

VILLAS OF MUIR STREET 25000 MUIR ST. HAYWARD CA.



PROJECT DATA

APN# _____
 PARCEL SIZE _____ 0.78 ACRES
 EXISTING USE _____ 1 SFR
 PROPOSE DENSITY _____ 6 UNITS/ACRE
 ZONING _____ RS
 GENERAL PLANS _____ LDR

LOTS

PLAN	LOT #	NET SIZE	1ST FLR.	2ND FLR.	TOTAL LIVING	GARAGE	COVERED PORCH	LOT COVERAGE
EXISTING	LOT-1	5,383 SF	965		965	460		
PLAN -A	LOT-2	5,290 SF	1,060	1,045	2,105	470	15	1,545 29.2%
PLAN -B	LOT-3	6,019 SF	1,027	1,096	2,123	635	18	1,680 27.7%
PLAN -B	LOT-4	6,035 SF	1,027	1,096	2,123	635	18	1,680 27.8%
PLAN -A	LOT-5	5,014 SF	1,060	1,045	2,105	470	15	1,545 30.8%
	PRIVATE STREET	6,367 SF						
	ACCESS EASEMENTS	0 SF						
	TOTAL LOT AREA	34,108 SF						

OWNER/DEVELOPER

KHOA LE
 1ST DESIGN SALE INC.
 1694 TULLY RD. # 50
 SAN JOSE, CA 95122

KHOA LE
 T. 408.595.9639
 KHOA.LE@AKIMAX.NET

PRINCIPAL ENGINEER

GPM ENGINEERS
 2051 JUNCTION AVE, #235
 SAN JOSE, CA 95131
 T. 650.331.7264

MOHAMED GENIDY, PhD, PE
 T. 510.377.7866
 mgenidy@gpmengineers.com

DESIGN

FAHED HABAYEB ,ASSOC. AIA
 DESIGN & PLANNING
 686 STOCKTON AVE.
 SAN JOSE, CA 95126

FAHED HABAYEB
 T. 408.483.0302
 habayeb3@aol.com

SURVEY

THE BRONSON COMPANY
 6206 EPPS DR.
 WINTON, CA. 95388
 T.209.606.7340

KEVIN BRONSON
 T. 209.606.7340
 kevin@thebronsonco.com

DRAWING INDEX

CS	NEW SITE PLAN, COVER SHEET & PROJECT DATA
A1-A	LOTS 2 & 5 FLOOR PLANS
A2-A	LOTS 2 & 5 ELEVATIONS
A1-B	LOTS 3 & 4 FLOOR PLANS
A2-B	LOTS 3 & 4 ELEVATIONS
S1	SURVEY PLAN
C1	CIVIL COVER SHEET
C2	SITE LAYOUT
C3	PRELIMINARY GRADING AND DRAINAGE PLAN
C4	PRELIMINARY UTILITY PLAN
C5	STORM WATER QUALITY MANAGEMENT
CBBP	CLEAN BAY BLUE PRINT
L1	CONCEPTUAL LANDSCAPE PLAN
L2	IRRIGATION PLAN
L3	HYDRO ZONE PLAN

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 TEL: (408) 483-0302
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**25000 MUIR ST.
 HAYWARD CA.**

NO.	DATE	ISSUE
	FEB. 15 2017	
	MAR. 27 2017	
	MAY. 15 2017	
	AUG. 18 2017	
	OCT. 30 2017	

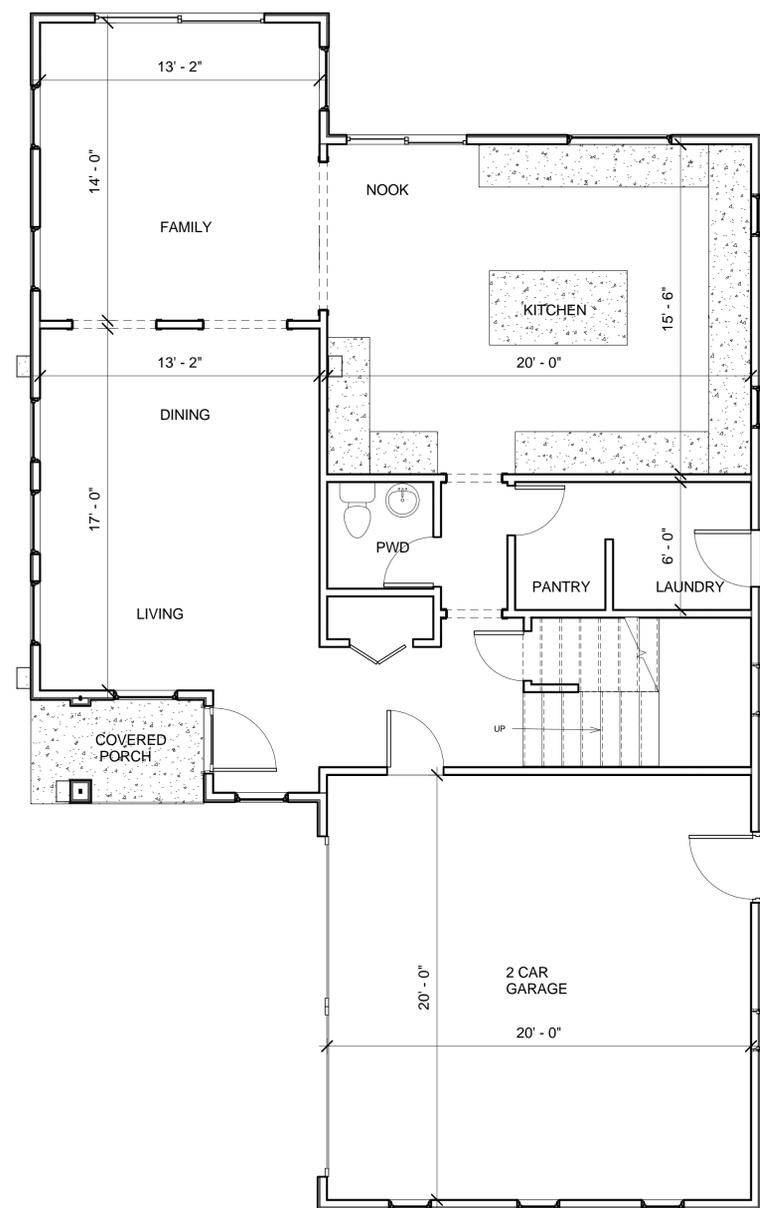
SITE PLAN

JOB NO. 0116
 SCALE AS NOTED
 DRAWN BY FH
 SHEET NO.

SITE PLAN

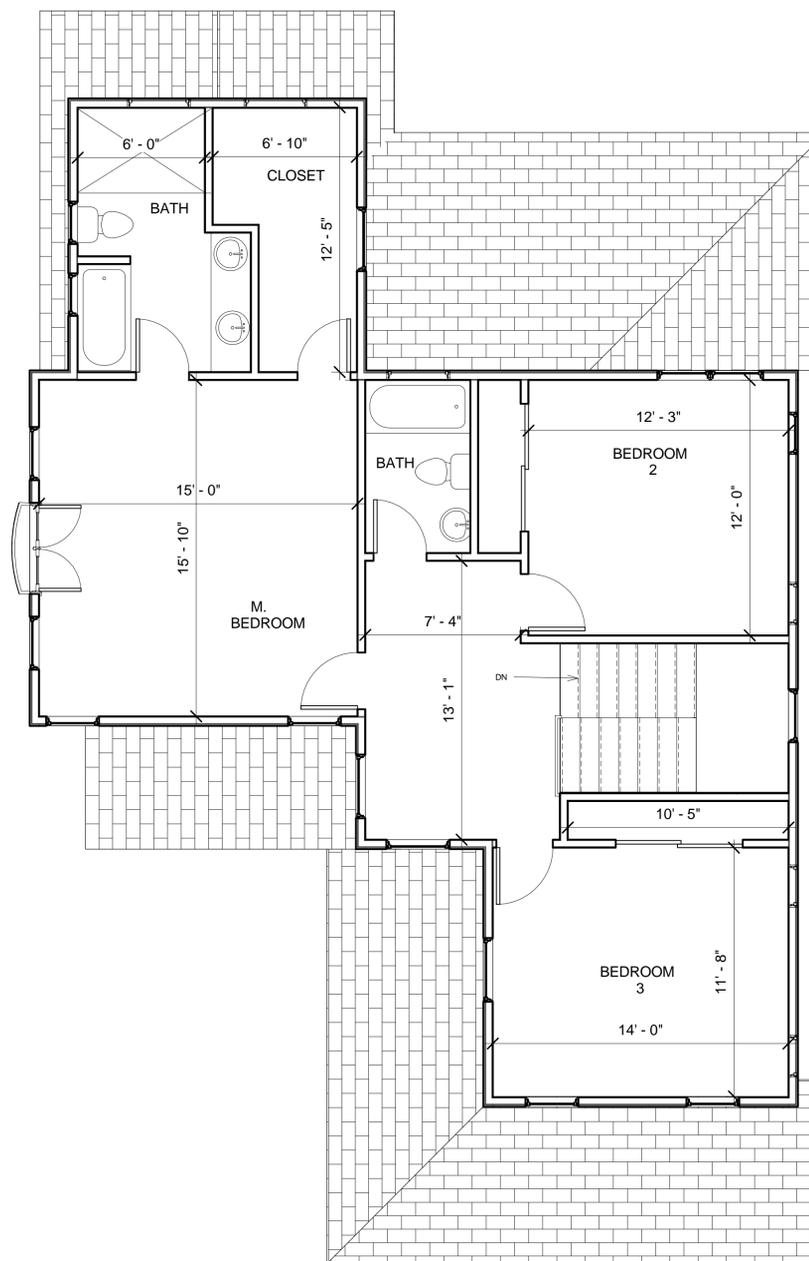
1" = 1/16"

CS



1ST FLOOR

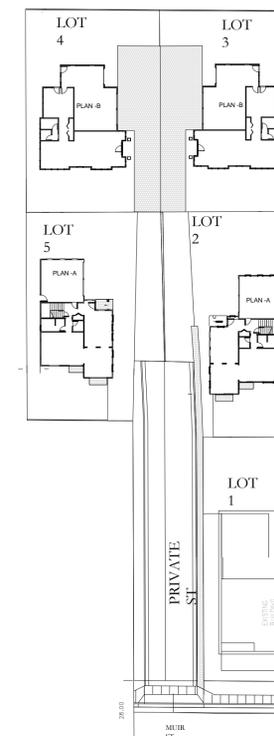
1/4"



2ND FLOOR

1,086 SQFT

1/4"



KEY MAP

FAHED HABAYEB
 PLANNING & DESIGN
 Assoc. AIA
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 SAN JOSE, CA. 95128
 TEL: (408) 483-0302
 E-MAIL: fhbayeb3@aol.com

**25000 MUIR ST.
 HAYWARD CA.
 LOTS 2 & 5**

NO.	DATE	ISSUE

PLANS

JOB NO. 0116
 SCALE AS NOTED
 DRAWN BY FH
 SHEET NO.

A1-A



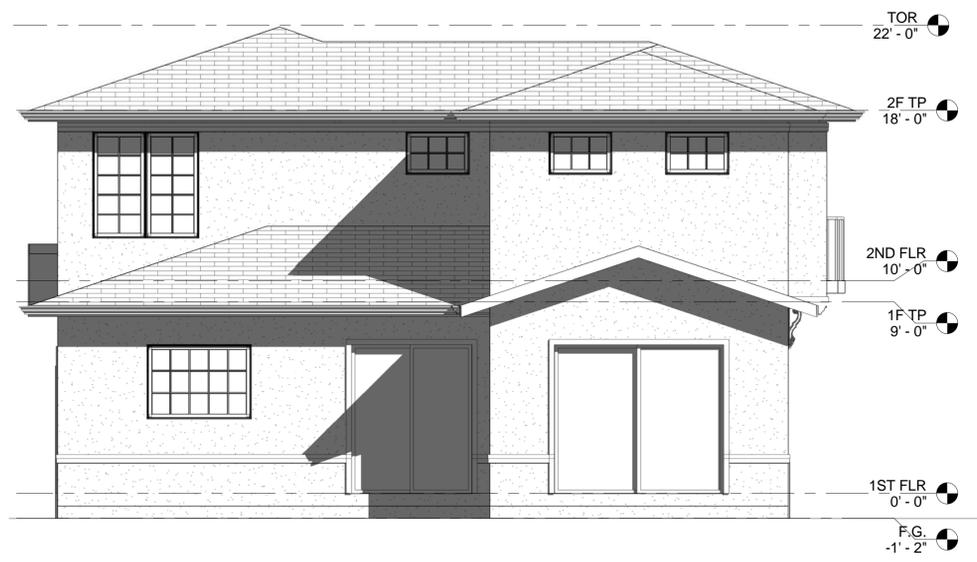
FRONT ELEVATION

1/4"



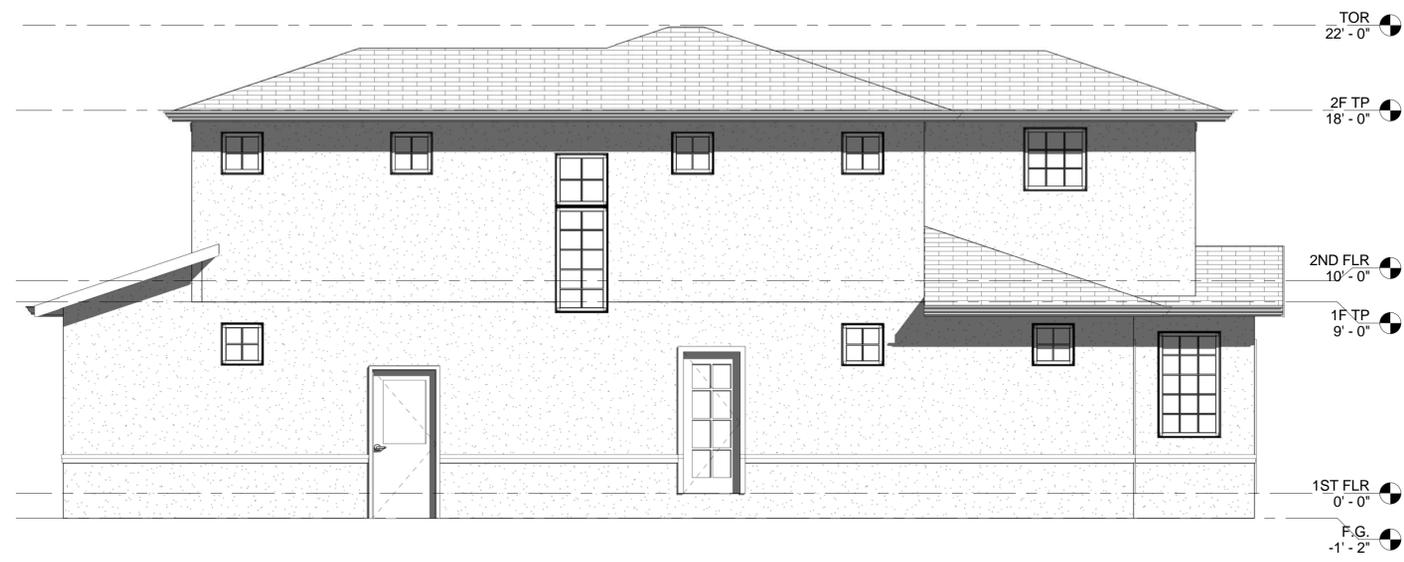
RIGHT SIDE ELEVATION

1/4"



LEFT SIDE ELEVATION

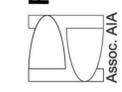
1/4"



REAR ELEVATION

1/4"

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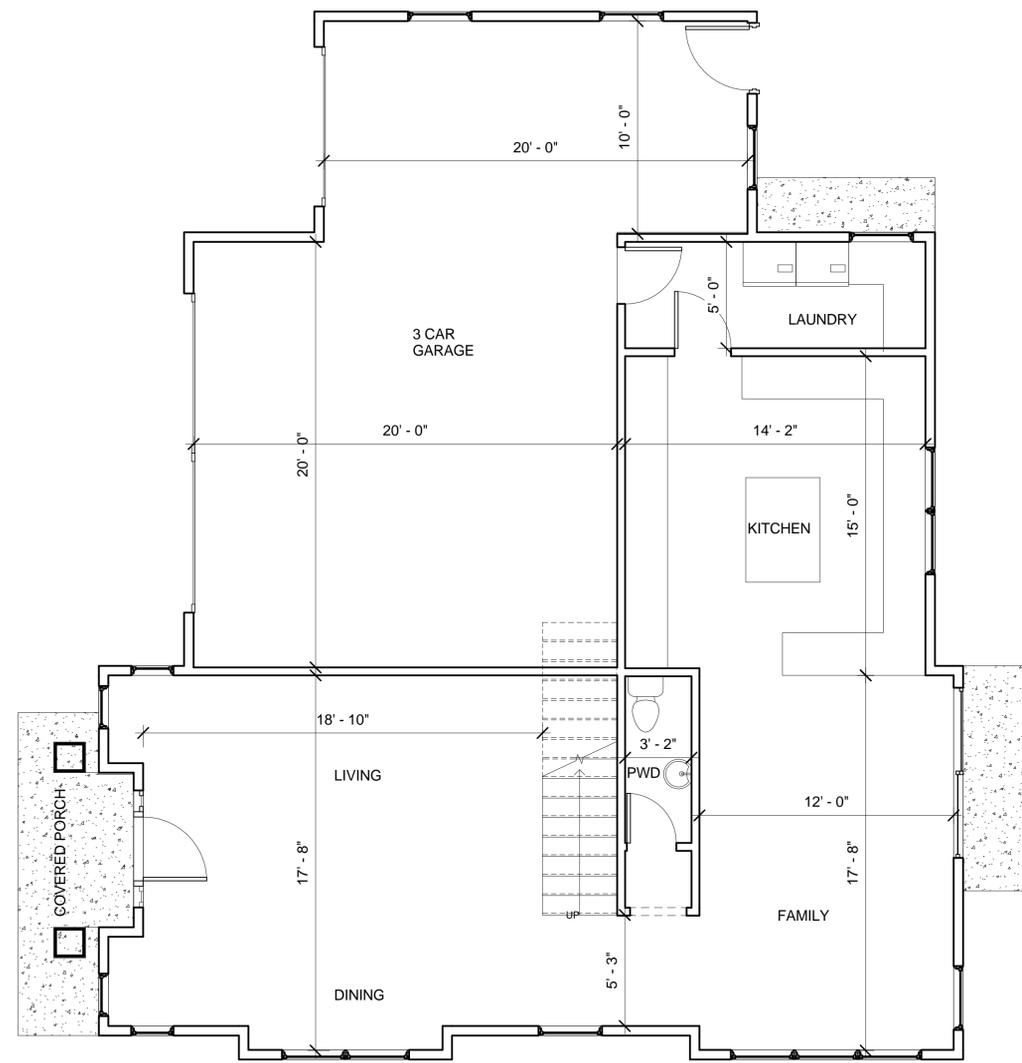
25000 MUIR ST.
HAYWARD CA.
 LOTS 2 & 5

NO.	DATE	ISSUE

ELVATIONS

JOB NO. 0116
 SCALE AS NOTED
 DRAWN BY FH
 SHEET NO.

A2-A



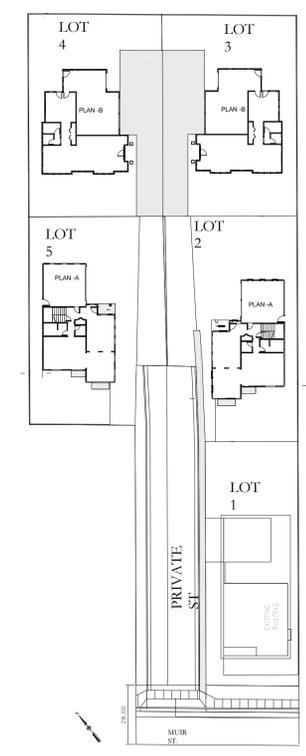
1ST FLOOR

1/4"



2ND FLOOR

1/4"



KEY MAP

25000 MUIR ST.
HAYWARD CA.
 LOT S 3 & 4

NO.	DATE	ISSUE

PLANS LOTTS 3 & 4

JOB NO. 0116
 SCALE AS NOTED
 DRAWN BY FH
 SHEET NO.

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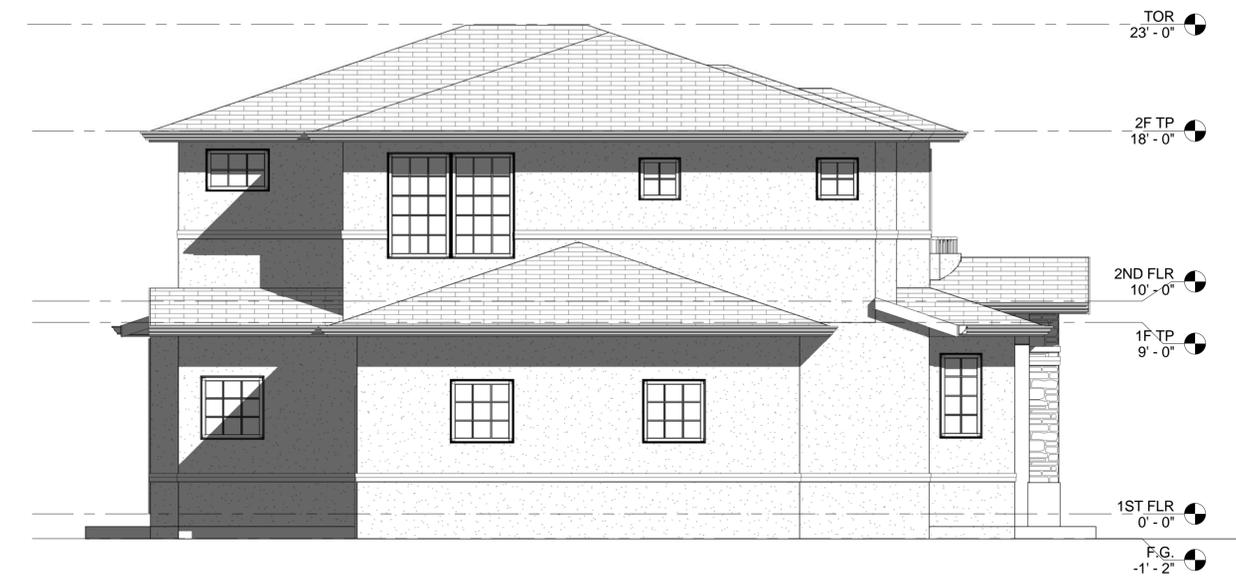
FRONT ELEVATION

1/4"



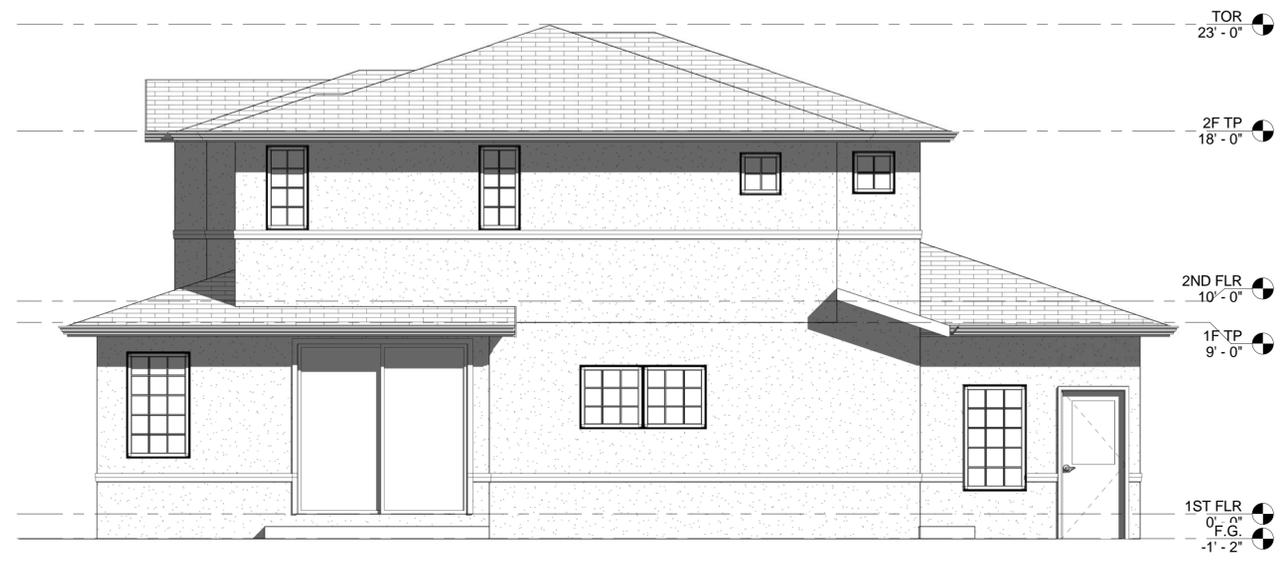
RIGHT SIDE ELEVATION

1/4"



LEFT SIDE ELEVATION

1/4"



REAR ELEVATION

1/4"

25000 MUIR ST.
HAYWARD CA.
LOT S 3 & 4

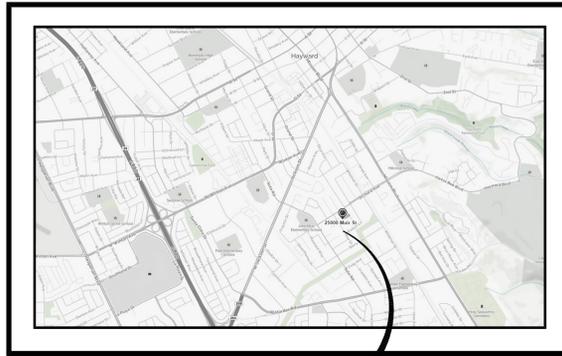
NO.	DATE	ISSUE

ELVATIONS

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SCALE AS NOTED
DRAWN BY FH
SHEET NO.

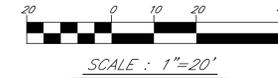
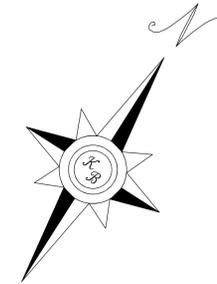
A2-B

VICINITY MAP
N.T.S.



PROJECT SITE

TOPOGRAPHIC & BOUNDARY SURVEY OF
25000 MUIR STREET
HAYWARD, CA 94544
APN 444-0051-116



SURVEY PREPARED FOR
1ST DESIGN
FOR SALE, INC.
AUGUST 17, 2016

LEGEND

- ASPHALT
- CONCRETE
- CURB AND GUTTER
- SANITARY SEWER LINE
- SANITARY SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- WATER LINE
- ELECTRIC OVERHEAD LINE
- COMMUNICATION OVERHEAD LINE
- JOINT POLE
- GAS METER
- GAS LINE
- ELECTRIC METER
- WOOD FENCE
- WROUGHT IRON FENCE

BENCHMARK

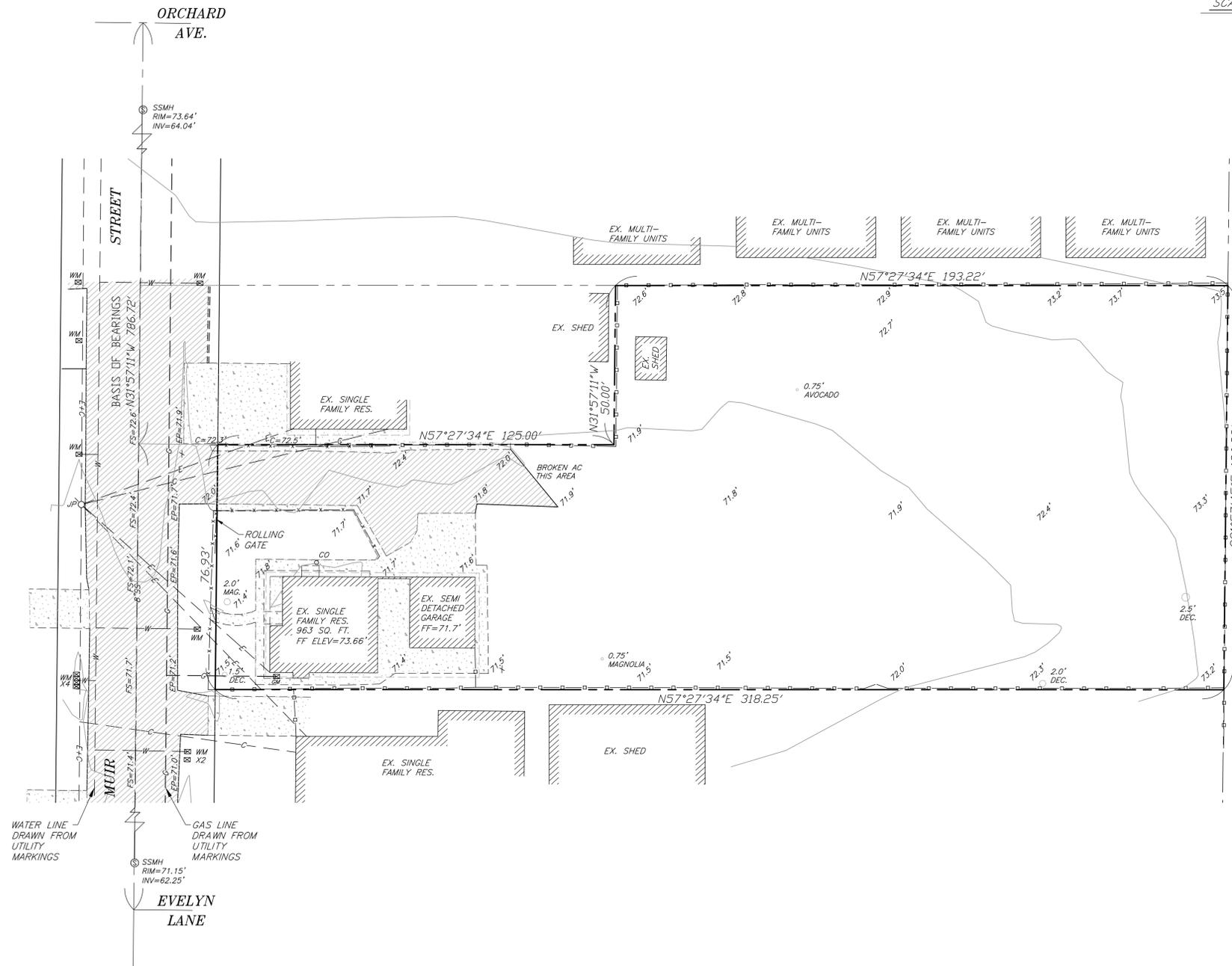
USGS BENCHMARK HT0207, A STANDARD BRASS DISK ALONG THE SOUTHERN PACIFIC TRACKS NEAR THE END OF ORCHARD AVENUE, HAVING AN NAVD83 ELEVATION OF 69.90', IS THE BASIS OF ALL ELEVATIONS SHOWN ON THIS MAP.

BASIS OF BEARINGS

THE CENTERLINE BEARING OF N31°57'11"W MUIR STREET AS SHOWN ON PARCEL MAP 2900 RECORDED ON APRIL 09, 1979, IN BOOK 109 OF MAPS AT PAGE 57, SANTA CLARA COUNTY RECORDS, IS THE BASIS OF BEARINGS FOR THIS SURVEY.

UTILITY NOTES:

THE UTILITIES AS DRAFTED ARE AS THEY ARE BELIEVED TO EXIST BASED ON SURFACE EVIDENCE. UTILITIES MAY EXIST THAT ARE NOT INDICATED. NO SUBSURFACE INVESTIGATIONS WERE PERFORMED.



THE BRONSON COMPANY

SURVEYING SERVICES
6206 EPPS DRIVE
WINTON, CA 95388
(209)606-7340 kevin@thebronsonco.com

TOPOGRAPHIC SURVEY OF
25000 MUIR STREET
CITY OF HAYWARD,
COUNTY OF ALAMEDA,
STATE OF CALIFORNIA

NO.	REVISION	DATE
PROJECT MANAGER Kevin Bronson		
DRAWN BY KB		CHECKED BY
DATE AUGUST 2016		
CAD FILE		
JOB NUMBER 3295		
SHEET S1 OF 1		

OWNER AND DEVELOPER

1ST DESIGN FOR SALE, INC.
1694 TULLY RD., UNIT #50
SAN JOSE, CA 95122

CONTACT: KHOA LE

PROJECT CONSULTANTS

CIVIL ENGINEER: GPM ENGINEERS
2051 JUNCTION AVE., #235, SAN JOSE, CA
MOHAMED GENIDY, PE TEL. (650) 331-7264
CONTACT@GPMENGINEERS.COM

LAND SURVEYOR: THE BRONSON COMPANY, 6206 EPPS DR., WINTON, CA
KEVIN BRONSON, PLS TEL. (209) 606.7340

UTILITY CONSULTANT: KENNETH S. NGAI, PE, LEED AP TEL. (408) 970-9888
AEC ALLIANCE ENGINEERING CONSULTANTS,
4701 PATRICK HENRY DR., #10, SANTA CLARA, CA

LANDSCAPE ARCHITECT: WESLEY SAKAMOTO, LSA TEL. (510) 882-0864
WESLEY SAKAMOTO LAND SURVEYOR,
665 HOLLYHOCK DR., SAN LEANDRO, CA

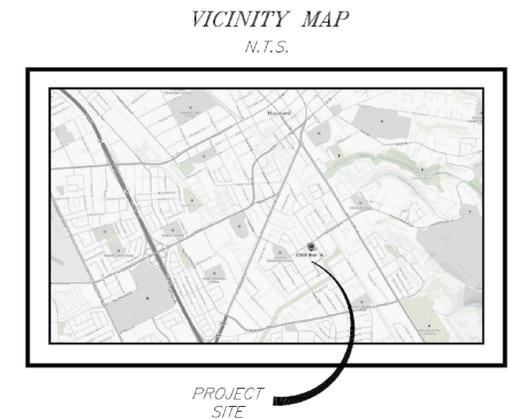
ARCHITECT: FAHD HAYABEB, ASSOC. AIA
2051 JUNCTION AVE., #235, SAN JOSE, CA

SOILS ENGINEER: WAYNE TING TEL. (510) 623-7768
WAYNE TING ASSOCIATES
42329 OSGOOD RD., FREMONT, CA

VILLAS OF MUIR STREET

VESTING TENTATIVE TRACT MAP 8397

CITY OF HAYWARD, ALAMEDA COUNTY



BENCHMARK

USGS BENCHMARK HT0207, A STANDARD BRASS DISK ALONG THE SOUTHERN PACIFIC TRACKS NEAR THE END OF ORCHARD AVENUE, HAVING AN NAVD88 ELEVATION OF 69.90', IS THE BASIS OF ALL ELEVATIONS SHOWN ON THIS MAP.

BASIS OF BEARINGS

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I, KHOA LE ON BEHALF OF 1ST DESIGN FOR SALE INC, AGREE TO THE FILING OF SAID MAP AND AGREE TO COMPLY WITH THE PROVISIONS OF THE CITY OF HAYWARD SUBDIVISION ORDINANCE AND THE STATE MAP ACT AS THEY APPLY TO THE PROCESSING AND APPROVAL OF SAID MAP.

I, MOHAMED S GENIDY, PE, CERTIFY THAT THIS TENTATIVE MAP WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT IT COMPLIES WITH THE CITY OF HAYWARD SUBDIVISION ORDINANCE AND THE STATE MAP ACT.

A SOILS REPORT ON THIS PROPERTY HAS BEEN PREPARED BY, WAYNE TING, PE GEOTECHNICAL INVESTIGATION DATED 12-18-2016, WHICH HAS BEEN FILED WITH THE CITY OF HAYWARD.

I, KEVIN BRONSON, A LICENSED LAND SURVEYOR IN THE STATE OF CALIFORNIA, HEREBY STATE THAT THIS TENTATIVE MAP IS BASED UPON SURVEY UNDER MY DIRECT SUPERVISION AND THAT IT COMPLIES WITH CITY OF HAYWARD SUBDIVISION ORDINANCE AND STATE MAP ACT.

PROJECT SUMMARY

PROPERTY: APN: 444-0051-116-00

SITE AREA: 36,083 SF GROSS (0.83 ACRE BEFORE PUBLIC ST DEDICATION)
33,915 SF NET (0.78 ACRE)

ZONING: RS: SINGLE FAMILY RESIDENTIAL

LANDUSE: LDR: LOW DENSITY RESIDENTIAL (4.3 TO 8.7 UNIT/ACRE)

PROPOSED DEVELOPMENT: 4 NEW DETACHED SINGLE FAMILY RESIDENCES
PLUS EXISTING SINGLE FAMILY RESIDENCE

PROPOSED DENSITY: 6.3 UNIT/ACRE

UTILITY SOURCES:
WATER --- CITY OF HAYWARD
SANITARY SEWER --- CITY OF HAYWARD
STORM DRAIN --- CITY OF HAYWARD
ELECTRICAL AND GAS --- PACIFIC GAS AND ELECTRIC
TELEPHONE --- ATT
CABLE TV --- COMCAST

ABBREVIATIONS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
⊙	AT	MAX	MAXIMUM
AB	AGGREGATE BASE	MIN	MINIMUM
AC	ASPHALT CONCRETE	NO., #	NUMBER
AD	AREA DRAIN	NTS	NOT TO SCALE
BC	BEGINNING OF CURVE	PIE	PRIVATE INGRESS EGRESS EASEMENT
BLDG	BUILDING	POC	POINT OF CURB RETURN
BOS	BOTTOM OF STEPS	PCR	PACIFIC GAS AND ELECTRIC
BW	BACK OF WALK	PL, P/L	PROPERTY LINE
CB	CATCH BASIN	POC	POINT ON CURVE
CL	CENTERLINE	PRC	POINT OF REVERSE CURVE
CONC	CONCRETE	PSDE	PRIVATE STORM DRAIN EASEMENT
CONT	CONTINUATION	PT	POINT
DDCV	DOUBLE DETECTOR CHECK VALVE	PUE	PUBLIC UTILITY EASEMENT
DI	DROP INLET	PVC	POLYVINYL CHLORIDE
DS	DOWN SPOUT	PI	POINT OF VERTICAL INTERSECTION
DWY	DRIVEWAY	R	RADIUS
EB	ELECTRICAL BOX	RCP	REINFORCED CONCRETE PIPE
EC	END OF CURVE	RIM	RIM ELEVATION
EL, ELEV.	ELEVATION	R/W	RIGHT OF WAY
EP	EDGE OF PAVEMENT	S	SLOPE
EVAE	EMERGENCY VEHICLE ACCESS EASEMENT	SD	STORM DRAIN
EX., EXIST.	EXISTING	SDE	STORM DRAIN EASEMENT
F/C	FACE OF CURB	SDMH	STORM DRAIN MANHOLE
FF	FINISHED FLOOR ELEVATION	SS	SANITARY SEWER
FG	FINISHED GRADE	SSCO	SANITARY SEWER LATERAL CLEANOUT
FH	FIRE HYDRANT	SSDI	SANITARY SEWER DRAIN INLET
FL	FLOW LINE	SSGB	SANITARY SEWER GRADE BREAK
FP	FINISHED PAVEMENT	SSE	SANITARY SEWER EASEMENT
FPW	FIRE PROTECTION WATER	SSMH	SANITARY SEWER MANHOLE
FS	FINISHED SERVICE ELEV.	ST	STREET
FT	FEET	STA	STATION
G	GAS	S/W	SIDEWALK
GB	GRADE BREAK	T	TELEPHONE
GF	GRADE FINISHED FLOOR ELEV.	TC	TOP OF CURB
GRND	GROUND	TEMP	TEMPORARY
HDPE	HIGH DENSITY POLYETHYLENE	TG	TOP OF GRATE
HGL	HYDRAULIC GRADE LINE	TP	TOP OF PAVEMENT
HP	HIGH POINT	TOS	TOP OF STEPS
INV	INVERT	TYP	TYPICAL
IRR	IRRIGATION	VC	VERTICAL CURVE
JT	JOINT TRENCH	W, WL	WATERLINE
LF	LINEAR FEET	WLE	WATER LINE EASEMENT
LP	LOW POINT	WM	WATER METER
LT	LEFT	WS	WATER SERVICE
		WV	WATER VALVE

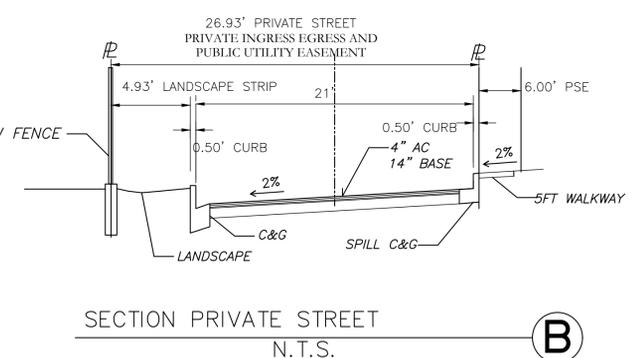
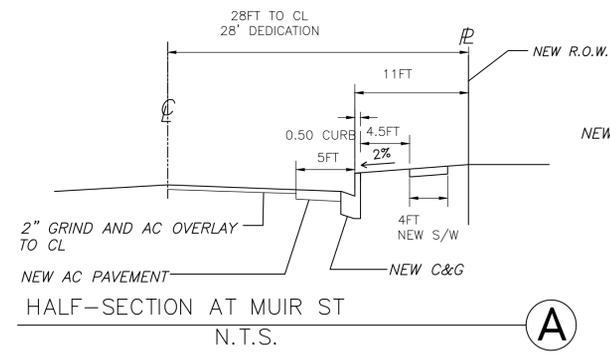
SHEET INDEX

SHEET NO.	TITLE
C1	COVER SHEET
C2	SITE LAYOUT
C3	PRELIMINARY GRADING AND DRAINAGE
C4	PRELIMINARY UTILITY PLAN
C5	PRELIMINARY STORMWATER MANAGEMENT PLAN

CIVIL

LEGEND

PROPOSED	EXISTING	PROPOSED	EXISTING	DESCRIPTION
---	---	⊙	⊙	PROPERTY LINE EASEMENTS
---	---	⊙	⊙	NEW LOT LINES
⊙	⊙	⊙	⊙	MONUMENT
⊙	⊙	⊙	⊙	BENCHMARK
XX SD	EX XX SD	XX XX	XX XX	STORM DRAIN LINE
⊙	⊙	XX.XX	XX.XX	CATCH BASIN
⊙	⊙	+	+	FIELD INLET
⊙	⊙	XX.XX	XX.XX	STORM DRAIN MANHOLE
⊙	⊙	XX.XX	XX.XX	AREA DRAIN W/ PVC LINE
⊙	⊙	⊙	⊙	BUBBLER
XX SS	EX XX SS	⊙	⊙	SANITARY SEWER LINE
⊙	⊙	⊙	⊙	SANITARY SEWER MANHOLE
⊙	⊙	⊙	⊙	SANITARY SEWER LATERAL
⊙	⊙	⊙	⊙	SANITARY SEWER CLEANOUT
⊙	⊙	⊙	⊙	WATER VALVE
⊙	⊙	⊙	⊙	WATER METER
⊙	⊙	⊙	⊙	UTILITY POLE
W	W	⊙	⊙	WATER MAIN LINE
G	G	⊙	⊙	GAS
E	E	⊙	⊙	ELECTRICAL
JT	JT	⊙	⊙	JOINT TRENCH
⊙	⊙	⊙	⊙	TREE TO BE REMOVED
⊙	⊙	⊙	⊙	TREE PROTECTION ZONE WITH TYPE II FENCING AT DRIP LINE AND BACK OF WALK
XX.XX	XX.XX	+	+	SPOT ELEVATION
XX.XX	XX.XX	XX.XX	XX.XX	CONTOUR LINE ELEVATIONS
⊙	⊙	⊙	⊙	SPLASH BLOCK AT ROOF DOWNSPOUT
⊙	⊙	⊙	⊙	OVERLAND RELEASE
⊙	⊙	⊙	⊙	RET WALL
⊙	⊙	⊙	⊙	STREET SIGN
⊙	⊙	⊙	⊙	SITE OR STREET LIGHT
⊙	⊙	⊙	⊙	FIRE HYDRANT
⊙	⊙	⊙	⊙	EARTHEN SWALE
x	x	x	x	WOOD FENCE
---	---	---	---	CMU FENCE
⊙	⊙	⊙	⊙	BUILDING ENTRANCE



DATE:	NO.	REVISION	DATE
10-18-2017	△		
SCALE: AS NOTED	△		
DESIGNED BY: MG	△		
DRAWN BY: EH	△		



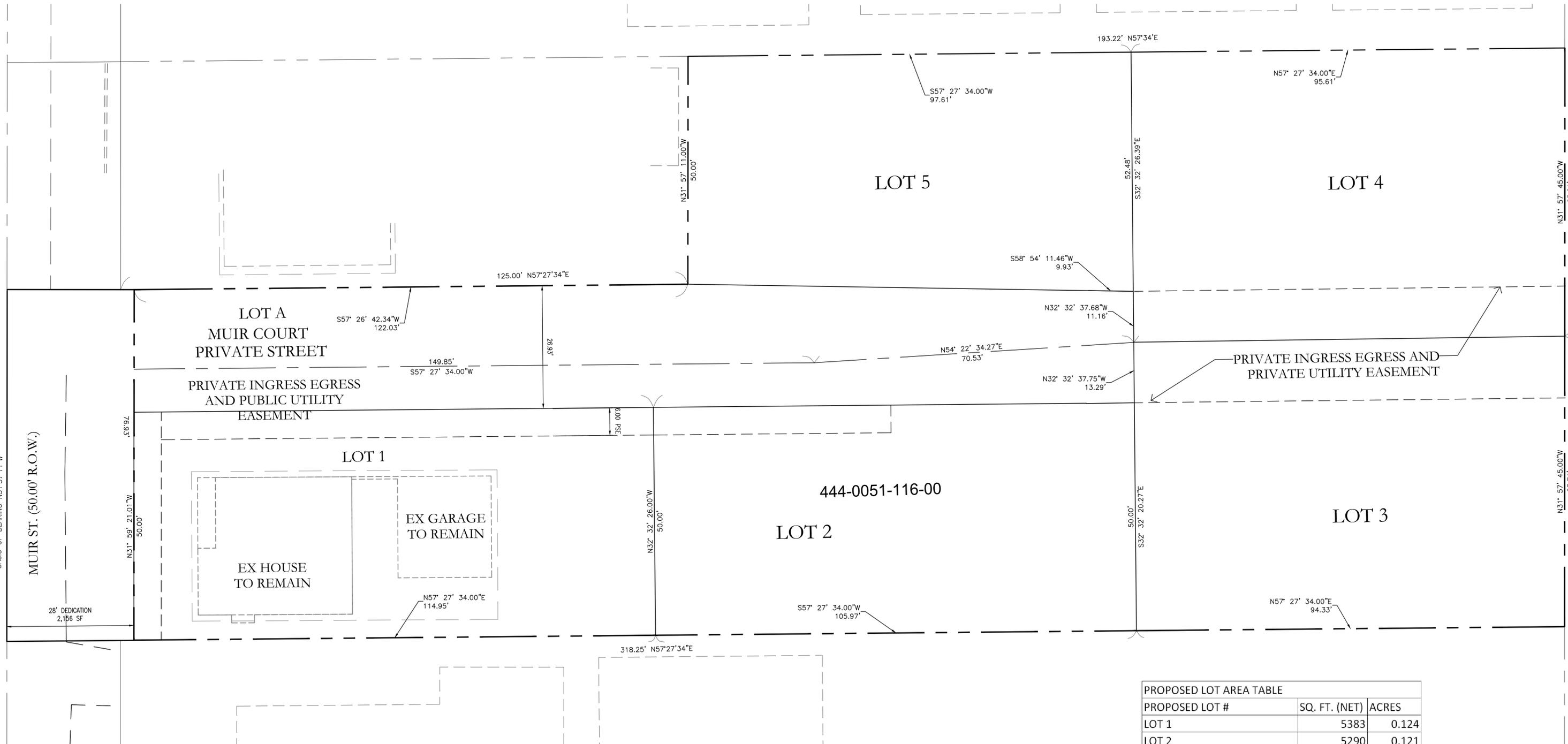
GPM ENGINEERS
2051 Junction Ave. SUITE 235
San Jose, CA 95131
TEL. (650) 331-7264 FAX (650) 472-9004
WWW.GPMENGINEERS.COM

CIVIL • STRUCTURAL • PLANNING • DEVELOPMENT

PROJECT: **VILLAS OF MUIR ST**
25000 MUIR ST.
HAYWARD, CA

SHEET TITLE: **COVER SHEET**

SHEET NUMBER **CI**
1 OF 5



A SITE LAYOUT

SCALE: 1" = 20'



SCALE: 1" = 20'

PROPOSED LOT AREA TABLE		
PROPOSED LOT #	SQ. FT. (NET)	ACRES
LOT 1	5383	0.124
LOT 2	5290	0.121
LOT 3	6019	0.138
LOT 4	6035	0.139
LOT 5	5014	0.115
LOT A: PRIVATE STREET	6367	0.146
ACCESS EASEMENTS	0	0.000
TOTAL LOT AREAS	34108	0.783

100% NET SITE

DATE:	NO.	REVISION	DATE
10-18-2017	1		
AS NOTED	2		
MG	3		
EH	4		

DIRECTED BY:

11-1-2017

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 San Jose, CA 95131
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 WWW.GPMENGINEERS.COM
 CIVIL • STRUCTURAL • PLANNING • DEVELOPMENT

PROJECT:
VILLAS OF MUIR ST
 25000 MUIR ST.
 HAYWARD, CA

SHEET TITLE:

SITE LAYOUT

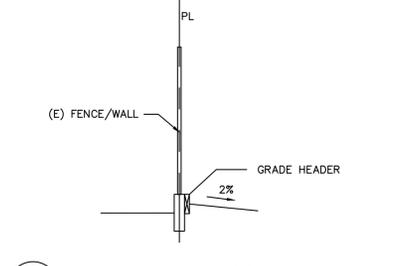
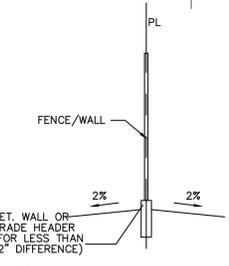
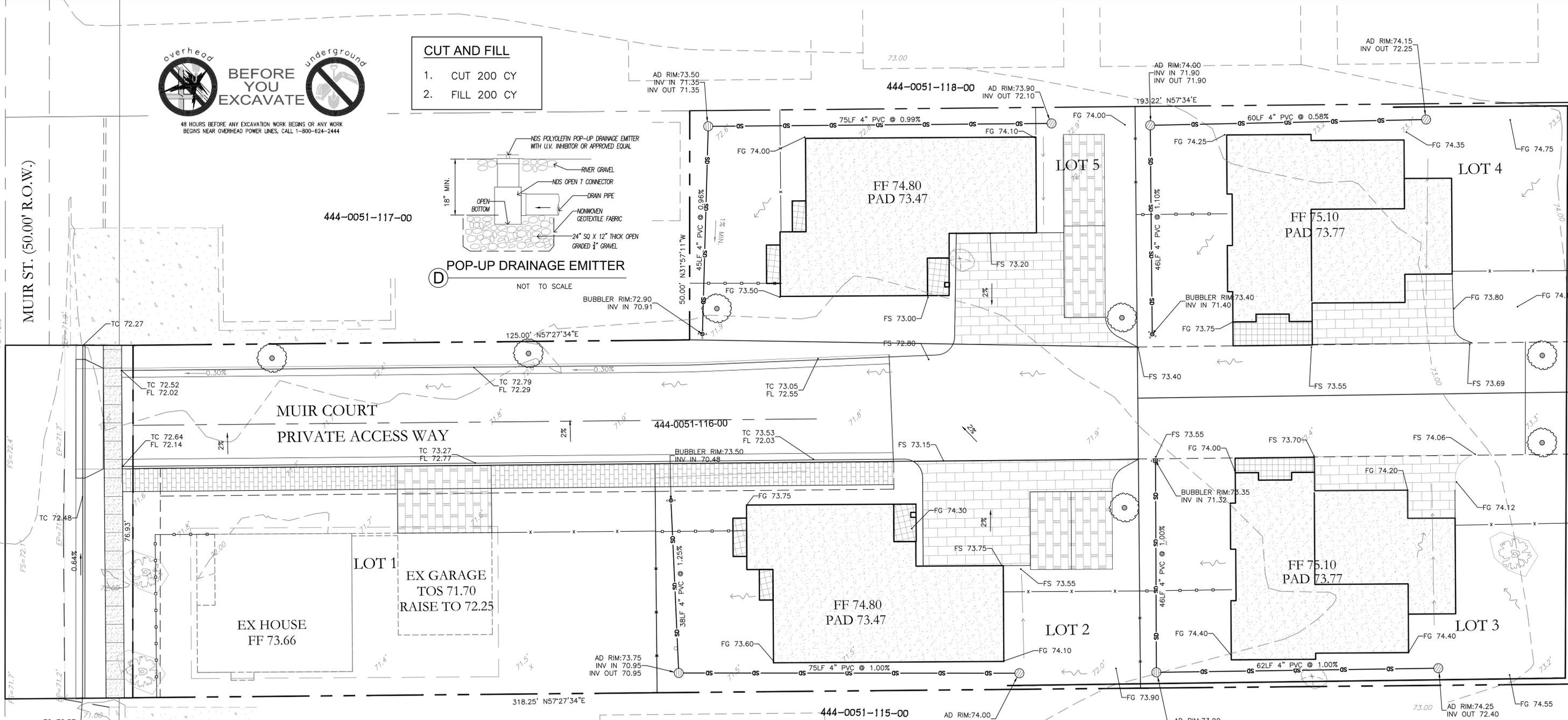
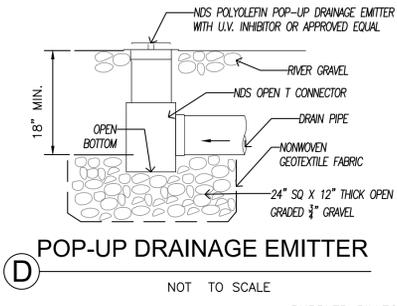
SHEET NUMBER

C2

2 OF 5



- CUT AND FILL**
- CUT 200 CY
 - FILL 200 CY

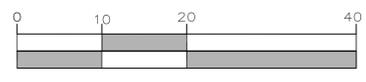


A CROSS SECTION AT COMMON FENCE
SCALE: N.T.S.

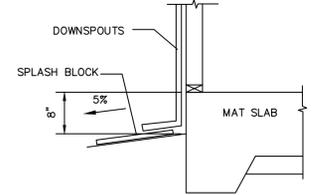
B CROSS SECTION AT (E) NEIGHBOR FENCE
SCALE: N.T.S.

PRELIMINARY GRADING AND DRAINAGE

SCALE: 1" = 10'



SCALE: 1" = 10'



C CROSS SECTION AT BUILDING WALL
SCALE: N.T.S.

NOTES

- ALL GRADING SHALL CONFORM TO THE CITY OF HAYWARD STANDARDS
- ALL GRADING SHALL BE DONE UNDER SUPERVISION OF THE PROJECT SOILS ENGINEER WHEN A SOIL STUDY WAS CONDUCTED
- OBTAIN ENCROACHMENT PERMIT AS REQUIRED FOR WORK WITHIN RIGHT OF WAY.
- ALL SURFACE WATER SHALL DRAIN AWAY FROM THE STRUCTURE WITH A MIN. 5% SLOPE FOR MIN. DISTANCE OF 5 FT AT LANDSCAPED AREAS
- ALL GRADES SHOWN ARE FINISHED GRADES, UNLESS OTHERWISE NOTED.
- AREA DRAINS SHALL HAVE A MIN. 6 INCHES DIAMETER GRATE OPENINGS
- ALL DRAIN LINES SHALL HAVE A 1% MIN. SLOPE
- WHEN A PERFORATED DRAIN LINE IS CONNECTED TO A SOLID DRAIN LINE, THE INVERT OF THE SOLID DRAIN SHALL BE HELD BELOW THE INVERT OF THE PERFORATED LINE
- ALL STORM DRAIN PIPE SHALL BE PVC SOR 35 OR EQUIVALENT, SLOPED AT 1% MIN. UNLESS OTHERWISE SPECIFIED ON THE PLANS. PIPES SHALL BE SIZED AS SPECIFIED ON THE PLANS. ALL CHANGES IN DIRECTIONS SHALL BE MADE WITH A WYE CONNECTION, ELBOWS, TEE'S SHOULD BE AVOIDED
- UTILITY COMPANIES SHALL BE CONSULTED AND NECESSARY PERMITS SHALL BE SECURED FOR DISCONNECTION/RECONNECTION OF UTILITY SERVICE LINES.
- INSTALLATION/CONNECTION OF GAS AND ELECTRIC METERS SHALL BE COORDINATED BY THE CONTRACTOR WITH PG&E. GAS SERVICE TO BE DETERMINED BY PG&E. TYPICAL TRENCH SECTION PER LATEST EDITION OF PG&E GREEN BOOK
- GRASS SWALES SHALL BE 12" WIDE, WITH SIDE SLOPE 3:1 (3" DROP) AND HYDROSEEDED TO AVOID EROSION.
- ALL CUT AND FILL SLOPES AT THE BOUNDARY LINES SHALL BE CONSTRUCTED IN SUCH A MANNER THAT ADJACENT GRADING WILL NOT BE DAMAGED. GRADING SHALL CONFORM AT BOUNDARY LINES. INSTALL PRESSURE TREATED WOODEN GRADE HEADER FOR GRADE DIFFERENCES LESS THAN 12".
- ALL CUT SLOPES SHALL BE ROUNDED TO MEET EXISTING GRADES AND BLEND WITH SURROUNDING TOPOGRAPHY. ALL GRADED SLOPES OVER FIVE FEET IN HEIGHT SHALL BE PLANTED WITH SUITABLE GROUND COVER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF SAID GRADING QUANTITIES PRIOR TO THE START OF THE GRADING OPERATION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR DISTRIBUTING ANY EXCESS MATERIAL OR SUPPLY MATERIAL FOR DEFICIENCIES TO BRING PAVEMENT OR LOTS TO REQUIRED GRADE. CLARIFICATION OF GRADING SHALL BE DONE BY THE SURVEYOR.
- PRIOR TO ANY GRADING, DEMOLITION OF THE SITE SHOULD BE COMPLETED. DEMOLITION SHOULD INCLUDE THE COMPLETE REMOVAL OF ALL SURFACE AND SUBSURFACE STRUCTURES. IF ANY OF THE FOLLOWING ARE ENCOUNTERED: TREE ROOT SYSTEMS, CONCRETE, SEPTIC TANKS, GAS OR OIL TANKS, STORM INLETS, IRRIGATION PIPES, FOUNDATIONS, ASPHALT, DEBRIS AND TRASH, THESE SHOULD ALSO BE REMOVED, WITH THE EXCEPTION OF ITEMS SPECIFIED BY THE OWNER FOR SALVAGE.
- SEE SOILS REPORT (WHEN APPLICABLE) FOR PREPARATION OF PAD

DATE:	NO.	REVISION	DATE	DIRECTED BY:
10-18-2017	1			
SCALE: AS NOTED	2			
DESIGNED BY: MG	3			
DRAWN BY: EH	4			



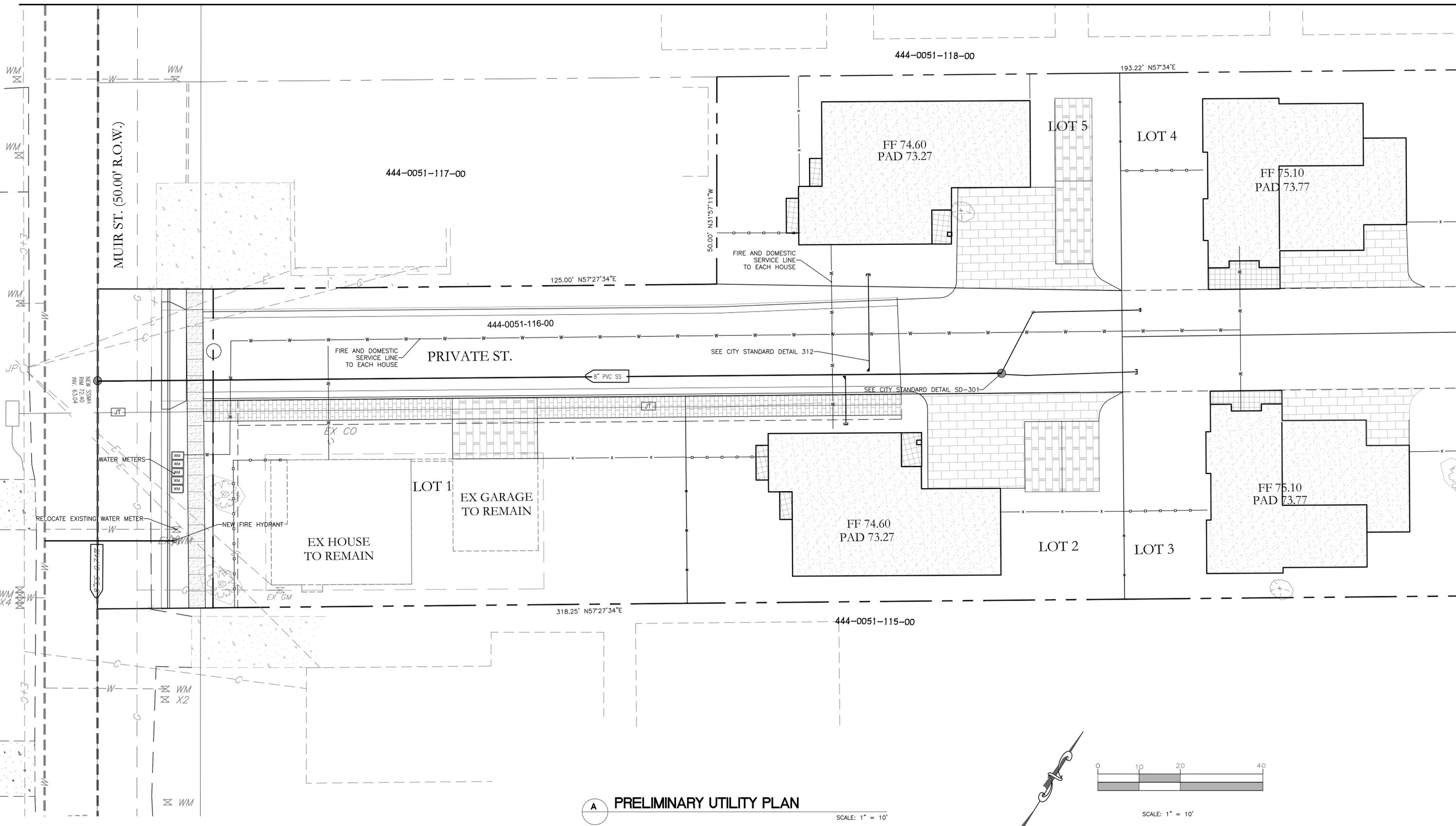
GPM ENGINEERS
2051 Junction Ave. SUITE 235
San Jose, CA 95131
TEL. (650) 331-7264 FAX (650) 472-9004
WWW.GPMENGINEERS.COM

CIVIL • STRUCTURAL • PLANNING • DEVELOPMENT

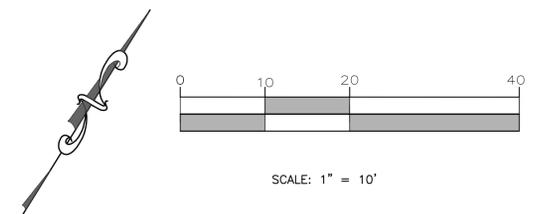
PROJECT:
VILLAS OF MUIR ST
25000 MUIR ST.
HAYWARD, CA

SHEET TITLE:
PRELIMINARY GRADING AND DRAINAGE

SHEET NUMBER
C3
3 OF 5



A PRELIMINARY UTILITY PLAN
SCALE: 1" = 10'



DATE:	10-18-2017	NO.	REVISION	DATE	DIRECTED BY:
SCALE:	AS NOTED	▲			
DESIGNED BY:	MG	▲			
DRAWN BY:	EH	▲			
		▲			
		▲			

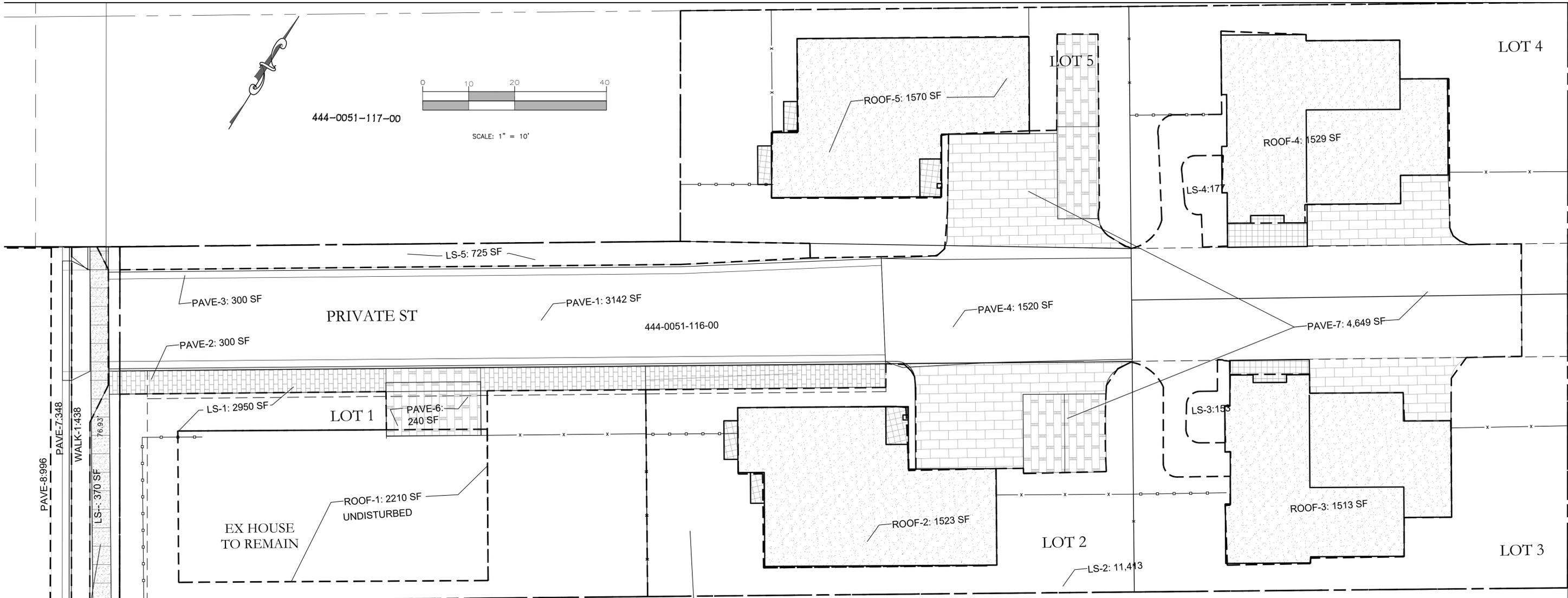


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PROJECT:
VILLAS OF MUIR ST
25000 MUIR ST.
HAYWARD, CA

SHEET TITLE:
PRELIMINARY UTILITY PLAN

SHEET NUMBER
C4
4 OF 5



DMA #2 (OFF-SITE)
2,152 SF

Drainage Management Area # 2 (Public Street)			
Pave-7	IMPERVIOUS	Existing Pavement	996
Pave-8	IMPERVIOUS	New Pavement	348
Walk-1	IMPERVIOUS	New sidewalk	438
LS-9	PERVIOUS	Landscape	370
TOTAL SITE			2,152

DMA #1 (ALL ON-SITE)
31,704 SF
DOES NOT INCLUDE EXISTING ROOF

Drainage Management Area # 1 (DMA-1)				
Drainage Area	PERVIOUS/ IMPERVIOUS	TYPE OF DRAINAGE DMANAGEMENT AREA	DRAINAGE DMANAGEMENT AREA (SF)	DMANAGEMENT FACILITIES
Roof-1	IMPERVIOUS	Existing House	UNDISTURBED	Direct to Landscape
Roof-2	IMPERVIOUS	House	1,523	Direct to Landscape
Roof-3	IMPERVIOUS	House	1,513	Direct to Landscape
Roof-4	IMPERVIOUS	House	1,529	Direct to Landscape
Roof-5	IMPERVIOUS	House	1,570	Direct to Landscape
Pave-1	PERVIOUS	Driveway-pavers	3,142	Direct to Landscape
Pave-2	IMPERVIOUS	Driveway-C&G	300	Direct to Landscape
Pave-3	IMPERVIOUS	Driveway-C&G	300	Direct to Landscape
Pave-4	PERVIOUS	Driveway-pavers	1,520	Self Treating
Pave-5	PERVIOUS	Private street - pavers	4,649	Self Treating
Pave-6	PERVIOUS	Private street - pavers	240	Self Treating
LS-1	IMPERVIOUS	Landscape	2,950	Self Treating
LS-2	IMPERVIOUS	Landscape	11,413	Self Treating
LS-3	IMPERVIOUS	Landscape	153	Self Treating
LS-4	IMPERVIOUS	Landscape	177	Self Treating
LS-5	IMPERVIOUS	Landscape	725	Self Treating
LS-6	IMPERVIOUS	Landscape	-	Self Treating
LS-7	IMPERVIOUS	Landscape	-	Self Treating
LS-8	IMPERVIOUS	Landscape	-	Self Treating
LS-9	IMPERVIOUS	Landscape	-	Self Treating
TOTAL DMA1			31,704	
DMA-1 IMPERVIOUS AREA			9,877 SF	Flow over landscape

PERVIOUS AND IMPERVIOUS DISTURBED SURFACES COMPARISON TABLE			
		PROJECT:	
Total Site (acres)	0.83	Total Area of Site Disturbed (Acres)	0.59
Impervious Surfaces		Proposed Condition of Site Area Disturbed (SF)	
	Existing Conditions of Site Area Disturbed (SF)	Replaced	New
Roof Area	0	0	6,135
Parking and Driveways	1,700	0	3,142
Sidewalks, Patios, Paths, etc	50	0	
Streets (Public)	0	0	
Streets (Private)	0	0	600
Total Impervious Surfaces	1,750	0	9,877
Pervious Surfaces			
Landscape Areas	31,475		12,468
Pervious Paving	858	858	8,453
Other Pervious Surfaces			
Total Pervious Surfaces	32,333	858	20,921
Total Proposed Replaced + New Impervious Surfaces		9,877	
Total Proposed Replaced + New Pervious Surfaces		21,779	

A STORMWATER QUALITY MANAGEMENT PLAN

SCALE: 1" = 10'

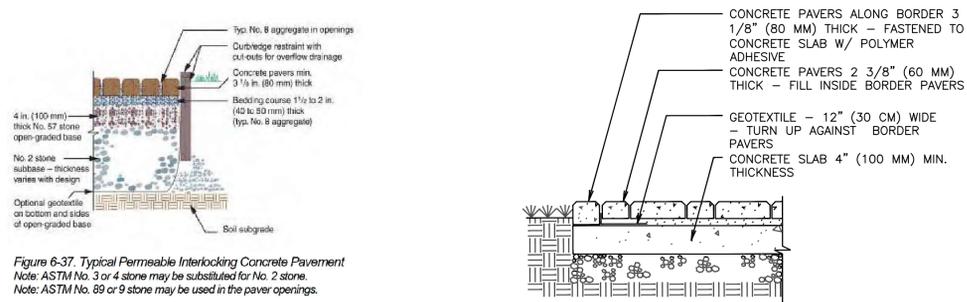


Figure 6-37. Typical Permeable Interlocking Concrete Pavement
Note: ASTM No. 3 or 4 stone may be substituted for No. 2 stone.
Note: ASTM No. 89 or 9 stone may be used in the paver openings.

DATE:	NO.	REVISION	DATE	DIRECTED BY:
10-18-2017	△			
AS NOTED	△			
DESIGNED BY: MG	△			
DRAWN BY: EH	△			



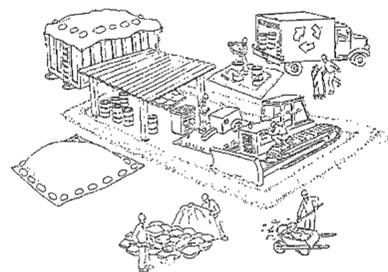
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PROJECT:
VILLAS OF MUIR ST
25000 MUIR ST.
HAYWARD, CA

SHEET TITLE:
**STORMWATER QUALITY
MANAGEMENT PLAN**

SHEET NUMBER
C5
5 OF 5

Clean Bay Blue Print



Make sure your crews and subs do the job right!

Runoff from streets and other paved areas is a major source of pollution and damage to creeks and the San Francisco Bay. Construction activities can directly affect the health of creeks and the Bay unless contractors and crews plan ahead to keep dirt, debris, and other construction waste away from storm drains and local creeks. Following these guidelines and the project specifications will ensure your compliance with City of Fremont requirements.

Materials storage & spill cleanup

- Non-hazardous materials management**
- ✓ Sand, dirt, and similar materials must be stored at least 10 feet (3 meters) from catch basins. All construction material must be covered with a tarp and contained with a perimeter control during wet weather or when rain is forecasted or when not actively being used within 14 days.
 - ✓ Use (but don't overuse) reclaimed water for dust control as needed.
 - ✓ Sweep or vacuum streets and other paved areas daily. Do not wash down streets or work areas with water!
 - ✓ Recycle all asphalt, concrete, and aggregate base material from demolition activities. Comply with **City of Fremont** Ordinances for recycling construction materials, wood, gyp board, pipe, etc.
 - ✓ Check dumpsters regularly for leaks and to make sure they are not overfilled. Repair or replace leaking dumpsters promptly.
 - ✓ Cover all dumpsters with a tarp at the end of every work day or during wet weather.
- Hazardous materials management**
- ✓ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state, and federal regulations.
 - ✓ Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecasted.
 - ✓ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecasted within 24 hours.
 - ✓ Be sure to arrange for appropriate disposal of all hazardous wastes.

Spill prevention and control

- ✓ Keep a stockpile of spill cleanup materials (rags, absorbents, etc.) available at the construction site at all times.
- ✓ When spills or leaks occur, contain them immediately and be particularly careful to prevent leaks and spills from reaching the gutter, street, or storm drain. Never wash spilled material into a gutter, street, storm drain, or creek!
- ✓ Dispose of all containment and cleanup materials properly.
- ✓ Report any hazardous materials spills immediately! Dial 911

Construction Entrances and Perimeter

- ✓ Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- ✓ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking.

Vehicle and equipment maintenance & cleaning

- ✓ Inspect vehicles and equipment for leaks frequently. Use drip pans to catch leaks until repairs are made; repair leaks promptly.
- ✓ Fuel and maintain vehicles on site only in a bermed area or over a drip pan that is big enough to prevent runoff.
- ✓ If you must clean vehicles or equipment on site, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or creeks.
- ✓ Do not clean vehicles or equipment on-site using soaps, solvents, degreasers, steam cleaning equipment, etc.



Earthwork & contaminated soils

- ✓ Keep excavated soil on the site where it will not collect in the street.
- ✓ Transfer to dump trucks should take place on the site, not in the street.
- ✓ Use fiber rolls, silt fences, or other control measures to minimize the flow of silt off the site.
- ✓ Earth moving activities are only allowed during dry weather by permit and as approved by the City Inspector in the Field.
- ✓ Mature vegetation is the best form of erosion control. Minimize disturbance to existing vegetation whenever possible.
- ✓ If you disturb a slope during construction, prevent erosion by securing the soil with erosion control fabric, or seed with fast-growing grasses as soon as possible. Place fiber rolls down-slope until soil is secure.
- ✓ If you suspect contamination (from site history, discoloration, odor, texture, abandoned underground tanks or pipes, or buried debris), call the Engineer for help in determining what should be done, and manage disposal of entaminated soil according to their instructions.



Dewatering operations

- ✓ Effectively manage all run-on, all runoff within the site, and all runoff that discharges from the site. Run-on from off site shall be directed away from all disturbed areas or shall collectively be in compliance.
- ✓ Reuse water for dust control, irrigation, or another on-site purpose to the greatest extent possible.
- ✓ Be sure to notify and obtain approval from the Engineer before discharging water to a street, gutter, or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ✓ In areas of known contamination, testing is required prior to reuse or discharge of groundwater. Consult with the Engineer to determine what testing is required and how to interpret results. Contaminated groundwater must be treated or hauled off-site for proper disposal.



Saw cutting

- ✓ Always completely cover or barricade storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or sand/gravel bags to keep slurry out of the storm drain system.
- ✓ Shovel, absorb, or vacuum saw-cut slurry and pick up all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- ✓ If saw cut slurry enters a catch basin, clean it up immediately.

Paving/asphalt work

- ✓ Always cover storm drain inlets and manholes when paving or applying seal coat, tack coat, slurry seal, or fog seal.
- ✓ Protect gutters, ditches, and drainage courses with sand/gravel bags, or earthen berms.
- ✓ Do not sweep or wash down excess sand from sand sealing into gutters, storm drains, or creeks. Collect sand and return it to the stockpile, or dispose of it as trash.
- ✓ Do not use water to wash down fresh asphalt concrete pavement.



Concrete, grout, and mortar storage & waste disposal

- ✓ Store concrete, grout, and mortar under cover, on pallets, and away from drainage areas. These materials must never reach a storm drain.
- ✓ Wash out concrete equipment/trucks off-site or into contained washout areas that will not allow discharge of wash water onto the underlying soil or onto the surrounding areas.
- ✓ Collect the wash water from washing exposed aggregate concrete and remove it for appropriate disposal off site.



Painting

- ✓ Never rinse paint brushes or materials in a gutter or street!
- ✓ Paint out excess water-based paint before rinsing brushes, rollers, or containers in a sink.
- ✓ Paint out excess oil-based paint before cleaning brushes in thinner.
- ✓ Filter paint thinners and solvents for reuse whenever possible. Dispose of oil-based paint sludge and unusable thinner as hazardous waste.



Landscape Materials

- ✓ Contain, cover, and store on pallets all stockpiled landscape materials (mulch, compost, fertilizers, etc.) during wet weather or when rain is forecasted or when not actively being used within 14 days.
- ✓ Discontinue the application of any erodible landscape material within 2 days of forecasted rain and during wet weather.

REVISIONS

NO.	DESCRIPTION	BY	DATE	APP'D

APPROVED

DATE	ADV	DATE

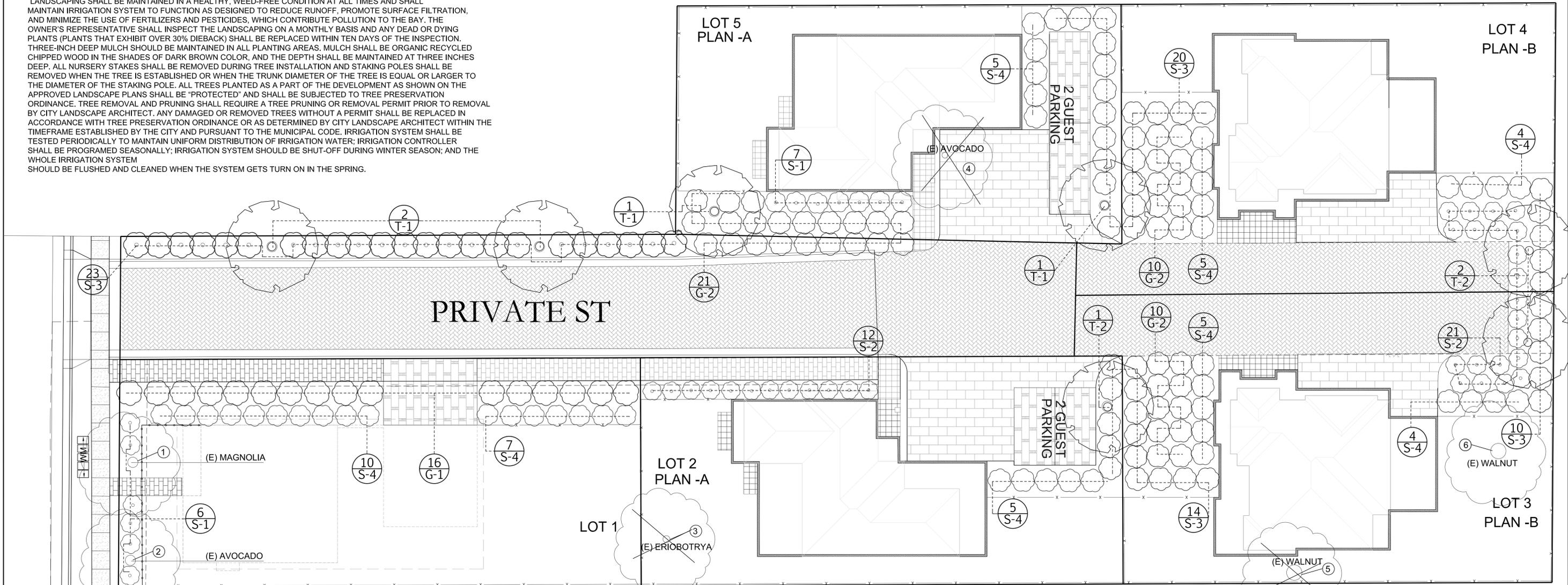
CLEAN BAY BLUE PRINT

WORK ORDER NO.
SPECIFICATION NO.
SHEET NO.
13 OF 29
FILE NO.

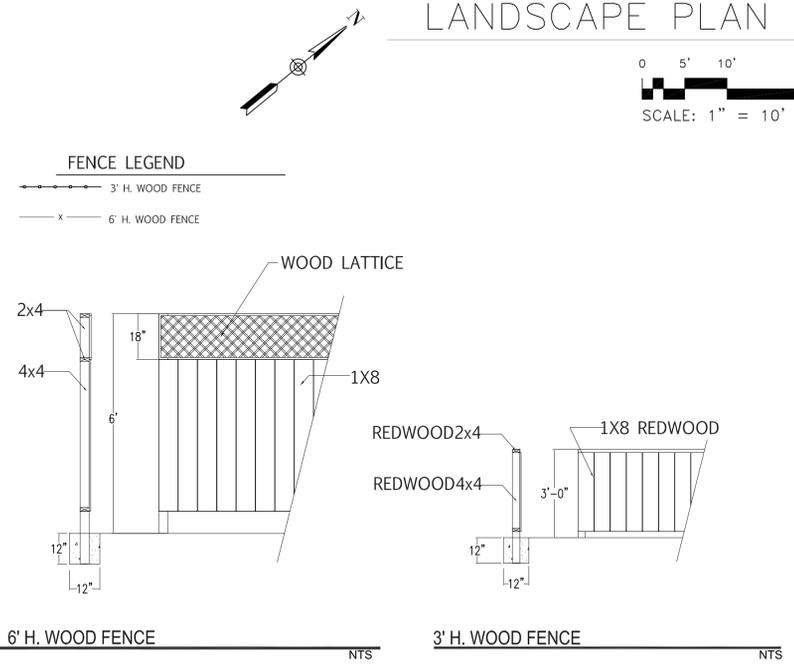
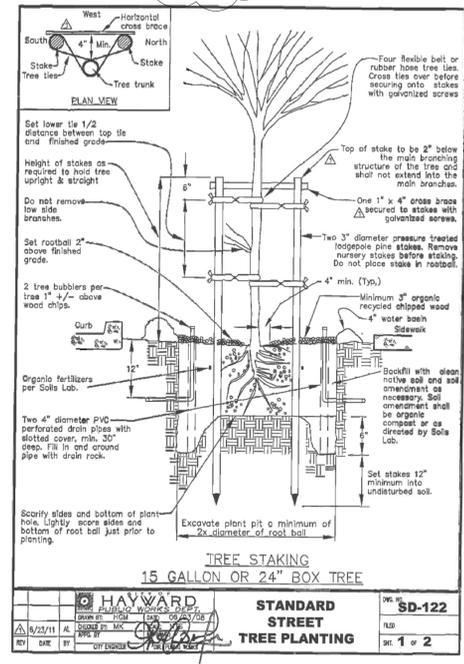
Storm drain polluters may be liable for fines of \$10,000 or more per day!

For references and more detailed information:
www.cleanwaterprogram.org
www.cabmphandbooks.com

LANDSCAPING SHALL BE MAINTAINED IN A HEALTHY, WEED-FREE CONDITION AT ALL TIMES AND SHALL MAINTAIN IRRIGATION SYSTEM TO FUNCTION AS DESIGNED TO REDUCE RUNOFF, PROMOTE SURFACE FILTRATION, AND MINIMIZE THE USE OF FERTILIZERS AND PESTICIDES, WHICH CONTRIBUTE POLLUTION TO THE BAY. THE OWNER'S REPRESENTATIVE SHALL INSPECT THE LANDSCAPING ON A MONTHLY BASIS AND ANY DEAD OR DYING PLANTS (PLANTS THAT EXHIBIT OVER 30% DIEBACK) SHALL BE REPLACED WITHIN TEN DAYS OF THE INSPECTION. THREE-INCH DEEP MULCH SHOULD BE MAINTAINED IN ALL PLANTING AREAS. MULCH SHALL BE ORGANIC RECYCLED CHIPPED WOOD IN THE SHADES OF DARK BROWN COLOR, AND THE DEPTH SHALL BE MAINTAINED AT THREE INCHES DEEP. ALL NURSERY STAKES SHALL BE REMOVED DURING TREE INSTALLATION AND STAKING POLES SHALL BE REMOVED WHEN THE TREE IS ESTABLISHED OR WHEN THE TRUNK DIAMETER OF THE TREE IS EQUAL OR LARGER TO THE DIAMETER OF THE STAKING POLE. ALL TREES PLANTED AS A PART OF THE DEVELOPMENT AS SHOWN ON THE APPROVED LANDSCAPE PLANS SHALL BE "PROTECTED" AND SHALL BE SUBJECT TO TREE PRESERVATION ORDINANCE. TREE REMOVAL AND PRUNING SHALL REQUIRE A TREE PRUNING OR REMOVAL PERMIT PRIOR TO REMOVAL BY CITY LANDSCAPE ARCHITECT. ANY DAMAGED OR REMOVED TREES WITHOUT A PERMIT SHALL BE REPLACED IN ACCORDANCE WITH TREE PRESERVATION ORDINANCE OR AS DETERMINED BY CITY LANDSCAPE ARCHITECT WITHIN THE TIMEFRAME ESTABLISHED BY THE CITY AND PURSUANT TO THE MUNICIPAL CODE. IRRIGATION SYSTEM SHALL BE TESTED PERIODICALLY TO MAINTAIN UNIFORM DISTRIBUTION OF IRRIGATION WATER; IRRIGATION CONTROLLER SHALL BE PROGRAMMED SEASONALLY; IRRIGATION SYSTEM SHOULD BE SHUT-OFF DURING WINTER SEASON; AND THE WHOLE IRRIGATION SYSTEM SHOULD BE FLUSHED AND CLEANED WHEN THE SYSTEM GETS TURN ON IN THE SPRING.



LANDSCAPE PLAN



(E) TREE CHART

NO	BOTANICAL & COMMON NAME	RECOMMENDATION
1	MAGNOLIA GRANDFLORA- MAGNOLIA	SAVE
2	AVOCADO	SAVE
3	ERIOBOTRYA - JAPONICA	REMOVE
4	AVOCADO	REMOVE
5	WALNUT	REMOVE
6	WALNUT	SAVE

PLANT LIST

TYPE	QUANT.	BOTANICAL & COMMON NAME	SIZE	WUCOLS	SPACING	HxW
TREES						
T-1	4	LAGERSTROEMIA MUSOGEE 'CRAPE MYRTLE	15 G	LW	SEE PLAN	25'X12'
T-2	3	PISTACIA CHINENSIS - CHINESE PISTASHE	15 G	LW	SEE PLAN	30'X30'
GROUND COVERS						
G-1	16	ARCTOSTAPHYLOS CULTIVAR MONTEREY CARPET- MONTEREY MANZITA	1 GC	LW	5' O.C.	2'X6'
G-2	41	CEANOTHUS GRISEUS - DIAMOND HEIGHT- DIAMOND HEIGHT - CEANOTHUS	1 GC	LW	5' O.C.	1'X6'
SHRUBS						
S-1	6	CISTUS PURPUREVS ROCK ROSE	5 GC	LW	4' O.C.	4'X4'
S-2	33	NANDINA DOMESTIC' COMPACTA- DWARF HEAVENLY BAMBOO	5 GC	LW	4' O.C.	4'X3'
S-3	67	NERIUM OLEANDER 'PETITE PINK' OLEANDER	5 GC	LW	4' O.C.	5'X5'
S-4	45	RHAPHIOLEPIS UMBELLATA MINOR YEDDO HAWTHORN	5 GC	LW	3' O.C.	5'X5'

NOTES:

- INSTALL 3" OF ORGANIC CHIPPED WOOD MULCH IN DARK BROWN COLOR IN ALL PLANTING AREAS.
- AMEND THE EXISTING SOIL WITH 3" OF ORGANIC COMPOST TO 9" IN DEPTH.
- PLANTING HOLE SHALL BE TWICE THE SIZE OF ROOT BALL FOR EACH PLANT, BACKFILL WITH ONE HALF NATIVE SOIL AND ONE HALF ORGANIC COMPOST, ADD SLOW RELEASE FERTILIZER AT TIME OF PLANTING.
- STAKE AND IRRIGATION AT TREES PER CITY OF HAYWARD TREE PLANTING DETAIL SD-122
- REQUIRED SOIL AMENDMENT SHALL BE ORGANIC COMPOST BASED ON SOIL ANALYSIS REPORT RECOMMENDATIONS.

WESLEY SAKAMOTO
LANDSCAPE ARCHITECT -LIC.# 1078
665 HOLLY HOCK DR.
SAN LEANDRO, CA. 94578
TEL: (510) 882-0864



PROJECT TITLE
VILLAS OF MUIR STREET
25000 MUIR STREET, HAYWARD, CA.

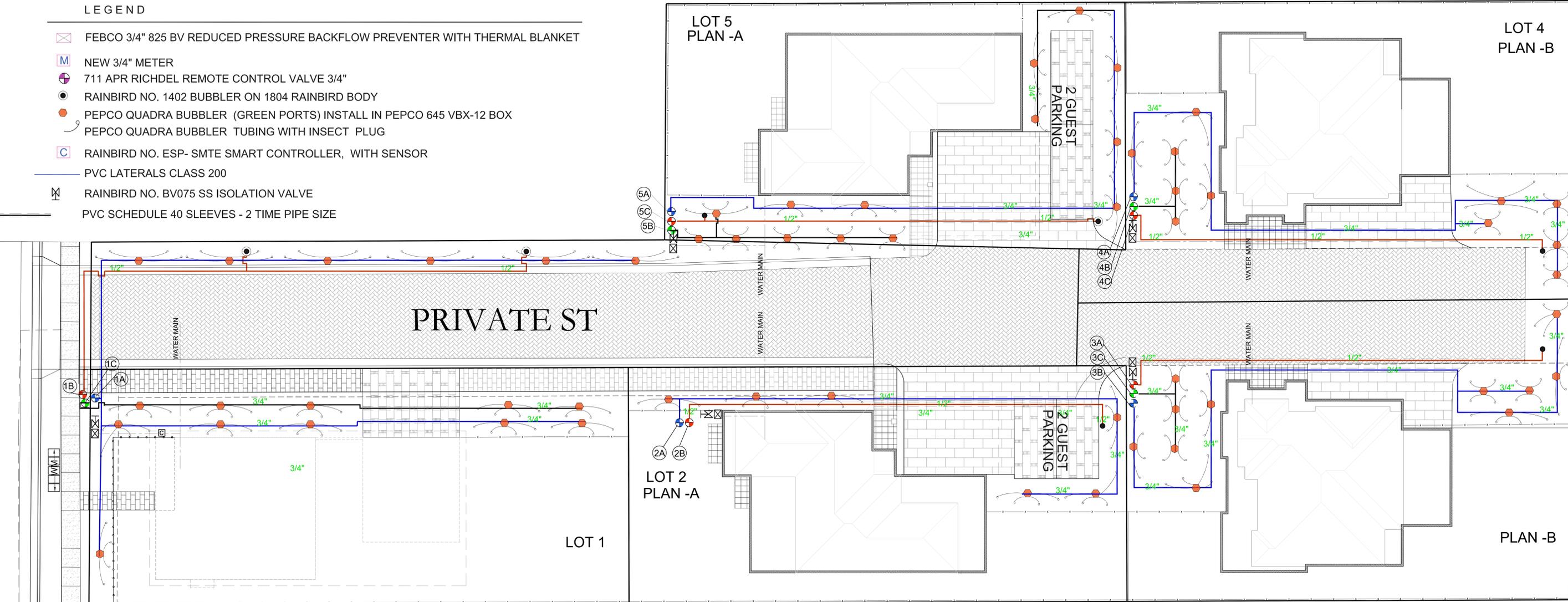
TITLE
LANDSCAPE PLAN

REVISIONS	DATE	BY	DRAWN	WS
			CHECKED	WS
			DATE	OCT. 26 2017
			SCALE	AS NOTED

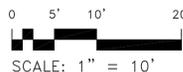
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OF 23 SHEETS

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IRRIGATION PLAN



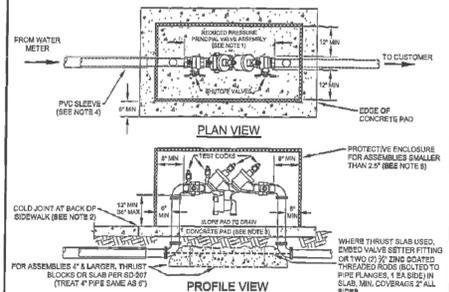
NOTES:

- 1- INSTALL BACKFLOW PREVENTER WITH ENCLOSURE AND THERMAL BLANKET PER CITY OF HAYWARD DETAIL SD-202.
- 2- INSTALL ALL REMOTE CONTROL VALVES IN PLASTIC VALVE BOXES SET TO GRADE PER CITY OF HAYWARD DETAIL SD-202.
- 3- INSTALL RAIN SENSOR ABOVE CONTROLLER.
- 4- PROVIDE POWER TO CONTROLLER LOCATION.
- 5- INSTALL PVC SCHEDULE 40 SLEEVES UNDER ALL PAVED AREAS. SLEEVES SHALL BE 24" DEEP UNDER DRIVEWAY AND 8" UNDER WALKWAYS.
- 6- TIE IN BACKFLOW PREVENTER TO MAIN LINE TO RESIDENCES WITH SCHEDULE 40 PVC MAIN AND RAINBIRD #BV075 SS ISOLATION VALVE IN PLASTIC VALVE BOX.

VALVE CHART

VALVE NO.	SIZE	IRRIGATION TYPE	GPM	PRESSURE
1A	3/4"	DRIP	4.6	35 PSI
1B	3/4"	BUBBLER	1.0	35 PSI
1C	3/4"	DRIP	2.9	35 PSI
2A	3/4"	DRIP	2.5	35 PSI
2B	3/4"	DRIP	.4	35 PSI
3A	3/4"	BUBBLER	.5	35 PSI
3B	3/4"	DRIP	3.3	35 PSI
3C	3/4"	DRIP	1.6	35 PSI
4A	3/4"	DRIP	1.6	35 PSI
4B	3/4"	DRIP	1.25	35 PSI
4C	3/4"	BUBBLER	.5	35 PSI
5A	3/4"	DRIP	2.3	35 PSI
5B	3/4"	DRIP	3.0	35 PSI
5C	3/4"	BUBBLER	1.0	35 PSI

FOR IRRIGATION AND WATER SERVICES WHERE REQUIRED BY CCR, TITLE 17, § 7604



1. ALL BACKFLOW PREVENTER ASSEMBLIES AND THEIR ORIGINATIONS SHALL BE LIMITED TO THOSE SPECIFIED ON THE LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES BY THE UNIVERSITY OF SOUTHERN CALIFORNIA'S FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH, INC. (ULISTED) FOR THE FIELD.
2. THE BACKFLOW DEVICE SHALL BE LOCATED (IN A MAXIMUM OF 6" FROM BACK OF SIDEWALK (TYP. 1) (B) WHERE SCREENING IS PROVIDED) A MAXIMUM OF 30" FROM BACK OF SIDEWALK OR (C) AT A LOCATION DETERMINED BY THE WATER DISTRIBUTION CROSS CONNECTION PERSONNEL IN THE FIELD.
3. CONCRETE PAD SHALL BE CLASS B CONCRETE, 4" MINIMUM THICKNESS, REINFORCED WITH WELDED WIRE MESH.
4. WHERE SERVICE LINES SMALLER THAN 2" PASS UNDER A SIDEWALK, THEY SHALL BE INSTALLED IN PVC CONDUIT AT LEAST 1" LARGER THAN THE SERVICE LINE AND EXTENDS AT LEAST 6" BEYOND THE EDGES OF THE SIDEWALK.
5. METAL TUBES EXPOSED TO SOIL OR CONCRETE SHALL BE COATED WITH AN EPICOTE/EPICURE PIPE PROTECTANT AND WRAPPED WITH 3M SCOTCHWRAP NO. 21 BLACK PVC TAPE (4" OVERLAP).
6. THE PORTION OF THE TRENCH FROM BACK OF SETBACK TO THE DEVICE SHALL REMAIN OPEN UNTIL WATER DISTRIBUTION CROSS CONNECTION PERSONNEL HAVE INSPECTED AND APPROVED THE INSTALLATION.
7. THE TESTING SIDE OF THE DEVICE SHALL HAVE A MINIMUM 24" OF CLEARANCE FROM OBSTRUCTIONS (NON-TERRIBLE LANDSCAPING, BUSHES, PLANTS, ETC.). METAL BACKFLOW DEVICES SHALL BE REINFORCED BY A MINIMUM OF TWO.
8. BACKFLOW ASSEMBLIES SMALLER THAN 2" SHALL BE COVERED WITH AN INSULATION BLANKET, MIN R-3, GREEN, WEATHER-RESISTANT OR FOAM AND PROTECTED BY A LOCKABLE WIRE MESH ENCLOSURE ATTACHED TO THE PAD. THE ENCLOSURE SHALL BE WELDED POWDER COATED GREEN AND SECURED WITH A DOUBLE-LOCKED GALVANIZED CHAIN LATCH SUCH THAT EITHER LOCK CAN RELEASE THE CHAIN. ONE LOCK WILL BE SUPPLIED BY CITY.
9. BACKFLOW ASSEMBLIES 2" AND LARGER SHALL BE SECURED BY A DOUBLE-LOCKED, GALVANIZED, STRAIGHT LINK CHAIN THAT LOCKS THE VALVE HANDLE DOWN AND EITHER LOCK CAN RELEASE THE CHAIN. ONE LOCK WILL BE SUPPLIED BY CITY. IN AREAS PRONE TO VANDALISM, CITY MAY ADDITIONALLY REQUIRE A LOCKABLE PROTECTIVE ENCLOSURE (SEE NOTE 8).
10. BOLLARDS MAY BE REQUIRED BY CITY TO PROVIDE ADDITIONAL PROTECTION FOR BOLLARD DETAIL.
11. BACKFLOW ASSEMBLIES INSTALLED ON PORTABLE WATER SERVICES SHALL BE LEAD FREE.
12. BACKFLOW ASSEMBLIES SHALL BE AT LEAST THE SIZE OF THE WATER METER OR THE WATER SUPPLY LINE ON THE PROPERTY SIDE OF THE METER, WHICHEVER IS LARGER.

HAYWARD STANDARD - REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTION ASSEMBLIES SD-202

REV. DATE BY CITY ENGINEER DATE: 11/20/18

1 OF 1

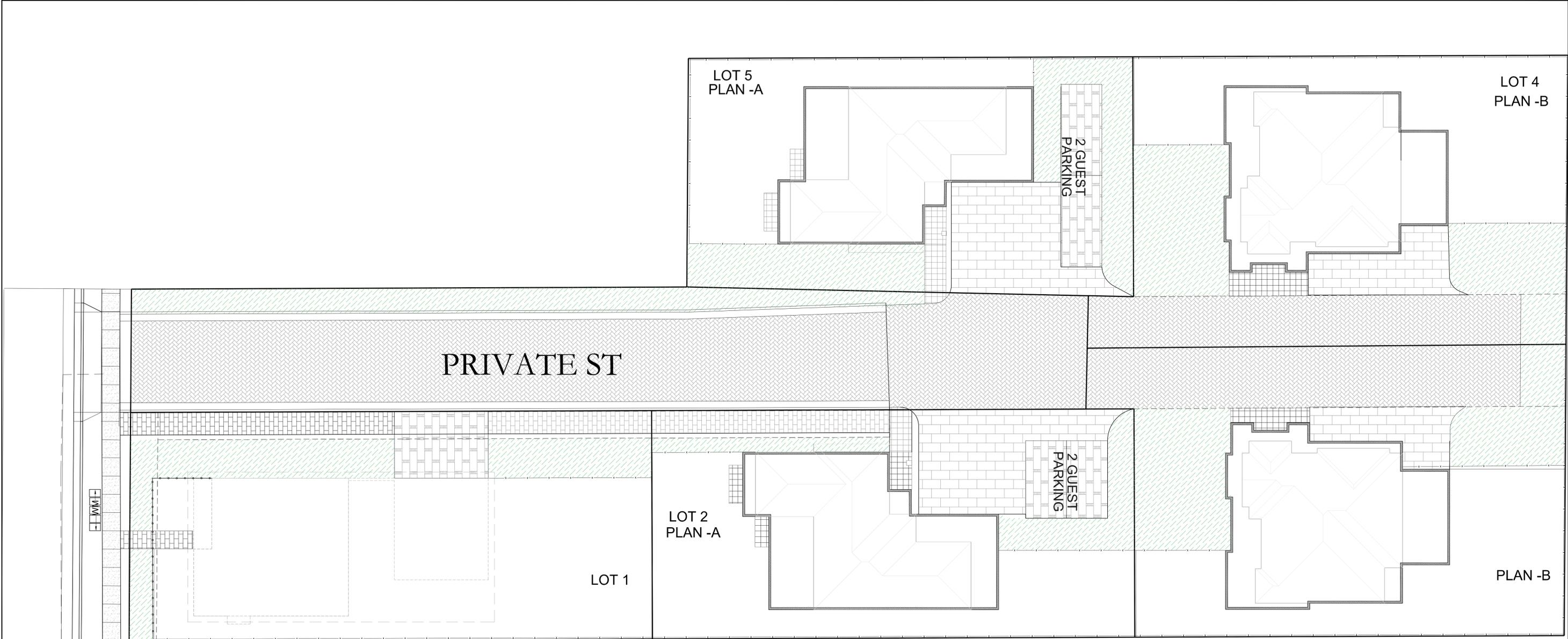
WESLEY SAKAMOTO
 LANDSCAPE ARCHITECT - LIC.# 1078
 665 HOLLY HOCK DR.
 SAN LEANDRO, CA. 94578
 TEL: (510) 882-0864



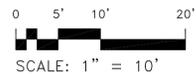
PROJECT TITLE
 VILLAS OF MUIR STREET
 25000 MUIR STREET, HAYWARD, CA.

TITLE
 IRRIGATION PLAN

REVISIONS	DATE	BY	DRAWN	WS	SHEET L2 OF 23 SHEETS
			CHECKED	WS	
			DATE	OCT. 26 2017	
			SCALE	AS NOTED	



HYDRO ZONE PLAN



 LOW WATER USE AREA

HYDRO ZONE #	PLANT FACTOR PF	IRRIGATION METHOD	IRRIGATION EFFICIENCY	ETAF (PF/IE)	LANDSCAPE AREA S.F.	ETAF X AREA	ESTIMATED TOTAL WATER USE (ETWS)
REGULAR LANDSCAPE							
2	.2	DRIP	.81	.25	5410 S.F.	1352.5	37059
					TOTAL	5410 S.F.	1352.5
						ETWU MAWA	37059 81529

MAWA = (ET)(0.62)(ETAF X LA)
 (44.2)(0.62)(.55 X 5410) = 81529 GAL.
 ETWU = (ET)(0.62)(ETAF X LA)
 (44.2)(0.62)(.25 X 5682) = 37059 GAL.

REGULAR LANDSCAPE AREA	
TOTAL ETAF X AREA	5410 S.F.
TOTAL AREA	5410 S.F.
PF / IE	.25

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 VILLAS OF MUIR STREET
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TITLE
 HYDRO ZONE PLAN

REVISIONS	DATE	BY	DRAWN	WS
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SCALE	AS NOTED			

SHEET
L3
 OF 23 SHEETS