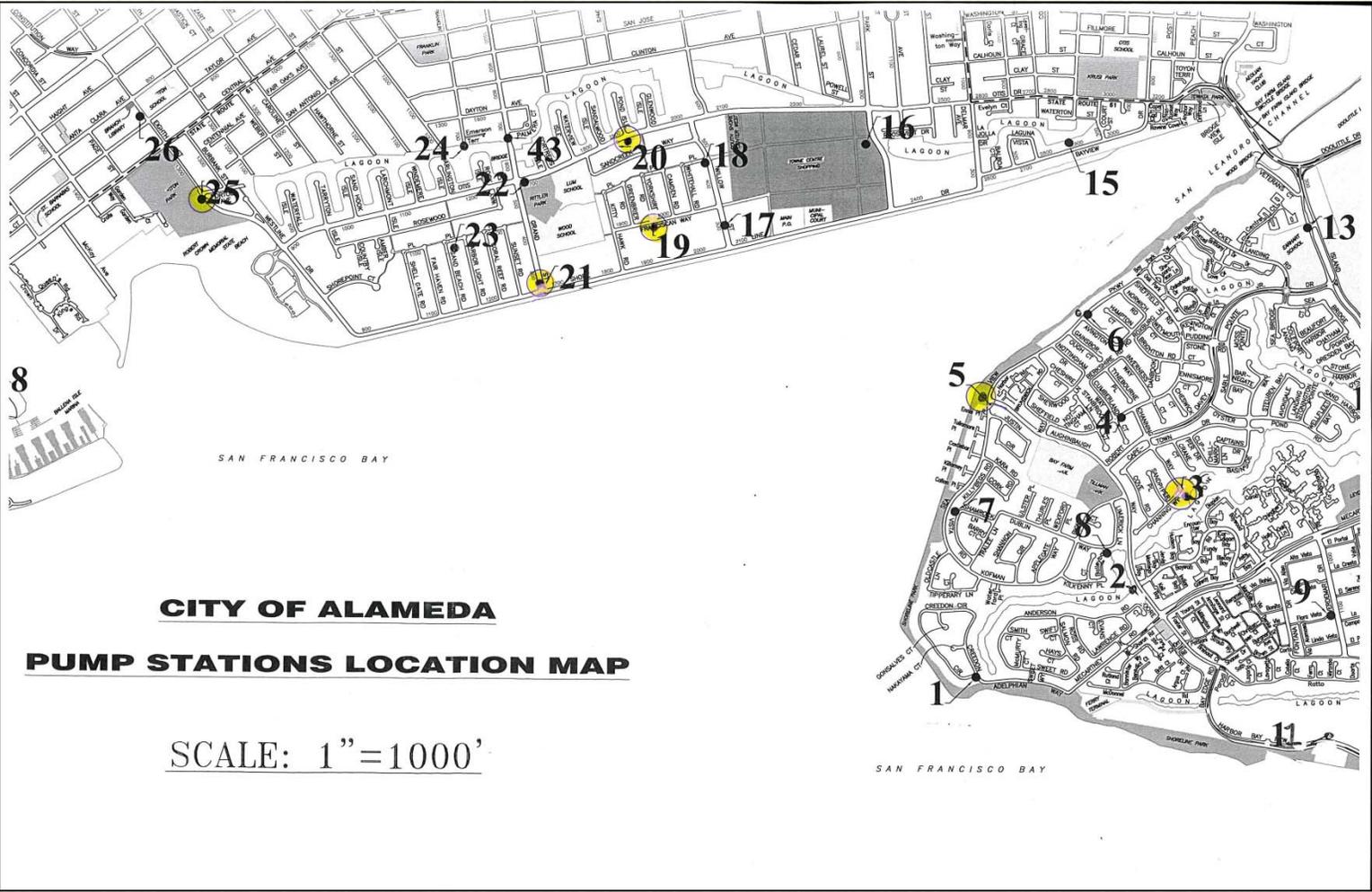
Pedestal cabinets (PED)

Back flow device and hose bib (BFD)

General Location Map of 35 PS



General Location Map of Group 1 PS



Newly renovated Pump stations

Completed in Fall 2012

- # Dublin – 25 kW generator add
- # Tideway - 25 kW generator add
- # Grand/Otis – 35 kW generator add
- # Catalina – 50 kW generator add
- # Park/Otis – 100 kW generator add

Station upgrades included restoring landscaping, fencing, pump and motor control upgrades and other improvements.

Dublin Pump station

25 kW Generator

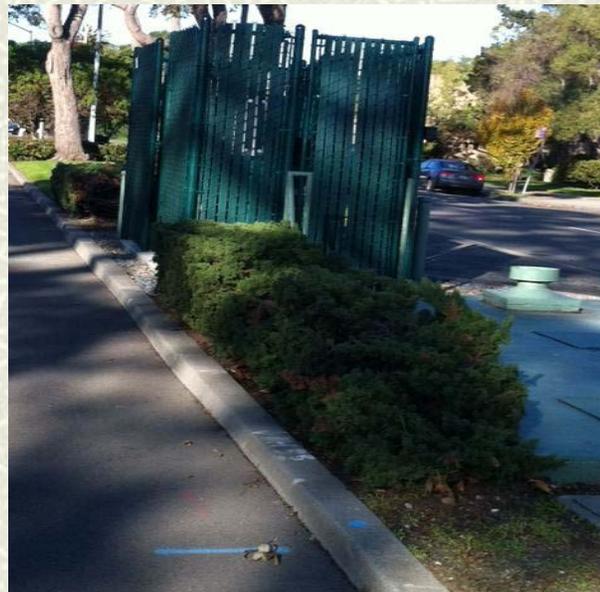
Address:
612 Dublin Way
On Bay Farm Island



Tideway Pump station

25 kW generator

Address:
1350 Ballena Blvd. (Fourth Street)



Grand/Otis Pump station

Address : 1700 Otis Drive, Rittler Park - 35 kW generator

Vent pipe



Catalina Pump station

Address: 1849 Aughinbaugh Way -50 kW generator



Park/Otis Pump station

Address: In South Shore Shopping Center- 501 Park Street

-100 kW generator



Comparison of Generator sizes

RECENTLY RENOVATED EXISTING STATIONS

Pump Station Name Group 1	Catalina 50 kW	Dublin & Tideway 25 kW	Grand/ Otis 35 kW	Park/ Otis 100kW	Portable Generator (manual)	Adjacent Gravity By-pass
Aughinbaugh	X					no
Channing		X				yes but 540' away
Yorkshire/ Franciscan					X	yes
Pond/Otis					X	yes
Grand/ Shoreline					X	yes
Eighth/ Portola			X			no

Portable generators



Cummins portable diesel generator

Generator Details

Generator Type

- Cummins Model #25DSKCA- in use since 2009

Air Quality rating

- Used in schools and hospitals. Rated as the cleanest burning diesel Fuel engine by Bay Area Air Quality Management District. (BAAQMD) and EPA

Existing Installations

- Examples of existing residential and commercial installations in Palo Alto, Los Gatos, Hayward, San Jose, Santa Rosa, Petaluma, Dublin, Livermore, Pleasanton, Fremont, San Francisco.
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Generator Details

Health Rating

- NFPA Health hazard rating: 0
- HMIS health hazard Rating :1

Additional Safety Measures

- Install optional pressure vacuum vent cap at the end of the vent pipe
 - Vent cap only opens during testing, re-fueling or in an emergency
-

Why Diesel?

An Alternative Fuel Sources Analysis

Biodiesel: Not recommended by Generator Supplier (Cummins)

- Lack quality and consistency in fuel
- Fuel cannot sit in a tank and must be used quickly
- Damages injectors, pumps, tanks and fuel system

Liquid Propane Vapor: Not recommended by Generator Supplier

- Requires a large propane fuel tank which has visual impact
 - Propane is highly flammable and explosive if leak occurs
 - Not as dependable and shorter life spans than diesel generators
-

Why Diesel?

An Alternative Fuel Sources Analysis

(Continued-)

Natural Gas: Not recommended by Cummins

- Reliance on PG&E for fuel source can become an issue if gas lines are damaged
 - Natural gas is flammable and explosive if leak occurs
 - Not as dependable and shorter life spans than diesel generators
-

Pump stations – Group 1

Reliability Renovations

PS #	PS Name	LOCATION
3	Channing	Channing Way Elbow at the Lagoon
5	Aughinbaugh	Intersection of Aughinbaugh Way and Sea View Parkway in Shoreline Park
19	Yorkshire/Franciscan	Intersection Of Yorkshire Rd. and Franciscan Way
20	Pond/Otis	Intersection of Pond Isle and Otis Drive
21	Grand/Shoreline	Intersection of Grand St. and Shoreline Drive
25	Eighth/Portola	Intersection of Eighth St. and Portola Ave. in Washington Park

CHANNING Pump station – LOCATION MAP



Existing site conditions – Channing Pump station

Location



Cabinets

Wetwell hatch



BFD

Proposed site conditions – Channing Pump station

vent

SP

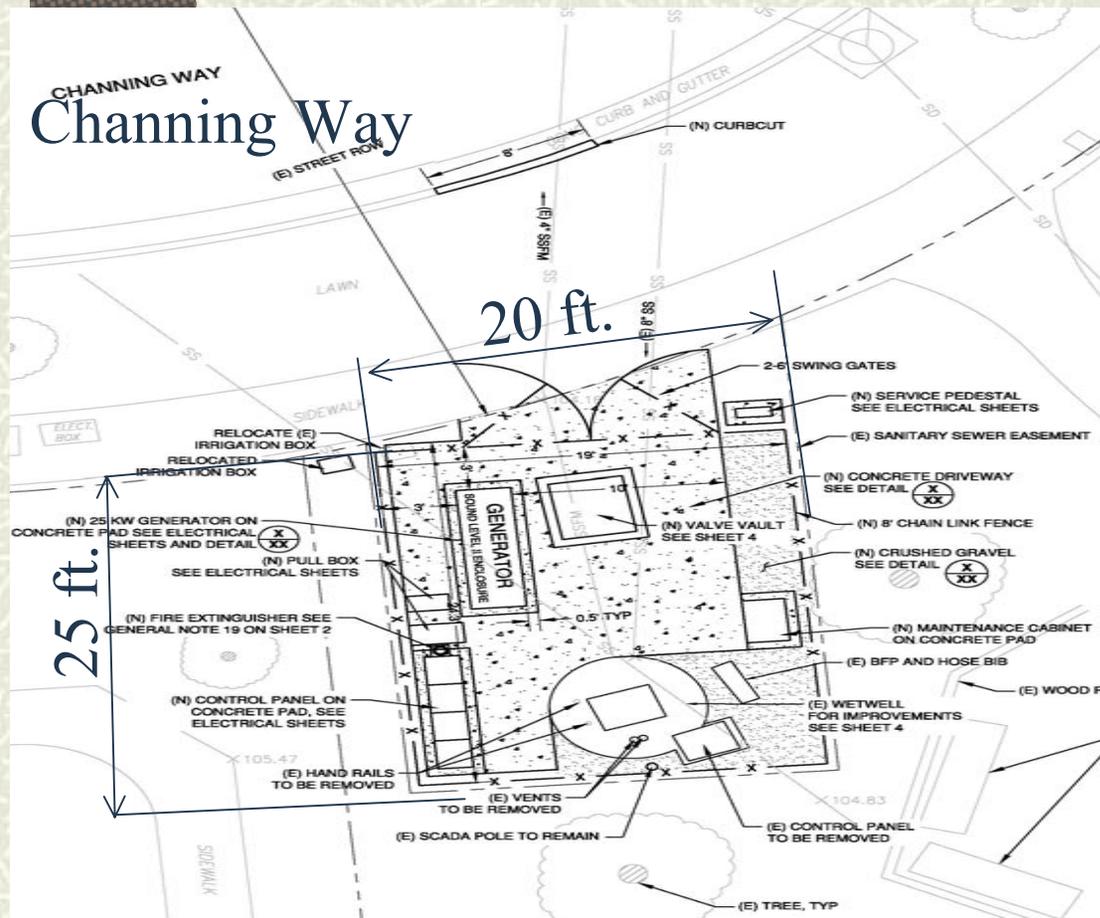
20' by 25' easement
to be enclosed
with green slat fence



New generator,
pedestal and motor
control cabinet,
SCADA pole behind
fence with 2"
diameter -12' high
vent pipe extending
over fence

CHANNING Pump station - site plan

Estimated Reliability Improvement cost = \$260,000



INSTALL

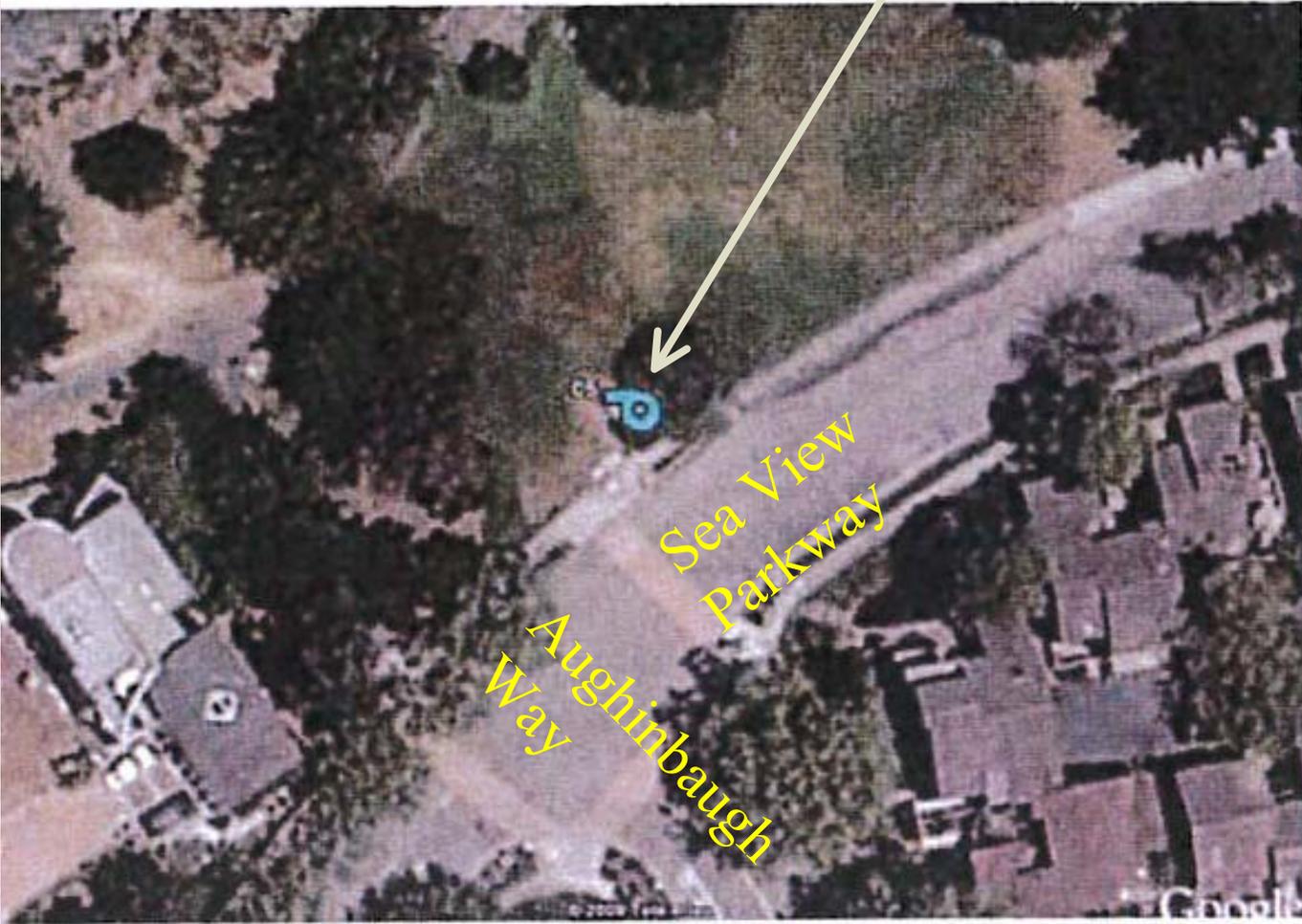
1.

REMOVE

1. Old Control panel

The existing easement does not need to be expanded. All proposed equipment fits in the easement.

AUGHINBAUGH Pump Station –LOCATION MAP



Existing site conditions - Aughinbaugh Pump station



Transformer



Diseased Tree to be posted for removal

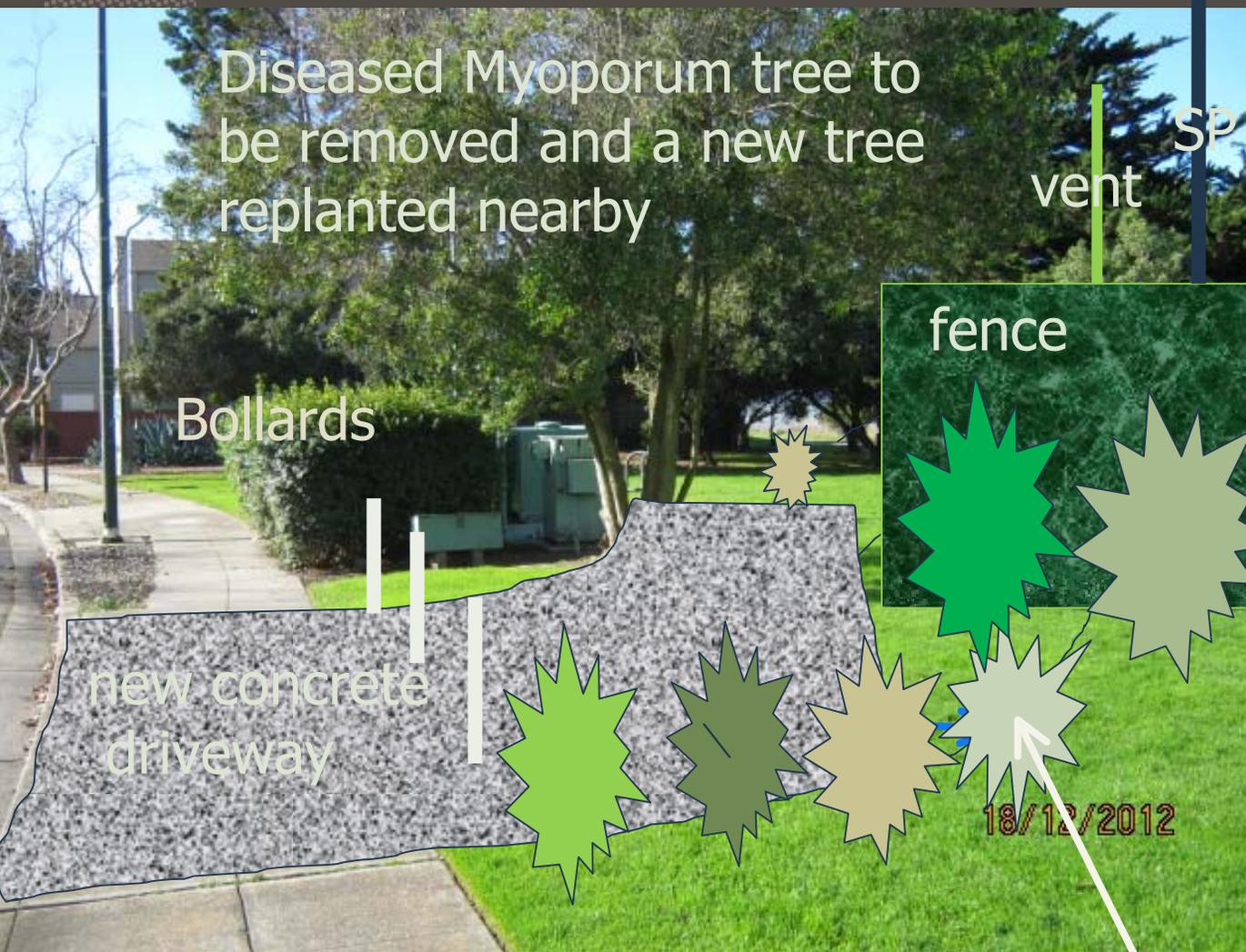


Cabinets



Wet well hatch

Proposed site conditions from street— Aughinbaugh Pump station



Diseased Myoporum tree to be removed and a new tree replanted nearby

vent

SP

Bollards

new concrete driveway

fence

18/12/2012

New generator with 12' H -2" diameter vent, SCADA pole and control panel behind 14' x 14' -8 ft. H -fencing

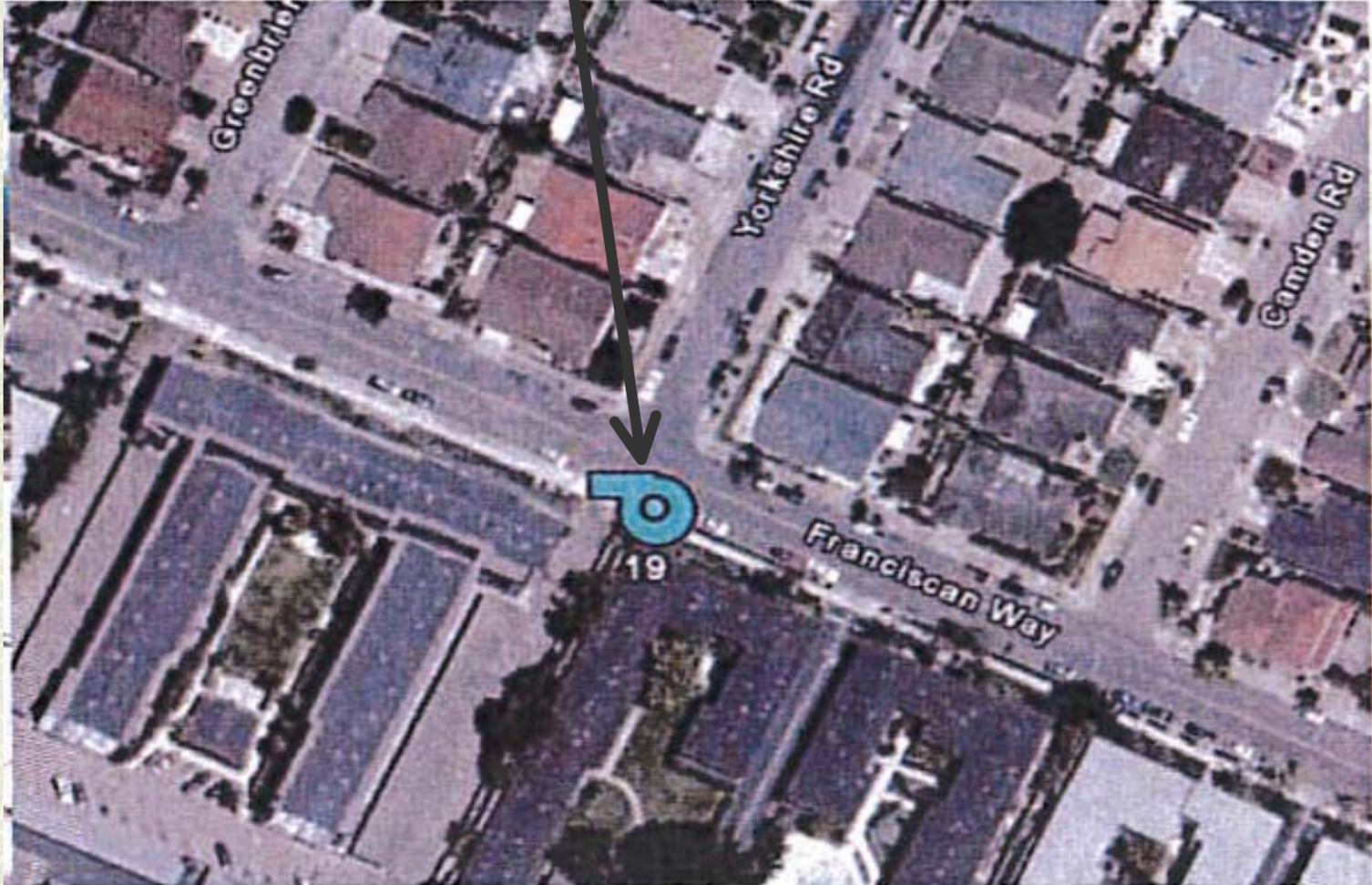
Add new landscaping similar to the existing.

Proposed site conditions from Park– Aughinbaugh Pump station



New similar landscaping to be added

Yorkshire/Franciscan Pump station LOCATION MAP



Existing site conditions at Yorkshire/Franciscan Pump station



MC

PGE

BFD

SP

wetwell

Proposed site conditions at Yorkshire/Franciscan Pump station

SP on ex. Light pole
Install new pedestal (PED) on sidewalk

Install New motor control (MC) panel on sidewalk

Existing BFD to remain



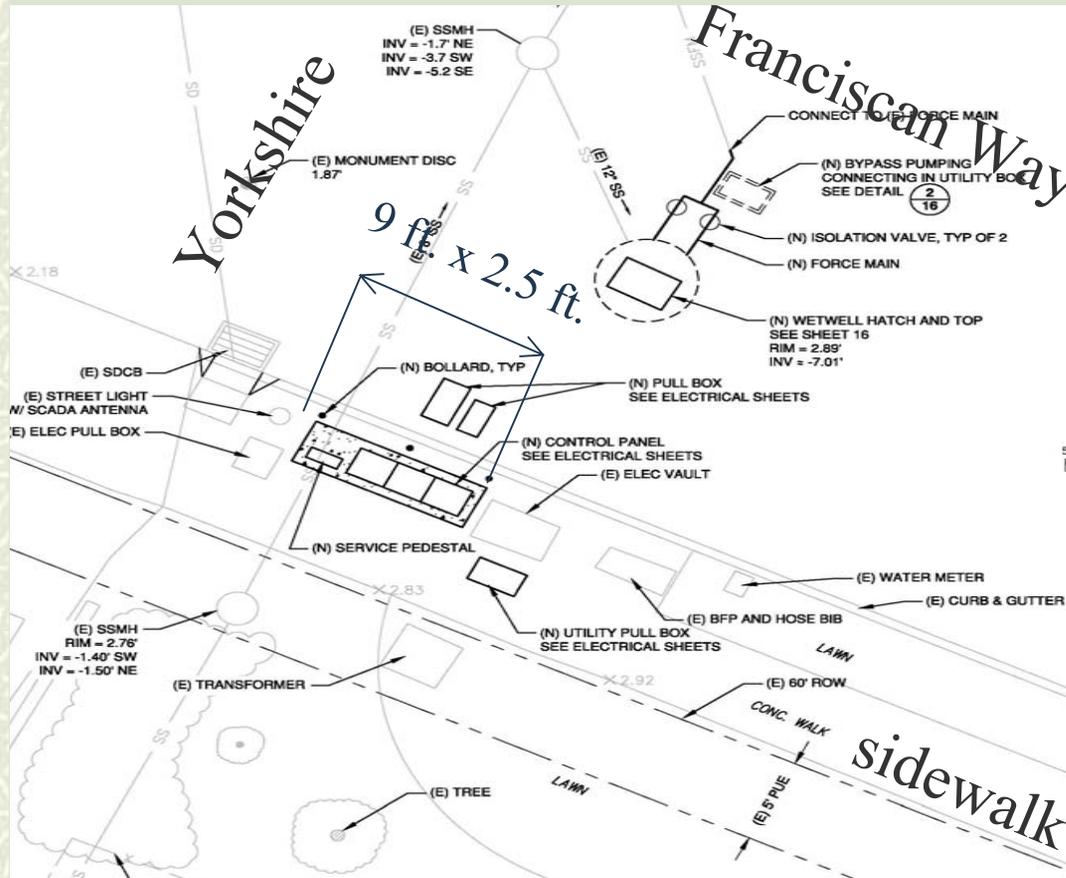
Yorkshire/Franciscan Pump station -Site Plan

Estimated Reliability Improvement cost = \$210,000

INSTALL

REMOVE

1. Old Motor Controls



All improvements are in the PUE or City Right of Way.

POND/OTIS Pump station –LOCATION MAP



Existing site conditions at Pond/Otis Pump station

Existing wetwell



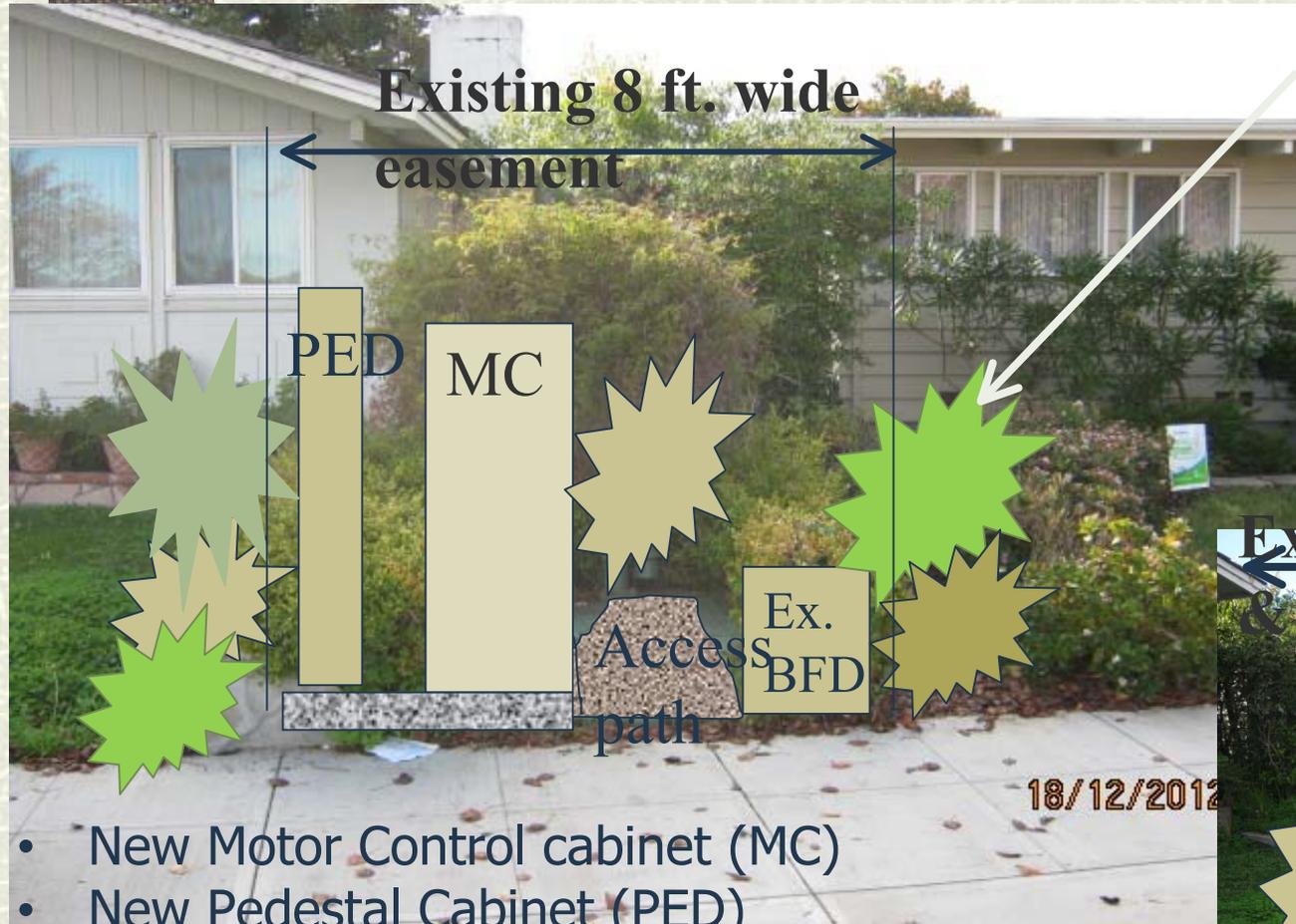
Existing Motor control



Existing BFD



Proposed site conditions at Pond/Otis Pump station



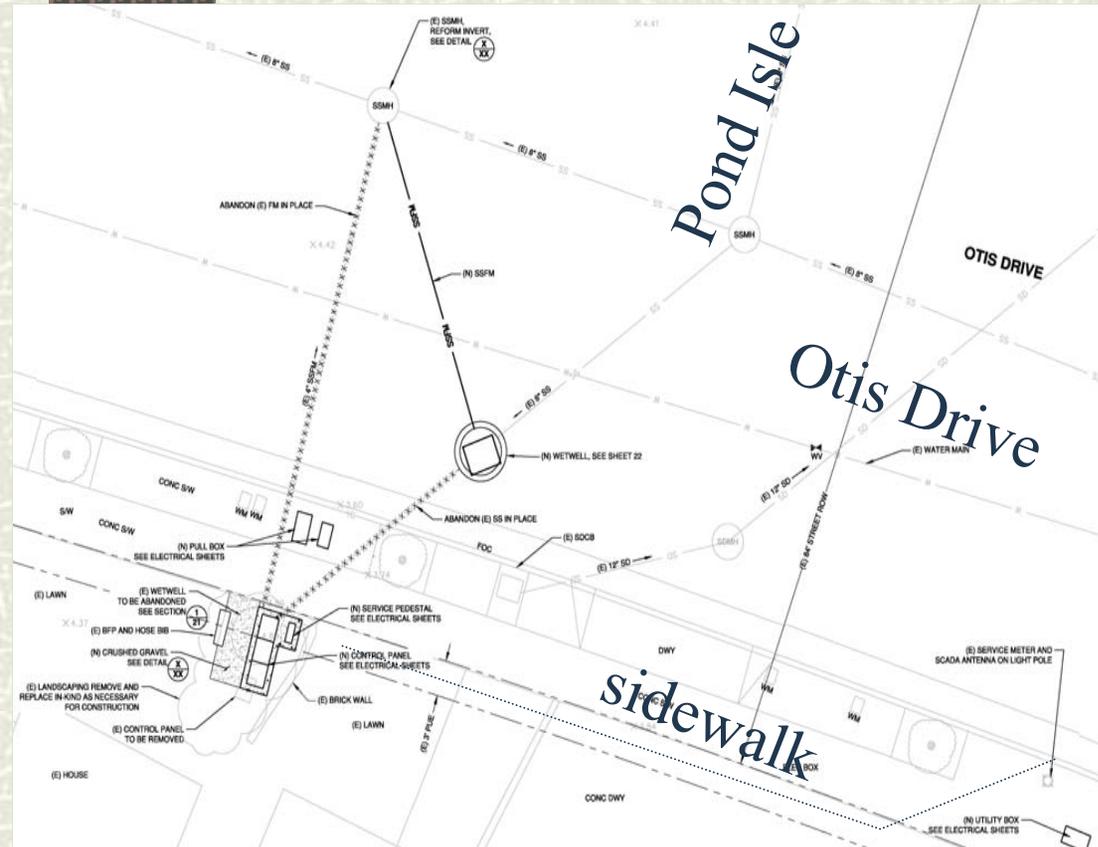
Restore landscaping similar to existing



- New Motor Control cabinet (MC)
- New Pedestal Cabinet (PED)
- Wet well to be moved to be flush with street. (WW)
- SCADA pole located down Otis Dr.- 76' to east on light pole

POND/OTIS Pump station - Site Plan

Estimated Reliability Improvement Cost = \$222,000



INSTALL

1.

REMOVE

1. Old Motor Controls

The easement does not need to be expanded. All proposed equipment fits in the easement or in City Right of Way.

Grand/Shoreline Pump station – LOCATION MAP



Existing site conditions at Grand/Shoreline Pump station



SCADA pole

Cabinet

Wetwell



BFD

Proposed site conditions at Grand/Shoreline Pump station

No changes on Shoreline Dr.



Grand Street



- New motor control cabinet (MC)
- New pedestal cabinet (PED)
- Relocate SCADA pole (SP)

GRAND/ SHORELINE Pump station – Site Plan

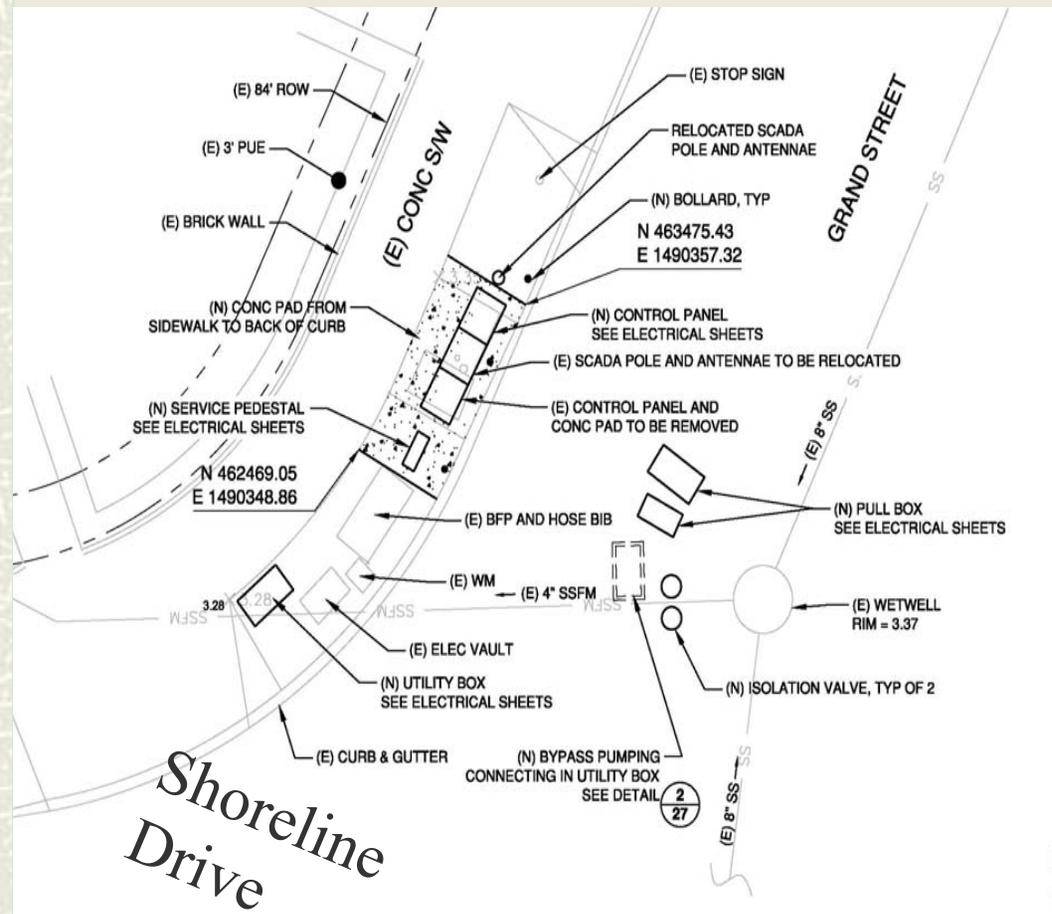
Estimated Reliability Improvement Cost = \$185,000

INSTALL

REMOVE

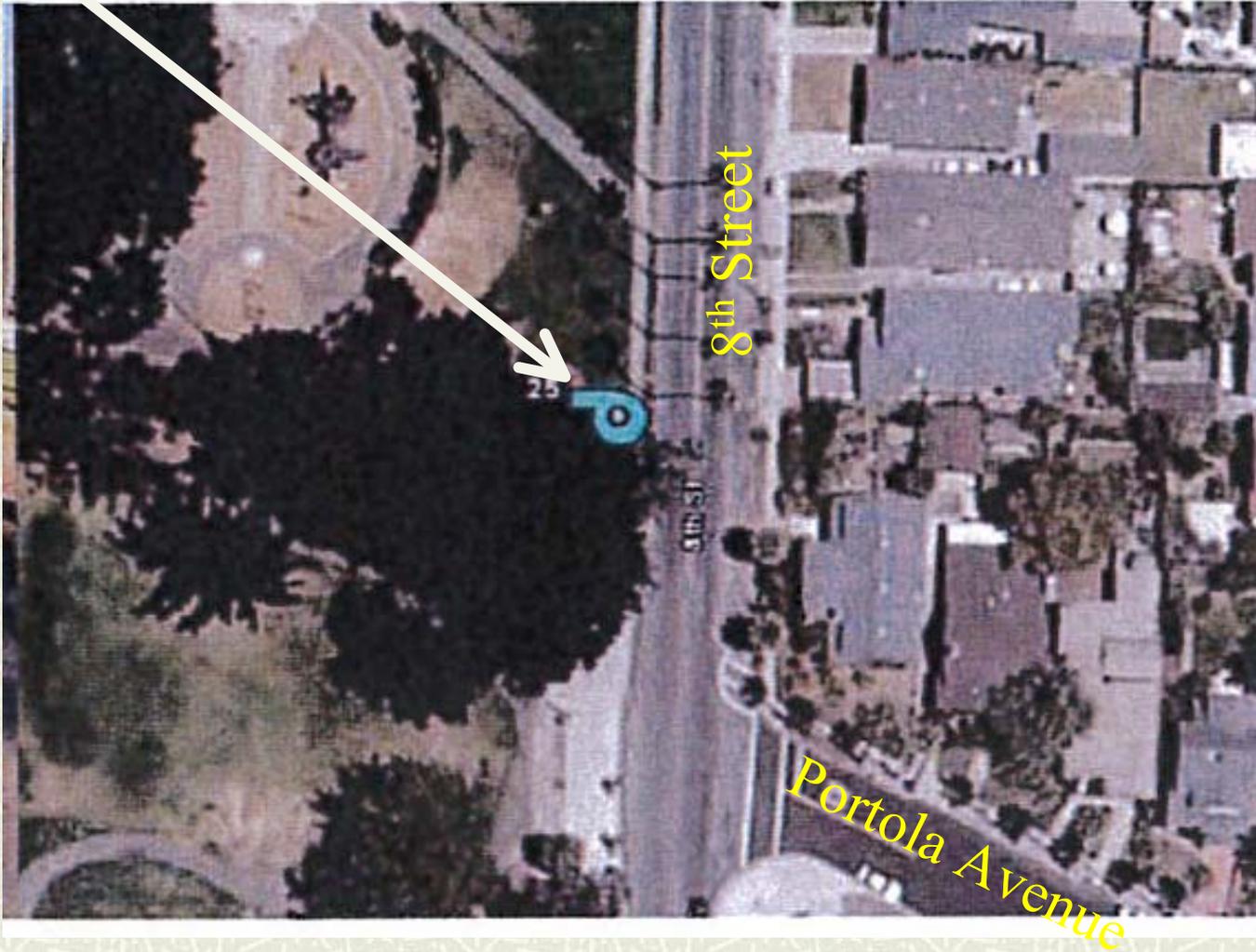
1. New pedestal - 1.68' L x 1' W x 5.25' H
2. New valve vault
3. New Control panel – 6' L x 1.67' W x 5' H
4. Wet well improvements
5. 2 new pumps
6. Portable generator plug-in
7. Bollards
8. Sidewalk repair

1. Old Motor Controls



All proposed equipment is being placed in City Right of Way.

Eighth/Portola Pump Station – LOCATION MAP



Existing site conditions at Eighth/Portola Pump station



Diseased Locust tree to be removed and a new tree planted in Park nearby



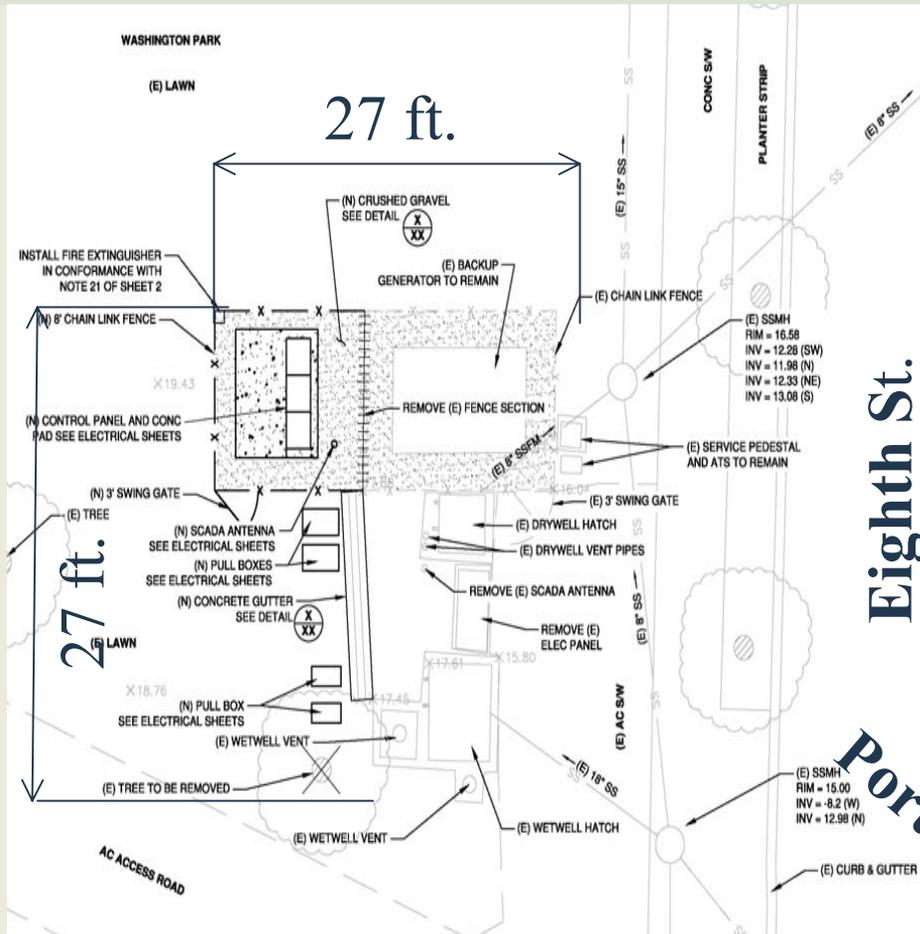
Proposed site conditions for Eighth/Portola Pump station



Install new Motor controls behind the existing Generator and extend the fence to enclose new motor controls. Relocate SCADA behind fence.

EIGHTH/PORTOLA Pump station – Site Plan

Estimated Reliability Improvement cost = \$257,000



Eighth St.

Portola St.

INSTALL

1. New control panel - 8' L x 1.7' W x 5' H behind existing generator
2. Extend existing fence around control panel and generator
3. Wet well improvements
4. 2 new pumps
5. New tree to be planted
6. Relocate SCADA

REMOVE

1. Old Motor Controls
2. Unstable locust tree to be posted for removal

The equipment is located on City property in Washington Park.



What do you think?

**■ Concerns,
Questions,
Comments and
Discussion**

Next Steps

- # Community Input and Comments to be received by Feb. 7, 2013
 - # Public Works Dept. - Project Manager
 - Ms. Carol Clark, telex. 510-747-7944,
 - email : cclark@ci.alameda.ca.us
 - By letter to :
 - City of Alameda, CA., West City Hall,
 - Public Works Department,
 - 950 W. Square Mall Rd.,
 - Alameda, CA., 94501
 - ATTN: C. Clark
 - # View City's web site – www.cityofalamedaca.gov for power point presentation under city hall/departments/public works/capital improvement engineering, scroll to bottom of page to “Current Projects”
 - # E-mail sign up for future pump station notices
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