

Project Info

Project Description:

Construction of a two-story 1488 ft² single-family residence, a 288 ft² garage, driveway, decks, patio, septic system, and landscaping improvements, on an infill parcel where a previous residence owned by the family was destroyed by fire.

All County and LCP building height, yard setback, and FAR limits are complied with, as well as all FEMA base elevation and design standards. A two-bedroom residence previously existed on the property, until it was destroyed in a 1983 fire. The applicant's family has continuously owned the property since the 1930s.

Applicant:
Brian and Alyce Johnson
P.O. Box 1139
Homewood, CA 96141
(530) 525-5129

Structural Engineer:
Paul Krohn
P.O. Box 113
Fairfax, CA 94978
(530) 342-2926

Design:
CivicKnit
P.O. Box 81
Forest Knolls, CA 94933
(415) 307-1370

Coastal Engineer:
Noble Consultants, Inc
2420 Mountain Ranch Road
Petaluma, CA 94954
(415) 884-0727

Civil Engineer:
AYS Engineering Group, Inc
P.O. Box 5693
Petaluma, CA 94955
(707) 763-6620

CEQA (Wastewater System)
WRA, Inc
2169-G East Francisco Blvd
San Rafael CA, 94901
(415) 454-8868

Surveyor:
L.A. Stevens & Associates, Inc
7 Commercial Blvd
Novato, CA 94949
(415) 382-7713

Geotechnical Engineer:
Murray Engineers, Inc
409 4th St
San Rafael, CA 94901
(415) 888-8952

APN: 195-162-49 **Lot Area:** 15,200 ft² (0.36 Acres) **Zoning Information:** C-R2 - Residential; 2 Family

Latitude: 37.899 **Longitude:** -122.645

Square Footage (Proposed):
Residence: 1563 ft² Garage: 288 ft²
Concrete Slab: 498 ft² Permeable Paving: 916 ft² Lot Coverage, Impervious: 0.13
Deck / Stairs: 528 ft² House Footprint: 1151 ft² Lot Coverage, Pervious: 0.06
SBCWD Defined: 1389 ft² Existing Coverage: 10 ft² Total Proposed Coverage: 3381 ft²

Minimum Setbacks for Residence:
Front: 25'
Rear: 16' (20% lot depth)
Side: 6'
Rear Deck: 10'
Front Porch: 19'

Proposed Residence Setbacks:
Front: 25'
Rear: 24'
Side: 25'
Rear Deck: 19'
Trellis: 20'

Minimum Setbacks for Accessory:
Front: 25'
Rear: 10'
Side: 6'

Proposed Accessory Setbacks:
Front: 30'
Back: 25'
Side: 29'

Maximum heights:
Residence: 25'
Accessory: 15'
Retaining wall: 4'
Boundary Fence: 6'

Proposed Heights:
Residence: 24' 5"
Accessory: 13'
Retaining wall: 4'
Boundary Fence: 6'

Maximum FAR: 0.30

Proposed FAR: 0.11

Grading Calculations:
Cut: 39.81 CY
Fill: 66.52 CY
Import: 26.71 CY

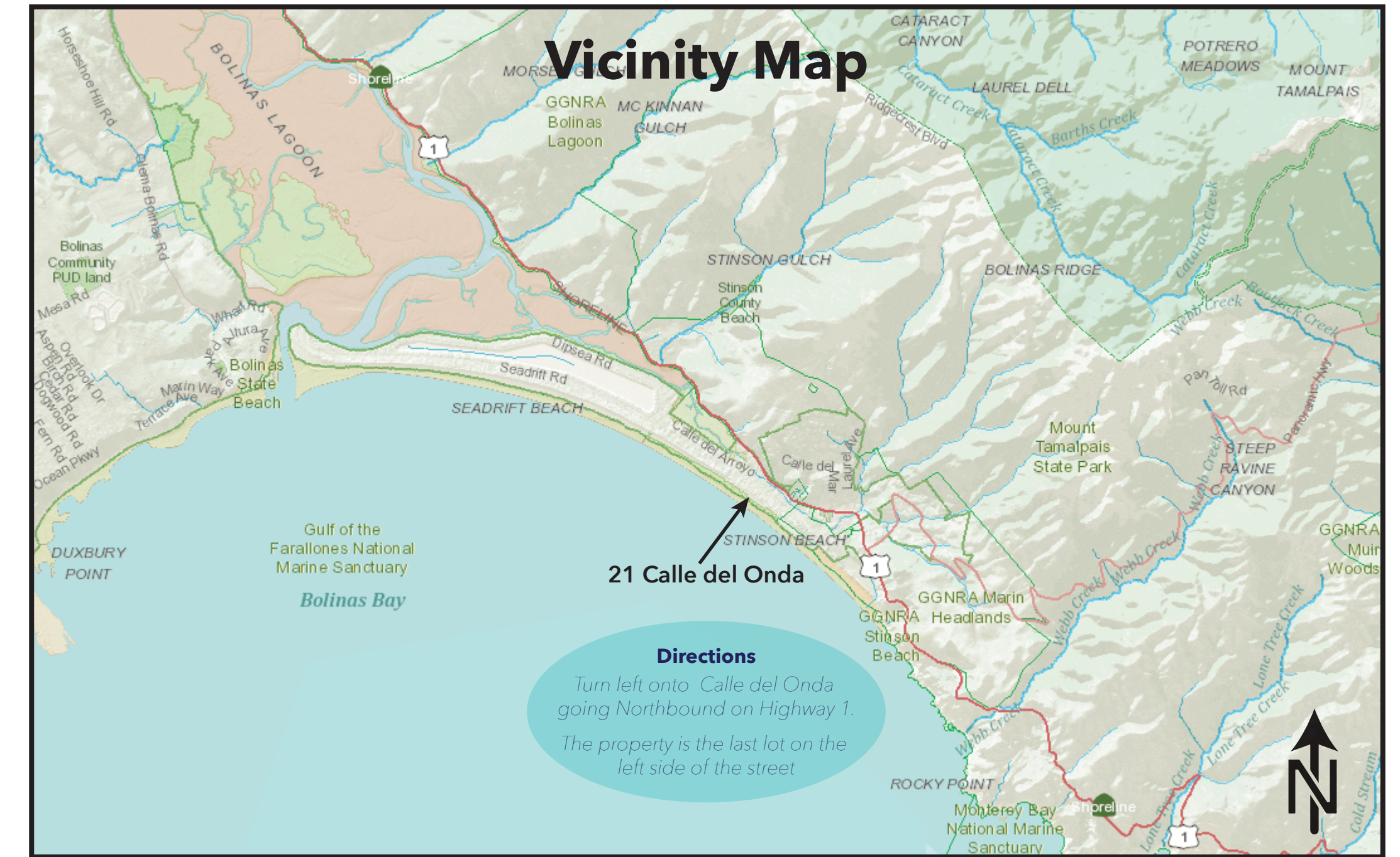
Average Slope: 7.13%

On-Site Parking Required: 3 spaces

Driveway Slope: 12% maximum

Proposed Parking: 3 spaces

FEMA Flood Zones: VE, A0 (See Sheet 3)



Aerial View from Street

Proposed Project Location

Sheet Index

1. Cover
2. Conceptual Renderings
3. Site Plan
4. Residence 1st Floor Plan
5. Residence 2nd Floor Plan
6. Residence Elevations
7. Residence Sections
8. Garage Plan, Elevations, Sections
9. Exterior Materials
10. Landscape Plan
11. Staking Plan
- W1. Septic Plan
- W2. Septic Plan Details
- C1. Grading and Drainage Notes
- C2. Grading Plan
- C3. Drainage Plan
- C4. Erosion and Sediment Control Plan
- T1. Topographic Survey



Reconstruction of a Residence
21 Calle del Onda, Stinson Beach, CA

Cover Sheet

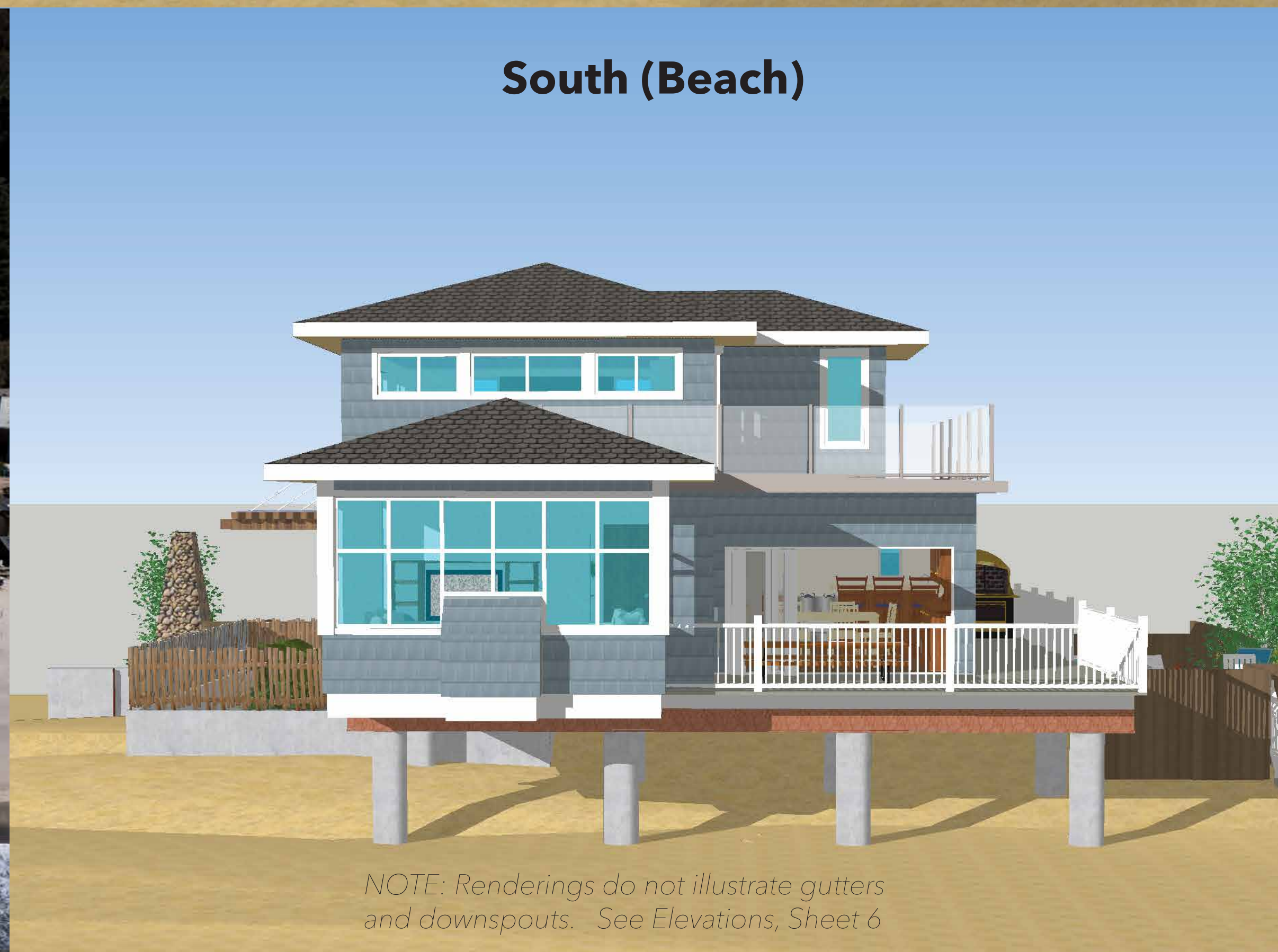


East



Neighborhood West of Residence

Site



South (Beach)

NOTE: Renderings do not illustrate gutters and downspouts. See Elevations, Sheet 6



Neighborhood East of Residence

Site



Legend			
[CH]	Existing Chimney	→	Drainage Direction
- - -	Setbacks	▬	Concrete Wall
●●●●	CCC Stringline	▬▬▬	Redwood Fence
- · - · -	Boundary between A0 and VE flood zones	⋯	Grape Stake Fence
→	Area of Proposed Easement	■	Structure
▬	Limits of Construction	■	Deck
		■	Concrete Slab
		■	Permeable Pavement
		□ WM	Water Meter
		⊕	Propane Tank
		—	Utility Line
		≡	Joint Trench

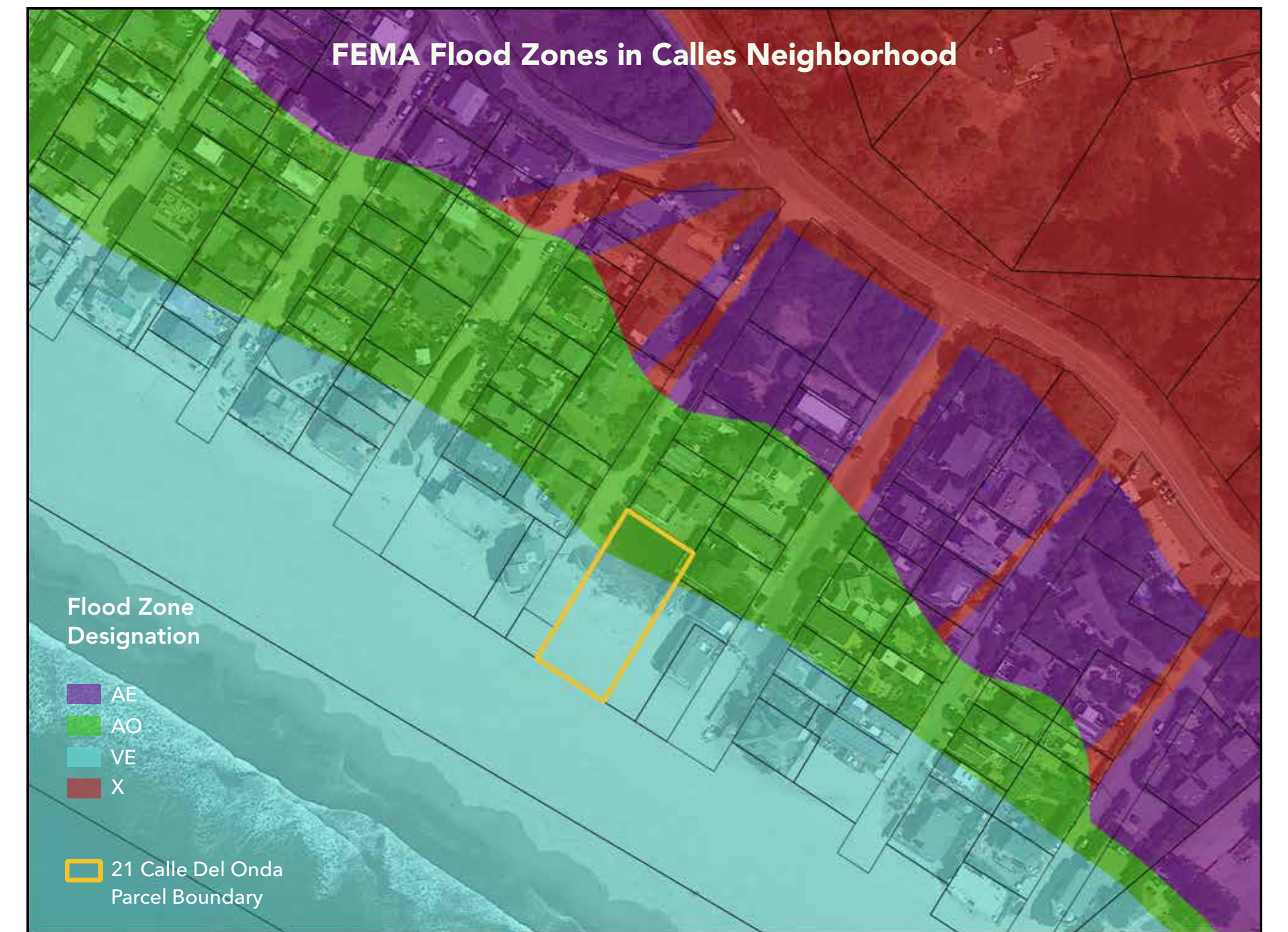
Coastal Guidance

In July 2020, the Stinson Beach County Water District (SBCWD) approved a septic system design and confirmed water service availability, subject to receipt of building permits from Marin County. A Mitigated Negative Declaration (MND) for the septic system application was prepared by WRA Associates in 2020, and approved by the SBCWD Board of Directors in July, 2020.

To address Storm and Sea Level Rise Hazards, Noble Consultants, Inc. prepared a Coastal Engineering Analysis in June 2016. Their report was updated in 2020. Murray Engineers prepared a Geotechnical Analysis that will inform the buildings' foundation systems in January 2021.

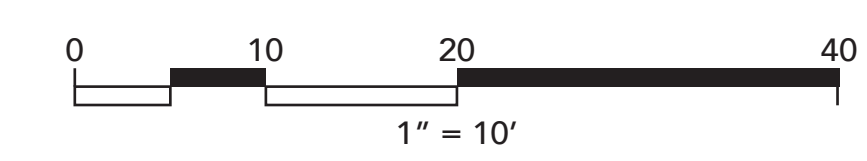
FEMA VE Zone Requirements

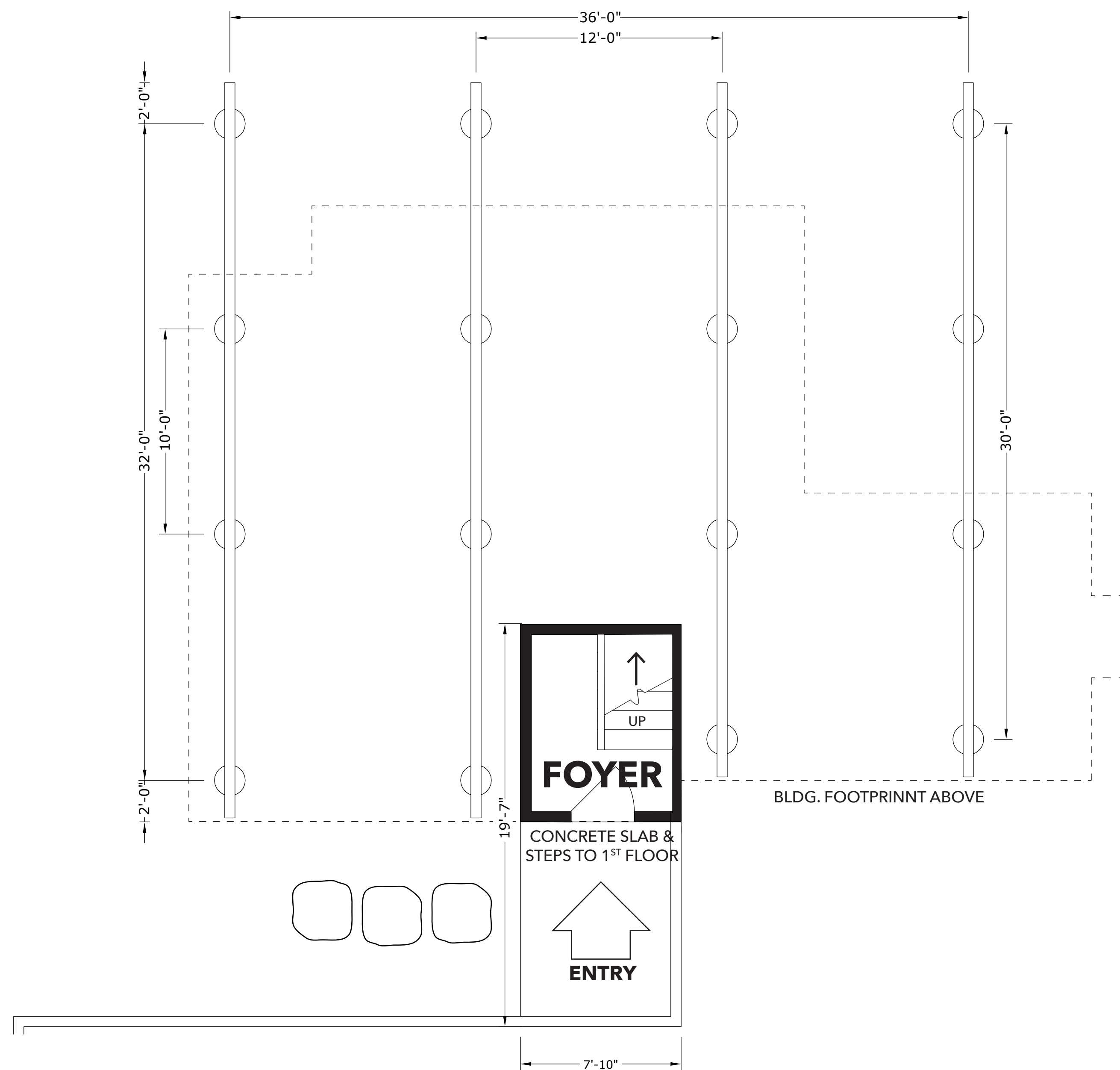
- 1) Extend open foundation system to minimum Base Flood Elevation of 18' 2"
- 2) Entry foyer walls shall be designed to break away without transferring loads to the structure
- 3) Construction materials beneath the Base Flood Elevation shall be flood resistant
- 4) No Utilities shall be located in flood resistant walls
- 5) Building elements and enclosures below the elevated building will be designed and constructed to break away from the structure and not transfer any loads to the elevated building nor the foundation system



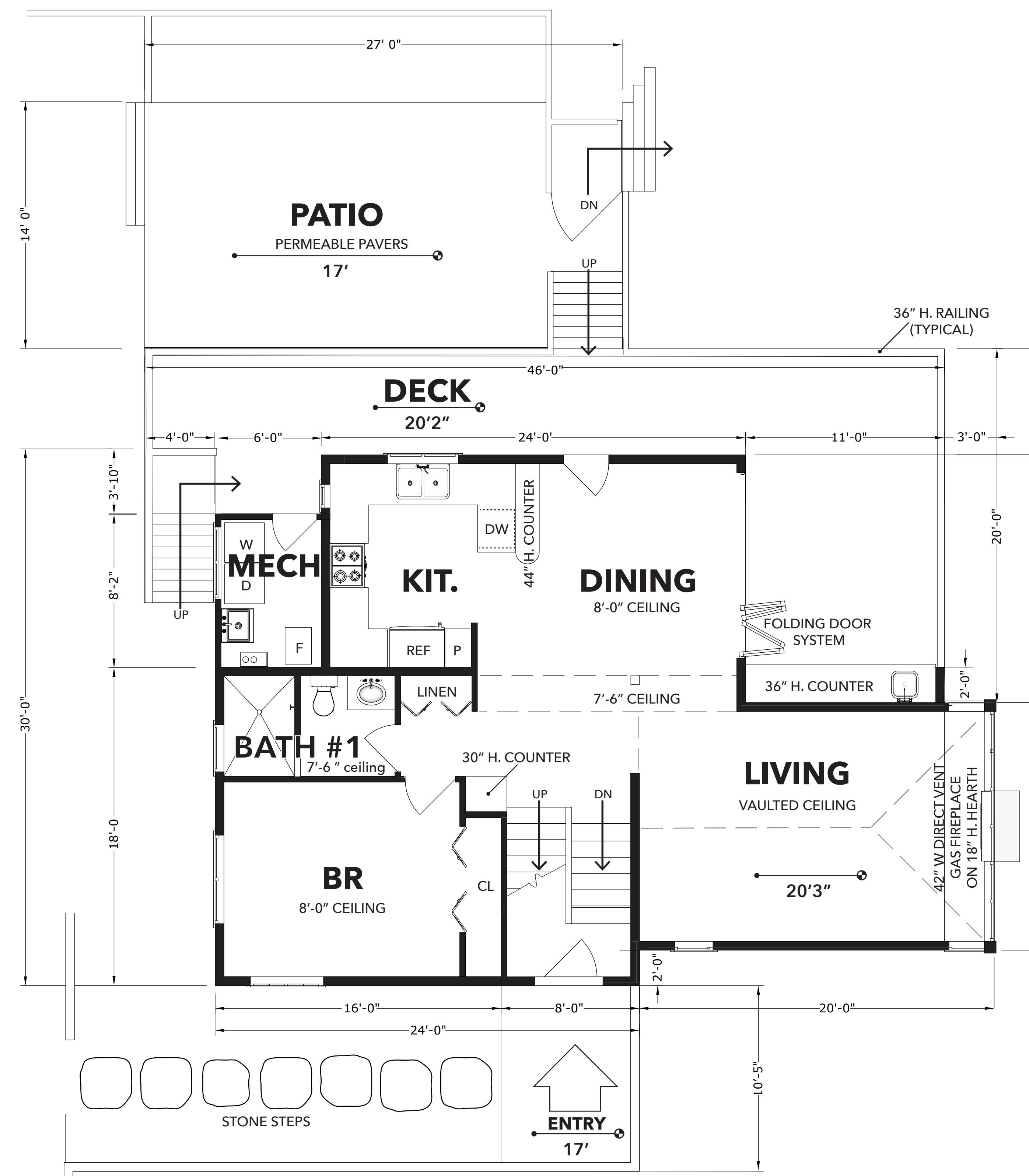
Additional Notes

- Driveway and patio pavers are permeable, with runoff factor of ≤ 0.5
- For fence and wall details see Landscaping Plan, Sheet 3

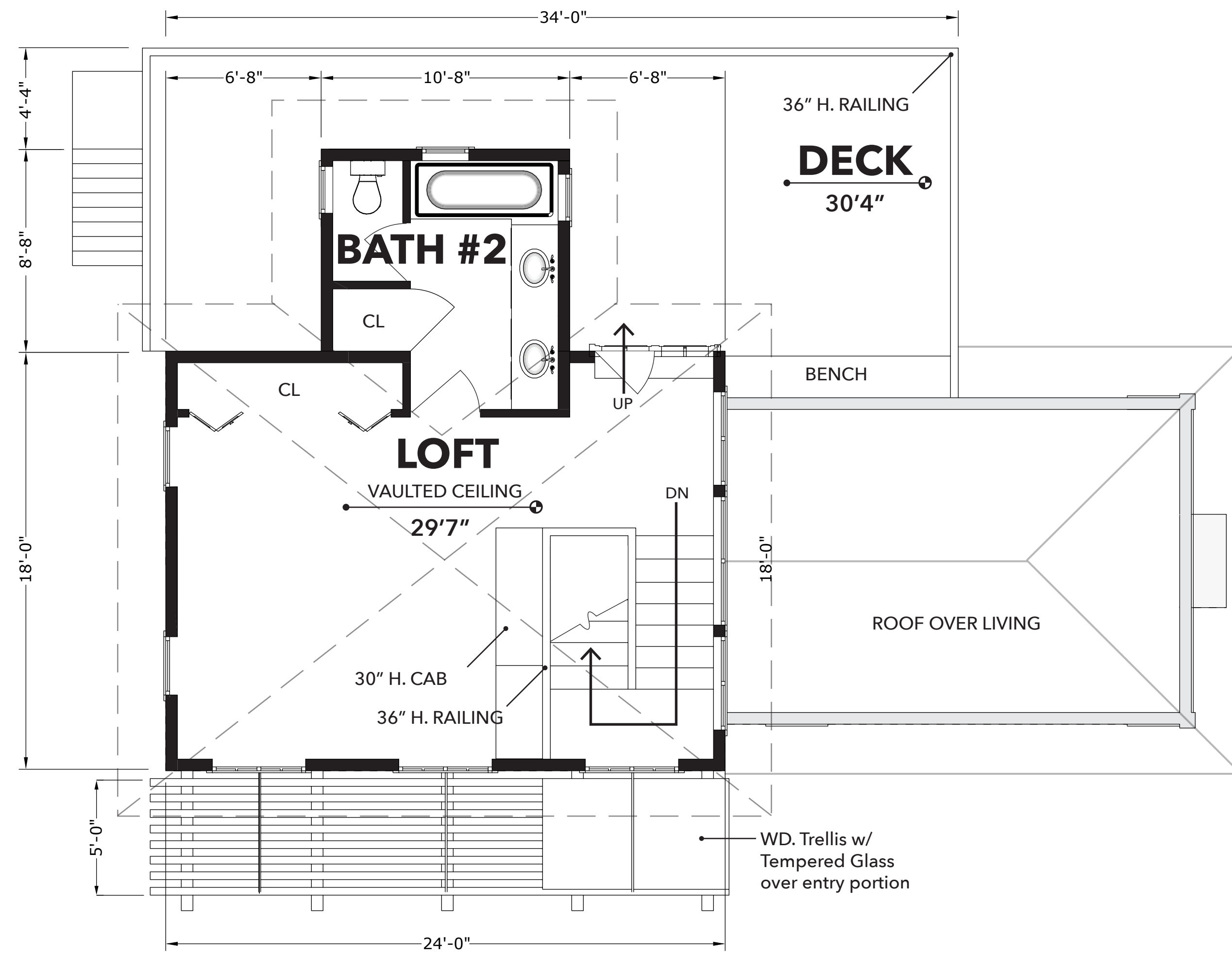




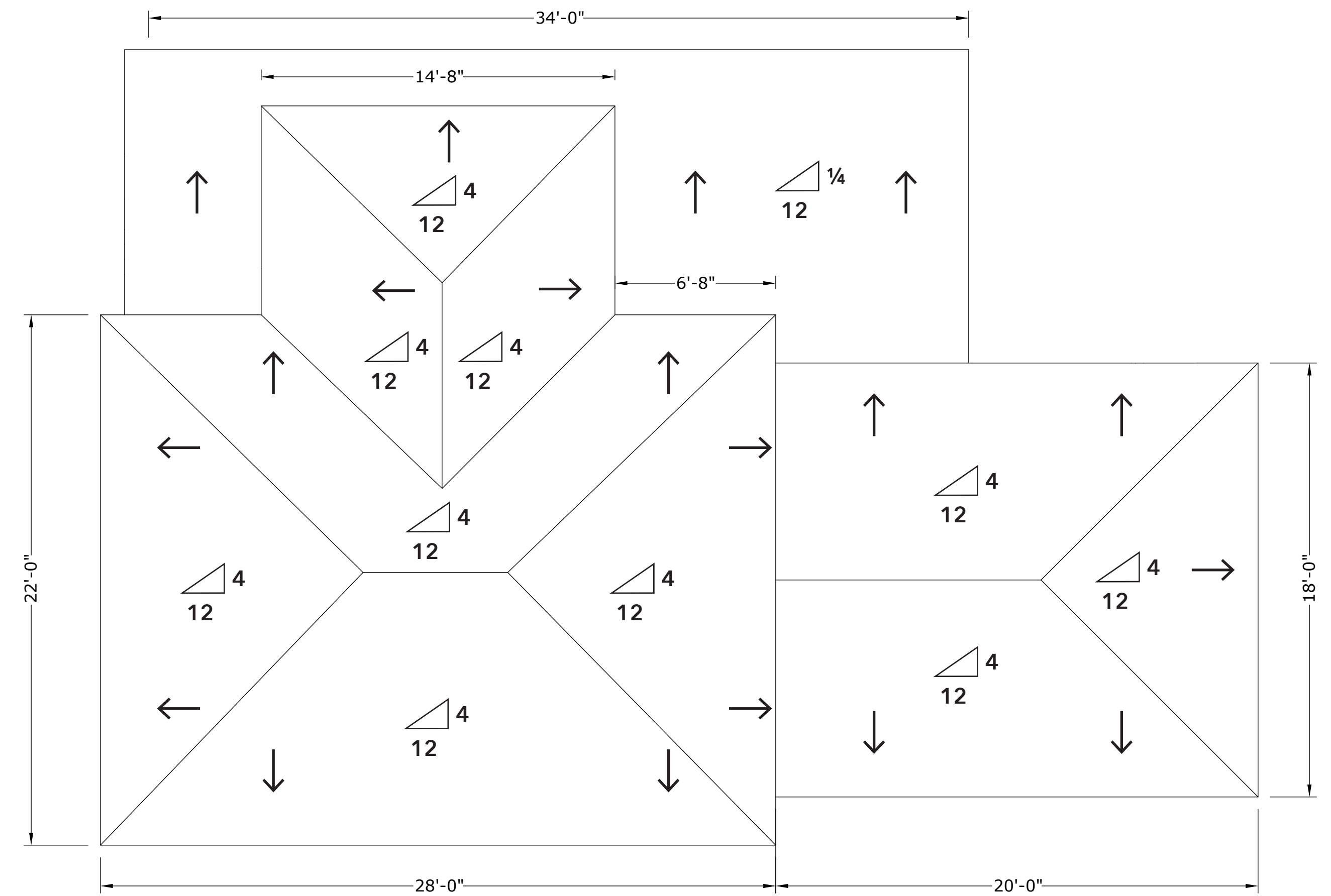
Entry Level



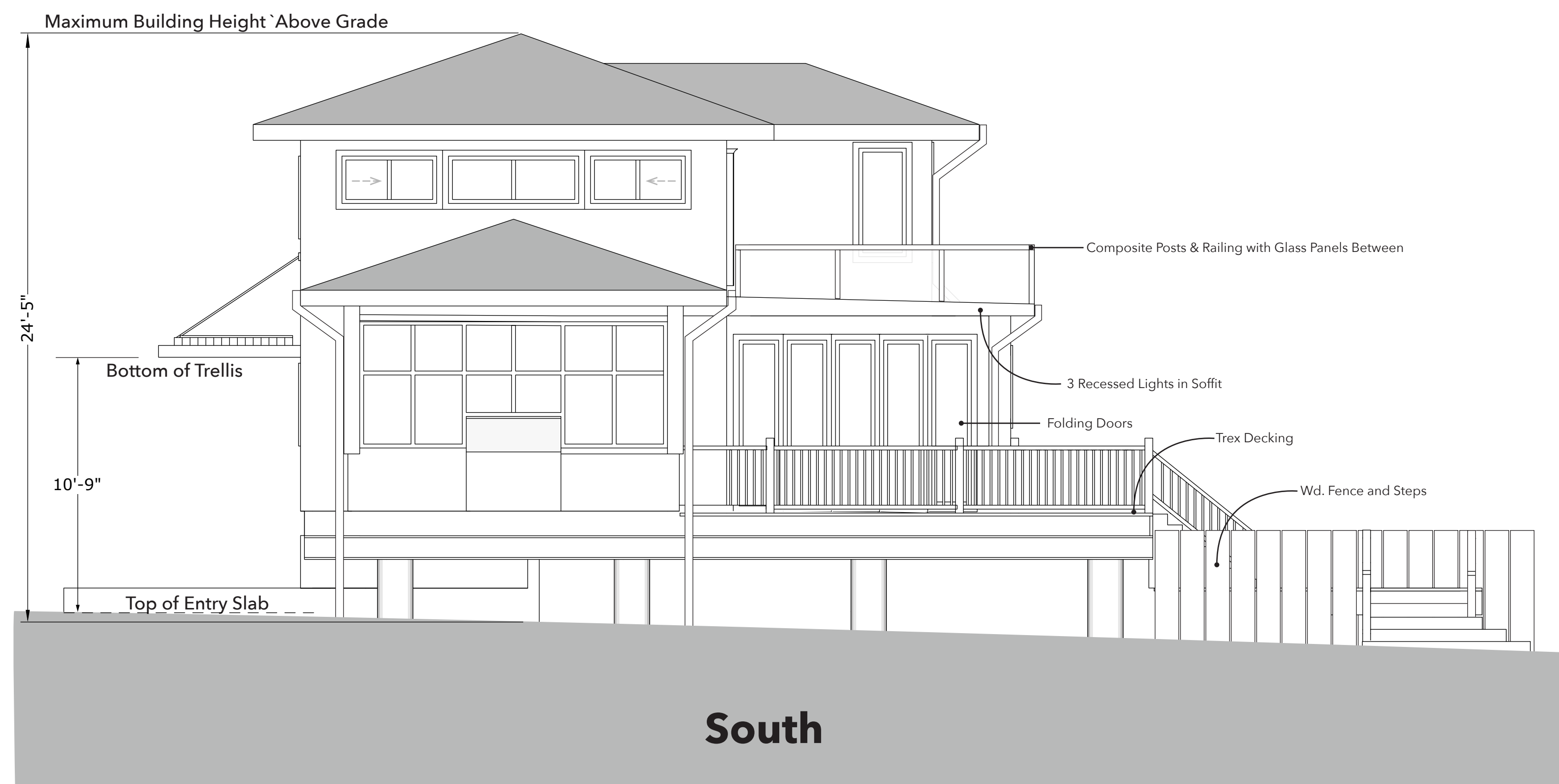
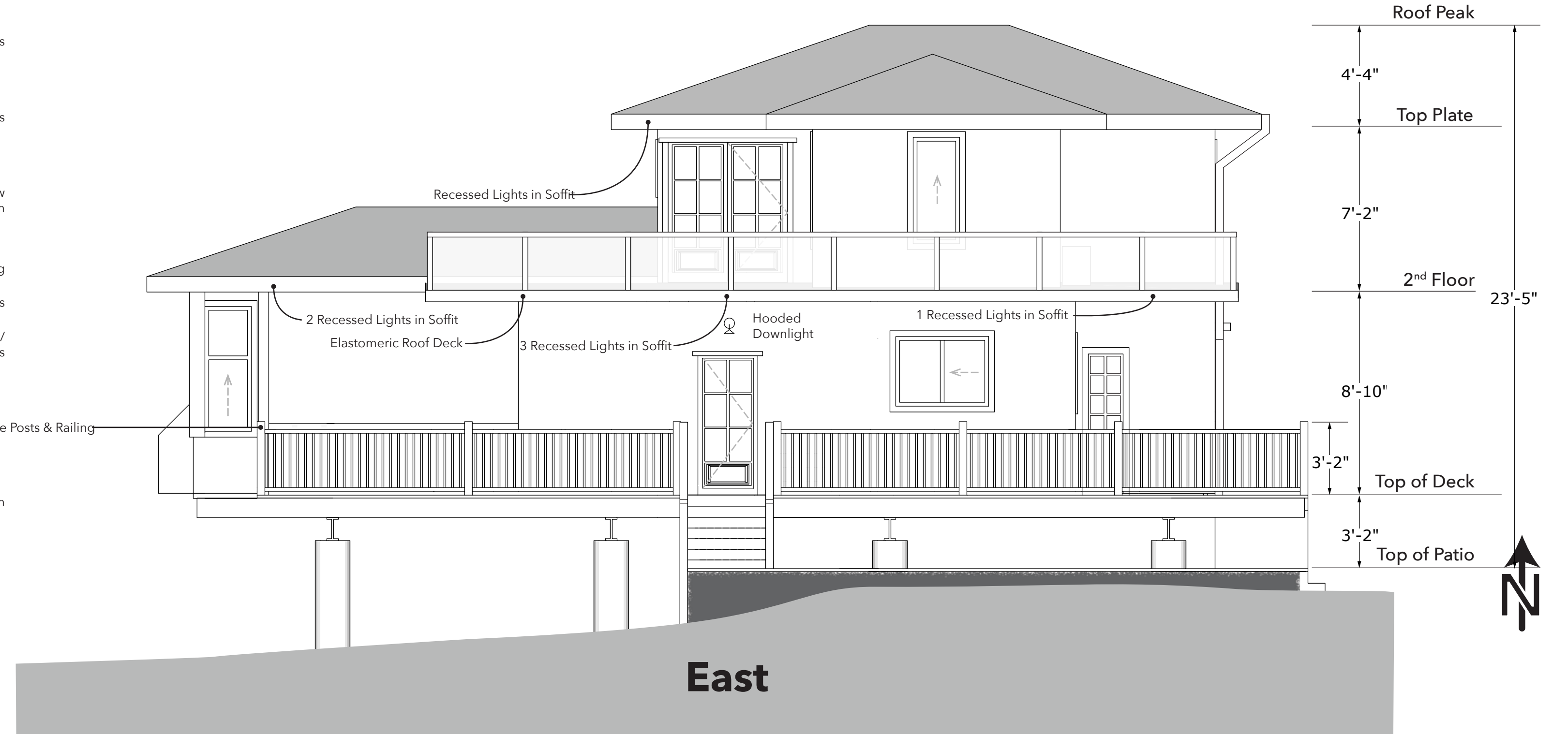
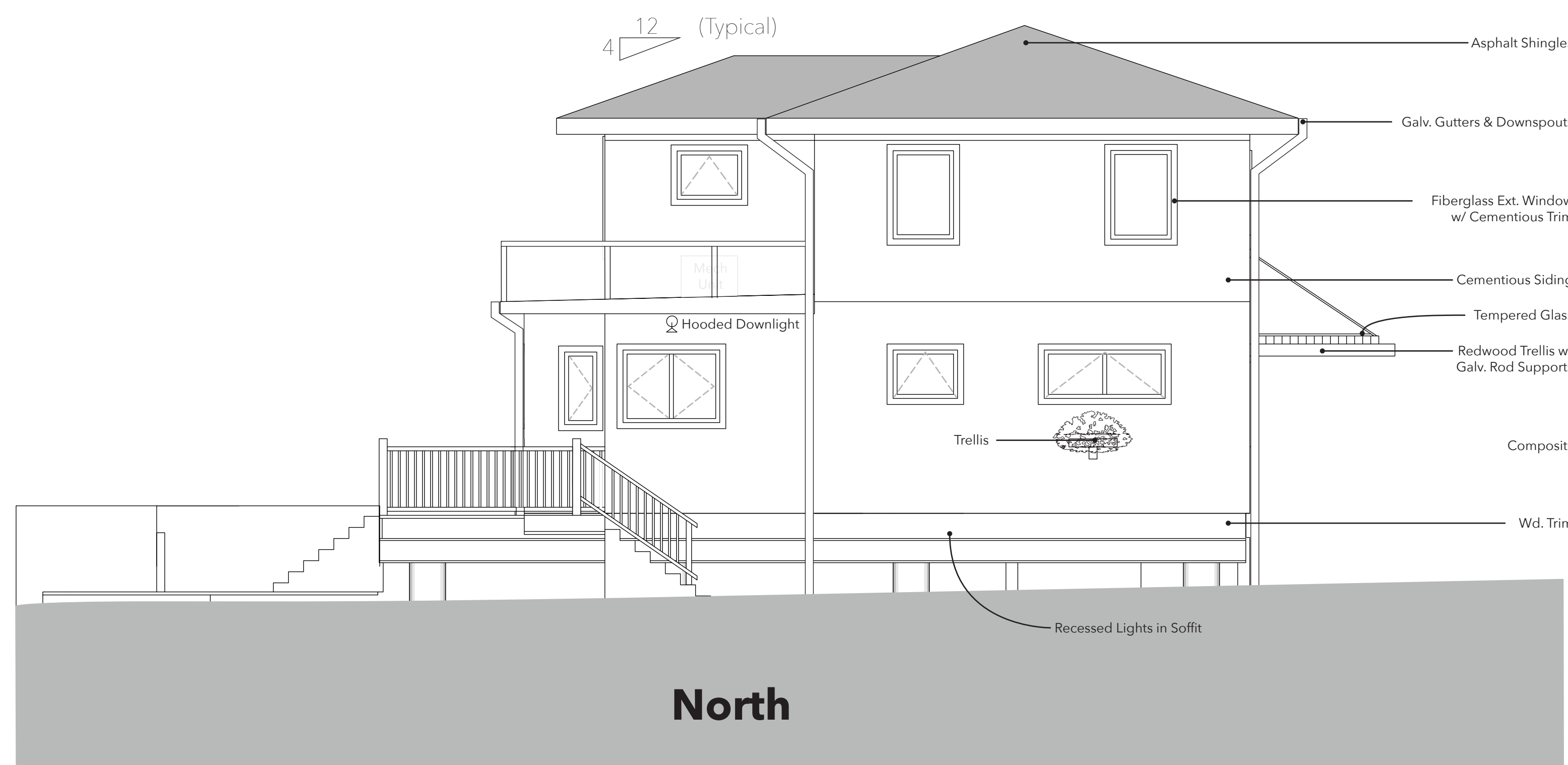
1st Floor



2nd Floor

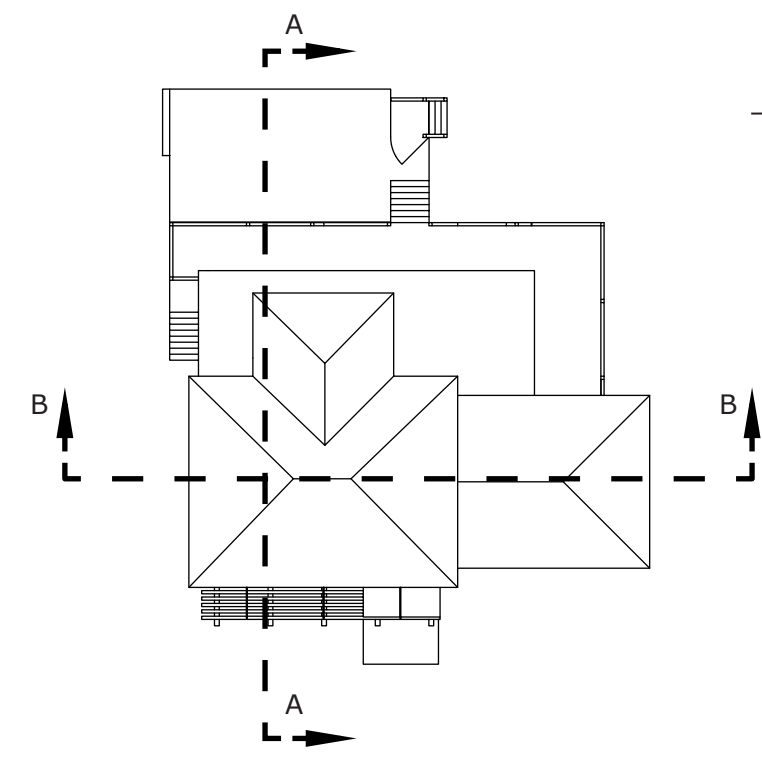


Roof Plan

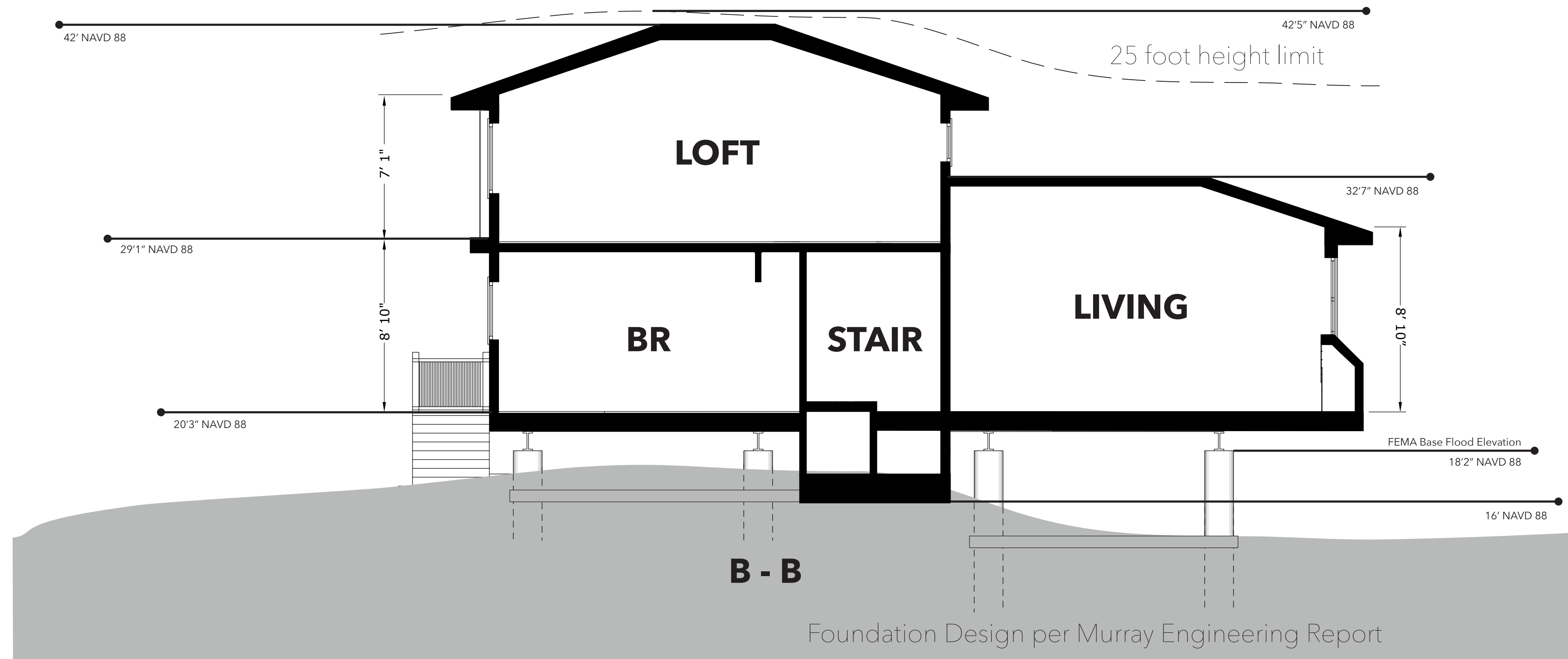
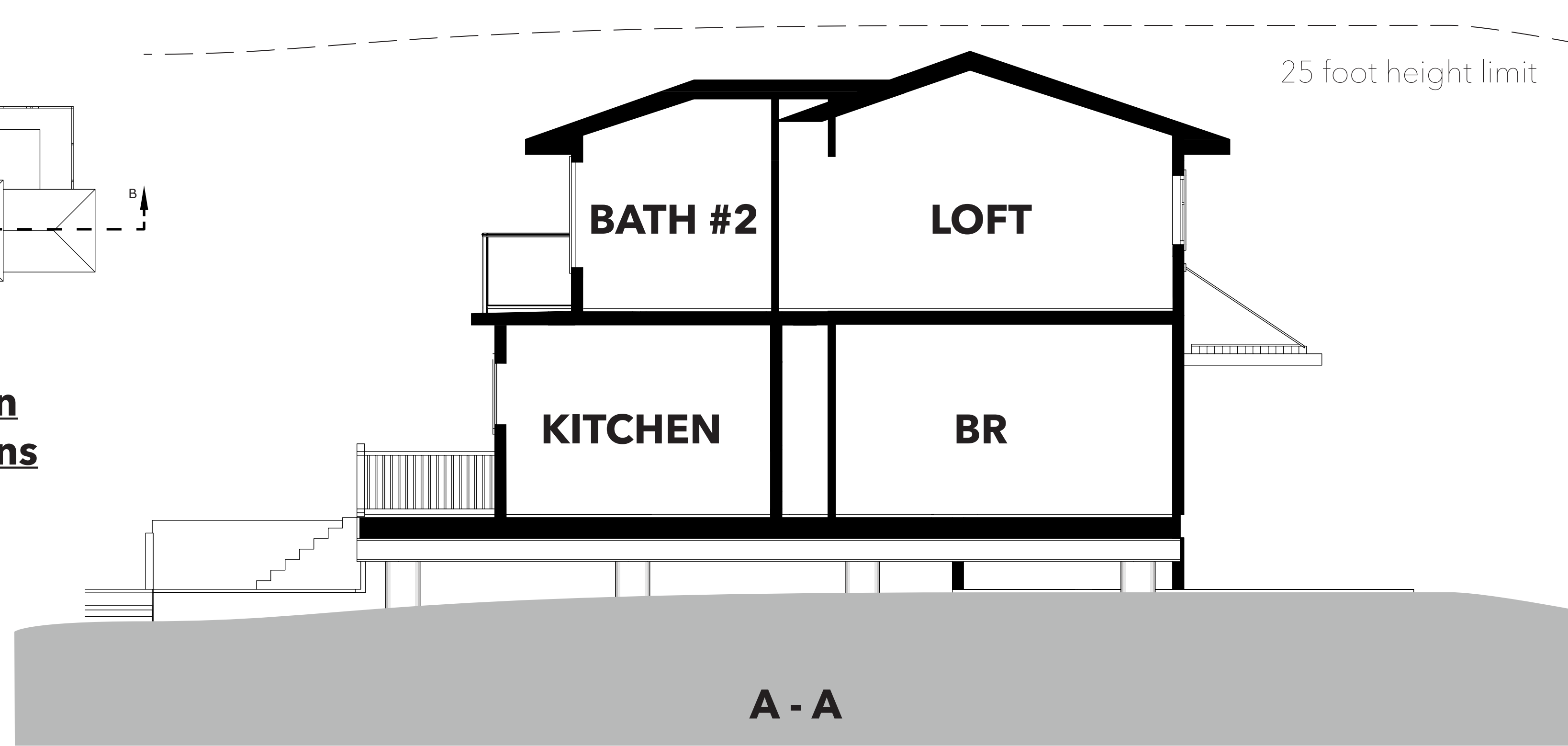


Legend

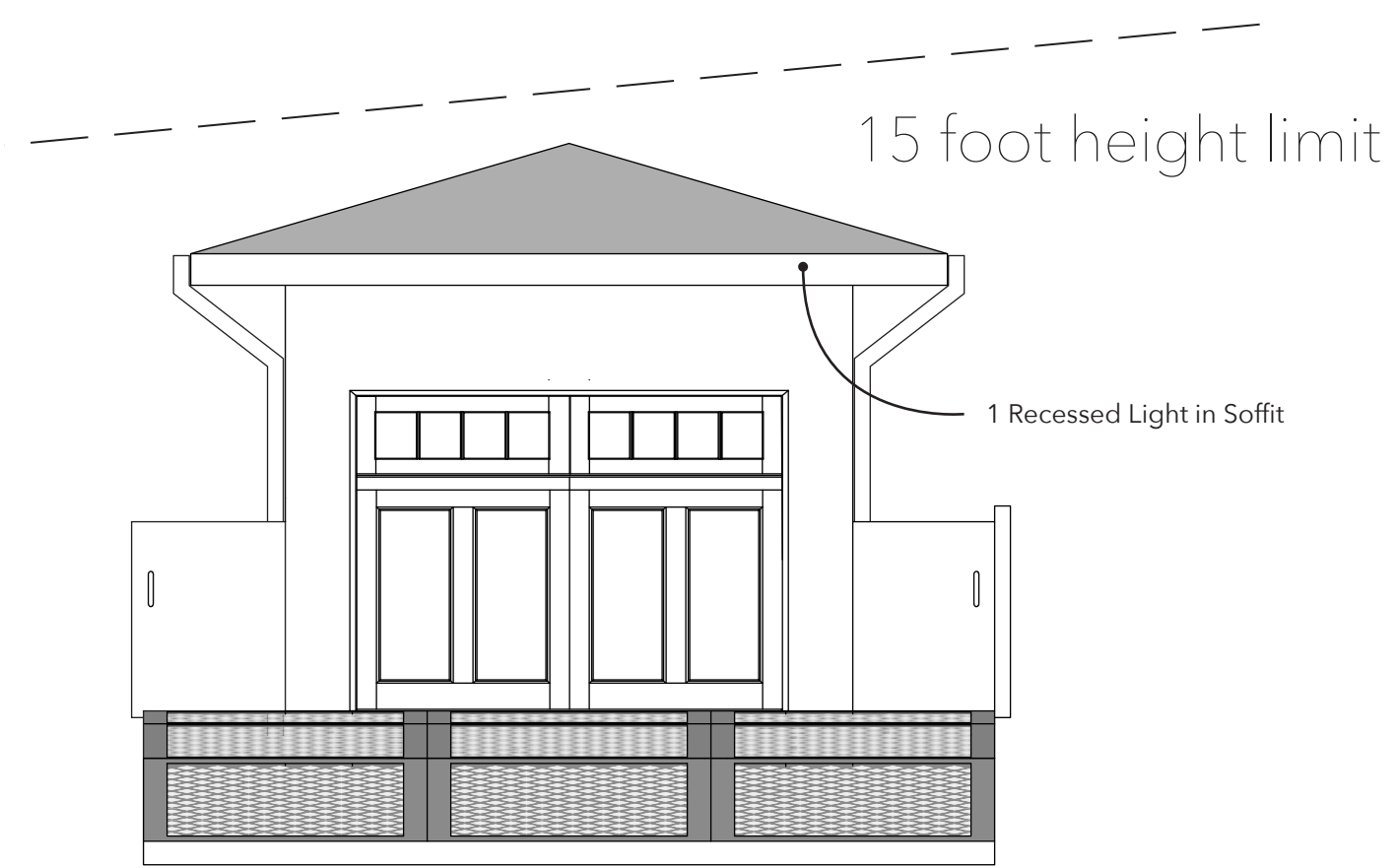
Existing Grade	Fill
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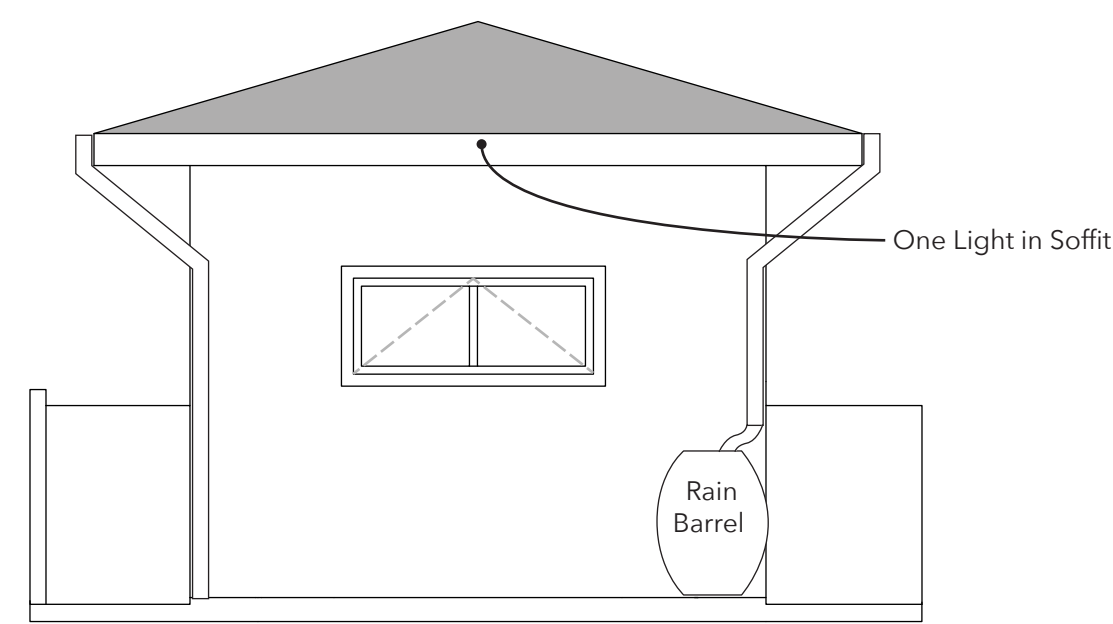
Section Locations



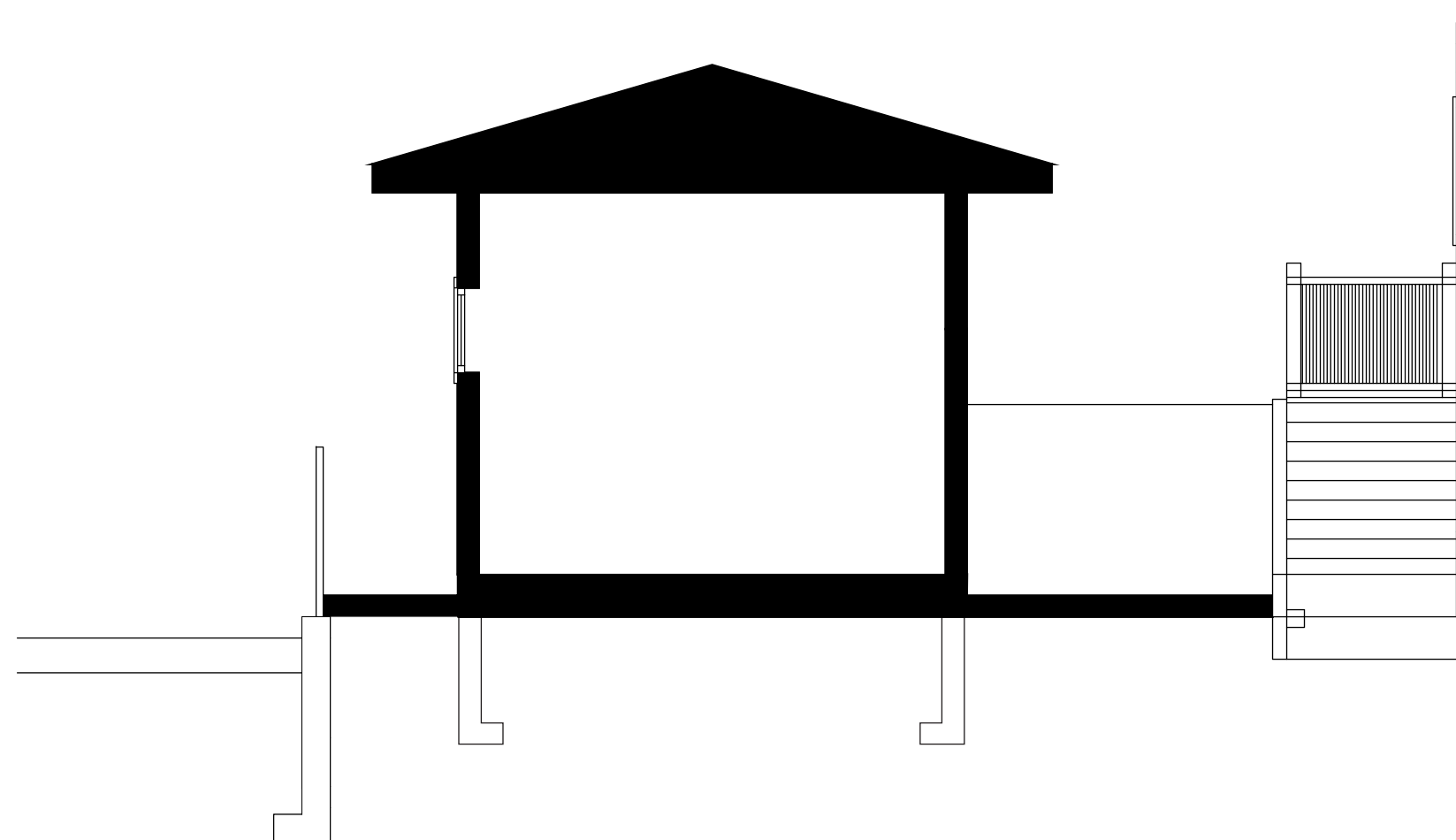
Foundation Design per Murray Engineering Report



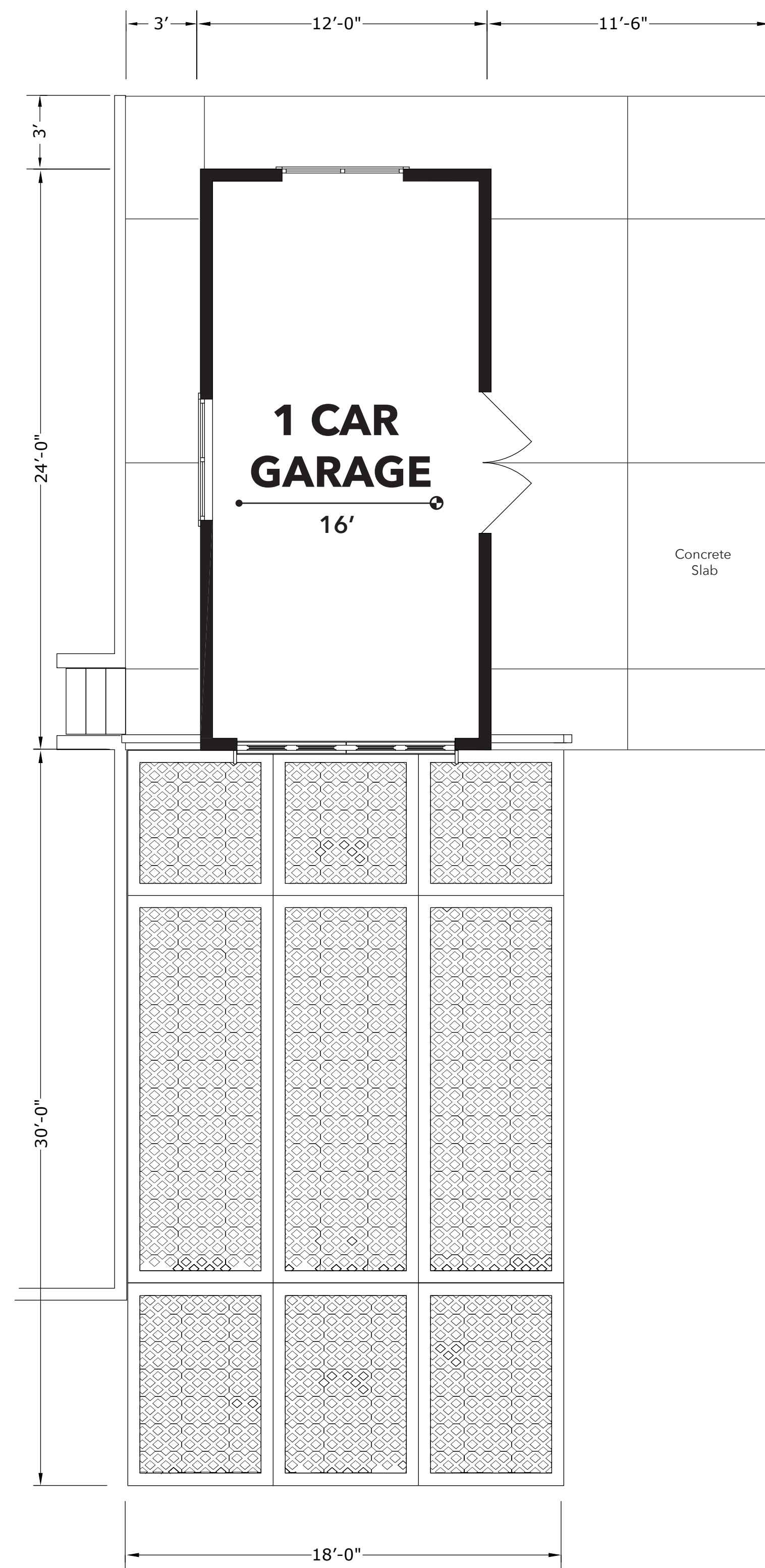
West



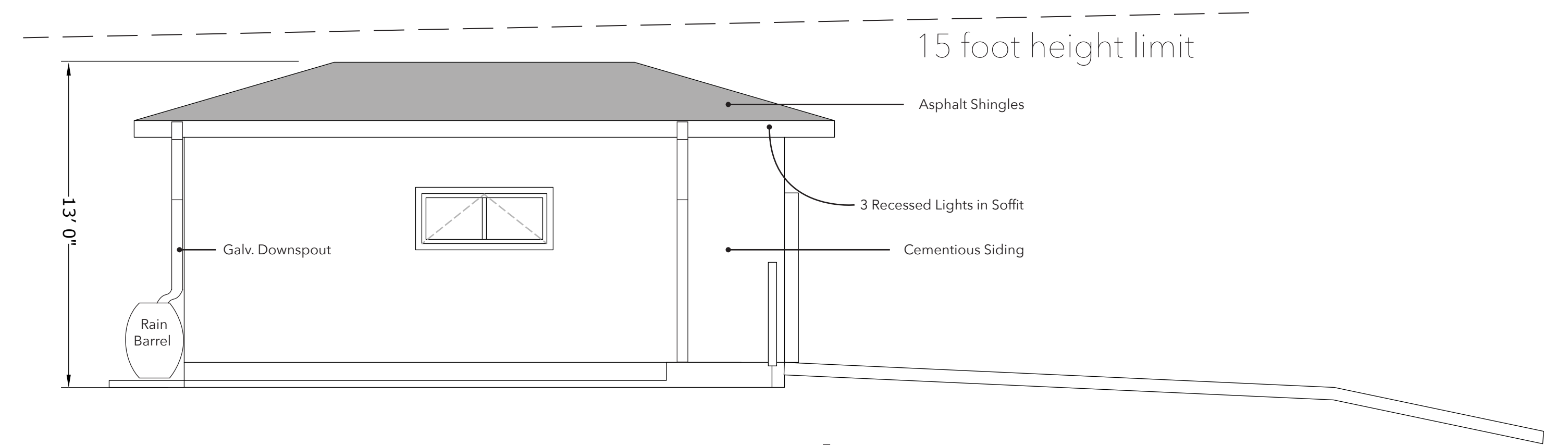
East



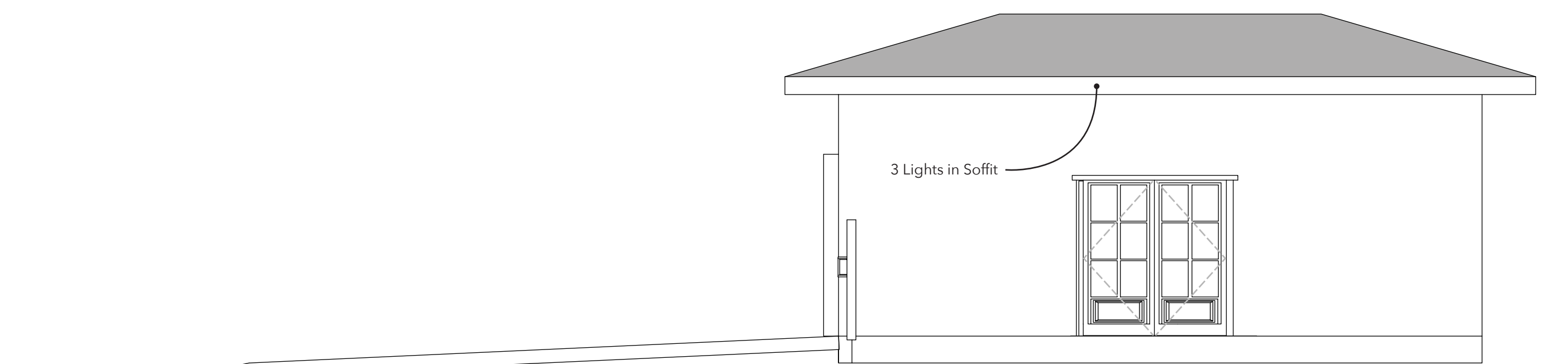
North-South Section



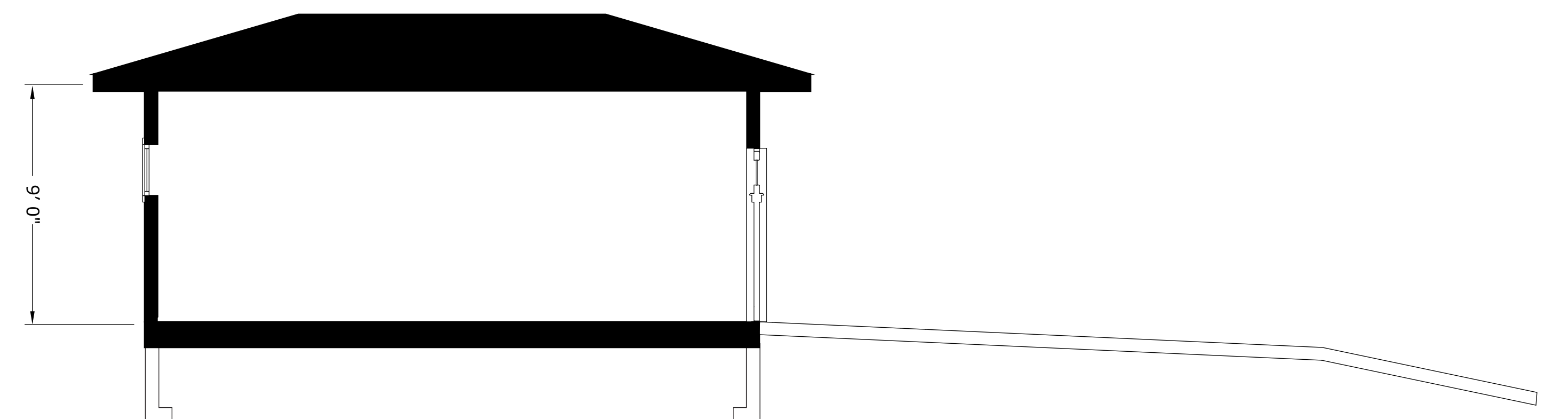
Plan



North



South



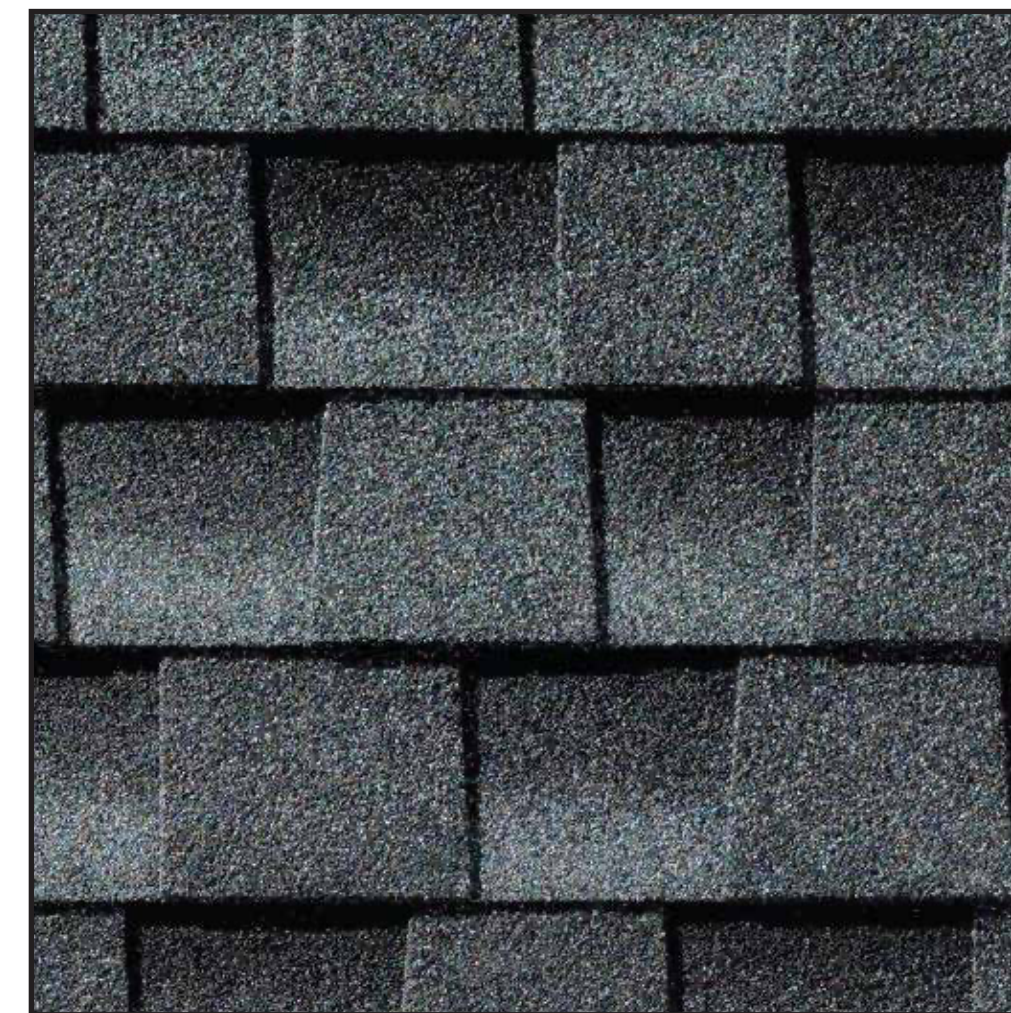
East-West Section

Siding



Exterior siding will be HardieShingle fiber cement shake siding

Roofing



Asphalt composite shingles will be used on all pitched roof areas

Fencing



Grape stake fencing will be used near the house entrance. Redwood fencing will be used around the perimeter of the septic area and at the rear of the garden and patio areas. In some locations these wooden fences will sit atop concrete retaining walls

Lighting Fixtures



Exterior lighting will consist of recessed soffit lights and hooded down lights to minimize light pollution

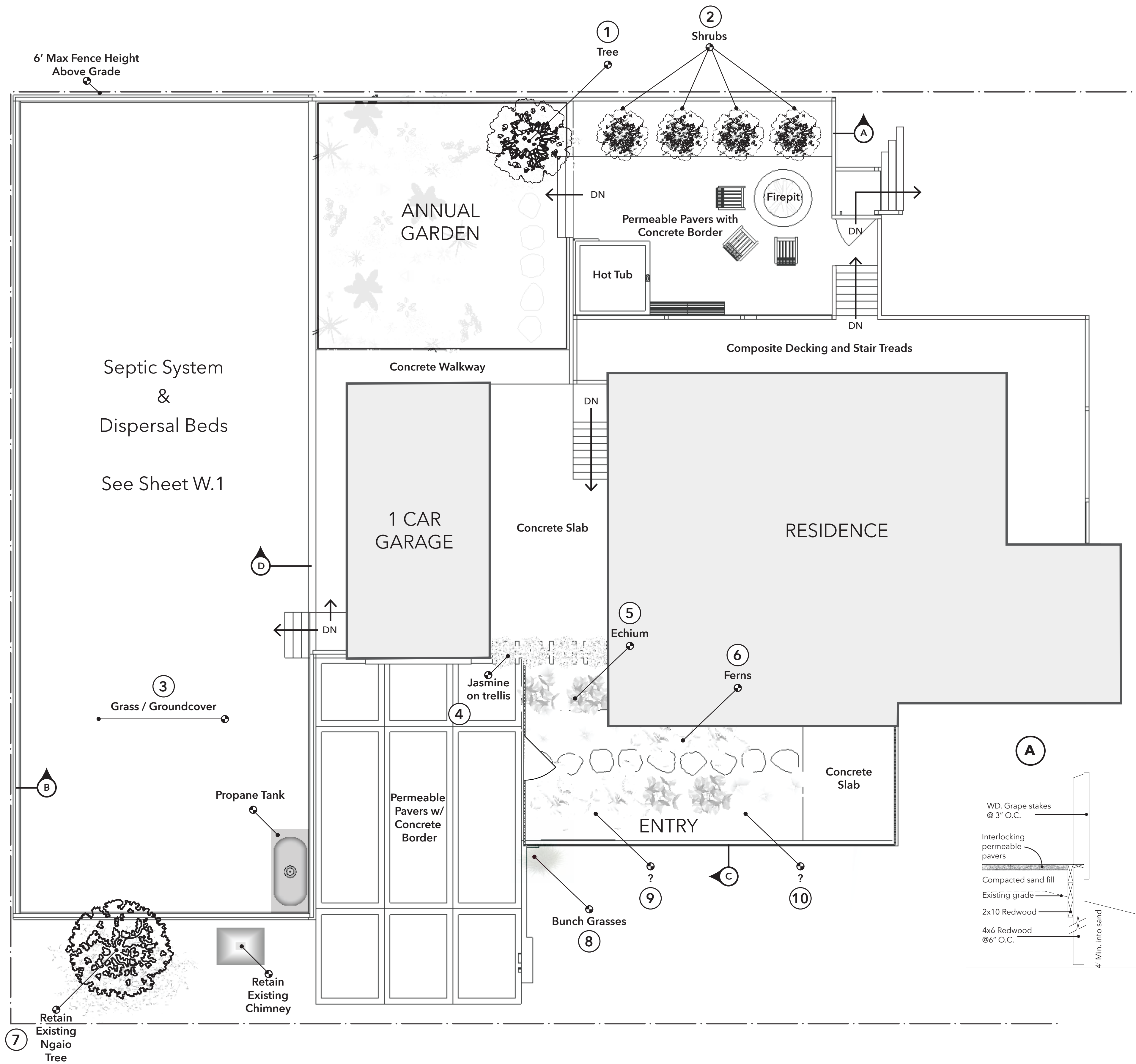


The roof above the kitchen will be an accessible deck, made of a tan PVC sheet membrane

Decking

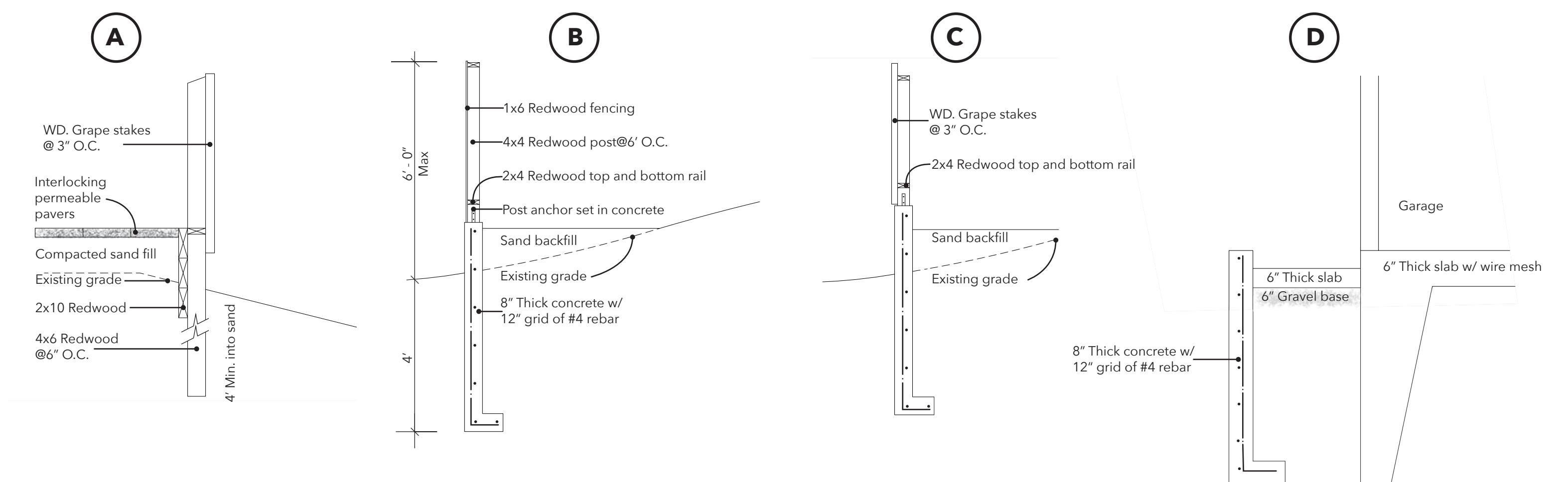
Driftwood colored Trex composite decking will be used for all decks and exterior stairs

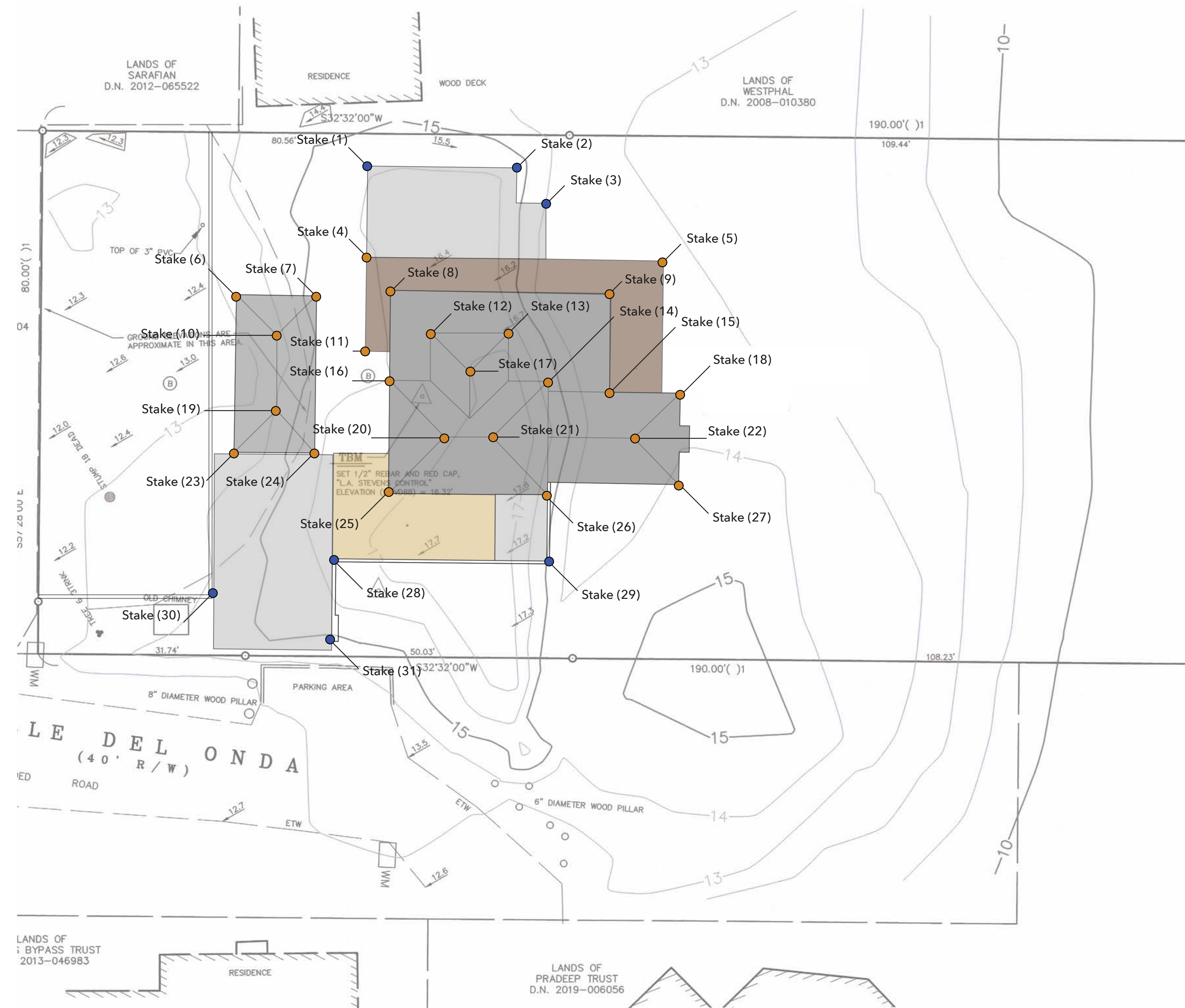




Species List				
#	Latin Name	Common Name	California Native	Notes
1	TBD		X	Evergreen fruit tree e.g. Citrus, Avocado, Loquat ~12 feet tall
2	TBD		?	Evergreen shrubs 6 to 8 feet tall
3	<i>Trifolium wormskioldii</i>	Wormskiold's Clover	✓	Final species of grasses and groundcover TBD
4	<i>Trachelospermum jasminoides</i>	Jasmine	X	
5	<i>Echium sp.</i>	Viper's Bugloss	X	
6	<i>Athyrium filix-femina</i>	Lady Fern	✓	
7	<i>Myoporum laetum</i>	Ngaio Tree	X	
8	TBD	Bunch grasses	X	
9	TBD		?	
10	TBD		?	

Fence Details

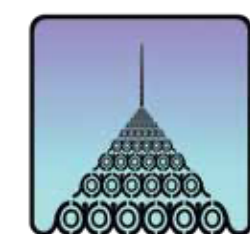




Stake and Story Pole Heights			
#	Elevation	Height Above Grade	Notes
1	N/A	12"	Patio area boundary
2	N/A	12"	Patio area boundary
3	N/A	12"	Patio area boundary
4	20' 2"	4' 4"	Perimeter of deck, not including rail height
5	20' 2"	7'	Perimeter of deck, not including rail height
6	26'	12' 9"	Height at low edge of garage roof
7	26'	10' 10"	Height at low edge of garage roof
8	28' 6"	12' 5"	Height at low edge of kitchen roof deck
9	28' 6"	14' 11"	Height at low edge of kitchen roof deck
10	28'	14' 2"	Height at peak of garage roof
11	20' 3"	4' 7"	Perimeter of deck, not including rail height
12	36' 7"	20' 1"	Height at low edge of loft roof
13	36' 7"	20' 1"	Height at low edge of loft roof
14	36' 7"	20' 11"	Height at low edge of loft roof
15	28' 6"	14' 8"	Height at low edge of kitchen roof deck
16	36' 7"	20' 7"	Height at low edge of loft roof
17	40' 9"	23' 9"	Height at low peak of loft roof
18	32' 7"	18' 11"	Height at low edge of living room roof
19	28'	13' 11"	Height at peak of garage roof
20	42'	25' 1"	Height at peak of loft roof
21	42'	24' 7"	Height at peak of loft roof
22	32' 7"	18' 11"	Height at peak of living room roof
23	26'	12' 4"	Height at low edge of garage roof
24	26'	12' 3"	Height at low edge of garage roof
25	36' 7"	19' 9"	Height at low edge of loft roof
26	36' 7"	21' 1"	Height at low edge of loft roof
27	32' 7"	18' 5"	Height at low edge of living room roof
28	18' 0"	1' 10"	Entry boundary
29	18' 0"	3' 0"	Entry boundary
30	19' 0"	6' 0"	Driveway boundary
31	18' 0"	3' 0"	Driveway boundary

Legend

● Story Pole ● Stake



NOTE:
REROUTE ANY WATERLINE WITHIN TEN FEET OF SEPTIC SYSTEM IF CROSSING OF WATER AND SEWER LINES MUST BE MADE THEN SLEEVE BOTH WATER AND SEWER WITHIN TEN FEET EACH OF EACH OTHER WITH SCH 80 PVC

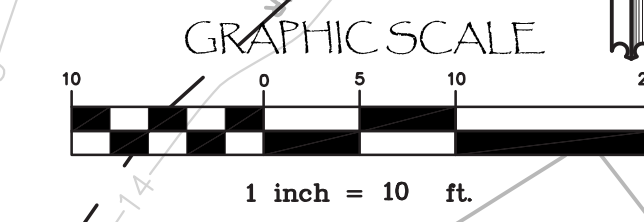
CONCRETE RETAINING WALL BELOW GRADE TO PROTECT SEPTIC AND SUMP TANKS. STRUCTURAL ENGINEER TO DESIGN TO WITHSTAND WAVE RUNUP FORCES

NOTE:
PROVIDE 115 VOLT SINGLE PHASE POWER SOURCE. ELECTRICIAN TO PROVIDE A MINIMUM OF 20 AMPS TO THE CONTROL PANEL.

NOTE:
SANDFILTER MONITORING WELLS #1 AND #3 TO BE INSTALLED TO THE UPPER GRAVEL/SAND INTERFACE AND #2 AND #4 TO THE BOTTOM OF THE LINER

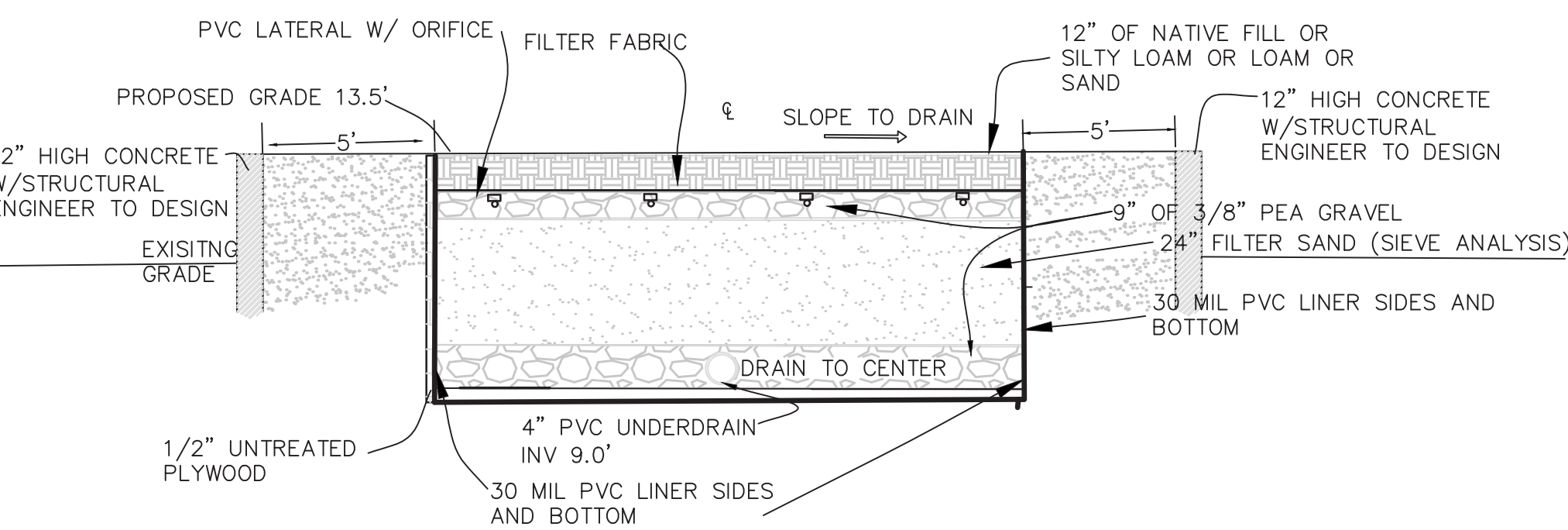
DEBRIS LINE FROM STORM RUNUP NOTICED 1-25-16

40LF 4" SCHED 40 PVC MIN SLOPE 2% TO TANK INLET

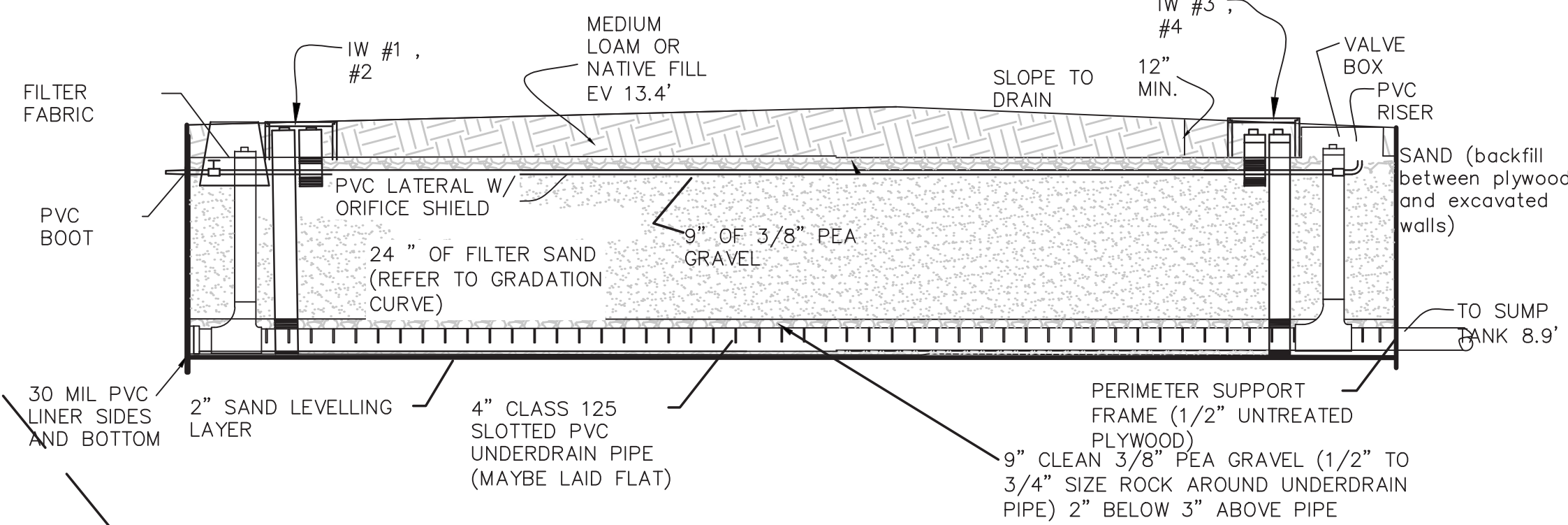


NOTE:
LOCATION OF EXISTING UTILITIES IS UNKNOWN AND MUST BE DETERMINED BY CONTRACTOR PRIOR TO CONSTRUCTION. ENGINEER ASSUMES NO RESPONSIBILITY IN LOCATING EXISTING UTILITIES.

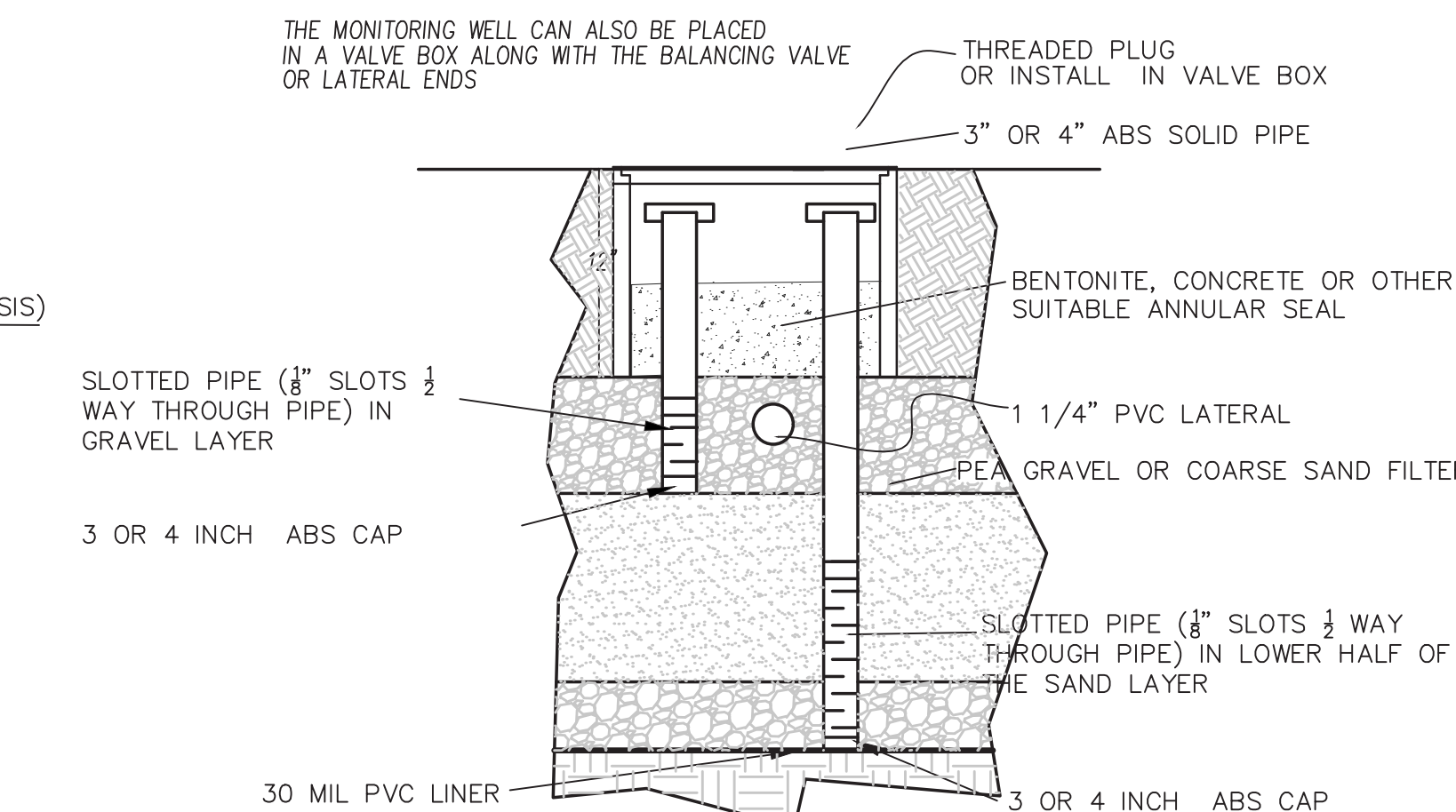
SEPTIC SYSTEM LAYOUT
SCALE 1"=10'



SAND FILTER SECTION C-C ALONG 8.5 FOOT DIMENSION
SCALE 1"=10'



SAND FILTER SECTION D-D ALONG 15.0 FOOT DIMENSION
SCALE 1"=10'

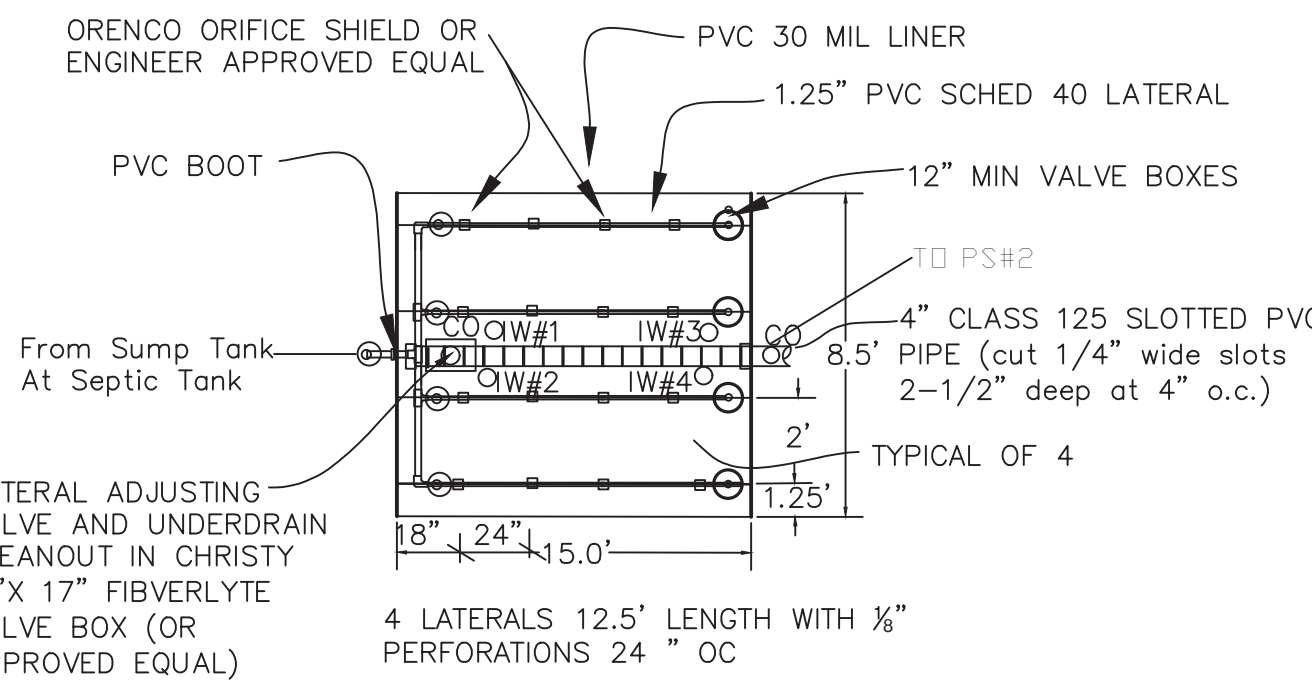


MONITORING WELL DETAIL
NTS

SAND FILTER MEDIA SIEVE ANALYSIS

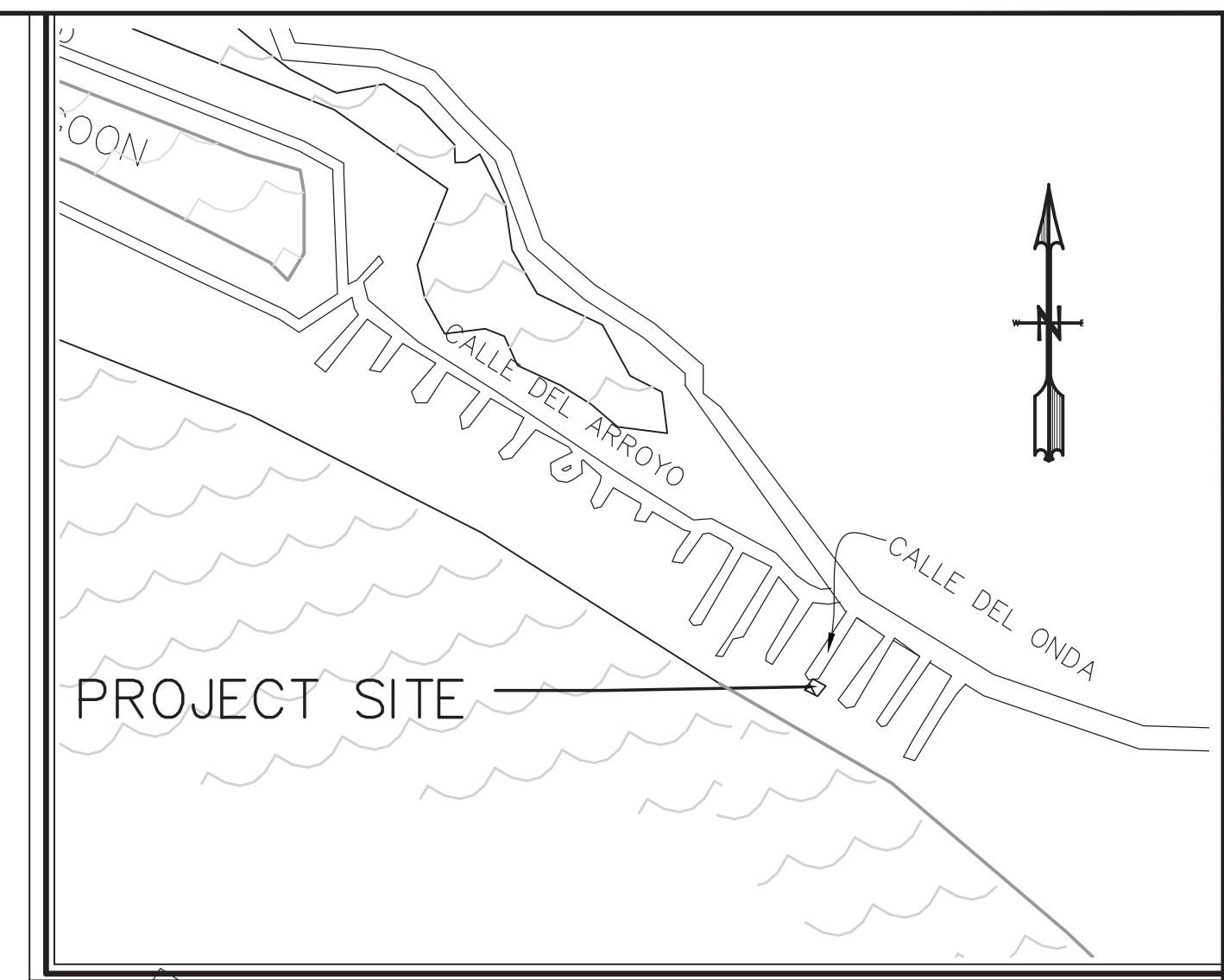
SIZE	% PASSING
#4	100
#8	70-90
#16	40-60
#30	25-35
#50	2-5
#60	0

D10>0.400mm
D60>1.4mm
Uc 3.0 - 4.0

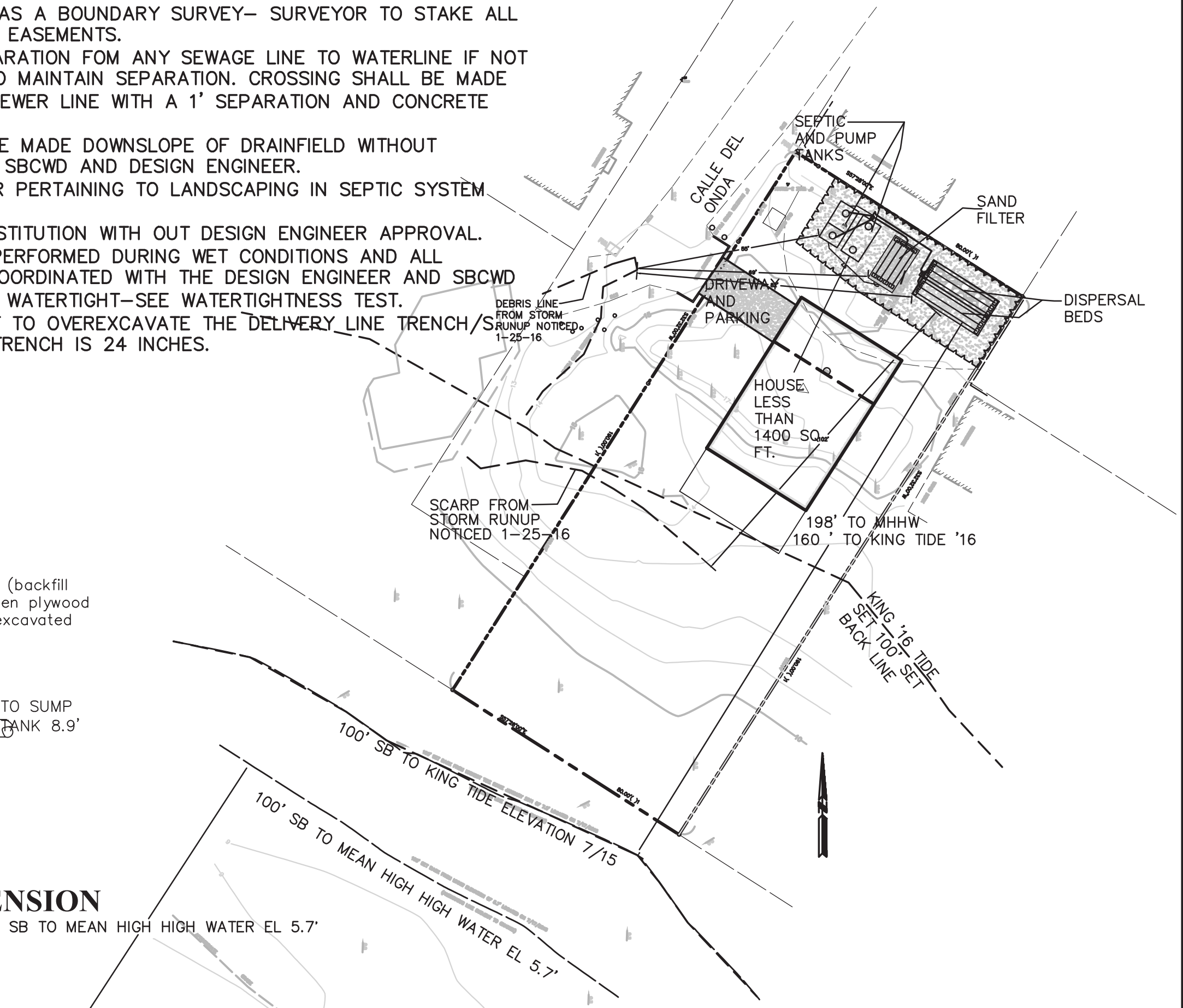


SAND FILTER
SCALE 1"=10'

- GENERAL NOTES
- 1) CONTRACTOR TO NOTIFY STINSON BEACH COUNTY WATER DISTRICT (SBCWD) PERSONEL AND DESIGN ENGINEER 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
 - 2) TOPOGRAPHIC SURVEY PROVIDED BY L.A STEVENS AND ASSOC. 415-382-7713
 - 3) NOT TO BE USED AS A BOUNDARY SURVEY- SURVEYOR TO STAKE ALL PROPERTY LINES AND EASEMENTS.
 - 4) MAINTAIN 10' SEPARATION FOM ANY SEWAGE LINE TO WATERLINE IF NOT POSSIBLE REROUTE TO MAINTAIN SEPARATION. CROSSING SHALL BE MADE WITH WATER ABOVE SEWER LINE WITH A 1' SEPARATION AND CONCRETE BETWEEN LINES.
 - 5) NO CUTS SHALL BE MADE DOWNSLOPE OF DRAINFIELD WITHOUT PERMISSION OF BOTH SBCWD AND DESIGN ENGINEER.
 - 6) CONSULT ENGINEER PERTAINING TO LANDSCAPING IN SEPTIC SYSTEM AREA.
 - 7) NO MATERIAL SUBSTITUTION WITH OUT DESIGN ENGINEER APPROVAL.
 - 8) NO WORK TO BE PERFORMED DURING WET CONDITIONS AND ALL EXCAVATION TO BE COORDINATED WITH THE DESIGN ENGINEER AND SBCWD
 - 9) ALL TANKS TO BE WATERTIGHT-SEE WATERTIGHTNESS TEST.
 - 10) CONTRACTOR NOT TO OVEREXCAVATE THE DELIVERY LINE TRENCH/S MAXIMUM DEPTH OF TRENCH IS 24 INCHES.



VICINITY MAP
NO SCALE



OVERALL PROPERTY
SCALE 1"=30'

- 11) EROSION PROTECTION SHALL BE PLACED IN ALL DISTURBED AREAS. STRAW AND SEED SHALL BE PLACED AT A MINIMUM PRIOR TO FINAL INSPECTION.
- 12) ALL PLUMBING FIXTURES TO BE LOW FLOW 1.6 GAL FLUSH TOILETS AND 2 GAL/MIN SHOWER HEADS.
- 13) ALL SEWER LINES FROM BUILDINGS SHALL BE 4 INCH SCH 40 PVC OR APPROVED EQUIVALENT WITH A MINIMUM SLOPE OF 2 PERCENT. INSTALL CLEANOUTS AT CHANGES IN DIRECTION AND 5 FEET FROM THE OUTSIDE OF THE BUILDING.
- 14) ALL WORK SHALL BE IN CONFORMANCE WITH THESE PLANS AND THE MOST RECENT REGULATIONS FOR WASTEWATER SYSTEMS SBCWD.
- 15) CONTRACTOR TO KEEP A COUNTY STAMPED SET OF PLANS AT THE JOBSITE AND A SET WITH ALL AS BUILT CHANGES MARKED UP AT THE JOB SITE AT ALL TIMES. THE CONTRACTOR TO PROVIDE ONE COPY OF THESE CHANGES ON A PLAN FOR PREPARATION OF AS-BUILT DRAWINGS TO GAIN SBCWD FINAL APPROVAL.

Revisions:

PREPARED FOR:
Brian Johnson
PO Box 1139
Homewood, CA 96141

RAISED BED/SAND FILTER SYSTEM
21 CALLE DEL ONDA
Stinson Beach, CA
APN 195-162-49

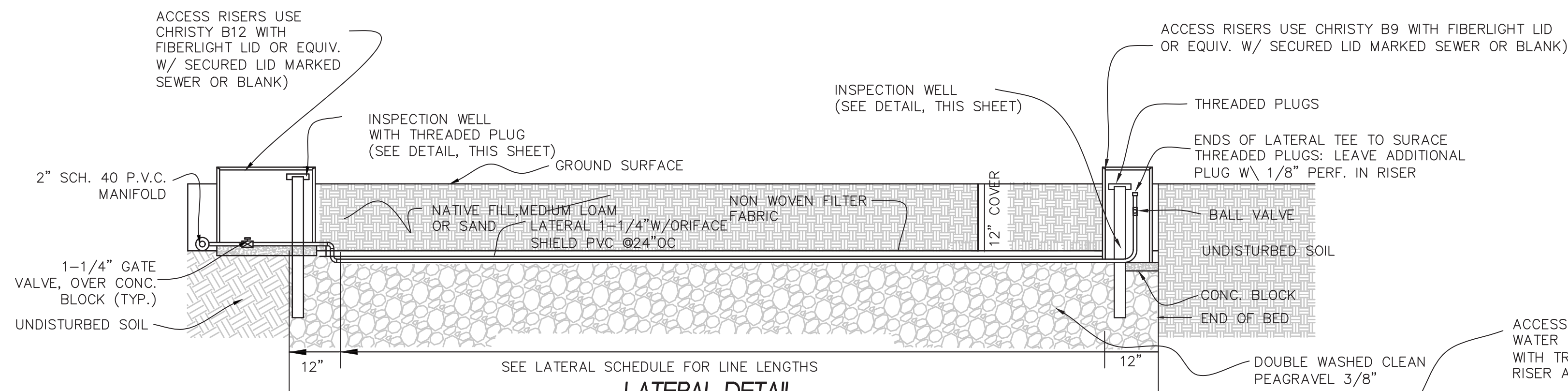
AYS Engineering Group, Inc
PO Box 5693, Petaluma, CA 94955
Voice (707) 763-6620, Fax (707) 781-8061

Job No. 2018-038
Date 11-19-18
Drawn By: tkp
Checked By: tkp
Scale as shown

Sheet 1 of 2

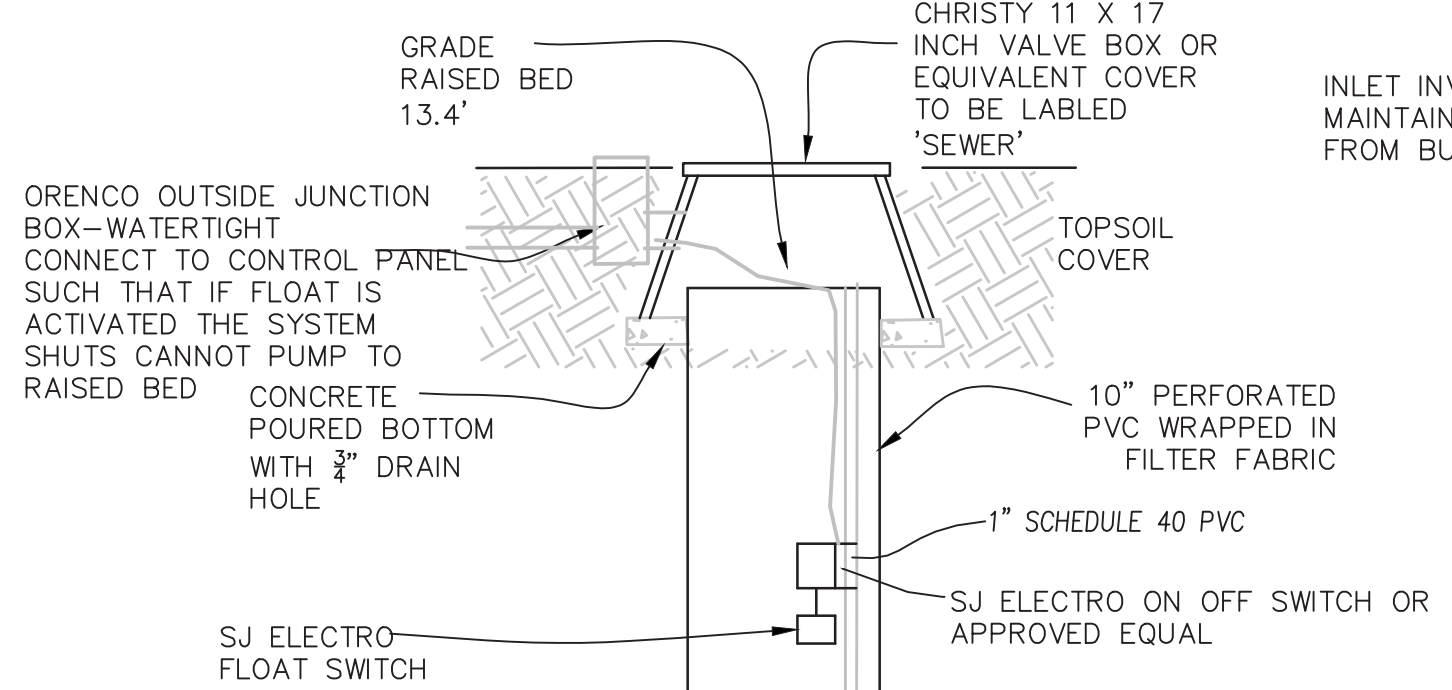
W1



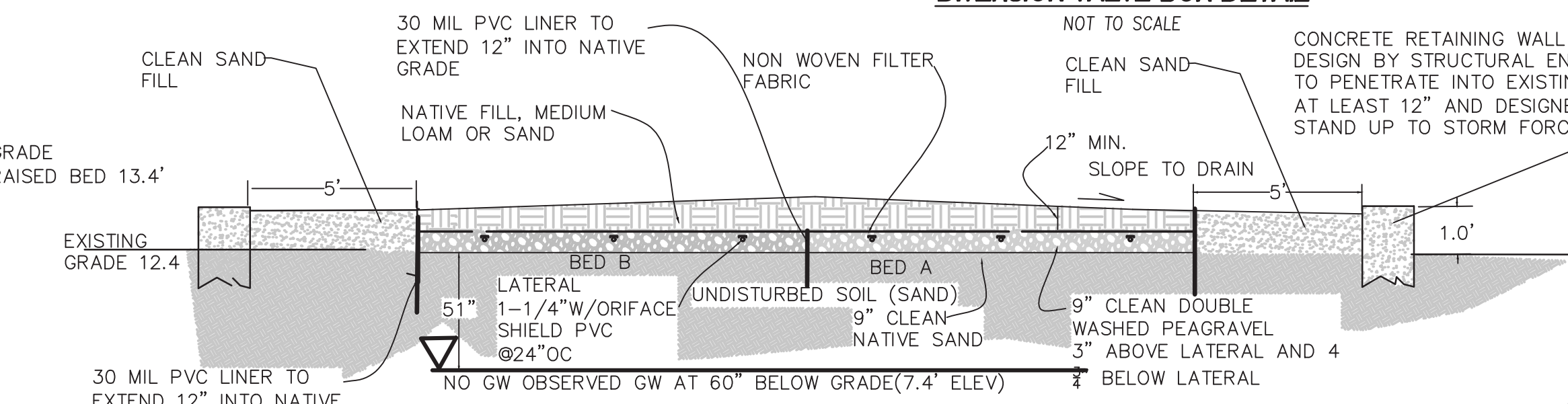


No.	DIAMETER	PERF SIZE	LENGTH	# OF PERFS"
A1	1 1/4"	1/8"	21'	10
A2	1 1/4"	1/8"	21'	10
A3	1 1/4"	1/8"	21'	10
B1	1 1/4"	1/8"	21'	10
B2	1 1/4"	1/8"	21'	10
B3	1 1/4"	1/8"	21'	10

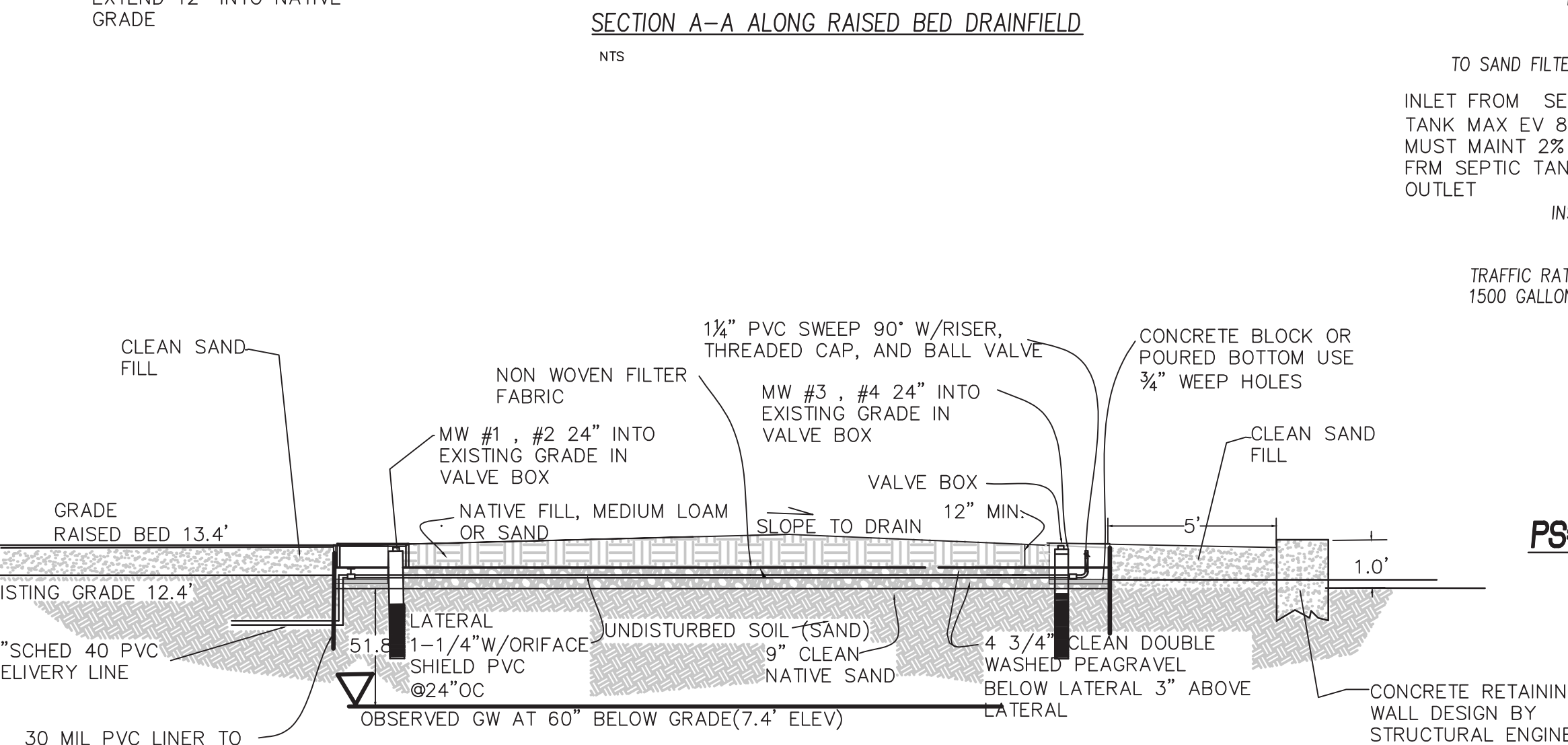
LATERAL SCHEDULE
NOT TO SCALE



DIVERSION VALVE BOX DETAIL
NOT TO SCALE



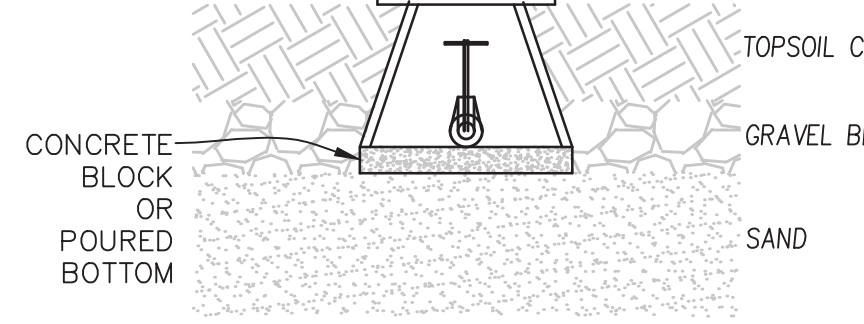
SECTION A-A ALONG RAISED BED DRAINFIELD
NTS



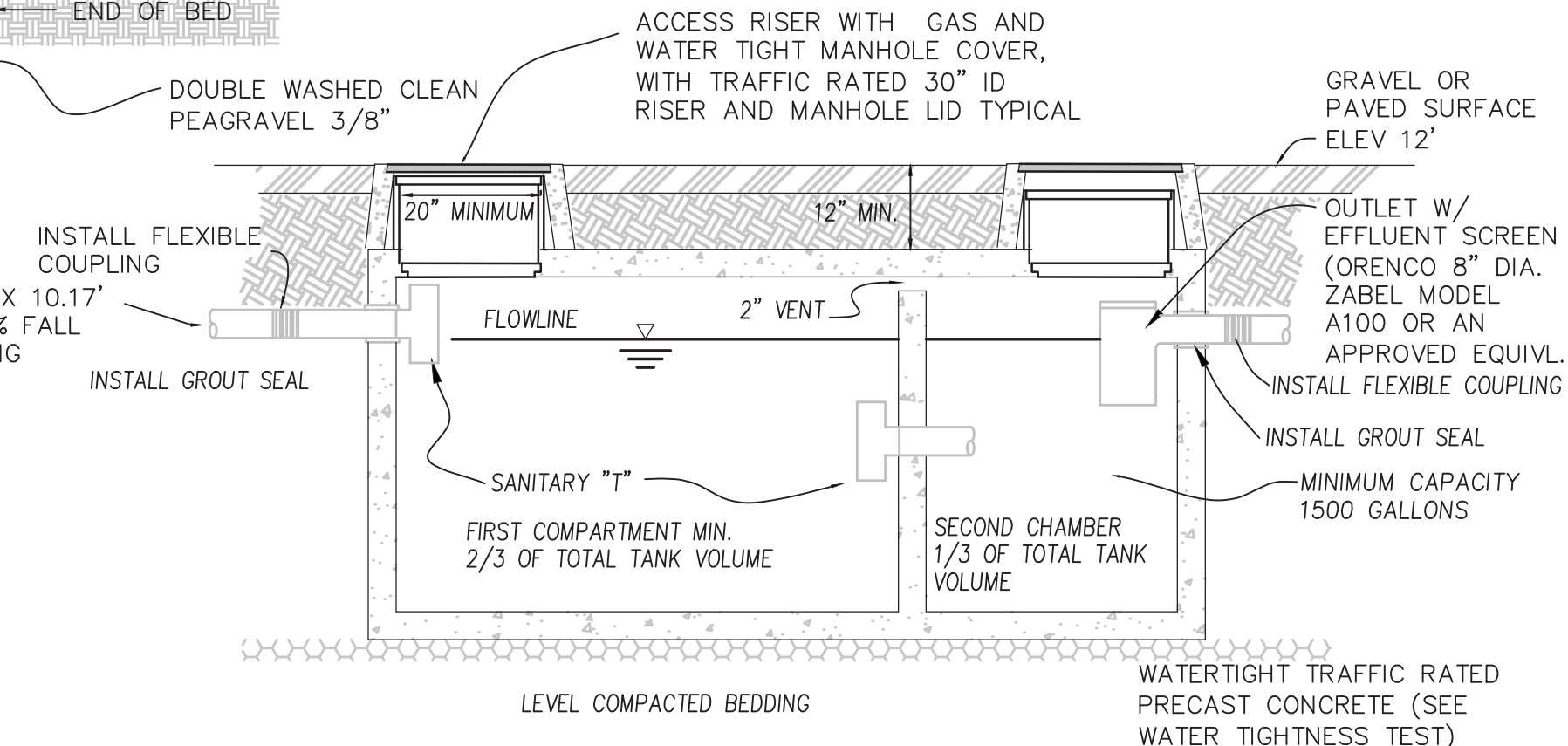
SECTION B-B ALONG RAISED BED DRAINFIELD
NTS

TANK WATERTIGHTNESS TEST

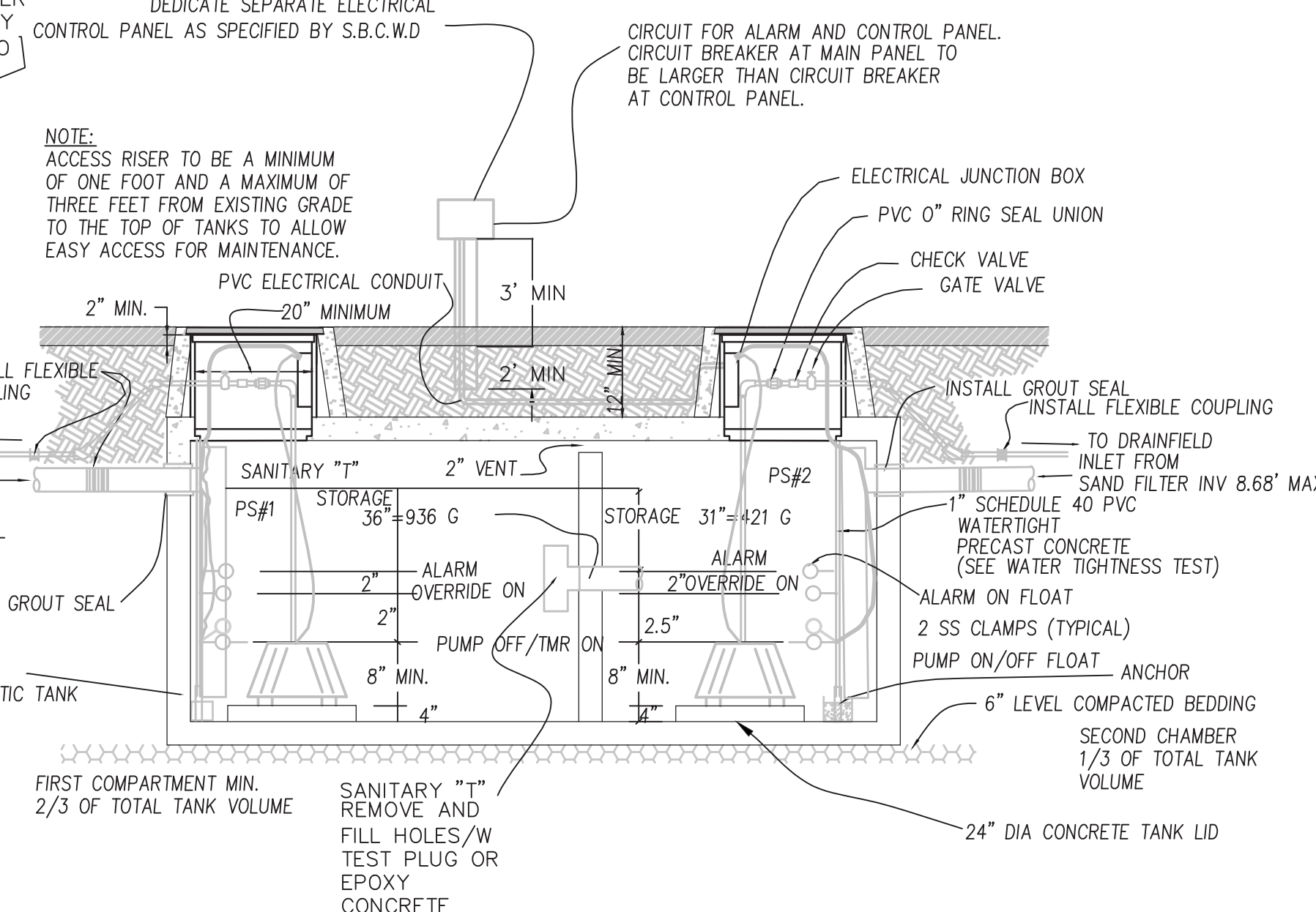
- CAP OR TEST PLUG ALL INLETS AND OUTLETS TO TANK.
- FILL TANK WITH WATER TWO INCHES INTO THE RISER AND MARK WATER LEVEL. SCHEDULE WITH ENGINEER AND NCM 24 HOURS BEFORE FILLING TANK.
- IF AFTER 24 HOURS WATER LEVEL DROPS, TANK MUST BE MADE WATERTIGHT BY APPLYING WATERPROOF SEALER (NOT BITUMINOUS PRODUCT) THOROPUG, THOROSEAL OR OTHER PORTLAND CONCRETE CEMENT PRODUCT.



VALVE BOX DETAIL
NOT TO SCALE



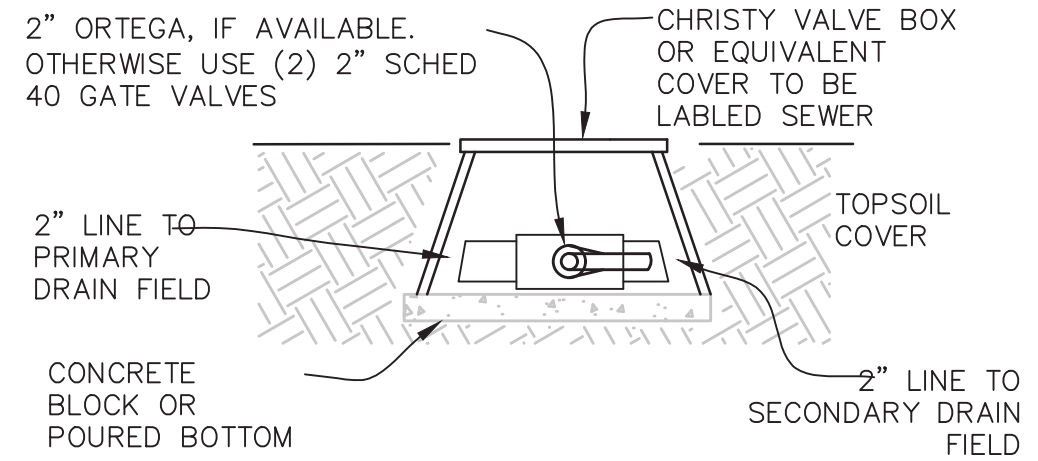
2000 GALLON TRAFFIC RATED SEPTIC TANK DETAIL (TYP.)
NOT TO SCALE



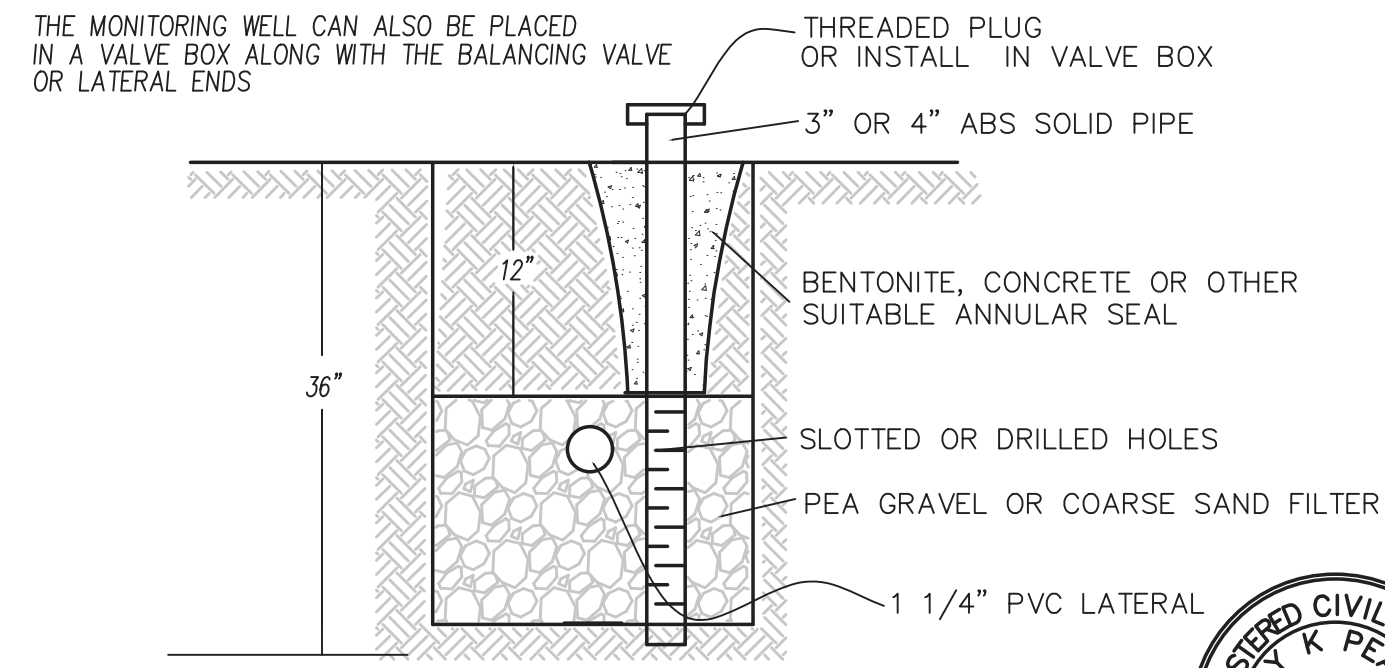
PS#1 and #2 2000 GALLON TRAFFIC RATED COMBO SUMP TANK DETAIL
NOT TO SCALE

PS#1 FROM 2/3 SIDE OF 1500 GALLON PUMP TANK TO SANDFILTER
TOTAL DYNAMIC HEAD = 20.5 FT
GALLONS PER MINUTE (GPM) = 10 GPM
DOSE = 30 GALLONS
OPERATION RANGE = 3.0"
RECOMMENDED PUMP TYPE: GOULDS MODEL 3885 WE0512HH (.5 HP, 230 VOLTS, SINGLE PHASE, 7.3 AMPS).
RECOMMENDED CONTROL PANEL: SEE CONTROL PANEL REQUIREMENTS THIS PAGE.
PS#1 TIMER SETTINGS
TIME ON 1MIN 30 SEC
TIME OFF 2 HOURS
OVERRIDE ON 1 MIN 30 SEC
OVERRIDE OFF 30 MIN

PS#2 FROM 1/3 SIDE OF 1500 GALLON PUMP TANK TO RAISED BEDS
TOTAL DYNAMIC HEAD = 24 FT
GALLONS PER MINUTE (GPM) = 13 GPM
DOSE = 30 GALLONS
OPERATION RANGE = 2.5"
RECOMMENDED PUMP TYPE: GOULDS MODEL 3885 WE0512HH (.5 HP, 230 VOLTS, SINGLE PHASE, 7.3 AMPS).
RECOMMENDED CONTROL PANEL: SEE CONTROL PANEL REQUIREMENTS THIS PAGE.
PS#2 ON DEMAND



DIVERSION VALVE BOX DETAIL
NOT TO SCALE



TYP. LEACHLINE INSPECTION WELL
NOT TO SCALE

GENERAL NOTES

- CONTRACTOR TO NOTIFY STINSON BEACH COUNTY WATER DISTRICT (SBCWD) PERSONEL AND DESIGN ENGINEER 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
- NOT TO BE USED AS A BOUNDARY SURVEY-- SURVEYOR TO STAKE ALL PROPERTY LINES AND EASEMENTS. SURVEY PROVIDED BY LAWRENCE P DOYLE 415-388-9585
- MAINTAIN 10' SEPARATION FROM ANY SEWAGE LINE TO WATERLINE IF NOT POSSIBLE REROUTE TO MAINTAIN SEPARATION. CROSSING SHALL BE MADE WITH WATER ABOVE SEWER LINE WITH BOTH LINES SLEEVED WITHIN 10' OF EACH OTHER.
- NO CUTS SHALL BE MADE DOWNSLOPE OF DRAINFIELD WITHOUT PERMISSION OF BOTH SBCWD AND DESIGN ENGINEER.
- CONSULT ENGINEER PERTAINING TO LANDSCAPE SEPTIC SYSTEM.
- NO MATERIAL SUBSTITUTION WITH OUT DESIGN ENGINEER APPROVAL.
- ALL TANKS TO BE WATERTIGHT--SEE WATERTIGHTNESS TEST.
- CONTRACTOR NOT TO OVEREXCAVATE THE DELIVERY LINE TRENCH/S. MAXIMUM DEPTH OF TRENCH IS 24 INCHES.
- THIS SYSTEM CALLS FOR A DIVERSION VALVE/S WHICH ARE TO BE HOUSED IN A SUBSTANTIAL VALVE BOX. THE BOX IS TO BE EXTENDED TO 3 INCHES ABOVE GRADE. THE VALVE SHOULD BE ALTERNATED EVERY SIX MONTHS.
- EROSION PROTECTION SHALL BE PLACED IN ALL DISTURBED AREAS. STRAW AND SEED SHALL BE PLACED AT A MINIMUM PRIOR TO FINAL INSPECTION.
- ALL SEWER LINES FROM BUILDINGS SHALL BE 3 INCH SDR 35 OR APPROVED EQUIVALENT WITH A MINIMUM SLOPE OF 2 PERCENT. INSTALL CLEANOUTS AT CHANGES IN DIRECTION AND 5 FEET FROM THE OUTSIDE OF THE BUILDING.
- ALL WORK SHALL BE IN CONFORMANCE WITH THESE PLANS AND THE MOST RECENT SBCWD REGULATIONS FOR WASTEWATER SYSTEMS.
- CONTRACTOR TO CONDUCT SQUIRT TEST CONSISTING OF PRESURIZING THE LEACHFIELD WITH THE PUMP AND ADJUSTING THE LEACHFIELD GATE VALVES TO PROVIDE A 5' HIGH STREAM OF WATER THROUGH ORIFICES. THIS IS TO BE REPEATED FOR CONSTRUCTION INSPECTION PHASE 2.
- CONTRACTOR TO KEEP A PLAN SET WITH ALL CHANGES MARKED UP AT THE JOB SITE AT ALL TIMES. THE CONTRACTOR TO PROVIDE ONE COPY OF THESE CHANGES ON A PLAN FOR PREPARATION OF AS- BUILT DRAWINGS TO GAIN COUNTY FINAL APPROVAL.

CONSTRUCTION INSPECTION NOTES
CONTRACTOR TO NOTIFY DESIGN ENGINEER AND SBCWD A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION AND INSPECTION OF THE SYSTEM. ADDITIONAL FEES WILL BE REQUIRED BY SBCWD AFTER THREE SITE INSPECTIONS. ENGINEER AND SBCWD SHALL INSPECT THE SYSTEM AT CRITICAL CONSTRUCTION PHASES AS FOLLOWS:

- PHASE ONE:**
- INSPECT STAKE OUT LOCATION OF LATERALS ALONG CONTOURS, THE SEPTIC AND SUMP TANKS, AND THE SANDFILTER.
 - INSPECT THE LEACHLINE GRAVEL AND SANDFILTER MEDIA, AND PROVIDE A CERTIFIED COPY OF WET SIEVE ANALYSIS USING ASTM C-117 OR EQUIVALENT.
- PHASE TWO:**
- INSPECT LEACHLINE INSTALLATION AND LEVEL VIA OPEN TRENCHES AND INSTALLED INSPECTION WELLS.
 - INSPECT PERFORMANCE SIZE AND SPACING.
 - INSPECT WATERTIGHTNESS OF ALL TANKS.
 - INSPECT SQUIRT TEST OF LEACHFIELD.
 - INSPECT CONTROL PANEL, FLOATS AND CIRCUIT BREAKER FOR ENTIRE SEPTIC SYSTEM.
- PHASE THREE:**
- INSPECT ANY ITEMS LISTED ABOVE WHICH HAVE NOT BEEN OBSERVED YET.
 - INSPECT FINISHED SEPTIC SYSTEM INCLUSIVE OF ANY NECESSARY EROSION CONTROL MEASURES.
 - INSPECT FLOOR PLAN OF STRUCTURE BEING SERVED BY THE SEPTIC SYSTEM. INSPECT, IF APPLICABLE, WHETHER LOW FLOW FIXTURES WERE INSTALLED OR NOT.
 - PROVIDE SBCWD WITH BUILDING DEPARTMENT APPROVAL OF PUMP INSTALLATION.

OPERATION AND MAINTENANCE OF A SEPTIC SYSTEM

- INSPECT SEPTIC TANKS AND DRAINFIELD EVERY SIX MONTHS.
 - IF SLUDGE OR SCUM BUILDUP IS GREATER THAN 6 TO 8 INCHES HAVE TANK PUMPED. (USUAL FREQUENCY FOR PUMPING IS 3 TO 5 YEARS).
 - MINIMIZE THE USE OF GARBAGE DISPOSAL.
 - MINIMIZE THE USE OF HARSH CHEMICALS IN LARGE QUANTITIES.
 - MINIMIZE THE AMOUNT OF GREASE DISPOSED OF IN SINKS. PACKAGE ALL FOOD WASTES AND DISPOSE OF IN GARBAGE FOR SANITARY LANDFILL.
 - MINIMIZE DISPOSAL OF NON-SEWAGE ITEMS SUCH AS SANITARY NAPKINS, CIGARETTES AND OTHERS.
 - MAINTAIN ALL PUMPING. LEAKS SHOULD BE FIXED AS QUICK AS THEY OCCUR.
 - MINIMIZE LIQUID LOAD ON THE SYSTEM BY WASHING DISHES AND LAUNDRY IN LARGE LOADS. SPREAD LOADS OVER THE WEEK RATHER THAN DOING ALL LAUNDRY ON A SINGLE DAY.
 - PROHIBIT VEHICULAR TRAFFIC AND HOOFED ANIMALS FROM THE SEPTIC SYSTEM AREA.
- PUMP:**
THE PUMP SHALL BE OF THE SIZE AND TYPE INDICATED ON THE PLANS AND SHALL INCLUDE THE FOLLOWING:
1) A HANDS OFF AUTO (HOA) SWITCH.
2) AN AUDIO AND VISIBLE ALARM AND NECESSARY EFFLUENT SENSING DEVICE TO INDICATE A HIGH WATER CONDITION.
3) USE EITHER PILL OR MERCURY TYPE FLOAT SWITCH.
4) SET PUMPING VOLUME AS STATED IN THE PUMP REQUIREMENTS.
5) PUMP TO BE SET A MINIMUM OF 8 INCHES FROM THE BOTTOM OF THE SUMP.
- SUMP:**
1) THE SUMP SHALL HAVE A WORKING CAPACITY OF 1.0 TIMES THE DESIGN FLOW DESIGNATED. THE CAPACITY SHALL INCLUDE THE DOSE VOLUME AND 24-HOUR STORAGE VOLUME.
2) ACCESS TO BE PROVIDED BY A MINIMUM 24-INCH DIAMETER WATERPROOF AIRTIGHT RISER AND LID SYSTEM.
3) ALL PIPE AND OR ELECTRICAL CONNECTIONS MADE THROUGH THE RISER EITHER TO BE PRECAST INTO THE RISER OR SEALED WITH GASTIGHT COMPRESSION CONNECTORS.

ELECTRICAL FEATURES
THE FOLLOWING ELECTRICAL FEATURES TO BE PROVIDED
1) AN OUTDOOR TYPE CONTROL BOX CONTAINING A FUSED DISCONNECT AND MOTOR PROTECTION SWITCH. SEE THE PUMP REQUIREMENT SECTION OF THE PLANS FOR THE MODEL NUMBER AND REQUIREMENTS.
2) THE CONTROL BOX TO BE MOUNTED ON THE BUILDING BEING SERVED IF WITHIN 20 FEET OF THE SUMP OTHERWISE INSTALL ON A 4"x4" POST THAT IS INSTALLED SECURELY. CONTROL PANEL TO BE VISIBLE FROM THE ROADWAY IF AT ALL POSSIBLE.
3) ALARM AND PUMP TO BE INSTALLED ON SEPARATE CIRCUITS THAT ARE OF SIZE LARGE ENOUGH FOR THE RESPECTIVE USES.
4) ELECTRICAL CONDUIT SHALL BE PVC AND SEPARATE CONDUITS SHALL BE PROVIDED TO POWER PUMP AND FLOATS.

PRESSURE PIPING
1) THE PIPE FROM THE SUMP TO THE DRAINFIELD SHALL BE PVC IN THE SIZE AND SCHEDULE SPECIFIED ON THE PLANS.
2) A UNION SWING CHECKVALVE AND DOUBLE WEDGE GATE VALVE SHALL BE INSTALLED IN THE SUMP CHAMBER IN THIS ORDER AWAY FROM THE PUMP. ALTERNATIVELY THESE ITEMS CAN BE INSTALLED IN A VALVE BOX NEXT TO THE SUMP CHAMBER.
3) CONCRETE THRUST BLOCKS SHALL BE INSTALLED WHEN CHANGE IN PIPE DIRECTION IS 45 DEGREES OR GREATER.

PERMITS
ASIDE FROM THE INDIVIDUAL SEWAGE DISPOSAL SYSTEM PERMIT ADDITIONAL PERMIT (S) WILL BE REQUIRED BY THE BUILDING INSPECTION DEPARTMENT FOR PUMP INSTALLATION.

Revisions:

PREPARED FOR:
Brian Johnson
PO Box 1139
Homewood, CA 96141

RAISED BED/SAND FILTER SYSTEM
21 CALLE DEL ONDA
Stinson Beach, CA
APN 195-162-49

AYS Engineering Group, Inc
PO Box 5693, Petaluma, CA 94955
Voice (707) 763-6620, Fax (707) 781-8061

Job No. 2018-038
Date 11-19-18
Drawn By: tkp
Checked By: tkp
Scale as shown

Sheet 2 of 2

W2

DETAILS



GENERAL NOTES

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND DESIGN ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER AND DESIGN ENGINEER.

ALL MATERIAL, WORKMANSHIP, AND CONSTRUCTION SHALL CONFORM TO THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS AND STANDARD PLANS (DATED JULY 1992) AND THE CURRENT MARIN COUNTY UNIFORM CONSTRUCTION STANDARDS AND SPECIFICATIONS.

CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UNDERGROUND SERVICE ALERT (U.S.A.) CALL TOLL FREE (800) 642-2444 AT LEAST 48 HOURS PRIOR TO EXCAVATION. CONTRACTOR TO UNCOVER EXISTING BURIED UTILITIES WITH UTILITY OWNER TO VERIFY LOCATION AND ELEVATION. BURIED UTILITIES INCLUDE BUT ARE NOT LIMITED TO WATER, SEWER, GAS, ELECTRICAL AND TELEPHONE. ALL UTILITIES CONFLICTING WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED PRIOR TO CONSTRUCTION.

CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO BEGINNING CONSTRUCTION.

CONTRACTOR SHALL OBTAIN A TRENCH PERMIT FROM THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY PRIOR TO THE EXCAVATION OF ANY TRENCH GREATER THAN FIVE FEET IN DEPTH.

ALL UNDERGROUND IMPROVEMENTS SHALL BE INSTALLED AND APPROVED PRIOR TO ROAD SURFACING.

NOT TO BE USED AS BOUNDARY SURVEY, TOPOGRAPHIC SURVEY PROVIDED BY PACIFIC LAND SURVEYS, BODEGA CA 707-875-3208

ALL TREES TO REMAIN SHALL BE FENCED AS DIRECTED BY ARBORIST OR COUNTY PRIOR TO BEGINNING OF CONSTRUCTION. NO TREES OF PERMIT SIZE TO BE REMOVED WITHOUT OBTAINING A TREE REMOVAL PERMIT.

TRAFFIC CONTROL SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST CALTRANS MANUAL OF TRAFFIC CONTROL DEVICES AND AS DIRECTED BY ENGINEER.

PROPERTY LINES, RIGHT OF WAY AND EASEMENTS TO BE FLAGGED PRIOR TO CONSTRUCTION.

GRADING NOTES

CONTRACTOR SHALL ENLIST THE SERVICES OF A REGISTERED GEOTECHNICAL ENGINEER TO MONITOR THE PLACEMENT OF EMBANKMENTS. THE GEOTECHNICAL ENGINEER SHALL SUBMIT A FINAL SOILS REPORT THAT CERTIFIES THAT THE EMBANKMENTS WERE PLACED IN ACCORDANCE WITH THE PROJECT PLANS (AND AMENDMENTS THERETO, IF ANY), SPECIFICATIONS, AND SOUND GEOTECHNICAL PRACTICE. THE REPORT SHALL ADDRESS IN PARTICULAR THE SUSTAINABILITY OF THE NATIVE SOIL ENCOUNTERED AT THE TOE AND BASE OF ALL FILLS. FURTHER, THE REPORT SHALL CONTAIN ANALYSIS OF THE SOILS ENCOUNTERED AND A COMPILATION OF COMPACTION TESTS PERFORMED.

CUT SLOPES SHALL BE EQUAL TO OR LESS THAN 2:1. WITH A GEOTECHNICAL ENGINEER'S WRITTEN PERMISSION, WEATHERED ROCK CUTS MAY BE STEEPENED. FILL SLOPES SHALL BE EQUAL TO OR LESS THAN 2:1 OR REINFORCED WITH GEOGRID PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS IF STEEPER THAN 2:1 AND SHALLOWER THAN 1:1.

ALL EXCESS SOIL MATERIAL, STUMPS, AND BOULDERS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH ANY ENVIRONMENTAL REGULATIONS AND THE PERMITTING AGENCY'S GRADING ORDINANCE AS THEY MAY APPLY.

IF CONSTRUCTION IS PERFORMED EARLIER THAN MAY 1ST OR LATER THAN OCTOBER 1ST IN ANY GIVEN YEAR, AN APPROVED SILTATION CONTROL PLAN, DESIGNED BY A CIVIL ENGINEER OR APPROVED, COMPETENT INDIVIDUAL IS REQUIRED.

STRUCTURAL SECTION NOTES

ACTUAL DIMENSION OF THE DRIVEWAY PAVEMENT SECTION SHALL BE DESIGNED BY THE SOILS ENGINEER.

THE ROAD SUBGRADE WITHIN THE ROADWAY SECTION SHALL BE SCARIFIED TO A DEPTH OF SIX INCHES AND COMPACTED TO A TIGHT NON-YIELDING SURFACE WITH NO VISIBLE DISPLACEMENT TO AT LEAST 95% OF RELATIVE COMPACTION AND SHALL BE FREE OF LOOSE OR EXTRANEIOUS MATERIAL.

THE CLASS II AGGREGATE BASE SHALL HAVE A RELATIVE COMPACTION OF AT LEAST 95%. SHALL BE FREE OF LOOSE OR EXTRANEIOUS MATERIAL AND BE A TIGHT NON-YIELDING SURFACE WITH NO VISIBLE DISPLACEMENT.

THE ASPHALT CONCRETE SHALL HAVE A RELATIVE COMPACTION OF AT LEAST 95%.

A SOILS ENGINEER SHALL TEST, AND APPROVE THE CONSTRUCTION OF ROADS, AND, IF REQUIRED, PARKING AREAS. THE SOILS ENGINEER SHALL PROVIDE COPIES OF THE TEST RESULTS AND WRITTEN APPROVALS TO THE COUNTY'S INSPECTOR WITHIN THREE WORKING DAYS OF TESTING OR APPROVAL. THE APPROVAL SHALL INCLUDE THE STABILITY AND RELATIVE DENSITY OF SUBGRADES AND BASE COURSES PRIOR TO THE PLACEMENT OF ASPHALT CONCRETE. A FINAL SOILS REPORT SHALL BE SUBMITTED BY THE PROJECT SOILS ENGINEER TO THE CONSTRUCTION INSPECTION SUPERVISOR OF THE PERMIT AND RESOURCE MANAGEMENT DEPARTMENT WHICH CONTAINS AN ANALYSIS OF THE SOILS ENCOUNTERED AND COMPILATION OF COMPACTION TESTS PERFORMED.

STORM DRAIN NOTES

TRENCH AND BACKFILL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CALTRANS' STANDARD PLAN A62-D FOR CONCRETE CULVERTS AND A62-F FOR METAL AND PLASTIC CULVERTS, EXCEPT THAT THE TRENCH WIDTH NEED ONLY BE ONE FOOT ON EACH SIDE OF THE PIPE.

ALL DRAINAGE PIPE IN DRIVEWAY SHALL HDPE TYPE N AASHTO RATED OR SDR35. GRATES IN DRIVEWAY AREA SHALL BE TRAFFIC RATED. DRAINAGE INLETS SHALL BE OF THE SIZE OR TYPE CALLED OUT AND CAN BE PRECAST OR POURED IN PLACE. CLEANOUTS REQUIRED EVERY 100 FEET AND AT ANY PIPE DIRECTION CHANGE 45 DEGREES OR GREATER.

ALL ROOF DRAINS SHALL BE TIED INTO STORM DRAINAGE SYSTEM AND SEPERATED FROM FOUNDATION DRAINS.. RAINWATER LEADERS SHALL HAVE AND FOUNDATION DRAINS SHALL HAVE CLEANOUTS AT ALL CHANGES IN DIRECTION GREATER THAN 44DEGREES.. FOUNDATION SUBDRAINS SHALL BE SEPERATE PIPING SYSTEMS TO OUTFALL FROM SURFACE DRAINS/ROOF DRAINS

MISCELLANEOUS NOTES

TESTING FOR RELATIVE DENSITIES SHALL BE IN ACCORDANCE WITH CALTRANS' TEST METHOD NO. 216 PART II OR ASTM 1557. THE USE OF SAND CONE METHODS - SUCH AS ASTM 1556 OR CALTRANS 216 PART I - SHALL NOT BE ALLOWED.

PLACEMENT OF MAIL BOXES IS TO BE COORDINATED WITH AND APPROVED BY THE LOCAL BRANCH OF THE UNITED STATES POST OFFICE.

DESIGN ENGINEER SHALL CERTIFY TO THE COUNTY IN WRITING THAT ALL GRADING, DRAINAGE, AND RETAINING WALL CONSTRUCTION WAS DONE IN ACCORDANCE WITH THE PLANS AND FIELD DIRECTIONS. ALSO NOTE THAT DRIVEWAY, PARKING AND OTHER SITE IMPROVEMENTS SHALL BE INSPECTED BY A DEPARTMENT OF PUBLIC WORKS ENGINEER.

ADDITIONAL GENERAL NOTES

UNAUTHORIZED CHANGES & USES: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PUBLIC WORKS DEPARTMENTNT DEPARTMENT AND THE PREPARER OF THESE PLANS.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF DESIGN PROFESSIONAL.

THE LOCATIONS OF UNDERGROUND OBSTRUCTIONS SHOWN ON THE PLANS ARE APPROXIMATE ONLY AND SHOULD NOT BE TAKEN AS FINAL OR ALL INCLUSIVE. THE CONTRACTOR IS CAUTIONED THAT THE PLANS MAY NOT INCLUDE ALL EXISTING UTILITIES AND THAT THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY FOR OBSTRUCTIONS WHICH MAY BE ENCOUNTERED.

THE CONTRACTOR MUST EXPOSE ALL EXISTING UTILITIES AS A FIRST ORDER OF WORK, INCLUDING SEWER AND STORM DRAINS, TO VERIFY DESIGN ASSUMPTIONS AND EXACT FIELD LOCATION.

EXISTING UTILITIES MAY REQUIRE RELOCATION AND/OR PROPOSED IMPROVEMENTS MAY REQUIRE GRADE OR ALIGNMENT REVISION DUE TO FIELD CONDITIONS.

THE CONTRACTOR IS CAUTIONED NOT TO ORDER PRECAST ITEMS OR INSTALL ANY IMPROVEMENTS UNTIL ALL CONFLICTS ARE RESOLVED. ALL IMPROVEMENTS INSTALLED OR ORDERED PRIOR TO CONFLICT RESOLUTION SHALL BE DONE SOLELY AT THE CONTRACTOR'S RISK AND AT NO EXPENSE TO THE OWNER.

THE CONTRACTOR SHALL RECOGNIZE THAT UNDERGROUND FACILITIES NOT SHOWN AS CIVIL IMPROVEMENTS (PG&E, TELEPHONE, TELEVISION, IRRIGATION, ETC.) SHALL BE COORDINATED AND CONSTRUCTED PRIOR TO PLACEMENT OF BASE ROCK AND PAVING.

ALL EARTHWORK AND SITE GRADING SHALL COMPLY WITH CHAPTER 33 AND APPENDIX CHAPTER 33 OF THE CALIFORNIA BUILDING CODE.

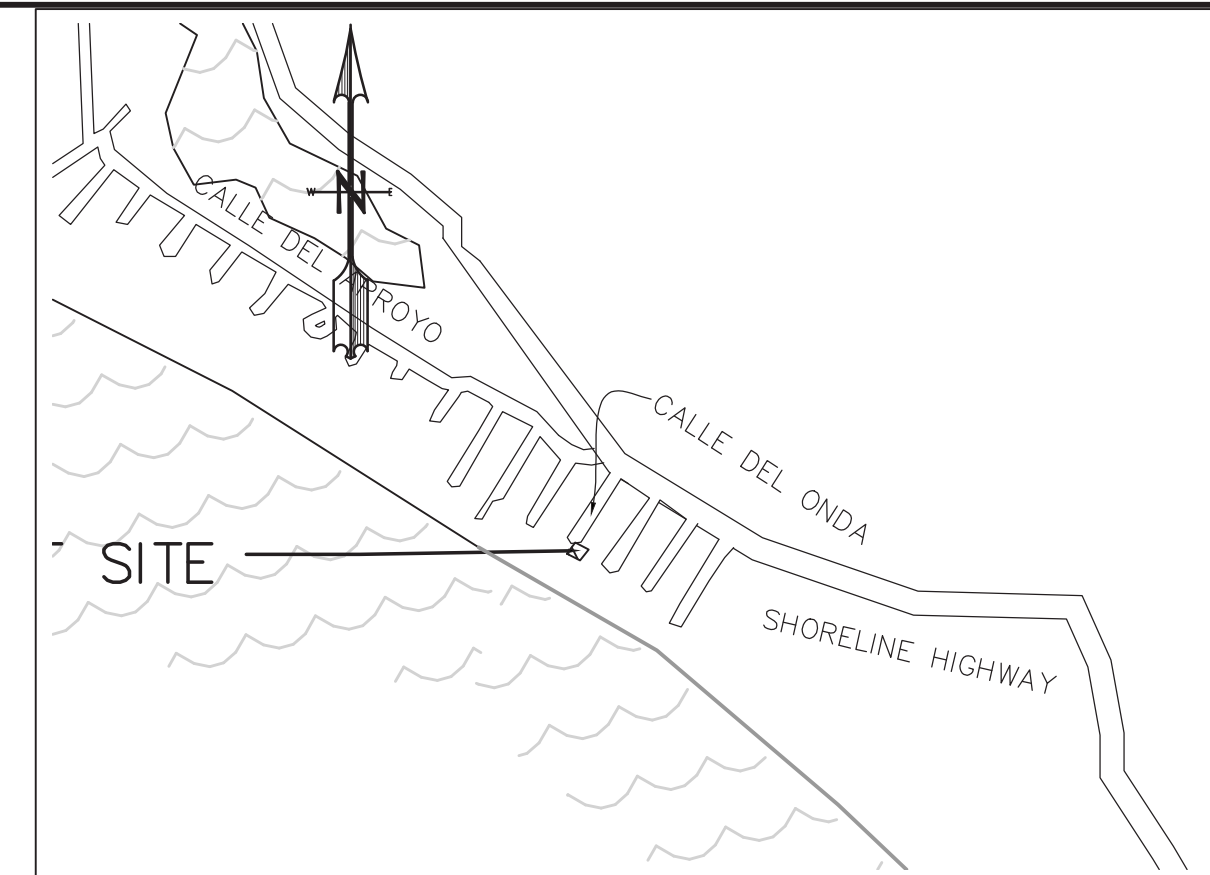
PRIOR TO BEGINING CONSTRUCTION, THE OWNER SHALL OBTAIN ALL NECESSARY AGREMENTS & EASEMENTS AS REQUIRED TO COMPLETE THE WORK.

ABBREVIATIONS

- AB AGGREGATE BASE
- AC ASPHALT CONCRETE
- BC BEGIN HORIZONTAL CURVE
- BOW BASE OF WALL
- BVC BEGIN VERTICAL CURVE
- CL CENTERLINE
- C,G,C&G CURB AND GUTTER
- CB CATCH BASIN
- CO CLEANOUT
- CONC CONCRETE
- DI DRAINAGE INLET
- EC END HORIZONTAL CURVE
- EG EXISTING GROUND
- EVC END VERTICAL CURVE
- EX EXISTING
- EXIST EXISTING
- FL FLOWLINE
- FF FINISHED FLOOR
- FG FINISHED GRADE
- FH FIRE HYDRANT
- GB GRADE BREAK
- GP HIGH POINT
- HT. EXPOSED FACE HEIGHT OF WALL
- INV INVERT
- JT JOINT TRENCH
- MAX MAXIMUM
- MH MAN HOLE
- N/A NOT APPLICABLE
- NTS NOT TO SCALE
- O/H OVERHEAD
- PCC PORTLAND CEMENT CONCRETE
- POC POINT ON CURVE
- PRC POINT OF REVERSE CURVATURE
- PUE PUBLIC UTILITY EASEMENT
- PVC POLYVINYL CHLORIDE
- PVI POINT OF VERTICAL INTERSECTION
- R/W RIGHT OF WAY
- RCP REINFORCED CONCRETE PIPE
- S SEWER
- S/W SIDEWALK
- SD STORM DRAIN
- SOG SLAB ON GRADE
- SS SANITARY SEWER
- SSCO SANITARY SEWER CLEAN OUT
- SSMH SANITARY SEWER MAN HOLE
- STA STATION
- STD STANDARD
- TC TOP OF CURB
- TEMP TEMPORARY
- TOE TOE OF WALL/SLOPE
- TOW TOP OF WALL
- TW TOP OF WALL
- TYP TYPICAL
- W WATER
- WM WATER METER

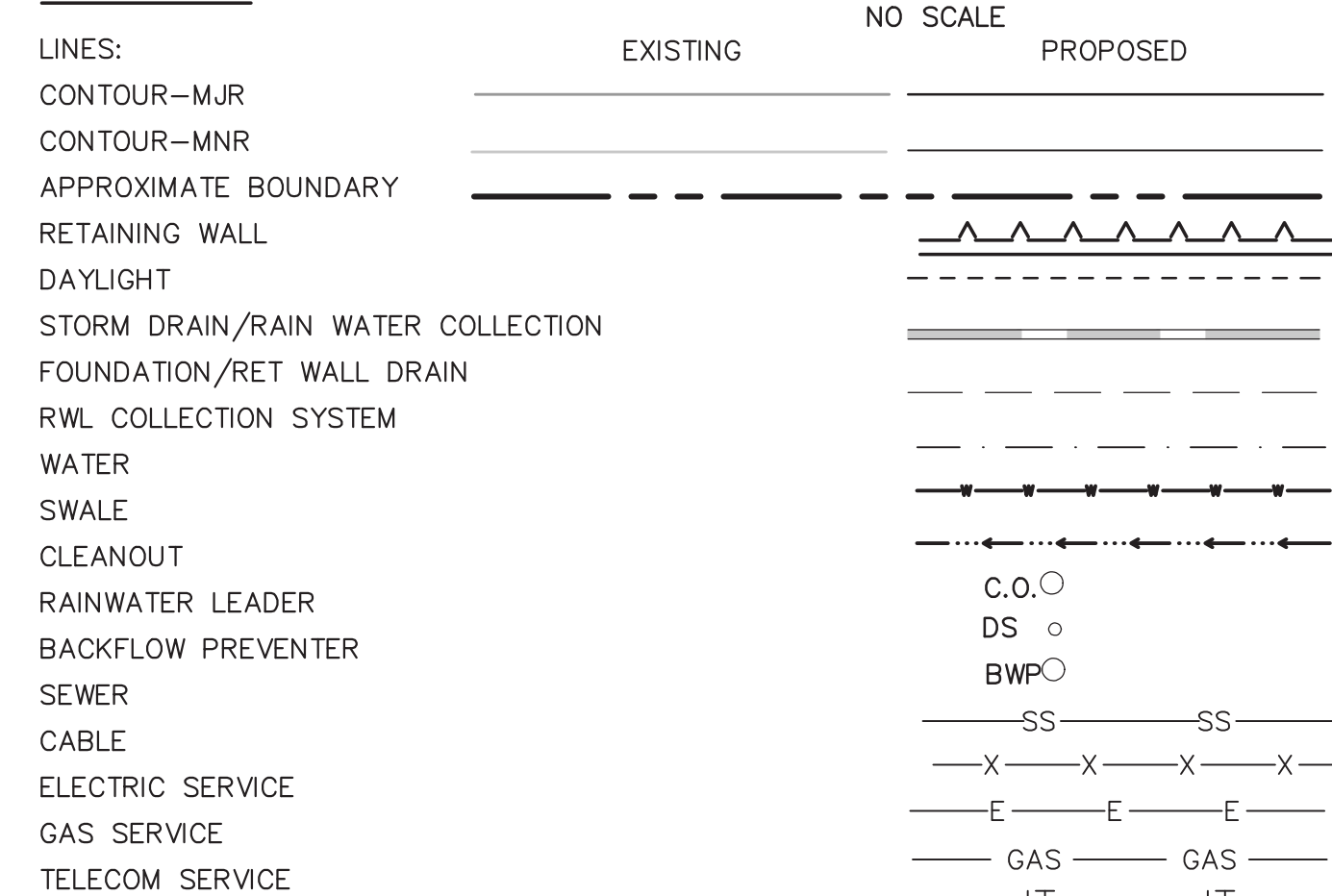
SHEET INDEX

- C1 - TITLE SHEET
- C2 - GRADING PLAN
- C3 - DRAINAGE & STORM WATER MANAGEMENT PLAN
- C4 - EROSION AND SEDIMENT CONTROL PLAN
- S1 - SEPTIC SYSTEM LAYOUT
- S2 - SEPTIC SYSTEM DETAILS



VICINITY MAP

LEGEND



EARTHWORK QUANTITIES

EARTHWORK QUANTITIES ARE APPROXIMATE AND FOR PLANNING PURPOSES ONLY. VOLUMES ARE APPROXIMATED FROM EXISTING AND FINISHED GRADE AND DO NOT INCLUDE TRENCH SPOILS, SITE STRIPPING, FOUNDATIONS, KEYWAY EXCAVATIONS OR EXPANSION/CONTRACTION OF SOIL. ACTUAL VOLUMES WILL VARY DEPENDING ON CONTRACTORS METHODS.

ESTIMATED QUANTITIES:

- CUT 39.81 CY
- FILL 66.52 CY
- NET 26.71 CY FILL (IMPORT)

**PRELIMINARY
NOT FOR CONSTRUCTION
FOR DESIGN REVIEW ONLY**

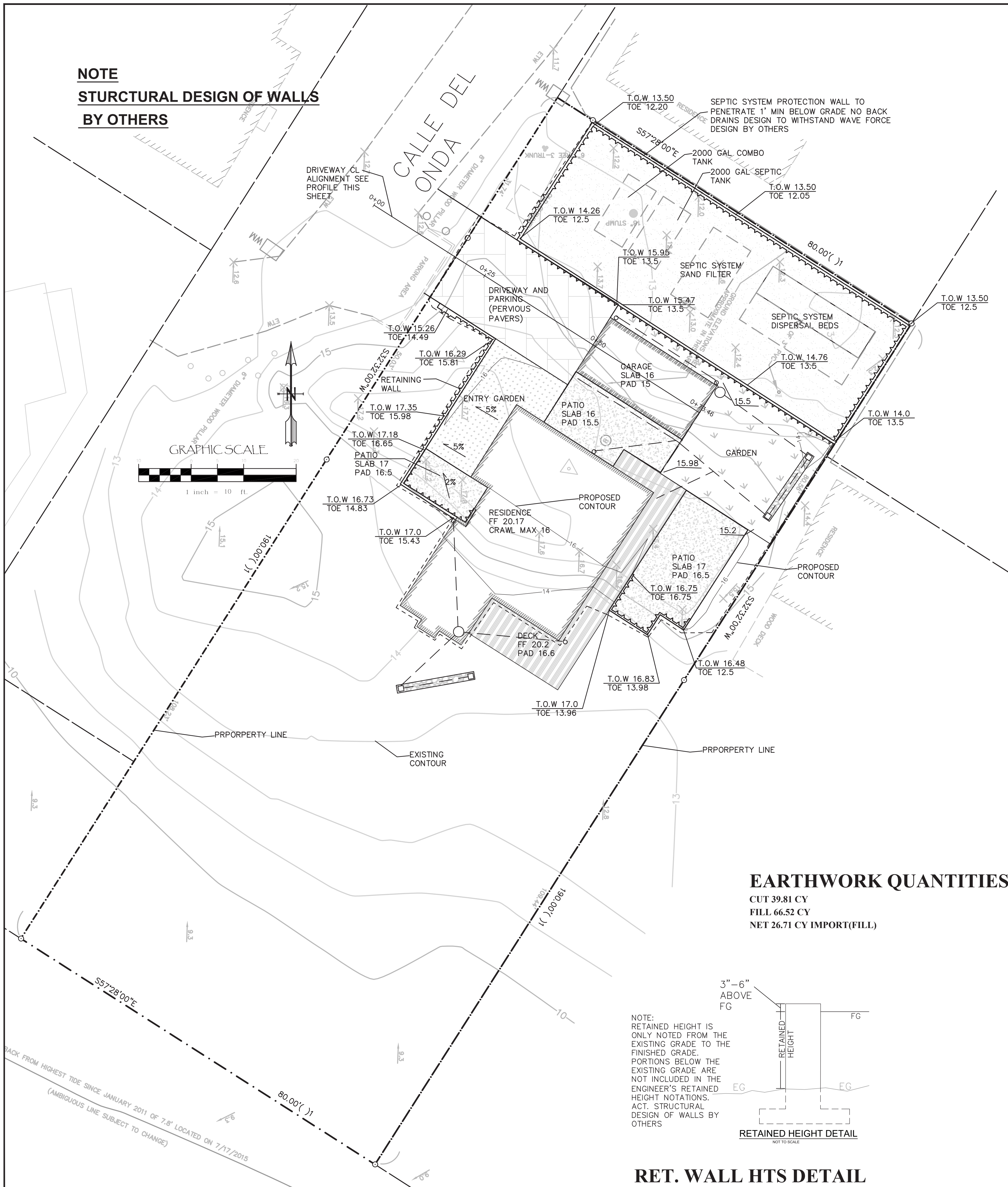


<p>Revisions:</p> <table border="1" style="width: 100%; height: 100px;"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>																													<p>PREPARED FOR: Brian Johnson PO Box 1139, Homewood, CA 96141</p> <p>IMPROVEMENT PLAN 21 CALLE DEL ONDA Stinson Beach, CA APN 195-162-49</p> <p>AYS Engineering Group, Inc PO Box 5693, Petaluma, CA 94955 Voice (707) 763-6620</p> <p>Job No. 2018-038 Date 10-1-20 Drawn By: TKP Checked By: TKP Scale as shown</p> <p>Sheet 1 of 6</p>

TITLE SHEET C1

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NOTE
STURCTURAL DESIGN OF WALLS
BY OTHERS



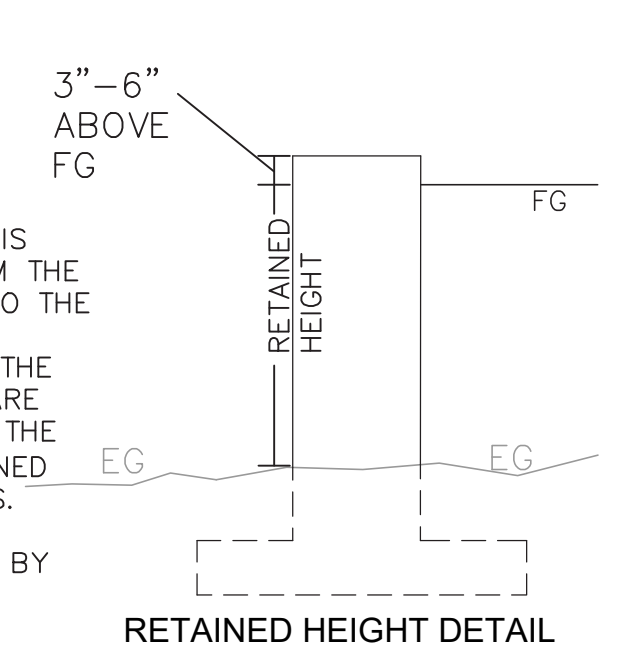
LEGEND

- 1.5 FILL DEPTH (FT.)
- 1.3 CUT DEPTH (FT.)
- ⊙ WALL HEIGHT (FT.)

EARTHWORK/WALL HTS DIAGRAM

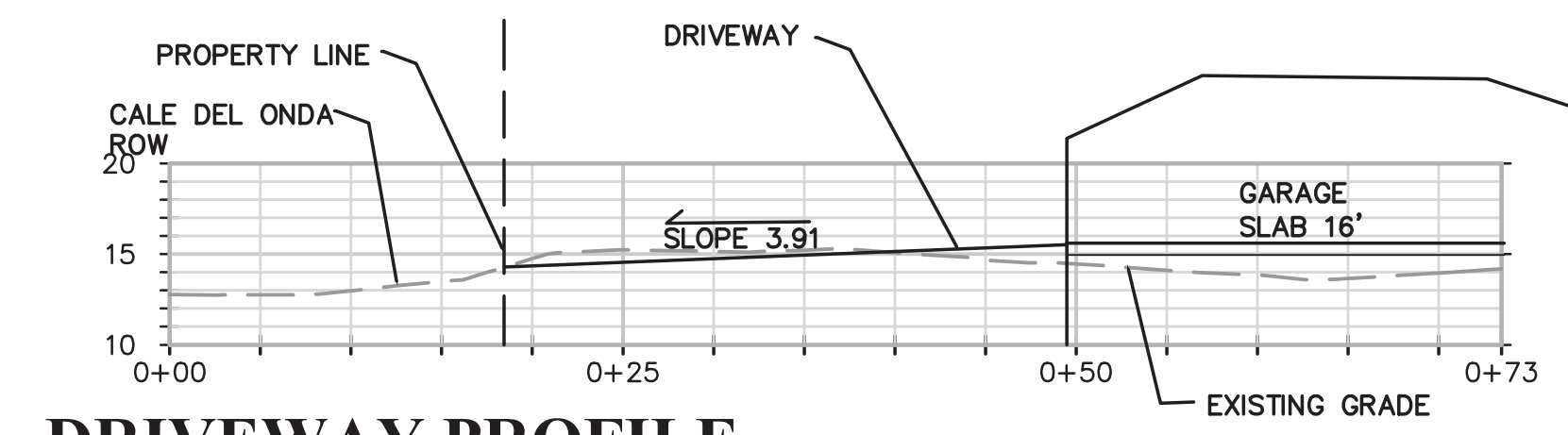
EARTHWORK QUANTITIES

CUT 39.81 CY
 FILL 66.52 CY
 NET 26.71 CY IMPORT(FILL)



NOTE:
 RETAINED HEIGHT IS ONLY NOTED FROM THE EXISTING GRADE TO THE FINISHED GRADE. PORTIONS BELOW THE EXISTING GRADE ARE NOT INCLUDED IN THE ENGINEER'S RETAINED HEIGHT NOTATIONS. ACT. STRUCTURAL DESIGN OF WALLS BY OTHERS

RET. WALL HTS DETAIL



DRIVEWAY PROFILE
 SCALE 1"=10' HORIZ AND VERT.

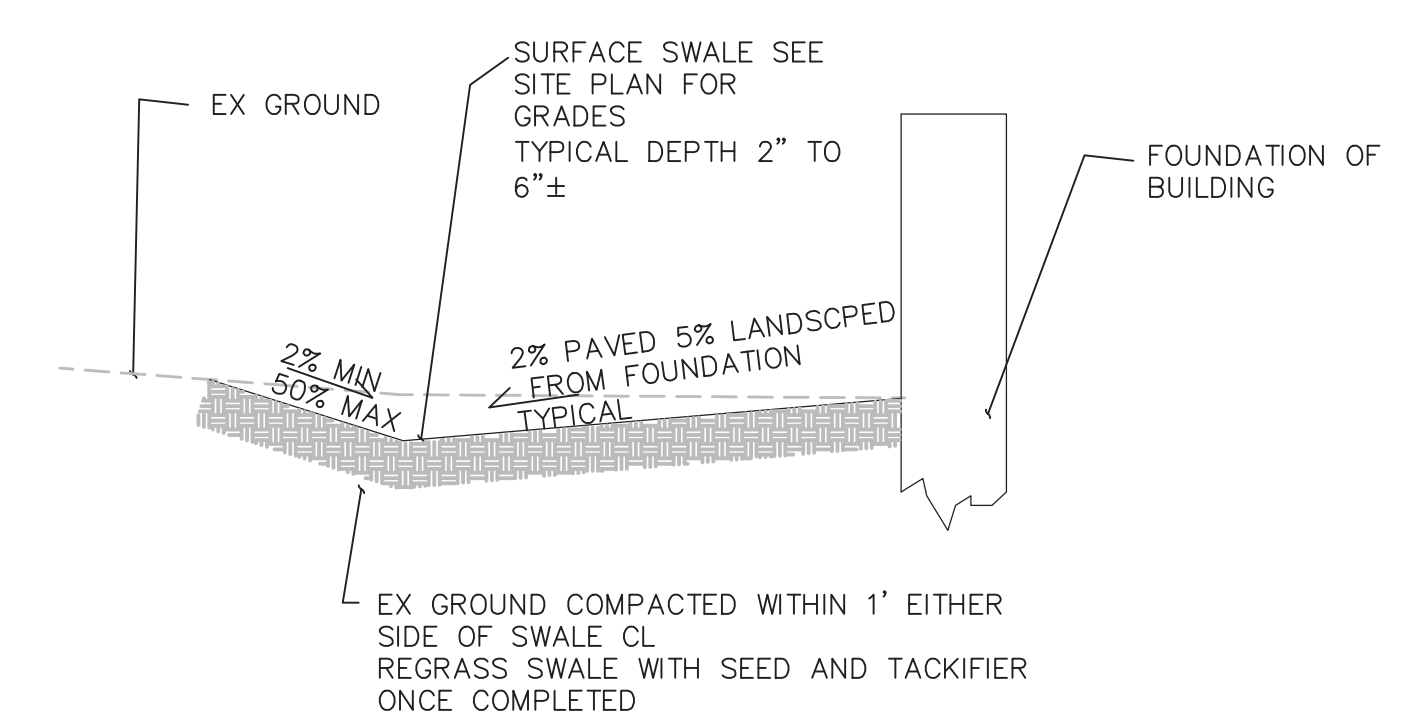
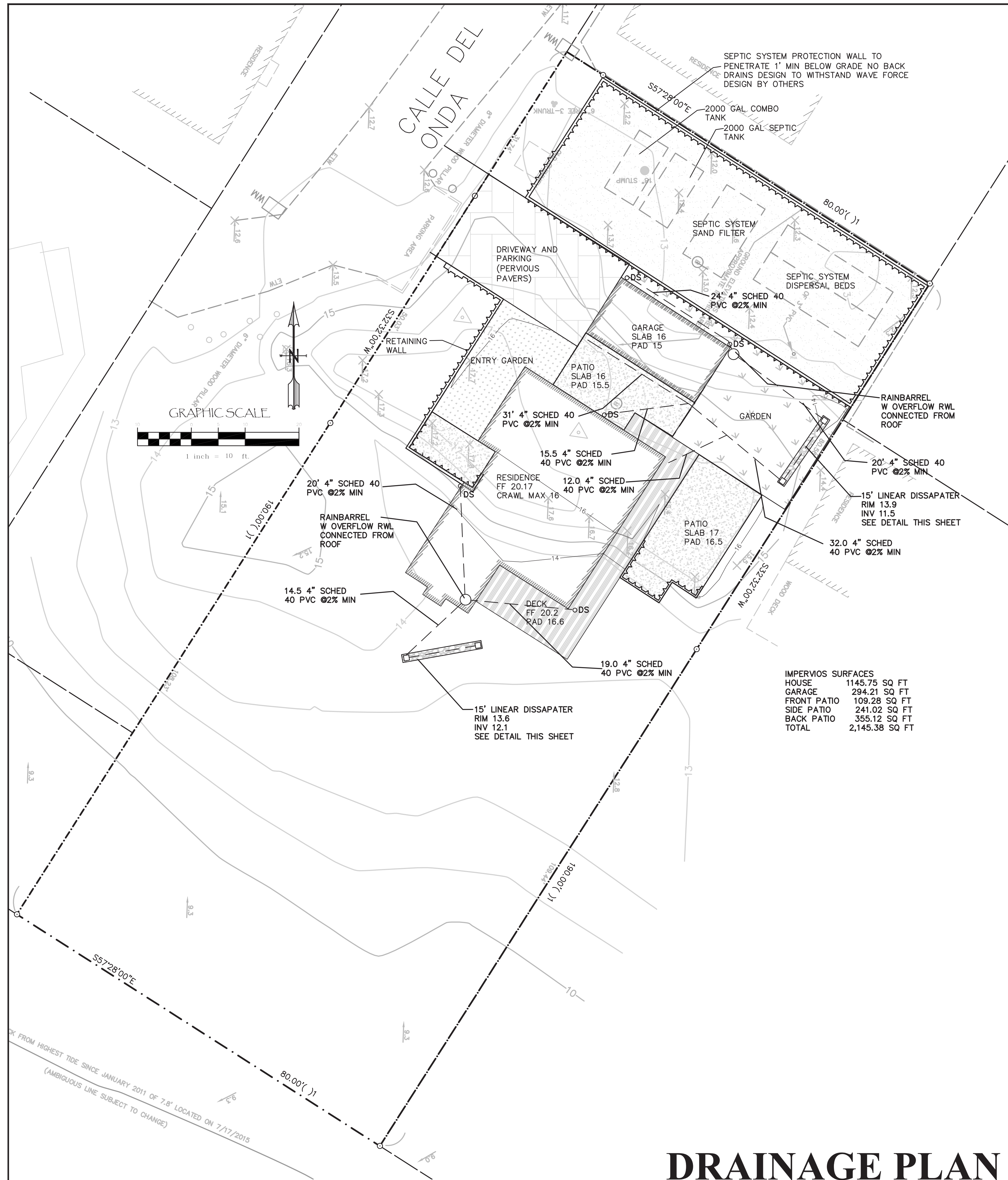
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 FOR DESIGN REVIEW ONLY



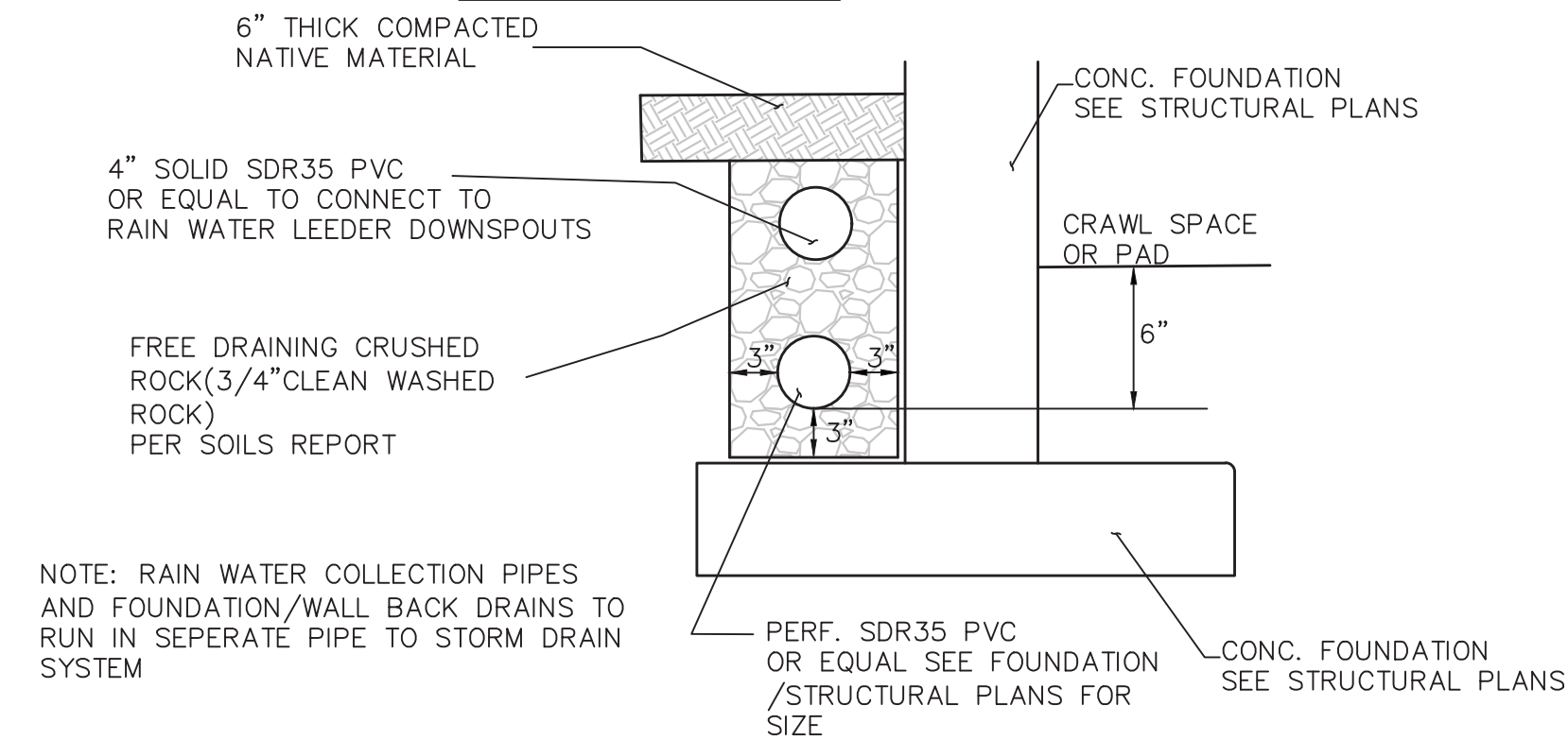
GRADING PLAN C2

Revisions:	
PREPARED FOR:	Brian Johnson PO Box 1139, Homewood, CA 96141
IMPROVEMENT PLAN	21 CALLE DEL ONDA Stinson Beach, CA APN 195-162-49
Engineering Group, Inc	PO Box 5693, Petaluma, CA 94955 Voice (707) 763-6620
Job No.	2018-038
Date	10-1-20
Drawn By:	TKP
Checked By:	TKP
Scale	as shown
Sheet	2 of 6

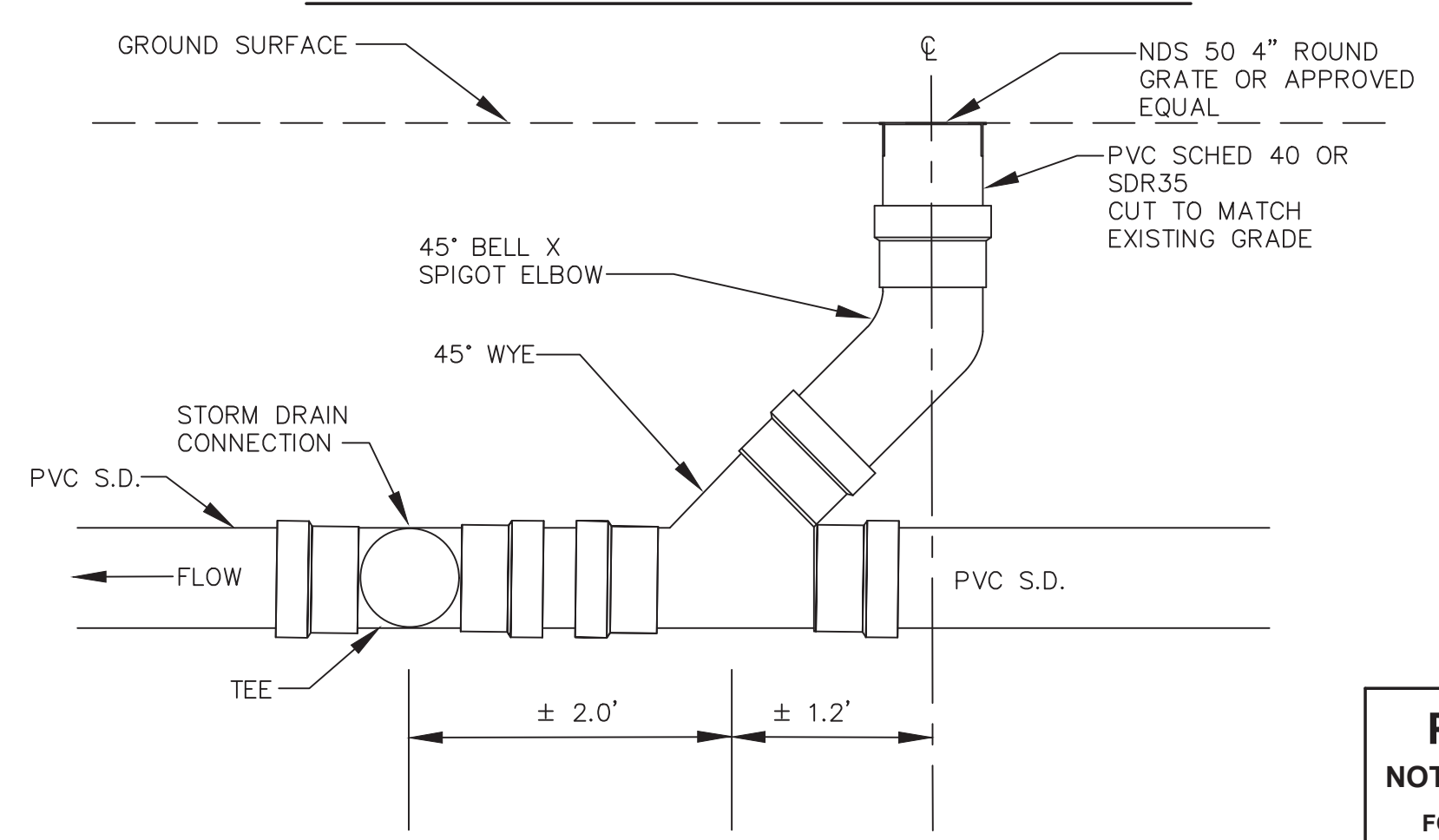
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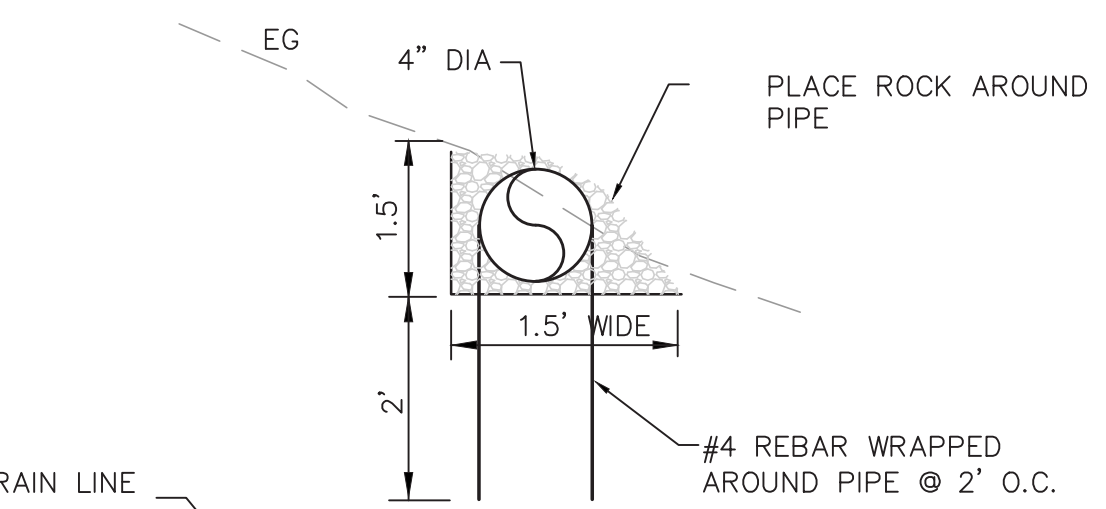
SWALE DETAIL



FOUNDATION AND RWL DRAIN DETAIL



CLEANOUT DETAIL



LINEAR DISSIPATER DETAIL

PRELIMINARY
NOT FOR CONSTRUCTION
FOR DESIGN REVIEW ONLY



DRAINAGE PLAN
SCALE 1"=10'

Revisions:

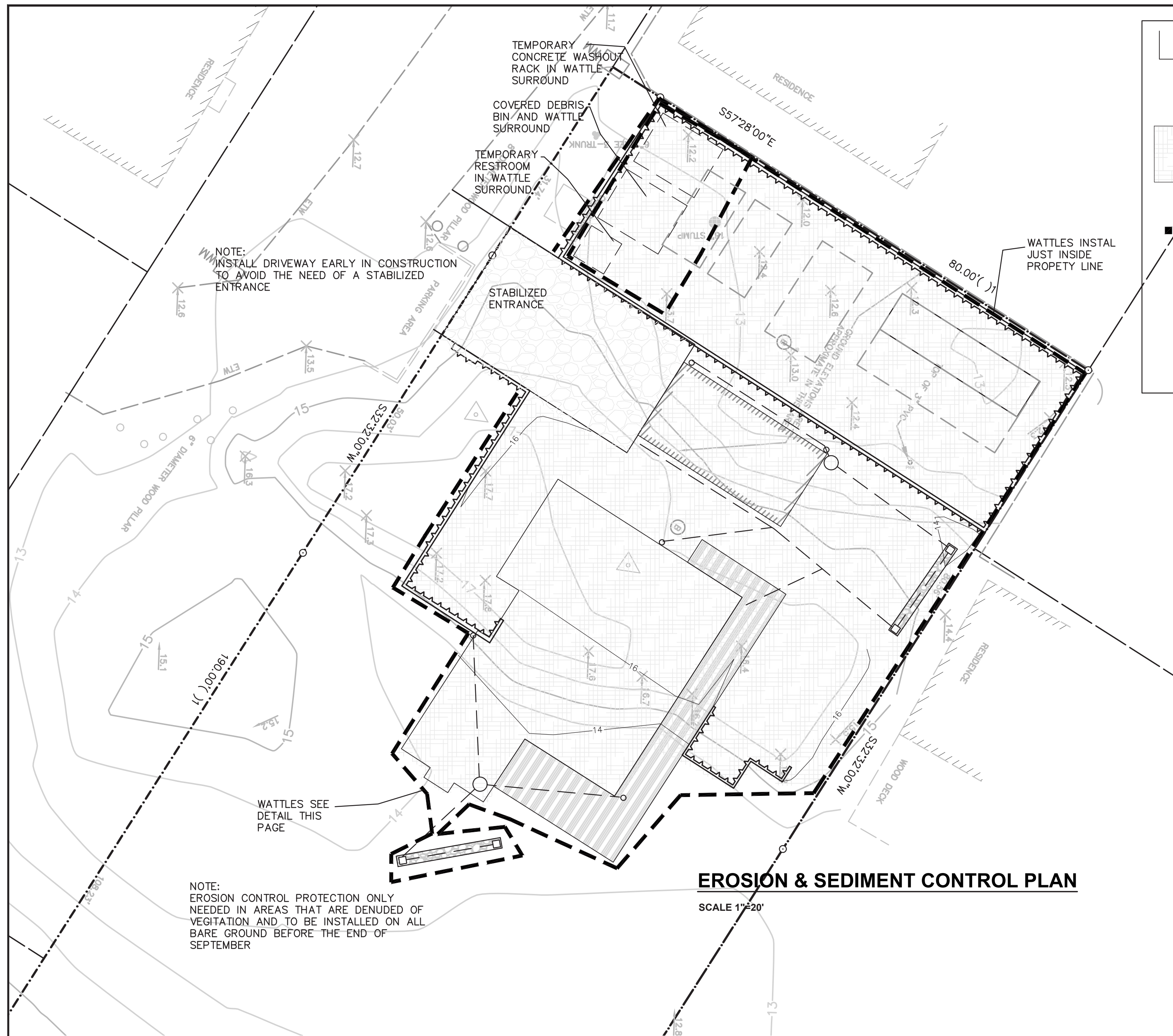
PREPARED FOR:
Brian Johnson
PO Box 1139,
Homewood, CA 96141

IMPROVEMENT PLAN
21 CALLE DEL ONDA
Stinson Beach, CA
APN 195-162-49

AYS Engineering Group, Inc
PO Box 5693, Petaluma, CA 94955
Voice (707) 763-6620

Job No. 2018-038
Date 10-1-20
Drawn By: TKP
Checked By: TKP
Scale as shown

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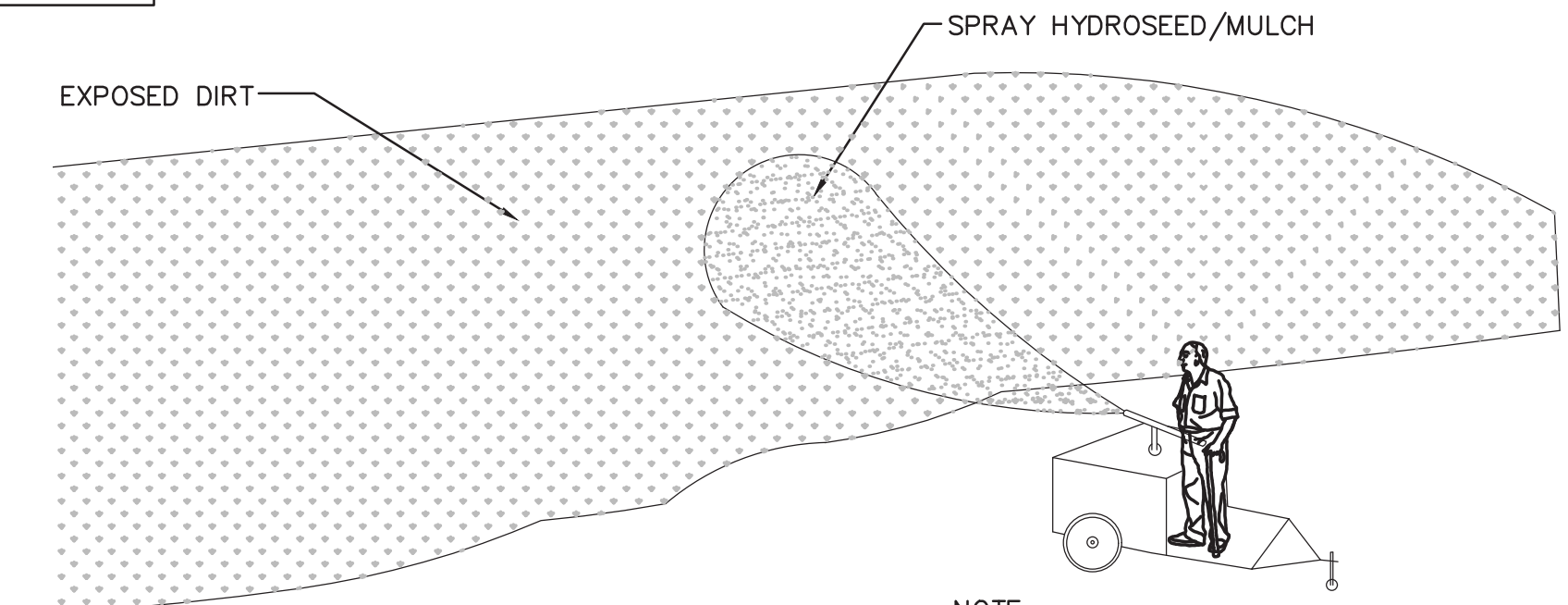


LEGEND

HYDROSEED/MULCH WOOD CHIPS OR EROSION CONTROL BLANKET ALL DISTURBED AREAS BEFORE RAIN

WATTLES

AREA OF DISTURBANCE= 6020 SQ FT
0.14 ACRES



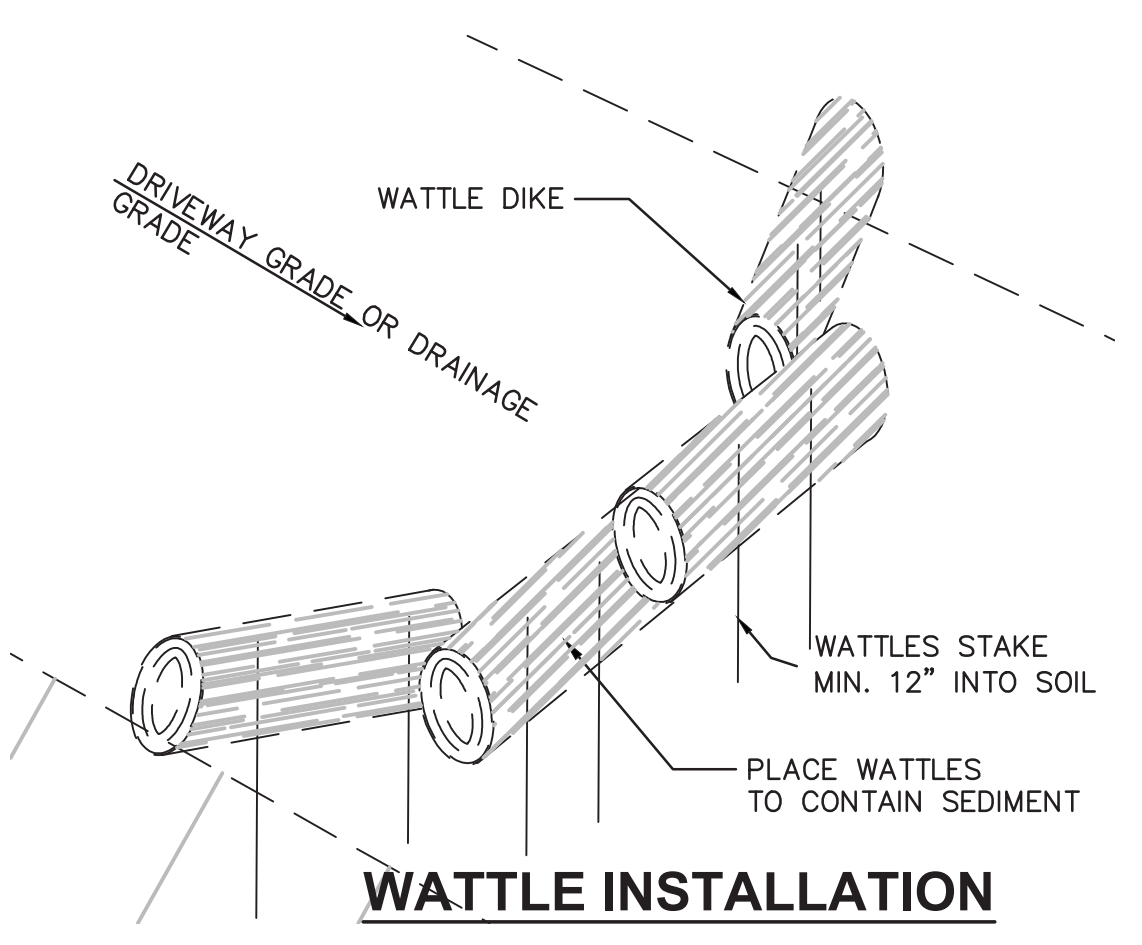
NOTE:
MULCH TO BE BLOWN ONTO EXPOSED EARTH. ANCHOR MULCH USING A TACKIFIER OR BY MECHANICAL MEANS. APPLY AT A RATE OF 4000LBS/ACRE OR USING MANUFACTURER'S RECOMMENDATIONS. MAY ALSO BE HAND MULCHED WITH STRAW TO A DEPTH OF 1" MIN OVER ALL BARE GROUND.

EROSION CONTROL NOTES

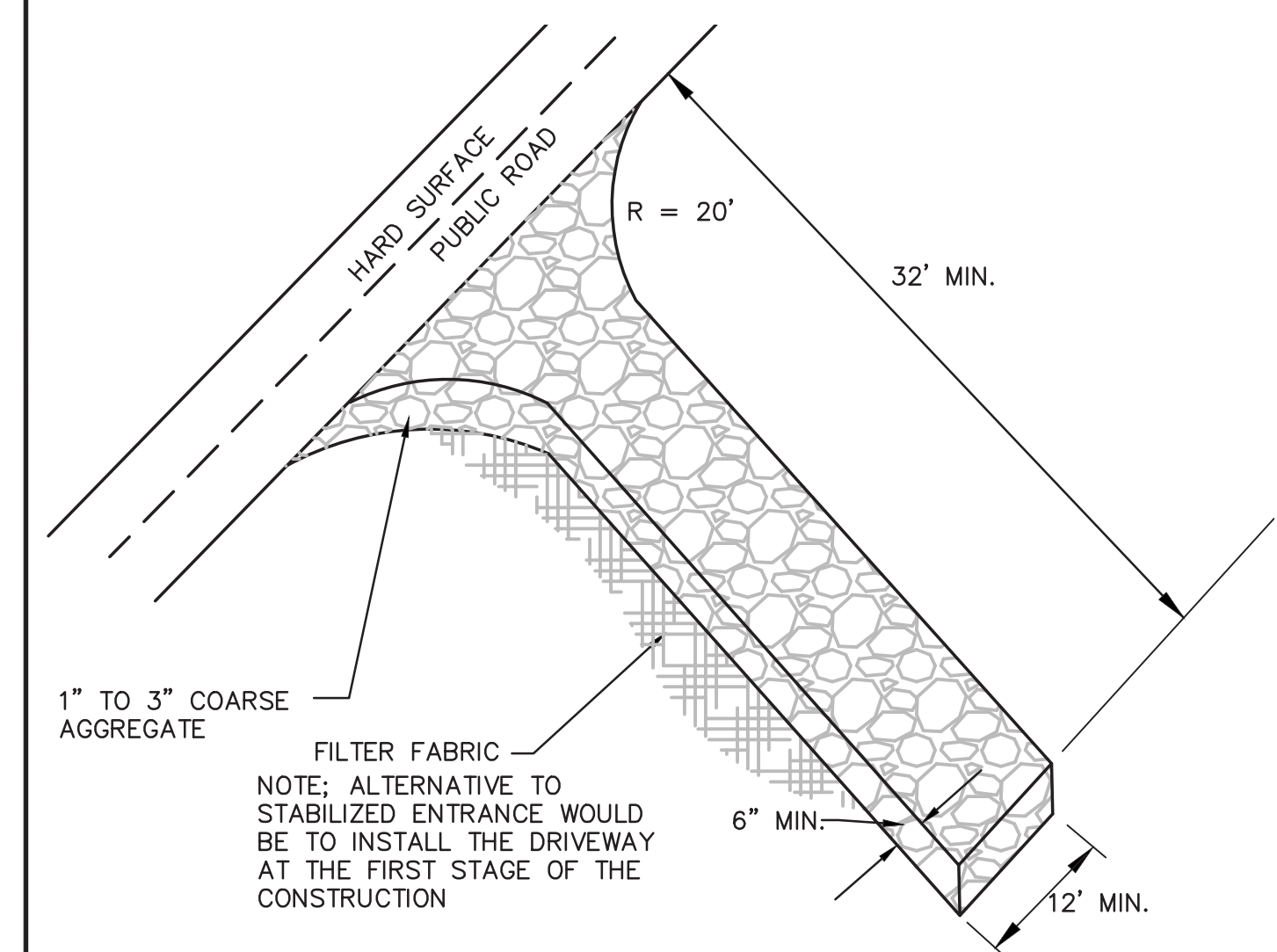
- BOUNDARY FOR REFERENCE PURPOSES ONLY NOT TO BE USED AS BOUNDARY SURVEY.
- ALL MODIFICATIONS TO THIS PLAN AND ALL EROSION CONTROL REPAIRS SHALL BE NOTED ON THIS PLAN AND KEPT UPDATED BY THE CONTRACTOR IN THE FIELD DURING CONSTRUCTION.
- ALL EROSION CONTROL MEASURES SHALL BE REGULARLY MONITORED AND REPLACED IF NECESSARY.
- ALL EROSION CONTROL MEASURES SHALL BE CHECKED AND THEIR OPERATION VERIFIED AFTER STORM EVENTS.
- NO SILT LADEN WATER SHALL LEAVE SITE.
- ANY MATERIAL OR DEBRIS STOCKPILED ON SITE SHALL BE CONTAINED BY WATTLES AND COVERED.
- A GRAVEL ACCESSWAY AT LEAST 50' LONG SHALL BE MAINTAINED AT DRIVEWAY ENTRANCE. 6" OF GRAVEL MUST BE MAINTAINED IN THIS AREA AND WILL REQUIRE REPLENISHMENT OVER THE COURSE OF CONSTRUCTION.
- AS PART OF THE MONITORING, ANY SILT THAT BUILDS UP BEHIND THE WATTLES SHALL BE REMOVED.
- MINIMIZE THE AMOUNT OF MATERIAL STOCKPILED ON SITE.
- ANY EXCAVATED MATERIAL STOCKPILED ON SITE SHALL BE COVERED WITH 15 MIL PLASTIC AND THE ENDS HELD DOWN WITH SAND BAGS.
- ADDITIONAL SAND BAGS, WATTLES AND OTHER EROSION CONTROL MATERIAL SHALL BE STORED ON SITE TO ALLOW FOR IMMEDIATE REPAIR OF PROPOSED FACILITIES.
- A WATTLE DIKE SHALL BE INSTALLED ON THE PROPOSED DRIVEWAY ROUGH GRADE EVERY 10' OF VERTICAL SEPARATION OR MORE OFTEN AS NEEDED TO PREVENT EROSION OF THE PROPOSED DRIVEWAY.
- REMOVE SEDIMENT WHEN ACCUMULATION REACHES 1/2 OF THE BARRIER HEIGHT.
- MINIMIZE THE AMOUNT OF EARTHWORK EXPOSED AT ANY ONE TIME.
- INSTALL DRIVEWAY GRAVEL BASE COURSE AS SOON AFTER ROUGH GRADING AS POSSIBLE.
- PRIOR TO PLACING AC ON ROADWAY OR DRIVEWAY, DRIVEWAYS TO BE USED FOR CONCRETE WASHDOWN. ONCE THE DRIVEWAY IS COMPLETE, USE A DESIGNATED CONCRETE WASH DOWN AREA.
- HYDROSEED ALL EXPOSED AREAS OF EARTH PRIOR TO START OF RAINY SEASON. IF RAIN IS IMMINENT OR GRASS IS NOT MATURE PRIOR TO OCTOBER 15 COVER EXPOSED EARTH WITH STRAW & TACKIFIER.
- THE ACTUAL AMOUNT AND TYPES OF EROSION CONTROL DEVICES WILL VARY BASED ON CONSTRUCTION METHODOLOGIES AND STAGING. THIS PLAN SHOWS A MINIMUM REQUIREMENT AND SHOULD BE SUPPLEMENTED AS NEEDED.

EROSION & SEDIMENT CONTROL PLAN

SCALE 1"=20"



SCALE 1"=10"



STABILIZED ENTRANCE

SCALE 1"=10"

PRELIMINARY
NOT FOR CONSTRUCTION
FOR DESIGN REVIEW ONLY



EROSION & SEDIMENT CONTROL PLAN

Revisions:

PREPARED FOR:
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Homewood , CA 96141

IMPROVEMENT PLAN
21 CALLE DEL ONDA
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Sheet 4 of 6

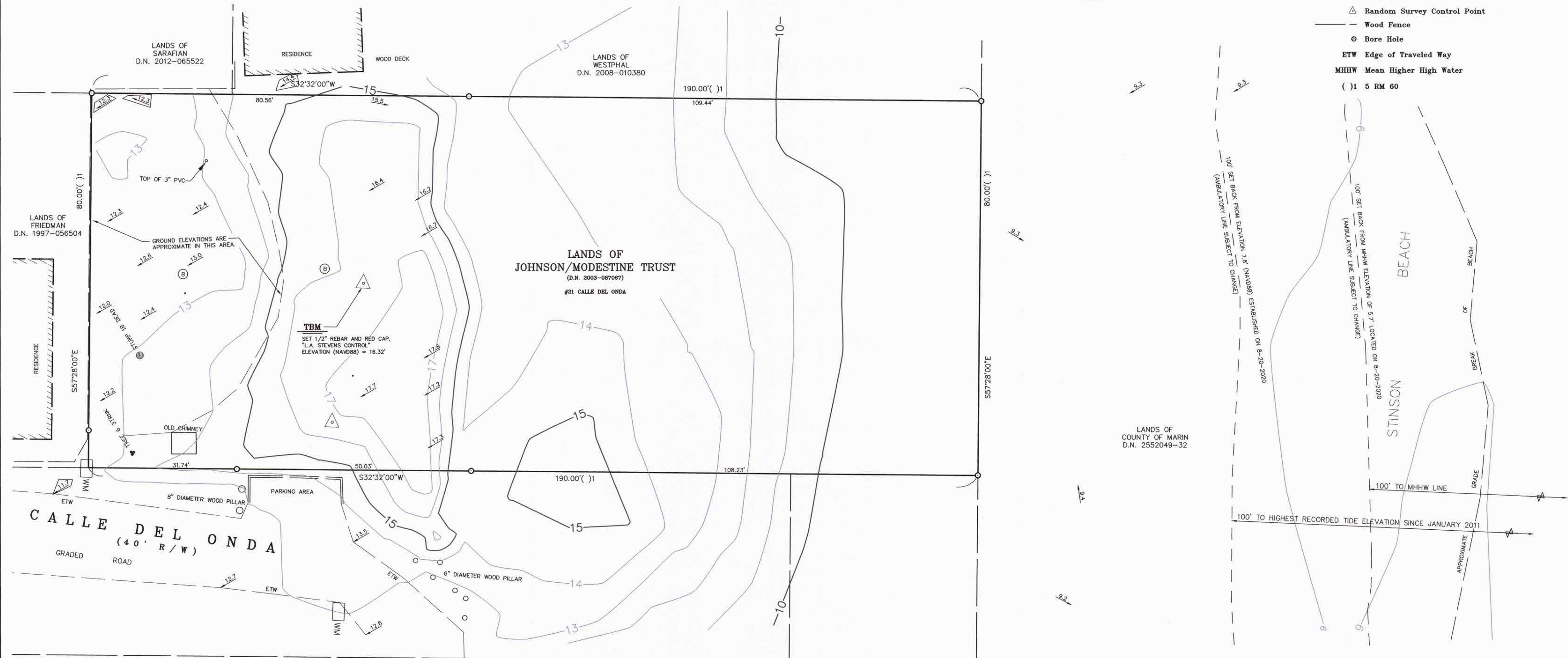
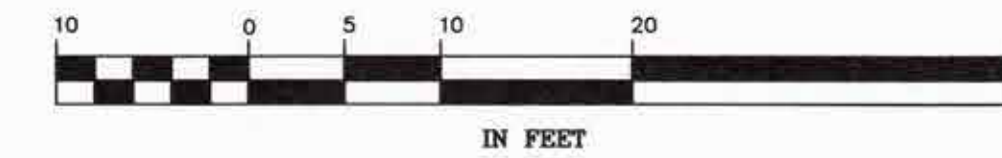
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LEGEND

- Tree (Size & Type Noted)
- Set 5/8" Rebar and 1 1/2" Aluminum Cap with Punch, Stamped "L.A. Stevens, PLS 6649"
- 101.4 Spot Elevation
- Water Meter
- U.N.O. Unless Noted Otherwise
- ⊕ Joint Pole
- △ Random Survey Control Point
- Wood Fence
- ⊙ Bore Hole
- ETW Edge of Traveled Way
- MHHW Mean Higher High Water
- () 1 5 RM 60

GRAPHIC SCALE



THE BASE FLOOD ELEVATION IN ZONE VE IS 16' NAVD 88 BASED ON FLOOD INSURANCE RATE MAP NO. 06041C0444E FROM FEMA EFFECTIVE DATE AUGUST 15, 2017.

SURVEYOR'S NOTES:

1. Contour Interval: 1 Feet
2. Vertical Datum: North American Vertical Datum 1988 (NAVD88)
3. Benchmark: Temporary Bench Mark (TBM) Noted Hereon.
4. The initial fieldwork for this topographic map was conducted by L.A. Stevens & Associates, Inc. on July 17, 2015. The topographic elements shown hereon reflect the site conditions existing at that time. The 100' set back lines were updated based on fieldwork conducted on August 20, 2020.
5. The boundary lines shown hereon are based on a boundary retracement survey conducted by L.A. Stevens & Associates, Inc. on July 17, 2015. A Record of Survey is recorded at the County of Marin Recorder's Office at Book of Maps 2016 Page 25.
6. The location of easement lines are outside the scope of services contracted for.
7. Assessor's Parcel: 195-162-49
8. The Preliminary Title Insurance Policy reviewed during the course of this survey was provided by First American Title Co., dated 03/27/2015, Policy Number 2102-4872721. Only documents within said Policy were reviewed for this work.
9. Parcel Area: 15,200 sq. ft. more or less.
10. Subsurface and environmental conditions were not surveyed or examined or considered as part of this survey. No statement is made concerning the existence of underground or overhead conditions, containers, or facilities that may affect the use or development of this property.
11. Only bond copies, with an original stamp and signature in red, may be considered to represent the work of L.A. Stevens & Associates, Inc. - Professional Land Surveyors. Any data relied upon from another format shall be checked to a bond copy mentioned above.
12. This map was prepared for the exclusive use of Brian Johnson and/or their legal representatives for the design and construction of a home and hardscape. Use or reliance on this map by any other party is forbidden without expressed written permission by Lawrence A. Stevens whose seal and signature are shown hereon.
13. This document shall be considered a "Preliminary Check Print" without a wet signature in red ink and wet stamp of the licensee responsible for the work.



Lawrence A. Stevens, PLS 6649

2	Updated 100' Set Back Lines	OA	8/31/2020
1	Added Highest Recorded Tide Setback Since 2011	ND	9/8/2015
No.	REVISION	BY	DATE
L.A. Stevens & Associates, Inc.			
Professional Land Surveyors * (415) 382-7713			
7 Commercial Blvd., Suite 1 * Novato, California 94949			
TOPOGRAPHIC MAP		BY:	N.D./L.A.S.
OF		DATE:	07-24-2015
21 Calle Del Onda		SCALE:	1" = 10'
Stinson Beach, California		DRAWING NO.	20-2046
FOR BRIAN JOHNSON			