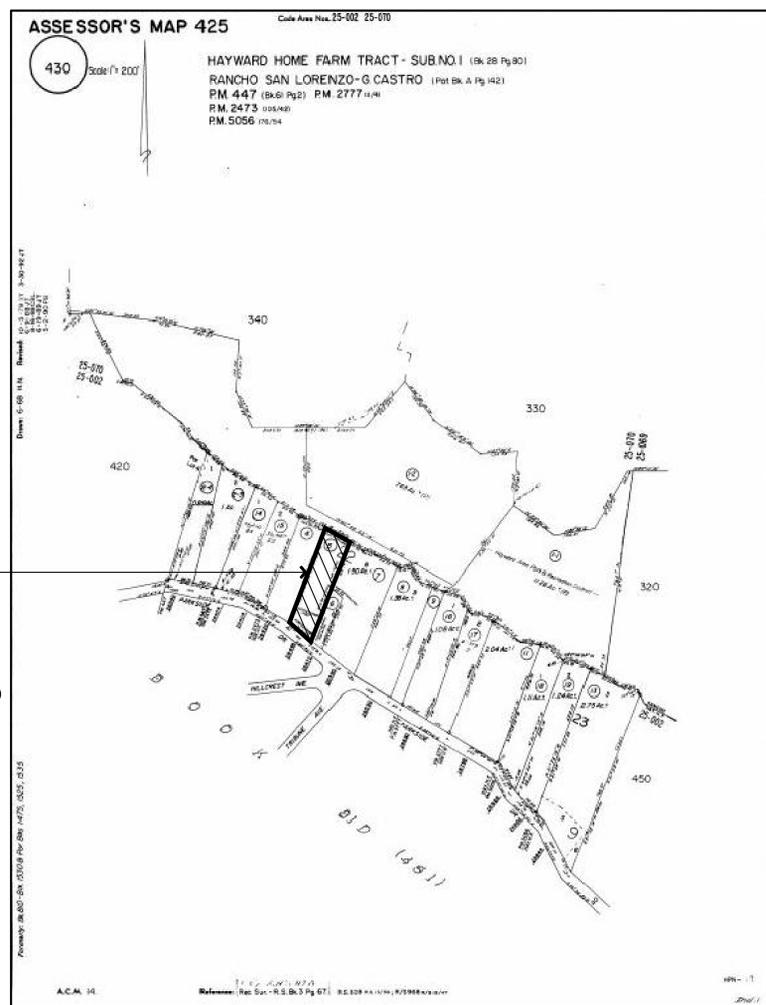


ZHANG RESIDENCE

26446 PARKSIDE DRIVE

HAYWARD, CA 94542

PROJECT LOCATION
 26446 PARKSIDE DRIVE
 HAYWARD, CA 94542
 APN: 425-0430-005-00



PARCEL MAP

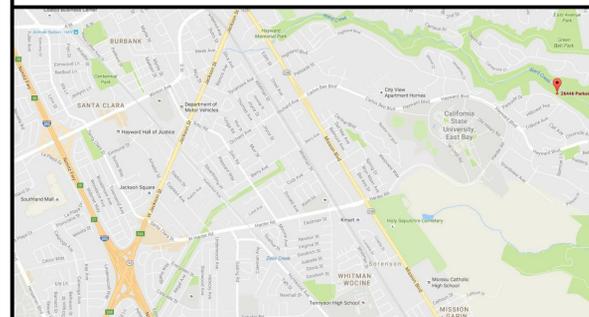
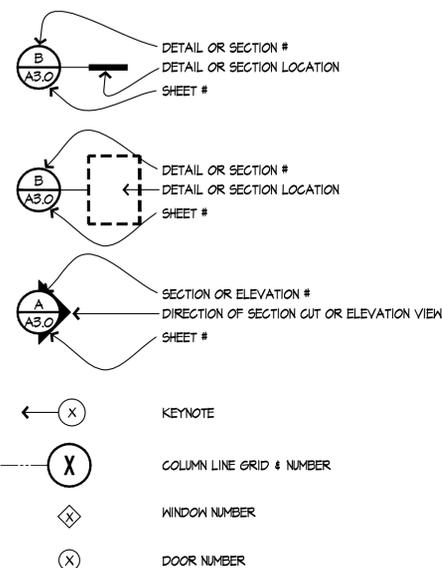
PROJECT DATA

PROPOSED BUILDING INFORMATION

LOT AREA: 39,838 S.F.
 TOTAL BLDG FOOTPRINT AREA: 3,023 S.F.
 GARAGE S.F.: 5055.0 S.F.
 MAIN LEVEL: 2780.00 S.F.
 LOWER LEVEL: 1690.00 S.F.
 TOTAL FLOOR S.F.: 4410.50 S.F.
 SETBACKS:
 FRONT YARD: 20'-0"
 RIGHT SIDE YARD: 20'-0"
 LEFT SIDE YARD: 10'-0"
 REAR YARD:

PROJECT DESCRIPTION

SYMBOL LEGEND



LOCATION MAP

PROJECT DIRECTORY

OWNER:
 CONAN ZHANG
 X
 X
 X
 email: cynica@gmail.com

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 RICHARD C. JANZEN, ARCHITECT
 6812 PASO ROBLES DRIVE
 OAKLAND, CA 94611
 (510) 339-7380 tel
 email: rich@rcharchitect.com

CIVIL/STRUCTURAL ENGINEER: RP ASSOCIATES, INC.
 CONSULTING ENGINEERS
 RAMAN PATEL, P.E.
 140 MAYHEW WAY, SUITE 507
 PLEASANT HILL, CA 94523
 (415) 863-4647 tel
 email: Raman@rpce.com

TITLE 24: GABEL ASSOCIATES, LLC.
 20825 NINES AVENUE, SUITE A
 CASTRO VALLEY, CA 94546
 (510) 426-0803 tel
 email: office@gabelenergy.com

LANDSCAPE ARCHITECT: MARY WEBER LANDSCAPE ARCHITECT
 MARY WEBER, L.A.
 1031 ARDITH DRIVE
 PLEASANT HILL, CA 94523
 (925) 682-9064 tel
 email: mary@weberla.com

APPLICABLE CODES

CODES INFORMATION:
 2013 EDITION OF THE CALIFORNIA BUILDING CODE.
 2013 EDITION OF THE CALIFORNIA MECHANICAL CODE
 2013 EDITION OF THE CALIFORNIA ELECTRICAL CODE
 2013 EDITION OF THE CALIFORNIA PLUMBING CODE
 2013 EDITION OF THE CALIFORNIA FIRE CODE

BUILDING CONSTRUCTION TYPE: TYPE V "NR"
ZONING: RNP
NUMBER OF STORIES: 2
OCCUPANCY: R3 - RESIDENTIAL

FIRE SPRINKLERS:

DRAWING INDEX

ARCHITECTURAL	
T1.0	TITLE SHEET AND PROJECT DATA
A1.0	ARCHITECTURAL SITE PLAN - EXISTING DEMO AND PROPOSED
A1.1	CONSERVATION EASEMENT SITE PLAN
A2.0	MAIN LEVEL FLOOR PLAN
A2.1	LOWER LEVEL FLOOR PLAN
A2.2	ROOF PLAN
A3.0	EXTERIOR ELEVATION
A3.1	EXTERIOR ELEVATION
A3.2	EXTERIOR ELEVATION
A3.3	EXTERIOR ELEVATION
A5.0	DOOR AND WINDOW SCHEDULES
GB.1	COLOR / MATERIAL BOARD

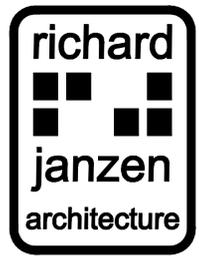
LANDSCAPE	
T-1	TREE PRESERVATION PLAN
L-1	LANDSCAPE LAYOUT PLAN
L-2	GRADING PLAN
L-3	PLANTING PLAN
L-4	IRRIGATION PLAN
L-5	LANDSCAPE DETAILS
L-6	LANDSCAPE DETAILS
L-7	IRRIGATION DETAILS

CIVIL	
C-1	TITLE SHEET
C-2	SITE PLAN
C-3	DRAINAGE AND GRADING/UTILITY PLAN
C-4	ENLARGED PLAN SHEET-1
C-5	ENLARGED PLAN SHEET-2
C-6	DRIVEMWAY PROFILE
C-7	CIVIL STANDARD DETAILS SHEET-1
C-8	CIVIL STANDARD DETAILS SHEET-2
C-9	NOTES

EC-1	EROSION CONTROL PLAN
EC-2	EROSION CONTROL DETAILS
I	EXISTING SURVEY

GENERAL NOTES

- THESE DRAWINGS ARE A PORTION OF THE CONSTRUCTION DOCUMENTS WITH WHICH THE SPECIFICATIONS ARE INTENDED TO COORDINATE ANYTHING IN ONE BUT NOT IN THE OTHER IS TO BE EXECUTED AS IF IN BOTH. DISCREPANCIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION TO THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK. CONTRACTOR ACCEPTS LIABILITY BY NOT REPORTING ANY AND ALL DISCREPANCIES TO THE ARCHITECT.
- DO NOT SCALE THE DRAWINGS. DIMENSIONS TAKE PRECEDENCE OVER SCALE OF DRAWINGS. LARGER SCALE DETAILS TAKE PRECEDENCE OVER SMALLER SCALE. REPORT ANY DISCREPANCIES PRIOR TO PROCEEDING WITH THE WORK.
- WHEN A CLOUD APPEARS IN THESE DRAWINGS, NOTE THAT THE INFORMATION ENCIRCLED HAS BEEN REVISED FROM THE PREVIOUS CONDITION.
 TYPICAL CLOUD REVISION NUMBER
- CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE. ALL INCONSISTENCIES SHALL BE NOTICED TO THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK. CONTRACTOR ASSUMES LIABILITY FOR NON-NOTIFICATION TO THE ARCHITECT.
- ALL DIMENSIONS ARE TO FACE OF STUD OR FRAMING OR CENTER LINE OF COLUMN OR MULLION, UNLESS OTHERWISE NOTED.
- PROTECT AREAS OF NEW OR EXISTING MATERIALS AND FINISH FROM DAMAGE WHICH MAY OCCUR FROM CONSTRUCTION, DUST, WATER, ETC. PROVIDE AND MAINTAIN TEMPORARY BARRIERS, CLOSURE WALLS, ETC., AS REQUIRED TO PROTECT NON-CONSTRUCTION PERSONNEL. REPAIR OR REPLACE DAMAGE TO NEW OR EXISTING MATERIALS, FINISHES, STRUCTURES, AND EQUIPMENT AS REQUIRED BY THE ARCHITECT.
- REMOVE RUBBISH AND WASTE MATERIALS ON A REGULAR BASIS AND EXERCISE STRICT CONTROL OVER JOB CLEANING TO PREVENT ANY DIRT, DEBRIS, OR DUST FROM AFFECTING, IN ANY WAY, FINISHED AREAS IN OR OUTSIDE THE JOB SITE.
- THE CONSTRUCTION DOCUMENTS ARE PROVIDED TO ILLUSTRATE THE GENERAL DESIGN AND TYPE OF CONSTRUCTION DESIRED, AND IMPLY THE FINEST QUALITY OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP THROUGHOUT. THESE DOCUMENTS DO NOT INTEND TO REFLECT EVERY CONDITION OF CONSTRUCTION. CONTRACTOR SHALL PROJECT THE INTENT OF THESE DOCUMENTS TO THE ENTIRE CONSTRUCTION WHETHER SPECIFICALLY ILLUSTRATED OR NOT.
- PROTECT AT ALL TIMES THE PROPERTY OF THE BUILDING OWNER AND THOSE OF HIS ADJACENT PROPERTY OWNERS IN REFERENCE TO THIS WORK.
- PROVIDE TEMPORARY UTILITIES THROUGHOUT PROJECT AREA, FOR THE DURATION OF THIS PROJECT AS REQUIRED.



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TITLE SHEET
 &
 PROJECT DATA

DRAWN	JF
CHECKED	RJ
DATE	FEBRUARY 06, 2017
SCALE	AS NOTED
JOB NO.	16101-4
SHEET	T1.0
OF	SHEETS

REVISIONS	BY

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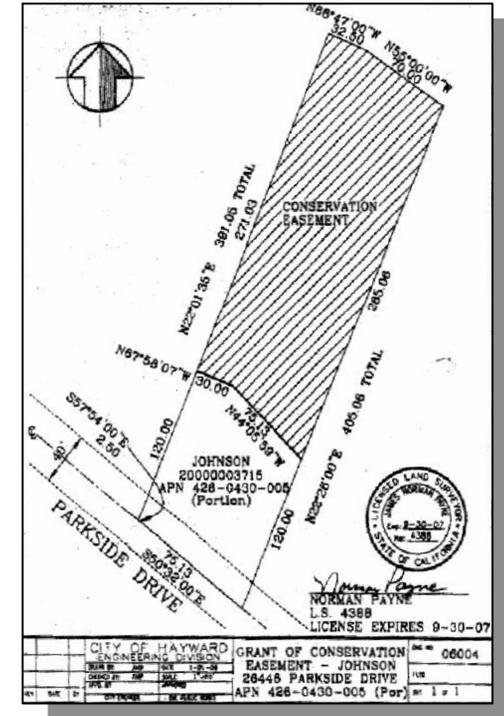
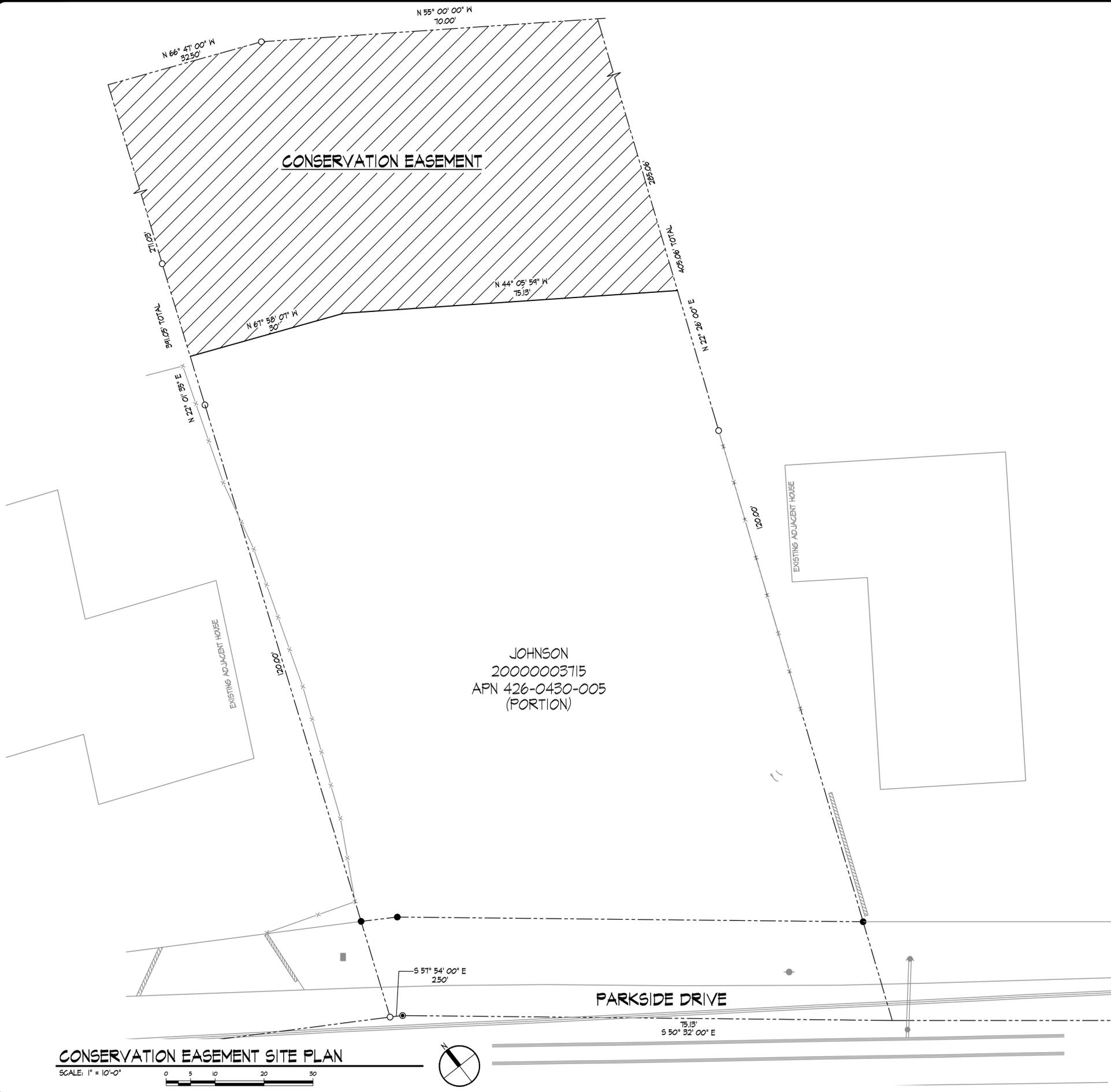
CONSERVATION
EASEMENT
SITE PLAN

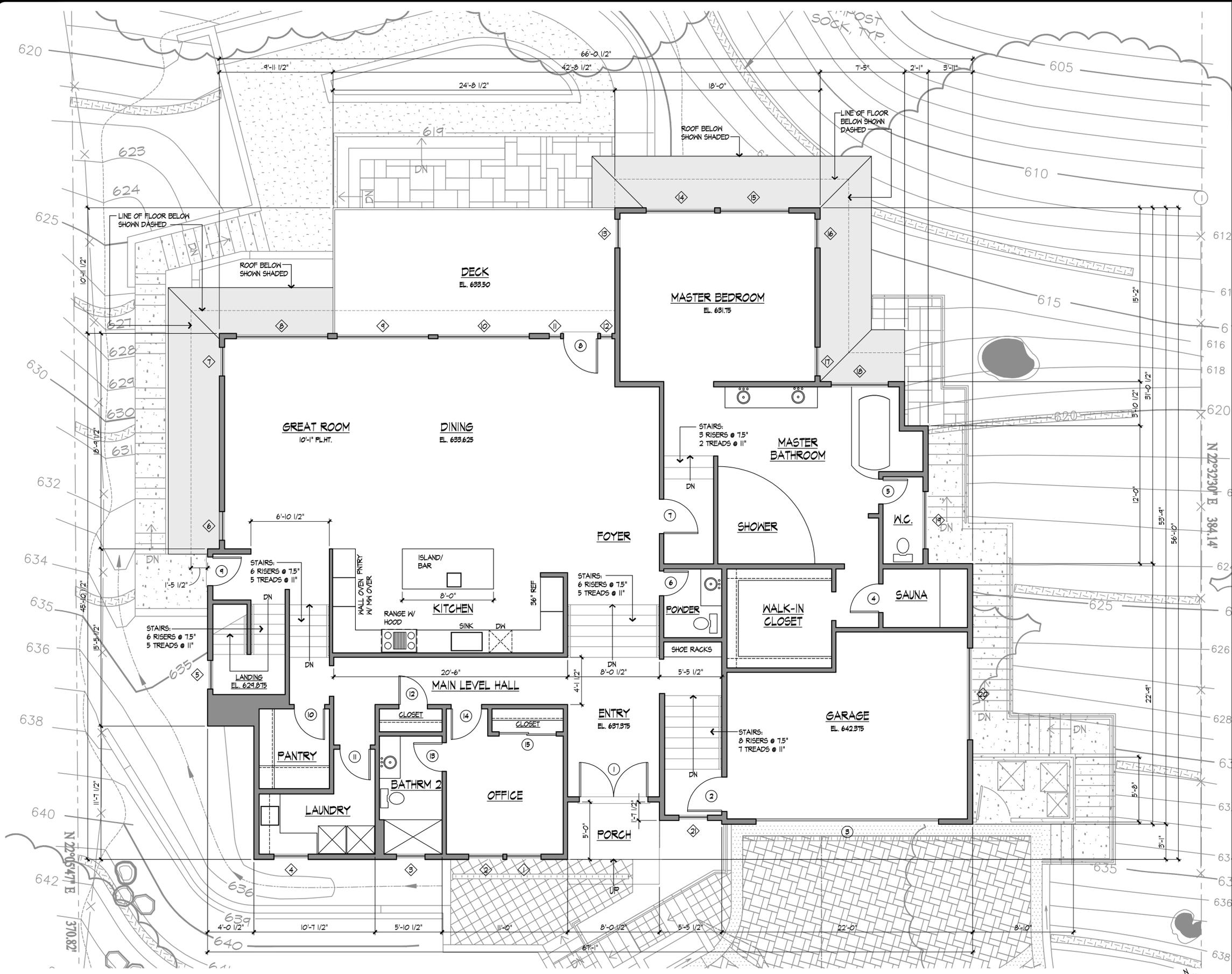
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CHECKED	RJ
DATE	FEBRUARY 06, 2017
SCALE	AS NOTED
JOB NO.	16101-4
SHEET	

A1.1
OF SHEETS

SYMBOL LEGEND

- DETAIL OR SECTION #
DETAIL OR SECTION LOCATION
SHEET #
- DETAIL OR SECTION #
DETAIL OR SECTION LOCATION
SHEET #
- SECTION #
DIRECTION OF SECTION CUT
SHEET #
- ELEVATION TARGET
ELEVATION #
SHEET #
- KEYNOTE
- WINDOW NUMBER
- DOOR NUMBER



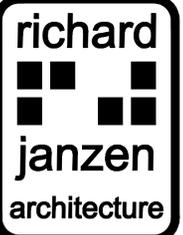


MAIN LEVEL FLOOR PLAN
 SCALE: 1/4" = 1'-0"
 2780 SF

SYMBOL LEGEND

- DETAIL OR SECTION #
DETAIL OR SECTION LOCATION
SHEET #
- DETAIL OR SECTION #
DETAIL OR SECTION LOCATION
SHEET #
- SECTION #
DIRECTION OF SECTION CUT
SHEET #
- ELEVATION TARGET
ELEVATION #
SHEET #
- KEYNOTE
- COLUMN LINE GRID # NUMBER
- WINDOW NUMBER
- DOOR NUMBER

GENERAL NOTES



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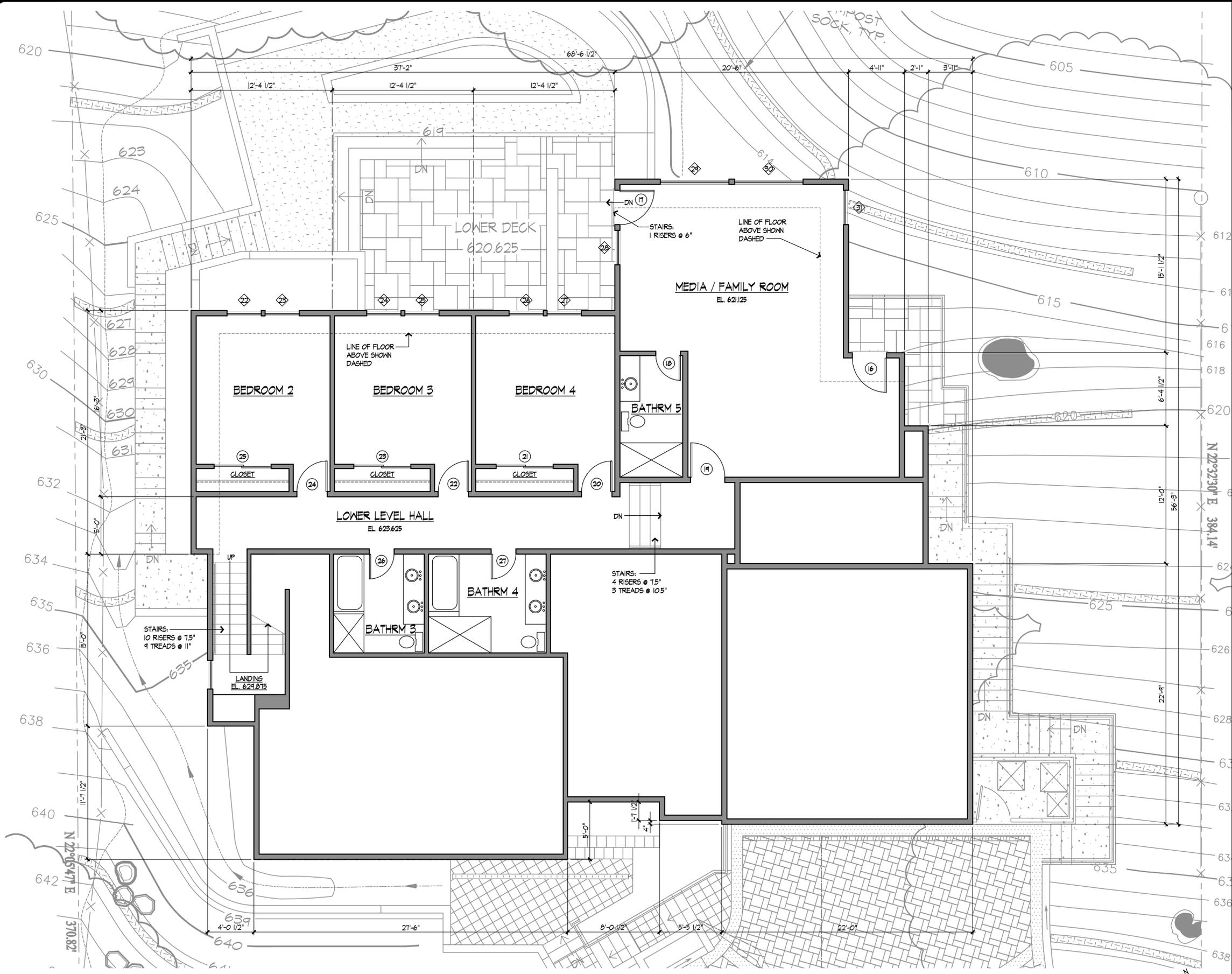
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 26446 PARKSIDE DRIVE
 HAYWARD, CA 94542

**MAIN LEVEL
 FLOOR PLAN**

DRAWN JF
 CHECKED RJ
 DATE FEBRUARY 06, 2017
 SCALE AS NOTED
 JOB NO. 16101-4
 SHEET

A2.0
 OF SHEETS

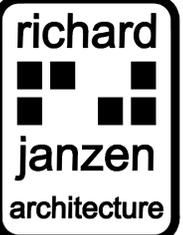


SYMBOL LEGEND

- DETAIL OR SECTION #
DETAIL OR SECTION LOCATION
SHEET #
- SECTION #
DIRECTION OF SECTION CUT
SHEET #
- ELEVATION TARGET
ELEVATION #
SHEET #
- KEYNOTE
- COLUMN LINE GRID # NUMBER
- WINDOW NUMBER
- DOOR NUMBER

GENERAL NOTES

LOWER LEVEL FLOOR PLAN 1630 SF
SCALE: 1/4" = 1'-0"



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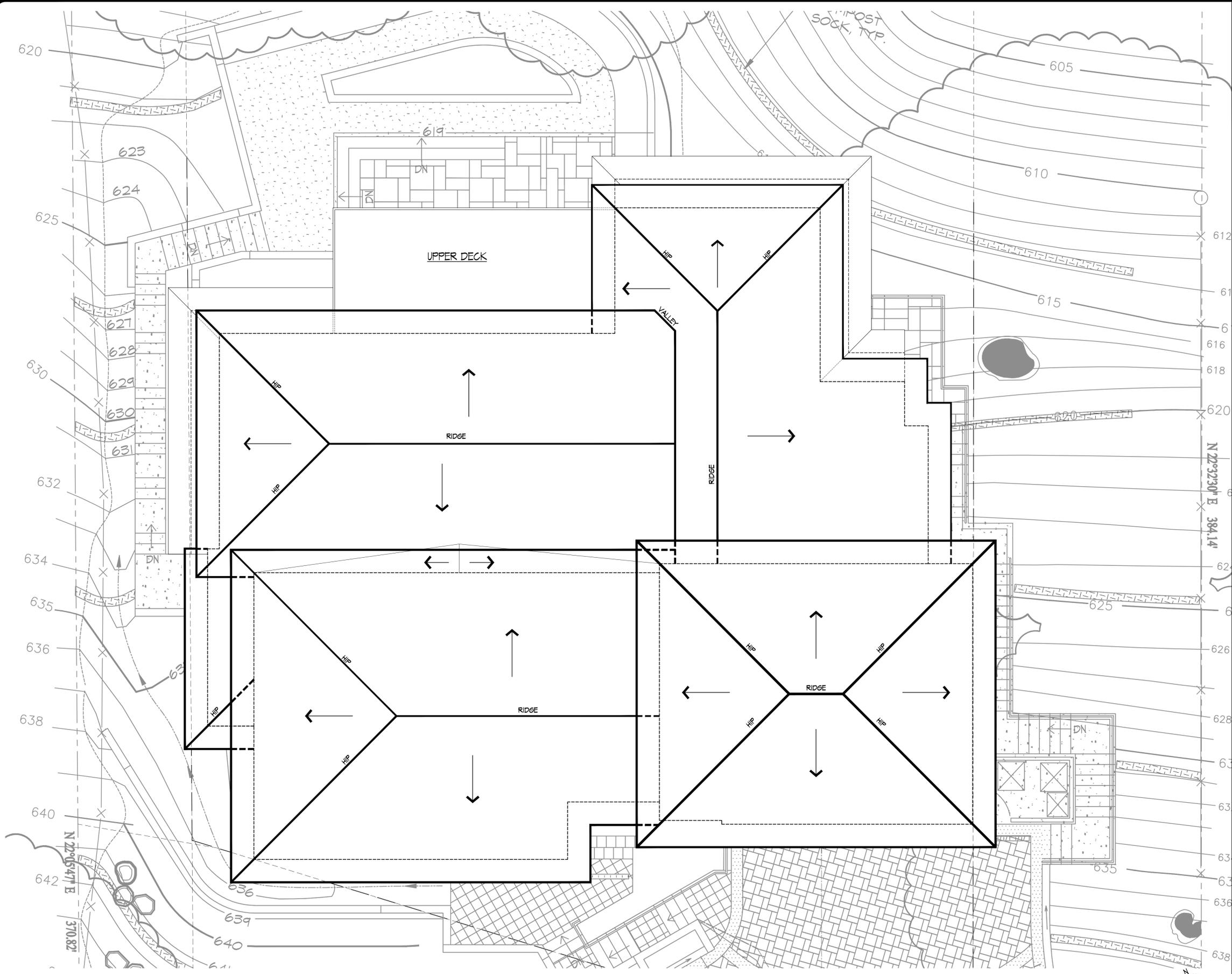
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LOWER LEVEL FLOOR PLAN

DRAWN	JF
CHECKED	RJ
DATE	FEBRUARY 06, 2017
SCALE	AS NOTED
JOB NO.	16101-4
SHEET	

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OF SHEETS



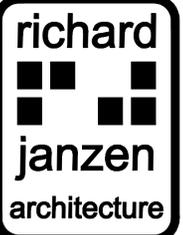
SYMBOL LEGEND

- DETAIL OR SECTION #
 DETAIL OR SECTION LOCATION
 SHEET #
- DETAIL OR SECTION #
 DETAIL OR SECTION LOCATION
 SHEET #
- SECTION #
 DIRECTION OF SECTION CUT
 SHEET #
- ELEVATION TARGET
 ELEVATION #
 SHEET #
- KEYNOTE
- COLUMN LINE GRID # NUMBER
- WINDOW NUMBER
- DOOR NUMBER

GENERAL NOTES

ROOF PLAN

SCALE: 1/4" = 1'-0"



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REVISIONS	BY

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 26446 PARKSIDE DRIVE
 HAYWARD, CA 94542

ROOF PLAN

DRAWN
 JF
 CHECKED
 RJ
 DATE
 FEBRUARY 06, 2011
 SCALE
 AS NOTED
 JOB NO.
 16101-4
 SHEET

A2.2
 OF SHEETS

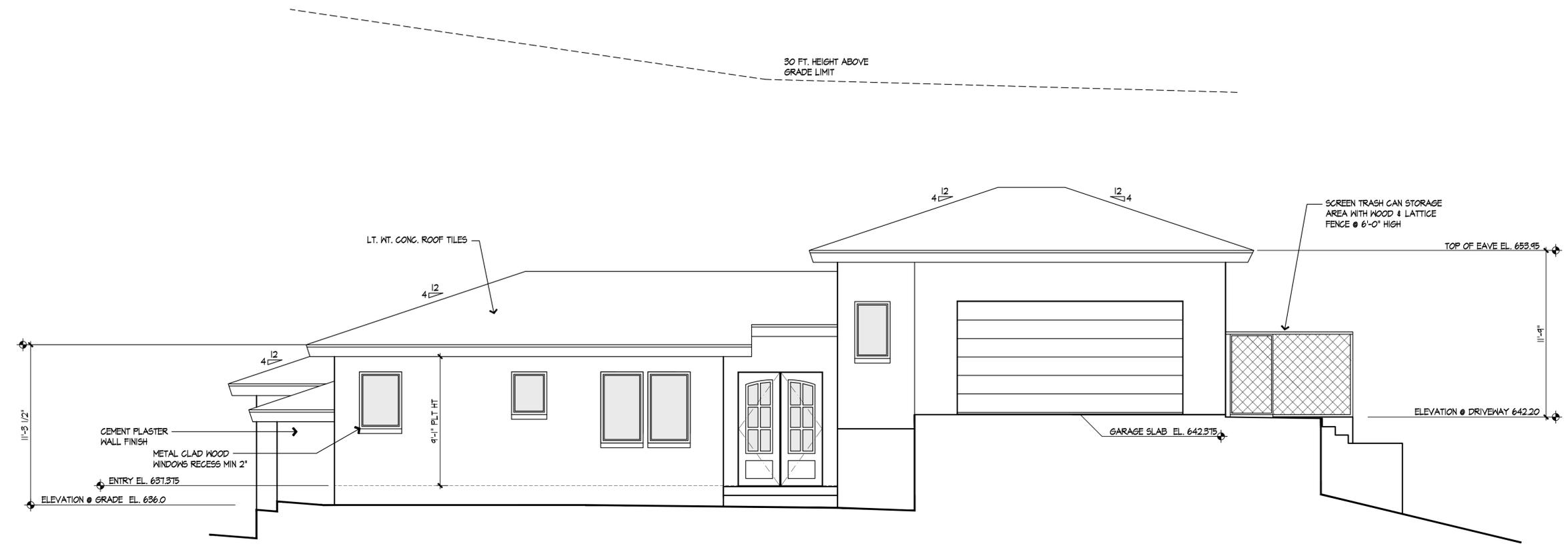
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ZHANG RESIDENCE
 26446 PARKSIDE DRIVE
 HAYWARD, CA 94542

EXTERIOR
 ELEVATION

DRAWN
 JF
 CHECKED
 RJ
 DATE
 FEBRUARY 06, 2017
 SCALE
 AS NOTED
 JOB NO.
 16101-4
 SHEET

A3.0
 OF SHEETS



FRONT ELEVATION
 SCALE: 1/4" = 1'-0"
 0 2 4 8 16

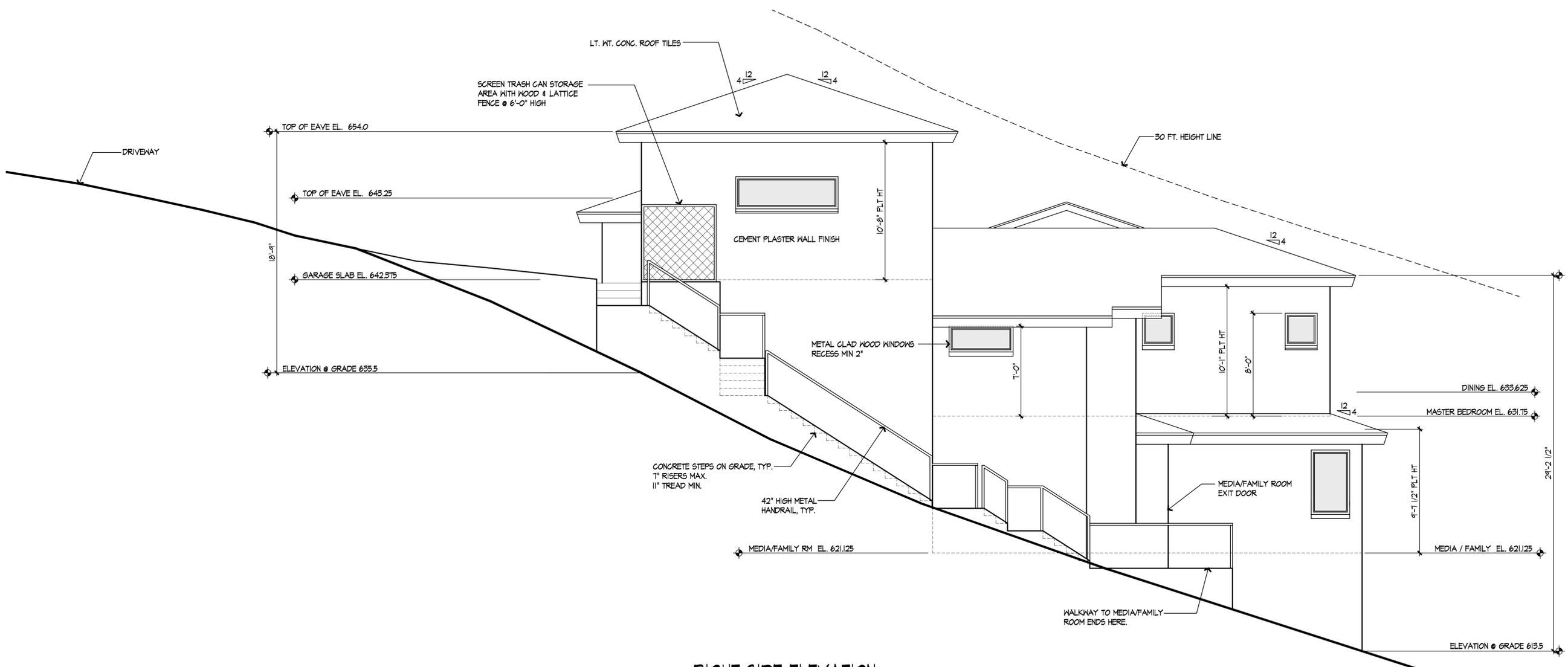
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ZHANG RESIDENCE
 26446 PARKSIDE DRIVE
 HAYWARD, CA 94542

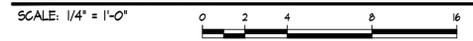
EXTERIOR
 ELEVATION

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SCALE	AS NOTED
JOB NO.	16101-4
SHEET	

A3.1
 OF SHEETS



RIGHT SIDE ELEVATION



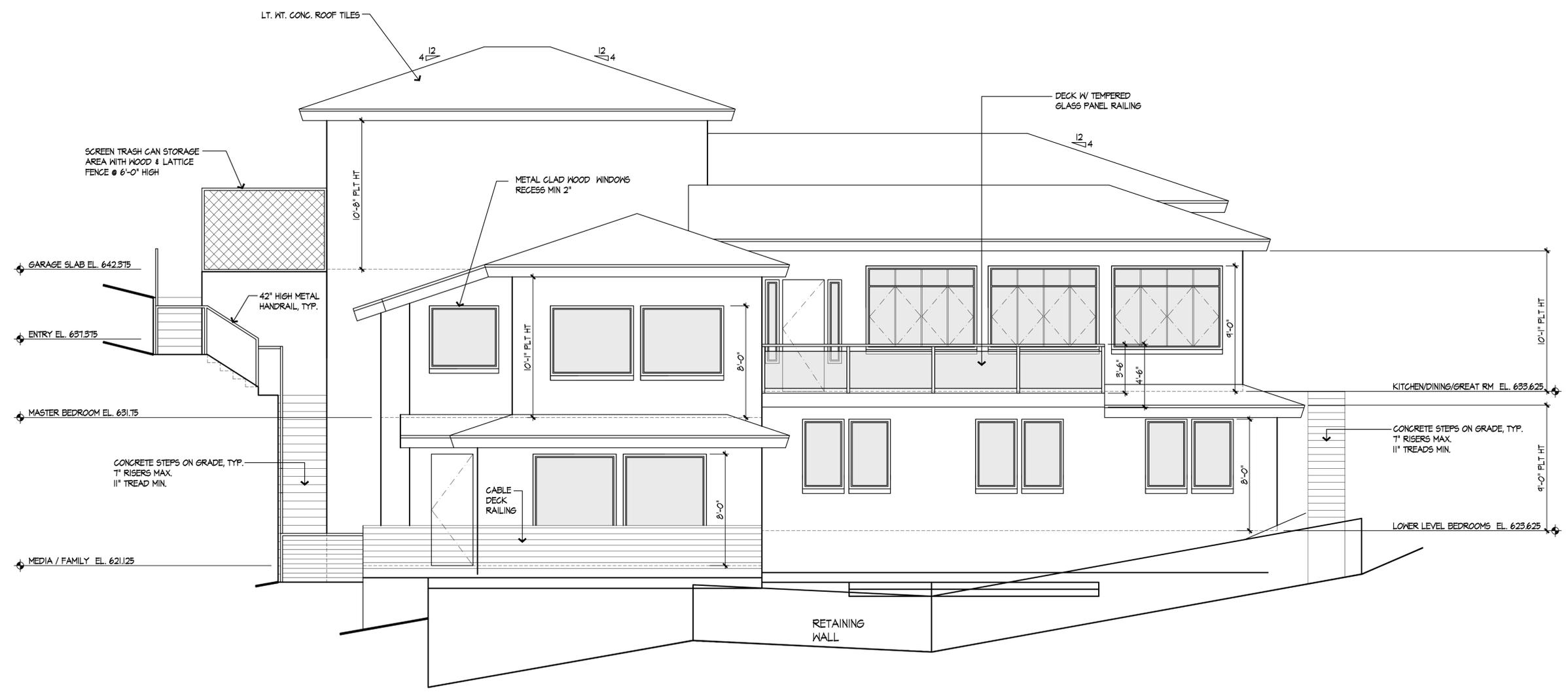
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26446 PARKSIDE DRIVE
HAYWARD, CA 94542

**EXTERIOR
ELEVATION**

DRAWN	JF
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DATE	FEBRUARY 06, 2011
SCALE	AS NOTED
JOB NO.	16101-4
SHEET	

A3.2
OF SHEETS



REAR ELEVATION

SCALE: 1/4" = 1'-0"



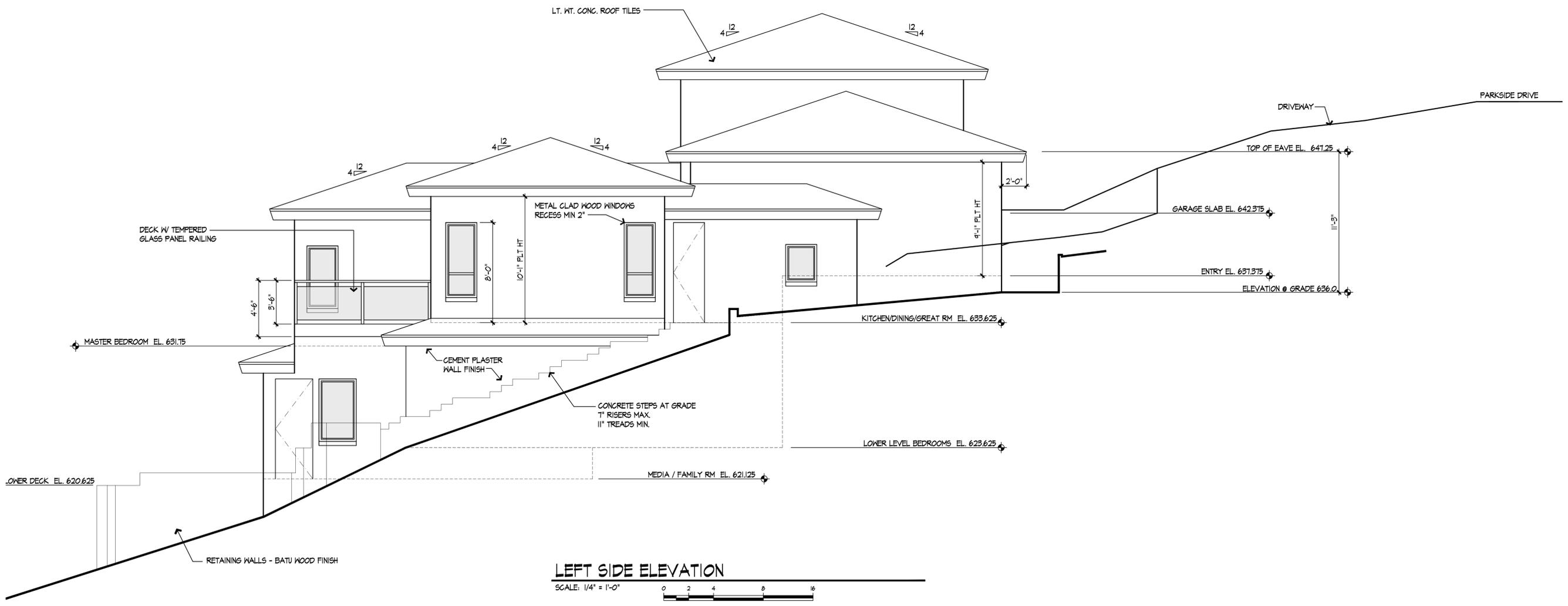
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ZHANG RESIDENCE
26446 PARKSIDE DRIVE
HAYWARD, CA 94542

EXTERIOR
ELEVATION

DRAWN	J
CHECKED	RJ
DATE	FEBRUARY 06, 2011
SCALE	AS NOTED
JOB NO.	16101-4
SHEET	

A3.3
OF SHEETS



LEFT SIDE ELEVATION
SCALE: 1/4" = 1'-0"

DOOR SCHEDULE

DOOR #	FLOOR LEVEL	LOCATION	TYPE	MATERIAL	WIDTH	HEIGHT	REMARKS
1	MAIN LEVEL	ENTRY	X	X	FR. 3'-0"	8'-0"	FR. SOLID CORE ENTRY DOORS
2		GARAGE - WEST WALL			3'-0"	8'-0"	SOLID CORE W/ SELF CLOSER, 20 MINUTE RATED
3		GARAGE DOOR			16'-0"	7'-0"	X
4		SAUNA					
5		MASTER BEDROOM - WATER CLOSET					
6		POWDER					
7		MASTER BEDROOM - WEST WALL					
8		DINING ROOM - NORTH WALL TO DECK					
9		CLOSET					
10		PANTRY					
11		LAUNDRY					
12		MAIN LEVEL HALL - CLOSET					
13		BATHROOM 2					
14		OFFICE					
15		OFFICE - CLOSET					
16	LOWER LEVEL	MEDIA / FAMILY ROOM - EAST WALL					
17		MEDIA / FAMILY ROOM - WEST WALL					
18		MEDIA / FAMILY ROOM - BATHROOM 5					
19		MEDIA / FAMILY ROOM					
20		BEDROOM 4					
21		BEDROOM 4 CLOSET					
22		BEDROOM 3					
23		BEDROOM 3 CLOSET					
24		BEDROOM 2					
25		BEDROOM 2 CLOSET					
26		WEST WALL HALL ENTRY/EXIT					
27		BATHROOM 3					
28		BATHROOM 4					

WINDOW SCHEDULE

WINDOW #	FLOOR LEVEL	LOCATION	TYPE	MATERIAL	WIDTH	HEIGHT	HEADER	OPERATION	REMARKS
1	MAIN LEVEL	OFFICE	X	X	3'-0"	5'-0"	8'-0"	CASEMENT	TEMPERED
2		OFFICE			3'-0"	5'-0"	8'-0"	CASEMENT	TEMPERED
3		BATHROOM 2			2'-6"	3'-0"	8'-0"	CASEMENT	TEMPERED
4		LAUNDRY			3'-0"	4'-0"	8'-0"	CASEMENT	TEMPERED
5		STAIR LANDING			2'-6"	3'-0"	8'-0"	CASEMENT	TEMPERED
6		GREAT ROOM - WEST WALL			2'-6"	3'-0"	8'-0"	CASEMENT	TEMPERED
7		GREAT ROOM - WEST WALL			2'-6"	3'-0"	8'-0"	CASEMENT	TEMPERED
8		GREAT ROOM/DINING - NORTH WALL			10'-0"	5'-0"	11'-0"	4 PANEL CASEMENT	TEMPERED, w/ 10'-0" x 2'-6" FX GL. OVER
9		GREAT ROOM/DINING - NORTH WALL			10'-0"	5'-0"	11'-0"	4 PANEL CASEMENT	TEMPERED, w/ 10'-0" x 2'-6" FX GL. OVER
10		GREAT ROOM/DINING - NORTH WALL			6'-0"	2'-6"	11'-0"	FX GL. OVER	TEMPERED, OVER 6'-0" x 8'-0" SLGD
11		SIDE LITE - NORTH WALL			6'-0"	5'-0"	8'-0"	2 PANEL SL GL	TEMPERED
12		SIDE LITE - NORTH WALL			6'-0"	5'-0"	8'-0"	2 PANEL SL GL	TEMPERED
13		MASTER BEDROOM - WEST WALL			6'-0"	5'-0"	8'-0"	2 PANEL SL GL	TEMPERED
14		MASTER BEDROOM - NORTH WALL			2'-6"	2'-6"	8'-0"	CASEMENT	TEMPERED
15		MASTER BEDROOM - NORTH WALL			2'-6"	2'-6"	8'-0"	CASEMENT	TEMPERED
16		MASTER BEDROOM - EAST WALL			5'-0"	4'-0"	8'-0"	2 PANEL SL GL	TEMPERED
17		MASTER BEDROOM - EAST WALL			2'-6"	4'-0"	8'-0"	CASEMENT	TEMPERED
18		MASTER BATHROOM - NORTH WALL			2'-6"	4'-0"	8'-0"	CASEMENT	TEMPERED
19		MASTER BATHROOM - WATER CLOSET			3'-0"	5'-0"	8'-0"	CASEMENT	TEMPERED
20		GARAGE - EAST WALL			3'-0"	5'-0"	8'-0"	CASEMENT	TEMPERED
21		GARAGE STAIRWELL TO ENTRY			3'-0"	5'-0"	8'-0"	CASEMENT	TEMPERED
22	LOWER LEVEL	BEDROOM 2 - NORTH WALL			3'-0"	5'-0"	8'-0"	CASEMENT	TEMPERED
23		BEDROOM 2 - NORTH WALL			3'-0"	5'-0"	8'-0"	CASEMENT	TEMPERED
24		BEDROOM 3 - NORTH WALL			3'-0"	5'-0"	8'-0"	CASEMENT	TEMPERED
25		BEDROOM 3 - NORTH WALL			3'-0"	5'-0"	8'-0"	CASEMENT	TEMPERED
26		BEDROOM 4 - NORTH WALL			6'-0"	5'-0"	8'-0"	2 PANEL CASEMENT	TEMPERED
27		BEDROOM 4 - NORTH WALL			6'-0"	5'-0"	8'-0"	2 PANEL CASEMENT	TEMPERED
28		MEDIA / FAMILY ROOM - WEST WALL			3'-0"	5'-0"	8'-0"	CASEMENT	TEMPERED
29		MEDIA / FAMILY ROOM - NORTH WALL							
30		MEDIA / FAMILY ROOM - NORTH WALL							
31		MEDIA / FAMILY ROOM - EAST WALL							

DOOR & WINDOW NOTES

- NEW WINDOWS AND SLIDING GLASS DOORS (SGLDRS) TO BE METAL CLAD WOOD WINDOWS.
- ALL WINDOWS TO BE TEMPERED.
- WINDOWS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
- COLOR BY OWNER.
- ALL WINDOW SHALL BE NFRC RATED PER TITLE 24 DOCUMENTS.
- ALL DOORS SHALL BE FRAMED TO NOMINAL 8'-0" HEADER HEIGHT TO ALIGN TOP OF DOORS WITH TOP OF ALL WINDOWS EXCEPT OTHERWISE NOTED.

DOOR TYPES

- A FR. 3'-0" x 8'-0" SOLID CORE ENTRY DOOR
- B 3'-0" x 8'-0" SOLID CORE W/ SELF CLOSER 20 MINUTE RATED DOOR
- C 2'-4" x 8'-0" VERTICAL GRAIN D.F. 1-3/4" INTERIOR DOOR
- D 2'-6" x 8'-0" VERTICAL GRAIN D.F. 1-3/4" INTERIOR DOOR
- E 2'-0" x 8'-0" VERTICAL GRAIN D.F. 1-3/4" INTERIOR DOOR
- F 2'-8" x 8'-0" VERTICAL GRAIN D.F. 1-3/4" INTERIOR DOOR
- G 3'-0" x 8'-0" VERTICAL GRAIN D.F. 1-3/4" INTERIOR DOOR
- H FR. 2'-6" x 8'-0" OUTWARD SWINGING CLOSET DOORS
- I FR. 3'-0" x 8'-0" OUTWARD SWINGING CLOSET DOORS
- J 16'-0" x 7'-0" OVERHEAD STEEL GARAGE DOOR W/ GLASS PANELS

WINDOW TYPES

- A 10'-0" x 2'-0" SLIDING GLASS
- B 2'-0" x 6'-6" FIXED GLASS
- C 3'-0" x 5'-0" CASEMENT
- D 2'-6" x 4'-0" CASEMENT
- E 3'-6" x 4'-6" ANNING
- F 5'-0" x 4'-6" SLIDING GLASS
- G 3'-6" x 7'-0" ANNING
- H 7'-0" x 7'-0" ANNING
- I 6'-0" x 6'-8" SLIDING GLASS DOOR W/ 6'-0" x 2'-0" FIXED GLASS OVER
- J 6'-0" x 7'-0" ANNING
- K 3'-0" x 6'-0" ANNING
- L 2'-0" x 2'-6" ANNING
- M 6'-0" x 5'-0" SLIDING GLASS EGRESS
- N 6'-6" x 5'-0" ANNING
- O 4'-0" x 5'-0" SLIDING GLASS EGRESS



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 HAYWARD, CA 94542

DOOR & WINDOW SCHEDULES

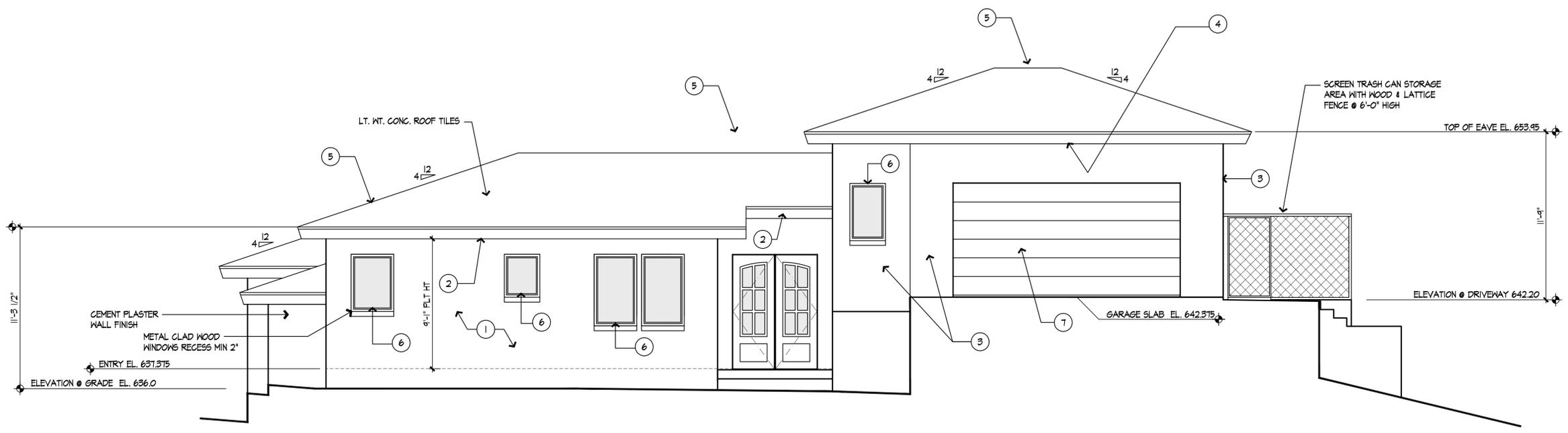
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CHECKED	RJ
DATE	FEBRUARY 06, 2017
SCALE	AS NOTED
JOB NO.	16101-4
SHEET	A5.0

REVISIONS	BY

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HAYWARD, CA 94542

**ZHANG
RESIDENCE
COLOR
BOARD**

DRAWN JF
CHECKED RJ
DATE FEBRUARY 06, 2017
SCALE AS NOTED
JOB NO. 16101-4
SHEET
CB.1
OF SHEETS



COLOR BOARD - FRONT ELEVATION

SCALE: 1/4" = 1'-0"

EXTERIOR COLOR SPECIFICATIONS

1 COLOR # 1: APLEGATE PARK NO. KM 5753
PLACEMENT: MAIN EXTERIOR HOUSE COLOR

2 COLOR # 2: PASEO VERDE NO. KM 5754
PLACEMENT: ROOF EAVE FASCIA AND ROOF DOWNSPOUTS

3 COLOR # 3: LA GRANGE NO. KM 5755
PLACEMENT: PAINT COLOR FOR GARAGE (ALL SIDES AND FRONT)

4 COLOR # 4: ROLLING HILLS NO. KM 5758
PLACEMENT: GARAGE ROOF FASCIA AND ROOF DOWNSPOUTS

COLOR SPECIFICATIONS NOTES

- EXTERIOR DWELLING COLORS AND GARAGE FRONT FACE SHALL BE BY PAINT MANUFACTURER "KELLY-MOORE PAINT" OR EQUAL.
- ROOFING SHALL BE BY ROOFING MANUFACTURER "EAGLE ROOFING PRODUCTS" 4602 CONCORD BLEND, PROFILE: BEL AIR DESCRIPTION: CHARCOAL, TAN BLEND OR EQUAL.
- WINDOWS SHALL BE BY WINDOW MANUFACTURER "ANDERSEN WINDOWS" VINYL CLAD WOOD INTERIOR #400 SERIES WINDOWS OR EQUAL.

ROOF SPECIFICATIONS

5 COLOR # 5: CONCORD BLEND NO. 4602
PLACEMENT: LIGHTWEIGHT CONCRETE ROOF TILES

WINDOW SPECIFICATIONS

6 COLOR # 6: TERRATONE
PLACEMENT: EXTERIOR FRAME (GLADDING)

GARAGE DOOR SPECIFICATIONS

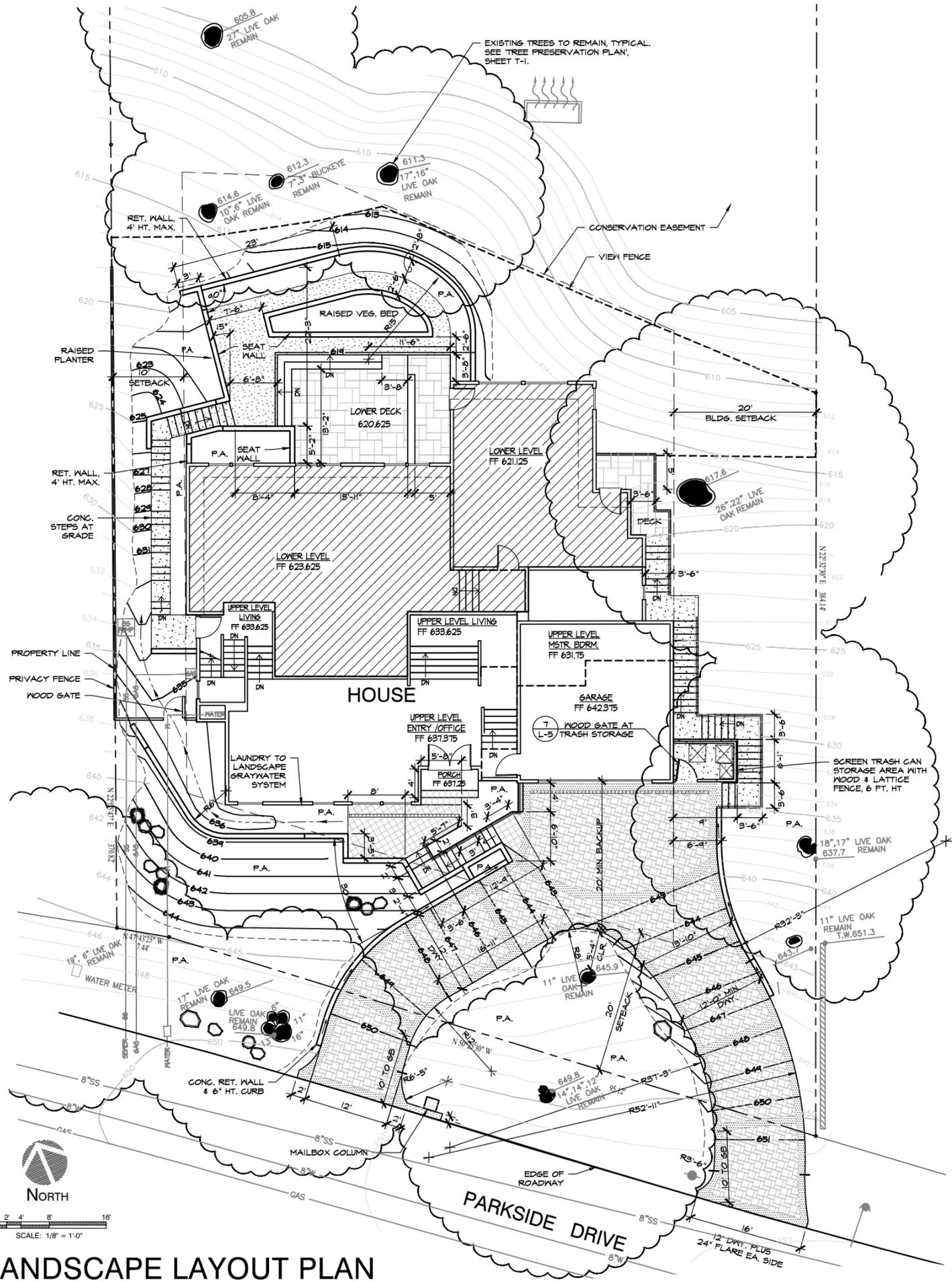
7 COLOR # 7: MUD ROOM NO. KM 4575
PLACEMENT: EXTERIOR FACE OF GARAGE DOOR

ABBREVIATIONS

AD	AREA DRAIN	HP	HIGH POINT
AGG	AGGREGATE	HT	HEIGHT
ARCH	ARCHITECT	INCL	INCLUDED
BLDG	BUILDING	ID	INSIDE DIAMETER
BC	BOTTOM OF CURB	INV	INVERT
BS	BOTTOM OF STAIR	JT	JOINT TRENCH
BM	BOTTOM OF WALL	LP	LOW POINT
CB	CATCH BASIN	LF	LINEAR FEET
CF	CUBIC FOOT	MAX	MAXIMUM
CL	CENTER LINE	MIN	MINIMUM
CLR	CLEAR	OC	ON CENTER
CONC	CONCRETE	OD	OUTSIDE DIAMETER
CONST	CONSTRUCTION	PC	POINT OF CONNECTION
CONT	CONTINUOUS	PT	PRESSURE TREATED
DIA	DIAMETER	R	RADIUS
DOUG	DOUGLAS	RWD	REDWOOD
DWGS	DRAWINGS	SCH	SCHEDULE
EA	EACH	SHT	SHEET
ELEC	ELECTRICAL	SL	SCORELINE
ELEV	ELEVATION	SS	SANITARY SEWER
EQ	EQUAL	STD	STANDARD
FFE	FINISH FLOOR ELEV	SQ	SQUARE
F6	FINISH GRADE	SYM	SYMBOL
FIN	FINISH	TBD	TO BE DETERMINED
FL	FLOW LINE	TC	TOP OF CURB
FC	FACE OF CURB	T6	TOP OF GRATE
FT6	FOOTING	TS	TOP OF STAIR
GAL	GALLON	TN	TOP OF WALL
GALV	GALVANIZED	TYP	TYPICAL
GB	GRADE BREAK	VERT	VERTICAL
HDR	HEADER	W	WATER
HORZ	HORIZONTAL		

GENERAL NOTES

- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, GRADES, UNDERGROUND UTILITIES, DRAIN LINES, CONDUITS, VEGETATION ETC. IN THE FIELD PRIOR TO COMMENCING WORK. CONTACT UNDERGROUND SERVICE ALERT (USA) AT 1-800-227-2588 TO REQUEST THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCEMENT OF WORK. ALL DISCREPANCIES OR QUESTIONS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR RESOLUTION.
- ALL LANDSCAPE CONSTRUCTION AND MATERIALS INCLUDING DEMOLITION, GRADING, ELECTRICAL, IRRIGATION & PLANTING SHALL CONFORM TO GOVERNING CODES AND ORDINANCES.
- CONTRACTOR SHALL CONSULT APPROPRIATE AGENCIES FOR CONDITIONS AFFECTING THE PROPOSED IMPROVEMENTS TO THE SITE. ALL REQUIRED PERMITS TO BE OBTAINED BY THE OWNER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR COSTS INCURRED DUE TO DAMAGE AND REPLACEMENT OF SAID UTILITIES.
- CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
- THESE PLANS REPRESENTS LANDSCAPE IMPROVEMENTS TO PLANS PROVIDED BY THE CIVIL ENGINEER. REFER TO SITE IMPROVEMENT PLANS AND ARCHITECT'S PLANS FOR CURRENTS INFORMATION REGARDING GRADING, DRAINAGE, BUILDINGS, PAVING, UTILITIES AND SITE INFORMATION.
- CONTRACTOR SHALL COORDINATE WORK WITH OTHER TRADES TO ASSURE THE INTEGRITY OF ALL WORK.
- MAINTENANCE: THE LANDSCAPE CONTRACTOR SHALL MAINTAIN THE PROJECT FOR 30 DAYS FOLLOWING APPROVAL TO BEGIN THE MAINTENANCE PERIOD. REGULAR WATERING, CULTIVATING, WEEDING, REPAIR OF STAKES AND TIES, FINE TUNING IRRIGATION SYSTEM AND SPRAYING FOR INSECTS SHALL BE PERFORMED. PLANTS SHALL BE FERTILIZED AS NECESSARY TO MAINTAIN VIGOROUS GROWTH AND GOOD COLOR.
- SITE OBSERVATIONS: THE LANDSCAPE CONTRACTOR IS TO NOTIFY THE OWNER'S REPRESENTATIVE 48 HOURS PRIOR TO A REQUIRED SITE OBSERVATION. SITE OBSERVATIONS ARE AS FOLLOWS:
 - ONE SITE OBSERVATION OF INSTALLED HARDSCAPE ELEMENTS INCLUDING PAVING, STAIRS AND WALLS AND GRADING & DRAINAGE.
 - ONE SITE OBSERVATION OF IRRIGATION SYSTEM, REFER TO IRRIGATION NOTES.
 - ONE SITE OBSERVATION ONCE PLANTS ARE ON-SITE BUT PRIOR TO PLANTING FOR REVIEW OF QUALITY OF DELIVERED PLANT MATERIALS AND SPOT LOCATIONS OF TREES.
 - PUNCH LIST SITE OBSERVATION SHALL BE MADE WHEN ALL WORK IS INSTALLED. ONCE THE CONTRACTORS WORK HAS BEEN INSTALLED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE THE MAINTENANCE PERIOD SHALL BEGIN.
 - FINAL SITE OBSERVATION SHALL BE MADE AT THE CONCLUSION OF THE MAINTENANCE PERIOD. PRIOR TO FINAL SITE OBSERVATION, ALL LANDSCAPE AREAS ARE TO BE NEED FREE AND ALL PLANTS IN A HEALTHY THRIVING CONDITION. NOTIFY THE OWNER'S REPRESENTATIVE 4 DAYS PRIOR TO ANTICIPATED DATE OF THE FINAL SITE OBSERVATION.
- CERTIFICATE OF SUBSTANTIAL COMPLETION: PRIOR TO ISSUANCE OF A 'CERTIFICATE OF OCCUPANCY' CONTRACTOR SHALL SUBMIT A CERTIFICATE OF SUBSTANTIAL COMPLETION FOR PHASE ONE - TREE MITIGATION WORK. CERTIFICATE AVAILABLE AT WWW.HAYWARD-CASOVCITY.



LANDSCAPE CONSTRUCTION LEGEND

SYMBOL	DESCRIPTION	DETAIL
	DRIVEWAY DRIVEWAY FIELD - MODULAR PAVERS, 80mm MANU. BASILITE PAVERS STYLE: 'ARTISAN SLATE PREMIER' PATTERN: 'BLEND' (60% 12x12, 40% 6x12) COLOR: 'POSITANO'	10 L-5
	ENTRY WALK - PERMEABLE PAVERS, 60mm - MANU. 'BASILITE' - STYLE: 'PERMEABLE ARTISAN SLATE' - PATTERN: 'HERRINGBONE' 100% RECTANGLE (5.5"x8.25"x60mm) - COLOR: 'POSITANO'	2 L-5
	ENTRY STAIRS - MODULAR PAVERS TREADS: 'BASILITE' STYLE: 'ARTISAN SLATE PREMIER' COLOR: 'POSITANO'	4 L-5
	CONCRETE PAVING & STAIRS (SIDEYARD) - HEAVY BROOM FINISH, NO COLOR	1 L-5
	GRAVEL PAVING - DECOMPOSED GRANITE (1/4" MINUS) - COLOR: GRAY	3 L-5
	DECKS - COLORED STAMPED CONCRETE - REFER TO ARCHITECT'S PLANS - RAILINGS: BLACK T.S. 42" HT. MIN, 45" HT. MAX - REFER TO ARCH. PLANS FOR DETAILS	SEE ARCH PLANS
	RETAINING WALLS & SEAT WALLS - 'VERSA-LOK' 'COMPAC' 'CLASSIC SPLIT-FACE' - COLOR: TBD - REFER TO STRUC. ENGR'S RECOMMENDATIONS. DENOTES SLOPE AT TOP OF WALL; ALL OTHER WALLS SHALL BE LEVEL	5 L-5
	PRIVACY FENCE WOOD W/ LATTICE TOP, 6 FT. HT.	8 L-5
	VIEW FENCE WOOD & WIRE, 6 FT. HT., MAX.	9 L-5
	HANDRAIL AT STAIRS BLACK TUB, STEEL HEIGHT: 42" MIN, 45" MAX	SEE ARCH PLANS
	LANDSCAPE BOULDER GROUPING HAND SELECTED 'MOSS FIELDSTONE' 3 BOULDERS MIN. AT EA. GROUPING, ONE- 2' x 2.5' MIN, TWO- 1.5' x 2' MIN.	
	BOULDERS 'MOSS FIELDSTONE' - HEAD SIZE, MIN. LOCATE OUTSIDE OF TREE BASINS ON DOWNSLOPE SIDE AT ALL NEW TREES PLANTED.	
	UPPER LEVEL AT HOUSE	
	LOWER LEVEL AT HOUSE	
	P.A. PLANTING AREA	
	IRRIGATION SLEEVE REFER TO IRRIGATION PLAN FOR LOCATIONS & SIZES	

WATER EFFICIENT STATEMENT

THESE LANDSCAPE PLANS HAVE BEEN PREPARED TO COMPLY WITH THE CRITERIA OF THE CITY OF HAYWARD BAY-FRIENDLY WATER EFFICIENT LANDSCAPE ORDINANCE, HAYWARD MUNICIPAL CODE, CHAPTER 10, ARTICLE 12, AND APPLIED THEM, ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN.

Mary Weber
S. MARY WEBER
Project Landscape Architect

04/03/2017
DATE

SHEET INDEX

- L-1 LANDSCAPE LAYOUT PLAN
- L-2 GRADING PLAN
- L-3 PLANTING PLAN
- L-4 IRRIGATION PLAN
- L-5 LANDSCAPE DETAILS
- L-6 LANDSCAPE DETAILS
- L-7 IRRIGATION DETAILS
- T-1 TREE PRESERVATION PLAN

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LANDSCAPE LAYOUT PLAN
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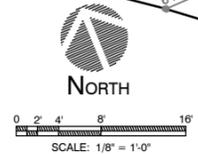
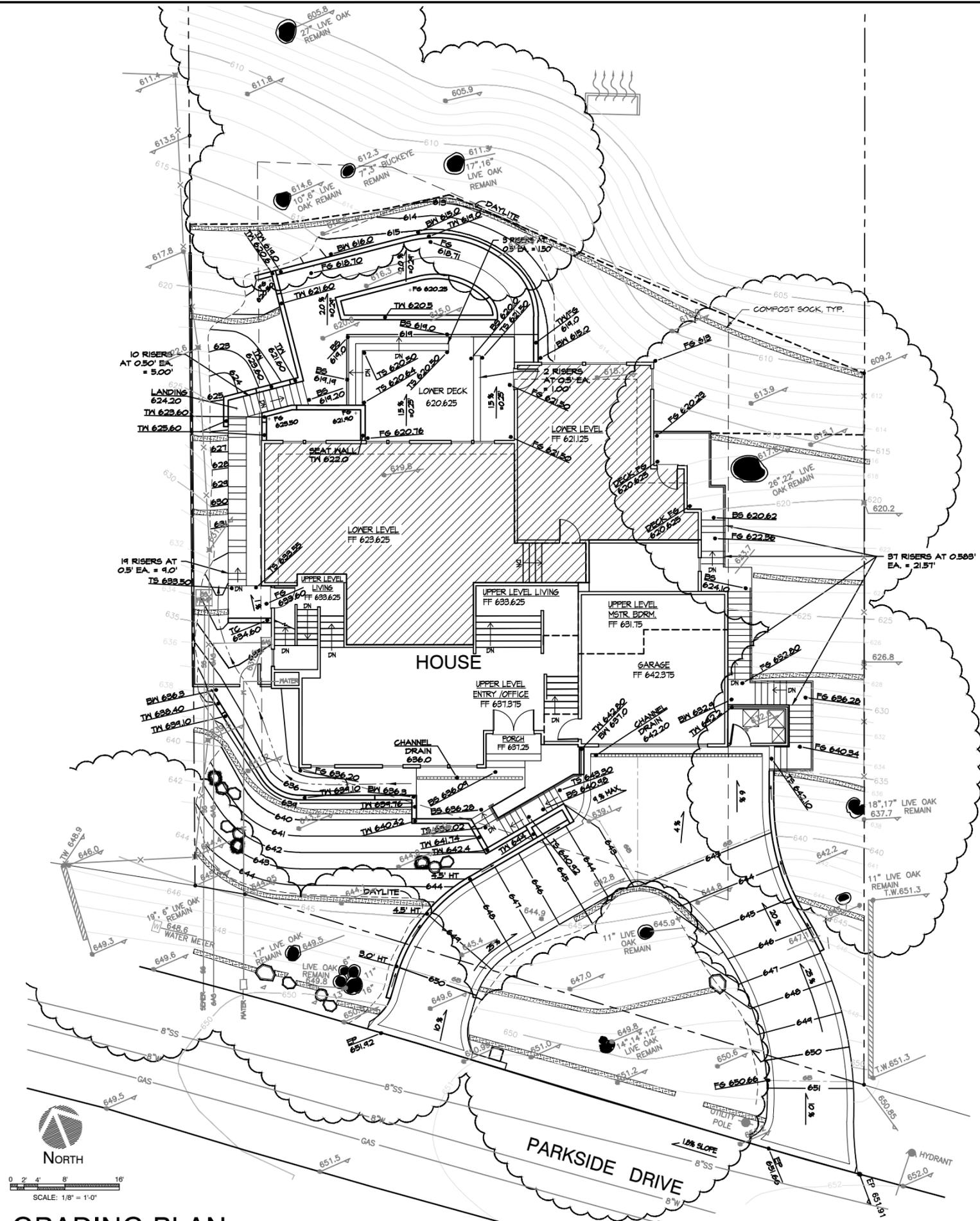
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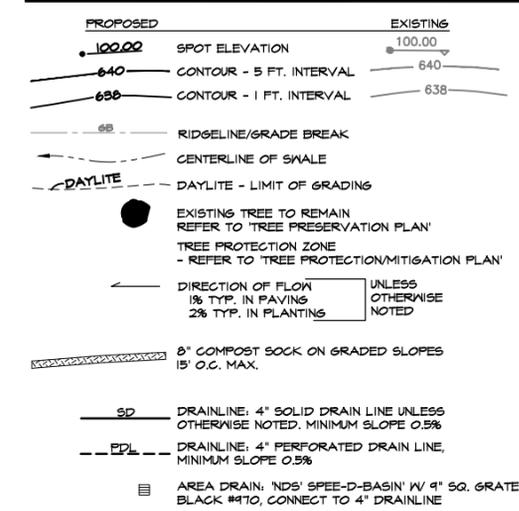
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GRADING PLAN

GRADING LEGEND



ABBREVIATIONS

- AD AREA DRAIN
- BC BOTTOM OF CURB
- BS BOTTOM OF WALL
- BW BOTTOM OF STAIR
- EP EDGE PAVING
- FF FINISH FLOOR
- FG FINISH GRADE
- GB GRADE BREAK
- HP HIGH POINT
- LP LOW POINT
- TB TOP OF BENCH
- TC TOP OF CURB
- TCOL TOP OF COLUMN
- TG TOP OF GRADE
- TS TOP OF STAIR
- TW TOP OF WALL

GRADING NOTES:

1. CONTRACTOR SHALL INSTALL CATCH BASIN AND/OR AREA DRAINS IN ALL LOW SPOTS, TYPICAL.
2. CATCH BASINS, REFER TO 'GRADING & DRAINAGE PLAN' PREPARED BY CIVIL ENGINEER FOR GRATES, INVERTS AND DRAIN PIPE ELEVATIONS, TYPICAL.
3. DRAINLINES, 4" SOLID DRAIN LINE UNLESS OTHERWISE NOTED, MINIMUM SLOPE 0.5%
4. PERFORATED DRAINLINES, LOCATE PERFORATED DRAINLINES BEHIND ALL RETAINING WALLS, TYP. 4" PERFORATED SOLID PIPE (NO FLEX), MINIMUM SLOPE 0.5%, DAYLIGHT AT BIOSWALES.

SLOPE STABILIZATION NOTES:

1. ALL SLOPES SHALL BE AUTOMATICALLY IRRIGATED WITH DRIP OR BUBBLERS, NO SPRAY.
2. ALL SLOPES 3:1 AND STEEPER SHALL RECEIVE EROSION CONTROL COMPOST BLANKET AND COMPOST SOCKS AS FOLLOWS.

EROSION CONTROL COMPOST BLANKET

SEQUENCE	ITEM	MATERIAL		APPLICATION RATE
		DESCRIPTION	TYPE	
STEP 1	ORGANIC COMPOST	ORGANIC COMPOST	MEDIUM SIZE	400 CY/ACRE
STEP 3	HYDROMULCH	ORGANIC FIBER	WOOD	1,500 LB/ACRE
		TACKIFIER	GUAR (PLANT BASED)	125 LB/ACRE

COMPOST SOCK

COMPOST SOCK	MESH TUBE - 8" DIA. BURLAP. PLACE PARALLEL WITH CONTOURS AT 15 FT INTERVALS. STAKE IN PLACE AT 6 FT. O.C.
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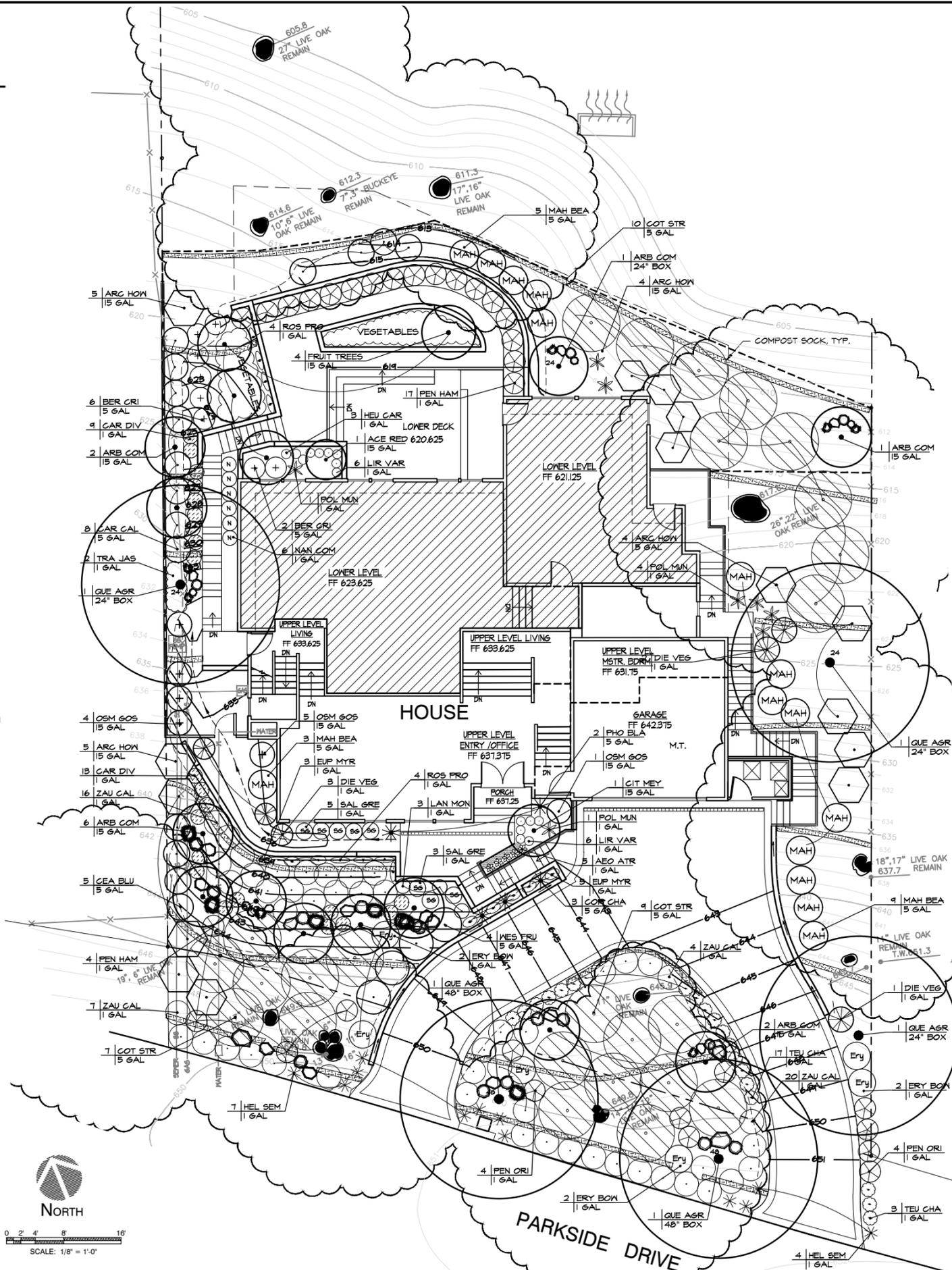
GRADING AND DRAINAGE NOTES

1. REFER TO SITE IMPROVEMENT PLANS FOR ROUGH GRADING, DRAINAGE, FINISH FLOOR ELEVATIONS AND RETAINING WALL INFORMATION.
2. CONTRACTOR SHALL VERIFY EXISTING GRADES PRIOR TO START OF CONSTRUCTION.
3. EXISTING GRADES, SWALES, DRAINS AND DRAINLINES SHALL BE MAINTAINED. CHANGES TO EXISTING GRADES THAT OBSTRUCT EXISTING SWALES AND POSITIVE DRAINAGE SHALL BE ADJUSTED IN THE FIELD WITH ADDITIONAL DRAINS AND SWALES TO ENSURE POSITIVE DRAINAGE TOWARDS STREET AND STORM DRAIN SYSTEM AND AWAY FROM BUILDING AND ADJACENT PROPERTIES.
4. LOW SPOTS AND POCKETS SHALL BE GRADED TO DRAIN PROPERLY. ALL LANDSCAPE AREAS SHALL HAVE POSITIVE DRAINAGE AWAY FROM EXISTING/PROPOSED BUILDINGS, STRUCTURES, WALLS AND ADJACENT PROPERTY LINES.
5. CROSS SLOPES FOR SIDEWALK ADJACENT TO STREET SHALL NOT EXCEED 2%.
6. LOCATE DRAINS IN ALL LOW SPOTS AND TIE INTO STORM DRAIN SYSTEM. ALL LANDSCAPE AREAS SHALL HAVE POSITIVE DRAINAGE, STANDING WATER WILL NOT BE ACCEPTED AT THE COMPLETION OF WORK.
7. FINISH GRADE OF PLANTING AREAS SHALL BE ONE INCH BELOW TOP OF ADJACENT CURB AND/OR PAVEMENT FOR TURF AREAS AND 1-1/2 INCH BELOW TOP OF ADJACENT CURB OR PAVEMENT FOR SHRUB AND GROUND COVER AREAS.
8. ALL PROPOSED GRADES ARE TO MEET AND BLEND WITH EXISTING GRADING AT PROJECT LIMIT AND EXISTING CURBS/SIDEWALKS.
9. TRANSITIONS BETWEEN SLOPES AND RELATIVELY FLAT AREAS SHALL BE ROUNDED AND GRADUAL.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR "ROUNDING-OFF" ALL SHARP RIDGES EXISTING ON SITE WEATHER OR NOT SUCH CONDITIONS ARE INDICATED ON THE PLANS.
11. ALL HORIZONTAL CURVES AND ALL TRANSITIONS BETWEEN CURVES AND STRAIGHT EDGES SHALL BE SMOOTH.
12. ALL CONSTRUCTION TO BE PLUMB AND TRUE.

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GRADING PLAN Conan Zhang Residence 26446 Parkside Drive Hayward, California	
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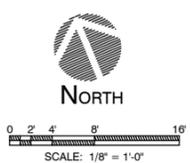
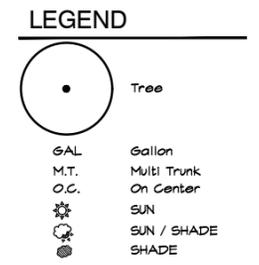
PLANTING NOTES

- SITE AND DRAWING REVIEW:** THE LANDSCAPE CONTRACTOR SHALL INSPECT THE SITE AND BE FAMILIAR WITH ALL EXISTING SITE CONDITIONS PRIOR TO SUBMITTING A BID. THE LANDSCAPE CONTRACTOR SHALL REVIEW RELATED DRAWINGS AND SHALL ENSURE COORDINATION WITH ALL APPLICABLE TRADES PRIOR TO SUBMITTING A BID.
- ALL PLANT MATERIAL/CONTAINER SIZES SHALL COMPLY WITH THE APPLICABLE PROVISIONS SET FORTH BY THE "AMERICAN STANDARD FOR NURSERY STOCK-ANSI Z601-2004", 2004 EDITION, AMERICAN ASSOCIATION OF NURSERYMEN (DOCUMENT AVAILABLE ON THE INTERNET AT www.anla.org)**
- CONTRACTOR SHALL VERIFY ALL PLANT MATERIAL QUANTITIES PRIOR TO INSTALLATION. PLANT MATERIAL QUANTITIES ARE LISTED FOR THE CONVENIENCE OF THE CONTRACTOR. ACTUAL NUMBER OF SYMBOLS SHALL HAVE PRIORITY OVER QUANTITY DESIGNATED IN CALLOUTS.**
- SOIL PREPARATION AND AMENDMENTS:**
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL GRADING +/- .01 AND SURFACE DRAINAGE OF ALL PLANTING AREAS. NO LOW SPOTS WHICH HOLD STANDING WATER WILL BE ACCEPTED.
 - AFTER INSTALLATION OF THE IRRIGATION SYSTEM AND HEADERS, ALL PLANTING AREAS SHALL BE RAKED SMOOTHLY AND ALL ROCKS AND PEBBLES OVER 2" IN DIAMETER REMOVED FROM THE SITE.
 - SOIL TESTS:** PRIOR TO LANDSCAPE INSTALLATION THE CONTRACTOR SHALL CONDUCT HORTICULTURAL SOIL TESTS AFTER ROUGH GRADING HAS BEEN COMPLETED. TWO SAMPLES TOTAL SHALL BE SENT TO LAB;
 - ONE FROM THE SLOPE
 - ONE FROM THE GRADED PAD.
 TAKE AT LEAST 5 TO 10 SUB-SAMPLES OF EQUAL SIZE RANDOMLY FROM EACH SAMPLE AREA AT 6" TO 18" DEPTHS. THOROUGHLY MIX EACH SAMPLE GROUP SEPARATELY AND SUBMIT TO A REPUTABLE SOILS LABORATORY FOR HORTICULTURAL TESTING.
 - THE FINAL SOIL AMENDMENT SHALL BE PER THE RECOMMENDATION FROM THE SOIL LAB AND SHALL BE EVENLY SPREAD AND THOROUGHLY BLENDED BY CROSS-RIPPING OR EQUALLY CULTIVATED BY MEANS OF ROTOTILLING TO A UNIFORM DEPTH OF 6".
 - BACKFILL FOR ALL CONTAINER PLANTS:** BACKFILL MIX PER THE HORTICULTURAL SOILS REPORT RECOMMENDATIONS.
 - SOIL AMENDMENT FOR BID PURPOSES ONLY:** THE CONTRACTOR SHALL SURFACE AMEND TURF AREAS, GROUNDCOVER AND SHRUB AREAS. THE CONTRACTOR SHALL SPREAD 5 CUBIC YARDS OF NITRIFIED SOIL CONDITIONER (1-0-0) AND 20 LBS. OF A COMMERCIAL FERTILIZER (11-5-4) PER 1000 SQUARE FEET OF LANDSCAPE PLANTING TO ALL PLANTING AREAS, AND ROTOTILL THOROUGHLY INTO THE TOP 6" OF SOIL.
- INSTALL AGRIFORM FERTILIZER 21 GRAM TABLETS (20-10-5) OR APPROVED EQUAL PER MANUFACTURER'S SPECIFICATIONS AT THE RATES AS FOLLOWS:**
 - 1 GALLON 2 TABLETS
 - 5 GALLON 5 TABLETS
 - 15 GALLON 5 TABLETS
 - 24" BOX + 1 PER 4" OF BOX SIZE (I.E. 24" BOX-6 TABLETS)
 REFER TO PLANTING DETAILS FOR ADDITIONAL INFORMATION.
- MULCH (LESS THAN 3:1 SLOPES):** ALL PLANTING AREAS LESS THAN 3:1 SLOPE SHALL RECEIVE A 3" LAYER OF ORGANIC RECYCLED CHIPPED WOOD COLOR DARK BROWN AFTER ALL TREES, SHRUBS AND GROUNDCOVERS HAVE BEEN PLANTED AND AFTER PRE EMERGENT HAS BEEN APPLIED. NO MULCH SHALL BE PLACED WITHIN A 3" CLEAR BAND AROUND TRUNK OF ALL TREES.
- MULCH (3:1 SLOPES AND STEEPER):**
 - ALL PLANTING AREAS 3:1 AND STEEPER SHALL RECEIVE COMPOST TO A DEPTH OF 3 INCHES AND SHALL BE EVENLY APPLIED BY USING A PNEUMATIC BLOWER. COLOR: DARK BROWN.
 - PRIOR TO APPLICATION PREPARE SLOPE BY REMOVING LOOSE ROCKS, ROOTS, STUMPS AND OTHER DEBRIS GREATER THAN 2" DIAMETER AND SCARIFY AREA TO RECEIVE MULCH.
 - HYDROMULCH COMPOST WITH WOOD FIBER AND TACKIFIER. REFER TO "EROSION CONTROL COMPOST BLANKET" SCHEDULE ON SHEET L-2.
- COMPOST SOCKS:** 8" DIAMETER COMPOST SOCKS SHALL BE INSTALLED PARALLEL TO CONTOURS ACROSS ALL SLOPES AT 15 FT. ON CENTER SPACING, AND AT TOP AND BOTTOM OF SLOPE. STAKE IN PLACE AT 5 FT. ON CENTER. INSTALL AFTER COMPOST AND HYDROMULCH HAS BEEN APPLIED.
- GROUNDCOVER:** PLANT AT THE SPACINGS NOTED IN THE LEGEND. AFTER THE GROUNDCOVER IS PLANTED, A PRE-EMERGENT SPRAY SHALL BE APPLIED.
- PRE-EMERGENT:** PRE-EMERGENT SPRAY SHALL BE APPLIED TO ALL PLANTING AREAS AFTER PLANTING AND PER MANUFACTURER'S RECOMMENDATIONS. THE LANDSCAPE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE USE OF CHEMICAL PRODUCTS AND IS TO SUPPLY THE OWNER WITH A WRITTEN RECORD OF THE TYPE OF CHEMICAL USED, DATE APPLIED AND RATE OF APPLICATION.
- TREE PLANTING:**
 - PLANT TREES A MINIMUM OF 3'-0" FROM THE EDGE OF CURBS AND WALKS, MINIMUM OF 5'-0" FROM UNDERGROUND UTILITIES, AND A MINIMUM OF 12'-0" FROM STREET LIGHTS. ALL TREES PLANTED WITHIN 5'-0" OF HARDSCAPE OR BUILT ELEMENT SHALL BE PLANTED WITH ROOT BARRIERS. REFER TO TREE PLANTING DETAIL.
 - CONTRACTOR TO COORDINATE TREE PLANTING WITH DRAINLINES AND UNDERGROUND UTILITY LOCATIONS TO AVOID CONFLICT.
- GUARANTEE:** ALL PLANTS AND PLANTINGS SHALL BE GUARANTEED TO BE HEALTHY, THRIVING CONDITION UNTIL THE END OF THE MAINTENANCE PERIOD. ALL PLANTS SHALL BE GUARANTEED FOR ONE (1) YEAR FROM THE DATE OF ACCEPTANCE.



PLANTING SCHEDULE

		SUNSET PLANTING ZONE 15				
QTY	SYMBOL	BOTANICAL NAME	COMMON NAME	PLANTING SIZE	SIZE AT MATURITY H x W	WULCOLS WATER USAGE
TREES						
1	ACE RED	<i>Acer p. dissect.</i> 'Red Dragon'	Red Dragon Jap. Maple	15 GAL	6' x 6'	M
11	ARB UNE	<i>Arbutus unedo</i> 'Compacta'	Dwarf Strawberry Tree	24" BOX	10' x 8'	L
	ARB UNE	<i>Arbutus unedo</i> 'Compacta'	Dwarf Strawberry Tree	15 GAL		
4	FRUIT TREES	Fruit Trees by Owner	Pomegranate, Plum	15 GAL	VARIES	M
1	CIT MEY	<i>Citrus Meyer's</i> Lemon	Meyer's Lemon Tree	15 GAL	10' x 8'	M
2	QUE AGR	<i>Quercus agrifolia</i>	Coast Live Oak	48" BOX	40' x 30'	L
3	QUE AGR	<i>Quercus agrifolia</i>	Coast Live Oak	24" BOX		
34 TOTAL						
SHRUBS						
5	ARC HON	<i>Arctostaphylos d.</i> 'Howard McMill'	McMinn Manzanita	5 1/2 GAL	6' x 8'	L
1	BER GRI	<i>Berberis</i> 'Crimson Pigmy'	Dwarf Berberis	5 GAL	2' x 2.5'	L
1	CAL SFE	<i>Calandrinia spectabilis</i>	Rock purslane	1 GAL	1' x 2.5'	L
1	CAR DIV	<i>Carex divisa</i>	Berkeley Sedge	1 GAL	1' x 2'	L
5	CEA BLU	<i>Ceanothus</i> 'Blue Jeans'	Hollyleaf Mountain Lilac	5 GAL	5' x 5'	L
5	COR ELE	<i>Cordylone</i> 'Cha Cha'	Cha Cha Cordylone	5 GAL	3' x 3'	L
1	DIE VEG	<i>Dietsa vegata</i>	Fornight Lily	1 GAL	3' x 2'	L
1	ERY BOW	<i>Erysimum</i> 'Bonies Mauve'	Bonies Mauve Wallflower	1 GAL	3' x 4'	L
1	EUP MYR	<i>Euphorbia myrsinites</i>	Trailing Euphorbia	1 GAL	1' x 2'	L
1	HEL SEM	<i>Helictotrichon sempervirens</i>	Blue Oat Grass	1 GAL	2' x 2'	L
1	HEL ORI	<i>Helleborus orientalis</i>	Lenten Rose	1 GAL	1' x 2'	L
1	HEU CAR	<i>Heuchera</i> 'Caramel'	Caramel Coral Bells	1 GAL	1' x 2'	L
1	LAN MON	<i>Lantana montevidensis</i> (purple)	Purple Trailing Lantana	1 GAL	1' x 3'	L
1	LIR VAR	<i>Liriope variegata</i>	Variegated Liriope	1 GAL	1' x 1'	L
5	MAH BEA	<i>Mahonia japonica</i> 'Beale'	Leatherleaf Mahonia	5 GAL	7' x 4'	L
5	NAN COM	<i>Nandina d.</i> 'Compacta'	Heavenly Bamboo	5 GAL	3' x 2'	L
15	OSM GOS	<i>Osmanthus heter.</i> 'Goshiki'	Goshiki Variegated Osmanthus	15 GAL	6' x 4'	L
1	PEN HAM	<i>Pennisetum alopec.</i> 'Hamelin'	Hamelin Fountain Grass	1 GAL	3' x 3'	L
5	PHO BLA	<i>Phormium</i> 'Black Adder'	Black Adder Phormium	5 GAL	4' x 3'	L
1	POL MUN	<i>Polystichum munitum</i>	Sword Fern	1 GAL	2' x 2'	L
1	ROS PRO	<i>Rosmarinus</i> off. 'Prostratus'	Rosemary	1 GAL	2' x 3'	L
1	SAL GRE	<i>Salvia greggii</i> 'Heatwave Blast'	Salmon Pink Autumn Sage	1 GAL	2.5' x 2.5'	L
1	TEU CHA	<i>Teucrium chamaedrys</i>	Germander	1 GAL	1 x 2'	L
1	ZAU CAL	<i>Zauschneria calif. mexicana</i>	California Fuchsia	1 GAL	1' x 4'	L
GROUNDCOVERS - LOW SPREADING SHRUBS						
1	Cotoneaster d. 'Strelbis Finding'	Strelbis Finding Cotoneaster	1 GAL	6" HT. 8" O.C.	L	☀
1	Sedum reflexum Blue Spruce	Blue Sedum	1 GAL	1' x 2'	L	☀
1	Trachelospermum jasminoides	Star Jasmine	1 GAL	12" HT. 3" O.C.	L	☀



PLANTING PLAN

REVISIONS	BY

MARY WEBER
LANDSCAPE ARCHITECT
1831 Ardith Drive, Pleasant Hill, California 94523
Phone: 925-692-9064 • Email: mary@webel.com

PLANTING PLAN
Conan Zhang Residence
26446 Parkside Drive
Hayward, California

APN: 425-430-005

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Scale: 1/8" = 1'-0"
Drawn by: MW
Date: 04/03/2017
Job: 2015-Zhang
Sheet
L-3
Of 7 Sheets

REFER TO SHEET T-1 'TREE PRESERVATION PLAN'

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City of Hayward - Water Efficient Landscape Worksheet

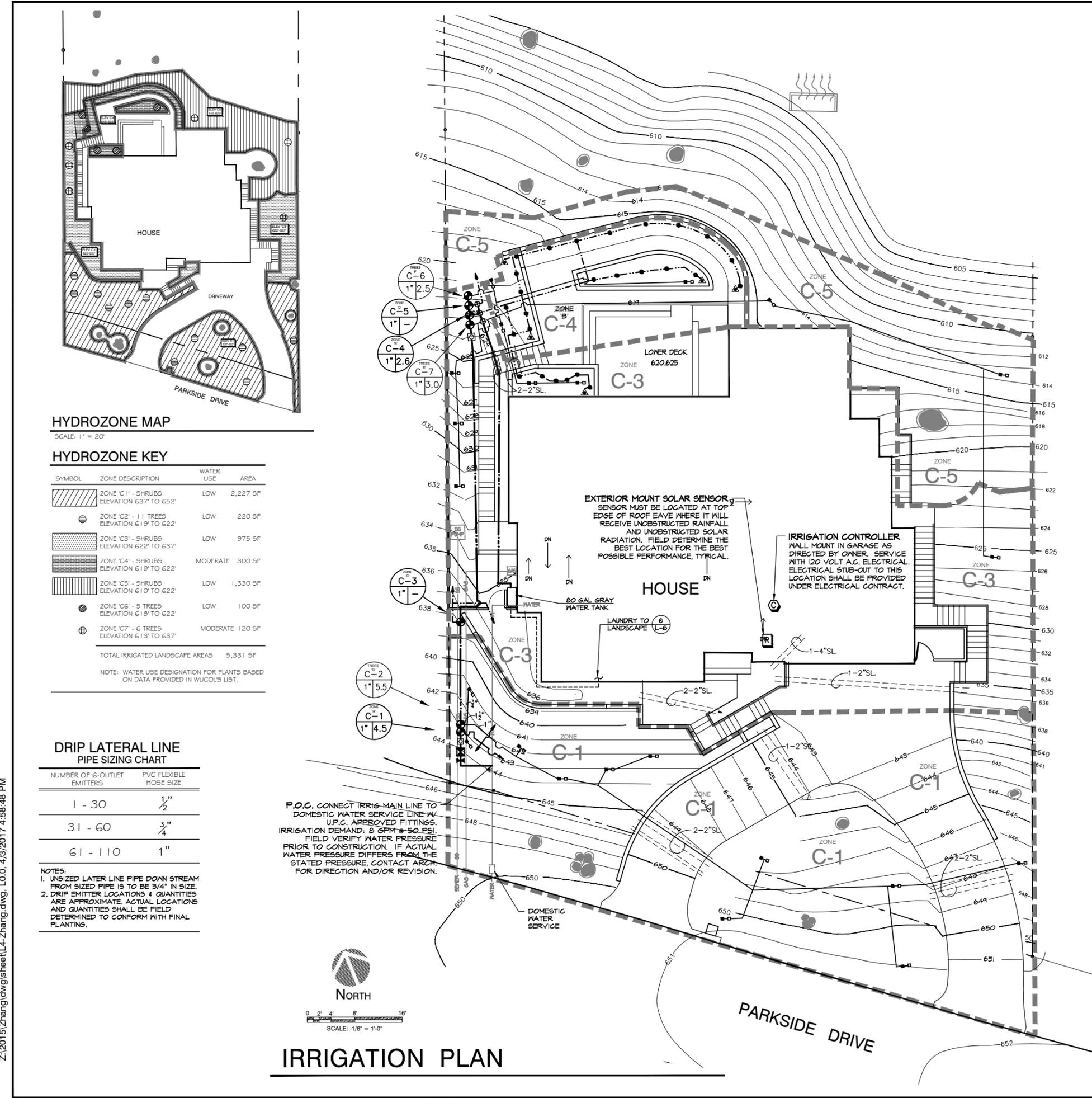
Project Name: Zhang Residence
Project Address: 26472 Parkside Drive, Hayward, California
Building Permit:
Prepared by: Mary Weber Landscape Architect, CLA# 2875
Address: 1831 Ardith Drive, Pleasant Hill, CA 94523
Phone: 925-682-9064

Total Irrigated Landscape Area	5,331 Sq. Ft.
PART 1 - Maximum Applied Water Allowance (MAWA)	102,264 Gal/Year
MAWA = (ETo) (0.62) [(0.7) (LA)] = (44.2) (0.62) [(0.7) (3,500)]	
TOTAL	= 102,264 Gal/Year = Maximum Applied Water Allowance
PART TWO - Estimated Total Water Use (ETWU)	57,883 Gal/Year
ETWU = Eto x 0.62 x [ETAF x LA] = 44.2 x 0.62 x [ETAF x LA] = 27.404 x [ETAF x LA]	

Landscape Zones	Plant Factor (PF)	Irrig. Method	Irrigation Efficiency (IE)	ETAF (PF/IE)	Landscape Area (LA) sq. ft.	ETAF x LA	ELWU (Gal/Yr)
A, C & D-SHRUBS Low	0.3	Drip	0.81	0.37	4,709	1,744	47,795
B - SHRUBS Moderate	0.6	Drip	0.81	0.74	292	216	5,927
E & G - TREES Low	0.3	Bubbler	0.81	0.37	250	93	2,537
F - TREES Moderate	0.6	Bubbler	0.81	0.74	80	59	1,624
TOTAL					5,331	2,171	57,883

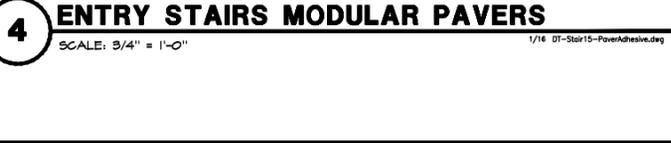
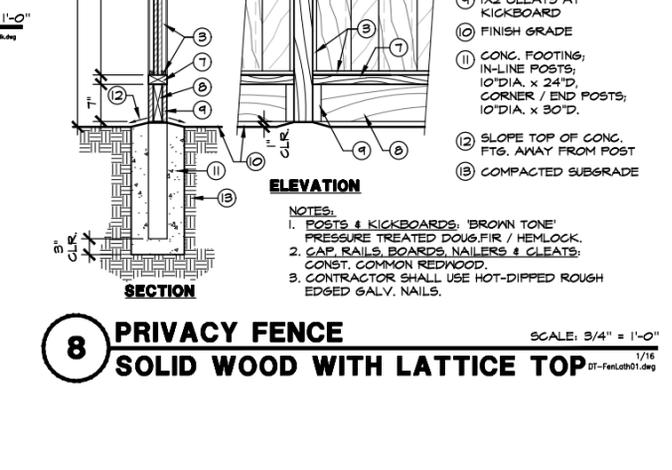
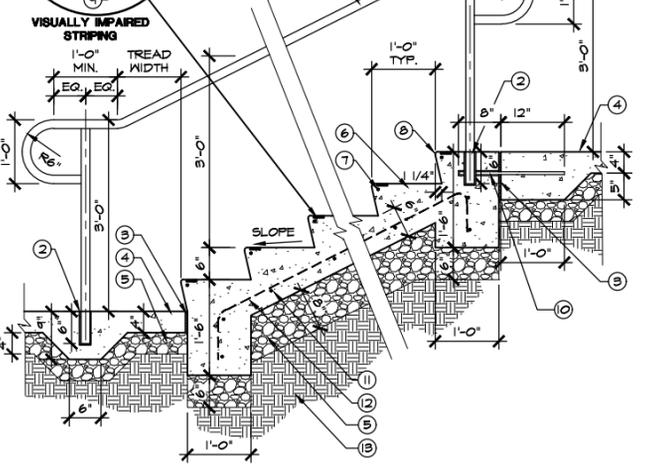
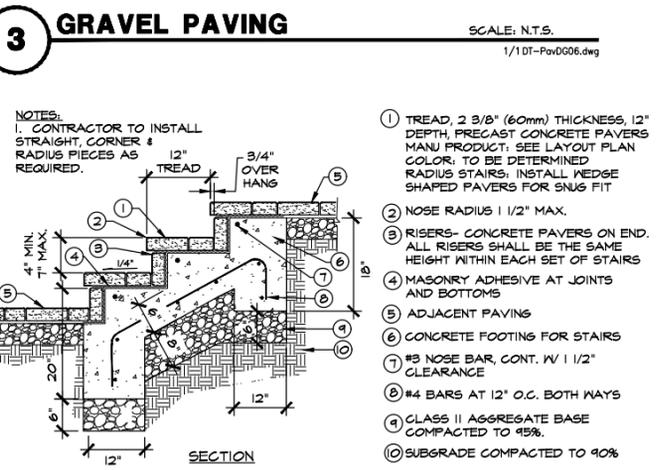
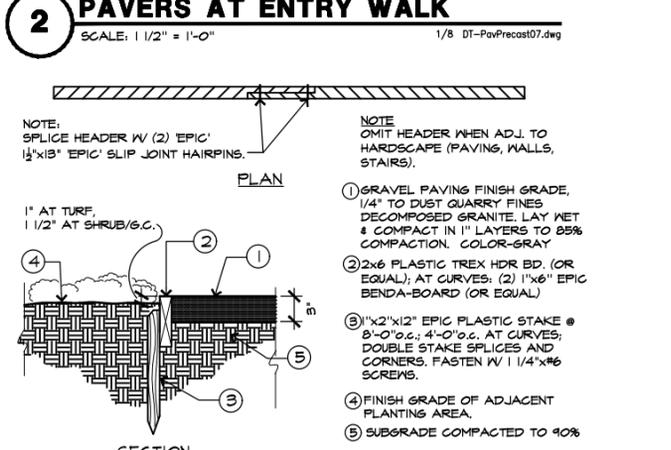
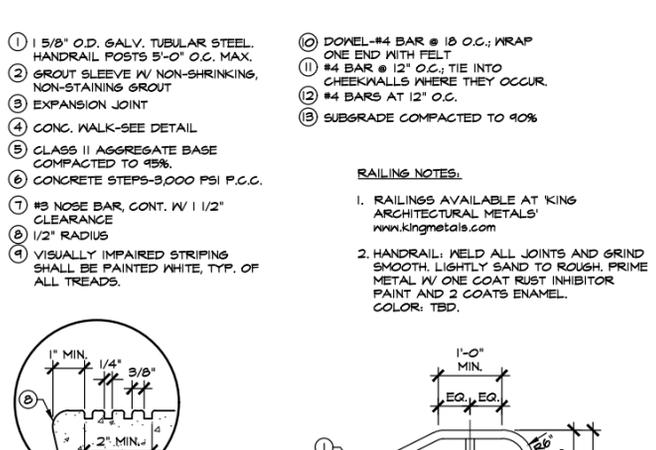
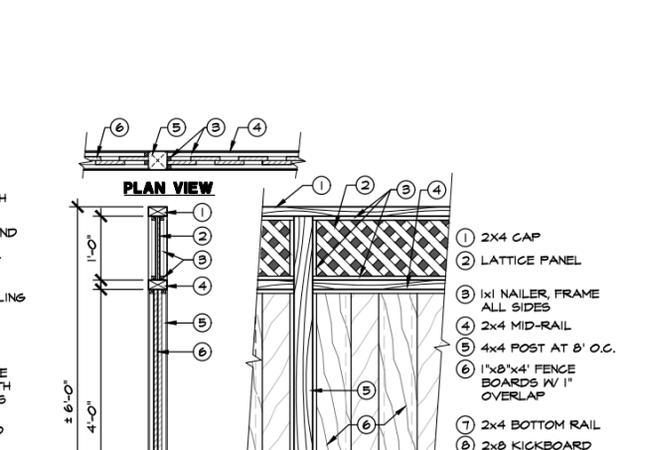
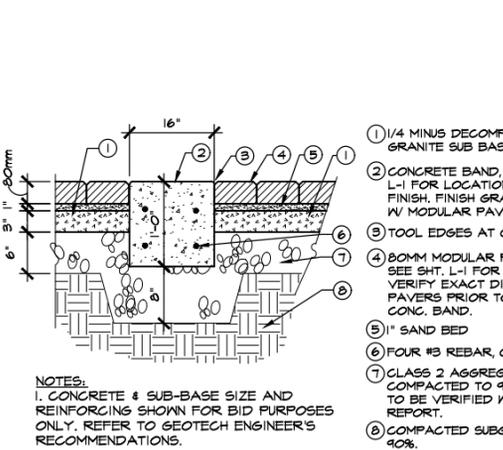
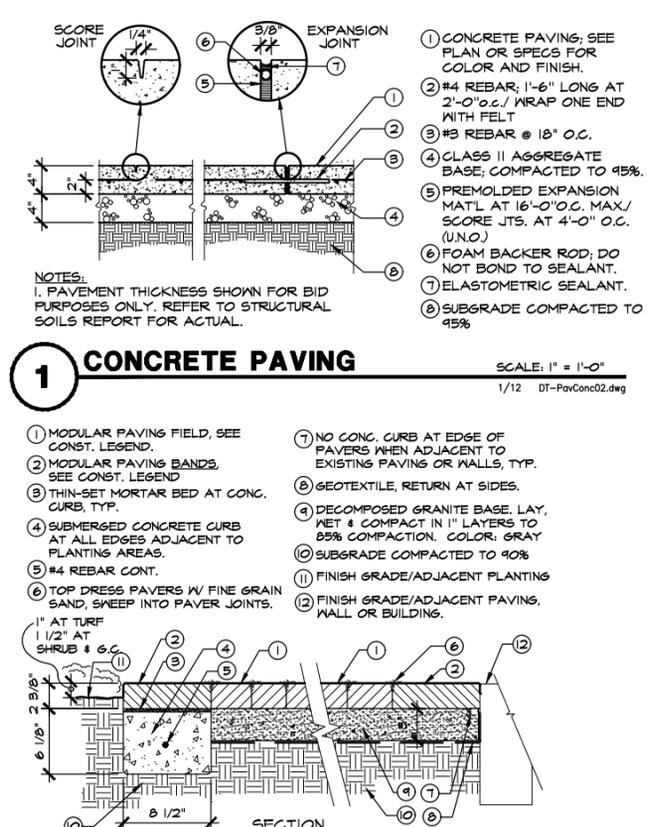
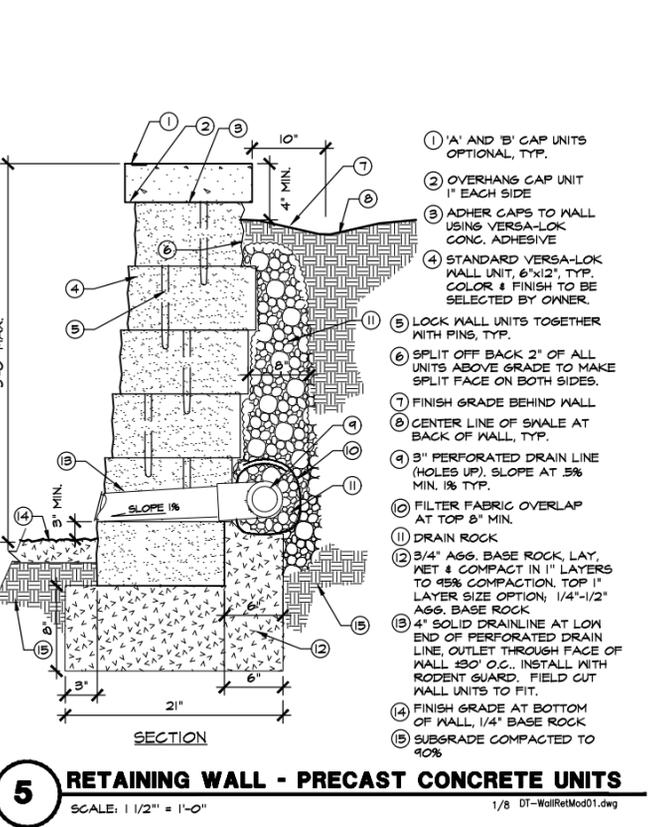
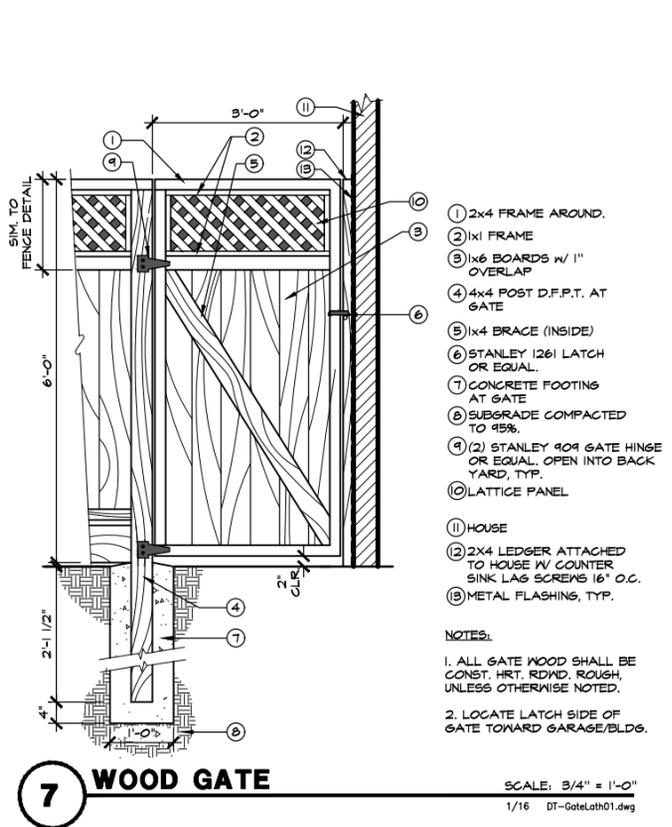
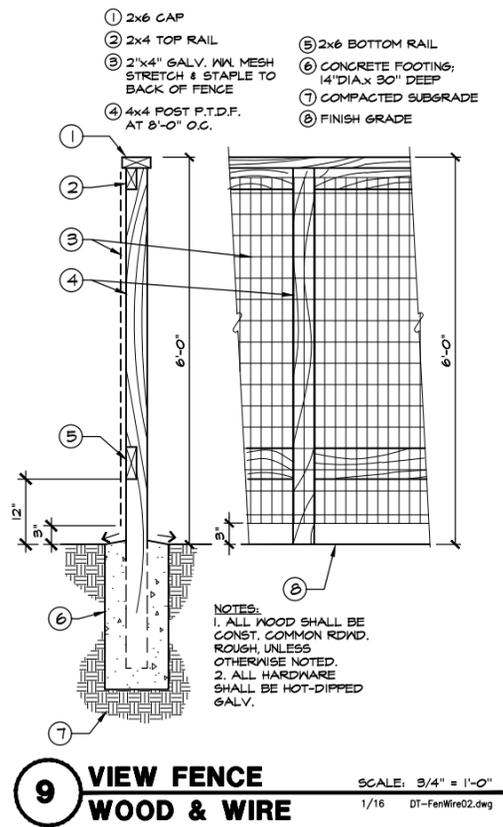
IRRIGATION LEGEND

SYMBOL	MODEL NUMBER	DESCRIPTION
●	PCG1	SALCO PRESSURE COMPENSATING MULTI-OUTLET EMITTER TWO EMITTERS AT 1' & 5 GAL. SHRUBS, THREE AT 15 GAL., TYP. (1 GPH EA. OUTLET = 6 GPH)
■	RZWS-36-25-CV	HUNTER ROOT ZONE BUBBLER ASSEMBLY & CHECK VALVE, 0.25 GPM (ONE PER TREE)
□	PCB-25	HUNTER BUBBLER, 0.25 GPM (ONE TREE)
⊠	1" COMPACT	AMIAD FILTER WITH 155 MESH SCREEN
▲	SEE DETAIL	EMITTER FLUSH VALVE ASSEMBLY
⊕	ICV-FS-AS-ADJ SERIES	HUNTER FILTER SENTRY ADJUSTABLE PRESSURE REGULATING REMOTE CONTROL VALVE
⊗	1" MANUAL DIVERTER	1" MANUAL DIVERTER VALVE FOR LAUNDRY TO LANDSCAPE VALVES 'C-4' AND 'C-5' ONLY, LOCATE DOWNSTREAM FROM VALVE
⊠	975XL2-1"	WILKINS REDUCED PRESSURE BACKFLOW ASSEMBLY (LEAD FREE)
⊗	T-113	NIBCO GATE VALVE (LINE SIZE)
⊙	PCC-9001	9-STATION HUNTER PCC CONTROLLER (INTERIOR WALL MOUNT)
⊠	WS5	HUNTER WIRELESS SOLAR SYNC SENSOR & SOLAR SYNC MODULE
⊕		CONTROLLER & STATION NUMBER APPROXIMATE FLOW (GPM) REMOTE CONTROL VALVE SIZE
---		MAIN LINE: 1 20-SCHEDULE 40 PVC PLASTIC PIPE WITH SCH 40 PVC SOLVENT-WELD FITTINGS. 1.8" COVER.
---		LATERAL LINE: 1 20-SCHEDULE 40 PVC PLASTIC PIPE WITH SCH 40 PVC SOLVENT-WELD FITTINGS. 1.2" COVER.
---		DRIP LINE: 3/4" SALCO ALGAE RESISTENT FLEXIBLE PVC DRIP HOSE. 4" COVER.
---		SLEEVING: 1 20-SCHEDULE 40 PVC PLASTIC PIPE, 8" COVER, 24" UNDER VEHICULAR PAVING

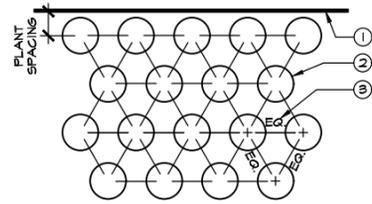


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REFER TO SHEET T-1 'TREE PRESERVATION PLAN'
REFER TO SHEET L-6 FOR IRRIGATION NOTES / DETAILS



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- 1 BUILDING, CURB, PAVEMENT EDGE OR BUILT ELEMENT
- 2 GROUND COVER OR SHRUB
- 3 SPACING PER PLANT LEGEND

5 GROUND COVER / SHRUB SPACING LAYOUT

SCALE: N.T.S.
1/1 DT-GrndCov01.dwg

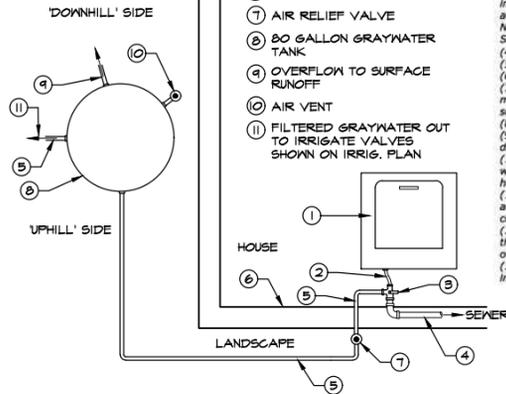
California Graywater Code Chapter 16 Nonpotable Water Reuse Systems

Systems that meet these standards do not require a permit or inspection:

- 1602.1.1 [HCD 1] Clothes Washer System. A clothes washer system in compliance with all of the following is exempt from the construction permit specified in Section 1.8.4.1 and may be installed or altered without a construction permit:
- (1) If required, notification has been provided to the enforcing agency regarding the proposed location and installation of a gray water irrigation or disposal system.
 - (2) The design shall allow the user to direct the flow to the irrigation or disposal field or the building sewer. The direction control of the gray water shall be clearly labeled and readily accessible to the user.
 - (3) The installation, change, alteration, or repair of the system does not include a potable water connection or a pump and does not affect other building, plumbing, electrical, or mechanical components including structural features, egress, fire-life safety, sanitation, potable water supply piping, or accessibility.
 - (4) The gray water shall be contained on the site where it is generated.
 - (5) Gray water shall be directed to and contained within an irrigation or disposal field.
 - (6) Ponding or runoff is prohibited and shall be considered a nuisance.
 - (7) Gray water may be released above the ground surface provided at least two (2) inches (51 mm) of mulch, rock, or soil, or a solid shield covers the release point. Other methods which provide equivalent separation are also acceptable.
 - (8) Gray water systems shall be designed to minimize contact with humans and domestic pets.
 - (9) Water used to wash diapers or similarly soiled or infectious garments shall not be used and shall be directed to the building sewer.
 - (10) Gray water shall not contain hazardous chemicals derived from activities such as cleaning car parts, washing greasy or oily rags, or disposing of waste solutions from home photo labs or similar hobbyist or home occupational activities.
 - (11) Exemption from construction permit requirements of this code shall not be deemed to grant authorization for any gray water system to be installed in a manner that violates other provisions of this code or any other laws or ordinances of the enforcing agency.
 - (12) An operation and maintenance manual shall be provided to the owner. Directions shall indicate that the manual is to remain with the building throughout the life of the system and upon change of ownership or occupancy.
 - (13) Gray water discharge from a clothes washer system through a standpipe shall be properly trapped in accordance with Section 1005.0.

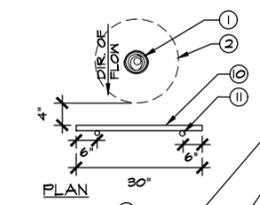
In accordance with Section 1005.0.

- 1 WASHING MACHINE
- 2 WASHER DRAIN HOSE
- 3 DIVERTER VALVE
- 4 HOUSE PLUMBING TO SEWER SYSTEM
- 5 1" PVC SCH 40 TO OUTSIDE
- 6 HOUSE WALL
- 7 AIR RELIEF VALVE
- 8 80 GALLON GRAYWATER TANK
- 9 OVERFLOW TO SURFACE RUNOFF
- 10 AIR VENT
- 11 FILTERED GRAYWATER OUT TO IRRIGATE VALVES SHOWN ON IRRIG. PLAN



6 LAUNDRY TO LANDSCAPE GRAVITY SYSTEM

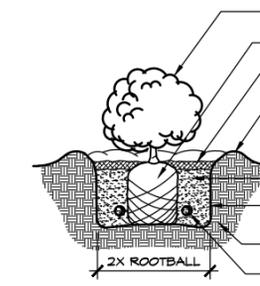
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- 1 SHRUB
- 2 ROOTBALL- SET TOP OF ROOTBALL 1" ABOVE FINISH GRADE AT SLOPES LESS THAN 6:1, SET FLUSH WITH FINISH GRADE ON STEEPER SLOPES, TYP.
- 3 2" LAYER FIR BARK MULCH- EXCEPT IN LAWN AREAS.
- 4 BACKFILL MIX- 1/3 NITRIFIED SOIL CONDITIONER, 2/3 SITE SOIL.
- 5 WATERING BASIN- 4" MIN. EARTH BERM.
- 6 SCARIFY PLANTING PIT
- 7 SUBGRADE
- 8 AGRIFORM PLANT TABLETS (20-10-5) 3 PER 5 GAL., 5 PER 15 GAL., 6 PER 24" BOX.
- 9 EXISTING 2:1 SLOPE
- 10 30"x12" PTFE BOARD, J TO DIR. OF FLOW, INSTALL ONLY TO 5 GAL. & LARGER PLANTS ON SLOPES GREATER THAN 2:1 TYP.
- 11 TWO 30"x12" DIA. GALV. PIPES, FOUND INTO EXIST. SUBGRADE TO SUPPORT 2X12.

3 PLANTING ON SLOPE

SCALE: N.T.S.
1/1 DT-PlantSlop.dwg



- 1 SHRUB- SEE PLAN FOR SIZE AND TYPE.
- 2 ROOTBALL- SET TOP OF ROOTBALL 1" ABOVE FINISH GRADE
- 3 2" LAYER FIR BARK MULCH- EXCEPT IN LAWN AREAS.
- 4 WATERING BASIN- 3" MIN. EARTH BERM.
- 5 FINISH GRADE
- 6 BACKFILL MIX- 1/3 NITRIFIED SOIL CONDITIONER, 2/3 SITE SOIL.
- 7 SHRUB PLANTING PIT- PERCOLATE TEST ALL PITS, SCARIFY SIDES AND BOTTOM PRIOR TO INSTALLING BACKFILL MIX.
- 8 SUBGRADE
- 9 AGRIFORM PLANT TABLETS (20-10-5) OR EQUAL: 2 PER 1 GAL., 3 PER 5 GAL.

4 SHRUB PLANTING

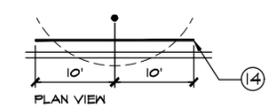
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1/1 DT-Shrub01.dwg



- 1 24" CORDED RUBBER TIE- ATTACH TO STAKE W/2 GALVANIZED ROOFING NAILS
- 2 2" DIA. LODGE POLE PINE STAKE- INSTALL NO CLOSER THAN 4" NOR FARTHER THAN 16" FROM TREE TRUNK, 2 REQUIRED.
- 3 TREE- SEE PLAN FOR SIZE AND TYPE.
- 4 ROOT BALL- SET CROWN OF ROOT BALL 1" ABOVE FINISHED GRADE
- 5 3" LAYER MULCH PER PLANTING NOTES/SPECS- EXCEPT IN LAWN AREAS
- 6 WATERING BASIN- 4" MIN. EARTH BERM.
- 7 REINFORCE TREE PLANTING BASIN WITH HEAD SIZE BOULDERS, ON ALL 2:1 & STEEPER SLOPES, TYP.
- 8 BACKFILL MIX- 1/3 NITRIFIED SOIL CONDITIONER, 2/3 SITE SOIL PER PLANTING NOTES/SPECS.
- 9 SUBGRADE
- 10 TREE PLANTING PIT- PERCOLATE TEST ALL PITS, SCARIFY SIDES AND BOTTOM PRIOR TO INSTALLING BACKFILL MIX.
- 11 AGRIFORM PLANT TABLETS (20-10-5) 3 PER 5 GAL., 5 PER 15 GAL., 6 PER 24" BOX.
- 12 EXISTING SLOPE

1 TREE & LARGE SHRUB PLANTING ON SLOPE

APPLIES TO ALL 15 GALLON CONTAINER PLANTS & LARGER
SCALE: NOT TO SCALE
1/1 DT-TreeSlop.dwg



- 1 24" CORDED RUBBER TIE- ATTACH TO STAKE W/2 GALVANIZED SCREWS.
- 2 3" DIA. PRESSURE TREATED LODGE POLE PINE STAKE- REMOVE NURSERY STAKES AFTER STAKING(2 REQUIRED.)
- 3 TREE- SEE PLAN FOR SIZE AND TYPE.
- 4 ROOT BALL- SET CROWN OF ROOT BALL 2" ABOVE FINISHED GRADE
- 5 2" LAYER WOOD CHIPS MULCH- EXCEPT IN LAWN AREAS
- 6 WATERING BASIN (4" MIN) W/2" WOOD CHIPS MULCH
- 7 SIDEWALK
- 8 BACKFILL MIX- 1/3 NITRIFIED SOIL CONDITIONER, 2/3 SITE SOIL
- 9 SUBGRADE
- 10 TREE PLANTING PIT- PERCOLATE TEST ALL PITS, SCARIFY SIDES AND BOTTOM PRIOR TO INSTALLING BACKFILL MIX.
- 11 AGRIFORM PLANT TABLETS (20-10-5) 3 PER 5 GAL., 5 PER 15 GAL., 6 PER 24" BOX.
- 12 1"x3" CROSS BACE NAILED TO STAKES W/GALVANIZED NAILS.
- 13 4" x 30" PERF. PIPE FILLED W/1/2"-3/4" GRAVEL W/BUBBLER ON ONE SIDE
- 14 DEEP ROOT BARRIER, LINEAR, MIN. 10' LONG FROM CENTER (20' TOT.)

2 STREET TREE PLANTING City of Hayward

SCALE: N.T.S.
1/1 DT-TrubR12.dwg

IRRIGATION SCHEDULES

HYDROZONE 'A', 'C' and 'D' - LOW WATER USE SHRUBS & GROUND COVER

MULTI OUTLET DRIP IRRIGATION @ SHRUB/GROUND COVER AREAS (LOW)		SALCO		LOCATION: HAYWARD, CALIFORNIA										
SPRINKLER MANUFACTURER		EMITTER SPACING: VARIES		HAYWARD, CALIFORNIA										
PRECIPITATION RATE (INCHES/HOUR): 0.57		EMITTER FLOW: 1 GPH PER HEAD		HAYWARD, CALIFORNIA										
IRRIGATION SYSTEM EFFICIENCY: 0.81		EMITTER FLOW: 1 GPH PER HEAD		HAYWARD, CALIFORNIA										
PLANT FACTOR: 0.30		EMITTER FLOW: 1 GPH PER HEAD		HAYWARD, CALIFORNIA										
YEAR 2 REDUCTION AMOUNT:		-10% OF YEAR 1 (ESTABLISHMENT) RUN TIME MINUTES												
MONTH:		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ETO PER MONTH (INCHES):		1.40	1.80	3.10	4.20	5.40	5.90	6.40	5.70	4.40	3.10	1.50	1.20	44.20
ETO PER WEEK (INCHES):		0.323	0.416	0.716	0.970	1.247	1.363	1.478	1.316	1.016	0.716	0.346	0.277	
APPLIED ETO PER WEEK (INCHES):		0.120	0.154	0.265	0.359	0.462	0.505	0.488	0.376	0.265	0.128	0.103	0.103	
MINUTES OF WATER PER WEEK:		YEAR 1	13	16	28	38	49	53	58	51	40	28	14	11
DAYS PER WEEK:		YEAR 1	1	1	1	2	2	2	2	2	2	1	1	1
MINUTES OF WATER PER DAY:		YEAR 1	13	16	28	19	24	27	29	26	20	14	14	11
CYCLES PER DAY:		YEAR 1	1	1	1	1	1	1	1	1	1	1	1	1
MINUTES PER CYCLE:		YEAR 1	13	16	28	19	24	27	29	26	20	14	14	11
YEAR 2		11	15	25	17	22	24	26	23	18	13	12	10	

HYDROZONE 'B' - MODERATE WATER USE SHRUBS & GROUND COVER

MULTI OUTLET DRIP IRRIGATION @ SHRUB/GROUND COVER AREAS (MODERATE)		SALCO		LOCATION: HAYWARD, CALIFORNIA										
SPRINKLER MANUFACTURER		EMITTER SPACING: VARIES		HAYWARD, CALIFORNIA										
PRECIPITATION RATE (INCHES/HOUR): 0.57		EMITTER FLOW: 1 GPH PER TUBE		HAYWARD, CALIFORNIA										
IRRIGATION SYSTEM EFFICIENCY: 0.81		EMITTER FLOW: 1 GPH PER TUBE		HAYWARD, CALIFORNIA										
PLANT FACTOR: 0.60		EMITTER FLOW: 1 GPH PER TUBE		HAYWARD, CALIFORNIA										
YEAR 2 REDUCTION AMOUNT:		-10% OF YEAR 1 (ESTABLISHMENT) RUN TIME MINUTES												
MONTH:		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ETO PER MONTH (INCHES):		1.40	1.80	3.10	4.20	5.40	5.90	6.40	5.70	4.40	3.10	1.50	1.20	44.20
ETO PER WEEK (INCHES):		0.323	0.416	0.716	0.970	1.247	1.363	1.478	1.316	1.016	0.716	0.346	0.277	
APPLIED ETO PER WEEK (INCHES):		0.240	0.308	0.530	0.719	0.924	1.009	1.095	0.975	0.753	0.530	0.257	0.205	
MINUTES OF WATER PER WEEK:		YEAR 1	25	32	56	76	97	106	115	103	79	56	27	22
DAYS PER WEEK:		YEAR 1	1	1	1	2	2	3	3	3	2	2	1	1
MINUTES OF WATER PER DAY:		YEAR 1	25	32	56	38	49	35	38	34	40	28	27	22
CYCLES PER DAY:		YEAR 1	1	1	1	1	1	1	1	1	1	1	1	1
MINUTES PER CYCLE:		YEAR 1	25	32	56	38	49	35	38	34	40	28	27	22
YEAR 2		23	29	50	34	44	32	35	31	36	25	24	19	

IRRIGATION SCHEDULE NOTES

THESE CHARTS ARE INTENDED TO BE USED AS A GUIDELINE ONLY AND INDICATE APPROXIMATE RUN TIMES (IN MINUTES) FOR EACH ZONE BASED ON ESTIMATED WEEKLY WATER REQUIREMENTS FOR ESTABLISHED PLANT MATERIAL. THE FIGURES SHOWN IN THIS SCHEDULE ARE APPROXIMATE AND HAVE BEEN DEVELOPED FROM LOCAL CURRENT AVERAGES FOR EVAPOTRANSPIRATION, AND REFLECT MAXIMUM IRRIGATION REQUIREMENTS OF THE PLANT MATERIAL BASED ON PLANT TYPE AND SPACING. ACTUAL RUN TIMES MAY BE DIFFERENT DEPENDING ON A VARIETY OF FACTORS INCLUDING TOPOGRAPHY, SOIL STRUCTURE, SUN AND WIND EXPOSURE, WEATHER, ACTUAL PLANT WATER REQUIREMENTS, ETC.

HYDROZONE 'E' & 'G' - BUBBLERS AT LOW WATER USE TREES

BUBBLER IRRIGATION @ TREES		HUNTER		LOCATION: HAYWARD, CALIFORNIA										
SPRINKLER MANUFACTURER		EMITTER SPACING: VARIES		HAYWARD, CALIFORNIA										
PRECIPITATION RATE (INCHES/HOUR): 1.50		EMITTER FLOW: 2 X .25		HAYWARD, CALIFORNIA										
IRRIGATION SYSTEM EFFICIENCY: 0.81		EMITTER FLOW: 2 X .25		HAYWARD, CALIFORNIA										
PLANT FACTOR: 0.30		EMITTER FLOW: 2 X .25		HAYWARD, CALIFORNIA										
YEAR 2 REDUCTION AMOUNT:		-10% OF YEAR 1 (ESTABLISHMENT) RUN TIME MINUTES												
MONTH:		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ETO PER MONTH (INCHES):		1.40	1.80	3.10	4.20	5.40	5.90	6.40	5.70	4.40	3.10	1.50	1.20	44.20
ETO PER WEEK (INCHES):		0.323	0.416	0.716	0.970	1.247	1.363	1.478	1.316	1.016	0.716	0.346	0.277	
APPLIED ETO PER WEEK (INCHES):		0.120	0.154	0.265	0.359	0.462	0.505	0.488	0.376	0.265	0.128	0.103	0.103	
MINUTES OF WATER PER WEEK:		YEAR 1	5	6	11	14	18	20	22	20	15	11	5	4
DAYS PER WEEK:		YEAR 1	1	1	1	1	1	2	2	2	1	1	1	1
MINUTES OF WATER PER DAY:		YEAR 1	5	6	11	14	18	10	11	10	8	11	5	4
CYCLES PER DAY:		YEAR 1	1	1	1	1	1	1	1	1	1	1	1	1
MINUTES PER CYCLE:		YEAR 1	5	6	11	14	18	10	11	10	8	11	5	4
YEAR 2		4	6	10	13	17	9	10	9	7	10	5	4	

HYDROZONE 'F' - BUBBLERS AT MODERATE WATER USE TREES

BUBBLER IRRIGATION @ TREES		HUNTER		LOCATION: HAYWARD, CALIFORNIA										
SPRINKLER MANUFACTURER		EMITTER SPACING: VARIES		HAYWARD, CALIFORNIA										
PRECIPITATION RATE (INCHES/HOUR): 1.50		EMITTER FLOW: 2 X .25		HAYWARD, CALIFORNIA										
IRRIGATION SYSTEM EFFICIENCY: 0.81		EMITTER FLOW: 2 X .25		HAYWARD, CALIFORNIA										
PLANT FACTOR: 0.60		EMITTER FLOW: 2 X .25		HAYWARD, CALIFORNIA										
YEAR 2 REDUCTION AMOUNT:		-10% OF YEAR 1 (ESTABLISHMENT) RUN TIME MINUTES												
MONTH:		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
ETO PER MONTH (INCHES):		1.40	1.80	3.10	4.20	5.40	5.90	6.40	5.70	4.40	3.10	1.50	1.20	44.20
ETO PER WEEK (INCHES):		0.323	0.416	0.716	0.970	1.247	1.363	1.478	1.316	1.016	0.716	0.346	0.277	
APPLIED ETO PER WEEK (INCHES):		0.240	0.308	0.530	0.719	0.924	1.009	1.095	0.975	0.753	0.530	0.257	0.205	
MINUTES OF WATER PER WEEK:		YEAR 1	10	12	21	29	37	40	44	39	30	21	10	8
DAYS PER WEEK:		YEAR 1	1	1	1	1	1	1	2	2	2	1	1	1
MINUTES OF WATER PER DAY:		YEAR 1	10	12	21	29	37	20	22	20	15	21	10	8
CYCLES PER DAY:		YEAR 1	1	1	1	1	1	1	1	1	1	1	1	1
MINUTES PER CYCLE:		YEAR 1	10	12	21	29	37	20	22	20	15	21	10	8
YEAR 2		9	11	19	26	33	18	20	18	14	19	9	7	

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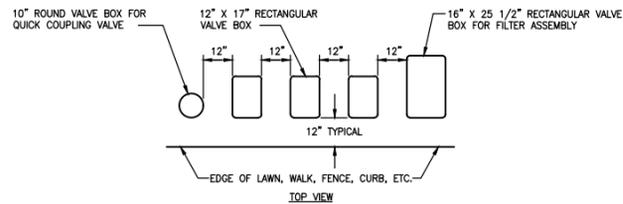
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Drawn by: MW
Date: 04/03/2017
Job: 2015-Zhang
Sheet
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Of 7 Sheets

APN: 425-430-005

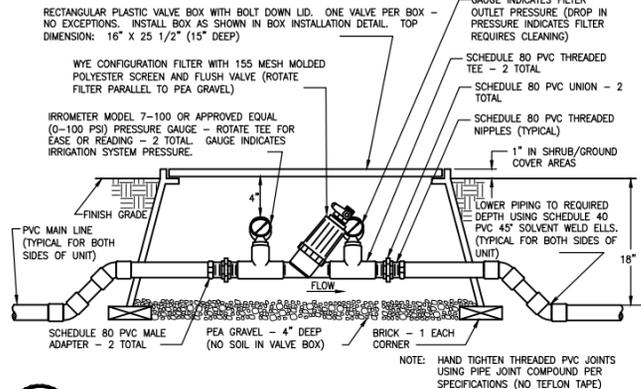


- CENTER VALVE BOX OVER REMOTE CONTROL VALVE TO FACILITATE SERVICING VALVE.
- SET BOXES 1" ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND FINISH GRADE IN TURF AREA.
- SET RCV AND VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN ONLY IF GROUND COVER DOES NOT EXIST ADJACENT TO LAWN.
- SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE OF LAWN, WALK, FENCE, CURB, ETC.
- AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOXES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
- INSTALL EXTENSION BY VALVE BOX MANUFACTURER AS REQUIRED TO COMPLETELY ENCLOSE ASSEMBLY FOR EASY ACCESS.

8 VALVE BOX INSTALLATION

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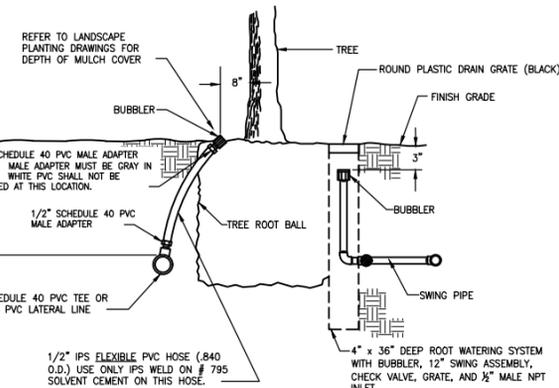
1/1 DT-IRRIG



5 FILTER ASSEMBLY

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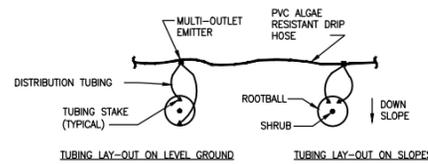
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1 TREE BUBBLERS

NOT TO SCALE

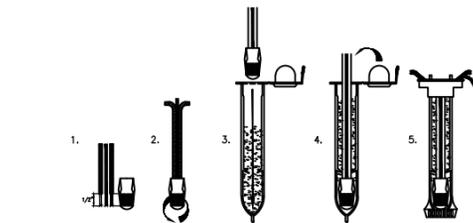
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2 EMITTER PLACEMENT

NOT TO SCALE

1/1 DT-IRRIG



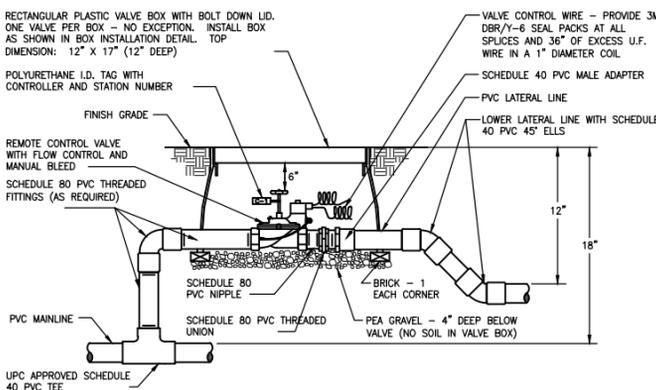
INSTRUCTIONS:

- USE 3M-DBR/Y-6 WEATHER PROOF SPLICE.
- STRIP WIRES APPROXIMATELY 1/2" (12.7 MM) TO EXPOSE WIRE.
- TWIST CONNECTOR AROUND WIRES CLOCKWISE UNTIL HAND TIGHT, DO NOT OVERTIGHTEN.
- INSERT WIRE ASSEMBLY INTO PLASTIC TUBE UNTIL WIRE CONNECTOR SNAPS PAST UP IN BOTTOM OF TUBE.
- PLACE WIRES WHICH EXIT TUBE IN WIRE EXIT HOLES AND CLOSE CAP UNTIL IT SNAPS.
- INSPECT FINAL SPLICE ASSEMBLY TO BE SECURE AND FINISHED.

9 WEATHERPROOF SPLICE ASSEMBLY

NOT TO SCALE

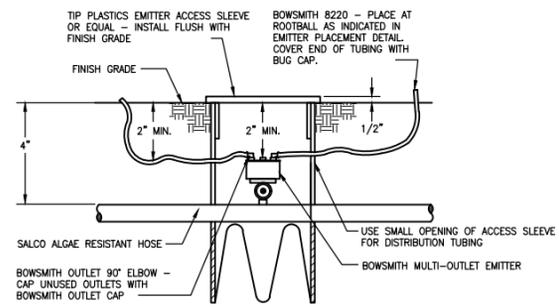
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6 REMOTE CONTROL VALVE

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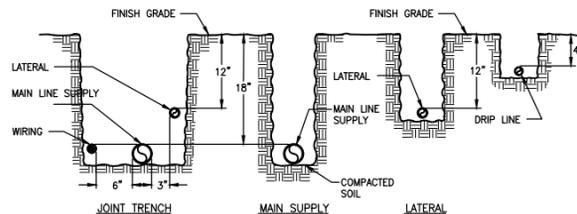
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3 MULTI-OUTLET EMITTER INSTALLATION

NOT TO SCALE

1/1 DT-IRRIG



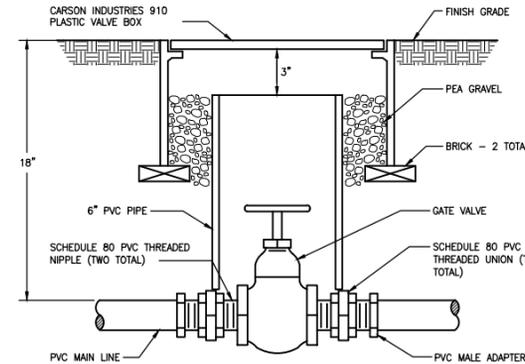
NOTES:

- ALL PLASTIC PIPING SHALL BE INSTALLED IN THE TRENCH IN A SERPENTINE MANNER AS PER THE MANUFACTURER'S SPECIFICATIONS.
- ALL SUPPLY LINES TO BE INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS.
- TAPE AND BUNDLE TUBING OR WIRING AT 10 FEET INTERVALS.
- ALL 120 VOLT WIRING IN CONDUIT TO BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES.
- BACKFILL MATERIAL SHALL BE THE EARTH EXCAVATED FROM THE TRENCHES, FREE FROM ROCKS, CONCRETE CHUNKS, AND OTHER FOREIGN OR COARSE MATERIALS. CAREFULLY SELECT BACKFILL THAT IS TO BE PLACED NEXT TO PLASTIC PIPE TO AVOID ANY SHARP OBJECTS WHICH MAY DAMAGE THE PIPE.

10 TRENCHING DETAIL

NOT TO SCALE

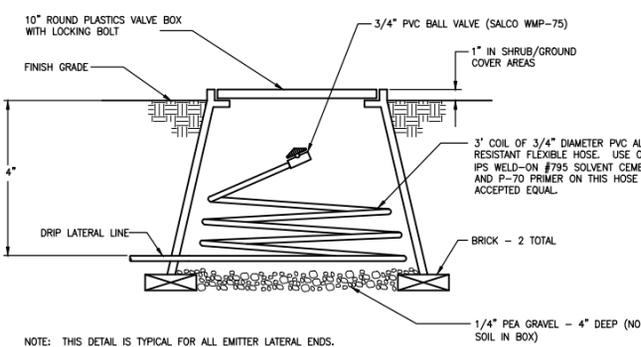
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7 GATE VALVE

NOT TO SCALE

1/1 DT-IRRIG



4 EMITTER LINE FLUSH VALVE

NOT TO SCALE

1/1 DT-IRRIG

IRRIGATION NOTES

- THESE IRRIGATION DRAWINGS ARE DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. ALL PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS IS FOR CLARITY ONLY AND ARE TO BE INSTALLED WITHIN PLANTING AREAS WHERE POSSIBLE. DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, ETC., WHICH MAY BE REQUIRED. THE CONTRACTOR IS REQUIRED TO INVESTIGATE THE STRUCTURAL AND FINISHED CONDITIONS AFFECTING ALL OF THE CONTRACT WORK INCLUDING OBSTRUCTIONS, GRADE DIFFERENCES OR AREA DIMENSIONAL DIFFERENCES WHICH MAY NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. IN THE EVENT OF FIELD DIFFERENCES, THE CONTRACTOR IS REQUIRED TO PLAN THE INSTALLATION WORK ACCORDINGLY BY NOTIFICATION AND APPROVAL OF THE OWNER'S AUTHORIZED REPRESENTATIVE AND ACCORDING TO THE CONTRACT SPECIFICATION. THE CONTRACTOR IS ALSO REQUIRED TO NOTIFY AND COORDINATE IRRIGATION CONTRACT WORK WITH ALL APPLICABLE CONTRACTORS FOR THE LOCATION AND INSTALLATION OF PIPE, CONDUIT OR SLEEVES THROUGH OR UNDER WALLS, ROADWAYS, PAVING, STRUCTURE, ETC., BEFORE CONSTRUCTION. IN THE EVENT THESE NOTIFICATIONS ARE NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL REQUIRED REVISIONS.
- THE CONTRACTOR SHALL EXERCISE CARE IN LOCATING PIPING AS TO NOT CONFLICT WITH OTHER UTILITIES. DO NOT INSTALL IRRIGATION PIPING PARALLEL TO AND DIRECTLY OVER OTHER UTILITIES.
- THE INTENT OF THIS IRRIGATION SYSTEM IS TO PROVIDE THE MINIMUM AMOUNT OF WATER REQUIRED TO SUSTAIN GOOD PLANT HEALTH.
- IT IS THE RESPONSIBILITY OF THE LANDSCAPE MAINTENANCE CONTRACTOR AND/OR OWNER TO PROGRAM THE IRRIGATION CONTROLLERS TO PROVIDE THE MINIMUM AMOUNT OF WATER NEEDED TO SUSTAIN GOOD PLANT HEALTH. THIS INCLUDES MAKING ADJUSTMENTS TO THE PROGRAM FOR SEASONAL WEATHER CHANGES, PLANT MATERIAL, WATER REQUIREMENTS, MOUNDS AND SLOPES, SUN, SHADE, AND WIND EXPOSURES.
- AT THE END OF THE REQUIRED MAINTENANCE PERIOD OF THE CONTRACTOR, THE OWNER SHALL PROVIDE REGULAR MAINTENANCE OF THE IRRIGATION SYSTEM TO ENSURE THE EFFICIENT USE OF WATER. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO CHECKING, ADJUSTING, AND REPAIRING IRRIGATION EQUIPMENT AND CONTROL SYSTEM.
- EXISTING IRRIGATION CONTROLLER LOCATED IN PHASE ONE SHALL BE USED FOR ALL NEW VALVES. IRRIGATION CONTRACTOR TO MAKE CONNECTION FROM ELECTRICAL STUB-OUTS PROVIDED AND ENSURE PROPER CONNECTIONS & GROUNDING PER CONTROLLER MANUFACTURER'S INSTRUCTIONS.
- IRRIGATION CONTROLLER TO HAVE ITS OWN INDEPENDENT 24 VOLT COMMON GROUND WIRE.
- CONTRACTOR SHALL PROGRAM THE IRRIGATION CONTROLLER TO PROVIDE IRRIGATION TO ALL PLANTING WITHIN THE ALLOWED WATERING WINDOW OF TIME AS REQUIRED. THE CONTRACTOR SHALL CREATE CONTROLLER PROGRAMS THAT WILL NOT EXCEED THE MAXIMUM GALLONS PER MINUTE FLOW RATE STATED ON THE DRAWINGS, AND NOT EXCEED THE CAPACITY OF ANY MAIN LINE PIPING.
- IRRIGATION CONTROL WIRES SHALL BE COPPER WITH U.L. APPROVAL FOR DIRECT BURIAL IN GROUND, SIZE #14-1. COMMON GROUND WIRE SHALL HAVE WHITE INSULATING JACKET. CONTROL WIRE SHALL HAVE INSULATING JACKET OF COLOR OTHER THAN WHITE. SPLICE SHALL BE MADE WITH 3M-DBR/Y-6 SEAL PACKS.
- INSTALL SPARE CONTROL WIRE OF A DIFFERENT COLOR ALONG THE ENTIRE MAIN LINE. LOOP 36" EXCESS WIRE INTO EACH SINGLE VALVE BOX AND INTO ONE VALVE BOX IN EACH GROUP OF VALVES. MINIMUM OF ONE SPARE WIRE PER CONTROLLER.
- SPLICINGS OF 24 VOLT WIRE IS NOT PERMITTED EXCEPT IN VALVE BOXES. SEAL WIRE SPLICES WITH 3M-DBR/Y-6 SPLICE SEALING DEVICES OF SIZE COMPATIBLE WITH WIRE SIZE. LEAVE A 36" LONG, 1" DIAMETER COIL OF EXCESS WIRE AT EACH SPLICE AND A 36" LONG EXPANSION LOOP EVERY 100 FEET ALONG WIRE RUN. TAPE WIRES TOGETHER EVERY TEN FEET. TAPING WIRES IS NOT REQUIRED INSIDE SLEEVES.
- PLASTIC VALVE BOXES ARE TO BE BLACK IN COLOR WITH BOLT DOWN, NON-HINGED COVER MARKED "IRRIGATION". BOX BODY SHALL HAVE KNOCK OUTS. MANUFACTURER SHALL BE CARSON INDUSTRIES.
- INSTALL REMOTE CONTROL VALVE BOXES 12" FROM WALK, CURB, HEADER BOARD, BUILDING, OR LANDSCAPE FEATURE. AT MULTIPLE VALVE BOX GROUPS, EACH BOX SHALL BE AN EQUAL DISTANCE FROM THE WALK, CURB, LAWN, ETC. AND EACH BOX SHALL BE 12" APART. SHORT SIDE OF RECTANGULAR VALVE BOXES SHALL BE PARALLEL TO WALK, CURB, ETC.
- VALVE LOCATIONS SHOWN ARE DIAGRAMMATIC. INSTALL IN ACCESSIBLE LOCATION WITH MINIMAL VISIBILITY FROM WALKS, STREET, DRIVENAYS, DECKS AND PATIOS.
- THE REMOTE CONTROL VALVE SPECIFIED ON THE DRAWINGS IS A PRESSURE REDUCING TYPE. SET THE DISCHARGE PRESSURE AS FOLLOWS:
 - TREE BUBBLERS = 35 PSI
 - DRIP EMITTERS = 30 PSI
- LOCATE DRIP EMITTER TUBES ON UP-HILL SIDE OF PLANT.
- LOCATE BUBBLERS ON UP-HILL SIDE OF TREE.
- INSTALL A VALCON 8000 SERIES SPRING LOADED CHECK VALVE BELOW THOSE SPRINKLERS WHERE LOW HEAD DRAINAGE WILL CAUSE EROSION AND/OR EXCESS WATER.
- WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, THE CONTRACTOR SHALL USE ALL POSSIBLE CARE TO AVOID INJURY TO TREES AND TREE ROOTS. EXCAVATION IN AREAS WHERE TWO (2) INCH AND LARGER ROOTS OCCUR SHALL BE DONE BY HAND. TRENCHES ADJACENT TO TREE SHOULD BE CLOSED WITHIN TWENTY-FOUR (24) HOURS; AND WHERE THIS IS NOT POSSIBLE, THE SIDE OF THE TRENCH ADJACENT TO THE TREE SHALL BE KEPT SHADED WITH BURLAP OR CANVAS.
- IRRIGATION CONTRACTOR TO NOTIFY ALL LOCAL JURISDICTIONS FOR INSPECTION AND TESTING OF INSTALLED BACKFLOW PREVENTION DEVICE.
- PRESSURE TEST PROCEDURE. THE CONTRACTOR SHALL:
 - NOTIFY ARCHITECT AT LEAST THREE (3) DAY IN ADVANCE OF TESTING.
 - PERFORM TESTING AT HIS OWN EXPENSE.
 - CENTER LOAD PIPING WITH SMALL AMOUNT OF BACKFILL TO PREVENT ARCHING OR SLIPPING UNDER PRESSURE. NO FITTING SHALL BE COVERED.
 - APPLY THE FOLLOWING TESTS AFTER WELD PLASTIC PIPE JOINTS HAVE CURED AT LEAST 24 HOURS:
 - TEST LIVE (CONSTANT PRESSURE) AND QUICK COUPLER LINE HYDROSTATICALLY AT 125 PSI. MINIMUM. LINES WILL BE APPROVED IF TEST PRESSURE IS MAINTAINED FOR SIX (6) HOURS. THE LINE WILL BE APPROVED OR NOT APPROVED AS SUCH RESULTS MAY INDICATE. THE CONTRACTOR SHALL MAKE TESTS AND REPAIRS AS NECESSARY UNTIL TEST CONDITIONS ARE MET.
 - TEST RCV CONTROLLED LATERAL LINES WITH WATER AT LINE PRESSURE AND VISUALLY INSPECT FOR LEAKS. RETEST AFTER CORRECTING DEFECTS.
- THE SPRINKLER SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE SHOWN ON THE IRRIGATION DRAWINGS. THE IRRIGATION CONTRACTOR SHALL VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE.
- IRRIGATION DEMAND: 7 GPM AT 65 PSI STATIC PRESSURE AT IRRIGATION POINT OF CONNECTION. FIELD VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. IF ACTUAL WATER PRESSURE DIFFERS FROM THE STATED PRESSURE CONTACT ARCHITECT FOR DIRECTION AND POSSIBLE REVISION.
- PIPE THREAD SEALANT COMPOUND SHALL BE RECTOR SEAL T-2, CHRISTY'S ULTRA SEAL, OR APPROVED EQUAL.

REVISIONS BY

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IRRIGATION NOTES & DETAILS
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APN: 425-430-005

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Date: 04/03/2017

Job: 2015-Zhang

Sheet

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Of 7 Sheets

Tree Preservation Guidelines

The goal of tree preservation is not merely tree survival during development but maintenance of tree health and beauty for many years. Trees retained on sites that are either subject to extensive injury during construction or are inadequately maintained become a liability rather than an asset. The response of individual trees will depend on the amount of excavation and grading, the care with which demolition is undertaken, and the construction methods. Coordinating any construction activity inside the **Tree Protection Zone** can minimize these impacts.

The following recommendations will help reduce impacts to trees from development and maintain and improve their health and vitality through the clearing, grading and construction phases.

Design recommendations

- All plans affecting trees shall be reviewed by the Consulting Arborist with regard to tree impacts. This includes, but is not limited to, all Grading, Drainage, Utility and landscape plans.
- A **TREE PROTECTION ZONE** must be established for trees to be preserved, in which no disturbance is permitted. **TREE PROTECTION ZONES** for trees identified for preservation are provided in the following table. No grading, excavation, construction or storage of materials shall occur within that zone.

Tree No.	TPZ
#676, 677 and 700	Dripline (DL) in all directions
#678	6' E, DL in all other directions
#679	9' W, DL in all other directions
#681	9' E, 9' W, 5' N, DL S
#686	7' W, DL in all other directions
#688	12' W & N, DL in all other directions
#697 and 698	8' S, DL in all other directions
#699	8' S, DL in all other directions
#690	7' W, DL in all other directions

- Underground services including utilities, sub-drains, water or sewer shall be routed around the **TREE PROTECTION ZONE**. Where encroachment cannot be avoided, special construction techniques such as hand digging or tunneling under roots shall be employed where necessary to minimize root injury.
- Tree Preservation Notes**, prepared by the Consulting Arborist, should be included on all plans.
- Irrigation systems must be designed so that no trenching will occur within the **TREE PROTECTION ZONE**.
- Any herbicides placed under paving materials must be safe for use around trees and labeled for that use.
- Do not lime within 25' of any tree to be preserved. Lime is toxic to tree roots.

Pre-construction treatments and recommendations

- The demolition contractor and construction superintendent shall meet with the Consulting Arborist before beginning work to discuss work procedures and tree protection.
- Fence all trees to be retained to completely enclose the **TREE PROTECTION ZONE** prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link or equivalent as approved by the City. Fences are to remain until all grading and construction is completed.
- Tree(s) to be removed that have branches extending into the canopy of tree(s) to remain must be removed by a qualified arborist and not by demolition or construction contractors. The qualified arborist shall remove the tree in a manner that causes no damage to the tree(s) and understory to remain. Stumps shall be ground below grade.
- Any brush clearing required within the **TREE PROTECTION ZONE** shall be accomplished with hand-operated equipment.
- Prune trees to be preserved to clean the crown and to provide clearance. All pruning shall be done by a State of California Licensed Tree Contractor (C61/D49). All pruning shall be done by Certified Arborist or Certified Tree Worker in accordance with the Best Management Practices for Pruning (International Society of Arboriculture, 2002) and adhere to the most recent editions of the American National Standard for Tree Care Operations (T133.1) and Pruning (A300).
- All tree work shall comply with the Migratory Bird Treaty Act as well as California Fish and Wildlife code 3503-3513 to not disturb nesting birds. To the extent feasible tree pruning and removal should be scheduled outside of the breeding season. Breeding bird surveys should be conducted prior to tree work. Qualified biologists should be involved in establishing work buffers for active nests.
- Structures and underground features to be removed within the **TREE PROTECTION ZONE** shall use the smallest equipment, and operate from outside the **TREE PROTECTION ZONE**. The Consulting Arborist shall be on-site during all operations within the **TREE PROTECTION ZONE** to monitor demolition activity.
- Apply and maintain 4-6" of wood chip mulch within the **TREE PROTECTION ZONE**.

Recommendations for tree protection during construction

- Prior to beginning work, all contractors working in the vicinity of trees to be preserved are required to meet with the Consulting Arborist at the site to review all work procedures, access routes, storage areas and tree protection measures.
- Any excavation within the dripline or other work that is expected to encounter tree roots should be approved and monitored by the Consulting Arborist. Roots shall be cut by manually digging a trench and cutting exposed roots with a sharp saw. The Consulting Arborist will identify where root pruning is required.
- No grading, construction, demolition or other work shall occur within the **TREE PROTECTION ZONE**. Any modifications must be approved and monitored by the Consulting Arborist.
- Fences have been erected to protect trees to be preserved. Fences define a specific **TREE PROTECTION ZONE** for each tree or group of trees. Fences are to remain until all site work has been completed. Fences may not be relocated or removed without permission of the Consulting Arborist.
- If temporary haul or access roads must pass over the root area of trees to be retained, a road bed of 6" of mulch or gravel shall be created to protect the soil. The road bed material shall be replenished as necessary to maintain a 6" depth.
- Construction trailers, traffic and storage areas must remain outside fenced areas at all times.
- Prior to grading, pad preparation, excavation for foundations/footings/walls, trenching, trees may require root pruning outside the **TREE PROTECTION ZONE** by cutting all roots cleanly to the depth of the excavation. Roots shall be cut by manually digging a trench and cutting exposed roots with a saw, vibrating knife, rock saw, or other approved root pruning equipment. The Consulting Arborist will identify where root pruning is required and monitor all root pruning.
- All underground utilities, drain lines or irrigation lines shall be routed outside the **TREE PROTECTION ZONE**. If lines must traverse through the protection area, they shall be tunneled or bored under the tree as directed by the Consulting Arborist.
- If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied.
- No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the **TREE PROTECTION ZONE**.
- Any additional tree pruning needed for clearance during construction must be performed by a Certified Arborist and not by construction personnel.

Maintenance of impacted trees

Preserved trees will experience a physical environment different from that pre-development. As a result, tree health and structural stability should be monitored. Occasional pruning, fertilization, mulch, pest management, replanting and irrigation may be required. In addition, provisions for monitoring both tree health and structural stability following construction must be made a priority. As trees age, the likelihood of failure of branches or entire trees increases. Therefore, annual inspection for hazard potential is recommended.

Tree Assessment

26646 Parkside Dr.
Hayward, California
July 2015



TREE No.	SPECIES	TRUNK DIAMETER (in.)	PROTECTED	CONDITION 1=poor 5=excellent	SUITABILITY FOR PRESERVATION	COMMENTS	Driplines (ft.)				Height (ft.)
							North	South	East	West	
676	Coast live oak	19.6	Yes	3	Moderate	Codominant trunks at base; 19" stem pruned S. for overhead utilities; 10" stem bowed NE.	20	16	22	25	35
677	Coast live oak	17	Yes	3	Moderate	Multiple attachments at 5'; pruned S. for overhead utilities; included bark/weak attachments.	15	5	25	15	30
678	Coast live oak	16,13,11,6	Yes	3	Moderate	Multiple attachments at base; S. half of canopy topped for overhead utilities; seam in attachments.	15	25	22	10	35
679	Coast live oak	14,14,12	Yes	3	Moderate	Multiple attachments at 4'; pruned S. for overhead utilities; trunk wounds.	15	20	25	20	35
680	Blackwood acacia	17,17,12,10	Yes	3	Low	Multiple attachments at base; poor form and structure; trunk wounds; dieback.	20	15	20	15	45
681	Coast live oak	11	Yes	3	Moderate	Suppressed; crooks in trunk; trunk wounds.	7	7	7	7	35
682	Coast live oak	14,10	Yes	3	Moderate	Codominant trunks at 4'; upright, narrow form; dieback.	15	8	15	20	35
683	Coast live oak	19	Yes	4	High	Multiple attachments at 5'; upright form; seams in attachments.	20	10	17	15	35
684	Coast live oak	20	Yes	4	High	Multiple attachments at 7'; upright form; growing against old foundation.	20	15	20	12	35
685	Coast live oak	14	Yes	4	High	Multiple attachments at 10'; upright form.	18	18	18	15	35
686	Coast live oak	11	Yes	3	Low	Suppressed; crown bowed E. over adjacent property.	8	15	8	0	25
687	Buckeye	6	No	2	Low	Suppressed; poor form and structure; branch tear out at 3'.	10	5	5	15	20
688	Coast live oak	18,17	Yes	4	High	Codominant trunks at base; slight lean N.; seam in attachment.	30	15	15	25	35
689	Calif. bay	7.6	Yes	3	Low	Codominant trunks at 2'; one sided W.; seam in attachment.	10	5	15	15	20
690	Coast live oak	26,22	Yes	3	Moderate	Codominant trunks at 4'; several large stubs; bleeding at base S.; dieback.	25	30	25	18	50
691	Coast live oak	11,3	Yes	3	Moderate	Codominant trunks at 3'; upright, narrow form; dieback.	8	8	8	8	25
692	Coast live oak	10	Yes	3	Moderate	Codominant trunks at 6'; upright, narrow form; dieback.	12	12	5	5	25
693	Coast live oak	6,2	Yes	3	Low	Codominant trunks at 6'; suppressed; leans N.; dieback.	5	0	0	5	25
694	Buckeye	9,7	Yes	3	Moderate	Codominant trunks at 2'; suppressed; leans N.	25	15	5	10	25
695	Plum	7,6,6,6,5,4	Yes	3	Low	Multiple attachments at base; topped with small regrowth.	10	10	10	10	20
696	Plum	7,6	Yes	1	Low	Mostly dead.	10	10	10	10	20
697	Coast live oak	17,16	Yes	3	Low	Codominant trunks at 4'; poor form and structure; trunk decay; dieback.	15	20	20	10	30
698	Buckeye	7,3	Yes	4	Moderate	Codominant trunks at 3'; narrow form; slight lean N.	15	5	15	15	25
699	Coast live oak	10,6	Yes	4	High	Codominant trunks at 4'; good, upright form.	12	12	12	12	25
700	Coast live oak	27	Yes	3	Moderate	Leans N. to horizontal; lowest 10" stem dead; dieback.	30	22	20	15	35

Table 4. Appraised value of trees identified for removal
26446 Parkside Dr., Hayward

Tree No.	Common Name	Size (in.)	Appraised Value (\$)
680	Blackwood acacia	17,17,12,10	2,350
682	Coast live oak	14,10	2,550
683	Coast live oak	19	4,350
684	Coast live oak	20	4,800
685	Coast live oak	14	2,400
687	Buckeye	6	200
689	Calif. bay	7,6	1,100
690	Coast live oak	26,22	6,650
691	Coast live oak	11,3	1,150
692	Coast live oak	10	900
693	Coast live oak	6,2	400
694	Buckeye	9,7	1,000
695	Plum	7,6,6,6,5,4	1,600
696	Plum	7,6	150
Total			29,600

Table 5. Appraised value of trees identified for preservation
26446 Parkside Dr., Hayward

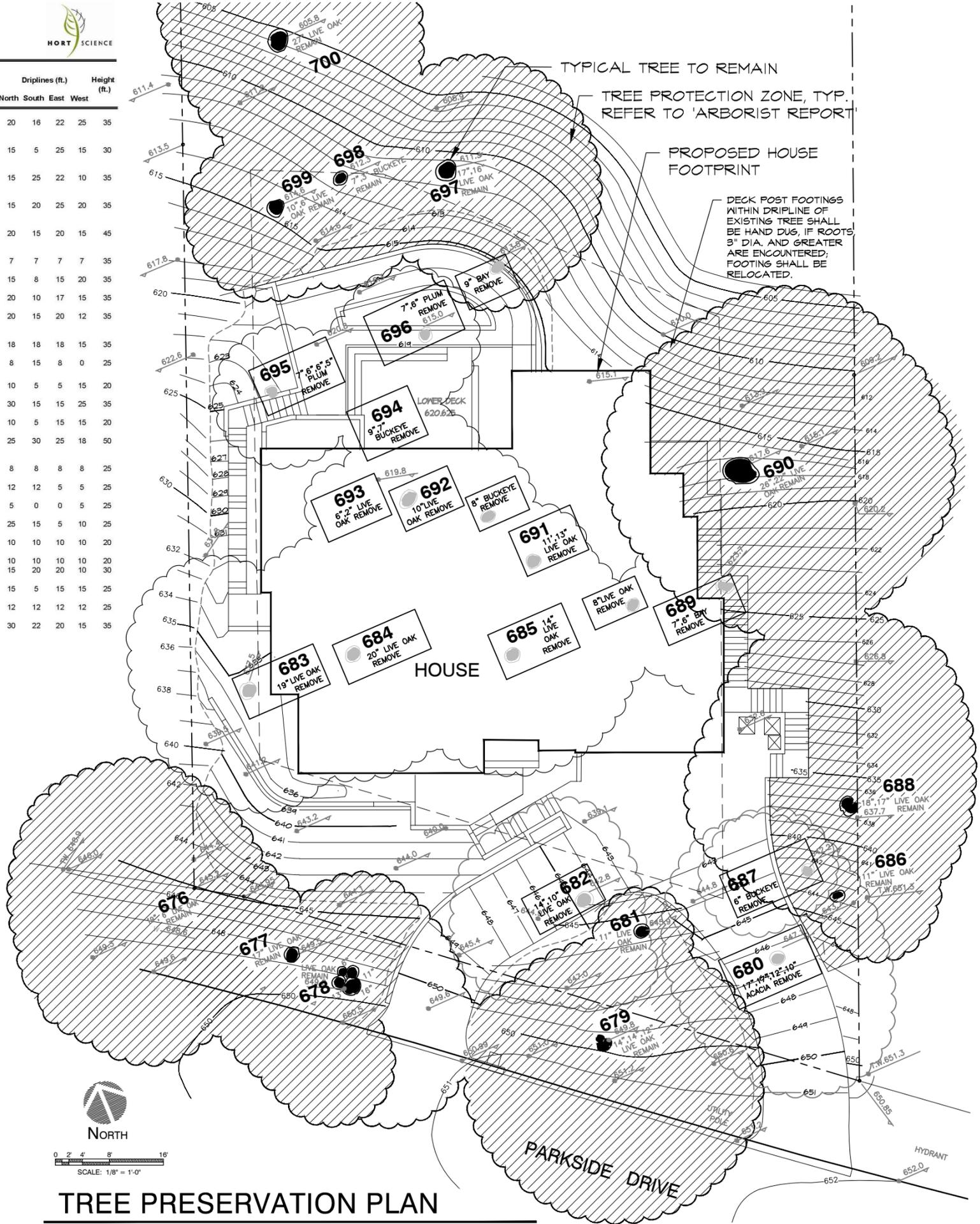
Tree No.	Common Name	Size (in.)	Appraised Value (\$)
676	Coast live oak	19.6	3,400
677	Coast live oak	17	2,500
678	Coast live oak	16,13,11,6	5,000
679	Coast live oak	14,14,12	4,600
681	Coast live oak	11	1,050
686	Coast live oak	11	1,050
688	Coast live oak	18,17	7,350
697	Coast live oak	17,16	4,700
698	Buckeye	7,3	650
699	Coast live oak	10,6	1,700
700	Coast live oak	27	6,250
Total			38,250

Tree Mitigation Summary

ITEM DESCRIPTION	NATIVE TREE	QTY.	UNIT	UNIT COST	AMOUNT
Dwarf Strawberry Tree - 24" Box	Yes	1	EA	\$ 1,000	\$ 1,000
Dwarf Strawberry Tree - 15 Gal	Yes	11	EA	350	3,850
Coast Live Oak - 48" Box	Yes	2	EA	4,000	8,000
Coast Live Oak - 24" Box	Yes	3	EA	1,000	1,000
SubTotal Native Trees					\$ 13,850
Fruit Trees - 15 Gal (Mitigates Plum Trees Only)		4	EA	350	\$ 1,400
Permeable Pavers - Driveway, Entry Walk		1,380	SF	22	30,360
Permeable Gravel Paving - Backyard		260	SF	6	1,560
TOTAL MITIGATION COSTS					\$ 47,170

INSTALLED TREE VALUES INCLUDE:

- Tree, labor, steep slope access, irrigation bubblers, mainline, controller, tree stakes, soil amendment, mulch, maintenance and plant establishment.
- Trees 24" box size & larger also includes boulders.
- Refer to Sheet L-3 for Proposed Tree Locations



REVISIONS BY

MARY WEBER
LANDSCAPE ARCHITECT



TREE PRESERVATION PLAN
Conan Zhang Residence
26446 Parkside Drive
Hayward, California

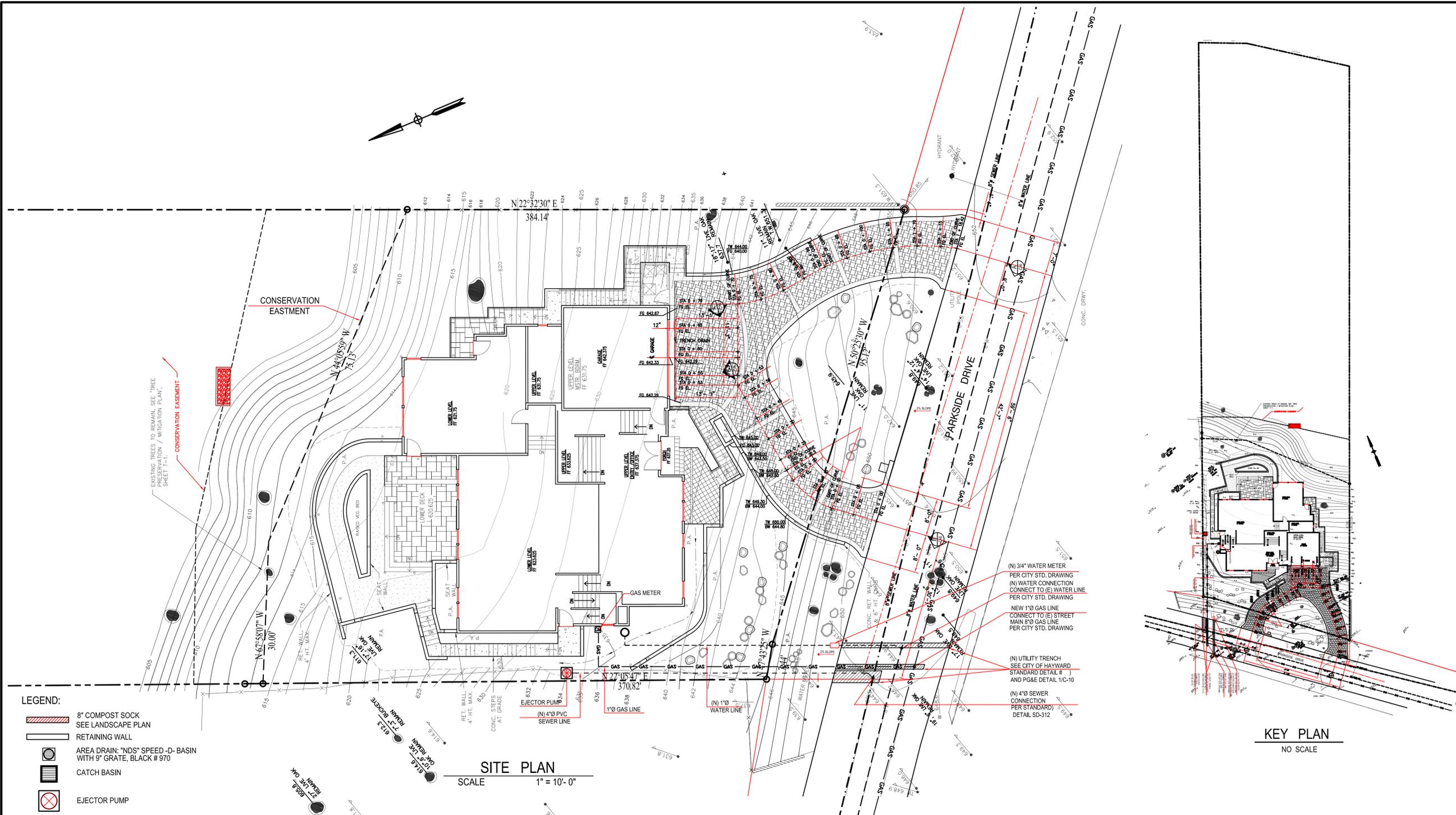
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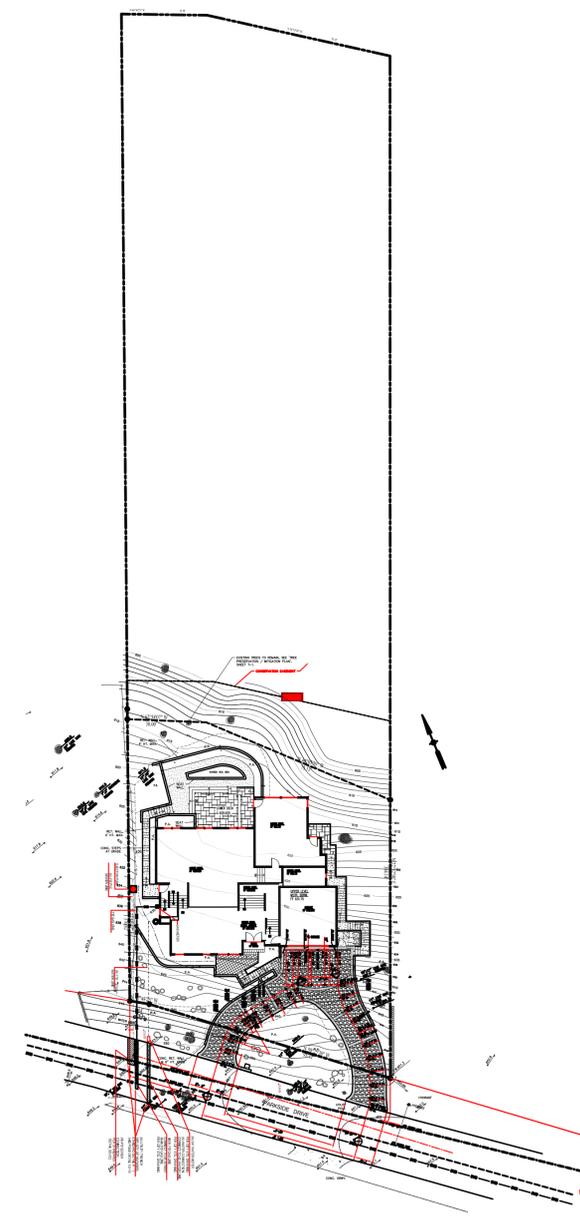
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Drawn by: MW
Date: 04/03/2017
Job: 2015-Zhang

Sheet
T-1
Of 7 Sheets



- LEGEND:**
- 8" COMPOST SOCK
SEE LANDSCAPE PLAN
 - RETAINING WALL
 - AREA DRAIN: "NDS" SPEED -D- BASIN
WITH 9" GRATE, BLACK # 970
 - CATCH BASIN
 - EJECTOR PUMP

SITE PLAN
SCALE 1" = 10'-0"



KEY PLAN
NO SCALE

DESIGNER



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SHEET CONTENT

SITE PLAN

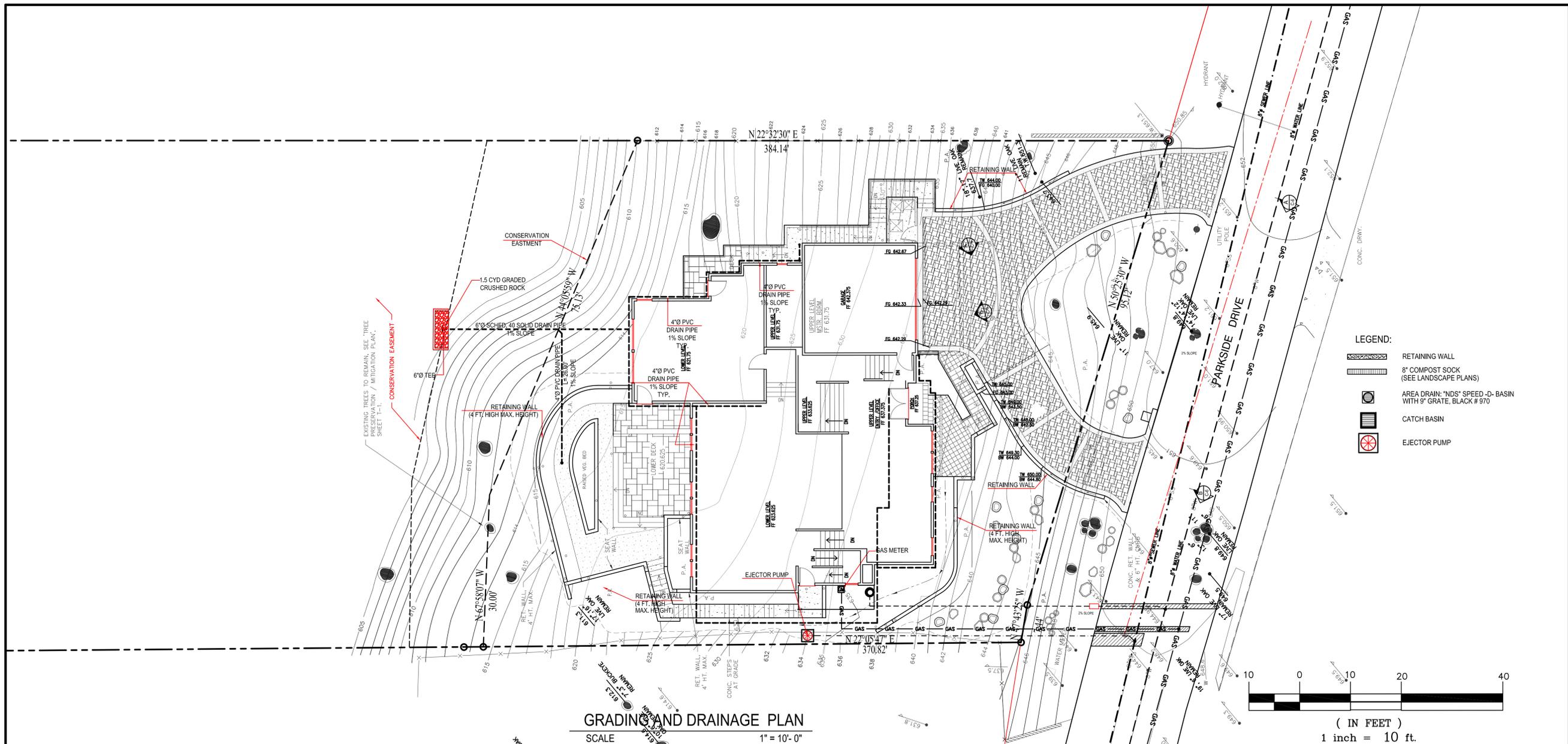
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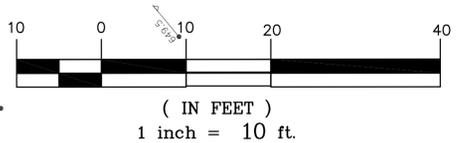
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CHECKED BY RAMAN PATEL

PROJECT NO. 16-26	SHEET NO. C-2
----------------------	-------------------------



- LEGEND:**
- RETAINING WALL
 - 8" COMPOST SOCK (SEE LANDSCAPE PLANS)
 - AREA DRAIN: "NDS" SPEED-D-BASIN WITH 9" GRATE, BLACK # 970
 - CATCH BASIN
 - EJECTOR PUMP



GRADING AND DRAINAGE PLAN
SCALE 1" = 10'-0"

GENERAL NOTES

1. PRIOR TO STARTING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY. THE SOILS REPORT AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND IN CASE OF CONFLICT SHALL TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCY BETWEEN SOILS REPORT, PLANS, AND/OR SPECIFICATIONS.
3. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS & SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE SOILS REPORT REFERENCED IN THIS PLAN SET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING & REPLACING ALL SOFT, YIELDING OR UNSUITABLE MATERIALS AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE SOILS REPORT. ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED TO A MINIMUM OF 90% COMPACTION ACCORDING TO ASTM D1557, MOST RECENT VERSION. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL NOT EXCEED 2% ABOVE, NOR 3% BELOW OPTIMUM. CONTRACTOR SHALL SUBMIT A COMPACTION REPORT PREPARED BY A QUALIFIED SOILS ENGINEER, REGISTERED WITHIN THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECS AND THE RECOMMENDATIONS SET FORTH IN THE SOILS REPORT.
4. THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THESE PLANS ARE BASED ON FIELD SURVEYS AND LOCAL UTILITY COMPANY RECORDS. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO STARTING CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE.
5. ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
6. WATER SERVICE SHALL BE AS NOTED ON THESE PLANS AND SHALL BE INSTALLED WITH 24" MINIMUM COVER OR BELOW FROSTLINE, WHICHEVER IS GREATER.

GRADING NOTES

1. ALL EXCESS FILL SHALL BE DISPOSED OF IN ACCORDANCE WITH CITY REQUIREMENTS. ALL BUILDING DEBRIS SHALL BE DISPOSED OF OUTSIDE THE CITY OF HAYWARD.
2. PRIOR TO COMMENCEMENT OF WORK, APPROVAL BY THE CITY ENGINEER SHALL BE OBTAINED FOR THE TRENCHING OF COMPLETED STREETS. THE CITY ENGINEER MAY REQUIRE THAT TRENCHES METHODS BE USED FOR CROSSING AND CONNECTIONS UNDER STREETS.
3. PRIOR TO OCCUPANCY, THE APPLICANT SHALL REPAIR AND REPLACE TO CITY STANDARDS ANY STREETS, CURBS, GUTTERS AND SIDEWALKS DAMAGED DURING CONSTRUCTION OF THE PROJECT.
4. PRIOR TO ISSUANCE OF A BUILDING PERMIT, THE EXISTING STORM DRAIN LINES SHALL BE TELEVIEWED TO VERIFY THEY HAVE NOT BECOME PLUGGED WITH SEDIMENT AND CLEANOUT IF NECESSARY.
5. PAVEMENT SECTION (TI = 6):
 FLEXIBLE PAVEMENT = 3.00" ASPHALT CONCRETE OVER 7.5" CLASS 2 AGGREGATE BASE
 RIGID PAVEMENT = 6.0" THICK RIGID CONCRETE PAVEMENT OVER 6.0" CLASS II AGGREGATE BASE
 $f_c = 2,500$ PSI, #4 @ 12" E.W. REINFORCING STEEL
 THE AGGREGATE BASE AND THE UPPER 6 INCHES OF UNDERLYING SOIL SUBGRADE SHOULD BE COMPACTED TO MINIMUM OF 95 PERCENT RELATIVE COMPACTION AS DETERMINED BY ASTM D 1557.
6. CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE HOURS OF 8 A.M. TO 5 P.M. ON WEEKDAYS UNLESS DEVIATIONS FROM THIS SCHEDULE ARE APPROVED IN ADVANCE BY THE CITY. NONCONSTRUCTION ACTIVITIES MAY TAKE PLACE BETWEEN THE HOURS OF 7 A.M. AND 8 A.M. ON WEEKDAYS AND 9 A.M. AND 4 P.M. ON SATURDAYS, BUT MUST BE LIMITED TO QUIET ACTIVITIES AND SHALL NOT INCLUDE THE USE OF ENGINE DRIVEN MACHINERY.
7. BLOWING DUST SHALL BE REDUCED BY TIMING CONSTRUCTION ACTIVITIES SO THAT PAVING AND BUILDING CONSTRUCTION BEGIN AS SOON AS POSSIBLE AFTER COMPLETION OF GRADING, AND BY LANDSCAPING DISTURBED SOILS AS SOON AS POSSIBLE. FURTHER, WATER TRUCKS SHALL BE PRESENT AND IN USED AT THE CONSTRUCTION SITE. ALL PORTIONS OF THE SITE SUBJECT TO BLOWING DUST SHALL BE WATERED AS OFTEN AS DEEMED NECESSARY BY THE CITY IN ORDER TO INSURE PROPER CONTROL OF BLOWING DUST FOR THE DURATION OF THE PROJECT. WATERING ON PUBLIC STREETS SHALL NOT OCCUR. STREETS WILL BE CLEANED BY STREET SWEEPERS OR BY HAND AS OFTEN AS DEEMED AS NECESSARY BY THE CITY ENGINEER. WATERING ASSOCIATED WITH ON SITE CONSTRUCTION ACTIVITY SHALL TAKE PLACE BETWEEN THE HOURS OF 8 A.M. AND 7 P.M. AND SHALL INCLUDE AT LEAST ONE LATE AFTERNOON WATERING TO MINIMIZE THE EFFECTS OF BLOWING DUST. ALL PUBLIC STREETS AND MEDIANS SOILED OR LITTERED DUE TO THIS CONSTRUCTION ACTIVITY SHALL BE CLEANED AND SWEEPED ON A DAILY BASIS DURING THE WORK-WEEK TO THE SATISFACTION OF THE CITY.
8. THE DEVELOPER SHALL NOTIFY THE CITY ENGINEER, IN WRITING AT LEAST 48 HOURS IN ADVANCE OF ALL DIFFERENCES BETWEEN THE PROPOSED WORK AND THE DESIGN INDICATED ON THE PLANS AND SHALL BE SUBJECT TO THE APPROVAL OF THE CITY BEFORE WORK IS ALTERED.
9. THE GENERAL CONTRACTOR SHALL PROVIDE QUALIFIED SUPERVISION ON THE JOBSITE AT ALL TIMES DURING CONSTRUCTION.
10. ALL WORK SHALL CONFORM TO THE APPLICABLE CITY/DISTRICT CODES. GOOD HOUSEKEEPING PRACTICES SHALL BE OBSERVED AT ALL TIMES DURING THE COURSE OF CONSTRUCTION. SUPERINTENDENCE OF CONSTRUCTION SHALL BE DILIGENTLY PERFORMED BY A PERSON OR PERSONS AUTHORIZED TO DO SO AT ALL TIMES DURING WORKING HOURS. THE STORING OF GOODS AND OR MATERIALS ON THE SIDEWALK AND OR THE STREET WILL NOT BE ALLOWED UNLESS A SPECIAL PERMIT IS ISSUED BY THE ENGINEERING DIVISION.
11. CURRENT BEST MANAGEMENT PRACTICES FOR NEW CONSTRUCTION AS OUTLINED BY THE CITY OF HAYWARD STORMWATER POLLUTION PREVENTION PROGRAM SHALL BE FOLLOWED.

DESIGNER



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PROJECT TITLE

ZHANG RESIDENCE

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SEAL



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SHEET CONTENT

GRADING AND DRAINAGE PLAN

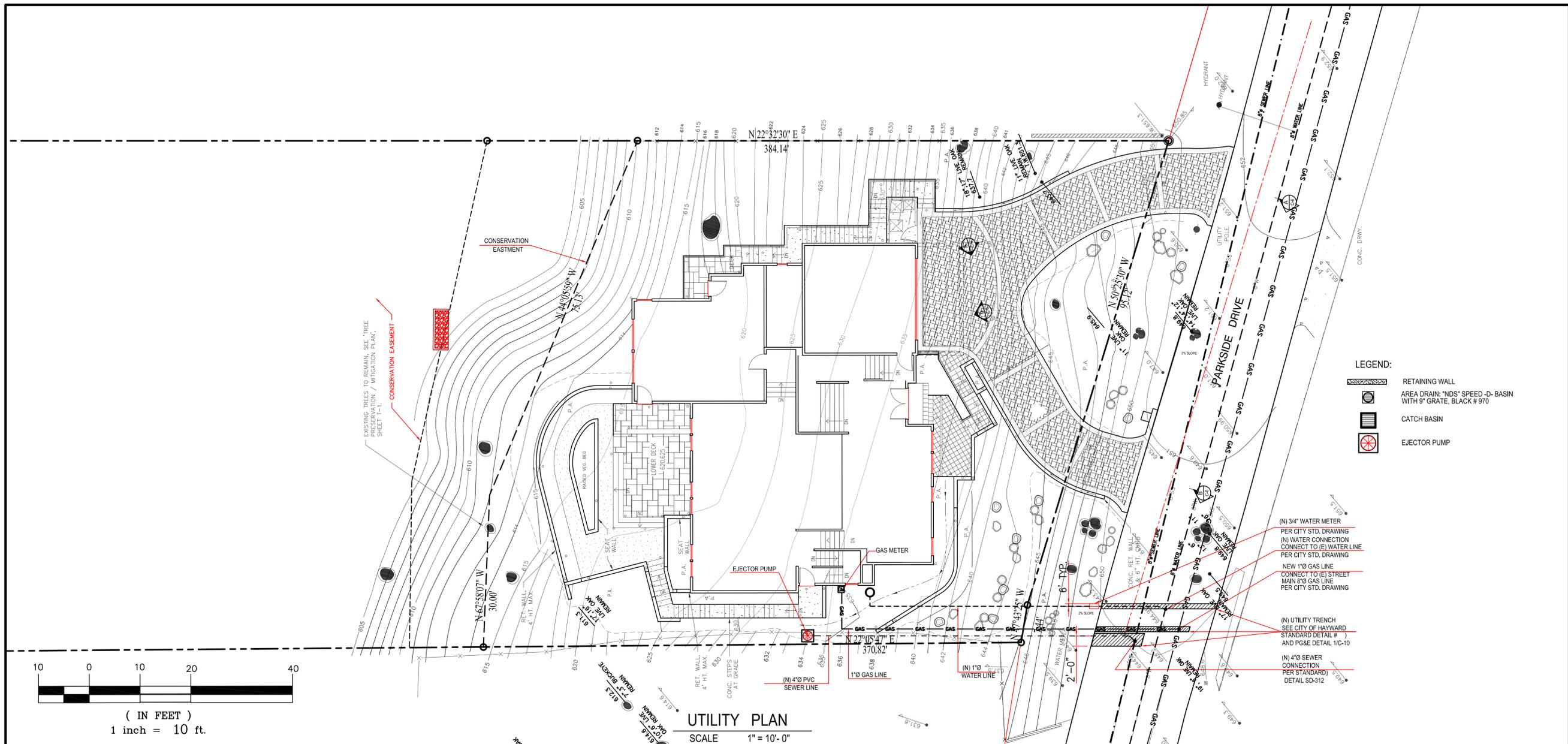
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PROJECT NO. 16-26 SHEET NO. **C-3**



UTILITY PLAN
SCALE 1" = 10'-0"

GENERAL NOTES

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- WATER SERVICE SHALL BE AS NOTED ON THESE PLANS AND SHALL BE INSTALLED WITH 24" MINIMUM COVER OR BELOW FROSTLINE, WHICHEVER IS GREATER.

UTILITY NOTES

THE UTILITIES EXISTING ON THE SURFACE AND SHOWN HEREON HAVE BEEN LOCATED BY FIELD SURVEY. ALL UNDERGROUND UTILITIES DEPICTED HEREON HAVE BEEN DELINEATED USING THE RECORDS OF THE AGENCIES RESPONSIBLE. THE SURVEYOR/ENGINEER IS NOT RESPONSIBLE FOR COMPLETENESS, INDICATED LOCATION, OR SIZE. UNDERGROUND UTILITY LOCATION, SIZE AND DEPTH SHALL BE CONFIRMED BY THE OWNER OR ANY OTHER USER OF THIS PLAN BY EXCAVATION OR INSPECTION.

THE FOLLOWING AGENCIES DID NOT RESPOND TO A REQUEST FOR UTILITY INFORMATION. THEY MAY HAVE FACILITIES WHICH EXIST WHICH ARE NOT SHOWN HEREON:

CITY OF HAYWARD WATER DEPARTMENT
CITY OF HAYWARD DEPARTMENT OF ELECTRICITY
CITY OF HAYWARD BUREAU OF TRAFFIC ENGINEERING
CITY OF HAYWARD BUREAU OF LIGHT HEAT AND POWER
CITY OF HAYWARD UTILITIES ENGINEERING BUREAU
PACIFIC GAS AND ELECTRIC COMPANY

DESIGNER



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SHEET CONTENT

UTILITY PLAN

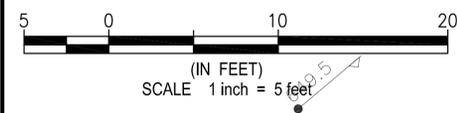
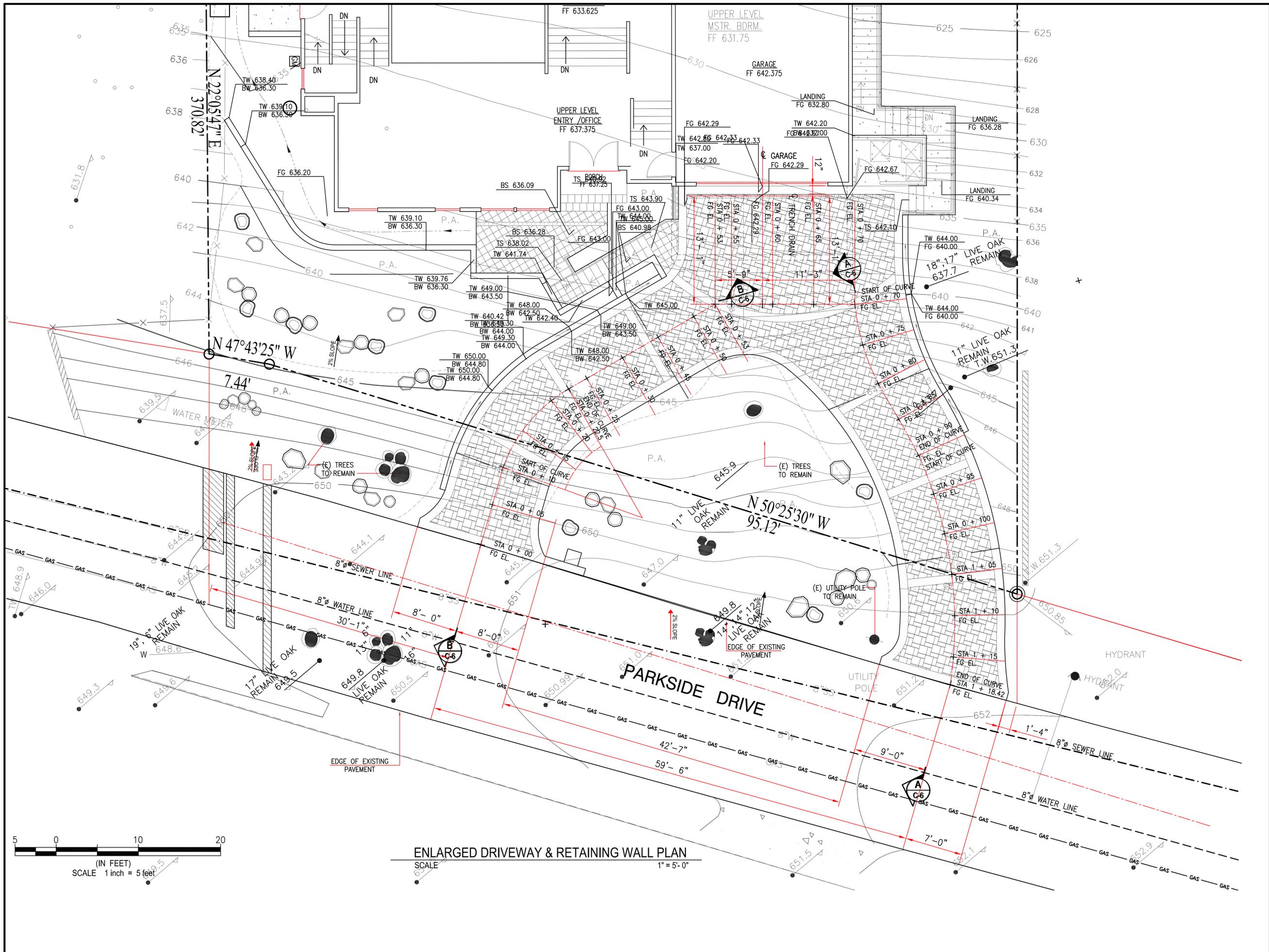
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PROJECT NO. SHEET NO.
16-26 **C-4**



ENLARGED DRIVEWAY & RETAINING WALL PLAN
SCALE 1" = 5'-0"

DESIGNER



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HAYWARD, CA 94542

PROJECT TITLE

ZHANG RESIDENCE
26446 PARKSIDE DRIVE,
HAYWARD, CA 94542

SEAL



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SHEET CONTENT

ENLARGE DRIVEWAY
RET. WALL PLAN
SHEET-1

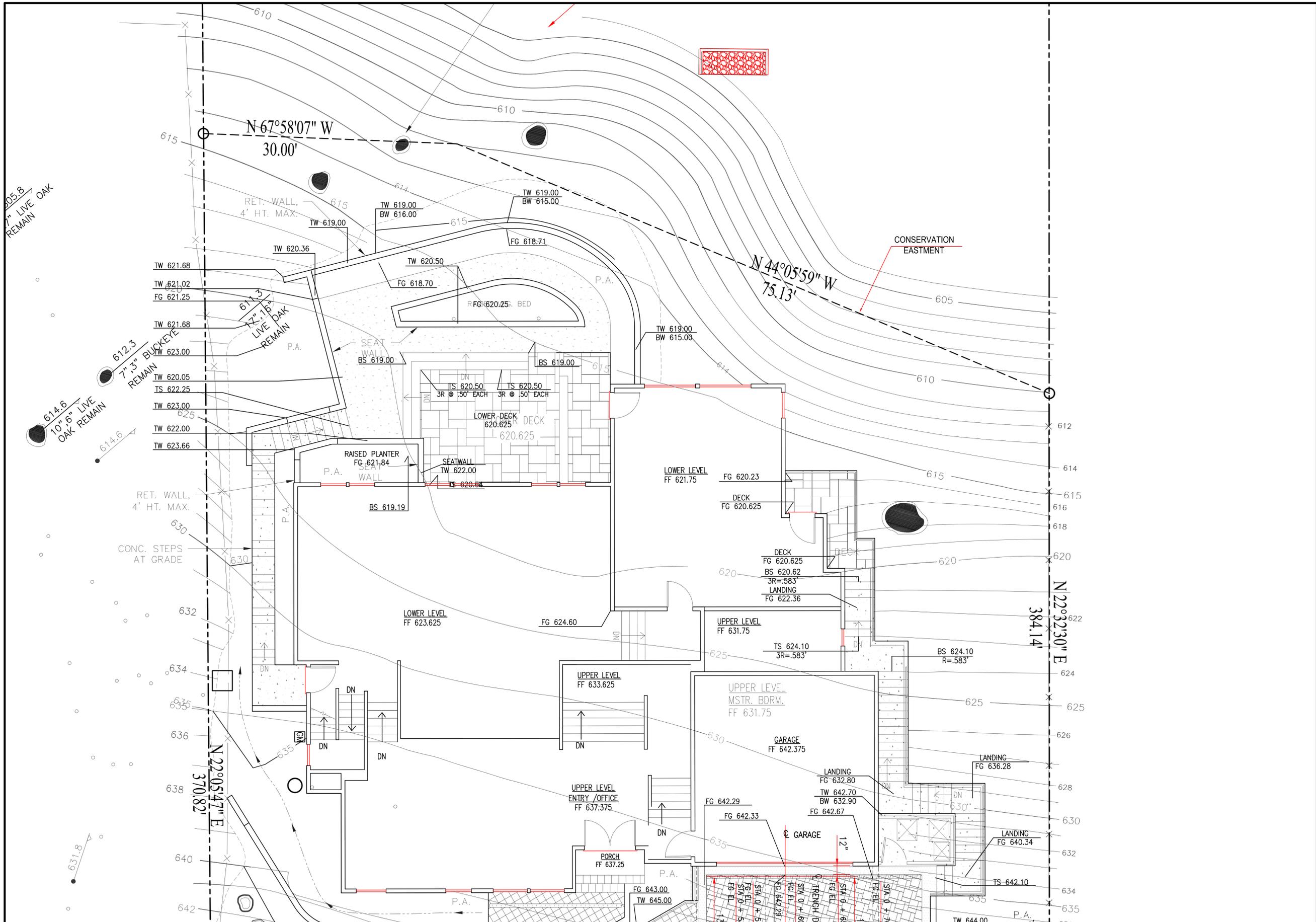
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PROJECT NO. 16-26	SHEET NO. C-5
----------------------	------------------



ENLARGE REAR RETAINING WALL PLAN
SCALE 1" = 5'-0"

DESIGNER



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PROJECT TITLE

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RESIDENCE

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HAYWARD, CA 94542

SEAL



Date Signed: FEB. 06, 2017

SHEET CONTENT

ENLARGE REAR
RET. WALL PLAN
SHEET-2

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PROJECT NO. 16-26	SHEET NO. C-6
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PROJECT TITLE

**ZHANG
RESIDENCE**

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SHEET CONTENT

**PROFILE
SHEET-1**

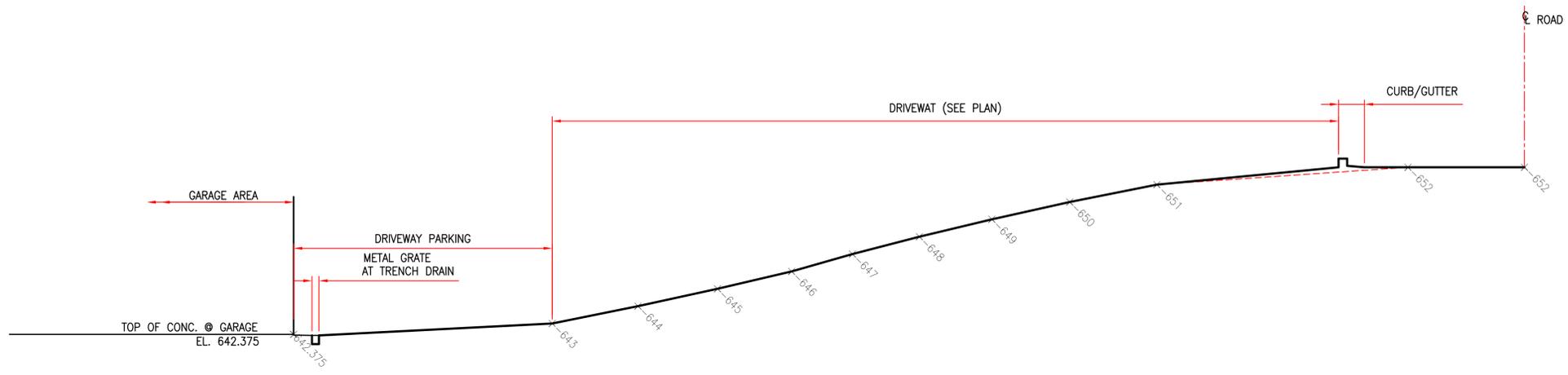
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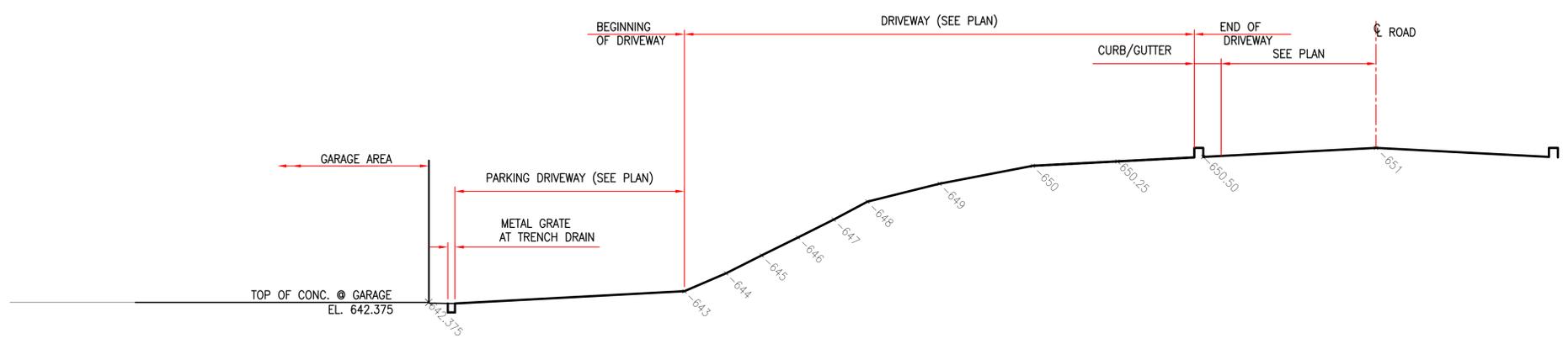
DRAWN BY UPA H

CHECKED BY RAMAN PATEL

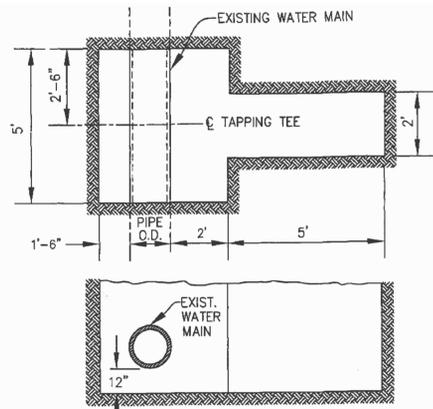
PROJECT NO.	SHEET NO.
16-26	C-7



PROFILE AT DRIVEWAY A
SCALE 1/4" = 1'-0" C-7



PROFILE AT DRIVEWAY B
SCALE 1/4" = 1'-0" C-7



MINIMUM EXCAVATION DIMENSIONS

CASE "A"	CASE "B"
FOR WORK BEING DONE UNDER CITY OF HAYWARD CONTRACT	FOR WORK BEING DONE UNDER CITY OF HAYWARD PERMIT AND /OR SUBDIVISION

- City will furnish and install tapping tee and tapping valve and make the Wet top, at no expense to the Contractor.
- City will furnish the valve box and cover, at no expense to the Contractor.
- Contractor/Permittee shall make the necessary excavation conforming to the above dimensions.
- Contractor/Permittee shall install thrust blocks, backfill, compact and install valve box per SD-205.
- Excavation for pipes over 24 inches shall be as shown on the plan or as designated by the Engineer.
- Centerline of tapping tee shall be a minimum of 3 feet from any existing joint or fitting.

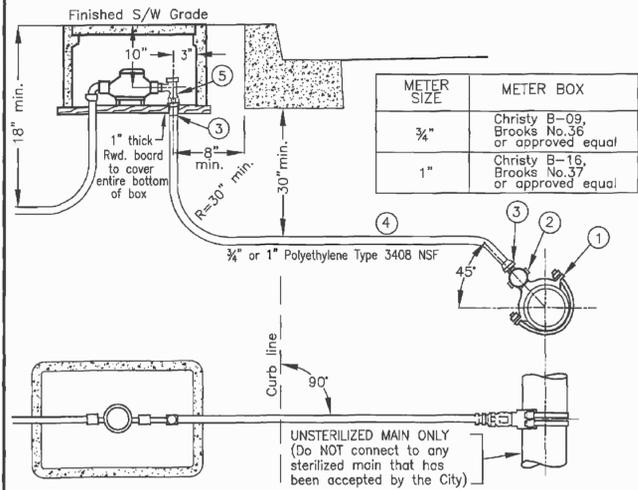
HAYWARD PUBLIC WORKS DEPT.
STANDARD TAPPING TEE AND VALVE INSTALLATION
 DWG. NO. **SD-203**
 SHEET **1 of 1**

NOTES:

- The water service piping shall be run in a straight line perpendicular to the curb from main to meter location.
- Water Department only will install meter.
- Tracer wire shall be installed from tap to meter box. Tape wire to tubing at tap location without contact with bronze fittings. Wire shall be copper, type THNN wire size A.W.G. #12.
- Polyethylene pipe ends shall be trimmed with Mueller H-18017 tool or equal.
- Stainless steel liners shall be used with all compression fittings.
- Water meter shall be located a minimum of 2' away from top of driveway flare or any other facility.

WATER MAIN SIZE	TAP TYPE	TAP	CORP. STOP
4" and larger	DIP	Saddle: J-979 or H-16102 through H-16116	H-10013
	PVC	Saddle: J-996 or H-13490 through H-13494	

- Service Saddle, double strap & all bronze
- Corporation Stop, H-10013
- Coupling H-15456
- Polyethylene (iron pipe size) Type 3408 NSF
- Angle meter stop, H-14266 with Insta-Tite



METER SIZE	METER BOX
3/4"	Christy B-09, Brooks No.36 or approved equal
1"	Christy B-16, Brooks No.37 or approved equal

HAYWARD PUBLIC WORKS DEPT.
STANDARD 3/4" & 1" CONSUMER WATER SERVICE CONNECTION PE WITH INSTA-TITE
 DWG. NO. **SD-215**
 SHEET **1 of 1**

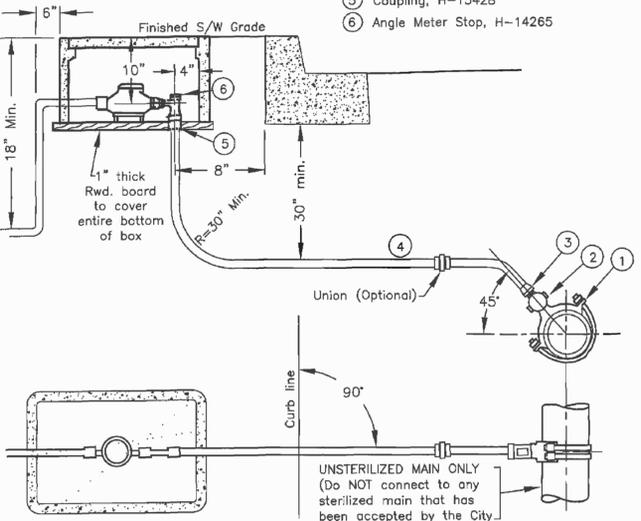
NOTES:

- The water service piping shall be run in a straight line perpendicular to the curb from main to meter location.
- All connections to copper tubing shall be flared.
- Water Department only will install meter.
- Water meter shall be located a minimum of 2' away from top of driveway flare or any other facility.

METER SIZE	METER BOX
3/8"	Christy B-09, Brooks No.36 or approved equal
3/4"	Christy B-16, Brooks No.37 or approved equal

SADDLES REQUIRED FOR CORPORATION STOP TAP			
WATER MAIN SIZE	TAP TYPE	3/4"	1"
4" and larger	DIP	J-979 or H-16102 through H-16116	J-979 or H-16102 through H-16116
	PVC	J-996 or H-13490 through H-13494	J-996 or H-13490 through H-13494

- Service Saddle, double strap & all bronze
- Corporation Stop, H-10013, 3/4" or 1"
- Coupling, H-15451
- Copper Tubing, Type K, 3/4" or 1"
- Coupling, H-15428
- Angle Meter Stop, H-14265



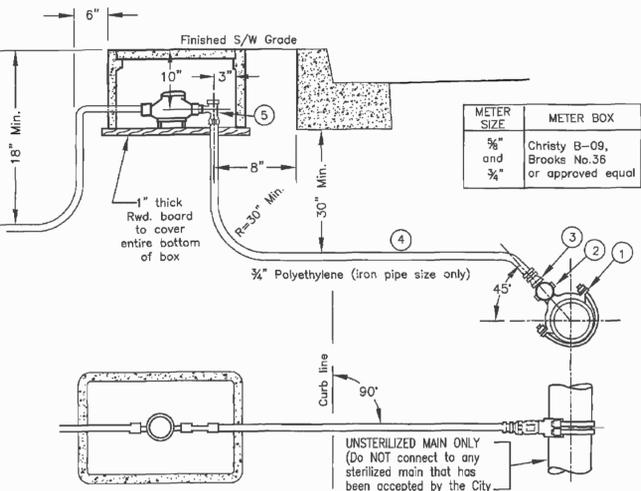
HAYWARD PUBLIC WORKS DEPT.
STANDARD COPPER 3/4" & 1" SINGLE WATER SERVICE CONNECTION
 DWG. NO. **SD-213**
 SHEET **1 of 1**

NOTES:

- The water service piping shall be run in a straight line perpendicular to the curb from main to meter location.
- Water Department only will install meter.
- Tracer wire shall be installed from tap to meter box. Tape wire to tubing at tap location without contact with bronze fittings. Wire shall be copper, type THNN wire size A.W.G. #12.
- Stainless steel liners shall be used with all compression fittings.
- Water meter shall be located a minimum of 2' away from top of driveway flare or any other facility.
- Polyethylene pipe ends shall be trimmed with Mueller H-18017 tool or equal.

WATER MAIN SIZE	TAP TYPE	TAP	CORP. STOP
4" and larger	DIP	Saddle: J-979 or H-16102 through H-16116	H-10013
	PVC	Saddle: J-996 or H-13490 through H-13494	

- Service Saddle, double strap & all bronze
- Corporation Stop, H-10013
- Coupling 3/4" H-15456
- 3/4" Polyethylene tubing
- Angle meter stop, H-14266



METER SIZE	METER BOX
5/8" and 3/4"	Christy B-09, Brooks No.36 or approved equal

HAYWARD PUBLIC WORKS DEPT.
STANDARD PLASTIC 5/8" & 3/4" SINGLE WATER SERVICE CONNECTION
 DWG. NO. **SD-214**
 SHEET **1 of 1**

DESIGNER



RP ASSOCIATES, INC.

CONSULTING ENGINEERS

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ARCHITECT

RICHARD JANZEN

6812 PASEO ROBLES DR.
 OAKLAND, CA 94611

OWNER

CONAN ZHANG

26446 PARKSIDE DRIVE,
 HAYWARD, CA 94542

PROJECT TITLE

ZHANG RESIDENCE

26446 PARKSIDE DRIVE,
 HAYWARD, CA 94542

SEAL



Date Signed: FEB. 06, 2017

SHEET CONTENT

STANDARD DETAILS SHEET-2

DATE	ISSUED FOR	BY
02-06-17	PERMIT	RP

SCALE AS NOTED

DRAWN BY UPA H

CHECKED BY RAMAN PATEL

PROJECT NO.	SHEET NO.
16-26	C-9

GENERAL NOTES:

- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF HAYWARD STANDARD CONSTRUCTION SPECIFICATIONS AND IMPROVEMENT STANDARDS. WHERE INCONSISTENCIES EXIST, THE LATEST EDITION SHALL TAKE PRECEDENCE.
- PUBLIC SAFETY AND TRAFFIC CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 66-12 OF THE STANDARD CONSTRUCTION SPECIFICATIONS AND AS DIRECTED BY THE COUNTY INSPECTOR. SAFE VEHICULAR AND PEDESTRIAN ACCESS SHALL BE PROVIDED AT ALL TIMES DURING CONSTRUCTION.
- THE CONSULTING ENGINEER SHALL NOTIFY THE CITY OF HAYWARD CONSTRUCTION INSPECTION OFFICE UPON COMPLETION OF STAKING. (PHONE NO. _____)
- THE CONTRACTOR SHALL NOTIFY THE CITY OF HAYWARD CONSTRUCTION INSPECTION OFFICE TWO WORKING DAYS PRIOR TO THE INTENTION TO COMMENCE WORK. THE CONTRACTOR SHALL NOT START ANY GRADING UNTIL THE COUNTY COMPLETES A PRE-CONSTRUCTION MEETING. (PHONE NO. _____)
- THE COUNTY OF ALAMEDA IS A MEMBER OF THE UNDERGROUND SERVICE ALERT (U.S.A.) ONE CALL PROGRAM. THE CONTRACTOR OR ANY SUB-CONTRACTOR FOR THIS CONTRACT SHALL NOTIFY MEMBERS OF U.S.A. TWO WORKING DAYS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK BY CALLING THE TOLL FREE NUMBER: 1-800-227-2600. THOMAS BROTHERS' MAP PAGE _____ INDEX _____ 2014 EDITION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION. ALL SUCH MONUMENTS OR MARKERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.
- ALL SERVICE SEWERS SHALL HAVE FOUR TO FIVE FEET OF COVER AT PROPERTY LINE OR RIGHT OF WAY, UNLESS OTHERWISE NOTED ON PLANS.
- EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH SECTION 11 OF THE CITY OF HAYWARD IMPROVEMENT STANDARDS.
- WHENEVER THE WORK AREA IS ADJACENT TO A TRAFFIC LANE AND THERE IS A CUT, DITCH OR TRENCH MORE THAN TWO INCHES DEEP, THE CONTRACTOR SHALL MAINTAIN CONTINUOUS BARRICADES SPACED AT APPROXIMATELY 20-FOOT INTERVALS FOR THE FIRST 100 FEET FROM THE BEGINNING OF THE CUT, DITCH OR TRENCH, AND AT APPROXIMATELY 50-FOOT INTERVALS THEREAFTER. IF THE CUT, DITCH TRENCH IS MORE THAN TEN FEET FROM A TRAFFIC LANE, THE BARRICADE SPACING MAY BE GREATER BUT NOT EXCEED 200 FEET.
- UNLESS SPECIFICALLY SET FORTH AS SPECIAL PROVISIONS, ALL MARKED LANES OF TRAFFIC SHALL BE UNOBSTRUCTED ON IN EACH DIRECTION DURING PEAK TRAFFIC HOURS OF 7:00 TO 8:00 A.M. AND 3:00 TO 6:00 P.M. A TRAFFIC LANE SHALL BE CONSIDERED UNOBSTRUCTED IF IT IS SURFACED WITH ASPHALT AND IS AT LEAST TEN FEET WIDE.
- NO PAVEMENT WORK WILL OCCUR WITHIN THE ROAD RIGHT OF WAY PRIOR TO COMPLETION OF ANY NECESSARY UTILITY POLE RELOCATION WITHIN THAT RIGHT OF WAY.

CITY OF HAYWARD WATER DISTRICT NOTES:

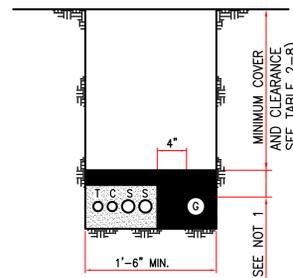
- CITY OF HAYWARD WATER DISTRICT IS A MEMBER OF U.S.A. ONE CALL PROGRAM. CALL FOR PUBLIC WATER SYSTEM INFORMATION.
- ALL MATERIALS USED AND WORK PERFORMED IN WATER SYSTEM CONSTRUCTION AND INSTALLATION SHALL COMPLY WITH APPROVED PLANS, SPECIAL CONDITIONS AND THE DISTRICT STANDARDS AND SPECS. ANY AND ALL DEVIATIONS FROM THESE DOCUMENTS SHALL REQUIRE PRIOR WRITTEN APPROVAL BY THE GENERAL MANAGER OF THE DISTRICT.
- TEN (10) DAYS PRIOR TO PRE- CONSTRUCTION MEETING, THE CONTRACTOR SHALL FURNISH TO THE DISTRICT, A LIST OF MATERIALS PROPOSED TO BE USED IN CONSTRUCTING THE WATER SYSTEM, INCLUDING MANUFACTURER, ACTUAL LOCATION OF MANUFACTURER AND MODEL NUMBER.
- AN ON SITE MEETING WITH DISTRICT INSPECTOR, CONSULTING ENGINEER, COUNTY INSPECTOR AND CONTRACTOR MUST BE HELD AT LEAST TWO (2) DAYS IN ADVANCE OF CONSTRUCTION TO INSPECT MATERIALS, SCHEDULE INSPECTIONS, REVIEW THE APPROVED WATER SYSTEM PLANS AND SCHEDULE ANY TIE IN CONNECTIONS. PRE- CONSTRUCTION MEETINGS WILL NOT BE SCHEDULED UNTILL ALL DISTRICT COST AND FEES HAVE BEEN PAID IN FULL AS WELL AS SUBMITTALS OF ALL MATERIALS LIST, GUARANTEE LETTERS, ENCROACHMENT/ MAINTENANCE BONDS, FINAL SIGNED PLANS, REPRODUCIBLE PLANS AND ELECTRONIC FILE OF PROJECT.
- NO WORK SHALL BEGIN UNTIL ITEMS IN GENERAL NOTES "3" AND "4" ARE COMPLETED.
- ALL WATER SYSTEM SHUTDOWNS SHALL BE MADE ONLY BY DISTRICT PERSONNEL. UNDER NO CIRCUMSTANCES SHALL ANYONE OTHER THAN THE DISTRICT OPEN OR CLOSE ANY VALVE IN THE DISTRICT SYSTEM. SHUTDOWNS FOR THE PURPOSE OF MAKING CONNECTIONS TO EXISTING MAINS MUST BE SCHEDULED AT LEAST THREE (3) DAYS IN ADVANCE, AND ARE ONLY PERMITTED ON TUESDAY, WEDNESDAY OR THURSDAY. THE HOURS OF THE SHUTDOWN SHALL BE DETERMINED BY THE DISTRICT. ALL CONNECTIONS WILL BE SUPERVISED AND CONTROLLED BY THE DISTRICT.
- THE FINISH GRADE SHALL BE ESTABLISHED, STAKED AND MARKED AT EACH WATER SERVICE CONNECTION AND HYDRANT LOCATION. PERMANENT PROPERTY CORNER MARKERS SHALL BE PLACED BY A LICENSED CIVIL ENGINEER OR SURVEYOR.
- A SEPARATE WATER SERVICE CONNECTION MUST BE INSTALLED FOR EACH LOT, PARCEL OR PREMISE AND SHALL BE ONE INCH DIAMETER UNLESS OTHERWISE SPECIFIED ON THE APPROVED WATER PLAN. NO SERVICE SHALL BE PERMITTED WITHIN 20' OF A BLOW OFF ASSEMBLY.
- THE COMPLETED WATER SYSTEM MUST BE DISINFECTED, HYDRO-TESTED AND FLUSHED.
- NO WATER SERVICE WILL BE PROVIDED AND NO CONNECTIONS TO WATER SERVICE WILL BE PERMITTED UNTIL THE REQUIREMENTS FOR TEMPORARY WATER APPROVAL HAVE BEEN COMPLETED.
- AT THE TIME OF FINAL ACCEPTANCE BY THE DISTRICT, THE COMPLETED WATER SYSTEM AND MAIN EXTENSIONS WITH ALL APPURTENANCES, APPARATUS, FITTINGS AND EQUIPMENT SHALL BECOME AND FOREVER REMAIN THE PROPERTY OF THE DISTRICT.
- ALL EXISTING WATER SERVICES NOT REQUIRED FOR THIS PROJECT SHALL BE ABANDONED ACCORDING TO THE FOLLOWING. THE EXACT METHOD SHALL BE DETERMINED BY THE DISTRICT INSPECTOR.
 - REMOVING SECTION OF PIPE AND REPLACING WITH A NEW SECTION.
 - REMOVE CORPORATION STOP, SADDLE AND PLACE A FULL CIRCLE 20" WIDE, STAINLESS STEEL REPAIR BAND.
- ALL BACKFLOW PREVENTION DEVICES SHALL BE TESTED BY CERTIFIED APPROVED COUNTY TESTERS PRIOR TO FINAL ACCEPTANCE. COPIES OF SATISFACTORY TEST RESULTS SHALL BE FURNISHED TO THE DISTRICT PRIOR TO FINAL ACCEPTANCE OF SYSTEM AT NO COST TO THE DISTRICT. WATER SERVICE SHALL NOT BE PROVIDED UNTIL DISTRICT RECEIVES THE SATISFACTORY TEST RESULTS.
- UPGRADE OF EXISTING FACILITIES SHALL INCLUDE BUT NOT LIMITED TO BRINGING FACILITY TO CURRENT STANDARDS AND/OR REPLACEMENT AS REQUIRED OR DIRECTED BY THE DISTRICT.
- A SEPARATE SAMPLING STATION AND/OR STATIONS SHALL BE INSTALLED AS NECESSARY TO MEET STATE DEPARTMENT OF HEALTH SERVICES REQUIREMENTS FOR COLIFORM TESTING.

HDPE PIPES:

- USE CONTROL DENSITY BACKFILL SECTION 50-15, FOR LOCATIONS WHERE TUNNELING OCCURS UNDER EXISTING STORM DRAIN PIPES.
- NO HDPE IS ALLOWED FOR STORM DRAIN LATERALS IN STREET INTERSECTIONS.

SIDEWALK CURB AND GUTTER NOTES:

- ALL SITE IMPROVEMENT WORK SHALL BE DONE IN ACCORDANCE WITH CITY OF HAYWARD PUBLIC WORKS AGENCY IMPROVEMENT STANDARDS.
- SUBGRADE SHALL BE COMPACTED TO AT LEAST 95% RELATIVE COMPACTION.
- WHERE UNSUITABLE SUBGRADE MATERIAL IS ENCOUNTERED, REMEDIAL WORK TO BE DONE UNDER THE DIRECTION OF THE CITY ENGINEER, INCLUDES BUT IS NOT LIMITED TO, REMOVING UNSUITABLE MATERIAL AND PLACING A LAYER OF CLASS II AGGREGATE BASE UNDER THE INSTALLATION.
- UNDERCUT SUBGRADE FOR GUTTER OR SIDEWALK SHALL BE FILLED WITH APPROVED GRANULAR MATERIAL.
- EXISTING CONCRETE SHALL BE REMOVED AT EXPANSION OR WEAKENED PLANE JOINTS OR AT SAWCUTS.
- SAWCUTS MUST BE FULL DEPTH.
- NO UTILITY BOXES OR POLES WILL BE PERMITTED IN THE SIDEWALK AREA WITHOUT THE WRITTEN APPROVAL OF THE CITY ENGINEER.
- NEW WORK SHALL MATCH EXISTING IN SCORE AND COLOR.
- NO CONCRETE SHALL BE PLACED UNTIL THE CITY ENGINEER HAS INSPECTED AND APPROVED FORMS AND SUBGRADE.
- ALL EXPOSED EDGES SHALL BE ROUNDED WITH 1/2 INCH RADIUS TOOL.
- ALL SURFACES SHALL BE BROOM FINISHED.
- ALL SIDEWALK CONSTRUCTED ADJACENT TO CURBS SHALL BE POURED MONO-LITIC WITH CURB UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL BE PERFORMED BY A STATE LICENSED "CLASS A" CONTRACTOR. CONCRETE FLATWORK MAYBE PERFORMED BY A CONCRETE CONTRACTOR WITH A "CLASS C" LICENSE.
- ALL PAVING SHALL BE COMPLETED NO LATER THAN 5 DAYS AFTER INSTALLATION OF UTILITY.
- MINIMUM 6 INCHES OF ASPHALT SHALL BE REMOVED FOR INSTALLATION OF FORMS. FOR CURB AND GUTTER INSTALLATIONS AC SHALL BE BROUGHT TO FINISH GRADE OF FORMS AND TRANSITIONED AS REQUIRED BY THE CITY ENGINEER.
- ALL ASPHALT REPAIRS SHALL BE FLUSH WITH THE ADJACENT SURFACES AT CONFORMS AND EDGES. MAXIMUM ALLOWABLE TOLERANCES SHALL BE .01 FEET LONGITUDINALLY AND .02 FEET TRANSVERSELY.
- ALL FACE ANGLE INSTALLATIONS IN RETURNS SHALL MATCH EXISTING RADIUS OF CURB.



TYP. PG&E SERVICE TRENCH DETAIL 1 C-10

- LEGEND:**
- T TELEPHONE
 - G GAS
 - C CABLE TELEVISION
 - S ELECTRIC SERVICE (SECONDARY)

NOTES:

- PROVIDE BACKFILL (SAND OR NATIVE SOIL) CONTAINING NOT MORE THAN OCCASIONAL ROUNDED ROCKS LESS THAN 1/2 INCH IN DIAMETER 4 INCHES ABOVE ALL FACILITIES WITHIN THE TRENCH AREA.
- ENSURE BACKFILL AND COMPACTION MEET ANY APPLICABLE PG&E, FEDERAL, STATE OR LOCAL REQUIREMENTS.
- THE DEPTHS AND SEPARATION SHOWN ARE MINIMUMS. VARIANCES MAYBE REQUIRED IF INSTALLING LARGER-DIAMETER FACILITIES. GAS FACILITIES SHALL CONFORM TO THE PROVISIONS OF GENERAL ORDER 112 AND ELECTRIC FACILITIES TO THE PROVISIONS OF GENERAL ORDER 128.
- PROVIDE ADDITIONAL DEPTH TO MAINTAIN THE REQUIRED SEPARATION AND COVER IF GAS FACILITIES CROSS ELECTRIC, TELEPHONE OR CABLE TELEVISION FACILITIES.
- ALTHOUGH SPACING BETWEEN SECONDARY, TELEPHONE AND CABLE TELEVISION IS RANDOM, ENSURE A 4 INCH CLEARANCE IS MAINTAINED BETWEEN THE NEAREST OF GROUPED FACILITIES AND GAS SERVICE. SEE TABLE 2-1 FOR COVER AND CLEARANCE REQUIREMENTS.
- PRVIDE CLEARANCE BETWEEN GROUPED FACILITIES TO ALLOW BACKFILL MATERIAL TO FLOW BETWEEN AND UNDERNEATH FACILITIES.

TRAFFIC NOTES:

A TRAFFIC PLAN SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO CITY OF HAYWARD "CONSTRUCTION MANAGEMENT & INSPECTION DIVISION" FOR REVIEW AT LEAST 20 DAYS PRIOR TO COMMENCEMENT OF ANY WORK. AN ENCROACHMENT PERMIT OR PLAN APPROVAL MUST FIRST BE OBTAINED PRIOR TO ANY WORK COMMENCING WITHIN THE COUNTY RIGHT- OF- WAY.

DRAINAGE NOTES:

- ALL CONSTRUCTION AND MATERIALS FOR DRAINAGE SHALL BE IN ACCORDANCE WITH LATEST EDITION OF THE CITY OF HAYWARD IMPROVEMENT STANDARDS AND STANDARD CONSTRUCTION SPECIFICATIONS. WHERE DISCREPANCIES EXIST, APPROPRIATE NOTES SHALL BE ADDED TO THE PLANS, TAKING PRECEDENCE OVER THE STANDARD CONSTRUCTION SPECIFICATIONS.
- THE MINIMUM COVER REQUIREMENTS DURING CONSTRUCTION FOR TEMPORARY CONSTRUCTION VEHICLE LOADING SHALL BE 4 FEET FOR METAL AND PLASTIC PIPES AND FOR 3 FEET FOR REINFORCED CONCRETE PIPE.
- THE CONTRACTOR SHALL PLACE THE PROPER STRENGTH PIPE IF TRENCH CONDITIONS ENCOUNTERED DIFFER FROM THE DESIGN TRENCH.
- DRAINAGE IN PUBLIC ROW AND DRAINAGE EASEMENTS SHALL CONFORM TO THE FOLLOWING:
 - DRAINAGE PIPE MATERIAL SHALL CONFORM TO SECTION 36 AND SECTION 50 (EXCLUDING 50-20), WHICH IS NOT ALLOWED) OF THE STANDARD CONSTRUCTION SPECIFICATION.
 - DRAINAGE MANHOLES SHALL CONFORM TO SECTION 39 OF THE STANDARD CONSTRUCTION SPECIFICATIONS.
- TESTING OF DRAINAGE SYSTEMS
 - DRAINAGE IN PUBLIC ROW AND DRAINAGE EASEMENTS SHALL CONFORM TO THE FOLLOWING:
 - DRAINAGE PIPES, INCLUDING DRAIN INLET LATERALS, SHALL BE TESTED IN CONFORMANCE WITH SECTION 38-10 OF THE STANDARD CONSTRUCTION SPECIFICATION.
 - STORM DRAIN MANHOLES SHALL BE TESTED IN CONFORMANCE WITH SECTION 39-4.02 OF THE STANDARD CONSTRUCTION SPECIFICATIONS. STANDARD CONSTRUCTION SPECIFICATIONS.
- RESILIENT CONNECTORS, IN CONFORMANCE WITH SECTION 39-2.02 AND STD DWG 9-7A OF THE STANDARD CONSTRUCTION SPECIFICATIONS, ARE REQUIRED BETWEEN PRE-CAST MANHOLE AND PIPE, AND BETWEEN PRE-CAST DROP INLET AND PIPE. WATER STOPS ARE REQUIRED FOR PIPE TO CAST-IN-PLACE MANHOLE/DROP INLET CONNECTIONS.
- EROSION CONTROL STRUCTURES (STD DWG 9-27) SHALL BE CLASS B CONCRETE, NOT GROUTED COBBLE.
- ALL DRAINAGE INLETS IN PUBLIC ROW AND DRAINAGE EASEMENTS SHALL HAVE A PERMANENT STORM DRAIN MESSAGE "NO DUMPING - FLOWS TO CREEK" OR OTHER APPROVED MESSAGE CONSISTENT WITH CITY OF HAYWARD STANDARD DRAWINGS.
- "OWNER, AT OWNER SOLE COST AND EXPENSE, SHALL MAINTAIN THE PRIVATE DRAINAGE PIPELINE IN GOOD WORKING ORDER AND REPAIR COMMENSURATE WITH THE COUNTY'S STANDARDS FOR SIMILAR DRAINAGE PIPELINES SUCH THAT WATER FLOWS FREELY THROUGH THE SYSTEM AS AND WHEN WEATHER EVENTS OR OTHER SOURCES OF SURFACE WATER RUNOFF OCCUR. OWNER SHALL AT ALL TIMES TAKE ALL NECESSARY ACTION TO KEEP THE DRAINAGE PIPELINE FREE FROM DEBRIS, TRASH, FOLIAGE AND ANY OTHER OBSTRUCTION WHICH MAY DISRUPT, ALTER, IMPEDE OR CHANGE THE FLOW OF WATER. OWNER SHALL ALSO PERFORM ANY RELOCATION OF THE DRAINAGE PIPELINE PURSUANT TO THE STANDARD SPECIFICATIONS OF THE COUNTY SHOULD RELOCATION BE NECESSARY DUE TO PIPE FAILURE OR BLOCKAGE AS DETERMINED NECESSARY BY THE COUNTY."

SEWER NOTES:

- DIMENSIONS SHOWN ON PLANS ARE TO THE CENTERLINE OF PIPE AND OR MANHOLES, UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 48" IN DIAMETER, UNLESS OTHERWISE SHOWN.
- MANHOLES LOCATED OUTSIDE OD PAVED AREAS SHALL HAVE RIM SET TWELVE INCHES (12") ABOVE GROUND SURFACE OR TO GRADES AS NOTED.
- MANHOLE VACUUM TESTING PER ASTM C1244-93 IS REQUIRED WITH THE ADDITION OF THE FOLLOWING CONSTRAINT: A MINIMUM OF 9 INCHES OF MERCURY SHALL BE HELD FOR A MINIMUM TIME OF ONE MINUTE.
- SANITARY SEWER MAINS SHALL BE CONSTRUCTED OF EXTRA STRENGTH (VCP) PIPE WITH TYPE II ALTERNATE BEDDING AND BACKFILL, UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL USE SIX- FOOT (6') PIPE LENGTHS IN CURED SECTIONS. JOINT DEFLECTION SHALL COMPLY WITH COUNTY STANDARDS AND MANUFACTURERS RECOMMENDATIONS.
- SERVICE SEWERS SHALL BE CONSTRUCTED PER CITY OF HAYWARD STANDARD DRAWINGS. ANY SEWER SERVICE ENTERING A MANHOLE SHALL BE INSTALLED WITH THE INVERT ELEVATION OF THE SERVICE PIPE MATCHING THE CROWN ELEVATION OF THE EXIT SEWER EXCEPT WHEN AN INTERNAL DROP CONNECTION IS USED. IF THE MANHOLE AT THE END OF A CUL-DE-SAC IS CONSTRUCTED WITH A PRECAST BASE, THE INVERT OF ANY SERVICE STUBS SHALL BE A MINIMUM OF ONE INCH ABOVE THE INVERT OF THE EXIT PIPE.
- ALTERNATIVE FOR VCP RESIDENTIAL FOUR INCH (4") SERVICE SEWER PIPE IS ACRYLONITRILE-BUTADIENE-STYRENE (ABS) SOLID PIPE. 4" ABS SOLID PIPE AND FITTING SHALL CONFORM TO AND MEET THE REQUIREMENTS OF ASTM DESIGNATION D2661, SDR 18.99 MINIMUM WALL THICKNESS 0.237 INCHES.
- CONSTRUCTION OF A CLEANOUT TO GRADE FOR ALL SEWER SERVICES IS REQUIRED PER STANDARD DRAWING 7-9. CONSTRUCTION OF THE TOP 1' OF THE CLEANOUT RISER MAY BE DELAYED UNTIL THE INSTALLATION OF THE BUILDING SEWER AT THE OPTION OF THE DEVELOPER, EXCEPT WHERE THE WATER MAIN IS TO BE INSTALLED BEHIND SIDEWALK (REFER TO NOTE 10: STANDARD DRAWING 7-5). IF THE CONSTRUCTION OF THE TOP 1' OF THE RISER IS DELAYED, THE LOCATION OF THE SERVICE SHALL ACCURATELY BE STAKED WITH A 4"x 4" POST.
- ANY WATER ENTERING THE SANITARY SEWER SYSTEM TO BE CONSTRUCTED UNDER THESE PLANS SHALL NOT BE DISCHARGE TO THE EXISTING SYSTEM. PLUGS MUST BE INSTALLED IN EXISTING MANHOLES AS NECESSARY TO PERMIT PUMPING THE NEW SYSTEM CLEAR OF WATER AND DEBRIS PRIOR TO ACCEPTANCE. CARE SHALL BE EXERCISED IN LOCATING PLUGS TO AVOID INTERRUPTING SERVICE CONNECTIONS. MORTAR AND BRICKS OR MECHANICAL DEVICE PLUGS MUST BE USED: INFLATABLE DEVICES ARE NOT SATISFACTORY.
- COUNTY SANITATION DISTRICT 1 REQUIRES THE CONTRACTOR TO VIDEO RECORD ALL SEWER MAINS AND DRAIN LINES FORM SIX INCH (6") TO AND INCLUDING THIRTY SIX INCH (36") DIAMETER IN ACCORDANCE WITH SECTION 38 OF THE ALAMEDA COUNTY STANDARD CONSTRUCTION SPECIFICATIONS. ADDITIONAL INFORMATION AND ASSIGNMENT OF SEWER MANHOLE NUMBERS MAY BE OBTAINED AT THE WATER QUALITY DEPARTMENT CUSTOMER SERVICE OFFICE. INSPECTION RECORD SHALL BE PROVIDED TO CITY OF HAYWARD WATER QUALITY DIVISION STAFF FOR REVIEW PRIOR TO ACCEPTANCE OF SEWER IMPROVEMENT.

CONSTRUCTION & OPERATIONS NOTES:

- ACCESSIBLE PEDESTRIAN PATH OF TRAVEL SHALL BE MAINTAINED DURING CONSTRUCTION AT ALL TIME.
- ALL EXCAVATION SPOILS SHALL LADED DIRECTLY INTO TRUCKS AND DISPOSE OF AT AN APPROVED DUMPSITE.
- STORAGE OF CONSTRUCTION MATERIALS AND EQUIPMENT WILL NOT BE ALLOWED IN OR UPON THE PUBLIC RIGHT-OF-WAY. ALL MATERIALS INTENDED FOR USE ON ANY PROJECT SHALL BE OFF LOADED DIRECTLY FROM DELIVERY VEHICLES AND PLACED AS REQUIRED DURING THE COURSE OF CONSTRUCTION. SHOULD THE PERMIT HOLDER OR HIS/HER COCONTRACTORS WISH TO STOCKPILE MATERIALS NEAR THE WORK SITE, THEY SHALL MAKE ARRANGEMENTS IN ADVANCE FOR STORAGE. ALL STORAGE SITES SHALL BE SECURE, INACCESSIBLE TO THE GENERAL PUBLIC AND KEPT FREE OF CONSTRUCTION SPOILS, DEBRIS AND TRASH AT ALL TIMES STORAGE SITES SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF THE CITY ENGINEER.
- CONSTRUCTION SITES SHALL BE KEPT CLEAN AT ALL TIMES. AT NO TIME SHALL THE CONTRACTOR OR PERMIT HOLDER BE ALLOWED TO LEAVE THE SITE PRIOR TO THOROUGHLY CLEANING SIDEWALKS, CURBS, GUTTERS, AND STREET SURFACES. CLEANING SHALL BE ACCOMPLISHED BY EITHER HAND OR MACHINE SWEEPING AS REQUIRED. IN NO EVENT SHALL THE CONTRACTOR BE ALLOWED TO FLUSH THE STREETS WITH WATER UNTIL SUCH TIME AS THE AREA HAS BEEN COMPLETELY AND THOROUGHLY SWEEP AND ALL DEBRIS PICKED UP AND PROPERLY DISPOSED OF.
- ALL EXCAVATIONS SHALL BE BACKFILLED AND COMPACTED AT DAY'S END. A MINIMUM OF TWO INCHES OF TEMPORARY PAVING SHALL BE INSTALLED AND COMPACTED BY MECHANICAL MEANS TO PRODUCE A SMOOTH SURFACE FOR PEDESTRIAN AND VEHICULAR TRAFFIC. TRAFFIC PLATES WILL NOT BE ALLOWED EXCEPT AS APPROVED BY THE ENGINEER DURING THE PERMIT APPLICATION PROCESS. INSTALLATION OF PLATES WILL ONLY ALLOWED IF A BONAFIDE EMERGENCY HAS BEEN DECLARED. IN THIS EVENT, PLATES WILL BE ALLOWED PROVIDING THEY ARE ANCHORED EITHER BY WELDING OR PINNED. ALL EDGES SHALL BE SECURED TO PREVENT RATTLING AND MOVEMENT AS WELL AS PROTECTED WITH TEMPORARY ASPHALT (MIN TWO FOOT TAPER). LONG TERM INSTALLATIONS, THOSE IN EXCESS OF FIVE DAYS, WILL BE ALLOWED, IF APPROVED BY THE CITY ENGINEER, PROVIDING THAT EXISTING SURFACES ARE GROUNDED TO ACCEPT PLATE INSTALLATIONS AND PROVIDE FOR A MATCHING SURFACE WHERE PLATE MEETS ROADWAY SURFACE.
- EQUIPMENT SHALL NOT BE STORED ON OR WITHIN THEN PUBLIC RIGHT-OF-WAY WITHOUT PRIOR WRITTEN APPROVAL FROM THE CITY ENGINEER. IF PERMITTED, EQUIPMENT SHALL BE SECURED AND LOCKED WITH PROTECTIVE COVERS IN PLACE. ADEQUATE BARRICADES WITH OPERABLE FLASHERS SHALL BE INSTALLED AROUND THE EQUIPMENT AND REMAIN IN WORKING ORDER AT ALL TIMES.
- IN THE EVENT OF NON-COMPLIANCE WITH PERMIT, PROJECT CONDITIONS AND/OR CITY STANDARDS FOR CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY, THE CITY WILL EXERCISE ITS RIGHT TO SUSPEND PROJECT PERMITS OR HALT WORK IN PROGRESS UNTIL SUCH TIME AS THE PERMIT HOLDER OR HIS CONTRACTOR IS IN COMPLIANCE. SHOULD THE CITY HAVE TO OBTAIN OUTSIDE SERVICES FOR CLEANING EQUIPMENT, TRANSPORT SERVICES, TOWING, CONTRACT PERSONNEL OR UTILIZE CITY FORCES FOR CLEANUP, THE CITY WILL BILL FOR ITS SERVICES AND EXPENSES INCLUDING ALL INCIDENTALS AND ADMINISTRATIVE OVERHEAD COSTS.

AIR QUALITY DUST CONTROL:

- ALL CONSTRUCTION PROJECTS ARE REQUIRED TO COMPLY WITH THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT'S (BAQMD) DUST CONTROL MEASURES. THESE MEASURES ARE LEVIED BY THE ENGINEERING DIVISION AS A CONDITION OF BUILDING PERMIT ISSURANCE AND ARE MONITORED FOR COMPLIANCE BY STAFF AND/OR SPECIAL CITY ENGINEERING AND/OR PLANNING INSPECTORS. THESE MEASURES INCLUDE:
- WATER ALL ACTIVE CONSTRUCTION SITES AT LEAST TWICE DAILY.
 - COVER ALL TRUCKS HAULING SOIL, SAND, AND OTHER LOOSE MATERIALS OR REQUIRE ALL TRUCKS TO MAINTAIN AT LEAST TWO FEET OF FREEBOARD.
 - PAVE, APPLY WATER THREE TIMES DAILY, OR APPLY (NON-TOXIC) SOIL STABILIZERS ON ALL UNPAVED ACCESS ROADS, PARKING AREAS, AND STAGING AREAS AT CONSTRUCTION SITES.
 - SWEEP DAILY (WITH WATER SWEEPERS) ALL PAVED ACCESS ROADS, PARKING AREAS AND STAGING AREAS AT CONSTRUCTION SITES.
 - SWEEP STREETS DAILY (WITH WATER SWEEPERS) IF VISBLE SOIL MATERIAL IS CARRIED ONTO ADJACENT PUBLIC STREETS CONSTRUCTION SITES.
 - HYDROSEED OR APPLY (NON-TOXIC) SOIL STABILIZERS TO INACTIVE CONSTRUCTION AREAS (PREVIOUSLY GRADED AREAS INACTIVE FOR TEN DAYS OR MORE.)
 - ENCLOSE, COVER, WATER TWICE DAILY, OR APPLY NON-TOXIC SOIL BINDERS TO EXPOSE STOCKPILED MATERIALS.
 - INSTALL SANDBAGS OR OTHER EROSION-CONTROL MEASURES TO PREVENT SILT RUNOFF TO PUBLIC ROADWAYS.
 - REPLANT VEGETATION IN DISTURBED AREAS AS QUICKLY AS POSSIBLE.
 - WATERING SHOULD BE USED TO CONTROL DUST GENERATION DURING THE BREAK-UP OF PAVEMENT.
 - COVER ALL TRUCKS HAULING DEMOLITION DEBRIS FROM THE SITE.
 - USE DUST-PROOF CHUTES TO LOAD DEBRIS INTO TRUCKS WHENEVER FEASIBLE.
 - WATER OR COVER STOCKPIKLES OF DEBRIS, SOIL, SAND, OR OTHER MATERIALS THAT CAN BE BLOWN BY THE WIND.
 - ALL CONSTRUCTION EQUIPMENT SHALL BE MAINTAINED AND PROPERLY TUNED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. ALL EQUIPMENT SHALL BE CHECKED BY A CERTIFIED MECHANIC AND DETERMINED TO BE IN PROPER RUNNING ORDER PRIOR TO OPERATION.
 - DIESEL POWERED EQUIPMENT SHALL NOT BE LEFT INACTIVE AND IDLING FOR MORE THAN FIVE MINUTES, AND SHALL COMPLY WITH APPLICABLE BAAQMD RULES.
 - USE ALTERNATIVE FUELED CONSTRUCTION EQUIPMENT, IF POSSIBLE.
 - ALL VEHICLE SPEEDS ON UNPAVED ROADS SHALL BE LIMITED TO 15 MPH.
 - POST A VISBLE SIGN WITH THE TELEPHONE NUMBER AND PERSON TO CONTACT AT THE LEAD AGENCY REGARDING DUST COMPLAINTS. THIS PERSON SHALL RESPOND AND TAKE CORRECTIVE ACTION WITHIN 24 HOURS. THE AIR DISTRICT PHONE NUMBER SHALL ALSO BE VISBLE TO ENSURE COMPLIANCE WITH APPLICABLE REGULATIONS.

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PROJECT TITLE

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RESIDENCE

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HAYWARD, CA 94542

SEAL



Date Signed: FEB. 06, 2017

SHEET CONTENT

NOTES

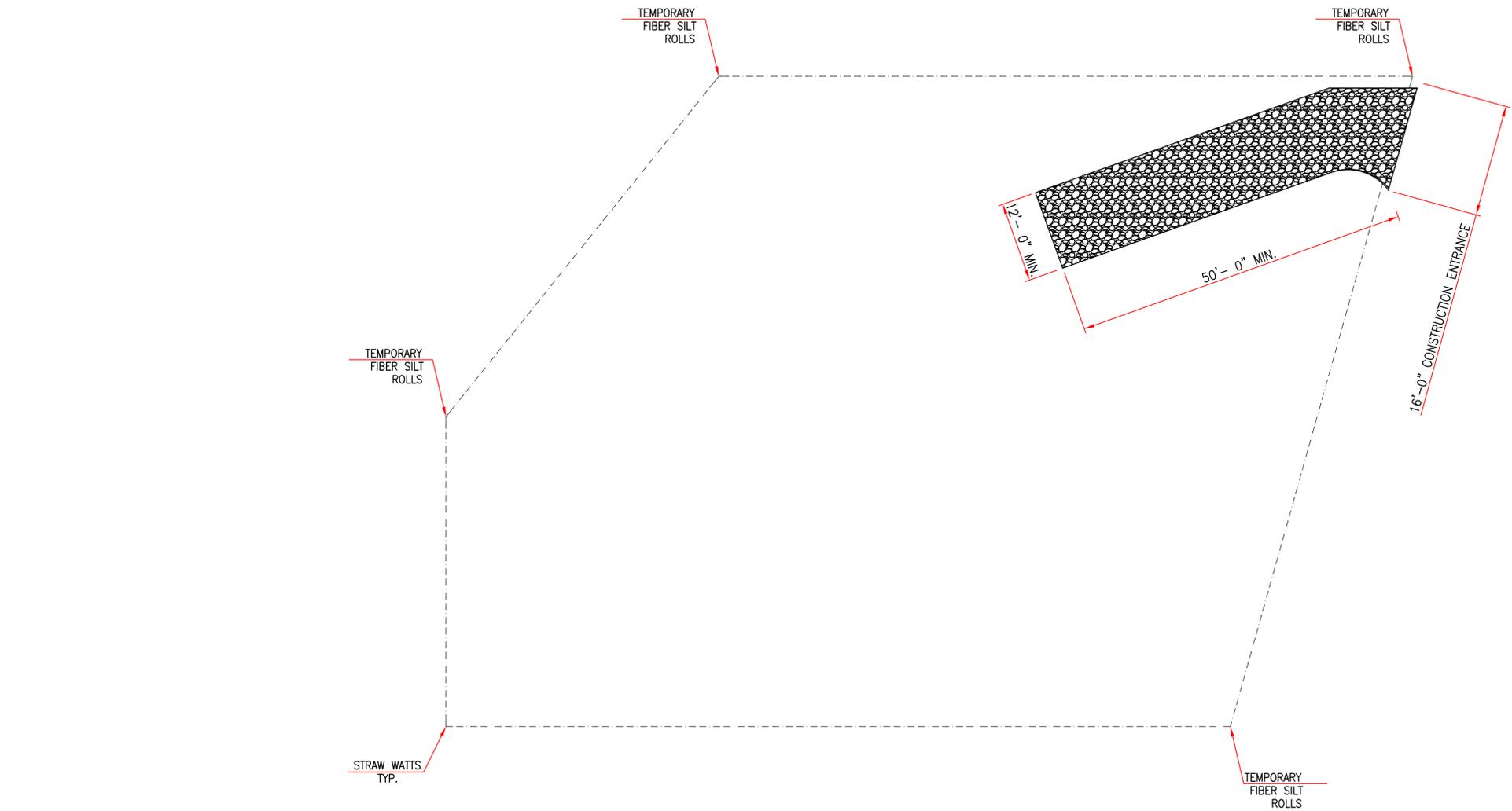
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SCALE AS NOTED

DRAWN BY UPA H

CHECKED BY RAMAN PATEL

PROJECT NO. 16-26 SHEET NO. C-10



EROSION CONTROL PLAN
SCALE 1" = 10'-0"

EROSION AND SEDIMENT CONTROL NOTES:

- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH CITY OF HAYWARD IMPROVEMENT STANDARDS, CURRENT EDITION, AND THE CITY OF HAYWARD EROSION AND SEDIMENT CONTROL GUIDELINES DATED NOVEMBER 2014.
- EROSION CONTROL BEST MANAGEMENT PRACTICES (BMPs) SHALL BE INSTALLED AND MAINTAINED DURING WET SEASON (OCTOBER 1 THROUGH APRIL 30) SEDIMENT CONTROL (BMPs) SHALL BE INSTALLED AND MAINTAINED ALL YEAR.
- ALL DRAINAGE INLETS IMMEDIATELY DOWSTREAM OF THE WORK AREAS AND WITHIN THE WORK AREAS SHALL BE PROTECTED WITH SEDIMENT CONTROL AND INLET FILTER BAGS. YEAR ROUND, INLET FILTER BAGS SHALL BE REMOVED FROM THE DRAINAGE INLETS UPON ACCEPTANCE OF THE PUBLIC IMPROVEMENTS BY THE COUNTY.
- ALL AREAS DISTURBED DURING CONSTRUCTION BY GRADING, TRENCHING OR OTHER ACTIVITIES, SHALL BE PROTECTED FROM EROSION DURING THE WET SEASON (OCTOBER 1 THROUGH APRIL 30), HYDROSEED, IF UTILIZED, MUST BE PLACED BY SEPTEMBER 15, HYDROSEED PLACED DURING THE WET SEASON SHALL USE A SECONDARY EROSION PROTECTION METHOD.
- SENSITIVE AREAS AND AREAS WHERE EXISTING VEGETATION IS BEING PRESERVED SHALL BE PROTECTED WITH CONSTRUCTION FENCING, SEDIMENT CONTROL BMPs, SHALL BE INSTALLED WHERE ACTIVE CONSTRUCTION AREAS DRAIN INTO SENSITIVE OR PRESERVED VEGETATION AREAS.
- SEDIMENT CONTROL BMPs SHALL BE PLACED ALONG THE PROTECTED PERIMETER WHERE DRAINAGE LEAVES THE PROJECT. SEDIMENT CONTROL BMPs SHALL BE MAINTAINED YEAR ROUND UNTIL CONSTRUCTION IS COMPLETE OR THE DRAINAGE PATTERN HAS BEEN CHANGED AND NO LONGER LEAVES THE SITE.
- EROSION AND SEDIMENT CONTROL MEASURES FOR THIS PROJECT SHALL BE IN SUBSTANTIAL COMPLIANCE AT ALL TIMES WITH STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED FOR THE PROJECT IN ACCORDANCE WITH THE STATE OF CALIFORNIA GENERAL CONSTRUCTION PERMIT. THIS PERMIT REQUIRES THAT THE SWPPP BE KEPT UP TO DATE TO REFLECT THE CHANGING SITE CONDITIONS AND THE SWPPP IS TO BE AVAILABLE ON SITE AT ALL TIMES FOR REVIEW BY STATE AND LOCAL INSPECTORS.
- EFFECTIVE EROSION CONTROL BMPs SHALL BE IN PLACE PRIOR TO ANY STORM EVENTS.

CONSTRUCTION NOTES:

- ALL DRAINAGE INLETS IN PUBLIC "ROW" AND DRAINAGE EASEMENTS SHALL HAVE A PERMANENT MESSAGE "NO DUMPING-FLOWS TO CREEK" OR OTHER APPROVED MESSAGE CONSISTENT WITH SECTION 9-14G AND STANDARD DRAWINGS 11-10B OF THE CITY OF HAYWARD IMPROVEMENT STANDARDS.
- REFER TO SITE CONSTRUCTION PLANS (DESIGNED BY RP ASSOCIATES, INC.) FOR EARTH WORK QUANTITIES.
- POST CONSTRUCTION PHASE: ALL DISTURBED SOIL AREAS WILL BE STABILIZED WITH HARDSCAPE OR LANDSCAPING.
- ALL ON SITE ROUTINE MAINTENANCE, FUELING AND WASHING OF VEHICLES AND EQUIPMENT SHALL BE CARRIED OUT IN LOCATIONS AWAY FROM PROTECTED WATER WAYS AND STORM DRAINS. THE MAINTENANCE AREA MUST BE PROPERLY CONTAINED BY EARTHEN-BERMS, SANDBAGS OR OTHER BMPs AS DEPICTED IN THE CASQA BMP SHEETS (SHEET NS-8, ATTACHMENT B), SO THAT SPILLS CAN IMMEDIATELY BE DETAINED AND REMEDIATED.
- ALL CONSTRUCTION MATERIALS WILL BE STORED AT THE STAGING AREA. PROPER USE, STORAGE AND MAINTENANCE OF POTENTIAL POLLUTANTS ASSOCIATED WITH CONSTRUCTION ACTIVITIES NEEDS TO BE USED. MATERIALS THAT COULD POTENTIALLY POLLUTE RUNOFF WILL BE STORED AND MAINTAINED ACCORDING TO LOCAL, STATE AND FEDERAL REGULATIONS. BMPs SHALL BE USED TO PREVENT AND OR ELIMINATE POTENTIAL POLLUTANTS FROM REACHING PROTECTED WATER FEATURES AND STORM WATER DRAINS. REFER TO CASQA BMP SHEETS WM-1, WM-2, WM-4, WM-5, WM-6 AND WM-7 (IN ATTACHMENT B) FOR SPECIFIC BMP MEASURES REGARDING PROPER MATERIAL AND WASTE MANAGEMENT.
- ESTABLISHING DESIGNATED ON-SITE COVERED WASTE COLLECTION AREAS AND THE DAILY COLLECTION OF REFUSE WILL MAXIMIZE THE PREVENTION AND REDUCTION OF POLLUTANTS. THE PROPER TRAINING OF ALL EMPLOYEES AND SUBCONTRACTORS SHALL BE IMPLEMENTED IN ORDER TO INFORM ALL PARTIES ABOUT PROPER HANDLING AND DISPOSAL OF MATERIALS DEEMED TO BE DELETERIOUS TO HUMAN HEALTH OR THE ENVIRONMENT. SOME OF THESE MATERIALS MAY INCLUDE, BUT ARE LIMITED TO, PETROLEUM PRODUCTS SUCH AS OILS, FUELS GREASE AND HERBICIDES AND PESTICIDES. REFER TO CASQA BMP SHEETS WM-1, WM-2, WM-4, WM-5, WM-6 AND WM-7 (IN ATTACHMENT B) FOR SPECIFIC BMP MEASURES REGARDING PROPER MATERIAL AND WASTE MANAGEMENT.
- DUST CONTROL MEASURES ARE TO BE PROVIDED DURING ANY GRADING OR EARTH MOVING ACTIVITIES AND FOR ALL FILL PILES, AND UNSTABILIZED EXPOSED SOILS. THE APPLICATION OF WATER VIA WATER TRUCK IS A TYPICAL DUST CONTROL MEASURE. THIS METHOD TYPICALLY REQUIRES REAPPLICATION AT A RECOMMENDED RATE OF APPROXIMATELY 0.125 GAL YD2 EVERY 20 TO 30 MINUTES. CAUTION MUST BE TAKEN PREVENT WATER APPLICATION IN EXCESS OF SOIL ADSORPTION RATES WHICH COULD RESULT IN SEDIMENT-LADEN RUNOFF BEING DEPOSITED IN UNWANTED AREAS. REFER CASQA BMP SHEETS (ATTACHMENT B) FOR ADDITIONAL INFORMATION ON PROPER WIND EROSION CONTROL PRACTICES.
- DETAILED DESIGN, INSTALLATION AND MAINTENANCE PROCEDURES FOR TYPICAL CONSTRUCTION SITE BMPs ARE INCLUDED IN ATTACHMENT B (CALIFORNIA STORM WATER QUALITY ASSOCIATION - STORMWATER BMP SHEETS).

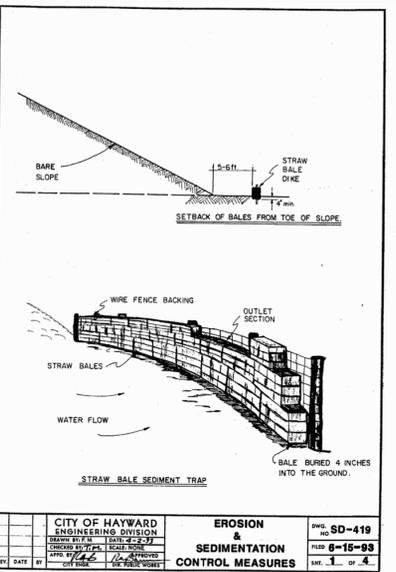
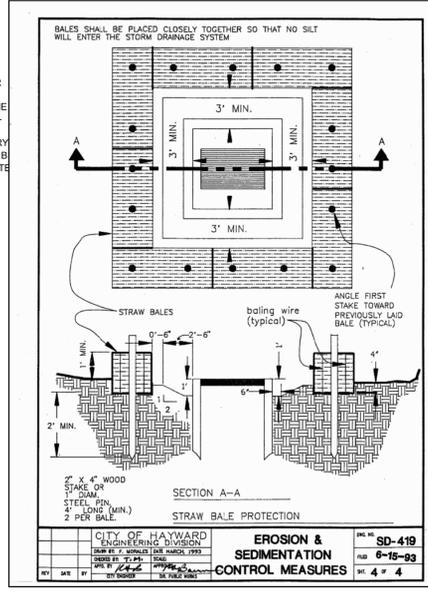
CONTAINMENT/FILTRATION NOTES:

- DUE TO THE SMALL SIZE OF THE SITE AND EXTENSIVE EROSION AND SEDIMENT CONTROL PLAN, CONTAINMENT AND FILTRATION IS NOT ANTICIPATED TO BE USED AT THE SITE. ALTHOUGH CONTAINMENT AND FILTRATION IS NOT EXPECTED TO BE NEEDED, IF THE PLANNED EROSION AND SEDIMENT CONTROL MEASURES DO NOT PROVIDE ADEQUATE PROTECTION FOR REDUCING SEDIMENT CONTAMINATED RUNOFF, CONTAINMENT FEATURES AND FILTRATION MAY BE NEEDED TO REDUCE SEDIMENT FROM CONSTRUCTION SITE RUNOFF.
- IF IT IS NEEDED, THE EXACT CONTAINMENT AND CONVEYANCE STRATEGY TO BE USED SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
- IF CONTAINED STORM WATER DOES NOT MEET BASIN PLAN STANDARDS (SEE TURBIDITY NOTE), SECONDARY FILTRATION, (I.E. DIRT FILTER BAG, SAND MEDIA FILTER, ETC.) MAY BE USED.
- IF SECONDARY FILTRATION DOES NOT RESULT IN WATER QUALITY THAT IS WITHIN BASIN PLAN STANDARDS, ADVANCED FILTRATION (USING CHEMICAL ADDITIVES) MAY BE NECESSARY TO MEET WATER QUALITY STANDARDS FOR STORM WATER RUNOFF PRIOR TO DISCHARGE.
- ADDITIONALLY, DURING GRADING, BERMS AND OR DIVERSION DITCHES MAY BE USED TO DIVERT STORM WATER RUN- ON AWAY FROM THE FUTURE POOL AND OPEN UTILITY TRENCHES IF NECESSARY. ALL STORM WATER WHICH COLLECTS IN THE FUTURE POOL OR UTILITY TRENCHES SHALL FOLLOW THE STEPS ABOVE.

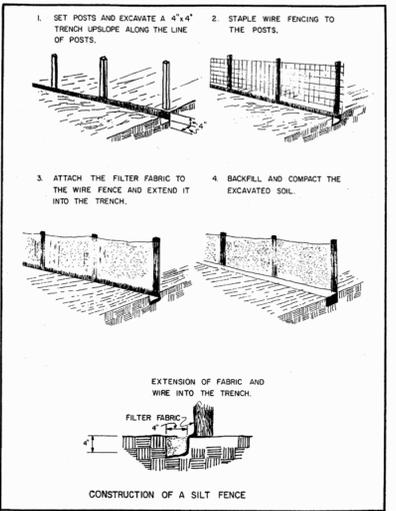
TURBIDITY NOTES:

- TURBIDITY LIMITS OF SITE RUNOFF:
SEDIMENT-LADEN WATER SHALL NOT BE DISCHARGED FROM THE SITE AND/OR INTO ADJACENT WETLANDS OR WATER FEATURES. THE REGIONAL WATER QUALITY CONTROL BOARD USES THE CRITERIA, AS OUTLINED IN THE BASIN PLAN FOR CONSTRUCTION SITE RUNOFF WATER QUALITY. IN DETERMINING WHETHER CONTAINED RUNOFF CAN BE DISCHARGE INTO MUNICIPAL STORM WATER SYSTEM, THE BASIN PLAN STIPULATES THAT WATERS SHALL BE FREE OF CHANGES IN TURBIDITY THAT CAUSE NUISANCE OR ADVERSELY AFFECT THE BENEFICIAL USES. INCREASE IN TURBIDITY SHALL NOT EXCEED THE FOLLOWING LIMITS:
- * WHERE NATURAL TURBIDITY IS BETWEEN 0 AND 5 NEPHELOMETRIC TURBIDITY UNITS (NTUs) INCREASE SHALL NOT EXCEED 1 NTU.
 - * WHERE NATURAL TURBIDITY IS BETWEEN 5 AND 50 NEPHELOMETRIC TURBIDITY UNITS (NTUs) INCREASES SHALL NOT EXCEED 20 PERCENT.
 - * WHERE NATURAL TURBIDITY IS BETWEEN 50 AND 100 NEPHELOMETRIC TURBIDITY UNITS (NTUs) INCREASES SHALL NOT EXCEED 10 NTUs.
 - * WHERE NATURAL TURBIDITY IS GREATER THAN 100 NEPHELOMETRIC TURBIDITY UNITS (NTUs) INCREASES SHALL NOT EXCEED 10 PERCENT.

THE REGIONAL BOARD RECOMMENDS THAT A SAMPLE OF UNCONTAMINATED (BACKGROUND) STORM WATER BE COLLECTED FROM THE RECEIVING WATER BODY FOR COMPARISON WITH SAMPLES COLLECTED FROM STORM WATER RUNOFF. WHILE SEDIMENT CONTAMINATION CAN BE DETECTED VISUALLY, THE USE OF A TURBIDITY WATER METER ALLOWS FOR A MORE ACCURATE DETERMINATION OF CONCENTRATION. ADDITIONAL BMPs SHALL BE APPLIED TO THE SITE (IN ADDITION TO THE BMPs SPECIFIED ON THE SWPP MAP) AS NECESSARY TO COMPLY WITH THE WATER QUALITY LIMITS. SECONDARY FILTRATION MAY BE NECESSARY TO REMOVE FINE PARTICLES SUCH AS CLAYS, FROM STORM WATER RUNOFF AND SEDIMENT BASINS AND IS A RECOGNIZED BAT. (BEST AVAILABLE TECHNOLOGY) BY THE REGIONAL WATER QUALITY CONTROL BOARD.



EROSION & SEDIMENTATION CONTROL MEASURES
SD-419
6-15-93
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EROSION & SEDIMENTATION CONTROL MEASURES
SD-419
6-15-93
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SPECIFICATIONS FOR SILT FENCE

- Materials:**
- Filter fabric shall be a pervious sheet of synthetic polymer composed of at least 85% by weight ethylene, propylene, amide, ester or vinylidene yarn, woven or non-woven, and shall contain stabilizers and/or inhibitors to resist deterioration by heat, water, and ultraviolet light. The fabric shall conform to the following criteria:
 - The Equivalent Opening Size (U.S. Standard Sieve) shall be within the range 70-100.
 - The tensile strength (ASTM D1682G) shall be at least 120 pounds. The strength of fabric required depends on the wire support fence. The strength given is the minimum for a 6-inch square mesh wire support fence. If extra-strength fabric is used without a support fence, the strength required shall be 200 pounds minimum with posts spaced on 6-foot centers.
 - Posts for silt fences shall be either 4-inch-diameter wood, or 1.33-pounds per linear foot steel with a minimum length of 5 feet. Steel posts shall have projections for fastening wire to them.
 - Wire fence reinforcement for silt fences shall be 42 inches in width, shall be a minimum of 14-gauge, and shall have a maximum mesh spacing of 6 inches.

Construction Specifications:

- The height of a silt fence shall not exceed 36 inches. On slopes, the fence line shall follow the contour as closely as possible. In small swales, the fence line shall be curved upstream at the sides to direct the flow toward the middle of the fence.
- If possible, the filter fabric shall be cut from a continuous roll to avoid the use of joints. When joints are necessary, filter cloth shall be spliced only at a support post, with a minimum 6-inch overlap and both ends securely fastened to the post.
- Posts shall be spaced a maximum of 10 feet apart and driven securely into the ground (minimum of 12 inches). When extra-strength fabric is used without the wire support fence, post spacing shall not exceed 6 feet.
- A trench shall be excavated approximately 4 inches wide and 4 inches deep along the line of posts and upslope from the barrier.
- When standard-strength filter fabric is used, a wire-mesh support fence shall be fastened long, tie wires, or hog rings, of the posts using heavy-duty wire staples at least 1 inch securely to the upslope side of the posts using heavy-duty wire staples at least 1 inch and shall not extend more than 36 inches above the original ground surface.
- The standard-strength filter fabric shall be stapled or wired to the fence, and 8 inches of the fabric shall extend into the trench. The fabric shall not extend more than 36 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.
- When extra-strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts with all other provisions of NP 6 above applying.
- The trench shall be backfilled and soil compacted over the toe of the filter fabric.
- Silt fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized.

EROSION & SEDIMENTATION CONTROL MEASURES
SD-419
6-15-93
3 of 4

DESIGNER



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HAYWARD, CA 94542

SEAL



Date Signed: FEB. 06, 2017

SHEET CONTENT

EROSION CONTROL PLAN

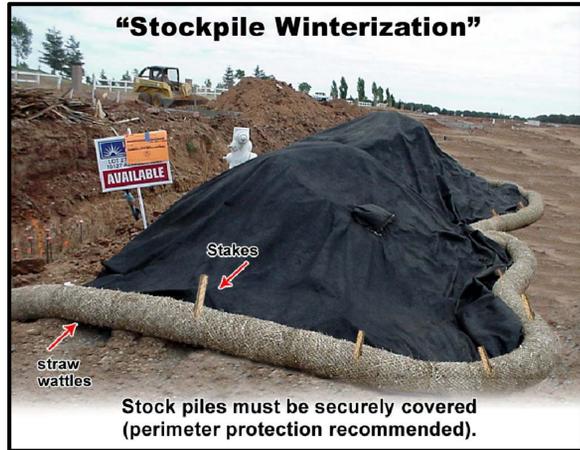
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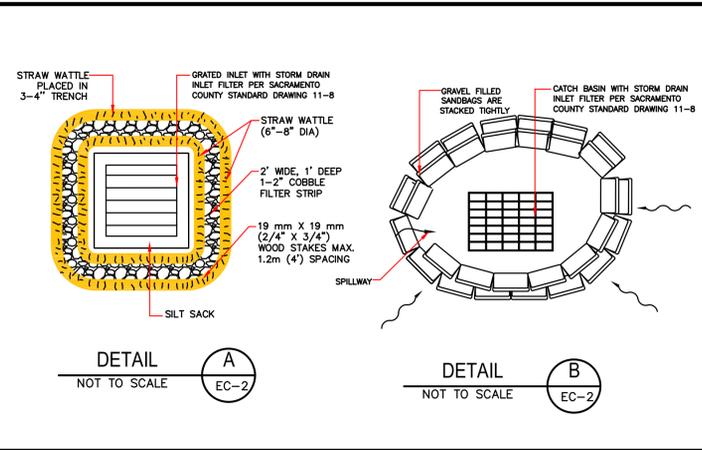
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PROJECT NO. 16-26
SHEET NO. EC-1



“Stockpile Winterization”

Stock piles must be securely covered (perimeter protection recommended).



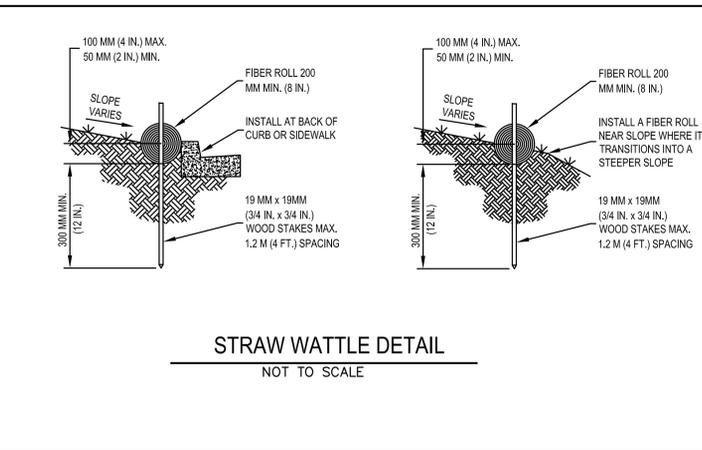
DETAIL A NOT TO SCALE EC-2

DETAIL B NOT TO SCALE EC-2



“Construction Site Entrances”

Geotextile liner under rocks.

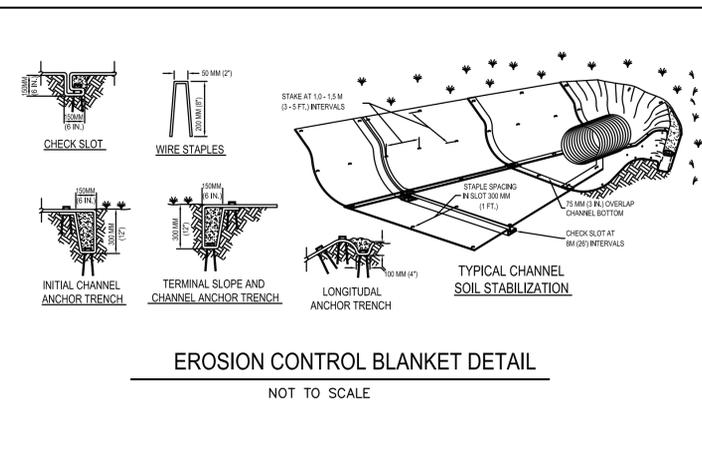


STRAW WATTLE DETAIL NOT TO SCALE



“Concrete Washout Area”

Constructed of straw bales lined with a sheet of plastic.

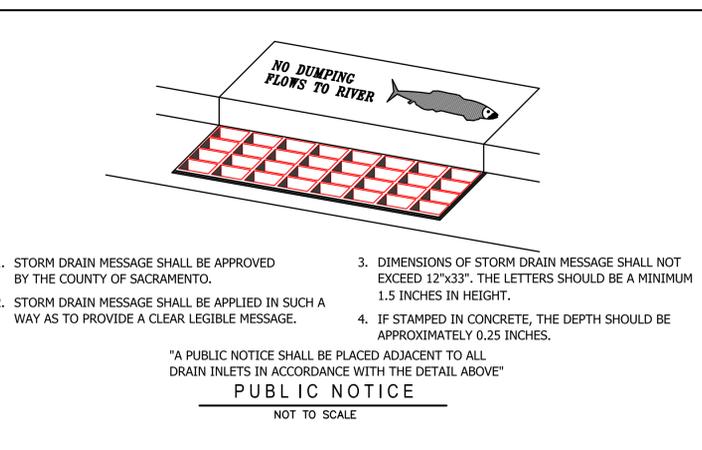


EROSION CONTROL BLANKET DETAIL NOT TO SCALE



“Drain Inlet Protection”

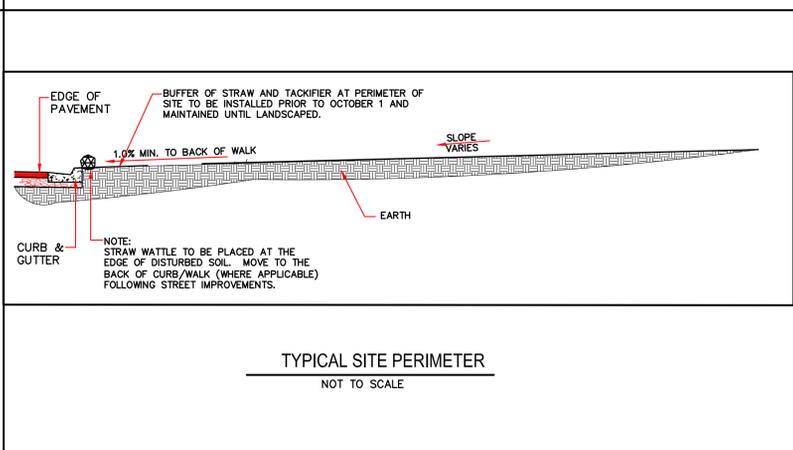
Silt sacks must be maintained weekly and after every rain event.



PUBLIC NOTICE NOT TO SCALE

BMP SCHEDULE										
CONSTRUCTION PHASE	WET SEASON (OCT 1 - APRIL 30)					YEAR ROUND				
	HYDROSEEDING	STRAW & TACKIFIER	PRESERVATION OF EXISTING VEGETATION	FIBER ROLL	DUST CONTROL	STORM DRAIN INLET PROTECTION	DEWATERING	DI STENCILING	STABILIZED CONSTRUCTION ENTRANCE	MATERIAL & WASTE DISPOSAL
PRE-GRADING										
ON-SITE EARTHWORK										
UNDERGROUND WORK										
STORM DRAIN IMPROVEMENTS										
PUBLIC STREET IMPROVEMENTS										
PAVEOUT/ SIDEWALK WORK										
POST - CONSTRUCTION						Until improvements are accepted by the County				

GOOD HOUSEKEEPING PRACTICES TABLE			
BEST MANAGEMENT PRACTICE	LOCATION	IMPLEMENTATION SCHEDULE	MAINTENANCE SCHEDULE
SOLID WASTE MANAGEMENT	THROUGHOUT THE PROJECT SITE	PRIOR TO GENERATION OF ONSITE WASTE	COLLECT TRASH DAILY, PROVIDE DESIGNATED WASTE COLLECTION AREAS AND CONTAINERS. ARRANGE FOR REGULAR REMOVAL AND DISPOSAL. CLEAR SITE OF TRASH INCLUDING ORGANIC DEBRIS, PACKAGING MATERIALS, SCRAP OR SURPLUS BUILDING MATERIALS AND DOMESTIC WASTE.
MATERIAL DELIVERY AND STORAGE	AS DETERMINED BY CONTRACTOR	AT THE TIME OF MATERIAL DELIVERY	PROVIDE A DESIGNATED MATERIAL STORAGE AREA WITH SECONDARY CONTAINMENT SUCH AS BERMING AND FENCING. STORE MATERIAL ON PALLETS AND PROVIDE COVERING FOR SOLUBLE MATERIAL. RELOCATE STORAGE AREA TO BUILDING SHELL WHEN POSSIBLE. INSPECT BERMING, PALLETS COVERINGS AND CONTAINERS WEEKLY.
CONCRETE WASTE	AS DETERMINED BY CONTRACTOR	PRIOR TO DELIVERY OF CONCRETE	INSPECT DAILY CONTROL RUNOFF. PROVIDE A DESIGNATED AREA FOR TEMPORARY PIT TO BE USED FOR CONCRETE TRUCK WASH-OUT. DISPOSE OF HARDENED CONCRETE WASTE. CONCRETE TRUCKS SHALL NEVER DUMP WASTE INTO CITY STORM DRAINS. INSPECT WEEKLY FOR REMOVAL OF HARDENED CONCRETE.
PAINT AND PAINTING SUPPLIES	THROUGHOUT THE PROJECT SITE	PRIOR TO PAINTING	PROVIDE INSTRUCTION TO EMPLOYEES AND SUB- CONTRACTORS REGARDING REDUCTION OF POLLUTANTS INCLUDING MATERIAL STORAGE. USE AND CLEANUP. INSPECT SITE WEEKLY FOR EVIDENCE OF IMPROPER DISPOSAL.
VEHICLE FUELING, MAINTENANCE AND CLEANING	AS DETERMINED BY CONTRACTOR	PRIOR TO ONSITE EQUIPMENT STORAGE	PROVIDE A DESIGNATED FUELING AREA WITH SECONDARY CONTAINMENT SUCH AS BERMING. DO NOT ALLOW MOBILE FUELING OF EQUIPMENT. PROVIDE EQUIPMENT WITH DRIP PAN. RESTRICT ONSITE MAINTENANCE AND CLEANING OF EQUIPMENT TO A MINIMUM.
SANITARY SEWER FACILITIES	AS DETERMINED BY CONTRACTOR	PRIOR TO MAINTAINING ONSITE WORK FORCE	INSPECT CONTAINMENT WEEKLY. INSPECT OR REMOVE WASTES WEEKLY OR MORE OFTEN AS APPROPRIATE. PROVIDE TEMPORARY SANITARY SEWER FACILITIES DURING SITE CONSTRUCTION.
PAVED ROADS	AT STABILIZED CONSTRUCTION ACCESS	FROM INITIAL GRADING TO COMPLETION OF ONSITE PAVING	SWEEP WEEKLY OF MORE OFTEN AS APPROPRIATE. ALL SEDIMENT DEPOSITED ON PAVED ROADS SHALL BE SWEEPED AND FREE OF SEDIMENT AT THE END OF EACH WORKING DAY.
ALL EROSION + SEDIMENT + CHEMICAL CONTROL MEASURES	THROUGHOUT THE PROJECT SITE	SEE BMP INSTALLATION SCHEDULE, THIS SHEET	BMP'S SHALL BE INSPECTED REGULARLY BEFORE, DURING AND AFTER ANY STORM EVENT AND REPAIRED ACCORDINGLY.



TYPICAL SITE PERIMETER NOT TO SCALE

BMP'S

EXISTING VEGETATION: RESTABILIZE WITH HYDROSEED STRAW AND TACKIFIER IF DISTURBED.

EROSION CONTROL BLANKETING, STRAW MULCH AND TACKIFIER, OR EQUIVALENT EROSION CONTROLS TO BE MAINTAINED ON DISTURBED SOIL AREAS ALONG AUBURN BOULEVARD DURING THE RAINY SEASON (OCT 1-APRIL 30).

STRAW MULCH AND TACKIFIER (OR EQUIVALENT) TO BE APPLIED FOLLOWING GRADING.

GRAVEL (OR EQUIVALENT) TO BE INSTALLED FOLLOWING GRADING TO FACILITATE BUILDING CONSTRUCTION DURING THE RAINY SEASON (OCT 1-APRIL 30).

STRAW WATTLE TO BE INSTALLED PRIOR TO START OF CONSTRUCTION.

STRAW WATTLE TO BE INSTALLED FOLLOWING PAVING.

DURING GRADING: INSTALL SILT SACK AND DOUBLE RINGS OF STRAW WATTLE DURING RAINY SEASON (OCT 1-APRIL 30) - (SEE DETAIL A).

INSTALL SILT SACK AND SINGLE RING OF STRAW WATTLE DURING DRY SEASON (APRIL 30- OCT 1).

AFTER PAVING: MAINTAIN SILT SACK AND PLACE GRAVEL BASIN AT PERIMETER ABUTTING AGAINST THE FRONT OF CURB WHERE APPLICABLE UNTIL LANDSCAPING IS COMPLETED. (SEE DETAIL B) APPLY SAME BMP'S TO EXISTING DIS.

STABILIZED CONSTRUCTION ENTRANCE

EXISTING PAVEMENT

EXISTING WOOD FENCE

MASONRY WALL TO BE CONSTRUCTED

FLOW LINE

PROPERTY BOUNDARY - APPROXIMATE AREA OF DISTURBANCE = 2 ACRES

LEGEND:

CONSTRUCTION TRAILER

VEHICLE/EQUIPMENT MAINTENANCE/ AND FUELING AREA

WASTE STORAGE (DUMPSTERS)

POST CONSTRUCTION UNDERGROUND DETENTION BASIN

NOT A PART OF THIS PROJECT

STRAW MULCH AND TACKIFIER (OR EQUIVALENT) TO BE APPLIED TO THE PARKING LOT FOLLOWING GRADING. MAINTAIN EROSION CONTROLS WHERE APPLICABLE PRIOR TO ANTICIPATED RAIN EVENTS

DESIGNER

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SEAL

REGISTERED PROFESSIONAL ENGINEER
RAMAN K. PATEL
NO. 0025997
EXP. MAR 2019
CIVIL
STATE OF CALIFORNIA

Date Signed: FEB. 06, 2017

SHEET CONTENT

EROSION CONTROL DETAILS AND NOTES

DATE	ISSUED FOR	BY
02-06-17	PERMIT	RP

SCALE AS NOTED

DRAWN BY UPA H

CHECKED BY RAMAN PATEL

PROJECT NO. 16-26 SHEET NO. EC-2