

**Westborough Water District
Capital Improvement Program Summary 2020**

Completed	CIP No.	DSA / Analysis	Zone	CIP Name	Quantity			Construction	Planning, Design & CM	Contingency	2020 Dollars
					LF	SRV	HYD				
✓	W20-02	002	3	Christen Hill Tank Water Main Improvements	1300	0	0	\$ 1,020,000	\$ 155,000	\$ 115,000	\$ 1,290,000
	W20-03		3	King Drive Improvements	1150	0	0	\$ 1,215,000	\$ 185,000	\$ 140,000	\$ 1,540,000
✓	W20-04	003	3	Myrna Lane Improvements	300	20	1	\$ 240,000	\$ 75,000	\$ 30,000	\$ 345,000
✓	W20-05	004	3	Callan Park Cross Country Abandonment	1850	103	7	\$ 1,411,000	\$ 210,000	\$ 164,000	\$ 1,785,000
✓	W20-06	005	3	Athy Drive Improvements	1300	4	5	\$ 728,000	\$ 145,000	\$ 87,000	\$ 960,000
	W20-07	006	3	Callan Blvd Pump Station	500	0	5	\$ 2,475,000	\$ 370,000	\$ 285,000	\$ 3,130,000
	W20-08		3	Callan Blvd Improvements	2900	40	6	\$ 1,865,000	\$ 280,000	\$ 215,000	\$ 2,360,000
✓	W20-09	NR	3	Daly City Emergency Intertie	0	0	0	\$ 250,000	\$ 75,000	\$ 35,000	\$ 360,000
✓	W20-10	NR	2	Skyline Tank Site Improvements	0	0	0	\$ 528,000	\$ 105,000	\$ 62,000	\$ 695,000
✓	W20-11	WWD Skyline Tanks Assessment	2	Skyline Tank No. 1 Improvements	0	0	0	\$ 940,000	\$ 190,000	\$ 110,000	\$ 1,240,000
	W20-12		2	Skyline Tank No. 2 Improvements	0	0	0	\$ 1,565,000	\$ 235,000	\$ 180,000	\$ 1,980,000
	W20-13		2	Skyline Tank No. 3 Improvements	0	0	0	\$ 1,700,000	\$ 255,000	\$ 195,000	\$ 2,150,000
✓	W20-14	NR	2	Westborough Blvd Improvements	2200	0	0	\$ 2,075,000	\$ 410,000	\$ 245,000	\$ 2,730,000
✓	W20-15	014	2	Shannon Drive Development Improvements	0	1	0	\$ 125,000	\$ 35,000	\$ 15,000	\$ 175,000
✓	W20-16	NR	2	City of San Bruno Emergency Inter-Tie	400	8	1	\$ 481,000	\$ 120,000	\$ 59,000	\$ 660,000
✓	W20-17	008	2	Wexford Avenue Abandonment	100	5	1	\$ 78,000	\$ 27,000	\$ 10,000	\$ 115,000
✓	W20-18	009	2	Shannon Drive Abandonment	700	21	2	\$ 439,500	\$ 110,000	\$ 55,500	\$ 605,000
✓	W20-19	NR	2	Vista Court Fire Hydrants	0	0	2	\$ 30,000	\$ 10,000	\$ 5,000	\$ 45,000
✓	W20-20	010	2	Callan Blvd Zone 2 Loop Closure	1150	40	1	\$ 792,500	\$ 160,000	\$ 97,500	\$ 1,050,000
✓	W20-21	011	2	Westborough Park Abandonments - Phase 1	1800	122	4	\$ 1,419,000	\$ 215,000	\$ 166,000	\$ 1,800,000
✓	W20-22	012	2	Greendale Drive Area Cross Country Abandonments	1650	110	4	\$ 1,297,500	\$ 195,000	\$ 152,500	\$ 1,645,000
✓	W20-23	NR	2	Greendale Drive Improvements - Phase 1	500	0	0	\$ 250,000	\$ 75,000	\$ 35,000	\$ 360,000
✓	W20-24	NR	2	Greendale Drive Improvements - Phase 2	1000	25	3	\$ 657,500	\$ 130,000	\$ 77,500	\$ 865,000
✓	W20-25	NR	2	Palos Verdes Way Improvements	250	14	1	\$ 190,500	\$ 60,000	\$ 24,500	\$ 275,000
✓	W20-26	NR	2	Greendale Dr Z3 to Z2 PRV Improvements	0	0	0	\$ 300,000	\$ 75,000	\$ 40,000	\$ 415,000
✓	W20-27	NR	2	Greendale Dr Z2 to Z1 PRV Improvements	0	0	0	\$ 325,000	\$ 80,000	\$ 40,000	\$ 445,000
✓	W20-28	NR	2	Gellert Ct Z2 to Z1 PRV Improvements	0	0	0	\$ 325,000	\$ 80,000	\$ 40,000	\$ 445,000
✓	W20-29	013	2	Wexford Avenue Loop Closures	950	11	2	\$ 507,000	\$ 100,000	\$ 63,000	\$ 670,000
✓	W20-30	NR	2	Westborough Blvd Zone 2 Blow-Offs	0	0	0	\$ 225,000	\$ 70,000	\$ 30,000	\$ 325,000

Westborough Water District
Capital Improvement Program Summary 2020

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					LF	SRV	HYD				
	W20-32	-	1	Westbrough Blvd Z2 to Z1 PRV Improvements	650	4	37	\$ 1,034,000	\$ 155,000	\$ 121,000	\$ 1,310,000
✓	W20-33	NR	1	Westborough Park Abandonments - Phase 2	350	2	1	\$ 181,500	\$ 55,000	\$ 23,500	\$ 260,000
✓	W20-34	015	1	Avalon Drive / Seville Way Improvements	650	37	2	\$ 539,000	\$ 110,000	\$ 66,000	\$ 715,000
✓	W20-35	016	1	Gellert Blvd Ridge Improvements	2500	160	2	\$ 1,960,000	\$ 300,000	\$ 225,000	\$ 2,485,000
✓	W20-36	NR	1	Galway Drive Improvements	300	0	1	\$ 162,500	\$ 50,000	\$ 22,500	\$ 235,000
✓	W20-37	NR	1	Westborough Pump Station Improvements	0	0	0	\$ 180,000	\$ 55,000	\$ 25,000	\$ 260,000
✓	W20-01	NR	Misc	Water and Sewer Rate Study	0	0	0	\$ -	\$ 35,000	\$ 5,000	\$ 40,000
✓	W20-31	NR	Misc	Westborough Blvd Transmission Blowoffs	0	0	0	\$ 675,000	\$ 135,000	\$ 80,000	\$ 890,000
✓	W20-38	NR	Misc	Inline Water Valves	0	0	0	\$ 1,300,000	\$ 195,000	\$ 150,000	\$ 1,645,000
✓	W20-39	NR	Misc	Emergency Hoses	0	0	0	\$ 2,000	\$ -	\$ 1,000	\$ 3,000
✓	W20-40	NR	Misc	Drain Pump	0	0	0	\$ 5,000	\$ -	\$ 1,000	\$ 6,000
✓	W20-41	NR	Misc	Office Remodel & Expansion (Phases 1 & 2)	0	0	0	\$ -	\$ 35,000	\$ 5,000	\$ 40,000

Material Totals 24450 727 88 System Total \$ 38,349,000

Cost Assumptions		
Item	Unit	Cost
8" DIP	LF	\$ 450
10" DIP	LF	\$ 500
12" DIP	LF	\$ 550
Service	EA	\$ 4,500
Hydrant	EA	\$ 1,500

*NR - Not Required

Zone 3 Total	\$ 11,770,000
Zone 2 Total	\$ 18,690,000
Zone 1 Total	\$ 5,265,000
Misc Total	\$ 2,624,000



westborough
water district

SEWER SYSTEM MAP
March 5, 2019

1" = 100'



westborough
water district

WATER SYSTEM MAP
March 17, 2019

1" = 100'



SCALE: NTS

WATER AND SEWER RATE STUDY

PROJECT BACKGROUND

The Westborough Water District (District) is a public utilities agency with approximately 4,000 residential, commercial and irrigation service connections. The District purchases their water supply from the San Francisco Public Utility Commission (SFPUC).

The District also owns the sanitary sewer system located within the same boundary. Under an agreement, the sewer system is maintained by the North San Mateo County Sanitation District (NSMCSD).

This project will hire a consultant to conduct a rate study based on SFPUC's current and projected rates, NSMCSD's contract and service costs, District Capital Improvement Projects, ongoing inflation costs, and any increase/decrease in District water sales or sewer usage.

PROPOSED IMPROVEMENTS

Water and Sewer Rate Study

PROJECT BENEFITS

The Water and Sewer Rate Study will ensure rates are properly set for ongoing funding for water supply, operation, maintenance, and capital improvements of water and sanitary sewer systems.

PROJECT BUDGET (2020)

Rate Study	\$	35,000
Subtotal	\$	35,000
Contingency (±10%)	\$	5,000
Project Budget	\$	40,000

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JOB No.	10025.01
DATE	02/2020
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WESTBOROUGH WATER DISTRICT
SAN MATEO COUNTY, CALIFORNIA
2263 WESTBOROUGH BOULEVARD
SOUTH SAN FRANCISCO, CA 94083

CAPITAL IMPROVEMENT PROGRAM
WATER AND SEWER RATE STUDY
PROJECT W20-01

CHRISTEN HILL TANK WATER MAIN IMPROVEMENTS

PROJECT BACKGROUND

Zone 3 is supplied water from the North Coast County Water District's (NCCWD) Christen Hill Tank located at the northeast corner of intersection of Glencourt Way, Skyline Blvd and King Dr. Although the tank is owned and maintained by NNCWD, the District has an agreement to use the tank for Zone 3 storage. Water is moved into Zone 3 via a 24" transmission water main located within the tank's access driveway which crosses the San Andreas Fault approximately 800 feet uphill from the site entrance. Hydraulic modeling shows the 24" water main is oversized and can be replaced with a fully restrained and earthquake resistant 16" water main. This project will replace the existing 24" water main and install a combination of new 16" ductile iron pipe (DIP) and earthquake resistant ductile iron pipe (ERDIP). Distribution System Analysis No. 002

PROPOSED IMPROVEMENTS

Replace 800 LF of 24" pipe with 16" DIP
Replace 500 LF of 24" pipe with 16" ERDIP

PROJECT BENEFITS

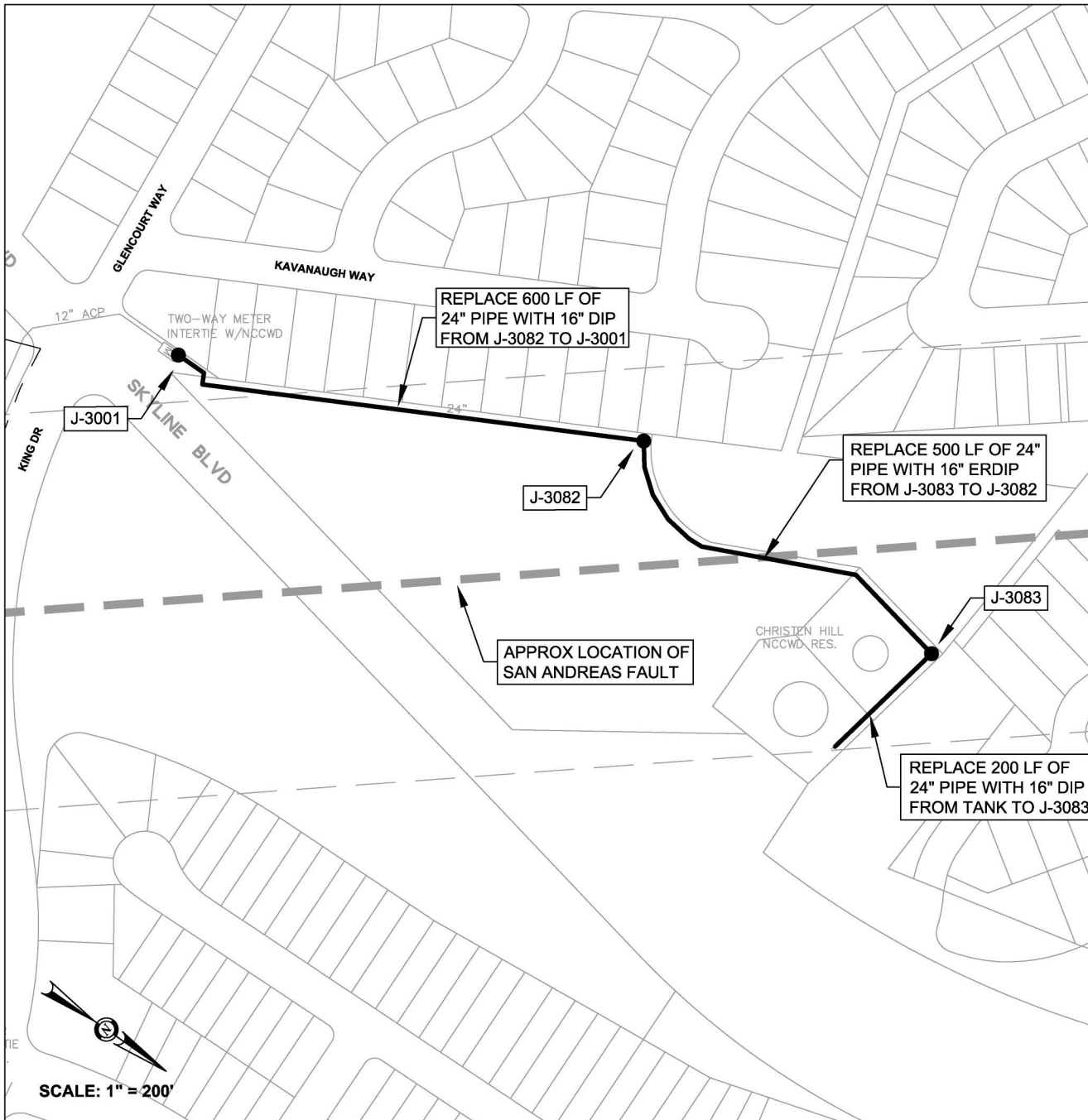
The Christen Hill Tank Water Main Improvements replaces an aging and oversized water main and improves seismic resiliency.

PROJECT BUDGET (2020)

16" DIP - 800 LF @ \$650/LF	\$ 520,000
16" ERDIP - 500 LF @ \$1,000/LF	\$ 500,000
Subtotal Construction	\$ 1,020,000
Planning, Design, & Construction Support	\$ 155,000
Contingency (±10%)	\$ 115,000
Project Budget	\$ 1,290,000

OPTIONAL

Construction Management/Inspection	\$ 100,000
Contingency (±10%)	\$ 10,000
Total	\$ 110,000



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SOUTH SAN FRANCISCO, CA 94083

CAPITAL IMPROVEMENT PROGRAM
CHRISTEN HILL TANK WATER MAIN IMPROVEMENTS
PROJECT W20-02

KING DRIVE IMPROVEMENTS

PROJECT BACKGROUND

Zone 3 is supplied water from the North Coast County Water District's (NCCWD) Christen Hill Tank located at the northeast corner of intersection of Glencourt Way, Skyline Blvd and King Dr. Although the tank is owned and maintained by NCCWD, the District has an agreement to use the tank for Zone 3 storage. To get water from the tank site to Zone 3, the District uses a combination of 24" and 12" pipe. The 12" asbestos cement pipe (ACP) water main portion is located in a cross country (CC) area within a few feet of San Andreas fault, with limited access and exact location unknown. This project abandons the existing 12" CC and installs a new 16" water main along King Dr using a combination of ductile iron pipe (DIP) and earthquake resistant ductile iron pipe (ERDIP). Distribution System Analysis No. 002

PROPOSED IMPROVEMENTS

Abandon 870 LF of 12" CC ACP
Install 600 LF of 16" DIP
Install 550 LF of 16" ERDIP

PROJECT BENEFITS

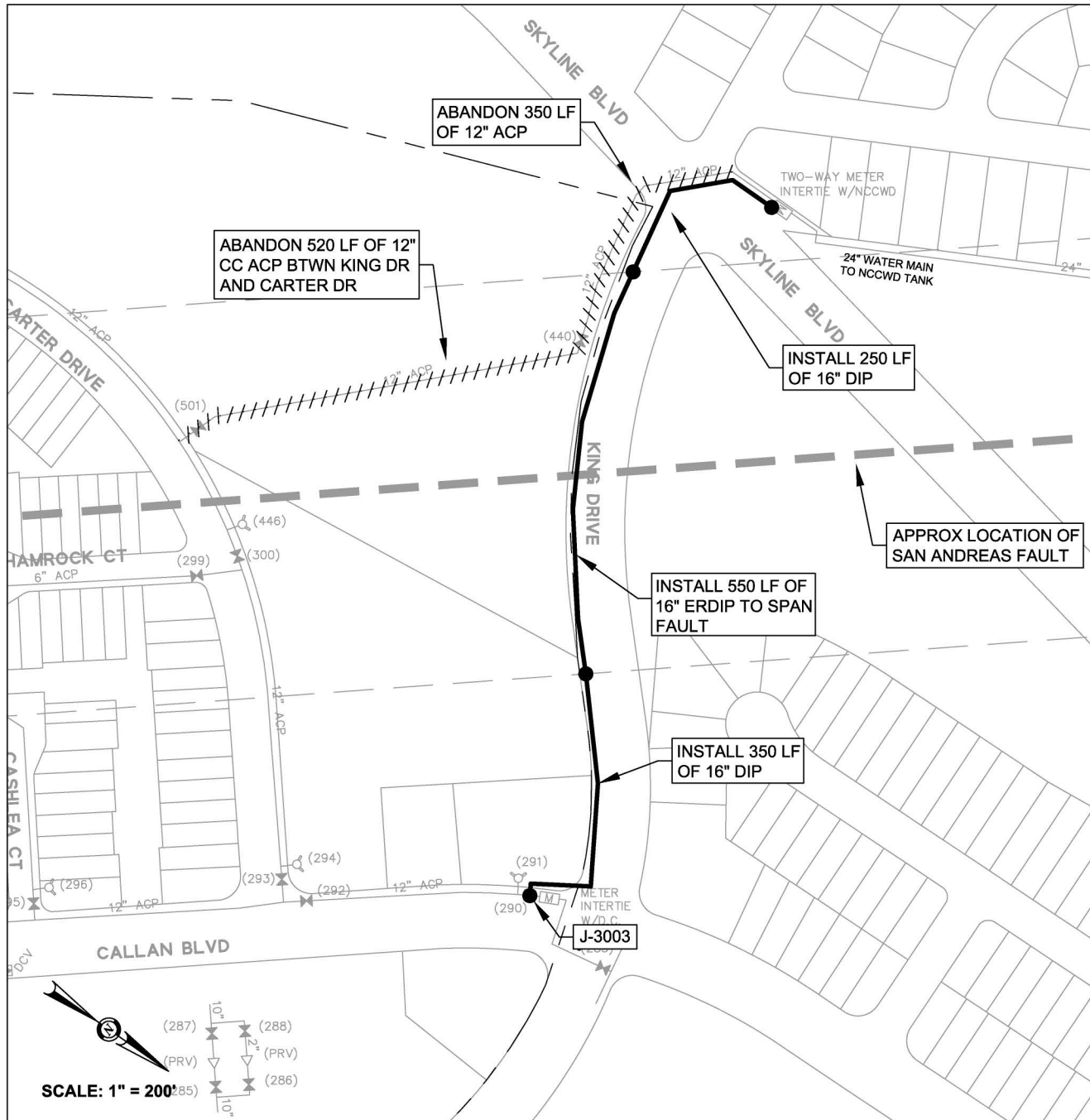
The King Drive Improvements eliminates a CC water main, improves water main accessibility, and improves seismic resiliency.

PROJECT BUDGET (2020)

16" DIP - 600 LF @ \$650/LF	\$ 390,000
16" ERDIP- 550 LF @ \$1,500/LF	\$ 825,000
Subtotal Construction	\$ 1,215,000
Planning, Design, & Construction Support	\$ 185,000
Contingency (±10%)	\$ 140,000
Project Budget	\$ 1,540,000

OPTIONAL

Construction Management/Inspection	\$ 120,000
Contingency (±10%)	\$ 15,000
Total	\$ 135,000



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CAPITAL IMPROVEMENT PROGRAM
KING DRIVE IMPROVEMENTS
PROJECT W20-03

MYRNA LANE IMPROVEMENTS

PROJECT BACKGROUND

A 150 LF cross country (CC) 6" asbestos cement pipe (ACP), is located between 3746 and 3750 Myrna Ln. This water main connects an existing 6" CC ACP located in the open space area between Myrna Ln, Cork Pl, and Farnie Ct to a 450 LF 4" ACP on Myrna Ln with two dead ends. Should a break occur on the CC water main, there is significant risk of water damage to surrounding properties. This project abandons both the 4" and 6" ACP, replaces 300 LF of 6" ACP with 8" ductile iron pipe (DIP) and relocates services on the 4" ACP to the new 8" DIP. Hydraulic analysis shows the abandonment and replacement of the existing water mains has no adverse affects on fire flows within the area except for the fire hydrant located across 3747 Myrna Ln. This fire hydrant experienced a 24% decrease in residual pressure yet the residual pressure (39 psi) was still greater than 20 psi during a 2,500 gpm fire flow. Distribution System Analysis No. 003

PROPOSED IMPROVEMENTS

Abandon 450 LF of 4" ACP and 150 LF of CC 6" ACP
 Replace 300 LF of 6" ACP with 8" DIP
 Replace 1 fire hydrant
 Replace 20 service connections

PROJECT BENEFITS

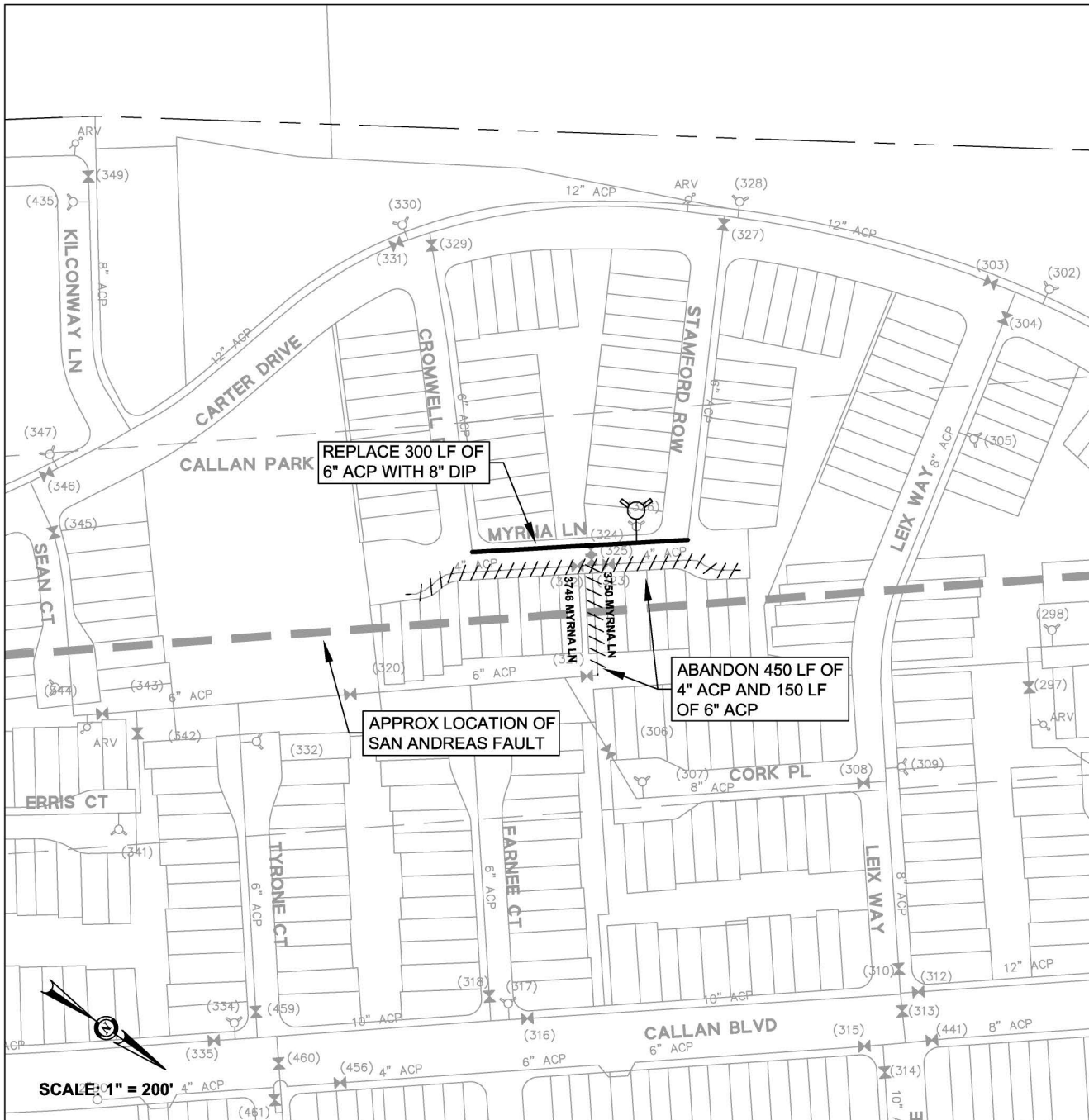
The Myrna Lane Improvements abandons a CC water main, eliminates dead ends, replaces aging pipes with new 8" DIP, and reduces District maintenance.

PROJECT BUDGET (2020)

8" DIP - 300 LF @ \$450/LF	\$ 135,000
Fire Hydrants - 1 @ \$15,000/EA	\$ 15,000
Service Connections - 20 @ \$4,500/EA	\$ 90,000
Subtotal Construction	\$ 240,000
Planning, Design, & Construction Support	\$ 75,000
Contingency (±10%)	\$ 30,000
Project Budget	\$ 345,000

OPTIONAL

Construction Management/Inspection	\$ 25,000
Contingency (±10%)	\$ 5,000
Total	\$ 30,000



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 SAN MATEO COUNTY, CALIFORNIA
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 SOUTH SAN FRANCISCO, CA 94083

CAPITAL IMPROVEMENT PROGRAM
MYRNA LANE IMPROVEMENTS
PROJECT W20-04

CALLAN PARK CROSS COUNTRY ABANDONMENT

PROJECT BACKGROUND

Callan Park is located between the back of homes on Myrna Ln, Farness Ct, and Tyrone Ct and has a 1,050 LF 6" asbestos cement pipe (ACP) cross country (CC) water main connecting to water mains on Sean Ct, Erris Ct, Tyrone Ct, Farness Ct and Cork Pl. The 6" CC ACP water main is difficult to access and could cause significant property damage if a break occurs. This project abandons the 6" CC ACP however creates 5 dead ends on each of the previously mentioned streets. To minimize the fire flow decrease, the existing 6" and 8" ACP on the above courts will be replaced with 8" ductile iron pipe (DIP). Hydraulic analysis indicates a maximum 14% decrease to fire flows on the courts however all locations are well above the 1,500 gpm at 20 psi recommendation. A water age analysis also indicates water turnover is sufficient on the courts with the increased pipe size. Upon water main abandonment, the District can quitclaim the water main easement along the abandoned alignment. Distribution System Analysis No. 004

PROPOSED IMPROVEMENTS

Abandon 1,050 LF of 6" ACP
Replace 1,850 LF of 6" and 8" ACP with 8" DIP
Replace 7 fire hydrants
Replace 103 service connections

PROJECT BENEFITS

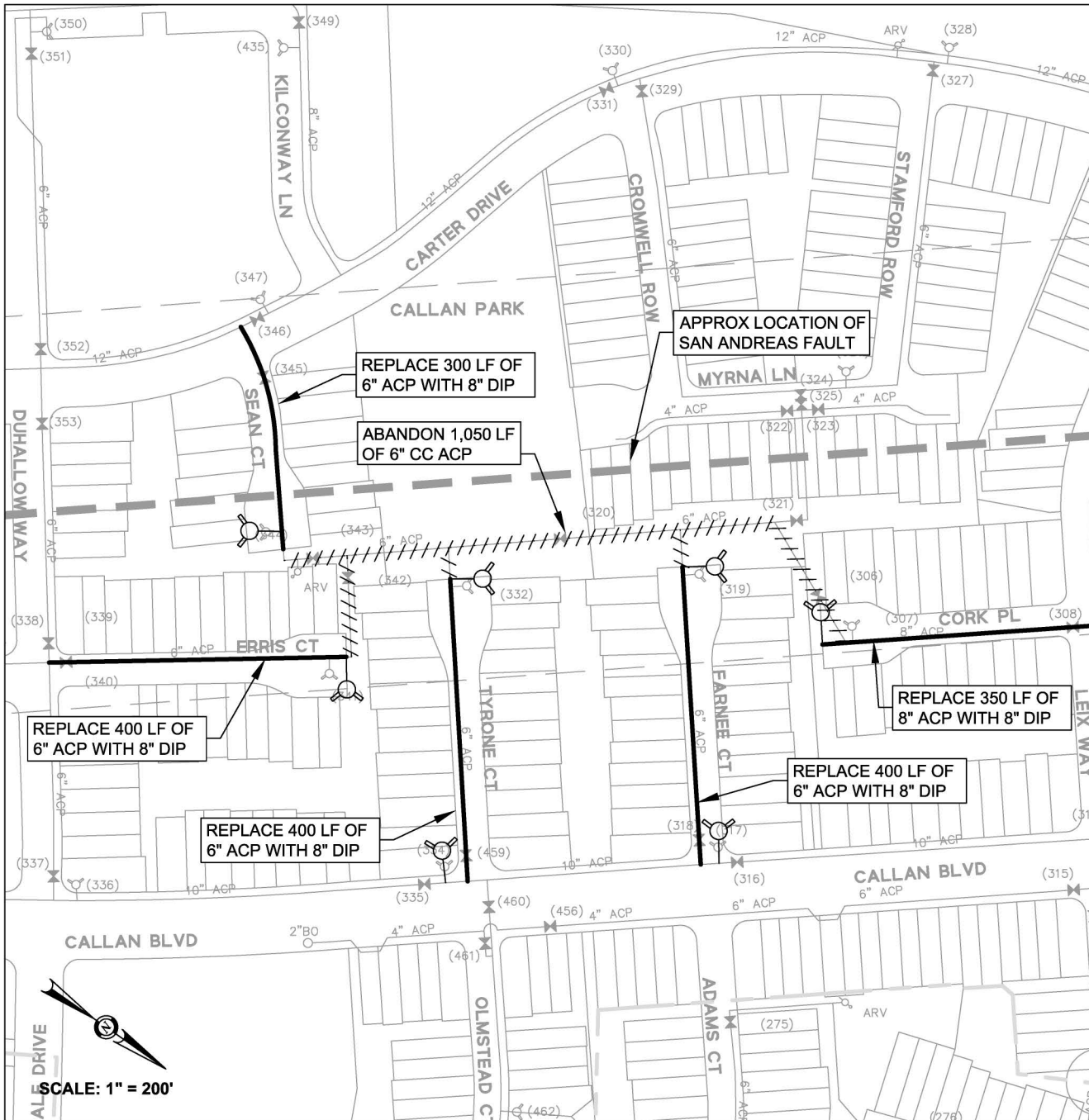
The Callan Park Cross Country Abandonment abandons a CC water main, replaces aging water mains, improves seismic resiliency, and reduces District maintenance.

PROJECT BUDGET (2020)

8" DIP - 1,850 LF @ \$450/LF	\$ 832,500
Fire Hydrants - 7 @ \$15,000/EA	\$ 105,000
Service Connections - 103 @ \$4,500/EA	\$ 463,500
Easement Coordination	\$ 10,000
Subtotal Construction	\$ 1,411,000
Planning, Design, & Construction Support	\$ 210,000
Contingency (±10%)	\$ 164,000
Project Budget	\$ 1,785,000

OPTIONAL

Construction Management/Inspection	\$ 140,000
Contingency (±10%)	\$ 15,000
Total	\$ 155,000



SCALE: 1" = 200'



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CAPITAL IMPROVEMENT PROGRAM
CALLAN PARK CROSS COUNTRY ABANDONMENT
PROJECT W20-05

ATHY DRIVE IMPROVEMENTS

PROJECT BACKGROUND

A 1,000 LF 8" asbestos cement pipe (ACP) is located along Athy Dr between Carter Dr and Meath Dr, with approximately 250 LF located in a cross country (CC) area between town homes in the Skyline Village subdivision immediately north of the Bay View Terrace Apartments. Elevation differences, wooden fences and landscaping along the CC portion creates accessibility issues and should a break occur on this section, there is significant risk of property damage. This project abandons the 8" ACP and with the addition of a new 8" water meter and check valve, creates a private water system within Skyline Village. Five fire hydrants will be replaced, two of which will become private fire hydrants within Skyline Village. In addition, water mains along Meath Dr and Carter Dr will be relocated away from the buildings into the public right-of-way among other improvements. Hydraulic analysis indicates an approximate 40% decrease in fire flows at the private fire hydrants (ends of the newly created dead ends). However, residual pressures remain greater than 20 psi at all locations with a 1,500 gpm fire flow. Distribution System Analysis No. 005

PROPOSED IMPROVEMENTS

Abandon 1,000 LF ACP
 Replace 150 LF of 2" PVC with 300 LF 6" DIP
 Replace 400 LF of 6" and 8" ACP with 8" DIP
 Replace 600 LF of 12" ACP with 12" DIP
 Relocate meters
 Replace 5 fire hydrants (2 Private and 3 Public)

PROJECT BENEFITS

The Athy Drive Improvements eliminates a CC water main, replaces aging water mains, and reduces District maintenance. The private water system will be maintained by Skyline Village.

PROJECT BUDGET (2020)

6" DIP - 300 LF @ \$350/LF	\$ 105,000
8" DIP - 400 LF @ \$450/LF	\$ 180,000
12" DIP - 600 LF @ \$550/LF	\$ 330,000
Fire Hydrants - 5 @ \$15,000/EA	\$ 75,000
Service Connections - 4 @ 4,500/EA	\$ 18,000
8" Meter and Check Valve	\$ 20,000
Subtotal Construction	\$ 728,000
Planning, Design & Construction Support	\$ 145,000
Contingency (±10%)	\$ 87,000
Project Budget	\$ 960,000

OPTIONAL

Construction Management/Inspection	\$ 75,000
Contingency (±10%)	\$ 10,000
Total	\$ 85,000

INSTALL 300 LF OF 6" DIP

ABANDON 300 LF OF 8" ACP

ABANDON 150 LF OF 2" PVC

REPLACE 250 LF OF 6" ACP WITH 8" DIP

ABANDON 700 LF OF 8" ACP

RELOCATE CITY METER

REPLACE 500 LF OF 12" ACP WITH 12" DIP

RELOCATE 8" METER AND CHECK VALVE

REPLACE 100 LF OF 12" ACP WITH 12" DIP

APPROXIMATE LOCATION OF SAN ANDREAS FAULT

SCALE: 1" = 200'



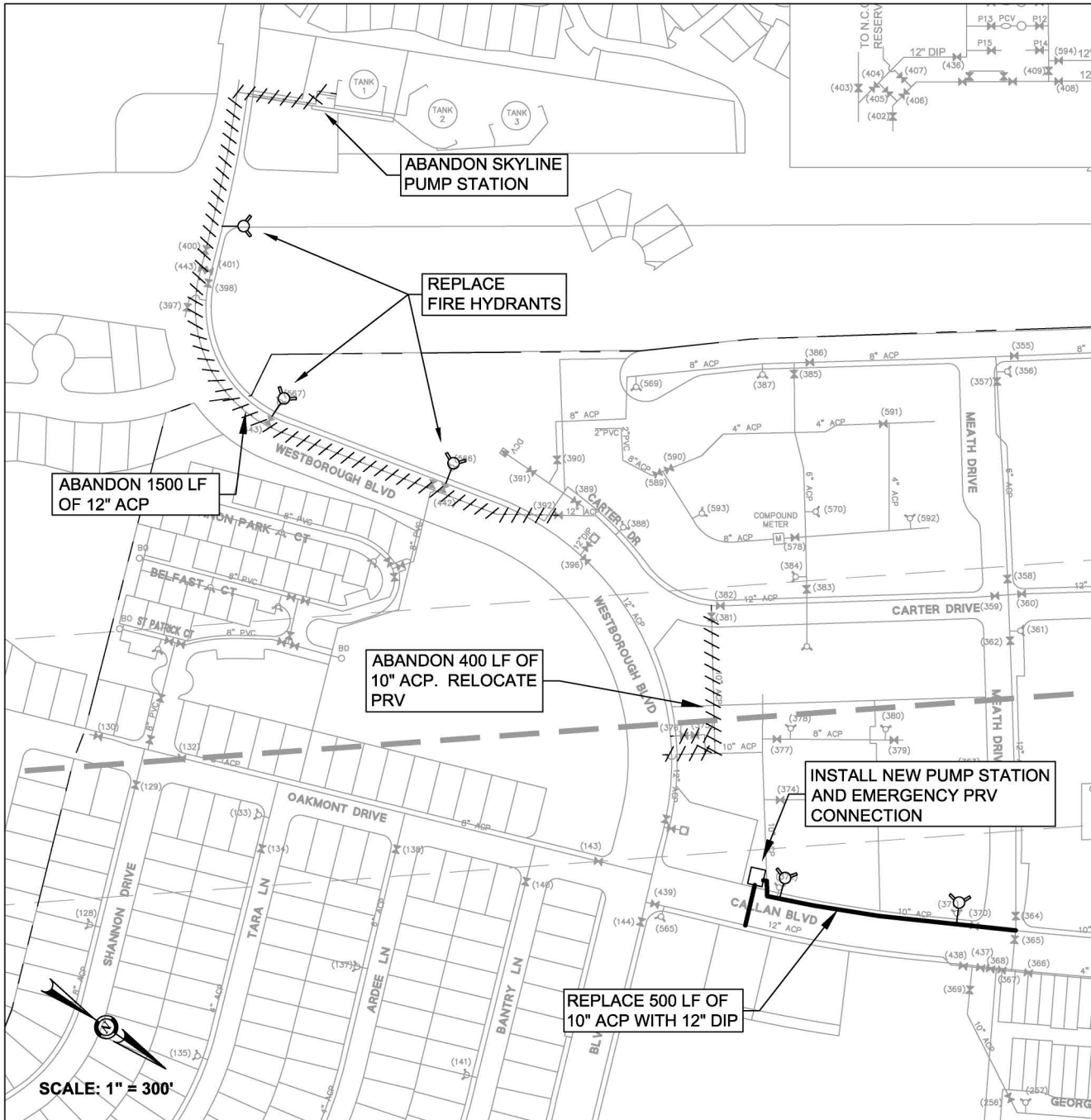
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CAPITAL IMPROVEMENT PROGRAM
 ATHY DRIVE IMPROVEMENTS
 PROJECT W20-06



CALLAN BLVD PUMP STATION

PROJECT BACKGROUND

Skyline Pump Station is located at the Skyline Tank Site and moves water from Zone 2 to Zone 3. The existing pump station consists of 2 30-HP pumps installed in 1972 and the building itself is in poor condition. The pumps, building and associated infrastructure have long exceeded their life expectancy. This project relocates the Skyline Pump Station to the intersection of Westborough and Callan Blvds eliminating 1,900 LF of water main on Westborough Blvd and Carter Drive. By abandoning these high risk water mains, some of which cross the San Andreas Fault, the District greatly reduces its maintenance and failure exposure. Electrical and mechanical engineers will design the new pump station to the highest efficiency to reduce the District's future power costs.

PROPOSED IMPROVEMENTS

Abandons 1,900 LF of 10"-12" ACP
 Replace 500 LF of 10" ACP with 12" DIP
 Relocate pump station and PRV
 Replace 5 fire hydrants

PROJECT BENEFITS

The Callan Blvd Pump Station replaces an obsolete pump station, abandons 1,900 LF of high risk water main, reduces District maintenance, and improves seismic resiliency.

PROJECT BUDGET (2020)

12" DIP - 500 LF @ \$550/LF	\$ 275,000
Fire Hydrants - 5 @ \$15,000/EA	\$ 75,000
Abandon 12" ACP	\$ 75,000
Pump Station (Building, Pumps, SCADA)	\$ 1,500,000
Relocate PRV	\$ 50,000
Right of Way Acquisition	\$ 500,000
Subtotal Construction	\$ 2,475,000
Planning, Design, & Construction Support	\$ 370,000
Contingency (±10%)	\$ 285,000
Project Budget	\$ 3,130,000

OPTIONAL

Construction Management/Inspection	\$ 250,000
Contingency (±10%)	\$ 25,000
Total	\$ 275,000



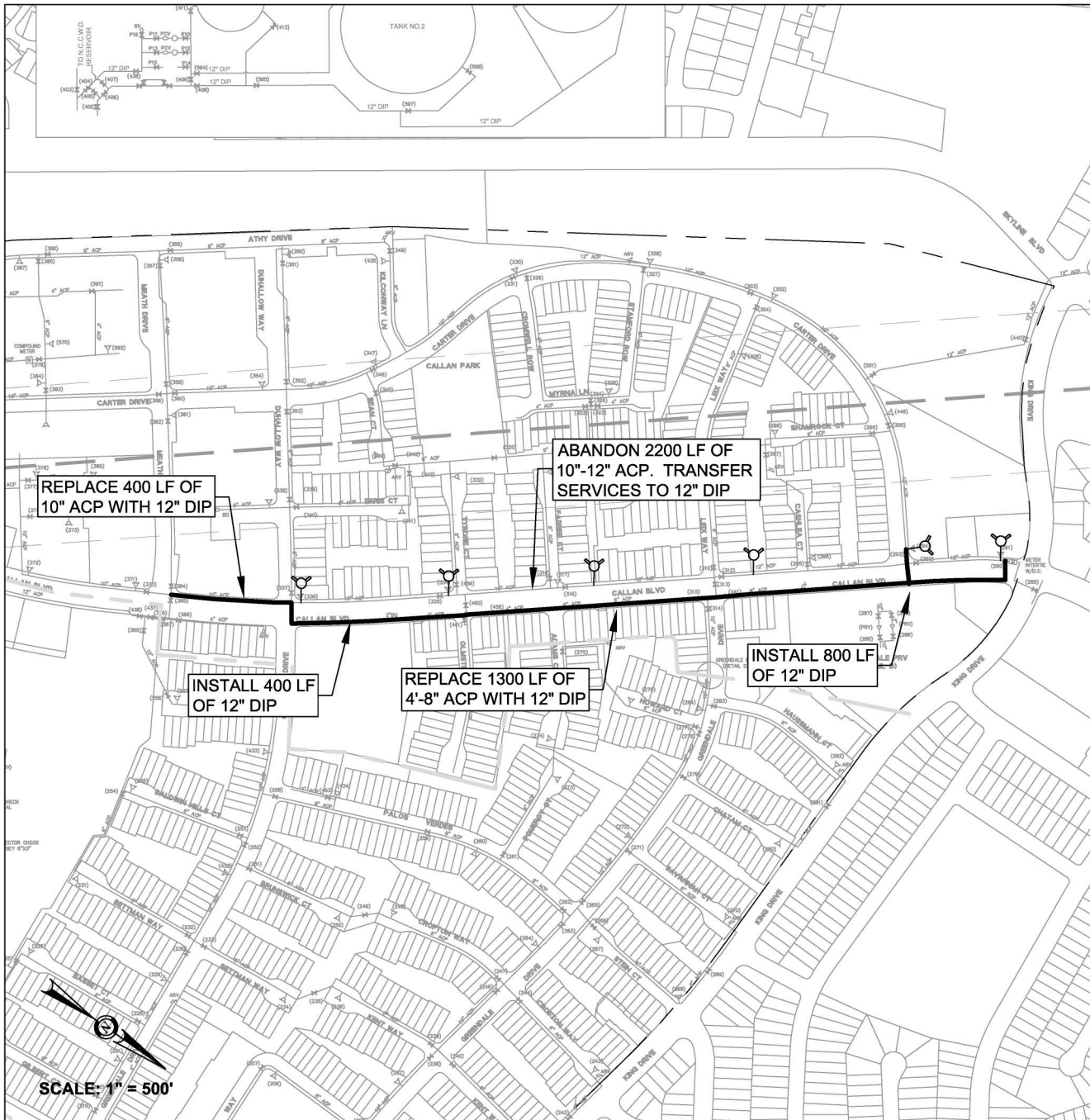
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 2263 WESTBOROUGH BOULEVARD
 SOUTH SAN FRANCISCO, CA 94083

CAPITAL IMPROVEMENT PROGRAM
CALLAN BLVD PUMP STATION
PROJECT W20-07



CALLAN BLVD IMPROVEMENTS

PROJECT BACKGROUND

Callan Blvd between Meath Dr and Carter Dr has approximately 2,600 LF of 10"-12" asbestos cement pipe (ACP) in addition to approximately 1,250 LF of parallel 4"-8" ACP. This project replaces the parallel water mains with a single 12" ductile iron pipe (DIP). Combining this project with CIPs W20-02, W20-03, W20-07 and W20-14 will create a new earthquake resistant 12" DIP backbone between the Callan Blvd Pump Station (W20-07) and Christen Hill Tank. In addition, this project will replace old and aging water mains, improve hydrant spacing, and reduce District maintenance.

PROPOSED IMPROVEMENTS

Replace 2,900 LF 4"-10" ACP with 12" DIP
Replace / install 6 fire hydrants
Replace 40 service connections

PROJECT BENEFITS

The Callan Blvd Improvements replaces parallel water mains with a single water main, improves fire protection in the area, greatly reduces District maintenance, and improves seismic resiliency.

PROJECT BUDGET (2020)

12" DIP - 2,900 LF @ \$550/LF	\$ 1,595,000
Fire Hydrants - 6 @ \$15,000/EA	\$ 90,000
Service Connections - 40 @ \$4,500/EA	\$ 180,000
Subtotal Construction	\$ 1,865,000
Planning, Design, & Construction Support	\$ 280,000
Contingency (±10%)	\$ 215,000
Project Budget	\$ 2,360,000

OPTIONAL

Construction Management/Inspection	\$ 185,000
Contingency (±10%)	\$ 20,000
Total	\$ 205,000

SCALE: 1" = 500'



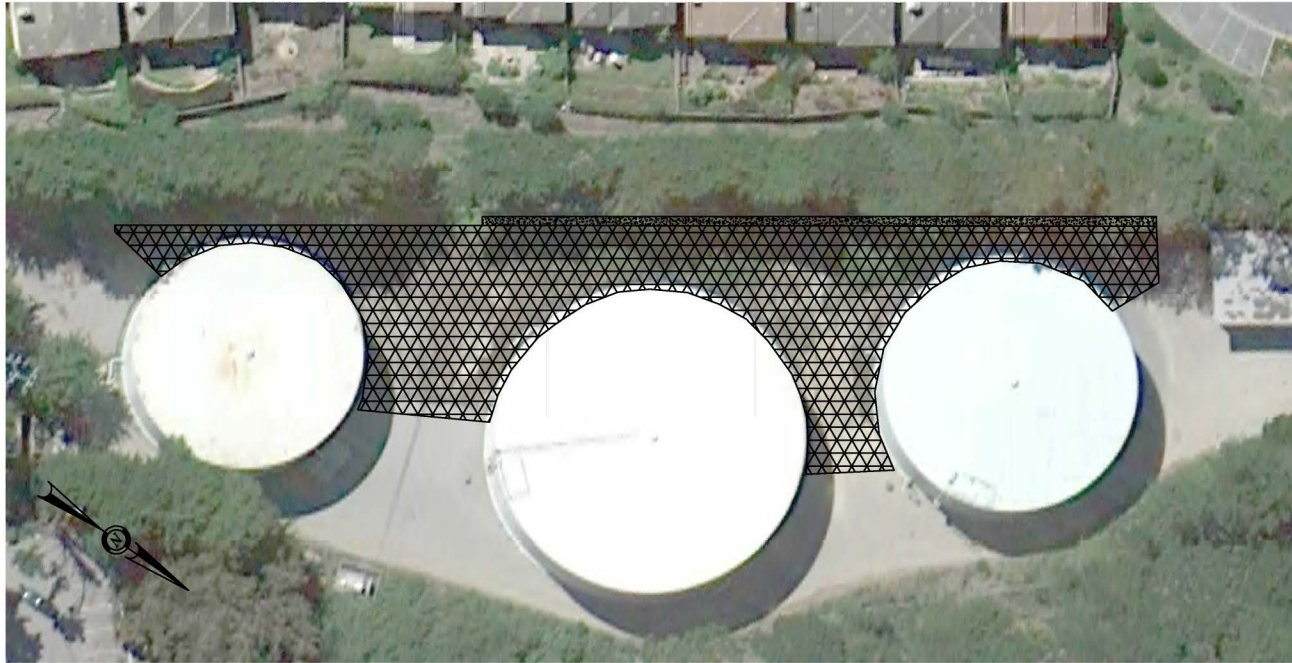
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CAPITAL IMPROVEMENT PROGRAM
CALLAN BLVD IMPROVEMENTS
PROJECT W20-08



SKYLINE TANK SITE IMPROVEMENTS

PROJECT BACKGROUND

The Skyline Tank Site has an approximate 20,000 SF unpaved area between and behind the three storage tanks with a downward slope towards the westerly fence. The unpaved area is inaccessible when wet and requires additional maintenance for weed and erosion control. This project involves installing a retaining wall along the westerly fence, leveling behind the tanks and paving the area. These improvements will improve site access, simplify maintenance, and eliminate weed and erosion control issues.

PROPOSED IMPROVEMENTS

Install 300 LF of 6 FT high retaining wall
Install drainage system
Level area behind tanks
Pave 20,000 SF

PROJECT BENEFITS

The Skyline Tank Site Improvements improves access, simplifies maintenance, and eliminates weed / erosion control issues.

PROJECT BUDGET (2020)

Retaining Wall - 300 LF @ \$500/LF	\$ 150,000
Storm Drain / Catch Basins	\$ 50,000
Site Grading - 950 CY @ \$100/CY	\$ 95,000
Aggregate Base - 270 CY @ \$150/CY	\$ 40,500
Asphalt Concrete - 550 TONS @ \$350/TON	\$ 192,500
Subtotal Construction	\$ 528,000
Planning, Design & Construction Support	\$ 105,000
Contingency (±10%)	\$ 62,000
Project Budget	\$ 695,000

OPTIONAL

Construction Management/Inspection	\$ 55,000
Contingency (±10%)	\$ 5,000
Total	\$ 60,000



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WESTBOROUGH WATER DISTRICT
SAN MATEO COUNTY, CALIFORNIA
2263 WESTBOROUGH BOULEVARD
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**CAPITAL IMPROVEMENT PROGRAM
SKYLINE TANK SITE IMPROVEMENTS
PROJECT W20-10**



SKYLINE TANK SITE



VIEW OF TANK 1



NEW VALVE ACTUATOR INSTALLATION



EXTERIOR COATING CORROSION



INTERIOR COATING CONDITION



EXIST 90° BEND WILL BE REPLACED WITH TEE WITH 4" GATE VALVE AS A NEW TANK DRAIN OUTLET/INLET

SKYLINE TANK NO. 1 IMPROVEMENTS

PROJECT BACKGROUND

In February 2018 the District completed a condition assessment of Skyline Tanks (3 total) including coating inspections and structural analysis in the event of a 2,475-yr earthquake (2% chance probability of exceedance within a 50-yr period). The Skyline Tanks are the District's primary water storage facility and therefore essential to providing service, especially fire suppression, following an earthquake.

Skyline Tank No. 1 retrofit recommendations include structurally retrofitting the tank's roof to withstand the design level earthquake at operating levels of up to 25 feet and jacking the center column to alleviate settlement. In addition, recommendations also include appurtenance upgrades including overflow relocation to exterior, ladders, guardrails, roof hatches, shell manholes, level indicators, center vent, sampling station, seismic valve, flush cleanout, and drain outlet. Work also includes a full recoat of the tank exterior and interior roof.

PROPOSED IMPROVEMENTS

Structural improvements to withstand the design level earthquake
Recoat the entire tank exterior and interior roof
Various appurtenance upgrades

PROJECT BENEFITS

The Skyline Tank No. 1 Improvements protects and extends the tank's service life, ensures tank integrity following the design level earthquake, provides tank isolation during a seismic event, and reduces water waste.

PROJECT BUDGET (2020)

Structural Retrofit	\$ 200,000
Tank Recoating	\$ 600,000
Seismic Valve	\$ 40,000
Appurtenance Upgrades	\$ 100,000
Subtotal Construction	\$ 940,000
Planning, Design & Construction Support	\$ 190,000
Contingency (±10%)	\$ 110,000
Project Budget	\$ 1,240,000

OPTIONAL

Construction Management/Inspection	\$ 95,000
Contingency (±10%)	\$ 10,000
Total	\$ 105,000



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CAPITAL IMPROVEMENT PROGRAM
SKYLINE TANK NO. 1 IMPROVEMENTS
PROJECT W20-11



SKYLINE TANK SITE



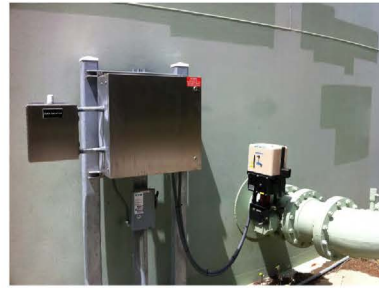
VIEW OF TANK 2



EXTERIOR COATING CORROSION



INTERIOR COATING CONDITION



NEW VALVE ACTUATOR INSTALLATION

EXIST 90° BEND WILL BE REPLACED WITH TEE WITH 4" GATE VALVE AS A NEW TANK DRAIN OUTLET/INLET



SKYLINE TANK NO. 2 IMPROVEMENTS

PROJECT BACKGROUND

In February 2018 the District completed a condition assessment of Skyline Tanks (3 total) including coating inspections and structural analysis in the event of a 2,475-yr earthquake (2% chance probability of exceedance within a 50-yr period). The Skyline Tanks are the District's primary water storage facility and therefore essential to providing service, especially fire suppression, following an earthquake.

Skyline Tank No. 2 retrofit recommendations include structurally retrofitting the tank's roof to withstand the design level earthquake at operating levels of up to 25 feet and shell strengthening/banding. In addition, recommendations also include appurtenance upgrades including overflow relocation to exterior, ladders, guardrails, roof hatches, shell manholes, level indicators, center vent, sampling station, seismic valve, flush cleanout and drain outlet. Work also includes a full recoat of the tank exterior and interior roof.

PROPOSED IMPROVEMENTS

Structural improvements to withstand the design level earthquake

Recoat the entire tank exterior and interior roof

Various appurtenance upgrades

PROJECT BENEFITS

The Skyline Tank No. 2 Improvements protects and extends the tank's service life, ensures tank integrity following the design level earthquake, provides tank isolation during a seismic event, and reduces water waste.

PROJECT BUDGET (2020)

Structural Retrofit	\$ 550,000
Tank Recoating	\$ 875,000
Seismic Valve	\$ 40,000
Appurtenance Upgrades	\$ 100,000
Subtotal Construction	\$ 1,565,000
Planning, Design & Construction Support	\$ 235,000
Contingency (±10%)	\$ 180,000
Project Budget	\$ 1,980,000

OPTIONAL

Construction Management/Inspection	\$ 155,000
Contingency (±10%)	\$ 15,000
Total	\$ 170,000



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CAPITAL IMPROVEMENT PROGRAM
SKYLINE TANK NO. 2 IMPROVEMENTS
PROJECT W20-12



SKYLINE TANK SITE



VIEW OF TANK 3



EXTERIOR COATING CORROSION



INTERIOR COATING CONDITION



EXIST 90° BEND WILL BE REPLACED WITH TEE WITH 4" GATE VALVE AS A NEW TANK DRAIN OUTLET/INLET

SKYLINE TANK NO. 3 IMPROVEMENTS

PROJECT BACKGROUND

In February 2018 the District completed a condition assessment of Skyline Tanks (3 total) including coating inspections and structural analysis in the event of a 2,475-yr earthquake (2% chance probability of exceedance within a 50-yr period). The Skyline Tanks are the District's primary water storage facility and therefore essential to providing service, especially fire suppression, following an earthquake.

Skyline Tank No. 3 retrofit recommendations include structurally retrofitting the tank's roof to withstand the design level earthquake at operating levels of up to 25 feet, shell strengthening/banding, and foundation improvements to mechanically anchor the tank. In addition, recommendations also include appurtenance upgrades including overflow relocation to exterior, ladders, guardrails, roof hatches, shell manholes, level indicators, center vent, sampling station, seismic valve, flush cleanout and a drain outlet. Work also includes a full recoat of the tank exterior and interior.

PROPOSED IMPROVEMENTS

Structural improvements to withstand the design level earthquake
Recoat the entire tank exterior and interior roof
Various appurtenance upgrades

PROJECT BENEFITS

The Skyline Tank No. 3 Improvements protects and extends the tank's service life, ensures tank integrity following the design level earthquake, provides tank isolation during a seismic event, and reduces water waste.

PROJECT BUDGET (2020)

Structural Retrofit	\$ 500,000
Tank Recoating	\$ 1,100,000
Appurtenance Upgrades	\$ 100,000
Subtotal Construction	\$ 1,700,000
Planning, Design & Construction Support	\$ 255,000
Contingency (±10%)	\$ 195,000
Project Budget	\$ 2,150,000

OPTIONAL

Construction Management/Inspection	\$ 170,000
Contingency (±10%)	\$ 20,000
Total	\$ 190,000



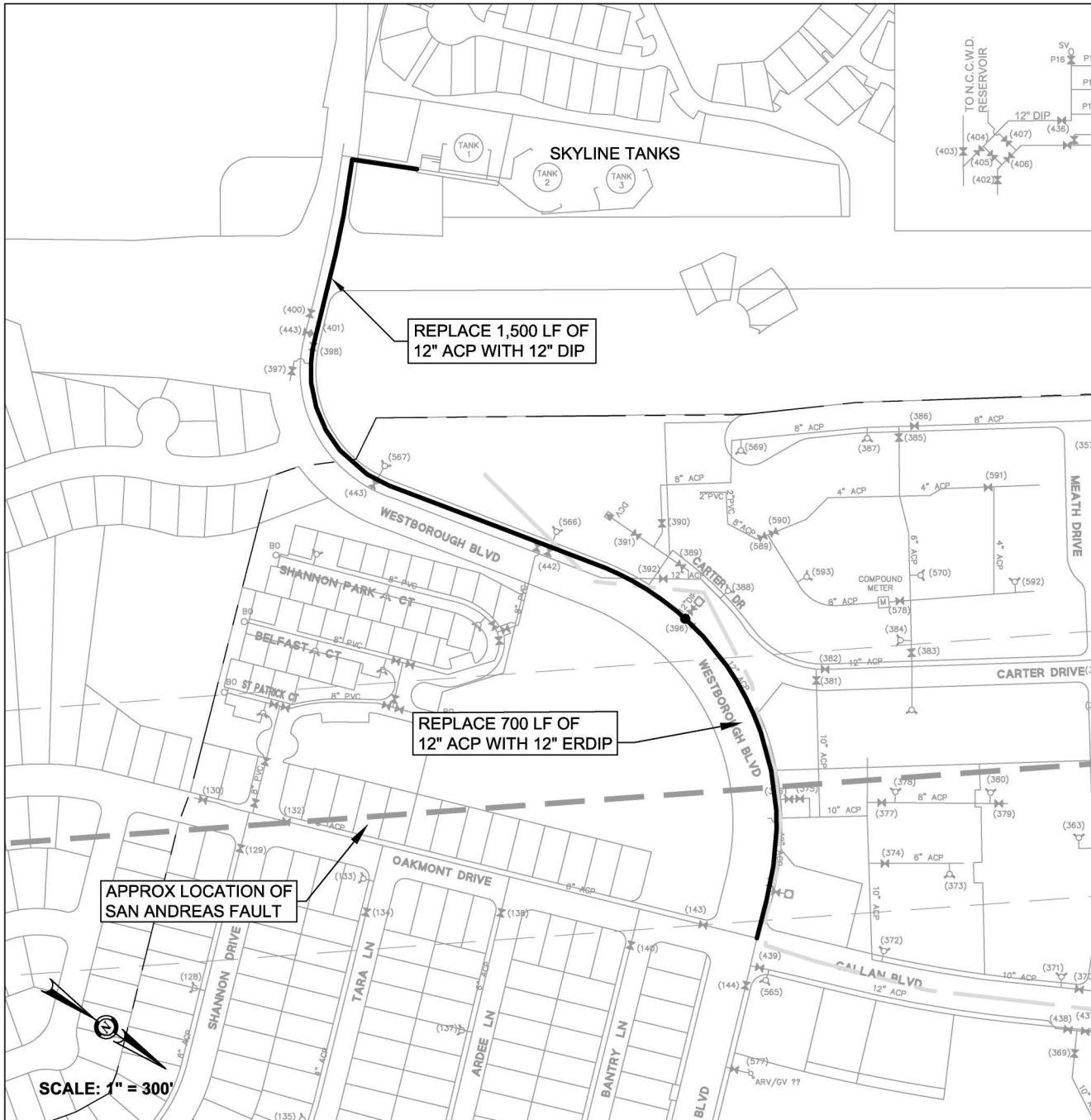
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CAPITAL IMPROVEMENT PROGRAM
SKYLINE TANK NO. 3 IMPROVEMENTS
PROJECT W20-13



WESTBOROUGH BLVD IMPROVEMENTS

PROJECT BACKGROUND

The existing Zone 2 12" asbestos cement pipe (ACP) along Westborough Blvd is the primary transmission water main for moving water from the Westborough Pump Station to the Skyline Tanks. The same water main back feeds Zones 1 and 2 from Skyline Tanks. The water main crosses the San Andreas fault approximately 300 feet west of Callan Blvd. In the event of an emergency or break on this main, the District would be unable to supply Zones 1 and 2 with its own water supply. The District however could utilize the NCCWD and Daly City interties to supply Zones 1 and 2 through Zone 3. This project replaces 2,200 LF of 12" ACP with a combination of 12" ductile iron pipe (DIP) and Earthquake Resistant DIP (ERDIP). The ERDIP will be installed where the water main crosses the fault.

PROPOSED IMPROVEMENTS

Replace 1,500 LF of 12" ACP with 12" DIP
Replace 700 LF of 12" ACP with 12" ERDIP

PROJECT BENEFITS

The Westborough Blvd Improvements improves seismic resiliency and greatly increases the chances of water being available for Zones 1 and 2 in the event of an earthquake

PROJECT BUDGET (2020)

12" DIP - 1,500 LF @ \$550/LF	\$ 825,000
12" ERDIP - 700 LF @ \$1,500/LF	\$ 1,050,000
12" ACP Abandonment	\$ 200,000
Subtotal Construction	\$ 2,075,000
Planning, Design & Construction Support	\$ 310,000
Geotechnical Investigation	\$ 100,000
Contingency (±10%)	\$ 245,000
Project Budget	\$ 2,730,000

OPTIONAL

Construction Management/Inspection	\$ 200,000
Contingency (±10%)	\$ 20,000
Total	\$ 220,000



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WESTBOROUGH WATER DISTRICT
SAN MATEO COUNTY, CALIFORNIA
2263 WESTBOROUGH BOULEVARD
SOUTH SAN FRANCISCO, CA 94083

CAPITAL IMPROVEMENT PROGRAM
WESTBOROUGH BLVD IMPROVEMENTS
PROJECT W20-14

SHANNON DR DEVELOPMENT IMPROVEMENTS

PROJECT BACKGROUND

Two cross country (CC) asbestos cement (ACP) water mains exist in the vicinity of the Shannon Dr and Oakmont Meadows subdivisions located between Westborough Blvd and Oakmont Dr: 1) an 800 LF 10" ACP just south connecting Westborough Blvd to Oakmont Dr and 2) a 200 LF 8" ACP connecting Westborough Blvd to Shannon Park Ct. Both are located in heavily vegetated, steep terrain making maintenance on these water mains challenging. Should breaks occur on these water mains there is a significant risk of property damage in the subdivision and to those along Oakmont Dr. This project abandons the CC ACPs however creates two dead ends in the upper portion of the subdivision. Hydraulic analysis indicates an approximate 30% decrease in fire flows at near the end of Shannon Park Ct however flows remain above 1,500 gpm at 20 psi with the exception of the very end where it is 1,400 gpm at 20 psi. This area can also be supplied water from hydrants along Westborough Blvd and other locations within the subdivision. All other locations in the subdivisions remain well above minimum fire flow recommendations. Distribution System Analysis No. 014

PROPOSED IMPROVEMENTS

Abandon 1,000 LF of 8" and 10" CC ACP
Install new fire hydrant

PROJECT BENEFITS

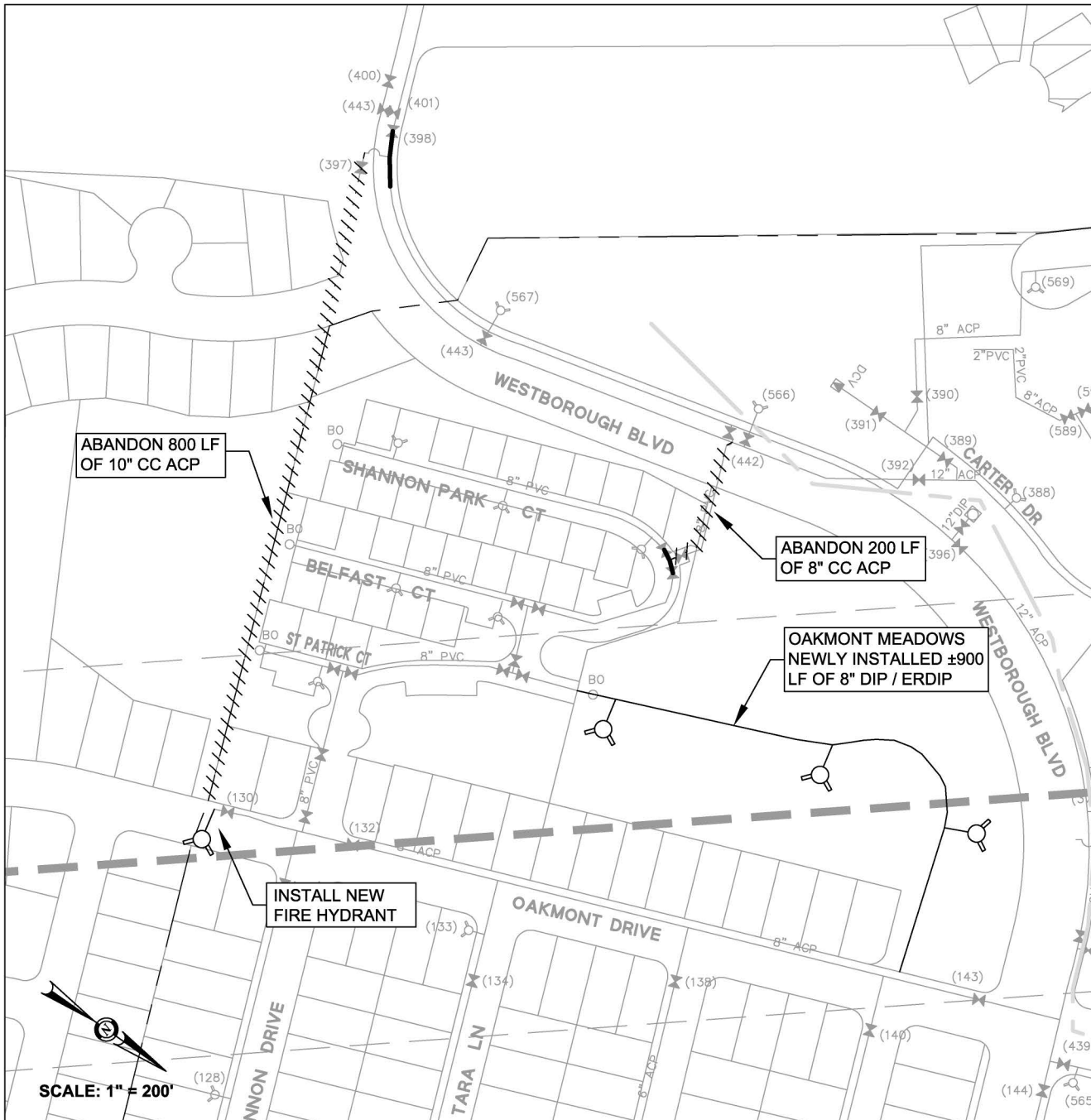
The Shannon Drive Development Improvements eliminates CC water mains, protects properties in the event of main breaks, and reduces District maintenance.

PROJECT BUDGET (2020)

Pipe Reconnections - 2 @ \$30,000/EA	\$ 60,000
1 Fire Hydrant @ \$15,000/EA	\$ 15,000
Pipe Abandonment	\$ 50,000
Subtotal Construction	\$ 125,000
Planning, Design, & Construction Support	\$ 35,000
Contingency (±10%)	\$ 15,000
Project Budget	\$ 175,000

OPTIONAL

Construction Management/Inspection	\$ 15,000
Contingency (±10%)	\$ 5,000
Total	\$ 20,000



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SOUTH SAN FRANCISCO, CA 94083

CAPITAL IMPROVEMENT PROGRAM
SHANNON DR DEVELOPMENT IMPROVEMENTS
PROJECT W20-15

CITY OF SAN BRUNO EMERGENCY INTERTIE

PROJECT BACKGROUND

The City of San Bruno, located on southeast side of the District's boundary, has a parallel water main with the District along Olympic Drive. This is an ideal location for adding a emergency intertie allowing San Bruno the ability to supply water to Zone 2 and vice versa contingent pressures are compatible between the two systems. In addition, approximately 400 LF of 6" asbestos cement pipe (ACP) will be replaced with 8" ductile iron pipe (DIP) along with 8 service connections and 1 fire hydrant replacement. SCADA functionality will also be incorporated into the intertie.

PROPOSED IMPROVEMENTS

Replace 400 LF of 6" ACP with 8" DIP
Replace 1 fire hydrant
Replace 8 service connections
Install an emergency intertie

PROJECT BENEFITS

The City of San Bruno Emergency Intertie creates a connection between two water systems capable of supplying each other water during emergency situations.

PROJECT BUDGET (2020)

8" DIP - 400 LF @ \$450/LF	\$ 180,000
Fire Hydrants - 1 @ \$15,000/EA	\$ 15,000
Service Connections - 8 @ \$4,500/EA	\$ 36,000
Emergency Intertie	\$ 200,000
SCADA Functionality	\$ 50,000
Subtotal Construction	\$ 481,000
Planning, Design & Construction Support	\$ 120,000
Contingency (±10%)	\$ 59,000
Project Budget	\$ 660,000

OPTIONAL

Construction Management/Inspection	\$ 50,000
Contingency (±10%)	\$ 5,000
Total	\$ 55,000

NEW CITY OF SAN BRUNO
EMERGENCY INTERTIE

REPLACE 400 LF OF
6" ACP WITH 8" DIP

SCALE: 1" = 200'



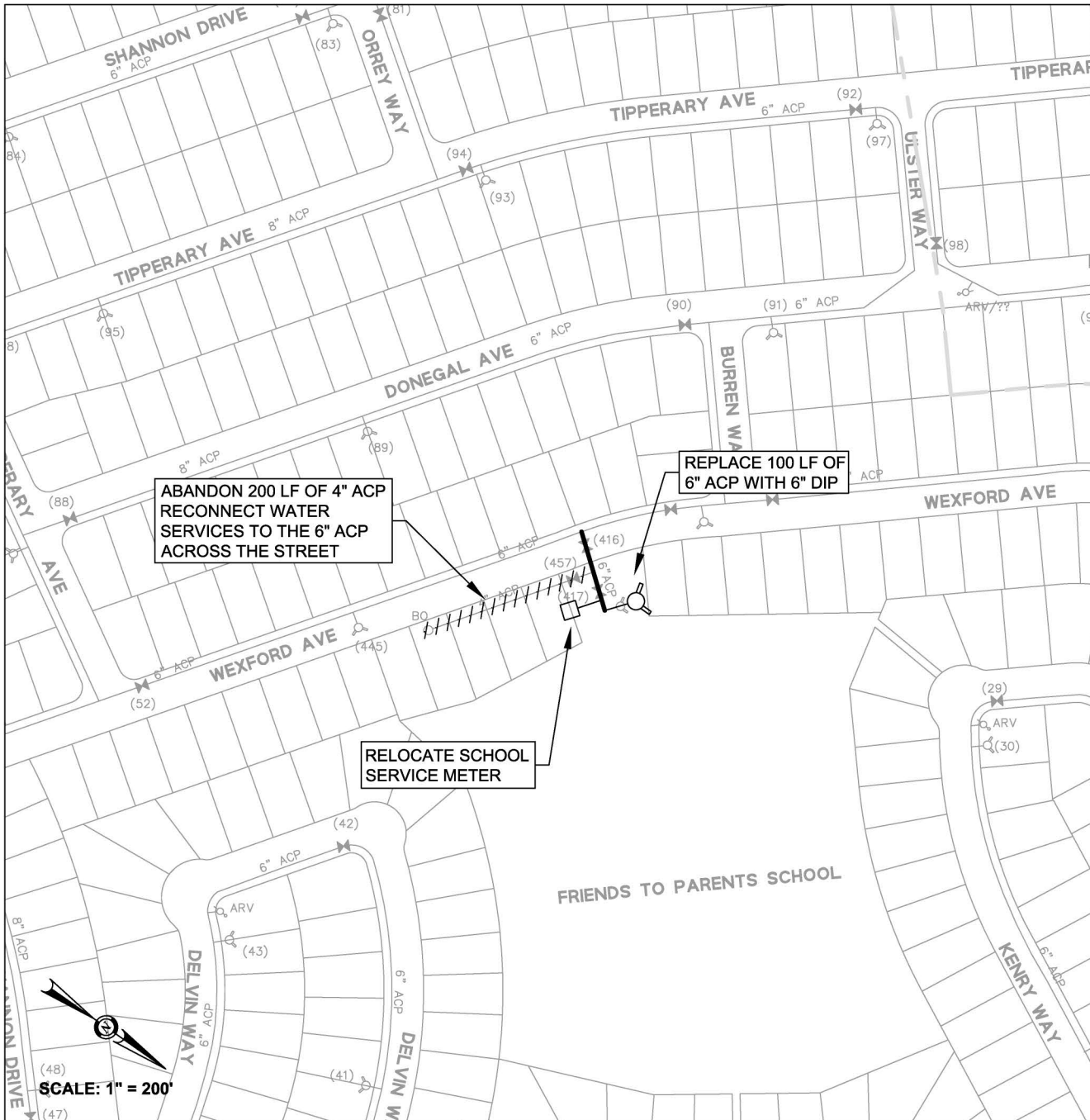
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WESTBOROUGH WATER DISTRICT
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SOUTH SAN FRANCISCO, CA 94083

CAPITAL IMPROVEMENT PROGRAM
CITY OF SAN BRUNO EMERGENCY INTERTIE
PROJECT W20-16



WEXFORD AVENUE ABANDONMENT

PROJECT BACKGROUND

A 4" asbestos cement pipe (ACP) water main exists on the east side of Wexford Ave between the driveway of the Friends to Parents School and 2585 Wexford Ave and is believed to be located on private property. Should a break occur on this water main, there is significant risk of property damage on Wexford Ave. This project abandons the water main, relocates the Friends to Parents School service meter, replaces 100 LF of 6" ACP with 6" ductile iron pipe (DIP), and replaces a fire hydrant. Hydraulic analysis shows the abandonment of this water main has no adverse effects on fire flows within the area. Distribution System Analysis No. 008

PROPOSED IMPROVEMENTS

Abandon 200 LF of 4" ACP
Replace 100 LF of 6" ACP with 6" DIP
Replace 1 fire hydrant
Replace 5 service connections

PROJECT BENEFITS

The Wexford Avenue Abandonment eliminates an aging, parallel water main and reduces District maintenance.

PROJECT BUDGET (2020)

6" DIP - 100 LF @ \$350/LF	\$ 35,000
Fire Hydrants - 1 @ \$15,000/EA	\$ 15,000
Service Connections - 4 @ \$4,500/EA	\$ 18,000
Service Meter Relocation - @ \$10,000/EA	\$ 10,000
Subtotal Construction	\$ 78,000
Planning, Design, & Construction Support	\$ 27,000
Contingency (±10%)	\$ 10,000
Project Budget	\$ 115,000

OPTIONAL

Construction Management/Inspection	\$ 10,000
Contingency (±10%)	\$ 1,000
Total	\$ 11,000



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WESTBOROUGH WATER DISTRICT
SAN MATEO COUNTY, CALIFORNIA
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SOUTH SAN FRANCISCO, CA 94083

CAPITAL IMPROVEMENT PROGRAM
WEXFORD AVENUE ABANDONMENT
PROJECT W20-17

SHANNON DRIVE ABANDONMENT

PROJECT BACKGROUND

Shannon Dr has an existing 550 LF 6" asbestos cement pipe (ACP) that parallels an existing 8" ACP water main between Wexford Ave and Gellert Ct. This project abandons the existing 6" ACP and replaces 700 LF of the existing 8" ACP with 8" ductile iron pipe (DIP). The existing services originally located on the 6" ACP will be transferred to the new 8" DIP. Hydraulic analysis shows the abandonment of the 6" ACP has no adverse effects on fire flows within the area. Distribution System Analysis No. 009

PROPOSED IMPROVEMENTS

Abandon 550 LF of 6" ACP
Replace 700 LF of 8" ACP with 8" DIP
Replace 2 fire hydrants
Replace 21 service connections

PROJECT BENEFITS

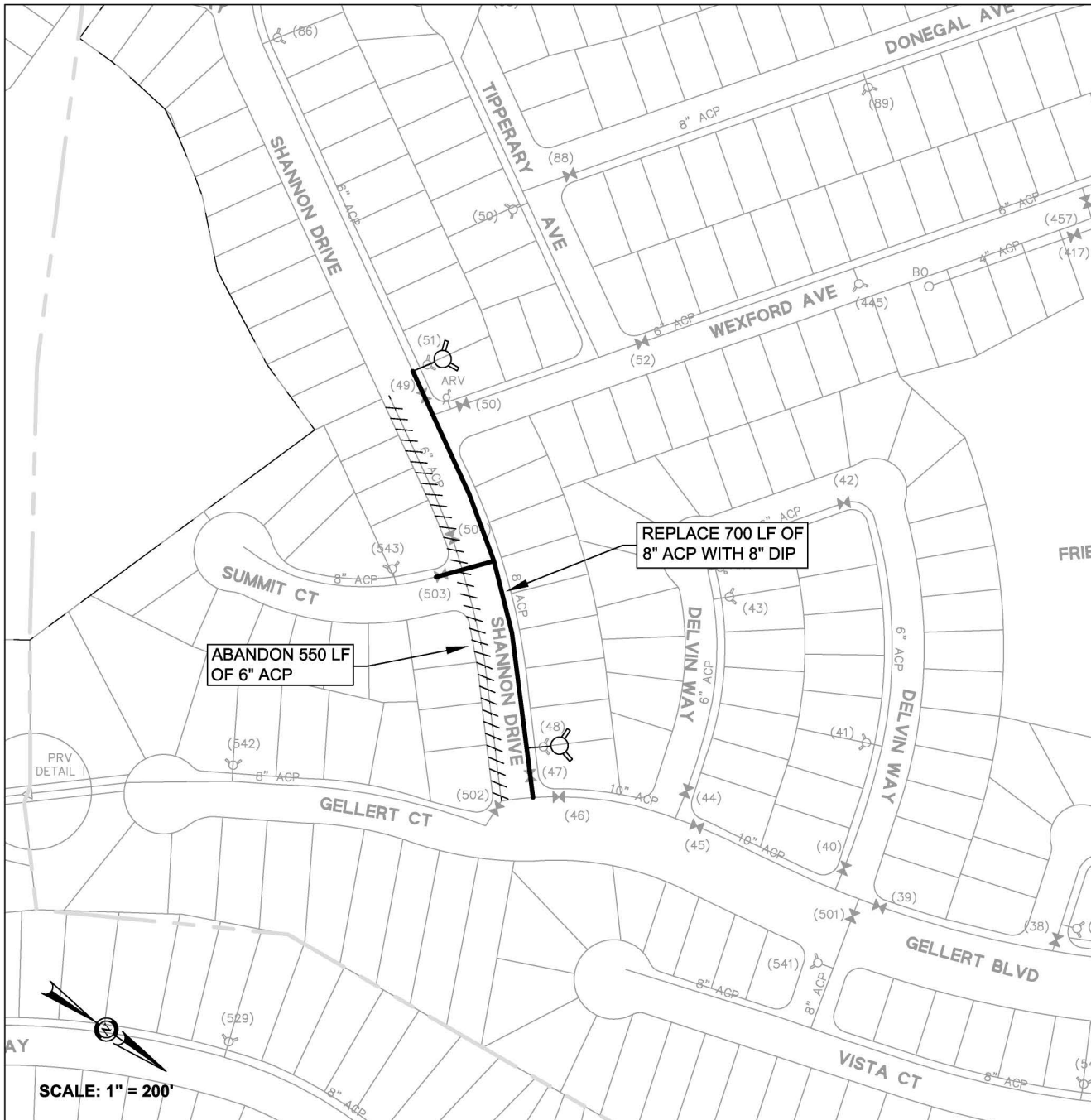
The Shannon Drive abandonment eliminates a parallel water main, replaces aging infrastructure, and reduces District maintenance.

PROJECT BUDGET (2020)

8" DIP - 700 LF @ \$450/LF	\$ 315,000
Fire Hydrants - 2 @ \$15,000/EA	\$ 30,000
Service Connections - 21 @ \$4,500/EA	\$ 94,500
Subtotal Construction	\$ 439,500
Planning, Design, & Construction Support	\$ 110,000
Contingency (±10%)	\$ 55,500
Project Budget	\$ 605,000

OPTIONAL

Construction Management/Inspection	\$ 45,000
Contingency (±10%)	\$ 5,000
Total	\$ 50,000



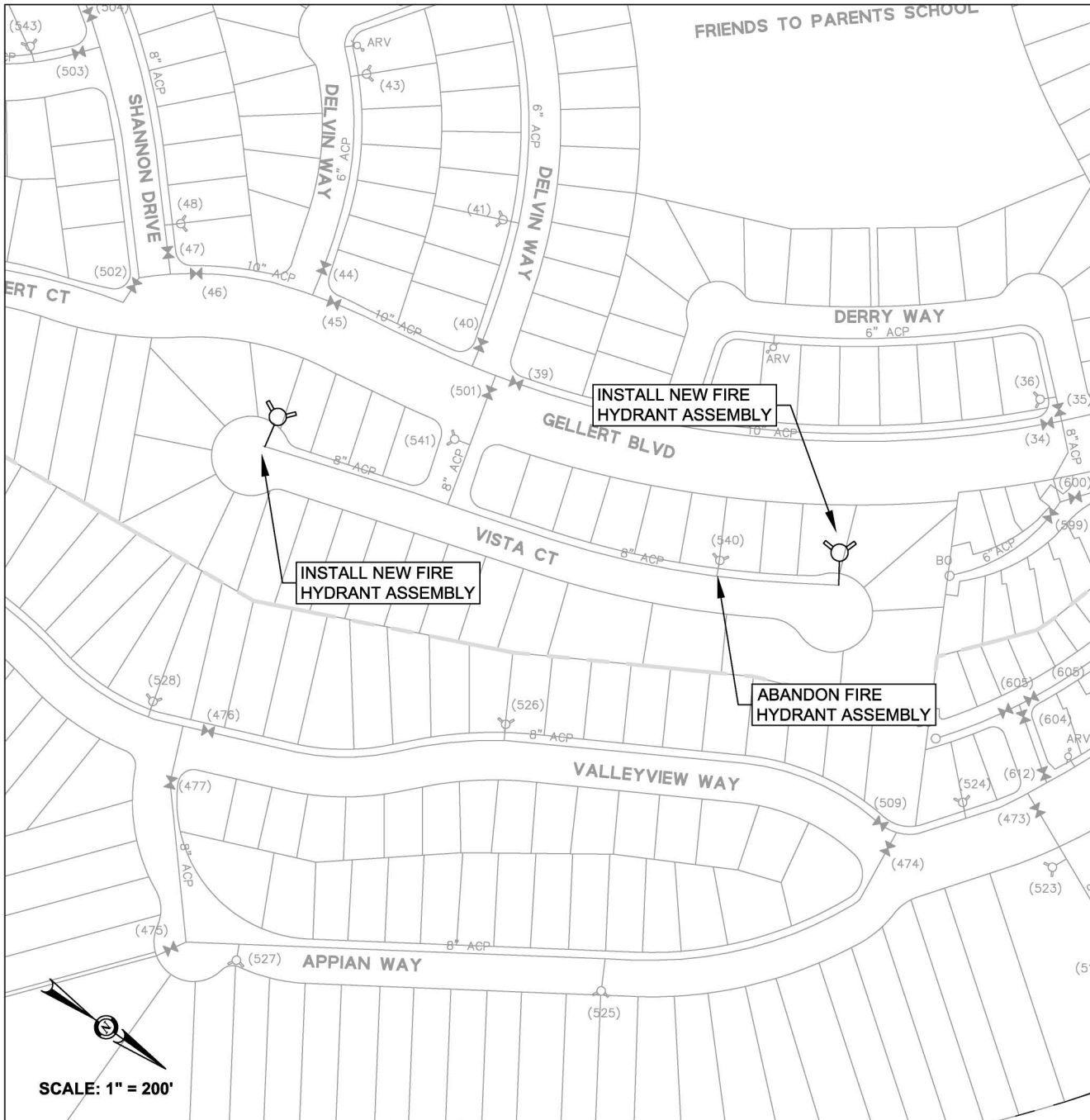
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CAPITAL IMPROVEMENT PROGRAM
SHANNON DRIVE ABANDONMENT
PROJECT W20-18



VISTA COURT FIRE HYDRANTS

PROJECT BACKGROUND

The existing 8" asbestos cement pipe (ACP) on Vista Ct has two dead ends: one side approximately 300 LF and the other side 500 LF. This project adds a fire hydrant on the southern alignment and relocates the existing hydrant on the northern alignment to the end of the water main. This will improve flushing capabilities and improve water quality.

PROPOSED IMPROVEMENTS

Install 1 new hydrant
Relocate 1 hydrant

PROJECT BENEFITS

The Vista Court Fire Hydrants improves flushing capabilities and improves water quality.

PROJECT BUDGET (2020)

Fire Hydrants - 2 @ \$15,000/EA	\$ 30,000
Subtotal Construction	\$ 30,000
Planning, Design, & Construction Support	\$ 10,000
Contingency (±10%)	\$ 5,000
Project Budget	\$ 45,000

OPTIONAL

Construction Management/Inspection	\$ 10,000
Contingency (±10%)	\$ 1,000
Total	\$ 11,000

SCALE: 1" = 200'



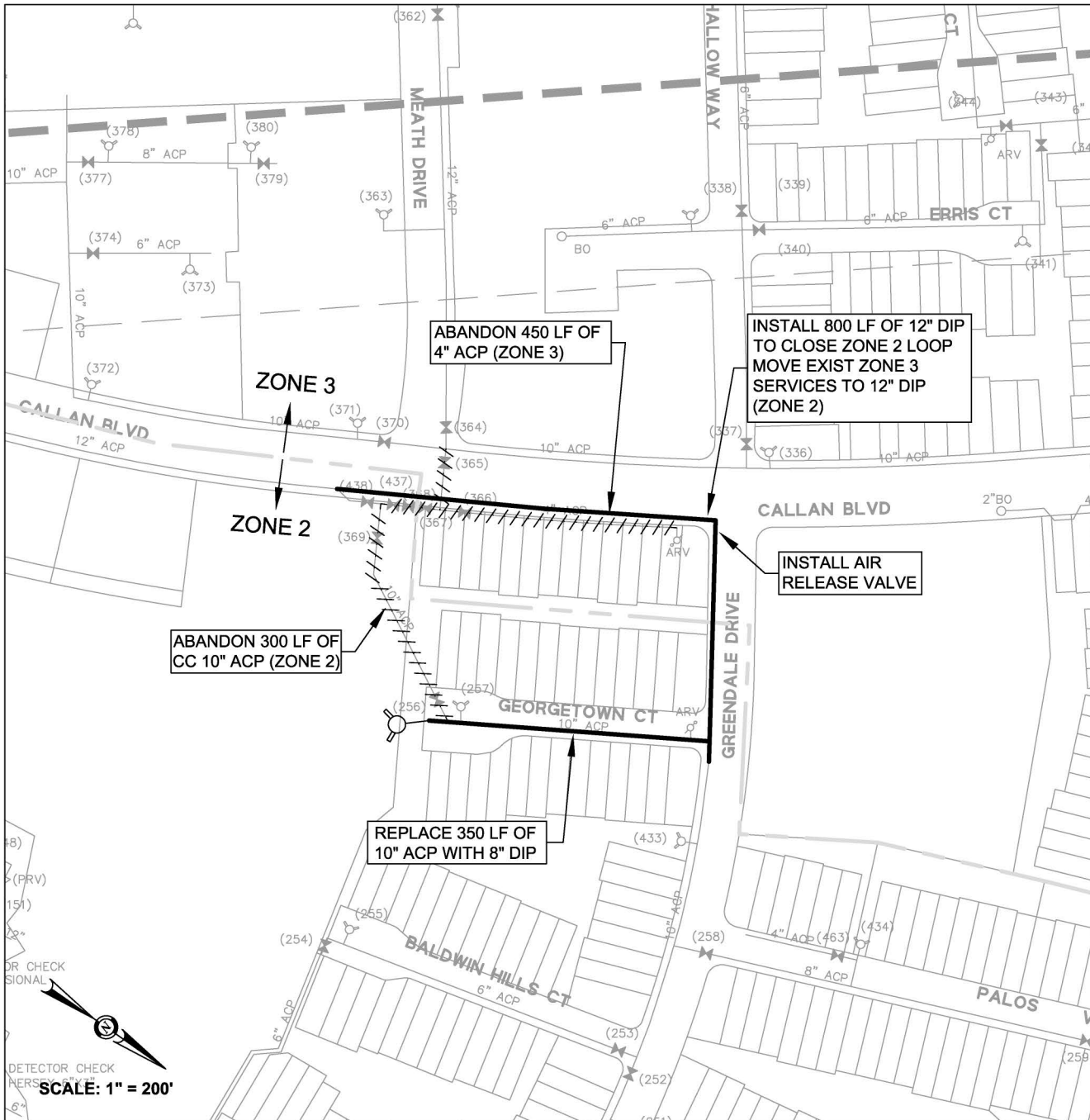
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SOUTH SAN FRANCISCO, CA 94083

CAPITAL IMPROVEMENT PROGRAM
VISTA COURT FIRE HYDRANTS
PROJECT W20-19



CALLAN BLVD ZONE 2 LOOP CLOSURE

PROJECT BACKGROUND

Callan Blvd has a 450 LF 4" asbestos cement pipe (ACP) (Zone 3) dead end and a 300 LF 10" cross country (CC) ACP (Zone 2) immediately south of Greendale Dr and Georgetown Ct. The dead end is undersized and the CC water main has potential to damage Westborough Middle School in the event of a leak. These two water mains will be replaced with 800 LF of 12" ductile iron pipe (DIP) along Callan Blvd and Greendale Dr creating a Zone 2 loop in the area. Fourteen service connections will be transferred from Zone 3 to the new Zone 2 12" DIP. In addition, the 10" ACP along Georgetown Ct will be replaced with 8" DIP to improve seismic resiliency and improve water quality. Hydraulic analysis indicates fire flows within the area, especially along Georgetown Ct will remain nearly identical with 1,500 gpm at 44-50 psi. Those properties switching from Zone 3 to Zone 2 will see a static pressure decrease of ± 40 psi from 85 psi to 45 psi. Distribution System Analysis No. 010

PROPOSED IMPROVEMENTS

Abandon 750 LF of 4"-10" ACP
Install 800 LF of 12" DIP
Replace 350 LF of 10" ACP w/ 8" DIP
Replace 1 fire hydrant
Replace 40 service connections

PROJECT BENEFITS

The Callan Blvd Zone 2 Loop Closure abandons CC water mains, eliminates undersized and aging dead end water mains, and improves seismic resiliency.

PROJECT BUDGET (2020)

12" DIP - 800 LF @ \$550/LF	\$ 440,000
8" DIP - 350 LF @ \$450/LF	\$ 157,500
Fire Hydrants - 1 @ \$15,000/EA	\$ 15,000
Service Connections - 40 @ \$4,500/EA	\$ 180,000
Subtotal Construction	\$ 792,500
Planning, Design, & Construction Support	\$ 160,000
Contingency ($\pm 10\%$)	\$ 97,500
Project Budget	\$ 1,050,000

OPTIONAL

Construction Management/Inspection	\$ 80,000
Contingency ($\pm 10\%$)	\$ 10,000
Total	\$ 90,000

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CAPITAL IMPROVEMENT PROGRAM
CALLAN BLVD ZONE 2 LOOP CLOSURE
PROJECT W20-20

WESTBOROUGH PARK ABANDONMENTS - PHASE 1

PROJECT BACKGROUND

Two 6" cross country (CC) asbestos cement pipes (ACP) exist between 1) Baldwin Hills Ct and Bettman Way and 2) Basset Ct and Gilbert Ct. Should breaks occur on these water mains, there is potential of property damage to homes, the park, and school downhill of the current location. This project abandons the existing CC water mains and to maintain system capacity and fire flows, the existing 6" ACP water mains on the above mentioned streets will be replaced with 8" ductile iron pipe (DIP). Hydraulic analysis indicates these improvements have no adverse affects on fire flows within the area. Distribution System Analysis No. 011

PROPOSED IMPROVEMENTS

Abandon 600 LF of 6" ACP
Replace 1,800 LF of 6" ACP w/ 8" DIP
Replace 4 fire hydrants
Replace 120 service connections

PROJECT BENEFITS

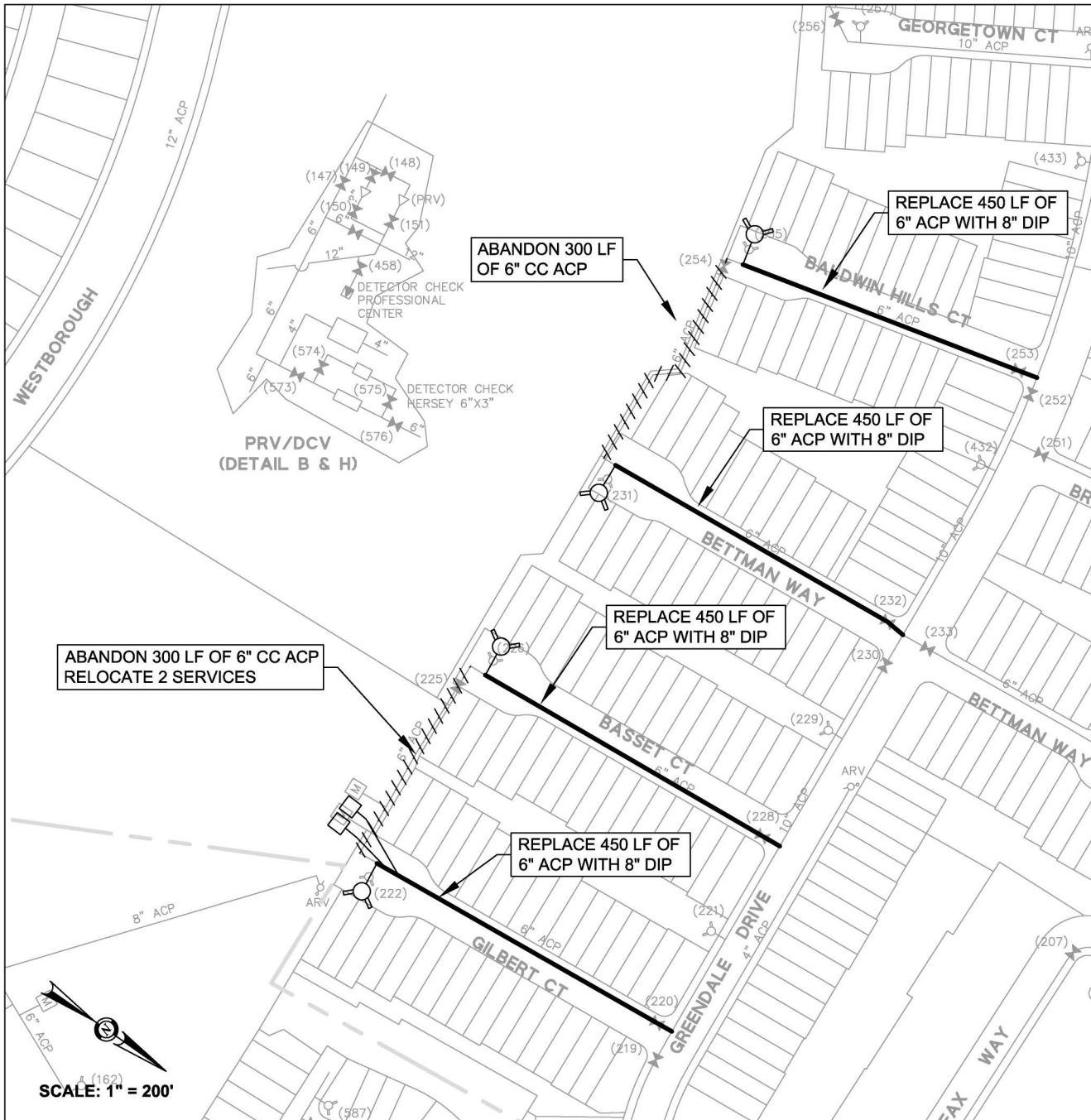
The Westborough Park Abandonments - Phase 1 eliminates CC water mains with potential to cause property damage during breaks, replaces aging infrastructure, improves seismic resiliency, and reduces District maintenance.

PROJECT BUDGET (2020)

8" DIP - 1,800 LF @ \$450/LF	\$ 810,000
Fire Hydrants - 4 @ \$15,000/EA	\$ 60,000
Service Connections - 122 @ \$4,500/EA	\$ 549,000
Subtotal Construction	\$ 1,419,000
Planning, Design, & Construction Support	\$ 215,000
Contingency (±10%)	\$ 166,000
Project Budget	\$ 1,800,000

OPTIONAL

Construction Management/Inspection	\$ 140,000
Contingency (±10%)	\$ 15,000
Total	\$ 155,000



SCALE: 1" = 200'



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WESTBOROUGH WATER DISTRICT
SAN MATEO COUNTY, CALIFORNIA
2263 WESTBOROUGH BOULEVARD
SOUTH SAN FRANCISCO, CA 94083

CAPITAL IMPROVEMENT PROGRAM
WESTBOROUGH PARK ABANDONMENTS - PHASE 1
PROJECT W20-21

GREENDALE DR AREA CROSS COUNTRY ABANDONMENTS

PROJECT BACKGROUND

Two 6" cross country (CC) asbestos cement pipes (ACP) connect opposing streets of Greendale Dr: 1) 100 LF between Brunswick Ct and Crofton Way and 2) 100 LF between Bettman Way and Kent Way. Should a leak occur on these mains, there is potential of water damage to properties and the open space area. This project abandons the CC water mains however with the abandonment, each court becomes a new dead end. To maintain system and flow capacities and to improve seismic reliability in these areas, the existing 6" ACP will be replaced with 8" ductile iron pipe (DIP). Hydraulic analysis indicates minimal differences with the new configuration with all flow locations well above the 1,500 gpm at 20 psi recommendation. A water quality analysis also indicates frequent water turnover due to the amount of homes on each court. Distribution System Analysis No. 012

PROPOSED IMPROVEMENTS

Abandon 200 LF 6" CC ACP
Replace 1,650 LF of 6" ACP with 8" DIP
Replace 4 fire hydrants
Replace 110 service connections

PROJECT BENEFITS

The Greendale Dr Area Cross Country Abandonments eliminates CC water mains, replaces aging infrastructure, reduces District maintenance, and improves seismic resiliency.

PROJECT BUDGET (2020)

8" DIP - 1,650 LF @ \$450/LF	\$ 742,500
Fire Hydrants - 4 @ \$15,000/EA	\$ 60,000
Service Connections - 110 @ \$4,500/EA	\$ 495,000
Subtotal Construction	\$ 1,297,500
Planning, Design, & Construction Support	\$ 195,000
Contingency (±10%)	\$ 152,500
Project Budget	\$ 1,645,000

OPTIONAL

Construction Management/Inspection	\$ 130,000
Contingency (±10%)	\$ 15,000
Total	\$ 145,000



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WESTBOROUGH WATER DISTRICT
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CAPITAL IMPROVEMENT PROGRAM
GREENDALE DR AREA CC ABANDONMENTS
PROJECT W20-22

GREENDALE DR IMPROVEMENTS - PHASE 1

PROJECT BACKGROUND

Greendale Dr has 10" asbestos cement pipes (ACP) with the southern portion terminating at the Greendale PRV to Zone 1 and the northern section terminating at a dead end just east of Geddes Ct with a blowoff. This project eliminates the dead end by installing 250 LF of 10" ductile iron pipe (DIP) and creates a loop on the eastern side of Greendale Dr. In addition, 250 LF of 8" ACP will be replaced with 10" DIP to eliminate the small 8" bottleneck when looping the area.

PROPOSED IMPROVEMENTS

Replace 250 LF of 8" ACP with 10" DIP
Install 250 LF of 10" DIP

PROJECT BENEFITS

The Greendale Dr Improvements - Phase 1 eliminates a dead end, provides system redundancy, improves water quality, and improves seismic resiliency.

PROJECT BUDGET (2020)

10" DIP - 500 LF @ \$500/LF	\$ 250,000
Subtotal Construction	\$ 250,000
Planning, Design, & Construction Support	\$ 75,000
Contingency (±10%)	\$ 35,000
Project Budget	\$ 360,000

OPTIONAL

Construction Management/Inspection	\$ 25,000
Contingency (±10%)	\$ 5,000
Total	\$ 30,000

REPLACE 250 LF OF
8" ACP WITH 10" DIP

REMOVE EXIST BO
INSTALL 250 LF OF
10" DIP



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SAN MATEO COUNTY, CALIFORNIA
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SOUTH SAN FRANCISCO, CA 94083

CAPITAL IMPROVEMENT PROGRAM
GREENDALE DR IMPROVEMENTS - PHASE 1
PROJECT W20-23

GREENDALE DR IMPROVEMENTS - PHASE 2

PROJECT BACKGROUND

Parallel water mains exist throughout the District which may have served as terminus locations as the original Westborough subdivisions were built in the 1960s. These parallel mains serve no hydraulic purpose and most are dead ends creating water quality concerns. In addition they create ongoing potential maintenance concerns for the District as two water mains have to be maintained in the same stretch of roadway. Greendale Dr between Bettman Way and Galway Dr is one such location with parallel 4" and 10" asbestos cement pipe (ACP) water mains. Currently all services are on the 4" ACP and moving them to the aging 10" ACP located in backyards is not feasible. This project abandons the 4" ACP, replaces the existing 10" ACP with a new 10" ductile iron pipe (DIP) located in the street, and relocates the services and hydrants new 10" DIP.

PROPOSED IMPROVEMENTS

Abandon 600 LF 4" ACP
Replace 1,000 LF of 10" ACP with 10" DIP
Replace 3 fire hydrants
Replace 25 service connections

PROJECT BENEFITS

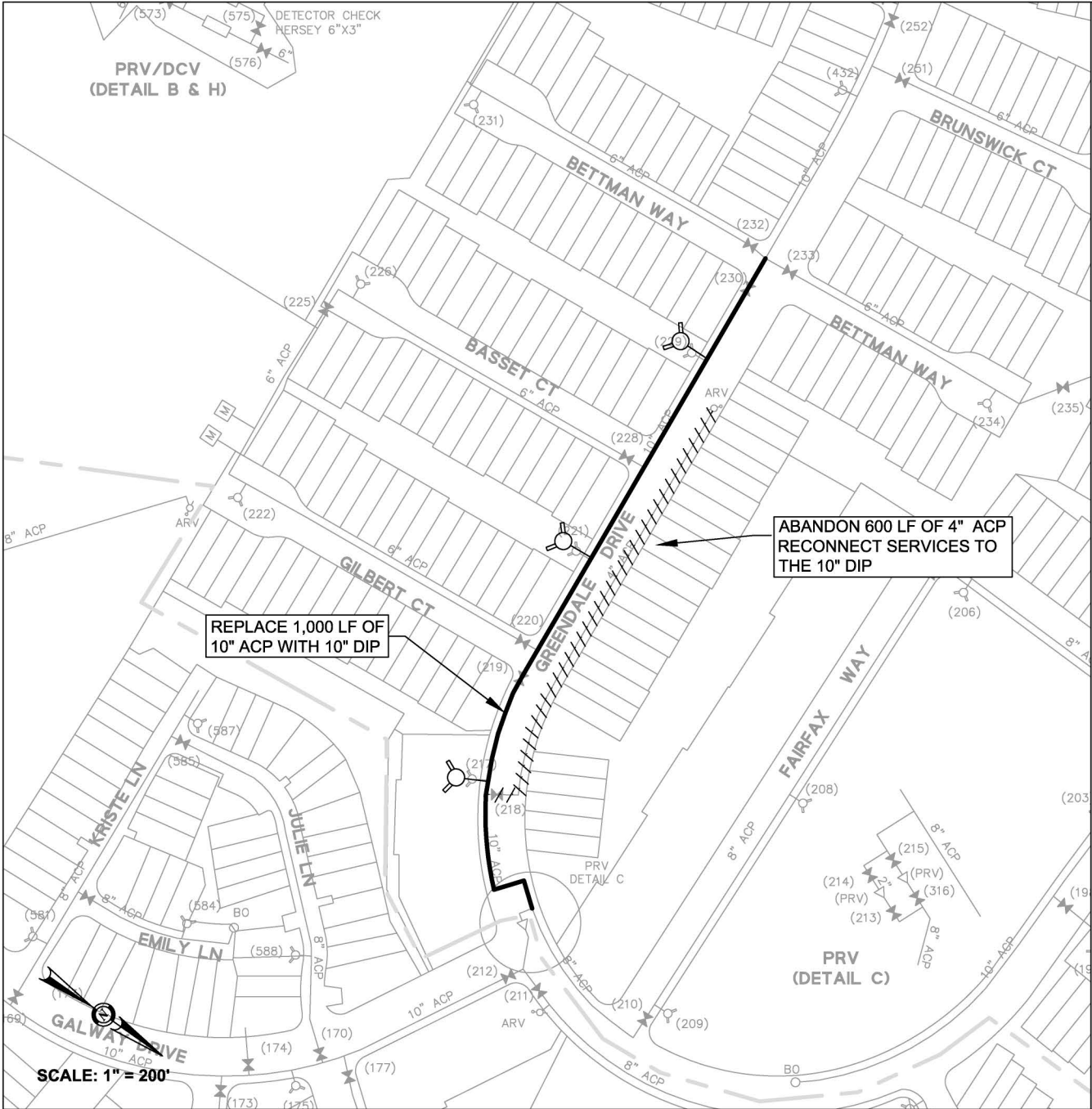
The Greendale Dr Improvements - Phase 2 eliminates parallel water mains, replaces aging and undersized water mains, and improves seismic resiliency.

PROJECT BUDGET (2020)

10" DIP - 1,000 LF @ \$500/LF	\$ 500,000
Fire Hydrants - 3 @ \$15,000/EA	\$ 45,000
Service Connections - 25 @ \$4,500/EA	\$ 112,500
Subtotal Construction	\$ 657,500
Planning, Design, & Construction Support	\$ 130,000
Contingency (±10%)	\$ 77,500
Project Budget	\$ 865,000

OPTIONAL

Construction Management/Inspection	\$ 65,000
Contingency (±10%)	\$ 5,000
Total	\$ 70,000



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SOUTH SAN FRANCISCO, CA 94083

CAPITAL IMPROVEMENT PROGRAM
GREENDALE DR IMPROVEMENTS - PHASE 2
PROJECT W20-24

PALOS VERDES WAY IMPROVEMENTS

PROJECT BACKGROUND

Parallel water mains exist throughout the District which may have served as terminus locations as the original Westborough subdivisions were built in the 1960s. These parallel mains serve no hydraulic purpose and most are dead ends creating water quality concerns. In addition they create ongoing potential maintenance concerns for the District as two water mains have to be maintained in the same stretch of roadway. Palos Verdes Way is one such location with parallel 4" and 8" asbestos cement pipe (ACP) water mains. Currently all services are on the 200 LF 4" ACP and moving them to the aging 8" ACP is not feasible due to its location. This project abandons the 4" ACP, replaces 250 LF 8" ACP with 8" DIP, relocates services to the new 8" DIP and replaces a fire hydrant.

PROPOSED IMPROVEMENTS

Abandon 200 LF 4" ACP
 Replace 250 LF of 8" ACP with 8" DIP
 Replace 1 fire hydrant
 Replace 14 service connections

PROJECT BENEFITS

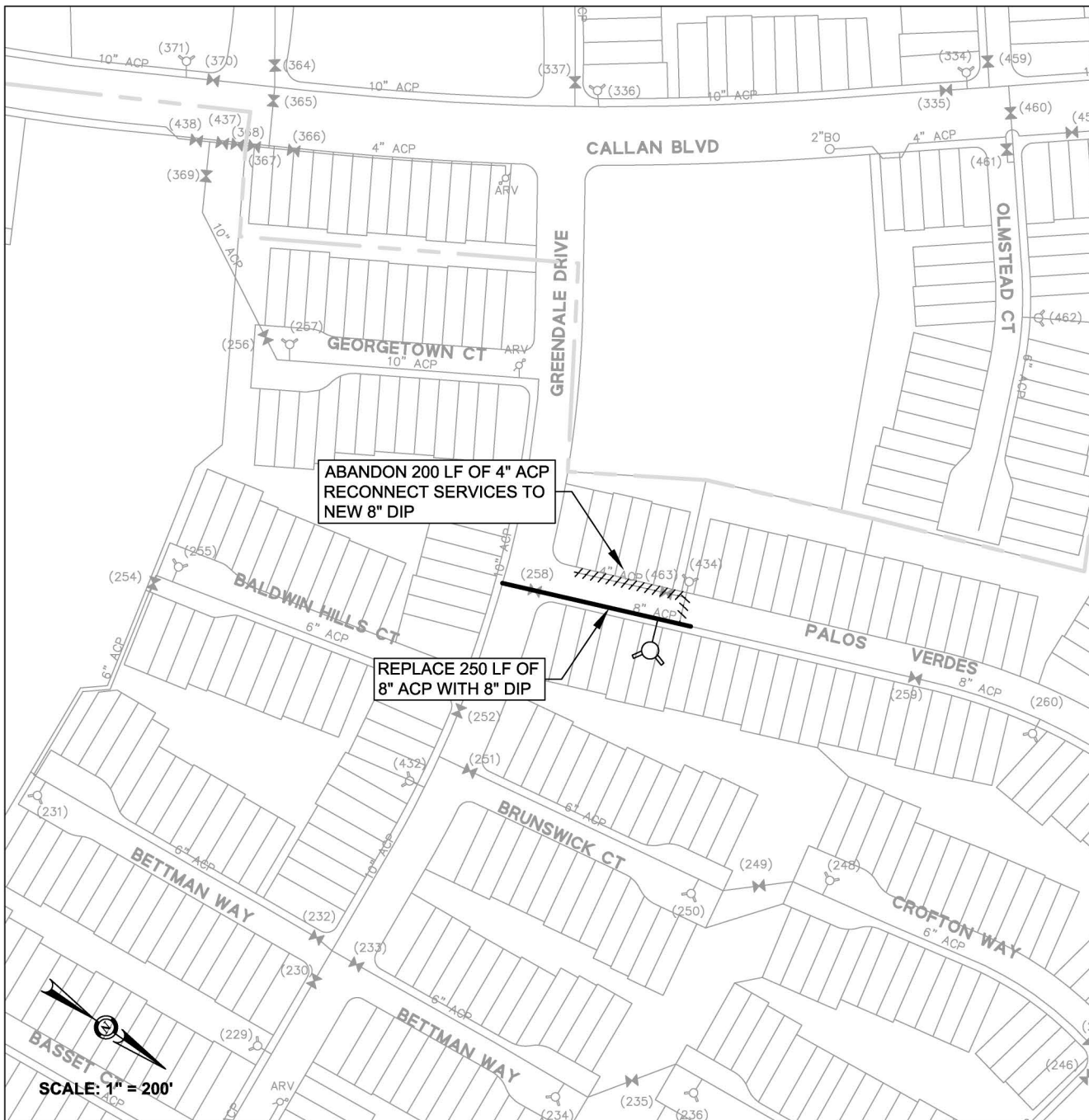
The Palos Verdes Way Improvements eliminates parallel water mains replaces aging and undersized water main, and improves seismic resiliency.

PROJECT BUDGET (2020)

8" DIP - 250 LF @ \$450/LF	\$ 112,500
Fire Hydrants - 1 @ \$15,000/EA	\$ 15,000
Service Connections - 14 @ \$4,500/EA	\$ 63,000
Subtotal Construction	\$ 190,500
Planning, Design, & Construction Support	\$ 60,000
Contingency (±10%)	\$ 24,500
Project Budget	\$ 275,000

OPTIONAL

Construction Management/Inspection	\$ 20,000
Contingency (±10%)	\$ 5,000
Total	\$ 25,000



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 SOUTH SAN FRANCISCO, CA 94083

CAPITAL IMPROVEMENT PROGRAM
 PALOS VERDES WAY IMPROVEMENTS
 PROJECT W20-25

GREENDALE DR Z3 TO Z2 PRV IMPROVEMENTS

PROJECT BACKGROUND

Under normal operating conditions, the Skyline Tanks supply water to Zone 2. Two pressure reducing valves (PRV) located at 1) Greendale Drive and 2) Seafood Market connect Zone 3 to Zone 2 and are set to operate during emergency or low pressure conditions allowing water to flow from Zone 3 to Zone 2. The Greendale PRV is old, beyond its operational life, and is located in a deep, tight vault not conducive to maintenance operations. This project replaces the PRV and vault at the Greendale location and will also add SCADA functionality for remote monitoring.

PROPOSED IMPROVEMENTS

Replace the 10" PRV
Replace the PRV Vault
Install SCADA functionality

PROJECT BENEFITS

The Greendale Dr Z3 to Z2 PRV Improvements replaces aging infrastructure and improves maintenance operations.

PROJECT BUDGET (2020)

PRV Station	\$ 250,000
SCADA Functionality	\$ 50,000
Subtotal Construction	\$ 300,000
Planning, Design, & Construction Support	\$ 75,000
Contingency (±10%)	\$ 40,000
Project Budget	\$ 415,000

OPTIONAL

Construction Management/Inspection	\$ 30,000
Contingency (±10%)	\$ 5,000
Total	\$ 35,000

REPLACE VAULT AND
10" PRV. INSTALL
SCADA FUNCTIONALITY

GREENDALE PRV
(DETAIL D)

ZONE 3

ZONE 2



SCALE: 1" = 200'



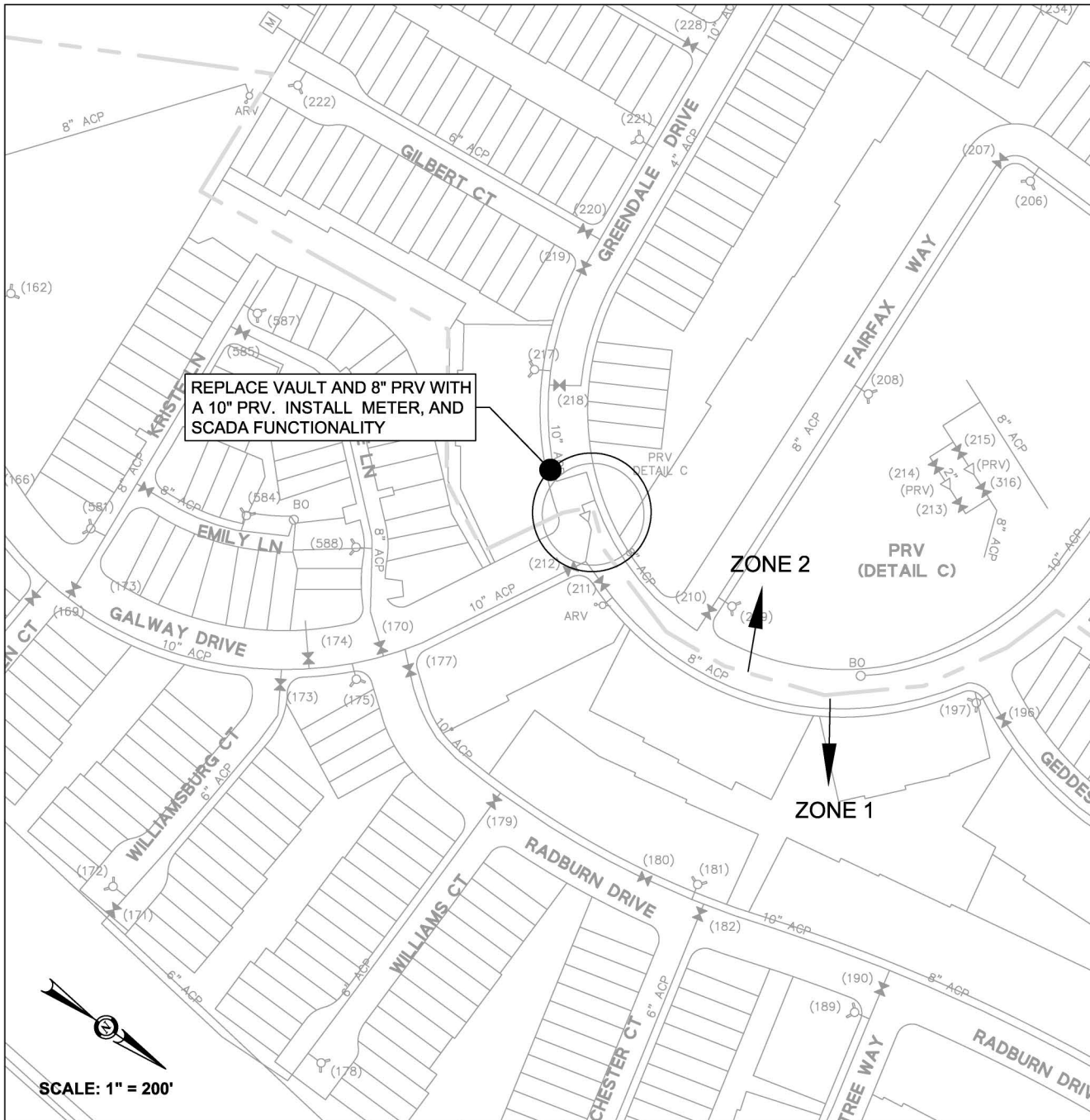
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CAPITAL IMPROVEMENT PROGRAM
GREENDALE DR Z3 TO Z2 PRV IMPROVEMENTS
PROJECT W20-26



GREENDALE DR Z2 TO Z1 PRV IMPROVEMENTS

PROJECT BACKGROUND

The Skyline Tanks supply water to both Zones 2 and 1. Zone 1 does not have storage tanks and is supplied water through three Zone 2 pressure reducing valve (PRV) stations connecting Zones 2 and 1. These stations are located on 1) Gellert Ct on the south end of the District, 2) Greendale Dr at the north end, and 3) Westborough Blvd in the middle. The PRV's are old and beyond their operational life and are located in deep vaults with little room for maintenance operations. This project reconfigures the Greendale PRV Station by replacing the 8" PRV with a new 10" PRV, replacing the vault to make it more accessible, adding a flow meter to record flow into Zone 1, and adding SCADA functionality for remote monitoring.

PROPOSED IMPROVEMENTS

Replace the 8" PRV with a 10" PRV
 Replace the PRV Vault
 Install a flow meter
 Install SCADA functionality

PROJECT BENEFITS

The Greendale Dr Z2 to Z1 Improvements replaces aging infrastructure, allows increased flow into Zone 1, allows flow monitoring, and improves maintenance operations.

PROJECT BUDGET (2020)

PRV Station	\$ 250,000
Flow Meter	\$ 25,000
SCADA Functionality	\$ 50,000
Subtotal Construction	\$ 325,000
Planning, Design, & Construction Support	\$ 80,000
Contingency (±10%)	\$ 40,000
Project Budget	\$ 445,000

OPTIONAL

Construction Management/Inspection	\$ 30,000
Contingency (±10%)	\$ 5,000
Total	\$ 35,000

SCALE: 1" = 200'



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CAPITAL IMPROVEMENT PROGRAM
GREENDALE DR Z2 TO Z1 PRV IMPROVEMENTS
PROJECT W20-27

GELLERT CT Z2 TO Z1 PRV
IMPROVEMENTS

PROJECT BACKGROUND

The Skyline Tanks supply water to both Zones 2 and 1. Zone 1 does not have storage tanks and is supplied water through three Zone 2 pressure reducing valve (PRV) stations connecting Zones 2 and 1. These stations are located on 1) Gellert Ct on the south end of the District, 2) Greendale Dr at the north end, and 3) Westborough Blvd in the middle. The PRV's are old and beyond their operational life and are located in deep vaults with little room for maintenance operations. This project reconfigures the Gellert PRV Station by replacing the 8" PRV, replacing the vault to make it more accessible, adding a flow meter to record flow into Zone 1, and adding SCADA functionality for remote monitoring.

PROPOSED IMPROVEMENTS

Replace the 8" PRV
Replace the PRV Vault
Install a flow meter
Install SCADA functionality

PROJECT BENEFITS

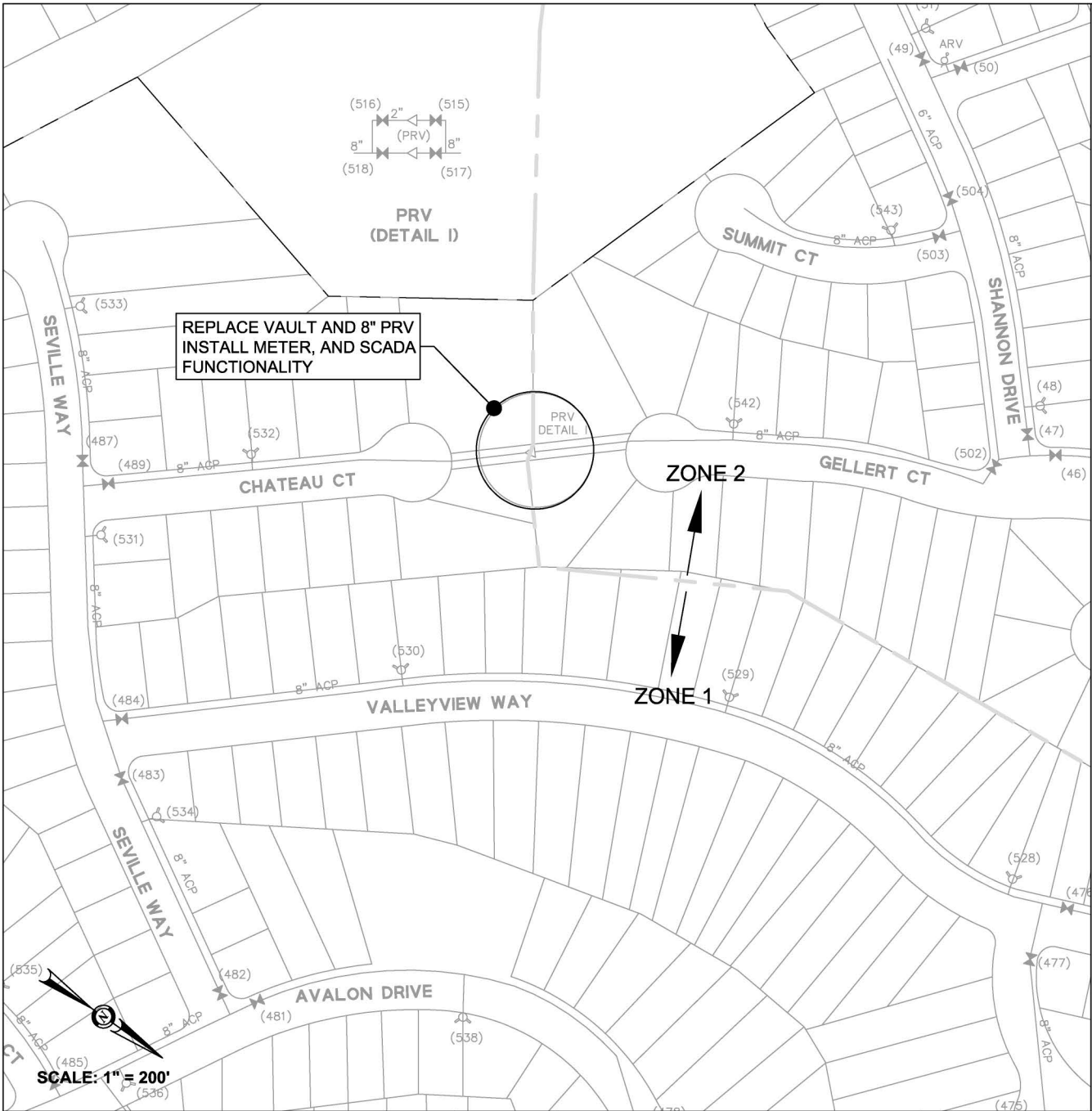
The Gellert Ct Z2 to Z1 PRV Improvements replaces aging infrastructure, allows flow monitoring into Zone 1, and improves maintenance operations.

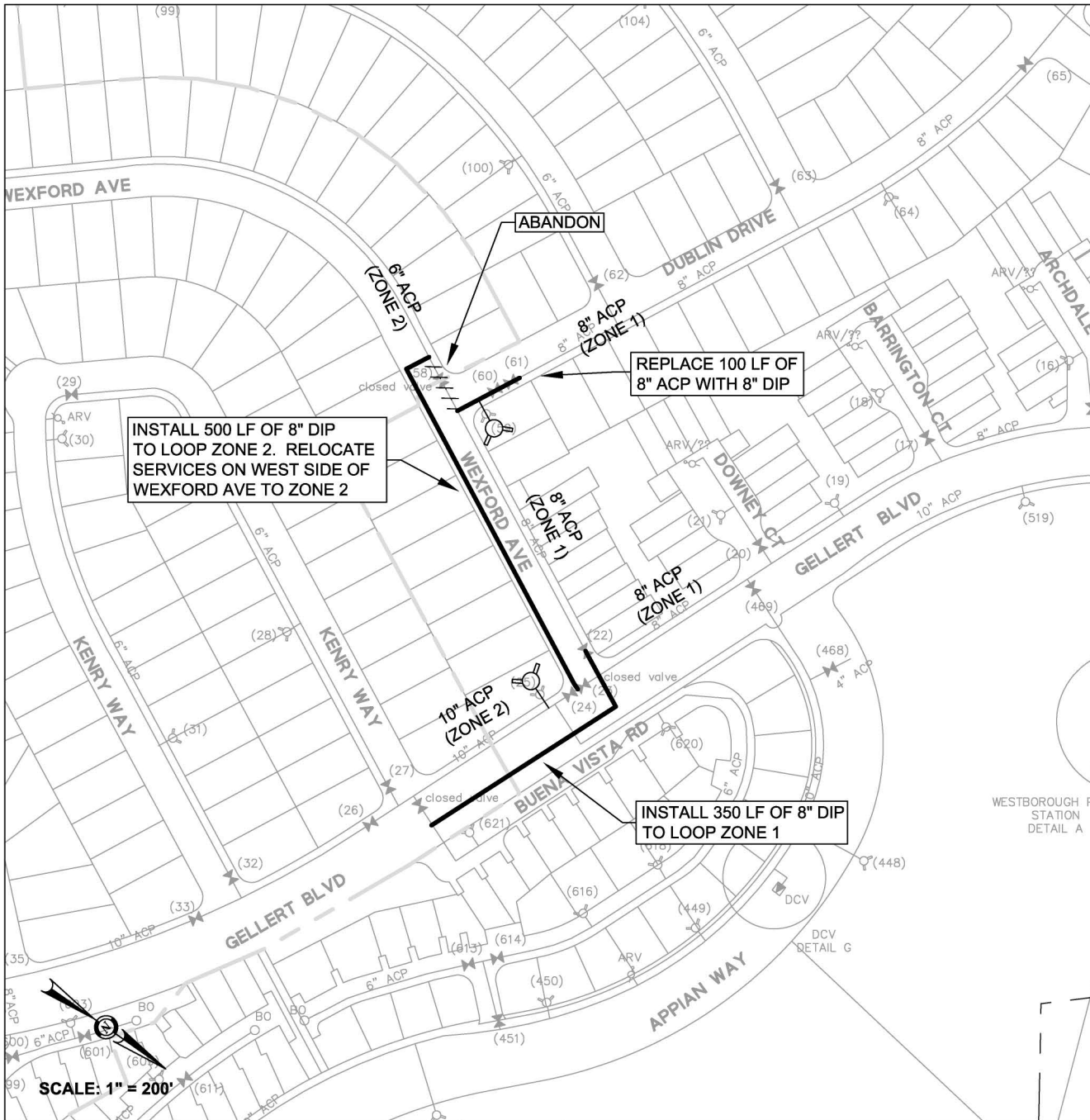
PROJECT BUDGET (2020)

PRV Station	\$ 250,000
Flow Meter	\$ 25,000
SCADA Functionality	\$ 50,000
Subtotal Construction	\$ 325,000
Planning, Design, & Construction Support	\$ 80,000
Contingency (±10%)	\$ 40,000
Project Budget	\$ 445,000

OPTIONAL

Construction Management/Inspection	\$ 35,000
Contingency (±10%)	\$ 5,000
Total	\$ 40,000





WEXFORD AVE LOOP CLOSURES

PROJECT BACKGROUND

According to District maps and discussions with District personnel, a closed valve between Zones 1 and 2 at Wexford Ave / Dublin Dr intersection creates a dead end on Wexford Ave just west of Dublin Dr. Similarly, a closed valve between Zones 1 and 2 at the Gellert Blvd and Kenry Way intersection creates a dead end on Buena Vista Rd. This improvement will eliminate the dead ends and create loops in both zones: 1) a Zone 1 loop on Gellert Blvd between Kenry Way and Wexford Ave with 350 LF of 8" ductile iron pipe (DIP) and 2) a Zone 2 loop on Wexford Ave between Dublin Dr and Gellert Dr with 500 LF of 8" DIP. The existing 8" asbestos cement pipe (ACP) along Wexford Ave will remain to preserve the Zone 1 loop between Dublin Dr and Gellert Blvd. Hydraulic analysis indicates up to a 155% increase in residual pressures along Wexford Ave upon completion of this project. Distribution System Analysis No. 013

PROPOSED IMPROVEMENTS

Install 850 LF of 8" DIP
 Replace 100 LF of 8" ACP w/ 8" DIP
 Replace 2 fire hydrants
 Replace 11 service connections

PROJECT BENEFITS

The Wexford Ave Loop Closures eliminates dead ends by creating loops in both Zones 1 and 2, improves residual pressures, provides system redundancy, and improves water quality.

PROJECT BUDGET (2020)

8" DIP - 950 LF @ \$450/LF	\$ 427,500
Fire Hydrants - 2 @ \$15,000/EA	\$ 30,000
Service Connections - 11 @ \$4,500/EA	\$ 49,500
Subtotal Construction	\$ 507,000
Planning, Design, & Construction Support	\$ 100,000
Contingency (±10%)	\$ 63,000
Project Budget	\$ 670,000

OPTIONAL

Construction Management/Inspection	\$ 50,000
Contingency (±10%)	\$ 5,000
Total	\$ 55,000



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 2263 WESTBOROUGH BOULEVARD
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CAPITAL IMPROVEMENT PROGRAM
WEXFORD AVE LOOP CLOSURES
PROJECT W20-29

WESTBOROUGH BLVD ZONE 2 BLOWOFFS

PROJECT BACKGROUND

The 12" asbestos cement pipe (ACP) along Westborough Blvd is the primary transmission water main for the District moving water from the Westborough Pump Station to the Skyline Tanks. The same water main back-feeds Zones 2 and 1 from the Skyline Tanks. In the event of an emergency and/or a break in this main, Zones 2 and 1 will be out of water. The District can utilize the NCCWD and Daly City emergency interties to supply water into the zones through Zone 3 using the Greendale and Seafood Market PRVs. Installing 12" blowoffs approximately every 700 feet along Westborough Blvd, between Galway Dr and Callan Blvd, allows the District to move water by jumping from one blowoff to another using flexible hoses in case of prolonged outages due to water main failures.

PROPOSED IMPROVEMENTS

Install 3 - 12" blowoffs

PROJECT BENEFITS

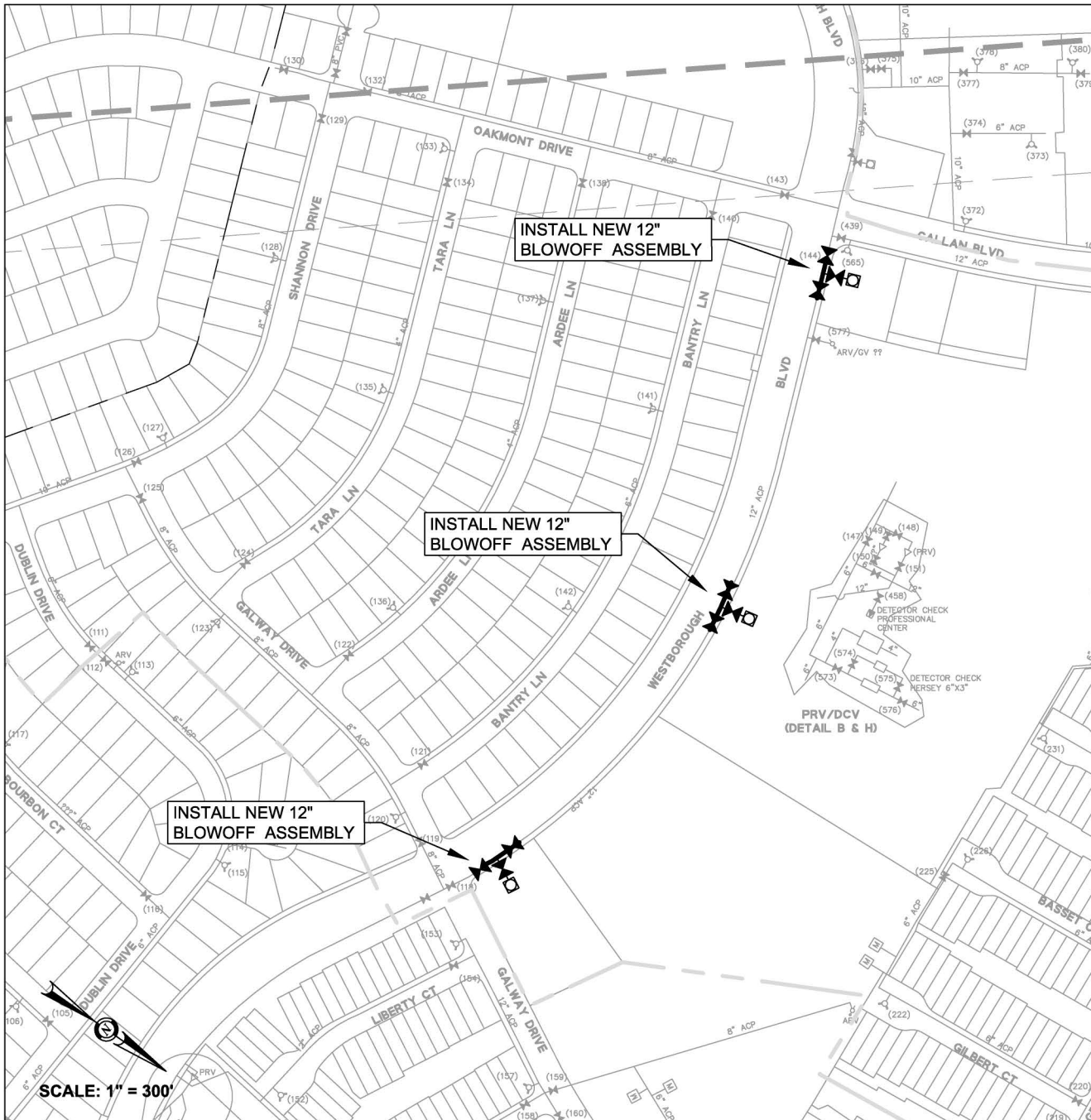
The Westborough Blvd Zone 2 Blowoffs allows the District to move water over sections of water main failures.

PROJECT BUDGET (2020)

12" Blowoffs - 3 @ \$75,000/EA	\$ 225,000
Subtotal Construction	\$ 225,000
Planning, Design, & Construction Support	\$ 70,000
Contingency (±10%)	\$ 30,000
Project Budget	\$ 325,000

OPTIONAL

Construction Management/Inspection	\$ 25,000
Contingency (±10% min)	\$ 5,000
Total	\$ 30,000



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CAPITAL IMPROVEMENT PROGRAM
WESTBOROUGH BLVD ZONE 2 BLOWOFFS
PROJECT W20-30

WESTBOROUGH BLVD
TRANSMISSION BLOWOFFS

PROJECT BACKGROUND

The 14" asbestos cement pipe (ACP) along Westborough Blvd is the primary transmission water main for the District moving water from the SFPUC turnout to the Westborough Pump Station. In the event of an emergency and/or a break along this main, the District will be unable to pump water to Skyline Tanks. The District can utilize the NCCWD and Daly City emergency inter-ties to supply water into the zones through Zone 3 using the Greendale and Seafood Market PRVs. Installing 12" blowoffs approximately every 700 feet along Westborough Blvd, between El Camino Real and the Westborough Pump Station, allows the District to move water by jumping from one blowoff to another using flexible hoses in case of prolonged outages due to water main failures.

PROPOSED IMPROVEMENTS

Install 9 - 12" blowoffs

PROJECT BENEFITS

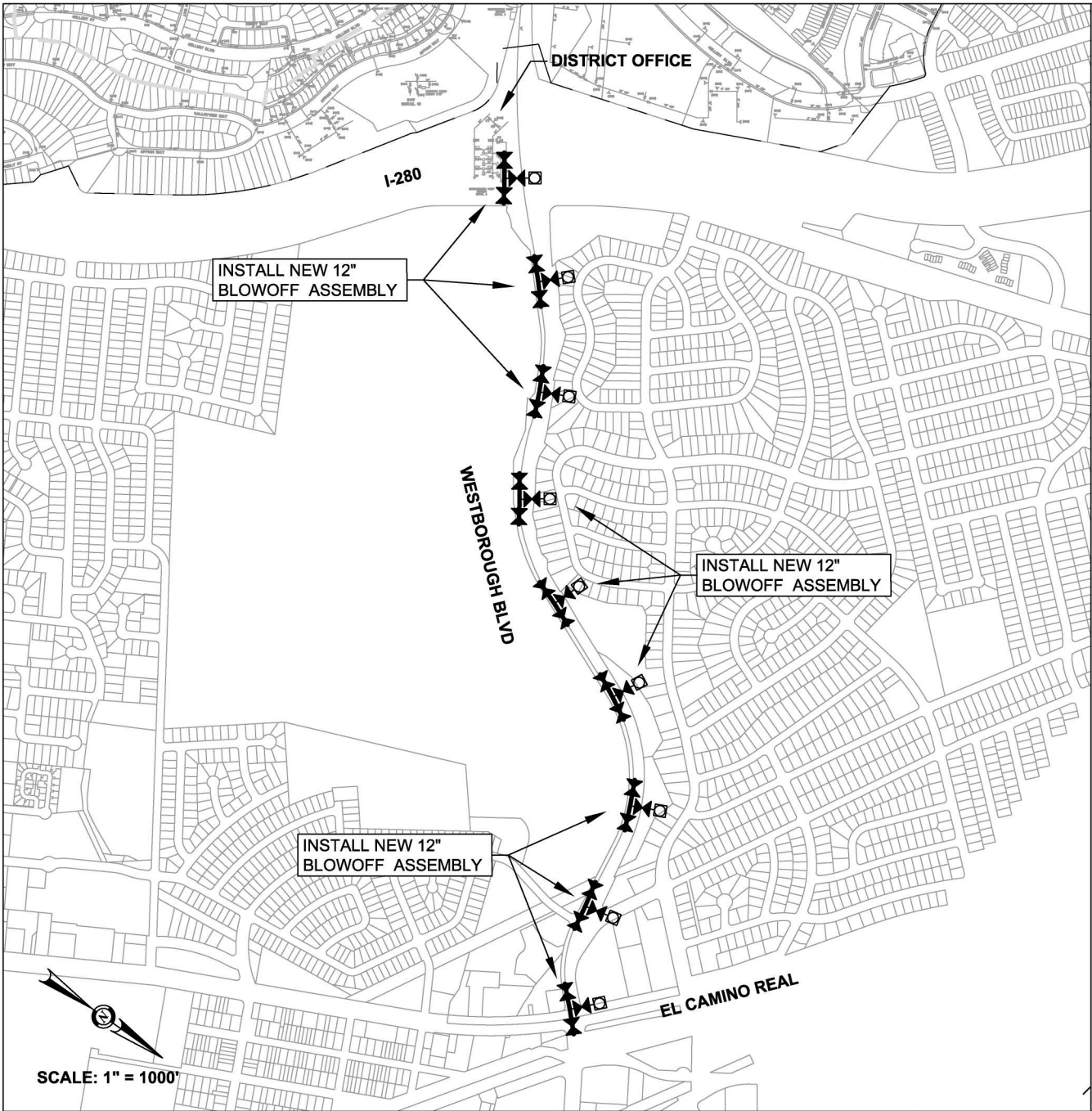
The Westborough Blvd Transmission Blowoffs allows the District to move water over sections of water main failures.

PROJECT BUDGET (2020)

12" Blowoffs - 9 @ \$75,000/EA	\$ 675,000
Subtotal Construction	\$ 675,000
Planning, Design, & Construction Support	\$ 135,000
Contingency (±10%)	\$ 80,000
Project Budget	\$ 890,000

OPTIONAL

Construction Management/Inspection	\$ 70,000
Contingency (±10% min)	\$ 5,000
Total	\$ 75,000



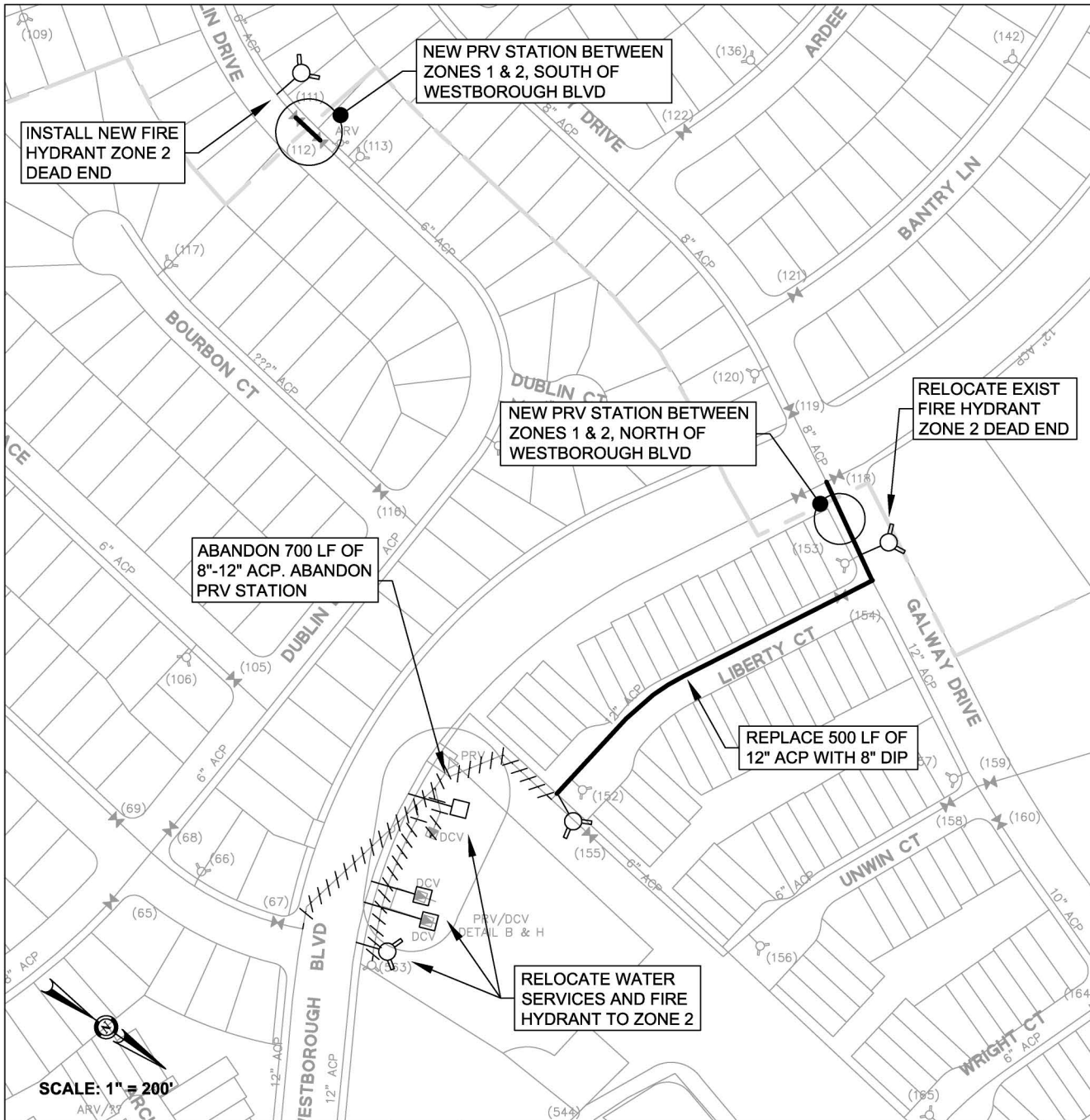
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CAPITAL IMPROVEMENT PROGRAM
WESTBOROUGH BLVD TRANSMISSION BLOWOFFS
PROJECT W20-31



WESTBOROUGH BLVD Z2 TO Z1 PRV IMPROVEMENTS

PROJECT BACKGROUND

The Skyline Tanks supply water to both Zones 2 and 1. Zone 1 does not have storage tanks and is supplied water through three Zone 2 pressure reducing valve (PRV) stations connecting Zones 2 and 1. These stations are located on 1) Gellert Ct on the south end of the District, 2) Greendale Dr at the north end, and 3) Westborough Blvd in the middle. The Westborough Blvd PRV is located approximately 750 LF west of Gellert Blvd just behind the sidewalk in a heavily vegetated area with no safe parking area. In addition, the Zone 1 water mains exiting the station which feed the area along Galway Dr and below are located in steep, cross country (CC) terrain with very large trees making it difficult for maintenance and repairs. Should a break occur on the Zone 1 water mains, there is potential of significantly damaging the office complex below. This project abandons the Westborough PRV station and installs 2 new more-accessible PRV stations at 1) Westborough Blvd / Galway Dr intersection and 2) along Dublin Drive. Lastly, upon abandonment of the CC water mains, the 12" asbestos cement (ACP) water main along Liberty Ct will be replaced with 8" ductile iron pipe (DIP) to alleviate water quality concerns and to improve seismic resiliency.

PROPOSED IMPROVEMENTS

Abandon 700 LF of 8"-12" ACP
Relocate PRV Station to more accessible location
Install 150 LF of 12" DIP
Replace 500 LF of 12" ACP w/ 8" DIP
Replace/install 4 fire hydrants
Replace 37 service connections

PROJECT BENEFITS

The Westborough Blvd Z2 to Z1 PRV Improvements relocates the existing PRV station to a more accessible location, removes CC water mains, replaces aging infrastructure and improves seismic resiliency.

PROJECT BUDGET (2020)

PRV Stations - 2 @ \$250,000/EA	\$ 500,000
12" DIP - 150 LF @ \$550/LF	\$ 82,500
8" DIP - 500 LF @ \$450/LF	\$ 225,000
Fire Hydrants - 4 @ \$15,000/EA	\$ 60,000
Service Connections - 37 @ \$4,500/EA	\$ 166,500
Subtotal Construction	\$ 1,034,000
Planning, Design, & Construction Support	\$ 155,000
Contingency (±10%)	\$ 121,000
Project Budget	\$ 1,310,000

OPTIONAL

Construction Management/Inspection	\$ 100,000
Contingency (±10% min)	\$ 10,000
Total	\$ 110,000

SCALE: 1" = 200'



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CAPITAL IMPROVEMENT PROGRAM
WESTBOROUGH BLVD Z2 TO Z1 PRV IMPROVEMENTS
PROJECT W20-32

WESTBOROUGH PARK ABANDONMENTS - PHASE 2

PROJECT BACKGROUND

An 8" cross country (CC) asbestos cement pipe (ACP) exists in Westborough Park which begins at the Galway Dr / Unwin Ct intersection and continues approximately 600 LF CC through the park and dead ends behind Gilbert Ct. It is believed this main was originally installed for a possible future development adjacent to the park which will never move forward per the District. There is also a 200 LF 6" ACP that branches off the 8" ACP serving two customers and a hydrant. This project will abandon both the 6" and 8" ACPs located in Westborough Park, replace 350 LF of 10" ACP with 10" ductile iron pipe (DIP), and relocate the two service connections and fire hydrant to the new 10" DIP along Galway Drive.

PROPOSED IMPROVEMENTS

Abandon 800 LF of 6"-8" ACP
Replace 350 LF of 10" ACP w/ 10" DIP
Relocate 1 fire hydrant
Relocate 2 service connections

PROJECT BENEFITS

The Westborough Park Abandonments - Phase 2 eliminates a long CC dead end water main, improves water quality, and reduces District maintenance and liability in the event of a break.

PROJECT BUDGET (2020)

8" DIP - 350 LF @ \$450/LF	\$ 157,500
Fire Hydrants - 1 @ \$15,000/EA	\$ 15,000
Service Connections - 2 @ \$4,500/EA	\$ 9,000
Subtotal Construction	\$ 181,500
Planning, Design, & Construction Support	\$ 55,000
Contingency (±10%)	\$ 23,500
Project Budget	\$ 260,000

OPTIONAL

Construction Management/Inspection	\$ 20,000
Contingency (±10%)	\$ 5,000
Total	\$ 25,000

RELOCATE 2 SERVICE
METERS TO 10" DIP
ON GALWAY DR

REPLACE 350 LF OF
10" ACP WITH 10" DIP

ABANDON 600 LF
OF 8" ACP AND
200 LF OF 6" ACP

RELOCATE FIRE
HYDRANT TO 10" DIP
ON GALWAY DRIVE

SCALE: 1" = 200'



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CAPITAL IMPROVEMENT PROGRAM
WESTBOROUGH PARK ABANDONMENTS - PHASE 2
PROJECT W20-33

AVALON DR / SEVILLE WAY
IMPROVEMENTS

PROJECT BACKGROUND

The lower portion of Avalon Dr and Waverly Ct is supplied water from two directions: 1) a 450 LF 8" asbestos cement pipe (ACP) water main along Seville Way and 2) a 700 LF cross country (CC) 8" ACP water main between Avalon Drive and Appian Way. To provide redundancy along Waverly Ct, there is also an existing 200 LF 8" CC ACP connecting the end of Waverly Ct with Avalon Dr. The 8" CC ACP between Avalon Dr and Appian Way is located in very steep terrain and runs adjacent to homes both at the top and bottom. This water main is nearly inaccessible and should a break occur on the alignment, repairs would prove difficult in addition to potential water damage to downhill properties. This project abandons the 700 LF 8" CC ACP and to ensure the area maintains it's one direct feed from Valley View Way, the existing 450 LF of 8" ACP will be replaced with 8" ductile iron pipe (DIP) along with relining the 200 LF 8" CC ACP. This project also includes abandoning a 160 LF of 6" ACP serving only 1 resident and replaces it with a long service. Hydraulic modeling indicates fire flows will remain above 1,500 gpm with pressures in the range of 85 psi, well above the minimum 20 psi recommendation. Distribution System Analysis 015

PROPOSED IMPROVEMENTS

Replaces 450 LF of 8" ACP w/ 8" DIP
Relines 200 LF of 8" CC ACP
Replaces 2 fire hydrants
Replaces 37 service connections
Abandons ±900 LF of 6"-8" ACP

PROJECT BENEFITS

The Avalon Dr / Seville Way Improvements abandons an existing CC and low service water main, rehabilitates existing pipe, improves seismic resiliency to the backbone of the area by replacing ACP with new DIP.

PROJECT BUDGET (2020)

8" DIP - 450 LF @ \$450/LF	\$ 202,500
8" DIP Rehab - 200 LF @ \$700/LF	\$ 140,000
Fire Hydrants - 2 @ \$15,000/EA	\$ 30,000
Service Connections - 37 @ \$4,500/EA	\$ 166,500
Subtotal Construction	\$ 539,000
Planning, Design, & Construction Support	\$ 110,000
Contingency (±10%)	\$ 66,000
Project Budget	\$ 715,000

OPTIONAL

Construction Management/Inspection	\$ 55,000
Contingency (±10%)	\$ 5,000
Total	\$ 60,000

REPLACE 450 LF OF
8" ACP WITH 8" DIP

ABANDON 160 LF OF 6" ACP
RECONNECT WATER
SERVICE AT CANYON CT

REHABILITATE 200 LF
OF 8" CC ACP WITH
NEW INTERIOR LINING

REPLACE WATER
SERVICES ALONG
WAVERLY CT

ABANDON 700 LF
OF 8" CC ACP



SCALE: 1" = 300'



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DATE 02/2020
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WESTBOROUGH WATER DISTRICT
SAN MATEO COUNTY, CALIFORNIA
2263 WESTBOROUGH BOULEVARD
SOUTH SAN FRANCISCO, CA 94083

CAPITAL IMPROVEMENT PROGRAM
AVALON DR / SEVILLE WAY IMPROVEMENTS
PROJECT W20-34

GELLERT BLVD RIDGE IMPROVEMENTS

PROJECT BACKGROUND

The ridge above Gellert Blvd has several 6" cross country (CC) asbestos cement pipe (ACP) water mains connecting several dead end courts off Galway Dr and Radburn Dr including: Unwin Ct, Wright Ct, Wren Ct, Williamsburg Ct, Williams Ct, and Westchester Ct. Should breaks occur on these water mains, there is a potential of damaging the downhill development including the 30 ft high retaining wall in addition to significant hillside erosion. This project will abandon the CC water mains and to maintain system and fire flow capacities, the existing 6" ACPs along the courts will be upsized to 8" Ductile Iron Pipe (DIP). In addition, a small section of 10" ACP will be replaced with 10" DIP at the Rowntree Way/Gellert Blvd intersection to improve configuration. Hydraulic analysis indicates fire flows will remain similar to pre-abandonment conditions. Distribution System Analysis 016

PROPOSED IMPROVEMENTS

Abandon 1,400 LF of 6" CC ACP
 Replace 2,300 LF of 6" ACP w/ 8" DIP
 Replace 200 LF of 10" ACP w/ 10" DIP
 Replace 7 hydrants
 Replace 160 service connections

PROJECT BENEFITS

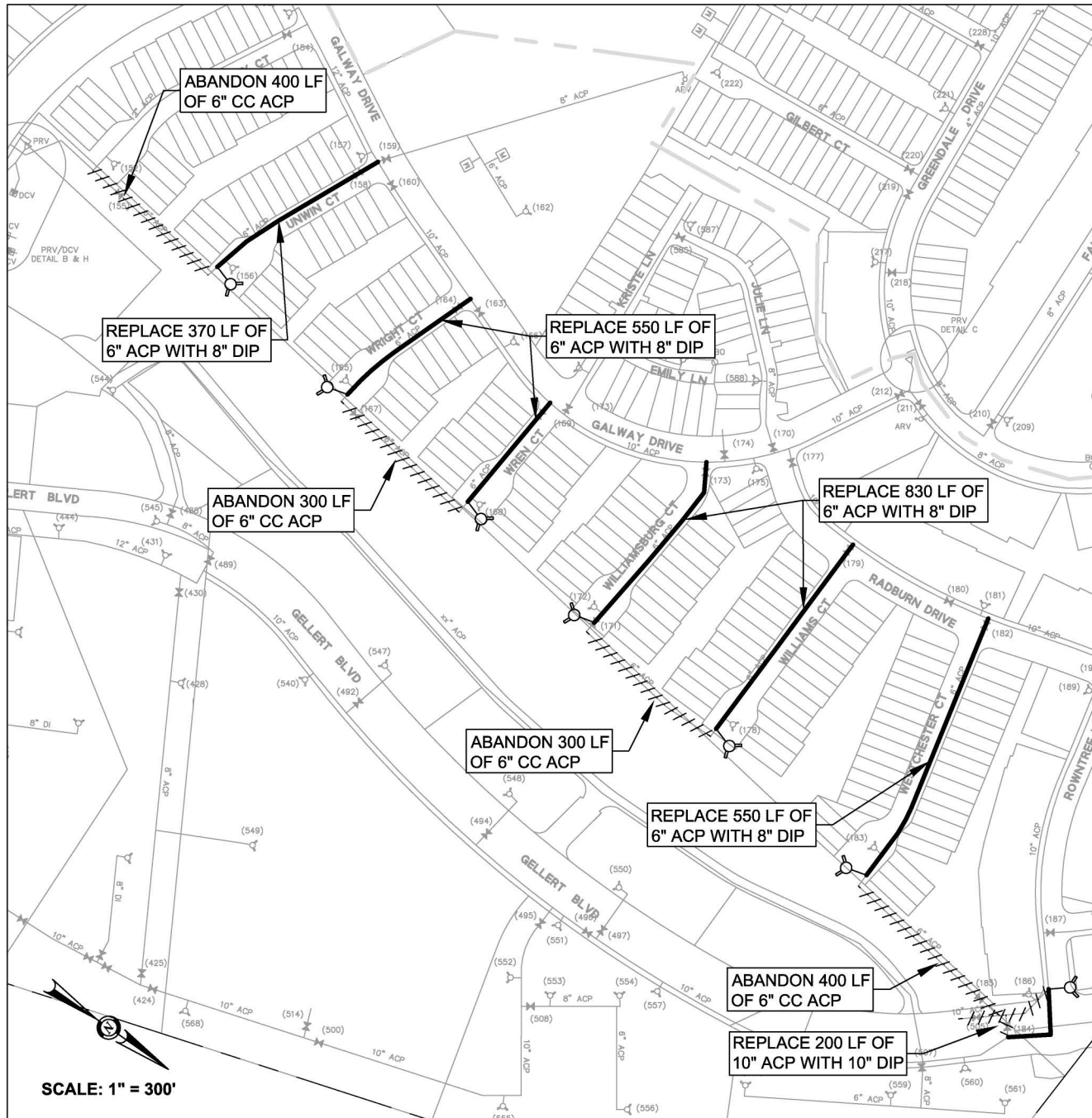
The Gellert Blvd Ridge Improvements eliminates 4 CC water mains, replaces aging infrastructure, and improves seismic resiliency.

PROJECT BUDGET (2020)

10" DIP - 200 LF @ 500/LF	\$ 100,000
8" DIP - 2,300 LF @ \$450/LF	\$ 1,035,000
Fire Hydrants - 7 @ \$15,000/EA	\$ 105,000
Service Connections - 160 @ \$4,500/EA	\$ 720,000
Subtotal Construction	\$ 1,960,000
Planning, Design, & Construction Support	\$ 300,000
Contingency (±10%)	\$ 225,000
Project Budget	\$ 2,485,000

OPTIONAL

Construction Management/Inspection	\$ 200,000
Contingency (±10%)	\$ 20,000
Total	\$ 220,000



SCALE: 1" = 300'



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WESTBOROUGH WATER DISTRICT
 SAN MATEO COUNTY, CALIFORNIA
 2263 WESTBOROUGH BOULEVARD
 SOUTH SAN FRANCISCO, CA 94083

CAPITAL IMPROVEMENT PROGRAM
 GELLERT BLVD RIDGE IMPROVEMENTS
 PROJECT W20-35

GALWAY DRIVE IMPROVEMENTS

PROJECT BACKGROUND

Galway Dr at the intersections of Williamsburg Ct and Radburn Dr does not have any in-line valves to isolate small sections of water main during shutdowns. There is also an unused existing dead end pipe directly across Williamsburg Ct. This project reconfigures the area to add additional valves to allow various shutdown scenarios in addition to abandoning the dead end water main and replacing a fire hydrant.

PROPOSED IMPROVEMENTS

Replace 250 LF of 10" ACP w/ 10" DIP

Replace 50 LF of 8" ACP w/ 8" DIP

Replace 1 hydrants

Abandon a dead end water main

PROJECT BENEFITS

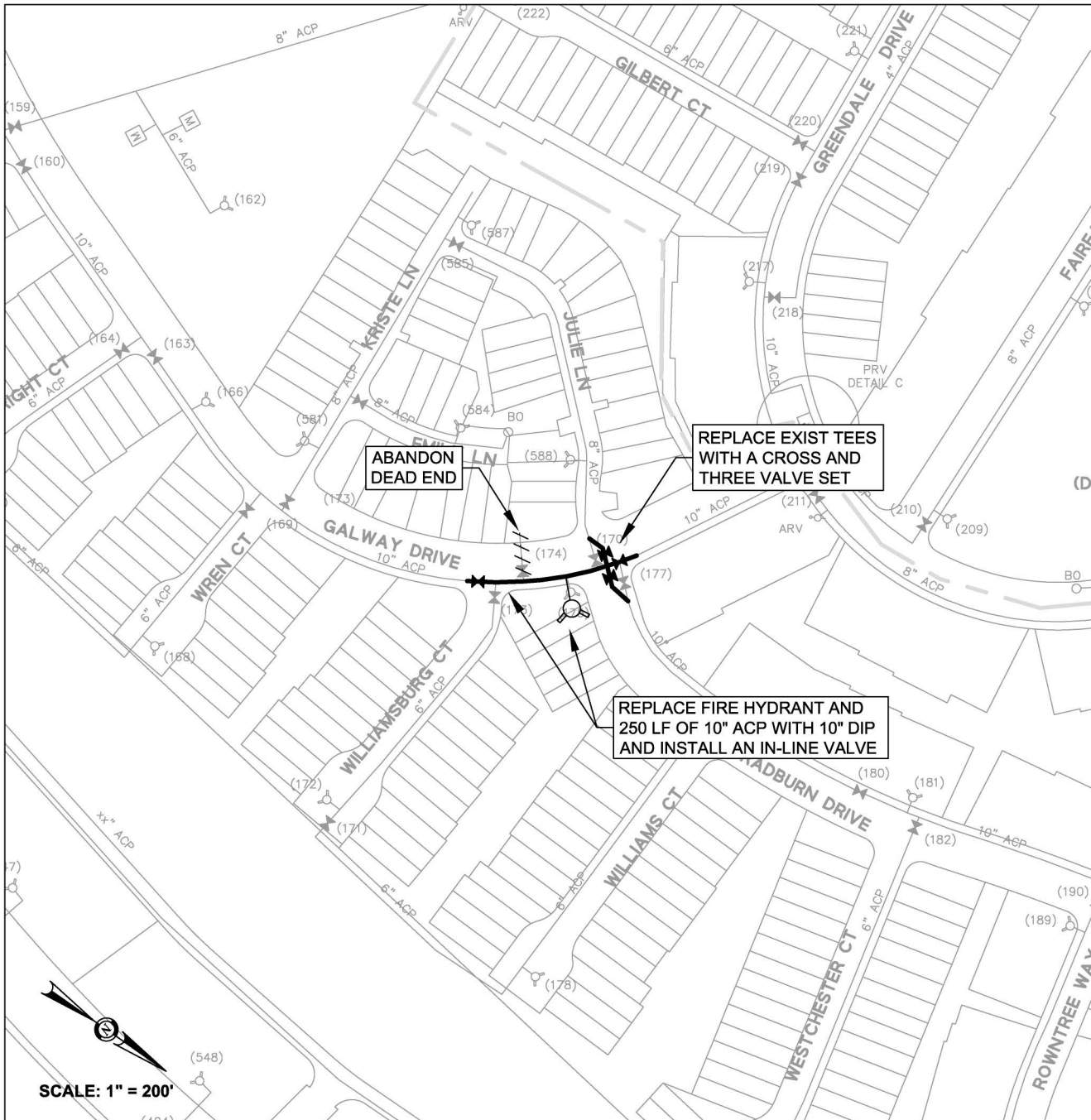
The Galway Drive Improvements adds additional valves to the area to permit various shutdown alternatives, replaces an existing fire hydrant, and abandons an unused dead end water main.

PROJECT BUDGET (2020)

10" DIP - 250 LF @ 500/LF	\$ 125,000
8" DIP - 50 LF @ \$450/LF	\$ 22,500
Fire Hydrants - 1 @ \$15,000/EA	\$ 15,000
Subtotal Construction	\$ 162,500
Planning, Design, & Construction Support	\$ 50,000
Contingency (±10%)	\$ 22,500
Project Budget	\$ 235,000

OPTIONAL

Construction Management/Inspection	\$ 20,000
Contingency (±10%)	\$ 5,000
Total	\$ 25,000



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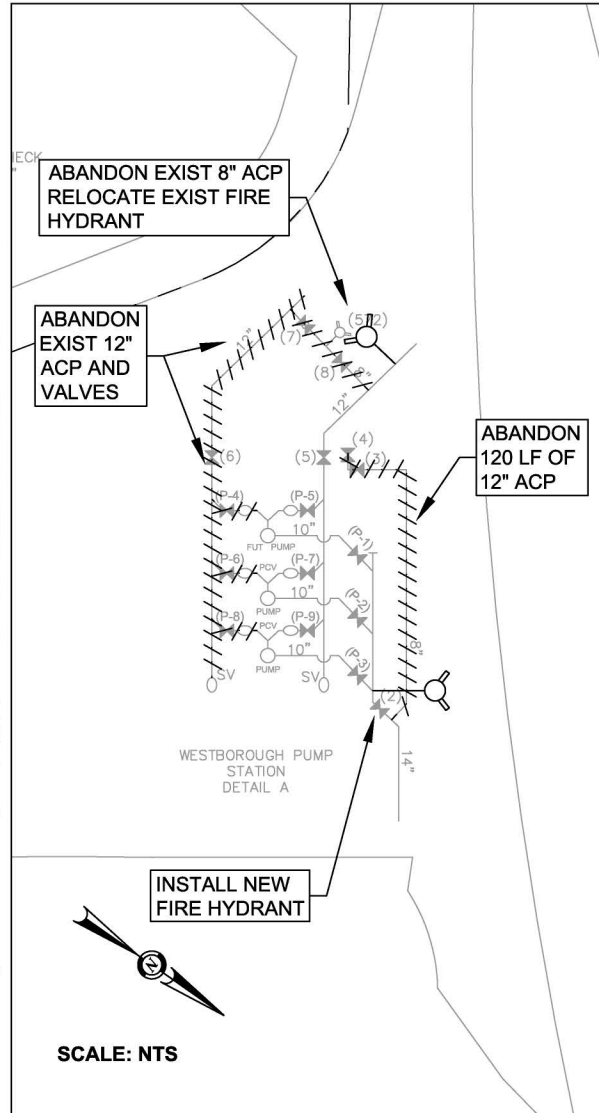
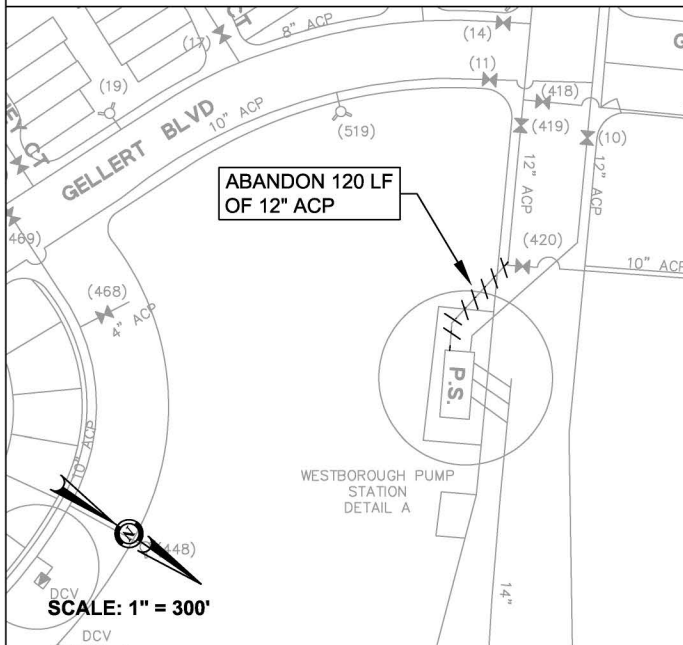
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WESTBOROUGH WATER DISTRICT
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CAPITAL IMPROVEMENT PROGRAM
GALWAY DRIVE IMPROVEMENTS
PROJECT W20-36

ZONE 1 PIPES, VALVES AND APPURTENANCES.
INSTALL CONCRETE BLOCKS TO STRUCTURALLY
SUPPORT THE PUMPS. BACKFILL EXISTING PIPE PIT
WITH STRUCTURAL BACKFILL AND A 6" CONCRETE CAP



WESTBOROUGH PUMP STATION IMPROVEMENTS

PROJECT BACKGROUND

Westborough Pump Station pumps water to the Skyline Tanks through Zone 2 but it is also designed to pump water to Zone 1 for a future Zone 1 tank. However, the area within the District boundary is fully developed and there is no land available for building any tanks making the additional Zone 1 piping at the pump station obsolete. This project will abandon the Zone 1 pipe configuration along with all its valves, check valves and pipes in the pump station and will create a extra space to be used as a storage area. As part of this improvement:

- The pumps will be structurally braced following a structural analysis.
- The existing 10" gate valves on the Zone 2 piping will be replaced with new 10" butterfly valves.
- The existing pit will be backfilled with structural backfill and resurfaced with a 6" concrete cap.
- Two new fire hydrants will be installed on the inlet and outlet sides of the pump station for flushing purposes.

PROPOSED IMPROVEMENTS

Abandon obsolete piping including valves and appurtenances
Backfill and cap existing pit
Structurally brace Zone 2 pumps
Replace Zone 2 gate valves with butterfly valves
Install two fire hydrants

PROJECT BENEFITS

Improvement of water quality by abandoning the Zone 1 pipes and improved flushing capabilities for the supply line.

PROJECT BUDGET (2020)

Remove Valves / Appurtenances	\$ 20,000
Backfill Existing Pit	\$ 30,000
Pipe Abandonments	\$ 50,000
Fire Hydrants - 2 @ \$15,000/EA	\$ 30,000
Butterfly Valves - 3 @ \$10,000/EA	\$ 30,000
Pump Bracing	\$ 20,000
Subtotal Construction	\$ 180,000
Planning, Design, & Construction Support	\$ 55,000
Contingency (±10%)	\$ 25,000
Project Budget	\$ 260,000

OPTIONAL

Construction Management/Inspection	\$ 20,000
Contingency (±10%)	\$ 5,000
Total	\$ 25,000



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CAPITAL IMPROVEMENT PROGRAM
WESTBOROUGH PUMP STATION IMPROVEMENTS
PROJECT W20-37



INLINE WATER VALVES

PROJECT BACKGROUND

The District is limited in isolating shorter sections of water main during shutdown operations due to existing valve locations. This project involves the installation of new inline valves throughout the system between pipe intersections and at intersections allowing the District to isolate smaller lengths of main for emergency repairs. This will also reduce the amount of residents affected by shutdowns.

PROPOSED IMPROVEMENTS

Install 130 valves

PROJECT BENEFITS

The Inline Water Valves project reduces the amount of customer disruptions during repairs and emergency events.

PROJECT BUDGET (2020)

Inline Valves - 130 @ \$10,000/EA	\$ 1,300,000
Subtotal Construction	\$ 1,300,000
Planning, Design, & Construction Support	\$ 195,000
Contingency (±10%)	\$ 150,000
Project Budget	\$ 1,645,000

OPTIONAL

Construction Management/Inspection	\$ 130,000
Contingency (±10%)	\$ 15,000
Total	\$ 145,000



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CAPITAL IMPROVEMENT PROGRAM
INLINE WATER VALVES
PROJECT W20-38



EMERGENCY HOSES

PROJECT BACKGROUND

In an emergency when there is a water main break, a 2.5" hose could be used to jump water from one hydrant or blowoff to another. This will act as a temporary bypass allowing water main repair with minimal water service disruptions. Similar to the 2.5" hose, a 1" hose could be used to move water from the hydrants to hydrants or residents.

PROPOSED IMPROVEMENTS

Purchase 2.5" hose and 1" hose to permit hydrant jumping.

PROJECT BENEFITS

Allows water service to be maintained while repairs on a water main break are performed.

PROJECT BUDGET (2020)

2 - 250 LF 2.5" Hose	\$	1,000
2 - 100 LF 2.5" Hose	\$	750
2 - 100 LF 1" Hose	\$	250
Subtotal	\$	2,000
Contingency (±10%)	\$	1,000
Project Budget	\$	3,000



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CAPITAL IMPROVEMENT PROGRAM
EMERGENCY HOSES
PROJECT W20-39

DRAIN PUMP

PROJECT BACKGROUND

The District drains the Skyline Tanks a few times a year to inspect and clean them. Since the District does not have the ability of pumping the water from one tank to another, they drain the tank when it reaches the lowest water level directly into the City's storm drain system. Purchasing a drain pump will give the ability to move the remaining water to any operable tank.

PROPOSED IMPROVEMENTS

Purchase a drain pump

PROJECT BENEFITS

Eliminates water waste

PROJECT BUDGET (2020)

4" Drain Pump	\$	5,000
Subtotal Construction	\$	5,000
Contingency (±10%)	\$	1,000
Project Budget	\$	6,000



DRAIN PUMP EXAMPLE



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CAPITAL IMPROVEMENT PROGRAM
DRAIN PUMP
PROJECT W20-40

OFFICE REMODEL & EXPANSION PHASES 1 & 2

PROJECT BACKGROUND

The District's main office building located at 2263 Westborough Boulevard is approximately 2,700 square feet, but only half of it is used as an office. The other half is used for the main pump station and parking garage. This project will add approximately 300 SF to the existing building, which can be used for staff office and storage space. This project is split into two phases: 1) a space analysis by an architect to optimize the layout of the building and propose any additions, and 2) construction.

PROPOSED IMPROVEMENTS

Office remodel and expansion

PROJECT BENEFITS

Adds additional office and storage space to the existing office building.

PROJECT BUDGET (2020)

Phase 1 - Analysis & Preliminary Design	\$	35,000
Subtotal	\$	35,000
Contingency (±10%)	\$	5,000
Project Budget	\$	40,000

Phase 2 - Construction budget determined upon Phase 1 completion.



SCALE: N.T.S



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CAPITAL IMPROVEMENT PROGRAM
OFFICE REMODEL & EXPANSION - (PHASES 1 & 2)
PROJECT W20-41