



## LEGAL DESCRIPTION

LOT 4, HILL HIGH ESTATES AS RECORDED IN VOLUME 68 OF PLATS, PAGE 28, RECORDS OF KING COUNTY, WASHINGTON.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

## BASIS OF BEARINGS

A BEARING OF N 74°41'28" W CALCULATED PER R1 BETWEEN MONUMENTS SHOWN HEREON

## REFERENCES

R1. HILL HIGH ESTATES, VOL. 68, PG. 28, RECORDS OF KING COUNTY, WASHINGTON.

## VERTICAL DATUM

NAVD88 PER GPS OBSERVATIONS

## SURVEYOR'S NOTES

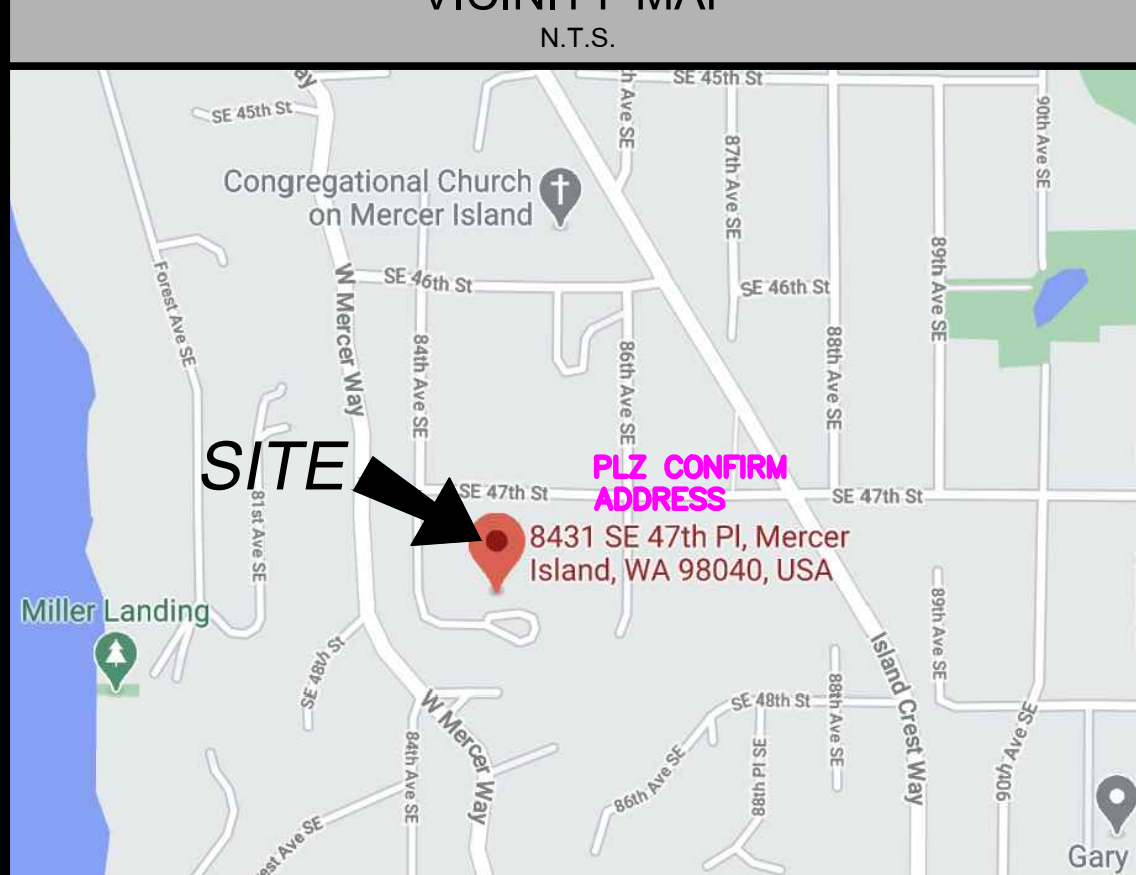
1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN FEBRUARY OF 2021. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. THE TYPES AND LOCATIONS OF ANY UTILITIES SHOWN ON THIS DRAWING ARE BASED ON INFORMATION PROVIDED TO US, BY OTHERS OR GENERAL INFORMATION READILY AVAILABLE IN THE PUBLIC DOMAIN INCLUDING, AS APPLICABLE, IDENTIFYING MARKINGS PLACED BY UTILITY LOCATE SERVICES AND OBSERVED BY TERRANE IN THE FIELD. AS SUCH, THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE RELIED ON FOR DESIGN OR CONSTRUCTION PURPOSES; TERRANE IS NOT RESPONSIBLE OR LIABLE FOR THE ACCURACY OR COMPLETENESS OF THIS UTILITY INFORMATION. FOR THE ACCURATE LOCATION AND TYPE OF UTILITIES NECESSARY FOR DESIGN AND CONSTRUCTION, PLEASE CONTACT THE SITE OWNER AND THE LOCAL UTILITY LOCATE SERVICE (800-424-5555).
4. SUBJECT PROPERTY TAX PARCEL NO. 3317500040.
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 19,360± S.F. (0.44 ACRES)
6. THE PROPERTY DESCRIBED HEREON IS THE SAME AS THE PROPERTY DESCRIBED IN CHICAGO TITLE COMPANY OF WASHINGTON, COMMITMENT NO. 0164787-ETJ, WITH AN EFFECTIVE DATE OF FEBRUARY 4, 2021 AND THAT ALL EASEMENTS, COVENANTS, AND RESTRICTIONS REFERENCED IN SAID TITLE COMMITMENT OR APPARENT FROM A PHYSICAL INSPECTION OF THE PROPERTY OR OTHERWISE KNOWN TO ME HAVE BEEN PLOTTED HEREON OR OTHERWISE NOTED AS TO THEIR EFFECT ON THE PROPERTY.
7. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 5-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

## LEGEND

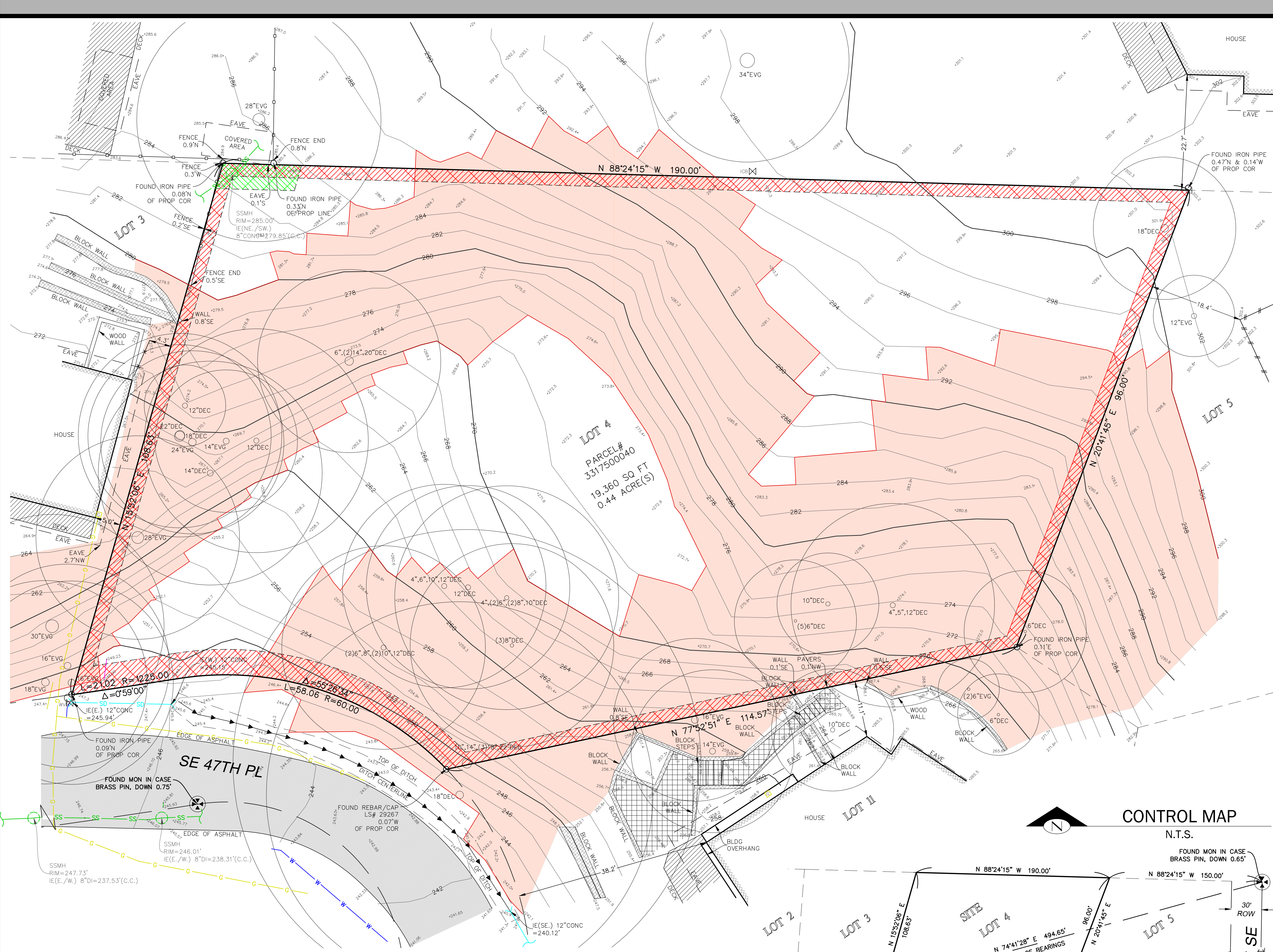
ASPHALT SURFACE	PAVER SURFACE
BUILDING	REBAR AS NOTED (FOUND)
CENTERLINE ROW	SEWER LINE
CULVERT PIPE	SEWER MANHOLE
CONCRETE SURFACE	STORM DRAIN LINE
RETAINING WALL	TREE (AS NOTED)
DECK	UTILITY LINE
DITCH (FLOWLINE)	WATER LINE
FENCE LINE (WIRE)	WATER METER
FENCE LINE (IRON)	FIRE HYDRANT
FENCE LINE (WOOD)	WATER VALVE
GAS LINE	IRRIGATION CONTROL BOX
IRON PIPE (FOUND)	GAS METER
MONUMENT IN CASE (FOUND)	STEEP SLOPE AREA 40% OR GREATER

## VICINITY MAP

N.T.S.



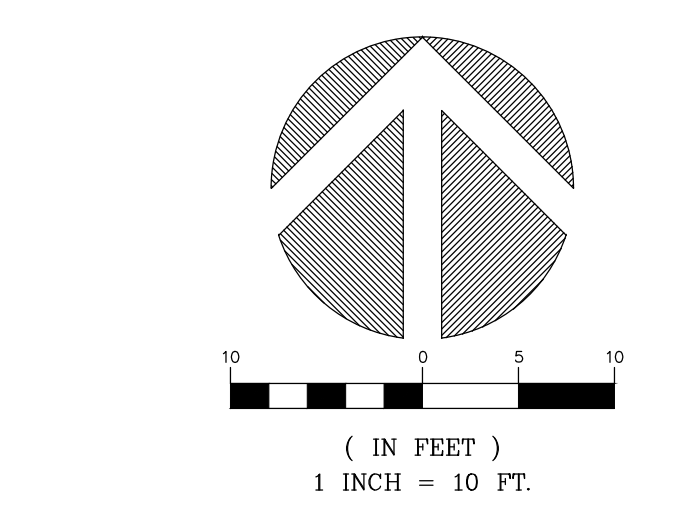
# TOPOGRAPHIC & BOUNDARY SURVEY



**STEEP SLOPE/BUFFER DISCLAIMER:**  
 THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY AVAILABLE PUBLIC DOCUMENTS; AS SUCH, TERRANE CANNOT BE LIABLE OR RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY STEEP SLOPE INFORMATION. ULTIMATELY, THE LIMITS AND EXTENT OF ANY STEEP SLOPES ASSOCIATED WITH ANY SETBACKS OR OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND APPROVED BY THE REVIEWING AGENCY BEFORE ANY CONSTRUCTION CAN OCCUR.

### SCHEDULE B ITEMS

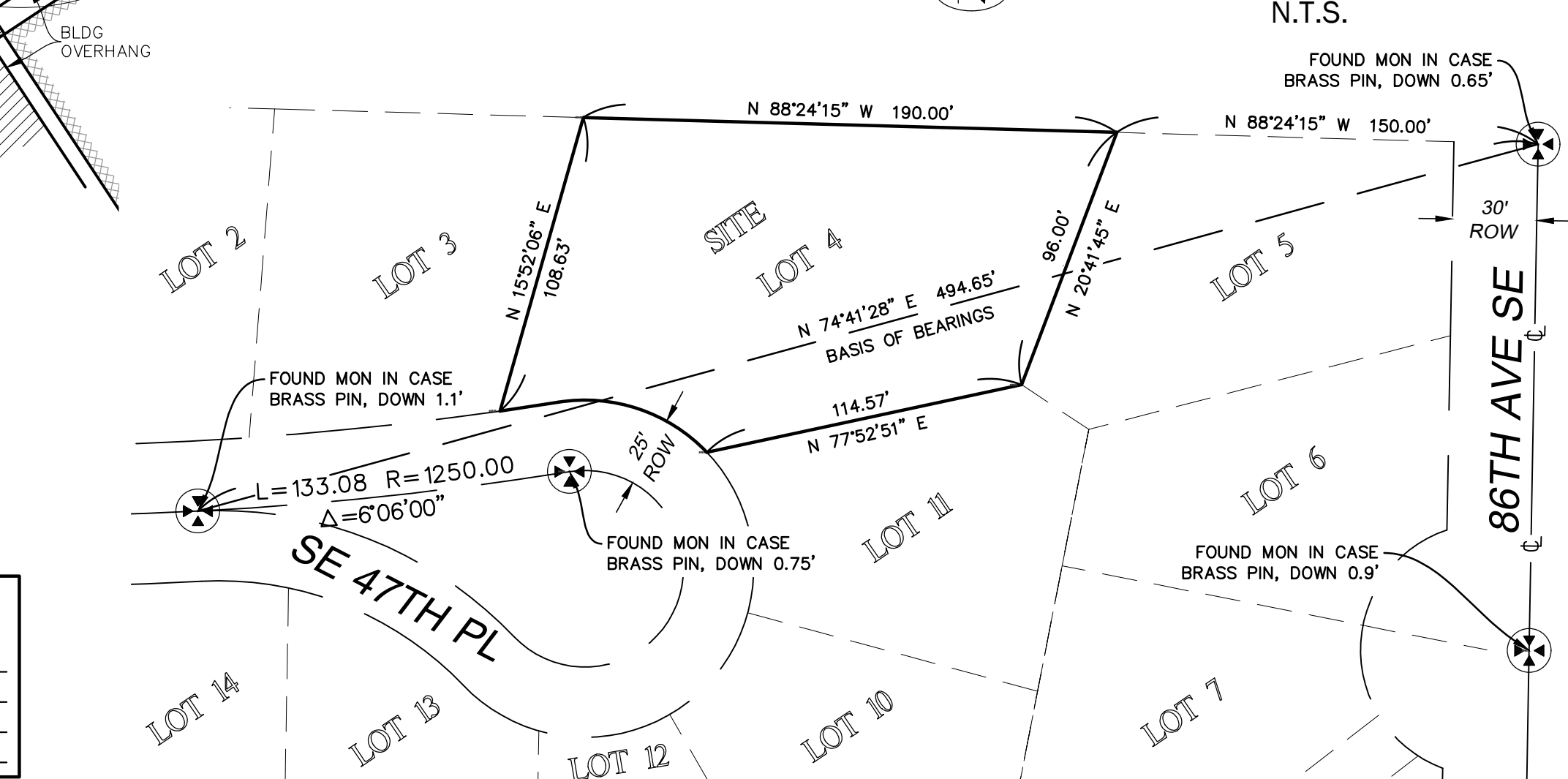
	ITEM NO. 2 - SEWER EASEMENT, REC. NO. 5783155
	ITEM NO. 3 - ELECTRIC & TELEPHONE EASEMENT, REC. NO. 5918268



### INDEXING INFORMATION

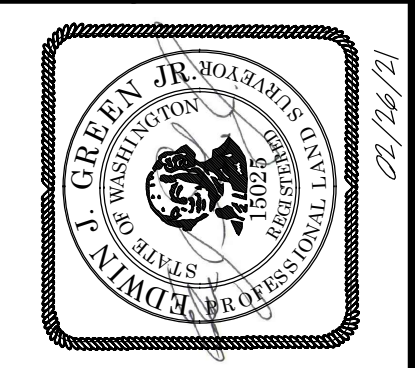
SW 1/4	SW 1/4
SE 1/4	SE 1/4
NE 1/4	NE 1/4
NW 1/4	NW 1/4

SECTION: 18  
 TOWNSHIP: 24N  
 RANGE: 5E, W.M.  
 COUNTY: KING



**measure success**

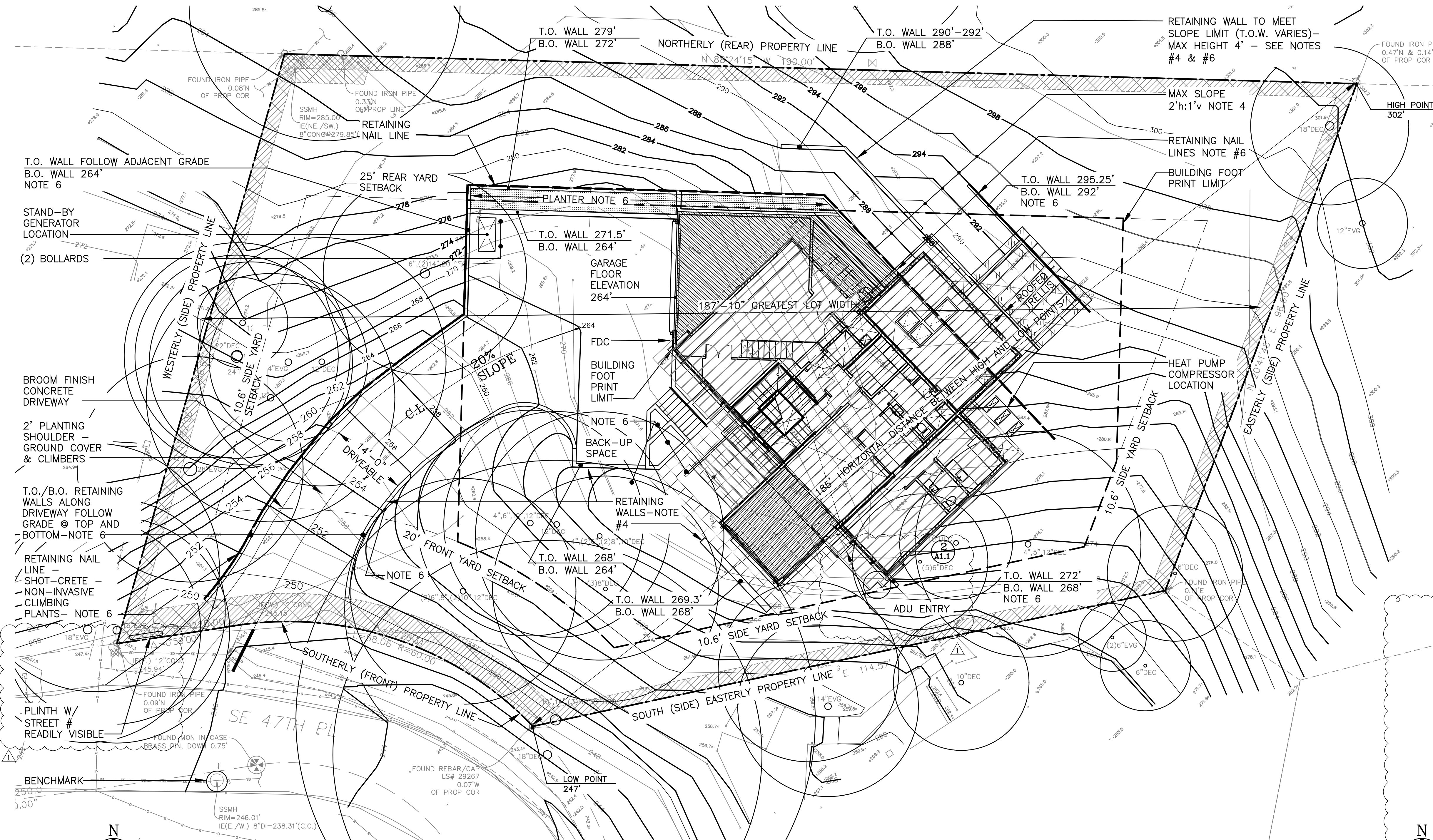
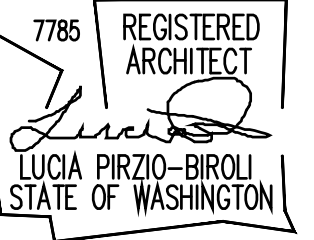
TOPOGRAPHIC & BOUNDARY SURVEY  
 PARCEL NO. 3317500040  
**STEINBORN PROPERTY**  
 84XX SE 47TH PL  
 MERCER ISLAND, WA 98040



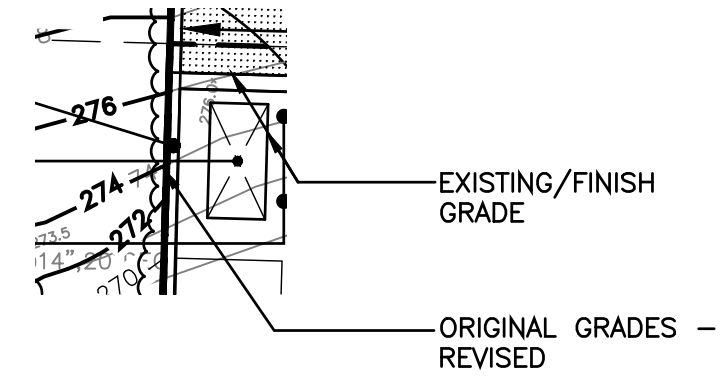
10801 Main Street, Suite 102, Bellevue, WA 98004  
 phone 425.458.4488 support@terrane.net  
 www.terrane.net

JOB NUMBER: 210291  
 DATE: 02/21/2021  
 DRAFTED BY: RSN  
 CHECKED BY: EJG/TMM  
 SCALE: 1" = 10'  
 REVISION HISTORY

SHEET NUMBER  
 1 OF 1

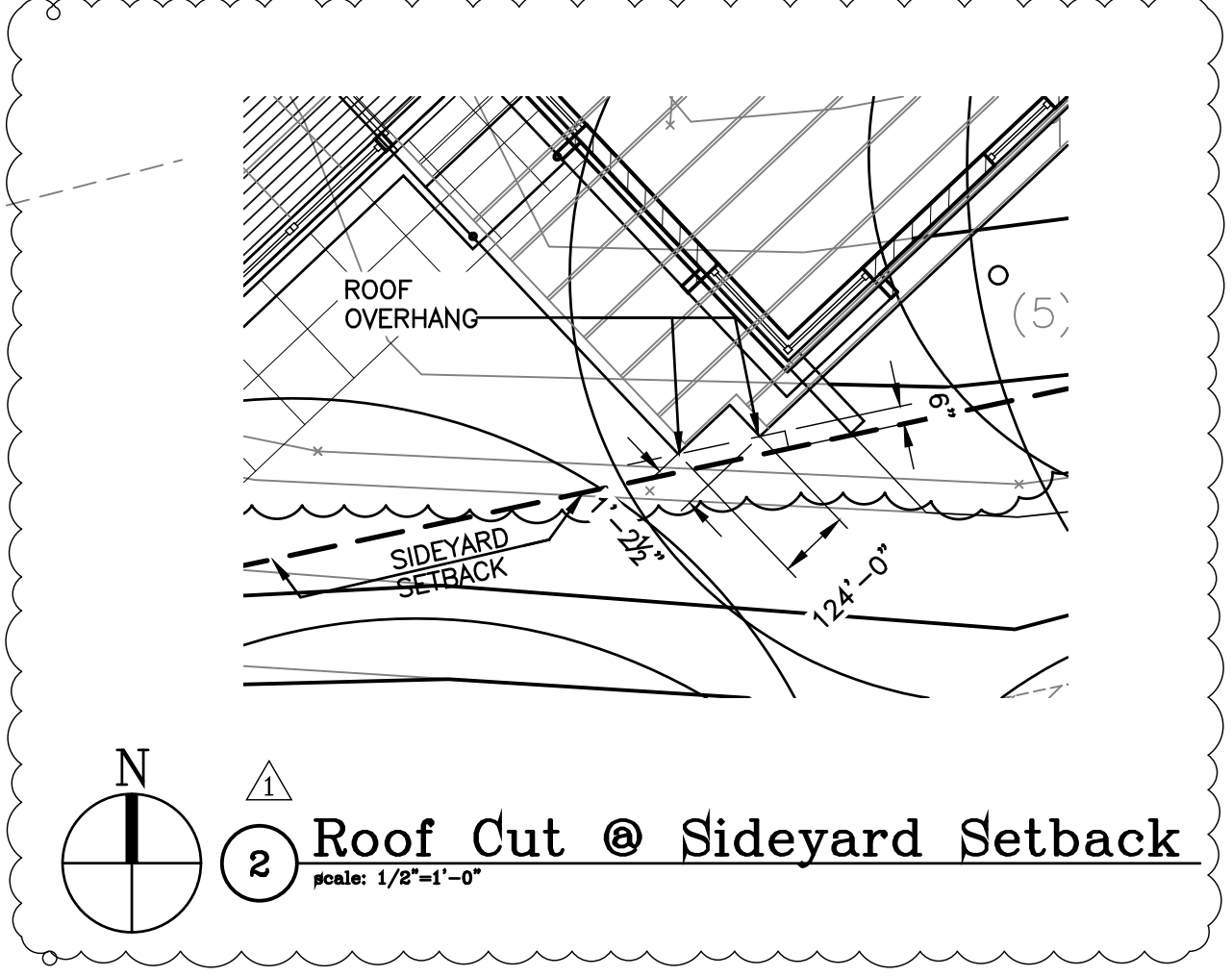


**Grade Legend**



**Side Yard Calculation**  
REQUIRED SIDE YARD WIDTH SUM: 17% OF LOT WIDTH  
LOT WIDTH: 187'-10"  
SIDE YARD TOTAL WIDTH: 187'-10" x 17% = 31'-11"  
(3) SIDE YARDS: 31'-11"/3 = 10.6'

**Lot Slope**  
HIGH POINT: 302'  
LOW POINT: 247'  
DIFFERENCE: 56'  
HORIZONTAL DIFFERENCE: 185'  
LOT SLOPE: 30%  
ALLOWED LOT COVERAGE: 30%  
SEE SHEET A1.2 FOR LOT COVERAGE CALCULATIONS AND ABE CALCULATION



**1 Site Plan**  
Scale: 1"=10'

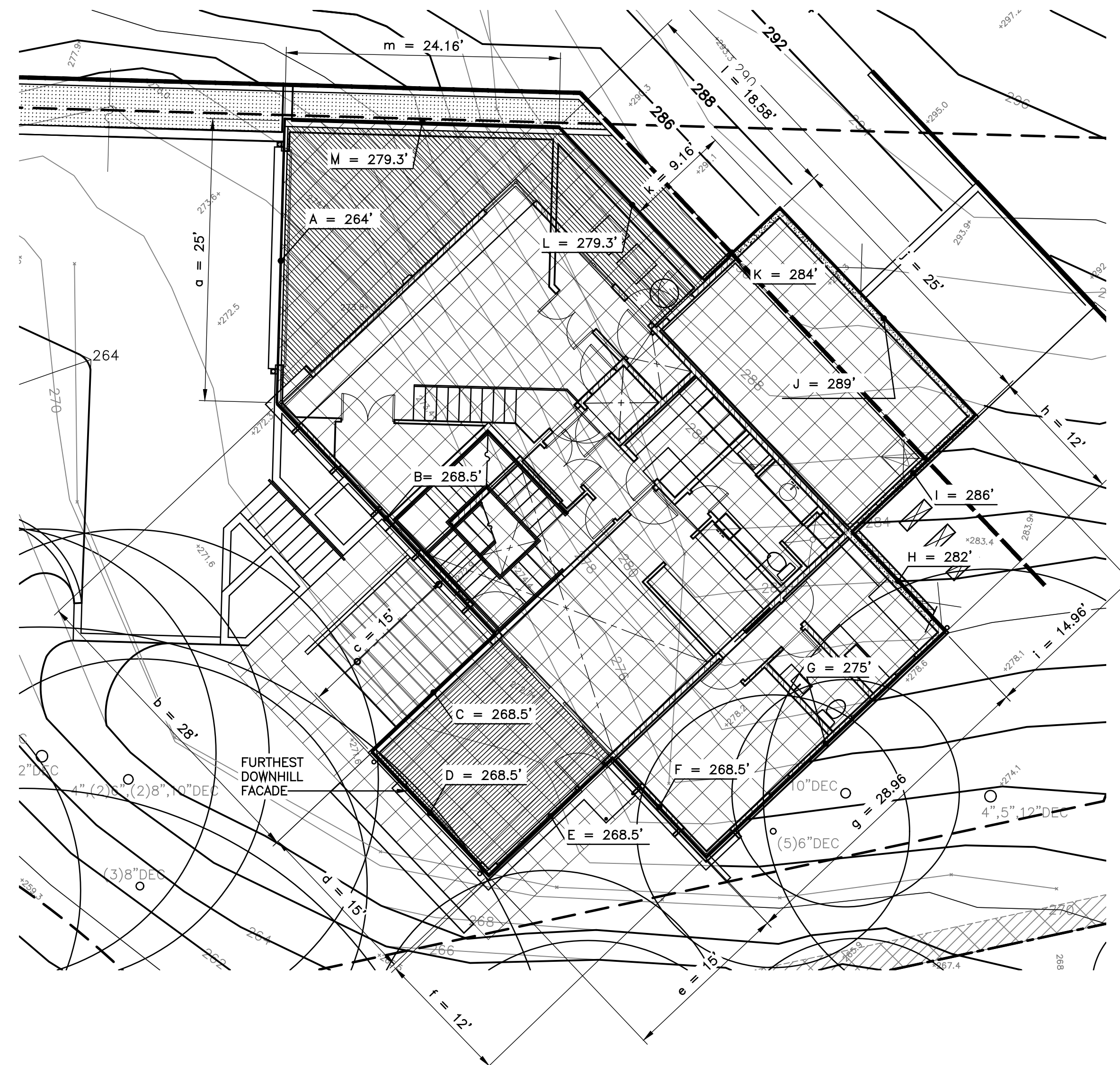
- Site Plan Notes**
1. See sheet AR1 (Tree Plan) for all tree information
  2. See sheet A1.4 (Grading Plan) for pre-foundation grading.
  3. T.O./B.O. retaining walls noted on this drawing are to address planning requirements. For permanent nail shoring retaining see sheet SH3.0.
  4. See 12/53.0 for Retaining Wall Schedule
  5. All graded slopes shall be protected during construction and heavily planted at completion there of.
  6. All planters/behind retaining walls shall be densely planted with no access as walking surfaces unless explicitly indicated. No guard required.
  7. See attached memo: Project 2202-225 Sub2 Ancillary Comments

**STEINBORN RESIDENCE**

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040

Date: 3/15/2021 Pre-App  
2/14/2022 Permit Submittal  
8/25/2022 Sub2-2202-225

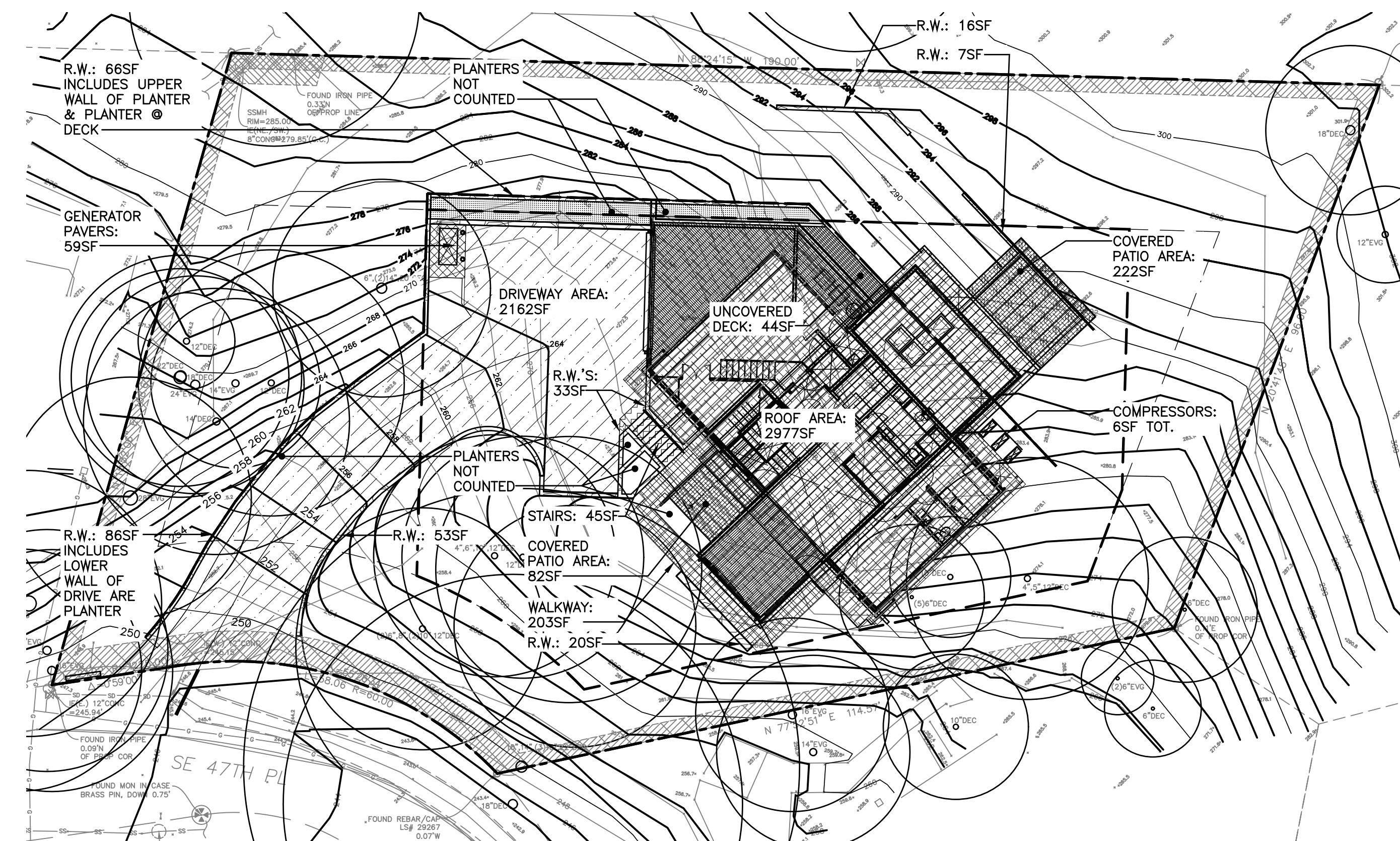
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AVERAGE BUILDING ELEVATION		
Mid-point Elev.	Wall Segment Length	Elev x Length
A= 264 ft	* a= 25.0 ft	= 6600.0
B= 268.5 ft	* b= 28.0 ft	= 7518.0
C= 268.5 ft	* c= 15.0 ft	= 4027.5
D= 268.5 ft	* d= 15.0 ft	= 4027.5
E= 268.5 ft	* e= 15.0 ft	= 4027.5
F= 268.5 ft	* f= 12.0 ft	= 3222.0
G= 275 ft	* g= 29.0 ft	= 7964.0
H= 282 ft	* h= 12.0 ft	= 3384.0
I= 286 ft	* i= 15.0 ft	= 4278.6
J= 289 ft	* j= 25.0 ft	= 7225.0
K= 284 ft	* k= 9.2 ft	= 2601.4
L= 279.3 ft	* l= 18.6 ft	= 5189.4
M= 279.3 ft	* m= 24.2 ft	= 6747.9
	total=	total=
	242.8 ft.	66812.8
Avg. Building Elevation = 275.2 ft.		
Allowed Building Height = 305.2 ft.		

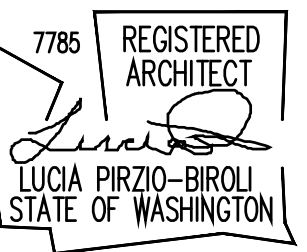
INDICATES FOOTPRINT OF FOUNDATION PERIMETER

1 Average Building Elevation Calculation  
scale: 1/8"=1'-0"



Lot Coverage Calculation	
GROSS/NET LOT AREA:	19360.24 SF
ALLOWED LOT COVERAGE:	5808 SF / 30%
EXISTING LOT COVERAGE:	0 SF
PROPOSED DRIVEWAY:	2118 SF
PROPOSED MAIN STRUCTURE ROOF AREA:	2977 SF
COVERED PATIOS AND DECKS:	304 SF
TOTAL LOT COVERAGE:	5228 SF
PROPOSED LOT COVERAGE AREA:	27%
Hardscape Calculation	
GROSS/NET LOT AREA:	19360.24 SF
ALLOWED HARDSCAPE:	1742 SF / 9%
EXISTING LOT COVERAGE:	0 SF
WALKWAYS:	262 SF
STAIRS:	45 SF
RETAINING WALLS (R.W.):	281 SF
UNCOVERED DECKS:	44 SF
TOTAL HARDSCAPE:	632 SF
PROPOSED LOT COVERAGE AREA:	3%

3 Lot Coverage & Hardscape Calculations  
scale: 1"=10'

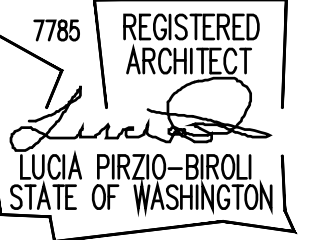


**STEINBORN RESIDENCE**

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040

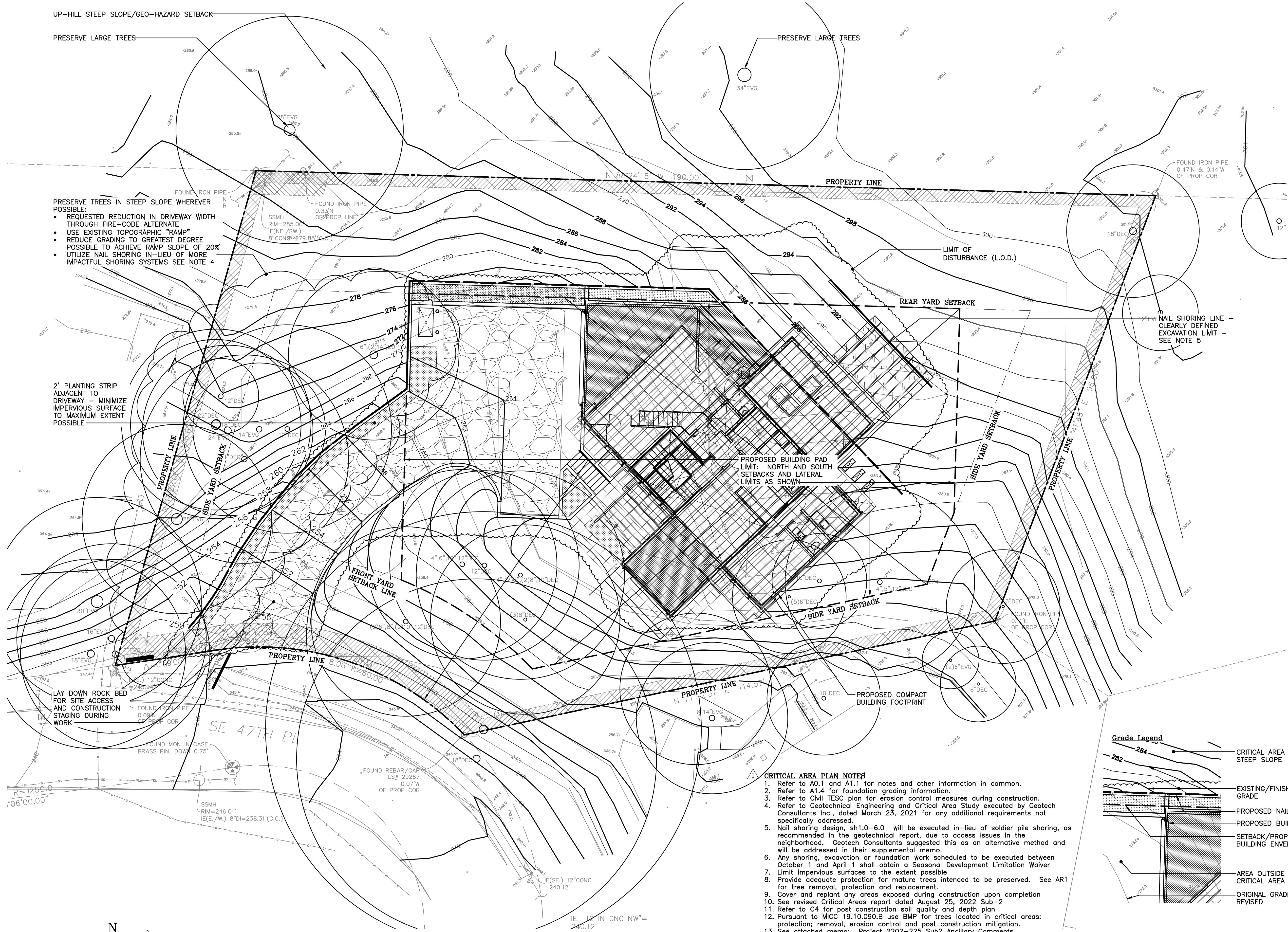
Date: 3/15/2021 Pre-App  
2/14/2022 Permit Submittal  
8/25/2022 Sub2-2202-225  
11/22/2022 Sub3-2202-225

Scale:  
Sheet:



# STEINBORN RESIDENCE

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040



UP-HILL STEEP SLOPE/GEO-HAZARD SETBACK

PRESERVE LARGE TREES

PRESERVE LARGE TREES

PRESERVE TREES IN STEEP SLOPE WHEREVER POSSIBLE:  
• REQUESTED REDUCTION IN DRIVEWAY WIDTH THROUGH FIRE-CODE ALTERNATE  
• USE EXISTING TOPOGRAPHIC "RAMP"  
• REDUCE GRADING TO GREATEST DEGREE POSSIBLE TO ACHIEVE RAMP SLOPE OF 20%  
• UTILIZE NAIL SHORING IN-LIEU OF MORE IMPACTFUL SHORING SYSTEMS SEE NOTE 4

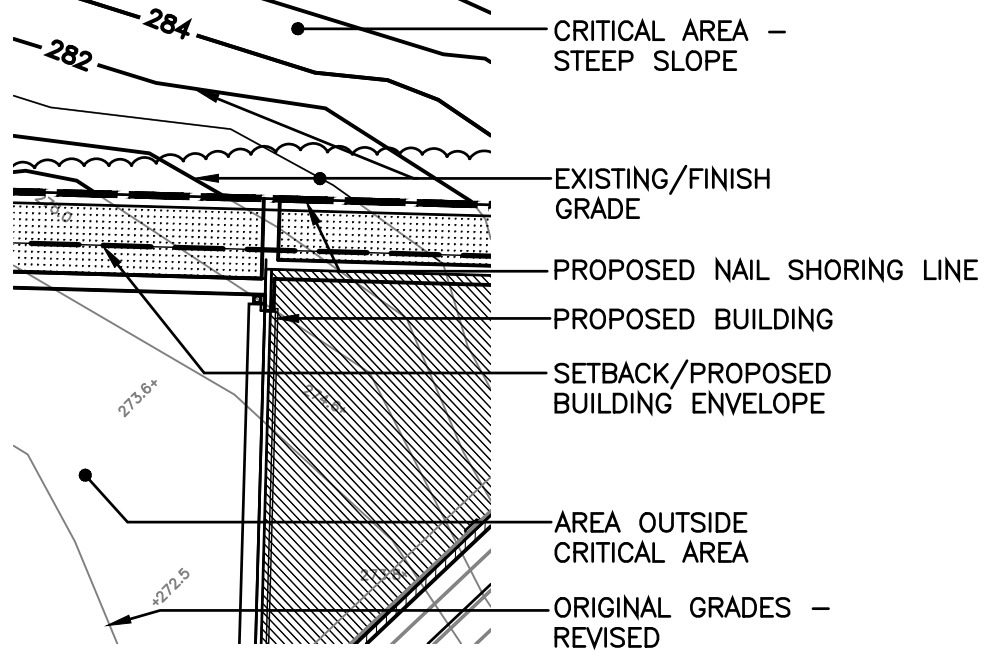
2' PLANTING STRIP ADJACENT TO DRIVEWAY - MINIMIZE IMPERVIOUS SURFACE TO MAXIMUM EXTENT POSSIBLE

LAY DOWN ROCK BED FOR SITE ACCESS AND CONSTRUCTION STAGING DURING WORK

### CRITICAL AREA PLAN NOTES

1. Refer to A0.1 and A1.1 for notes and other information in common.
2. Refer to A1.4 for foundation grading information.
3. Refer to Civil TESC plan for erosion control measures during construction.
4. Refer to Geotechnical Engineering and Critical Area Study executed by Geotech Consultants Inc., dated March 23, 2021 for any additional requirements not specifically addressed.
5. Nail shoring design, sh1.0-6.0 will be executed in-lieu of soldier pile shoring, as recommended in the geotechnical report, due to access issues in the neighborhood. Geotech Consultants suggested this as an alternative method and will be addressed in their supplemental memo.
6. Any shoring, excavation or foundation work scheduled to be executed between October 1 and April 1 shall obtain a Seasonal Development Limitation Waiver
7. Limit impervious surfaces to the extent possible
8. Provide adequate protection for mature trees intended to be preserved. See AR1 for tree removal, protection and replacement.
9. Cover and replant any areas exposed during construction upon completion
10. See revised Critical Areas report dated August 25, 2022 Sub-2
11. Refer to C4 for post construction soil quality and depth plan
12. Pursuant to MICC 19.10.090.B use BMP for trees located in critical areas: protection; removal, erosion control and post construction mitigation.
13. See attached memo: Project 2202-225 Sub2 Ancillary Comments

### Grade Legend



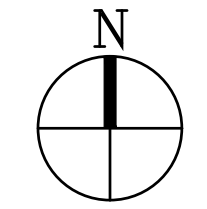
Date: 3/15/2021 Pre-App  
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8/25/2022 Sub2-2202-225

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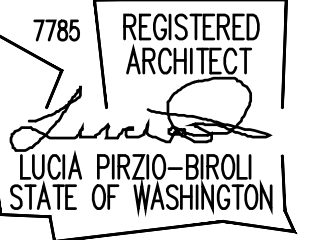
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CAR 2  
Plan

NEW NUMBER - REVISED LOCATION IN SET  
A1.3

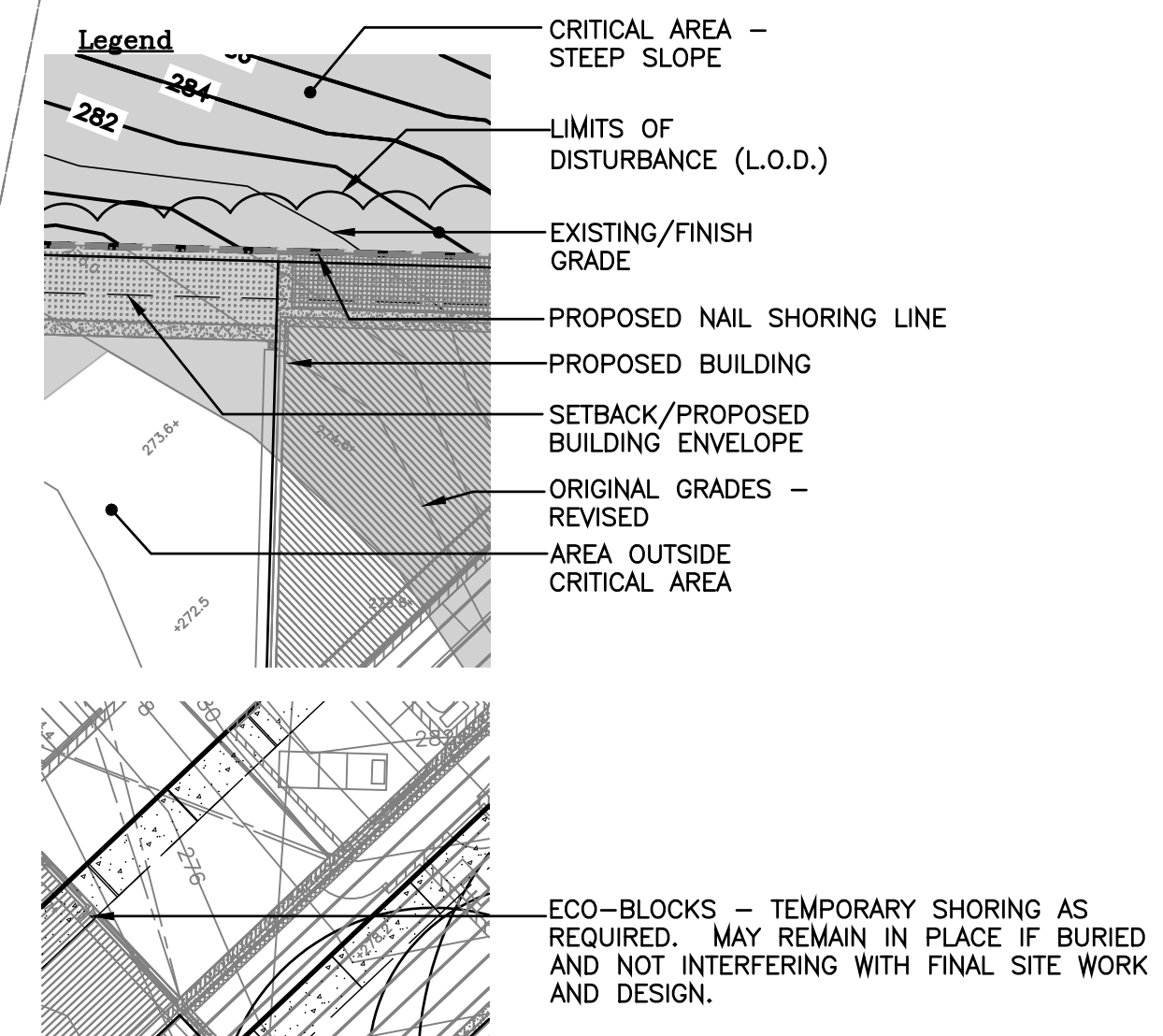
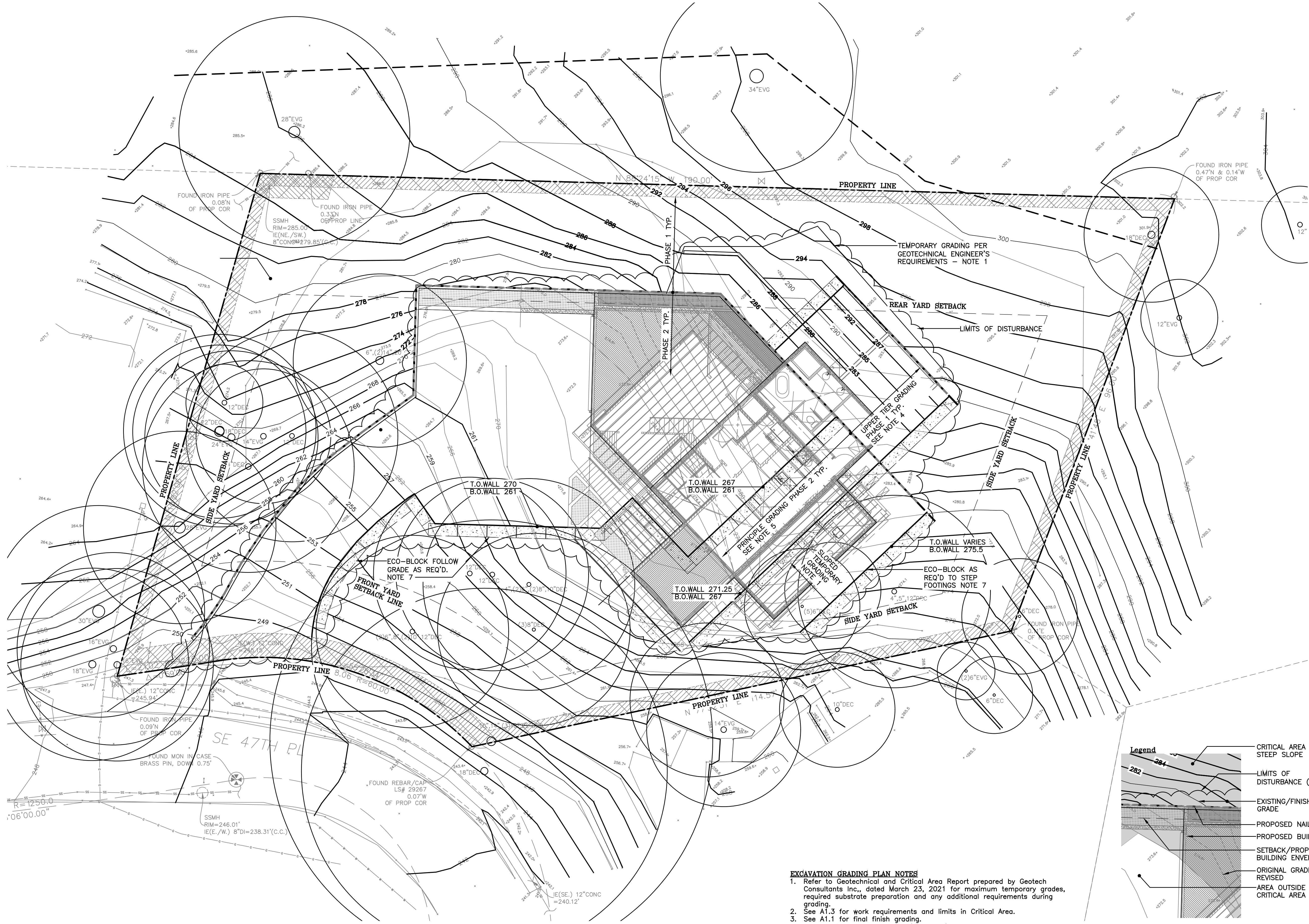


1 Critical Area Review 2 Plan  
Scale: 1"=10'



# STEINBORN RESIDENCE

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040



- EXCAVATION GRADING PLAN NOTES**
- Refer to Geotechnical and Critical Area Report prepared by Geotech Consultants Inc., dated March 23, 2021 for maximum temporary grades, required substrate preparation and any additional requirements during grading.
  - See A1.3 for work requirements and limits in Critical Area.
  - See A1.1 for final finish grading.
  - Refer to Nail Shoring design (SH series) for requirements during execution of shoring.
  - Phase 1: Complete nail shoring, excavation, foundation work and final grading work at Upper Tier prior to start of phase 2
  - Phase 2: Begin work AFTER completion of Phase 1, including final grading. No heavy equipment above Phase 2 after phase 1 is complete.
  - Install Eco-Blocks as required for temporary shoring for foundation work. Blocks may remain in place if completely buried during final grading.
  - Any shoring, excavation or foundation work scheduled to be executed between October 1 and April 1 shall obtain a Seasonal Development Limitation Waiver
  - See attached memo: Project 2202-225 Sub2 Ancillary Comments

Date: **3/15/2021 Pre-App**  
**2/14/2022 Permit Submittal**  
**8/25/2022 Sub2-2202-225**

Scale:  
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**1 Excavation Grading Plan**  
Scale: 1"=10'



# DAN AND SUSAN STEINBORN

# 8435 SE 47TH PLACE

MERCER ISLAND, WASHINGTON

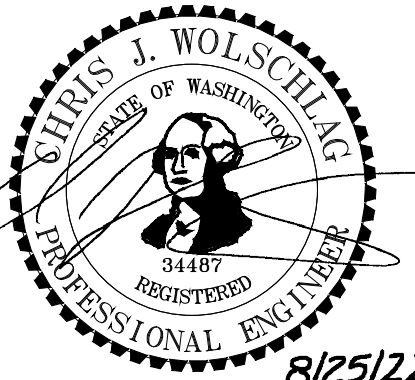
# PERMANENT SOIL NAIL RETAINING WALL PLANS

**ECTYPOS**  
ARCHITECTURE

4212 W. Mercer Way  
Mercer Island, WA 98040  
t. (206) 232-9147  
f. (206) 275-0312



**Ground Support** PLLC  
16932 Woodinville Redmond Rd NE, #210  
Woodinville, WA 98072  
Ph: (425) 922-1501



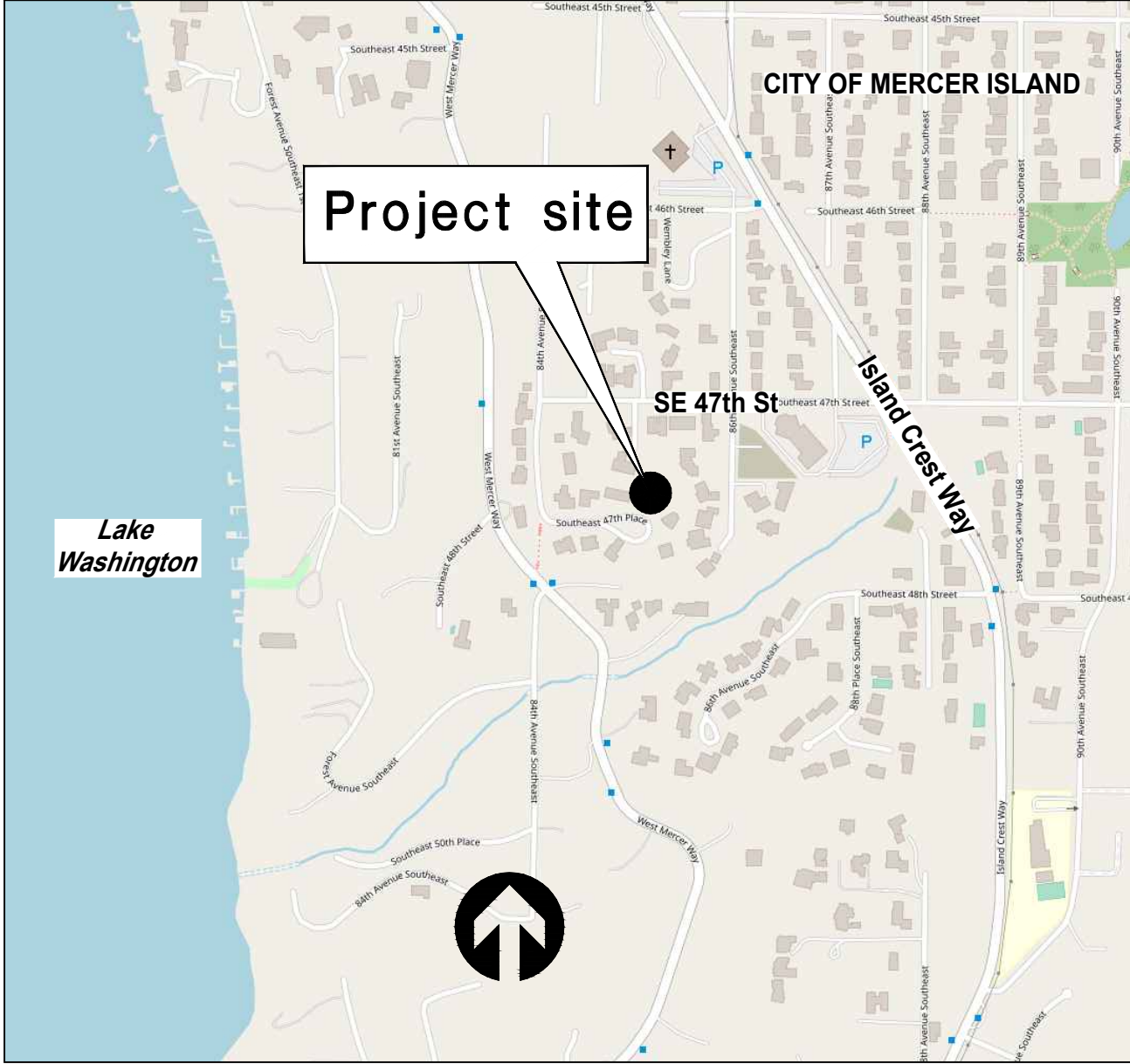
**STEINBORN RESIDENCE**  
New Residence  
8435 SE 47th Pl.  
Mercer Island, WA 98040

Date: **3/15/2021 Pre-App**  
**2/14/2022 Permit Submittal**  
**2202-225-SUB2 August 25th, 2022**

Scale:  
Sheet:

Cover Sheet  
and Notes  
**SH1.0**

SHEET NUMBER	SHEET TITLE
SH1.0-1.1	COVER SHEET AND NOTES
SH2.0	WALL PLAN
SH3.0	WALL ELEVATION
SH4.0	CROSS-SECTIONS
SH5.0-5.1	DETAILS
SH6.0	SOIL NAILING SEQUENCE
SH7.0-7.1	SPECIFICATIONS



VICINITY MAP

**GENERAL:**  
THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING DIMENSIONS AND SITE CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLANS AND THOSE UTILITIES OR UNDERGROUND OBSTRUCTIONS NOT SHOWN ON THE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL ABANDONED UTILITIES, OR OTHER UNDERGROUND OBSTRUCTIONS THAT INTERFERE WITH THE NEW CONSTRUCTION.

THE CONTRACTOR AND SUBCONTRACTORS ARE RESPONSIBLE FOR THE CONSTRUCTION PROCESS AND THE SAFETY OF THE WORKERS. THIS INCLUDES BUT IS NOT LIMITED TO, THE CONSTRUCTION SEQUENCE, TEMPORARY HANDRAILS, EXCAVATION ACCESS, AND BARRIERS. IT ALSO INCLUDES LIFTING OF MATERIALS AND CONSTRUCTION EQUIPMENT INTO AND OUT OF THE EXCAVATION, TEMPORARY BRACING OF SINGLE-SIDED FORMWORK, TEMPORARY SHORING OF EXCAVATIONS, AND STABILITY OF ALL TEMPORARY CUT SLOPES.

**REFERENCE DATA:**  
THE EXISTING SITE, TOPOGRAPHICAL, AND UTILITY DATA; THE PROPOSED GRADES, TOP AND BOTTOM OF WALL, AND THE WALL LOCATIONS, ARE ALL BASED ON THE FOLLOWING:  
• THE AUTOCAD DRAWING FILES NAMED: "LOWER-LEVEL-PERMIT.DWG", DATED JULY 19, 2022, "SITEPLAN-PERMIT.DWG", DATED AUGUST 9, 2022, AND "ELEVATIONS-PERMIT-PANEL.DWG", DATED AUGUST 9, 2022, ALL PREPARED BY ECTYPOS ARCHITECTURE.

**BUILDING CODES, DESIGN MANUALS, AND SPECIFICATIONS:**  
2018 INTERNATIONAL BUILDING CODE  
PUBLICATION NO. FHWA-IF-03-017, GEOTECHNICAL ENGINEERING CIRCULAR NO. 1, SOIL NAIL WALLS

**DESIGN LIVE LOADS:**  
FOR ALL THE WALLS, A UNIFORM SURCHARGE OF 250 PSF WAS CONSIDERED ON THE SLOPES BEHIND THE WALLS, EVEN THOUGH SURCHARGE IS UNLIKELY THERE. THE EXCEPTION IS IN NAIL SCHEDULE D (SEE WALL ELEVATION) WHERE A 500 PSF SURCHARGE WAS CONSIDERED TO ACCOUNT FOR THE FOOTING LOADS FROM THE STRUCTURE BEARING BEHIND THE WALL.

**SEISMIC LOADING CONSIDERATIONS:**  
FOR THE PERMANENT SOIL NAIL WALLS, SEISMIC SLOPE STABILITY ANALYSES WERE PERFORMED FOR THE FINAL CONFIGURATION, BY CONSIDERING A PSEUDO-STATIC ACCELERATION OF 0.36 (CORRESPONDING TO AN MCE OF 0.678G). SEISMIC LOADING WAS FOUND TO BE MORE CRITICAL TO THE DESIGN THAN THE PERMANENT STATIC LOADING CONDITION FOR THE DETERMINATION OF UPPER ROW NAIL LENGTHS ONLY, BUT NAIL BAR SIZES AND FACING LOADS WERE GOVERNED BY STATIC LOADING.

**WALL TYPES/SCOPE:**  
ALL OF THE SOIL NAILS ARE PERMANENT, AND AS SUCH, EPOXY-COATED. ALL OF THE SHOTCRETE FACING IS ALSO PERMANENT, BEING 1" THICK, AND CONNECTED TO THE NAILS. SOME FACING AREAS RECEIVE A SPECIAL FLOAT FINISH AND WILL BE VISIBLE; WHILE OTHERS ARE NOT GOING TO BE VISIBLE AND THE FINISH CAN BE LESS SMOOTH.

**DESIGN CALCULATIONS:**  
THE PERMANENT RETAINING WALL DESIGN CALCULATIONS ARE CONTAINED IN THE REPORT TITLED: "PERMANENT RETAINING WALL DESIGN CALCULATIONS AND PLANS, 8435 SE 47TH PLACE, MERCER ISLAND, WA", PREPARED BY GROUND SUPPORT PLLC FOR DAN AND SUSAN STEINBORN, DATED AUGUST 25, 2022.

**SUBSURFACE DESIGN PARAMETERS:**  
THE SUBSURFACE CHARACTERIZATION USED TO DESIGN THE RETAINING WALLS IS BASED ON THE REPORT TITLED: "GEOTECHNICAL ENGINEERING STUDY, PROPOSED STEINBORN RESIDENCE, VACANT LOT EAST OF 8435 SE 47TH PLACE, PARCEL #831500040, MERCER ISLAND, WASHINGTON", PREPARED BY GEOTECH CONSULTANTS, INC., DATED MARCH 23, 2021. THE FOLLOWING SOIL PROPERTIES WERE USED TO DESIGN THE SOIL NAIL RETAINING WALLS:

SUBSURFACE UNIT	UNIT WEIGHT (PCF)	SOIL FRICTION (DEG)	SOIL COHESION (PSF)	SERVICE NAIL PULLOUT (K/FT)
FILL	125	32	50	1.5
GLACIAL SOILS	135	40	100	3.5

FOR THE PURPOSES OF DESIGN OF THE RETAINING WALLS, THE WATER TABLE HAS BEEN ASSUMED TO OCCUR AT OR BENEATH THE BASE OF THE EXCAVATION, IN ACCORDANCE WITH THE FINDINGS FROM THE GEOTECHNICAL INVESTIGATION.

HOWEVER, SIGNIFICANT LOCALIZED WET ZONES AND/OR PERCHED POCKETS AND STRINGERS OF WATER-BEARING SOILS MAY BE ENCOUNTERED. THESE AREAS WILL REQUIRE SPECIAL ATTENTION TO DEWATERING USING METHODS SUCH AS INCREASED DRAIN BOARD COVERAGE, ADDITIONAL WEEP AND HEADER PIPES THROUGH THE SHOTCRETE WALL, AND SUMP PUMPS AS REQUIRED TO PREVENT THE WATER FROM CAUSING FACE INSTABILITY OR WATER PRESSURES FROM DEVELOPING BEHIND THE SHOTCRETE WALL DURING CONSTRUCTION.

**RETAINING WALL STABILITY ANALYSES:**  
IN ACCORDANCE WITH THE REFERENCED FHWA PUBLICATION, THE FOLLOWING PARTIAL FACTORS OF SAFETY WERE USED IN THE ANALYSIS OF INTERNAL AND EXTERNAL RETAINING WALL STABILITY:

DESIGN COMPONENT	PARTIAL F.O.S. (TEMP)	PARTIAL F.O.S. (PERM)	PARTIAL F.O.S. (SEISMIC)
SOIL FRICTION	1.35	1.50	1.10
SOIL COHESION	1.35	1.50	1.10
SOIL-GROUT ADHESION	2.00	2.00	1.50
NAIL BAR YIELD	1.02	1.02	1.35
FACING CAPACITY	1.50	1.50	1.10

FOR THE INTERIM CONSTRUCTION CONDITIONS WHERE EXCAVATION FOR A LIFT HAS OCCURRED YET THE CORRESPONDING NAIL ROW HAS NOT BEEN INSTALLED, THE REQUIRED PARTIAL FACTORS OF SAFETY FOR SOIL FRICTION AND SOIL COHESION ARE REDUCED TO 1.20 IN ACCORDANCE WITH THE REFERENCED FHWA PUBLICATION.

**SOIL NAIL THREADED BARS AND GROUT:**  
SOIL NAIL THREADED BARS SHALL CONFORM TO EITHER ASTM A615 / AASHTO M31, GRADE 75 OR ASTM A722 / AASHTO M215, GRADE 150, AS INDICATED ON THE PLANS.  
SOIL NAIL GROUT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI, AND A MINIMUM 3-DAY COMPRESSIVE STRENGTH OF 1500 PSI. SOIL NAIL GROUT MAY BE NEAT-CEMENT GROUT OR READY-MIX SAND-CEMENT GROUT. TYPE I/II PORTLAND CEMENT CONFORMING TO ASTM C150 / AASHTO M85 SHALL BE USED.

**SHOTCRETE:**  
ALL SHOTCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI, AND A MINIMUM 3-DAY COMPRESSIVE STRENGTH OF 2000 PSI. SEE THE SPECIFICATIONS PLAN SHEETS FOR SPECIFIC REQUIREMENTS.

TYPE I/II PORTLAND CEMENT CONFORMING TO ASTM C150 / AASHTO M85 SHALL BE USED FOR SHOTCRETE. SUBMIT MIX DESIGNS IN ACCORDANCE WITH THE SPECIFICATIONS.  
TEMPORARY SHOTCRETE MAY BE LEFT WITH A SCREEDED FINISH. PERMANENT SHOTCRETE SHALL RECEIVE A SMOOTH FLOAT FINISH.

**REINFORCING STEEL:**  
ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 / AASHTO M31, GRADE 60 FOR DEFORMED BARS, AND ASTM A105 / AASHTO M55 FOR WELDED WIRE FABRIC. ALL REINFORCING DETAILS IN ACCORDANCE WITH ACI 315 MANUAL OF STANDARD PRACTICE.

WELDED WIRE FABRIC (WWF) LAPS SHALL BE 2 SQUARES. ALL DEFORMED REINFORCING BAR LAPS SHALL BE CLASS B, IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE, OR AS SUMMARIZED IN THE FOLLOWING TABLE:

BAR SIZE	TENSILE DEVELOP LENGTH (IN)	LAP SPLICE LENGTH (IN)
#4	12	16
#5	15	20
#6	22	28
#7	36	48
#8	48	62

**STRUCTURAL STEEL:**  
ALL STRUCTURAL STEEL WIDE FLANGE AND OTHER ROLLED SHAPES SHALL CONFORM TO ASTM A572 / AASHTO M270, GRADE 50; ALL STRUCTURAL STEEL PLATES SHALL CONFORM TO ASTM A36 / AASHTO M270, GRADE 36; ALL RECTANGULAR STEEL TUBE WALLERS SHALL CONFORM TO ASTM A500, GRADE B; AND ALL PIPES SHALL CONFORM TO ASTM A53 GRADE B, UNLESS SHOWN OTHERWISE ON THE PLANS, OR APPROVED OTHERWISE BY THE ENGINEER.

**STRUCTURAL WELDING:**  
MINIMUM WELD SIZE 1/4" CONTINUOUS FILLET. MINIMUM WELD LENGTH 2 INCHES. ALL WELDING TO BE PERFORMED BY NABO-CERTIFIED WELDERS PER AWS STANDARD SPECIFICATIONS. USE ETOXX ELECTRODES.

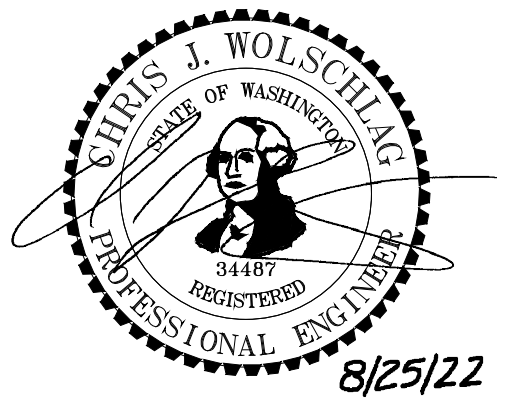


**ECTYPOS**  
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**Ground Support** PLLC  
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Ph: (425) 922-1501



**STEINBORN RESIDENCE**

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040

Date: 3/15/2021 Pre-App  
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2202-225-SUB2 August 25th, 2022

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Notes

HEADED STUDS:  
ALL HEADED STUDS SHALL CONFORM TO ASTM A108 UNO. HEADED STUDS SHALL BE "NELSON STUDS" BY NELSON DIVISION OF TRM, INC. OR AN APPROVED EQUAL, AUTOMATICALLY END WELDED.

GEOCOMPOSITE WALL DRAINAGE BOARD:  
ALL GEOCOMPOSITE WALL DRAINAGE BOARD SHALL BE AMERDRAIN 500, MIRAFI 6100, OR AN APPROVED EQUAL.

SPECIAL INSPECTION OF THE SHORING WALLS:  
IN ACCORDANCE WITH SECTION 1704 OF IBC (2018), SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING SHORING ITEMS OR PROCESSES: SOIL NAIL INSTALLATION, SOIL NAIL TESTING, AND SHOTCRETE FACING/LAGGING MATERIALS TESTING AND PLACEMENT.

SHORING MONITORING:  
SURVEY MONITORING OF THE SHORING WALLS, SHALL BE PERFORMED TO DETERMINE THE VERTICAL AND HORIZONTAL MOVEMENT OF THE MONITORING POINTS. THE MEASURING SYSTEM SHALL HAVE AN ACCURACY OF AT LEAST 0.01 FEET.  
THE MONITORING PROGRAM SHALL BE DETERMINED BY THE GEOTECHNICAL SPECIAL INSPECTOR BUT, AT A MINIMUM, SHALL INCLUDE THE FOLLOWING:  
- MONITORING POINTS SHALL CONSIST OF RODS OR BOLTS EMBEDDED INTO THE OBJECT OF INTEREST OR CROSS-HAIRS INSCRIBED ONTO A PLATE THAT IS ATTACHED TO THE OBJECT OF INTEREST.  
- MONITORING POINTS SHALL BE ESTABLISHED: (1) A MAXIMUM OF 25 FEET ON CENTER AT THE TOP OF THE SHOTCRETE WALLS, (2) A MAXIMUM OF 25 FEET ON CENTER A DISTANCE OF 5 FEET BEHIND THE SHORING WALLS WHERE THERE ARE NO ADJACENT BUILDINGS, (3) A MAXIMUM OF 25 FEET ON CENTER A DISTANCE BEHIND THE SHORING WALLS WHERE THERE ARE NO ADJACENT BUILDINGS EQUAL TO THE EXCAVATION HEIGHT OF THE WALL, AND (4) ON ANY ADJACENT STRUCTURES THAT ARE LOCATED WITHIN A HORIZONTAL DISTANCE EQUAL TO THE WALL HEIGHT ALONG THE SHORING WALLS.  
- READINGS SHALL BE TAKEN AND REPORTED AT LEAST TWICE A WEEK, ONE TIME OF WHICH MUST BE BY A LICENSED SURVEYOR.  
MONITORING DATA SHALL BE DISTRIBUTED TO THE GEOTECHNICAL ENGINEER, THE SHORING DESIGN ENGINEER, AND THE GENERAL CONTRACTOR FOR REVIEW.  
THE EXPECTED LATERAL SHORING WALL MOVEMENT IS ON THE ORDER OF 1/2". IF MOVEMENTS EXCEED 1/2", THE EXCAVATION SHALL BE HALTED UNTIL FURTHER REVIEW BY GROUND SUPPORT PLLC.



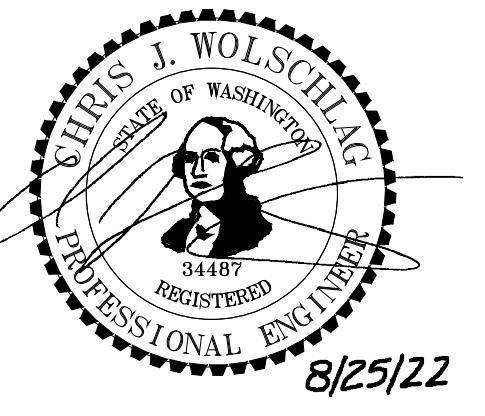


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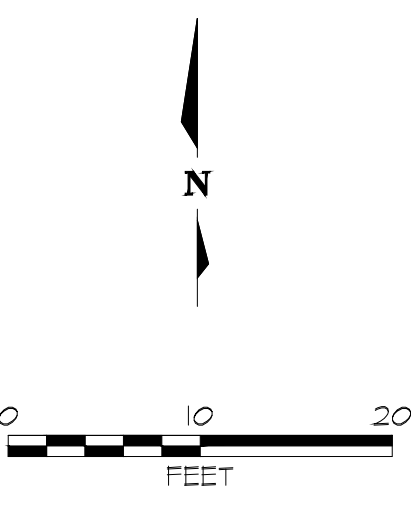
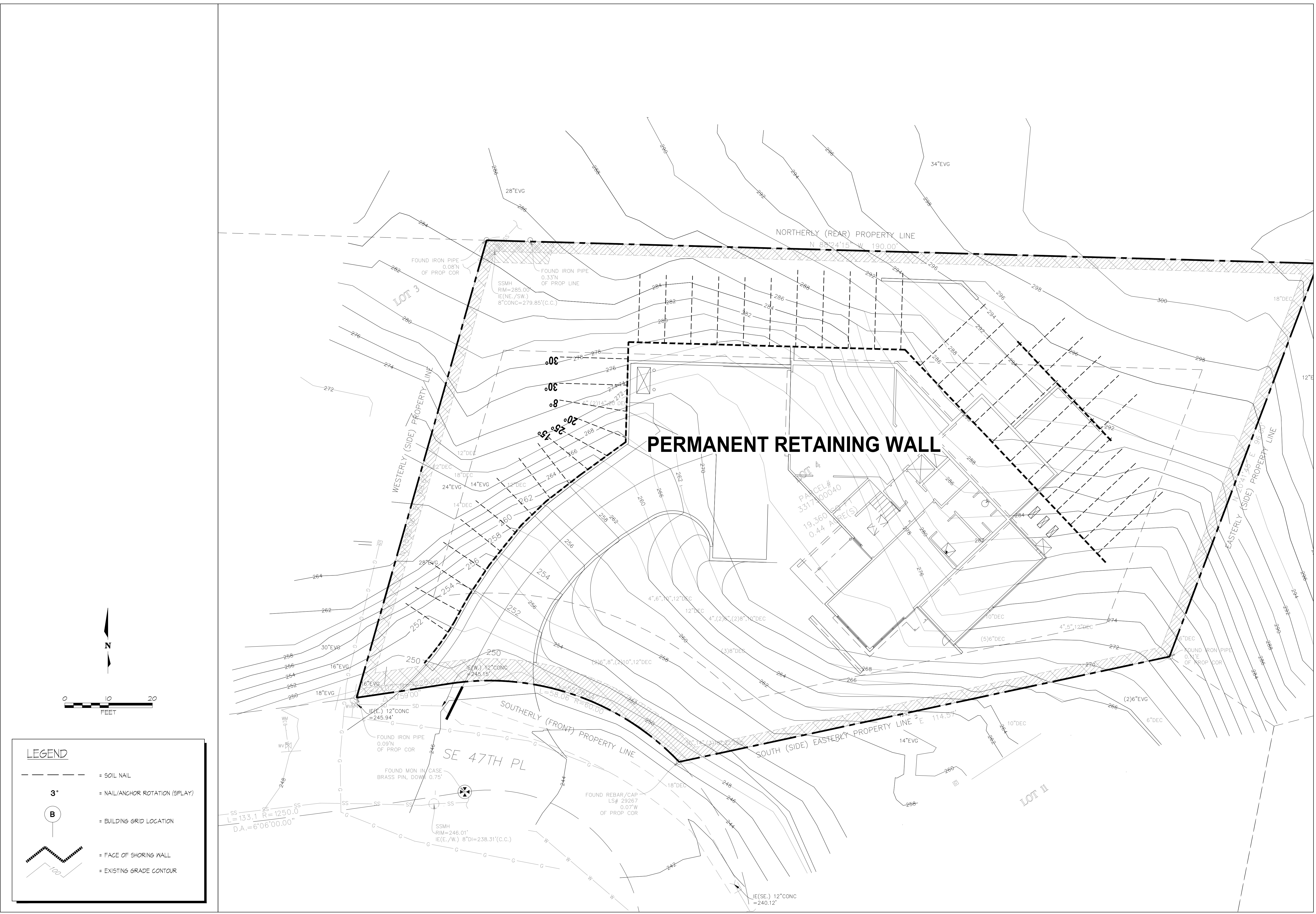
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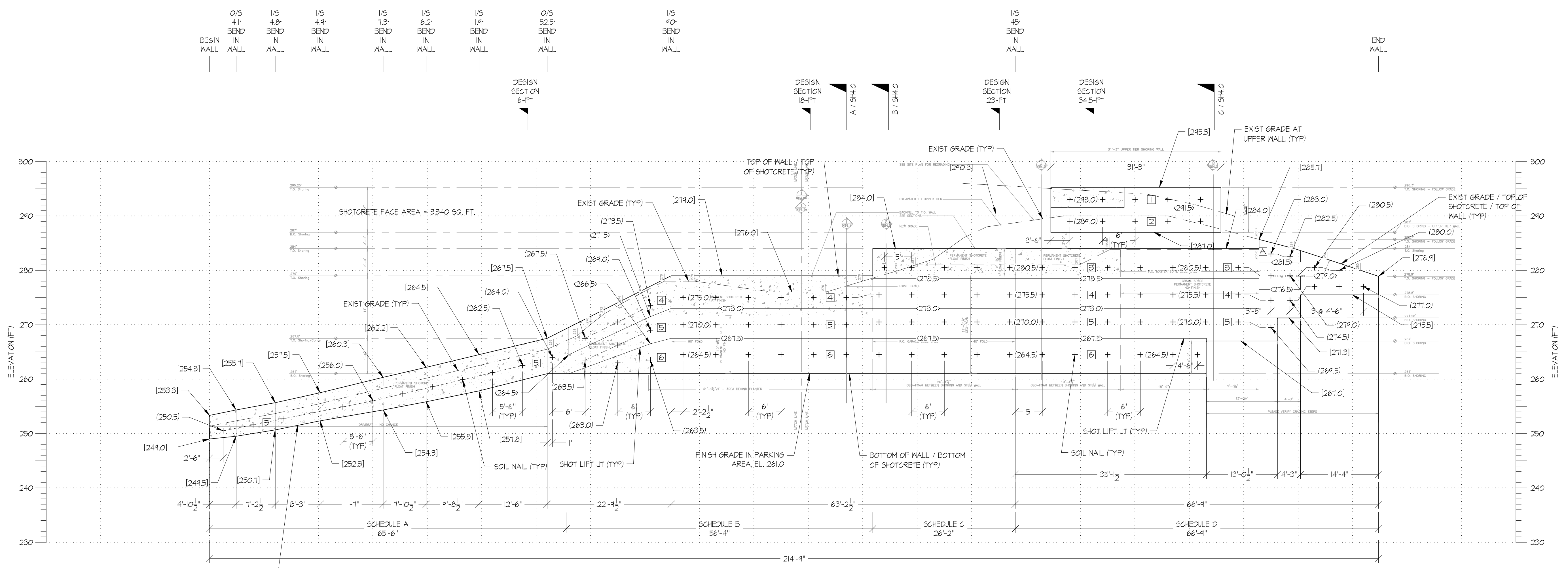
Wall Plan  
**SH2.0**



**LEGEND**

- = SOIL NAIL
- = NAIL/ANCHOR ROTATION (SPLAY)
- = BUILDING GRID LOCATION
- = FACE OF SHORING WALL
- = EXISTING GRADE CONTOUR

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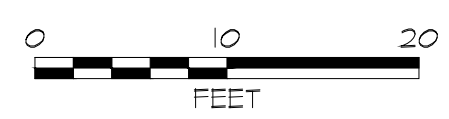
PERMANENT SOIL NAIL WALL						
SCHEDULE A						
ROW	BAR	GRADE	L (UNO)	$\alpha$ (UNO)	$Q_p$	FACING
5	#8	T5	12	15	3.5	F40

PERMANENT SOIL NAIL WALL						
SCHEDULE B						
ROW	BAR	GRADE	L (UNO)	$\alpha$ (UNO)	$Q_p$	FACING
4	#8	T5	16	15	3.5	F40
5	#8	T5	16	15	3.5	F40
6	#8	T5	12	15	3.5	F40

PERMANENT SOIL NAIL WALL						
SCHEDULE C						
ROW	BAR	GRADE	L (UNO)	$\alpha$ (UNO)	$Q_p$	FACING
3	#8	T5	18	15	3.5	F40
4	#8	T5	18	15	3.5	F40
5	#8	T5	18	15	3.5	F40
6	#8	T5	12	15	3.5	F40

PERMANENT SOIL NAIL WALL						
SCHEDULE D						
ROW	BAR	GRADE	L (UNO)	$\alpha$ (UNO)	$Q_p$	FACING
1	#8	T5	12	15	3.5	F40
2	#8	T5	12	15	3.5	F40
3	#8	T5	21	15	3.5	F40
4	#8	T5	21	15	3.5	F40
5	#8	T5	18	15	3.5	F40
6	#8	T5	12	15	3.5	F40

LEGEND			
	NAIL ROW	BAR	SIZE OF NAIL BAR
+	NAIL	GRADE	STEEL GRADE OF NAIL BAR
[21.0]	GRADE ELEVATION	L	MIN DRILLED LENGTH (FT)
(42.5)	NAIL ROW ELEVATION	$\alpha$	NAIL DECLINATION ANGLE FROM HORIZONTAL (DEGREES)
38.0	SHOTCRETE JOINT ELEVATION	$Q_p$	DESIGN NAIL PULLOUT RESISTANCE (K/FT)
20°	SPECIFIC NAIL DECLINATION	NI	ANALYSIS SECTION LOCATION AND IDENTIFICATION
	CROSS SECTION LOCATION AND IDENTIFICATION		



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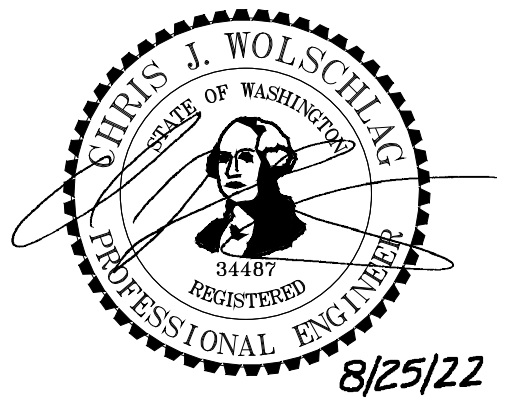


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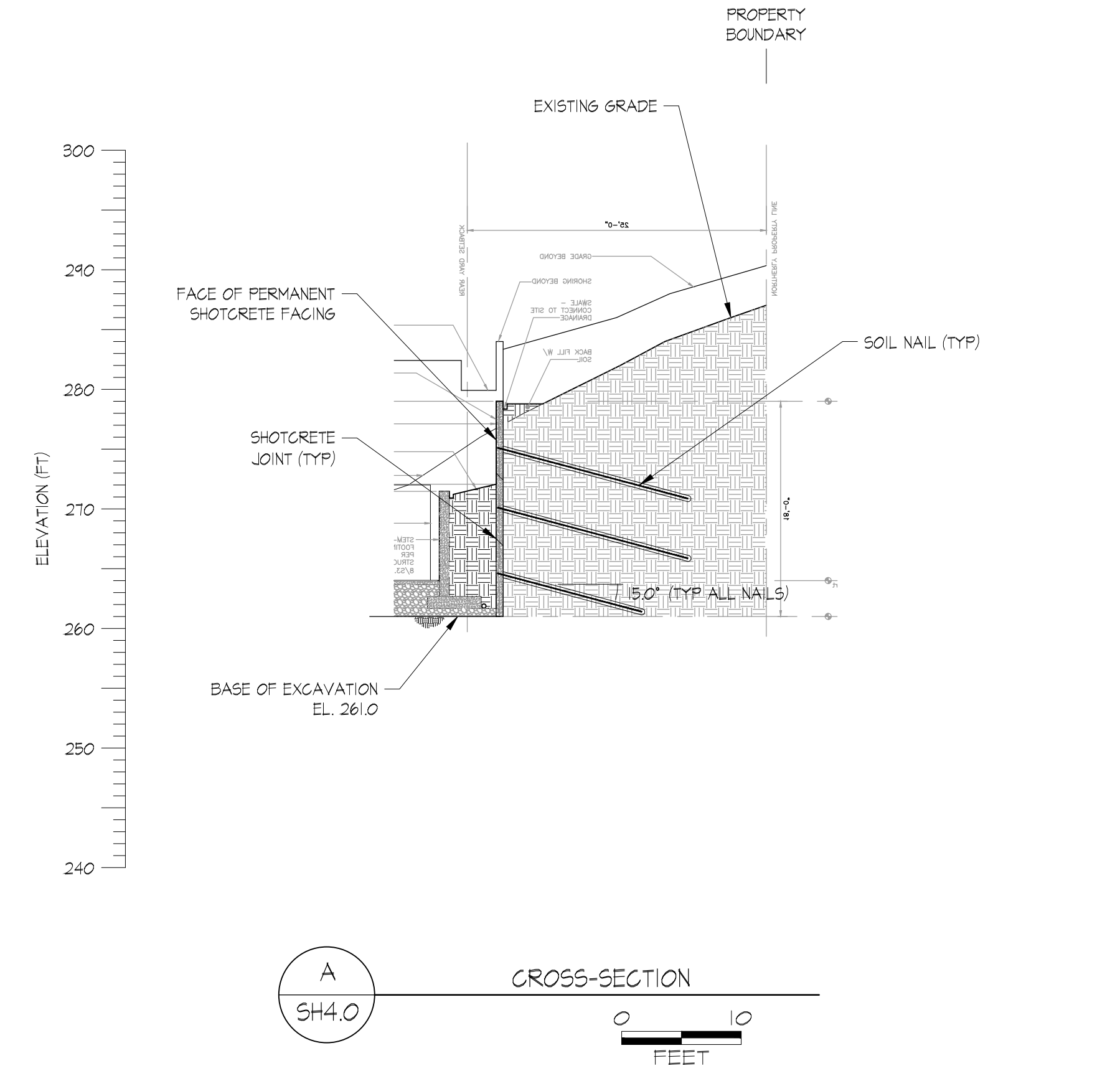
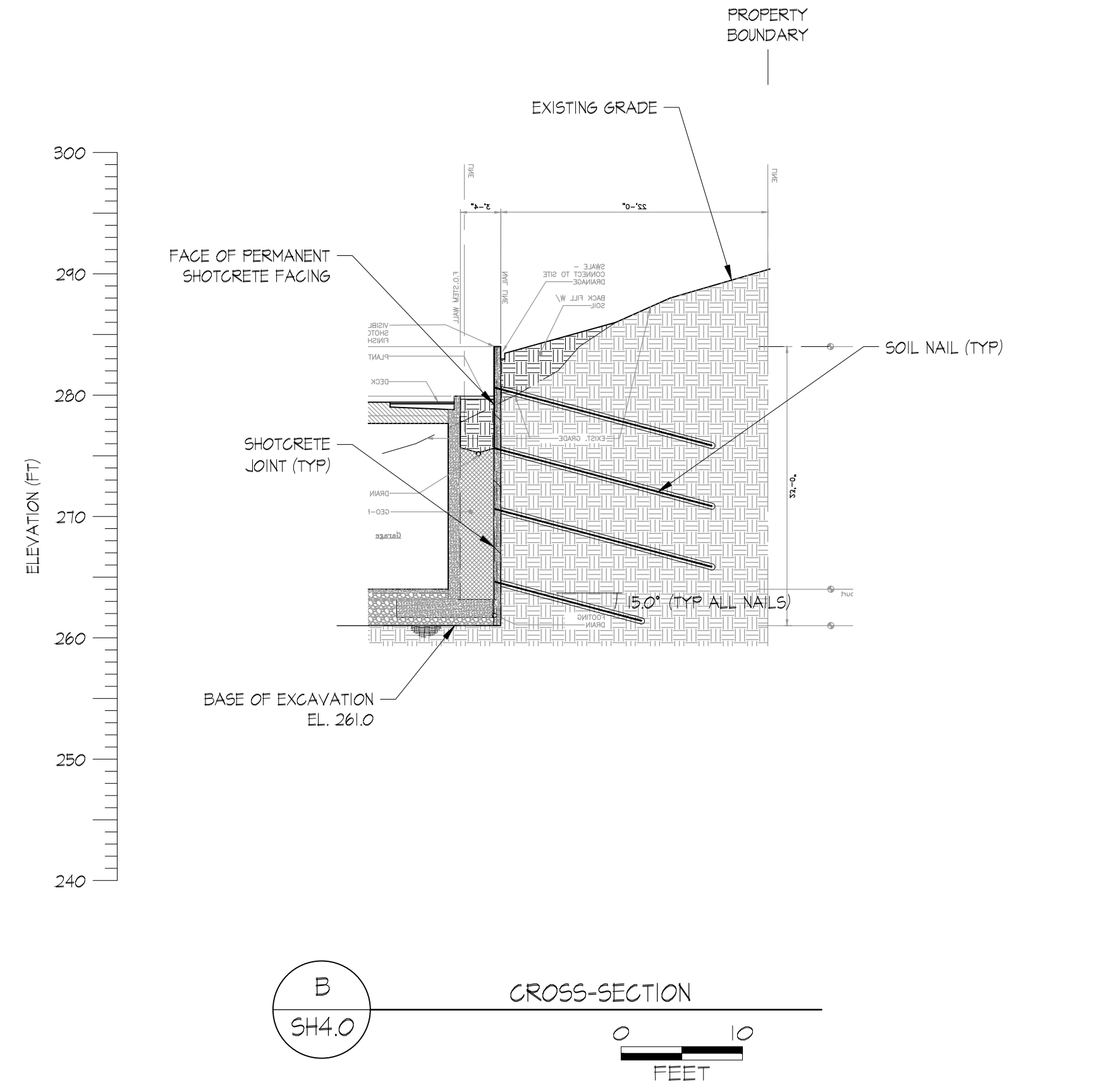
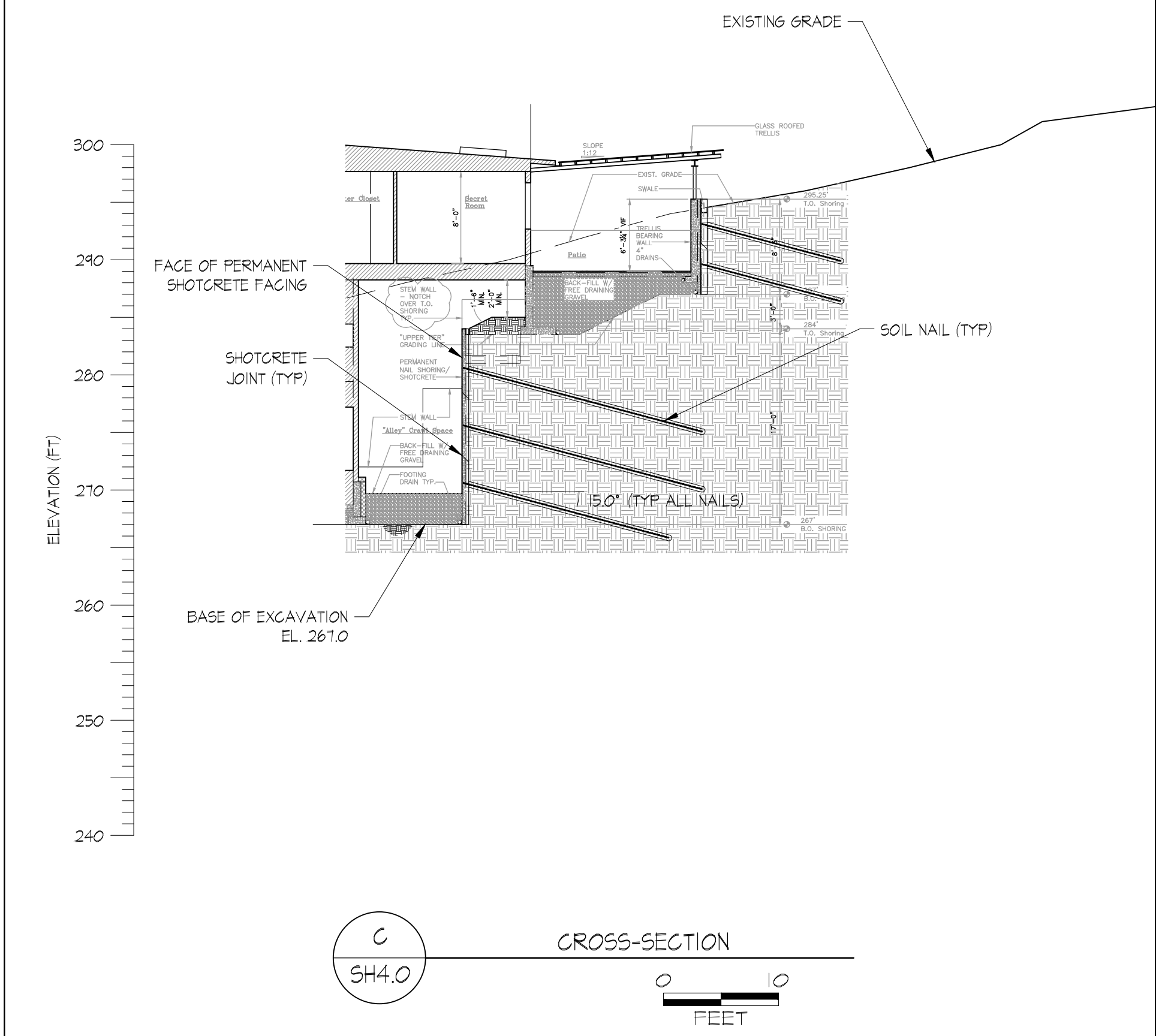
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Cross-Sections

SH4.0





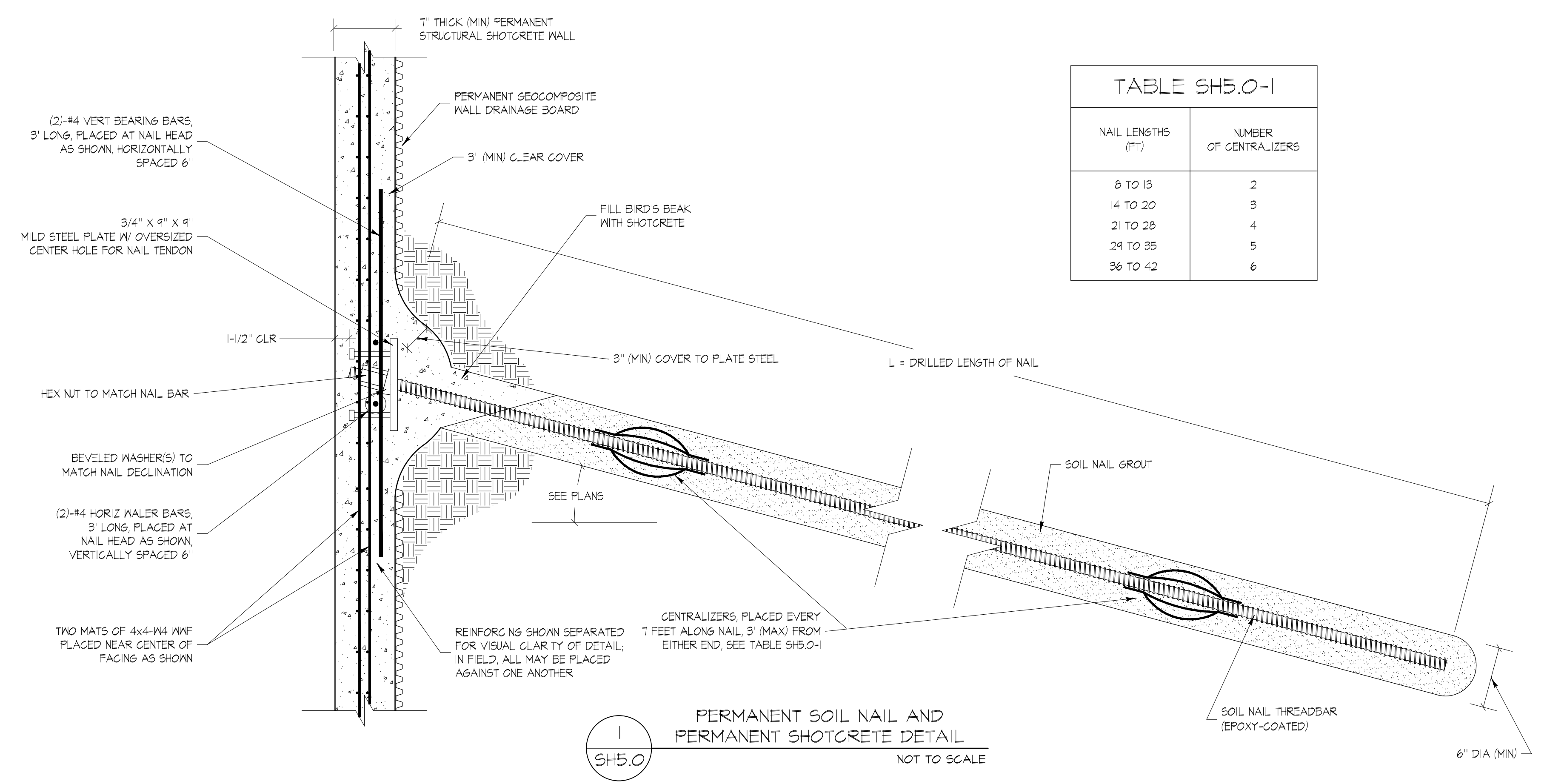
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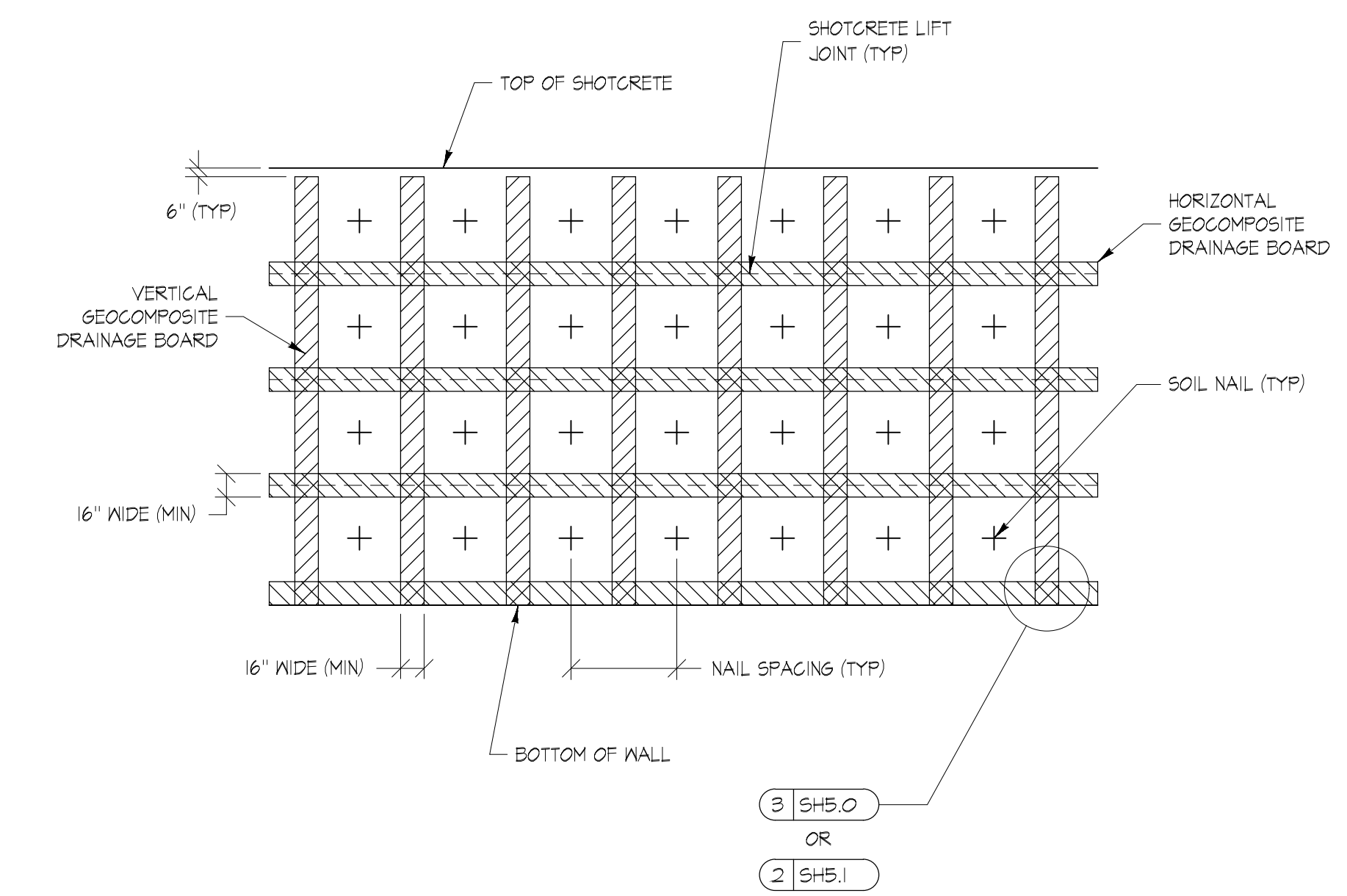
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**TABLE SH5.0-1**

NAIL LENGTHS (FT)	NUMBER OF CENTRALIZERS
8 TO 13	2
14 TO 20	3
21 TO 28	4
29 TO 35	5
36 TO 42	6

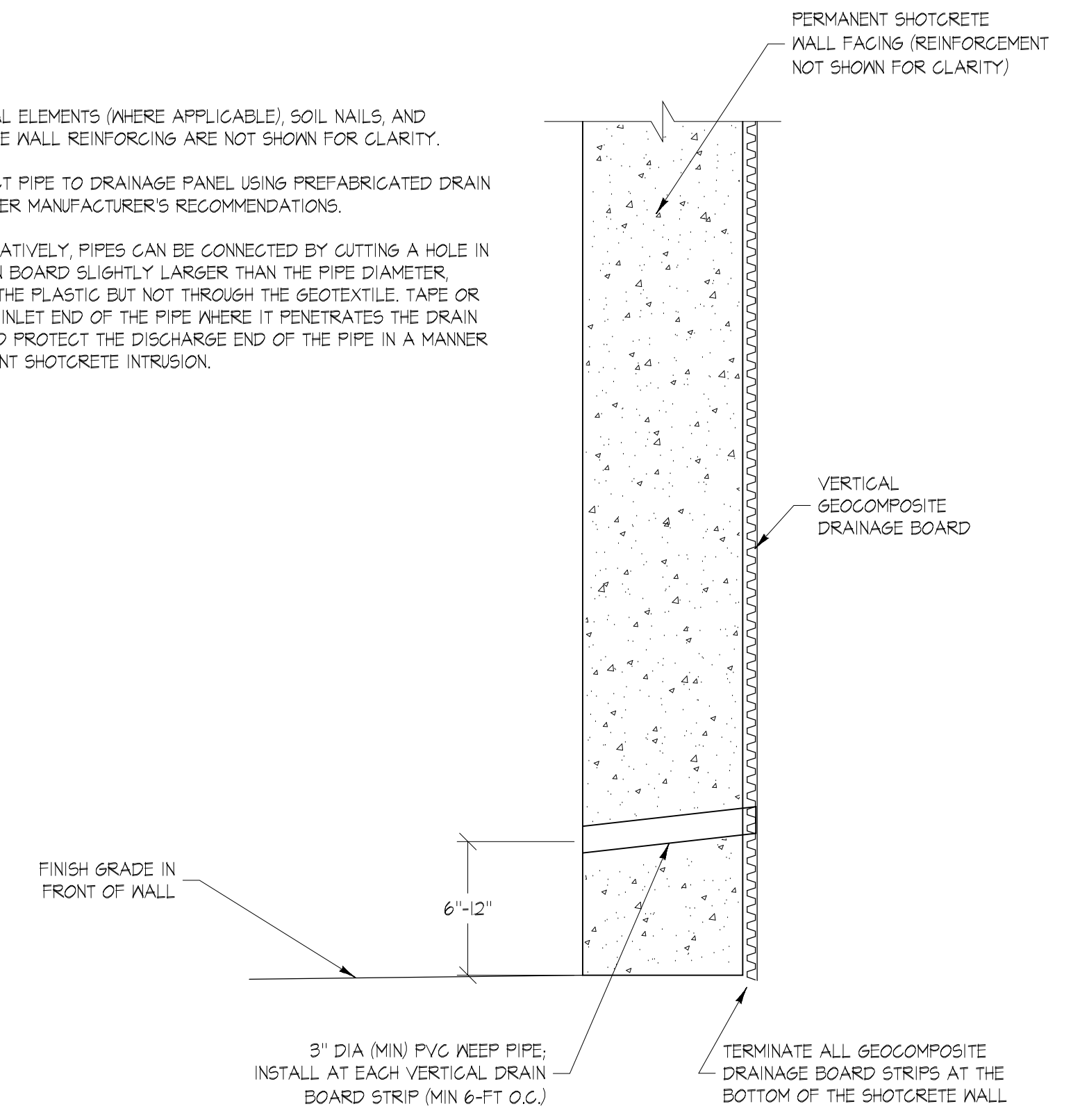


**1**  
**SH5.0**  
**PERMANENT SOIL NAIL AND PERMANENT SHOTCRETE DETAIL**  
NOT TO SCALE

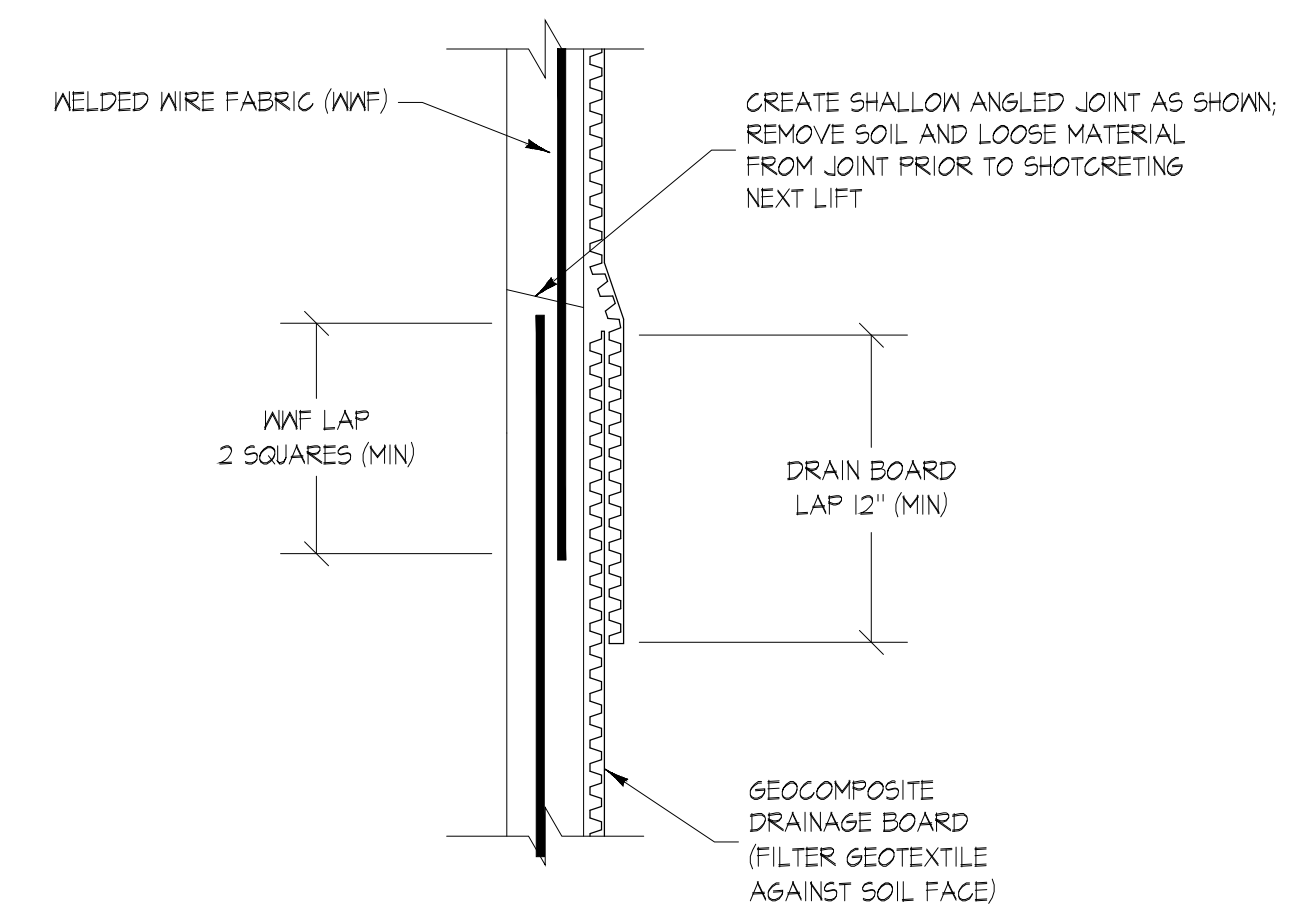


**2**  
**SH5.0**  
**WALL FACE DRAINAGE DETAIL**  
NOT TO SCALE

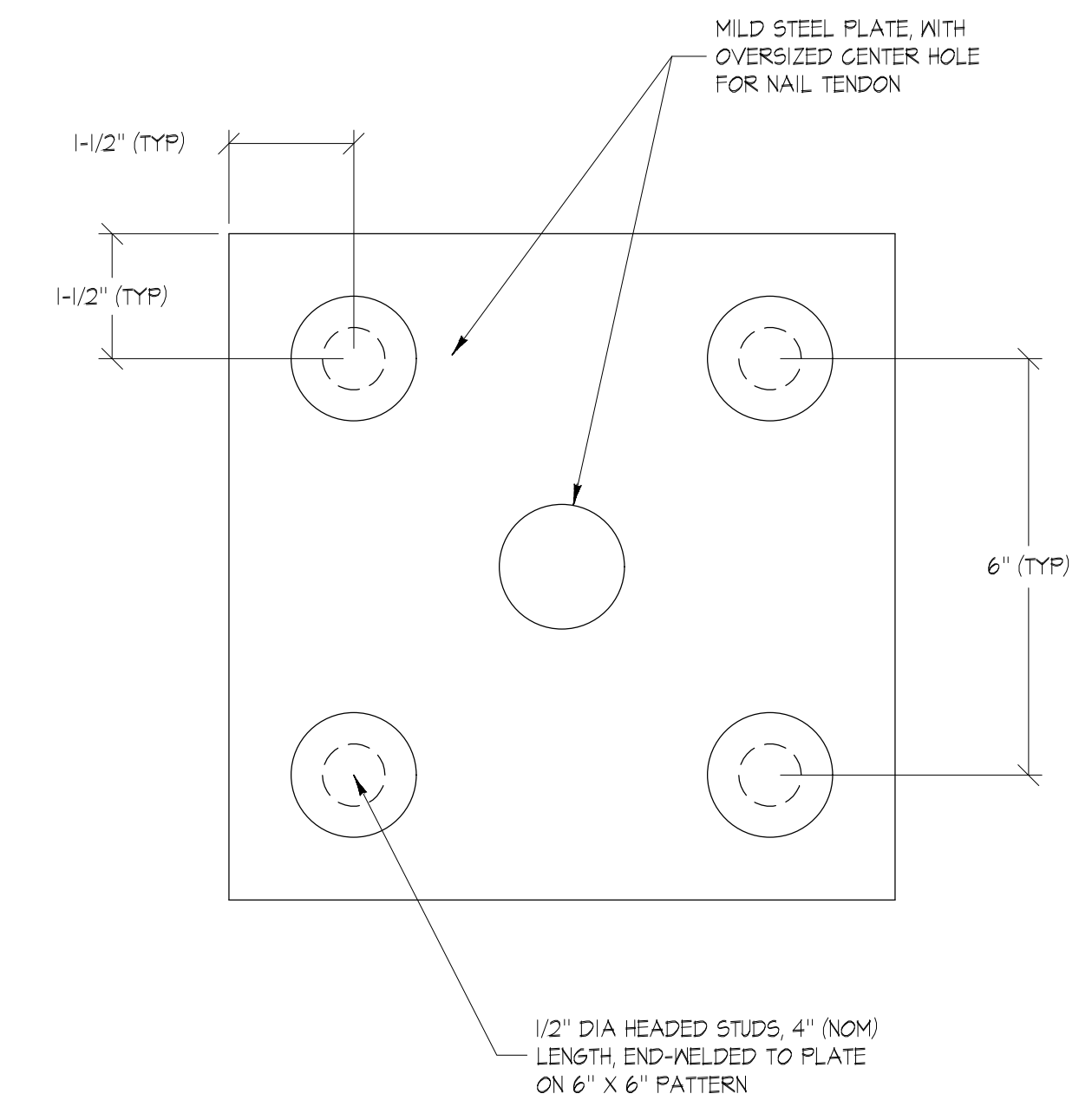
- NOTES:**
1. VERTICAL ELEMENTS (WHERE APPLICABLE), SOIL NAILS, AND SHOTCRETE WALL REINFORCING ARE NOT SHOWN FOR CLARITY.
  2. CONNECT PIPE TO DRAINAGE PANEL USING PREFABRICATED DRAIN GRATES PER MANUFACTURER'S RECOMMENDATIONS.
  3. ALTERNATIVELY, PIPES CAN BE CONNECTED BY CUTTING A HOLE IN THE DRAIN BOARD SLIGHTLY LARGER THAN THE PIPE DIAMETER, THROUGH THE PLASTIC BUT NOT THROUGH THE GEOTEXTILE, TAPE OR SEAL THE INLET END OF THE PIPE WHERE IT PENETRATES THE DRAIN STRIP, AND PROTECT THE DISCHARGE END OF THE PIPE IN A MANNER TO PREVENT SHOTCRETE INTRUSION.



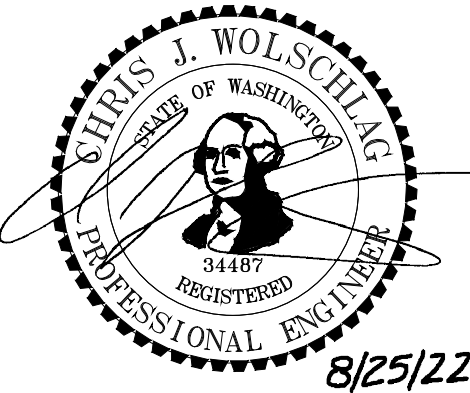
**3**  
**SH5.0**  
**BOTTOM OF WALL DETAIL (WHERE WEEPS ARE EXPOSED)**  
NOT TO SCALE



**4**  
**SH5.0**  
**WALL FACING JOINT AND LAP DETAIL**  
NOT TO SCALE



**5**  
**SH5.0**  
**HEADED STUD AND BEARING PLATE DETAIL**  
NOT TO SCALE

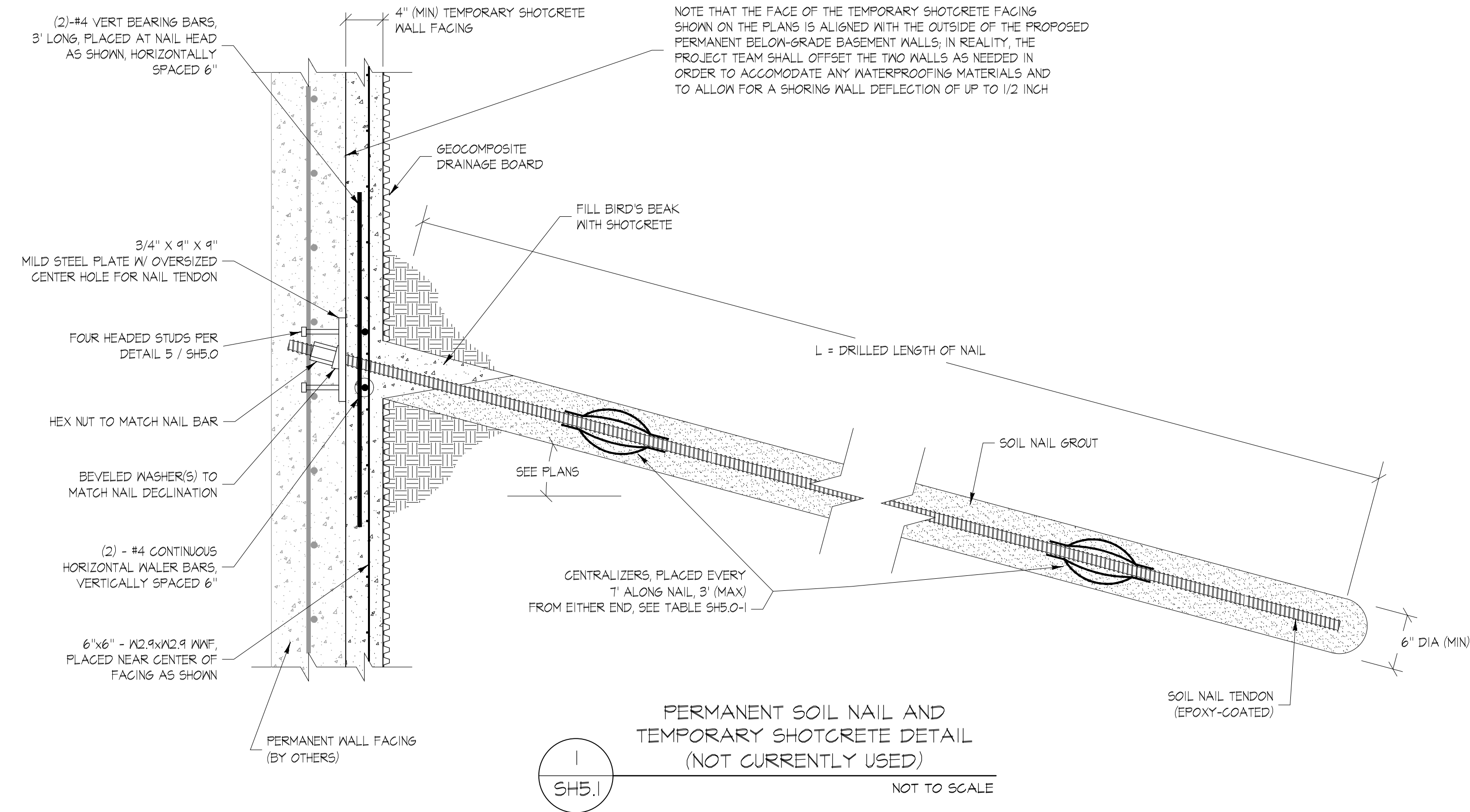


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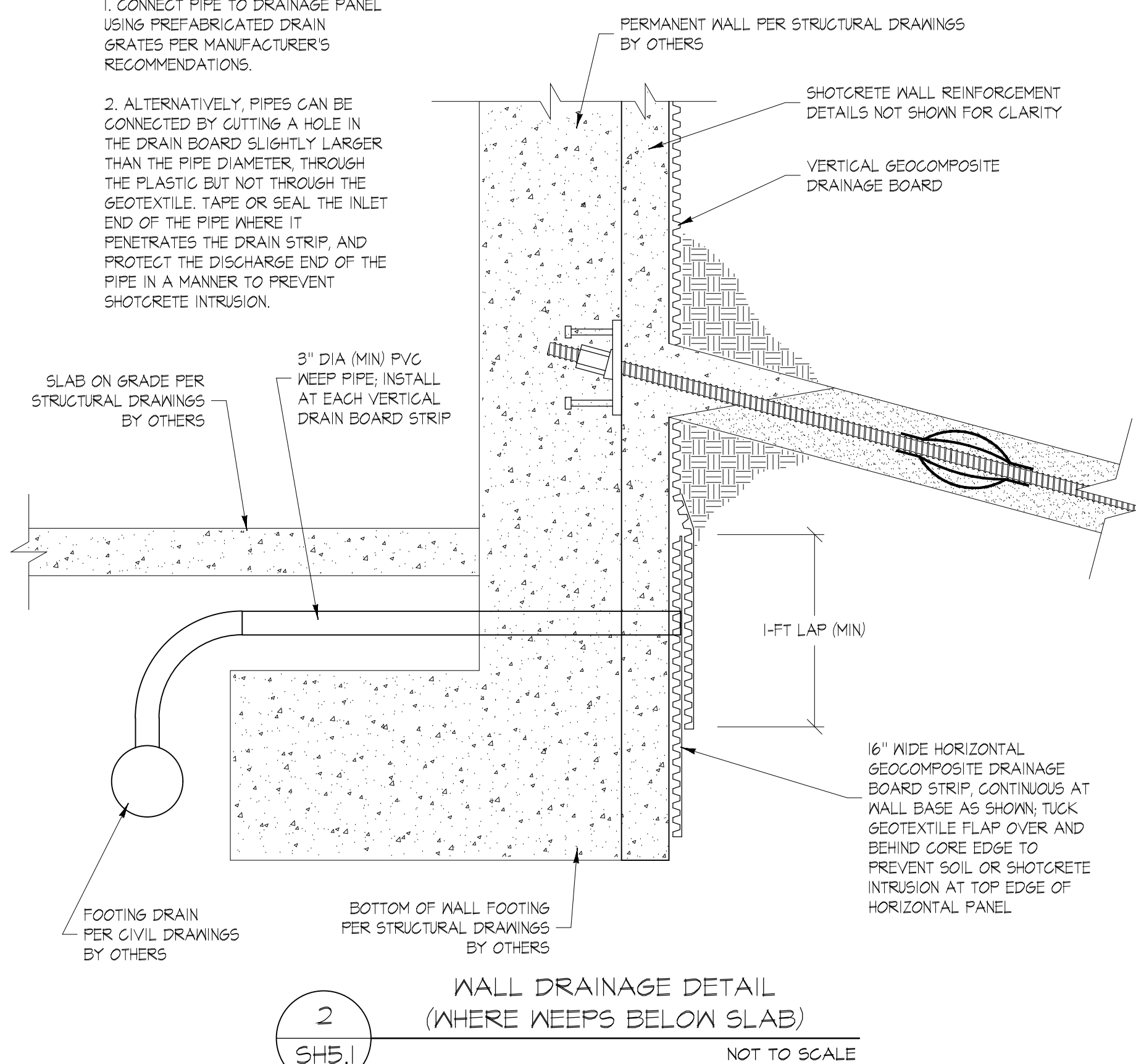
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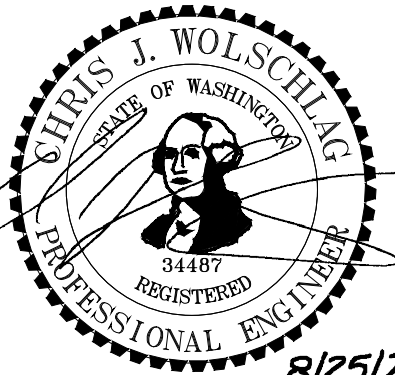
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**NOTES:**

- CONNECT PIPE TO DRAINAGE PANEL USING PREFABRICATED DRAIN GRATES PER MANUFACTURER'S RECOMMENDATIONS.
- ALTERNATIVELY, PIPES CAN BE CONNECTED BY CUTTING A HOLE IN THE DRAIN BOARD SLIGHTLY LARGER THAN THE PIPE DIAMETER, THROUGH THE PLASTIC BUT NOT THROUGH THE GEOTEXTILE. TAPE OR SEAL THE INLET END OF THE PIPE WHERE IT PENETRATES THE DRAIN STRIP AND PROTECT THE DISCHARGE END OF THE PIPE IN A MANNER TO PREVENT SHOTCRETE INTRUSION.

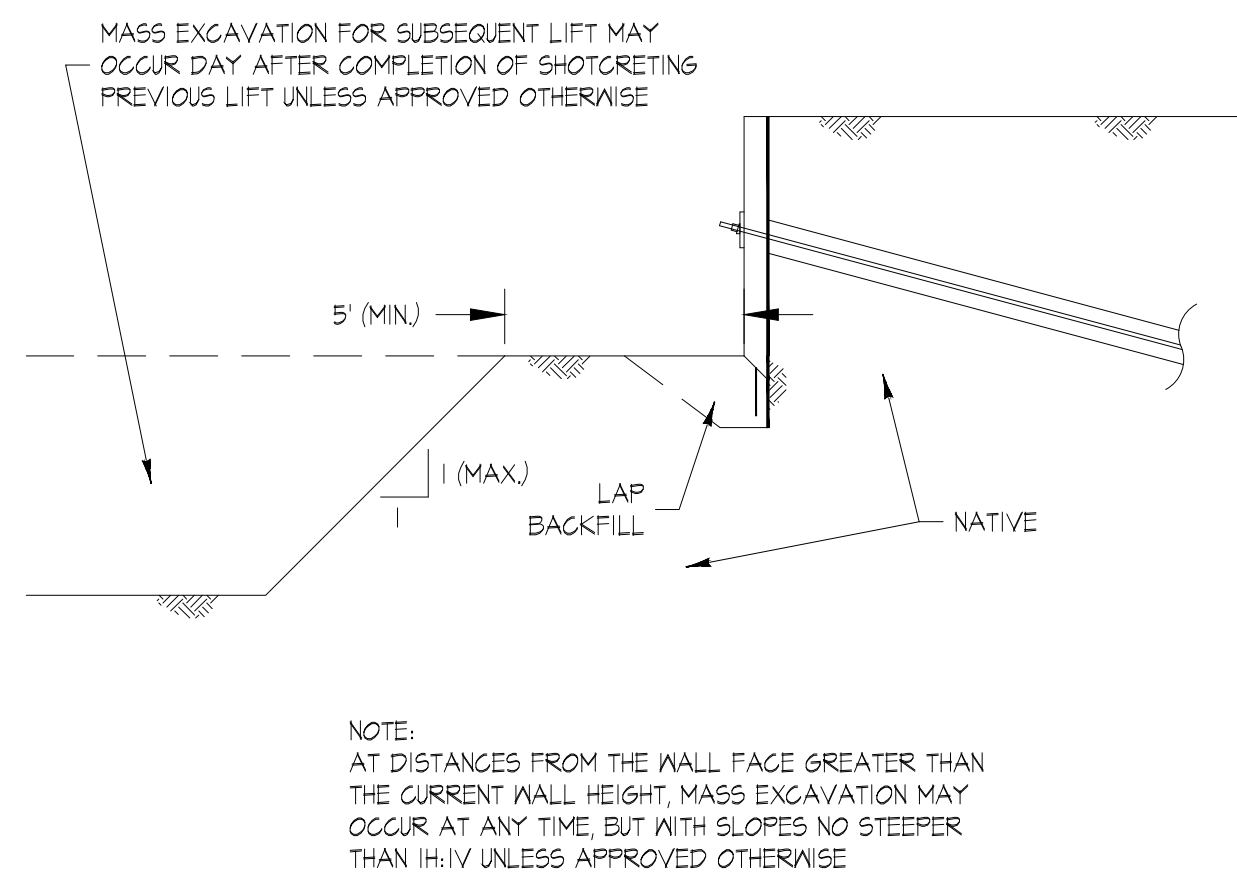




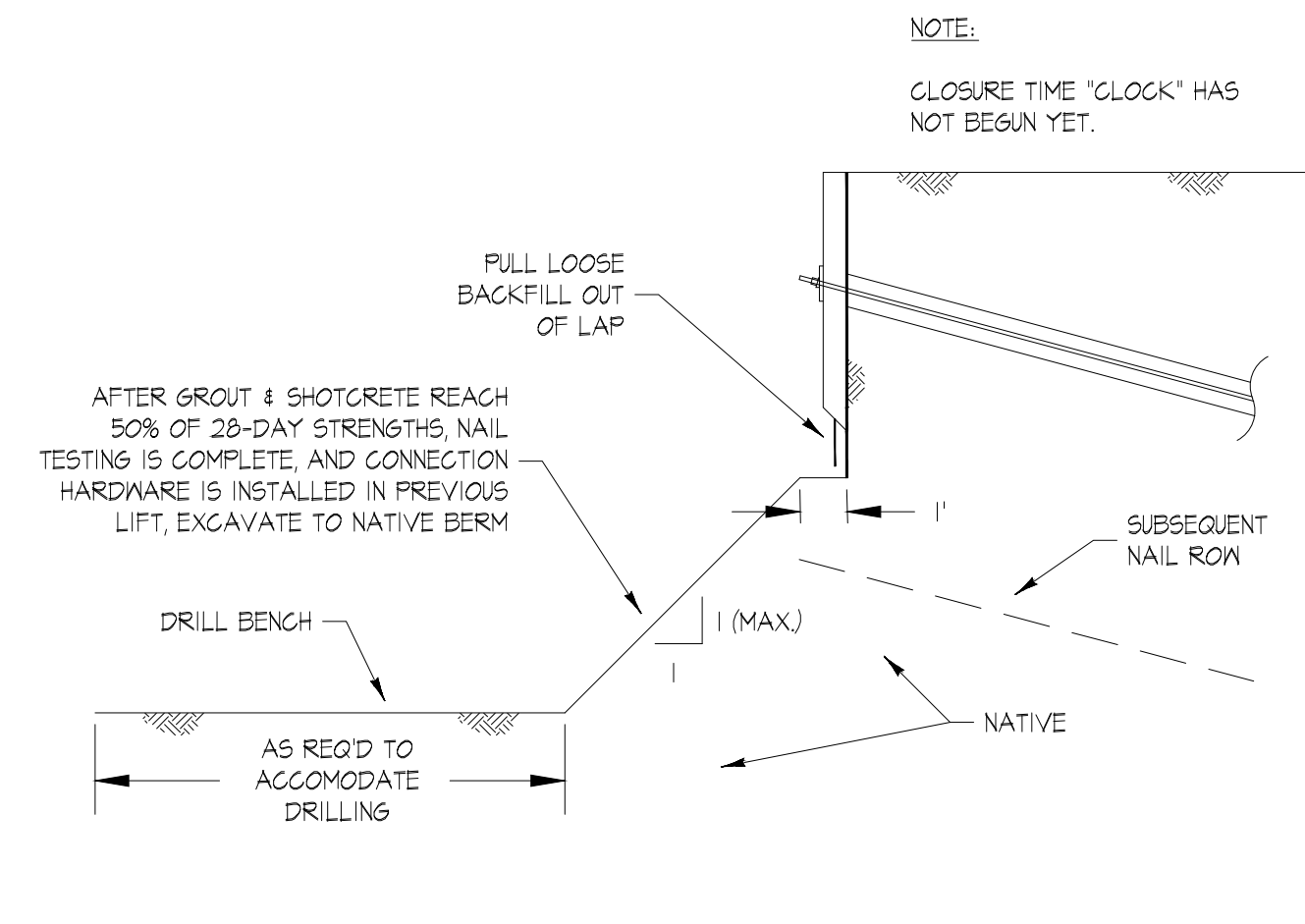
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**STEINBORN RESIDENCE**

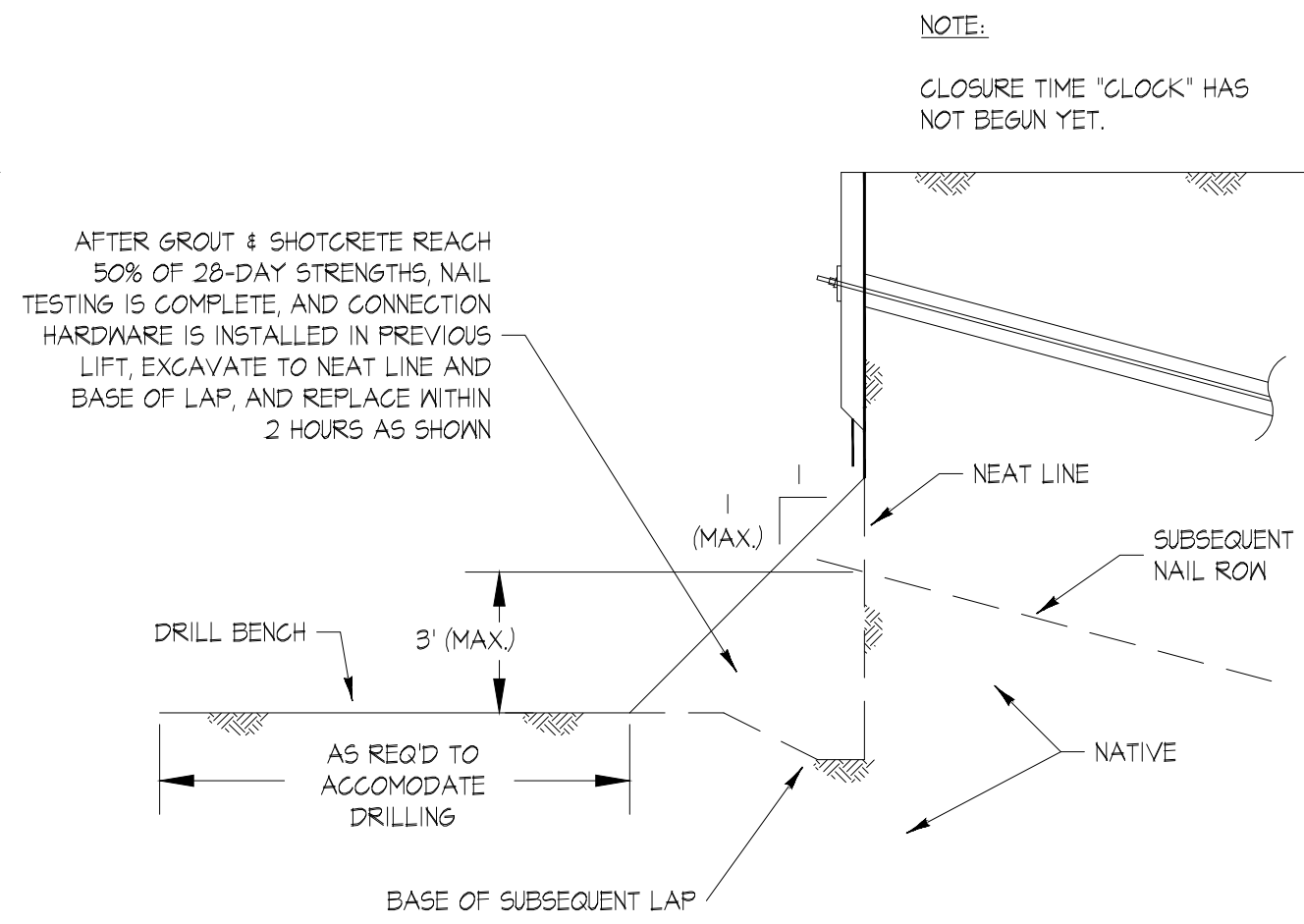
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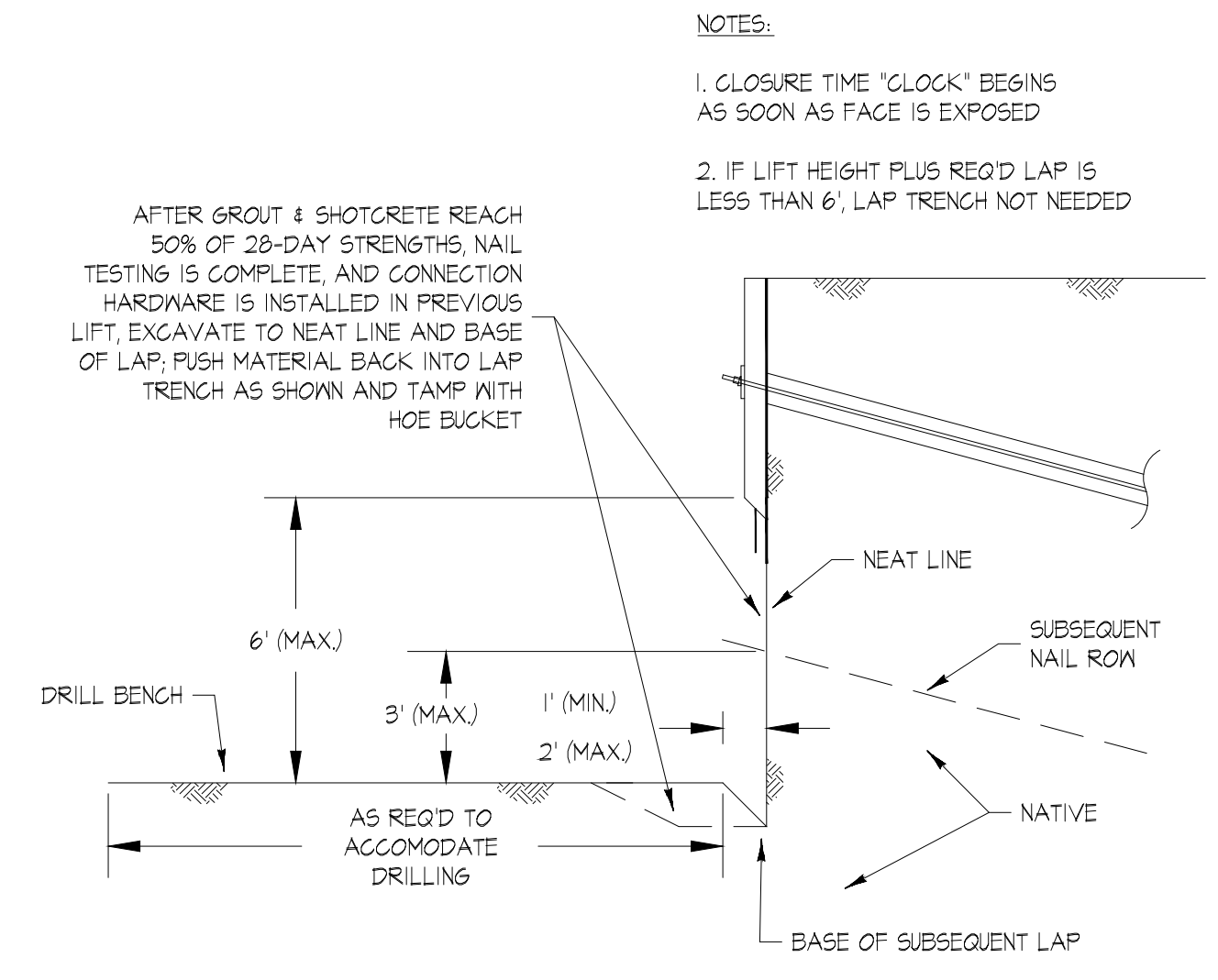
STEP 1  
1 MASS EXCAVATION FOR SUBSEQUENT LIFT  
SH6.0 NOT TO SCALE



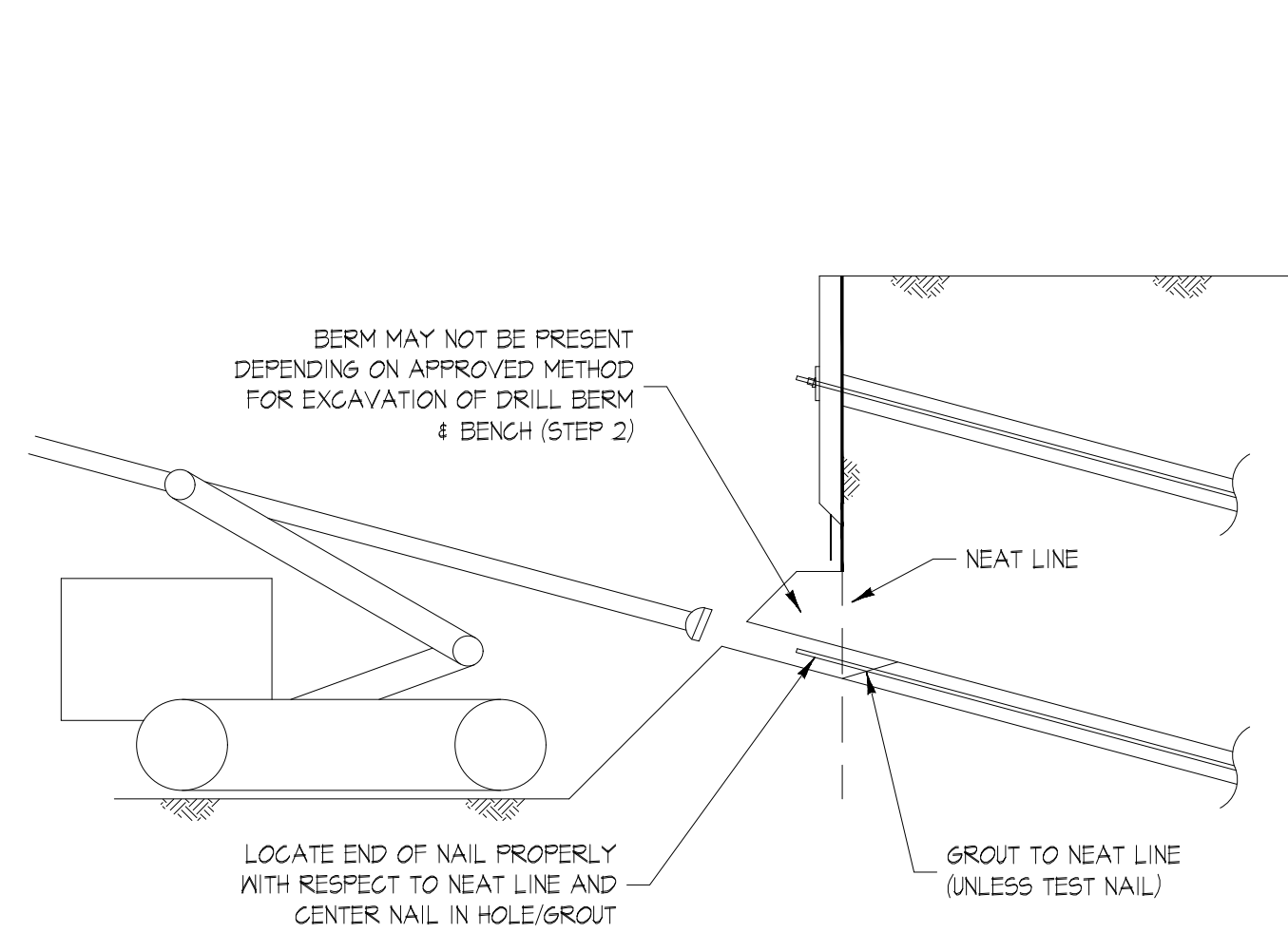
STEP 2  
2-A EXCAVATION FOR DRILL BENCH AND BERM METHOD A - NATIVE BERM  
SH6.0 NOT TO SCALE



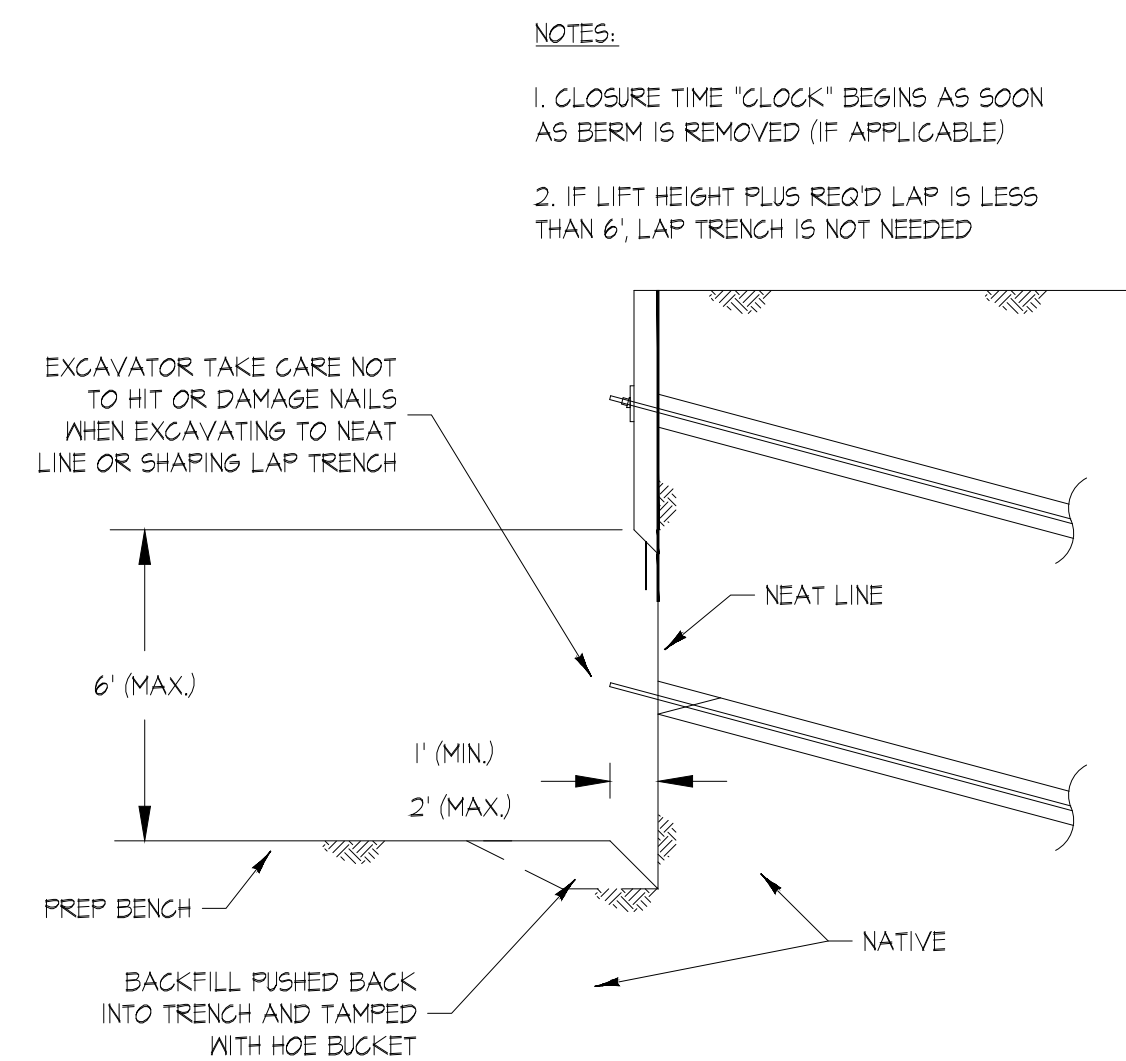
STEP 2  
2-B EXCAVATION FOR DRILL BENCH AND BERM METHOD B - SOFT/FILL BERM  
SH6.0 NOT TO SCALE



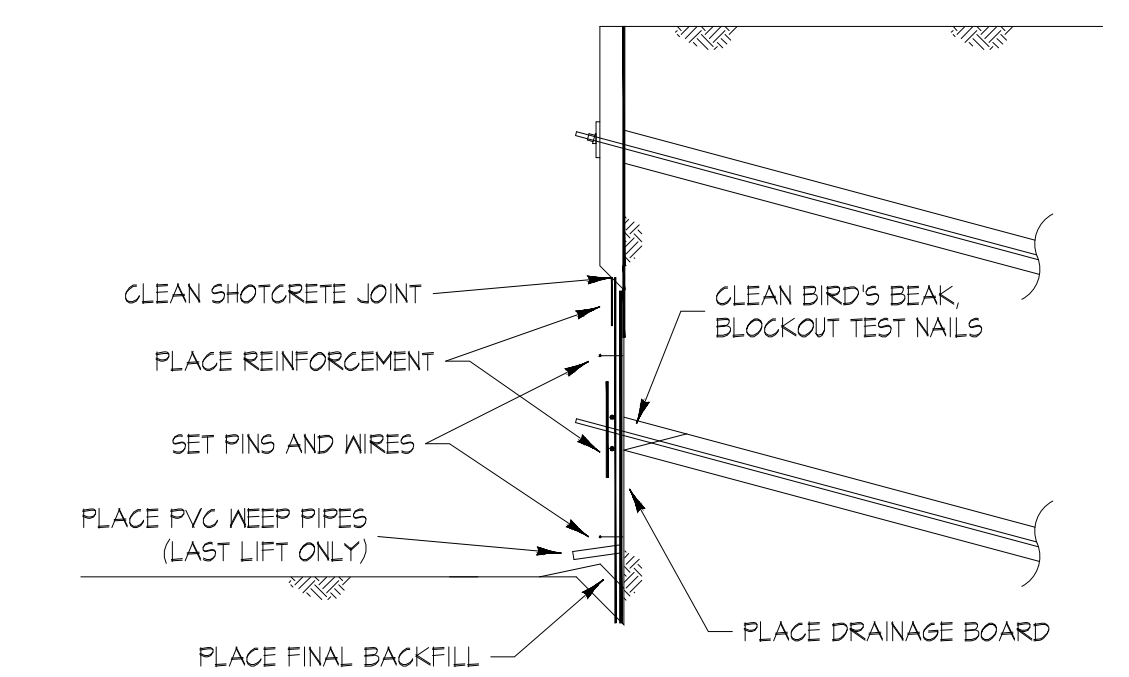
STEP 2  
2-C EXCAVATION FOR DRILL BENCH AND BERM METHOD C - NEAT CUT  
SH6.0 NOT TO SCALE



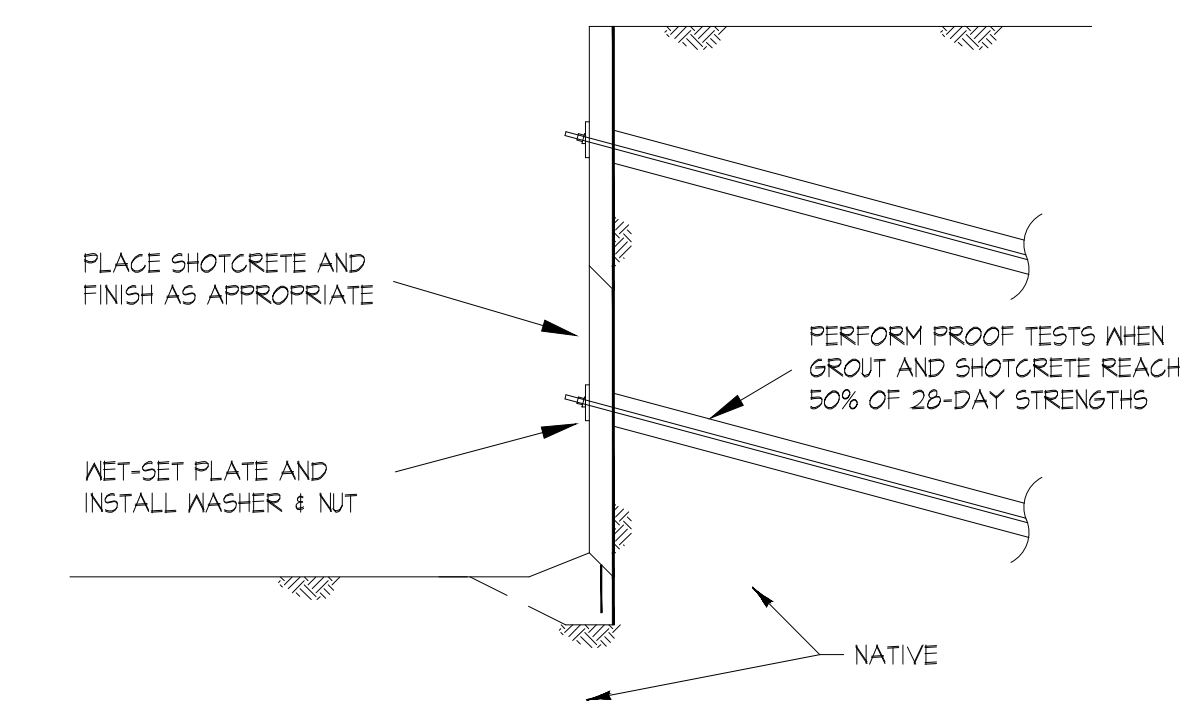
STEP 3  
3 DRILL AND GROUT NAILS  
SH6.0 NOT TO SCALE



STEP 4  
4 EXCAVATE NEAT LINE AND PREP BENCH  
SH6.0 NOT TO SCALE



STEP 5  
5 PREPARE WALL FACING COMPONENTS  
SH6.0 NOT TO SCALE



STEP 6  
6 SHOTCRETE, WET SET CONNECTION, TEST NAILS  
SH6.0 NOT TO SCALE

CONSTRUCTION NOTES:

BASED ON THE REFERENCED GEOTECHNICAL REPORT, THE SUBSURFACE CONDITIONS AT THE PROJECT SITE GENERALLY CONSIST OF A THIN VENEER OF FILL LESS THAN ABOUT 5-FT THICK, UNDERLAIN BY VERY DENSE GLACIAL TILL.

FOR STEP 2, IF LESS COMPETENT SOILS ARE ENCOUNTERED, ONLY METHOD A IS APPROVED BY THE ENGINEER.

FOR STEP 2, FOR THE UPPERMOST LIFT ALONG ANY WALL, WHEN VERY DENSE NATIVE SOIL IS ENCOUNTERED, METHOD B IS APPROVED BY THE ENGINEER.

FOR STEP 2, FOR LIFTS OTHER THAN THE UPPERMOST LIFT ALONG ANY WALL, WHEN VERY DENSE NATIVE SOIL IS ENCOUNTERED, METHOD C IS APPROVED BY THE ENGINEER, BUT METHOD B IS HIGHLY RECOMMENDED.

IF AT ANY TIME DURING CONSTRUCTION THE SOIL FACE APPEARS TO BE DISTRESSED IN SUCH A WAY AS TO CAUSE POTENTIAL FOR SLOUGHING, FALLOUT, OR LARGE OVERBREAKS, THEN EITHER METHOD A OR B WILL BE REQUIRED BY THE OWNER'S REPRESENTATIVE AS NECESSARY TO LIMIT SOIL DISTURBANCE AT THE FACE.

CLOSURE TIME, DEFINED AS THE TIME DURATION BETWEEN EXCAVATION OF THE NEAT CUT FACE AND PLACEMENT OF SHOTCRETE, SHALL BE NO GREATER THAN A SINGLE WORKSHIFT UNLESS APPROVED OTHERWISE BY THE ENGINEER OR THE OWNER'S REPRESENTATIVE.

METHODS OF CONSTRUCTION AND CLOSURE TIMES THAT ARE APPROVED BY THE ENGINEER OR THE OWNER'S REPRESENTATIVE DO NOT RELIEVE THE CONTRACTOR OF ALL RESPONSIBILITY FOR STABILITY OF THE TEMPORARY CUT FACE UNTIL IT IS CLOSED WITH HARDENED SHOTCRETE AND THE NAIL CONNECTION IS COMPLETELY INSTALLED.

SEE THE SOIL NAIL SHORING WALL SPECIFICATION SHEETS FOR SPECIFIC REQUIREMENTS FOR MATERIALS AND CONSTRUCTION.

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**GENERAL NOTES**

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF MERCER ISLAND STANDARD SPECIFICATIONS, AND WSDOT/APWA STANDARD SPECIFICATIONS, LATEST EDITION. THE CITY OF MERCER ISLAND RESERVES THE RIGHT TO REJECT ANY DAMAGED AND/OR NON-COMPLIANT CONSTRUCTION MATERIAL.
- PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL SCHEDULE AND ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF MERCER ISLAND CONSTRUCTION INSPECTION PERSONNEL.
- AN APPROVED PLAN SET MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- ALL SITE WORK IMPROVEMENTS SHALL BE CONSTRUCTED TO OBTAIN STREET USE AND ANY OTHER RELATED PERMITS PRIOR TO ANY CONSTRUCTION ACTIVITY.
- IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN STREET USE AND ANY OTHER RELATED PERMITS PRIOR TO ANY CONSTRUCTION ACTIVITY.
- ANY APPROVED CUTS OF EXISTING PUBLIC ROADWAYS SHALL BE BACK FILLED AND COMPACTED IN ACCORDANCE WITH CITY OF MERCER ISLAND STANDARDS. ALL CUTS INTO EXISTING ASPHALT SHALL BE ALONG NEAT, CONTINUOUS, SAWED, OR WHEEL CUT LINES. A TEMPORARY COLD MIX PATCH MUST BE PLACED IMMEDIATELY AFTER BACKFILL AND COMPACTION. THIS EXISTING ROAD CUT SHALL BE REPLACED WITH AT LEAST THREE (3) INCHES OF COMPACTED CL "B" ASPHALT CONCRETE, SIX (6) INCH CRUSHED ROCK SURFACING TOP COURSE (5/8 INCH MINUS), AS REQUIRED DEPENDENT UPON A SOILS ENGINEER'S RECOMMENDATION AND TESTS. IN NO CASE SHALL THE REPLACEMENT BE LESS THAN THE EXISTING SECTION.
- PAVED SURFACES INCLUDING ROADWAYS, SIDEWALKS, AND CURBS THAT ARE DAMAGED BY NEW CONSTRUCTION SHALL BE REPAIRED AS REQUIRED BY THE CITY OF MERCER ISLAND INSPECTOR.
- ALL LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.
- THE CONTRACTOR SHALL LOCATE AND PROTECT ALL CASTINGS AND UTILITIES DURING CONSTRUCTION AND SHALL CONTACT THE UNDERGROUND UTILITIES LOCATOR SERVICE (1-800-424-5555) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL ADJUST ALL EXISTING MANHOLE RIMS, DRAINAGE STRUCTURE LIDS, VALVE BOXES, AND UTILITY ACCESS STRUCTURES TO FINISH GRADE WITHIN AREAS AFFECTED BY THE PROPOSED IMPROVEMENTS.
- UTILITY SERVICE CONNECTIONS SHOWN ON THIS PLAN ARE TO BE MAINTAINED PRIVATELY AND NOT BY THE CITY MERCER ISLAND.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY SEDIMENTATION COLLECTION FACILITIES TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE NATURAL OR PUBLIC DRAINAGE SYSTEM. AS CONSTRUCTION PROGRESSES AND UNEXPECTED (SEASONAL) CONDITIONS DICTATE, MORE SILTATION CONTROL FACILITIES MAY BE REQUIRED TO INSURE COMPLETE SILTATION CONTROL OF THE PROJECT. THEREFORE, DURING THE COURSE OF CONSTRUCTION IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES THAT MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES.
- THE CONTRACTOR SHALL KEEP OFF-SITE STREETS CLEAN AT ALL TIMES BY SWEEPING. WASHING OF THESE STREETS WILL NOT BE ALLOWED WITHOUT PRIOR CITY OF MERCER ISLAND APPROVAL.
- ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE TRAFFIC CONTROL MANUAL.
- CARE SHALL BE EXERCISED WHEN EXCAVATING NEAR EXISTING CHARGED WATER MAINS.

**SURVEY NOTE:**

UNDERGROUND UTILITIES AND EXISTING IMPROVEMENTS SHOWN ARE BASED UPON THE SURVEY "TOPOGRAPHIC AND BOUNDARY SURVEY, STEINBORN PROPERTY, BY TERRANE, DATED FEBRUARY 21, 2021 AND RECORD DRAWINGS. NO WARRANTY OR GUARANTEE OF ACCURACY OR COMPLETENESS IS EITHER IMPLIED OR EXPRESSED. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS HAVE BEEN SHOWN ON THIS DRAWING FOR THE PURPOSE OF ASSISTING THE CONTRACTOR IN LOCATING SAID UTILITIES AND IMPROVEMENTS IN THE FIELD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING WITH APPROPRIATE AGENCIES THAT MAY HAVE UNDERGROUND UTILITIES AND IMPROVEMENTS WITHIN THE PROJECT LIMITS AND FOR CHECKING LOCATIONS IN THE FIELD. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY AND ALL DAMAGE TO UNDERGROUND UTILITIES AND IMPROVEMENTS RESULTING FROM HIS OPERATION.

**VERTICAL DATUM**

NAVD88 PER GPS OBSERVATIONS

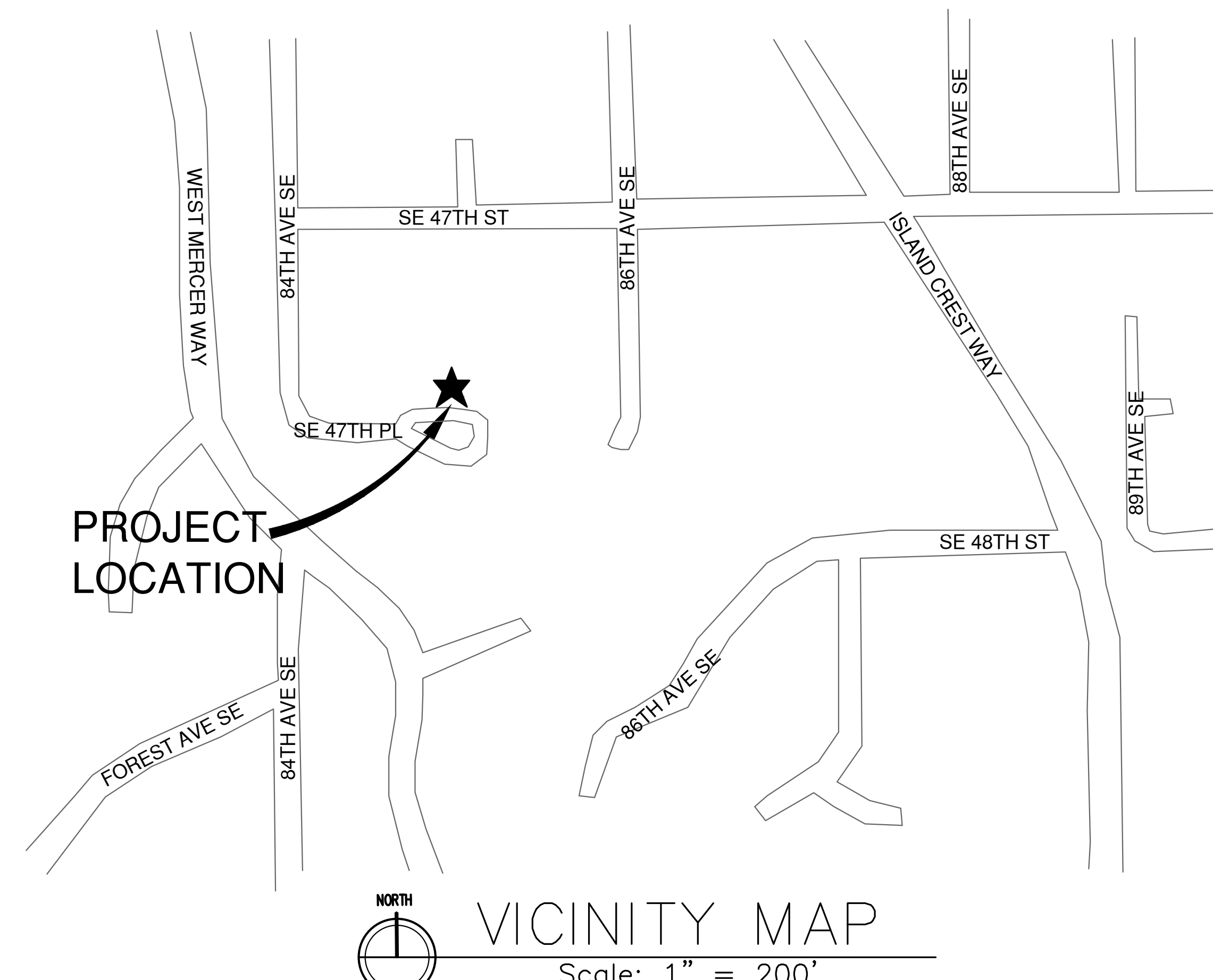
FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 5-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

**GENERAL DRAINAGE NOTES**

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CITY OF MERCER ISLAND STANDARD SPECIFICATIONS AND WSDOT/APWA STANDARD SPECIFICATIONS, LATEST EDITION AND THE REQUIREMENTS OF THE DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON.
- PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL SCHEDULE AND ATTEND A PRE-CONSTRUCTION CONFERENCE WITH CITY OF MERCER ISLAND CONSTRUCTION INSPECTION PERSONNEL.
- ALL STORM DRAINAGE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE APPROVED PLANS. ANY DEVIATION FROM THESE PLANS WILL REQUIRE APPROVAL FROM THE OWNER, ENGINEER AND APPROPRIATE PUBLIC AGENCIES.
- IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN STREET USE AND ANY OTHER RELATED PERMITS PRIOR TO ANY CONSTRUCTION ACTIVITY.
- ALL STORM DRAIN PIPE MAY BE CONSTRUCTED OF ONE OF THE FOLLOWING MATERIALS UNLESS OTHERWISE SPECIFIED IN THE PLANS. ALL PIPE JOINTS MUST BE GASKETED WATERTIGHT AND MUST BE OF THE SAME MATERIAL AS THE PIPE. ALL PIPE SHALL HAVE A MINIMUM COVER AS SPECIFIED AND SHALL BE ADEQUATELY PROTECTED DURING CONSTRUCTION (REFER TO THE MANUFACTURE'S RECOMMENDATIONS FOR MINIMUM COVER FOR HEAVY EQUIPMENT LOADINGS). THE CITY OF MERCER ISLAND PUBLIC WORKS DEPARTMENT SHALL EXERCISE THE OPTION TO ACCEPT OR REJECT ALL DAMAGED OR NON-COMPLIANT CONSTRUCTION MATERIAL. THE CONTRACTOR/DEVELOPER SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH REJECTED OR SUBSTITUTED CONSTRUCTION MATERIAL.
- PIPE SHALL BE AS FOLLOWS: PVC - FOUR (4) INCH THROUGH EIGHTEEN (18) INCH DIAMETER PIPE, WITH TWENTY FOUR (24) INCH TO THIRTY SIX (36) INCH OF COVER SHALL BE IN ACCORDANCE WITH ASTM D3034 SDR 21. FOUR (4) INCH THROUGH EIGHTEEN (18) INCH DIAMETER PIPE, WITH ASTM D3034 SDR 35 SHALL HAVE THIRTY SIX (36) INCHES MINIMUM COVER. ALL JOINTS SHALL BE PUSH-ON WITH RUBBER GASKETS. PVC STORM PIPE REQUIRES SAND COLLARS MEETING ASTM D-3034-78 SDR 35 SPECIFICATIONS (I.E. CATCH BASIN CONNECTION) OR KOR-N-SEAL BOOTS.
- ALL PIPE BEDDING SHALL BE APWA TYPE "F" FOR FLEXIBLE PIPE (I.E. PVC, SMP OR ADS). BEDDING MATERIAL SHALL BE 5/8 INCH MINUS CRUSHED ROCK ONLY.
- ALL TRENCH BACKFILL IN AREAS OF FUTURE PAVEMENT OR STRUCTURAL LOADING SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY PER ASTM D 1557-70 (MODIFIED PROCTOR). ALL OTHER AREAS SHALL BE COMPACTED TO 90 PERCENT MINIMUM).
- CONSTRUCTION OF DEWATERING (GROUNDWATER INTERCEPTION) SYSTEMS SHALL BE IN ACCORDANCE WITH THE APWA STANDARD SPECIFICATIONS, SECTION 61-3.02.
- THE CONTRACTOR SHALL KEEP OFF-SITE STREETS CLEAN AT ALL TIMES BY SWEEPING. WASHING THESE STREETS WILL NOT BE ALLOWED WITHOUT PRIOR CITY OF MERCER ISLAND APPROVAL.
- ALL STORMWATER FACILITIES WILL BE INSTALLED AND IN OPERATION PRIOR TO OR IN CONJUNCTION WITH ALL CONSTRUCTION ACTIVITY UNLESS THAT ACTIVITY EXCEEDS THE CAPACITY AND INTENT OF THE EROSION/SEDIMENTATION CONTROL FACILITY OR UNLESS OTHERWISE APPROVED BY THE CITY.
- RELAY EXISTING SERVICE DRAINS AND SIDE SEWERS TO CLEAR OVER OR UNDER THE NEW UTILITY AS APPROVED BY THE INSPECTOR.

**EROSION CONTROL/CONSTRUCTION SEQUENCE**

- ARRANGE AND ATTEND PRE-CONSTRUCTION MEETING WITH BETWEEN OWNER OR OWNER'S REPRESENTATIVE AND CITY OF MERCER ISLAND SITE INSPECTOR.
- CONTRACTOR'S SURVEYOR TO ESTABLISH AND STAKE OUT CONTROL POINTS FOR WORK.
- INSTALL STRAW WATTLE BARRIERS AND GRATE INLET PROTECTION.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE (IF REQUIRED).
- CLEAR AND GRUB AREA.
- CONSTRUCT OR INSTALL SOIL STABILIZATION MEASURES.
- COORDINATE REMOVAL AND CAPPING OF EXISTING UTILITY LINES WITH APPROPRIATE PURVEYOR.
- GRADE SITE PER PLAN. STABILIZE GRADED AREAS WITH TEMPORARY EROSION CONTROL MEASURES AS REQUIRED.
- CONSTRUCT SITE IMPROVEMENTS.
- HYDROSEED REMAINING DISTURBED AREAS.
- RETURN SILTATION CONTROL AREAS TO ORIGINAL GROUND CONDITIONS.
- REMOVE REMAINING TEMPORARY EROSION/SEDIMENTATION CONTROL ONLY AFTER SITE HAS BEEN STABILIZED AND CITY OF MERCER ISLAND SITE INSPECTOR HAS APPROVED THE REMOVAL.



**VICINITY MAP**  
Scale: 1" = 200'

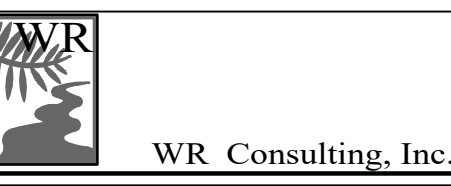
**CONSTRUCTION SEDIMENT CONTROL (CSC) NOTES**

- APPROVAL OF THIS CONSTRUCTION SEDIMENT CONTROL PLAN (CSC) DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.)
- THE IMPLEMENTATION OF THESE CSC AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THESE CSC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.
- THE CSC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS.
- THE CSC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE CSC FACILITIES SHALL BE UPGRADED (E.G. ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS AND AS THE CITY REQUIRES.
- THE CSC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING AND OPERATION.
- ANY AREA STRIPPED OF VEGETATION, INCLUDING ROADWAY EMBANKMENTS, WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF TWO (2) DAYS, SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED CSC METHODS (E.G. SEEDING, MULCHING, NETTING, EROSION BLANKETS, ETC.) GRASS SEEDING ALONE WILL BE ACCEPTABLE ONLY DURING THE MONTHS OF APRIL THROUGH OCTOBER INCLUSIVE.
- ANY AREA NEEDING CSC MEASURE, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE ADDRESSED WITHIN FIFTEEN (15) DAYS.
- THE CSC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 48 HOURS FOLLOWING A STORM EVENT AND AS THE CITY DEEMS NECESSARY.
- AT NO TIME SHALL MORE THAN ONE (1) FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
- STABILIZED CONSTRUCTION ENTRANCES AND WASH PADS PER CITY STANDARDS, SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- DURING THE TIME PERIOD OF NOVEMBER 1ST THROUGH MARCH 31ST, ALL PROJECT DISTURBED AREAS THAT ARE TO BE LEFT UNWORKED FOR MORE THAN TWO (2) DAYS SHALL BE COVERED BY ONE OF THE FOLLOWING COVER MEASURES: MULCH, SODDING OR PLASTIC COVERING.
- WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST GERMINATING GRASSES SHALL BE APPLIED AT AN APPROPRIATE (E.G. ANNUAL OR PERENNIAL RYE APPLIED AT APPROXIMATELY 80 POUNDS PER ACRE).
- WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF THREE (3) INCHES OR 3,000 LBS/ACRE.
- AS CONSTRUCTION PROGRESSES AND UNEXPECTED SEASONAL CONDITIONS DICTATE, AND AS THE CITY REQUIRES, THE PERMITTEE SHOULD ANTICIPATE THAT MORE CSC MEASURES WILL BE NECESSARY TO PROTECT ADJACENT PROPERTIES AND ENSURE MINIMUM WATER QUALITY FOR SITE RUNOFF. IT SHALL BE THE RESPONSIBILITY OF THE PERMITTEE TO ADDRESS DEFICIENT CSC CONDITIONS AND PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE MINIMUM REQUIREMENTS OUTLINED ON THE APPROVED PLANS.
- FILTER FABRIC FENCE SHALL BE USED WHERE NOTED ON THE PLANS OR AS DIRECTED BY THE CITY.

CALL 48 HOURS BEFORE YOU DIG  
1-800-424-5555  
OR CALL 8-1-1



4212 W. Mercer Way  
Mercer Island, WA 98040  
t. (206) 232-9147  
f. (206) 275-0312



Civil Engineer:  
WR Consulting, Inc.  
3611 45th Ave W.  
Seattle, WA 98199  
P: 206.285.1593



**STEINBORN RESIDENCE**  
New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040

**PROJECT ADDRESS:**  
8435 SE 47th Place, Mercer Island, WA 98040

**LEGAL DESCRIPTION:**  
LOT 4, HILL HIGH ESTATES AS RECORDED IN VOLUME 68 OF PLATS, PAGE 28, RECORDS OF KING COUNTY, WASHINGTON.  
SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

**PARCEL NUMBER:**  
331750-0040

**LOT AREA:**  
19,361 SF

Date:  
**2/17/2022 Permit Set**  
**3/14/2022 Permit Set**  
**7/22/2022 Permit Rev. Set**  
**11/18/2022 Permit Rev. Set**

Project No.: 2205-225  
Scale: As Noted  
Sheet: 1 of 5

GENERAL NOTES  
**C1**

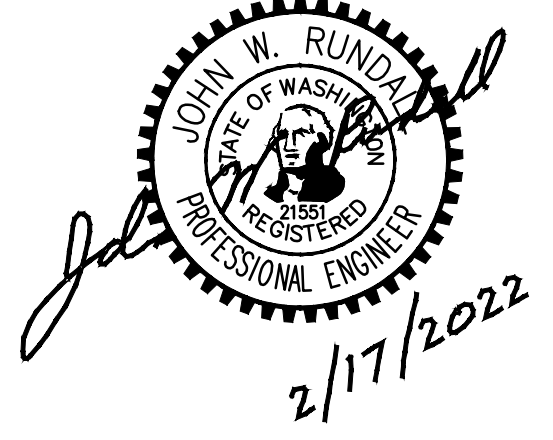
CALL 48 HOURS BEFORE YOU DIG  
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**ECTYPOS**  
ARCHITECTURE

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**TREE PROTECTION NOTES:**

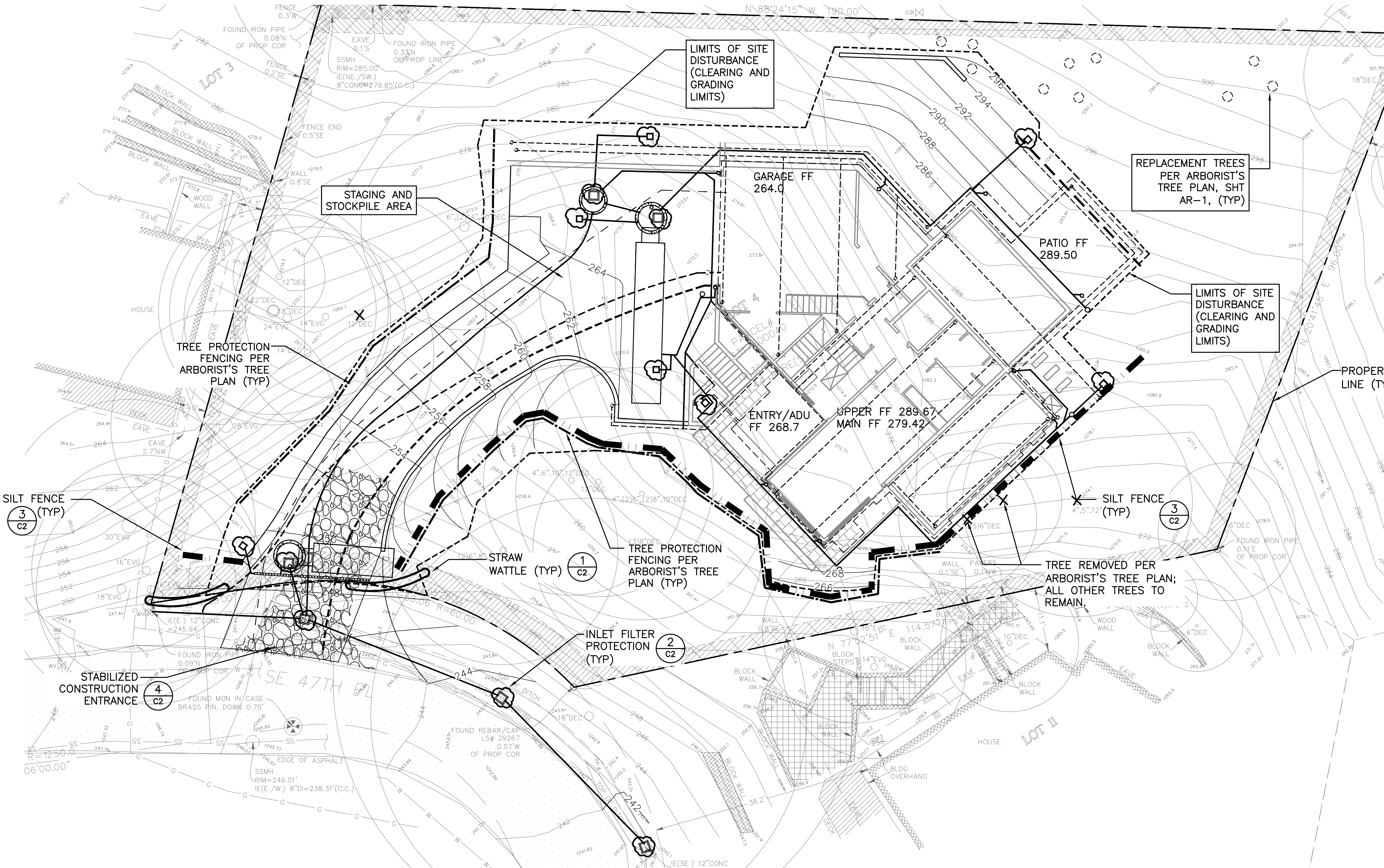
1. ALL TREES NOT INDICATED FOR REMOVAL SHALL REMAIN UNDISTURBED.
2. INSTALL ADDITIONAL TREE PROTECTION FENCING AS NEEDED TO PREVENT DAMAGE TO EXISTING TREES.
3. EXCESS EXCAVATED MATERIALS SHALL NOT BE DISPOSED OF ON-SITE OR PLACED ON ANY ROOT ZONE OF EXISTING TREES TO REMAIN.
4. SPOILS, EXCESS MATERIALS AND CONSTRUCTION DEBRIS SHALL BE REMOVED FROM THE HILLSIDE AND DISPOSED OF IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS.
5. ALL INFORMATION ABOUT TREES, PLANTINGS, MAINTENANCE, ETC. ARE IN ACCORDANCE WITH THE ARBORIST'S TREE PLAN (AR-1) AND CITY OF MERCER ISLAND REQUIREMENTS. THEY ARE SHOWN ON THIS SHEET IN RESPONSE TO CITY OF MERCER ISLAND REVIEW REQUIREMENTS. THE ENGINEERING SEAL AFFIXED TO THIS PLAN DOES NOT ADDRESS ANY ASPECT OF TREES OR PLANTINGS FOR THIS PROJECT.
6. REPLACEMENT TREES SHALL BE MAINTAINED FOR A MINIMUM OF 5 YEARS FOR PLANT ESTABLISHMENT.

**LEGEND**

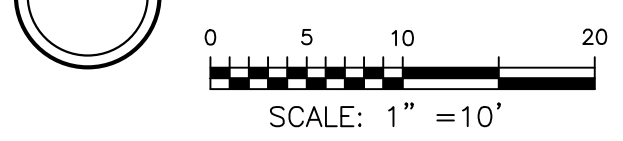
- INLET PROTECTION
- REMOVE TREE
- SILT FENCE
- STRAW WATTLE/COIR LOG
- STABILIZED CONSTRUCTION ENTRANCE
- TREE PROTECTION FENCE

**TESC SEASONAL WAIVER NOTES:**

1. DURING CONSTRUCTION OF DETENTION SYSTEM OR OTHER SITE WORK, A STORMWATER MANAGEMENT FACILITY INCLUDING STORAGE (EG. BAKER TANKS), PUMPS, TREATMENT COMPONENTS AND SETTLING MEASURES SHALL BE IN PLACE AS NEEDED TO CONTROL SEDIMENT WHEN DISCHARGING STORMWATER TO THE STORM DRAIN SYSTEM.
2. THE STORMWATER MANAGEMENT FACILITY SHALL BE MAINTAINED AND OPERATED AS REQUIRED TO PREVENT THE DISCHARGE OF SEDIMENT LADEN SOILS FROM THE SITE.

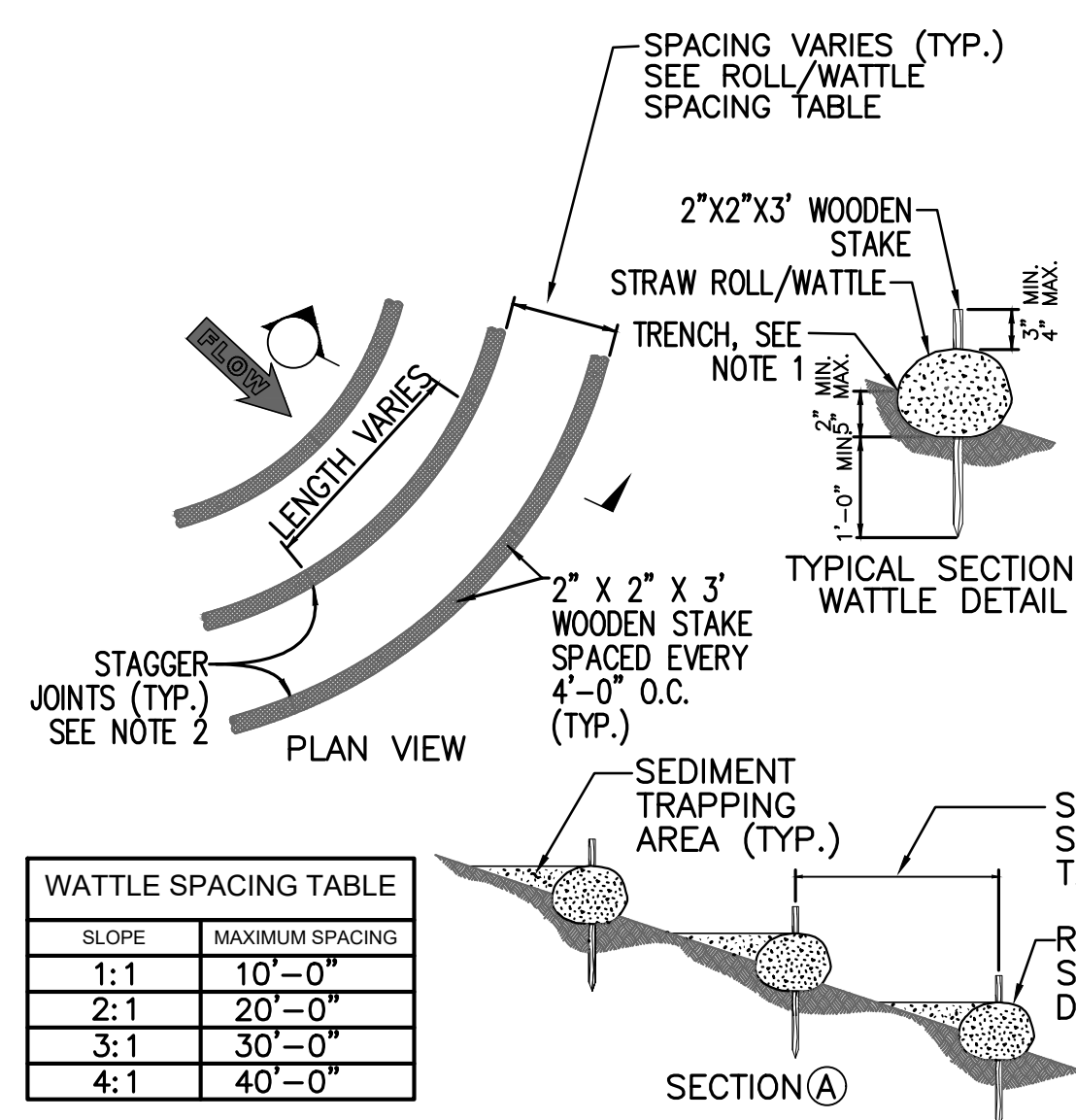


**CONSTRUCTION SEDIMENT CONTROL (CSC) PLAN**

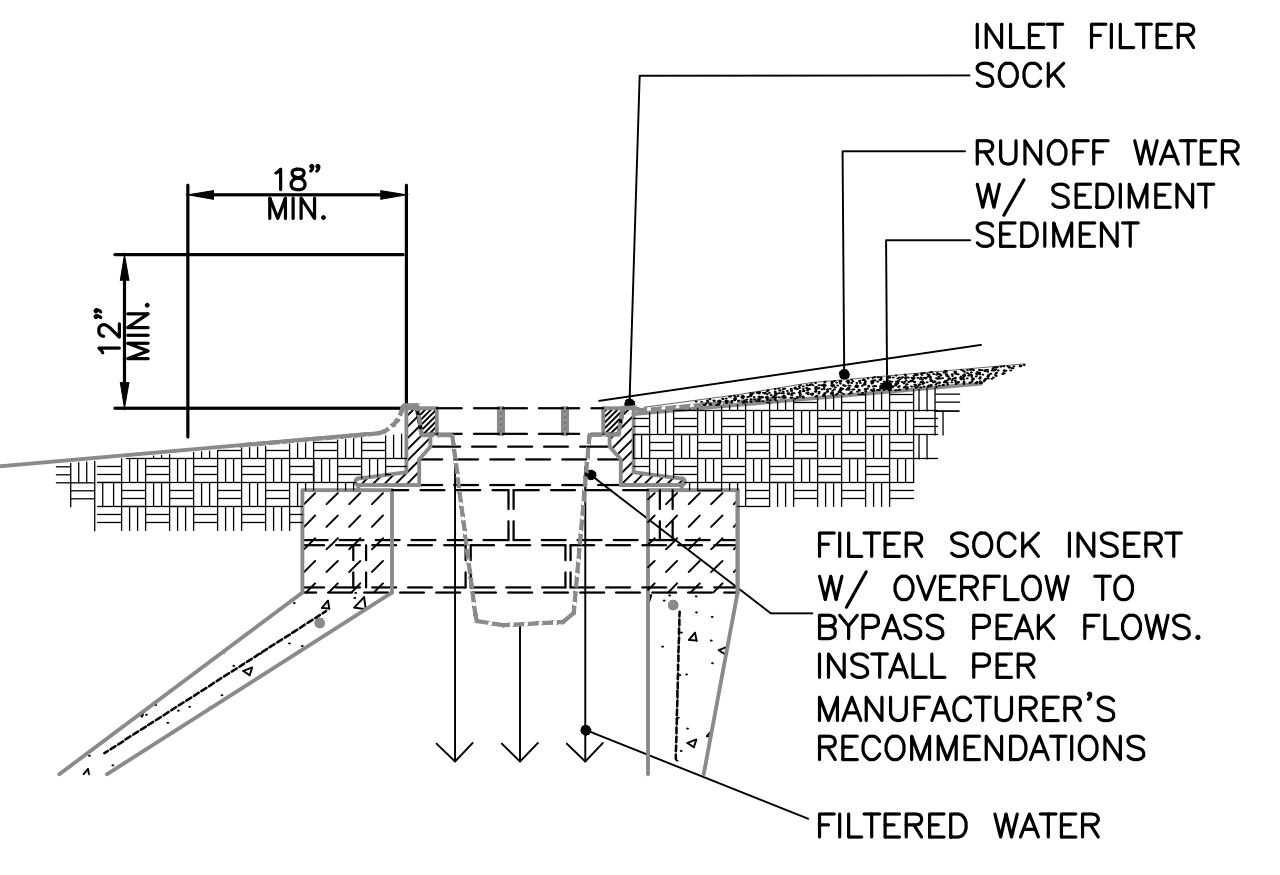


**WATTLE DETAIL NOTES**

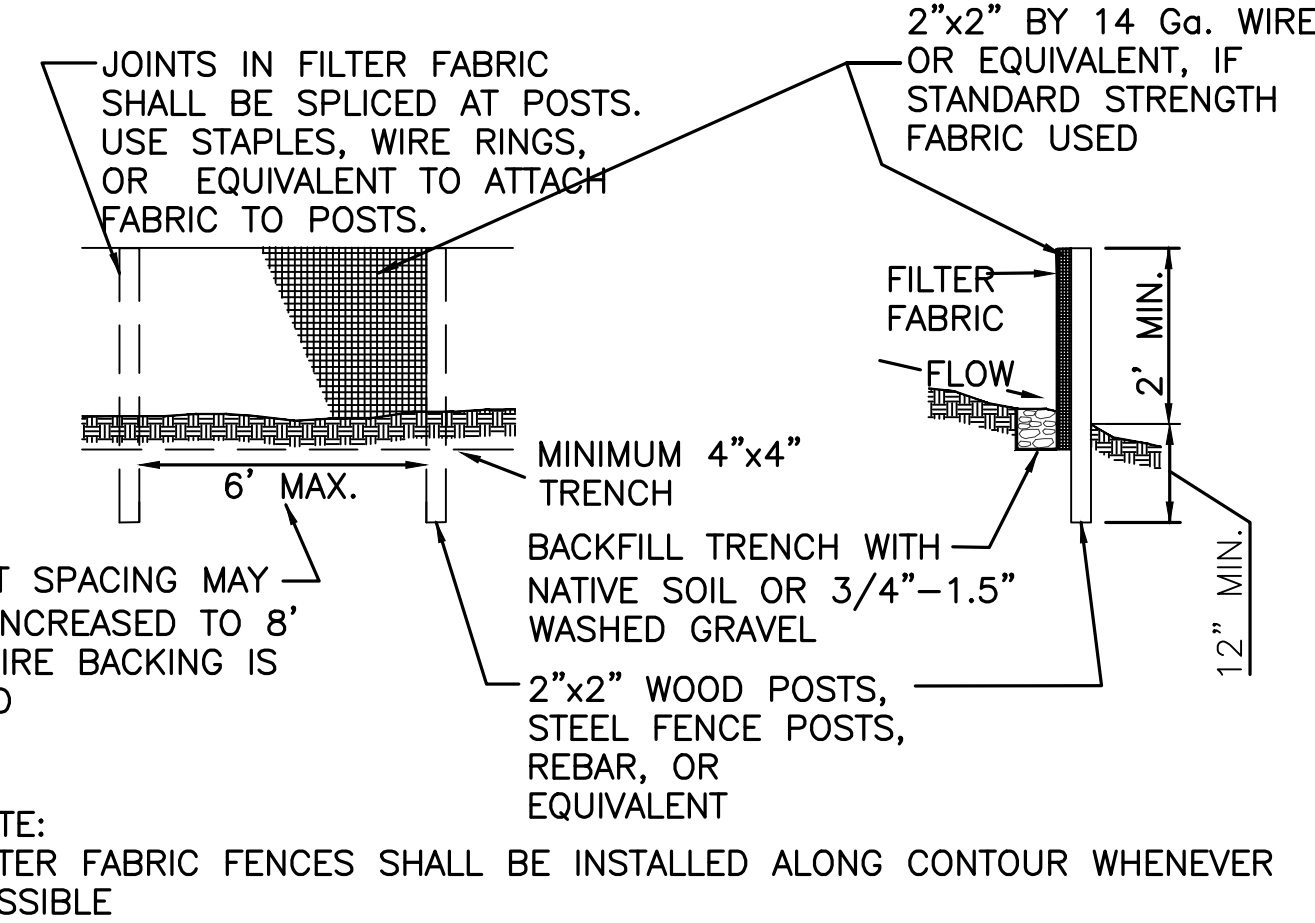
1. Install Wattles along contours. Installation shall be in accordance with Standard Specification 8-01.3(10).
2. Securely knot each end of Wattle. Abut adjacent Wattles tightly, end to end, without overlapping the ends.
3. Pilot holes may be driven through the Wattles and into the soil when soil conditions require.
4. Live stakes may be used for Permanent installation and shall be in accordance with Standard Specification 9-14.6.
5. Wattles shall be inspected regularly, and immediately after a rainfall produces runoff, to ensure they remain thoroughly entrenched and in contact with the soil.



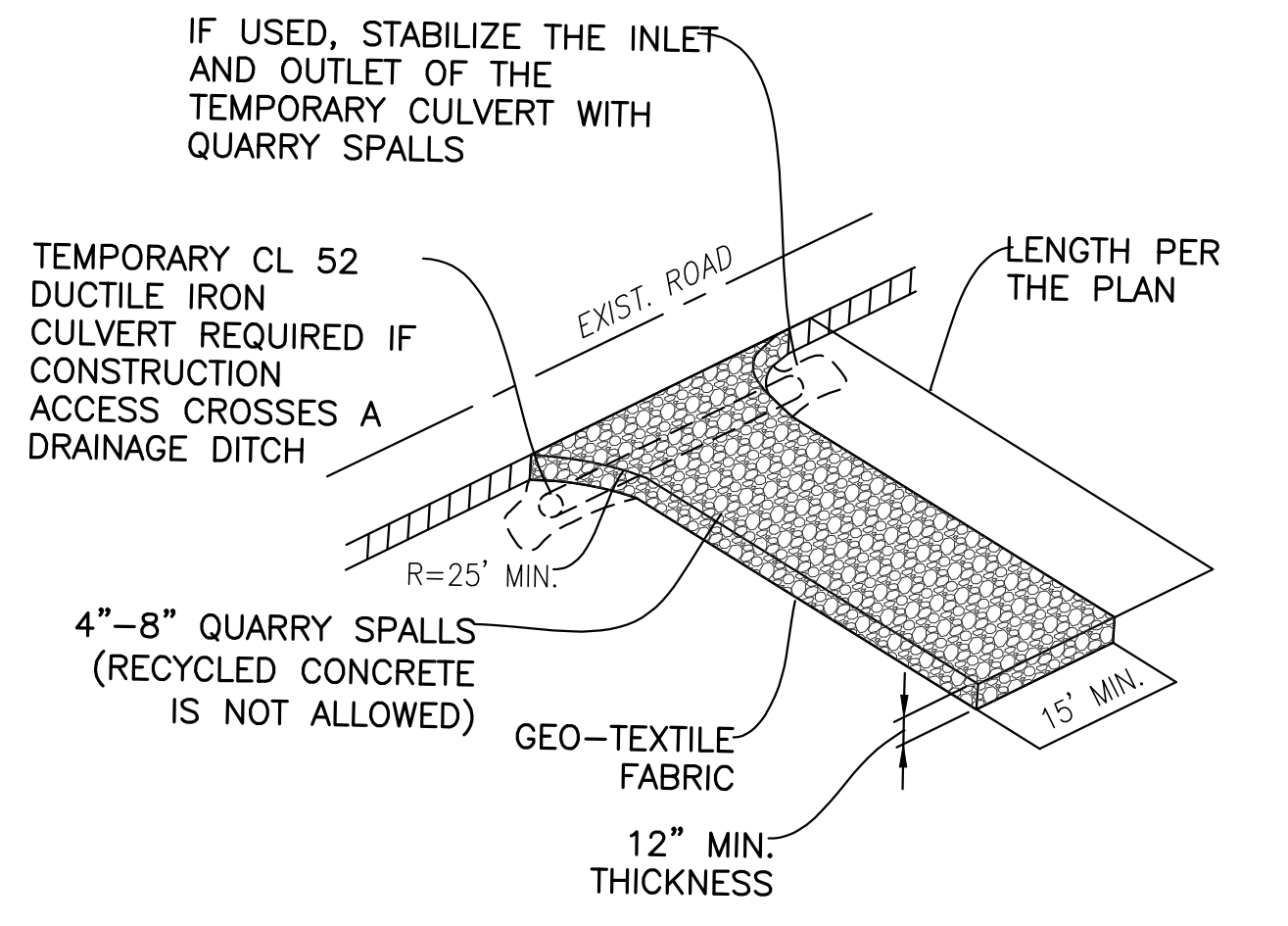
WATTLE SPACING TABLE	
SLOPE	MAXIMUM SPACING
1:1	10'-0"
2:1	20'-0"
3:1	30'-0"
4:1	40'-0"



**2** INLET PROTECTION DETAIL  
SCALE: N.T.S.



**3** SILT FENCE DETAIL  
SCALE: N.T.S.



**4** STABILIZED CONSTRUCTION ACCESS  
SCALE: N.T.S.

**STEINBORN RESIDENCE**

New Residence  
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Mercer Island, WA 98040

Date:  
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Project No.: 2205-225  
Scale: 1" = 10'  
Sheet: 2 of 5

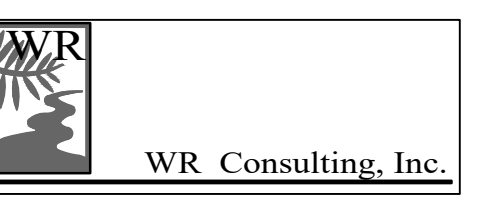
CSC PLAN AND DETAILS

**C2**

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**ECTYPOS ARCHITECTURE**

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**DETENTION TANK CONSTRUCTION SEQUENCING NOTES:**

1. DETENTION TANK AND ASSOCIATED STRUCTURES SHALL BE INSTALLED ONLY AFTER SOIL NAILING STABILIZATION IMPROVEMENTS ARE COMPLETE.
2. EXCAVATION FOR DETENTION TANKS AND OTHER UTILITIES SHALL BE A SINGLE VERTICAL WALL TRENCH WITH TEMPORARY SHORING AND SAFETY SYSTEMS AS REQUIRED.
3. EXCAVATION FOR DETENTION FACILITIES SHALL BE REVIEWED AND APPROVED BY CITY OF MI INSPECTOR PRIOR TO FURTHER CONSTRUCTION.
4. THE DETENTION TANKS SHALL BE LOWERED INTO PLACE AND BACKFILLED AS INDICATED. EXCESS SPOILS SHALL BE REMOVED FROM THE SITE IMMEDIATELY.

**CONSTRUCTION NOTES:**

1. FURNISH AND INSTALL ALL TRANSITION COUPLINGS (FERNCO REDUCERS AND COUPLINGS) AS NEEDED FOR CONNECTIONS TO BLDG UTILITIES
2. INVERT ELEVATIONS ARE APPROXIMATE. ADJUST INVERT ELEVATIONS AS NEEDED TO COORDINATE WITH BLDG UTILITIES AND EXISTING GRADES.
3. SEE ARCHITECTURE PLANS FOR BUILDING AND SITE FURNISHINGS DETAILS.
5. FOUNDATION DRAINS FOR THE STRUCTURES ARE SHOWN ALONG THE BUILDING PERIMETER OR WALL FOR CLARITY. ADJUST LOCATION TO INTERIOR OF WALL TO DRAIN GROUNDWATER FROM RETAINED SOIL AT THE WALLS AND RELIEVE HYDROSTATIC PRESSURE AGAINST THE STRUCTURE AS INDICATED ON SHORING AND STRUCTURAL PLANS.

**STEINBORN RESIDENCE**

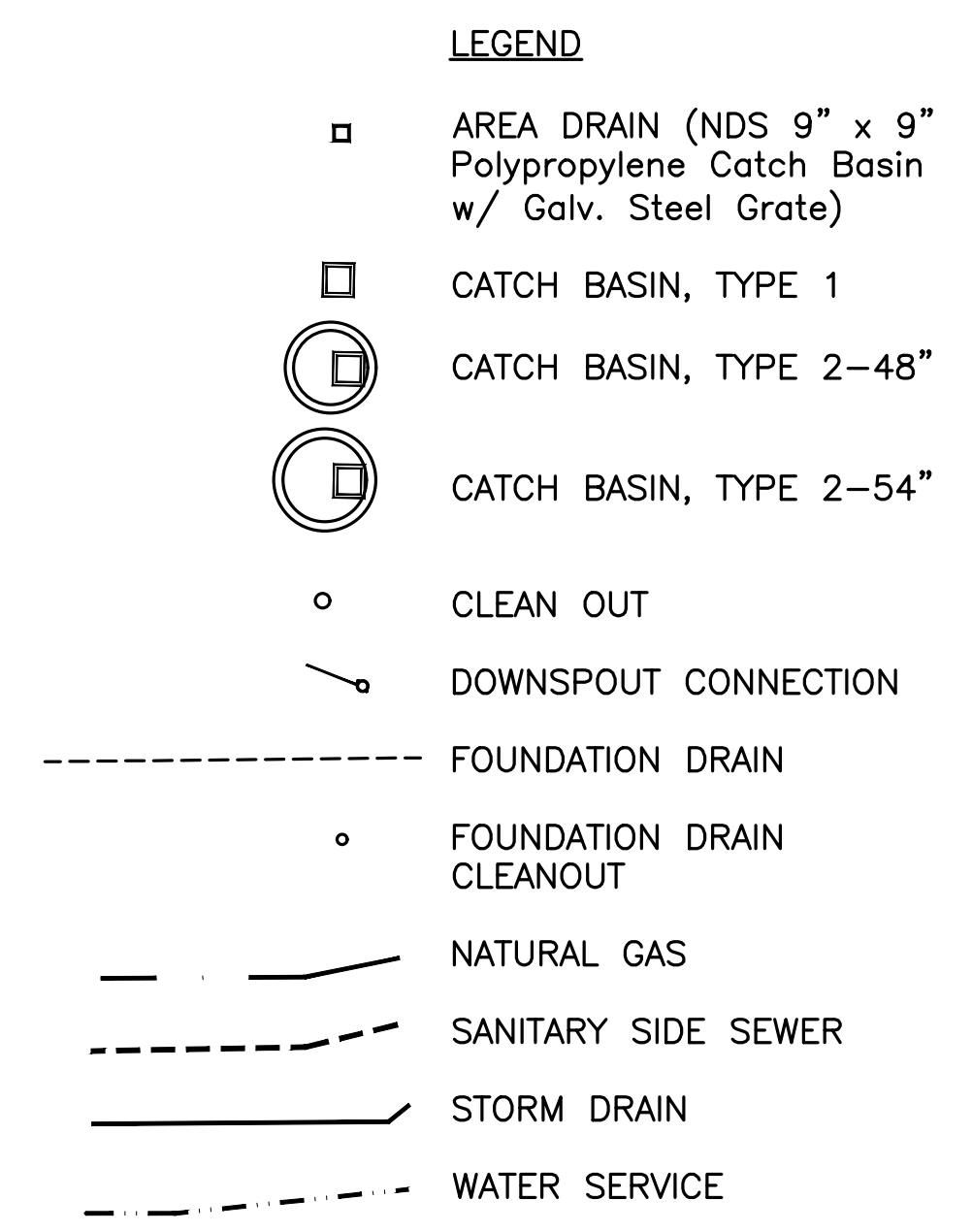
New Residence  
8435 SE 47th PL.  
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2/17/2022 Permit Set  
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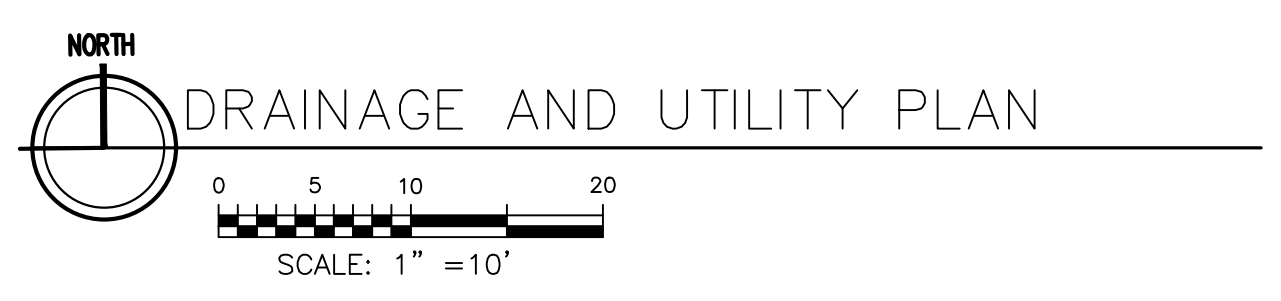
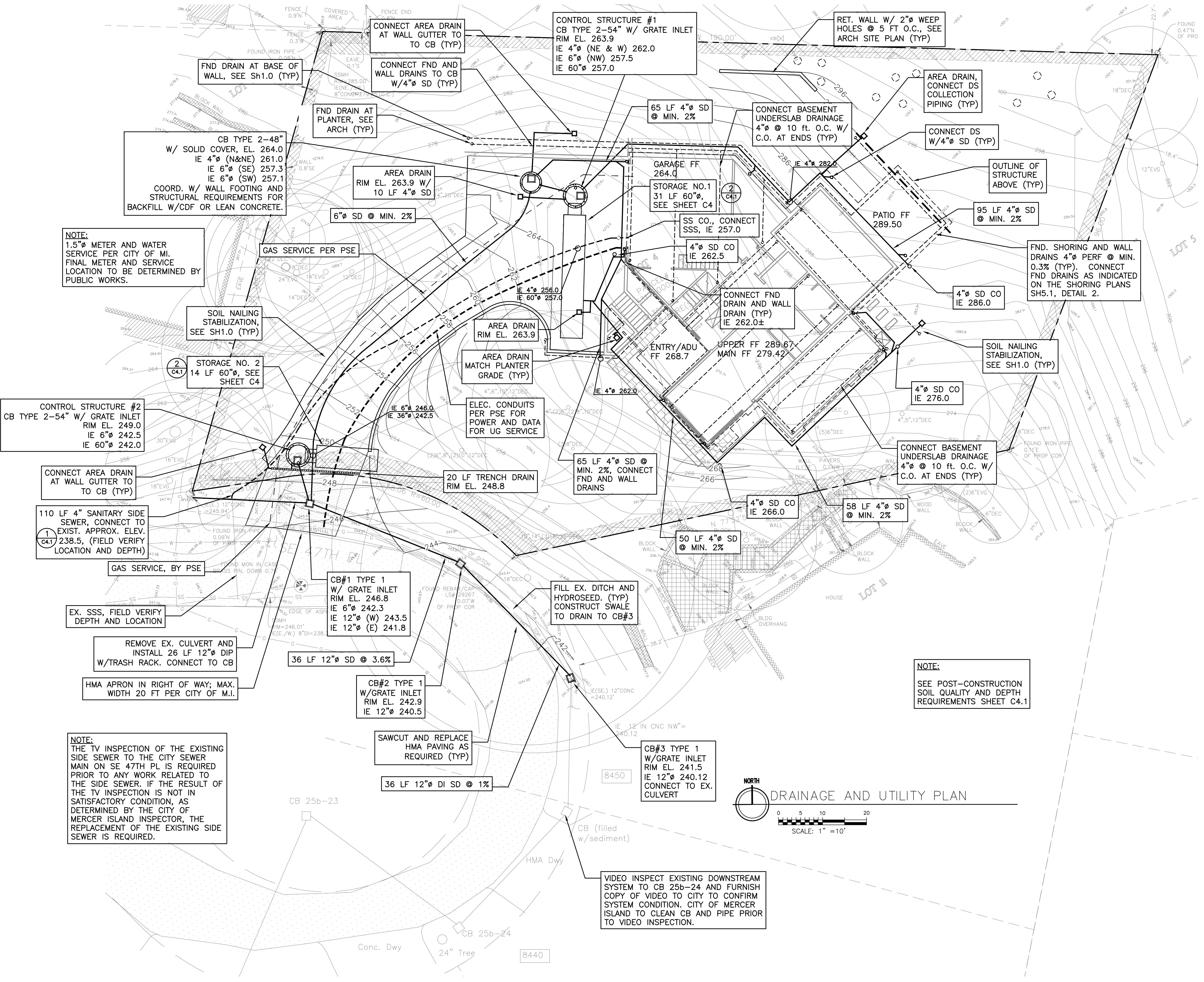
Project No.: 2205-225  
Scale: 1" = 10'  
Sheet: 3 of 5

**DRAINAGE AND UTILITY PLAN**

**C3**



NOTE: SEE ADDITIONAL DETENTION PIPE DETAILS SHEET C4

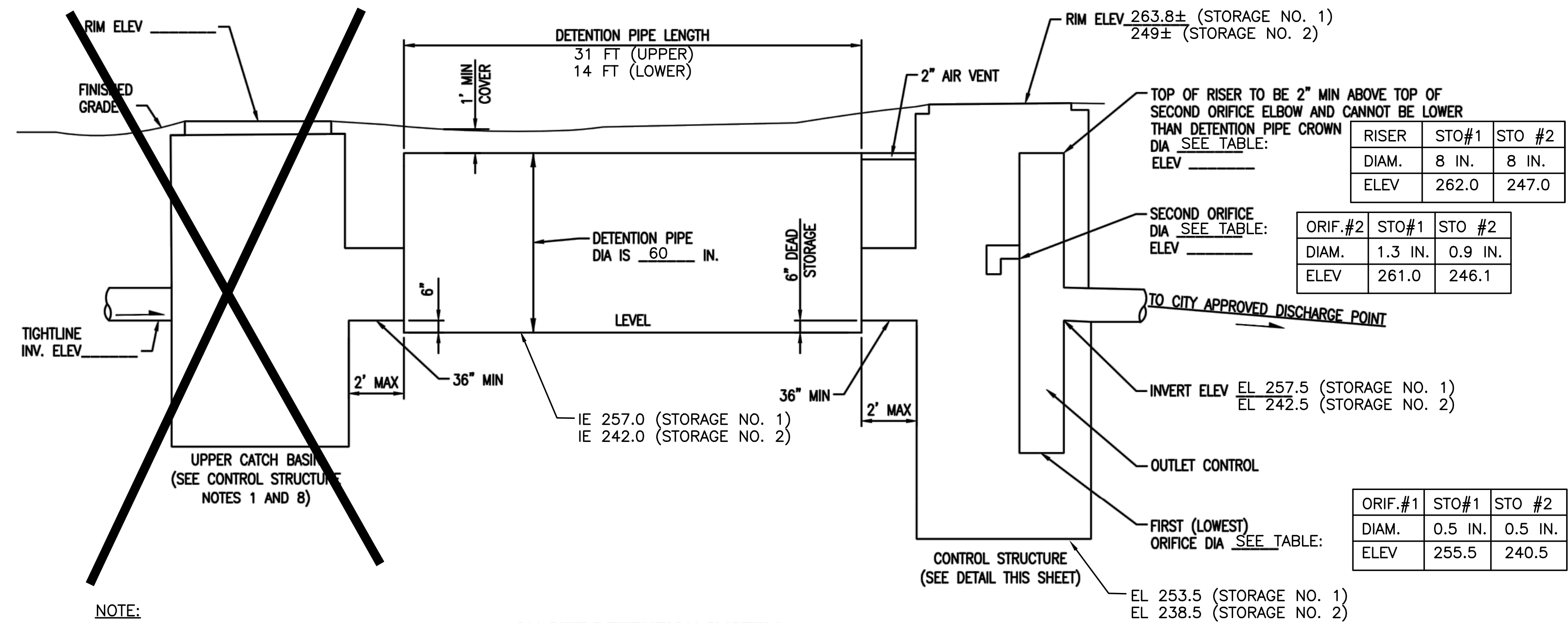
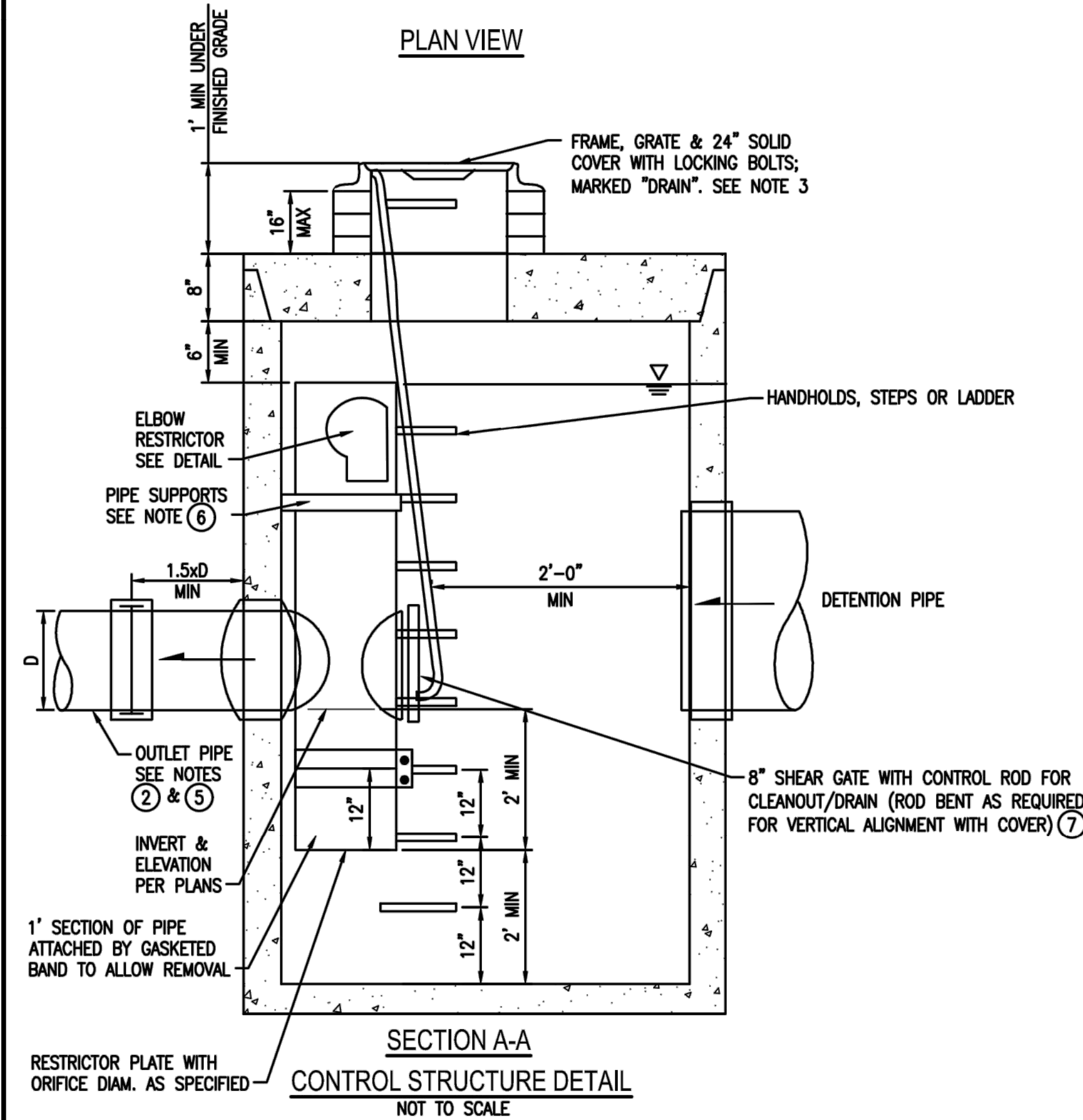
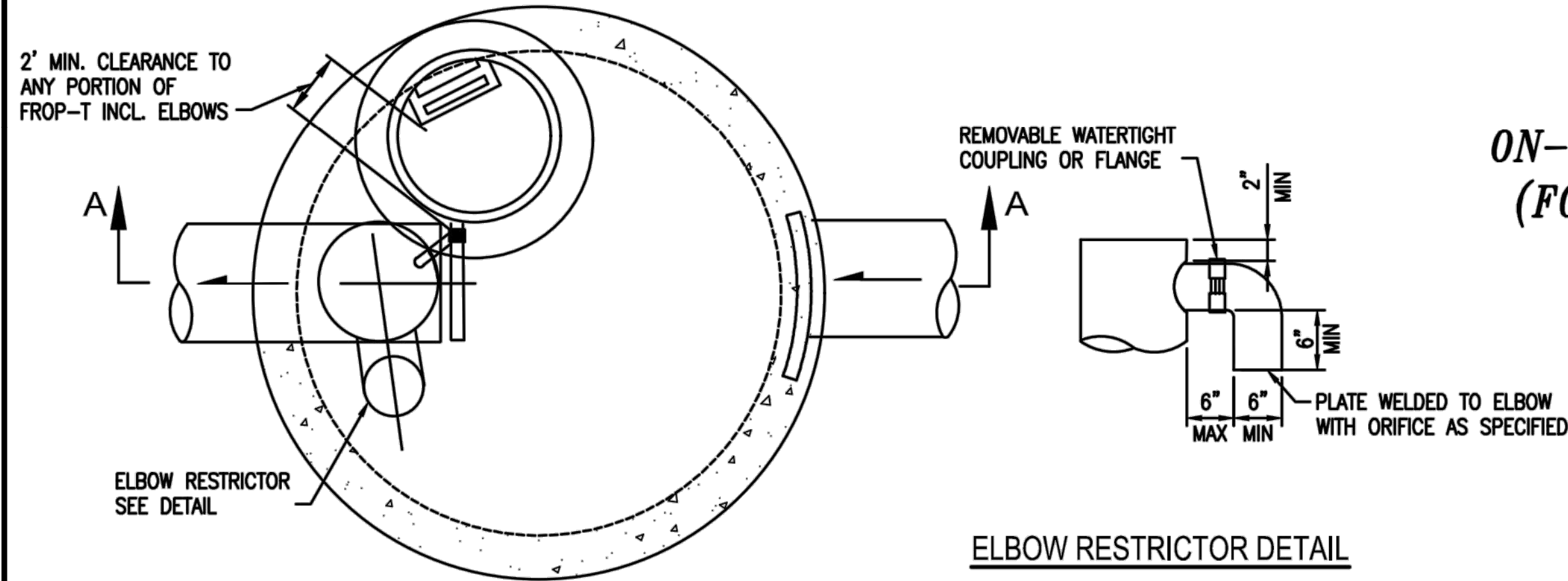


**ATTACHMENT 1**  
**CITY OF MERCER ISLAND**  
**ON-SITE DETENTION SYSTEM WORKSHEET**  
**(FOR NEW PLUS REPLACED IMPERVIOUS**  
**AREA OF 9,500 SF OR LESS)**

**DETENTION TANK NOTES:**

1. THE DETENTION PIPE MATERIAL SHALL BE WATERTIGHT AS OPPOSED TO "SOIL TIGHT".
2. THE DETENTION TANKS SHALL BE ADS N-12 WT (WATERTIGHT) IB PIPE WITH JOINTS IN ACCORDANCE WITH ASTM D3212 LAB TEST AND ASTM F1417 WATERTIGHT FIELD TEST.
3. THE PIPE MATERIAL SELECTED SHALL CONFORM TO THE TESTING REQUIREMENTS IN SECTION 7-17.3(2)F OF THE 2020 WSDOT STANDARD SPECIFICATIONS EXCEPT THE DETENTION PIPE SHALL BE TESTED IN ITS ENTIRETY RATHER THAN ONE JOINT AT A TIME.

OWNER: Dan and Susan Steinborn ADDRESS: 8435 SE 47th PLACE PREPARED BY: JOHN W. RUNDALL, P.E.  
 PERMIT #: \_\_\_\_\_ MERCER ISLAND, WA PHONE: 206-850-1686  
 DATE: JUNE 10, 2022  
 NEW PLUS REPLACED IMPERVIOUS SURFACE AREA (SF): 5,795 SF DETENTION PIPE DIA (INCH): 60" Ø DETENTION PIPE LENGTH (FT): 45 ORIFICE #1 DIA SEE TABLES BELOW:  
 SOIL TYPE: TYPE D PIPE MATERIAL: ADS N-12 WT IB PIPE W/WATERTIGHT JOINTS ORIFICE #2 DIA



**NOTE:**

1. UPPER CATCH BASIN NOT REQUIRED FOR EITHER STORAGE TANK PER CONTROL STRUCTURE NOTES, NOTE #8.

**ON-SITE DETENTION SYSTEM**  
NOT TO SCALE (ENGINEER TO FILL IN BLANKS)

**CONTROL STRUCTURE NOTES:**

1. USE A MINIMUM OF A 54 IN. DIAM. TYPE 2 CATCH BASIN. THE ACTUAL SIZE IS DEPENDENT ON CONNECTING PIPE MATERIAL AND DIAMETER.
2. OUTLET PIPE: MIN. 6 INCH.
3. METAL PARTS: CORROSION RESISTANT. NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1.
4. FRAME AND LADDER OR STEPS OFFSET SO:
  - A. CLEANOUT GATE IS VISIBLE FROM TOP;
  - B. CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE;
  - C. FRAME IS CLEAR OF CURB.
5. IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4 IN.

6. PROVIDE AT LEAST ONE 3 X 0.090 GAUGE SUPPORT BRACKET ANCHORED TO CONCRETE WALL WITH 5/8 IN. STAINLESS STEEL EXPANSION BOLTS OR EMBEDDED SUPPORTS 2 IN. INTO CATCH BASIN WALL (MAXIMUM 3'-0" VERTICAL SPACING).
7. THE SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26M AND ASTM B 275, DESIGNATION ZG32A; OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B. THE LIFT HANDLE SHALL BE MADE OF A SIMILAR METAL TO THE GATE (TO PREVENT GALVANIC CORROSION), IT MAY BE OF SOLID ROD OR HOLLOW TUBING, WITH ADJUSTABLE HOOK AS REQUIRED. A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE. THE MATING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT. ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.
8. THE UPPER CATCH BASIN IS REQUIRED IF THE LENGTH OF THE DETENTION PIPE IS GREATER THAN 50 FT.

**ON-SITE DETENTION SYSTEM NOTES:**

1. CALL DEVELOPMENT SERVICES (206-275-7605) 24 HOURS IN ADVANCE FOR A DETENTION SYSTEM INSPECTION BEFORE BACKFILLING AND FOR FINAL INSPECTIONS.
2. RESPONSIBILITY FOR OPERATION AND MAINTENANCE OF DRAINAGE SYSTEMS ON PRIVATE PROPERTY IS RESPONSIBILITY OF THE PROPERTY OWNER. MATERIAL ACCUMULATED IN THE STORAGE PIPE MUST BE REMOVED FROM CATCH BASINS TO ALLOW PROPER OPERATION. THE OUTLET CONTROL ORIFICE MUST BE KEPT OPEN AT ALL TIMES.
3. PIPE MATERIAL, JOINT, AND PROTECTIVE TREATMENT SHALL BE IN ACCORDANCE WITH SECTION 7.04 AND 9.05 OF THE WSDOT STANDARD SPECIFICATION FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, LATEST VERSION. SUCH MATERIALS INCLUDE THE FOLLOWING, LINED CORRUGATED POLYETHYLENE PIPE (LCPE), ALUMINIZED TYPE 2 CORRUGATED STEEL PIPE AND PIPE ARCH (MEETS AASHTO DESIGNATIONS M274 AND M36), CORRUGATED OR SPIRAL RIB ALUMINUM PIPE, OR REINFORCED CONCRETE PIPE. CORRUGATED STEEL PIPE IS NOT ALLOWED.
4. FOOTING DRAINS SHALL NOT BE CONNECTED TO THE DETENTION SYSTEM.

Date:  
2/17/2022 Permit Set  
3/14/2022 Permit Set  
7/22/2022 Permit Rev. Set  
11/18/2022 Permit Rev. Set

Project No.: 2205-225  
Scale: As Noted  
Sheet: 4 of 5

DETENTION  
TANK DETAILS

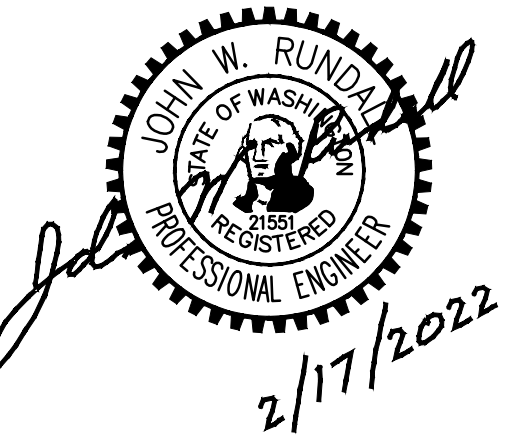
CALL 48 HOURS  
BEFORE YOU DIG  
1-800-424-5555  
OR CALL 8-1-1

**ECTYPOS**  
ARCHITECTURE

4212 W. Mercer Way  
Mercer Island, WA 98040  
t. (206) 232-9147  
f. (206) 275-0312



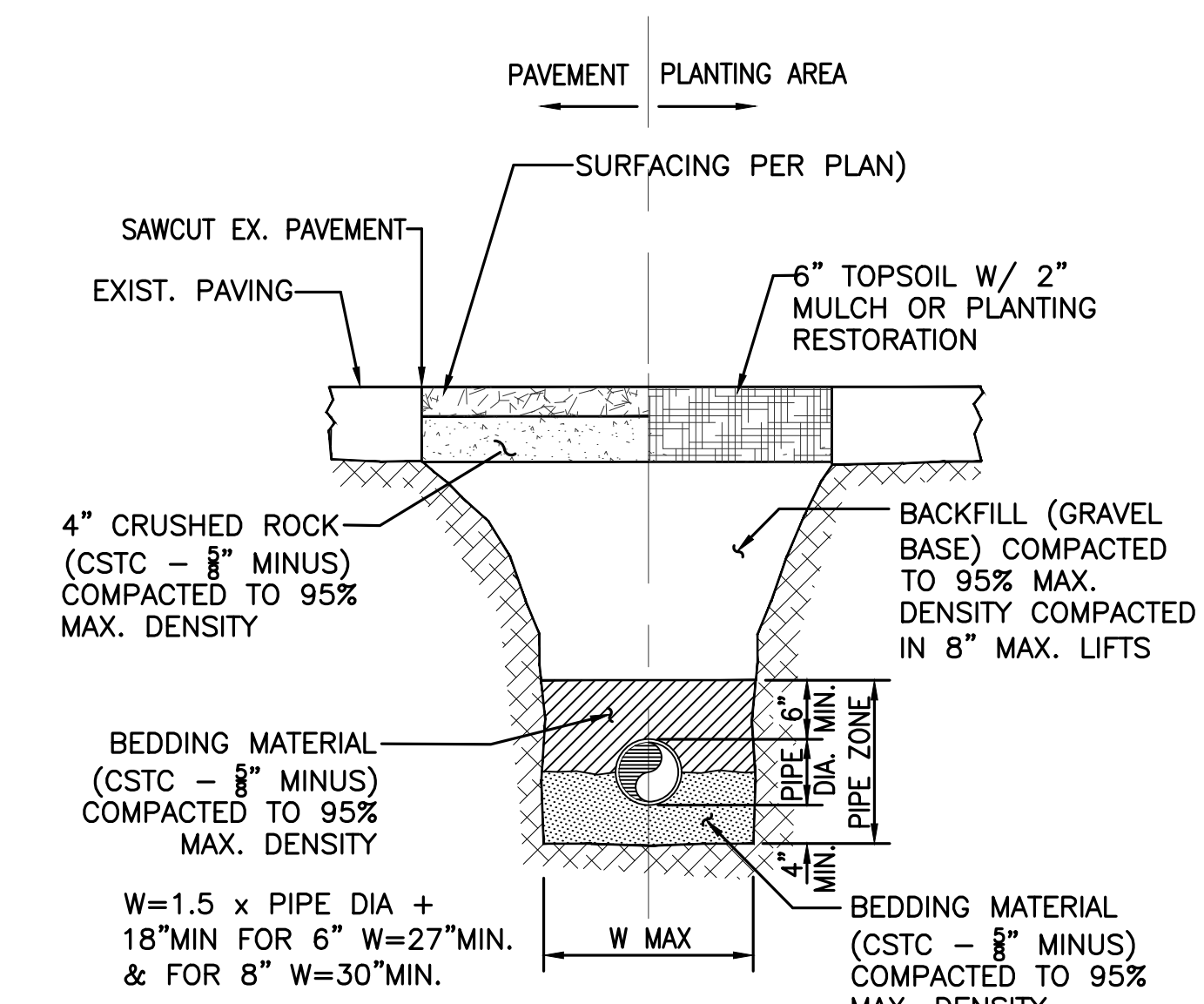
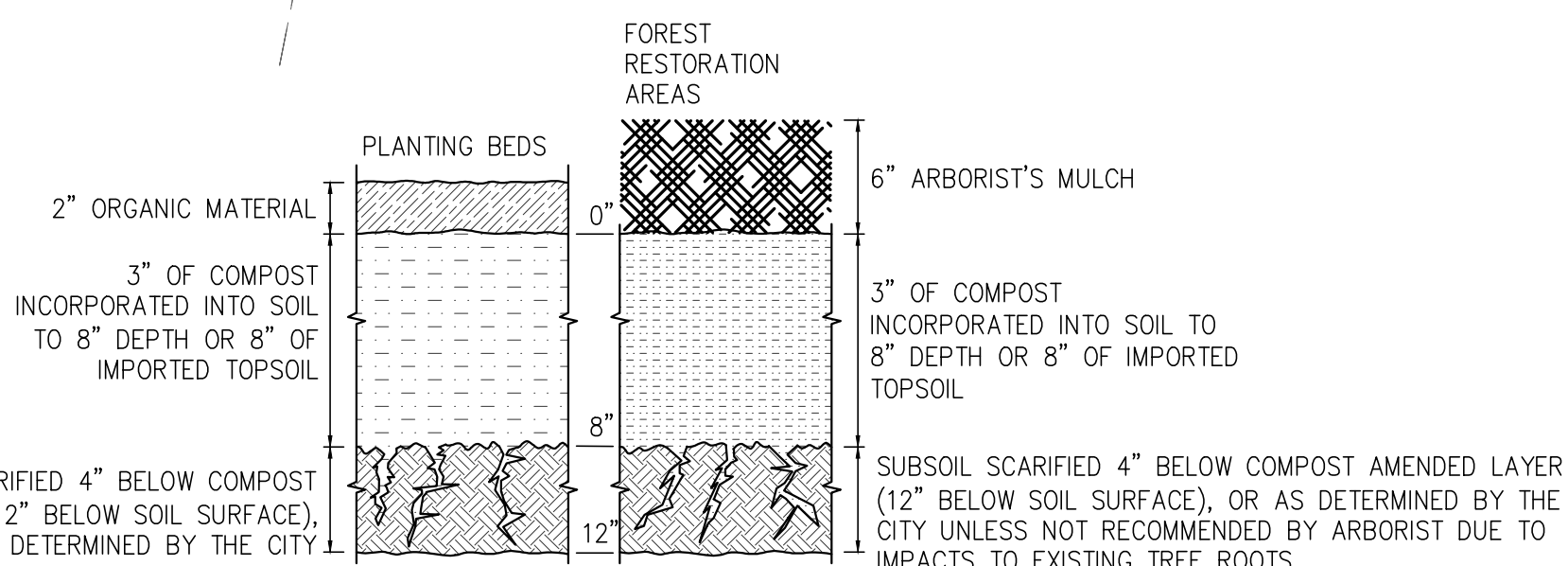
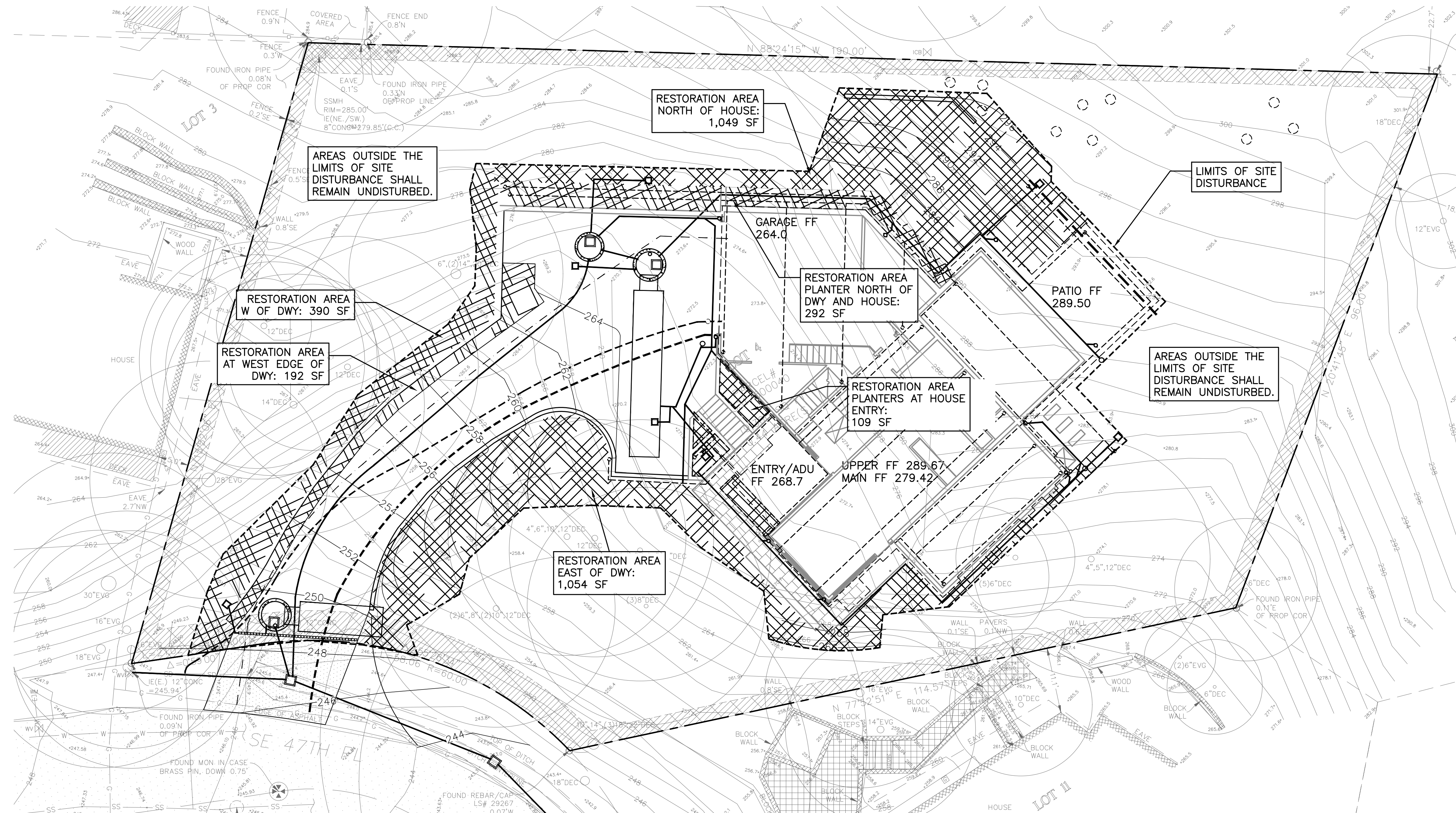
Civil Engineer:  
WR Consulting, Inc.  
3611 45th Ave W.  
Seattle, WA 98199  
P: 206.285.1593



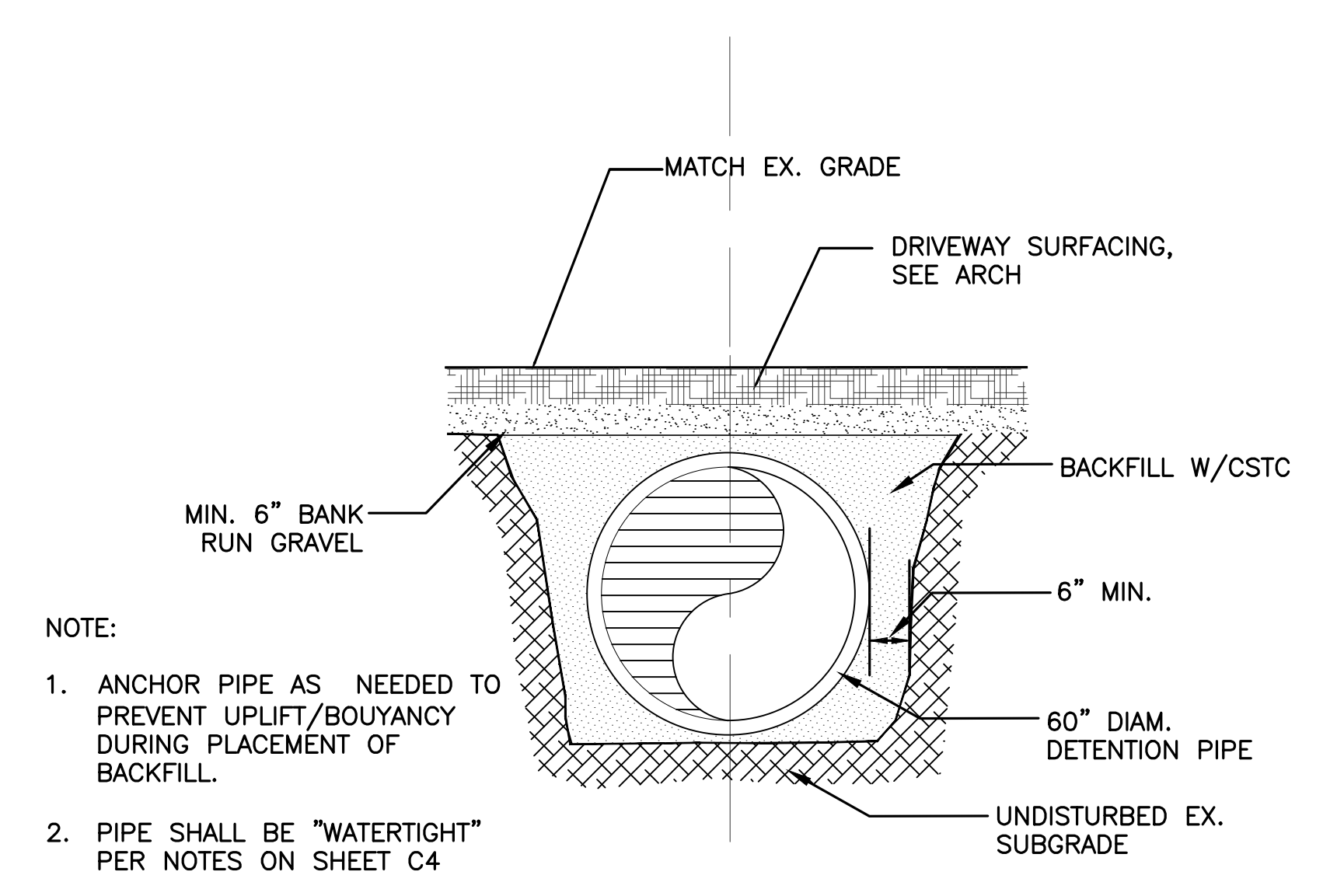
RESTORATION AREAS	AREA(SF)
NORTH OF HOUSE	1,049 SF
WEST OF DRIVEWAY	390 SF
EAST OF DRIVEWAY	1,054 SF
PLANTER AT WEST EDGE OF DWY	192 SF
PLANTER N. OF DWY AND HOUSE	292 SF
PLANTERS AT ENTRY	109 SF

**SOIL RESTORATION REQUIREMENTS:**

- IN ALL AREAS DISTURBED BY CONSTRUCTION AND IN NEW PLANTERS AND PLANTING BEDS AS INDICATED ON THE PLAN.
- SOIL RESTORATION SHALL BE IN ACCORDANCE WITH CITY OF MERCER ISLAND POST-CONSTRUCTION SOIL-MANAGEMENT MINIMUM REQUIREMENT #5, BMP T5.13
- SOIL RESTORATION SHALL BE AS FOLLOWS: TILL IN 3" COMPOST OR IMPORT 8" OF COMPOST AMENDED TOPSOIL



**1** UTILITY TRENCH DETAIL  
C4.1 NTS



**2** DETENTION PIPE DETAIL  
C4.1 NTS

- NOTES:**
- POST CONSTRUCTION SOIL AMENDMENT IS REQUIRED ON ALL AREAS NOT COVERED BY HARD SURFACE WHERE SOIL IS DISTURBED DURING CONSTRUCTION.
  - SOIL AMENDMENT MUST PASS A 12 INCH MINIMUM PROBE TEST.
  - IMPORTED AMENDMENT AND TOPSOIL SHALL BE IN ACCORDANCE WITH CITY OF MERCER ISLAND REQUIREMENTS AND BMP T5.13 AS FOLLOWS:
    - THE ORGANIC CONTENT FOR 'PRE-APPROVED' AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE COMPOST SPECIFICATION FOR BIORETENTION (BMP T7.30), WITH THE EXCEPTION THAT THE COMPOST MAY HAVE UP TO 35% BIOSOLIDS OR MANURE.
    - THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40% TO 65%, AND A CARBON TO NITROGEN RATIO BELOW 25:1.
    - THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.
    - CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIAL MEETING AS NOTED ABOVE; OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND NOT EXCEEDING THE CONTAMINANT LIMITS IDENTIFIED IN TABLE 220-B, TESTING PARAMETERS, IN WAC 173-350-220.
- IMPLEMENTATION OPTIONS:**
- THE SOIL QUALITY DESIGN GUIDELINES LISTED ABOVE CAN BE MET BY USING ONE OF THE METHODS LISTED BELOW:
- LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL, AND PROTECT FROM COMPACTION DURING CONSTRUCTION.
  - AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT 'PRE-APPROVED' RATES, OR AT CUSTOM CALCULATED RATES BASED ON TESTS OF THE SOIL AND AMENDMENT.
  - STOCKPILE EXISTING TOPSOIL DURING GRADING, AND REPLACE IT PRIOR TO PLANTING. STOCKPILED TOPSOIL MUST ALSO BE AMENDED IF NEEDED TO MEET THE ORGANIC MATTER OR DEPTH REQUIREMENTS, EITHER AT A DEFAULT 'PRE-APPROVED' RATE OR AT A CUSTOM CALCULATED RATE.
  - IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET THE REQUIREMENTS. MORE THAN ONE METHOD MAY BE USED ON DIFFERENT PORTIONS OF THE SAME SITE. SOIL THAT ALREADY MEETS THE DEPTH AND ORGANIC MATTER QUALITY STANDARDS, AND IS NOT COMPACTED, DOES NOT NEED TO BE AMENDED

**3** BMP T5.13 SOIL AMENDMENT DESIGN CRITERIA  
C4.1 NTS

**STEINBORN RESIDENCE**  
New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040

Date:  
**2/17/2022 Permit Set**  
**3/14/2022 Permit Set**  
**7/22/2022 Permit Rev. Set**  
**11/18/2022 Permit Rev. Set**  
Project No.: 2205-225  
Scale: 1" = 10'  
Sheet: 5 of 5

DRAINAGE  
DETAILS  
**C4.1**

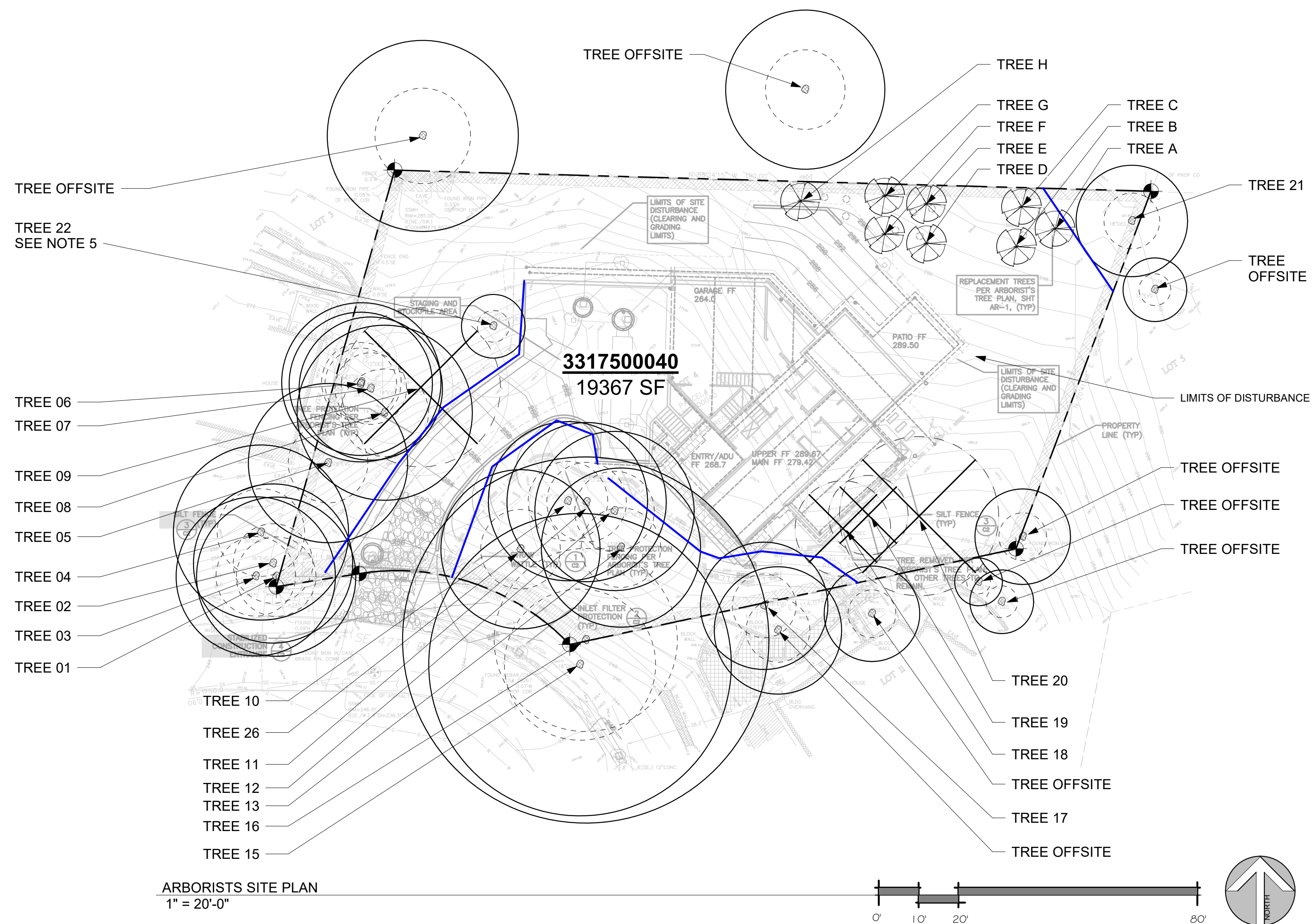
No.	Description	Date

EXISTING TREE SCHEDULE								
Arborists NW Tree Inventory								
Tree Number	Common name	Scientific Name	# of Trunks	DBH (Inches)	Dripline (Feet)	Condition	Retain	Notes
1	DOUGLAS FIR	Pseudotsuga menziesii	1	14	19	FAIR	YES	
2	DOUGLAS FIR	Pseudotsuga menziesii	1	15	12	FAIR	YES	
3	DOUGLAS FIR	Pseudotsuga menziesii	1	18	12	FAIR	YES	
4	DOUGLAS FIR	Pseudotsuga menziesii	1	25	19	FAIR	YES	
5	DOUGLAS FIR	Pseudotsuga menziesii	1	21	20	FAIR	YES	
6	CHERRY	Prunus avium	1	16	12	FAIR	YES	
7	DOUGLAS FIR	Pseudotsuga menziesii	1	15	14	FAIR	YES	
8	BIG LEAF MAPLE	Acer macrophyllum	1	14	18	FAIR	YES	
9	BIG LEAF MAPLE	Acer macrophyllum	1	12	14	FAIR	NO	
10	BIG LEAF MAPLE	Acer macrophyllum	4	17.2	18	FAIR	YES	STUMP SPROUTED
11	BIG LEAF MAPLE	Acer macrophyllum	1	12	12	FAIR	YES	
12	BIG LEAF MAPLE	Acer macrophyllum	6	17.7	18	FAIR	YES	STUMP SPROUTED
13	BIG LEAF MAPLE	Acer macrophyllum	3	13.8	14	FAIR	YES	STUMP SPROUTED
14	BIG LEAF MAPLE	Acer macrophyllum	6	20.6	18	FAIR	YES	STUMP SPROUTED
15	BIG LEAF MAPLE	Acer macrophyllum	1	18	27	FAIR	YES	STUMP SPROUTED
16	BIG LEAF MAPLE	Acer macrophyllum	6	31	20	FAIR	YES	STUMP SPROUTED
17	DOUGLAS FIR	Pseudotsuga menziesii	1	16	14	FAIR	YES	
18	BIG LEAF MAPLE	Acer macrophyllum	5	17.4	14	FAIR	NO	STUMP SPROUTED
19	BIG LEAF MAPLE	Acer macrophyllum	1	10	18	FAIR	NO	
20	BIG LEAF MAPLE	Acer macrophyllum	3	13.6	18	FAIR	NO	STUMP SPROUTED
21	DOUGLAS FIR	Pseudotsuga menziesii	1	18	14	FAIR	YES	
22	SCOUERS WILLOW	Salix scouleriana	4	28.7	16	FAIR	YES	CLINGING TO STEEP EDGE
23	BIG LEAF MAPLE	Acer macrophyllum	1	10	12	FAIR	YES	STUMP SPROUTED - OFF SITE
24	DOUGLAS FIR	Pseudotsuga menziesii	1	14	14	GOOD	YES	OFF SITE
25	BIG LEAF MAPLE	Acer macrophyllum	1	6	10	FAIR	YES	OFF SITE
26	BIG LEAF MAPLE	Acer macrophyllum	4	18.2	14	FAIR	YES	STUMP SPROUTED
27	DOUGLAS FIR	Pseudotsuga menziesii	1	8.4	10	FAIR	YES	OFF SITE
28	BIG LEAF MAPLE	Acer macrophyllum	1	6	10	FAIR	YES	OFF SITE
29	DOUGLAS FIR	Pseudotsuga menziesii	1	12	12	FAIR	YES	OFF SITE
30	DOUGLAS FIR	Pseudotsuga menziesii	1					
31	DOUGLAS FIR	Pseudotsuga menziesii	1	34	26	FAIR	YES	OFF SITE
		Total DBH		492.6				
		Retained DBH		439.6				
		Retained Percentage		89.2%				

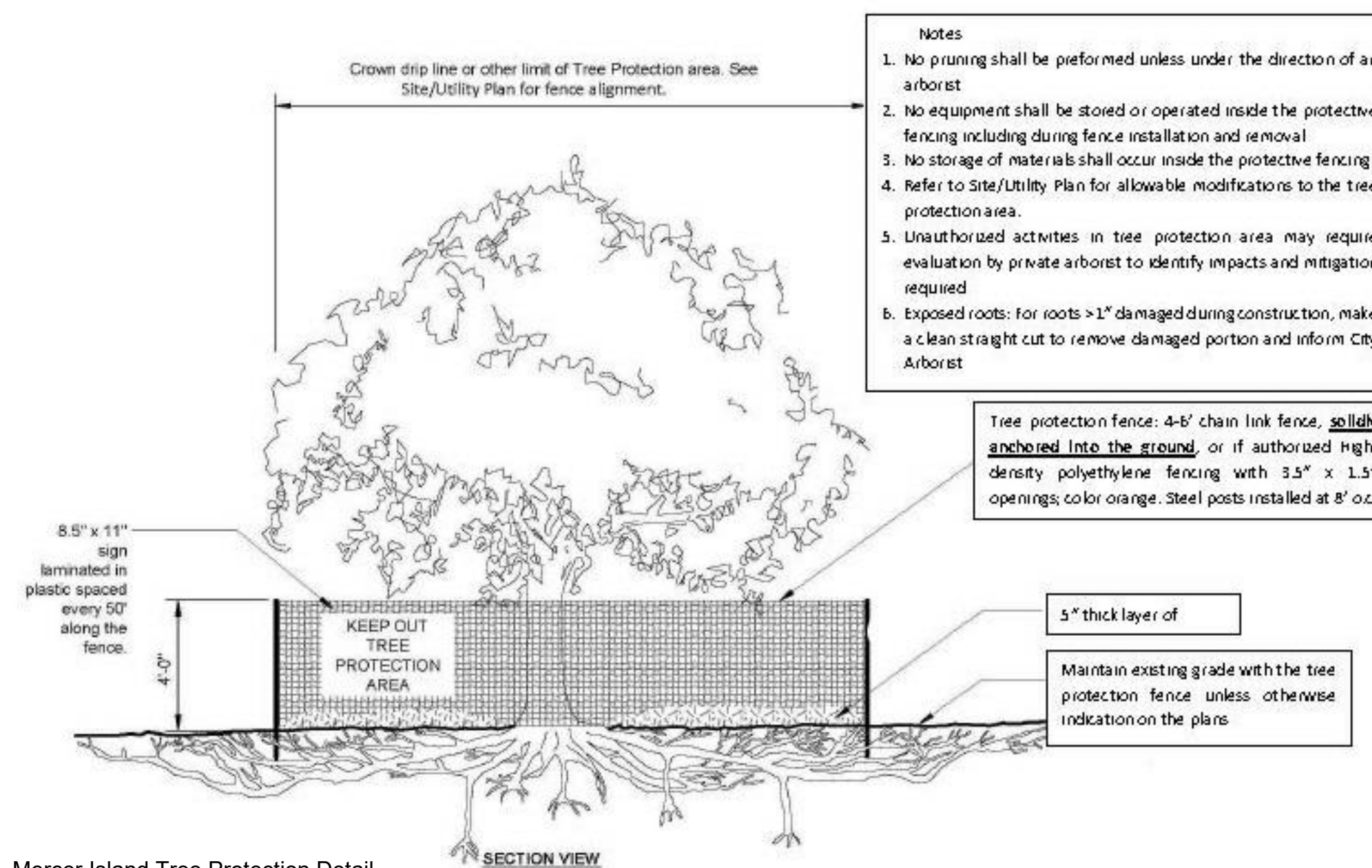
REPLACEMENT TREE SCHEDULE				
TREE #	COMMON NAME	LATIN NAME	SIZE	QTY
A	EXCELSA CEDAR	Thuja Plicata Excelsa	8'-10'	1
B	EXCELSA CEDAR	Thuja Plicata Excelsa	8'-10'	1
C	EXCELSA CEDAR	Thuja Plicata Excelsa	8'-10'	1
D	EXCELSA CEDAR	Thuja Plicata Excelsa	8'-10'	1
E	EXCELSA CEDAR	Thuja Plicata Excelsa	8'-10'	1
F	EXCELSA CEDAR	Thuja Plicata Excelsa	8'-10'	1
G	EXCELSA CEDAR	Thuja Plicata Excelsa	8'-10'	1
H	EXCELSA CEDAR	Thuja Plicata Excelsa	8'-10'	1

GENERAL ARBORISTS NOTES:

- PROJECT ARBORIST MUST BE ON-SITE DURING EXCAVATION ALONG THE DRIVEWAY.
- THE LAWN AND LANDSCAPE AREAS ARE REQUIRED TO PROVIDE POST-CONSTRUCTION SOIL QUALITY AND DEPTH IN ACCORDANCE WITH BMP T5.13. THE PROJECT ARBORIST MUST PROVIDE A LETTER OF CERTIFICATION TO ENSURE THAT THE LAWN AND LANDSCAPE AREAS ARE MEETING THE POST-CONSTRUCTION SOIL QUALITY AND DEPTH REQUIREMENTS ON THE APPROVED PLAN SET PRIOR TO FINAL INSPECTION OF THE PROJECT.
- PURSUANT TO MICC 19.10.070.D, TREES SHALL BE MAINTAINED IN A HEALTHY CONDITION FOR 5 YEARS. DEAD OR DEPRESSED TREES SHALL BE REPLACED.
- REFER TO C4 FOR THE POST-CONSTRUCTION SOIL QUALITY AND DEPTH PLAN.
- SEE ATTACHED ARBORISTS REPORT.



ARBORISTS SITE PLAN  
1" = 20'-0"



2 Mercer Island Tree Protection Detail  
1/4" = 1'-0"

- Notes
- No pruning shall be performed unless under the direction of an arborist.
  - No equipment shall be stored or operated inside the protective fencing including during fence installation and removal.
  - No storage of materials shall occur inside the protective fencing.
  - Refer to Site/Utility Plan for allowable modifications to the tree protection area.
  - Unauthorized activities in tree protection area may require evaluation by private arborist to identify impacts and mitigation required.
  - Exposed roots: for roots >1" damaged during construction, make a clean straight cut to remove damaged portion and inform City Arborist.

Tree protection fence: 4-ft chain link fence, solidly anchored into the ground, or if authorized high-density polyethylene fencing with 3.5" x 1.5" openings, color orange. Steel posts installed at 8' o.c.

5" thick layer of

Maintain existing grade with the tree protection fence unless otherwise indication on the plans

	TREE DRIP LINE (DL)
	DIAMETER STANDARD HEIGHT (DSH)
	EVERGREEN TREE
	DECIDUOUS TREE
	TREE TO BE REMOVED
	TREE PROTECTION FENCING
	NEW TREE

PREPARED BY:  
 NEAL BAKER  
 ARBORISTS NW.COM  
 ISA CERT. PN1075A  
 TRAQ ISA (TREE RISK ASSESSMENT QUALIFIED)  
 MEMBER AREA & SOCA  
 PH: 206 779 2579

STEINBORN AR-1

8435 SE 47TH PL, MERCER ISLAND, WA 98040

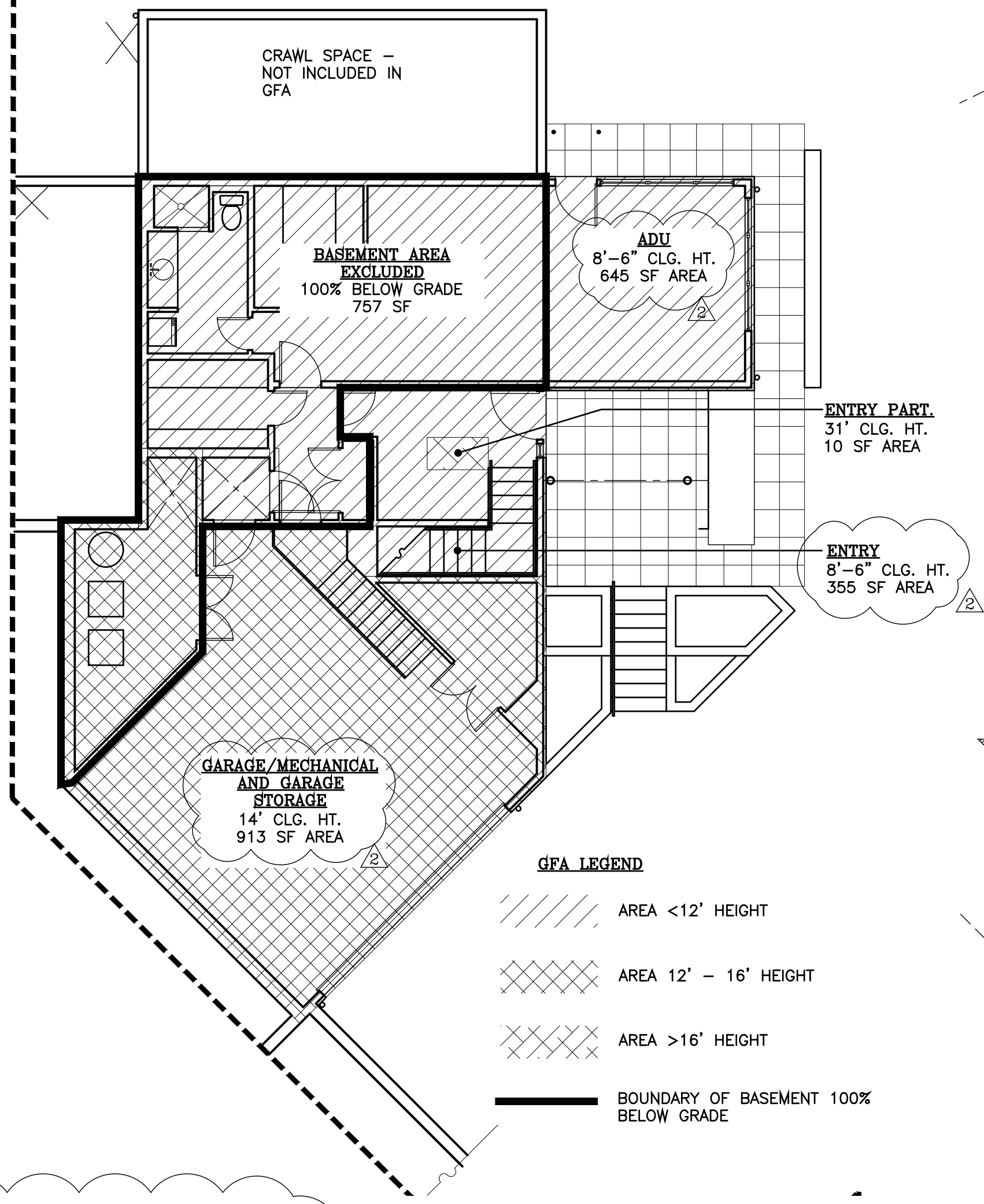
STEINBORN AR-1

ARBORIST TREE PLAN

Project number	21029
Date	--
Drawn by	CW
Checked by	NB

AR-1

Scale As indicated



**Garage/Entry/ADU GFA Calculation:**

<12'	1,000 SF
12'-16'	913 SF
>16'	10 SF
<b>BASEMENT AREA EXCLUDED</b>	<b>757 SF</b>

**1 Lower Floor Plan GFA Calculation**  
scale: 1/8"=1'-0"

**Enclosed Crawl Space Ventilation Under Heated**

TOTAL AREA: 318 SF

VENTILATION REQUIRED W/ CLASS I VAPOR BARRIER: 1 SF/300 SF

REQUIRED VENTILATION: 1.06 SF OR 152.64 SI

PROVIDED VENTILATION @ EXTERIOR WALLS: 186 SI

NOTE: NFVA - NET FREE VENT AREA

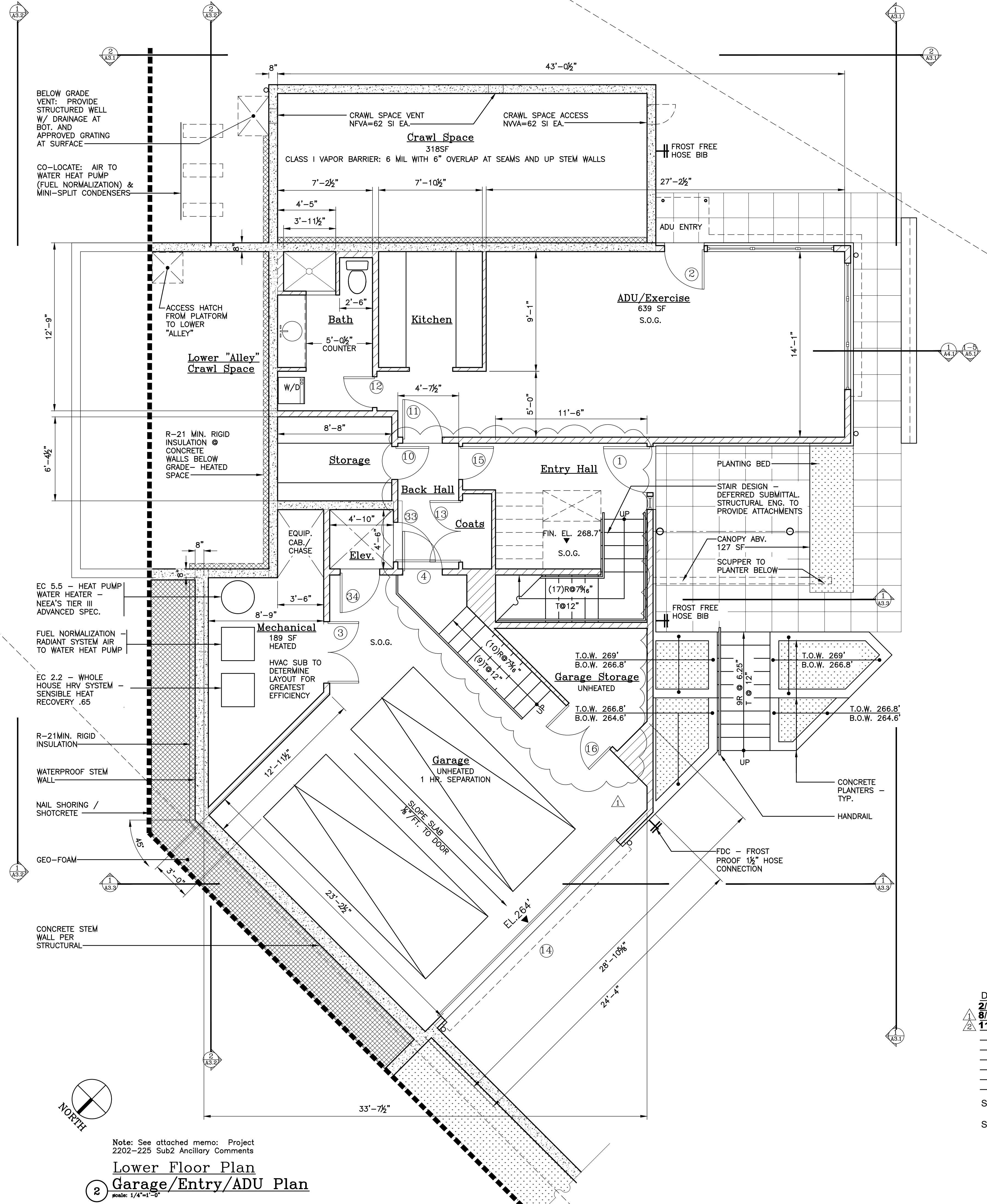
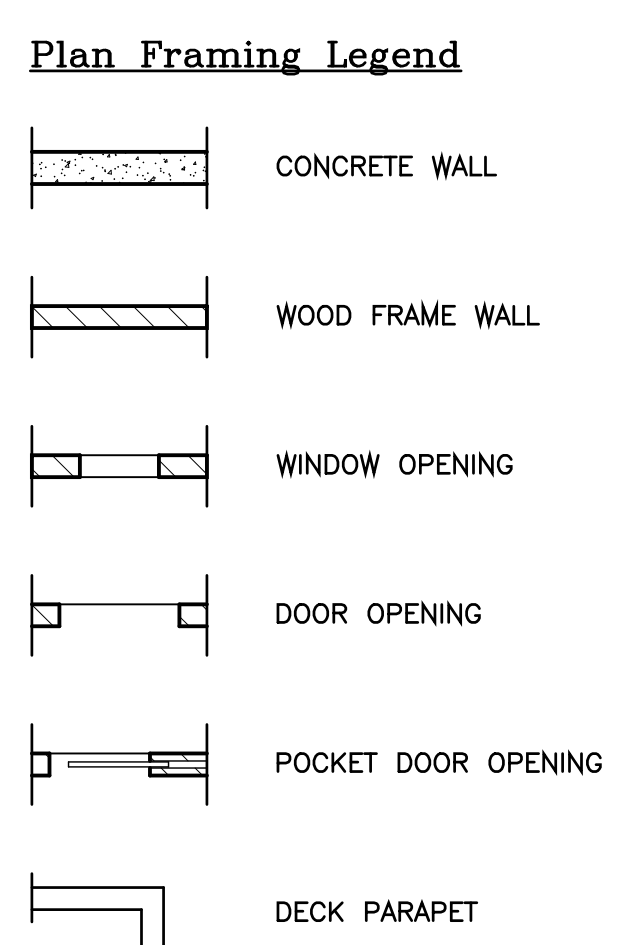
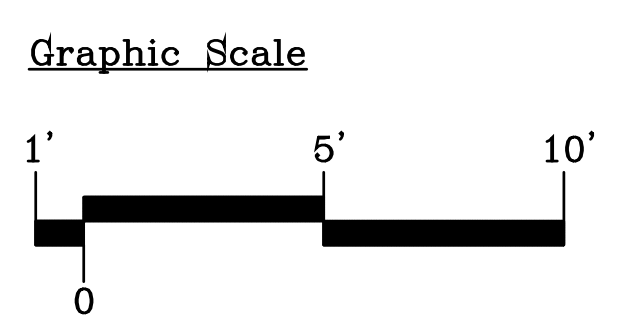
  

**Conditioned Space Square Footage:** 1107.6SF

**Fire Area Square Footage**

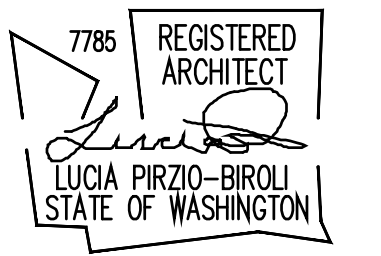
ATTACHED GARAGE/MECHANICAL ROOM/ELEVATOR:	932.7 SF
ADU / ENTRY HALL:	800.0 SF
ENTRY CANOPY:	117.3 SF

- Floor Plan Notes**
- Stair design deferred submittal. Structural Engineer to provide connection specifications.
  - See Sheet A0.1 for General Notes in common.
  - Fire Code Alternate minimum requirements:  
13R Sprinkler System Plus - Design Build per 2016 NFPA  
1 HR 5/8" GWB throughout  
Solid core doors throughout except at closets.
  - Energy Performance Requirements:  
EC 2.2 - Air Leakage Control and Efficient Ventilation: Reduce tested air leakage to 2.0 air changes per hour maximum @ 50 Pascals  
EC 4.2 - High Efficiency HVAC Distribution System: Hydronic in-floor piping throughout all conditioned spaces.
  - Vapor Retarder Required - Low/no VOC vapor barrier primer on all painted surfaces per IRC 702.7



Note: See attached memo: Project 2202-225 Sub2 Ancillary Comments

**Lower Floor Plan**  
**2 Garage/Entry/ADU Plan**  
scale: 1/4"=1'-0"

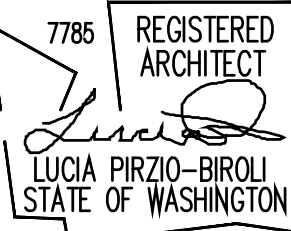


**STEINBORN RESIDENCE**

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040

Date: 3/15/2021 Pre-App  
2/14/2022 Permit Submittal  
8/25/2022 Sub2-2202-225  
11/22/2022 Sub3-2202-225

Scale:  
Sheet:  
Lower Floor Plan  
**A2.0**

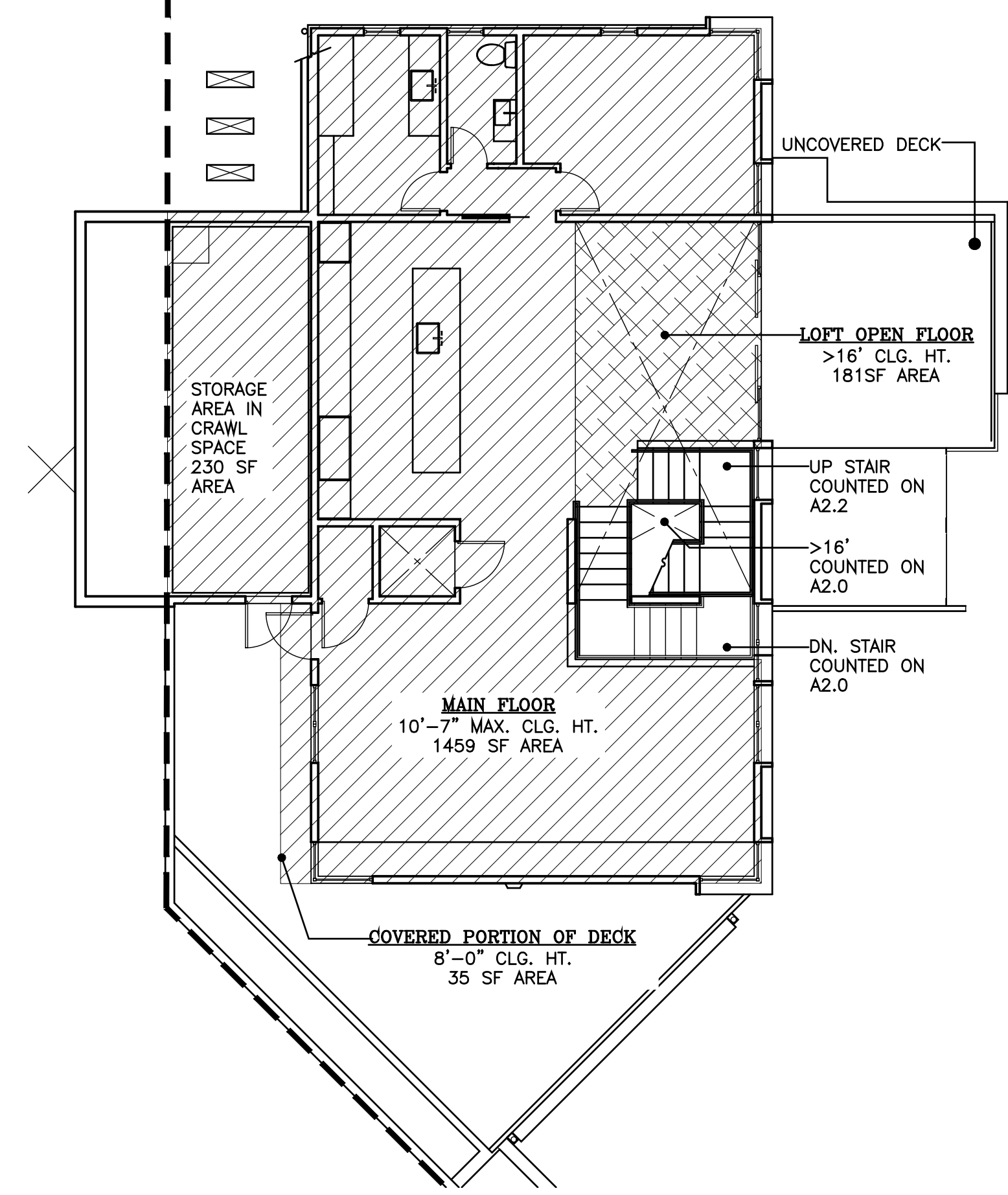


# STEINBORN RESIDENCE

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040

Date: 3/15/2021 Pre-App  
2/14/2022 Permit Submittal  
8/25/2022 Sub2-2202-225  
11/22/2022 Sub3-2202-225

Scale:  
Sheet:  
Main Floor Plan  
A2.1



**Main Floor GFA Calculation:**

MAIN FLOOR*	1459 SF
COVERED DECK	69 SF
ACCESSORY (STORAGE)	229 SF
>16'	181 SF

\*MAIN FLOOR IS, FOR THE MOST PART, <12' IN HEIGHT. THE AREA >16' IS INCLUDED IN THE AREA OF MAIN FLOOR AND WILL BE LISTED ON THE FORM AT 200% AS WELL.

**GFA LEGEND**

	AREA <12' HEIGHT
	AREA >16' HEIGHT

**1 Main Floor GFA Calculation**  
Scale: 1/8"=1'-0"

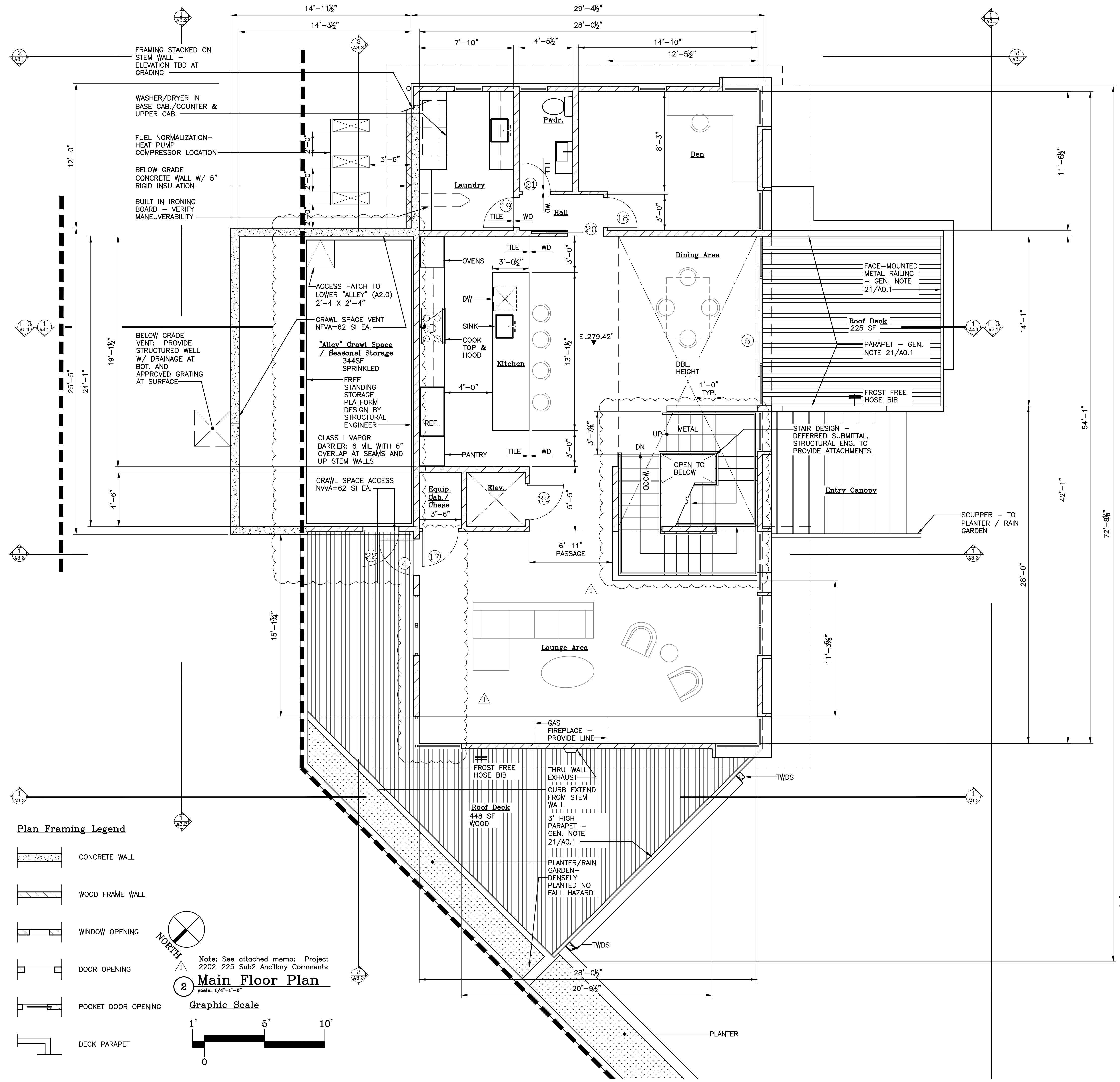
**Enclosed Crawl Space Ventilation Under Heated**  
TOTAL AREA: 344 SF  
VENTILATION REQUIRED W/ CLASS I VAPOR BARRIER: 1 SF/300 SF  
REQUIRED VENTILATION: 1,146 SF OR 165 SI  
PROVIDED VENTILATION @ EXTERIOR WALLS: 186 SI  
NOTE: NFVA - NET FREE VENT AREA

**Conditioned Space Square Footage:** 1446 SF

**Fire Area Square Footage**  
MAIN FLOOR AREA NOT INCLUDING STAIRS: 1421.5 SF  
STORAGE ARE (PORTION OF CRAWL SPACE): 230.0 SF  
COVERED DECK: 69.0 SF

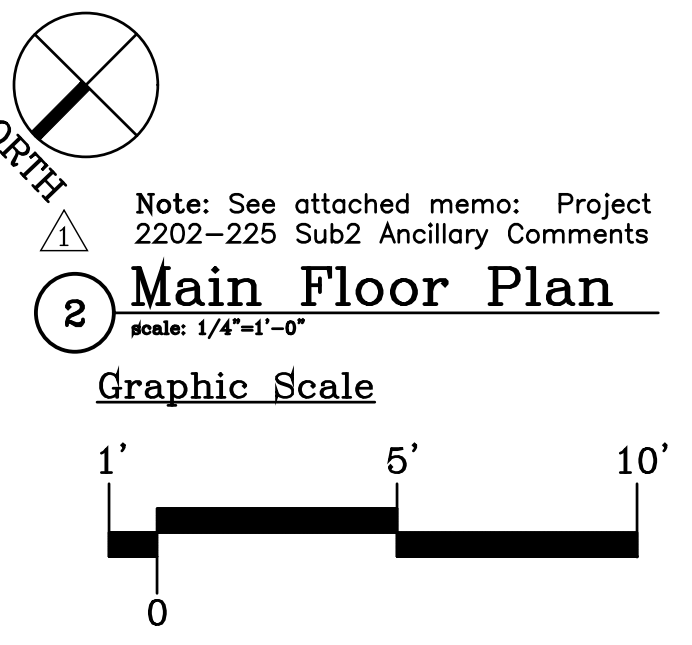
**Roof Deck Square Footage:** 673.0 SF

- Floor Plan Notes**
- Stair design deferred submittal. Structural Engineer to provide connection specifications.
  - See Sheet A0.1 for General Notes in common.
  - Fire Code Alternate minimum requirements:  
13R Sprinkler System Plus - Design Build per 2016 NFPA  
1 HR 5/8" GWB throughout  
Solid core doors throughout except at closets.
  - Energy Performance Requirements:  
EC 2.2 - Air Leakage Control and Efficient Ventilation: Reduce tested air leakage to 2.0 air changes per hour maximum @ 50 Pascals  
EC 4.2 - High Efficiency HVAC Distribution System: Hydronic in-floor piping throughout all conditioned spaces.
  - Vapor Retarder Required - Low/no VOC vapor barrier primer on all painted surfaces per IRC 702.7

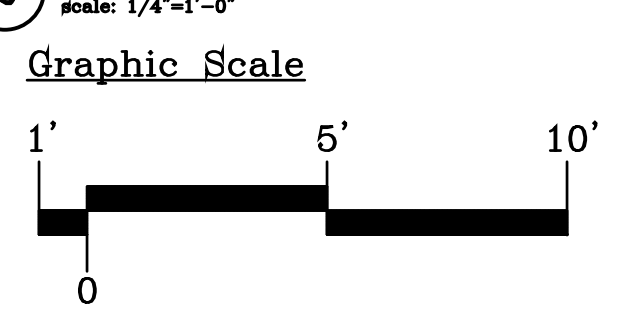


**Plan Framing Legend**

- CONCRETE WALL
- WOOD FRAME WALL
- WINDOW OPENING
- DOOR OPENING
- POCKET DOOR OPENING
- DECK PARAPET



**2 Main Floor Plan**  
Scale: 1/4"=1'-0"





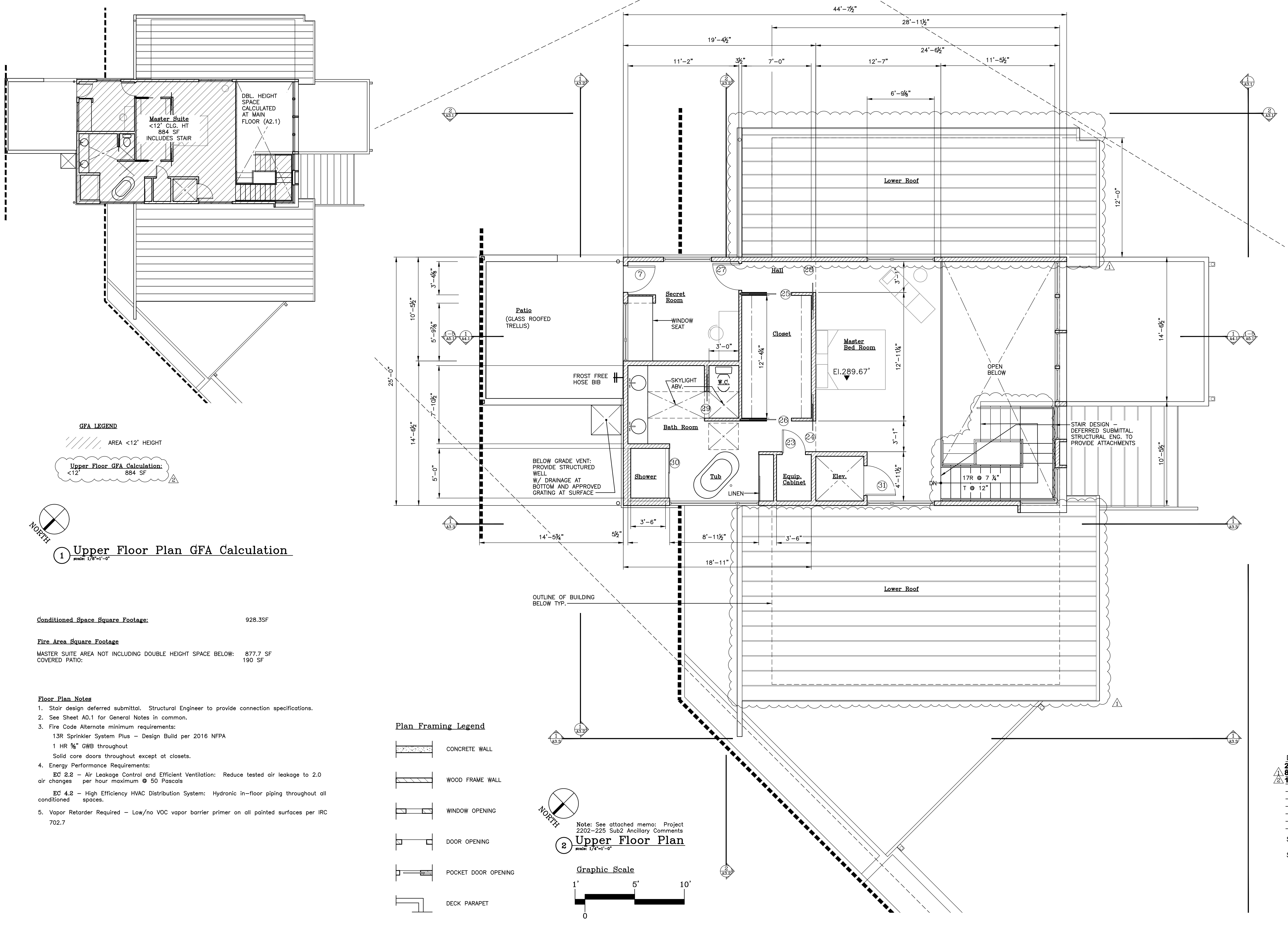
**STEINBORN RESIDENCE**

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040

Date: 3/15/2021 Pre-App  
2/14/2022 Permit Submittal  
8/25/2022 Sub2-2202-225  
11/22/2022 Sub3-2202-225

Scale:  
Sheet:

Upper Floor Plan  
A2.2



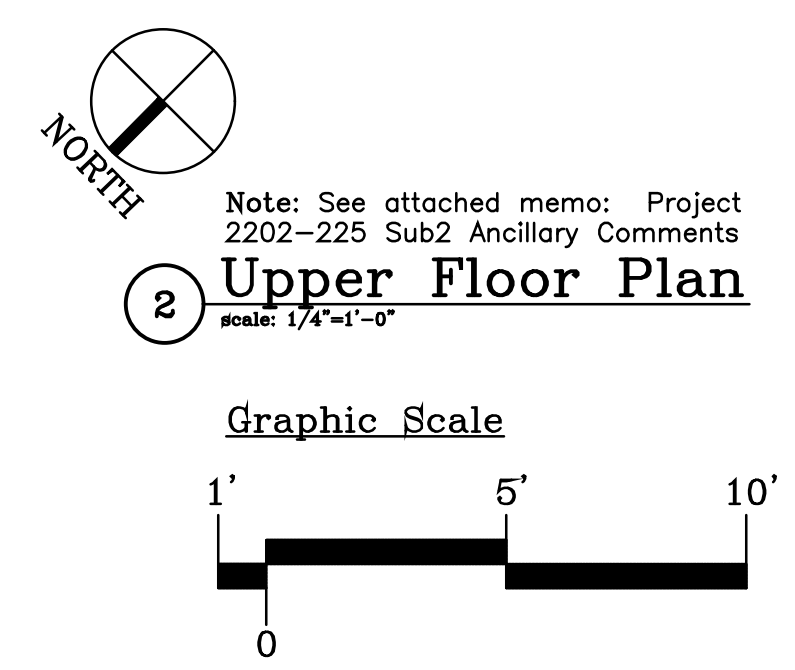
**GFA LEGEND**  
AREA <12' HEIGHT  
**Upper Floor GFA Calculation:**  
<12' 884 SF

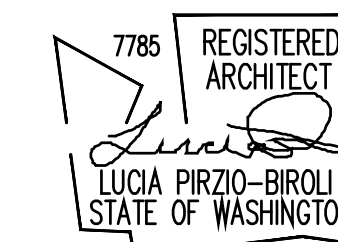
**1 Upper Floor Plan GFA Calculation**  
scale: 1/8"=1'-0"

**Conditioned Space Square Footage:** 928.35SF  
**Fire Area Square Footage:**  
MASTER SUITE AREA NOT INCLUDING DOUBLE HEIGHT SPACE BELOW: 877.7 SF  
COVERED PATIO: 190 SF

- Floor Plan Notes**
1. Stair design deferred submittal. Structural Engineer to provide connection specifications.
  2. See Sheet A0.1 for General Notes in common.
  3. Fire Code Alternate minimum requirements:  
13R Sprinkler System Plus - Design Build per 2016 NFPA  
1 HR 5/8" GWB throughout  
Solid core doors throughout except at closets.
  4. Energy Performance Requirements:  
EC 2.2 - Air Leakage Control and Efficient Ventilation: Reduce tested air leakage to 2.0 air changes per hour maximum @ 50 Pascals  
EC 4.2 - High Efficiency HVAC Distribution System: Hydronic in-floor piping throughout all conditioned spaces.
  5. Vapor Retarder Required - Low/no VOC vapor barrier primer on all painted surfaces per IRC 702.7

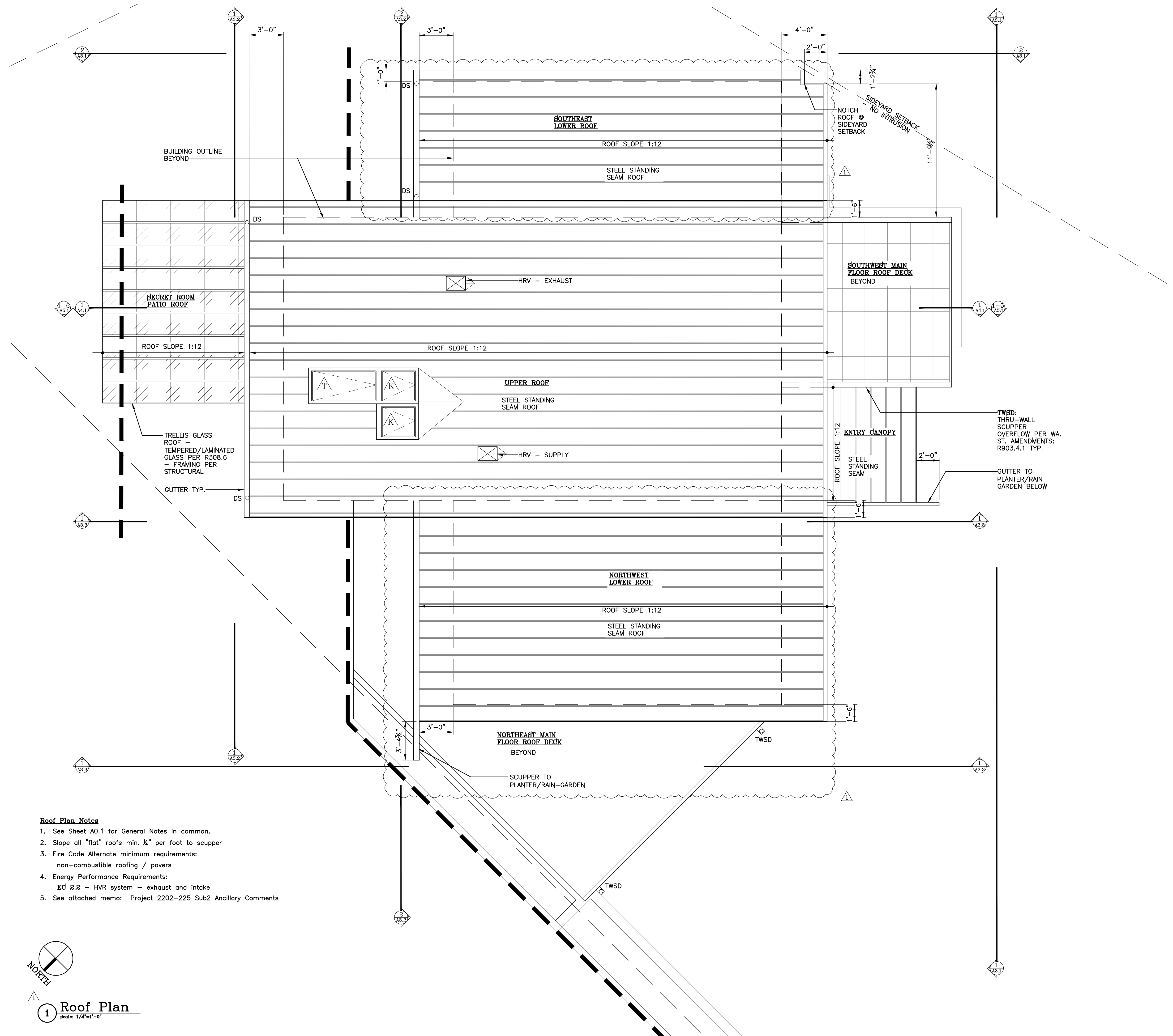
- Plan Framing Legend**
- CONCRETE WALL
  - WOOD FRAME WALL
  - WINDOW OPENING
  - DOOR OPENING
  - POCKET DOOR OPENING
  - DECK PARAPET



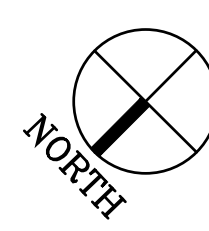


**STEINBORN RESIDENCE**

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040



- Roof Plan Notes**
1. See Sheet A0.1 for General Notes in common.
  2. Slope all "flat" roofs min. 1/4" per foot to scupper
  3. Fire Code Alternate minimum requirements:  
non-combustible roofing / pavers
  4. Energy Performance Requirements:  
EC 2.2 - HVR system - exhaust and intake
  5. See attached memo: Project 2202-225 Sub2 Ancillary Comments



**1 Roof Plan**  
scale: 1/4"=1'-0"

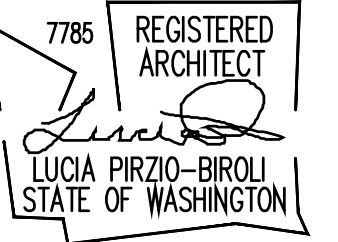
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8/25/2022 Sub2-2202-225


Scale:  
Sheet:



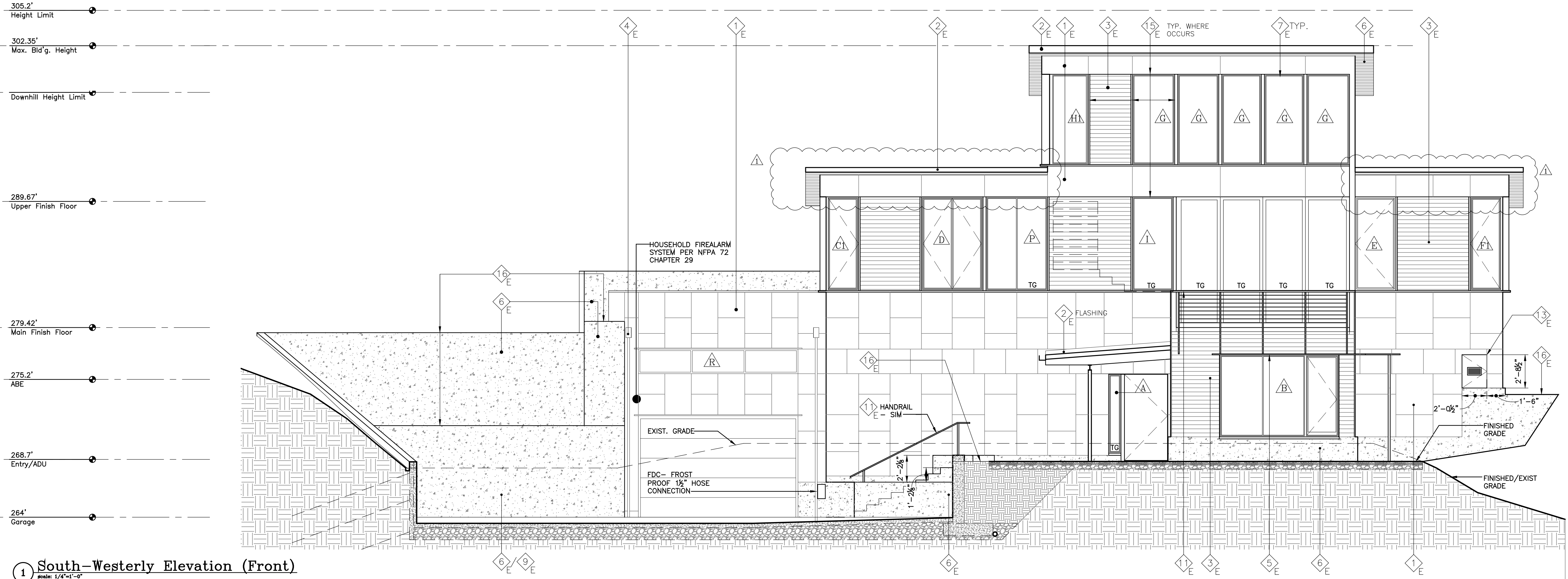
**ECTYPOS**  
ARCHITECTURE

4212 W. Mercer Way  
Mercer Island, WA 98040  
t. (206) 232-9147  
f. (206) 275-0312

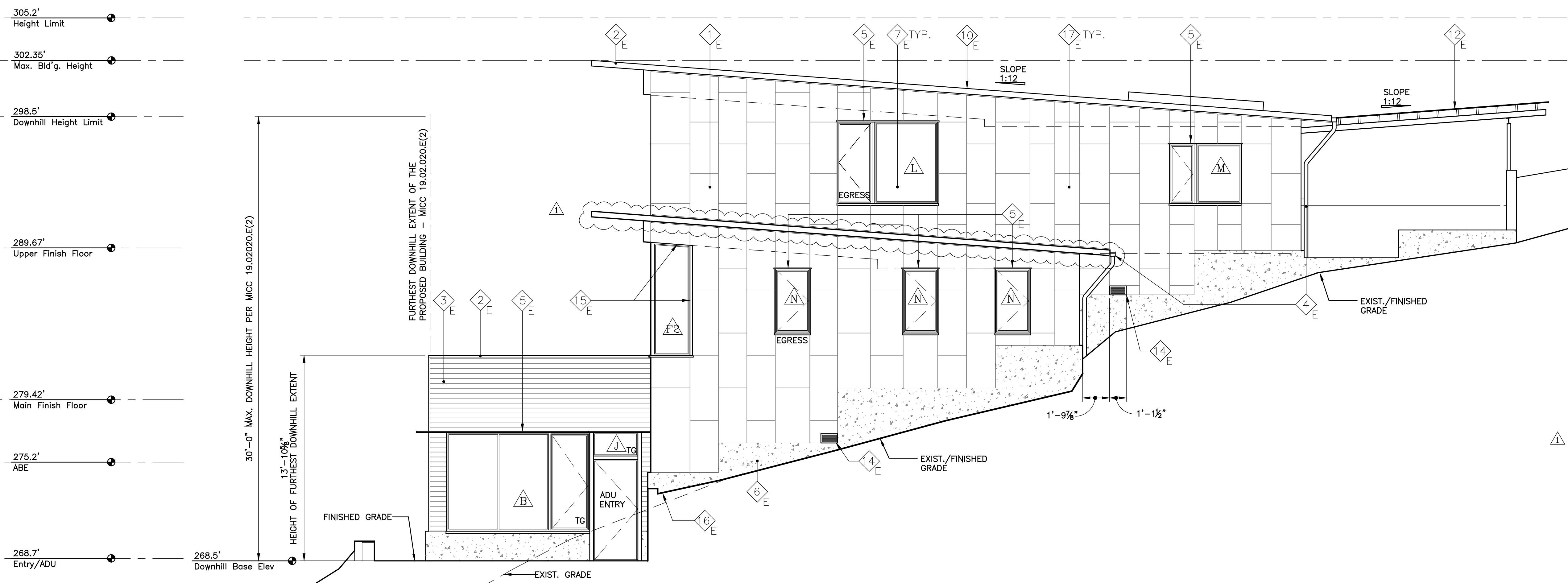


# STEINBORN RESIDENCE

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040



1 South-Westerly Elevation (Front)  
Scale: 1/4"=1'-0"



2 South-Easterly Elevation (Side)  
Scale: 1/4"=1'-0"

- EXTERIOR MATERIAL LEGEND:**  
Note: See attached memo: Project 2202-225 Sub2 Ancillary Comments
- 1 E EQUITONE FIBER CEMENT PANEL W/ EXPOSED FASTENERS - COLOR TBD
  - 2 E METAL TRIM/COPING/FLASHING/SILL - COLOR TO COMPLEMENT FIBER CEMENT PANEL
  - 3 E HORIZONTAL CLEAR CEDAR SHIPLAP SIDING - STAIN COLOR TBD
  - 4 E METAL GUTTER/OVERFLOW SCUPPER/DOWNSPOUT METAL - COLOR TO MATCH METAL TRIM/GUTTERS ETC.
  - 5 E STEEL EYEBROW - 14 GAUGE - COLOR TO MATCH METAL TRIM/GUTTERS ETC.
  - 6 E CONCRETE STEM WALLS/PLANTERS - ARCHITECTURAL APPEARANCE GRADE WHERE EXPOSED
  - 7 E FIBERGLASS WINDOWS
  - 8 E CLEAR CEDAR T&G SOFFIT - STAIN TBD
  - 9 E ESPALIER GREEN WALL - STEEL WIRE ROPE & HARDWARE
  - 10 E STANDING SEAM METAL ROOF AND RELATED METAL TRIM - COLOR TBD.
  - 11 E STAINLESS STEEL GUARDRAIL WITH WOOD TOP RAIL-FACE MOUNTED. SEE GENERAL NOTE #21 ON A0.1
  - 12 E STEEL/WOOD/GLASS PERGOLA - OVERHEAD GLAZING PER IRC 308.6
  - 13 E 18"x24" ACCESS OPENING W/ CRAWL SPACE VENT NFVA: 62SI PER IRC R408.4/WAC 51-51 R408
  - 14 E CRAWL SPACE VENT NFVA: 62SI - PER WAC 51-51 R408 AT BELOW GRADE VENTS PROVIDE STRUCTURED WELL WITH GRAVEL 6" BELOW VENT & DRAIN TO CONNECTED DRAINAGE SYSTEM.
  - 15 E ELECTRIC ROLLER SHADES W/ LATERAL TRACK "FINS"
  - 16 E DENSELY PLANTED VEGETATION - NO FALL RISK
  - 17 E MEET OR EXCEED EC 1.4 - EFFICIENT BUILDING ENVELOPE

Date: 3/15/2021 Pre-App  
2/14/2022 Permit Submittal  
8/25/2022 Sub2-2202-225

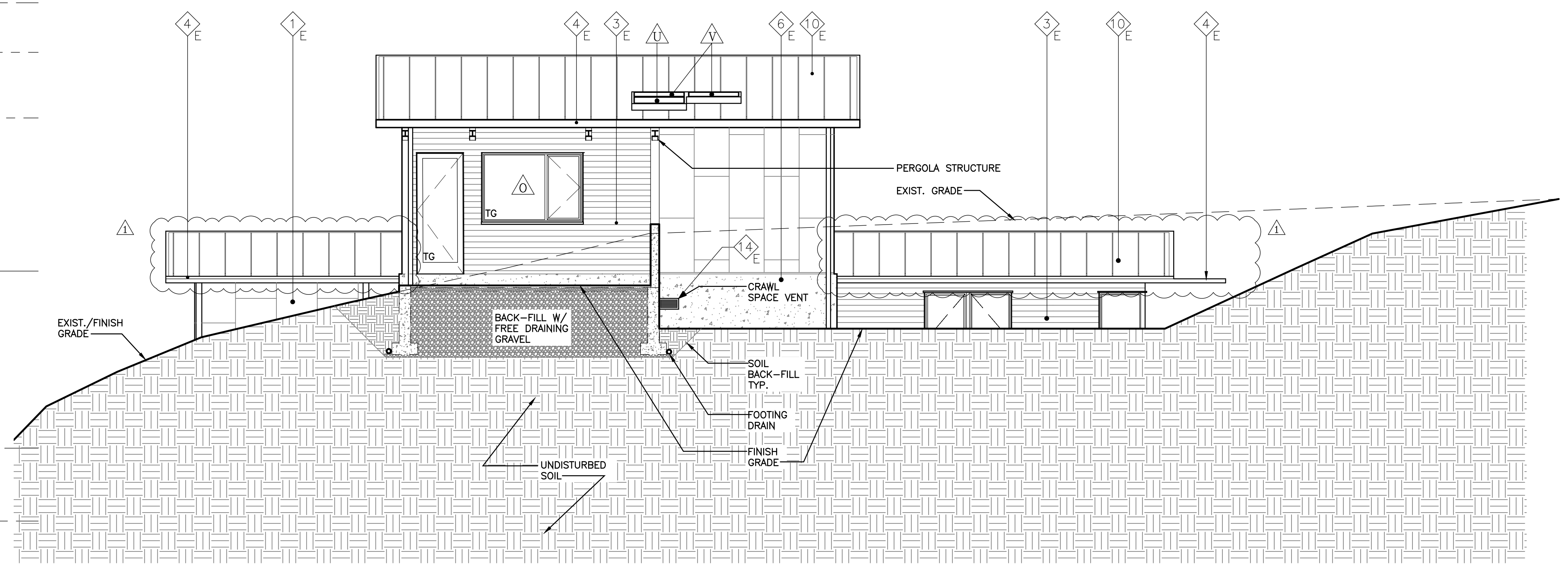
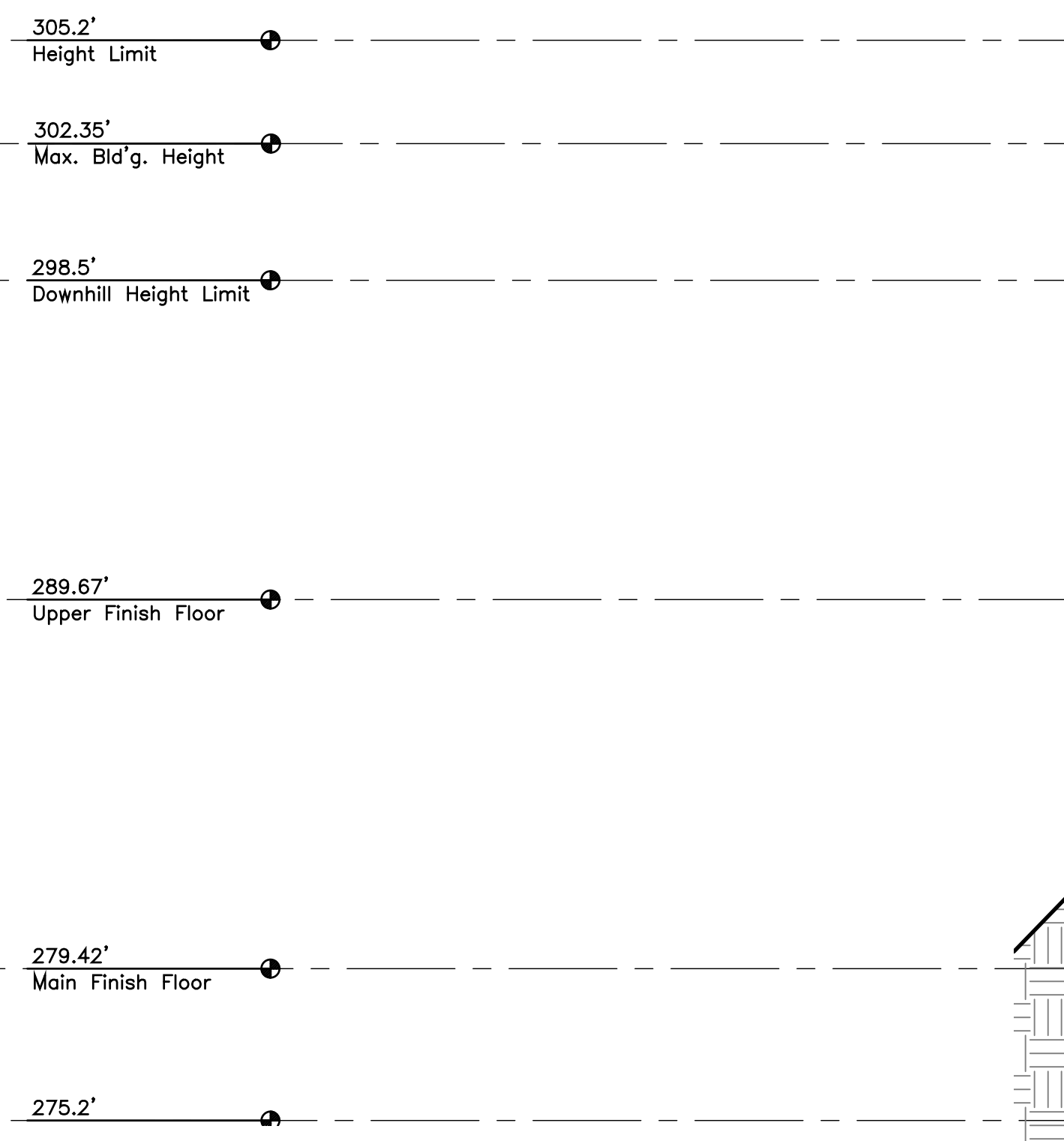
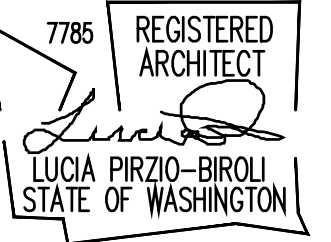
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Elevations  
A3.1

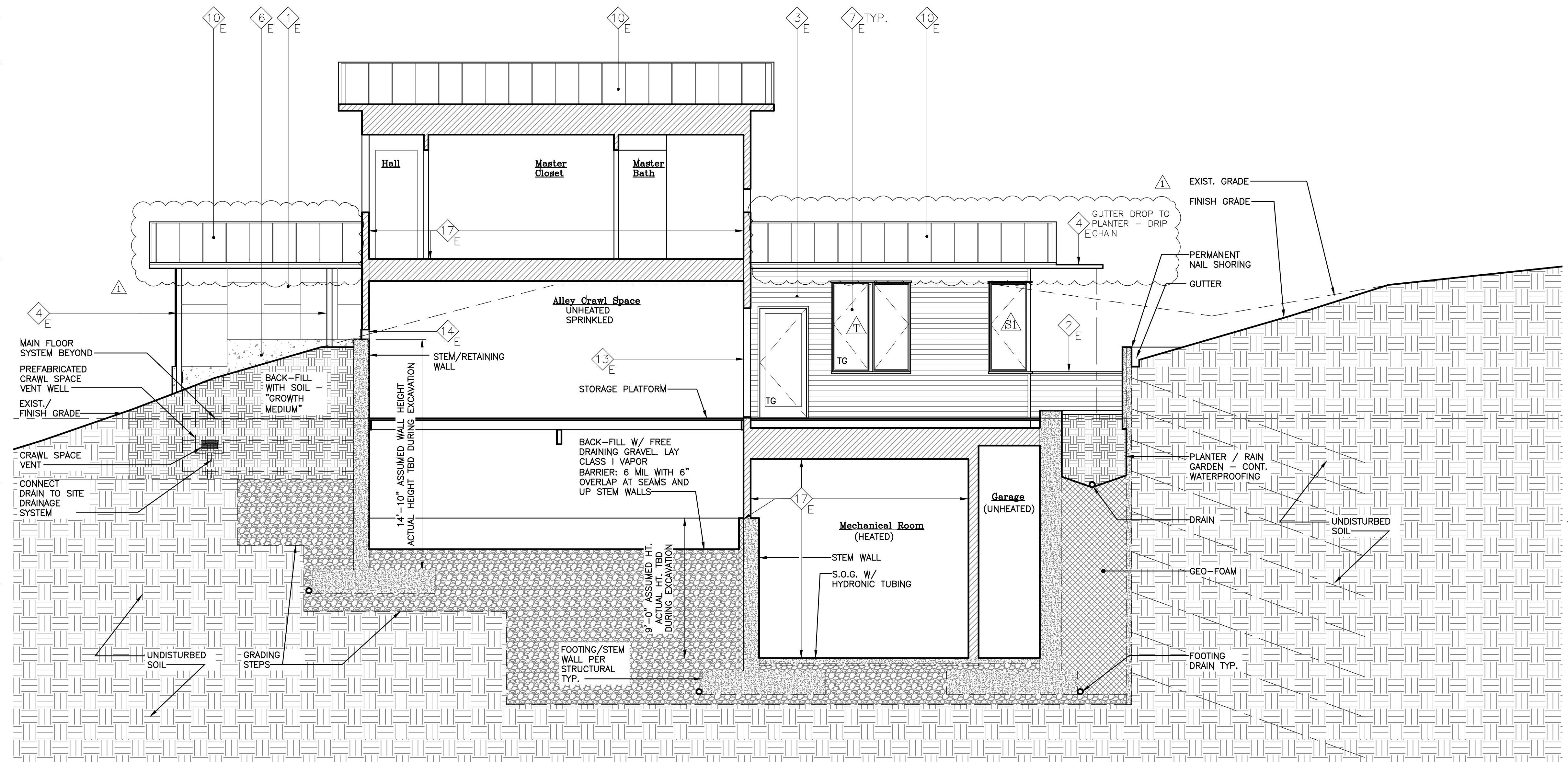
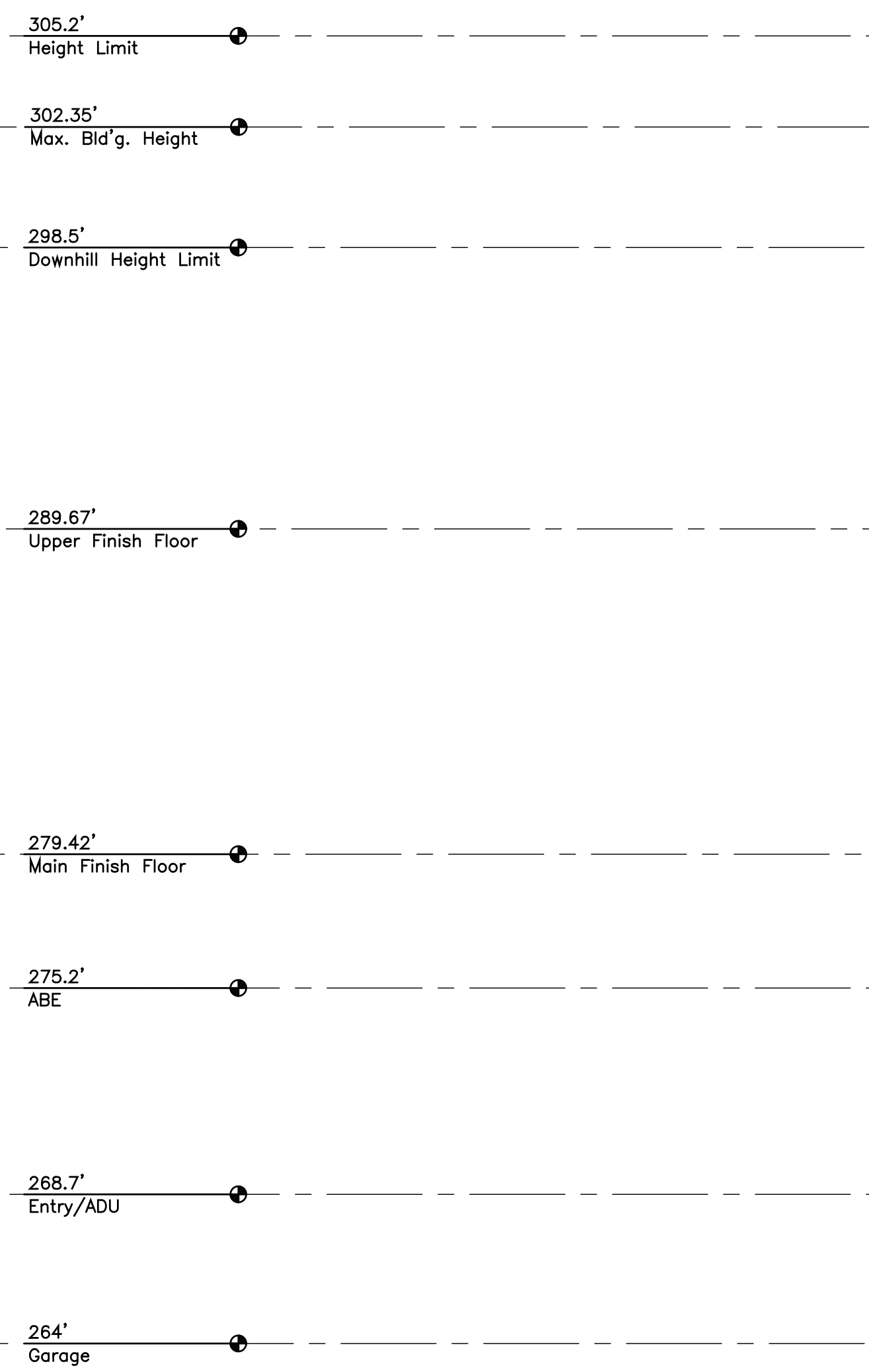


**ECTYPOS**  
ARCHITECTURE

4212 W. Mercer Way  
Mercer Island, WA 98040  
t. (206) 232-9147  
f. (206) 275-0312



**1 North-Easterly Elevation (Rear)**  
Scale: 1/4"=1'-0"



**2 Building Section / Partial Elevation**  
Scale: 1/4"=1'-0"

**STEINBORN RESIDENCE**

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040

Date: 3/15/2021 Pre-App  
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8/25/2022 Sub2-2202-225

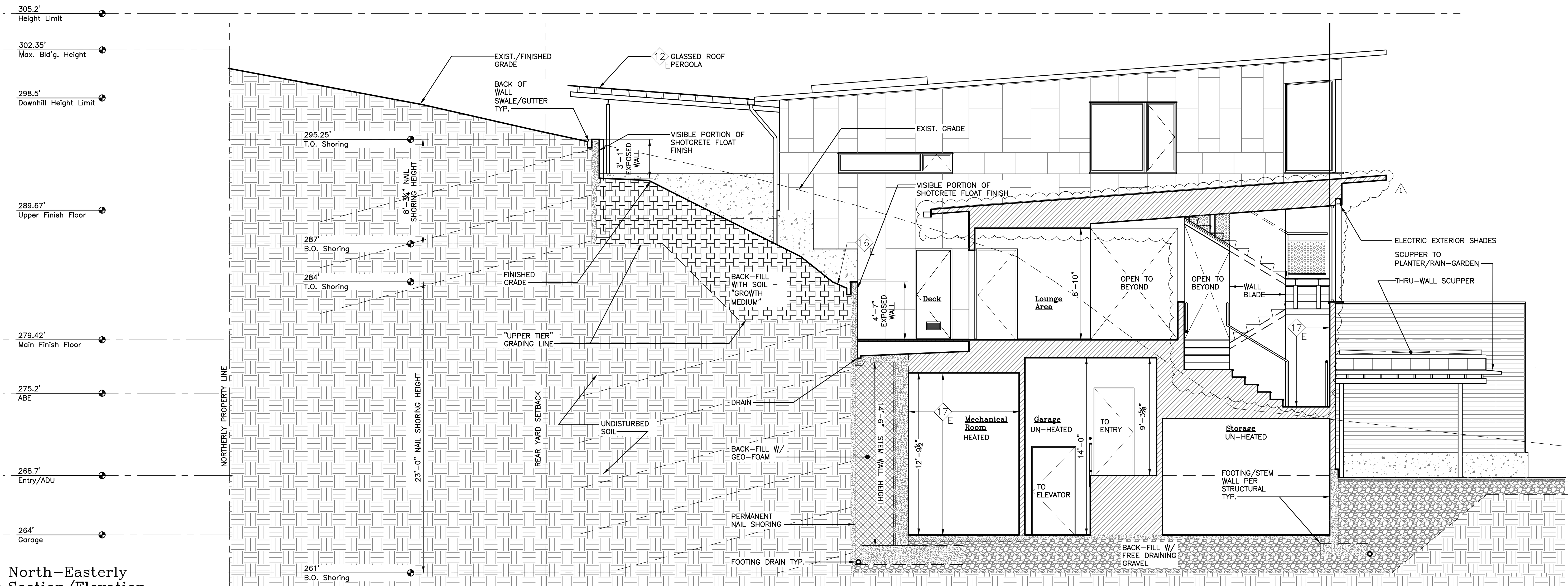
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Elevations/  
Sections  
A3.2



**STEINBORN RESIDENCE**

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040



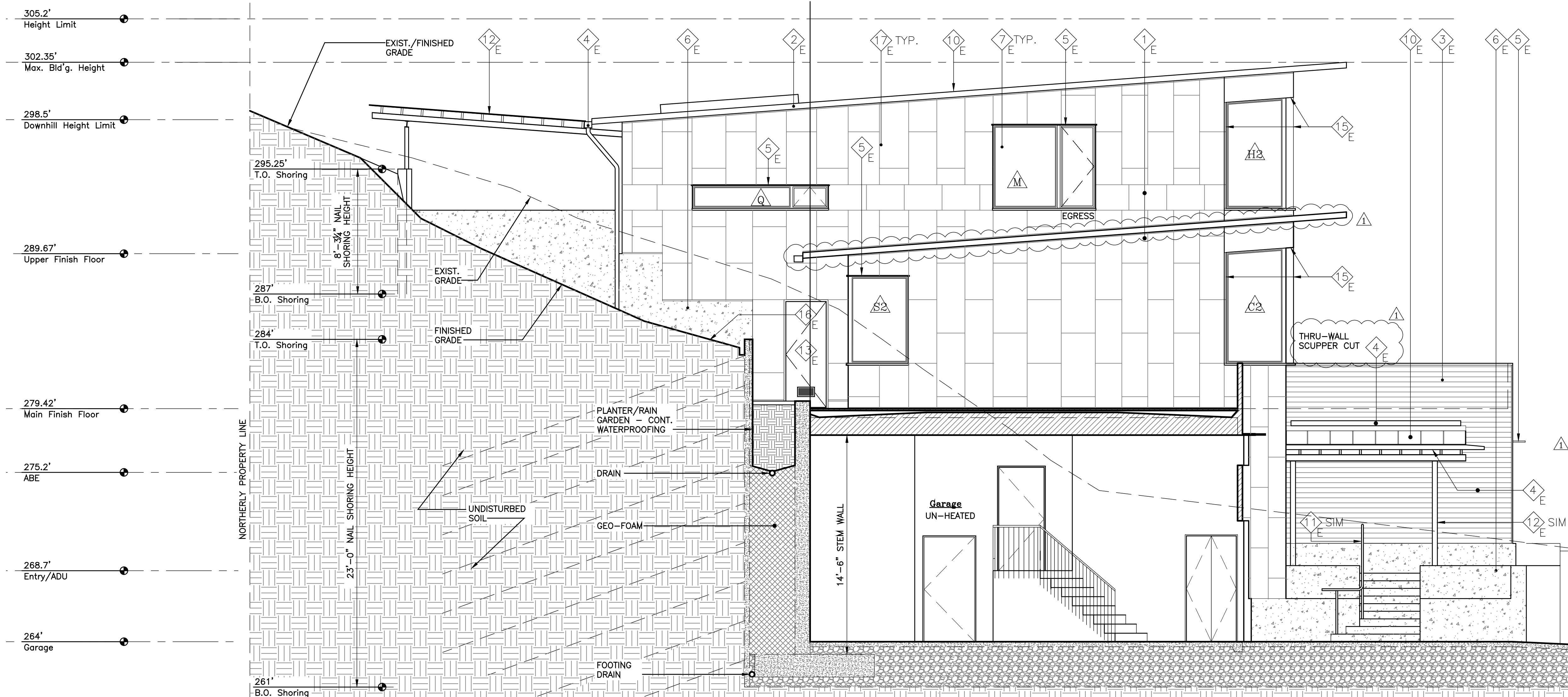
**1** North-Easterly Section/Elevation  
Scale: 1/4"=1'-0"

**EXTERIOR MATERIAL LEGEND:**

Notes: See attached memo: Project 2202-225 Sub2 Ancillary Comments

- 1 E EQUITONE FIBER CEMENT PANEL W/ EXPOSED FASTENERS - COLOR TBD
- 2 E METAL TRIM/COPING/FLASHING/SILL - COLOR TO COMPLEMENT FIBER CEMENT PANEL
- 3 E HORIZONTAL CLEAR CEDAR SHIPLAP SIDING - STAIN COLOR TBD
- 4 E METAL GUTTER/OVERFLOW SCUPPER/DOWNSPOUT METAL - COLOR TO MATCH METAL TRIM/GUTTERS ETC.
- 5 E STEEL EYEBROW - 14 GAUGE - COLOR TO MATCH METAL TRIM/GUTTERS ETC.
- 6 E CONCRETE STEM WALLS/PLANTERS - ARCHITECTURAL APPEARANCE GRADE WHERE EXPOSED
- 7 E FIBERGLASS WINDOWS
- 8 E CLEAR CEDAR T&G SOFFIT - STAIN TBD
- 9 E ESPALIER GREEN WALL - STEEL WIRE ROPE & HARDWARE
- 10 E STANDING SEAM METAL ROOF AND RELATED METAL TRIM - COLOR TBD.
- 11 E STAINLESS STEEL GUARDRAIL WITH WOOD TOP RAIL - FACE MOUNTED. SEE GENERAL NOTE #21 ON A0.1
- 12 E STEEL/WOOD/GLASS PERGOLA - OVERHEAD GLAZING PER IRC 308.6
- 13 E 18"x24" ACCESS OPENING W/ CRAWL SPACE VENT NFVA: 62SI - PER IRC R408.4/WAC 51-51 R408
- 14 E CRAWL SPACE VENT NFVA: 62SI - PER WAC 51-51 R408 AT BELOW GRADE VENTS PROVIDE STRUCTURED WELL WITH GRAVEL 6" BELOW VENT & DRAIN TO CONNECTED DRAINAGE SYSTEM.
- 15 E ELECTRIC ROLLER SHADES W/ LATERAL TRACK "FINS"
- 16 E DENSELY PLANTED VEGETATION - NO FALL RISK
- 17 E MEET OR EXCEED EC 1.4 - EFFICIENT BUILDING ENVELOPE

**2** North-Easterly Section/Elevation  
Scale: 1/4"=1'-0"



Date: 3/15/2021 Pre-App  
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8/25/2022 Sub2-2202-225

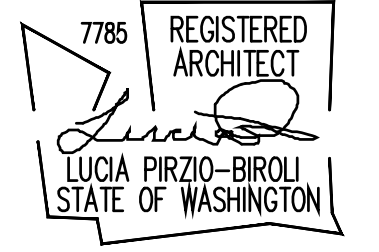
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Elevations/  
Sections  
A3.3



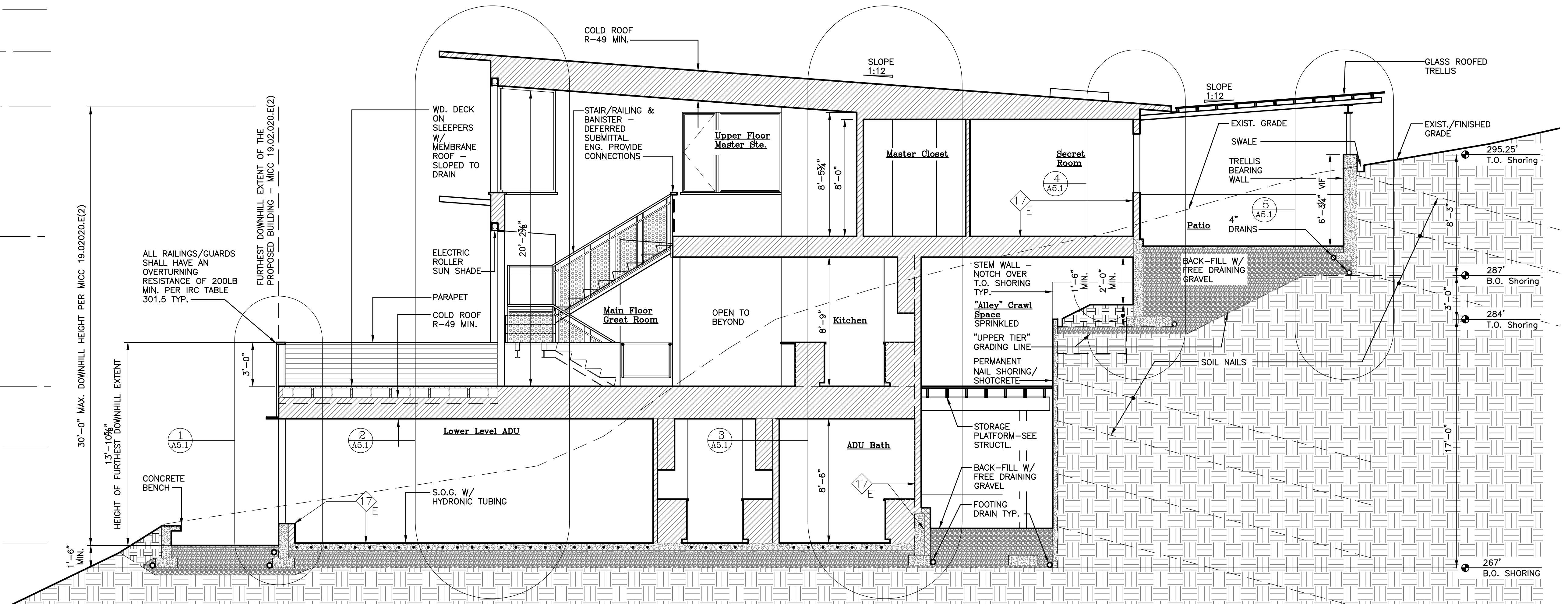
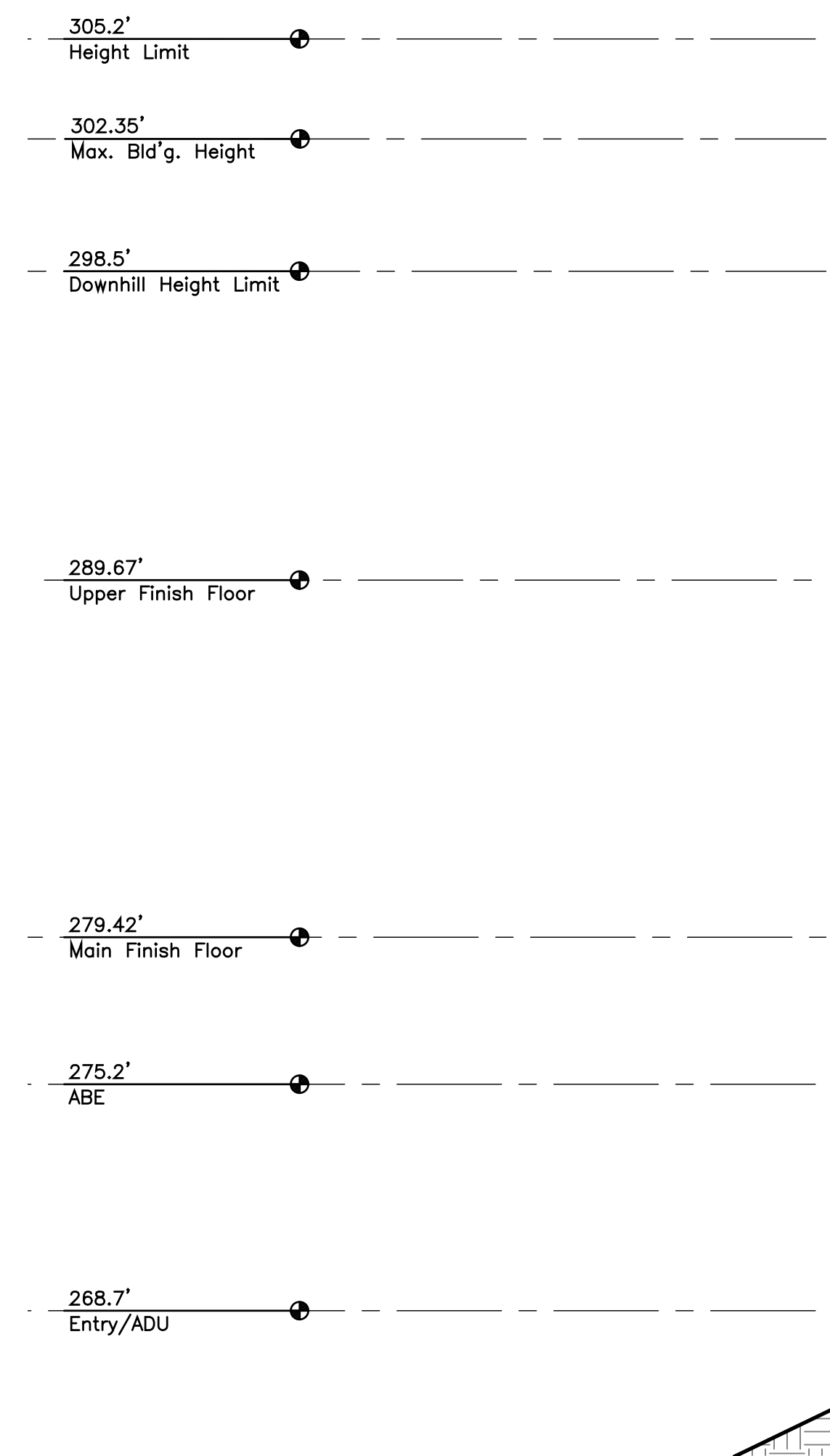
**ECTYPOS**  
ARCHITECTURE

4212 W. Mercer Way  
Mercer Island, WA 98040  
t. (206) 232-9147  
f. (206) 275-0312



# STEINBORN RESIDENCE

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040



1 General Building Section  
scale: 1/4"=1'-0"

Date: 3/15/2021 Pre-App  
2/14/2022 Permit Submittal  
8/25/2022 Sub2-2202-225

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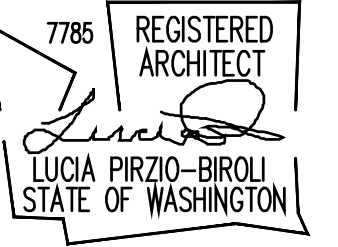
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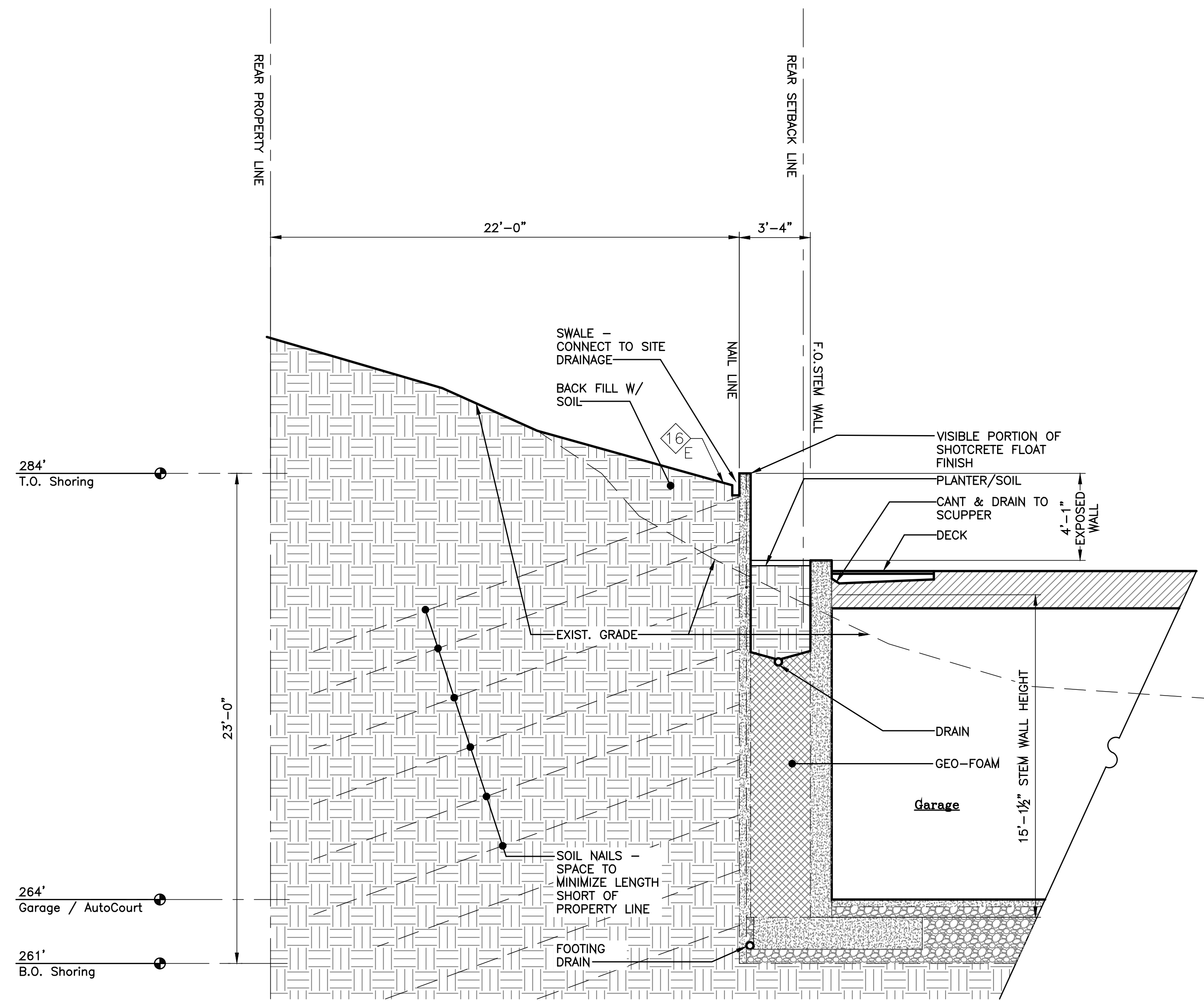
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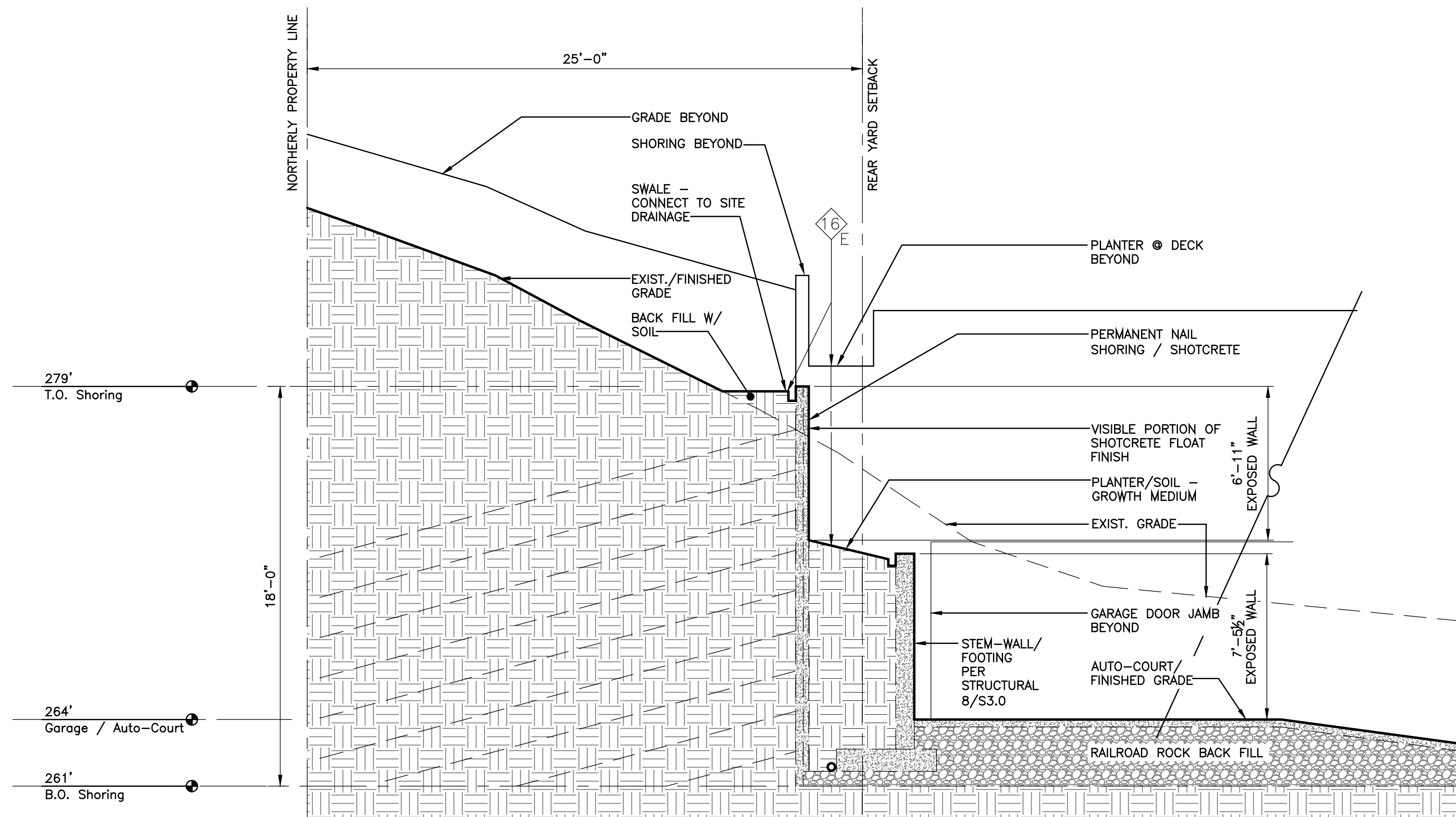


# STEINBORN RESIDENCE

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040



1 General Section @ Shoring/Deck Planter  
Scale: 1/4"=1'-0"



2 General Section @ Shoring/Driveway Planter  
Scale: 1/4"=1'-0"

Date: 3/15/2021 Pre-App  
2/14/2022 Permit Submittal  
8/25/2022 Sub2-2202-225

Scale:  
Sheet:

306.5'  
Height Limit

302.33'  
Max. Bld'g. Height

289.67'  
Upper Finish Floor

279.42'  
Main Finish Floor

276.8'  
ABE

268.7'  
Entry/ADU  
Downhill Base  
Elevation

EXTERIORLY APPLIED SPRAY FOAM  
AT ALL STRUCTURAL BAYS

T&G CEDAR SOFFIT

CURTAIN WALL-  
U-20

TYP. RAINDRIP WALL @ FIBER CEMENT  
PANEL (CAVITY WHERE ROLLER SHADES  
OCCUR); VERTICAL FURNING; R-4 MIN. CI;  
VB; SHEATHING; 2X WD. FRAMING; R-21  
MIN. INSULATION; 5/8" TYPE "X" GWB W/  
VAPOR BARRIER PRIMER/PAINT

ELECTRIC ROLLER SHADE

TYP. ROOF DECK: WOOD DECKING ON  
SLEEPERS; TPO MEMBRANE &  
UNDERLAYMENT; 3" PLYWD.; RIPPED FRAMING  
TO SLOPE W/ CLOSED CELL SPRAY FOAM  
INSULATION; SHT'G PER STRUCTURAL; FRM'G  
PER STRUCTURAL W/ 3" SPRAY FOAM  
INSULATION & BATT. INSULATION; 5/8" TYPE "X"  
GWB W/ VB PAINT/PRIMER

STEEL GUARD RAIL WITH WOOD  
TOP RAIL - SEE GEN. NOTE  
#21 ON A0.1

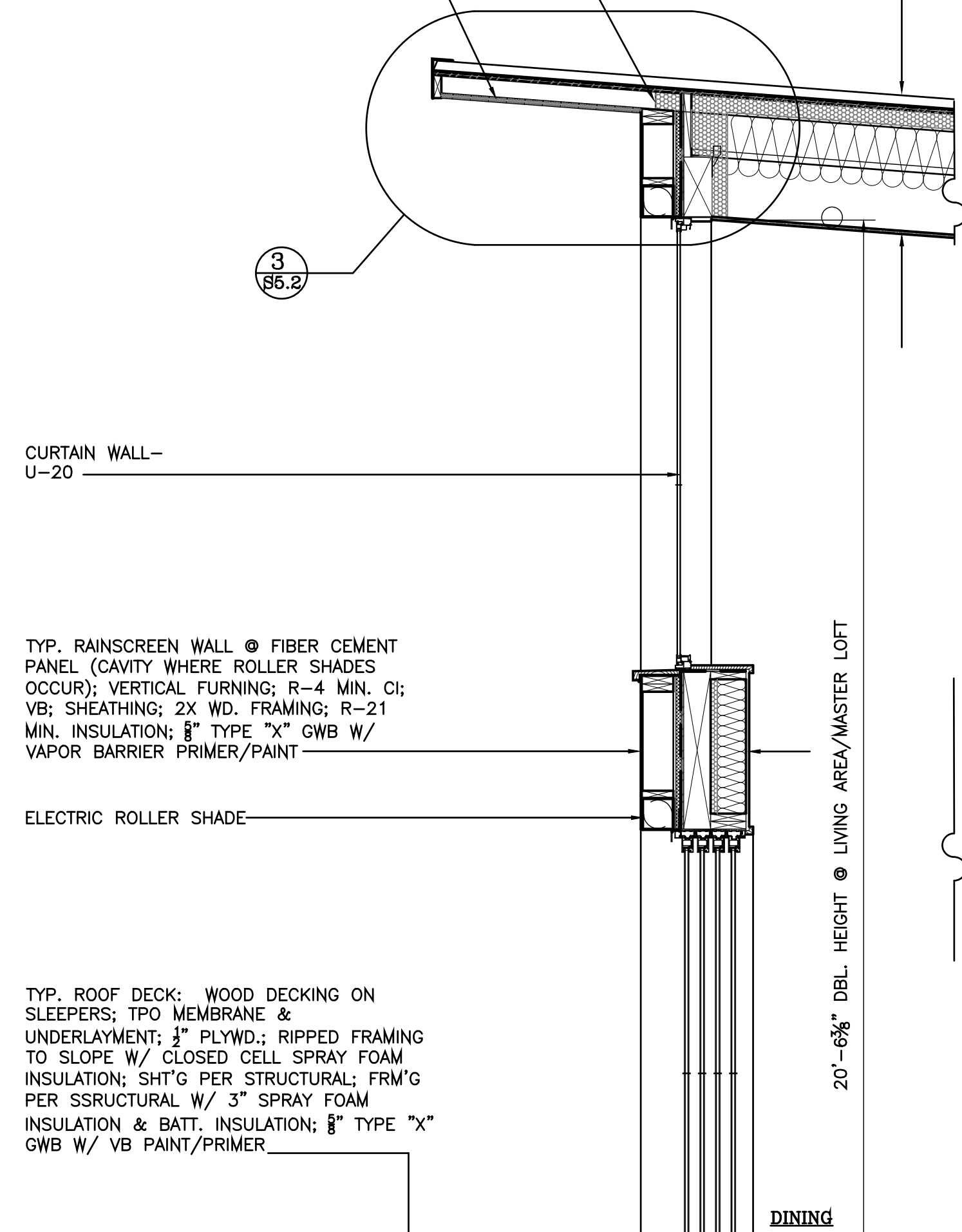
FIBERGLASS WINDOWS MAX.  
U--25 TYP.

STEM WALL W/ INTERIOR  
FRAMING: CONCRETE STEM  
WALL PER STRUCTURAL; VAPOR  
BARRIER; 2x8 WD. FRAMING W/  
R-8 MINERAL WOOL BOARD +  
R-21 BATT INSULATION  
(EXCEED EC 1.4); 5/8" TYPE "X"  
GWB W/ VAPOR BARRIER  
PRIMER/PAINT

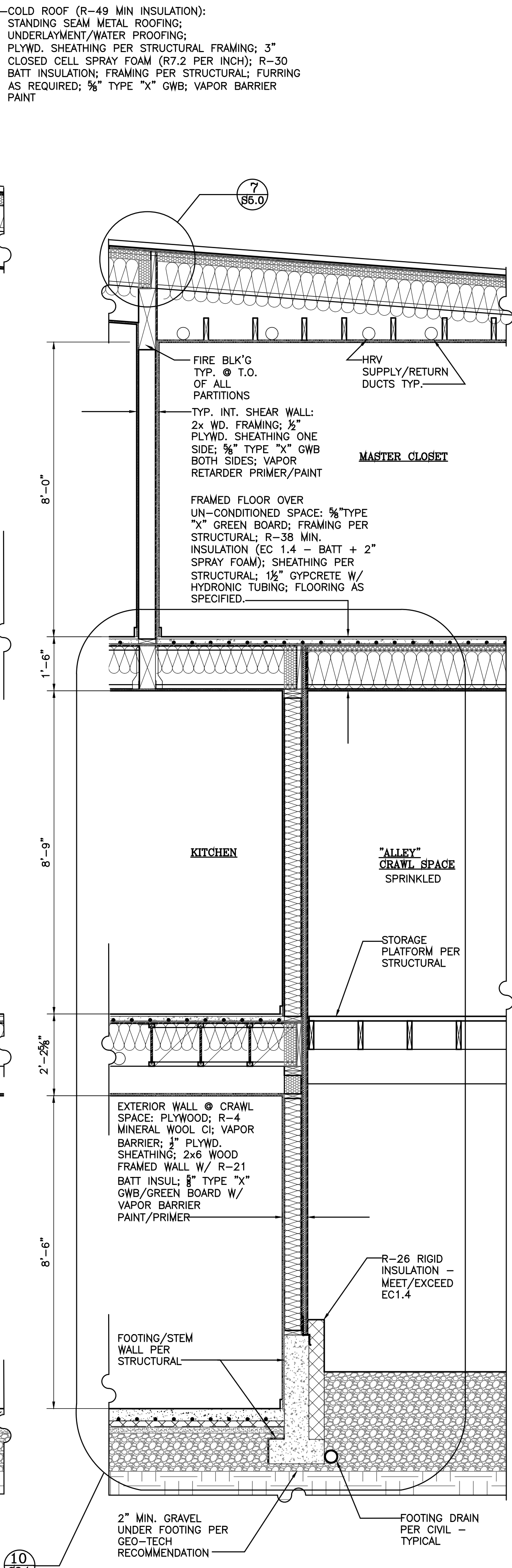
STORM DRAIN  
FOOTING DRAIN

1 Wall Section  
scale: 1/8"=1'-0"

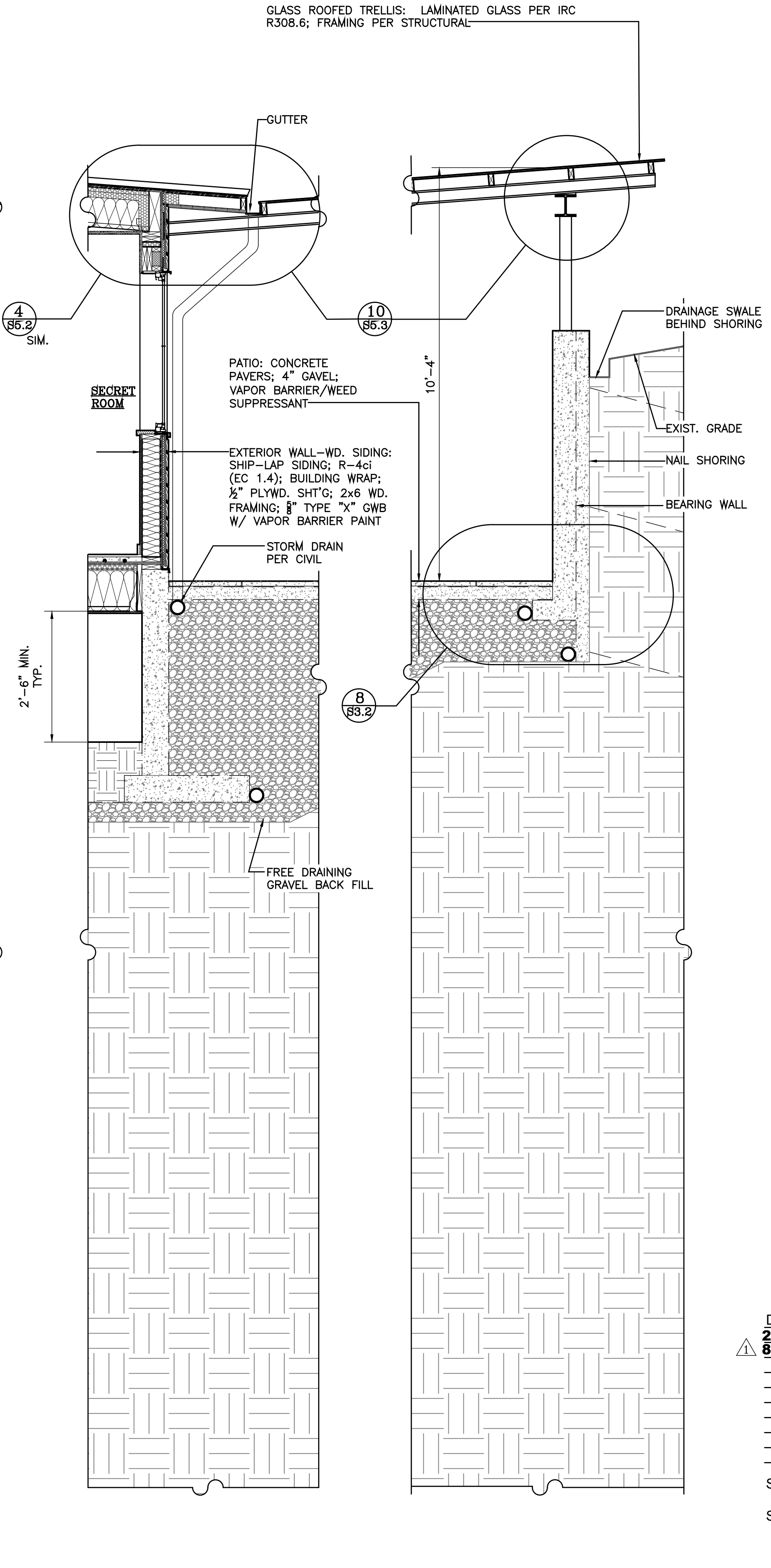
COLD ROOF (R-49 MIN INSULATION);  
STANDING SEAM METAL ROOFING;  
UNDERLAYMENT/WATER PROOFING;  
PLYWD. SHEATHING PER STRUCTURAL FRAMING; 3"  
CLOSED CELL SPRAY FOAM (R7.2 PER INCH); R-30  
BATT INSULATION; FRAMING PER STRUCTURAL; FURRING  
AS REQUIRED; 5/8" TYPE "X" GWB; VAPOR BARRIER  
PAINT



2 Wall Section  
scale: 1/8"=1'-0"



3 Wall Section  
scale: 1/8"=1'-0"



4 Wall Section  
scale: 1/8"=1'-0"

5 Wall Section  
scale: 1/8"=1'-0"

**STEINBORN RESIDENCE**

New Residence  
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Mercer Island, WA 98040

Date: 3/15/2021 Pre-App  
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8/25/2022 Sub2-2202-225

Scale:  
Sheet:





# Window Schedule

TAG	WINDOW R.O.		UNIT AREA	QTY.	TOTAL	MAX U-VALUE NOTE 6 ⚠	UA VALUE	HEAD HEIGHT (AFF)	TYPE OPERATION	SCREEN	TYPE	FRAME / FINISH	GLASS	MANUF. ⚠	NOTES
	Notes 1, 2 & 9												square ft.		
	width	height													
A	1'-0"	x 6'-4"	6.3 SQ. FT.	1	6.3 SQ. FT.	0.25	1.6 SQ. FT.	7'-0"	FIX			FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON/LAM	MARVIN	COORDINATE W/ ADJ. DOOR & CONCRETE
B	9'-8"	x 6'-8"	64.4 SQ. FT.	2	128.9 SQ. FT.	0.25	32.2 SQ. FT.	8'-6"	FIX/CASE	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	SEE ELEVATIONS/COORD. RAILING STANCHIONS
C1	2'-6"	x 7'-7 1/2"	19.1 SQ. FT.	1	19.1 SQ. FT.	0.25	4.8 SQ. FT.	10'-7 1/2"	CASE	X	CORNER	FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	COORD. W/ "C2"
C2	3'-10"	x VARIES	29.6 SQ. FT.	1	29.6 SQ. FT.	0.25	7.4 SQ. FT.	FOLLOW ROOF	FIX		CORNER	FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	COORD. W/ "C1"
D	5'-0"	x 7'-7 1/2"	38.1 SQ. FT.	1	38.1 SQ. FT.	0.25	9.5 SQ. FT.	10'-7 1/2"	FIX	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	
E	2'-6"	x 7'-7 1/2"	19.1 SQ. FT.	1	19.1 SQ. FT.	0.25	4.8 SQ. FT.	10'-7 1/2"	CASE	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	EGRESS
F1	2'-6"	x 7'-7 1/2"	19.1 SQ. FT.	1	19.1 SQ. FT.	0.25	4.8 SQ. FT.	10'-7 1/2"	CASE	X	CORNER	FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	COORDINATE W/ "F2"
F2	3'-10"	x VARIES	29.6 SQ. FT.	1	29.6 SQ. FT.	0.25	7.4 SQ. FT.	FOLLOW ROOF	FIX		CORNER	FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	COORDINATE W/ "F1"
G	3'-4"	x 7'-4"	24.4 SQ. FT.	5	122.2 SQ. FT.	0.25	30.6 SQ. FT.	10'-4"	FIX			FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	COORDINATE WITH DOOR PANELS BELOW
H1	3'-8"	x 7'-4"	26.9 SQ. FT.	1	26.9 SQ. FT.	0.25	6.7 SQ. FT.	10'-4"	FIX		CORNER	FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	COORDINATE W/ "H2"
H2	3'-10"	x VARIES	28.3 SQ. FT.	1	28.3 SQ. FT.	0.25	7.1 SQ. FT.	FOLLOW ROOF	FIX		CORNER	FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	COORDINATE W/ "H1"
I	3'-4"	x 7'-7 1/2"	25.4 SQ. FT.	1	25.4 SQ. FT.	0.25	6.4 SQ. FT.	10'-7 1/2"	FIX	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	COORDINATE W/ OVERHEAD DOOR
J	5'-0"	x 7'-7 1/2"	38.1 SQ. FT.	1	38.1 SQ. FT.	0.25	9.5 SQ. FT.	10'-7 1/2"	CASE	X				MARVIN	
K	3'-0"	x 1'-6"	4.5 SQ. FT.	3	13.5 SQ. FT.	0.25	3.4 SQ. FT.		FIX		TRANSOM	FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	COORDINATE W/ DOOR
L	6'-9"	x 5'-6"	37.1 SQ. FT.	1	37.1 SQ. FT.	0.25	9.3 SQ. FT.	8'-6"	FIX/CASE	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	EGRESS/ALIGN SILL W/ "K" / MIRROR "M"
M	6'-9"	x 5'-6"	37.1 SQ. FT.	1	37.1 SQ. FT.	0.25	9.3 SQ. FT.	8'-6"	FIX/CASE	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	EGRESS/MIRROR "L"
N	2'-4"	x 4'-4"	10.1 SQ. FT.	3	30.3 SQ. FT.	0.25	7.6 SQ. FT.	8'-10"	CASE	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	EGRESS AS SHOWN ON 2/A3.1
O	4'-10"	x 4'-0"	19.3 SQ. FT.	1	19.3 SQ. FT.	0.25	4.8 SQ. FT.	7'-0"	FIX/CASE	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	
P	5'-10"	x 4'-0"	23.3 SQ. FT.	1	23.3 SQ. FT.	0.25	5.8 SQ. FT.	7'-0"	FIX/CASE	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	
Q	8'-11 1/2"	x 1'-6"	13.4 SQ. FT.	1	13.4 SQ. FT.	0.25	3.4 SQ. FT.	4'-6" VIF	FIX/CASE	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	VERIFY SILL W/ ADJACENT TUB HEIGHT
R	2'-0"	x 13'-4"	26.7 SQ. FT.	1	26.7 SQ. FT.	0.25	6.7 SQ. FT.	13'-8" VIF	FIX			FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	COORD. W/ GARAGE DOOR AND TRACKS
S1	2'-6"	x 5'-9"	14.4 SQ. FT.	1	14.4 SQ. FT.	0.25	3.6 SQ. FT.	8'-9"	CASE	X	CORNER	FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	ALIGN WITH "C1" OPPOSITE / COORD. W/ "S2"
S2	3'-10"	x 5'-9"	22.0 SQ. FT.	1	22.0 SQ. FT.	0.25	5.5 SQ. FT.	8'-9"	FIX		CORNER	FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	COORD. W/ "S1"
T	5'-0"	x 5'-9"	28.8 SQ. FT.	1	28.8 SQ. FT.	0.25	7.2 SQ. FT.	8'-9"	CASE	X		FIBERGLASS/BLACK	LO-E3/LOW ERS/ARGON	MARVIN	ALIGN W/ "D" OPPOSITE
U	2'-10 5/8"	x 4'-2 5/8"	12.2 SQ. FT.	1	12.2 SQ. FT.	0.48	5.8 SQ. FT.	NA	"FRESH AIR"	X	SKYLIGHT	FIBERGLASS/BLACK	LO-E366/TG/LAM	VELUX	ELECTRIC/SHADE
V	2'-10 5/8"	x 2'-10 5/8"	8.3 SQ. FT.	2	16.7 SQ. FT.	0.48	8.0 SQ. FT.	NA	"FRESH AIR"	X	SKYLIGHT	FIBERGLASS/BLACK	LO-E366/TG/LAM	VELUX	ELECTRIC/SHADE
WINDOW UA:			WINDOW AREA		825.5 SQ. FT.	TOTAL UA	213.0 SQ. FT.								

**ECTYPOS**  
ARCHITECTURE

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**STEINBORN RESIDENCE**

New Residence  
8435 SE 47th PL.  
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**WINDOW NOTES:**

- CONTRACTOR SHALL MEASURE ACTUAL FRAMED OPENINGS PRIOR TO ORDERING UNITS. ROUGH OPENING PER MANUFACTURER'S REQUIREMENTS.
- WINDOW MANUFACTURER: MARVIN EXCEPT AS NOTED OTHERWISE
- WINDOW MANUFACTURER TO VERIFY OPERATION AND WIDTH OPENING - COORDINATE WITH ARCHITECT WHERE DIFFERS FROM DRAWINGS
- TEMPERED GLASS: WITHIN TWO FEET OF ALL EXTERIOR DOORS, WITHIN 18" OF FLOOR, IN SHOWERS AND OTHER HAZARDOUS LOCATIONS AS IDENTIFIED IN IRC R308.4. SEE ELEVATIONS FOR TEMPERED LIGHTS.
- EGRESS WINDOWS AT SLEEPING ROOMS SHALL MEET IRC R310
- EC 1.4: EFFICIENT BUILDING ENVELOPE ALL NEW EXTERIOR WINDOWS SHALL MEET MINIMUM U-25 MINIMUM COMPLIANCE.
- OBSCURED GLASS AS NOTED.
- SCREENS ON ALL OPERABLE WINDOWS. CONNECT SCREENS TO SECURITY SYSTEM.
- ALL OPERABLE WINDOWS CONNECTED TO WHOLE-HOUSE SECURITY SYSTEM

**ABBREVIATIONS**

- |       |                  |
|-------|------------------|
| AWN   | AWNING           |
| CASE  | CASEMENT         |
| CLR   | CLEAR            |
| DBL   | DOUBLE GLAZING   |
| FIX   | FIXED            |
| HC    | HOLLOW CORE      |
| LAM   | LAMINATED        |
| LO-E  | LOW-EMISSIVITY   |
| MIN   | MINUTE           |
| OBS   | OBSCURE          |
| R.O.  | ROUGH OPENING    |
| SC    | SOLID CORE       |
| SLD   | SLIDING          |
| SL    | SKYLIGHT         |
| STORE | STOREFRONT       |
| TBD   | TO BE DETERMINED |
| TG    | TEMPERED GLASS   |
| UA    | U-VALUE AREA     |
| WD    | WOOD             |

Date: 3/15/2021 Pre-App  
2/14/2022 Permit Submittal  
8/25/2022 Sub2-2202-225

Scale:

Sheet:

Window  
Schedule  
A9.1



### Exterior Door to Conditioned Space

TAG	PANEL SIZE		UNIT AREA square ft.	PANEL QTY.	TOTAL door area	MAX U-VALUE	UA VALUE	Thickness	Location	TYPE	HARDWARE NOTE 3	MATERIAL/FINISH	FRAME/FINISH	GLASS	MANUF.	COLOR	NOTES
	width	height															
1	3'-6"	x 7'-0"	24.5 SQ. FT.	1	24.5 SQ. FT.	.46	11.3 SQ. FT.	0'-1 3/4"	ENTRY	SC/INSULATED/SLAB	DEADBOLT/TBD	WD/TBD	WD./TBD	NA	CUSTOM	TBD	COORD W/ SIDELIGHT WINDOW "A"
2	3'-0"	x 7'-0"	21.0 SQ. FT.	1	21.0 SQ. FT.	.46	9.7 SQ. FT.	0'-1 3/4"	ADU ENTRY	SC/FLUSH/INSULATED	DEADBOLT/LEVER	WD/STAIN	WD./STAIN	NA	TBD	TBD	COORD. W/ TRANSOM "K"
3	2'-4"	x 7'-0"	16.3 SQ. FT.	2	32.7 SQ. FT.	.46	15.0 SQ. FT.	0'-1 3/4"	GARAGE/MECH.	SC/FLUSH/INSULATED	SELF-CLOSING/LEVER	WD/STAIN	WD./STAIN	NA	TBD	MATCH INT. DOORS	20 MINUTE
4	3'-0"	x 7'-0"	21.0 SQ. FT.	1	21.0 SQ. FT.	.46	9.7 SQ. FT.	0'-1 3/4"	GARAGE/ENTRY	SC/FLUSH/INSULATED	SELF-CLOSING/LEVER	WD./STAIN	WD./STAIN	NA	TBD	MATCH INT. DOORS	20 MINUTE
5	3'-6"	x 10'-7"	37.0 SQ. FT.	4	148.2 SQ. FT.	.25	37.0 SQ. FT.	0'-1 3/4"	MAIN DINING/DECK 1	STORE/MULTI-SLIDE	TRACK/3 PT. LOCK	FIBERGLASS/MATCH WINDOWS	FIBERGLASS/FACTORY	LO-E3/LO-ERS/ARGON/TG	MARVIN	BLACK	NOTE 4
6	3'-0"	x 7'-0"	21.0 SQ. FT.	1	21.0 SQ. FT.	.25	5.3 SQ. FT.	0'-1 3/4"	MAIN LOUNGE/DECK 2	STORE/INSULATED	DEADBOLT/LEVER	FIBERGLASS/MATCH WINDOWS	FIBERGLASS/FACTORY	LO-E3/LO-ERS/ARGON/TG	MARVIN	BLACK	
7	2'-8"	x 7'-0"	18.7 SQ. FT.	1	18.7 SQ. FT.	.25	4.7 SQ. FT.	0'-1 3/4"	SECRET ROOM/PATIO	STORE/INSULATED	DEADBOLT/LEVER	FIBERGLASS/MATCH WINDOWS	FIBERGLASS/FACTORY	LO-E3/LO-ERS/ARGON/TG	MARVIN	BLACK	
31	3'-0"	x 7'-0"	21.0 SQ. FT.	1	21.0 SQ. FT.	.46	9.7 SQ. FT.	0'-1 3/4"	ELEVATOR/MASTER STE	SC/FLUSH/INSULATED	SELF-CLOSING/LEVER	WD./STAIN	WD./STAIN	NA	TBD	MATCH INT. DOORS	20 MINUTE
32	3'-0"	x 7'-0"	21.0 SQ. FT.	1	21.0 SQ. FT.	.46	9.7 SQ. FT.	0'-1 3/4"	ELEVATOR/MAIN FLOOR	SC/FLUSH/INSULATED	SELF-CLOSING/LEVER	WD./STAIN	WD./STAIN	NA	TBD	MATCH INT. DOORS	20 MINUTE
33	3'-0"	x 7'-0"	21.0 SQ. FT.	1	21.0 SQ. FT.	.46	9.7 SQ. FT.	0'-1 3/4"	ELEVATOR/ENTRY	SC/FLUSH/INSULATED	SELF-CLOSING/LEVER	WD./STAIN	WD./STAIN	NA	TBD	MATCH INT. DOORS	20 MINUTE
34	3'-0"	x 7'-0"	21.0 SQ. FT.	1	21.0 SQ. FT.	.46	9.7 SQ. FT.	0'-1 3/4"	ELEVATOR/GARAGE	SC/FLUSH/INSULATED	SELF-CLOSING/LEVER	WD./STAIN	WD./STAIN	NA	TBD	MATCH INT. DOORS	20 MINUTE
AREA DOORS IMPACTING UA:			EXT. DOOR AREA	268.3 SQ. FT.	TOTAL UA	87.9 SQ. FT.											

ELEVATOR DOORS  
NOTE 13

**EXTERIOR DOOR NOTES:**

- CONTRACTOR SHALL MEASURE ACTUAL FRAMED OPENINGS PRIOR TO ORDERING UNITS. ROUGH OPENING PER MANUFACTURER'S REQUIREMENTS.
- UNIT BREAK DOWN W/ IN ROUGH OPENING
- (3) MINIMUM HEAVY DUTY CONCEALED HINGES MIN. AT ALL EXTERIOR SWING DOORS
- 3 POINT LOCKING SYSTEM MINIMUM
- MANUFACTURER: MARVIN EXCEPT AS NOTED OTHERWISE
- MANUFACTURER TO VERIFY OPERATION AND WIDTH OPENING - COORDINATE WITH ARCHITECT WHERE DIFFERS FROM DRAWINGS
- TEMPERED GLASS: WITHIN TWO FEET OF ALL EXTERIOR DOORS, WITHIN 18" OF FLOOR, IN SHOWERS AND OTHER HAZARDOUS LOCATIONS AS IDENTIFIED IN IRC R308.4
- GLASS - LO-E3/LOW ERS/ARGON FILLED AT ALL WINDOWS AND STOREFRONT DOORS
- EGRESS WINDOWS AT SLEEPING ROOMS SHALL MEET IRC R310. NOTED ON ELEVATIONS
- EC 1.4: EFFICIENT BUILDING ENVELOPE ALL NEW EXTERIOR WINDOWS AND GLAZED DOORS SHALL MEET MINIMUM U-25 MINIMUM COMPLIANCE.
- OBSCURED GLASS AS NOTED.
- SCREENS ON ALL OPERABLE WINDOWS, SLIDING GLASS DOORS AND SWING DOORS AS NOTED.
- ALL EXTERIOR DOORS AND SCREENS CONNECTED TO WHOLEHOUSE SECURITY SYSTEM.
- ELEVATOR DOORS: 20 MINUTE WITH SELF-CLOSING HARDWARE

**ABBREVIATIONS**

- AWN AWNING
- CASE CASEMENT
- CLR CLEAR
- DBL DOUBLE GLAZING
- FIX FIXED
- HC HOLLOW CORE
- LAM LAMINATED
- LO-E LOW-EMISSIVITY
- MIN MINUTE
- OBS OBSOURE
- R.C. ROLLER CATCH
- R.O. ROUGH OPENING
- SC SOLID CORE
- SLD SLIDING
- SL SKYLIGHT
- STORE STOREFRONT
- TBD TO BE DETERMINED
- TG TEMPERED GLASS
- TRPL TRIPLE
- UA U-VALUE AREA
- WD WOOD

### Interior Door Schedule & Doors From Un-conditioned Space to Exterior

TAG	PANEL SIZE (NOTE #4)		PANEL QTY.	UNIT AREA square ft.	Thickness	TYPE	LOCATION	MATERIAL/ FINISH	GLASS	HARDWARE NOTES 2&3	MANUF.	NOTES
	width	height										
10	2'-6"	x 7'-0"	1	17.5 SQ. FT.	0'-1 3/8"	HC/SLAB	ENTRY HALL/STORAGE	WOOD/TBD	NA	PULL/RC	TBD.	NOTE 4
11	3'-0"	x 7'-0"	1	21.0 SQ. FT.	0'-1 3/8"	SC/SLAB	ENTRY HALL/ADU	WOOD/TBD	NA	SELF-CLOSING/LEVER/DEADBOLT	TBD	20 MIN. DOOR/PROVIDE SEPARATE LOCKS BOTH SIDES
12	2'-4"	x 7'-0"	1	16.3 SQ. FT.	0'-1 3/8"	SC/SLAB	ADU/BATH	WOOD/TBD	NA	LEVER/PRIVACY	TBD	NOTE 4
13	2'-4"	x 7'-0"	2	16.3 SQ. FT.	0'-1 3/8"	HC/SLAB	ENTRY COATS	WOOD/TBD	N/A	PULLS/RC	TBD	NOTE 4
14	18'-0"	x 8'-0"	1	144.0 SQ. FT.	0'-1 3/4"	SECTIONAL	GARAGE	WD. FACED/STAIN	N/A	MOTORIZED TRACK	TBD	MATCH CEDAR SIDING FINISH
16	3'-0"	x 7'-0"	1	21.0 SQ. FT.	0'-1 3/8"	SC/SLAB/PKT	ENTRY HALL	WOOD/TBD	N/A	FLUSH PULL	TBD	SEE NOTE 4/PART OF FLUSH PANEL SYSTEM
16	2'-6"	x 7'-0"	2	17.5 SQ. FT.	0'-1 3/8"	HC/SLAB	GARAGE STORAGE	WOOD/TBD	N/A	PULL/RC	TBD	NOTE 4
17	3'-0"	x 7'-0"	1	21.0 SQ. FT.	0'-1 3/8"	HC/SLAB	LOUNGE/EQUIP.	WOOD/TBD	N/A	PULL/RC	TBD	NOTE 4
18	2'-6"	x 7'-0"	1	17.5 SQ. FT.	0'-1 3/8"	SC/SLAB	HALL/DEN-GUEST	WOOD/TBD	N/A	LEVER/PRIVACY	TBD	NOTE 4
19	2'-6"	x 7'-0"	1	17.5 SQ. FT.	0'-1 3/8"	SC/SLAB	HALL/LAUNDRY	WOOD/TBD	N/A	LEVER/PASS	TBD	NOTE 4
20	3'-0"	x 7'-0"	1	21.0 SQ. FT.	0'-1 3/8"	STORE/PKT	GREAT ROOM/HALL	WOOD/TBD	OBS/TG	FLUSH PULL	TBD	NOTE 4
21	2'-4"	x 7'-0"	1	16.3 SQ. FT.	0'-1 3/8"	SC/SLAB	HALL/GUEST BATH	WOOD/TBD	N/A	LEVER/PRIVACY	TBD	NOTE 4
22	3'-0"	x 7'-0"	1	21.0 SQ. FT.	0'-1 3/4"	SC/SLAB	DECK/"ALLEY"	MATCH ADJ. SIDING	N/A	LEVER/DEADBOLT	TBD	MATCH SIDING/PROVIDE GRILL W/ MIN. NWA=62SI
23	2'-4"	x 7'-0"	1	16.3 SQ. FT.	0'-1 3/8"	SC/SLAB	MASTER BATH/EQUIP CABINET	WOOD/TBD	N/A	PULL/RC	TBD	NOTE 4
24	3'-0"	x 7'-0"	1	21.0 SQ. FT.	0'-1 3/8"	SC/PKT	MASTER BED/BATH	WOOD/TBD	N/A	FLUSH PULL	TBD	NOTE 4
25	2'-6"	x 7'-0"	1	17.5 SQ. FT.	0'-1 3/8"	SC/SLAB	CLOSET/HALL	WOOD/TBD	N/A	FLUSH PULL	TBD	NOTE 4
26	2'-6"	x 7'-0"	1	17.5 SQ. FT.	0'-1 3/8"	SC/SLAB	CLOSET/HALL	WOOD/TBD	N/A	FLUSH PULL	TBD	NOTE 4
27	2'-8"	x 7'-0"	1	18.7 SQ. FT.	0'-1 3/8"	STORE	SECRET ROOM/HALL	WOOD/TBD	OBS/TG	LEVER/PRIVACY	TBD	NOTE 4
28	3'-0"	x 7'-0"	1	21.0 SQ. FT.	0'-1 3/8"	SC/PKT	MASTER BED/HALL	WOOD/TBD	N/A	FLUSH PULL	TBD	NOTE 4
29	2'-6"	x 7'-0"	1	17.5 SQ. FT.	0'-1 3/8"	SC/SLAB	MSTR. BATH/W.C.	WOOD/TBD	N/A	LEVER/PRIVACY	TBD	NOTE 4
30	3'-0"	x 6'-8"	1	20.0 SQ. FT.	0'-0 3/8"	SHOWER	MASTER BATH	FRAMELESS SHOWER	LAMINATED/TG	CHROME TRACK/PULL	TBD	4" UNDER-CUT/COORD. W/ SHOWER ENCLOSURE

**INTERIOR DOOR NOTES:**

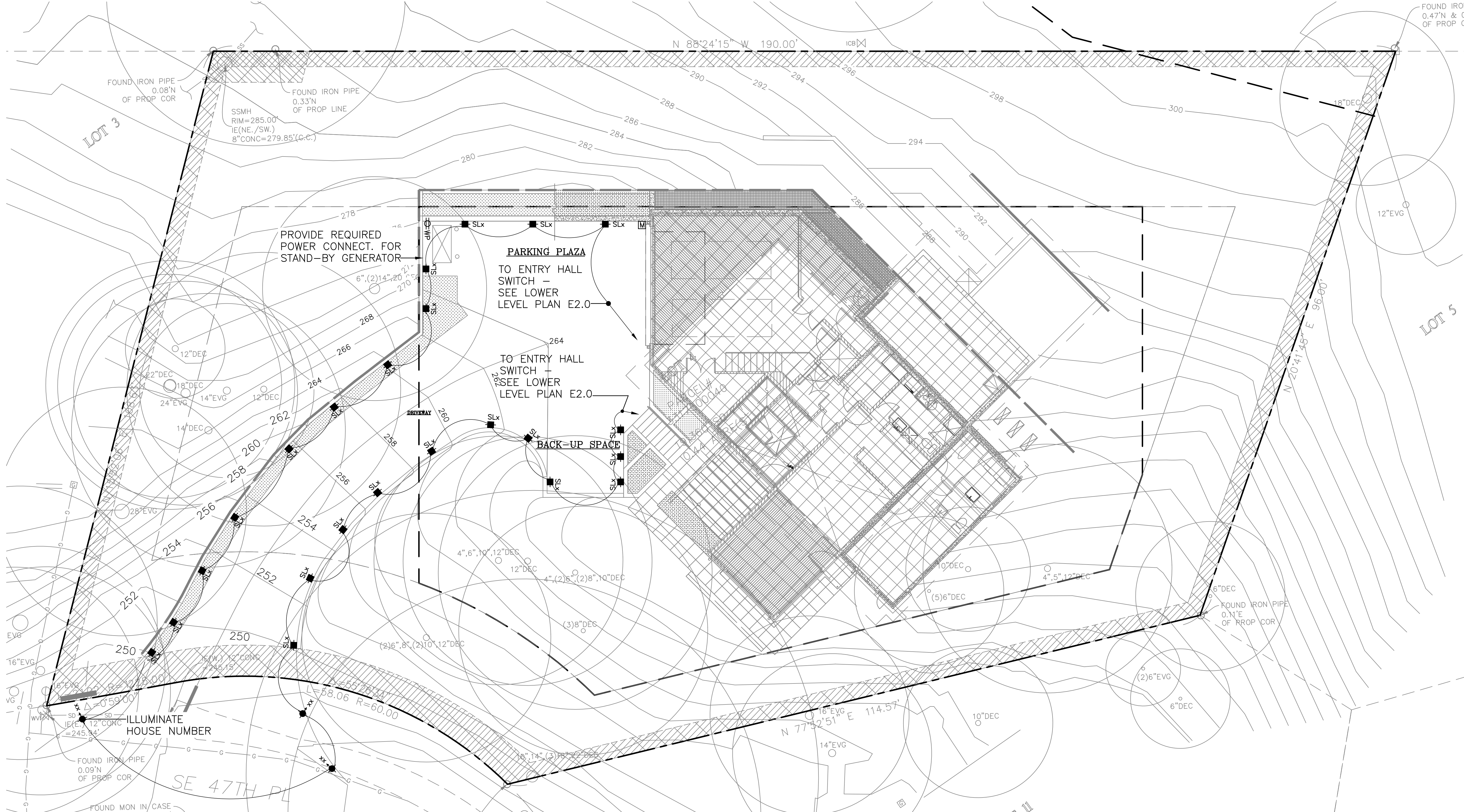
- ALL NON-CLOSET FLUSH DOORS - SOLID CORE
- (3) HINGES MINIMUM
- HANDLE LEVER UNO
- UNDERCUT DOORS 1/2" TO HABITABLE SPACES AS NECESSARY TO MEET WHOLE HOUSE VENTILATION REQUIREMENTS
- MEASURE PRIOR TO ORDERING DOORS.

**STEINBORN RESIDENCE**

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040

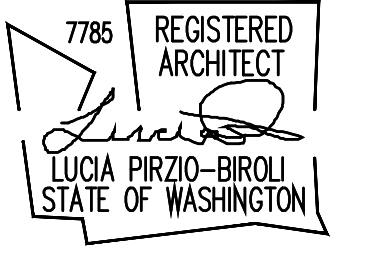
Date: 3/15/2021 Pre-App  
2/14/2022 Permit Submittal  
8/25/2022 Sub2-2202-225

Scale:  
Sheet:



**ECTYPOS**  
ARCHITECTURE

4212 W. Mercer Way  
Mercer Island, WA 98040  
t. (206) 232-9147  
f. (206) 275-0312



**STEINBORN RESIDENCE**

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040

**1 Site Electrical Plan**  
Scale: 1/8"=1'-0"

**Power and Lighting Legend**

- CFM Recessed Ceiling Mounted Exhaust Fan
- ⊙ SC Recessed Ceiling Mounted Smoke Detector/Carbon Monoxide
- ⊙ HD Heat Detector / Heat Alarm
- ⊙ CC Cable Connection
- ⊙ FC Floor Mounted Cable Connection
- ⊙ DO Dedicated Data Outlet (CatV)
- ⊙ S Switch
- ⊙ SM Switch, Multi-way
- ⊙ SD Switch, Dimmer
- ⊙ SDM Switch, Dimmer/Multi-way
- ⊙ DA Dr. Act. Switch, Door Activated
- ⊙ DO Duplex Outlet
- ⊙ GFI Ground Fault Circuit Interrupter
- ⊙ WP Exterior Duplex Outlet
- ⊙ FO Four-plex Outlet
- ⊙ FDO Floor Mounted Duplex Outlet

- ⊙ SO Strip Outlets
- ⊙ 220V 220 V Outlet
- ⊙ P Breaker Panel
- ⊙ M Meter
- ⊙ S Security Panel
- ⊙ RCD Recessed Ceiling Mounted LED Downlight
- ⊙ RCDW Recessed Ceiling Mounted LED Wallwasher
- ⊙ SCED Surface Ceiling Mounted LED Downlight
- ⊙ SSW Surface Mounted Wall LED Sconce
- ⊙ TLxx Surface Mounted Track LED Lighting
- ⊙ UCxx Surface Mounted Undercabinet Strip LED Lighting
- ⊙ RLxx Ribbon LED linear light
- ⊙ Pxx Pendant Fixture
- ⊙ Pxx Cluster Pendant Fixture
- ⊙ SDLx Surface Mounted Downlight

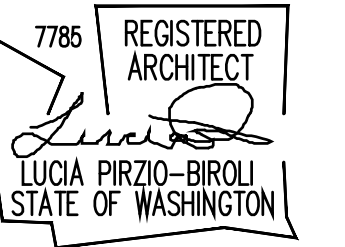
- ⊙ xx Surface Mounted LED Batten Fixture
- ⊙ xx Recessed Mounted Wall LED Washer
- ⊙ xx Recessed Wall LED Light
- ⊙ xx Exterior Recessed Ceiling Mounted LED Downlight
- ⊙ xx Exterior Ground LED Light
- ⊙ Sxx Exterior Surface Mounted Wall LED Sconce
- ⊙ SLx Exterior Recessed Wall LED Step Light
- ⊙ DBx Exterior Direct Burial Uplight
- ⊙ xx Pool Light
- ⊙ Waste Disposal
- ⊙ Level 2 240V EV Charger
- ⊙ CF Ceiling Fan with Light
- ⊙ SC Security Camera w/ Night Vision Capability

**NOTES:**  
1- INSTALL HOUSEHOLD FIRE ALARM  
2- INSTALL COMPREHENSIVE SECURITY

Date: 3/15/2021 Pre-App  
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8/25/2022 Sub2-2202-225

Scale:  
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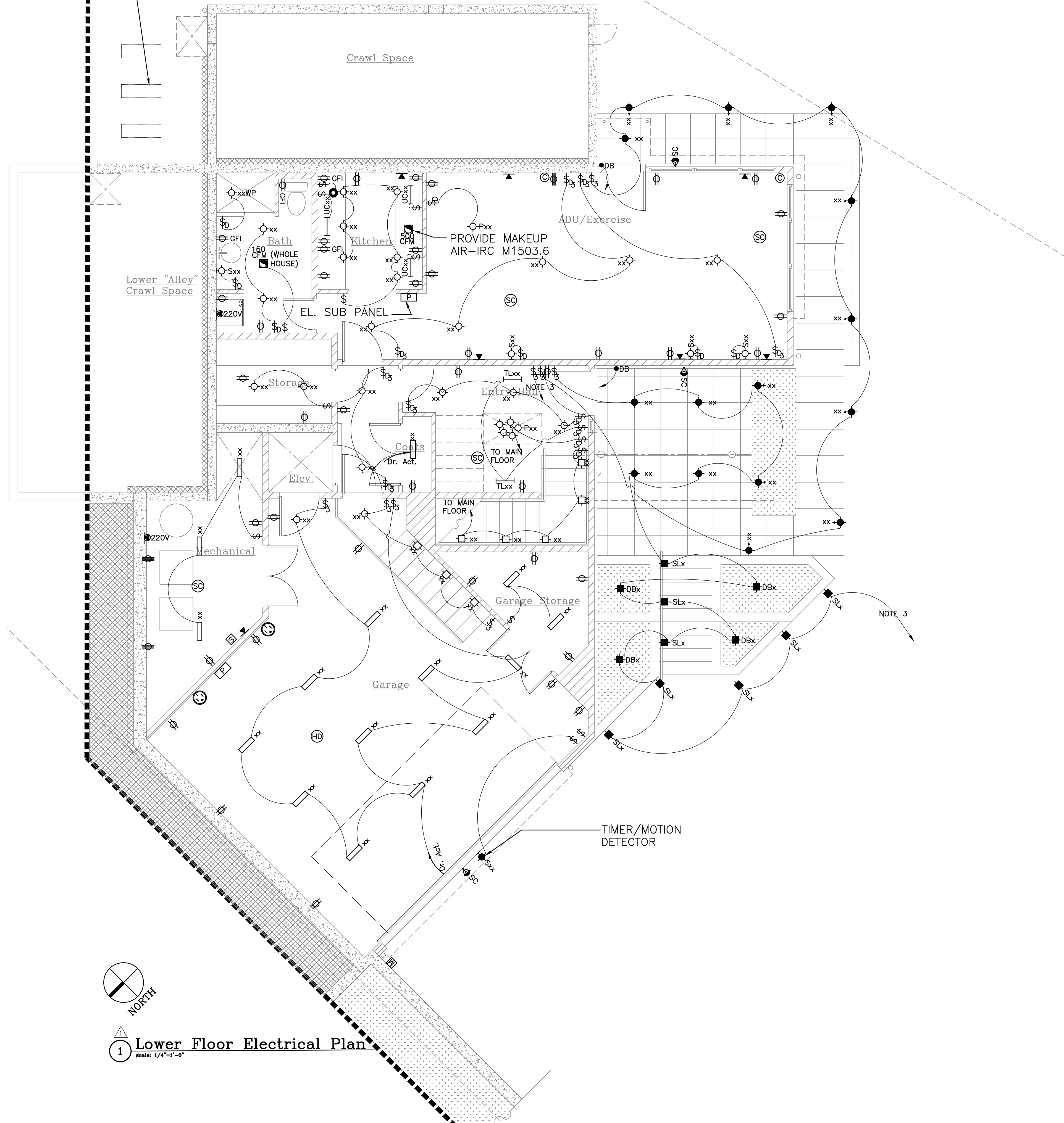
Site Electrical Plan  
E1.0



# STEINBORN RESIDENCE

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040

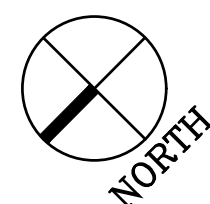
PROVIDE REQUIRED POWER:  
MINI-SPLIT & AIR TO WATER  
CONDENSER



### Power and Lighting Legend

- Recessed Ceiling Mounted Exhaust Fan
- Recessed Ceiling Mounted Smoke Detector/Carbon Monoxide
- Heat Detector / Heat Alarm
- Cable Connection
- Floor Mounted Cable Connection
- Dedicated Data Outlet (CatVI)
- Switch
- Switch, Multi-way
- Switch, Dimmer
- Switch, Dimmer/Multi-way
- Switch, Door Activated
- Duplex Outlet
- Ground Fault Circuit Interrupter
- Exterior Duplex Outlet
- Four-plex Outlet
- Floor Mounted Duplex Outlet
- Strip Outlets
- 220 V Outlet
- Breaker Panel
- Meter
- Security Panel
- Recessed Ceiling Mounted LED Downlight
- Recessed Ceiling Mounted LED Wallwasher
- Surface Ceiling Mounted LED Downlight
- Surface Mounted Wall LED Sconce
- Surface Mounted Track LED Lighting
- Surface Mounted Undercabinet Strip LED Lighting
- Ribbon LED linear light
- Pendant Fixture
- Cluster Pendant Fixture
- Surface Mounted Downlight
- Surface Mounted LED Batten Fixture
- Recessed Step LED Light
- Exterior Recessed Ceiling Mounted LED Downlight
- Exterior Ground LED Light
- Exterior Surface Mounted Wall LED Sconce
- Exterior Recessed Wall LED Step Light
- Exterior Direct Burial Uplight
- Pool Light
- Waste Disposal
- Level 2 240V EV Charger
- Security Camera w/ Night Vision Capability
- DOOR BELL

- Notes:**
1. Install household fire alarm system as outlined in General Notes on A0.1
  2. Install comprehensive security system as specified.
  3. To parking plaza and driveway lighting – see E1.0 for site electrical plan.



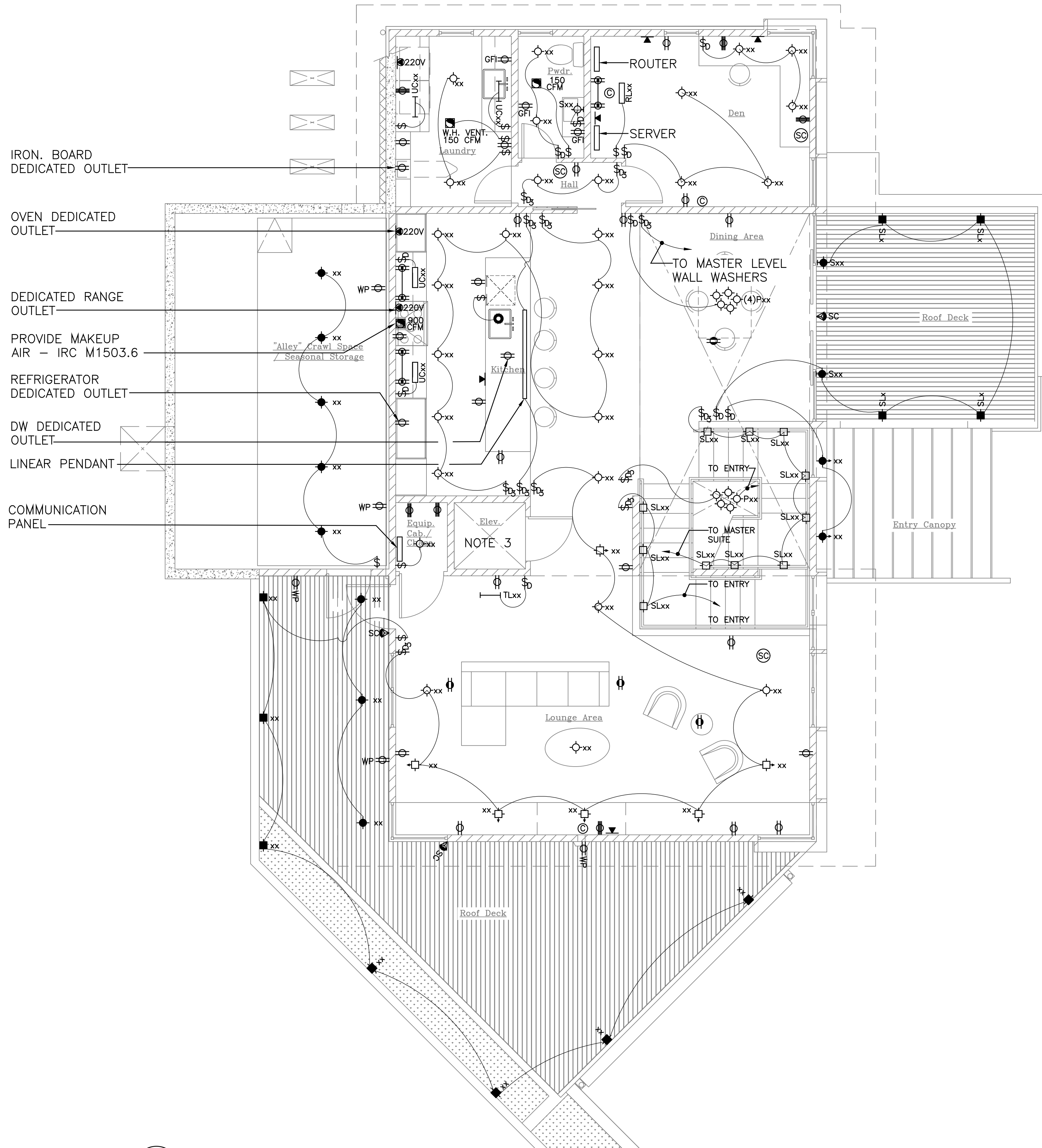
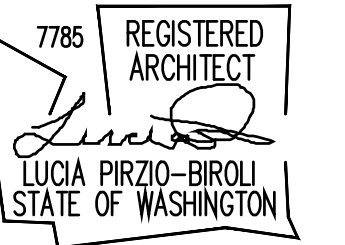
**1 Lower Floor Electrical Plan**  
Scale: 1/4"=1'-0"

Date: 3/15/2021 Pre-App  
2/14/2022 Permit Submittal  
8/25/2022 Sub2-2202-225

Scale:

Sheet:

Lower Floor  
Electrical Plan  
E2.0



IRON. BOARD  
DEDICATED OUTLET

OVEN DEDICATED  
OUTLET

DEDICATED RANGE  
OUTLET

PROVIDE MAKEUP  
AIR - IRC M1503.6

REFRIGERATOR  
DEDICATED OUTLET

DW DEDICATED  
OUTLET

LINEAR PENDANT

COMMUNICATION  
PANEL

**Power and Lighting Legend**

- Recessed Ceiling Mounted Exhaust Fan
- Recessed Ceiling Mounted Smoke Detector/Carbon Monoxide
- Heat Detector / Heat Alarm
- Cable Connection
- Floor Mounted Cable Connection
- Dedicated Data Outlet (CatV)
- Switch
- Switch, Multi-way
- Switch, Dimmer
- Switch, Dimmer/Multi-way
- Switch, Door Activated
- Duplex Outlet
- Ground Fault Circuit Interupter
- Exterior Duplex Outlet
- Four-plex Outlet
- Floor Mounted Duplex Outlet
- Strip Outlets
- 220 V Outlet
- Breaker Panel
- Meter
- Security Panel
- Recessed Ceiling Mounted LED Downlight
- Recessed Ceiling Mounted LED Wallwasher
- Surface Ceiling Mounted LED Downlight
- Surface Mounted Wall LED Sconce
- Surface Mounted Track LED Lighting
- Surface Mounted Undercabinet Strip LED Lighting
- Ribbon LED linear light
- Pendant Fixture
- Cluster Pendant Fixture
- Surface Mounted Downlight
- Surface Mounted LED Batten Fixture
- Recessed Wall LED Light
- Exterior Recessed Ceiling Mounted LED Downlight
- Exterior Ground LED Light
- Exterior Surface Mounted Wall LED Sconce
- Exterior Recessed Wall LED Step Light
- Exterior Direct Burial Uplight
- Pool Light
- Waste Disposal
- Level 2 240V EV Charger
- Security Camera w/ Night Vision Capability
- DOOR BELL

- Notes:**
1. Install household fire alarm system as outlined in General Notes on A0.1
  2. Install comprehensive security system as specified.
  3. Provide all necessary power for elevator

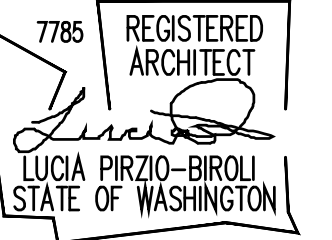
**STEINBORN RESIDENCE**

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040

**1 Main Floor Electrical Plan**  
Scale: 1/4"=1'-0"

Date: 3/15/2021 Pre-App  
2/14/2022 Permit Submittal  
8/25/2022 Sub2-2202-225

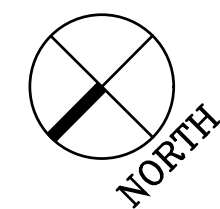
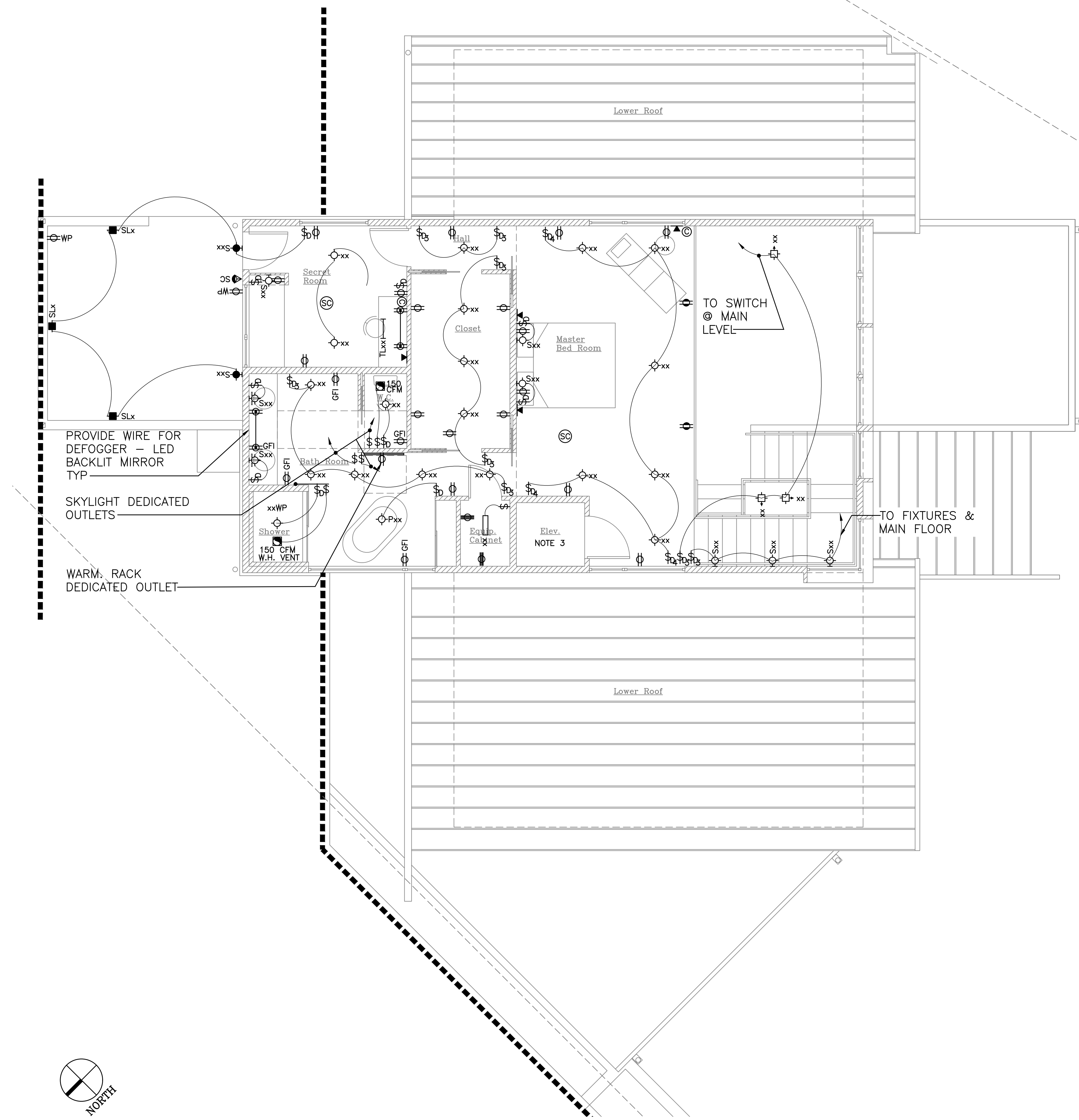
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**Main Floor  
Electrical Plan  
E2.1**



**Power and Lighting Legend**

	Recessed Ceiling Mounted Exhaust Fan
	Recessed Ceiling Mounted Smoke Detector/Carbon Monoxide
	Heat Detector / Heat Alarm
	Cable Connection
	Floor Mounted Cable Connection
	Dedicated Data Outlet (CatVI)
	Switch
	Switch, Multi-way
	Switch, Dimmer
	Switch, Dimmer/Multi-way
	Switch, Door Activated
	Duplex Outlet
	Ground Fault Circuit Interrupter
	Exterior Duplex Outlet
	Four-plex Outlet
	Floor Mounted Duplex Outlet
	Strip Outlets
	220 V Outlet
	Breaker Panel
	Meter
	Security Panel
	Recessed Ceiling Mounted LED Downlight
	Recessed Ceiling Mounted LED Wallwasher
	Surface Ceiling Mounted LED Downlight
	Surface Mounted Wall LED Sconce
	Surface Mounted Track LED Lighting
	Surface Mounted Undercabinet Strip LED Lighting
	Ribbon LED linear light
	Pendant Fixture
	Cluster Pendant Fixture
	Surface Mounted Downlight
	Surface Mounted LED Batten Fixture
	Recessed Mounted Wall LED Washer
	Recessed Wall LED Light
	Exterior Recessed Ceiling Mounted LED Downlight
	Exterior Ground LED Light
	Exterior Surface Mounted Wall LED Sconce
	Exterior Recessed Wall LED Step Light
	Exterior Direct Burial Uplight
	Pool Light
	Waste Disposal
	Level 2 240V EV Charger
	Ceiling Fan with Light
	Security Camera w/ Night Vision Capability

- Notes:**
1. Install household fire alarm system as outlined in General Notes on A0.1
  2. Install comprehensive security system as specified.
  3. Provide all necessary power for elevator



**1 Upper Floor Electrical Plan**  
Scale: 1/4"=1'-0"

**STEINBORN RESIDENCE**

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040

Date: 3/15/2021 Pre-App  
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8/25/2022 Sub2-2202-225

Scale:

Sheet:

Upper Floor  
Electrical Plan  
E2.2



WOOD

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

Table with 2 columns: JOISTS, BEAM AND STRINGERS, POSTS AND TIMBERS, STUDS PLATES & MISCELLANEOUS LIGHT FRAMING, 2X AND 3X TONGUE AND GROOVE DECKING and HEM-FIR NO. 2 (UNLESS NOTED OTHERWISE ON PLANS) MINIMUM BASE VALUE, Fb = 850 PSI...

43. WOOD FASTENERS:

A. NAIL SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

Table with 3 columns: SIZE, LENGTH, DIAMETER. Rows include 6d, 8d, 10d, 12d, 16d with corresponding length and diameter values.

DESIGN IS BASED ON COMMON STEEL WIRE NAILS MEETING THE REQUIREMENTS OF ASTM F1667. USE OF ALTERNATE FASTENERS MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER PRIOR TO THE START OF CONSTRUCTION.

B. NAILS — PLYWOOD (APA RATED SHEATHING) FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED.

44. WOOD FRAMING NOTES — THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:

- A. ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE INTERNATIONAL BUILDING CODE... B. WALL FRAMING: ALL STUD WALLS SHOWN AND NOT OTHERWISE NOTED SHALL BE 2x6 AT 16" O.C.

STUDS MAY BE NOTCHED, CUT, OR PENETRATED WITH ROUND BORED HOLES AS FOLLOWS:

Table with 3 columns: STUD SIZE, MAXIMUM NOTCH / CUT, MAXIMUM BORED HOLE. Rows include 2x4, 2x6 with corresponding notch and hole dimensions.

BORED HOLES SHALL NOT BE LOCATED WITH 5/8" FROM THE EDGE OF THE STUD OR AT THE SAME LOCATION AS A NOTCH OR CUT.

WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE TO EACH STUD WITH TWO 16d NAILS, AND TOENAIL OR END NAIL EACH STUD TO BOTTOM PLATE WITH TWO 16d NAILS.

ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16d NAILS AT 12" O.C. STAGGERED OR BOLTED TO CONCRETE WITH 5/8" DIAMETER ANCHOR BOLTS (WITH 7" MINIMUM EMBEDMENT) @ 4' 0" O.C.

C. FLOOR AND ROOF FRAMING: PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS THAT EXTEND OVER MORE THAN HALF THE JOIST LENGTH AND AROUND ALL OPENINGS IN FLOORS OR ROOFS UNLESS OTHERWISE NOTED.

NOTCHES AT THE END OF JOISTS AND RAFTERS SHALL NOT EXCEED 1/4 THE DEPTH OF THE MEMBER. NOTCHES IN THE TOP OR BOTTOM SHALL NOT EXCEED 1/6 THE DEPTH OF THE MEMBER AND SHALL NOT BE LOCATED WITHIN THE MIDDLE 1/3 OF THE SPAN.

TOENAIL JOISTS TO SUPPORTS WITH TWO 16d NAILS. ATTACH TIMBER JOISTS TO FLUSH HEADERS OR BEAMS WITH SIMPSON METAL JOIST HANGERS IN ACCORDANCE WITH NOTES ABOVE.

UNLESS OTHERWISE NOTED ON THE PLANS, APA RATED ROOF AND FLOOR SHEATHING SHALL BE LAID UP WITH STRENGTH AXIS PERPENDICULAR TO SUPPORTS AND ATTACHED WITH 10d NAILS @ 6" O.C. TO FRAMED PANEL EDGES AND OVER STUD WALLS AS SHOWN ON PLANS.

TONGUE AND GROOVE STRUCTURAL ROOF AND FLOOR DECKING SHALL BE INSTALLED AS FOLLOWS:

- A. 2X DECKING SHALL BE TOENAILED THROUGH THE TONGUE AND FACE NAILED WITH ONE 16d NAIL PER PIECE PER SUPPORT. B. 3X AND 4X DECKING SHALL BE TOENAILED WITH ONE 40d NAIL AND FACE NAILED WITH ONE 60d NAIL PER SUPPORT.

36. PARALLEL STRAND LUMBER (PSL): EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, PRODUCT DESIGNATION OR TYPE, THE PRODUCTION DATE, SPECIES OR SPECIES GROUP DESIGNATION, AND THE QUALITY CONTROL AGENCY.

37. LAMINATED VENEER LUMBER (LVL): EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, PRODUCT DESIGNATION OR TYPE, THE PRODUCTION DATE, SPECIES OR SPECIES GROUP DESIGNATION, AND THE QUALITY CONTROL AGENCY.

DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURED BY WEYERHAEUSER. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER.

38. LAMINATED STRAND LUMBER (LSL): EACH PIECE SHALL BEAR A STAMP OR STAMPS NOTING THE NAME AND PLANT NUMBER OF THE MANUFACTURER, THE GRADE, PRODUCT DESIGNATION OR TYPE, THE PRODUCTION DATE, SPECIES OR SPECIES GROUP DESIGNATION, AND THE QUALITY CONTROL AGENCY.

DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURED BY WEYERHAEUSER. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER.

LSL RIM JOISTS SHALL CONFORM TO ANSI/APA PRR 410 AND SHALL BE MARKED IN ACCORDANCE WITH THE STANDARD.

DESIGN SHOWN ON PLANS IS BASED ON LUMBER MANUFACTURED BY WEYERHAEUSER. ALTERNATE MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER.

39. PREFABRICATED PLYWOOD WEB JOIST DESIGN SHOWN ON PLANS IS BASED ON JOIST MANUFACTURED BY THE WEYERHAEUSER. ALTERNATE PLYWOOD WEB JOIST MANUFACTURERS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND STRUCTURAL ENGINEER.

40. PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH DOC PS 1-09 OR PS 2-18 AND AMERICAN PLYWOOD ASSOCIATION PERFORMANCE STANDARD PRP-108.

41. ALL WOOD PLATES IN DIRECT CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE, PROVIDE 2 LAYERS OF ASPHALT IMPREGNATED BUILDING PAPER BETWEEN UNTREATED LEDGERS, BLOCKING, ETC. AND CONCRETE OR MASONRY.

PRESSURE TREATED LUMBER SHALL COMPLY WITH THE AMERICAN WOOD PROTECTION ASSOCIATION (AWPA) STANDARD U1, COMMODITY SPECIFICATION A AS INDICATED BELOW OR HAVE EQUIVALENT ICC-ES APPROVAL.

Table with 3 columns: PROPOSED USE, RESIDENTIAL DECKS, SAWN LUMBER PLYWOOD, SILL PLATES, INTERIOR LEDGERS and AWP USE CATEGORY.

ALL TREATED LUMBER SHALL BEAR THE QUALITY MARK OF AN ACCREDITED INSPECTION AGENCY. THE QUALITY MARK SHALL INCLUDE:

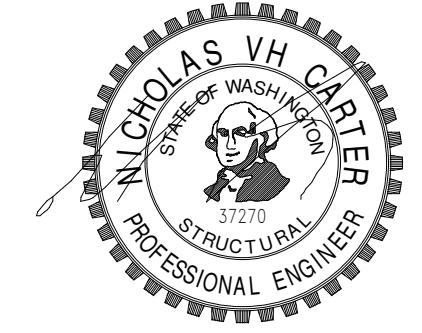
- A. IDENTIFICATION OF TREATING MANUFACTURER B. TYPE OF PRESERVATIVE USED C. MINIMUM PRESERVATIVE RETENTION (PCF) D. END USE FOR WHICH THE PRODUCT IS TREATED E. IDENTITY OF THE ACCREDITED INSPECTION AGENCY F. STANDARD TO WHICH THE PRODUCT IS TREATED

42. TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, AS SPECIFIED IN THEIR CATALOG NUMBER C-C-2019.

ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD.

UNLESS NOTED OTHERWISE ALL SAWN LUMBER JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LUS" SERIES JOIST HANGERS AND ALL PREFABRICATED PLYWOOD WEB JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "IUS" SERIES JOIST HANGERS.

ALL CONNECTIONS/FASTENERS IN CONTACT WITH PRESERVATIVE-TREATED OR FIRE-RETARDANT-TREATED WOOD, SHALL BE OF HOT DIPPED ZINC-COATED GALVANIZED STEEL OR STAINLESS STEEL. HOT DIPPED GALVANIZED FASTENERS SHOULD CONFORM TO ASTM STANDARD 153, AND HOT DIPPED GALVANIZED CONNECTORS SHOULD CONFORM TO ASTM STANDARD A653 (CLASS G-185).



STEINBORN RESIDENCE

New Residence 8435 SE 47th PL.

Mercer Island, WA 98040

Date: 2/14/2022 Permit Submittal 8/25/2022 Sub2-2202-225

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General Structural Notes



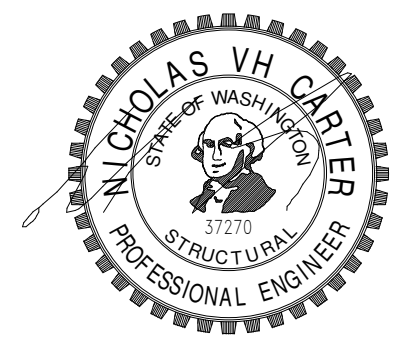
**Foundation Plan Notes**

- All slabs-on-grade shall be 4" reinforced with WWF6x6 W1.4xW1.4 u.n.o. Provide minimum 6-mil visqueen vapor barrier under all slabs. Slabs shall be supported on a minimum 4 inches of free draining material.
- At holddowns provide the following anchor bolts:
 

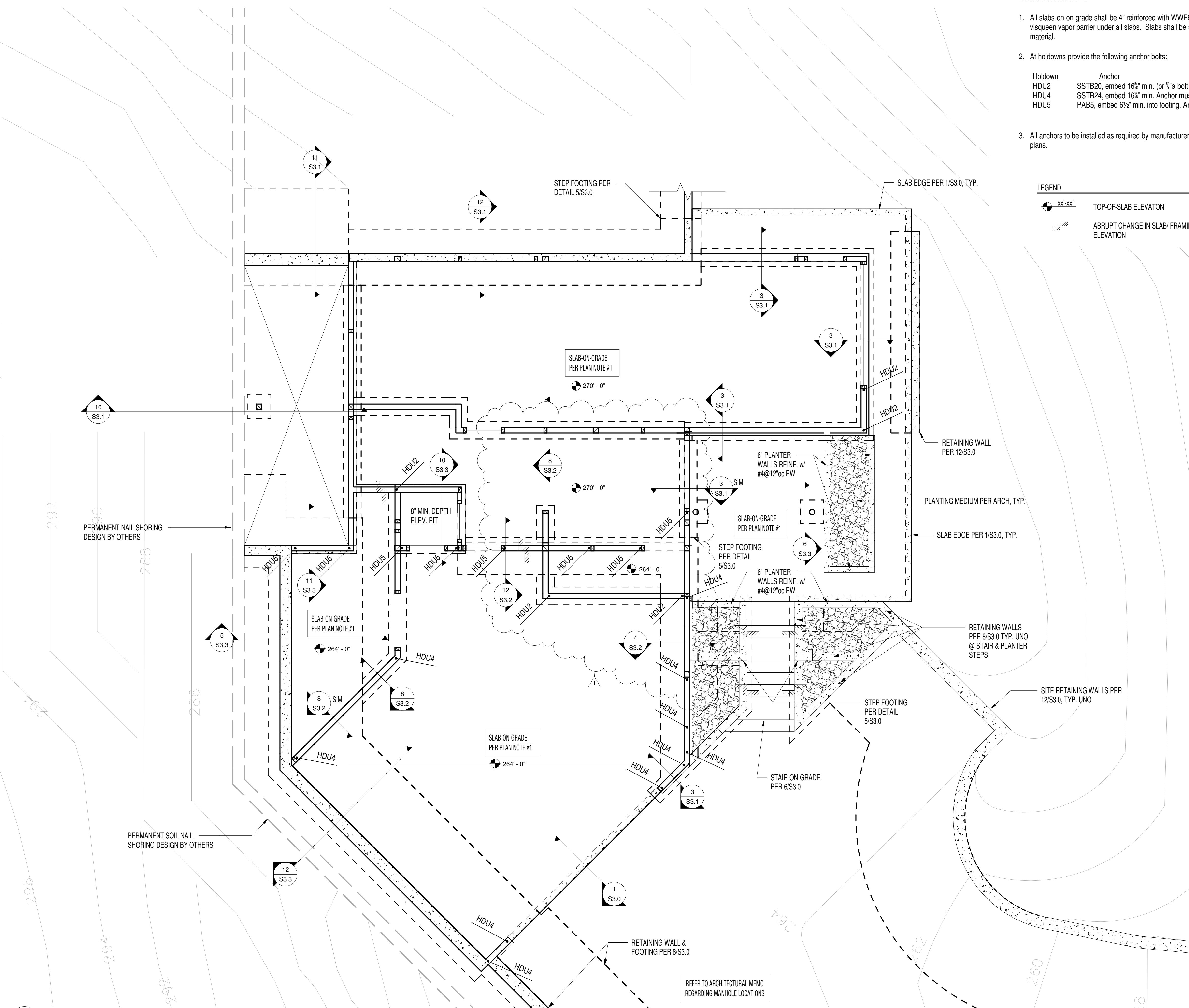
Holddown	Anchor
HDU2	SSTB20, embed 16 1/4" min. (or 1/2" bolt, SET-XP epoxy embed 10 min.)
HDU4	SSTB24, embed 16 1/4" min. Anchor must be cast-in-place.
HDU5	PAB5, embed 6 1/2" min. into footing. Anchor must be cast-in-place.
- All anchors to be installed as required by manufacturer. Minimum (2) 2x studs unless otherwise noted on plans.

**LEGEND**

- xx'-xx" TOP-OF-SLAB ELEVATION
- ABRUPT CHANGE IN SLAB/ FRAMING ELEVATION



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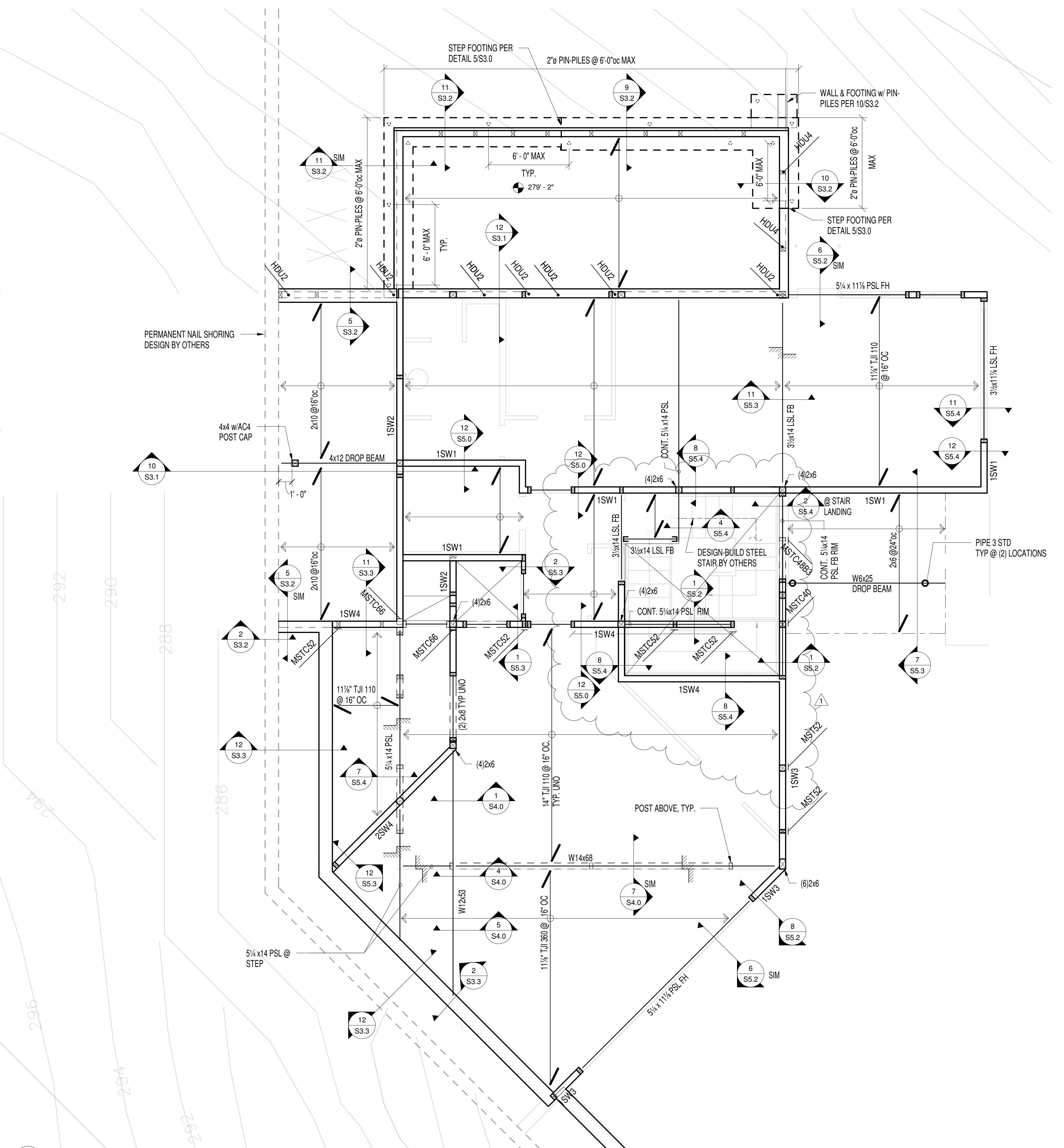
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Foundation Plan

S2.0

1 Foundation Plan  
1/4" = 1'-0"

REFER TO ARCHITECTURAL MEMO REGARDING MANHOLE LOCATIONS

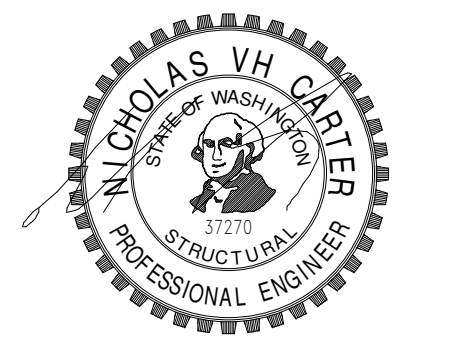


Floor Framing Plan Notes

1. Floor sheathing shall be 23/32" APA, Sturd-I-Floor with a panel index of 40/20. Nail to framing with 10d common nails at 6" oc at panel edges and 12" oc in field unless noted otherwise on plans.
2. All headers and beams shall be (2) 2x8 minimum, u.n.o. Refer to note 3 for support requirements.
3. All columns shall be double stud minimum, u.n.o., with the beam or header bearing fully on the column. Individual studs shall be nailed together per the general structural notes.
4. Exterior wall sheathing shall be 15/32" APA Rated sheathing with a panel index of 24/0 (Oriented strand board of equivalent thickness, exposure rating, and panel index may be used in lieu of plywood at contractors' option).
5. Attach LVL plies w/ (2) SDS25600 @16"oc.

LEGEND

- HANGER
- WALL/ COLUMN BELOW
- WALL/ COLUMN ABOVE
- ABRUPT CHANGE IN SLAB/ FRAMING ELEVATION
- FB INDICATES FLUSH BEAM
- FH INDICATED FLUSH HEADER
- UNO UNLESS NOTED OTHERWISE
- SPAN AND EXTENTS
- SPAN AND EXTENTS THRU-OUT



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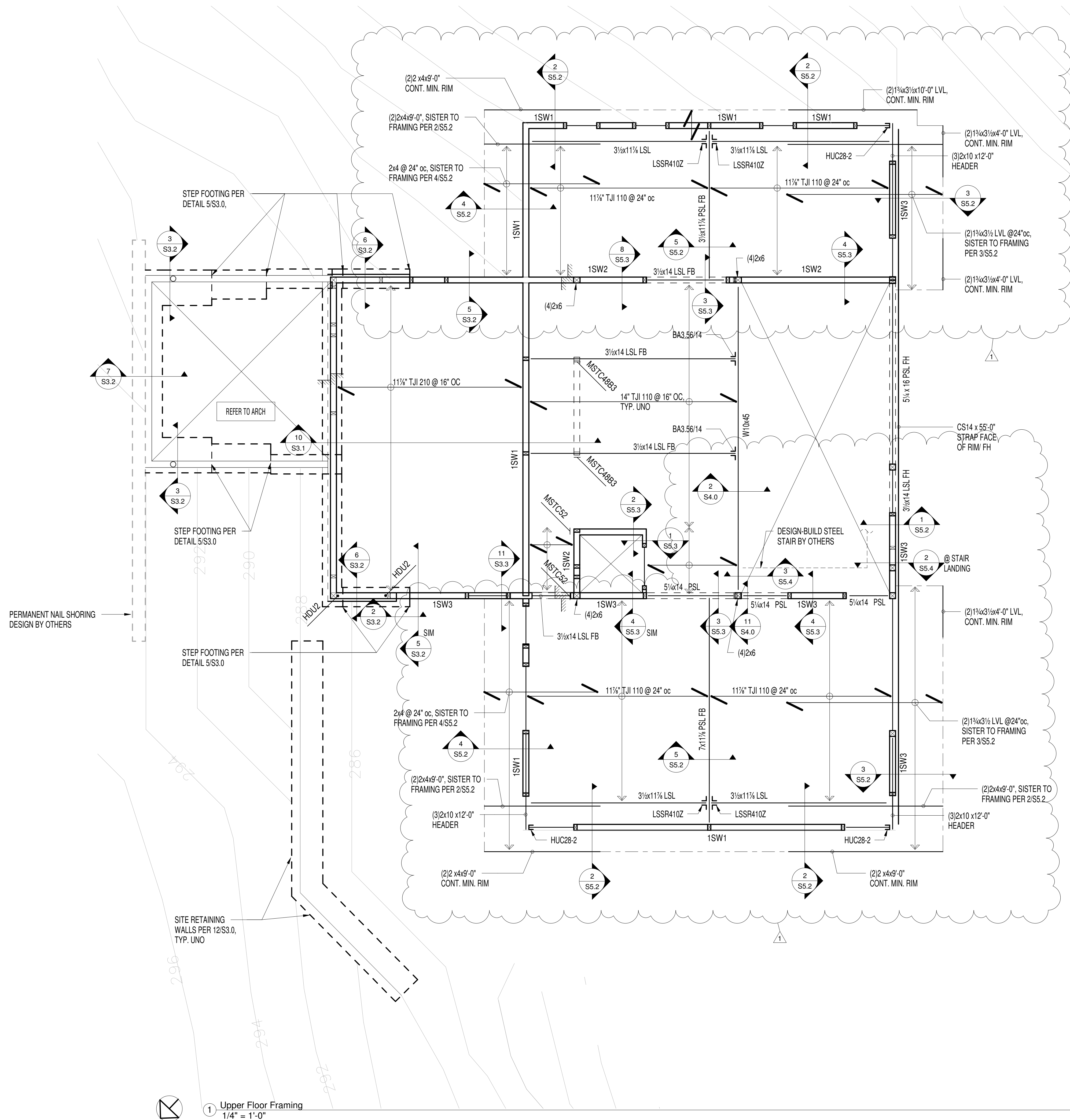
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Main Floor Framing Plan

1 Main Floor Framing  
1/4" = 1'-0"

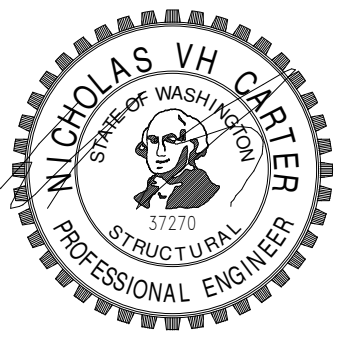


Floor Framing Plan Notes

1. Floor sheathing shall be 23/32" APA, Sturd-I-Floor with a panel index of 40/20. Nail to framing with 10d common nails at 6" oc at panel edges and 12" oc in field unless noted otherwise on plans.
2. All headers and beams shall be (2) 2x8 minimum, u.n.o. Refer to note 3 for support requirements.
3. All columns shall be double stud minimum, u.n.o., with the beam or header bearing fully on the column. Individual studs shall be nailed together per the general structural notes.
4. Exterior wall sheathing shall be 15/32" APA Rated sheathing with a panel index of 24/0 (Oriented strand board of equivalent thickness, exposure rating, and panel index may be used in lieu of plywood at contractors' option).
5. Attach LVL plies w/ (2) SDS25600 @ 16" oc.

LEGEND

- HANGER
- WALL/ COLUMN BELOW
- WALL/ COLUMN ABOVE
- ABRUPT CHANGE IN SLAB/ FRAMING ELEVATION
- FB INDICATES FLUSH BEAM
- FH INDICATED FLUSH HEADER
- UNO UNLESS NOTED OTHERWISE
- SPAN AND EXTENTS
- SPAN AND EXTENTS THRU-OUT



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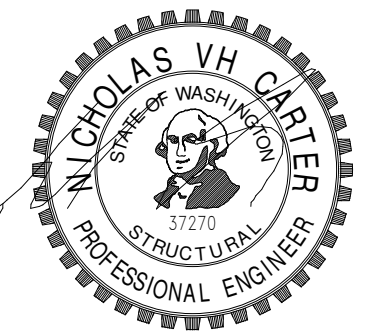
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Upper Floor Framing Plan

S2.2

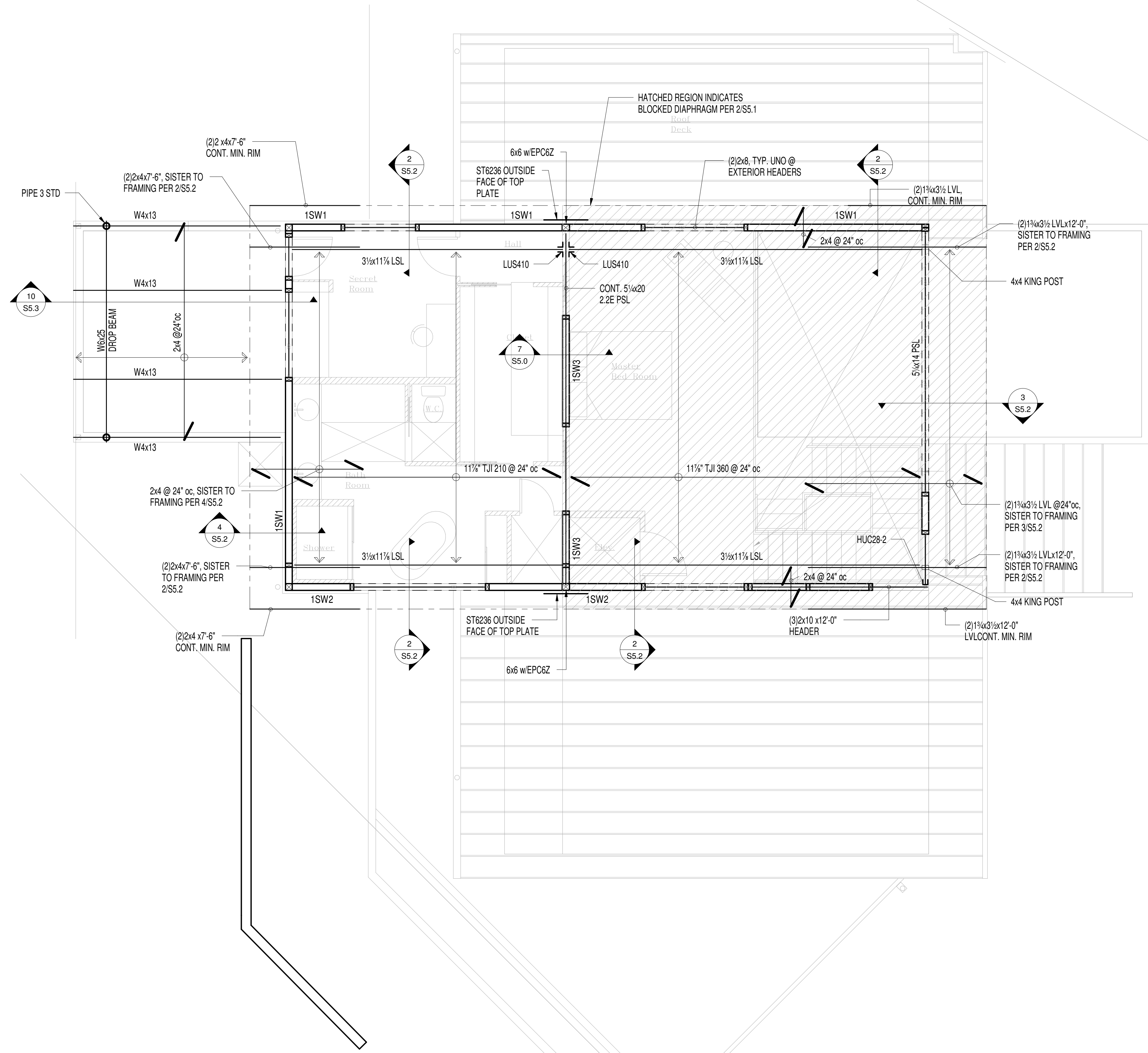
1 Upper Floor Framing  
1/4" = 1'-0"



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Roof Framing Plan Notes

1. Roof sheathing shall be 15/32" APA Rated sheathing with a panel index of 24/0. Nail to framing with 8d common nails at 6" oc at panel edges and 12" oc in field unless noted otherwise on plans. Where noted on the plans all panel edges shall be block with minimum 2x material.
2. All headers and beams shall be (2) 2x8 minimum, u.n.o. Refer to note 3 for support requirements.
3. All columns shall be double stud minimum, u.n.o., with the beam or header bearing fully on the column. Individual studs shall be nailed together per the general structural notes.
4. Exterior wall sheathing shall be 15/32" APA Rated sheathing with a panel index of 24/0 (Oriented strand board of equivalent thickness, exposure rating, and panel index may be used in lieu of plywood at contractors' option).

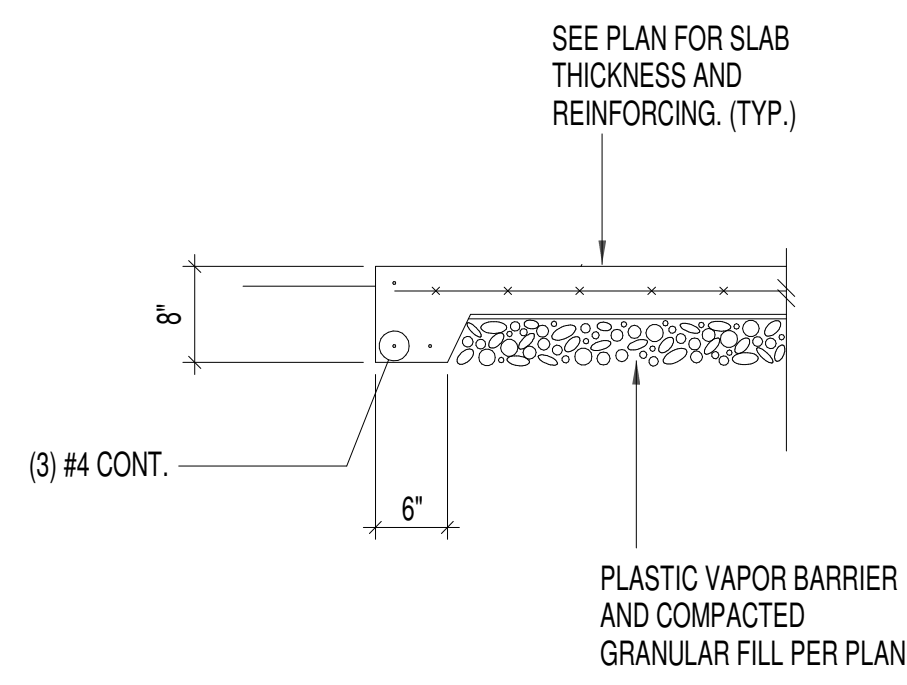
LEGEND

	HANGER
	WALL / COLUMN BELOW
	WALL / COLUMN ABOVE
	ABRUPT CHANGE IN SLAB/ FRAMING ELEVATION
	FB INDICATES FLUSH BEAM
	FH INDICATED FLUSH HEADER
	UNO UNLESS NOTED OTHERWISE
	SPAN AND EXTENTS
	SPAN AND EXTENTS THRU-OUT

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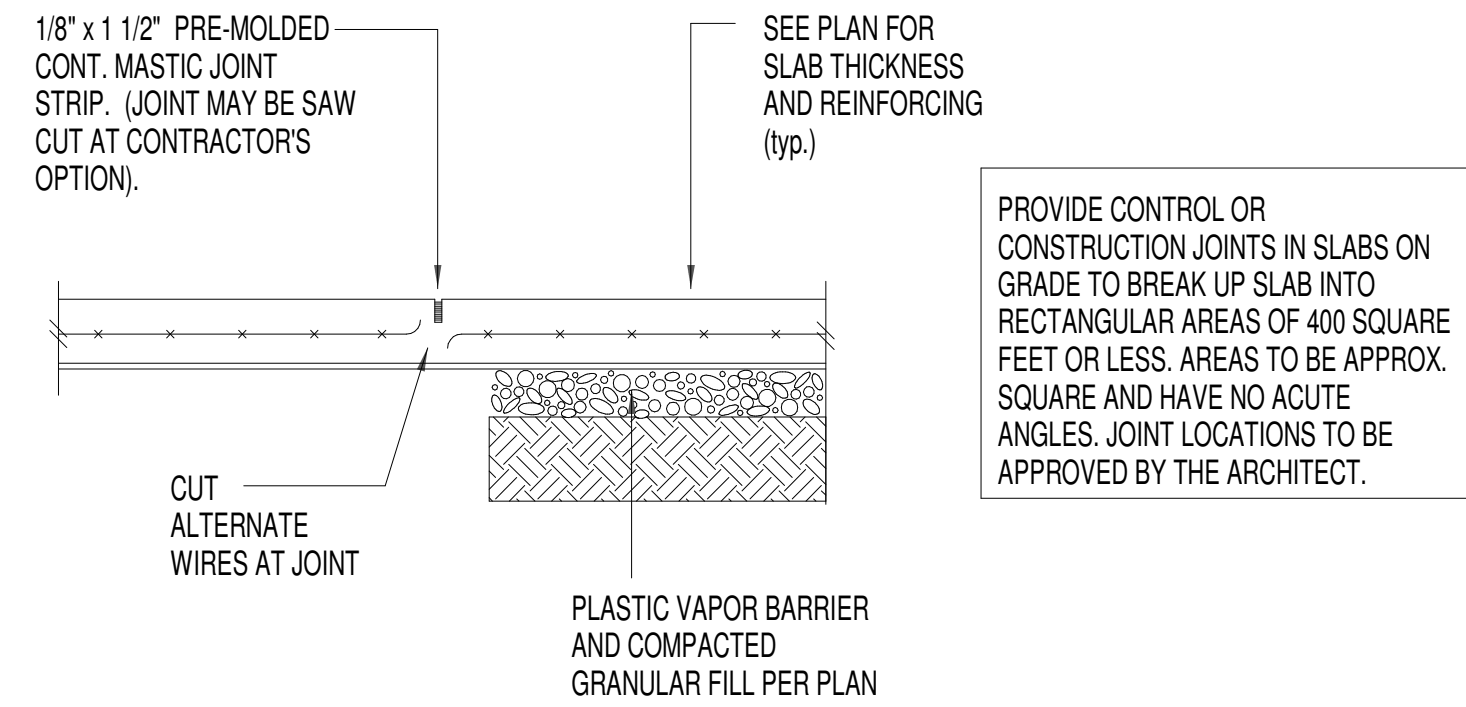
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Roof Framing Plan

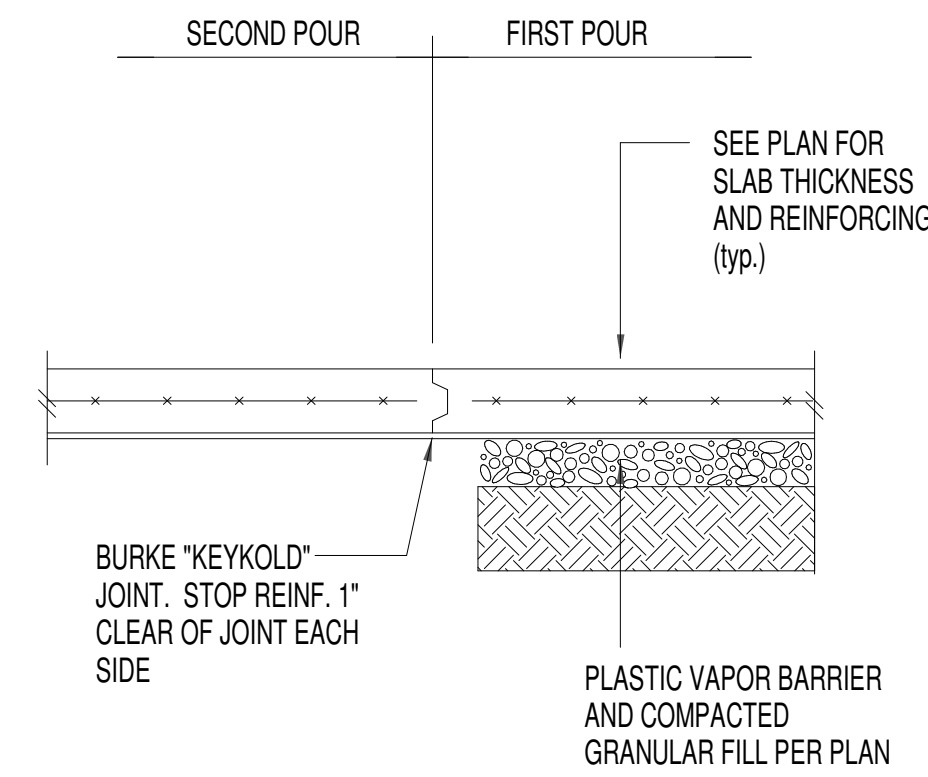


Typical Slab Edge

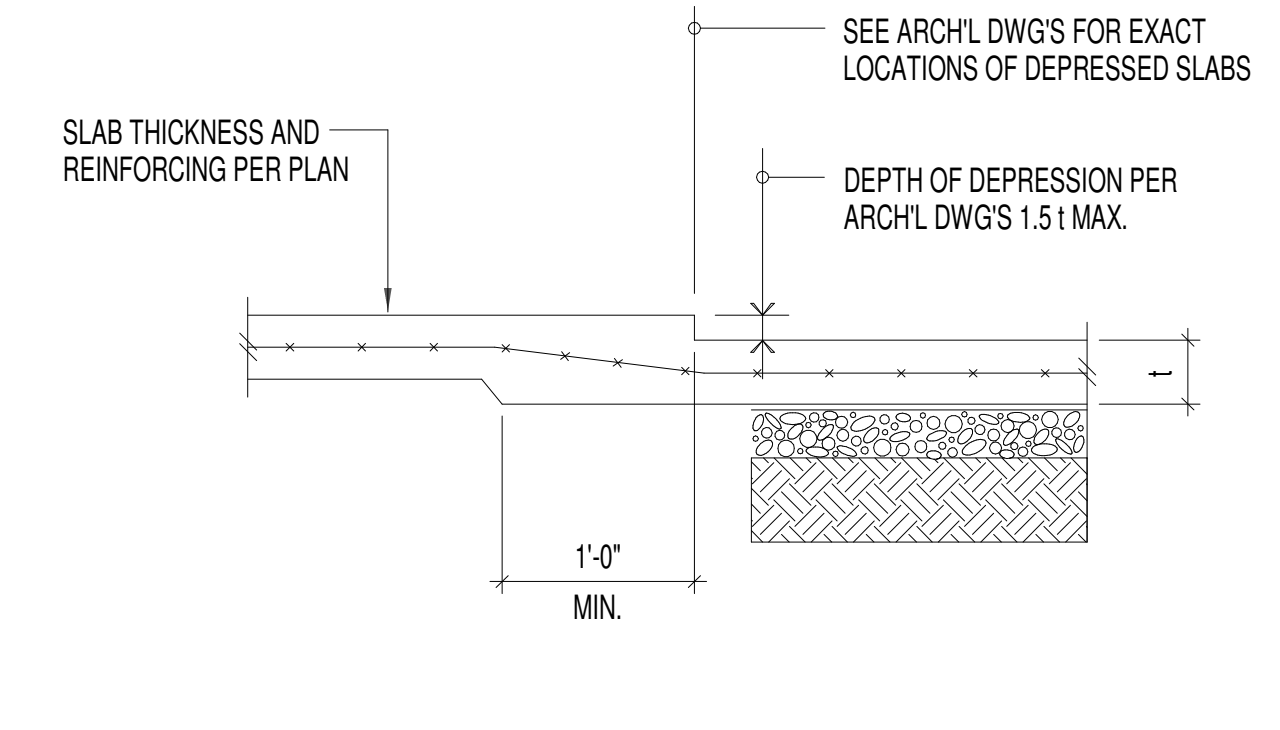
1



Control Joint

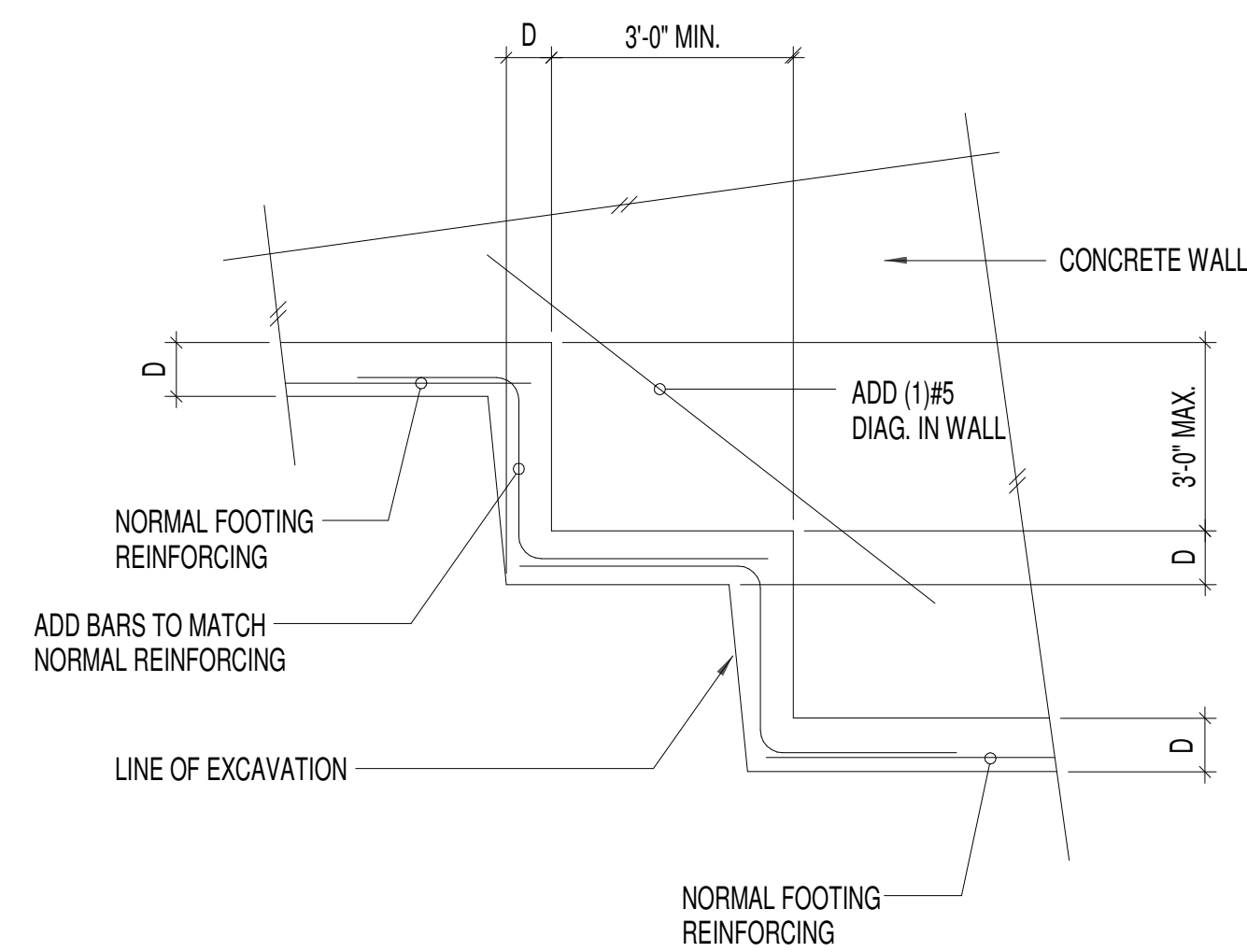


Construction Joint



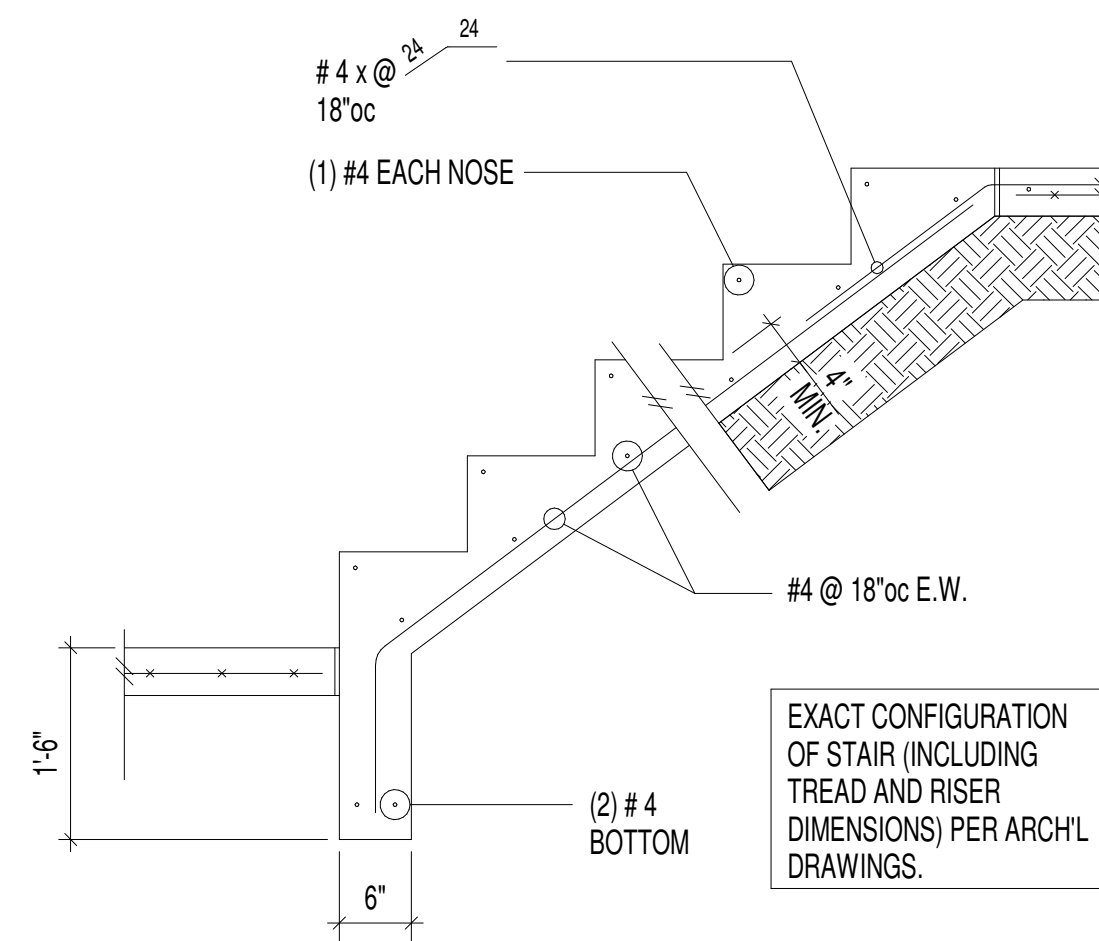
Typical Depressed Slab

4



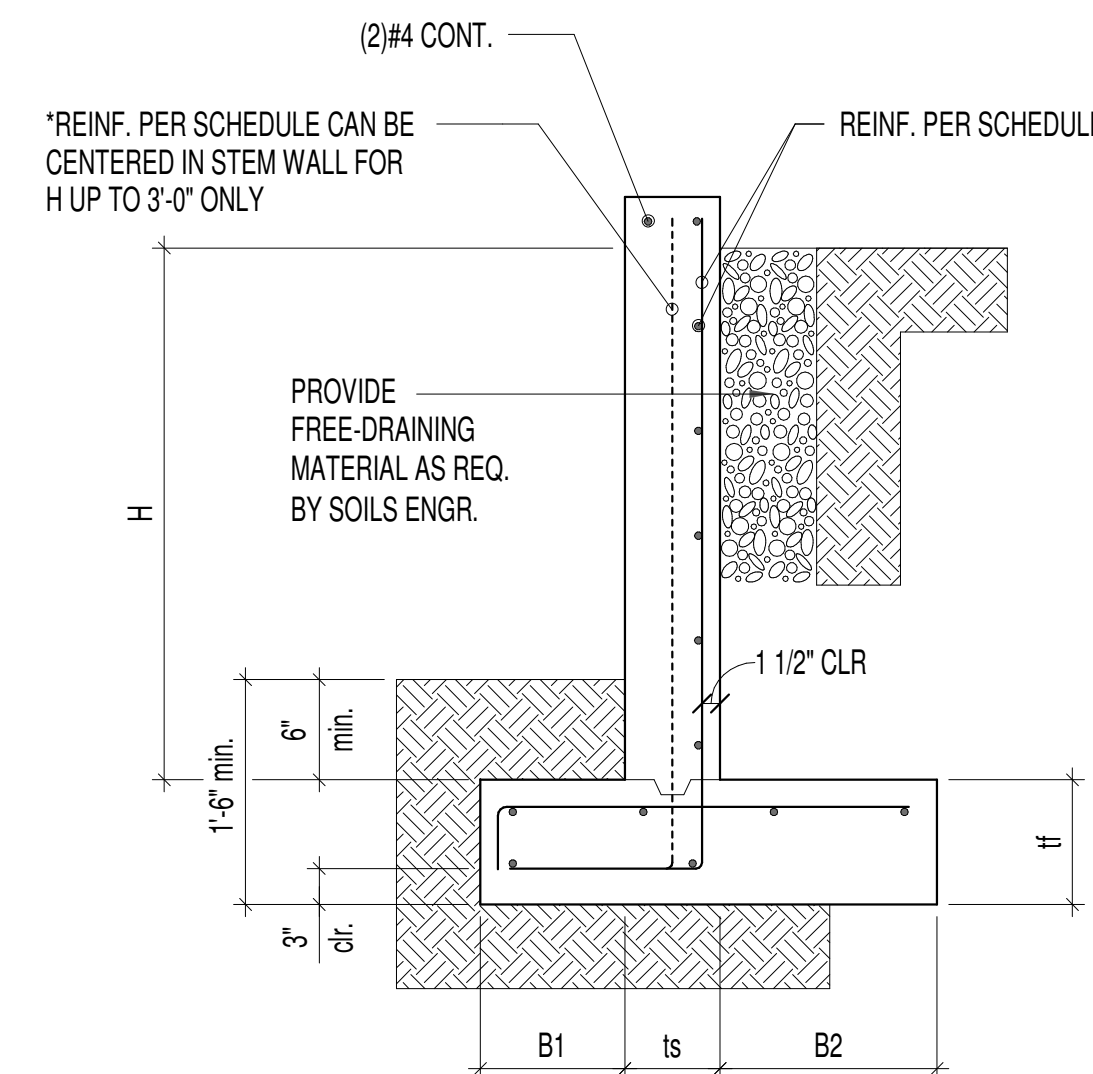
Typical Stepped Footing

5



Stair On Grade

6

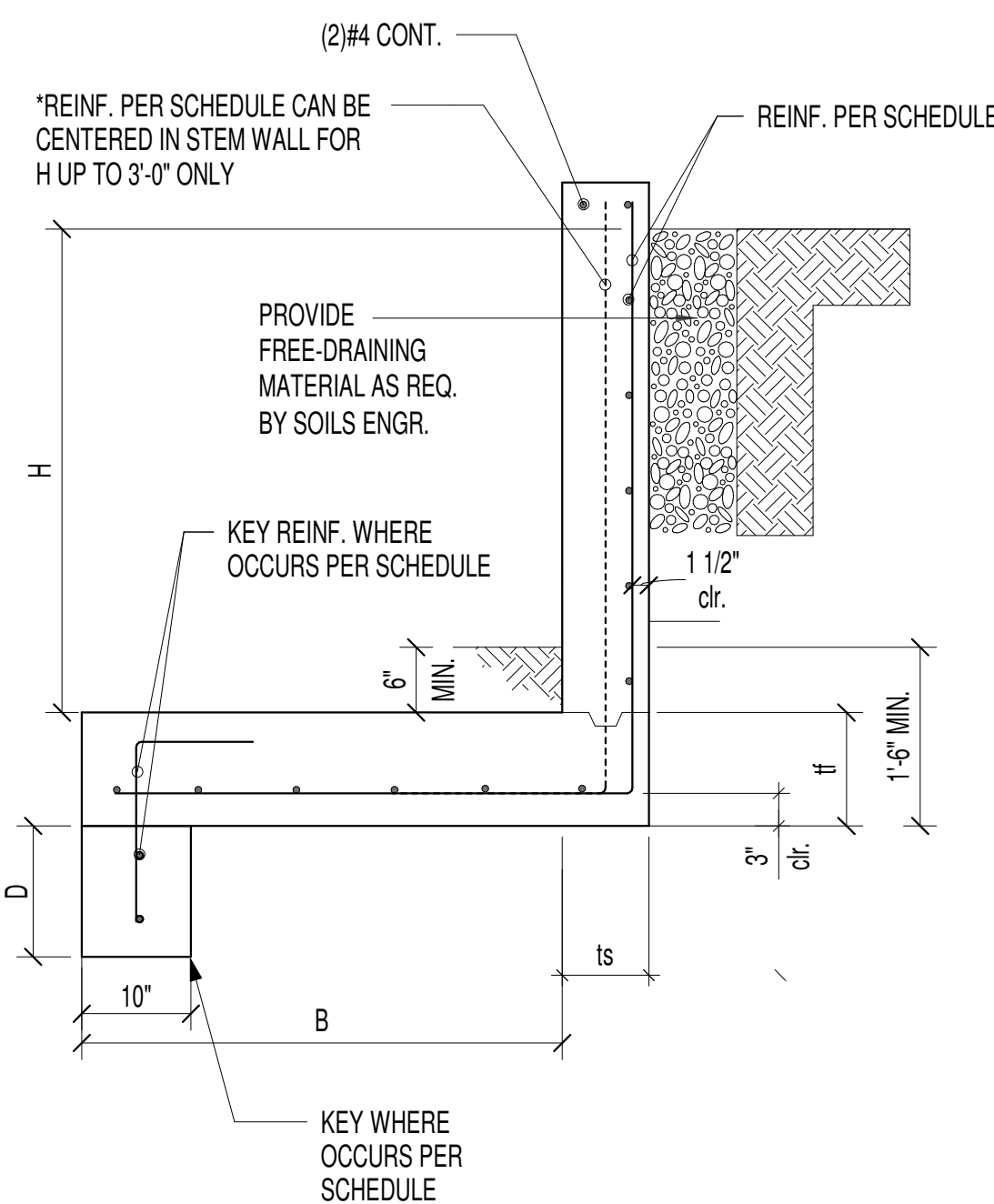


H	tf	B1	ts	B2	RETAINING WALL SCHEDULE DATA			
					Stem Reinforcement		Footing Reinforcement	
					VERT.	HORIZ.	TOP	LONGIT.
*UP TO 3'-0"	10"	5"	8"	5"	#4 @12"oc	#4 @12"oc	#4 @10"oc	(2)#4
4'-0"	10"	5"	8"	16"	#4 @12"oc	#4 @12"oc	#4 @10"oc	(3)#4
5'-0"	10"	5"	8"	22"	#4 @12"oc	#4 @12"oc	#4 @10"oc	(4)#4
6'-0"	12"	9"	8"	28"	#4 @12"oc	#4 @12"oc	#5 @12"oc	(5)#4
7'-0"	12"	12"	10"	32"	#5 @12"oc	#5 @12"oc	#5 @10"oc	(6)#4
8'-0"	12"	12"	10"	35"	#5 @12"oc	#5 @12"oc	#5 @10"oc	(7)#4

EQUIVALENT FLUID PRESSURE = 40 PCF  
 MINIMUM ALLOWABLE BEARING = 4000 PSF  
 COEFFICIENT OF FRICTION = 0.45 (ULTIMATE)  
 PASSIVE RESISTANCE = 300 PCF (ULTIMATE)  
 LATERAL SEISMIC SURCHARGE = 9H (ULTIMATE)

Retaining Wall Schedule

8



H	tf	ts	B	D	RETAINING WALL SCHEDULE DATA - SITE WALLS				
					Stem Reinforcement		Footing Reinforcement		Key Reinf.
					VERT.	HORIZ.	TOP	LONGIT.	
*UP TO 3'-0"	10"	8"	15"	-	#4 @10"oc	#4 @12"oc	#4 @10"oc	(2)#4	-
4'-0"	10"	8"	21"	-	#4 @10"oc	#4 @12"oc	#4 @10"oc	(2)#4	-
5'-0"	12"	8"	44"	-	#4 @9"oc	#4 @12"oc	#4 @9"oc	(5)#4	-
6'-0"	14"	8"	44"	8"	#5 @12"oc	#4 @12"oc	#5 @12"oc	(6)#5	#4 @12"oc (1)#4
7'-0"	14"	12"	60"	8"	#5 @12"oc	#5 @12"oc	#5 @10"oc	(6)#5	#4 @12"oc (1)#4
8'-0"	14"	12"	84"	12"	#5 @10"oc	#5 @12"oc	#5 @10"oc	(8)#5	#4 @12"oc (1)#4
9'-0"	14"	12"	99"	16"	#5 @8"oc	#5 @12"oc	#5 @8"oc	(9)#5	#4 @10"oc (2)#4
10'-0"	16"	12"	123"	18"	#6 @10"oc	#5 @12"oc	#6 @10"oc	(12)#5	#4 @10"oc (2)#4

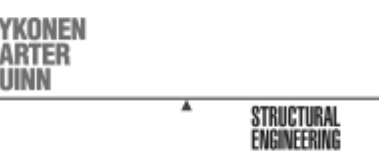
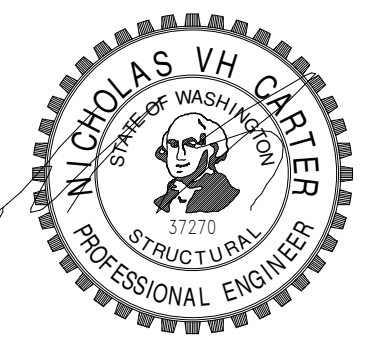
EQUIVALENT FLUID PRESSURE = 40 PCF  
 MINIMUM ALLOWABLE BEARING = 4000 PSF  
 COEFFICIENT OF FRICTION = 0.45 (ULTIMATE)  
 PASSIVE RESISTANCE = 300 PCF (ULTIMATE)  
 LATERAL SEISMIC SURCHARGE = 9H (ULTIMATE)

Retaining Wall Schedule - Site Walls

12

9

10



**STEINBORN RESIDENCE**

New Residence  
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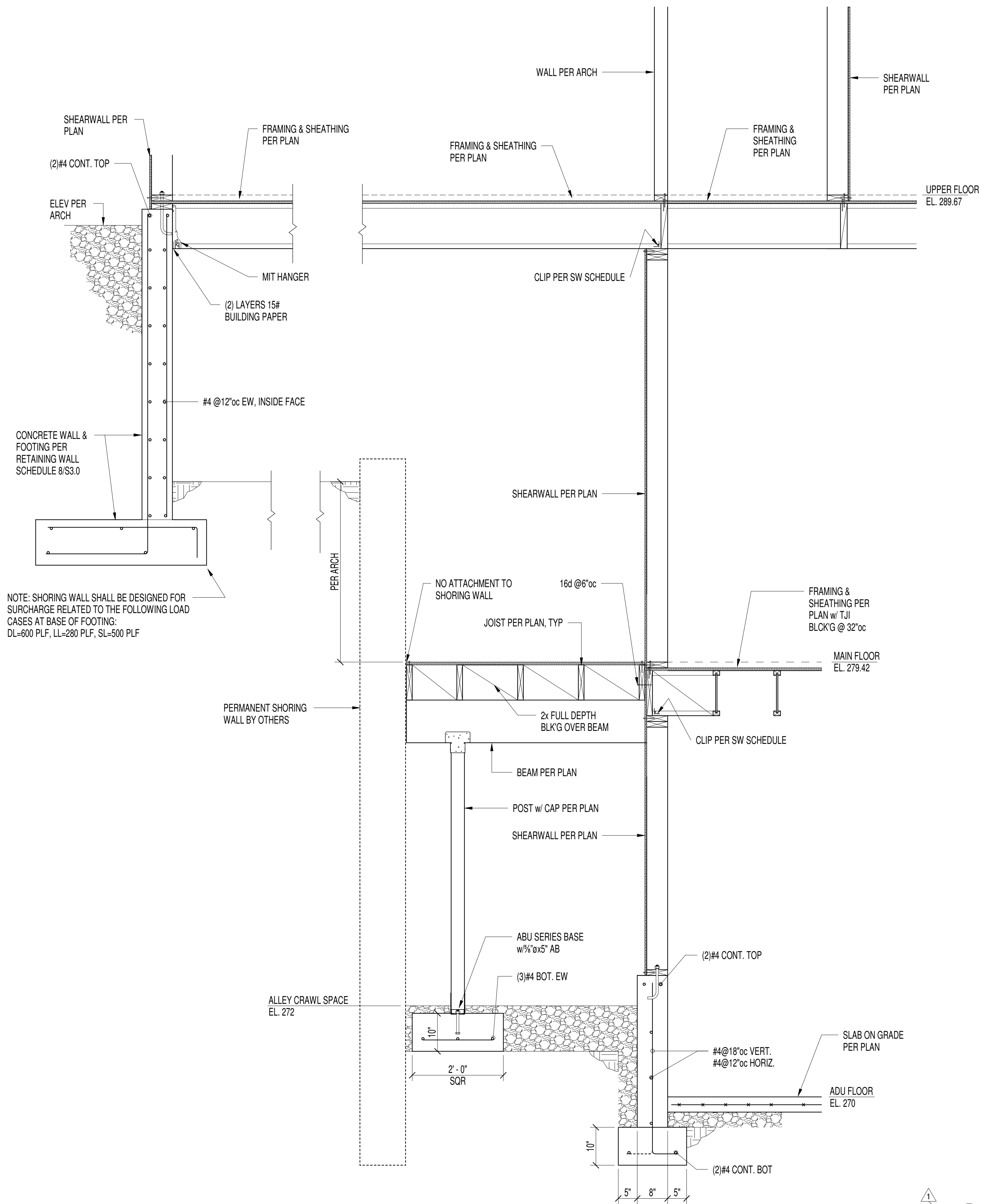
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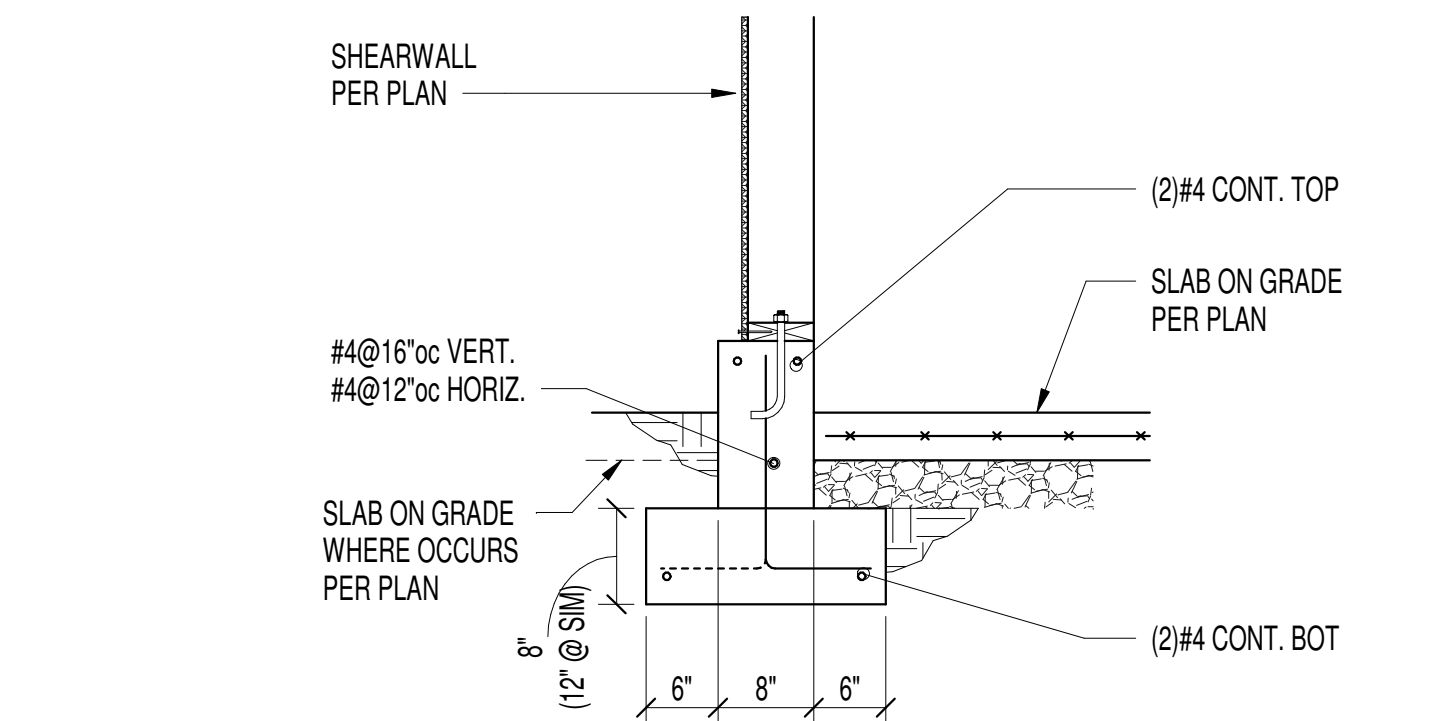
Concrete Details

S3.0



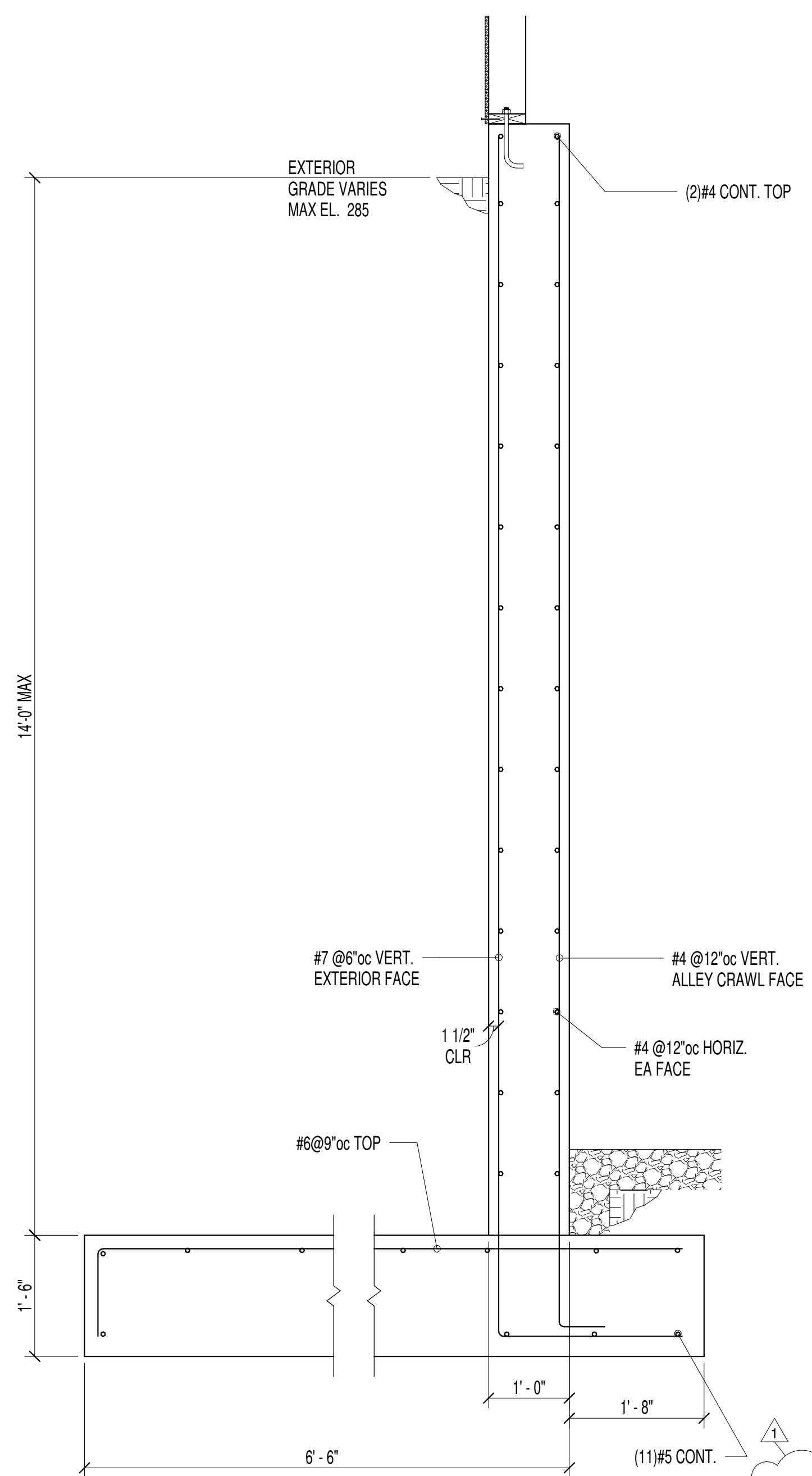
Section thru NE wall @ Stair

10



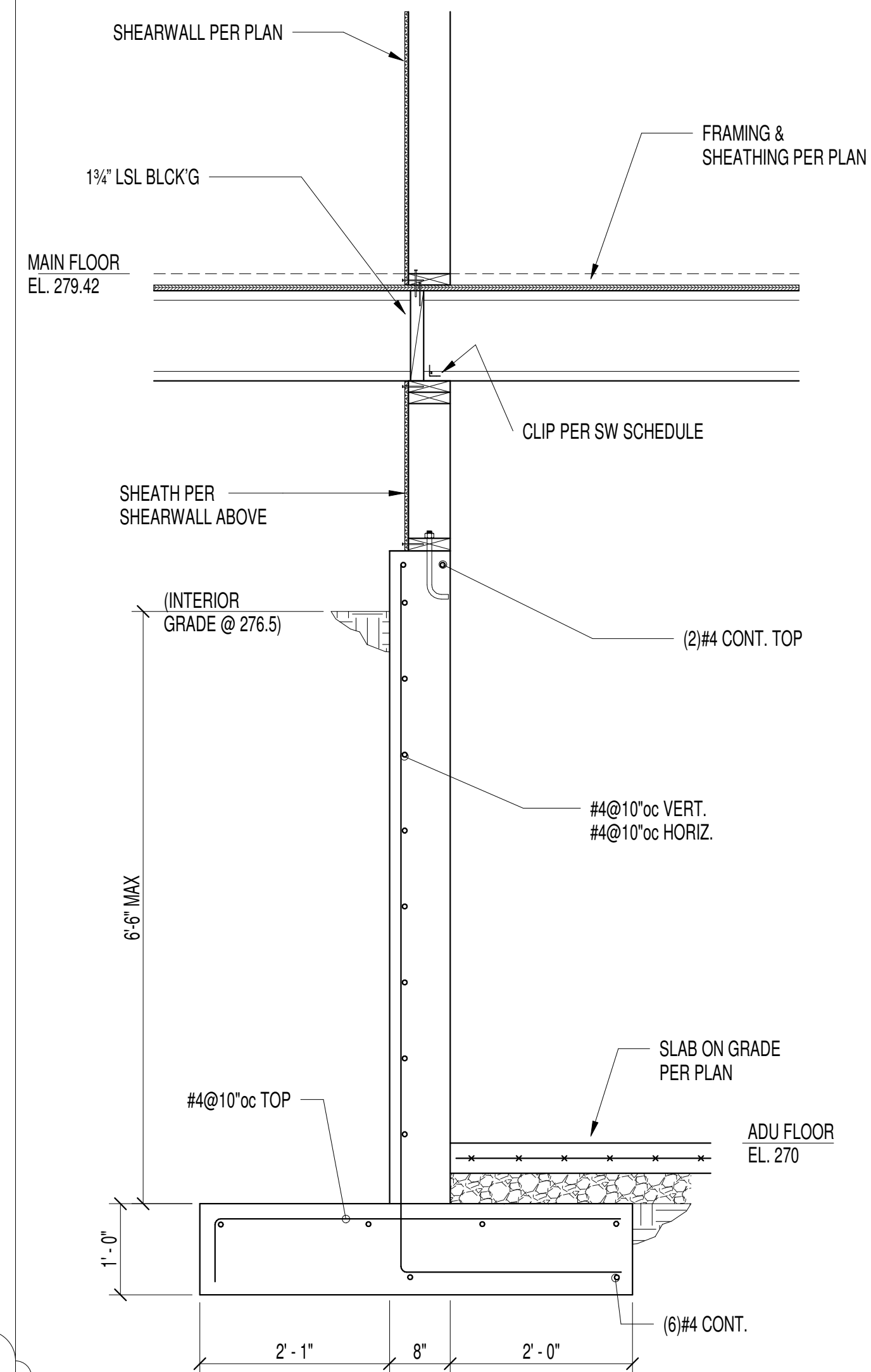
Section SW ADU/Entry 3

4



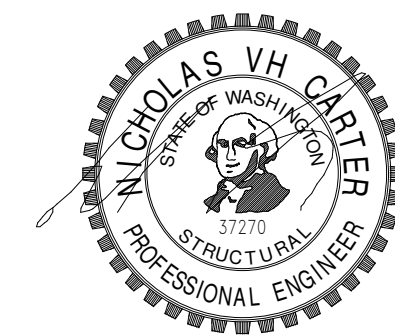
Section thru SE elevation @ ADU/Laundry

11



Section thru SE elevation @ ADU/Laundry

12



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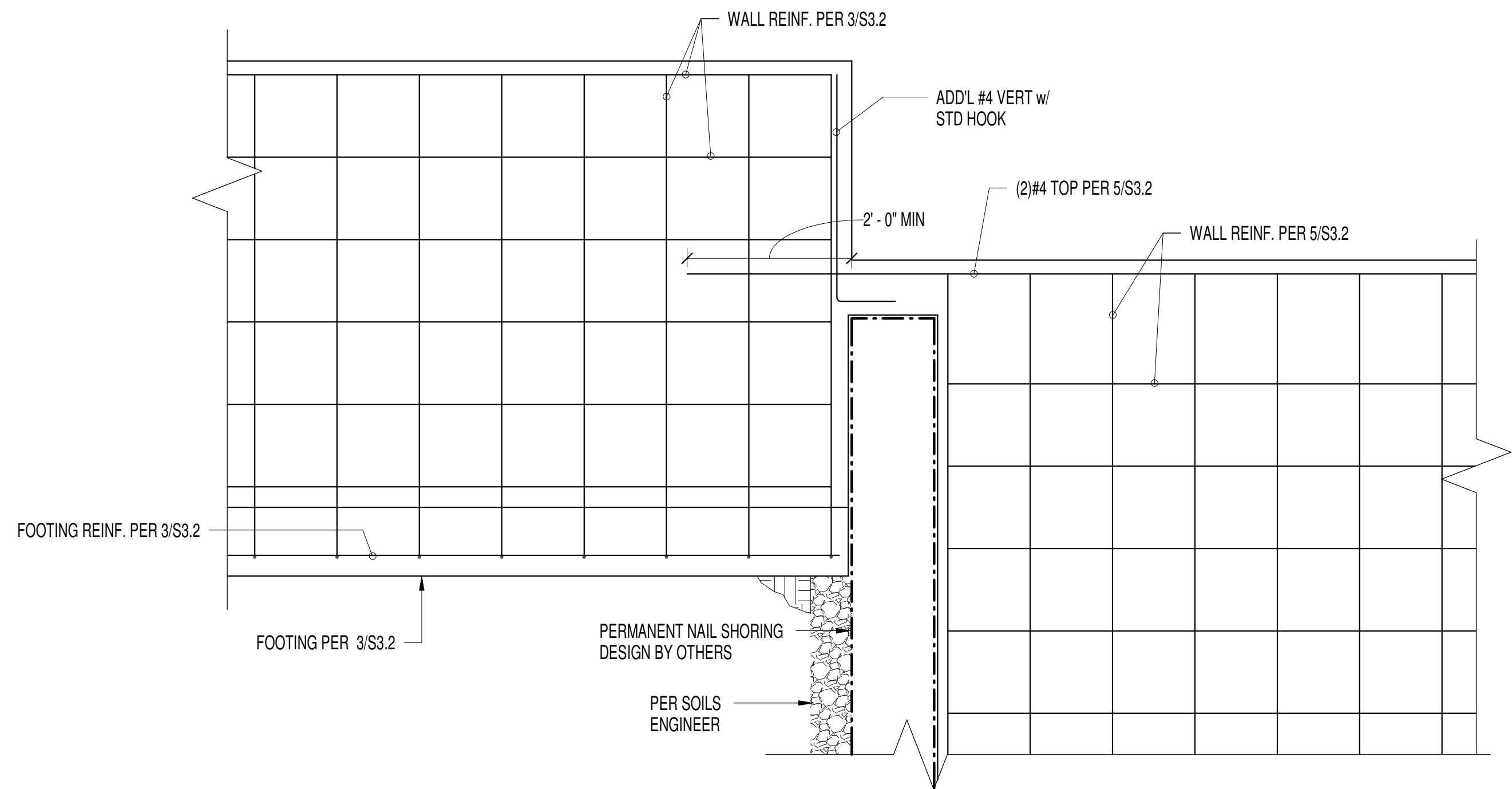
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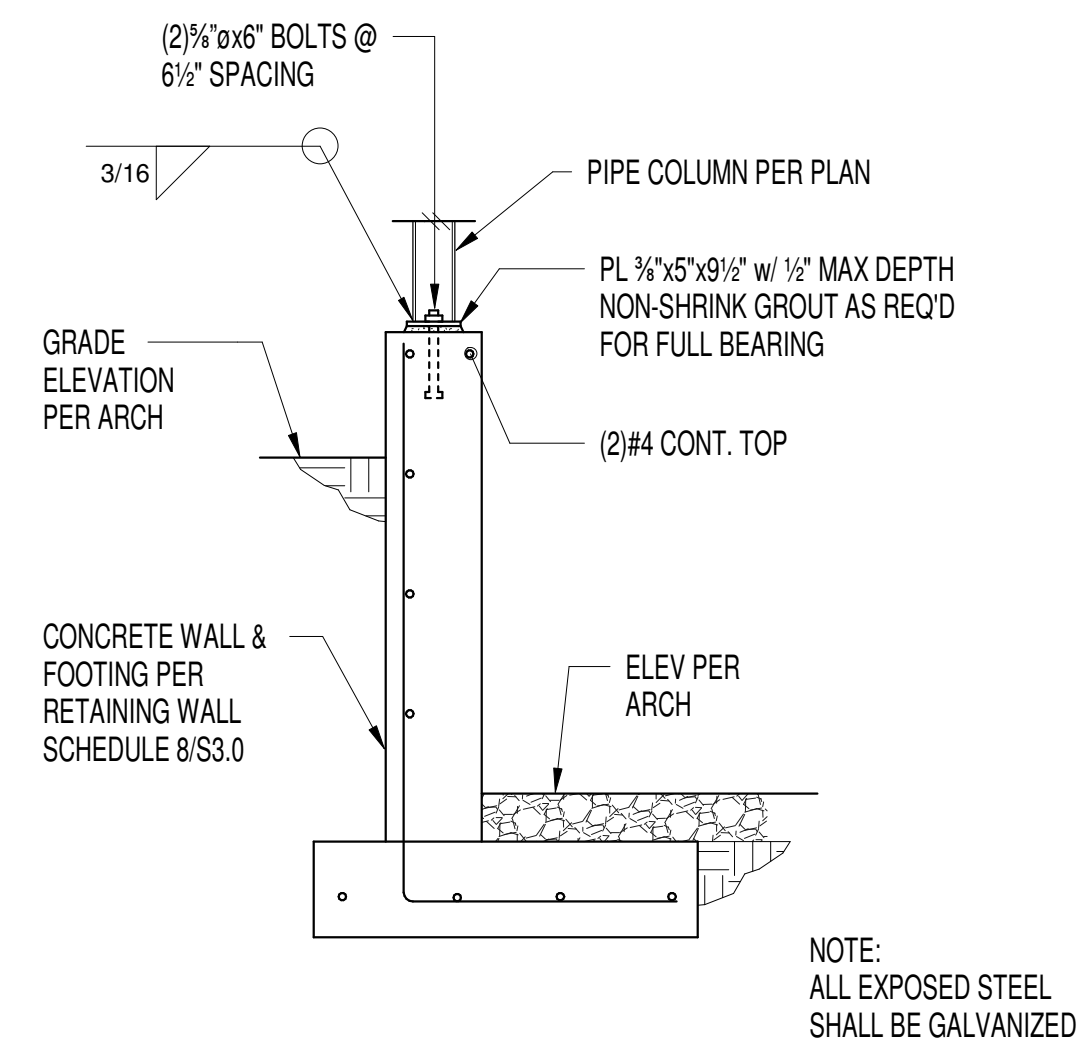
Concrete Details

S3.1



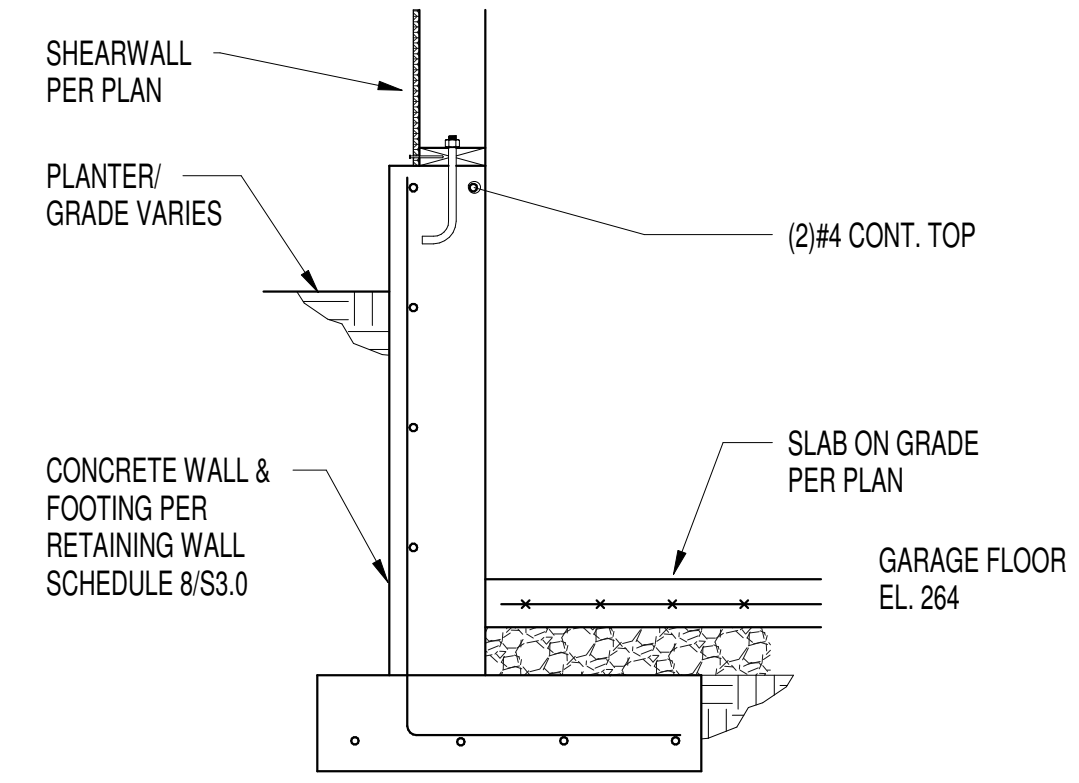
Wall Elevation

2



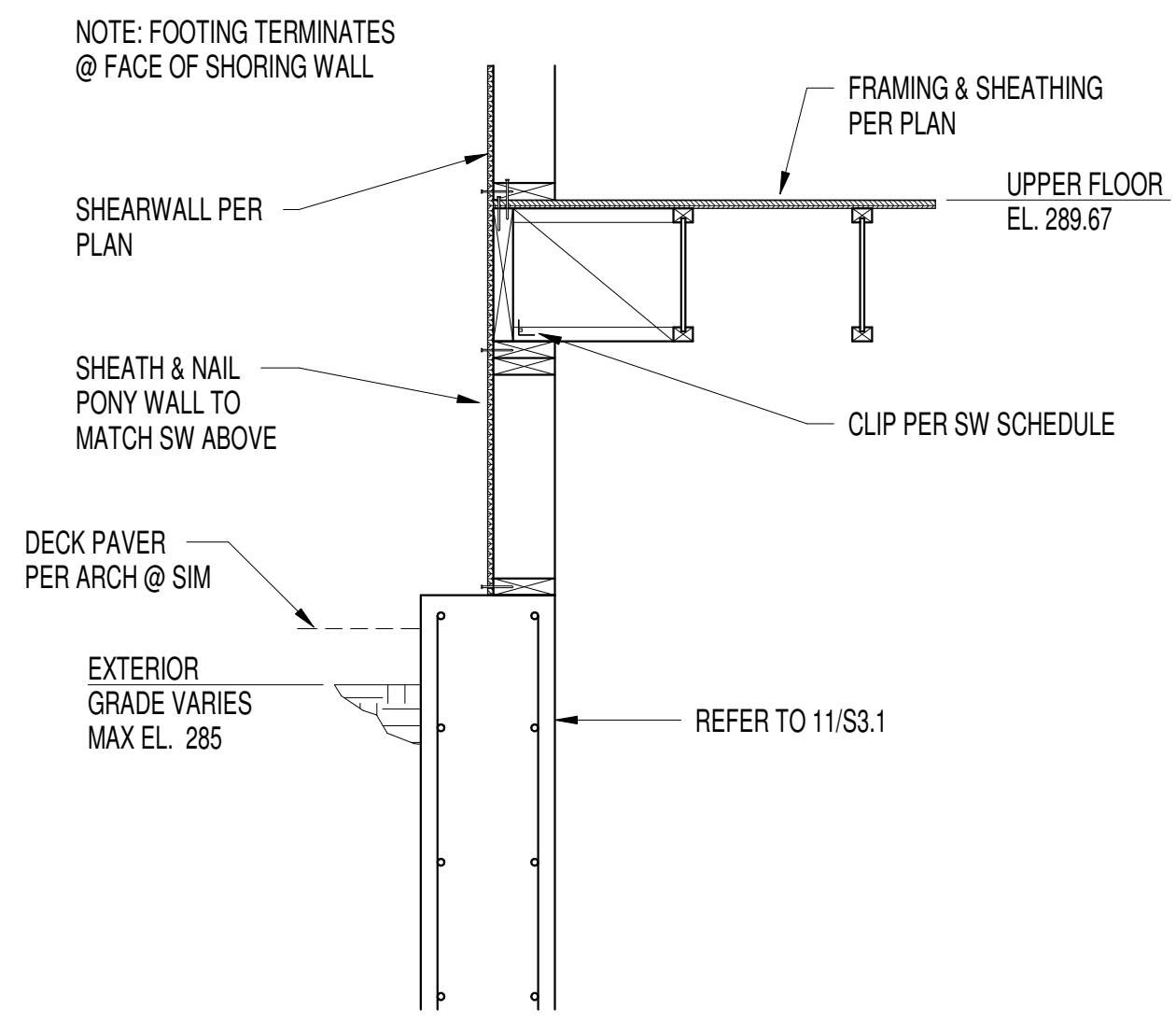
Trellis Post Base

3



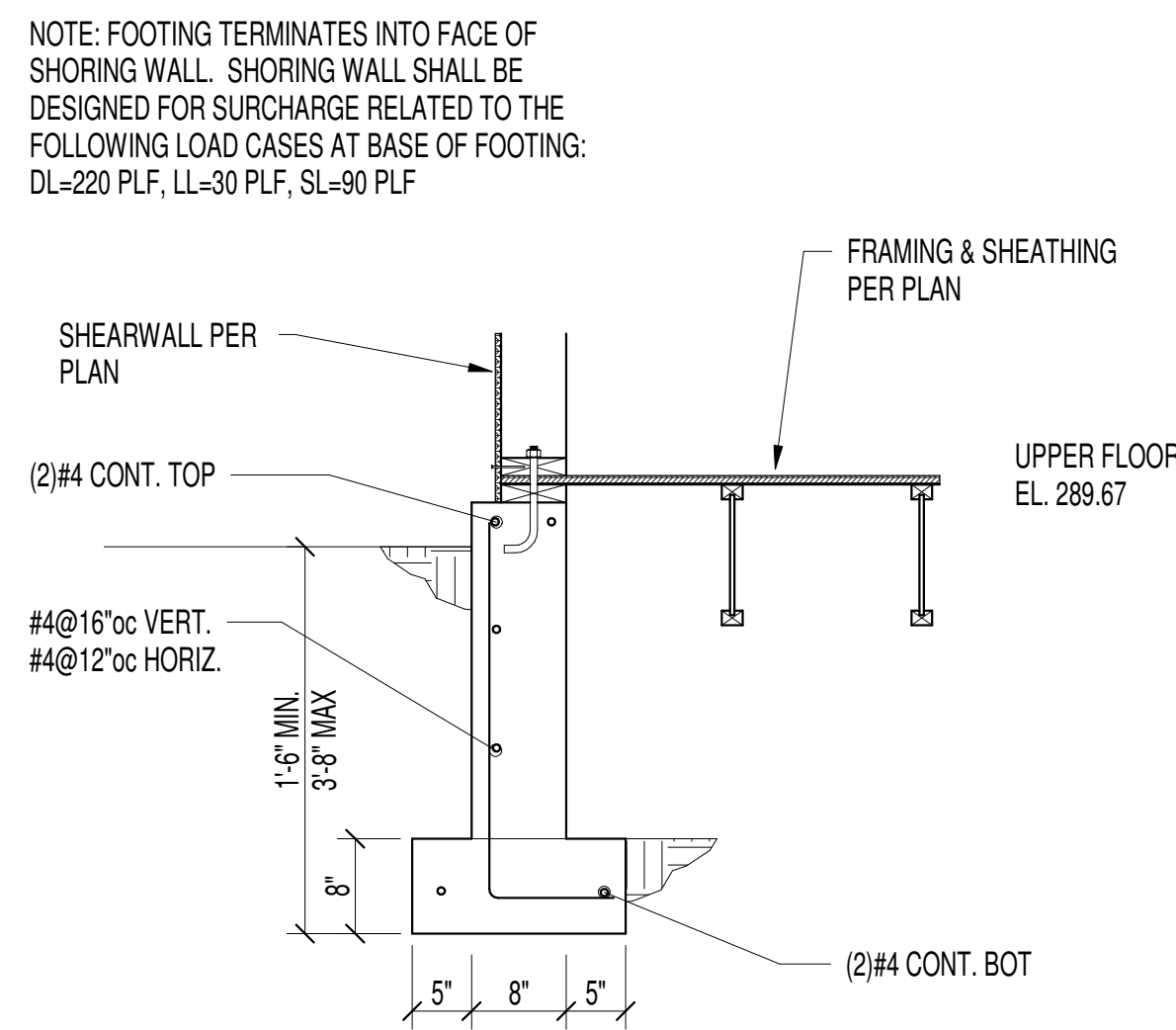
Garage SW @ Entry Planters

4



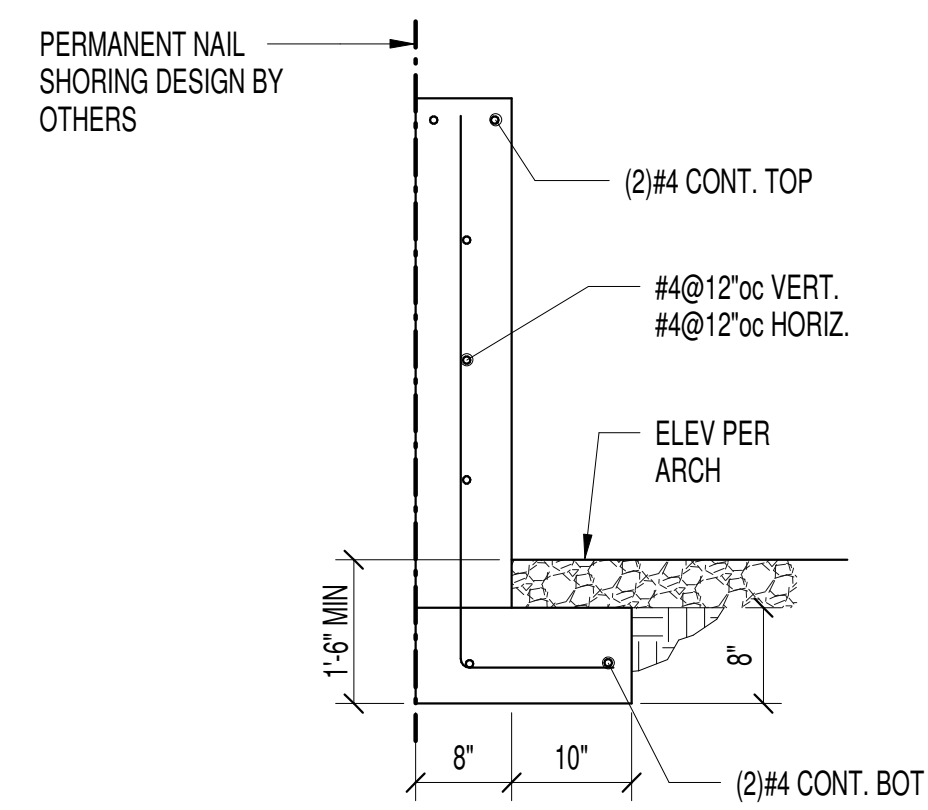
Section thru SW & NE elevations @ Secret Room/Bath

5

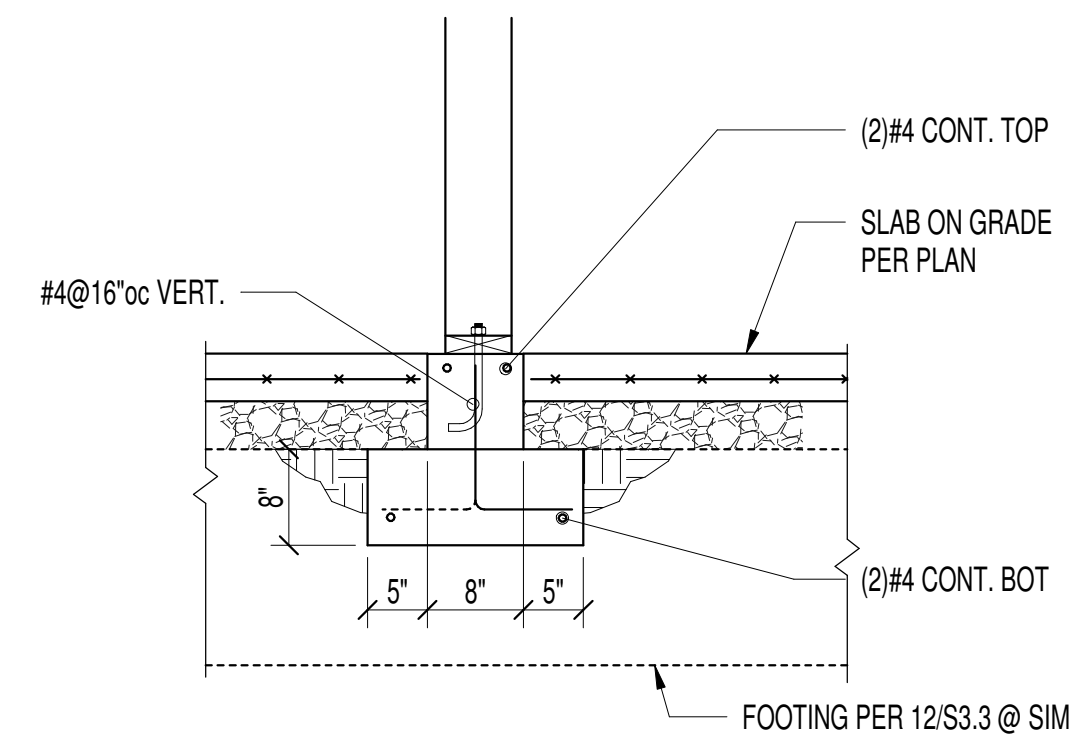


SE/NW @ Secret Room/Bath (NE of Shoring Wall)

6

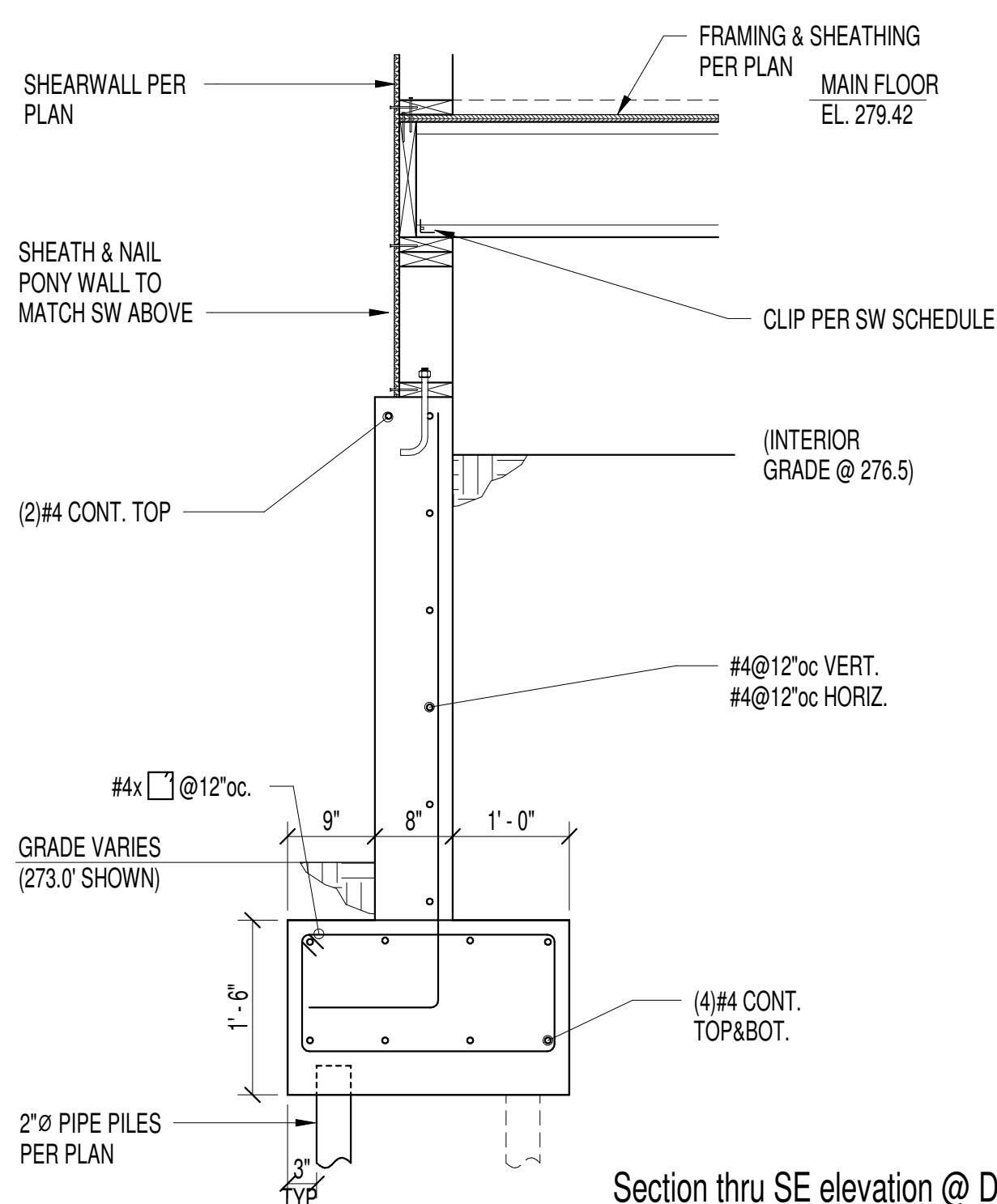


7



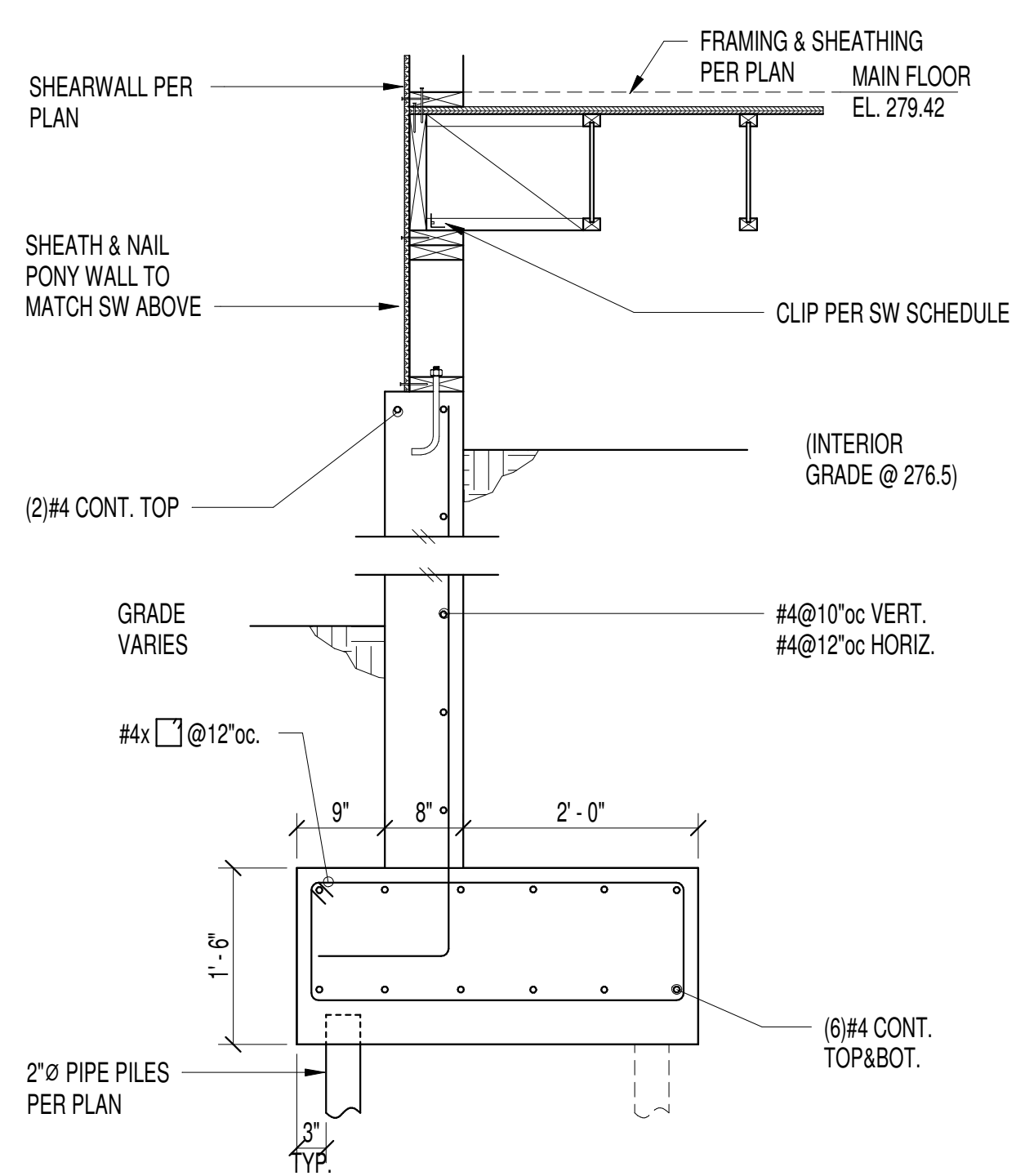
Interior Bearing Stem Wall

8



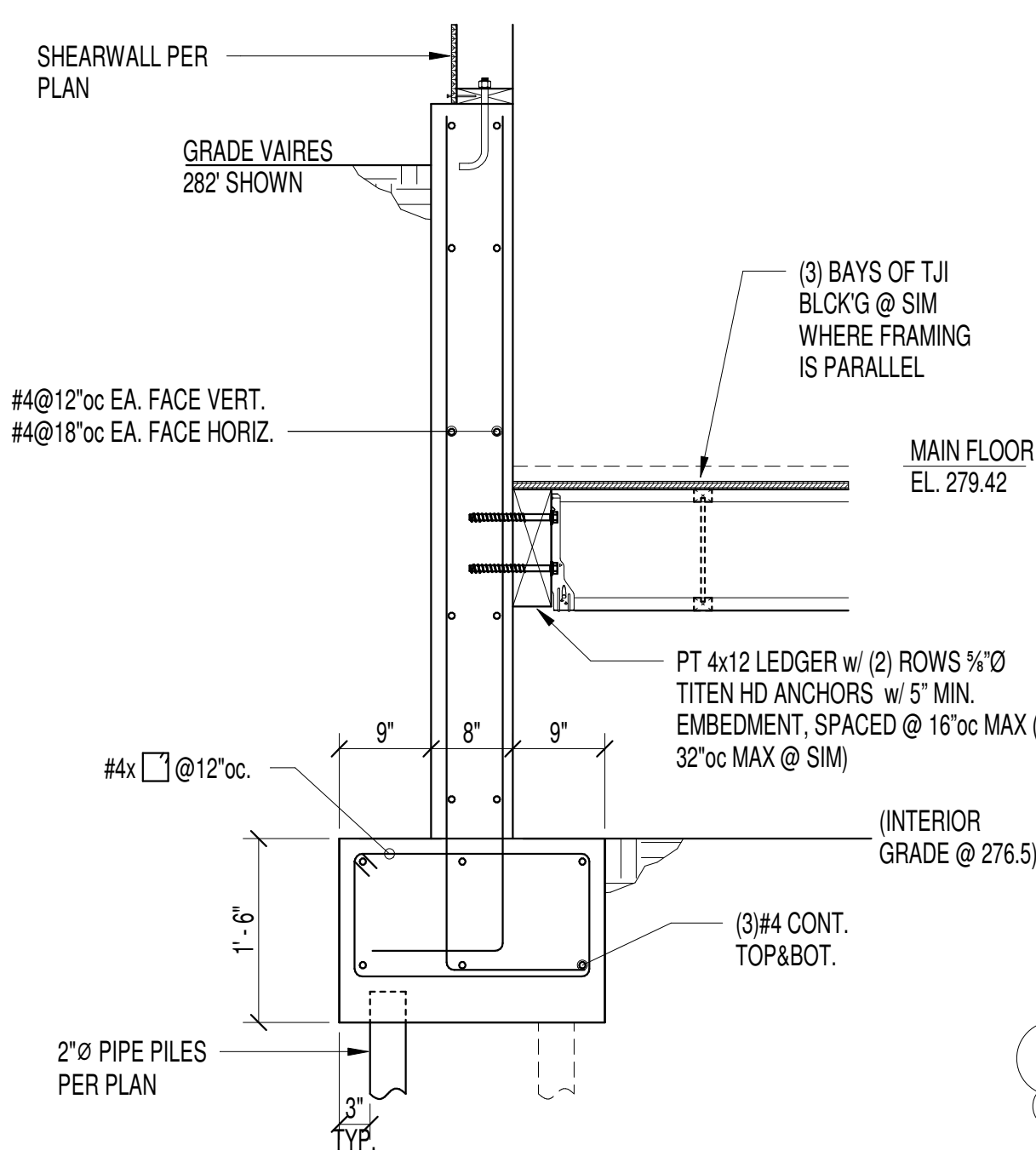
Section thru SE elevation @ Den/Laundry

9



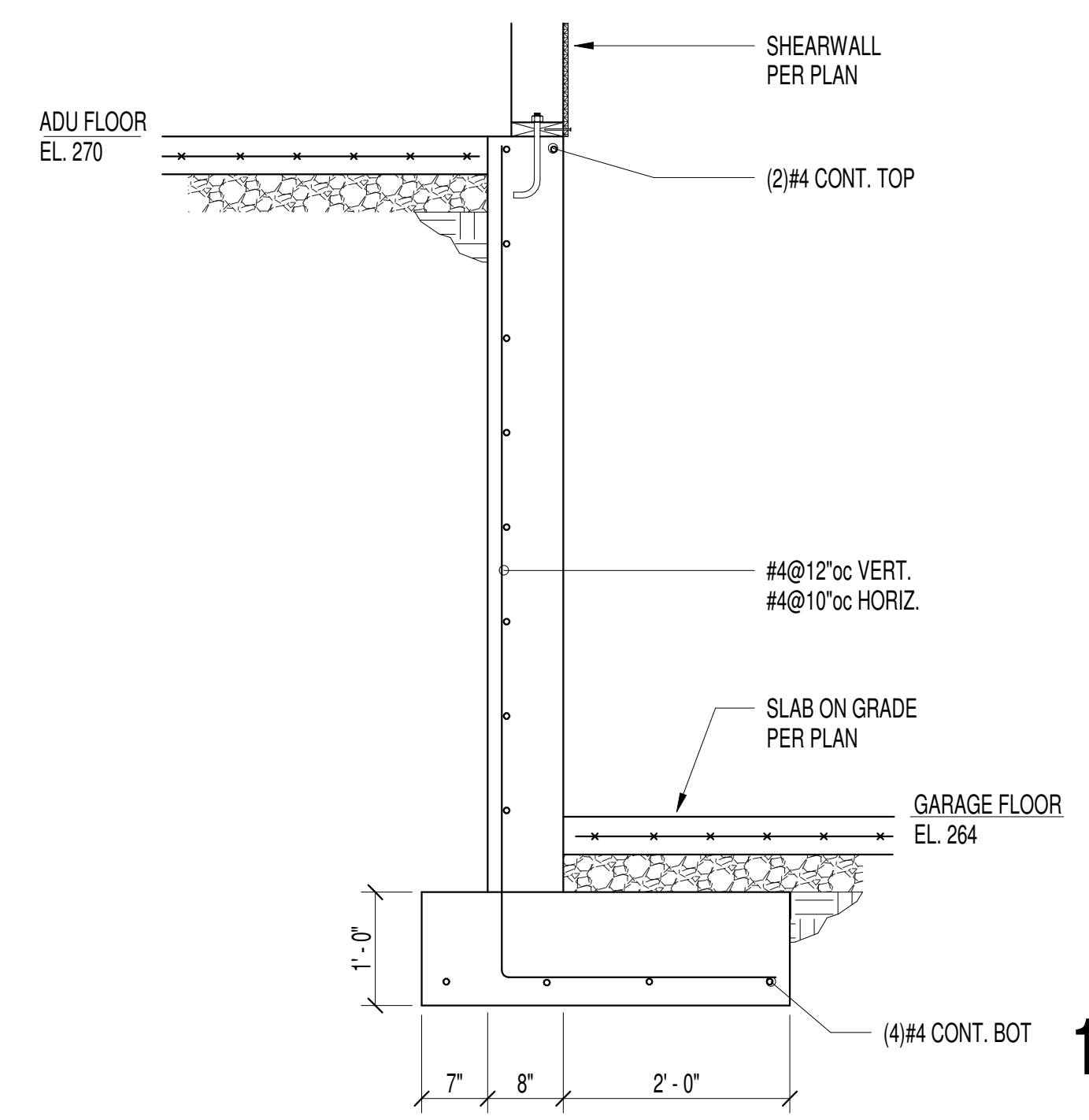
Section thru SW elevation @ Den/Laundry

10



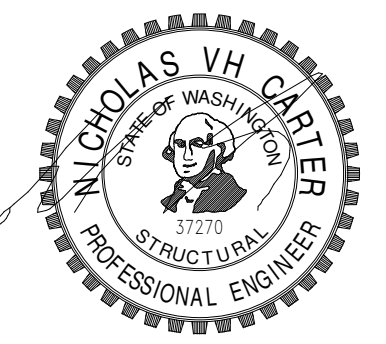
Section thru NE/SE elevation @ Laundry

11



Garage/ADU step

12



BYKONEN CARTER QUINN STRUCTURAL ENGINEERING

**STEINBORN RESIDENCE**

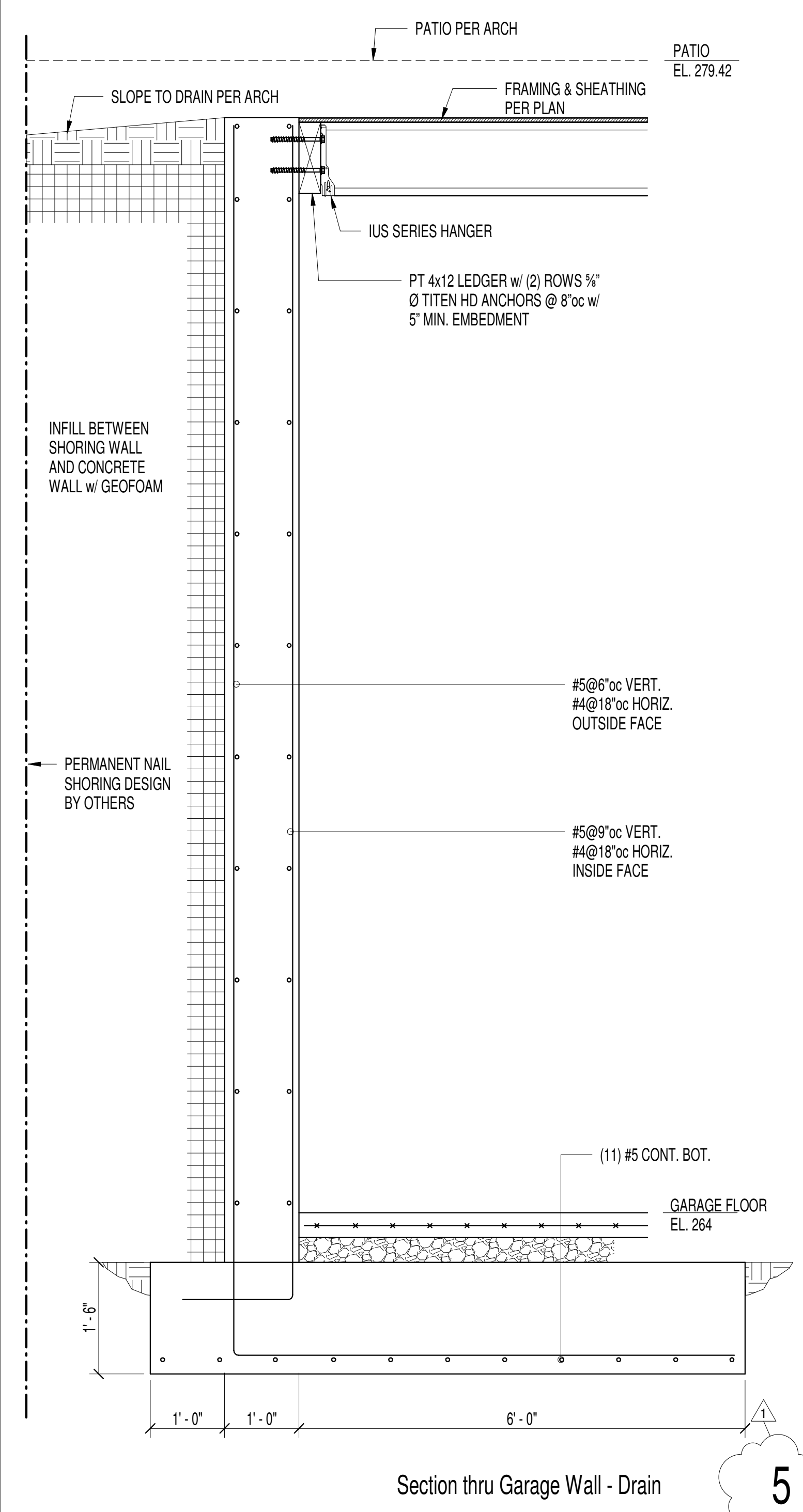
New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040

Date: 2/14/2022 Permit Submittal  
8/25/2022 Sub2-2202-225

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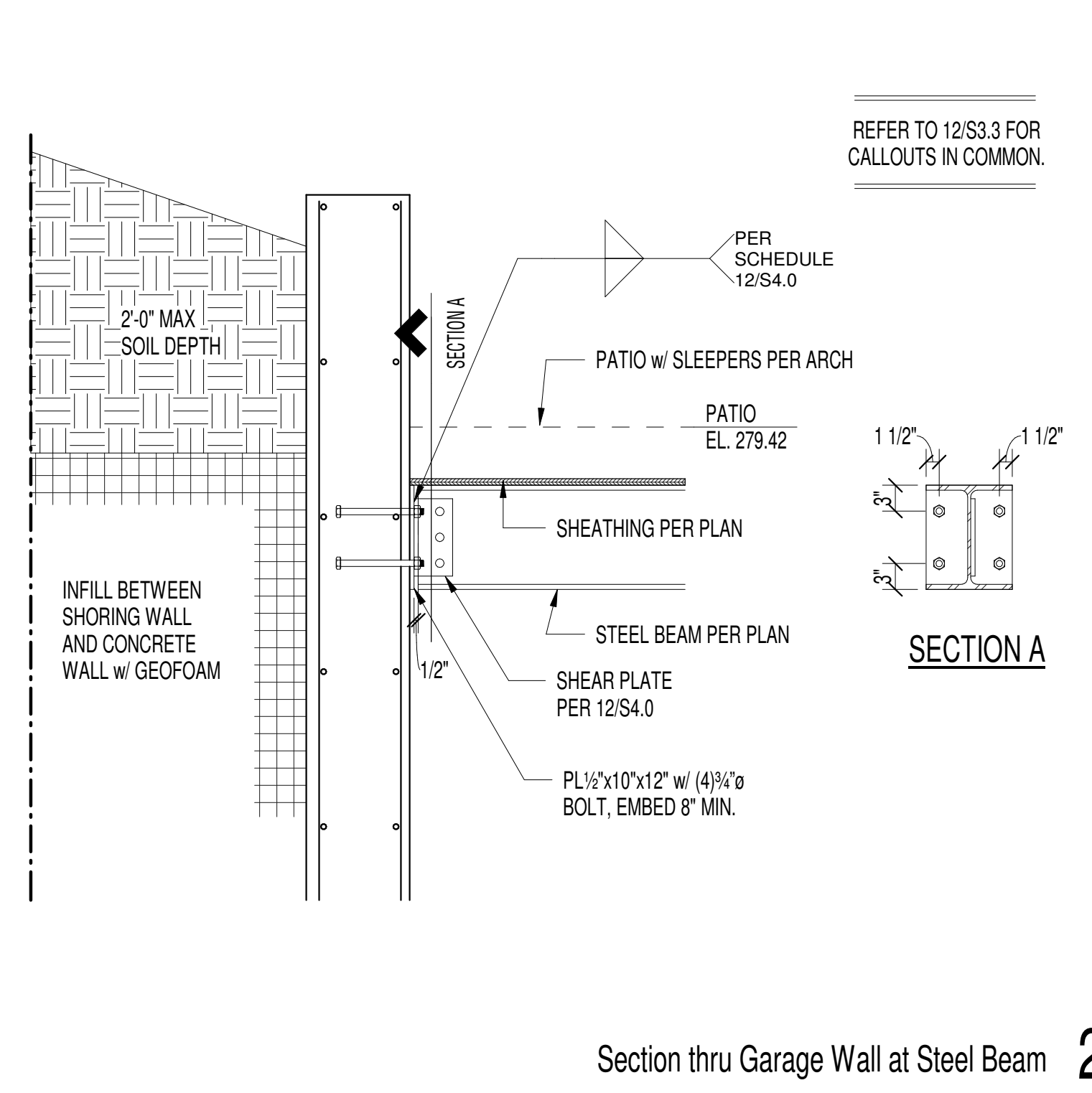
Concrete Details

S3.2



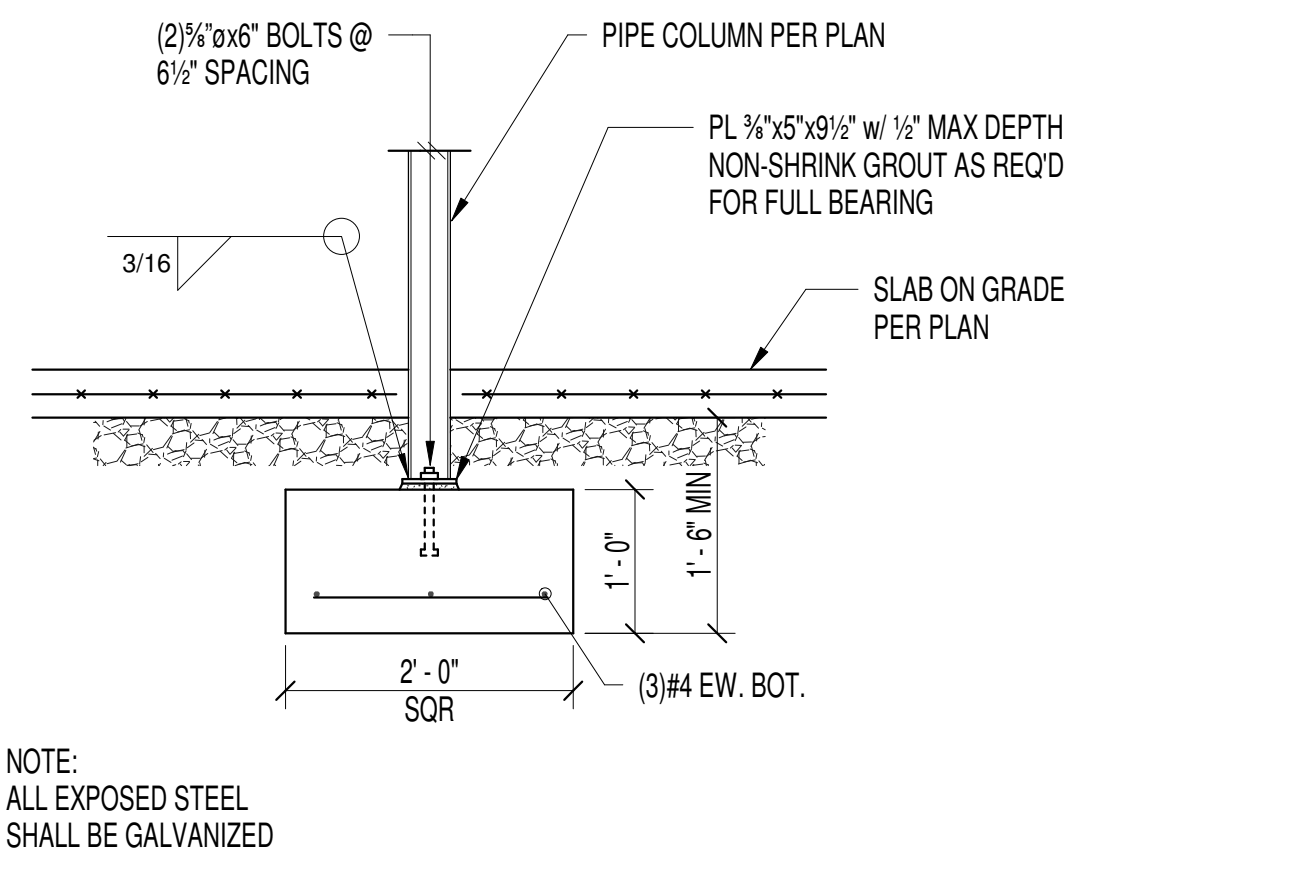
Section thru Garage Wall - Drain

5



Section thru Garage Wall at Steel Beam

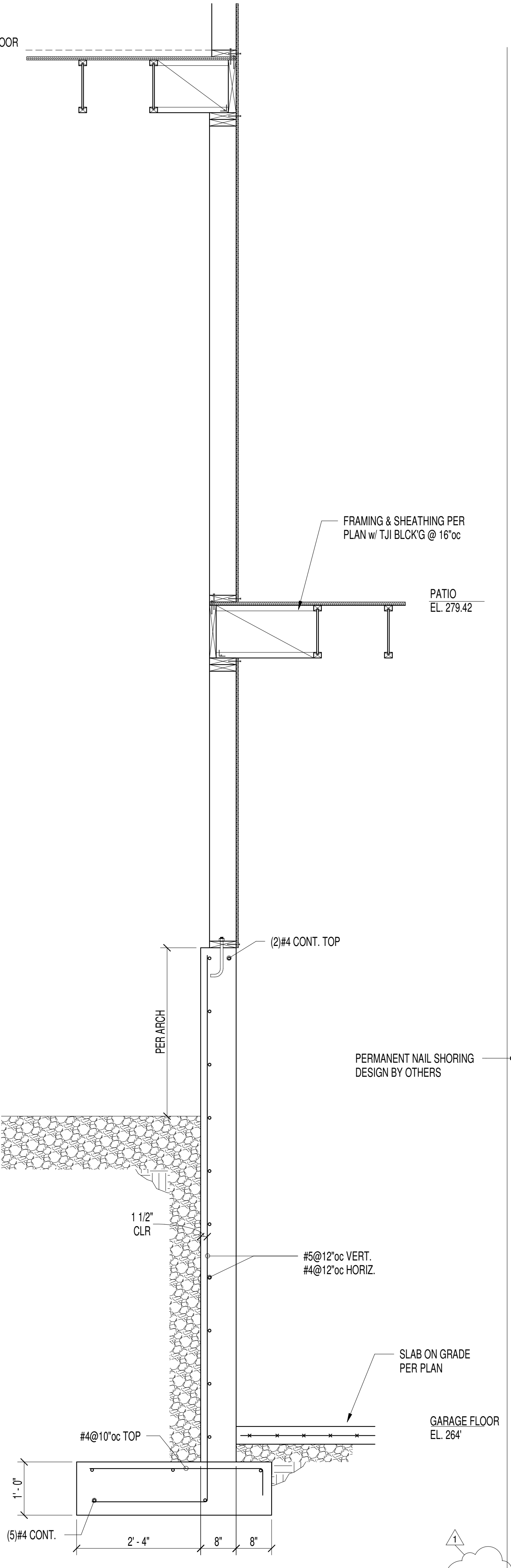
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Entry Canopy Post Base

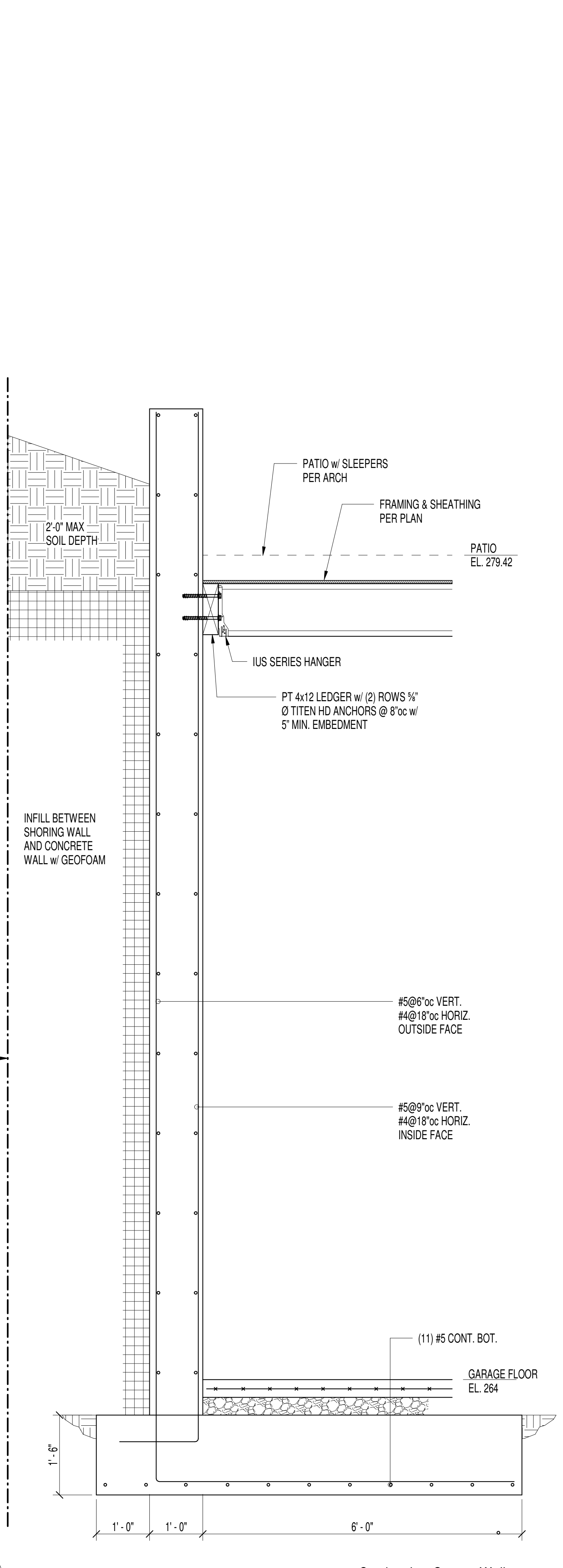
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ALLEY CRAWL SPACE EL. 272'



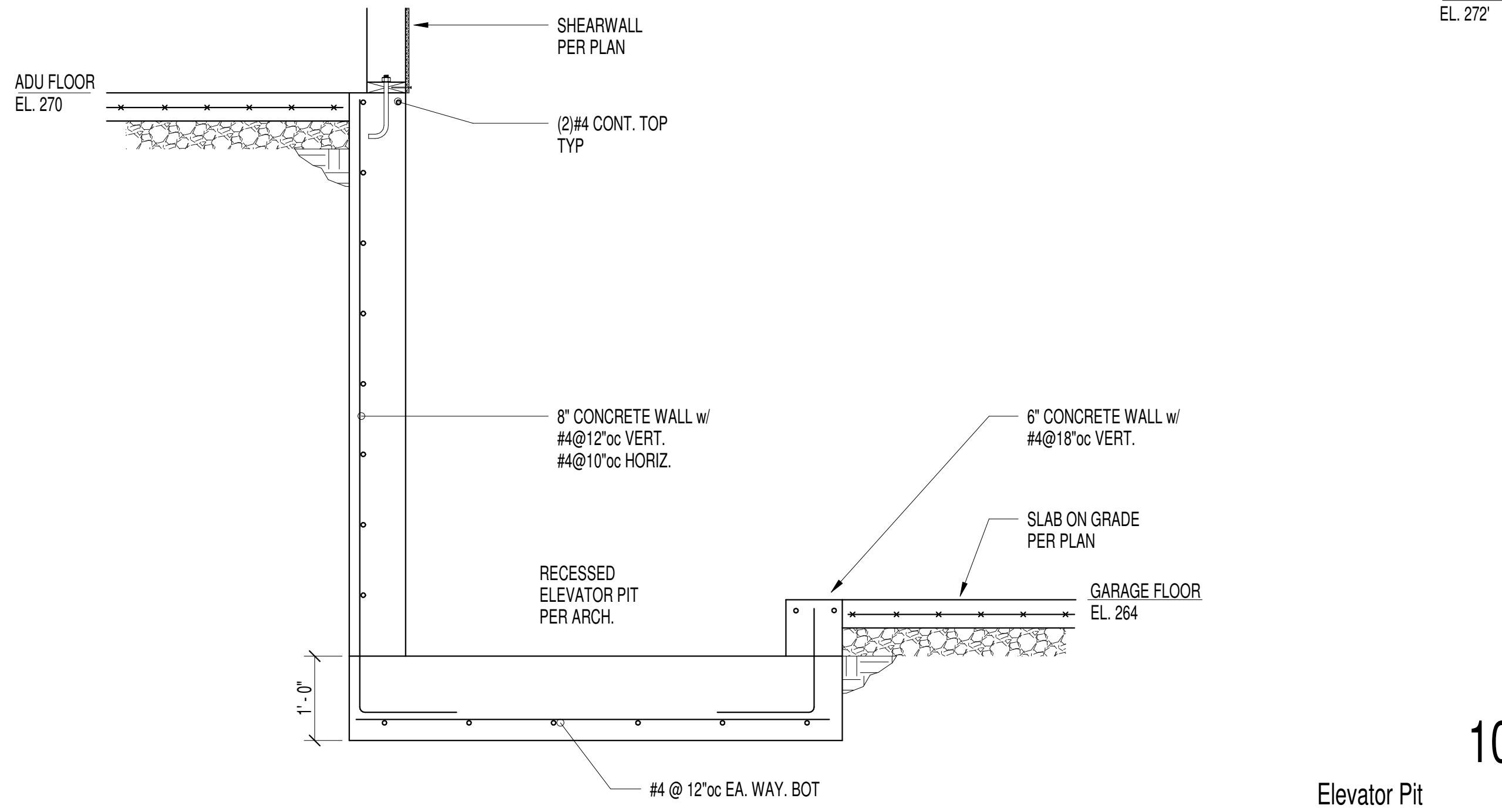
Section thru Garage Wall at Upper Floor

11



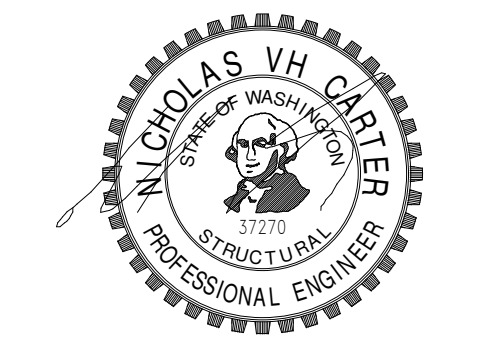
Section thru Garage Wall

12



Elevator Pit

10



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ENGINEERING

# STEINBORN RESIDENCE

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040

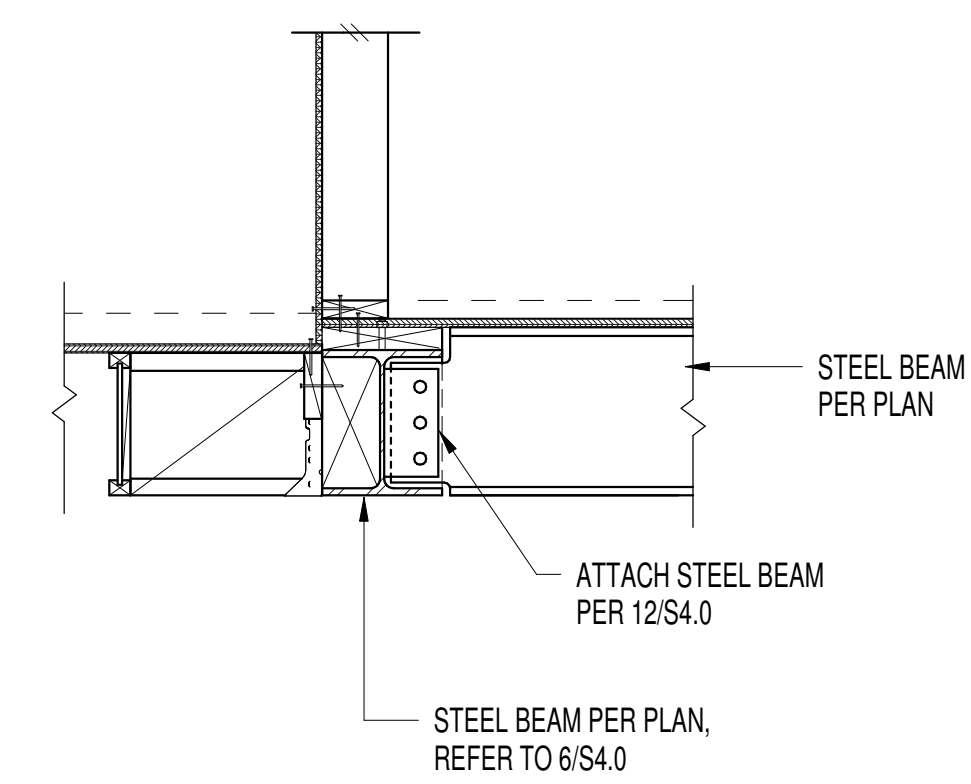
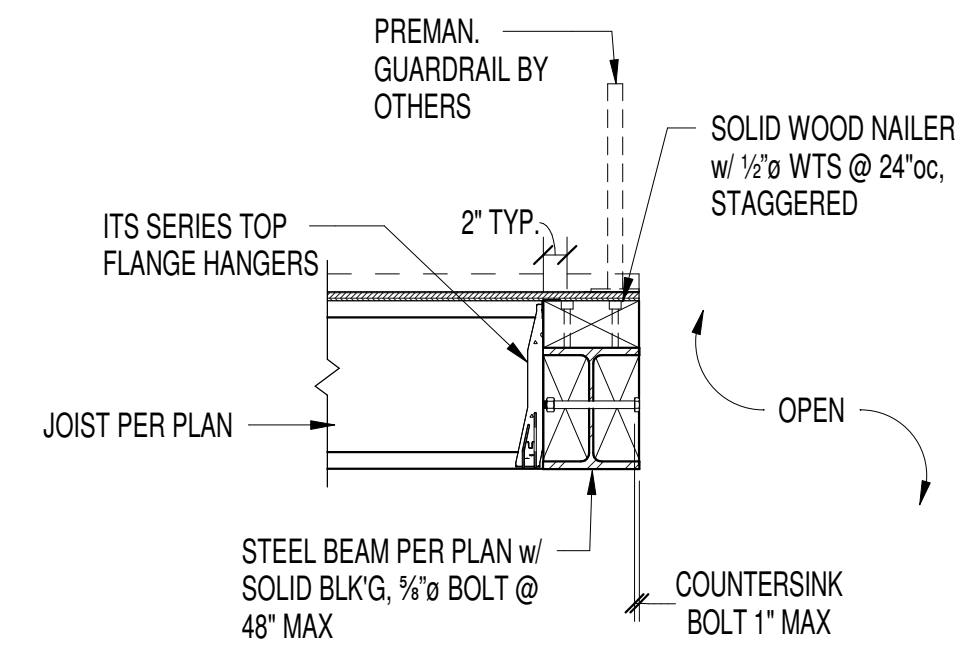
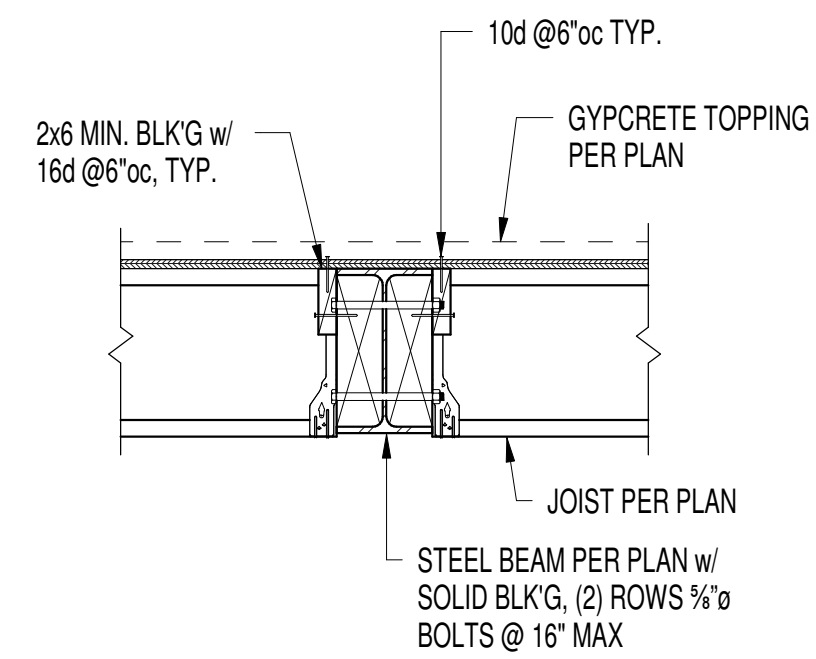
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Concrete Details

S3.3





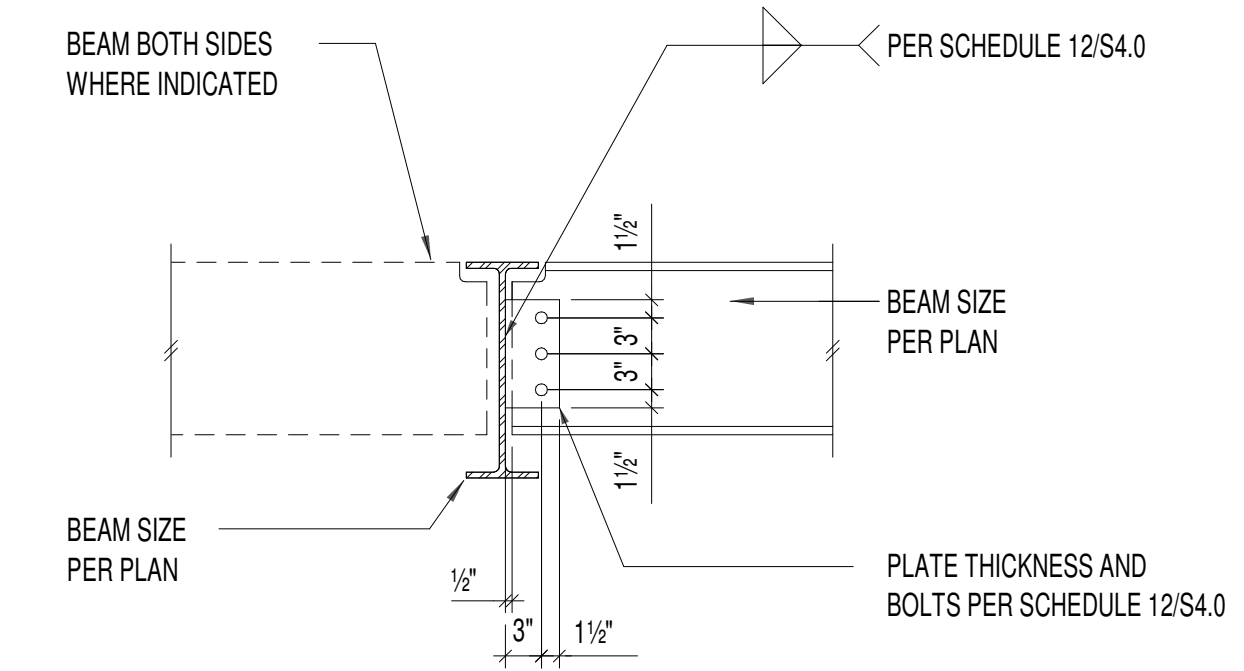
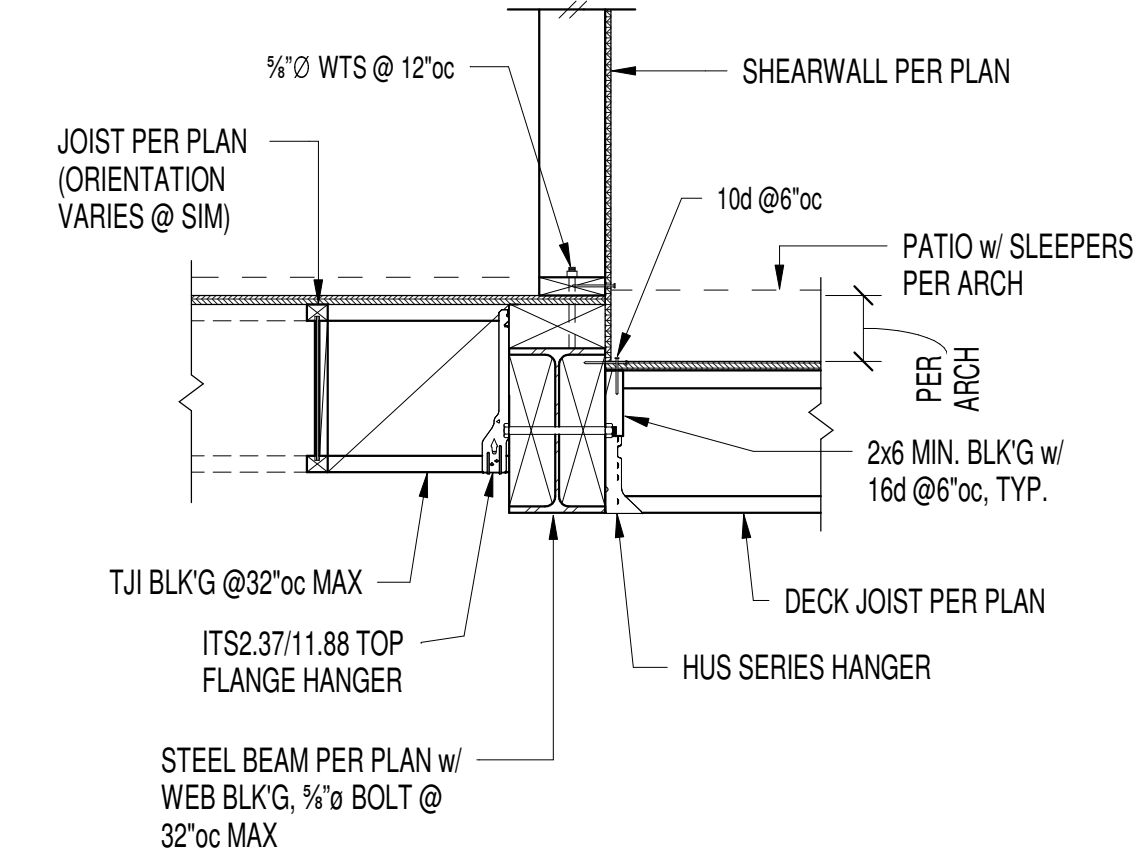
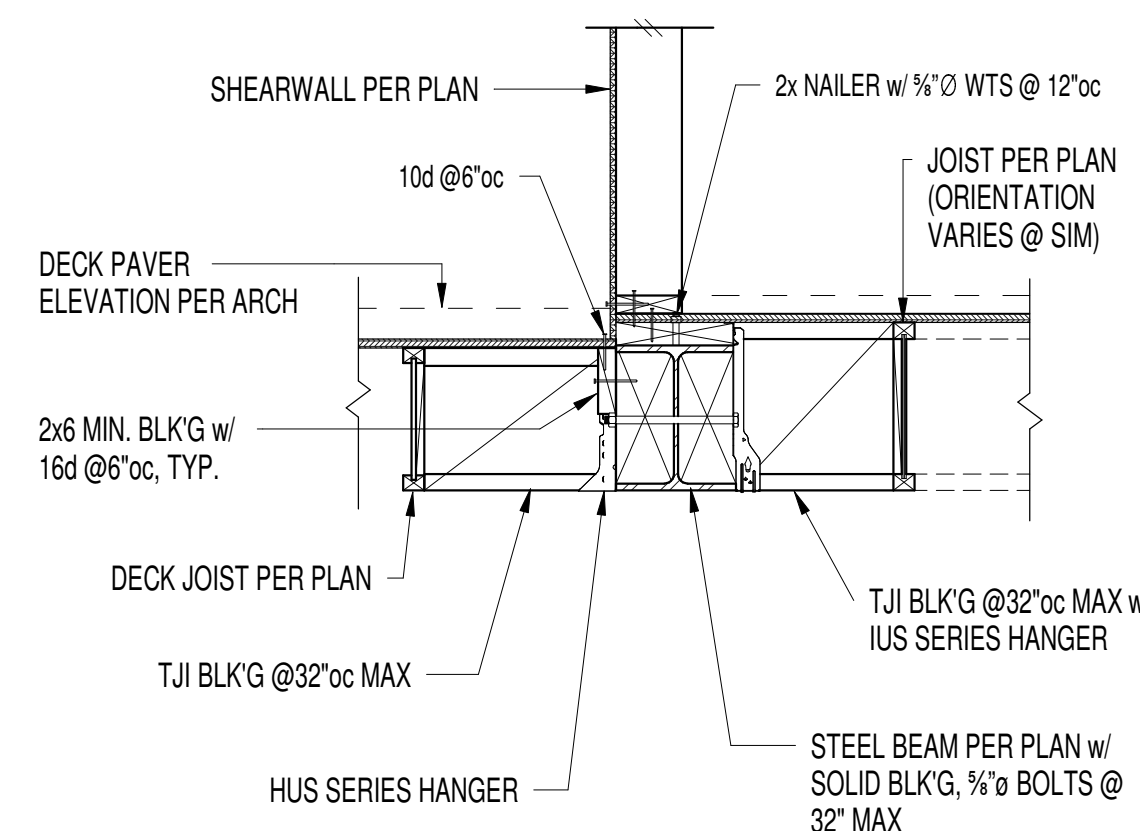
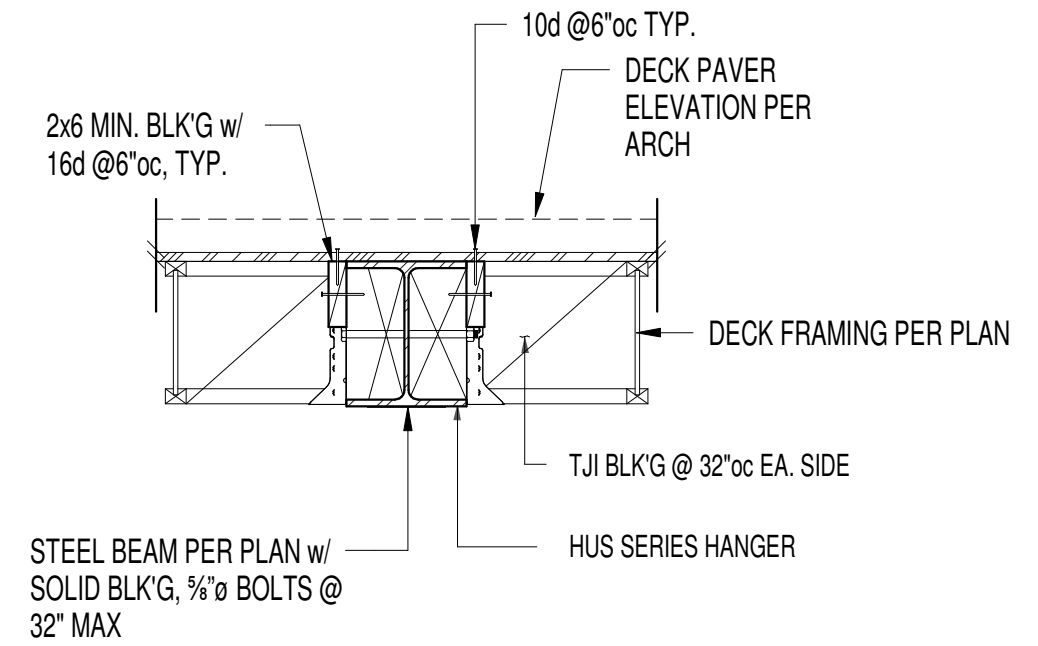
REFER TO 6/S4.0 FOR CALLOUTS IN COMMON.

1

2

3

4



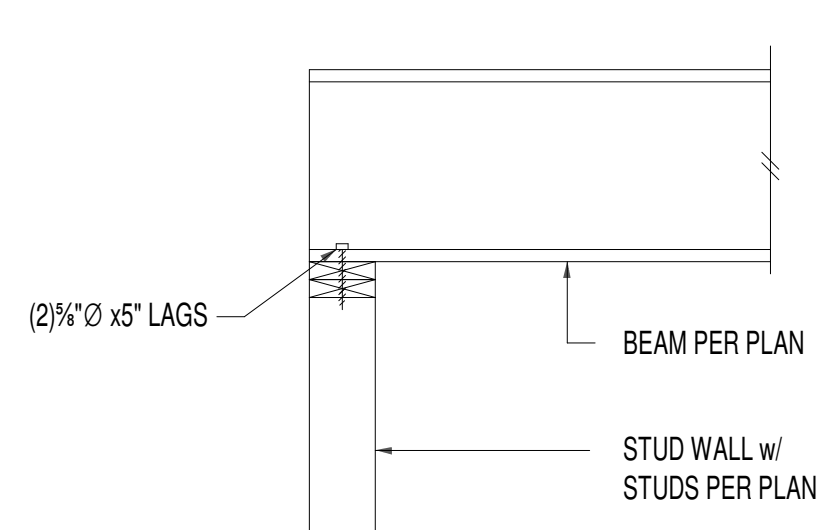
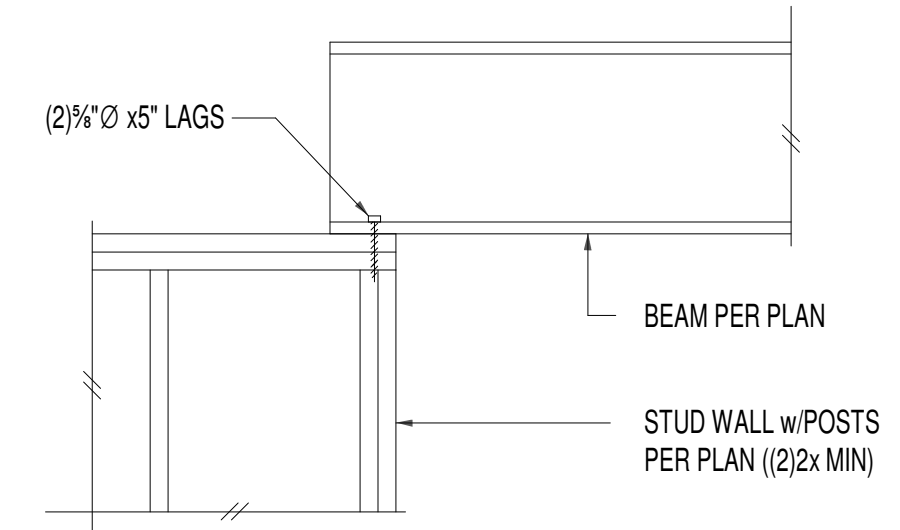
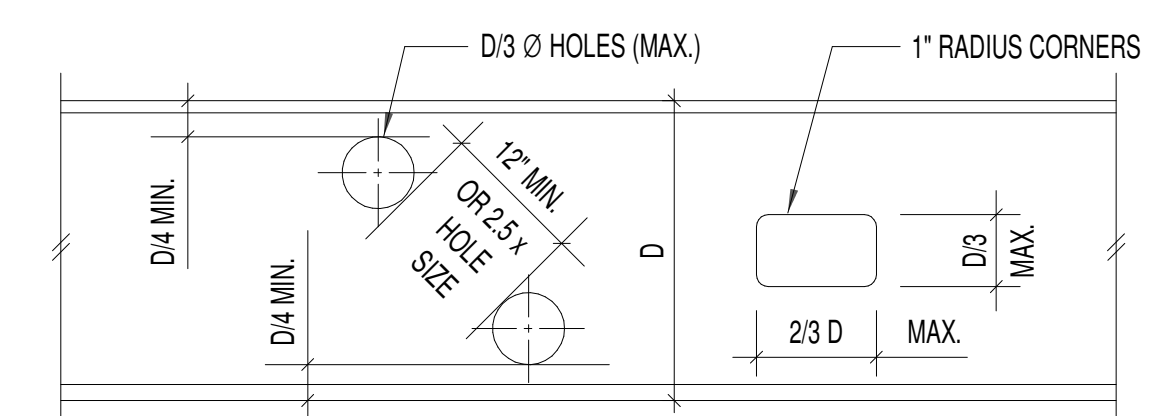
5

6

7

Typical Beam To Beam Connection

8



1. CONTRACTOR SHALL COORDINATE SIZES AND LOCATIONS OF ALL BEAM PENETRATIONS. ALL PENETRATIONS LARGER THAN 2" Ø SHALL BE SHOWN ON SHOP DRAWINGS OR SKETCHES AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. FIELD CUTTING NOT PERMITTED WITHOUT APPROVAL.
2. OPENINGS MAY OCCUR IN MIDDLE HALF OF BEAM LENGTH ONLY.
3. NO CUTTING MAY OCCUR IN TOP OR BOTTOM QUARTER OF BEAM DEPTH.
4. ADJACENT OPENINGS MUST BE SPACED AT THE LESSER OF, 12" OR 2.5 x LARGER OPENING SIZE, EDGE TO EDGE.
5. MAXIMUM SIZES OF OPENINGS SHALL BE D/3 Ø OR D/3 x 2D/3 AS SHOWN.
6. NO OPENINGS SHALL OCCUR WITHIN 12" OF AN ADJACENT BEAM CONNECTION.
7. REQUIRED OPENINGS NOT MEETING ABOVE CRITERIA SHALL BE SUBMITTED TO ENGINEER FOR REINFORCING DESIGN.

SHEAR PLATE SCHEDULE					
BEAM SIZE	NO. OF BOLTS	BOLT SIZE	PLATE THICKNESS	WELD SIZE	CAPACITY
W10	2	1"Ø	1/2"	1/4"	37.0k
W12, W14	3	1"Ø	1/2"	1/4"	53.3k

\* BOLT TYPE = A325X  
PL MATERIAL = A36

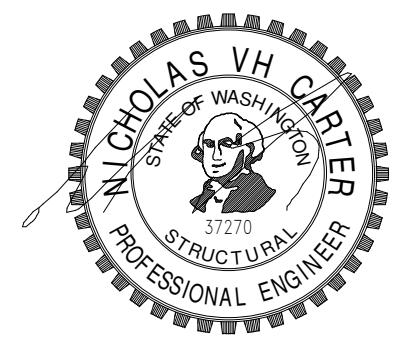
Steel Beam Openings

9

10

11

12



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STRUCTURAL ENGINEERING

**STEINBORN RESIDENCE**

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Steel Details

S4.0

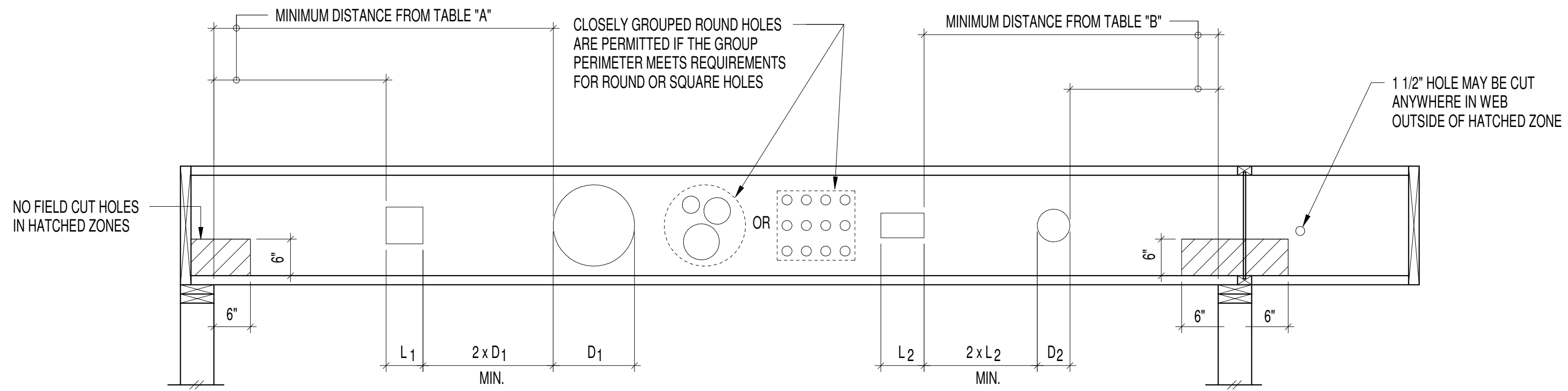


TABLE A - END SUPPORT

MINIMUM DISTANCE FROM EDGE OF HOLE TO INSIDE FACE OF NEAREST END SUPPORT

DEPTH	TJI	ROUND HOLE SIZE										SQUARE OR RECTANGULAR HOLE SIZE									
		2"	3"	4"	5"	6 1/2"	7"	8 7/8"	11"	13"	2"	3"	4"	5"	6 1/2"	7"	8 7/8"	11"	13"		
9 1/2"	110	1'-0"	1'-6"	2'-0"	3'-0"	5'-0"	-	-	-	-	1'-0"	1'-6"	2'-6"	3'-6"	4'-6"	-	-	-	-		
	210	1'-0"	1'-6"	2'-6"	3'-0"	5'-6"	-	-	-	-	1'-0"	2'-0"	2'-6"	4'-0"	5'-0"	-	-	-	-		
	230	1'-6"	2'-0"	2'-6"	3'-6"	5'-6"	-	-	-	-	1'-0"	2'-0"	3'-0"	4'-6"	5'-0"	-	-	-	-		
11 7/8"	110	1'-0"	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	5'-6"	-	-	1'-0"	1'-6"	2'-0"	2'-6"	4'-6"	5'-0"	6'-0"	-	-		
	210	1'-0"	1'-6"	2'-0"	2'-0"	3'-0"	3'-6"	6'-0"	-	-	1'-0"	1'-6"	2'-6"	3'-0"	5'-0"	5'-6"	6'-6"	-	-		
	230	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	6'-6"	-	-	1'-0"	2'-0"	2'-6"	3'-6"	5'-6"	5'-6"	7'-0"	-	-		
	360	1'-6"	2'-0"	3'-0"	3'-6"	4'-6"	5'-0"	7'-0"	-	-	1'-6"	2'-6"	3'-6"	4'-6"	6'-6"	6'-6"	7'-6"	-	-		
14"	110	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	2'-0"	3'-0"	5'-6"	-	1'-0"	1'-0"	1'-6"	2'-0"	3'-6"	4'-0"	6'-0"	8'-0"	-	-	
	210	1'-0"	1'-0"	1'-0"	1'-6"	2'-0"	2'-6"	3'-6"	6'-0"	-	1'-0"	1'-0"	2'-0"	2'-6"	4'-0"	4'-6"	6'-6"	8'-6"	-	-	
	230	1'-0"	1'-0"	1'-0"	1'-6"	2'-6"	2'-6"	4'-0"	7'-0"	-	1'-0"	1'-0"	2'-0"	3'-0"	4'-0"	5'-0"	7'-0"	9'-0"	-	-	
	360	1'-0"	1'-0"	1'-6"	2'-6"	3'-6"	4'-0"	5'-6"	8'-0"	-	1'-0"	1'-6"	2'-6"	4'-0"	6'-0"	6'-6"	8'-0"	9'-6"	-	-	
	560	1'-0"	1'-0"	2'-0"	3'-0"	4'-6"	5'-0"	6'-6"	9'-0"	-	1'-6"	3'-0"	4'-0"	5'-0"	7'-0"	7'-6"	9'-0"	10'-0"	-	-	

TABLE B - INTERMEDIATE OR CANTILEVER SUPPORT

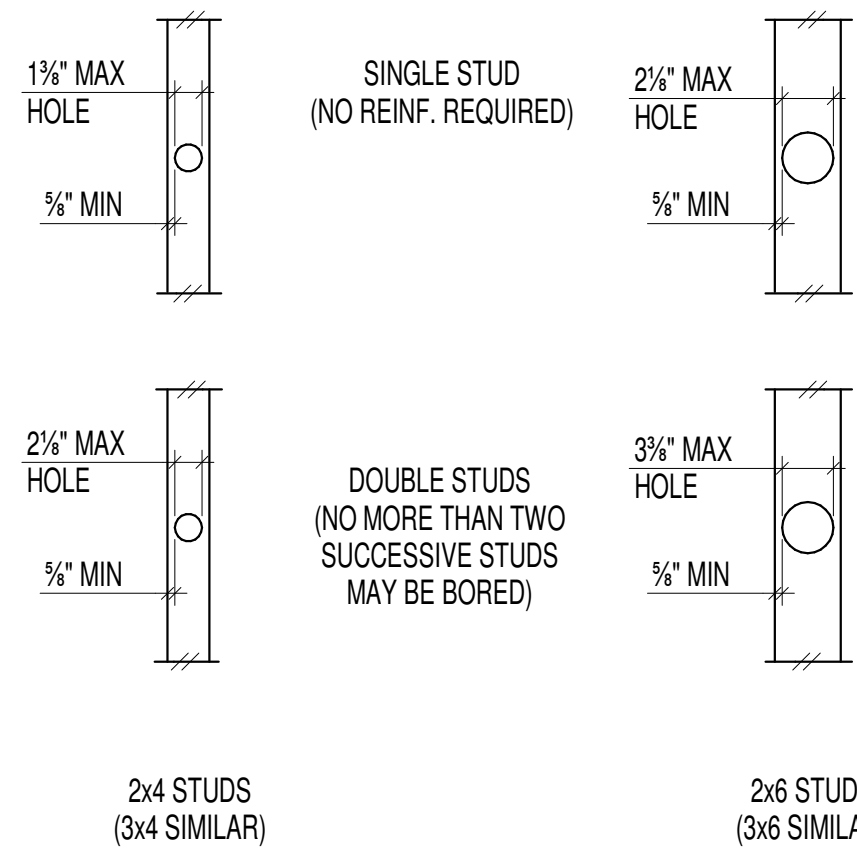
MINIMUM DISTANCE FROM EDGE OF HOLE TO INSIDE FACE OF NEAREST INTERMEDIATE OR CANTILEVER SUPPORT

DEPTH	TJI	ROUND HOLE SIZE										SQUARE OR RECTANGULAR HOLE SIZE									
		2"	3"	4"	5"	6 1/2"	7"	8 7/8"	11"	13"	2"	3"	4"	5"	6 1/2"	7"	8 7/8"	11"	13"		
9 1/2"	110	2'-0"	2'-6"	3'-6"	4'-6"	7'-6"	-	-	-	-	1'-6"	2'-6"	3'-6"	5'-6"	6'-6"	-	-	-	-		
	210	2'-0"	2'-6"	3'-6"	5'-0"	8'-0"	-	-	-	-	2'-0"	3'-0"	4'-0"	6'-6"	7'-6"	-	-	-	-		
	230	2'-6"	3'-0"	4'-0"	5'-6"	8'-6"	-	-	-	-	2'-0"	3'-6"	4'-6"	6'-6"	7'-6"	-	-	-	-		
11 7/8"	110	1'-0"	1'-0"	1'-6"	2'-6"	4'-0"	4'-6"	8'-6"	-	-	1'-0"	1'-6"	2'-6"	4'-0"	7'-0"	7'-0"	9'-6"	-	-		
	210	1'-0"	1'-0"	2'-0"	3'-0"	4'-6"	5'-0"	9'-0"	-	-	1'-0"	2'-0"	3'-0"	4'-6"	8'-0"	8'-0"	10'-0"	-	-		
	230	1'-0"	2'-0"	2'-6"	3'-6"	5'-0"	5'-6"	10'-0"	-	-	1'-0"	2'-6"	3'-6"	5'-0"	8'-6"	9'-0"	10'-6"	-	-		
	360	2'-0"	3'-0"	4'-0"	5'-6"	7'-0"	7'-6"	11'-0"	-	-	2'-0"	3'-6"	5'-0"	7'-0"	9'-6"	9'-6"	11'-0"	-	-		
14"	110	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	2'-6"	4'-6"	8'-6"	-	1'-0"	1'-0"	1'-0"	2'-6"	5'-0"	6'-0"	9'-0"	12'-0"	-	-	
	210	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	3'-0"	5'-6"	9'-6"	-	1'-0"	1'-0"	2'-0"	3'-6"	6'-0"	7'-0"	10'-0"	13'-0"	-	-	
	230	1'-0"	1'-0"	1'-0"	2'-0"	3'-6"	4'-0"	6'-0"	10'-6"	-	1'-0"	1'-0"	2'-6"	4'-0"	6'-6"	7'-6"	11'-0"	13'-6"	-	-	
	360	1'-0"	1'-0"	2'-0"	3'-6"	5'-6"	6'-0"	8'-6"	12'-6"	-	1'-0"	2'-0"	4'-0"	5'-6"	9'-0"	10'-0"	12'-0"	14'-0"	-	-	
	560	1'-0"	1'-0"	1'-6"	3'-6"	5'-6"	6'-6"	9'-6"	13'-6"	-	1'-0"	3'-0"	5'-0"	7'-0"	10'-0"	11'-0"	13'-6"	15'-0"	-	-	

GENERAL NOTES:

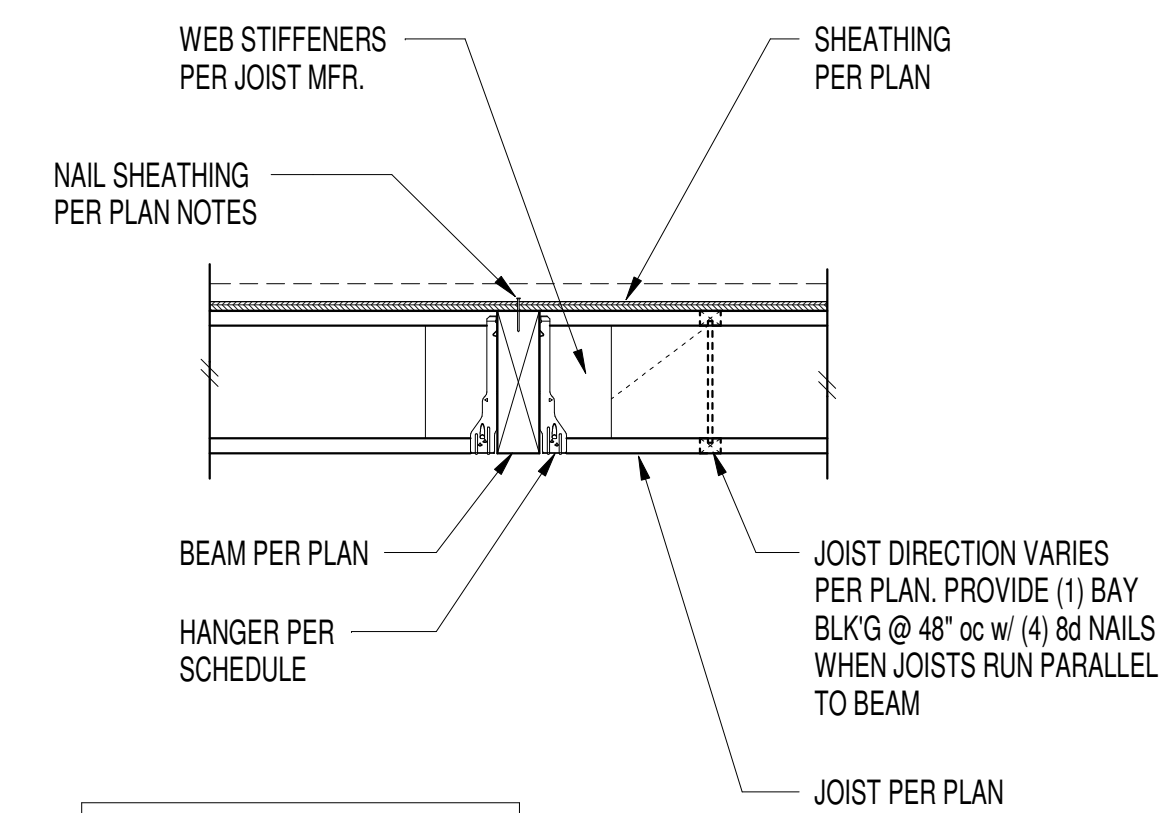
- HOLES MAY BE LOCATED VERTICALLY ANYWHERE WITHIN THE WEB. LEAVE 1/8" OF WEB (MINIMUM) AT TOP AND BOTTOM OF HOLE.
- KNOCKOUTS ARE LOCATED IN WEB AT APPROXIMATELY 12" ON-CENTER; THEY DO NOT AFFECT HOLE PLACEMENT AND MAY BE LOCATED IN THE HATCHED ZONE.
- FOR SIMPLE SPAN (5' MINIMUM) UNIFORMLY LOADED JOISTS MEETING THE REQUIREMENTS OF THIS GUIDE, ONE MAXIMUM SIZE ROUND HOLE MAY BE LOCATED AT THE CENTER OF THE JOIST SPAN PROVIDED THAT NO OTHER HOLES OCCUR IN THE JOIST.
- DISTANCES ARE BASED ON THE MAXIMUM UNIFORM LOADS SHOWN IN THIS GUIDE. FOR OTHER LOAD CONDITIONS OR HOLE CONFIGURATIONS, USE FORTE SOFTWARE OR CONTACT YOUR WEYERHAEUSER REPRESENTATIVE.
- DO NOT CUT OR NOTCH FLANGE.

Allowable TJI Joist Penetrations



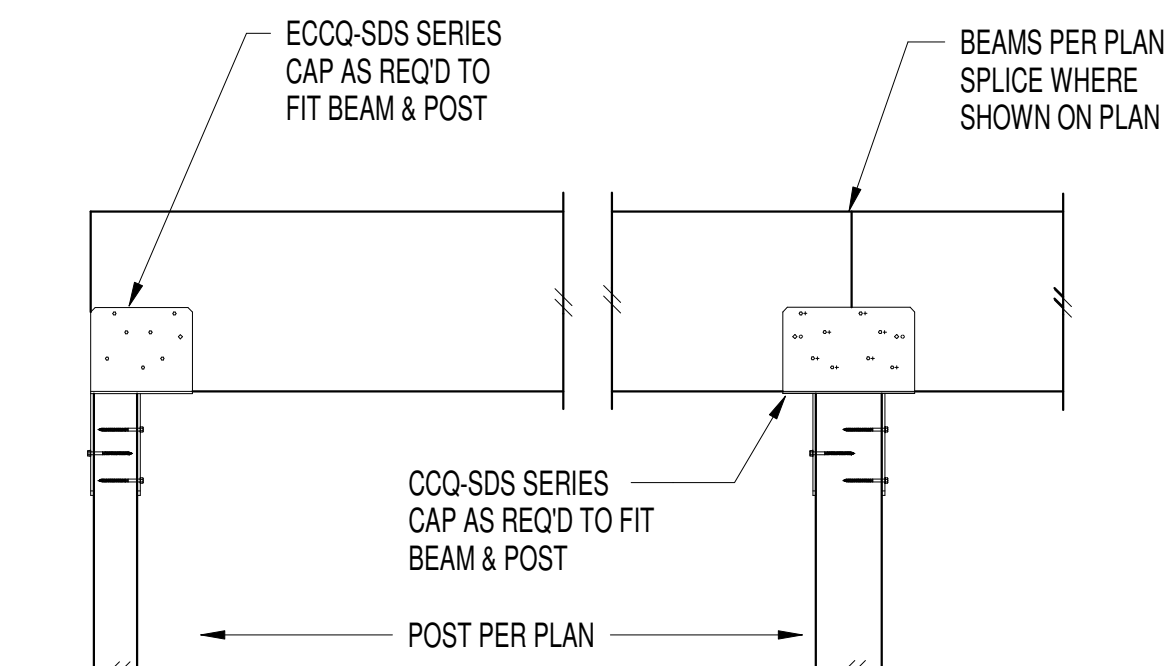
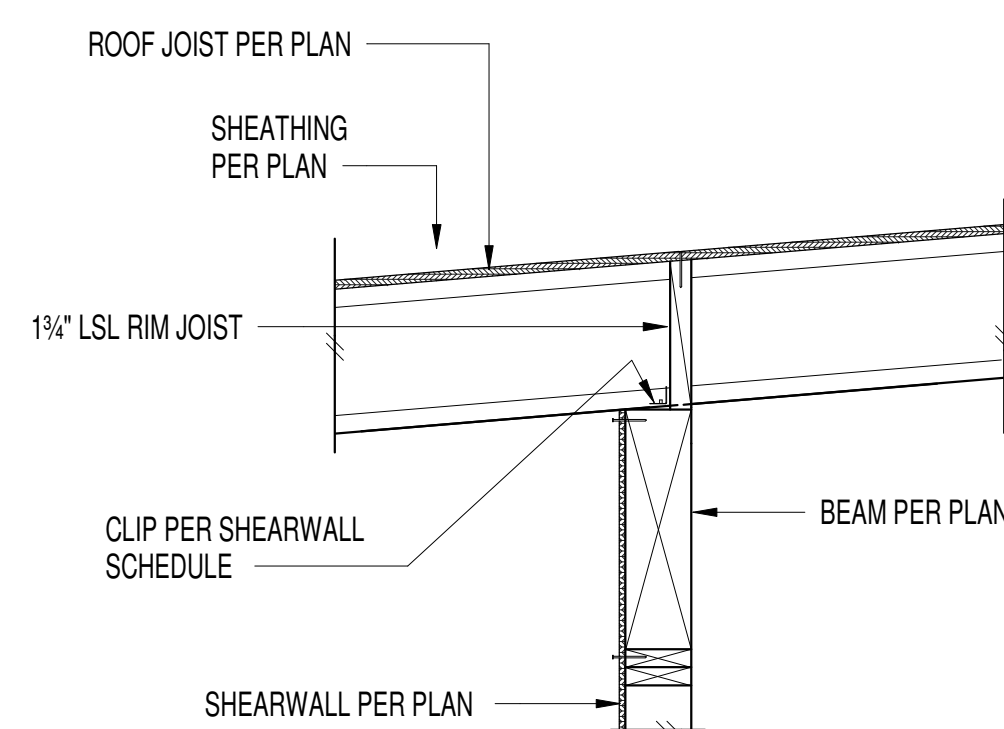
NOTE: BORED HOLES SHALL NOT BE LOCATED @ THE SAME SECTION OF STUD AS A NOTCH.

Holes Allowed Through Studs

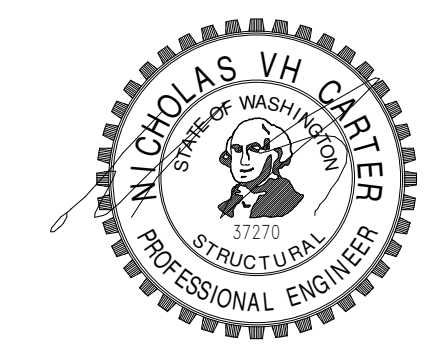
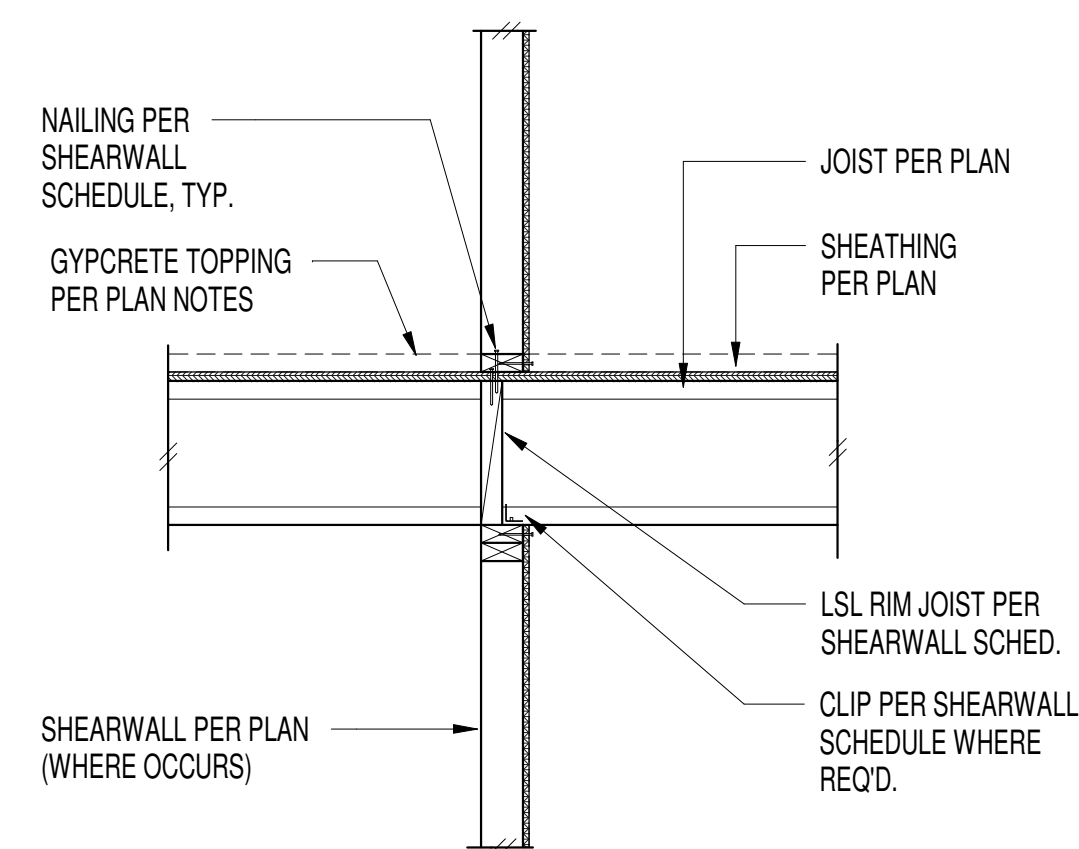
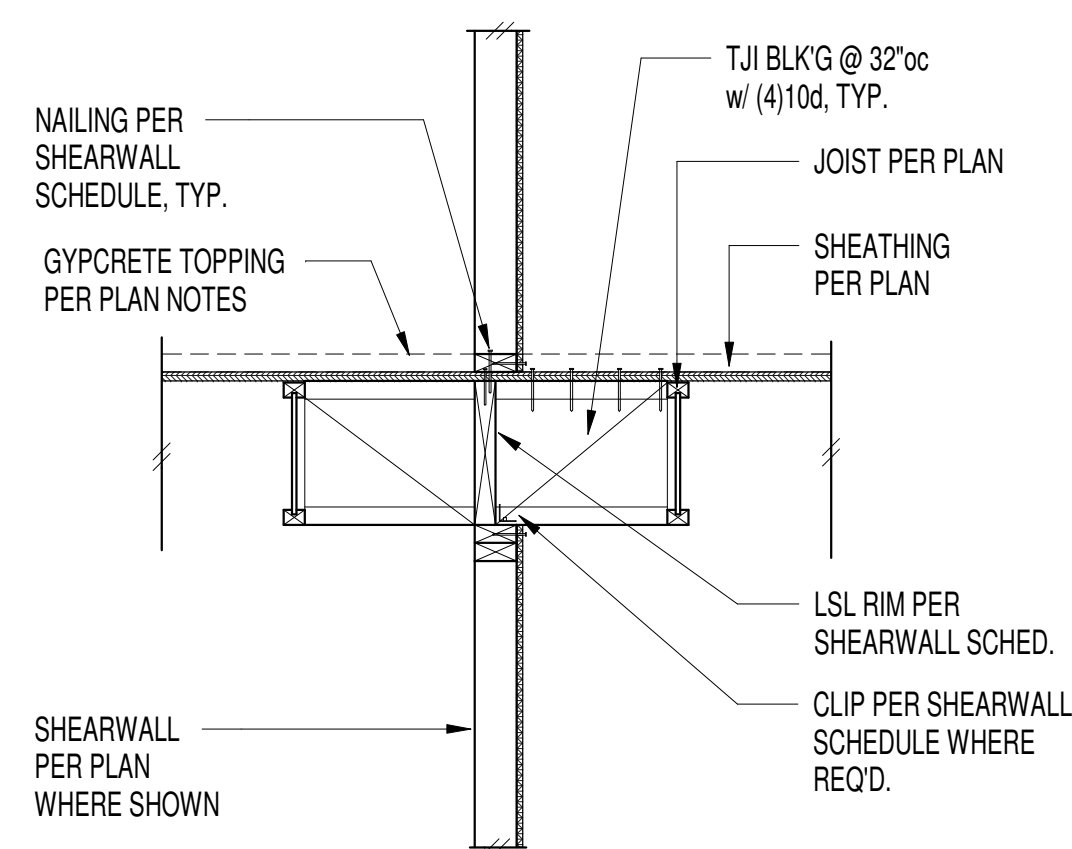


JOIST	HANGER
11 1/2" TJI 110	HUS1.81/11
11 1/2" TJI 360	HU3511
14" TJI 110	IUS1.81/14

Typical Beam



Typical Beam To Isolated Post Connection



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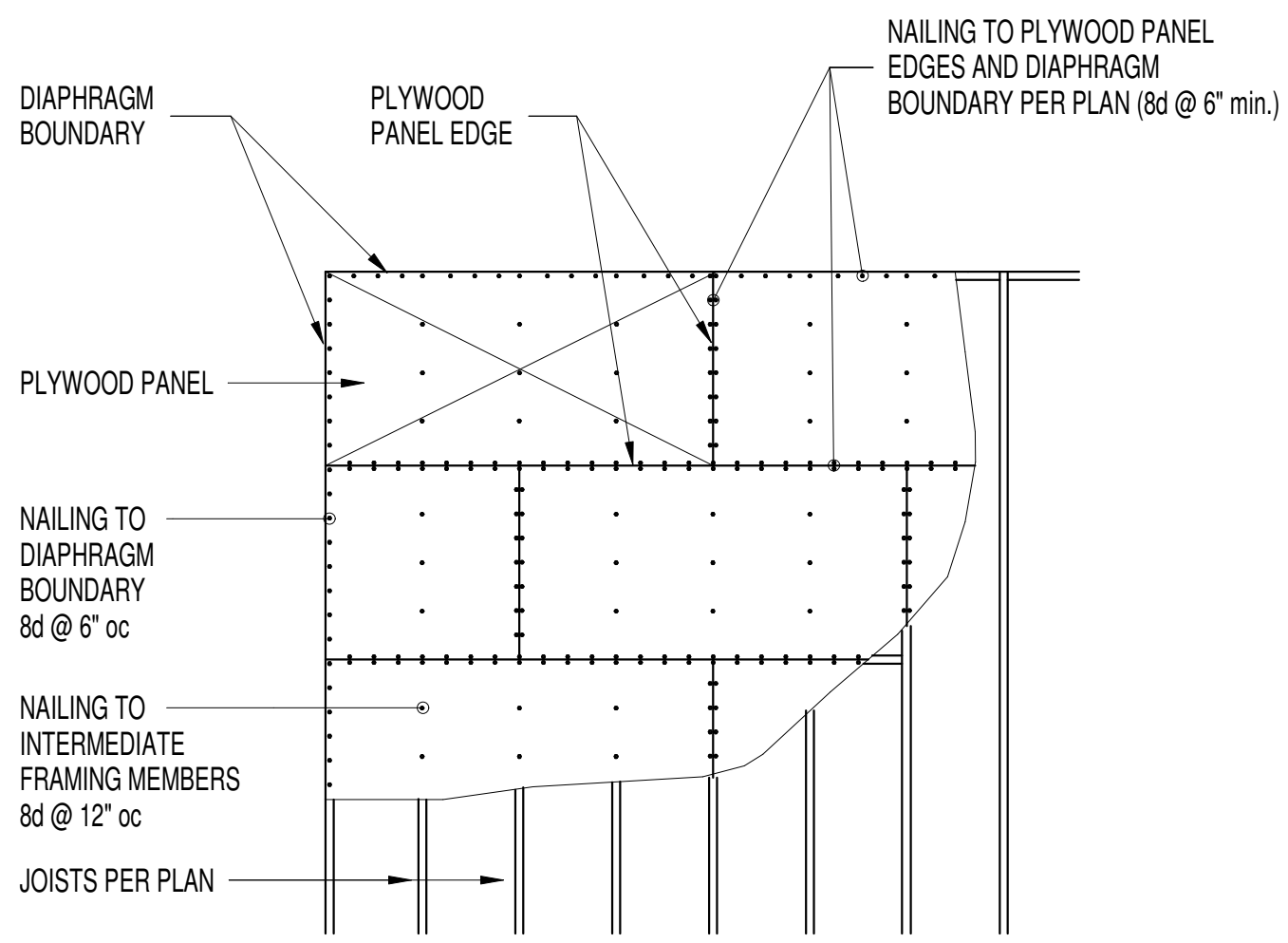
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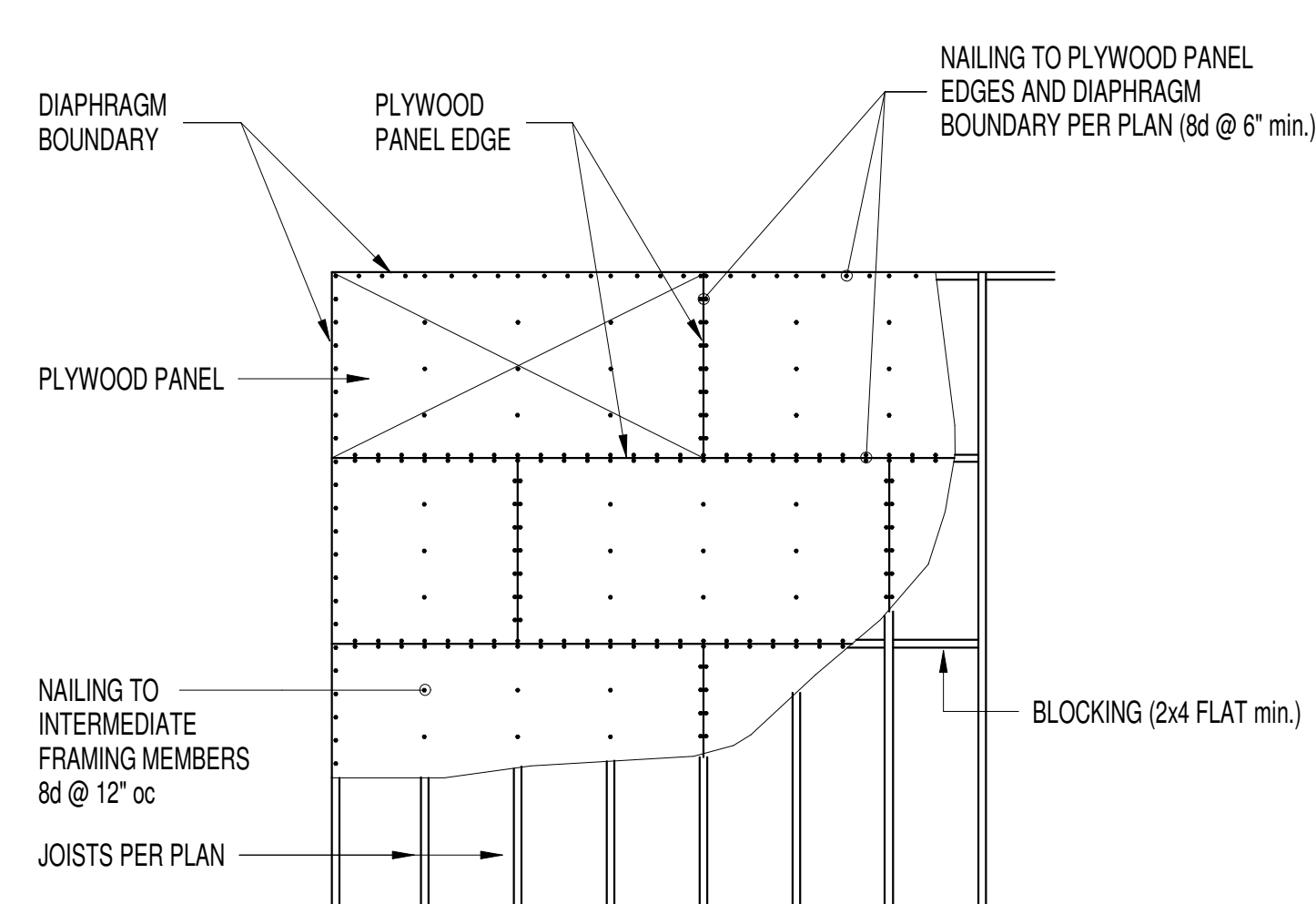
Typical Wood Details



NOTE:  
BEARING AND SHEAR WALL INTERSECTIONS SHALL BE CONSIDERED DIAPHRAGM BOUNDARIES, TYP

Typical Un-Blocked Plywood Roof/Floor Sheathing Layout

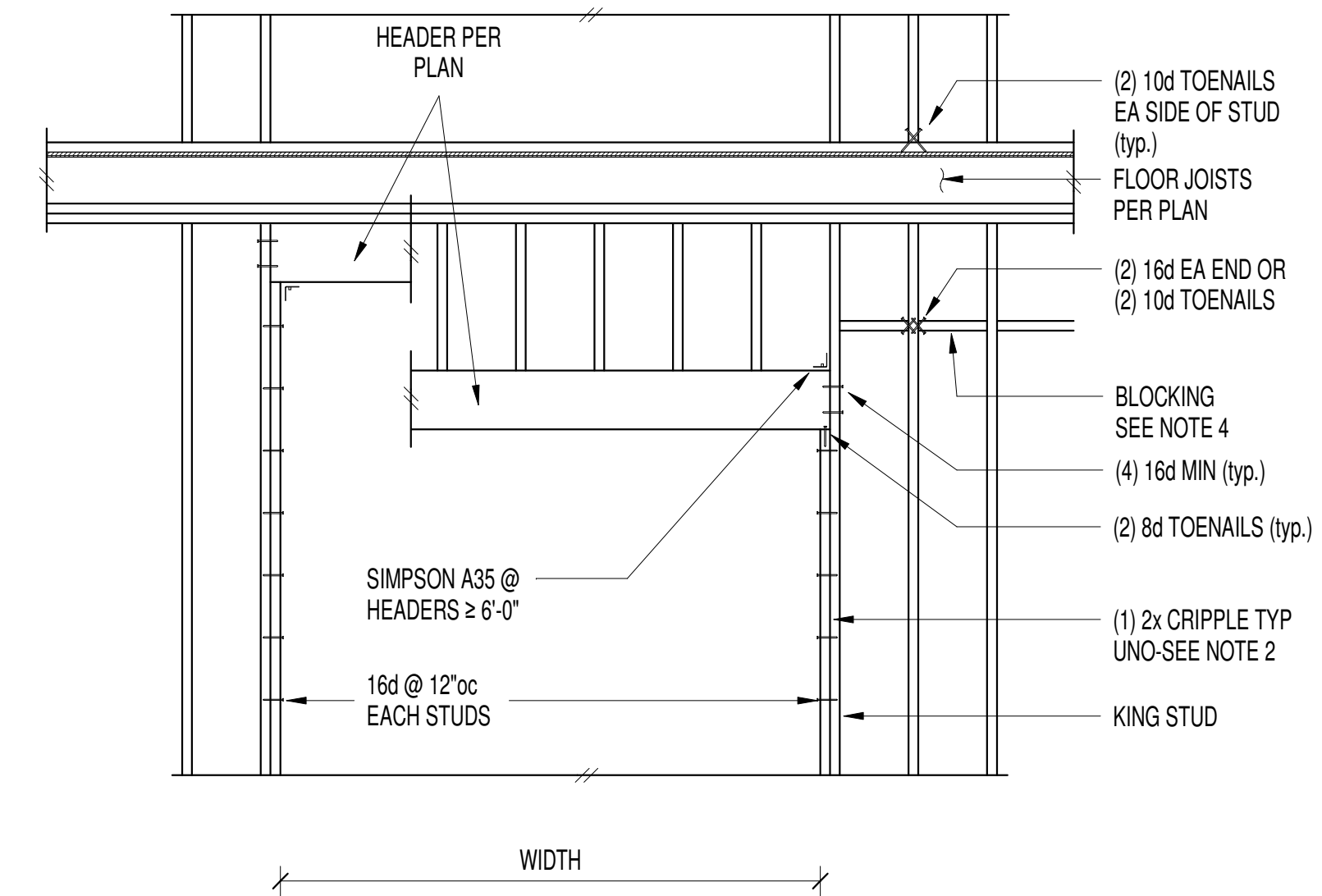
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NOTE:  
BEARING AND SHEAR WALL INTERSECTIONS SHALL BE CONSIDERED DIAPHRAGM BOUNDARIES, TYP

Typical Blocked Sheathing Layout

2



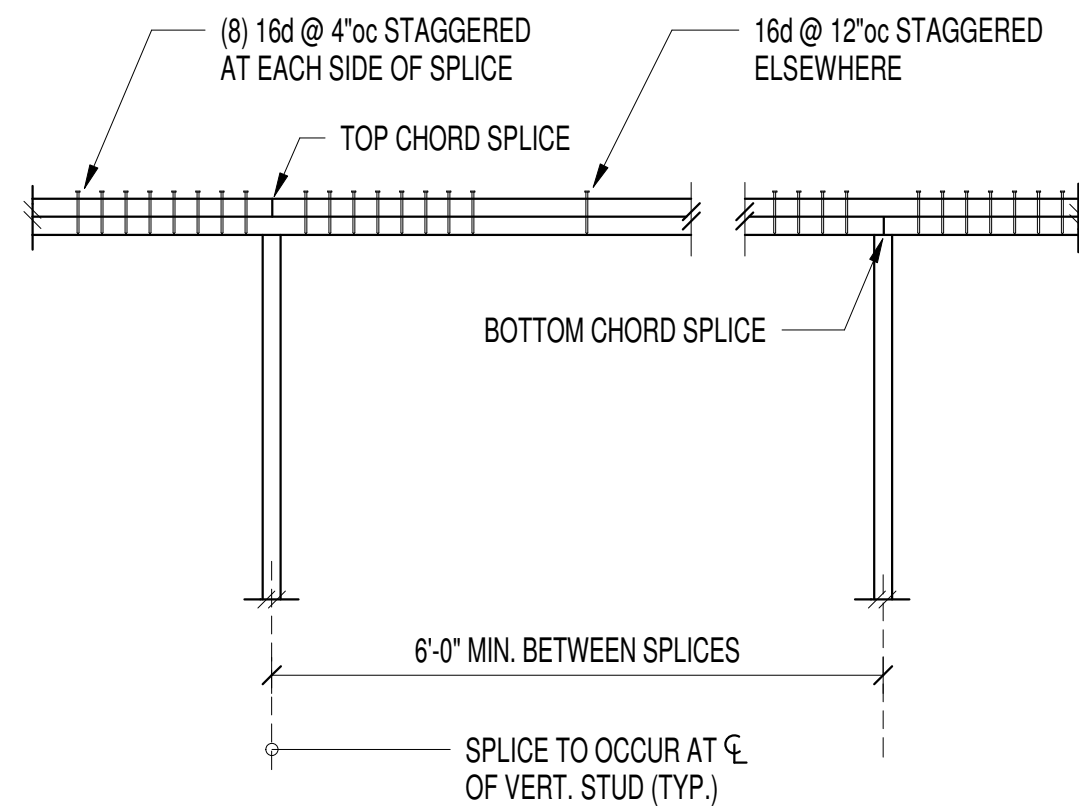
Scale : N.T.S.

NOTES:

- HEADERS PER PLAN
- PROVIDE (1) 2x CRIPPLE STUDS MINIMUM TYPICAL, U.O.N.
- SEE ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS
- 2x SOLID BLOCKING REQUIRED AT CEILING LINE, ALL PANEL EDGES, AND @ 8'-0" MAX.

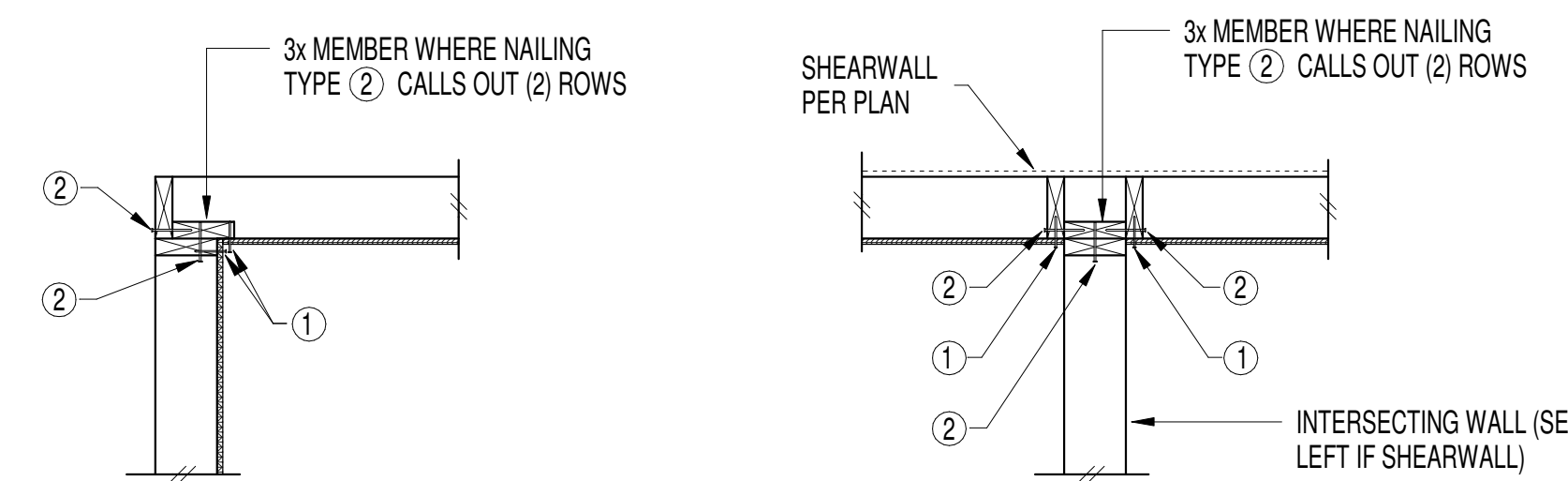
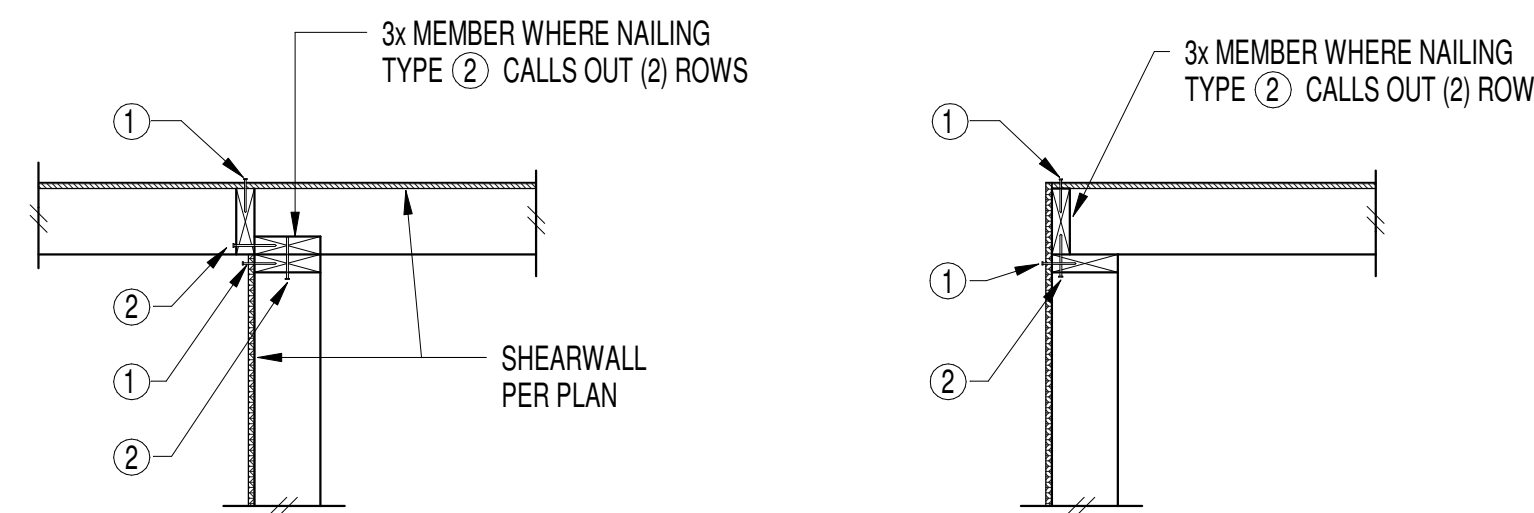
Typical Wall Opening Framing Elevation

4

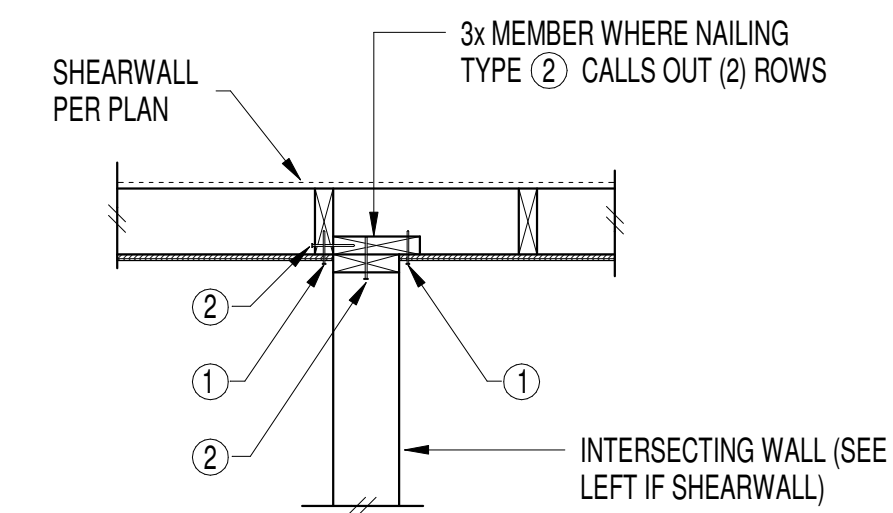


Typical Top Plate Splice - Side View

5

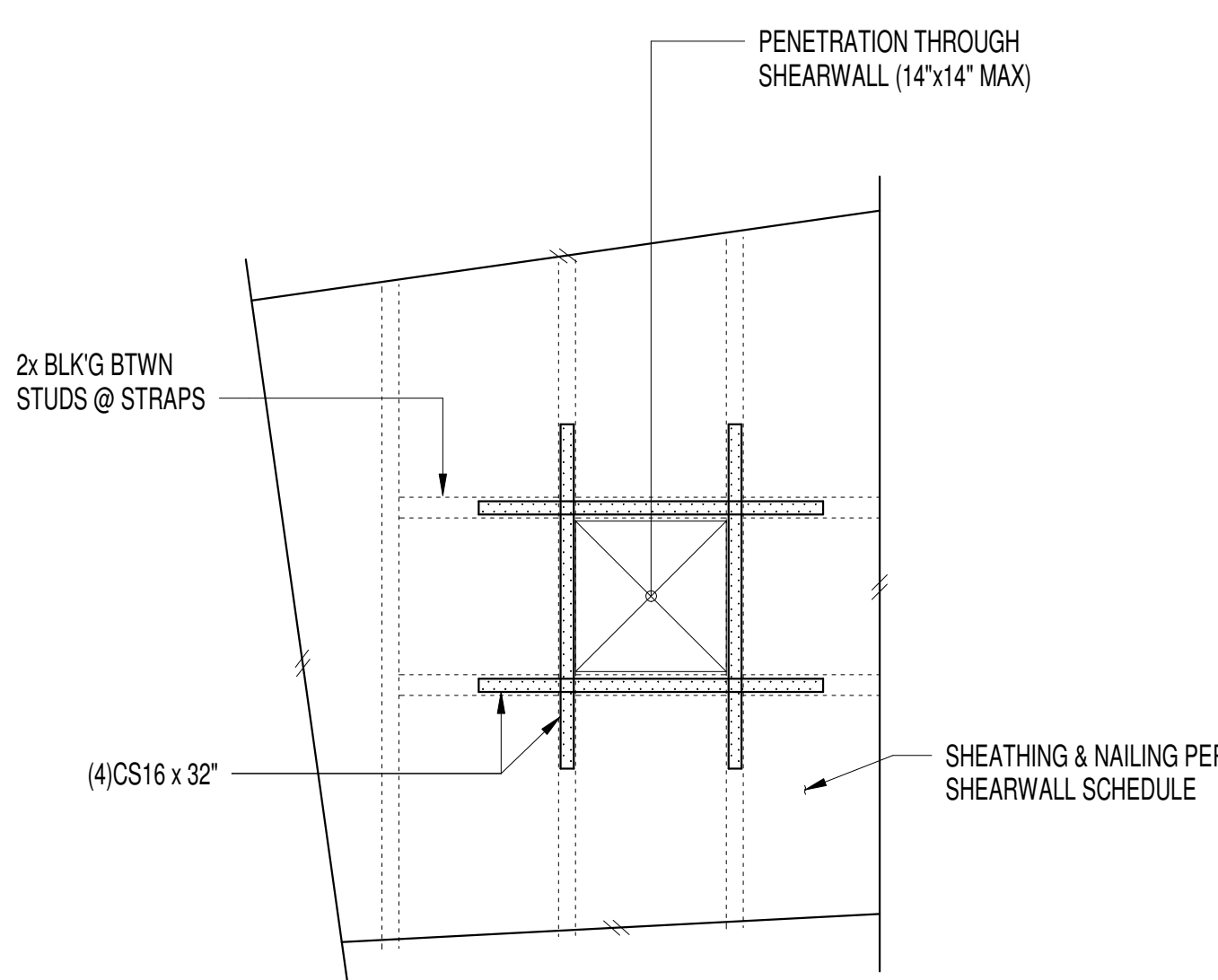


- PLYWOOD PANEL EDGE NAILING PER SHEARWALL SCHEDULE TO MATCH BOTTOM PLATE
- NAILING PER SHEARWALL SCHEDULE



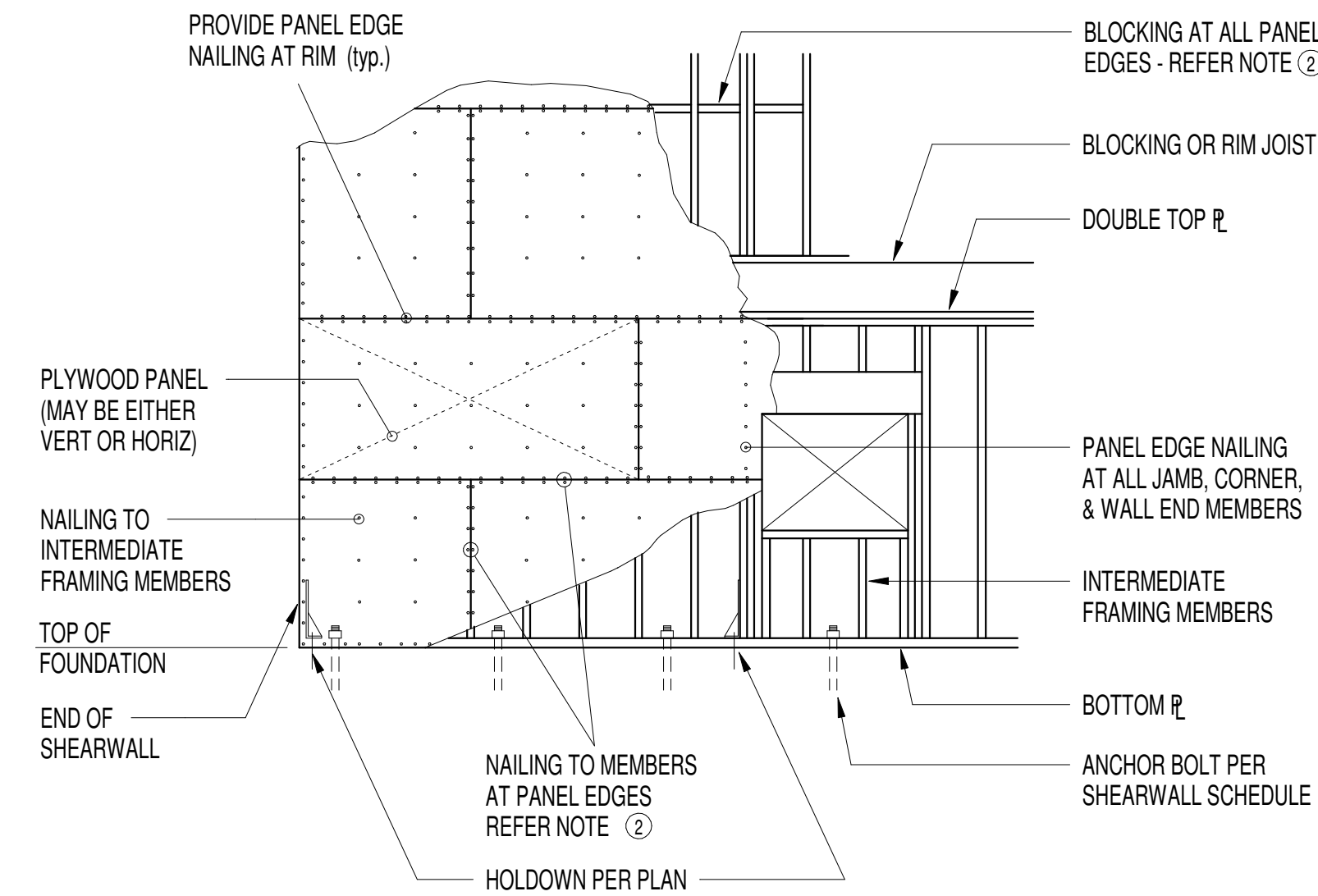
Shearwall Intersection

8



Penetration Through Shearwall

9



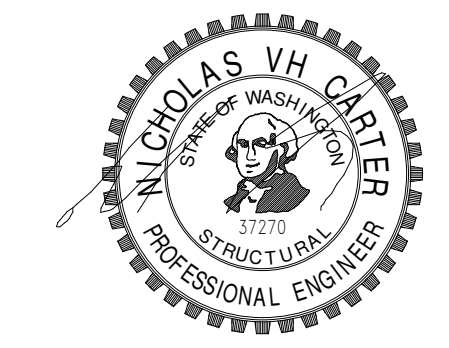
Typical Shearwall Panel Elevation

SHEAR WALL SCHEDULE

#SW#	SHEATHING	BLOCKING	PANEL EDGE NAILING	ATTACHMENT TO TOP PLATE	BOTTOM PLATE ATTACHMENT			CAPACITY (plf) SEISMIC
					LSL RIM JOIST REQ'D.	FACENAILING TO WOOD BELOW	ANCHOR BOLTING TO CONC. BELOW	
1SW1	15/32" APA RATED SHEATHING	YES	10d @ 6"oc	CLIP @ 16"oc	1 3/4" LSL	NAILS @ 6"oc	5/8" @ 48"oc	280 PLF
1SW2	15/32" APA RATED SHEATHING	YES	10d @ 4"oc	CLIP @ 16"oc	1 3/4" LSL	NAILS @ 4 3/4"oc	5/8" @ 48"oc	380 PLF
1SW3	15/32" APA RATED SHEATHING	YES	10d @ 2"oc	CLIP @ 12"oc	3 1/2" LSL	(2) ROWS NAILS @ 5 1/2"oc	5/8" @ 24"oc	640 PLF
2SW4	15/32" APA RATED SHEATHING EA SIDE	YES	10d @ 4"oc	CLIP @ 10"oc	3 1/2" LSL	(2) ROWS NAILS @ 4 3/4"oc	5/8" @ 24"oc	760 PLF

- NAILS SHALL BE 10d COMMON. NAILING APPLIES TO ALL PANEL EDGES (BLOCK ALL UNSUPPORTED PANEL EDGES), TOP & BOTTOM PLATES AND BLOCKING. NAIL TO INTERMEDIATE FRAMING MEMBERS w/ 10d @ 12"oc. (NOTE: WHERE STUD SPACING IS 24" oc, NAIL TO INTERMEDIATE FRAMING MEMBERS w/ 10d @ 6" oc)
- FRAMING AT ADJOINING PANEL EDGES SHALL BE 3 INCH NOMINAL OR WIDER AND NAILS SHALL BE STAGGERED.
- CLIP SHALL BE EITHER A35 OR LTP4, CLIP MAY BE OMITTED WHEN ADJOINING PANEL EDGES OCCUR @ RIM JOIST AS SHOWN IN ELEVATION.
- ROWS MUST BE OFFSET AT LEAST 1/2" AND STAGGERED.
- NAILS SHALL BE 10d COMMON (0.1480 x 3 1/2") SCREWS SHALL BE SIMPSON SDS25500 (1/4" @ 5" MIN.)

- PROVIDE 3"x3"x0.229" PLATE WASHER AT ALL ANCHOR BOLTS. ANCHOR BOLTS SHALL BE POSITIONED SUCH THAT PLATE EDGE OF PLATE WASHER IS WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE (PLATE WASHER MAY BE DIAGONALLY SLOTTED WITH A WIDTH OF UP TO 13/16" AND A LENGTH NOT TO EXCEED 1 3/4")
- ALTERNATE PLATE WASHERS TO PROVIDE 1/2" DIMENSION ON EACH SIDE OF THE SHEARWALL



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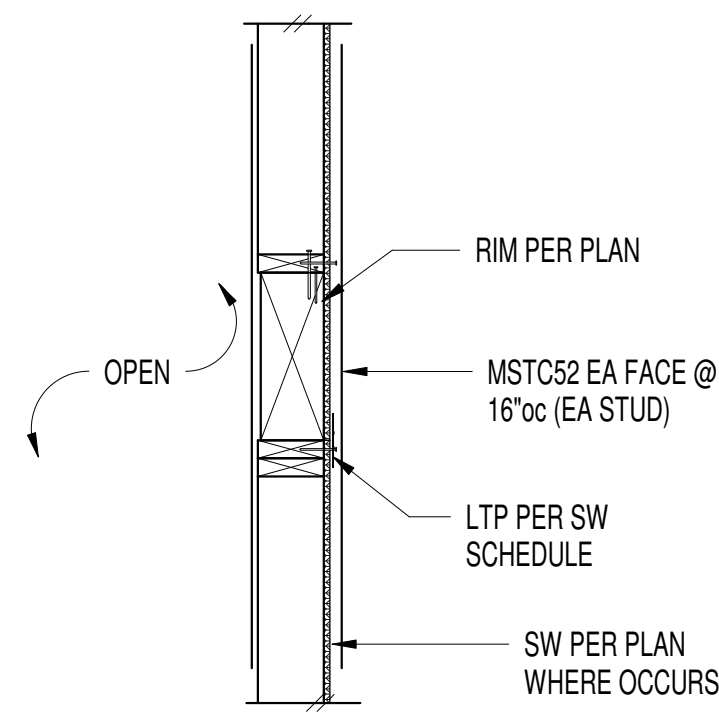
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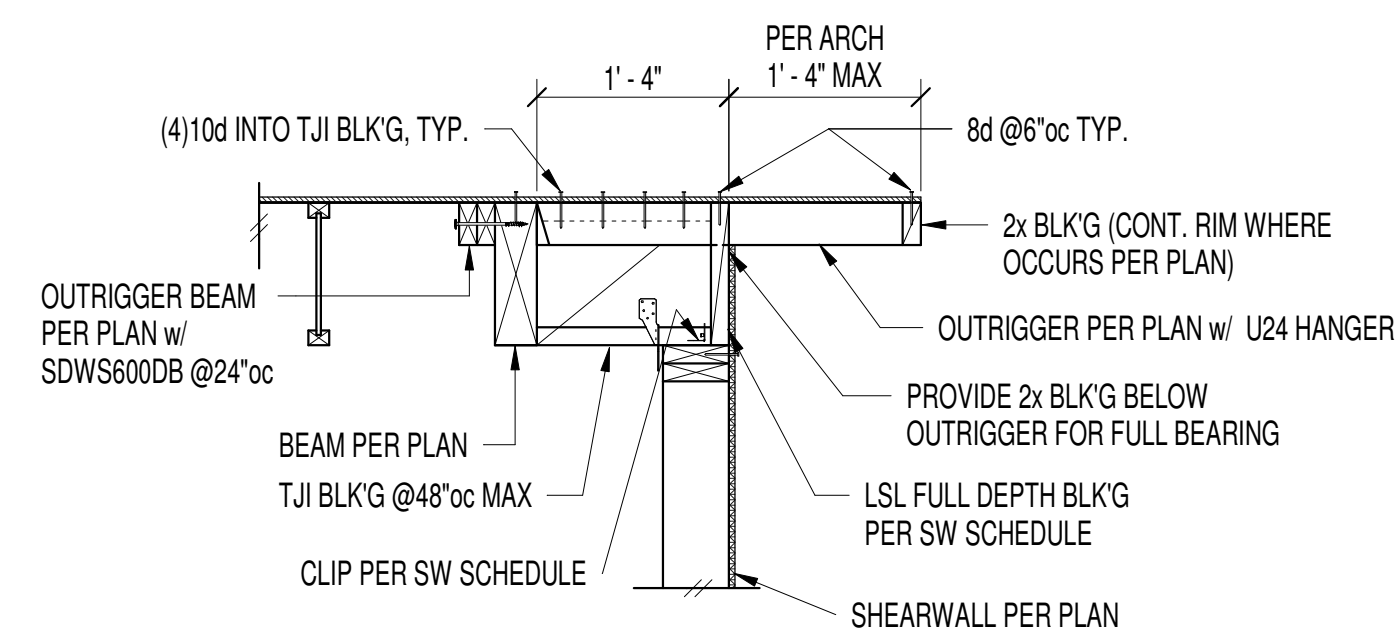
Typical Wood Lateral Details

S5.1

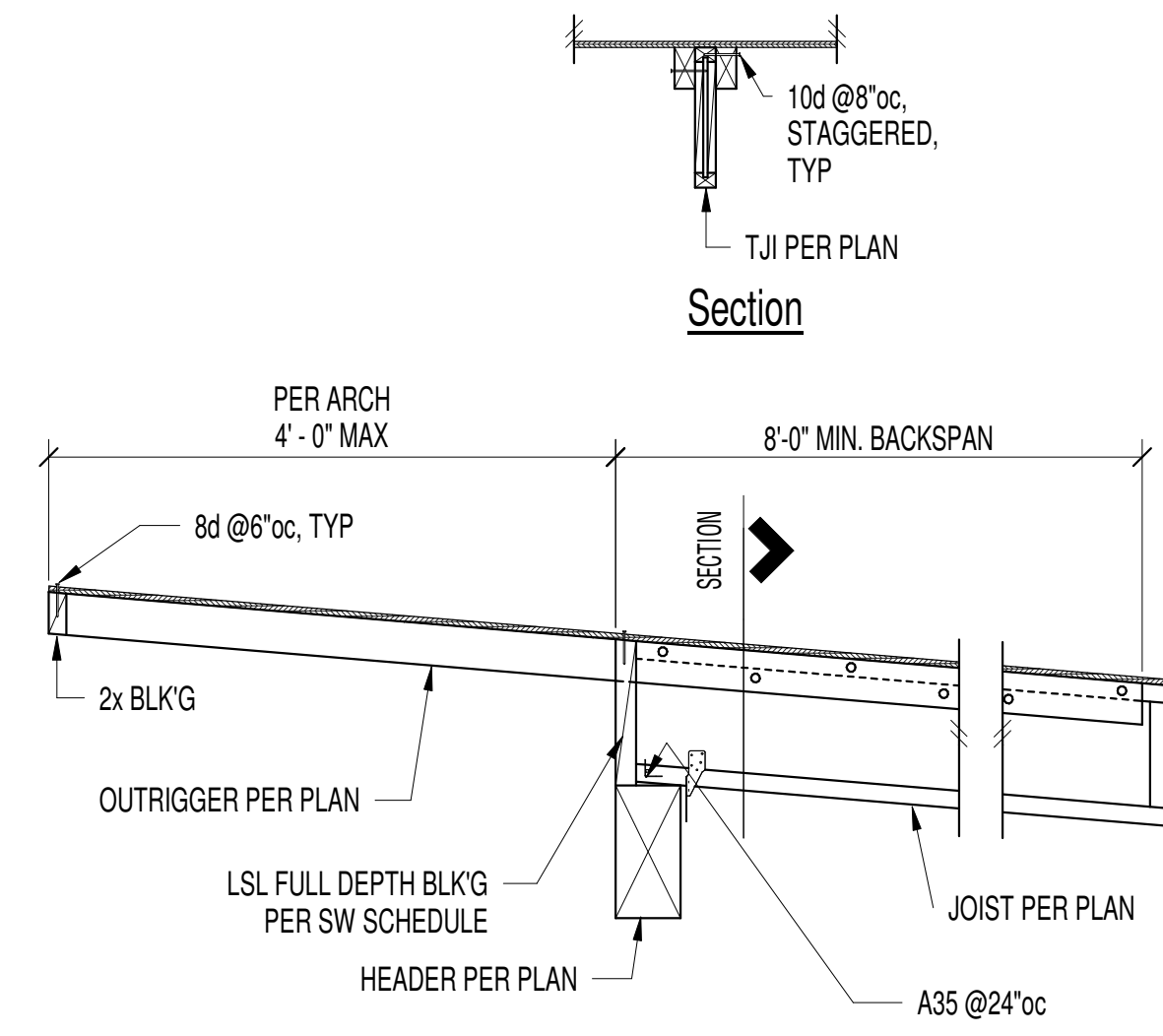
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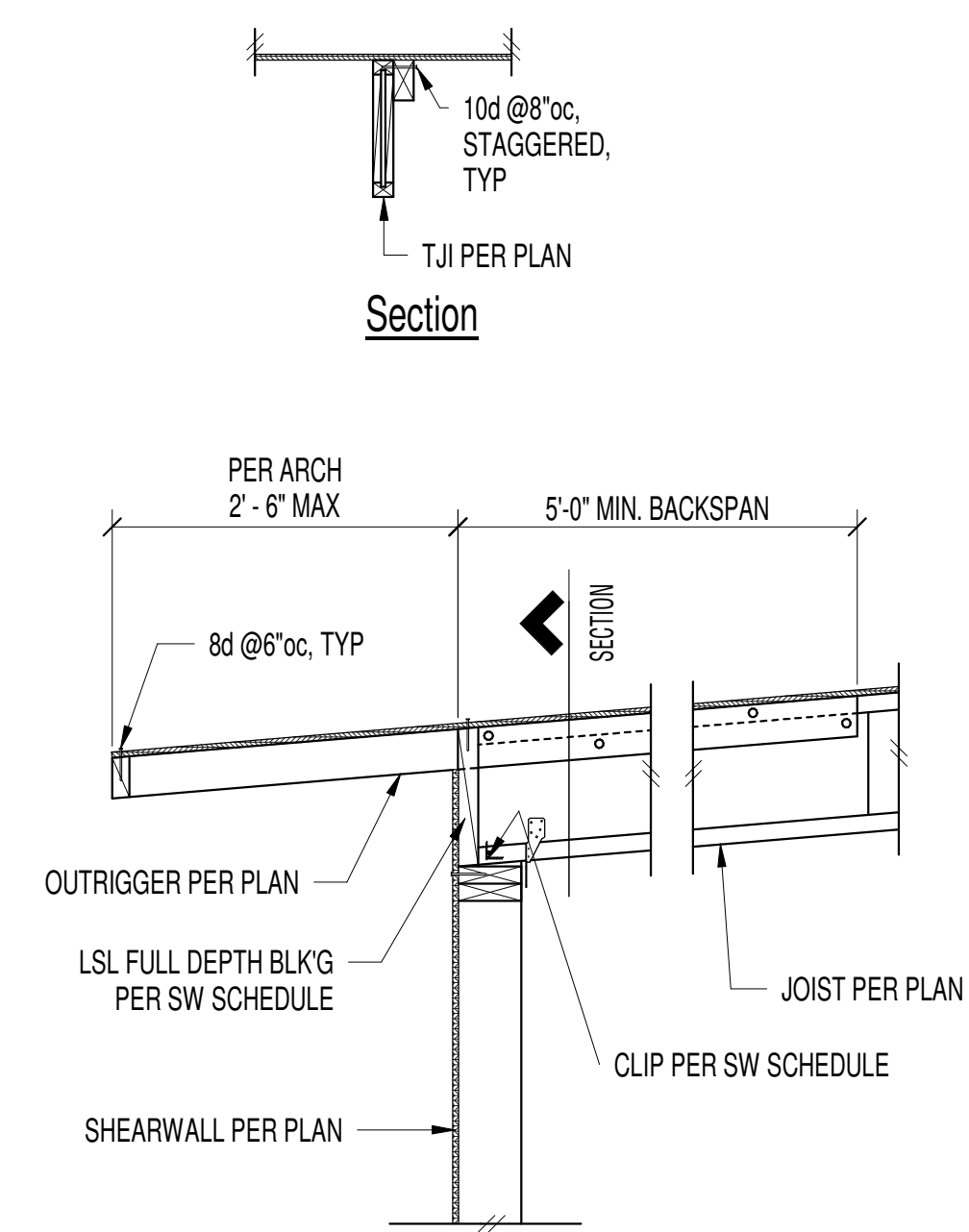
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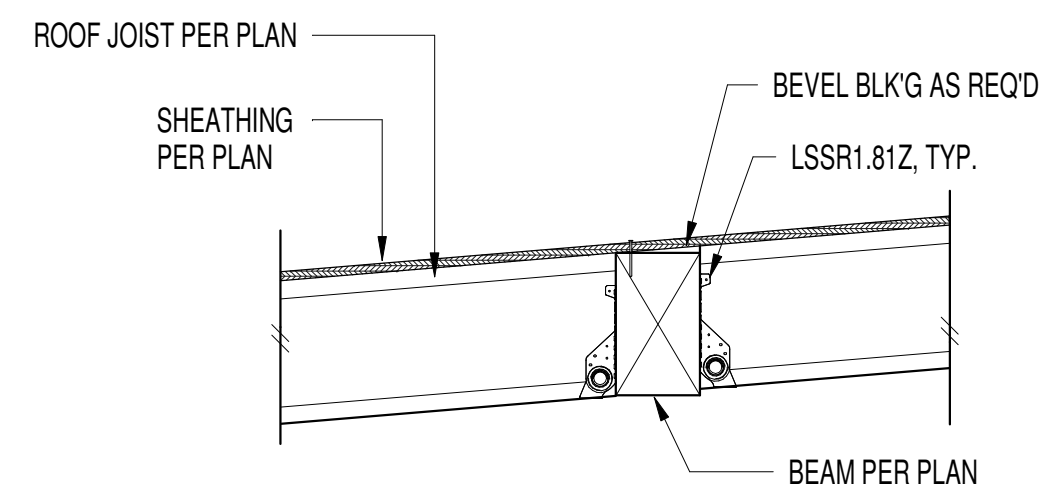
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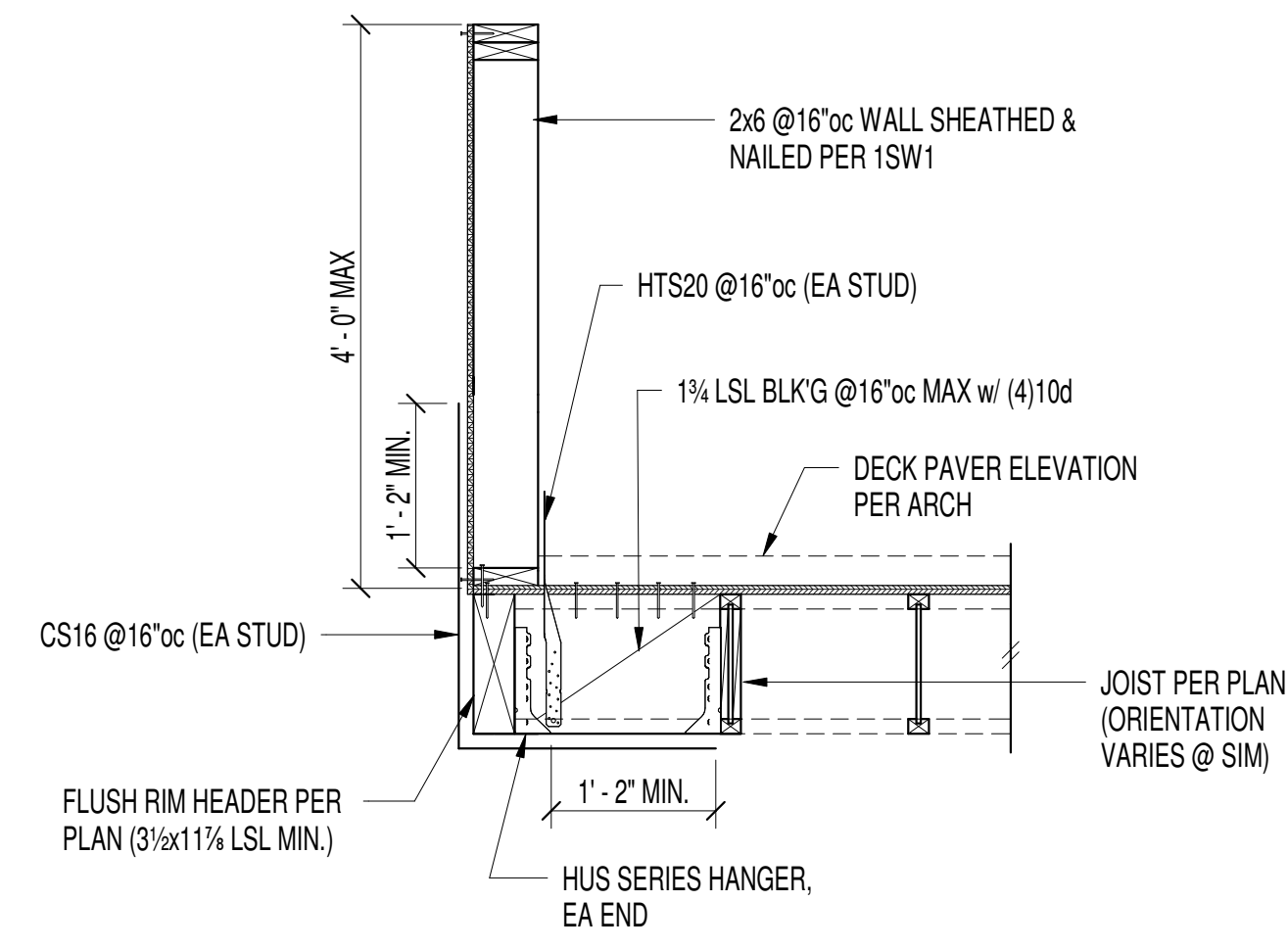
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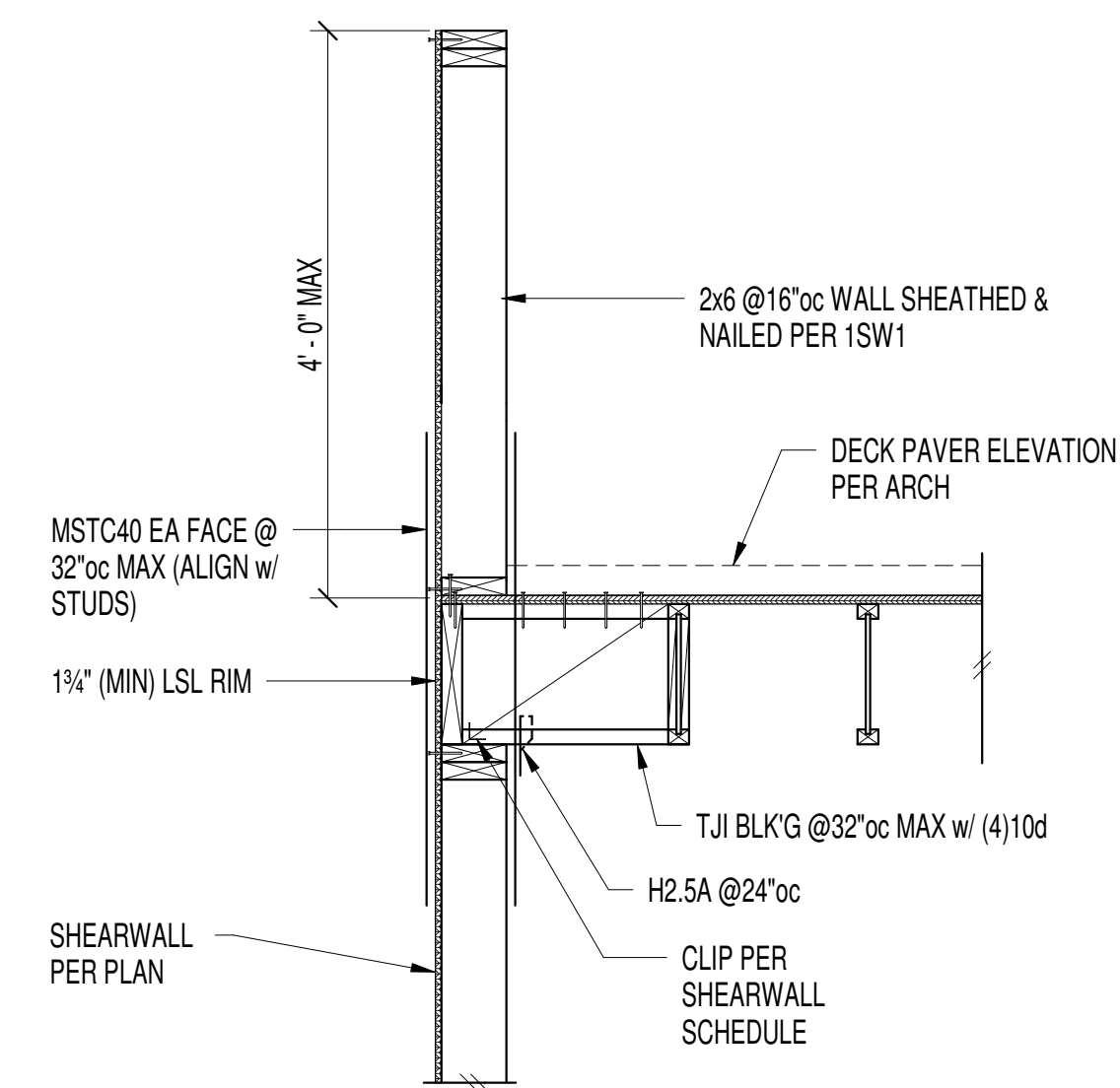


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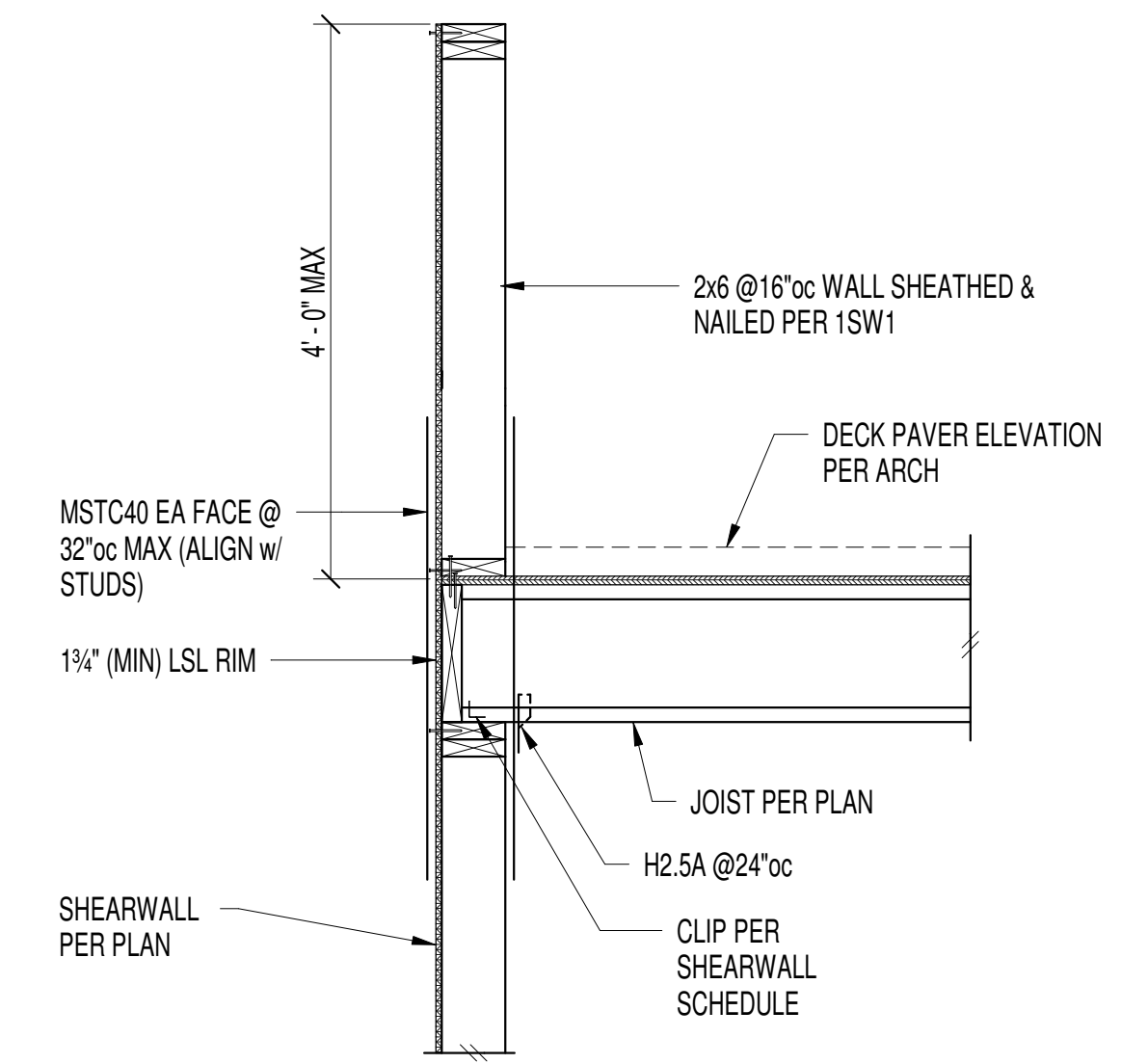
Deck Parapet - Flush Rim Header

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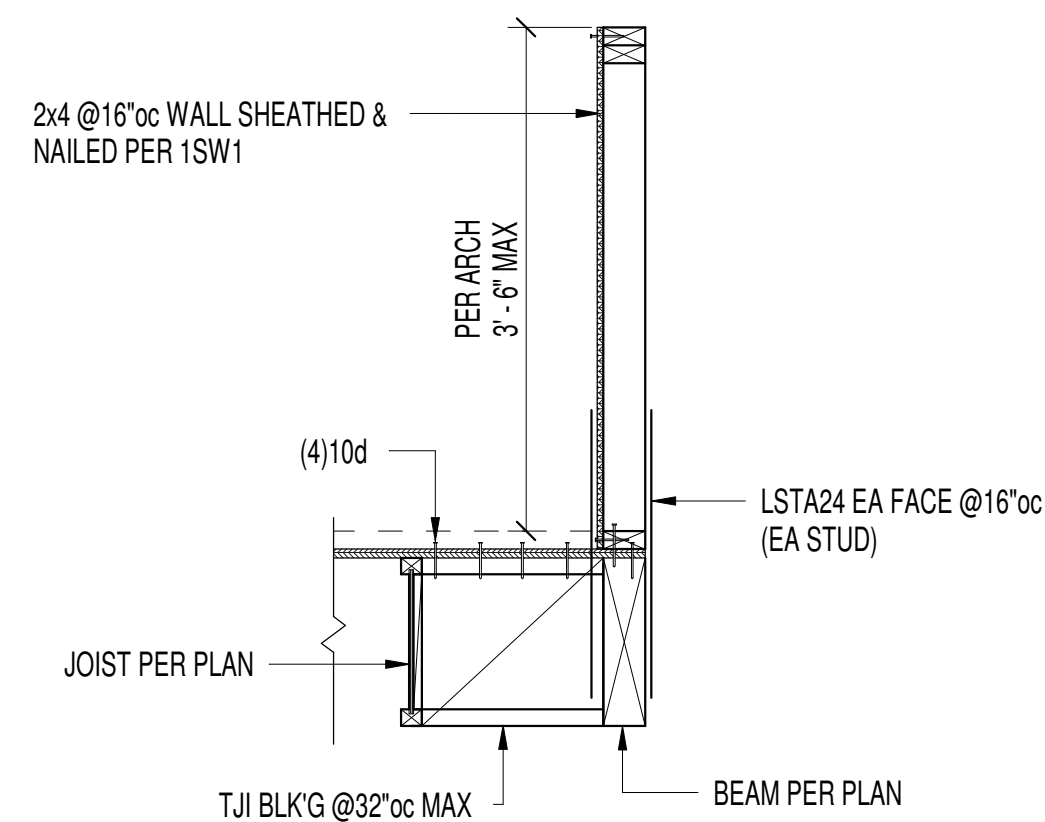
Deck Parapet - Parallel framing

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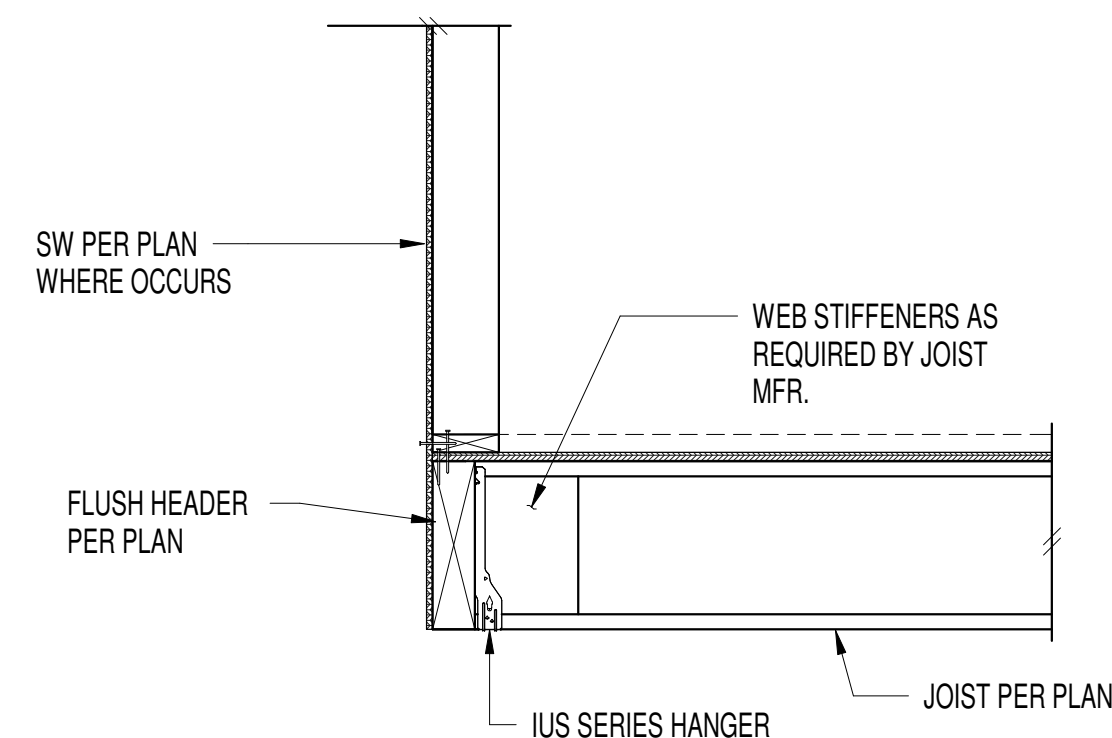
Deck Parapet - Perpendicular Framing

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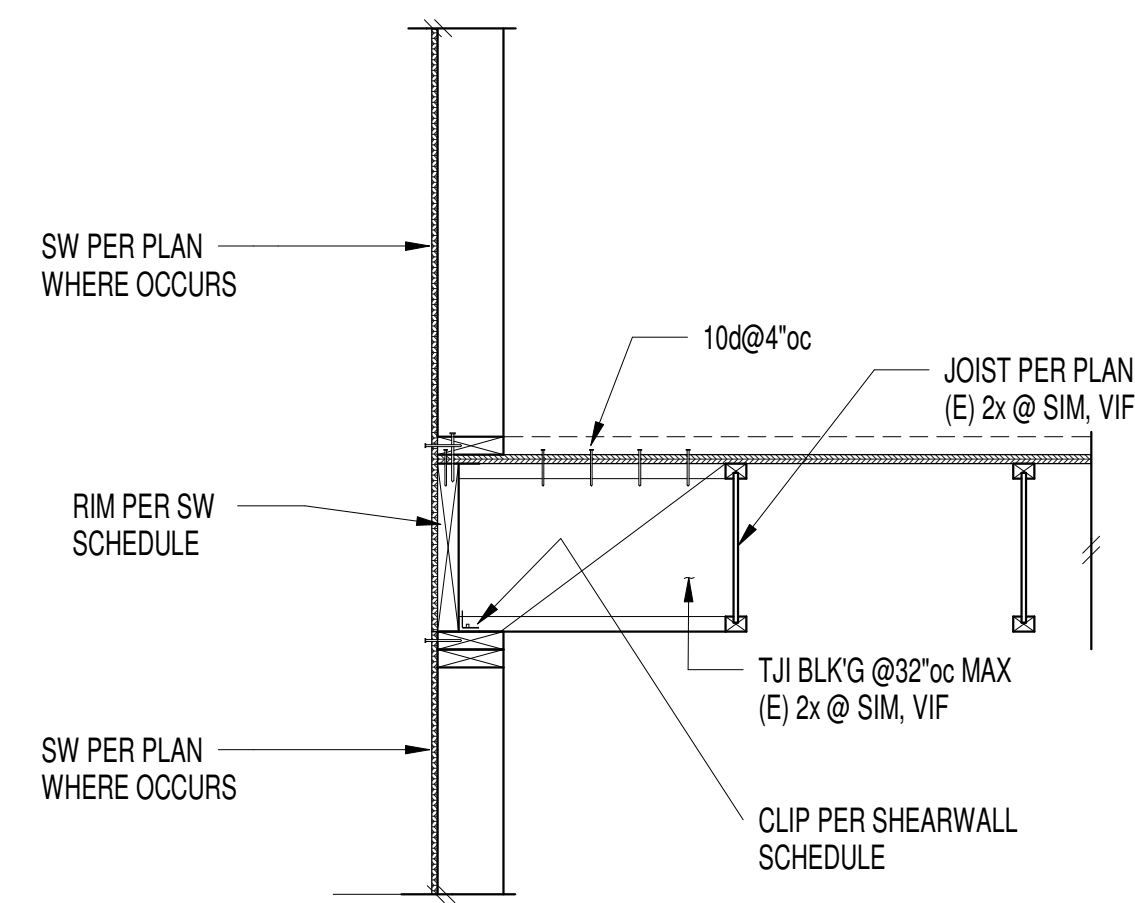


Knee-wall - Flush Beam

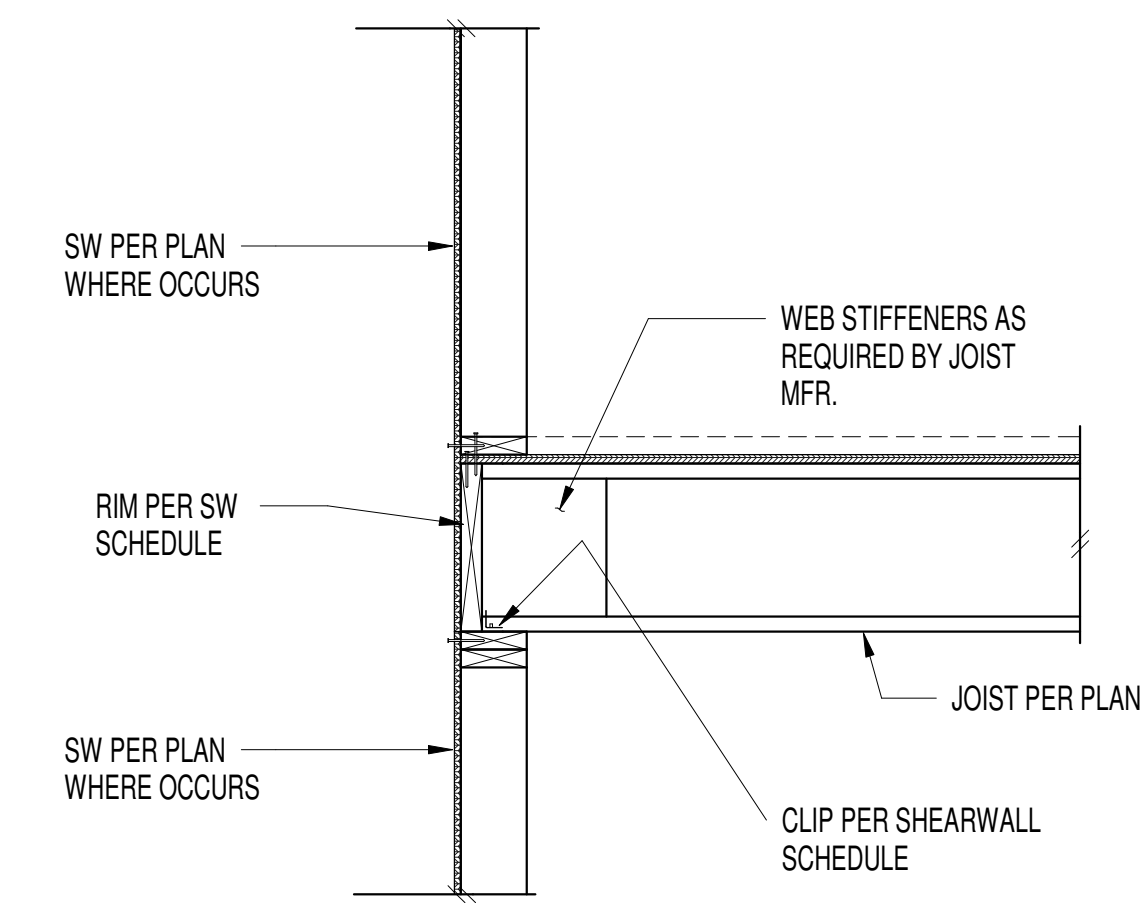
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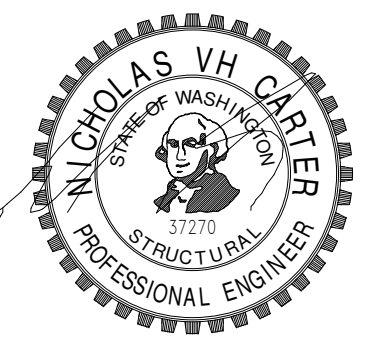
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11



12



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STRUCTURAL ENGINEERING

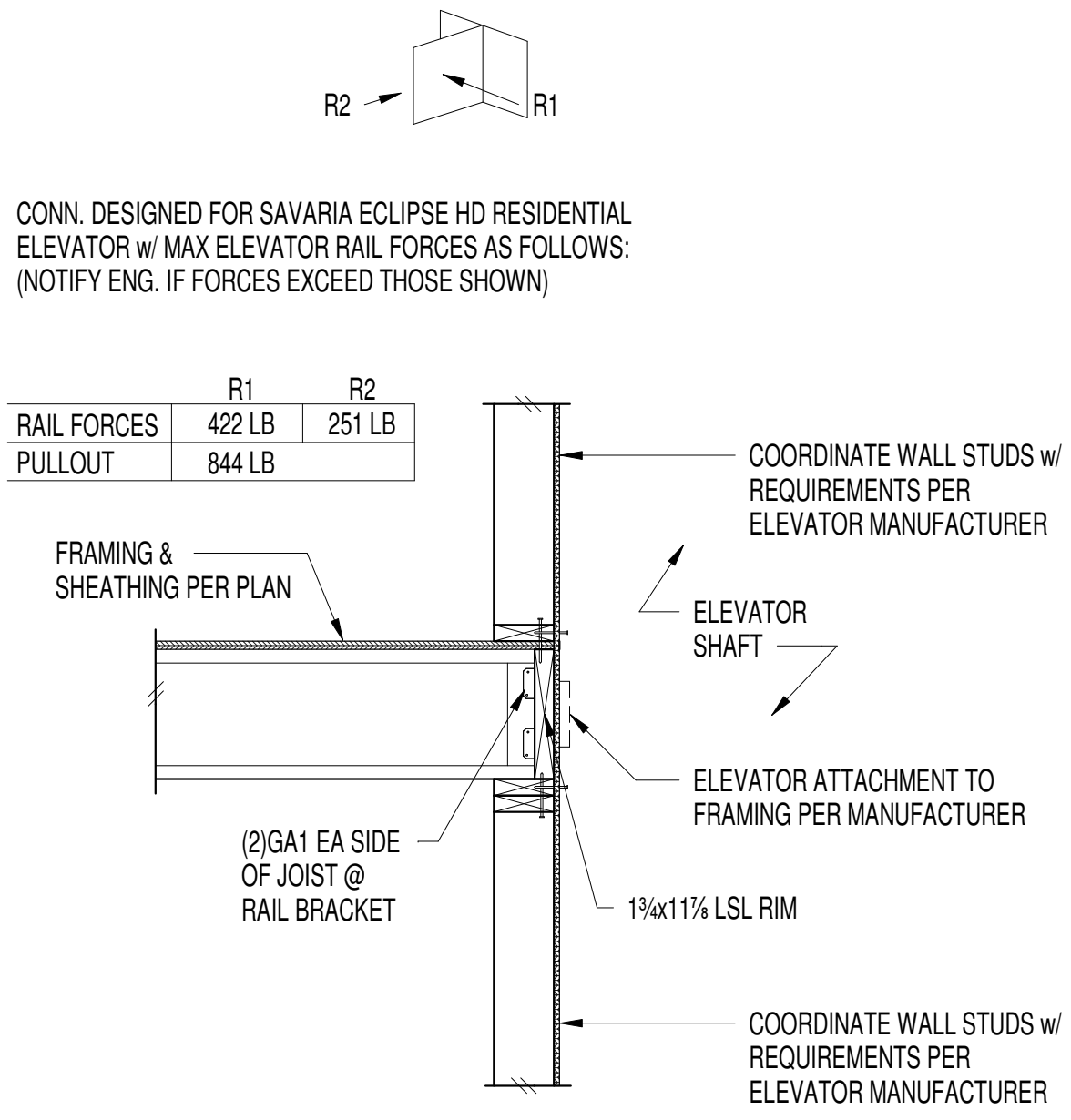
**STEINBORN RESIDENCE**

New Residence  
8435 SE 47th PL.  
Mercer Island, WA 98040

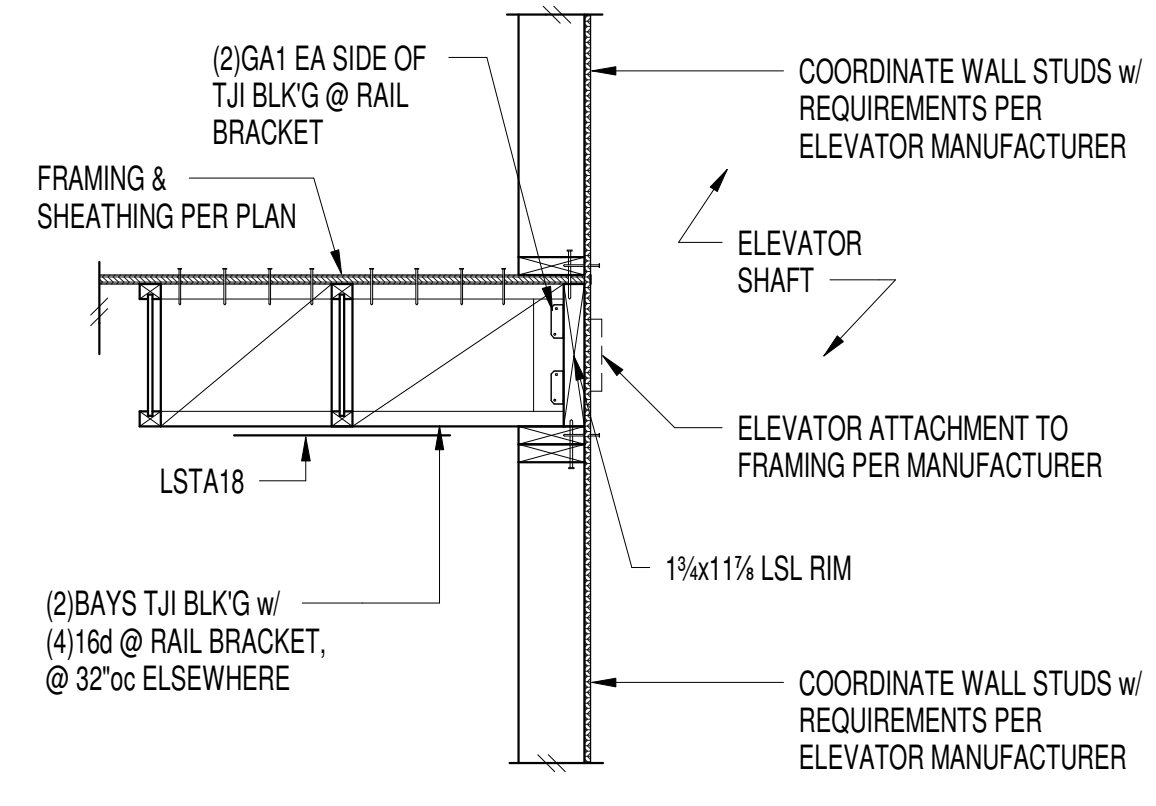
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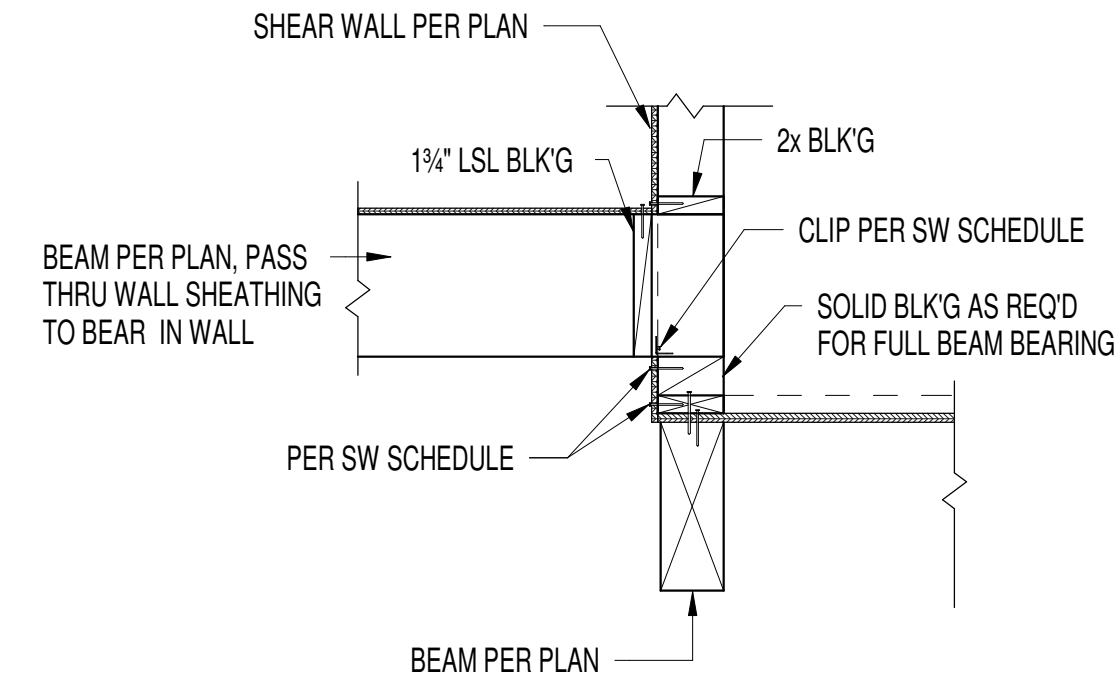
Wood Details



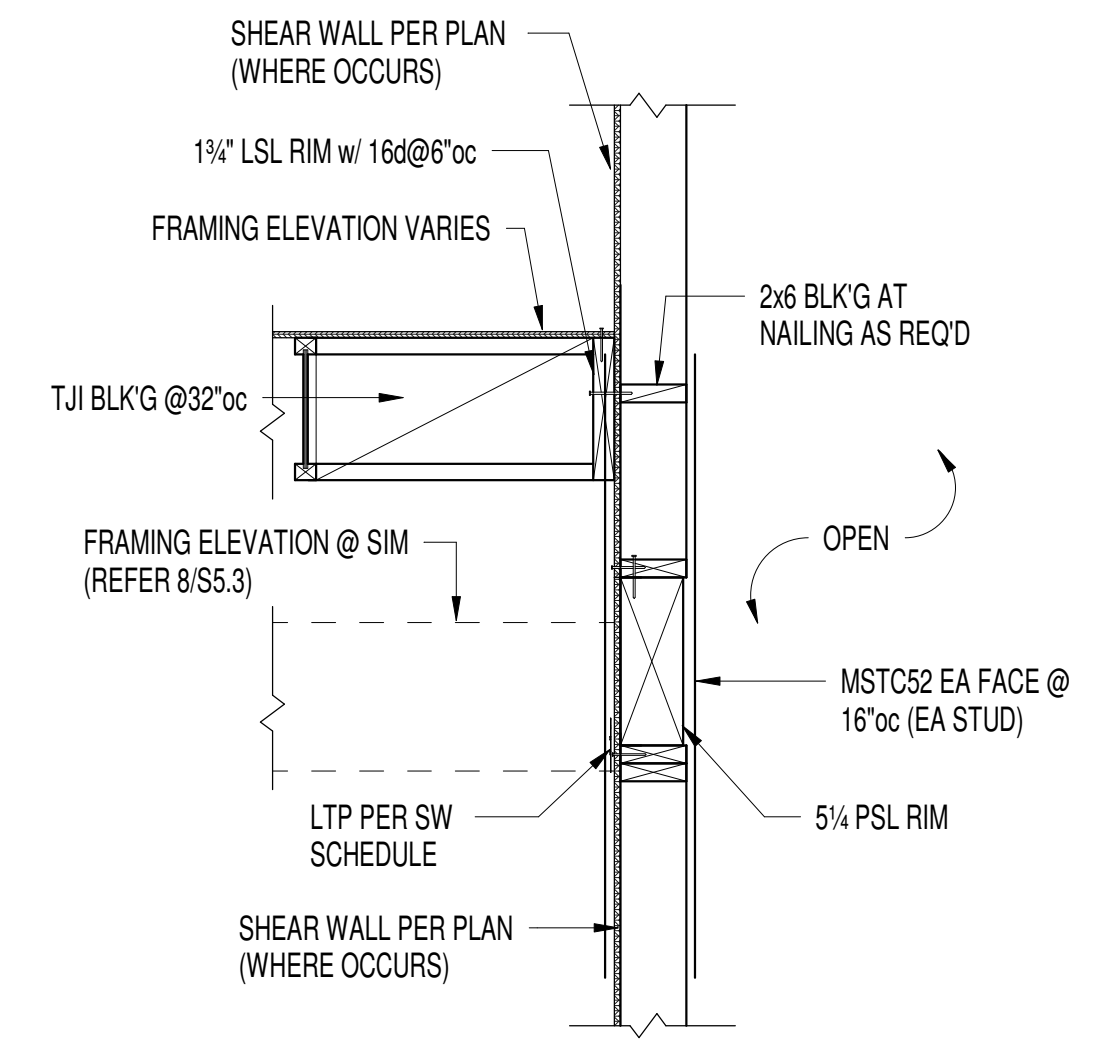
Elevator Bracket w/ Perpendicular Framing 1



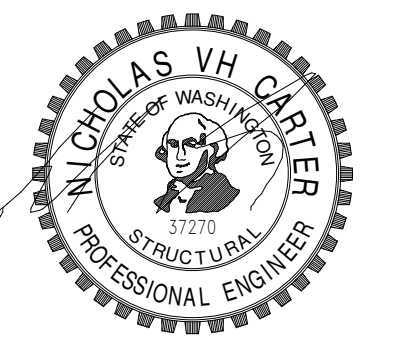
Typ. Elevator Bracket w/ Parallel Framing 2



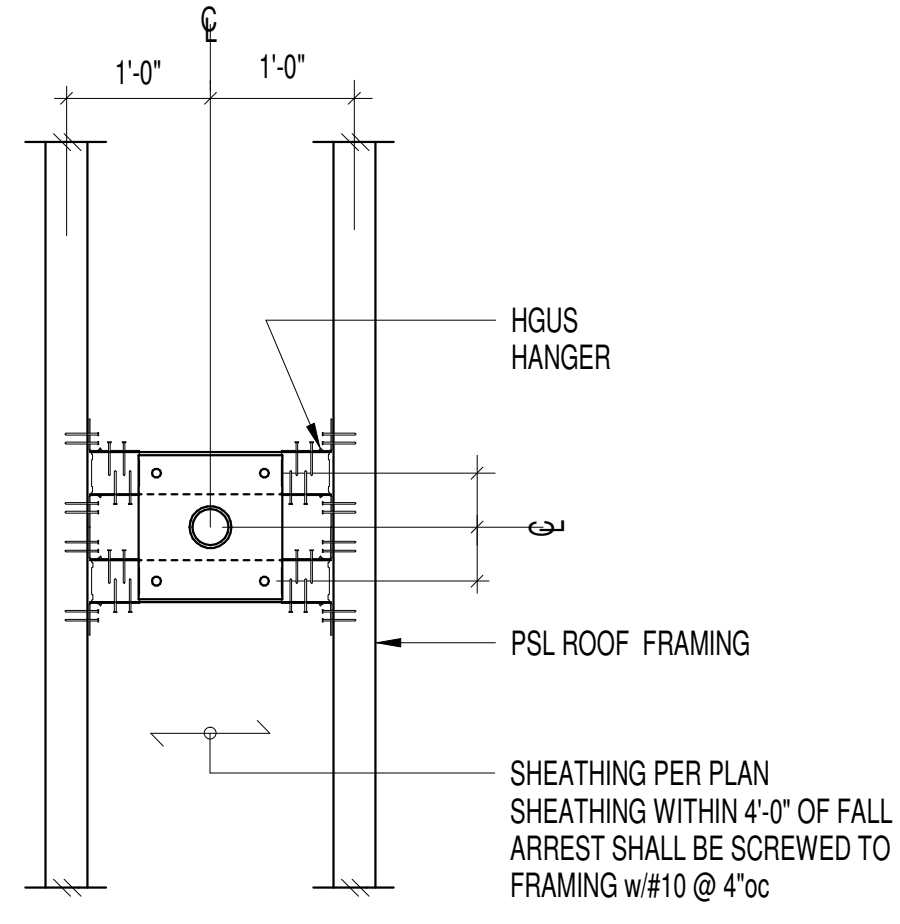
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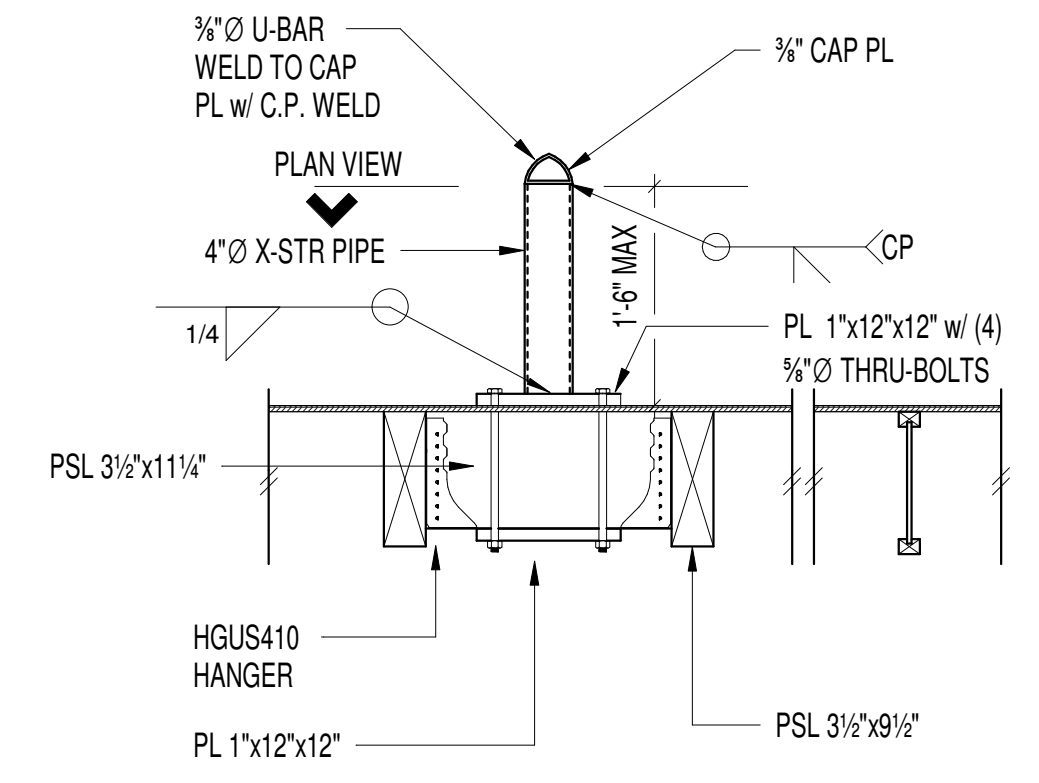
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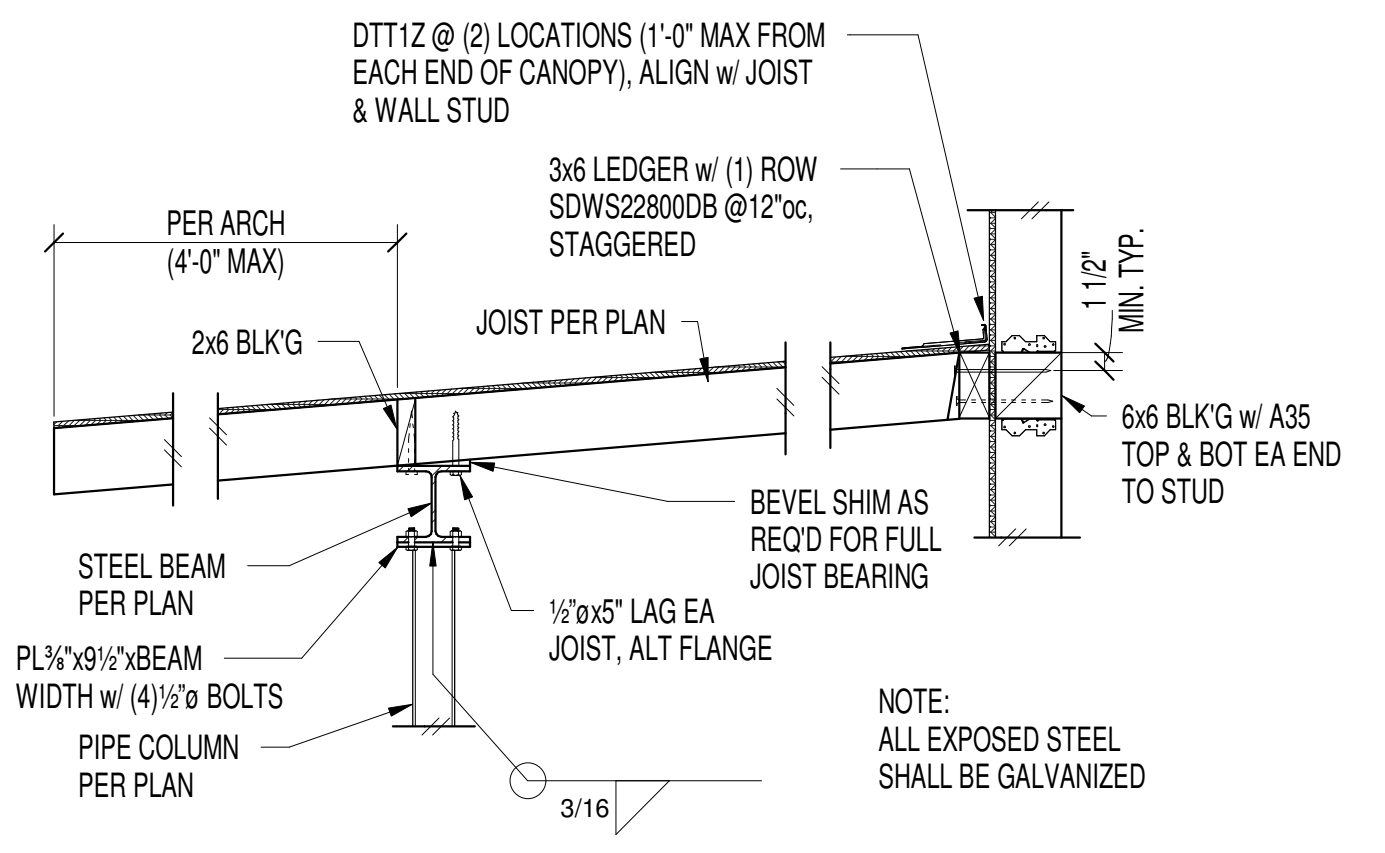
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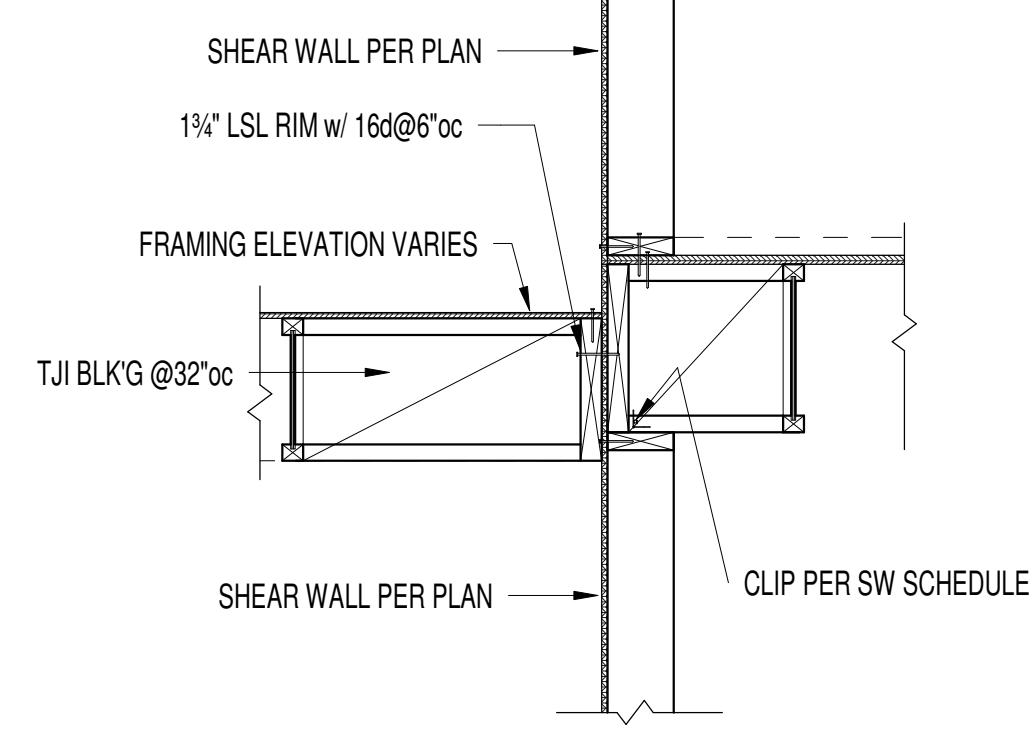
PLAN VIEW



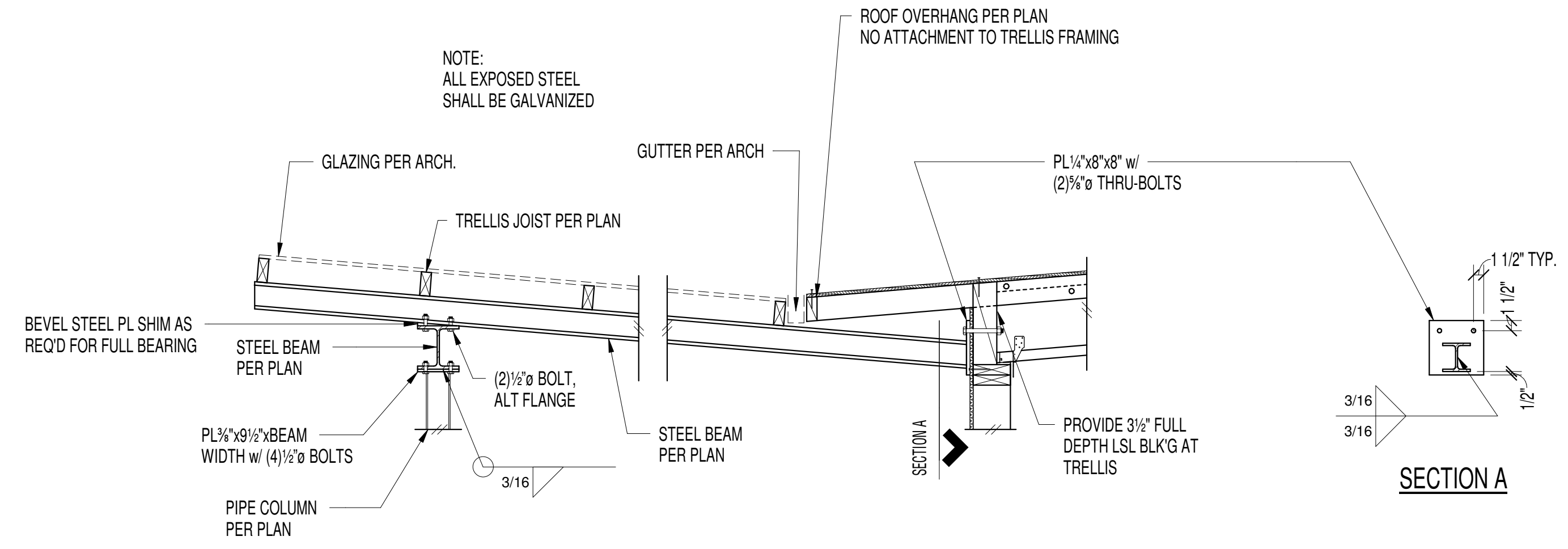
Fall Arrest Anchor 6



7

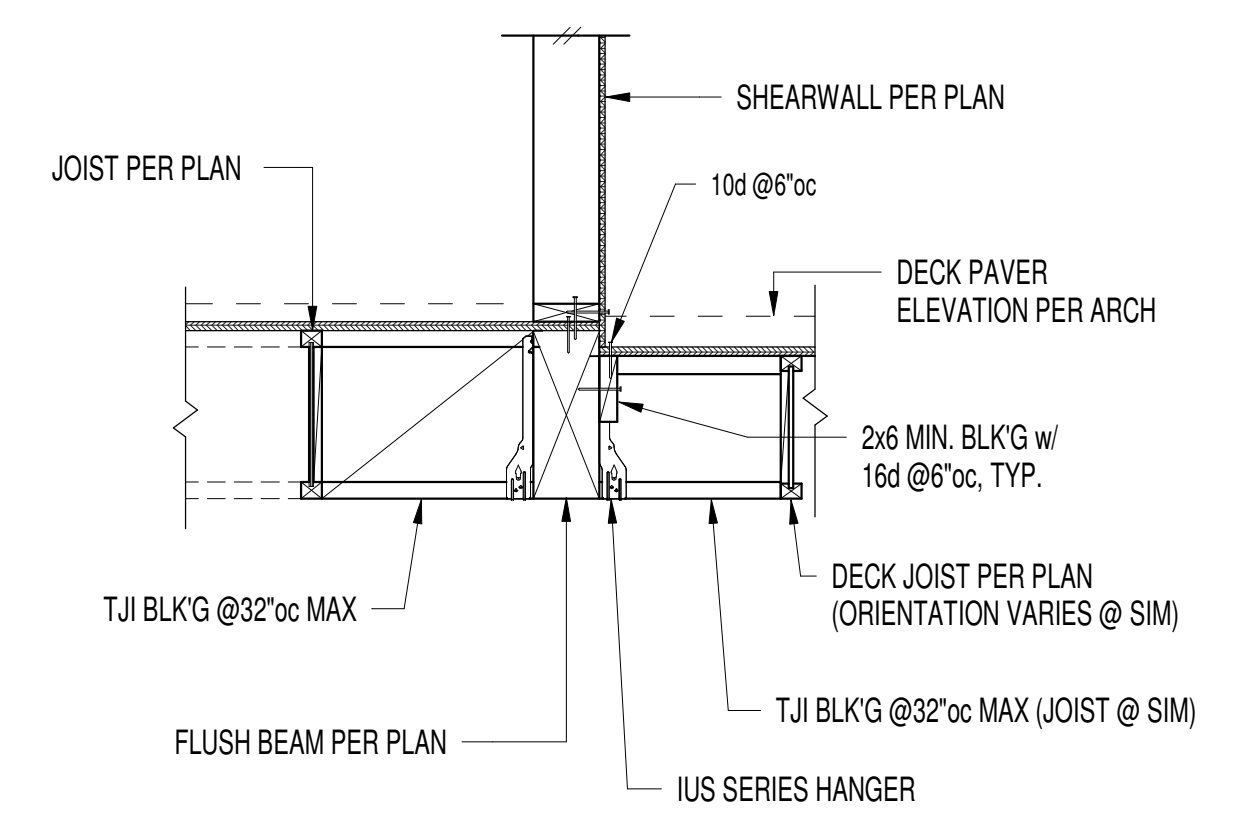


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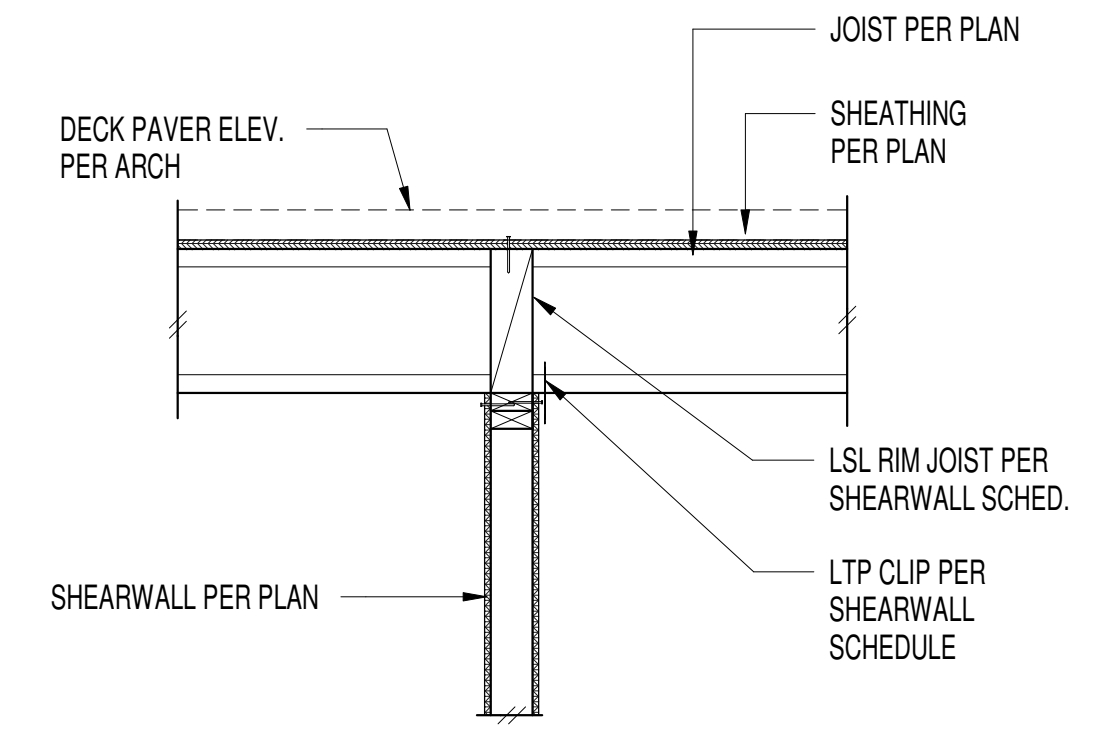


SECTION A

10



11



12

STEINBORN RESIDENCE

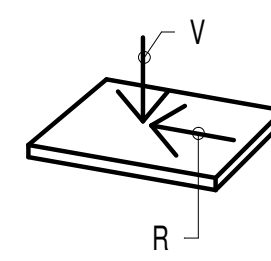
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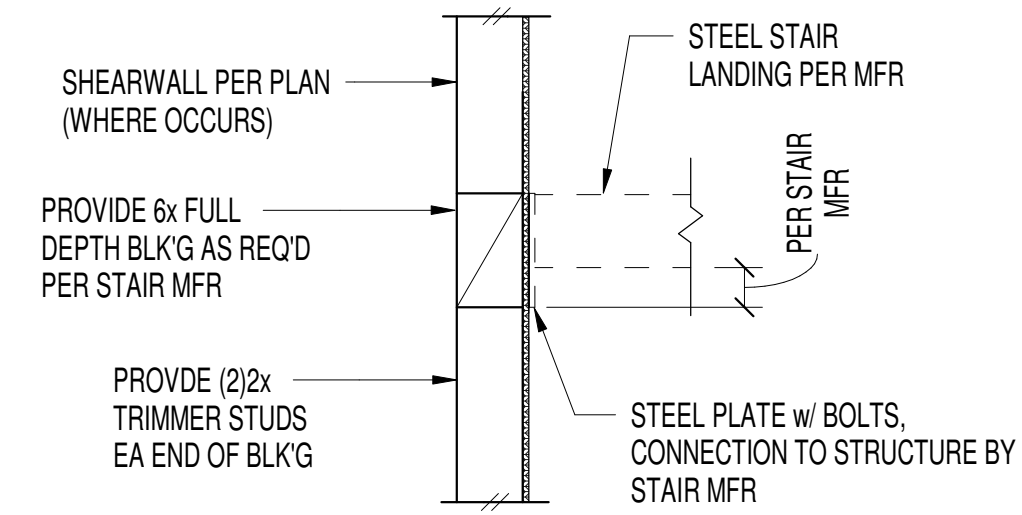
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Wood Details

- NOTES:
- STRUCTURE IS DESIGNED FOR FORCES IMPOSED BY PREFABRICATED STEEL STAIR. LOADING ASSUMES SINGLE STRINGER. NOTIFY ENGINEER OF RECORD IF FORCES EXCEED THOSE SHOWN.
  - STEEL PLATE CONNECTION IS BY MANUFACTURER AND SHALL BE PER MANUFACTURER SHOP DRAWINGS AND CALCULATIONS.

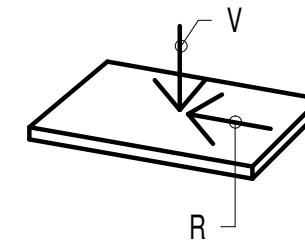


MAXIMUM TOTAL LOAD FORCES AS FOLLOWS (REFER TO NOTE 1):  
 V=2250 #  
 R=1508 #  
 (NOTIFY ENGINEER OF RECORD IF FORCES EXCEED THOSE SHOWN).

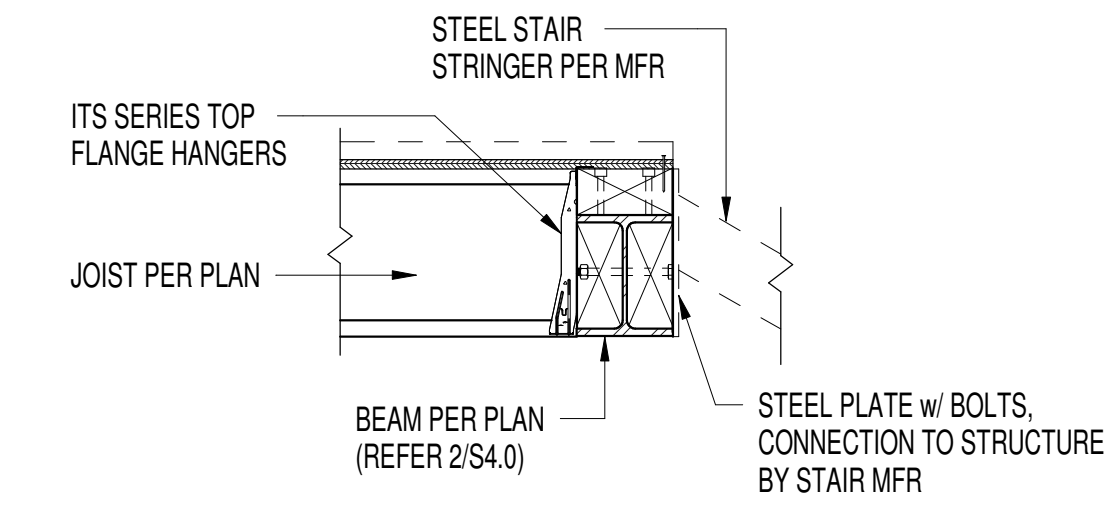


1

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  - STEEL PLATE CONNECTION IS BY MANUFACTURER AND SHALL BE PER MANUFACTURER SHOP DRAWINGS AND CALCULATIONS.

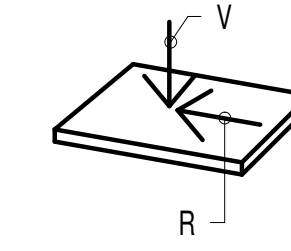


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 (NOTIFY ENGINEER OF RECORD IF FORCES EXCEED THOSE SHOWN).

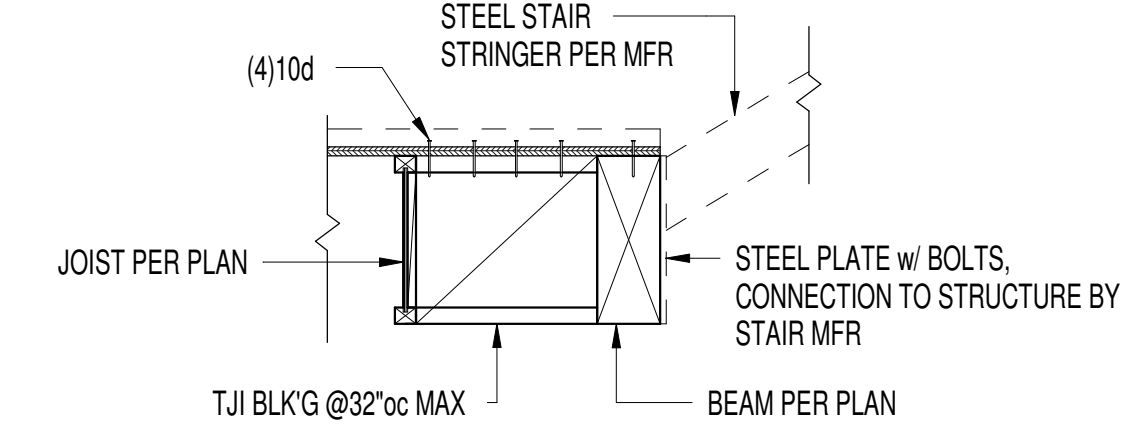


2

- NOTES:
- STRUCTURE IS DESIGNED FOR FORCES IMPOSED BY PREFABRICATED STEEL STAIR. LOADING ASSUMES SINGLE STRINGER. NOTIFY ENGINEER OF RECORD IF FORCES EXCEED THOSE SHOWN.
  - STEEL PLATE CONNECTION IS BY MANUFACTURER AND SHALL BE PER MANUFACTURER SHOP DRAWINGS AND CALCULATIONS.

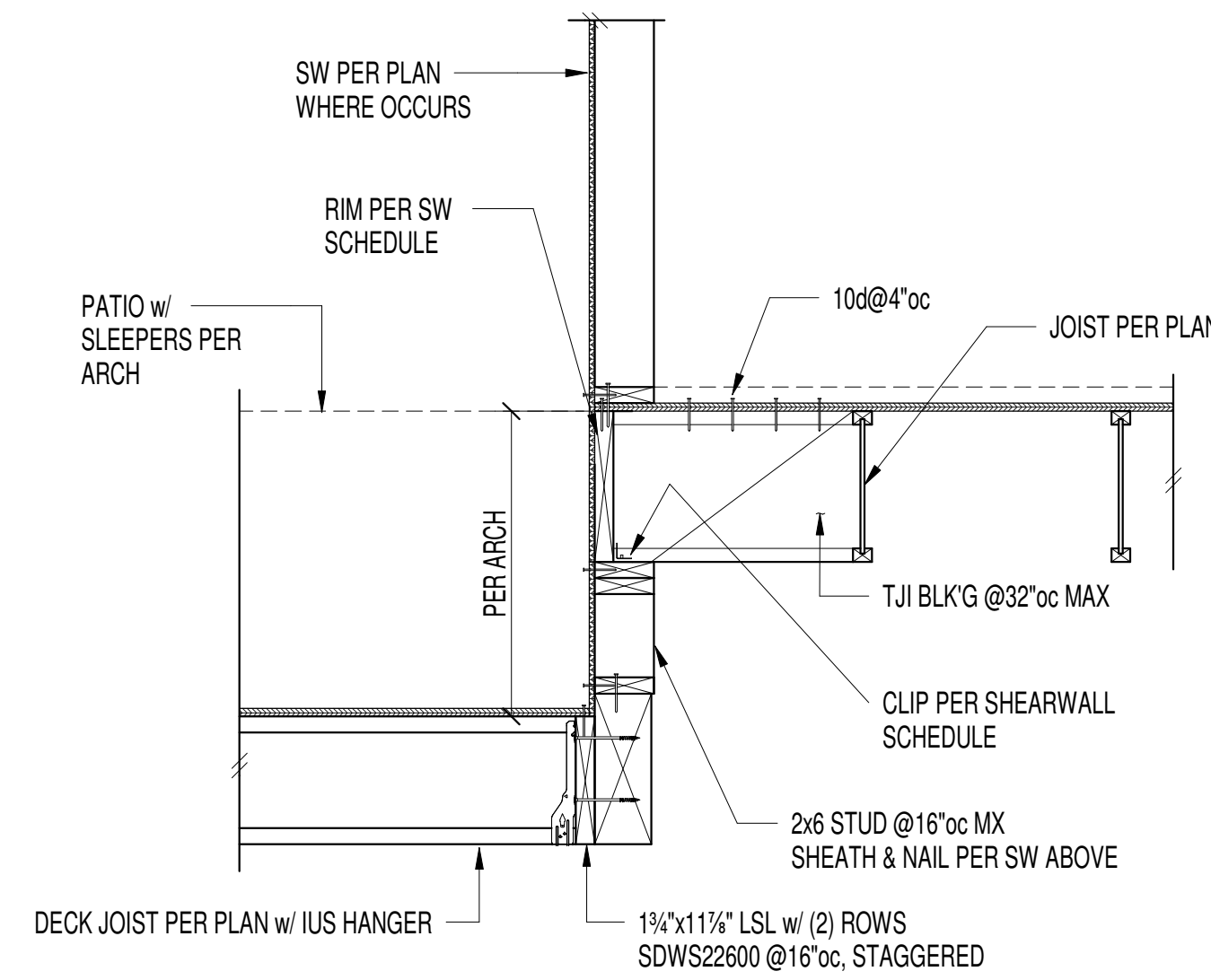


MAXIMUM TOTAL LOAD FORCES AS FOLLOWS (REFER TO NOTE 1):  
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 (NOTIFY ENGINEER OF RECORD IF FORCES EXCEED THOSE SHOWN).



3

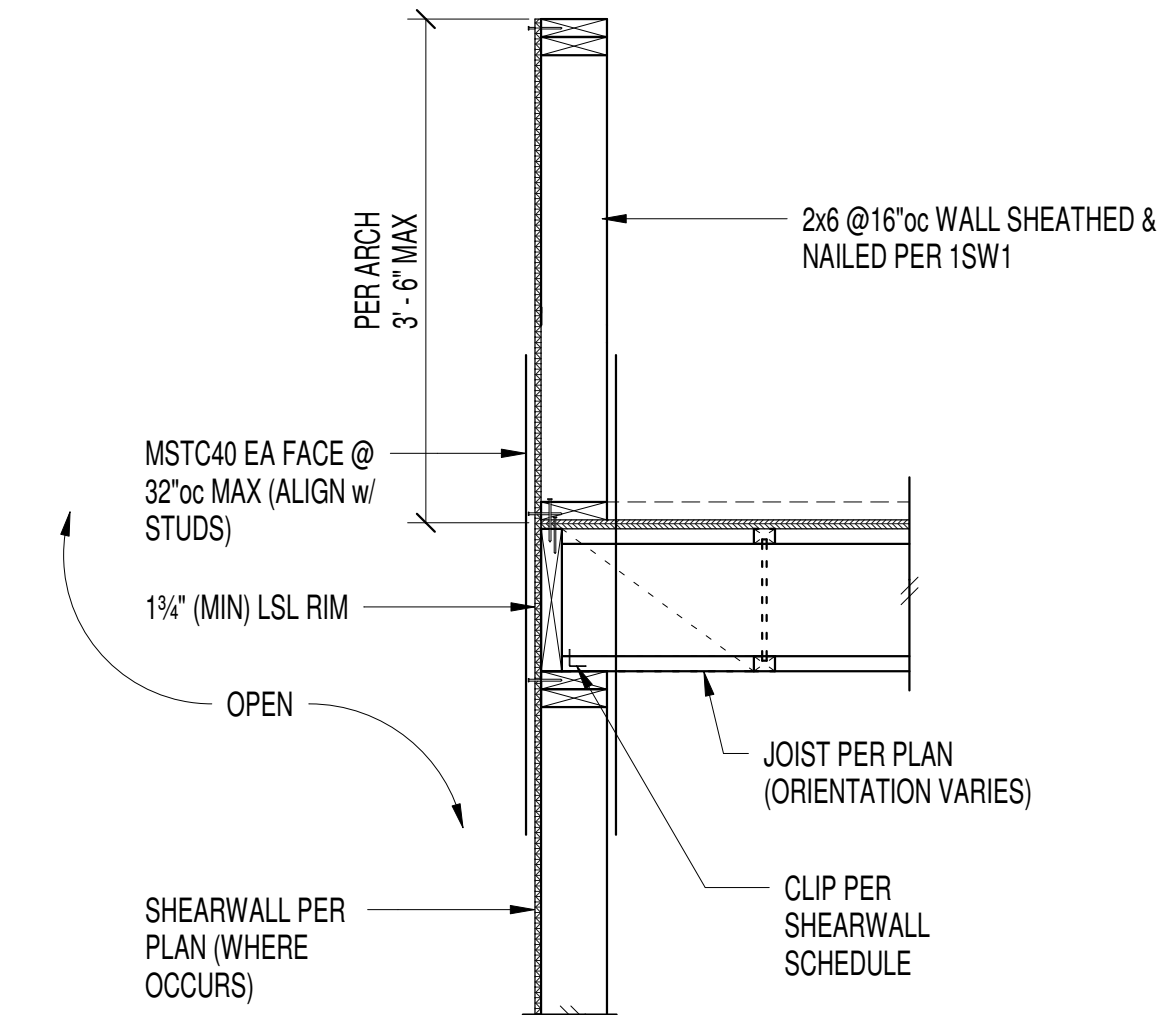
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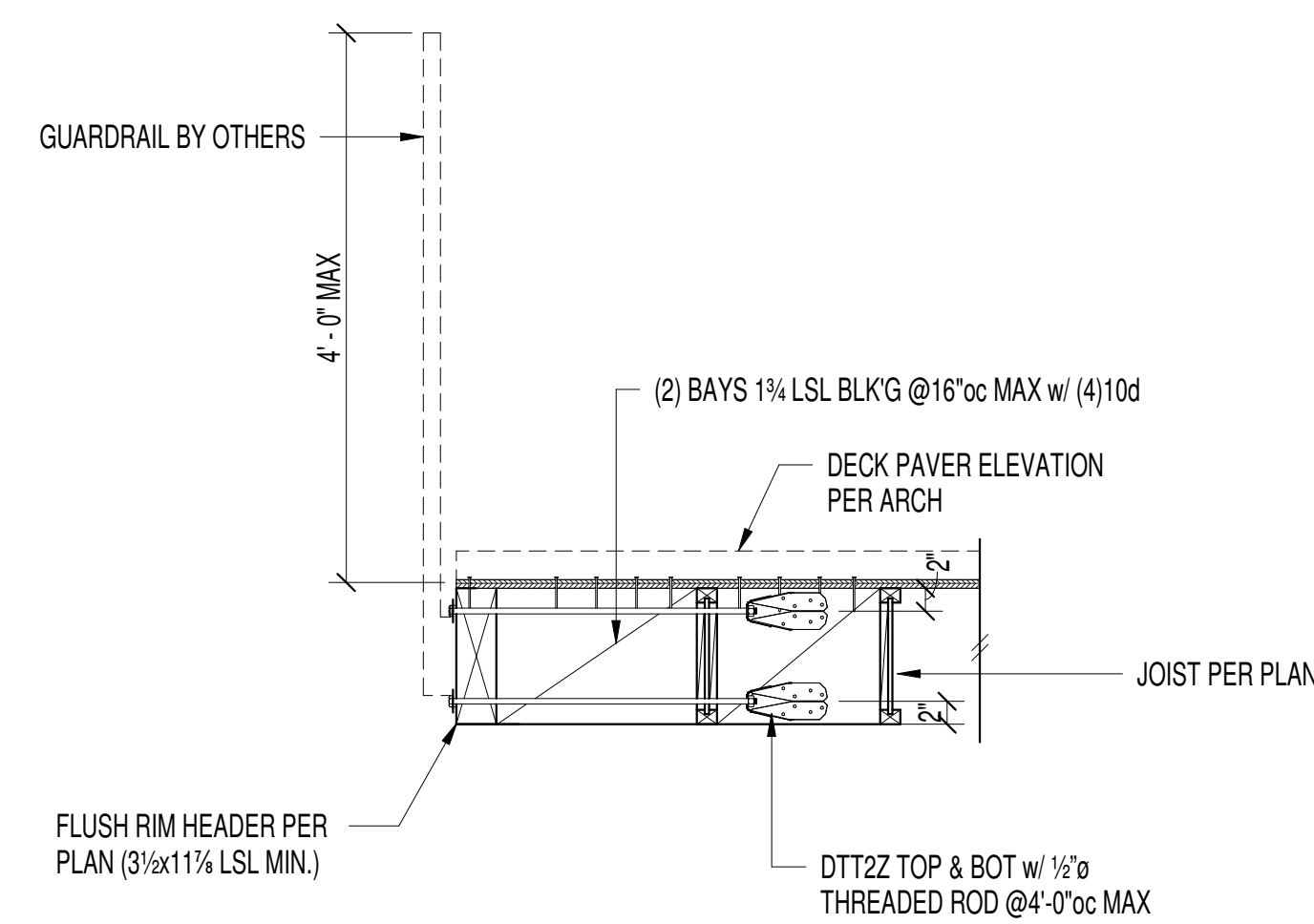
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Stair Partial height wall

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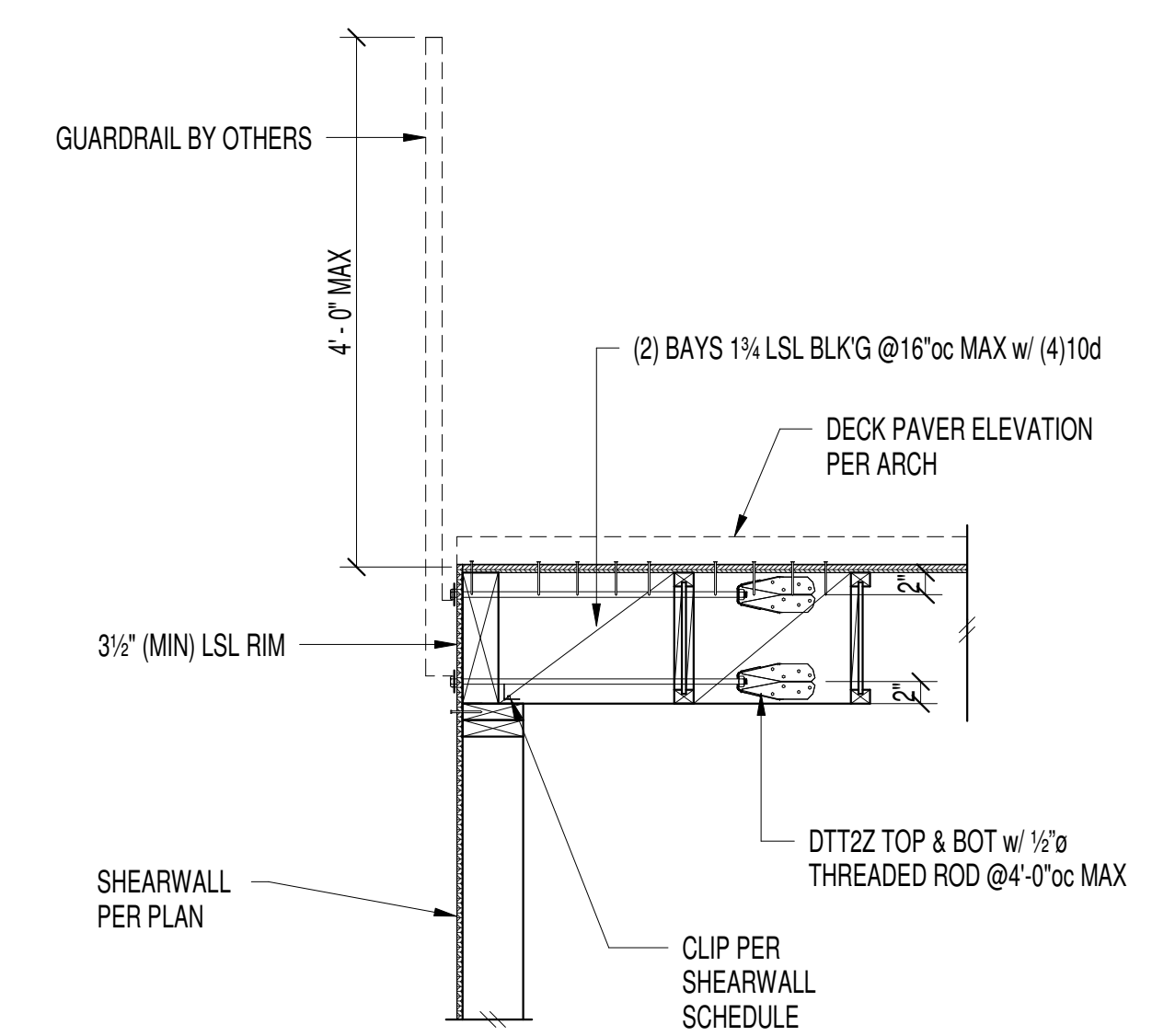


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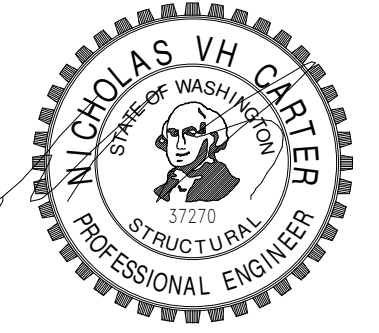
Deck Rail - Flush Rim Header

11



Deck Rail - Parallel framing

12



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# STEINBORN RESIDENCE

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Wood Details