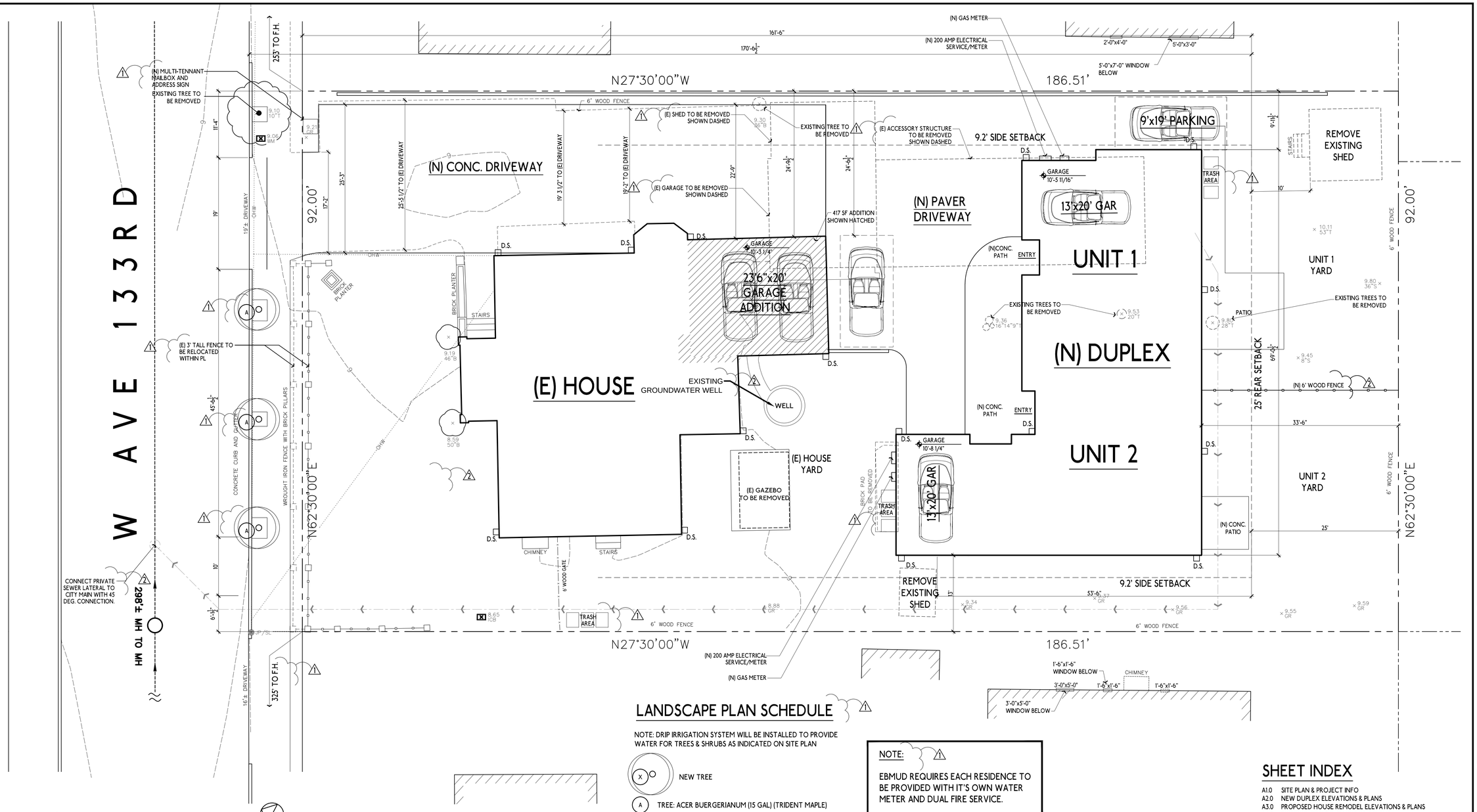


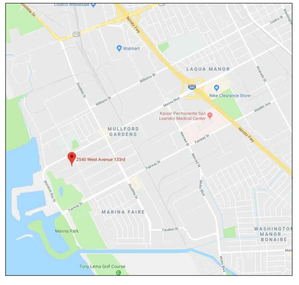
1 A1.0 SITE PLAN
1/8"=1'-0"
0 2' 4' 8' 16'
TRUE NORTH

NEW DUPLEX & EXISTING HOUSE REMODEL

2540 W Ave. 133RD
San Leandro, CA 94577

APN: 22-366-13-1

VICINITY MAP



LANDSCAPE PLAN SCHEDULE

NOTE: DRIP IRRIGATION SYSTEM WILL BE INSTALLED TO PROVIDE WATER FOR TREES & SHRUBS AS INDICATED ON SITE PLAN

X NEW TREE

A TREE: ACER BUERGERIANUM (15 GAL) (TRIDENT MAPLE)

GENERAL NOTES

1. REVIEW ALL DOCUMENTS AND VERIFY ALL DIMENSIONS AND FIELD CONDITIONS AND CONFIRM THAT ALL WORK IS BUILDABLE AS SHOWN. ANY CONFLICTS OR OMISSIONS SHALL BE IMMEDIATELY REPORTED TO THE DESIGNER OF RECORD FOR WRITTEN CLARIFICATION PRIOR TO PROCEEDING WITH ASSOCIATED WORK.
2. IN CASE OF CONFLICT BETWEEN ARCHITECTURAL AND ENGINEERING DOCUMENTS, THE ARCHITECTURAL DOCUMENTS SHALL GOVERN FOR LOCATIONAL PURPOSES. INFORM THE DESIGNER OF RECORD IN WRITING OF ALL DISCREPANCIES.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES STATUTES AND REGULATIONS HAVING JURISDICTION OVER THE BUILDING SITE.
4. SECURE AND CONTROL ACCESS TO THE SITE AND ALL AREAS OF CONSTRUCTION AND ENFORCE ALL REQUIRED RULES OF SAFETY.
5. THESE DOCUMENTS ARE COMPLIMENTARY. WHAT IS SHOWN OR REFERRED TO ON ANY DRAWING SHALL BE PROVIDED AS IF SHOWN ON ALL.
6. THOSE MATERIALS IN THESE DOCUMENTS WHICH ARE SPECIFIED BY BRAND NAME ARE TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE. ALL REQUESTS FOR SUBSTITUTION SHALL BE SUBMITTED FOR DESIGNER APPROVAL AND SUCH SUBMISSIONS SHALL NOT BE A CAUSE FOR DELAY OF THE PROJECT.
7. MAINTAIN A COMPLETE AND CURRENT SET OF ALL CONSTRUCTION DOCUMENTS, SUBMITTALS, AND CLARIFICATIONS ON THE JOBSITE AT ALL TIMES.
8. ALL DIMENSIONS ARE GIVEN TO FACE OF STUD UNLESS OTHERWISE NOTED. ELEVATION OF FLOOR DECK AND ROOF LEVELS ARE GIVEN TO FINISH FLOOR U.O.N. ALLOW 3/4" THICKNESS FOR FLOOR FINISH MATERIAL, TYPICAL.
9. ALL WORK SHOWN ON THE DRAWINGS IS NEW UNLESS OTHERWISE NOTED.

NOTE:

EBMUD REQUIRES EACH RESIDENCE TO BE PROVIDED WITH IT'S OWN WATER METER AND DUAL FIRE SERVICE.

CODE COMPLIANCE

2016 CALIFORNIA BUILDING CODE (CBC)
2016 CALIFORNIA RESIDENTIAL CODE (CRC)
2016 CALIFORNIA ENERGY CODE (CBEES)
2016 CA. GREEN BUILDING STANDARDS CODE (CALGreen)
2016 CALIFORNIA ELECTRICAL CODE (CEC)
2016 CALIFORNIA PLUMBING CODE (CPC)
2016 CALIFORNIA MECHANICAL CODE (CMC)
2016 CALIFORNIA FIRE CODE (CFC)

SYMBOL LEGEND

HEIGHT
SECTION — X / AX.X
DETAIL — X / AX.X
GRID LINE — X
DOOR — 001
WINDOW — A

PROJECT INFORMATION

ZONING: RO
LOT SIZE: 17,159 SF
CONSTRUCTION: TYPE 5 UNPROTECTED WOOD FRAME
BUILDING OCCUPANCY: EXISTING SINGLE FAMILY RESIDENCE R-3/ U-1, NEW DUPLEX R-3/U-1
SPRINKLER: YES (NEW DUPLEX) (DEFFERED SUBMITTAL)

EXISTING HOUSE: 2,838 SF
FOOTPRINT 1,776 SF

PROPOSED HOUSE: 2,785 SF + 470 SF GARAGE
FOOTPRINT 2,269 SF

NEW DUPLEX: 4,459 SF + 316 SF GARAGE
NEW DUPLEX ATTIC: X SF
FOOTPRINT 2,525 SF

TOTAL FOOTPRINT: 4,794 SF; LOT COVERAGE: 27.9%
TOTAL : PROPOSED HOUSE & DUPLEX 7,244 SF
+ 1,038 SF GARAGES
PROPOSED FAR: 8,282/17,159 = 48.3%

DESCRIPTION OF WORK

REMOVED EXISTING GARAGE/ACCESSORY BUILDING. REMODEL EXISTING HOUSE AND ADD 470 SF GARAGE. BUILD NEW 4,459 SF DUPLEX WITH ATTACHED 568 SF GARAGES. CONDOIZE DUPLEX THROUGH A SEPARATE SUBDIVISION/MAP PROCESS AS REQUIRED.

SHEET INDEX

NOTE: TOPO SURVEY

The applicant shall obtain an Encroachment Permit from the Engineering and Transportation Department for any work within the public right-of-way including the use of lifting equipment or the staging of materials. Barricades, traffic cones, and/or caution ribbon shall be positioned around any equipment or materials within the right-of-way to provide a barrier to public access and assure public safety. Any damage to the right-of-way improvements must be promptly repaired by the applicant according to City adopted standards.
The applicant shall comply with the following high standards for sanitation during construction of improvements: garbage cans, construction dumpsters, and debris piles shall be removed on a minimum weekly basis. All food related trash items such as wrappers, cans, bottles, and food scraps shall be disposed of in closed containers only and shall be regularly removed from the site. Inspections, conducted as part of the regular construction compliance, will be conducted to ensure compliance of the Applicant and contractors with this requirement.
The applicant shall implement construction best management practices during construction to control erosion, keep sediment from leaving the project site and prevent storm water pollution. The applicant shall protect existing storm drain inlets and conveyances within the project area to prevent sediment from construction activities entering the storm drain system.

EXHIBIT A

John Newton
Design & Development
5666 Telegraph Ave, Ste A
Oakland, CA 94609
(510) 526-7370

NEW DUPLEX & EXISTING HOUSE REMODEL

PROJECT ADDRESS:
2540 W Ave. 133RD
San Leandro, CA 94577
APN: 79A-586-15-1

OWNER:
Ly My Bui and
Kenneth Tat Ngai
2540 W Ave. 133rd
San Leandro, CA 94577

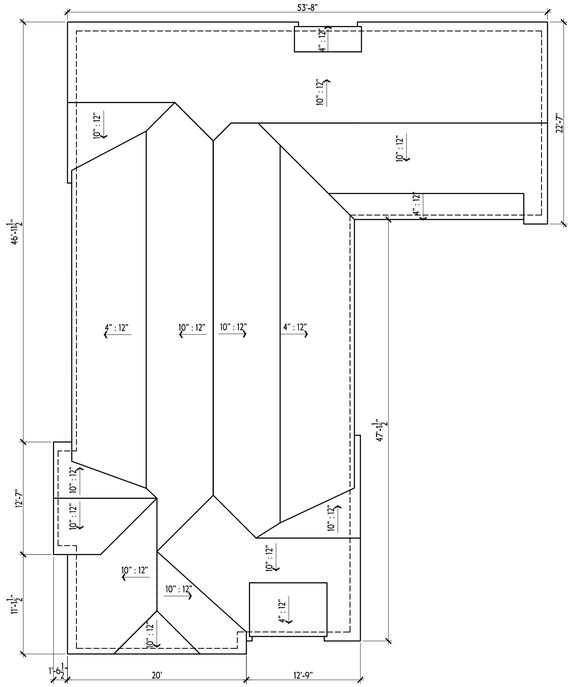
SITE PLAN & PROJECT INFO

REVISION

No.	Description	Date
1	DESIGN REV	3/5/19
2	DESIGN REV	4/25/19

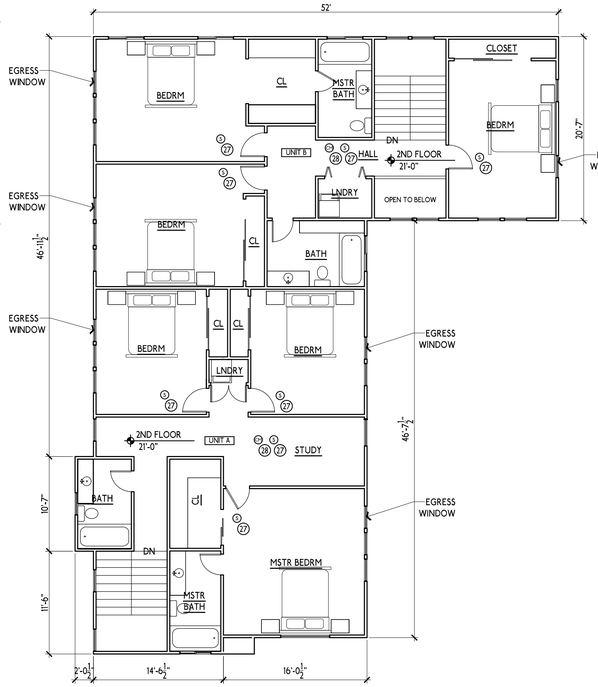
PROJECT No. :	
DRAWN BY:	JMN
CHECKED BY:	JMN
DATE:	4/25/19

A1.0



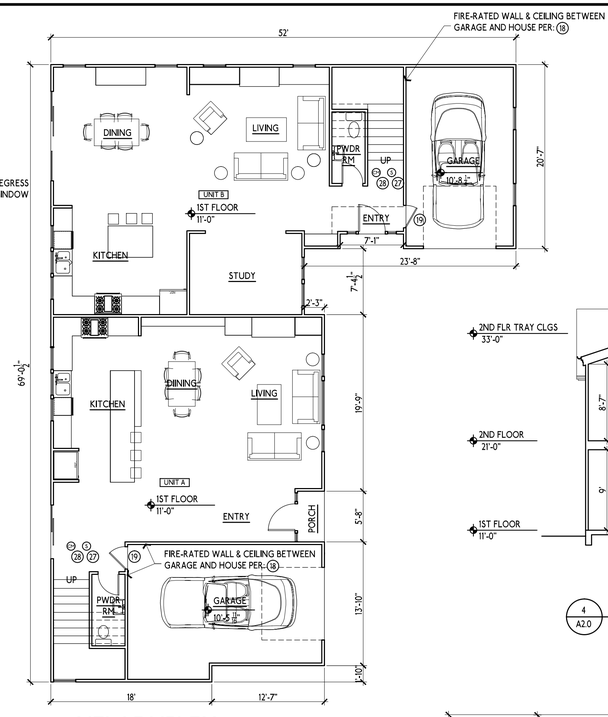
NEW DUPLEX
ROOF PLAN

7 A2.0 1/8"=1'-0" 0 2' 4' 8' 16'



NEW DUPLEX
2ND FLOOR PLAN

6 A2.0 1/8"=1'-0" 2nd FLOOR: 2,544 SF 0 2' 4' 8' 16'



NEW DUPLEX
1ST FLOOR PLAN

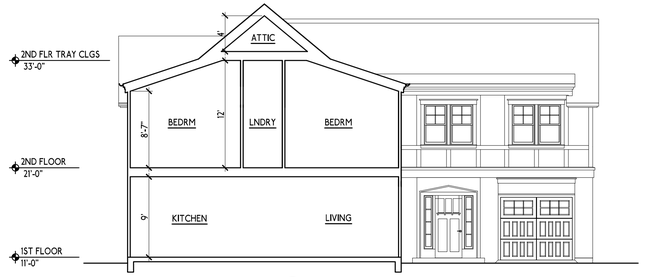
5 A2.0 1/8"=1'-0" 1st FLOOR: 1,915 SF
GARAGES: 568 SF
TOTAL: 4,459 SF + 568 SF GARAGES
0 2' 4' 8' 16'

18 **1-HR WALL BETWEEN GARAGE & HOUSE:** 5/8" type x gyp. bd garage side; 2x4 wd studs @ 16" o.c. w/ R-13 batt insulation; 1/2" gyp bd @ house side; 1-hr clg between garage & house: 2 layers ⅝" type X gyp. bd. garage side (fasten per CBC Table 7-C item 21.1.1)

19 **DOOR TO GARAGE:** door between garage & house to be self-closing; tight-fitting solid wood door 1-3/8" thick or approved 20 min. fire-rated door

27 **SMOKE DETECTORS:** (see CRC R314 for full req't's) smoke detectors installed at the following locations: 1. each sleeping room 2. outside each sleeping area in the immediate vicinity 3. at least one every story. all smoke detectors are to be interconnected per 2016 CRG R314.5 (activation of one alarm will activate all other alarms in the individual unit & alarm will be clearly audible in all bedrooms over background noise levels with all intervening doors closed)

28 **CARBON MONOXIDE ALARMS:** (Sec:R315) new interconnected 110v carbon monoxide alarm (with battery backup) installed outside each area adjacent to a sleeping area; each story of the building; and in any basement



NEW DUPLEX
SECTION

4 A2.0 1/8"=1'-0" 0 2' 4' 8' 16'

NEW DUPLEX
RIGHT (WEST) ELEVATION

4 A2.0 1/8"=1'-0" 0 2' 4' 8' 16'

STC-50/1-HR UNIT SEPARATION

2 A3.2 NTS

TYPICAL MATERIALS: 1

ROOF: CLASS "A" ASPHALT SHINGLE ROOF

SIDING: STUCCO, TYP.

BELLY BAND & TRIM:ADVANTAGE PINE WOOD TRIM

WINDOWS: DUAL-PANE ALUMINUM-CLAD WOOD WITH PAINTED WOOD TRIM, TYP.

DOORS: DUAL-PANE ALUMINUM-CLAD WOOD WITH PAINTED WOOD TRIM, TYP. SOLID WOOD ENTRY DOOR

NEW DUPLEX
REAR (SOUTH) ELEVATION

3 A2.0 1/8"=1'-0" 0 2' 4' 8' 16'

NEW DUPLEX
LEFT(EAST) ELEVATION

2 A2.0 1/8"=1'-0" 0 2' 4' 8' 16'

NEW DUPLEX
FRONT (NORTH) ELEVATION

1 A2.0 1/8"=1'-0" 0 2' 4' 8' 16'

EXHIBIT B

John Newton
Design & Development
5666 Telegraph Ave, Ste A
Oakland, CA 94609
(510) 526-7370

NEW DUPLEX & EXISTING HOUSE REMODEL

PROJECT ADDRESS:
2540 W Ave. 133RD
San Leandro, CA 94577
APN: 79A-586-15-1

OWNER:
Ly My Bui and
Kenneth Tat Ngai
2540 W Ave. 133rd
San Leandro, CA 94577

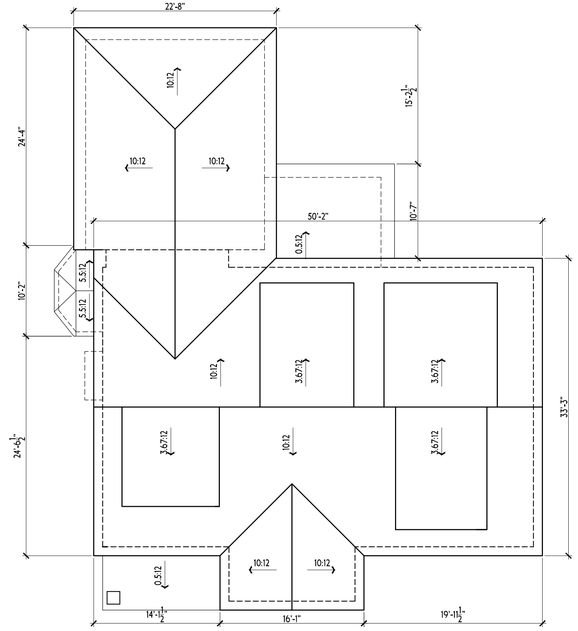
NEW DUPLEX FLOOR PLANS, ELEVATIONS, ROOF PLAN, & SECTION

REVISION

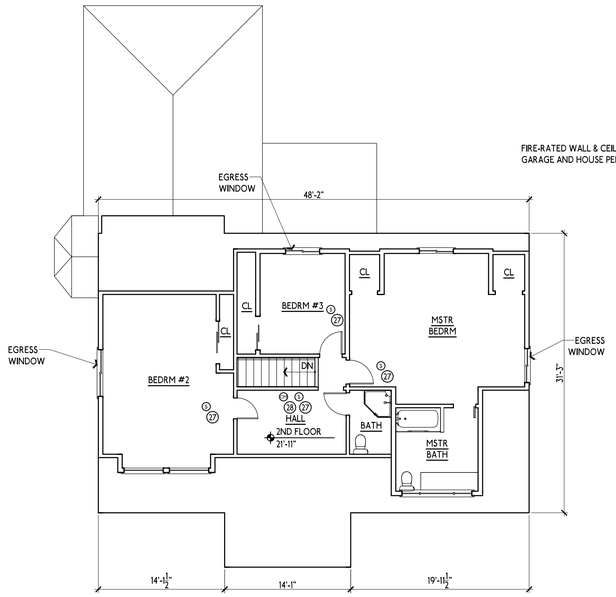
No.	Description	Date
1	DESIGN REV	3/5/19
2	DESIGN REV	4/25/19

PROJECT No. :
DRAWN BY: JMN
CHECKED BY: JMN
DATE: 4/25/19

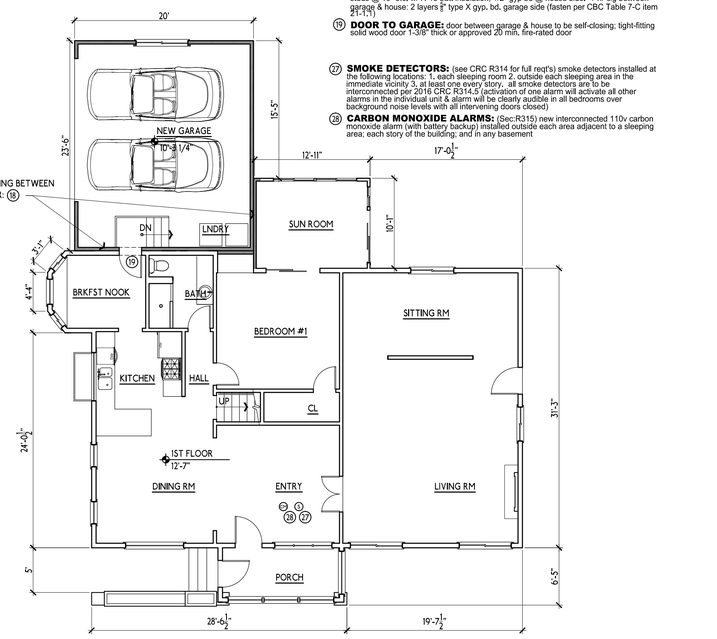
A2.0



7 A3.0 **PROPOSED ROOF PLAN**
1/8"=1'-0"



6 A3.0 **PROPOSED 2nd FLOOR PLAN**
1/8"=1'-0" 2nd FLOOR: 1,073 SF



5 A3.0 **PROPOSED 1st FLOOR PLAN**
1/8"=1'-0" 1ST FLOOR: 1,712 SF
GARAGE: 470 SF
TOTAL: 3311 SF

EXISTING WALL TO REMAIN
NEW WALL

18 1-HR WALL BETWEEN GARAGE & HOUSE: 5/8" type x gyp. bd garage side; 2x4 wd studs @ 16" o.c. w/ R-13 batt insulation; 1/2" gyp bd @ house side. 1-hr clg between garage & house: 2 layers ⅝" type X gyp. bd. garage side (fasten per CBC Table 7-C item 21-1.11)

19 DOOR TO GARAGE: door between garage & house to be self-closing; tight-fitting solid wood door 1-3/8" thick or approved 20 min. fire-rated door

27 SMOKE DETECTORS: (see CRC R314 for full reqt's) smoke detectors installed at the following locations: 1. each sleeping room 2. outside each sleeping area in the immediate vicinity 3. at least one every story. all smoke detectors are to be interconnected per 2016 CRC R314.5 (activation of one alarm will activate all other alarms in the individual unit & alarm will be clearly audible in all bedrooms over background noise levels with all intervening doors closed)

28 CARBON MONOXIDE ALARMS: (Sec:R315) new interconnected 110v carbon monoxide alarm (with battery backup) installed outside each area adjacent to a sleeping area; each story of the building; and in any basement

TYPICAL MATERIALS: 1

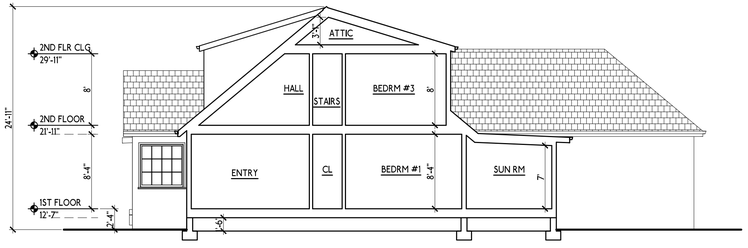
ROOF: CLASS "A" ASPHALT SHINGLE ROOF

SIDING: STUCCO, TYP.

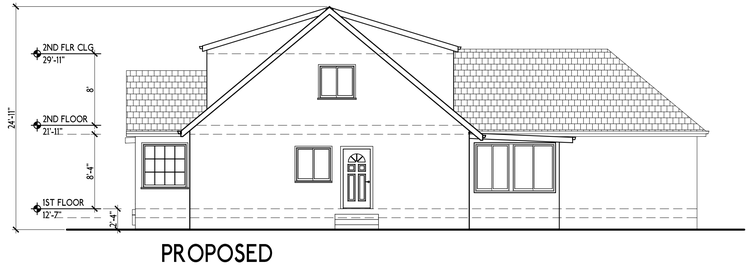
TRIM: ADVANTAGE PINE WOOD TRIM

WINDOWS: DUAL-PANE ALUMINUM-CLAD WOOD WITH PAINTED WOOD TRIM, TYP.

DOORS: DUAL-PANE ALUMINUM-CLAD WOOD WITH PAINTED WOOD TRIM, TYP. SOLID WOOD ENTRY DOOR



4 A3.0 **PROPOSED SECTION** 1
1/8"=1'-0"



PROPOSED RIGHT (WEST) ELEVATION
4 A3.0 1/8"=1'-0"

PROPOSED REAR (SOUTH) ELEVATION
3 A3.0 1/8"=1'-0"

PROPOSED LEFT (EAST) ELEVATION
2 A3.0 1/8"=1'-0"

PROPOSED FRONT (NORTH) ELEVATION
1 A3.0 1/8"=1'-0"

EXHIBIT C

John Newton
Design & Development
5666 Telegraph Ave, Ste A
Oakland, CA 94609
(510) 526-7370

NEW DUPLEX & EXISTING HOUSE REMODEL

PROJECT ADDRESS:
2540 W Ave. 133RD
San Leandro, CA 94577
APN: 79A-586-15-1

OWNER:
Ly My Bui and
Kenneth Tat Ngai
2540 W Ave. 133rd
San Leandro, CA 94577

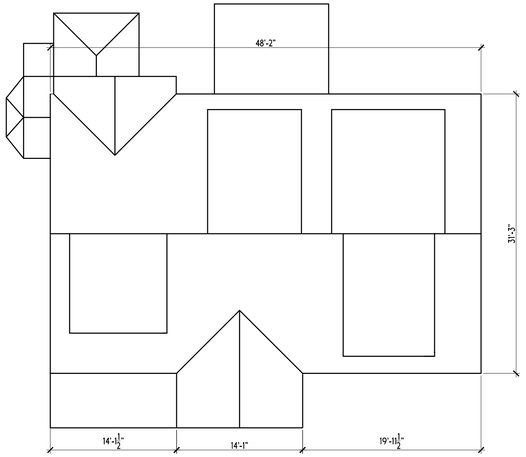
PROPOSED HOUSE REMODEL ELEVATIONS & PLANS

REVISION

No.	Description	Date
1	DESIGN REV	3/5/19
2	DESIGN REV	4/25/19

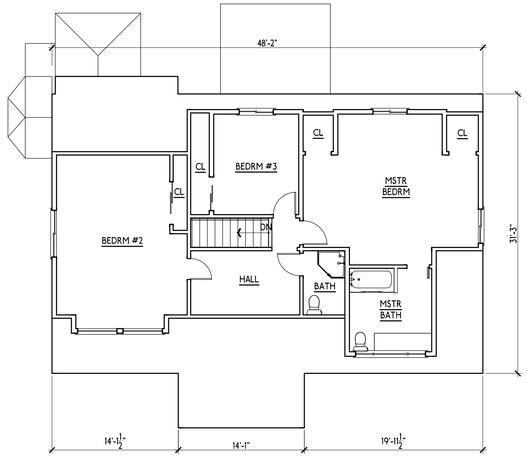
PROJECT No. :	
DRAWN BY:	*JMN*
CHECKED BY:	*JMN*
DATE:	*4/25/19*

A3.0



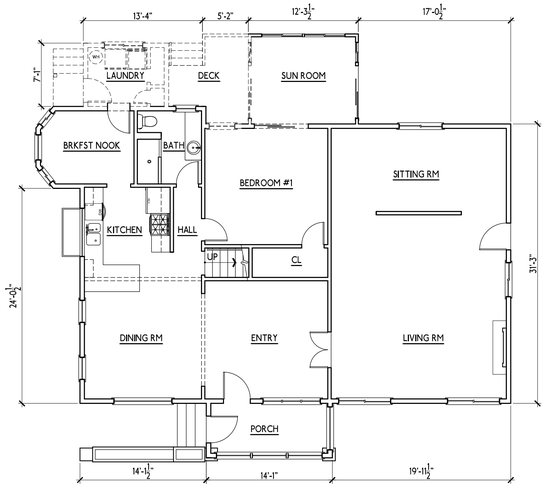
EXISTING/DEMO
ROOF PLAN

3 A4.0 1/8"=1'-0"



EXISTING/DEMO
2nd FLOOR PLAN

2 A4.0 1/8"=1'-0" 2ND FLOOR: 1,073 SF



EXISTING/DEMO
1st FLOOR PLAN

1 A4.0 1/8"=1'-0" 1ST FLOOR: 1,765 SF
TOTAL: 2,838 SF

WALL TO BE REMOVED
EXISTING WALL TO REMAIN

EXISTING/DEMO
RIGHT (WEST) ELEVATION

4 A3.0 1/8"=1'-0"

EXISTING/DEMO
REAR (SOUTH) ELEVATION

3 A3.0 1/8"=1'-0"

EXISTING/DEMO
LEFT (EAST) ELEVATION

2 A3.0 1/8"=1'-0"

EXISTING/DEMO
FRONT (NORTH) ELEVATION

1 A3.0 1/8"=1'-0"

EXHIBIT D

John Newton
Design & Development

5666 Telegraph Ave, Ste A
Oakland, CA 94609
(510) 526-7370

NEW DUPLEX & EXISTING HOUSE REMODEL

PROJECT ADDRESS:
2540 W Ave. 133RD
San Leandro, CA 94577
APN: 79A-586-15-1

OWNER:
Ly My Bui and
Kenneth Tat Ngai
2540 W Ave. 133rd
San Leandro, CA 94577

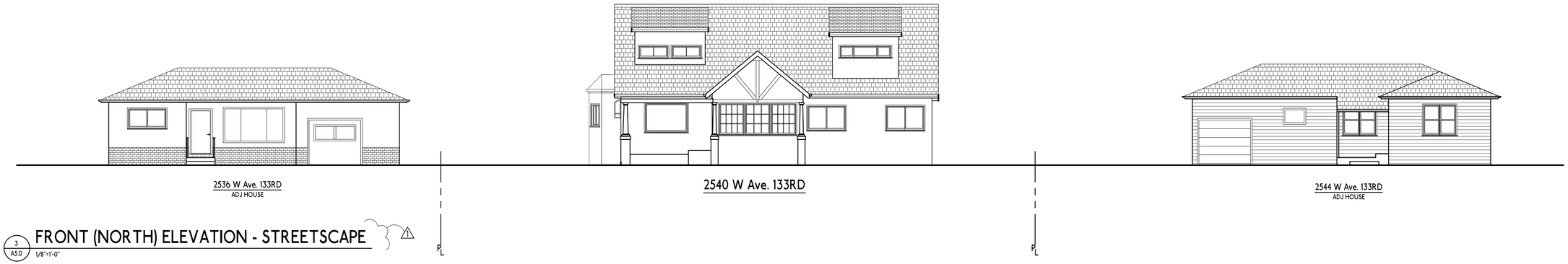
EXISTING/ DEMO ELEVATIONS & PLANS

REVISION

No.	Description	Date
1	DESIGN REV	3/5/19
2	DESIGN REV	4/25/19

PROJECT No. :	
DRAWN BY:	*JMN*
CHECKED BY:	*JMN*
DATE:	*4/25/19*

A4.0



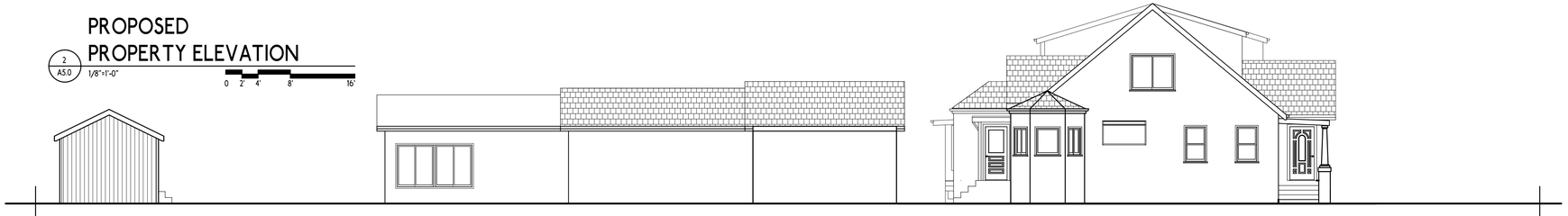
3 A5.0 FRONT (NORTH) ELEVATION - STREETSCAPE

1/8"=1'-0"

2 A5.0 PROPOSED PROPERTY ELEVATION

1/8"=1'-0"

0 2' 4' 8' 16'



1 A5.0 EXISTING/DEMO PROPERTY ELEVATION

1/8"=1'-0"

0 2' 4' 8' 16'

EXHIBIT E

John Newton
Design & Development
5666 Telegraph Ave, Ste A
Oakland, CA 94609
(510) 526-7370

NEW DUPLEX & EXISTING HOUSE REMODEL

PROJECT ADDRESS:
2540 W Ave. 133RD
San Leandro, CA 94577
APN: 79A-586-15-1

OWNER:
Ly My Bui and
Kenneth Tat Ngai
2540 W Ave. 133rd
San Leandro, CA 94577

EXISTING/DEMO, PROPOSED ELEVATION & STREETSCAPE

REVISION

No.	Description	Date
1	DESIGN REV	3/5/19
2	DESIGN REV	4/25/19

PROJECT No. :	
DRAWN BY:	*JMN*
CHECKED BY:	*JMN*
DATE:	*4/25/19*

A5.0

4 A2.0 RIGHT (WEST) ELEVATION

1/8"=1'-0"

0 2' 4' 8' 16'

1 A2.0 FRONT (NORTH) ELEVATION

1/8"=1'-0"

0 2' 4' 8' 16'

3 A2.0 REAR (SOUTH) ELEVATION

1/8"=1'-0"

0 2' 4' 8' 16'

2 A2.0 LEFT(EAST) ELEVATION

1/8"=1'-0"

0 2' 4' 8' 16'

DUPLEX

4 A3.0 RIGHT (WEST) ELEVATION

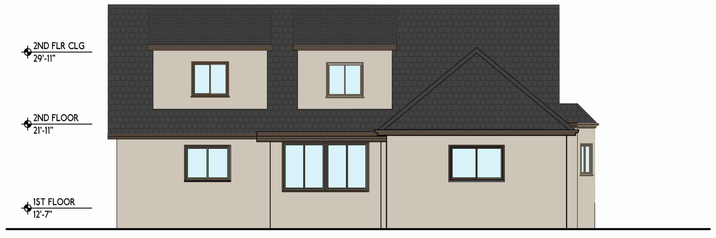
1/8"=1'-0"

0 2' 4' 8' 16'

1 A3.0 FRONT (NORTH) ELEVATION

1/8"=1'-0"

0 2' 4' 8' 16'



3 A3.0 REAR (SOUTH) ELEVATION

1/8"=1'-0"

0 2' 4' 8' 16'

2 A3.0 LEFT (EAST) ELEVATION

1/8"=1'-0"

0 2' 4' 8' 16'

PROPOSED RESIDENCE

EXHIBIT F

John Newton
Design & Development
5666 Telegraph Ave, Ste A
Oakland, CA 94609
(510) 526-7370

NEW DUPLEX & EXISTING HOUSE REMODEL

PROJECT ADDRESS:
2540 W Ave. 133RD
San Leandro, CA 94577
APN: 79A-586-15-1

OWNER:
Ly My Bui and
Kenneth Tat Ngai
2540 W Ave. 133rd
San Leandro, CA 94577

COLOR ELEVATIONS

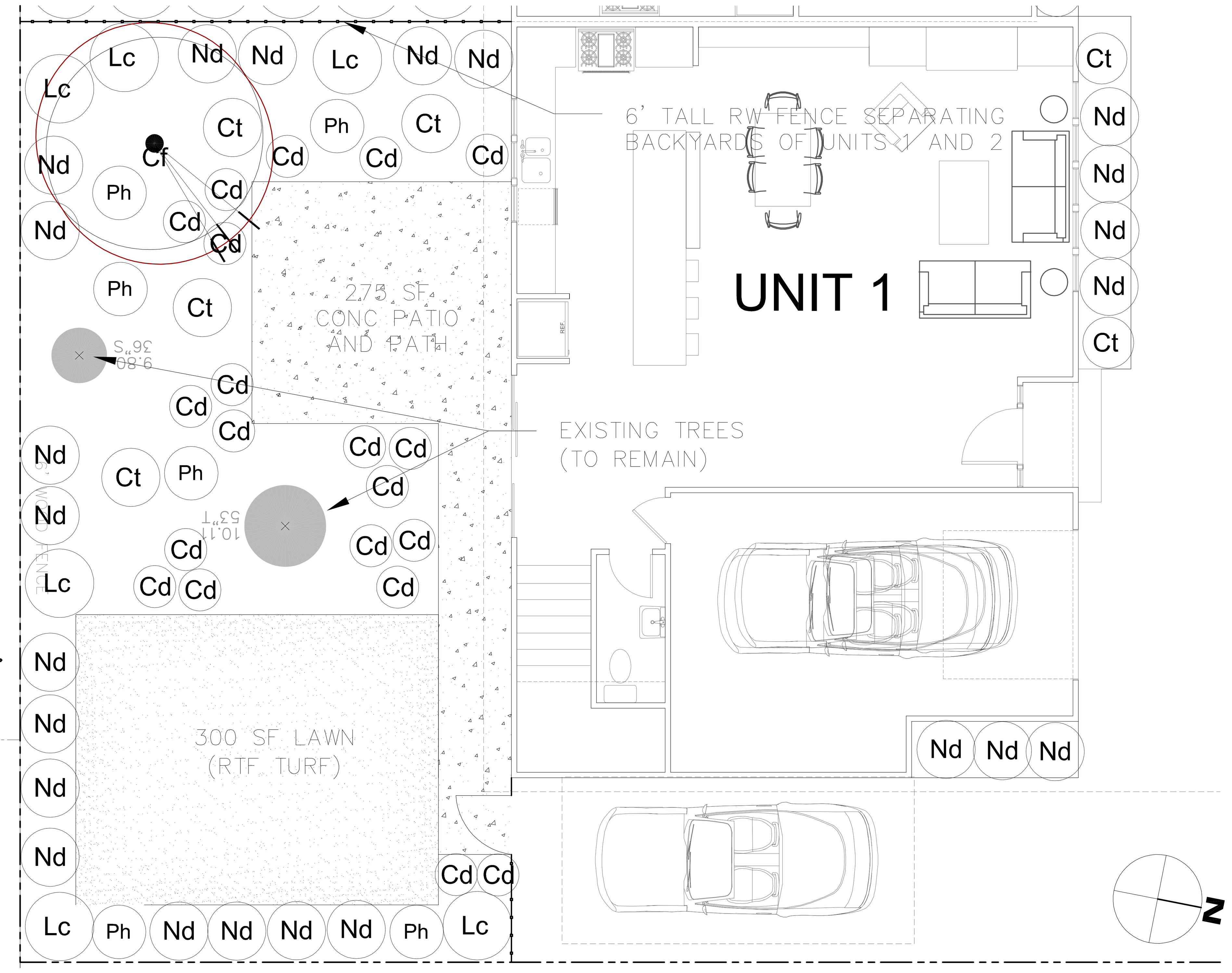
REVISION

No.	Description	Date
1	DESIGN REV	3/5/19
2	DESIGN REV	4/25/19

PROJECT No. :
DRAWN BY: JMN
CHECKED BY: JMN
DATE: 4/25/19

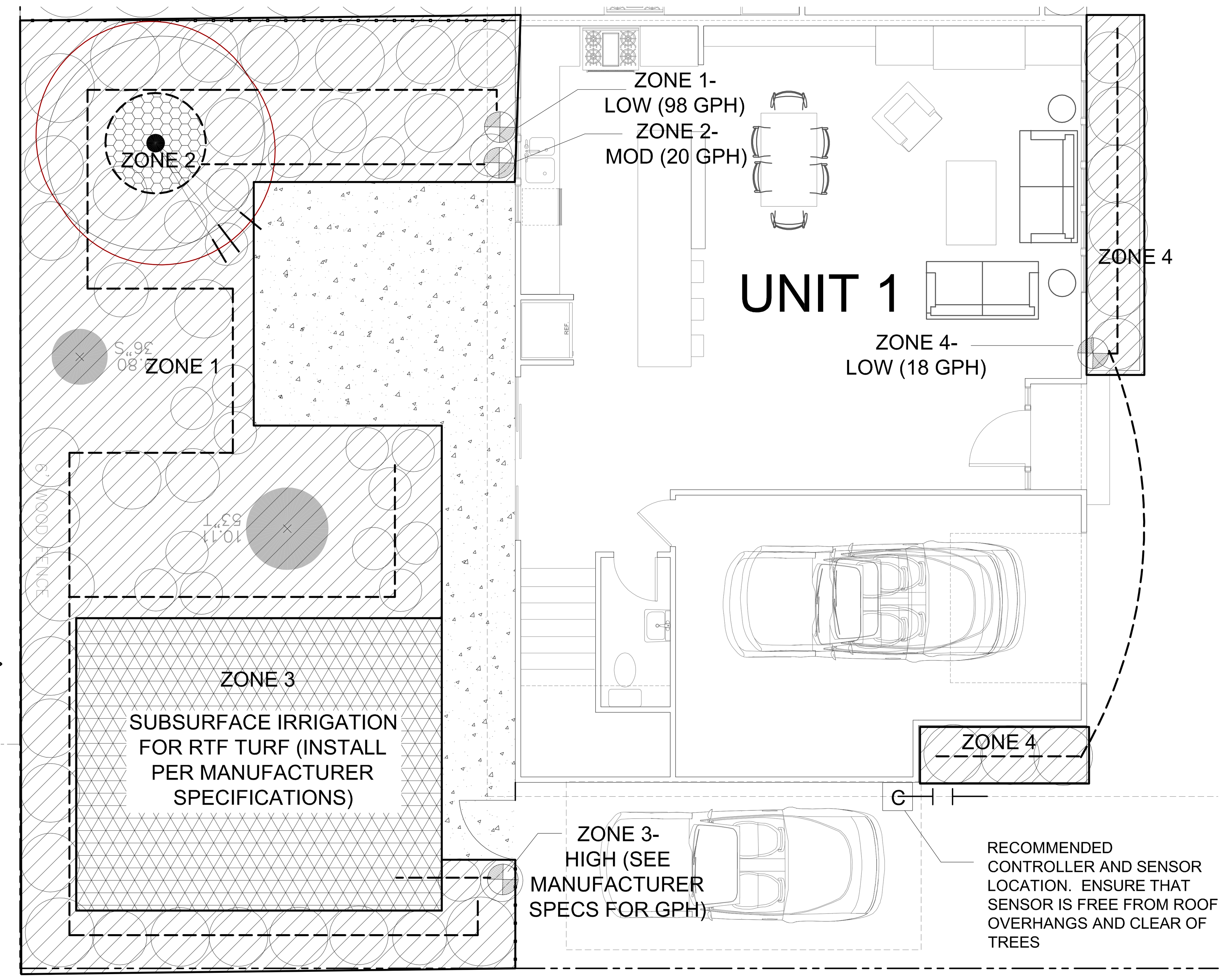
A6.0

EXHIBIT G



UNIT 1 PLANTING PLAN

SCALE 3/16"=1'-0"



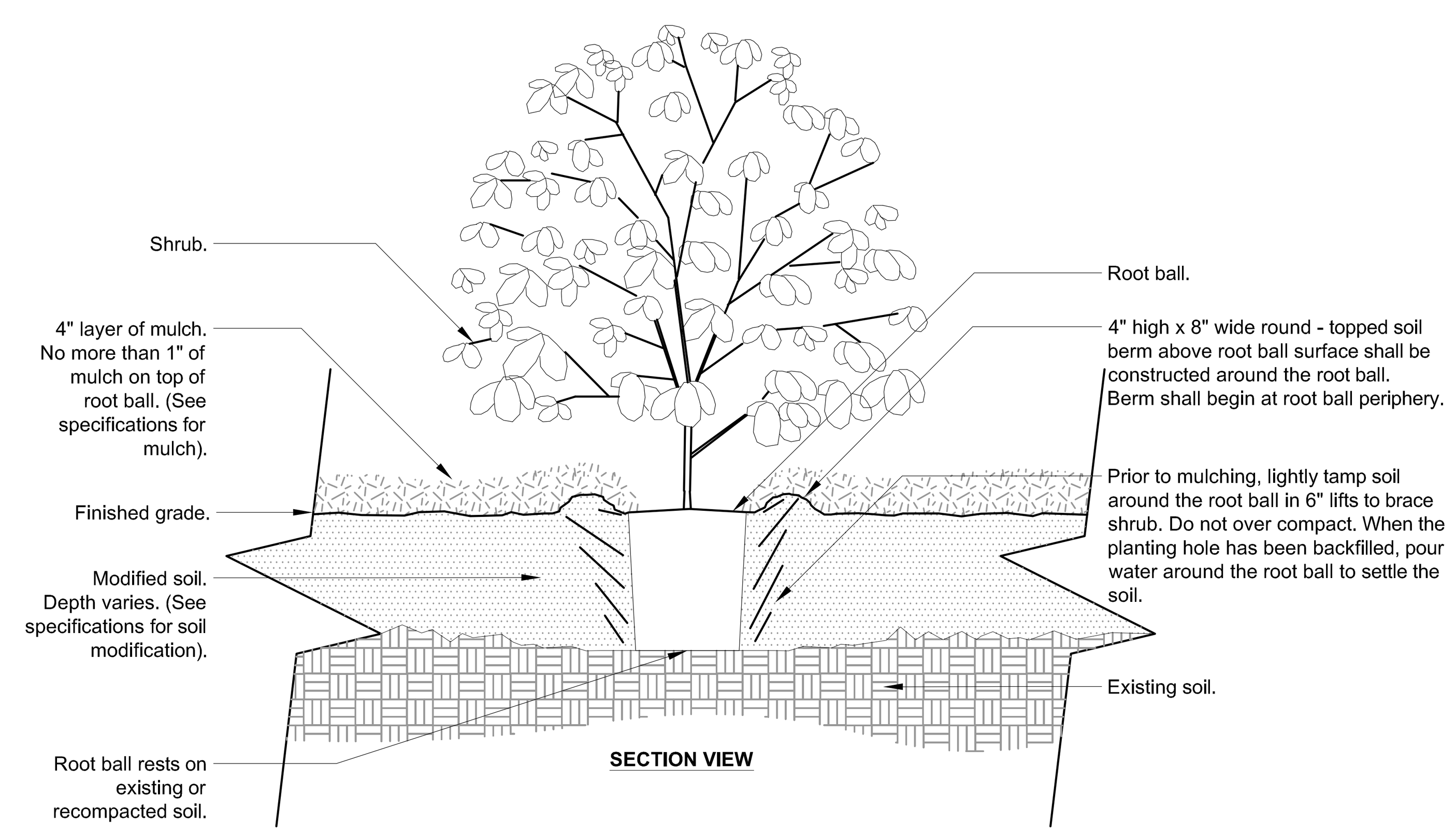
"I have complied with the criteria of the ordinance and applied them for the efficient use of water in the irrigation design"

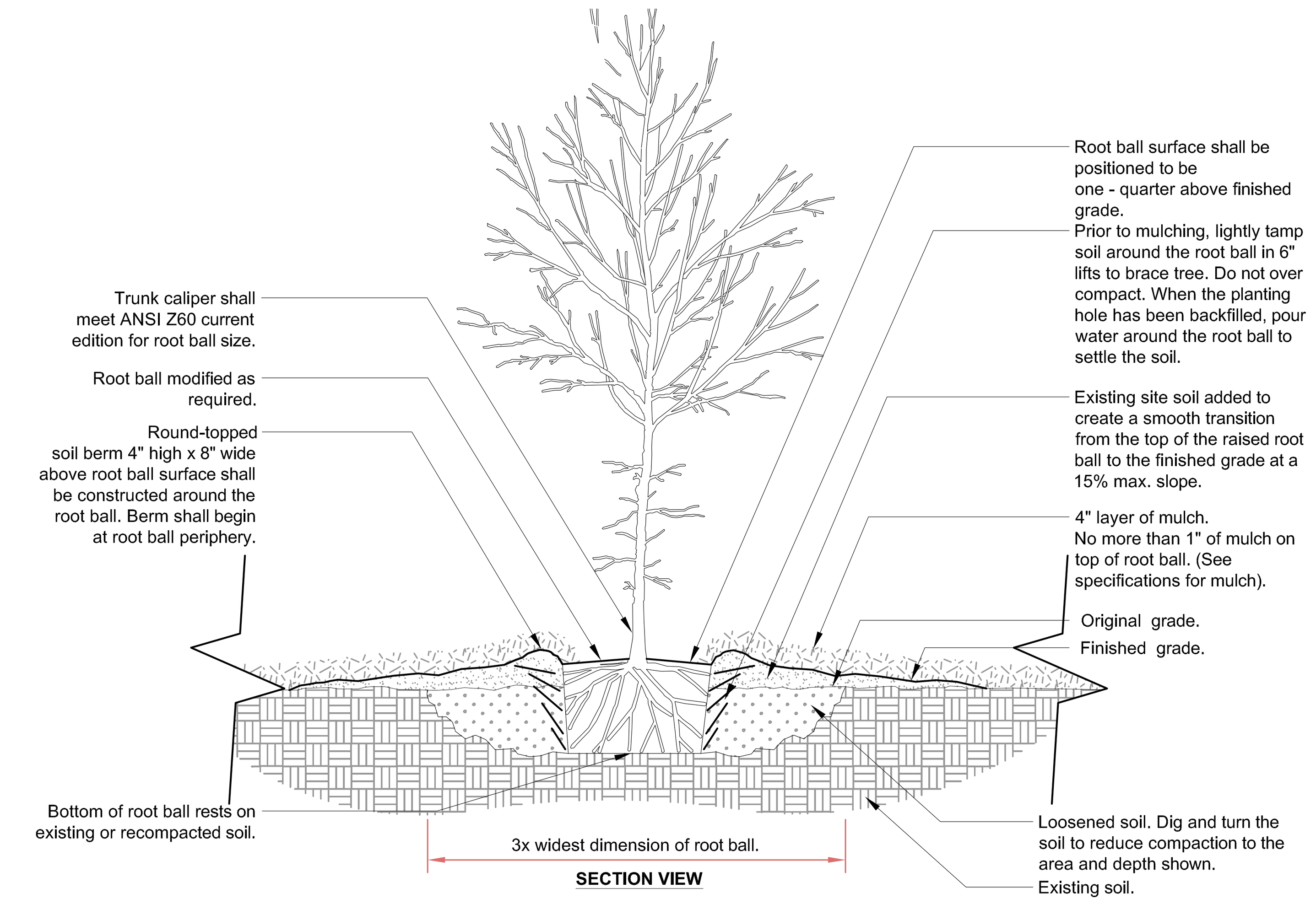
UNIT 1 IRRIGATION PLAN

SCALE 3/16"=1'-0"

2540 W AVE 133RD UNIT 1 PLANT LIST

Symbol	Botanical name	Size	Quantity	WELO
Cd	Carex divulsa	1 gal	19	LOW
Ct	Chondrapetalum tectorum	5 gal	6	LOW
Lc	Loropetalum chinensis 'Rubrum'	5 gal	6	LOW
Nd	Nandina domestica	5 gal	23	LOW
Ph	Phormium tenax 'Rainbow Maiden'	5 gal	6	LOW
TREES				
Cf	Cornus florida 'Cherokee Brave'	15 gal	1	MOD
TURF				
	Rhizomatous Tall Fescue	sod	300sf	MOD/HIGH





TREE PLANTING DETAIL

1/2" = 1'-0"

Soil and Planting Notes:

1. A minimum of 8" of non-mechanicall compacted soil shall be available for water absorption and root growth in planting areas.
2. Incorporate compost or natural fertilizer into teh soil to a minimum depth of 8" at a minimum rate of 6 cubic yards per 1000 square feet or per specific amendment recommendations from a soils laboratory report.
3. A minimum 3" layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers or direct seeding applications.

"I have complied with the criteria of the ordinance and applied them for the efficient use of water in the planting design"

Irrigation Legend

- C — RAINBIRD SMART IRRIGATION CONTROLLER- SEE SPECS ON THIS SHEET
- NEW VALVE LOCATION
- POINT OF CONNECTION (ESTIMATED LOCATION)
- MAIN LINE
- 5/8" POLY IRRIGATION LINE FROM VALVE. USE (1) RAINBIRD XB20PC 1.0 GPH XERI-BUG EMITTER AT BASE OF EACH PLANT FOR LOW WATER USE PLANTS AND 2.0 GPH XERI-BUG EMITTER AT BASE OF EACH PLANT FOR MODERATE USE PLANTS. TREES TO HAVE RING OF NETAFIM IN LINE EMITTERS (12" SPACING) 16" AWAY FROM TRUNK.

Project Notes:

Total landscaped area: 1165 sf
-100% of landscaped area on drip irrigation (no spray heads)
-Low and moderate water use plants on separate valves
-Trees on separate valves
-Use Rhizomatuous Tall Fescue (RTF) turf for lawn areas with subsurface irrigation
-Dedicated irrigation meter not required because landscaped area is less than 5000 sf
-Certificate of completion: applicant shall submit a landscape audit report verifying installation and irrigation efficiency per design on a form provided by the East Bay Municipal Utility District

Hydrozone Legend

- LOW WATER USE HYDROZONE
- MODERATE WATER USE HYDROZONE
- HIGH WATER USE HYDROZONE

WELO - NOTES:

1. Backflow preventer and shut-off valves are located upstream of the mainline.

2. Calculations for the Maximum Allowable Water Allotment (WELO Appendix A)

3. Control system has the ability to run multiple operating cycles, and implement global increase or decrease by percentage to match plant water requirements, environmental conditions, and the soil's infiltration rate.

4. Hydrozones are seperated by plant type, solar exposure, soil type, and microclimate. Flow rate, application rate, and design pressures are shown for each hydrozone.

5. No overhead spray irrigation is used on this project.

6. Drip irrigation has integrated check valves and pressure regulation, and will provide even coverage throughout planted areas.

7. Station operation times shall not exceed the soil's infiltration rate.

8. Upon completion of the installation the contractor shall submit to the building department a completed and signed "Certificate of Completion" stating that the project has been installed as designed.

9. The Certificate of Completion shall be accompanied by an irrigation audit, irrigation schedule, and maintenance schedule as described in the City Ordinance.

10. A final City inspection shall be performed. The installation contractor shall attend this inspection, and make all required repairs and adjustments to achieve approval and completion from the City.

Maximum Applied Water Allowance Calculations for New and Rehabilitated Residential Landscapes
Enter value in Pale Blue Cells
Tan Cells Show Results
Messages and Warnings

Click on the blue cell on right to Pick City Na	**Oakland**	**Name of City**
ET_o of City from Appendix A	**41.80**	**ET_o (inches/year)**
	0	Overhead Landscape Area (ft^2)
	1165	Drip Landscape Area (ft^2)
	0	SLA (ft^2)
Total Landscape Area	**1,165.00**	
Results:		
(ET_o) x (0.62) x [(0.55 xLA) + (1.0 - 0.55) X S	-	Gallons
	-	Cubic Feet
	-	HCF
	-	Acre-feet
	-	Millions of Gallons
MAWA calculation incorporating Effective Precipitation (Optional)		
Precipitation (Optional)		
ET_o of City from Appendix A	**41.80**	ET_o (inches/year)
Total Landscape Area	**1,165.00**	LA (ft^2)
Special Landscape Area	**0.00**	SLA (ft^2)
	24	Total annual precipitiation (inches/year)
Enter Effective Precipitation	**6.00**	Eppt (in/yr)(25% of total annual precipitation)
Results:		
MAWA = [(ET_o - Eppt) x (0.62)] x [(0.55 x LA) + (	**14,224.65**	Gallons
	1,901.57	Cubic Feet
	19.02	HCF
	0.04	Acre-feet
	0.01	Millions of Gallons

Estimated Total Water Use
Enter values in Pale Blue Cells
Tan Cells Show Results
Messages and Warnings

Irrigation Efficiency Default Value for overhead 0.75 and drip 0.81.

Plant Water Use Type	Plant Factor
Very Low	0 - 0.1
Low	0.2 - 0.3
Medium	0.4 - 0.6
High	0.7 - 1.0
SLA	1

Hydrozone	Select System From the Dropdown List click on cell below	Plant Water Use Type (s) (low, medium, high)	Plant Factor (PF)	Hydrozone Area (HA) (ft^2) Without SLA	Irrigation Efficiency (IE)	(PF x HA (ft^2))/IE
Zone 1	Drip	Low	0.20	760	0.81	**188**
Zone 2	Drip	Medium	0.50	25	0.81	**15**
Zone 3	Drip	Low	0.20	300	0.81	**74**
Zone 4	Drip	High	0.90	80	0.81	**89**
						366
		SLA		0		**0**
			Sum	1,165		

Results

MAWA = 14,225	ETWU=	8,126	Gallons
		1,086	Cubic Feet
		11	HCF
		0	Acre-feet
		0	Millions of Gallons

ETWU complies with MAWA

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landscape architecture | arboriculture | sculpture

LICENSED LANDSCAPE ARCHITECT DAVID FOWLER LA6126 STATE OF CALIFORNIA — Signature 12/2018 — Renewal Date 091118 — Date

APN: 22-366-13-1

2540 W AVE 133RD
SAN LEANDRO, CA 94577

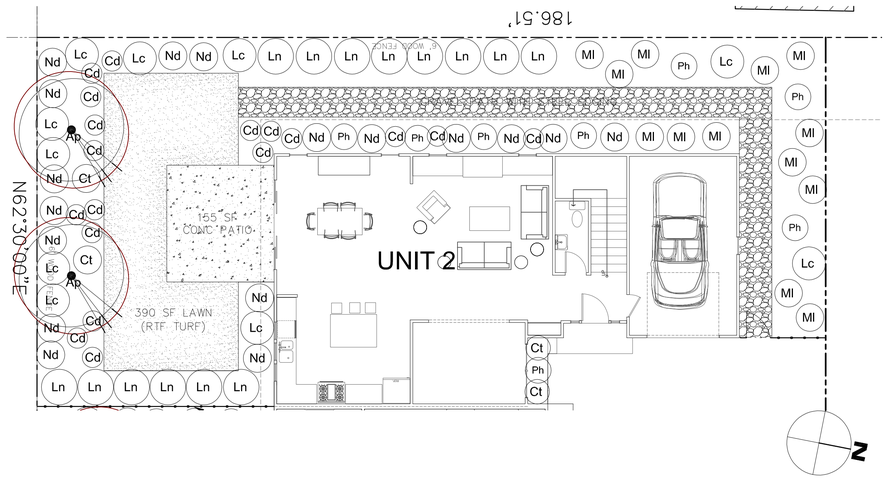
DUPLEX UNIT 1 PLANTING AND IRRIGATION PLAN

REVISIONS:	
DATE	DESCRIPTION

SCALE
3/16"=1'-0"

DATE
091118

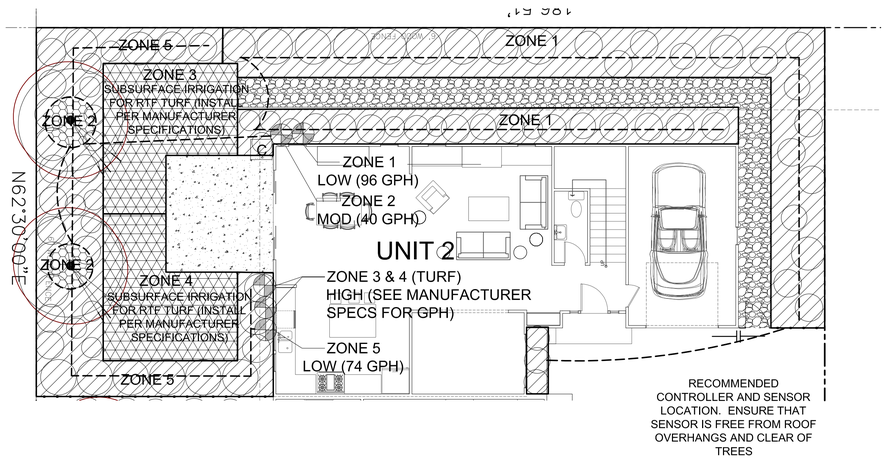
L1



UNIT 2 PLANTING PLAN

SCALE 1/8"=1'-0"

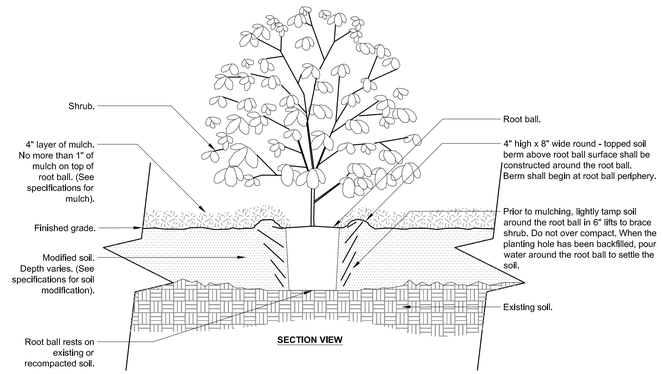
2540 W AVE 133RD UNIT 2 PLANT LIST				
Cd	Carex divulsa	1 gal	17	LOW
Ct	Chondrapetalum tectorum	5 gal	4	LOW
Lc	Loropetalum chinensis 'Rubrum'	5 gal	10	LOW
Ln	Laurus nobilis	5 gal	14	
Ml	Muhlenbergia lindheimeri	1 gal	13	
Nd	Nandina domestica	5 gal	13	LOW
Ph	Phormium tenax 'Rainbow Maiden'	5 gal	5	LOW
TREES				
Ap	Acer palmatum 'Bloodgood'	15 gal	24" box	MOD
TURF				
	Rhizomatous Tall Fescue	sod	300sf	MOD/HIGH



"I have complied with the criteria of the ordinance and applied them for the efficient use of water in the irrigation design"

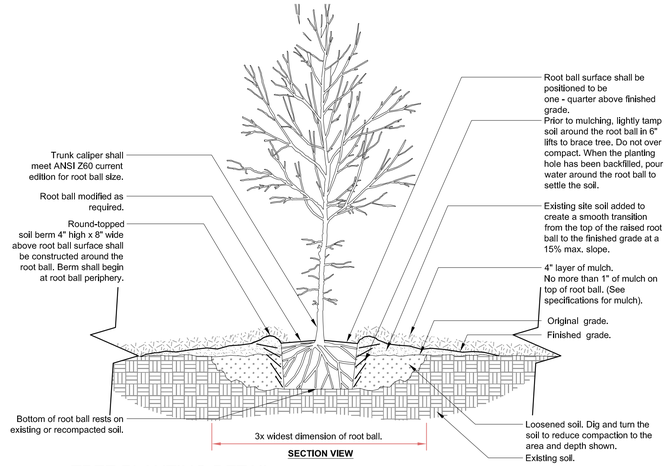
UNIT 2 IRRIGATION PLAN

SCALE 1/8"=1'-0"



SHRUB PLANTING DETAIL

3/4" = 1'-0"



TREE PLANTING DETAIL

1/2" = 1'-0"

Soil and Planting Notes:

1. A minimum of 8" of non-mechanicall compacted soil shall be available for water absorption and root growth in planting areas.
2. Incorporate compost or natural fertillizer into teh soil to a minimum depth of 8" at a minimum rate of 6 cubic yards per 1000 square feet or per specific amendment recommendations from a soils laboratory report.
3. A minimum 3" layer of mulch shall be applied on all exposed soil surfaces of planting areas except in turf areas, creeping or rooting groundcovers or direct seeding applications.

Project Notes:

Total landscaped area: 1655
-100% of landscaped area on drip irrigation (no spray heads)
-Low and moderate water use plants on separate valves
-Trees on separate valves
-Use Rhizomatuous Tall Fescue (RTF) turf for lawn areas with subsurface irrigation
-Dedicated irrigation meter not required because landscaped area is less than 5000 sf
-Certificate of completion: applicant shall submit a landscape audit report verifying installation and irrigation efficiency per design on a form provided by the East Bay Municipal Utility District

Irrigation Legend

- C — RAINBIRD SMART IRRIGATION CONTROLLER- SEE SPECS ON THIS SHEET
- NEW VALVE LOCATION
- POINT OF CONNECTION (ESTIMATED LOCATION)
- MAIN LINE
- 5/8" POLY IRRIGATION LINE FROM VALVE. USE (1) RAINBIRD XB20PC 1.0 GPH XERI-BUG EMITTER AT BASE OF EACH PLANT FOR LOW WATER USE PLANTS AND 2.0 GPH XERI-BUG EMITTER AT BASE OF EACH PLANT FOR MODERATE USE PLANTS. TREES TO HAVE RING OF NETAFIM IN LINE EMITTERS (12" SPACING) 16" AWAY FROM TRUNK.

Hydrozone Legend

- LOW WATER USE HYDROZONE
- MODERATE WATER USE HYDROZONE
- HIGH WATER USE HYDROZONE

"I have complied with the criteria of the ordinance and applied them for the efficient use of water in the planting design"

WELO - NOTES:

1. Backflow preventer and shut-off valves are located upstream of the mainline.

2. Calculations for the Maximum Allowable Water Allotment (WELO Appendix A)

3. Control system has the ability to run multiple operating cycles, and implement global increase or decrease by percentage to match plant water requirements, environmental conditions, and the soil's infiltration rate.

4. Hydrozones are seperated by plant type, solar exposure, soil type, and microclimate. Flow rate, application rate, and design pressures are shown for each hydrozone.

5. No overhead spray irrigation is used on this project.

6. Drip irrigation has integrated check valves and pressure regulation, and will provide even coverage throughout planted areas.

7. Station operation times shall not exceed the soil's infiltration rate.

8. Upon completion of the installation the contractor shall submit to the building department a completed and signed "Certificate of Completion" stating that the project has been installed as designed.

9. The Certificate of Completion shall be accompanied by an irrigation audit, irrigation schedule, and maintenance schedule as described in the City Ordinance.

10. A final City inspection shall be performed. The installation contractor shall attend this inspection, and make all required repairs and adjustments to achieve approval and completion from the City.

Maximum Applied Water Allowance Calculations for New and Rehabilitated Residential Landscapes
Enter value in Pale Blue Cells
Tan Cells Show Results
Messages and Warnings

Click on the blue cell on right to Pick City Name	Oakland	Name of City
ET_o of City from Appendix A	41.80	ET_o (inches/year)
	0	Overhead Landscape Area (ft^2)
	1,165	Drip Landscape Area (ft^2)
	0	SLA (ft^2)
Total Landscape Area	1,655.00	
Results:		
$(ET_o) \times (0.62) \times [(0.55 \times LA) + (1.0 - 0.55) \times SLA)]$	-	Gallons
	-	Cubic Feet
	-	HCF
	-	Acre-feet
	-	Millions of Gallons
MAWA calculation incorporating Effective Precipitation (Optional)		
Precipitation (Optional)		
ET_o of City from Appendix A	41.80	ET_o (inches/year)
Total Landscape Area	1,655.00	LA (ft^2)
Special Landscape Area	0.00	SLA (ft^2)
	24	Total annual precipitation (inches/year)
Enter Effective Precipitation	6.00	Eppt (in/yr)(25% of total annual precipitation)
Results:		
$MAWA = [(ET_o - Eppt) \times (0.62)] \times [(0.55 \times LA) + ((1.0 - 0.55) \times SLA)]$	14,224.65	Gallons
	1,901.57	Cubic Feet
	19.02	HCF
	0.04	Acre-feet
	0.01	Millions of Gallons

Estimated Total Water Use
Where: ETWU = $ET_o \times 0.62 \times [((PF \times HA)/IE) + SLA]$; Considering precipitation ETWA =(ETo-Eppt) x 0.62 x [((PF x HA)/IE)
Enter values in Pale Blue Cells
Tan Cells Show Results
Irrigation Efficiency Default Value for overhead 0.75 and drip 0.81.

Plant Water Use Type	Plant Factor
Very Low	0 - 0.1
Low	0.2 - 0.3
Medium	0.4 - 0.6
High	0.7 - 1.0
SLA	1

Hydrozone	Select System From the Dropdown List click on cell below	Plant Water Use Type (e) (low, medium, high)	Plant Factor (PF)	Hydrozone Area (HA) (ft^2) Without SLA	Irrigation Efficiency (IE)	(PF x HA (ft^2))/IE
Zone 1	Drip	Low	0.20	495	0.81	122
Zone 2	Drip	Medium	0.50	50	0.81	31
Zone 3	Drip	High	0.90	195	0.81	217
Zone 4	Drip	High	0.90	195	0.81	217
Zone 5	Drip	Low	0.20	720	0.81	178
						764
		SLA		0		0
			Sum	1,655		

Results

MAWA = 20,208	ETWU=	16,965	Gallons
		2,268	Cubic Feet
		23	HCF
		0	Acre-feet
		0	Millions of Gallons

ETWU complies with MAWA

EXHIBIT H

David Fowler Designs
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landscape architecture | arboriculture | sculpture

LICENSED LANDSCAPE ARCHITECT DAVID FOWLER 6126 Renewal Date 09111 18 STATE OF CALIFORNIA

APN: 22-366-13-1

2540 W AVE 133RD
SAN LEANDRO, CA 94577

DUPLEX UNIT 2
PLANTING AND
IRRIGATION PLAN

REVISIONS:

DATE	BY	DESCRIPTION

SCALE
1/8"=1'-0"

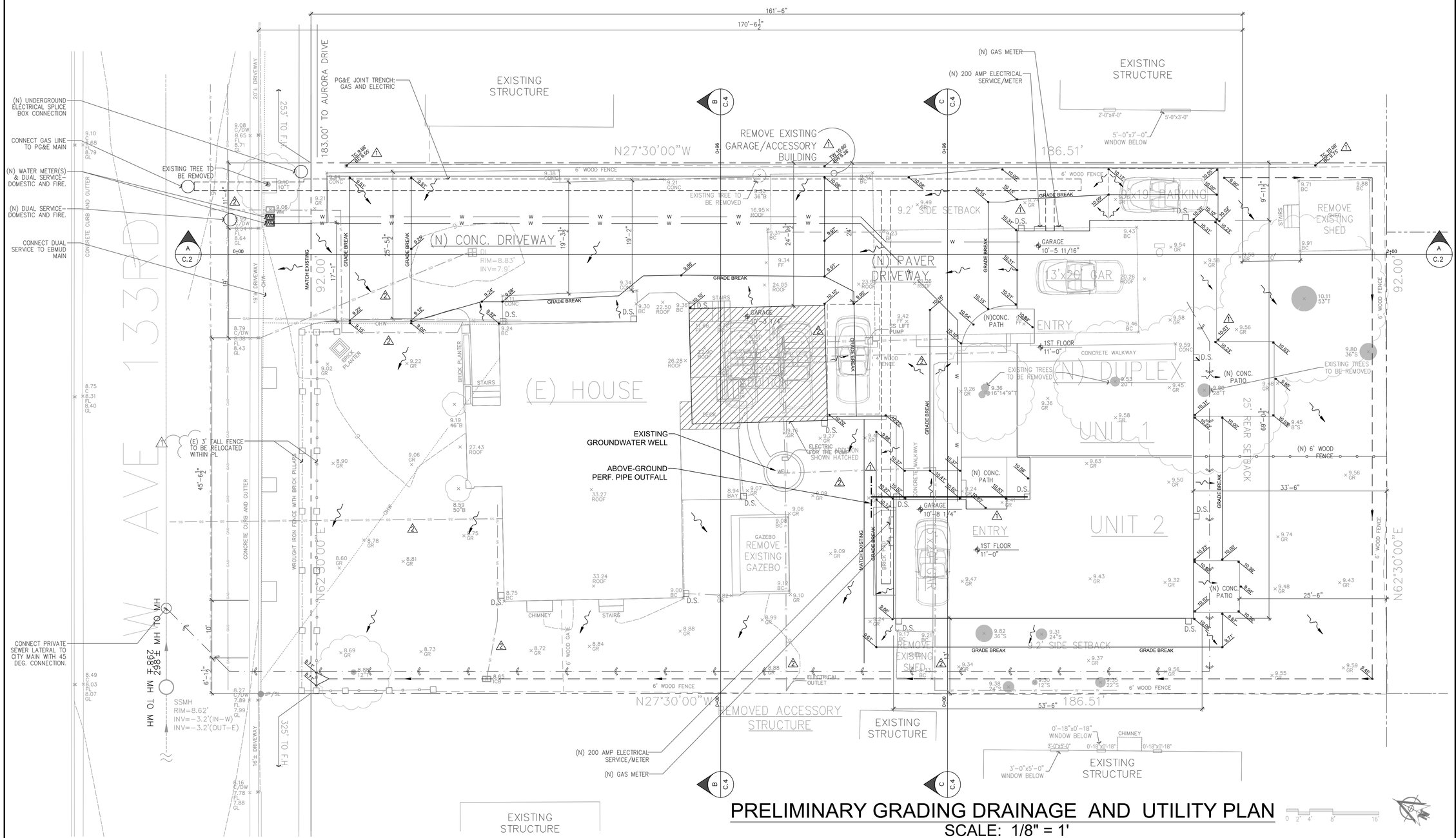
DATE
091118

L2

EXHIBIT I

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	PROPERTY LINE INDICATOR	SD	SQUARE DRAIN
	PERFORATED DRAIN PIPE		PIPE END PT. / CONNECTION
	DOWNSPOUT DRAIN PIPE		GRATED STORM DRAIN
	SOLID DRAIN PIPE	CO DS	CLEANOUT/DOWNSPOUT
	DRAINAGE SWALE FLOWLINE		PROP. SURFACE FLOW ARROW
W	WATER SUPPLY LINE		DRAINAGE ARROW
	SANITARY SEWER	BE	BUBBLE EMMITER
	JOINT TRENCH		
AD	CIRCULAR/ATRIUM DRAIN		



PRELIMINARY GRADING DRAINAGE AND UTILITY PLAN

SCALE: 1/8" = 1'

0 2' 4' 8' 16'

REGISTERED PROFESSIONAL ENGINEER
JUAN C. MARTINEZ
No. C72492
Exp.6/30/2020
CIVIL
STATE OF CALIFORNIA

OWNER:
LY MY BUI AND
KENNETH TAT NGAI
2540 W AVE. 133RD
SAN LEANDRO, CA 94577
510.506.8968

PROJECT ADDRESS:
2540 W. 133RD. AVE.
SAN LEANDRO, CA 94577
APN: 79A-586-15-1

PRELIMINARY GRADING, DRAINAGE AND UTILITY PLAN
2540 W. 133RD AVENUE

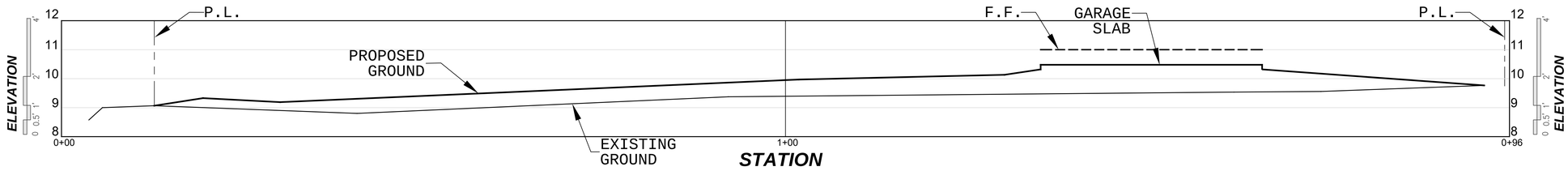
REVISION

No.	DESCRIPTION	DATE
1	GRADES AND DRAINAGE REVISIONS	4/7/19
2	UNDERGROUND UTILITIES	4/24/19

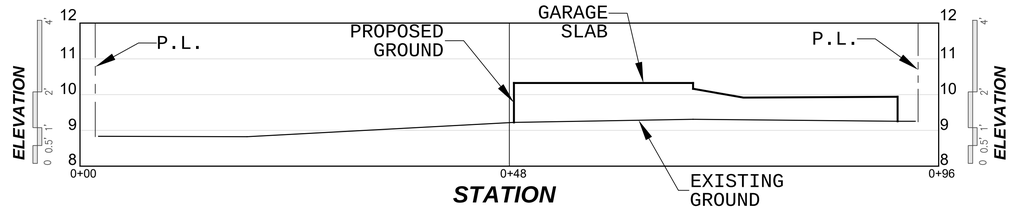
PROJECT No.:
DRAWN BY:
CHECKED BY:
DATE: 2/19/19

C.1

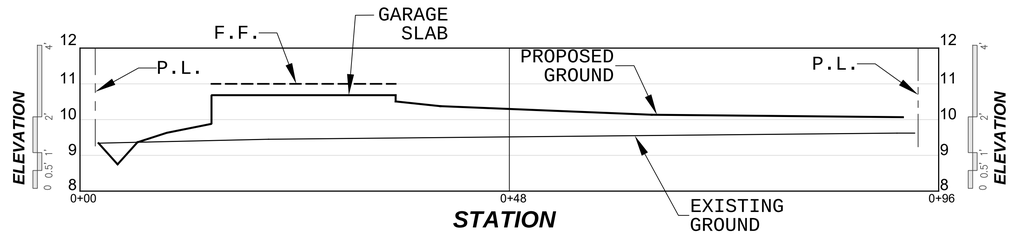
EXHIBIT J



SECTION A



SECTION B



SECTION C

REGISTERED PROFESSIONAL ENGINEER
JUAN C. MARTINEZ
No. C72492
Exp.6/30/20
STATE OF CALIFORNIA

OWNER:
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KENNETH TAT NGAI
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SAN LEANDRO, CA 94577
510.506.8968

PROJECT ADDRESS:
2540 W. 133RD. AVE.
SAN LEANDRO, CA 94577
APN: 79A-586-15-1

PRELIMINARY GRADING DRAINAGE AND UTILITY PLAN SECTIONS

2540 W. 133RD AVE.

REVISION

No.	DESCRIPTION	DATE
1		
2		
3		
4		

PROJECT No.:
DRAWN BY:
CHECKED BY:
DATE: 4/24/19

C.2