



JOSEPH GREIF ARCHITECTS
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PLOT DATE: MAY-2018
 DRAWN BY: JA, JG
 PURPOSE: PERMIT
 PROJ. NO: 2017_MILLS
 CHECKED BY: JG

REVISIONS:
 ▲ DATE: APRIL 2018
 ▲ DATE:

PERMIT SET

MERCER ISLAND RESIDENCE
 5236 W MERCER WAY
 MERCER ISLAND, WA 98125

GENERAL INFORMATION
 GENERAL NOTES

SHEET NO.

A0.1

GENERAL NOTES

PERMITS

- THIS DRAWING SET IS DEVELOPED AS REQUIRED FOR ATTAINING A BUILDING PERMIT AND IDENTIFYING AESTHETIC DESIGN ELEMENTS OF THE PROJECT. THIS SET IS NOT INTENDED, COORDINATED OR COMPLETED AS A DETAILED CONSTRUCTION DOCUMENT SET.
- MECHANICAL, ELECTRICAL, AND PLUMBING WORK SHALL BE SUBMITTED UNDER SEPERATE PERMIT AND COORDINATED BY THE CONTRACTOR.
- CONTRACTOR IS TO COORDINATE AND SCHEDULE ALL REQUIRED CITY INSPECTIONS
- THE ELECTRICAL SUBCONTRACTOR SHALL SUBMIT TO THE OWNER AND CONTRACTOR FOR APPROVAL ELECTRICAL PLANS SHOWING ALL LIGHT FIXTURE, SWITCH, RECEPTICLE, AND EQUIPMENT LOCATIONS BEFORE CONSTRUCTION BEGINS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ANY SUBCONTRACTOR'S WORK INTO THE PROJECT, TO SECURE COMPLIANCE WITH THE DRAWINGS AND CODES. ALONG WITH THE ACCURATE VERIFICATION AND LOCATION OF PENETRATIONS THROUGH FOUNDATION WALLS, STRUCTURAL MEMBERS AND BUILDING SPACES.
- INSTALLATION CONFLICT: IN CASE OF ANY CONFLICT WHEREIN THE METHODS OR STANDARDS OF INSTALLATION OF THE MATERIALS SPECIFIED DO NOT EQUAL OR EXCEED THE REQUIREMENTS OF THE CODE OR ORDINANCES, THE CODE OR ORDINANCES SHALL GOVERN.
- THE ROLE OF THE ARCHITECT INCLUDES CONSTRUCTION ADMINISTRATION AND REVIEW OF CONSTRUCTION CHANGES, SUBSTITUTIONS AND CLARIFICATIONS REVIEWED WITH THE CONTRACTOR, OWNER PRIOR TO FABRICATION AND OR INSTALLATION

DIMENSIONING

- GRID LINES ARE LOCATED AT THE FACE OF CONCRETE FOUNDATION WALL. DIMENSIONS ARE TO FACE OF FRAMING AND/OR EXTERIOR CONCRETE FOUNDATION GRID LINES.
- DIMENSIONS WITHIN DETAILS AND ENLARGED PLANS IDENTIFY FACE OF FINISHES.
- VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN TO CONFIRM COORDINATION WITH ACTUAL FIELD FRAMING CONDITIONS.
- DO NOT SCALE DRAWINGS. USE DIMENSIONS SHOWN ON THE DRAWINGS AND ACTUAL FIELD MEASUREMENTS.

SITE SAFTY

- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO SECURE THE SAFETY OF OCCUPANTS AND WORKERS AT ALL TIMES.
- IT IS THE RESPONCIBILITY OF THE CONTRACTOR TO CONFORM AND COMPLY TO ALL HEALTH AND SAFTY CODES AND ORDINANTES

CHANGE ORDERS

- THE ARCHITECT IS NOT AUTHORIZED TO APPROVE ANY COST INCREASES.
- ALL COST INCREASES FOR ANY REASON MUST BE AUTHORIZED BY THE OWNER PRIOR TO COMMENCING THE WORK REQUIRING THE COST INCREASE.

SHOP DRAWINGS, AND PRODUCT INFORMATION

SUBMITTALS SHOP DRAWINGS AND PRODUCT INFORMATION SUBMITTALS FOR FINAL COORDINATION AND REVIEW, IN ADDITION TO THE MECHANICAL, ELECTRICAL AND PLUMBING APPLIANCES AND EQUIPMENT IS TO BE REVIEWED FOR DESIGN INTENT BY THE ARCHITECT BEFORE PURCHASING. SHOP DRAWINGS ARE TO INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

-COLOR AND/OR MATERIAL SAMPLES OF ALL EXTERIOR AND INTERIOR FINISH COMPONENTS THAT WILL BE VISIBLE

- EXTERIOR AND INTERIOR DOOR AND WINDOW PRODUCT INFORMATION

- DOORS AND WINDOWS ARE TO BE ORDERED BASED ON ACTUAL SITE MEASUREMENT OF ROUGH OPENINGS.

- ARCHITECTS REVIEW OF SHOP DRAWINGS DOES NOT ALLOW FOR PRICE INCREASES

- A CHANGE ORDER IS REQUIRED FOR ANY PRICE INCREASES.

MISSELLANIOUS

- ABBREVIATIONS: THROUGH OUT THE PLAN ARE ABBREVIATIONS WHICH ARE OF COMMON USE. THE ARCHITECT WILL DEFINE THE INTENT OF ANY ABBREVIATIONS IN QUESTION.
- THESE DRAWINGS ARE COPYRIGHTED BY JOSEPH GREIF ARCHITECTS. THEY CAN NOT BE RE-USED, ADDED TO, MODIFIED OR REFERENCED TO WITHOUT THE WRITEN CONSENT OF THE ARCHITECT

VENT, FLASHING AND DRAINAGE

ALL EXTERIOR FLASHING AND COUNTER FLASHING IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSTRUCT TO MAKE WEATHERPROOF IN COOPERATION WITH A WATERPROOFING CONSULTANT

ALL ROOF EAVES AND UNDERSIDE OF ENCLOSED DECKS TO HAVE CONTINUOUS SCREENED VENTING

SPECIFIC WATERPROOFING AND FLASHING NOTES:

PROVIDE GALVANIC INSULATION BETWEEN DISSIMILAR METALS

ALL EXTERIOR WOOD TRIM IS TO BE PRIMED AND PAINTED OR STAINED ALL SIDES

ALL WOOD MEMBERS IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED AND METAL FLASHED WHERE POSSIBLE

USE PLASTIC WOOD AT ANY LOCATION WHERE EARTH COULD MAKE CONTACT WITH FRAMING MATERIALS

INSPECTIONS IN THE WATERPROOFING CONSULTANT SHALL BE (BUT NOT LIMITED TO THE FOLLOWING:

- PRE-CONSTRUCTION REVIEW OF THE COSNTRUCTION DOCUMENTS
- PRE-CONSTRUCTION MEETING ON SITE
- BEFORE FOUNDATION IS BACKFILLED
- BEFORE BASEMENT AND GARAGE SLABS ARE POURED
- BEFORE WINDOWS AND DOORS ARE INSTALLED
- BEFORE ROOFING IS INSTALLED

CODE SPECIFIC DETAILS

GLAZING CODE REQUIREMENTS

SEE A5.2 FOR REFERENCE DETAILS

EGRESS OPENING REQUIREMENTS

SEE A5.2 FOR REFERENCE DETAILS

STAIRS AND RAILINGS

SEE A5.1 FOR REFERENCE DETAILS

SMOKE DETECTORS

SEE A5.1 FOR REFERENCE DETAILS

CARBON MONOXIDE ALARMS

SEE A5.1 FOR REFERENCE DETAILS

GARAGE / DWELLING SEPARATION

SEE A5.3 FOR REFERENCE DETAILS

NOTCHING OF CONSTRUCTION FRAMING

SEE A5.3 FOR REFERENCE DETAIL

PROJECT DIRECTORY

CITY OF MERCER ISLAND
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 DAN WESTLEY - PE | SENIOR ENGINEER

ARBORIST
 ARBOR OPTIONS.LLC
 RYAN RINGE - PRINCIPAL - 206 755 5826 - ryan@arboroptions.com

PROJECT INFORMATION

PROJECT ADDRESS
 5236 WEST MERCER WAY, MERCER ISLAND, WA 98125

OWNER
 ED MILLS 8430 SE 53RD PL, MERCER ISLAND

PROJECT DESCRIPTION
 CONSTRUCTION OF NEW SINGLE FAMILY HOUSE ON AN UNDEVELOPED LOT WITH STEEPSLOPS AND WETLANDS

LEGAL DESCRIPTION
 LOT 4A OF THE REVISED MILLS LOT LINE REVISION. PORTION OF : NW ¼, SW ¼, NW ¼. SECTION 19, T, 24N, R S E W M

PARCEL NUMBER: 192405-9324
ZONING: R-15

PROJECT LOCATION MAP



VICINITY MAP SCALE: NTS

PROJECT DRAWING INDEX

GENERAL INFORMATION	A1.3d 2ND LV OUTLETS	CIVIL
A0.0 CITY COVER SHEET	A1.3e ROOF OUTLETS	C0.0 COVER SHEET
A0.1 PROJECT NOTES, INFORMATION, INDEX	A1.4a BASEMENT FINISH FLOOR PLAN	C0.1 EXISTING CONDITION
A0.2 WSEC & VENTILATION	A1.4b MAIN LV FINISH FLOOR PLAN	C1.0 TESC PLAN
A0.3 SITE SURVEY	A1.4c 1ST LV FINISH FLOOR	C1.1 TESC DETAILS
A0.4 ARBORIST PLAN	A1.4d 2ND LV FINISH FLOOR	C2.0 ROAD, GRADING, STORM & UTILITY PLAN
W1 WETLAND I	A1.4e ROOF LEVEL FINISH FLOOR	C2.1 STORM DRAINAGE DETAILS
W2 WETLAND II	A1.5a BASEMENT MECHANICAL PLAN	C2.2 STORM DRAINAGE DETAILS
W3 WETLAND III	A1.5b MAIN LV MECHANICAL PLAN	C2.3 SANITARY SIDE SEWER DETAILS
ARCHITECTURAL	A1.5c 1ST LV MECHANICAL PLAN	C2.4 WATER DETAILS
A.1 PLAN SHEETS	A1.5d 2ND LV MECHANICAL PLAN	STRUCTURAL
A1.0 SITE PLAN	A1.5e ROOF LV MECHANICAL PLAN	S.1 GENERAL STRUCTURE NOTES
A1.0a AVERAGE BUILDING ELEVATION	A.2 BUILDING SECTIONS	S.2 FOUNDATION PLAN & SECTIONS
A1.0b BUILDING AREA	A2.1 SOUTH SECTION	S.3 MAIN FLOOR STRUCTURE
A1.0c LOT COVERAGE AREA	A2.2 STAIR SECTION	S.4 FIRST FLOOR STRUCTURE
A.1.1 FLOOR PLAN KEY PLANS	A2.3 NORTH SECTION	S.5 SECOND FLOOR STRUCTURE
A1.1a BASEMENT LV FRAMING PLAN	A2.4 WEST SECTION	S.6 ROOF FLOOR STRUCTURE
A1.1b MAIN LV FRAMING PLAN	A2.5 EAST SECTION	S.7 ROOF STRUCTURE
A1.1c 1ST LV FRAMING PLAN	A2.6 WALL SECTIONS	S.8 SHEAR WALLS
A1.1d 2ND LV FRAMING PLAN	A.3 BUILDING ELEVATION	S.9 CONNECTION DETAILS, ROOF DIAPHRAGM
A1.1e ROOF LEVEL FRAMING PLAN	A3.1 WEST ELEVATION	
A1.1f ROOF PLAN	A3.2 SOUTH ELEVATION	
A1.2a BASEMENT REFLECTED CLG PLAN	A3.3 NORTH ELEVATION	
A1.2b MAIN LV REFLECTED CLG PLAN	A3.4 EAST ELEVATION	
A1.2c 1ST LV CEILING PLAN	A.4 DR & WND SCHDS & DETAILS	
A1.2d 2ND LV CEILING PLAN	A4.1 GLAZING SCHEDULE	
A1.2e ROOF LEVEL CEILING PLAN	A.5 CODE REFERENCE SHEETS	
A1.3a BASEMENT OUTLETS	A5.1 CODE COMPLIANCE FRAMING	
A1.3b MAIN LV OUTLETS	A5.2 STAIR & GLAZING GENERAL CODE REFERENCE	
A1.3c 1ST LV OUTLETS		

STRUCTURAL SHORING AND PILING

S-0 COVER SHEET
 S-1 STRUCTURAL GENERAL NOTES
 S-2 SHORING AND TEMPORARY EXCAVATION PLAN
 S-3 SOLID PILE SECTION AND SCHEDULE

SUPPLEMENTAL DOCUMENTS

- CITY OF MERCER ISLAND BUILDING PERMIT APPLICATION
- SITE DEVELOPMENT WORKSHEET
- GEOTECHNICAL REPORT
- ENERGY CODE INFORMATION SHEET
- STRUCTURAL CALCULATION
- STORM DRAINAGE REPORT
- WATER SIZING WORKSHEET
- FIRE AREA SQUARE FOOTAGE CALCULATION WORKSHEET

PRESCRIPTIVE ENERGY CODE COMPLIANCE FOR CLIMATE ZONE MARINE 4									
COMPONENT	Fenestration		Ceiling w/ Attic	Vaulted Ceiling	Wood Framed Wall (int)	Mass Wall (Above Grade)	Below-Grade Wall	Framed Floor	Slab R-Value & Depth
	Vertical	Overhead							
PRESCRIPTIVE VALUE	U 0.30 max. U 0.25*	U 0.50 max.	R-49 min.	R-38 min.	R-21 min.	R-21 min.	R-10/15/21 int. + TB R-21*	R-30 min. R-38*	R-10 min.- 2' R-10 under whole slab *

*SEE BELOW: 2015 WSCE - TABLE R406.2 (1b)

Whole House Ventilation (Prescriptive)
Please check the appropriate box to describe which of the four prescriptive Whole House Ventilation Systems you will be using AND fill in the required whole house ventilation rate in CFM's. (See "2015 Residential Whole House Ventilation Rate" Handout.) A complete system required by one of the sections noted below must be specified on the drawings.

WHOLE HOUSE VENTILATION METHOD	Whole House Ventilation Rate
<input type="checkbox"/> Intermittent Whole House Ventilation Using Exhaust Fans & Fresh Air Inlets. (IRC M1507.3.4)	
<input checked="" type="checkbox"/> Intermittent Whole House Ventilation Integrated with a Forced Air System. (IRC M1507.3.5)	120
<input type="checkbox"/> Intermittent Whole House Ventilation using a Supply Fan. (IRC M1507.3.6)	
<input type="checkbox"/> Intermittent Whole House Ventilation Using a Heat Recovery Ventilation System (IRC M1507.3.7)	

Source Specific Exhaust Ventilation & Fan Efficiency
Required in each kitchen, bathroom, water closet compartment, laundry room, indoor swimming pool, spa and other rooms where water vapor or cooking odor is produced. (IRC M 1507.4) Fan efficiency from WAC 51-11R – Table R403.6.1. Kitchen Hoods greater than 400 cfm require makeup air per IRC M1503.4

Minimum Source Specific Ventilation Capacity Requirements			
	Bathrooms – Utility Rooms	Kitchens	In-line fan
Intermittently operating	50 cfm min	100 cfm min	
Continuous operation	20 cfm min	25 cfm min	
Minimum Efficacy (cfm/watt)	1.4 cfm/watt if <90cfm	2.8 cfm/watt if >90cfm	2.8 cfm/watt

Energy Efficiency Credits
Each dwelling unit shall comply with sufficient options from WSEC Table R406.2 so as to achieve the following minimum number of credits as described on the reverse side of this page.

<input type="checkbox"/> Small Dwelling Unit: 1.5 credits (Dwelling units less than 1500 SF in conditioned floor area with less than 300 square feet of fenestration area. Additions to existing building that are greater than 500 SF of heated floor area, but less than 1500 SF. TOTAL SQUARE FEET OF FENESTRATION: _____ (doors, windows, skylights))
<input type="checkbox"/> Medium Dwelling Unit: 3.5 credits (All dwelling units not included in #1 or #3. Exception: Dwelling units serving R-2 occupancies shall require 2.5 credits.)
<input checked="" type="checkbox"/> Large Dwelling Unit: 4.5 credits (Dwelling Units exceeding 5000 SF of conditioned floor area.)
<input type="checkbox"/> Additions less than 500 SF: 0.5 credits

S:\DSG\FORMS\2017\Building\2015_WSEC_IRC_Ventilation.pdf

2015 WSCE - TABLE R406.2

1b	EFFICIENT BUILDING ENVELOPE 1b: Vertical fenestration U = 0.25 Wall R-21 plus R-4 Floor R-38 Basement wall R-21 int plus R-5 ci Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab. OR Compliance based on Section R402.1.4: Reduce the Total UA by 15%.	1.0
2c	AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2c: Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 1.5air changes per hour maximum. AND All whole house ventilation requirements as determined by Section M1507.3 of the <i>International Residential Code</i> shall be met with a heat recovery ventilationsystem with minimum sensible heat recovery efficiency of 0.85. <i>To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.</i>	1.5
3a	HIGH EFFICIENCY HVAC EQUIPMENT 3a: Gas, propane or oil-fired furnace with minimum AFUE of 94%, or Gas, propane or oil-fired boiler with minimum AFUE of 92%. Projects may only include credit from one space heating option, 3a, 3b, 3c or 3d. When a housing unit has two pieces of equipment (i.e., two furnaces) both must meet the standard to receive the credit. <i>To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.</i>	1.0
5b	EFFICIENT WATER HEATING 5b: Water heating system shall include one of the following: Gas, propane or oil water heater with a minimum EF of 0.74 OR Water heater heated by ground source heat pump meeting the requirements of Option 3c. OR For R-2 occupancy, a central heat pump water heater with an EF greater than 2.0that would supply DHW to all the units through a ceiling minimum pipe insulation. <i>To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency.</i>	1.0

GLAZING SCHEDULE

SEE A4.1 FOR DETAILS

TABLE M1507.3.3

Continuous Whole-House Mechanical Ventilation System Airflow Rate Requirements

Dwelling Unit Floor Area (square feet)	NUMBER OF BEDROOMS				
	0 - 1	2 - 3	4 - 5	6 - 7	> 7
	Airflow in CFM				
< 1,500	30	45	60	75	90
1,501 - 3,000	45	60	75	90	105
3,001 - 4,500	60	75	90	105	120
4,501 - 6,000	75	90	105	120	135
6,001 - 7,500	90	105	135	150	150
> 7,501	105	120	135	150	165

FIRE SPRINKLERS

FIRE SPRINKLERS ARE REQUIRED FOR THIS PROJECT
THEY ARE TO BE DESIGN UNDER SEPARATE PERMIT

SUBMIT SHOP DRAWINGS SHOWING PROPOSED LAYOUT OF
FIXTURE HEAD LOCATIONS AND CONTROLS FOR
ARCHITECTURAL REVIEW AND DESIGN COORDINATION

SECTION M1507 - MECHANICAL VENTILATION

M1507.3.5 WHOLE-HOUSE VENTILATION INTEGRATED WITH A FORCED-AIR SYSTEM. THIS SECTION ESTABLISHES MINIMUM PRESCRIPTIVE REQUIREMENTS FOR WHOLE-HOUSE VENTILATION SYSTEMS INTEGRATED WITH FORCED-AIR VENTILATION SYSTEMS. A SYSTEM WHICH MEETS ALL THE REQUIREMENTS OF THIS SECTION SHALL BE DEEMED TO SATISFY THE REQUIREMENTS FOR A WHOLE-HOUSE VENTILATION SYSTEM.

M1507.3.5.1 INTEGRATED WHOLE-HOUSE VENTILATION SYSTEMS. INTEGRATED WHOLE-HOUSE VENTILATION SYSTEMS SHALL PROVIDE OUTDOOR AIR AT THE RATE CALCULATED USING SECTION M1507.3.3. INTEGRATED FORCED-AIR VENTILATION SYSTEMS SHALL DISTRIBUTE OUTDOOR AIR TO EACH HABITABLE SPACE THROUGH THE FORCED-AIR SYSTEM DUCTS. INTEGRATED FORCED-AIR VENTILATION SYSTEMS SHALL HAVE AN OUTDOOR AIR INLET DUCT CONNECTING A TERMINAL ELEMENT ON THE OUTSIDE OF THE BUILDING TO THE RETURN AIR PLENUM OF THE FORCED-AIR SYSTEM, AT A POINT WITHIN 4 FEET UPSTREAM OF THE AIR HANDLER. THE OUTDOOR AIR INLET DUCT CONNECTION TO THE RETURN AIR STREAM SHALL BE LOCATED UPSTREAM OF THE FORCED-AIR SYSTEM BLOWER AND SHALL NOT BE CONNECTED DIRECTLY INTO A FURNACE CABINET TO PREVENT THERMAL SHOCK TO THE HEAT EXCHANGER. THE SYSTEM WILL BE EQUIPPED WITH A MOTORIZED DAMPER CONNECTED TO THE AUTOMATIC VENTILATION CONTROL AS SPECIFIED IN SECTION M1507.3.2. THE REQUIRED FLOW RATE SHALL BE VERIFIED BY FIELD TESTING WITH A FLOW HOOD OR A FLOW MEASURING STATION.

M1507.3.5.2 VENTILATION DUCT INSULATION. ALL SUPPLY DUCTS IN THE CONDITIONED SPACE SHALL BE INSULATED TO A MINIMUM OF R-4.

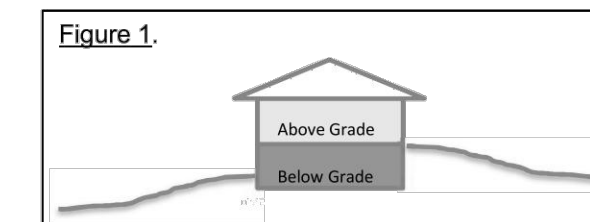
M1507.3.5.3 OUTDOOR AIR INLETS. INLETS SHALL BE SCREENED OR OTHERWISE PROTECTED FROM ENTRY BY LEAVES OR OTHER MATERIAL. OUTDOOR AIR INLETS SHALL BE LOCATED SO AS NOT TO TAKE AIR FROM THE FOLLOWING AREAS:

- CLOSER THAN 10 FEET FROM AN APPLIANCE VENT OUTLET, UNLESS SUCH VENT OUTLET IS 3 FEET ABOVE THE OUTDOOR AIR INLET.
- WHERE IT WILL PICK UP OBJECTIONABLE ODORS, FUMES OR FLAMMABLE VAPORS.
- A HAZARDOUS OR UNSANITARY LOCATION.
- A ROOM OR SPACE HAVING ANY FUEL-BURNING APPLIANCES THEREIN.
- CLOSER THAN 10 FEET FROM A VENT OPENING OF A PLUMBING DRAINAGE SYSTEM UNLESS THE VENT OPENING IS AT LEAST 3 FEET ABOVE THE AIR INLET.
- ATTIC, CRAWL SPACES, OR GARAGES.

SIMPLE HEATING SYSTEM SIZE: WASHINGTON STATE

Simple Heating System Size: Washington State
This heating system sizing calculator is based on the Prescriptive Requirements of the 2015 Washington State Energy Code (WSEC) and ACCA Manuals J and S. This calculator will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling loads.
The glazing (window) and door portion of this calculator assumes the installed glazing and door products have an area weighted average U-factor of 0.30. The incorporated insulation requirements are the minimum prescriptive amounts specified by the 2015 WSEC. Please fill out all of the green drop-downs and boxes that are applicable to your project. As you make selections in the drop-downs for each section, some values will be calculated for you. If you do not see the selection you need in the drop-down options, please call the WSU Energy Extension Program at (360) 956-2042 for assistance.

Project Information 5236 W MERCER WAY, SEATTLE 98125	Contact Information JOSEPH GREIF (206 633 3735)
Heating System Type: <input checked="" type="radio"/> All Other Systems <input type="radio"/> Heat Pump	
To see detailed instructions for each section, place your cursor on the word "Instructions".	
Design Temperature Instructions: Mercer Island	Design Temperature Difference (ΔT) ΔT = Indoor (70 degrees) - Outdoor Design Temp 45
Area of Building Conditioned Floor Area Instructions: Conditioned Floor Area (sq ft)	6,285
Average Ceiling Height Instructions: Average Ceiling Height (ft)	8.5 Conditioned Volume 53,423
Glazing and Doors Instructions:	U-Factor X Area = UA 0.30 X 1,578 = 473.40
Skylights Instructions:	U-Factor X Area = UA 0.50 X 0 = ---
Insulation Attic Instructions: R-49	U-Factor X Area = UA 0.026 X 2,130 = 55.38
Single Rafter or Joist Vaulted Ceilings Instructions: R-38 Vaulted	U-Factor X Area = UA 0.027 X 170 = 4.59
Above Grade Walls (see Figure 1) Instructions: R-21 Intermediate	U-Factor X Area = UA 0.056 X 3,675 = 205.77
Floors Instructions: R-30	U-Factor X Area = UA 0.029 X 836 = 24.24
Below Grade Walls (see Figure 1) Instructions: R-21 Interior	U-Factor X Area = UA 0.042 X 1,848 = 77.62
Slab Below Grade (see Figure 1) Instructions: R-5 Thermal Break at slab edge	F-Factor X Length = UA 0.570 X 1,521 = 866.97
Slab on Grade (see Figure 1) Instructions: Select R-Value	F-Factor X Length = UA No selection = ---
Location of Ducts Instructions: Unconditioned Space	Duct Leakage Coefficient 1.10



Sum of UA	1707.97
Envelope Heat Load Sum of UA X ΔT	76,859 Btu / Hour
Air Leakage Heat Load Volume X 0.6 X ΔT X 0.018	25,963 Btu / Hour
Building Design Heat Load Air Leakage + Envelope Heat Loss	102,822 Btu / Hour
Building and Duct Heat Load Ducts in unconditioned space: Sum of Building Heat Loss X 1.10 Ducts in conditioned space: Sum of Building Heat Loss X 1	113,104 Btu / Hour
Maximum Heat Equipment Output Building and Duct Heat Loss X 1.40 For Forced Air Furnace Building and Duct Heat Loss X 1.25 For Heat Pump	158,346 Btu / Hour



JOSEPH GREIF ARCHITETS
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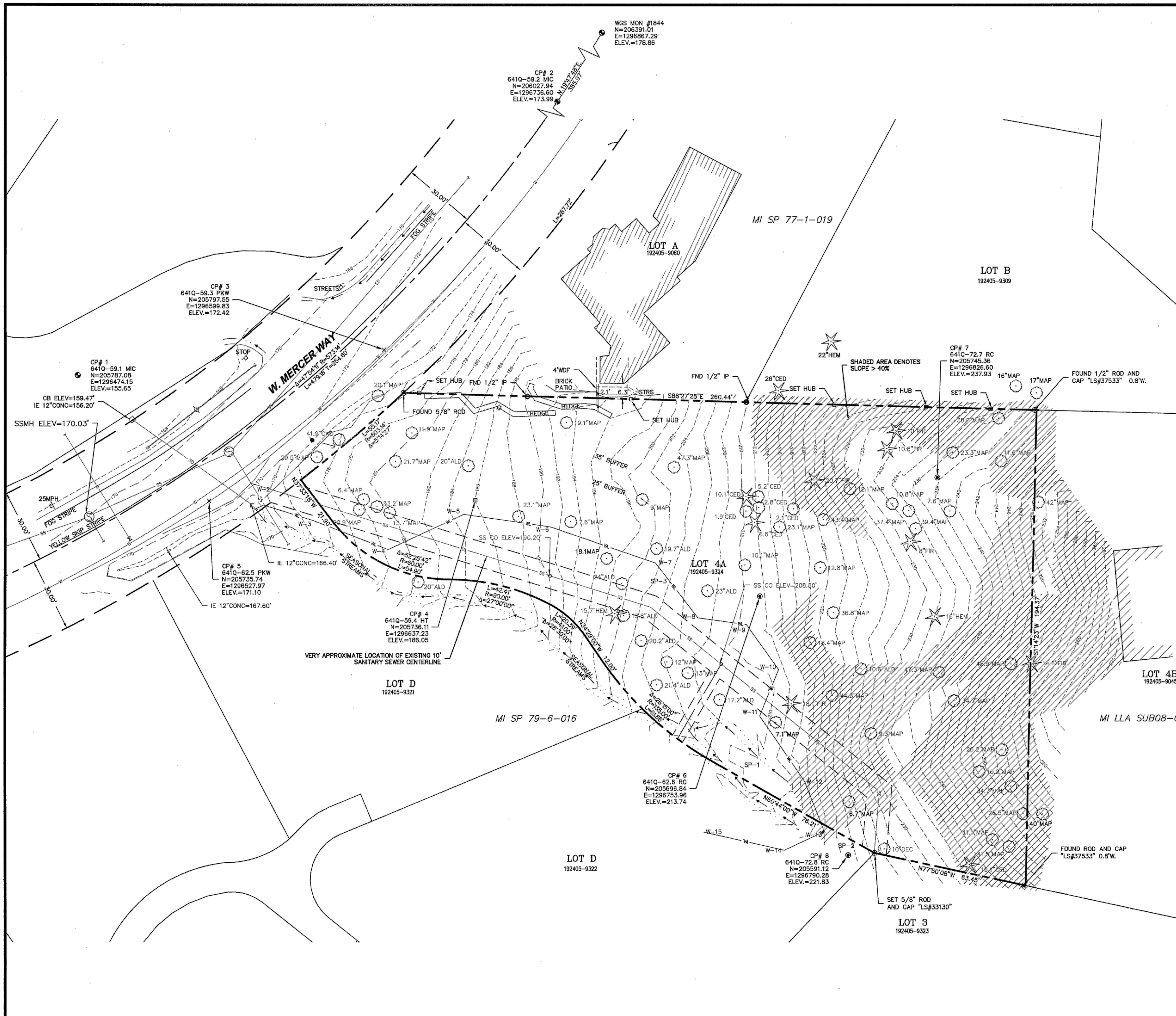
PERMIT SET

MERCER ISLAND RESIDENCE
5236 W MERCER WAY
MERCER ISLAND, WA 98125

GENERAL INFORMATION
ENERGY CODE COMPLIANCE

SHEET NO.

A0.2

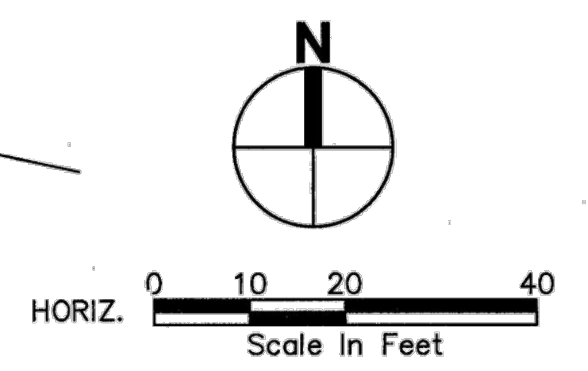


RECORD LEGAL DESCRIPTION:
 LOT 4A OF THE REVISED MILLS LOT LINE REVISION.

REFERENCES:
 REVISED MILLS LOT LINE REVISION, MI LLA #SUB08-003, VOL. 265, PG. 020.
 AF#2009071090001

- LEGEND**
- WATER VALVE
 - HYDRANT
 - SOIL TEST PIT
 - WETLAND FLAG
 - WATER METER
 - MANHOLES (SS/SD)
 - CB
 - POWER/UTILITY POLE
 - CLY ANCHOR
 - POWER TRANSFORMER
 - POWER/TELEPHONE VAULT
 - POWER METER
 - TELEPHONE/TV RISER
 - GAS VALVE
 - JUNCTION BOX
 - GAS METER
 - STREET LIGHT
 - LUMINAIRE
 - SPOT ELEVATION
 - SIGN
 - MAILBOX
 - ROCKERY
 - CONFEROUS TREE
 - DECIDUOUS TREE
 - CASED MONUMENT
 - MAGNETIC NAIL W/ WASHER
 - REBAR AND CAP
 - HUB AND TACK
- CENTER LINES
 PROPERTY LINES
 RIGHT-OF-WAY LINES
 LOT LINES
 DITCH LINE
 FLOW LINE
 WATER LINE
 SANITARY SEWER LINE
 STORM DRAIN LINE
 GAS LINE
 UNDERGROUND POWER LINES
 UNDERGROUND TELEPHONE LINES
 UNDERGROUND CABLE TV LINES
 UNDERGROUND FIBER OPTIC LINES
 OVERHEAD UTILITY LINES
 CHAIN LINK FENCE
 WIRE FENCE
 WOOD FENCE
- SHADED AREA DENOTES SLOPE > 40%

NOTES:
 HORIZONTAL DATUM: NAD 1983/91 BASED ON FOUND MONUMENTS IN WEST MERCER WAY.
 VERTICAL DATUM: NAVD 88 BASED ON FOUND MONUMENTS IN WEST MERCER WAY.
 SITE AREA: 37,350 SQUARE FEET, MORE OR LESS.
 ALL DISTANCES SHOWN ARE GROUND DISTANCES UNLESS OTHERWISE NOTED.
 THE LOCATION AND DESCRIPTION OF ALL SURVEY MARKERS SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS TAKEN IN APRIL, 2017, UNLESS OTHERWISE INDICATED.
 WORK PERFORMED IN CONJUNCTION WITH THIS SURVEY UTILIZED THE FOLLOWING EQUIPMENT AND PROCEDURES: (A) 1" TRIMBLE S6 SERIES ELECTRONIC TOTAL STATION, MAINTAINED TO THE MANUFACTURER'S SPECIFICATIONS PER W.A.C. 332-130-100. (B) FIELD TRAVERSE, EXCEEDING REQUIREMENTS SET FORTH IN W.A.C. 332-130-090.
 THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT AND DOES NOT PURPORT TO SHOW ALL EASEMENTS.
 THIS TOPOGRAPHIC SURVEY DRAWING ACCURATELY PRESENTS SURFACE FEATURES LOCATED DURING THE COURSE OF THIS SURVEY. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED SOLELY UPON INFORMATION PROVIDED BY OTHERS AND PACE ENGINEERS, INC. DOES NOT ACCEPT RESPONSIBILITY OR ASSUME LIABILITY FOR THEIR ACCURACY OR COMPLETENESS. CONTRACTOR/ENGINEERS SHALL VERIFY EXACT SIZE AND LOCATION PRIOR TO CONSTRUCTION.
 CALL FOR LOCATE: UTILITY LOCATION SERVICE: 811



CALL BEFORE
 YOU DIG 811
 UNDERGROUND SERVICE (USA)

DATE	
SYM	
REVISION	
5236 W MERCER WAY SINGLE FAMILY RESIDENCE EXISTING CONDITIONS	
SCALE: AS SHOWN	DATE: 10/10/17
DESIGNED BY: DW	CHECKED BY: JS
JOB NUMBER: 17387	SHEET: C0.1
SHEET 2 OF 10	

GENERAL INFORMATION
 SITE SURVEY

A0.3

SEE CIVIL SHEET C0.2
FOR ARBORIST & TREE
INFORMATION

SHEET NO. _____

A0.4

GENERAL INFORMATION
ARBORIST PLAN
TREES INFO

MERCER ISLAND RESIDENCE
5236 W MERCER WAY
MERCER ISLAND, WA 98125

PERMIT
SET

REVISIONS:
△ DATE: APRIL 2018
△ DATE:

PLOT DATE: MAY-2018
DRAWN BY: JA, JG
PURPOSE: PERMIT
PROJ. NO: 2017_MILLS
CHECKED BY: JG

JOSEPH GREIF ARCHITETS
921 NE Boat Street, Seattle, WA 98105
www.greifarchitects.com
T: 206 633 4293
F: 206 633 3735



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MILLS SINGLE FAMILY RESIDENTIAL (SFR)

PROJECT INFORMATION

PROJECT NAME:
MILLS SINGLE FAMILY RESIDENCE
TAX PARCEL NUMBER:
192405-9324

PROPERTY OWNER:
ED MILLS
8430 53RD PL
MERCER ISLAND
APPLICANT:
JOSEPH GREIF
921 NE BOAT STREET
SEATTLE, WA 98105
(206) 465-4201

ARBORIST:
ARBOR OPTIONS, LLC
RYAN RINGE
(206) 755-5826
RYAN@ARBOROPTIONS.COM
GEOTECHNICAL ENGINEER:
PAN GEO, INC.
JON REHKOFF, P.E.
3213 EASTLAKE AVENUE EAST, SUITE B
SEATTLE, WA 98102
(206) 262-0370

SITE ADDRESS:
5236 WEST MERCER WAY
MERCER ISLAND, WA 98040
SITE AREA:
15,682 SQUARE FEET / 0.36 ACRES

CIVIL ENGINEER:
PACE ENGINEERS
DAN WESTLEY, P.E.
11255 KIRKLAND WAY, SUITE 300
KIRKLAND, WA 98033
(425) 827-2014

PROFESSIONAL WETLAND SCIENTIST:
PACE ENGINEERS, INC.
ROBERT KNABLE
11255 KIRKLAND WAY, SUITE 300
KIRKLAND, WA 98033
(425) 827-2014

JURISDICTION:
CITY OF MERCER ISLAND
AREA CALCULATIONS:

ONSITE WETLAND AREA = 6,806 SF
ONSITE 35-FOOT WETLAND BUFFER AREA = 11,315 SF
ONSITE 25-FOOT WETLAND BUFFER AREA = 7,911 SF

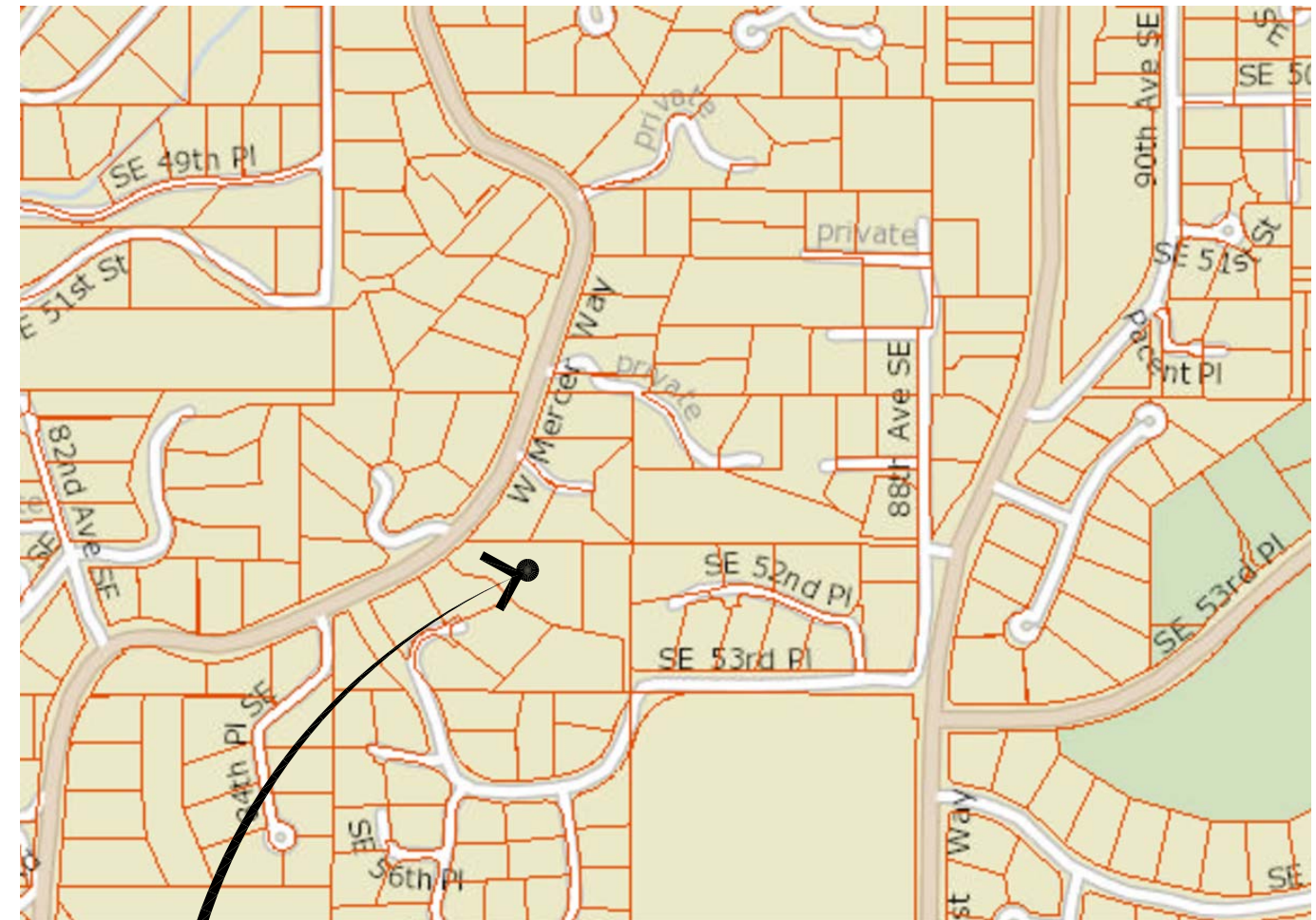
PURPOSE OF MITIGATION IS TO IMPROVE FUNCTIONS AND VALUES OF WETLAND AND WETLAND BUFFER.

SHEET INDEX:
W1.0 WETLAND MITIGATION PLAN WEST
W2.0 WETLAND MITIGATION PLAN EAST
W3.0 MITIGATION NOTES AND DETAILS

WETLAND LEGEND

- WL WETLAND BOUNDARY
- W-# WETLAND FLAG #
- WETLAND FLAG
- WETLAND
- WETLAND BUFFER ADDITION AREA
- WETLAND BUFFER SUBTRACTION AREA
- PROPOSED PERMANENT SPLIT RAIL FENCE
- PROPOSED TEMPORARY ORANGE CHECKERED NOPE FENCE AND TEMP. BLACK SILT FENCE
- SP-# SAMPLE POINT FLAG #
- EXISTING EVERGREEN TREE
- EXISTING DECIDUOUS TREE
- MAP: DEC. DECIDUOUS TREE, ALD. ALDER TREE, CON. CONIFER TREE, XX PROPOSED TREE OR SHRUB

Call 2 Working Days Before You Dig
1-800-424-5555
Utilities Underground Location Center (ID, MT, ND, OR, WA)
SAFETY PRECAUTION SHALL BE IMPLEMENTED BY CONTRACTORS AT ALL TRENCHING IN ACCORDANCE WITH CURRENT OSHA STANDARDS
ELECTRIC-RED SEWER-GREEN GASOL-YELLOW SURVEY-PINK TELECOM-ORANGE PROPOSED-WHITE WATER-BLUE



VICINITY MAP SCALE: NTS

"NO NET LOSS" TABLE (ONSITE AREAS ONLY FOR 35-FOOT BUFFER)

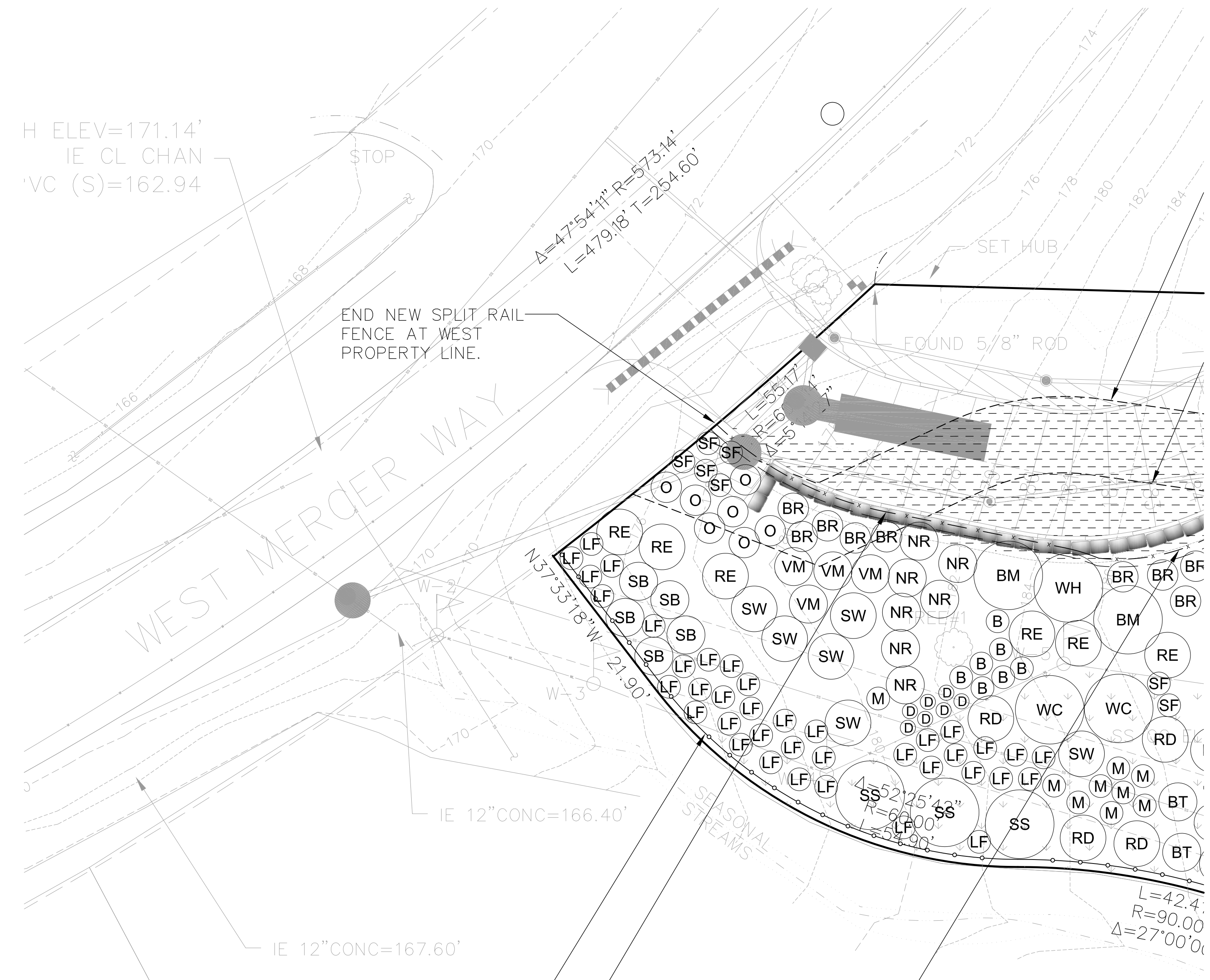
WETLAND AREA = 6,806 SF
WETLAND 35-FOOT BUFFER AREA = 11,315 SF
PROPOSED WETLAND BUFFER SUBTRACTION AREA = 4,005 SF
PROPOSED WETLAND BUFFER AREA = 7,310 SF (WITH SUBTRACTION)
PROPOSED WETLAND BUFFER ADDITION AREA = 2,004 SF
PROPOSED WETLAND BUFFER AREA = 9,314 SF (WITH ADDITION)
PROPOSED NET REDUCTION AREA IN WETLAND BUFFER = 2,001 SF

MERCER ISLAND CODE 19.07 DOES NOT HAVE SPECIFIC MITIGATION CRITERIA FOR RESTORATION, BUT MI CODE CITES "NO NET LOSS".

"NO NET LOSS" = AN ECOLOGICAL CONCEPT WHEREBY CONSERVATION LOSSES IN ONE GEOGRAPHIC OR OTHERWISE DEFINED AREA ARE EQUALED BY CONSERVATION GAINS IN FUNCTION IN ANOTHER AREA. BECAUSE MI CODE DOES NOT HAVE SPECIFIC MITIGATION RATIOS, KING COUNTY CODE 21A.24.340 WAS FOLLOWED FOR MITIGATION RATIOS, WHICH ARE:

WETLAND BUFFER RESTORATION AT 1:1 RATIO
ENTIRE WETLAND BUFFER AREA OF 7,310 SF IS PROPOSED TO BE RESTORED
WETLAND RESTORATION AT 1:1 RATIO
ALMOST ENTIRE WETLAND AREA OF 6,806 SF IS PROPOSED TO BE RESTORED
TOTAL RESTORATION AREA = 14,116 SF
RESTORATION OF BUFFER AND WETLAND (14,116 SF) > DECREASE IN WETLAND BUFFER (2,001 SF)

THUS, "NO NET LOSS" REQUIREMENT IS MET.



SURVEYOR SHALL STAKE SOUTH PROPERTY LINE. CONTRACTOR SHALL PLACE CHECKERED ORANGE NGPE FENCE ALONG SOUTH PROPERTY LINE. FENCE SYMBOL IS SHOWN 1' AWAY FOR CLARITY ON THIS DRAWING.

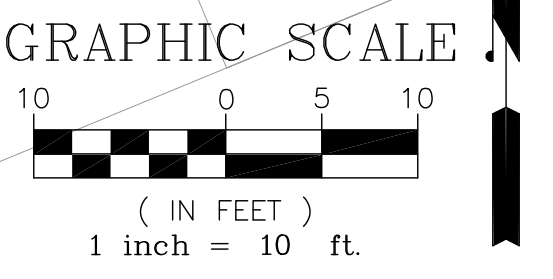
INSTALL TEMP. CHECKERED OF NGPE FENCE APPROX. WHERE OR ON PROPERTY LINE. BEHIN ORANGE FENCE, INSTALL BLAC FENCE.

INSTALL CRITICAL AREA SIGNS (PER DETAIL ON SHEET W3.0) ALONG SPLIT RAIL FENCE EVERY 100'.

REMOVE ALL INVASIVE VEGETA INSIDE WETLAND BUFFER WHICH INCLUDES ENGLISH IVY AND H BLACKBERRY. SEE NOTES ON W1.0.

INSTALL PERMANENT SPLIT RAIL FENCE (PER DETAIL ON SHEET W3.0) APPROX. WHERE SHOWN FROM SITE'S WEST PROPERTY LINE TO THE SITE'S SOUTH PROPERTY LINE.

SAME SPECIES AS EXISTING N VEGETATION IN THE WETLAND CAN REMAIN. THIS INCLUDES ALDER, SALMONBERRY, INDIAN BIG LEAF MAPLE AND SWORD



WETLAND MITIGATION PLAN WEST

SPECIAL NOTES:

- TREE DATA FOR EXISTING TREES IS SHOWN ON THE TOPOGRAPHICAL AND BOUNDARY SURVEY PROVIDED BY OTHERS.
- 35' WETLAND BUFFER WAS USED FOR PURPOSES OF CALCULATING REQUIRED MITIGATION.

INVASIVE REMOVAL NOTES:

BEFORE INSTALLING PLANTINGS FOR RESTORATION AREAS, TAKE NOTE OF ANY INVASIVE WEED SPECIES FOUND ON-SITE. CONTROL OF THESE SPECIES IS VERY IMPORTANT IN RESTORATION AREAS IN ORDER TO ALLOW FOR THE SUCCESSFUL ESTABLISHMENT OF PLANTINGS THAT MIGHT OTHERWISE HAVE DIFFICULTY COMPETING WITH THESE AGGRESSIVE PLANTS.

WHERE ENCOUNTERED, INVASIVE WEEDS SHOULD BE REMOVED MANUALLY WITHOUT THE USE OF PESTICIDE (INCLUDES HERBICIDE), EXCEPT IN RARE CASES WHEN APPLIED BY A STATE LICENSED PESTICIDE APPLICATOR. MANUAL REMOVAL CAN BE ACCOMPLISHED BY GRUBBING OUT PLANTS AND ROOTS ENTIRELY (INCLUDING SEED PODS, FRUITS AND LEAVES) WITHOUT SIMULTANEOUSLY SPREADING MORE SEEDS. THE IDEAL TIME FOR REMOVAL IS PRIOR TO FLOWERING IN SPRING OR SUMMER. IF REMOVAL IS TO OCCUR AFTER FLOWERING, IT IS RECOMMENDED THAT FLOWERS BE CUT OFF AND DISPOSED OF PRIOR TO GRUBBING. GRUBBED OUT MATERIALS SHOULD BE DISPOSED OF OFF-SITE IMMEDIATELY, SINCE MANY OF THESE SPECIES ARE STILL CAPABLE OF PROPAGATING POST-REMOVAL. DO NOT USE WEED MATERIALS FOR MULCH AND DO NOT PUT INTO COMPOST OR YARD WASTE BINS.

ONCE THE INVASIVE SPECIES HAVE BEEN REMOVED, YOU CAN ASSESS SITE SOIL QUALITY. CERTAIN INVASIVE SPECIES SUCH AS SCOTCH BROOM DISPERSES THOUSANDS OF SEEDS PER PLANT. IN EXTREME CASES, TOPSOIL REMOVAL MAY BE NECESSARY TO EVACUATE THE INVASIVE SEED BANK. DENSE NATIVE PLANTING IS RECOMMENDED AND HAS PROVEN SUCCESSFUL AT PREVENTING WEEDY AND/OR INVASIVE SPECIES FROM REEMERGING.

PLANT MATERIALS FOR WETLAND AND WETLAND BUFFER RESTORATION

SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	TOTAL NUMBER	STRATUM	SPACING ON CENTER	MAX HEIGHT	SITE PLACEMENT	LIGHT NEEDS
BM	BIG LEAF MAPLE	ACER MACROPHYLLUM	2 GAL	5	TREE	9'	100'	DRIER BUFFER	SHADE TOLERANT
SP	SHORE PINE	PINUS CONTORTA	2 GAL	1	TREE	9'	60'	WETTER BUFFER	HIGHLY ADAPTABLE
PY	PACIFIC YEW	TAXUS BREVIFOLIA	2 GAL	1	TREE	9'	80'	WETTER BUFFER	SHADE TOLERANT
SS	SITKA SPRUCE	PICEA SITCHENSIS	2 GAL	7	TREE	9'	230'	SATURATED SOILS	SHADE INTOLERANT
WC	WESTERN RED CEDAR	THUJA PLICATA	2 GAL	13	TREE	9'	230'	SATURATED SOILS	SHADE DEPENDENT
WH	WESTERN HEMLOCK	TSUGA HETEROPHYLLA	2 GAL	7	TREE	9'	200'	DRIER BUFFER	SHADE DEPENDENT
PW	PACIFIC WILLOW	SALIX LASIANDRA	2 GAL	3	TREE	9'	50'	SATURATED SOILS	HIGHLY ADAPTABLE
SW	SITKA WILLOW	SALIX SITCHENSIS	2 GAL	11	SHRUB	6'	20'	SATURATED SOILS	SHADE TOLERANT
RD	RED-OSIER DOGWOOD	CORNUS STOLONIFERA	2 GAL	31	SHRUB	6'	20'	SATURATED SOILS	SHADE TOLERANT
VM	VINE MAPLE	ACER CIRCINATUM	2 GAL	8	SHRUB	5'	25'	WETTER BUFFER	SHADE DEPENDENT
SB	SALMONBERRY	RUBUS SPECTABILIS	2 GAL	44	SHRUB	5'	15'	WETTER BUFFER	HIGHLY ADAPTABLE
RE	RED ELDERBERRY	SAMBUCUS RACEMOSA	2 GAL	16	SHRUB	6'	20'	WETTER BUFFER	HIGHLY ADAPTABLE
IP	INDIAN PLUM	OEMLERIA CERASIFORMIS	2 GAL	15	SHRUB	6'	15'	DRIER BUFFER	SHADE DEPENDENT
NR	NOOTKA ROSE	ROSA NUTKANA	2 GAL	7	SHRUB	5'	10'	WETTER BUFFER	SHADE TOLERANT
BT	BLACK TWINBERRY	LONICERA INVOLUCRATA	2 GAL	26	SHRUB	5'	10'	SATURATED SOILS	SHADE TOLERANT
BR	BALD-HIP ROSE	ROSA GYMNOCARPA	2 GAL	13	SHRUB	4'	7'	DRIER BUFFER	SHADE TOLERANT
O	SHORT OREGON GRAPE	BERBERIS NERVOSA	2 GAL	49	SHRUB	4'	4'	DRIER BUFFER	SHADE TOLERANT
BF	WESTERN SWORD FERN	POLYSTICHUM MUNITUM	2 GAL	66	FERN	3'	5'	DRIER BUFFER	SHADE TOLERANT
B	SMALL FRUITED BULRUSH	SCIRPUS MICROCARPUS	1 GAL	27	RUSH	4.5'	3'	SATURATED SOILS	SHADE TOLERANT
LF	LADY FERN	ATHYRIUM FILIX-FEMINA	1 GAL	145	FERN	3'	4'	WETTER BUFFER	SHADE TOLERANT
M	TALL MANNAGRASS	GLYCERIA ELATA	1 GAL	51	GRASS	3'	4.5'	WATER'S EDGE	SHADE DEPENDENT
DF	DEER FERN	BLECHUM SPICANT	1 GAL	11	FERN	2'	2'	WETTER BUFFER	SHADE DEPENDENT

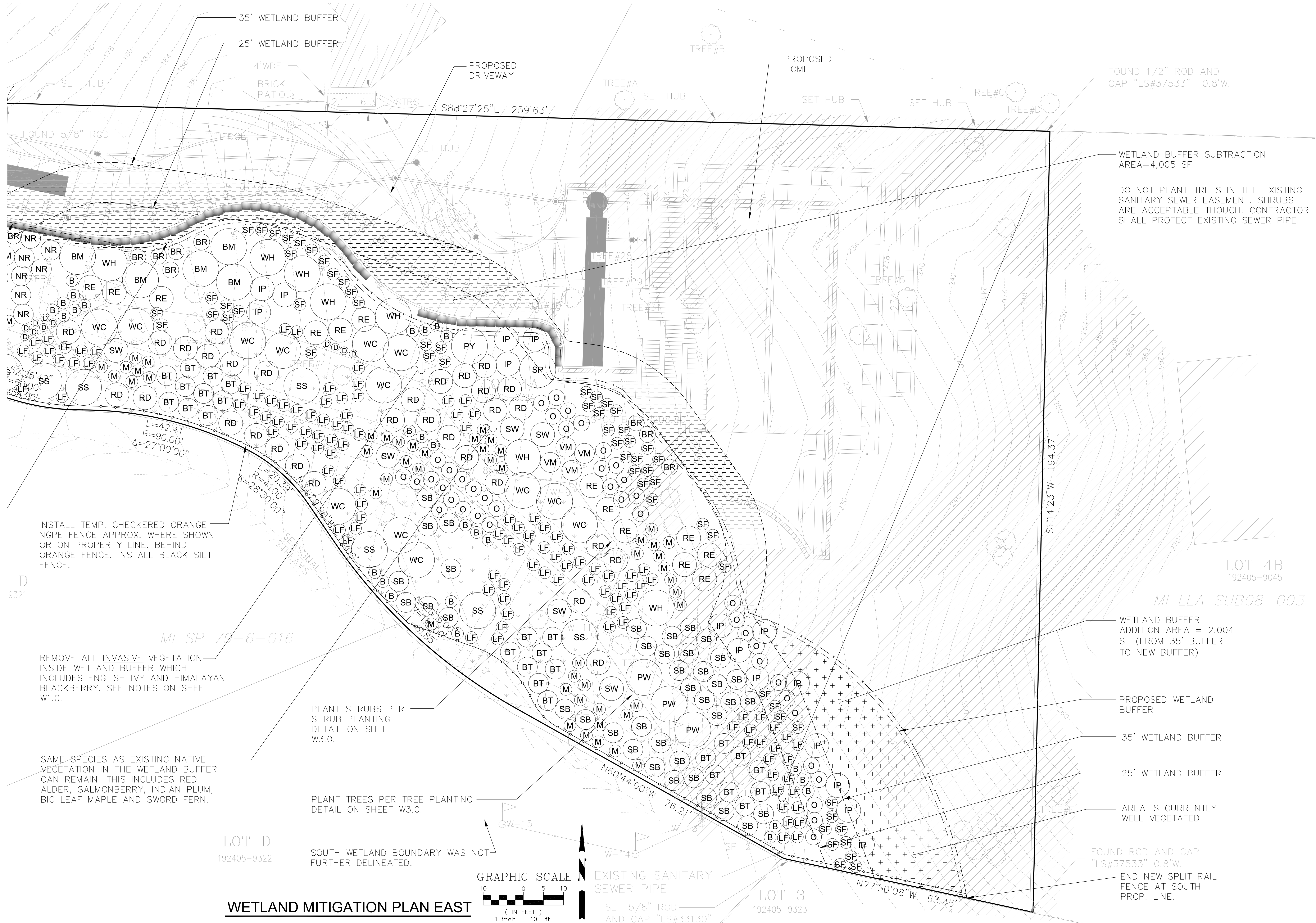
MARK RIGOS
440 SE DARST STREET
ISSAQUAH, WA 98027
(425) 652-6013

MILLS SFR
5236 WEST MERCER WAY
MERCER ISLAND, WA 98040

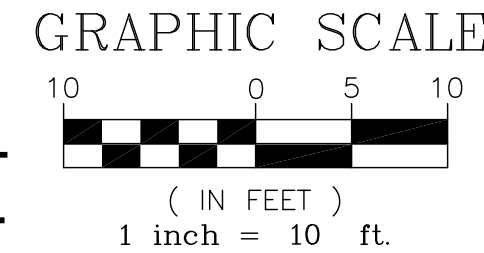
REV.	DATE:
1	10/09/2017
2	04/16/2018

DATE: 07/26/2018

W1.0



WETLAND MITIGATION PLAN EAST



MARK RIGOS
 440 SE DARST STREET
 ISSAQUAH, WA 98027
 (425) 652-6013

MILLS SFR
 5236 WEST MERCER WAY
 MERCER ISLAND, WA 98040

REV.	DATE:
1	10/09/2017
2	04/16/2018

DATE: 07/26/2018

W2.0

INSTALL TEMP. CHECKERED ORANGE NGPE FENCE APPROX. WHERE SHOWN OR ON PROPERTY LINE. BEHIND ORANGE FENCE, INSTALL BLACK SILT FENCE.

REMOVE ALL INVASIVE VEGETATION INSIDE WETLAND BUFFER WHICH INCLUDES ENGLISH IVY AND HIMALAYAN BLACKBERRY. SEE NOTES ON SHEET W1.0.

SAME SPECIES AS EXISTING NATIVE VEGETATION IN THE WETLAND BUFFER CAN REMAIN. THIS INCLUDES RED ALDER, SALMONBERRY, INDIAN PLUM, BIG LEAF MAPLE AND SWORD FERN.

PLANT SHRUBS PER SHRUB PLANTING DETAIL ON SHEET W3.0.

PLANT TREES PER TREE PLANTING DETAIL ON SHEET W3.0.

SOUTH WETLAND BOUNDARY WAS NOT FURTHER DELINEATED.

WETLAND BUFFER SUBTRACTION AREA=4,005 SF

DO NOT PLANT TREES IN THE EXISTING SANITARY SEWER EASEMENT. SHRUBS ARE ACCEPTABLE THOUGH. CONTRACTOR SHALL PROTECT EXISTING SEWER PIPE.

WETLAND BUFFER ADDITION AREA = 2,004 SF (FROM 35' BUFFER TO NEW BUFFER)

PROPOSED WETLAND BUFFER

35' WETLAND BUFFER

25' WETLAND BUFFER

AREA IS CURRENTLY WELL VEGETATED.

FOUND ROD AND CAP "LS#37533" 0.8'W.

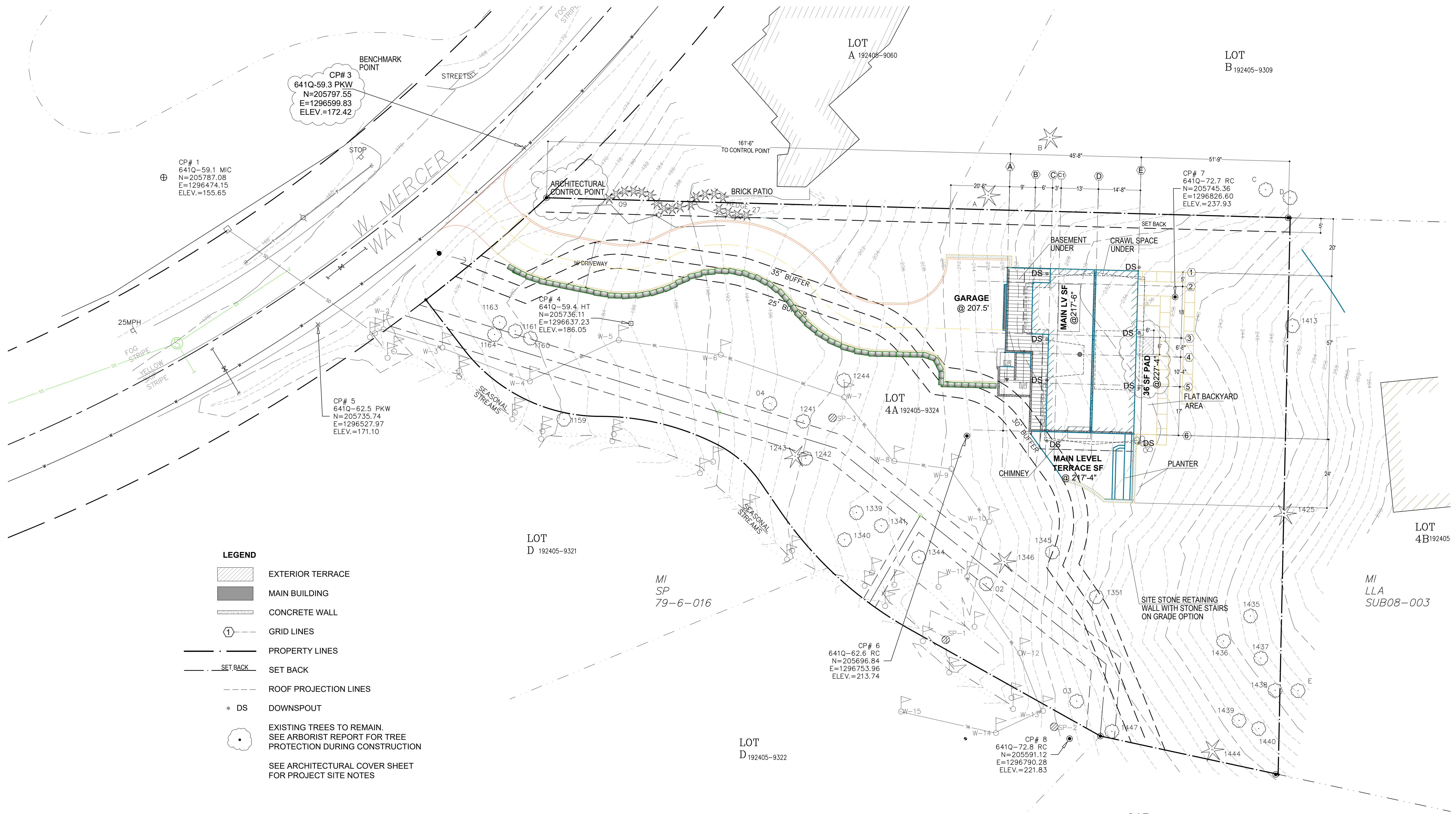
END NEW SPLIT RAIL FENCE AT SOUTH PROP. LINE.

LOT 4B
 192405-9045

MI LLA SUB08-003

LOT D
 192405-9322

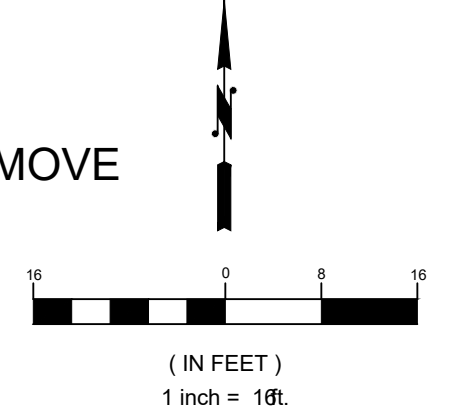
LOT 3
 192405-9323



- LEGEND**
- EXTERIOR TERRACE
 - MAIN BUILDING
 - CONCRETE WALL
 - GRID LINES
 - PROPERTY LINES
 - SET BACK
 - ROOF PROJECTION LINES
 - DOWNSPOUT
 - EXISTING TREES TO REMAIN.
SEE ARBORIST REPORT FOR TREE PROTECTION DURING CONSTRUCTION
 - SEE ARCHITECTURAL COVER SHEET FOR PROJECT SITE NOTES

NOTES

- SEE SITE SURVEY A0.3 FOR EXISTING GRADE
- SEE CIVIL DRAWINGS FOR TREE PROTECTION, SITE GRADING DRIVE WAY & SITE UTILITIES
- SEE WET LAND DRAWING FOR SITE MITTIGATION REQUERIMENTS
- SEE CIVIL SHEET C0.2 FOR ARBORIST AND TREE REMOVE AND REMAIN



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 921 NE Boat Street, Seattle, WA 98105
 www.greifarchitects.com
 T: 206 633 4293
 F: 206 633 3735
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PLOT DATE: MAY-2018
 DRAWN BY: JA, JG
 PURPOSE: PERMIT
 PROJ. NO: 2017_MILLS
 CHECKED BY: JG

REVISIONS:
 1. DATE: APRIL 2018
 2. DATE:

PERMIT SET

MERCER ISLAND RESIDENCE
 5236 W MERCER WAY
 MERCER ISLAND, WA 98125

ARCHITECTURAL
 SITE PLAN
 GENERAL PLAN

SHEET NO.

A1.0



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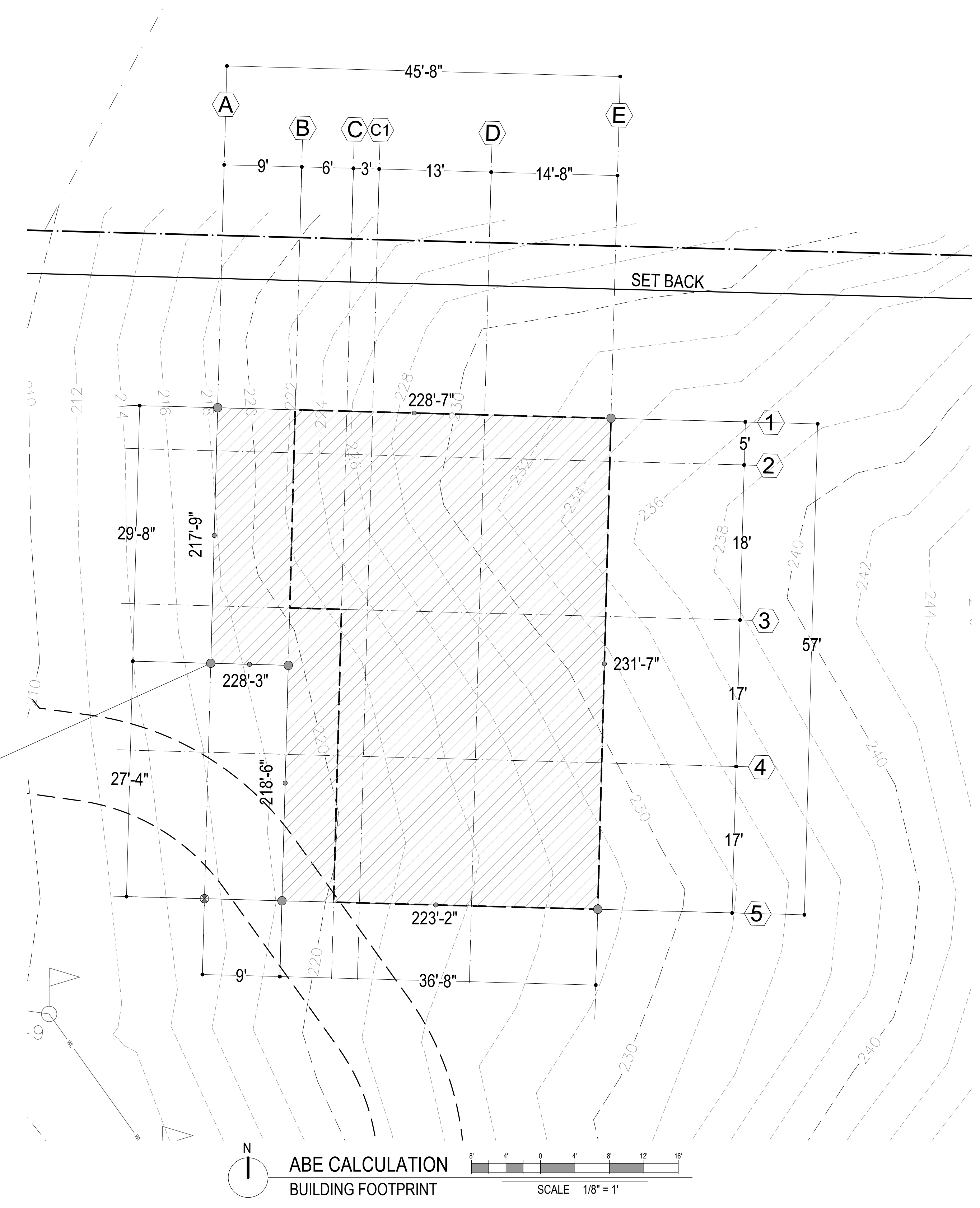
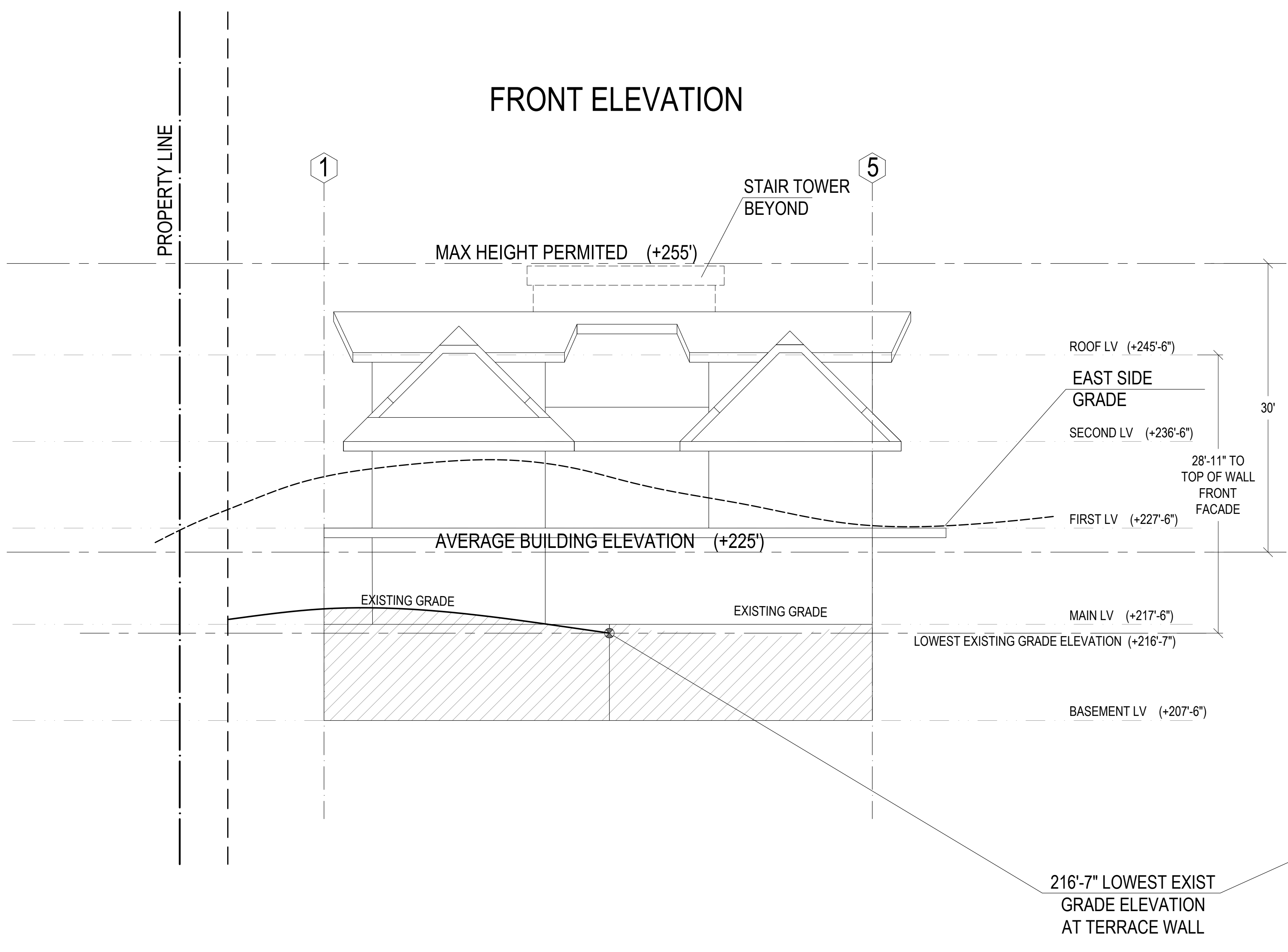
MERCER ISLAND RESIDENCE
 5236 W MERCER WAY
 MERCER ISLAND, WA 98125

ARCHITECTURAL AVERAGE BUILDING ELEVATION

SHEET NO. _____

A1.0a

FRONT ELEVATION



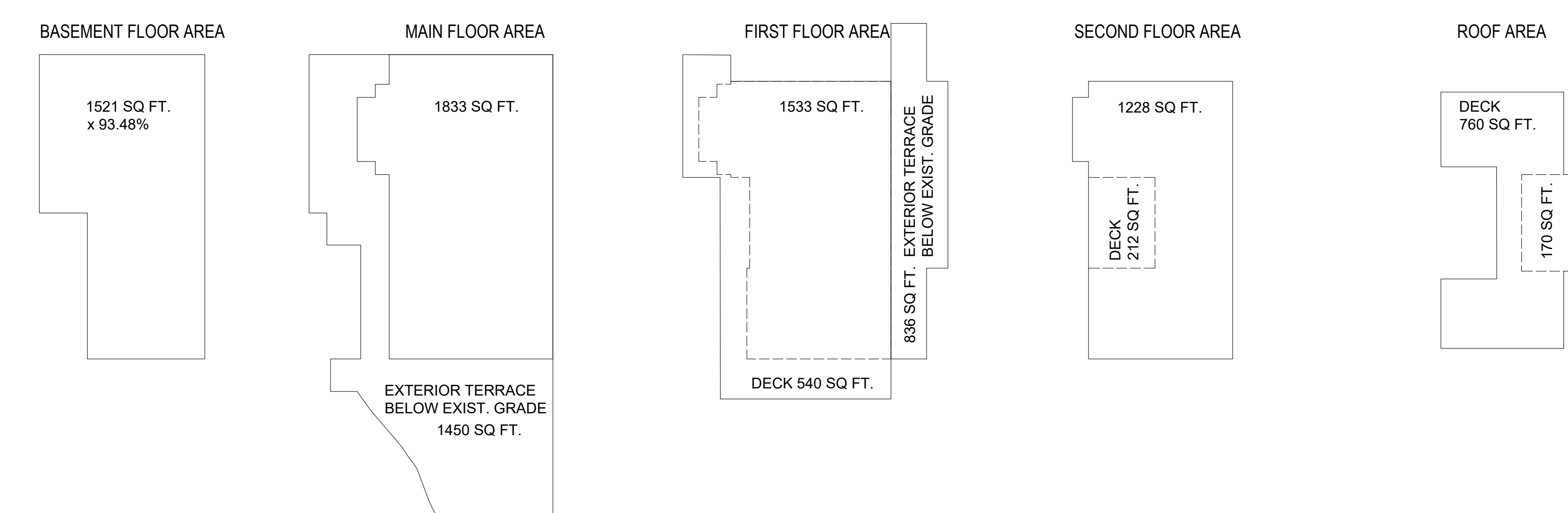
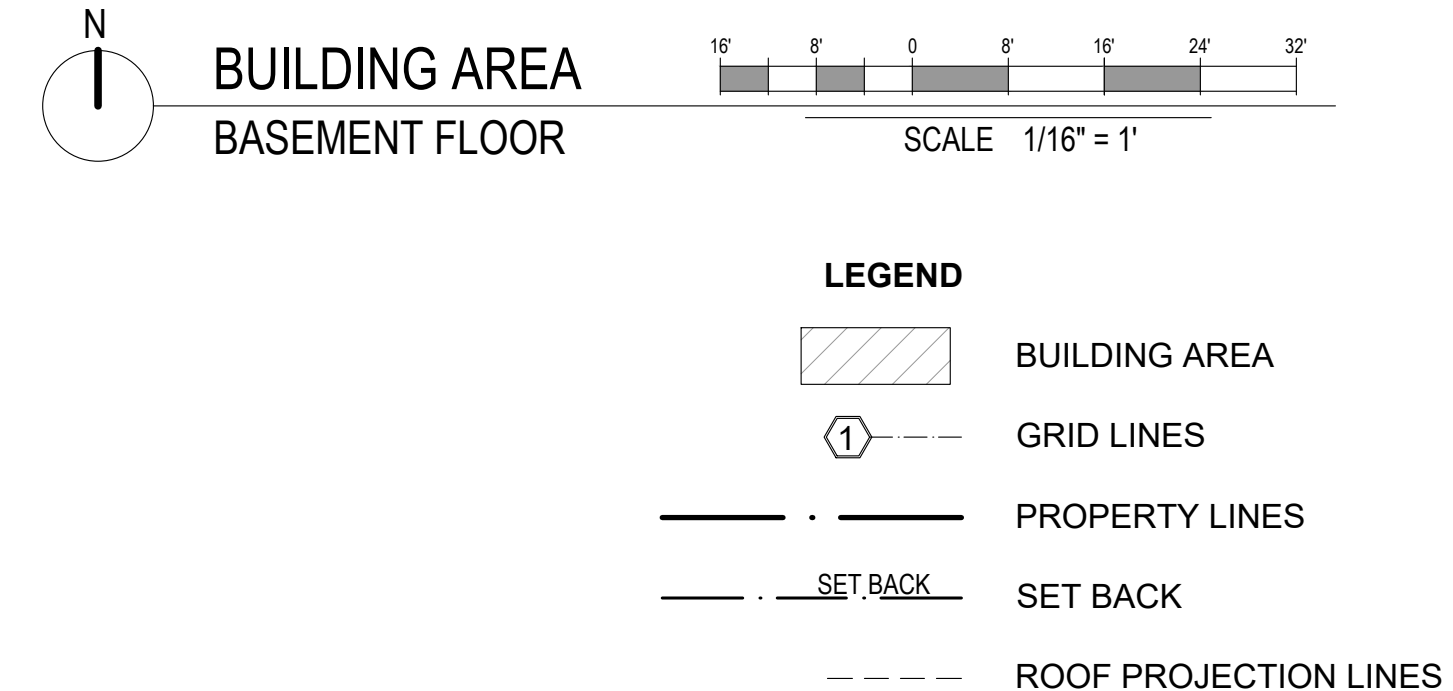
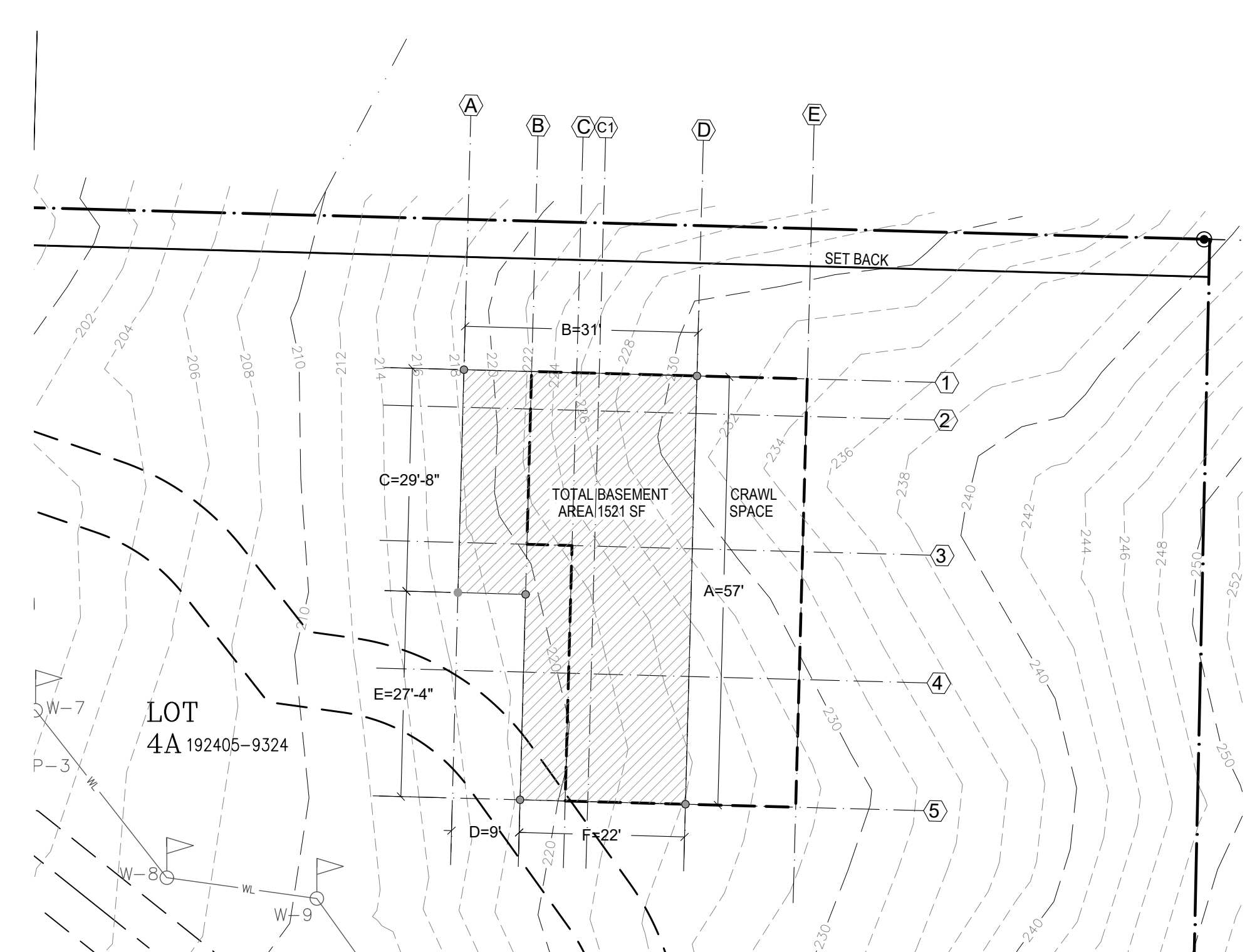
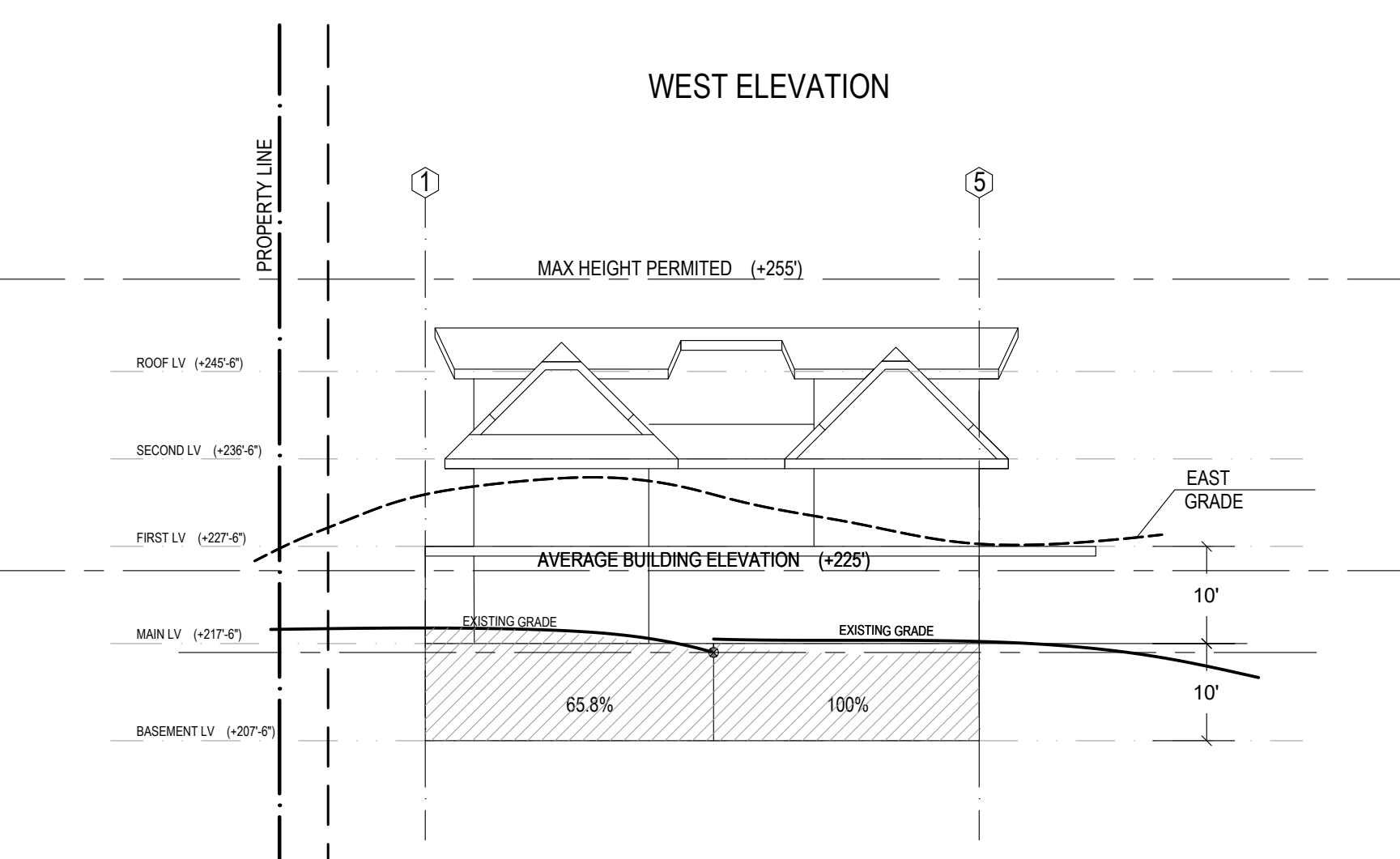
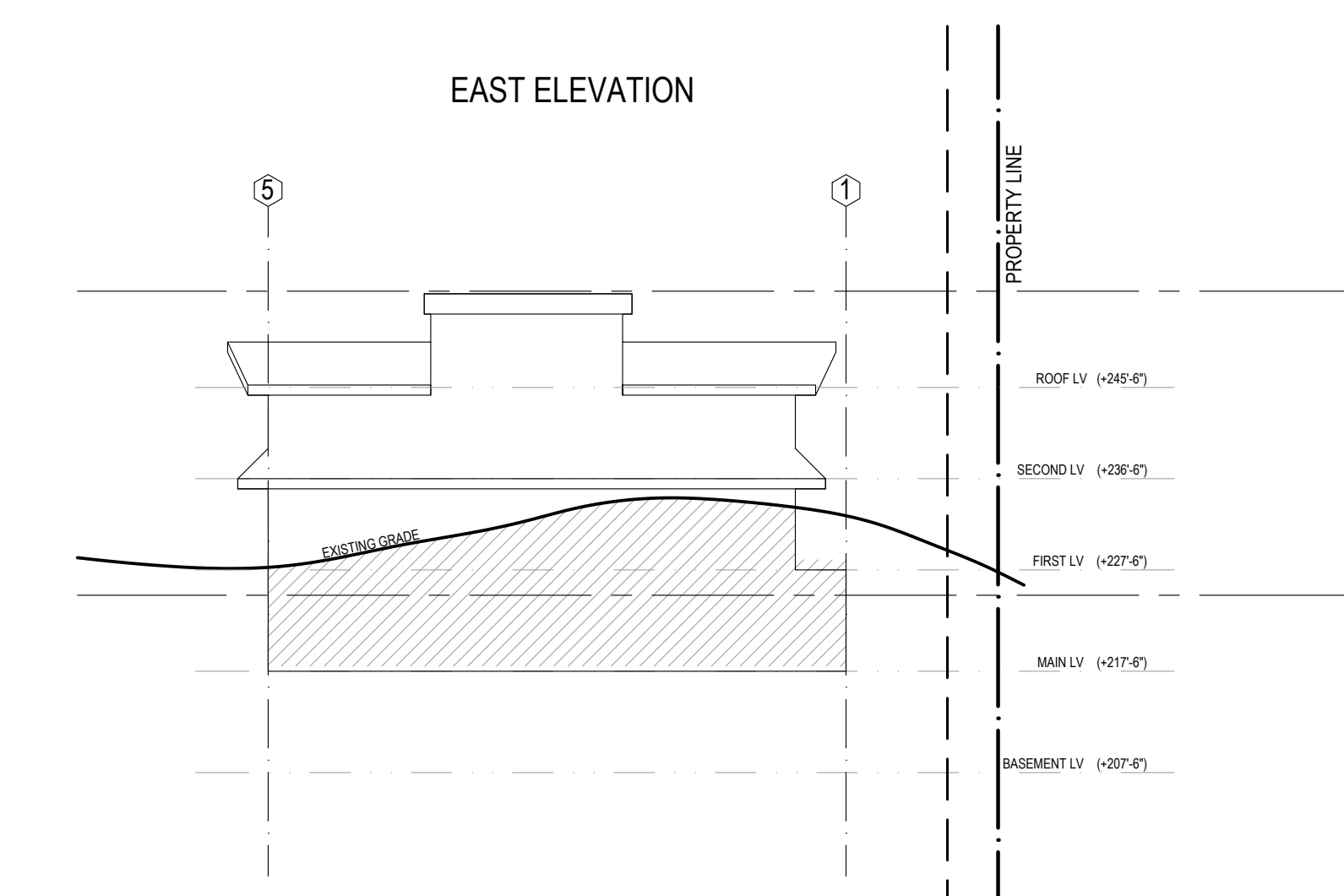
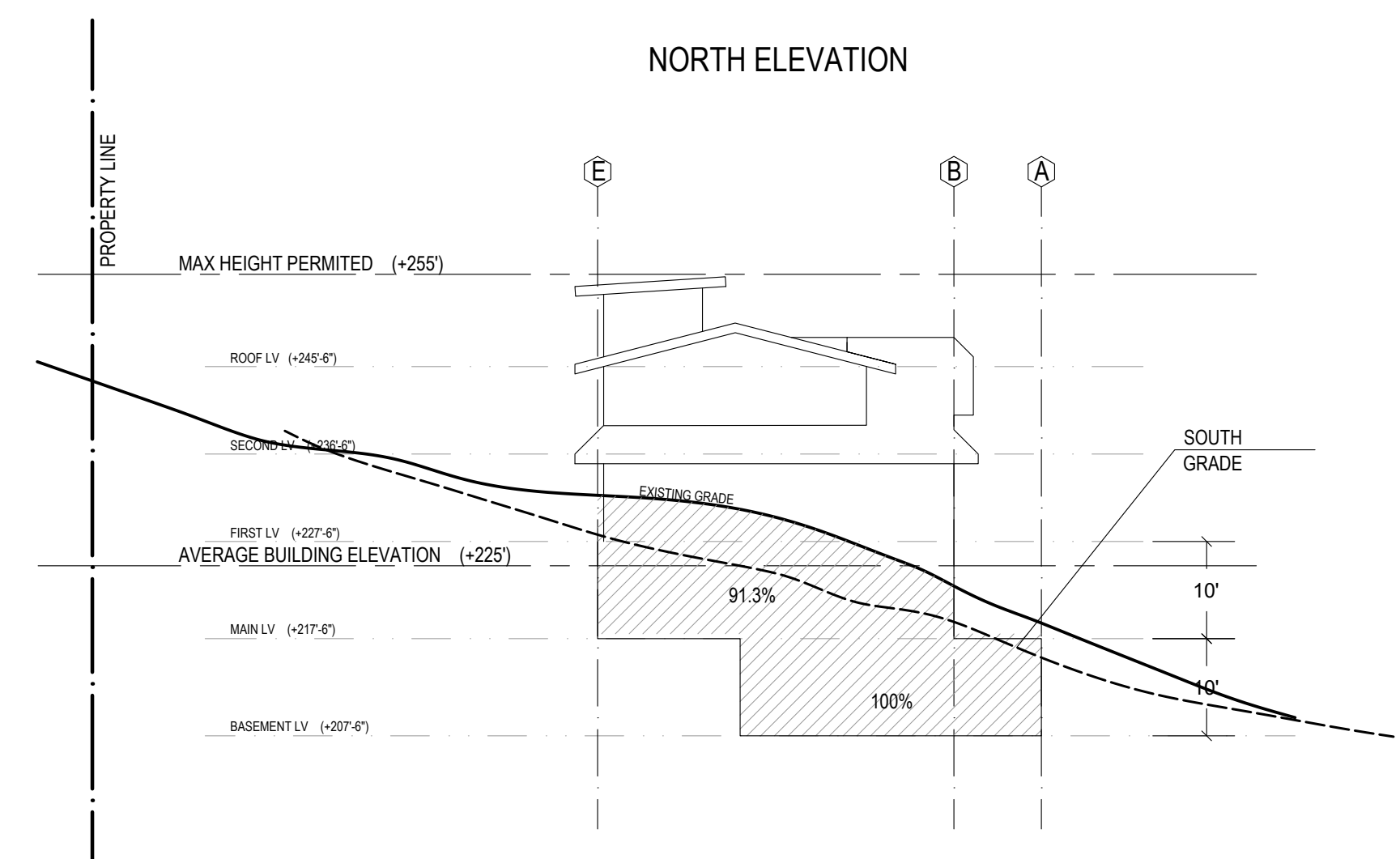
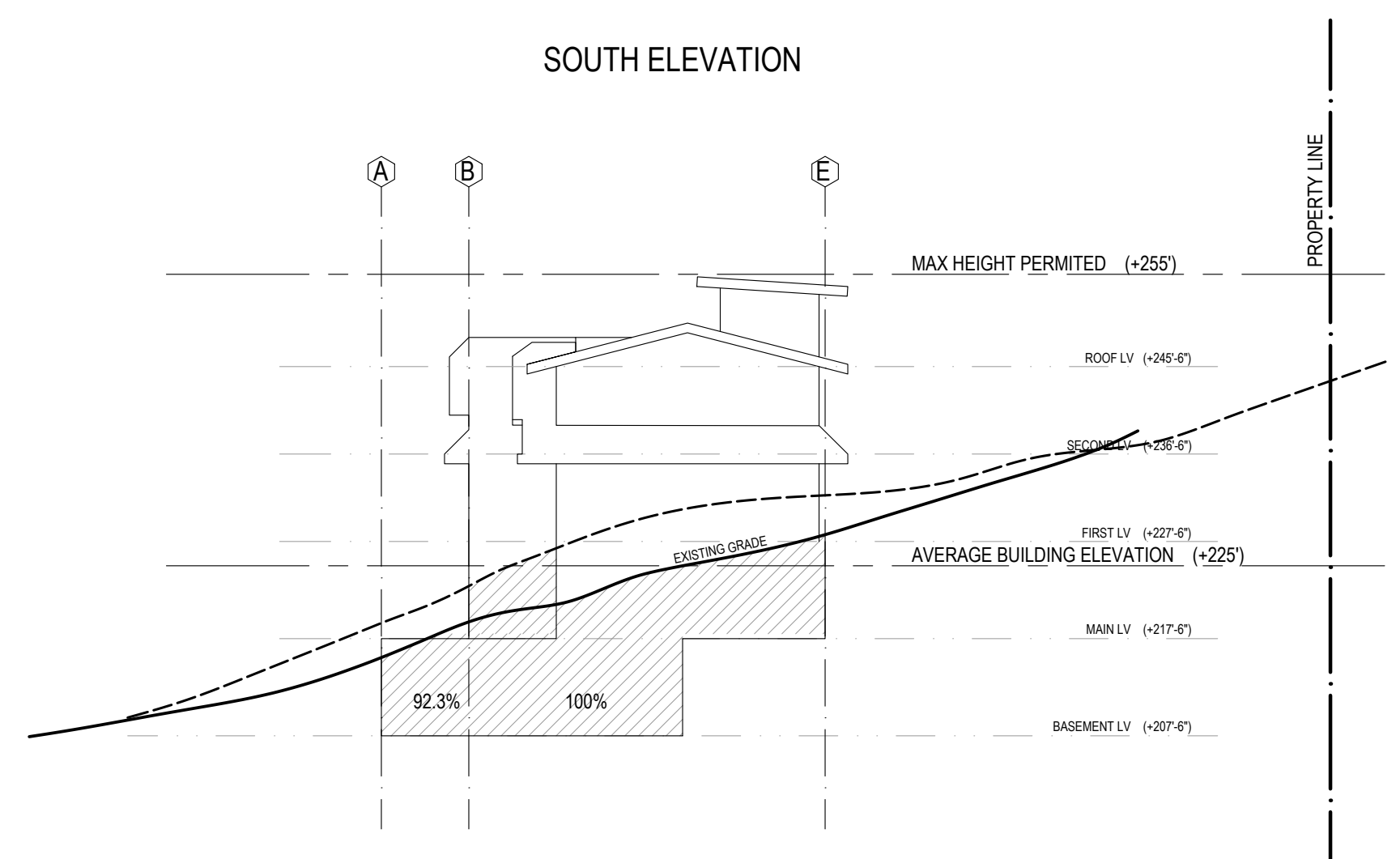
BUILDING HEIGHT	
AVERAGE BUILDING ELEVATION	225 FEET
ALLOWABLE BUILDING HEIGHT (ABE + 30 FT)	255 FEET
PROPOSED BUILDING HEIGHT	254'-8"
BENCHMARK ELEVATION	172.42 FEET
BENCHMARK DESCRIPTION	CP #3 AT W MERCER WAY SEE A0.3 SITE SURVEY
MAXIMUM HEIGHT OF TOP EXTERIOR WALL FACADE ABOVE LOWEST EXISTING GRADE (35 FT MAX)	28'-11"
ABE & ALLOWED BUILDING HEIGHT SHOWN ON ELEVATIONS-PLAN SHEET #	A1.0a
TOPO SURVEY ACCURACY ATTESTED ON PLAN SHEET #	A0.3

AVERAGE BUILDING ELEVATION

$$\frac{[(231'-7") \times 57' + (228'-6") \times 45'-8" + (217'-9") \times 29'-8" + (218'-3") \times 9' + (218'-6") \times 27'-4" + (223'-2") \times 36'-8"]}{(57' + 45'-8" + 29'-8" + 9' + 27'-4" + 36'-8")} = 225'-13\frac{1}{16}" \approx 225'$$

TOP OF ROOF = 254' - 9"
 ALLOWED (+30') = 255'

- LEGEND**
- BUILDING AREA
 - GRID LINES
 - PROPERTY LINES
 - SET BACK
 - ROOF PROJECTION LINES



BASEMENT FLOOR AREA CALCULATION

$$1521 \text{ SF} \times \left[\frac{(57' \times 100\%) + (31' \times 100\%) + (29.66' \times 65.8\%) + (9' \times 92.3\%) + (27.33' \times 100\%) + (22' \times 100\%)}{(57' + 31' + 29.66' + 9' + 27.33' + 22')} \right] =$$

1521 SF x 93.48% = **1427 SF** BASEMENT PORTION EXCLUDED FROM GROSS AREA

- **GROSS BASEMENT AREA = 94 SF**

GROSS FLOOR AREA	
GROSS LOT AREA	37,350 SF
NET LOT AREA GROSS = LOT AREA MINUS INGRESS/EGRESS EASEMENT	
NET LOT AREA x 45% EQUALS:	
ALLOWED GROSS FLOOR AREA	16,807.5 SF
PROPOSED GROSS FLOOR AREA	4,858.0 SF
PROPOSED % OF LOT AREA	13%

BUILDING AREA	
FLOOR NAME	FLOOR AREA (SF)
ROOF LEVEL	170 SF
2ND LEVEL	1,228 SF
1ST LEVEL	1,533 SF
MAIN LEVEL	1,833 SF
GROSS BASEMENT	94 SF
ADJUSTED TOTAL FLOOR AREA	4,858 SF
BASEMENT AREA EXCLUDED	
ACTUAL TOTAL BUILDING AREA	6,285 SF
BUILDING DECK AREA	
EXTERIOR TERRACE AREAS	2,286 SF
DRIVEWAY	
	3,974 SF

- SEE SHEET A1.0c FOR LOT COVERAGE CALCULATION



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REVISIONS:
 Δ DATE: APRIL 2018
 Δ DATE: AUG. 2018

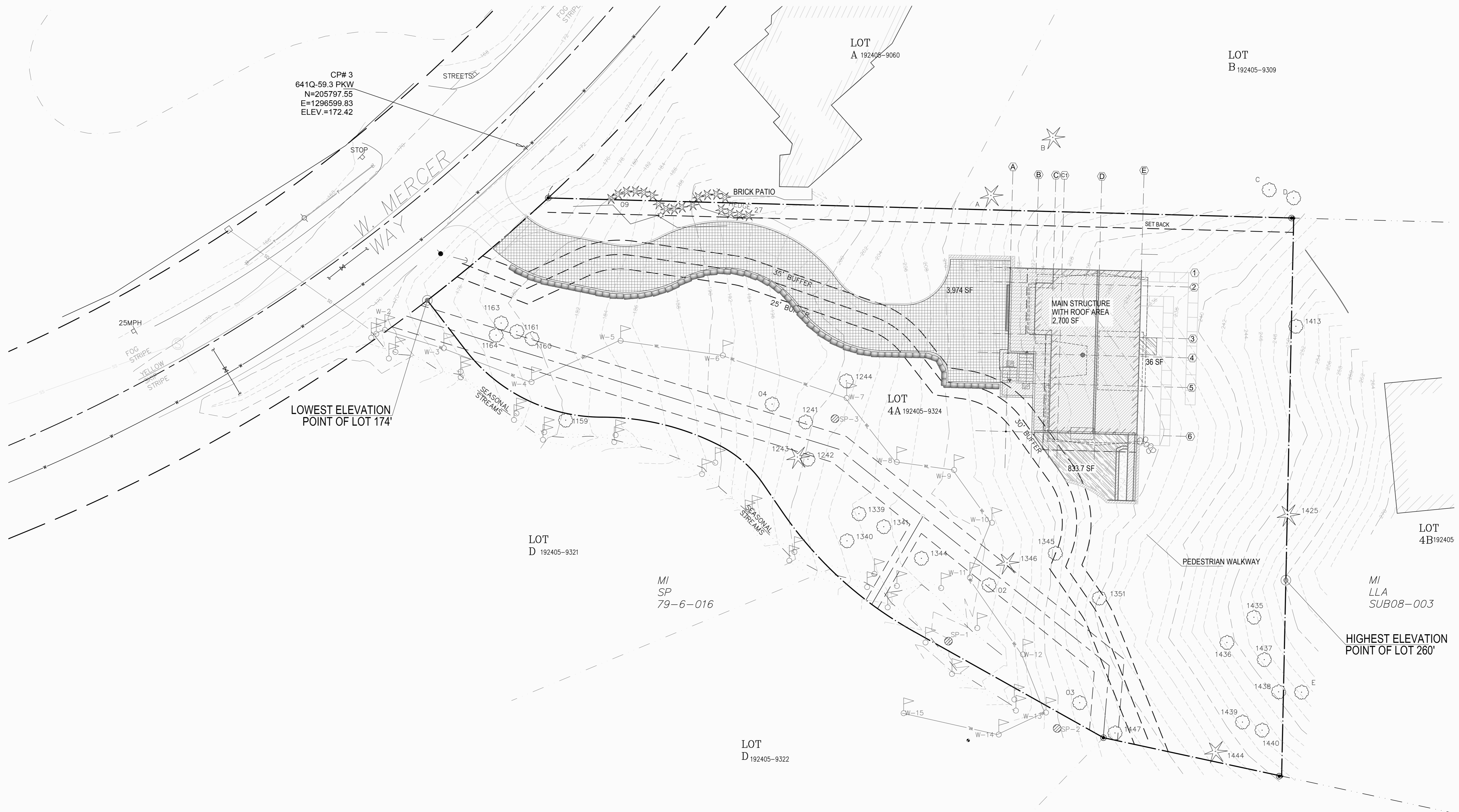
PERMIT SET

MERCER ISLAND RESIDENCE
 5236 W MERCER WAY
 MERCER ISLAND, WA 98125

ARCHITECTURAL LOT COVERAGE

SHEET NO.

A1.0c



CP# 3
 6410-59.3 PKW
 N=205797.55
 E=1296599.83
 ELEV.=172.42

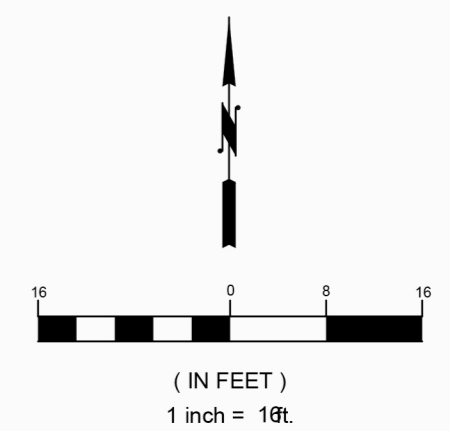
LOWEST ELEVATION POINT OF LOT 174'

HIGHEST ELEVATION POINT OF LOT 260'

LOT SLOPE	
HIGHEST ELEVATION POINT OF LOT	260 FEET
LOWEST ELEVATION POINT OF LOT	174 FEET
ELEVATION DIFFERENCE	86 FEET
HORIZONTAL DISTANCE BETWEEN HIGH AND LOW POINTS	325 FEET
LOT SLOPE	26.5 %

LOT COVERAGE	
GROSS LOT AREA	37,350 SF
ALLOWED LOT COVERAGE (35%)	13,072.5 SF
MAIN STRUCTURE W/ROOF AREA	2,700 SF
IMPERVIOUS DECK AREA	1,347.7 SF
DRIVEWAY	3,974 SF
TOTAL IMPERVIOUS AREA	8,000 SF Δ
PROPOSED LOT COVERAGE	21.5%

- LEGEND**
- MAIN STRUCTURE WITH ROOF INCLUDED
 - STONE ON GRADE
 - IMPERVIOUS DECK
 - DRIVEWAY (IMPERVIOUS)
 - LANDSCAPE AREA
 - GRID LINES
 - PROPERTY LINES
 - SET BACK



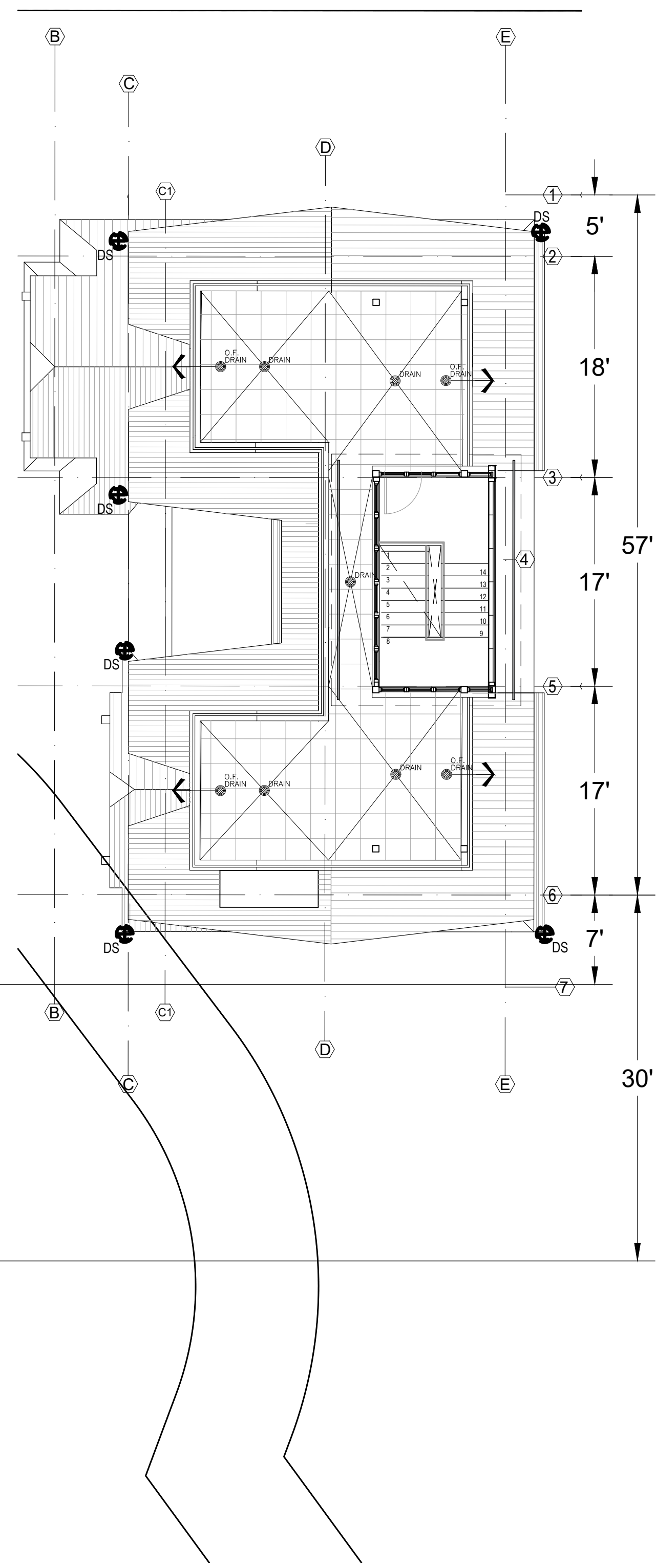
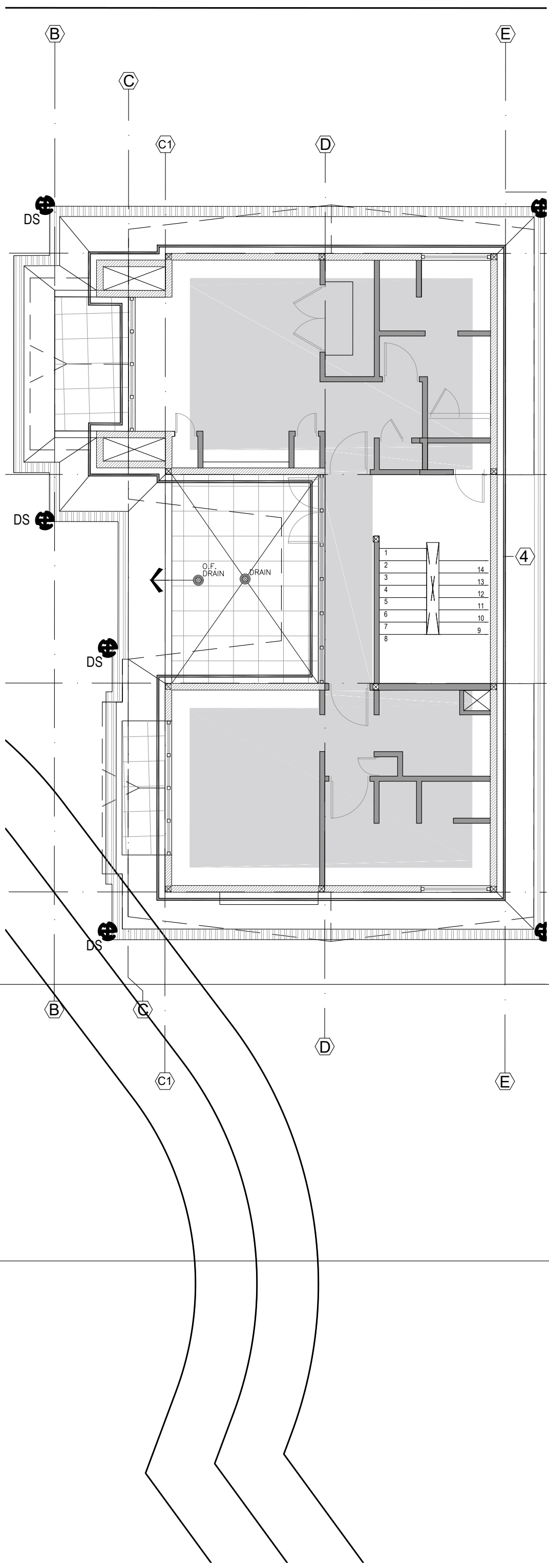
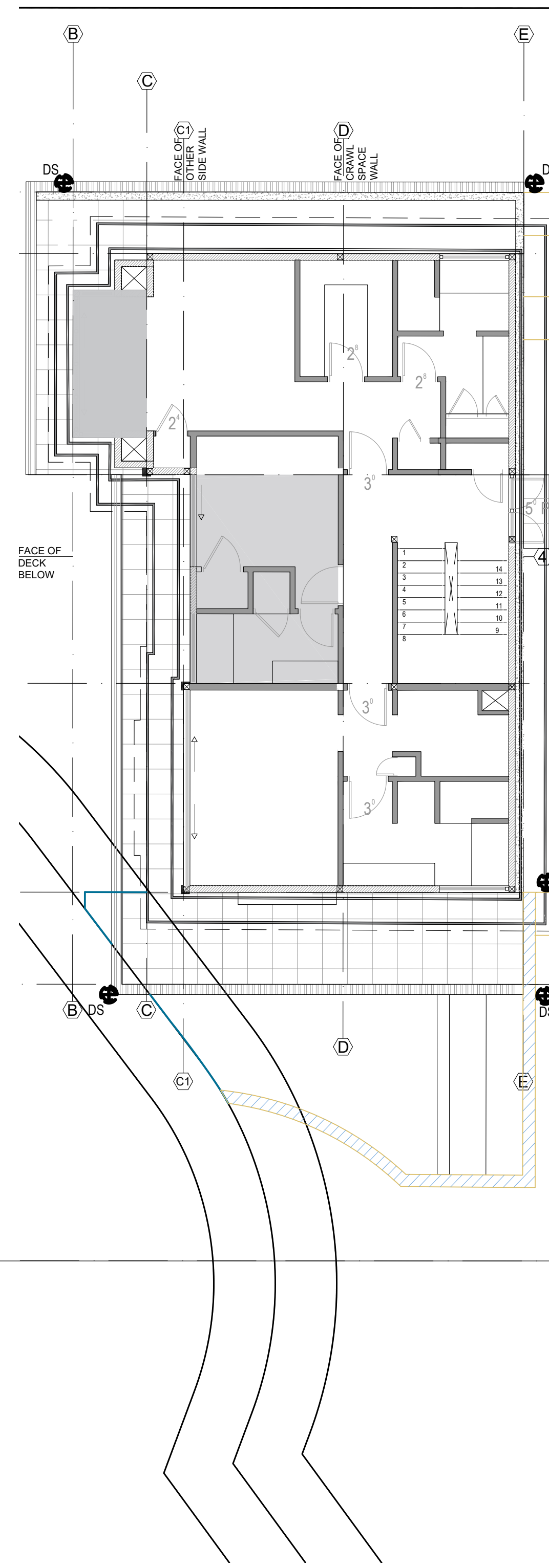
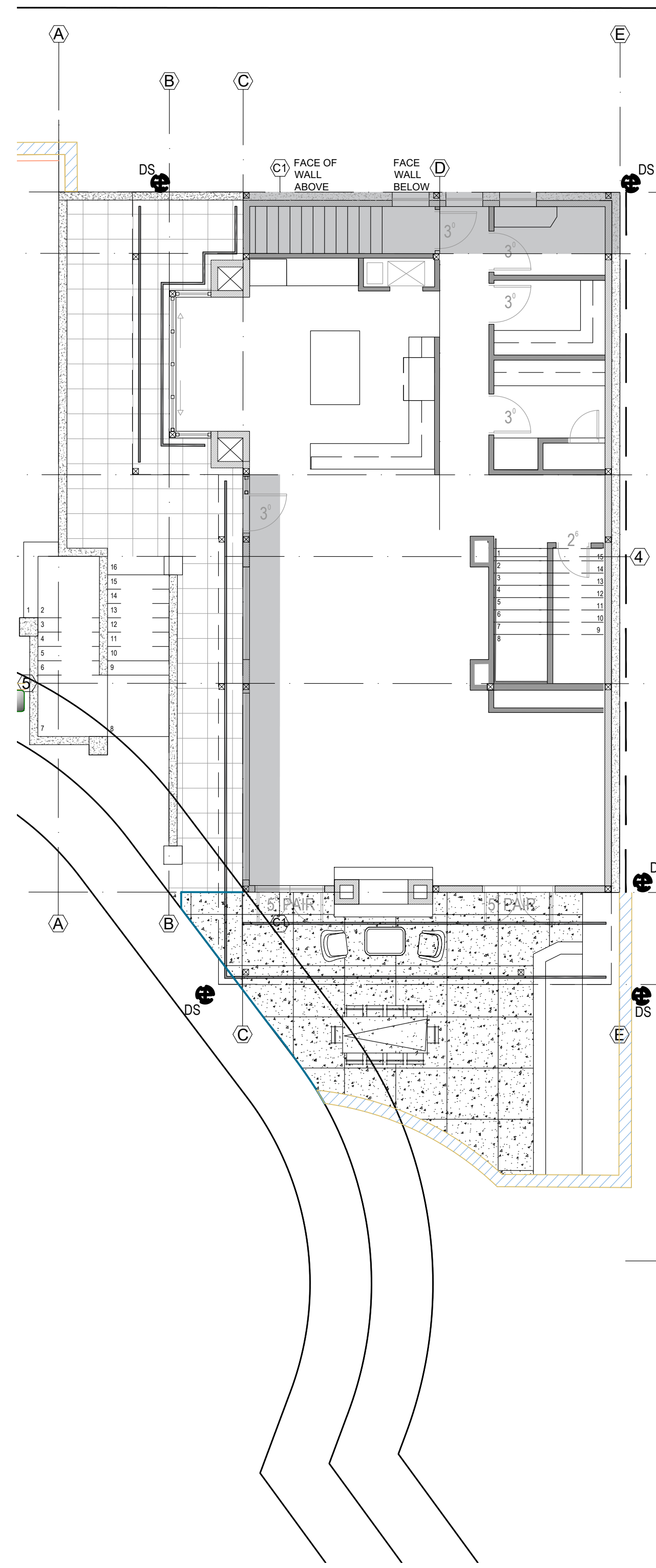
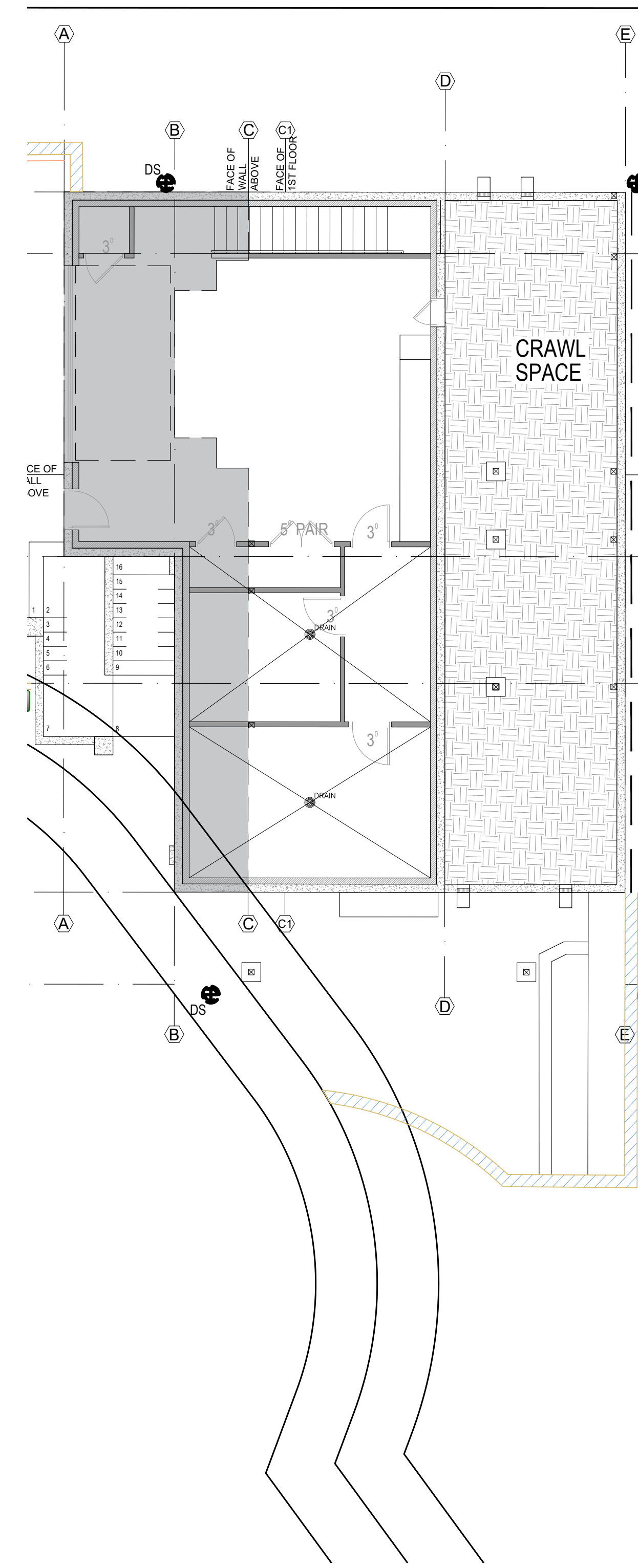
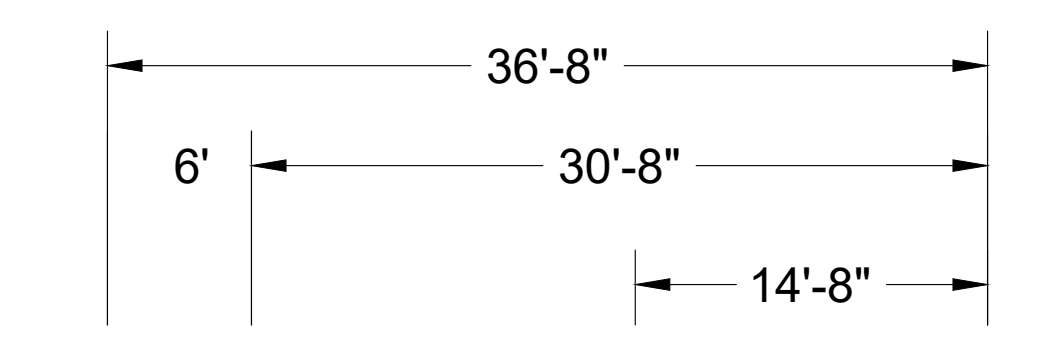
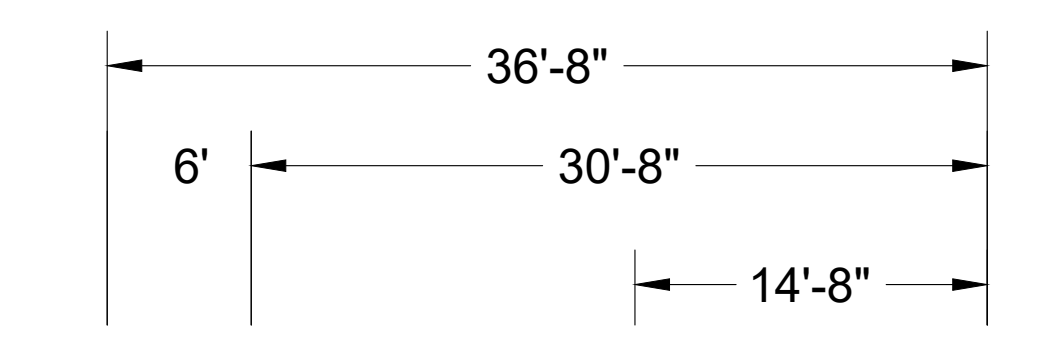
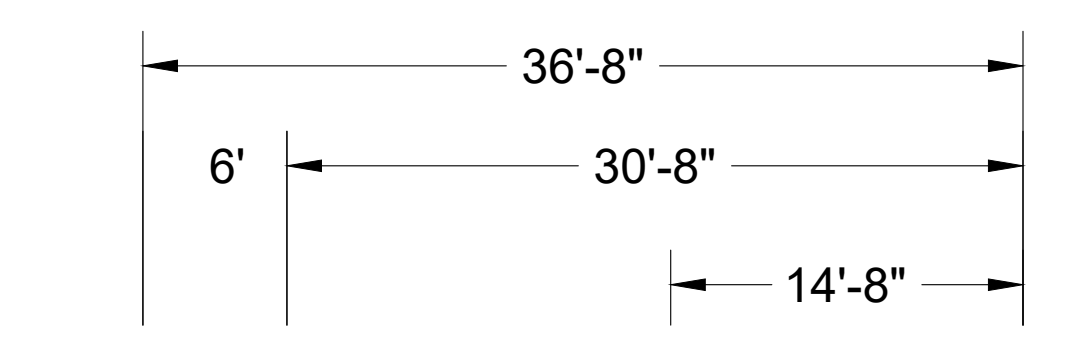
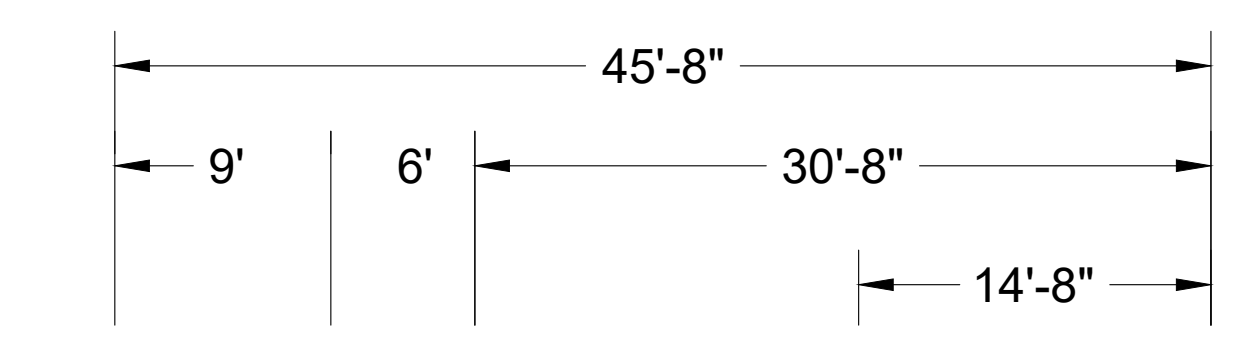
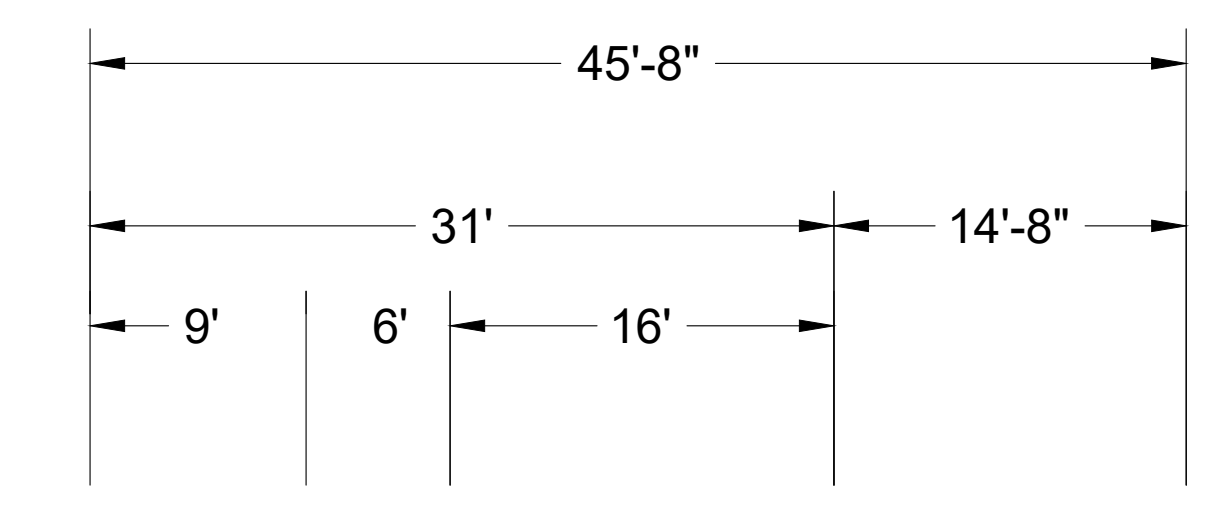
PERMIT SET

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ARCHITECTURAL FLOOR PLANS RELATION

SHEET NO.

A1.1



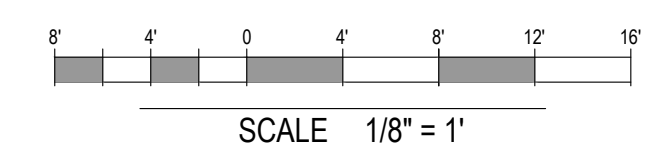
1 BASEMENT LEVEL
 UNDER GROUND BASE EXISTING GRADE

2 MAIN LEVEL
 UNDER GROUND BASE EXISTING GRADE

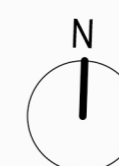
3 FIRST LEVEL

4 SECOND LEVEL

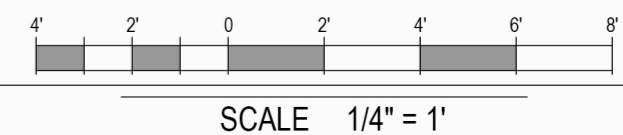
5 ROOF



SET BACK



FRAMING PLAN
BASEMENT LEVEL



FLOOR AREA 1,521 SF

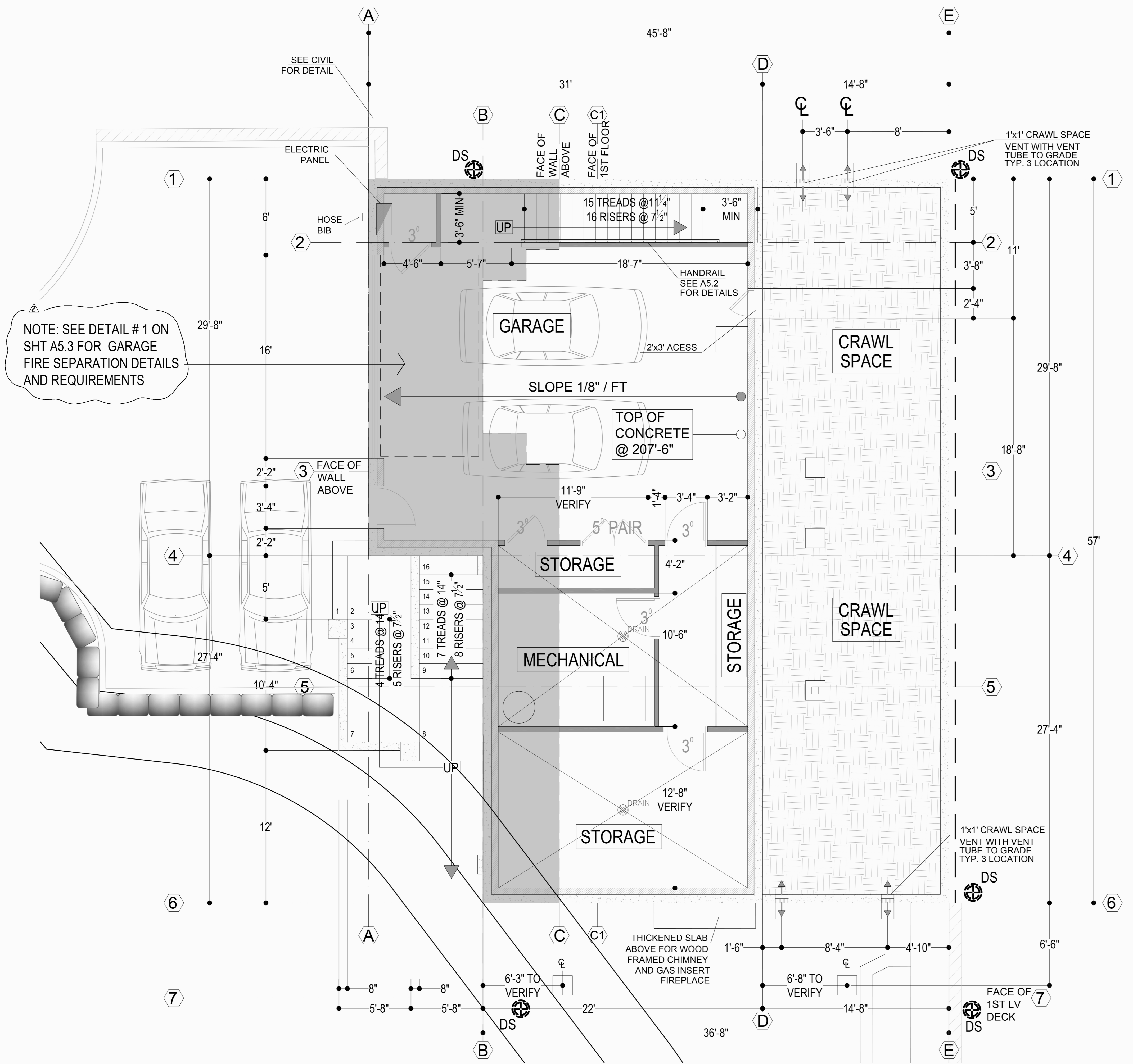
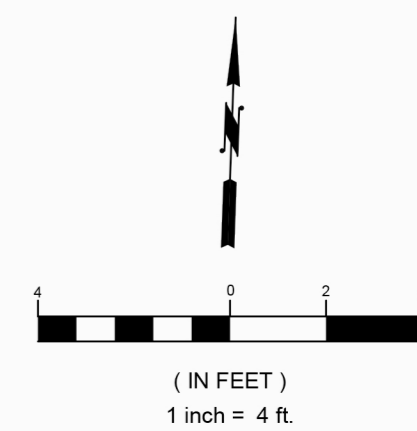
CRAWL SPACE VENTING
CRAWL SPACE = 798 SF
798 SF / 300 = 2.5 SF REQUIRED
4 x 12"x12" VENTS PROVIDE = 4 SF

NOTES:

- SEE STRUCTURAL DRAWINGS FOR FRAMING AND FOUNDATION NOTES
- ALL CABINETS DIMENSIONS ARE TO FACE OF CABINET BOX
- SEE SHEET A5.3 FOR GARAGE-HOUSE SEPARATION NOTES
- VERIFY WITH OWNER HOSEBIB LOCATION

LEGEND

- EXTERIOR TERRACE OVER HEATED SPACE. 2" LOWER THAN INTERIOR UPPER LV SF
- 2x6 EXTERIOR FRAMING
- 2x4 INTERIOR FRAMING
- FLAT WALL
- GRID LINES
- PROPERTY LINES
- SET BACK
- UPPER LV PROJECTION LINES
- SAFETY GLAZING
- HOSE BIB
- DOWNSPOUT



NOTE: SEE DETAIL # 1 ON SHT A5.3 FOR GARAGE FIRE SEPARATION DETAILS AND REQUIREMENTS



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PURPOSE: PERMIT
PROJ. NO: 2017_MILLS
CHECKED BY: JG

REVISIONS:
DATE: APRIL 2018
DATE: AUG. 2018

PERMIT SET

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MERCER ISLAND, WA 98125

ARCHITECTURAL
FRAMING PLAN
BASEMENT LEVEL

SHEET NO.

A1.1a

FRAMING PLAN
MAIN LEVEL
SCALE 1/4" = 1'

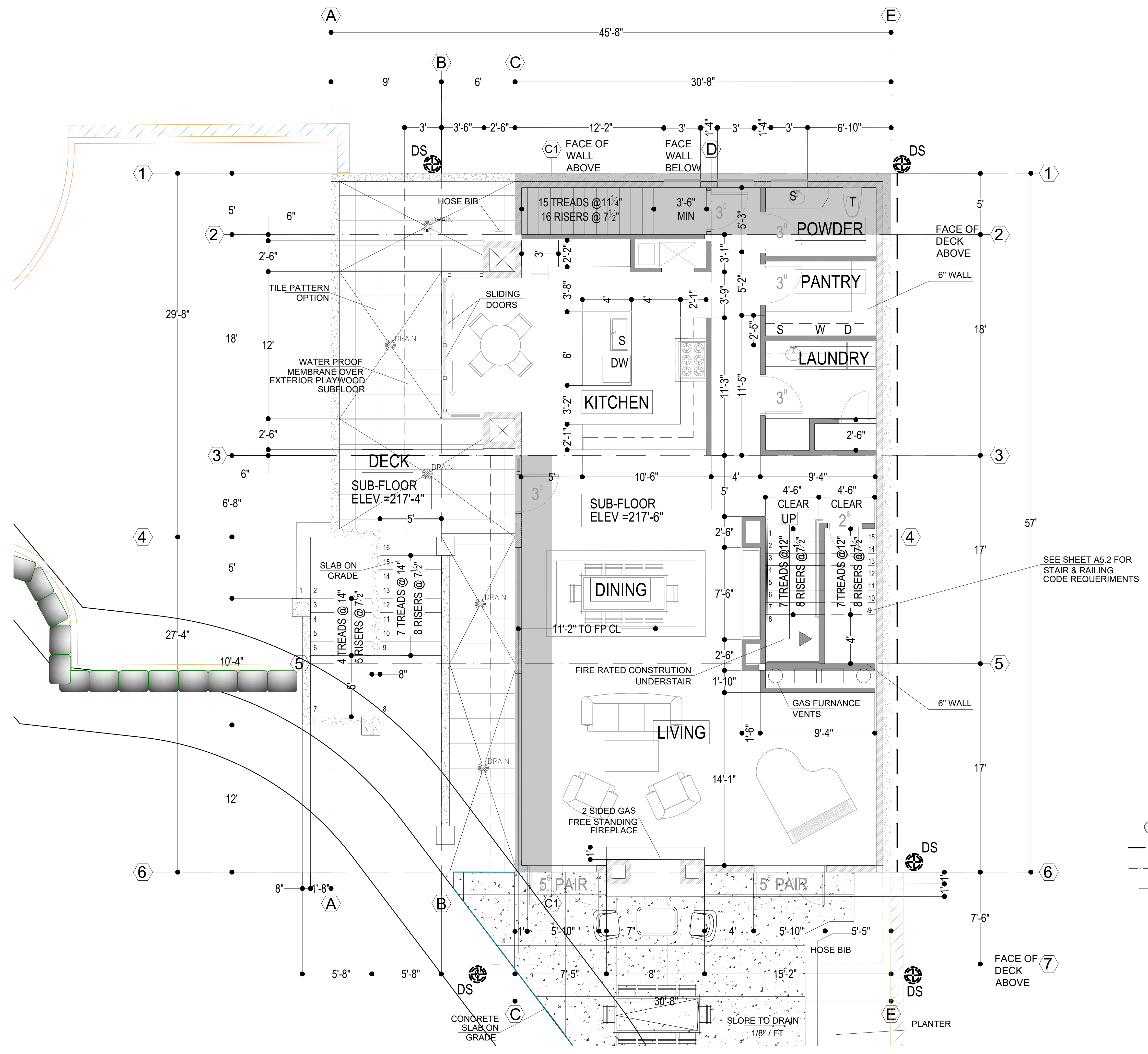
FLOOR AREA 1,833 SF

NOTES:

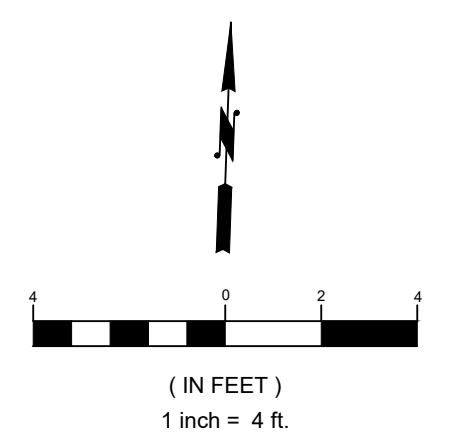
- SEE STRUCTURAL DRAWINGS FOR FRAMING AND FOUNDATION NOTES
- ALL CABINETS DIMENSIONS ARE TO FACE OF CABINET BOX
- SEE SHEET A5.3 FOR GARAGE-HOUSE SEPARATION NOTES
- VERIFY WITH OWNER HOSEBIB LOCATION

LEGEND

- EXTERIOR TERRACE OVER HEATED SPACE. 2" LOWER THAN INTERIOR UPPER LV SF
- 2x6 EXTERIOR FRAMING
- 2x4 INTERIOR FRAMING
- FLAT WALL
- GRID LINES
- PROPERTY LINES
- SET BACK
- UPPER LV PROJECTION LINES
- SAFETY GLAZING
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- DOWNSPOUT



SEE SHEET A5.2 FOR STAIR & RAILING CODE REQUIREMENTS





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**ARCHITECTURAL
 FRAMING PLAN
 FIRST LEVEL**

SHEET NO.

A1.1c

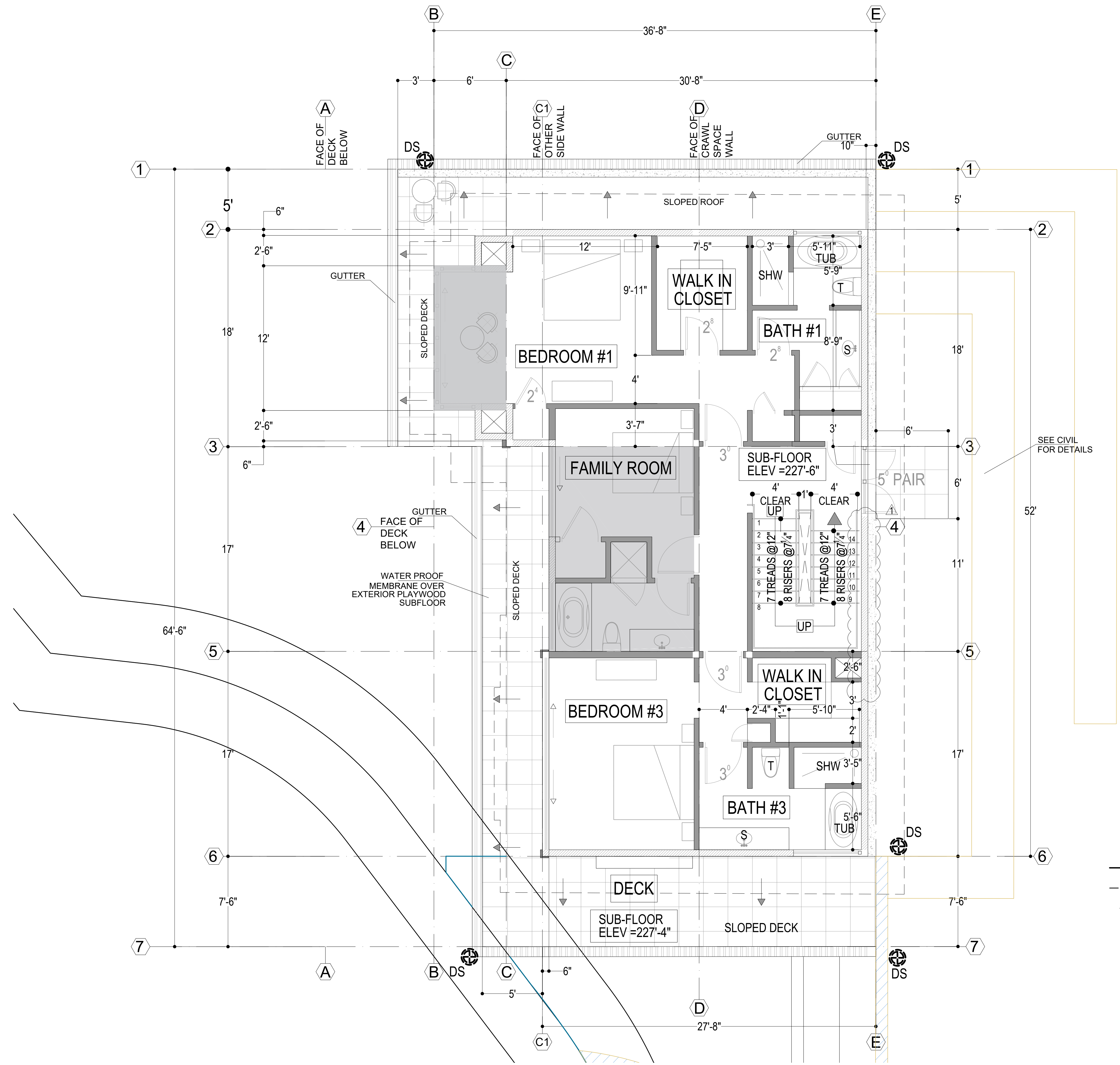
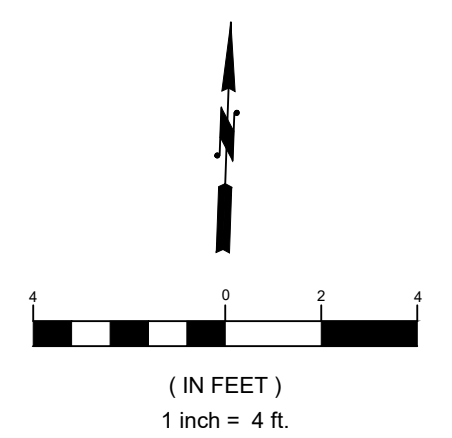
**FRAMING PLAN
 FIRST LEVEL**
 SCALE 1/4" = 1'

FLOOR AREA 1,533 SF

NOTES:

- SEE STRUCTURAL DRAWINGS FOR FRAMING AND FOUNDATION NOTES
- ALL CABINETS DIMENSIONS ARE TO FACE OF CABINET BOX
- VERIFY WITH OWNER HOSEBIB LOCATION

- LEGEND**
- EXTERIOR TERRACE OVER HEATED SPACE. 2" LOWER THAN INTERIOR UPPER LV SF
 - 2x6 EXTERIOR FRAMING
 - 2x4 INTERIOR FRAMING
 - FLAT WALL
 - GRID LINES
 - PROPERTY LINES
 - SET BACK
 - UPPER LV PROJECTION LINES
 - SAFETY GLAZING
 - HOSE BIB
 - DOWNSPOUT





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**ARCHITECTURAL
 FRAMING PLAN
 SECOND LEVEL**

SHEET NO.

A1.1d

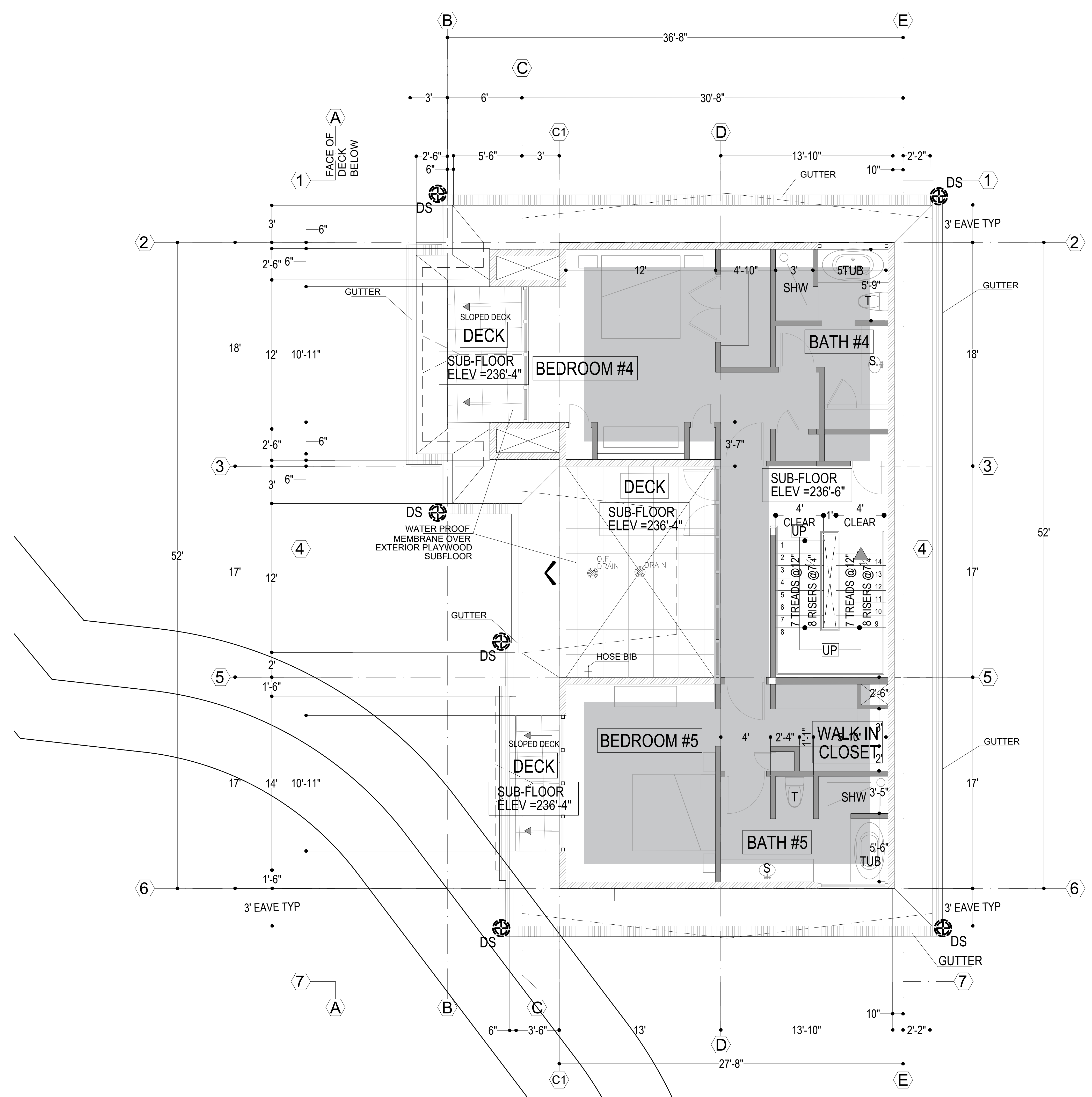
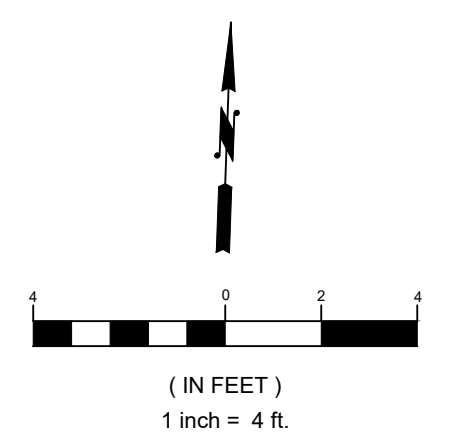
**FRAMING PLAN
 SECOND LEVEL**
 SCALE 1/4" = 1'

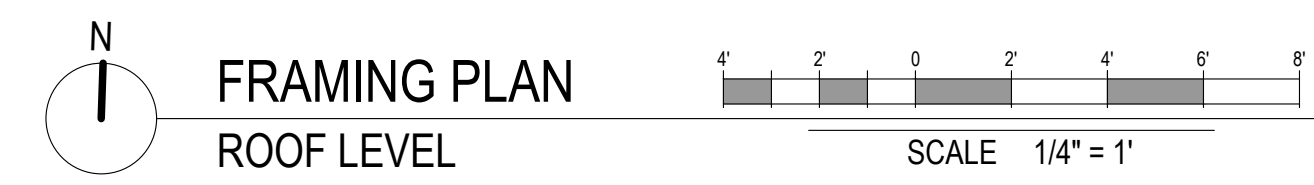
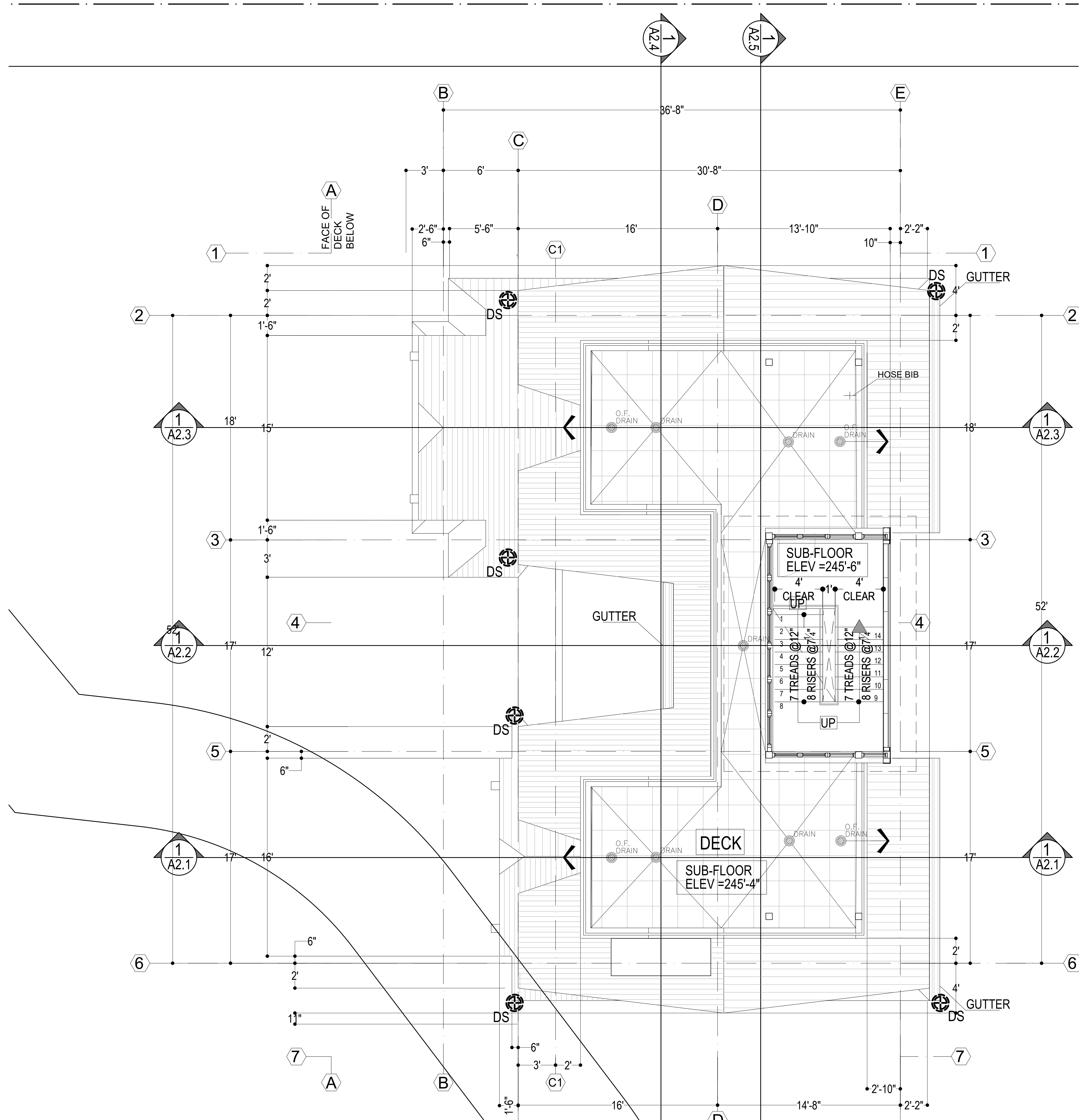
FLOOR AREA 1,228 SF

NOTES:

- SEE STRUCTURAL DRAWINGS FOR FRAMING AND FOUNDATION NOTES
- ALL CABINETS DIMENSIONS ARE TO FACE OF CABINET BOX
- VERIFY WITH OWNER HOSEBIB LOCATION

- LEGEND**
- EXTERIOR TERRACE OVER HEATED SPACE. 2" LOWER THAN INTERIOR UPPER LV SF
 - 2x6 EXTERIOR FRAMING
 - 2x4 INTERIOR FRAMING
 - FLAT WALL
 - GRID LINES
 - PROPERTY LINES
 - SET BACK
 - UPPER LV PROJECTION LINES
 - SAFETY GLAZING
 - HOSE BIB
 - DOWNSPOUT

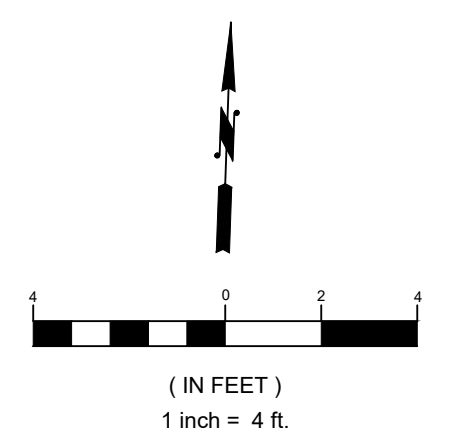




FLOOR AREA 178 SF

- NOTES:**
- SEE STRUCTURAL DRAWINGS FOR FRAMING AND FOUNDATION NOTES
 - ALL CABINETS DIMENSIONS ARE TO FACE OF CABINET BOX
 - VERIFY WITH OWNER HOSEBIB LOCATION

- LEGEND**
- EXTERIOR TERRACE OVER HEATED SPACE. 2" LOWER THAN INTERIOR UPPER LV SF
 - 2x6 EXTERIOR FRAMING
 - 2x4 INTERIOR FRAMING
 - FLAT WALL
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 - PROPERTY LINES
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 - UPPER LV PROJECTION LINES
 - SAFETY GLAZING
 - HOSE BIB
 - DOWNSPOUT



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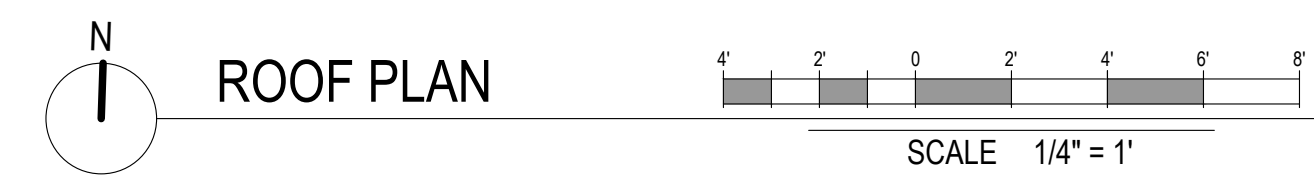
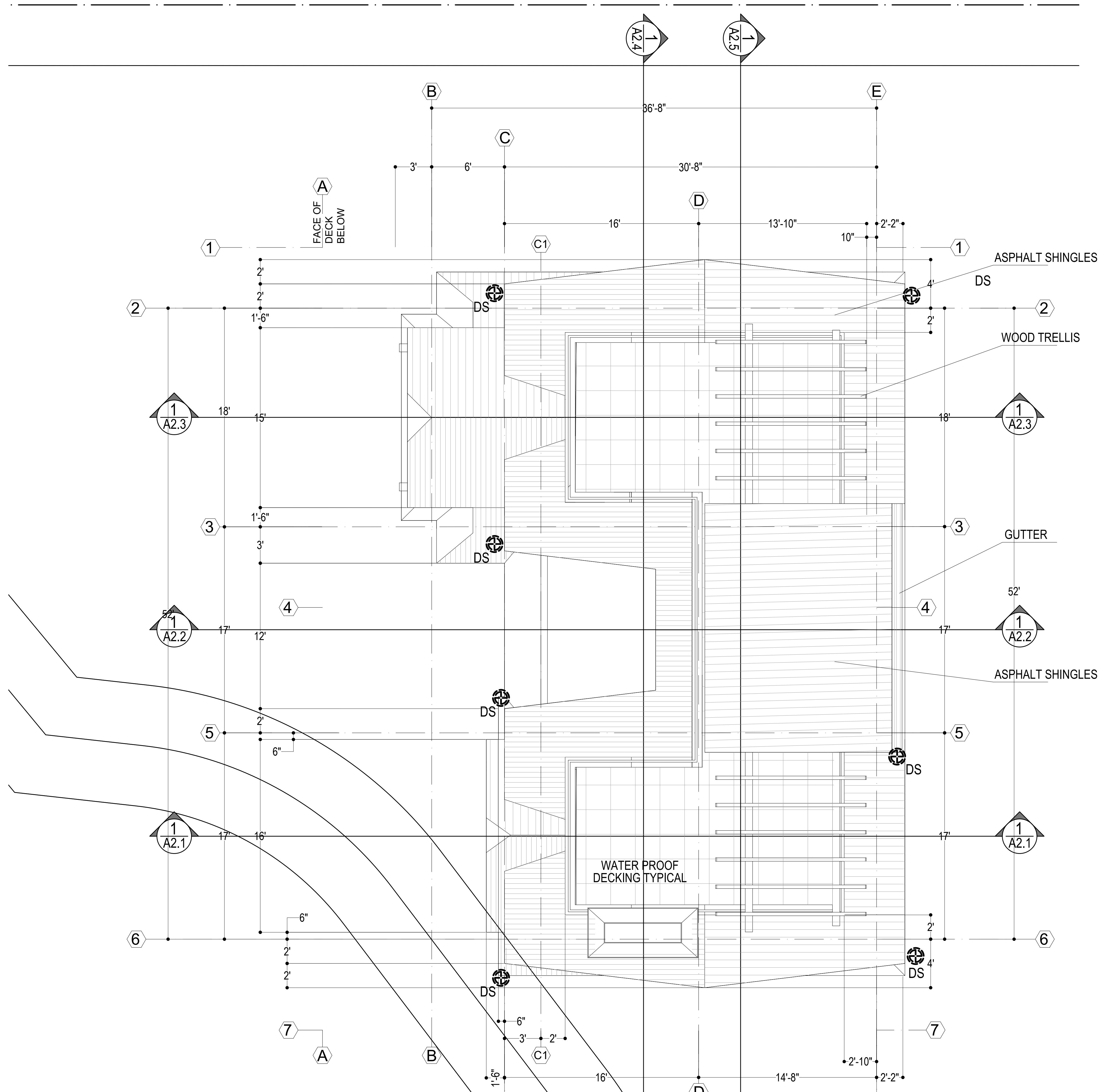
PERMIT SET

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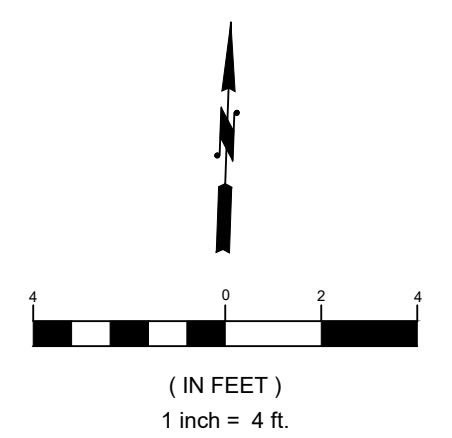
ARCHITECTURAL FRAMING PLAN ROOF LEVEL

SHEET NO.

A1.1e



- LEGEND**
- EXTERIOR TERRACE OVER HEATED SPACE. 2" LOWER THAN INTERIOR UPPER LV SF
 - 2x6 EXTERIOR FRAMING
 - 2x4 INTERIOR FRAMING
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ARCHITECTURAL
 ROOF PLAN

SHEET NO.

A1.1f



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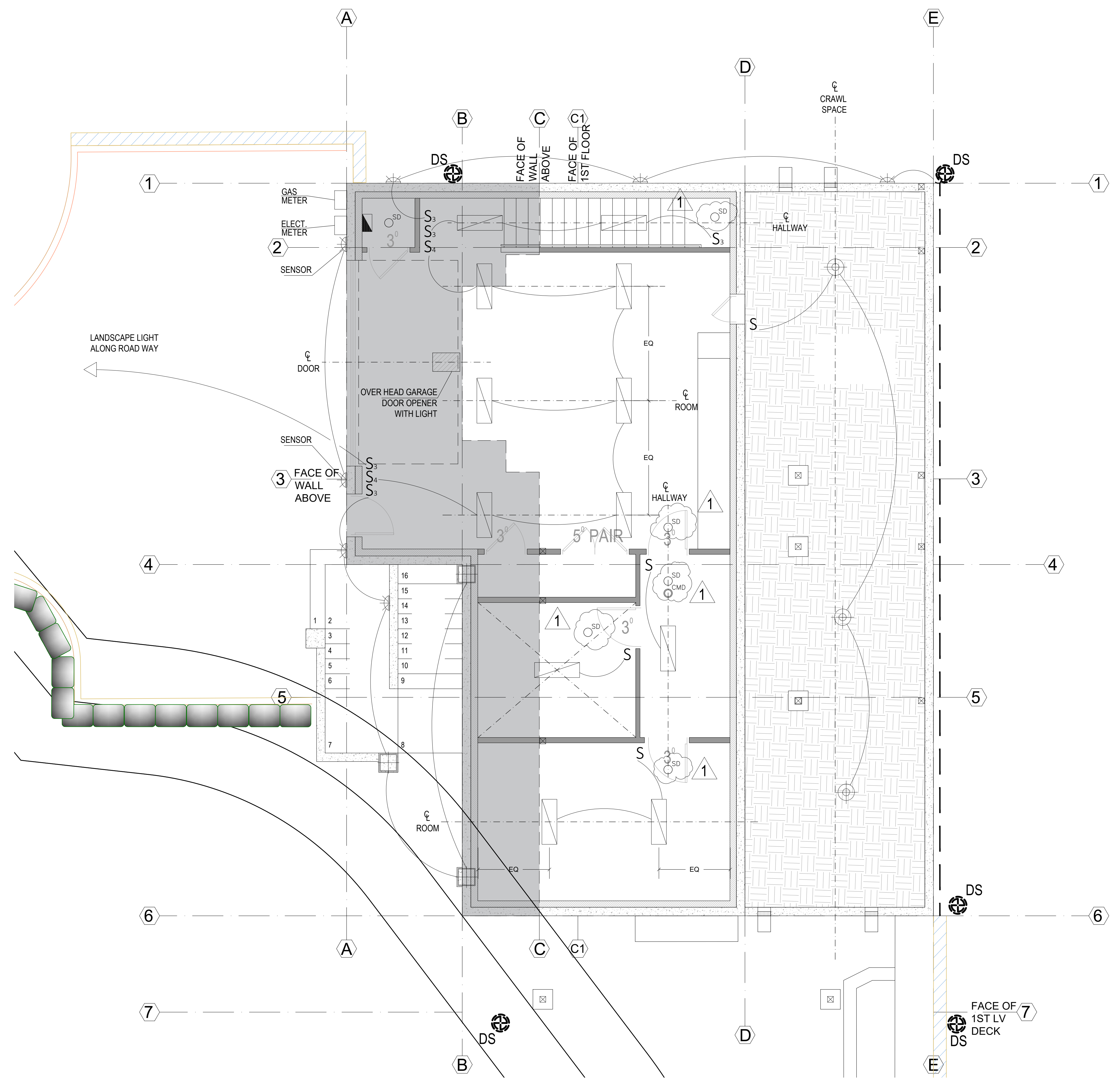
ARCHITECTURAL REFLECTED CEILING PLAN BASEMENT LEVEL

SHEET NO.

A1.2a

CEILING PLAN
BASEMENT LEVEL
 SCALE 1/4" = 1'

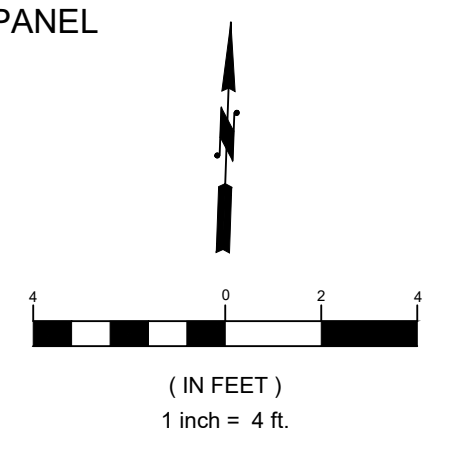
NOTE
 ALL ROOF EAVES AND UNDERSIDE OF ENCLOSED DECKS TO HAVE CONTINUOUS SCREENED VENTING



ELECTRICAL

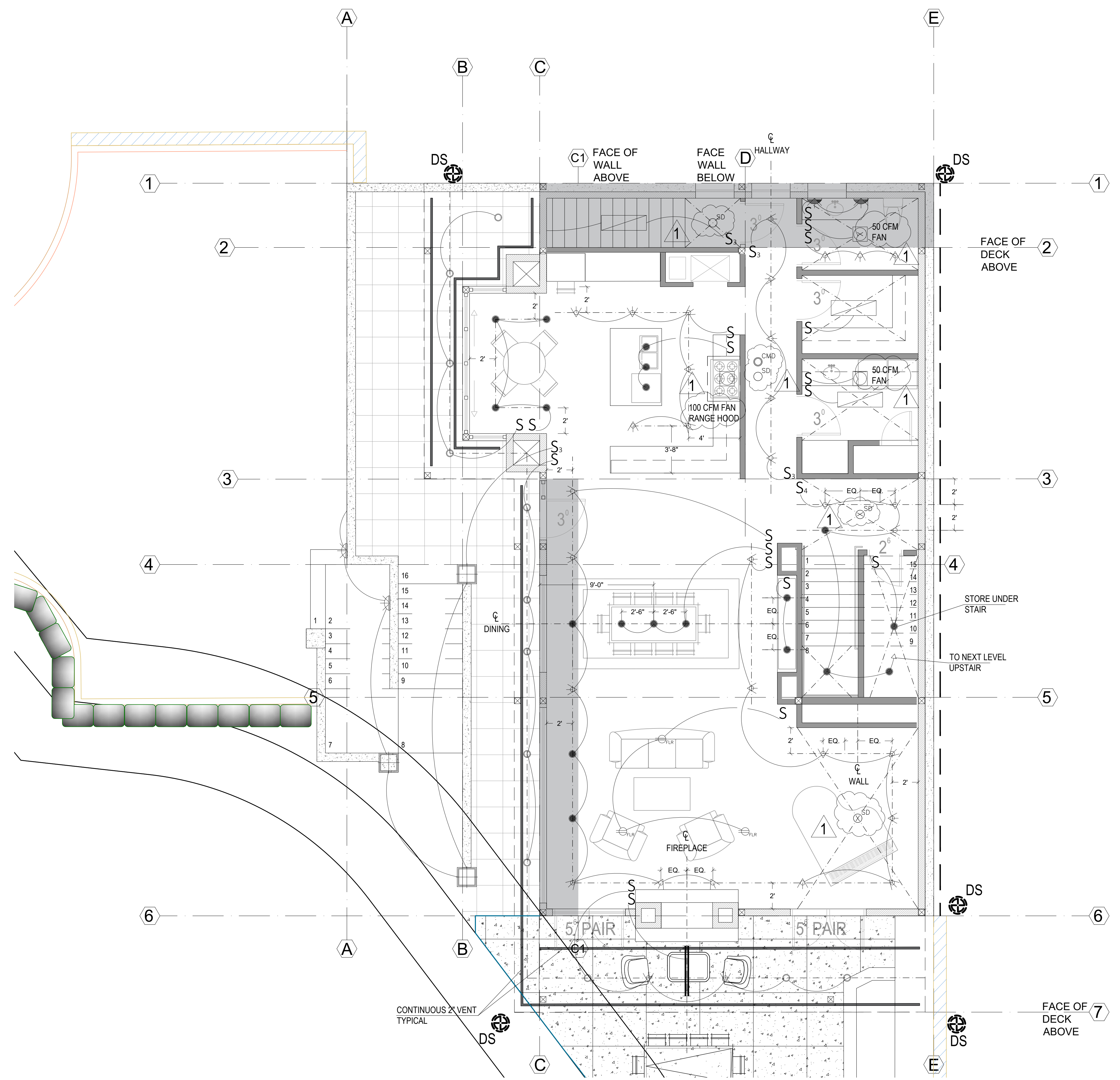
- 4" RECESSED CAN TYP
- ^{SP} RECESSED SHOWER LIGHT
- 4" EXTERIOR RECESSED CAN
- ⊙ STEP LIGHT
- ⊙ 4" RECESSED WALL WASHER
- ⊙ SURFACE MOUNT LIGHT
- ▭ FLORESCENT FIXTURE
- ▭ WALL LIGHT
- ▭ EXTERIOR WALL LIGHT
- ▭ LINTERN
- - - ROPE LIGHT
- ^{SD} SMOKE DETECTOR- WIRED TO BUILDING POWER
- ^{CMD} CARBON MONOXIDE ALARM CONNECTED TO THE BUILDING POWER VERIFY MANUFACTURES MOUNT REQUERMENTS

- ⊙ EXTERIOR FOCUS
- ▭ HEATER
- ▭ MEDIA OUTLET
- ⊙ OUTLET
- ⊙^{WA} WET AREA OUTLET
- ⊙^{EX} EXTERIOR OUTLET
- ⊙^{FL} FLOOR OUTLET
- S SINGLE SWITCH
- S₃ THREE-WAY SWITCH
- S₄ FOUR-WAY SWITCH
- ▭ CONTROL PANEL
- ⊙ FAN



CEILING PLAN
MAIN LEVEL
SCALE 1/4" = 1'

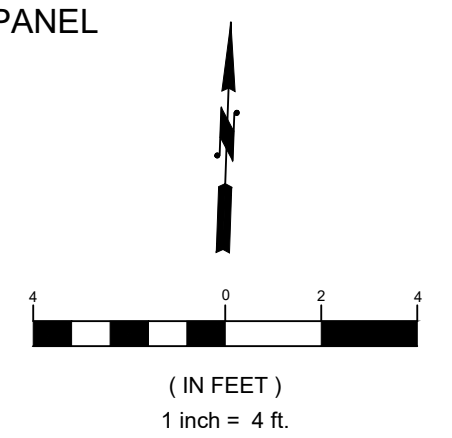
NOTE
ALL ROOF EAVES AND UNDERSIDE OF ENCLOSED DECKS TO HAVE CONTINUOUS SCREENED VENTING



ELECTRICAL

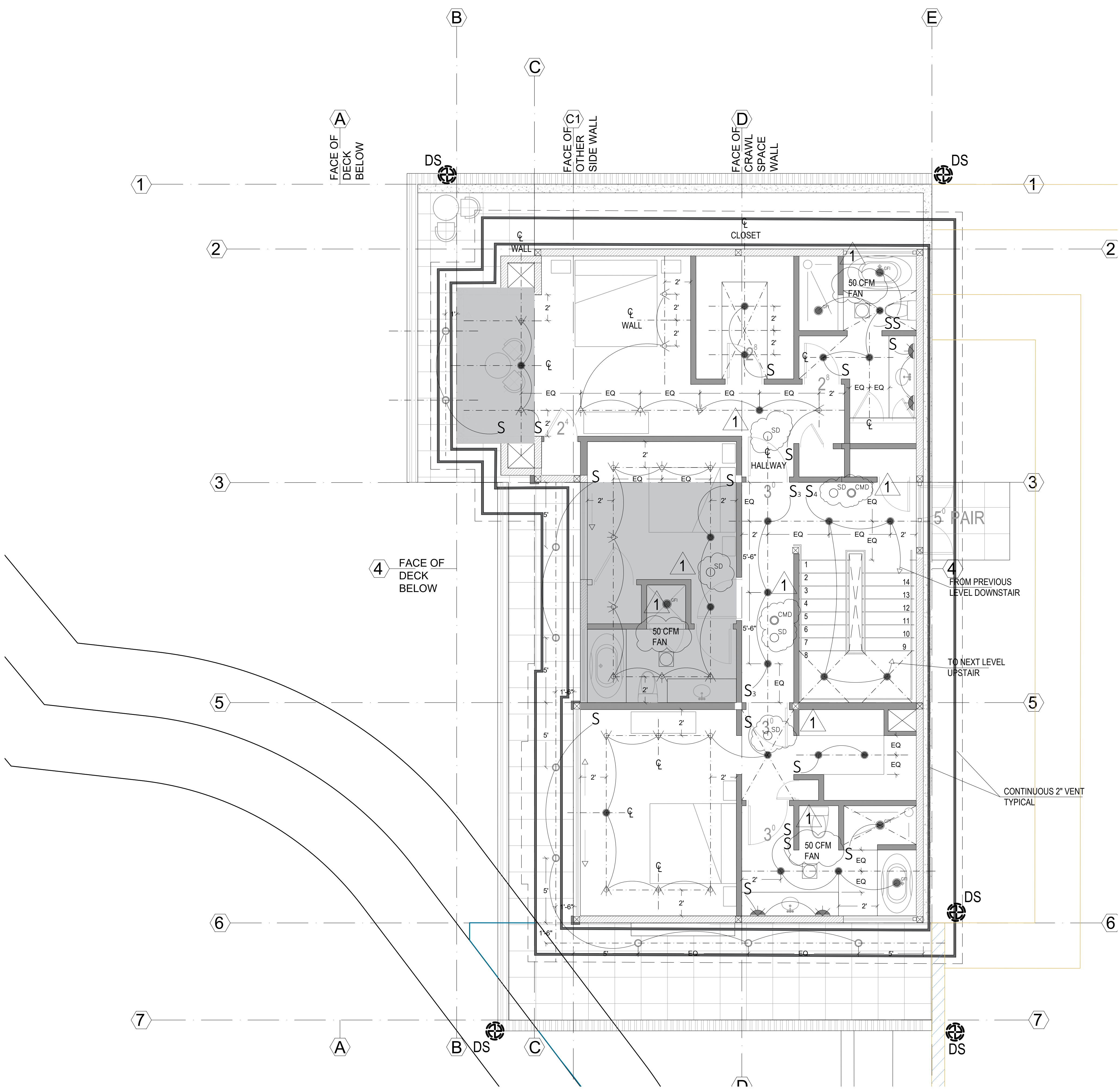
- 4" RECESSED CAN TYP
- ^{SP} RECESSED SHOWER LIGHT
- 4" EXTERIOR RECESSED CAN
- STEP LIGHT
- 4" RECESSED WALL WASHER
- SURFACE MOUNT LIGHT
- ▭ FLORESCENT FIXTURE
- ▭ WALL LIGHT
- ▭ EXTERIOR WALL LIGHT
- ▭ LINTERN
- - - ROPE LIGHT
- ^{SD} SMOKE DETECTOR- WIRED TO BUILDING POWER
- ^{CMD} CARBON MONOXIDE ALARM CONNECTED TO THE BUILDING POWER VERIFY MANUFACTURERS MOUNT REQUERIMENTS

- EXTERIOR FOCUS
- ▭ HEATER
- ▭ MEDIA OUTLET
- OUTLET
- ^W WET AREA OUTLET
- ^E EXTERIOR OUTLET
- ^F FLOOR OUTLET
- S SINGLE SWITCH
- S₃ THREE-WAY SWITCH
- S₄ FOUR-WAY SWITCH
- ▭ CONTROL PANEL
- FAN



CEILING PLAN
FIRST LEVEL
SCALE 1/4" = 1'

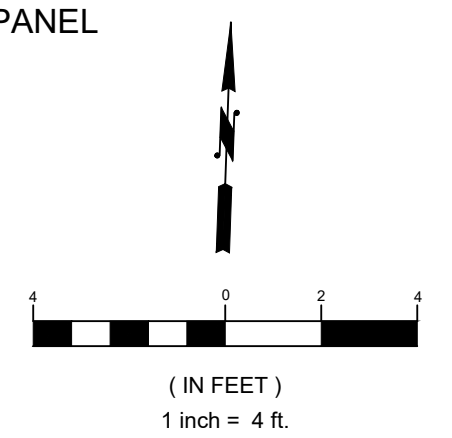
NOTE
ALL ROOF EAVES AND UNDERSIDE OF ENCLOSED DECKS TO HAVE CONTINUOUS SCREENED VENTING



ELECTRICAL

- 4" RECESSED CAN TYP
- ^{SH} RECESSED SHOWER LIGHT
- 4" EXTERIOR RECESSED CAN
- ⊙ STEP LIGHT
- ⊙ 4" RECESSED WALL WASHER
- ⊙ SURFACE MOUNT LIGHT
- ⊙ FLORESCENT FIXTURE
- ⊙ WALL LIGHT
- ⊙ EXTERIOR WALL LIGHT
- ⊙ LINTERN
- ⊙ ROPE LIGHT
- ^{SD} SMOKE DETECTOR- WIRED TO BUILDING POWER
- ^{CMD} CARBON MONOXIDE ALARM CONNECTED TO THE BUILDING POWER VERIFY MANUFACTURES MOUNT REQUERIMENTS

- ⊙ EXTERIOR FOCUS
- ▬ HEATER
- ▴ MEDIA OUTLET
- ⊙ OUTLET
- ⊙^{WA} WET AREA OUTLET
- ⊙^{EX} EXTERIOR OUTLET
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- S SINGLE SWITCH
- S₃ THREE-WAY SWITCH
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- ▭ CONTROL PANEL
- ⊙ FAN





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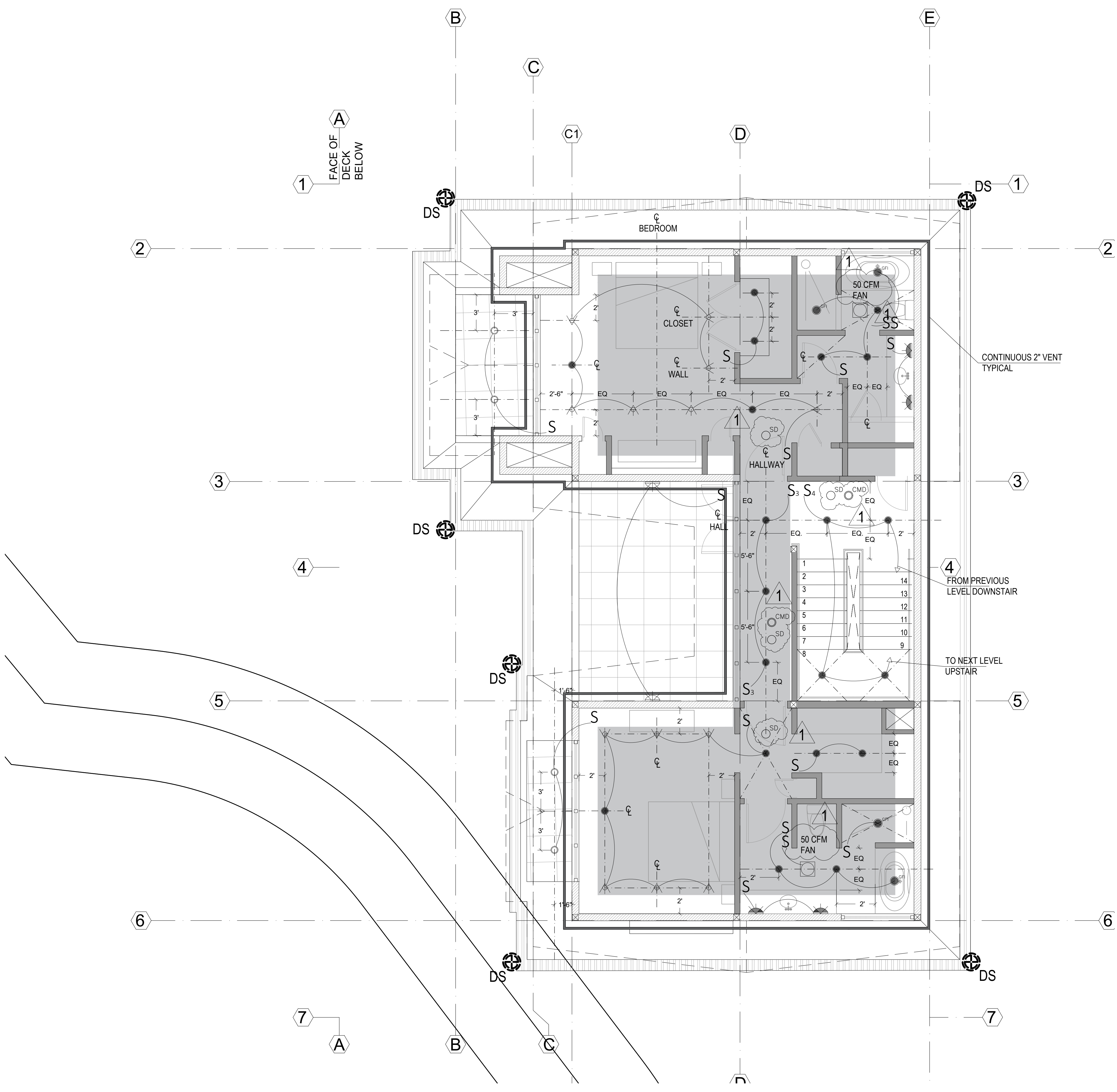
ARCHITECTURAL REFLECTED CEILING PLAN SECOND LEVEL

SHEET NO.

A1.2d

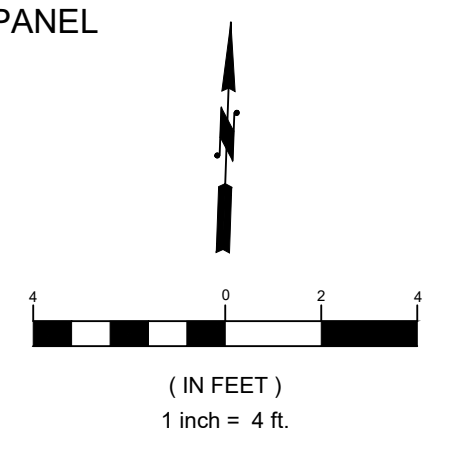
CEILING PLAN SECOND LEVEL
 SCALE 1/4" = 1'

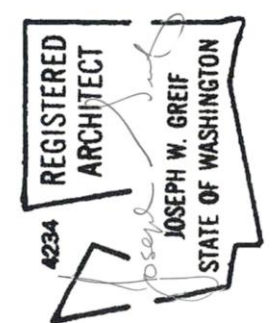
NOTE
 ALL ROOF EAVES AND UNDERSIDE OF ENCLOSED DECKS TO HAVE CONTINUOUS SCREENED VENTING



ELECTRICAL

- 4" RECESSED CAN TYP
- ^{CFM} RECESSED SHOWER LIGHT
- 4" EXTERIOR RECESSED CAN
- ⊙ STEP LIGHT
- ⊙ 4" RECESSED WALL WASHER
- ⊙ SURFACE MOUNT LIGHT
- ⊙ FLORESCENT FIXTURE
- ⊙ WALL LIGHT
- ⊙ EXTERIOR WALL LIGHT
- ⊙ LINTERN
- ⊙ ROPE LIGHT
- ^{SD} SMOKE DETECTOR- WIRED TO BUILDING POWER
- ^{CMD} CARBON MONOXIDE ALARM CONNECTED TO THE BUILDING POWER VERIFY MANUFACTURERS MOUNT REQUERIMENTS
- ⊙ EXTERIOR FOCUS
- ▬ HEATER
- ▾ MEDIA OUTLET
- ⊙ OUTLET
- ⊙^{WA} WET AREA OUTLET
- ⊙^{EX} EXTERIOR OUTLET
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- S SINGLE SWITCH
- S₃ THREE-WAY SWITCH
- S₄ FOUR-WAY SWITCH
- ▭ CONTROL PANEL
- ⊙ FAN





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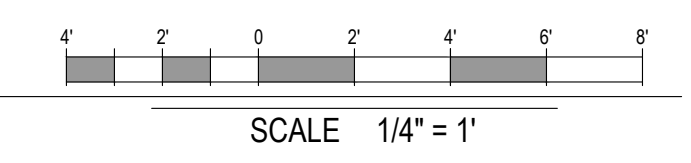
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ARCHITECTURAL REFLECTED CEILING PLAN ROOF LEVEL

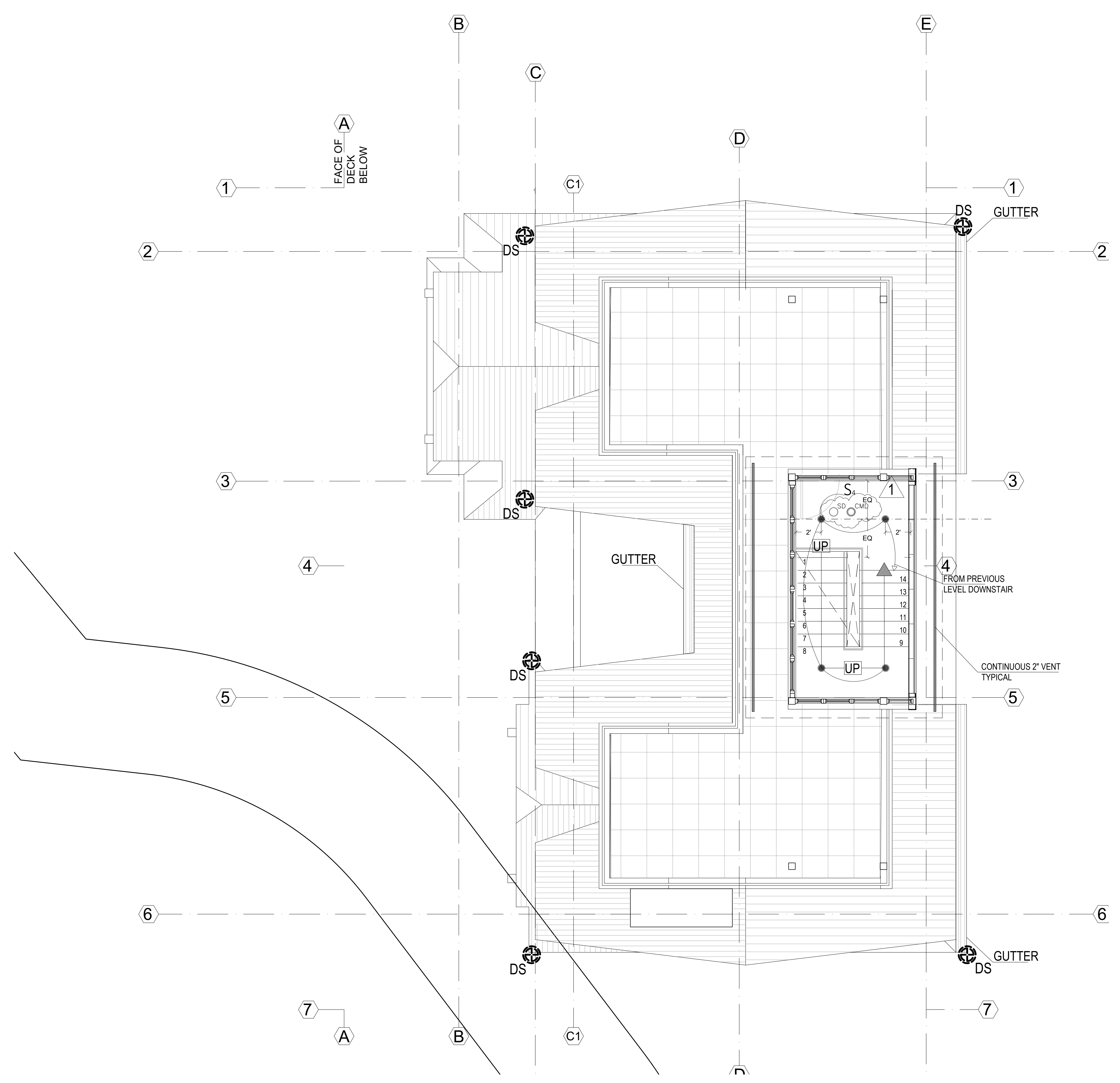
SHEET NO.

A1.2e

FRAMING PLAN
 ROOF LEVEL

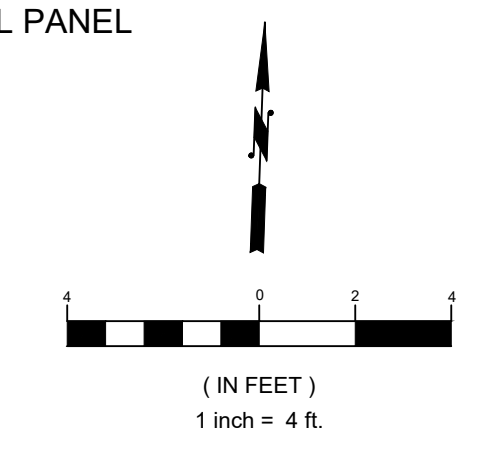


NOTE
 ALL ROOF EAVES AND UNDERSIDE OF ENCLOSED DECKS TO HAVE CONTINUOUS SCREENED VENTING



ELECTRICAL

- | | | | |
|------------------|---|--------------------|------------------|
| ● | 4" RECESSED CAN TYP | ⊙ | EXTERIOR FOCUS |
| ● ^{SH} | RECESSED SHOWER LIGHT | ▬▬▬ | HEATER |
| ○ | 4" EXTERIOR RECESSED CAN | ▾ | MEDIA OUTLET |
| ⊙ | STEP LIGHT | ⊕ | OUTLET |
| ⊙ | 4" RECESSED WALL WASHER | ⊕ _{WA} | WET AREA OUTLET |
| ⊕ | SURFACE MOUNT LIGHT | ⊕ _{EX} | EXTERIOR OUTLET |
| ▭ | FLORESCENT FIXTURE | ⊕ _{FLOOR} | FLOOR OUTLET |
| ▭ | WALL LIGHT | S | SINGLE SWITCH |
| ▭ | EXTERIOR WALL LIGHT | S ₃ | THREE-WAY SWITCH |
| ▭ | LINTERN | S ₄ | FOUR-WAY SWITCH |
| ▭ | ROPE LIGHT | ▭ | CONTROL PANEL |
| ○ ^{SD} | SMOKE DETECTOR- WIRED TO BUILDING POWER | ⊕ | FAN |
| ○ ^{CMD} | CARBON MONOXIDE ALARM CONNECTED TO THE BUILDING POWER VERIFY MANUFACTURERS MOUNT REQUIREMENTS | | |





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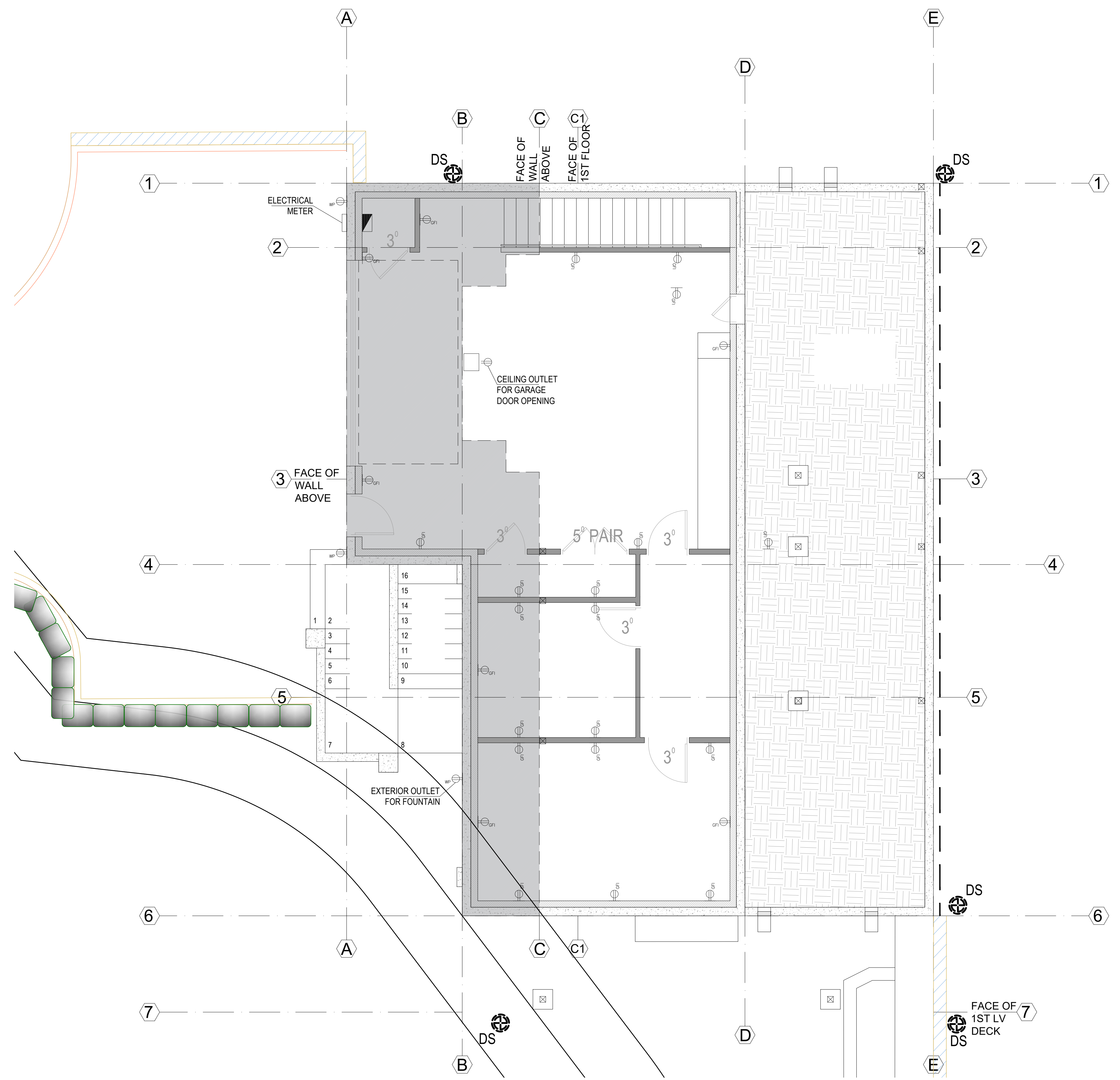
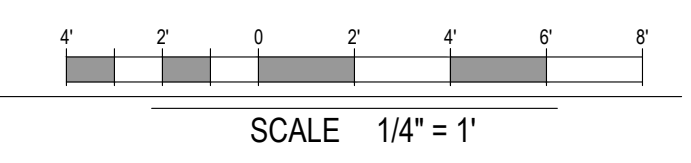
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**ARCHITECTURAL
 OUTLETS PLAN
 BASEMENT LEVEL**

SHEET NO. _____

A1.3a

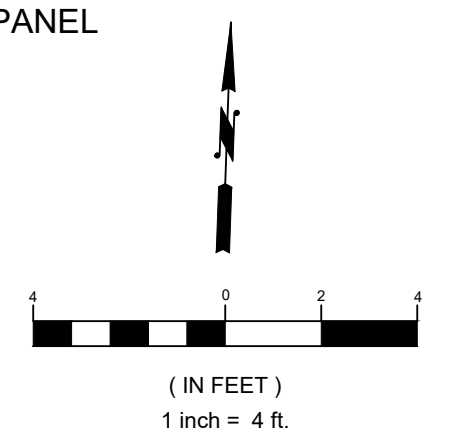
**CEILING PLAN
 BASEMENT LEVEL**



ELECTRICAL

- 4" RECESSED CAN TYP
- _{gr} RECESSED SHOWER LIGHT
- 4" EXTERIOR RECESSED CAN
- ⊙ STEP LIGHT
- ⊙ 4" RECESSED WALL WASHER
- ⊙ SURFACE MOUNT LIGHT
- ▭ FLORESCENT FIXTURE
- ▭ WALL LIGHT
- ▭ EXTERIOR WALL LIGHT
- ▭ LINTERN
- - - ROPE LIGHT
- _{SD} SMOKE DETECTOR- WIRED TO BUILDING POWER
- _{CMD} CARBON MONOXIDE ALARM CONNECTED TO THE BUILDING POWER VERIFY MANUFACTURES MOUNT REQUERMENTS

- ⊙ EXTERIOR FOCUS
- ▬ HEATER
- ▴ MEDIA OUTLET
- ⊙ OUTLET
- ⊙_{gr} WET AREA OUTLET
- ⊙_{ex} EXTERIOR OUTLET
- ⊙_{fr} FLOOR OUTLET
- S SINGLE SWITCH
- S₃ THREE-WAY SWITCH
- S₄ FOUR-WAY SWITCH
- ▭ CONTROL PANEL
- ⊙ FAN





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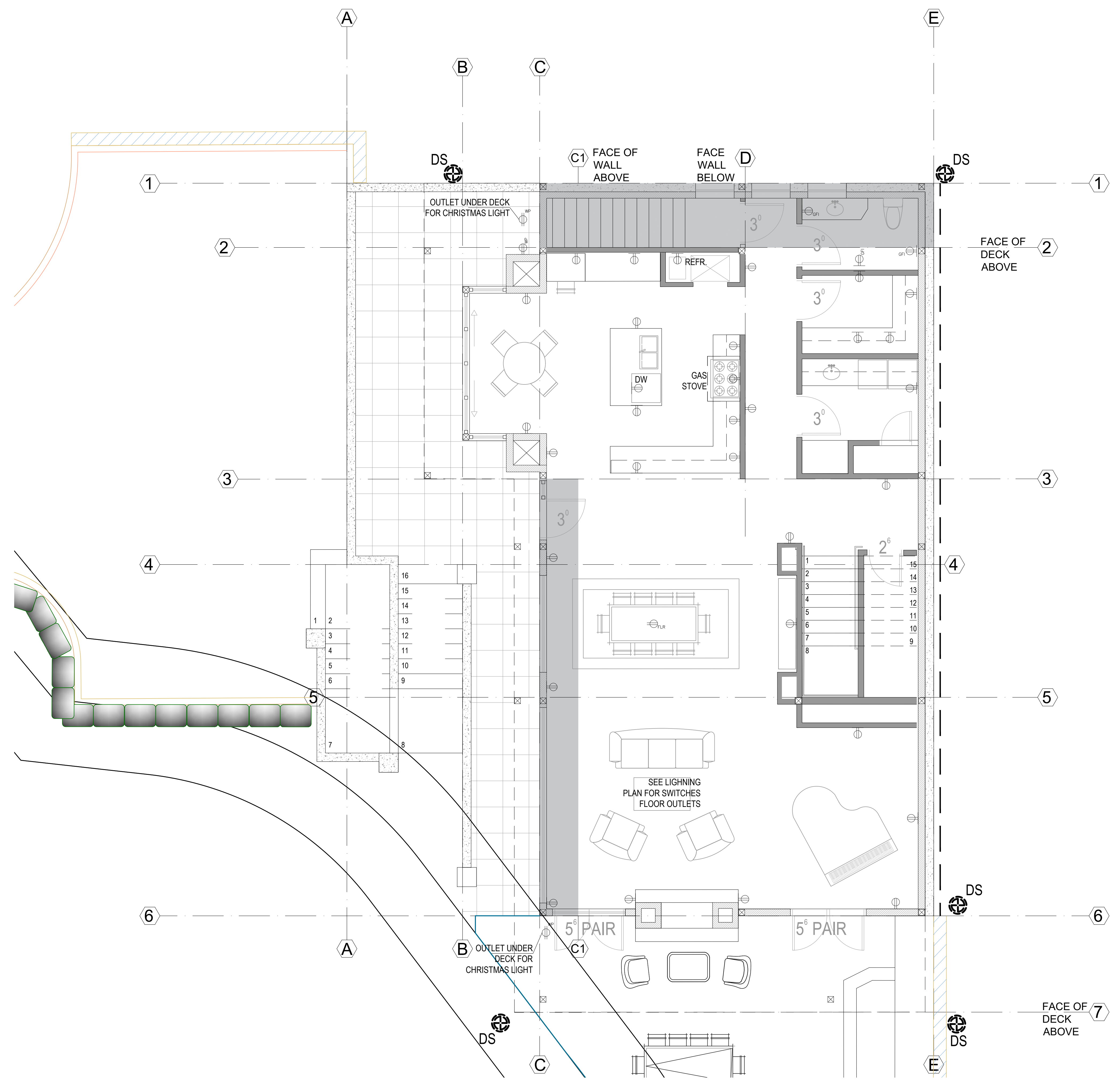
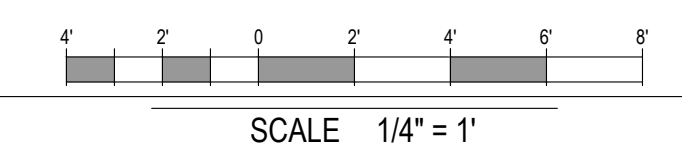
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**ARCHITECTURAL
 OUTLET PLAN
 MAIN LEVEL**

SHEET NO.

A1.3b

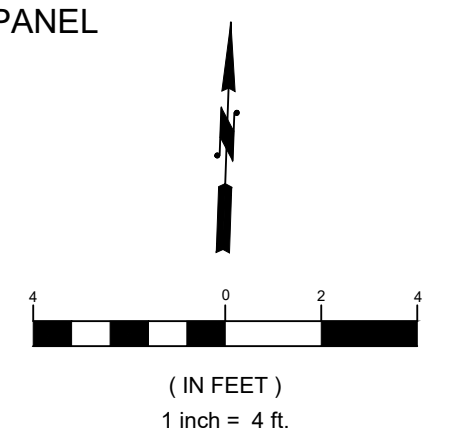
**CEILING PLAN
 MAIN LEVEL**

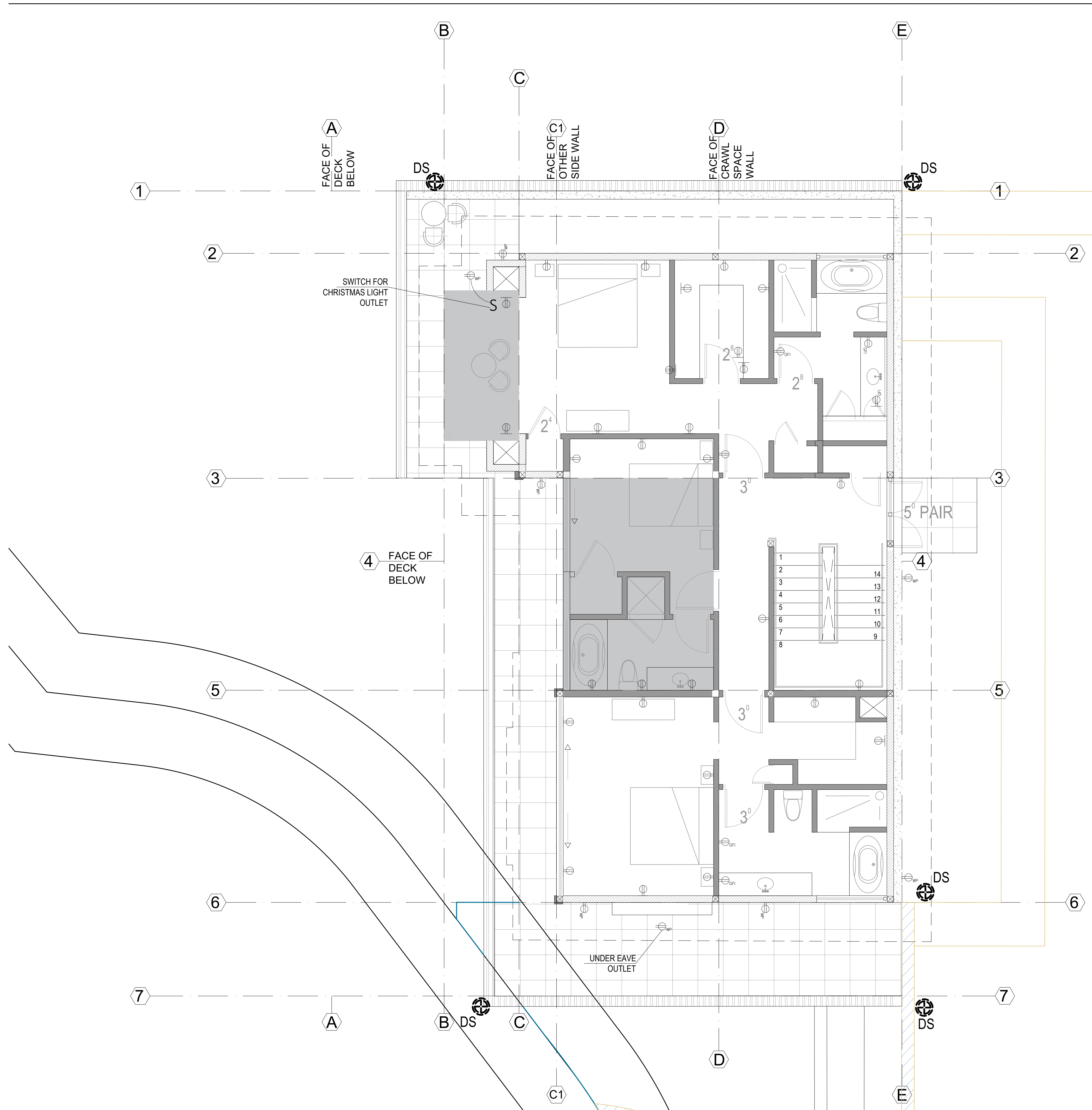


ELECTRICAL

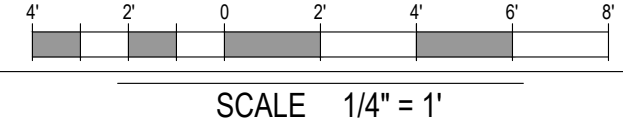
- 4" RECESSED CAN TYP
- ^{gr} RECESSED SHOWER LIGHT
- 4" EXTERIOR RECESSED CAN
- ⊙ STEP LIGHT
- ⊙ 4" RECESSED WALL WASHER
- ⊙ SURFACE MOUNT LIGHT
- ▭ FLORESCENT FIXTURE
- ▭ WALL LIGHT
- ▭ EXTERIOR WALL LIGHT
- ▭ LINTERN
- - - ROPE LIGHT
- ^{SD} SMOKE DETECTOR- WIRED TO BUILDING POWER
- ^{CMD} CARBON MONOXIDE ALARM CONNECTED TO THE BUILDING POWER VERIFY MANUFACTURES MOUNT REQUERMENTS

- ⊙ EXTERIOR FOCUS
- ▭ HEATER
- ▭ MEDIA OUTLET
- ⊙ OUTLET
- ⊙^{gr} WET AREA OUTLET
- ⊙^{gr} EXTERIOR OUTLET
- ⊙^{gr} FLOOR OUTLET
- S SINGLE SWITCH
- S₃ THREE-WAY SWITCH
- S₄ FOUR-WAY SWITCH
- ▭ CONTROL PANEL
- ⊙ FAN





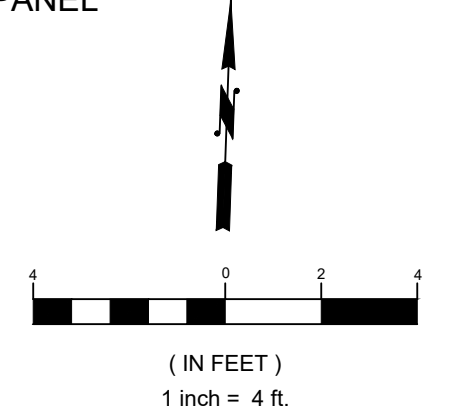
N
CEILING PLAN
FIRST LEVEL



ELECTRICAL

- 4" RECESSED CAN TYP
- ^{SN} RECESSED SHOWER LIGHT
- 4" EXTERIOR RECESSED CAN
- ⊙ STEP LIGHT
- ⊙ 4" RECESSED WALL WASHER
- ⊙ SURFACE MOUNT LIGHT
- ▭ FLORESCENT FIXTURE
- ▭ WALL LIGHT
- ▭ EXTERIOR WALL LIGHT
- ▭ LINTERN
- - - ROPE LIGHT
- ^{SD} SMOKE DETECTOR- WIRED TO BUILDING POWER
- ^{CMD} CARBON MONOXIDE ALARM CONNECTED TO THE BUILDING POWER VERIFY MANUFACTURERS MOUNT REQUIREMENTS

- ⊙ EXTERIOR FOCUS
- ▬ HEATER
- ▭ MEDIA OUTLET
- ⊙ OUTLET
- ⊙^{WA} WET AREA OUTLET
- ⊙^{EX} EXTERIOR OUTLET
- ⊙^{FL} FLOOR OUTLET
- S SINGLE SWITCH
- S₃ THREE-WAY SWITCH
- S₄ FOUR-WAY SWITCH
- ▭ CONTROL PANEL
- ⊙ FAN



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ARCHITECTURAL
 OUTLET PLAN
 FIRST LEVEL

SHEET NO.

A1.3c



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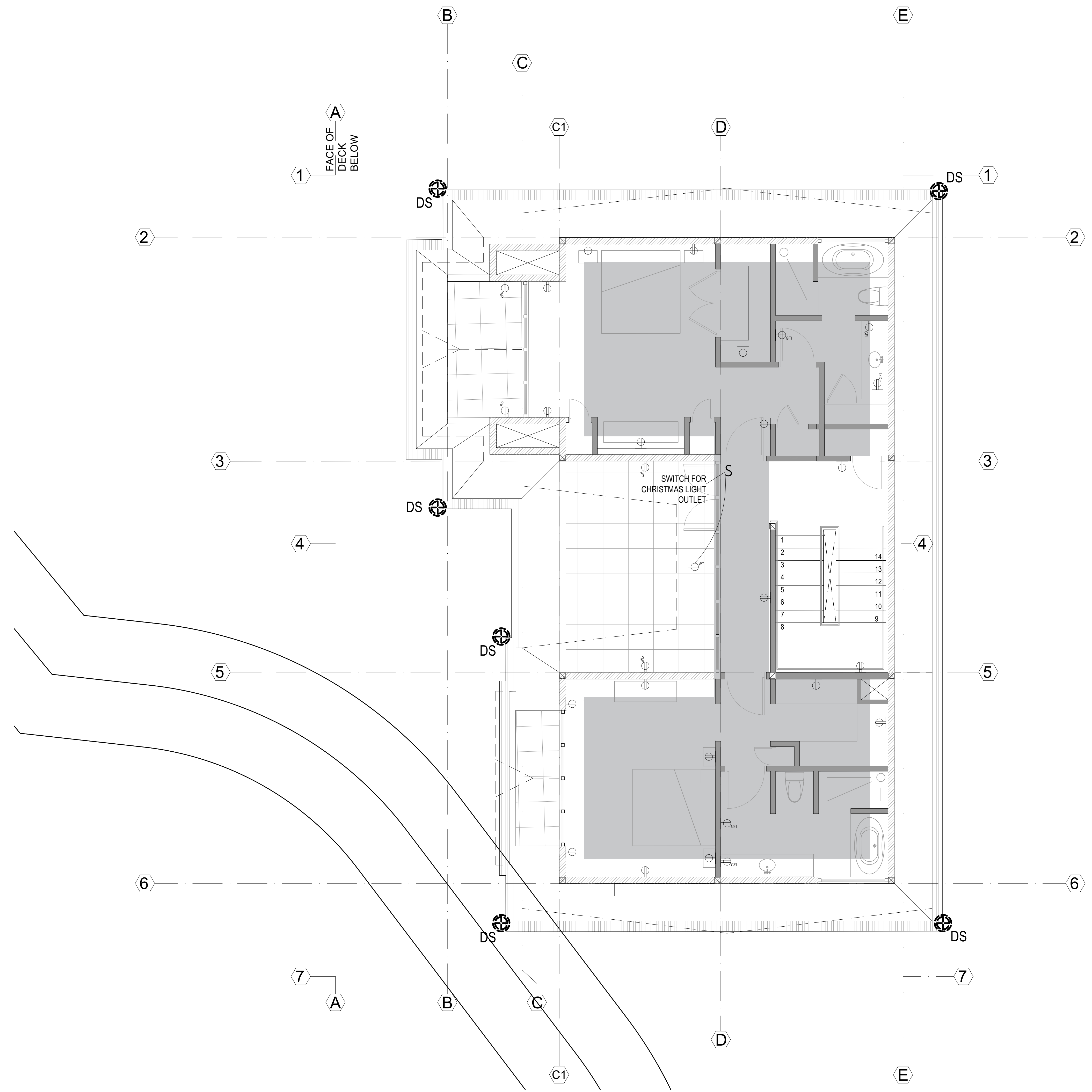
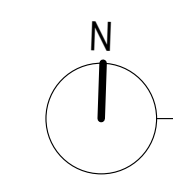
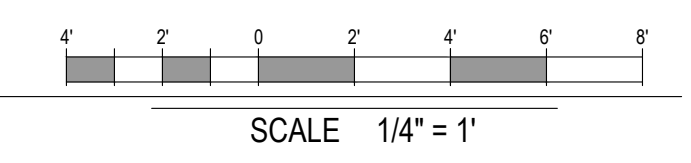
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**ARCHITECTURAL
 OUTLET PLAN
 SECOND LEVEL**

SHEET NO. _____

A1.3d

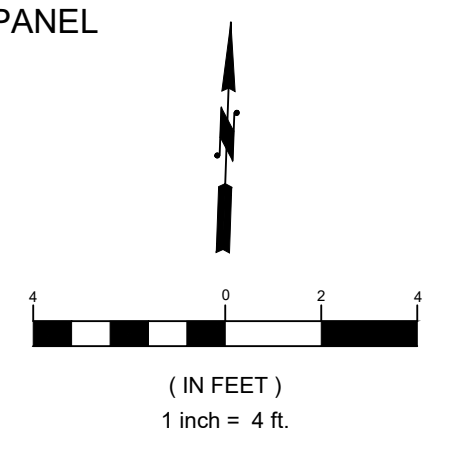
**CEILING PLAN
 SECOND LEVEL**



ELECTRICAL

- 4" RECESSED CAN TYP
- ^{SH} RECESSED SHOWER LIGHT
- 4" EXTERIOR RECESSED CAN
- ⊙ STEP LIGHT
- ⊙ 4" RECESSED WALL WASHER
- ⊙ SURFACE MOUNT LIGHT
- ▭ FLORESCENT FIXTURE
- ▭ WALL LIGHT
- ▭ EXTERIOR WALL LIGHT
- ▭ LINTERN
- - - ROPE LIGHT
- ^{SD} SMOKE DETECTOR- WIRED TO BUILDING POWER
- ^{CMD} CARBON MONOXIDE ALARM CONNECTED TO THE BUILDING POWER VERIFY MANUFACTURES MOUNT REQUERIMENTS

- ⊙ EXTERIOR FOCUS
- ▭ HEATER
- ▭ MEDIA OUTLET
- ⊙ OUTLET
- ⊙^{WA} WET AREA OUTLET
- ⊙^{EX} EXTERIOR OUTLET
- ⊙^{FL} FLOOR OUTLET
- S SINGLE SWITCH
- S₃ THREE-WAY SWITCH
- S₄ FOUR-WAY SWITCH
- ▭ CONTROL PANEL
- ⊙ FAN





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**ARCHITECTURAL
 OUTLET PLAN
 ROOF LEVEL**

SHEET NO.

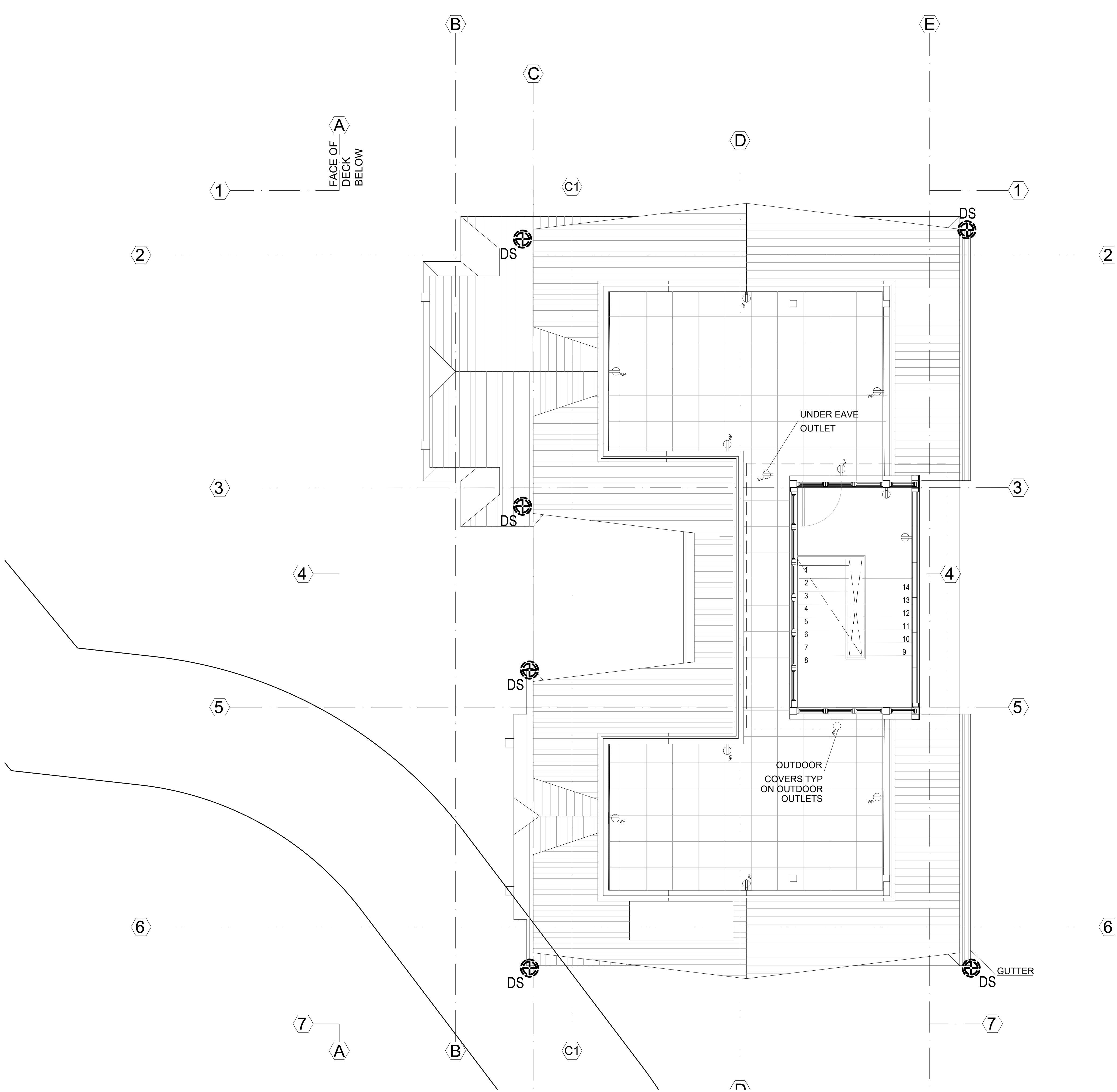
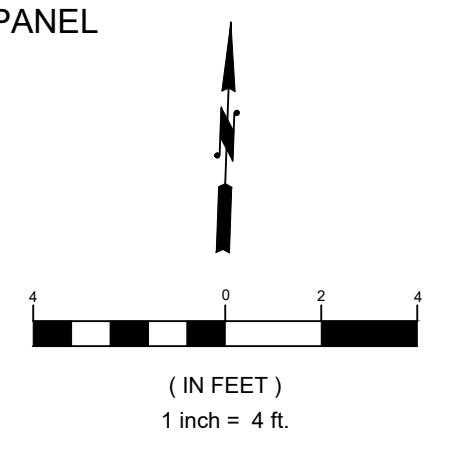
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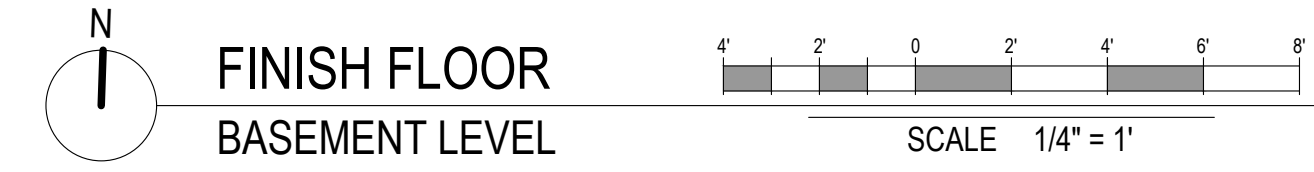
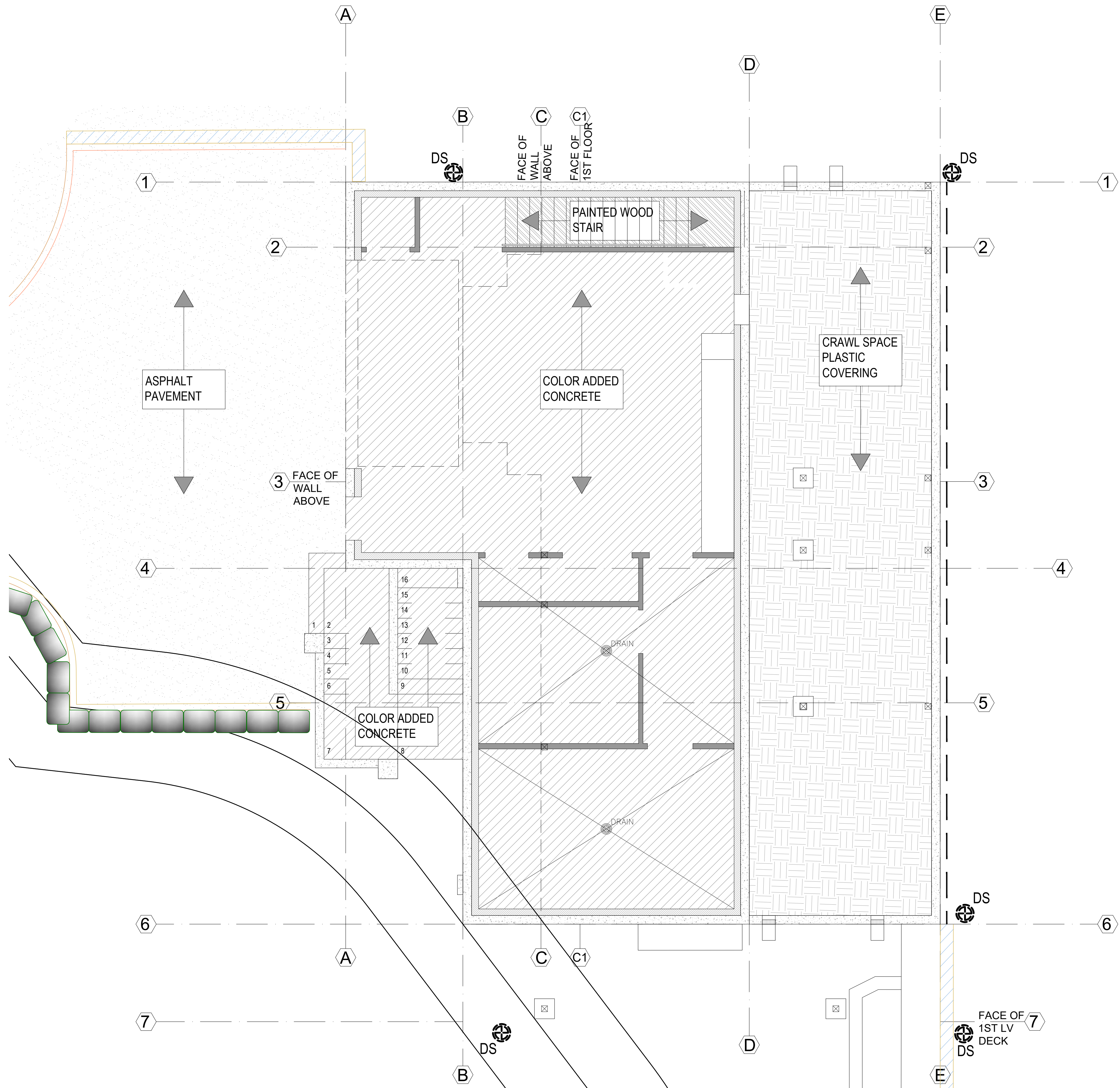
OUTLET PLAN
 ROOF LEVEL
 SCALE 1/4" = 1'

FLOOR AREA 178 SF

ELECTRICAL

- | | | | |
|------------------|---|-----------------|------------------|
| ● | 4" RECESSED CAN TYP | ⊙ | EXTERIOR FOCUS |
| ● ^{SH} | RECESSED SHOWER LIGHT | ▬▬▬ | HEATER |
| ○ | 4" EXTERIOR RECESSED CAN | ▾ | MEDIA OUTLET |
| ⊙ | STEP LIGHT | ⊕ | OUTLET |
| ⊙ ^{AW} | 4" RECESSED WALL WASHER | ⊕ ^{WA} | WET AREA OUTLET |
| ⊕ | SURFACE MOUNT LIGHT | ⊕ ^{EX} | EXTERIOR OUTLET |
| ▭ | FLORESCENT FIXTURE | ⊕ ^{FL} | FLOOR OUTLET |
| ▭ ^W | WALL LIGHT | S | SINGLE SWITCH |
| ▭ ^{EW} | EXTERIOR WALL LIGHT | S ₃ | THREE-WAY SWITCH |
| ▭ ^L | LINTERN | S ₄ | FOUR-WAY SWITCH |
| ▬▬▬ | ROPE LIGHT | ▭ | CONTROL PANEL |
| ○ ^{SD} | SMOKE DETECTOR- WIRED TO BUILDING POWER | ⊕ | FAN |
| ○ ^{CMD} | CARBON MONOXIDE ALARM CONNECTED TO THE BUILDING POWER VERIFY MANUFACTURERS MOUNT REQUIREMENTS | | |



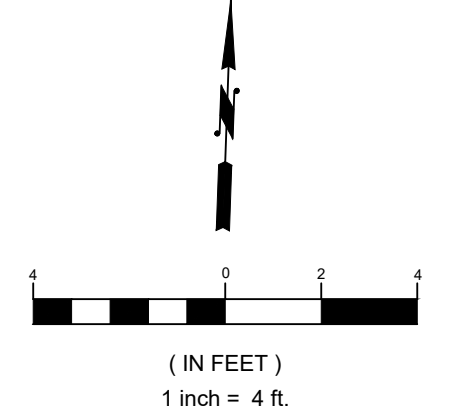


NOTES

- PAINTED WALLS, CABINETS & DOOR
- 6" RUBBER BASE

LEGEND

	COLORED CONCRETE
	PAINTED WOOD
	WOOD FLOORING
	CARPET FLOORING
	ASPHALT PAVEMENT



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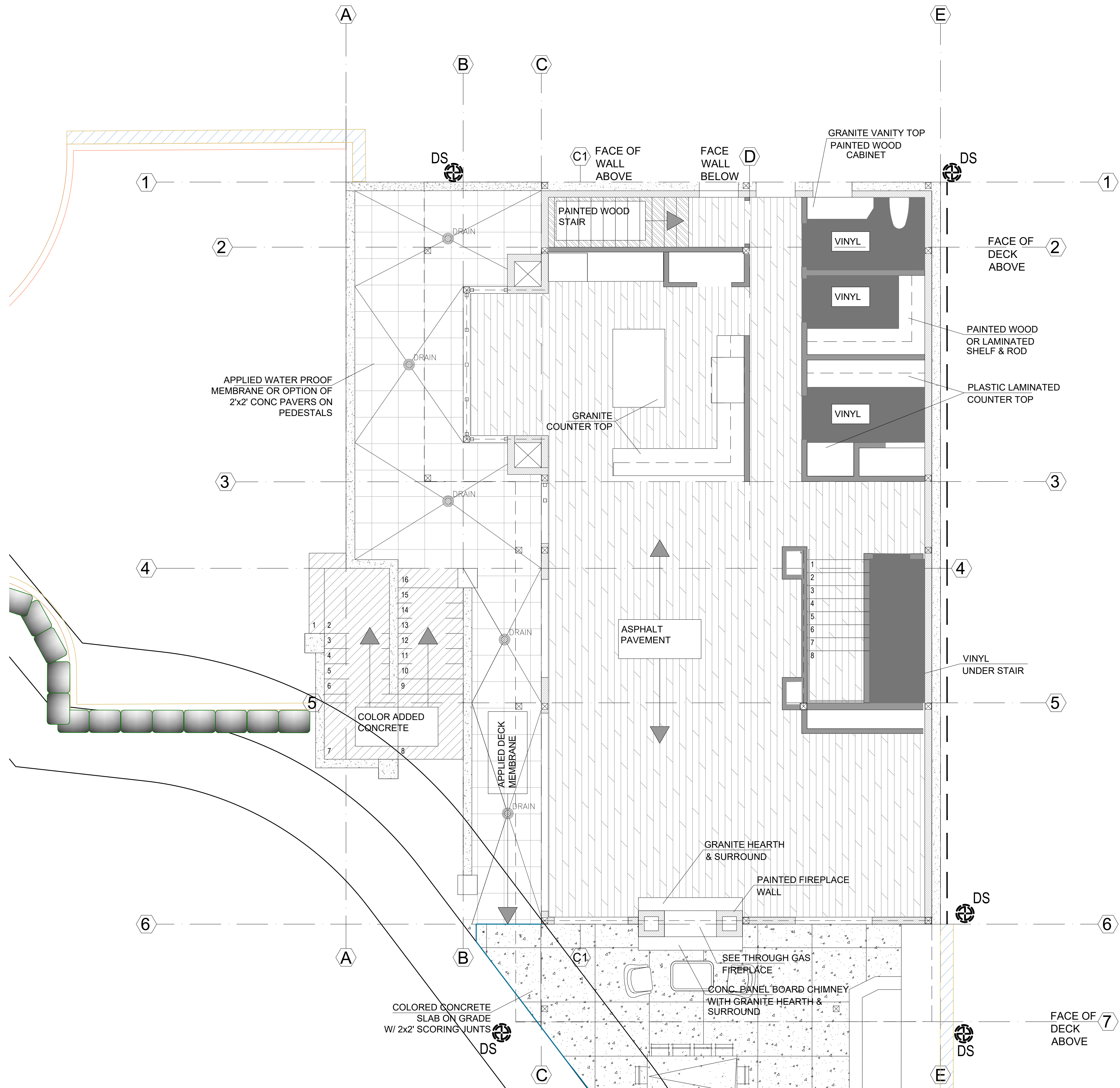
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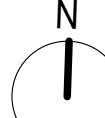
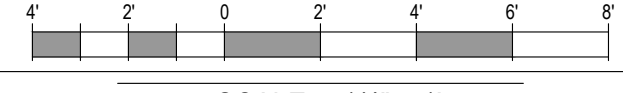
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ARCHITECTURAL FINISH FLOOR PLAN BASEMENT LEVEL



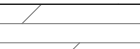

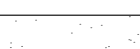
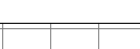

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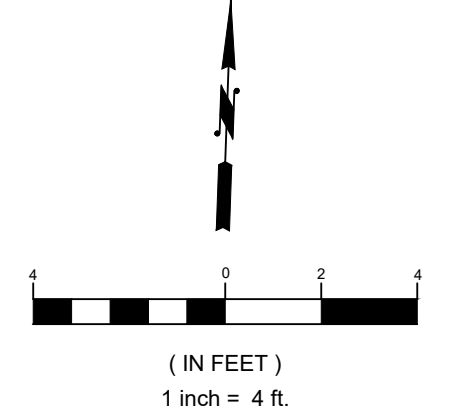
A1.4a




FINISH FLOOR
 MAIN LEVEL

 SCALE 1/4" = 1'

- NOTES**
- ALL TRIM TO BE PAINTED
 - ALL DOOR - FLUSH PANEL - STAINED

- LEGEND**
-  COLORED CONCRETE
 -  PAINTED WOOD
 -  WOOD FLOORING
 -  CARPET FLOORING
 -  ASPHALT PAVEMENT
 -  CONCRETE PAVERS
 -  VINYL



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ARCHITECTURAL
FINISH FLOOR PLAN
 MAIN LEVEL

SHEET NO.

A1.4b



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ARCHITECTURAL FINISH FLOOR PLAN FIRST LEVEL

SHEET NO.

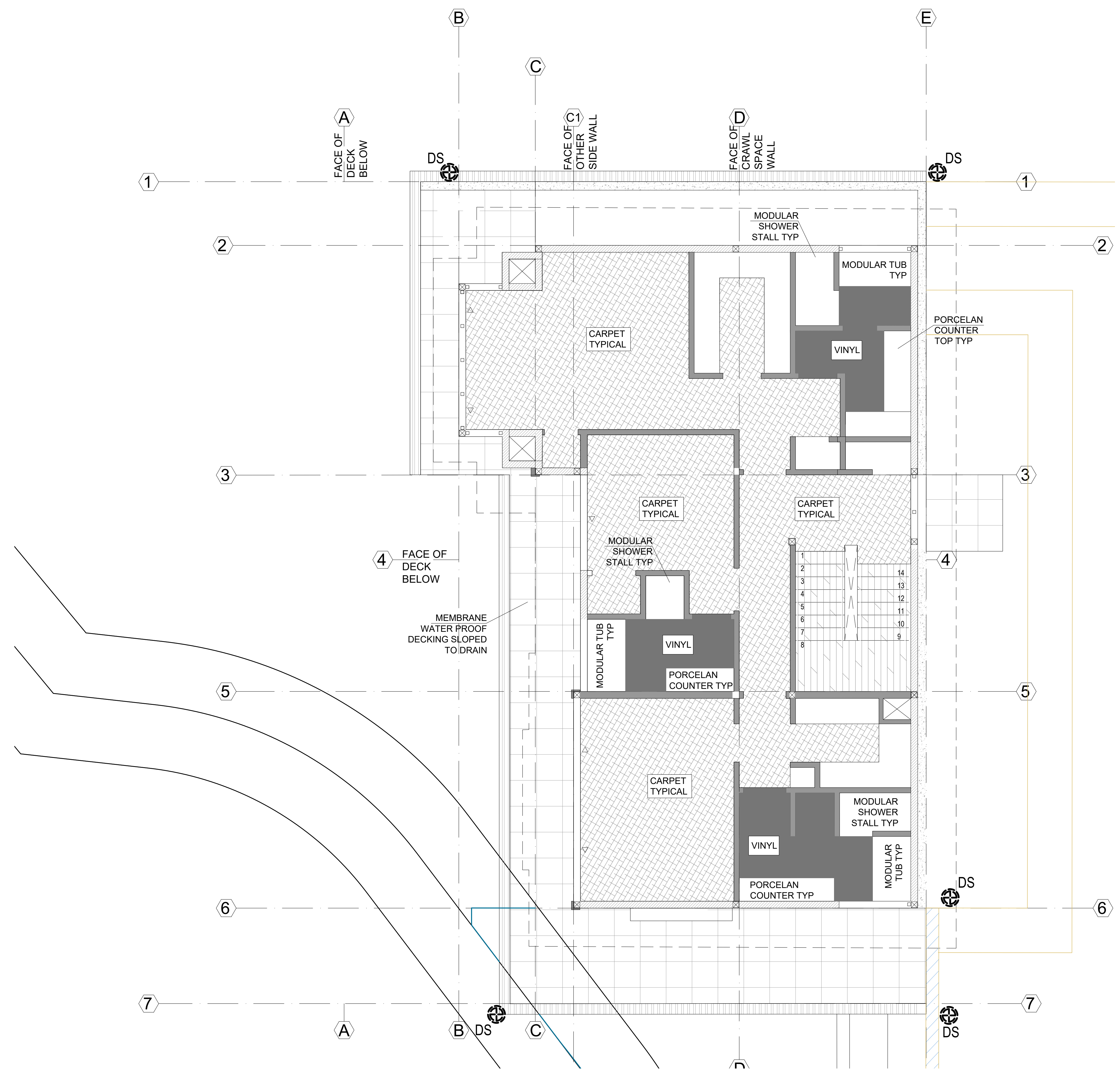
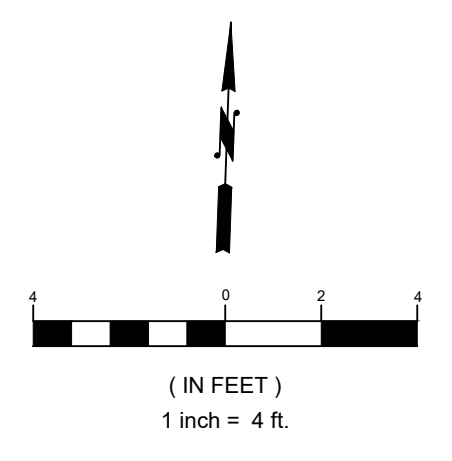
A1.4c

FINISH FLOOR FIRST LEVEL
 SCALE 1/4" = 1'

NOTES
 - ALL TRIM TO BE PAINTED
 - ALL DOOR - FLUSH PANEL - STAINED

LEGEND

	COLORED CONCRETE
	PAINTED WOOD
	WOOD FLOORING
	CARPET FLOORING
	ASPHALT PAVEMENT
	CONCRETE PAVERS
	VINYL





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**ARCHITECTURAL
 FINISH FLOOR PLAN
 SECOND LEVEL**

SHEET NO.

A1.4d

**FINISH FLOOR
 SECOND LEVEL**

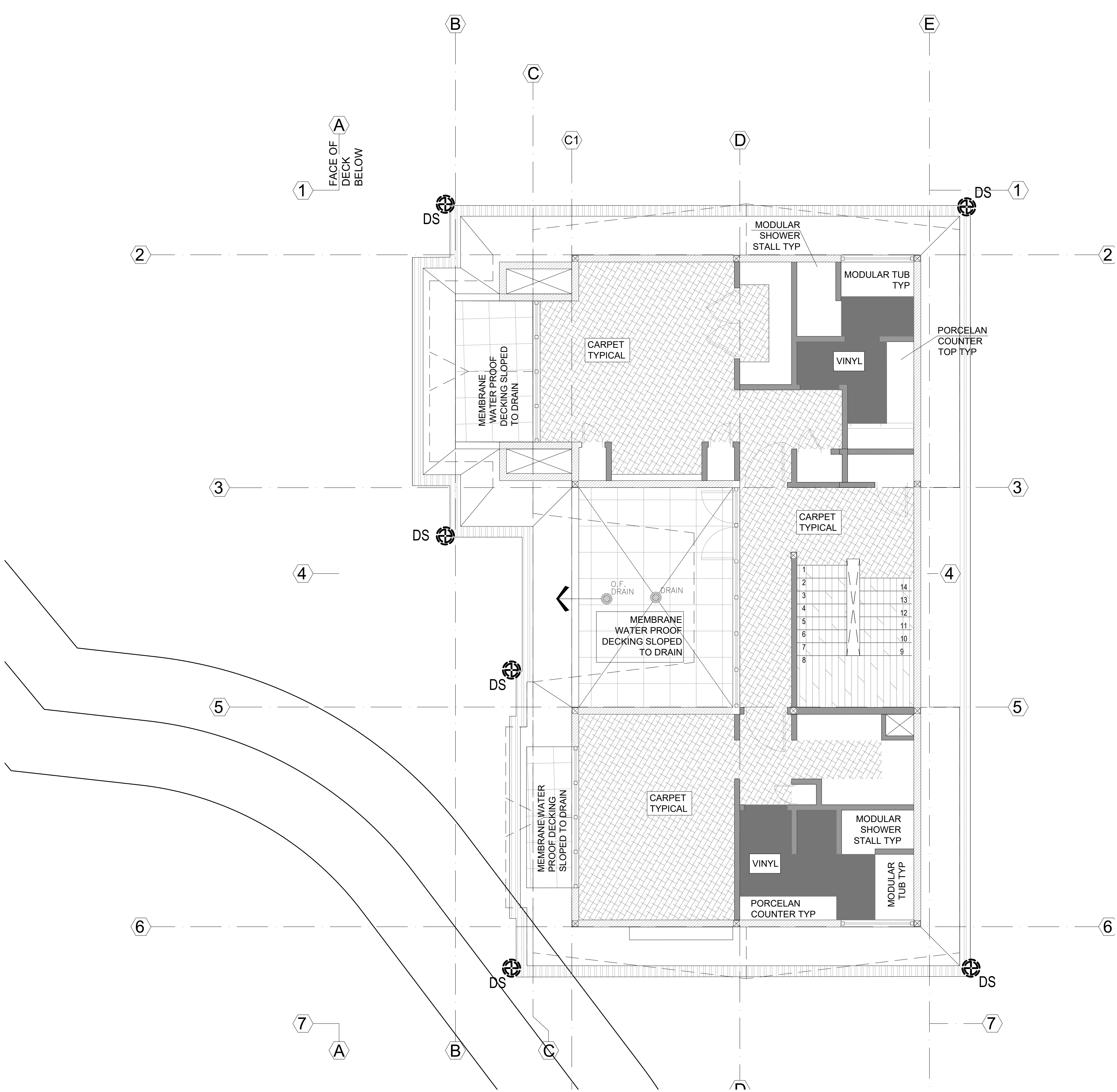
SCALE 1/4" = 1'

- NOTES**
- ALL TRIM TO BE PAINTED
 - ALL DOOR - FLUSH PANEL - STAINED

LEGEND

- COLORED CONCRETE
- PAINTED WOOD
- WOOD FLOORING
- CARPET FLOORING
- ASPHALT PAVEMENT
- CONCRETE PAVERS
- VINYL

(IN FEET)
 1 inch = 4 ft.





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**ARCHITECTURAL
 FINISH FLOOR
 ROOF LEVEL**

SHEET NO.

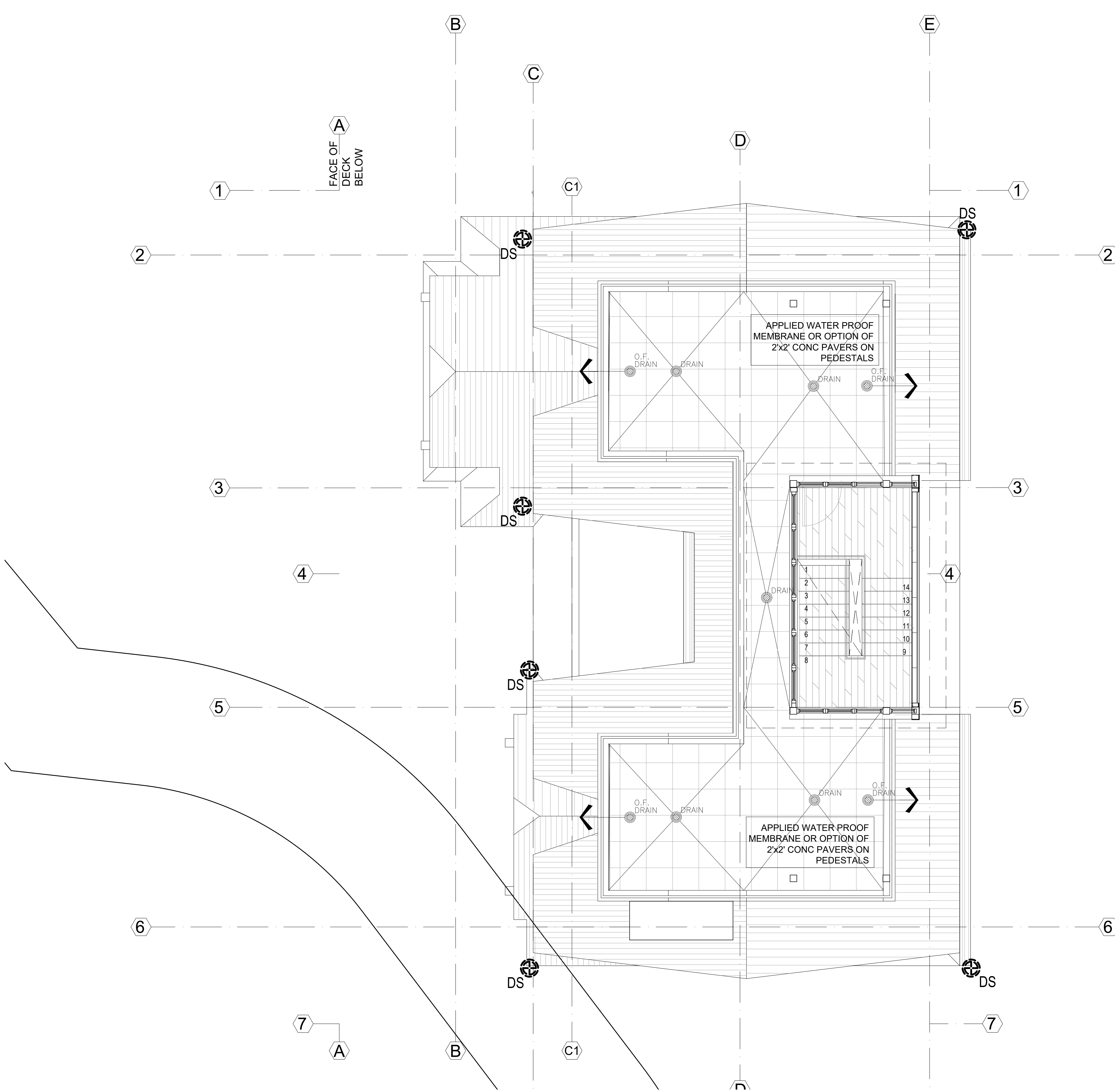
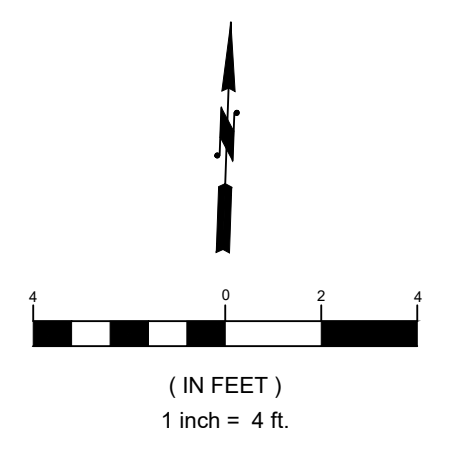
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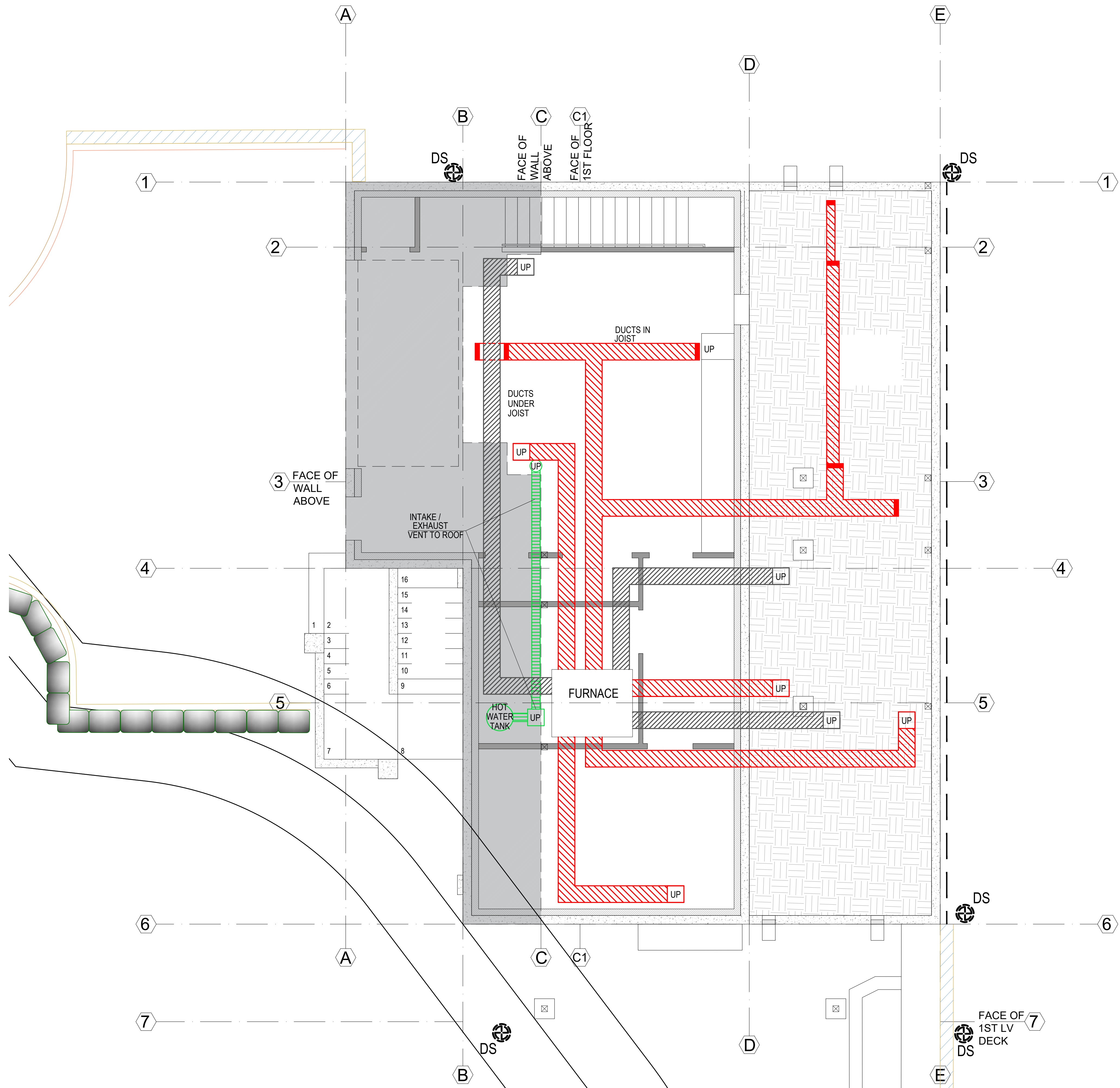
N
 FINISH FLOOR
 ROOF LEVEL
 SCALE 1/4" = 1'

ROOF AREA 178 SF

- ALL TRIM TO BE PAINTED
- ALL DOOR - FLUSH PANEL - STAINED

- LEGEND**
- COLORED CONCRETE
 - PAINTED WOOD
 - WOOD FLOORING
 - CARPET FLOORING
 - ASPHALT PAVEMENT
 - CONCRETE PAVERS
 - VINYL

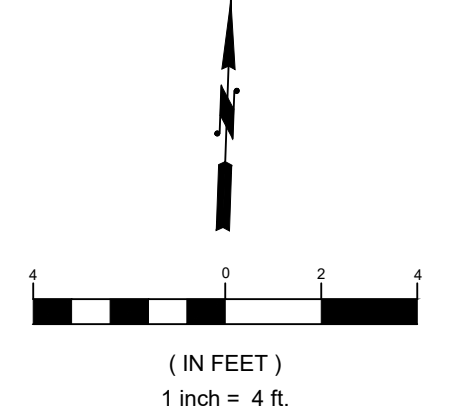




N
 FINISH FLOOR
 BASEMENT LEVEL
 SCALE 1/4" = 1'

- MECHANICAL**
- HEAT DUCTS
 - RETURN AIR DUCTS
 - EXHAUST & VENT LINE

- LEGEND**
- 2x6 EXTERIOR FRAMING
 - 2x4 INTERIOR FRAMING
 - FLAT WALL FLAT WALL
 - GRID LINES
 - PROPERTY LINES
 - SET BACK
 - ROOF PROJECTION LINES
 - EXISTING TREES TO REMAIN. SEE CIVIL DRAWING FOR TREE PROTECTION DURING DEMOLITION & CONSTRUCTION
 - SAFETY GLAZING
 - SEE ARCHITECTURAL COVER SHEET FOR PROJECT SITE NOTES



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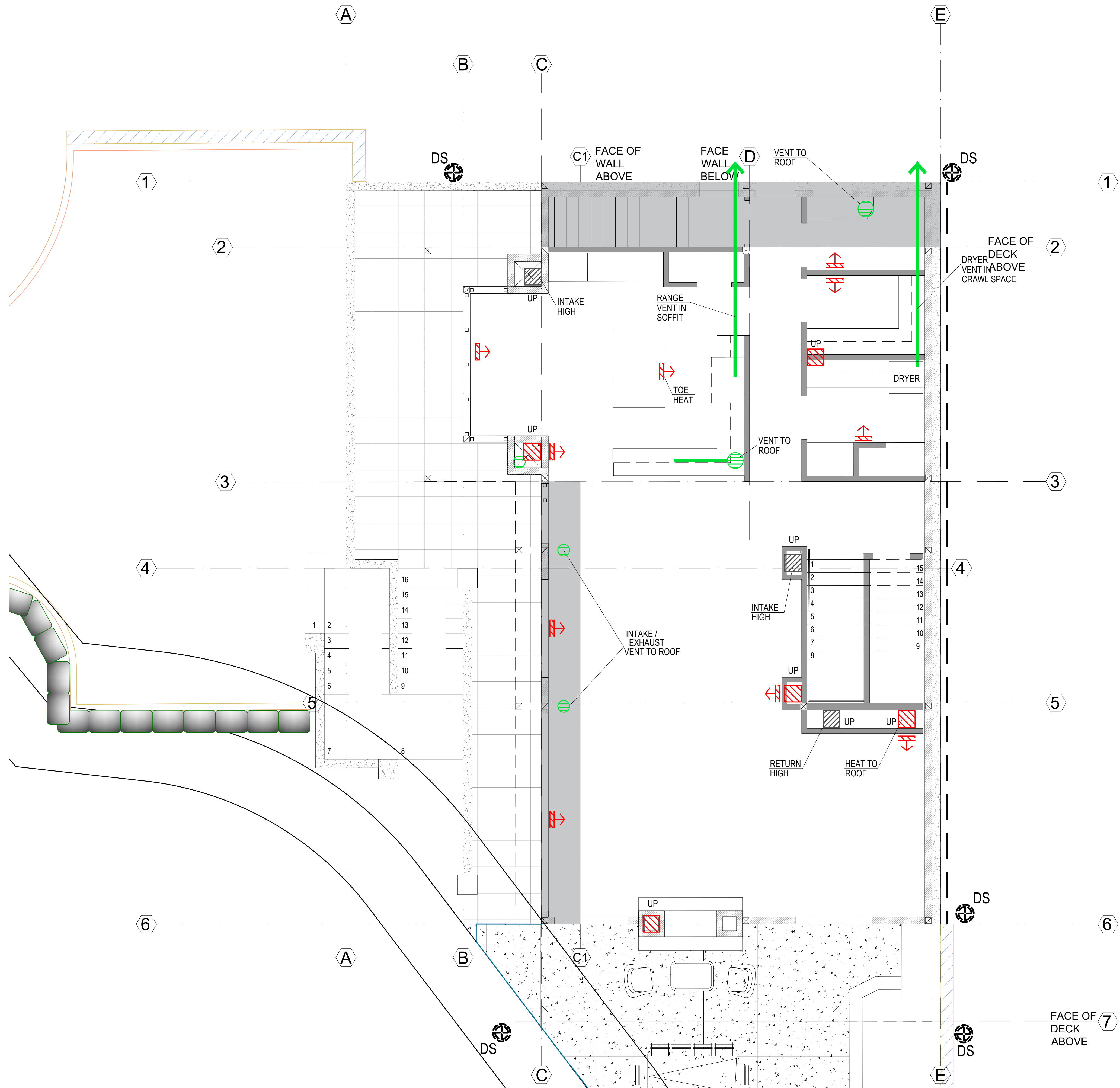
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ARCHITECTURAL
 MECHANICAL PLAN
 BASEMENT LEVEL

SHEET NO.

A1.5a

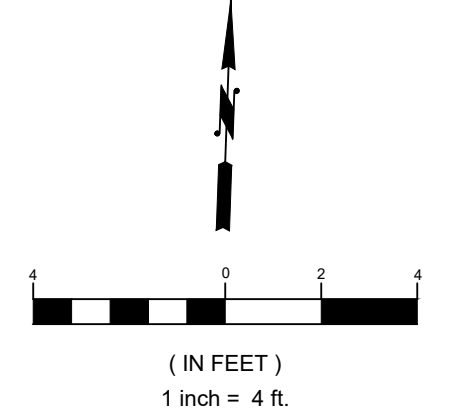


MECHANICAL PLAN
MAIN LEVEL

SCALE 1/4" = 1'

- MECHANICAL**
- HEAT DUCTS
 - RETURN AIR DUCTS
 - EXHAUST & VENT LINE
- SEE GARAGE LEVEL FOR DUCT RUNS UNDER THIS FLOOR

- LEGEND**
- 2x6 EXTERIOR FRAMING
 - 2x4 INTERIOR FRAMING
 - FLAT WALL FLAT WALL
 - GRID LINES
 - PROPERTY LINES
 - SET BACK
 - ROOF PROJECTION LINES
 - EXISTING TREES TO REMAIN. SEE CIVIL DRAWING FOR TREE PROTECTION DURING DEMOLITION & CONSTRUCTION
 - SAFETY GLAZING
 - SEE ARCHITECTURAL COVER SHEET FOR PROJECT SITE NOTES



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5236 W MERCER WAY
MERCER ISLAND, WA 98125

ARCHITECTURAL
MECHANICAL PLAN
MAIN LEVEL

SHEET NO.

A1.5b



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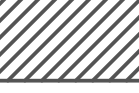

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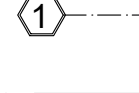
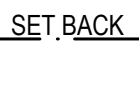




ARCHITECTURAL MECHANICAL PLAN FIRST LEVEL

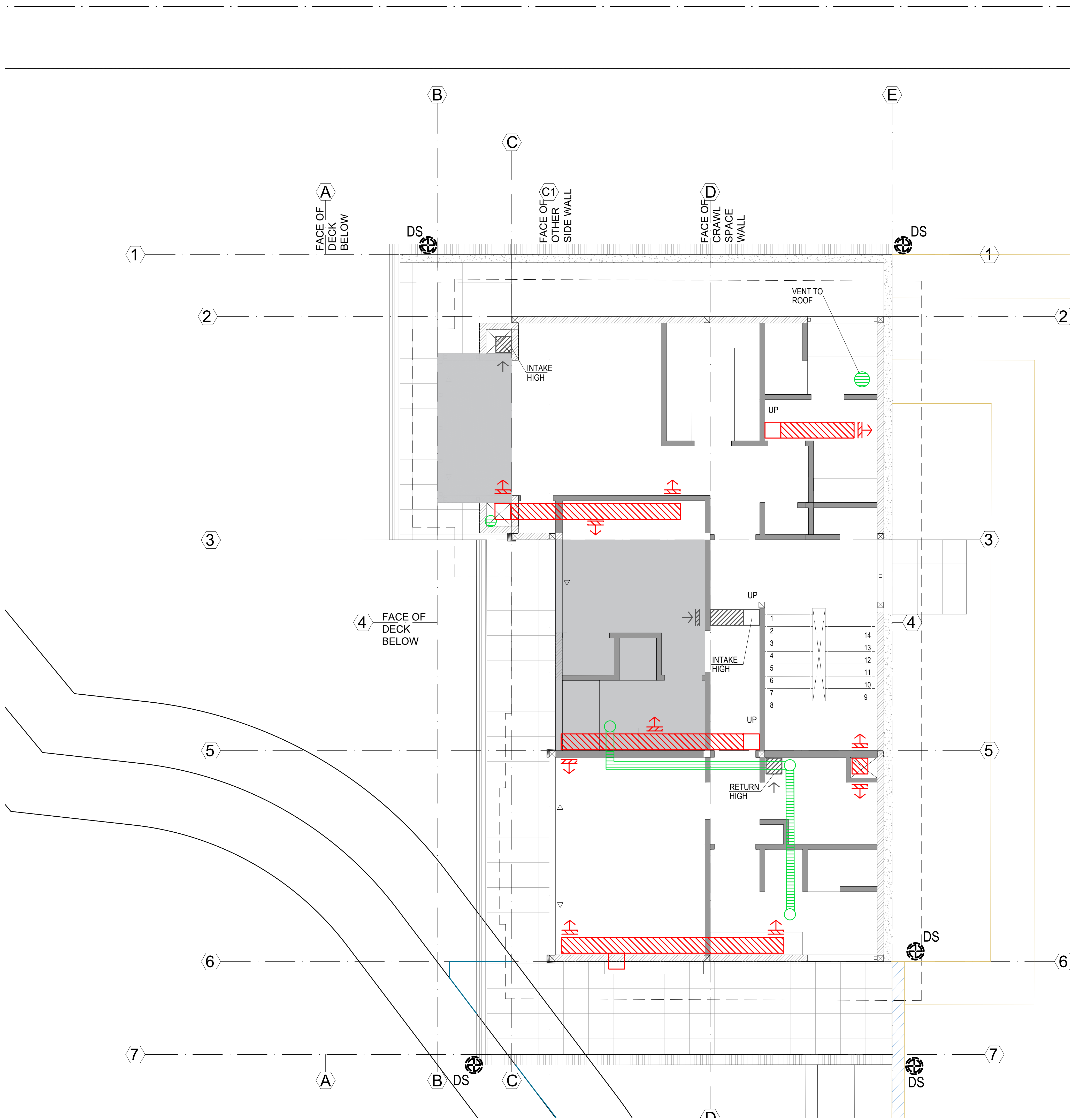
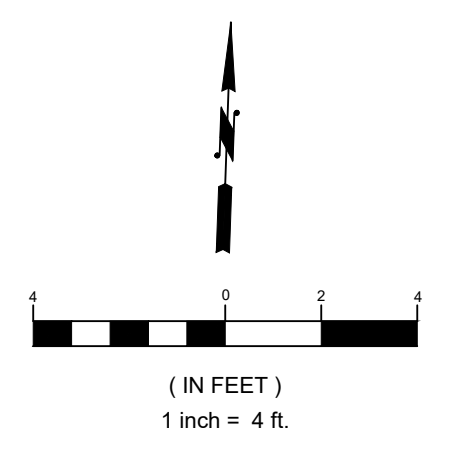
SHEET NO.

A1.5c

MECHANICAL PLAN
 FIRST LEVEL
 SCALE 1/4" = 1'

- MECHANICAL**
-  HEAT DUCTS
 -  RETURN AIR DUCTS
 -  EXHAUST & VENT LINE
- SEE GARAGE LEVEL FOR DUCT RUNS UNDER THIS FLOOR

- LEGEND**
-  2x6 EXTERIOR FRAMING
 -  2x4 INTERIOR FRAMING
 - FLAT WALL FLAT WALL
 -  GRID LINES
 -  PROPERTY LINES
 -  SET BACK
 -  ROOF PROJECTION LINES
 -  EXISTING TREES TO REMAIN. SEE CIVIL DRAWING FOR TREE PROTECTION DURING DEMOLITION & CONSTRUCTION
 -  SAFETY GLAZING
- SEE ARCHITECTURAL COVER SHEET FOR PROJECT SITE NOTES





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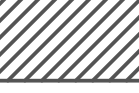

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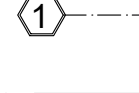
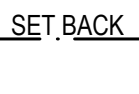




ARCHITECTURAL MECHANICAL PLAN SECOND LEVEL

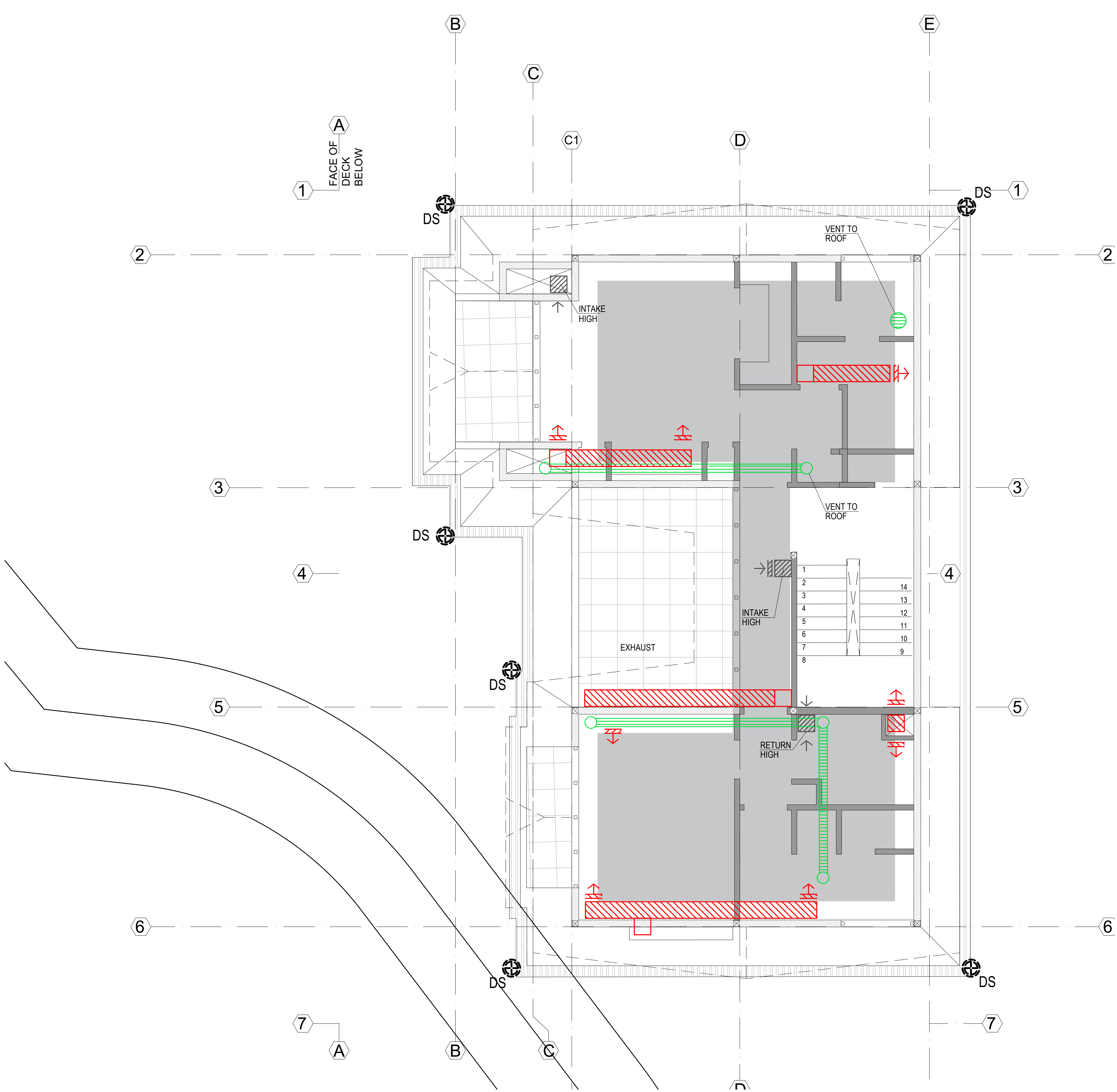
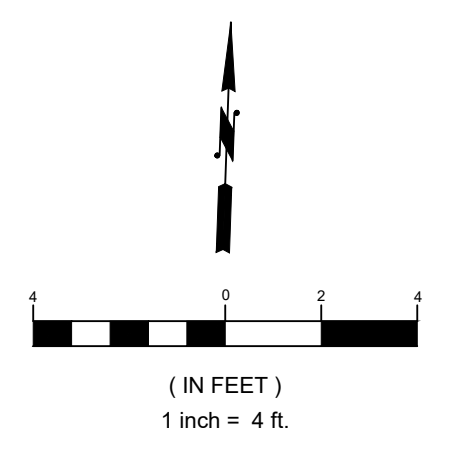
SHEET NO.

A1.5d

MECHANICAL PLAN SECOND LEVEL
 SCALE 1/4" = 1'

- MECHANICAL**
-  HEAT DUCTS
 -  RETURN AIR DUCTS
 -  EXHAUST & VENT LINE
- SEE GARAGE LEVEL FOR DUCT RUNS UNDER THIS FLOOR

- LEGEND**
-  2x6 EXTERIOR FRAMING
 -  2x4 INTERIOR FRAMING
 - FLAT WALL FLAT WALL
 -  GRID LINES
 -  PROPERTY LINES
 -  SET BACK
 -  ROOF PROJECTION LINES
 -  EXISTING TREES TO REMAIN. SEE CIVIL DRAWING FOR TREE PROTECTION DURING DEMOLITION & CONSTRUCTION
 -  SAFETY GLAZING
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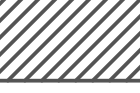

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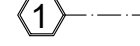




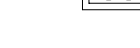
ARCHITECTURAL MECHANICAL PLAN ROOF LEVEL

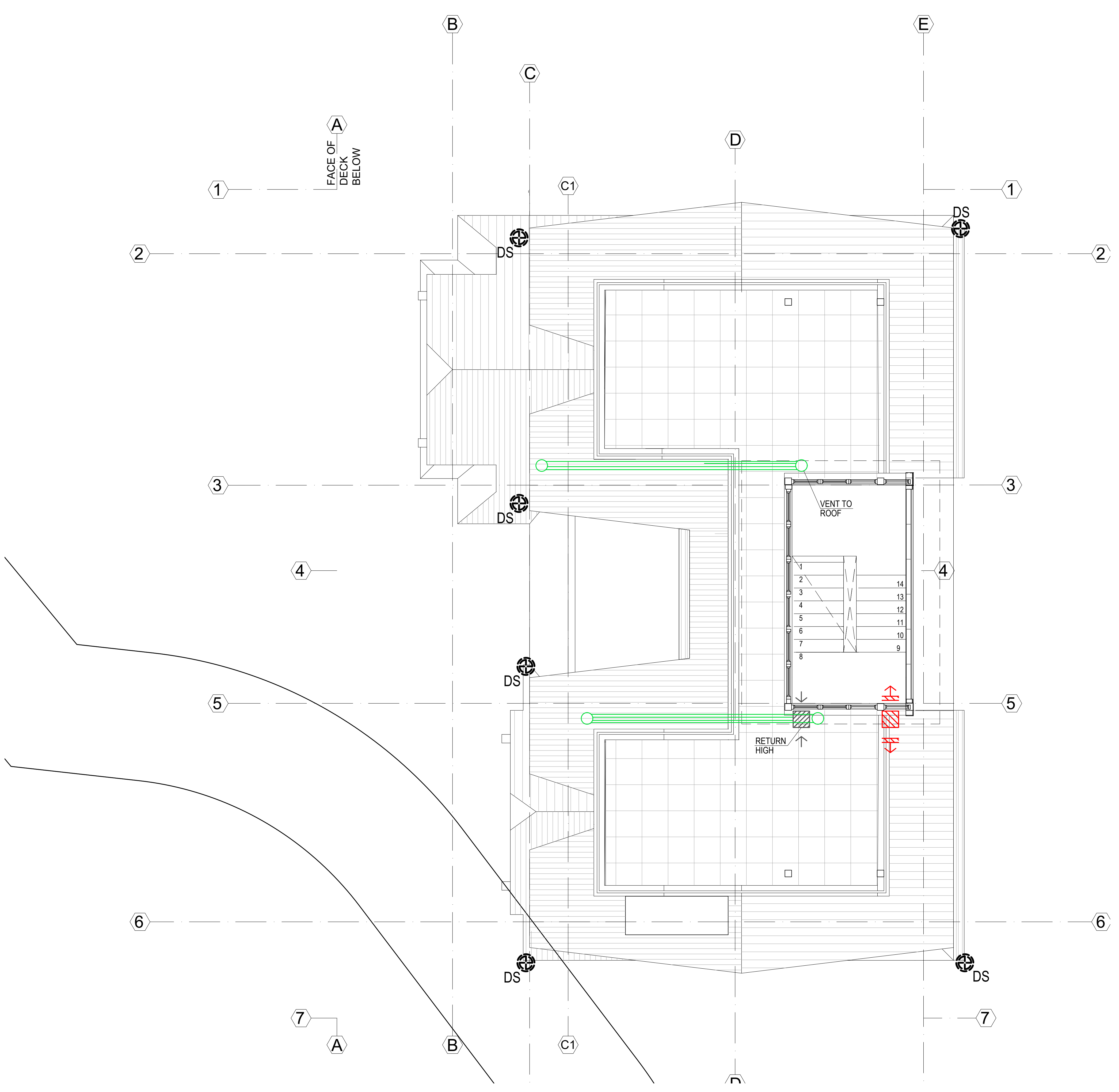
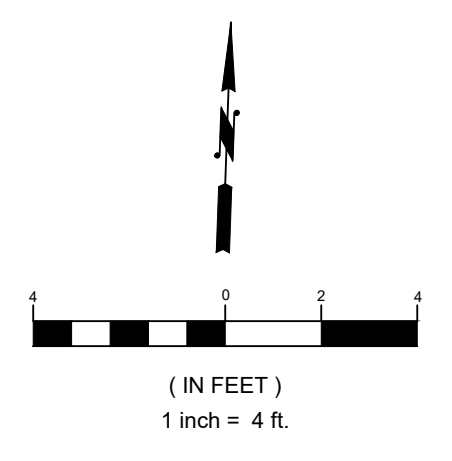
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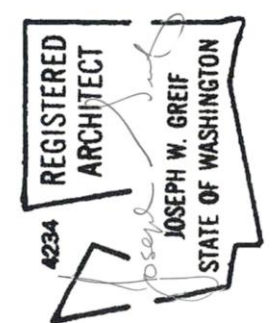
A1.5e

MECHANICAL PLAN
 ROOF LEVEL
 SCALE 1/4" = 1'

- MECHANICAL**
-  HEAT DUCTS
 -  RETURN AIR DUCTS
 -  EXHAUST & VENT LINE
- SEE GARAGE LEVEL FOR DUCT RUNS UNDER THIS FLOOR

- LEGEND**
-  2x6 EXTERIOR FRAMING
 -  2x4 INTERIOR FRAMING
 - FLAT WALL FLAT WALL
 -  GRID LINES
 -  PROPERTY LINES
 -  SET BACK
 -  ROOF PROJECTION LINES
 -  EXISTING TREES TO REMAIN. SEE CIVIL DRAWING FOR TREE PROTECTION DURING DEMOLITION & CONSTRUCTION
 -  SAFETY GLAZING
- SEE ARCHITECTURAL COVER SHEET FOR PROJECT SITE NOTES





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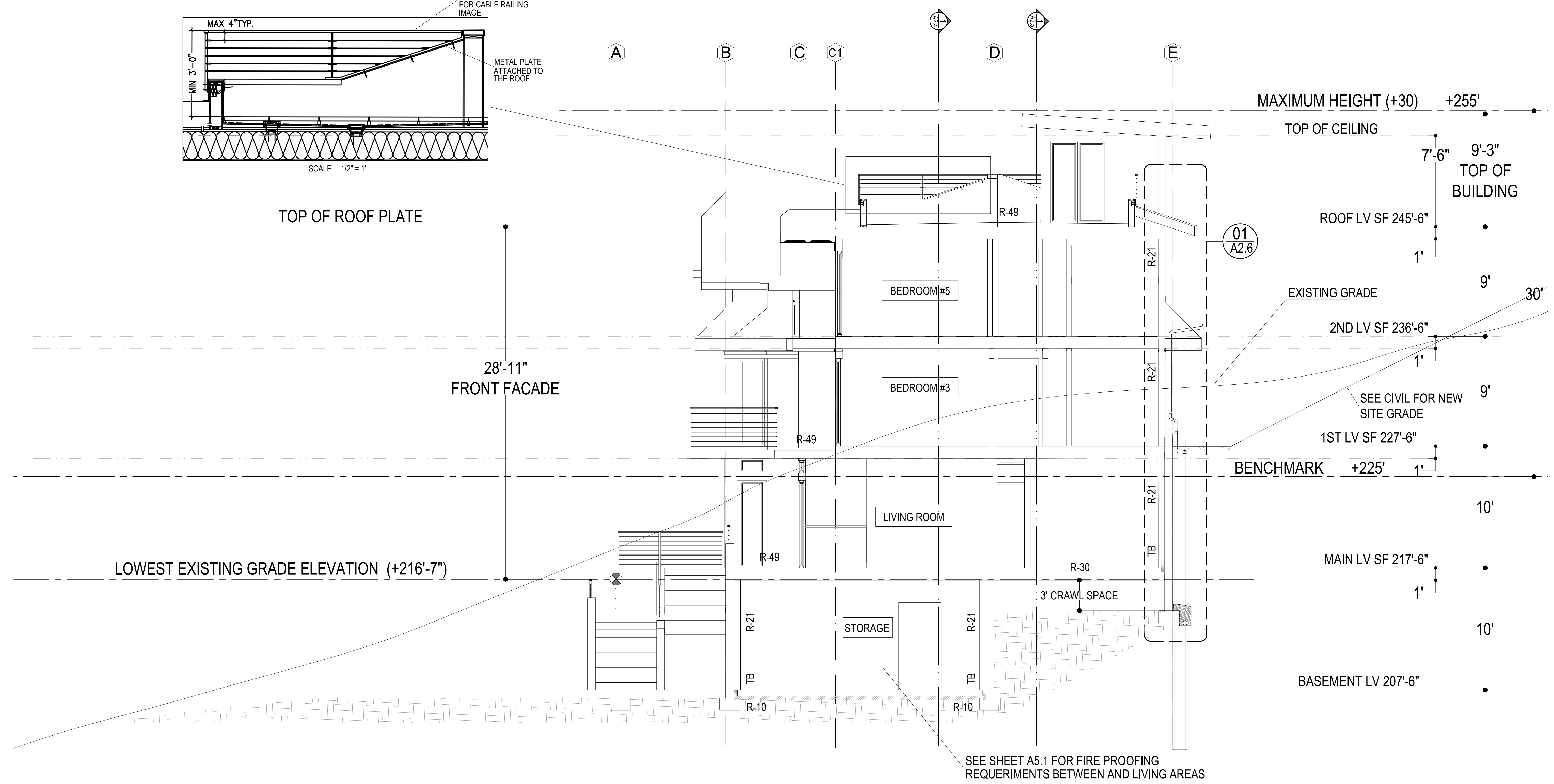
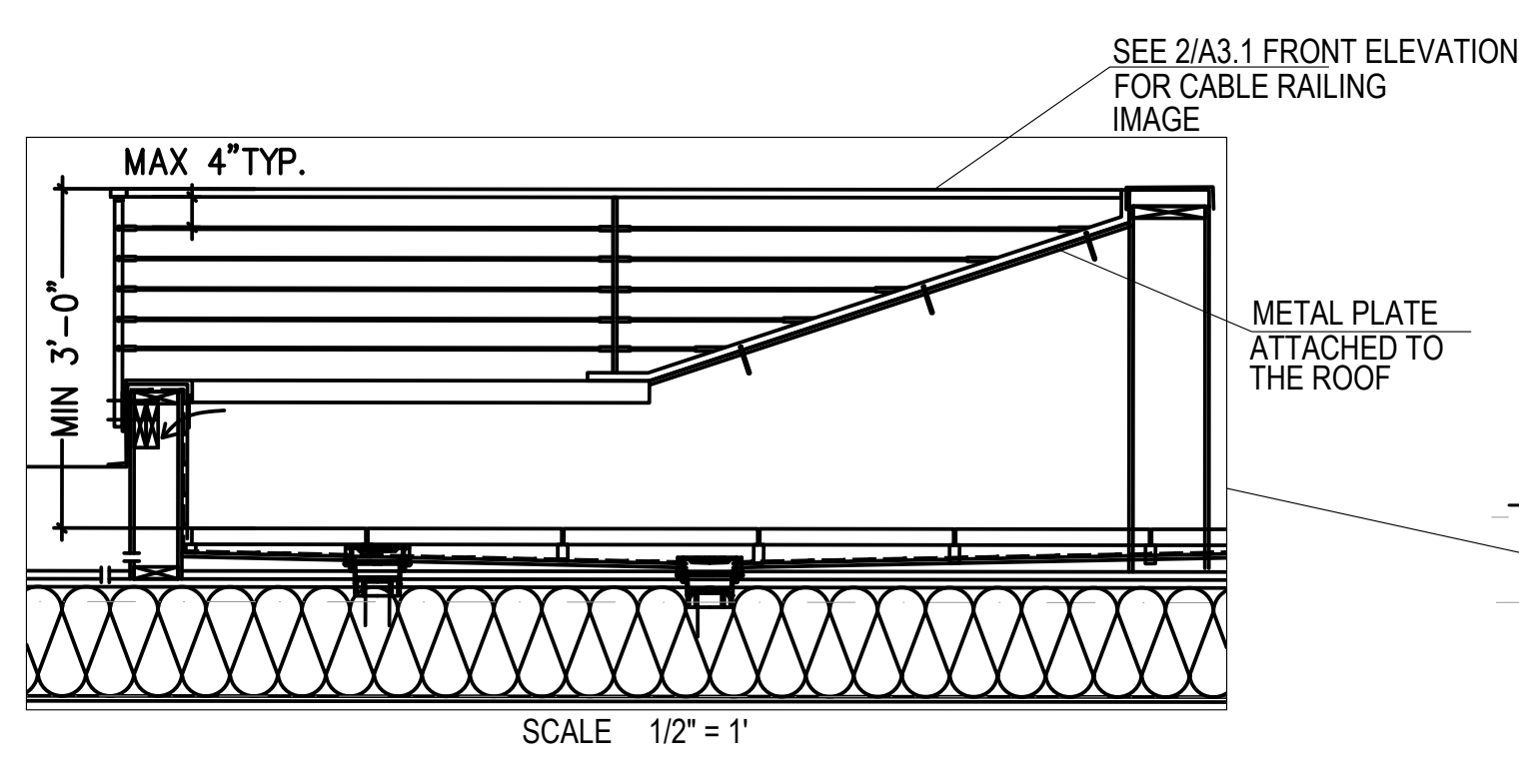
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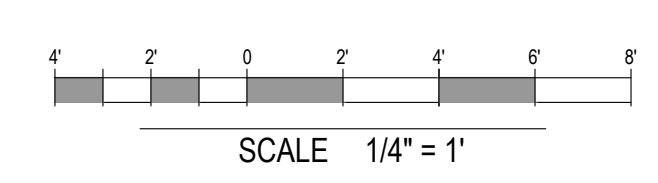
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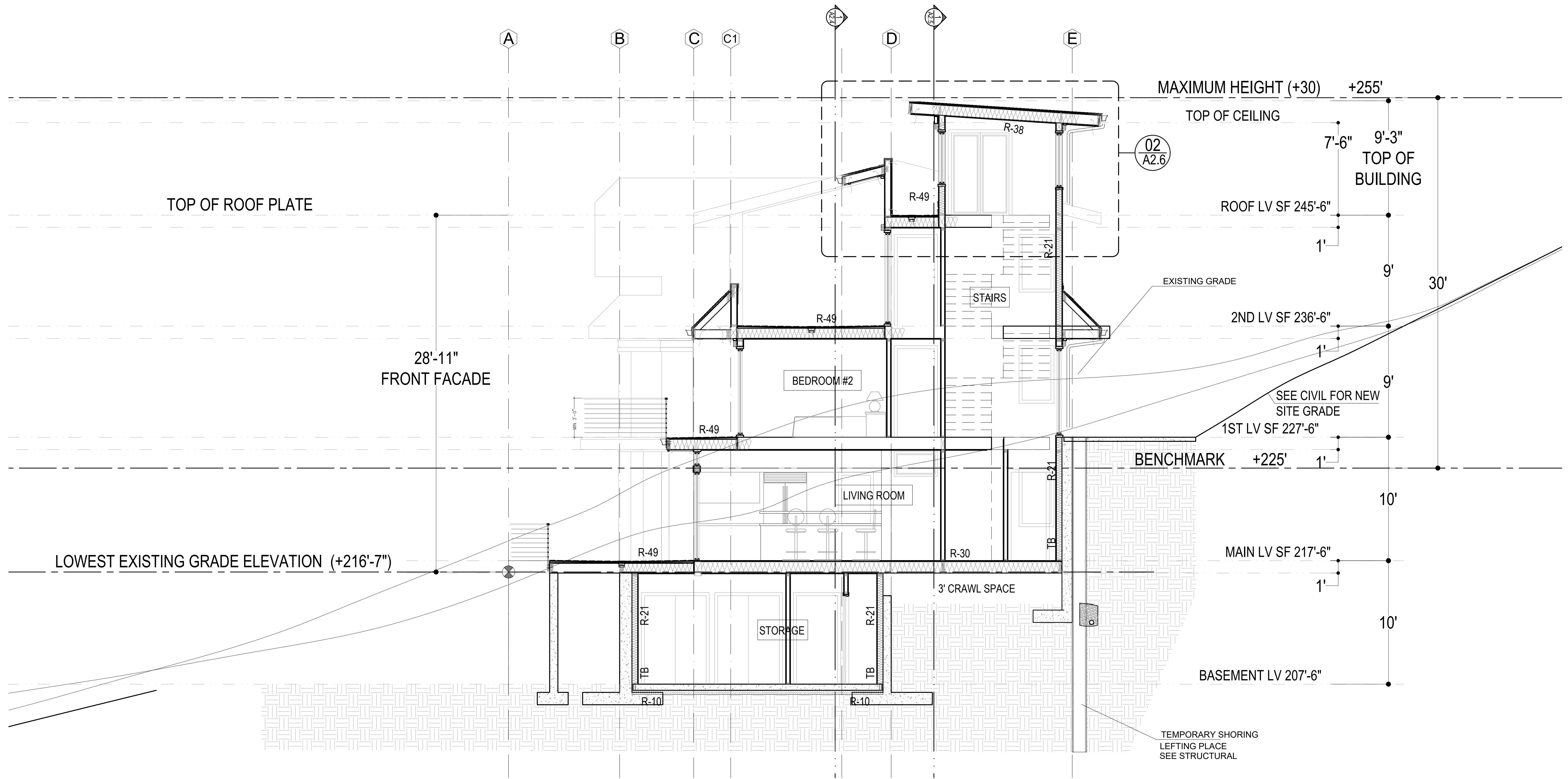
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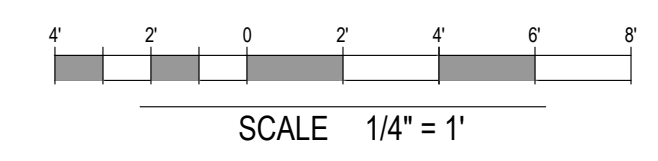


- NOTE**
- ALL ROOF EAVES AND UNDERSIDE OF ENCLOSED DECKS TO HAVE CONTINUOUS SCREENED VENTING
 - SEE A2.5 FOR STAIR DETAILS
 - SEE A2.6 FOR ENLARGED WALL SECTION SHOWING LOCATIONS FOR INSULATION VALUES AND TYPICAL VENTING LOCATIONS





- NOTE**
- ALL ROOF EAVES AND UNDERSIDE OF ENCLOSED DECKS TO HAVE CONTINUOUS SCREENED VENTING
 - SEE A2.1 FOR INSULATION VALUES TYP
 - SEE A2.5 FOR STAIR DETAILS
 - SEE A2.6 FOR ENLARGED WALL SECTION SHOWING LOCATIONS FOR INSULATION VALUES AND TYPICAL VENTING LOCATIONS



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ARCHITECTURAL STAIRS SECTION

SHEET NO. _____

A2.2



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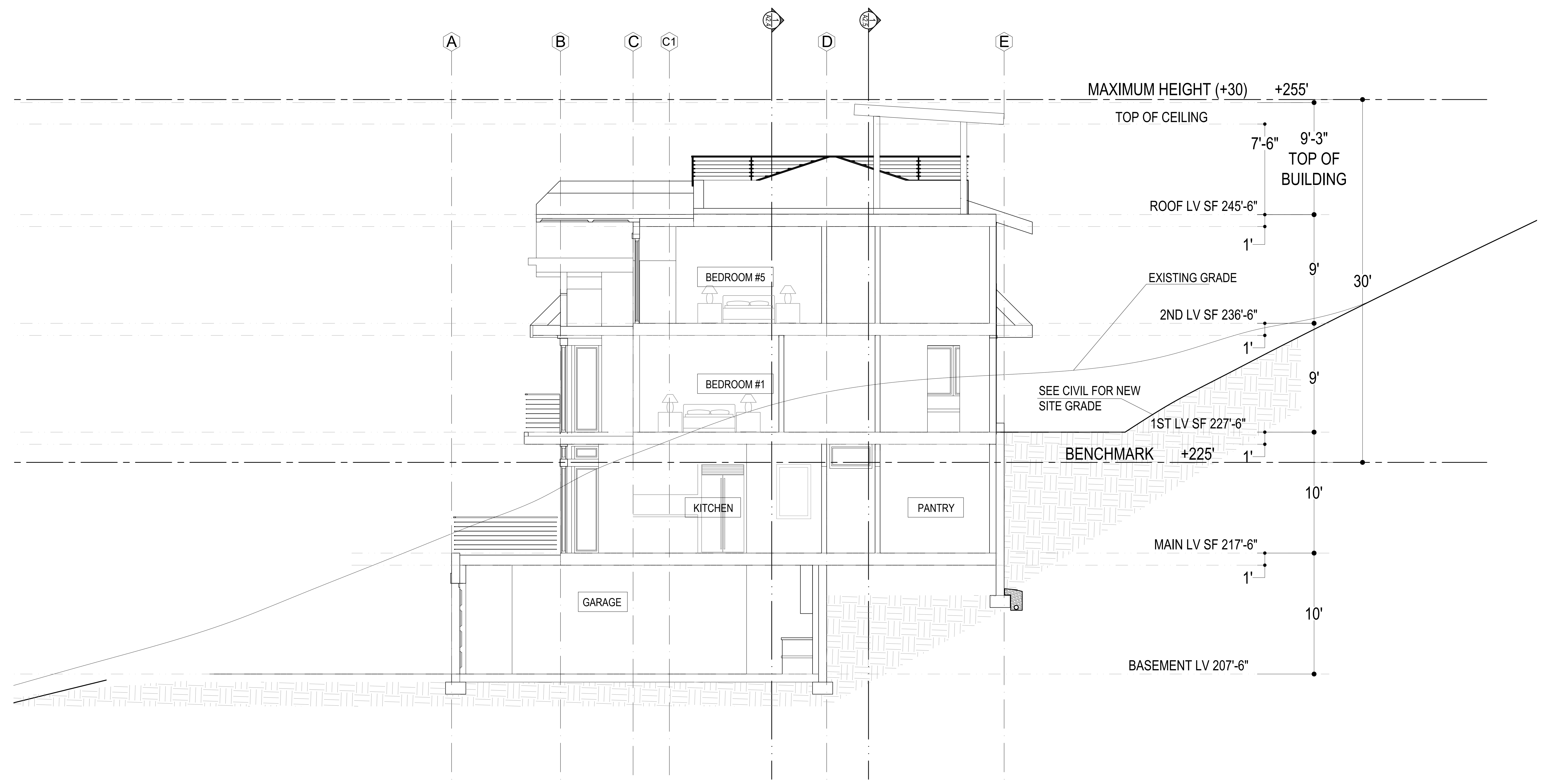
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ARCHITECTURAL NORTH SECTION

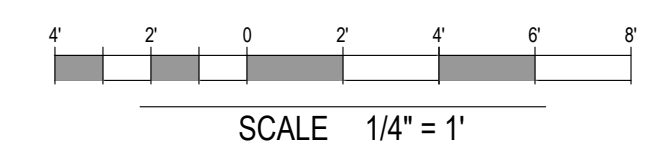
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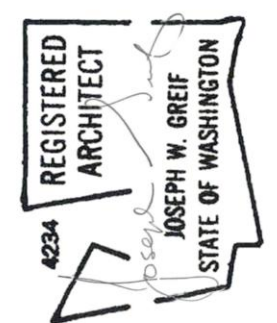
A2.3



NOTE

- ALL ROOF EAVES AND UNDERSIDE OF ENCLOSED DECKS TO HAVE CONTINUOUS SCREENED VENTING
- SEE A2.1 FOR INSULATION VALUES TYP
- SEE A2.5 FOR STAIR DETAILS
- SEE A2.6 FOR ENLARGED WALL SECTION SHOWING LOCATIONS FOR INSULATION VALUES AND TYPICAL VENTING LOCATIONS





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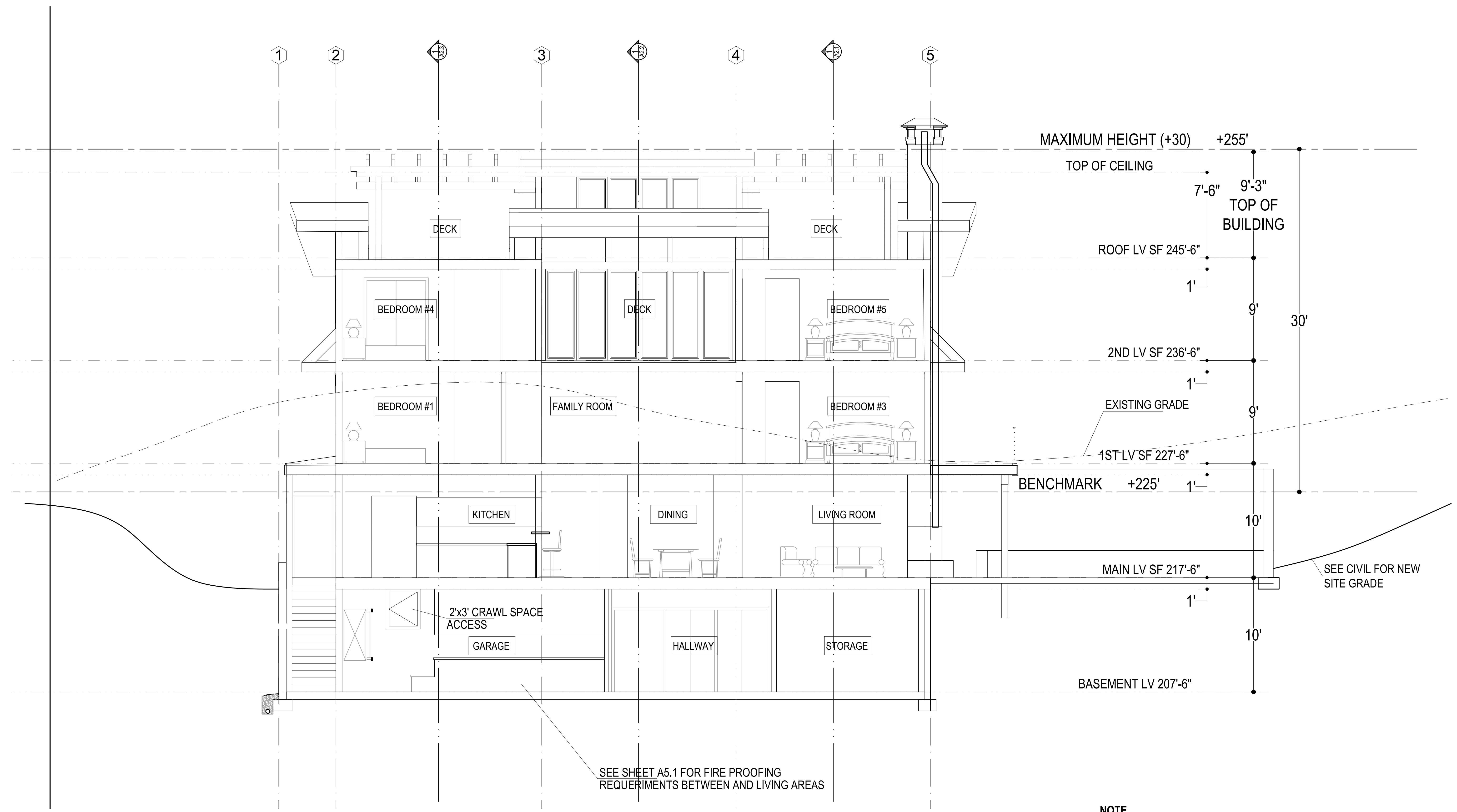
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ARCHITECTURE
WEST SECTION

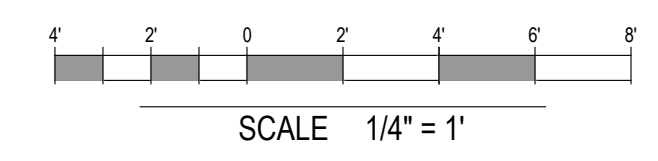
SHEET NO. _____

A2.4



NOTE

- ALL ROOF EAVES AND UNDERSIDE OF ENCLOSED DECKS TO HAVE CONTINUOUS SCREENED VENTING
- SEE A2.1 FOR INSULATION VALUES TYP
- SEE A2.5 FOR STAIR DETAILS
- SEE A2.6 FOR ENLARGED WALL SECTION SHOWING LOCATIONS FOR INSULATION VALUES AND TYPICAL VENTING LOCATIONS





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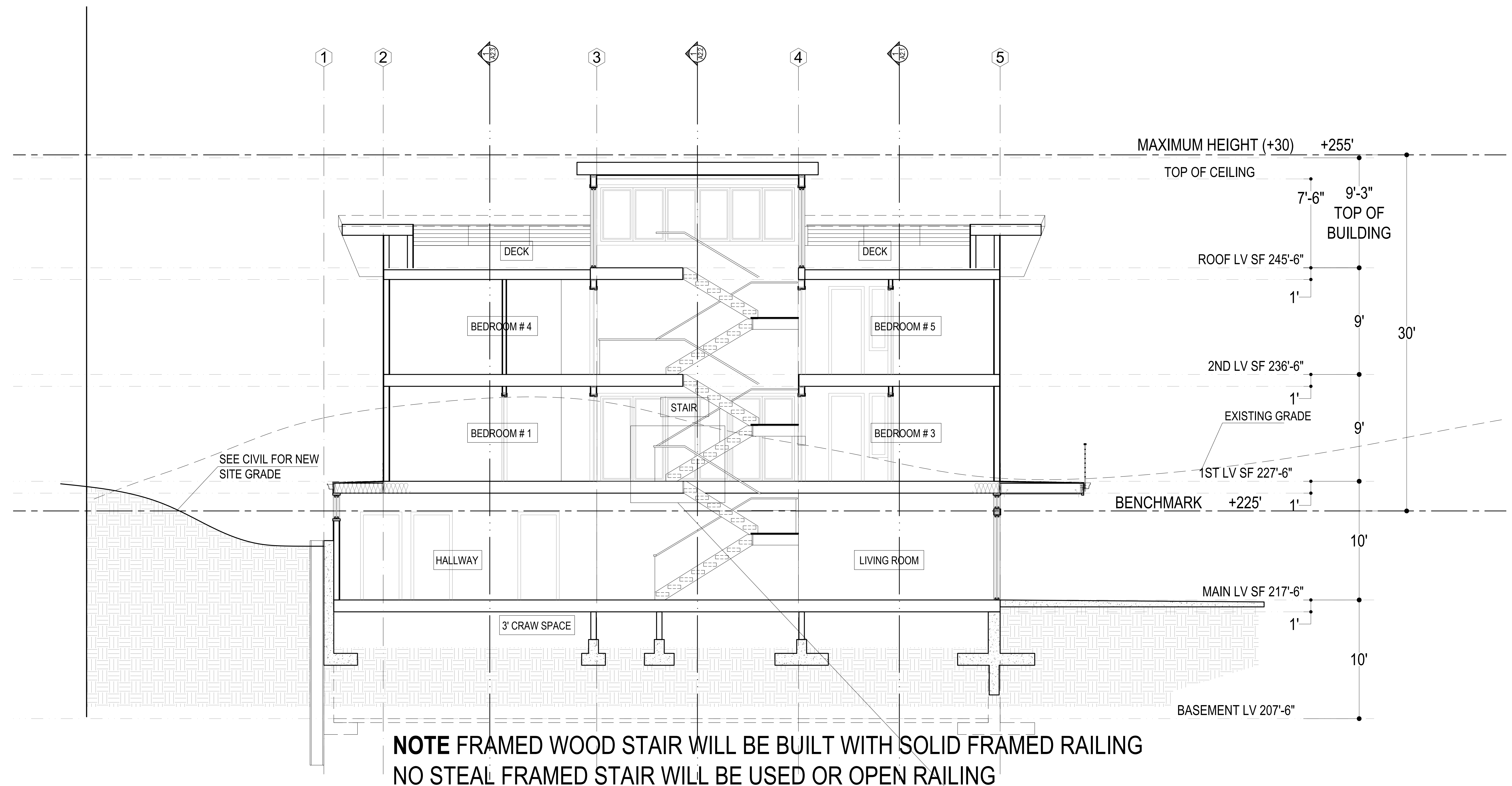
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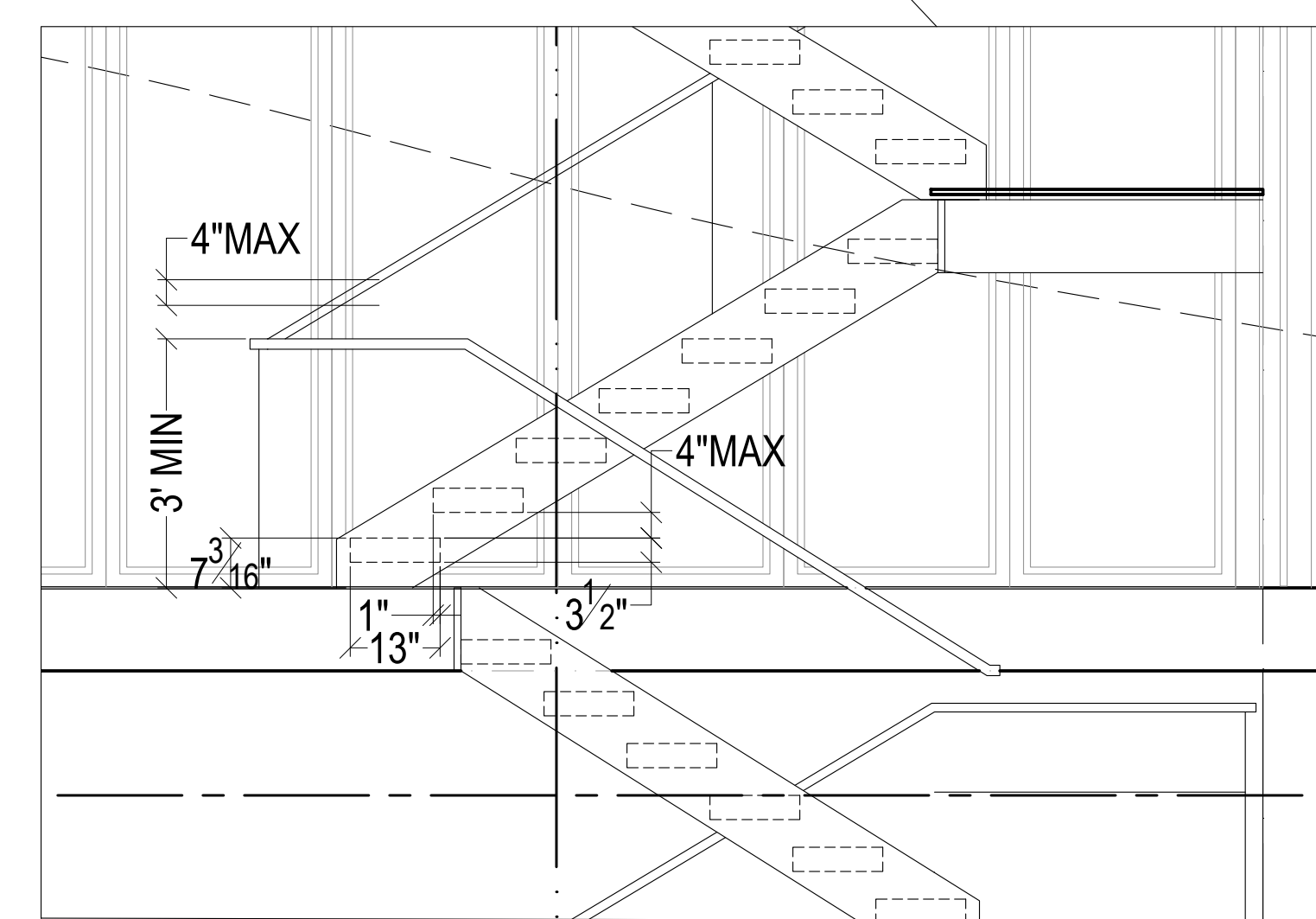
ARCHITECTURE
EAST SECTION

SHEET NO.

A2.5



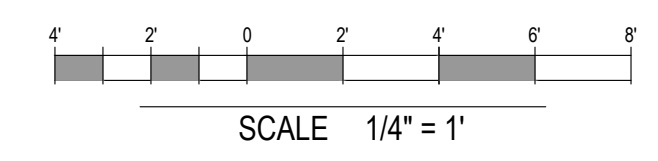
**NOTE FRAMED WOOD STAIR WILL BE BUILT WITH SOLID FRAMED RAILING
 NO STEEL FRAMED STAIR WILL BE USED OR OPEN RAILING**

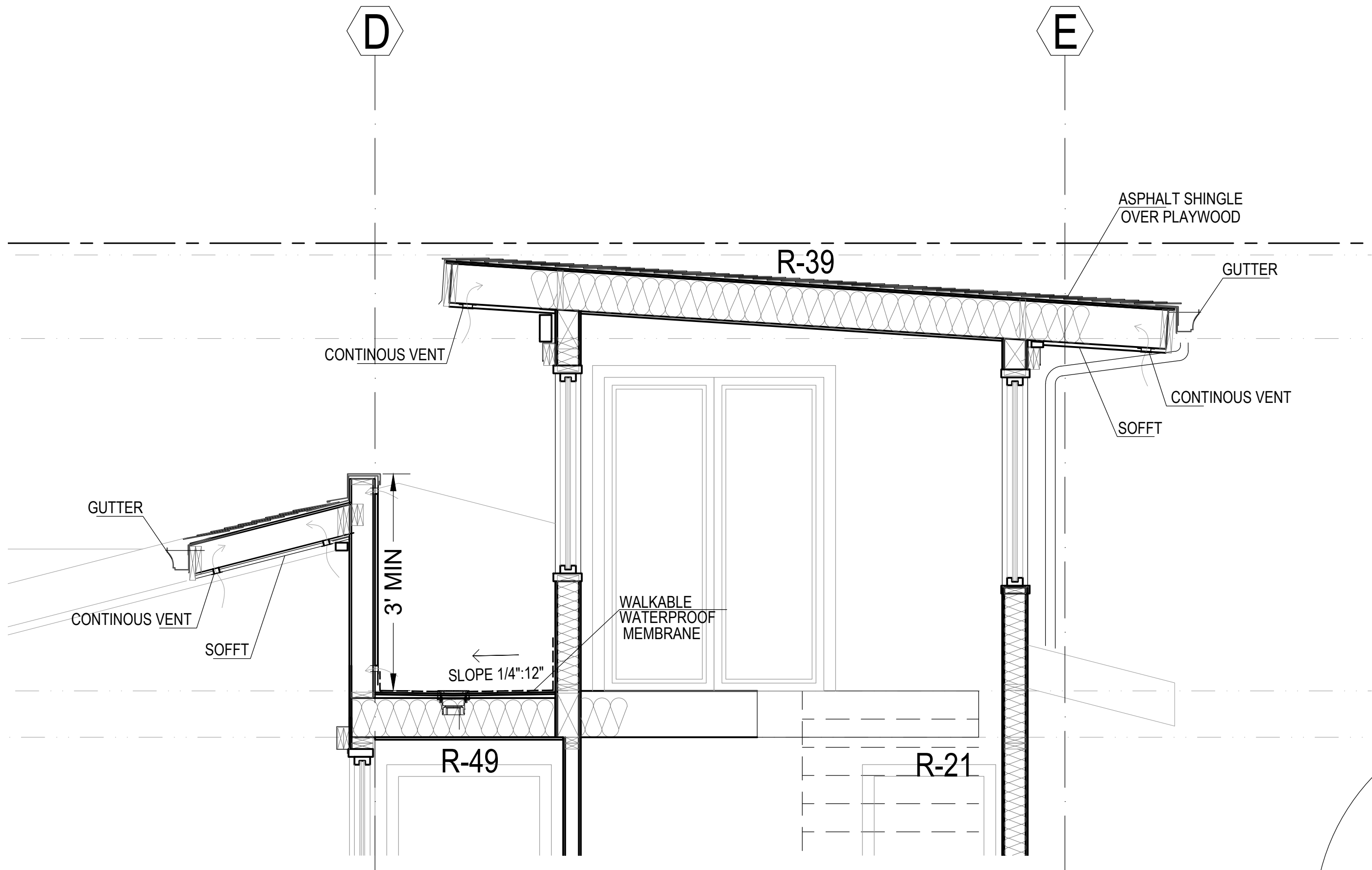


SCALE 1/2" = 1'

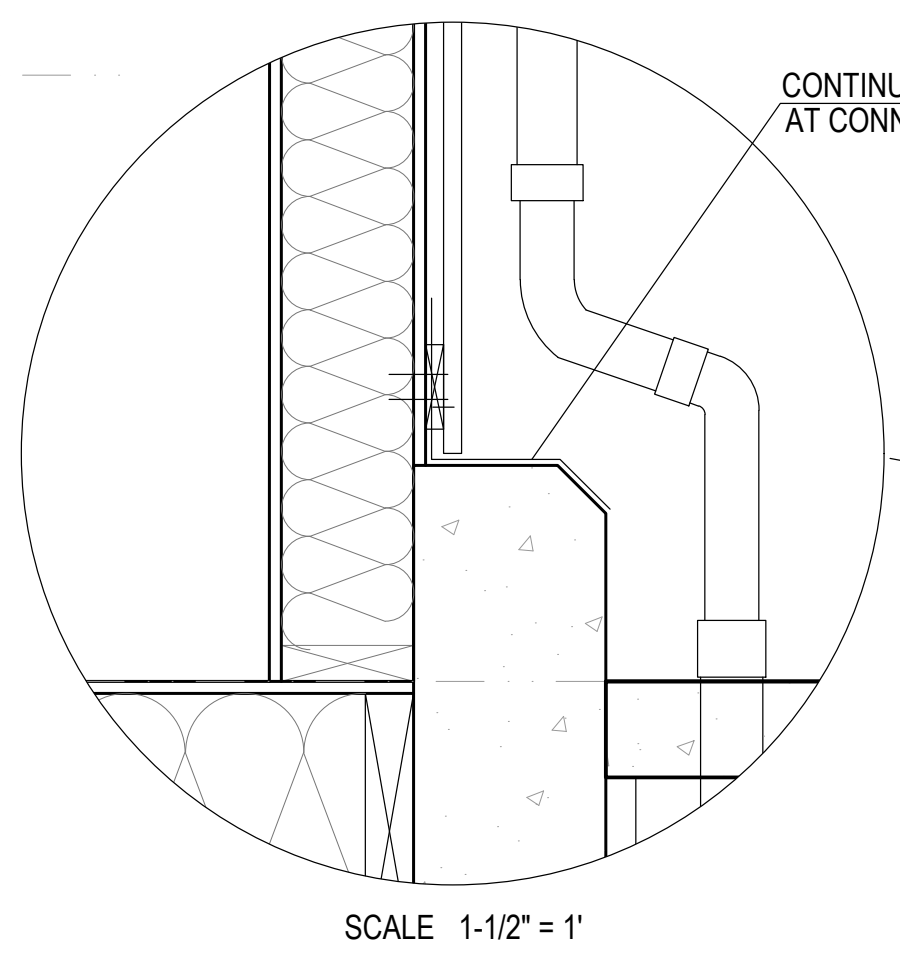
NOTE

- ALL ROOF EAVES AND UNDERSIDE OF ENCLOSED DECKS TO HAVE CONTINUOUS SCREENED VENTING
- SEE A2.1 FOR INSULATION VALUES TYP
- SEE A2.6 FOR ENLARGED WALL SECTION SHOWING LOCATIONS FOR INSULATION VALUES AND TYPICAL VENTING LOCATIONS
- CONTRACTORS SHALL VERIFY TO INSPECTOR ALL GUARD AND RAILING SHALL BE CAPABLE OF RESISTING 200 LB LOAD ON TOP RAIL ACTING IN ANY DIRECTION AS REQUIRED BY IRC TABLE R301.5





2 WALL SECTION STAIR ROOF DETAILS
SCALE 1/2" = 1'

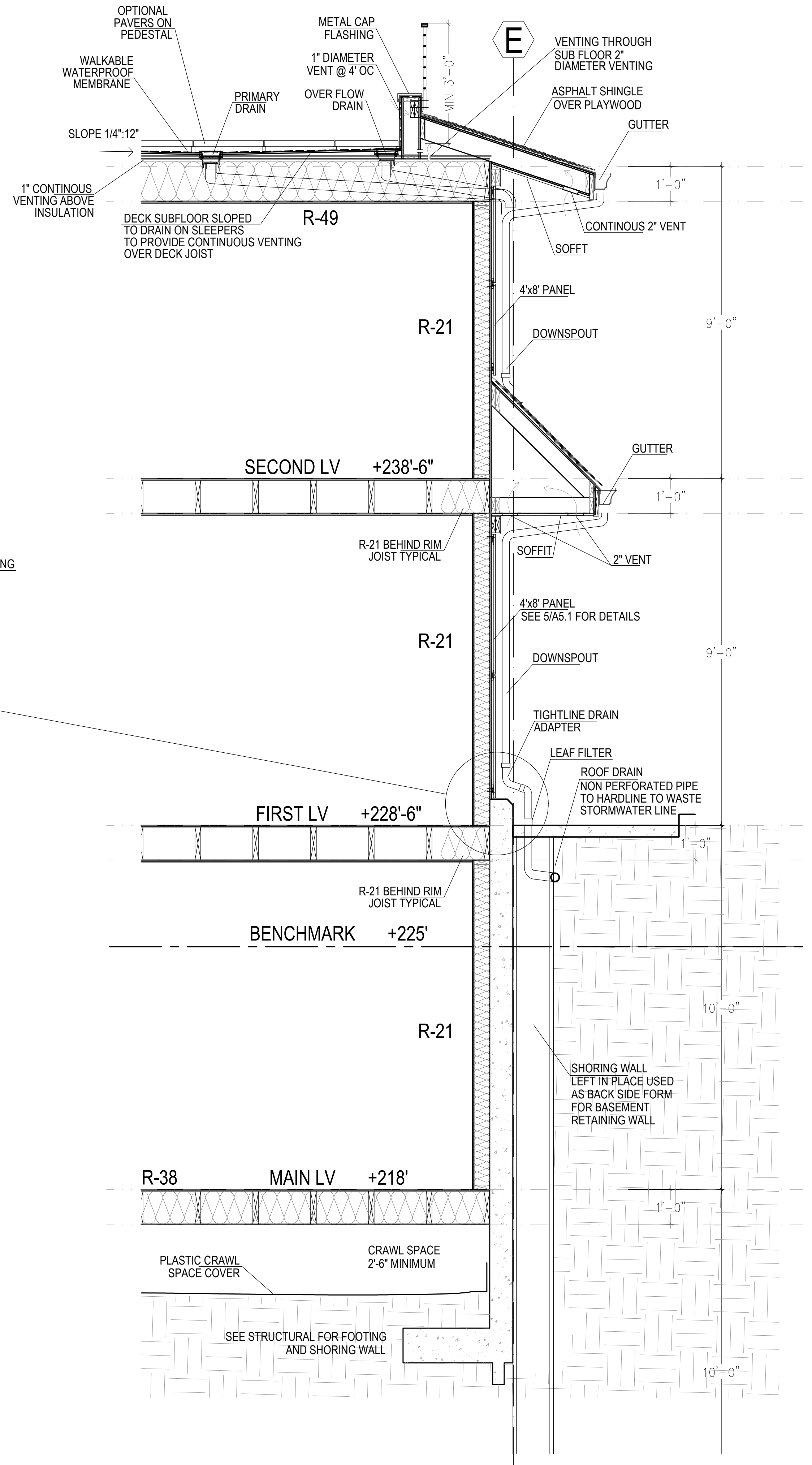


SCALE 1-1/2" = 1'

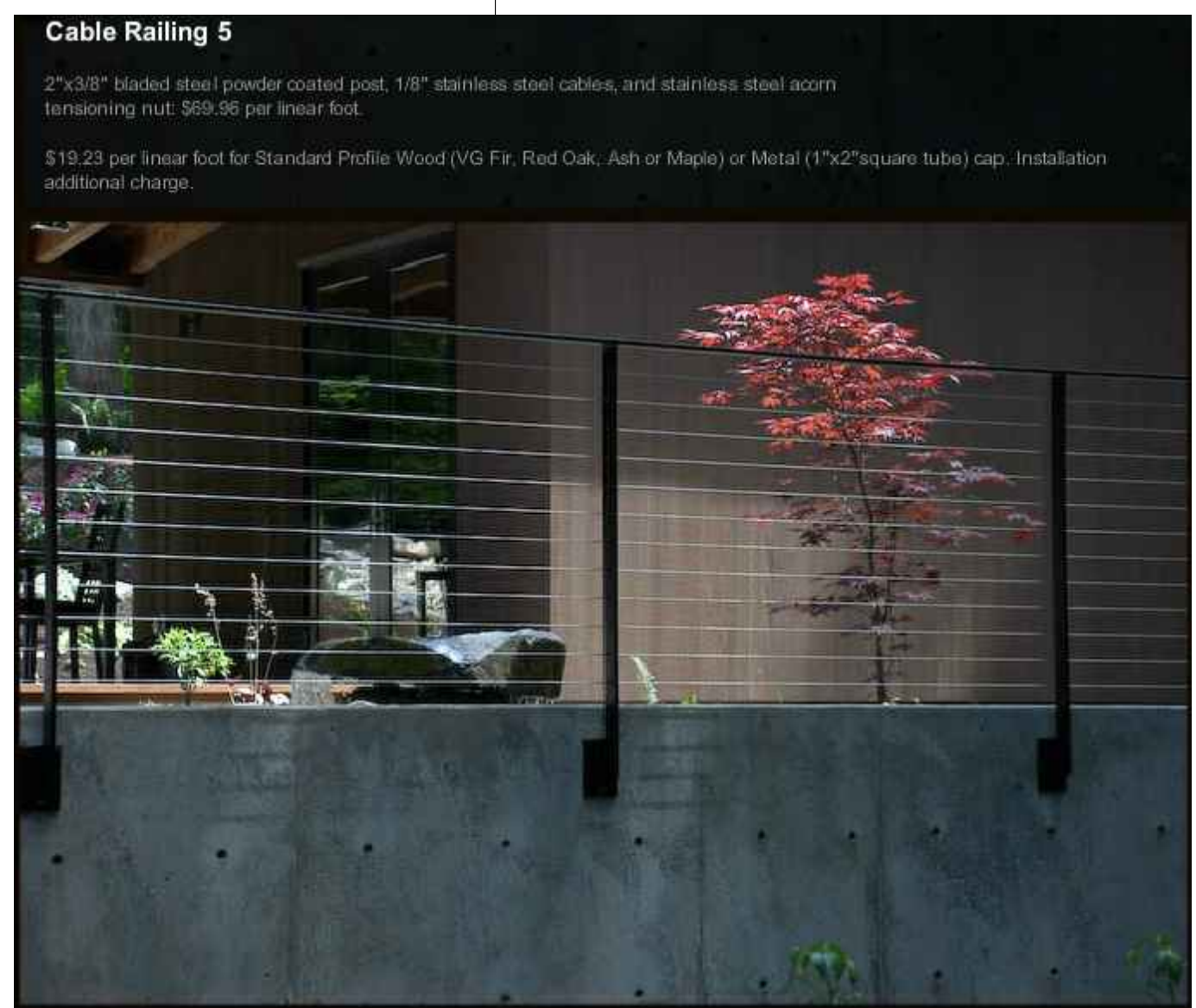
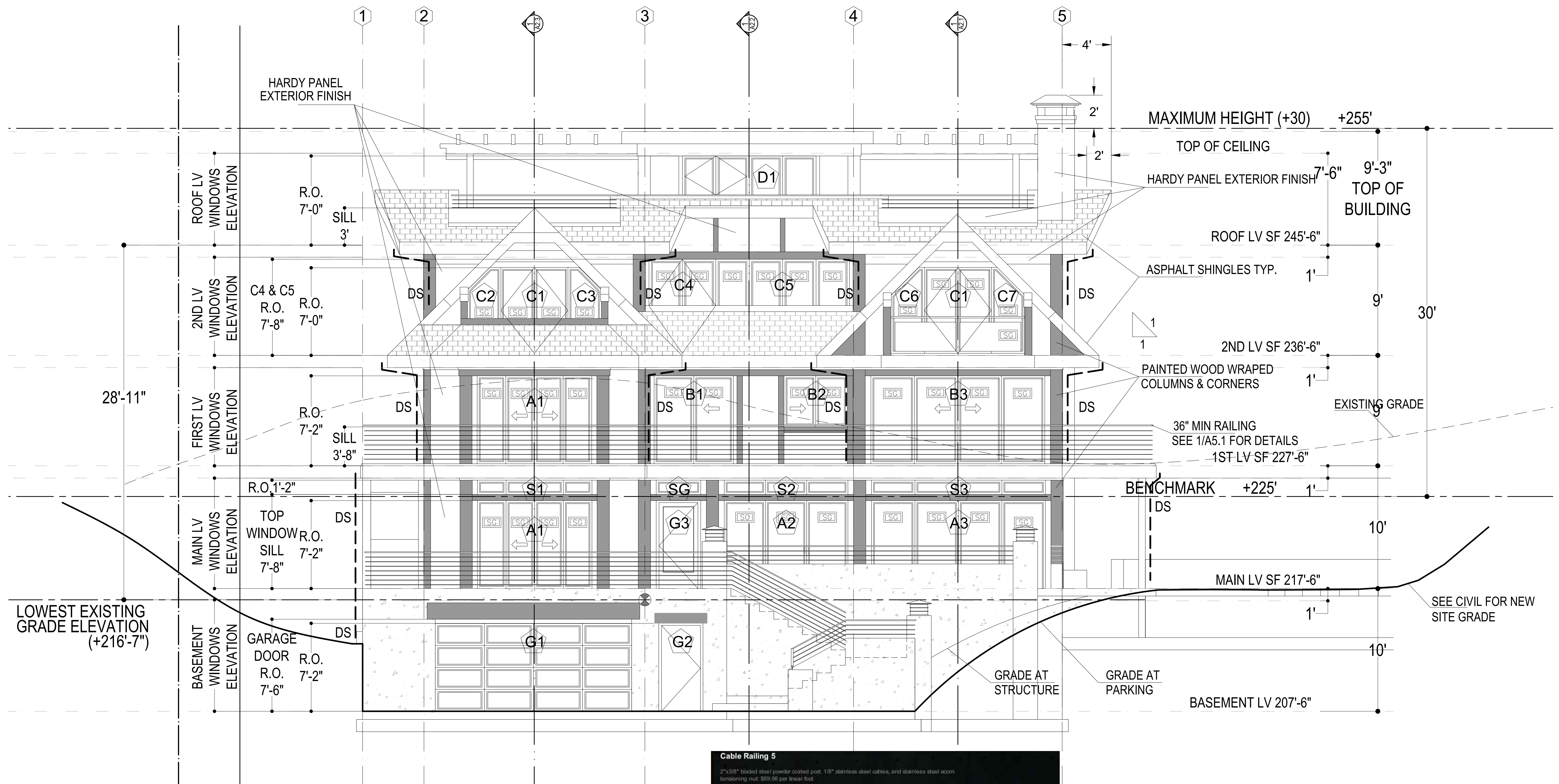
NOTE
- VERIFY ALL WATER PROOFING REQUIREMENTS WITH WATER PROOFING ENGINEER TYP.

ROOF VENTILATION
REFERENCE SRC R806
1 SQ FT OF VENTING PER 150 SQ FT OF AREA TO BE VENTED
1" AIR SPACE MINIMUM REQUIRED ABOVE ROOF INSULATION.
SEE REFLECTED CEILING PLAN AND SECTION FOR CONTINUOUS VENTING LOCATION

1SF LEVEL DECK	545 SF/150 = 3.64 SF OF VENTING AREA. PROVIDE 25 SF
2ND LEVEL ROOF	555 SF/150 = 3.70 SF OF VENTING AREA. PROVIDE 30 SF
ROOF LEVEL	900 SF/150 = 6.00 SF OF VENTING AREA. PROVIDE 30 SF
STAIR ROOF	316 SF/150 = 2.10 SF OF VENTING AREA. PROVIDE 6.5 SF



1 WALL SECTION EAST WALL
SCALE 1/2" = 1'



Cable Railing 5
2" x 3/8" bleaded steel powder coated post, 1/8" stainless steel cables, and stainless steel acorn tensioning nut. \$69.96 per linear foot.
\$19.23 per linear foot for Standard Profile Wood (VG Fir, Red Oak, Ash or Maple) or Metal (1"x2" square tube) cap. Installation additional charge.

2 CABLE RAILING TYPICAL
SCALE 1/2" = 1'

NOTE
- CONTRACTORS SHALL VERIFY TO INSPECTOR ALL GUARD AND RAILING SHALL BE CAPABLE OF RESISTING 200 LB LOAD ON TOP RAIL ACTING IN ANY DIRECTION AS REQUIRED BY IRC TABLE R301.5

SG - SAFETY GLAZING
DS - DOWNSPOUT

SCALE 1/4" = 1"



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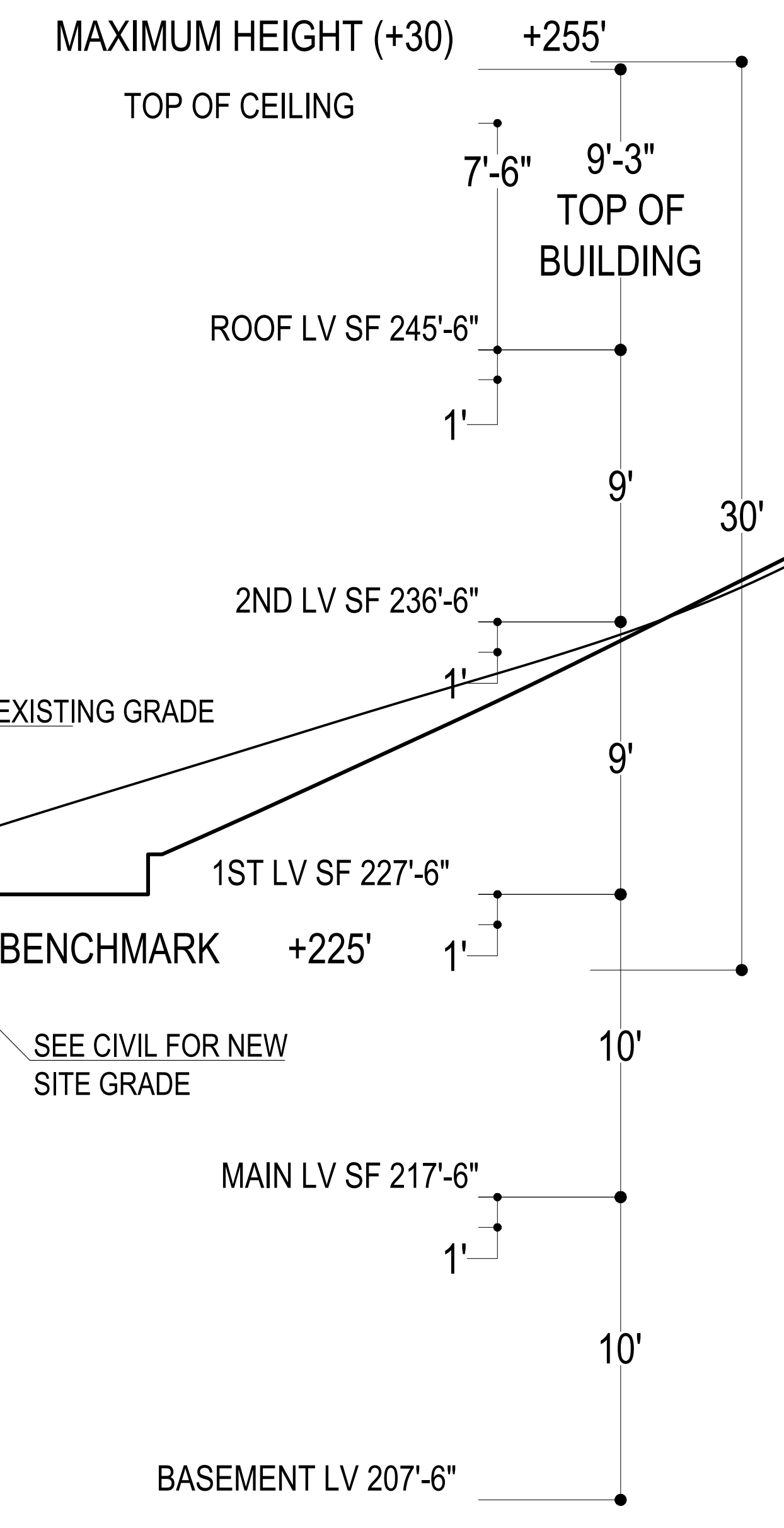
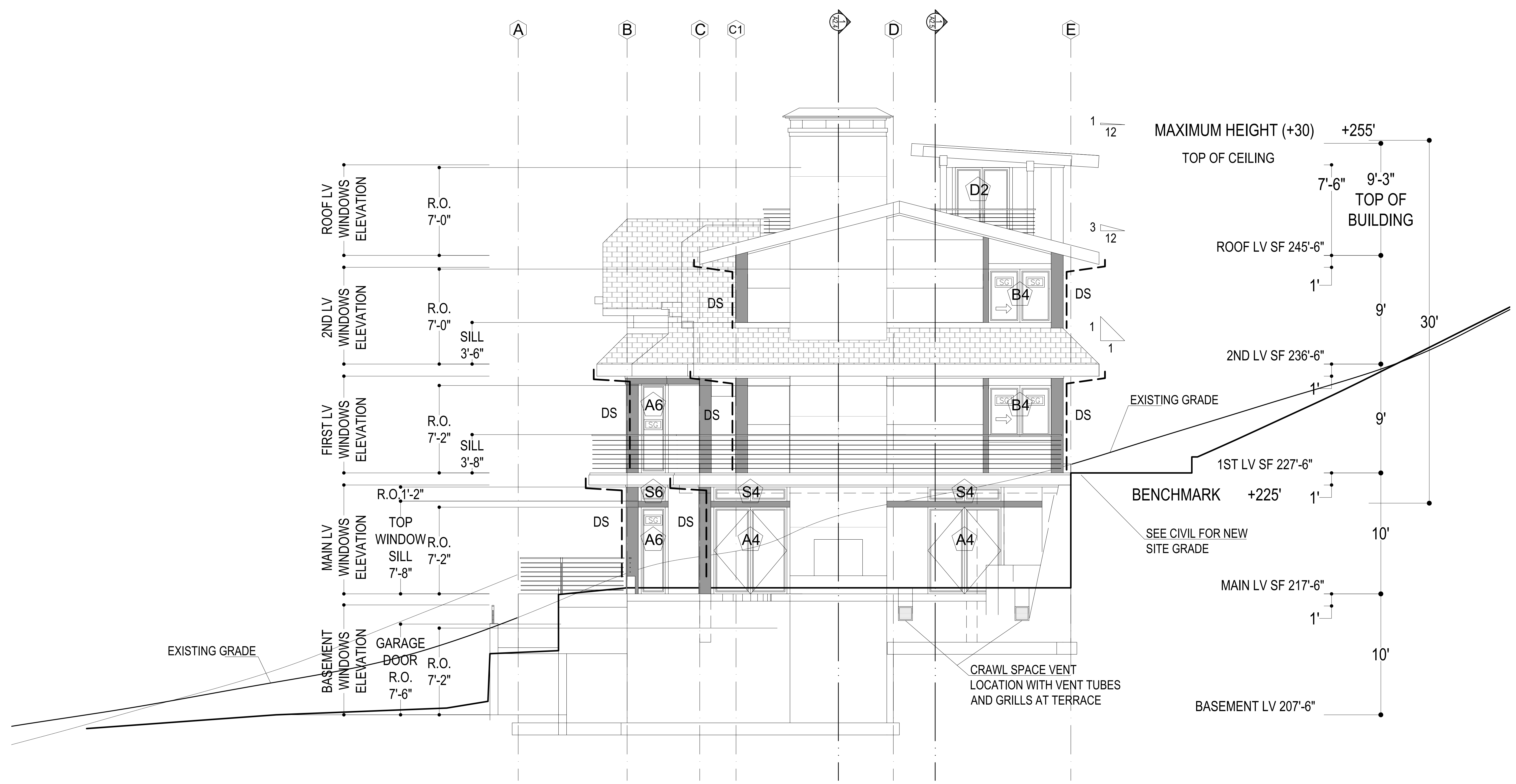
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ARCHITECTURAL SOUTH ELEVATION

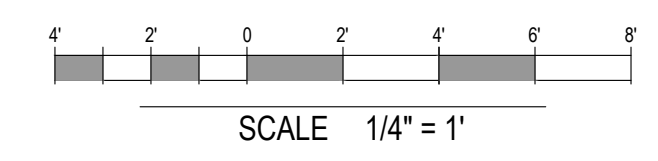
SHEET NO. _____

A3.2



SG - SAFETY GLAZING
 DS - DOWNSPOUT

SEE A3.1 FOR EXTERIOR FINISH MATERIALS TYP





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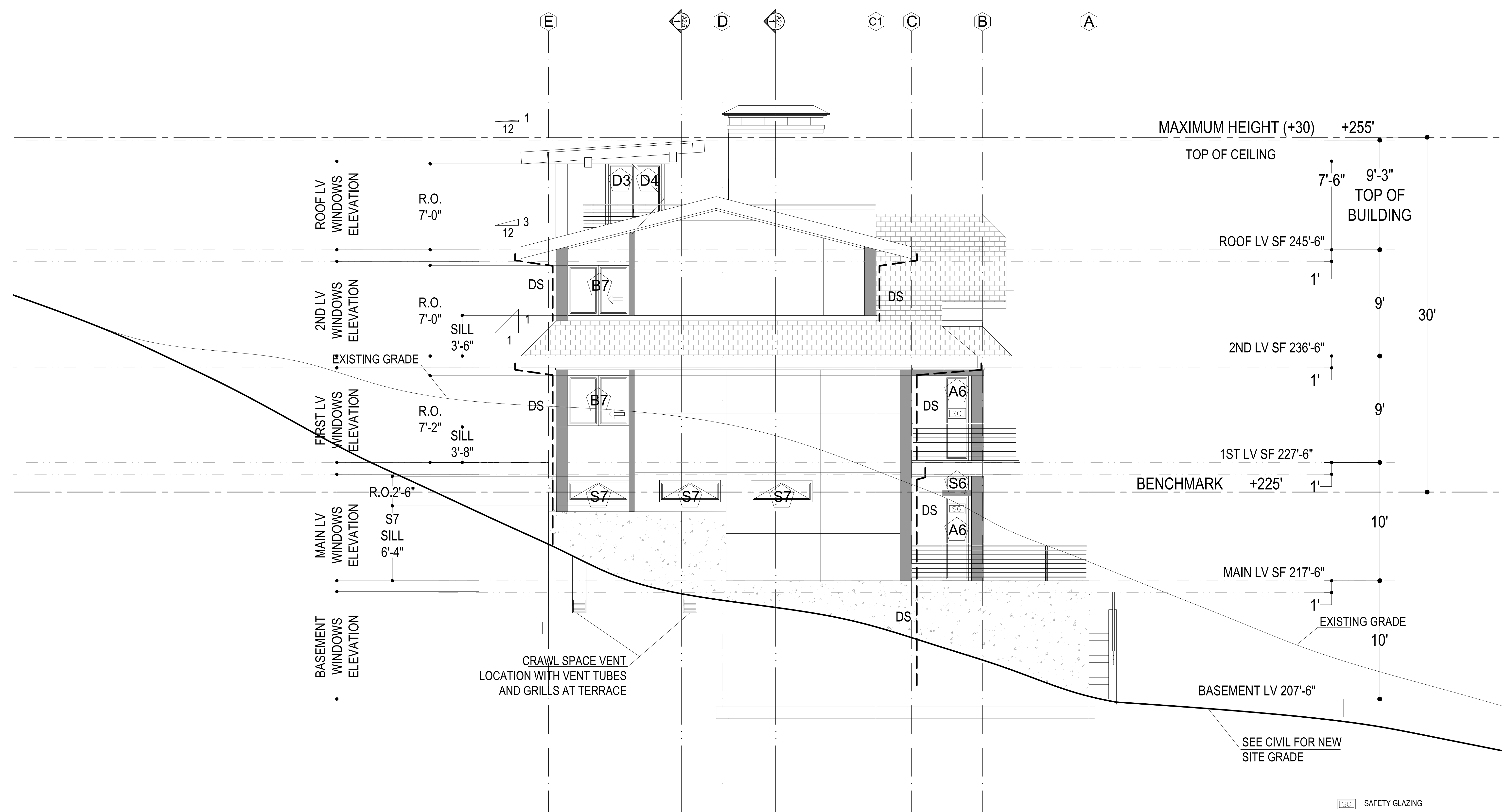
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ARCHITECTURAL NORTH ELEVATION

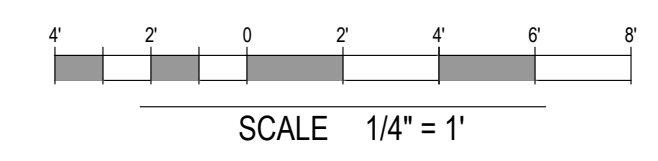
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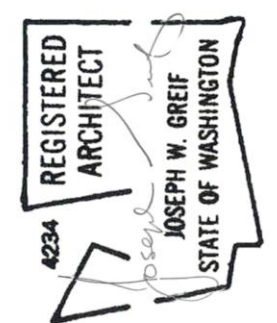
A3.3



SG - SAFETY GLAZING
 DS - DOWNSPOUT

SEE A3.1 FOR EXTERIOR FINISH MATERIALS TYP





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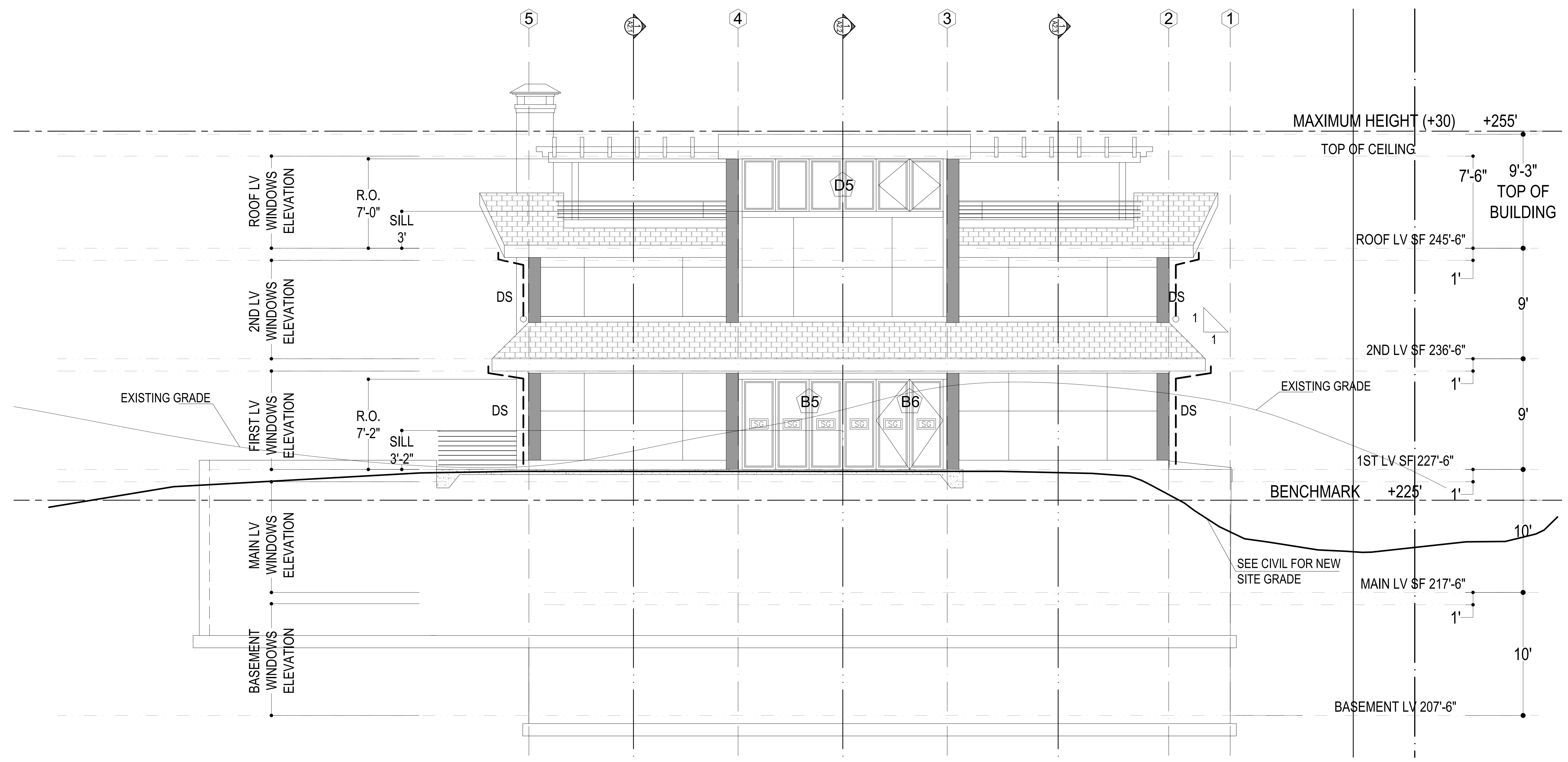
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ARCHITECTURAL EAST ELEVATION

SHEET NO. _____

A3.4



MAXIMUM HEIGHT (+30) +255'

TOP OF CEILING

7'-6" 9'-3"
TOP OF BUILDING

ROOF LV SF 245'-6"

1' 9'

2ND LV SF 236'-6"

1' 9'

1ST LV SF 227'-6"

BENCHMARK +225'

1' 10'

MAIN LV SF 217'-6"

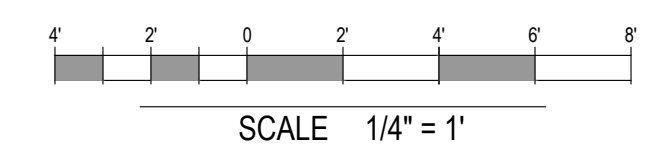
1' 10'

BASEMENT LV 207'-6"

SG - SAFETY GLAZING

DS - DOWNSPOUT

SEE A3.1 FOR EXTERIOR FINISH MATERIALS TYP



GLAZING SCHEDULE									
DOOR REFERENCE	WINDOW REFERENCE	QTY	ROUGH OPENING	GLAZING EACH	SF EACH	TOTAL AREA SF	U FACTOR	UA	NOTES
WEST ELEVATION									
G1		1	16'-0" x 7'-6"	16'-0" x 7'-6"	120 SF	120	0.25	30.0	AUTOMATIC GARAGE DOOR
G2		1	3'-2" x 7'-2"	3'-2" x 7'-2"	22.7 SF	22.7	0.25	5.7	BASEMENT SOLID DOOR
G3		1	4'-6" x 7'-2"	3'-2" x 7'-2"	22.7 SF	22.7	0.25	5.7	MAIN DOOR, SOLID DOOR
	A1	2	10'-2" x 7'-2"	9'-4" x 7'-2"	66.9 SF	133.8	0.25	33.5	4 UNITS (2 FIXED)
	A2	1	7'-6" x 7'-2"	10'-0" x 7'-2"	71.7 SF	71.7	0.25	17.9	3 FIXED UNITS
	A3	1	15'-2" x 7'-2"	14'-2" x 7'-2"	101.5 SF	101.5	0.25	25.4	4 FIXED UNITS
	S1	1	10'-2" x 1'-2"	9'-4" x 1'-6"	14 SF	14	0.25	3.5	4 FIXED UNITS (MATCHED W/ LOWER WINDOW)
	S2	1	7'-6" x 1'-2"	10'-0" x 1'-6"	15 SF	15	0.25	3.8	3 FIXED UNITS (MATCHED W/ LOWER WINDOW)
	S3	1	15'-2" x 1'-2"	14'-2" x 1'-6"	21.25 SF	21.25	0.25	5.3	4 FIXED UNITS (MATCHED W/ LOWER WINDOW)
	SG	1	4'-6" x 1'-2"	3'-8" x 1'-6"	5.5 SF	5.5	0.25	1.4	1 FIXED UNIT (MATCHED W/ LOWER WINDOW)
	B1	1	7'-0" x 7'-2"	6'-6" x 7'-2"	46.6 SF	46.6	0.25	11.7	
	B2	1	5'-6" x 3'-6"	5'-2" x 4'-2"	21.5 SF	21.5	0.25	5.4	
	B3	1	15'-0" x 7'-2"	14'-2" x 7'-2"	101.5 SF	101.5	0.25	25.4	
	C1	1		5'-6" x 6'-8"	36.7 SF	36.7	0.25	9.2	
	C2	1	10'-11" x 7'-0"	2'-8" x 6'-8"	17.75 SF	17.75	0.25	4.4	CUSTOM, FIXED
	C3	1		2'-8" x 6'-8"	17.75 SF	17.75	0.25	4.4	CUSTOM, FIXED
	C4	1	16'-11" x 7'-8"	5'-6" x 7'-6"	41.25 SF	41.25	0.25	10.3	
	C5	1		10'-6" x 7'-6"	78.75 SF	78.75	0.25	19.7	
	C1	1		5'-6" x 6'-8"	36.7 SF	36.7	0.25	9.2	
	C6	1	10'-11" x 7'-0"	2'-8" x 6'-8"	17.75 SF	17.75	0.25	4.4	CUSTOM, FIXED
	C7	1		2'-8" x 6'-8"	17.75 SF	17.75	0.25	4.4	CUSTOM, FIXED
	D1	1	10'-11" x 4'-0"	10'-6" x 4'-0"	42 SF	42	0.25	10.5	
				TOTAL		1004		251.0	
SOUTH ELEVATION									
	A4	2	6'-0" x 7'-2"	6'-0" x 7'-2"	43 SF	86	0.25	21.5	
	A6	2	2'-6" x 7'-2"	2'-0" x 7'-2"	14.5 SF	29.0	0.25	7.3	
	S4	2	6'-0" x 1'-2"	6'-0" x 1'-6"	9 SF	18.0	0.25	4.5	2 FIXED UNITS (MATCHED W/ LOWER WINDOW)
	S6	1	2'-6" x 1'-2"	2'-0" x 1'-6"	3 SF	3	0.25	0.8	1 FIXED UNIT (MATCHED W/ LOWER WINDOW)
	B4	2	5'-6" x 3'-6"	5'-2" x 4'-2"	21.5 SF	43	0.25	10.8	
	D2	1	5'-0" x 7'-0"	4'-6" x 6'-8"	30 SF	30	0.25	7.5	
				TOTAL		209		52.3	
NORTH ELEVATION									
	A6	2	2'-6" x 7'-2"	2'-0" x 7'-2"	14.5 SF	29.0	0.25	7.3	
	S6	1	2'-6" x 1'-2"	2'-0" x 1'-6"	3 SF	3	0.25	0.8	
	S7	3	3'-0" x 2'-6"	3'-6" x 2'-0"	7 SF	21	0.25	5.3	
	B7	2	5'-6" x 3'-6"	5'-2" x 4'-2"	21.5 SF	43	0.25	10.8	
	D3	1	5'-0" x 7'-0"	2'-0" x 6'-8"	13.5 SF	13.5	0.25	3.4	
	D4	1		2'-8" x 6'-8"	17.8 SF	30	0.25	7.5	
				TOTAL		140		34.9	
EAST ELEVATION									
	B5	1	16'-11" x 7'-2"	10'-6" x 7'-2"	75.25 SF	75.25	0.25	18.8	
	B6	1		5'-6" x 7'-2"	39.4 SF	39.4	0.25	9.9	
	D5	1	16'-11" x 4'-0"	16'-4" x 4'-0"	65.3	65.3	0.25	16.3	
				TOTAL		180		45.0	
TOTAL						1533		383.2	

NEW COLUMN ADDED

NOTE:

- SEE ELEVATION PLANS FOR WINDOW ELEVATIONS
- SEE PLAN AND ELEVATIONS FOR SAFETY GLAZING LOCATIONS
- ALL FENESTRATION WILL BE NFRC CERTIFIED



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PLOT DATE: MAY-2018
DRAWN BY: JA, JG
PURPOSE: PERMIT
PROJ. NO: 2017_MILLS
CHECKED BY: JG

REVISIONS:

△ DATE: DECEMBER 2018
△ DATE:

PERMIT SET

MERCER ISLAND RESIDENCE
5236 W MERCER WAY
MERCER ISLAND, WA 98125

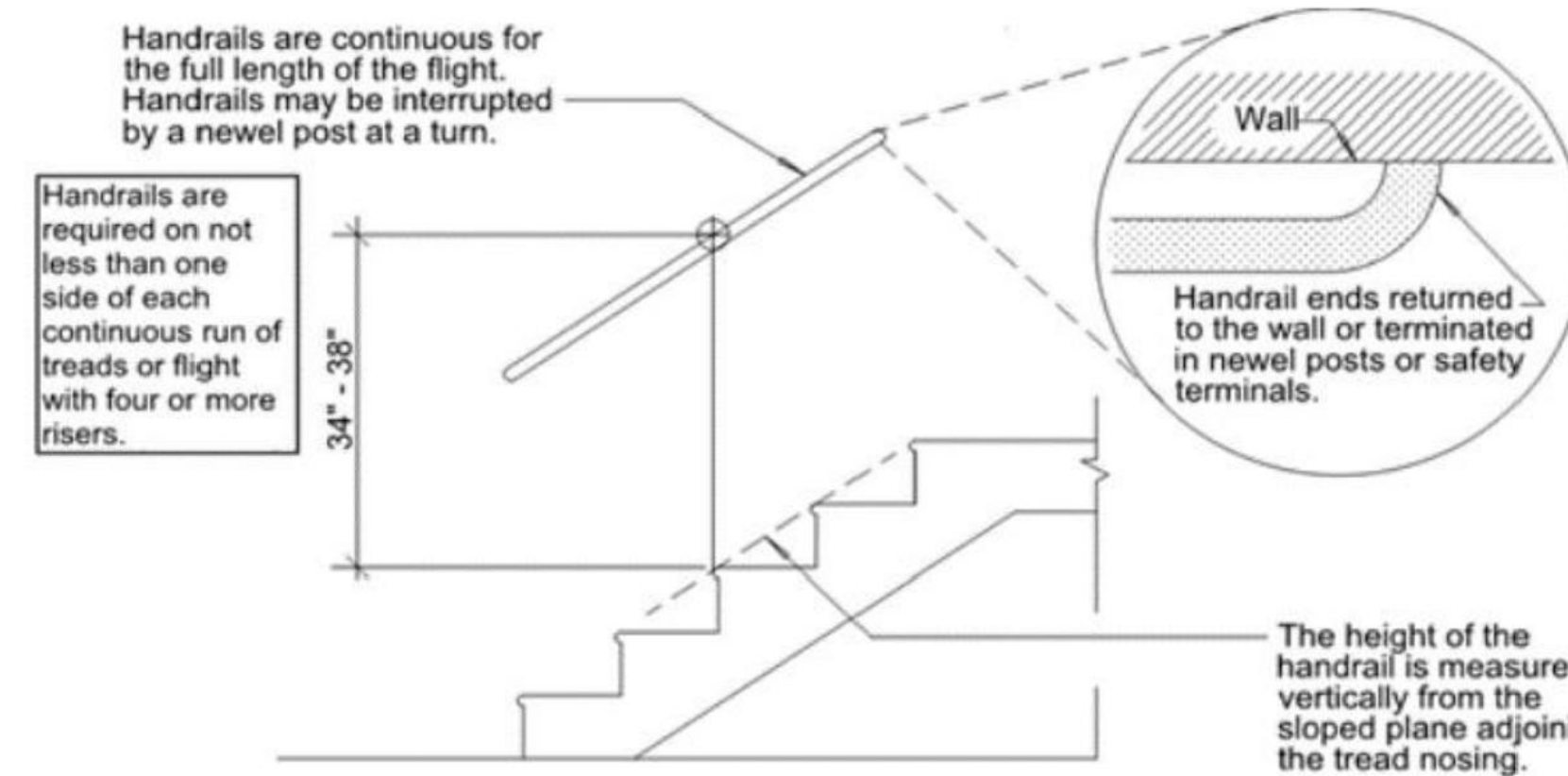
ARCHITECTURAL
EXTERIOR WINDOWS
AND DOOR SCHEDULE

SHEET NO.

A4.1

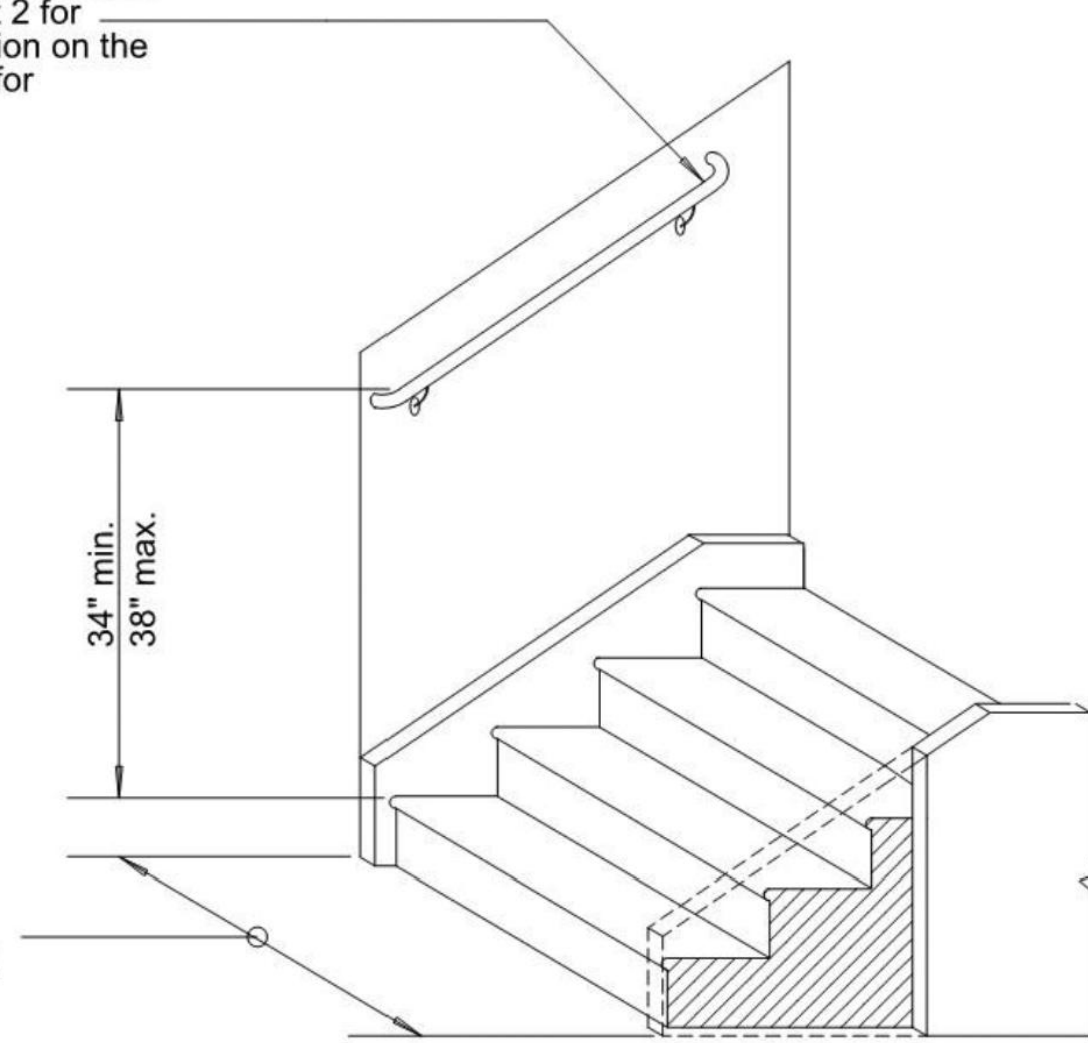
NOTE
 - CONTRACTORS SHALL VERIFY TO INSPECTOR ALL GUARD AND RAILING SHALL BE CAPABLE OF RESISTING 200 LB LOAD ON TOP RAIL ACTING IN ANY DIRECTION AS REQUIRED BY IRC TABLE R301.5

Handrails are required on at least one side of each continuous run of treads or flight with four or more risers.

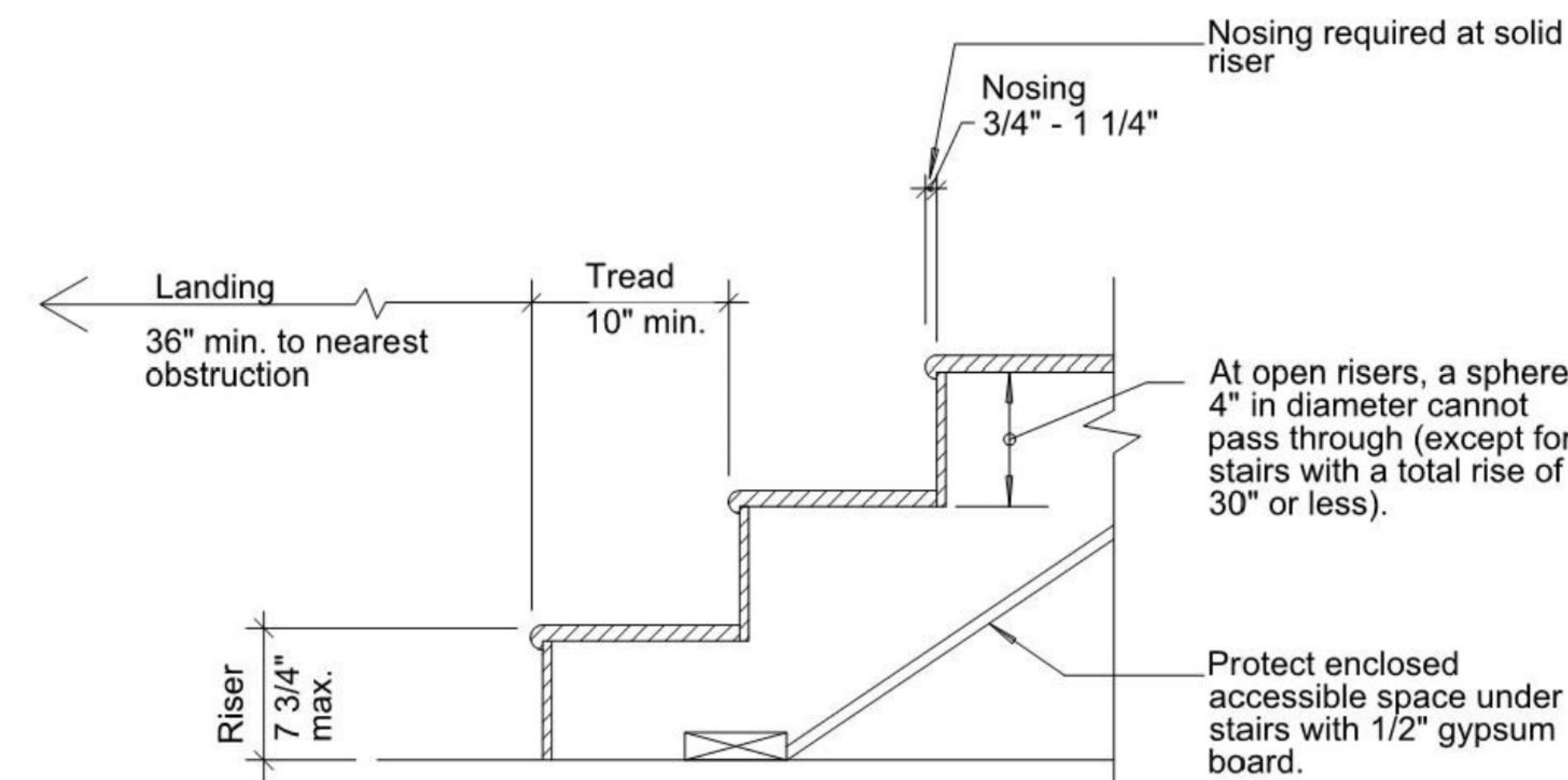
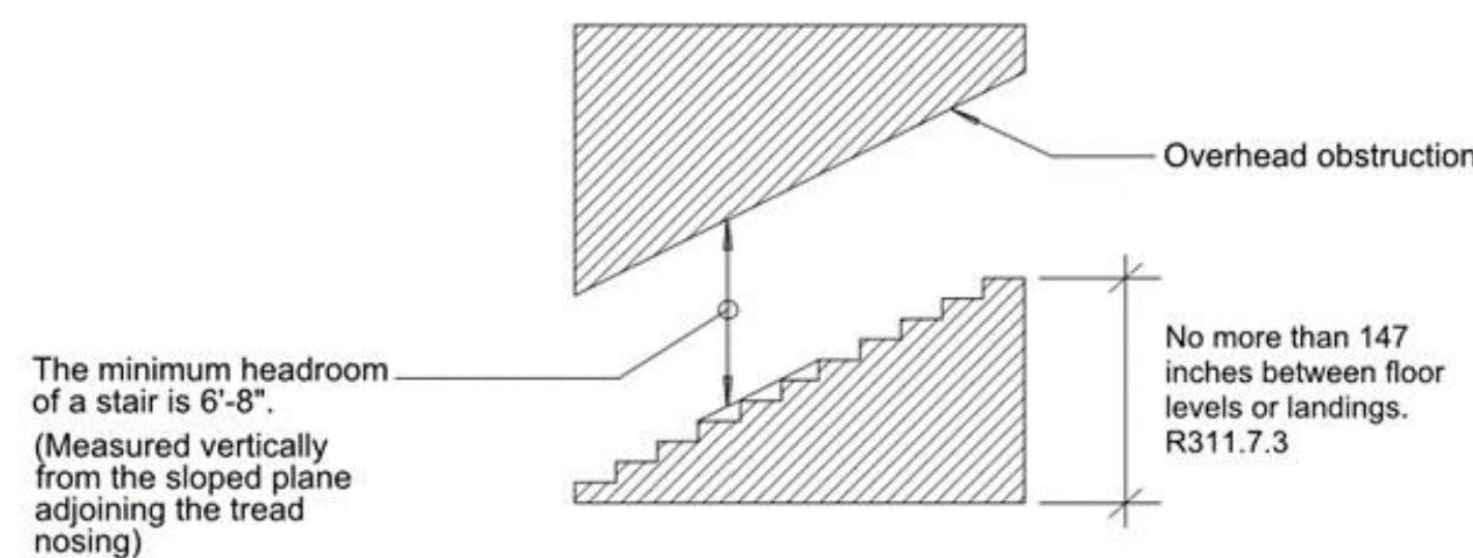


Stair runs with 4 or more risers require a handrail. See Tip Sheet 2 for more information on the requirements for handrails. R311.7.8

Minimum required stairway width is 36". R311.7.1



Typical Stair Elevation



- **Stair treads and risers:** The largest tread or riser within any flight of stairs is not to exceed the smallest by more than 3/8". (R311.7.5)
- **Illumination:**
 - Interior stairways shall be provided with an artificial light source to illuminate landings and treads. There shall be a wall switch at each floor level to control the light source where the stairway has 6 or more risers. (R303.7)
 - Exterior stairways shall be provided with an artificial light source located at the top landing of the stairway, and located at the bottom landing where accessing a basement. (R303.8)
- **Handrails:** Handrails are required on at least one side for stairways with four or more risers. See Tip Sheet 2 for additional information regarding handrails. (R311.7.8)
- **Landings required:** Landings are required at the top and the bottom of stairways. A floor landing is not required at the top of an interior flight of stairs, provided a door does not swing over the stairs. (R311.7.6)
- **Landing dimensions:** A landing extending the width of the stair and measuring a minimum of 36" in the direction of travel is required at the top and bottom of every stairway. (R311.7.6)
- **Circular, winding or spiral stairways:** For exceptions related to the construction of circular, winding, or spiral stairways. (R311.7.5.2.1 & R311.7.10)

CODE REFERENCE
 STAIRS AND RAILING

Smoke and carbon monoxide alarms must be provided in all required locations and must be:

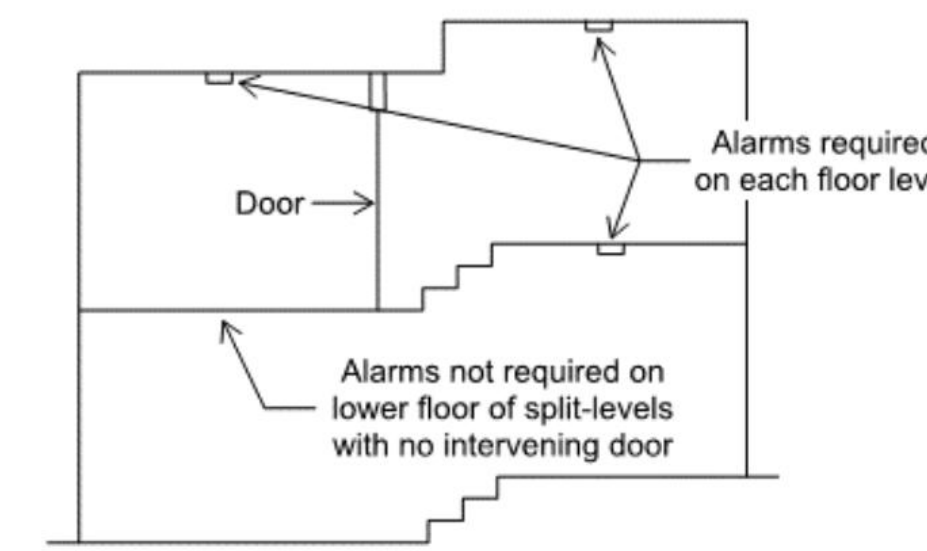
- audible in all parts of the house
- installed per manufacturer's instructions

New Houses (IRC R314 & R315)

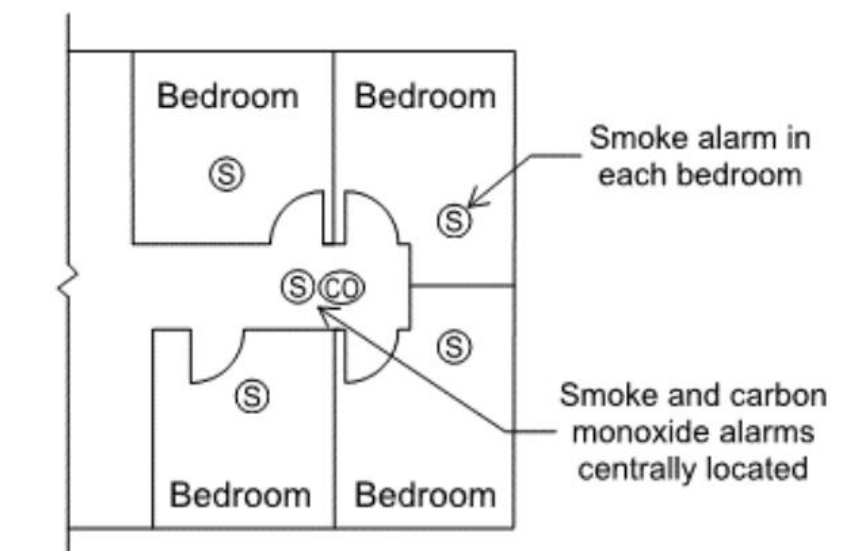
Smoke alarms and carbon monoxide alarms are required and must be connected to the main electrical system with battery backup.

Required Locations

- Smoke alarms shall be located in each sleeping room and in napping areas in a family home child care.
- Smoke alarms and carbon monoxide alarms shall be located outside each sleeping area in the immediate vicinity of the bedrooms.
- Smoke alarms and carbon monoxide alarms shall be located on every floor level, including basements (does not include crawlspace and uninhabitable attics).
- In split level floor plans, at the upper level, provided there is no intervening door between adjacent levels and the lower level is less than a full story below the upper level
- A carbon monoxide alarm is required in a bedroom when a fuel-burning appliance is installed in the bedroom or its attached bathroom.
- A combination alarm (combined smoke and carbon monoxide alarm) is acceptable in any required location.



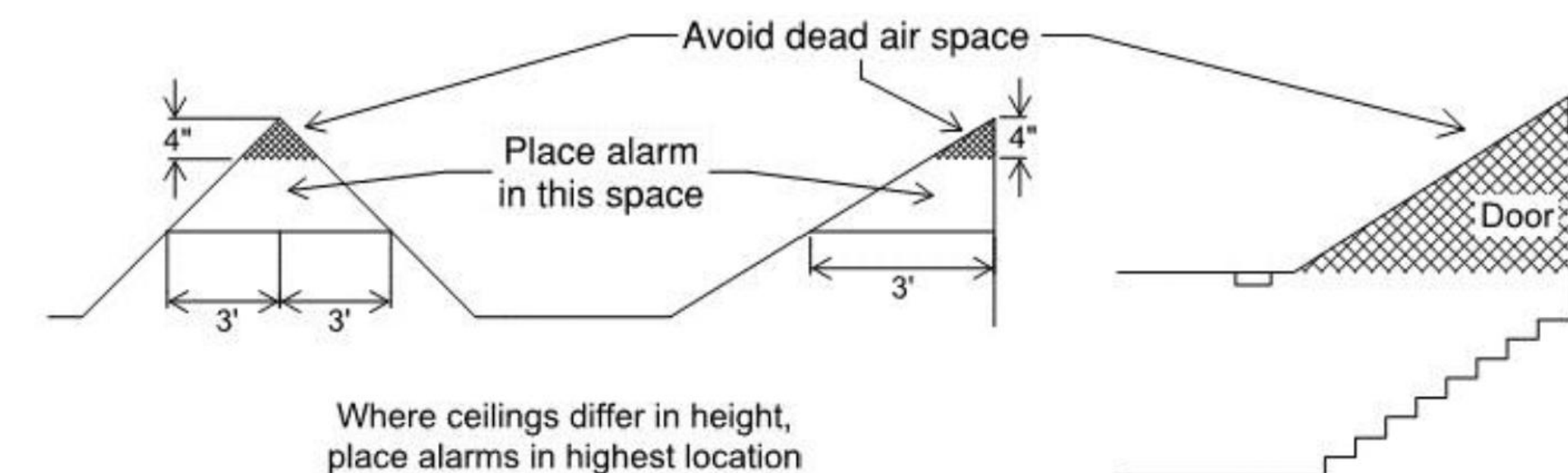
Section View



Plan View

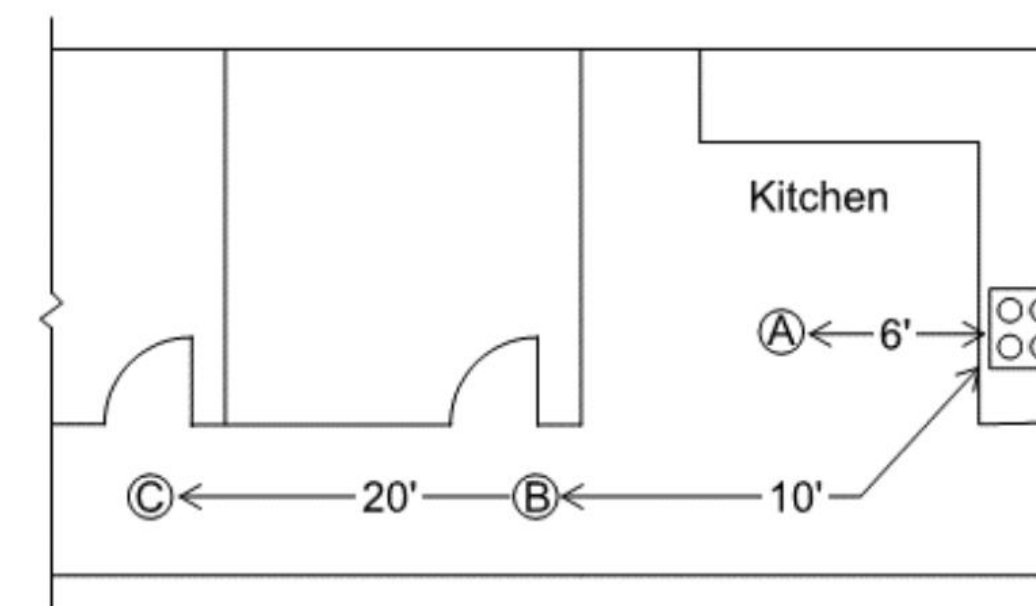
Smoke Alarm Location Limitations

- Wall mounted alarms must be not more than 12 inches from the adjoining ceiling surface.
- Avoid placing alarms less than 3 feet from supply registers of a forced air heating or cooling system and do not place alarms in the direct airflow of the registers.
- Avoid placing alarms within 3 feet horizontally from doors to bathrooms containing a bathtub or shower.
- Do not place alarms in spaces where temperatures may be above or below the alarm's operating temperature range.
- Do not place alarms within 3 feet of the blades of a ceiling fan.
- Alarms in peaked or sloped ceilings must be within 3 feet of the peak, measured horizontally, but not in the highest 4 inches of the ceiling, measured vertically. (See figure below)
- Avoid placing alarms in dead air spaces. (See figure below)



Where ceilings differ in height, place alarms in highest location

Smoke Alarms near Cooking Appliances



- Photoelectric smoke alarms must not be less than 6 feet from a permanent cooking appliance.
- Ionization smoke alarms with an alarm-silencing switch must not be less than 10 feet from a permanent cooking appliance.
- Ionization smoke alarms without an alarm-silencing switch must not be less than 20 feet from a permanent cooking appliance.

Carbon Monoxide Alarm Location Limitations

- Do not place alarms directly above or beside fuel-burning appliances.
- Do not place alarms in direct sunlight.
- Do not place alarms in low areas where children can reach. Do not place alarms behind curtains or any structure that might prevent carbon monoxide from reaching the sensor.

CODE REFERENCE
 SMOKE DETECTORS

Safety Glazing Markings:

Where safety glazing is required, each pane must be provided with a manufacturer's label defining the type of glass and safety glazing standard to which it complies. The label must be permanently etched, fired, or embossed, on the glass or be a type that once applied cannot be removed without being destroyed.

Safety Glazing Required Locations:

- 1. Glazing in Doors:** Safety glazing is required in fixed and operable panels of swinging, sliding, and bifold doors. Safety glazing is not required in a door if the glazed openings do not allow the passage of a 3 inch sphere, or the glazing in the door is decorative.
- 2. Glazing Adjacent to Doors:** Glazing adjacent to doors is required in the following locations if the bottom edge of the glazing is less than 60 inches above the walking surface: Within 24 inches of either side of the door if glazing is in the same plane as the door, or if glazing is in a wall perpendicular to the door within 24 inches on the hinge side of an inswing door. Safety glazing is not required if there is an intervening wall or permanent barrier between the door and the glazing.

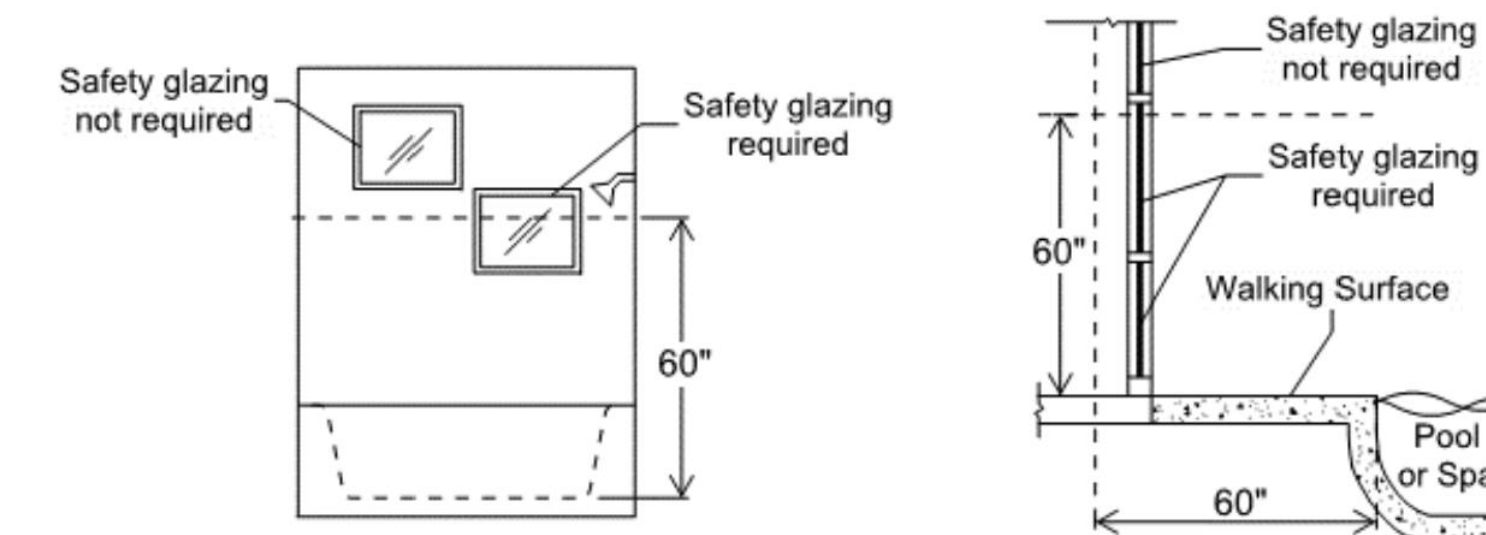


- 3. Glazing in Windows:** Safety glazing in windows is required if the individual panel meets **all** of the following requirements:
 - Exposed area of the individual panel is greater than 9 square feet.
 - The bottom edge of the glazing is less than 18 inches from the floor.
 - The top edge of the glazing is more than 36 inches above the floor.
 - There is a walking surface within 36 inches, measured horizontally, from the glazing.

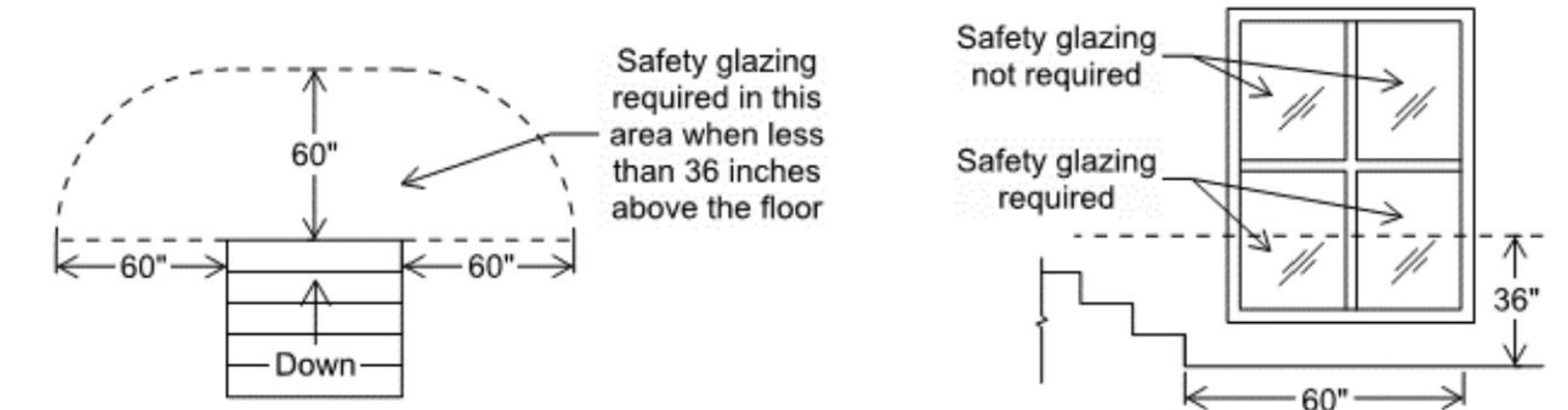
Exceptions:

- Decorative glazing.
- Where a horizontal rail capable of resisting 50 pounds per lineal foot of force without making contact with the glass is installed on the accessible side of the glazing 34-38 inches above the walking surface.

- 4. Glazing in Railings and Guards:** All glazing in guards and railings, including structural baluster panels and nonstructural in-fill panels, is required to be safety glazing.
- 5. Glazing and Wet Surfaces:** Glazing in walls, enclosures, or fences around showers, bathtubs, pools, hot tubs, spas, saunas, and steam rooms where the bottom edge of the glazing is less than 60 inches from the standing or walking surface is required to be safety glazing. Safety glazing is not required where the glazing is more than 60 inches, horizontally, from the edge of the water.



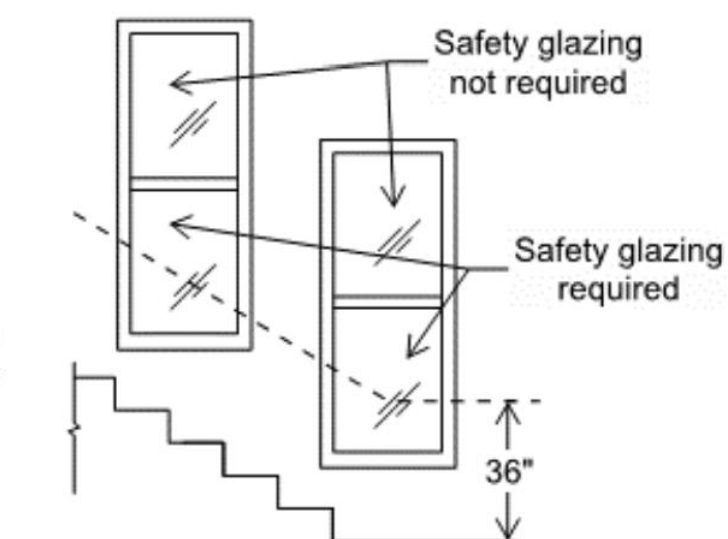
- 6. Glazing Adjacent to Bottom Stair Landings:** Glazing adjacent to the landing at the bottom of a stairway where the glazing is less than 36 inches above the landing and within a 60 inch horizontal arc from the bottom tread must be safety glazing.



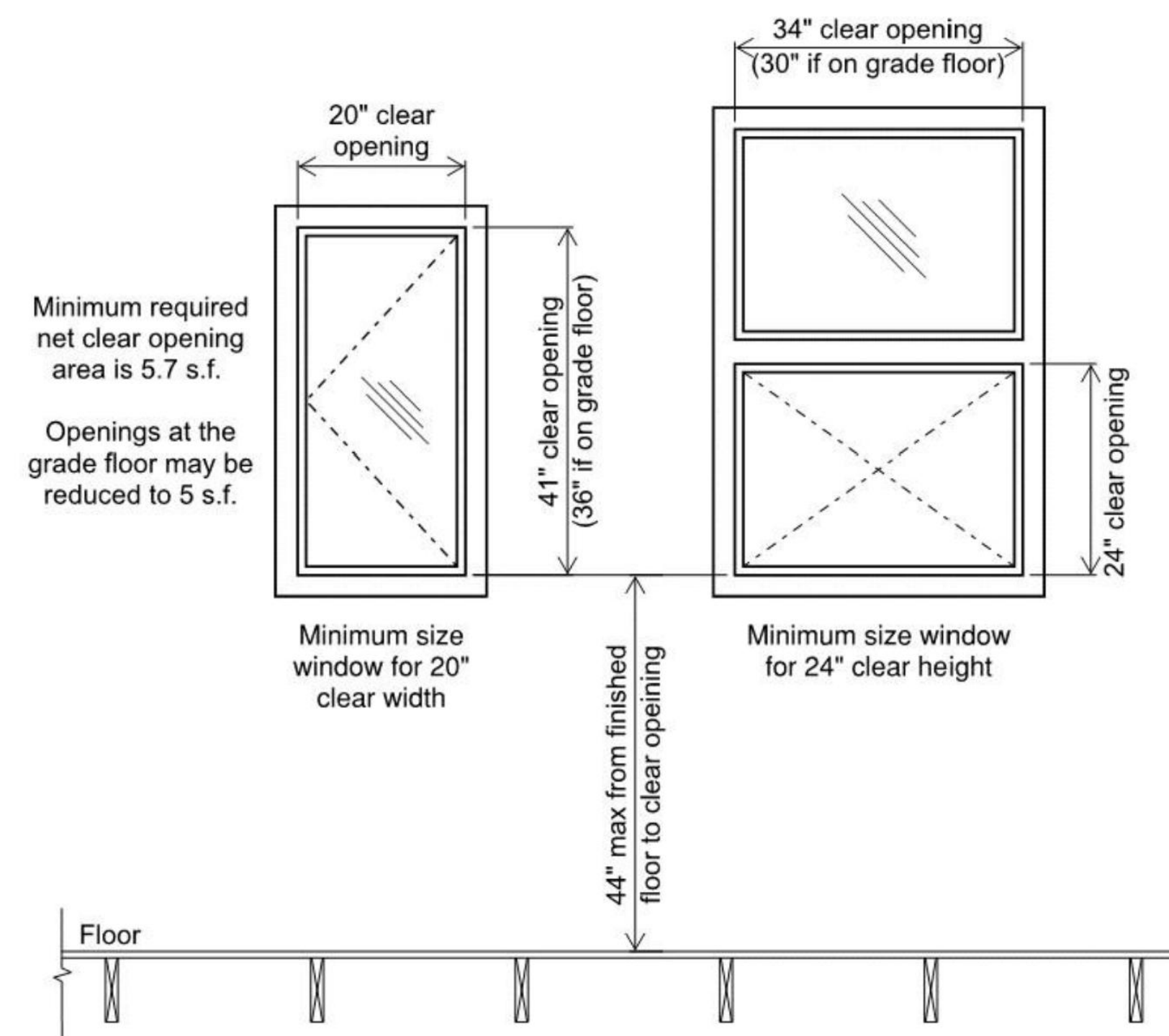
- 7. Glazing Adjacent to Stairs and Ramps:** Glazing where the bottom edge is less than 36 inches above the plane of the adjacent walking surface of stairways, ramps, and landings between stair flights and ramp runs, must be safety glazing.

Exceptions:

- Where a horizontal rail capable of resisting 50 pounds per lineal foot of force without making contact with the glass is installed on the accessible side of the glazing 34-38 inches above the walking surface.
- Glazing more than 36 inches horizontally from the walking surface is not required to be safety glazing.



Basements, habitable attics and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, an emergency escape and rescue opening shall be required in each sleeping room. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.

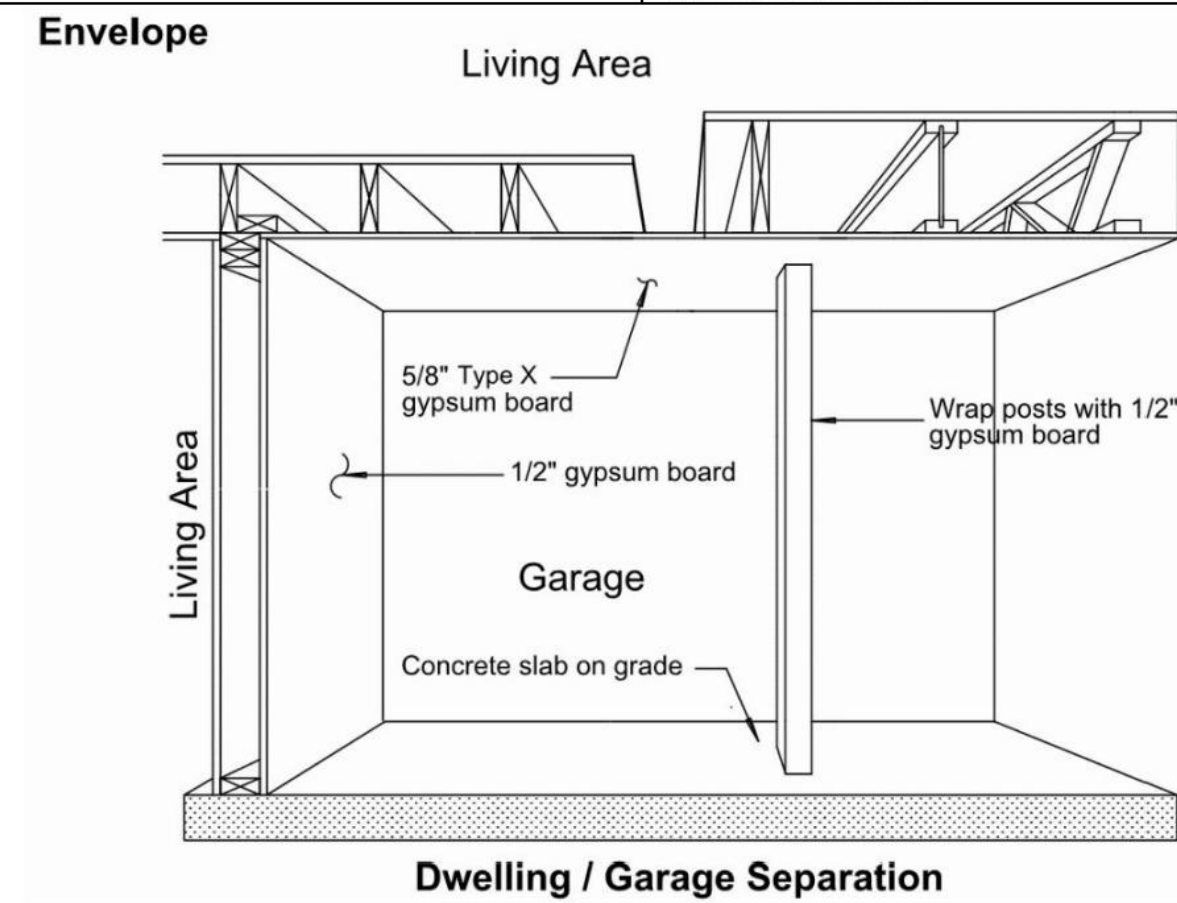


CODE REFERENCE
EGRESS OPENING

CODE REFERENCE
GLAZING CODE REQUIREMENTS

Table R302.6 - Dwelling-Garage Separation

Separation	Material
From the residence and attics	Not less than 1/2-inch gypsum board or equivalent applied to the garage side.
From habitable rooms above the garage	Not less than 5/8-inch Type X gypsum board or equivalent
Structure(s) supporting floor/ceiling assemblies used for separation required by this section	Not less than 1/2-inch gypsum board or equivalent.
Garages located less than 3 feet from a dwelling unit on the same lot	Not less than 1/2-inch gypsum board or equivalent applied to the interior side of exterior walls that are within this area



Fastening per IRC Table R702.3.5:

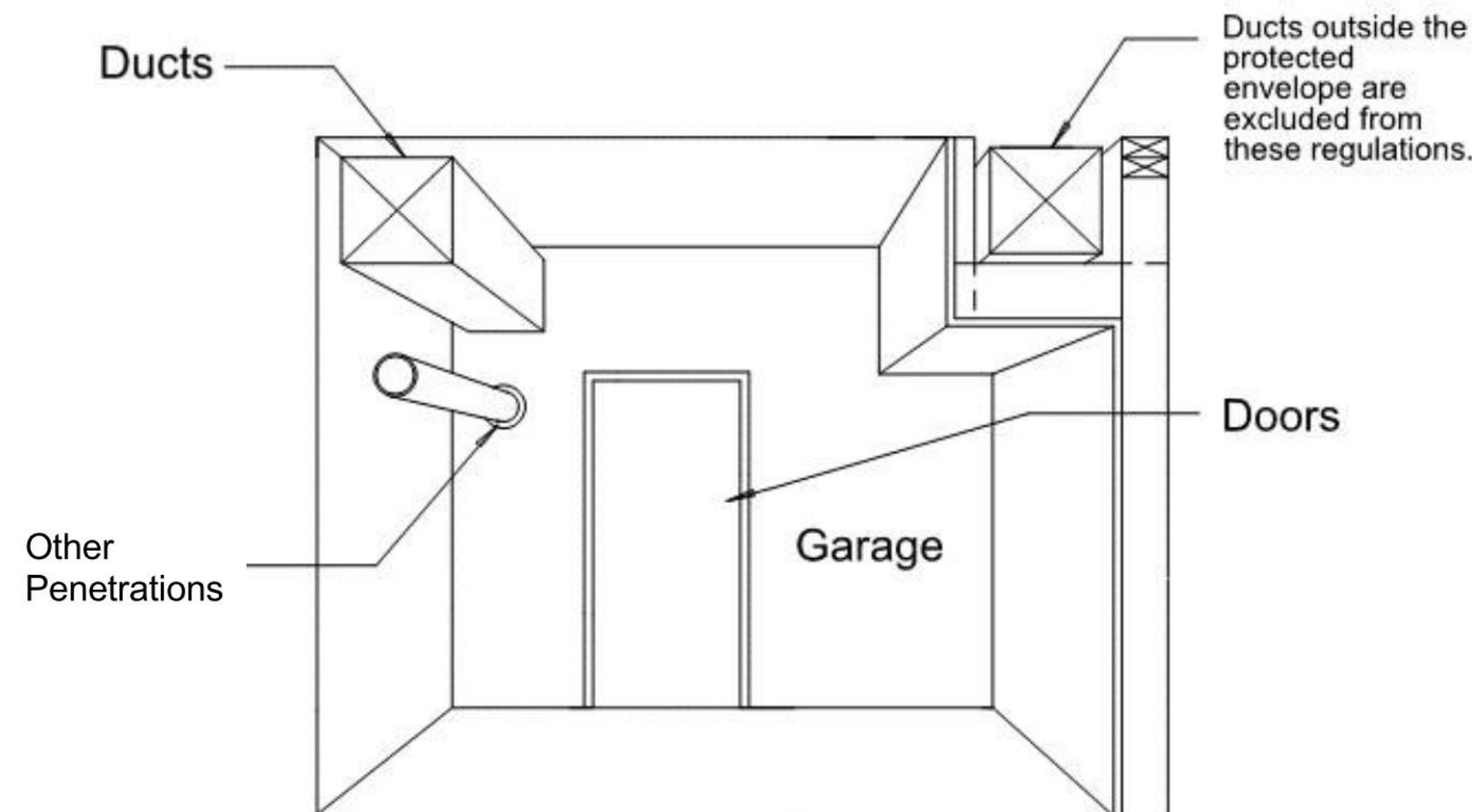
5/8" Type X at Ceiling:

- Fasten with 6d cooler nails @ 6" o.c. or drywall screws @ 6" o.c. when framing is maximum 24" o.c.

1/2" Gypsum Board at Walls:

- Fasten with 5d cooler nails @ 8" o.c. or drywall screws @ 16" o.c. when framing is maximum 16" o.c.
- Fasten with 5d cooler nails @ 8" o.c. or drywall screws @ 12" o.c. when framing is maximum 24" o.c.

Penetrations (of the protected envelope)



Duct Penetrations:

Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage must be a minimum of No. 26 gage sheet metal with no register outlets (openings) into the garage. R302.5.2

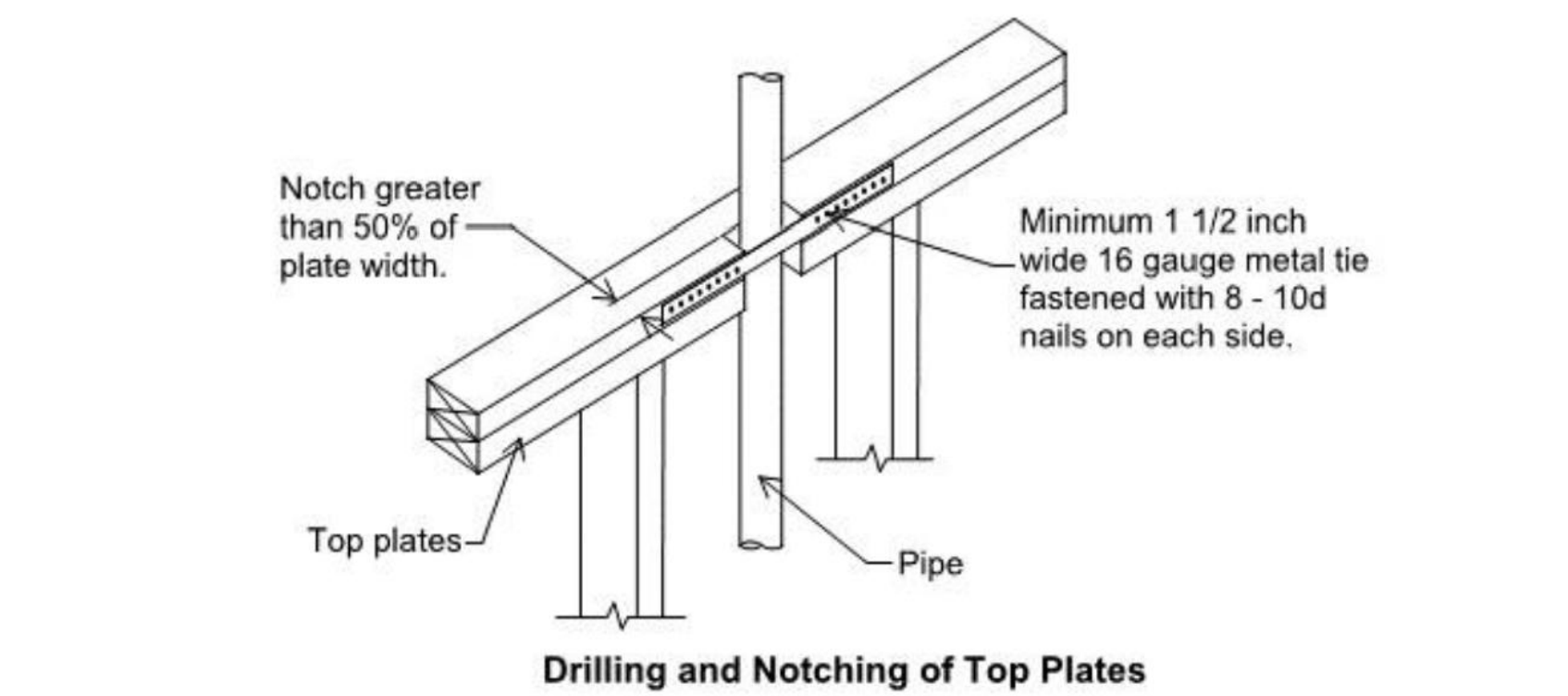
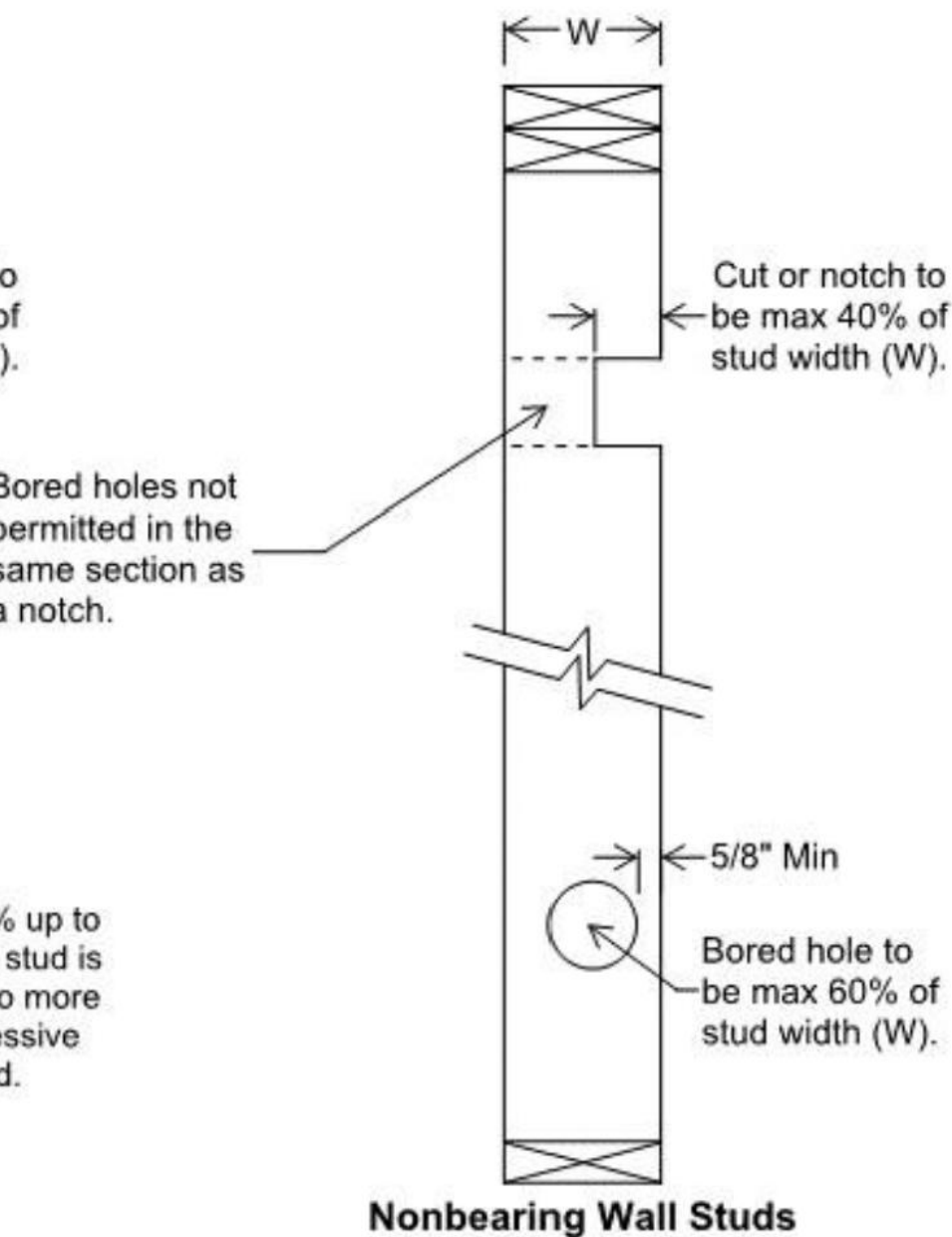
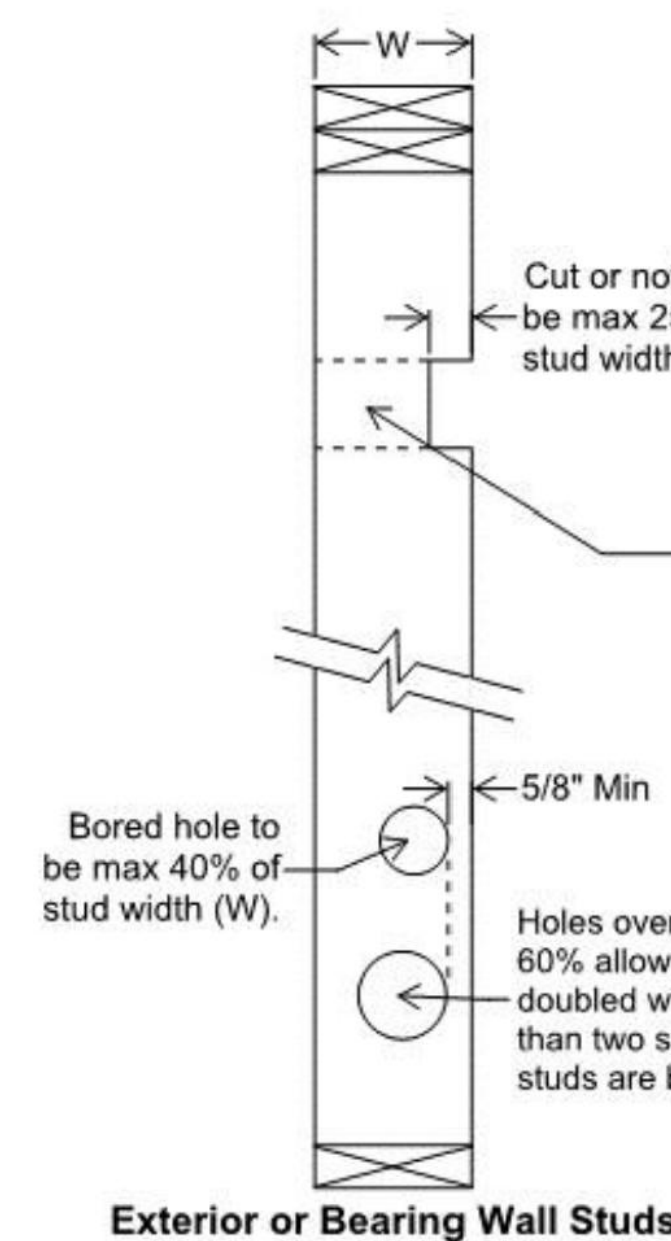
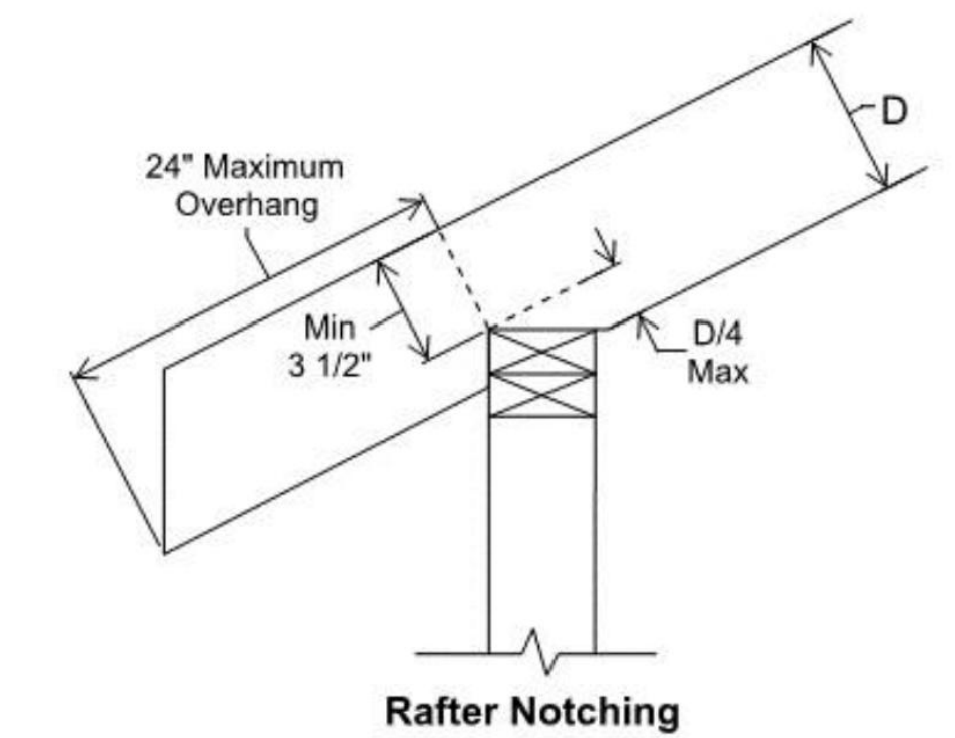
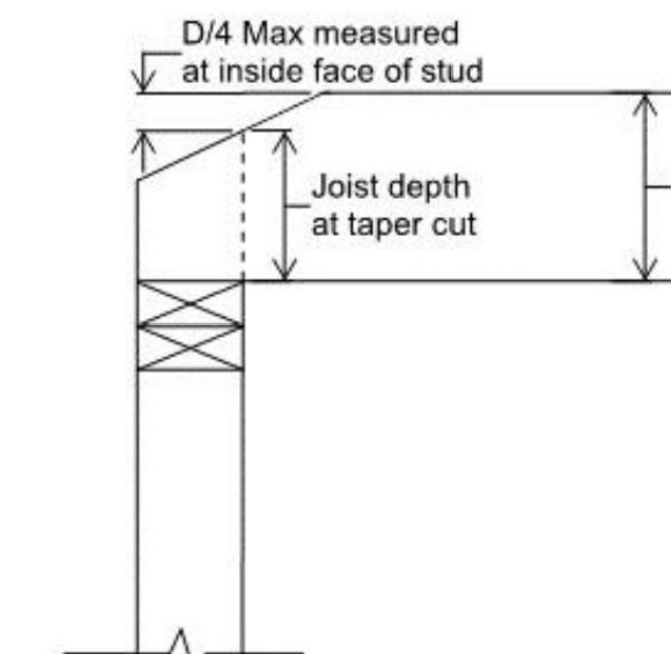
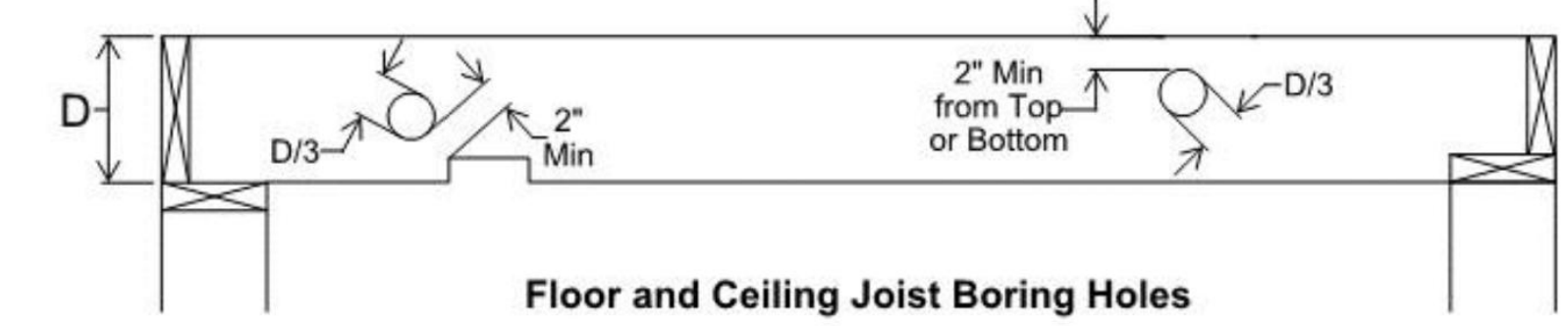
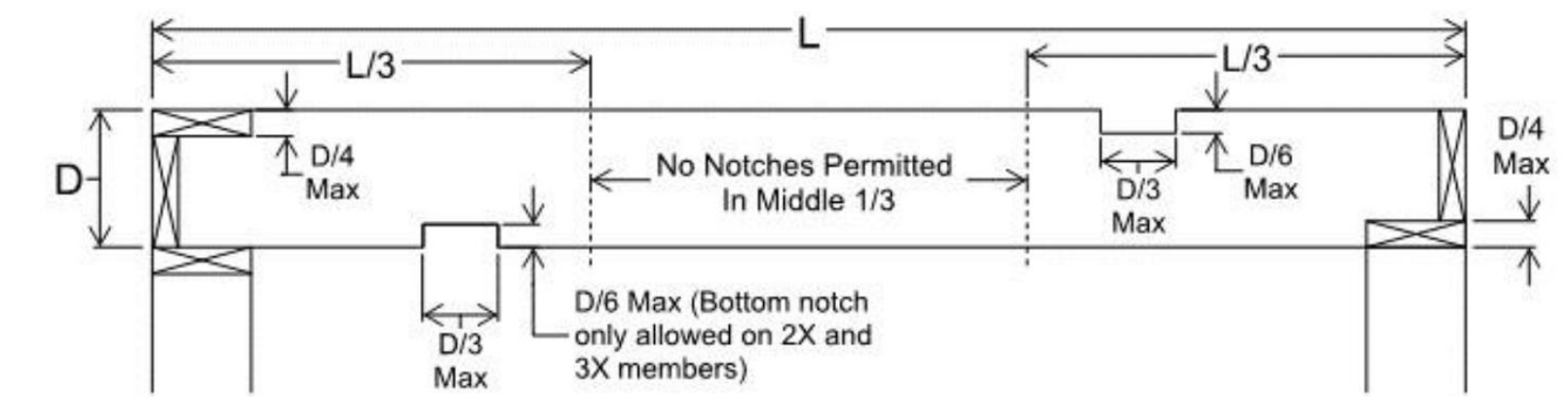
Other Penetrations:

Penetrations through the required separation must be protected at openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with an approved material to resist the free passage of flame and products of combustion. The material filling this annular space shall not be required to meet the ASTM E 136 requirements. R302.11 Fireblocking Item 4.

Doors:

Doors separating the garage and living spaces shall be 1-3/8" solid wood, solid or honeycomb core steel doors not less than 1-3/8" thick, or 20-minute rated doors. These doors shall also be equipped with a self-closing device. These doors shall not open into a sleeping room.

1. CODE REFERENCE
GARAGE SEPARATION



2. CODE REFERENCE
NOTCHING OF CONSTRUCTION FRAMING



JOSEPH GREIF ARCHITETS
921 NE Boat Street, Seattle, WA 98105
www.greifarchitects.com
T: 206 633 4293
F: 206 633 3735

PLOT DATE: MAY-2018
DRAWN BY: JA, JG
PURPOSE: PERMIT
PROJ. NO: 2017_MILLS
CHECKED BY: JG

REVISIONS:
DATE: APRIL 2018
DATE:

PERMIT SET

MERCER ISLAND RESIDENCE
5236 W MERCER WAY
MERCER ISLAND, WA 98125

CODE REFERENCE
FRAMING REQUIREMENTS

SHEET NO.

A5.3

5236 W MERCER WAY

SINGLE FAMILY RESIDENCE

CIVIL ENGINEERING PLANS

AUGUST 2018

PROJECT DATA

AREA SUMMARY:

TOTAL SITE AREA: 37,350 SF
 TOTAL IMPERVIOUS AREA: 8,000 SF
 IMPERVIOUS COVERAGE: 21.4%

EARTHWORK QUANTITIES:

CUT: 3,200* CY
 FILL: 50* CY
 NET: 3,150* CY (CUT)

* EARTHWORK QUANTITIES FOR PERMITTING PURPOSES ONLY

SETBACKS:

FRONT: 20- FEET
 SIDE: 5 MIN. (SUM 15)- FEET EACH SIDE
 REAR: 25- FEET

RECORD LEGAL DESCRIPTION:

LOT 4A OF THE REVISED MILLS LOT LINE REVISION.

SURVEY NOTES:

HORIZONTAL DATUM: NAD 1983/91 BASED ON FOUND MONUMENTS IN WEST MERCER WAY.
 VERTICAL DATUM: NAVD 88 BASED ON FOUND MONUMENTS IN WEST MERCER WAY.
 SITE AREA: 37,350 SQUARE FEET, MORE OR LESS.

UTILITY PURVEYOURS

WATER: CITY OF MERCER ISLAND
SEWER: CITY OF MERCER ISLAND
GAS: PUGET SOUND ENERGY
POWER: PSE
CABLE: COMCAST
PHONE: COMCAST
GARBAGE: REPUBLIC SERVICES

OWNER/DEVELOPER/CONSULTANTS

APPLICANT / ARCHITECT:

JOSEPH GREIF, AIA
 GREIF ARCHITECTS/LIVING ARCHITECTURE
 921 NE BOAT ST.
 SEATTLE, WA 98105
 (206) 465-4201
 GREIF@MSN.COM

CIVIL ENGINEER:

DAN WESTLEY, P.E.
 PACE ENGINEERS, INC.
 11255 KIRKLAND WAY
 SUITE 300
 KIRKLAND, WA 98033
 (425) 827-2014
 DANW@PACEENGRS.COM

GEOTECHNICAL ENGINEER:

JON C. REHKOPF, P.E.
 PANGE, INC.
 3213 EASTLAKE AVENUE EAST
 SUITE B
 SEATTLE, WA 98102
 (206) 262-0370
 JREHKOPF@PANGEINC.COM

SURVEYOR:

BILL HAWKINS, P.L.S.
 PACE ENGINEERS, INC.
 11255 KIRKLAND WAY
 SUITE 300
 KIRKLAND, WA 98033
 (425) 827-2014
 BILLH@PACEENGRS.COM

ARBORIST:

RYAN RINGE
 ARBOR OPTIONS, LLC
 (206) 755-5826
 RYAN@ARBOROPTIONS.COM

STRUCTURAL ENGINEER:

TOM WOLF
 QUALITY ENGINEERING AND DESIGN
 (206) 817-8834
 WOLFTOMJ@MSN.COM

WET LAND ENVIRONMENTALIST:

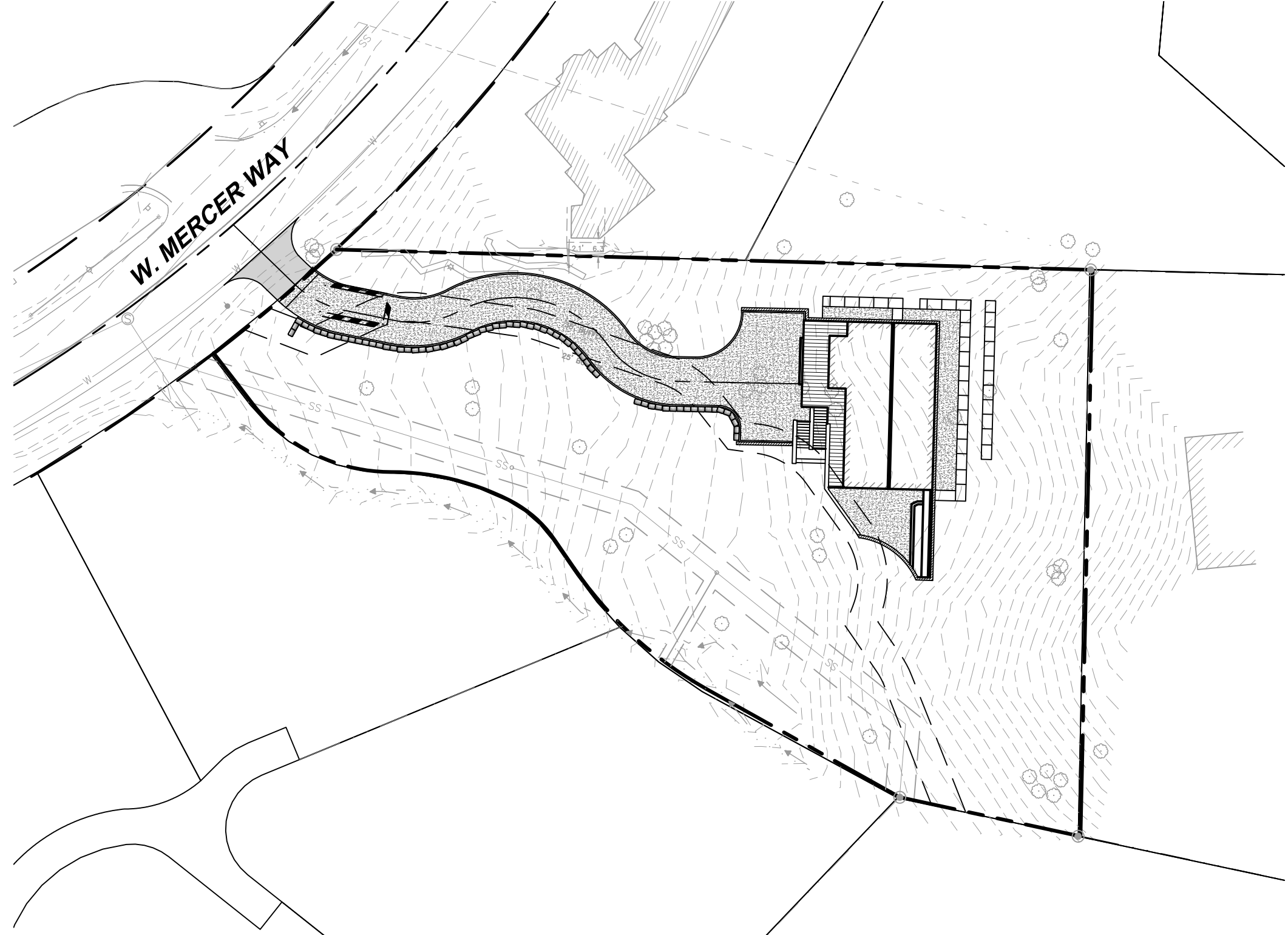
MARK RIGOS
 (425) 652-6013
 MARKRIGOS@HOTMAIL.COM

CONTRACTOR:

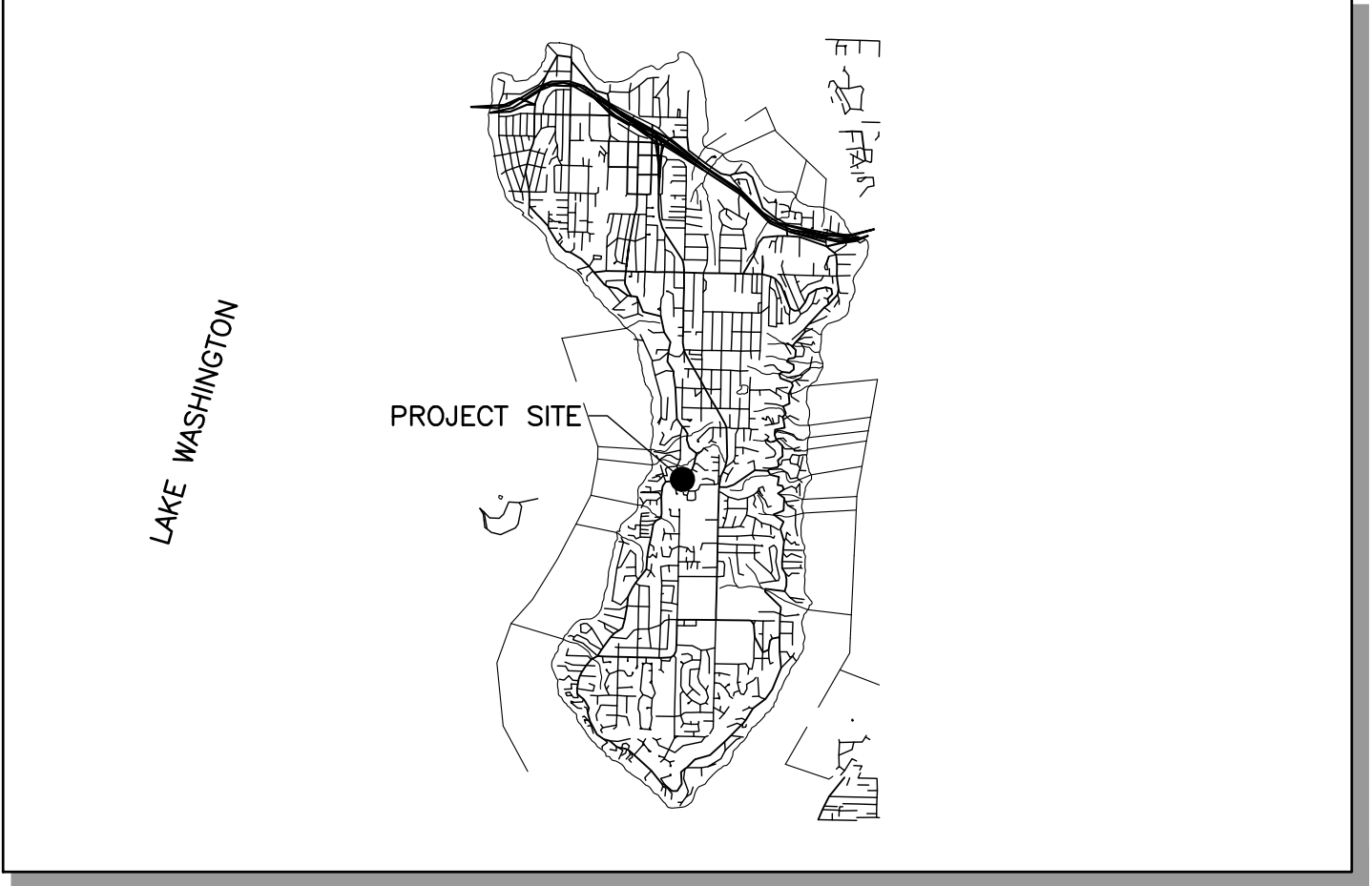
TO BE DETERMINED



11255 Kirkland Way, Suite 300
 Kirkland, WA 98033
 ☎ 425.827.2014 ☎ 425.827.5043
 Civil Structural Planning Services
 www.paceengr.com



SITE PLAN
 SCALE= 1"=40'



VICINITY MAP
 NTS

SITE INFORMATION

ADDRESS:
 5236 W MERCER WAY

TAX PARCEL NO.: 192405-9324

ZONING: R-15

SHEET INDEX

NO.	TITLE
C0.0	COVER SHEET
C0.1	EXISTING CONDITIONS
C0.2	TREE PRESERVATION PLAN
C1.0	TESC AND CONSTRUCTION MANAGEMENT PLAN
C1.1	TESC DETAILS
C2.0	ROAD, GRADING, AND STORM PLAN
C2.1	STORM DRAINAGE DETAILS
C2.2	STORM DRAINAGE DETAILS
C3.0	SITE, UTILITY, AND SEWER PLAN
C3.1	SANITARY SIDE SEWER DETAILS
C3.2	WATER DETAILS

PACE
 An Engineering Services Company
 11255 Kirkland Way, Suite 300
 Kirkland, WA 98033
 ☎ 425.827.2014 ☎ 425.827.5043
 Civil Structural Planning Services
 www.paceengr.com

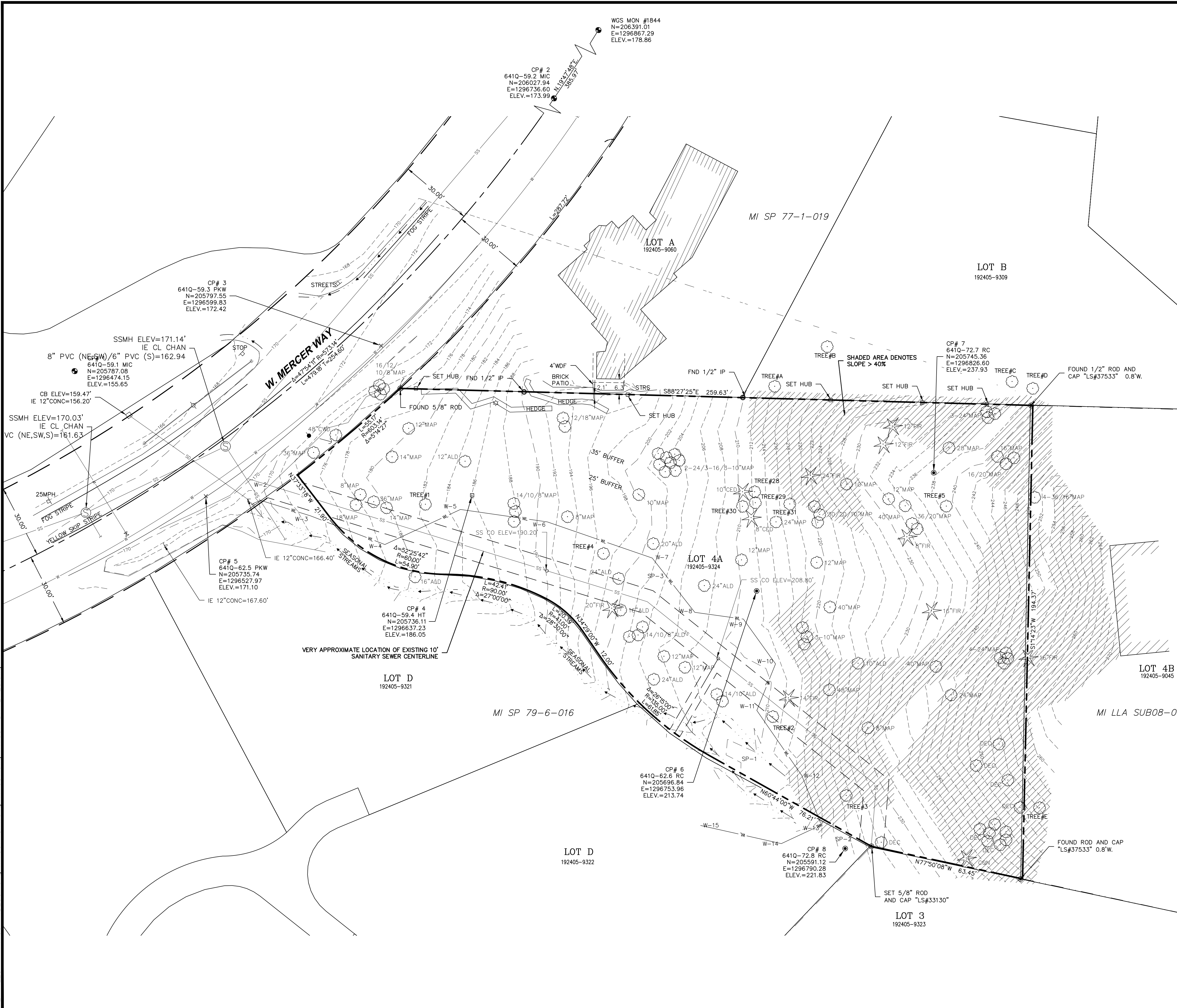
5236 W MERCER WAY
 SINGLE FAMILY RESIDENCE
 COVER SHEET

SCALE: AS SHOWN	DATE: 07/31/2018
DESIGNED BY: DW	CHECKED BY: JS
JOB NUMBER 17387	
SHEET: C0.0	
SHEET 1 OF 11	

CALL BEFORE YOU DIG 8-11
 UNDERGROUND SERVICE (USA)

FILE NAME: P:\P1717387_5236 WEST MERCER WAY_SFR\CAD\ENGINEERING\SHETS\P17387-CVR.DWG
 SAVE TIME: 7/31/2018 8:45:26 AM
 PLOT TIME: 7/31/2018 12:17 PM
 USER NAME: MICHAEL PARKER
 XREF FILES: X17387-TBLOCK.dwg X17387-SRV.dwg V17387.dwg X17387-SP.dwg X17387-HA.dwg

FILE NAME: P:\P1717387 WEST MERCER WAY SFR\CAD\ENGINEERING\ SHEETS\17387-EC.DWG
 SAVE TIME: 10/24/2017 8:23:17 PM
 PLOT TIME: 7/31/2018 12:17 PM
 USER NAME: MICHAEL PARKER
 XREF FILES: X17387-TBLOCK.dwg X17387-SRV.dwg X17387-DRIPLINES.dwg



RECORD LEGAL DESCRIPTION:
 LOT 4A OF THE REVISED MILLS LOT LINE REVISION.

REFERENCES:
 REVISED MILLS LOT LINE REVISION, MI LLA #SUB08-003. VOL. 265, PG. 020.
 AF#20090710900001

LEGEND

- ⊕ WATER VALVE
- ⊕ HYDRANT
- ⊕ SOIL TEST PIT
- ⊕ WETLAND FLAG
- ⊕ WATER METER
- ⊕ MANHOLES (SS/SD)
- ⊕ CB
- ⊕ POWER/UTILITY POLE
- ⊕ GUY ANCHOR
- ⊕ POWER TRANSFORMER
- ⊕ POWER/TELEPHONE VAULT
- ⊕ PM
- ⊕ POWER METER
- ⊕ TELEPHONE/TV RISER
- ⊕ GAS VALVE
- ⊕ JUNCTION BOX
- ⊕ GAS METER
- ⊕ STREET LIGHT
- ⊕ LUMINAIRE
- ⊕ SPOT ELEVATION
- ⊕ SIGN
- ⊕ MAILBOX
- ⊕ ROCKERY
- ⊕ CONIFEROUS TREE
- ⊕ DECIDUOUS TREE
- ⊕ CASED MONUMENT
- ⊕ MAGNETIC NAIL W/ WASHER
- ⊕ REBAR AND CAP
- ⊕ HUB AND TACK

--- CENTER LINES
 --- PROPERTY LINES
 --- RIGHT-OF-WAY LINES
 --- LOT LINES
 --- DITCH LINE
 --- FLOW LINE
 --- WATER LINE
 --- SS
 --- SD
 --- SANITARY SEWER LINE
 --- STORM DRAIN LINE
 --- GAS LINE
 --- UP
 --- UNDERGROUND POWER LINES
 --- UT
 --- UNDERGROUND TELEPHONE LINES
 --- LTV
 --- UNDERGROUND CABLE TV LINES
 --- UFO
 --- UNDERGROUND FIBER OPTIC LINES
 --- P
 --- OVERHEAD POWER LINES
 --- OHL
 --- OVERHEAD UTILITY LINES
 --- CHAIN LINK FENCE
 --- WIRE FENCE
 --- WOOD FENCE

▨ SHADED AREA DENOTES SLOPE > 40%

NOTES:
 HORIZONTAL DATUM: NAD 1983/91 BASED ON FOUND MONUMENTS IN WEST MERCER WAY.
 VERTICAL DATUM: NAVD 88 BASED ON FOUND MONUMENTS IN WEST MERCER WAY.
 SITE AREA: 37,350 SQUARE FEET, MORE OR LESS.
 ALL DISTANCES SHOWN ARE GROUND DISTANCES UNLESS OTHERWISE NOTED.
 THE LOCATION AND DESCRIPTION OF ALL SURVEY MARKERS SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS TAKEN IN APRIL, 2017, UNLESS OTHERWISE INDICATED.
 WORK PERFORMED IN CONJUNCTION WITH THIS SURVEY UTILIZED THE FOLLOWING EQUIPMENT AND PROCEDURES: (A) 1" TRIMBLE S6 SERIES ELECTRONIC TOTAL STATION, MAINTAINED TO THE MANUFACTURER'S SPECIFICATIONS PER W.A.C. 332-130-100. (B) FIELD TRAVERSE, EXCEEDING REQUIREMENTS SET FORTH IN W.A.C. 332-130-090.
 THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT AND DOES NOT PURPORT TO SHOW ALL EASEMENTS.
 THIS TOPOGRAPHIC SURVEY DRAWING ACCURATELY PRESENTS SURFACE FEATURES LOCATED DURING THE COURSE OF THIS SURVEY. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED SOLELY UPON INFORMATION PROVIDED BY OTHERS AND PACE ENGINEERS, INC. DOES NOT ACCEPT RESPONSIBILITY OR ASSUME LIABILITY FOR THEIR ACCURACY OR COMPLETENESS. CONTRACTOR/ENGINEERS SHALL VERIFY EXACT SIZE AND LOCATION PRIOR TO CONSTRUCTION.
 CALL FOR LOCATE: UTILITY LOCATION SERVICE: 811

SCALE: AS SHOWN DATE: 07/31/2018
 DESIGNED BY: DW CHECKED BY: JS
 JOB NUMBER: 17387
 SHEET: C0.1 OF 11
 SHEET 2 OF 11

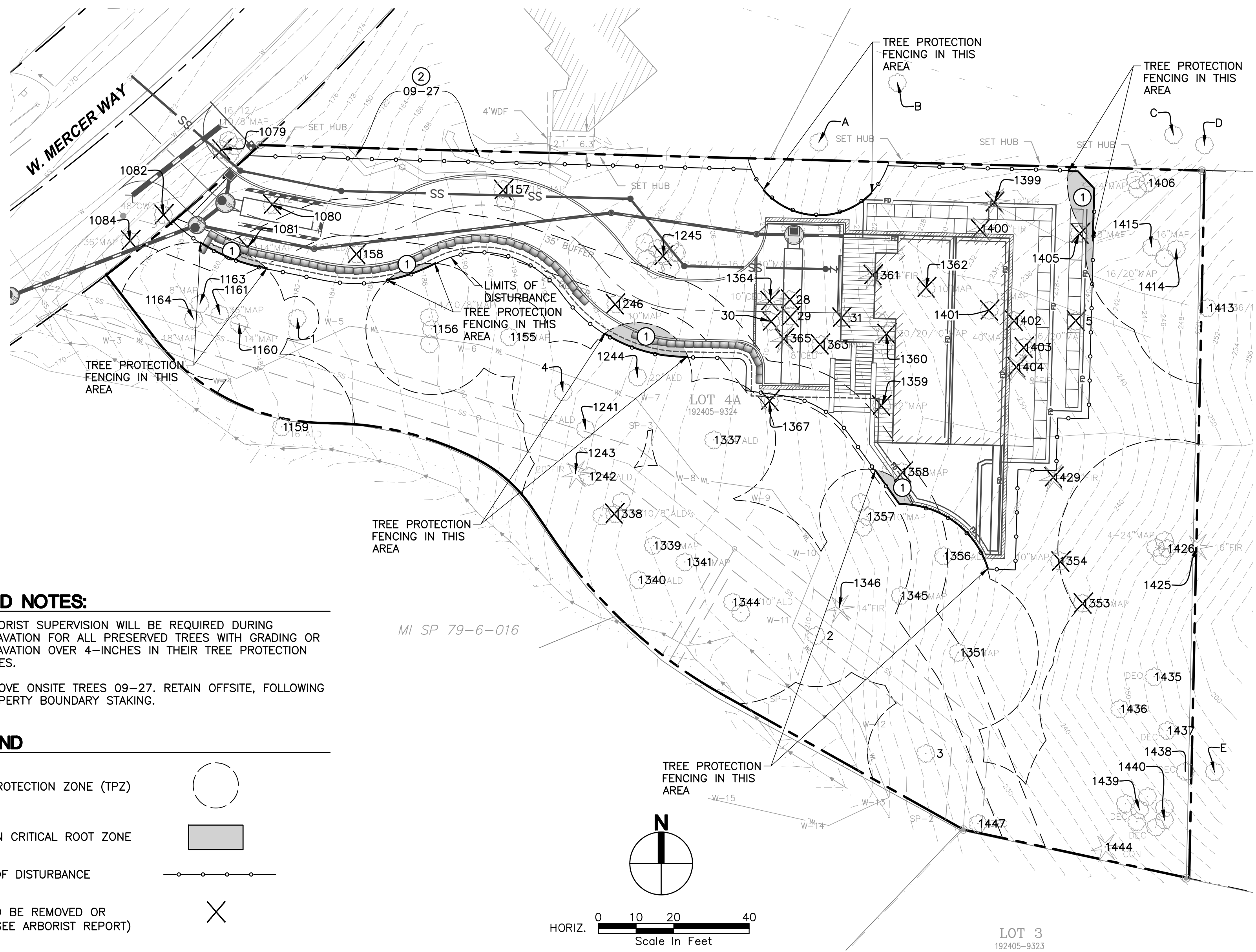
CALL BEFORE YOU DIG 8-11
 UNDERGROUND SERVICE (USA)

PACE
 A Engineering Services Company
 11255 Kirkland Way, Suite 300
 Kirkland, WA 98033
 Tel: 425.827.2014 Fax: 425.827.5043
 Civil/Site/Detail/Planning/Survey
 pace.gis.com

WILLIAM R. HARKINS
 STATE OF WASHINGTON
 1950
 REGISTERED
 PROFESSIONAL LAND SURVEYOR

5236 W MERCER WAY
 SINGLE FAMILY RESIDENCE
 EXISTING CONDITIONS

DATE: 07/31/2018
 CHECKED BY: JS
 SHEET: C0.1 OF 11

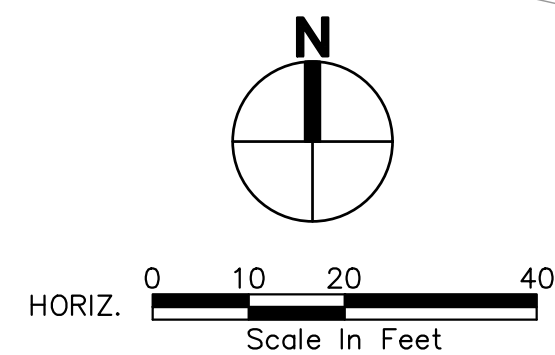


KEYED NOTES:

- ① ARBORIST SUPERVISION WILL BE REQUIRED DURING EXCAVATION FOR ALL PRESERVED TREES WITH GRADING OR EXCAVATION OVER 4-INCHES IN THEIR TREE PROTECTION ZONES.
- ② REMOVE ONSITE TREES 09-27. RETAIN OFFSITE, FOLLOWING PROPERTY BOUNDARY STAKING.

LEGEND

- TREE PROTECTION ZONE (TPZ)
- WORK IN CRITICAL ROOT ZONE
- LIMITS OF DISTURBANCE
- TREE TO BE REMOVED OR SNAG (SEE ARBORIST REPORT)

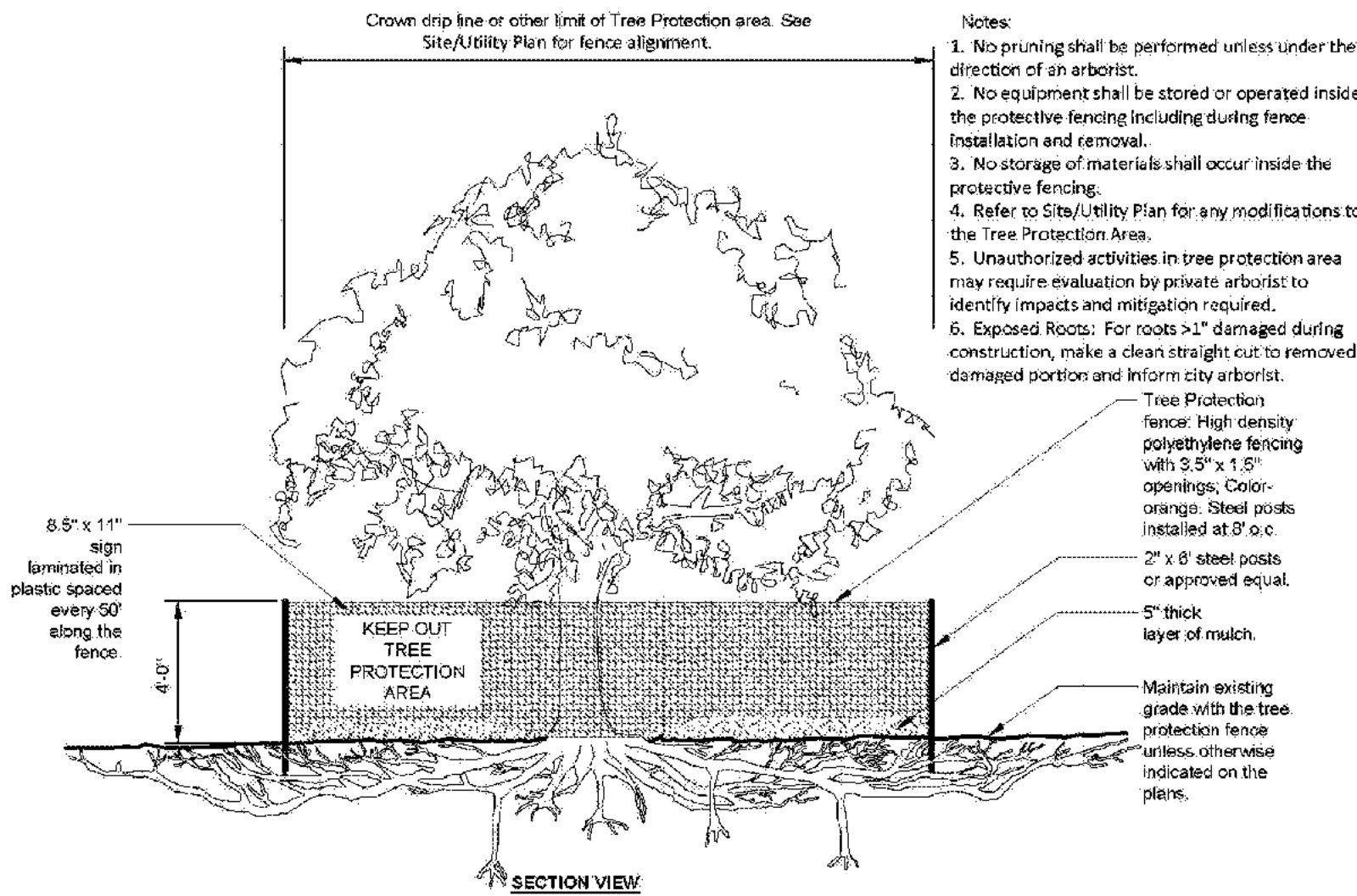


GENERAL NOTES:

1. SEE ARBORIST PLAN AND ARBORIST REPORT FOR ADDITIONAL INFORMATION.
2. RETAINED TREE #1439 (41.1" BIGLEAF MAPLE, NON-WETLANDS TREE) HAS A LARGE DEAD STEM THAT SHOULD BE REMOVED OR SHORTENED BEFORE COMMENCEMENT OF CONSTRUCTION ACTIVITIES. RETAINED TREE #1156 (23.1" BIGLEAF MAPLE, 35' WETLANDS BUFFER TREE) HAS A LARGE DEAD INTERIOR STEM THAT SHOULD BE REMOVED BEFORE BUILDING OCCUPANCY. ALL RETAINED TREES WITH IVY GROWING UP THE TRUNK SHOULD HAVE THE IVY CUT AT THE BASE OF THE TREE.
3. RETAINED TREES #1426 (48.9" BIGLEAF MAPLE, NON-WETLANDS TREE) AND #1415 (11.6" BIGLEAF MAPLE, NON-WETLANDS TREE) HAVE CONDITIONS OR DEFECTS WARRANTING FUTURE ARBORIST INSPECTIONS. THEY SHOULD BE INSPECTED AT 5-YEAR MINIMUM INTERVALS TO ENSURE THAT THE STRUCTURAL INTEGRITY OF THE TREES IS STILL INTACT.
4. SUBJECT PROPERTY TREES #1158, 1400, 1429, 1354, 1353, 1415, AND ROW TREE #1084 ARE EITHER IN POOR CONDITION WITH LIMITED LIFE SPANS OR ARE HAZARD TREES AND REMOVAL OR CONVERSION INTO WILDLIFE SNAGS IS RECOMMENDED.
5. CONSIDER CONVERTING REQUIRED TREE REMOVALS INTO WILDLIFE SNAGS INSTEAD OF COMPLETE REMOVAL OF ALL WOOD, WHERE POSSIBLE.
6. ARBORIST SUPERVISION BY A CERTIFIED ARBORIST IS REQUIRED FOR ALL EXCAVATION THAT TAKES PLACE WITHIN THE DRIP LINES OF TREE #S 1406, 1161, 1156, 1337, 1345
7. TREE #1244 AND 1357 (35' WETLANDS BUFFER TREES) ARE TOO CLOSE TO PROPOSED DEVELOPMENT (DRIVEWAY) BUT WE WILL ATTEMPT TO RETAIN THROUGH ARBORIST SUPERVISION/ ROOT PRUNING. IF THE ARBORIST DETERMINES IN THE FIELD DURING EXCAVATION ACTIVITIES THAT THE TREES MAY BE RETAINED, THEY WILL BE RETAINED AND PROTECTED.
8. TREES #06-27 ARE ALL PART OF A LEYLAND CYPRESS HEDGE THAT MEANDERS BETWEEN THE NORTH ADJACENT PROPERTY AND THE SUBJECT PROPERTY. THE TREES ARE LOCATED NEAR THE NORTHWEST CORNER OF THE SUBJECT PROPERTY, AND ARE NUMBERED FROM WEST TO EAST (TREE #6 WESTERNMOST TREE AND TREE #27 EASTERNMOST TREE).

PROBABLE LOCATIONS OF LEYLAND CYPRESS HEDGE TREES #6-27 ARE TREES #6-8, 15-19, AND 24-27 LOCATED ON THE SUBJECT PROPERTY, AND TREES #9-14 & 20-23 LOCATED ON THE NORTH ADJACENT PROPERTY. ALL ADJACENT PROPERTY CYPRESS TREES WILL BE RETAINED AND PROTECTED, AND ALL SUBJECT PROPERTY CYPRESS TREES WILL BE REMOVED.

IF THE CONSTRUCTION STAGING AREA IS LOCATED CLOSER THAN 6 FT. TO THE ADJACENT PROPERTY CYPRESS TREES, A 1/2" MINIMUM THICKNESS STEEL PLATE IS TO BE PLACED ON THE GROUND TO AVOID COMPACTION, AND THE TPZ PROTECTION FENCE MAY BE TEMPORARILY REDUCED TO LESS THAN 6 FT.



1 TREE PROTECTION DETAIL
NTS

Subject Property Significant Trees						
Tree #	Species	DBH (in.)	Drip line Radius (ft.)	TPZ Radius (ft.)	Retain Yes/ No	Arborist Supervision Required During Excavation?
(Non-Wetlands)						
1080	Bigleaf Maple	11.9	18	N/A	No	
1157	Bigleaf Maple	19.1	22	N/A	No	
1245	Bigleaf Maple	47.3	32	N/A	No	
1363	Bigleaf Maple	23.1	34	N/A	No	
1365	Western Red Cedar	6.6	8	N/A	No	
1364	Western Red Cedar	10.1	17	N/A	No	
1361	Douglas Fir	20.7	23	N/A	No	
1360	Bigleaf Maple	43.4	34	N/A	No	
1359	Bigleaf Maple	12.8	17	N/A	No	
1362	Bigleaf Maple	12.1	25	N/A	No	
1400	Western Hemlock	10.5	13	N/A	No	
1399	Western Hemlock	10	13	N/A	No	
1401	Bigleaf Maple	10.8	19	N/A	No	
1402	Bigleaf Maple	37.4	30	N/A	No	
1403	Bigleaf Maple	39.4	29	N/A	No	
1404	Western Hemlock	8	15	N/A	No	
1405	Bigleaf Maple	23.3	30	N/A	No	
1406	Bigleaf Maple	38.6	33	*33/17	Yes	Yes

*Note: Tree Protection Zone radius = *33 ft. (drip line radius) except where the east gabion wall excavation intersects with the dripline 17 ft. southwest of the tree.

1415	Bigleaf Maple	11.6	12	12	Yes	
1414	Bigleaf Maple	28.9	30	25	Yes	
5	Bigleaf Maple	7.6	17	N/A	No	
1429	Western Hemlock	16	16	N/A	No	
1354	Bigleaf Maple	47.3	35	N/A	No	
1353	Bigleaf Maple	34.7	10/20	N/A	No	
1426	Bigleaf Maple	48.9	32	32	Yes	
1425	Western Hemlock	14.6	20	20	Yes	
1435	Bigleaf Maple	26.2	28	28	Yes	
1437	Bigleaf Maple	34.7	29	29	Yes	
1438	Bigleaf Maple	28.5	31	31	Yes	
1436	Bigleaf Maple	10.2	22	22	Yes	
1439	Bigleaf Maple	41.1	32	32	Yes	
1440	Bigleaf Maple	41.5	32	32	Yes	
1444	Western Red Cedar	19.1	18	18	Yes	
06-27	Leyland Cypress	3.5-5	4-7	6	*Yes/ No	

*Note: Probable locations of Trees #6-27 are Trees #6-8, 15-19, and 24-27 located on the subject property, and Trees #9-14 & 20-23 located on the north adjacent property. All adjacent property Cypress trees will be retained and protected, and all subject property Cypress trees will be removed.

If the construction staging area is located closer than 6 ft. to the adjacent property Cypress trees, a 1/2" minimum thickness steel plate is to be placed on the ground to avoid compaction, and the TPZ protection fence may be temporarily reduced to less than 6 ft.

28	Western Red Cedar	5.2	12	N/A	No	
29	Western Red Cedar	2.8	7	N/A	No	
30	Western Red Cedar	1.9	7	N/A	No	
31	Western Red Cedar	2.1	6	N/A	No	

(35 Wetlands Buffer Trees)

1081	Bigleaf Maple	21.7	18	N/A	No	
1161	Bigleaf Maple	33.2	30	18	Yes	Yes
1160	Bigleaf Maple	13.7	26	14	Yes	
1163	Bigleaf Maple	6.4	14	14	Yes	
1164	Bigleaf Maple	20.9	26	21	Yes	
1158	Red Alder	20	21	N/A	No	
1	Bigleaf Maple	6.2	18	6	Yes	
1156	Bigleaf Maple	23.1	22	18	Yes	Yes
1155	Bigleaf Maple	7.6	21	8	Yes	
1246	Bigleaf Maple	9	20	N/A	No	
1244	Red Alder	19.7	16	N/A	No	*Yes

*Tree #1244 is too close to proposed development (driveway) but we will attempt to retain through arborist supervision/ root pruning. If the arborist determines in the field during excavation activities that the tree may be retained, it will be retained and protected.

1337	Red Alder	23	26	17	Yes	*Yes
------	-----------	----	----	----	-----	------

*Tree #1357 is too close to proposed development (driveway) but we will attempt to retain through arborist supervision/ root pruning. If the arborist determines in the field during excavation activities that the tree may be retained, it will be retained and protected.

1367	Bigleaf Maple	10.1	21	N/A	No	
1358	Bigleaf Maple	36.8	36	N/A	No	
1357	Bigleaf Maple	18.4	30	N/A	No	
1345	Bigleaf Maple	44.3	39	24	Yes	Yes
1346	Western Hemlock	18.1	18	18	Yes	
2	Bigleaf Maple	7.1	14	14	Yes	
1356	Pacific Dogwood	10.6	19	N/A	No	
1351	Bigleaf Maple	9.3	22	22	Yes	
3	Bigleaf Maple	6.7	16	16	Yes	
1447	Bigleaf Maple	10	17	17	Yes	

(Wetlands Trees)						
1241	Red Alder	20.5	17	17	Yes	
4	Bigleaf Maple	18.1	26	18	Yes	
1242	Red Alder	13.8	11	11	Yes	
1243	Western Hemlock	15.7	11	11	Yes	
1338	Red Alder	20.2	26	26	Yes	
1339	Bigleaf Maple	12	22	22	Yes	
1340	Red Alder	21.4	24	24	Yes	
1341	Bigleaf Maple	13	22	22	Yes	
1344	Red Alder	17.2	28	28	Yes	

Encroaching Adjacent Property Significant Trees

A	Western Red Cedar	26	20	20	Yes	
B	Western Hemlock	22	26	26	Yes	
C	Bigleaf Maple	16	24	24	Yes	
D	Bigleaf Maple	17	24	24	Yes	
E	Bigleaf Maple	40	30	30	Yes	
1413	Bigleaf Maple	42	34	34	Yes	
1159	Red Alder	20	20	20	Yes	

R.O.W. (Right-Of-Way) Trees

1079	Bigleaf Maple	20.1	36	N/A	No	
1082	Black Cottonwood	41.9	29	N/A	No	
1084	Bigleaf Maple	29.5	25	N/A	No	

CALL BEFORE YOU DIG 811
UNDERGROUND SERVICE (USA)

FILE NAME: P:\P171387-5236 WEST MERCER WAY SFR\CAD\ENGINEERING\171387-5236-TREE.DWG
 SAVE TIME: 7/31/2018 10:42:30 AM
 PLOT TIME: 7/31/2018 12:17 PM
 USER NAME: MICHAEL PARKER
 XREF FILES: X17387-TBLOCK.dwg; X17387-SRV.dwg; X17387-SP.dwg; X17387-EG.dwg; X17387-DRIPLINES.dwg; X17387-SD.dwg

SCALE: AS SHOWN
 DATE: 07/31/2018
 DESIGNED BY: DW
 CHECKED BY: JS
 JOB NUMBER: 17387
 SHEET: **C0.2**
 SHEET 3 OF 11

5236 W MERCER WAY
 SINGLE FAMILY RESIDENCE
 TREE PRESERVATION PLAN

LEGEND

- SILT FENCE
- CONSTRUCTION LIMITS AND TREE PROTECTION CHAIN LINK FENCE
- INTERCEPTOR SWALE
- TEMPORARY CONSTRUCTION ENTRANCE
- INLET PROTECTION
- TREE PROTECTION LIMITS
- DRIVEWAY BASE COURSE OR ATB PRELEVEL

GENERAL NOTES:

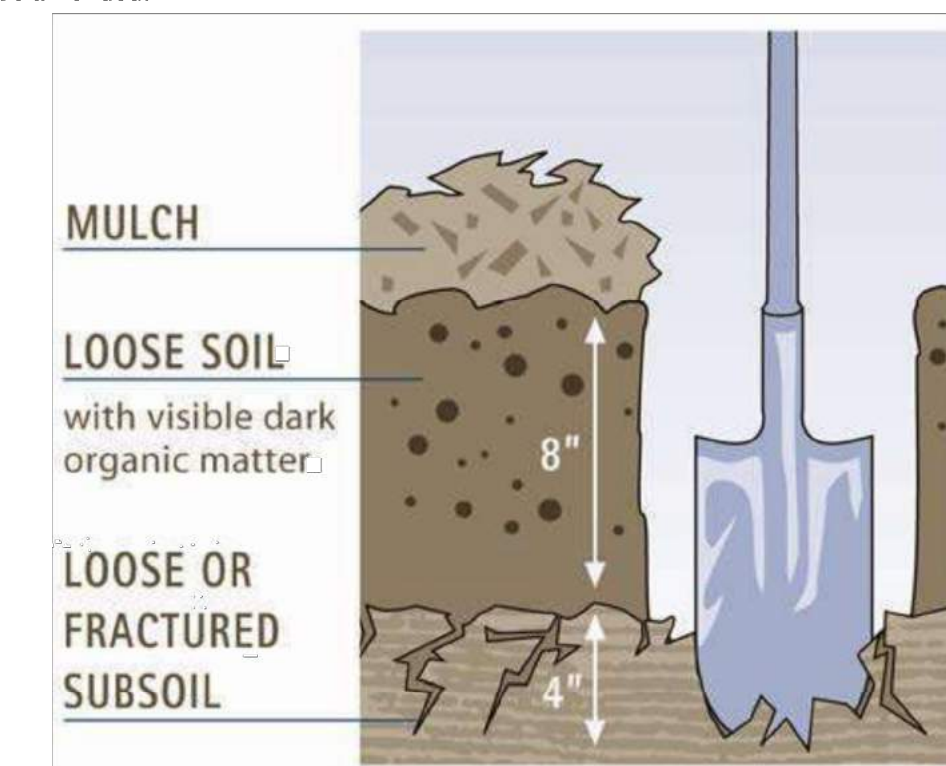
1. TREE REMOVAL TO BE COORDINATED WITH ARBORIST AND THE CITY OF MERCER ISLAND.

CONSTRUCTION SEQUENCE

1. INSTALL CONSTRUCTION LIMITS AND TREE PROTECTION CHAIN LINK FENCE, ALONG IDENTIFIED CONSTRUCTION LIMITS.
2. INSTALL PERMANENT DOWNSTREAM PIPED CONVEYANCE INCLUDING CB5 AND CB2. SEE SHEET C2.0.
3. INSTALL STORM DRAIN INLET PROTECTION.
4. GRADE AND INSTALL CONSTRUCTION ENTRANCE AND PERMANENT DRIVEWAY CULVERT.
5. GRADE AND INSTALL CONSTRUCTION STAGING / PARKING AREA.
6. GRADE AND DESIGNATE STOCKPILE AREAS.
7. INSTALL TEMPORARY INTERCEPTOR SWALE AND SEDIMENT CONTROL MEASURES.
8. BEGIN DRIVEWAY CLEARING AND GRADING.
9. INSTALL UTILITIES LOCATED IN DRIVEWAY CORRIDOR.
10. INSTALL DRIVEWAY, GRADE WALLS, DRIVEWAY ACCESS BASE COURSE OR ATB PRELEVEL.
11. INSTALL GABION BASKET WALLS.
12. INSTALL BUILDING FOUNDATION SHORING.
13. CONSTRUCT BUILDING AND REMAINING HARDSCAPE FEATURES.
14. CONNECT UTILITIES.
15. STABILIZE SITE.
16. REMOVE REMAINING TESC FEATURES.
17. CONDUCT ALL ACTIVITIES IN ACCORDANCE WITH ESC NOTES, THIS SHEET.

BMP T5.13 IMPLEMENTATION NOTES:

1. Leave undisturbed native vegetation and soil, and protect from compaction during construction.
2. Amend existing site topsoil or subsoil either at default "pre-approved" rates, or at custom calculated rates based on tests of the soil and amendment.
3. Stockpile existing topsoil during grading, and replace it prior to planting. Stockpiled topsoil must also be amended if needed to meet the organic matter or depth requirements, either at a default "pre-approved" rate or at a custom calculated rate.
4. Import topsoil mix of sufficient organic content and depth to meet the requirements.
5. More than one method may be used on different portions of the same site. Soil that already meets the depth and organic matter quality standards, and is not compacted, does not need to be amended.



1 **DETAIL**
NTS



HORIZ. 0 10 20 40
Scale In Feet

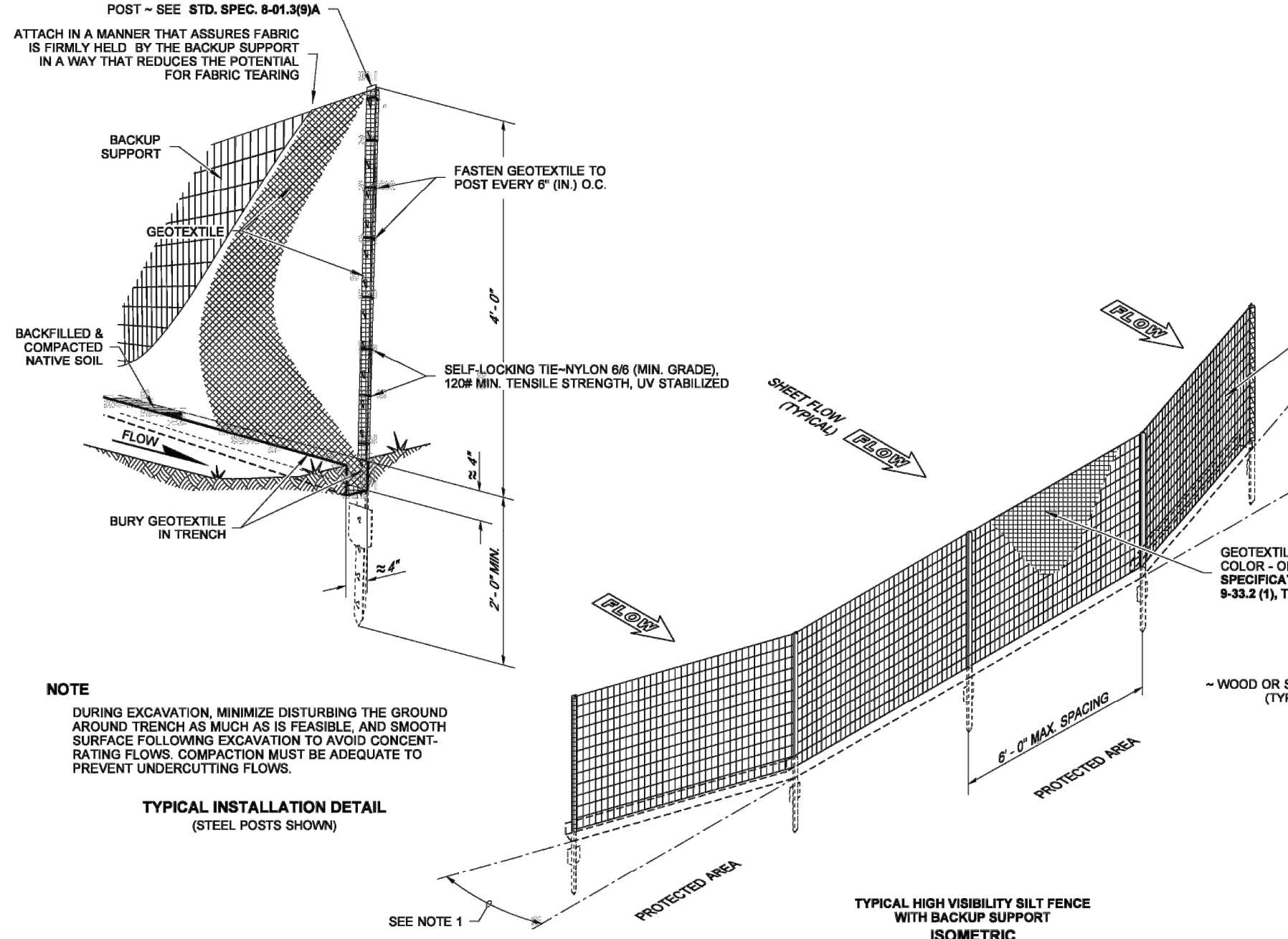
CALL BEFORE YOU DIG 8-11
UNDERGROUND SERVICE (USA)

EROSION AND SEDIMENTATION CONTROL NOTES:

1. APPROVAL OF THIS EROSION AND SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.)
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL THE SITE IS STABILIZED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY SURVEY TAPE OR FENCING, IF REQUIRED, PRIOR TO CONSTRUCTION (SWDM APPENDIX D). DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.
4. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS CONSTRUCTED WHEEL WASH SYSTEMS OR WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN AND TRACK OUT TO ROAD RIGHT OF WAY DOES NOT OCCUR FOR THE DURATION OF THE PROJECT.
5. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.
6. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL COVER MEASURES, RELOCATION OF DITCHES AND SILT FENCES, PERIMETER PROTECTION ETC.).
7. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE ESC FACILITIES.
8. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC COVER METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
9. ANY AREA NEEDING ESC MEASURES, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN SEVEN (7) DAYS.
10. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 24 HOURS FOLLOWING A STORM EVENT.
11. AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
12. COVER MEASURES WILL BE APPLIED IN CONFORMANCE WITH APPENDIX D OF THE SURFACE WATER DESIGN MANUAL.
13. PRIOR TO THE BEGINNING OF THE WET SEASON (OCT. 1), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. DISTURBED AREAS SHALL BE SEEDED WITHIN ONE WEEK OF THE BEGINNING OF THE WET SEASON. A SKETCH MAP OF THOSE AREAS TO BE SEEDED AND THOSE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE DDES INSPECTOR FOR REVIEW.

FILE NAME: P:\P1717387_5236 WEST MERCER WAY SFR\CAD\ENGINEERING\SHETS\P17387-TESC.DWG
SAVE TIME: 7/31/2018 9:11:15 AM
PLOT TIME: 7/31/2018 12:18 PM
USER NAME: MICHAEL PARKER
XREF FILES: X17387-TBLOCK.dwg X17387-SRV.dwg X17387-SP.dwg X17387-EG.dwg X17387-SD.dwg X17387-DRILINES.dwg

 11255 Kiriakou Way, Suite 300 Kirkland, WA 98033 P: 425.827.2014 F: 425.827.5043 Civil/Site/Civil/Planning/Gravel paceengr.com	 07/31/18
5236 W MERCER WAY SINGLE FAMILY RESIDENCE TESC AND CONSTRUCTION MANAGEMENT PLAN	
SCALE: AS SHOWN	DATE: 07/31/2018
DESIGNED BY: DW	CHECKED BY: JS
JOB NUMBER: 17387	
SHEET: C1.0	
SHEET 4 OF 11	



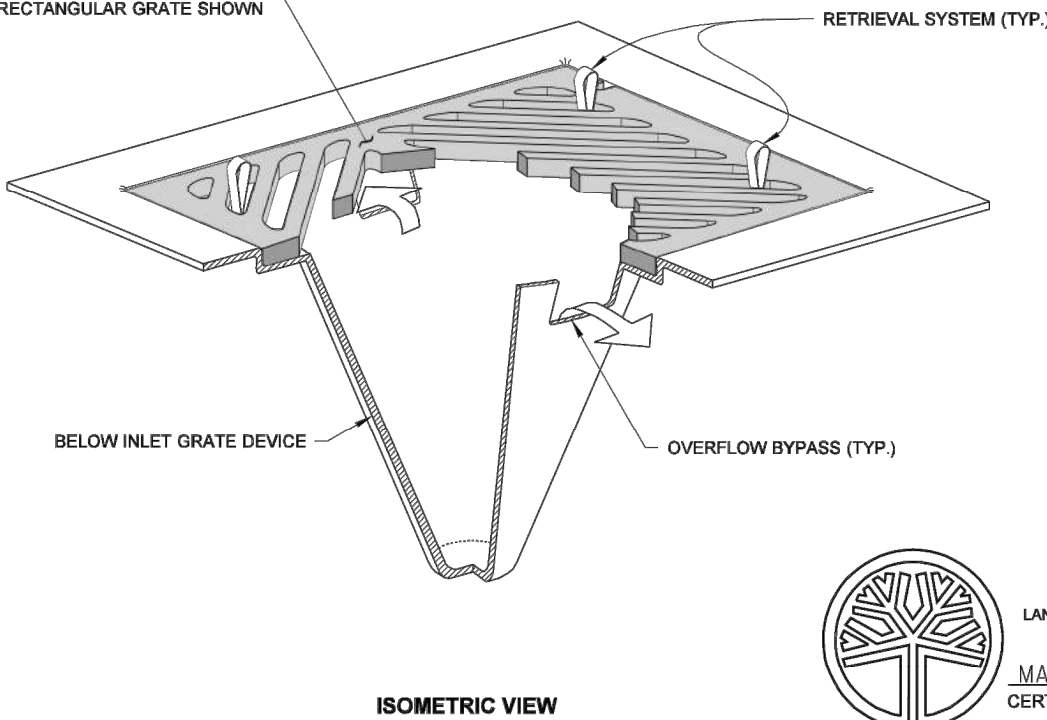
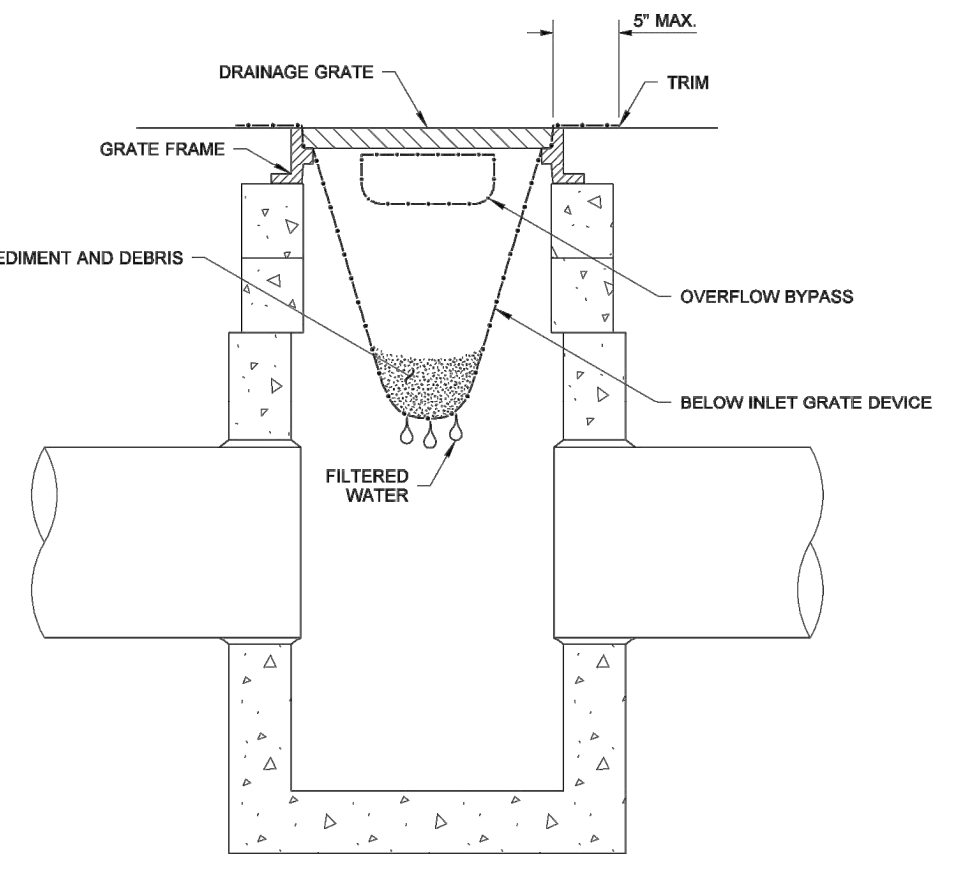
- NOTES**
1. Install the ends of the high visibility silt fence to point slightly upslope to prevent sediment from flowing around the ends of the fence.
 2. Perform maintenance in accordance with **Standard Specifications 8-01.3(9)A and 8-01.3(15)**.
 3. Splices shall never be placed in low spots or sump locations. If splices are located in low or sump areas, the fence may need to be reinstalled unless the Project Engineer approves the installation.
 4. Install silt fencing parallel to mapped contour lines.

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
SANDRA L. SALISBURY
CERTIFICATE NO. 000860

DATE: 3/22/13

HIGH VISIBILITY SILT FENCE WITH BACKUP SUPPORT
STANDARD PLAN I-30.16-00
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Pasco Bakotich III
Washington State Department of Transportation



- NOTES**
1. Size the Below Inlet Grate Device (BIGD) for the storm water structure it will service.
 2. The BIGD shall have a built-in high-flow relief system (overflow bypass).
 3. The retrieval system must allow removal of the BIGD without spilling the collected material.
 4. Perform maintenance in accordance with Standard Specification 8-01.3(15).

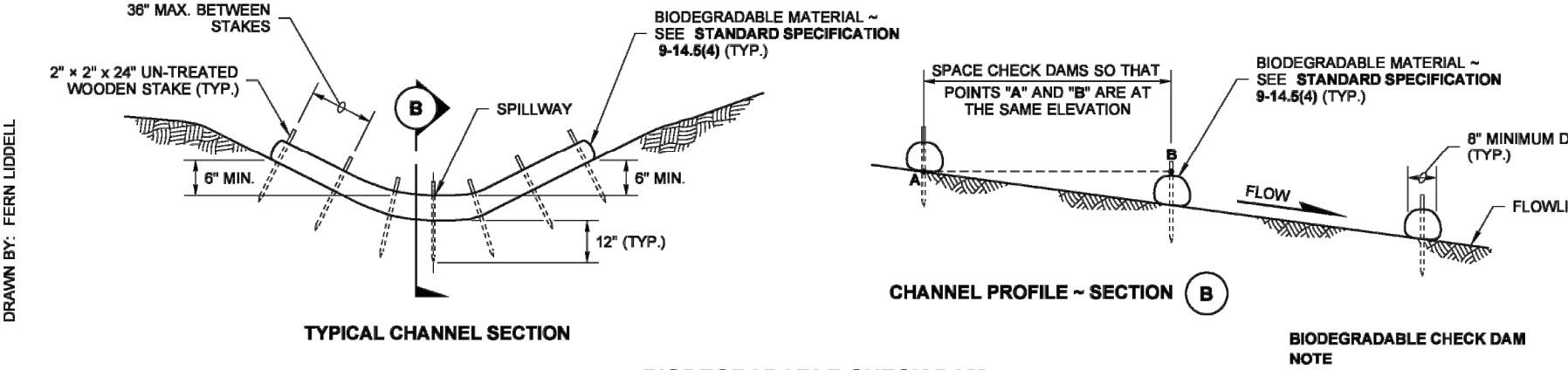
STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
MARK W. MAURER
CERTIFICATE NO. 000598

DATE: 09-20-07

STORM DRAIN INLET PROTECTION
STANDARD PLAN I-40.20-00
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Pasco Bakotich III
Washington State Department of Transportation

1 HIGH VISIBILITY SILT FENCE
NTS



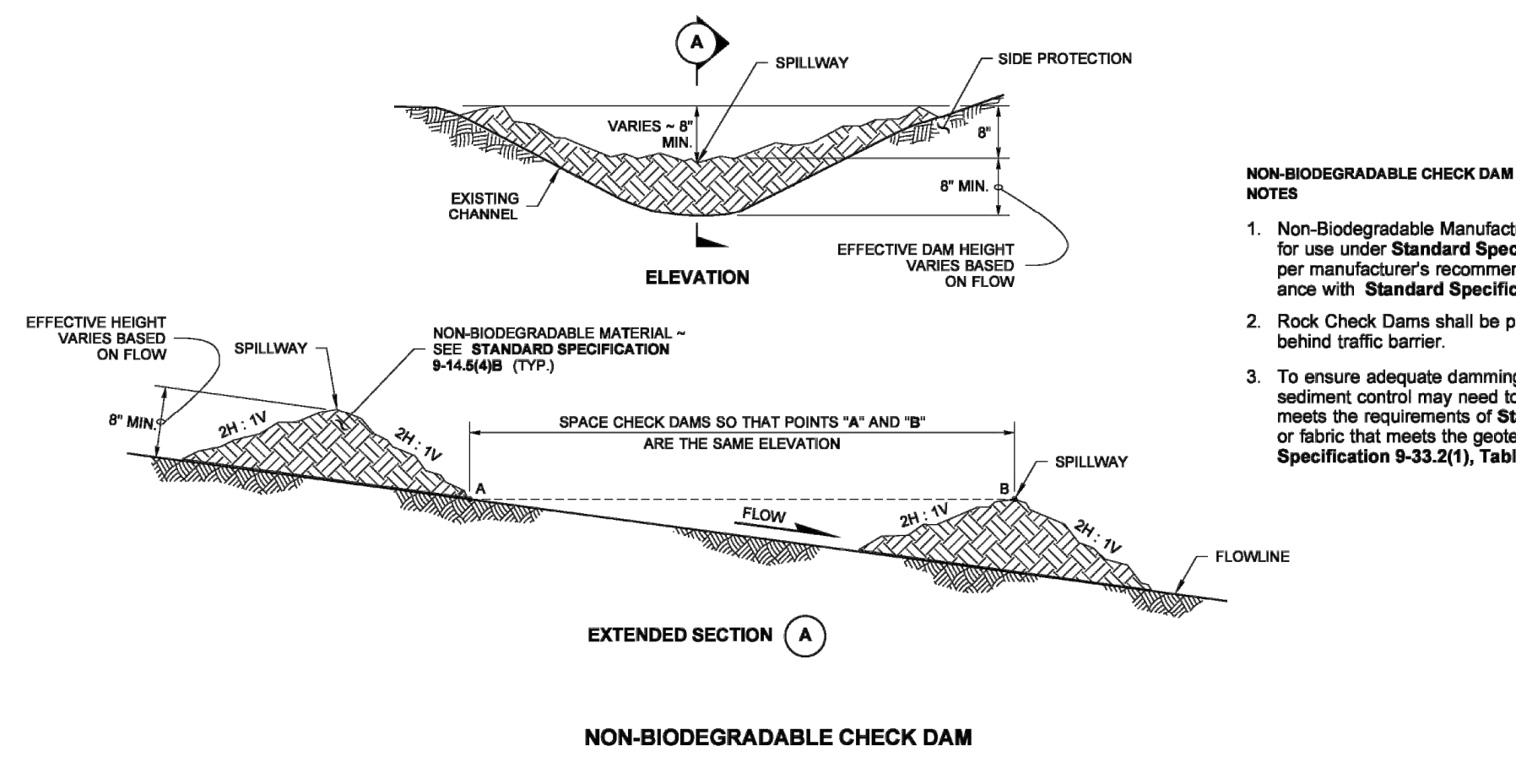
- GENERAL NOTES**
1. Check Dams shall meet the requirements of **Standard Specifications 8-01.3(6) and 9-14.5(4)**.
 2. In channels, install the sloped ends of the Check Dam a minimum of 8" higher than the spillway to ensure water flows over the dam and not around it.
 3. Perform maintenance in accordance with **Standard Specification 8-01.3(15)**.
 4. Remove Check Dams in accordance with **Standard Specification 8-01.3(16)**.

STATE OF WASHINGTON
REGISTERED
LANDSCAPE ARCHITECT
SANDRA L. SALISBURY
LICENSE NO. 180
DATE: June 8, 2013

DATE: 6/10/13

CHECK DAMS ON CHANNELS
STANDARD PLAN I-50.20-01
SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION
Pasco Bakotich III
Washington State Department of Transportation

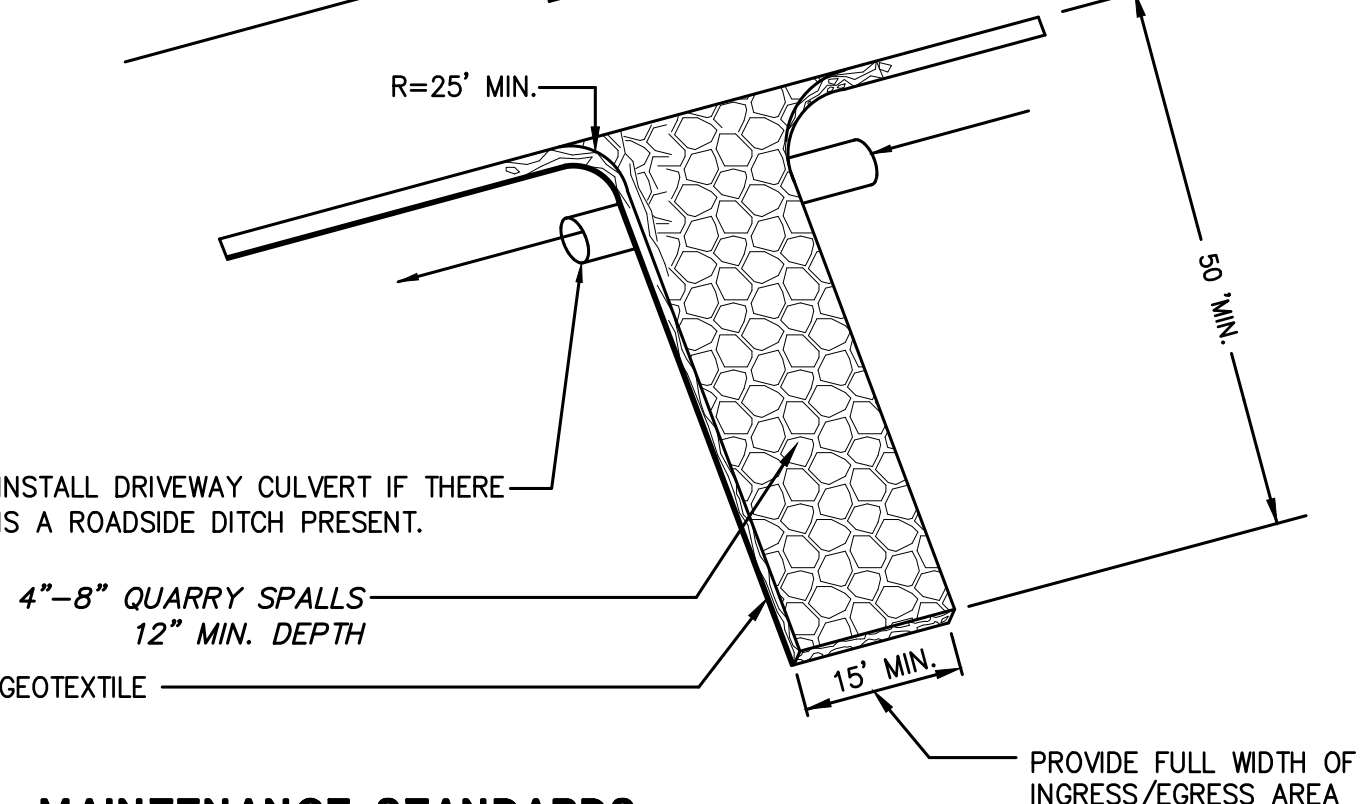


3 INTERCEPTOR SWALE W/ROCK CHECK DAMS
NTS

2 INLET PROTECTION
NTS

DRIVEWAYS SHALL BE PAVED TO THE EDGE OF R-O-W PRIOR TO INSTALLATION OF THE CONSTRUCTION ENTRANCE TO AVOID DAMAGING OF THE ROADWAY

IT IS RECOMMENDED THAT THE ENTRANCE BE CROWNED SO THAT RUNOFF DRAINS OFF THE PAD



- MAINTENANCE STANDARDS**
1. QUARRY SPALLS SHALL BE ADDED IF THE PAD IS NO LONGER IN ACCORDANCE WITH THE SPECIFICATIONS.
 2. IF THE ENTRANCE IS NOT PREVENTING SEDIMENT FROM BEING TRACKED ONTO PAVEMENT, THEN ALTERNATIVE MEASURES TO KEEP THE STREETS FREE OF SEDIMENT SHALL BE USED. THIS MAY INCLUDE STREET SWEEPING, AN INCREASE IN THE DIMENSIONS OF THE ENTRANCE, OR THE INSTALLATION OF A WHEEL WASH. IF WASHING IS USED, IT SHALL BE DONE ON THE AREA COVERED WITH CRUSHED ROCK, AND WASH WATER SHALL DRAIN TO A SEDIMENT TRAP OR POND.
 3. ANY SEDIMENT THAT IS TRACKED ONTO PAVEMENT SHALL BE REMOVED IMMEDIATELY BY SWEEPING. THE SEDIMENT COLLECTED BY SWEEPING SHALL BE REMOVED OR STABILIZED ON-SITE. THE PAVEMENT SHALL NOT BE CLEANED BY WASHING DOWN THE STREET, EXCEPT WHEN SWEEPING IS INEFFECTIVE AND THERE IS A THREAT TO PUBLIC SAFETY. IF IT IS NECESSARY TO WASH THE STREETS, THE CONSTRUCTION OF A SMALL SUMP SHALL BE CONSIDERED. THE SEDIMENT WOULD THEN BE WASHED INTO THE SUMP.
 4. ANY ROCK SPALLS THAT ARE LOOSEENED FROM THE PAD AND END UP ON THE ROADWAY SHALL BE REMOVED IMMEDIATELY.
 5. IF VEHICLES ARE ENTERING OR EXITING THE SITE AT POINTS OTHER THAN THE CONSTRUCTION ENTRANCE(S), FENCING SHALL BE INSTALLED TO CONTROL TRAFFIC.

4 STABILIZED CONSTRUCTION ENTRANCE
NTS

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PLOT TIME: 7/31/2018 12:18 PM
USER NAME: MICHAEL PARKER
XREF FILES: X17387-TBLOCK.dwg X17387-SRV.dwg X17387-SP.dwg X17387-FC.dwg X17387-SD.dwg X17387-DRILINES.dwg

PACE
Engineering Services, Inc. LLC
11255 Kirkland Way, Suite 300
Kirkland, WA 98033
Tel: 425.827.2014 Fax: 425.827.5043
Civil Structural Planning Survey
pacegrs.com

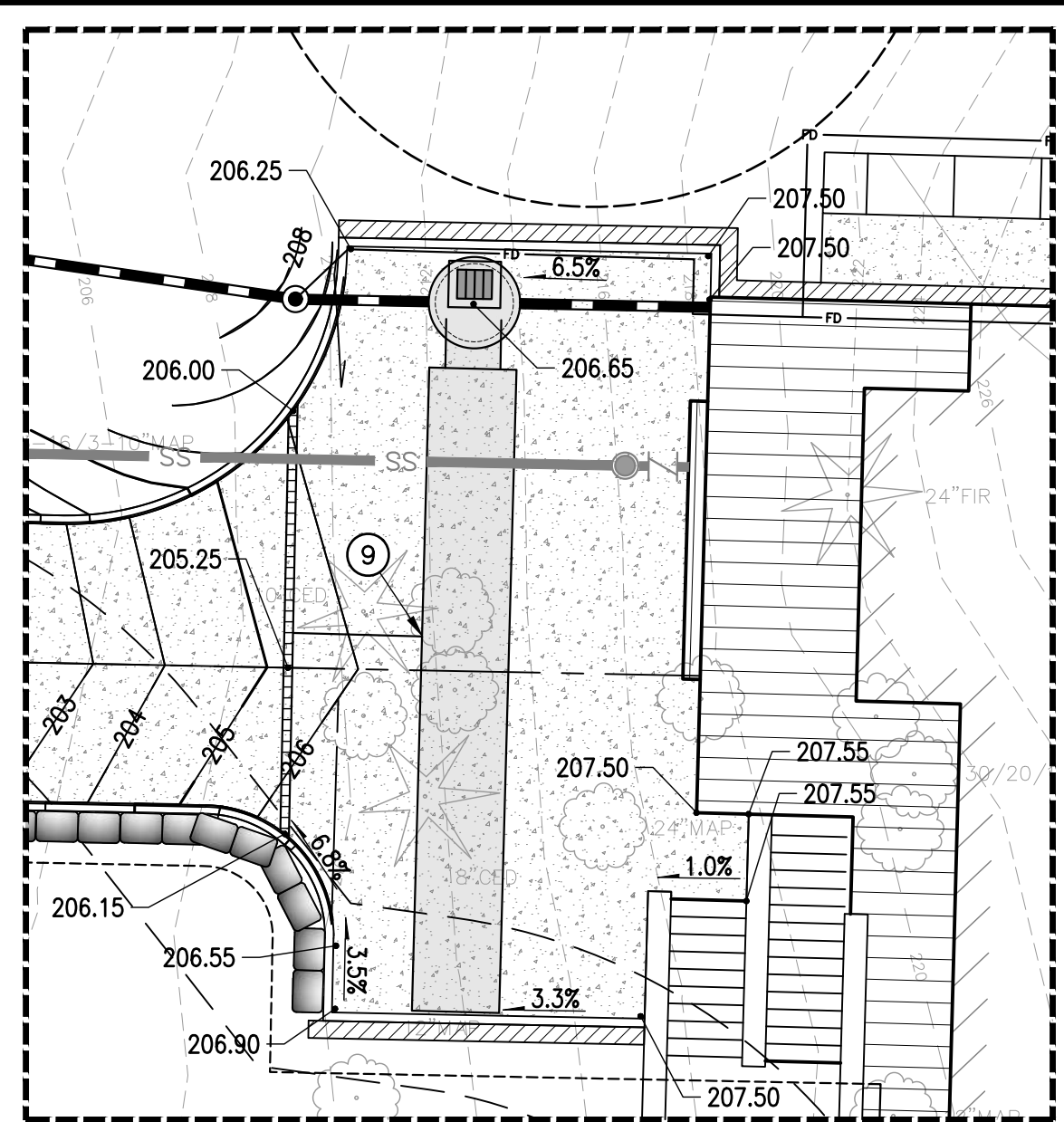
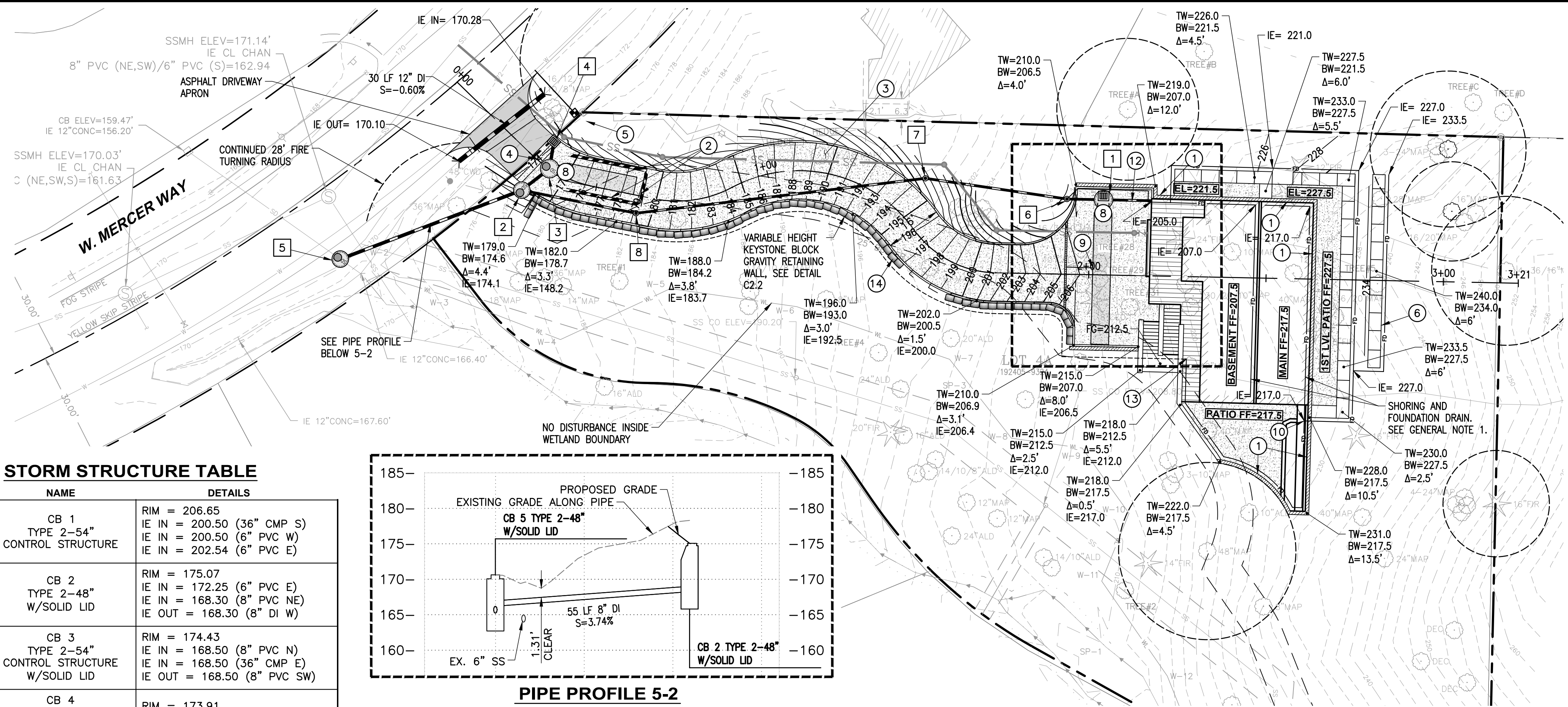
EDWARD WOODRUFF
STATE OF WASHINGTON
REGISTERED
PROFESSIONAL ENGINEER
54340
07/31/18

5236 W MERCER WAY
SINGLE FAMILY RESIDENCE
TESC DETAILS

SCALE: AS SHOWN	DATE: 07/31/2018
DESIGNED BY: DW	CHECKED BY: JS
JOB NUMBER 17387	
SHEET: C1.1	
SHEET 5 OF 11	

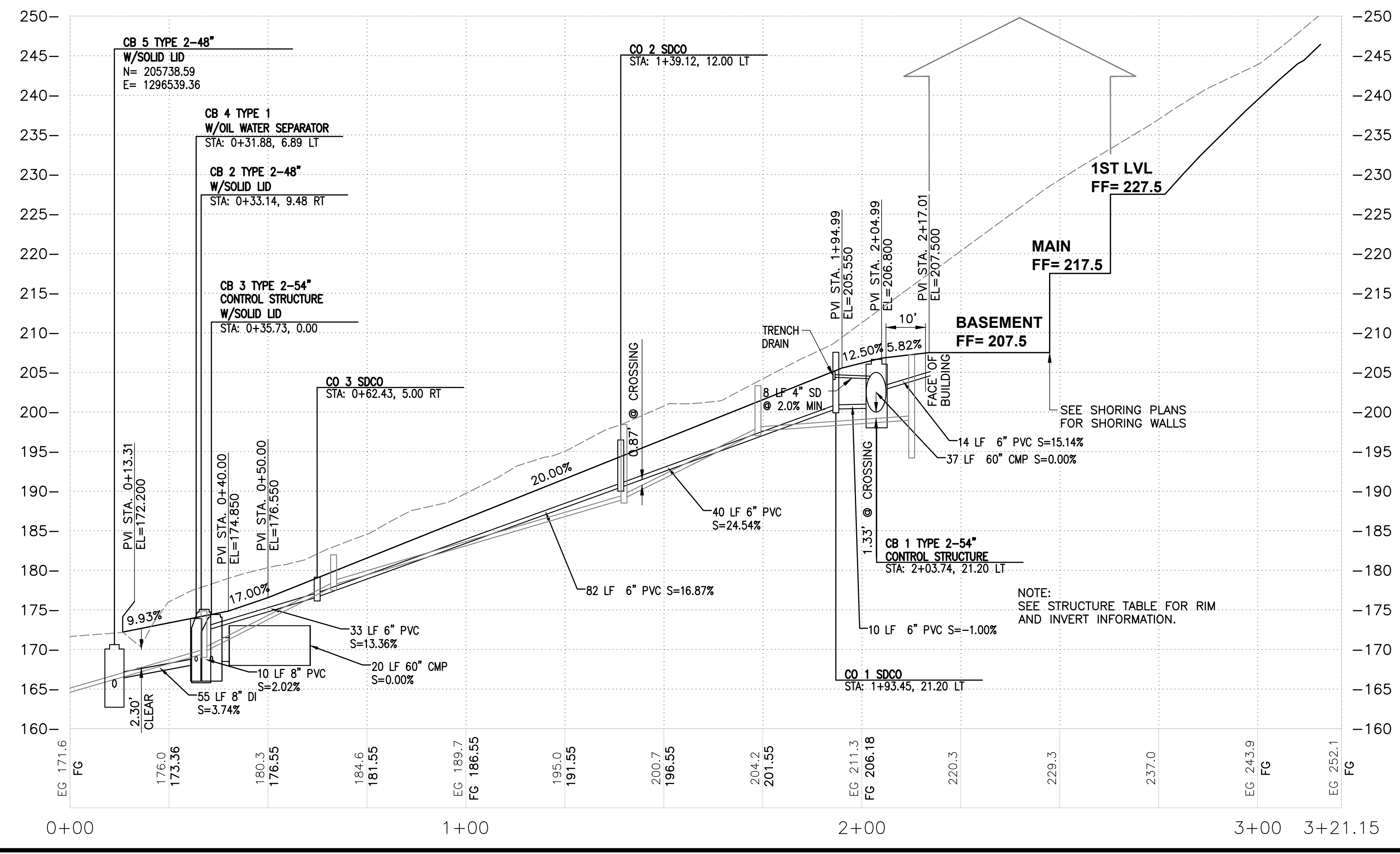
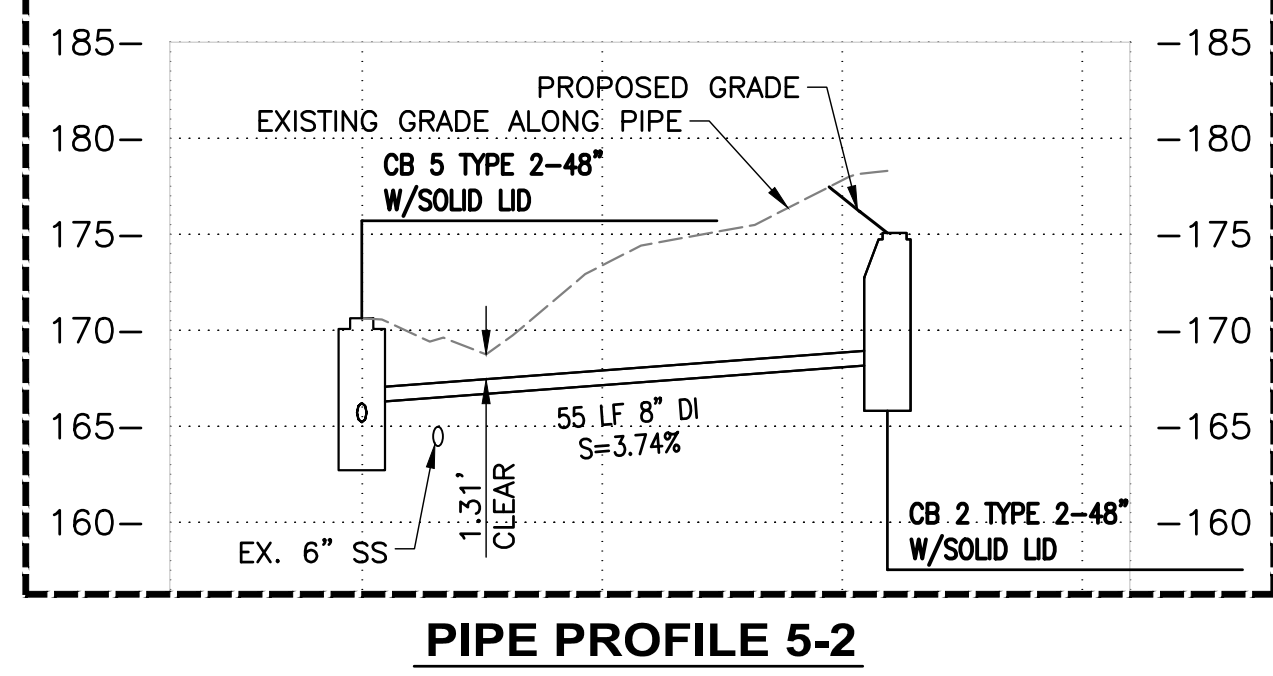
CALL BEFORE YOU DIG 8-11
UNDERGROUND SERVICE (USA)

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STORM STRUCTURE TABLE

NAME	DETAILS
1 CB 1 TYPE 2-54" CONTROL STRUCTURE	RIM = 206.65 IE IN = 200.50 (36" CMP S) IE IN = 200.50 (6" PVC W) IE IN = 202.54 (6" PVC E)
2 CB 2 TYPE 2-48" W/SOLID LID	RIM = 175.07 IE IN = 172.25 (6" PVC E) IE IN = 168.30 (8" PVC NE) IE OUT = 168.30 (8" DI W)
3 CB 3 TYPE 2-54" CONTROL STRUCTURE W/SOLID LID	RIM = 174.43 IE IN = 168.50 (8" PVC N) IE IN = 168.50 (36" CMP E) IE OUT = 168.50 (8" PVC SW)
4 CB 4 TYPE 1 W/OIL WATER SEPARATOR	RIM = 173.91 IE OUT = 168.50 (8" PVC S)
5 CB 5 TYPE 2-48" W/SOLID LID	RIM = 170.62 IE IN = 166.25 (8" DI E) IE IN = 165.21 (12" CONC SE) IE OUT = 165.21 (12" CONC NW)
6 CO 1 SDCO	RIM = 207.55 IE OUT = 200.40 (6" PVC E) IE OUT = 200.40 (6" PVC W)
7 CO 2 SDCO	RIM = 196.47 IE IN = 190.50 (6" PVC E) IE OUT = 190.50 (6" PVC W)
8 CO 3 SDCO	RIM = 179.14 IE IN = 176.64 (6" PVC E) IE OUT = 176.64 (6" PVC W)



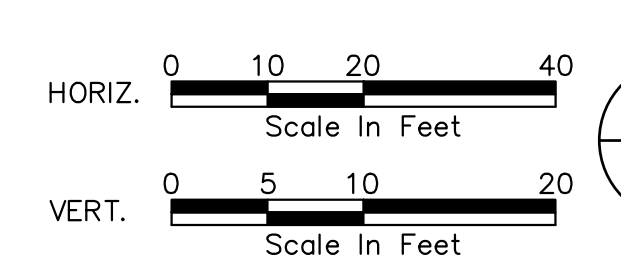
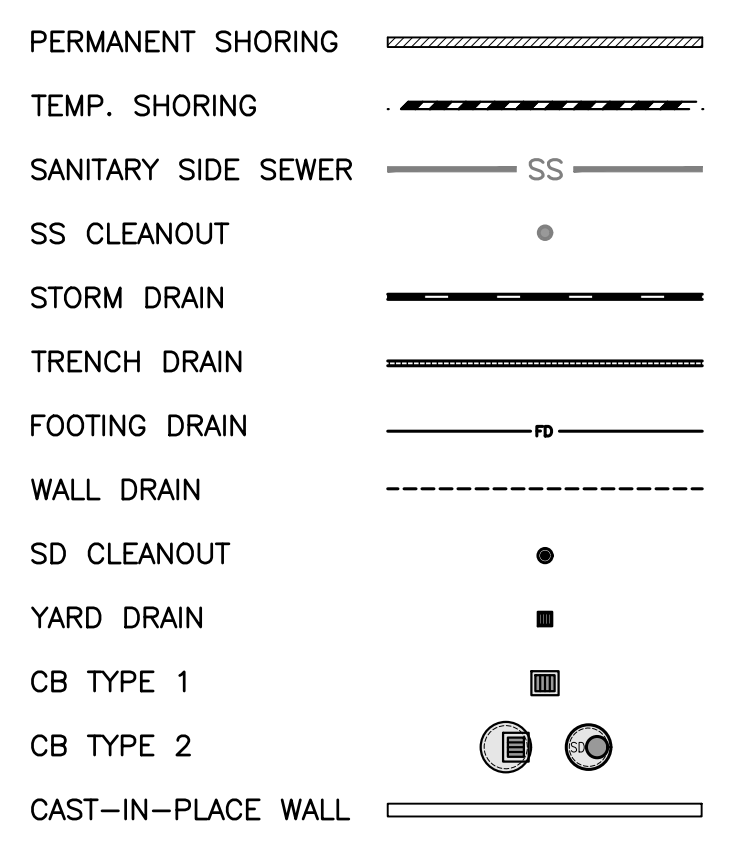
KEY NOTES

- PERMANENT SHORING WALLS
- TEMPORARY SHORING WALLS
- CONCRETE DRIVEWAY WITH VERTICAL CURB AND GUTTER.
- VALLEY GUTTER AT EDGE OF ASPHALT. SEE DETAIL 3, SHEET C2.1.
- 1" WATER METER, MINIMUM.
- GABION BASKET WALL (TYP), SEE DETAIL 4, SHEET C2.1.
- NOT USED.
- CMP DETENTION PIPE, SEE DETAILS ON SHEET C2.1.
- CONNECT TRENCH DRAIN TO DETENTION SYSTEM VIA 4" SD GRAVITY DRAIN @ 2.0% MINIMUM SLOPE. TRENCH DRAIN FINISHED GRADE ELEVATION MUST NOT BE LESS THAN 205.25.
- CONNECT GABION BASKET WALL FOOTING DRAINS TO SOLDIER PILE SHORING FOOTING DRAIN.
- CONNECT WALL DRAIN TO CB.
- 6" ROOF DRAIN OUTLET, S=2.00% MIN.
- CONNECT FOOTING DRAIN TO WALL DRAIN.
- FINAL WALL DESIGN SHALL BE COMPLETED BY THE BLOCK WALL MANUFACTURER, BASED ON GEOTECHNICAL PARAMETERS PRESENTED IN THE GEOTECHNICAL REPORT, SECTION 6.6.

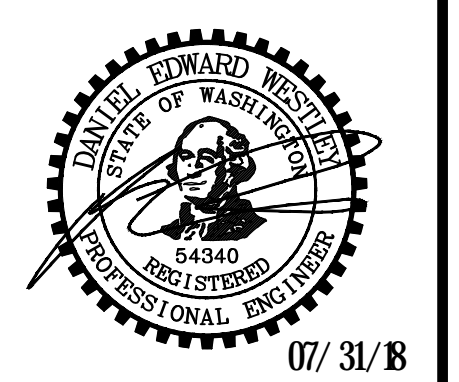
GENERAL NOTES:

- REFERENCE SHORING AND STRUCTURAL DETAILS FOR SHORING AND FOUNDATION DRAIN OUTLET DETAILS.
- BASEMENT FLOOR SHORING-FOUNDATION DRAIN OUTLET SD @ 2.0% MIN.
- YARD DRAIN OUTLET SD @ 2.0% MIN
- STORM CONVEYANCE PIPE SHALL BE SDR 35 PVC.
- GABION BASKET WALL CONSTRUCTED PRIOR TO PERMANENT SHORING CONSTRUCTION. SEE SHORING AND STRUCTURAL PLANS.
- BMP T5.13 POST CONSTRUCTION SOIL QUALITY AND DEPTH OR BETTER FOR ALL DISTURBED LANDSCAPE AREAS.

LEGEND

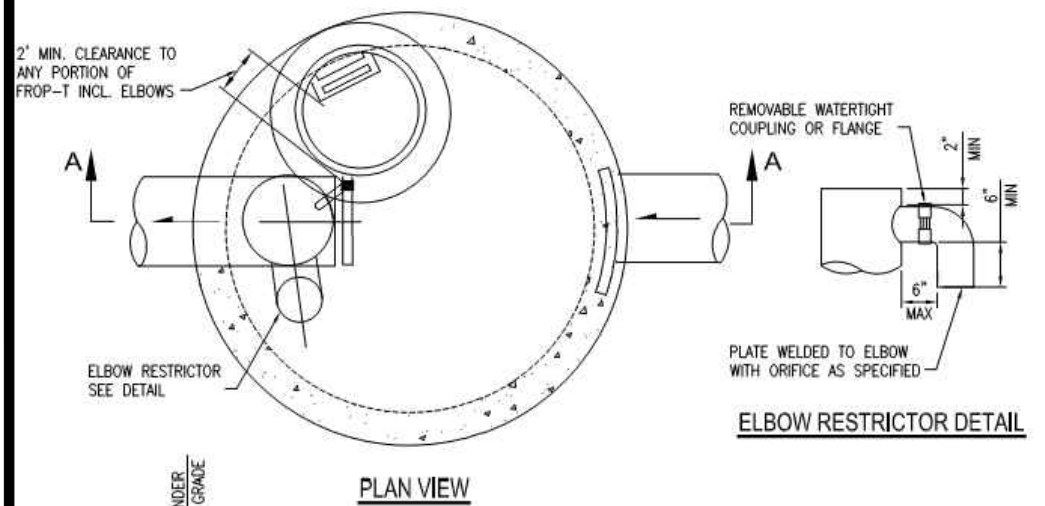


CALL BEFORE YOU DIG 8-11
 UNDERGROUND SERVICE (USA)



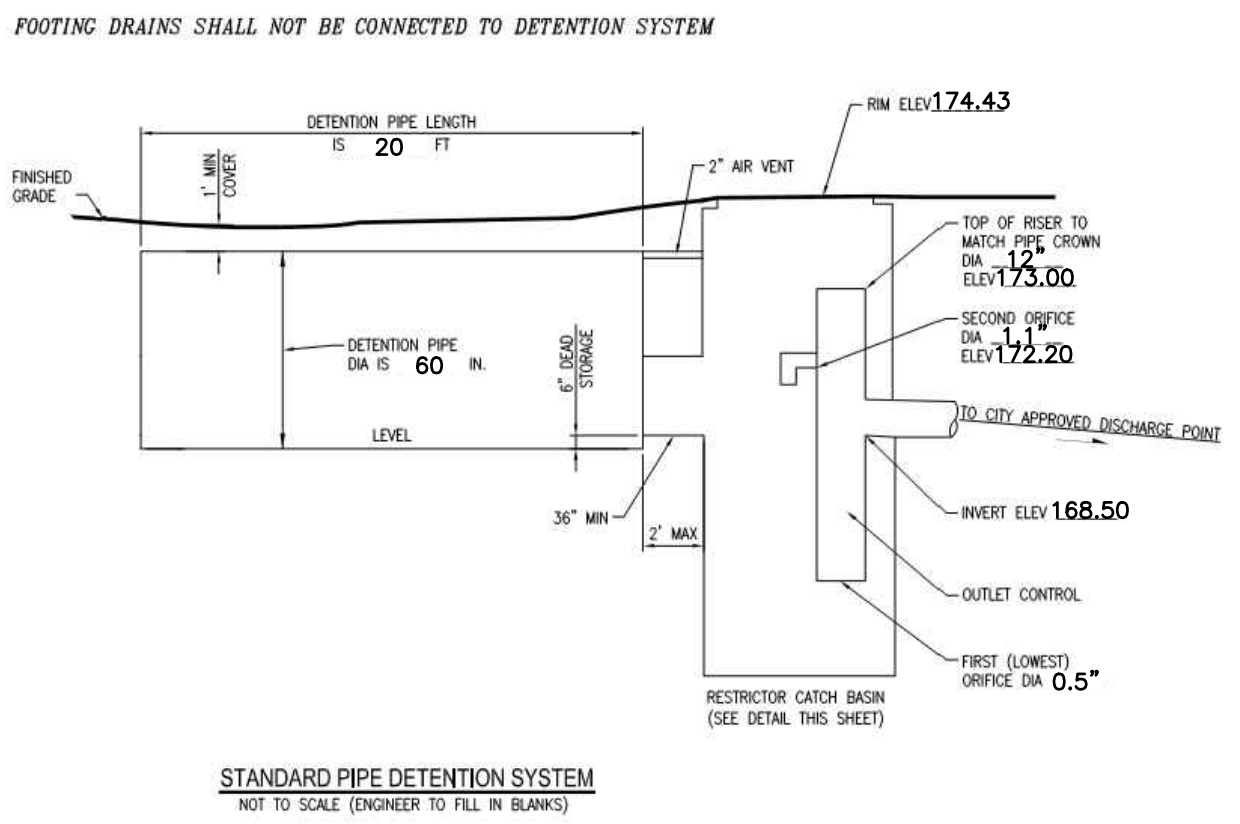
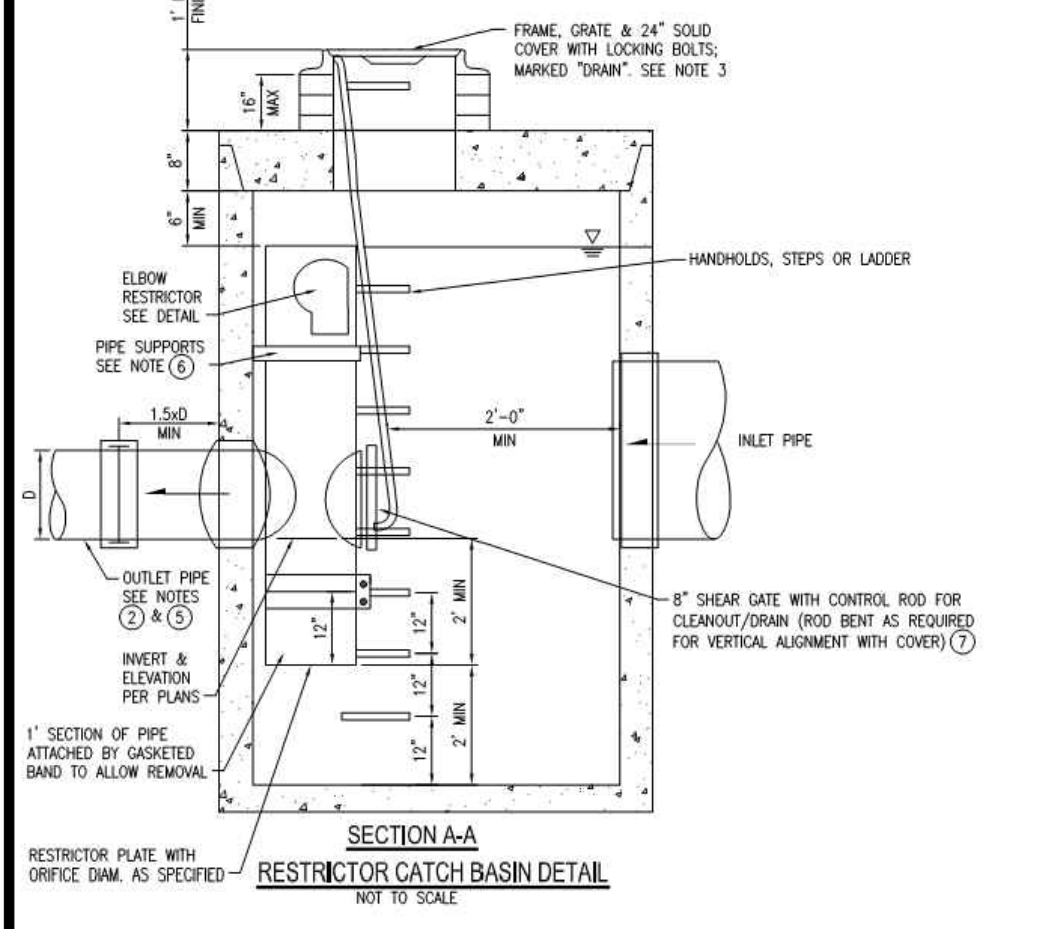
5236 W MERCER WAY
 SINGLE FAMILY RESIDENCE
 ROAD, GRADING, AND STORM PLAN

SCALE: AS SHOWN	DATE: 07/31/2018
DESIGNED BY: DW	CHECKED BY: JS
JOB NUMBER 17387	
SHEET: C2.0	
SHEET 6 OF 11	

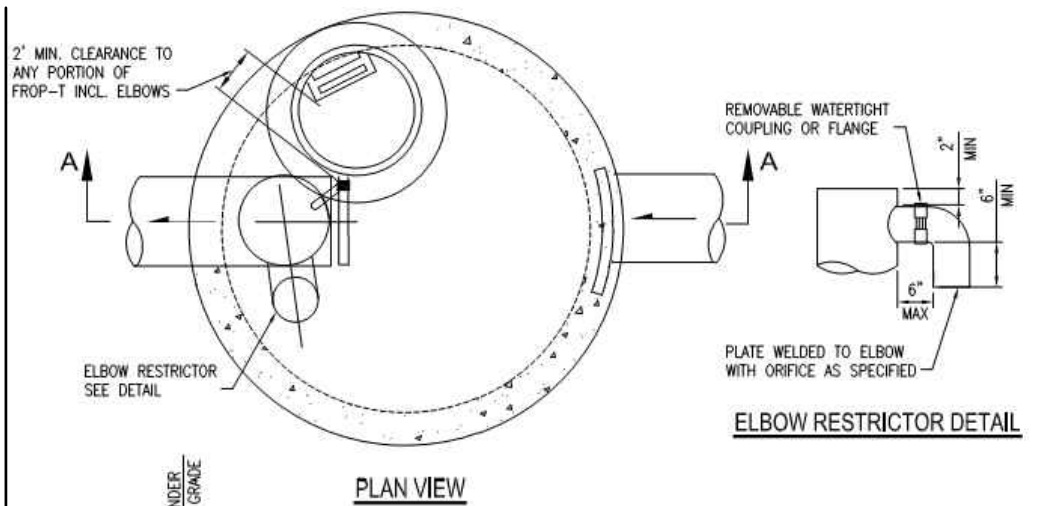


Attachment 1
CITY OF MERCER ISLAND
STANDARD DETENTION SYSTEM WORKSHEET
(FOR IMPERVIOUS AREA OF 5,000 SF OR LESS)

OWNER: _____ ADDRESS: 5236 W. MERCER WAY PREPARED BY: D. WESTLEY
 MERCER ISLAND, WA PHONE: 425.827.2014
 PERMIT #: _____ DATE: 10/6/2017
 IMPERVIOUS SURFACE AREA (SF): 3,000 DETENTION PIPE DIA (INCH): 60 DETENTION PIPE LENGTH (FT): 20 ORIFICE #1 DIA 0.5 INCH, ELEV 166.50
 PIPE MATERIAL: CORRUGATED ALUMINUM PIPE ORIFICE #2 DIA 2.2 INCH, ELEV 172.20

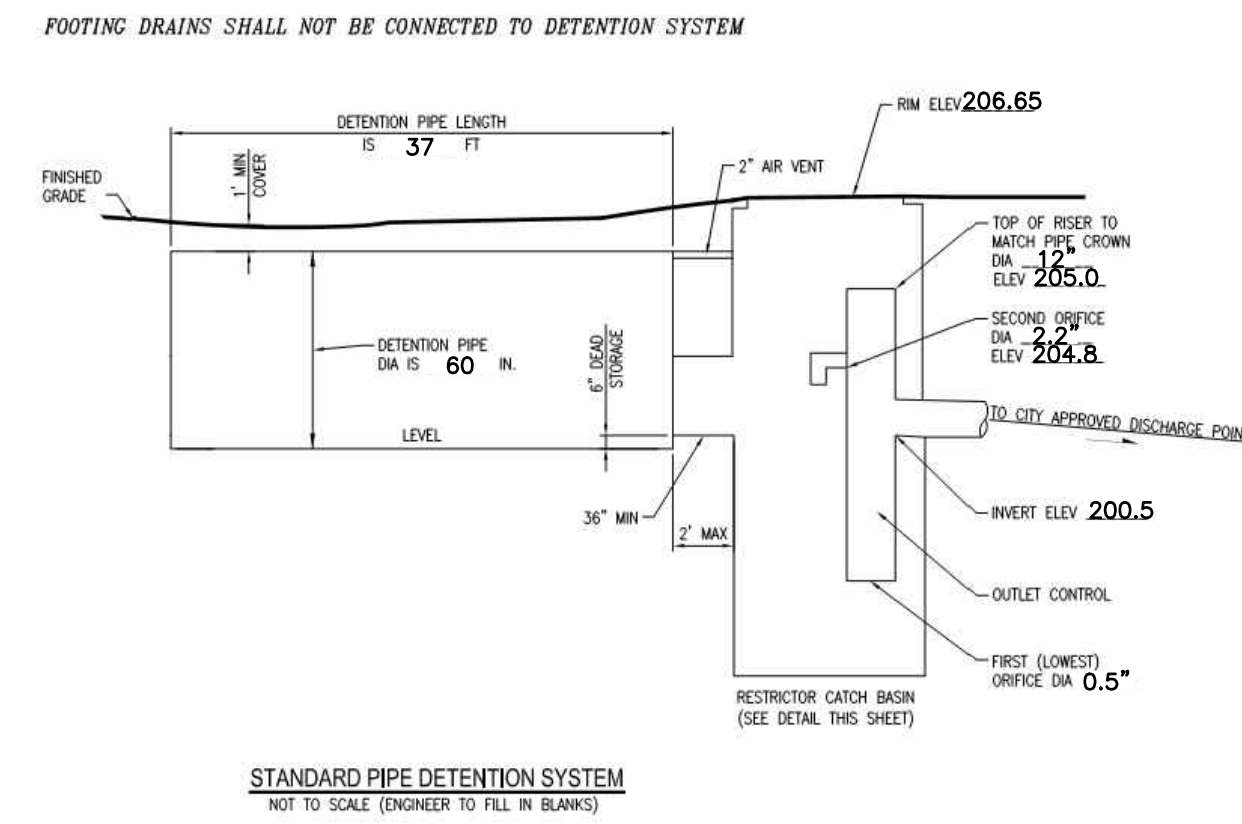
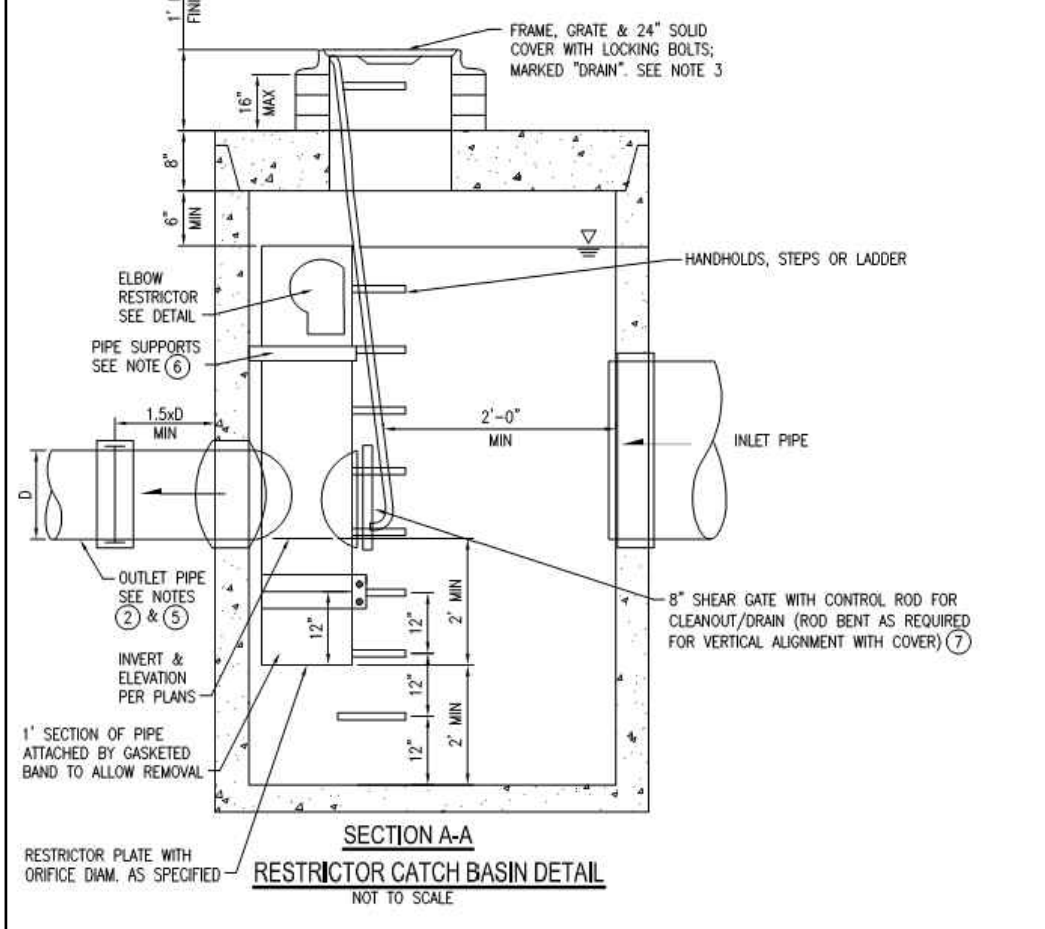


RESTRICTOR CATCH BASIN NOTES:
 1. USE A MINIMUM OF A 72 IN. DIAM. TYPE 2 CATCH BASIN WHEN CONNECTING PIPE MATERIAL IS CONCRETE OR LOPE. A 54 IN. DIAM. TYPE 2 CATCH BASIN MAY BE USED FOR OTHER CIRCULAR SINGLE WALL PIPE (SUCH AS CORRUGATED ALUMINUM PIPE).
 2. OUTLET PIPE, MIN. 6 INCH.
 3. METAL PARTS: CORROSION RESISTANT, NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1.
 4. FRAME AND LADDER OR STEPS OFFSET SO:
 A. CLEANOUT GATE IS VISIBLE FROM TOP.
 B. CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE.
 C. FRAME IS CLEAR OF CURB.
 5. IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4 IN.
 6. PROVIDE AT LEAST ONE 3 X 0.090 GAUGE SUPPORT BRACKET ANCHORED TO CONCRETE WALL WITH 5/8 IN. STAINLESS STEEL EXPANSION BOLTS OR EMBEDDED SUPPORTS 2 IN. INTO CATCH BASIN WALL (MAXIMUM 3'-0" VERTICAL SPACING).
 7. THE SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 28M AND ASTM B 275, DESIGNATION 2023A; OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B. THE LEFT HANDLE SHALL BE MADE OF A SIMILAR METAL TO THE GATE (TO PREVENT GALVANIC CORROSION). IT MAY BE OF SOLID ROD OR HOLLOW TUBING, WITH ADJUSTABLE HOOK AS REQUIRED. A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE. INSTALL THE GATE SO THAT THE LEVEL-LINE MARK IS LEVEL WHEN THE GATE IS CLOSED. THE MOUNTING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT. ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.



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 PIPE MATERIAL: CORRUGATED ALUMINUM PIPE ORIFICE #2 DIA 2.2 INCH, ELEV 204.8



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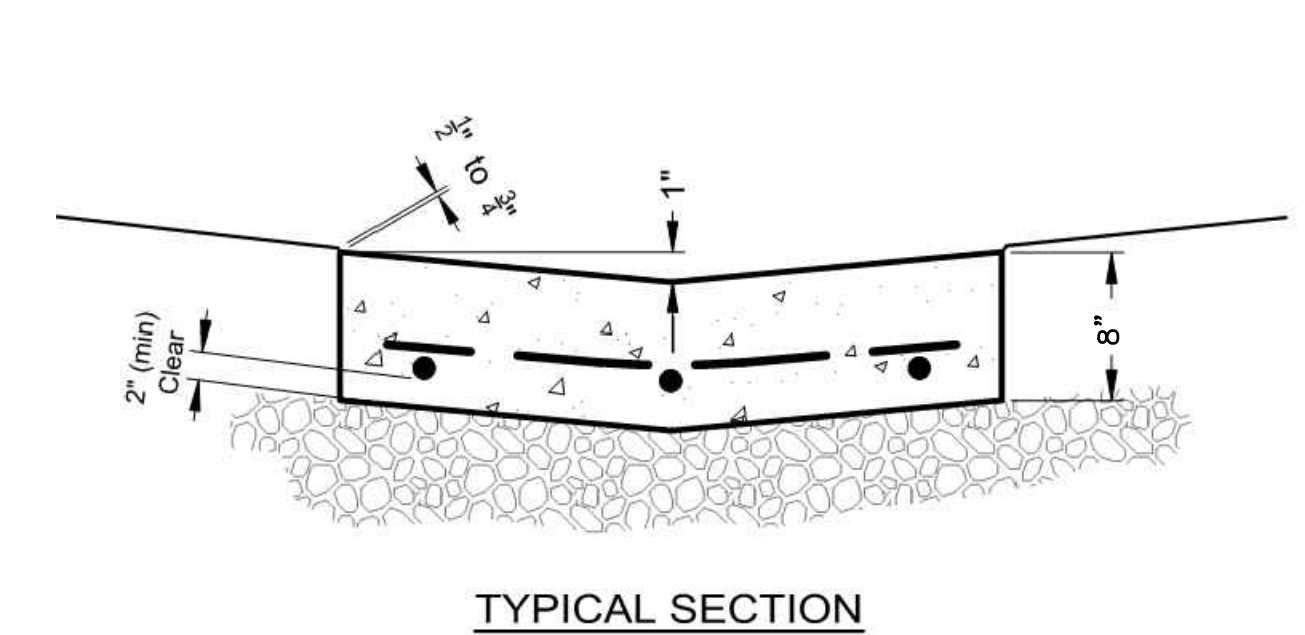
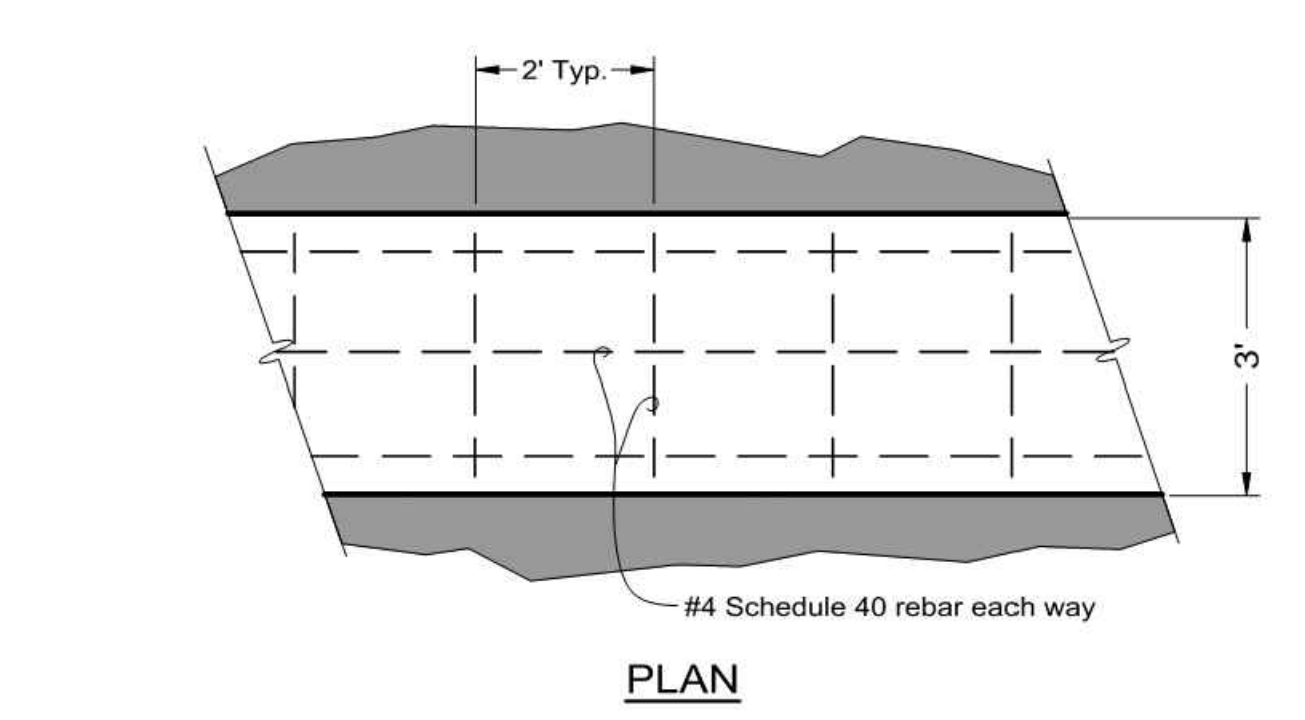
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- STANDARD DETENTION SYSTEM NOTES:**
- CALL DEVELOPMENT SERVICES (206-275-7600) 24 HOURS IN ADVANCE FOR A DETENTION SYSTEM INSPECTION BEFORE BACKFILLING AND FOR FINAL INSPECTIONS.
 - RESPONSIBILITY FOR OPERATION AND MAINTENANCE OF DRAINAGE SYSTEMS ON PRIVATE PROPERTY IS RESPONSIBILITY OF THE PROPERTY OWNER. MATERIAL ACCUMULATED IN THE STORAGE PIPE MUST BE REMOVED FROM CATCH BASINS TO ALLOW PROPER OPERATION. THE OUTLET CONTROL ORIFICE MUST BE KEPT OPEN AT ALL TIMES.
 - PIPE MATERIAL, JOINT, AND PROTECTIVE TREATMENT SHALL BE IN ACCORDANCE WITH SECTION 7.04 AND 8.05 OF THE WSDOT STANDARD SPECIFICATION FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, LATEST VERSION. SUCH MATERIALS INCLUDE THE FOLLOWING: LINED CORRUGATED POLYETHYLENE PIPE (LOPE), GALVANIZED TYPE 2 CORRUGATED STEEL PIPE AND PIPE ARCH (MEETS ABOVE DESIGNATIONS N174 AND N160), CORRUGATED OR SPIRAL REINFORCED ALUMINUM PIPE, OR REINFORCED CONCRETE PIPE. CORRUGATED STEEL PIPE IS NOT ALLOWED.

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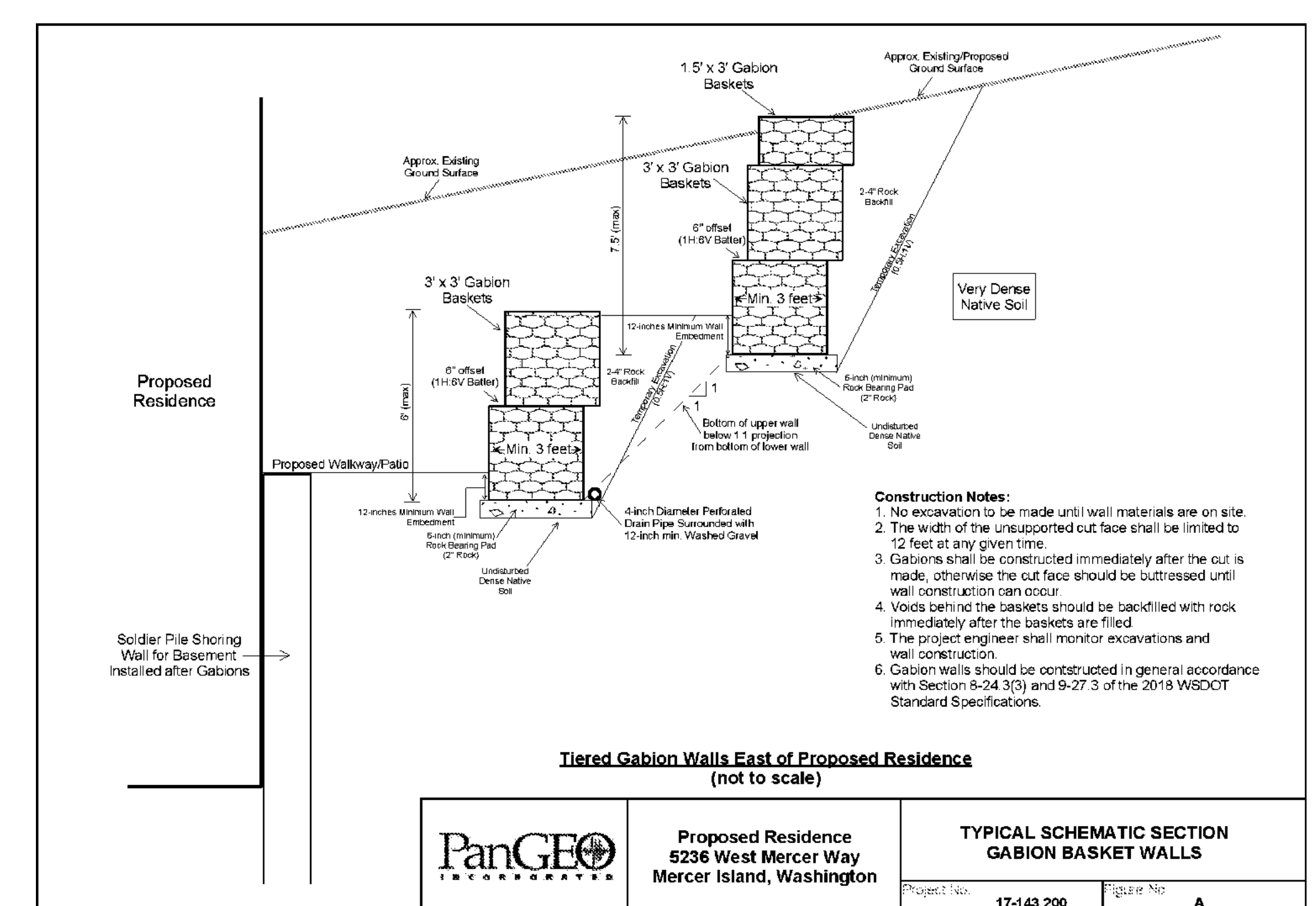
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1 DETENTION SYSTEM DETAIL (WEST)
 NTS



3 VALLEY GUTTER CURB
 NTS

2 DETENTION SYSTEM DETAIL (EAST)
 NTS

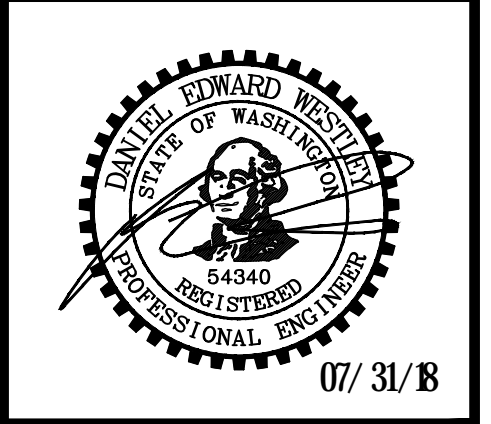


4 GABION BASKET WALLS
 NTS

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 PLOT TIME: 7/31/2018 12:19 PM
 USER NAME: MICHAEL PARKER
 XREF FILES: XT17387-TBLOCK.dwg

NO.	REVISION	DATE

PACE
 A/E/C Engineering Services, Inc.
 11255 Kirtland Way, Suite 300
 Kirkland, WA 98033
 P: 425.827.2014 F: 425.827.5043
 Civil/Site Detail/Plumbing/Structural
 pacegrs.com



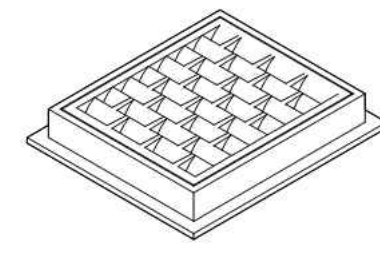
5236 W MERCER WAY
SINGLE FAMILY RESIDENCE

STORM DRAINAGE DETAILS

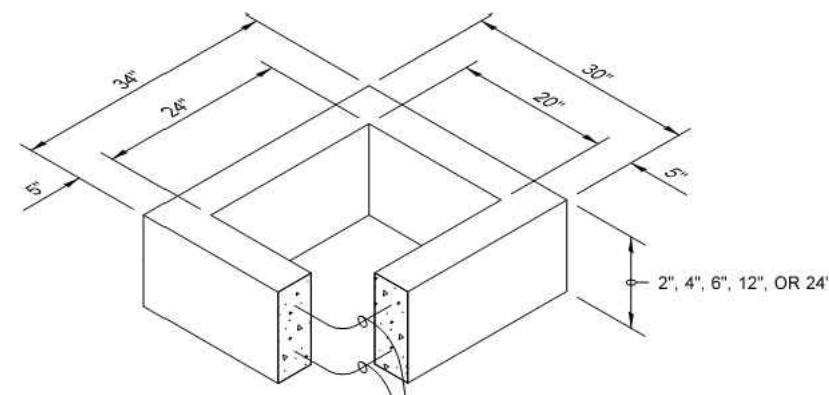
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DESIGNED BY: DW	CHECKED BY: JS
JOB NUMBER: 17387	
SHEET: C2.1	
SHEET 7 OF 11	

CALL BEFORE YOU DIG 8-11
 UNDERGROUND SERVICE (USA)

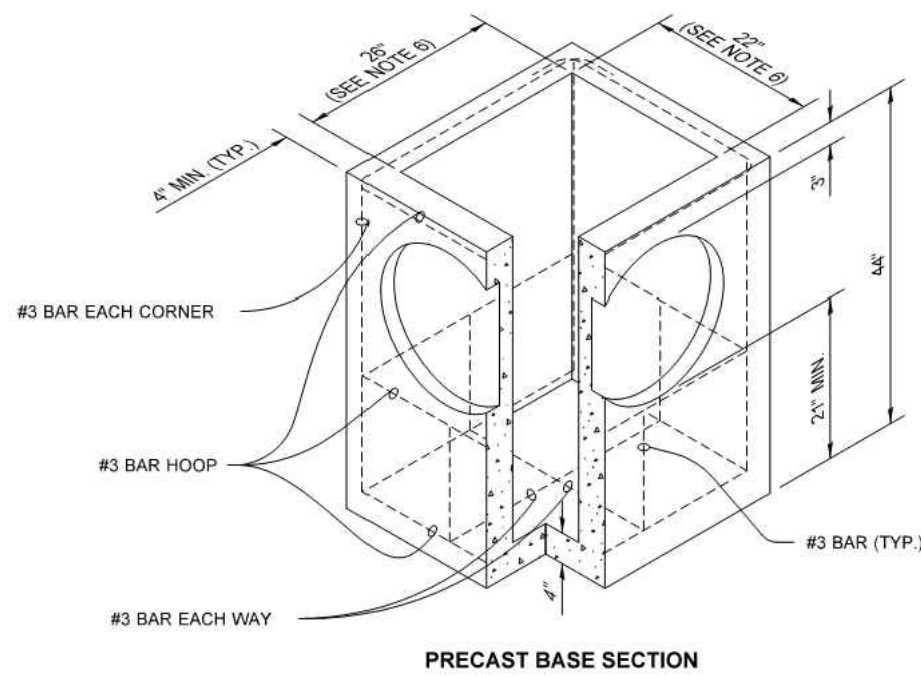
DRAWN BY: LISA CYFORD



FRAME AND VANED GRATE



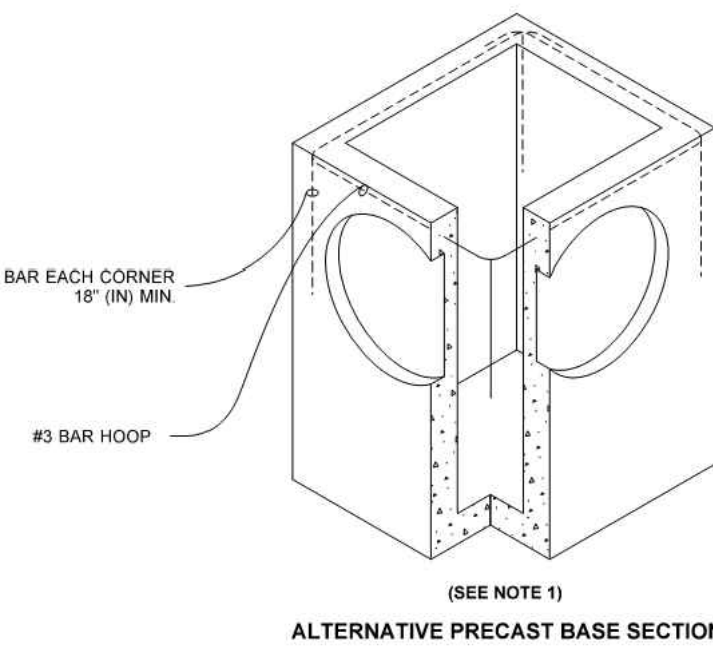
RECTANGULAR ADJUSTMENT SECTION



PRECAST BASE SECTION

PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER (INCHES)
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CPSSP * (STD. SPEC. SECT. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. SECT. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. SECT. 9-05.12(2))	15"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

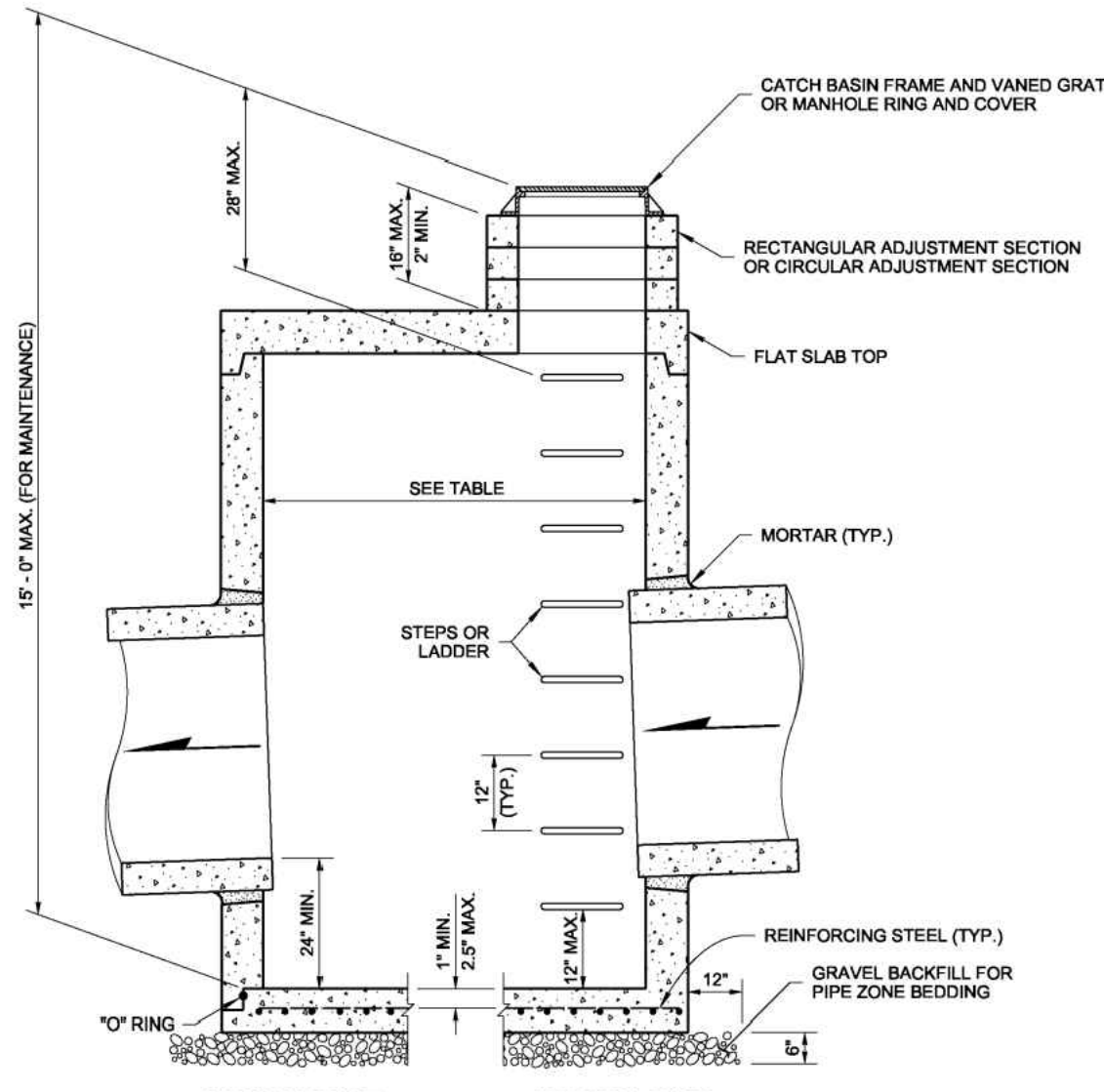


ALTERNATIVE PRECAST BASE SECTION

NOTES

- As acceptable alternatives to the rebar shown in the PRECAST BASE SECTION: fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the ALTERNATIVE PRECAST BASE SECTION. Wire mesh shall not be placed in the knockouts.
- The knockout diameter shall not be greater than 20" (in). Knockouts shall have a wall thickness of 2" (in) minimum to 2.5" (in) maximum. Provide a 1.5" (in) minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with Standard Specification Section 9-04.3.
- The maximum depth from the finished grade to the lowest pipe invert shall be 5' (ft).
- The frame and grate may be installed with the flange down, or integrally cast into the adjustment section with flange up.
- The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1 : 24 or steeper.
- The opening shall be measured at the top of the Precast Base Section.
- All pickup holes shall be grouted full after the basin has been placed.

DRAWN BY: LISA CYFORD



CATCH BASIN DIMENSIONS				
CATCH BASIN DIAMETER	MIN. WALL THICKNESS	MIN. BASE THICKNESS	MAXIMUM KNOCKOUT SIZE	MINIMUM DISTANCE BETWEEN KNOCKOUTS
48"	4"	6"	36"	8"
54"	4.5"	8"	42"	8"
60"	5"	8"	48"	8"
72"	6"	8"	60"	12"
84"	8"	12"	72"	12"
96"	8"	12"	84"	12"
120"	10"	12"	96"	12"
144"	12"	12"	108"	12"

PIPE ALLOWANCES					
CATCH BASIN DIAMETER	PIPE MATERIAL WITH MAXIMUM INSIDE DIAMETER	ALL METAL	CPSSP	SOLID WALL PVC	PROFILE WALL PVC
48"	24"	30"	24"	30"	30"
54"	30"	36"	30"	36"	36"
60"	36"	42"	36"	42"	42"
72"	42"	54"	42"	48"	48"
84"	54"	60"	54"	48"	48"
96"	60"	72"	60"	48"	48"
120"	66"	84"	60"	48"	48"
144"	78"	96"	60"	48"	48"

- ① Corrugated Polyethylene Storm Sewer Pipe (Standard Specification 9-05.20)
- ② (Standard Specification 9-05.12(1))
- ③ (Standard Specification 9-05.12(2))



CATCH BASIN TYPE 2
STANDARD PLAN B-10.20-01

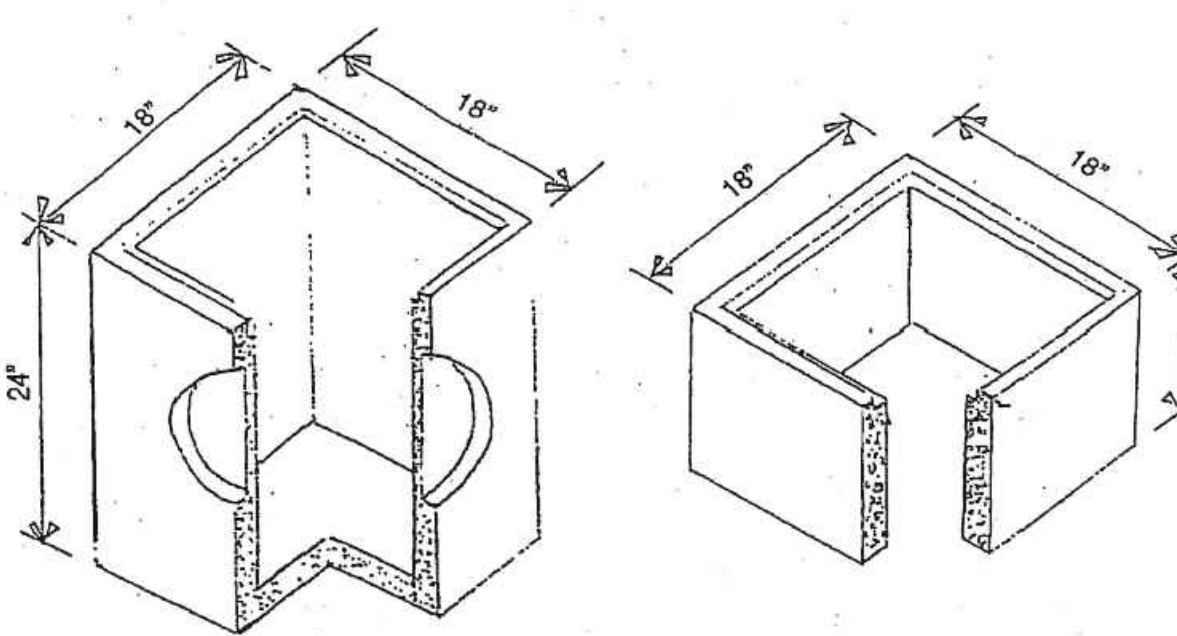
APPROVED FOR PUBLICATION
Pasco Bakotich III 02-07-12
STATE DESIGN ENGINEER
Washington State Department of Transportation

1 TYPE 1 CATCH BASIN
NTS

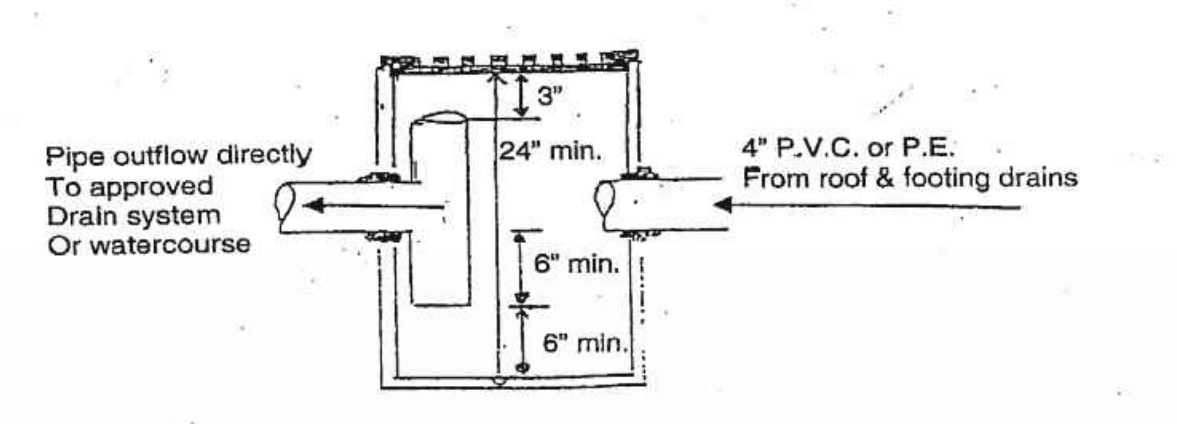
2 TYPE 2 CATCH BASIN
NTS

PACE
Engineering Services, Inc. II
11255 Kirtland Way, Suite 300
Kirkland, WA 98033
Tel: 425.827.2014 Fax: 425.827.5043
Civil/Structural/Plumbing/Storm
water/gis.com

EDWARD WOODRUFF
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
54340
07/31/8

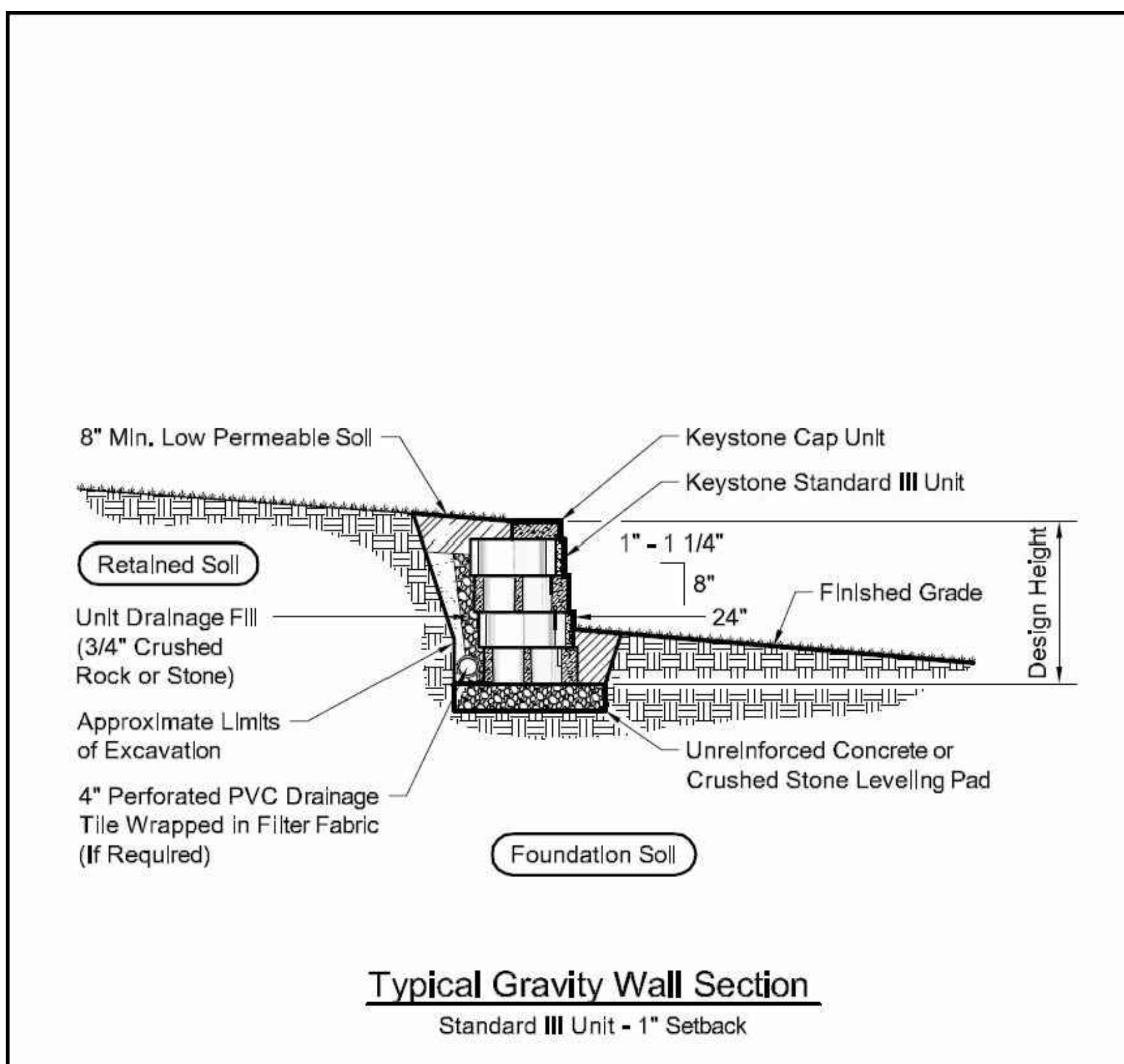


Catch Basin (C.B.)
Depth & Volume are Minimum Dimensions.
Minimum Volume = 24 gal.



Catch Basin with Oil Separator

3 CATCH BASIN WITH OIL SEPARATOR
NTS



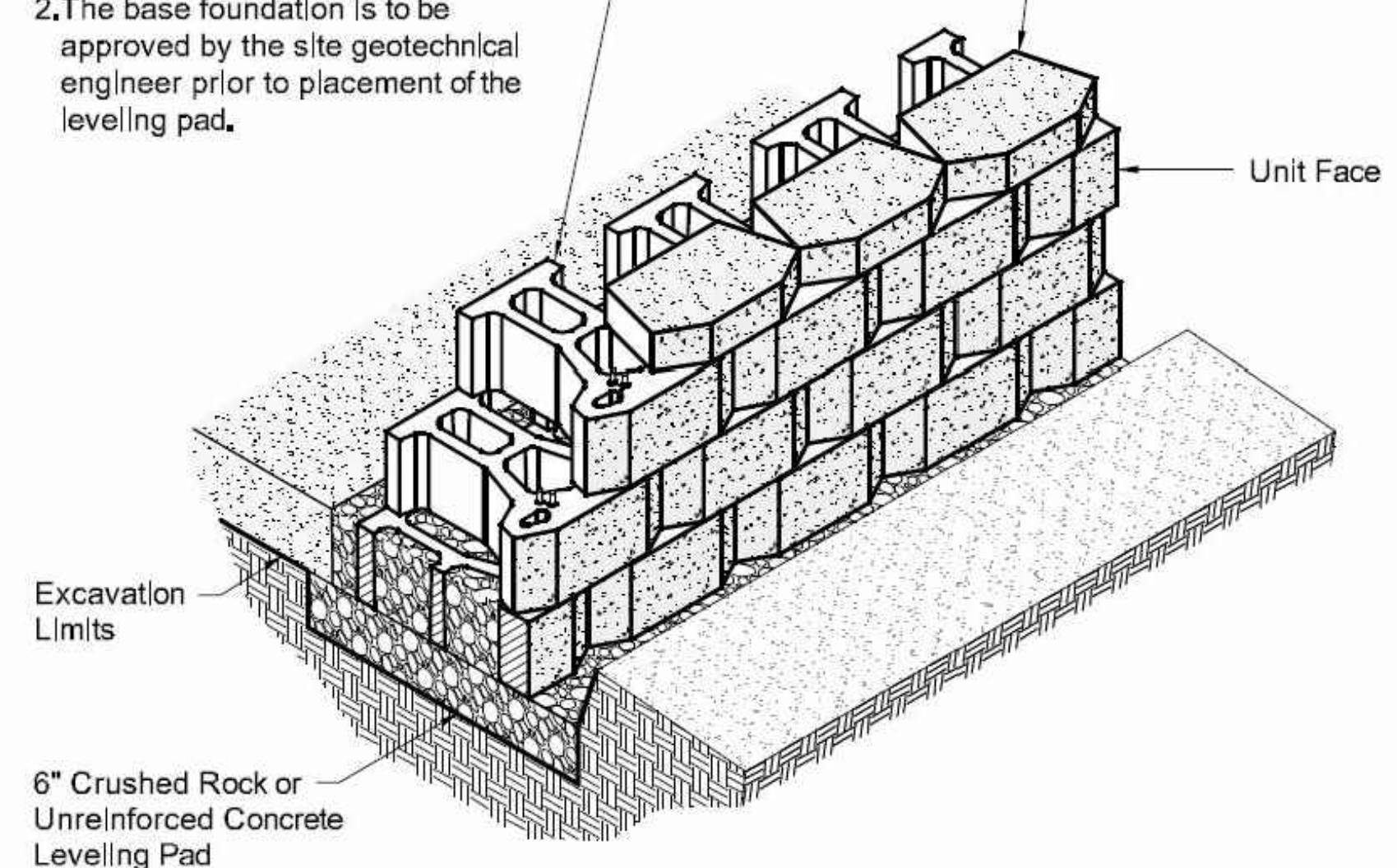
Typical Gravity Wall Section
Standard III Unit - 1" Setback

1 TYPICAL GRAVITY WALL SECTION
NTS

Base Leveling Pad Notes:

- The leveling pad is to be constructed of crushed stone or 2,000 psi± unreinforced concrete
- The base foundation is to be approved by the site geotechnical engineer prior to placement of the leveling pad.

Standard III Unit	Cap Unit
Width: 18"	Width: 18"
*Depth: 21"	*Depth: 10 1/2"
Height: 8"	Height: 4"
*Weight: 92 lbs	*Weight: 45 lbs



Standard III Unit/Base Pad Isometric Section View
*Dimensions & Weight May Vary by Region

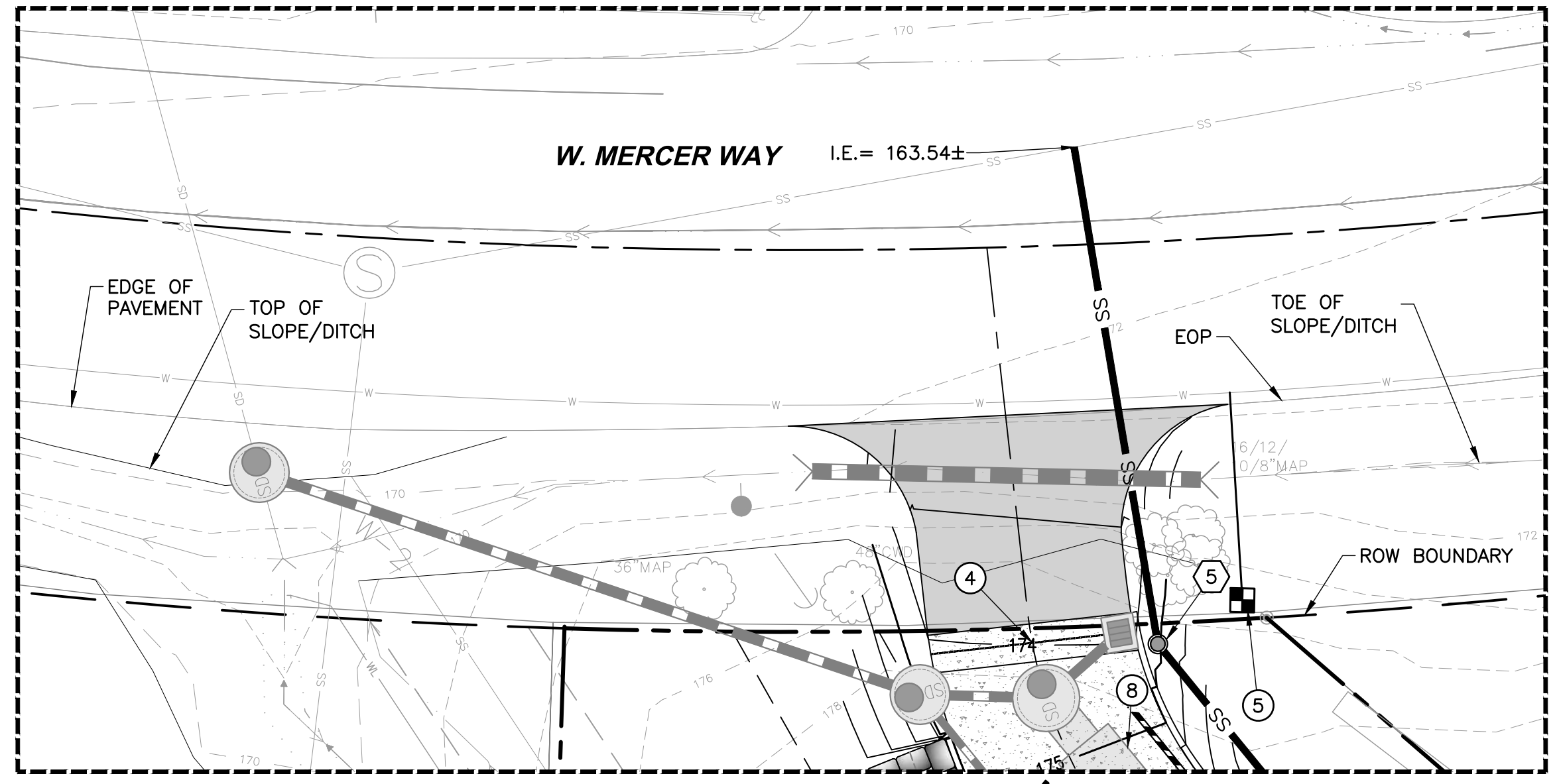
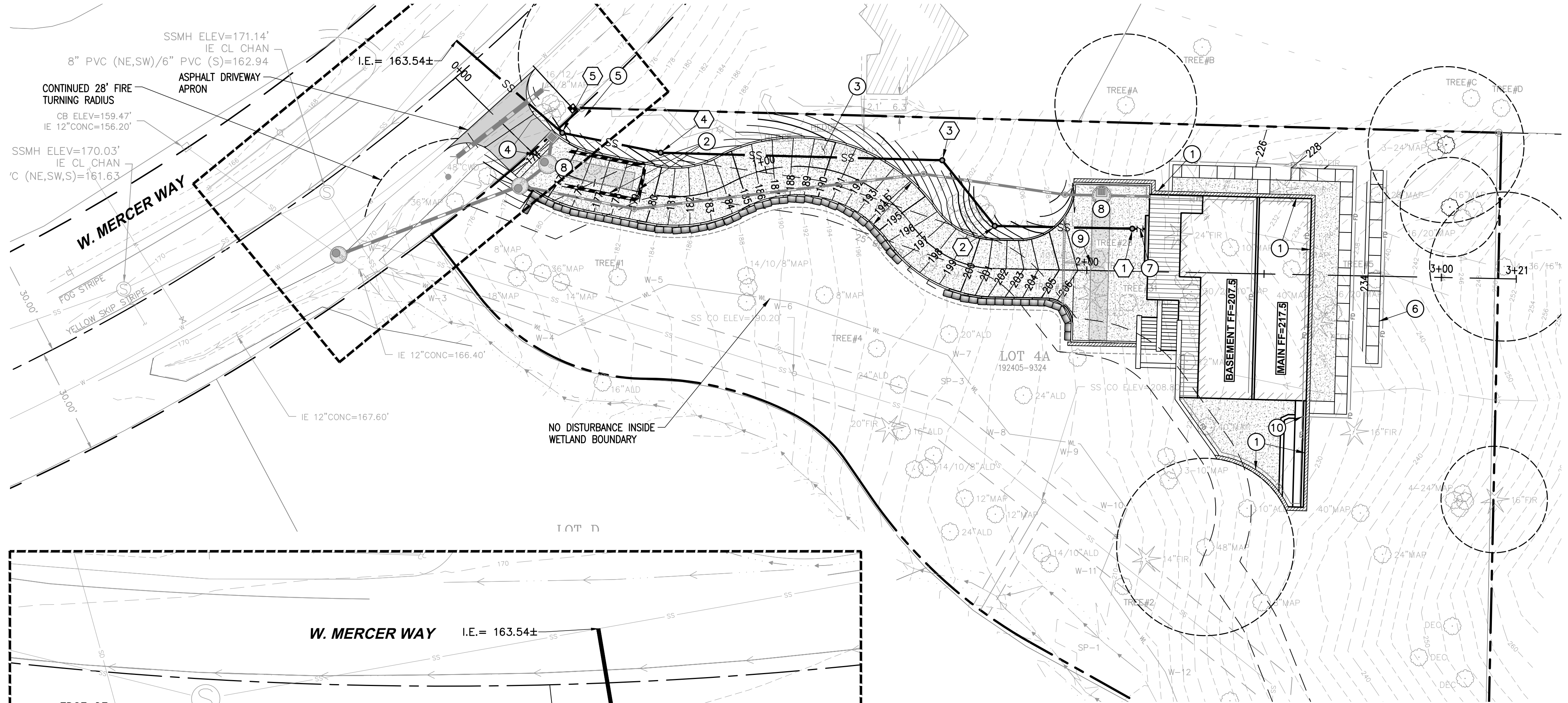
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YOU DIG 8-11
UNDERGROUND SERVICE (USA)

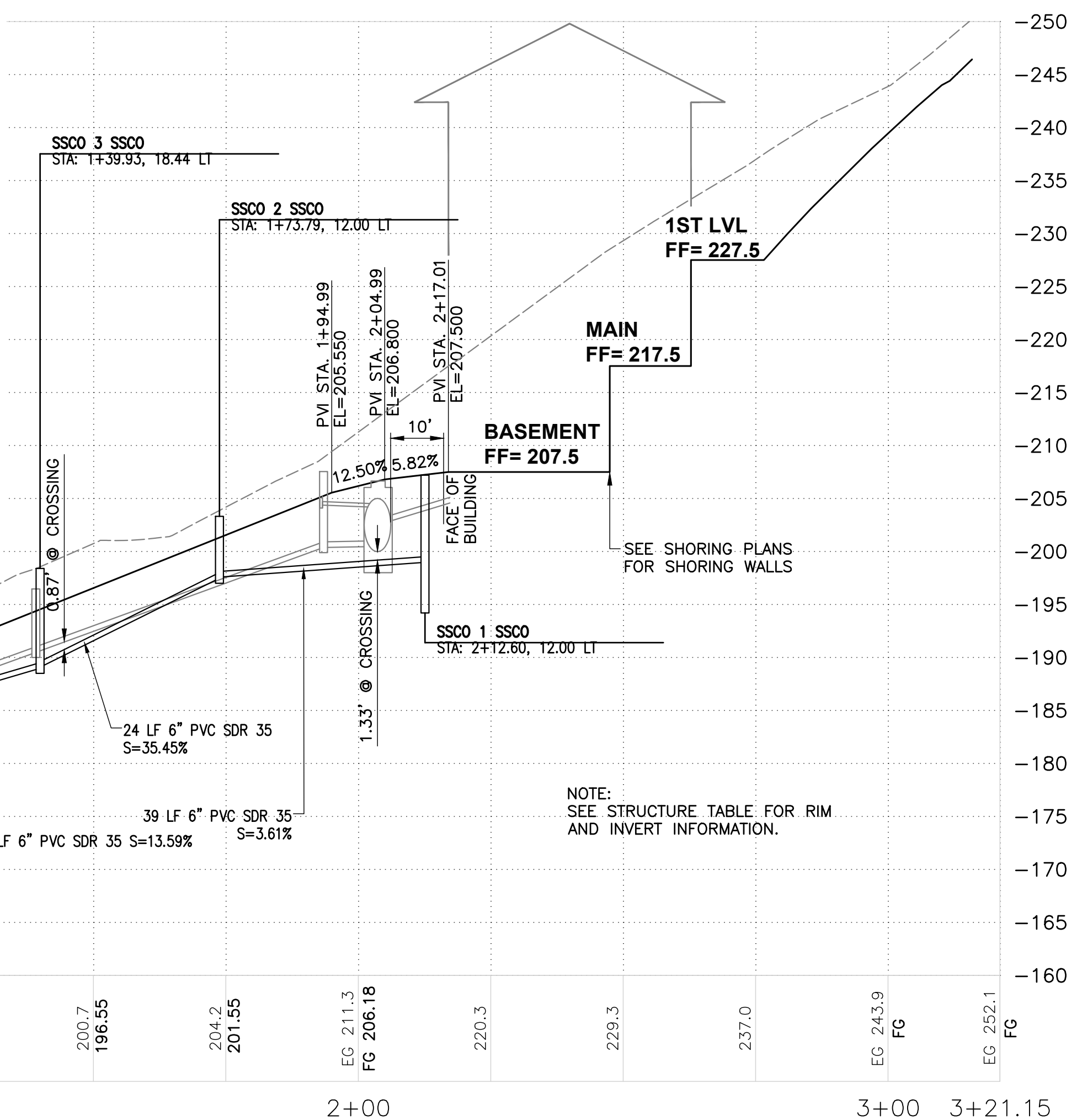
5236 W MERCER WAY
SINGLE FAMILY RESIDENCE
STORM DRAINAGE DETAILS

SCALE: AS SHOWN	DATE: 07/31/2018
DESIGNED BY: DW	CHECKED BY: JS
JOB NUMBER: 17387	
SHEET: C2.2	
SHEET 8 OF 11	

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FRONTAGE PLAN
 1"=10'



SEWER STRUCTURE TABLE

NAME	DETAILS
SSCO 1 SSCO	RIM = 207.21 IE OUT = 199.00 (6" PVC SDR 35 W)
SSCO 2 SSCO	RIM = 203.32 IE IN = 197.60 (6" PVC SDR 35 E) IE OUT = 197.50 (6" PVC SDR 35 NW)
SSCO 3 SSCO	RIM = 198.40 IE IN = 189.10 (6" PVC SDR 35 SE) IE OUT = 189.00 (6" PVC SDR 35 W)
SSCO 4 SSCO	RIM = 181.96 IE IN = 178.20 (6" PVC SDR 35 E) IE OUT = 178.00 (6" PVC SDR 35 W)
SSCO 5 SSCO	RIM = 174.88 IE IN = 169.70 (6" PVC SDR 35 E) IE OUT = 169.50 (6" PVC SDR 35 NW)

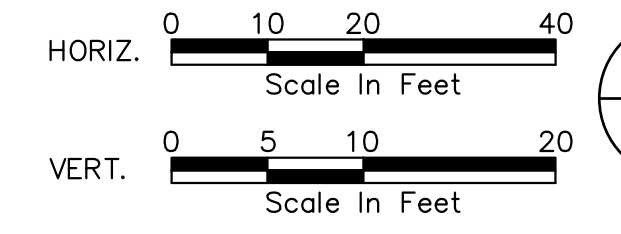
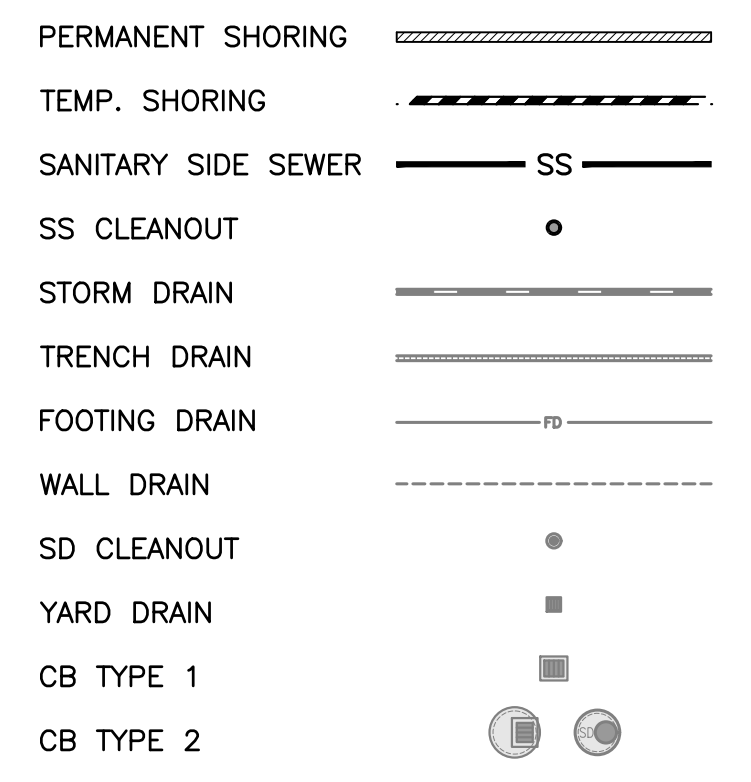
KEY NOTES

- PERMANENT SHORING WALLS
- TEMPORARY SHORING WALLS
- CONCRETE DRIVEWAY WITH VERTICAL CURB AND GUTTER.
- VALLEY GUTTER AT EDGE OF ASPHALT. SEE DETAIL 3, SHEET C2.1.
- 1" WATER METER, MINIMUM.
- GABION BASKET WALL (TYP), SEE DETAIL 4, SHEET C2.1.
- SIDE SEWER BACKFLOW PREVENTION VALVE, SEE DETAIL 5, SHEET C3.1.
- CMP DETENTION PIPE, SEE DETAILS ON SHEET C2.1.
- CONNECT TRENCH DRAIN TO DETENTION SYSTEM VIA 4" SD GRAVITY DRAIN @ 2.0% MINIMUM SLOPE.
- CONNECT GABION BASKET WALL FOOTING DRAINS TO SOLDER PILE SHORING FOOTING DRAIN.
- SIDE SEWER BACKFLOW PREVENTION VALVE, SEE DETAIL 5, SHEET C3.1.

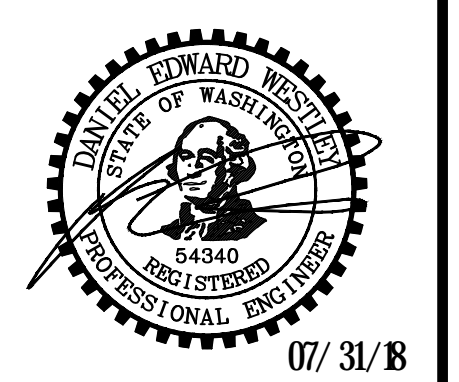
GENERAL NOTES:

- REFERENCE SHORING AND STRUCTURAL DETAILS FOR SHORING AND FOUNDATION DRAIN OUTLET DETAILS.
- BASEMENT FLOOR SHORING-FOUNDATION DRAIN OUTLET SD @ 2.0% MIN.
- YARD DRAIN OUTLET SD @ 2.0% MIN
- STORM CONVEYANCE PIPE SHALL BE SDR 35 PVC.
- FIRE PROTECTION SYSTEM REQUIRED AND SHALL BE DESIGNED BY A FIRE SPRINKLER DESIGNER.
- GABION BASKET WALL CONSTRUCTED PRIOR TO PERMANENT SHORING CONSTRUCTION. SEE SHORING AND STRUCTURAL PLANS.
- FIRE PROTECTION SYSTEM REQUIRED AND SHALL BE DESIGNED BY A FIRE SPRINKLER DESIGNER.
- CONSULT FIRE SPRINKLER DESIGNER FOR FINAL METER AND SUPPLY LINE SIZING.

LEGEND



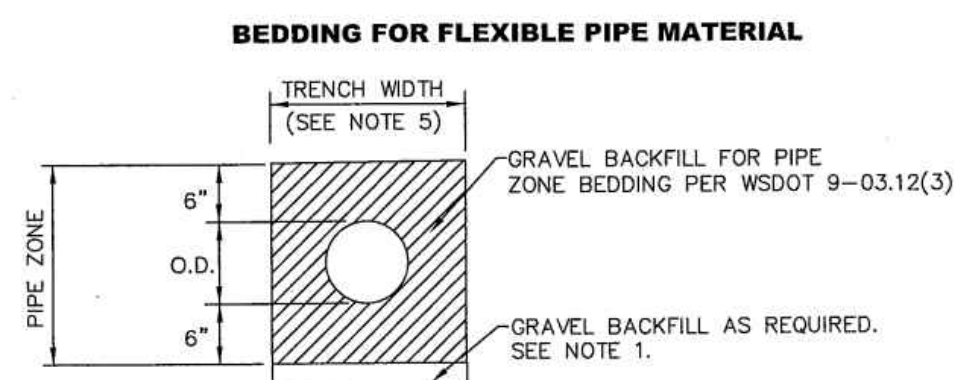
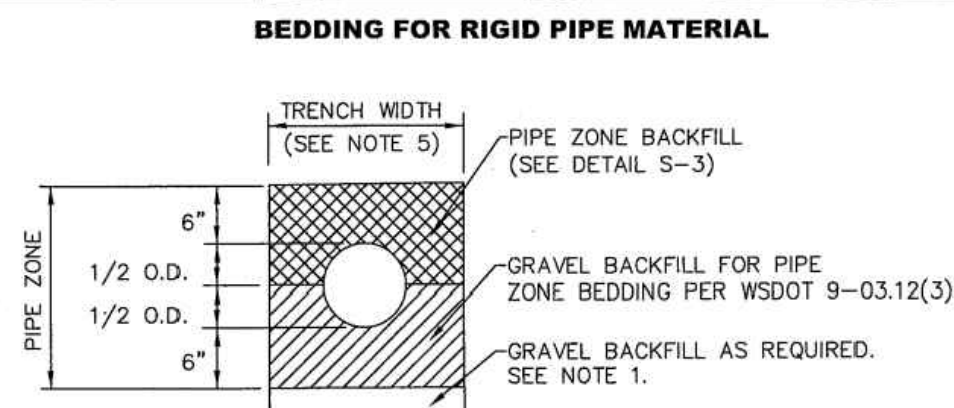
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 UNDERGROUND SERVICE (USA)



5236 W MERCER WAY
SINGLE FAMILY RESIDENCE
SITE, UTILITY, AND SEWER PLAN

SCALE:	DATE:
AS SHOWN	07/31/2018
DESIGNED BY:	CHECKED BY:
DW	JS
JOB NUMBER	17387
SHEET:	C3.0
SHEET	9 OF 11

DATE	REVISION	SYM



NOTES

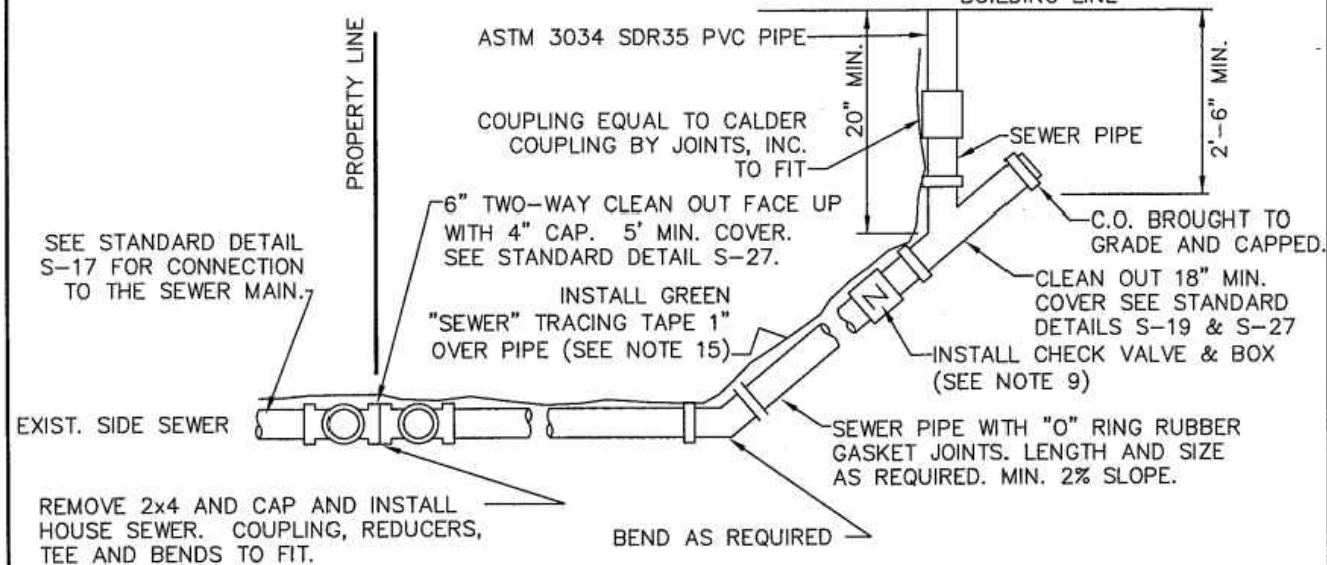
- EXCAVATE UNSTABLE MATERIAL DOWN TO FIRM SOIL. REPLACE WITH GRAVEL BACKFILL PER WSDOT 9-03.12(3) AS DIRECTED BY THE CITY ENGINEER.
- PROVIDE UNIFORM SUPPORT UNDER BARREL.
- HAND TAMP UNDER HAUNCHES.
- COMPACT BEDDING AND BACKFILL MATERIAL TO 95% MAX. DENSITY EXCEPT DIRECTLY OVER PIPE. HAND TAMP ONLY UNTIL MINIMUM 6" ABOVE TOP OF PIPE.
- 30" MAXIMUM TRENCH WIDTH FOR PIPE UP TO AND INCLUDING 12", FOR PIPE LARGER THAN 12", USE O.D. PLUS 16".

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
PIPE
BEDDING

6-5-2009	NO SCALE	S-4
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REV DATE _____ APPROVED _____

1 PIPE BEDDING
NTS



NOTES

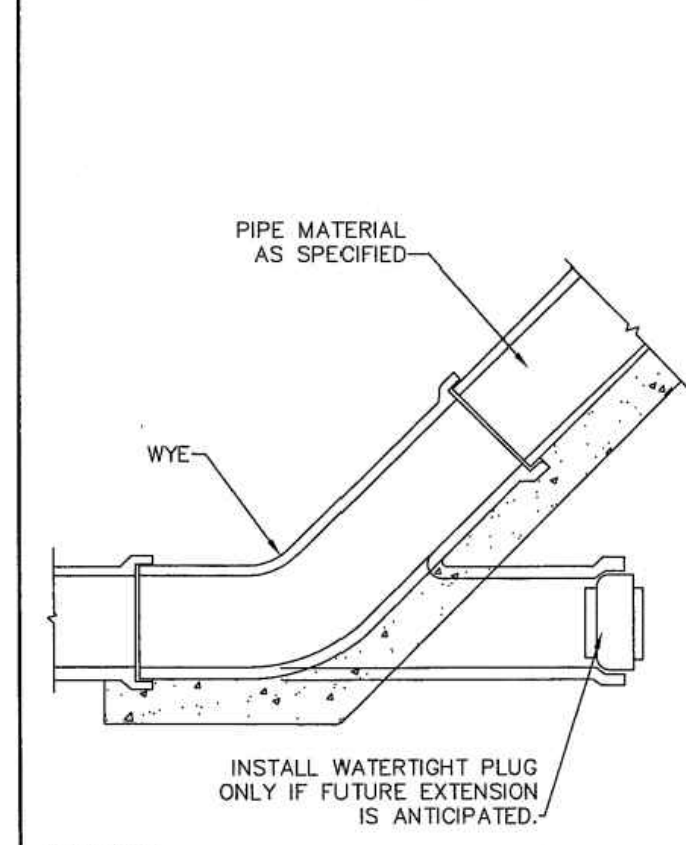
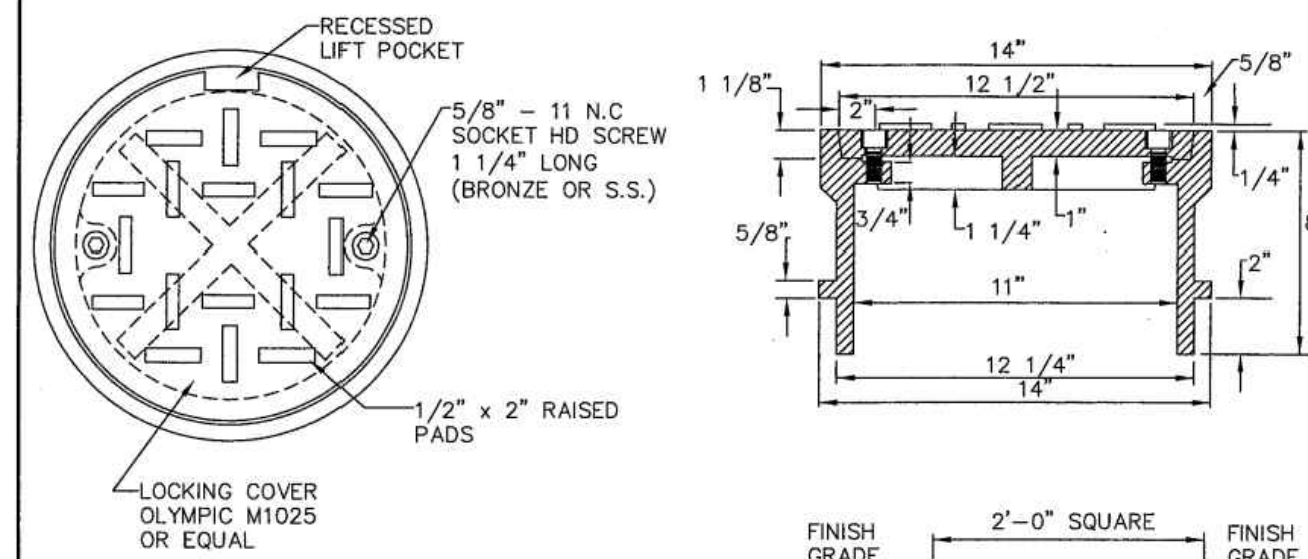
- ELBOWS SHALL NOT BE GREATER THAN 45 DEGREES.
- CLEAN OUT IS REQUIRED FOR EACH PIPE LENGTH GREATER THAN 100' AND FOR EACH 90° ACCUMULATED ELBOW/100'.
- ALL HOUSE PLUMBING OUTLETS MUST BE CONNECTED TO THE SEWER. NO DOWN SPOUTS OR STORM DRAINAGE MAY BE CONNECTED TO THE SEWER SYSTEM.
- 18" MINIMUM COVERAGE OVER PIPE.
- LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH 1/2 BEND OR WYE. 90° CHANGE WITH 1/8 BEND AND WYE.
- 4" SEWER PIPE MINIMUM SIZE ON PROPERTY. 2% MINIMUM GRADE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT SEWER ORDINANCES.
- ALL CONSTRUCTION REQUIRES A PLAN SHOWING PROPERTY AND DIMENSIONS AND COMPLETION OF SIDE SEWER APPLICATION AND MAINTENANCE AGREEMENT, AS NEEDED.
- BACK WATER VALVE (CHECK VALVE) IS REQUIRED:
 - IF CONNECTED TO A SHARED SIDE SEWER.
 - IF CONNECTION AT HOUSE IS LOWER THAN BOTH UPSTREAM AND DOWNSTREAM MANHOLE.
 - SEE S-23 & S-24 FOR LAKE LINE REQUIREMENTS.
- AS-BUILT DRAWING SHOWING LOCATION OF SIDE SEWER & ALL BENDS, C.O. ETC., IN RELATION TO THE HOUSE IS REQUIRED AFTER INSPECTION & INSTALLATION. SEE STANDARD DETAIL S-38 FOR A TYPICAL "AS BUILT".
- THE MINIMUM PIPE SIZE FOR SIDE SEWERS SHALL BE:
 - 6" - WITHIN THE PUBLIC RIGHT-OF-WAY.
 - 4" - SINGLE FAMILY RESIDENCES.
 - 6" - 2 TO 6 SINGLE FAMILY RESIDENCES.
 - 6" - BUILDINGS OTHER THAN SINGLE FAMILY RESIDENCES.
- UTILITY PIPE TRACER TAPE SHALL BE DETECTABLE BELOW GROUND SURFACE, COLOR CODED, WITH UTILITY NAME PRINTED ON TAPE. CONDUCTIVE WARNING TAPE REQUIRED OVER ALL WATER PIPE. TAPE SHALL BE MANUFACTURER'S STANDARD PERMANENT, BRIGHT-COLORED, CONTINUOUS PRINTED PLASTIC TAPE, ALUMINUM BACKED, INTENDED FOR DIRECT-BURIAL SERVICE. TAPE SHALL BE NOT LESS THAN 6" WIDE X 4 MILS THICK.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
HOUSE SEWER CONNECTION

6-5-2009	NO SCALE	S-18
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REV DATE _____ APPROVED _____

2 HOUSE SEWER CONNECTION
NTS



NOTES

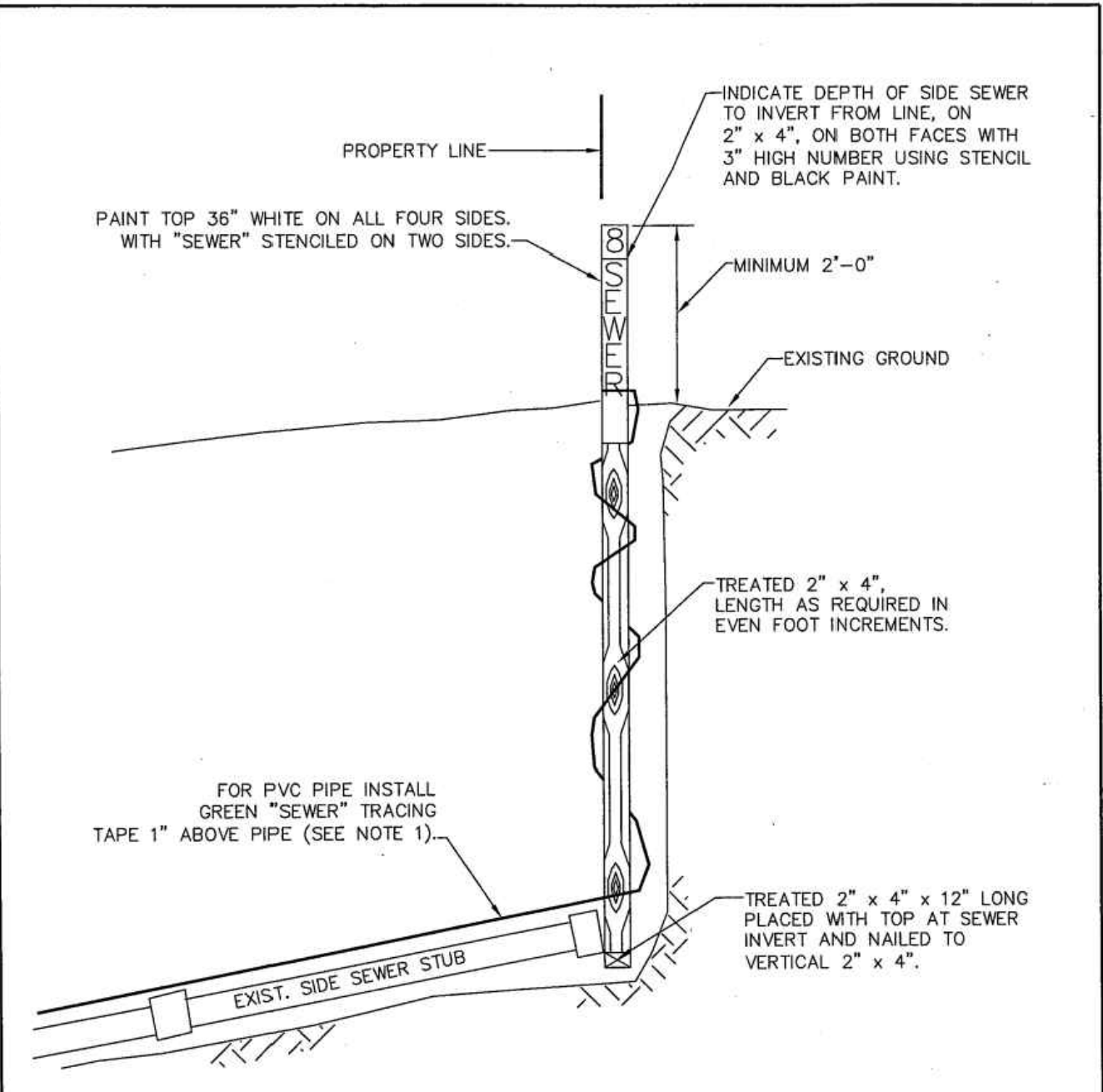
- SEE S-27 FOR INSTALLATION DETAILS.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
CLEAN OUT DETAIL

6-5-2009	NO SCALE	S-19
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REV DATE _____ APPROVED _____

3 CLEAN OUT DETAIL
NTS



NOTES

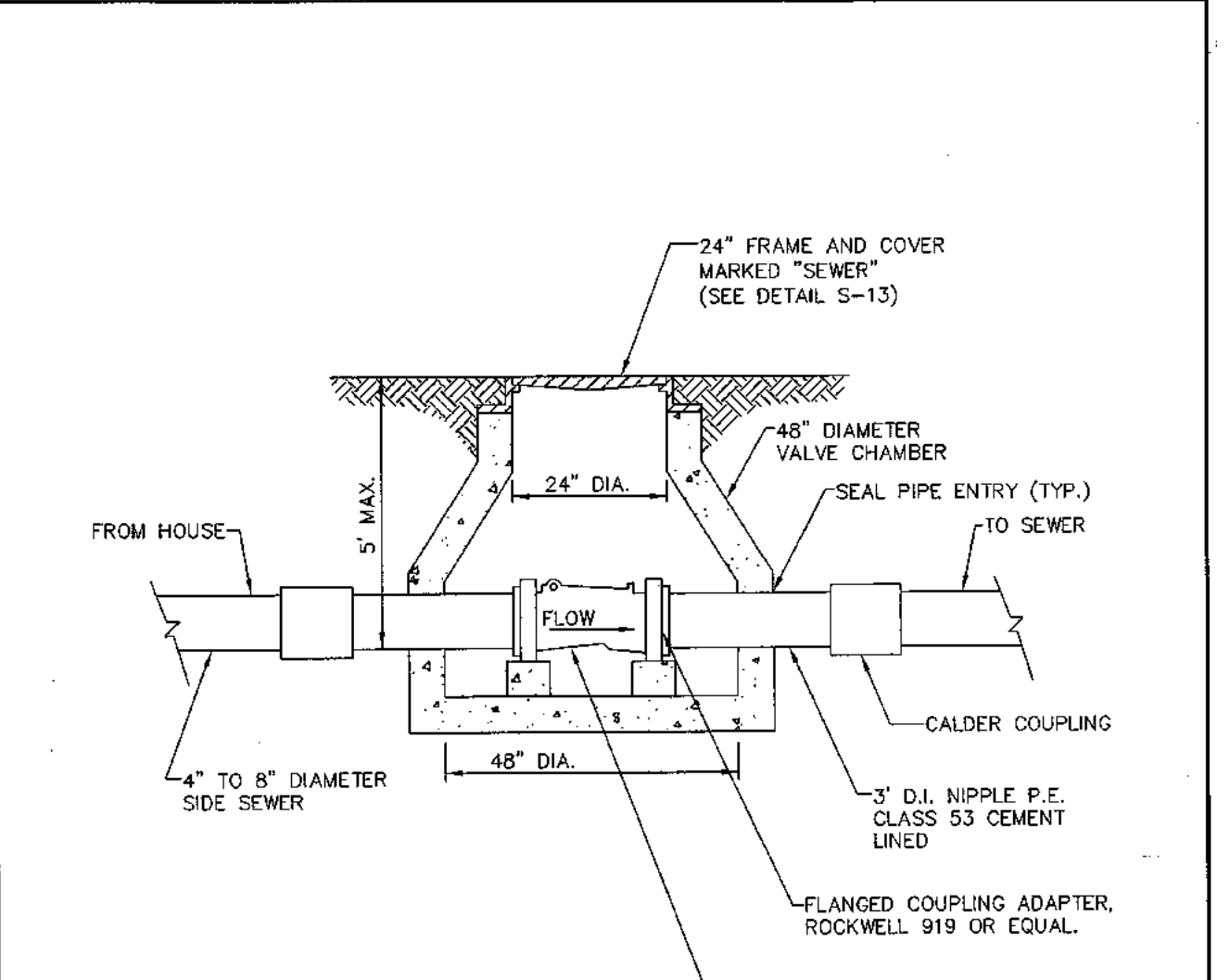
- UTILITY PIPE TRACER TAPE SHALL BE DETECTABLE BELOW GROUND SURFACE, COLOR CODED, WITH UTILITY NAME PRINTED ON TAPE. CONDUCTIVE WARNING TAPE REQUIRED OVER ALL WATER PIPE. TAPE SHALL BE MANUFACTURER'S STANDARD PERMANENT, BRIGHT-COLORED, CONTINUOUS PRINTED PLASTIC TAPE, ALUMINUM BACKED, INTENDED FOR DIRECT-BURIAL SERVICE. TAPE SHALL BE NOT LESS THAN 6" WIDE X 4 MILS THICK.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
SIDE SEWER MARKER POST

6-5-2009	NO SCALE	S-20
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REV DATE _____ APPROVED _____

4 SIDE SEWER MARKER POST
NTS

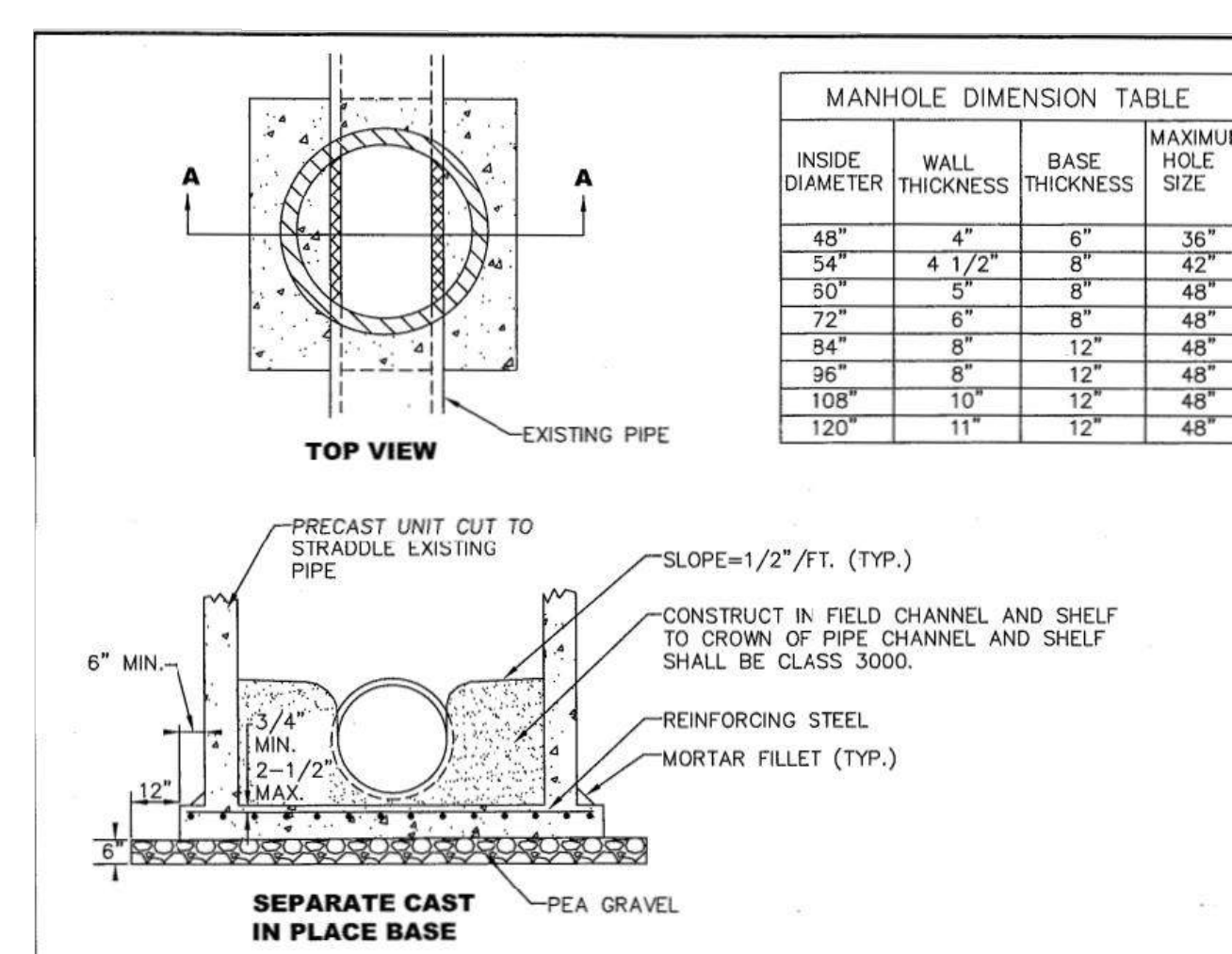


CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
BACK WATER VALVE ASSEMBLY FOR JOINT USE SIDE SEWER (4" OR 6" DIAMETER)

6-5-2009	NO SCALE	S-26
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REV DATE _____ APPROVED _____

5 BACKFLOW PREVENTION VALVE
NTS



INSIDE DIAMETER	WALL THICKNESS	BASE THICKNESS	MAXIMUM HOLE SIZE
48"	4"	6"	36"
54"	4 1/2"	8"	42"
60"	5"	8"	48"
72"	6"	8"	48"
84"	8"	12"	48"
96"	8"	12"	48"
108"	10"	12"	48"
120"	11"	12"	48"

NOTES

- EXISTING PIPE SHALL BE SUPPORTED AT ALL TIMES.
- NO WEIGHT OF THE PRECAST UNIT SHALL BEAR ON THE EXISTING PIPE.
- CONCRETE FOR CAST-IN-PLACE BASE SHALL BE CLASS 4000.
- PRECAST MANHOLE SECTION SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARD PLAN FOR THE SPECIFIED MANHOLE SIZE AND TYPE.
- MANHOLE SECTIONS SHALL NOT BE INSTALLED UNTIL CONCRETE BASE HAS SET FOR 12 HOURS.
- THE EXISTING MAIN SHALL BE LEFT IN PLACE AND THE TOP PORTION OF THE MAIN SHALL BE REMOVED. THE BOTTOM PORTION OF THE MAIN SHALL BE TIED IN AS THE CHANNEL OF THE NEW MANHOLE.
- GROUT ALL OPENINGS TO ENSURE WATER TIGHT STRUCTURE.
- A FLEXIBLE PIPE-TO-MANHOLE CONNECTOR SHALL BE EMPLOYED IN ALL CONNECTIONS OF RIGID AND FLEXIBLE PIPES TO NEW PRECAST CONCRETE MANHOLES. THE CONNECTOR SHALL BE "KOR-N-SEAL" WITH "WEDGE KOR-BAND" MANUFACTURED BY NPC, INC., OR APPROVED EQUAL.
- BASE REINFORCING STEEL SHALL BE PER MANUFACTURER'S RECOMMENDATION.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
NEW MANHOLE OVER AN EXISTING SEWER LINE

6-5-2009	NO SCALE	S-15
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REV DATE _____ APPROVED _____

6 NEW MANHOLE OVER AN EXISTING SEWER LINE
NTS

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 PLOT TIME: 7/31/2018 12:19:19 PM
 USER NAME: MICHAEL PARKER
 XREF FILES: XT7387-TBLOCK.dwg

PACE
 A Engineering Services Company
 11255 Kirtland Way, Suite 300
 Kirkland, WA 98033
 Tel: 425.827.2014 Fax: 425.827.5043
 Civil/Site Detail/Plumbing/Site
 pacegrs.com

EDWARD WOODRUFF
 STATE OF WASHINGTON
 5430
 REGISTERED
 PROFESSIONAL ENGINEER
 07/31/8

5236 W MERCER WAY
SINGLE FAMILY RESIDENCE
SANITARY SIDE SEWER DETAILS

SCALE: AS SHOWN DATE: 07/31/2018
 DESIGNED BY: DW CHECKED BY: JS
 JOB NUMBER: 17387
 SHEET: C3.1 OF 11

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 UNDERGROUND SERVICE (USA)

General Structural Notes

THE FOLLOWING APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

CRITERIA

1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (2015 EDITION).
2. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS,
3. DESIGN LOADING CRITERIA:
 HANDRAILS AND GUARDS
 GUARDRAILS/BALCONY RAILS 50 PSF
 GUARDRAILS/BALCONY RAILS CONCENTRATED LOAD 200 LBS
 RESIDENTIAL
 FLOOR LIVE LOAD 40 PSF
 ENVIRONMENTAL LOADS
 SNOW Pf=25 PSF
 WIND Ccp=0.18, 110 MPH, RISK CATEGORY II, EXPOSURE "D"
 EARTHQUAKE ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
 LATERAL SYSTEM FOR NORTH-SOUTH FORCES AT NORTH WING:
 ORDINARY STEEL MOMENT FRAME, R=3.5, LATERAL SYSTEM FOR
 REMAINDER OF BUILDING: LIGHT FRAMED SHEAR WALLS, R=6.5
 SITE CLASS D, Ss=1.254g, Sds=0.836g, Si=0.484g,
 SD1=0.489g, SDC D, Ie=1.0

4. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THE SPECIFICATION, THESE GENERAL NOTES AND THE SITE CONDITIONS SHALL BE REPORTED TO THE ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY IN WRITING. ANY WORK DONE BY THE GENERAL CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE GENERAL CONTRACTOR'S RISK.

5. PRIMARY STRUCTURAL ELEMENTS NOT DIMENSIONED ON THE STRUCTURAL PLANS AND DETAILS SHALL BE LOCATED BY THE ARCHITECTURAL PLANS AND DETAILS. VERTICAL DIMENSION CONTROL IS DEFINED BY THE ARCHITECTURAL WALL SECTIONS, BUILDING SECTION, AND PLANS. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE DIMENSIONAL INFORMATION CONTAINED IN BOTH ARCHITECTURAL AND STRUCTURAL DRAWINGS.

6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTORS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.

7. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. CONFORM TO ASCE 37-02 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION".

8. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.

9. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER. ALL TYPICAL NOTES AND DETAILS SHOWN ON DRAWINGS SHALL APPLY, UNLESS NOTED OTHERWISE. TYPICAL DETAILS MAY NOT NECESSARILY BE INDICATED ON THE PLANS BUT SHALL STILL APPLY AS SHOWN OR DESCRIBED IN THE DETAILS. WHERE TYPICAL DETAILS ARE NOTED ON THE PLANS, THE SPECIFIED TYPICAL DETAIL SHALL BE USED. WHERE NO TYPICAL DETAIL IS NOTED, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CHOOSE THE APPROPRIATE TYPICAL DETAIL FROM THOSE PROVIDED OR REQUEST ADDITIONAL INFORMATION. THE CONTRACTOR SHALL SUBMIT ALL PROPOSED ALTERNATE TYPICAL DETAILS TO THOSE PROVIDED WITH RELATED CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO SHOP DRAWING PRODUCTION AND FIELD USE.

10. ALL STRUCTURAL SYSTEMS, WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED, SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.

11. SHOP DRAWINGS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THESE ITEMS.

CONNECTOR PLATE WOOD ROOF TRUSSES
STRUCTURAL STEEL

APPROVED SETS OF ALL SHOP DRAWINGS SHALL ALSO BE SUBMITTED TO THE BUILDING DEPARTMENT.

12. SHOP DRAWING REVIEW: DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY THE ENGINEER OF RECORD, THEREFORE MUST BE VERIFIED BY THE CONTRACTOR. CONTRACTOR SHALL REVIEW AND STAMP DRAWINGS PRIOR TO REVIEW BY ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW DRAWINGS FOR CONFORMANCE WITH THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND OPERATIONS OF CONSTRUCTION, AND ALL SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO. SUBMITTALS SHALL INCLUDE A REPRODUCIBLE AND ONE COPY; REPRODUCIBLE WILL BE MARKED AND RETURNED WITHIN TWO WEEKS OF RECEIPT WITH A NOTATION INDICATING THAT THE SUBMITTAL HAS BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE SUBMITTED ITEMS SHALL NOT BE INSTALLED UNTIL THEY HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

SHOP DRAWING SUBMITTALS PROCESSED BY THE ENGINEER ARE NOT CHANGE ORDERS. THE PURPOSE OF SHOP DRAWING SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE ENGINEER THAT THE CONTRACTOR UNDERSTANDS THE DESIGN CONCEPT, BY INDICATING WHICH MATERIAL IS INTENDED TO BE FURNISHED AND INSTALLED AND BY DETAILING THE INTENDED FABRICATION AND INSTALLATION METHODS. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWING SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE ENGINEER, THE DESIGN DRAWINGS AND SPECIFICATIONS SHALL CONTROL AND SHALL BE FOLLOWED.

GEOTECHNICAL

13. FOUNDATION NOTES: SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY TO RECOMMENDATIONS GIVEN IN THE SOILS REPORT OR AS DIRECTED BY THE SOILS ENGINEER. FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH OR COMPACTED STRUCTURAL FILL AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY; THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB AND SOILS ENGINEER. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE SOILS REPORT.

LATERAL EARTH PRESSURE (RESTRAINED/UNRESTRAINED) 50 PCF/35 PCF
 ALLOWABLE PASSIVE EARTH PRESSURE (F.S. OF 1.5 INCLUDED) 350 PCF
 COEFFICIENT OF FRICTION (F.S. OF 1.5 INCLUDED) 0.3
 SEISMIC SURCHARGE PRESSURE (UNIFORM LOAD)7H PSF
 3" DIAMETER PILE CAPACITY (COMPRESSION) 6 TONS

SOILS REPORT REFERENCE: FILE #14-213, OCTOBER 2017, PANGEO INCORPORATED, SEATTLE, WASHINGTON

CONCRETE

14. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH ACI 301, INCLUDING TESTING PROCEDURES. CONCRETE SHALL ATTAIN A 28-DAY STRENGTH OF $f_c = 3,000$ PSI AND MIX SHALL CONTAIN NOT LESS THAN 5-1/2 SACKS OF CEMENT PER CUBIC YARD AND SHALL BE PROPORTIONED TO PRODUCE A SLUMP OF 5" OR LESS. REQUIRED CONCRETE STRENGTH IS BASED ON THE DURABILITY REQUIREMENTS OF SECTION 1904 OF THE IBC. DESIGN STRENGTH IS $f_c = 2,500$ PSI.

15. A CONCRETE PERFORMANCE MIX SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES AS WELL AS THE WATER CEMENT RATIO, SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH ACI 318, SECTION 5.3. THE USE OF A PERFORMANCE MIX REQUIRES BATCH PLANT INSPECTION, THE COST OF WHICH SHALL BE PAID BY THE GENERAL CONTRACTOR. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY WITH CONTRACT DOCUMENTS. CONTRACTOR OR SUPPLIER MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.

16. ALL CONCRETE WITH SURFACES EXPOSED TO WEATHER OR STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, AND C618. TOTAL AIR CONTENT FOR FROST-RESISTANT CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318, TABLE 4.4.1 MODERATE EXPOSURE, F1.

17. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, $f_y = 60,000$ PSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, $f_y = 40,000$ PSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.

18. DETAILING OF REINFORCING STEEL (INCLUDING HOOKS AND BENDS) SHALL BE IN ACCORDANCE WITH ACI 315-99 AND 318-11. LAP ALL CONTINUOUS REINFORCEMENT #5 AND SMALLER 40 BAR DIAMETERS OR 2'-0" MINIMUM. PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS #5 AND SMALLER 40 BAR DIAMETERS OR 2'-0" MINIMUM. LAPS OF LARGER BARS SHALL BE MADE IN ACCORDANCE WITH ACI 318-11, CLASS B. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.

NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.

19. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
 FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#6 BARS OR LARGER) 2"
 FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#5 BARS OR SMALLER) 1-1/2"
 COLUMN TIES OR SPIRALS AND BEAM STIRRUPS 1-1/2"
 SLABS AND WALLS (INT. FACE) GREATER OF BAR DIAMETER PLUS 1/8" OR 3/4"

20. CONCRETE WALL REINFORCING--PROVIDE THE FOLLOWING UNLESS DETAILED OTHERWISE:

6" WALLS	#4 @ 16 HORIZ.	#4 @ 18 VERTICAL	1 CURTAIN
8" WALLS	#4 @ 12 HORIZ.	#4 @ 18 VERTICAL	1 CURTAIN
10" WALLS	#4 @ 18 HORIZ.	#4 @ 18 VERTICAL	2 CURTAINS
12" WALLS	#4 @ 16 HORIZ.	#4 @ 18 VERTICAL	2 CURTAINS

21. CAST-IN-PLACE CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOOR AND WINDOW OPENINGS IN ALL CONCRETE WALLS. SEE MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF MISCELLANEOUS MECHANICAL OPENINGS THROUGH CONCRETE WALLS. SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE, AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES, BOTH CAST-IN-PLACE AND PRECAST.

ANCHORAGE

22. EXPANSION BOLTS INTO CONCRETE SHALL BE "STRONG-BOLT 2" WEDGE ANCHORS AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY AND INSTALLED IN STRICT CONFORMANCE TO ICC-ES REPORT NUMBER ESR-1771, INCLUDING MINIMUM EMBEDMENT REQUIREMENTS. BOLTS INTO CONCRETE, MASONRY OR BRICK MASONRY UNITS SHALL BE INTO FULLY GROUTED CELLS. SPECIAL INSPECTION IS REQUIRED FOR ALL EXPANSION BOLT INSTALLATION.

23. EPOXY-GROUTED ITEMS (THREADED RODS OR REINFORCING BAR) SPECIFIED ON THE DRAWINGS SHALL BE INSTALLED USING "SET-XP" HIGH STRENGTH EPOXY AS MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY. INSTALL IN STRICT ACCORDANCE WITH ICC-ES REPORT NO. ESR-2508. MINIMUM BASE MATERIAL TEMPERATURE IS 50 DEGREES F. SPECIAL INSPECTION OF INSTALLATION IS REQUIRED. RODS SHALL BE ASTM A-36 UNLESS OTHERWISE NOTED.

MASONRY

24. MASONRY VENEER, 5" MAXIMUM THICKNESS, SHALL BE ANCHORED TO BACKING WALLS PER SECTION 1405.6 OF THE INTERNATIONAL BUILDING CODE WITH "RJ-711" OR "HB-200" ADJUSTABLE VENEER ANCHORS AS MANUFACTURED BY WIRE-BOND, INC. ANCHORS SHALL BE SPACED SO AS TO SUPPORT NOT MORE THAN TWO SQUARE FEET OF WALL AREA AND SHALL BE SPACED NOT MORE THAN 24" O.C. HORIZONTALLY. ATTACHMENTS SHALL BE WITH CORROSION RESISTANT FASTENERS AND CONNECT TO FRAMING MEMBERS OR CONCRETE OR MASONRY BACKING. INSTALL ANCHORS IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE SHEAR LUGS OF EACH ANCHOR SHALL ENGAGE A NO. 9 GAUGE JOINT REINFORCEMENT WIRE. JOINT REINFORCEMENT SHALL BE CONTINUOUS WITH BUTT SPLICES BETWEEN TIES PERMITTED.

25. ADHERED MASONRY VENEER, 2-5/8" MAXIMUM THICKNESS, SHALL BE ADHERED TO BACKING WALLS PER SECTION 1405.10 OF THE INTERNATIONAL BUILDING CODE. ADHERED MASONRY SHALL BE ABLE TO DEVELOP SHEAR STRENGTH OF 50 PSI MINIMUM BETWEEN THE BACKING AND THE UNIT IN ACCORDANCE WITH ASTM C 482 OR SHALL BE ADHERED PER ARTICLE 3.3C OF TMS602/ACI530.1/ASCE 6.

STEEL

26. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE BASED ON:

- A. AISC 360 AND SECTION 2205.2 OF THE INTERNATIONAL BUILDING CODE.
- B. APRIL 14, 2010 AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES AMENDED AS FOLLOWS:
 • AS NOTED IN THE CONTRACT DOCUMENTS.
 • BY THE DELETION OF PARAGRAPH 4.4.1.
- REVISE REFERENCE FROM "STRUCTURAL DESIGN DRAWINGS" TO "CONTRACT DOCUMENTS" IN PARAGRAPH 3.1.

C. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.

27. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

TYPE OF MEMBER	ASTM SPECIFICATION	Fy
A. WIDE FLANGE SHAPES	A992	50 KSI
B. OTHER SHAPES, PLATES, AND RODS	A36	36 KSI
C. OTHER SHAPES AND PLATES (NOTED GRADE 50 ON PLANS)	A572 (GRADE 50)	50 KSI
D. PIPE COLUMNS	A53 (E OR S, GR.B)	35 KSI
E. STRUCTURAL TUBING (SQUARE OR RECTANGULAR)	A500 (GR.B) OR ASTM A1085	46 KSI
(ROUND)		42 KSI
F. CONNECTION BOLTS (3/4" ROUND, UNLESS SHOWN OTHERWISE)	A325-N	

28. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL SHALL CONFORM TO SECTION 10 OF THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES.

29. ALL STEEL EXPOSED TO THE WEATHER OR IN CONTACT WITH GROUND SHALL BE CORROSION PROTECTED BY GALVANIZATION OR PROVIDED WITH EXTERIOR PAINT SYSTEM, UNLESS OTHERWISE NOTED.

30. SHOP PRIME ALL STEEL EXCEPT:

- A. STEEL ENCASED IN CONCRETE.
- B. SURFACES TO BE WELDED.
- C. CONTACT SURFACES AT HIGH-STRENGTH BOLTS.
- D. MEMBERS TO BE GALVANIZED.
- E. MEMBERS WHICH WILL BE CONCEALED BY INTERIOR FINISHES.
- F. SURFACES TO RECEIVE SPRAYED FIREPROOFING.
- G. SURFACES TO RECEIVE OTHER SPECIAL SHOP PRIMERS.

31. ALL A-325N CONNECTION BOLTS NEEDED ONLY BE TIGHTENED TO A SNUG TIGHT CONDITION, DEFINED AS THE TIGHTNESS THAT EXISTS WHEN ALL PLIES IN A JOINT ARE IN FIRM CONTACT. THIS MAY BE ATTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH.

32. ALL ANCHORS EMBEDDED IN MASONRY OR CONCRETE SHALL BE A307 HEADED BOLTS OR A36 THREADED ROD WITH AN ASTM 563 HEAVY HEX NUT TACK WELDED ON THE EMBEDDED END.

33. ALL WELDING SHALL BE IN CONFORMANCE WITH A.I.S.C. AND A.W.S. STANDARDS AND SHALL BE PERFORMED BY W.A.B.O. CERTIFIED WELDERS USING E70 XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY A.W.S.) SHALL BE USED. ALL COMPLETE JOINT PENETRATION GROOVE WELDS SHALL BE MADE WITH A FILLER MATERIAL THAT HAS A MINIMUM CVN TOUGHNESS OF 20 FT-LBS AT -20 DEGREES F AND 40 FT - LBS AT 70 DEGREES F, AS DETERMINED BY AWS CLASSIFICATION OR MANUFACTURER CERTIFICATION.

34. METAL CHIMNEYS SHALL BE ANCHORED AT ROOF AND CEILING WITH TWO 1-1/2"x1/8" METAL STRAPS LOOPED AROUND THE OUTSIDE OF THE CHIMNEY INSULATION AND NAILED WITH SIX 8d NAILS PER STRAP TO THE ROOF AND CEILING FRAMING.

WOOD

35. FRAMING LUMBER SHALL BE KILN DRIED OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH W.C.L.B. STANDARD GRADING RULES FOR WEST COAST LUMBER NO. 17. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

JOISTS AND BEAMS: (2X & 3X MEMBERS)	HEM-FIR NO. 2 MINIMUM BASE VALUE, Fb = 850 PSI
(4X MEMBERS)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fb = 1000 PSI
BEAMS: (INCL. 6X AND LARGER)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fb = 1350 PSI
POSTS: (4X MEMBERS)	DOUGLAS FIR-LARCH NO. 2 MINIMUM BASE VALUE, Fc = 1350 PSI
(6X AND LARGER)	DOUGLAS FIR-LARCH NO. 1 MINIMUM BASE VALUE, Fc = 1000 PSI
STUDS, PLATES & MISC. FRAMING:	HEM-FIR NO. 2

36. GLUED LAMINATED MEMBERS SHALL BE FABRICATED IN CONFORMANCE WITH ASTM AND ANSI/AITC STANDARDS. EACH MEMBER SHALL BEAR AN A.I.T.C. OR APA-EWS IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN A.I.T.C. OR APA-EWS CERTIFICATE OF CONFORMANCE. ALL SIMPLE SPAN BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V4, Fb = 2,400 PSI, Fv = 265 PSI. ALL CANTILEVERED BEAMS SHALL BE DOUGLAS FIR COMBINATION 24F-V8, Fb = 2,400 PSI, Fv = 265 PSI. CAMBER ALL SIMPLE SPAN GLULAM BEAMS TO 3,500' RADIUS, UNLESS SHOWN OTHERWISE ON THE PLANS.

37. MANUFACTURED LUMBER, PSL, LVL, AND LSL SHOWN ON PLAN ARE BASED PRODUCTS MANUFACTURED BY THE WEYERHAEUSER CORPORATION IN ACCORDANCE WITH ICC-ES REPORT ESR-1387. MEMBERS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:

PSL (2.2E)	Fb = 2900 PSI, E = 2200 KSI, Fv = 290 PSI
LVL (2.0E)	Fb = 2600 PSI, E = 2000 KSI, Fv = 285 PSI
LSL (1.55E)	Fb = 2325 PSI, E = 1550 KSI, Fv = 310 PSI

ALTERNATE MANUFACTURED LUMBER MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE MANUFACTURER'S PRODUCTS SHALL BE COMPATIBLE WITH THE JOIST HANGERS AND OTHER HARDWARE SPECIFIED ON PLANS, OR ALTERNATE HANGERS AND HARDWARE SHALL SUBMITTED FOR REVIEW AND APPROVAL. SUBSTITUTED ITEMS SHALL HAVE ICC-ES REPORT APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES.

MANUFACTURED LUMBER PRODUCTS SHALL BE INSTALLED WITH A MOISTURE CONTENT OF 12% OR LESS. THE CONTRACTOR SHALL MAKE PROVISIONS DURING CONSTRUCTION TO PREVENT THE MOISTURE CONTENT OF INSTALLED BEAMS FROM EXCEEDING 12%. EXCESSIVE DEFLECTIONS MAY OCCUR IF MOISTURE CONTENT EXCEEDS THIS VALUE.

38. PREFABRICATED PLYWOOD WEB JOIST DESIGN SHOWN ON PLANS IS BASED ON JOISTS MANUFACTURED BY THE WEYERHAEUSER CORPORATION. ALTERNATE PLYWOOD WEB JOIST MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER. ALTERNATE MANUFACTURER'S PRODUCTS SHALL BE COMPATIBLE WITH THE JOIST HANGERS AND OTHER HARDWARE SPECIFIED ON PLANS, OR ALTERNATE HANGERS AND HARDWARE SHALL SUBMITTED FOR REVIEW AND APPROVAL. SUBSTITUTED ITEMS SHALL HAVE ICC-ES REPORT APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES.

39. PREFABRICATED CONNECTOR PLATE WOOD ROOF TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH THE "NATIONAL DESIGN STANDARD FOR METAL PLATE-CONNECTED WOOD TRUSS CONSTRUCTION, ANSI/TPI 1" BY THE TRUSS PLATE INSTITUTE FOR THE SPANS AND CONDITIONS SHOWN ON THE PLANS. LOADING SHALL BE AS FOLLOWS:

TOP CHORD LIVE LOAD	25 PSF
TOP CHORD DEAD LOAD	10 PSF
BOTTOM CHORD DEAD LOAD	5 PSF
TOTAL LOAD	40 PSF

WIND UPLIFT (TOP CHORD)	5 PSF
BOTTOM CHORD LIVE LOAD (BOTTOM CHORD LIVE LOAD DOES NOT ACT CONCURRENTLY WITH THE ROOF LIVE LOAD)	10 PSF

WOOD TRUSSES SHALL UTILIZE APPROVED CONNECTOR PLATES (GANGNAIL OR EQUAL). SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. SUBMITTED DOCUMENTS SHALL BE SIGNED AND STAMPED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON. PROVIDE FOR SHAPES, BEARING POINTS, INTERSECTIONS, HIPPS, VALLEYS, ETC., SHOWN ON THE DRAWINGS. EXACT COMPOSITION OF SPECIAL HIP, VALLEY, AND INTERSECTION AREAS (USE OF GIRDER TRUSSES, JACK TRUSSES, STEP-DOWN TRUSSES, ETC.) SHALL BE DETERMINED BY THE MANUFACTURER UNLESS SPECIFICALLY INDICATED ON THE PLANS. PROVIDE ALL TRUSS TO TRUSS AND TRUSS TO GIRDER TRUSS CONNECTION DETAILS AND REQUIRED CONNECTION MATERIALS. PROVIDE FOR ALL TEMPORARY AND PERMANENT TRUSS BRACING AND BRIDGING.

40. PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS 1 OR PS 2. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD.

ROOF SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 32/16.

FLOOR SHEATHING SHALL BE 3/4" (NOMINAL) WITH SPAN RATING 48/24.

WALL SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 24/0.

PROVIDE APPROVED PLYWOOD EDGE CLIPS CENTERED BETWEEN JOISTS/TRUSSES AT UNBLOCKED ROOF SHEATHING EDGES. ALL FLOOR SHEATHING EDGES SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED WITH SOLID BLOCKING. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF FLOOR AND ROOF SHEATHING.

REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS.

41. ALL WOOD IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE OR (2) LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER SHALL BE PROVIDED BETWEEN UNTREATED WOOD AND CONCRETE OR MASONRY.

42. PRESERVATIVE TREATED WOOD SHALL BE TREATED PER AWP A STANDARD U1 TO THE USE CATEGORY EQUAL TO OR HIGHER THAN THE INTENDED APPLICATION. TREATED WOOD FOR ABOVE GROUND USE SHALL BE TREATED TO AWP UC3B. WOOD IN CONTINUOUS CONTACT WITH FRESH WATER OR SOIL SHALL BE TREATED TO AWP UC4A. WOOD FOR USE IN PERMANENT FOUNDATIONS SHALL BE TREATED TO AWP UC4B.

43. WOOD TREATED FOR FIRE RESISTANCE SHALL MEET THE REQUIREMENTS OF ASTM E 84 OR UL 723 AND HAVE A LISTED FLAME SPREAD INDEX OF 25 OR LESS. FIRE RETARDANT TREATED LUMBER AND WOOD STRUCTURAL PANELS SHALL BE LABELED IN ACCORDANCE WITH IBC 2303.2.4. WOOD TREATED FOR FIRE PROTECTION FOR USE IN INTERIOR ABOVE GROUND CONSTRUCTION AND CONTINUOUSLY PROTECTED FROM WEATHER AND OTHER SOURCES OF MOISTURE SHALL BE TREATED TO AWP UCFA. WOOD TREATED FOR FIRE PROTECTION FOR USE IN EXTERIOR ABOVE GROUND CONSTRUCTION AND SUBJECT TO WETTING OR OTHER SOURCES OF MOISTURE SHALL BE TREATED TO AWP UCFB.

44. FASTENERS AND TIMBER CONNECTORS USED WITH TREATED WOOD SHALL HAVE CORROSION RESISTANCE AS INDICATED IN THE FOLLOWING TABLE, UNLESS OTHERWISE NOTED.

WOOD TREATMENT	CONDITION	PROTECTION
HAS NO AMMONIA CARRIER	INTERIOR DRY	G90 GALVANIZED
CONTAINS AMMONIA CARRIER	INTERIOR DRY	G185 OR A185 HOT DIPPED OR CONTINUOUS HOT-GALVANIZED PER ASTM A653
CONTAINS AMMONIA CARRIER	INTERIOR WET	TYPE 304 OR 316 STAINLESS
CONTAINS AMMONIA CARRIER	EXTERIOR	TYPE 304 OR 316 STAINLESS
AZCA	ANY	TYPE 304 OR 316 STAINLESS

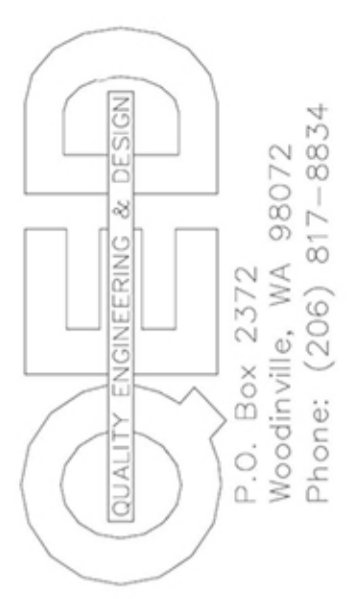
INTERIOR DRY CONDITIONS SHALL HAVE WOOD MOISTURE CONTENT LESS THAN 19%. WOOD MOISTURE CONTENT IN OTHER CONDITIONS (INTERIOR WET, EXTERIOR WET, AND EXTERIOR DRY) IS EXPECTED TO EXCEED 19%. CONNECTORS AND THEIR FASTENERS SHALL BE THE SAME MATERIAL. COMPLY WITH THE TREATMENT MANUFACTURERS RECOMMENDATIONS FOR PROTECTION OF METAL.

45. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NUMBER C-2015. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE ICC-ES APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER FOR MAXIMUM LOAD CARRYING CAPACITY. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

ALL 2X JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS. ALL TJ JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "ITS" SERIES JOIST HANGERS. ALL DOUBLE-JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "MIT" SERIES JOIST HANGERS.

WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER.

ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM)AS MEMBERS CONNECTED.



PLOT DATE: OCT-2017
 DRAWN BY: JA, JG
 PURPOSE: PERMIT
 PROJ. NO: 2017_MLLS
 CHECKED BY: JG

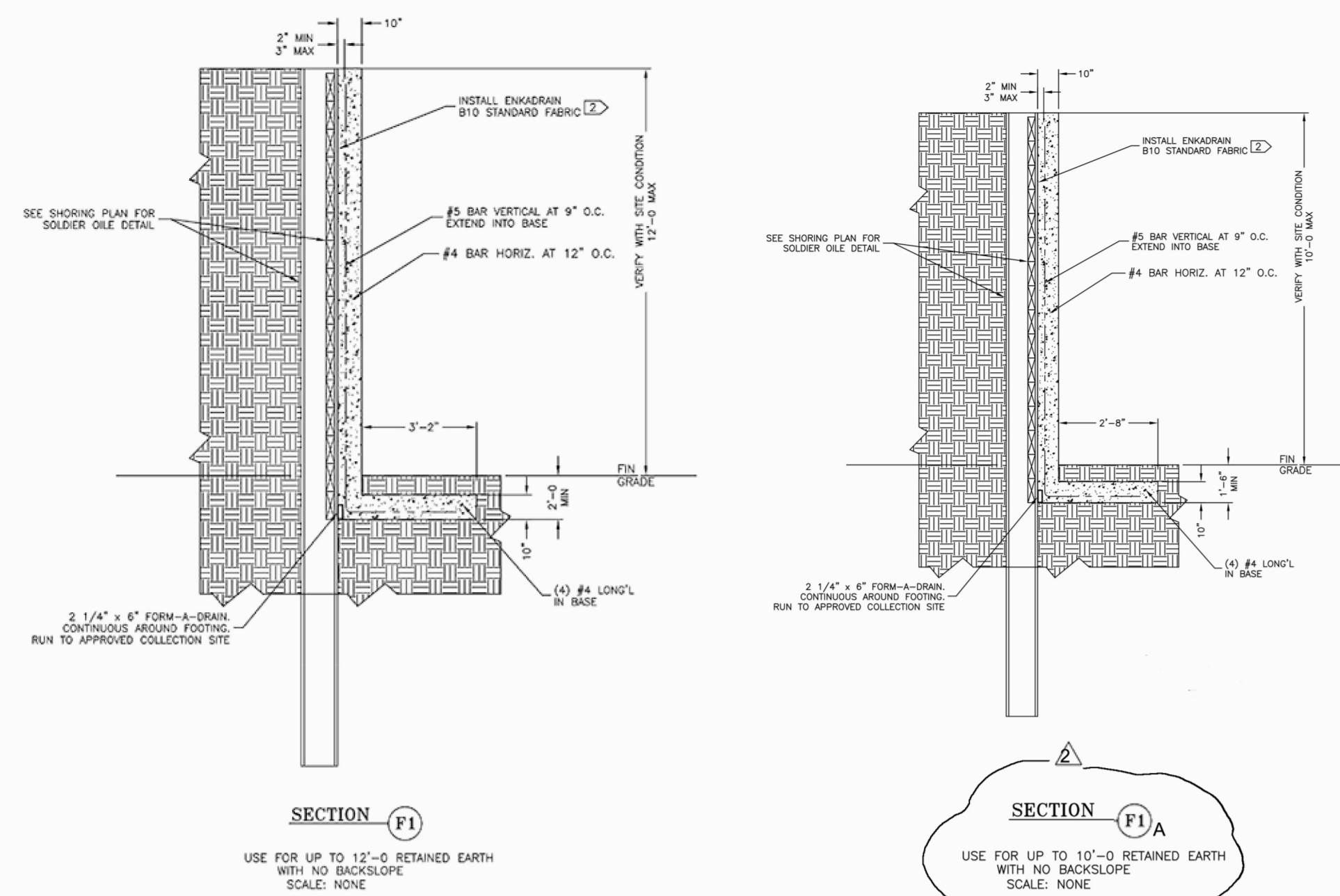
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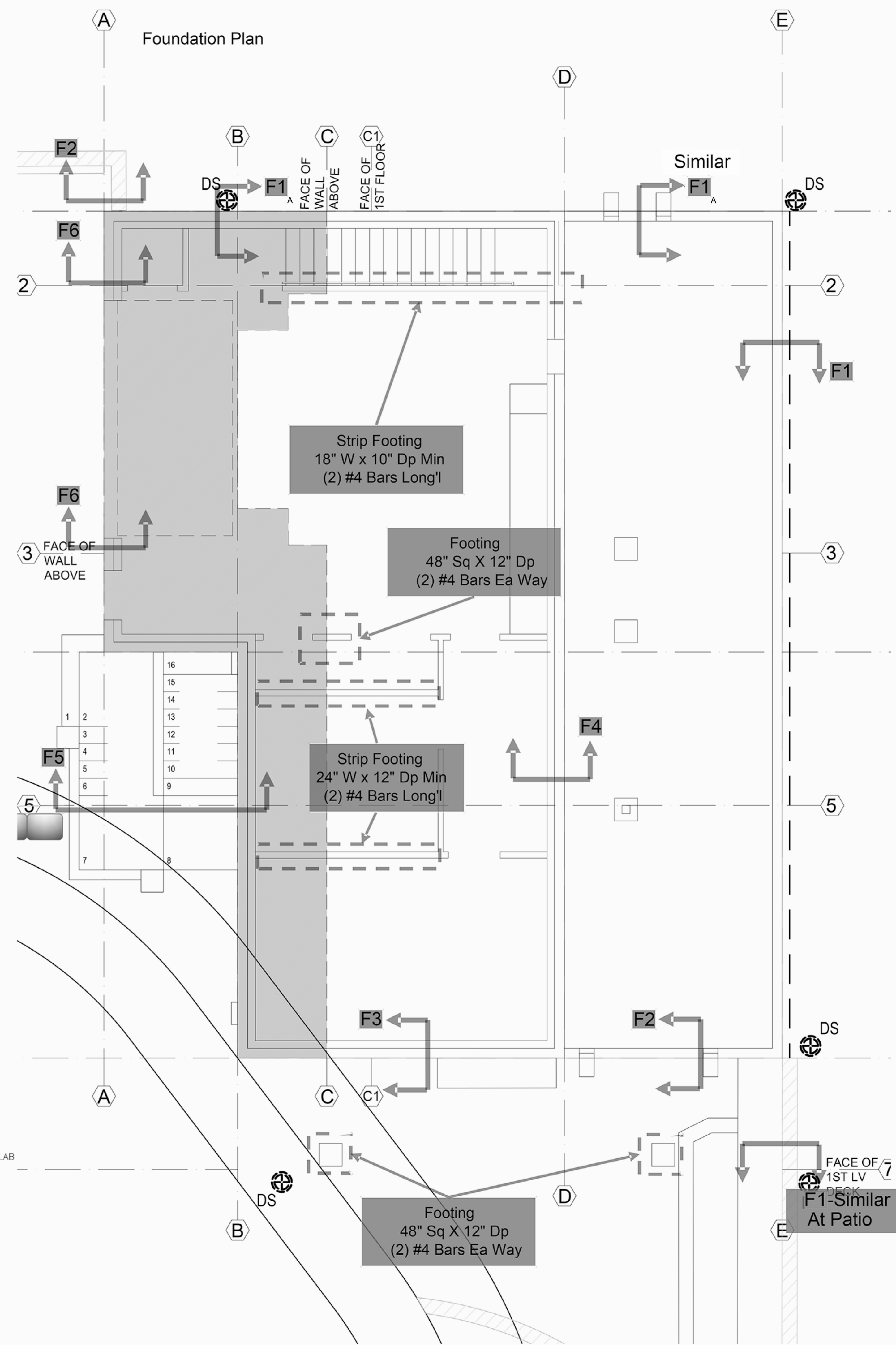
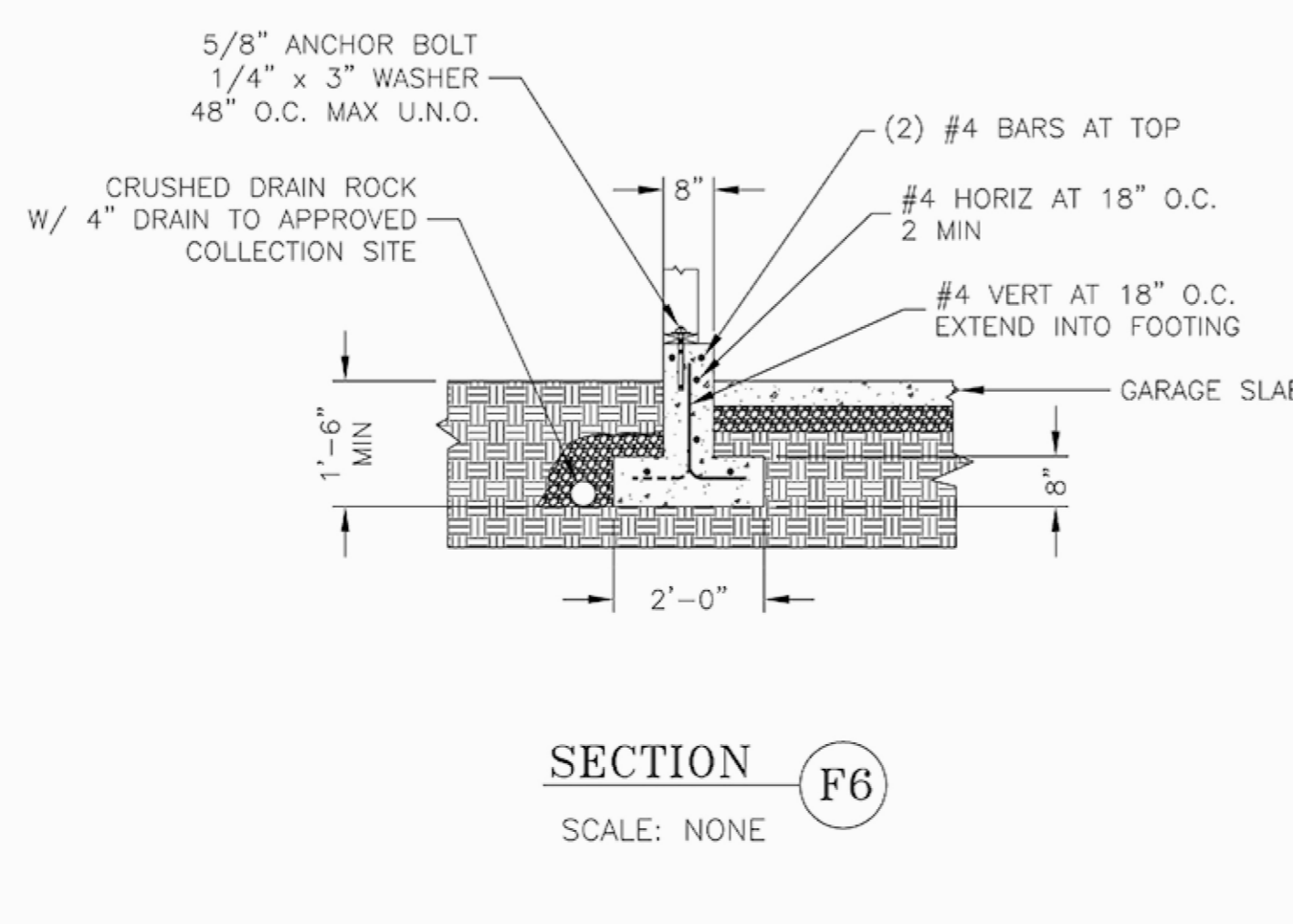
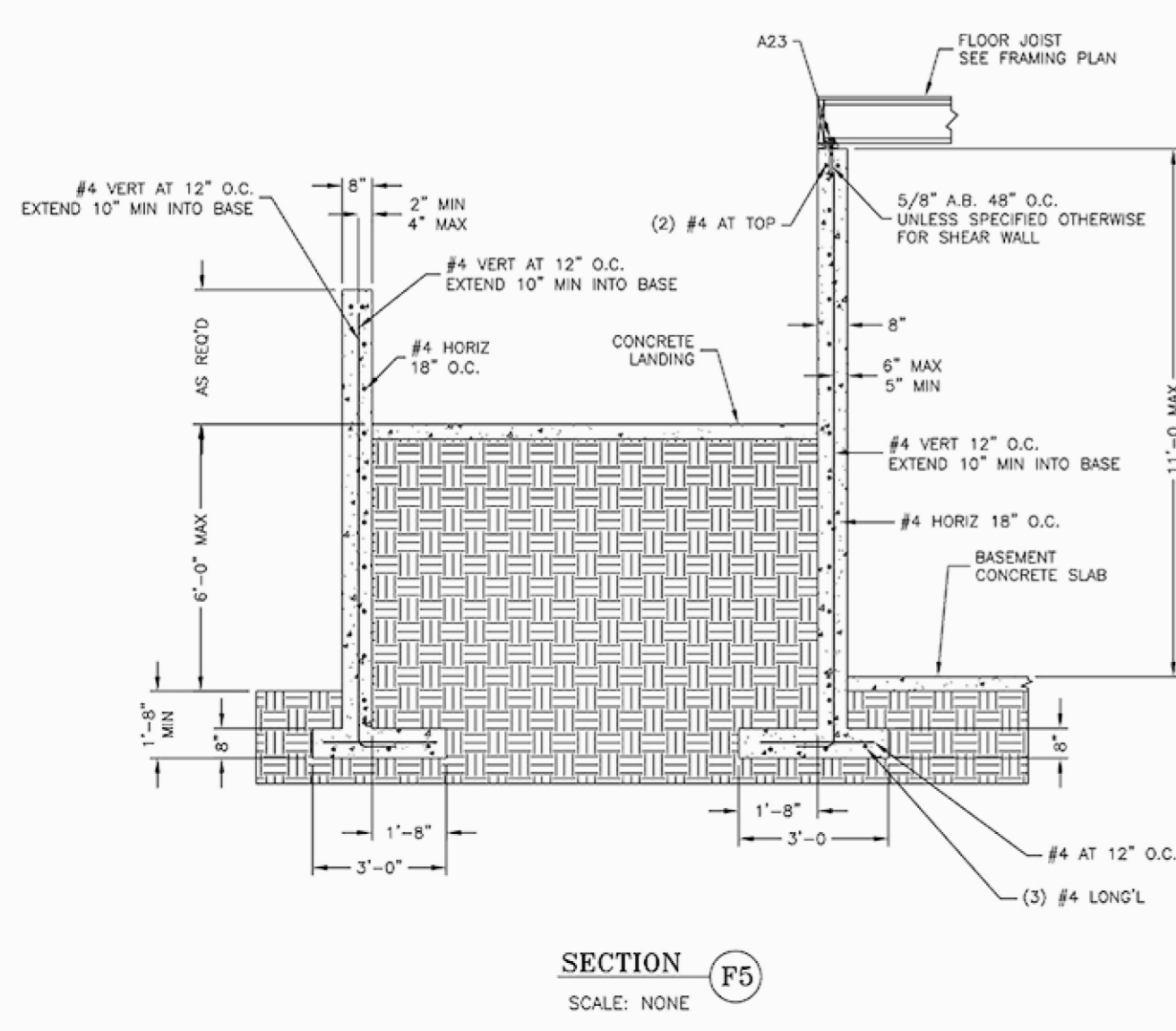
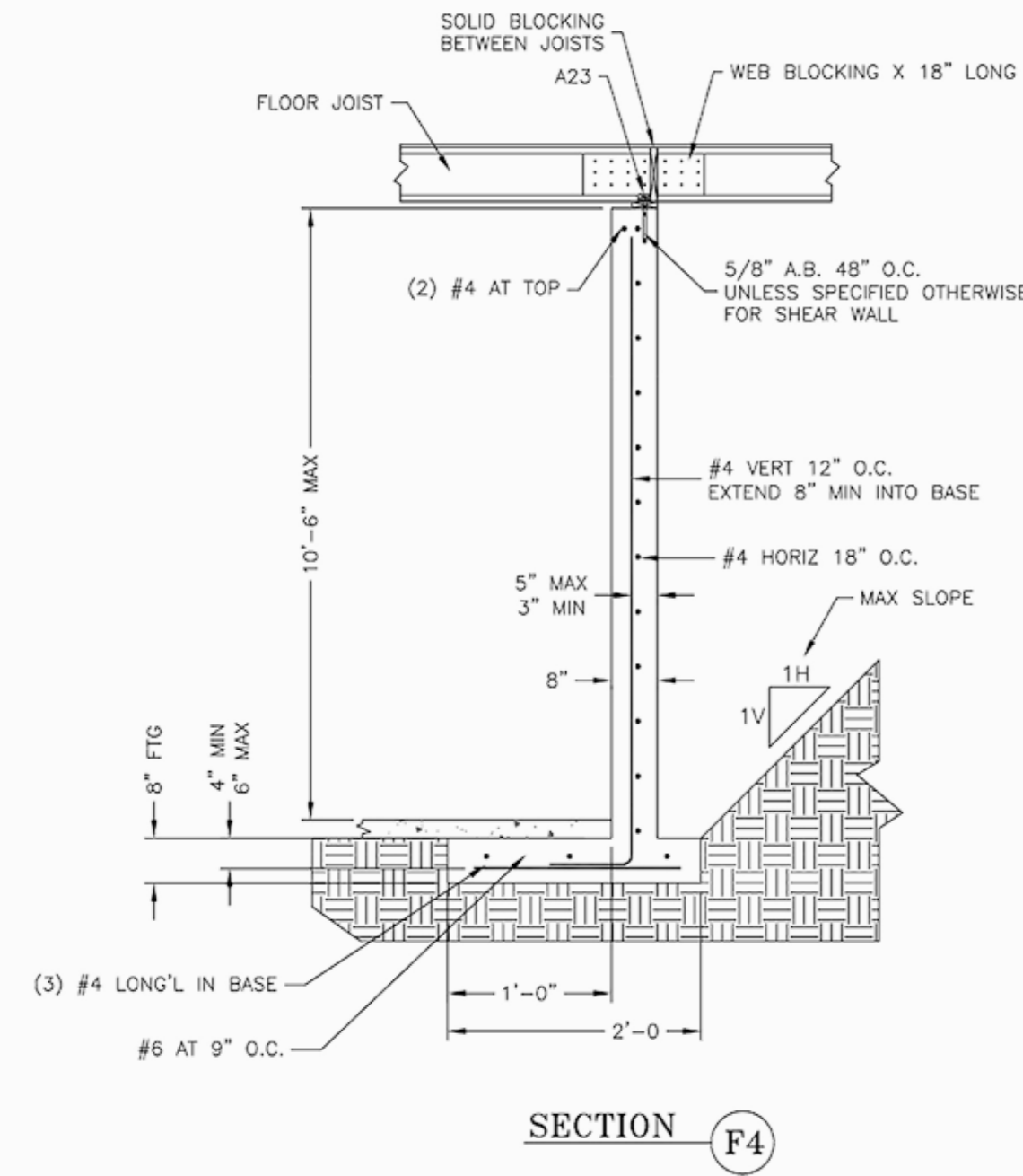
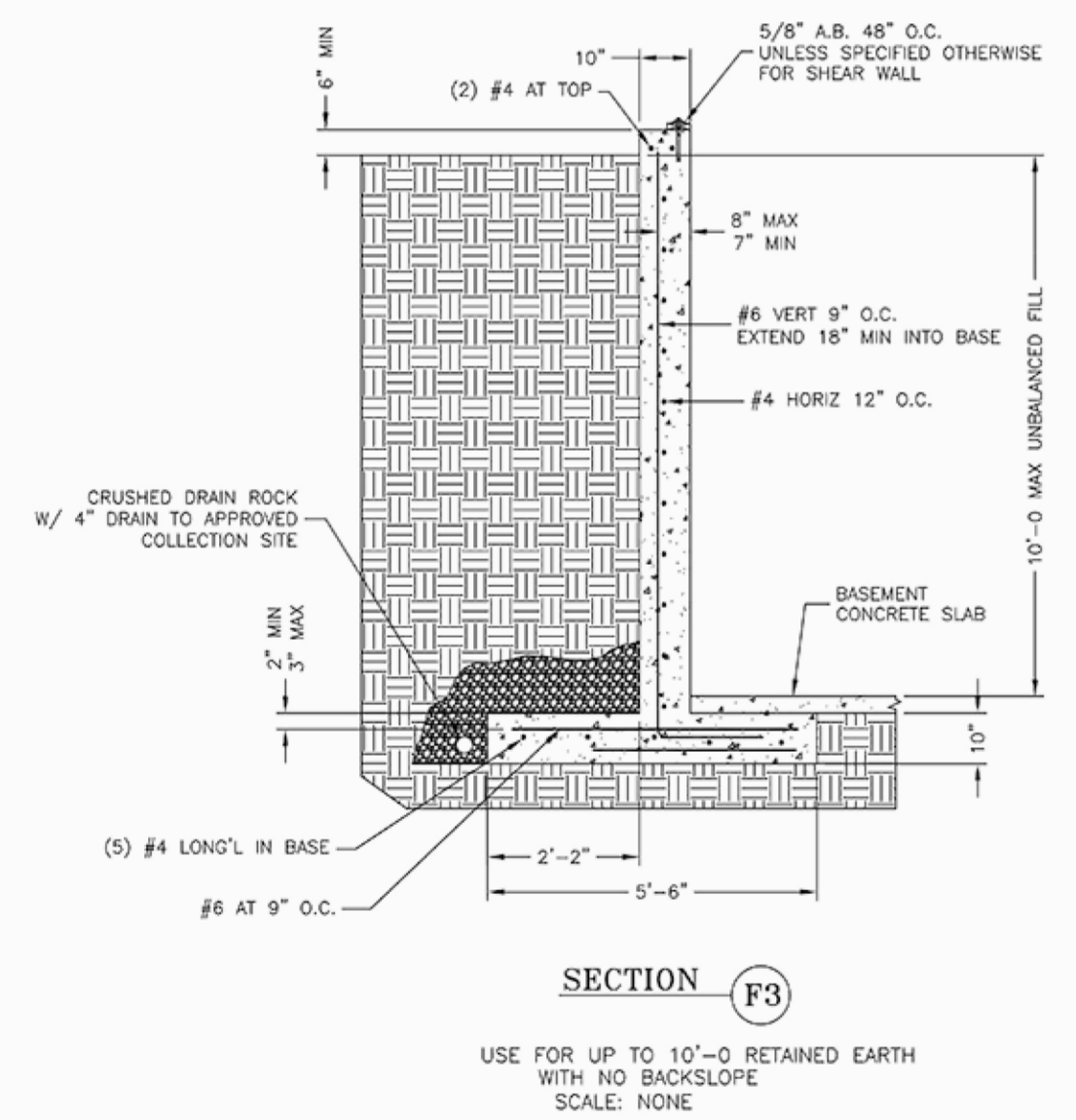
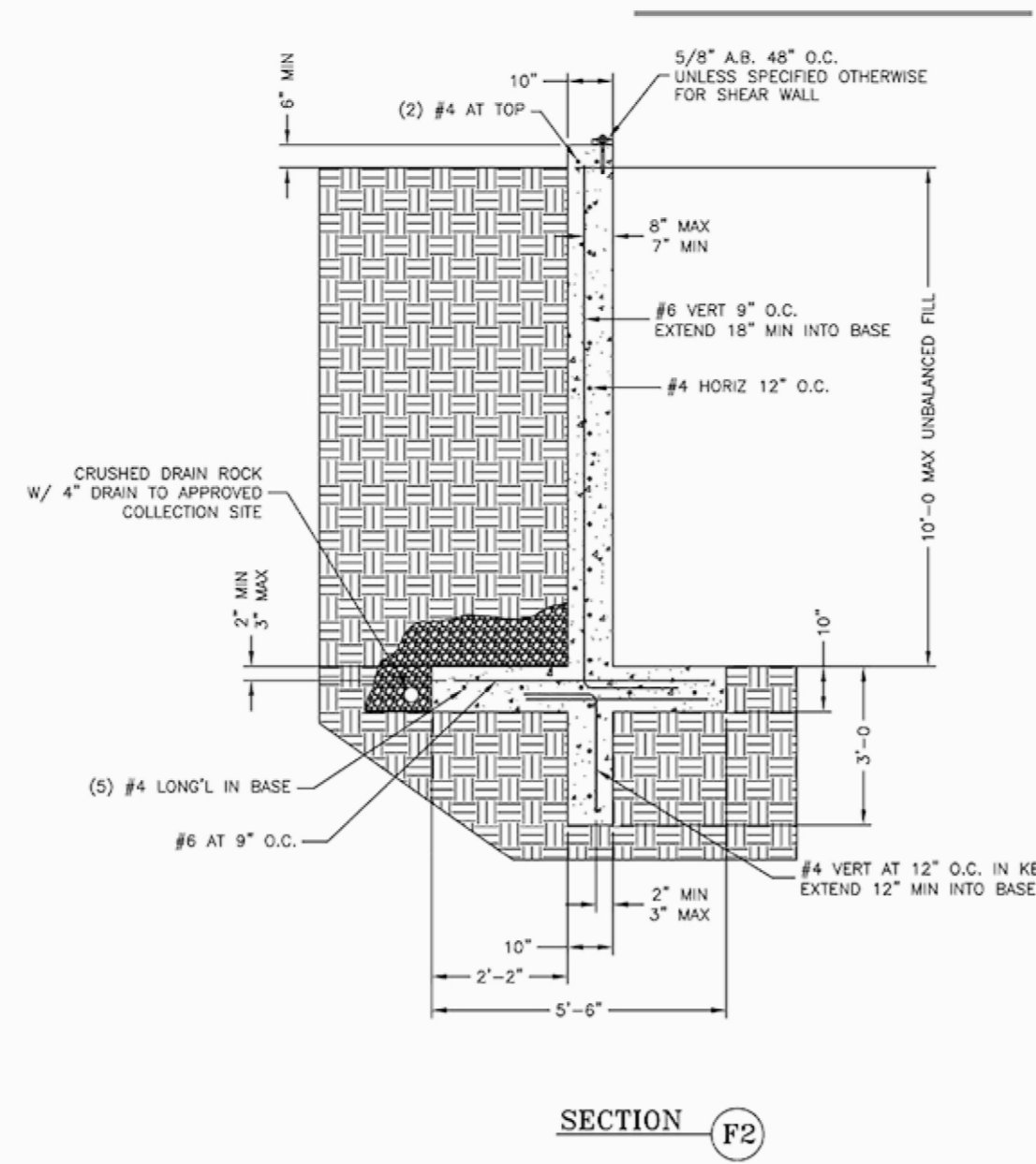
MERCER ISLAND RESIDENCE
 5236 W MERCER WAY
 MERCER ISLAND, WA 98115

STRUCTURAL GENERAL STRUCTURAL NOTES

SHEET NO.



INSTALL ENKADRAN PER MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS. ENSURE THAT RIGID DRAIN IS ISOLATED FROM SOIL BY ENKADRAN FABRIC. USE ENKADRAN STANDARD FABRIC, MODEL B10 AS A MINIMUM REQUIREMENT.



PLOT DATE: OCT-2017
DRAWN BY: JA, JG
PURPOSE: PERMIT
PROJ. NO: 2017_MILLS
CHECKED BY: JG

REVISIONS:
DATE: AUG. 2018
DATE:

PERMIT SET

MERCER ISLAND RESIDENCE
5236 W MERCER WAY
MERCER ISLAND, WA 98125

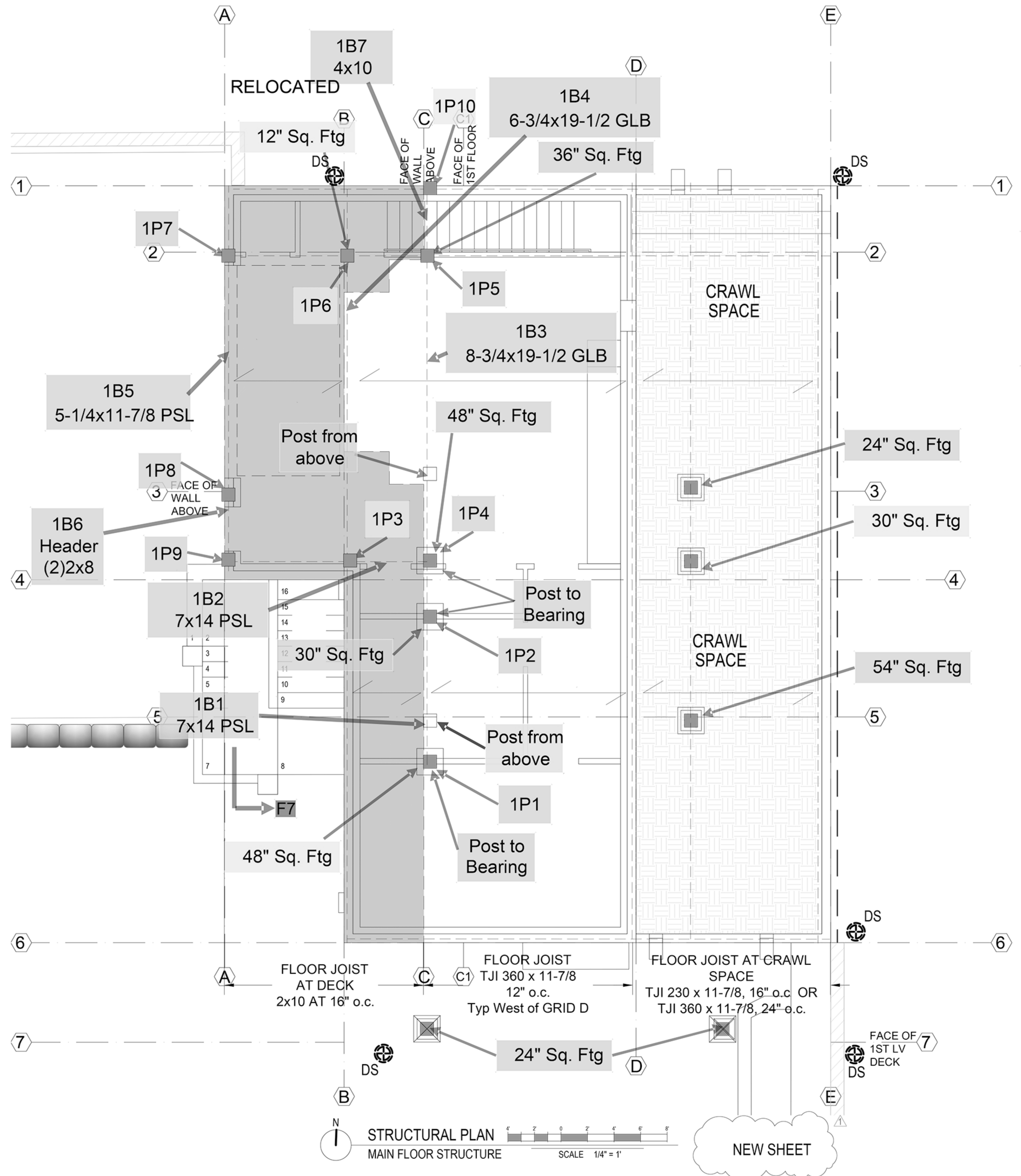
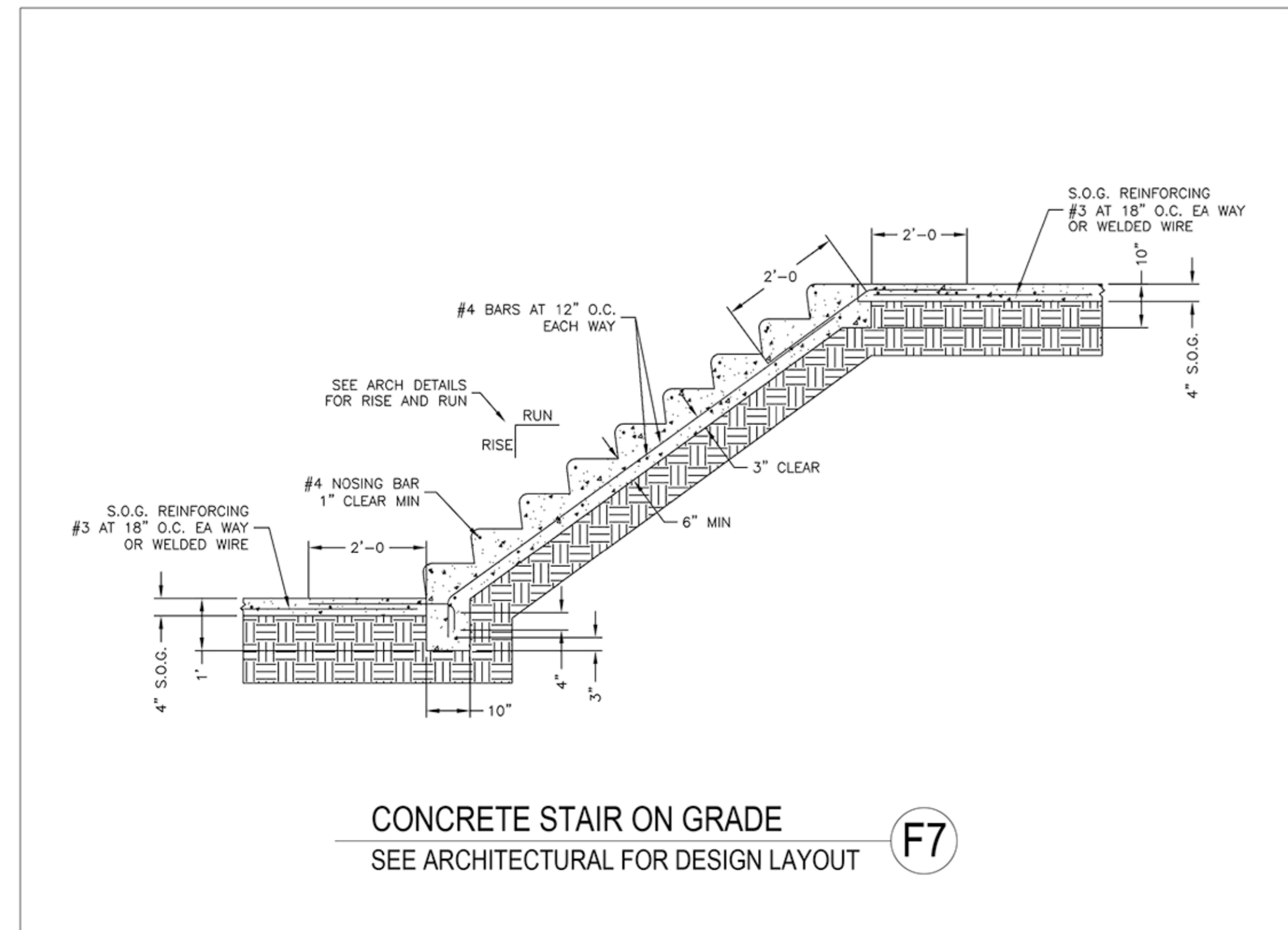
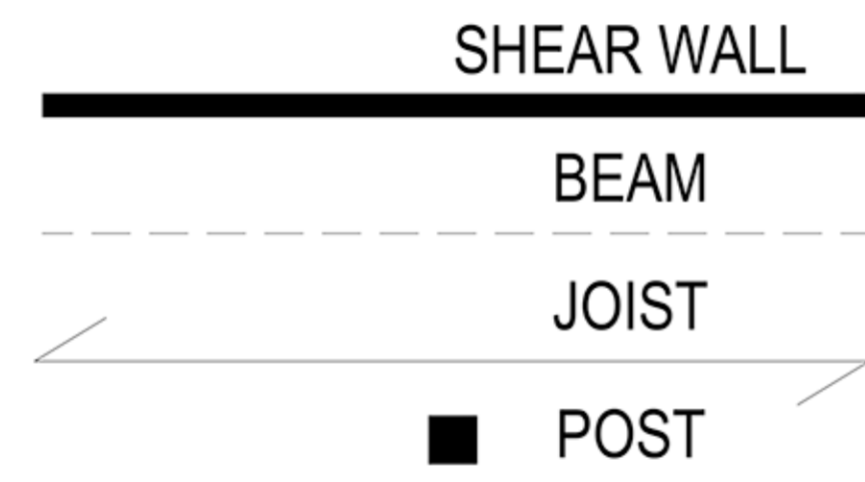
STRUCTURAL FOUNDATION PLAN AND SECTIONS

SHEET NO.

S.2
63

1st Floor Posts

BEAM ID	POST ID	POST SIZE	HANGER TYPE	NOTES
1B1	1P1	5-1/4 x 5-1/4 PSL		18,711 lb.
	1P2	6x6 D-Fir		8000
1B2	1P3	5-1/4 x 7 PSL		27,000 lb.
	1P4	5-1/4 x 5-1/4 PSL		20000 lb.
1B3			EG9	18697
	1P5	6x6 D-Fir		12,500 lb.
1B4	1P6	6x6 D-Fir		12,000
1B5	1P7	4x6 D-Fir		4000
	1P8	4x6 D-Fir		5,000 lb.
1B6	1P9	4x4 D-Fir		1,000 lb.
1B7	1P10	4x4 D-Fir		1,700 lb.



QUALITY ENGINEERING & DESIGN
P.O. Box 2372
Woodinville, WA 98072
Phone: (206) 817-8834

PLOT DATE: OCT-2017
DRAWN BY: JA, JG
PURPOSE: PERMIT
PROJ. NO: 2017_MLLS
CHECKED BY: JG

REVISIONS:
DATE: DEC-2017

PERMIT SET

MERCER ISLAND RESIDENCE
5236 W MERCER WAY
MERCER ISLAND, WA 98125

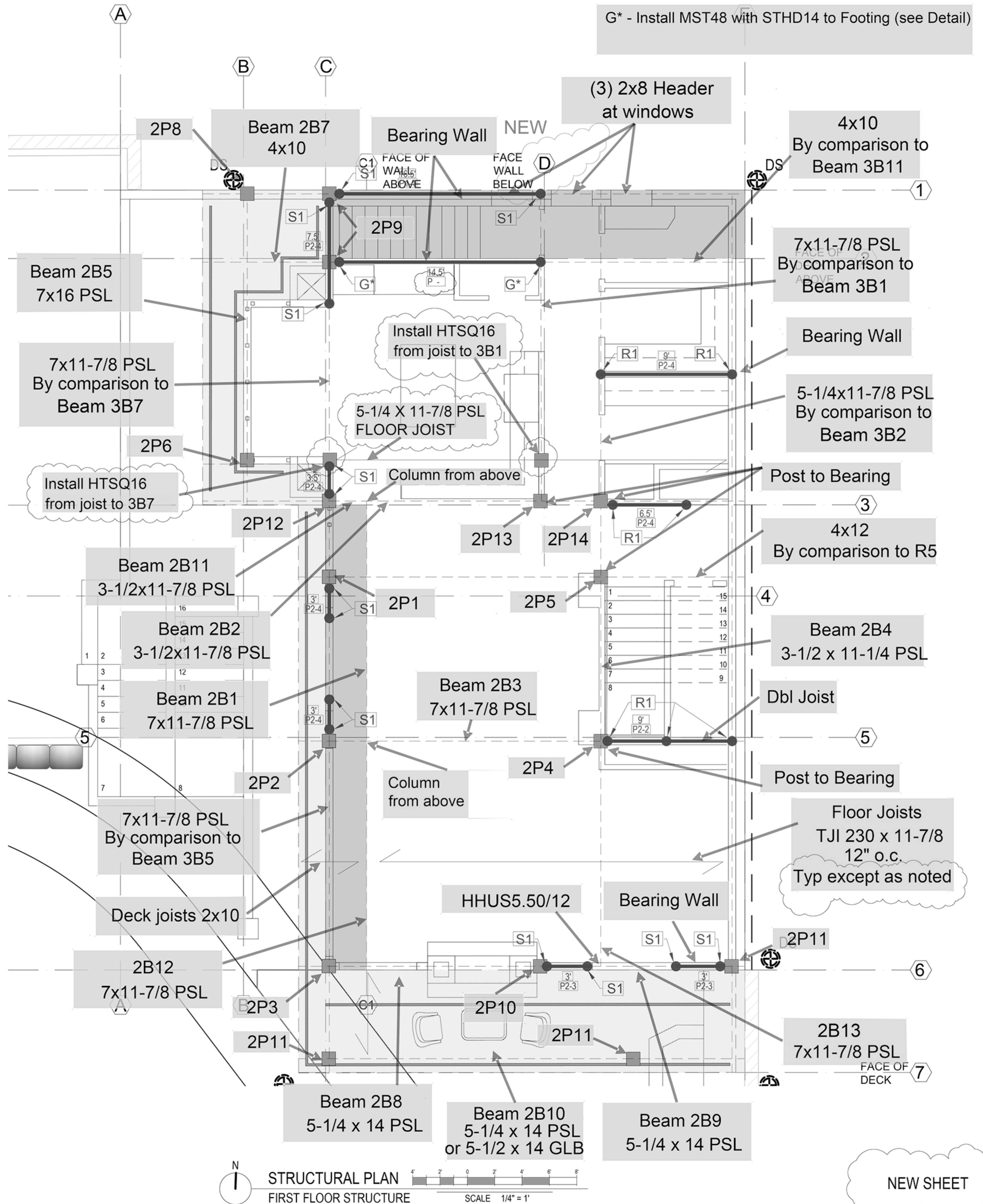
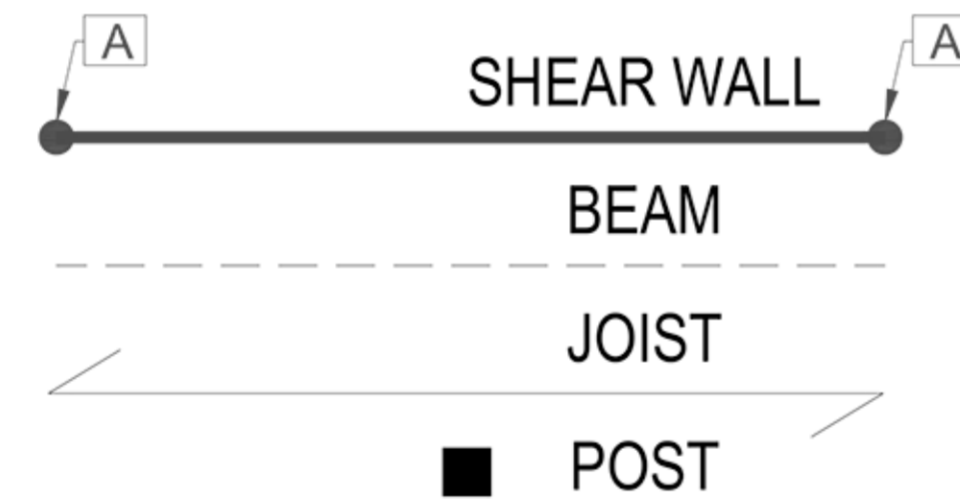
STRUCTURAL
MAIN FLOOR STRUCTURE

SHEET NO.

S.3

2nd Floor Posts

BEAM ID	POST ID	POST SIZE	HANGER TYPE	NOTES
2B1	2P1	6x6 D-Fir	HHUS410	
2B2	2P2	5-1/4 x 5-1/4 PSL	HHUS410	
2B3	2P3	5-1/4 x 5-1/4 PSL		
2B4	2P4	7 x 7 PSL		17500 + 3P4 = 32500
	2P5	6x6 D-Fir		5400 + 3P5 = 8400
2B5	2P6	4x4 D-Fir		
	2P7	6x6 D-Fir		
	2P8	4x6 D-Fir		
2B7	2P9	4x4 D-Fir		
2B8	2P10	5-1/4 x 7 PSL		Land on Post 2P3 & 2P10
2B9	2P11	6x6 D-Fir		5150 + 3P11 = 9350
2B10	2P11	6x6 D-Fir		6,000 lb.
2B11	2P12	5-1/4 x 5-1/4 PSL		
	2P13	6x6 D-Fir		10,500 lb.
	2P14	6x6 D-Fir		6,000 lb.



STRUCTURAL PLAN
FIRST FLOOR STRUCTURE
SCALE 1/4" = 1'

NEW SHEET



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MERCER ISLAND, WA 98125

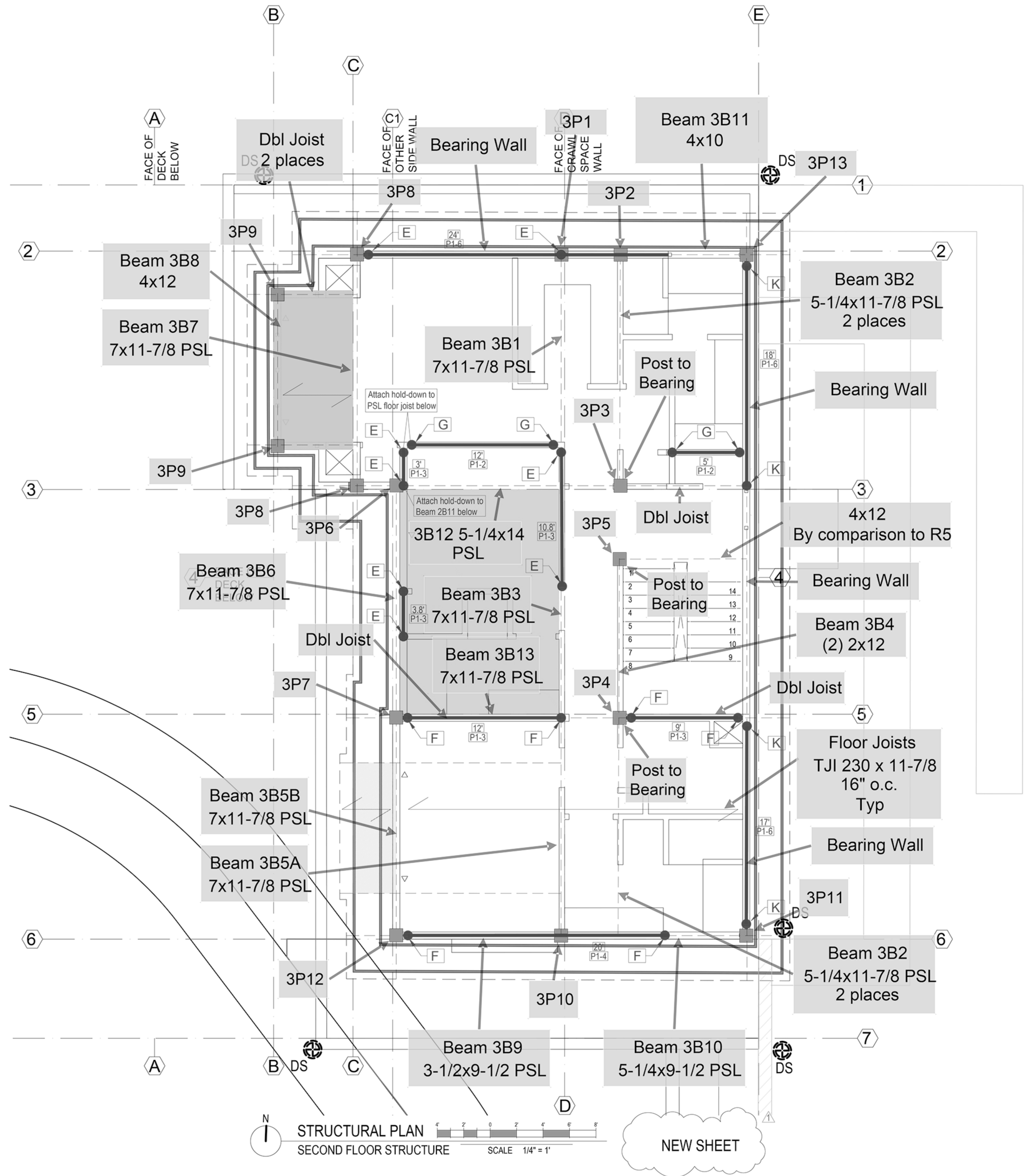
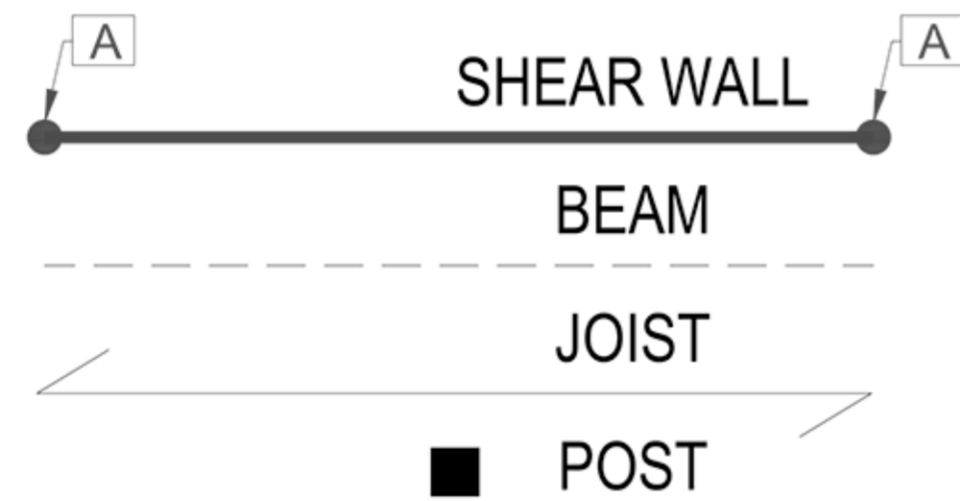
STRUCTURAL
FIRST FLOOR STRUCTURE

SHEET NO.

S.4
65

3rd Floor Posts

BEAM ID	POST ID	POST SIZE	HANGER TYPE	NOTES
3B1	3P1	4x6 D-Fir	HHUS7.25/10	
3B2	3P2	4x4 D-Fir		
	3P3	5-1/4 x 5-1/4 PSL	12,000 lb.	12,000 lb.
	3P4	5-1/4 x 5-1/4 PSL	15,000 lb.	15,000 lb.
3B3			HGUS7.25/12	
3B4			U210-2	
	3P5	4x4 D-Fir		3000 lb.
3B5			HGUS7.25/12	
3B6	3P6	5-1/4 x 5-1/4 PSL		
	3P7	5-1/4 x 5-1/4 PSL		
3B7	3P8	6x6 D-Fir		
3B8	3P9	4x4 D-Fir		
3B9	3P10	6x6 D-Fir		
	3P11	4x4 D-Fir		4200 lb.
3B10	3P12	6x6 D-Fir		
3B11	3P13	4x4 D-Fir		
3B12			HGUS5.50/14	
3B13			HGUS7.25/12	



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 MERCER ISLAND, WA 98125

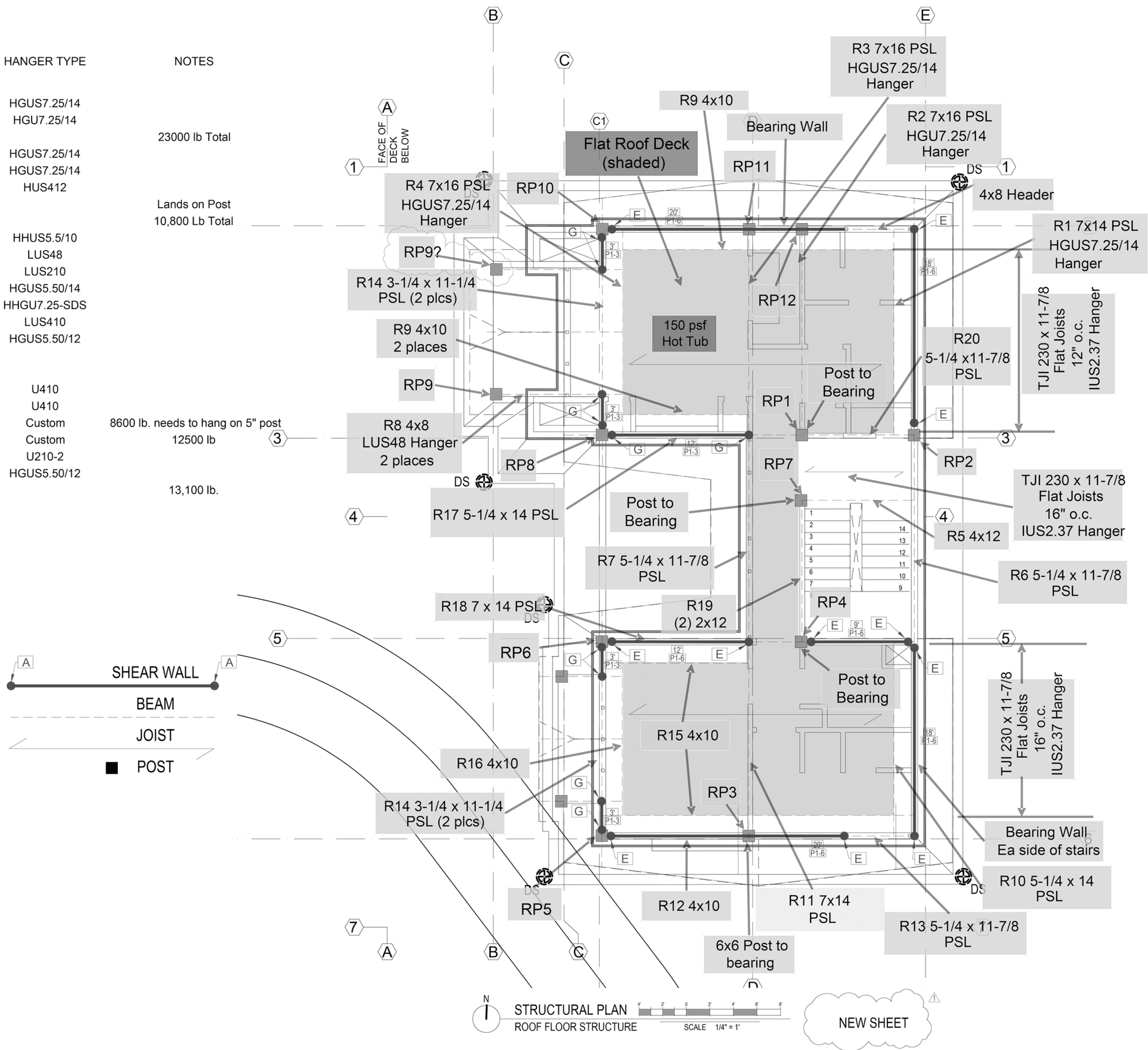
STRUCTURAL SECOND FLOOR STRUCTURE

SHEET NO.

S.5
 66

Roof Framing-Posts

BEAM ID	POST ID	POST SIZE	HANGER TYPE	NOTES
R1	RP1	5-1/4 x 5-1/4 PSL	HGUS7.25/14	23000 lb Total
R2			HGU7.25/14	
R3			HGUS7.25/14	
R4			HGUS7.25/14	
R5			HUS412	
R6				
R7	RP2	5-1/4 x 5-1/4 PSL	HGUS7.25/14	Lands on Post 10,800 Lb Total
R8			HGUS7.25/14	
R9			HUS412	
R10				
R11				
R12				
R13	RP3	5-1/4 x 5-1/4 PSL	HHUS5.5/10	8600 lb. needs to hang on 5" post 12500 lb
R14			4x4 D-Fir	
R15			LUS48	
R16			LUS210	
R17			HGUS5.50/14	
R18			HHGU7.25-SDS	
R19	LUS410	13,100 lb.		
R20	HGUS5.50/12			
RP4	6x6 D-Fir			
RP5	3-1/2 x 3-1/2 PSL			
RP6	3-1/2 x 7 PSL			
RP7	4x4 D-Fir			
RP8	3-1/2 x 5-1/4 PSL			
RP9	4x4 D-Fir			
RP10	4x4 D-Fir			
RP11	5-1/4 x 5-1/4 PSL			
RP12	5-1/4 x 5-1/4 PSL			



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STRUCTURAL ROOF FLOOR STRUCTURE

SHEET NO.

S.6



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 △ DATE: DEC-2017
 △ DATE:

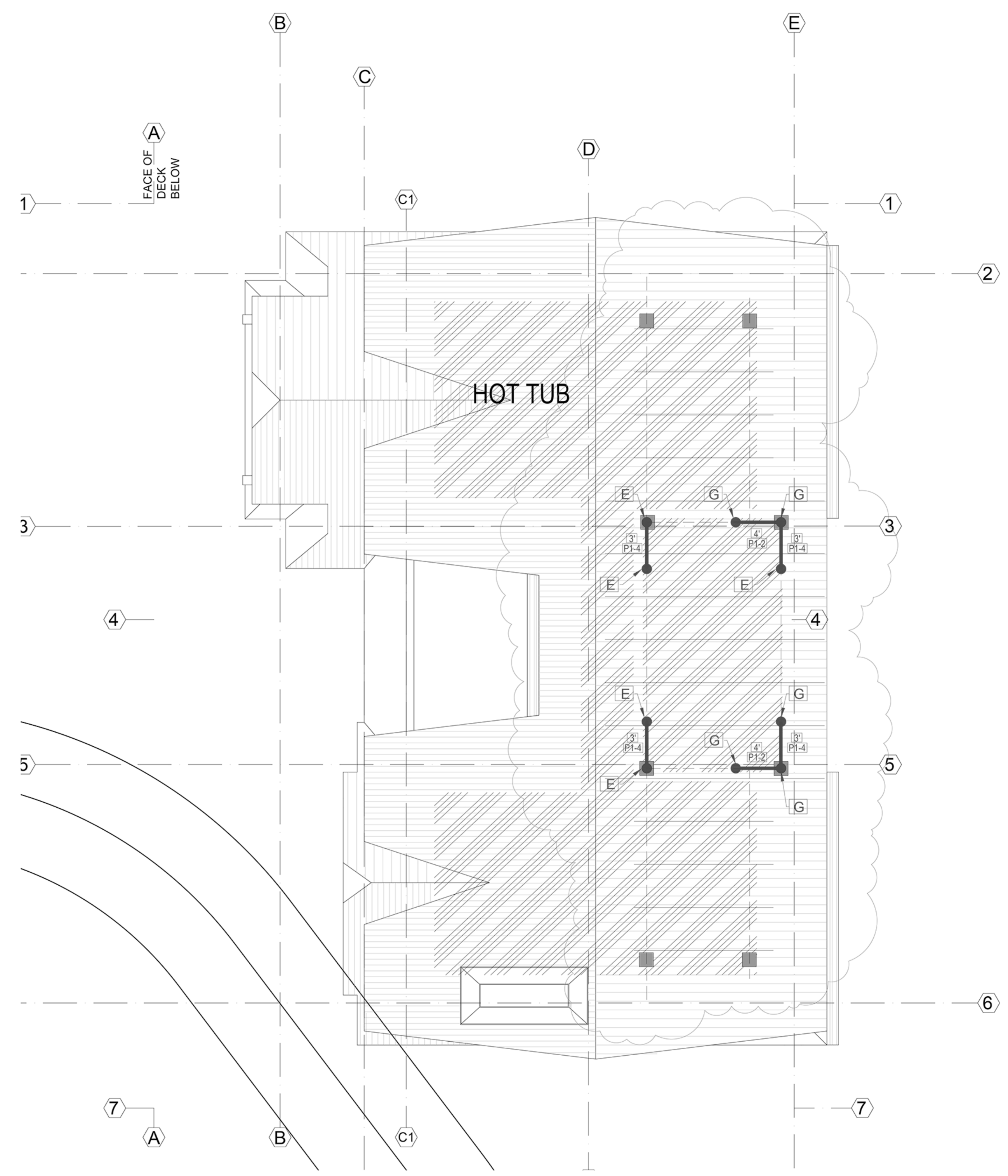
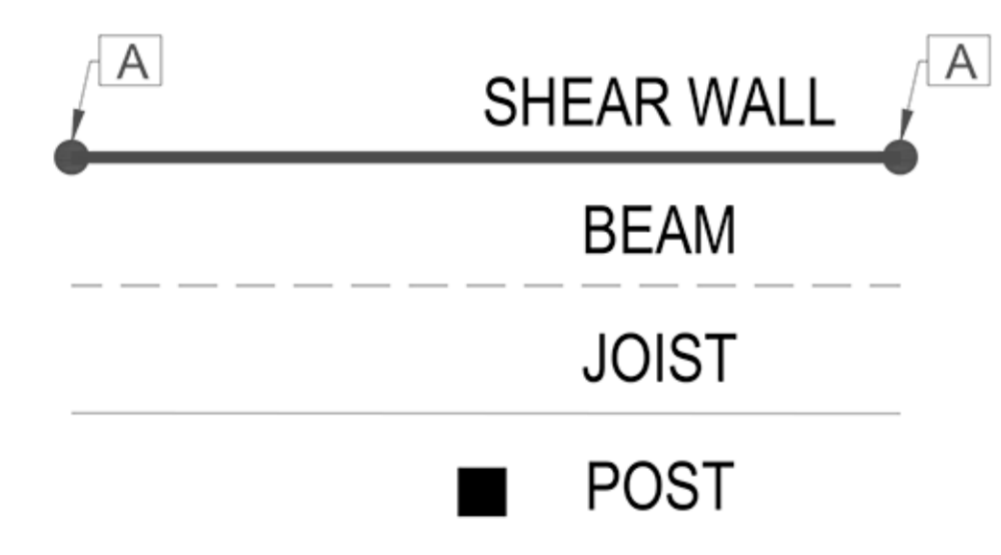
PERMIT SET

MERCER ISLAND RESIDENCE
 5236 W MERCER WAY
 MERCER ISLAND, WA 98125

STRUCTURAL ROOF STRUCTURE

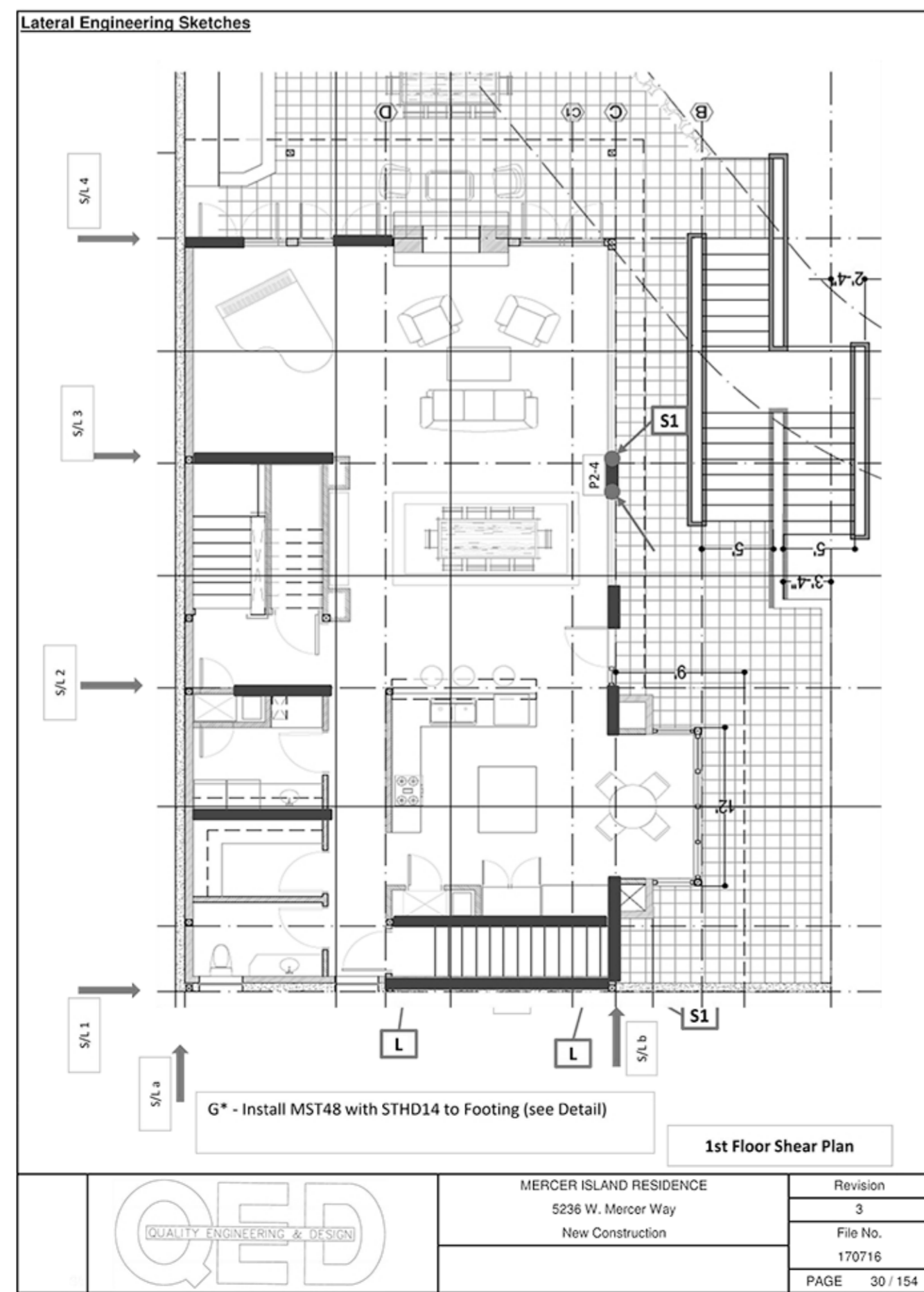
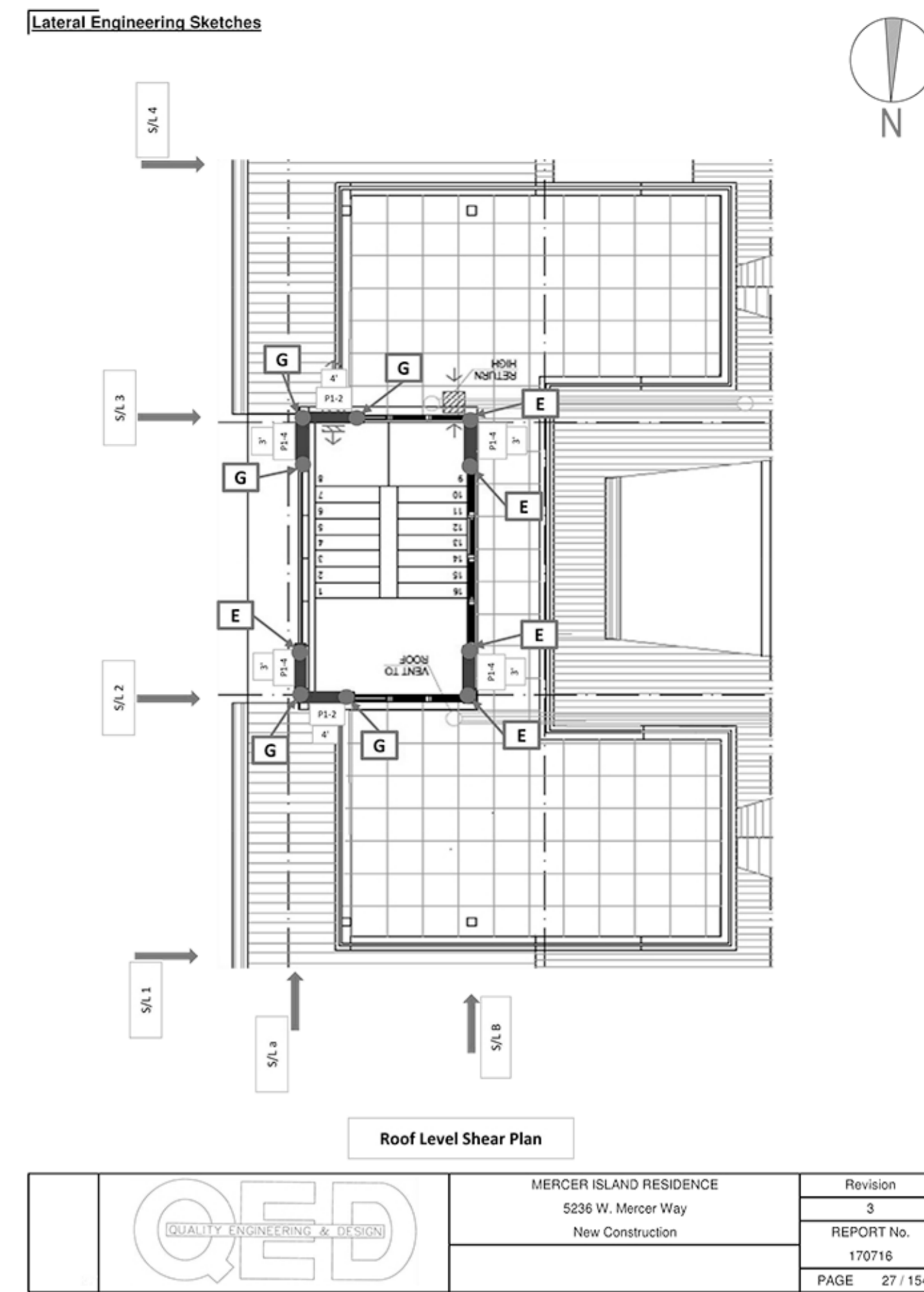
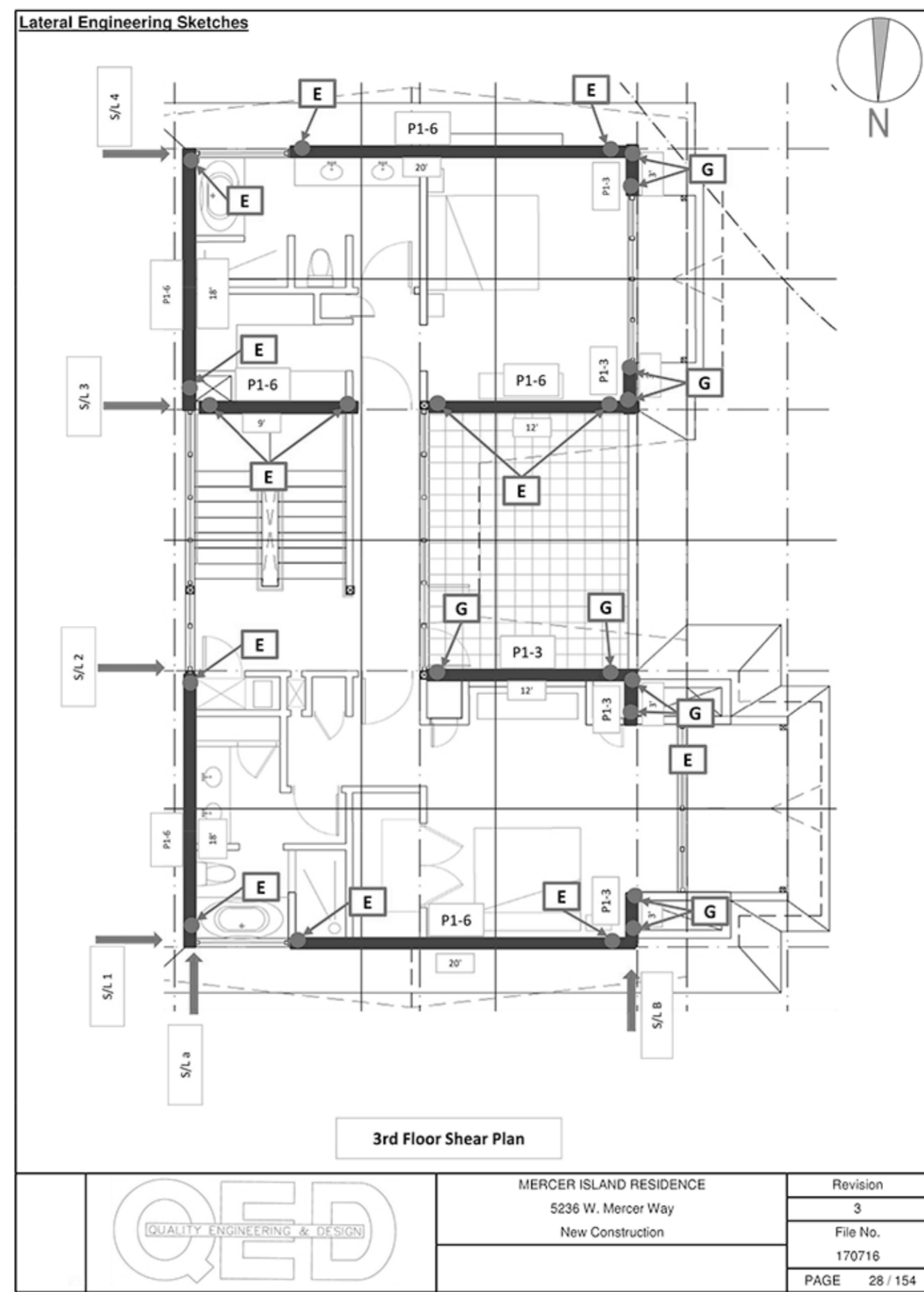
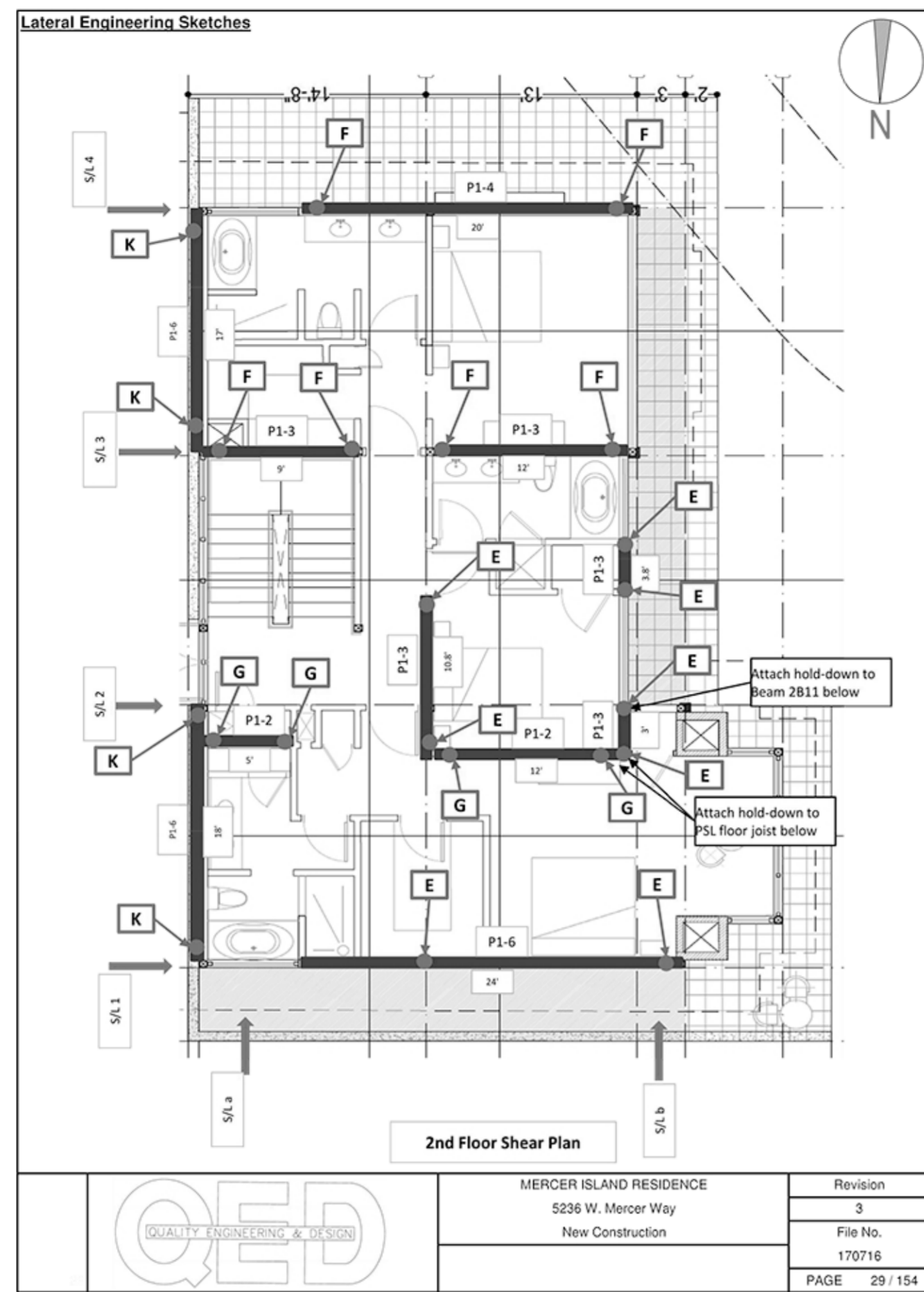
SHEET NO.

S.7



STRUCTURAL PLAN
 ROOF STRUCTURE
 SCALE 1/4" = 1'

NEW SHEET



SHEAR WALL SCHEDULE

DESIGNATION	NAIL SIZE	NAIL EDGE FIELD	SPACING	BLOCKING Y/N	BOTTOM PLATE ANCHORAGE	DESIGN LOAD (PLF)
P1-6	8d	6"	12"	YES	(2) 16d AT 6" O.C. OR 5/8" BOLTS AT 12" O.C.	242
P1-4	8d	4"	12"	YES	(2) 16d AT 6" O.C. OR 5/8" BOLTS AT 24" O.C.	353
P1-3	8d	3"	12"	YES	(3) 16d AT 5" O.C. OR 5/8" BOLTS AT 24" O.C.	456
P1-2	8d	2"	12"	YES	(3) 16d AT 5" O.C. OR 3/4" BOLTS AT 24" O.C.	595
P2-6	8d	6"	12"	YES	(2) 16d AT 5" O.C. OR 5/8" BOLTS AT 24" O.C.	484
P2-4	8d	4"	12"	YES	(3) 16d AT 5" O.C. OR 3/4" BOLTS AT 24" O.C.	707
P2-3	8d	3"	12"	YES	(4) 16d AT 5" O.C. OR 3/4" BOLTS AT 20" O.C.	911
P2-2	8d	2"	12"	YES	(4) 16d AT 4" O.C. OR 3/4" BOLTS AT 16" O.C.	1190

SHEAR WALL SCHEDULE NOTES

- P1 SHEAR WALL TO HAVE 7/16" A.P.A. RATED PLYWOOD OR ORIENTED STRAND BOARD (O.S.B.) ON ONE SIDE
- P2 SHEAR WALL TO HAVE 7/16" A.P.A. RATED PLYWOOD OR ORIENTED STRAND BOARD (O.S.B.) ON BOTH SIDES
- FOR P1-3 THROUGH P2-4 WALLS, 3X STUDS ARE REQUIRED AT ALL PANEL EDGES
- NAILS ARE COMMON IN THE SIZE INDICATED
- FOR DOUBLE SIDED SHEAR WALLS (P2-X), SEAMS SHALL BE STAGGERED ON EACH SIDE (NO TWO SEAMS ON SAME STUD).
- PANEL EDGES TO BE BLOCKED WITH FULL WIDTH 2X NOMINAL FRAMING FOR P1-6 AND P1-4 WALLS. PANEL EDGES FOR P1-3 THROUGH P2-4 WALLS SHALL BE BLOCKED WITH 3X NOMINAL FRAMING. PANELS MAY BE INSTALLED EITHER VERTICALLY OR HORIZONTALLY.
- ANCHOR BOLTS SHALL BE EMBEDDED IN CONCRETE A MINIMUM OF 7", AND SHALL BE INSTALLED WITH 3" SQUARE X 0.229" WASHERS.

KEY TO LATERAL ENGINEERING SKETCHES

- E Designates Hold-Down Location. See schedule on following page for hold-down type
- Shear Wall
- PH-# Shear Wall Designation. See Schedule for details

QED QUALITY ENGINEERING & DESIGN	MERCER ISLAND RESIDENCE	Revision
	5236 W. Mercer Way	3
	New Construction	File No.
		170716
		PAGE 31 / 154

HOLDDOWN SCHEDULE

DESIGNATION	DESCRIPTION	ALLOWABLE DESIGN LOAD (lb)	
A	CMST12	9,215 (End Length = 44" w/ (49) 10d each end)	
B	CMST14	6,490 (End Length = 34" w/ (38) 10d each end)	
C	CS16	1,700 (End Length = 12" w/ (11) 10d each end)	
D	CS14	2,490 (End Length = 16" w/ (15) 10d each end)	WOOD TO WOOD CONNECTION
E	MST37	3,815	
F	MST48	4,460	
G	MST69	5,900	
H	LSTDH8	1,695	8" Wall
J	STDH8	2,345	8" Wall
K	STDH10	3,185	CONCRETE STRAP (Based on 2000 psi Concrete)
L	STDH14	4,865	5,785
M	HDU2-SDS2.5	3,075	BOLTED TO CONCRETE NAILED TO STUDS
O	HDU4-SDS2.5	4,565 (5/8" bolt)	
P	HDU5-SDS2.5	5,645 (5/8" bolt)	
Q	HDU8-SDS2.5	6970 (w/ 3 1/2" thick end studs**)	
R1	HDU11-SDS2.5	9535 (w/ 5 1/2" thick end studs**)	BOLTED TO CONCRETE SCREWED TO STUDS
R2	HDU11-SDS2.5	11175 (w/ 7 1/4" thick end studs**)	
S1	HDU14-SDS2.5	14390 (w/ 7 1/4" thick end studs**)	
S2	HDU14-SDS2.5	14925 (w/ 5 1/2" x 5 1/2" thick end studs)	

** Dimension shown is in direction parallel to SDS screws. Dimension perpendicular to screws (wall thickness) is 3 1/2" minimum except for Type S2 which requires a fast post.

HOLD-DOWNS LISTED ABOVE ARE SIMPSON STRONG-TIE

QED QUALITY ENGINEERING & DESIGN	MERCER ISLAND RESIDENCE	Revision
	5236 W. Mercer Way	3
	New Construction	File No.
		170716
		PAGE 32 / 154



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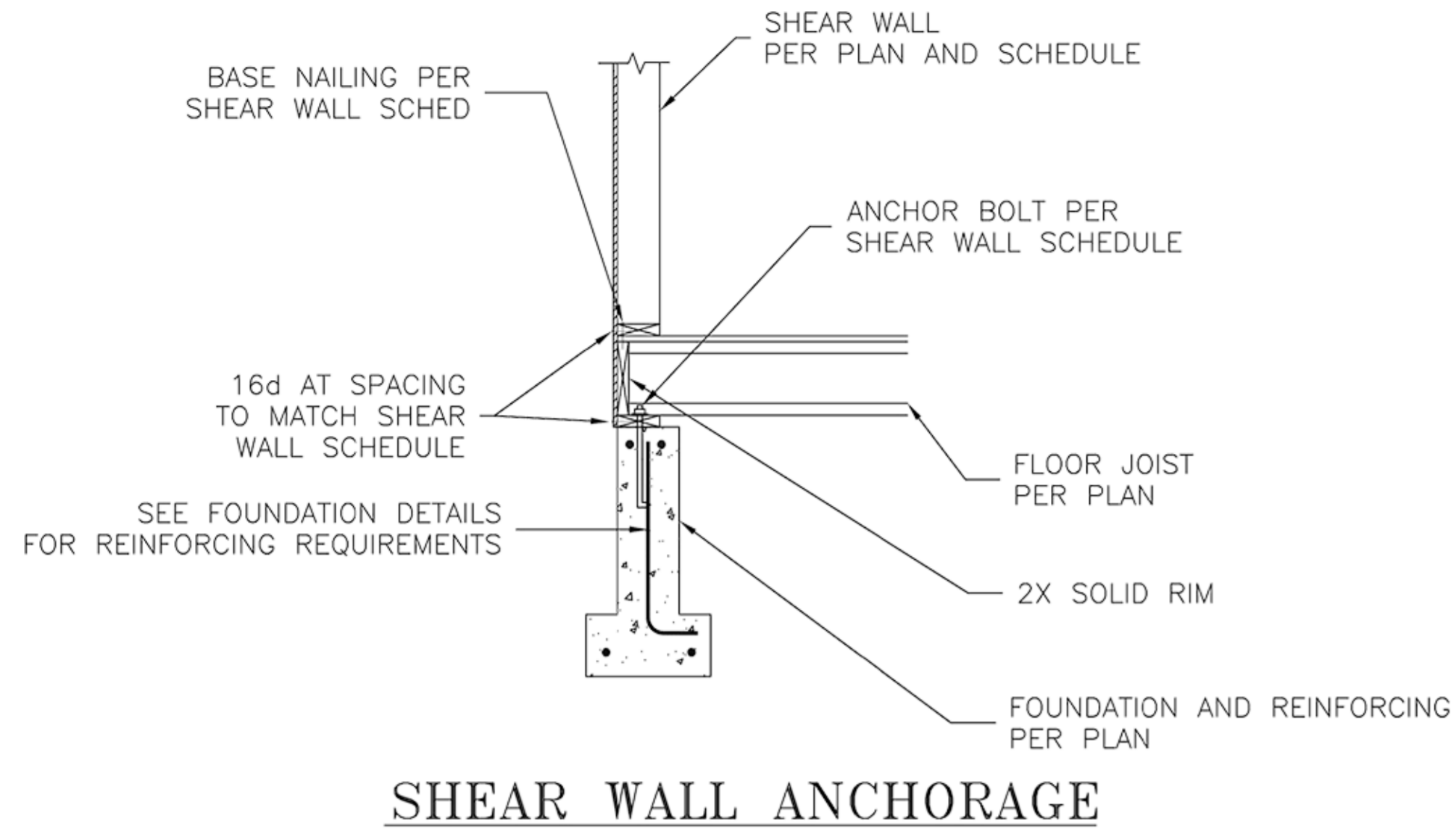
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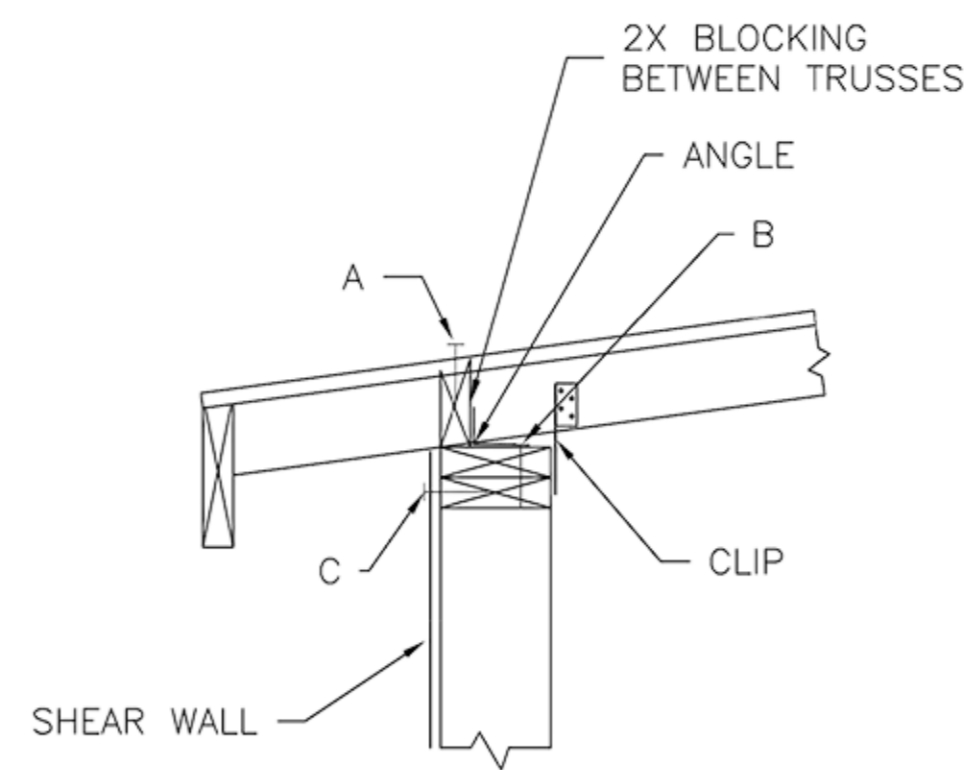
MERCER ISLAND RESIDENCE
5236 W. MERCER WAY
MERCER ISLAND, WA 98125

STRUCTURAL SHEAR WALLS

SHEET NO.

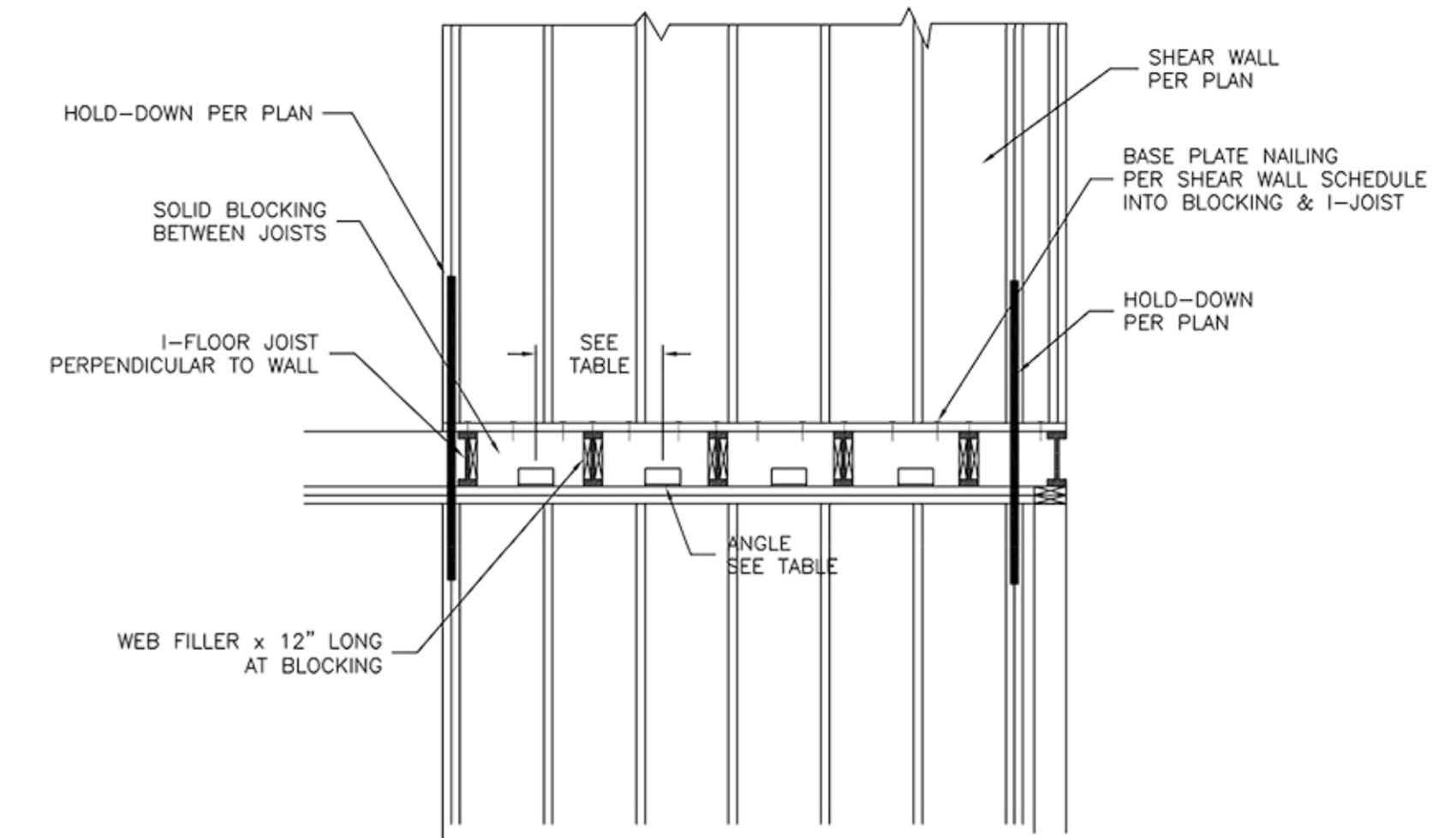


SHEAR WALL ANCHORAGE



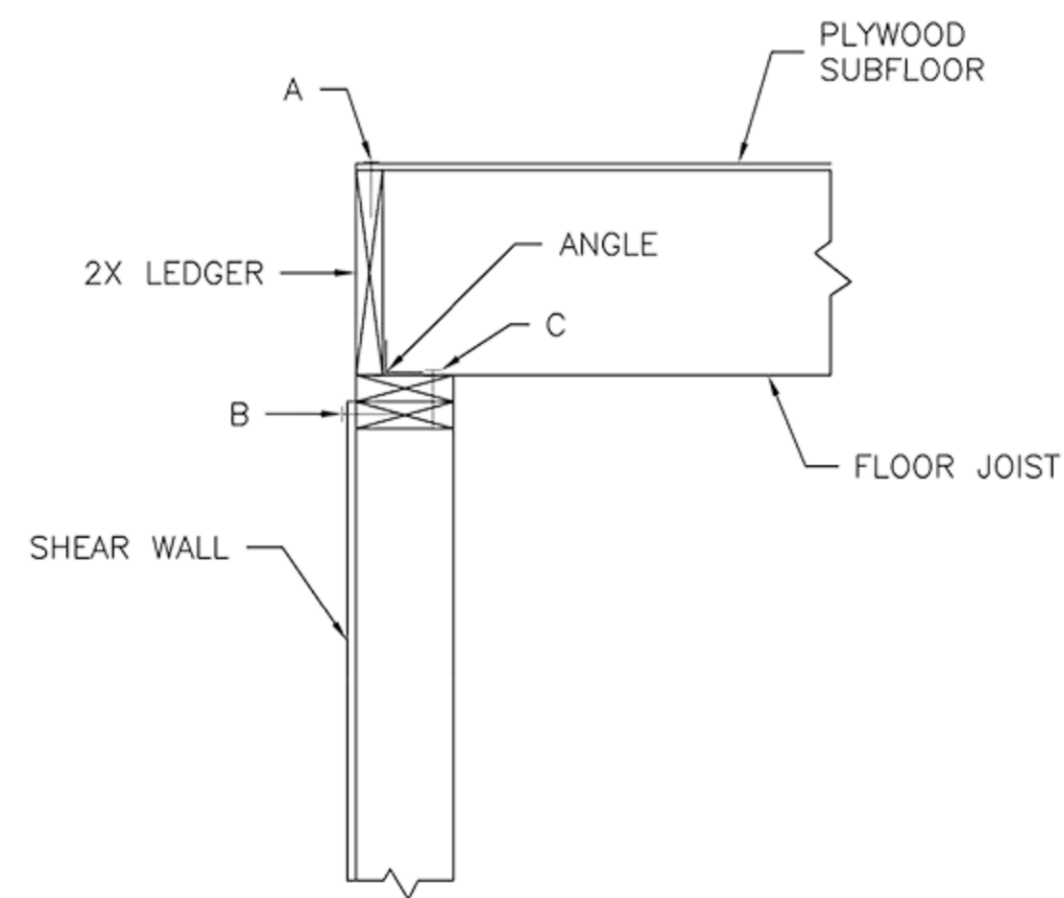
ROOF DIAPHRAGM TO EXTERIOR SHEAR WALL

SHEAR WALL TYPE	ANGLE		NAIL						CLIP TYPE
			A		B		C		
	TYPE	SPACING	SIZE	SPACING	SIZE	SPACING	SIZE	SPACING	
P1-6	A34	18"	10d	6"	10d	6"	10d	6"	H1
P1-4	A34	12"	10d	4"	10d	4"	10d	4"	H1
P1-3	A23	12"	10d	3"	10d	3"	10d	3"	H1
P1-2	A23	9"	10d	2"	10d	2"	10d	2"	H1



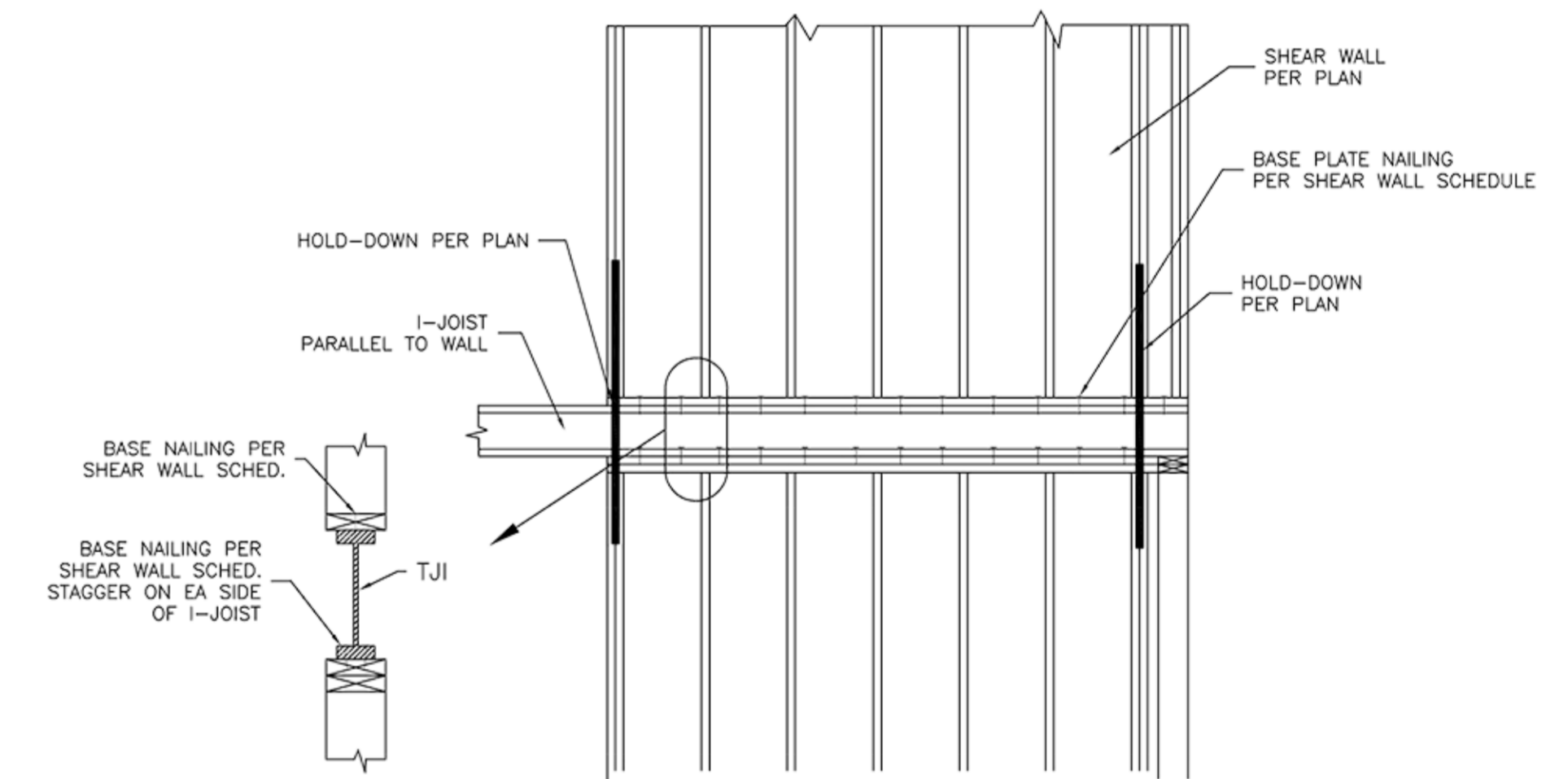
SHEAR WALL CONNECTION
JOISTS PERPENDICULAR TO SHEAR WALL

SHEAR WALL TYPE	ANGLE	
	TYPE	SPACING
P1-6	A23	24"
P1-4	A23	18"
P1-3	A23	12"
P1-2	A23	9"



FLOOR DIAPHRAGM TO SHEAR WALL BELOW
FLOOR JOISTS PERPENDICULAR

SHEAR WALL TYPE	ANGLE		NAIL					
			A		B		C	
	TYPE	SPACING	SIZE	SPACING	SIZE	SPACING	SIZE	SPACING
P1-6	A23	24"	10d	6"	10d	6"	10d	6"
P1-4	A23	18"	10d	4"	10d	4"	10d	4"
P1-3	A23	12"	10d	3"	10d	3"	10d	3"
P1-2	A23	9"	10d	2"	10d	2"	10d	2"



SHEAR WALL CONNECTION
JOISTS PARALLEL TO SHEAR WALL

SHEAR WALL TYPE	ANGLE	
	TYPE	SPACING
P1-6	A23	24"
P1-4	A23	18"
P1-3	A23	12"
P1-2	A23	9"



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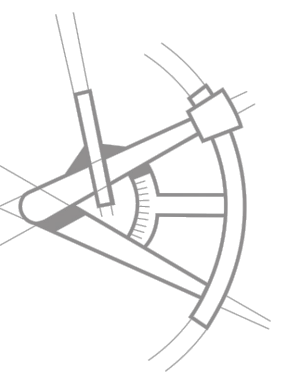
STRUCTURAL CONNECTION DETAILS
ROOF DIAPHRAGM

MERCER ISLAND RESIDENCE

5236 W MERCER WAY MERCER ISLAND, WA 98125



LONGITUDE
ONE TWENTY^{CO}
ENGINEERING & DESIGN



REVISIONS

Δ	DESCRIPTION	DATE	BY
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1	PERMIT REVISION	4/20/18	
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PROJECT NAME

MERCER ISLAND
RESIDENCE

PROJECT NUMBER

S180115

DRAWN BY - MR

CHECKED BY - MT

SHEET DATE - 05/04/18

SCALE

24X36 SHEET

DESCRIPTION
COVER SHEET
SHEET
S-0

PROJECT INFORMATION

CLIENT

ARCHITECT
JOSEPH GRIEF ARCHITECTS
921 NE BOAT STREET
SEATTLE, WA 98105
PHONE: (206) 633-4293

STRUCTURAL ENGINEER
L120 ENGINEERING & DESIGN
16240 118TH LN NE
BOTHELL, WA 98011
CONTACT: MANS THURFJELL, PE
EMAIL: MTHURFJELL@L120ENGINEERING.COM
PHONE: (206) 790-9502

CODES

ENGINEERED PER: 2015 (IRC) INTERNATIONAL RESIDENTIAL CODE
2015 (IBC) INTERNATIONAL BUILDING CODE

ABBREVIATIONS

AB	ANCHOR BOLT	HDR	HEADER
ABV	ABOVE	HF	HEM FIR
AFF	ABOVE FINISH FLOOR	HGT	HEIGHT
ALT	ALTERNATE	HT	HEIGHT
ALUM	ALUMINUM	IN	INCH
APPROX	APPROXIMATE	JT	JOINT
AYC	ALASKAN YELLOW CEDAR	MAX	MAXIMUM
BB	BOX BEAM	MIN	MINIMUM
BF	BOTTOM FLUSH	MISC	MISCELLANEOUS
BLDG	BUILDING	NB	NON-BEARING
BLKG	BLOCKING	NO	NUMBER
BM	BEAM	OC	ON CENTER
BOT	BOTTOM	PSF	POUNDS PER SQUARE FOOT
BP	BOTTOM PLATE	PSI	POUNDS PER SQUARE INCH
BRG	BEARING	PT	PRESSURE TREATED
BTWN	BETWEEN	RAF	RAFTER
BSMT	BASEMENT	REF	REFERENCE
B/W	BOTTOM OF WALL	REINF	REINFORCEMENT
CANT	CANTILEVER	REQD	REQUIRED
CJ	CONTROL JOINT	SF	SQUARE FOOT
CLG.	CEILING	SIM	SIMILAR
CLJ	CEILING JOIST	SPF	SPRUCE PINE FIR
CLR	CLEAR	STD	STANDARD
CMU	CONCRETE MASONRY UNIT	SYP	SOUTHERN YELLOW PINE
COL	COLUMN	T/	TOP OF
CONC	CONCRETE	T/C	TOP OF CONCRETE
CONN	CONNECTION	T/P	TOP OF PLATE
CONST	CONSTRUCTION	T/S	TOP OF STEEL
CONT	CONTINUOUS	T/S	TOP OF STEEL
CTR	CENTER	T/W	TOP OF WALL
DET	DETAIL	TF	TOP FLUSH
DF	DOUGLAS FIR (SOUTH)	TJ	TRIPLE JOIST
DFL	DOUGLAS FIR LARCH	T/BM	TOP OF BEAM
DIM	DIMENSION	T/SLAB	TOP OF SLAB
DJ	DOUBLE JOIST	TP	TOP PLATE
DIA	DIAMETER	TYP	TYPICAL
DN	DOWN	UNO	UNLESS NOTED OTHERWISE
DS	DOWN SPOUT	UPA	UNDER POST ABOVE
EA	EACH	UWA	UNDER WALL ABOVE
EF	EACH FACE	VERT	VERTICAL
EJ	EXPANSION JOINT	VIF	VERIFY IN FIELD
ELEV	ELEVATION	W/	WITH
EN	EDGE NAILING (PANEL)	WC	WESTERN CEDAR
EQ	EQUAL	WP	WATERPROOF
ES	EACH SIDE	WWF	WELDED WIRE FABRIC
EW	EACH WAY		
FB	FLUSH BEAM		
FIN	FINISH		
FL	FLOOR		
FLSHG	FLASHING		
FND	FOUNDATION		
FP	FIREPLACE		
FT	FOOT		
FTG	FOOTING		
GA	GAUGE		
GALV	GALVANIZED		
GLB	GLULAM BEAM		
GR	GRADE		
GYP	GYPSUM WALL BOARD		
HDG	HOT-DIPPED GALVANIZED		

SHEET INDEX

ARCHITECTURAL DRAWINGS

S-0	COVER SHEET
S-1	STRUCTURAL GENERAL NOTES
S-2	SHORING AND TEMPORARY EXCAVATION PLAN
S-3	SOLDIER PILE SECTION AND SCHEDULE

GENERAL STRUCTURAL NOTES

DESIGN CRITERIA

1. CODE: 2015 IBC/IRC & AMENDMENTS AS ADOPTED BY THE REVIEWING AGENCY/COUNTY.
2. GEOTECHNICAL REPORT PROVIDED BY PanGEO INC. DATED OCT. 5, 2017.
3. DESIGN EARTH PRESSURE:
ACTIVE PRESSURE: 40 PCF EQUIVALENT FLUID DENSITY
PASSIVE PRESSURE: 350 PCF ACTING ON 2x DRILLED SHAFT DIAMETER

GENERAL CONDITIONS

1. THE CONTRACTOR SHALL EXAMINE THE STRUCTURAL DRAWINGS AND SHALL NOTIFY THE STRUCTURAL ENGINEER OF ANY DISCREPANCIES HE MAY FIND BEFORE PROCEEDING WITH THE WORK.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS BEFORE STARTING WORK. THE ARCHITECT/ENGINEER SHALL IMMEDIATELY BE NOTIFIED IN WRITING OF ANY DISCREPANCIES.
3. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.
4. IN CASE OF CONFLICT, NOTES AND DETAILS OF THESE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE "GENERAL NOTES" AND/OR "STANDARD DETAILS".
5. IF A SPECIFIC DETAIL IS NOT SHOWN FOR ANY PART OF THE WORK, THE CONSTRUCTION SHALL BE THE SAME AS FOR SIMILAR WORK.
6. WORKING DIMENSIONS SHALL NOT BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON THESE DRAWINGS.
7. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT AND THE STRUCTURAL ENGINEER OF ANY CONDITION WHICH IN HIS OPINION MIGHT ENDANGER THE STABILITY OF THE STRUCTURE OR CAUSE DISTRESS TO THE STRUCTURE.
8. THE CONTRACTOR SHALL SUPERVISE AND DIRECT HIS WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. PROVIDE ADEQUATE SHORING AND BRACING OF ALL STRUCTURAL MEMBERS DURING CONSTRUCTION.
9. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE, AND ALL OTHER REGULATING AGENCIES EXERCISING AUTHORITY OVER ANY PORTION OF THE WORK.
10. SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE THE NOTES, DRAWINGS, AND/OR SPECIFICATIONS DIFFER, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
11. REFER TO THE ARCHITECTURAL DRAWINGS FOR INFORMATION NOT COVERED BY THESE GENERAL NOTES OR THE STRUCTURAL DRAWINGS.
12. NOTIFY ENGINEER OF ALL FIELD CHANGES PRIOR TO INSTALLATION.
13. DISCREPANCIES FOUND BETWEEN STRUCTURAL DRAWINGS AND OTHER DOCUMENTS ARE TO BE NOTED IN WRITING TO THE ENGINEER PRIOR TO CONSTRUCTION.
14. ALL CONSTRUCTION SHALL BE DONE WITH MATERIALS, METHODS, AND WORKMANSHIP ACCEPTED AS GOOD PRACTICE BY THE CONSTRUCTION INDUSTRY IN CONFORMANCE TO THE PROVISIONS OF THE "INTERNATIONAL BUILDING CODE" (IBC), AND STANDARDS REFERENCED THEREIN.

CONCRETE

1. REFERENCE STANDARDS: ACI-301, ACI-318, IBC.
MINIMUM STRUCTURAL CONCRETE STRENGTH (28 DAYS).....2,500 PSI
LEAN CONCRETE STRENGTH300 PSI
2. MIXING: COMPLY WITH ACI-301. DO NOT EXCEED THE AMOUNT OF WATER SPECIFIED IN THE APPROVED MIX. PROPORTIONS OF AGGREGATE TO CEMENT SHALL BE SUCH AS TO PRODUCE A DENSE WORKABLE MIX WHICH CAN BE PLACED WITHOUT SEGREGATION OR EXCESS FREE SURFACE WATER
3. PLACING: COMPLY WITH ACI-301. PROVIDE A 3/4 INCH CHAMFER ALL EXPOSED CONCRETE EDGES, UNLESS INDICATED OTHERWISE ON ARCHITECTURAL DRAWINGS.
4. SLUMP: 4" PLUS OR MINUS ONE INCH. DO NOT ADD WATER TO MIX TO INCREASE SLUMP. GREATER SLUMP, ACCELERATED SET, OR HIGH EARLY STRENGTH MAY BE ACHIEVED BY USING APPROVED ADMIXTURES.
5. CURING: COMPLY WITH ACI-301. KEEP CONCRETE MOIST FOR SEVEN DAYS MINIMUM.
6. JOINTING: PROVIDE ADEQUATE JOINTING TO MINIMIZE EFFECTS OF VOLUME CHANGE. JOINTS SHOWN MAY BE ADJUSTED AT CONTRACTOR'S OPTION, WITH PRIOR APPROVAL FROM ENGINEER.
7. WEATHER EXTREMES: COMPLY WITH ACI 305R FOR HOT WEATHER. COMPLY WITH ACI 306R FOR COLD WEATHER.
8. WATER/CEMENT RATIO SHALL NOT EXCEED 0.50 (BY WEIGHT), TYPICAL.

STRUCTURAL AND MISC. STEEL

1. REFERENCE STANDARDS: DESIGN, FABRICATION AND ERECTION ARE TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
2. MATERIALS:
WF BEAMS - ASTM A572-50 (Fy = 50,000 PSI)
ALL OTHER STEEL - ASTM A36 (Fy = 36,000 PSI)
ALL STEEL SHALL BE PRIME AND PAINT FOR CORROSION PROTECTION.

STRUCTURAL STEEL WELDING

1. CONFORM TO THE AWS CODES D1.1 AND D1.3., AND USE ONLY CERTIFIED WELDERS. WELDS NOT SPECIFIED ARE TO BE 1/4" CONTINUOUS FILLET MINIMUM. USE DRY E70 ELECTRODES.

DIMENSIONAL LUMBER

1. MEET REQUIREMENTS OF PS 20-70 AND NATIONAL GRADING RULES FOR SOFTWOOD DIMENSIONAL LUMBER. BEAR STAMP OF WWPA.
2. MINIMUM DIMENSIONAL LUMBER GRADES TO BE:
LAGGING: 4x - PRESSURE TREATED, #1 HEM-FIR OR BETTER
3. PRESSURE TREATED WOOD: WOOD MATERIALS ARE REQUIRED TO BE "TREATED WOOD" IN ACCORDANCE WITH IBC SECTION 2304.11. "DECAY AND TERMITE PROTECTION" SHALL CONFORM TO THE APPROPRIATE STANDARDS OF THE AMERICAN WOOD-PRESERVERS ASSOCIATION (AWPA) FOR SAWN LUMBER. FOLLOW AMERICAN LUMBER STANDARDS COMMITTEE (ALSC) QUALITY ASSURANCE PROCEDURES. PRODUCTS SHALL BEAR THE APPROPRIATE MARK. ALL NAILS INTO PT WOOD SHALL BE HOT DIPPED GALVANIZED PER ASTM A153 OR STAINLESS STEEL.

SHORING WALL DRAINAGE

1. WALL DRAINAGE MATERIAL SHALL BE IN ACCORDANCE WITH GEOTECHNICAL REPORT. DRAINAGE MAT SHALL BE INSTALLED ON THE FACE OF WOOD LAGGING. PROVIDE FULL COVERAGE OF DRAINAGE MAT. LAP DRAINAGE MAT IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. PROVIDE CONNECTION AT THE BASE OF SHORING WALLS TO THE UNDERSLAB DRAINAGE SYSTEM USING DRAINAGE GRATE CONNECTORS THAT ARE COMPATIBLE WITH THE DRAINAGE MAT. EACH DRAINAGE MAT SHOULD BE CONNECTED TO A SUBDRAIN USING A DRAINAGE GRATE CONNECTOR.

SHORING MONITORING

1. A SYSTEMATIC PROGRAM OF OBSERVATION SHALL BE CONDUCTED DURING THE PROJECT EXECUTION TO DETERMINE MOVEMENT OF THE SHORING WALLS. INITIAL SURVEY POINTS SHOULD BE PLACED AT STRATEGIC LOCATION ALONG ADJACENT RETAINING WALL, RIGHT OF WAY ALIGNMENTS THAT WILL ALLOW FOR PERIOD MEASUREMENT DURING AND AFTER THE SHORING INSTALLATION. MONITORING POINTS ARE TO BE ESTABLISHED AT THE TOPS OF AT LEAST TWO SOLDIER PILES PRIOR TO PROCEEDING WITH EXCAVATION. PRIOR TO THE START OF CONSTRUCTION, THE GEOTECHNICAL ENGINEER, THE PROJECT OWNER, AND THE CONSTRUCTION CONTRACTOR SHOULD REVIEW RELEVANT PROJECT PLANS AND DEVELOP A MONITORING PROGRAM FOR THE SITE.
2. A LICENSED SURVEYOR (NOT THE CONTRACTOR) MUST DO THE SURVEYING AT LEAST ONCE A WEEK.
3. SURVEY FREQUENCY CAN BE DECREASED AFTER THE SHORING SYSTEM HAS BEEN INSTALLED AND EXCAVATION IS COMPLETE IF THE DATA INDICATES LITTLE OR NO ADDITIONAL MOVEMENT. SURVEYING MUST CONTINUE UNTIL THE PERMANENT STRUCTURE (INCLUDING FLOOR SLABS AS BRACES) IS COMPLETE UP TO FINAL AND STREET GRADES. THE SURVEY FREQUENCY WILL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AFTER REVIEW AND APPROVAL BY SDCI.
4. THE GEOTECHNICAL ENGINEER SHALL REVIEW SURVEY DATA AND PROVIDE AN EVALUATION OF WALL PERFORMANCE ALONG WITH SURVEY DATA TO SDCI ON AT LEAST A WEEKLY BASIS. IMMEDIATELY AND DIRECTLY, NOTIFY SDCI IF ANY UNUSUAL OR SIGNIFICANTLY INCREASED MOVEMENT OCCURS.
5. IMMEDIATELY AND DIRECTLY NOTIFY THE GEOTECHNICAL AND STRUCTURAL ENGINEERS, WALL DESIGNER, AND SDCI IF 1 INCH OF MOVEMENT OCCURS BETWEEN TWO CONSECUTIVE READINGS AND WHEN TOTAL MOVEMENT REACH 1 INCH. AT THAT AMOUNT OF MOVEMENT, THE ENGINEERS AND DESIGNERS SHALL DETERMINE THE CAUSE OF DISPLACEMENT AND DEVELOP REMEDIAL MEASURES SUFFICIENT TO LIMIT TOTAL WALL MOVEMENTS TO 1 INCH, TYP., EXCEPT NORTH WALL LIMIT TO 1 3/4". ALL EARTHWORK AND CONSTRUCTION ACTIVITIES MUST BE DIRECTED TOWARDS IMMEDIATE IMPLEMENTATION OF REMEDIAL MEASURES NECESSARY TO LIMIT TOTAL WALL MOVEMENTS TO WHAT HAS BEEN DEFINED AS ACCEPTABLE BY THE DESIGN TEAM.

PERMANENT SHORING CONSTRUCTION NOTES

1. CLEAR THE SITE AND SET UP A SAFE AREA FOR DRILLER.
2. DRILL VERTICAL SHAFTS SUCH THAT THE TOP OF SHAFT IS WITHIN 3"+/- OF PLAN LOCATION. PILE SHAFTS SHALL BE DRILLED TO WITHIN 1% OF PLUMB, WITHOUT LOSS OF GROUND AND WITHOUT ENDANGERING PREVIOUSLY INSTALLED PILES.
3. POUR CONCRETE MIX INTO THE DRILLED HOLES AND INSTALL SOLDIER PILES. STEEL PILES ARE TO BE PLACED SO THAT THE CENTERLINE IS WITHIN 1" +/- OF PLAN LOCATION AND SHALL BE WITHIN 1% OF PLUMB.
4. NO EXCAVATION ALLOWED UNTIL CONCRETE HAS CURED AND REACHED ITS DESIGN STRENGTH.
5. EXCAVATE 4'-0" MAX LIFTS AND INSTALL LAGGING RIGHT AWAY. IT IS THE RESPONSIBILITY OF THE SHORING CONTRACTOR TO PLACE THE LAGGING IN SUCH A MANNER THAT PREVENTS SOIL FAILURE, SLOUGHING, OR LOSS OF GROUND. VOIDS BEHIND THE LAGGING SHALL BE BACKFILLED PER RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.
6. CONTINUE STEP 5 UNTIL THE BOTTOM OF THE EXCAVATION IS REACHED.

SHOP DRAWINGS AND SUBMITTALS

1. SUBMIT 2 SETS OF PRINTS AND 1 SET OF REPRODUCIBLES FOR REVIEW FOR:
A) REINFORCING STEEL
B) MISCELLANEOUS STEEL
C) GLU-LAMINATED BEAMS
D) PRE-MANUFACTURED WOOD TRUSSES
2. SUBMIT 3 COPIES FOR REVIEW PRIOR TO FABRICATION FOR:
A) CONCRETE DESIGN MIX
B) CONCRETE INSERTS
C) EPOXY ADHESIVES

INSPECTIONS

1. REFERENCE STANDARDS: IBC 110.
INSPECTIONS ARE TO BE PERFORMED BY THE BUILDING OFFICIAL. INSPECTIONS REQUIRED ARE AS FOLLOWS:
2. SOIL: VERIFY SUBGRADE IS DRY DENSE AND DOES NOT HAVE STANDING WATER PRIOR TO POURING FOOTINGS.
3. CONCRETE: INSPECTIONS REQUIRED ONLY FOR DESIGN MIXES SPECIFIED GREATER THAN 2500 PSI. TAKE CONCRETE CYLINDERS AS REQUIRED. VERIFY SLUMP AND STRENGTH.

ALTERNATES:

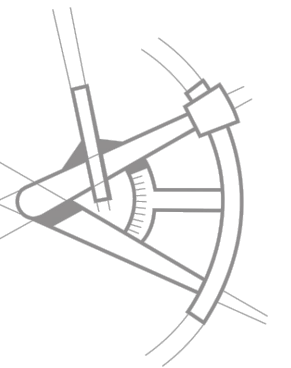
1. ALTERNATE ASSEMBLIES AND MATERIALS WILL BE CONSIDERED FOR REVIEW. ENGINEER MAY REQUEST PAYMENT FOR REVIEW; CONTRACTOR WILL BEAR BURDEN FOR ADDITIONAL PAYMENT AT NO ADDITIONAL COST TO OWNER.

JOBSITE SAFETY:

1. THE ENGINEER AND/OR ARCHITECT HAVE NOT BEEN RETAINED OR COMPENSATED TO PROVIDE DESIGN AND/OR CONSTRUCTION REVIEW SERVICES RELATED TO THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES FOR THE CONTRACTOR TO PERFORM HIS WORK. THE UNDERTAKING OF PERIODIC SITE VISITS BY THE ENGINEER AND/OR ARCHITECT SHALL NOT BE CONSTRUED AS SUPERVISION OF ACTUAL CONSTRUCTION NOR MAKE HIM RESPONSIBLE FOR PROVIDING A SAFE PLACE FOR THE PERFORMANCE OF WORK BY THE CONTRACTOR, SUBCONTRACTORS, SUPPLIERS OR THEIR EMPLOYEES, OR FOR ACCESS, VISITS, USE, WORK, TRAVEL, OR OCCUPANCY BY ANY PERSON.



LONGITUDE
ONE TWENTYth
ENGINEERING & DESIGN



REVISIONS

△	DESCRIPTION	DATE	BY
1	PERMIT REVISION	4/20/18	
-			
-			

PROJECT NAME

**MERCER ISLAND
RESIDENCE**

PROJECT NUMBER

S180115

DRAWN BY

MR

CHECKED BY

MT

SHEET DATE

05/04/18

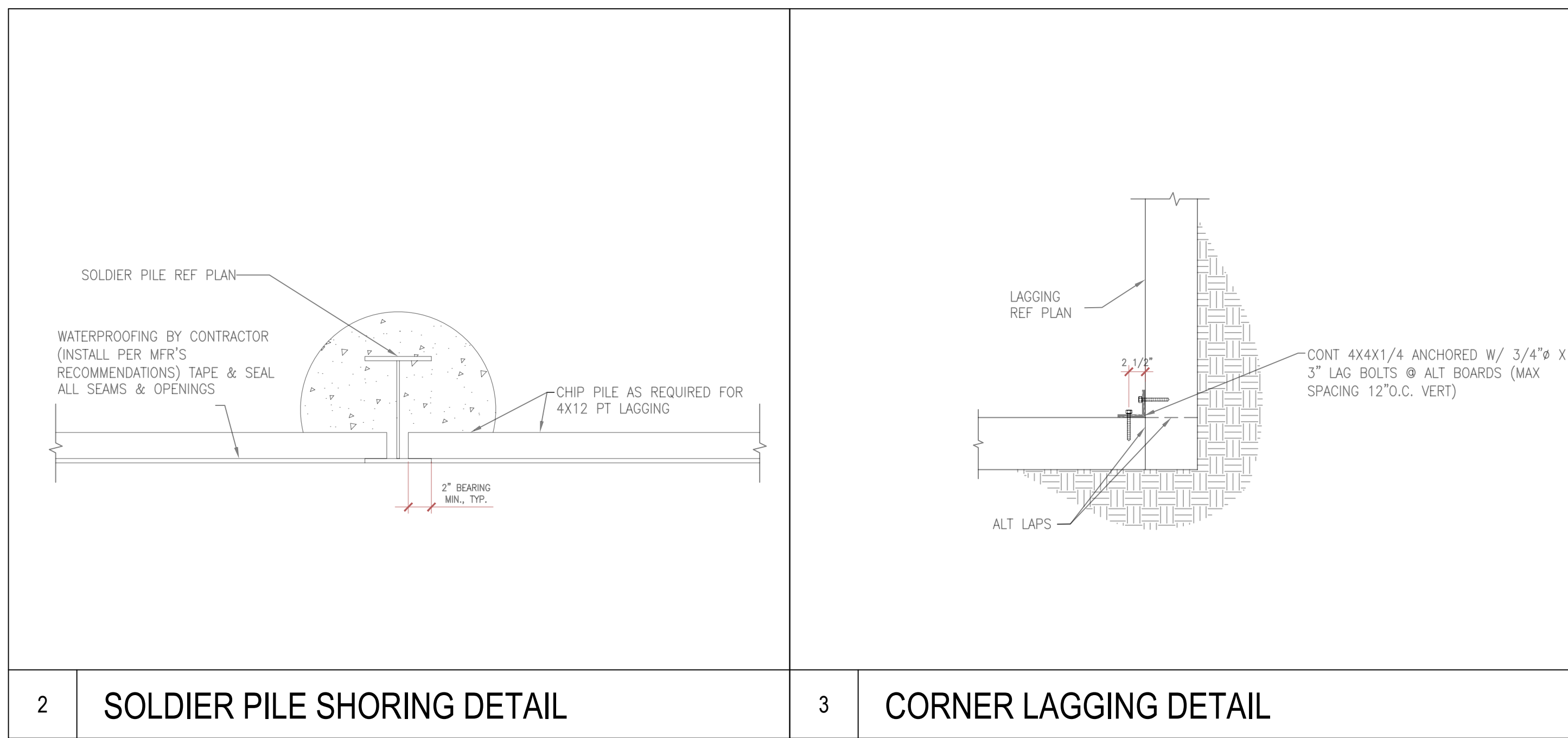
SCALE

24X36 SHEET

DESCRIPTION
STRUCTURAL GENERAL NOTES

S-1

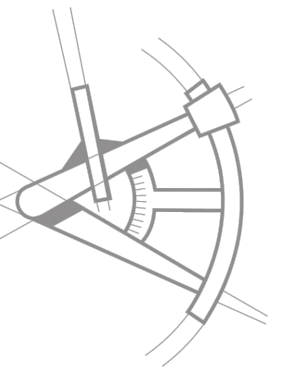
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SOLDIER PILE SCHEDULE					
MARK	PILE SIZE	TOP OF PILE ELEVATION	BOTTOM OF EXCAVATION	BOT OF PILE ELEVATION	PILE LENGTH (ft)
S1	W16X67	227.5'	215.0'	198.5'	29
S2	W16X67	227.5'	215.0'	198.5'	29
S3	W16X67	227.5'	215.0'	198.5'	29
S4	W16X67	227.5'	215.0'	198.5'	29
S5	W16X67	227.5'	215.0'	198.5'	29
S6	W16X67	227.5'	215.0'	198.5'	29
S7	W16X67	227.5'	215.0'	198.5'	29
S8	W16X67	227.5'	215.0'	198.5'	29
S9	W16X67	227.5'	215.0'	198.5'	29
S10	W16X67	227.5'	215.0'	198.5'	29
S11	W16X67	227.5'	215.0'	198.5'	29
S12	W16X67	228.0'	217.0'	199.0'	29
S13	W16X67	229.0'	217.0'	200.0'	29
S14	W16X67	230.0'	217.0'	203.0'	27
S15	W16X67	230.0'	217.0'	203.0'	27
S16	W16X67	228.0'	217.0'	201.0'	27
S17	W16X67	227.0'	217.0'	200.0'	27
S18	W16X67	225.0'	217.0'	198.0'	27
S19	W16X67	224.0'	217.0'	197.0'	27
S20	W16X67	222.0'	217.0'	195.0'	27
S21	W16X67	221.0'	209.0'	194.0'	27
S22	W16X67	220.0'	207.0'	193.0'	27
S23	W16X67	218.0'	206.0'	192.0'	26
S24	W21X211	227.5'	215.0'	183.5'	44
S25	W21X211	227.5'	212.0'	183.5'	44
S26	W21X211	227.5'	209.0'	183.5'	44
S27	W16X89	221.5'	206.0'	188.5'	33
S28	W16X89	221.5'	206.0'	188.5'	33
S29	W16X89	221.5'	206.0'	188.5'	33
S30	W16X89	221.5'	206.0'	188.5'	33
S31	W16X89	221.5'	206.0'	188.5'	33
S32	W16X89	221.5'	206.0'	188.5'	33
S33	W16X89	218.0'	207.0'	185.0'	33
S34	W21x211	216.0'	201.0'	172.0'	44
S35	W21x211	214.0'	196.0'	170.0'	44
S36	W21x211	211.0'	200.0'	167.0'	44
S37	W16X50	217.0'	212.5'	197.0'	20
S38	W16X50	216.0'	212.5'	196.0'	20
S39	W16X50	214.0'	207.0'	194.0'	20
S40	W16X50	214.0'	207.0'	194.0'	20
S41	W16X50	212.0'	200.0'	185.0'	27
S42	W16X50	210.0'	206.5'	190.0'	20
S43	W16X50	209.0'	206.5'	189.0'	20
S44	W16X50	208.0'	206.5'	188.0'	20



LONGITUDE
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MT

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SCALE

24X36 SHEET

DESCRIPTION
SOLDIER PILE SECTION AND SCHEDULE
SHEET
S-3

