

# GENERAL NOTES

THESE GENERAL NOTES ARE TO BE USED AS A SUPPLEMENT TO THE DRAWINGS. ANY DISCREPANCIES FOUND AMONG THE DRAWINGS, THESE GENERAL NOTES, SITE CONDITIONS, AND THE STANDARDS LISTED BELOW SHALL BE REPORTED TO THE ARCHITECT, WHO SHALL CORRECT SUCH DISCREPANCY OR OMISSION IN WRITING. ANY WORK DONE BY THE CONTRACTOR AFTER THE DISCOVERY OF A DISCREPANCY SHALL BE DONE AT THE CONTRACTOR'S OWN RISK. THE CONTRACTOR SHALL VERIFY AND COORDINATE DIMENSIONS AMONG ALL DRAWINGS PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION. THE CONTRACTOR IS RESPONSIBLE FOR ALL BRACING AND SHORING DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES REQUIRED TO PERFORM HIS WORK.

## STANDARDS:

ALL METHODS, MATERIALS AND WORKMANSHIP SHALL CONFORM WITH:  
2015 Washington State Energy Code  
Washington Cities Electrical Code  
LATEST ADOPTED EDITIONS AS AMENDED AND ADOPTED BY THE APPLICABLE JURISDICTION.

## TYPE OF CONSTRUCTION:

TYPE V-N SPRINKLERED  
NFPA 13D

## PREMISES IDENTIFICATION:

PROVIDE ADDRESS OR HOUSE NUMBER PER R319.1 RC. APPROVED NUMBERS OR ADDRESSES SHALL BE PROVIDED FOR ALL NEW BUILDINGS IN SUCH A POSITION AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY.

## MORTAR AND GROUT:

TYPE 'S' MORTAR FOR INTERIOR AND EXTERIOR WORK. MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS: 800 PSI. GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 2000 PSI.

## MASONRY VENEER:

MASONRY VENEER TO BE ANCHORED TO WOOD FRAMING WITH 22GA. X 1" GALV. ANCHORS SPACED 2' MIN. O.C. IN BELTIC ZONES 3/4" ANCHORS SHALL HAVE LIP OR HOOK ON THE EXTENDED LEG THAT WILL ENGAGE OR ENCLOSE A 3/8" GA HORIZONTAL JOINT REINFORCEMENT WIRE. THE JOINT WIRE SHALL BE CONTINUOUS W/ BUT SPICES BETWEEN TIES PERMITTED.

## FORMALDEHYDE REDUCTION MEASURES:

ALL STRUCTURAL PANEL COMPONENTS OF THE HOUSE SUCH AS SOFTWOOD PLYWOOD, PARTICLE BOARD, WATER BOARD, AND ORIENTED STRAND BOARD SHALL BE IDENTIFIED AS 'EXPOSURE 1', 'EXTERIOR' OR 'M-D APPROVED'.

## EXTERIOR WALL FLASHING:

APPROVED CORROSION-RESISTIVE FLASHING SHALL BE APPLIED SHINGLE FASHION IN A MANNER TO PREVENT ENTRY OF WATER INTO THE WALL CAVITY OR PENETRATION OF WATER INTO THE BUILDING STRUCTURAL FRAMING COMPONENTS. SELF-ANCHORED MEMBRANES USED AS FLASHING SHALL COMPLY WITH AAMA 711. THE FLASHING SHALL EXTEND TO THE SURFACE OF THE EXTERIOR WALL FINISH. APPROVED CORROSION-RESISTANT FLASHING SHALL BE INSTALLED AT ALL OF THE FOLLOWING LOCATIONS:

1. EXTERIOR WINDOW AND DOOR OPENINGS. FLASHING AT EXTERIOR WINDOW AND DOOR OPENINGS SHALL EXTEND TO THE SURFACE OF THE EXTERIOR WALL FINISH OR TO THE WATER RESISTIVE BARRIER FOR SUBSEQUENT DRAINAGE.
2. AT THE INTERSECTION OF CHIMNEYS OR OTHER MASONRY CONSTRUCTION WITH FRAME OR STUCCO WALLS, WITH PROJECTING LIPS ON BOTH SIDES UNDER STUCCO COFININGS.
3. UNDER AND AT THE EDGES OF MASONRY, WOOD OR METAL CORNERS AND SILLS.
4. CONTINUOUSLY ABOVE ALL PROJECTING WOOD TRIM.
5. WHERE EXTERIOR PORCHES, DECKS OR STAIRS ATTACH TO A WALL OR FLOOR ASSEMBLY OF WOOD-FRAME CONSTRUCTION.
6. AT WALLS AND ROOF INTERSECTIONS.
7. AT BUILT-IN GUTTERS.

## FIREBLOCKING:

FIREBLOCKING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STOREYS, AND BETWEEN A TOP STORY AND THE ROOF SPACE.

- FIREBLOCKING SHALL BE PROVIDED IN WOOD-FRAME CONSTRUCTION IN THE FOLLOWING LOCATIONS:
1. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROUS OF STUDS OR STAGGERED STUDS, AS FOLLOWS:
    - 1.1 VERTICALLY AT THE CEILING AND FLOOR LEVELS.
    - 1.2 HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET.
  2. AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS CORNERS AT ROOFED, DROP CEILING AND COVER CEILING.
  3. IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN, ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH SECTION R302.1.
  4. 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 ANNUAL SPACE SHALL NOT BE REQUIRED TO MEET THE ASTM E 136 REQUIREMENTS.
  5. FOR THE FIREBLOCKING OF CHIMNEYS AND FIREPLACES. SEE SECTION R1003.19.

## RATPROOFING:

STRAINER PLATES ON DRAIN INLETS SHALL BE DESIGNED AND INSTALLED SO THAT NO OPENING IS GREATER THAN 1/8-INCH IN THE LEAST DIMENSION.  
PIETER BOXES SHALL BE CONSTRUCTED IN SUCH A MANNER THAT RATS CANNOT ENTER A BUILDING BY FOLLOWING THE SERVICE PIPES FROM THE BOX INTO THE BUILDING.  
IN OR ON BUILDINGS WHERE OPENINGS HAVE BEEN MADE IN WALLS, FLOORS, OR CEILINGS FOR THE PASSAGE OF PIPES, SUCH OPENINGS SHALL BE CLOSED AND PROTECTED BY THE INSTALLATION OF APPROVED METAL COLLARS SECURELY FASTENED TO THE ADJOINING STRUCTURE.  
TUB WASTE OPENINGS IN FRAMED CONSTRUCTION TO CRAWL SPACES AT OR BELOW THE FIRST FLOOR SHALL BE PROTECTED BY THE INSTALLATION OF APPROVED METAL COLLARS OR METAL SCREEN SECURELY FASTENED TO THE ADJOINING STRUCTURE WITH NO OPENING GREATER THAN 1/8-INCH IN THE LEAST DIMENSION.

## GARAGE SEPARATION:

GARAGES, SHOPS, AND SIMILAR AREAS SHALL BE SEPARATED FROM THE DWELLING BY 1/2" GIBS ON THE GARAGE SIDE WALLS AND SUPPORTING POSTS AND BEAMS. THE MATERIALS SHALL EXTEND FROM THE FOUNDATION TO THE ROOF SHEATHING, WHERE A LIVING AREA IS ABOVE THE GARAGE, THE CEILING SHALL BE PROTECTED WITH ONE LAYER OF 5/8" TYPE 'X' GYPSUM WALLBOARD, PER SECTION R302.6.

## TUBS AND SHOWERS:

TUB AND SHOWER WALLS SHALL HAVE A 5/8" THICK, NONABSORBENT SURFACE TO A HEIGHT OF NOT LESS THAN 6' ABOVE THE FLOOR. MATERIAL OTHER THAN STRUCTURAL ELEMENTS USED IN SUCH WALLS SHALL BE OF A TYPE NOT ADVERSELY AFFECTED BY MOISTURE. ALL GLAZING INCLUDING WINDOWS UP TO 60 INCHES OF THE DRAIN INLET SHALL BE SAFETY GLASS. DOORS SHALL BE HUNG OUT.  
FIREBLOCK BETWEEN STUDS.

## FIREPLACES:

5/8" ZERO-CLEARANCE FIREPLACES SHALL BE UL APPROVED. THEY SHALL BE INSTALLED IN ACCORDANCE WITH THE IBC AND THE MANUFACTURER'S SPECIFICATIONS. THEY SHALL BE FITTED WITH A TIGHT FITTING FLUE DAMPER. 4 OPERATED WITH A READILY ACCESSIBLE MANUAL OR APPROVED AUTOMATIC CONTROL. ALL FIREPLACES SHALL BE PROVIDED WITH FRESH AIR FROM THE OUTSIDE TO THE FIRE BOX. FRESH AIR INTAKES SHALL BE A MINIMUM OF 6 SQUARE INCHES AND SHALL BE FITTED WITH A READILY OPERABLE DAMPER. THEY SHALL HAVE TIGHT FITTING GLASS OR METAL DOORS, OR FLUE DRAFT INDUCTION PAN.

## CRAWL ACCESS:

CRAWL ACCESS SHALL BE A MINIMUM OF 18"x24". IT SHALL BE UNOBSTRUCTED. IT SHALL BE WEATHERSTRIPPED AND INSULATED TO A LEVEL EQUIVALENT TO THE INSULATION ON THE SURROUNDING SURFACES.

## HOT WATER TANK:

HOT WATER TANK SHALL BE LABELED COMPLY WITH THE LATEST NAESCA STANDARDS. THEY SHALL HAVE A TEMPERATURE / PRESSURE RELIEF VALVE WHICH SHALL VENT TO THE EXTERIOR OF THE BUILDING AND AN EXPANSION TANK. IN UNHEATED SPACES, ELECTRIC WATER HEATERS SHALL BE PLACED ON AN NONCOMPRESSIBLE INSULATED SURFACE OF R-10 MINIMUM. THE WATER HEATER SHALL BE STRAPPED WITH TWO 2" GAUGE X 3/4" METAL STRAPS AT UPPER AND LOWER 1/3 OF TANK. STRAPS SHALL BE ATTACHED DIRECTLY TO THE STUDS OR A 2X4 CROSS BRACE W/ 1/4"x2" LAGS. INSTALL GAS IN GARAGES ON AN 18" HIGH STAND.

## HOT WATER TEMPERATURE MAXIMUM:

MAXIMUM HOT WATER TEMPERATURE AT BATH TUBS AND WHIRLPOOLS SHALL BE LIMITED TO 120 DEGREES FAHRENHEIT. THE WATER HEATER SHALL NOT BE CONSIDERED A CONTROL TO MEET THIS REQUIREMENT.

## STAIR NOTES:

MINIMUM STAIR WIDTH 36" CLEAR MINIMUM HEADROOM 6'-8" CLEAR. STAIR RISE AND RUN PER THE PLANS (3-3/4" MAX RISE/10" MIN RUN). THE MAX RISE SHALL NOT EXCEED THE MIN RISE BY MORE THAN 3/8". INSTALL FIRESTOPS IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN AND BETWEEN THE STUDS ALONG AND IN LINE WITH THE RUN OF THE STAIRS IF THE WALLS UNDER THE STAIRS ARE UNFINISHED. COVER ANY USABLE SPACE UNDER THE STAIRS WITH GYP. BOARD. THE HANDRAILS SHALL BE BETWEEN 1/2" AND 2" IN CROSS SECTION. IT SHALL BE MOUNTED BETWEEN 34" AND 38" ABOVE THE STAIR NOSING, AND BETWEEN 1/2" AND 3/4" FROM THE WALL. THE ENDS OF THE HANDRAIL SHALL RETURN TO THE WALL.

## SMOKE ALARMS:

SMOKE ALARMS SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH SECTION R319. SMOKE DETECTORS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING AND SHALL HAVE A BATTERY BACKUP. SMOKE DETECTORS SHALL BE INTERCONNECTED TO PROVIDE AN ALARM IN ALL SLEEPING ROOMS, OUTSIDE THE BEDROOM AREA IN THE IMMEDIATE VICINITY AND EACH ADDITIONAL STORY.

## EGRESS:

EVERY SLEEPING ROOM SHALL BE PROVIDED WITH AT LEAST ONE OPERABLE DOOR OR WINDOW WITH A NET CLEAR OPENING OF 5.7 SQUARE FEET. THE OPENING HEIGHT SHALL BE AT LEAST 24" AND THE WIDTH AT LEAST 20" WITH A FINISHED SILL HEIGHT NOT MORE THAN 42" ABOVE THE FLOOR.

## RECESSED LIGHTING FIXTURES:

WHEN INSTALLED, RECESSED LIGHTING FIXTURES SHALL MEET ONE OF THE FOLLOWING REQUIREMENTS:

1. TYPE IC RATED, MANUFACTURED WITH NO PENETRATIONS BETWEEN THE INSIDE OF THE RECESSED FIXTURE AND CEILING CAVITY AND SEALED OR GASKETED TO PREVENT AIR LEAKAGE INTO THE UNCONDITIONED SPACE.
2. TYPE IC OR NON-IC RATED, INSTALLED INSIDE A SEALED BOX CONSTRUCTED FROM A MINIMUM ONE HALF INCH GYPSUM WALL BOARD OR CONSTRUCTED FROM A FIRE-RATED POLYETHYLENE VAPOR BARRIER, OR OTHER AIR TIGHT ASSEMBLY MANUFACTURED FOR THIS PURPOSE, WHILE MAINTAINING REQUIRED CLEARANCES OF NOT LESS THAN ONE HALF INCH FROM COMBUSTIBLE MATERIAL AND NOT LESS THAN THREE INCHES FROM INSULATION MATERIAL.
3. TYPE IC RATED, CERTIFIED UNDER ASTM E893 TO HAVE NO MORE THAN 2.0 CFM AIR MOVEMENT FROM THE CONDITIONED SPACE TO THE CEILING CAVITY. THE LIGHTING FIXTURE SHALL BE TESTED AT SEVENTY-FIVE PASICALS OR 1.51 LBS/SQ PRESSURE DIFFERENCE AND HAVE A LABEL ATTACHED, SHOWING COMPLIANCE.

## WATER EFFICIENCY STANDARDS:

MAXIMUM WATER USE ALLOWED MEASURED IN GALLONS PER MINUTE (GPM):

TOILETS	1.5 GPM
SHOWERHEADS	1.5 GPM
LAVATORY FAUCETS	1.0 GPM
KITCHEN FAUCETS	1.5 GPM

## FANS:

BATH, POWDER ROOM AND LAUNDRY ROOM FANS SHALL HAVE A MINIMUM CAPACITY OF 80 CFM. THE FANS SHALL BE VENTED TO THE EXTERIOR AND SHALL HAVE A BACK FLOW PREVENTER. EXHAUST DUCTS IN UNCONDITIONED SPACE SHALL BE INSULATED TO A MINIMUM OF R-4. EXHAUST DUCTS SHALL BE SIZED IN ACCORDANCE WITH THESE GENERAL NOTES. SEE 'PRESCRIPTIVE DUCT SIZING'. FANS SHALL BE FLOOR RATED AT 0.25 W.G. STATIC PRESSURE. MINIMUM EFFICACY 1.4 CFM/WATT

## RANGE HOODS:

RANGE HOODS SHALL HAVE A MINIMUM CAPACITY OF 100 CFM AND SHALL VENT TO THE OUTSIDE AND SHALL HAVE A BACK FLOW PREVENTER. EXHAUST DUCTS IN UNCONDITIONED SPACE SHALL BE INSULATED TO A MINIMUM OF R-4. EXHAUST DUCTS SHALL BE SIZED IN ACCORDANCE WITH THESE GENERAL NOTES. SEE 'PRESCRIPTIVE DUCT SIZING'. FANS SHALL BE FLOOR RATED AT 0.25 W.G. STATIC PRESSURE. MINIMUM EFFICACY 2.8CFM/WATT

## PRESCRIPTIVE DUCT SIZING:

THIS SECTION SHALL BE USED FOR SIZING EXHAUST AND SUPPLY DUCTS.

FAN CFM	FLEX DIA.	MAX LENGTH	SMOOTH DIA.	MAX LENGTH
80	4 INCH	25'	4 INCH	10'
80	5 INCH	30'	5 INCH	100'
80	6 INCH	NO LIMIT	6 INCH	NO LIMIT
80	4 INCH	NOT ALLOWED	4 INCH	20'
80	5 INCH	15'	5 INCH	100'
80	6 INCH	30'	6 INCH	NO LIMIT
100	5 INCH	NOT ALLOWED	5 INCH	80'
100	6 INCH	45'	6 INCH	NO LIMIT
125	6 INCH	15'	6 INCH	NO LIMIT
25	1 INCH	10'	1 INCH	NO LIMIT

THERE SHALL BE A MAXIMUM OF THREE ELBOWS. FOR EACH ELBOW OVER THREE SUBTRACT 1/2 FEET FROM THE MAXIMUM LENGTH.

## 2015 TABLE R406.2 CREDITS:

OPTION 1a	EFFICIENT BUILDING ENVELOPE	1a	0.5 CREDITS
OPTION 3a	HIGH EFFICIENCY HYVA EQUIPMENT	3a	1.0 CREDITS
OPTION 5a	EFFICIENT WATER STANDARDS	5a	0.5 CREDITS
OPTION 5c	EFFICIENT WATER HEATING	5c	1.5 CREDIT

## WHOLE HOUSE VENTILATION (INTEGRATED):

THE INTEGRATED WHOLE HOUSE VENTILATION SYSTEMS SHALL PROVIDE OUTDOOR AIR AT THE RATE CALCULATED USING SECTION M309.3. INTEGRATED FORCED-AIR VENTILATION SYSTEMS SHALL DISTRIBUTE OUTDOOR AIR TO EACH HABITABLE ROOM THROUGH THE DUCTS AND 2" BATTERY BACKUP. 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 M309.3.2. THE REQUIRED FLOW RATE SHALL BE VERIFIED BY FIELD TESTING WITH A FLOW HOOD OR A FLOW MEASURING STATION.

THE WHOLE HOUSE VENTILATION SYSTEM SHALL BE CONTROLLED BY A 24-HOUR CLOCK TIMER WITH THE CAPABILITY OF CONTINUOUS OPERATION, MANUAL AND AUTOMATIC CONTROL. THE CONTROL WILL CONTROL THE FORCED AIR SYSTEM BLOWER AND THE AUTOMATIC DAMPER. THE 24-HOUR TIMER SHALL BE READILY ACCESSIBLE. THE 24-HOUR TIMER SHALL BE CAPABLE OF OPERATING THE WHOLE HOUSE VENTILATION SYSTEM WITHOUT ENERGIZING OTHER ENERGY-CONSUMING APPLIANCES. AT THE TIME OF FINAL INSPECTION, THE AUTOMATIC CONTROL TIMER SHALL BE SET TO OPERATE THE WHOLE HOUSE SYSTEM FOR AT LEAST 8 HOURS A DAY. A LABEL SHALL BE AFFIXED TO THE CONTROL THAT READS 'WHOLE HOUSE VENTILATION (SEE OPERATING INSTRUCTIONS)'. WHOLE HOUSE EXHAUST FANS SHALL BE RATED AT 0.25 W.G. AND MAX. 1.0 SONE RATING.

THE OUTDOOR AIR CONNECTION TO THE RETURN AIR STREAM SHALL BE LOCATED TO PREVENT THERMAL SHOCK TO THE HEAT EXCHANGER. THE OUTDOOR AIR INLET SHALL BE SCREENED OR OTHERWISE PROTECTED FROM ENTRY BY INSECTS, LEAVES, OR OTHER MATERIAL. THE INLETS SHALL BE LOCATED 80 AS NOT TO TAKE AIR FROM THE FOLLOWING AREAS:

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

THE DUCT SHALL BE INSULATED TO R-4 WHERE PASSING THROUGH UNCONDITIONED SPACE. A WHOLE HOUSE EXHAUST FAN SHALL BE LOCATED IN THE CEILING, AND SIZED AS PER TABLE M309.2 OF THE IRC.

## HVAC:

THE HVAC SHALL BE CAPABLE OF MAINTAINING 68 DEGREES FAHRENHEIT AT A POINT THREE FEET OFF THE FLOOR AND 2' FROM EXTERIOR WALLS IN ALL HABITABLE ROOMS WHEN THE OUTSIDE TEMPERATURE IS AS SET FORTH IN THE WASHINGTON STATE ENERGY CODE. THE HVAC SYSTEM SHALL BE A GEOTHERMAL HEAT PUMP, WATER FURNACE 5 SERIES RDV 060, GHP 30 SER. 5 COP. THE INSTALLED HVAC SIZE SHALL BE BASED ON THE CALCULATED HEAT LOSS AND SHALL NOT EXCEED 80% OF THE CALCULATED HEAT LOSS. A NIGHT SETBACK THERMOSTAT IS REQUIRED.

## ENERGY CODE DATA:

THIS BUILDING IS DESIGNED IN ACCORDANCE WITH THE WASHINGTON STATE ENERGY CODE

## INSULATION VALUES:

(ALL VALUES AS LISTED BELOW UNLESS NOTED OTHERWISE)

WALLS: R-13 INT.  
INSULATE BEHIND TUB/SHOWER, PARTITIONS, AND CORNERS. FACE STAPLE FACED INSULATION, FRICTION FIT UNFACED BATTS AND INSTALL A 4-MIL POLY VAPOR BARRIER.

## CEILING: R-38

INSTALL INSULATION BARRIERS AT EAVES. BARRIERS TO MAINTAIN 1" CLEAR ABOVE INSULATION. EXTEND BARRIERS 6" ABOVE BATT INSULATION AND 12" ABOVE LOOSE FILL INSULATION.

## FLOORS: R-30

SLAB EDGE: R-10, RIGID

## DUCT INSULATION: R-8

PIPE INSULATION: R-3

HOT AND COLD WATER PIPES OUTSIDE OF THE CONDITIONED SPACE SHALL BE INSULATED.

## WINDOWS: U-0.24

ALL EXTERIOR WINDOWS SHALL BE DESIGNED TO OMIT INFILTRATION INTO OR FROM THE BUILDING ENVELOPE AND SHALL BE SUBSTITUTED BY TESTING TO STANDARD ASTM E 283-15.

## EXTERIOR DOORS: U-0.20

ONE SIDE-HINGED SLIP-DOOR ASSEMBLY UP TO 24 SQUARE FEET IN AREA IS EXEMPT FROM THE UFACTOR REQUIREMENTS. ALL EXTERIOR DOORS OR DOORS SERVING AS ACCESS TO AN ENCLOSED UNHEATED AREA, OTHER THAN FIRE-RATED DOORS, SHALL BE DESIGNED TO LIMIT AIR LEAKAGE AROUND THEIR PERIMETER WHEN IN A CLOSED POSITION. DOORS BETWEEN RESIDENCE AND GARAGE ARE NOT CONSIDERED FIRE-RATED.

## OUTDOOR LIGHTING:

OUTDOOR LIGHTING FIXTURES THAT ARE PERMANENTLY MOUNTED TO THE STRUCTURE OR OTHER STRUCTURES UPON THE SAME LOT SHALL BE HIGH EFFICIENCY LUMINAIRES UNLESS CONTROLLED BY A MOTION SENSOR WITH AN INTEGRAL PHOTO SENSOR.

## INFILTRATION CONTROL:

EXTERIOR JOINTS AROUND SOLE PLATES, WIRING, PLUMBING, DUCTS, RIM JOISTS, MUDBALLS, FLUES, LIGHT FIXTURES, AND PARTITION STUD PENETRATIONS THROUGH WALLS, FLOORS, AND ROOFS, AND ALL OTHER SUCH OPENINGS INTO THE BUILDING ENVELOPE SHALL BE SEALED, CAULKED, GASKETED, OR WEATHER-STRIPPED TO LIMIT AIR LEAKAGE.

## VAPOR BARRIERS:

AN APPROVED VAPOR BARRIER SHALL BE PROPERLY INSTALLED IN ROOF DECKS, IN ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF RAFTERS, AND AT EXTERIOR WALLS.

## GROUND COVER:

A GROUND COVER OF 6 MIL BLACK POLYETHYLENE OR EQUIVALENT SHALL BE LAID OVER THE GROUND IN ALL CRAWL SPACES AND UNDER ALL FLOOR SLABS EXCEPT GARAGE FLOOR SLABS. THE GROUND FLOOR COVER SHALL BE OVERLAPPED ONE FOOT AT EACH JOINT AND SHALL EXTEND TO THE FOUNDATION WALL.

## NON-COMPLIANCE WITH MI ORDINANCES:

THIS IS NOT THE LOCATION WE SELECTED FOR THE HOUSE, NOR DO WE FEEL IT IS A REASONABLE LOCATION FOR MANY REASONS.

THE LOCATION WAS SELECTED BY EVAN MANN, COMMUNITY PLANNING & DEVELOPMENT DIRECTOR, NOT ONLY IS IT A DIFFICULT AND EXPENSIVE LOCATION TO BUILD A HOUSE IT VIOLATES MANY CITY ORDINANCES WITH EVAN'S BLESSINGS. PLEASE CONTACT HIM WITH ANY QUESTIONS OR CONCERNS.

DRIVEWAY SLOPE IS GREATER THAN 8%.

STRUCTURE EXCEEDS ALLOWABLE HEIGHT LIMIT.

STRUCTURE EXCEEDS DOWNHILL HEIGHT LIMIT.

STRUCTURE ENCLOSED INTO EASEMENT SETBACKS.

STRUCTURE ENCLOSED INTO BOTH STREAMS SETBACKS.

## ARCHITECTURAL PLANS

- A 1.0 GENERAL NOTES
- A 1.1 SITE PLAN
- A 1.2 MI DEVELOPMENT PLAN
- A 2.1 GARAGE PLAN
- A 2.2 MAIN FLOOR PLAN
- A 2.3 UPPER FLOOR PLAN
- A 2.4 ROOF PLAN
- A 3.1 SECTION "A-A"
- A 3.2 SECTION "B-B"
- A 3.3 SECTION "C-C"
- A 3.4 SECTION "D-D"

- A 4.1 ELEVATIONS SOUTH - EAST
- A 4.2 ELEVATIONS NORTH - WEST

- A 5.1 DETAILS
- A 5.2 DETAILS
- A 5.3 DETAILS
- A 5.4 STAIRS
- A 5.5 WINDOWS

- A 6.1 CABINETS
- A 6.2 GARAGE FLOOR ELECTRICAL
- A 6.3 MAIN FLOOR ELECTRICAL
- A 6.4 UPPER FLOOR ELECTRICAL

## STRUCTURAL PLANS

- F 1.0 SHORING PIN FILE DETAILS
- F 1.1 SHORING PIN FILE PLAN

- S 1.0 STRUCTURAL NOTES
- S 2.0 FOUNDATION PLAN
- S 2.1 MAIN FLOOR FRAMING PLAN
- S 2.2 UPPER FLOOR FRAMING PLAN
- S 2.3 ROOF FRAMING PLAN

- S 3.0 FOUNDATION DETAILS
- S 3.1 FOUNDATION DETAILS
- S 3.2 FOUNDATION DETAILS

- S 4.0 FRAMING DETAILS
- S 4.1 FRAMING DETAILS
- S 4.2 FRAMING DETAILS
- S 4.3 FRAMING DETAILS

## SURVEY PLAN

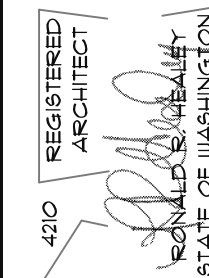
- 1/1 CORE SURVEY

## CIVIL ENGINEERING PLANS

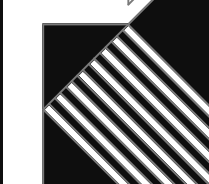
- 1/4 TITLE & T&PE PLAN
- 2/4 T&PE DETAILS
- 3/4 UTILITY & GRADING PLAN
- 4/4 STORM DETAILS

## WETLAND PLANS

- 1/2 WETLAND BUFFER IMPACT SITE PLAN
- 2/2 PLANTING PLAN



THE HEALEY ALLIANCE AZ  
205 N 139th DRIVE GOODYEAR, AZ 85335 • (480) 444-6168  
ARCHITECTS



Mi Treehouse, LLC,  
5631 EAST MERCER WAY  
MERCER ISLAND, WA.

COVER SHEET  
SCALE 1/4" = 1'-0"

DATE  
6-25-2020

PROJECT NO.  
001

SHEET NO.

A 1.0

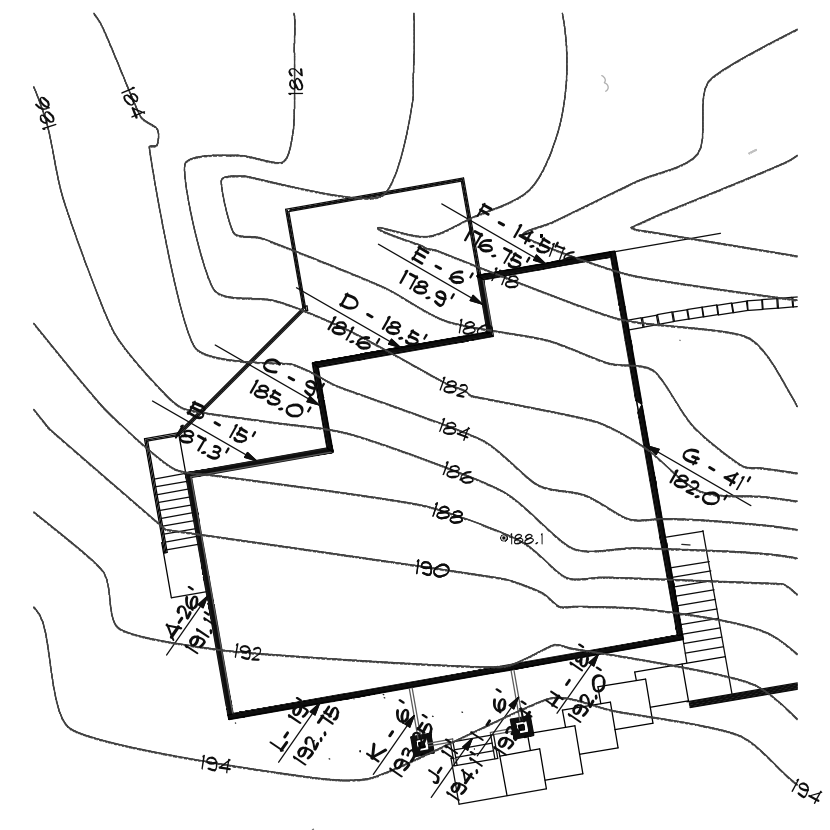
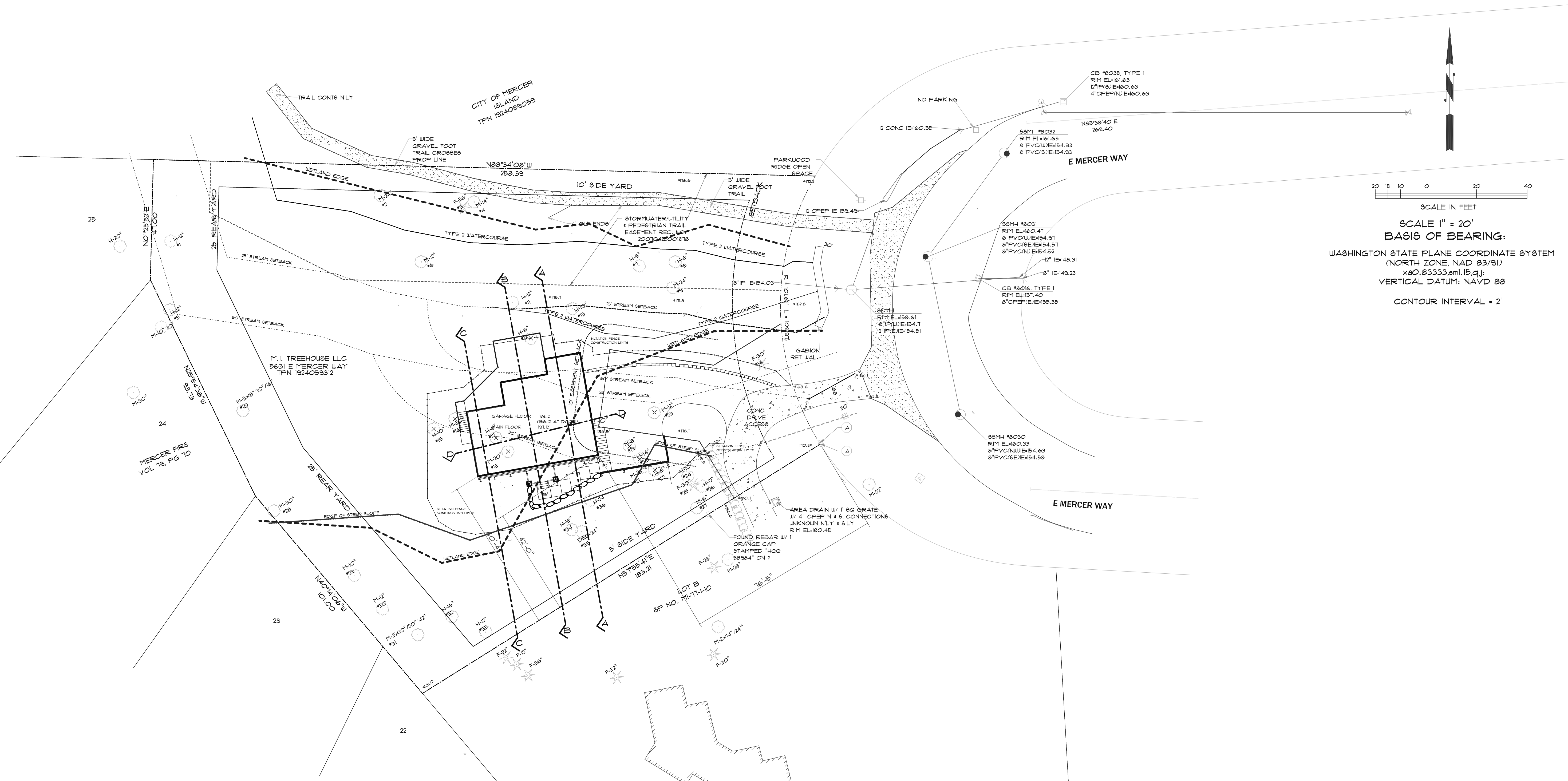
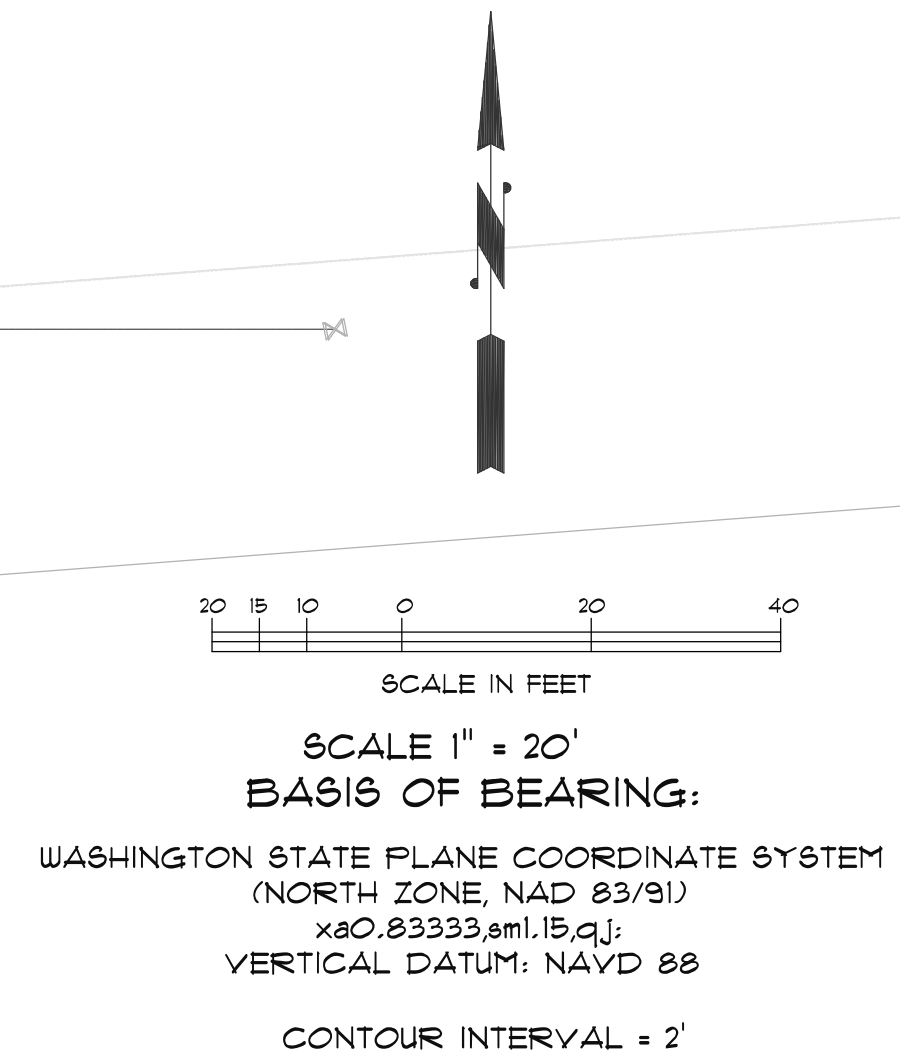
A PORTION OF GOVERNMENT LOT 3, OF SECTION 19, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., KING COUNTY, WASHINGTON



**THE HEALEY ALLIANCE AZ**  
 2505 N 135th DRIVE, GOODYEAR, AZ, 85395 - (425) 444-6768  
**ARCHITECTS**

**M.I. Treehouse, LLC,**  
 5631 EAST MERCER WAY  
 MERCER ISLAND, WA.

**SITE PLAN**  
 DATE 6-25-2020  
 PROJECT NO. 001  
 SHEET NO. **A1.1**  
 SCALE: 1"=20'



**AVERAGE BUILDING ELEVATION**

	WALL LENGTH	MIDPOINT ELEVATION	SUM
A	26	181.1	4968.6
B	15	181.3	2809.5
C	9	185.0	1665
D	18.5	181.6	3595.6
E	6	179.3	1075.4
F	14.5	176.75	2962.9
G	41	182.0	7482
H	18	182.0	3486
I	6	183.4	1100.4
J	11	184.1	2135.1
K	6	183.25	1159.5
L	19	182.75	3662.25
<b>SUM</b>	<b>190</b>		<b>35474.25</b>

ABE 35474.25 ÷ 186.7 = 190

**SUMMARY:**

ROOF AREA	2150 SF
HOUSE FOOTPRINT	1631 SF
DRIVEWAY	1560 SF
SITE DISTURBANCE	6926 SF
WETLAND DISTURBANCE	3587 SF
STREAM BUFFER DISTURBANCE	5195 SF
BOTH STREAM & WETLAND DISTURBANCE	2294 SF

- TREES TO REMAIN
- TREES TO BE REMOVED (8) TOTAL  
 #15, #16, #17, #18, #19, #20, #21, #22 & #23  
 (ONE #18 IS DEAD)
- SILTATION FENCE CLEARING LIMITS



CITY OF MERCER ISLAND

DEVELOPMENT SERVICES GROUP
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
PHONE: 206.275.7605 | www.mercergov.org



INSPECTION REQUESTS:



voicemail: (206) 275-7730

NOTE: ALL RECORDS AND DRAWINGS ARE SUBJECT TO PUBLIC DISCLOSURE AS REQUIRED BY RCW 42.56

CONTACT INFORMATION:

Applicant is to complete the following information.

Applicant Contact information prior to permit issuance: Name: MI Treehouse LLC, Bill Summers; Address: PO Box 261, Medina WA, 98039; Phone: (425) 761-5460; Email: bill@summersdevelopment.com

REQUIRED SPECIAL INSPECTIONS / STRUCTURAL OBSERVATIONS:

It is the Engineer of Record's responsibility to specify all required Special Inspections or Structural Observation (check items below). The owner is responsible for hiring an approved private Special Inspector for the checked inspections noted below.

STRUCTURAL OBSERVATION BY ENGINEER OF RECORD (EOR): Engineer of Record: Dwayne Barnes; Company: Stoney Point Engineering; Phone: (425) 644-9500

SOILS / GEOTECHNICAL: Special Inspector: \_\_\_\_\_; Company: \_\_\_\_\_; Phone: \_\_\_\_\_

REINFORCED CONCRETE: Special Inspector: TBD; Company: Cascade Testing Laboratories; Phone: (206) 525-6700

STRUCTURAL STEEL: Special Inspector: \_\_\_\_\_; Company: \_\_\_\_\_; Phone: \_\_\_\_\_

STRUCTURAL MASONRY: Special Inspector: \_\_\_\_\_; Company: \_\_\_\_\_; Phone: \_\_\_\_\_

WOOD: Special Inspector / Engineer of Record: \_\_\_\_\_; Company: \_\_\_\_\_; Phone: \_\_\_\_\_

OTHER SPECIAL INSPECTIONS: Special Inspector: TBD; Company: Cascade Testing Laboratories; Phone: 206-525-6700

DEFERRED SUBMITTALS:

The Applicant is required to select all deferred submittals / shop drawings for submittal to the City for review and approval prior to item fabrication / construction.

Connector plate wood trusses; Metal joist / metal trusses; Premanufactured structures (stairs, etc.); Precast concrete elements; Other: \_\_\_\_\_

ENERGY CODE COMPLIANCE INFORMATION:

Indicate where the following information is located in the drawing set. Alternatively, incorporate or include the Residential Energy Code Prescriptive Compliance (REPC) Form into the drawing set.

Building envelope: WSEC Table 402.2.1; Air Leakage Testing: IRC Section R402.4.1.2 WA Amendments; Duct Leakage Testing: WSEC R403.2.2; Postconstruction Test: WSEC R403.2.2.1

TO BE COMPLETED BY DSG

PROJECT ALERTS: Construction of the project shall be from approved plans only. No deviation from the approved project plans is allowed without prior approval from the City of Mercer Island.

TREE PROTECTION REQUIREMENTS: Tree protection as shown on approved drawings shall be installed at tree dripline prior to start of any site work and must remain in place throughout the project.

FIRE PROTECTION REQUIREMENTS: Separate Permits are required for ALL fire protection systems. Fire Sprinkler; Monitored Household Fire Alarm per NFPA 72; Monitored Sprinkler; Water Flow Alarm; Other: \_\_\_\_\_

WATER SUPPLY REQUIREMENTS: Fire sprinkler design calculations must be provided prior to determining water supply system requirements. Water Supply system upgrade required; City Installation; Applicant Installation.

DRAINAGE REQUIREMENTS: On site detention system required; On site infiltration system required; As-built Utility drawings required; Full Size drawings required.

SIDE SEWER REQUIREMENTS: Side sewer requires a backflow preventer when connecting to the lake line or when the elevation of the lowest plumbing fixture is lower than the elevation of the upstream manhole rim or when side sewer is shared with one or more properties.

APPROVED CODE ALTERNATIVES: Code alternatives must be inspected. Refer to the Inspection Checklist. CA1: \_\_\_\_\_; CA2: \_\_\_\_\_

SURVEY REQUIREMENTS: Surveyor shall verify points chosen for height calculations and point verification shall be submitted at the time of City foundation inspection. A property survey may be required to verify setbacks and in some cases buildings must be surveyed onto the lot.

MAXIMUM 40 PERCENT ALTERATION INSPECTION: A Building Inspection prior to demolition is required for all legally nonconforming single family dwelling to ensure no more than 40 percent of the dwelling's exterior walls are structurally altered.

GEOTECHNICAL INFORMATION: Land clearing, grading, filling and foundation work within geologic hazard areas is NOT PERMITTED between October 1 and April 1 without an approved Seasonal Development Limitation Waiver.

Geotechnical Report provided. All construction must comply with the recommendations of the Geotechnical Report. A copy of report and other geotechnical information must be kept on site at all times.

SEASONAL DEVELOPMENT LIMITATION RESTRICTION: Applies (Geologic Hazard area). Grading not permitted between October 1 through April 1.

Permit number: \_\_\_\_\_; Approved by: \_\_\_\_\_; Date: \_\_\_\_\_

TO BE COMPLETED BY DSG

TO BE COMPLETED BY DSG

REQUIRED CONSTRUCTION INSPECTIONS: Inspector shall initial and date appropriate inspection only if approved. Note: Items marked with an "A" require a separate permit. Inspections: Tree protection; Erosion control; Sewer disconnect and cap; Right-of-way use or work / easement, material delivery, etc.

TO BE COMPLETED BY DSG

Final Inspection: Tree Restoration; Final Inspection: Fire protection, including (but not limited to): Sprinkler; Access Road; Fire Code Alternatives (see below); Final Inspection: Water supply protection, including (but not limited to): backflow devices for; Waterfront property; Fire / lawn sprinkler.

90 DAY TEMPORARY CERTIFICATE OF OCCUPANCY (TCO): Applicant option. Additional fees will be required and must be approved prior to occupancy. TCO requires tree plantings be completed.

Approved: \_\_\_\_\_; Start Date: \_\_\_\_\_; End Date: \_\_\_\_\_

ADDITIONAL REQUIRED CITY INSPECTIONS: Call the appropriate contact to arrange the inspection. Required Inspection(s): \_\_\_\_\_; Contact: \_\_\_\_\_; Phone: \_\_\_\_\_; Scheduling: \_\_\_\_\_

IMPACT FEES: If applicable. Impact fees apply and are due prior to Final Inspection or on \_\_\_\_\_, whichever occurs first.

PLAN REVIEW APPROVALS: Not all review disciplines may be required to review the documents. DC Building; RP Planning; N/A Engineering; N/A Tree; N/A Fire

TO BE COMPLETED BY DSG

TO BE COMPLETED BY APPLICANT

TO BE COMPLETED BY APPLICANT

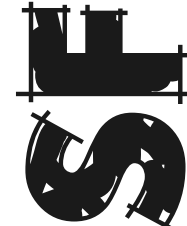
APPROVED DRAWINGS MUST BE KEPT ON THE BUILDING SITE AT ALL TIMES

REVIEWED FOR CODE COMPLIANCE

PROJECT NAME: MI Treehouse LLC, Bill Summers

PROJECT ADDRESS: 5637 East Mercer Way

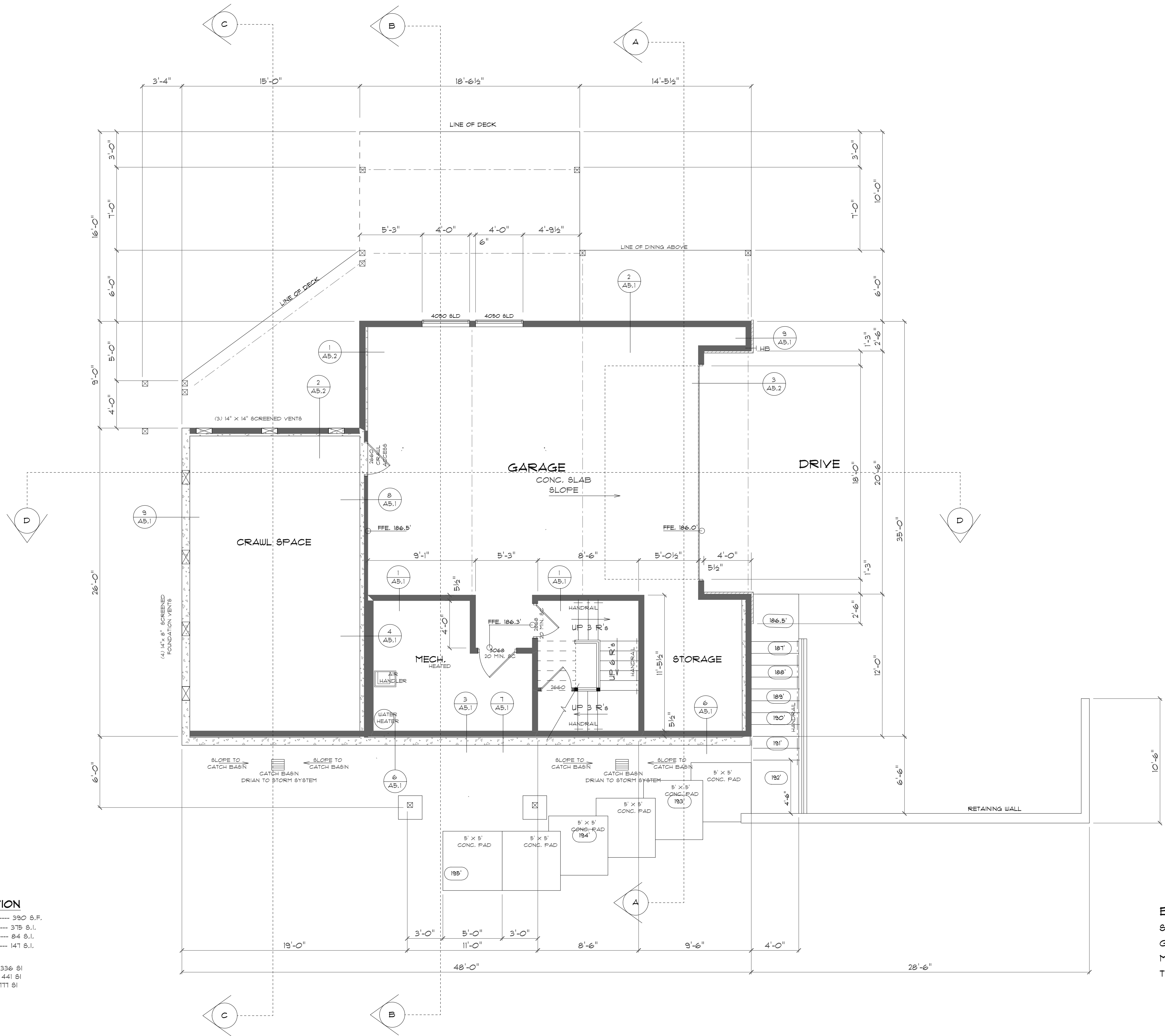
CERTIFICATE OF OCCUPANCY Issued after all required inspections have been performed and approved.



PERMIT NUMBER

Approved \_\_\_\_\_ Date \_\_\_\_\_





**CRAWL SPACE VENTILATION**

CRAWL SPACE AREA	390 S.F.
VENT. AREA REQ.D. (A/150 X 144)	375 S.F.
8x14 SCREENED VENTS CLEAR AREA	84 S.F.
14x14 SCREENED VENTS CLEAR AREA	141 S.F.

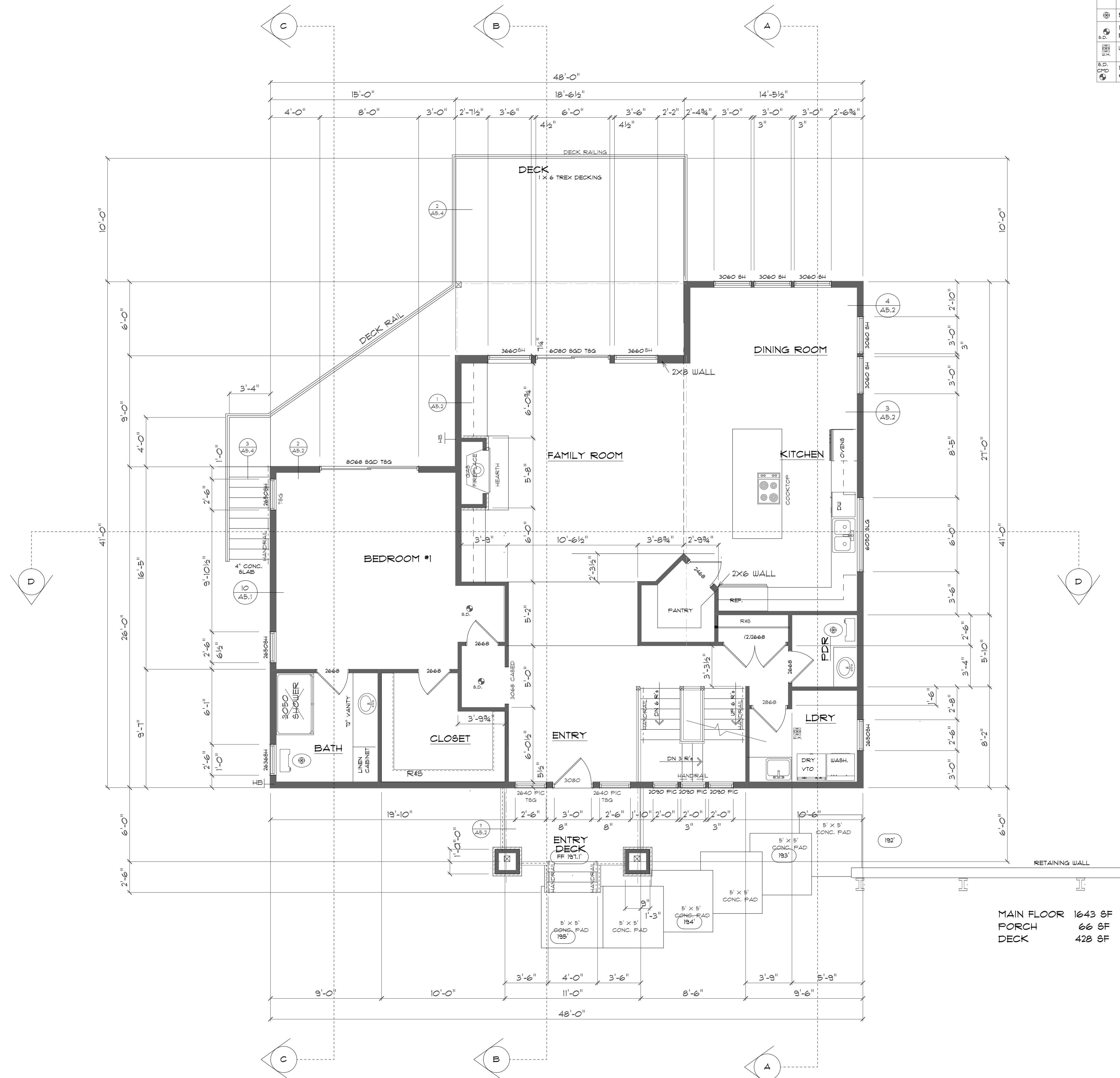
NUMBER OF VENTS:	
(4) 8x14 (4 X 84)	336 S.F.
(3) 14x14 (3 X 141)	441 S.F.
TOTAL	777 S.F.

**BASEMENT FLOOR**

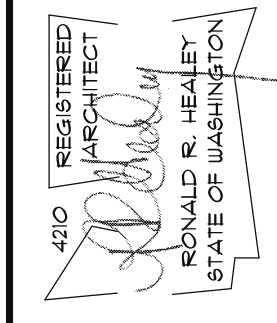
STAIRS	112 SF (HEATED)
GARAGE	810 SF (UNHEATED)
MECH.	144 SF (HEATED)
TOTAL	1066 SF



LEGEND	
	50 CFM MIN. FAN (V.T.O.)
	110V. SMOKE DETECTOR W/ BATTERY BACK-UP & INTERCONNECTED ALARMS
	WHOLE HOUSE FAN - 100 CFM MIN, VTO
	110V. COMBINATION SMOKE DETECTOR
	& CARBON MONOXIDE DETECTOR



MAIN FLOOR 1643 SF  
 PORCH 66 SF  
 DECK 428 SF



THE HEALEY ALLIANCE AZ  
 2505 N 195th DRIVE, GIGGYEAR, AZ 85595 - (480) 444-6768  
**ARCHITECTS**

**MI Treehouse, LLC,**  
 5637 EAST MERCER WAY  
 MERCER ISLAND, WA.

**MAIN FLOOR PLAN**

SCALE 1/4" = 1'-0"

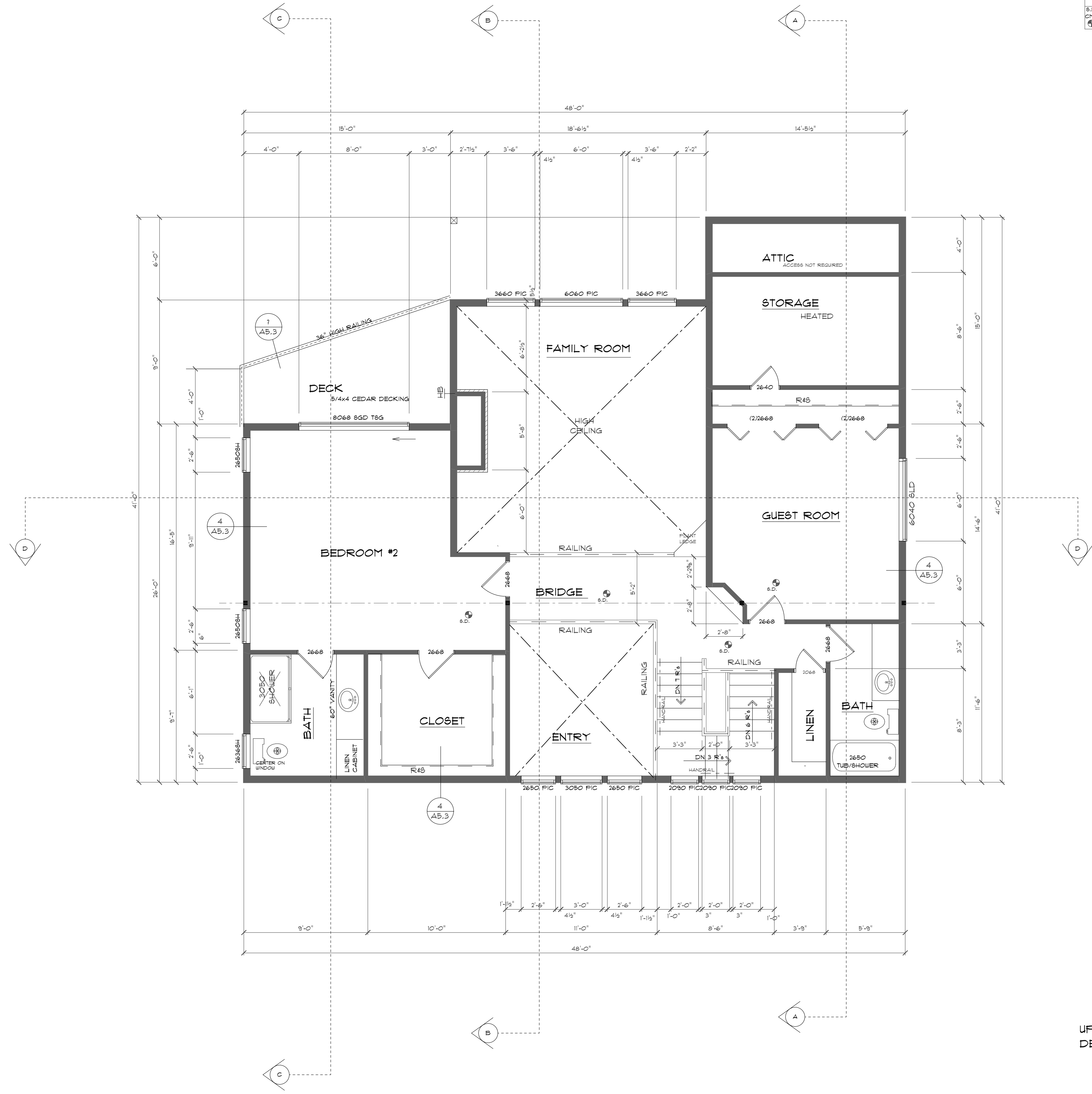
DATE 6-25-2020

PROJECT NO. 001

SHEET NO.

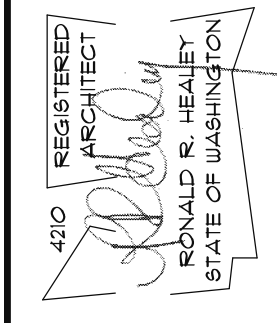
**A2.2**





LEGEND	
	50 CFM MIN. FAN (V.T.O.)
	110V. SMOKE DETECTOR W/ BATTERY BACK-UP & INTERCONNECTED ALARMS
	WHOLE HOUSE FAN - 100 CFM MIN. VTO
	110V. COMBINATION SMOKE DETECTOR & CARBON MONOXIDE DETECTOR

UPPER FLOOR 1142 SF  
DECK 91 SF



**THE HEALEY ALLIANCE AZ**  
2505 N 193th DRIVE, GOODYEAR, AZ 85395 • (480) 444-6168  
**ARCHITECTS**

**Mi Treehouse, LLC,**  
5631 EAST MERCER WAY  
MERCER ISLAND, WA.

UPPER FLOOR PLAN

DATE 6-25-2020

PROJECT NO. 001

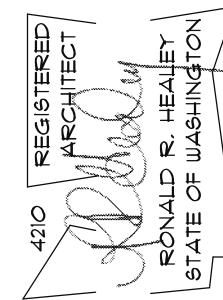
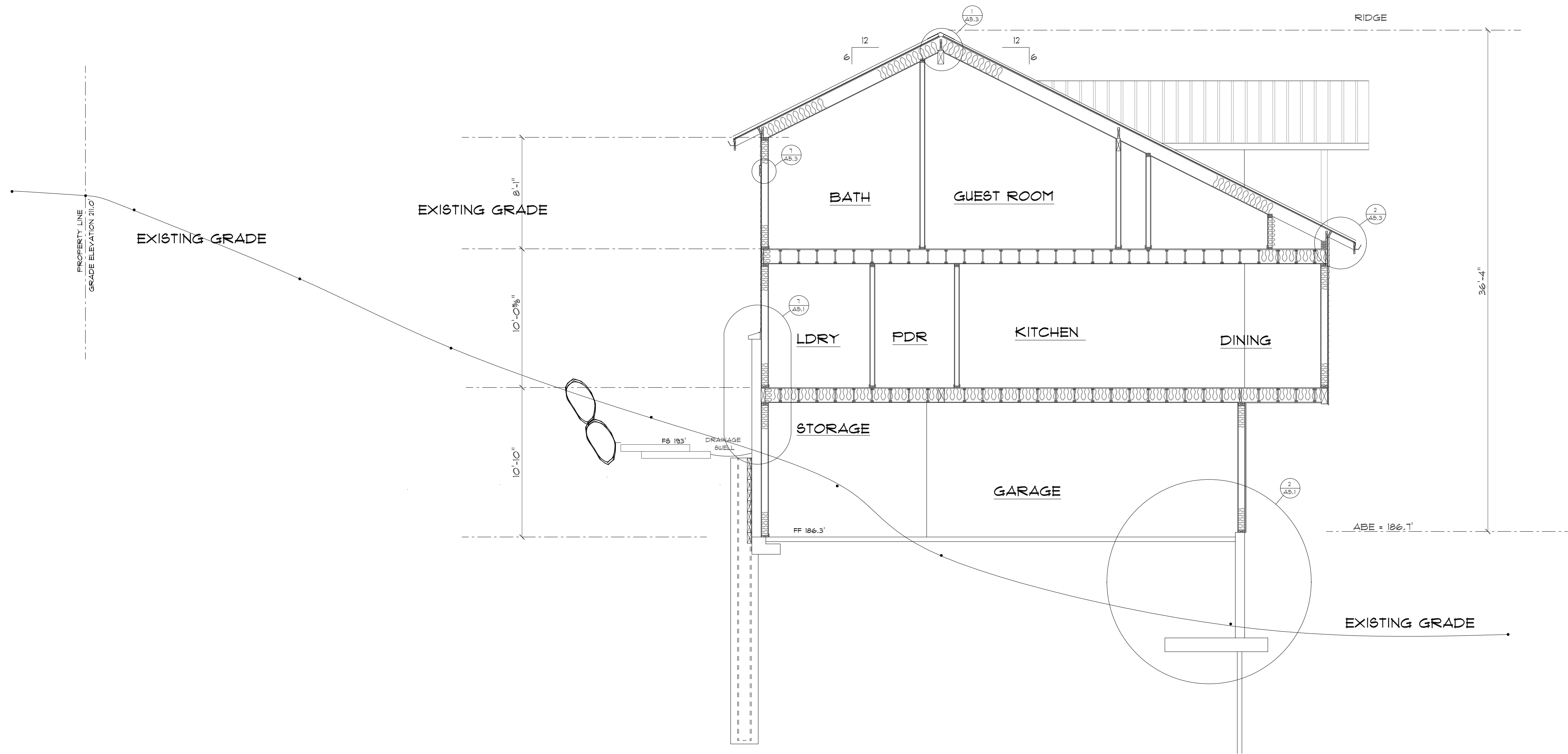
SHEET NO. **A2.3**

SCALE 1/4" = 1'-0"









THE HEALEY ALLIANCE AZ  
 2505 N. 159th DRIVE, GOOD YEAR, AZ 85395 • (480) 444-8788



M1 Treehouse, LLC,  
 5631 EAST MERCER WAY  
 MERCER ISLAND, WA.

SECTION "A-A"

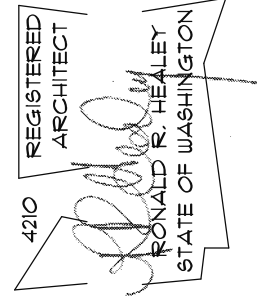
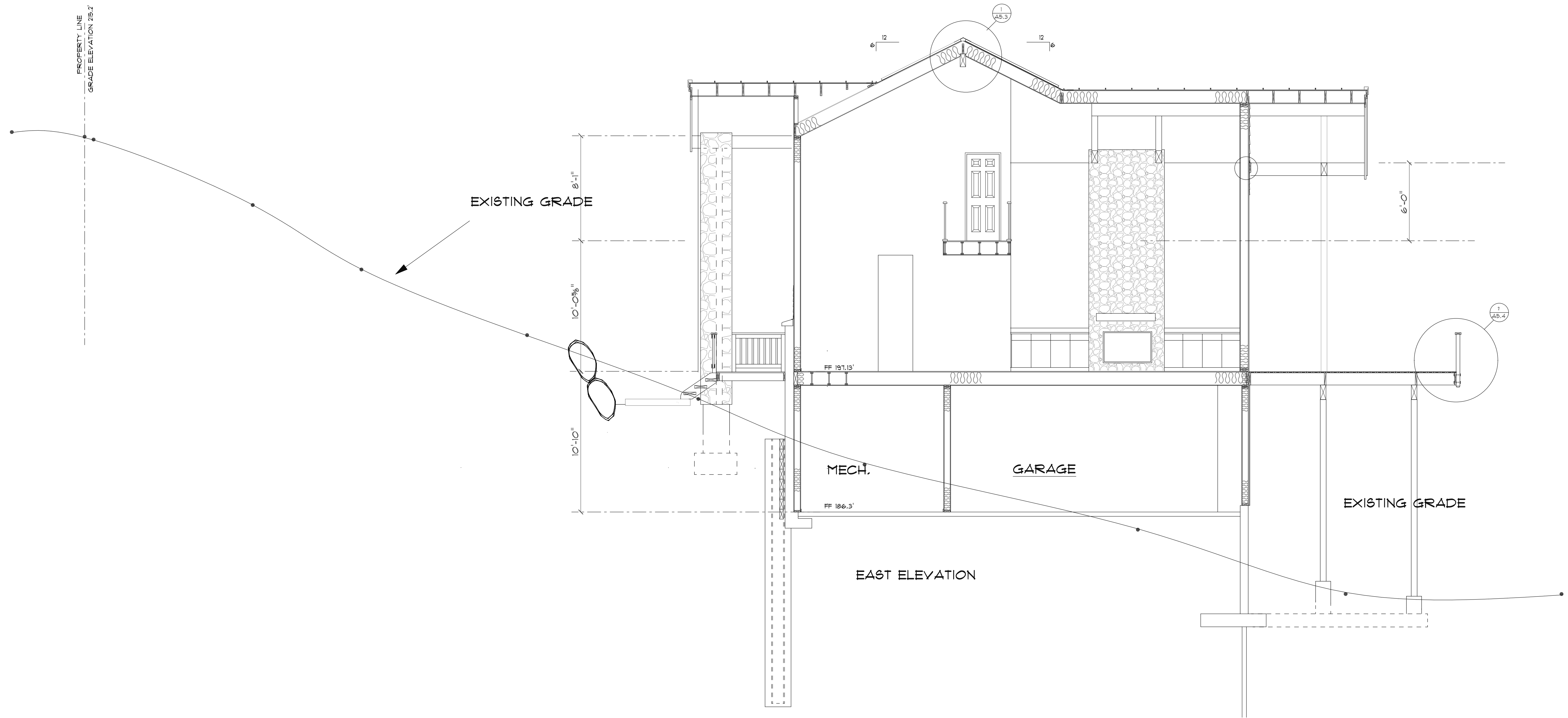
DATE  
 6-25-2020

PROJECT NO.  
 001

SHEET NO.  
 A3.1

SCALE 1/4" = 1'-0"





**THE HEALEY ALLIANCE AZ**  
 2505 N 138th DRIVE, SUITE 100, AZ 85595 • (480) 444-6768  
**ARCHITECTS**

**M1 Treehouse, LLC,**  
 5637 EAST MERCER WAY  
 MERCER ISLAND, WA.

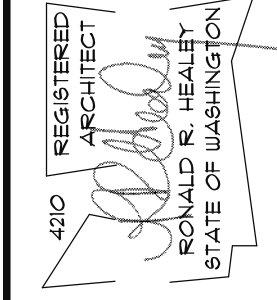
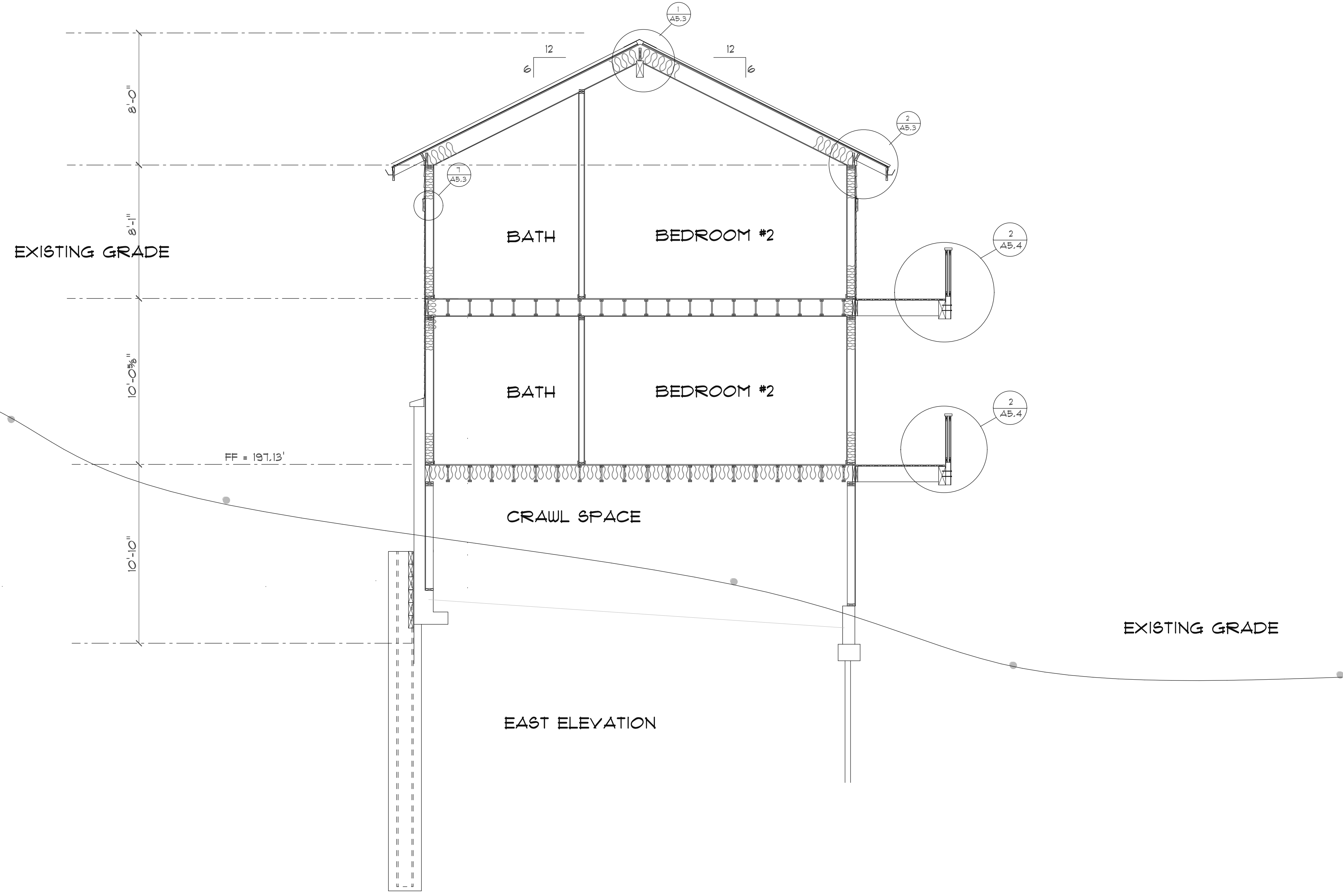
**SECTION "B-B"**  
 SCALE 1/4" = 1'-0"

DATE  
 6-25-2020

PROJECT NO.  
 001

SHEET NO.  
**A3.2**

PROPERTY LINE  
GRADE ELEVATION 111.25'



THE HEALEY ALLIANCE AZ  
 2505 N 135th DRIVE, GOODYEAR, AZ 85395 • (480) 444-6968  
 ARCHITECTS

MI Treehouse, LLC,  
 5631 EAST MERCER WAY  
 MERCER ISLAND, WA.

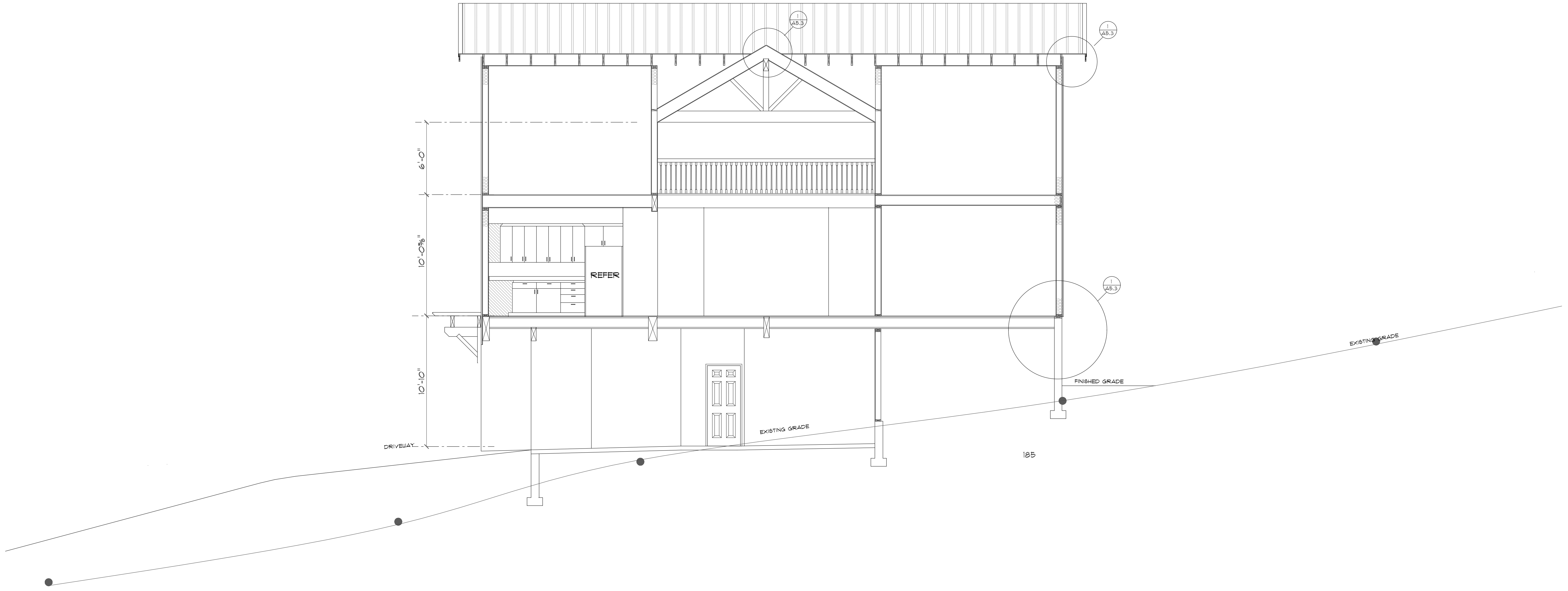
SECTION "C-C"  
 SCALE 1/4" = 1'-0"

DATE  
 6-25-2020

PROJECT NO.  
 001

SHEET NO.  
 A3.3





REGISTERED ARCHITECT  
 RONALD R. HEALEY  
 STATE OF WASHINGTON

**THE HEALEY ALLIANCE AZ**  
 2505 N 135th DRIVE, GOODYEAR, AZ 85338 • (480) 444-6788  
**ARCHITECTS**

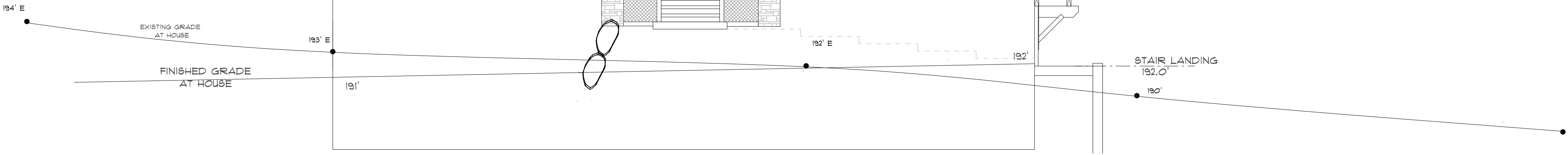
**Mi Treehouse, LLC,**  
 5631 EAST MERCER WAY  
 MERCER ISLAND, WA.

SECTION "D-D"  
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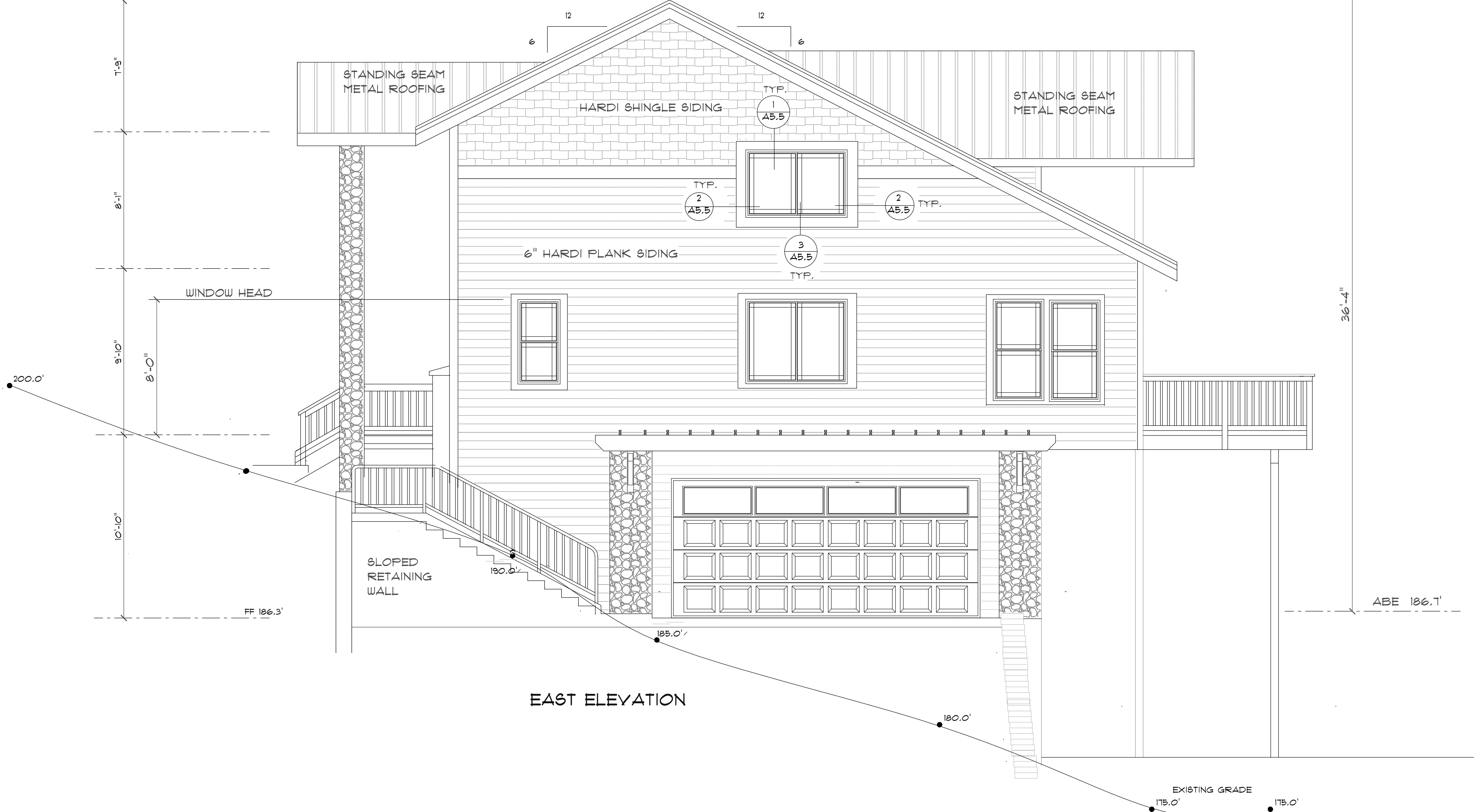
DATE  
 6-25-2020

PROJECT NO.  
 001

SHEET NO.  
**A3.4**

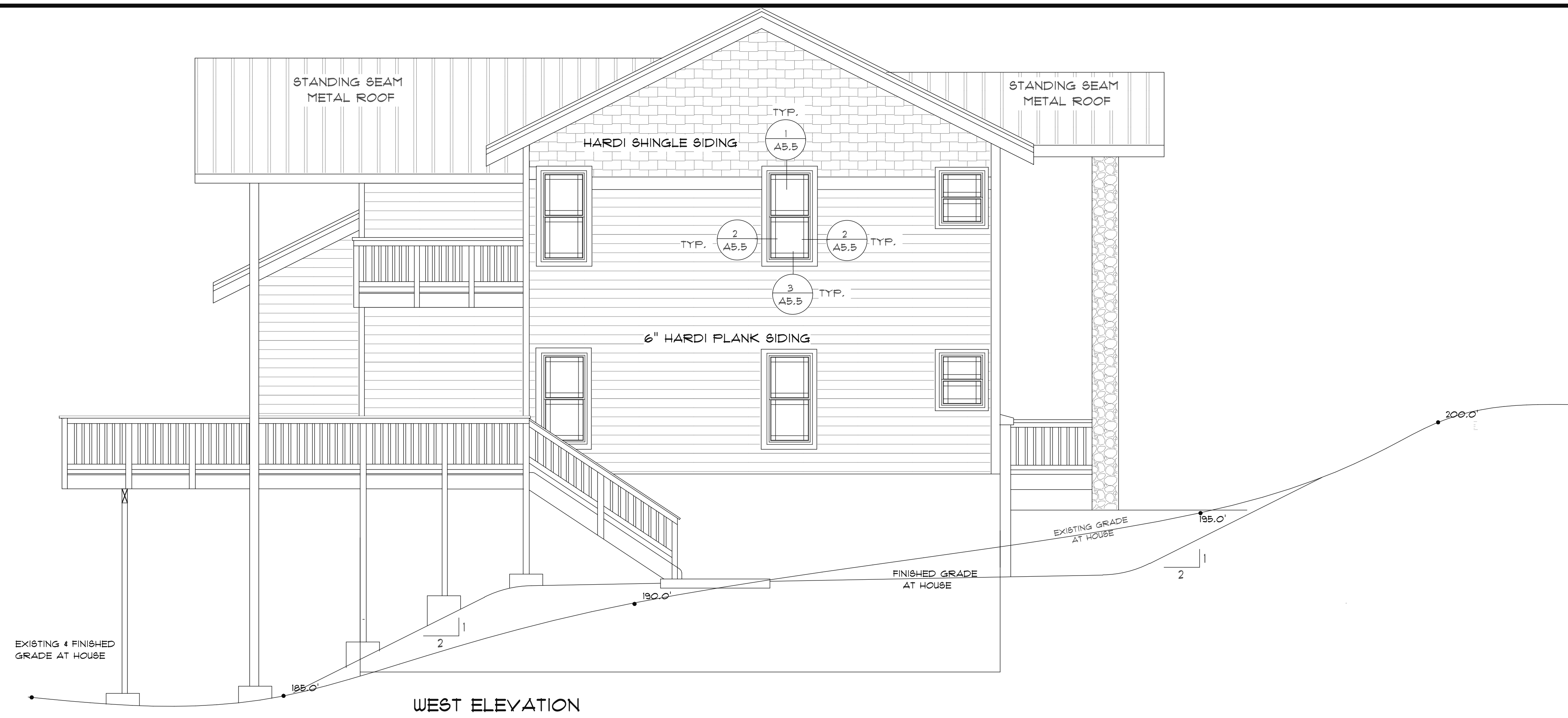


**SOUTH ELEVATION**

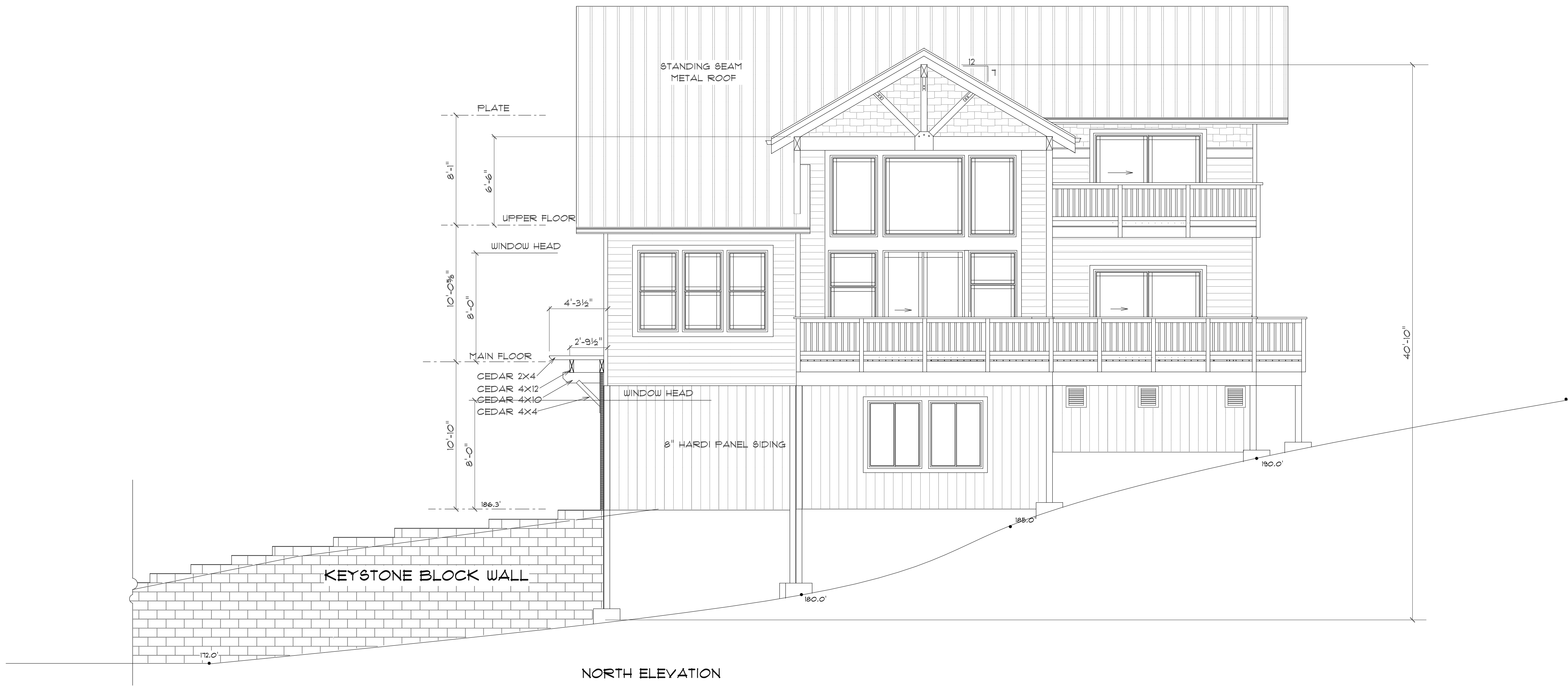


**EAST ELEVATION**

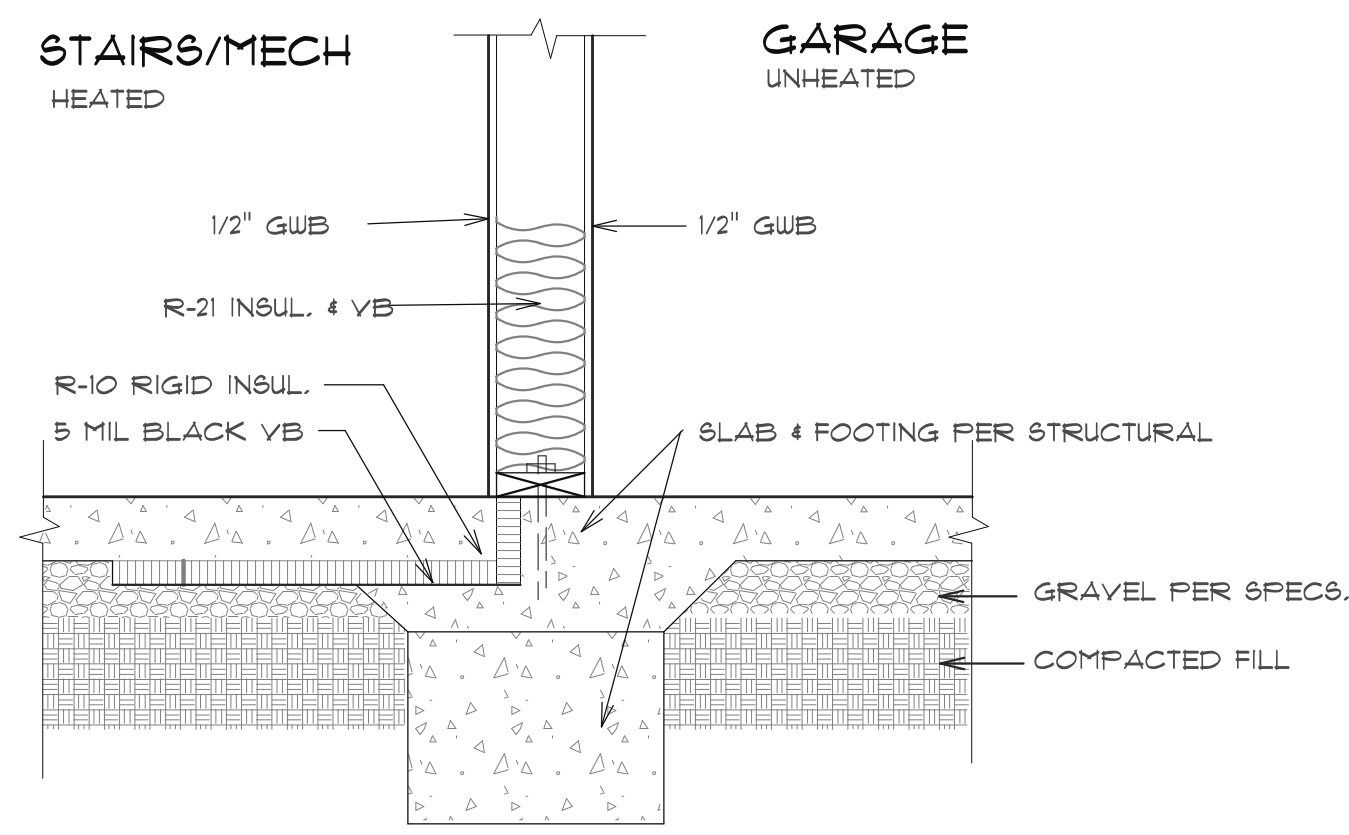




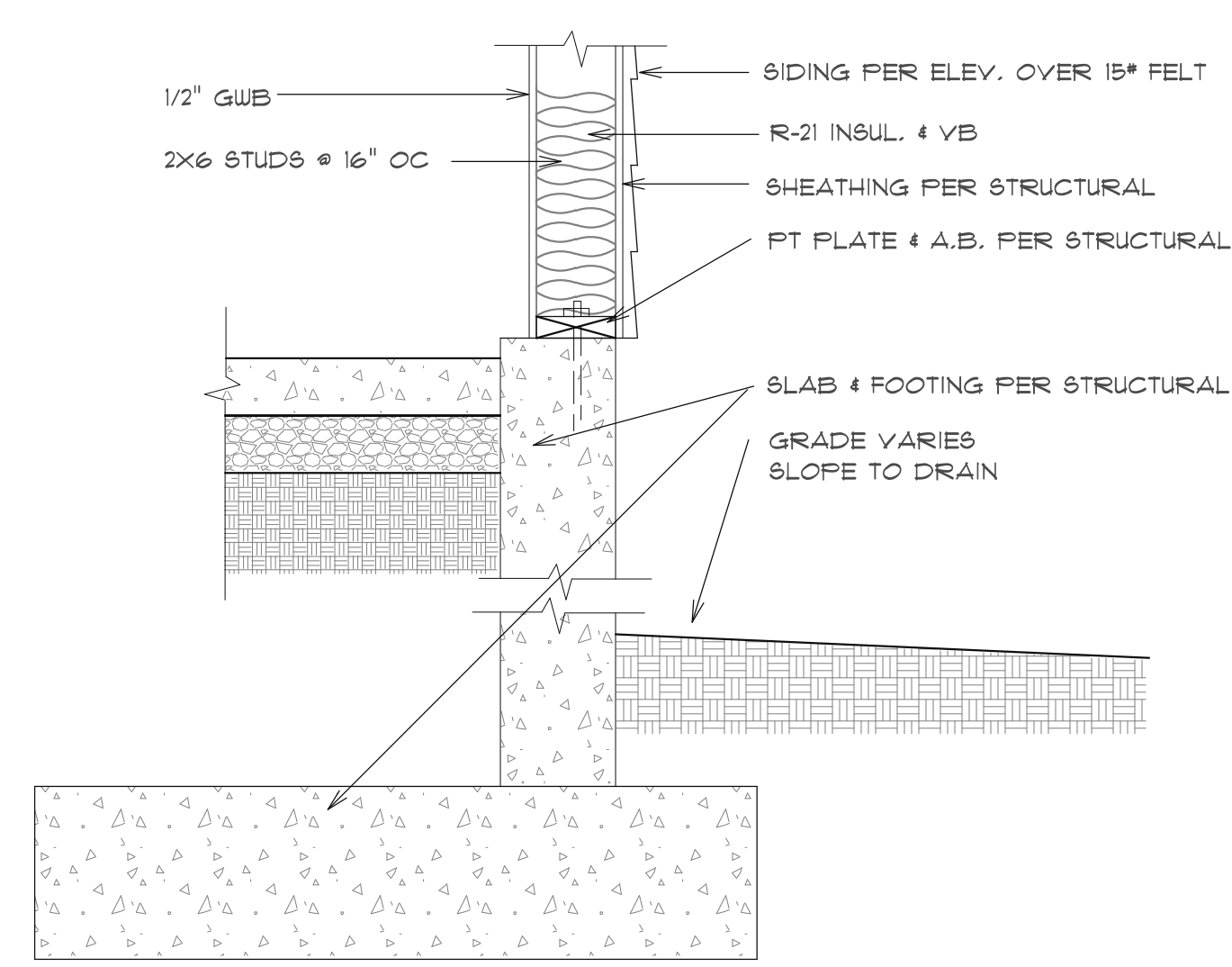
WEST ELEVATION



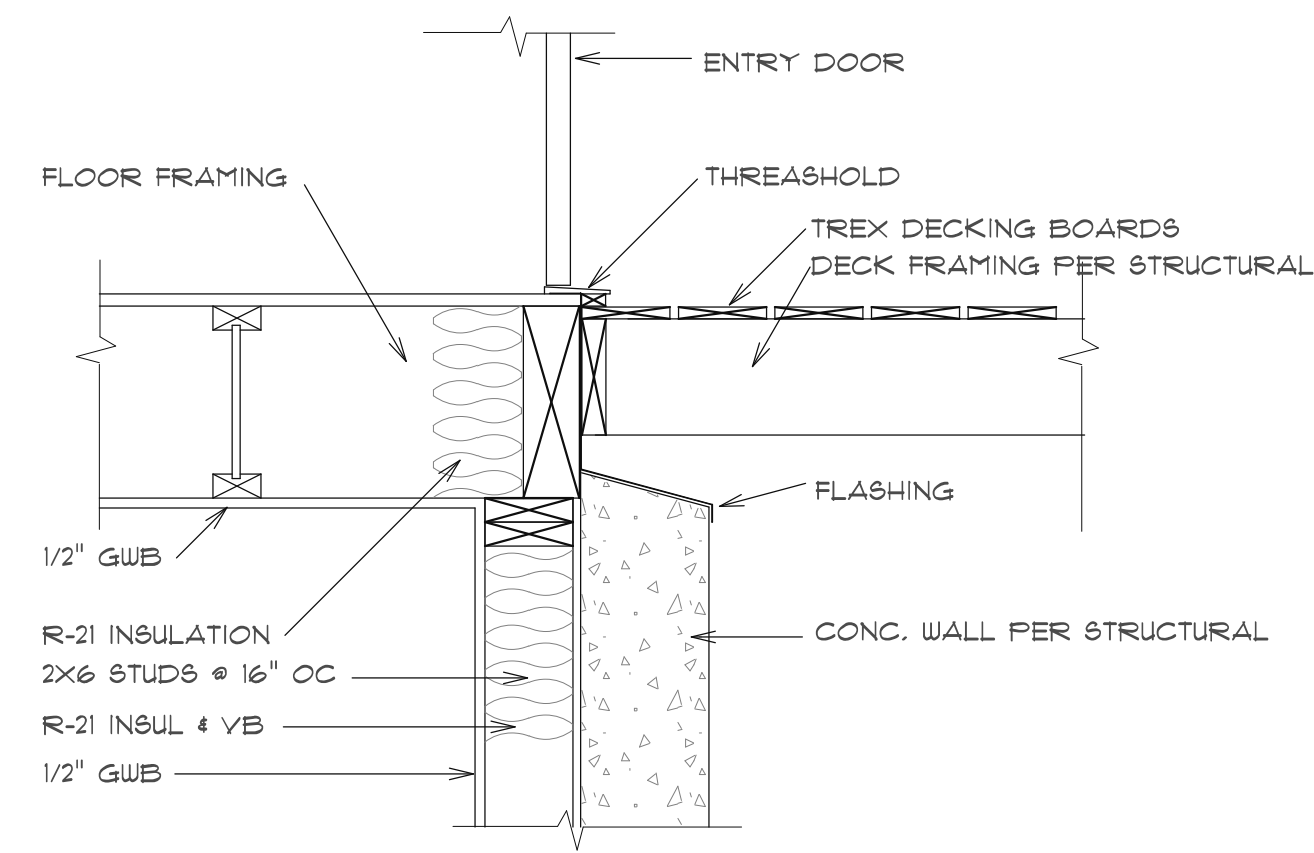
NORTH ELEVATION



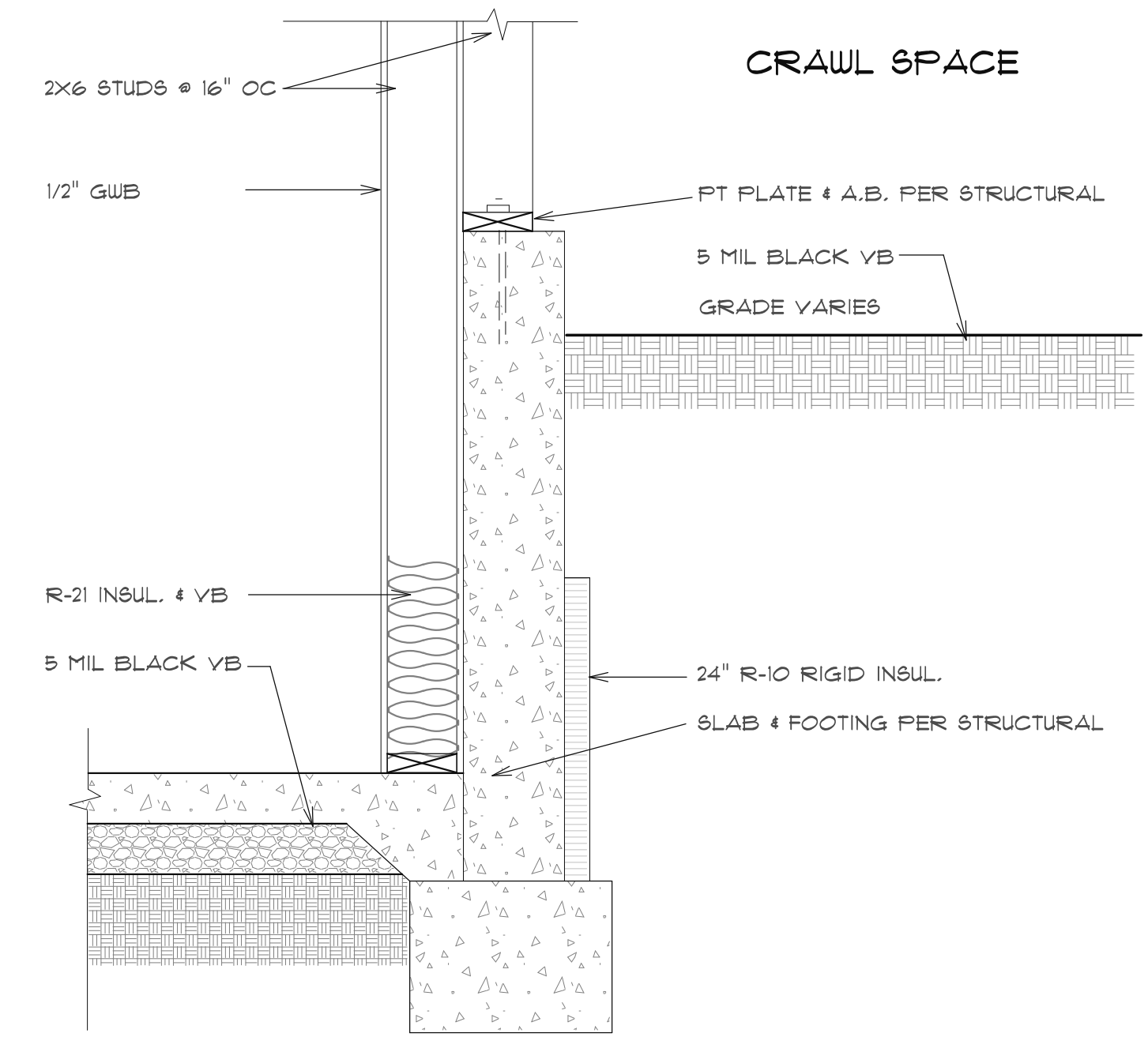
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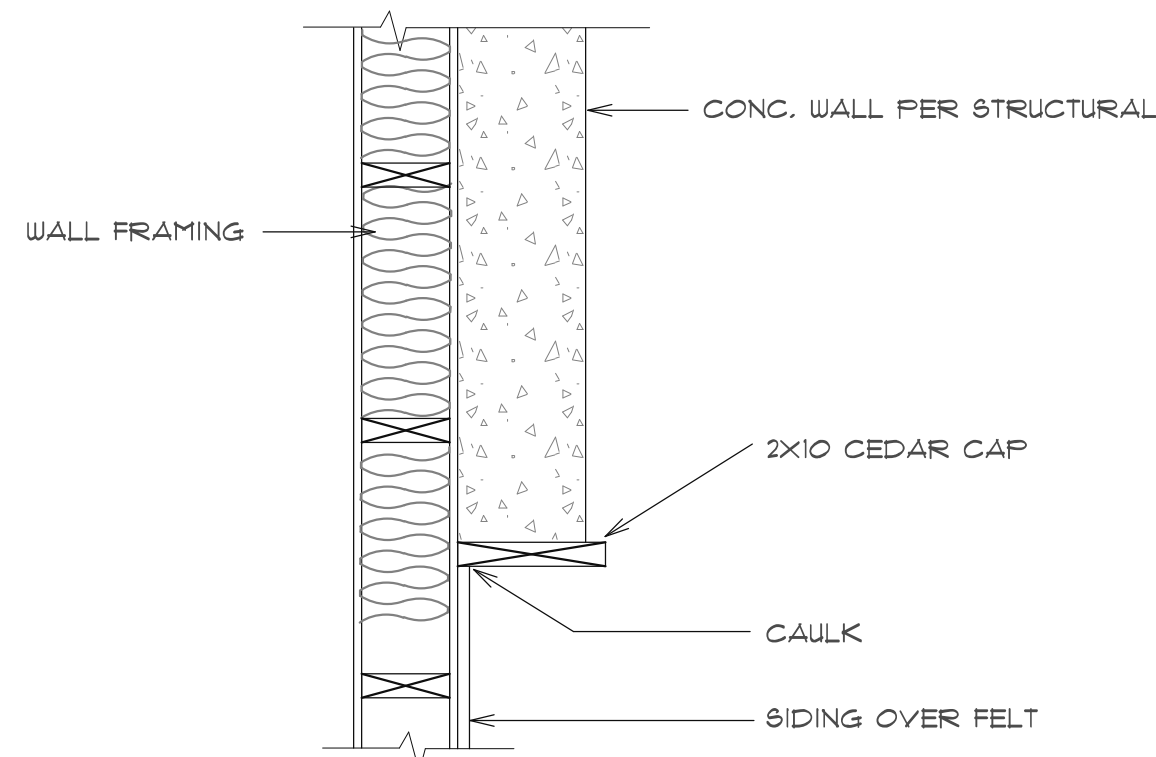
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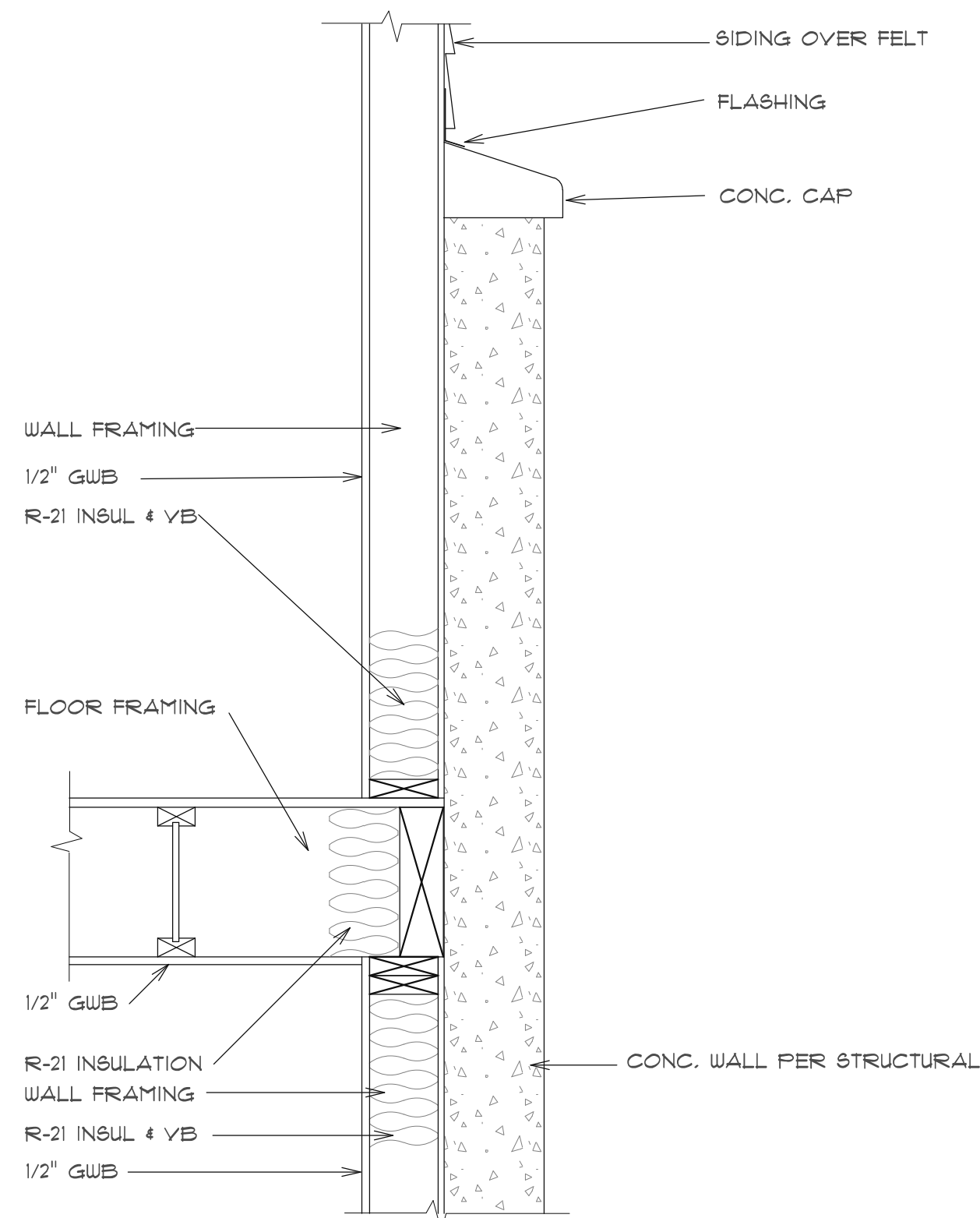
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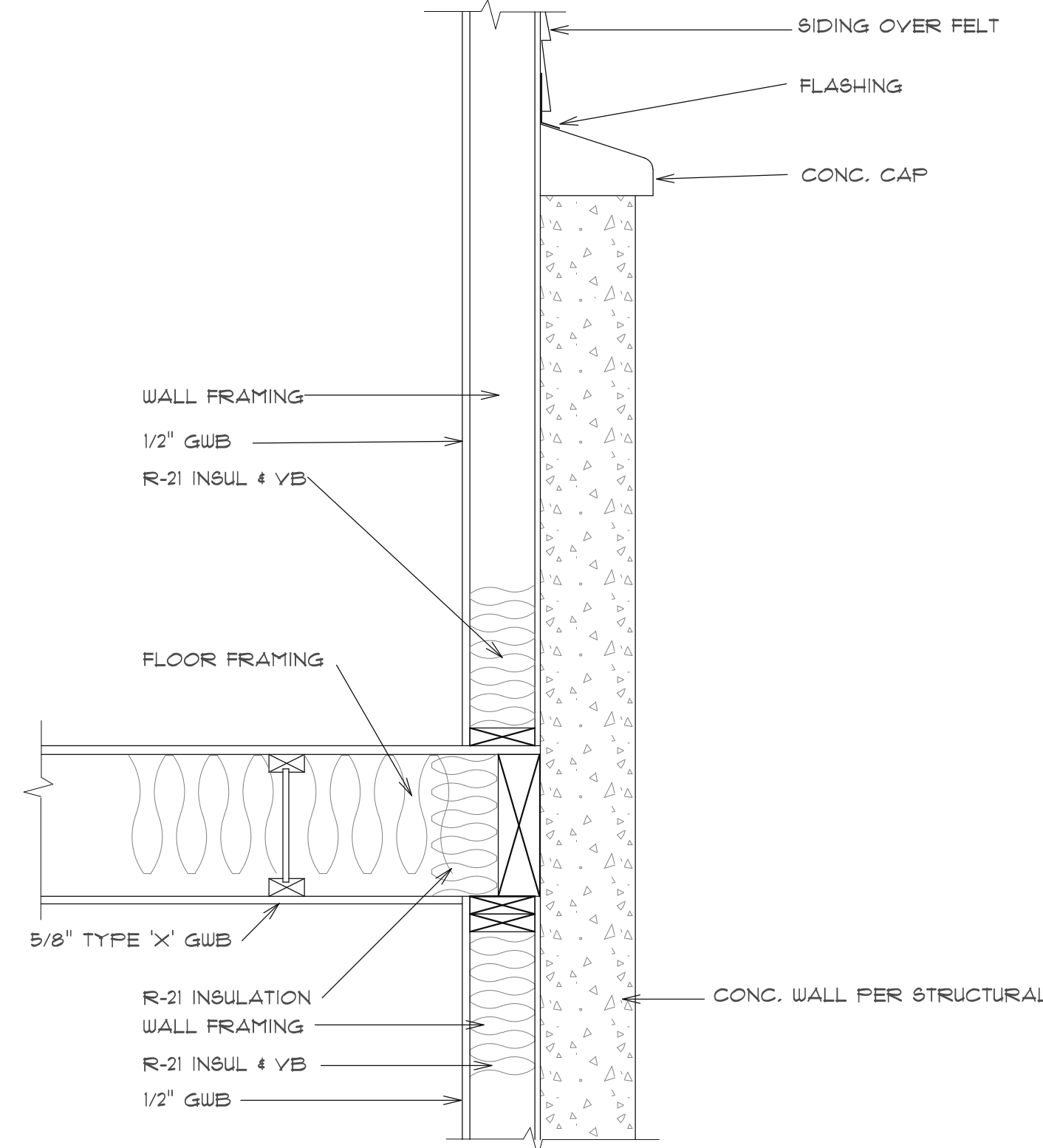
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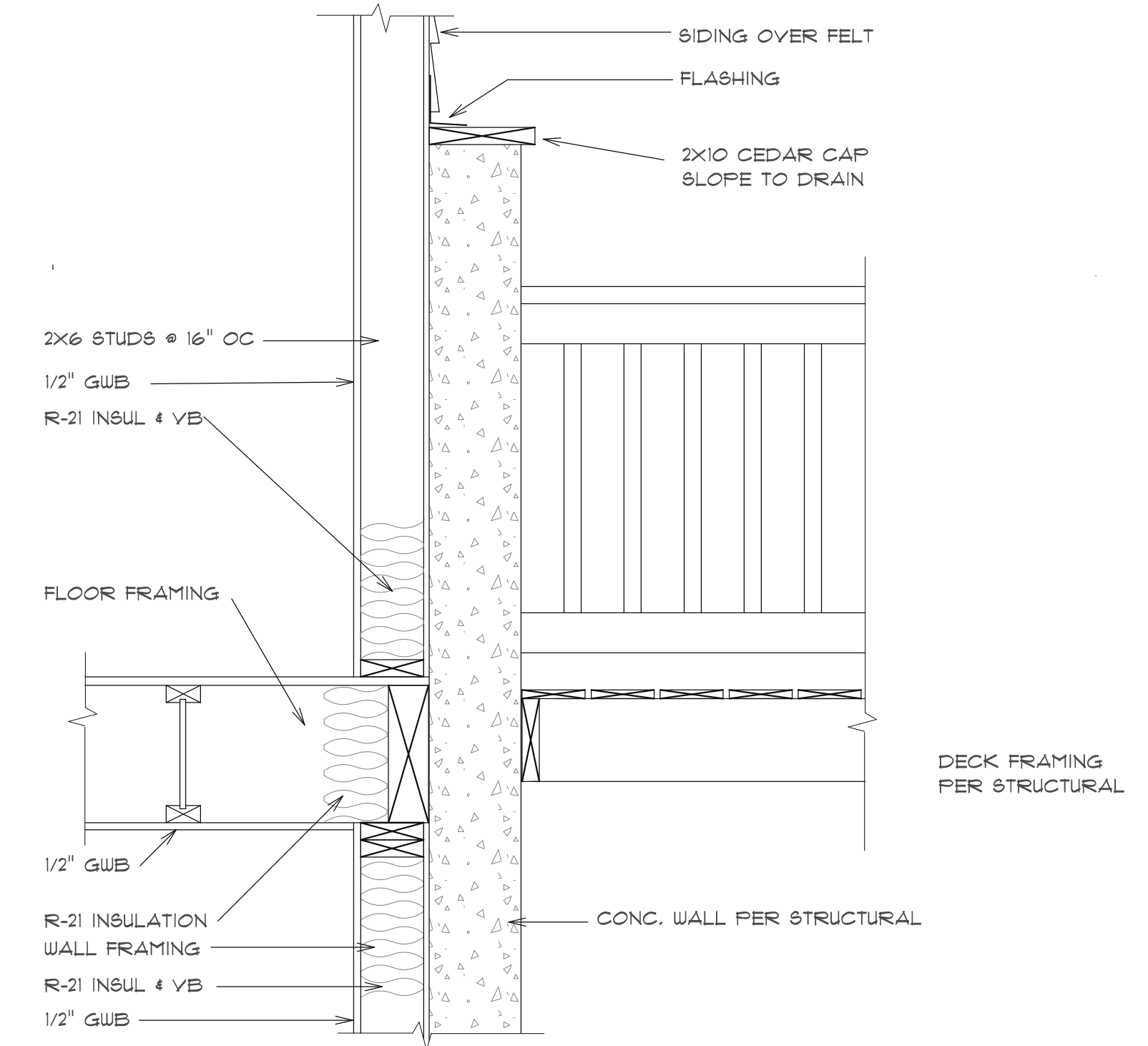
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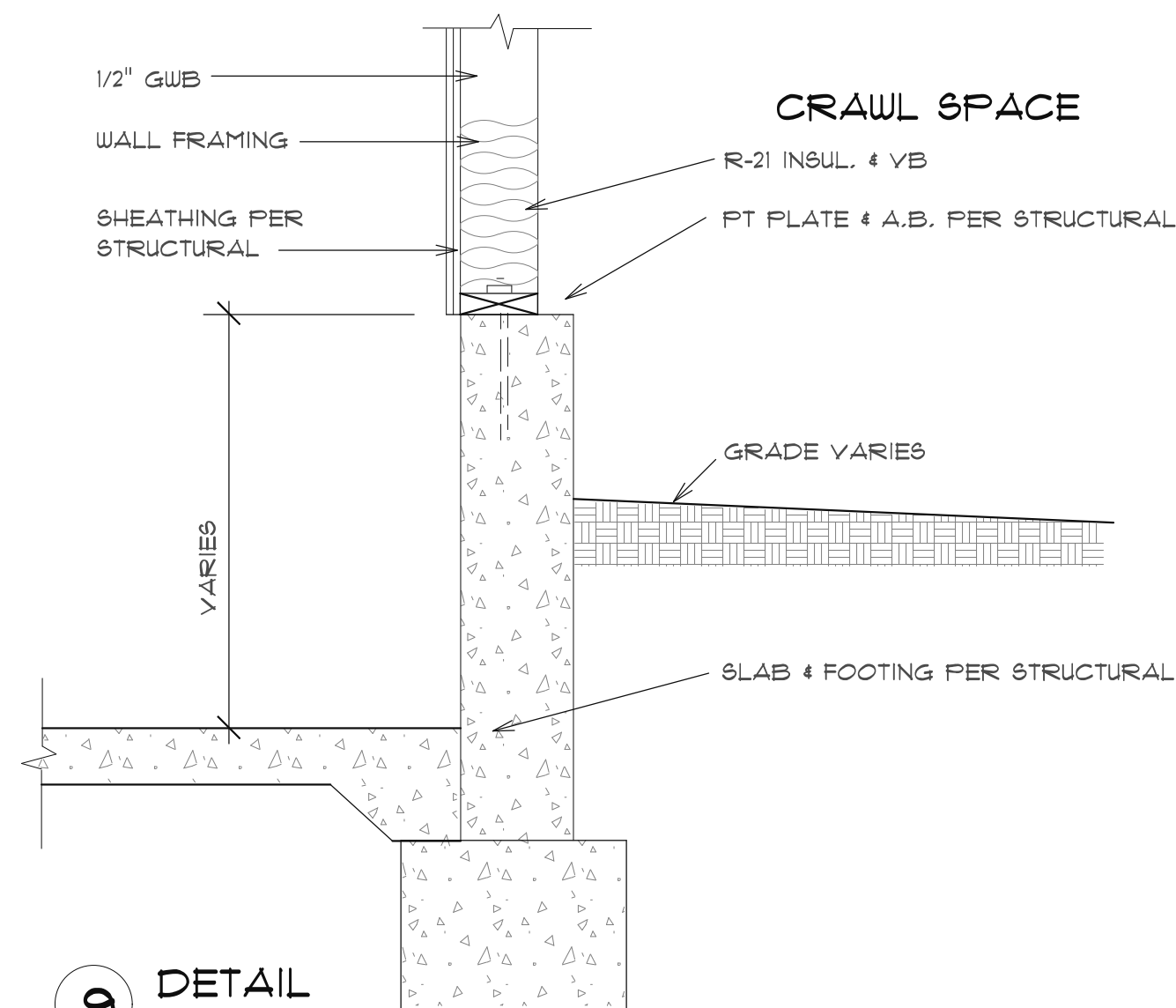
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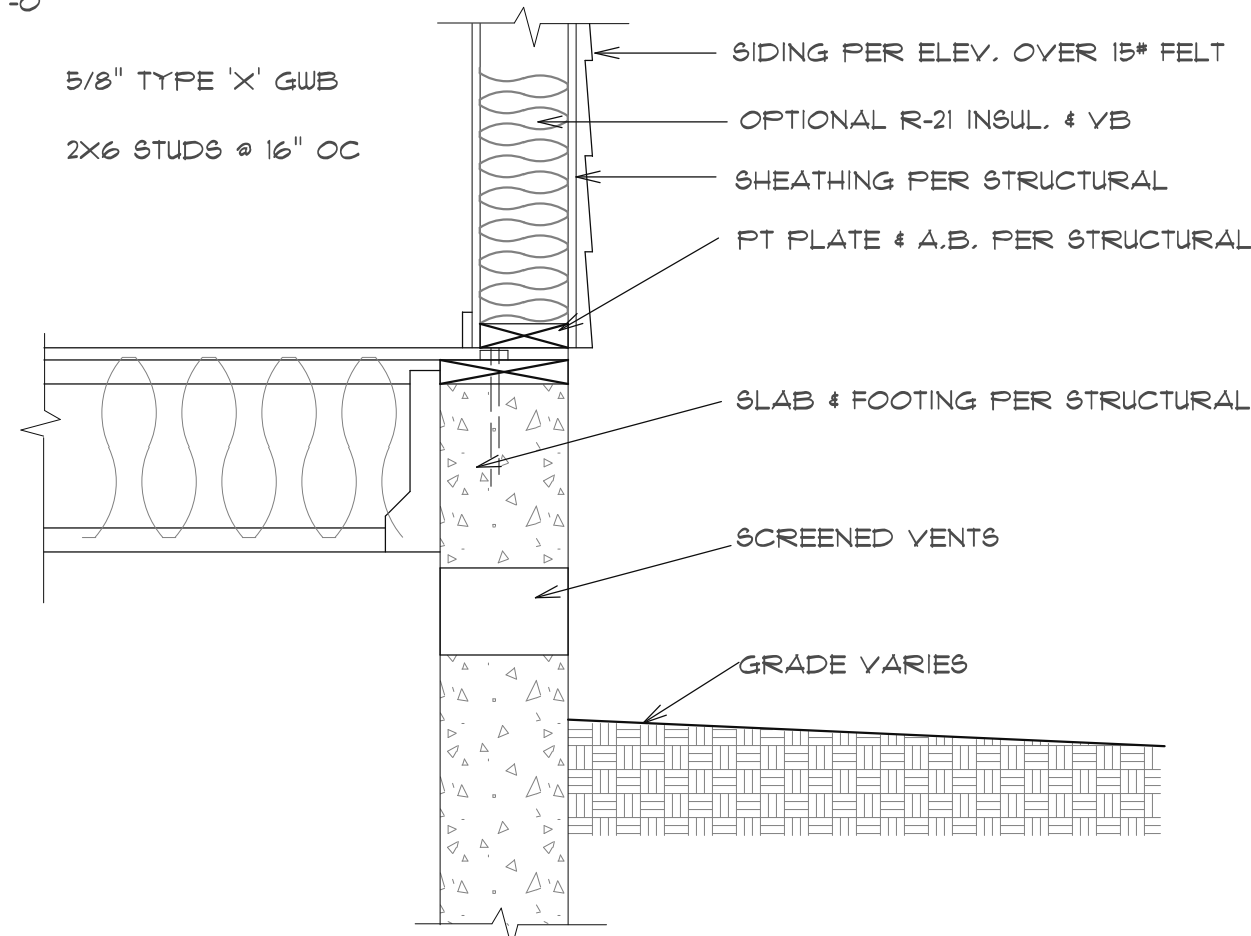
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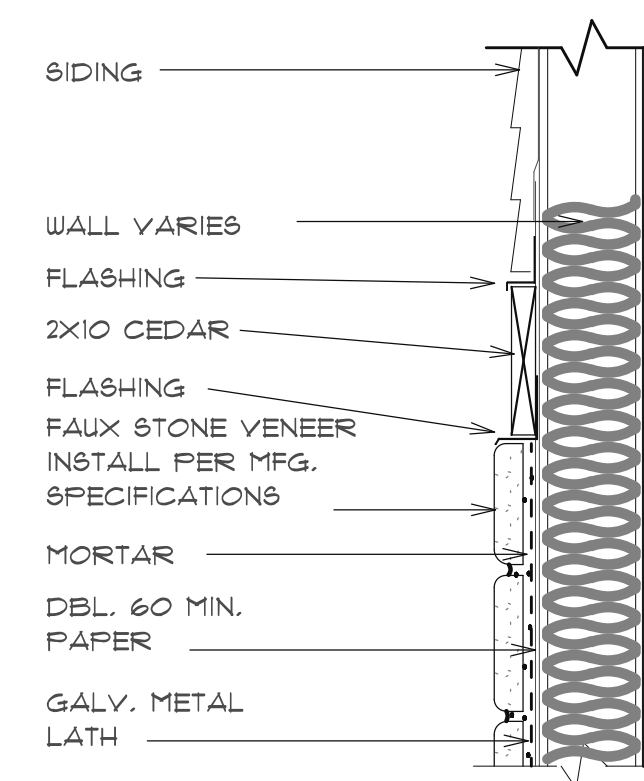
8 DETAIL  
SCALE: 1"=1'-0"



9 DETAIL  
SCALE: 1"=1'-0"



10 DETAIL  
SCALE: 1"=1'-0"



11 WALL VENEER DETAILS  
SCALE: 1"=1'-0"

420 REGISTERED ARCHITECT  
RONALD R. HEALEY  
STATE OF WASHINGTON

THE HEALEY ALLIANCE AZ  
2905 N. 19TH DRIVE, GOODYEAR, AZ 85335 - 4287 444-6168

ARCHITECTS

Mi Treehouse, LLC,  
5631 EAST MERCER WAY  
MERCER ISLAND, WA.

DETAILS

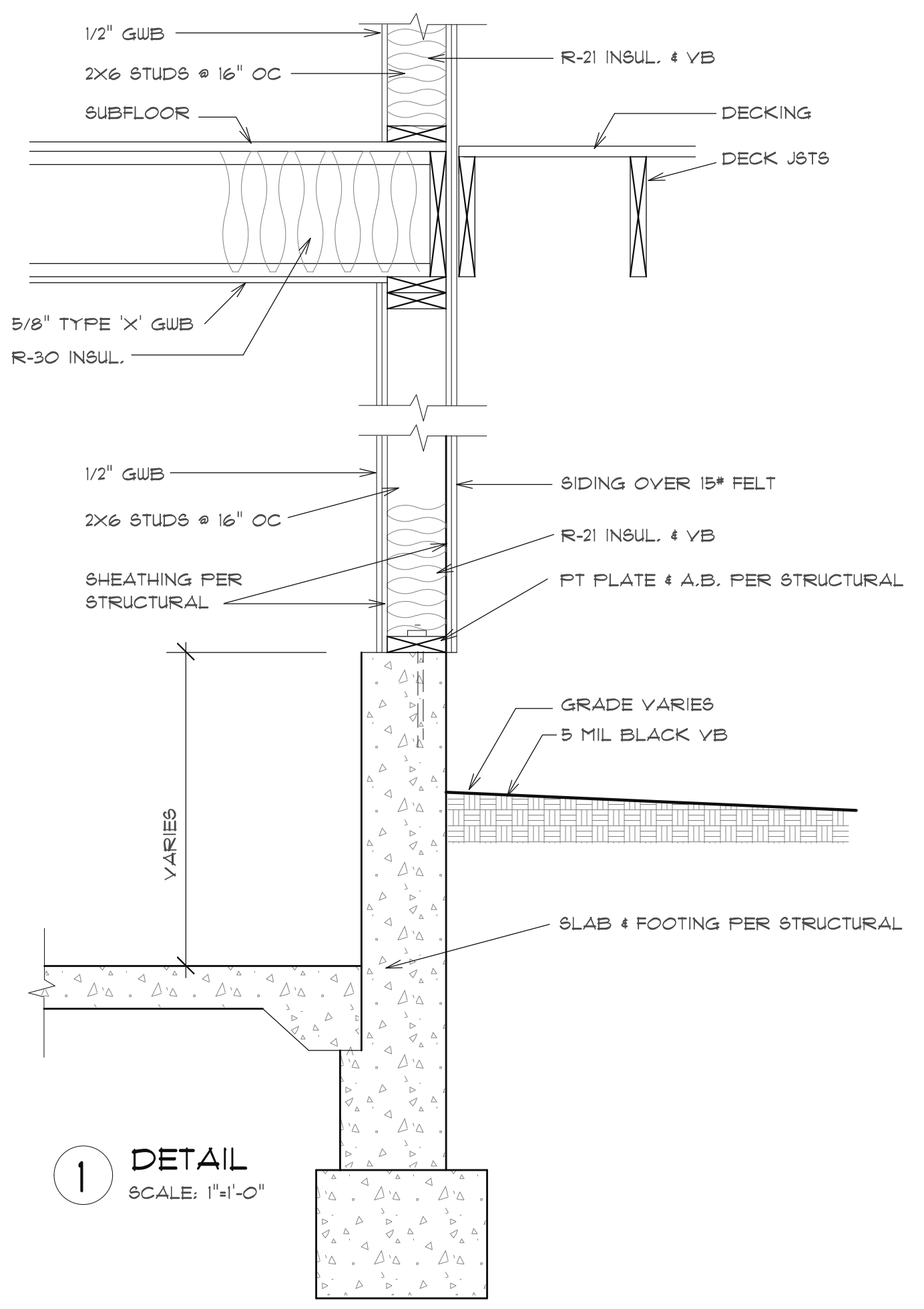
DATE 6-25-2020

PROJECT NO. 001

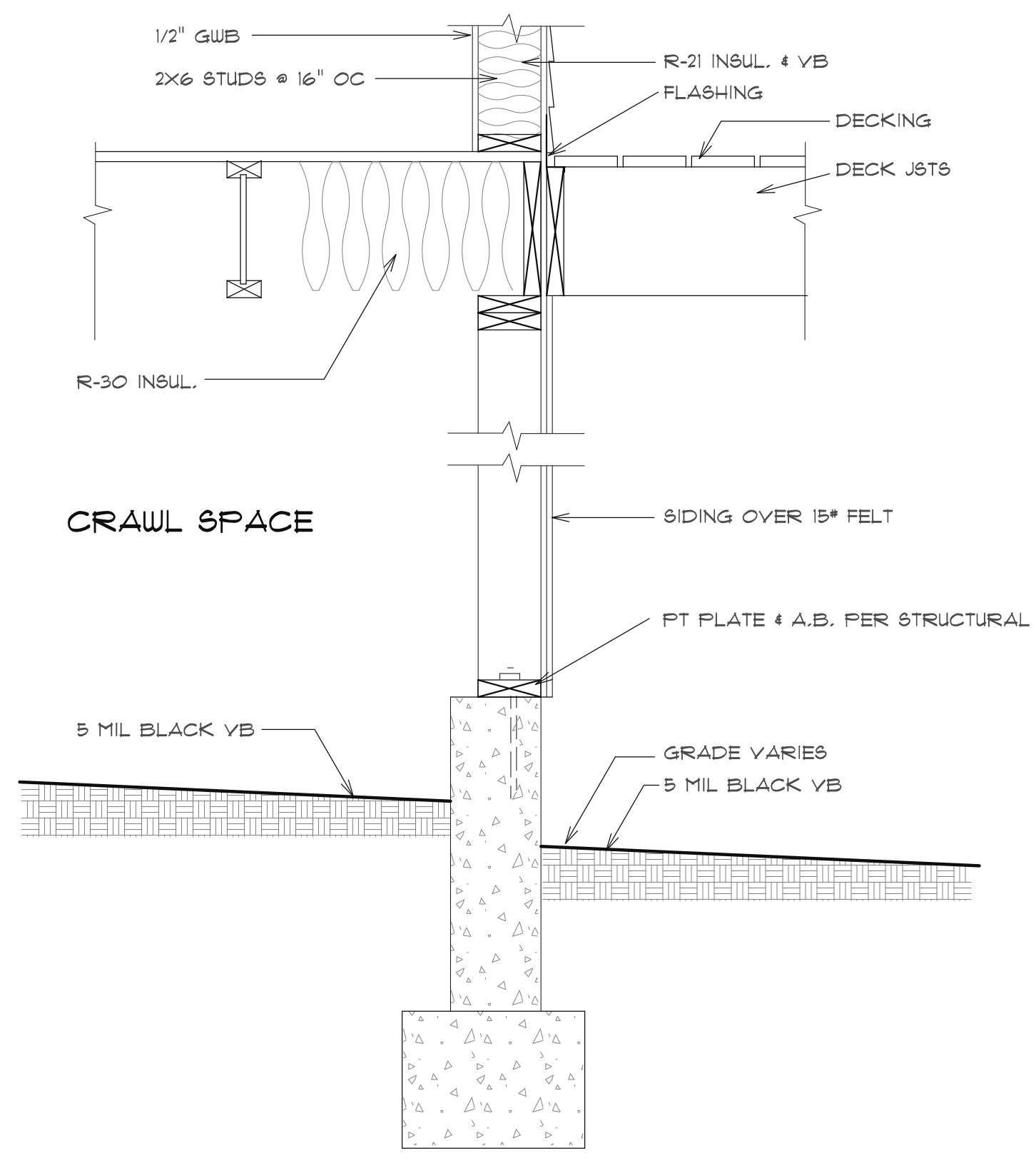
SHEET NO.

A5.1

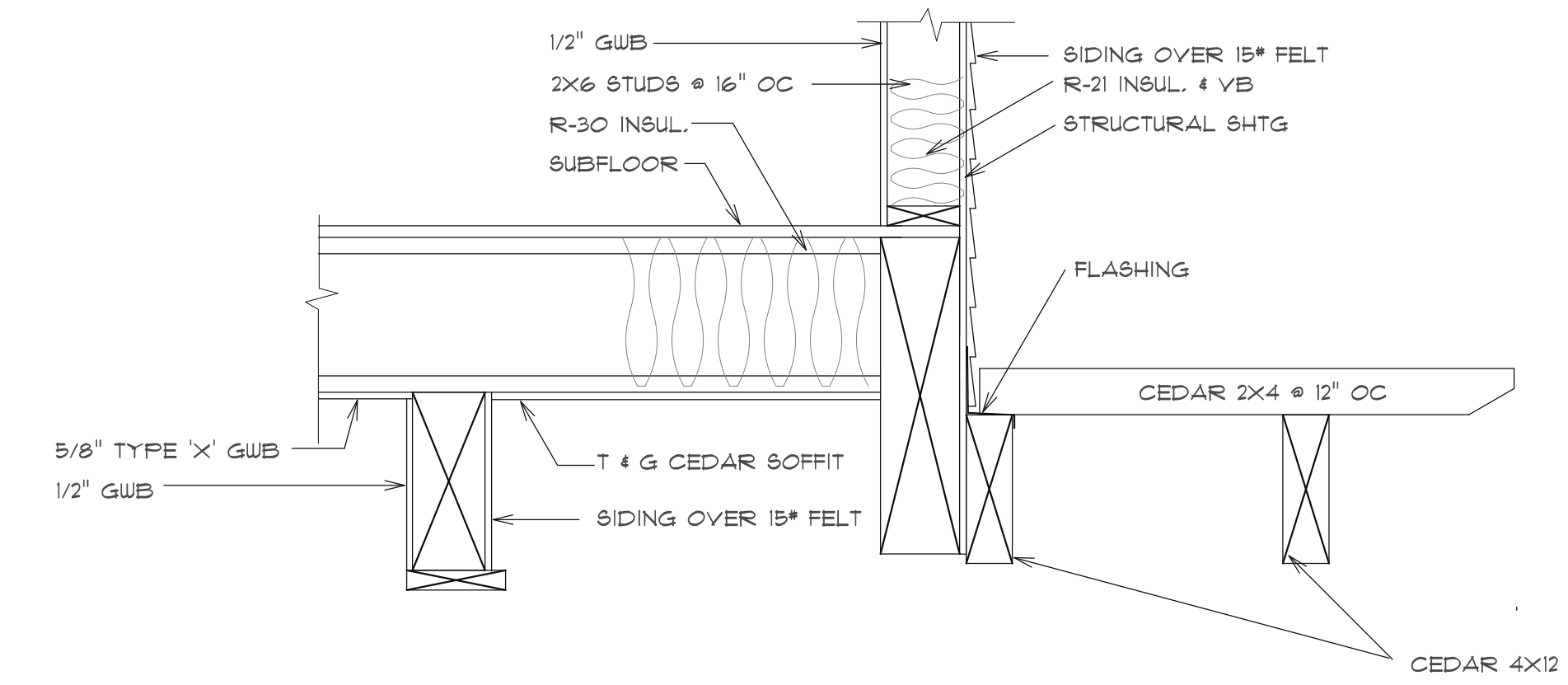




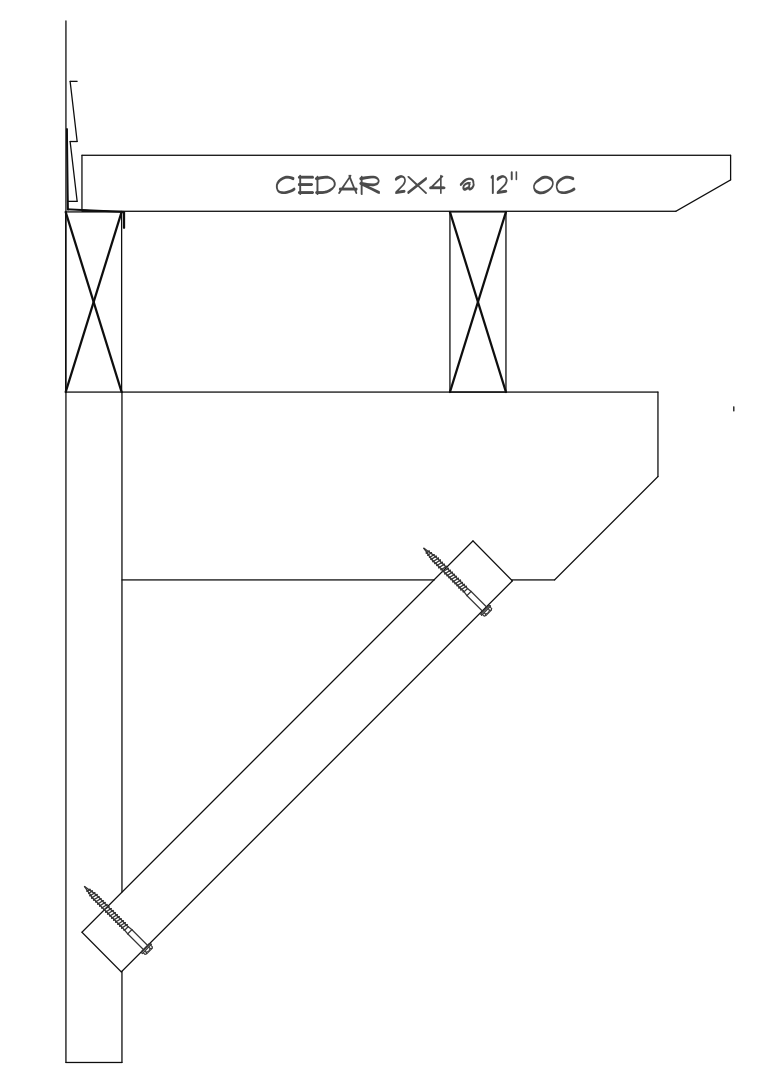
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2 DETAIL  
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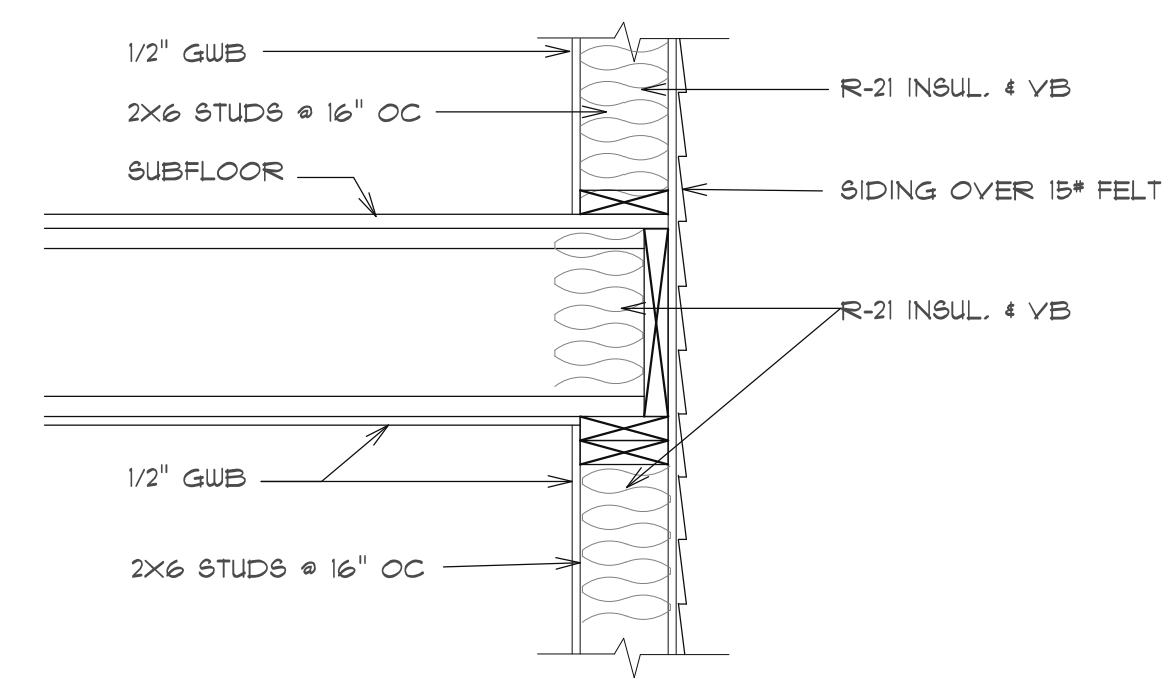


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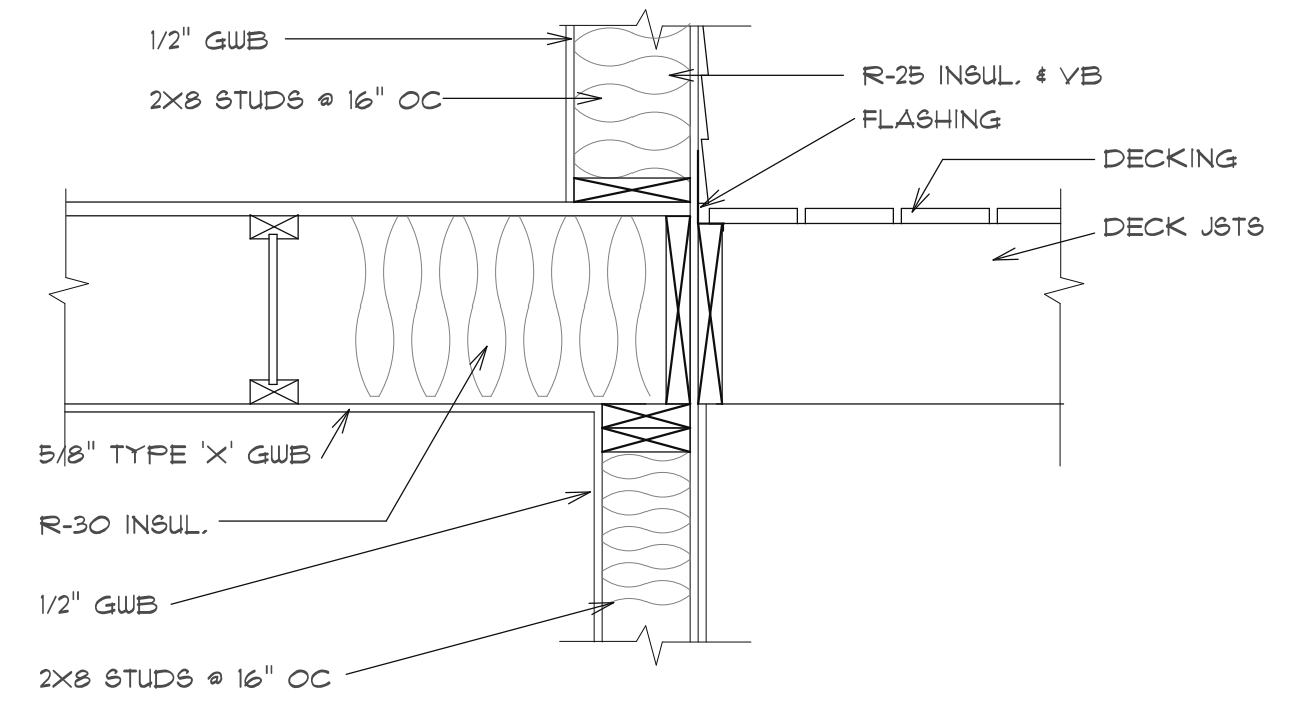


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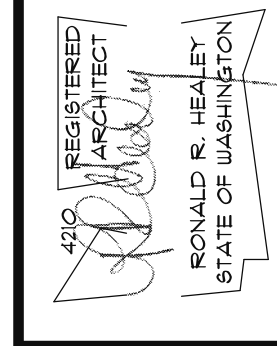
- CEDAR 4X12
- 4X6 CEDAR
- 1/2" GALV. LAG BOLTS
- 4X4 CEDAR
- 2X6 CEDAR BACKER



5 DETAIL  
SCALE: 1"=1'-0"



6 DETAIL  
SCALE: 1"=1'-0"



THE HEALEY ALLIANCE AZ  
3905 N. 195th DRIVE, GOODPASTER, AZ 85395 - (480) 444-6868  
ARCHITECTS

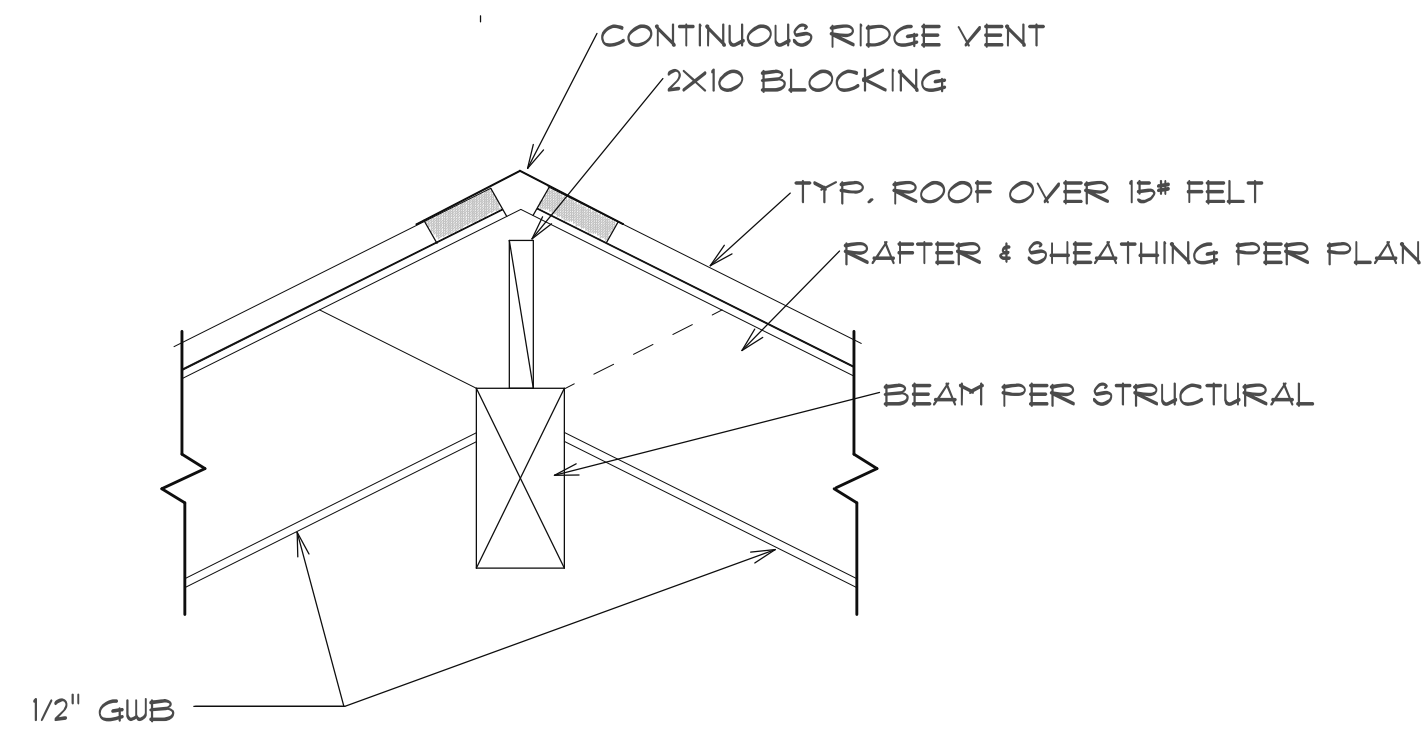
M1 Treehouse, LLC,  
5631 EAST MERCER WAY  
MERCER ISLAND, WA.

DETAILS

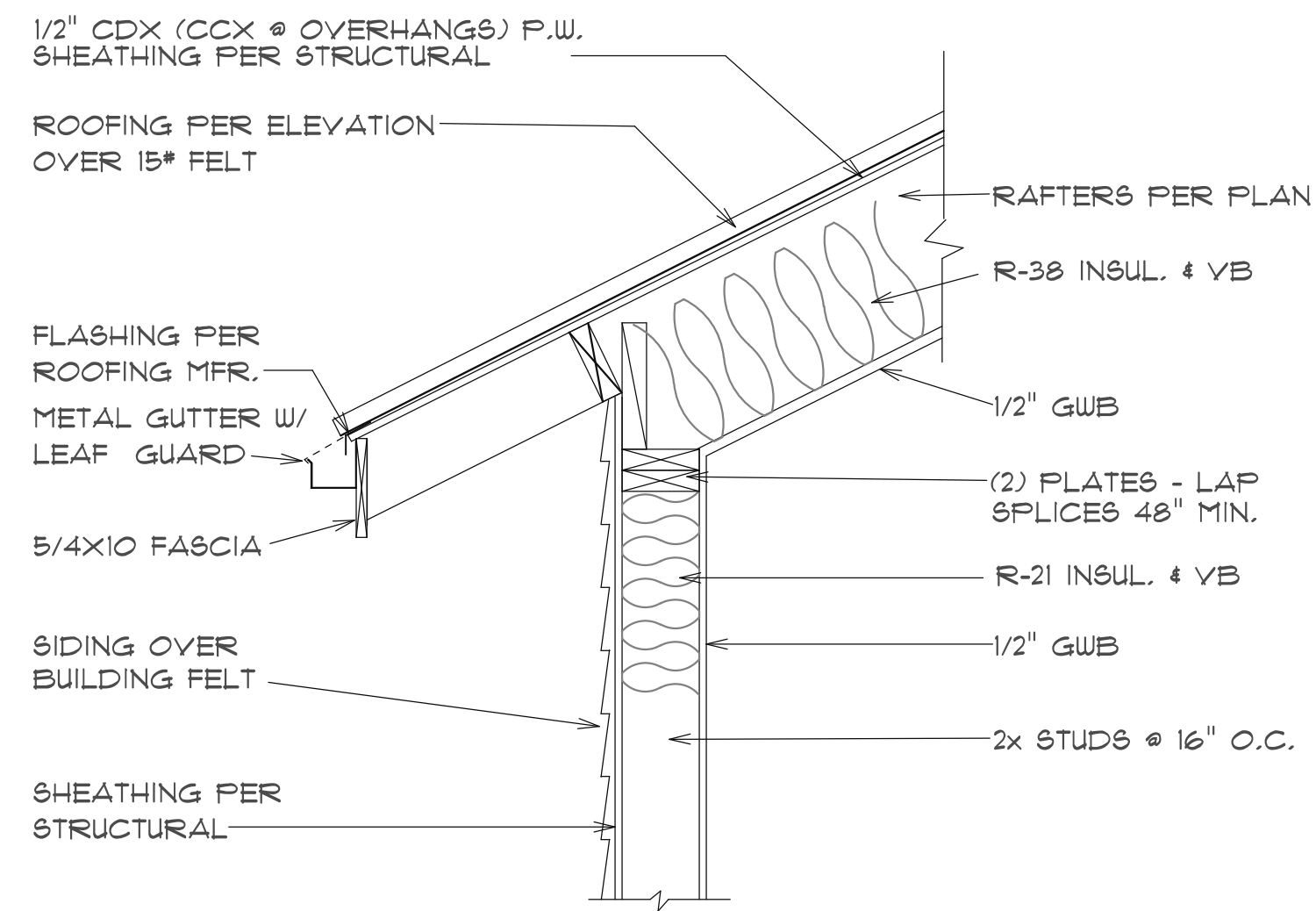
DATE  
6-25-2020

PROJECT NO.  
001

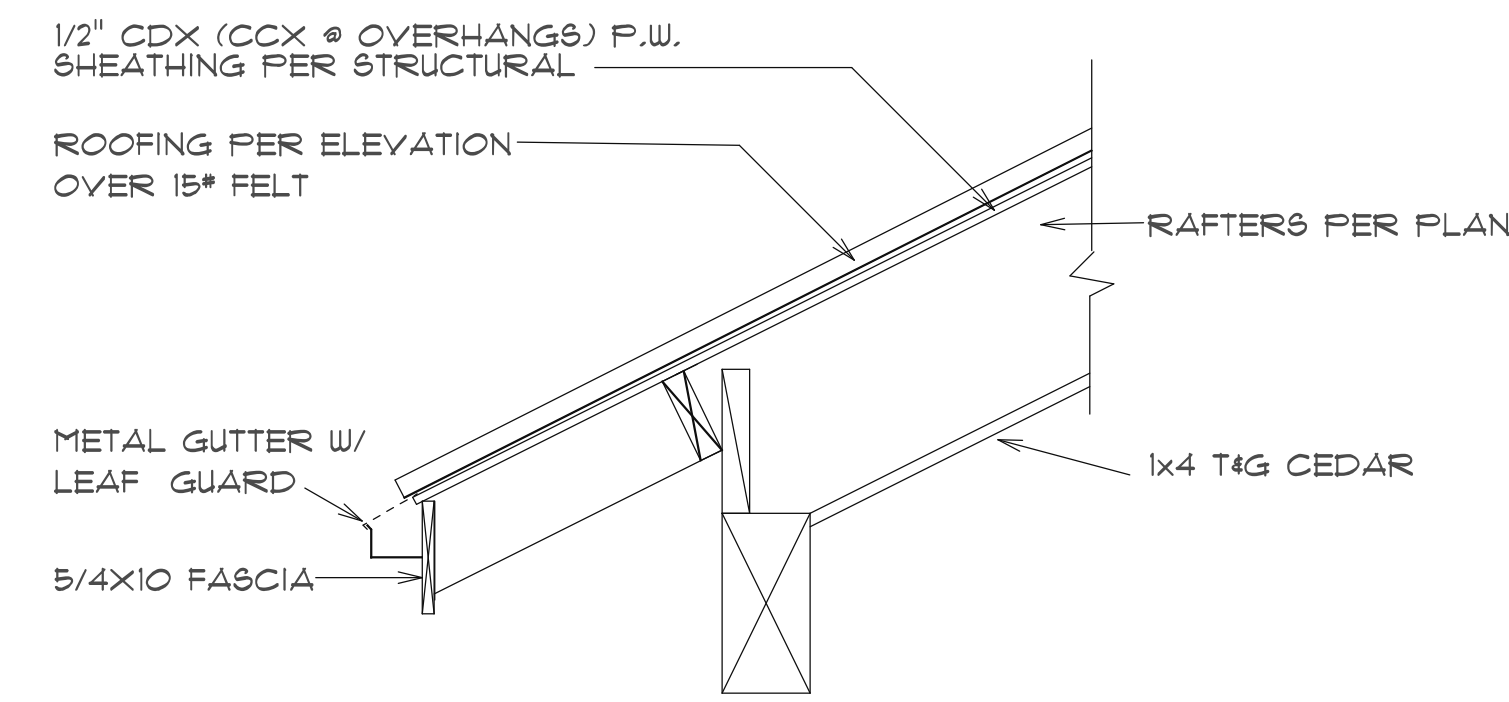
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A5.2



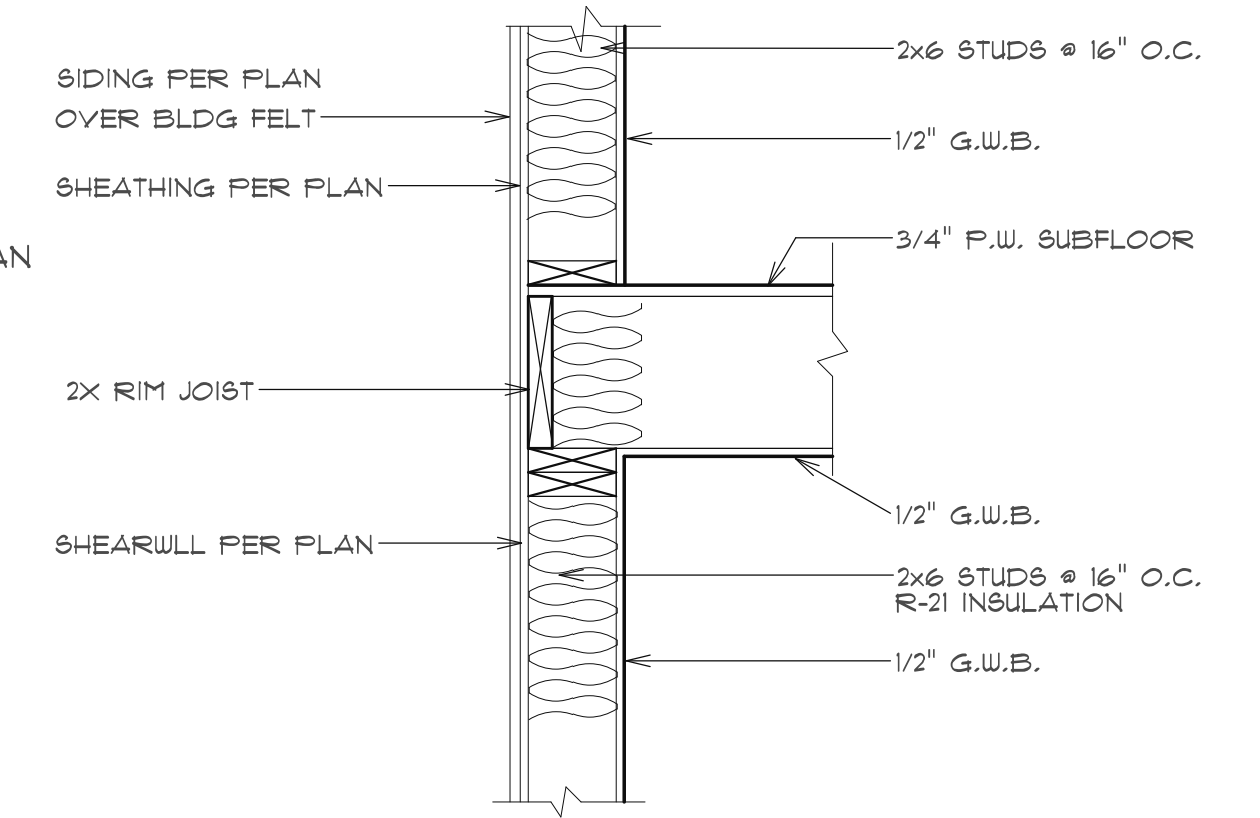
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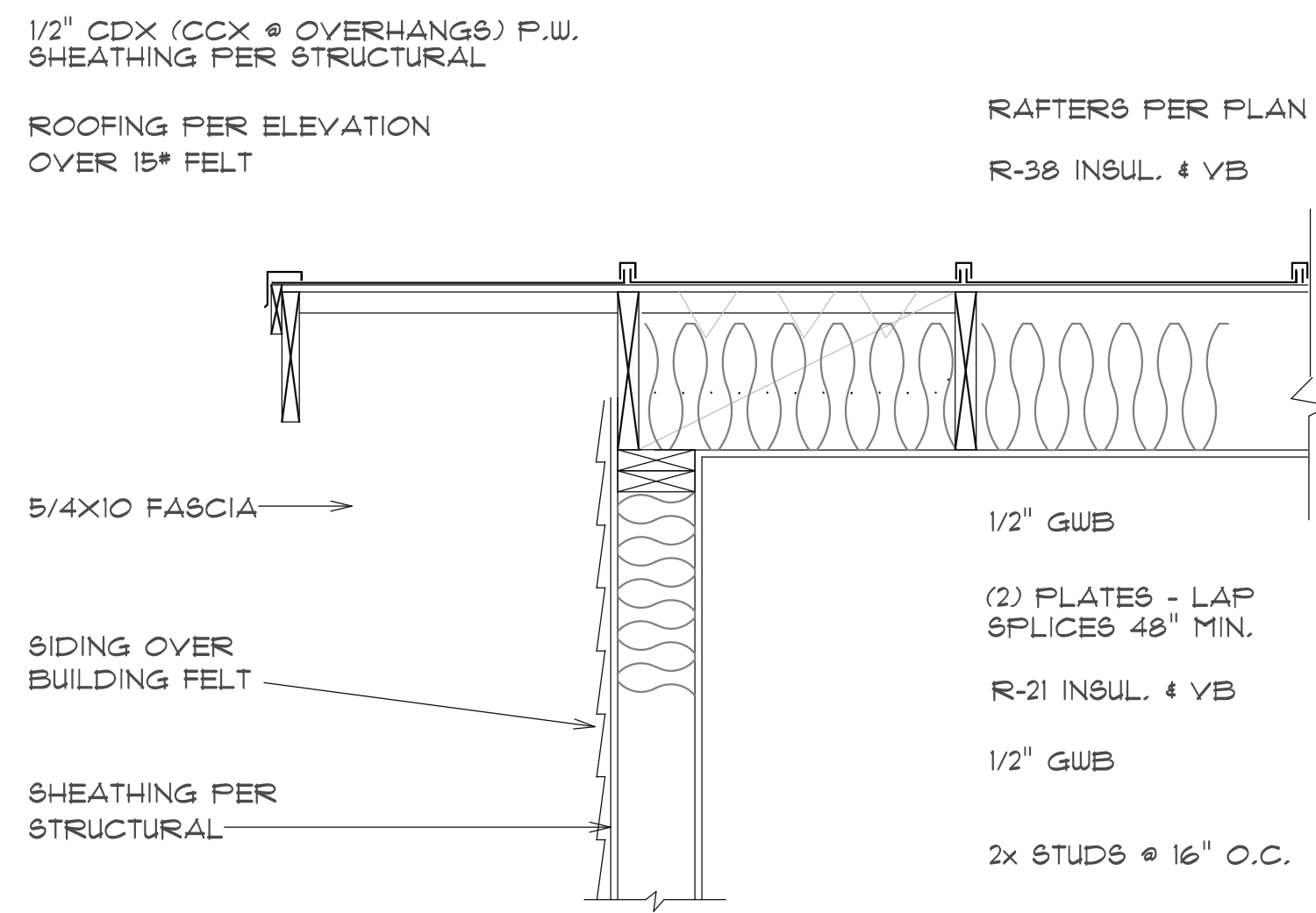
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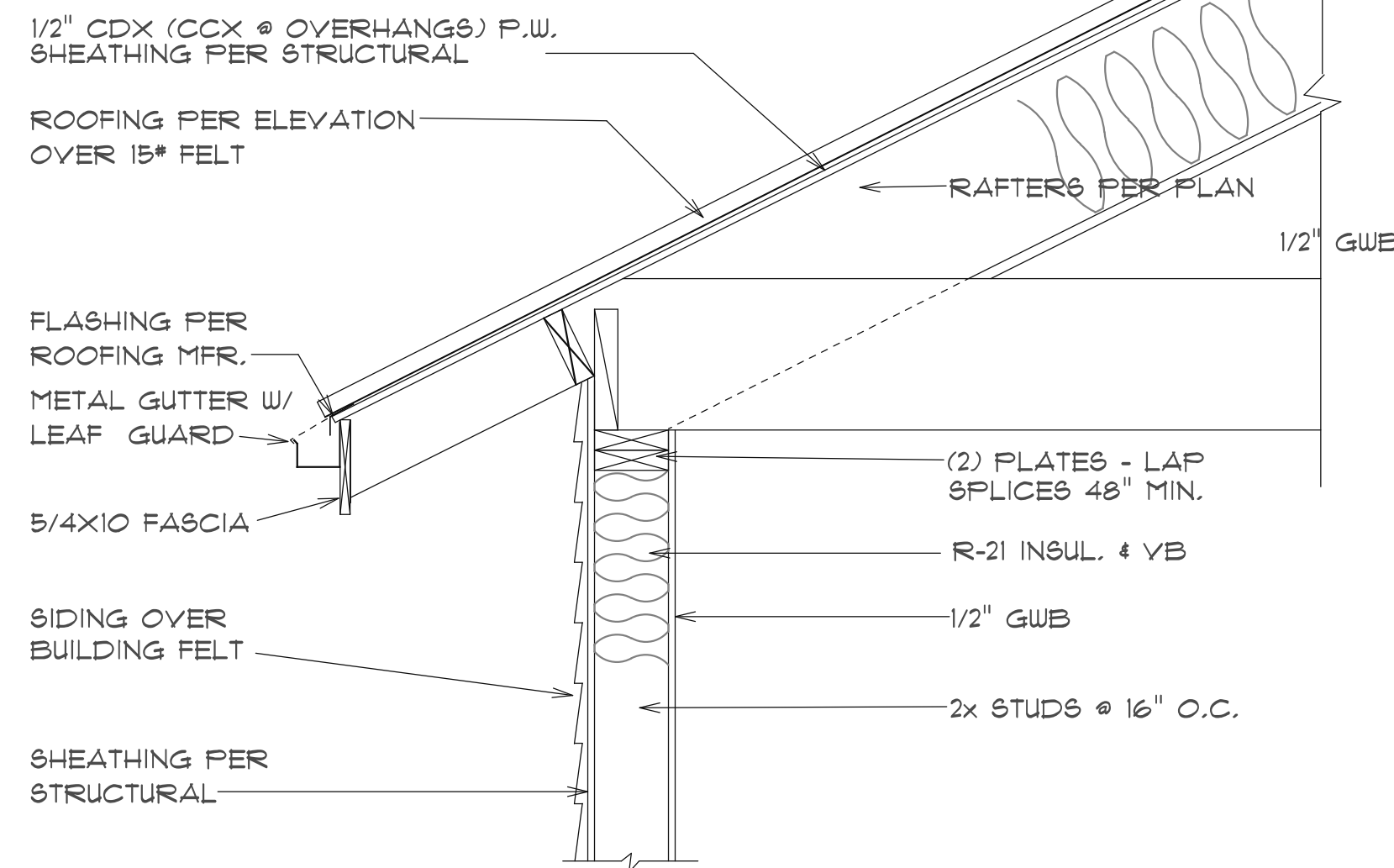
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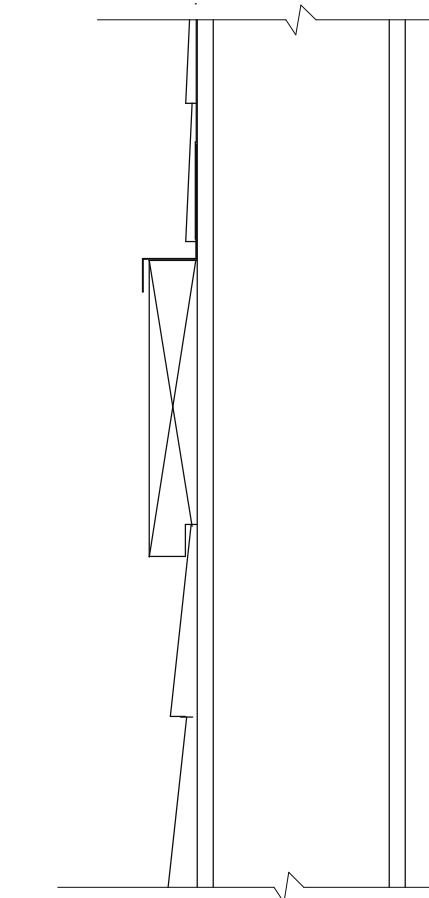
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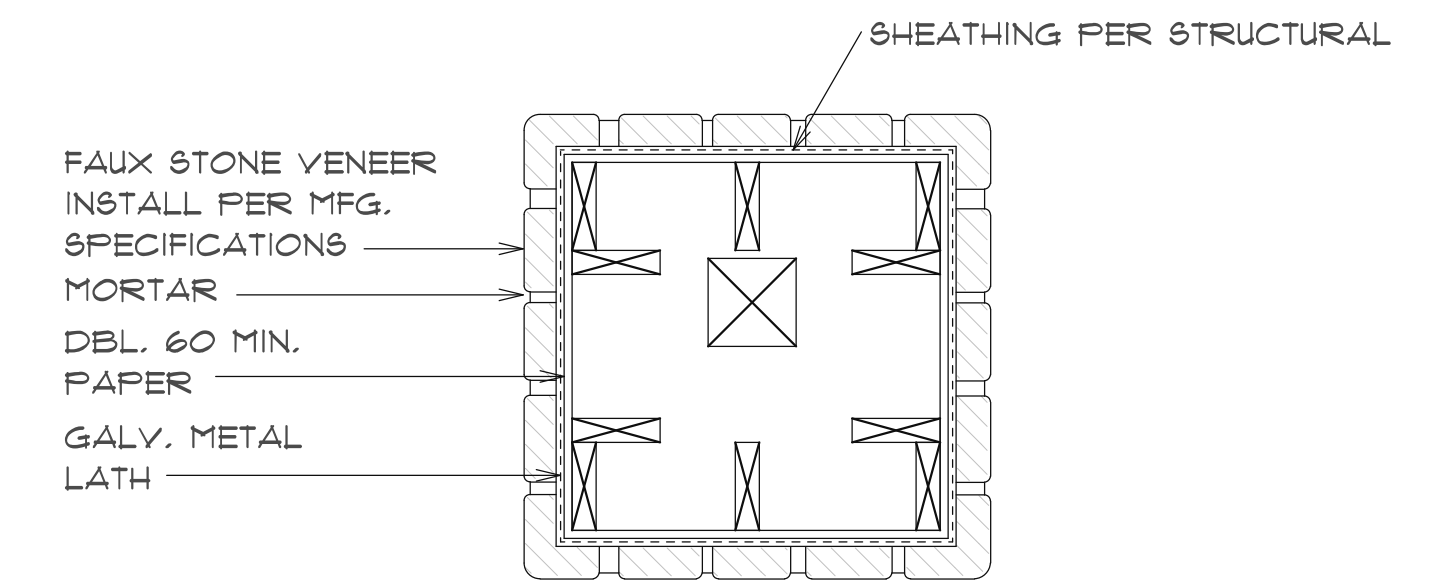
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6 DETAIL  
SCALE: 1"=1'-0"



7 DETAIL  
SCALE: 1"=1'-0"



8 DETAIL  
SCALE: 1"=1'-0"

3 DETAIL  
SCALE: 1"=1'-0"

6 DETAIL  
SCALE: 1"=1'-0"



THE HEALEY ALLIANCE AZ  
2505 N 195TH DRIVE, GOODYEAR, AZ 85339 • (480) 444-6768  
ARCHITECTS

MI Treehouse, LLC,  
5637 EAST MERCER WAY  
MERCER ISLAND, WA.

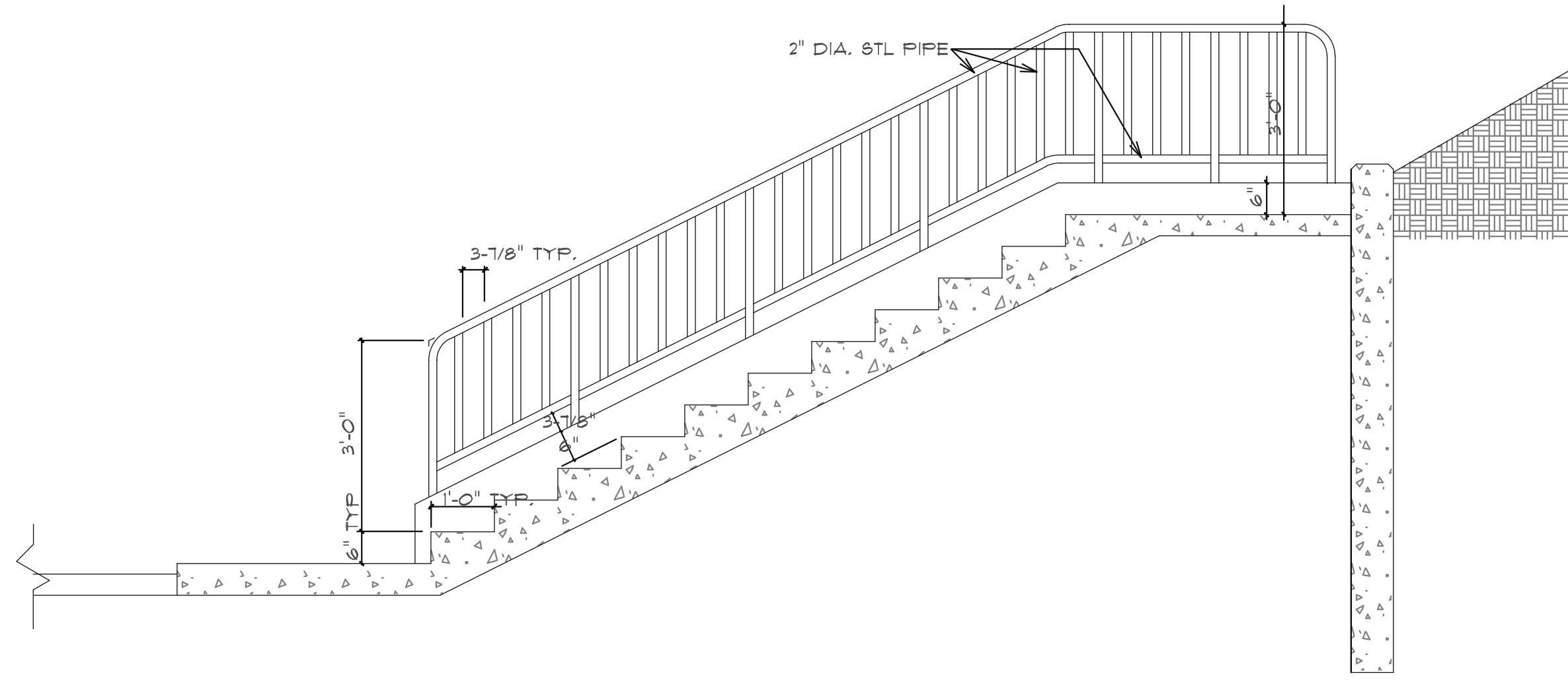
DETAILS

DATE  
6-25-2020

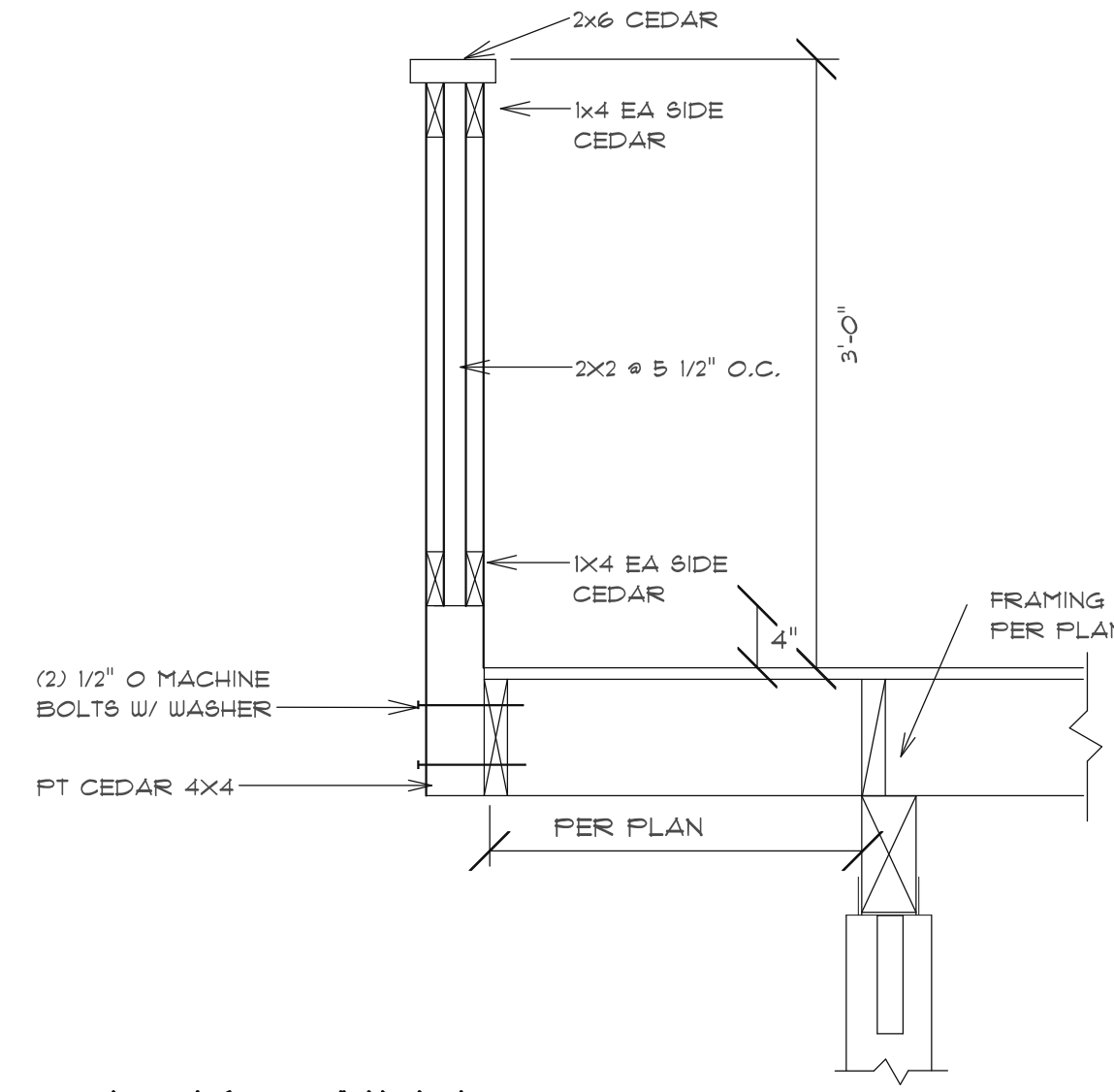
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SHEET NO.

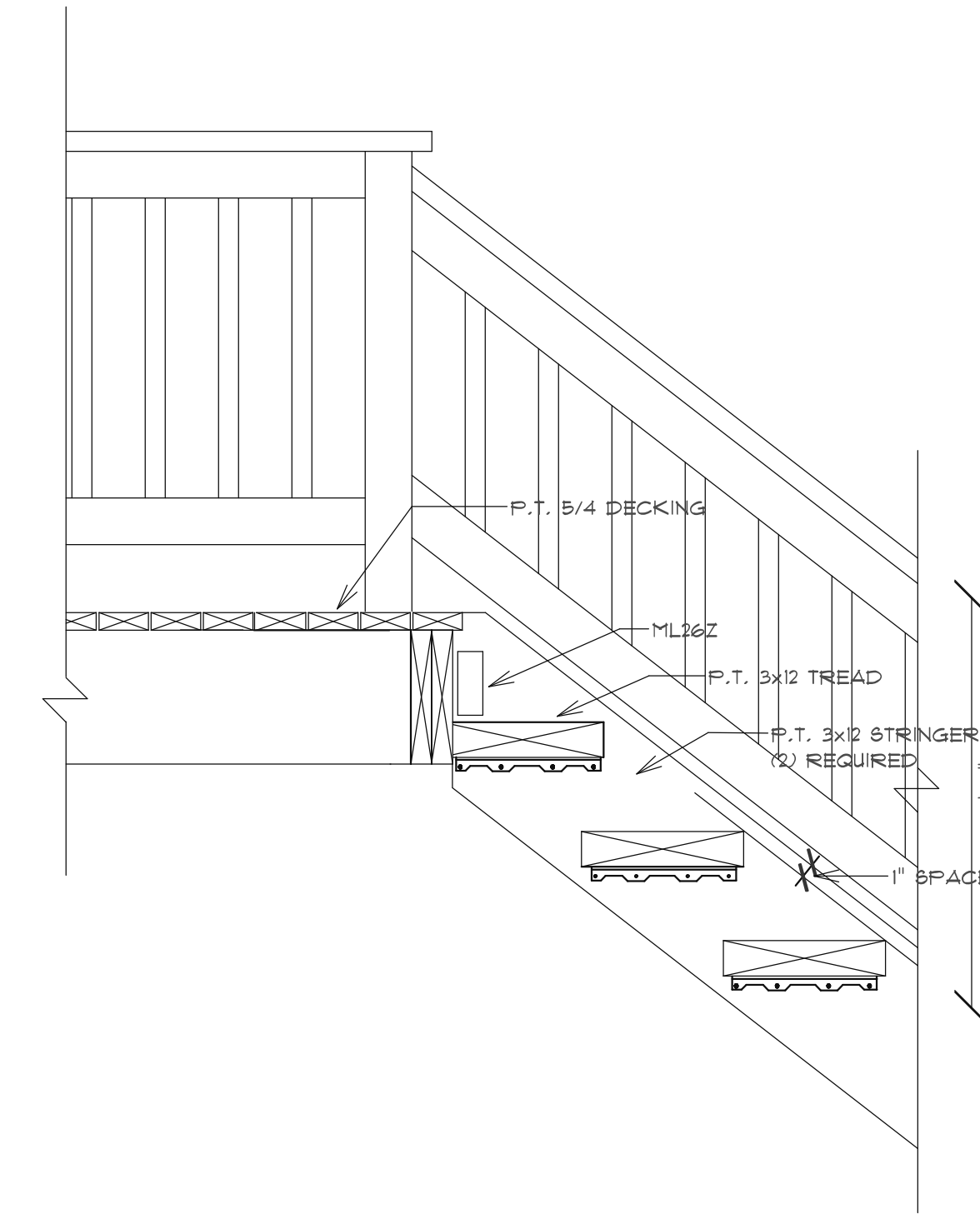
A-5.3



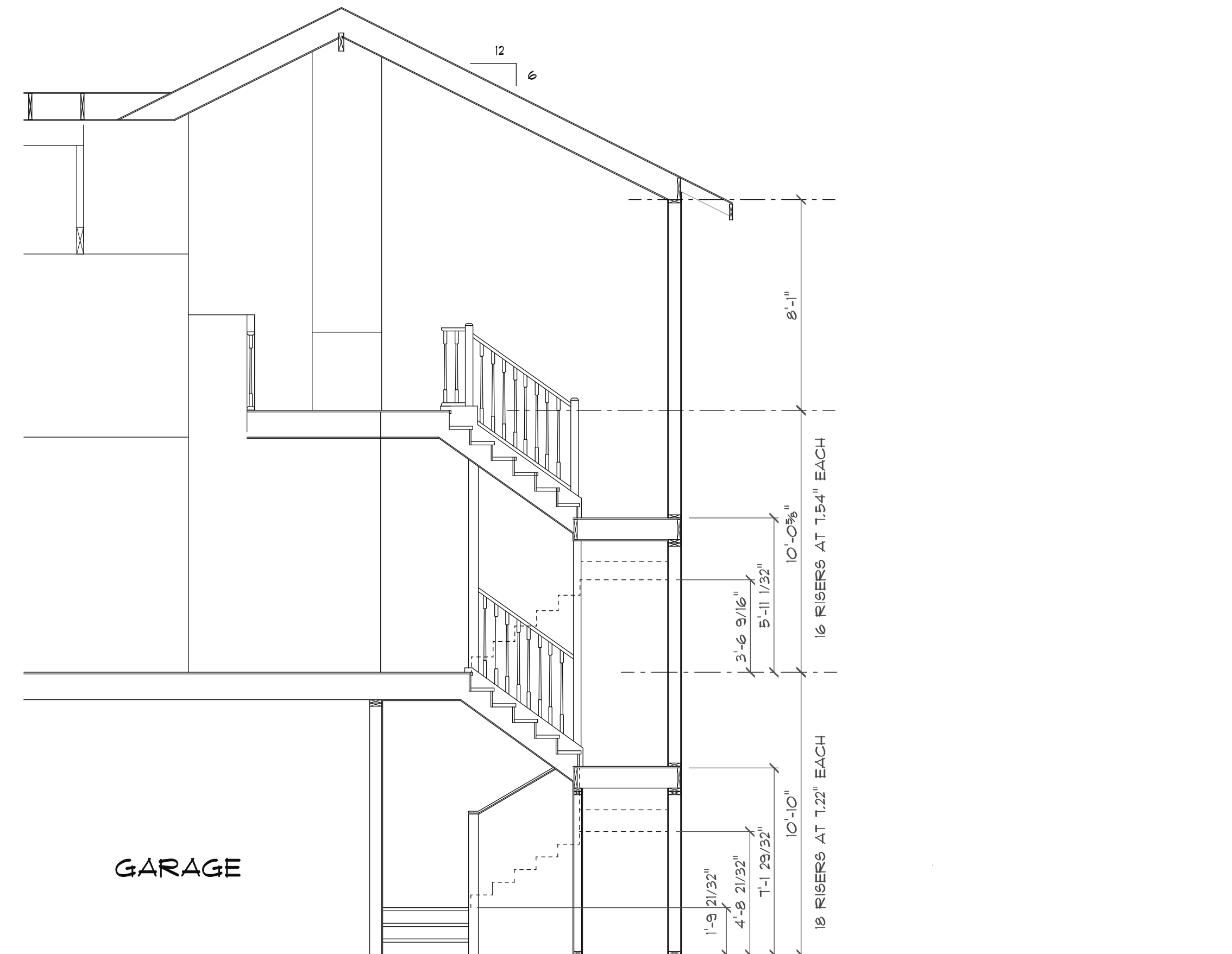
1 STAIR SECTION  
SCALE: 1/4"=1'-0"



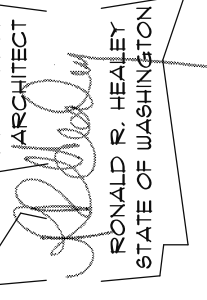
2 DECK RAILING  
SCALE: 1/4"=1'-0"



3 STAIR CONNECTION  
SCALE: 1/4"=1'-0"



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



THE HEALEY ALLIANCE AZ  
2505 N. 139th DRIVE, SUITE 100, AZ 85508 • (480) 444-6788  
ARCHITECTS

MI Treehouse, LLC,  
5631 EAST MERCER WAY  
MERCER ISLAND, WA.

STAIRS SECTION  
& DETAILS

DATE  
6-25-2020

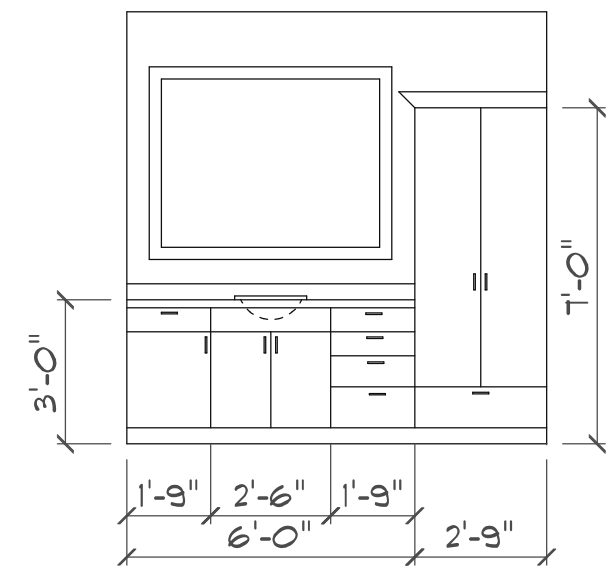
PROJECT NO.  
001

SHEET NO.

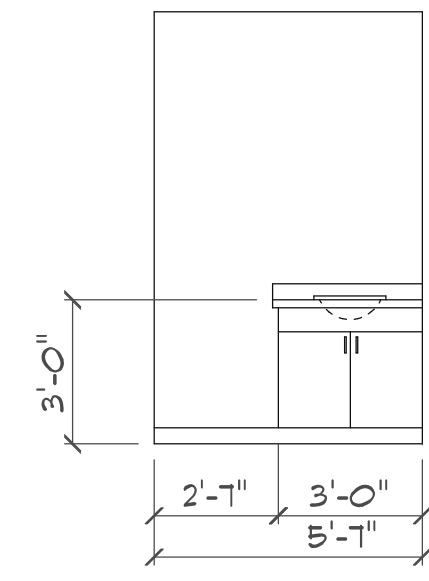
A5.4



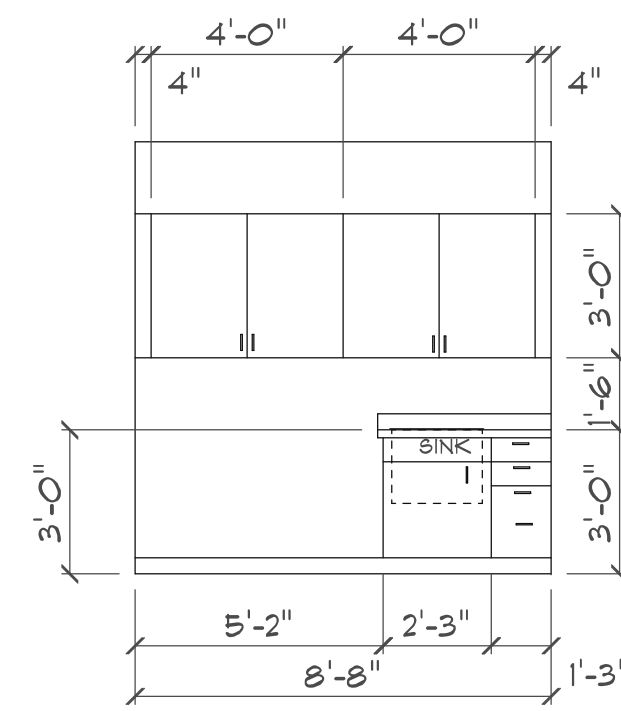




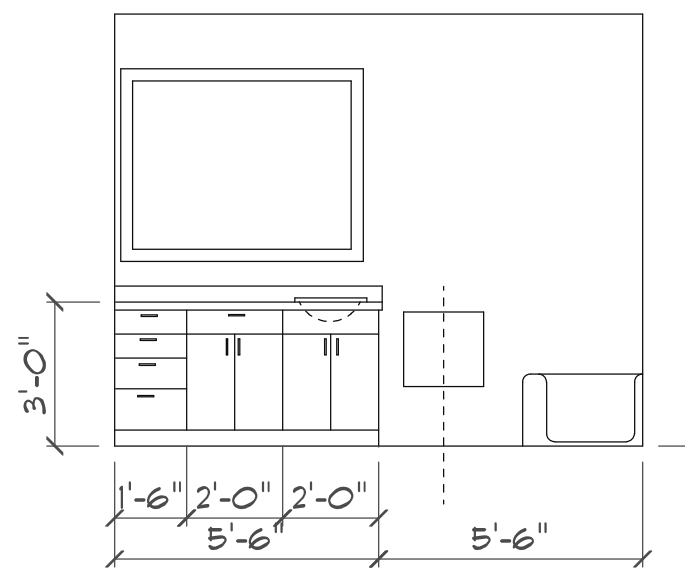
BATH CABINETS BDRM #2 & #3



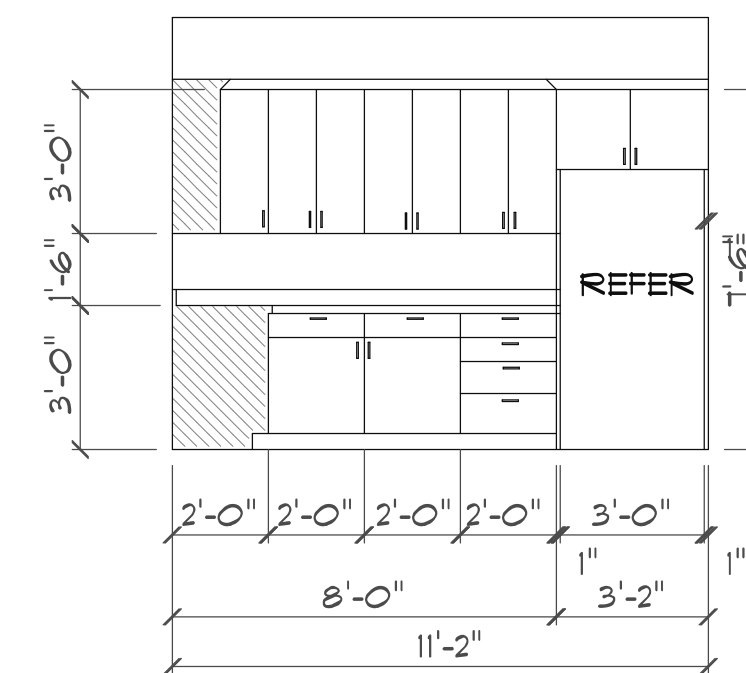
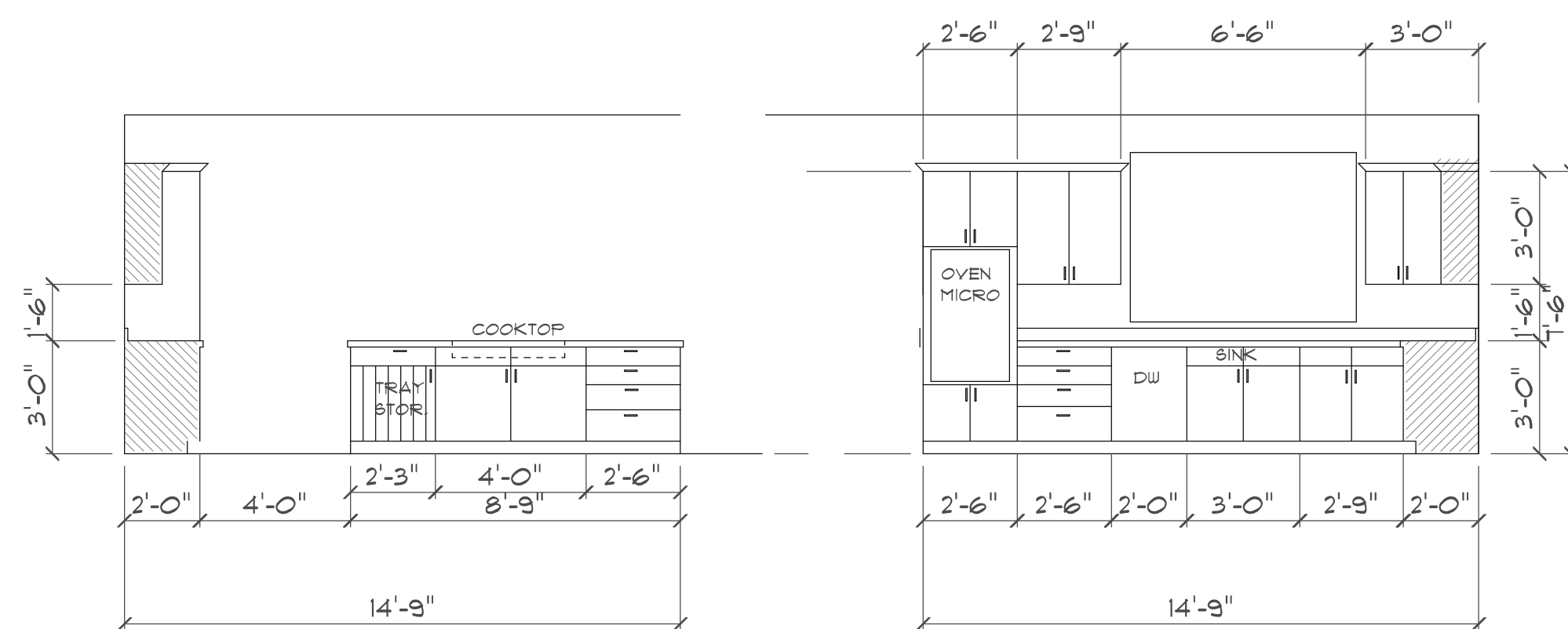
POWDER ROOM



LAUNDRY ROOM



BATH CABINETS BDRM #2 & #3



BATH CABINETS BDRM #2 & #3



ELECTRICAL	SYMBOL
110 v direct connection	⊕
Outlet 110 gfi up	⊕ <sub>gfi</sub>
Recessed can	⊙
Recessed directional	⊙ <sub>dir</sub>
Surface mount	⊙ <sub>sm</sub>
Wall Mount Flood	⊙ <sub>wmf</sub>
Telephone outlet	⊙ <sub>tel</sub>
Wall mount	⊙ <sub>wm</sub>
fan	⊙ <sub>f</sub>
outlet	⊕
220v Direct Wire	⊕ <sub>220</sub>
outlet gfi	⊕ <sub>gfi</sub>
smoke detector	⊙ <sub>sd</sub>
split receptacle	⊕ <sub>split</sub>
switch	⊕ <sub>s</sub>
switch 3 way	⊕ <sub>3w</sub>

REGISTERED ARCHITECT  
 RONALD R. HEALEY  
 STATE OF WASHINGTON

THE HEALEY ALLIANCE AZ  
 2509 N 185th DRIVE, GOODPASTER, AZ 85595 • (480) 444-6768  
**ARCHITECTS**

**M1 Treehouse, LLC,**  
 5631 EAST MERCER WAY  
 MERCER ISLAND, WA.

**GARAGE PLAN**

DATE  
 6-25-2020

PROJECT NO.  
 001

SHEET NO.  
**A6.2**

SCALE 1/4" = 1'-0"

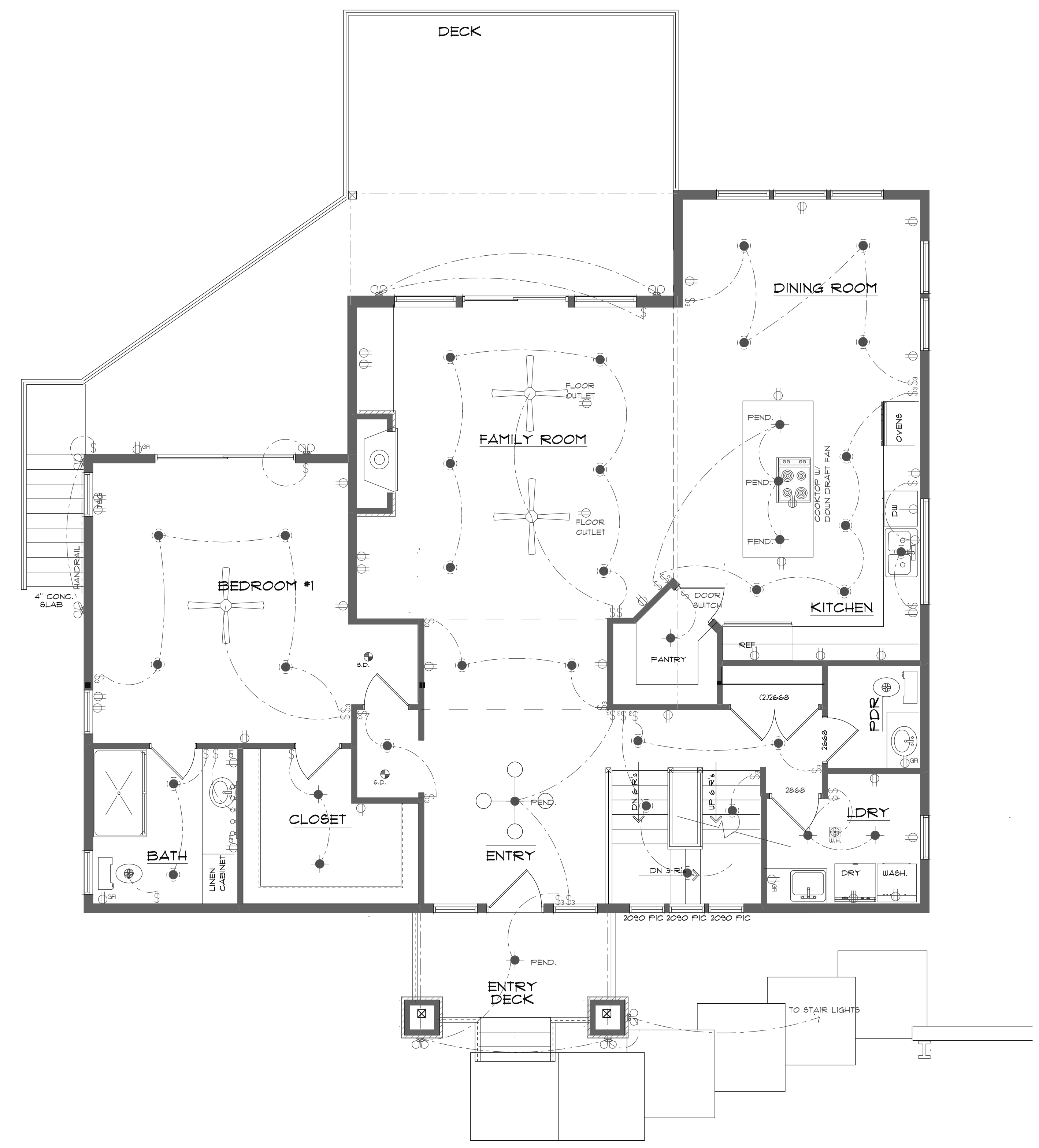


**WALL LEGEND**

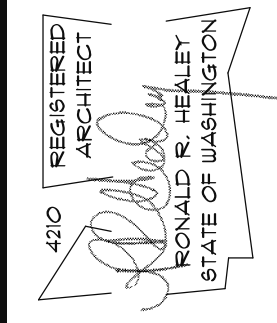
	2x6 EXTERIOR WALL
	2x4 PARTITION
	2x6 PARTITION
	36" HIGH RAILING

**LEGEND**

	50 CFM MIN. FAN (V.T.O.)
	110V. SMOKE DETECTOR W/ BATTERY BACK-UP & INTERCONNECTED ALARMS
	WHOLE HOUSE FAN - 100 CFM MIN. VTO
	110V. COMBINATION SMOKE DETECTOR & CARBON MONOXIDE DETECTOR



ELECTRICAL	SYMBOL
110 v direct connection	
Outlet 110 gfi up	
Recessed can	
Recessed directional	
Surface mount	
Wall Mount Flood	
Telephone outlet	
Wall mount	
Fan 50 CFM min	
outlet	
220v Direct Wire	
outlet gfi	
110v. smoke detector with battery backup interconnect alarms	
110v. combination smoke & carbon monoxide detector with battery backup interconnect alarms	
split receptacle	
switch	
switch 3 way	
paddle fan	



**THE HEALEY ALLIANCE AZ**  
 2525 N 135th DRIVE, GOODYEAR, AZ 85335 • (480) 444-6168  
**ARCHITECTS**

**MI Treehouse, LLC,**  
 5637 EAST MERCER WAY  
 MERCER ISLAND, WA.

**MAIN FLOOR ELECTRICAL**

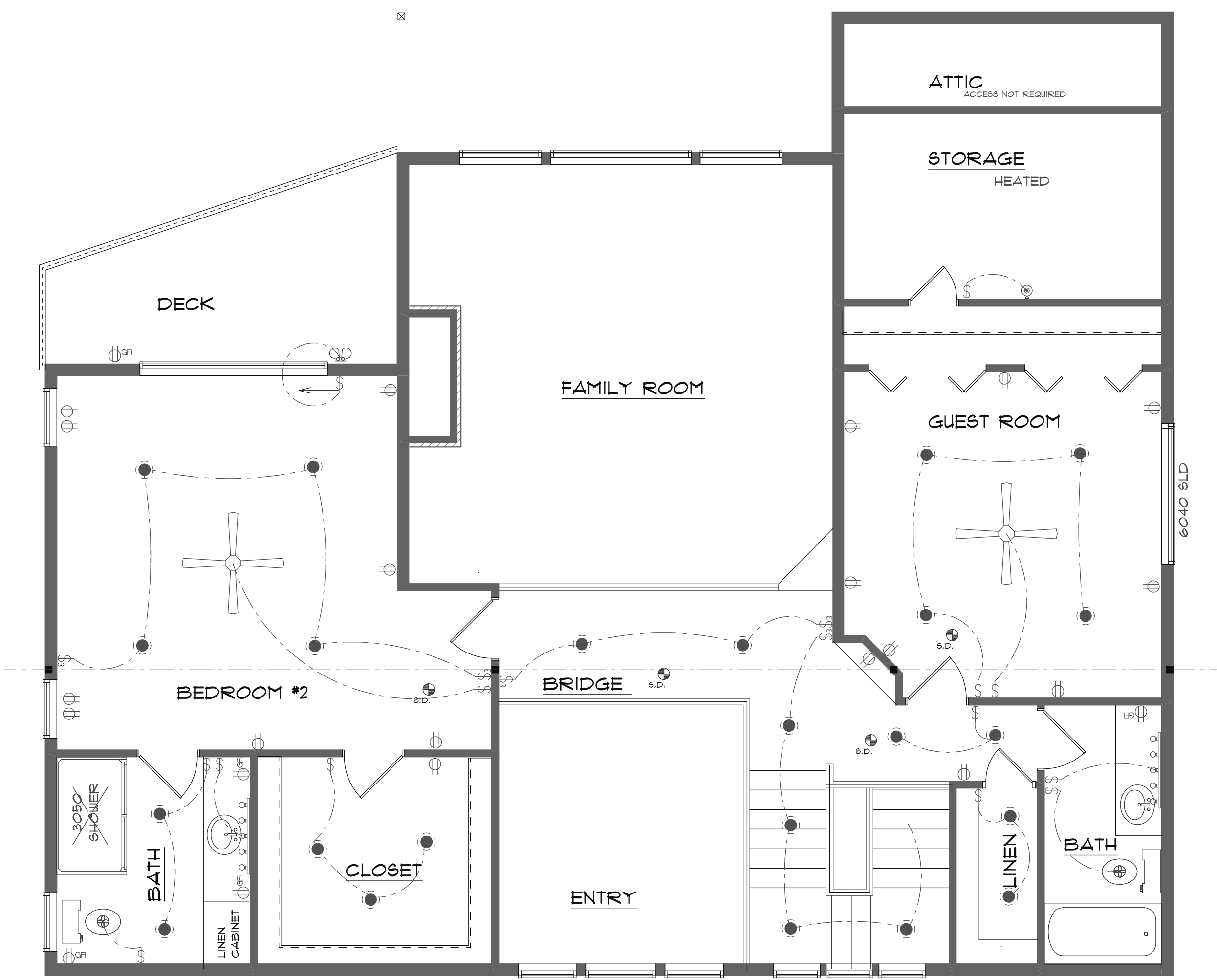
SCALE 1/4" = 1'-0"

DATE  
6-25-2020

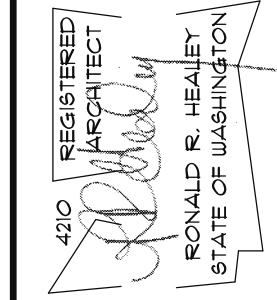
PROJECT NO.  
001

SHEET NO.

**A6.3**



ELECTRICAL	SYMBOL
110 v direct connection	⊖
Outlet 110 gfi up	⊖ <sub>GF</sub>
Recessed can	●
Recessed directional	●
Surface mount	●
Wall Mount Flood	⊖
Telephone outlet	⊖
Wall mount	●
fan 50 CFM min	⊕
outlet	⊖
220v Direct Wire	⊖
outlet gfi	⊖ <sub>GF</sub>
110v. smoke detector with battery backup interconnect alarms	⊕ <sub>S</sub>
110v. combination smoke & carbon monoxide detector with battery backup interconnect alarms	⊕ <sub>S</sub>
split receptacle	⊖
switch	\$
switch 3 way	\$ <sub>3</sub>
paddle fan	⊕



THE HEALEY ALLIANCE AZ  
 2805 N TIBBET DRIVE, GOOD YEARS, AZ 85526 - (480) 444-6766  
**ARCHITECTS**

**MI Treehouse, LLC,**  
 5637 EAST MERCER WAY  
 MERCER ISLAND, WA.

**UPPER FLOOR PLAN**

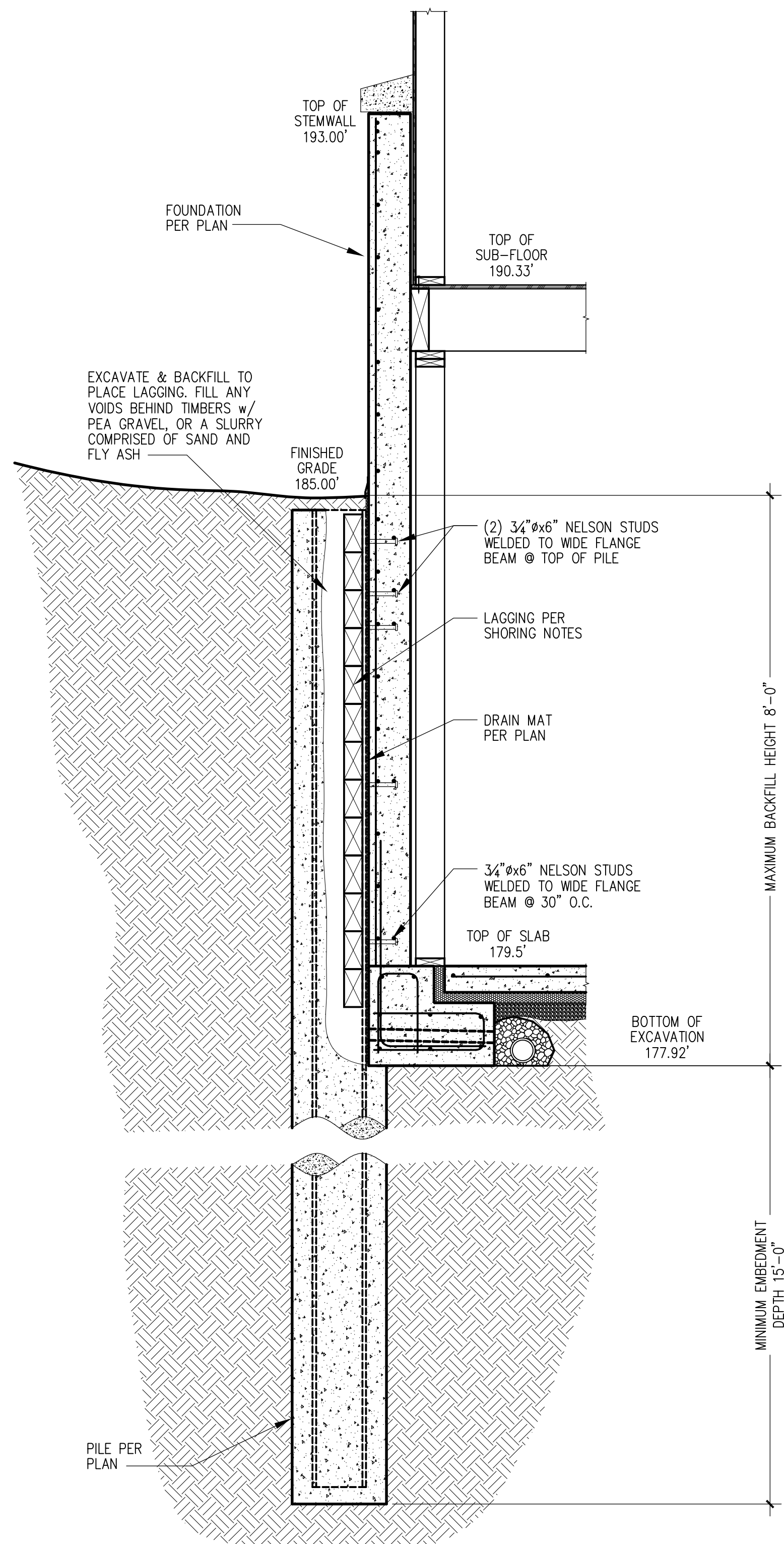
DATE  
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PROJECT NO.  
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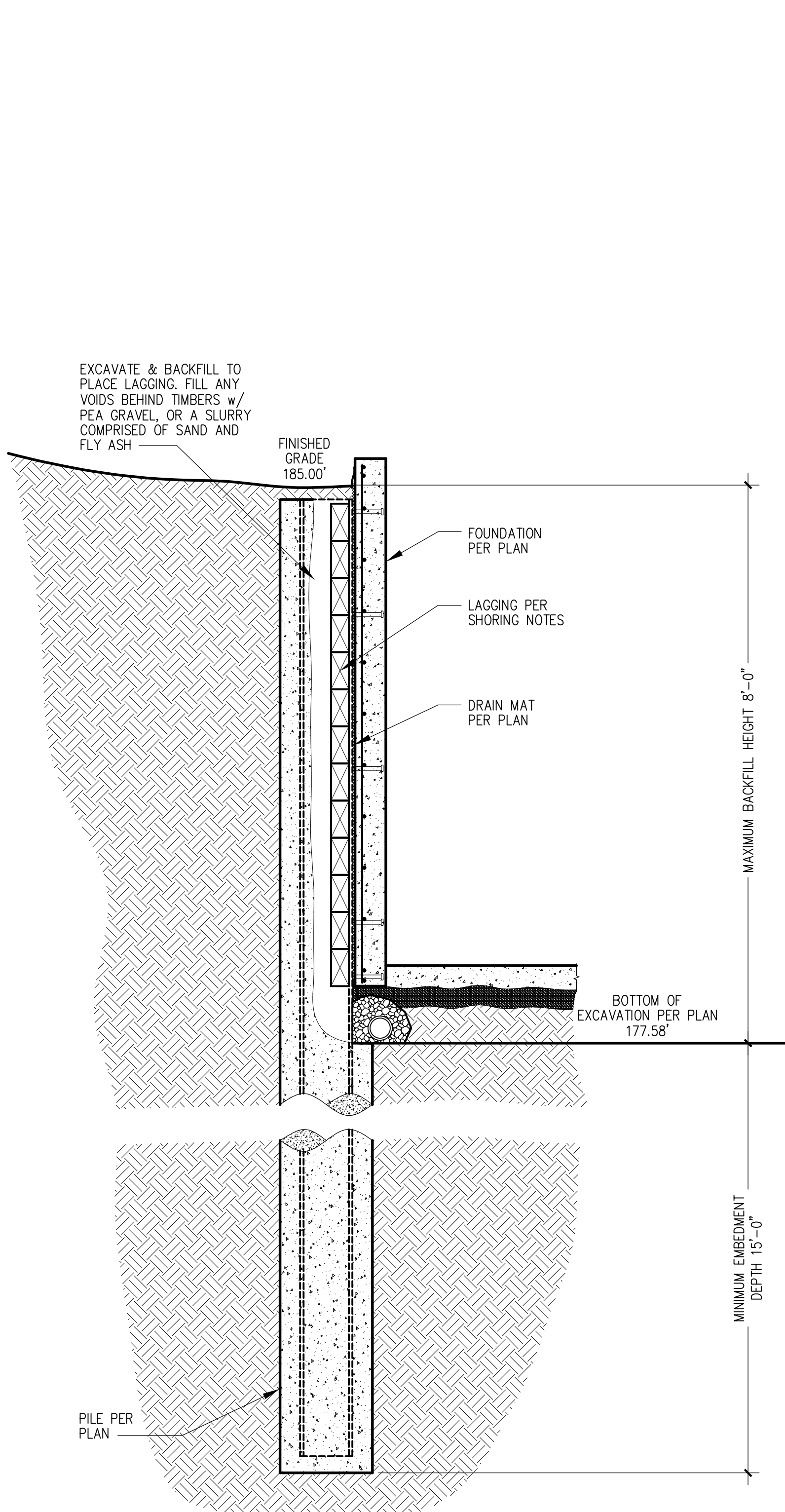
SHEET NO.  
**A6.4**

SCALE 1/4" = 1'-0"

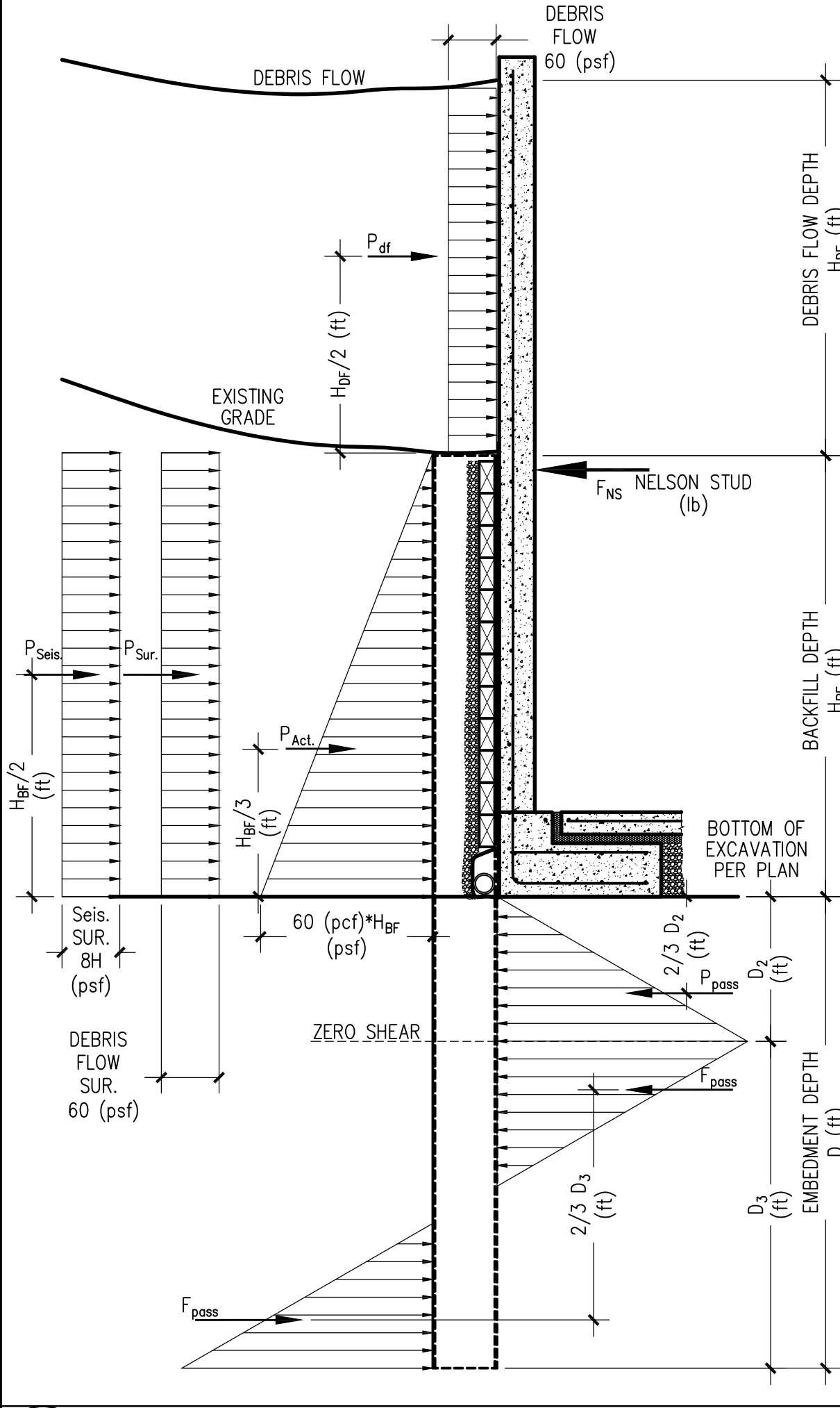




1 TYPICAL PILE SECTION (MAIN HOUSE)



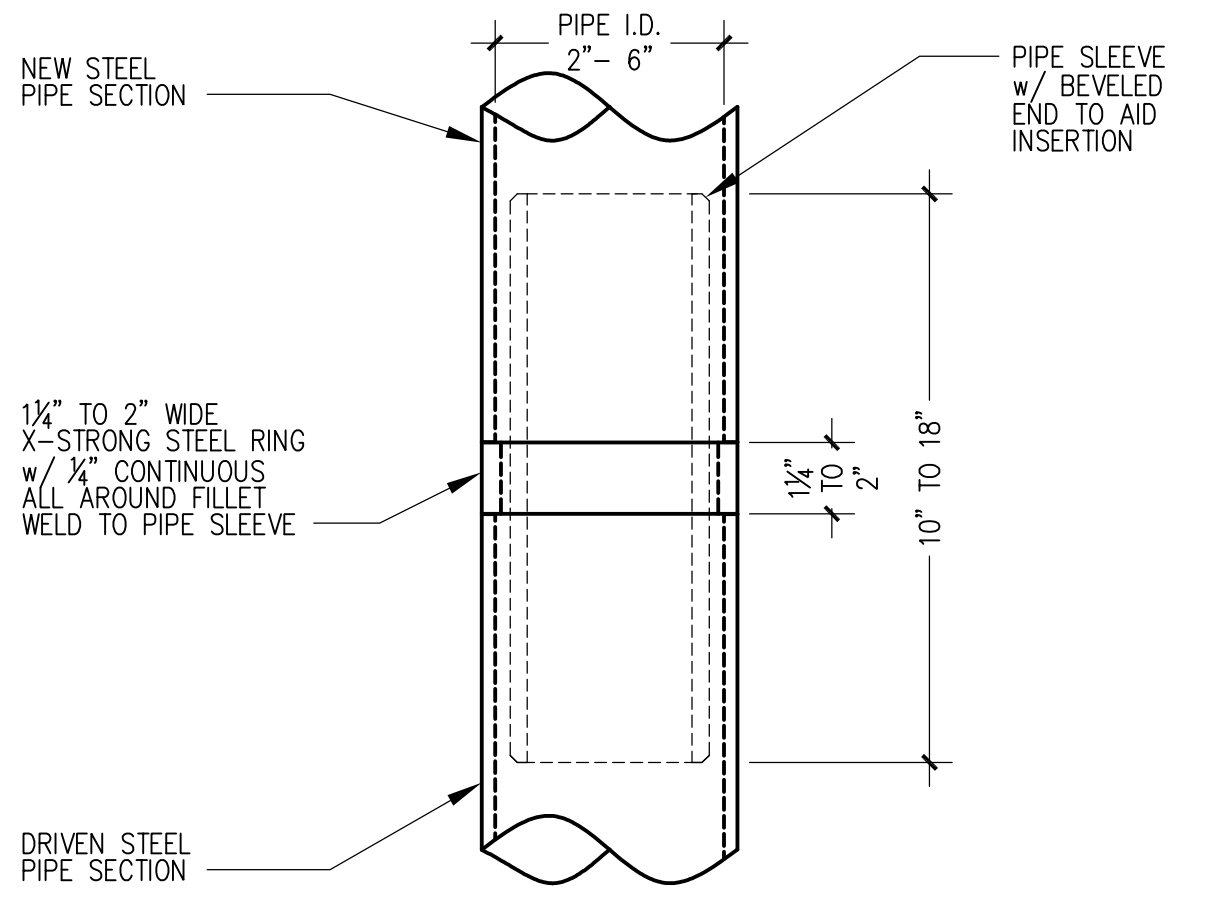
2 TYPICAL PILE SECTION (SITE WALL)



3 PILE LOADING DIAGRAM

PILE #	HEIGHT OF BACKFILL H (ft)	MIN. PILE DEPTH D (ft)	MAX. PILE SPACING S <sub>P</sub> (ft)	AUGER DIA. d (in)	STEEL SECTION	TIMBER LAGGING
1-9	7'-2"	31'-6"	6'-0"	24"	W10x45	4x8 P.T. HF#2
10-13	9'-0"	30'-10"	6'-0"	24"	W10x54	4x8 P.T. HF#2
14-16	8'-0"	28'-2"	6'-0"	24"	W10x39	4x8 P.T. HF#2

4 PILE SCHEDULE



5 TYPICAL PIN PILE SPLICING DETAIL

GENERAL STRUCTURAL SHORING NOTES

REFERENCE DOCUMENTS:  
 GEOTECHNICAL ENGINEERING STUDY  
 GEO GROUP NORTHWEST, INC.  
 REPORT #G-3637 DATED: FEB. 14, 2016

DESIGN LOADS:  
 THE SOIL PRESSURES INDICATED ON THE SOILS PRESSURE DIAGRAM DETAIL 3/P1.0 WERE USED FOR DESIGN.

SOILS:  
 CONTINUOUS OBSERVATIONS BY THE GEOTECHNICAL ENGINEER SHALL BE CONDUCTED FOR ALL PHASES OF PILE INSTALLATION. ALL PREPARED SOIL BEARING SURFACES SHALL BE INSPECTED BY THE THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF PILE. SEE GEOTECHNICAL ENGINEERING STUDY FOR COMPLETE INFORMATION INCLUDING; RECOMMENDATIONS FOR SHORING IN GENERAL, SHORING MONITORING, EXCAVATION, LAGGING AND DRAINING.

CONCRETE:  
 CONCRETE SHALL CONFORM TO ALL REQUIREMENT OF OF CHAPTER 19 OF THE IBC. CONCRETE STRENGTHS SHALL BE VERIFIED BY STANDARD CYLINDER TESTS. UNLESS APPROVED OTHERWISE, REQUIRED ULTIMATE COMPRESSIVE STRENGTHS OF STRUCTURAL GROUT SHALL BE REACHED BY 28 DAYS FOR PILES.

f <sub>c</sub> (psi)	MIN. SACKS OF CEMENT PER YARD OF CONCRETE	MAX. WATER PER 94lb SACK CEMENT	USE
3000	1} SACKS 6SACKS	6 GALLONS	PILE LEAN CONCRETE PILE STRUCTURAL GROUT

STRUCTURAL TIMBERS:  
 ALL GRADES SHALL CONFORM TO WCLIB GRADING RULES FOR "WEST COAST LUMBER", LATEST EDITION. ALL PERMANENT TIMBER LAGGING SHALL BE PRESSURE TREATED WITH WATERBORNE PRESERVATIVES IN ACCORDANCE WITH AWPB LP-22 TO A MINIMUM RETENTION OF 0.4. ALL STRUCTURAL LUMBER SHALL BE AS NOTED BELOW.

FRAMING GRADES:  
 4x TIMBER LAGGING HEM-FIR#2..... F<sub>b</sub> = 680PSI

STRUCTURAL STEEL:  
 STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE A.I.S.C. SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL BUILDINGS (14th EDITION). STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM DESIGNATION A992, 50KSI UNLESS NOTED OTHERWISE. WELDING SHALL BE IN ACCORDANCE WITH THE STRUCTURAL WELDING CODE LAWS. ALL WELDING SHALL BE BY CERTIFIED WELDERS (W.A.B.O. OR EQUAL) USING E60 OR E70 ELECTRODES. SHOP DRAWINGS OF ALL STRUCTURAL STEEL WORK SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. ALL STEEL MEMBERS SHALL BE GIVEN ONE SHOP COAT OF APPROVED PRIMER. SURFACES TO BE EMBEDDED IN CONCRETE, FIREPROOFED OR FIELD WELDED SHALL NOT BE PRIMED. ALL BOLTS SHALL BE A325 UNLESS NOTED OTHERWISE. ALL ANCHOR BOLTS SHALL BE ASTM A307

STATEMENT OF SPECIAL INSPECTION REQUIREMENTS:  
 SPECIAL INSPECTIONS PER IBC CHAPTER 1704 SHALL BE PERFORMED ON THE FOLLOWING BUILDING COMPONENTS. INSPECTIONS SHALL BE PROVIDED BY A QUALIFIED INSPECTION AGENCY APPROVED BY THE BUILDING DEPARTMENT AND RETAINED BY THE OWNER/CONTRACTOR:

1. ALL STRUCTURAL STEEL SHALL BE PERIODICALLY INSPECTED TO VERIFY MEMBER SIZE, GRADE, AND INSTALLATION PER PLAN. ANY ON SITE WELDING SHALL BE INSPECTED BY AN AWS D1.1 QUALIFIED INSPECTOR. CONTINUOUS INSPECTION IS NOT REQUIRED IF THE PROCEDURES AND QUALIFICATIONS OF THE WELDERS ARE VERIFIED PRIOR TO THE START OF THE WORK. TESTING AGENCY AND CREDENTIALS TO BE PROVIDED FOR APPROVAL UPON CONTRACT AGREEMENT.
2. AUGERCAST PILE PLACEMENT

HOLE DIGGING:  
 PILE HOLES SHALL BE DRILLED WITHOUT LOSS OF GROUND AND WITHOUT ENDANGERING PREVIOUSLY INSTALLED PILES. THIS MAY INVOLVE CASING HOLES OR OTHER METHODS OF PROTECTION FROM CAVING. REFER TO TO GEOTECHNICAL ENGINEERING STUDY FOR RECOMMENDED HOLE DIGGING PROCEDURE.

STEEL PLACEMENT TOLERANCES:  
 1" INSIDE PERPENDICULAR TO SHORING WALL  
 1" OUTSIDE PERPENDICULAR TO SHORING WALL  
 3" LATERALLY

LAGGING:  
 TIMBER LAGGING SHALL BE INSTALLED IN ALL AREAS UNLESS OTHERWISE DIRECTED BY THE GEOTECHNICAL ENGINEER IN THE FIELD. VOIDS BETWEEN LAGGING AND SOIL SHALL BE BACKFILLED WITH EITHER PEA GRAVEL OR SLURRY PER GEOTECHNICAL ENGINEER. DRAINAGE BEHIND THE WALL MUST BE MAINTAINED. IT IS THE CONTRACTOR RESPONSIBILITY TO LIMIT THE AMOUNT OF EXPOSED SOIL WITHOUT LAGGING TO AVOID LOSS OF SOIL. MAXIMUM HEIGHT OF 4 FEET IS RECOMMENDED. SPECIAL CARE SHOULD BE TAKEN TO AVOID GROUND LOSS DURING EXCAVATION.

SHORING MONITORING:  
 CONTINUOUS OBSERVATIONS BY THE GEOTECHNICAL ENGINEER SHALL BE CONDUCTED FOR ALL PHASES OF THE SHORING PROJECT EXECUTION TO DETERMINE THE EFFECT OF CONSTRUCTION ON ADJACENT STRUCTURES IN ORDER TO PROTECT THEM FROM DAMAGE. REFER TO GEOTECHNICAL ENGINEERING STUDY FOR COMPLETE INFORMATION INCLUDING; RECOMMENDATIONS.

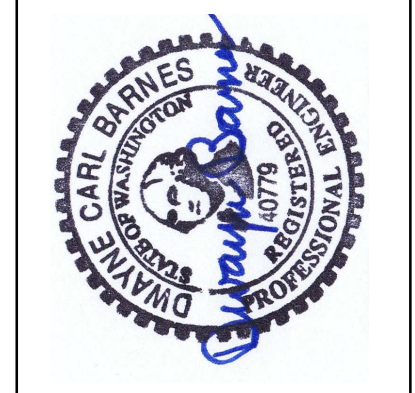
GENERAL STRUCTURAL PIN PILE NOTES

REFERENCE DOCUMENTS:  
 GEOTECHNICAL ENGINEERING STUDY  
 GEO GROUP NORTHWEST, INC.  
 REPORT #G-3637 DATED: MAR. 15, 2015

- PIN PILES:
1. ALL PIN PILES SHALL CONSIST OF 4" GALVANIZED SCHEDULE 40 ASTM A-53 GRADE "A" PIPE, AND DRIVEN SECTIONS AND CONNECTED WITH COMPRESSION FITTED SLEEVE COUPLERS AND PILE CAPS AS INDICATED IN DETAIL 5/P1.0 & 6/P1.0
  2. PILES SHALL BE DRIVEN WITH A TELEDYNE TB325 PNEUMATIC HAMMER (OR EQUIVALENT) TO A REFUSAL PENETRATION RATE OF 16SEC/INCH SUSTAINED THROUGH AT LEAST 3 MINUTES OF CONTINUOUS DRIVING. BATTERED PILES SHALL BE DRIVEN AT A RATIO OF 2 HORIZ: TO VERT: PILE CAPACITY 8 TONS FOR VERTICAL PILES, AND 7.8 TONS FOR BATTERED PILES.
  3. CONTRACTOR SHALL SUPPLY THE GEOTECHNICAL ENGINEER WITH ALL EQUIPMENT AND HAMMER ENERGY INFORMATION TO BE USED ON THE PROJECT, PRIOR TO ARRIVING ON SITE.
  4. FILED LOAD TESTING PER ASTM STANDARD D 1143-81, SHALL BE CONDUCTED ON AT LEAST (1) PILE, OR A MINIMUM OF 3% OF THE PILES, UP TO A MAXIMUM OF (5).

PIN PILE MONITORING:  
 CONTINUOUS OBSERVATIONS BY THE GEOTECHNICAL ENGINEER SHALL BE CONDUCTED FOR ALL PHASES OF PIN PILE INSTALLATION. ALL PREPARED SOIL BEARING SURFACES SHALL BE INSPECTED BY THE THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF PILE. REFER TO GEOTECHNICAL ENGINEERING STUDY FOR COMPLETE INFORMATION INCLUDING; RECOMMENDATIONS.

Stoney Point Engineering  
 Dwayne Barnes P.E.  
 dwayne@stonepointengineering.com  
 Office: 425-644-9500



MI Treehouse, LLC  
 5637 East Mercer Way  
 Mercer Island, WA 98084

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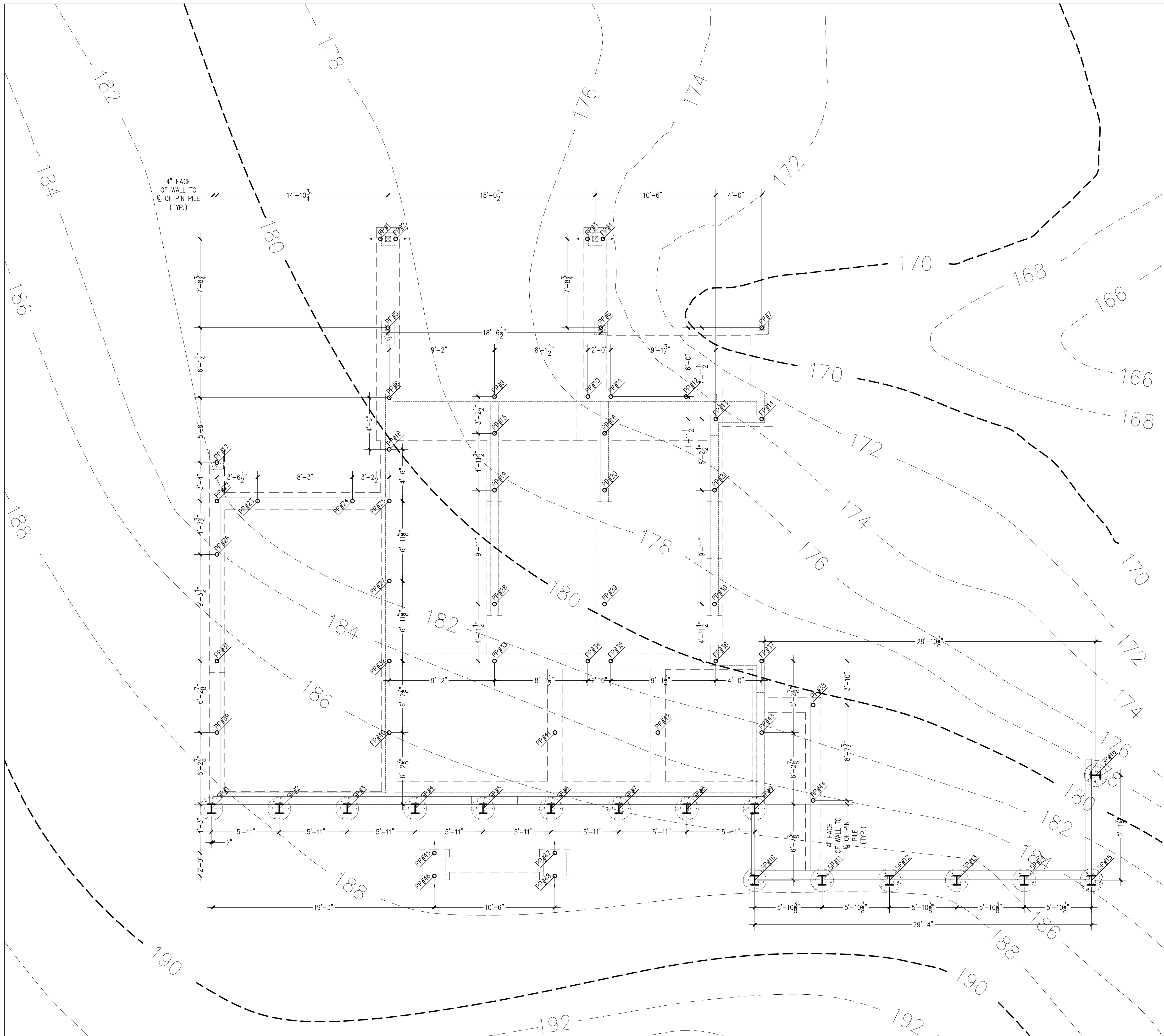
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Issued	Date
Permit Plans	03/30/20

18-025

P1.0  
 SHORING/PIN PILE DETAILS





# PILE PLAN

SCALE 1/4" = 1'-0"

## PILE PLAN NOTES

1. PLANS SHOULD BE REVIEWED BY ALL SUBCONTRACTORS PRIOR TO STARTING CONSTRUCTION. IF DISCREPANCIES EXIST PLEASE CONTACT STONEY POINT ENGINEERING OR OWNER/CONTRACTOR.
2. WRITTEN DIMENSIONS TAKE PRECEDENT OVER SCALED DIMENSIONS.
3. VERIFY ALL DIMENSIONS AND FIELD CONDITIONS.
4. REFER TO SHEET P1.0 FOR GENERAL SHORING AND PILE NOTES AND ADDITIONAL SHORING AND PIN PILE INFORMATION.
5. INDICATES LOCATION AND NUMBER OF 4" PIN PILE PER PLAN.
6. INDICATES LOCATION AND NUMBER OF A BATTERED 4" PIN PILE PER PLAN. ARROW INDICATES DIRECTION TO DRIVE PILE. BATTERED PILES SHALL BE DRIVEN AT A RATIO OF 2 HORIZ:10 VERT.
7. INDICATES LOCATION AND NUMBER OF AUGERCAST PILE PER PLAN. SEE TABLE 4/P1.0 FOR STEEL SIZE AND AUGER DEPTH AND DIAMETER.
8. REFER TO SOILS REPORT G-3837 FROM GEO GROUP NORTHWEST, INC. FOR ADDITIONAL INFORMATION.
9. GEOTECHNICAL SPECIAL INSPECTOR SHALL BE CONTINUOUSLY ONSITE DURING PILE INSTALLATION TO OBSERVE AND VERIFY CORRECT INSTALLATION OF ALL SHORING AND PIN PILES.

**Stoney Point Engineering**  
 Dwayne Barnes P.E.  
 dwayne@stonepointengineering.com  
 Office: 425-644-9500



**MI Treehouse, LLC**  
 5637 East Mercer Way  
 Mercer Island, WA 98084

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Permit Plans	03/30/20

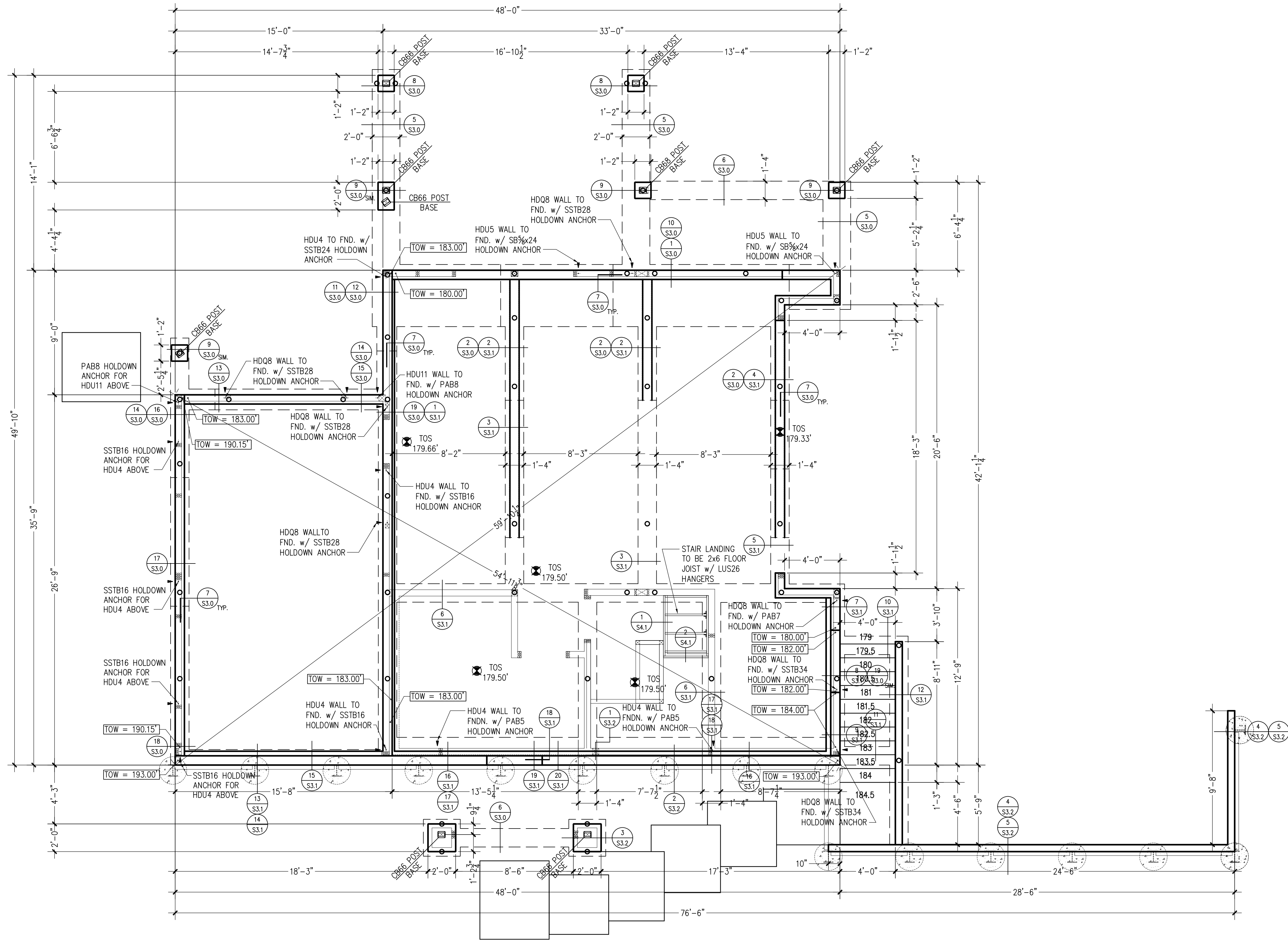
18-025

**P1.1**  
 SHORING/PIN PILE PLAN









# FOUNDATION PLAN

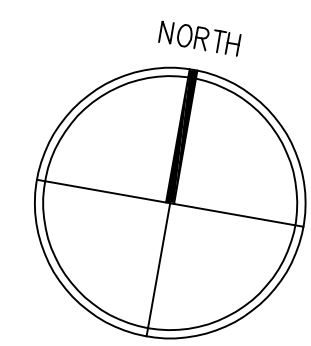
SCALE 1/4" = 1'-0"

## FOUNDATION PLAN NOTES

- PLANS SHOULD BE REVIEWED BY ALL SUBCONTRACTORS PRIOR TO STARTING CONSTRUCTION. IF DISCREPANCIES EXIST PLEASE CONTACT STONEY POINT ENGINEERING OR OWNER/CONTRACTOR.
- WRITTEN DIMENSIONS TAKE PRECEDENT OVER SCALED DIMENSIONS.
- ALL FOOTINGS TO HAVE A MINIMUM DEPTH OF 18" BELOW FINISH GRADE.
- ALL CONCRETE FOOTINGS TO BEAR ON 4" Ø PIN PILES OR WIDE-FLANGE SHORING PILES PER PLAN.
- STEP FOUNDATION PER SITE CONDITIONS.
- CONCRETE COMPRESSIVE STRENGTH F'C = 3,000 PSI, GRADE 60 REINFORCEMENT.
- ALL WOOD IN CONTACT WITH CONCRETE, MASONRY, EARTH, OR EXPOSED TO WEATHER SHALL BE PRESSURE TREATED.
- VERIFY ALL DIMENSIONS AND FIELD CONDITIONS.
- PROVIDE TEMPORARY BRACING AS REQUIRED UNTIL ALL PERMANENT CONNECTIONS AND STIFFENINGS HAVE BEEN INSTALLED.
- CONCRETE PROTECTION FOR REINFORCEMENT:
  - 3" CAST AGAINST EARTH.
  - 1 1/2" EXPOSED TO EARTH OR WEATHER.
  - 3/4" NOT EXPOSED TO EARTH OR WEATHER.
- METAL FRAMING CONNECTORS SPECIFIED ARE MANUFACTURED BY THE SIMPSON COMPANY. SEE LATEST CATALOG EDITION. INSTALL PER SPECS. USE ONLY EQUIVALENT SUBSTITUTIONS.
- ALL METAL CONNECTORS SUPPORTED BY PRESSURE TREATED MATERIAL SHALL BE "ZMAX" (G185 HDG PER ASTM A653) OR EQUIVALENT AND FASTENERS SHALL BE PER ASTM A153.

## SHEARWALL NOTES

- ALL EXTERIOR WALLS TO BE P1-6 U.N.O.
- DENOTES SHEARWALL MARK. MARK IS ON SIDE OF WALL TO BE SHEATHED U.N.O.
- DENOTES LOCATION OF TIE STRAP PER PLAN
- DENOTES LOCATION HOLDOWN PER PLAN.
- SEE SHEETS S3.0, S3.1, S3.2, S4.1, AND S4.3 FOR SHEARWALL SCHEDULE, NOTES AND TYP. DETAILS



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18-025

**S2.0**  
 FOUNDATION PLAN

Issued	Date
Permit Plans	10/10/19

18-025

**S2.1**

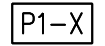


# MAIN FLOOR FRAMING PLAN

SCALE 1/8" = 1'-0"



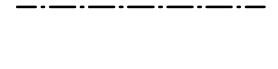
## MAIN FLOOR FRAMING PLAN NOTES

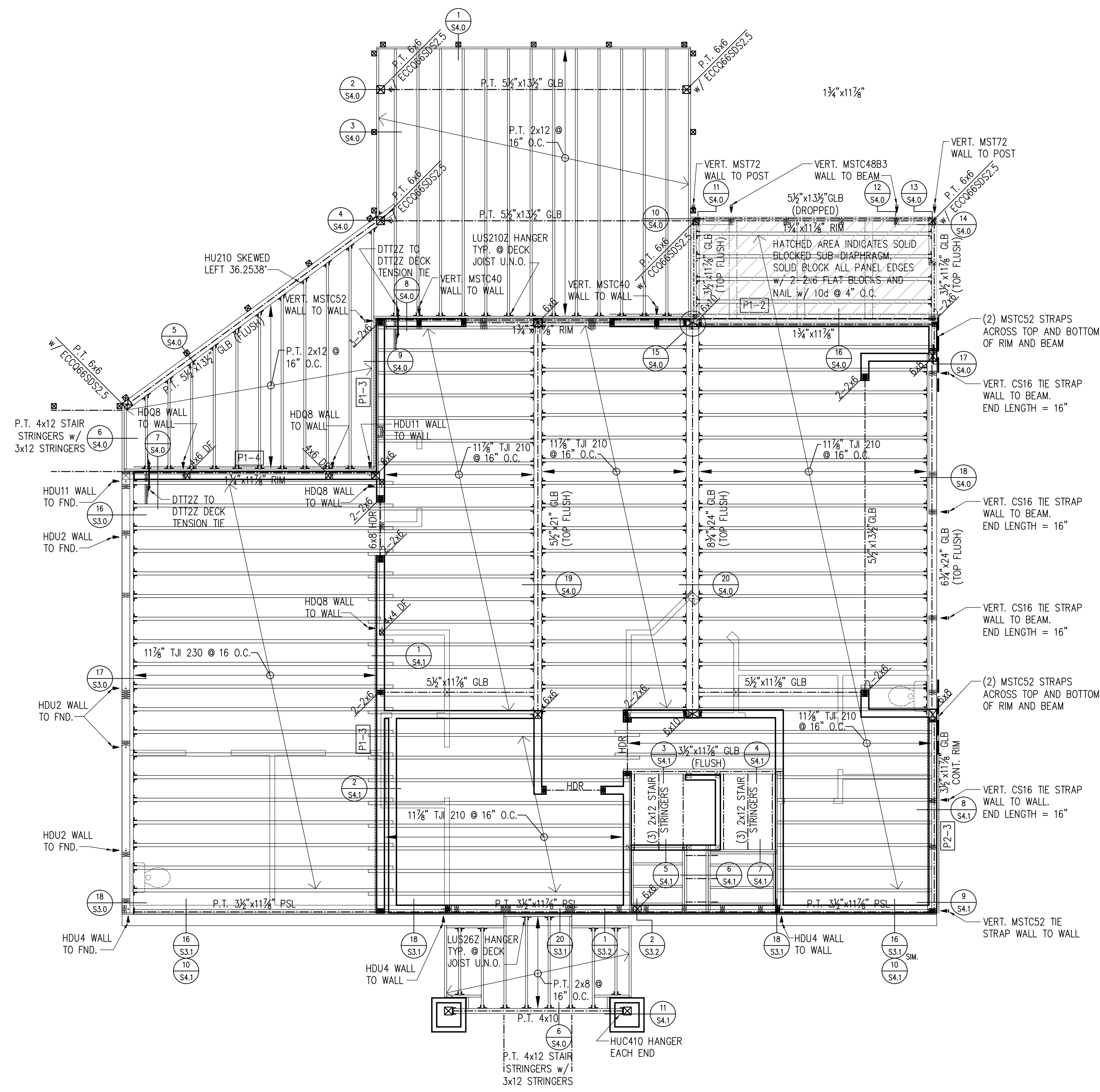
- PLANS SHOULD BE REVIEWED BY ALL SUBCONTRACTORS PRIOR TO STARTING CONSTRUCTION. IF DISCREPANCIES EXIST PLEASE NOTIFY STONEY POINT ENGINEERING OR OWNER/CONTRACTOR.
- ALL EXTERIOR WALLS TO BE FRAMED WITH 2x6 H.F. (STUD GRADE OR BETTER).
- ALL FRAME NAILING TO COMPLY WITH TABLE 2304.10.1, 2015 I.B.C. BLOCK ALL APA RATED SHEATHING EDGES AND NAIL WITH 8d AT 6" O.C. TYPICAL, U.N.O. ON SHEAR WALL SCHEDULE. NAILING INTO PRESSURE TREATED MATERIAL SHALL BE HOT-DIP GALVANIZED PER ASTM A153.
- ALL FLOOR BEAMS TO BE 4x8 D.F.#2 TYP. U.N.O.
- ALL FLOOR JOIST TO BE 11 1/8" TJI 230 @ 16" O.C. U.N.O. PROVIDE SOLID BLOCKING BELOW ALL POINT LOADS ABOVE.
- DENOTES MINIMUM REQUIRED NUMBER OF STUDS NEEDED FOR BEARING UNDER BEAMS AND BELOW WINDOW HEADERS. DOES NOT INCLUDE KING STUDS. MAY BE REPLACED W/ SOLID SAWN LUMBER OF SAME SECTION. TYPICAL, U.N.O.
- ENGINEERED LUMBER SPECIFIED SHALL MEET OR EXCEED THE DESIGN STRESS VALUES INDICATED ON SHEET S1.0. INSTALL PER MFG. RECOMMENDATIONS. THESE DRAWINGS ONLY SHOW SIZE, SPAN, AND SPACING.

## SHEARWALL NOTES

- ALL EXTERIOR WALLS TO BE P1-6 U.N.O.
-  DENOTES SHEARWALL MARK. MARK IS ON SIDE OF WALL TO BE SHEATHED U.N.O.
-  DENOTES LOCATION OF THE STRAP PER PLAN
-  DENOTES LOCATION HOLDOWN PER PLAN.
- SEE SHEETS S3.0, S3.1, S3.2, S4.0, S4.1, AND S4.3 FOR SHEARWALL SCHEDULE, NOTES AND TYP. DETAILS

## LEGEND

-  DENOTES INTERIOR LOWER FLOOR BEARING WALLS
-  DENOTES LOWER FLOOR WALLS
-  DENOTES BEAMS, HEADERS



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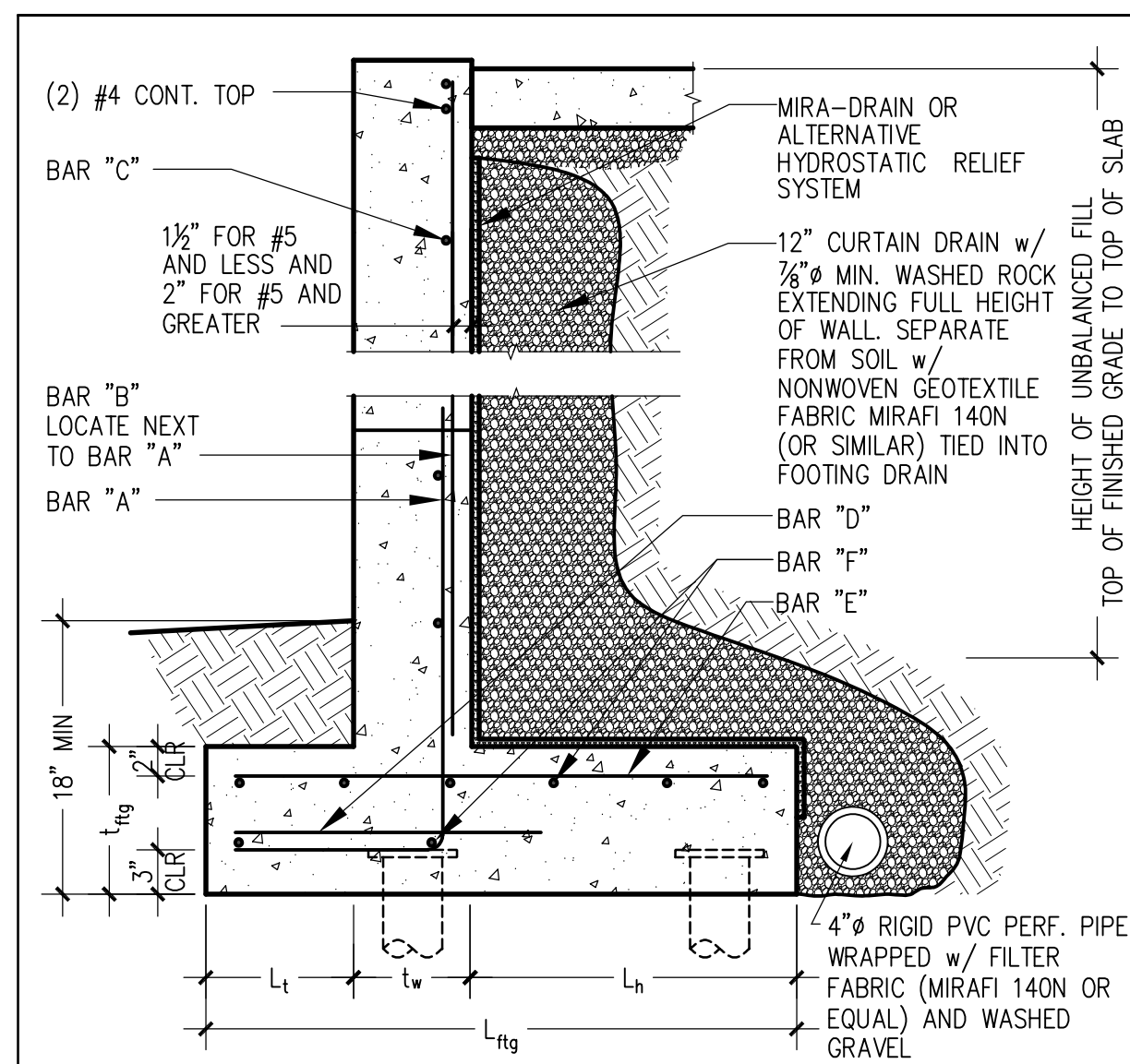










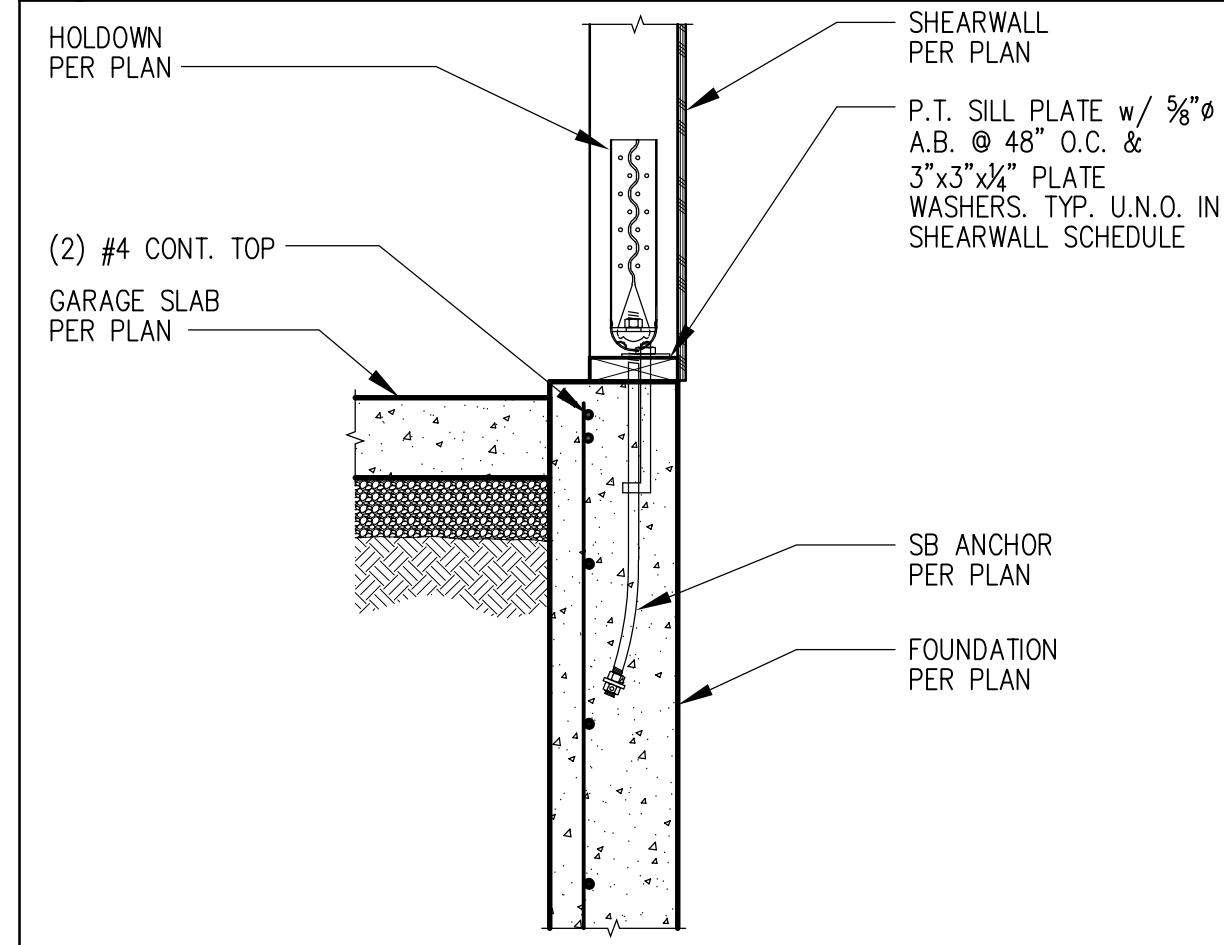


**RETAINING WALL SCHEDULE**

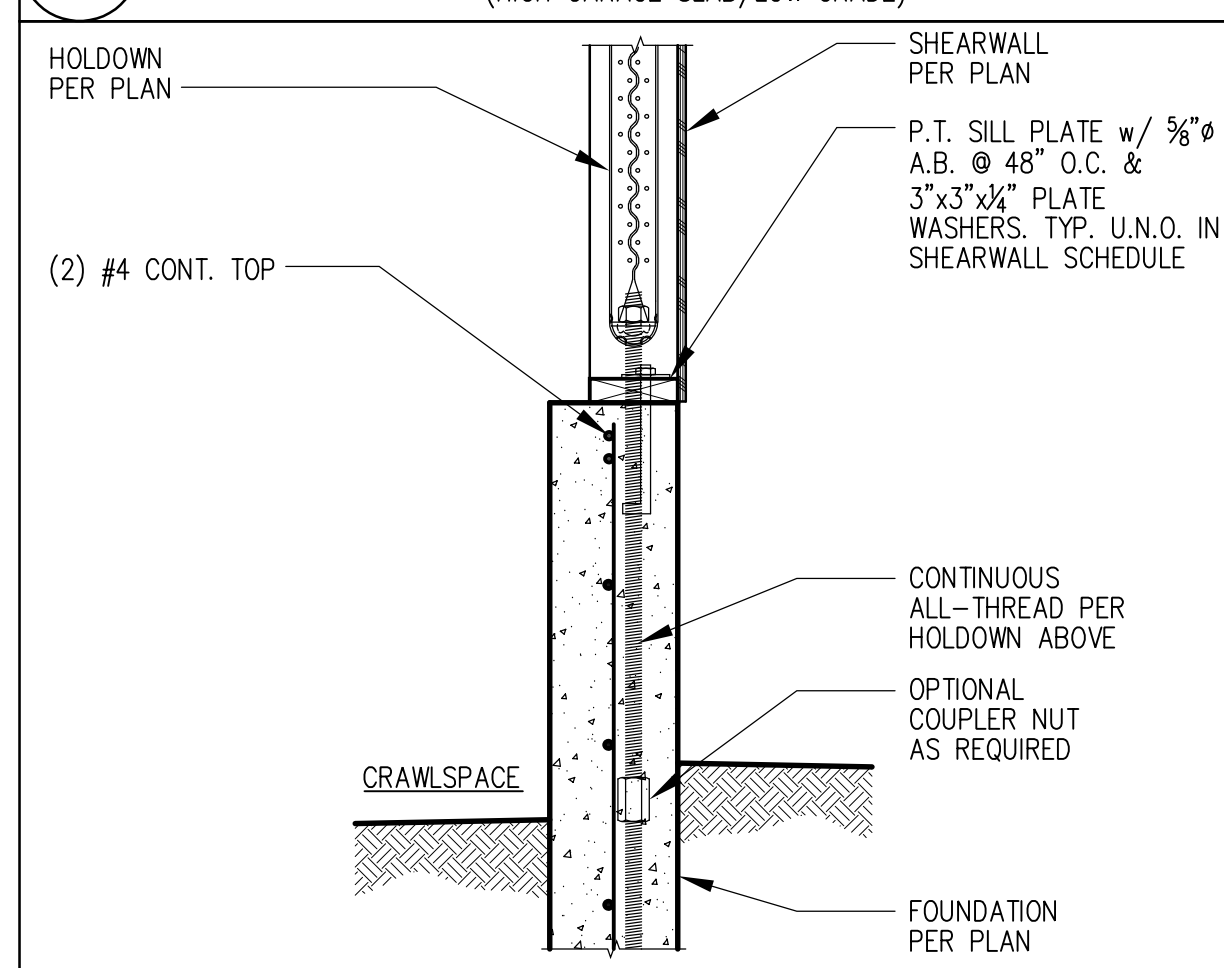
WALL DIMENSIONS				REINFORCEMENT																					
H <sub>UNBAL</sub>	L <sub>t</sub>	t <sub>w</sub>	L <sub>h</sub>	T <sub>ftg</sub>	L <sub>ftg</sub>	BAR A	BAR B	BAR C	BAR D	BAR E	BAR F	BAR G	BAR H	BAR I	BAR J	BAR K	BAR L	BAR M	BAR N	BAR O	BAR P	BAR Q	BAR R	BAR S	BAR T
4'-0"	6"	8"	1'-0"	10"	2'-2"	#4@18" 1'-4"	N/A	#4@10"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5'-0"	6"	8"	1'-6"	10"	2'-8"	#4@18" 1'-4"	N/A	#4@10"	N/A	#4@16"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
6'-0"	12"	8"	1'-10"	10"	3'-6"	#4@18" 1'-4"	#4@18"	#4@10"	N/A	#4@12"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
7'-0"	12"	8"	2'-6"	12"	4'-2"	#4@12" 1'-4"	#4@18"	#4@10"	N/A	#4@12"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8'-0"	12"	8"	3'-0"	12"	4'-8"	#4@9" 1'-4"	#4@18"	#4@10"	N/A	#4@12"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9'-0"	12"	8"	3'-8"	14"	5'-4"	#5@9" 1'-4"	#4@18"	#4@10"	N/A	#5@12"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10'-0"	12"	8"	4'-2"	16"	5'-10"	#6@9" 1'-4"	#5@18"	#4@10"	N/A	#5@12"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**NOTES FOR UNBRACED RETAINING WALL:**  
 1. EQUIVALENT FLUID PRESSURE = 35 PCF. ALL FOOTINGS TO BEAR ON 4" PIN PILES.  
 2. CONCRETE COMPRESSIVE STRENGTH  $f'_c$  = 2500 PSI. REBAR GRADE = 60 KSI.  
 3. BACKFILL HEEL SIDE OF WALL AFTER COMPACTING FILL AND/OR POURING CONCRETE SLAB AT TOE SIDE.

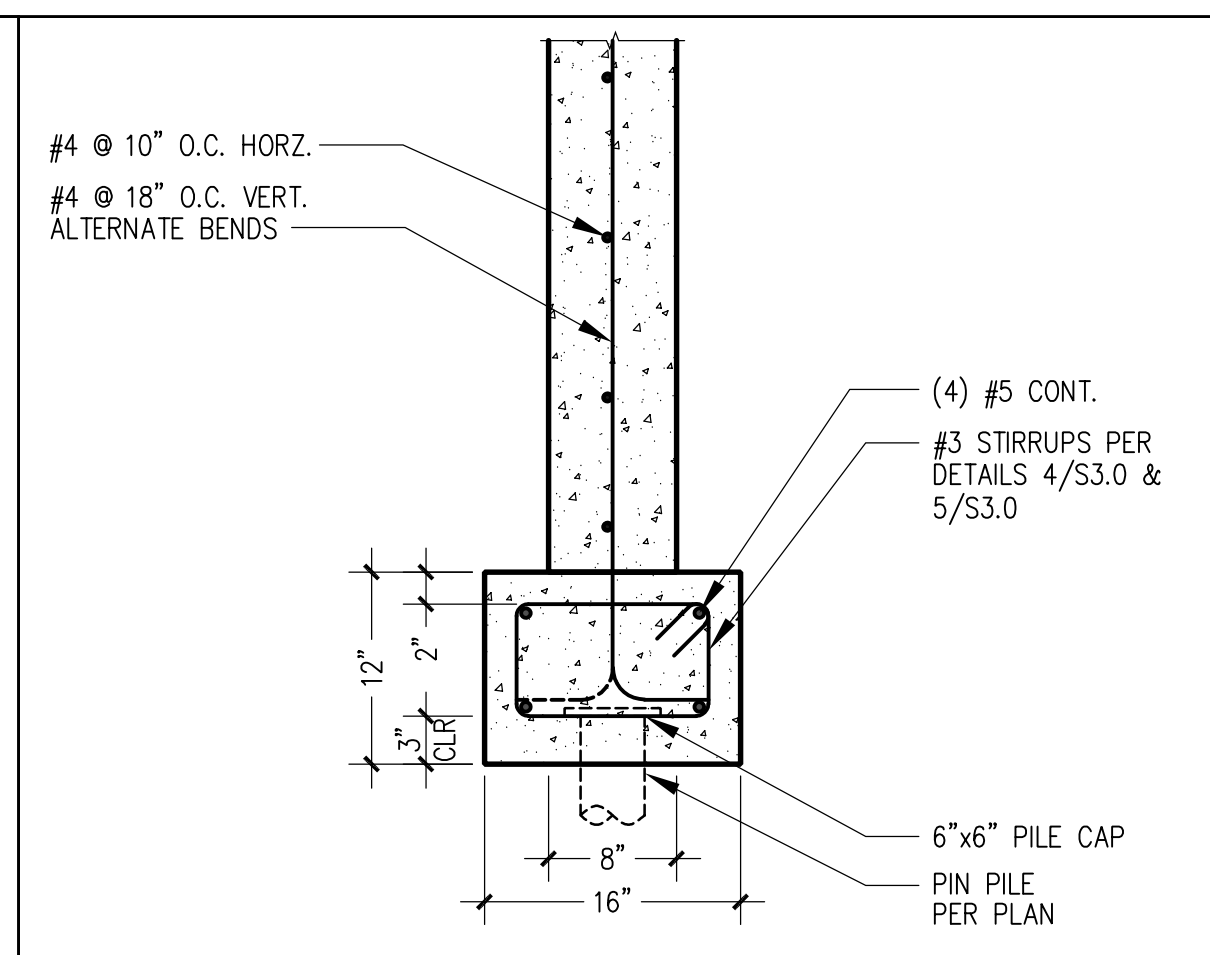
**1 UNBRACED CONCRETE RETAINING WALL**



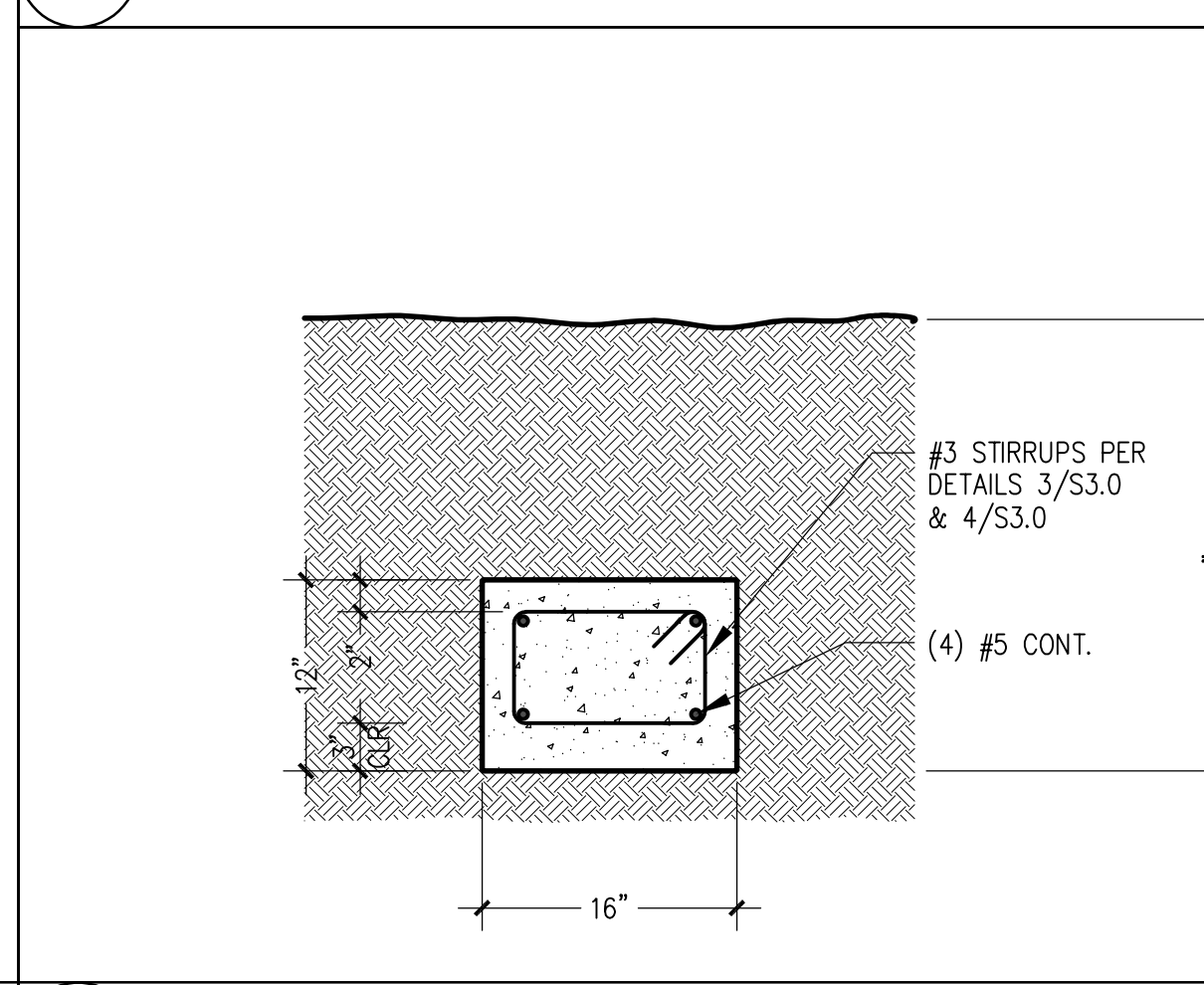
**10 SB HOLDOWN ANCHOR TO FOUNDATION (HIGH GARAGE SLAB/LOW GRADE)**



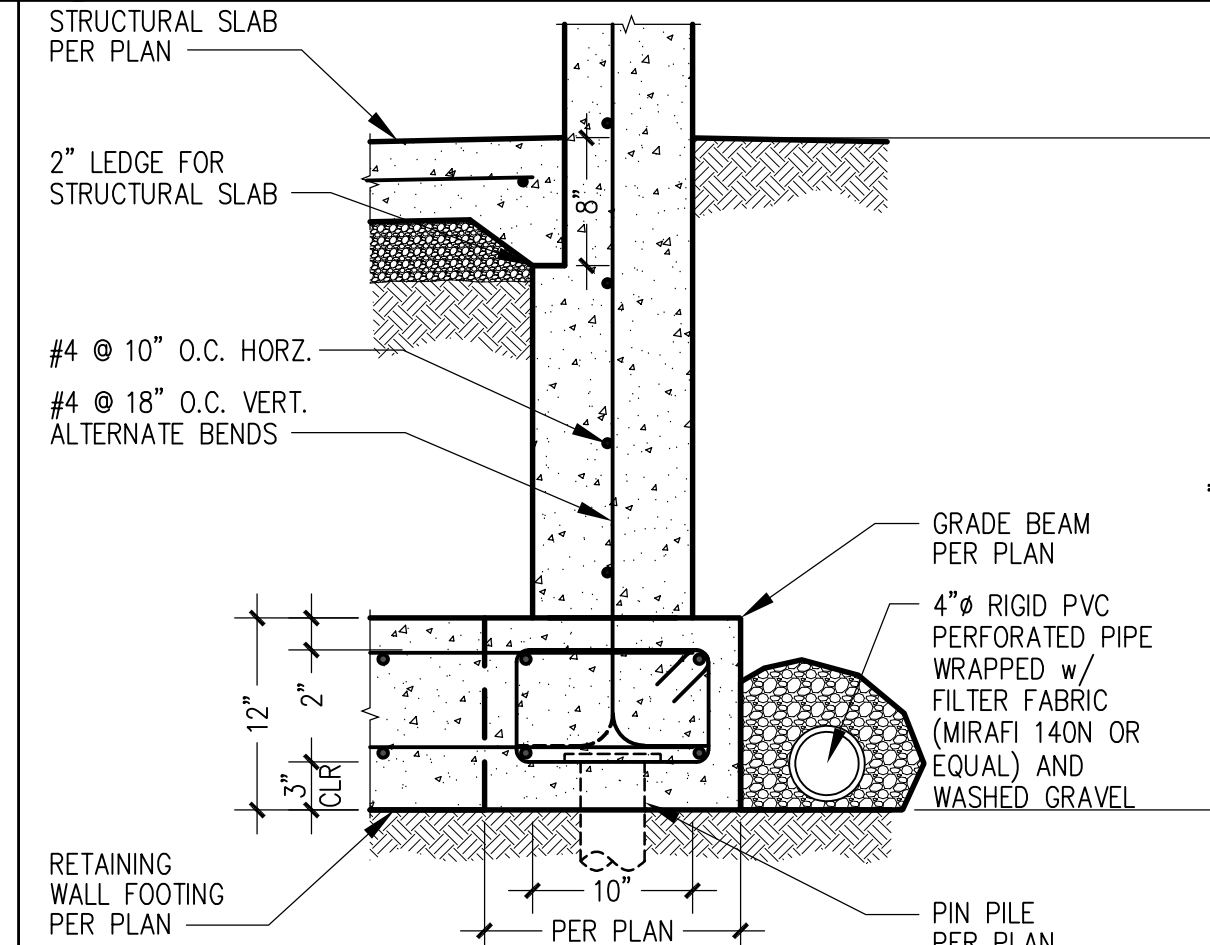
**15 PAB HOLDOWN ANCHOR TO FOUNDATION (HOLDOWN @ PONYWALL)**



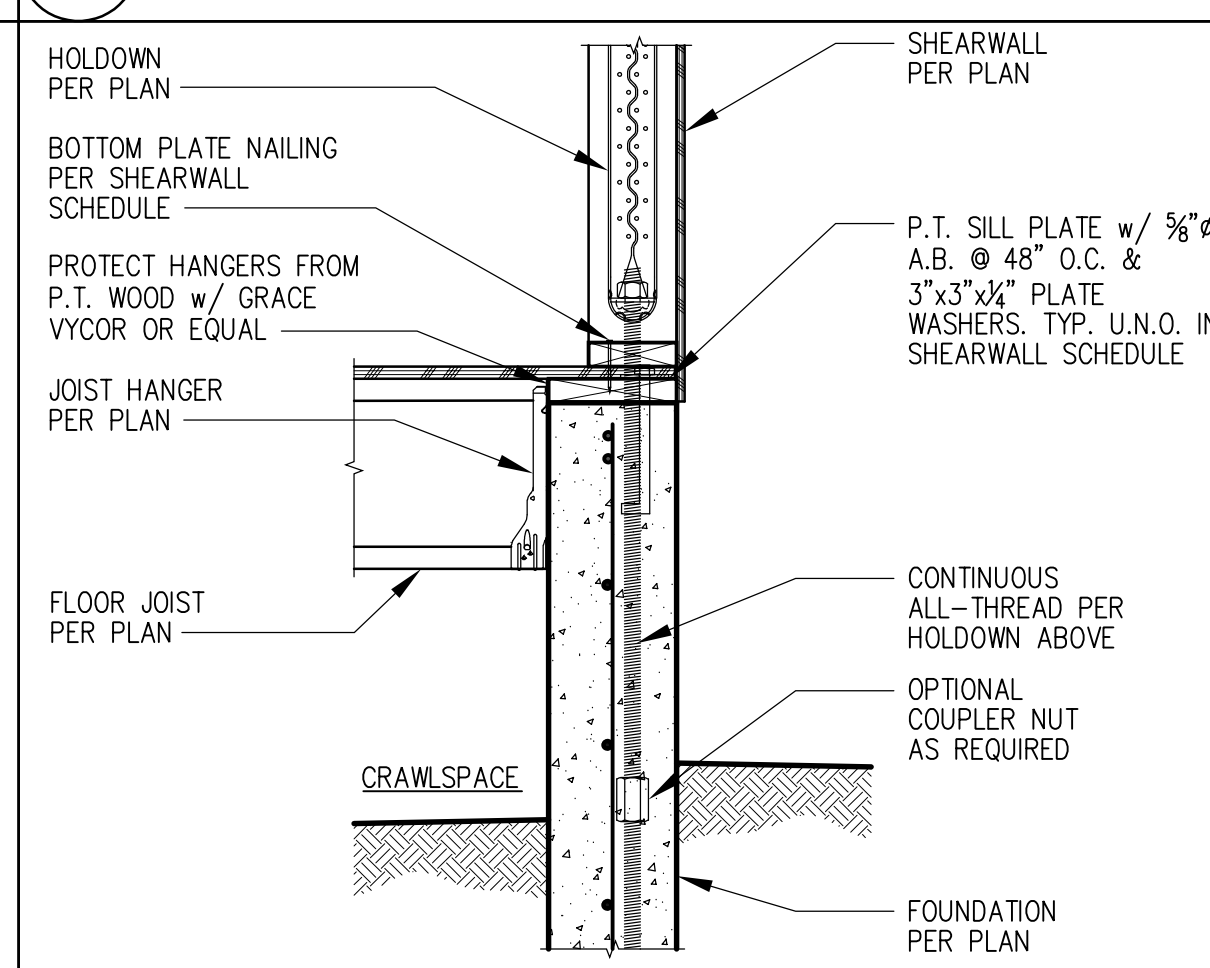
**2 TYPICAL GRADE BEAM FOUNDATION**



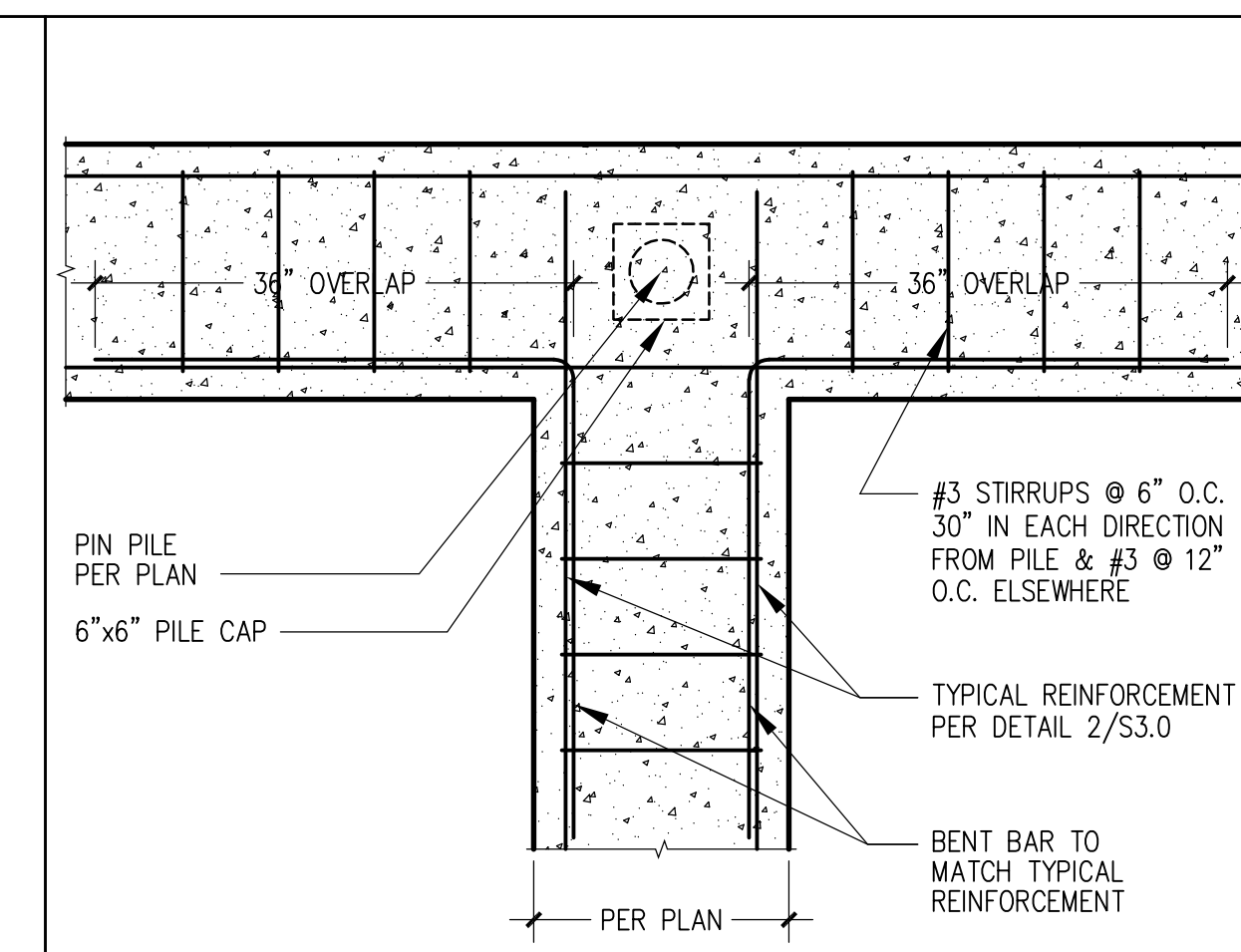
**6 TYPICAL 16" WIDE GRADE BEAM**



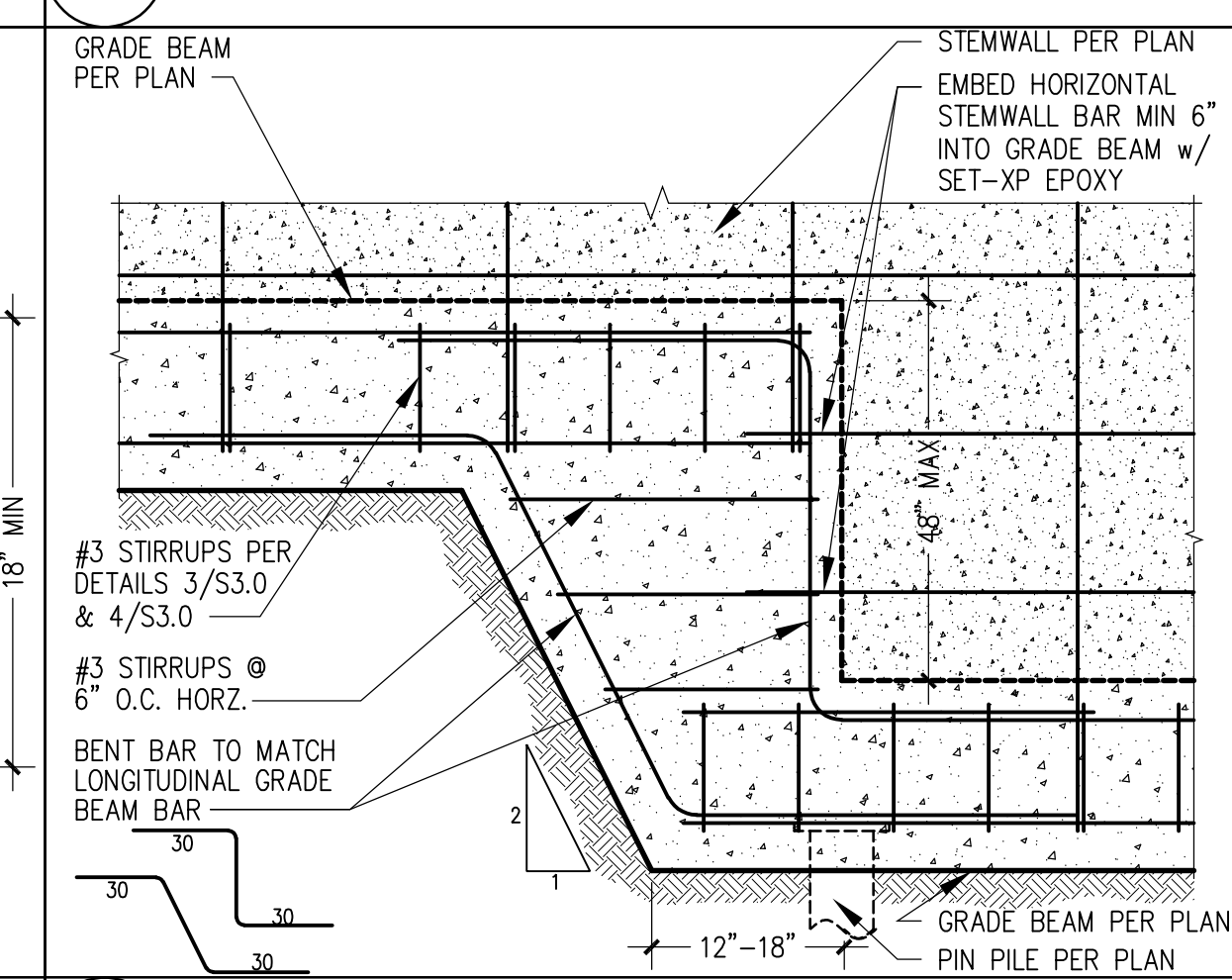
**11 GARAGE FOUNDATION WALL**



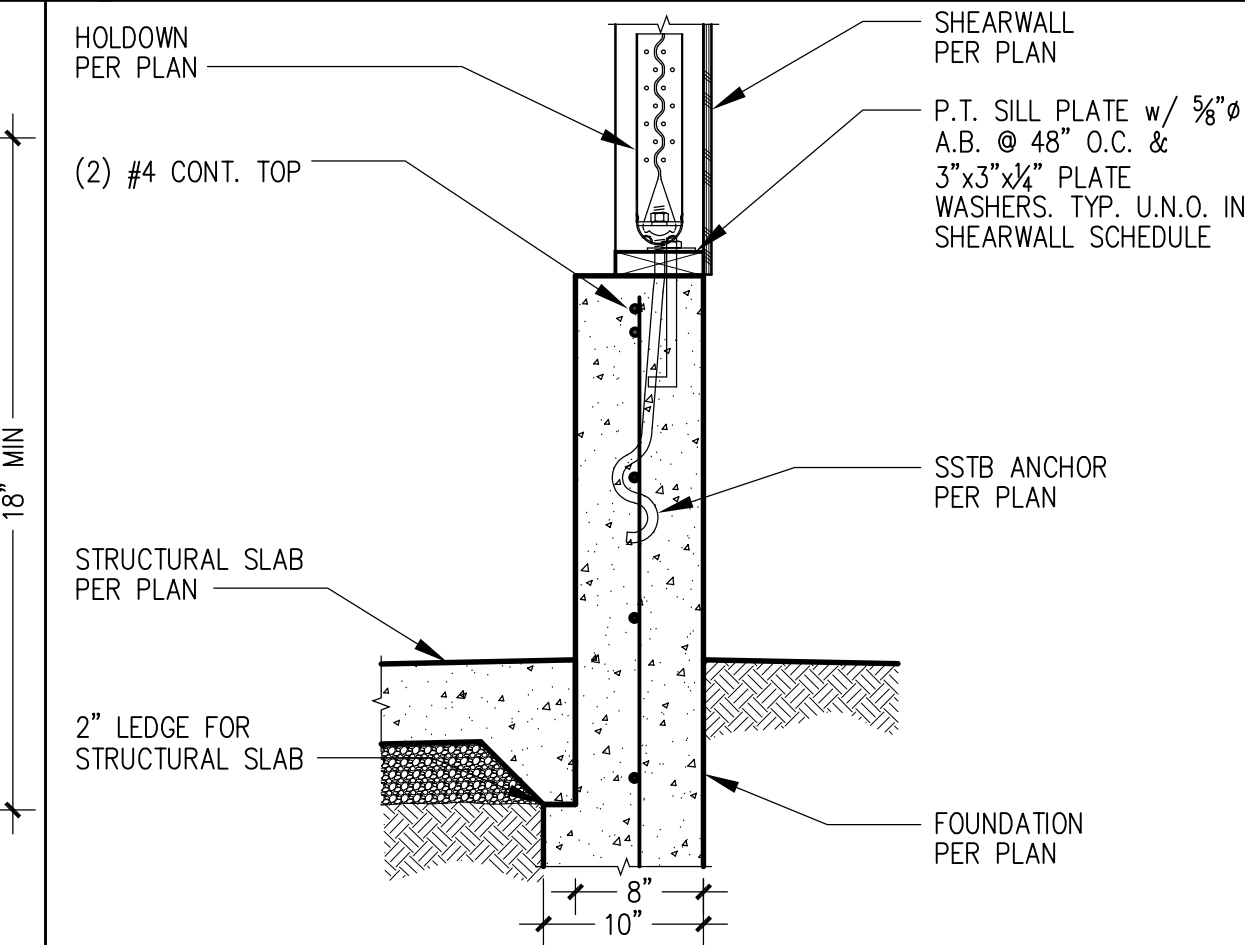
**16 PAB HOLDOWN ANCHOR TO FOUNDATION (HOLDOWN @ FLUSH FLOOR FRAMING)**



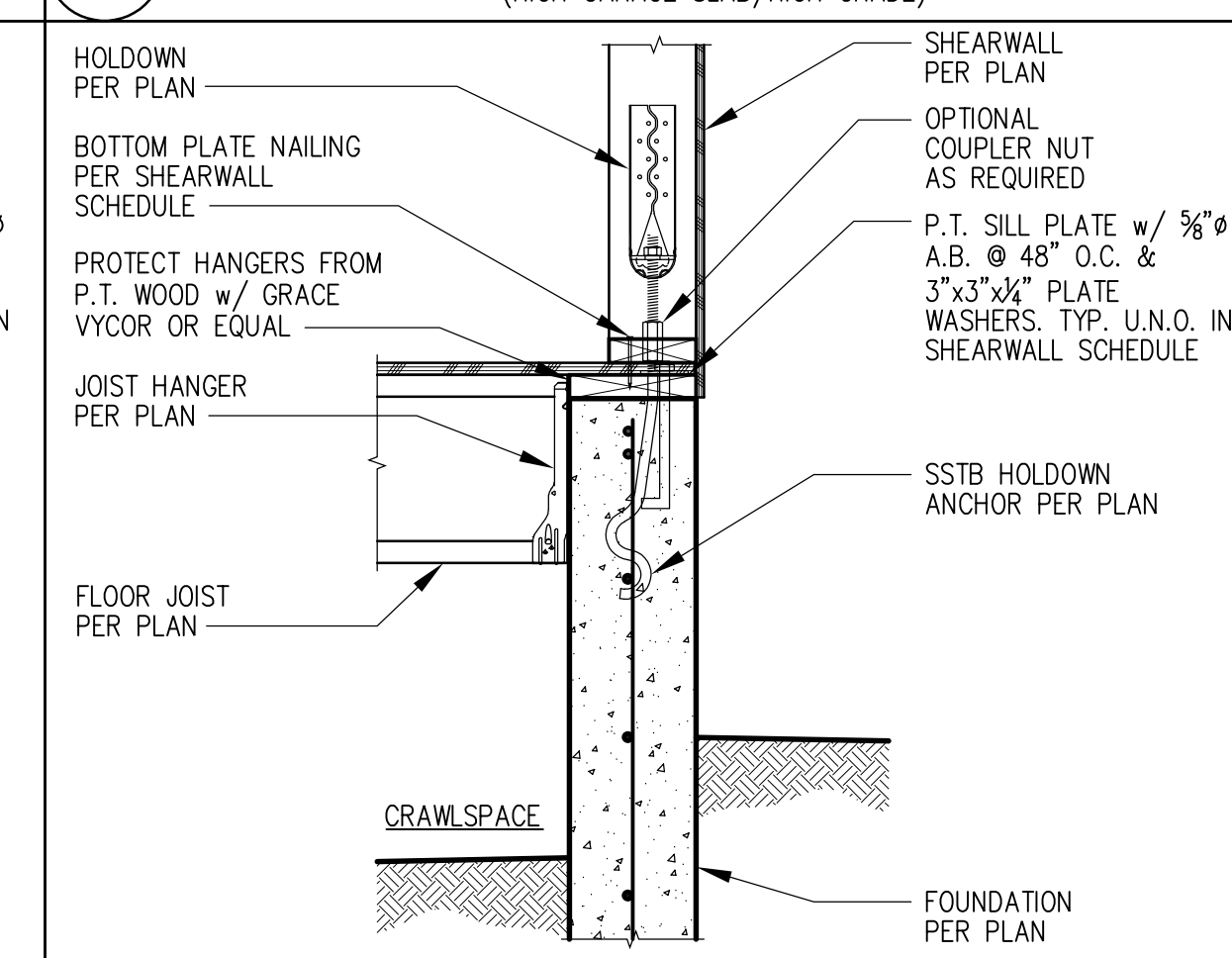
**3 TYPICAL GRADE BEAM AT INTERSECTIONS**



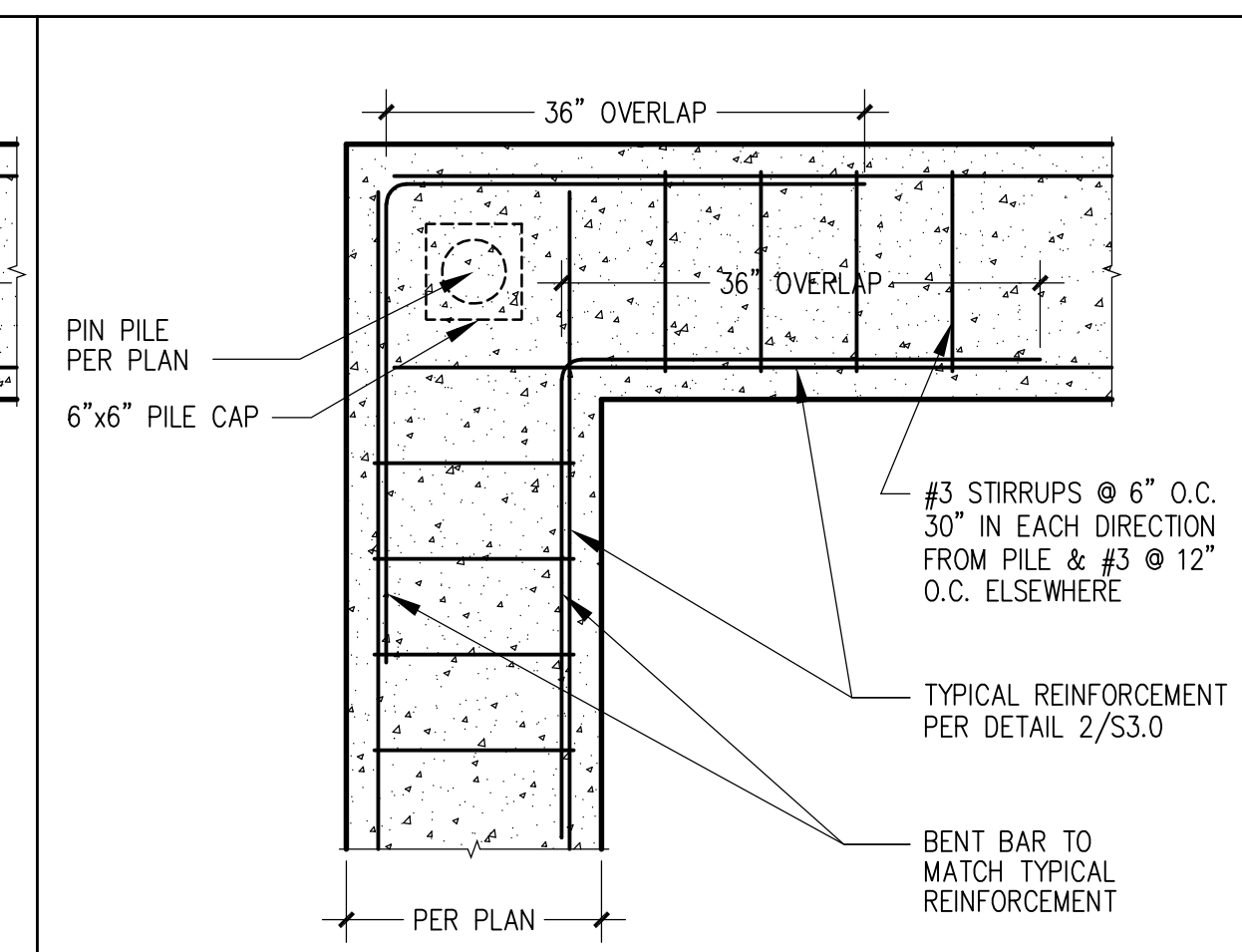
**7 TYPICAL FOOTING STEP**



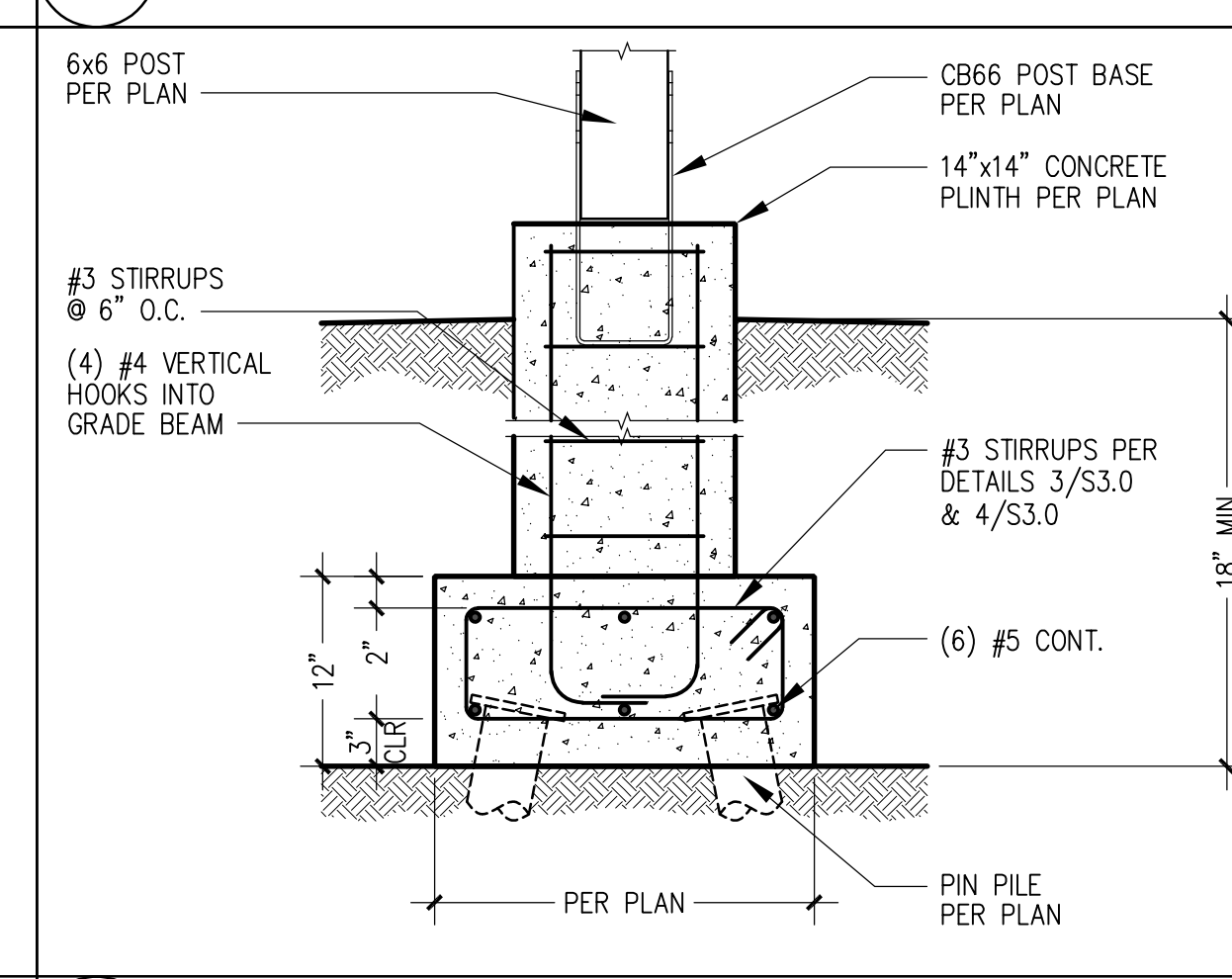
**12 SSTB HOLDOWN ANCHOR TO FOUNDATION (HIGH GARAGE SLAB/HIGH GRADE)**



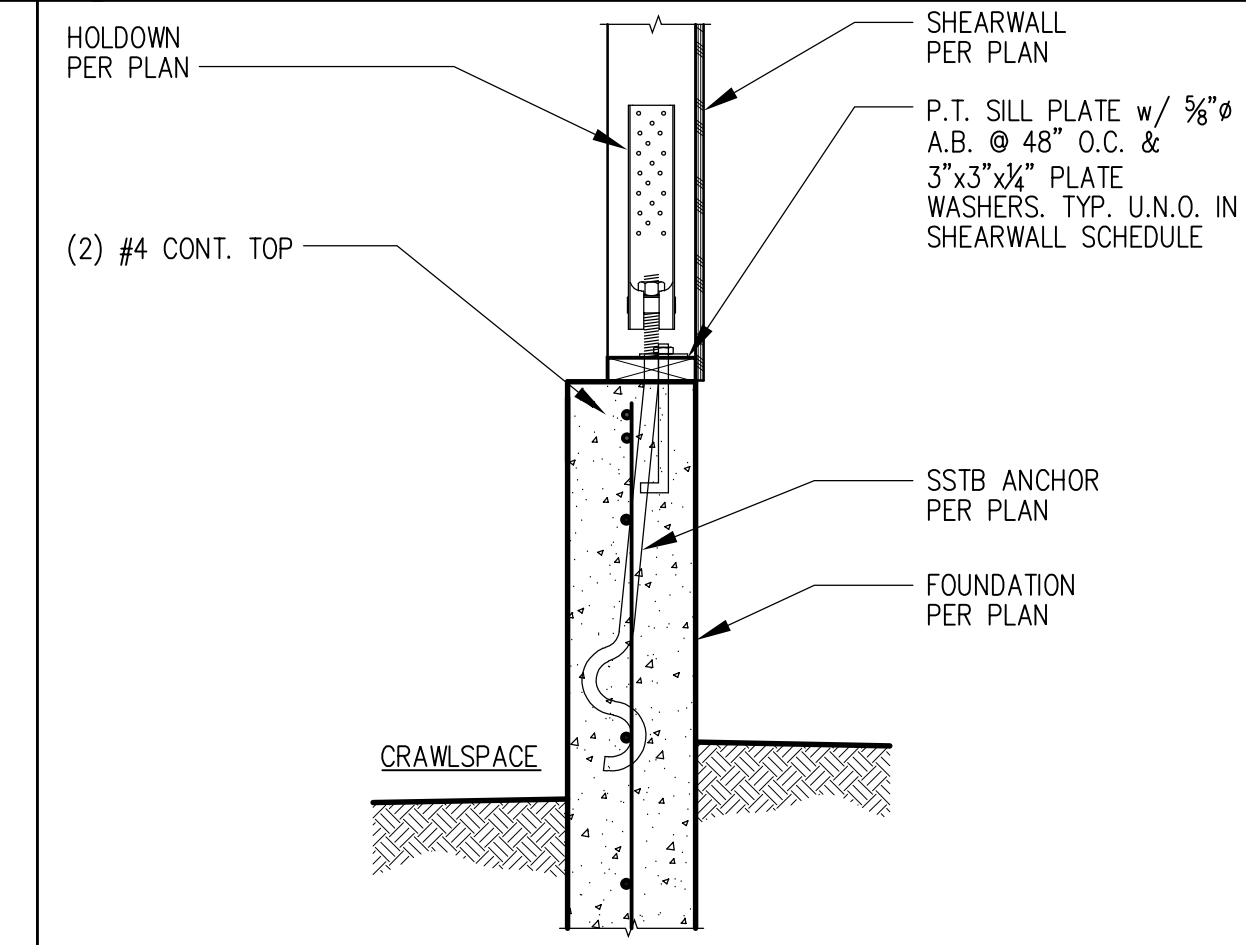
**17 SSTB HOLDOWN ANCHOR TO FOUNDATION (HOLDOWN @ FLUSH FLOOR FRAMING)**



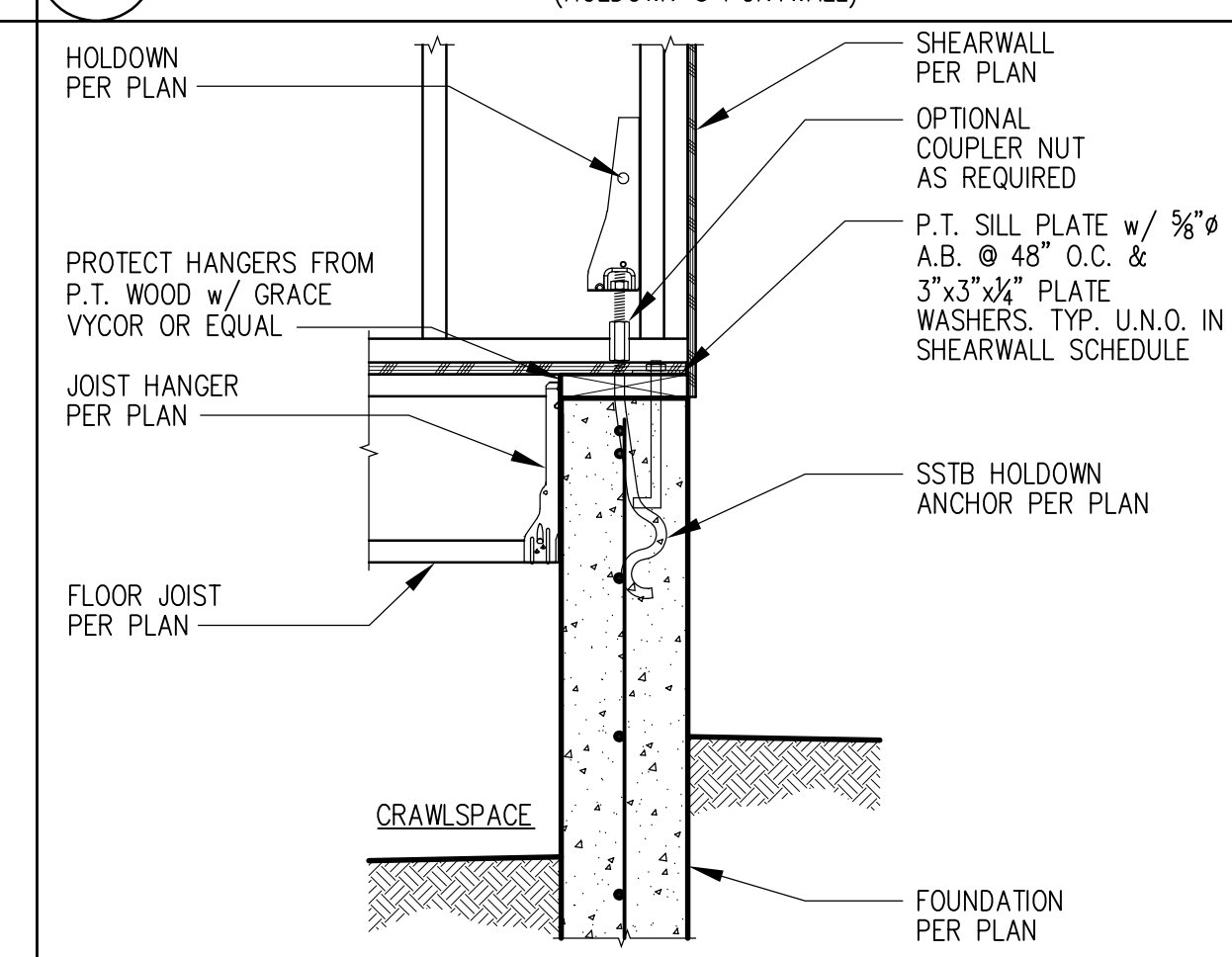
**4 TYPICAL GRADE BEAM AT CORNER**



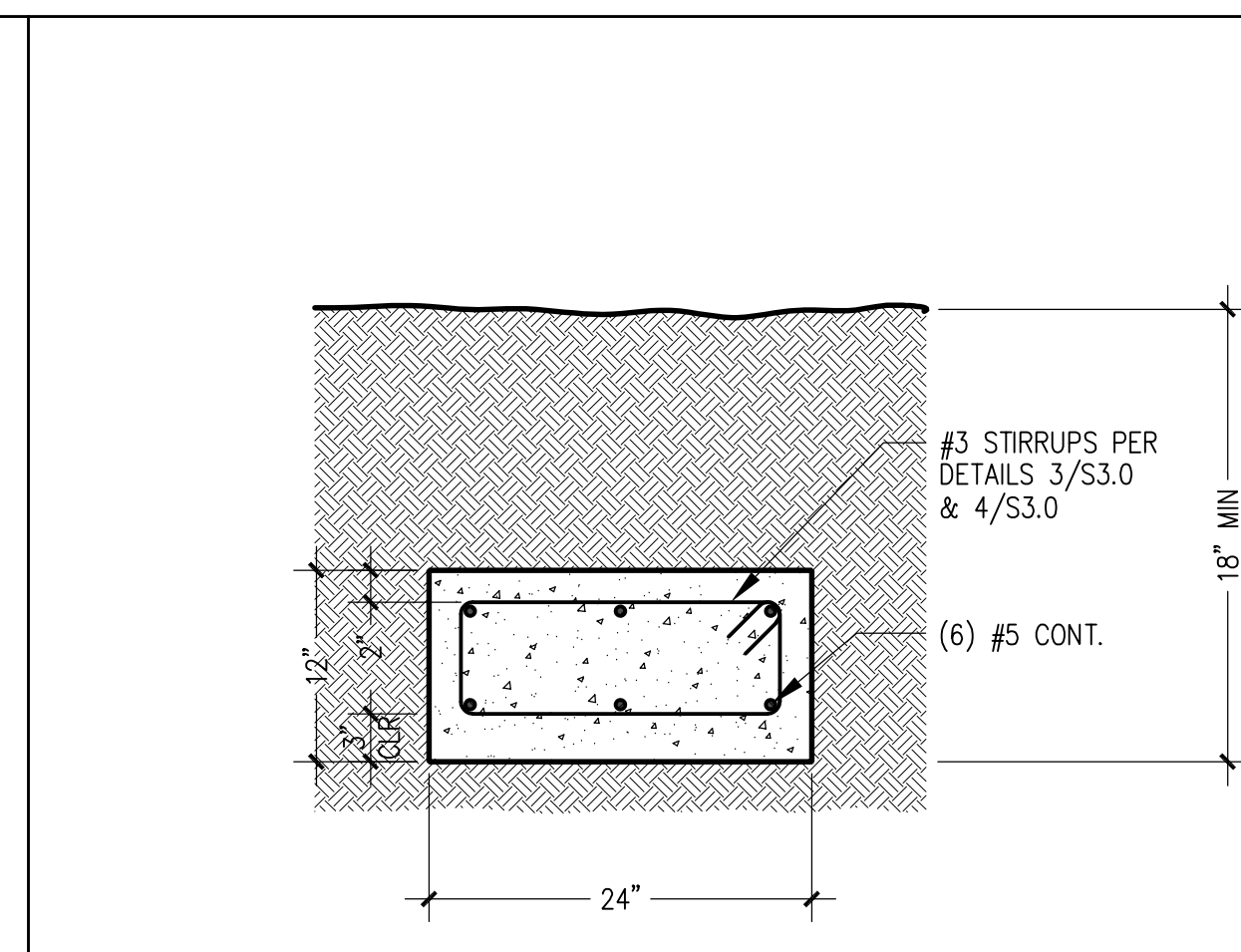
**8 CONCRETE POST PLINTH @ GRADE BEAM (ISOLATED GRADE BEAM)**



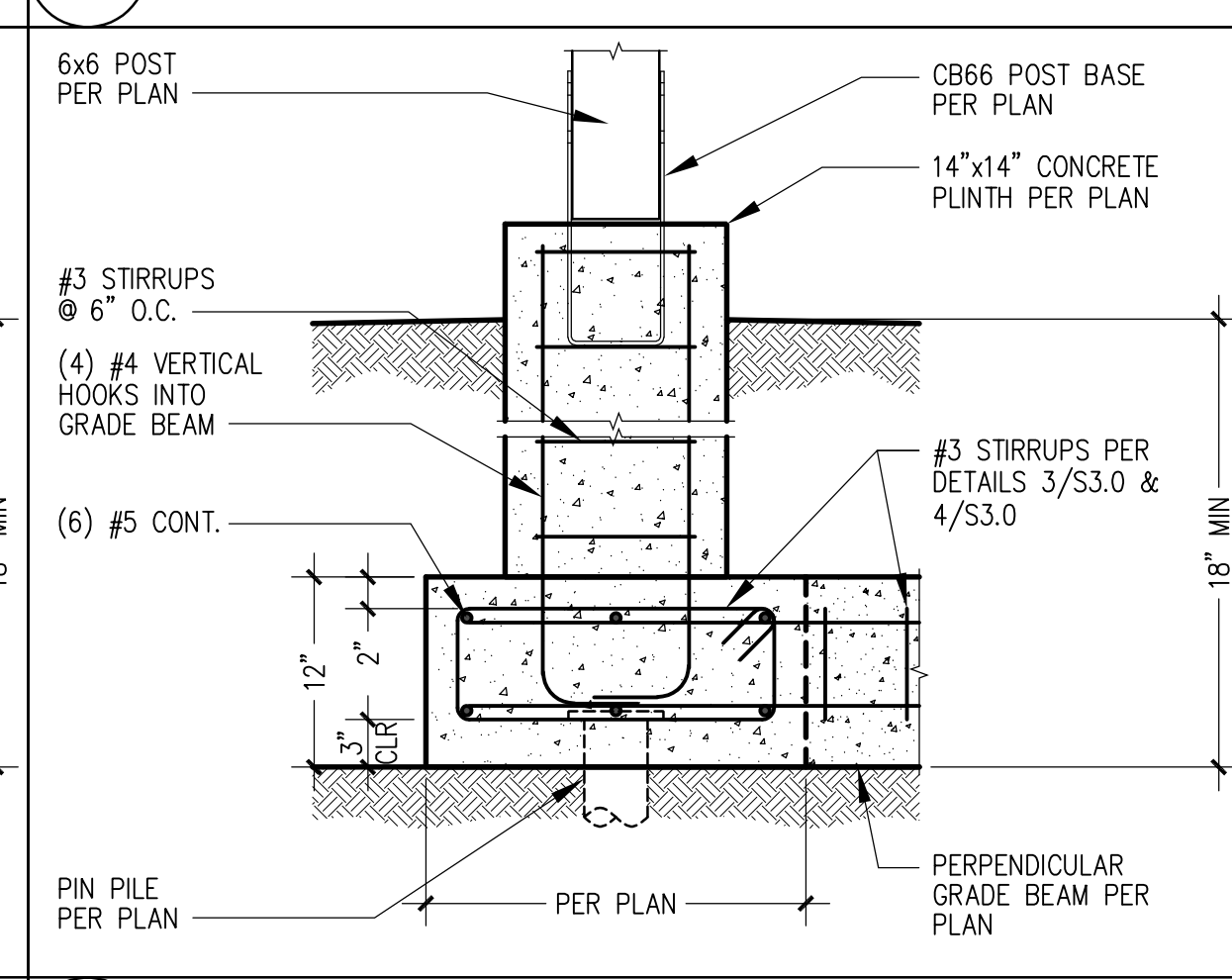
**13 SSTB HOLDOWN ANCHOR TO FOUNDATION (HOLDOWN @ PONYWALL)**



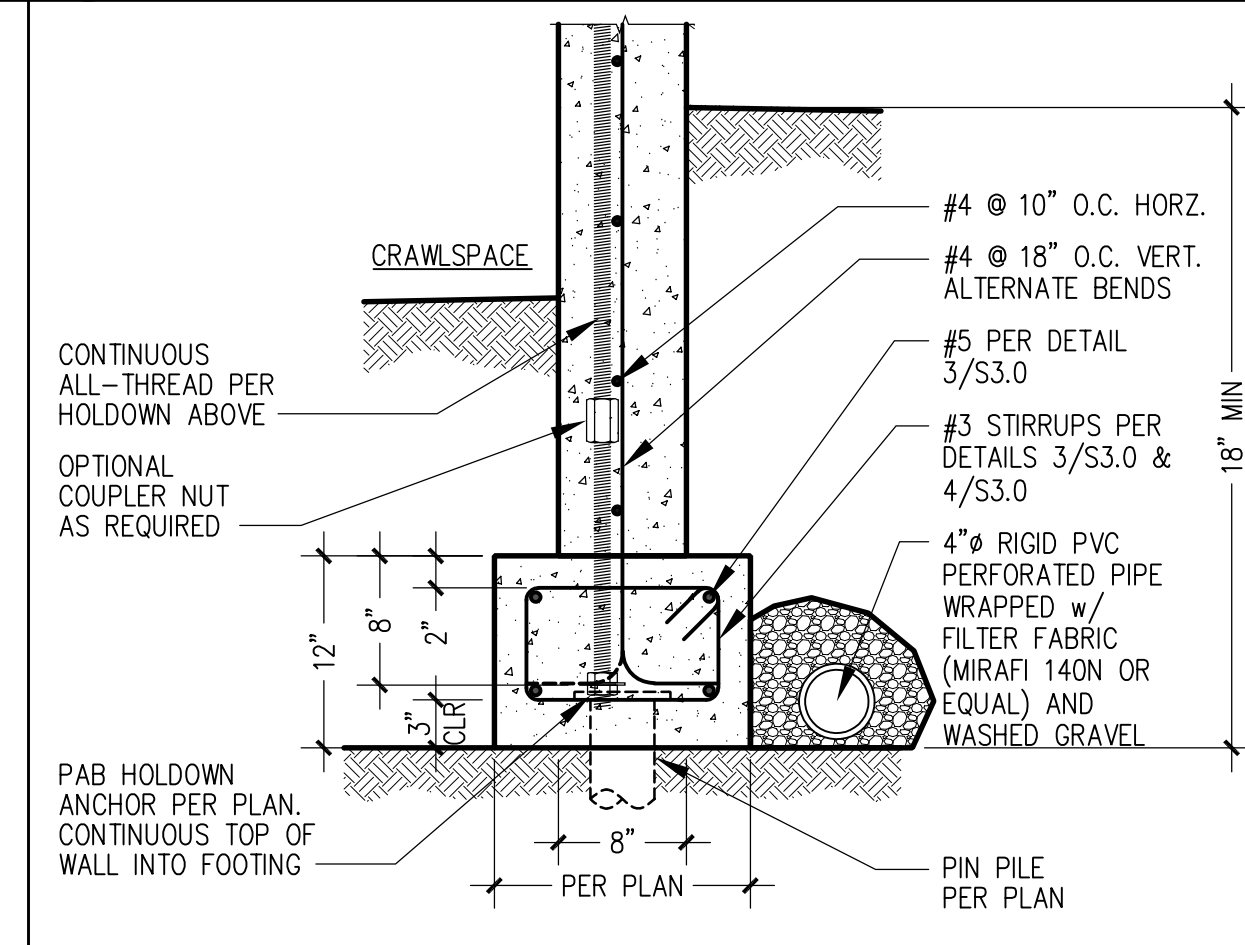
**18 SSTB HOLDOWN ANCHOR TO FOUNDATION (HOLDOWN @ FLUSH FLOOR FRAMING)**



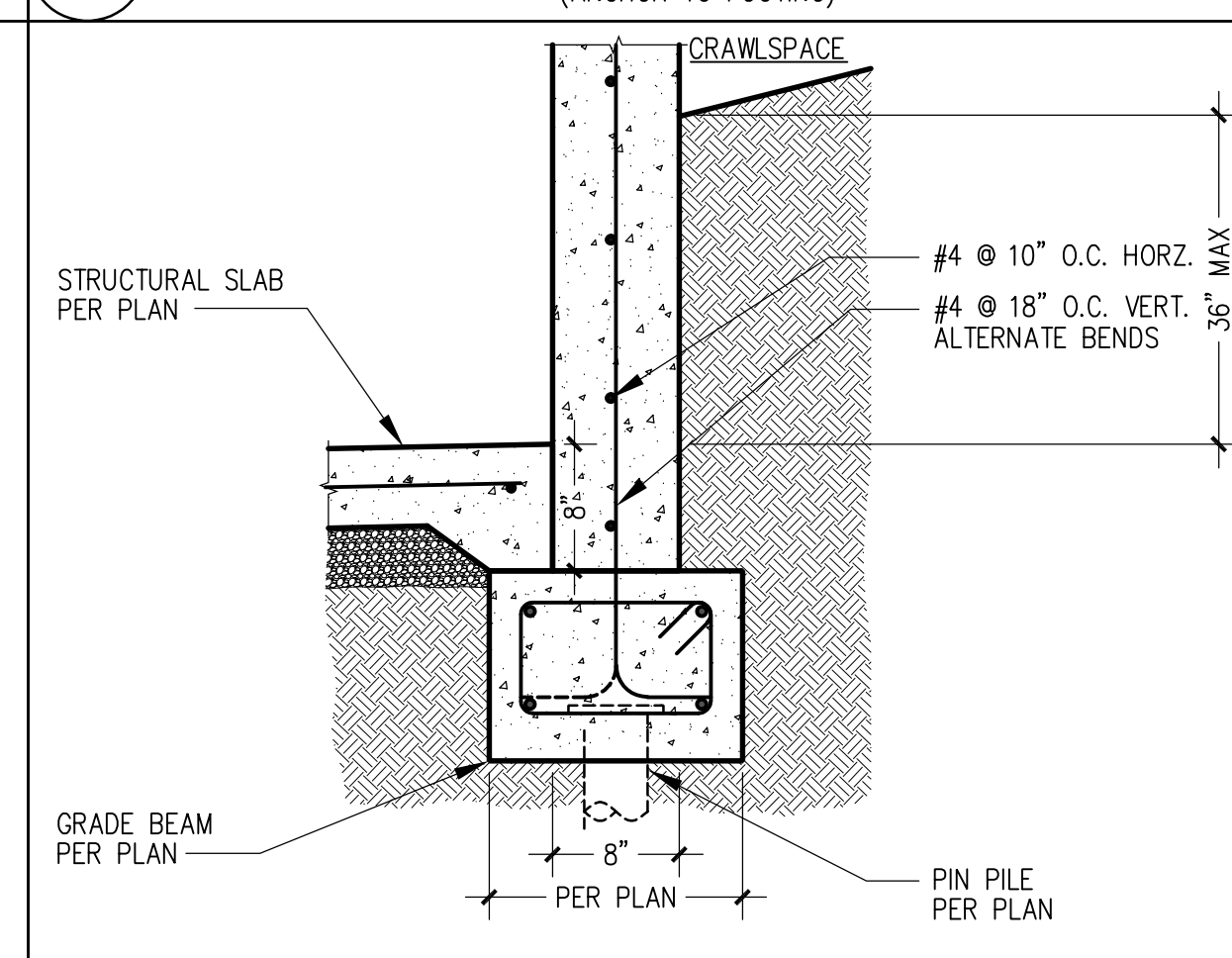
**5 TYPICAL 24" WIDE GRADE BEAM**



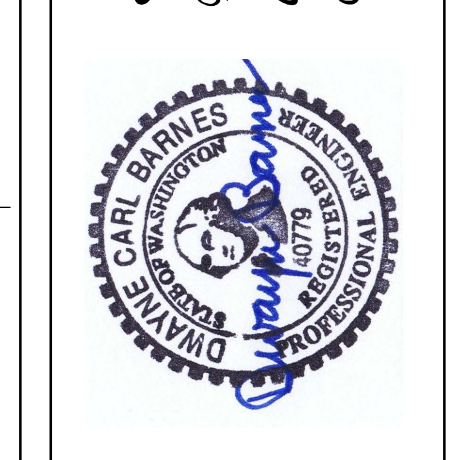
**9 CONCRETE POST PLINTH @ GRADE BEAM (GRADE BEAM TEE OFF FOOTING)**



**14 PAB HOLDOWN ANCHOR TO FOUNDATION (ANCHOR TO FOOTING)**



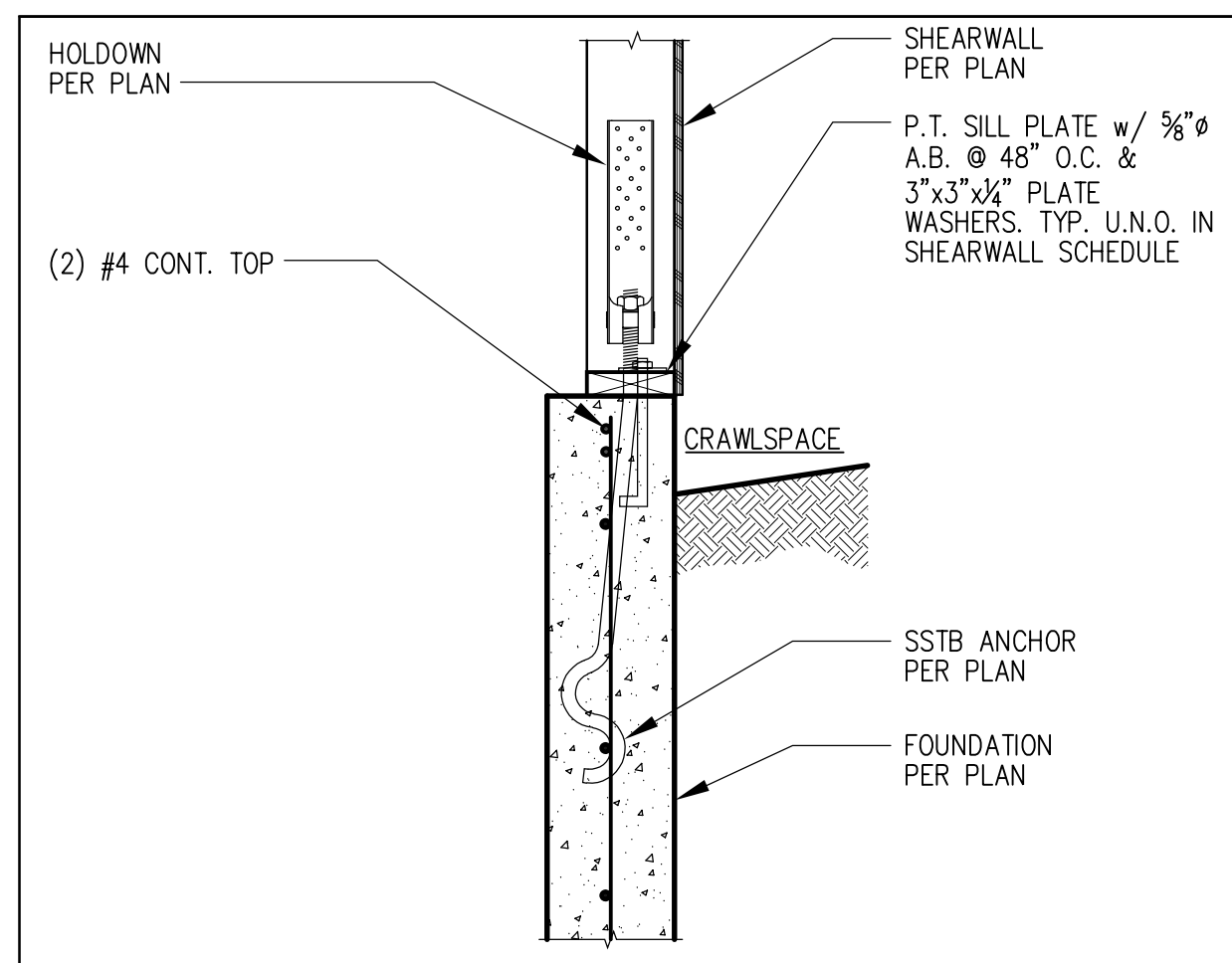
**19 GARAGE SLAB @ CRAWLSPACE WALL**



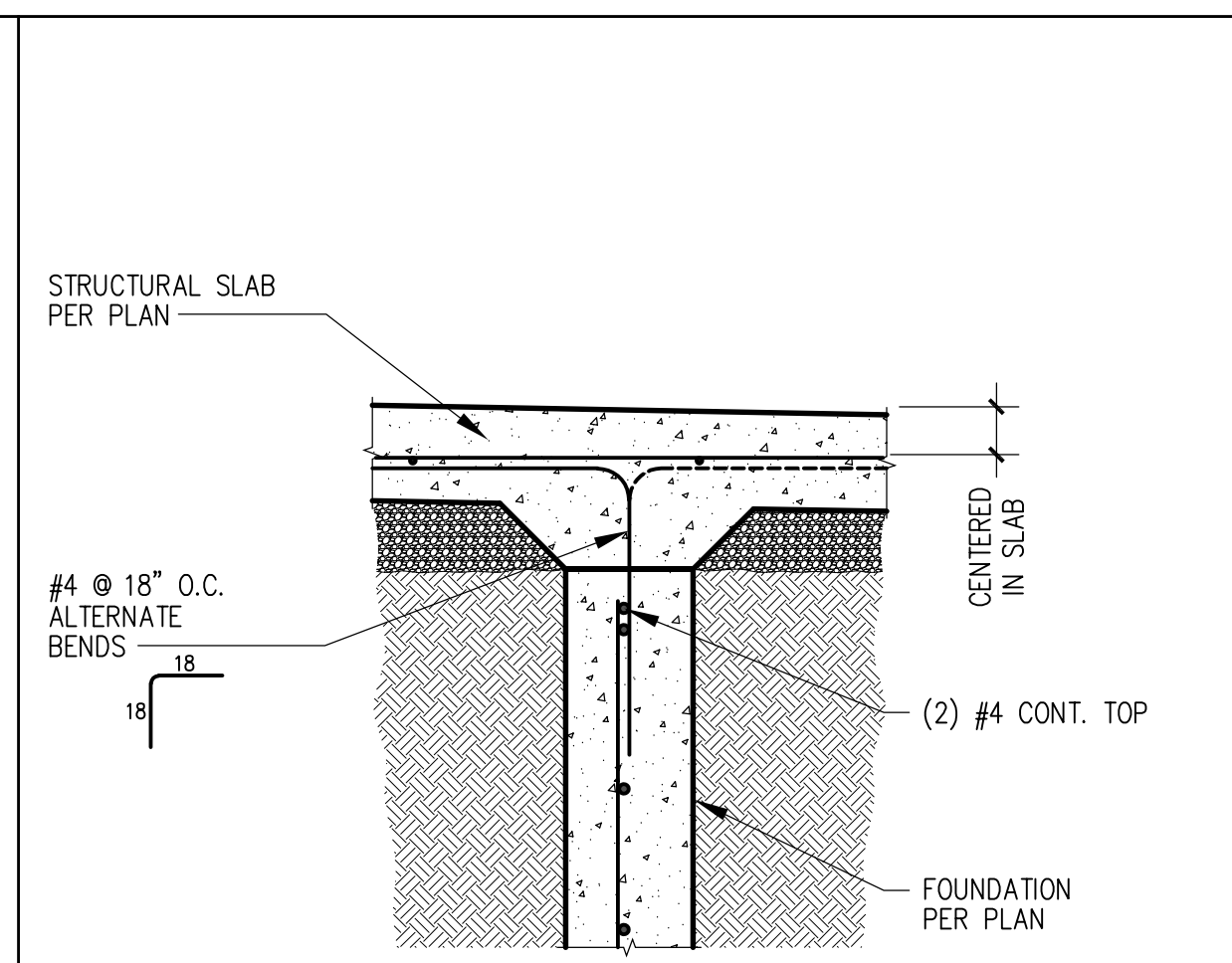
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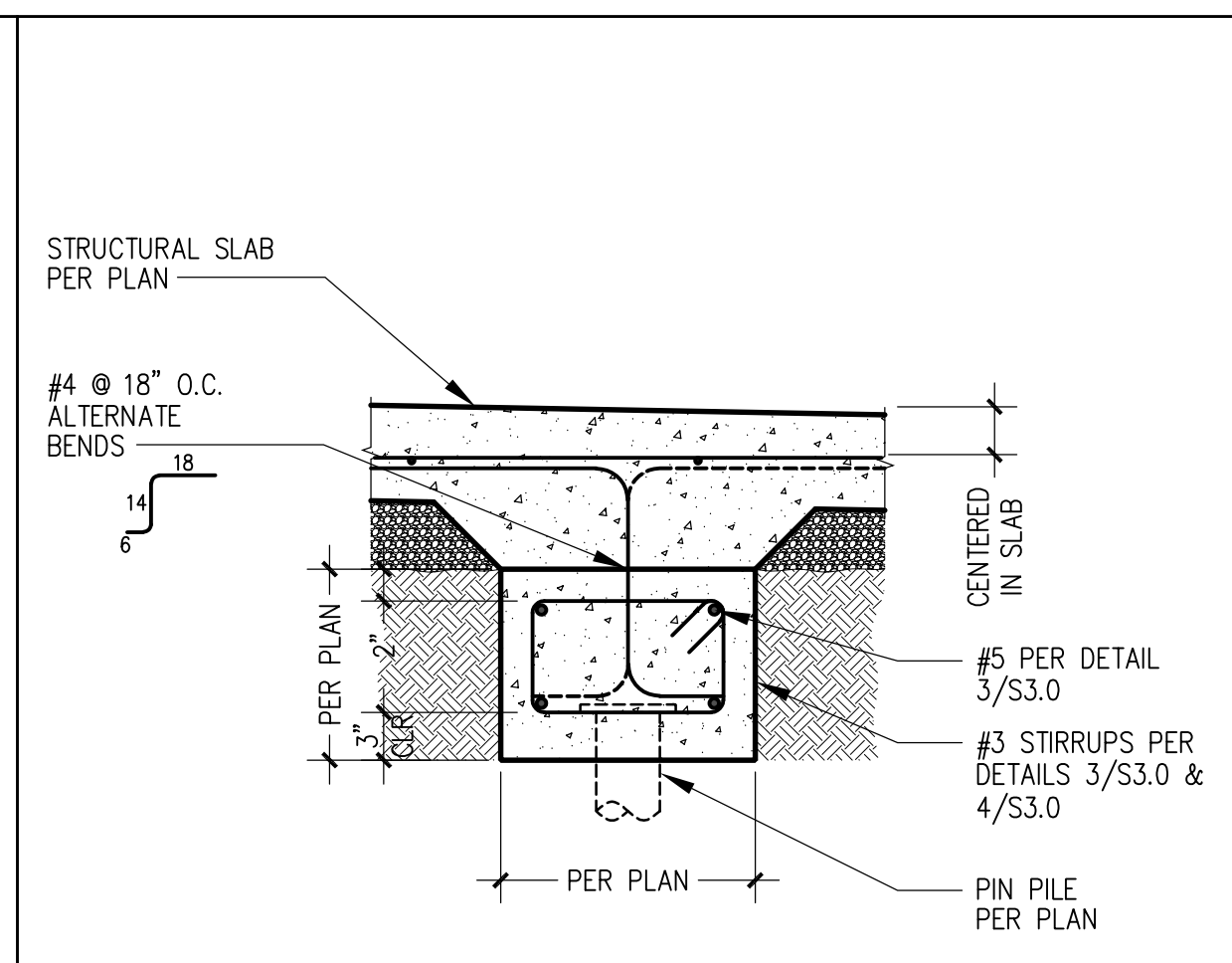




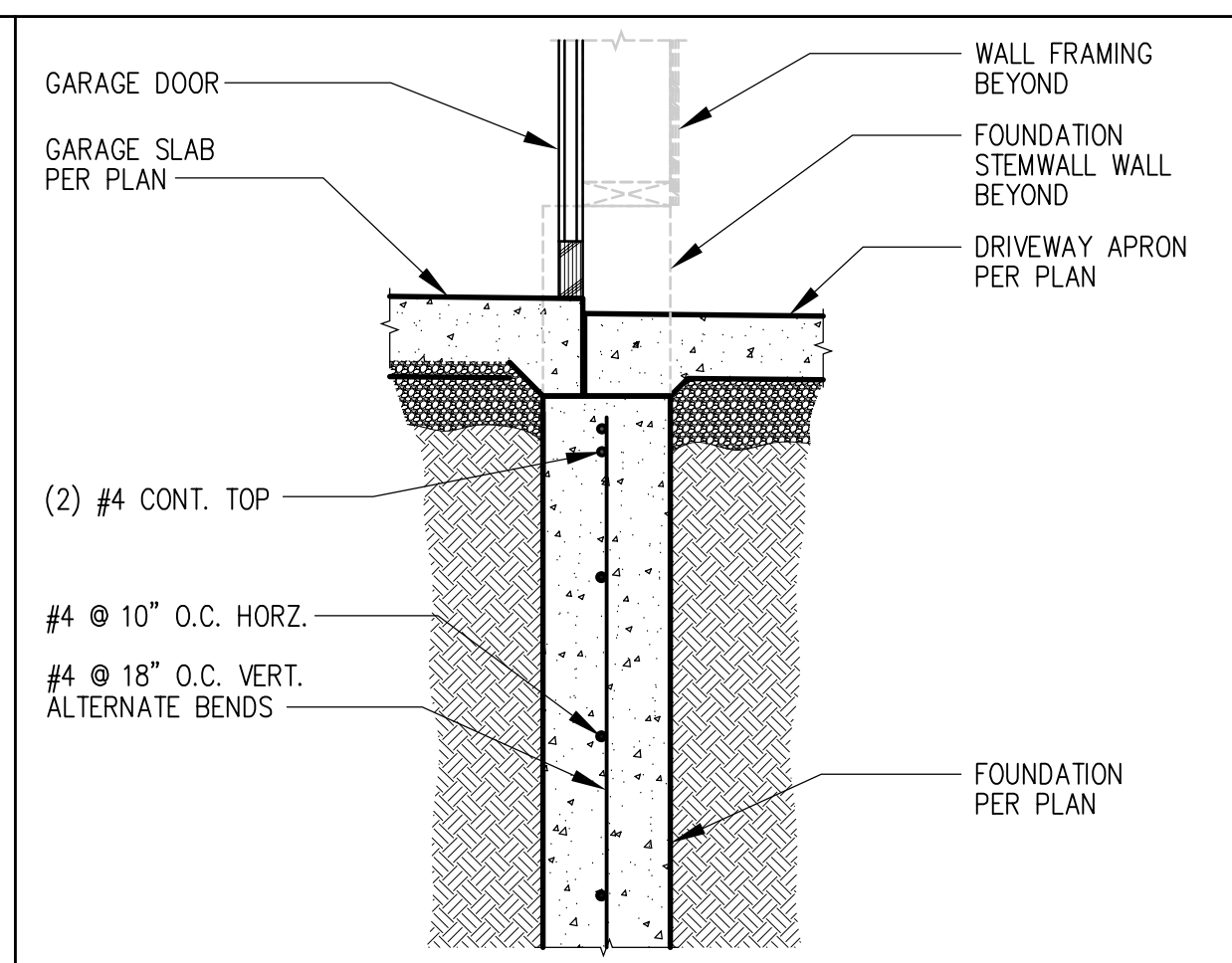
1 SSTB HOLDOWN ANCHOR TO FOUNDATION (HOLDOWN @ INTERIOR GARAGE PONYWALL)



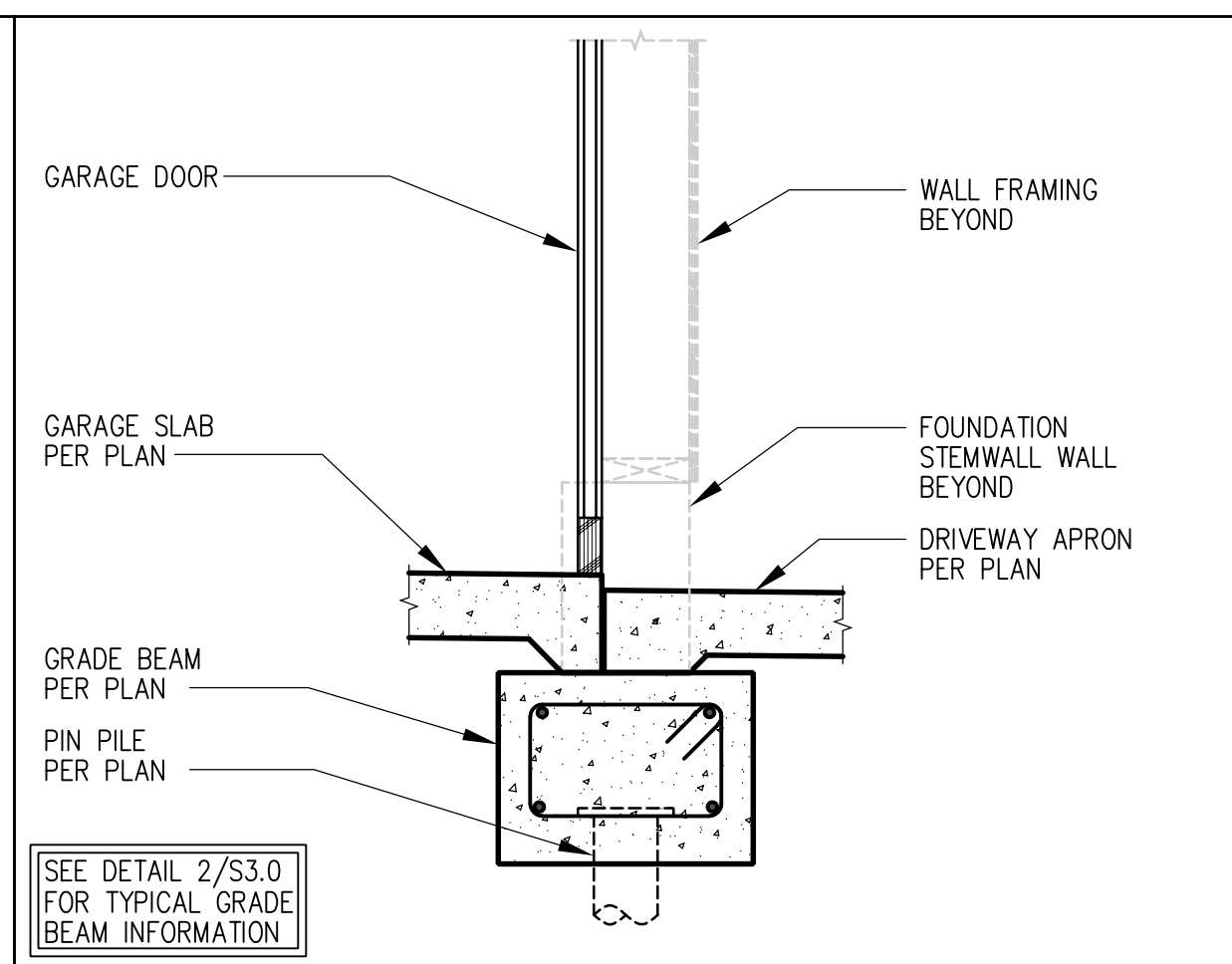
2 GARAGE SLAB @ STEMWALL



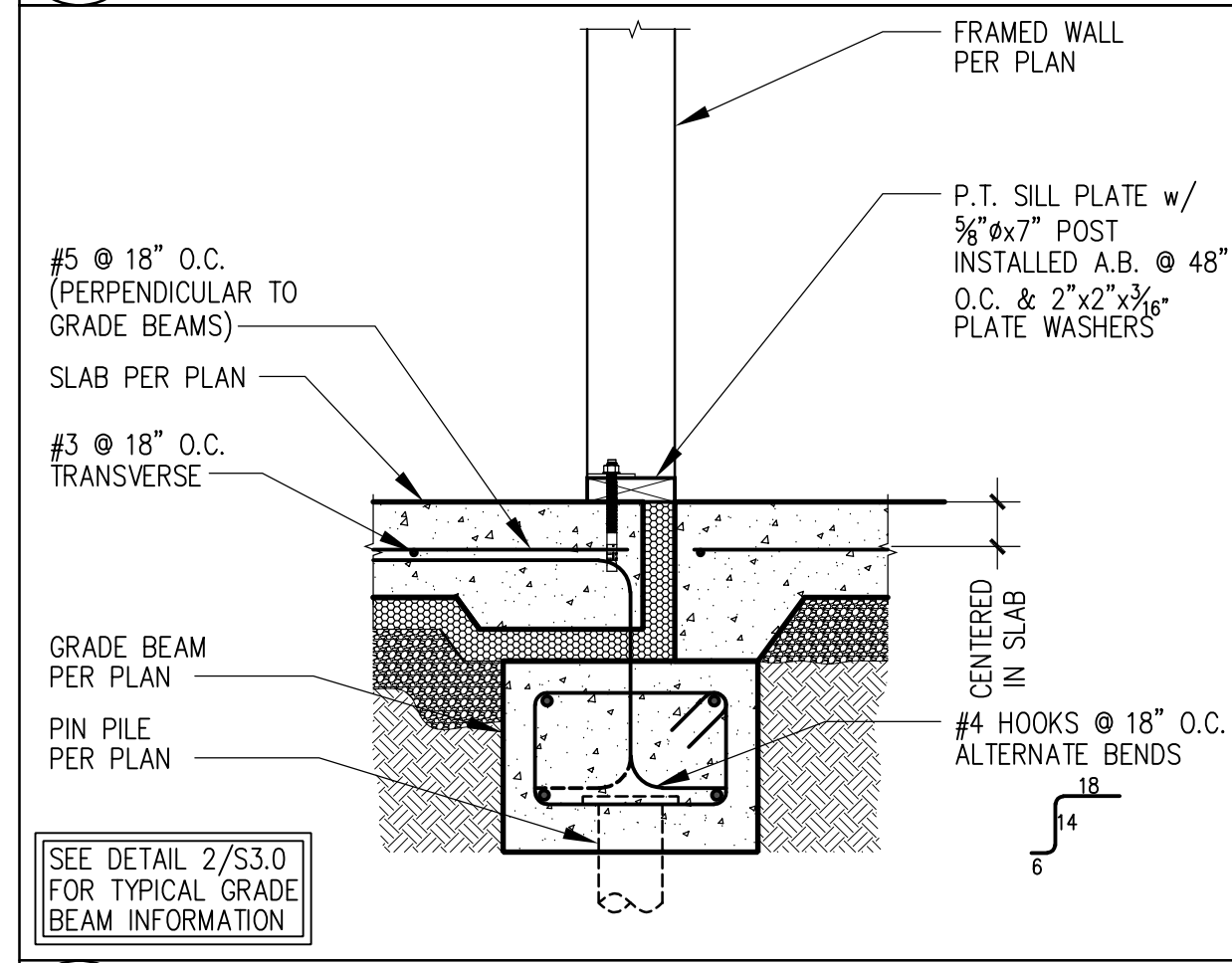
3 GARAGE SLAB @ GRADE BEAM



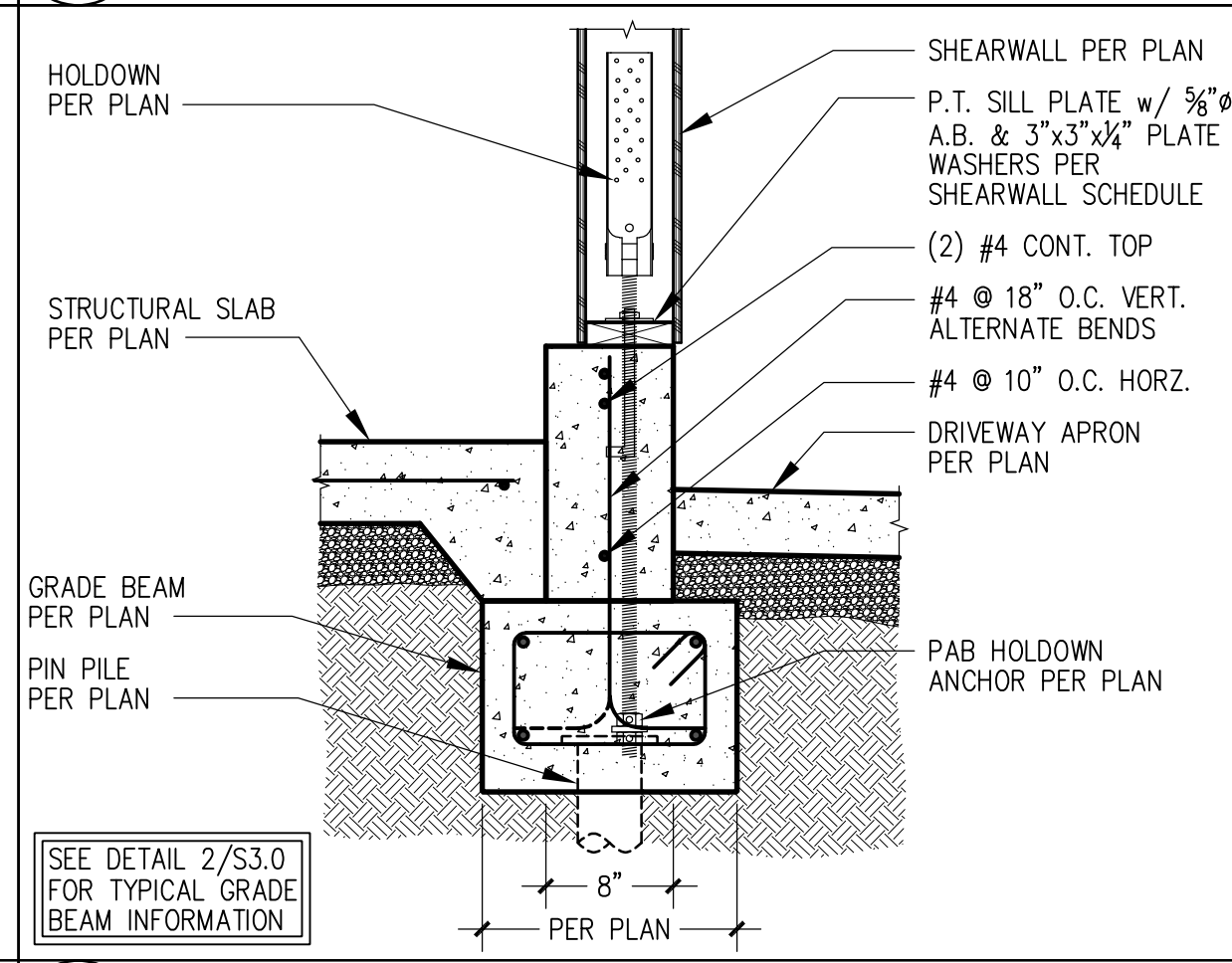
4 GARAGE SLAB @ FOUNDATION WALL (UNHEATED SLAB)



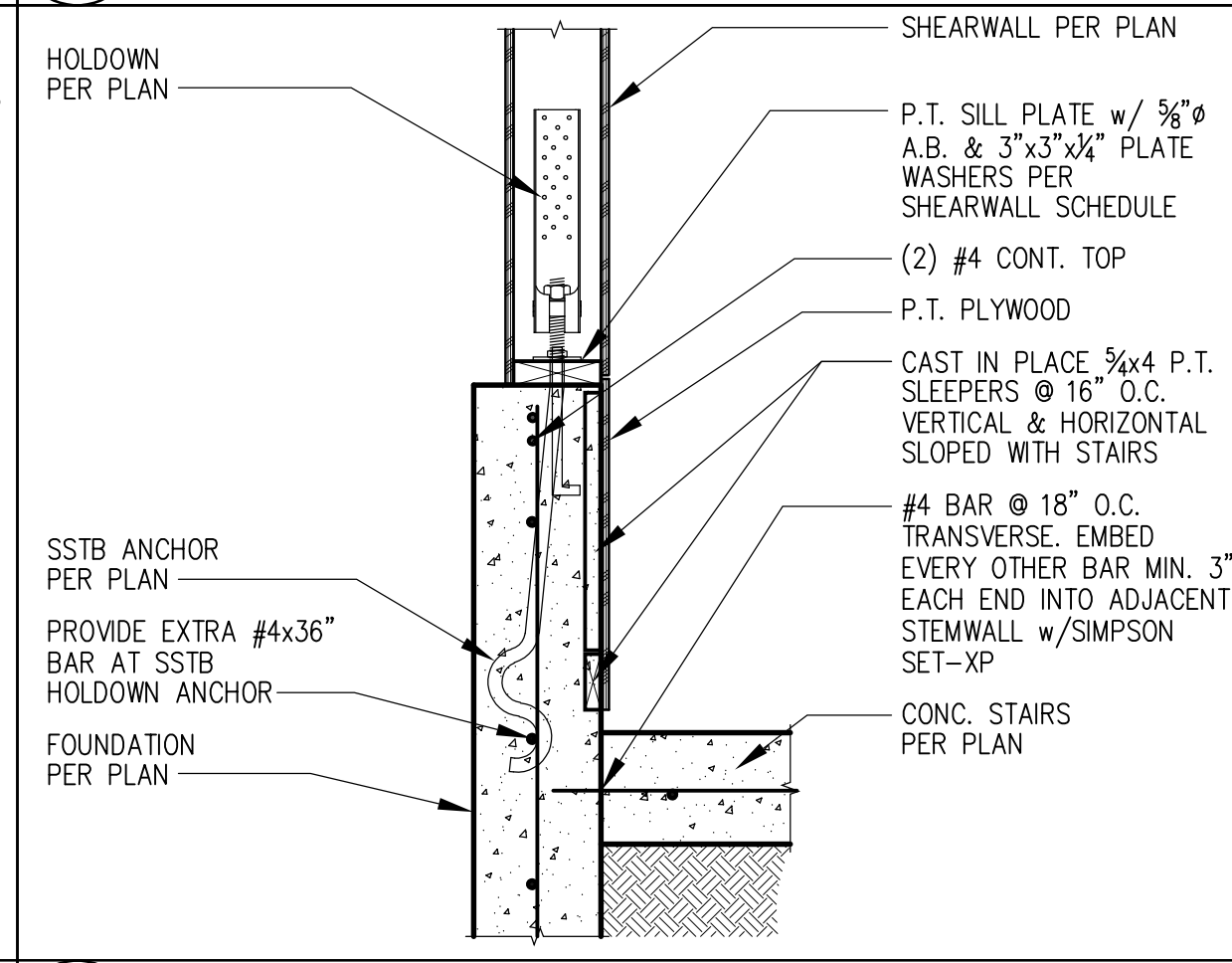
5 TYPICAL GRADE BEAM @ DRIVEWAY APRON



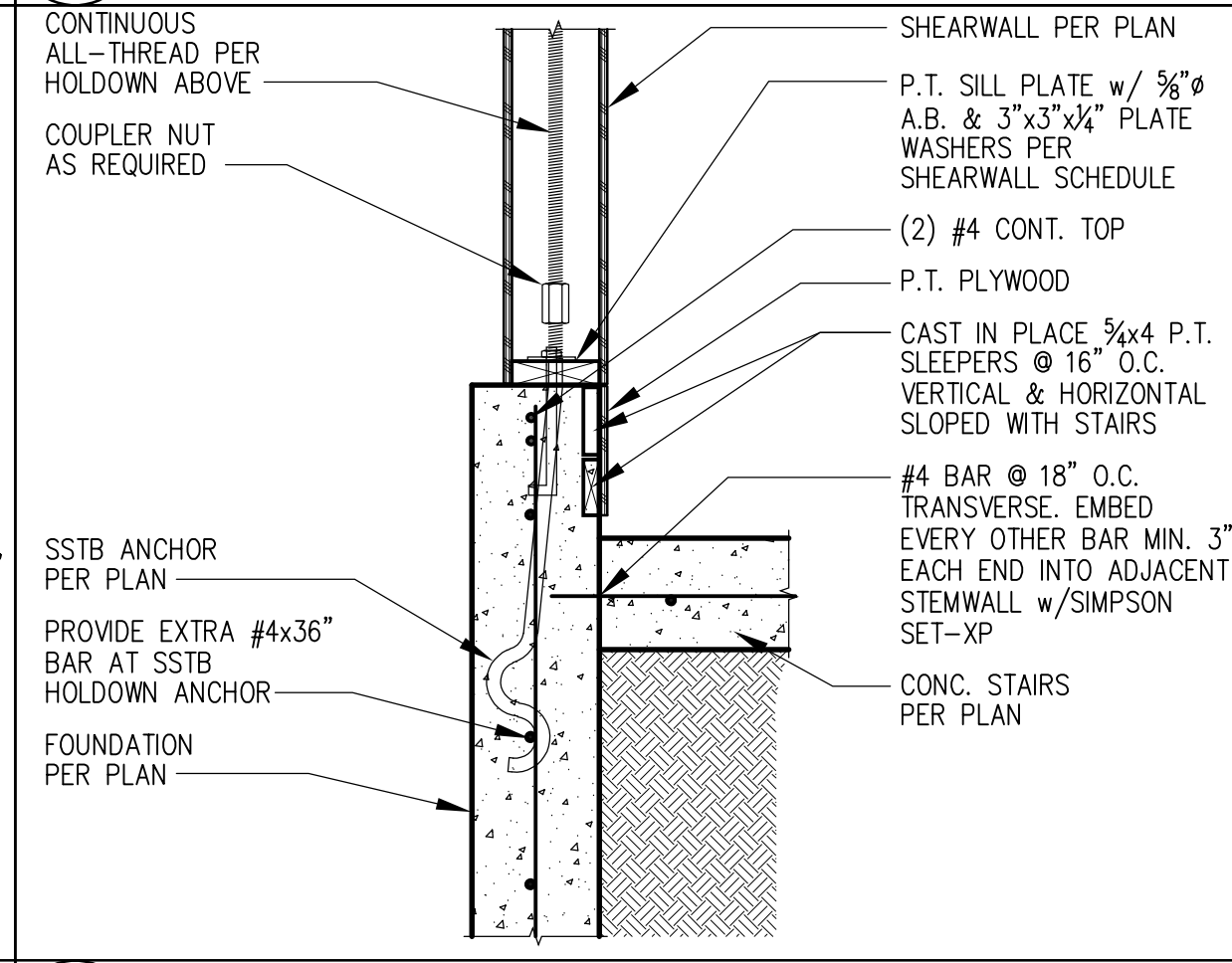
6 TYPICAL BEARING WALL @ SLAB



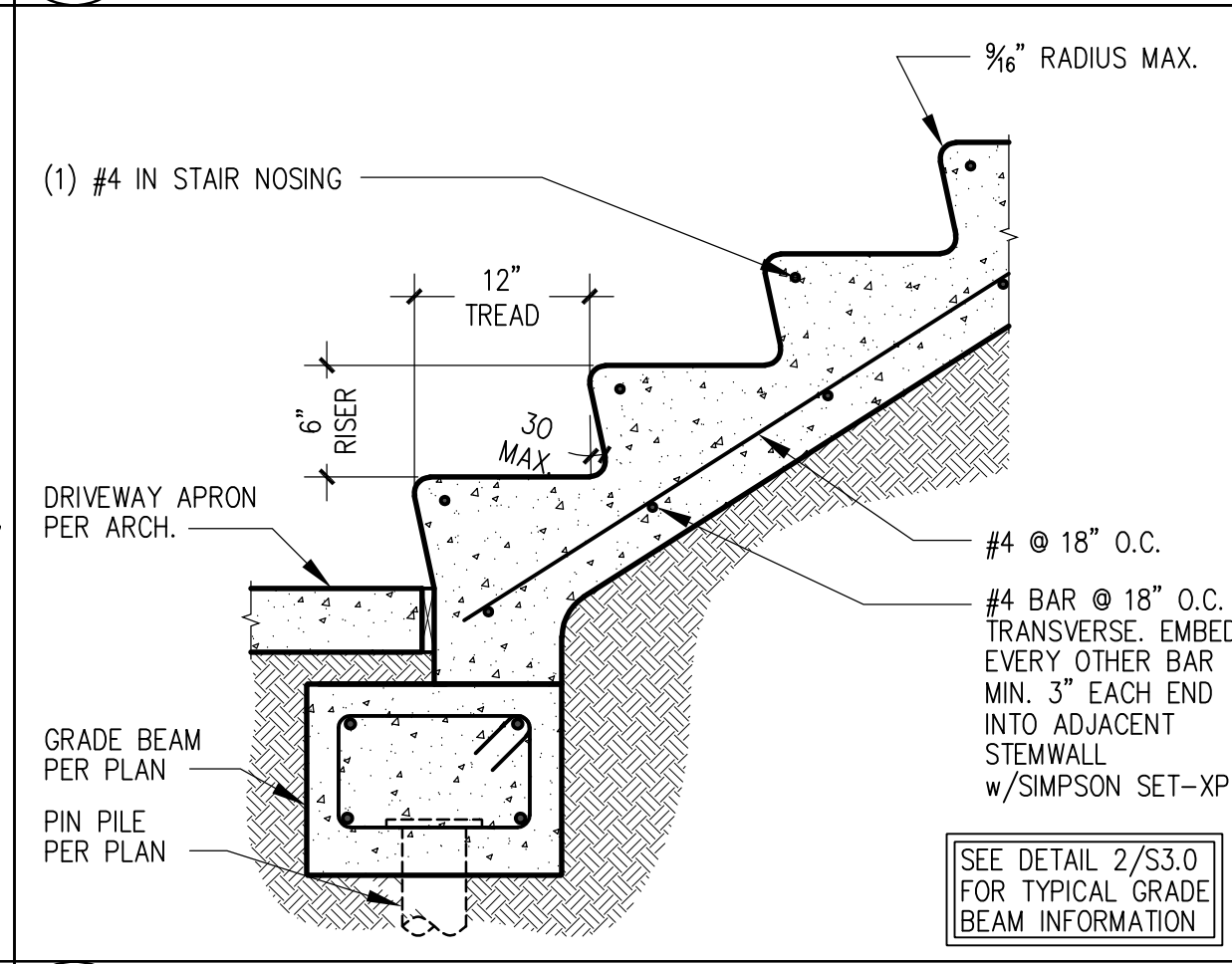
7 HOLDOWN @ GARAGE FNDN.



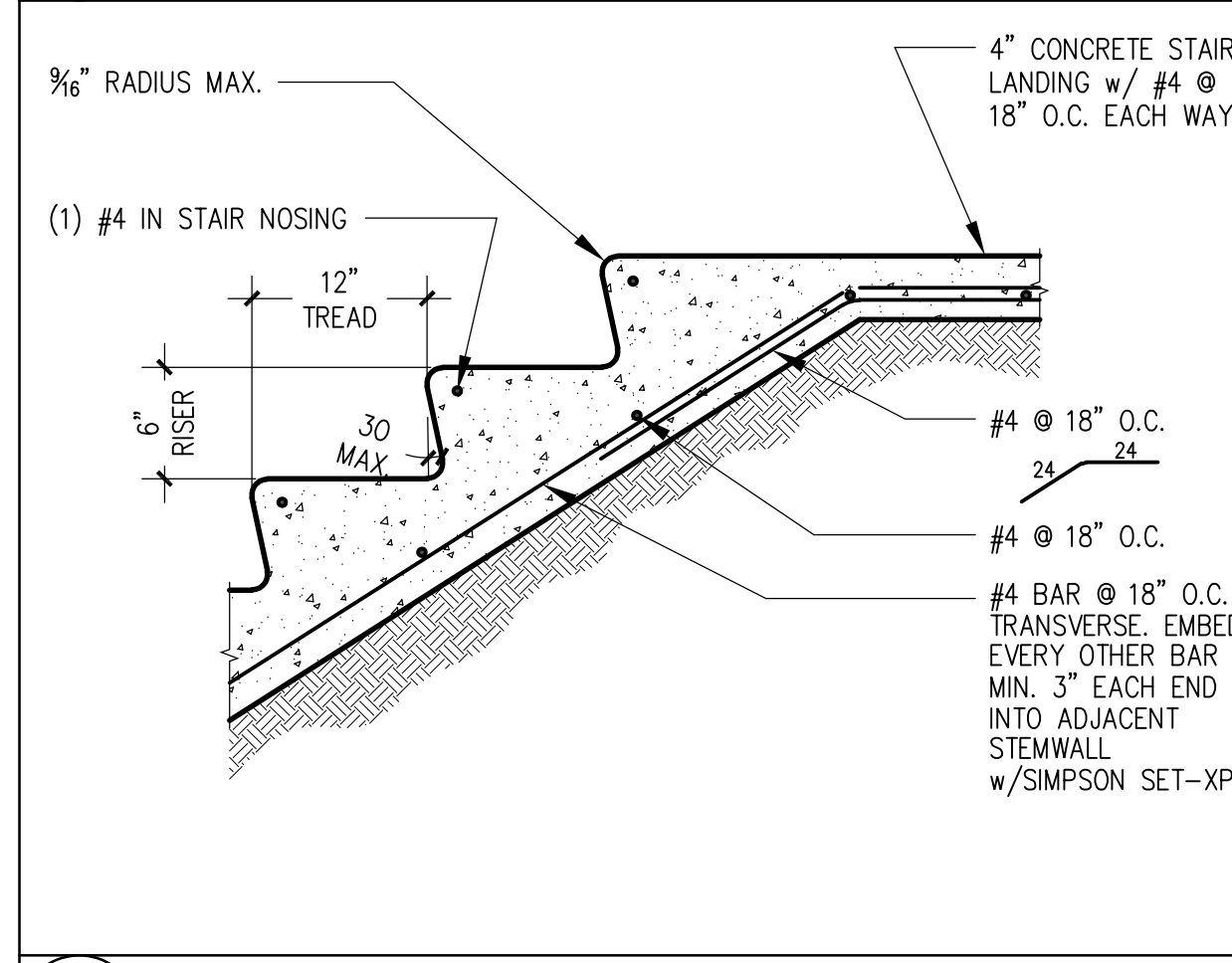
8 SSTB HOLDOWN ANCHOR TO FOUNDATION (HOLDOWN @ PONYWALL/EXTERIOR STAIRS)



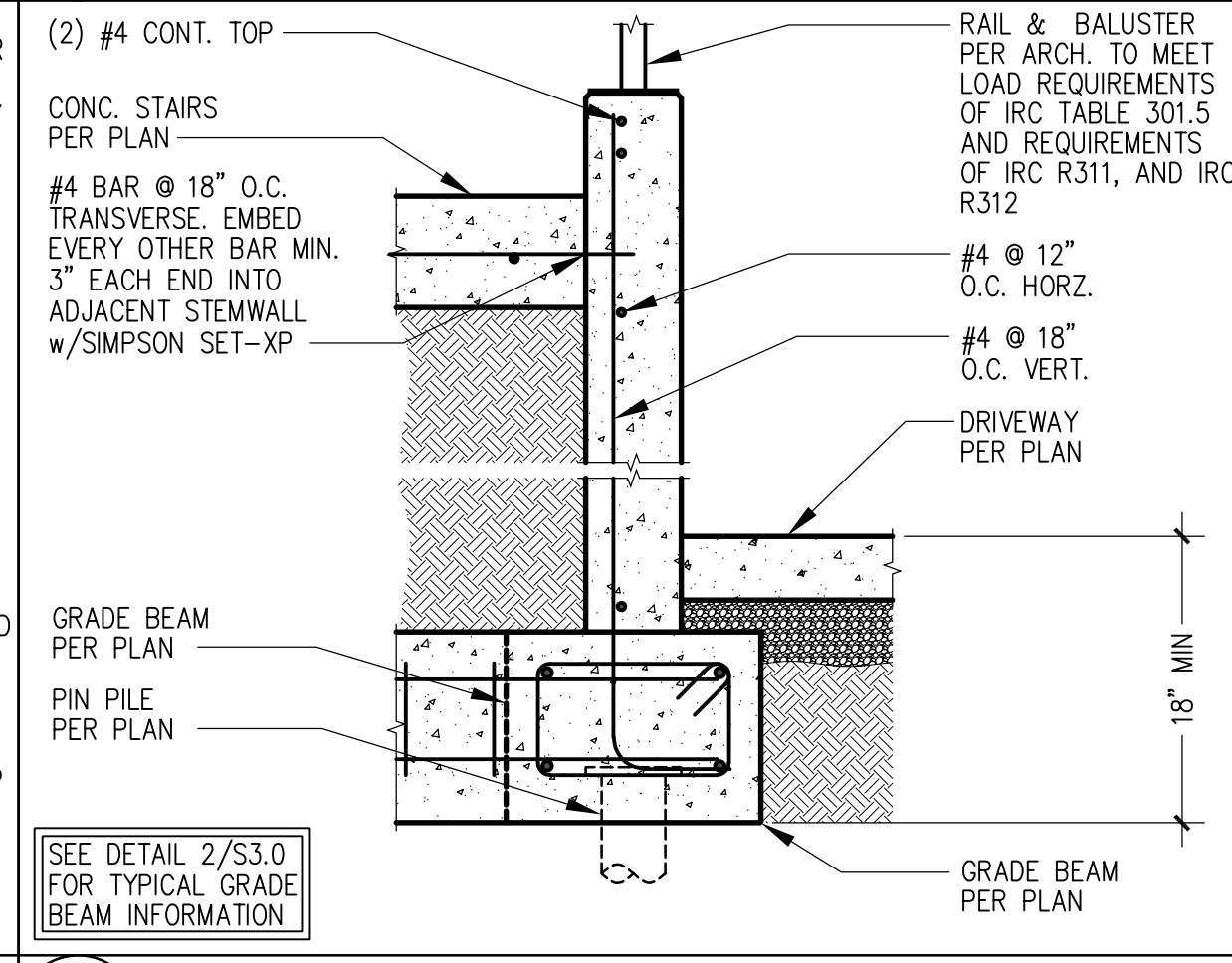
9 SSTB HOLDOWN ANCHOR TO FOUNDATION (ALL-THREAD @ PONYWALL)



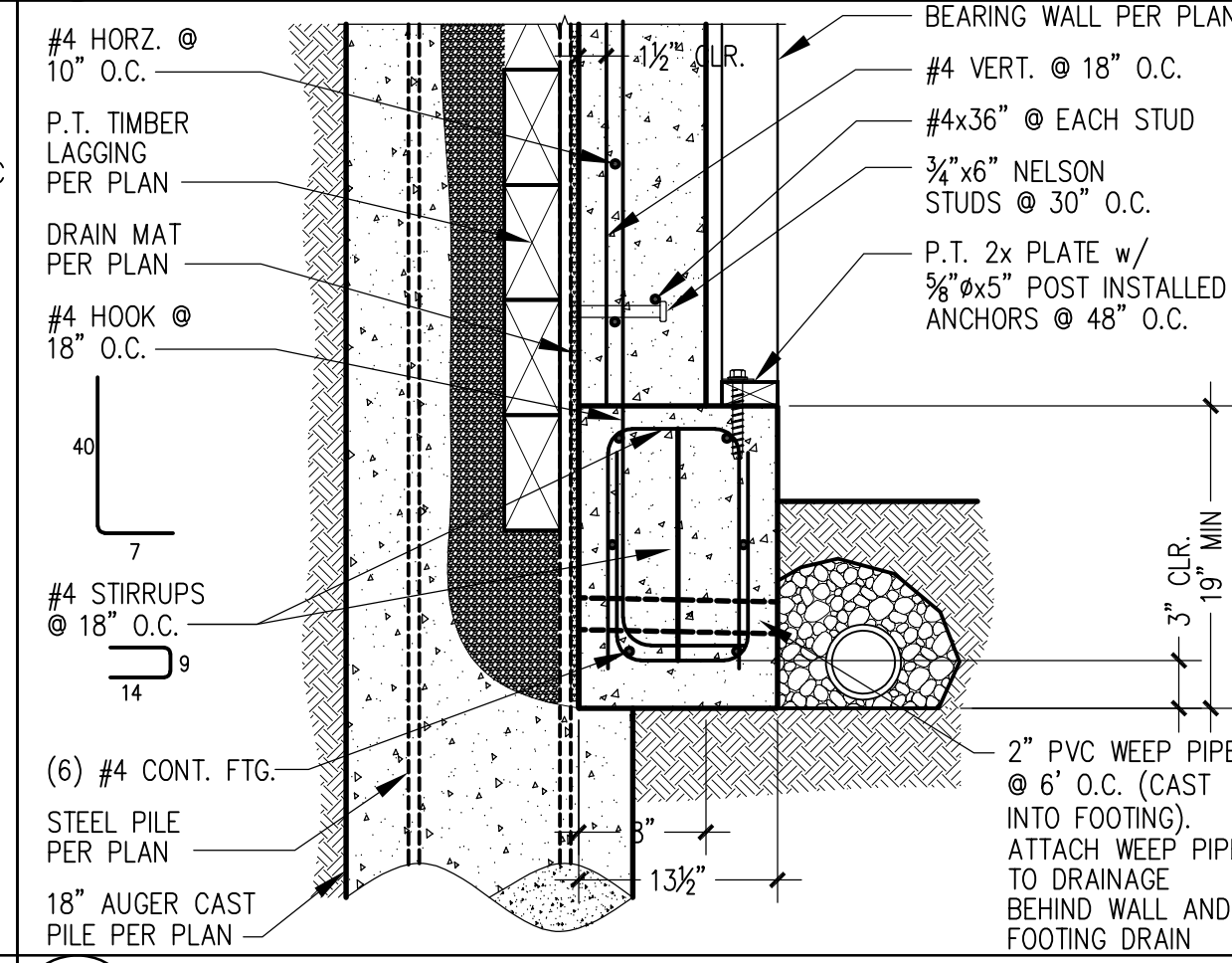
10 CONCRETE STAIRS @ GRADE BEAM



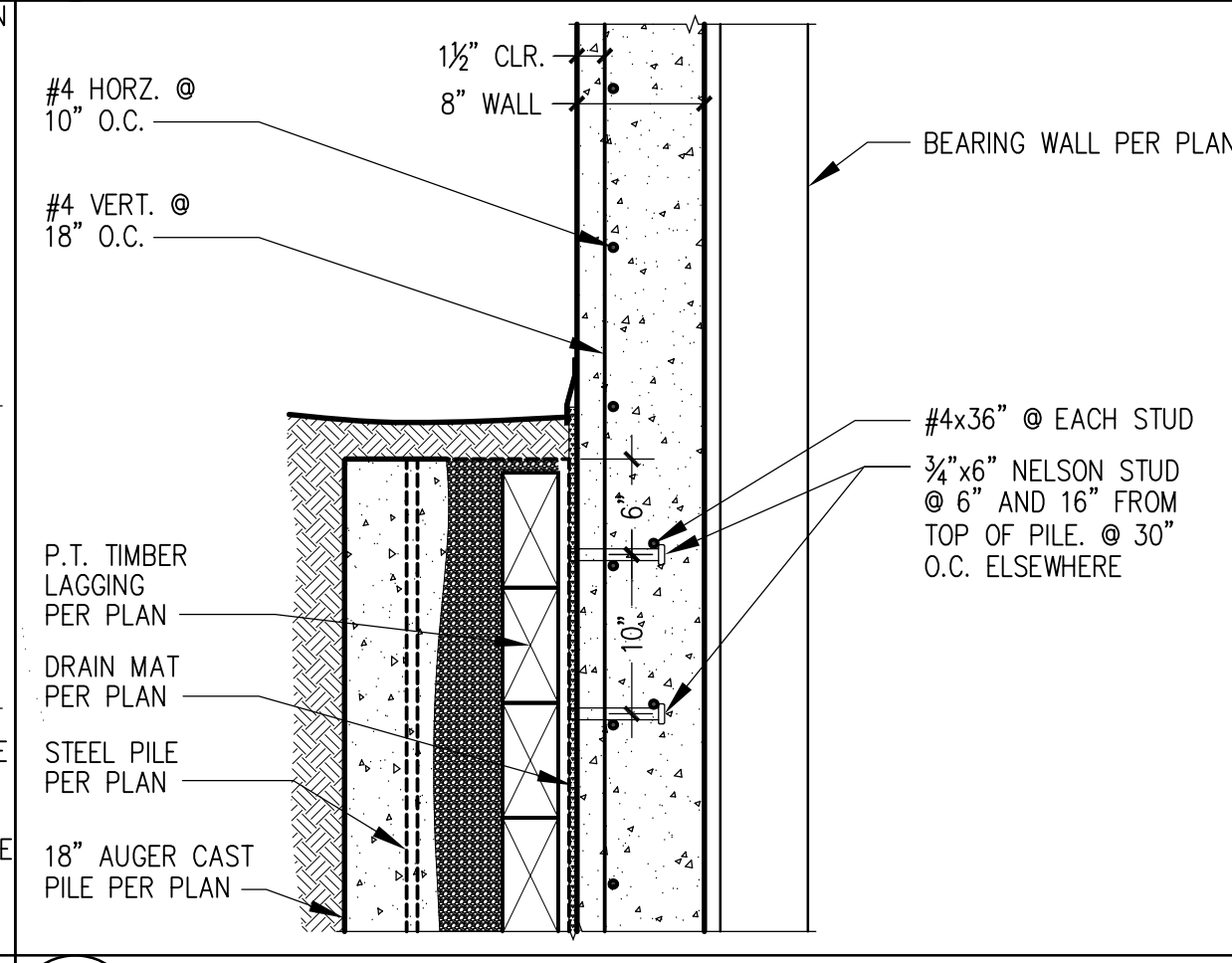
11 CONCRETE STAIRS @ UPPER LANDING



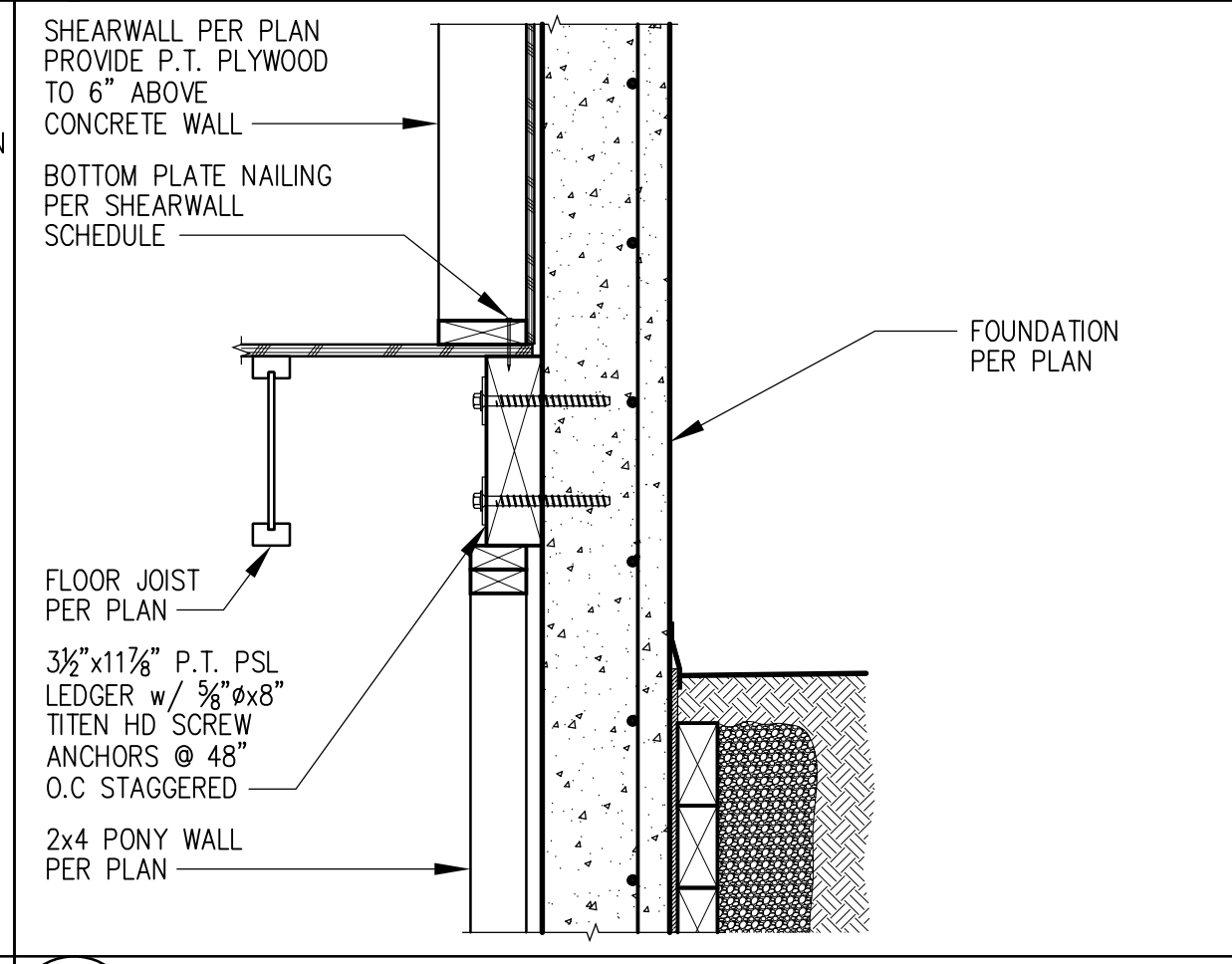
12 CONCRETE STAIR WALL



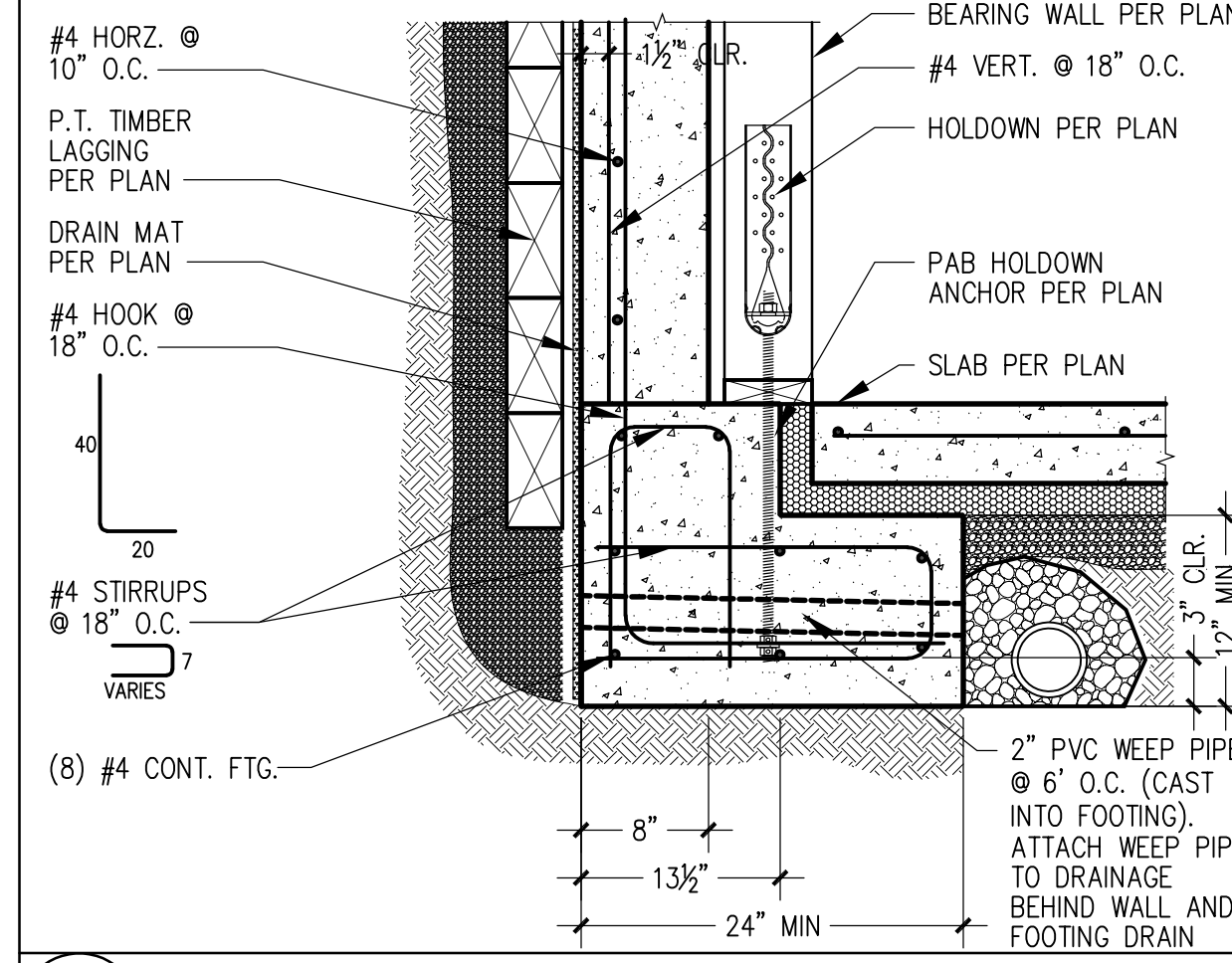
13 TYPICAL CRAWLSPACE FOUNDATION @ PILE (BASE OF WALL)



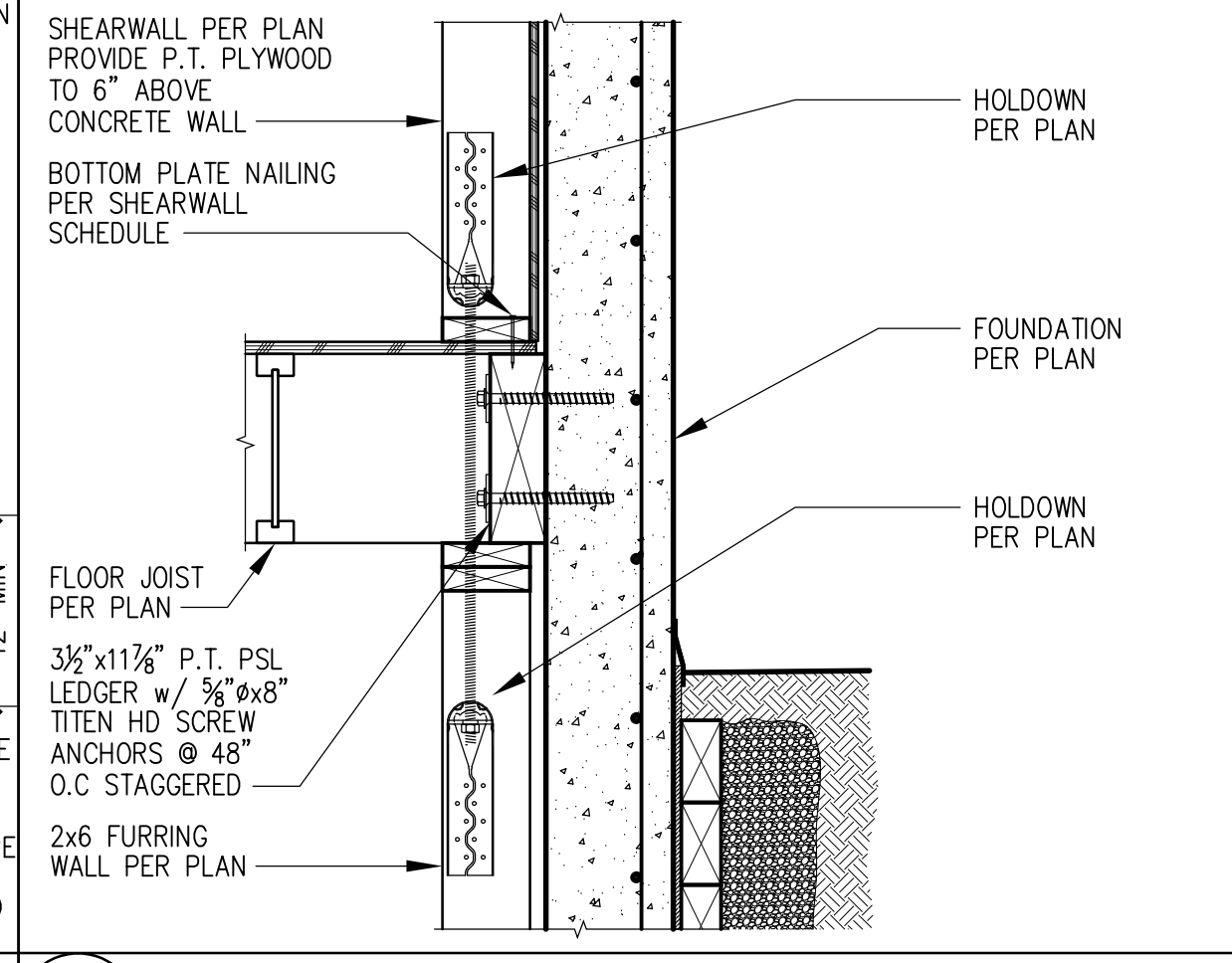
14 TYPICAL FOUNDATION @ PILE (TOP OF GRADE)



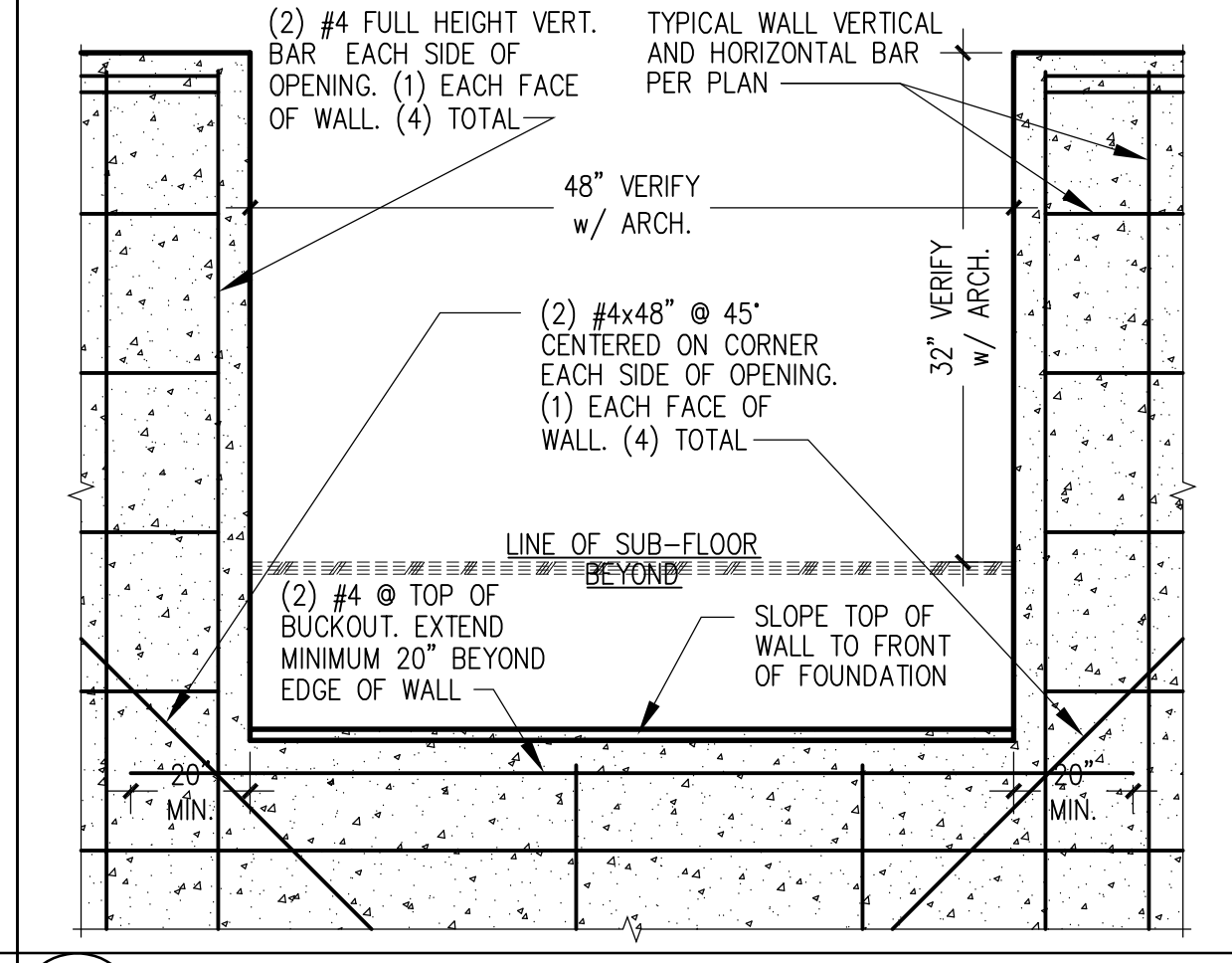
15 TYPICAL SHEAR TRANSFER @ FNDN. WALL (CRAWLSPACE FLOOR FRAMING)



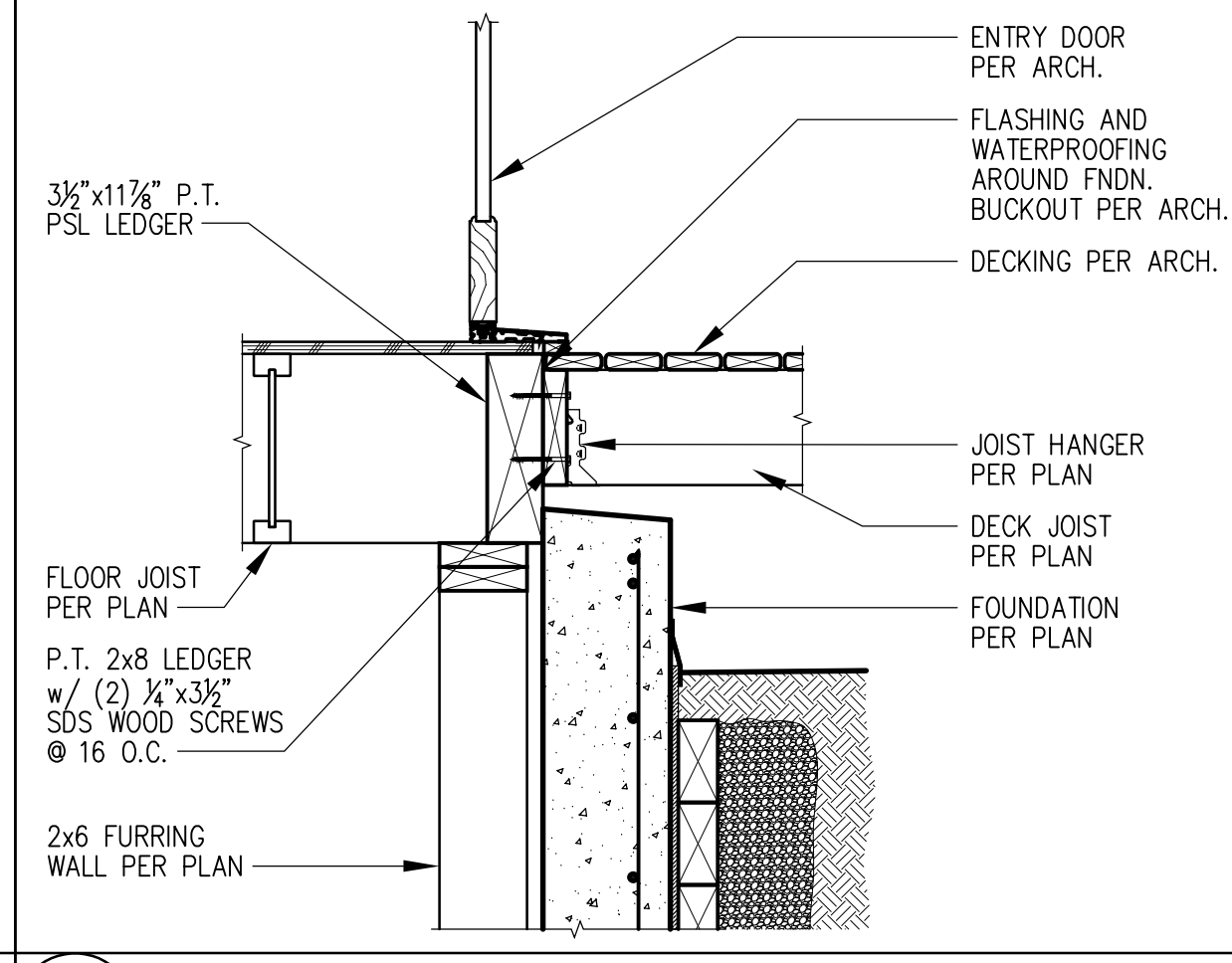
16 HOLDOWN @ BASEMENT FOUNDATION



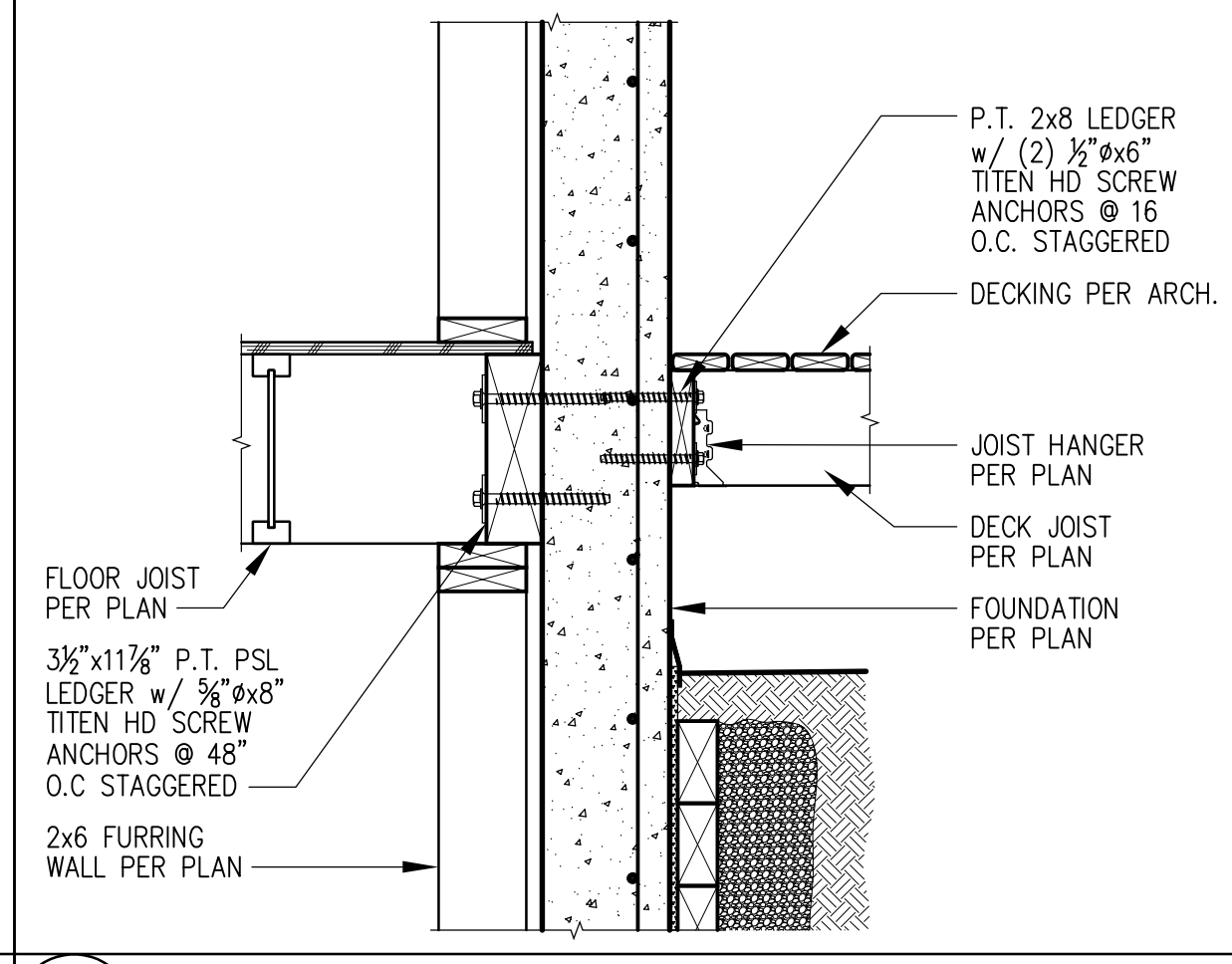
17 SHEAR TRANSFER @ FNDN. WALL (BASEMENT FLOOR FRAMING/HOLDOWN TO HOLDOWN)



18 TYPICAL CONCRETE BUCKOUT (ELEVATION)

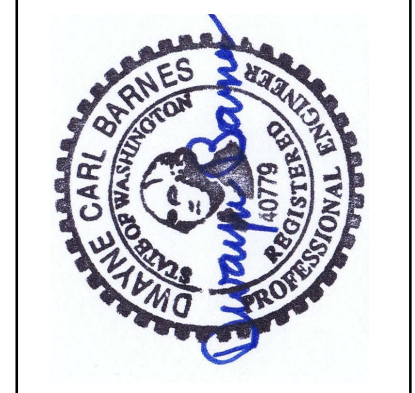


19 ENTRY DECK FRAMING



20 ENTRY DECK @ BALLOON FRAME WALL

**Stoney Point Engineering**  
 Dwayne Barnes P.E.  
 dwayne@stonepointengineering.com  
 Office: 425-644-9500



**MI Treehouse, LLC**  
 5637 East Mercer Way  
 Mercer Island, WA 98084

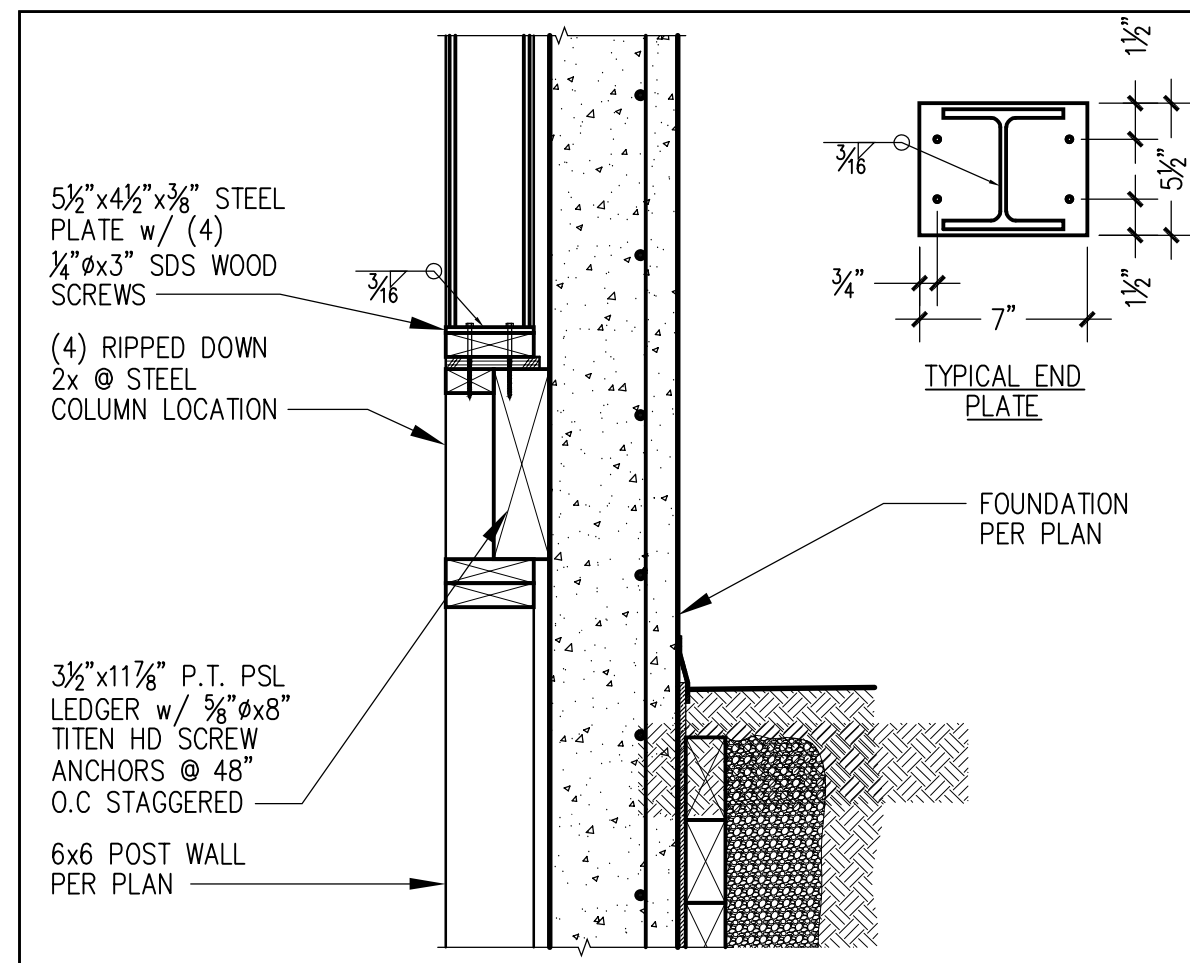
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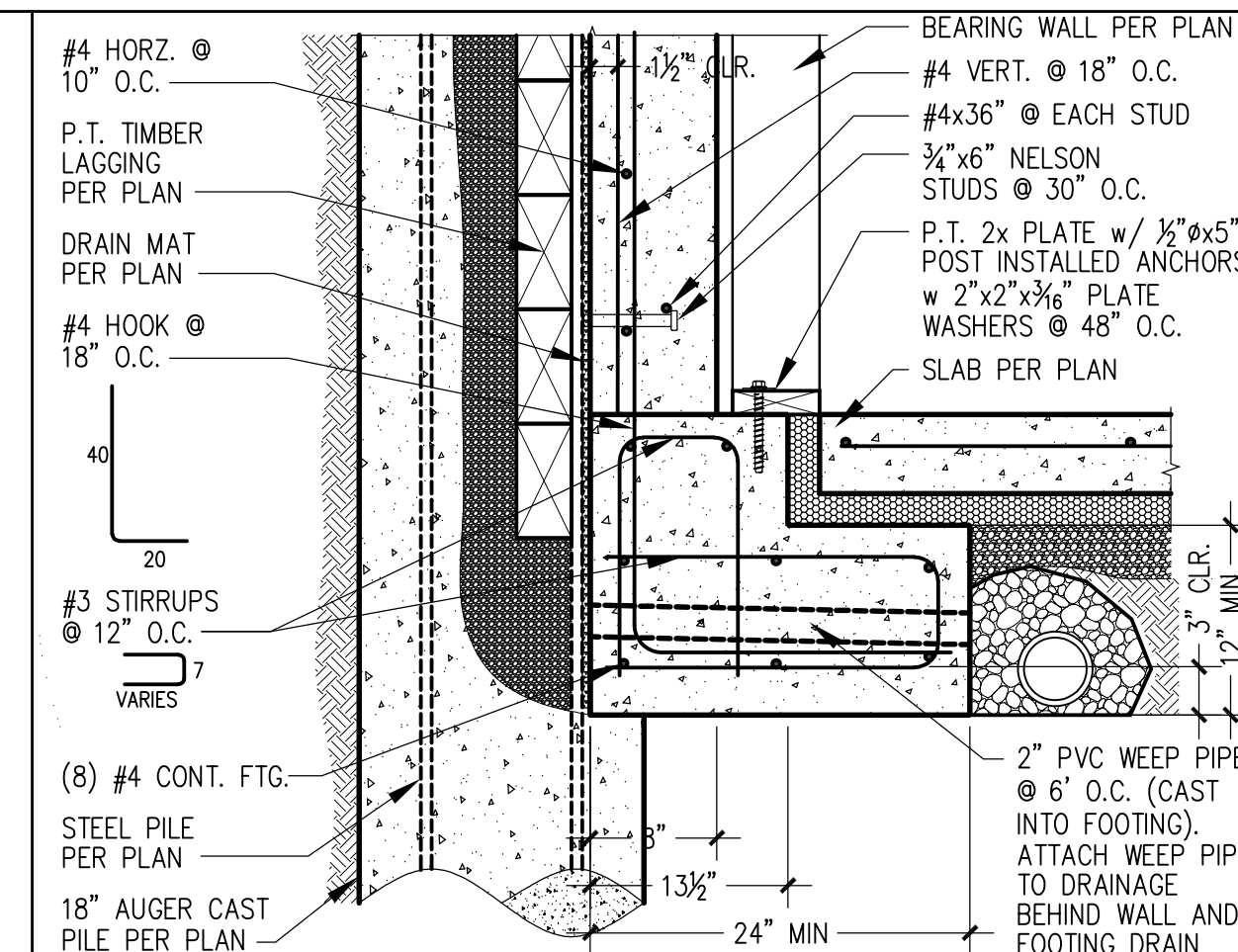
18-025

**S3.1**  
 FOUNDATION DETAILS

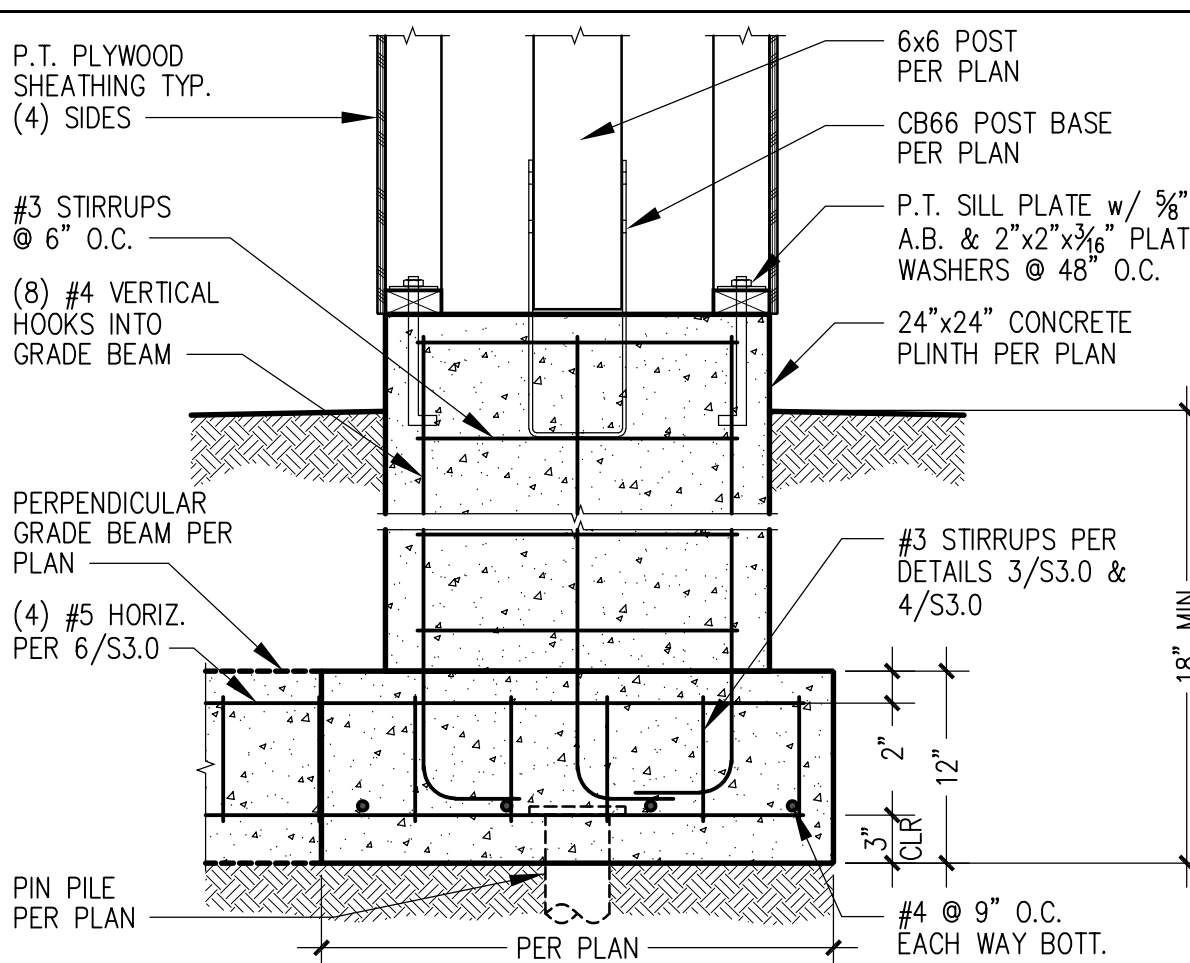




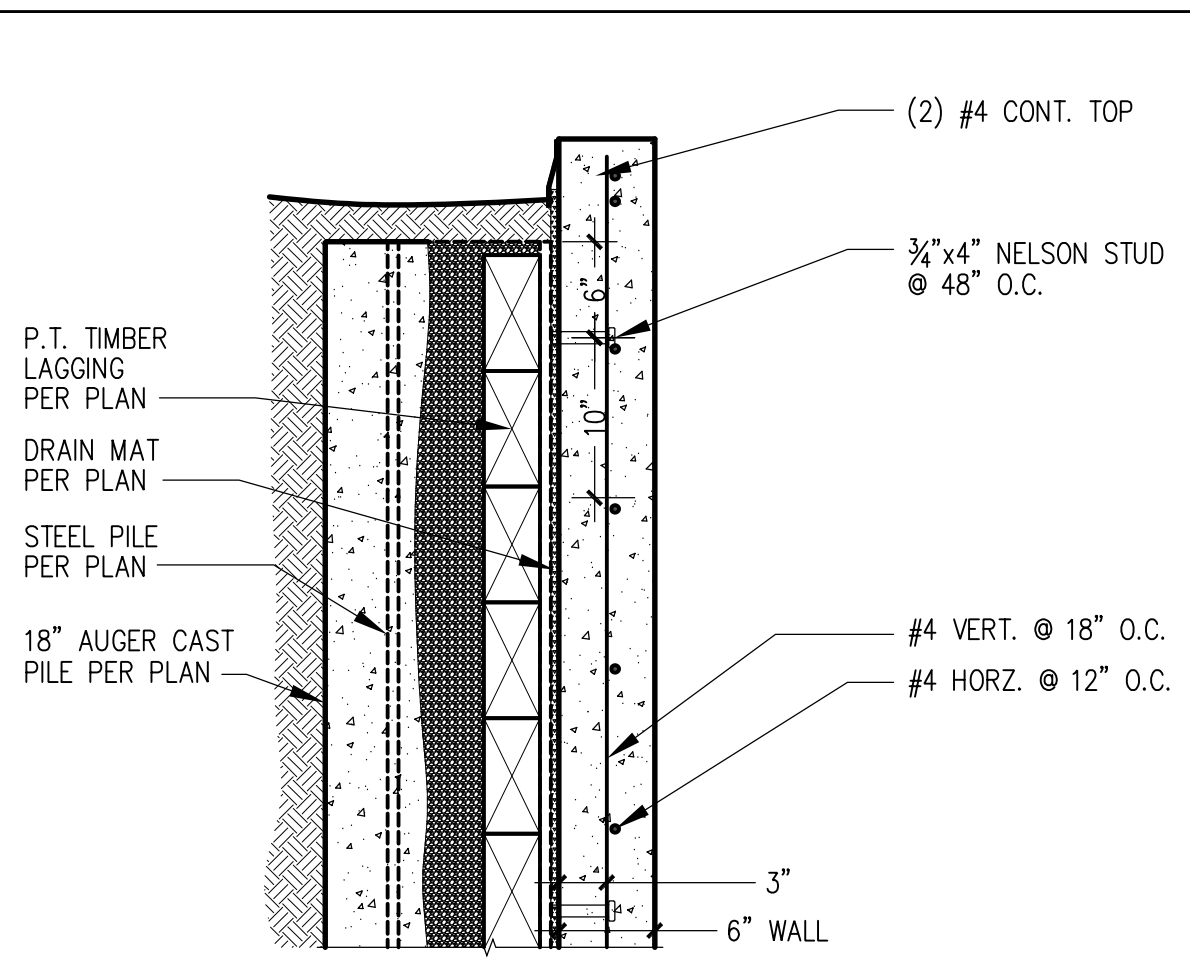
1 W5x16 STEEL COLUMN TO BOTTOM PLATE  
(FLOOR FRAMING)



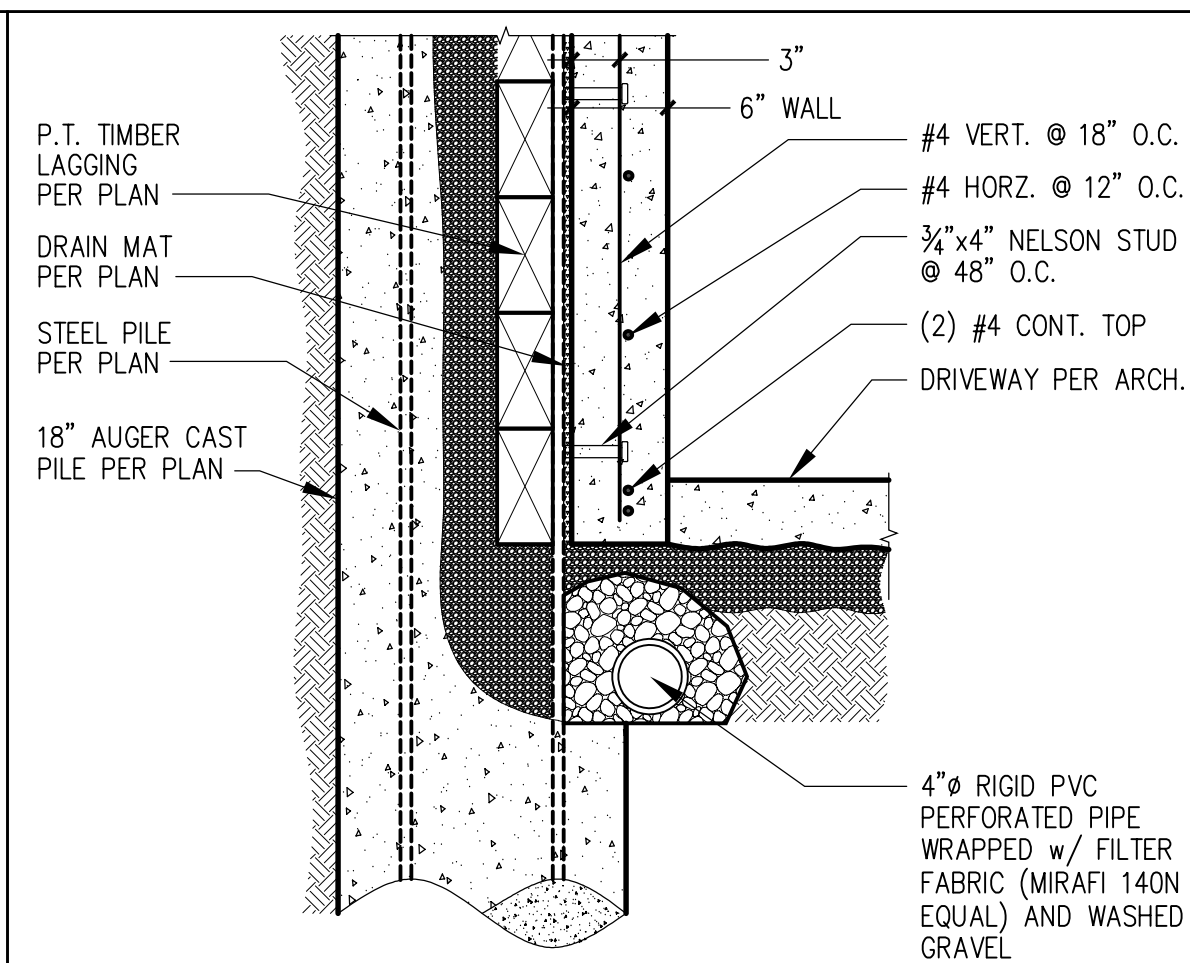
2 TYPICAL BASEMENT FOUNDATION @ PILE  
(BASE OF WALL)



3 CONCRETE POST PLINTH @ ENTRY PORCH  
(GRADE BEAM TEE OFF FOOTING)

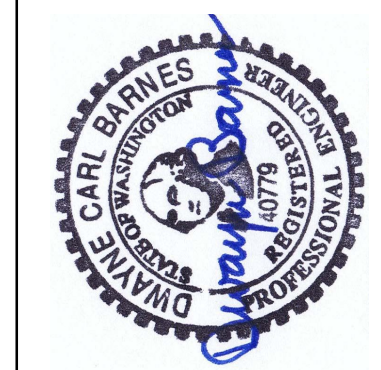


4 DRIVEWAY SITE WALL  
(TOP OF GRADE)



5 DRIVEWAY SITE WALL  
(BASE OF WALL)

**Stoney Point Engineering**  
 Dwayne Barnes P.E.  
 dwayne@stonepointengineering.com  
 Office: 423-644-9500



MI Treehouse, LLC  
 5637 East Mercer Way  
 Mercer Island, WA 98084

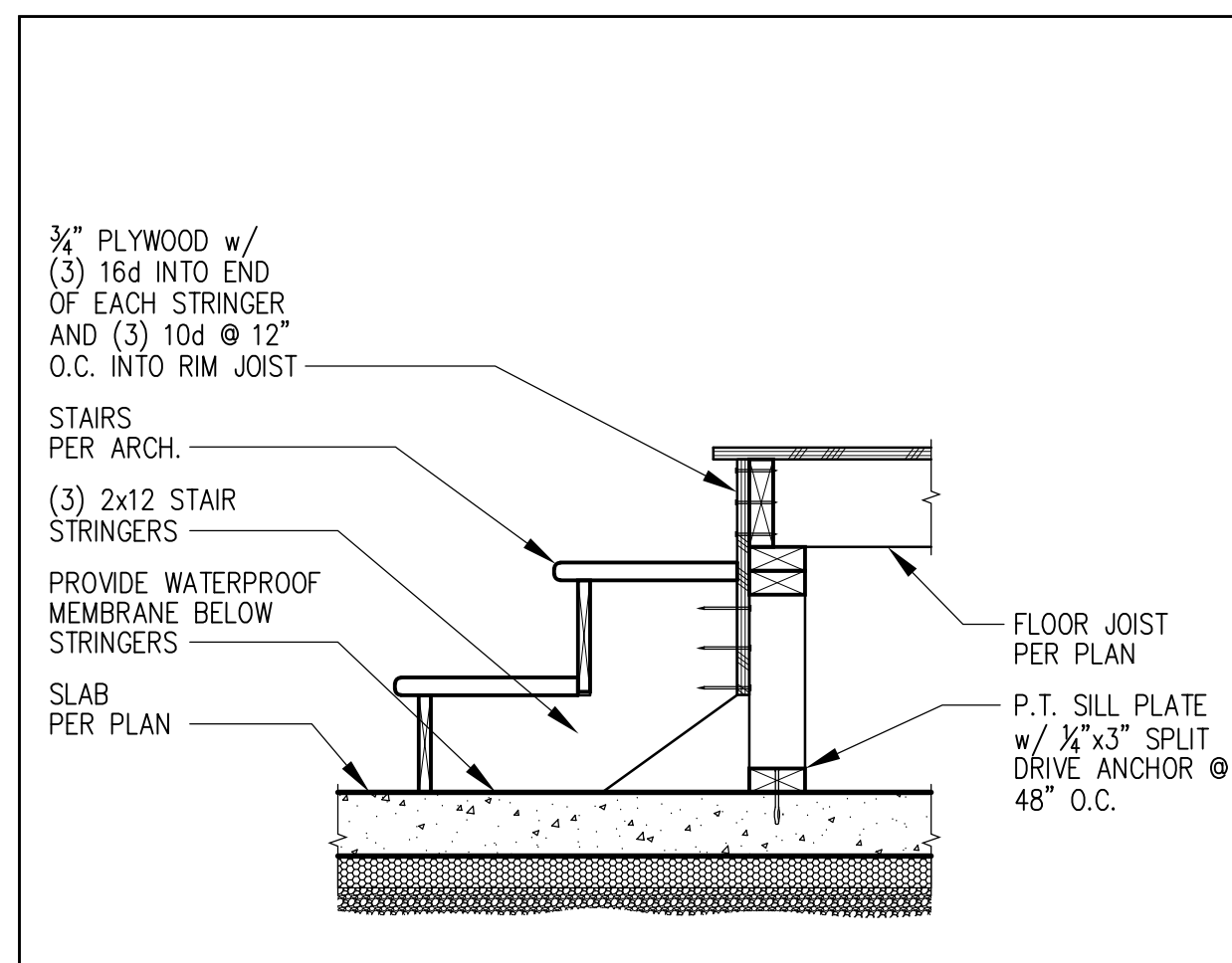
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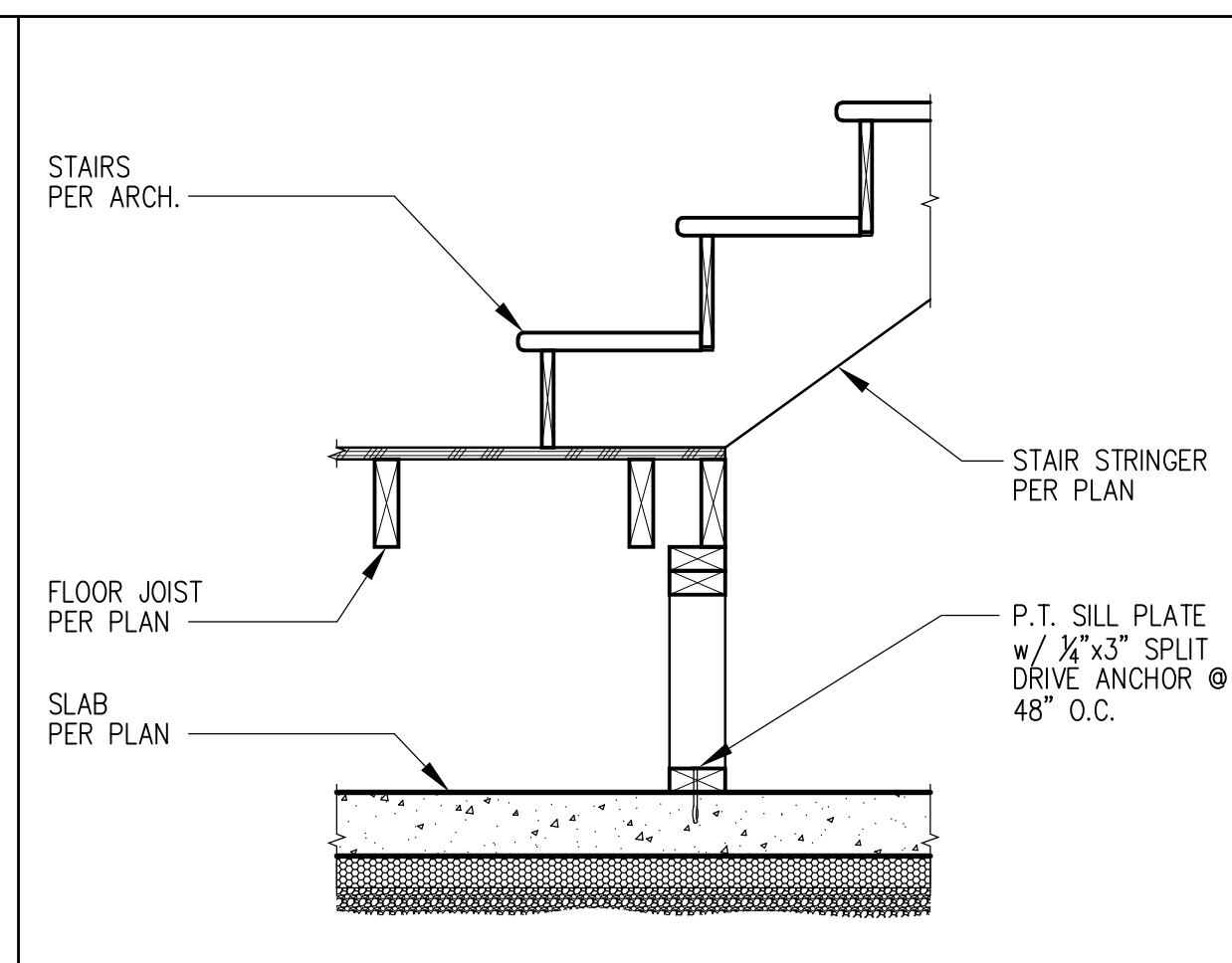
18-025

**S3.2**  
 FOUNDATION  
 DETAILS

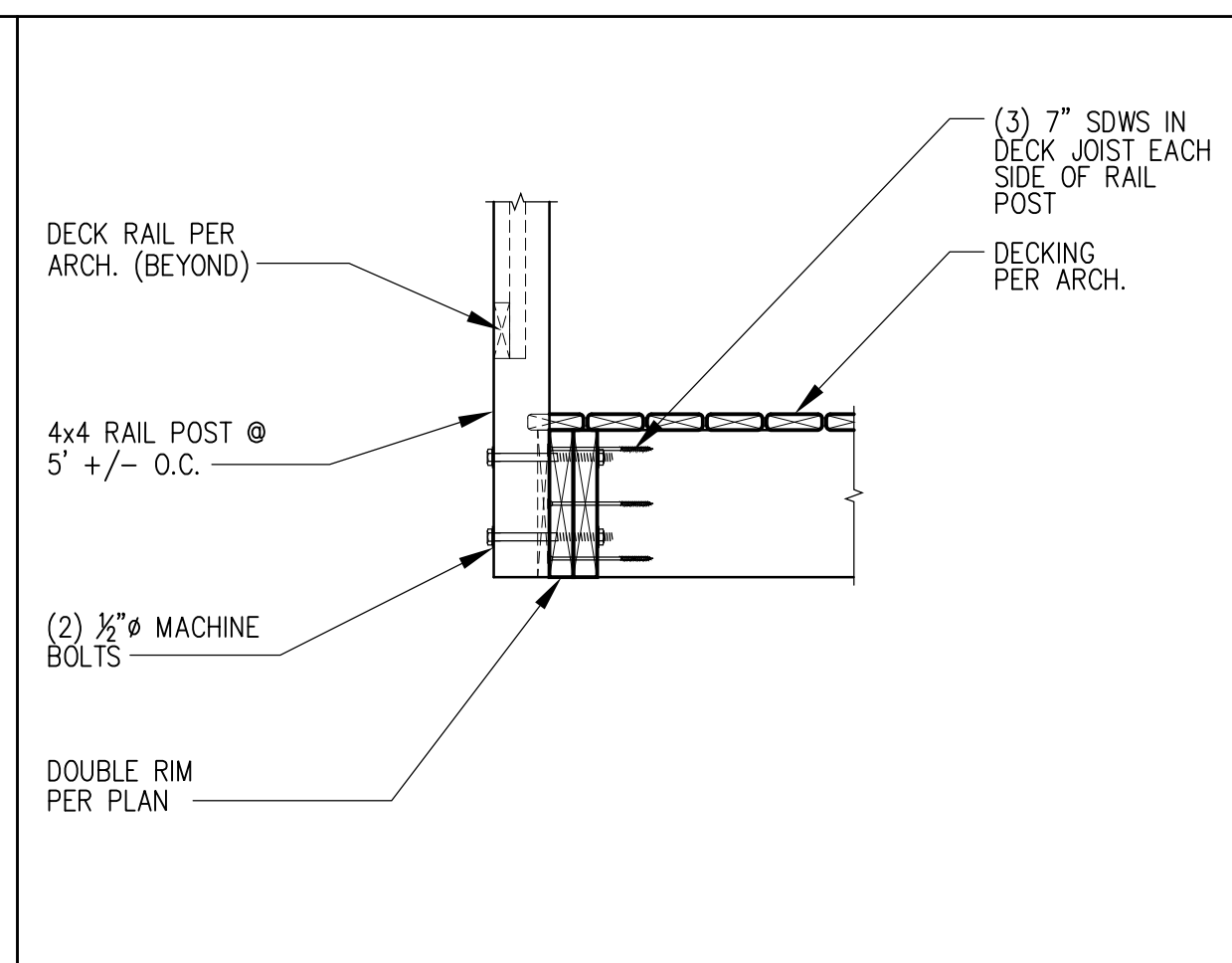




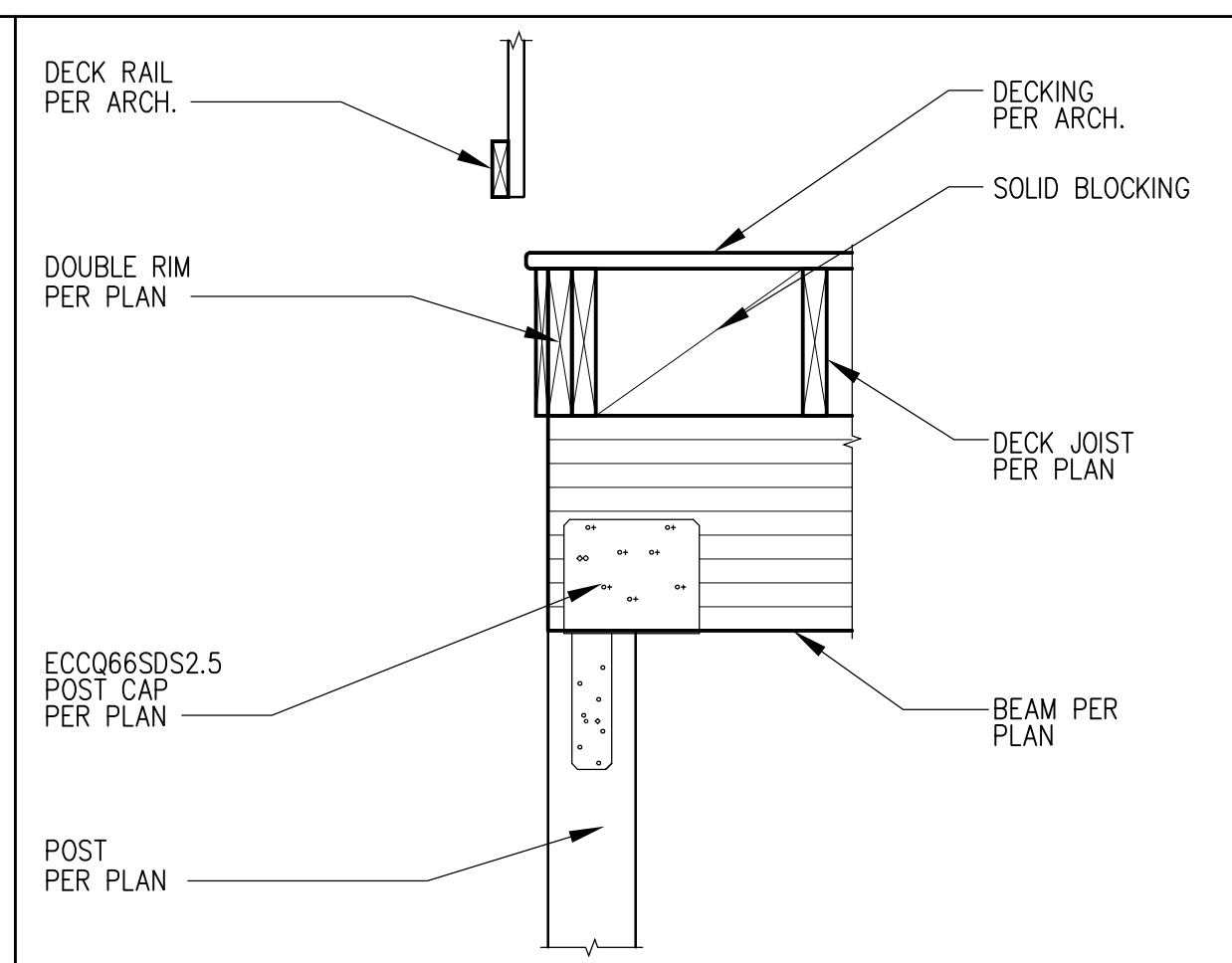
1 STAIR STRINGER FRAMING (BASEMENT STAIRS @ SLAB/LOWER LANDING)



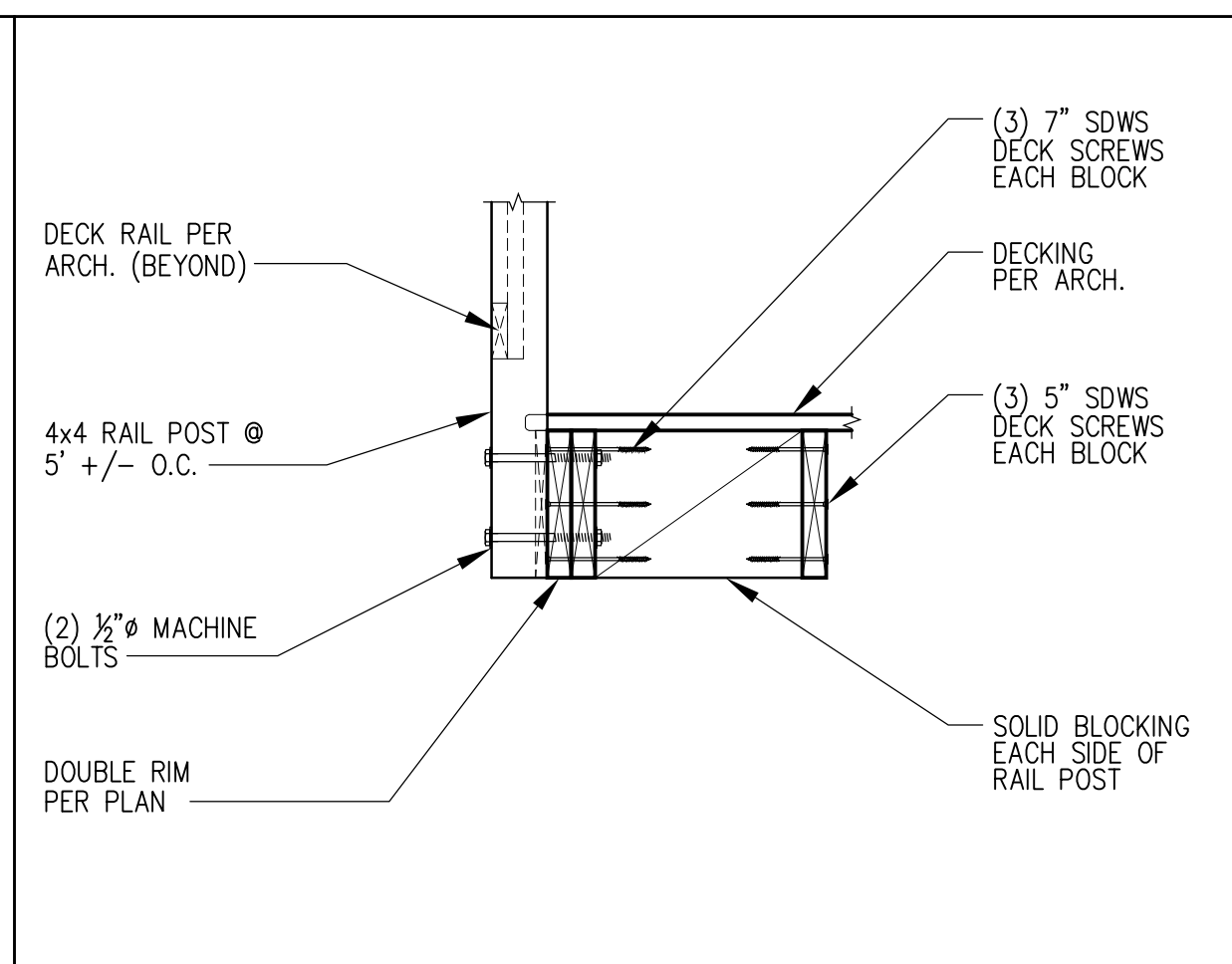
2 STAIR STRINGER FRAMING (BASEMENT STAIRS @ LOWER LANDING)



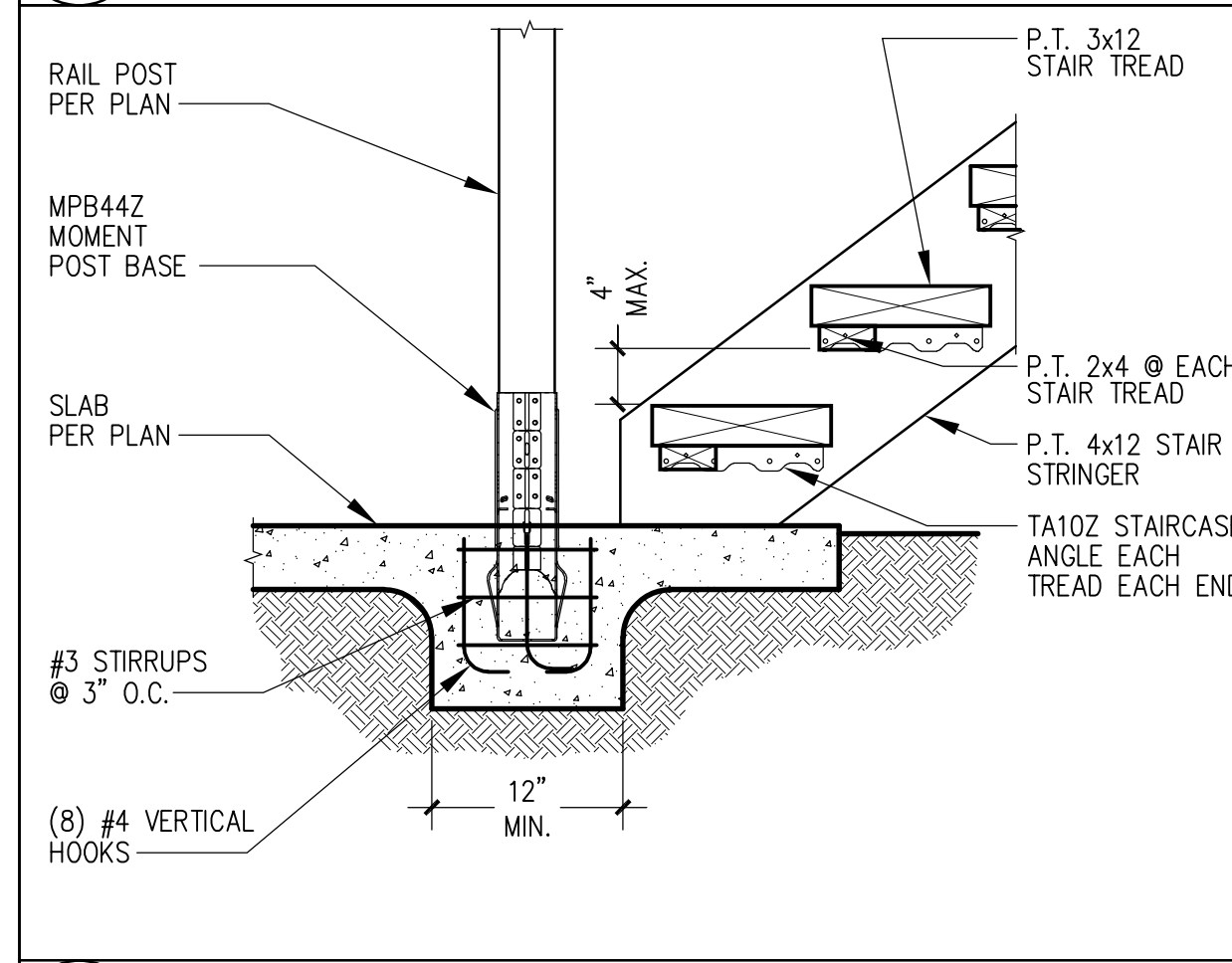
3 TYPICAL DECK POST (PERPENDICULAR JOIST)



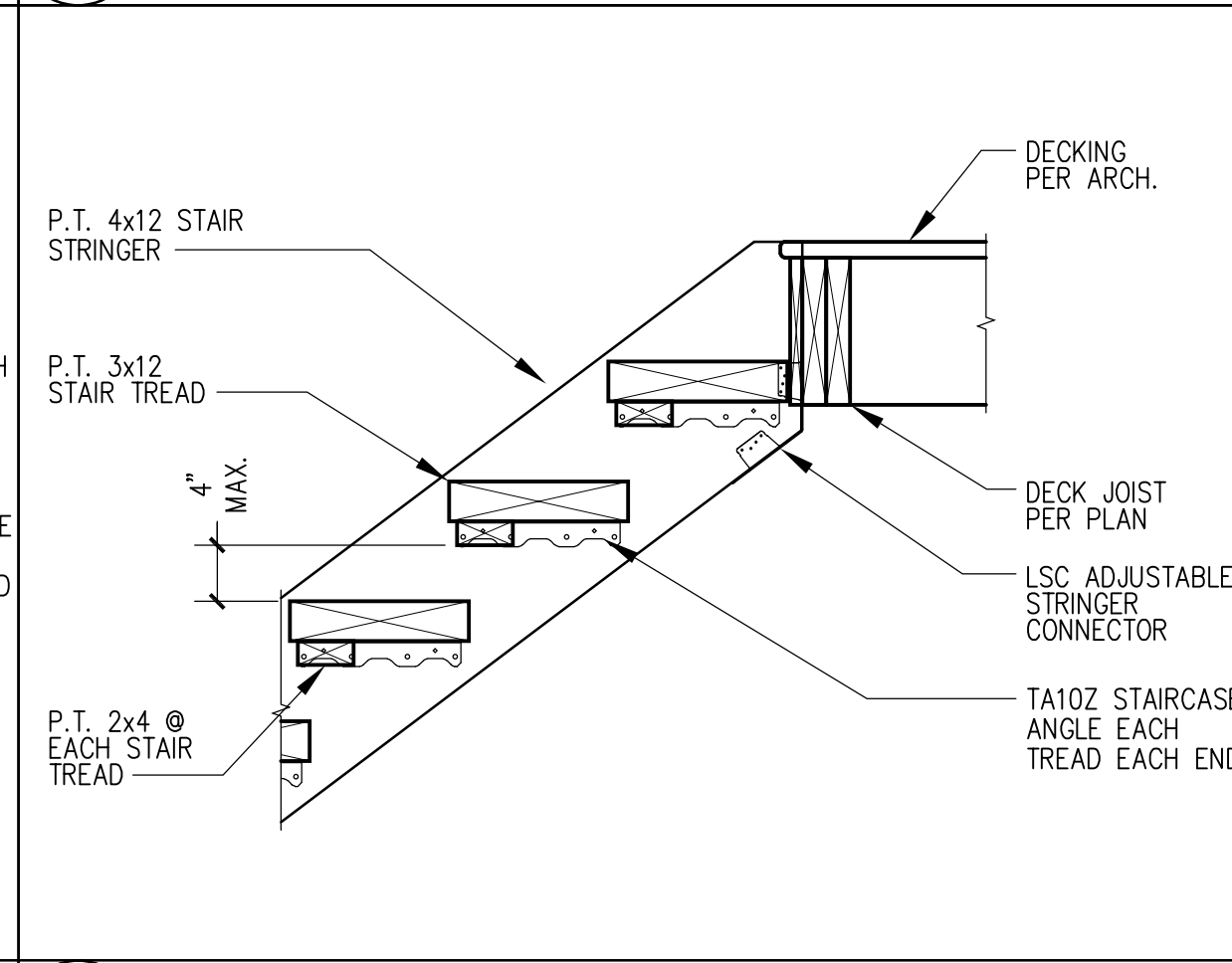
4 TYPICAL DECK POST (PARALLEL JOIST)



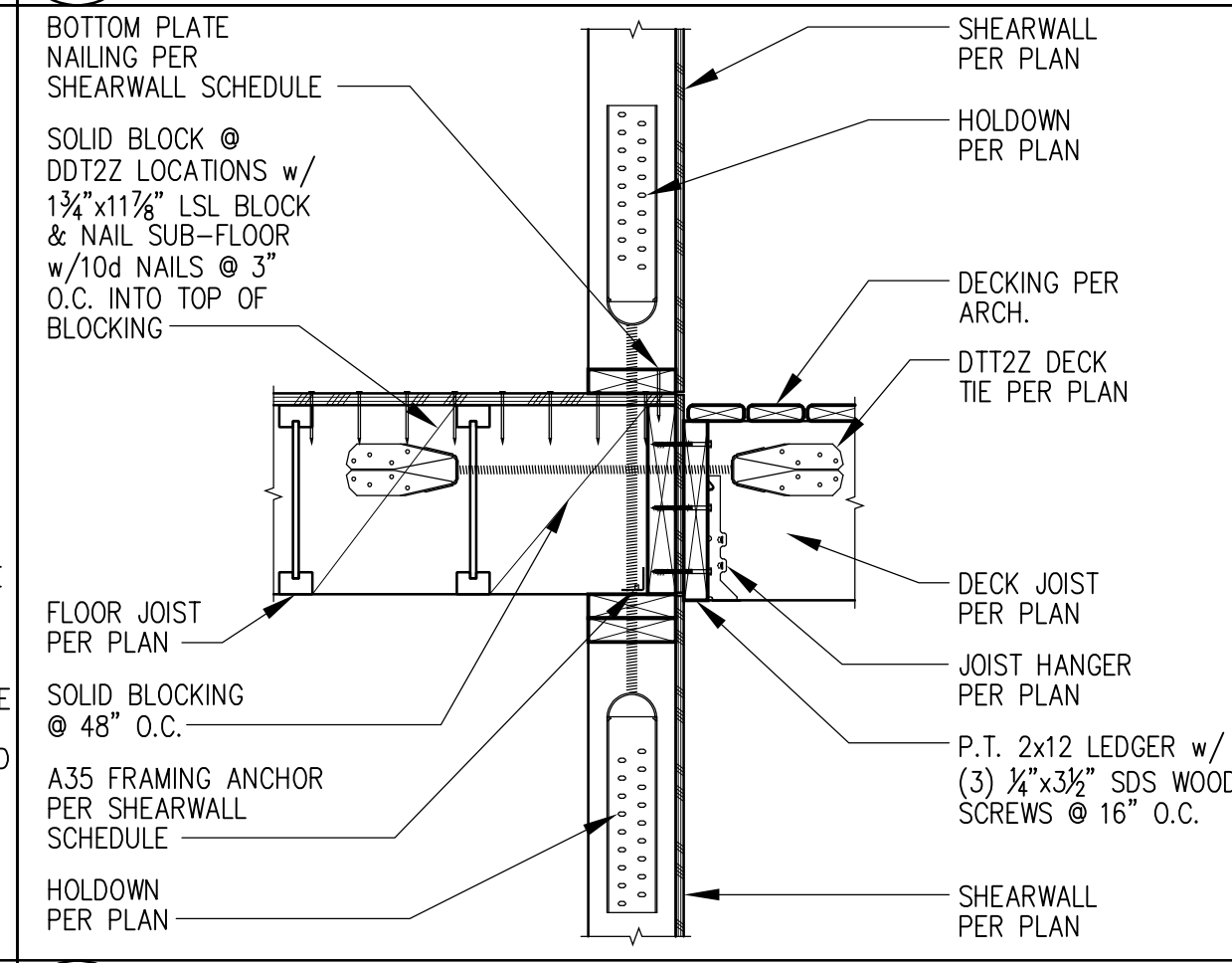
5 TYPICAL DECK POST (PARALLEL JOIST)



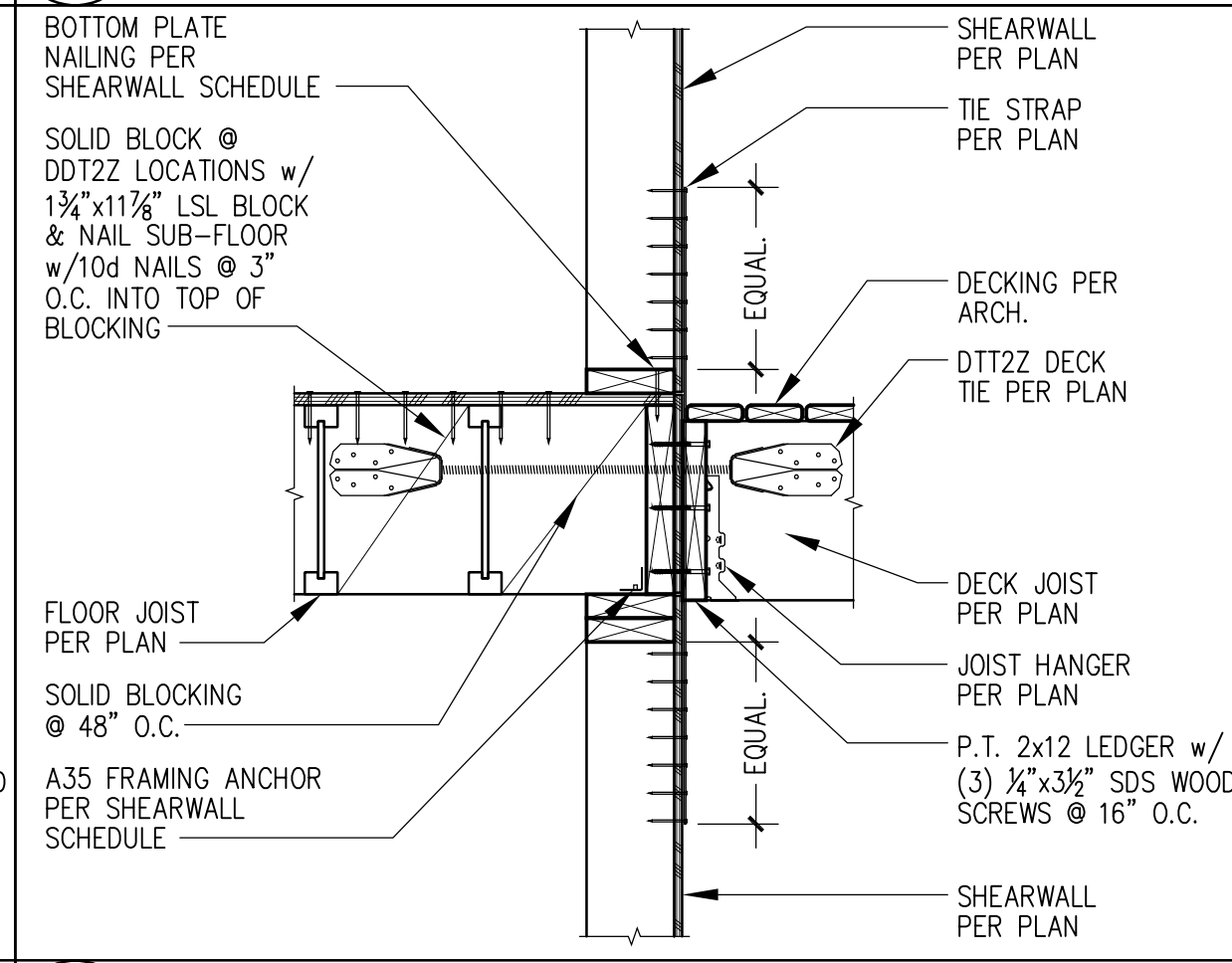
6 TYPICAL DECK STAIRS



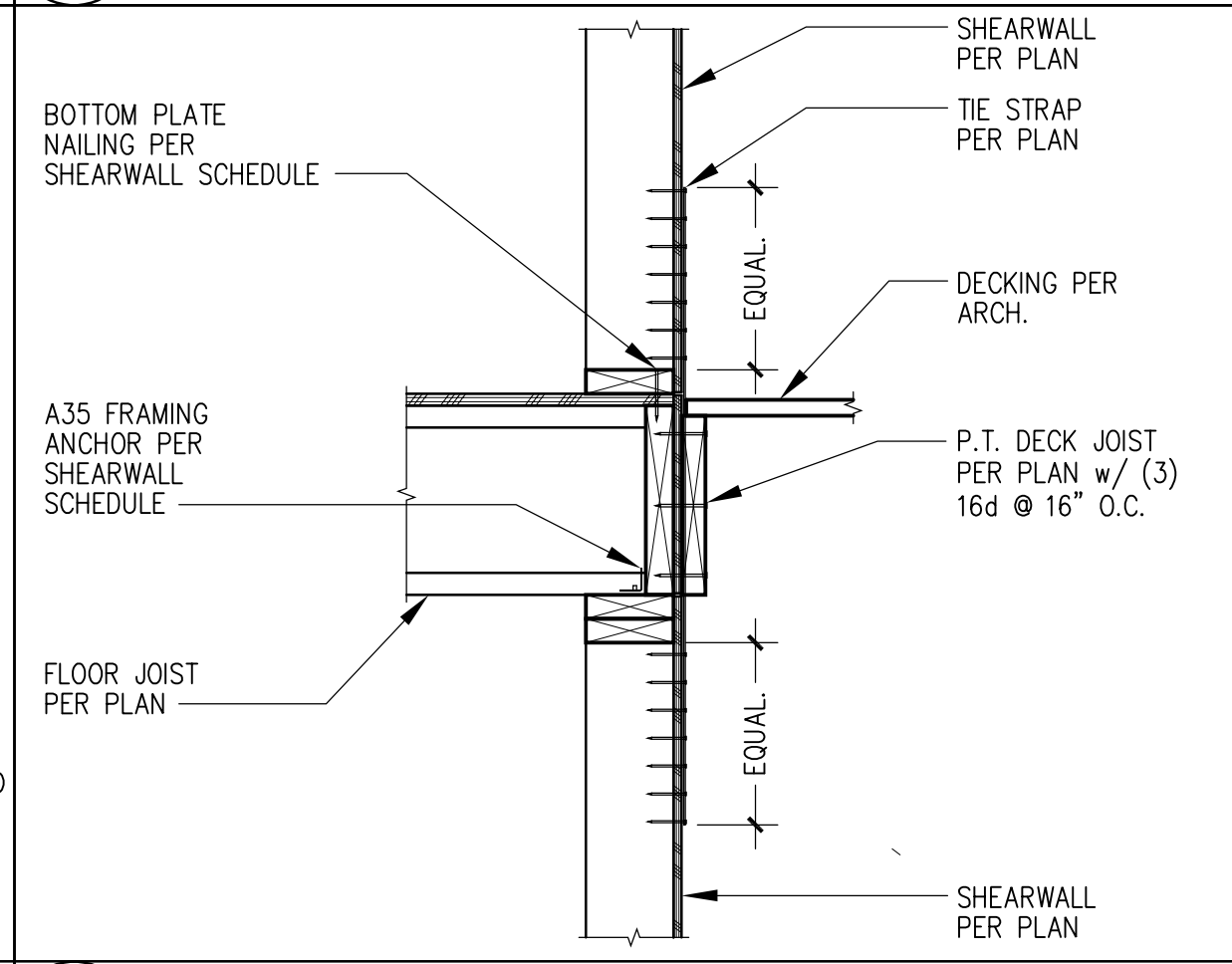
7 TYPICAL DECK STAIRS



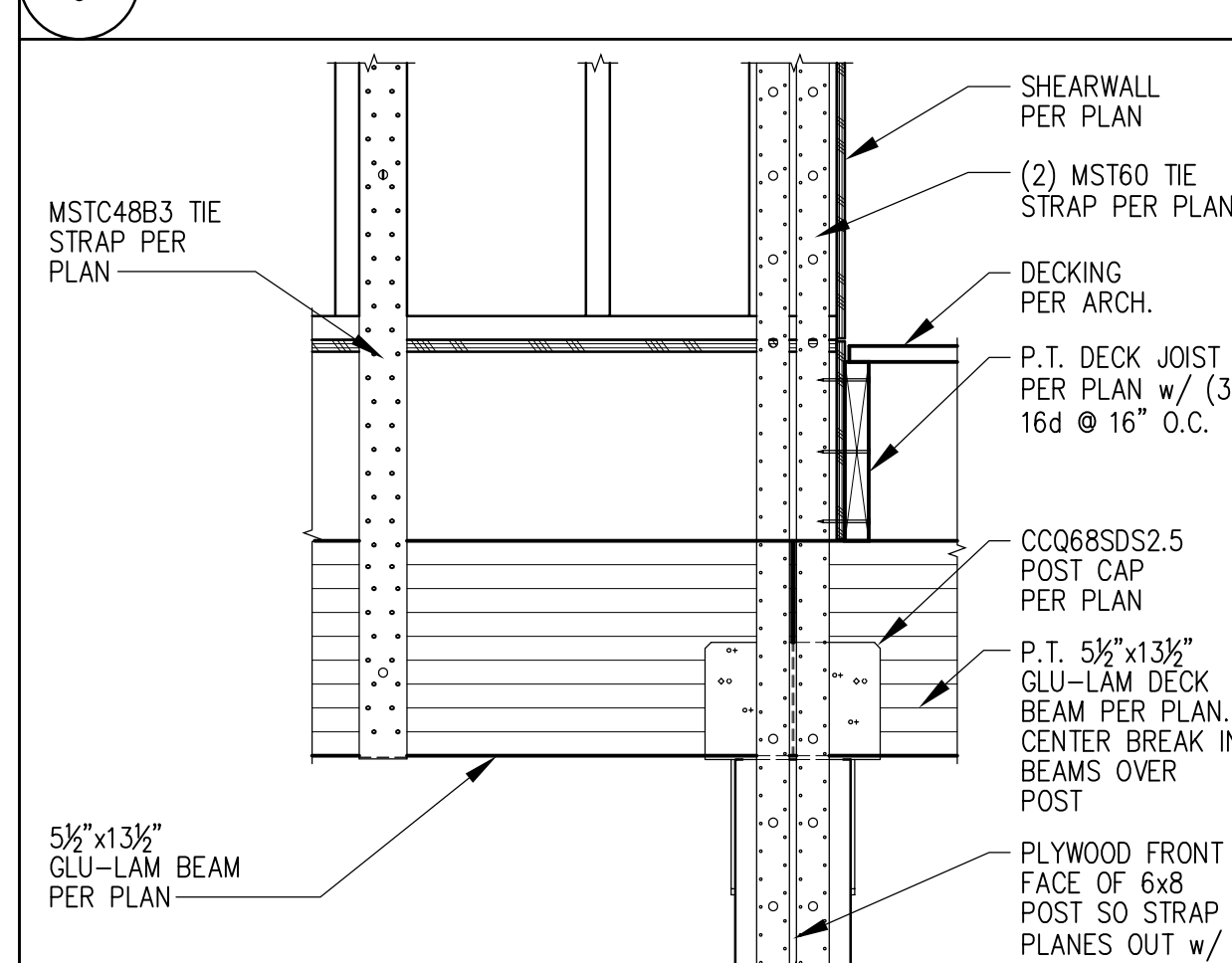
8 SHEAR TRANSFER @ FLOOR FRAMING (PARALLEL JOIST w/HOLDOWN & DECK FRAMING)



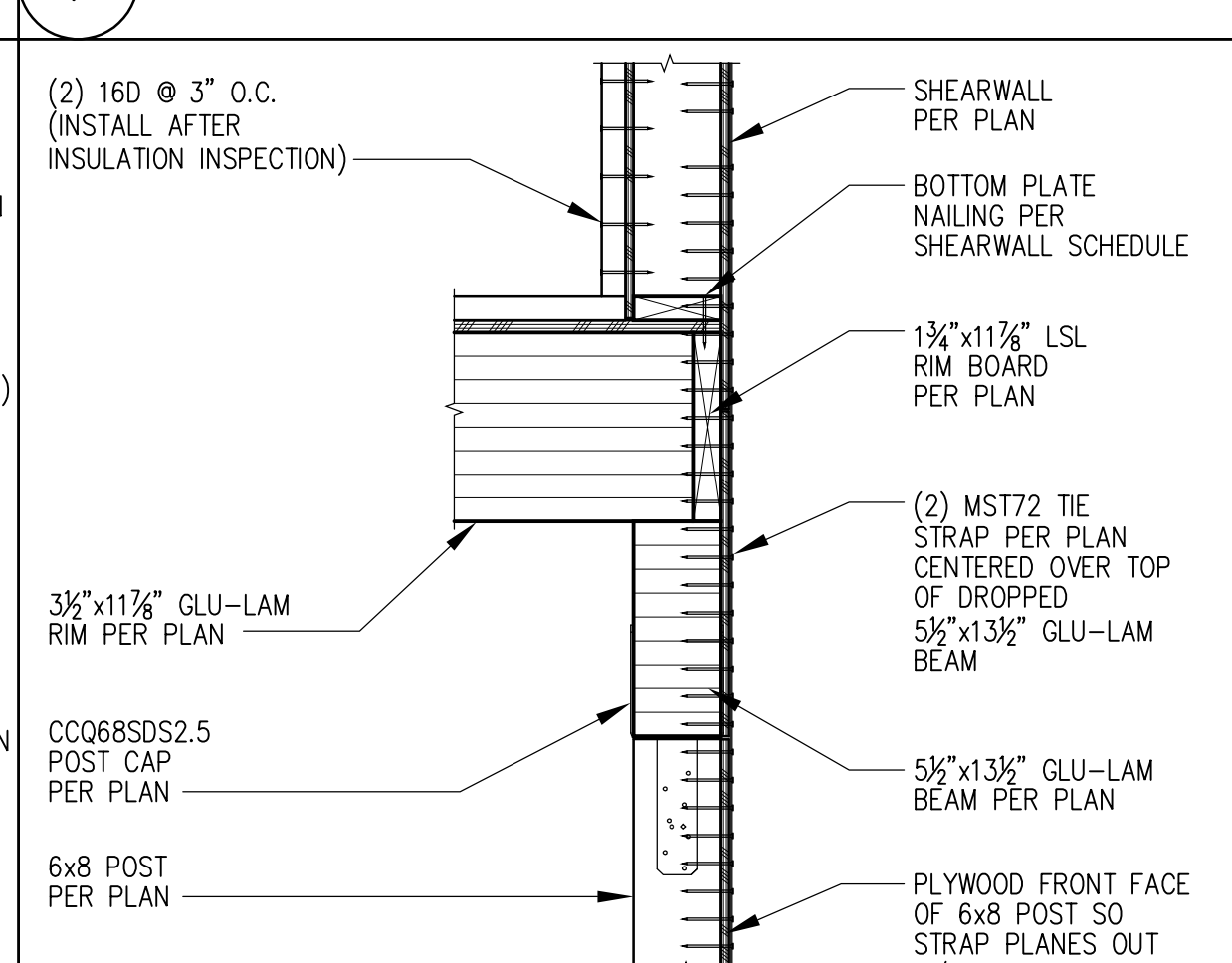
9 SHEAR TRANSFER @ FLOOR FRAMING (PARALLEL JOIST w/TIE STRAP & DECK FRAMING)



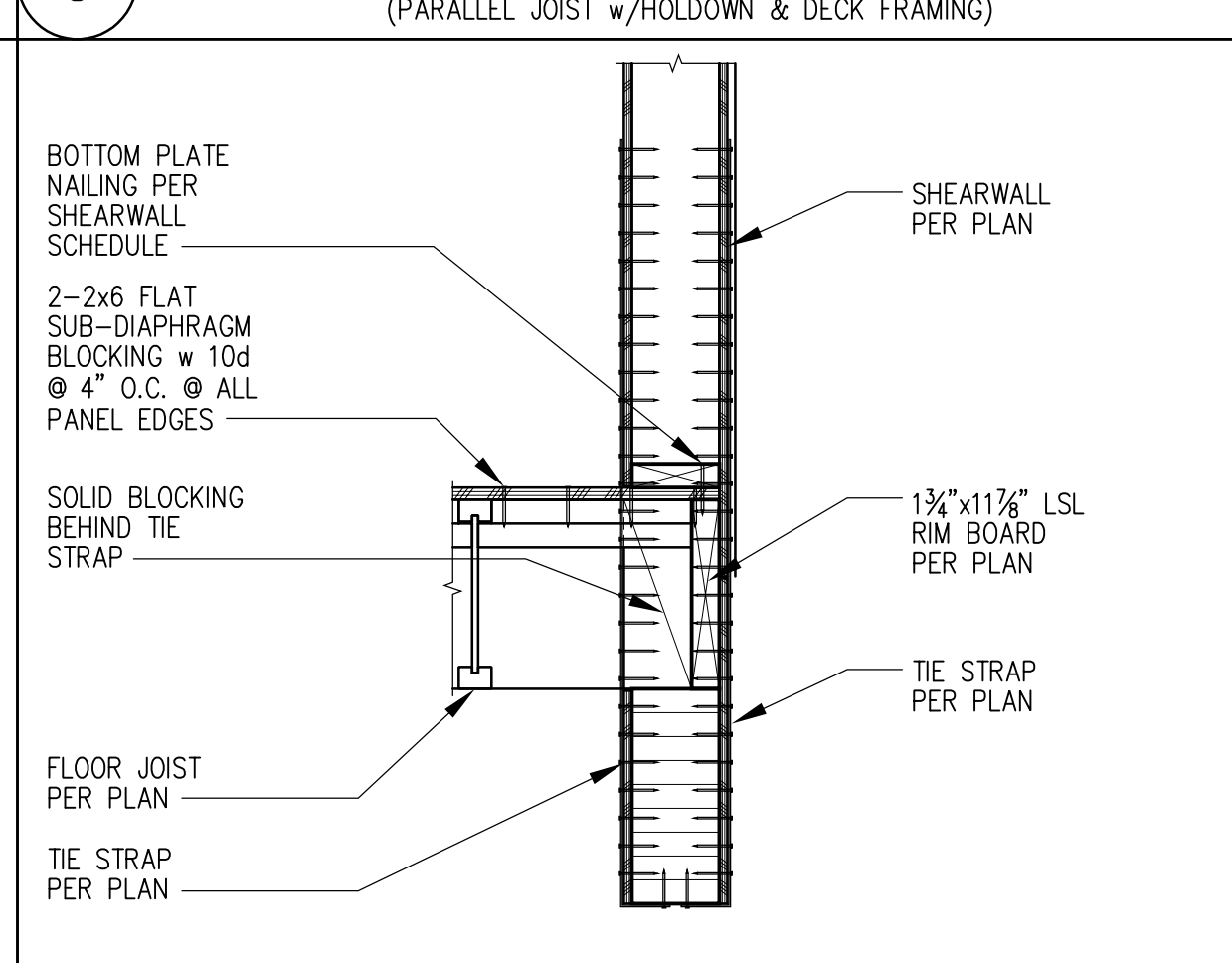
10 SHEAR TRANSFER @ FLOOR FRAMING (PERPENDICULAR JOIST w/TIE STRAP & DECK FRAMING)



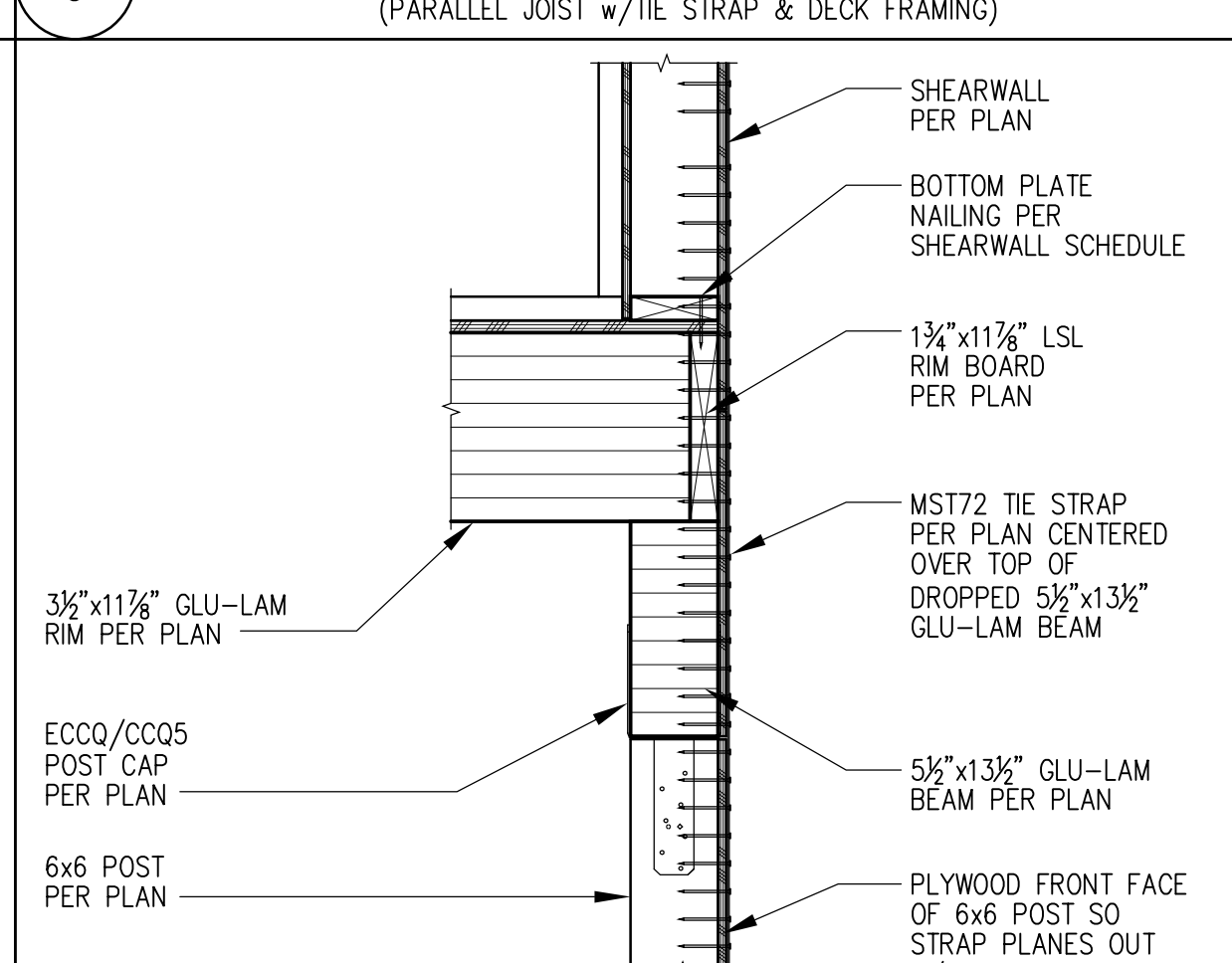
11 (2) MST60 TIE STRAP @ DROPPED BEAM (WEST SECTION VIEW)



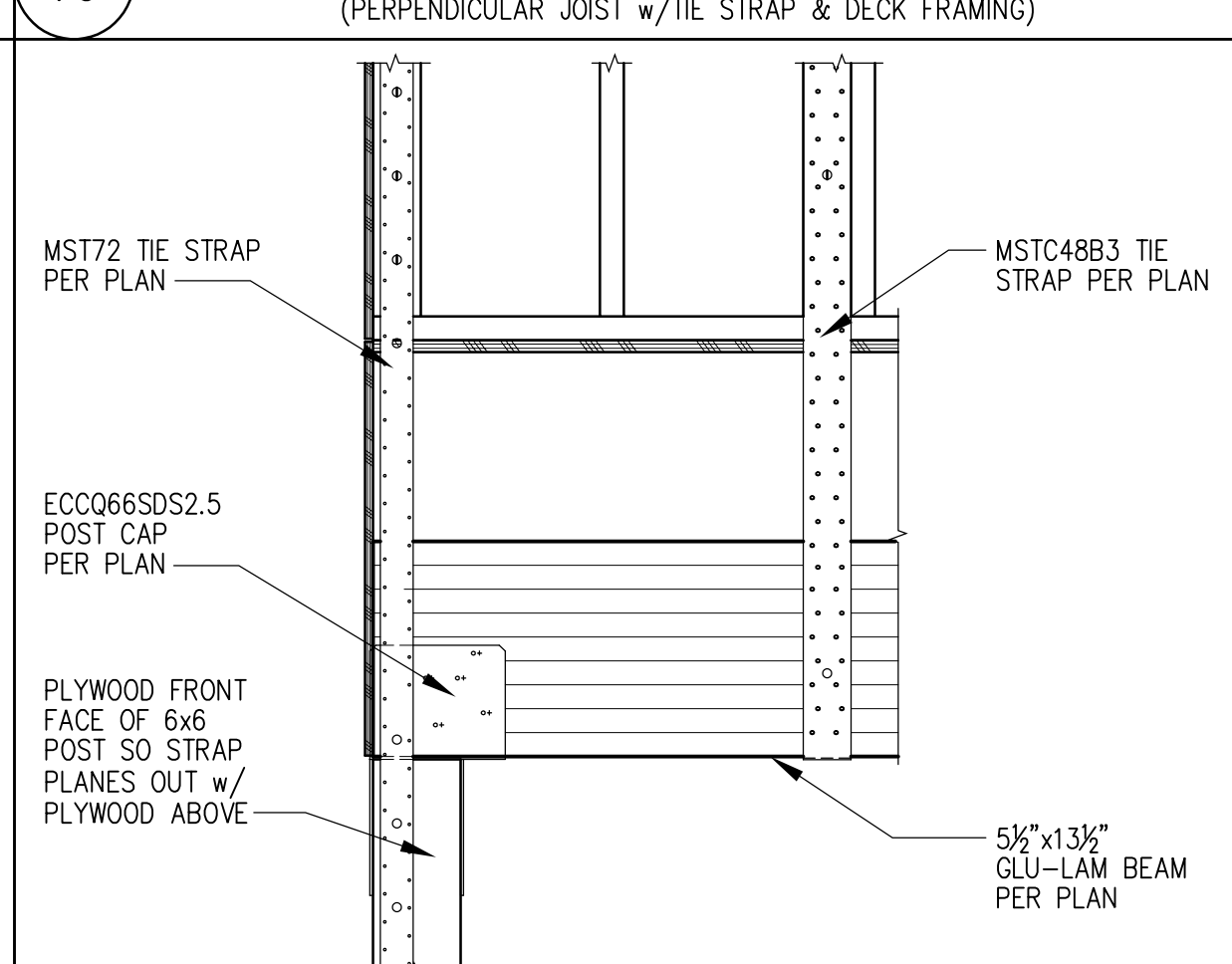
12 MST60 TIE STRAPS @ DROPPED BEAM (ELEVATION VIEW /w PERPENDICULAR P2-3 SHEARWALL)



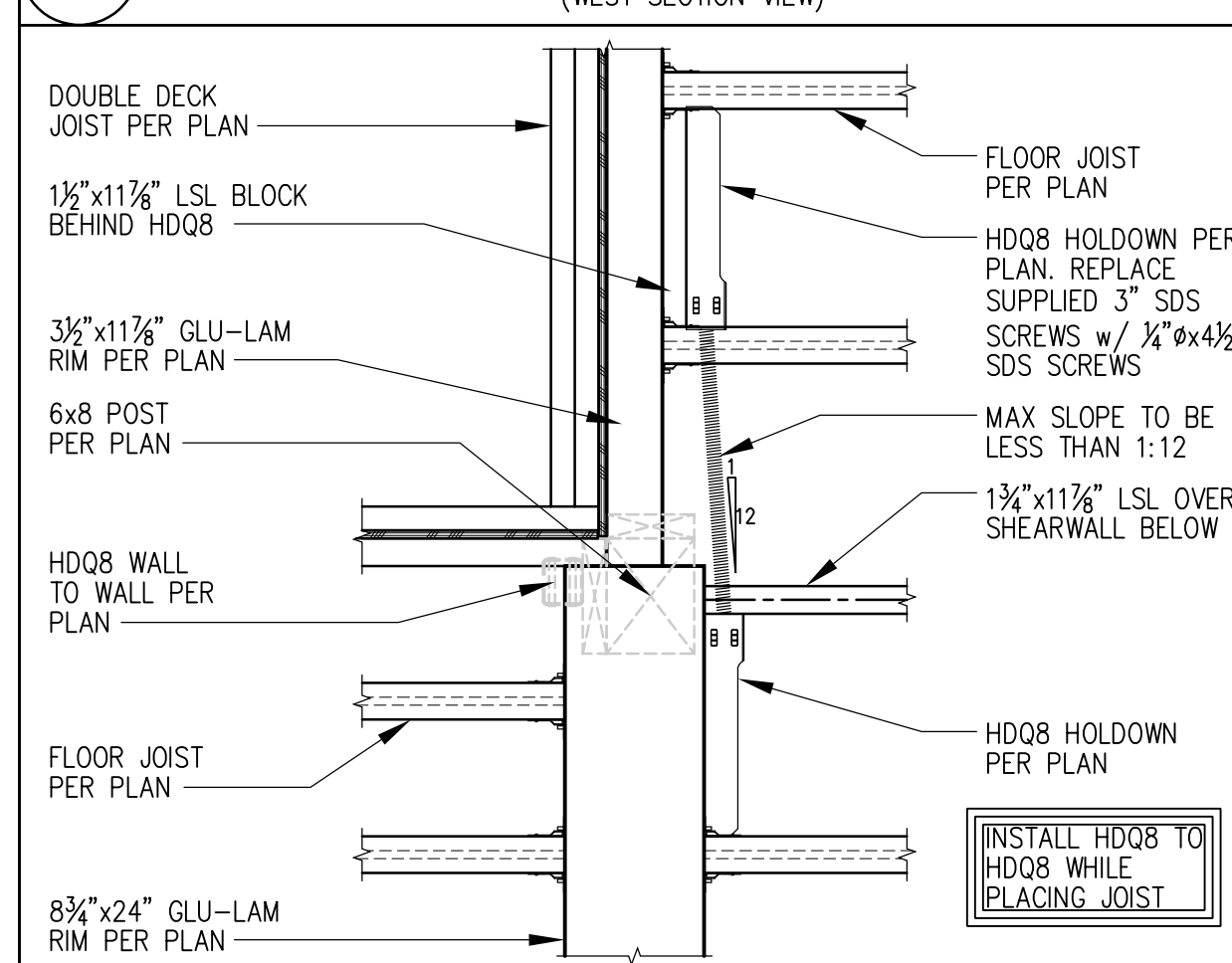
13 SHEAR TRANSFER @ FLOOR FRAMING (STRAP @ DROPPED BEAM)



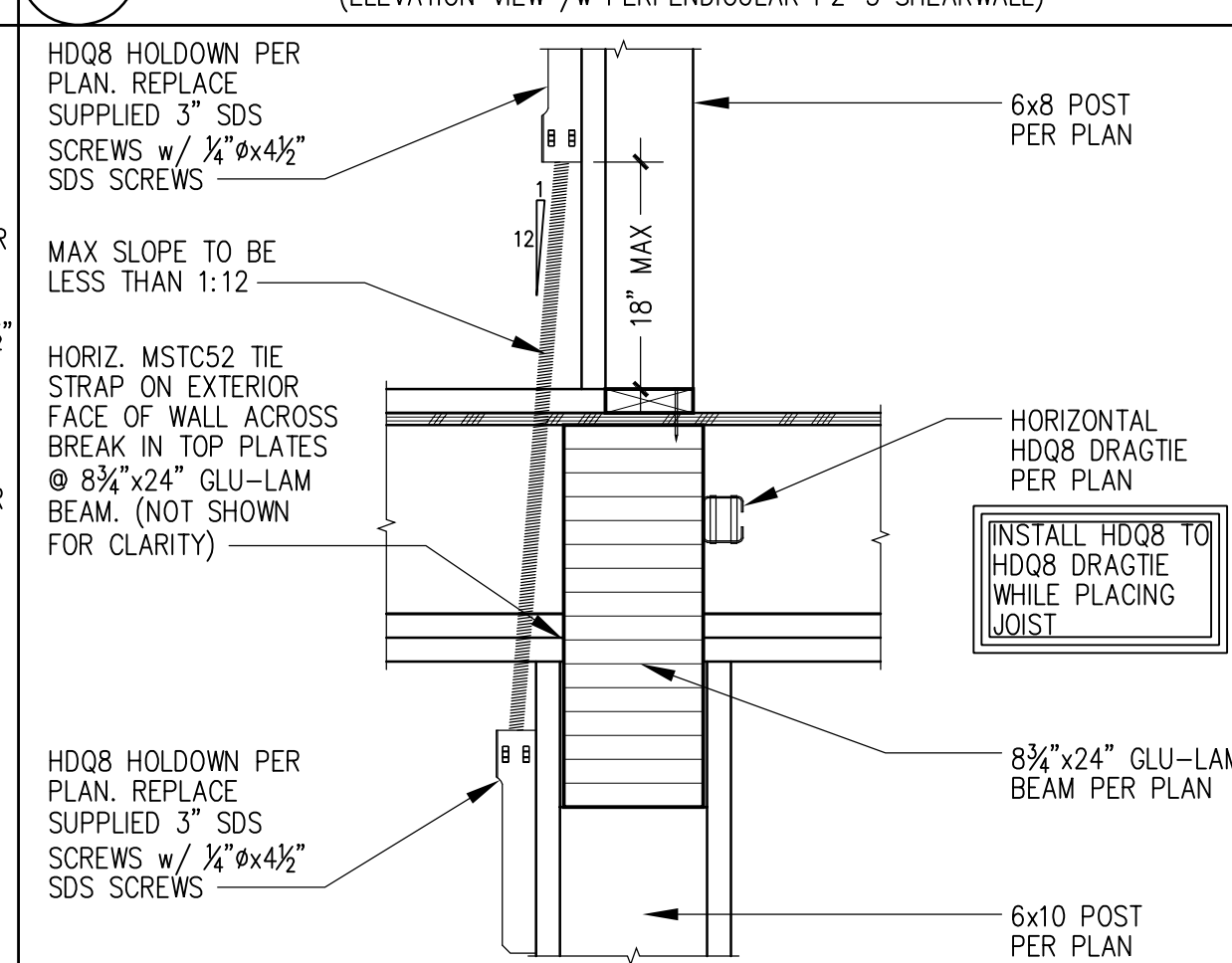
14 MSTC78 TIE STRAP @ DROPPED BEAM (ELEVATION VIEW)



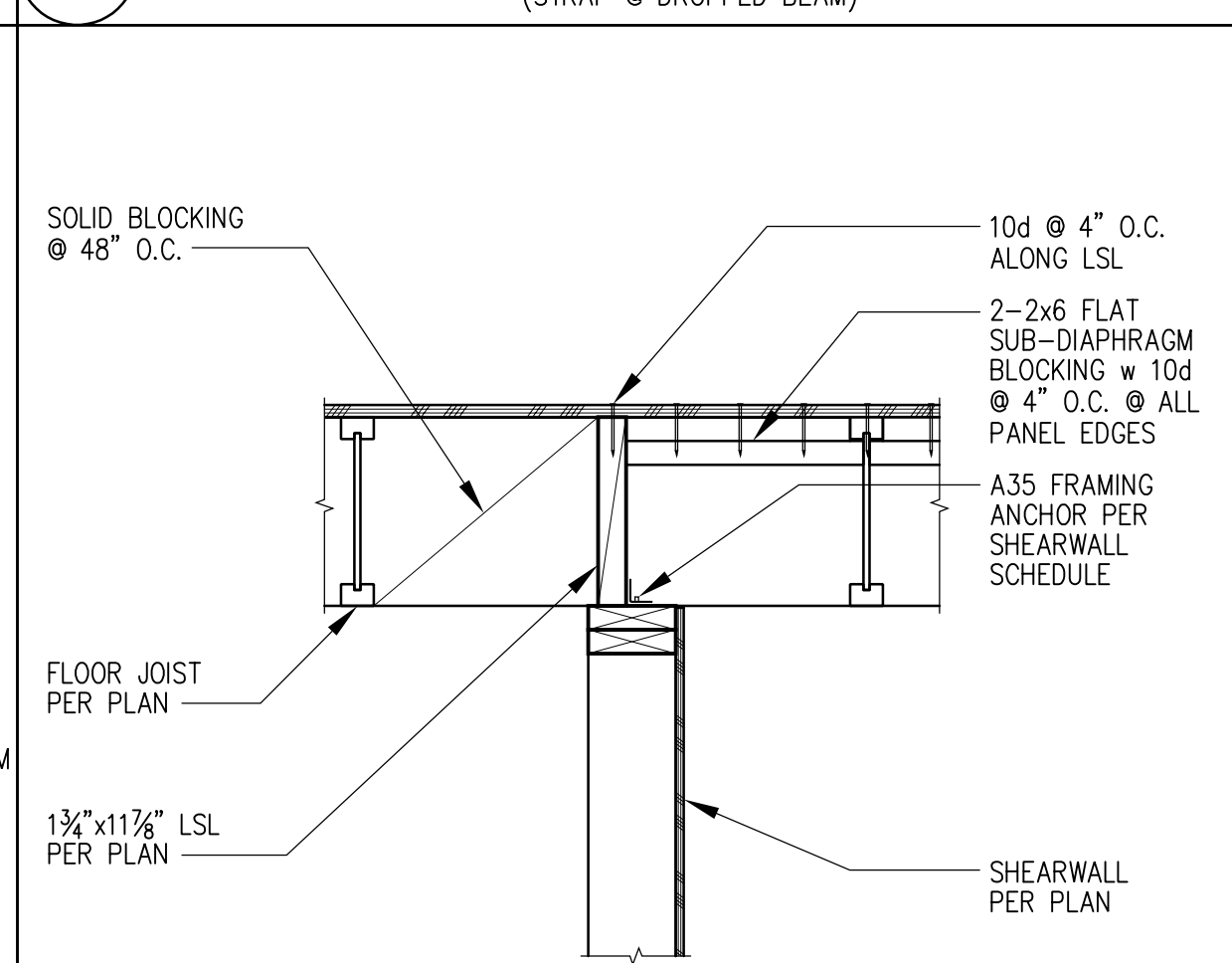
15 MST72 TIE STRAP @ DROPPED BEAM (EAST SECTION VIEW)



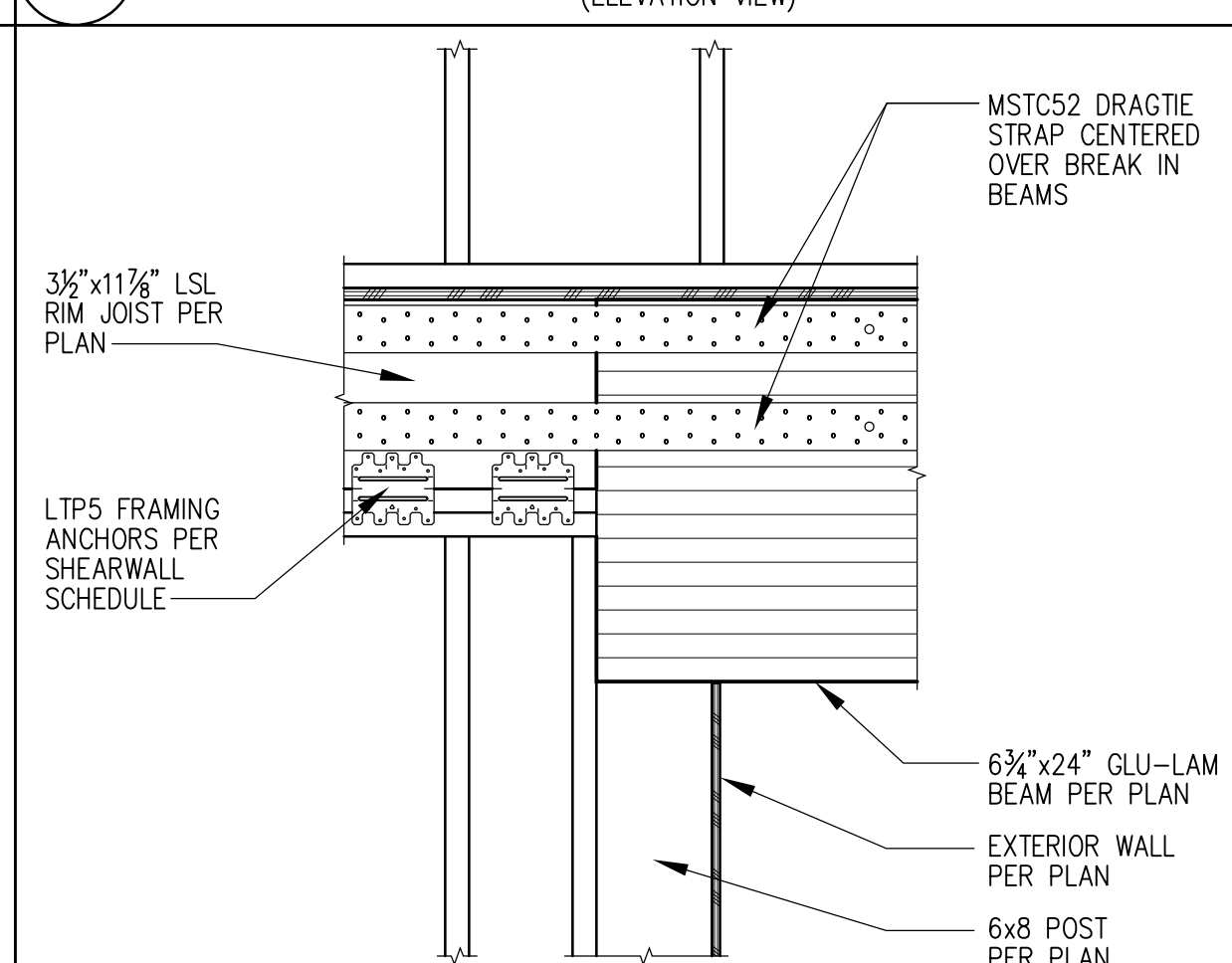
16 HDQ8 TO HDQ8 DRAGTIE (PLAN VIEW)



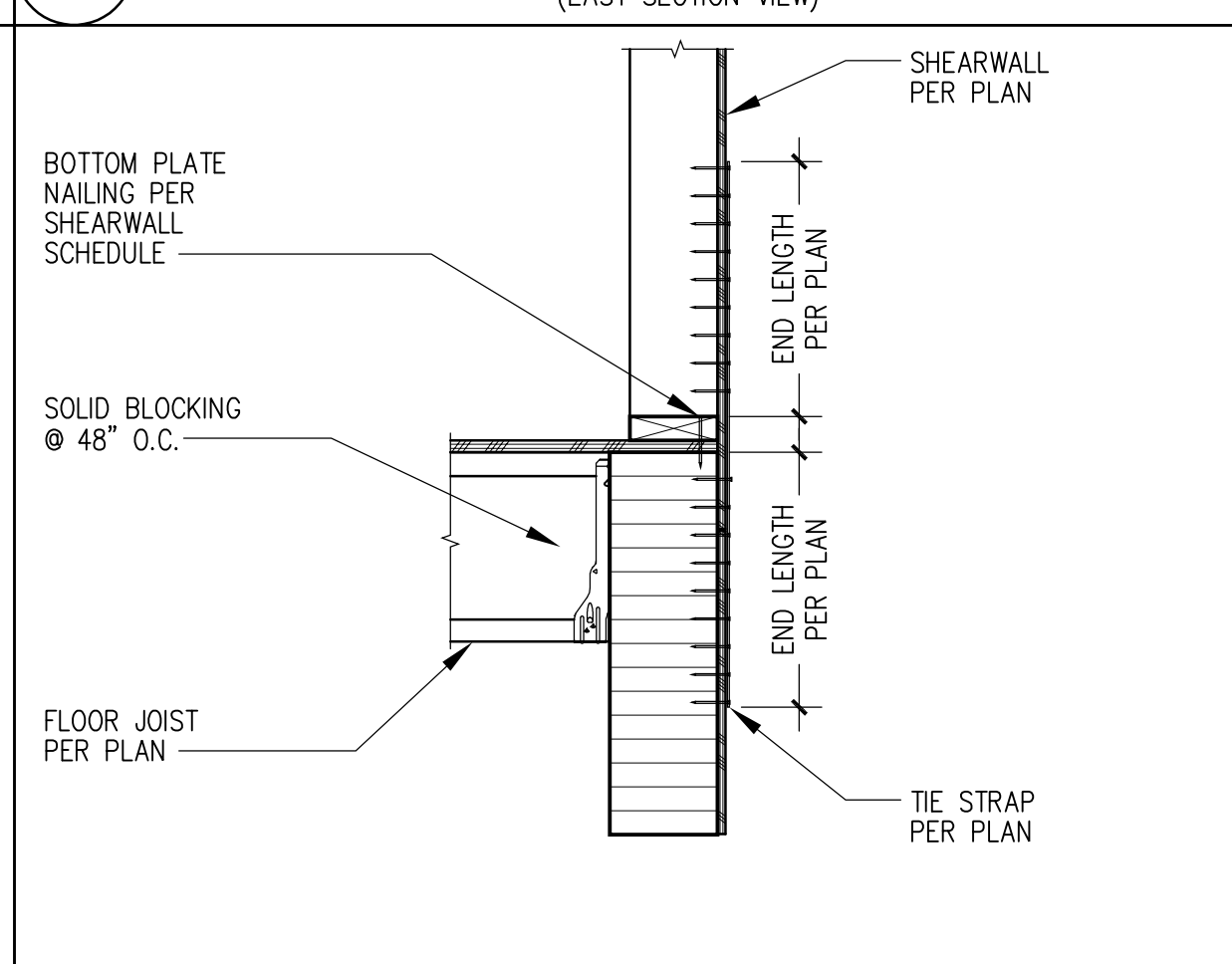
17 HOLDDOWN TO HOLDDOWN (8 3/4\"/>



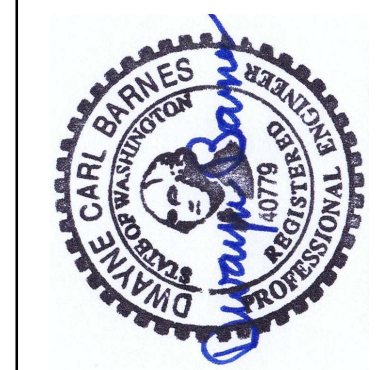
18 SHEAR TRANSFER @ FLOOR FRAMING (INTERIOR PARALLEL JOIST)



19 DRAGTIE @ FLOOR FRAMING



20 SHEAR TRANSFER @ FLOOR FRAMING (STRAP @ FLUSH BEAM)



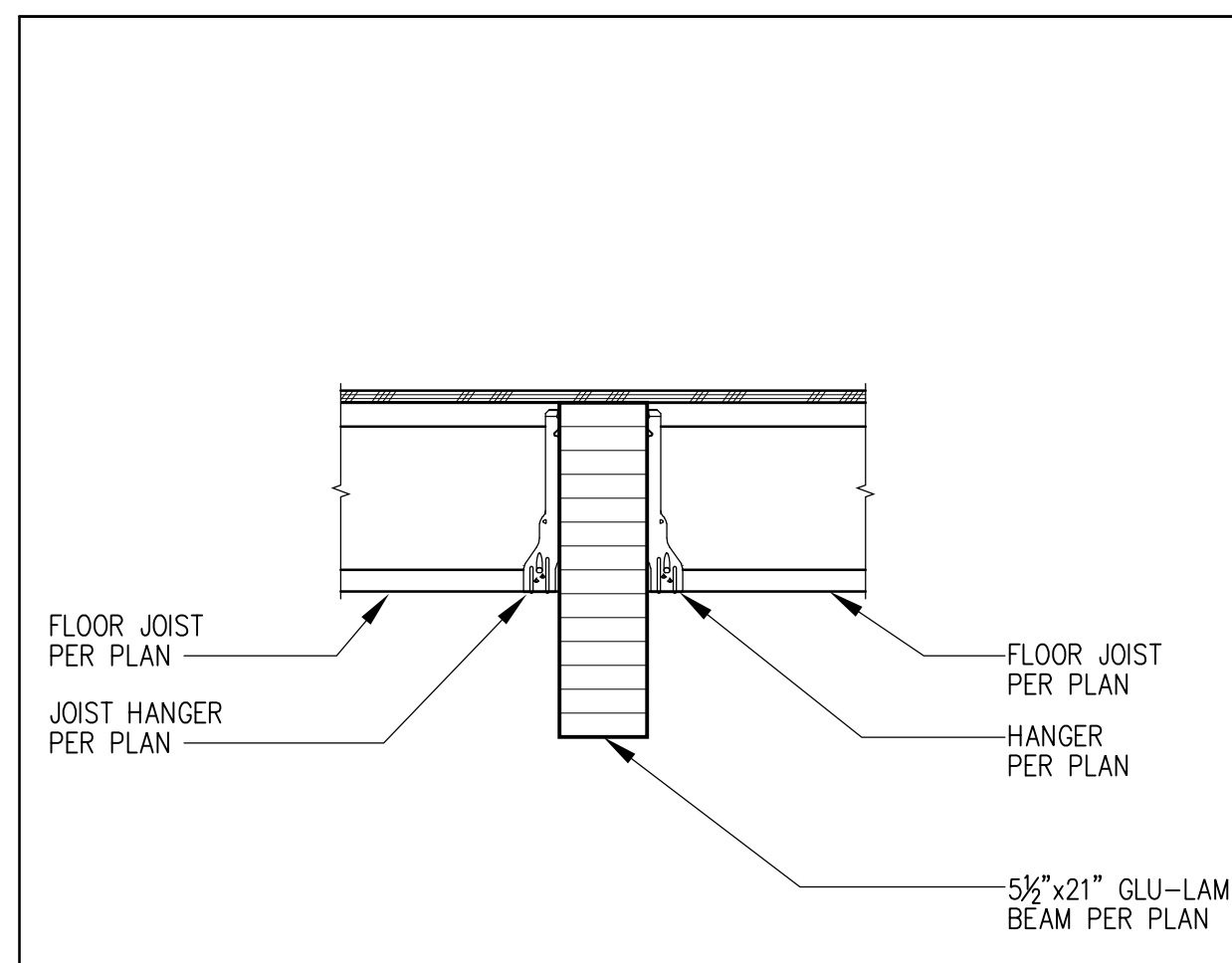
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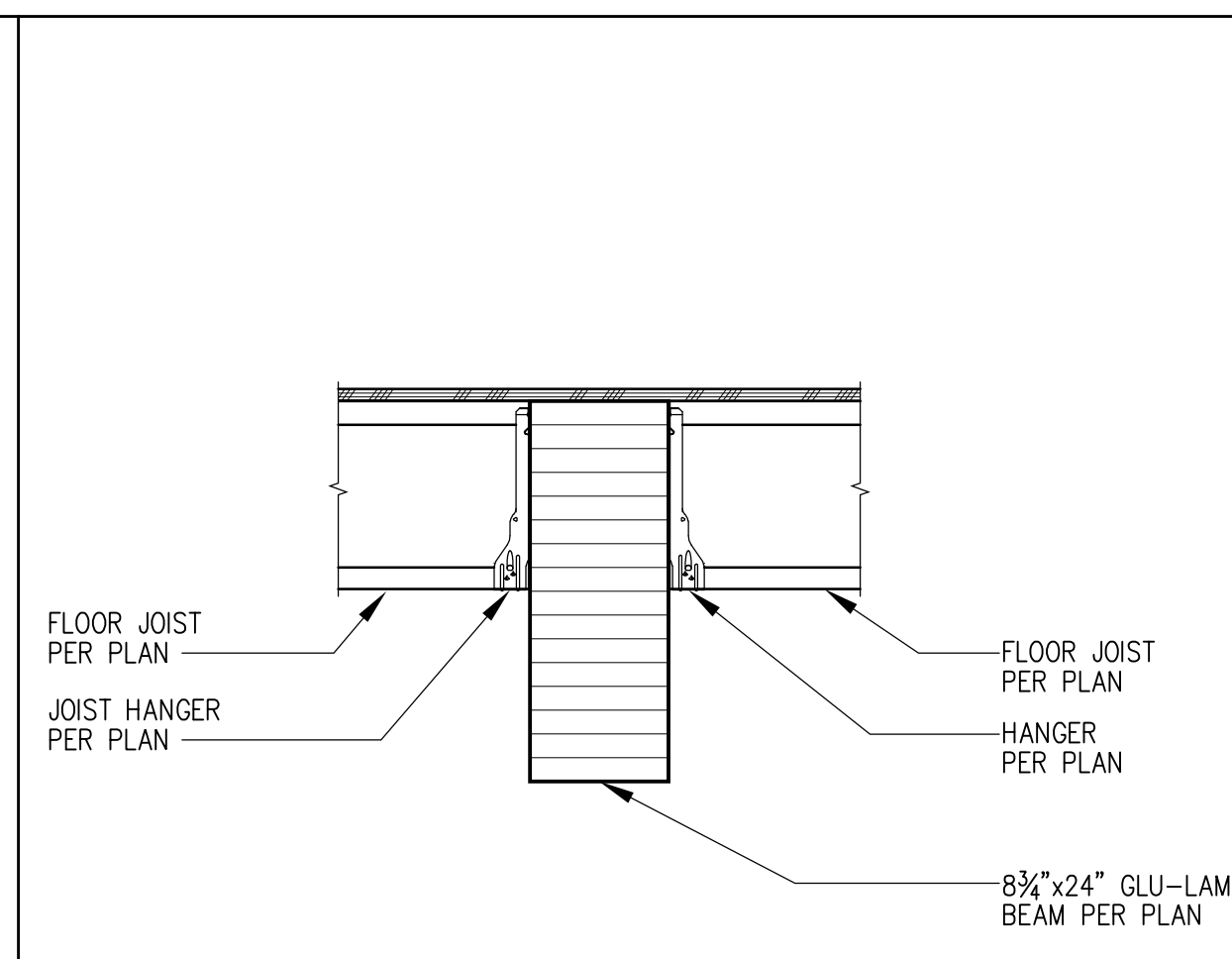
18-025

S4.0  
FRAMING DETAILS

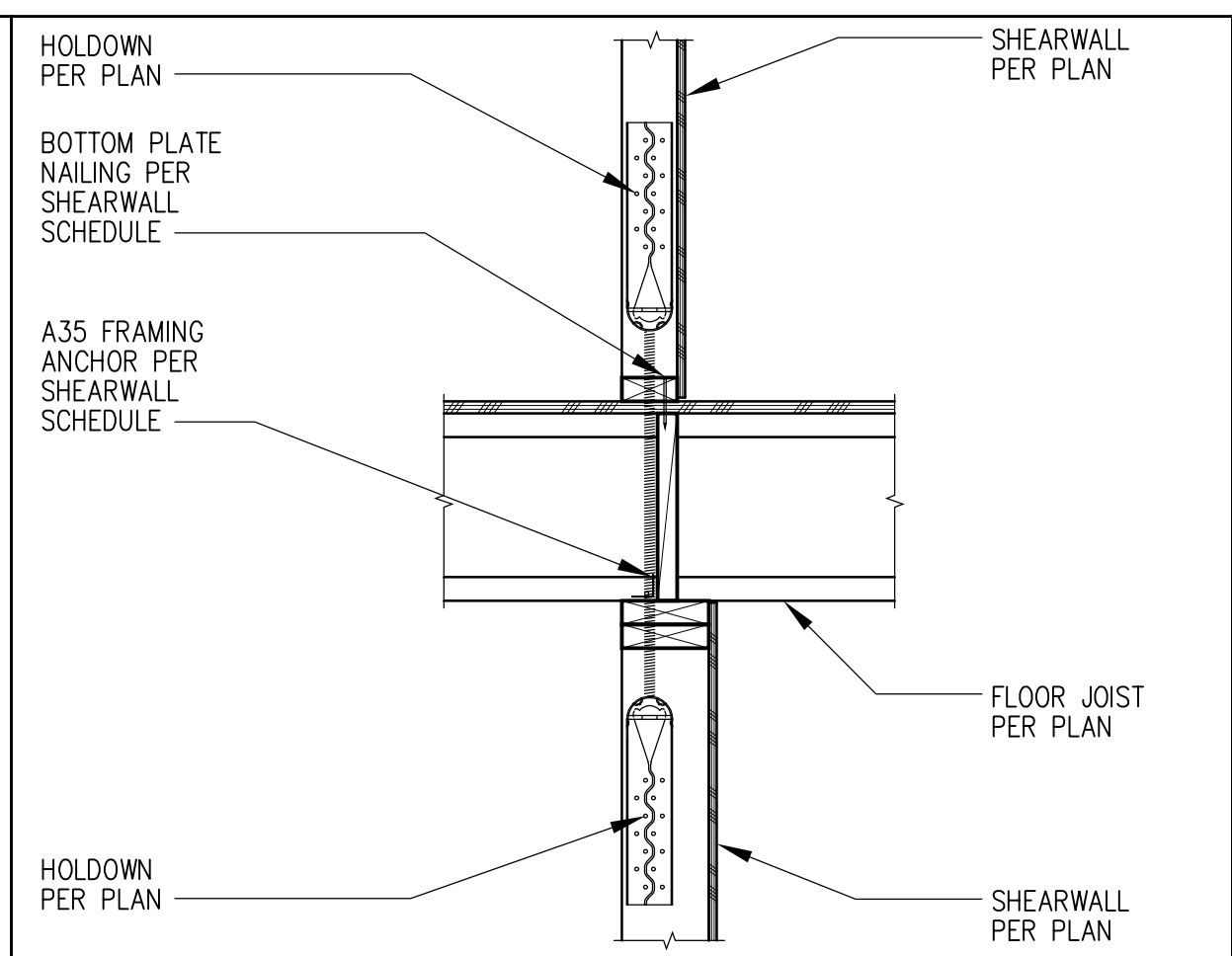




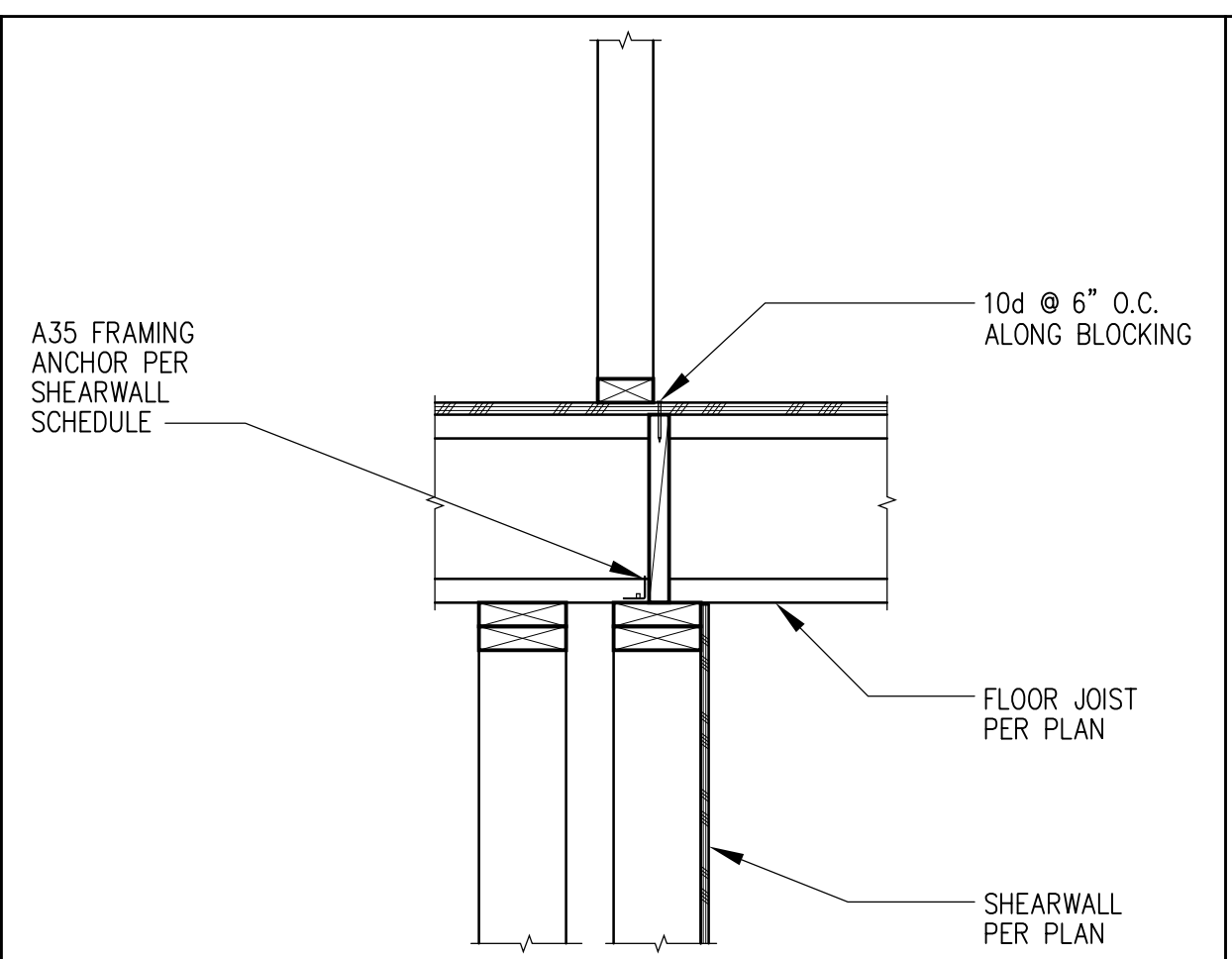
1 FLOOR FRAMING @ GARAGE BEAM  
(5 1/2"x21" GLU-LAM)



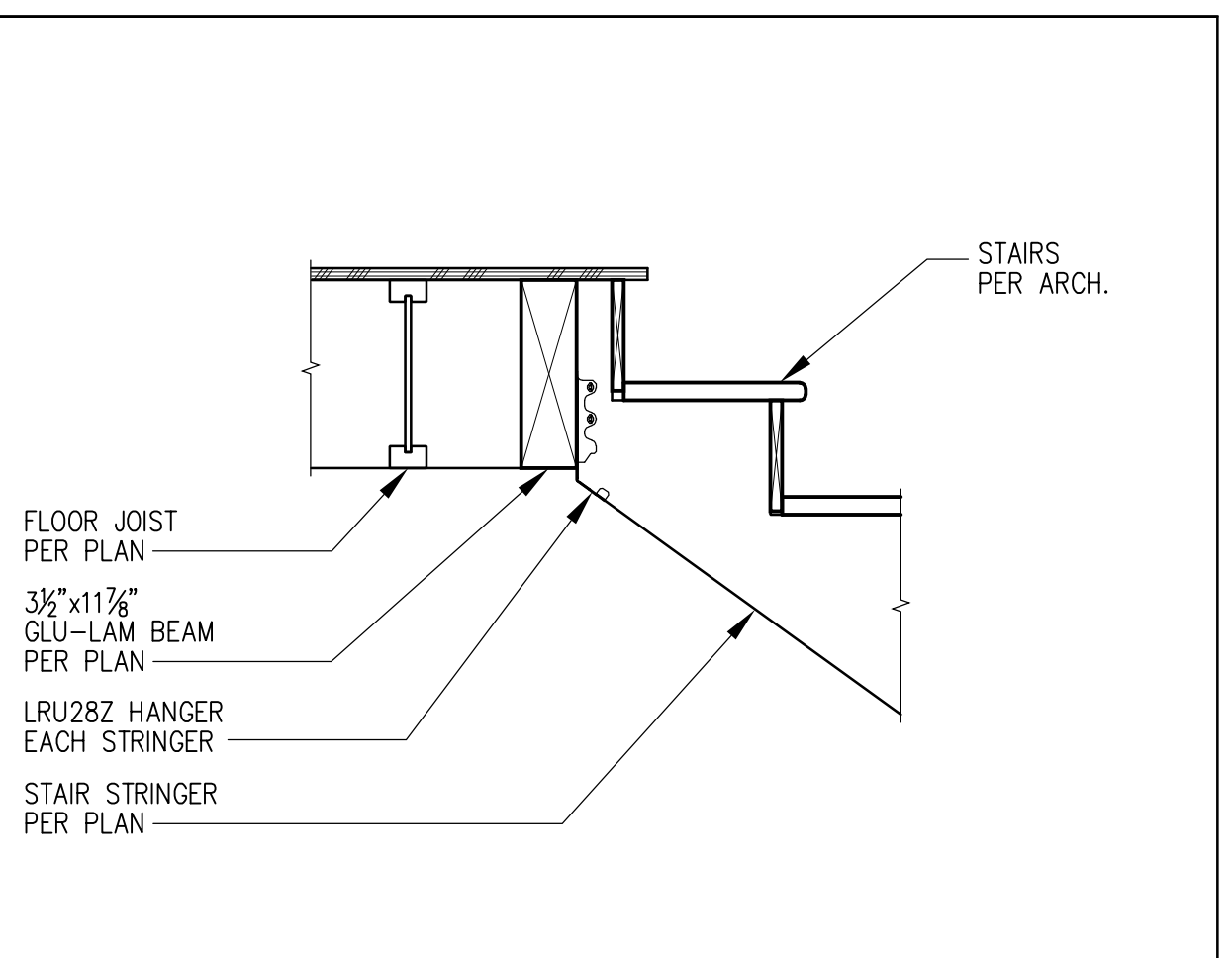
2 FLOOR FRAMING @ GARAGE BEAM  
(8 3/4"x24" GLU-LAM)



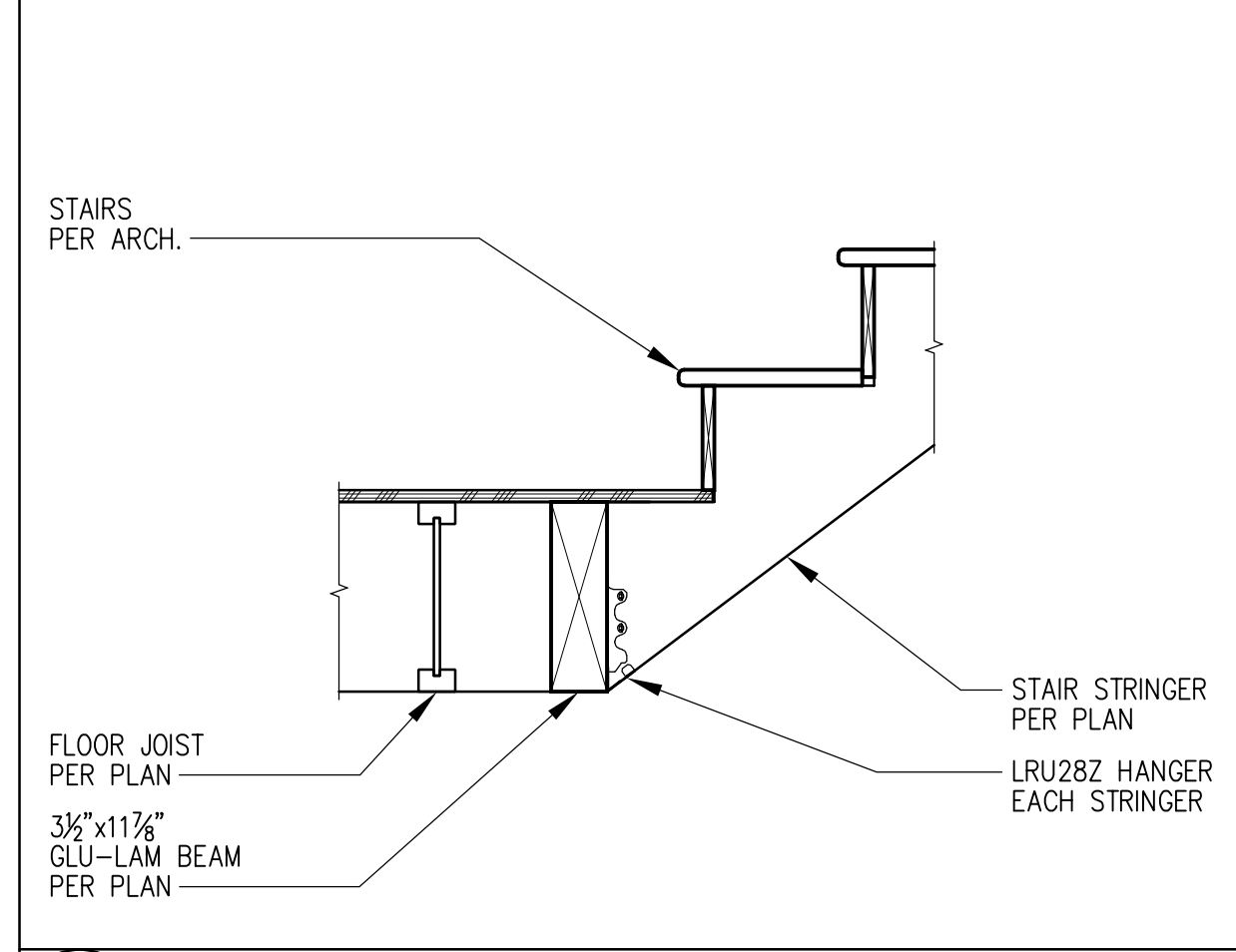
3 SHEAR TRANSFER @ FLOOR FRAMING  
(HOLD-DOWN @ INTERIOR PERPENDICULAR JOIST)



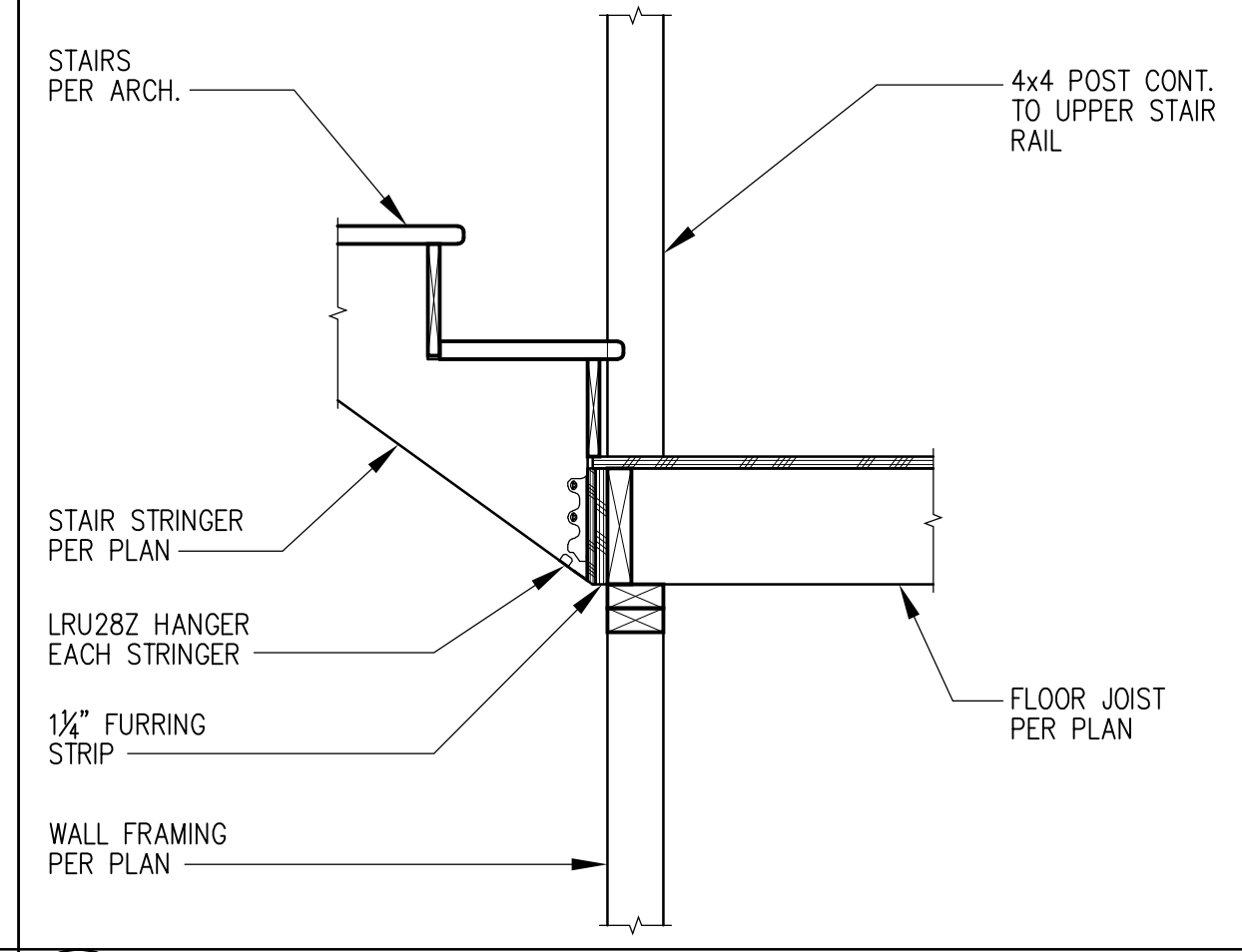
4 SHEAR TRANSFER @ FLOOR FRAMING  
(INTERIOR PERPENDICULAR JOIST)



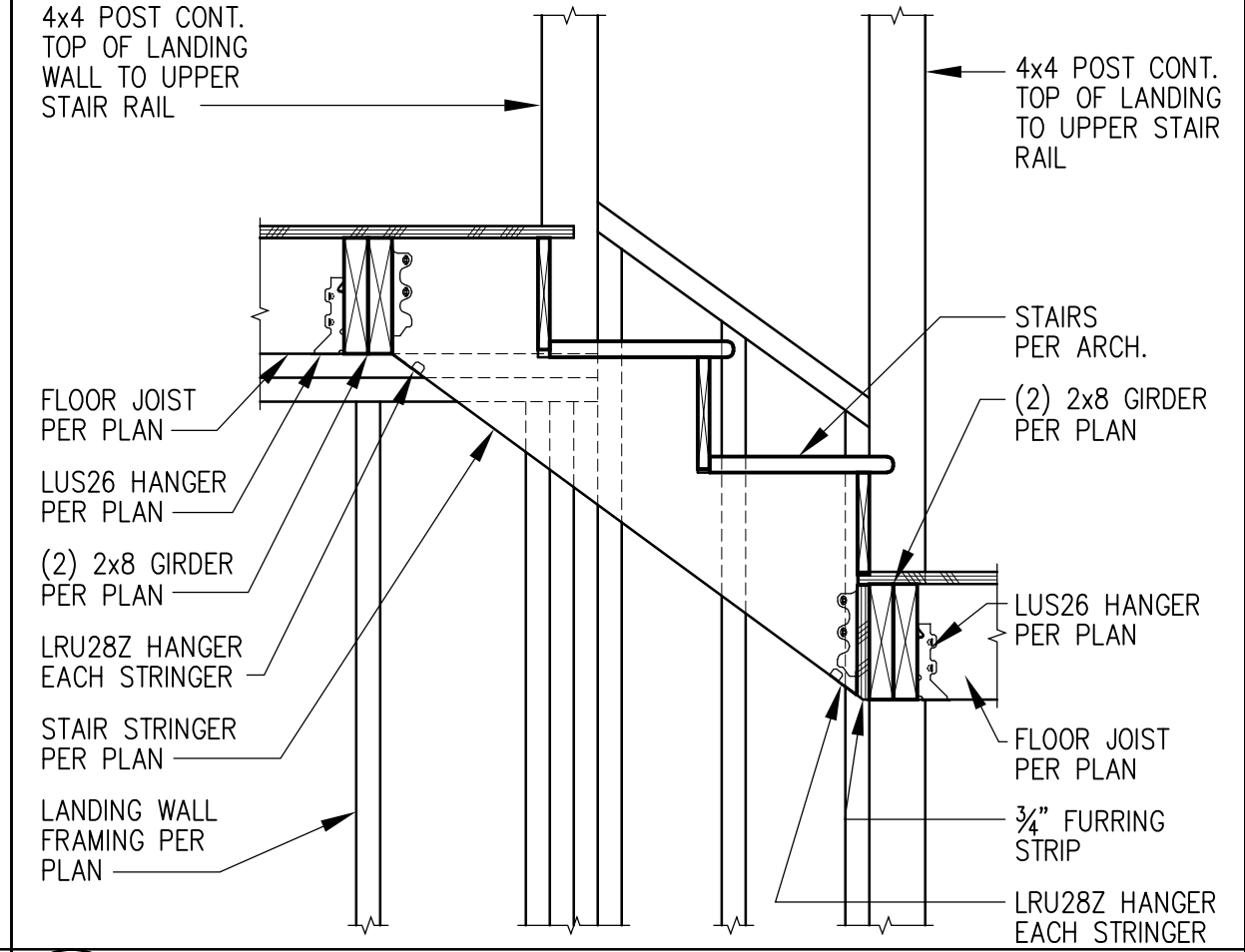
5 STAIR STRINGER FRAMING  
(BASEMENT STAIRS @ MAIN FLOOR FRAMING)



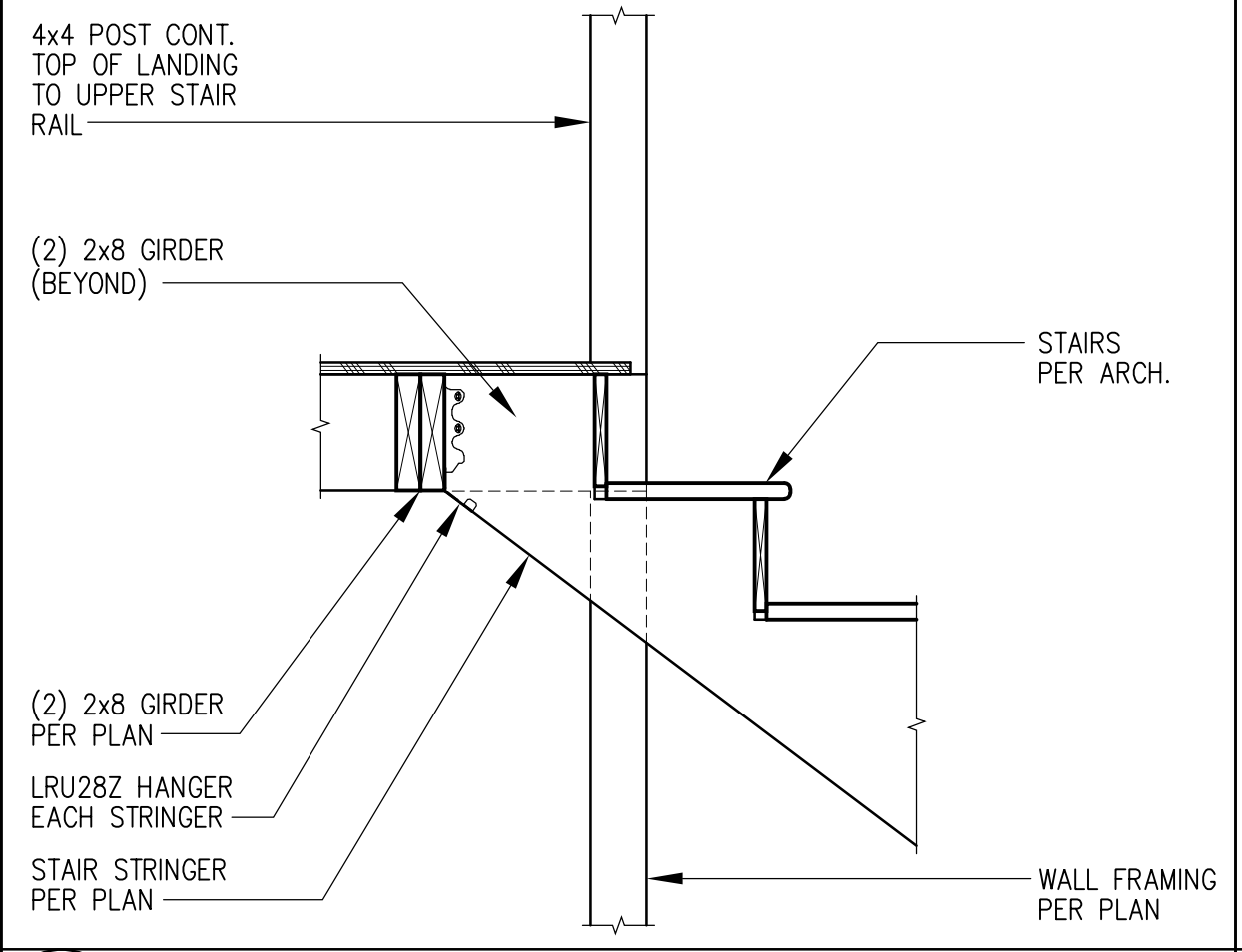
6 STAIR STRINGER FRAMING  
(UPPER FLOOR STAIRS @ MAIN FLOOR FRAMING)



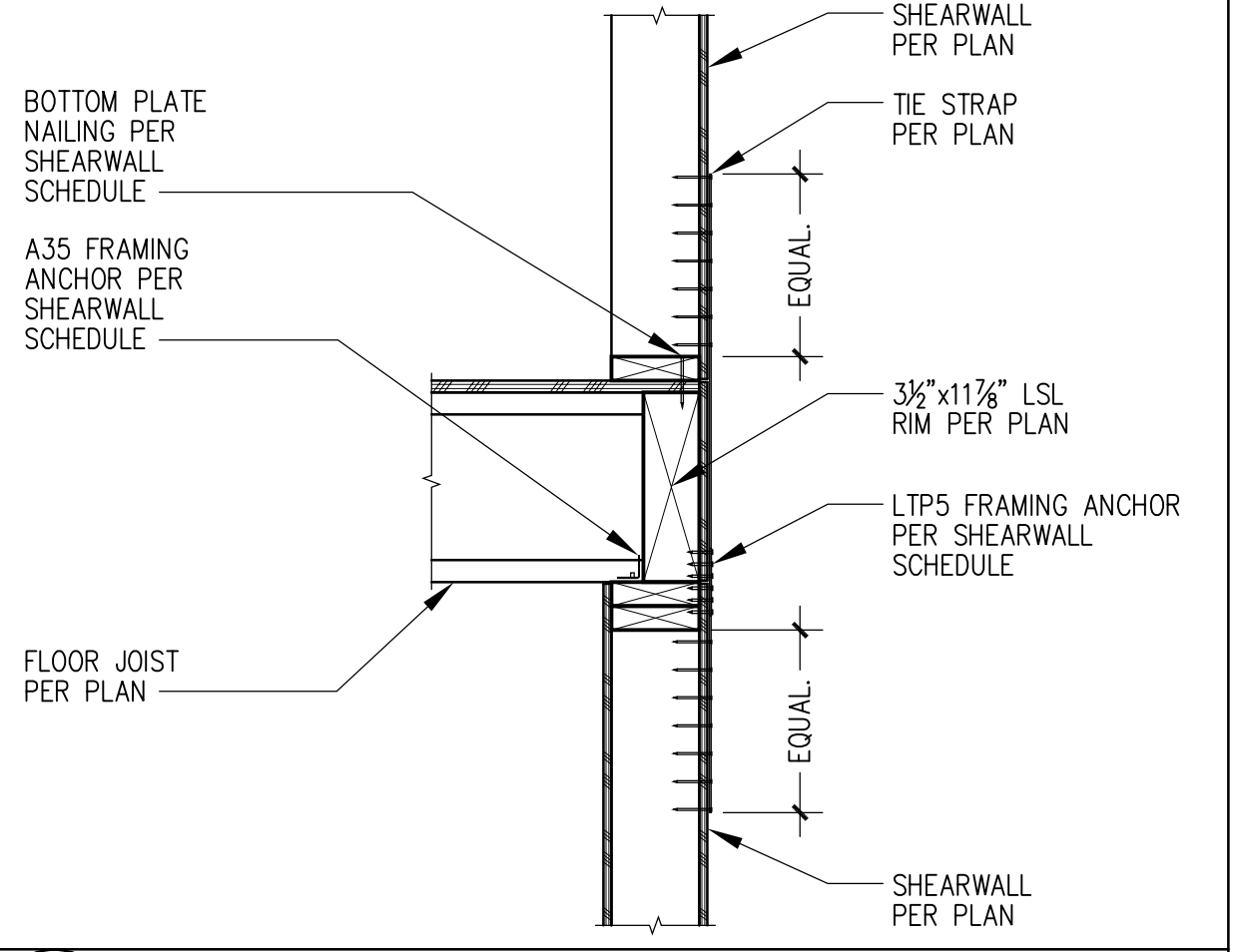
7 STAIR STRINGER FRAMING  
(BASEMENT STAIRS @ UPPER MID LANDING)



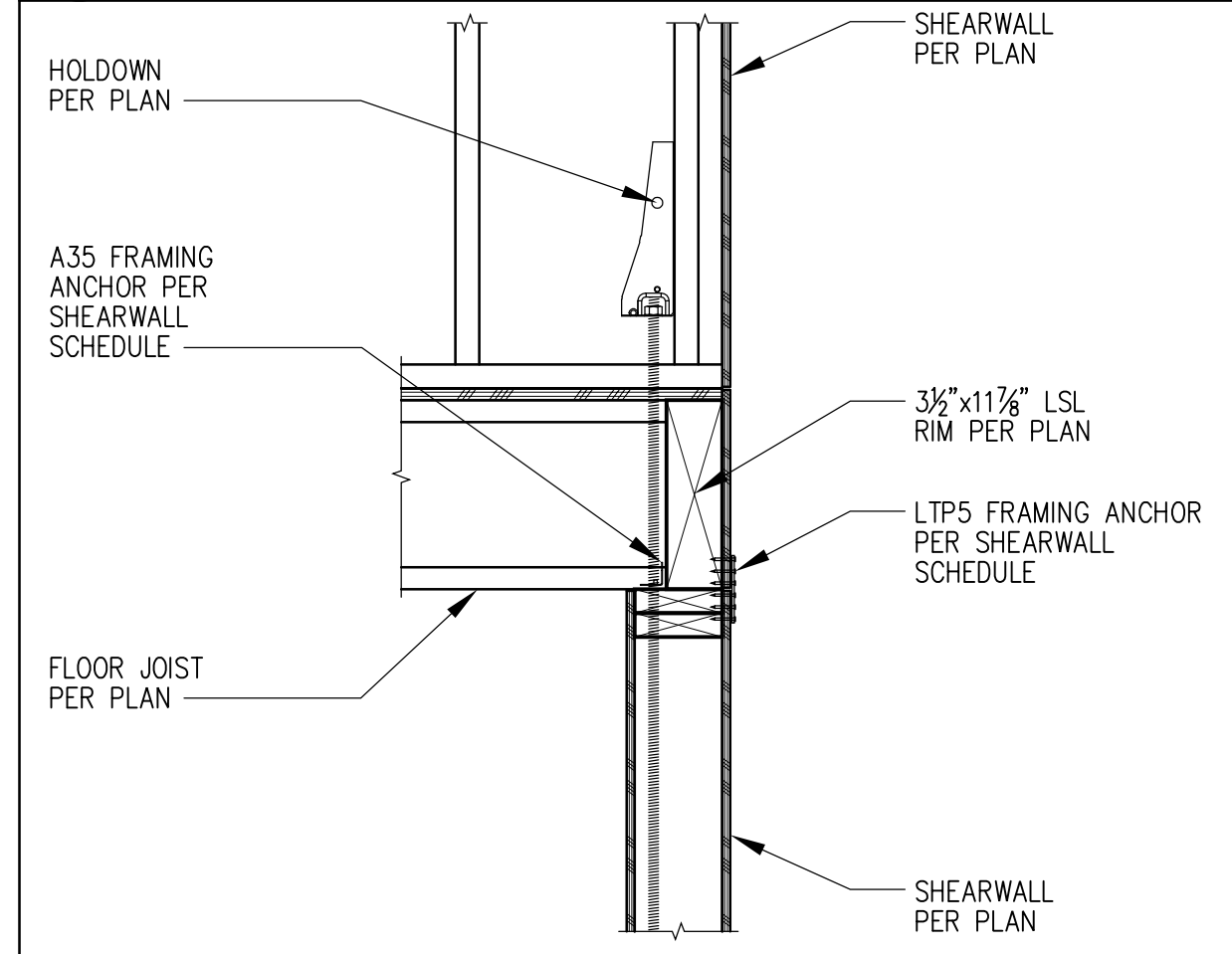
8 STAIR STRINGER FRAMING  
(BASEMENT STAIRS BETWEEN MID LANDINGS)



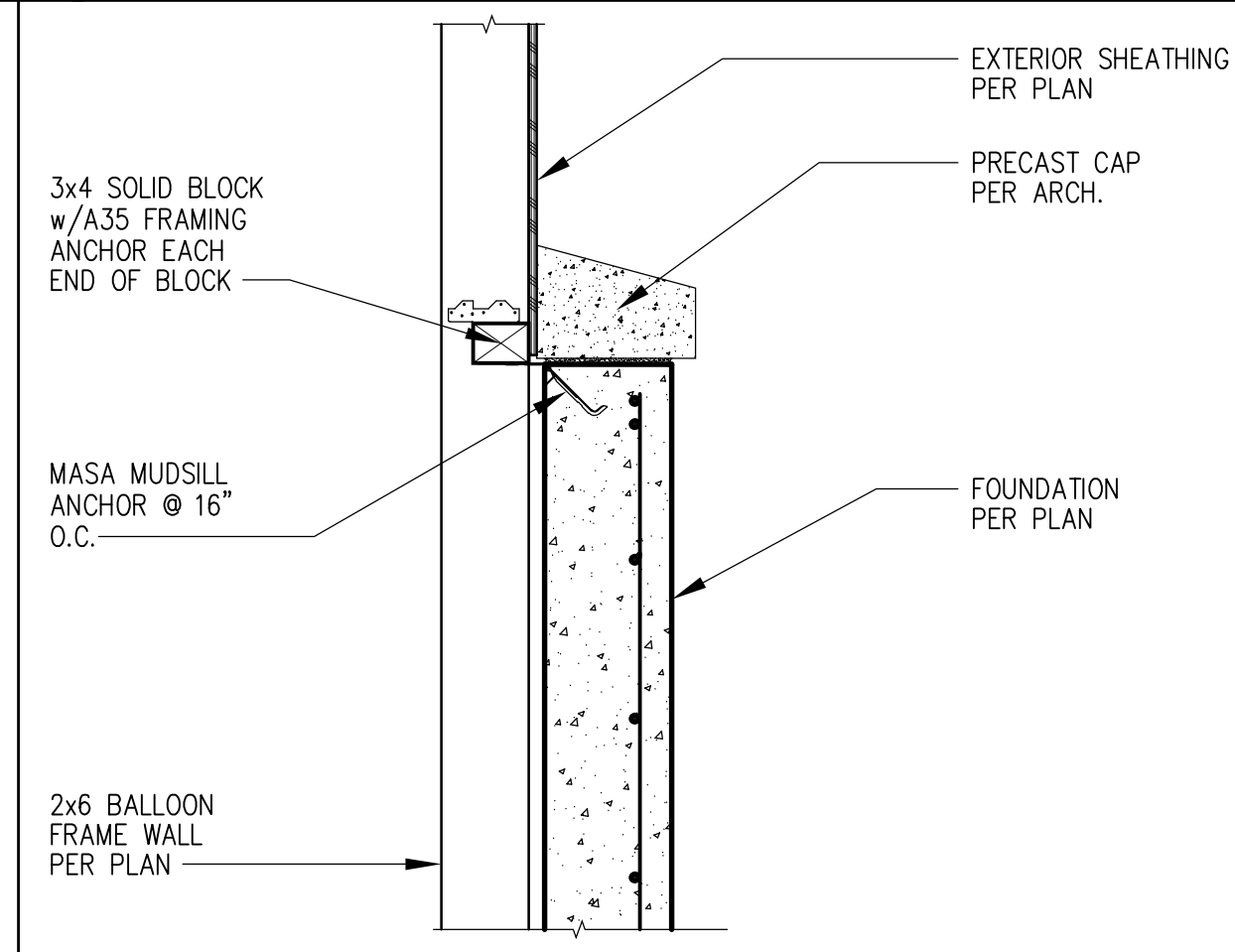
9 STAIR STRINGER FRAMING  
(BASEMENT STAIRS @ LOWER MID LANDING)



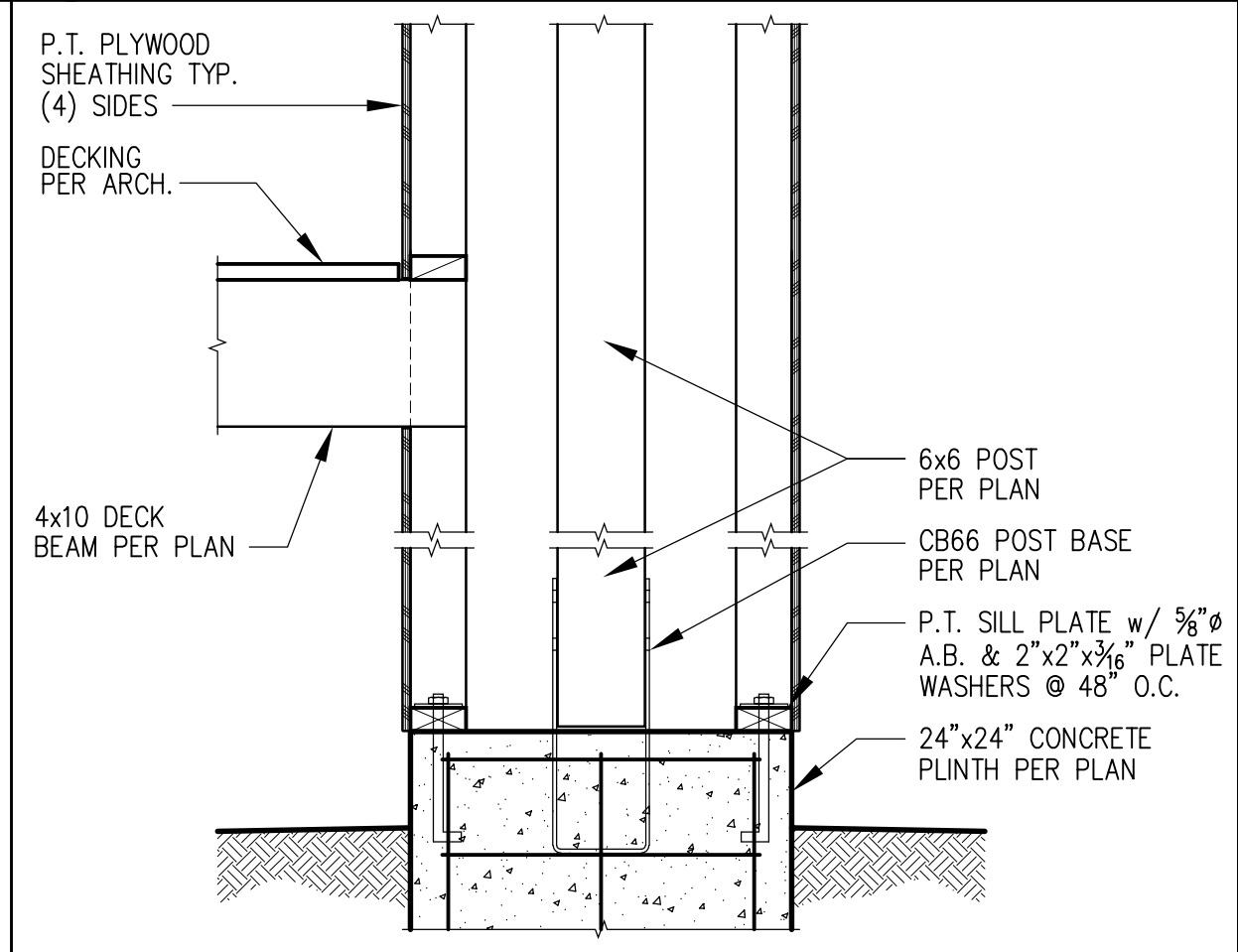
10 SHEAR TRANSFER @ FLOOR FRAMING  
(PERPENDICULAR JOIST w/ TIE STRAP)



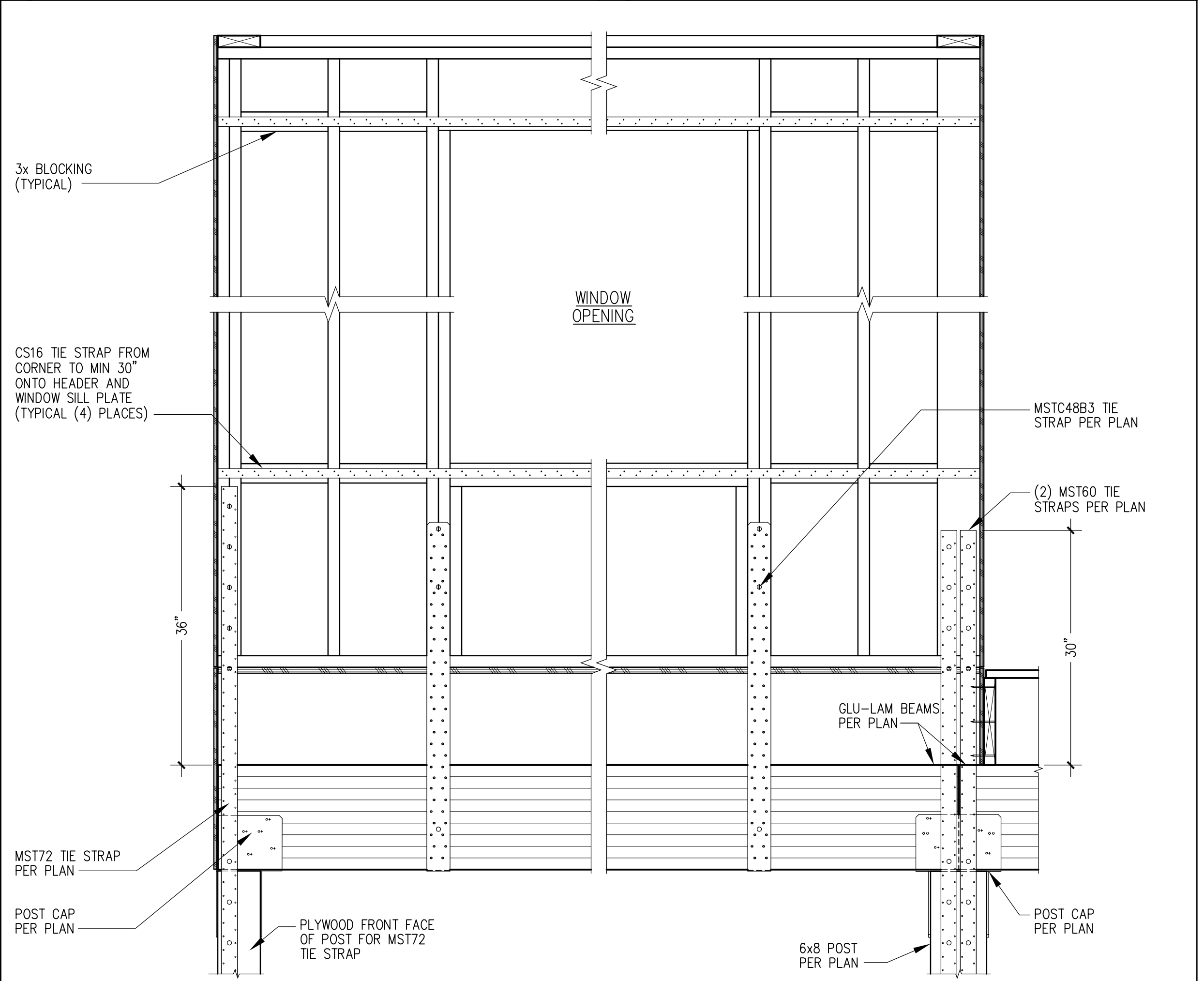
11 SHEAR TRANSFER @ FLOOR FRAMING  
(PERPENDICULAR JOIST w/ TIE STRAP)



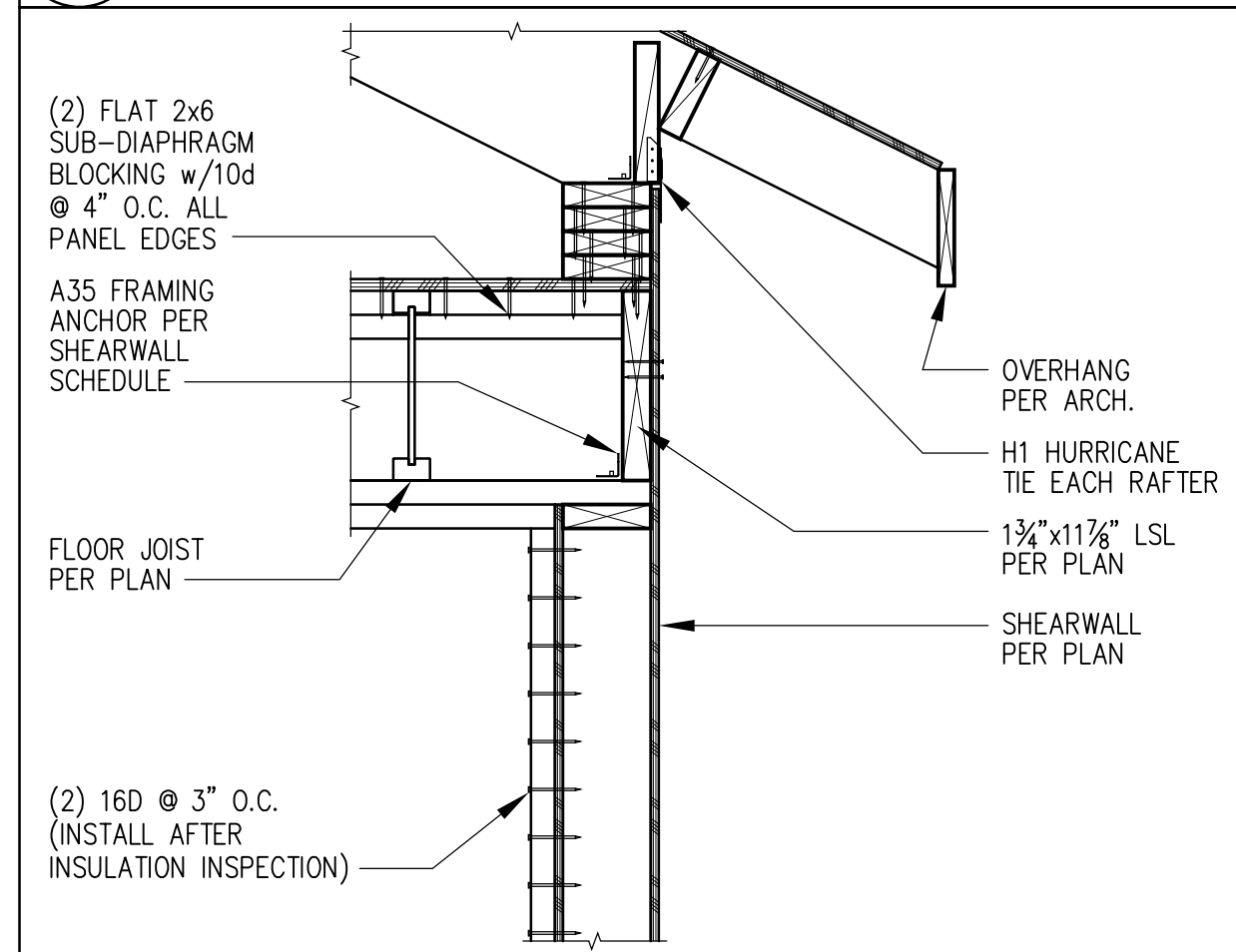
12 TWO-STORY BALLOON FRAME WALL  
(NON-SHEARWALL @ ENTRY & STAIRS)



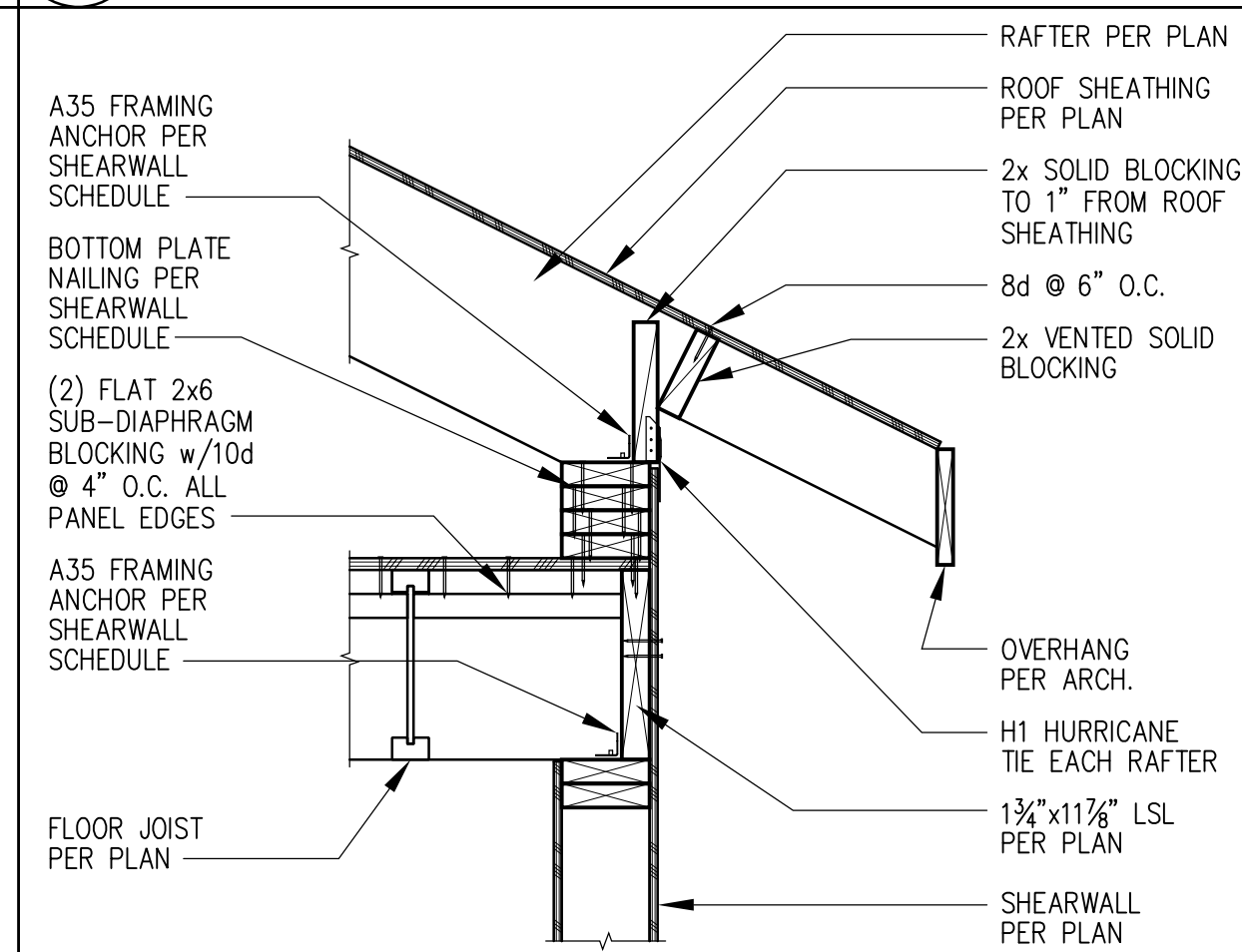
13 DECK BEAM @ ENTRY COLUMN



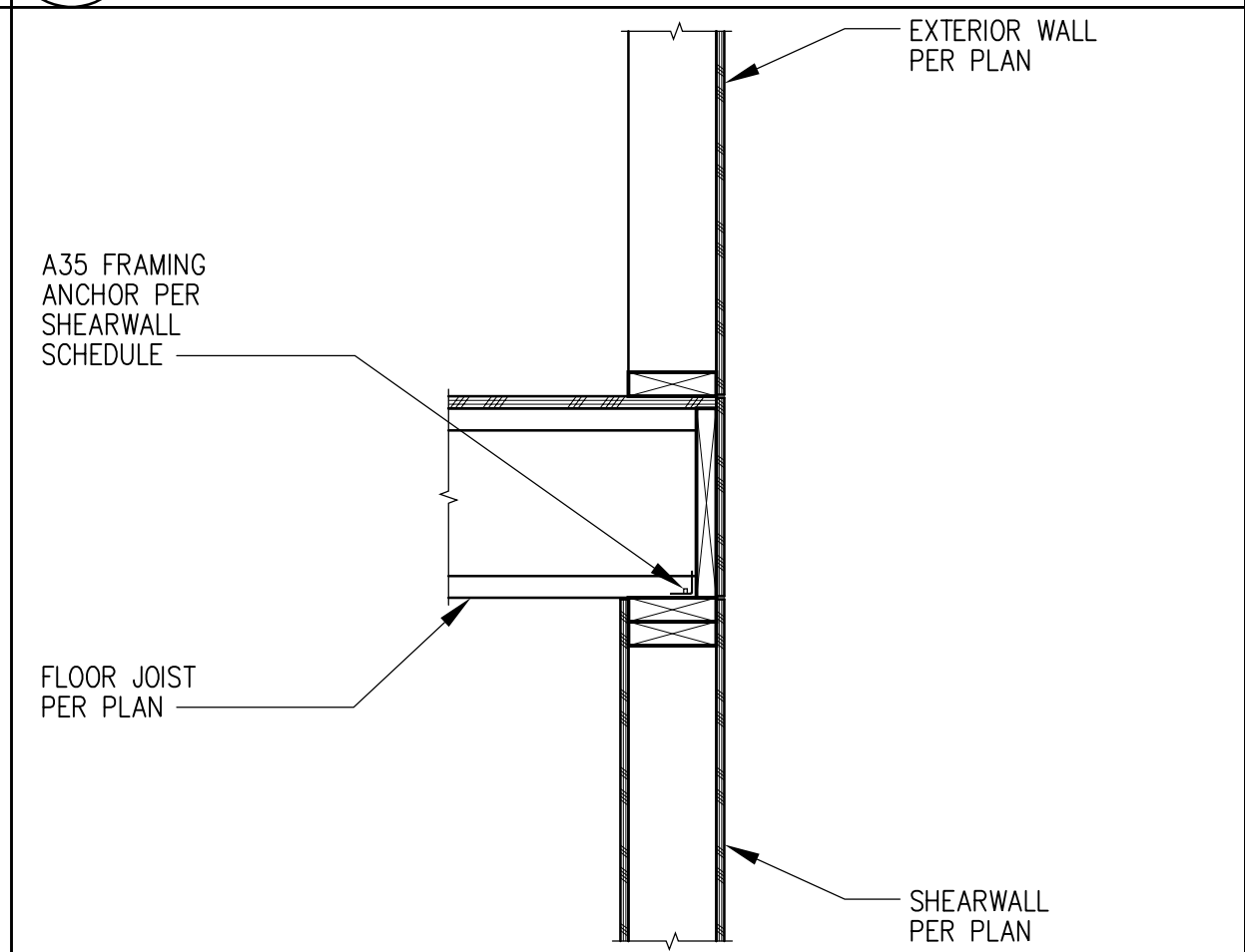
17 SHEARWALL WITH OPENINGS



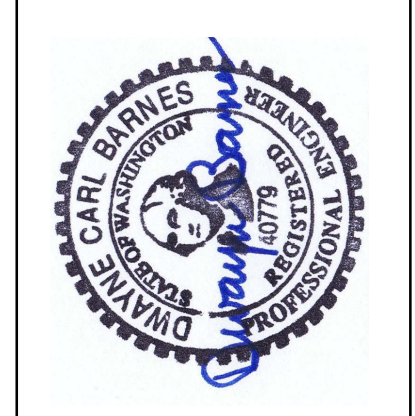
14 SHEAR TRANSFER @ P2-3 SHEARWALL  
(PERPENDICULAR WALL)



15 SHEAR TRANSFER @ EAVE  
(ATTIC EAVE)



16 SHEAR TRANSFER @ FLOOR FRAMING  
(PERPENDICULAR JOIST)

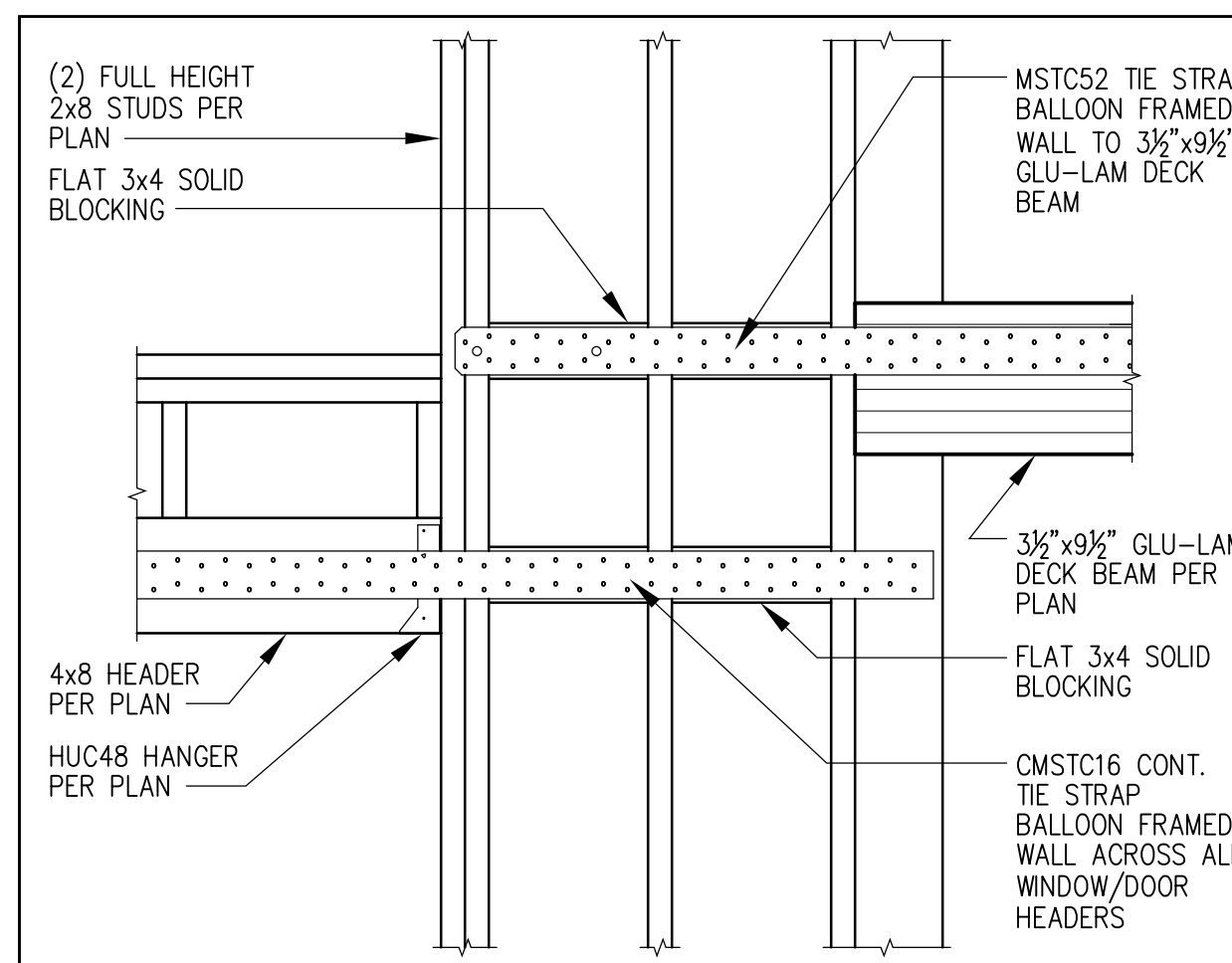


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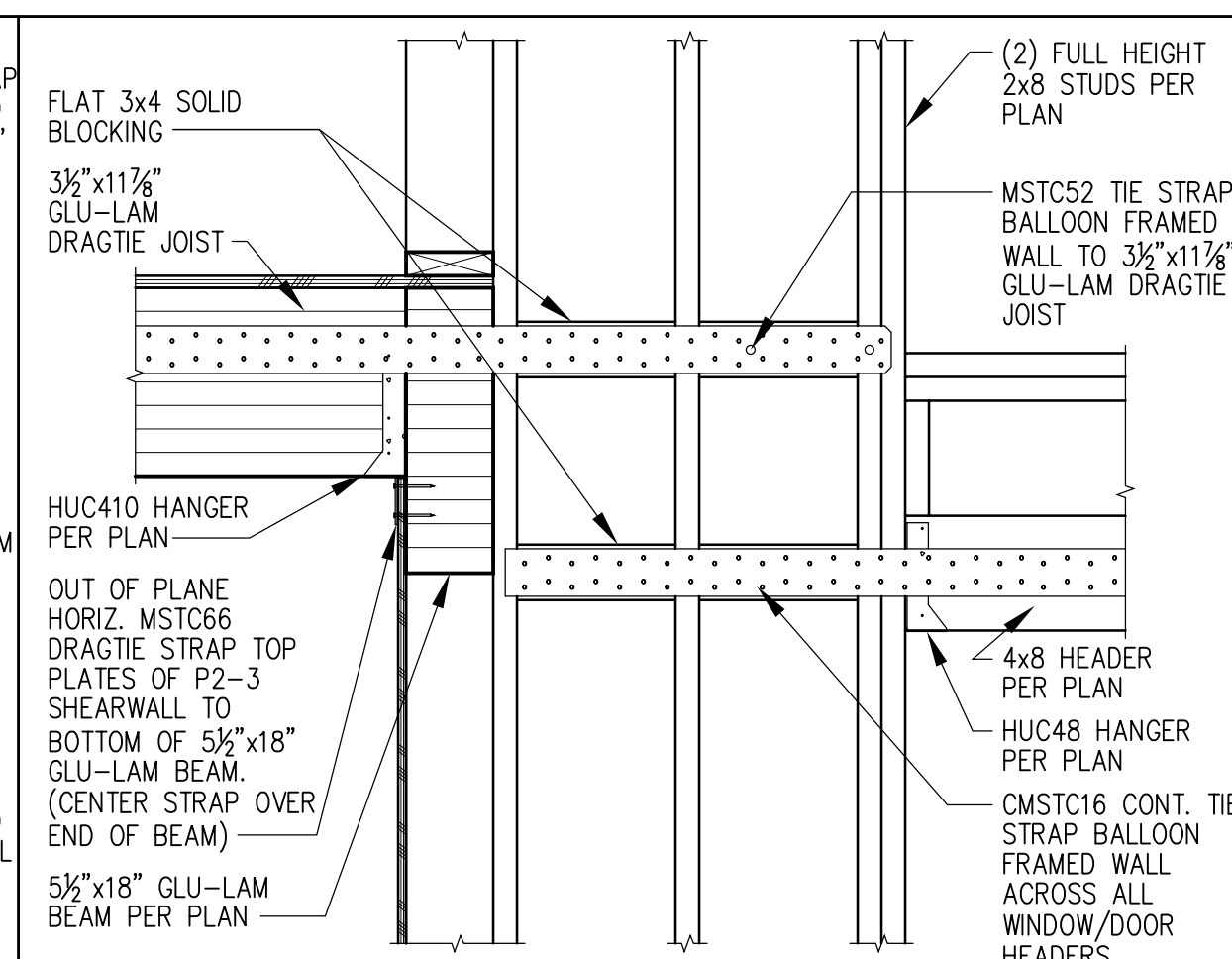
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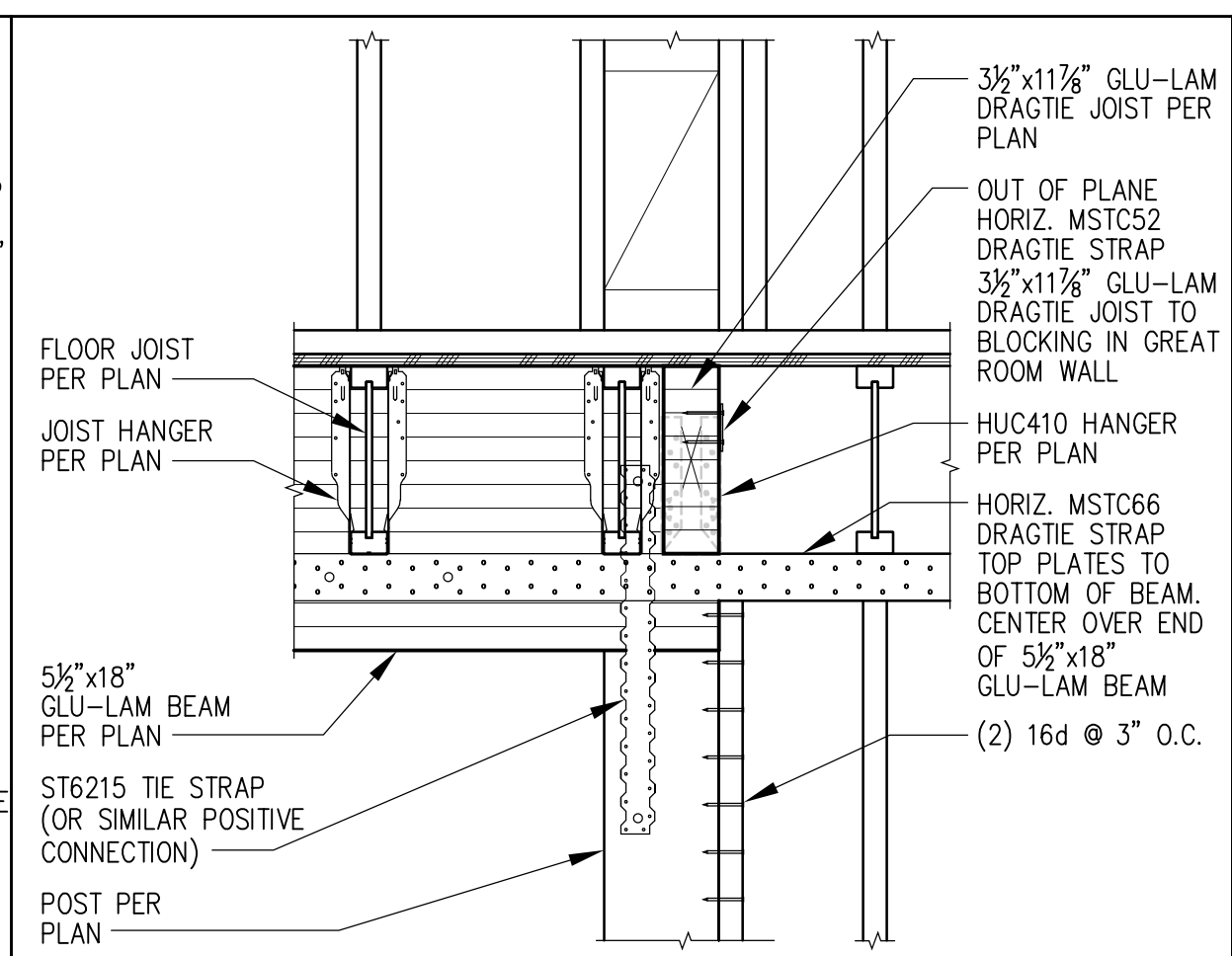




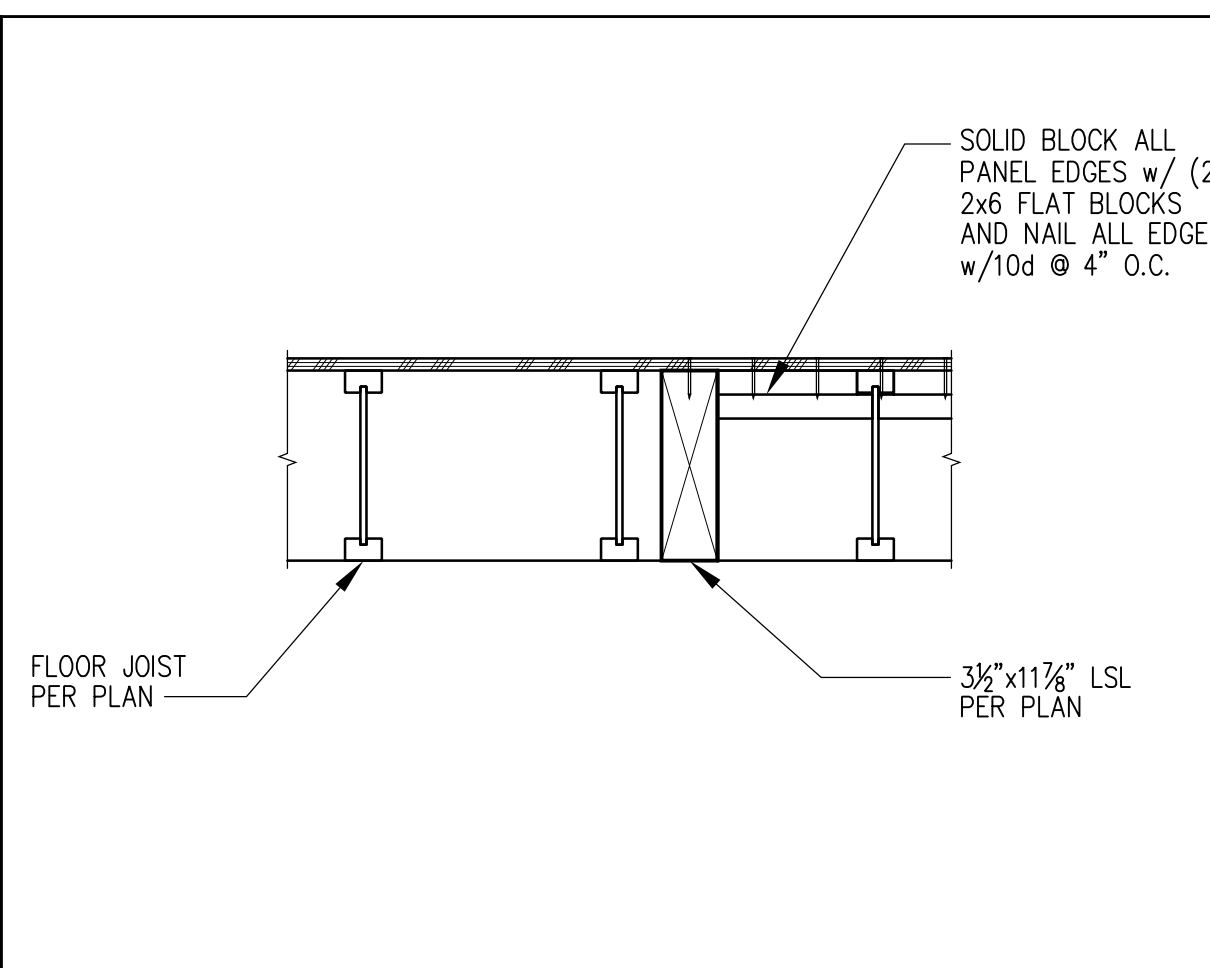
1 TIE STRAP GREAT ROOM TO DECK BEAM



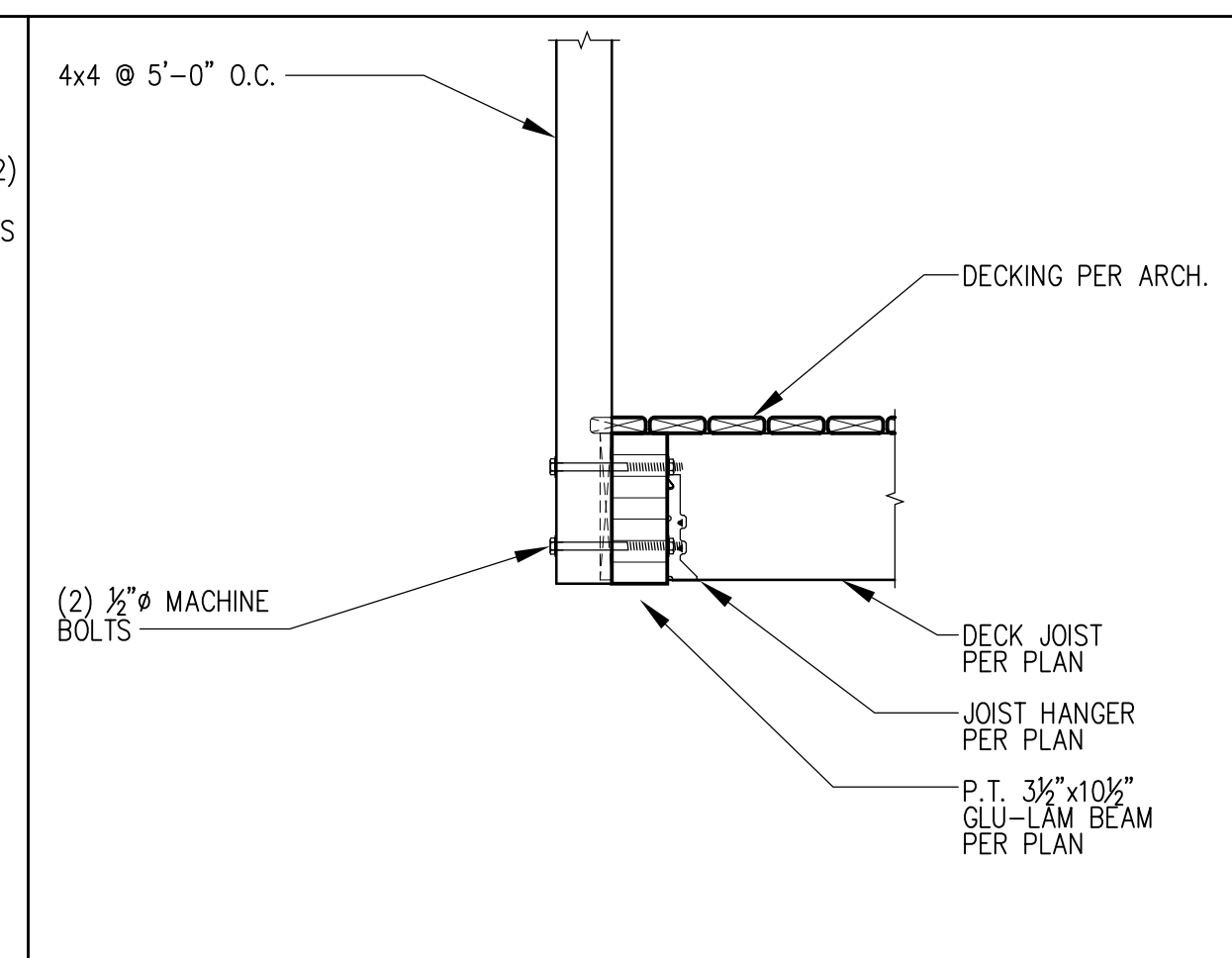
2 TIE STRAP GREAT ROOM TO FLOOR FRAMING



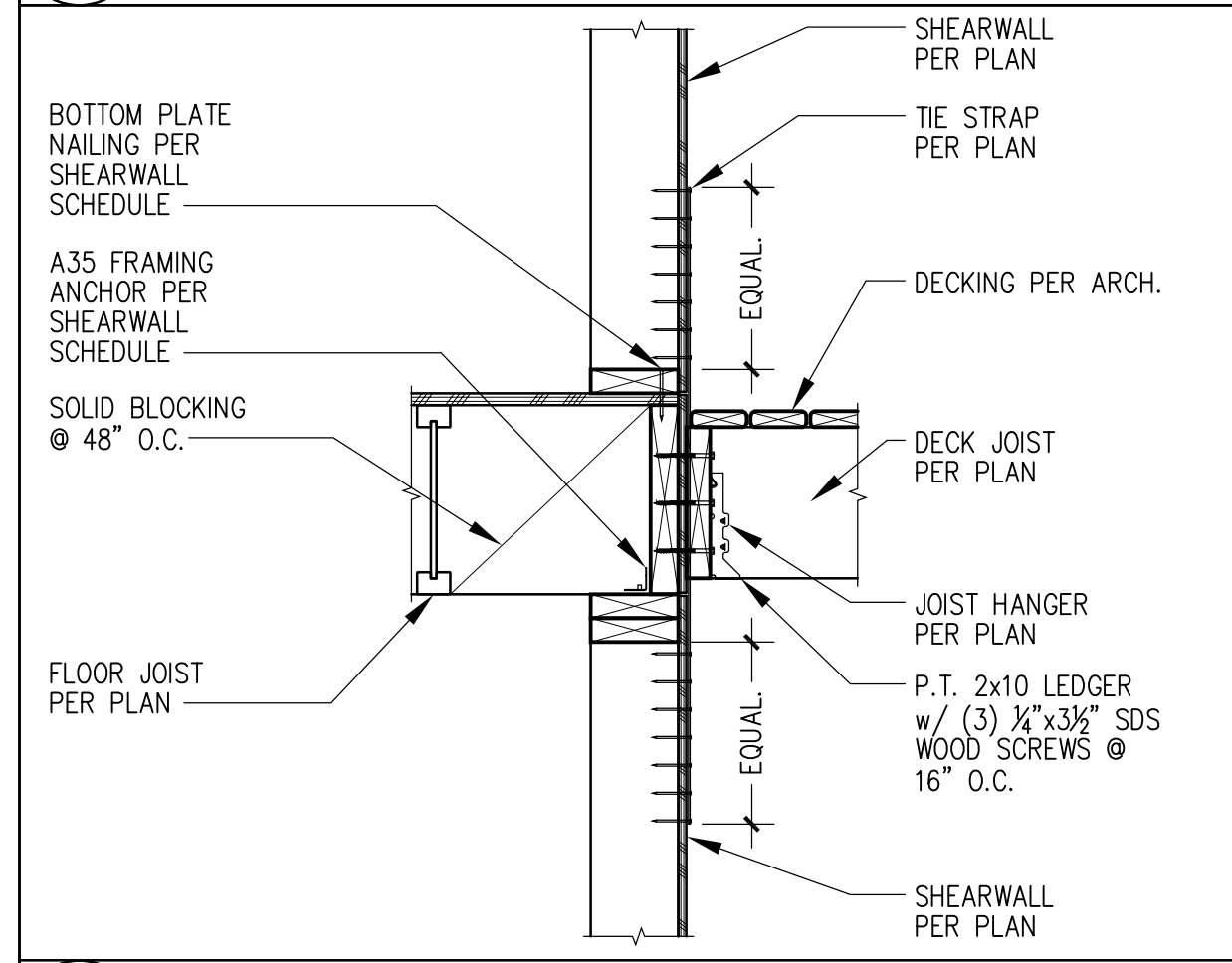
3 DRAGTIE STRAPS @ GLU-LAM FLOOR BEAM



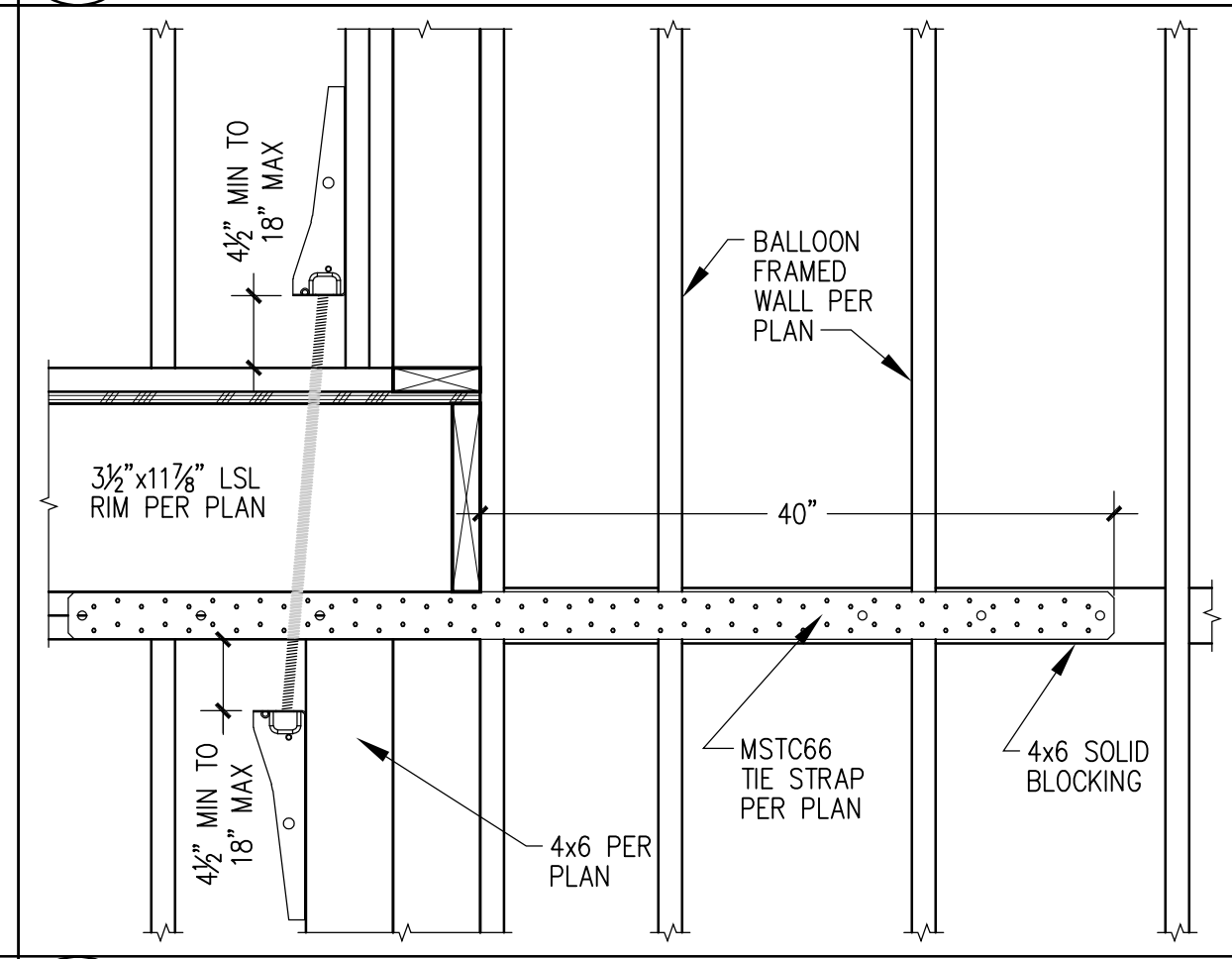
4 SUB-DIAPHRAGM BLOCKING



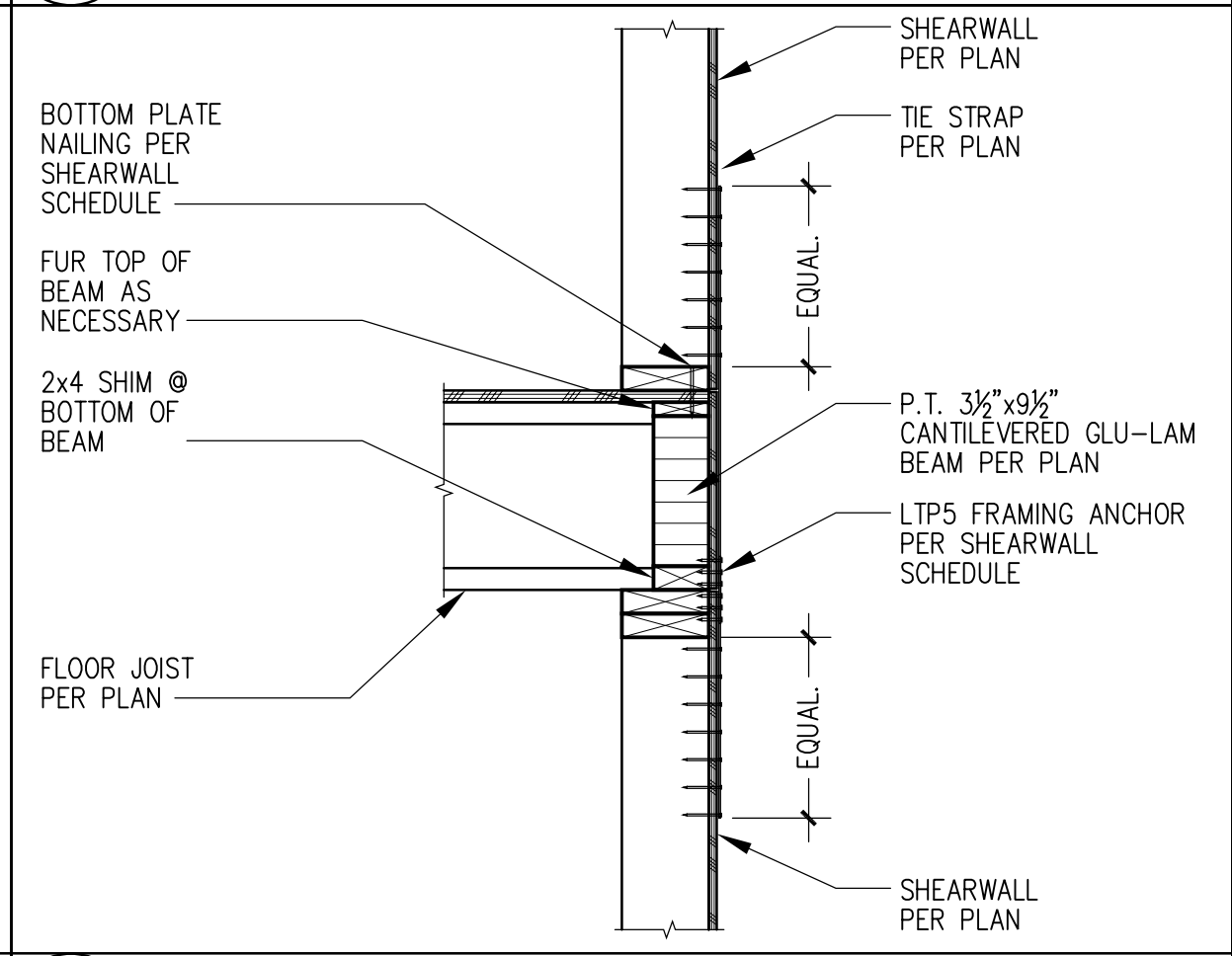
5 TYPICAL UPPER DECK BEAM (FLUSH)



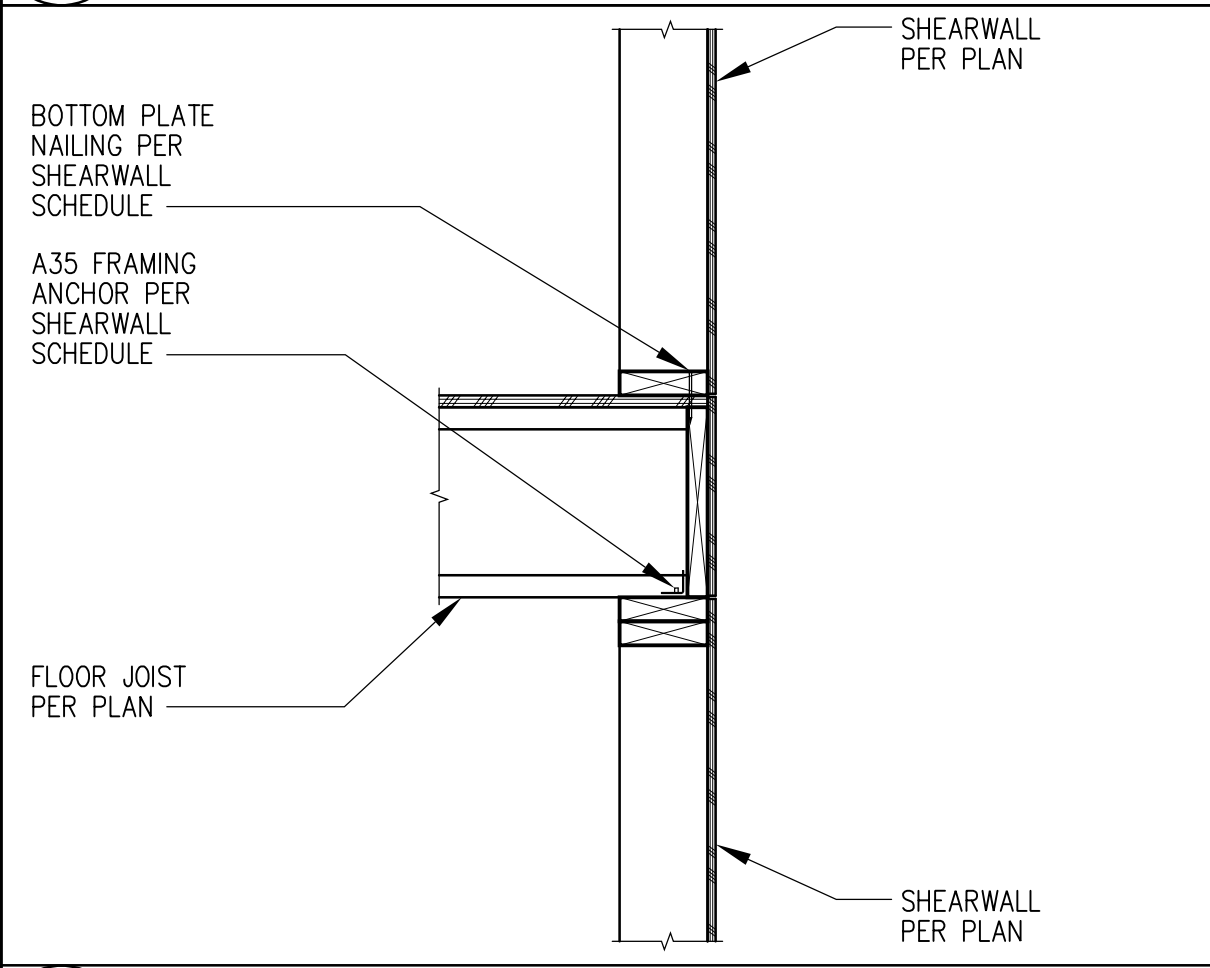
6 SHEAR TRANSFER @ FLOOR FRAMING (PARALLEL JOIST w/ TIE STRAP)



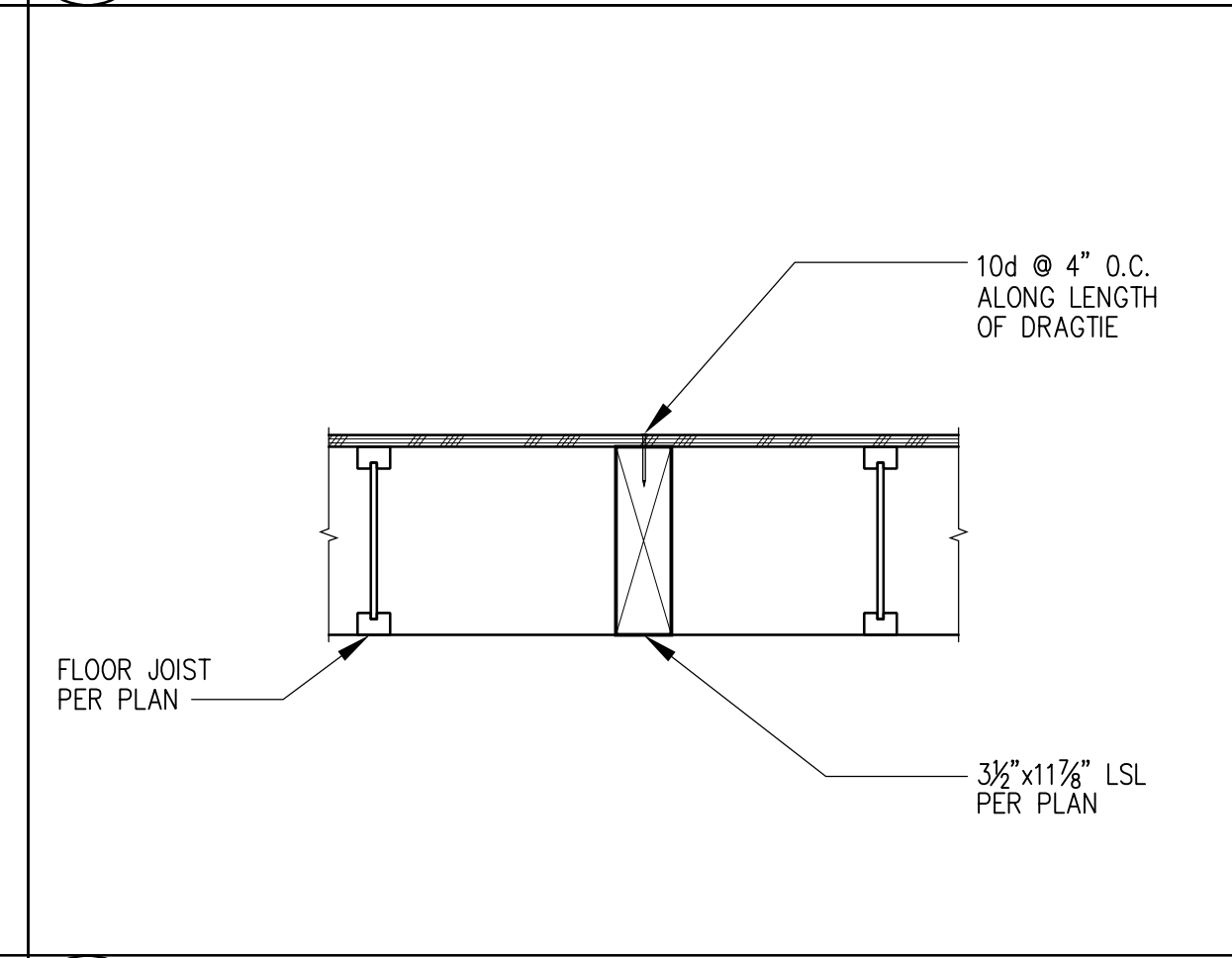
7 TIE STRAP @ GREAT ROOM BALLOON WALL



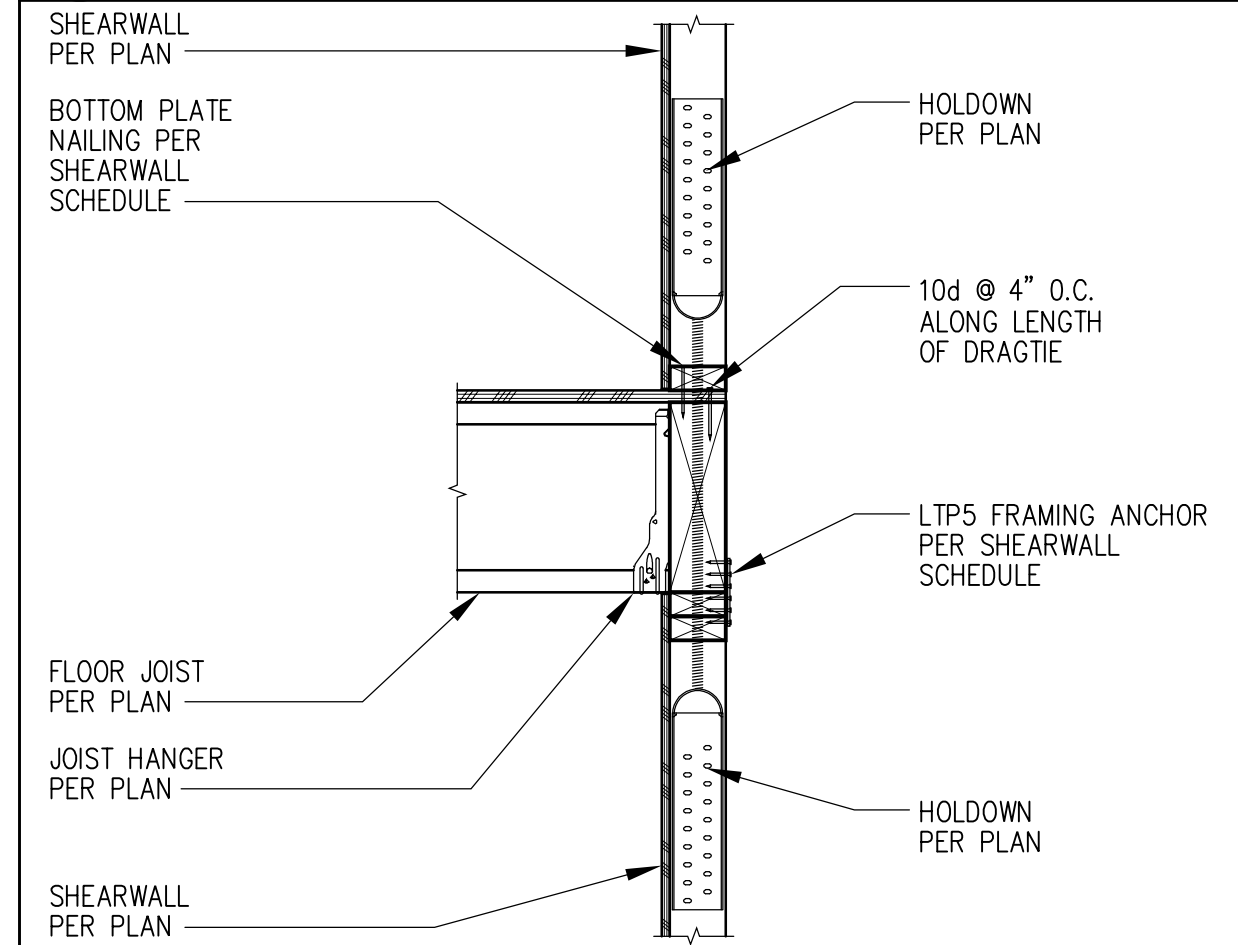
8 SHEAR TRANSFER @ CANT. DECK BEAM (PERPENDICULAR JOIST w/ TIE STRAP)



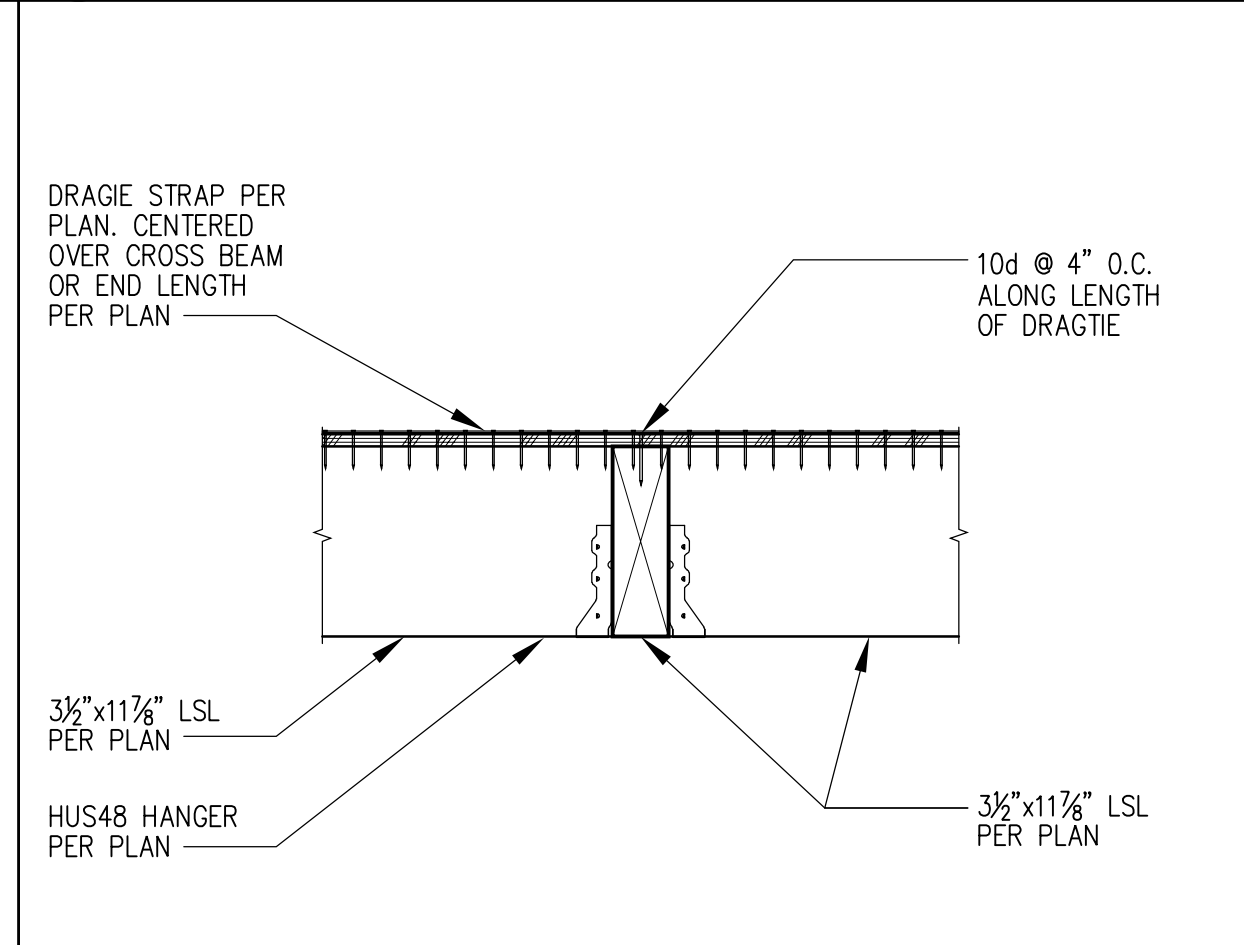
9 SHEAR TRANSFER @ FLOOR FRAMING (PERPENDICULAR JOIST)



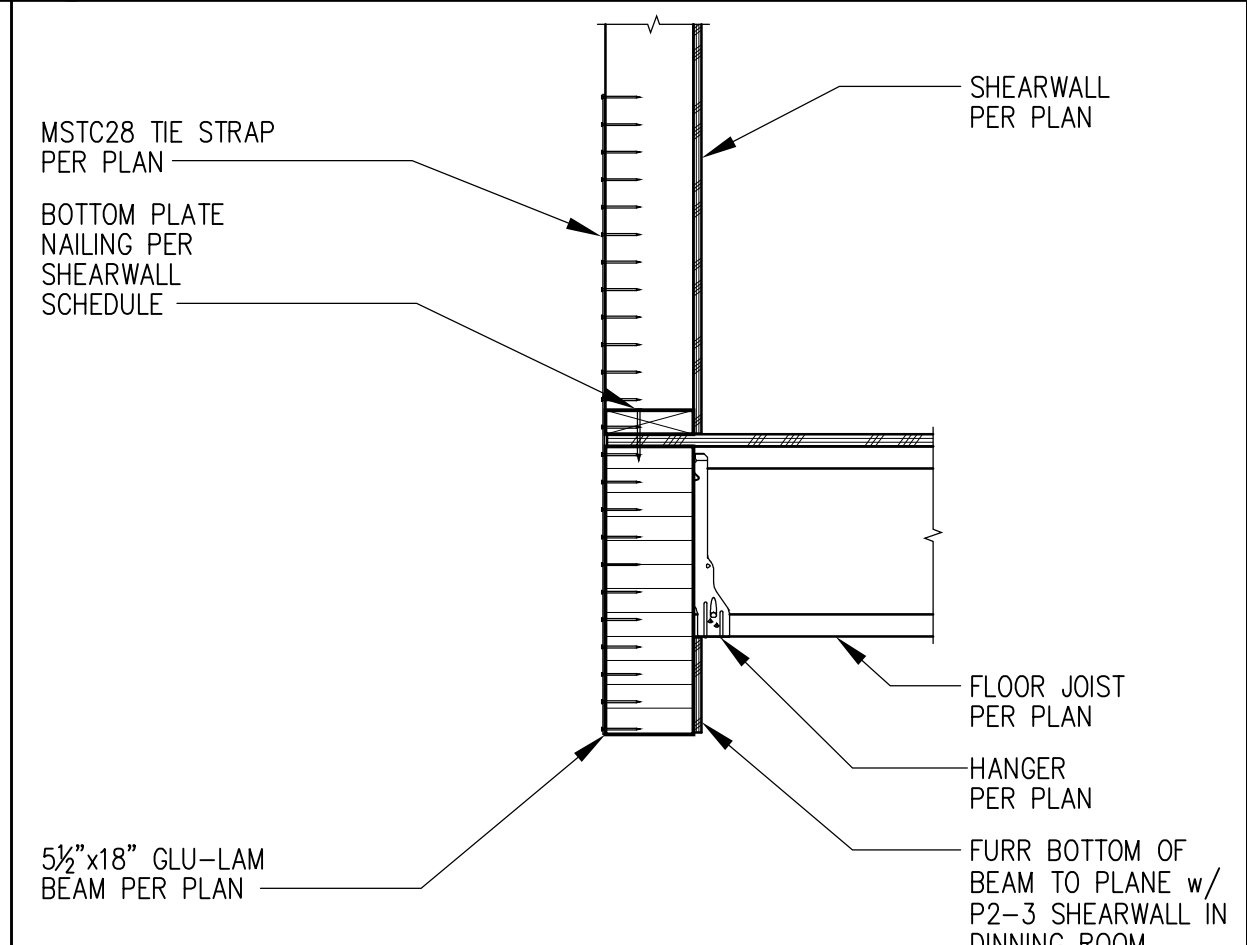
10 DRAGTIE @ PARALLEL JOIST



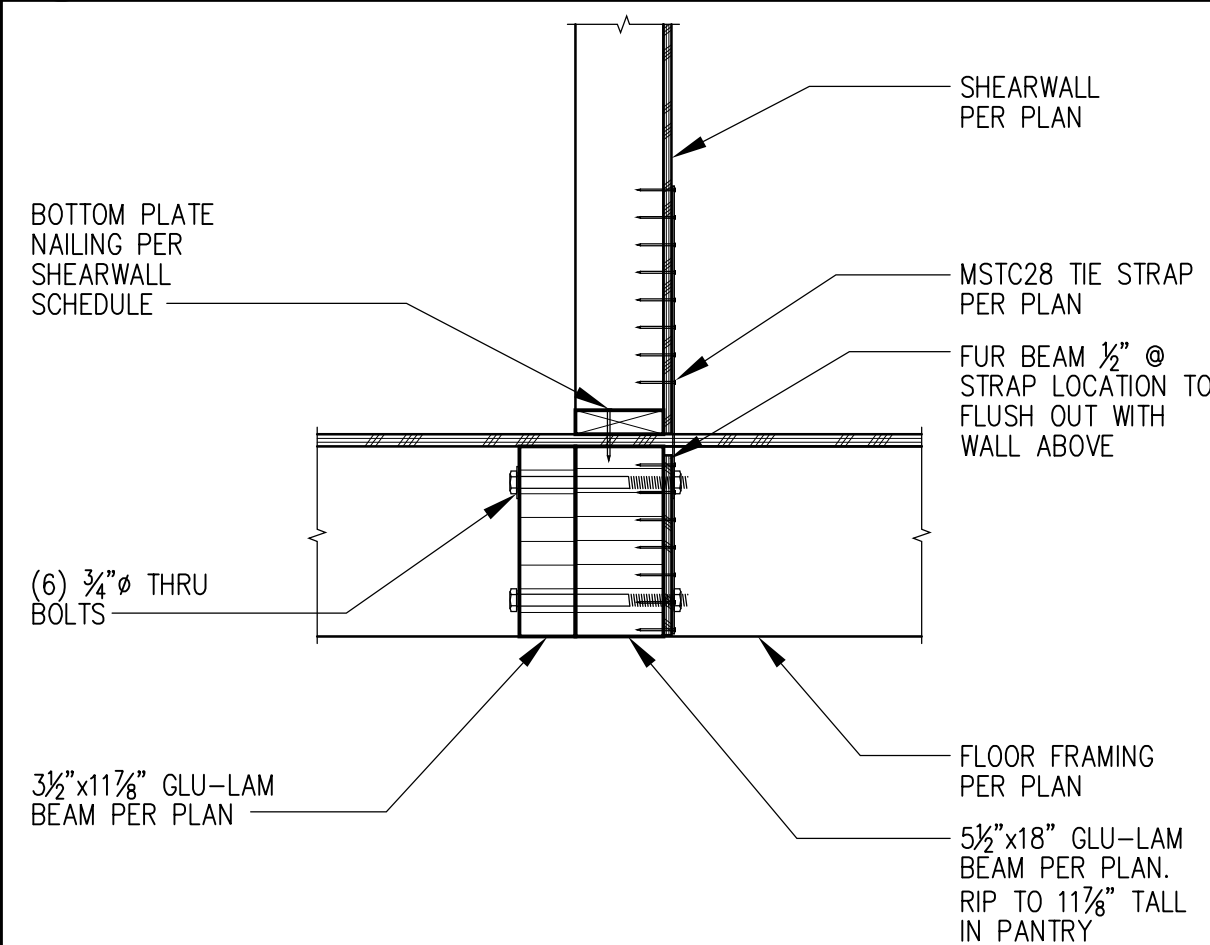
11 SHEAR TRANSFER @ FLOOR FRAMING (HOLDOWN TO HOLDOWN @ PERPENDICULAR JOIST)



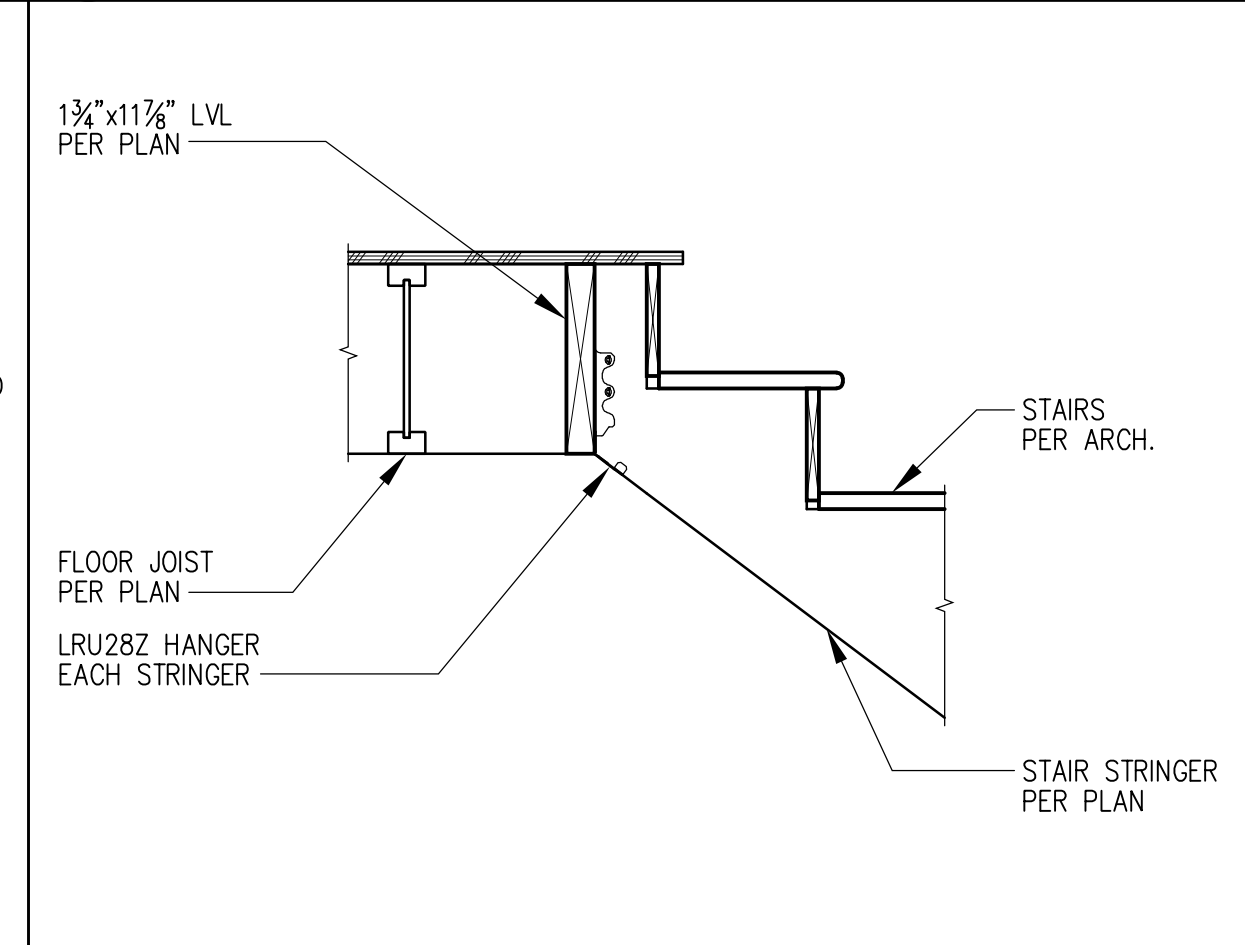
12 DRAGTIE STRAP @ BEAM INTERSECTIONS



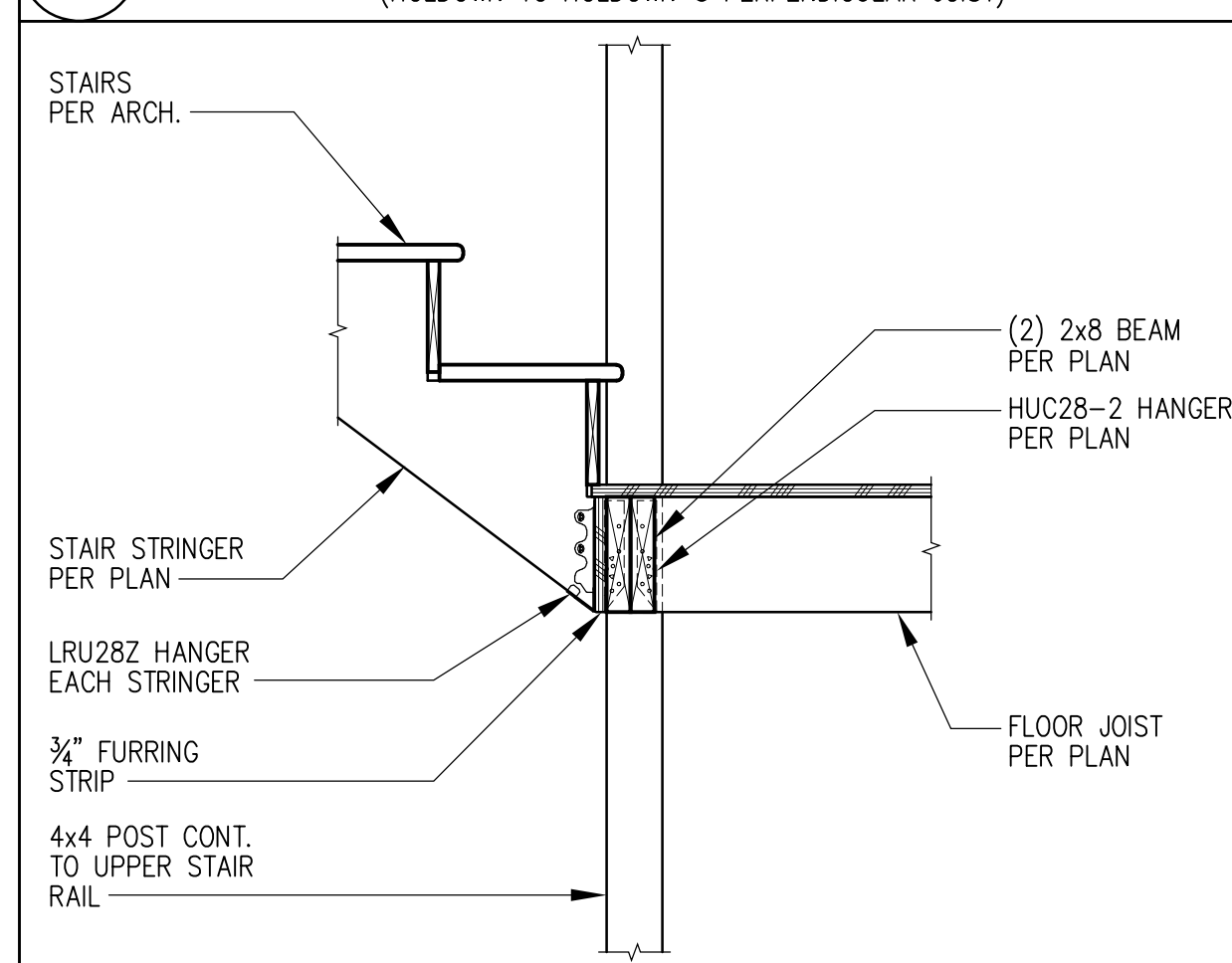
13 TIE STRAP TO BEAM (@ PERPENDICULAR JOIST)



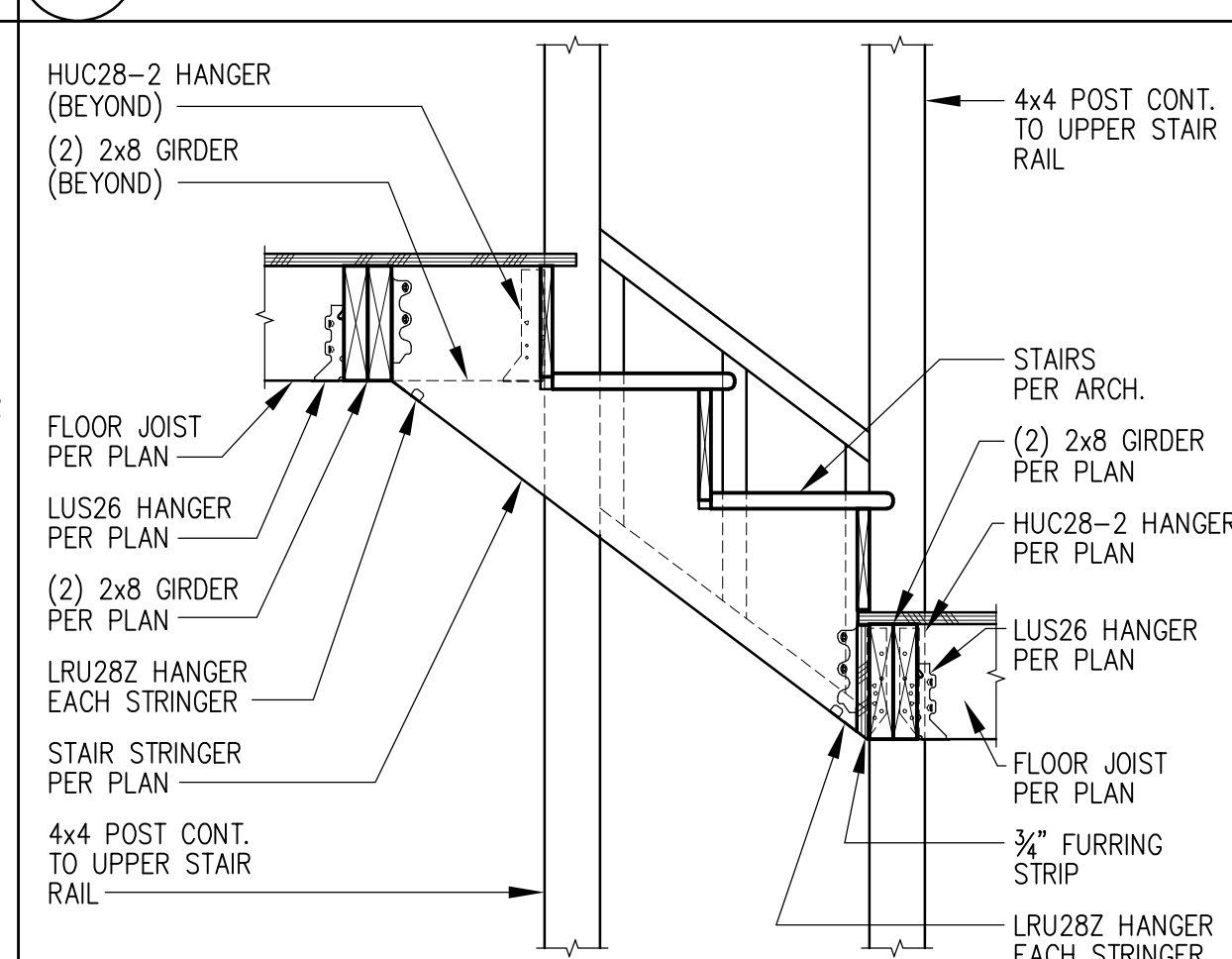
14 TIE STRAP TO BEAM (@ PERPENDICULAR JOIST)



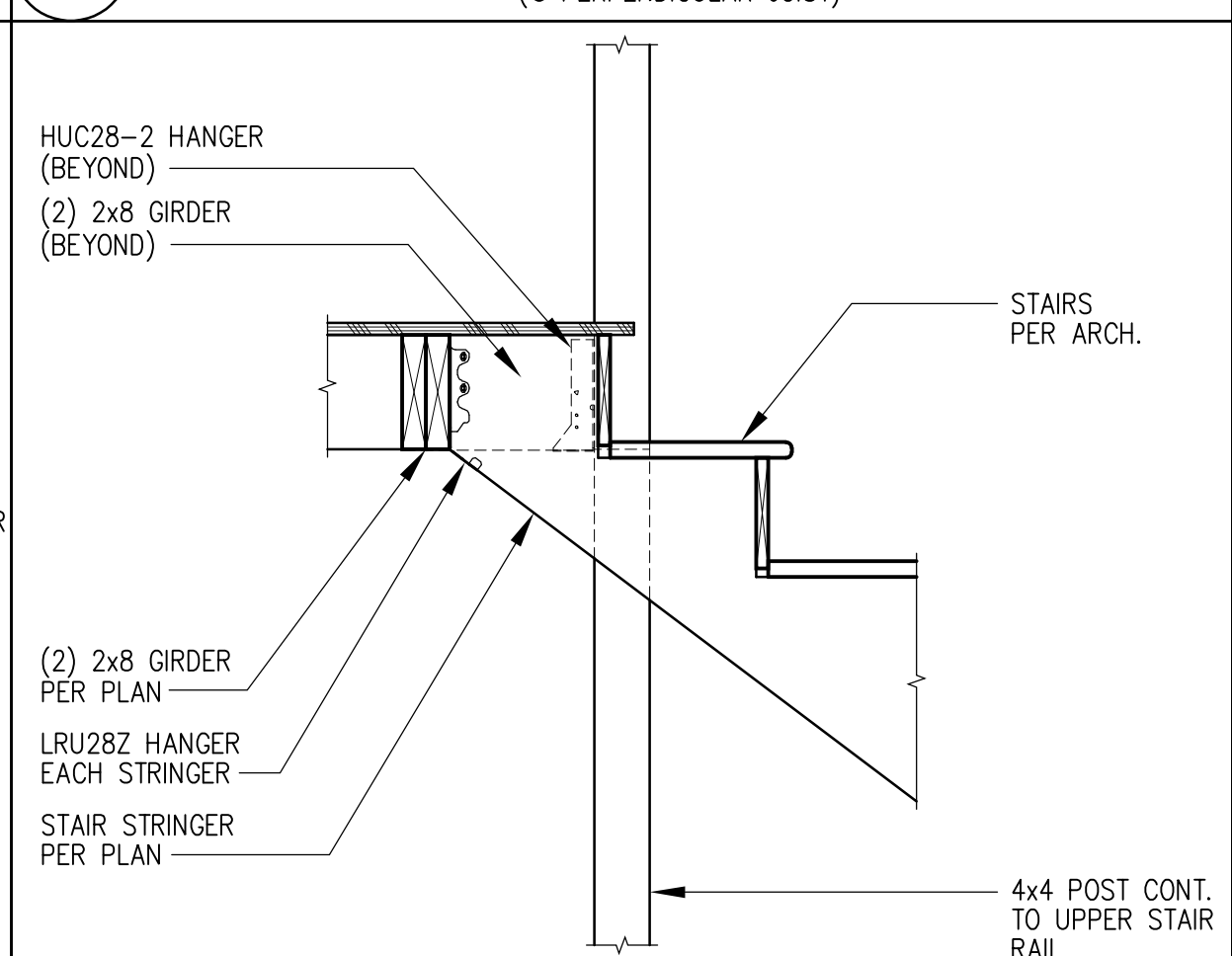
15 STAIR STRINGER FRAMING (UPPER FLOOR STAIRS @ UPPER FLOOR FRAMING)



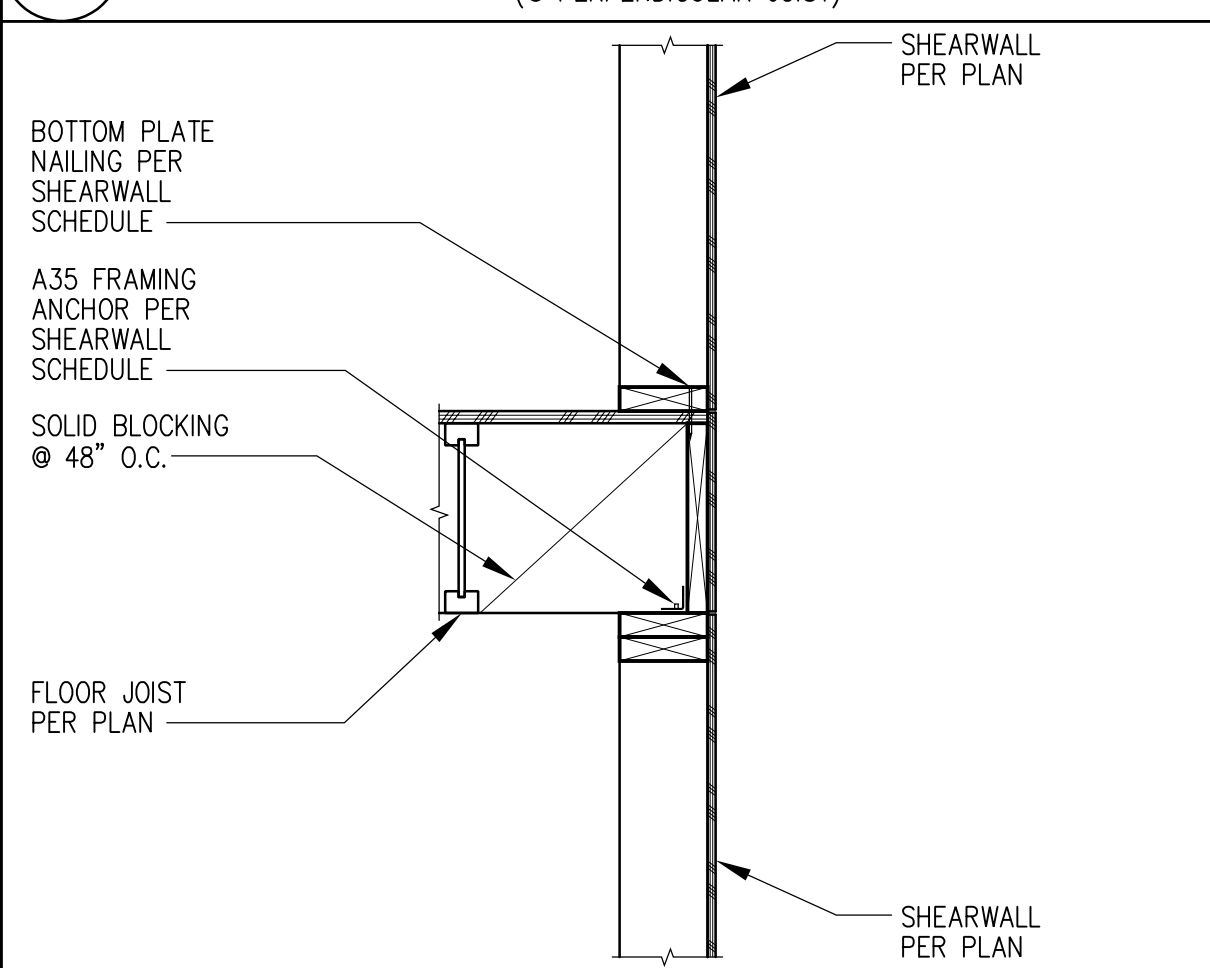
16 STAIR STRINGER FRAMING (UPPER FLOOR STAIRS @ UPPER MID LANDING)



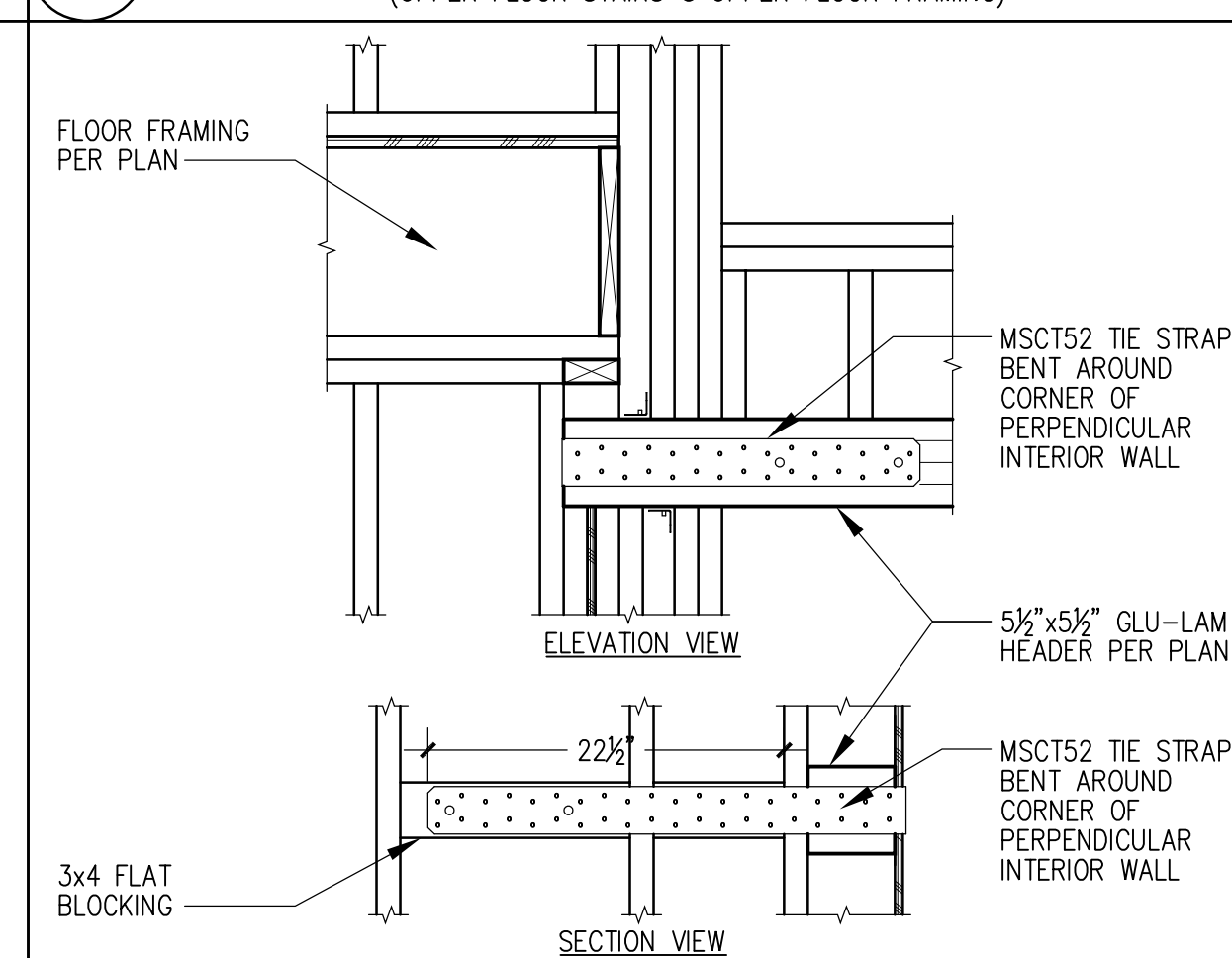
17 STAIR STRINGER FRAMING (UPPER FLOOR STAIRS BETWEEN MID LANDINGS)



18 STAIR STRINGER FRAMING (UPPER FLOOR STAIRS @ LOWER MID LANDING)

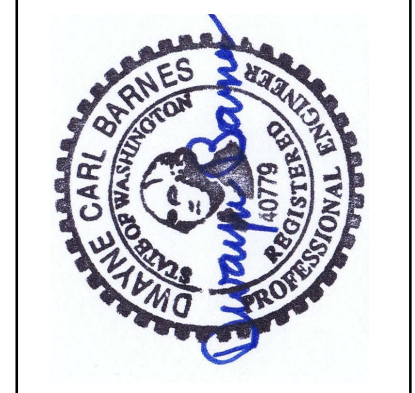


19 SHEAR TRANSFER @ FLOOR FRAMING (PARALLEL JOIST)



20 TIE STRAP @ DOOR HEADER (BALLOON FRAMING w/ TIE STRAP & ENTRY WALL FRAMING)

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 dwayne@stonepointengineering.com  
 Office: 425-644-9500



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 5637 East Mercer Way  
 Mercer Island, WA 98084

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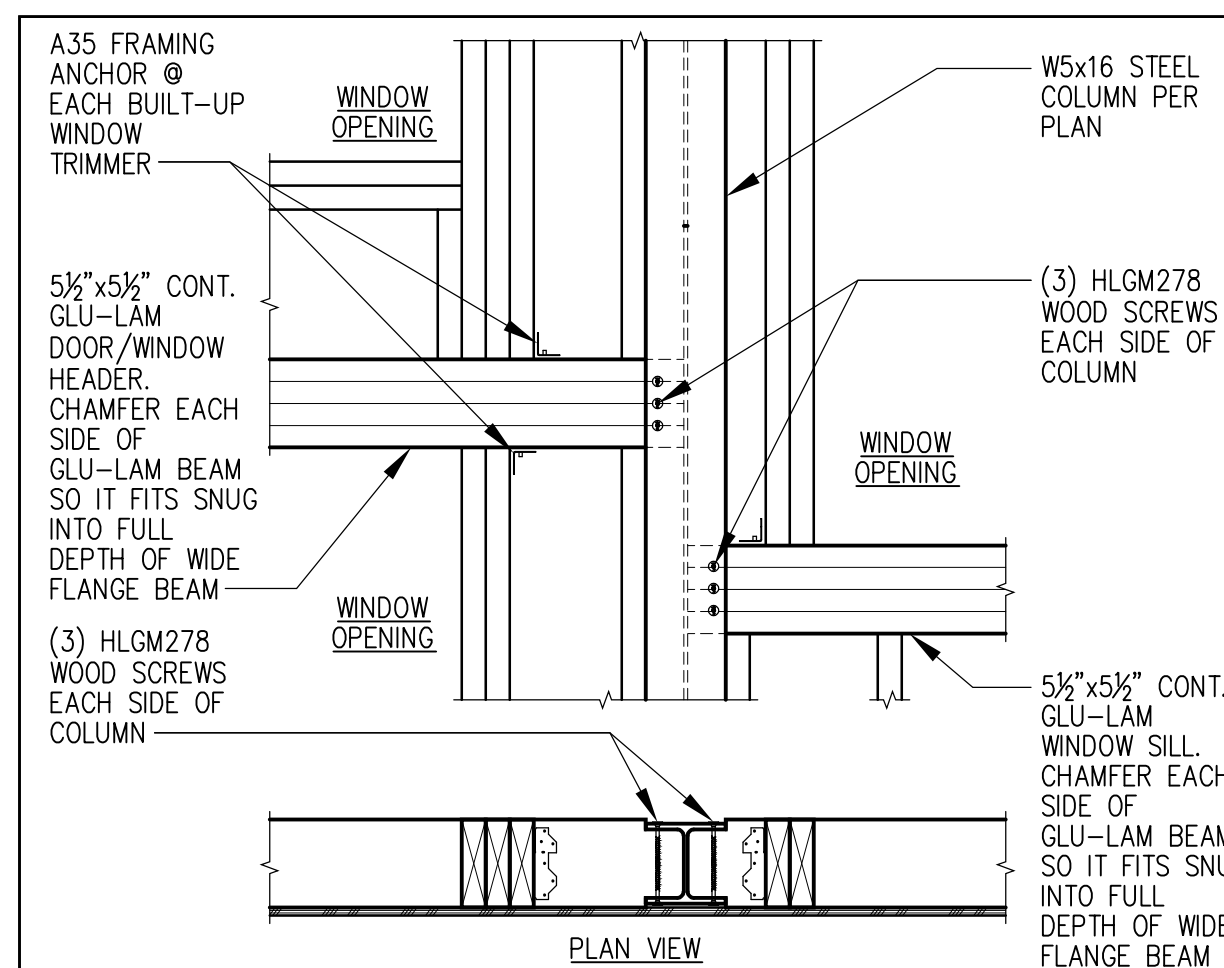
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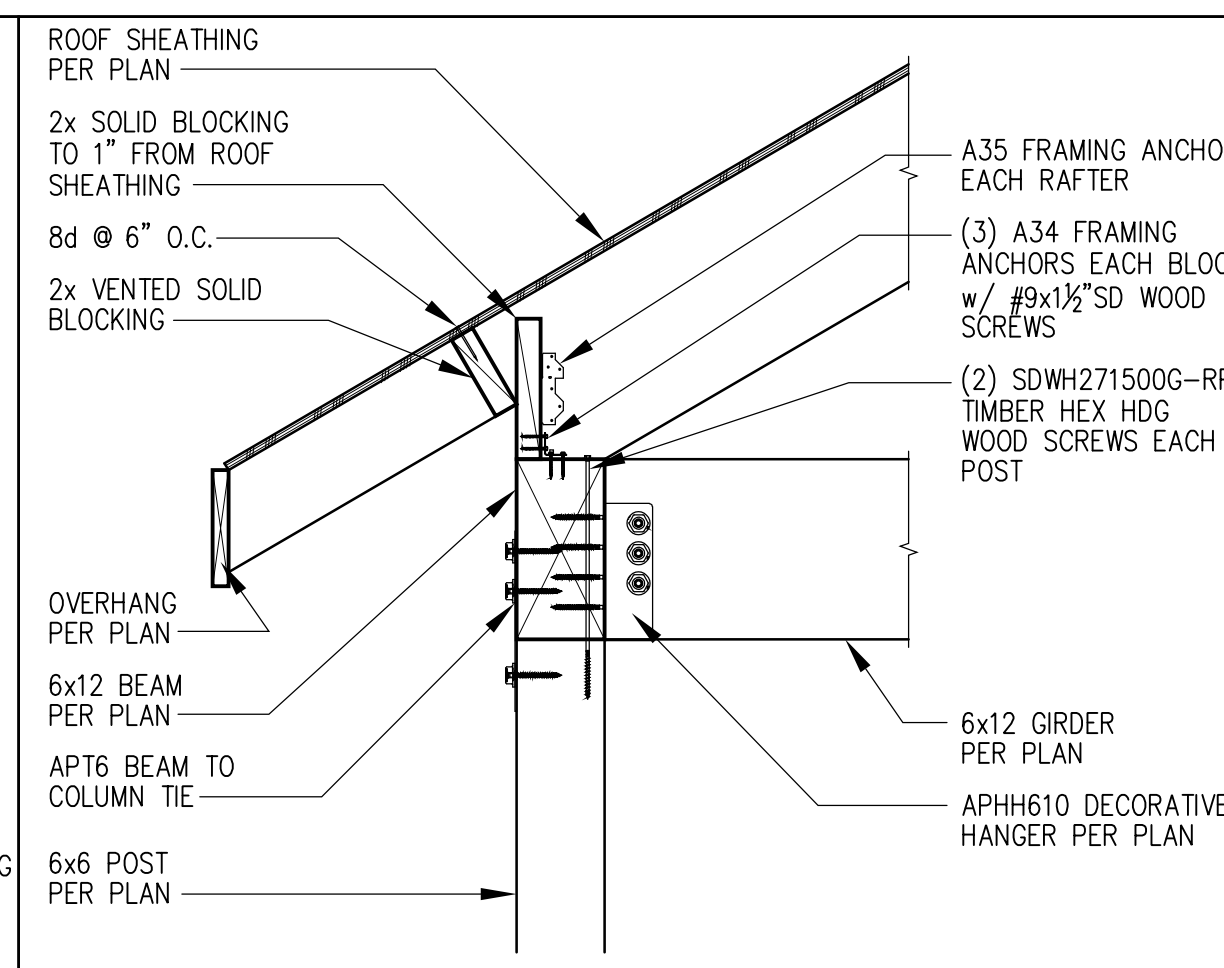
18-025

**S4.2**  
 FRAMING DETAILS

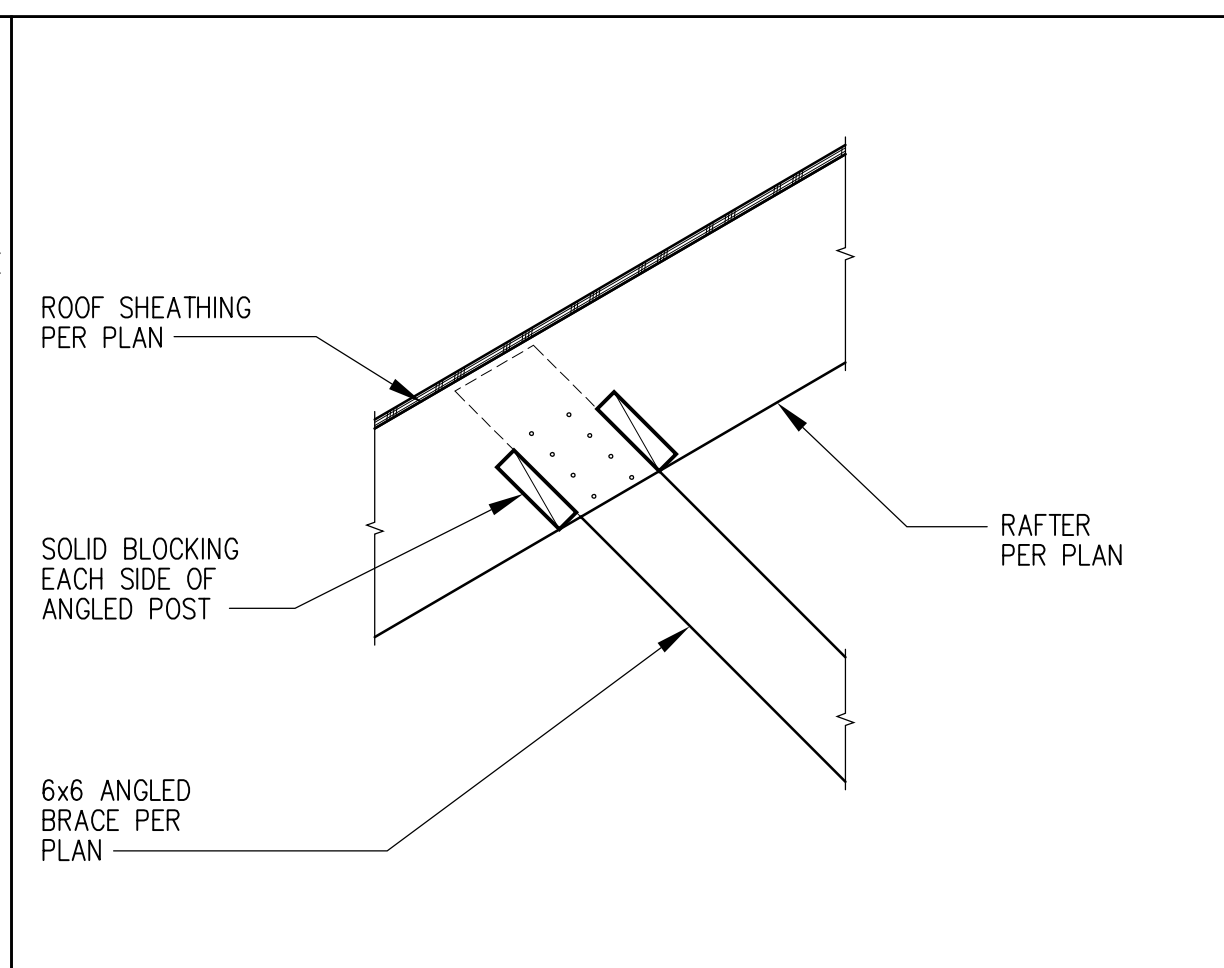




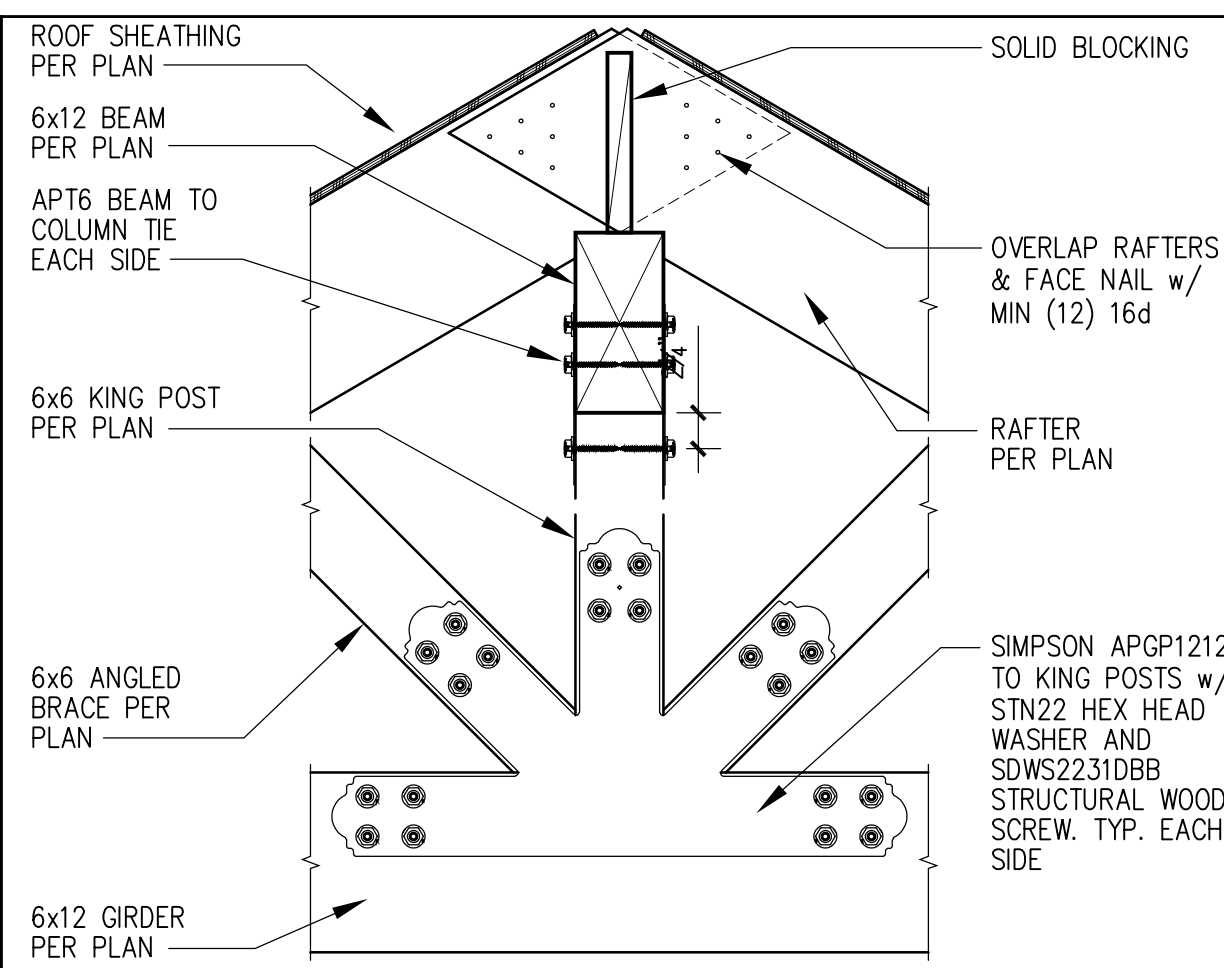
1 W5x16 STEEL COLUMN HEADERS (TYPICAL RAFTER)



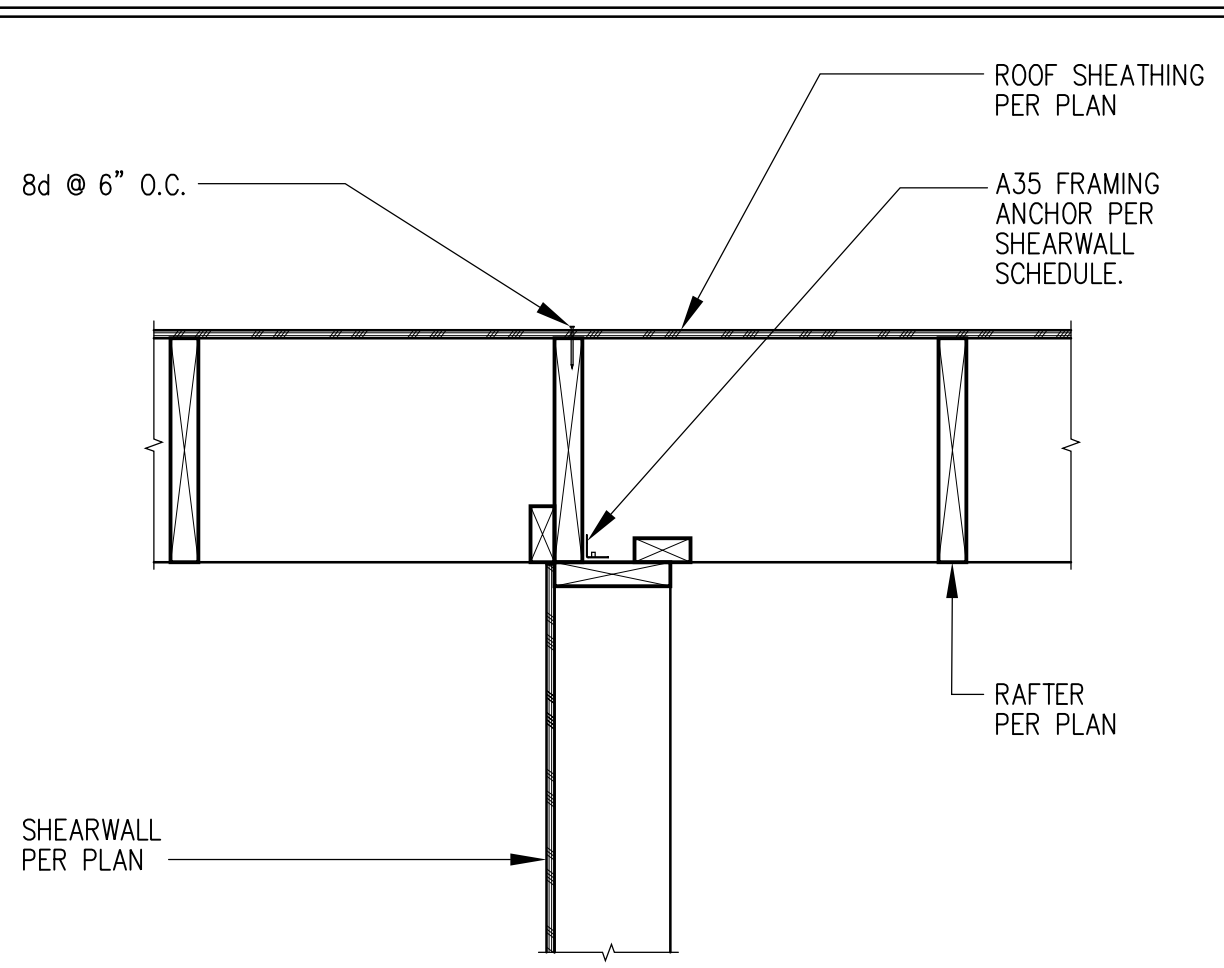
2 TYP. PORCH POST TO BEAM CONNECTION



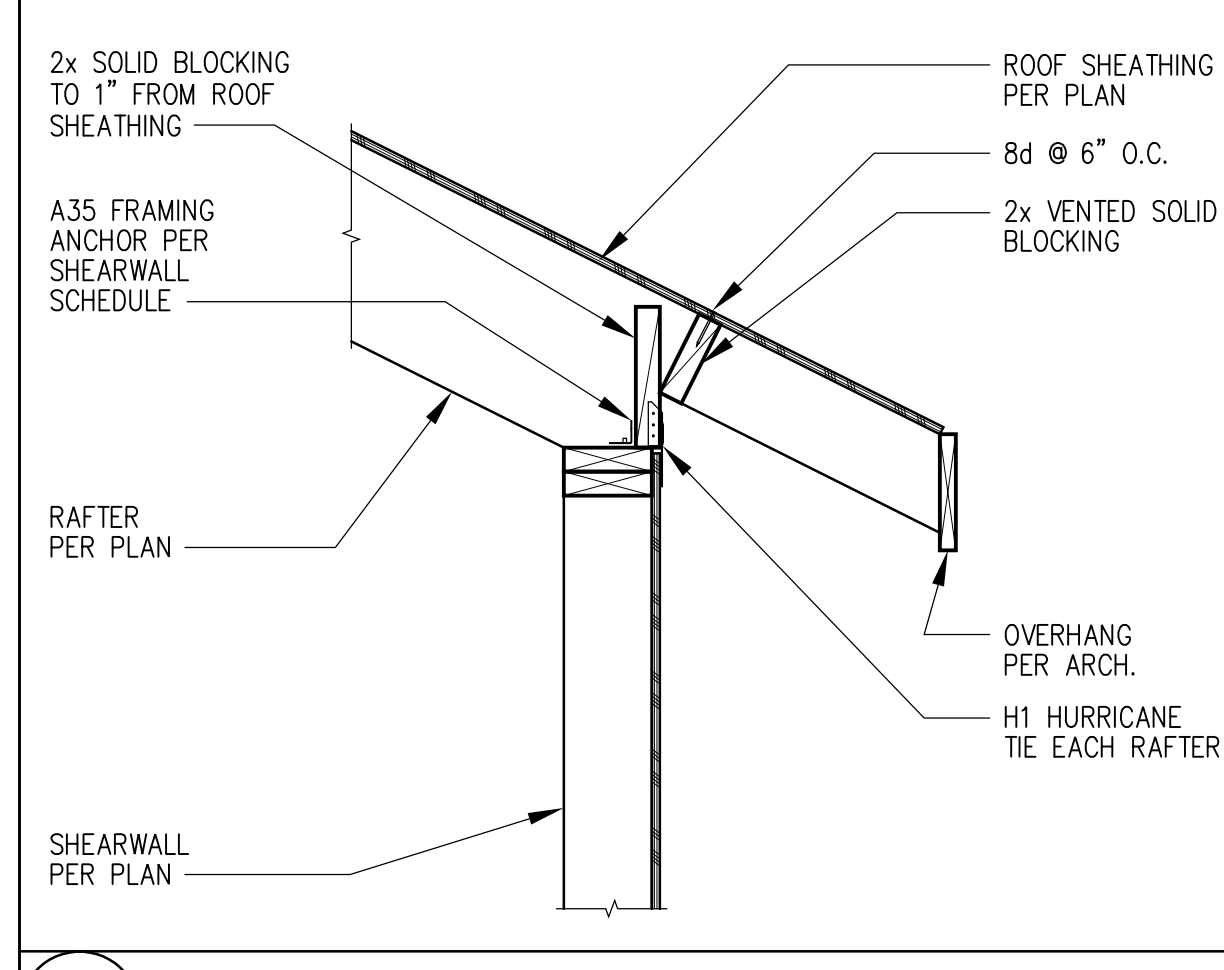
3 ANGLED POST TO RAFTER CONNECTION



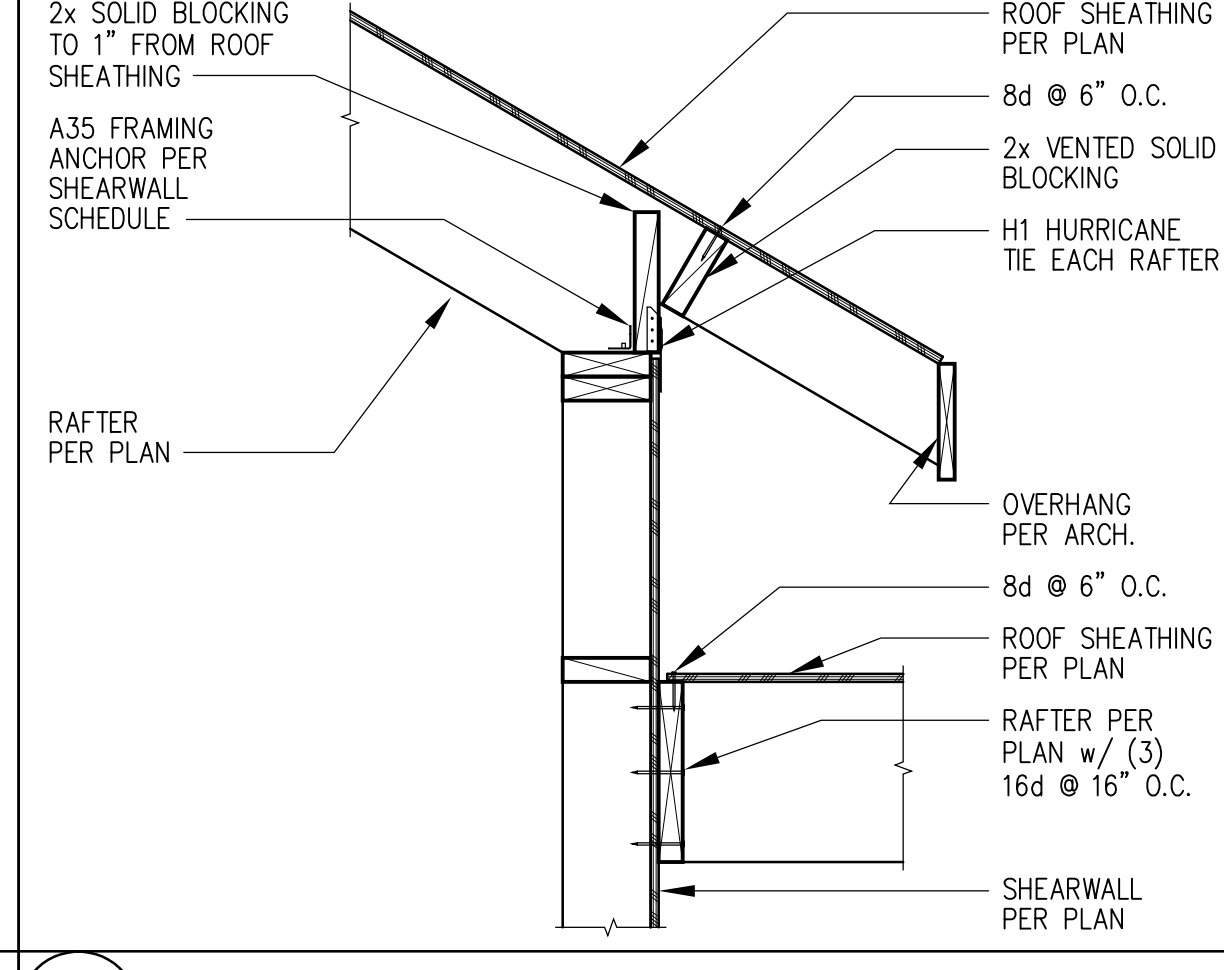
4 KING POST TO BEAM CONNECTION



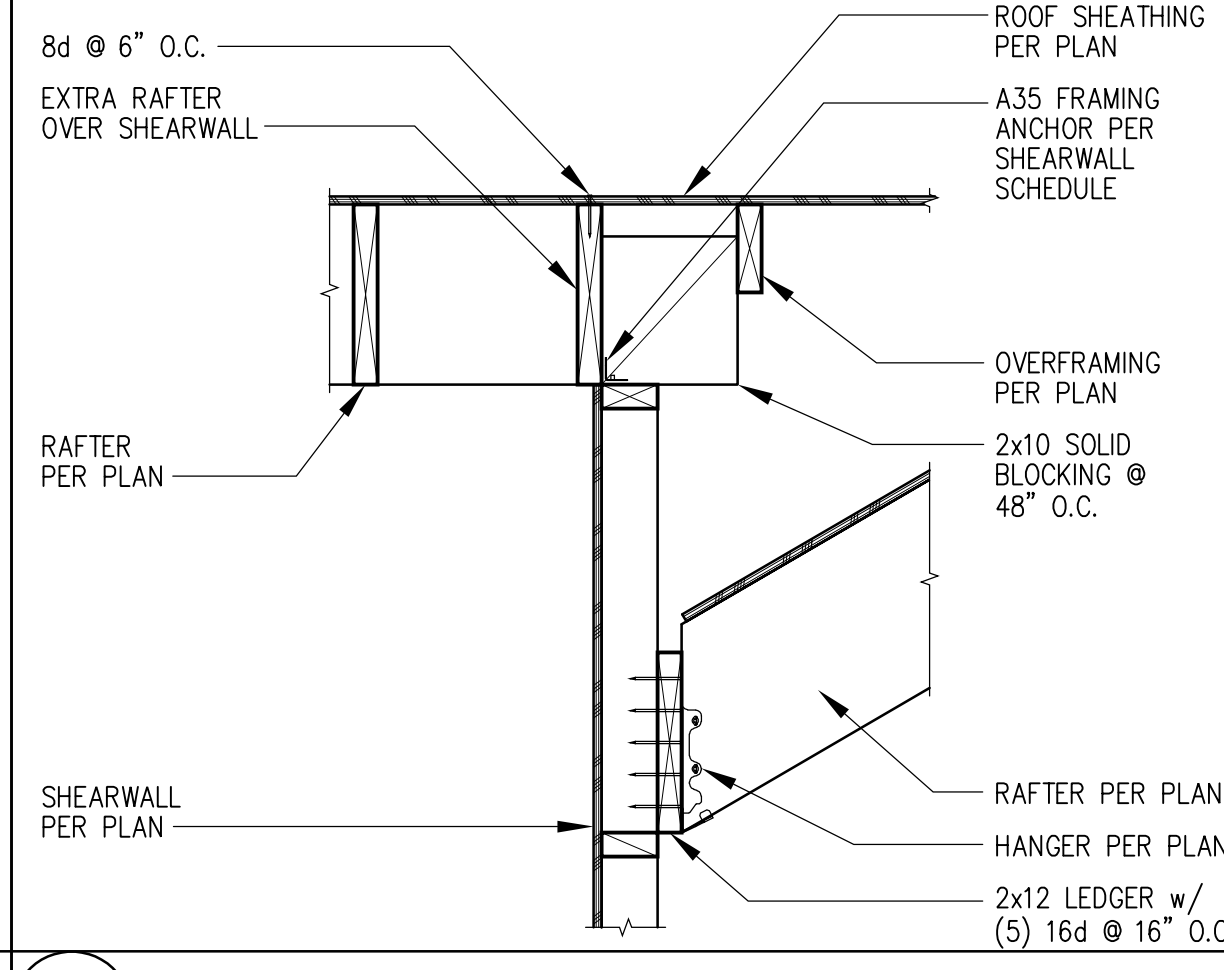
5 SHEAR TRANSFER @ GREAT ROOM GABLE



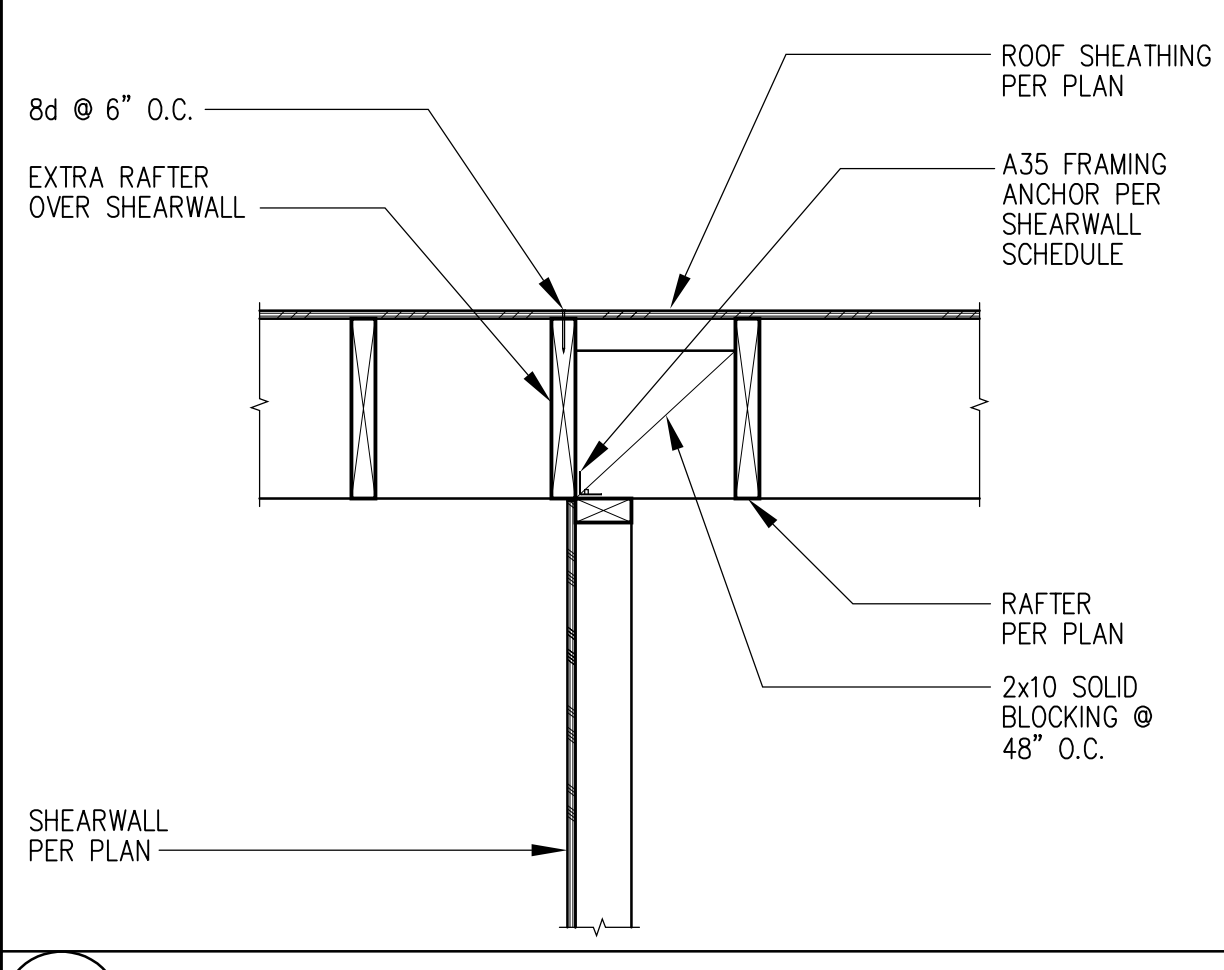
6 SHEAR TRANSFER @ EAVE (TYPICAL RAFTER)



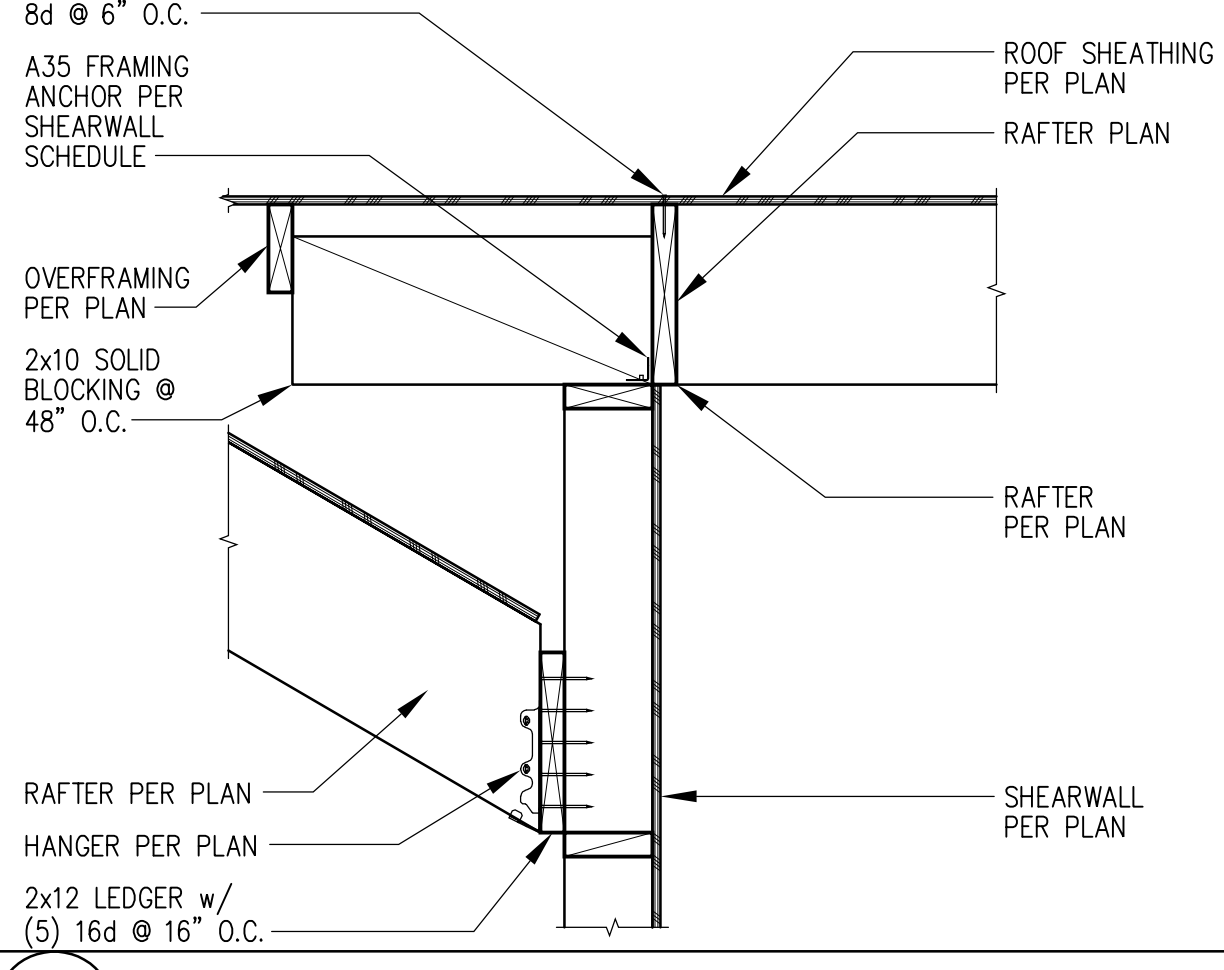
7 SHEAR TRANSFER @ EAVE (TYPICAL RAFTER w/ LOWER ROOF)



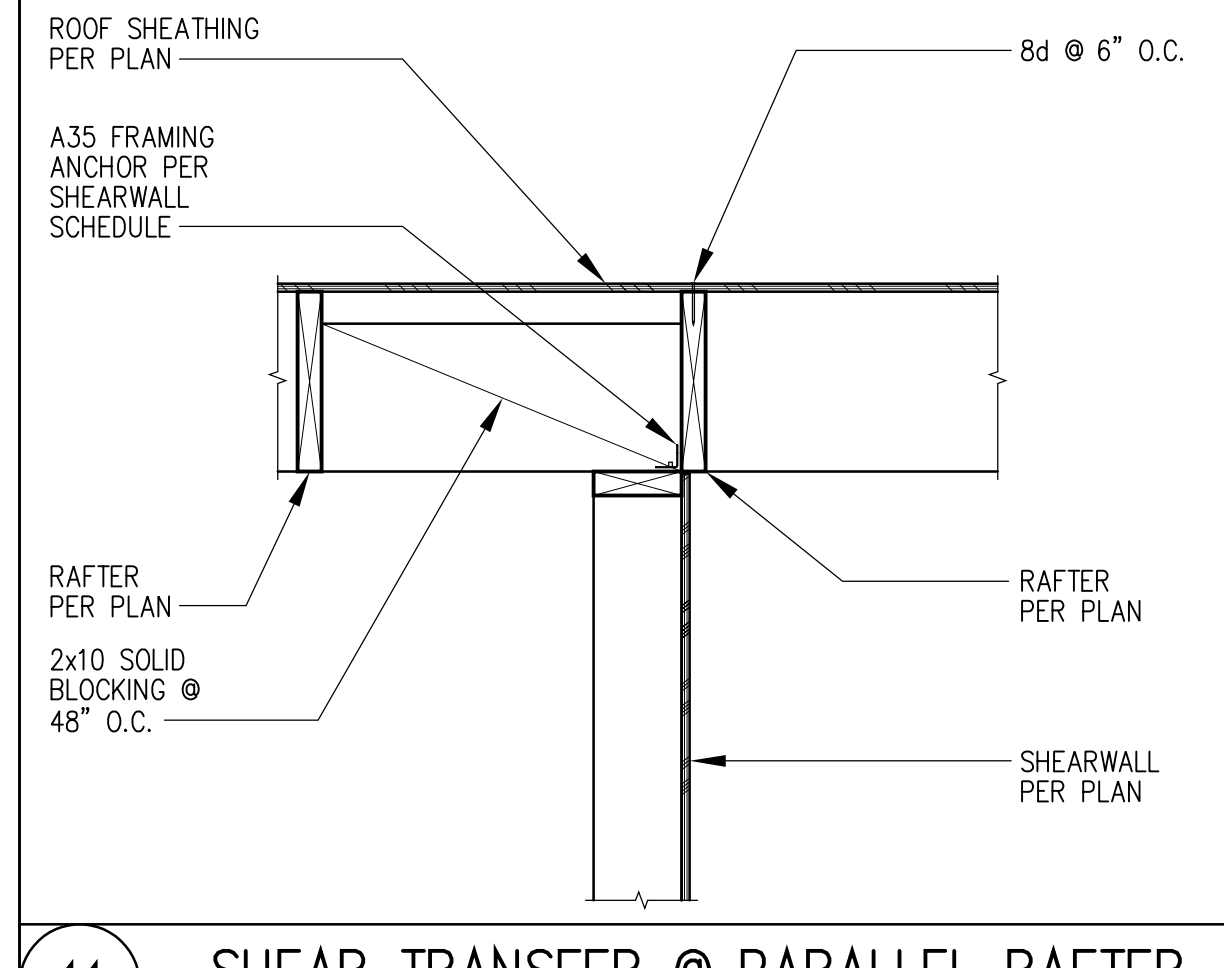
8 SHEAR TRANSFER @ PARALLEL RAFTER (SHEARWALL OFF TYPICAL RAFTER LAYOUT w/OVERFRAMING)



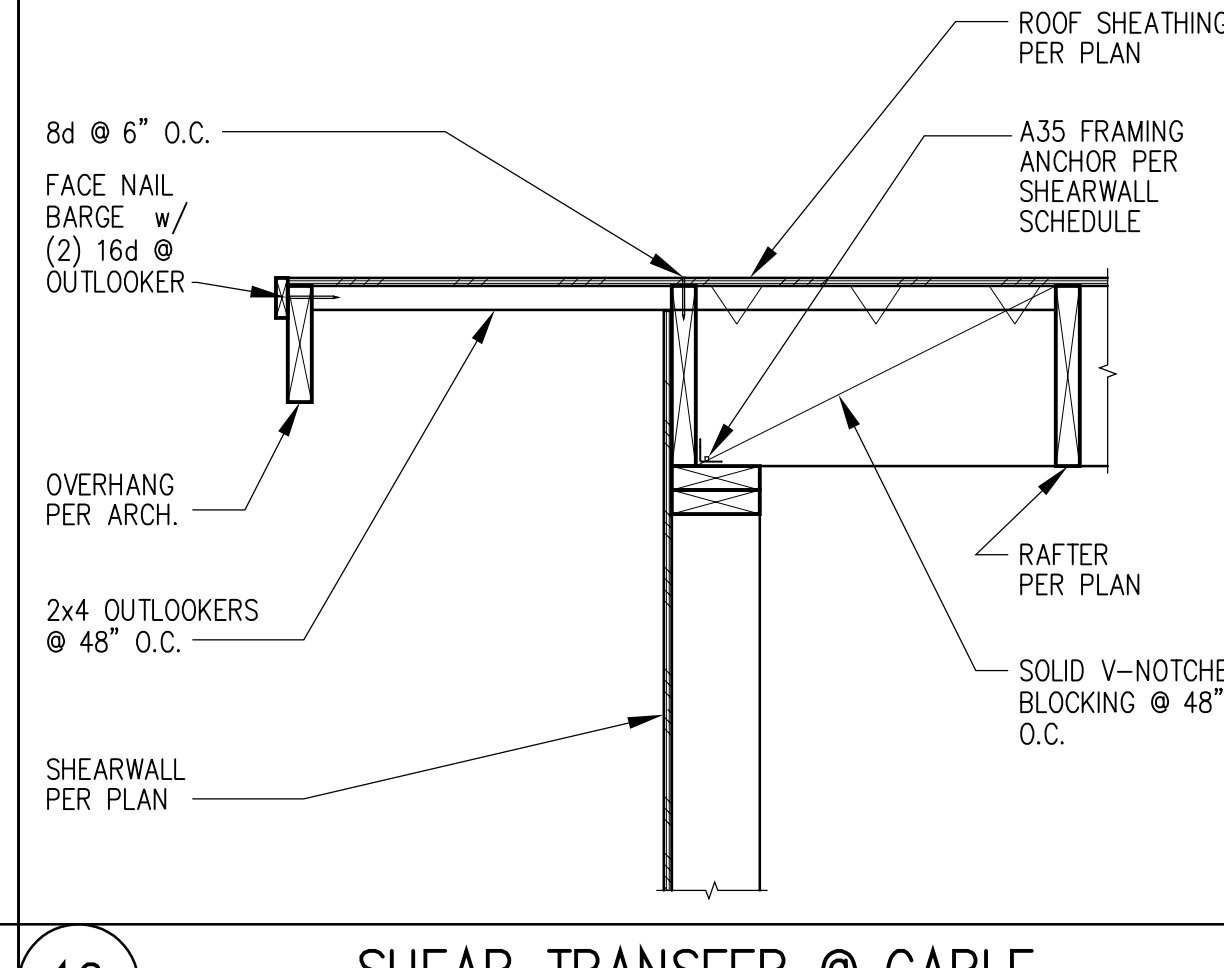
9 SHEAR TRANSFER @ PARALLEL RAFTER (SHEARWALL ON TYPICAL RAFTER LAYOUT)



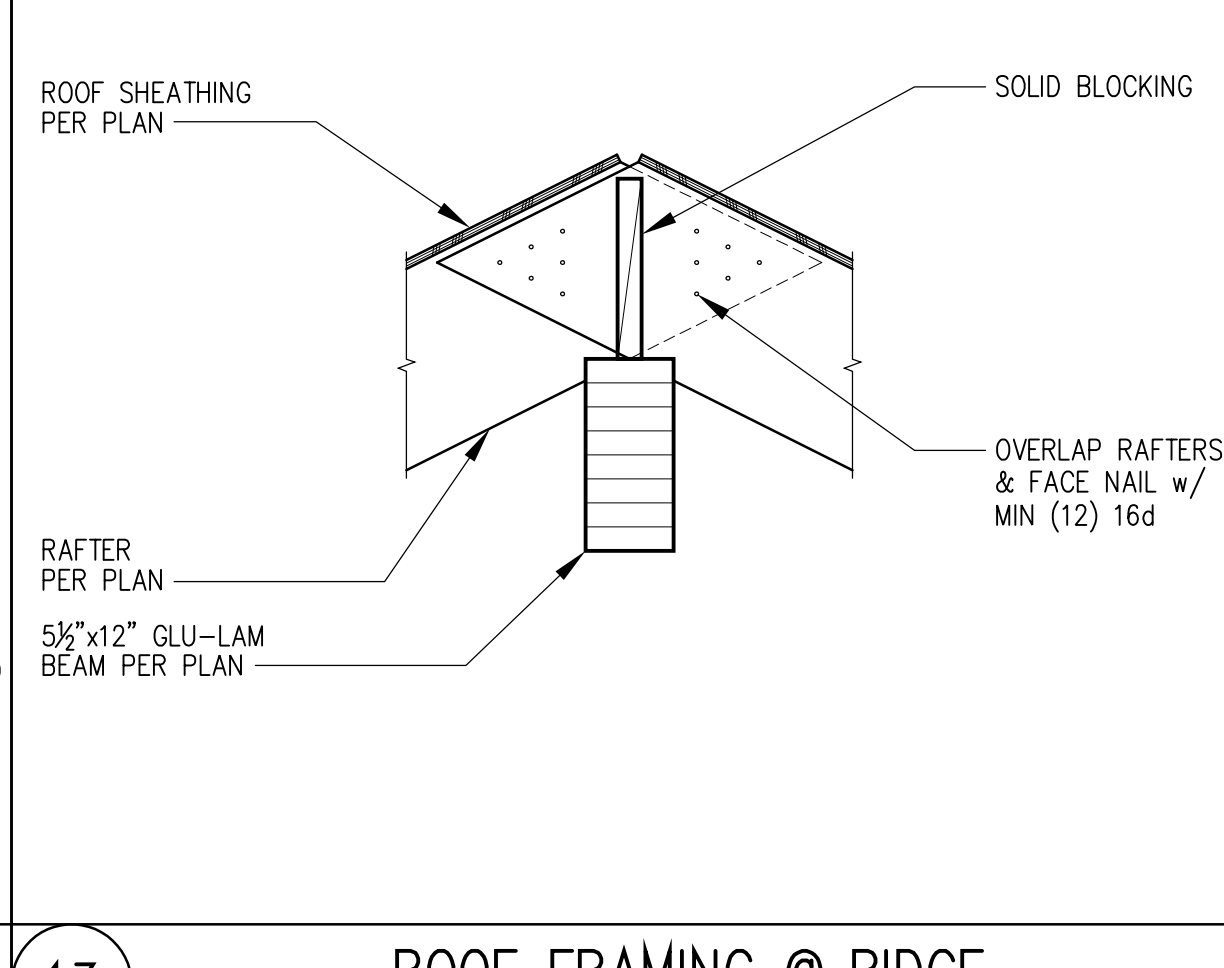
10 SHEAR TRANSFER @ PARALLEL RAFTER (SHEARWALL ON TYPICAL RAFTER LAYOUT w/OVERFRAMING)



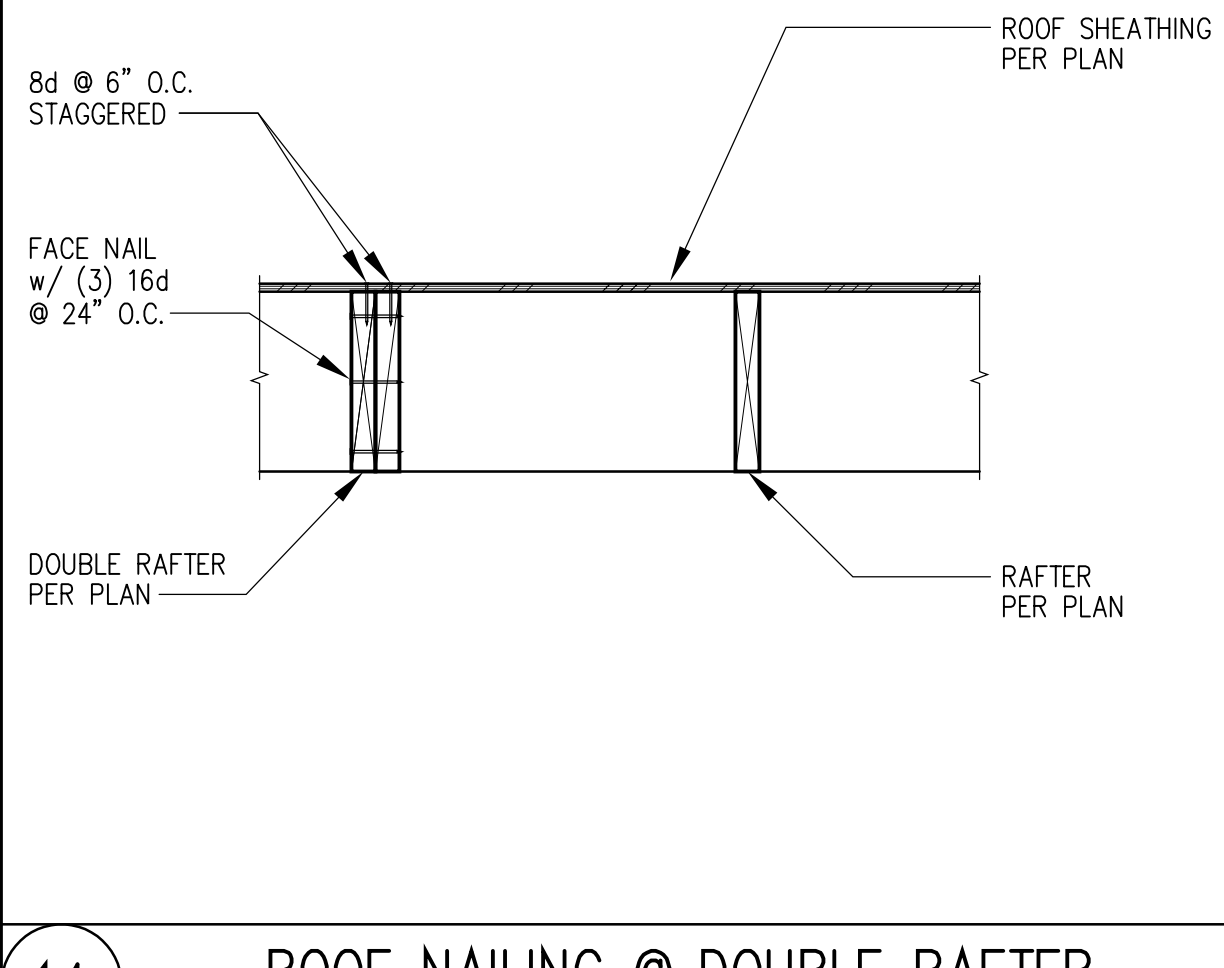
11 SHEAR TRANSFER @ PARALLEL RAFTER (SHEARWALL ON TYPICAL RAFTER LAYOUT)



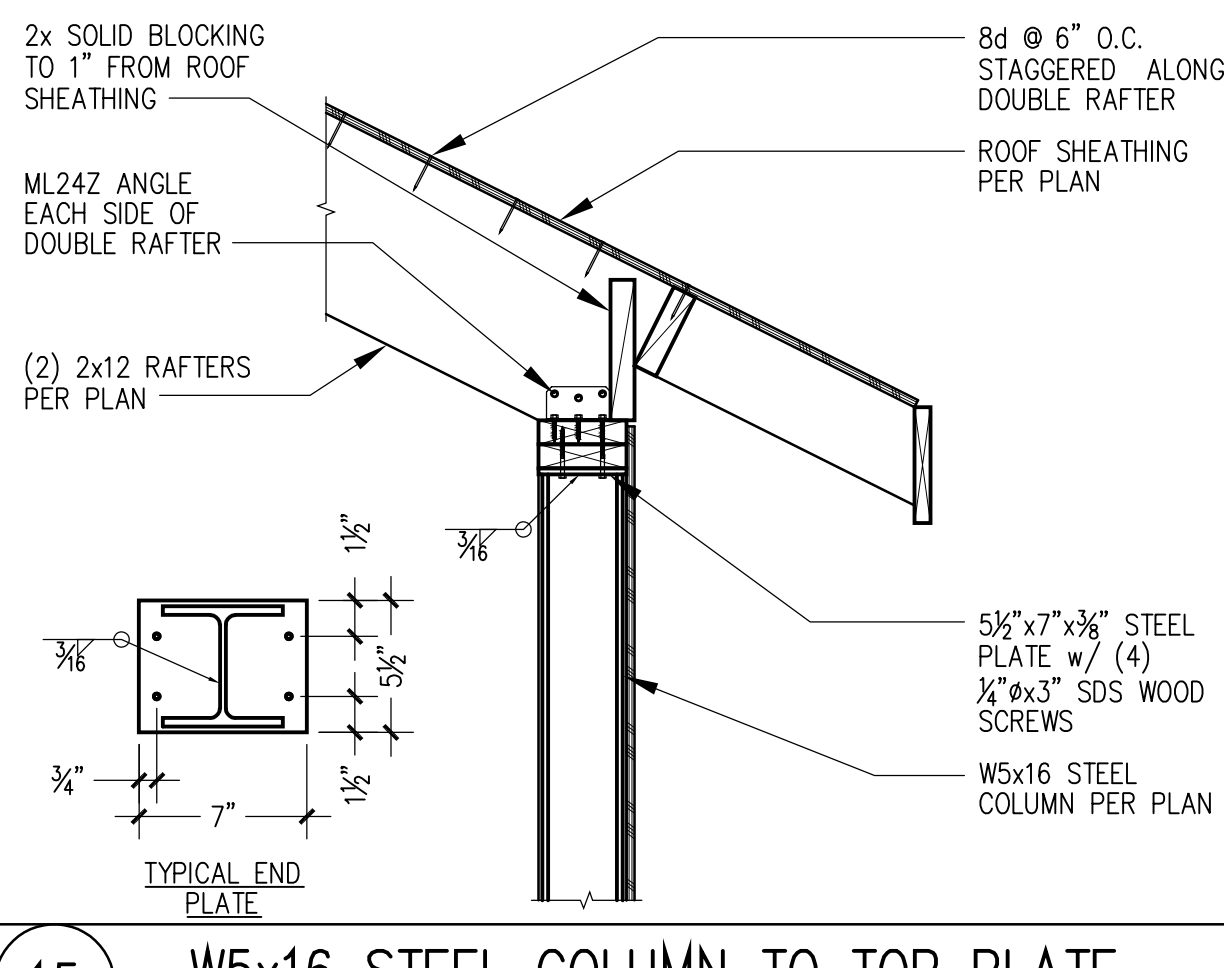
12 SHEAR TRANSFER @ GABLE



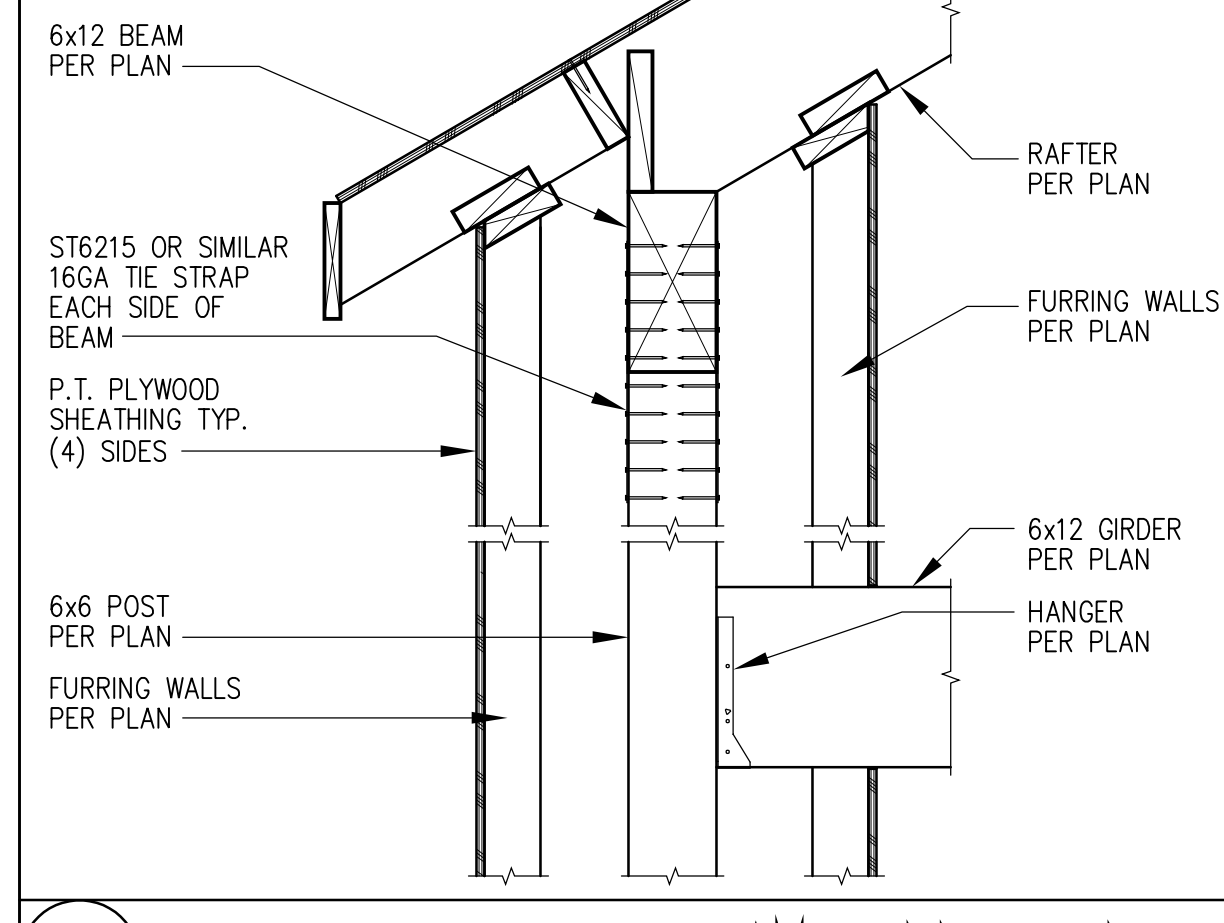
13 ROOF FRAMING @ RIDGE



14 ROOF NAILING @ DOUBLE RAFTER



15 W5x16 STEEL COLUMN TO TOP PLATE (TYPICAL RAFTER)



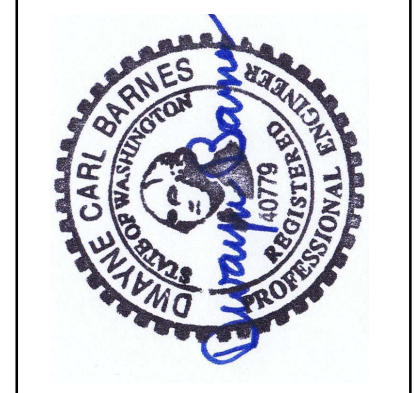
16 PORCH POST TO BEAM CONNECTION (@ STONE FACADE)

MARK	EDGE	FIELD	SILL PLATE ANCHORS	BOTTOM PLATE NAILING	TOP PLATE CONNECTION			BASE SHEAR (PLF)	
					JOIST (8)	RAFTER OR TRUSS	W/O H1	WIND	SEISMIC
P1-6	8d @ 6"	8d @ 12"	3/8" @ 48"	(1) 16d @ 4"	A35 @ 29"	RBC @ 18"	339	241	
P1-4	8d @ 4"	8d @ 12"	3/8" @ 33"	(1) 16d @ 3"	A35 @ 20"	RBC @ 31"	RBC @ 12"	495 353	
P1-3 (6)	8d @ 3"	8d @ 12"	3/8" @ 25"	(1) 16d @ 3"	A35 @ 15"	RBC @ 18"	RBC @ 10"	637 455	
P1-2 (6)	8d @ 2"	8d @ 12"	3/8" @ 19"	(2) 16d @ 4"	A35 @ 12"	RBC @ 11"	RBC @ 7"	832 595	
P2-4 (6,7)	8d @ 4"	8d @ 12"	3/8" @ 16"	(2) 16d @ 3 1/2"	A35 @ 10"	RBC @ 9"	RBC @ 6"	990 706	
P2-3 (6,7)	8d @ 3"	8d @ 12"	3/8" @ 12"	(2) 16d @ 3"	A35 @ 7"	RBC @ 6"	(2) RBC @ 10"	1274 911	
P2-2 (6,7)	8d @ 2"	8d @ 12"	3/8" @ 8"	(3) 16d @ 3"	A35 @ 6"	RBC @ 5"	(2) RBC @ 6"	1662 1190	
P1-2-10d (8)	10d @ 2"	10d @ 12"	3/8" @ 16"	(2) 16d @ 3 1/2"	A35 @ 10"	RBC @ 9"	RBC @ 6"	1002 716	

NOTES:  
 1. ALL EXTERIOR WALLS TO BE "P1-6" SHEARWALL UNLESS NOTED OTHERWISE.  
 2. NAILS TO HAVE A MINIMUM DIAMETER OF 0.131" FOR 8d, 0.148" FOR 10d and 16d.  
 3. ALL PANEL EDGES TO BE BACKED WITH 2" NOMINAL OR WIDER FRAMING.  
 4. "P1" INDICATES PLYWOOD ON ONE SIDE OF SHEARWALL ONLY, "P2" INDICATES PLYWOOD ON BOTH SIDES.  
 5. ANCHOR BOLTS SHALL HAVE A 3"x3"x24" STEEL PLATE WASHER THAT EXTENDS TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SHEATHED SIDE. WHERE 2x6 SHEARWALLS ARE SHEATHED ON BOTH SIDES, LARGER PLATE WASHERS WILL BE REQUIRED IN ORDER TO MEET THE 1/2" EDGE DISTANCE REQUIREMENT.  
 6. FRAMING MEMBERS RECEIVING EDGE NAILING FROM ABUTTING PANELS SHALL NOT BE LESS THAN A SINGLE 3" NOMINAL MEMBER OR A BUILT-UP MEMBER STITCH NAILED TOGETHER PER THE BOTTOM PLATE NAILING PATTERN IN THE SHEARWALL SCHEDULE.  
 7. PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS OR FRAMING SHALL BE 3" NOMINAL OR THICKER. NAILS ON EACH SIDE SHALL BE STAGGERED.  
 8. AT CONTRACTORS DISCRETION LTP FRAMING ANCHORS MAY BE USED IN LIEU OF THE A35.

17 PLYWOOD/OSB SHEARWALL SCHEDULE (HEM FIR FRAMING) (1, 2, 3, 4, 5)

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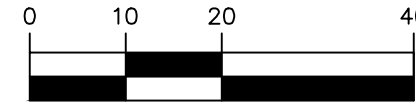
18-025

**S4.3**  
 FRAMING DETAILS





SCALE: 1" = 20'



**LEGEND**

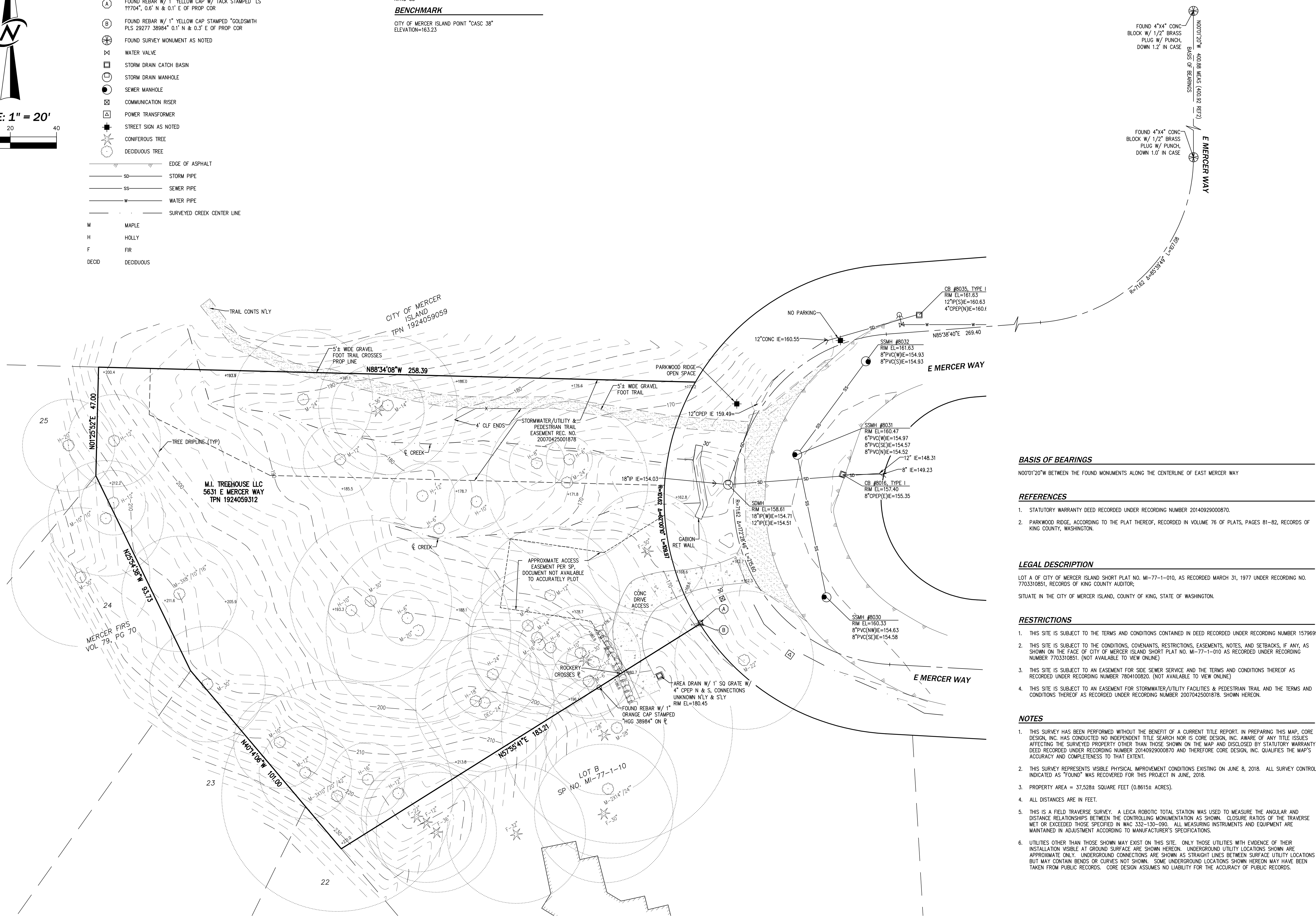
- ⊙ FOUND REBAR W/ 1" YELLOW CAP W/ TACK STAMPED "LS  
??704", 0.6" N & 0.1" E OF PROP COR
- ⊙ FOUND REBAR W/ 1" YELLOW CAP STAMPED "GOLDSMITH  
PLS 29277 38984" 0.1" N & 0.3" E OF PROP COR
- ⊙ FOUND SURVEY MONUMENT AS NOTED
- ⊗ WATER VALVE
- ⊠ STORM DRAIN CATCH BASIN
- ⊕ STORM DRAIN MANHOLE
- ⊙ SEWER MANHOLE
- ⊠ COMMUNICATION RISER
- ⊠ POWER TRANSFORMER
- ⊠ STREET SIGN AS NOTED
- ⊙ CONIFEROUS TREE
- ⊙ DECIDUOUS TREE
- EDGE OF ASPHALT
- SD — STORM PIPE
- SS — SEWER PIPE
- W — WATER PIPE
- SURVEYED CREEK CENTER LINE
- M MAPLE
- H HOLLY
- F FIR
- DECD DECIDUOUS

**VERTICAL DATUM**

NAVD 88

**BENCHMARK**

CITY OF MERCER ISLAND POINT "CASC 38"  
ELEVATION=163.23



**BASIS OF BEARINGS**

N00°01'20"W BETWEEN THE FOUND MONUMENTS ALONG THE CENTERLINE OF EAST MERCER WAY

**REFERENCES**

1. STATUTORY WARRANTY DEED RECORDED UNDER RECORDING NUMBER 20140929000870.
2. PARKWOOD RIDGE, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 76 OF PLATS, PAGES 81-82, RECORDS OF KING COUNTY, WASHINGTON.

**LEGAL DESCRIPTION**

LOT A OF CITY OF MERCER ISLAND SHORT PLAT NO. MI-77-1-010, AS RECORDED MARCH 31, 1977 UNDER RECORDING NO. 7703310851, RECORDS OF KING COUNTY AUDITOR;  
SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

**RESTRICTIONS**

1. THIS SITE IS SUBJECT TO THE TERMS AND CONDITIONS CONTAINED IN DEED RECORDED UNDER RECORDING NUMBER 1579699.
2. THIS SITE IS SUBJECT TO THE CONDITIONS, COVENANTS, RESTRICTIONS, EASEMENTS, NOTES, AND SETBACKS, IF ANY, AS SHOWN ON THE FACE OF CITY OF MERCER ISLAND SHORT PLAT NO. MI-77-1-010 AS RECORDED UNDER RECORDING NUMBER 7703310851. (NOT AVAILABLE TO VIEW ONLINE)
3. THIS SITE IS SUBJECT TO AN EASEMENT FOR SIDE SEWER SERVICE AND THE TERMS AND CONDITIONS THEREOF AS RECORDED UNDER RECORDING NUMBER 7804100820. (NOT AVAILABLE TO VIEW ONLINE)
4. THIS SITE IS SUBJECT TO AN EASEMENT FOR STORMWATER/UTILITY FACILITIES & PEDESTRIAN TRAIL AND THE TERMS AND CONDITIONS THEREOF AS RECORDED UNDER RECORDING NUMBER 20070425001878. SHOWN HEREON.

**NOTES**

1. THIS SURVEY HAS BEEN PERFORMED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT. IN PREPARING THIS MAP, CORE DESIGN, INC. HAS CONDUCTED NO INDEPENDENT TITLE SEARCH NOR IS CORE DESIGN, INC. AWARE OF ANY TITLE ISSUES AFFECTING THE SURVEYED PROPERTY OTHER THAN THOSE SHOWN ON THE MAP AND DISCLOSED BY STATUTORY WARRANTY DEED RECORDED UNDER RECORDING NUMBER 20140929000870 AND THEREFORE CORE DESIGN, INC. QUALIFIES THE MAP'S ACCURACY AND COMPLETENESS TO THAT EXTENT.
2. THIS SURVEY REPRESENTS VISIBLE PHYSICAL IMPROVEMENT CONDITIONS EXISTING ON JUNE 8, 2018. ALL SURVEY CONTROL INDICATED AS "FOUND" WAS RECOVERED FOR THIS PROJECT IN JUNE, 2018.
3. PROPERTY AREA = 37,528± SQUARE FEET (0.8615± ACRES).
4. ALL DISTANCES ARE IN FEET.
5. THIS IS A FIELD TRAVERSE SURVEY. A LEICA ROBOTIC TOTAL STATION WAS USED TO MEASURE THE ANGULAR AND DISTANCE RELATIONSHIPS BETWEEN THE CONTROLLING MONUMENTATION AS SHOWN. CLOSURE RATIOS OF THE TRAVERSE MET OR EXCEEDED THOSE SPECIFIED IN WAC 332-130-090. ALL MEASURING INSTRUMENTS AND EQUIPMENT ARE MAINTAINED IN ADJUSTMENT ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
6. UTILITIES OTHER THAN THOSE SHOWN MAY EXIST ON THIS SITE. ONLY THOSE UTILITIES WITH EVIDENCE OF THEIR INSTALLATION VISIBLE AT GROUND SURFACE ARE SHOWN HEREON. UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY. UNDERGROUND CONNECTIONS ARE SHOWN AS STRAIGHT LINES BETWEEN SURFACE UTILITY LOCATIONS BUT MAY CONTAIN BENDS OR CURVES NOT SHOWN. SOME UNDERGROUND LOCATIONS SHOWN HEREON MAY HAVE BEEN TAKEN FROM PUBLIC RECORDS. CORE DESIGN ASSUMES NO LIABILITY FOR THE ACCURACY OF PUBLIC RECORDS.

NO.	REVISIONS	DATE

14711 NE 28th Place, #101  
Bellevue, Washington 98007  
425-885-7877 Fax 425-885-7963

**CORE DESIGN**  
ENGINEERING • PLANNING • SURVEYING

**BOUNDARY & TOPOGRAPHIC SURVEY**  
**MERCER ISLAND TREEHOUSE**  
**MI TREEHOUSE, LLC**  
PO BOX 261  
MEDINA, WA

DATE: 2018-06-13	DESIGNED	DRAWN: NRR	APPROVED: KWS	PROJECT MANAGER
SHEET	1	OF	1	
PROJECT NUMBER	18039			



# 5637 MERCER WAY

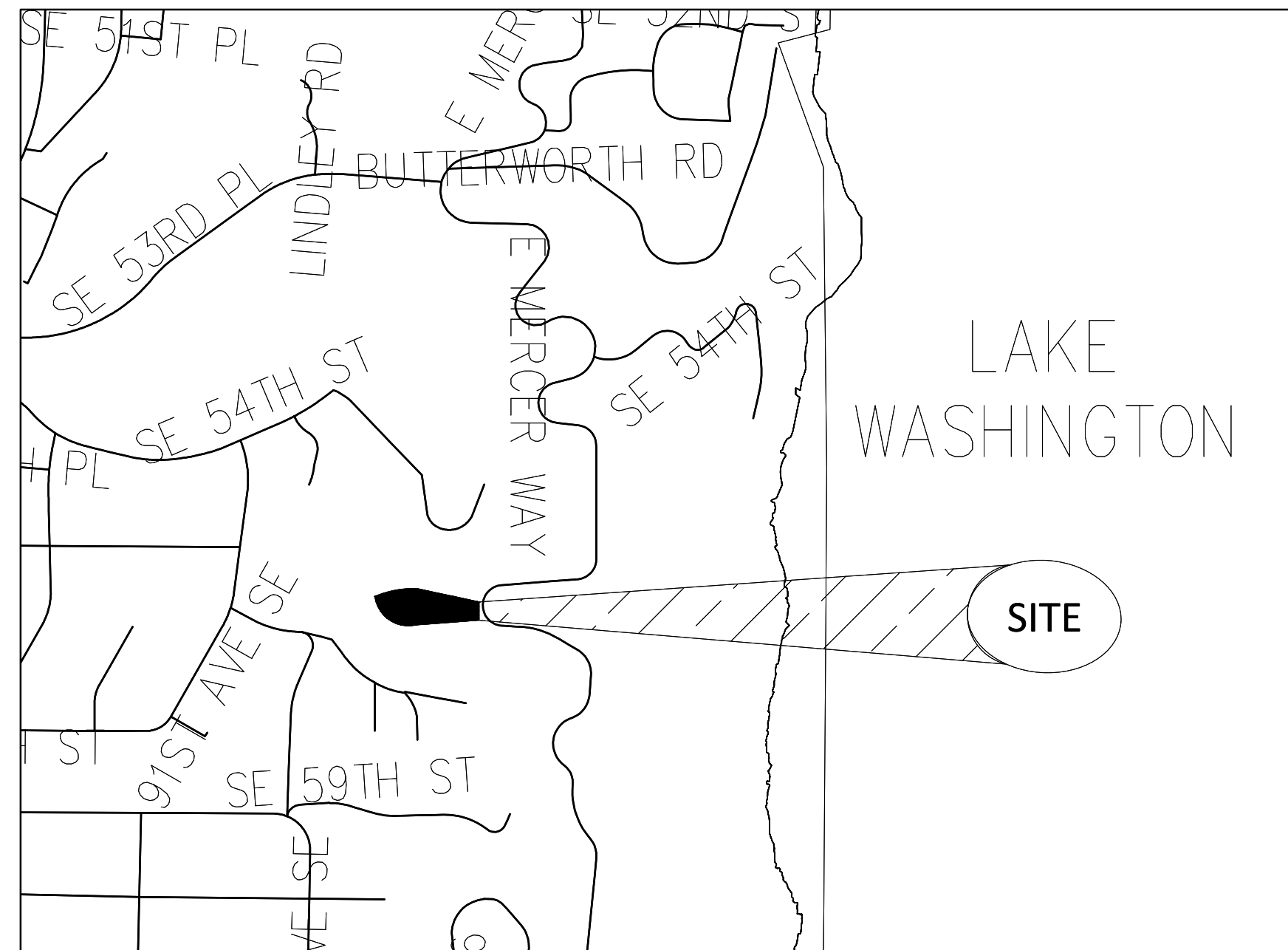
5637 E MERCER WAY  
MERCER ISLAND, WASHINGTON

**OWNER:**

MI TREEHOUSE, LLC  
11030 SE 30TH ST  
BELLEVUE, WA 98004

**ENGINEER/ SURVEY:**

CORE DESIGN INC  
14711 NE 29TH PL, SUITE 101  
BELLEVUE, WASHINGTON 98007  
(425) 885-7877  
CONTACT: MICHAEL A. MOODY, P.E.  
GLENN R. SPRAGUE, P.L.S.



**VICINITY MAP**

1" = 500'

**BASIS OF BEARINGS**

N00°01'20"W BETWEEN THE FOUND MONUMENTS ALONG THE CENTERLINE OF EAST MERCER WAY

**REFERENCES**

STATUTORY WARRANTY DEED RECORDED UNDER RECORDING NUMBER 20140929000870

**LEGAL DESCRIPTION**

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**BASIS OF BEARINGS**

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**VERTICAL DATUM**

NAVD 88

**BENCHMARKS**

CITY OF MERCER ISLAND POINT "CASC 38"  
ELEVATION=163.23

**SHEET INDEX**

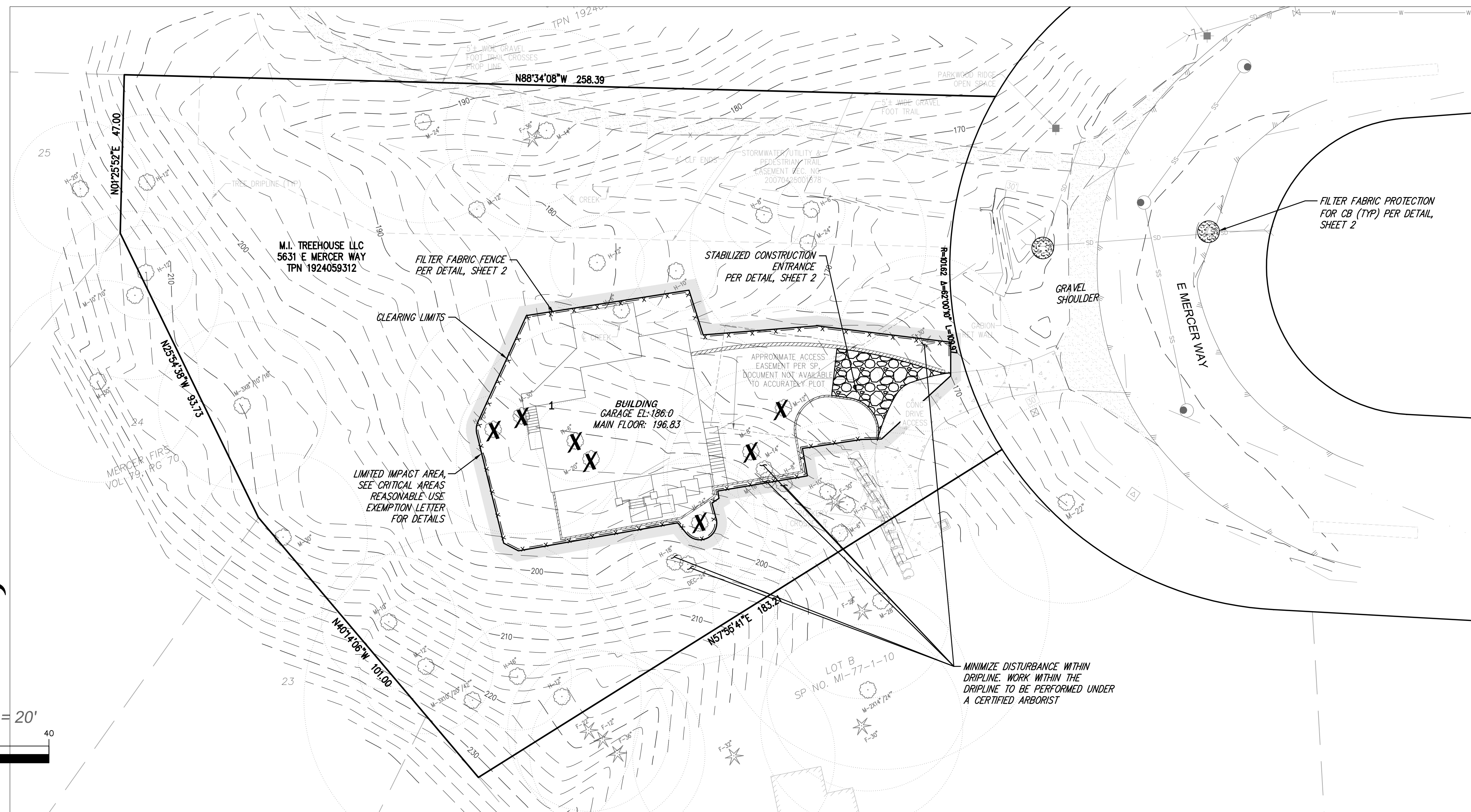
- |   |                              |
|---|------------------------------|
| 1 | CLEARING & GRADING PLAN      |
| 2 | TESC PLAN                    |
| 3 | UTILITIES PLAN               |
| 4 | NOTES, DETAILS, AND SECTIONS |

**SITE STATISTICS**

ZONING:	R-15 (RESIDENTIAL-SINGLE FAMILY)
SITE AREA:	±37,554 SF (±0.862 ACRES)
LOTS PROPOSED:	1
TAX PARCEL:	192405-9312
LOT SLOPE STATISTICS	
LOT 1:	24.5%

**LEGEND**

- BUILDING OVERHANG
- LOT LINES
- DRIVEWAY BOUNDARY
- PROPERTY BOUNDARY
- BUILDING EDGE
- SURVEY ALIGNMENT
- 41ST PAVEMENT EDGE
- ⊕ FOUND MONUMENT AS DESCRIBED
- FOUND PIPE/REBAR AS DESCRIBED
- M MADRONA O OAK
- FIG FIG
- D DOGWOOD
- CLF CHAIN LINK FENCE
- VBF VERTICAL BOARD FENCE
- ∞ ROCKERY
- ⊙ INLET FILTER (W.S.D.O.T. STD DTL. 1-40.20-00)
- x - x - SILT FENCE
- ▨ STABILIZED CONSTRUCTION ENTRANCE DOE STD DTL. BMP 205
- CLEARING LIMITS
- 110 EXISTING CONTOUR
- 110 PROPOSED CONTOUR
- X ONSITE TREE TO BE REMOVED

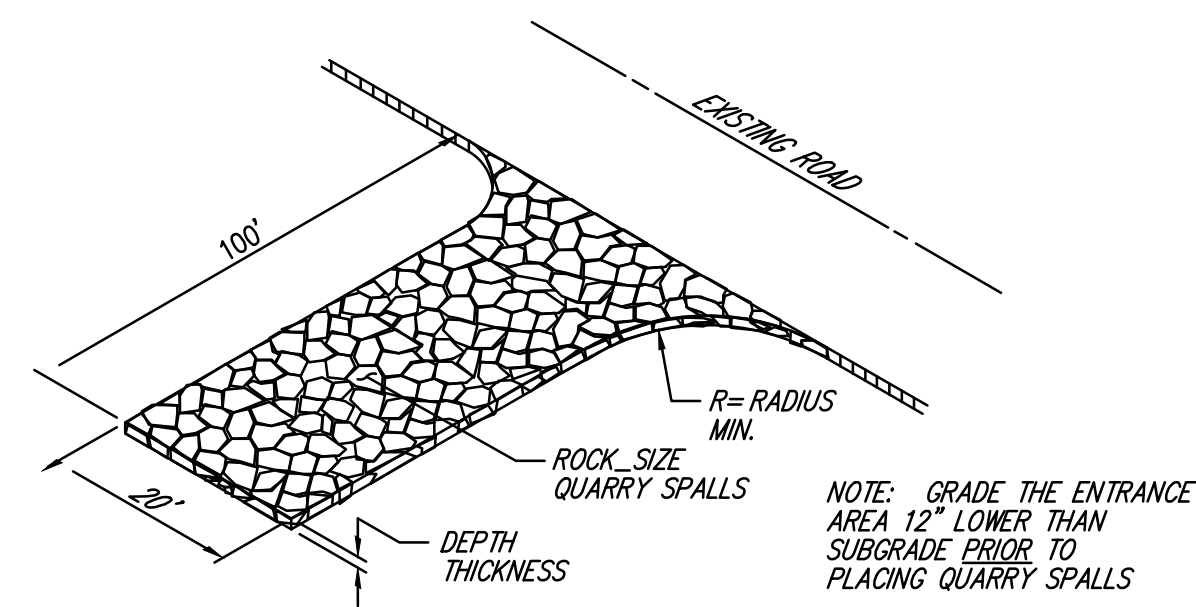


DATE		REVISIONS		TWO		THREE		FOUR	
<p>14711 NE 29th Place Suite 101 Bellevue, Washington 98007 425.885.7877 Fax 425.885.7963</p>									
<p><b>TITLE AND TESC PLAN</b> <b>5637 MERCER WAY</b> <b>MI TREEHOUSE, LLC</b> 11030 SE 30TH ST BELLEVUE, WA 98004</p>									
DATE	JUNE, 2018	DESIGNED	NICHOLAS JOHNSON	DRAWN	NICHOLAS JOHNSON	APPROVED	MICHAEL A. MOODY	PROJECT MANAGER	MICHAEL A. MOODY
SHEET	1	OF	4						
PROJECT NUMBER <b>18039</b>									

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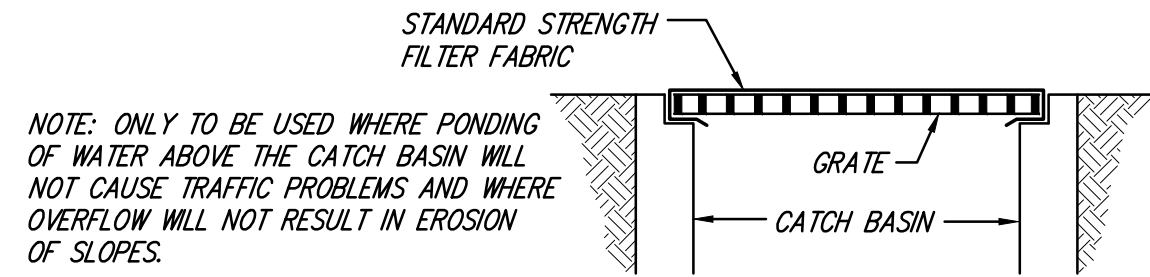
**CONSTRUCTION SEQUENCE**

- ① PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL SCHEDULE AND ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF MERCER ISLAND BY PHONING (206)-275-7726.
- ② FLAG LIMITS OF CLEARING IN FIELD AS INDICATED ON SHEET C1.01.
- ③ CLEAR FOR AND CONSTRUCT THE ROCKED CONSTRUCTION ACCESS.
- ④ CONSTRUCT PERIMETER FILTER FABRIC FENCES.
- ⑤ CONSTRUCT DOWNSTREAM DISCHARGE SYSTEM, INTERCEPTOR SWALES, ROCK CHECK DAMS, STORM DRAINAGE PIPES, RIP RAP PADS.
- ⑥ CLEAR & GRADE SITE WHILE EXTENDING TEMPORARY INTERCEPTOR SWALE AS CONSTRUCTION PROCEEDS. ALL SILT-LADEN RUNOFF SHALL BE DIRECTED TO SEDIMENT RETENTION FACILITIES.
- ⑦ CLEAR FOR AND CONSTRUCT DETENTION TANK FOR USE FOR SEDIMENT RETENTION AND CONSTRUCT DISCHARGE SYSTEM.
- ⑧ CONSTRUCT SANITARY SEWER, WATER, & REMAINING STORM DRAINAGE FACILITIES PER THE APPROVED PLANS.
- ⑨ FINE GRADE AND PAVE THE DRIVEWAY.
- ⑩ UPON COMPLETION OF GRADING ACTIVITIES, STABILIZE ALL DISTURBED AREAS, REMOVE EXCESS SEDIMENT FROM THE TANK AND REMOVE ALL TEMPORARY EROSION/ SEDIMENTATION CONTROL FACILITIES.

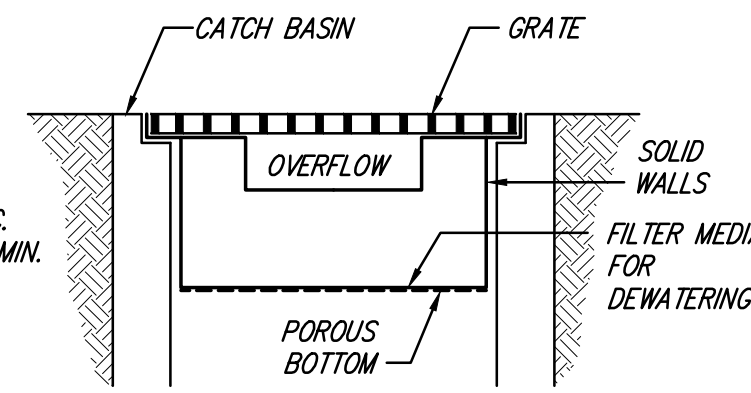


**STABILIZED CONSTRUCTION ACCESS**

NO SCALE



**FILTER FABRIC PROTECTION**



**CATCH BASIN INSERT**

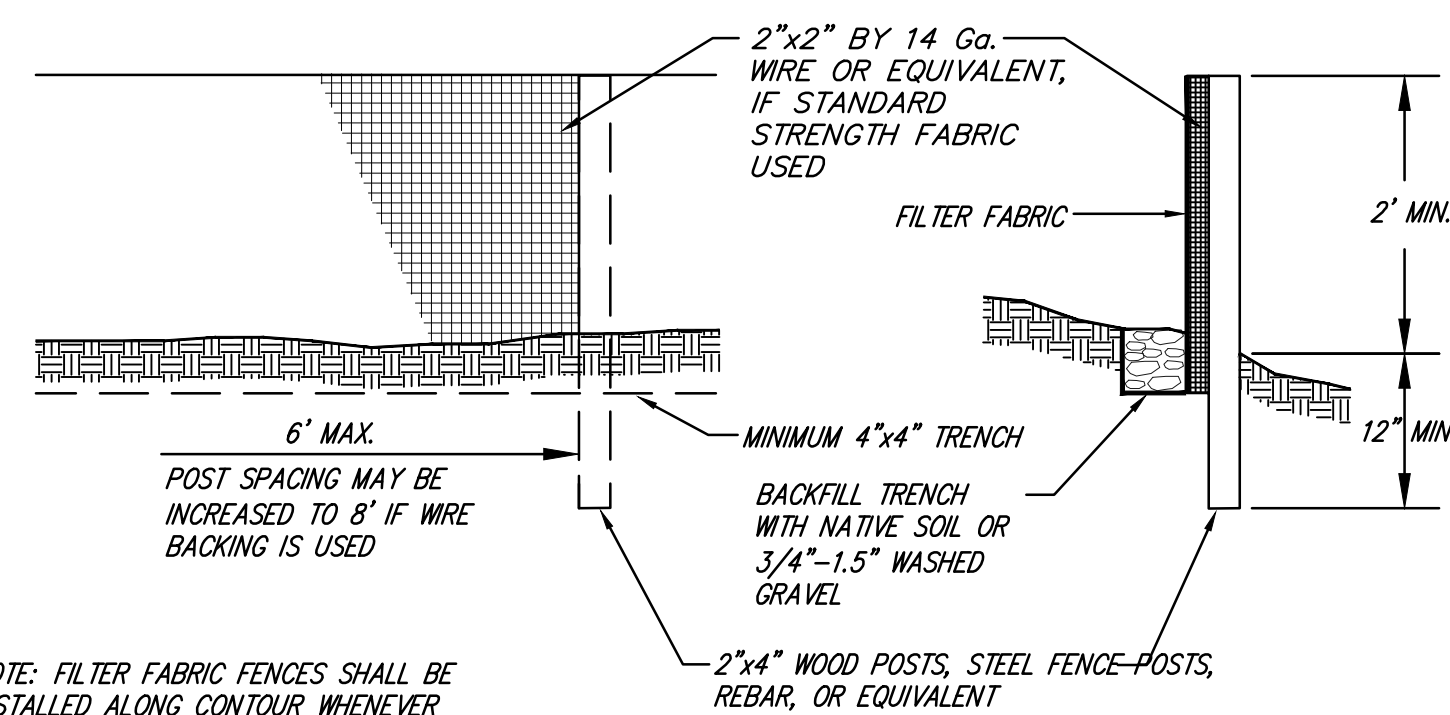
**Maintenance Standards**

1. ANY ACCUMULATED SEDIMENT ON OR AROUND THE FILTER FABRIC PROTECTION SHALL BE REMOVED IMMEDIATELY. SEDIMENT SHALL NOT BE REMOVED WITH WATER, AND ALL SEDIMENT MUST BE DISPOSED OF AS FILL ON-SITE OR HAULED OFF-SITE.
2. ANY SEDIMENT IN THE CATCH BASIN INSERT SHALL BE REMOVED WHEN THE SEDIMENT HAS FILLED ONE-THIRD OF THE AVAILABLE STORAGE. THE FILTER MEDIA FOR THE INSERT SHALL BE CLEANED OR REPLACED AT LEAST MONTHLY.
3. REGULAR MAINTENANCE IS CRITICAL FOR BOTH FORMS OF CATCH BASIN PROTECTION. UNLIKE MANY FORMS OF PROTECTION THAT FAIL GRADUALLY, CATCH BASIN PROTECTION WILL FAIL SUDDENLY AND COMPLETELY IF NOT MAINTAINED PROPERLY.

**FILTER FABRIC PROTECTION FOR CB's**

NO SCALE

JOINTS IN FILTER FABRIC SHALL BE SPLICED AT POSTS. USE STAPLES, WIRE RINGS, OR EQUIVALENT TO ATTACH FABRIC TO POSTS.



NOTE: FILTER FABRIC FENCES SHALL BE INSTALLED ALONG CONTOUR WHENEVER POSSIBLE

**FILTER FABRIC FENCE DETAIL**

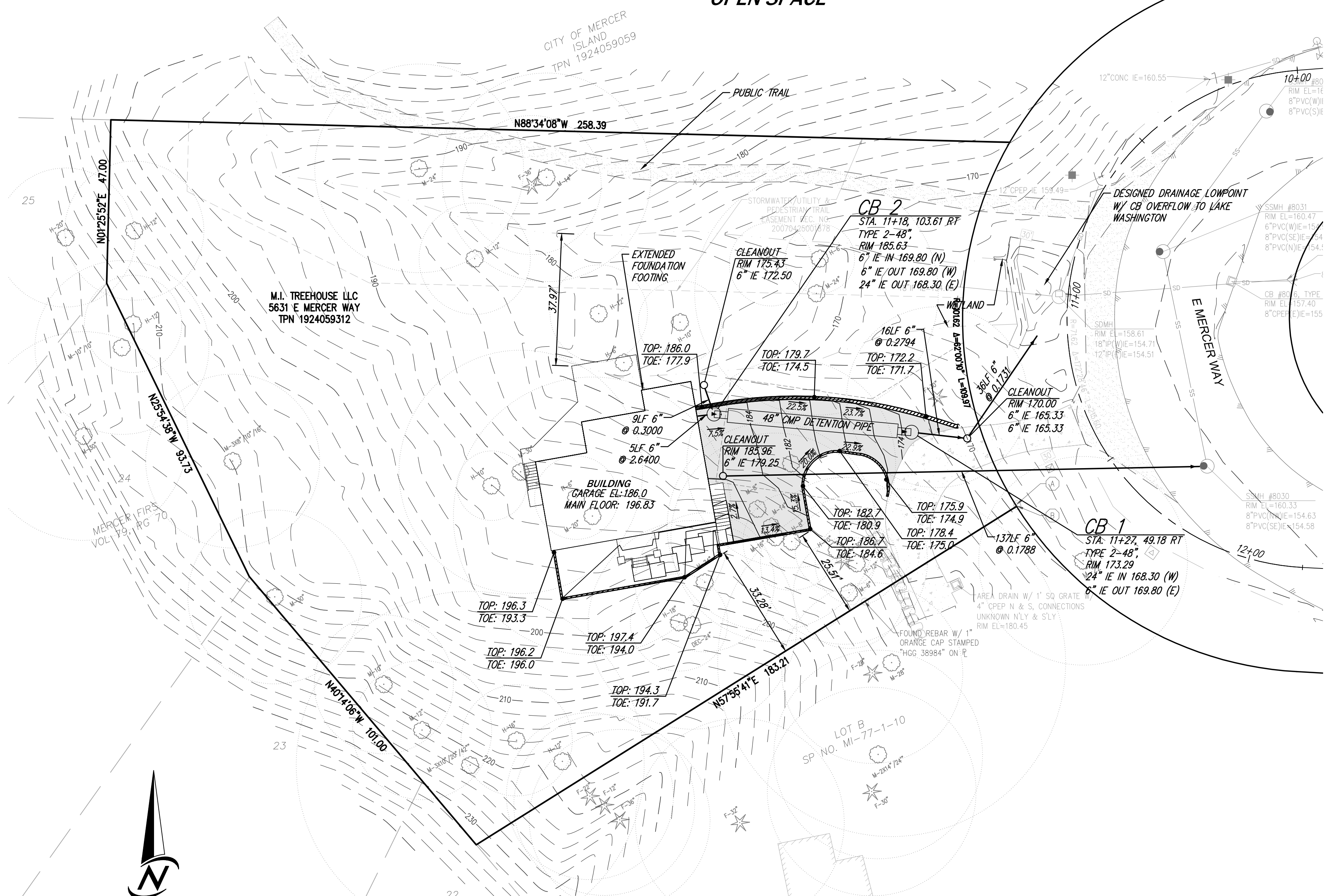
NO SCALE

DATE		REVISIONS							
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14711 NE 29th Place Suite 101 Bellevue, Washington 98007 425.885.7877 Fax 425.885.7963									
ENGINEERING • PLANNING • SURVEYING									
<b>TESC DETAILS</b> <b>5637 MERCER WAY</b> <b>MI TREEHOUSE, LLC</b> 11030 SE 30TH ST BELLEVUE, WA 98004									
DATE	JUNE, 2018	DESIGNED	NICHOLAS JOHNSON	DRAWN	NICHOLAS JOHNSON	APPROVED	MICHAEL A. MOODY	PROJECT MANAGER	MICHAEL A. MOODY
SHEET	2	OF	4						
PROJECT NUMBER <b>18039</b>									

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**PARKWOOD RIDGE  
OPEN SPACE**



**STORM DRAINAGE GENERAL NOTES**

1. ALL NEW CATCH BASINS SHALL CONFORM TO THE APWA WSDOT STANDARD DETAILS.
2. THE FOOTING DRAINAGE SYSTEM AND THE ROOF DOWNSPOUT SYSTEM SHALL NOT BE INTERCONNECTED.
3. PROVIDE AND MAINTAIN TEMPORARY SEDIMENTATION FILTER AND SILT REMOVAL FACILITIES TO ENSURE THAT SEDIMENT OR OTHER HAZARDOUS MATERIALS DO NOT ENTER THE STORM DRAINAGE SYSTEM. FOR ALL CONSTRUCTION DURING THE RAINY SEASON, DOWNHILL BASINS AND INLETS MUST BE PROTECTED WITH CATCH BASIN INSERTS. PLACEMENT OF FILTER FABRIC UNDER GRATE IS NOT ACCEPTABLE.
4. PRIOR TO FINAL INSPECTION AND ACCEPTANCE OF STORM DRAINAGE WORK, PIPES AND STORM DRAIN STRUCTURES SHALL BE CLEANED AND FLUSHED. ANY OBSTRUCTIONS TO FLOW WITHIN THE STORM DRAINAGE SYSTEM (SUCH AS RUBBLE, MORTAR, AND WEDGED DEBRIS) SHALL BE REMOVED AT THE NEAREST STRUCTURE. WASH WATER OF ANY SORT SHALL NOT BE DISCHARGED TO THE STORM DRAIN SYSTEM OR SURFACE WATER.
5. ON-SITE DRAINAGE SYSTEM WILL BE PRIVATELY OWNED AND MAINTAINED.
6. SEE FOUNDATION PLAN FOR FOOTING DRAIN LOCATIONS.
7. EXCAVATION OF ON-SITE CATCH BASINS WILL NOT IMPACT NEIGHBORING PROPERTY AND WILL BE CONTAINED BY WALL.

**GENERAL NOTES**

1. CONTRACTOR IS TO OBTAIN PERMITS AND GUARANTEES.
2. ALL DAMAGE TO ADJACENT PROPERTIES OR PUBLIC RIGHTS-OF-WAY RESULTING FROM CONSTRUCTION (E.G., SILTATION, MUD, WATER, RUNOFF, ROADWAY DAMAGE CAUSED BY CONSTRUCTION EQUIPMENT OR HAULING) SHALL BE EXPEDITIOUSLY MITIGATED AND REPAIRED BY THE CONTRACTOR, AT NO EXPENSE TO THE CITY. FAILURE TO MITIGATE AND REPAIR SAID DAMAGE OR TO COMPLY WITH THE APPROVED CONSTRUCTION PLANS, THE PERMITS ISSUED BY THE CITY OR THE CITY REQUIREMENT FOR CORRECTIVE ACTION SHALL BE CAUSE FOR THE ISSUANCE OF A "STOP WORK" ORDER, FORECLOSURE ON THE PLAT BOND/ SECURITY, AND/OR OTHER MEASURES DEEMED APPROPRIATE BY THE CITY ENGINEER OR CODE OFFICIAL TO ENSURE QUALITY CONSTRUCTION AND PROTECT THE PUBLIC SAFETY.
3. CONSTRUCTION OF ALL IMPROVEMENTS FOR ACCESS, UTILITIES, STORM DRAINAGE AND SITE WORK SHALL COMPLY WITH CURRENT CITY ORDINANCES AND THE REQUIREMENTS OF THE CITY ENGINEER.
4. ALL SHORT PLAT IMPROVEMENTS SHALL BE COMPLETED PRIOR TO FINAL APPROVAL AND RECORDING OF THE SHORT PLAT MYLAR DOCUMENTS OR BONDED AND COMPLETED PRIOR TO ISSUANCE OF BUILDING PERMITS WHEN APPROVED BY THE CITY ENGINEER. AN ACCURATELY PREPARED AS-BUILT DRAWING THAT SHOWS ALL UTILITIES AND SHORT PLAT IMPROVEMENTS SHALL BE SUBMITTED TO THE CITY UPON COMPLETION OF THE WORK PROVIDED TWO PAPER COPIES, ONE MYLAR AND ONE DXF AUTOCAD FILE. SUBMIT USING MERCER ISLAND'S DATUM AN TIE THE PLAT TO AT LEAST TWO MONUMENTS.

**TREE PROTECTION NOTES**

1. CONTRACTOR SHALL COORDINATE WITH ARBORIST ON GRADING AROUND RETAINED TREES AND ROOTS.
2. ARBORIST TO BE ONSITE TO VERIFY PRESERVATION OF RETAINED TREES

**WATER GENERAL NOTES**

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE DEVELOPER EXTENSION AGREEMENT, THE STANDARD SPECIFICATIONS AND THE STANDARD DETAILS OF THE CITY OF MERCER ISLAND.
- UTILITY LOCATES
2. THE APPROXIMATE LOCATIONS OF EXISTING UTILITIES ARE SHOWN ON PLANS AND PROFILES FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF UTILITY LOCATIONS SHOWN AND FOR DISCOVERY OF POSSIBLE ADDITIONAL UTILITIES NOT SHOWN ON PLANS.
  3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE LOCATED BY APPROPRIATE UTILITY DISTRICTS OR COMPANIES, ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  4. FOR UTILITY LOCATES IN KING COUNTY, CALL 1-800-424-5555 PRIOR TO DIGGING.

PERMITS

5. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL REGULATORY PERMITS.
6. ALL WORK IN RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF PERMITTING AGENCY.

PRE-CON

7. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD AT THE CITY OF MERCER ISLAND'S OFFICE PRIOR TO THE START OF CONSTRUCTION. CITY STAFF WILL NOTIFY THE APPROPRIATE AGENCIES OR REPRESENTATIVES.

SURVEYING

8. PRIOR TO CONSTRUCTING ANY WATER MAINS, THE STREET CENTERLINES OF THE DEVELOPMENT, CENTER OF CUL-DE-SACS, ALL WATER LINE EASEMENTS AND ALL LOT CORNERS SHALL BE STAKED. THE MAXIMUM STATIONING INTERVAL WILL BE 50 FEET WITH THE STATION NUMBER ON EACH STAKE.
9. HORIZONTAL CONTROL DATA SHALL BE NAD '83/'91. VERTICAL CONTROL SHALL BE NAVD-88 DATUM.
10. AT THE CONCLUSION OF CONSTRUCTION, THE DEVELOPER'S REGISTERED PROFESSIONAL SURVEYOR SHALL PREPARE A DRAWING BASED ON THE SURVEYED LOCATIONS OF ALL APPURTENANCES INSTALLED, INCLUDING BUT NOT LIMITED TO, WATER MAIN, METER BOXES, BLOWOFFS, VALVES BOXES, HYDRANTS AND BENDS. THE DISTRICT WILL PROVIDE LOCATES TO ASSIST THE SURVEYOR IN LOCATING THE WATER MAIN BETWEEN APPURTENANCES AND LOCATING THE BENDS. THE DRAWING SHALL BE PROVIDED TO THE DISTRICT IN AUTOCAD FORMAT, R 2000 OR NEWER. IN ADDITION, ALL WATER EASEMENTS SHALL BE STAKED AND FLAGGED AT THEIR INTERSECTION WITH PROPERTY LINES AND AT 25 FOOT STATIONS ALONG THE EASEMENT LINES.

CONSTRUCTION

11. THE WATER MAIN SHALL BE PLACED AS SHOWN ON PLAN.
12. A MINIMUM TEN (10) FOOT HORIZONTAL SEPARATION MUST BE MAINTAINED BETWEEN THE SANITARY SEWER LINE AND THE WATER MAIN.
13. A FIVE (5) FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN ALL WATER FACILITIES AND UNDERGROUND POWER AND TELEPHONE FACILITIES, UNLESS OTHERWISE APPROVED BY THE DISTRICT.
14. DISTRICT VALVES SHALL ONLY BE OPERATED BY DISTRICT PERSONNEL.

MATERIALS

15. ALL WATER MAIN PIPING SHALL BE DUCTILE-IRON MINIMUM THICKNESS CLASS 52, CEMENT-MORTAR LINED AND TYTON JOINT. ALL WATER MAIN PIPING TO MEET THE REQUIREMENTS OF AWWA C-151.
16. ALL WATER MAIN FITTINGS SHALL BE CEMENT-MORTAR LINED AND MEET THE REQUIREMENTS OF AWWA C-153.
17. POLYETHYLENE ENCASUREMENT TO MEET THE AWA STANDARD C-105. ANY TEARS OR OPENINGS MADE FOR SERVICE OR TAPS SHALL BE REPAIRED WITH AN ADHESIVE TAPE.
18. ALL WATER MAIN PIPES AND SERVICES SHALL BE INSTALLED WITH A 14 (FOURTEEN) GAUGE, CONTINUOUS, SOLID-CORE, NEOPRENE COATED LOCATING WIRE. ANY CONNECTIONS OR SPLICES SHALL BE MADE WITH SPLIT-BOLT WIRE CONNECTORS.

PLACEMENT

19. FIRE HYDRANT LOCATIONS TO BE APPROVED BY THE FIRE MARSHAL OF JURISDICTION.
20. WATER SERVICE LINE AND METER LOCATIONS WILL BE COORDINATED WITH THE DEVELOPER'S ENGINEER AFTER A THOROUGH REVIEW OF ALL UTILITY FACILITIES.
  - 20-1 THE METER LOCATION SHALL BE WITHIN THREE (3) FEET OF THE PROPERTY LINE THAT IS PERPENDICULAR TO THE RIGHT-OF-WAY AND WITHIN ONE (1) FOOT OF THE EDGE OF PROPERTY ON THE RIGHT-OF-WAY SIDE UNLESS OTHERWISE APPROVED IN WRITING BY THE DISTRICT.
  - 20-2 AFTER INSTALLATION OF THE METER AND BOX, A 2X4 BOARD PAINTED WHITE WITH "WATER SERVICE" STENCILED ONTO IT WILL BE DRIVEN INTO THE GROUND BEHIND THE METER BOX.

**SEWER GENERAL NOTES**

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE DEVELOPER EXTENSION AGREEMENT, THE STANDARD SPECIFICATIONS, STANDARD DETAILS OF THE CITY OF MERCER ISLAND.

UTILITY LOCATES

2. THE APPROXIMATE LOCATIONS OF EXISTING UTILITIES ARE SHOWN ON PLANS AND PROFILES FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF UTILITY LOCATIONS SHOWN AND FOR DISCOVERY OF POSSIBLE ADDITIONAL UTILITIES NOT SHOWN ON PLANS.
3. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE LOCATED, BY APPROPRIATE UTILITY DISTRICTS OR COMPANIES, ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
4. FOR UTILITY LOCATES IN KING COUNTY, CALL 1-800-424-5555 PRIOR TO DIGGING.

PERMITS

5. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL REGULATORY PERMITS.
6. ALL WORK IN RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PERMITTING AGENCY.

PRE-CON

7. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD AT THE CITY OF MERCER ISLAND'S OFFICE PRIOR TO THE START OF CONSTRUCTION. DISTRICT STAFF WILL NOTIFY THE APPROPRIATE AGENCIES OR REPRESENTATIVES.

CONSTRUCTION

11. THE SEWER MAIN SHALL BE PLACED FIVE (5) FEET SOUTH OR WEST FROM THE CENTERLINE OF THE ROADWAY, UNLESS OTHERWISE SHOWN ON THE PLAN.
12. A MINIMUM TEN (10) FOOT HORIZONTAL SEPARATION MUST BE MAINTAINED BETWEEN THE SANITARY SEWER LINE AND THE WATER MAIN.
13. AFTER TRENCH BACKFILL AND COMPACTION, PVC SANITARY SEWER MAINS SHALL BE TESTED FOR DEFLECTION AS SPECIFIED IN SECTION 7-17.3(2)(C) OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION TEST OBSERVATION AND INSPECTION BY NORTHSLORE.

UTILITY DISTRICT

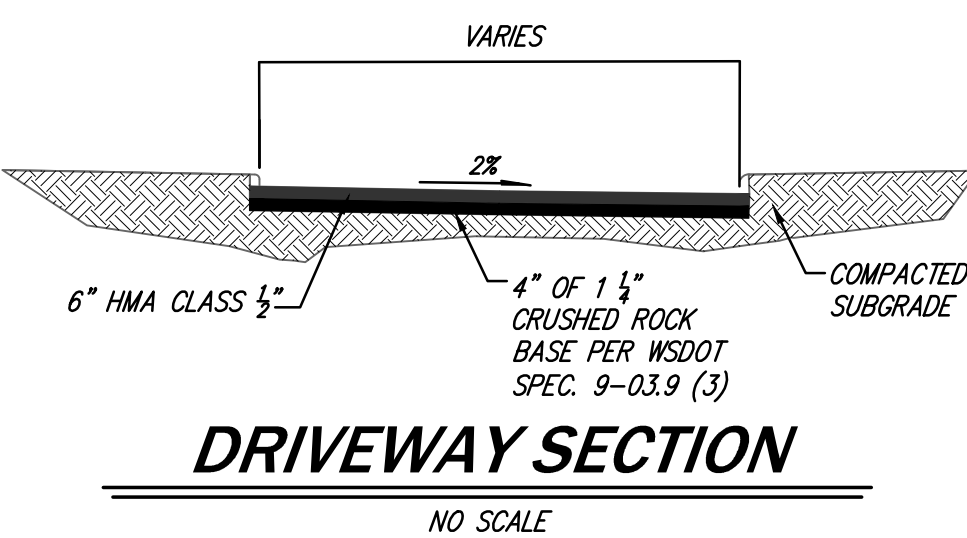
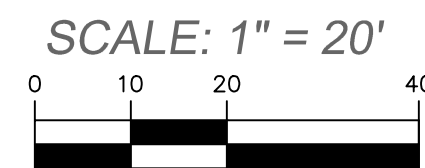
14. WHENEVER SANITARY SEWER CROSSES BELOW A WATER MAIN, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER LINE IS AT LEAST EIGHTEEN (18) INCHES BELOW THE BOTTOM OF THE WATER MAIN.
15. ALL MANHOLES SHALL HAVE A MINIMUM DROP OF ONE-TENTH (0.10) FOOT AND FIVE-TENTHS (0.50) FOOT MAXIMUM DROP BETWEEN INVERT IN AND INVERT OUT.
16. MANHOLES IN THE PUBLIC RIGHT-OF-WAY SHALL BE A MINIMUM OF EIGHT (8) FEET IN DEPTH OR PER APPROVED PLANS.
17. MANHOLES NOT IN PAVED PUBLIC RIGHT-OF-WAY TO HAVE LOCKING LIDS AND ALL FRAMES SHALL BE LOCKING TYPE PER THE STANDARD DETAILS.
18. FOR PIPE SLOPES GREATER THAN 20% RESTRAINED-JOINT DUCTILE IRON PIPE SHALL BE USED FOR EVERY JOINT.
19. SIDE SEWER STUBS SHALL HAVE A MINIMUM OF TWO (2) PERCENT SLOPE AND MAXIMUM OF FORTY-FIVE (45) DEGREE SLOPE. STUBS SHALL BE 6" MINIMUM DIAMETER. FOR ALL STUBS LESS THAN EIGHT (8) FEET IN DEPTH: INSTALL A THREE (3) INCH WIDE GREEN METALLIC DETECTOR TAPE 12" ABOVE THE PIPE, THE ENTIRE LENGTH OF THE STUB CONTINUING UP THE 2X4 SIDE SEWER MARKER POST. IDENTIFICATION ON THE TAPE SHALL INCLUDE THE WORDS "SANITARY SEWER".

MATERIALS

20. SANITARY SEWER PIPE LESS THAN EIGHTEEN (18) FEET IN DEPTH AND LESS THAN 20% SLOPE SHALL BE PVC CONFORMING TO ASTM D-3034, SDR-35 AND SHALL BE BEDDED WITH CLEAN, GRANULAR MANUFACTURED PEA GRAVEL FROM 4" UNDER TO 6" OVER THE PIPE. SANITARY SEWER PIPE EIGHTEEN (18) FEET DEEP AND GREATER, OR ON A SLOPE OF 20% DUCTILE-IRON PIPE MUST MEET THE REQUIREMENTS OF AWWA C-151.
21. HIGH-DENSITY POLYETHYLENE (HDPE) SHALL BE SDR-11 MINIMUM.

SURVEYING

8. PRIOR TO CONSTRUCTING ANY SEWER MAINS, THE STREET CENTERLINES OF THE DEVELOPMENT, CENTER OF CUL-DE-SACS, ALL SEWER LINE EASEMENTS AND ALL LOT CORNERS SHALL BE STAKED. THE MAXIMUM STATIONING INTERVAL SHALL BE 50 FEET WITH THE STATION NUMBER ON EACH STAKE.
9. HORIZONTAL CONTROL DATA SHALL BE NAD '83/'91. VERTICAL CONTROL SHALL BE NAVD-88 DATUM.
10. AT THE CONCLUSION OF CONSTRUCTION, THE DEVELOPER'S REGISTERED PROFESSIONAL SURVEYOR SHALL PREPARE A DRAWING BASED ON THE SURVEYED LOCATION OF ALL AT-GRADE APPURTENANCES INSTALLED, INCLUDING BUT NOT LIMITED TO, LOCATION OF EXISTING MANHOLES INCLUDING RIM & ALL INVERT ELEVATIONS AND NEW MANHOLE LOCATIONS INCLUDING RIM & ALL INVERT ELEVATIONS. THE DRAWING SHALL BE PROVIDED TO THE DISTRICT IN AUTOCAD FORMAT, R 2000 OR NEWER. IN ADDITION, ALL SEWER EASEMENTS SHALL BE STAKED AND FLAGGED AT THEIR INTERSECTION WITH PROPERTY LINES AND AT 25 FOOT STATIONS ALONG THE EASEMENT LINES.



5. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL REGULATORY PERMITS.
6. ALL WORK IN RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PERMITTING AGENCY.

PRE-CON

7. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD AT THE CITY OF MERCER ISLAND'S OFFICE PRIOR TO THE START OF CONSTRUCTION. DISTRICT STAFF WILL NOTIFY THE APPROPRIATE AGENCIES OR REPRESENTATIVES.

CONSTRUCTION

11. THE SEWER MAIN SHALL BE PLACED FIVE (5) FEET SOUTH OR WEST FROM THE CENTERLINE OF THE ROADWAY, UNLESS OTHERWISE SHOWN ON THE PLAN.
12. A MINIMUM TEN (10) FOOT HORIZONTAL SEPARATION MUST BE MAINTAINED BETWEEN THE SANITARY SEWER LINE AND THE WATER MAIN.
13. AFTER TRENCH BACKFILL AND COMPACTION, PVC SANITARY SEWER MAINS SHALL BE TESTED FOR DEFLECTION AS SPECIFIED IN SECTION 7-17.3(2)(C) OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION TEST OBSERVATION AND INSPECTION BY NORTHSLORE.

UTILITY DISTRICT

14. WHENEVER SANITARY SEWER CROSSES BELOW A WATER MAIN, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER LINE IS AT LEAST EIGHTEEN (18) INCHES BELOW THE BOTTOM OF THE WATER MAIN.
15. ALL MANHOLES SHALL HAVE A MINIMUM DROP OF ONE-TENTH (0.10) FOOT AND FIVE-TENTHS (0.50) FOOT MAXIMUM DROP BETWEEN INVERT IN AND INVERT OUT.
16. MANHOLES IN THE PUBLIC RIGHT-OF-WAY SHALL BE A MINIMUM OF EIGHT (8) FEET IN DEPTH OR PER APPROVED PLANS.
17. MANHOLES NOT IN PAVED PUBLIC RIGHT-OF-WAY TO HAVE LOCKING LIDS AND ALL FRAMES SHALL BE LOCKING TYPE PER THE STANDARD DETAILS.
18. FOR PIPE SLOPES GREATER THAN 20% RESTRAINED-JOINT DUCTILE IRON PIPE SHALL BE USED FOR EVERY JOINT.
19. SIDE SEWER STUBS SHALL HAVE A MINIMUM OF TWO (2) PERCENT SLOPE AND MAXIMUM OF FORTY-FIVE (45) DEGREE SLOPE. STUBS SHALL BE 6" MINIMUM DIAMETER. FOR ALL STUBS LESS THAN EIGHT (8) FEET IN DEPTH: INSTALL A THREE (3) INCH WIDE GREEN METALLIC DETECTOR TAPE 12" ABOVE THE PIPE, THE ENTIRE LENGTH OF THE STUB CONTINUING UP THE 2X4 SIDE SEWER MARKER POST. IDENTIFICATION ON THE TAPE SHALL INCLUDE THE WORDS "SANITARY SEWER".

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DATE	JUNE, 2018
DESIGNED	NICHOLAS JOHNSON
DRAWN	NICHOLAS JOHNSON
APPROVED	MICHAEL A. MOODY
PROJECT MANAGER	MICHAEL A. MOODY
SHEET	3
OF	4
PROJECT NUMBER	18039

UTILITY & GRADING PLAN  
5637 MERCER WAY  
MI TREEHOUSE, LLC  
11030 SE 30TH ST  
BELLEVUE, WA 98004

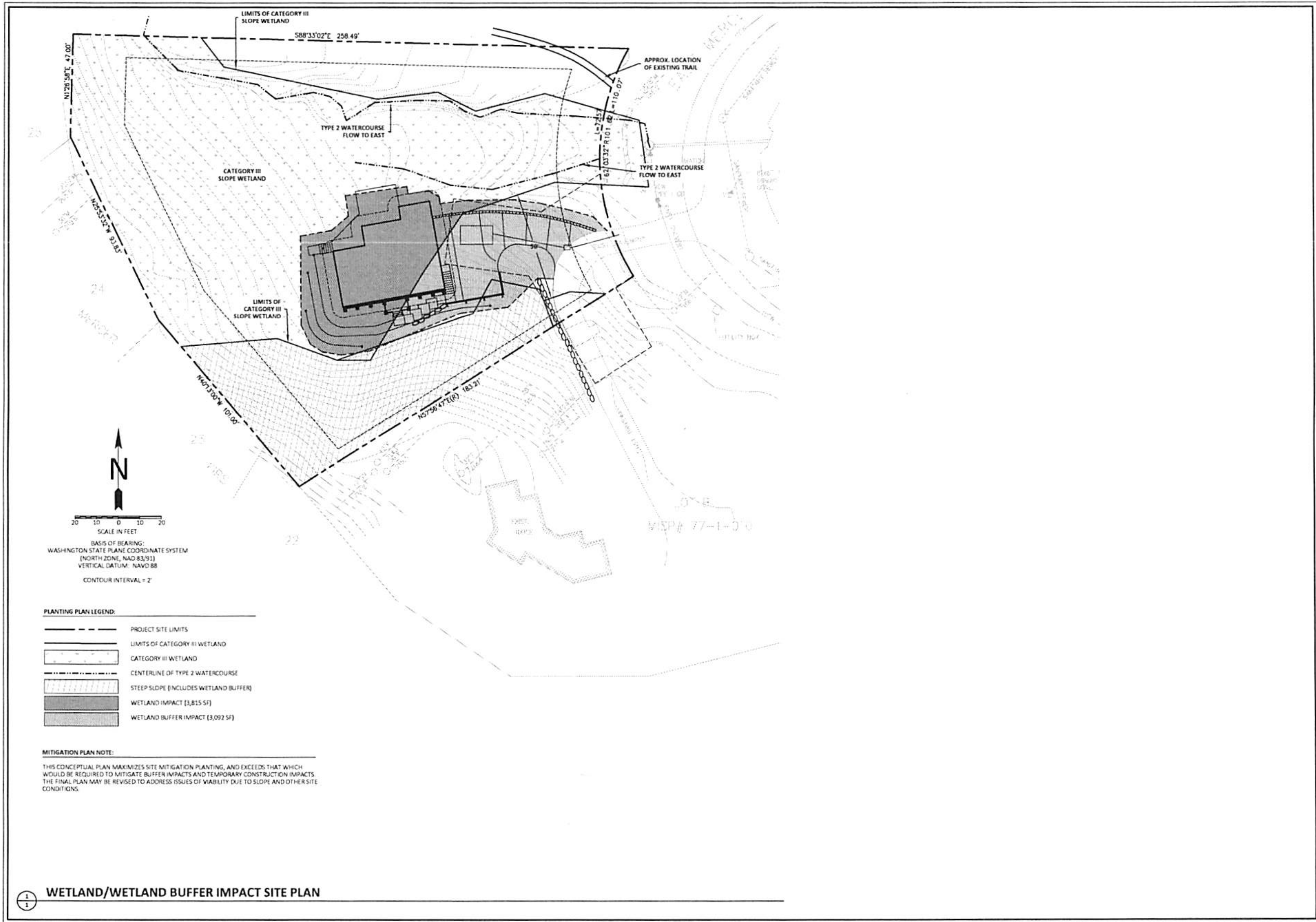
CORE DESIGN  
ENGINEERING • PLANNING • SURVEYING

14711 NE 29th Place Suite 101  
Bellevue, Washington 98007  
425.885.7877 Fax 425.885.7963

06-09-20







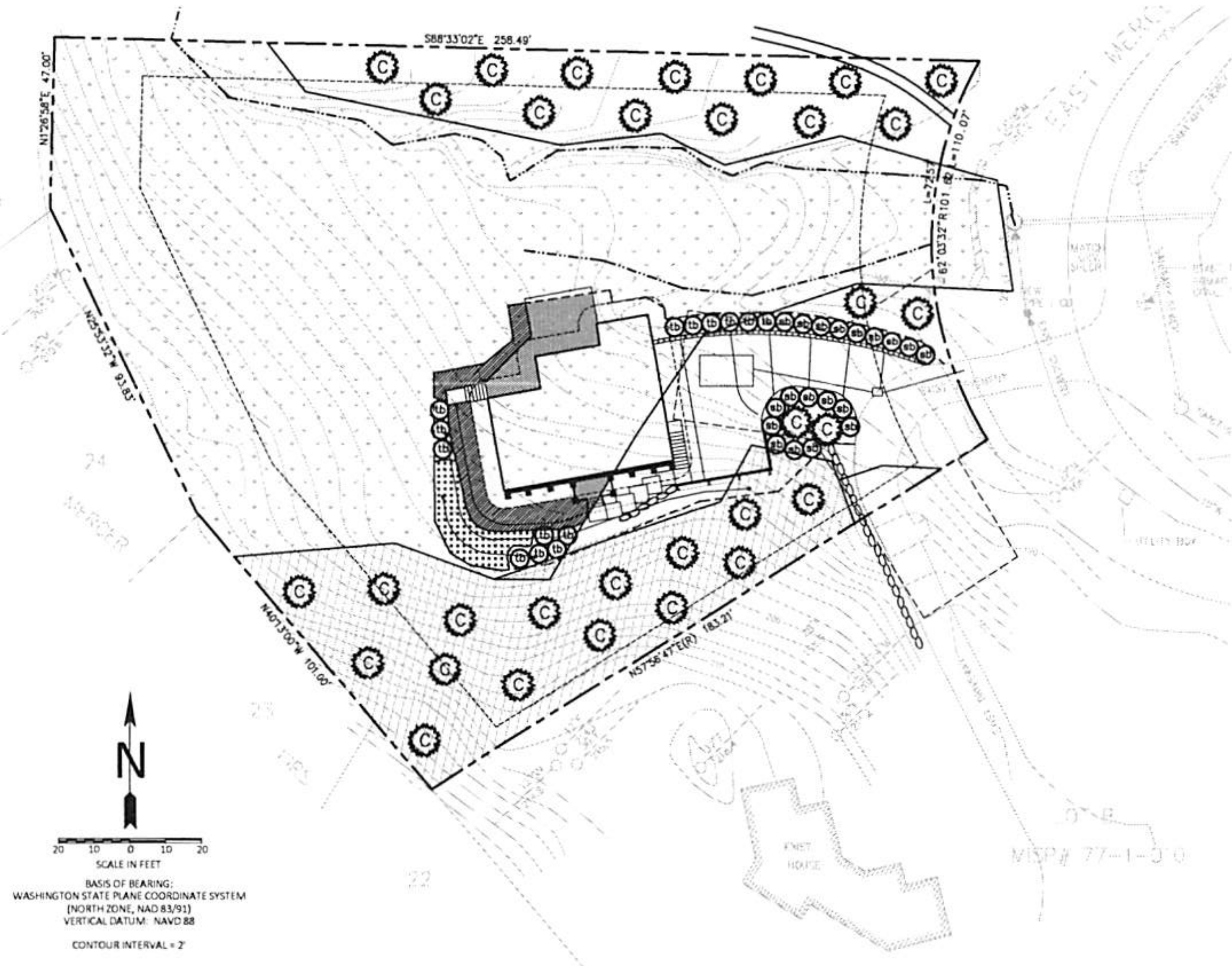
**CRITICAL AREA ENHANCEMENT PLAN**  
 - MI TREEHOUSE LLC -  
 5637 EAST MERCER WAY  
 MERCER ISLAND, WASHINGTON

NO.	DATE	NOTES
1.	09/08/2015	ADDED STREAM
2.	10/21/2015	REVISED PER CITY COMMENTS
3.	12/04/2018	REVISED PER NEW SITE PLAN
4.	12/17/2018	ADDED IMPACT SITE PLAN
5.	01/24/2019	REVISED PLANTING PLAN
6.	01/29/2019	ADDED MITIGATION PLAN NOTE
7.	10/30/2019	REVISED PER NEW SITE PLAN

DATE: 03/04/2015  
 JOB NUMBER: 14-206  
 DESIGN BY: ES  
 DRAWN BY: EARC  
 CHECK BY: ES

**Wetland and Wetland Buffer Impact Site Plan**





- PLANTING PLAN LEGEND:**
- PROJECT SITE LIMITS
  - LIMITS OF CATEGORY III WETLAND
  - CATEGORY III WETLAND
  - CENTERLINE OF TYPE 2 WATERCOURSE
  - STEEP SLOPE (INCLUDES WETLAND BUFFER)

- PLANTING PLAN NOTES:**
1. BASE TOPOGRAPHIC AND SITE PLAN PROVIDED BY HEALY-JORGENSEN ARCHITECTS (2958 222ND PLACE SE - SAMMAMISH, WASHINGTON 98075; 425-454-3096). SOURCE DRAWINGS HAVE BEEN MODIFIED FOR VISUAL ENHANCEMENT.
  2. PROTECT AND ACCOMMODATE EXISTING NATIVE VEGETATION WHEN INSTALLING PLANTS.
  3. PLANT MATERIAL QUALITY AND LOCATIONS SHALL BE INSPECTED BY PLAN DESIGNER PRIOR TO PLANT INSTALLATION.
  4. PLANT LOCATIONS SHOWN ARE APPROXIMATE. ADJUST PLANT LOCATIONS TO ACCOMMODATE SITE CONDITIONS, TO PRESERVE AND PROTECT EXISTING NATIVE VEGETATION, AND/OR PER PLAN DESIGNER AT THE TIME OF INSTALLATION.
  5. SEE THIS SHEET FOR PLANT INSTALLATION DETAILS.

**MITIGATION PLAN NOTE:**  
THIS CONCEPTUAL PLAN MAXIMIZES SITE MITIGATION PLANTING, AND EXCEEDS THAT WHICH WOULD BE REQUIRED TO MITIGATE BUFFER IMPACTS AND TEMPORARY CONSTRUCTION IMPACTS. THE FINAL PLAN MAY BE REVISED TO ADDRESS ISSUES OF VIABILITY DUE TO SLOPE AND OTHER SITE CONDITIONS.

**PLANT SCHEDULE:**

COMMON NAME	SCIENTIFIC NAME	SIZE/FORM	QUANTITY	SPACING
WESTERN REDCEDAR	<i>THUJA PLICATA</i>	2 GALLON CONTAINERIZED	32	AS SHOWN
TWINBERRY HONEYSUCKLE	<i>LONICERA HYCOCYCLATA</i>	2 GALLON CONTAINERIZED	14	AS SHOWN
SALMONBERRY	<i>RUBUS SPECTABILIS</i>	2 GALLON CONTAINERIZED	19	AS SHOWN
RED-OSIER DOGWOOD	<i>CORNUS SERICEA</i>	4 FOOT LIVE STAKE	180	2 FT ON-CENTER
SITKA WILLOW	<i>SALIX SITCHENSIS</i>	4 FOOT LIVE STAKE	100	2 FT ON-CENTER
COMMON LADYFERN	<i>ATHYRIUM FILIX-FEMINA</i>	1 GALLON CONTAINERIZED	68	18" ON-CENTER
SLOUGH SEDGE	<i>CAREX OBNUPTA</i>	10 IN <sup>3</sup> PLUG	150	18" ON-CENTER
			<b>TOTAL - 563</b>	

**1**  
**2**  
**PLANTING PLAN**

**MONITORING PLAN & MAINTENANCE PLAN**

**ENHANCEMENT PLAN GOALS, OBJECTIVES, AND PERFORMANCE STANDARDS**  
ENHANCEMENT PLAN GOALS, OBJECTIVES, AND PERFORMANCE STANDARDS ARE OUTLINED IN TABLE 1-1 (BELOW). THE GOALS AND OBJECTIVES OF THIS PLAN ARE CONSIDERED ACHIEVED WHEN THE PERFORMANCE STANDARDS ARE SATISFIED.

**MONITORING PLAN**  
**AS-BUILT**  
FOLLOWING COMPLETION OF THE WORK SHOWN ON THIS PLAN, A QUALIFIED PROFESSIONAL SHALL PREPARE AN AS-BUILT OF THE COMPLETED WORK. THE AS-BUILT SHALL SUMMARIZE THE COMPLETED WORK AS WELL AS ANY DEVIATIONS FROM THE APPROVED VERSION OF THIS PLAN.  
BASELINE MONITORING DATA SHALL BE COLLECTED AT THE TIME OF THE AS-BUILT (SEE "ANNUAL COMPLIANCE MONITORING" FOR FIELD DATA COLLECTION REQUIREMENTS). PERMANENT PHOTO POINTS SHALL BE ESTABLISHED AT THE TIME OF THE AS-BUILT TO PHOTOGRAPHICALLY DOCUMENT REPRESENTATIVE CONDITIONS WITHIN BUFFER AREAS. BASELINE MONITORING AND PHOTOGRAPHS SHALL BE SUBMITTED WITH THE AS-BUILT.  
THE AS-BUILT AND BASELINE MONITORING DATA SHALL BE SUBMITTED TO THE CITY OF MERCER ISLAND NO LATER THAN 30 DAYS FROM THE DATE THAT THE WORK SHOWN ON THIS PLAN HAS BEEN COMPLETED.

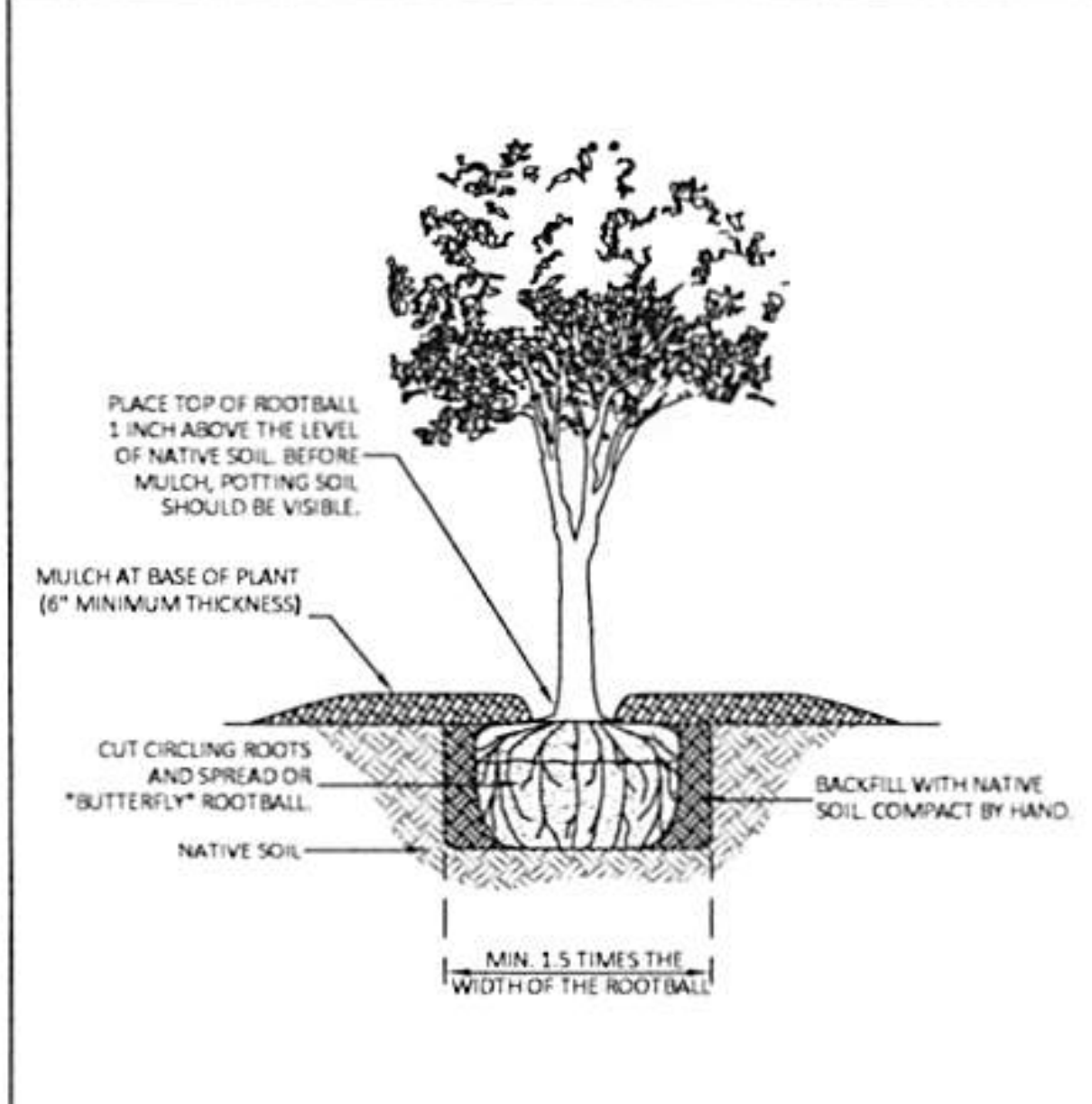
**ANNUAL MONITORING**  
FOLLOWING ACCEPTANCE OF THE AS-BUILT BY THE CITY OF MERCER ISLAND, ANNUAL COMPLIANCE MONITORING SHALL BE COMPLETED FOR A PERIOD OF FIVE (5) YEARS. ANNUAL COMPLIANCE MONITORING SHALL BE COMPLETED BY A QUALIFIED PROFESSIONAL AND SHALL COMPRISE A SITE INVESTIGATION IN AUGUST OR SEPTEMBER AND REPORTING TO THE CITY OF MERCER ISLAND BY NOVEMBER 30 OF EACH MONITORING YEAR.  
MONITORING SHALL COMPRISE A QUANTITATIVE ASSESSMENT OF CONDITIONS WITHIN BUFFER AREAS FOR PURPOSES OF EVALUATING THE CURRENT YEAR'S SUCCESS STANDARDS. AT THE TIME OF EACH MONITORING, THE FOLLOWING INFORMATION SHALL BE COLLECTED WITHIN BUFFER AREAS AND ASSESSED RELATIVE TO THE SUCCESS STANDARDS ESTABLISHED FOR THE PROJECT:  
• THE CONDITION OF INSTALLED PLANT STOCK INCLUDING SURVIVORSHIP, HEALTH, AND VIGOR. THE RATIONALE FOR POOR CONDITIONS, IF PRESENT, WILL BE DETERMINED.  
A DIRECT COUNT INVENTORY AND ASSESSMENT OF INSTALLED PLANT STOCK SHALL BE USED TO EVALUATE PLANT STOCK CONDITIONS. IN ADDITION, PHOTOGRAPHS OF BUFFER AREAS SHALL BE TAKEN FROM THE PERMANENT PHOTO POINTS ESTABLISHED DURING THE AS-BUILT.  
THE RESULTS OF EACH MONITORING ASSESSMENT SHALL BE SUMMARIZED IN A WRITTEN REPORT AND SUBMITTED TO THE CITY OF MERCER ISLAND NO LATER THAN NOVEMBER 30 OF THE RESPECTIVE MONITORING YEAR.

**CONTINGENCY PLAN**  
SHOULD ANY COMPLIANCE MONITORING ASSESSMENT REVEAL THAT THE PERFORMANCE STANDARDS FOR THE RESPECTIVE YEAR ARE NOT SATISFIED, THE PERMITTEE SHALL WORK WITH THE CITY OF MERCER ISLAND TO DEVELOP A CONTINGENCY PLAN TO ADDRESS THE DEFICIENCY(IES). CONTINGENCY PLANS CAN INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING ACTIONS:  
1. ADDITIONAL PLANT INSTALLATION;  
2. EROSION CONTROL;  
3. HERBIVORY PROTECTION;  
4. MODIFICATION TO THE IRRIGATION REGIME, AND/OR  
5. PLANT SUBSTITUTIONS OF TYPE, SIZE, QUANTITY, AND LOCATION.  
SUCH CONTINGENCY PLAN SHALL BE SUBMITTED TO THE CITY OF MERCER ISLAND BY JANUARY 31 OF ANY YEAR WHEN DEFICIENCIES ARE DISCOVERED. UNLESS OTHERWISE APPROVED BY THE CITY OF MERCER ISLAND, ACTIONS SPECIFIED ON AN APPROVED CONTINGENCY PLAN MUST BE COMPLETED WITHIN 60 DAYS. IF THE FAILURE IS SUBSTANTIAL, THE CITY OF MERCER ISLAND MAY EXTEND THE COMPLIANCE MONITORING PERIOD FOR THE ENHANCEMENT WORK.

**MAINTENANCE PLAN**  
THIS SECTION PROVIDES A GENERAL OVERVIEW OF THE MAINTENANCE PROGRAM NECESSARY TO ENSURE THE PERFORMANCE STANDARDS ESTABLISHED FOR THIS PLAN ARE SATISFIED.  
**GENERAL MAINTENANCE**  
INSTALLED PLANTS SHALL BE MAINTAINED AT REGULAR INTERVALS DURING THE MONITORING PERIOD TO PROMOTE THE SUCCESSFUL ESTABLISHMENT AND VIGOROUS GROWTH OF THE INSTALLED PLANT STOCK.  
GENERAL MAINTENANCE SHALL INCLUDE:  
1. RE-APPLYING BARK MULCH TO MAINTAIN A 6" MINIMUM APPLIED THICKNESS - YEAR 1 ONLY  
2. THE PRUNING OF INSTALLED PLANTS TO REMOVE DEAD WOOD AND PROMOTE VIGOROUS PLANT GROWTH AND PROPER FORM.  
3. THE REPLACEMENT OF PLANTS THAT APPEAR TO BE IN DISTRESS AND/OR DISEASED.  
4. THE REMOVAL OF TRASH, LITTER, AND/OR OTHER NON-DECOMPOSING DEBRIS.  
GENERAL MAINTENANCE WORK SHALL OCCUR MONTHLY DURING THE GROWING SEASON AND/OR AT A FREQUENCY OTHERWISE NECESSARY TO ENSURE THE SUCCESSFUL ESTABLISHMENT AND VIGOROUS GROWTH OF THE INSTALLED PLANTS.

**TABLE 1-1: GOALS, OBJECTIVES, MONITORING SCHEDULE, & PERFORMANCE STANDARDS**

GOAL	OBJECTIVE	SCHEDULE	PERFORMANCE STANDARDS
TO SUCCESSFULLY ENHANCE ON-SITE WETLAND AND BUFFER AREAS USING NATIVE PLANT SPECIES.	TO INSTALL AND SUCCESSFULLY ESTABLISH 596 NATIVE PLANTS	AUGUST OR SEPTEMBER OF YEARS 1, 2, 3, 4, & 5 FOLLOWING PLANT INITIAL INSTALLATION	• 100% SURVIVAL BY INSTALLED PLANT STOCK AFTER THE FIRST GROWING SEASON (YEAR 1). THIS STANDARD CAN BE MET THROUGH PLANT ESTABLISHMENT OR REPLANTING, AS NECESSARY, TO ACHIEVE THE REQUIRED PLANT NUMBERS. • 85% SURVIVAL BY INSTALLED PLANT STOCK AFTER THE FIFTH GROWING SEASON (YEAR 5).



**2**  
**2**  
**PLANT INSTALLATION DETAIL**  
NOT TO SCALE

- GENERAL NOTES:**
1. WORK SHALL CONFORM TO ANY AND ALL APPLICABLE PERMITS AND/OR APPROVED CONSTRUCTION DRAWINGS.
  2. WORK SHALL BE COMPLETED BY PERSONS EXPERIENCED IN THE ENHANCEMENT WORK SHOWN ON THESE DRAWINGS.
  3. BEFORE THE START OF CONSTRUCTION, A PRE-CONSTRUCTION MEETING MUST BE HELD BETWEEN MERCER ISLAND, THE OWNER, AND THE PLAN DESIGNER.
  4. A COPY OF THESE APPROVED DRAWINGS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
  5. SITE CONDITIONS MAY VARY BASED ON SEASON AND/OR TIME OF YEAR. THE CONSTRUCTION CONTRACTOR SHALL ACCOMMODATE REALIZED AND ANTICIPATED SITE CONDITIONS WHEN COMPLETING THE WORK SHOWN ON THESE DRAWINGS.

**811**  
Know what's below.  
Call before you dig.  
UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE. UTILITY LOCATIONS AND CHARACTERISTICS SHOWN ON THIS DRAWING, IF ANY, ARE BASED ON THE FIELD LOCATION OF THE APPARENT SURFACE EVIDENCE OF EXISTING STRUCTURES. THE UNDERGROUND ROUTING AND CONDITION OF BURIED UTILITIES HAS NOT BEEN VERIFIED OR CONFIRMED. ADDITIONAL UTILITY LOCATION AND MAPPING MAY BE REQUIRED. FIELD LOCATE, VERIFY DEPTH OF, AND ADEQUATELY PROTECT ALL UTILITIES PRIOR TO THE START OF WORK.

**Sewall Wetland Consulting, Inc.**  
27641 Covington Way SW #2, Covington, WA 98042 253-809-0515 Fax 253-832-4732

**CRITICAL AREA ENHANCEMENT PLAN**  
- MI TREEHOUSE LLC -  
5637 EAST MERCER WAY  
MERCER ISLAND, WASHINGTON

**NOTES**

NO.	DATE	DESCRIPTION
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2.	10/21/2015	REVISED PER CITY COMMENTS
3.	12/04/2018	REVISED PER NEW SITE PLAN
4.	12/17/2018	ADDED IMPACT SITE PLAN
5.	07/26/2019	REVISED PLANTING PLAN
6.	07/25/2019	ADDED MITIGATION PLAN NOTE
7.	10/20/2019	REVISED PER NEW SITE PLAN

DATE: 03/04/2015  
JOB NUMBER: 14-206  
DESIGN BY: ES  
DRAWN BY: EANC  
CHECK BY: ES  
**Planting Plan, Notes, Details, & Monitoring Plan**  
SHEET **2** OF **2**