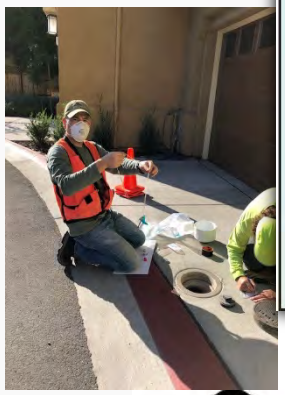
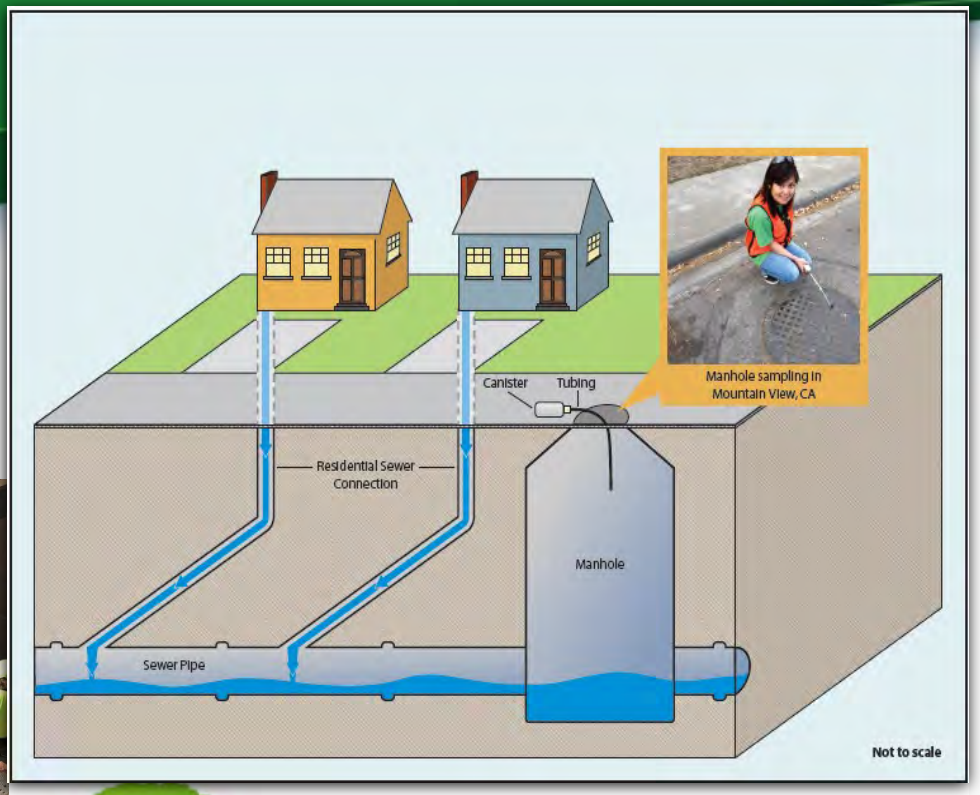
Investigating Sewer Pathway

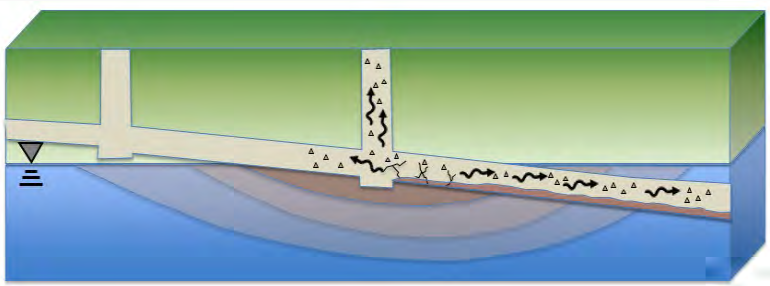
Disposal of TCE in Sewer
- Permitted, non-permitted discharges

Infiltration of shallow groundwater contamination where sewer/utility tunnel intercepts

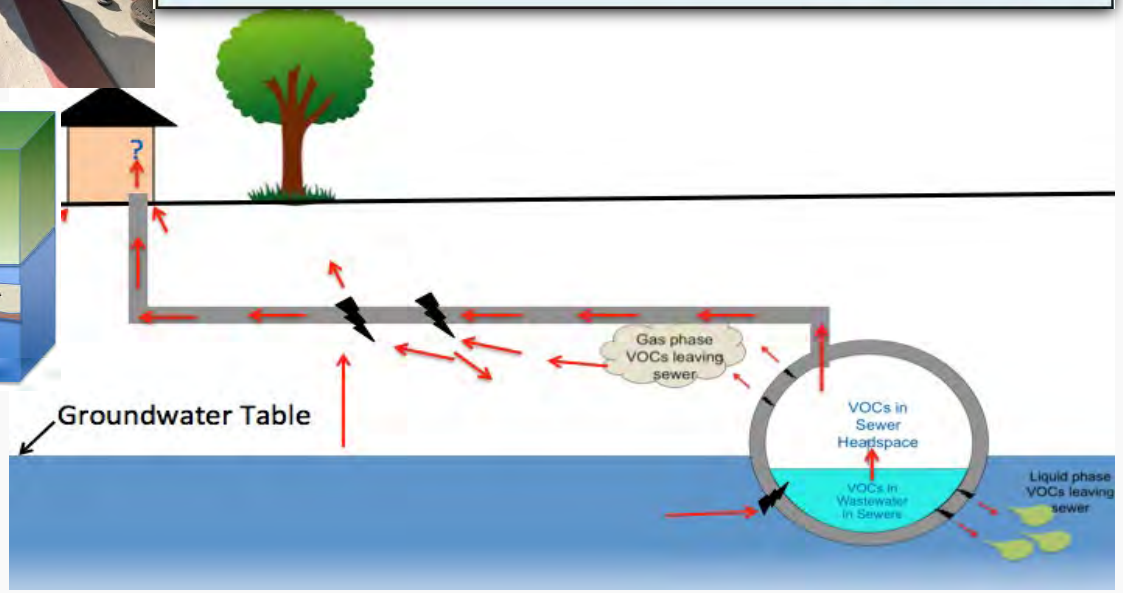
Sampling
- Manhole sewer gas, sewage
- Sewer cleanout





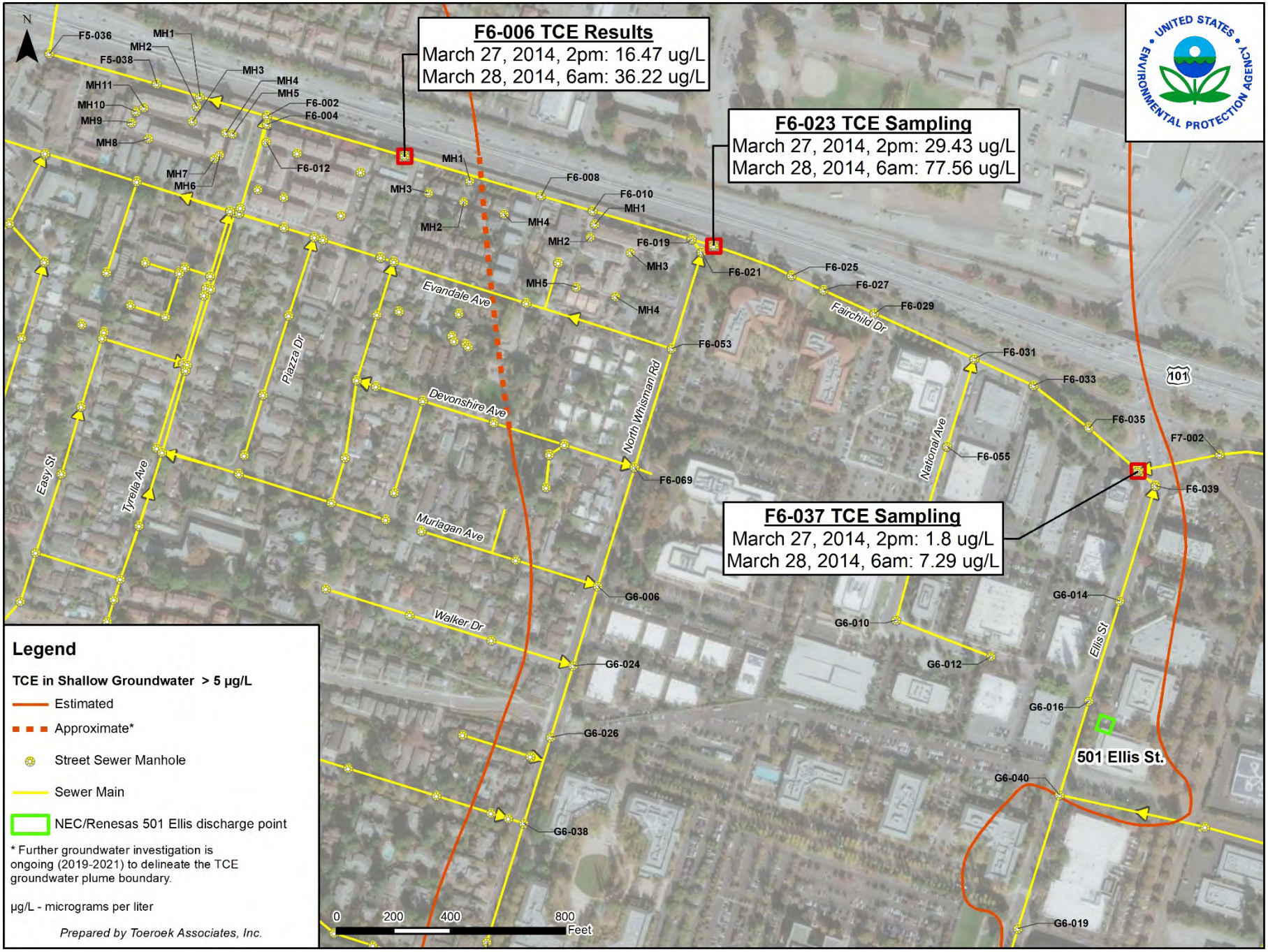


(Source: McHugh and Beckley, 2015)



Source: Kelly Pennell, UKY, 2016)

N
Evandale Ave
Fairchild Dr
Devonshire Ave
Murlagan Ave
Walker Dr
Easy St
Tyrella Ave
Piazza Dr
North Whisman Rd
National Ave
Ellis St
101
Legend
TCE in Shallow Groundwater > 5 µg/L
Estimated
Approximate*
Street Sewer Manhole
Sewer Main
* Further groundwater investigation is ongoing (2019-2021) to delineate the TCE groundwater plume boundary.
µg/L - micrograms per liter
Prepared by Toeroek Associates, Inc.
0
200
400
800
Feet


F6-006 TCE Results
March 27, 2014, 2pm: 16.47 ug/L
March 28, 2014, 6am: 36.22 ug/L
F6-023 TCE Sampling
March 27, 2014, 2pm: 29.43 ug/L
March 28, 2014, 6am: 77.56 ug/L
F6-037 TCE Sampling
March 27, 2014, 2pm: 1.8 ug/L
March 28, 2014, 6am: 7.29 ug/L
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
N
F5-036
F5-038
MH1
MH2
MH3
MH4
MH5
MH6
MH7
MH8
MH9
MH10
MH11
F6-002
F6-004
F6-012
F6-008
F6-010
F6-019
F6-021
F6-025
F6-027
F6-029
F6-031
F6-033
F6-035
F6-039
F6-053
F6-055
F6-069
F7-002
G6-006
G6-010
G6-012
G6-014
G6-016
G6-019
G6-024
G6-026
G6-038
G6-040
Evandale Ave
Devonshire Ave
Murlagan Ave
Walker Dr
Fairchild Dr
North Whisman Rd
National Ave
Ellis St
Easy St
Tyrella Ave
Piazza Dr
101
501 Ellis St.
Legend
TCE in Shallow Groundwater > 5 µg/L
Estimated
Approximate*
Street Sewer Manhole
Sewer Main
NEC/Renesas 501 Ellis discharge point
* Further groundwater investigation is ongoing (2019-2021) to delineate the TCE groundwater plume boundary.
µg/L - micrograms per liter
Prepared by Toeroek Associates, Inc.
0
200
400
800
Feet

Nearby TCE Shallow A-zone Groundwater Results

Legend

TCE - Trichloroethene

Vapor Intrusion Study Area - estimated TCE in shallow groundwater > 5 parts per billion (ppb)

Groundwater Monitoring Well (Sampled in 2018)
The result shown is the TCE concentration in ppb from groundwater monitoring well samples collected in 2018.
ND = Not Detected (below 0.5 ppb TCE)

89A Well Identification
92 TCE Concentration

2014 Groundwater Grab Sample

2012 Groundwater Grab Sample

The result shown is the maximum TCE concentration in ppb to 40 feet below ground surface

Planned developments with vapor intrusion control systems (not yet built)

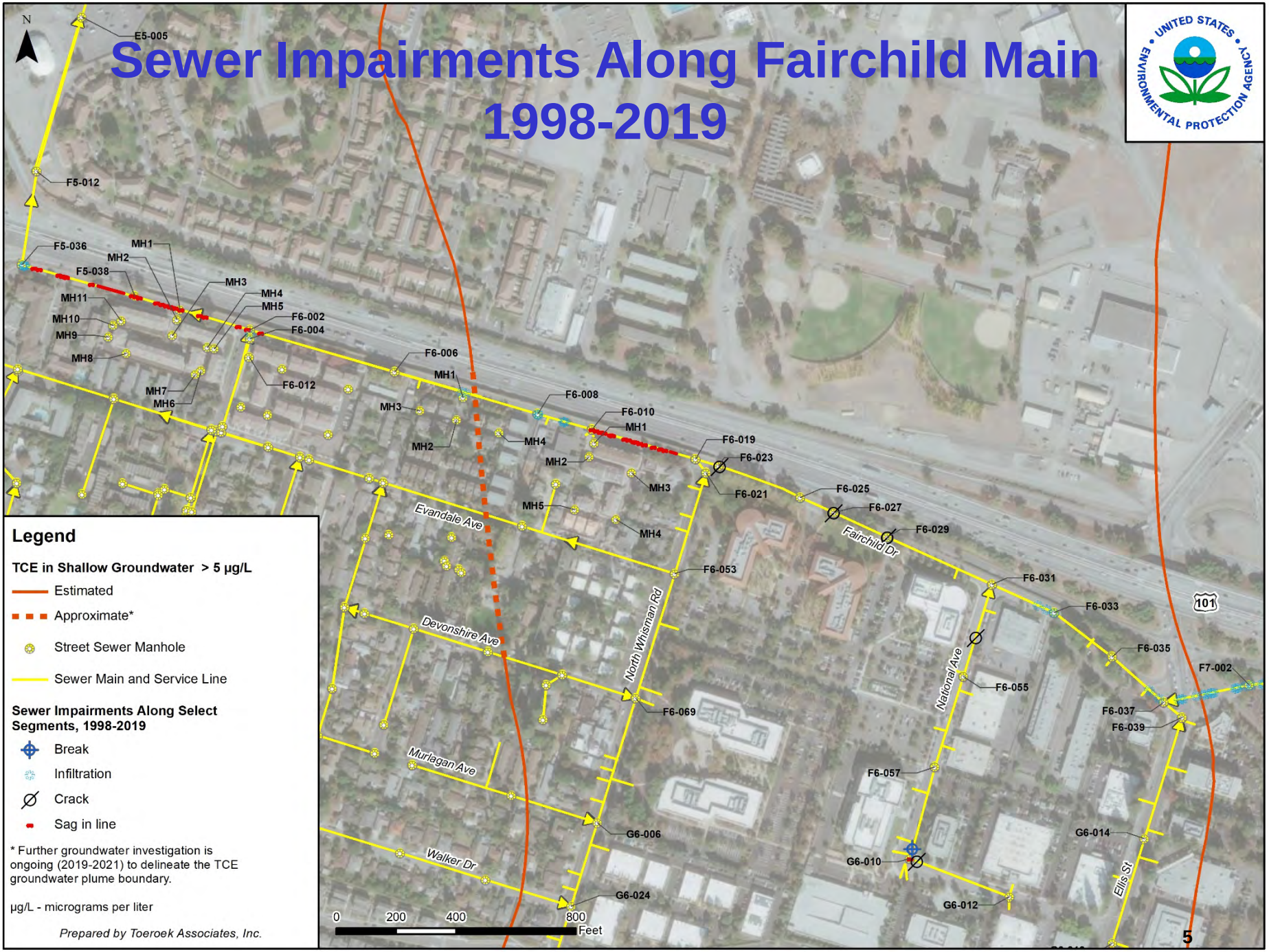
Buildings built with vapor intrusion control systems

Wescoat Village Residential Area buildings with vapor intrusion control systems (2006)

Proposed Development Area

Slurry Wall (Underground)

Sewer Impairments Along Fairchild Main 1998-2019



N
F5-036
MH1
MH2
F5-038
MH3
MH4
MH5
MH11
MH10
MH9
MH8
F6-002
F6-004
F6-012
MH7
MH6
F6-006
MH1
MH3
MH2
MH4
F6-008
F6-010
MH1
MH2
MH3
MH5
MH4
F6-019
F6-023
F6-021
F6-025
F6-027
F6-029
Fairchild Dr
Evandale Ave
Tyrella Ave
Piazza Dr
F6-053
North Whisman Rd
Devonshire Ave
F6-069
Murlagan Ave
Walker Dr
F6-031
F6-033
F6-035
F7-002
101
National Ave
F6-055
F6-037
F6-039
F6-057
G6-014
G6-010
G6-012
Ellis St
G6-016
501 Ellis St.
G6-040
G6-019
0
200
400
800
Feet
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Legend
TCE Maximum Concentrations in Manhole Sewer Air, May-December 2020, µg/m3
TCE Not Detected
>ND - 100
>100 - 500
>500 - 1000
>1000
TCE in Shallow Groundwater > 5 µg/L
Estimated
Approximate*
Street Sewer Manhole
Sewer Main
NEC/Renesas 501 Ellis discharge point
* Further groundwater investigation is ongoing (2019-2021) to delineate the TCE groundwater plume boundary.
µg/L - micrograms per liter
µg/m3 - micrograms per cubic meter
Prepared by Toeroek Associates, Inc.

N
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
F5-036
22.76
F5-038
19.88
MH2
13.56
MH3
9.4
MH1
18.5
MH4
8.79
MH5
6.0
F6-002
18.45
F6-004
12.72
MH11
7.33
MH10
7.42
MH9
7.16
MH8
7.21
MH7
7.56
MH6
7.53
Cinnamon Circle
6Sixty
Perimeter Rd
Wescoat Ct
Bailey Rd
Dailey Rd
F6-012
12.63
Sonoma Terrace
Viewpoint
F6-006
17.35
MH1
11.52
MH2
11.2
MH3
3.61
177
Wiley Terrace
MH4
3.53
Classics
F6-008
16.87
F6-010
17.72
MH1
7.64
211
235
MH2
7.6
MH3
6.1
Ariana Place
Waverly
MH5
MH4
F6-019
16.87
F6-023
16.06
F6-021
12.98
Evandale Ave
F6-053
11.75
Plazza Dr
Devonshire Ct
Lambert Way
N Whisman Rd
Annie Laurie St
Devonshire Ave
Dorchester Dr
F6-069
9.78
Murlagan Ave
0
125
250
500
Feet
Legend
TCE Maximum Concentrations in Manhole Sewer Air, May-December 2020, µg/m³
TCE Not Detected
>ND - 100
>100 - 500
>500 - 1000
>1000
Development Area
County Parcel
Street Sewer Manhole
Manhole ID F5-036
Invert depth in feet 22.76
Sewer Main and Service Line
µg/m³ - micrograms per cubic meter
Prepared by Toeroek Associates, Inc.

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EPA Sewer Gas Sampling Results
Fairchild Main - Sewer Trunk and Laterals
Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View, CA
May - December 2020

All units in micrograms per cubic meter (µg/m^3)					TCE	cis-1,2-DCE	PCE
Main or Lateral Location	**Sample Date**	**Analytical Laboratory**	**Sample Method**	**Sample Duration**			
Fairchild Main - F6-039 to F6-019 and F7-002							
F7-002	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	120	33	95
F6-039	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	180	25	6.7
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	185	35.3	7.23
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	301	44.5	12.3
F6-037	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	270	45	32
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	325	65.5	38
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	339	84.4	31.5
	11/13/2020	EPA R9	TO-15	Grab	300	50	20
F6-035	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	280	45	55
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	323	78.5	67
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	482 D	103	123
F6-033	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	201	47	44
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	221	66.3	40.5
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	406	83.5	86.2
	11/13/2020	EPA R9	TO-15	Grab	300	70	60
F6-031	11/13/2020	EPA R9	TO-15	Grab	500	100	70
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	181	66.3	28.4
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	310	94.3	39.3
	12/4/2020-12/6/2020	EPA R9	RAD 130	2 Days	380	120	39
	12/4/2020-12/6/2020	Beacon	TO-17 B1	2 Days	670	126	65.6
	12/6/2020	EPA R9	RAD 130	2 Hours	980	340	57
F6-029	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	680	130	52
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	780 D	199	51.3
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	1380 D	264	96.1
	11/13/2020	EPA R9	TO-15	Grab	1,700	300	90
F6-027	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	800	90	36
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	1090 D	219	52.8
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	1780 D	253 D	88.6
F6-025	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	1100 D	206	47.2
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	1840 D	246 D	77.2
F6-023	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	1560 D	262 D	59.3
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	2230 D	428 D	80
F6-019	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	3.1	0.91	0.41
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	12.4	4.26	2.54 J
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	37.7	6.08	5.12
Fairchild Main - F6-010 to F5-036							
F6-010	5/8/2020-5/11/2020	EPA R9	RAD 130	3 days	470	24	8.5
	6/2/2020	EPA R9	RAD 130	5 Hours	1,100	470	54
	9/18/2020-9/24/2020	EPA R9	RAD 130	6 Days	390	77	19
	9/18/2020-9/24/2020	Beacon	TO-17 tube	6 Days	585 D	160	21.7
	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	860	160	42
	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	970	210	43
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	1690 D	292 D	47.4
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	1530 D	356 D	67.2

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All units in micrograms per cubic meter (µg/m^3)					TCE	cis-1,2-DCE	PCE
Main or Lateral Location	**Sample Date**	**Analytical Laboratory**	**Sample Method**	**Sample Duration**			
	11/13/2020	EPA R9	TO-15	Grab	1,600	400	70
	12/4/2020-12/6/2020	EPA R9	RAD 130	2 Days	670	130	18
	12/4/2020-12/6/2020	Beacon	TO-17 B1	2 Days	2,230	398	73.7
	12/6/2020	EPA R9	RAD 130	1.5 Hours	1,000	360	28
F6-008	9/18/2020-9/24/2020	EPA R9	RAD 130	6 Days	390	81	18
	9/18/2020-9/24/2020	Beacon	TO-17 tube	6 Days	547 D	134	19.4
	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	1,000	230	43
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	1,630	305 D	42.6
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	2,320	447 D	72.6
	12/4/2020-12/6/2020	EPA R9	RAD 130	2 Days	1,400	360	50
	12/6/2020	EPA R9	RAD 130	2 Hours	1,300	500	35
F6-006	9/21/2020	EPA R9	TO-15	Grab	200	200	8 C1, J
	9/21/2020-9/24/2020	EPA R9	RAD 130	3 Days	830	130	35
	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	1,540	341 D	50.4
	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	1,400	314 D	44.8
	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	1,100	230	45
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	1,460	277 D	37.6
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	2,450	550 D	61.6
	11/13/2020	EPA R9	TO-15	Grab	2,100	500	70
F6-002	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	622	189	21.1
	11/2/2020-11/13/2020	EPA R9	RAD 130	11 Days	390	62	18
	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	640	130	25
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	961	220	26
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	1,620	325	53.7
MH1 (6Sixty, New)	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	376	122	9.72
	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	620	120	29
	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	570	110	24
	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	630	140	32
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	957	211	31.2
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	1,790	338	72.9
F5-038	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	445	136	13.4
	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	700	170	38
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	874	202	32.2
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	1,940	345 D	92.4
F5-036	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	704	225	71
Lateral on Ellis to F6-039							
G6-014	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	270	41	5.5
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	431	68.4	6.93
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	629	78.2 D	11.1
G6-016	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	450	71	9.4
G6-040	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	110	13	5.6
G6-019	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	190	15	5.9
Lateral on National to F6-031							
F6-055	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	67	5.4	4.3
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	68.6	5.63	3.13 J
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	93.4	8.25	4.46
	11/13/2020	EPA R9	TO-15	Grab	30	4 C1, J	ND<10
	12/4/2020-12/6/2020	EPA R9	RAD 130	2 Days	88	12	4.9
F6-057	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	55	0.75	2.9
G6-010	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	320	11	4.4

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All units in micrograms per cubic meter (µg/m^3)					TCE	cis-1,2-DCE	PCE
Main or Lateral Location	**Sample Date**	**Analytical Laboratory**	**Sample Method**	**Sample Duration**			
G6-012	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	110	1.9	2.2
Lateral on Whisman to F6-019							
F6-021	11/13/2020	EPA R9	TO-15	Grab	10	ND<8	ND<10
	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	75	7.5	12
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	95.5	10.4	11.1
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	164	14	19.9
F6-053	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	24	0.36	6.0
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	43	0.842 J	9.39
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	76.9	1.66 J	18.2
F6-069	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	33	0.17 C1, J	8.5
Lateral on Tyrella and Sonoma Terrace to F6-002							
F6-004	6/2/2020	EPA R9	RAD 130	3 Hours	ND<8.6	ND<9.5	ND<10
	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	4.64	ND<1.97	ND<2.38
F6-012	9/22/2020	EPA R9	TO-15	Grab	5	ND<8	ND<10
	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	7.36	ND<1.97	2.53 J
Sewer Cleanout							
235 FCH	9/21/2020-9/24/2020	EPA R9	RAD 130	3 days	47	16	2.4
	12/4/2020-12/6/2020	EPA R9	RAD 130	2 Days	17	5.3	0.61

Notes:

- TO15 results calculated based on Temperature of 25 degrees Celsius at 1 atmosphere
- Passive Sorbent Sampler (Radiello® [RAD 130]) - Uptake rates average field temperatures when provided.
- Manhole locations are ordered from upstream to downstream along Fairchild Drive sewer main.

Acronyms:

EPA R9 = EPA Region 9 Laboratory
Beacon = Beacon Environmental Laboratory
MH = Manhole
RAD 130 = Radiello® passive sorbent sampler analyzed by modified EPA Method TO-17
TCE = Trichloroethene; PCE = Tetrachloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene
TO-17-B1 = Beacon passive sampler analyzed by EPA Method TO-17
TO-17 tube = Passive sorbent tube analyzed by EPA Method TO-17

Laboratory Qualifiers

C1 = The reported concentration for this analyte is below the quantitation limit
D = Result was obtained from the analysis of a dilution
J = The reported result is an estimate
ND = Not Detected, denotes result was below laboratory quantitation limit

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EPA Sewer Gas Sampling Results
Waverly (former 277 Fairchild)
Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View, CA
May - December 2020

All units in micrograms per cubic meter (µg/m^3)				TCE	cis-1,2-DCE	PCE
Manhole Location	**Sample Date**	**Sample Method**	**Sample Duration**			
F6-031	11/13/2020	TO-15	Grab	500	100	70
	11/9/2020-11/13/2020	TO-17 tube	4 Days	181	66.3	28.4
	11/9/2020-11/13/2020	TO-17 B1	4 Days	310	94.3	39.3
	12/4/2020-12/6/2020	RAD 130	2 Days	380	120	39
	12/4/2020-12/6/2020	TO-17 B1	2 Days	670	126	65.6
	12/6/2020	RAD 130	2 Hours	980	340	57
F6-019	11/9/2020-11/13/2020	RAD 130	4 Days	3.1	0.91	0.41
	11/9/2020-11/13/2020	TO-17 tube	4 Days	12.4	4.26	2.54 J
	11/9/2020-11/13/2020	TO-17 B1	4 Days	37.7	6.08	5.12
F6-010	5/8/2020-5/11/2020	RAD130	3 days	470	24	8.5
	6/2/2020	RAD 130	5 Hours	1,100	470	54
	9/18/2020-9/24/2020	RAD 130	6 Days	390	77	19
	9/18/2020-9/24/2020	TO-17 tube	6 Days	585 D	160	21.7
	11/2/2020-11/6/2020	RAD 130	4 Days	860	160	42
	11/9/2020-11/13/2020	RAD 130	4 Days	970	210	43
	11/9/2020-11/13/2020	TO-17 tube	4 Days	1690 D	292 D	47.4
	11/9/2020-11/13/2020	TO-17 B1	4 Days	1530 D	356 D	67.2
	11/13/2020	TO-15	Grab	1,600	400	70
	12/4/2020-12/6/2020	RAD 130	2 Days	670	130	18
	12/4/2020-12/6/2020	TO-17 B1	2 Days	2,230	398	73.7
	12/6/2020	RAD 130	1.5 Hours	1,000	360	28
MH1	5/6/2020	TO15	Grab	300	7 C1,J	8
	5/8/2020-5/11/2020	RAD130	3 days	1,300	55	20
	6/2/2020	RAD 130	5 Hours	560	210	28
	9/16/2020	TO-15	Grab	500	200	9 C1,J
	9/18/2020-9/24/2020	RAD 130	6 days	560	130	23
	9/18/2020-9/24/2020	TO-17 tube	6 Days	1030 D	225 D	29.2
	11/9/2020-11/13/2020	TO-17 tube	4 Days	1410 D	259 D	41.1
	11/9/2020-11/13/2020	TO-17 B1	4 Days	2050 D	419 D	71
	12/4/2020-12/6/2020	RAD 130	2 Days	27	ND<0.57	0.30
	12/4/2020-12/6/2020	TO-17 B1	2 Days	44.4	ND<3.23	ND<4.18
	12/6/2020	RAD 130	1.5 Hours	12 C1,J	ND<17	ND<18
MH2	5/8/2020	TO15	Grab	60	ND<10	ND<8
	9/16/2020	TO-15	Grab	500	200	10
	9/18/2020-9/24/2020	RAD 130	6 days	750	120	41
	9/18/2020-9/24/2020	TO-17 tube	6 Days	1320 D	242 D	42.2
	11/9/2020-11/13/2020	TO-17 tube	4 Days	1600 D	296 D	43.6
	11/9/2020-11/13/2020	TO-17 B1	4 Days	2650 D	463 D	82.7

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All units in micrograms per cubic meter (µg/m^3)				TCE	cis-1,2-DCE	PCE
Manhole Location	**Sample Date**	**Sample Method**	**Sample Duration**			
	12/4/2020-12/6/2020	TO-17 B1	2 Days	40	ND<3.21	ND<4.15
	12/6/2020	RAD 130	1.5 Hours	12 C1,J	ND<17	ND<18
MH3	5/6/2020	TO15	Grab	300	8 C1,J	7 C1,J
	5/8/2020	TO15	Grab	20	ND<10	ND<8
	9/16/2020	TO-15	Grab	200	100	ND<10
	9/18/2020-9/24/2020	RAD 130	6 days	320	62	12
	9/18/2020-9/24/2020	TO-17 tube	6 Days	521 D	123	14.2
	12/4/2020-12/6/2020	RAD 130	2 Days	ND<0.51	ND<0.57	ND<0.60
	12/4/2020-12/6/2020	TO-17 B1	2 Days	ND<5.16	ND<3.21	ND<4.16
MH4	5/6/2020	TO15	Grab	6 C1,J	ND<10	ND<8
	9/16/2020	TO-15	Grab	ND<10	ND<8	ND<10
	9/18/2020-9/24/2020	RAD 130	6 days	0.16	ND<0.20	ND<0.21
	9/18/2020-9/24/2020	TO-17 tube	6 Days	ND<1.19	ND<1.02	ND<1.23
	12/4/2020-12/6/2020	RAD 130	2 Days	ND<0.51	ND<0.57	ND<0.60
	12/4/2020-12/6/2020	TO-17 B1	2 Days	ND<5.22	ND<3.25	ND<4.20
MH5	5/6/2020	TO15	Grab	8 C1,J	ND<10	ND<8
	9/16/2020	TO-15	Grab	ND<10	ND<8	ND<10
	9/18/2020-9/24/2020	RAD 130	6 days	ND<0.18	ND<0.20	ND<0.21
	9/21/2020-9/24/2020	TO-17 tube	3 Days	ND<2.32	ND<2.00	ND<2.42
	12/4/2020-12/6/2020	RAD 130	2 Days	ND<0.51	ND<0.57	ND<0.60
	12/4/2020-12/6/2020	TO-17 B1	2 Days	ND<5.20	ND<3.24	ND<4.19

Notes:

- TO15 results calculated based on Temperature of 25 degrees Celsius at 1 atmosphere
- Passive Sorbent Sampler (Radiello® [RAD 130]) - Uptake rates average field temperatures when provided.
- Green highlight indicates sample collected after installation of siphon located between F6-010 and Waverly MH1 installed on 11/30/2020

Acronyms:

EPA R9 = EPA Region 9 Laboratory

Beacon = Beacon Environmental Laboratory

MH = manhole

RAD 130 = Radiello® passive sorbent sampler analyzed by modified EPA Method TO-17

TCE = Trichloroethene; PCE = Tetrachloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene

TO-17-B1 = Beacon passive sampler analyzed by EPA Method TO-17

TO-17 tube = Passive sorbent tube analyzed by EPA Method TO-17

Laboratory Qualifiers

C1 = The reported concentration for this analyte is below the quantitation limit

D = Result was obtained from the analysis of a dilution

J = The reported result is an estimate

ND = Not Detected, denotes result was below laboratory quantitation limit

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EPA Sewer Gas Sampling Results
Classics Development
Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View, CA
September - December 2020

All units in micrograms per cubic meter (µg/m^3)					TCE	cis-1,2-DCE	PCE
Manhole or Sewer Cleanout Location	**Sample Date**	**Analytical Laboratory**	**Sample Method**	**Sample Duration**			
Manholes	**Fairchild Main F6-008 to Laterals MH1 - MH4 on Wiley Terrace**						
F6-008	9/18/2020-9/24/2020	EPA R9	RAD 130	6 Days	390	81	18
	9/18/2020-9/24/2020	Beacon	TO-17 tube	6 Days	547 D	134	19.4
	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	1,000	230	43
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	1630 D	305 D	42.6
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	2320 D	447 D	72.6
	12/4/2020-12/6/2020	EPA R9	RAD 130	2 Days	1,400	360	50
	12/6/2020	EPA R9	RAD 130	2 Hours	1,300	500	35
MH1	9/18/2020	EPA R9	TO-15	Grab	ND<10	ND<8	ND<10
	9/18/2020-9/24/2020	EPA R9	RAD 130	6 Days	390	76	15
	9/18/2020-9/24/2020	Beacon	TO-17 tube	6 Days	639 D	167	17.1
	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	930	130	40
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	1910 D	392 D	43.4
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	3,040	555 D	91.2
	12/4/2020-12/6/2020	EPA R9	RAD 130	2 Days	1,200	280	35
MH2	9/18/2020	EPA R9	TO-15	Grab	600	300	ND<10
	9/18/2020-9/24/2020	EPA R9	RAD 130	6 Days	680	120	35
	9/18/2020-9/24/2020	Beacon	TO-17 tube	6 Days	1,440	263 D	42.2
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	1,670	327 D	41
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	2,320	556 D	56.1
	12/4/2020-12/6/2020	EPA R9	RAD 130	2 Days	1,400	370	46
MH3	9/18/2020	EPA R9	TO-15	Grab	ND<10	ND<8	ND<10
	9/18/2020-9/24/2020	EPA R9	RAD 130	6 Days	ND<0.17	ND<0.19	0.56
	9/18/2020-9/24/2020	Beacon	TO-17 tube	6 Days	ND<1.16	ND<1.00	ND<1.21
	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	0.39	ND<0.27	0.77
MH4	9/18/2020	EPA R9	TO-15	Grab	ND<10	ND<8	ND<10
	9/18/2020-9/24/2020	EPA R9	RAD 130	6 Days	ND<0.20	ND<0.19	ND<0.20
	9/18/2020-9/24/2020	Beacon	TO-17 tube	6 Days	ND<1.16	ND<0.999	ND<1.21
	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	ND<0.24	ND<0.27	ND<0.28
F6-006	9/21/2020	EPA R9	TO-15	Grab	200	200	8 C1,J
	9/21/2020-9/24/2020	EPA R9	RAD 130	3 Days	830	130	35
	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	1540 D	341 D	50.4
	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	1400 D	314 D	44.8
	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	1,100	230	45
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	1460 D	277 D	37.6
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	2450 D	550 D	61.6
	11/13/2020	EPA R9	TO-15	Grab	2,100	500	70
Sewer Cleanout							
A18	9/22/2020	EPA R9	TO-15	Grab	ND<10	ND<8	ND<10
	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	97	19	3.8
A19	9/22/2020	EPA R9	TO-15	Grab	200	80	ND<10
	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	57	15	2.4
B20	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	10	2.6	0.41
B21	9/18/2020-9/24/2020	EPA R9	RAD 130	6 Days	110	26	4.7
	9/18/2020-9/24/2020	Beacon	TO-17 tube	6 Days	170	48.3	5.76
	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	430	84	25
C22	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	280	55	10
C23	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	64	17	2.5
D24	9/22/2020	EPA R9	TO-15	Grab	ND<10	ND<8	ND<10
	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	36	9.5	1.4
	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	61	17	2.4

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EPA Sewer Gas Sampling Results
Classics Development
Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View, CA
September - December 2020

All units in micrograms per cubic meter (µg/m^3)					TCE	cis-1,2-DCE	PCE
Manhole or Sewer Cleanout Location	**Sample Date**	**Analytical Laboratory**	**Sample Method**	**Sample Duration**			
D25	9/22/2020	EPA R9	TO-15	Grab	10	4 C1,J	ND<10
	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	160	32	5.7
E26	9/22/2020	EPA R9	TO-15	Grab	ND<10	ND<8	ND<10
	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	140	33	4.7
E27	9/22/2020	EPA R9	TO-15	Grab	ND<10	ND<8	ND<10
	9/18/2020-9/24/2020	EPA R9	RAD 130	6 Days	0.99	0.17 J	ND<0.20
	9/18/2020-9/24/2020	Beacon	TO-17 tube	6 Days	ND<1.16	ND<0.996	ND<1.20
	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	36	11	1.4
F28	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	15	2.8	0.43
F29	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	70	20	2.7
G30	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	110	26	3.9
G31	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	210	50	8.5
H33	9/22/2020	EPA R9	TO-15	Grab	ND<10	ND<8	ND<10
	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	170	42	6.7
	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	220	51	8.6
J34	9/22/2020	EPA R9	TO-15	Grab	ND<10	ND<8	ND<10
	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	220	51	9.1
J35	9/22/2020	EPA R9	TO-15	Grab	ND<10	ND<8	ND<10
	11/2/2020-11/9/2020	EPA R9	RAD 130	7 Days	21	4.5	0.98

Notes:
- TO15 results calculated based on Temperature of 25 degrees Celsius at 1 atmosphere
- Passive Sorbent Sampler (Radiello® [RAD 130]) - Uptake rates average field temperatures when provided.

Acronyms:
Beacon = Beacon Environmental Laboratory
EPA R9 = EPA Region 9 Laboratory
MH = Manhole
NA = Not analyzed
RAD 130 = Radiello® passive sorbent sampler analyzed by modified EPA Method TO-17
TCE = Trichloroethene; PCE = Tetrachloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene
TO-17-B1 = Beacon passive sampler analyzed by EPA Method TO-17
TO-17 tube = Passive sorbent tube analyzed by EPA Method TO-17

Laboratory Qualifiers
C1 = The reported concentration for this analyte is below the quantitation limit
D = Result was obtained from the analysis of a dilution
J = The reported result is an estimate
ND = Not Detected, denotes result was below laboratory quantitation limit

DRAFT FOR DISCUSSION ONLY

EPA Sewer Gas Sampling Results
6Sixty Development
Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View, CA
September - December 2020

All units in micrograms per cubic meter (µg/m^3)					TCE	cis-1,2-DCE	PCE
Manhole or Sewer Cleanout Location	**Sample Date**	**Analytical Laboratory**	**Sample Method**	**Sample Duration**			
Manholes	**Fairchild Main F6-002 and MH1 - Lateral MH2 -MH11 - Cinnamon Circle**						
F6-002	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	622 D	189	21.1
	11/2/2020-11/13/2020	EPA R9	RAD 130	11 Days	390	62	18
	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	640	130	25
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	961 D	220	26
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	1620 D	325	53.7
MH1	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	376	122	9.72
	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	620	120	29
	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	570	110	24
	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	630	140	32
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	957	211	31.2
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	1790 D	338 D	72.9
MH2	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	602 D	176	17.1
	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	460	72	17
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	840 D	189	26.8
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	1460 D	260 D	60.5
MH3	9/21/2020-9/24/2020	EPA R9	RAD 130	3 Days	300	68	11
	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	505 D	144	13.9
	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	490	97	22
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	897 D	219	30.3
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	1500 D	269	51.8
	12/4/2020-12/6/2020	EPA R9	RAD 130	2 Days	550	140	23
MH4	9/21/2020-9/24/2020	EPA R9	RAD 130	3 Days	110	31	4.5
	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	158	48.8	4.71 J
	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	230	49	9.3
MH5	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	23	7.4	0.89
MH6	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	49	15	2.0
MH7	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	40	11	1.7
MH8	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	ND<0.24	ND<0.27	ND<0.28
MH9	11/2/2020-11/6/2020	EPA R9	RAD 130	4 Days	0.40	ND<0.27	0.17 C1, J
MH10	11/2/2020-11/6/2020	EPA R9	RAD 130	4 days	29	9.0	1.2
MH11	9/21/2020-9/24/2020	EPA R9	RAD 130	3 Days	110	30	5.8
	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	162	48.3	6.37
	11/2/2020-11/6/2020	EPA R9	RAD 130	4 days	210	47	8.0
F6-038	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	445	136	13.4
	11/9/2020-11/13/2020	EPA R9	RAD 130	4 Days	700	170	38
	11/9/2020-11/13/2020	Beacon	TO-17 tube	4 Days	874 D	202	32.2
	11/9/2020-11/13/2020	Beacon	TO-17 B1	4 Days	1940 D	345 D	92.4
Sewer Cleanout							
A1	9/22/2020	EPA R9	TO-15	Grab	300	90	10
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	46	9.8	2.6
A2	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	ND<2.29	ND<1.97	ND<2.38
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	36	11	1.8
A3	9/22/2020	EPA R9	TO-15	Grab	40	20	ND<10
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	130	30	5.3
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	140	23	4.9
A4	9/22/2020	EPA R9	TO-15	Grab	7	ND<8	ND<10
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	150	29	6.1
A5	9/22/2020	EPA R9	TO-15	Grab	10	ND<8	ND<10
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	260	54	12
A6	9/22/2020	EPA R9	TO-15	Grab	20	ND<8	ND<10
	9/22/2020	EPA R9	TO-15	Grab	30	9	ND<10
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	270	49	12
A7	9/22/2020	EPA R9	TO-15	Grab	300	100	10
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	150	36	5.9
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	150	43	6.8
A8	9/21/2020-9/24/2020	EPA R9	RAD 130	3 Days	12	3.5	0.71
	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	ND<2.29	2.15 J	ND<2.38
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	270	56	12
	9/21/2020-9/24/2020	EPA R9	RAD 130	3 Days	11	3.2	0.6

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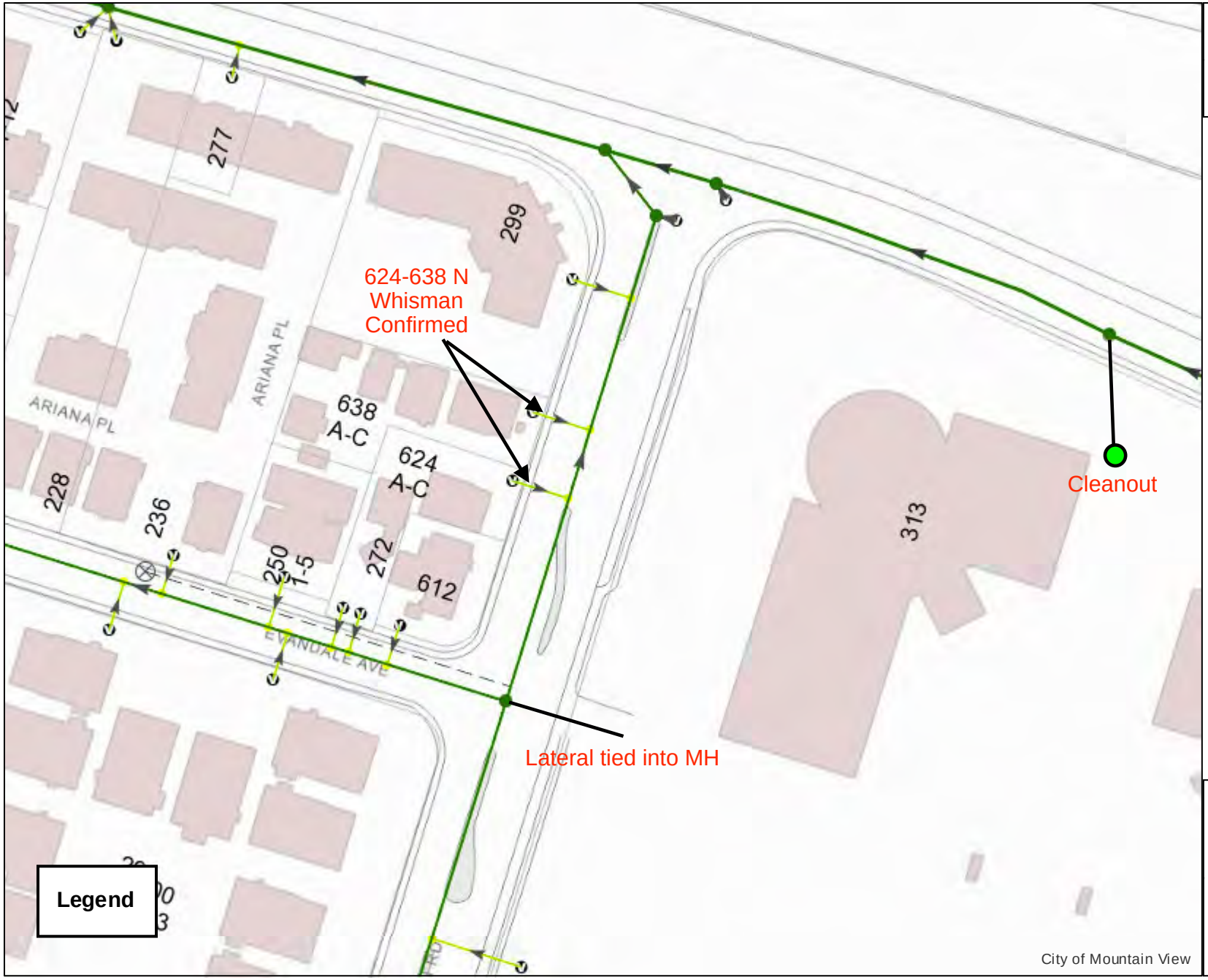
EPA Sewer Gas Sampling Results
6Sixty Development
Middlefield-Ellis-Whisman (MEW) Superfund Study Area, Mountain View, CA
September - December 2020

All units in micrograms per cubic meter (µg/m^3)					TCE	cis-1,2-DCE	PCE
Manhole or Sewer Cleanout Location	**Sample Date**	**Analytical Laboratory**	**Sample Method**	**Sample Duration**			
A9	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	19.7	5.41	ND<2.38
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	310	53	16
B10	9/22/2020	EPA R9	TO-15	Grab	40	8	ND<10
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	37	11	1.9
B11	9/22/2020	EPA R9	TO-15	Grab	ND<10	ND<8	ND<10
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	0.07	ND<0.16	ND<0.17
B12	9/21/2020-9/24/2020	EPA R9	RAD 130	3 Days	66	25	2.3
	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	92.3	27.9	2.79
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	250	34	10
B13	9/22/2020	EPA R9	TO-15	Grab	ND<10	ND<8	ND<10
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	180	45	8.2
B14	9/21/2020-9/24/2020	Beacon	TO-17 tube	3 Days	27.2	7.36	ND<2.39
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	280	49	14
B15	9/22/2020	EPA R9	TO-15	Grab	50	20	ND<10
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	50	12	2.6
B16	9/22/2020	EPA R9	TO-15	Grab	ND<10	ND<8	ND<10
	9/22/2020	EPA R9	TO-15	Grab	ND<10	ND<8	ND<10
	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	11	2.6	0.59
C17	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	21	6.7	1.2
C18	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	47	13	2.6
C19	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	37	10	2.0
D23	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	43	10	2.4
D24	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	62	16	3.5
D25	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	0.07	ND<0.16	ND<0.17
F35	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	1.0	ND<0.16	0.09
F36	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	1.5	0.38	0.12
F37	11/2/20-11/9/20	EPA R9	RAD 130	7 Days	3.8	0.88	0.24

Notes:
- TO15 results calculated based on Temperature of 25 degrees Celsius at 1 atmosphere
-Passive Sorbent Sampler (Radiello® [RAD 130]) - Uptake rates average field temperatures when provided.

Acronyms:
TCE = Trichloroethene; PCE = Tetrachloroethene; cis-1,2-DCE = cis-1,2-Dichloroethene
EPA R9 = EPA Region 9 Laboratory
Beacon = Beacon Environmental Laboratory
MH = Manhole
RAD 130 = Radiello® passive sorbent sampler analyzed by modified EPA Method TO-17
TO-17-B1 = Beacon passive sampler analyzed by EPA Method TO-17
TO-17 tube = Passive sorbent tube analyzed by EPA Method TO-17

Laboratory Qualifiers
C1 = The reported concentration for this analyte is below the quantitation limit
D = Result was obtained from the analysis of a dilution
J = The reported result is an estimate
ND = Not Detected, denotes result was below laboratory quantitation limit



CITY OF MOUNTAIN VIEW

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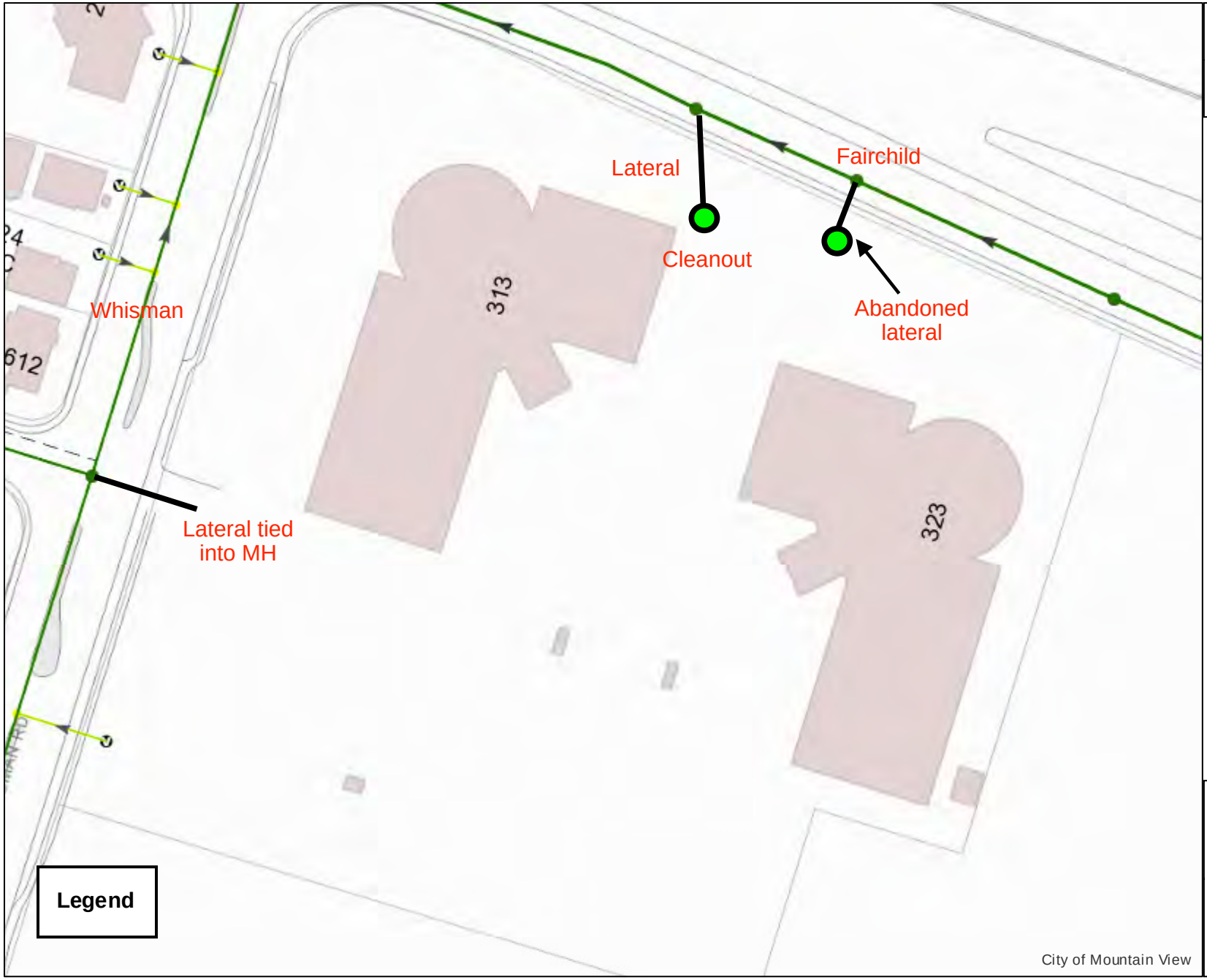

City of Mountain View

313-323 Fairchild

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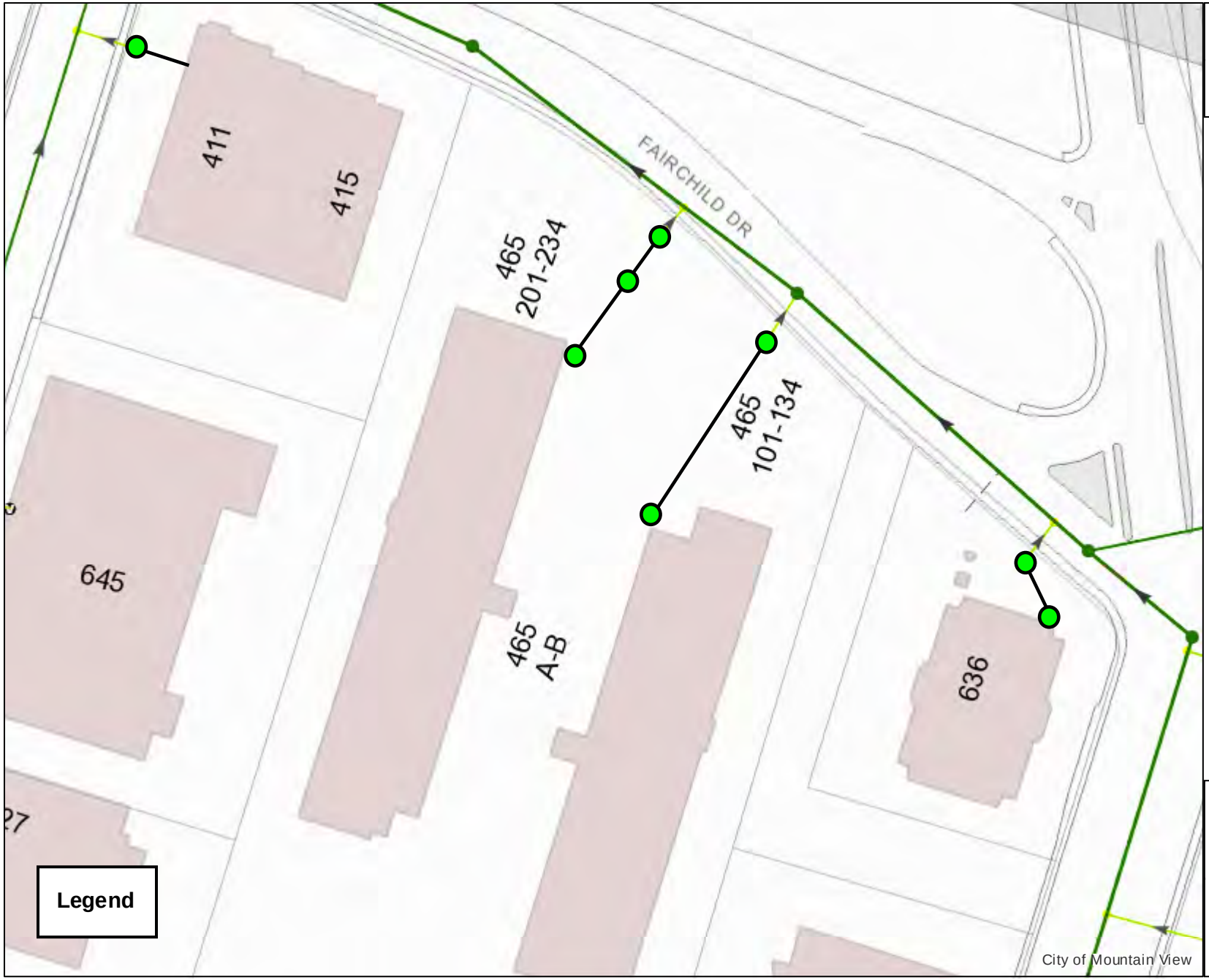

City of Mountain View

Cleanouts

465 Fairchild Ellis

N
W
E
S

0
100
1 " = 83 '

7/6/2020 3:01 PM

This map is a user generated static output from the City of Mountain View online mapping site and is for reference only.
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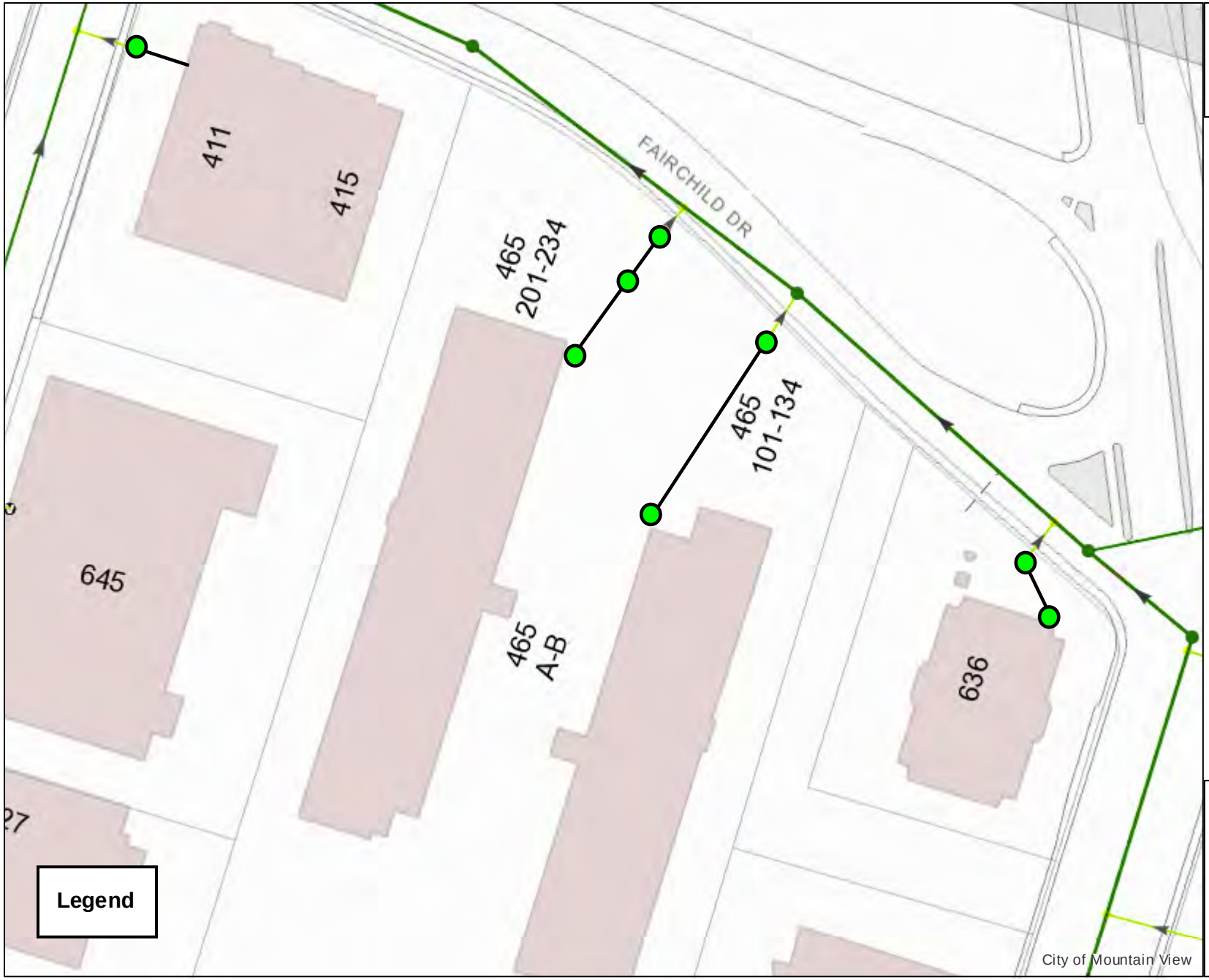

City of Mountain View

Cleanouts

465 Fairchild Ellis

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0
100
1 " = 83 '

7/6/2020 3:01 PM

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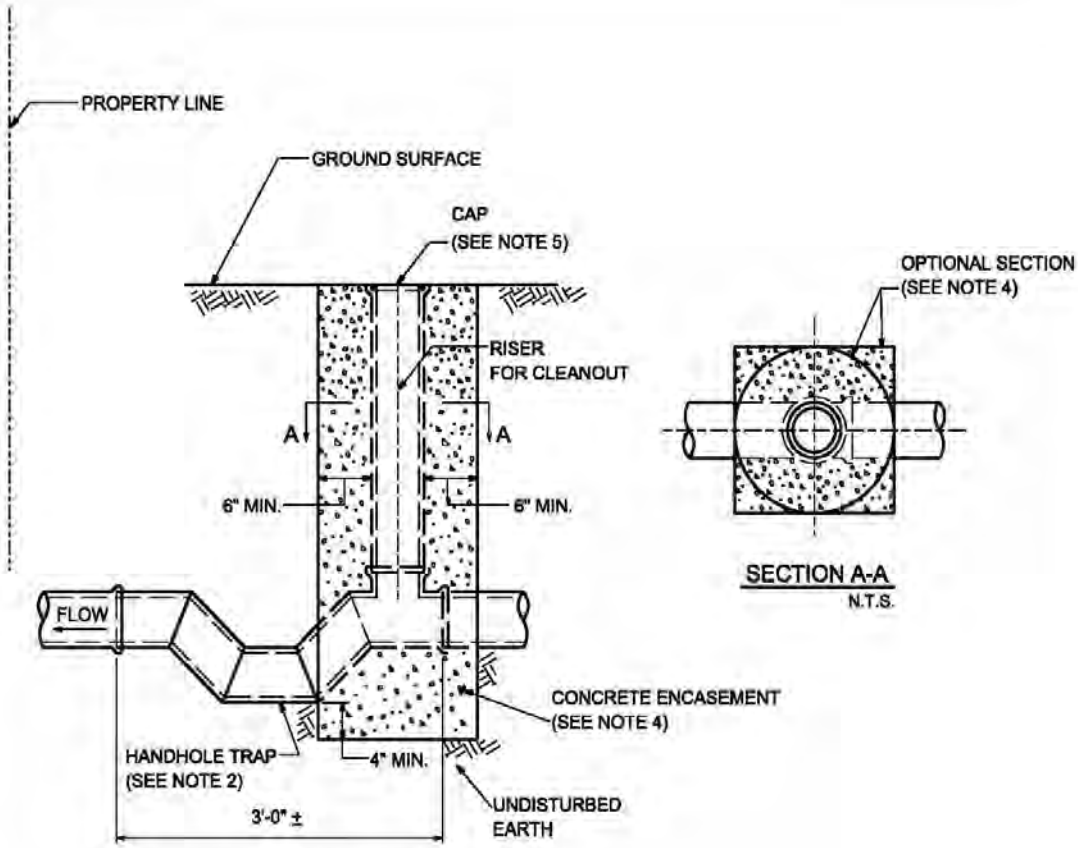

ELEVATION
N.T.S.

NOTES:

1. EXCEPT AS OTHERWISE INDICATED HEREON OR ON THE PROJECT PLANS, CONSTRUCTION SHALL CONFORM TO THE APPLICABLE PORTIONS OF STANDARD PLAN, HOUSE CONNECTION SEWERS AND HOUSE CONNECTION REMODELING.
2. THE HANDHOLE TRAP MAY BE FABRICATED OF MITERED SECTION AS SHOWN HEREON, OR OF A SINGLE UNIT WITH CURVED SEGMENTS.
3. PLAIN END PIPE MAY BE USED IN LIEU OF BELL (SOCKET) AND SPIGOT FITTED PIPE PROVIDED APPROVED COUPLINGS ARE USED.
4. THE CONCRETE ENCASEMENT AROUND THE RISER ABOVE THE TOP OF THE HOUSE CONNECTION TEE MAY BE CIRCULAR OR RECTANGULAR IN CROSS SECTION. FROM THE BOTTOM OF THE ENCASEMENT TO THE TOP OF THE HOUSE CONNECTION TEE, THE ENCASEMENT SHALL BE RECTANGULAR IN CROSS SECTION. ENCASEMENT SHALL BE CLASS 420-C-2000 CONCRETE.
5. THE RISER SHALL BE SEALED WITH A CAP AND 1 INCH THICK TYPE "F" MORTAR AROUND THE CIRCUMFERENCE OF THE CAP.
6. THE HANDHOLE TRAP SHALL BE BEDDED IN THE SAME MANNER AS THE HOUSE CONNECTION SEWER.

GAS TRAP

FIGURE 2-1

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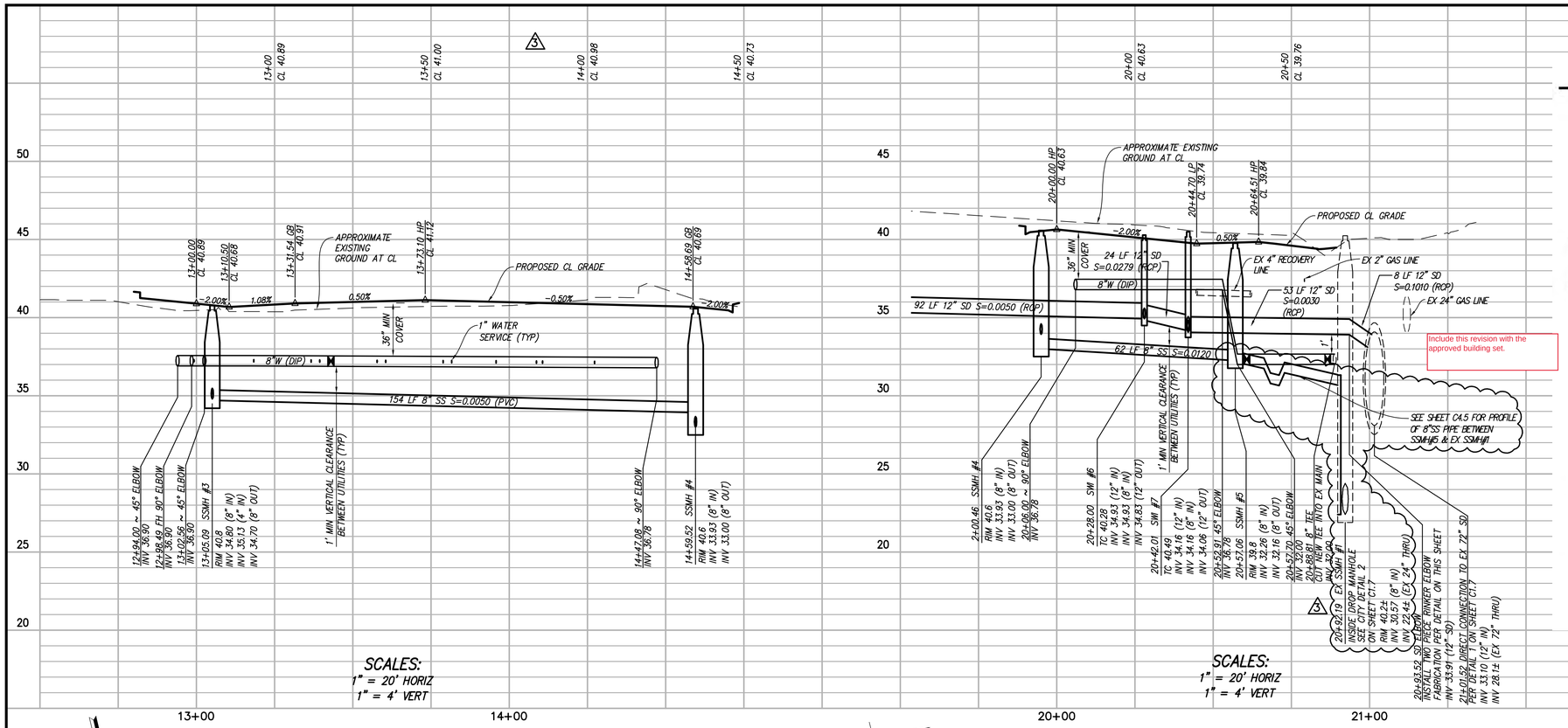
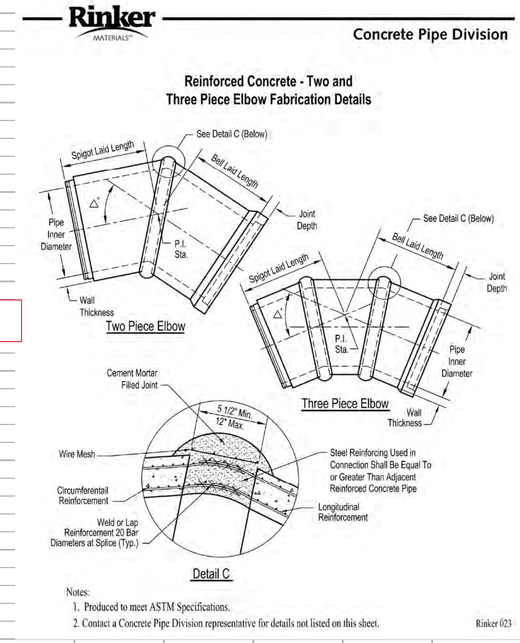
TQT
4/19/2012

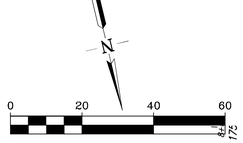


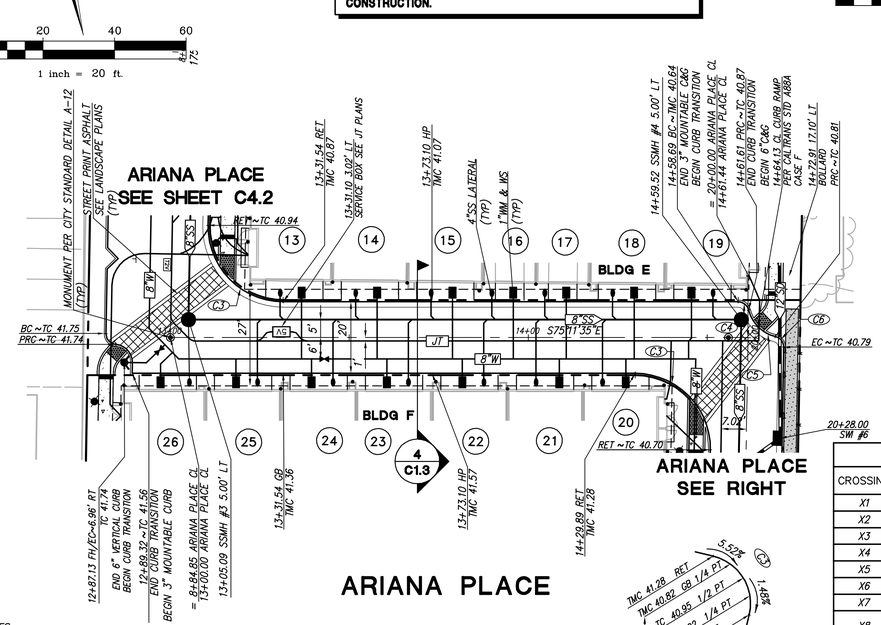


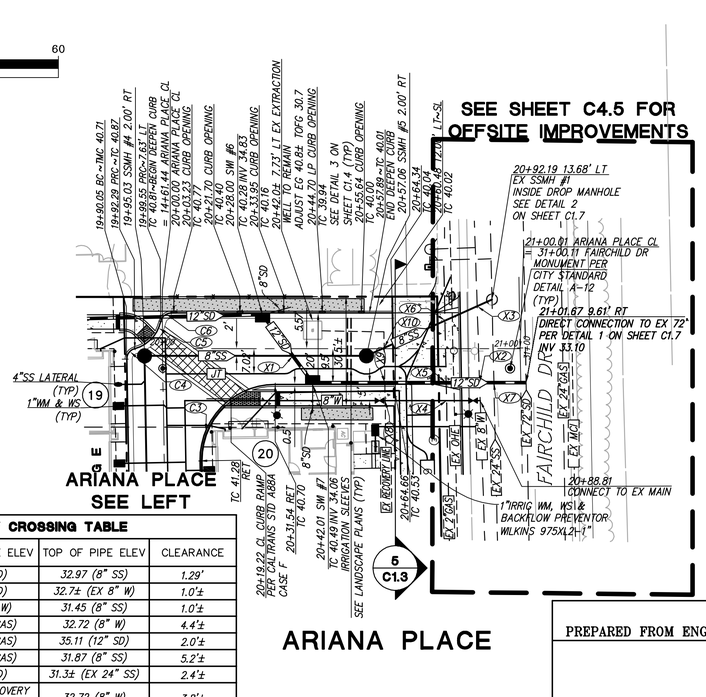
SD ELBOW DETAIL

NOT TO SCALE

LOCATION AND/OR ELEVATIONS OF ALL EXISTING UTILITIES ARE UNKNOWN. CONTRACTOR SHALL POTHOLE AND VERIFY THIS INFORMATION AND NOTIFY THE CIVIL ENGINEER OF ANY CONFLICT WITH THE DESIGN PRIOR TO STARTING OF CONSTRUCTION.







NOTES:

1. SEE SHEET C1.2–PROJECT NOTES FOR PIPE MATERIAL FOR PROPOSED PIPES.
2. PROPOSED TRANSFORMERS AND VAULTS ARE TO BE INSTALLED BELOW GRADE.
3. SEE FINE GRADING C6.1–C6.2 FOR CURB RAMP GRADES

UTILITY CROSSING TABLE

CROSSING	BOTTOM OF PIPE ELEV	TOP OF PIPE ELEV	CLEARANCE
X1	34.26 (12" SD)	32.97 (8" SS)	1.29'
X2	33.75 (12" SD)	32.7± (EX 8" W)	1.0'±
X3	32.5± (EX 8" W)	31.45 (8" SS)	1.0'±
X4	37.1± (EX 2" GAS)	32.72 (8" W)	4.4'±
X5	37.1± (EX 2" GAS)	35.11 (12" SD)	2.0'±
X6	37.1± (EX 2" GAS)	31.87 (8" SS)	5.2'±
X7	33.74 (12" SD)	31.3± (EX 24" SS)	2.4'±
X8	36.5± (EX 4" RECOVERY LINE)	32.72 (8" W)	3.8'±
X9	36.4± (EX 4" RECOVERY LINE)	35.17 (12" SD)	1.2'±
X10	36.3± (EX 4" RECOVERY LINE)	32.65 (8" SS)	3.7'±

* BOTTOM AND TOP PIPE ELEVATIONS INCLUDE THE PIPE THICKNESS*

UTILITY & DRIVEWAY CL TABLE

UNIT NUMBER	DRIVEWAY	SEWER LATERAL				WM
	CL (8' OR 16' WIDE)	STATION	OFFSET	SLOPE	INVERT @ STUB	STATION OFFSET
13	13+34.68	13+30.68	12.50' LT	0.110	36.40	13+36.68 11.50' LT
14	13+55.76	13+51.76	12.50' LT	0.130	36.50	13+57.76 11.50' LT
15	13+76.50	13+72.85	12.50' LT	0.150	36.61	13+78.85 11.50' LT
16	13+94.80	13+89.80	12.50' LT	0.170	36.65	13+95.80 11.50' LT
17	14+05.63	14+04.63	12.50' LT	0.180	36.57	14+10.63 11.50' LT
18	14+27.59	14+23.59	12.50' LT	0.185	36.48	14+29.59 11.50' LT
19	14+48.67	14+51.63	12.50' LT	0.180	36.34	14+45.63 11.50' LT
20	14+25.76	14+20.76	12.50' RT	0.020	36.99	14+27.26 11.50' RT
21	14+04.68	14+02.18	12.50' RT	0.020	37.08	14+08.68 11.50' RT
22	13+83.60	13+87.60	12.50' RT	0.020	37.15*	13+81.60 11.50' RT
23	13+62.51	13+66.51	12.50' RT	0.020	37.05*	13+60.51 11.50' RT
24	13+41.43	13+45.43	12.50' RT	0.020	36.95*	13+39.43 11.50' RT
25	13+20.35	13+24.35	12.50' RT	0.020	36.84*	13+18.35 11.50' RT
26	12+99.26	13+05.29	12.50' RT	0.020	37.02*	12+97.26 11.50' RT

* SEWER LATERALS TO MATCH CROWN AT MAIN
* BOTTOM AND TOP PIPE ELEVATIONS INCLUDE THE PIPE THICKNESS*

CURVE TABLE

CURVE	RADIUS	DELTA	LENGTH	DESC
C1	3.00'	090°00'00"	4.71'	FC
C2	5.00'	090°00'00"	7.85'	FC
C3	21.00'	090°59'53"	33.35'	FC
C4	3.00'	076°23'18"	4.00'	FC
C5	10.00'	063°20'35"	11.06'	FC
C6	3.00'	077°57'10"	4.08'	FC

AS-BUILT PLANS
PREPARED FROM ENGINEER'S AND CONTRACTOR'S RECORDS

EDDIE SIEU, RCE 44189 DATE
RUGGERI–JENSEN–AZAR

SUBMIT ELECTRONIC "AS–BUILT" PLANS IN BOTH AUTOCAD AND PDF FORMATS.

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PHONE: (925) 227-9100 FAX: (925) 227-9300

REGISTERED PROFESSIONAL ENGINEER — EDDIE K. SIEU — No. 44189 — CIVIL — STATE OF CALIFORNIA

IMPROVEMENT PLANS FOR 277 FAIRCHILD DRIVE WAVERLY
PLAN AND PROFILE
ARIANA PLACE STA 13+00 TO 21+00
CITY OF MOUNTAIN VIEW, SANTA CLARA COUNTY, CALIFORNIA
EXCAVATION PERMIT NO.: 2016-76
FOR: WARMINGTON FAIRCHILD ASSOCIATES, LLC.

SHEET REVISIONS	DATE	MK	BY	CK	CITY
REVISED WATER CONNECTION TO EX MAIN	8/21/18	1	JM		
REVISED SEWER CONNECTION	8/18/20	2	JM		

SCALE: NONE
DATE: 4-10-2018
DRAWN: JM
CHECKED: EJS
PROJ. ENGR.: DC

SHEET NO. C4.3 OF 53 SHEETS

JOB NO. 131078IP

PIN #8465-14

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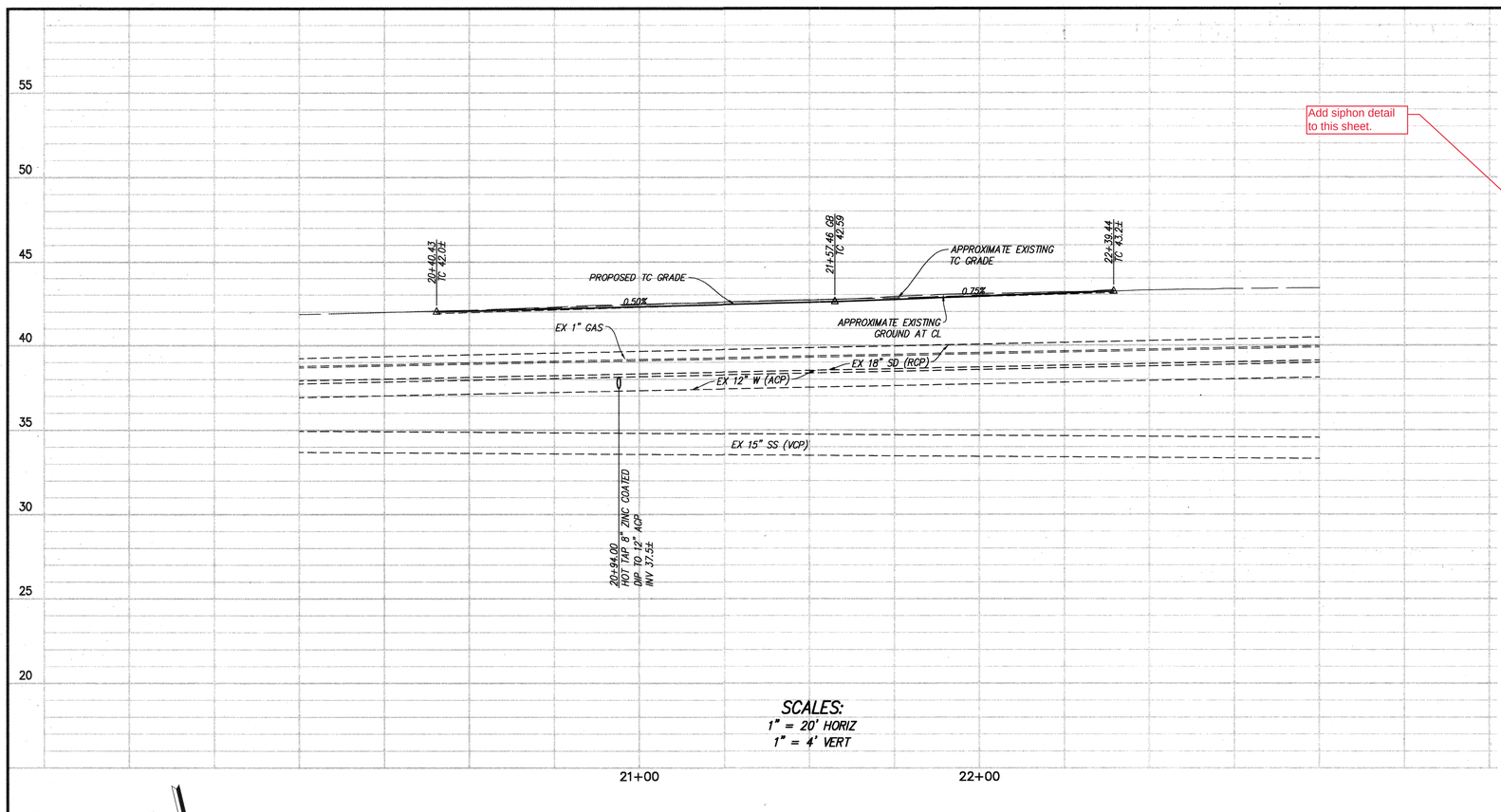

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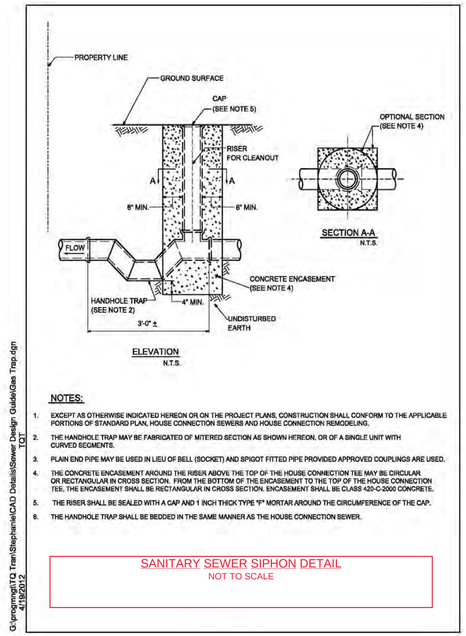

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4/19/2012

NOTES:

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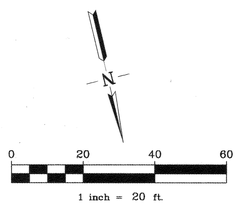
SANITARY SEWER SIPHON DETAIL
NOT TO SCALE



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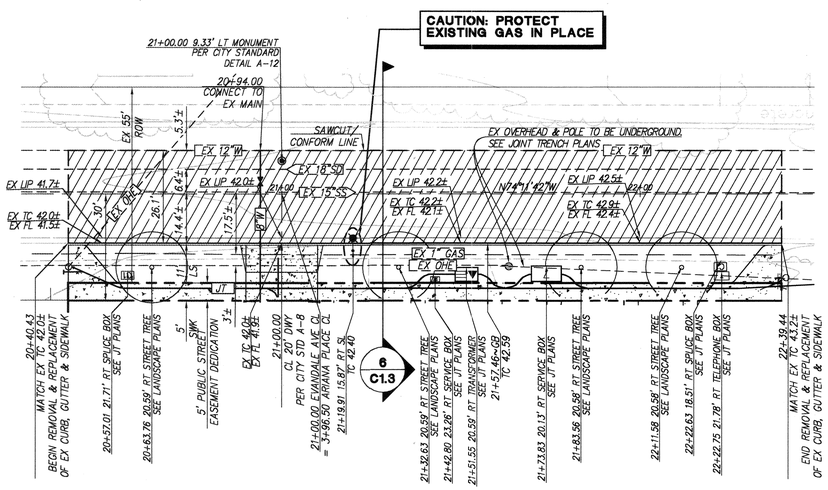
NOTES:

1. SEE SHEET C1.2–PROJECT NOTES FOR PIPE MATERIAL FOR PROPOSED PIPES.
2. SEE SHEET C2.1 FOR ABANDONMENT OF ALL EXISTING UTILITIES.
3. CONTRACTOR SHALL VERIFY THE MATERIAL AND SIZE OF THE EXISTING PIPES.
4. PROPOSED TRANSFORMERS AND VAULTS ARE TO BE INSTALLED BELOW GRADE.

LEGEND

PAVEMENT RESTORATION
(SEE DETAIL 10, SHEET C1.4)



EVANDALE AVENUE

AS–BUILT PLANS
PREPARED FROM ENGINEER'S AND CONTRACTOR'S RECORDS

EDDIE SIEU, RCE 44189 DATE
RUGGERI–JENSEN–AZAR

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PHONE (925) 227-9100 FAX (925) 227-9300

REGISTERED PROFESSIONAL ENGINEER
EDDIE K. SIEU
No. 44189
CIVIL
STATE OF CALIFORNIA

IMPROVEMENT PLANS FOR 277 FAIRCHILD DRIVE
WAVERLY
PLAN & PROFILE
EVANDALE AVENUE

CITY OF MOUNTAIN VIEW, SANTA CLARA COUNTY, CALIFORNIA
BUILDING PERMIT NO.: 2016-0145
EXCAVATION PERMIT NO.: 2016-72

FOR: WARMINGTON FAIRCHILD ASSOCIATES, LLC.

SCALE	BY	CK	CITY
NONE			
4-10-2018			
DRAWN JM			
CHECKED ES			
PROJ. MGR. DZ			

SHEET REVISIONS

DATE	MK

SHEET NO.
C4.4
OF 53 SHEETS

JOB NO.
131078IP

PIN #B465-15

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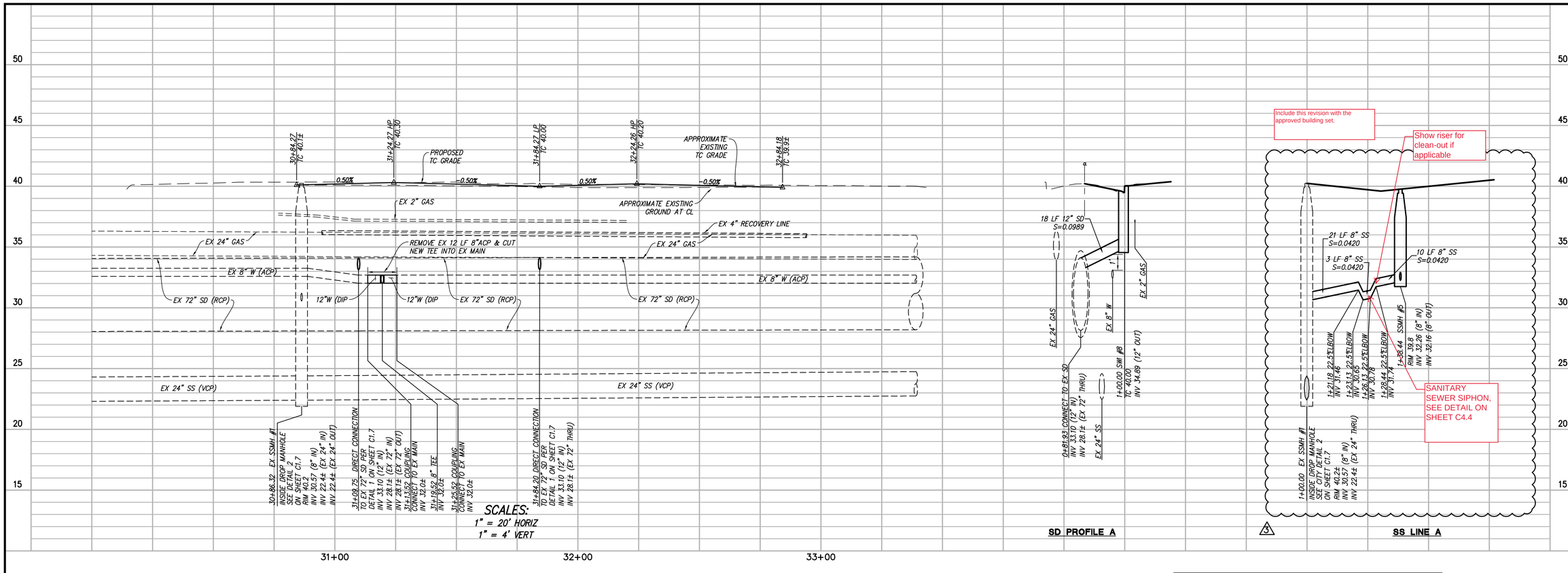

NOTES:
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UTILITY CROSSING TABLE

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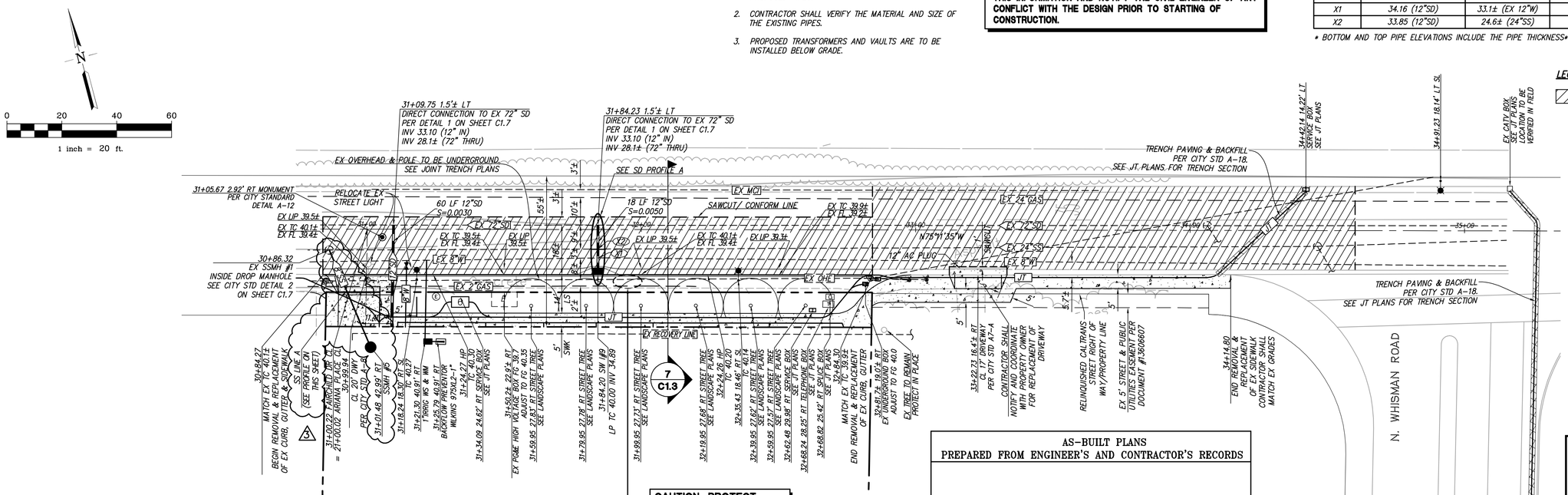
X1	34.16 (12"SD)	33.1± (EX 12"W)	1.0'±
X2	33.85 (12"SD)	24.6± (24"SS)	9.2'±

* BOTTOM AND TOP PIPE ELEVATIONS INCLUDE THE PIPE THICKNESS*



AS-BUILT PLANS
PREPARED FROM ENGINEER'S AND CONTRACTOR'S RECORDS

EDDIE SIEU, RCE 44189 DATE
RUGGERI-JENSEN-AZAR

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REGISTERED PROFESSIONAL ENGINEER EDDIE K. SIEU No. 44189 CIVIL STATE OF CALIFORNIA

IMPROVEMENT PLANS FOR 277 FAIRCHILD DRIVE
WAVERLY
PLAN & PROFILE
FAIRCHILD DRIVE
CITY OF MOUNTAIN VIEW, SANTA CLARA COUNTY, CALIFORNIA
FOR: WARMINGTON FAIRCHILD ASSOCIATES, LLC. EXCAVATION PERMIT NO.: 2016-76

SCALE	DATE	DRAWN	CHECKED	PROJ. MGR.
NONE	4-10-2018	JM	ES	JK

SHEET REVISIONS

DATE	MK	SHEET REVISIONS	BY	CK	CITY
8/21/18	1	REVISED WATER CONNECTION TO EX MAIN	JM		
8/18/20	2	REVISED SEWER CONNECTION	JM		

SHEET NO. C4.5 OF 53 SHEETS

JOB NO. 131078IP

PIN #8465-16

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