Illicit Discharges and Connections (Municipal Code 15.52) are prohibited into the Storm Drain System: Contractor is responsible for keeping streets clean and free of contaminants at all times, removing pollutants from a private system that enters the municipal storm system and/or surface and ground water, and preventing an illicit discharge (KMC 15.52) into a the municipal storm drain system and/or surface and ground water. If your construction project violates Municipal Code 15.52, the City of Kirkland Storm Maintenance Division will be called to clean the public storm system, and other affected public infrastructure. The contractor(s), property owner, vendor, and any other responsible party may be charged all costs associated with the clean-up and may also be assessed a fine (KMC 1.12.200). The minimum fine is $500. A fine for a repeat violation shall be determined by multiplying the surface water fine by the number of violations. A fine may be reduced or waived for persons who immediately self-report violation to the city at 425-587-3900. A Final Inspection of your Project will not be granted until all costs associated with the clean-up, and penalties, are paid to the City of Kirkland.

SEPARATE PERMITS REQUIRED

Separate permits are required for any electrical, mechanical, and/or plumbing work.

WSEC 502.1.1.2 Primary dwelling unit addition is required to have:

WSEC 502.1.1.4/R404.1 Not less than 90 percent of lamps in permanently installed lighting fixtures shall be high-efficacy lamps.

BLOWER DOOR/AIR LEAKAGE TESTING REQUIRED

BLOWER DOOR/AIR LEAKAGE TO BE TESTED BY AN APPROVED THIRD PARTY IN ACCORDANCE WITH 2018 WSEC R402.4.1.2.

FOR PROJECTS UTILIZING AN ENERGY CREDIT WITHIN OPTION 2, TESTING SHALL COMPLY WITH THE REQUIRED REDUCED AIR CHANGES.

WHOLE-HOUSE VENTILATION TESTING REQUIRED

WHOLE-HOUSE VENTILATION SYSTEM TO BE TESTED BY AN APPROVED THIRD PARTY IN ACCORDANCE WITH 2018 IRC M1505.4.1.6.

CERTIFICATE OF TESTING TO BE POSTED PER M1505.4.1.7.

R401.3 A permanent certificate shall be completed by the builder or other approved party and posted on a wall in the space where the furnace is located, a utility room, or an approved location inside the building. When located on an electrical panel, the certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label, or other required labels. The certificate shall list the predominant R-values of insulation installed in or on ceiling/roof, walls, foundation (slab, below-grade wall, and/or floor) and ducts outside conditioned spaces; U-factors for fenestration and the solar heat gain coefficient (SHGC) of fenestration; the results from any required duct system and building envelope air leakage testing done on the building; and the results from the whole-house mechanical ventilation system flow rate test. Where there is more than one value for each component, the certificate shall list the value covering the largest area. The certificate shall list the types and efficiencies of heating, cooling, whole house mechanical ventilation, and service water heating appliances. Where a gas-fired unvented room heater, electric furnace, or baseboard electric heater is installed in the residence, the certificate shall list "gas-fired unvented room heater," "electric furnace" or "baseboard electric heater," as appropriate. An efficiency shall not be listed for gas-fired unvented room heaters, electric furnaces or electric baseboard heaters. The code official may require that documentation for any required test results include an electronic record of the time, date and location of the test. A date-stamped smart phone photo or air leakage testing software may be used to satisfy this requirement.

MUST REMAIN ON JOB SITE

2018 INTERNATIONAL BUILDING CODE (IBC)
2018 INTERNATIONAL RESIDENTIAL CODE (IRC)
2018 INTERNATIONAL FIRE CODE (IFC)
2018 WASHINGTON STATE ENERGY CODE, WAC 51-11 (WSEC)
2018 INTERNATIONAL MECHANICAL CODE (IMC)
2018 INTERNATIONAL FUEL GAS CODE (IFGC)
2018 UNIFORM PLUMBING CODE (UPC)
2017 Washington Cities Electrical Code (2017 WCEC with 2020 NEC updates)

WSEC-R 503.1/503.1.1
Any exposed building assemblies, that are part of the alteration, shall comply with R402.1.1 minimum insulation R-Values.

TABLE R402.1.1
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT[a]

	CLIMATE ZONE 5 AND MARINE 4
Fenestration U-Factor[b]	0.30
Skylight[b] U-Factor	0.50
Ceiling R-Value[c]	49
Wood Frame Wall[d,h] R-Value	21 int
Floor R-Value	30
Below-Grade[e,h] Wall R-value	10/15/21 int + 5TB
Slab[d,f] R-Value & Depth	10, 2 ft

***BLDG. DEPT. CONDITIONS -**

SUBJECT TO FIELD INSPECTION – The constructed elements of this project are subject to field inspection and your inspector may not approve of site built details that are different than, or were not on the approved plans. Most changes/revisions cannot be inspected in the field without prior review and you must stay within the original scope. Any changes/revisions are to be submitted to Development Services for review prior to building them.

SCOPE OF WORK - Changes to the scope of work, design, materials or method of construction will require revised plans to be submitted. The plans must be reviewed and approved by City of Kirkland review staff prior to being implemented in the field. Additional review fees will be charges as applicable.

ADDRESS NUMBERS - New and existing buildings shall have approved address numbers placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Address number shall be Arabic numerals or alphabet letters. Numbers shall be a minimum of 4 inches (4") high with a minimum stroke width of 0.5 inches (1/2"). IFC Sec. 505.

SMOKE and CARBON MONOXIDE ALARMS - Smoke Alarms are required for all new dwelling units and in existing dwelling units when alterations or repairs require a permit, or when one or more sleeping rooms are created within an existing space. Alarms shall be hard wired with battery backup and interconnected. Smoke Alarms and Carbon Monoxide Alarms are required at each story and outside each separate sleeping area in the immediate vicinity of the bedroom. See IRC Sec 314 and 315.

HEAT DETECTOR - IRC R314.2.3 A heat detector or heat alarm rated for the ambient outdoor temperatures and humidity shall be installed in new garages that are attached to or located under new and existing dwellings. Heat detectors and heat alarms shall be installed in a central location and in accordance with the manufacturer's instructions.

SPECIAL INSPECTION REQUIRED

ALL Welding:

Is required to be done by a WABO certified welder and have Special Inspections by a WABO certified Inspection Agency or
Be done in a WABO certified fabrication shop.

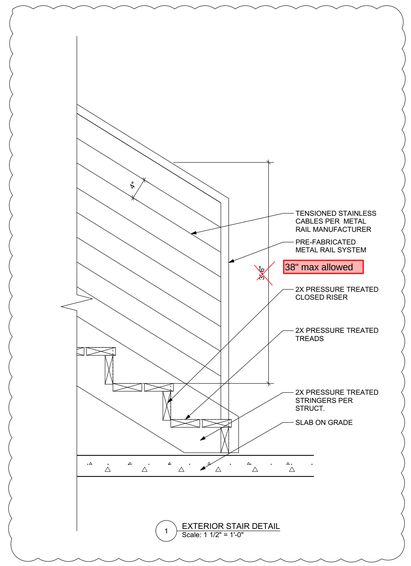
Have either the special inspection report or the WABO fabrication shop certification available on site for the Building Inspector.

R303.8Exterior stairway illumination.
Exterior stairways shall be provided with an artificial light source located at the top landing of the stairway. Stairway illumination shall receive primary power from the building wiring.

R311.7.5.1Risers.
The riser height shall be not more than 73/4 inches (196 mm). The riser shall be measured vertically between leading edges of the adjacent treads.

R311.7.5.2Treads.
The tread depth shall be not less than 10 inches (254 mm)

R311.7.8.1Height.
Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).



SPECIAL INSPECTION REQUIRED

SPECIAL INSPECTION REQUIRED BY LICENSED 3RD PARTY FOR ALL EPOXY SET ANCHORS OR STRUCTURAL HOLD DOWNS

City of Kirkland
Reviewed by E Huffman
10/19/2022

GENERAL INFORMATION

ADDRESS: 10341 NE 141ST PL

KIRKLAND ZONING: RSA 6

KING COUNTY PARCEL NO: 814300-0590

LEGAL DESCRIPTION: SUN VILLAGE
Plat Block:
Plat Lot: 59

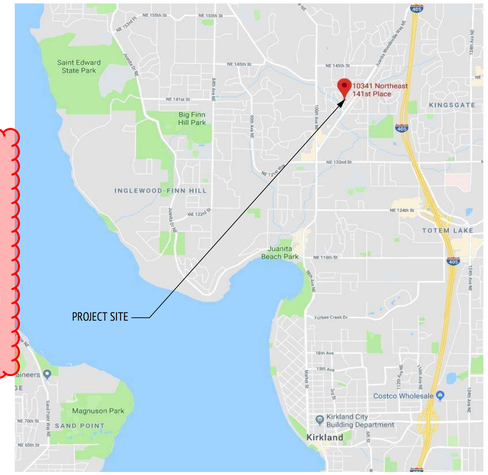
8.31.2023/Post Rev 1 - Move lower unit entry door, window sized changed, upper unit entry door moved, revise wall framing and hold down location for revised entry openings, revised framing and beam sizes, reduced overhang and revised support of added studs at post.

1.12.2026
Post - Rev 2: Slab, Driveway, & lot coverage.

Revised sheets: A2, A5, & A6.

New sheets: C1-C6.

VICINITY MAP



ABBREVIATIONS

&	AND
L	ANGLE
@	AT
℄	CENTERLINE
ϕ	DIAMETER, ROUND
⊥	PERPENDICULAR
#	POUND, NUMBER
ACOUS.	ACOUSTICAL
A.C.T.	ACOUSTICAL TILE
A.D.	AREA DRAIN
ADJ.	ADJUSTABLE
AGG.	AGGREGATE
ALUM.	ALUMINUM
APPR.	APPROXIMATELY
ARCH.	ARCHITECTURAL
BD.	BOARD
BLDG.	BUILDING
BLK.	BLOCK
BLKG.	BLOCKING
BM.	BEAM
BOT.	BOTTOM
BRG.	BEARING
CAB.	CABINET
C. B.	CORK BOARD
CEM.	CEMENT
CER.	CERAMIC
C. I.	CAST IRON
CL	CLOSER
CLG.	CEILING
CLR.	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CORR.	CORRIDOR
CPT.	CARPET
CTSK.	COUNTERSUNK
CNTR.	COUNTER
CTR.	CENTER
C. T.	CERAMIC TILE
D.	DEEP, DEPTH
DBL.	DOUBLE
D. F.	DRINKING FOUNTAIN
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DISP.	DISPENSER, DISPOSAL
DN.	DOWN
DR.	DOOR
D. S.	DOWNSPOUT
DWG.	DRAWING
D. W.	DISHWASHER
EXIST.	EXISTING
E.	EAST
EA.	EACH
EL.	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
EMER.	EMERGENCY
ENCL.	ENCLOSURE
EQ.	EQUAL
EQUIP.	EQUIPMENT
E. W. C.	ELECTRIC WATER COOLER
EXH.	EXHAUST
EXP.	EXPANSION
EXPO.	EXPOSED
EXT.	EXTERIOR
F. A.	FIRE ALARM
F. B.	FLAT BAR
F. D.	FLOOR DRAIN
FDN.	FOUNDATION
F. E.	FIRE EXTINGUISHER & CABINET
F. H.	FIRE HYDRANT
FIN.	FINISH
FL.	FLOOR
FLASH.	FLASHING
F. O. C.	FACE OF CONCRETE
F. O. F.	FACE OF FINISH
F. O. S.	FACE OF STUD
F. O. I. C.	FURNISHED BY OWNER, INSTALLED BY CONTRACTOR
F. O. I. O.	FURNISHED BY OWNER, INSTALLED BY OWNER
F. O. I. V.	FURNISHED BY OWNER, INSTALLED BY VENDOR
FT.	FOOT OR FEET
FTG.	FOOTING
FURR.	FURRING
GA.	GAUGE
GALV.	GALVANIZED
G. B.	GRAB BAR
GL.	GLASS
GYP.	GYPSUM
G. W. B.	GYPSUM WALLBOARD
H. B.	HOSE BIBB
H. C.	HOLLOW CORE
HDWD.	HARDWOOD
HDWE.	HARDWARE
H. M.	HOLLOW METAL
H.O.	HOLD OPEN
HORIZ.	HORIZONTAL
HR.	HOUR
HT.	HEIGHT
H. W. H.	HOT WATER HEATER
I. D.	INSIDE DIAMETER
INSUL.	INSULATION
INT.	INTERIOR
JAN.	JANITOR
JT.	JOINT
KIT.	KITCHEN
K.T.	KEYBOARD TRAY
L.	LAVATORY
LAM.	LAMINATE
LT.	LIGHT
MAX.	MAXIMUM
M. C.	MEDICINE CABINET
MECH.	MECHANICAL
MEMB.	MEMBRANE
MTL.	METAL
MFR.	MANUFACTURER
M. H.	MANHOLE
MIN.	MINIMUM
MIR.	MIRROR
MISC.	MISCELLANEOUS
M. O.	MASONRY OPENING
MTD.	MOUNTED
MUL.	MULLION
N.	NORTH
N. I. C.	NOT IN CONTRACT
NO.	NUMBER
NOM.	NOMINAL
N. T. S.	NOT TO SCALE
O. A.	OVERALL
OBS.	OBSCURE
O. C.	ON CENTER
O. D.	OUTSIDE DIAMETER
OFF.	OFFICE
OPNG.	OPENING
OPP.	OPPOSITE
PEEP	PEEP HOLE
PH	PANIC HARDWARE
PL.	PLATE
P. LAM.	PLASTIC LAMINATE
PLAS.	PLASTER
PLYWD.	PLYWOOD
PR.	PAIR
PT.	POINT, PAINT
P. T. D.	PAPER TOWEL DISPENSER
P. S.	PROJECTION SCREEN
Q. T.	QUARRY TILE
R.	RANGE; RISER
RAD.	RADIUS
R. D.	ROOF DRAIN
REF.	REFERENCE
REFR.	REFRIGERATOR
REG.	REGISTER
REIN.	REINFORCE(D)
R.U.	ROLL UP
REQ'D.	REQUIRED
RES.	RESILIENT
RM.	ROOM
R. O.	ROUGH OPENING
S.	SOUTH
S. C.	SOLID CORE
SCHED.	SCHEDULE
SECT.	SECTION
S. F.	SQUARE FOOT/FEET
SK.	SINK
SH.	SHELF
SHT.	SHEET
SIM.	SIMILAR
SPEC.	SPECIFICATION
SQ.	SQUARE
SST.	STAINLESS STEEL
S. S.	SERVICE SINK
STA.	STATION
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRUCT.	STRUCTURAL
SUSP.	SUSPENDED
S.V.	SHEET VINYL
SYM.	SYMMETRICAL
T.	TREAD
T.B.	TACK BOARD
T. C.	TOP OF CURB
TEL.	TELEPHONE
T. & G.	TONGUE AND GROOVE
THK.	THICK
T.O.G.	TOP OF GYPCRETE
T.O.S.	TOP OF SLAB
T. P.	TOP OF PAVEMENT
T. P. D.	TOILET PAPER DISPENSER
T.V.	TELEVISION
T. W.	TOP OF WALL
TYP.	TYPICAL
U.	URINAL
UNF.	UNFINISHED
U. O. N.	UNLESS OTHERWISE NOTED
UTIL.	UTILITY
V. A. T.	VINYL ASBESTOS TILE
V. C. T.	VINYL COMPOSITION TILE
V. G.	VERTICAL GRAIN
VERT.	VERTICAL
VEST.	VESTIBULE
W.	WASHER
W.	WEST
W/	WITH
W. B.	WHITE BOARD
W. C.	WATER CLOSET
WD.	WOOD
W / O	WITHOUT
W.P.	WATER PROOF
WT.	WEIGHT

LIEN NISHIWAKI ARCHITECTS
homero@ln-arc.com · 206.321.1449

Aguilar Addition

10341 NE 141st Pl
Kirkland WA 98034

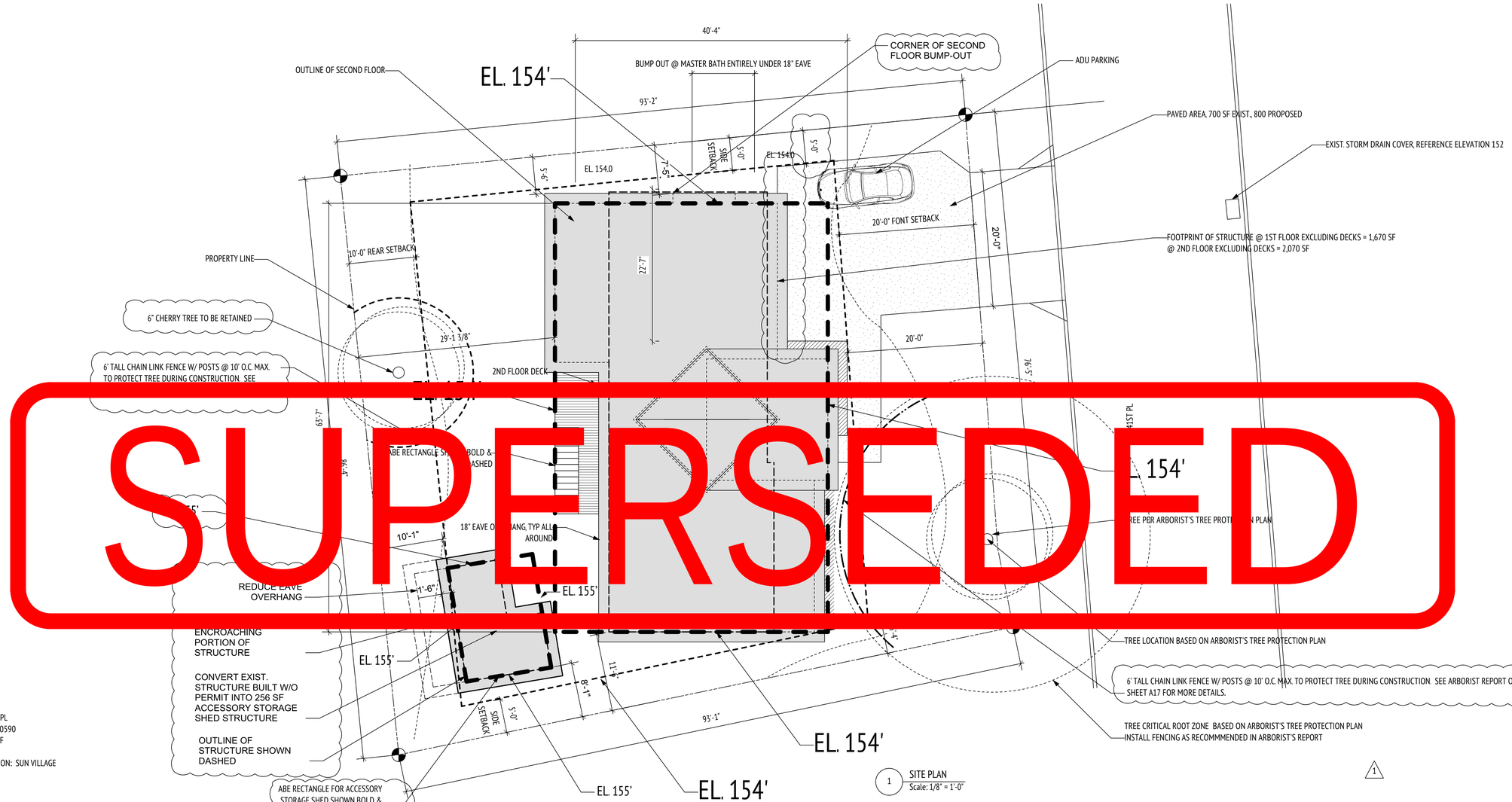
8585 REGISTERED ARCHITECT
HOMERO NISHIWAKI
STATE OF WASHINGTON

SHEET INDEX

•Notes

Building PERMIT
October 5, 2021

A1



1 SITE PLAN
Scale: 1/8" = 1'-0"

10341 NE 141ST PL
KCPN 814300-0590
LOT SIZE: 8,100 SF

LEGAL DESCRIPTION: SUN VILLAGE
PLat Block:
Plat Lot: 59

ZONE: RSA6

ABE CALCULATION (MAIN HOUSE): 154 (63'-7")+154(40-4")+154(63'-7")+154(40'-4")
/ 63'-7"+ 40'-4"+63'-7"+ 40'-4"= 154'

ABE CALCULATION (ACCESSORY STORAGE SHED): 155 (13')+155(17')+155(13')+155(17')
= 155'

LOT COVERAGE:
ROOF COVERAGE INCLUDING STORAGE SHED, DECKS AND HARDSCAPE = 2,495 + 256 + 136 +600 (HARDSCAPE)/8,100 =43 PERCENT
50 PERCENT ALLOWED

FLOOR AREA RATIO:
EXISTING: 1575 (FIRST FLOOR) / 8100 SF (LOT SIZE) = 19.5 PERCENT
PROPOSED: 1575 (FIRST FLOOR) + 1945 (SECOND FLOOR) + 256 (STORAGE SHED)/ 8100 SF (LOT SIZE) = 47 PERCENT
50 PERCENT ALLOWED

MAX BUILDING HEIGHT: 27' (SEE ELEVATIONS)

30' ALLOWED

TREE CREDITS: 30 CREDITS PER ACRE (43,560 SF)

8,100 SF/ 43,560 SF = .186 ACRE X 30 = **5.6 CREDITS REQUIRED**
EXISTING DOUGLAS FIR TREE IS 23.4" DBH PER ARBORIST REPORT
EXISTING CHERRY TREE IN BACK YARD IS 6" DBH PER SURVEY
7 CREDITS FOR 22" DBH TREE PER TABLE 95.33.1
~~1 CREDIT FOR 6" DBH CHERRY TREE~~

8 TOTAL TREE CREDITS

NOTE: DRAINAGE REVIEW NOT REQUIRED PER KMC 15.52.050

Applicability—Drainage review required.Share
(a) Drainage review is required when any proposed project is subject to a city of Kirkland development permit or approval and:

(1) Would result in five hundred square feet or more of new impervious surface, replaced impervious surface or new plus replaced impervious surface

NORTH

NOTICE HOURS OF WORK:
7 AM TO 8 PM MON-FRI
9 AM TO 6 PM SAT
NO WORK SUNDAYS & HOLIDAYS (PER KZC SEC. 115.25). Exceptions must be approved in writing by Planning Official.

PCD APPROVED SITE PLAN
Any proposed changes to the approved site plan, such as but not limited to added hard surfaces, HVAC units, tree removals and accessory structures, must be submitted to the Planning and Building Department as a revision to the permit for review and approval by all departments prior to implementation.

PLACING MATERIAL NEAR TREES
No person may conduct any activity within the protected area of any tree designated to remain, including but not limited to, operating or parking equipment, placing solvents, storing building material or soil deposits, or dumping concrete washout or other chemicals. During construction no person shall attach any object to any tree designated for protection.

NO TREE REMOVAL APPROVED

LIEN NISHIWAKI ARCHITECTS
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Aguilar Addition

10341 NE 141st Pl
Kirkland WA 98034

REGISTERED ARCHITECT
8585
HOMERO NISHIWAKI
STATE OF WASHINGTON

2 PERMIT CORRECTIONS

Site Plan

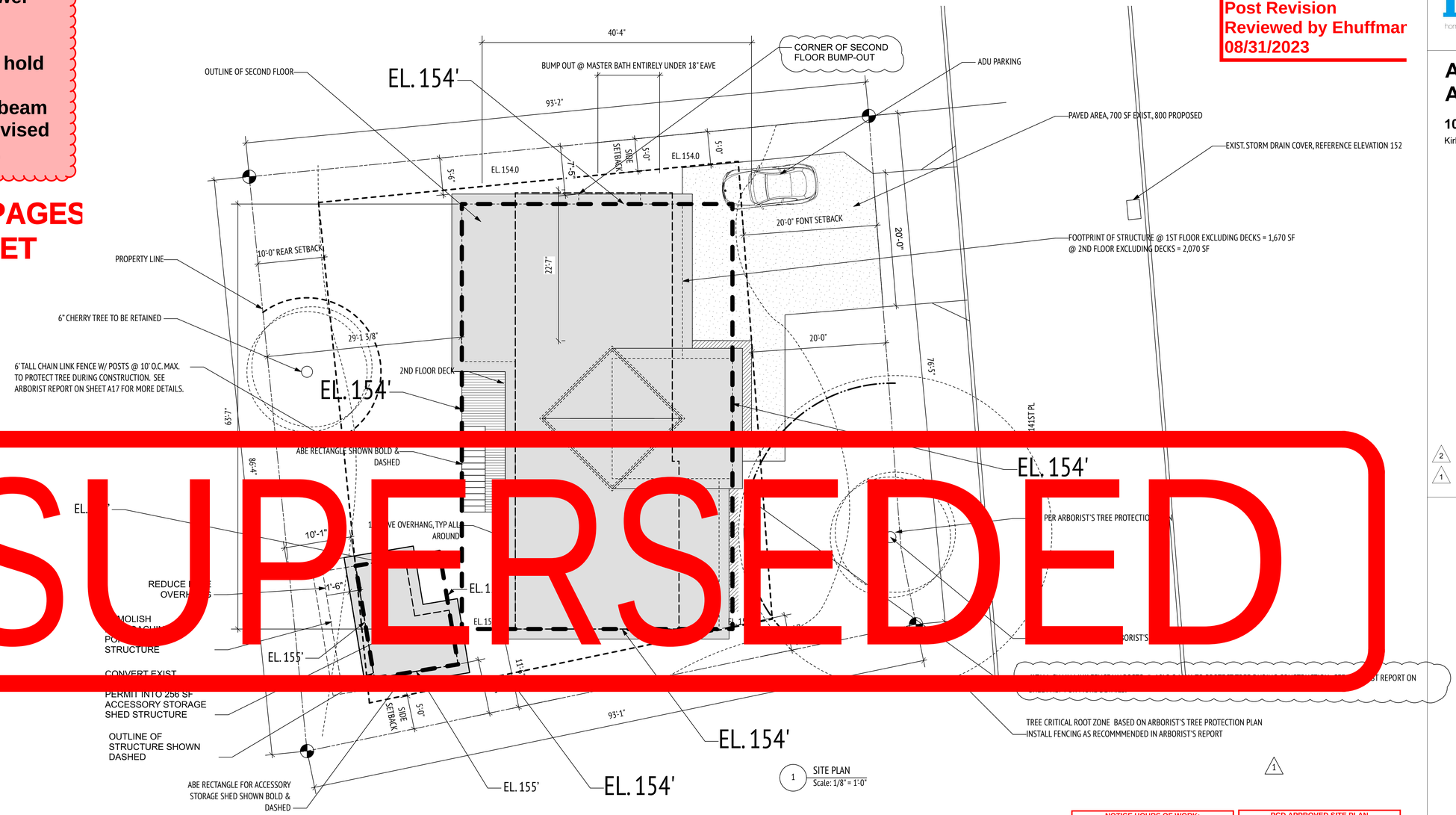
Building PERMIT
October 5, 2021

A2

8.31.2023/Post Rev 1 - Move lower unit entry door, window sized changed, upper unit entry door moved, revise wall framing and hold down location for revised entry openings, revised framing and beam sizes, reduced overhang and revised support of added studs at post.

INSERT REVISED PAGES INTO APPROVED SET 08/31/2023

City of Kirkland
Post Revision
Reviewed by Ehuffmar
08/31/2023



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50 PERCENT ALLOWED

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30' ALLOWED

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8,100 SF/ 43,560 SF = .186 ACRE X 30 = **5.6 CREDITS REQUIRED**
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NOTE: DRAINAGE REVIEW NOT REQUIRED PER KMC 15.52.050

Applicability—Drainage review required.Share
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NORTH

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No person may conduct any activity within the protected area of any tree designated to remain, including but not limited to, operating or parking equipment, placing solvents, storing building material or soil deposits, or dumping concrete washout or other chemicals. During construction no person shall attach any object to any tree designated for protection.

NO TREE REMOVAL APPROVED

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STATE OF WASHINGTON

2 PERMIT REVISION 08/29/2023
1 PERMIT REVISION 08/09/2023

Site Plan

Building PERMIT
October 5, 2021

A2

1.12.2026
Post - Rev 2: Slab, Driveway, & lot coverage.

Revised sheets: A2, A5, & A6.

New sheets: C1-C6.

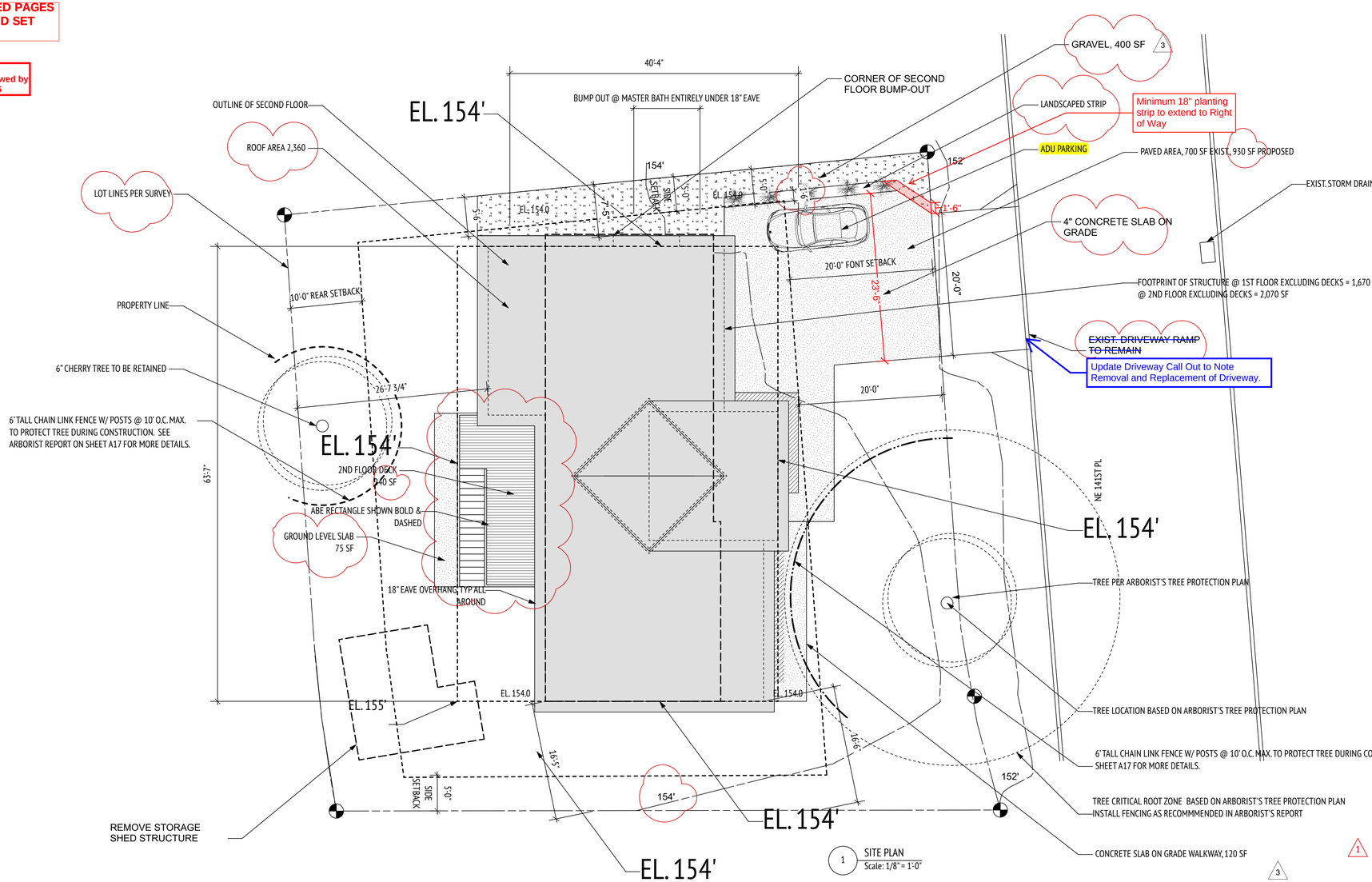
INSERT REVISED PAGES INTO APPROVED SET 01/12/2026

City of Kirkland
Post Revision Reviewed by Ehuffman 01/07/2026

APPROVED PLAN SET MUST REMAIN ON SITE.

CITY MARKUPS & APPROVALS MUST BE PRINTED IN RED.

POST REVISION REVIEWED AND APPROVED BY PUBLIC WORKS & PLANNING



1 SITE PLAN
Scale: 1/8" = 1'-0"

10341 NE 141ST PL
KCPN 8 14300-0590
LOT SIZE: 7,915 SF

LEGAL DESCRIPTION: SUN VILLAGE
Plat Block:
Plat Lot: 59

ZONE: RSA6

ABE CALCULATION (MAIN HOUSE): 154 (63'-7")+154(40-4")+154(63'-7")+154(40'-4")
/ 63'-7"+ 40'-4"+63'-7"+ 40'-4"= 154'

LOT COVERAGE:
ROOF COVERAGE INCLUDING DECKS AND HARDSCAPE = 2,330 + 240 + 930 + 400 + 75 (HARDSCAPE)/7,915 =50 PERCENT
50 PERCENT ALLOWED

FLOOR AREA RATIO:
EXISTING: 1575 (FIRST FLOOR) / 7,915 SF (LOT SIZE) = 19.5 PERCENT
PROPOSED: 1575 (FIRST FLOOR) + 1945 (SECOND FLOOR) / 7,915 SF (LOT SIZE) = 44 PERCENT
50 PERCENT ALLOWED

MAX BUILDING HEIGHT: 27' (SEE ELEVATIONS)
30' ALLOWED

BUILDING CONSTRUCTION VALUATION:
ICC BUILDING VALUATION DATA CHART 2024
TYPE VB, SINGLE FAMILY RESIDENTIAL: $167.37/ SF

ADDITION: 1,945 SF (SECOND FLOOR) + 240 SF (FIRST FLOOR) X 167.37 = $368,214

110.70 MODIFICATIONS, DEFERMENTS AND WAIVERS THRESHOLD: $369,000

TREE CREDITS: 30 CREDITS PER ACRE (43,560 SF)
7,915 SF/ 43,560 SF = .186 ACRE X 30 = **5.6 CREDITS REQUIRED**
EXISTING DOUGLAS FIR TREE IS 23.4" DBH PER ARBORIST REPORT
EXISTING CHERRY TREE IN BACK YARD IS 6" DBH PER SURVEY
7 CREDITS FOR 22" DBH TREE PER TABLE 95.33.1
1 CREDIT FOR 6" DBH CHERRY TREE
8 TOTAL TREE CREDITS

NOTE: DRAINAGE REVIEW ~~NOT~~ REQUIRED PER KMC 15.52.050
Basic Drainage Review Applies
Applicability – Drainage review required.Share
(a) Drainage review is required when any proposed project is subject to a city of Kirkland development permit or approval and:

(1) Would result in five hundred square feet or more of new impervious surface, replaced impervious surface or new plus replaced impervious surface

NORTH

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Aguilar Addition

10341 NE 141st Pl
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8585 REGISTERED ARCHITECT
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STATE OF WASHINGTON

3 POST-ISSUANCE PERMIT REVISION 08/11/2025
2 PERMIT REVISION 08/29/2023
1 PERMIT REVISION 08/09/2023

Site Plan

Building PERMIT
October 5, 2021

A2

TOPOGRAPHIC & BOUNDARY SURVEY

LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDING# 20160705001584)

LOT 59, SUN VILLAGE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 83 OF PLATS, PAGES 26 AND 27, IN KING COUNTY, WASHINGTON.

BASIS OF BEARINGS

ACCEPTED THE BEARING OF S 35°26'34" W , BETWEEN MONUMENTS FOUND ALONG THE CENTERLINE OF 104TH PLACE N.E., PER REFERENCE NO. 1.

REFERENCES

R1. SUN VILLAGE, VOL. 83, OF PLATS, PGS. 26-27, RECORDS OF KING COUNTY, WASHINGTON.

VERTICAL DATUM

NAVD 88 PER GPS OBSERVATIONS

SURVEYOR'S NOTES

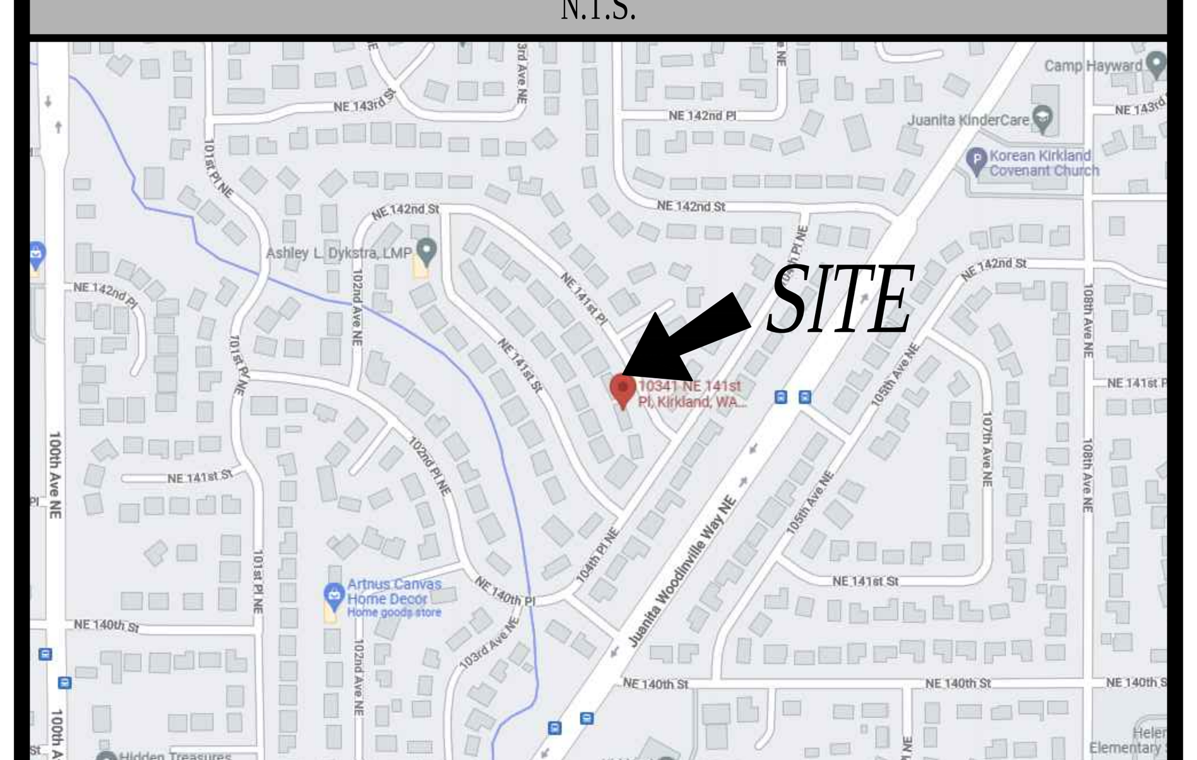
1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN FEBRUARY OF 2022. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY 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. 814300-0590
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 7,915 ±S.F. (0.18 ACRES)
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
7. EXISTING STRUCTURE(S) LOCATION AND DIMENSIONS ARE MEASURED FROM THE FACE OF THE SIDING UNLESS OTHERWISE NOTED.
8. 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.

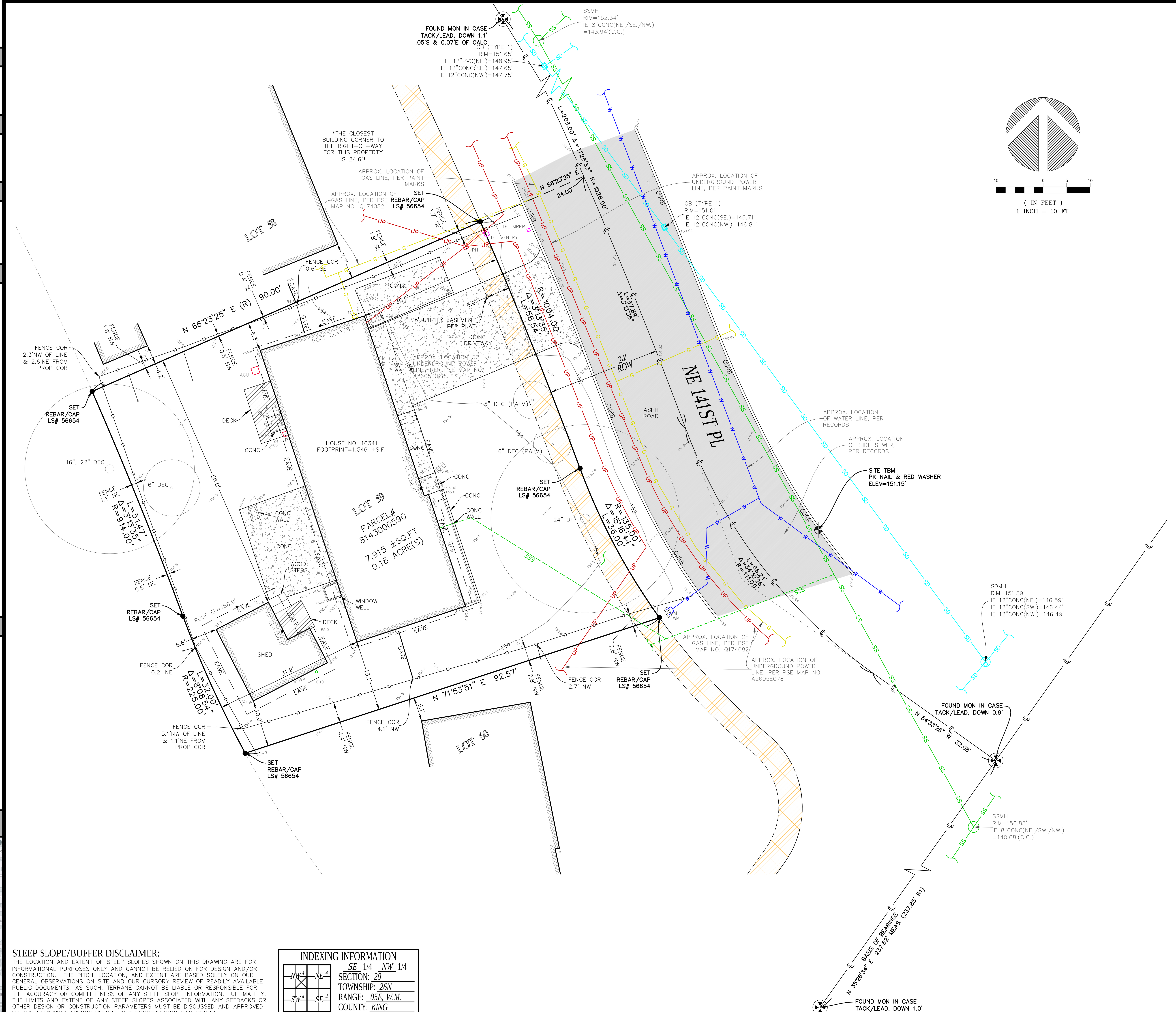
LEGEND

Symbol	Description	Symbol	Description
ACU	AIR CONDITION UNIT	P	POWER METER
	ASPHALT SURFACE	UP	POWER (UNDERGROUND)
	BENCHMARK		REBAR & CAP (SET)
	BUILDING		RETAINING WALL
	CENTERLINE ROW	SS	SEWER LINE
CO	CLEANOUT		SEWER MANHOLE
	CONCRETE SURFACE	SD	STORM DRAIN LINE
	DECK		STORM MANHOLE
	FENCE LINE (WOOD)	TEL MRKR	TELEPHONE DOWN MRKR
G	GAS LINE	TEL SENTRY	TELEPHONE SENTRY
G	GAS METER	SIZE TYPE	TREE (AS NOTED)
	INLET (TYPE 1)	W	WATER LINE
	MONUMENT (IN CASE, FOUND)	WM	WATER METER
PH	POWER HAND HOLE		UTILITY EASEMENT PER PLAT

VICINITY MAP

N.T.S.





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.

INDEXING INFORMATION
SE 1/4 NW 1/4
SECTION: 20
TOWNSHIP: 26N
RANGE: 05E, W.M.
COUNTY: KING

We are the measure | terrane.net

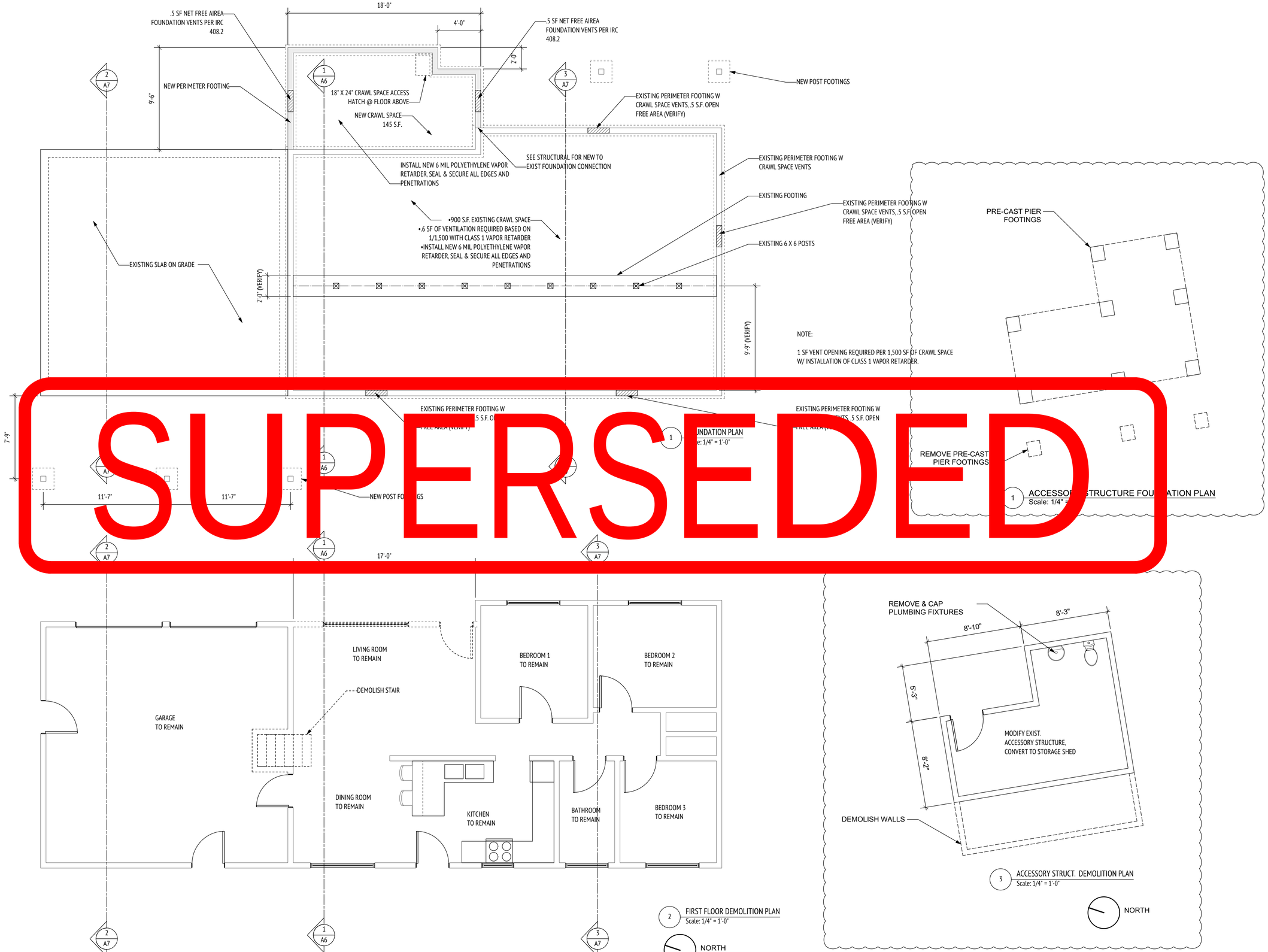
TOPOGRAPHIC & BOUNDARY SURVEY
PARCEL NO. 8143000590
ARTEAGA / AGUILAR RESIDENCE
10341 NE 141ST PL
KIRKLAND, WA 98034

TERRANE
10801 Main Street, Suite 102
Bellevue, WA 98004
p: 425-458-4488 | e: info@terrane.net

JOB NUMBER:	220117
DATE:	03/16/22
DRAFTED BY:	IDV / RPM
CHECKED BY:	JGM / TBH
SCALE:	1" = 10'

REVISION HISTORY

SHEET NUMBER
1 OF 1



LIEN NISHIWAKI ARCHITECTS
homero@ln-arc.com · 206.321.1449

Aguilar Addition

10341 NE 141st Pl
Kirkland WA 98034

8585 REGISTERED ARCHITECT
HOMERO NISHIWAKI
STATE OF WASHINGTON

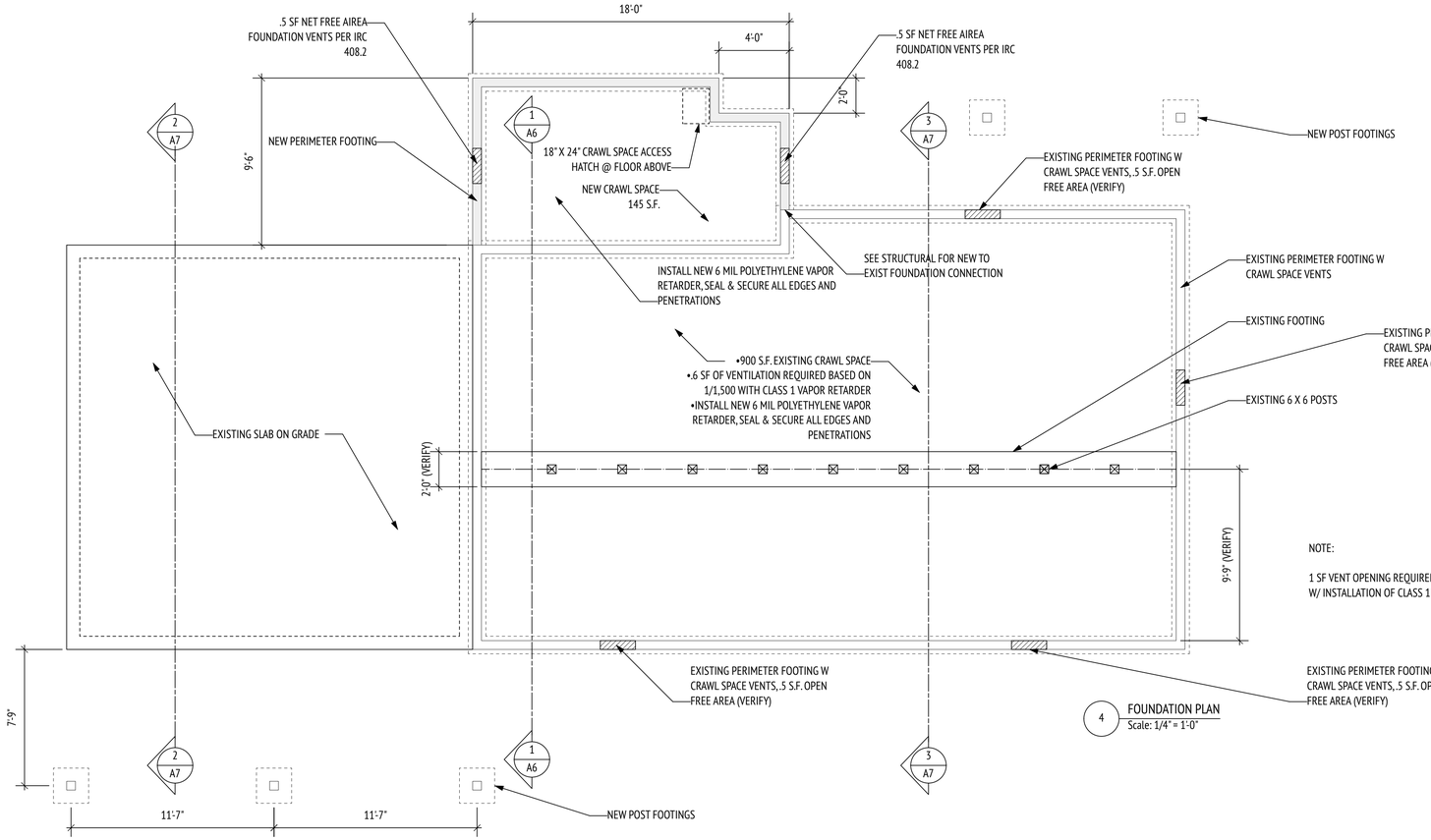
Existing Floor Plans

Building PERMIT

October 5, 2021

A3

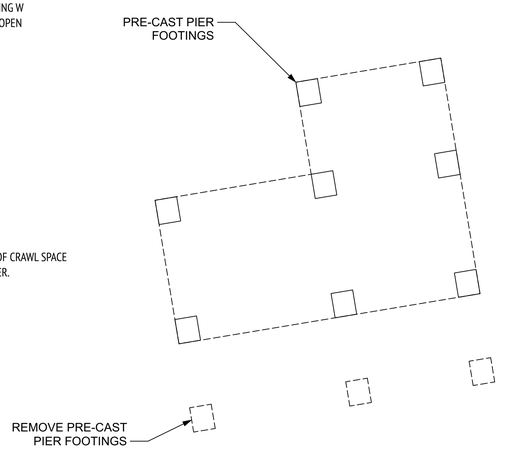
INSERT REVISED PAGES INTO APPROVED SET 08/31/2023



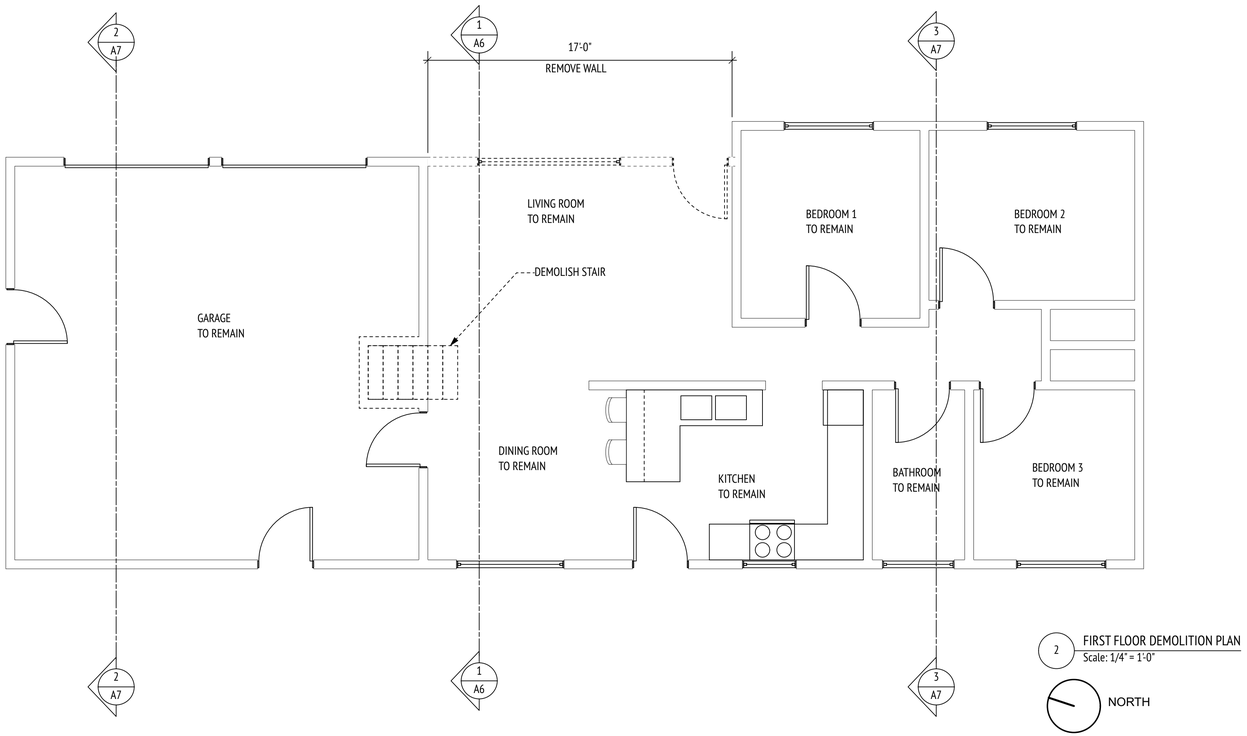
4 FOUNDATION PLAN
Scale: 1/4" = 1'-0"

NOTE:

1 SF VENT OPENING REQUIRED PER 1,500 SF OF CRAWL SPACE W/ INSTALLATION OF CLASS 1 VAPOR RETARDER.

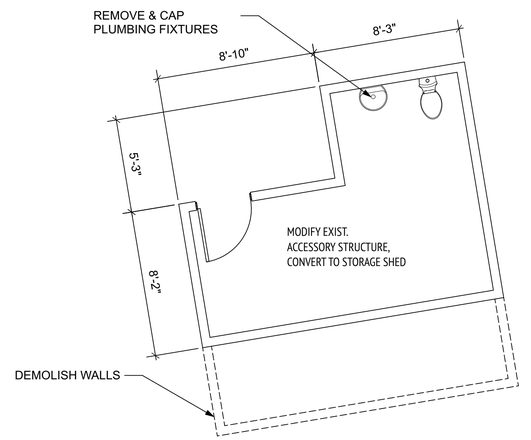


1 ACCESSORY STRUCTURE FOUNDATION PLAN
Scale: 1/4" = 1'-0"



2 FIRST FLOOR DEMOLITION PLAN
Scale: 1/4" = 1'-0"

NORTH



3 ACCESSORY STRUCT. DEMOLITION PLAN
Scale: 1/4" = 1'-0"

NORTH

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STATE OF WASHINGTON

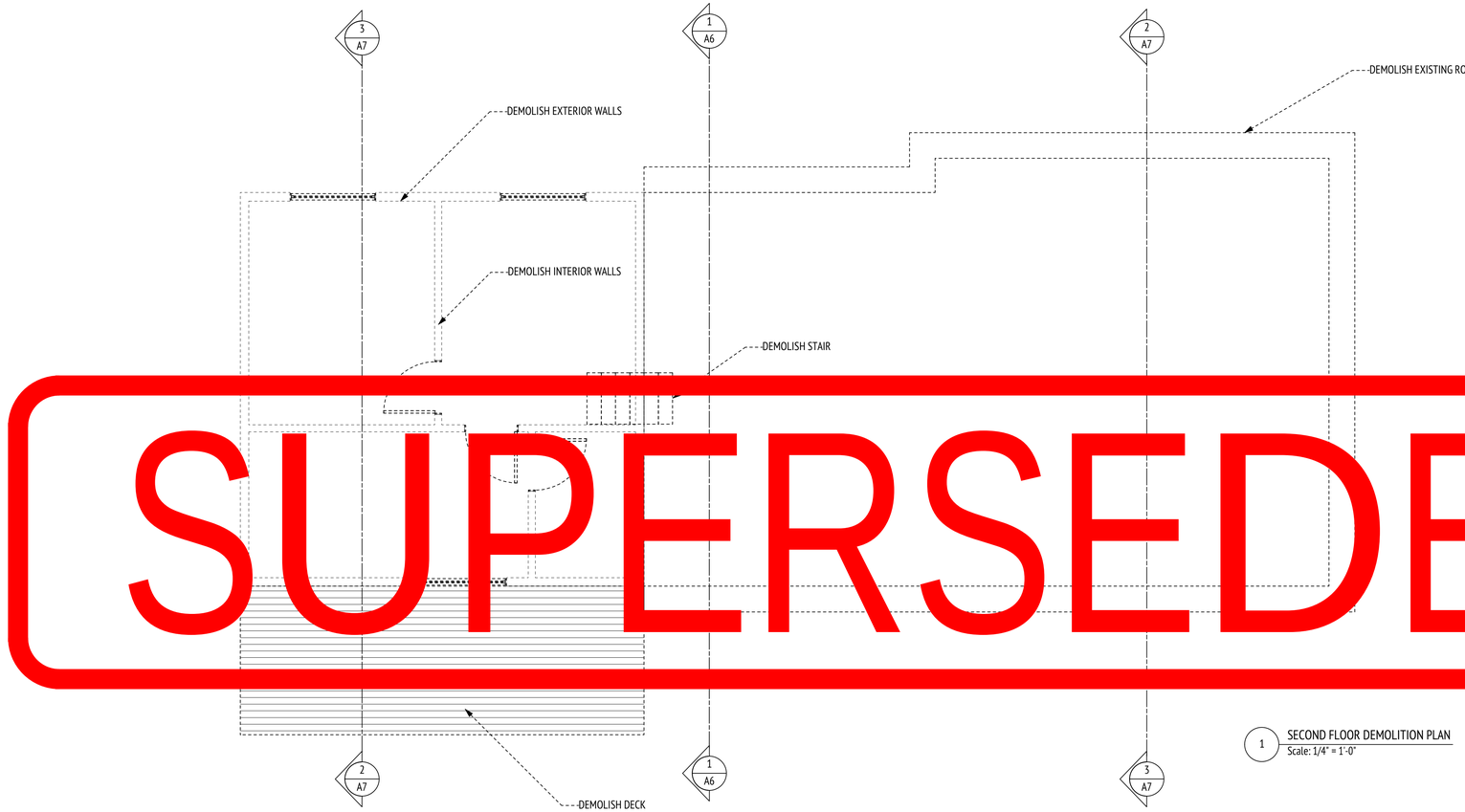
2 PERMIT REVISION 08/29/2023
1 PERMIT REVISION 08/09/2023

Existing Floor Plans

Building PERMIT

October 5, 2021

A3



1 SECOND FLOOR DEMOLITION PLAN
Scale: 1/4" = 1'-0"

SUPERSEDED

NORTH

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Aguilar Addition

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Kirkland WA 98034

8585 REGISTERED ARCHITECT
HOMERO NISHIWAKI
STATE OF WASHINGTON

1 PERMIT CORRECTIONS 7/13/2018

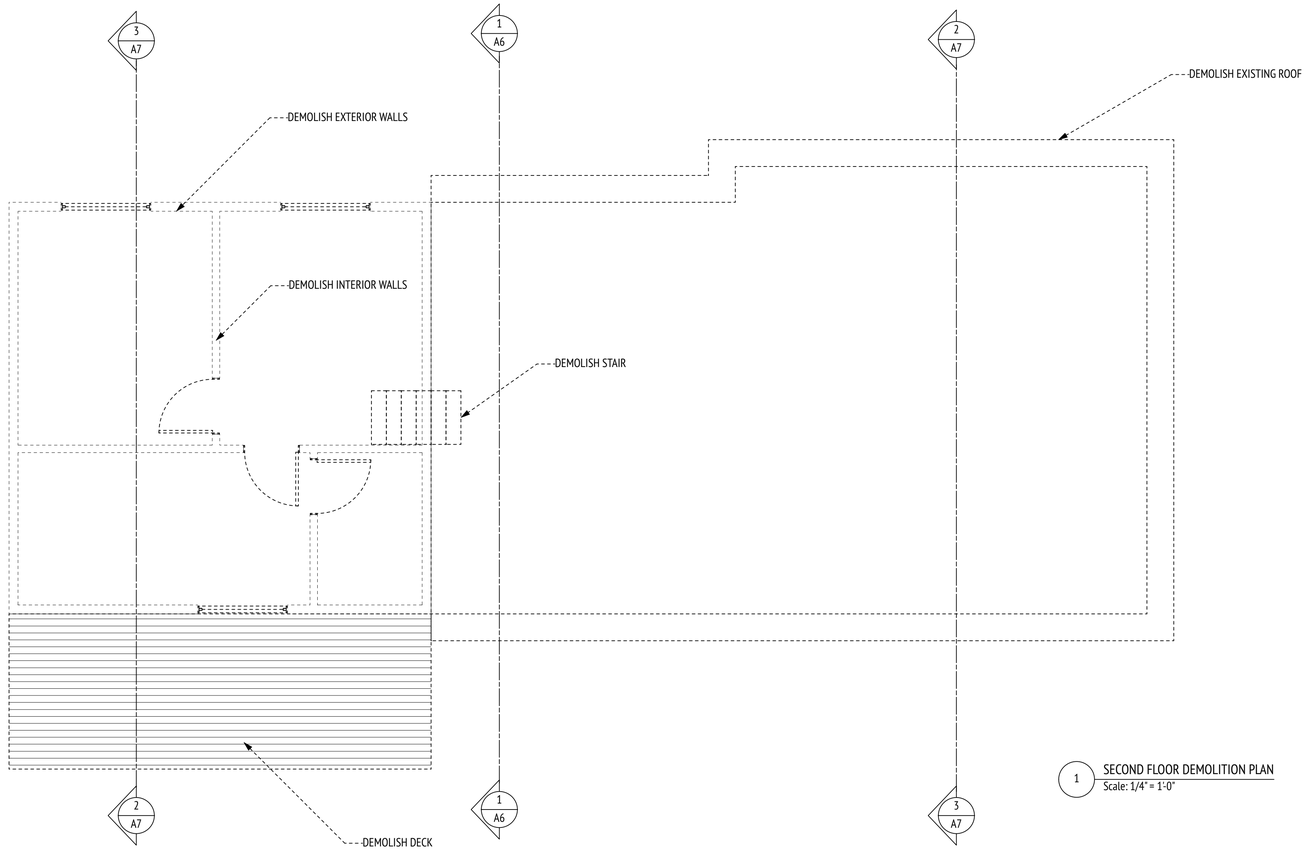
Floor Plans

Building PERMIT

October 5, 2021

A4

INSERT REVISED PAGES INTO APPROVED SET 08/31/2023



1 SECOND FLOOR DEMOLITION PLAN
Scale: 1/4" = 1'-0"

NORTH

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Aguilar Addition

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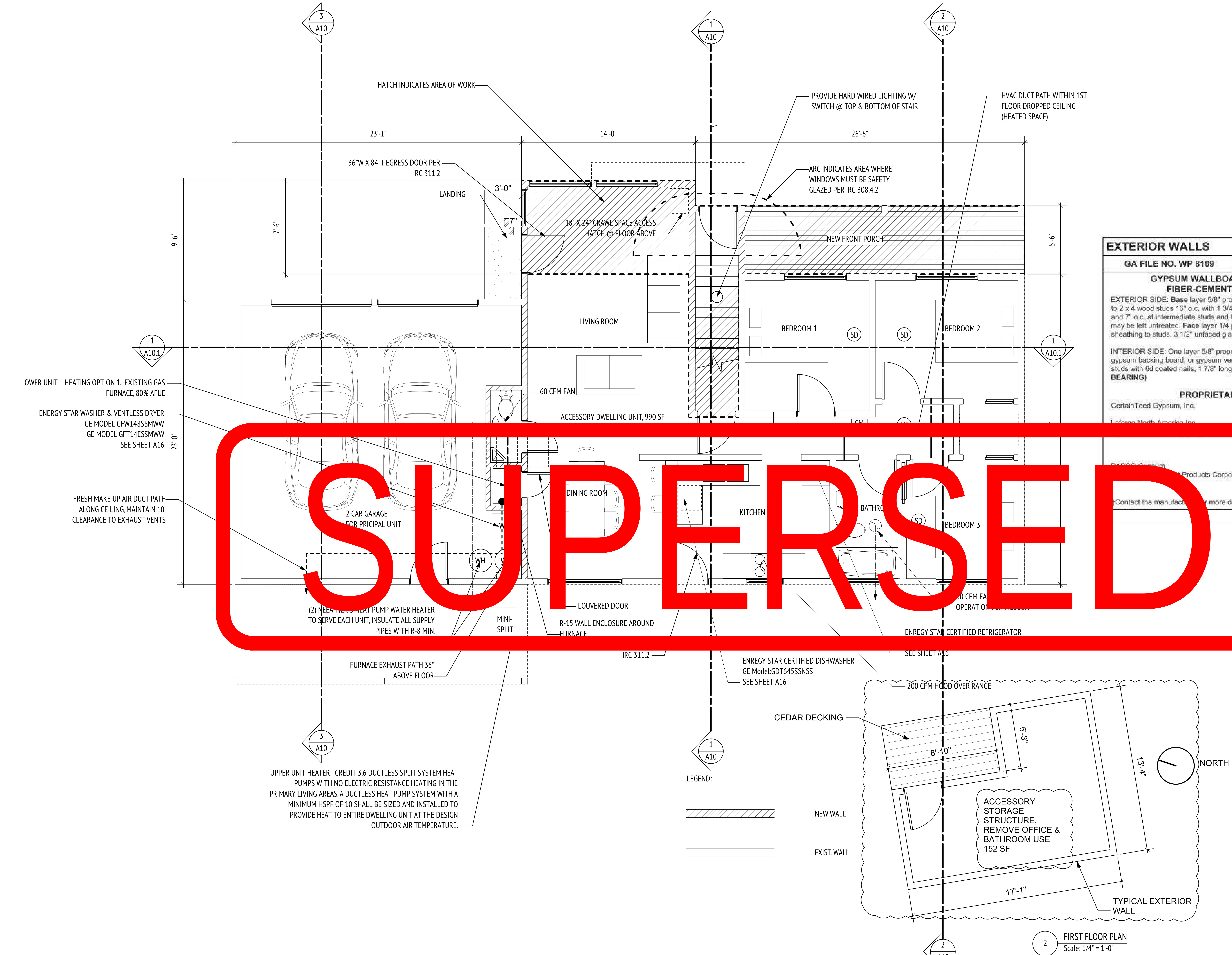
8585 REGISTERED ARCHITECT
HOMERO NISHIWAKI
STATE OF WASHINGTON

2 PERMIT REVISION 08/29/2023
1 PERMIT CORRECTIONS 7/13/2018
PERMIT REVISION 08/09/2023

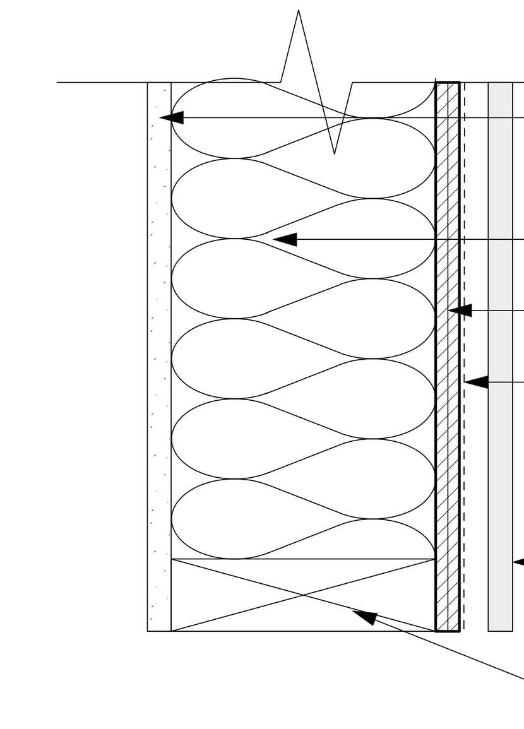
Floor Plans
Building PERMIT
October 5, 2021

A4

SUPERSEDED



2 FIRST FLOOR PLAN
Scale: 1/4" = 1'-0"



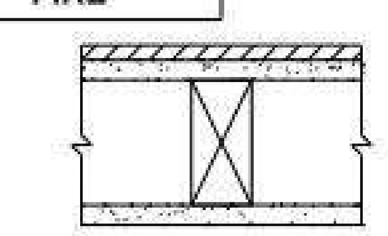
EXTERIOR WALLS

GA FILE NO. WP 8109	PROPRIETARY†	1 HOUR FIRE

GYPSUM WALLBOARD, GYPSUM SHEATHING, FIBER-CEMENT SIDING, WOOD STUDS

EXTERIOR SIDE: **Base** layer 5/8" proprietary type X gypsum sheathing applied parallel to 2 x 4 wood studs 16" o.c. with 1 3/4" galvanized roofing nails 4" o.c. at vertical joints and 7" o.c. at intermediate studs and top and bottom plates. Joints of gypsum sheathing may be left untreated. **Face** layer 1/4 proprietary fiber-cement siding fastened through sheathing to studs. 3 1/2" unfaced glass fiber friction fit in stud space.

INTERIOR SIDE: One layer 5/8" proprietary type X gypsum wallboard, water-resisitant gypsum backing board, or gypsum veneer base applied at right angles to studs with 6d coated nails, 1 7/8" long, 0.0915" shank, 1/4" heads 7" o.c. **(LOAD BEARING)**



Thickness: 5 1/8"
Approx. Weight: 9 psf
Fire Test: See WP 3510 (UL R3501-47, -48, 9-17-65, UL Design U309)

PROPRIETARY GYPSUM BOARD

CertainTeed Gypsum, Inc. — 5/8" ProRoc Type X Gypsum Panels; 5/8" ProRoc Type X Gypsum Sheathing

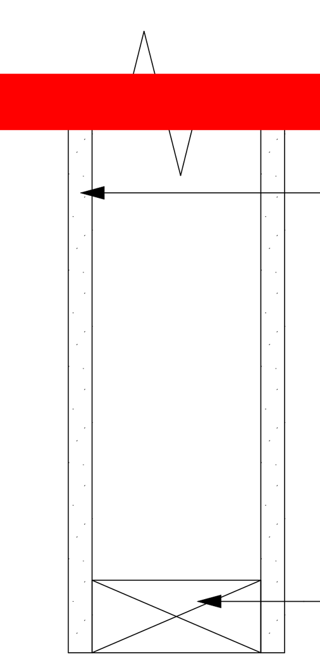
Lafarge North American Inc. — ... Gypsum Wallboard; 5/8" Gold Bond® Brand FIRE-SHIELD Gypsum Sheathing

PABCO Gypsum — ... FLAME ...

... Products Corp...

†Contact the manufacturer for more detailed information on proprietary products.

3 TYP. EXTERIOR WALL
Scale: 3" = 1'-0"



UL U305
Interior Partitions - Wood Stud (Load-Bearing)

Fire Rating
1 hours

System Thickness
4 3/4 in.

STC
36

ASSEMBLY DETAILS
Gypsum Board: 5/8" Thick Gypsum Board (UL Type ULIX™)

Wood Studs: 2x4 Wood Studs, 16" O.C.

Insulation: 3-1/2" Glass Fiber Batt Insulation

Gypsum Board: 5/8" Thick Gypsum Board (UL Type ULIX™)

4 TYP. INTERIOR WALL
Scale: 3" = 1'-0"

LIEN NISHIWAKI ARCHITECTS
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Aguilar Addition

10341 NE 141st Pl
Kirkland WA 98034

LEGEND

CM CARBON MONOXIDE DETECTOR WALL MOUNTED 5' ABOVE FLOOR

SD SMOKE DETECTOR CEILING MOUNTED

Floor Plans

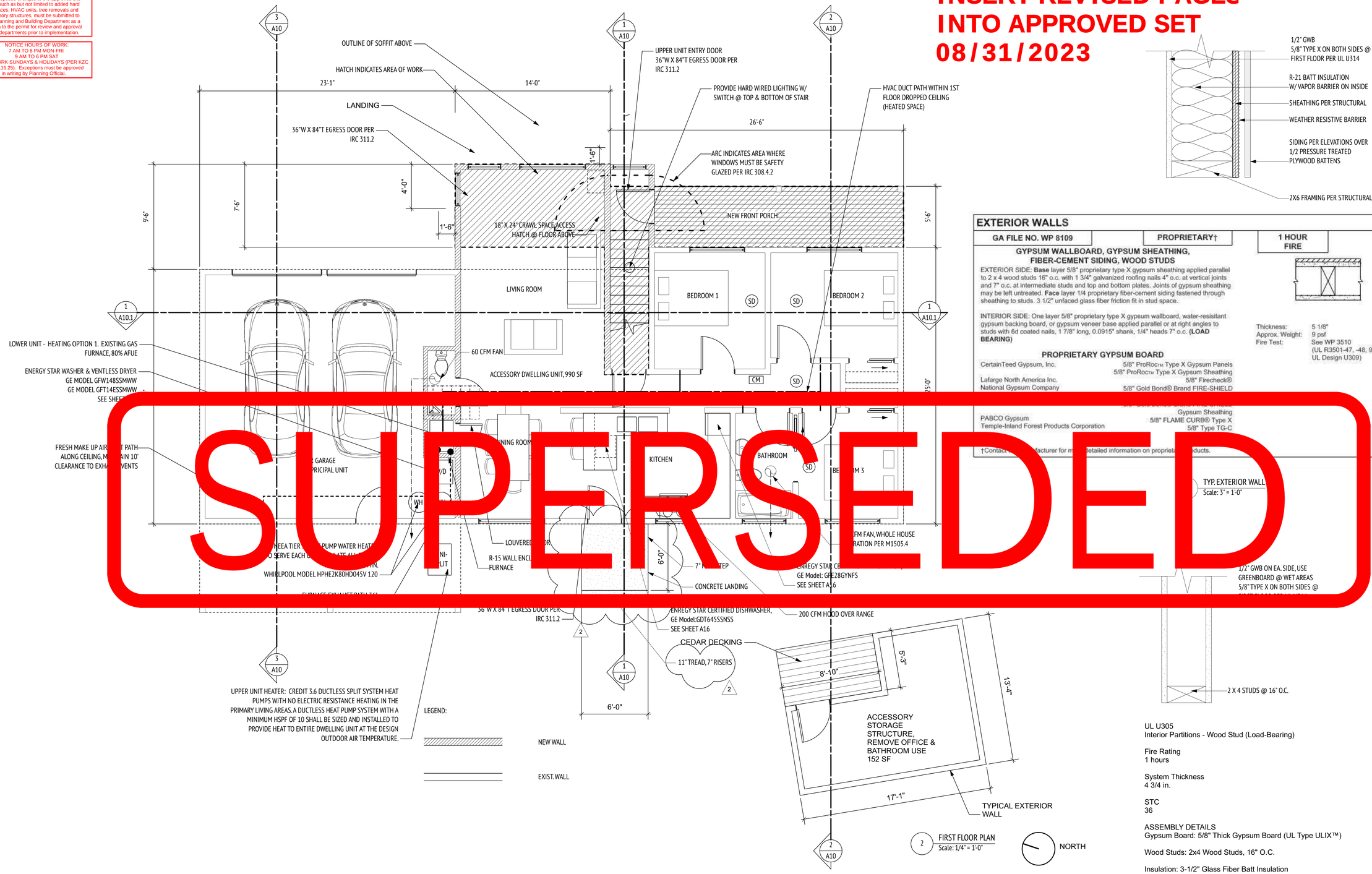
Building PERMIT
October 5, 2021

A5

PCD APPROVED SITE PLAN
Any proposed changes to the approved site plan, such as but not limited to added hard surfaces, HVAC units, tree removals and accessory structures, must be submitted to the Planning and Building Department as a revision to the permit for review and approval by all departments prior to implementation.

NOTICE HOURS OF WORK:
7 AM TO 8 PM MON-FRI
9 AM TO 6 PM SAT
NO WORK SUNDAYS & HOLIDAYS (PER KZC SEC. 115.25). Exceptions must be approved in writing by Planning Official.

INSERT REVISED PAGES INTO APPROVED SET 08/31/2023



2 FIRST FLOOR PLAN
Scale: 1/4" = 1'-0"

EXTERIOR WALLS

GA FILE NO. WP 8109	PROPRIETARY†	1 HOUR FIRE

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Approx. Weight: 9 psf
Fire Test: See WP 3510 (UL R3501-47, -48, 9-17-65, UL Design U309)

PROPRIETARY GYPSUM BOARD

CertainTeed Gypsum, Inc.	5/8" ProRock™ Type X Gypsum Panels 5/8" ProRock™ Type X Gypsum Sheathing
Lafarge North America Inc. National Gypsum Company	5/8" Firecheck® 5/8" Gold Bond® Brand FIRE-SHIELD
PABCO Gypsum Temple-Inland Forest Products Corporation	Gypsum Sheathing 5/8" FLAME CURB® Type X 5/8" Type TG-C

†Contact manufacturer for more detailed information on proprietary products.

TYP. EXTERIOR WALL
Scale: 3" = 1'-0"

UL U305
Interior Partitions - Wood Stud (Load-Bearing)

Fire Rating
1 hours

System Thickness
4 3/4 in.

STC
36

ASSEMBLY DETAILS
Gypsum Board: 5/8" Thick Gypsum Board (UL Type ULIX™)

Wood Studs: 2x4 Wood Studs, 16" O.C.

Insulation: 3-1/2" Glass Fiber Batt Insulation

Gypsum Board: 5/8" Thick Gypsum Board (UL Type ULIX™)

4 TYP. INTERIOR WALL
Scale: 3" = 1'-0"

SUPERSEDED

LIEN NISHIWAKI ARCHITECTS
homero@ln-arc.com · 206.321.1449

Aguilar Addition

10341 NE 141st Pl
Kirkland WA 98034

8585 REGISTERED ARCHITECT
HOMERO NISHIWAKI
STATE OF WASHINGTON

2 PERMIT REVISION 08/29/2023
1 PERMIT REVISION 08/09/2023

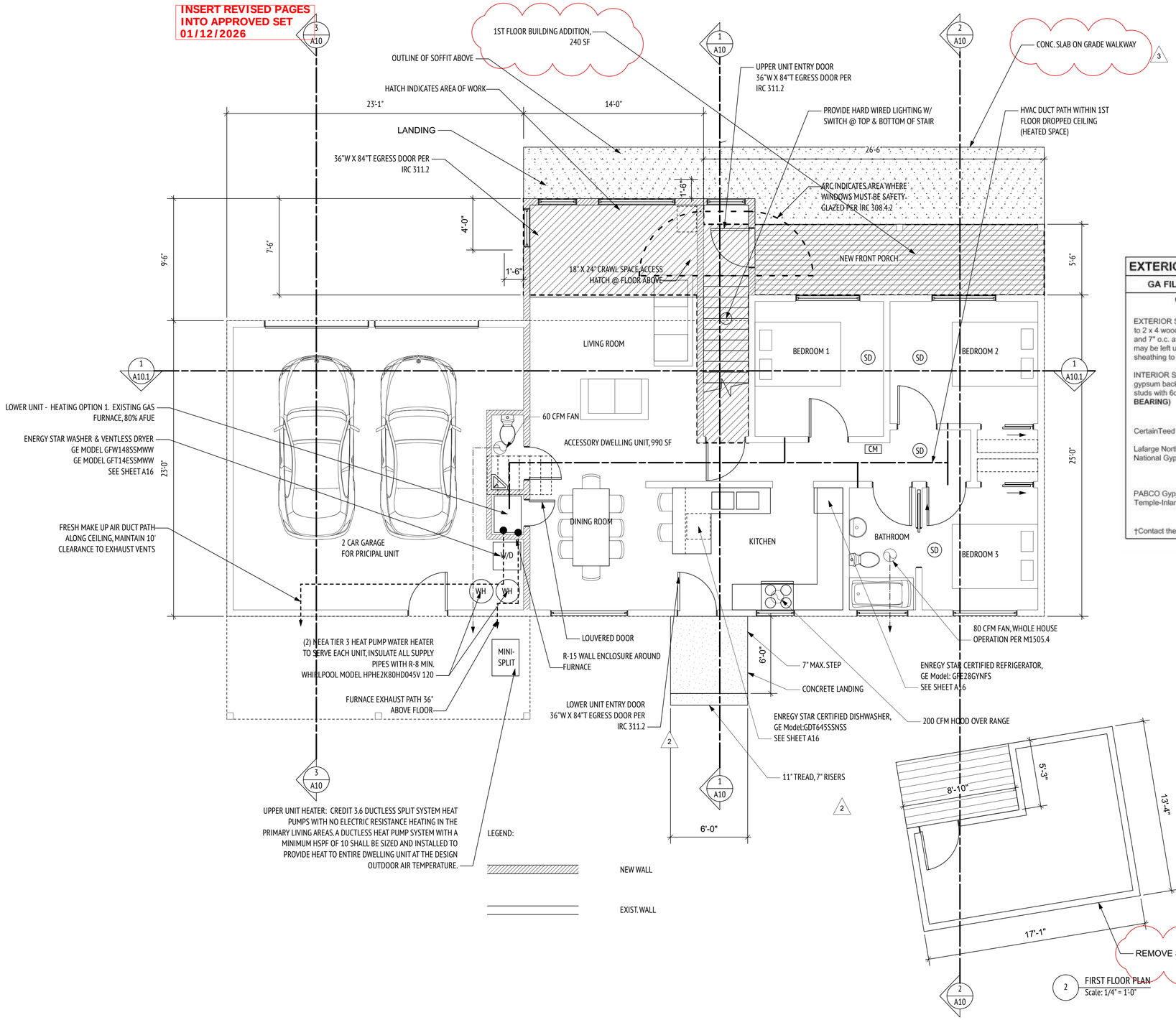
LEGEND
CM CARBON MONOXIDE DETECTOR WALL MOUNTED 5' ABOVE FLOOR
SD SMOKE DETECTOR CEILING MOUNTED

Floor Plans

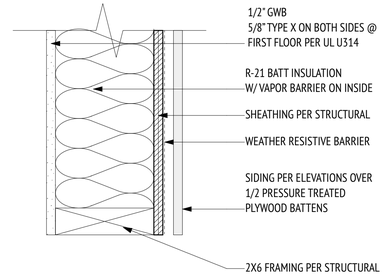
Building PERMIT
October 5, 2021

A5

INSERT REVISED PAGES INTO APPROVED SET 01/12/2026



2 FIRST FLOOR PLAN
Scale: 1/4" = 1'-0"



EXTERIOR WALLS

GA FILE NO. WP 8109	PROPRIETARY†	1 HOUR FIRE

GYPSUM WALLBOARD, GYPSUM SHEATHING, FIBER-CEMENT SIDING, WOOD STUDS

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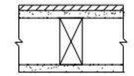

Thickness: 5 1/8"
Approx. Weight: 9 psf
Fire Test: See WP 3510 (UL R3501-47, -48, 9-17-65, UL Design U309)

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CertainTeed Gypsum, Inc.	5/8" ProRock™ Type X Gypsum Panels 5/8" ProRock™ Type X Gypsum Sheathing
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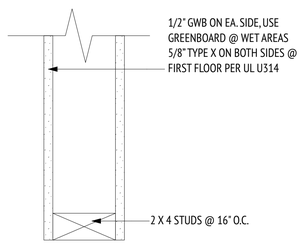
PABCO Gypsum Temple-Inland Forest Products Corporation	5/8" FLAME CURB® Type X 5/8" Type TG-C

†Contact the manufacturer for more detailed information on proprietary products.

3 TYP. EXTERIOR WALL
Scale: 3" = 1'-0"



UL U305
Interior Partitions - Wood Stud (Load-Bearing)

Fire Rating
1 hours

System Thickness
4 3/4 in.

STC
36

ASSEMBLY DETAILS
Gypsum Board: 5/8" Thick Gypsum Board (UL Type ULIX™)

Wood Studs: 2x4 Wood Studs, 16" O.C.

Insulation: 3-1/2" Glass Fiber Batt Insulation

Gypsum Board: 5/8" Thick Gypsum Board (UL Type ULIX™)

4 TYP. INTERIOR WALL
Scale: 3" = 1'-0"

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Aguilar Addition

10341 NE 141st Pl
Kirkland WA 98034

8585 REGISTERED ARCHITECT
HOMERO NISHIWAKI
STATE OF WASHINGTON

3 POST-ISSUANCE PERMIT REVISION 08/11/2025
2 PERMIT REVISION 08/29/2023
1 PERMIT REVISION 08/09/2023

LEGEND

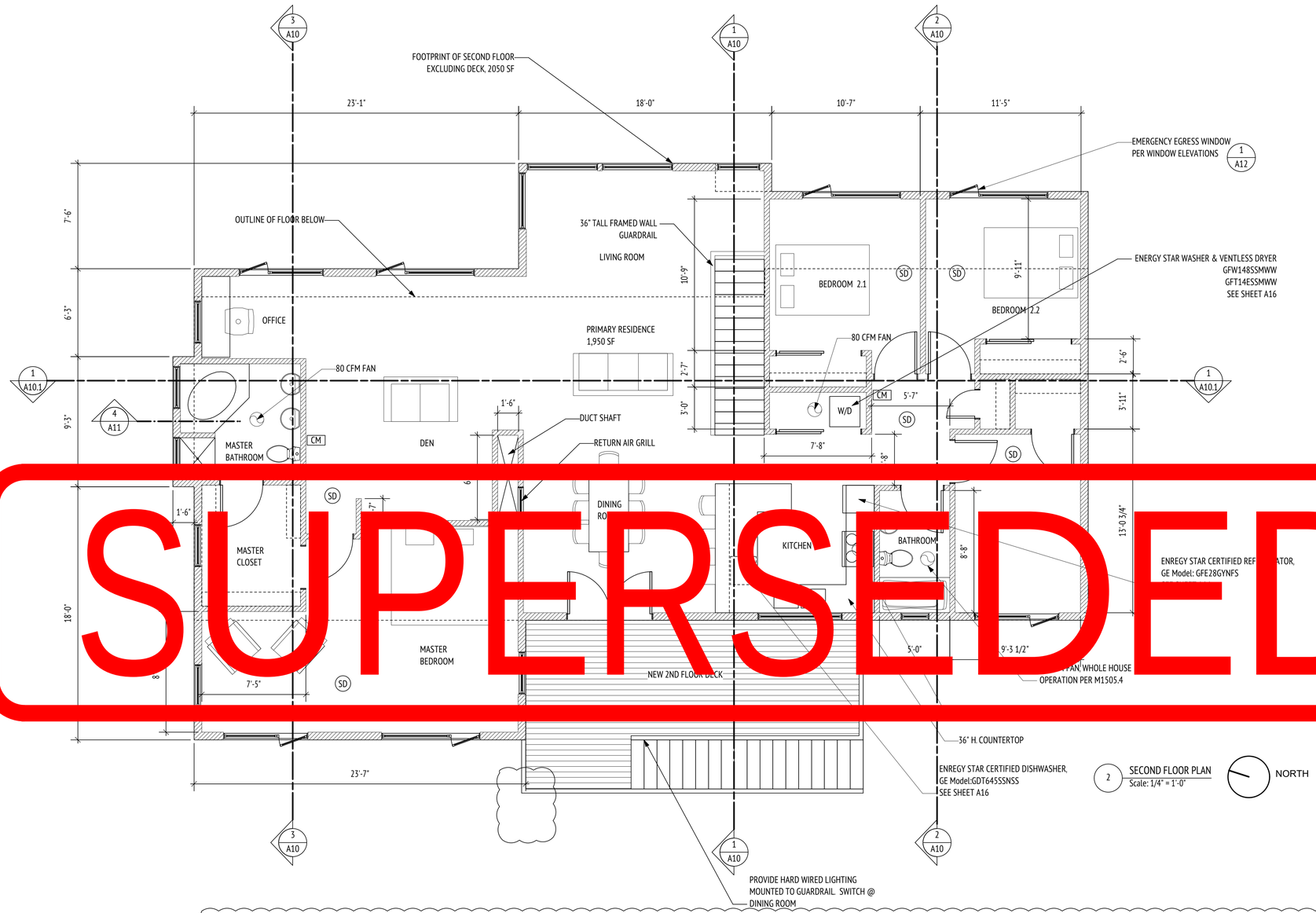
CM CARBON MONOXIDE DETECTOR WALL MOUNTED 5' ABOVE FLOOR

SD SMOKE DETECTOR CEILING MOUNTED

Floor Plans

Building PERMIT
October 5, 2021

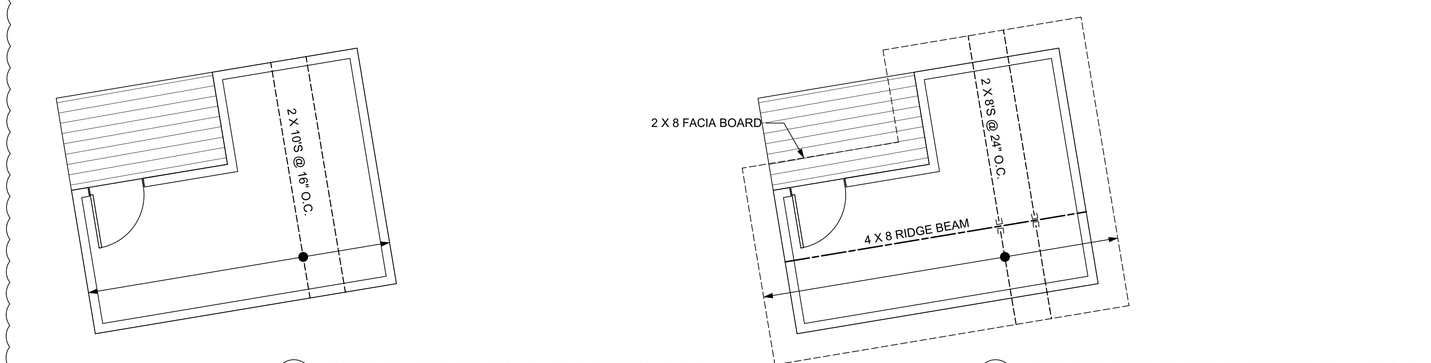
A5



SUPERSEDED

2 SECOND FLOOR PLAN
Scale: 1/4" = 1'-0"

NORTH



3 ACCESSORY STORAGE STRUCTURE FLOOR FRAMING PLAN
Scale: 1/4" = 1'-0"

4 ACCESSORY STORAGE STRUCTURE ROOF FRAMING PLAN
Scale: 1/4" = 1'-0"

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HOMERO NISHIWAKI
STATE OF WASHINGTON

WALL LEGEND:

NEW WALL

EXIST. WALL

LEGEND

CM CARBON MONOXIDE DETECTOR
WALL MOUNTED 5' ABOVE FLOOR

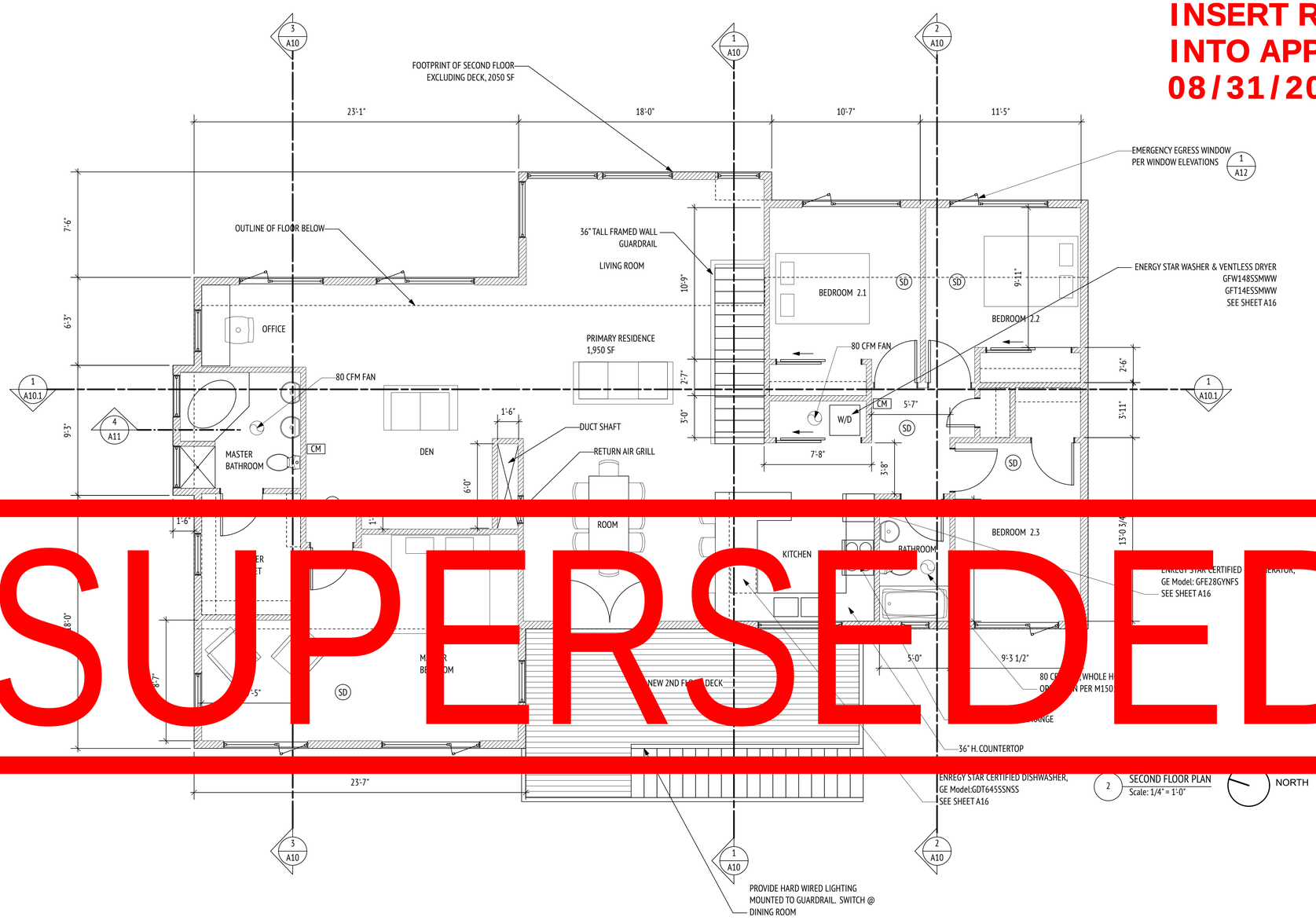
SD SMOKE DETECTOR
CEILING MOUNTED

•Second Floor Plan

Building PERMIT
October 5, 2021

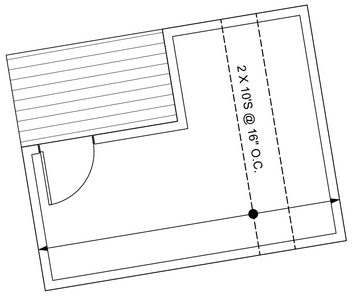
A6

INSERT REVISED PAGES INTO APPROVED SET 08/31/2023

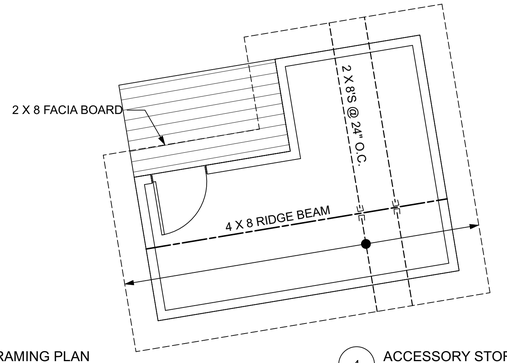


2 SECOND FLOOR PLAN
Scale: 1/4" = 1'-0"

NORTH



3 ACCESSORY STORAGE STRUCTURE FLOOR FRAMING PLAN
Scale: 1/4" = 1'-0"



4 ACCESSORY STORAGE STRUCTURE ROOF FRAMING PLAN
Scale: 1/4" = 1'-0"

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8585 REGISTERED ARCHITECT
HOMERO NISHIWAKI
STATE OF WASHINGTON

WALL LEGEND:

NEW WALL

EXIST. WALL

2 PERMIT REVISION 08/29/2023
1 PERMIT REVISION 08/09/2023

LEGEND

CM CARBON MONOXIDE DETECTOR WALL MOUNTED 5' ABOVE FLOOR

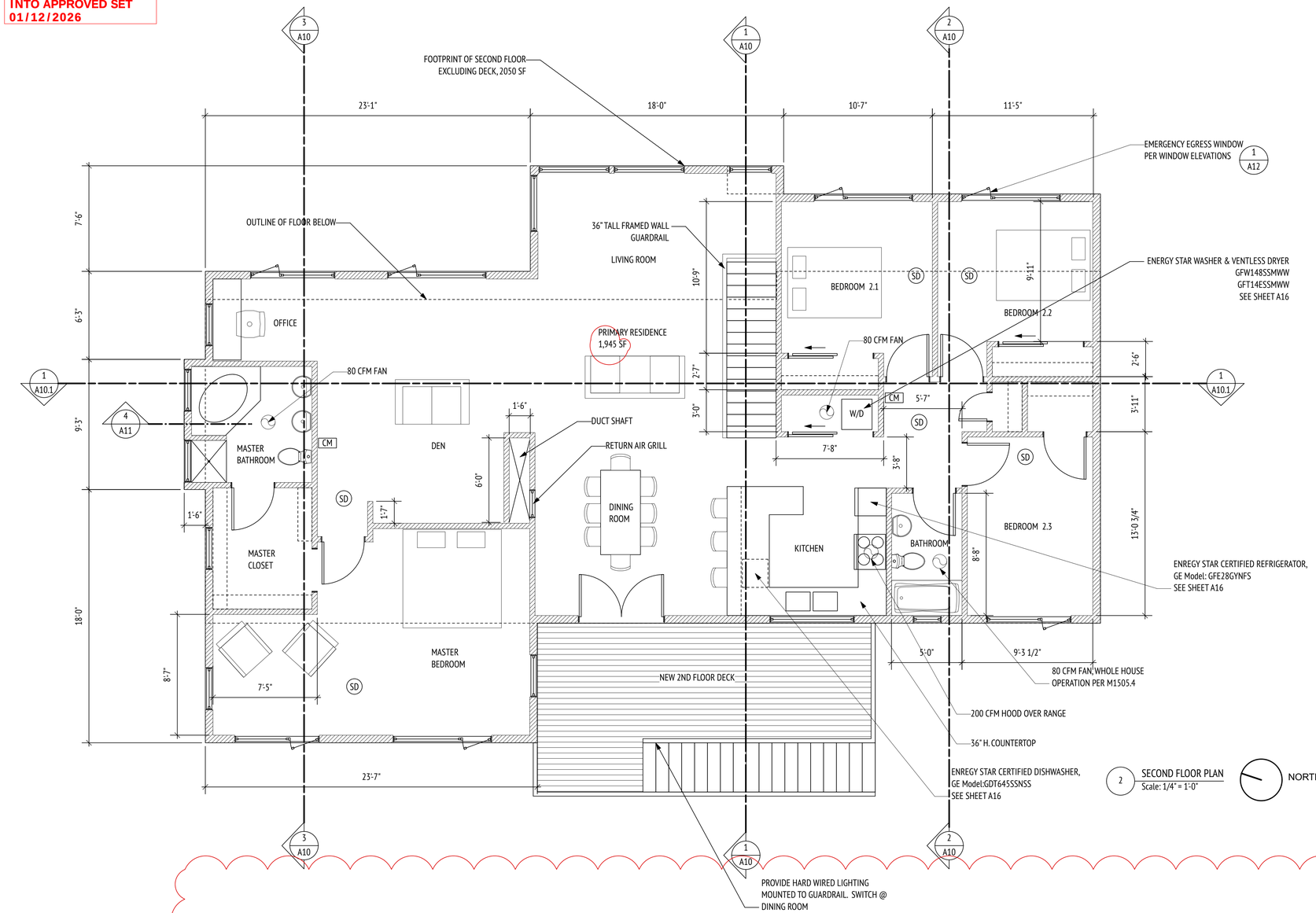
SD SMOKE DETECTOR CEILING MOUNTED

•Second Floor Plan

Building PERMIT
October 5, 2021

A6

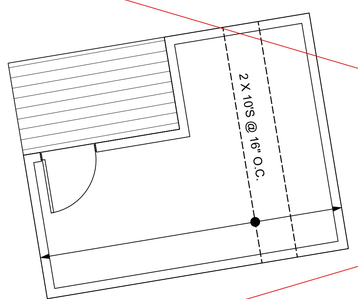
INSERT REVISED PAGES
INTO APPROVED SET
01/12/2026

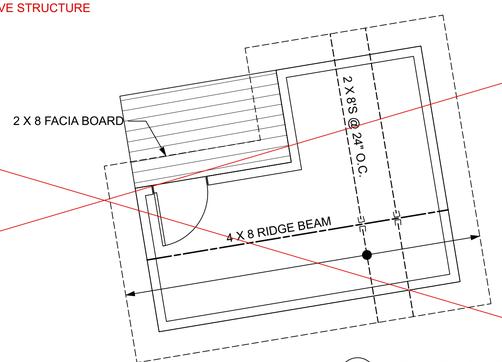


2 SECOND FLOOR PLAN
Scale: 1/4" = 1'-0"

NORTH

REMOVE STRUCTURE





3 ACCESSORY STORAGE STRUCTURE FLOOR FRAMING PLAN
Scale: 1/4" = 1'-0"

4 ACCESSORY STORAGE STRUCTURE ROOF FRAMING PLAN
Scale: 1/4" = 1'-0"

LIEN NISHIWAKI ARCHITECTS
homero@ln-arc.com - 206.321.1449

Aguilar Addition

10341 NE 141st Pl
Kirkland WA 98034

8585 REGISTERED ARCHITECT
HOMERO NISHIWAKI
STATE OF WASHINGTON

WALL LEGEND:

NEW WALL

EXIST. WALL

3 POST-ISSUANCE PERMIT REVISION 08/11/2025
2 PERMIT REVISION 08/29/2023
1 PERMIT REVISION 08/09/2023

LEGEND

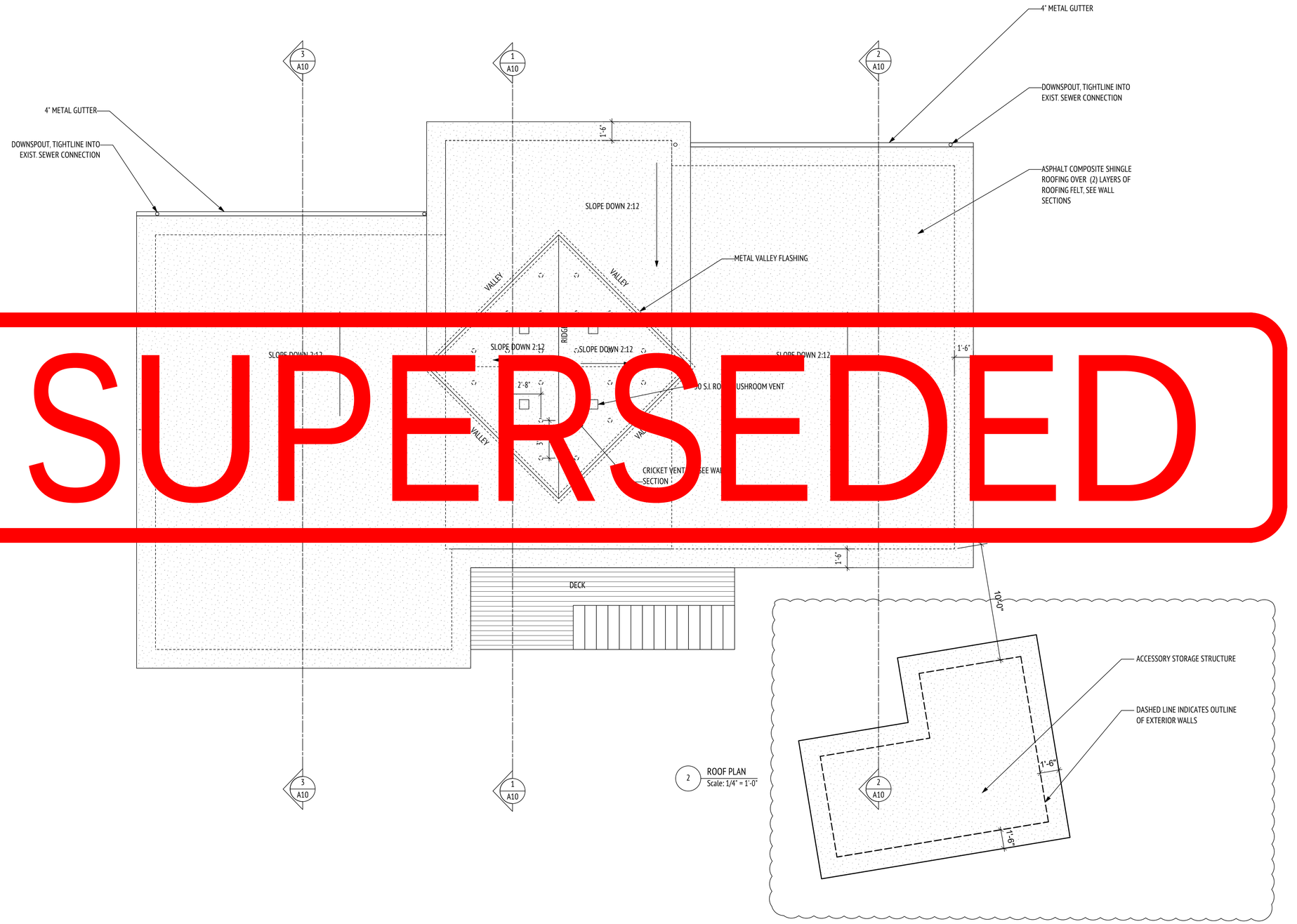
CM CARBON MONOXIDE DETECTOR WALL MOUNTED 5' ABOVE FLOOR

SD SMOKE DETECTOR CEILING MOUNTED

•Second Floor Plan

Building PERMIT
October 5, 2021

A6



2 ROOF PLAN
Scale: 1/4" = 1'-0"

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Building PERMIT
October 5, 2021

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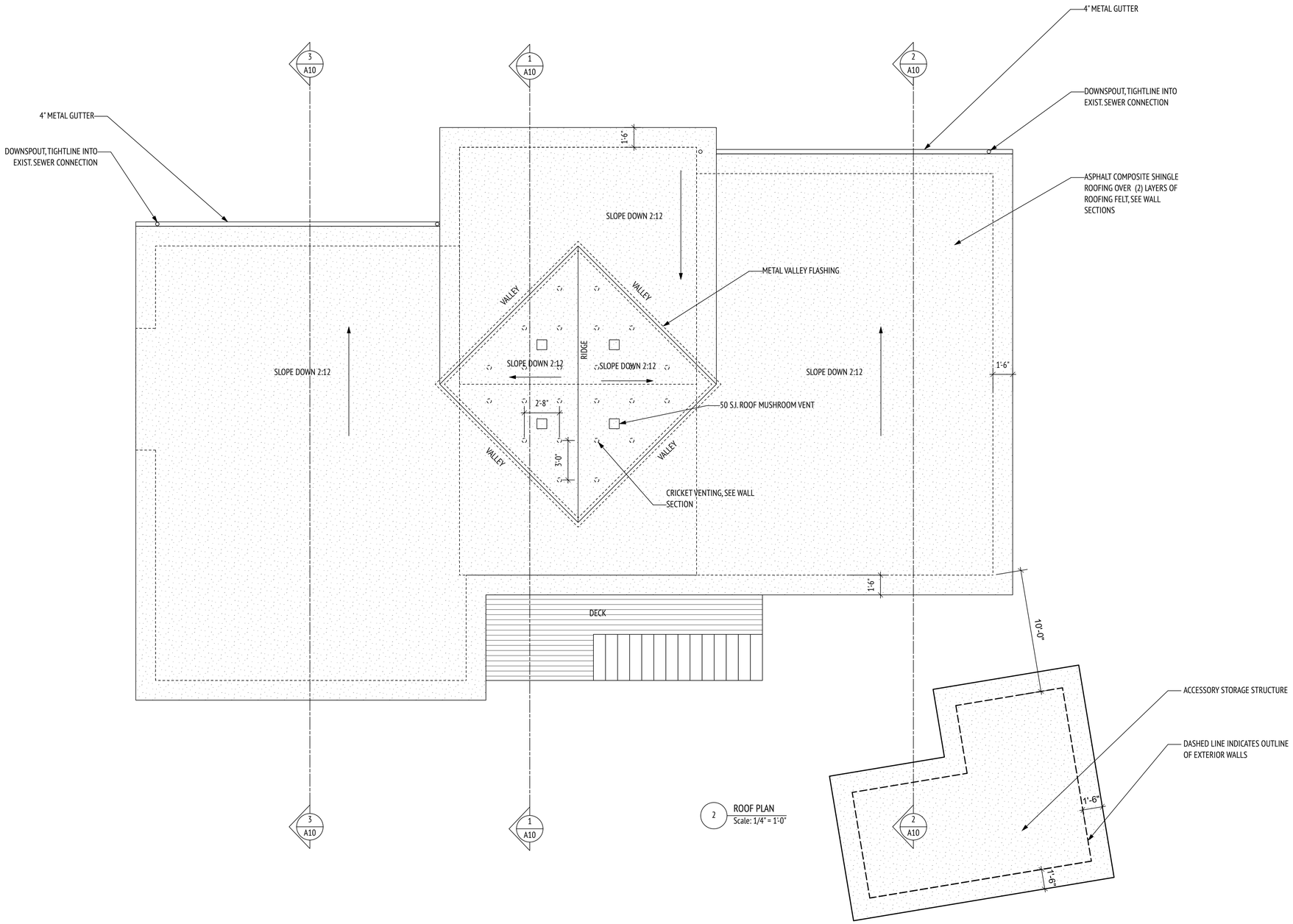
INSERT REVISED PAGES INTO APPROVED SET 08/31/2023



2 ROOF PLAN
Scale: 1/4" = 1'-0"

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•Building Section

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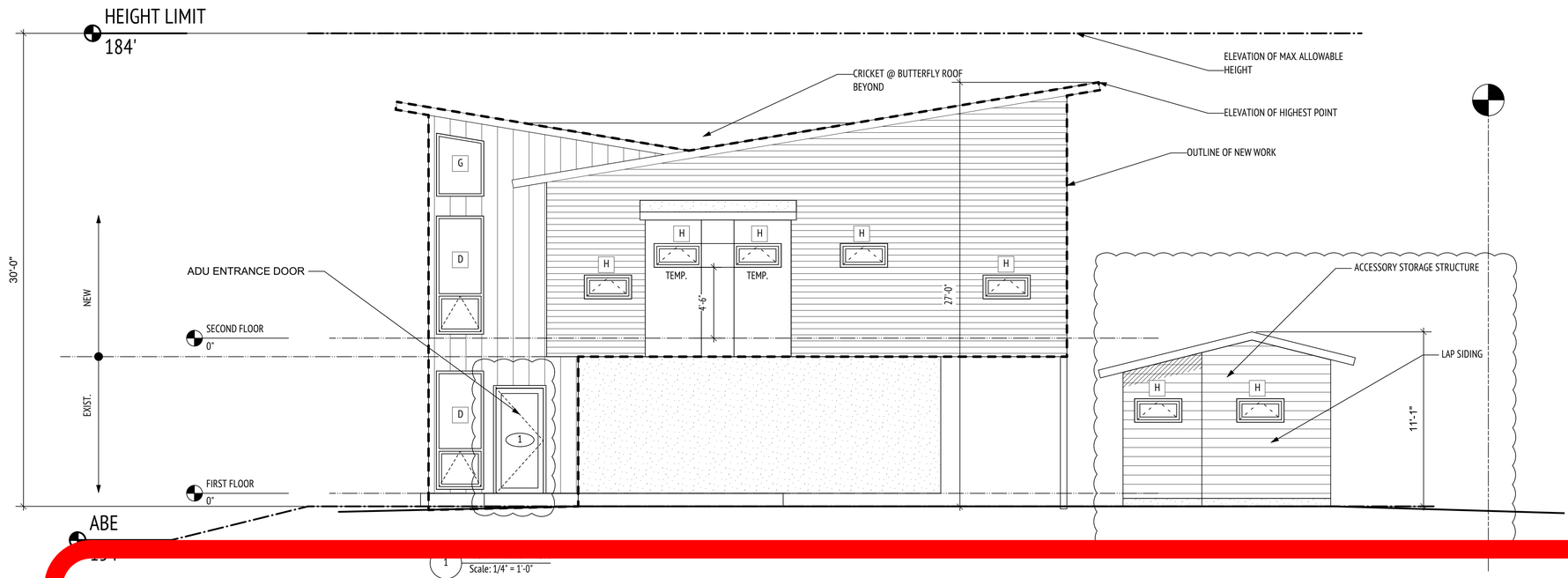
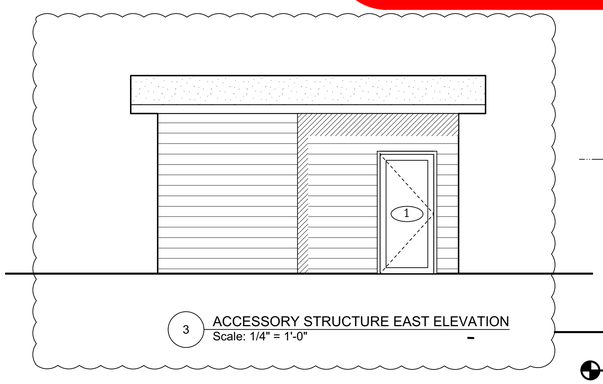
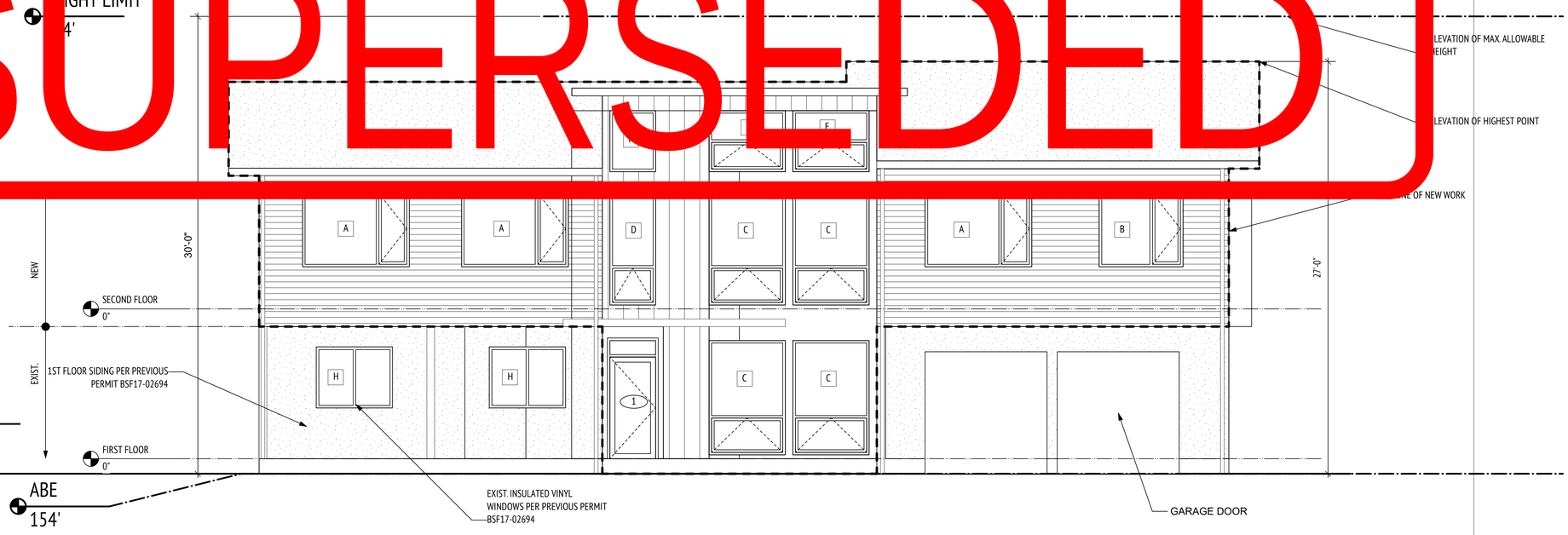




3 ACCESSORY STRUCTURE EAST ELEVATION
Scale: 1/4" = 1'-0"



2 EAST ELEVATION
Scale: 1/4" = 1'-0"

•Elevations

Building PERMIT
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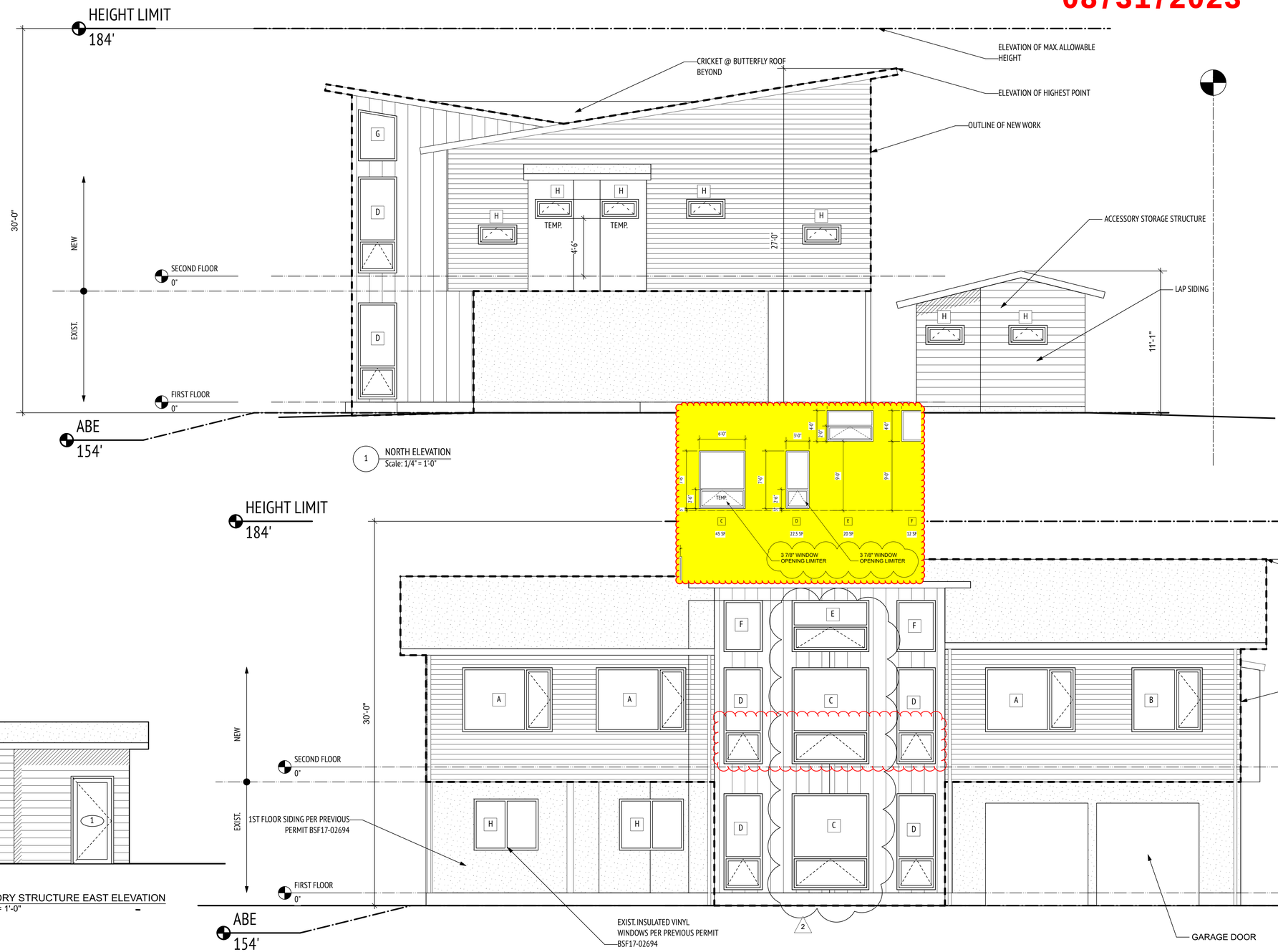
2 PERMIT REVISION 08/29/2023
1 PERMIT REVISION 08/09/2023



•Elevations

Building PERMIT
October 5, 2021

A8

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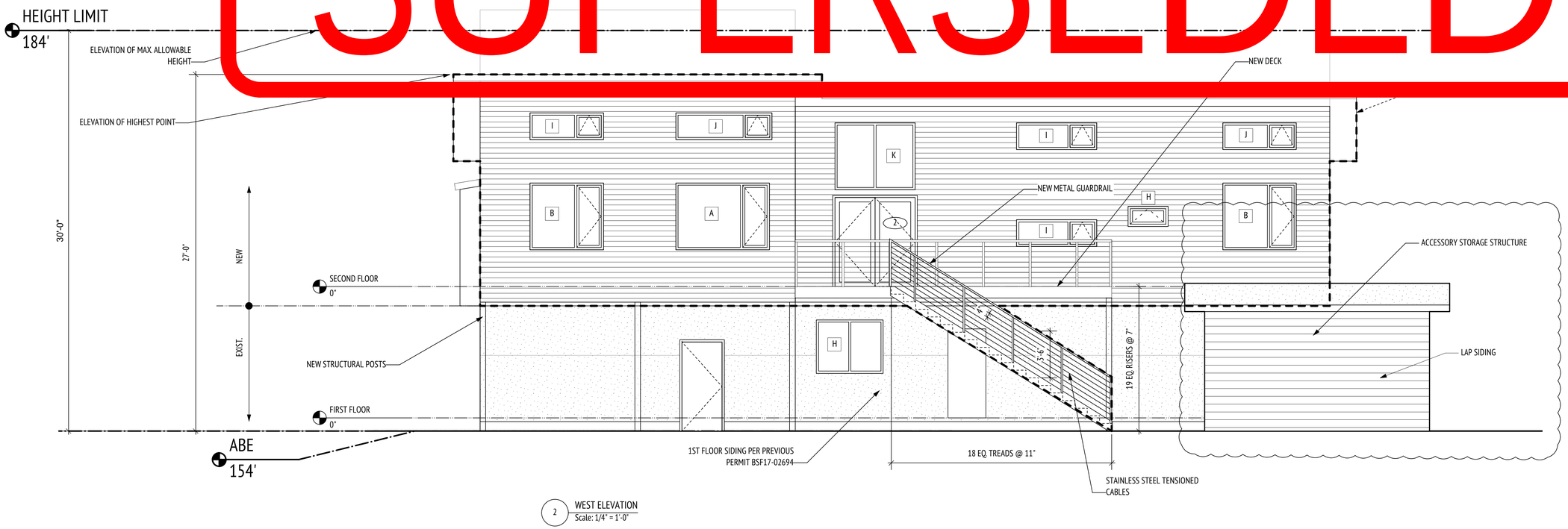
1 SOUTH ELEVATION
Scale: 1/4" = 1'-0"



2 WEST ELEVATION
Scale: 1/4" = 1'-0"

•Elevations

Building PERMIT
October 5, 2021

A9

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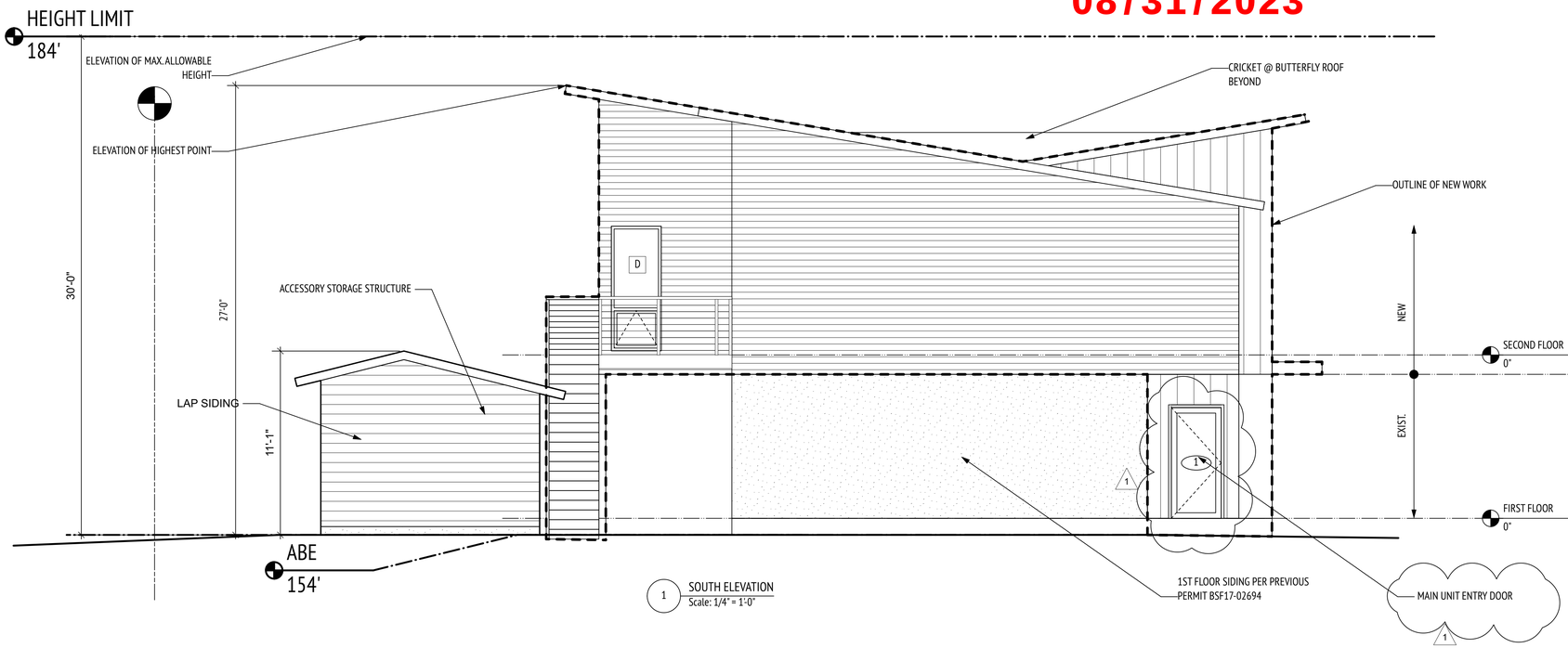

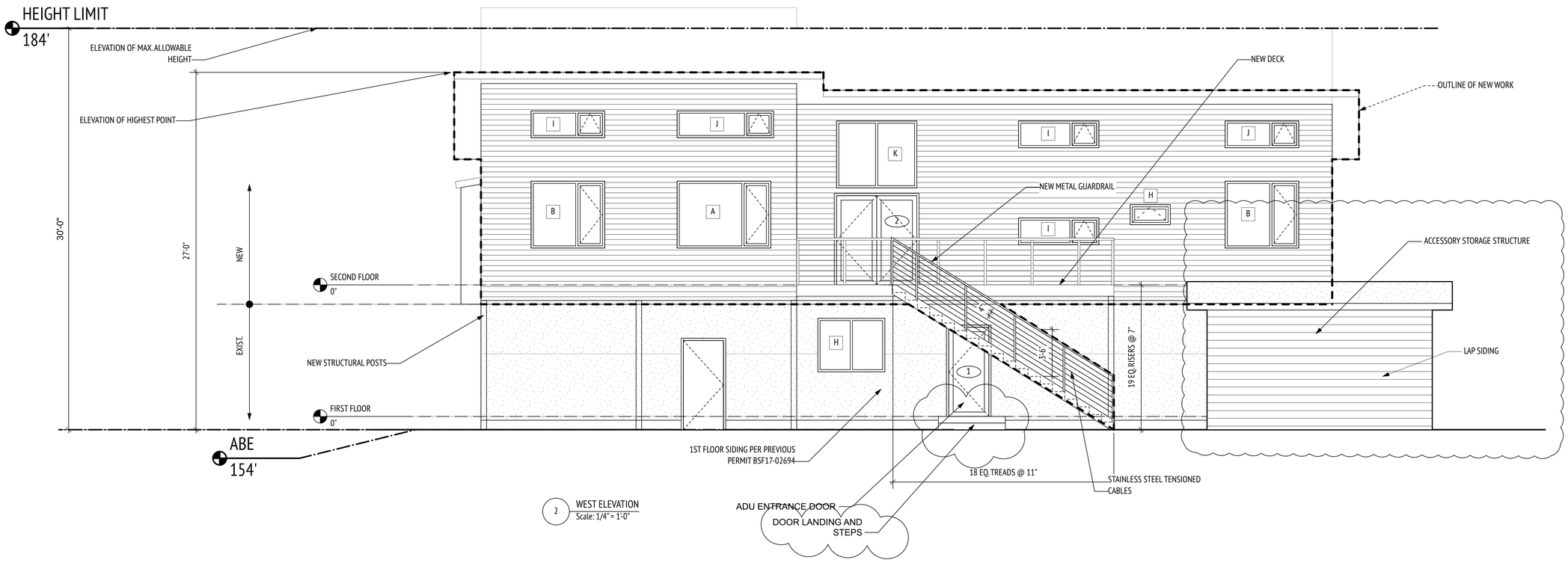

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2 PERMIT REVISION 08/29/2023
1 PERMIT REVISION 08/09/2023

•Elevations

Building PERMIT
October 5, 2021

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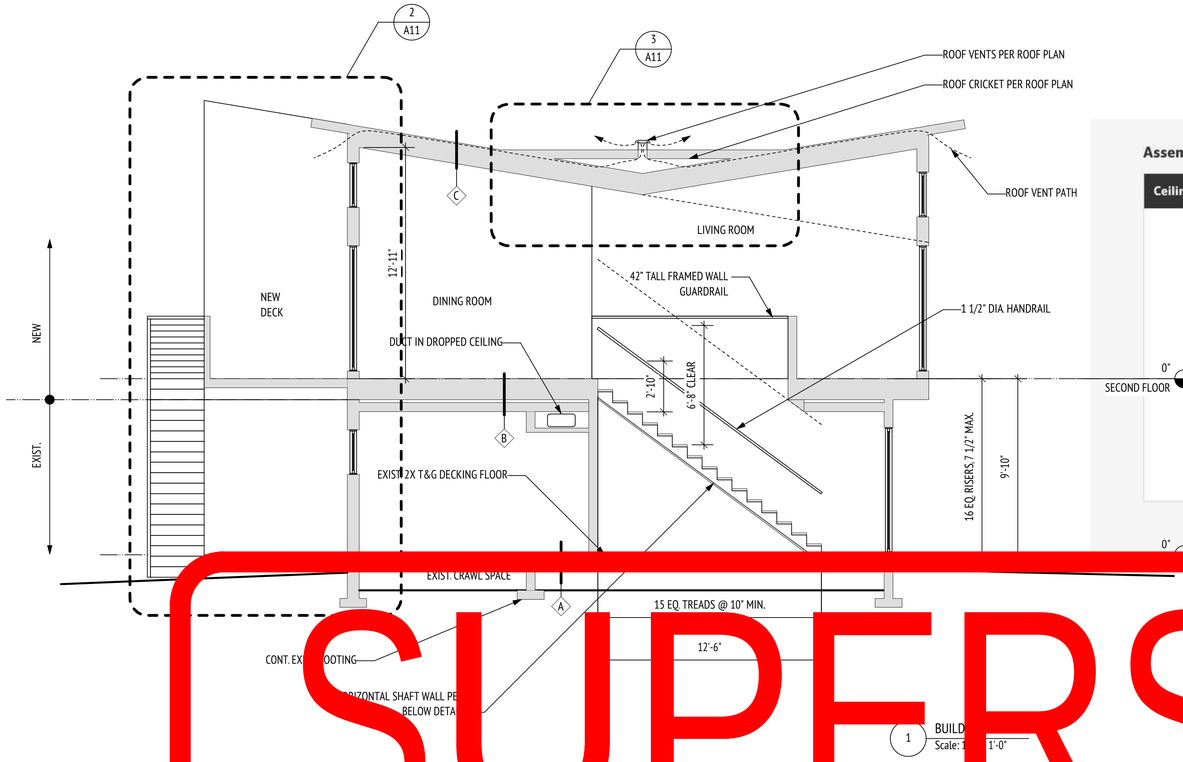
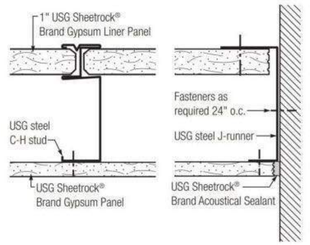
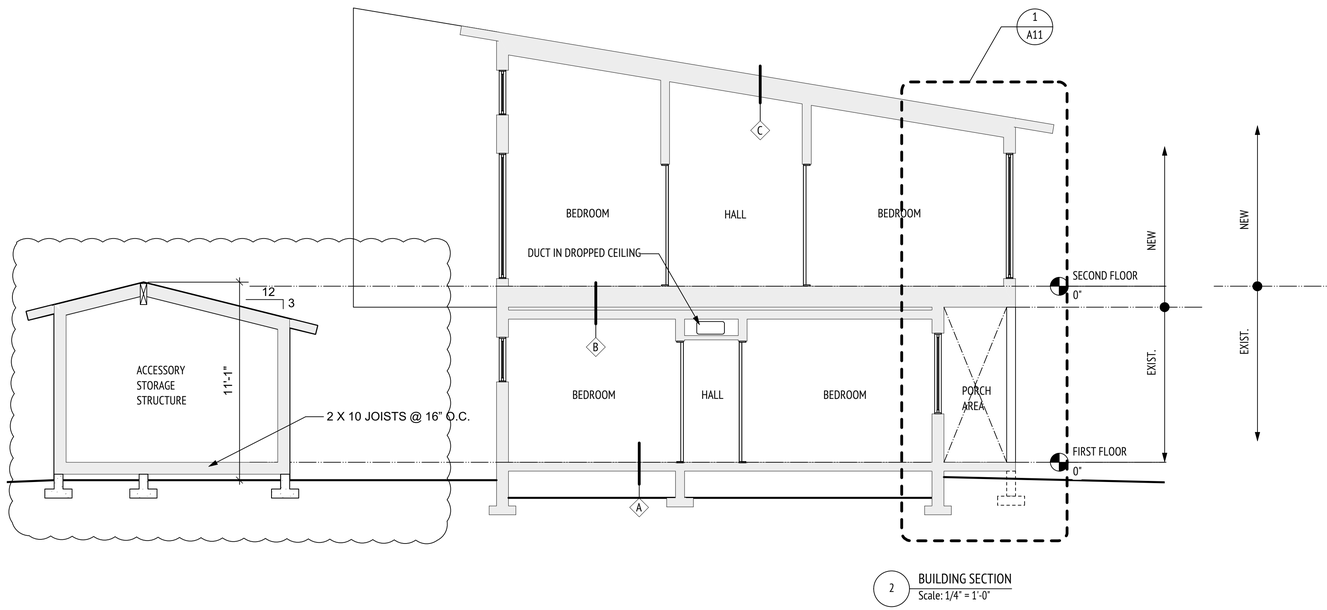


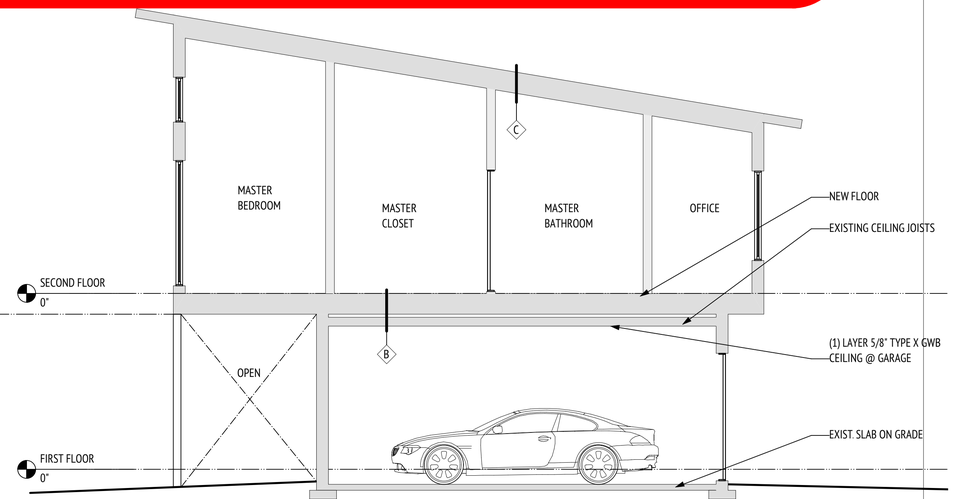
Assembly with Single-Layer 5/8" Gypsum Panels

Ceiling Membrane of 1-Hour Corridor


Stud Steel Member Designation	Limiting Span
212CH25-18	**8' 6"**
400CH25-18	**9' 3"**
212CH20-34	**10' 4"**
400CH20-34	**14' 11"**
600CH20-34	**20' 10"**



2 BUILDING SECTION
Scale: 1/4" = 1'-0"



3 BUILDING SECTION
Scale: 1/4" = 1'-0"

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8585 REGISTERED ARCHITECT HOMERO NISHIWAKI STATE OF WASHINGTON

LEGEND

X FLOOR/ CEILING TYPE, SEE 6 A12

•Building Section

Building PERMIT
October 5, 2021

A10

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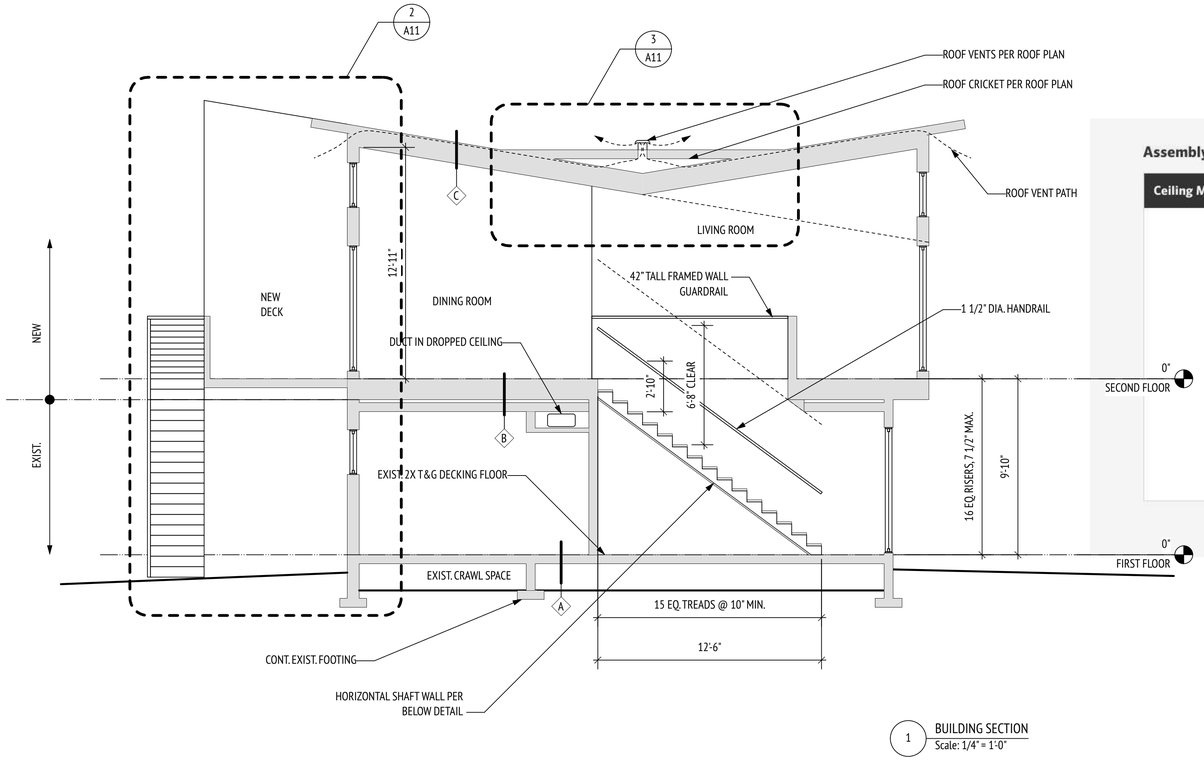
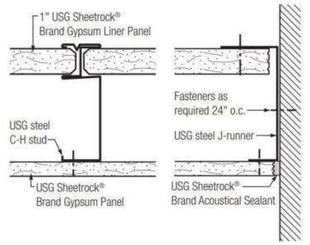


1 BUILDING SECTION
Scale: 1/4" = 1'-0"

Assembly with Single-Layer 5/8" Gypsum Panels

Ceiling Membrane of 1-Hour Corridor


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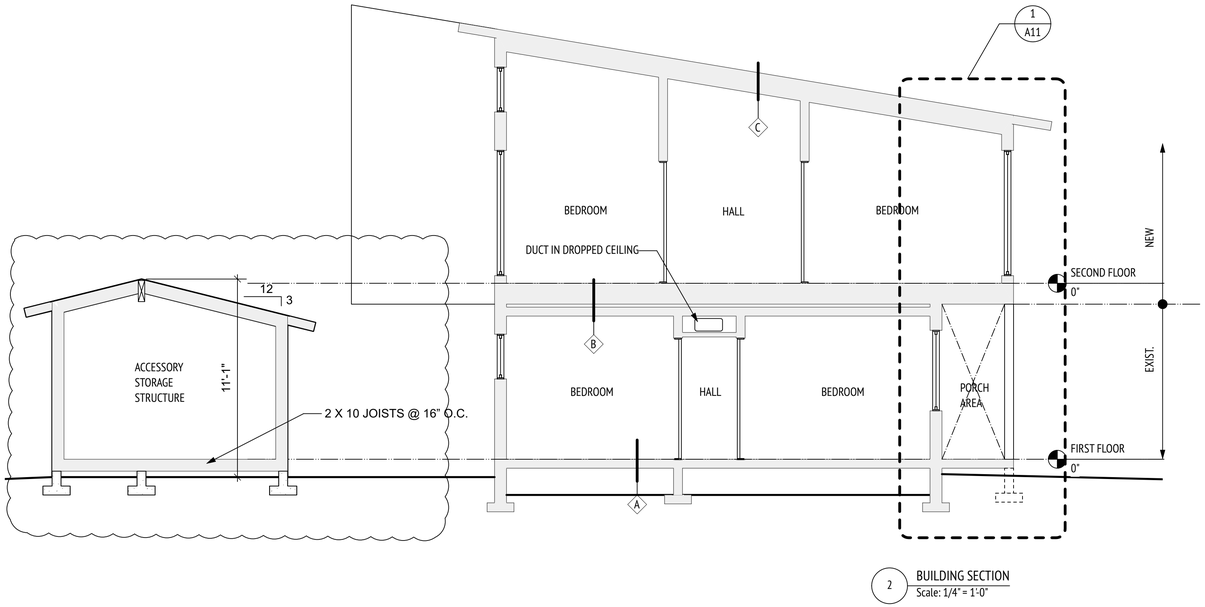
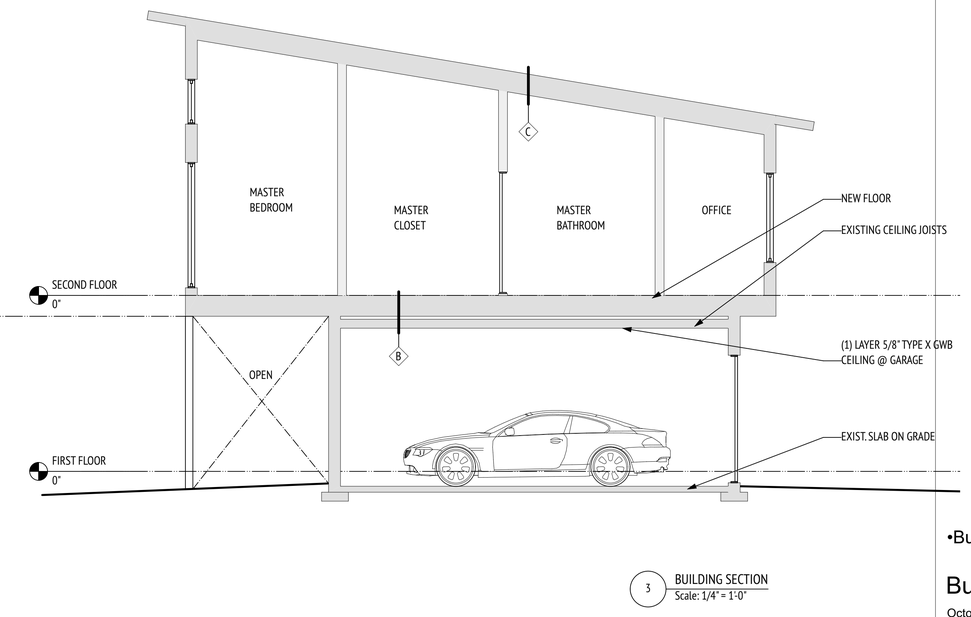


2 BUILDING SECTION
Scale: 1/4" = 1'-0"



3 BUILDING SECTION
Scale: 1/4" = 1'-0"

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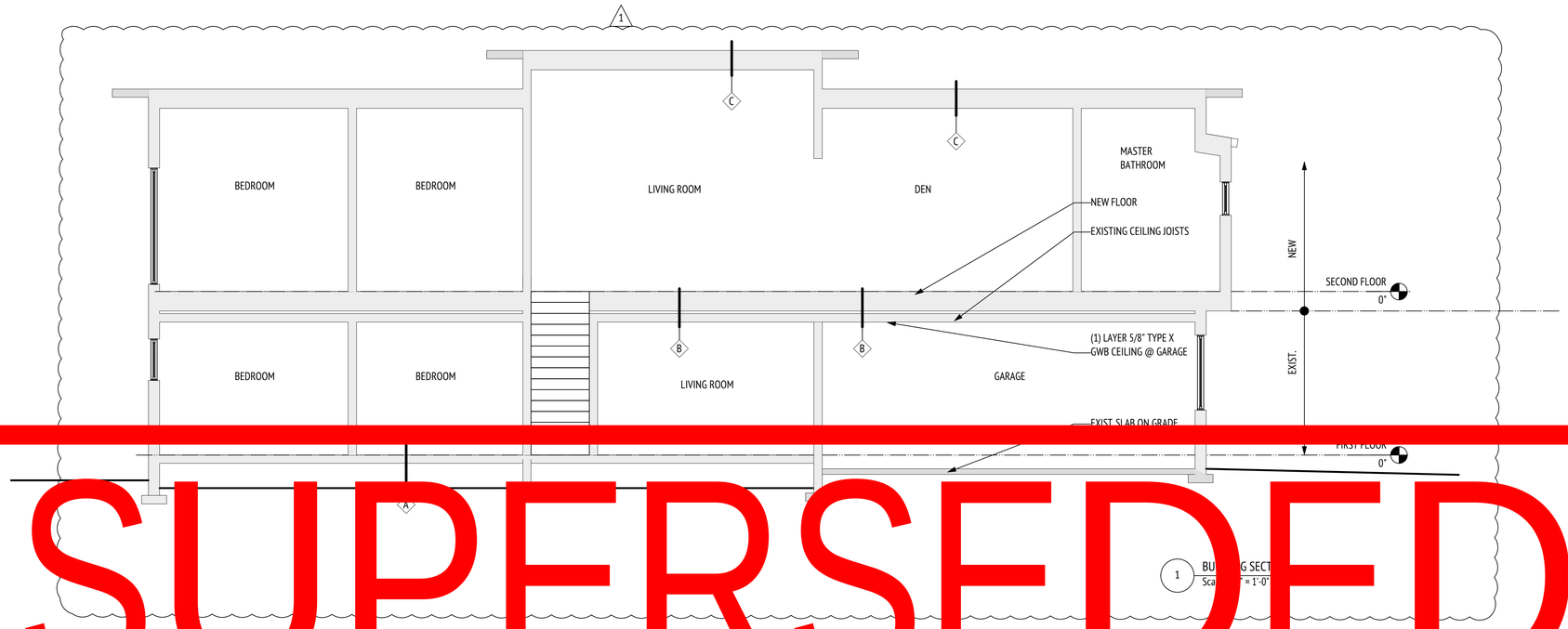
LEGEND

X FLOOR/ CEILING TYPE, SEE 6/A12

•Building Section

Building PERMIT
October 5, 2021

A10



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1 PERMIT CORRECTIONS 7/13/2018

LEGEND

X FLOOR/ CEILING TYPE, SEE 6/A12

1

•Building Section

Building PERMIT
October 5, 2021

A10.1

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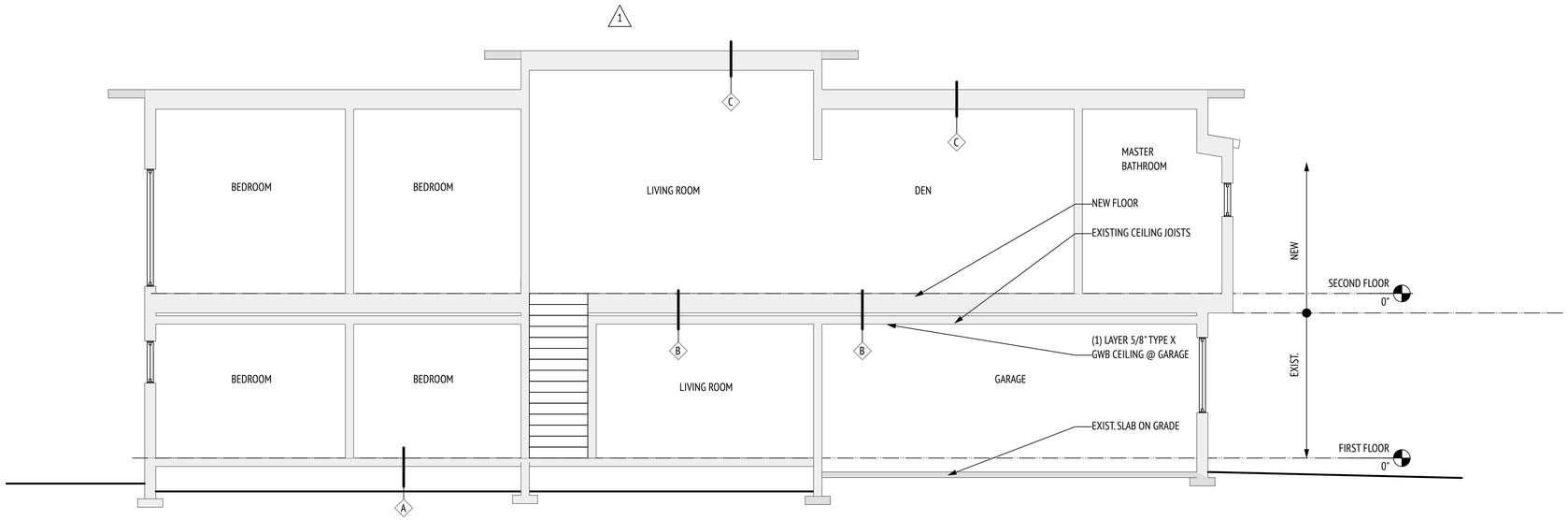

1 BUILDING SECTION
Scale: 1/4" = 1'-0"

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Aguilar Addition

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2 PERMIT REVISION 08/29/2023
1 PERMIT CORRECTIONS 7/13/2018
1 PERMIT REVISION 08/09/2023

LEGEND

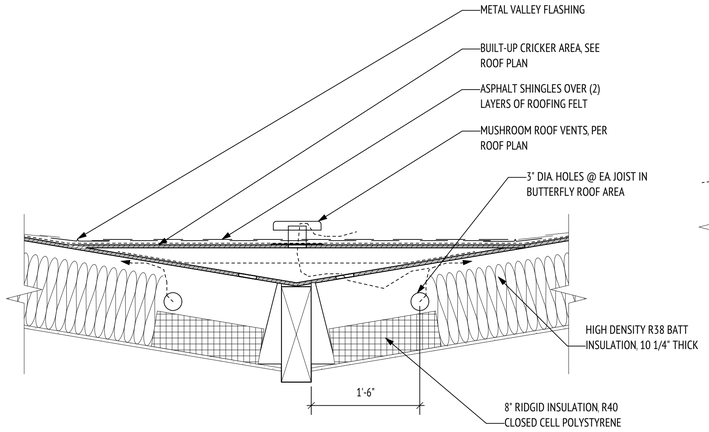
X FLOOR/ CEILING TYPE, SEE 6/A12

1

•Building Section

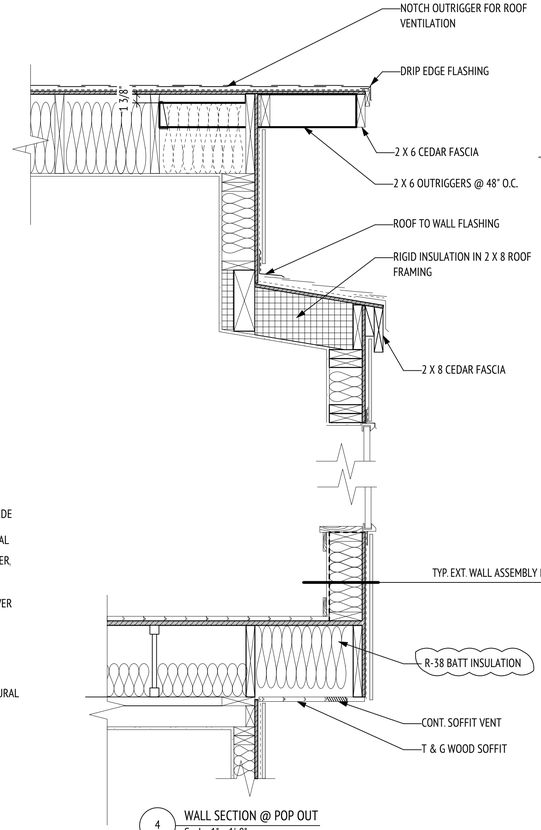
Building PERMIT
October 5, 2021

A10.1

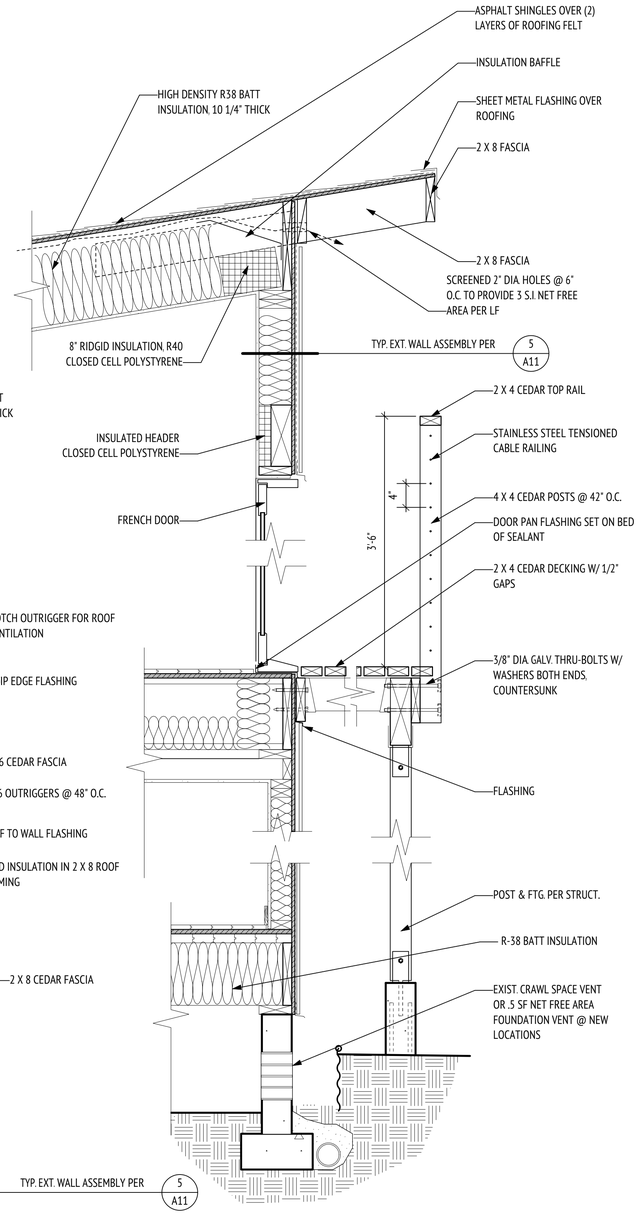


3 WALL SECTION @ POP OUT
Scale: 1" = 1'-0"

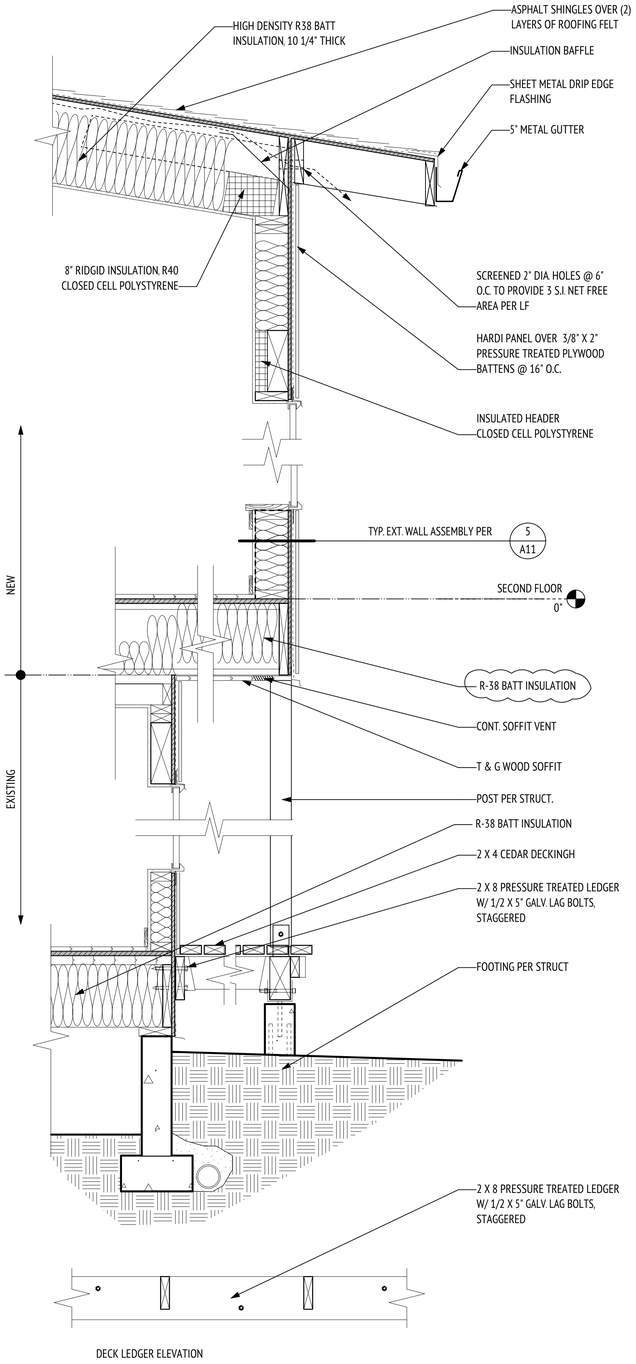
5 TYP. EXTERIOR WALL
Scale: 3" = 1'-0"



4 WALL SECTION @ POP OUT
Scale: 1" = 1'-0"



2 WALL SECTION @ REAR DECK
Scale: 1" = 1'-0"



1 WALL SECTION @ FRONT PORCH
Scale: 1" = 1'-0"

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•Wall Sections

Building PERMIT
October 5, 2021

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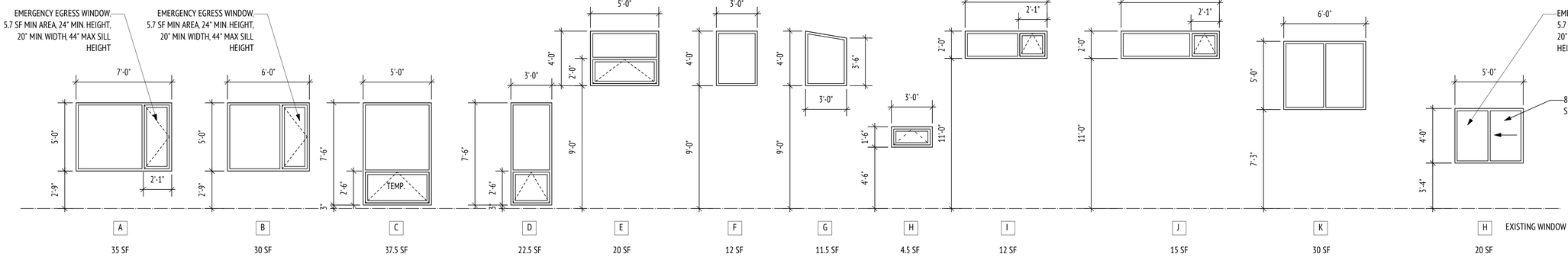
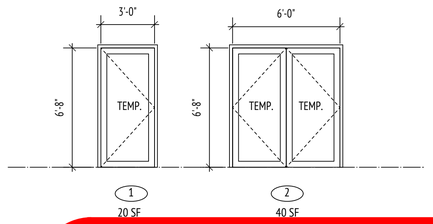
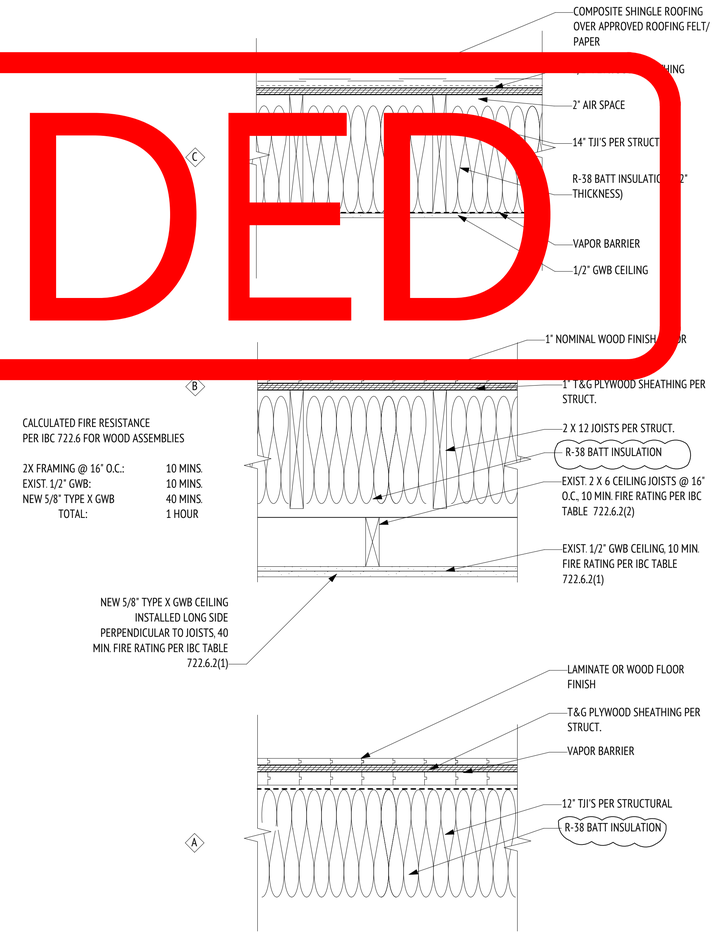




WINDOW SCHEDULE							
TAG	QUANTITY	SIZE (W X H)	SQ. AREA	MATERIAL	TYPE	U-VALUE	GLAZING TYPE
A		7'-0" X 5'-0"		VINYL	FIXED/ CASEMENT	.28 MAX	1" DBL. PANE, LOW-E
B		6'-0" X 5'-0"		VINYL	FIXED	.28 MAX	1" DBL. PANE, LOW-E
C	4	5'-0" X 7'-6"		VINYL	FIXED		1" DBL. PANE, LOW-E, TEMPERED PER ELEVATIONS
D	4	3'-0" X 7'-6"		VINYL	FIXED/ AWNING	.28 MAX	1" DBL. PANE, LOW-E
E	2	5'-0" X 4'-0"		VINYL	FIXED/ AWNING	.28 MAX	1" DBL. PANE, LOW-E
F	1	3'-0" X 4'-0"		VINYL	FIXED	.28 MAX	1" DBL. PANE, LOW-E
G	1	3'-0" X 4'-0"		VINYL	FIXED	.28 MAX	1" DBL. PANE, LOW-E
H	3	3'-0" X 1'-6"		VINYL	AWNING	.28 MAX	1" DBL. PANE, LOW-E, TEMPERED @ BATHROOM
I		6'-0" X 2'-0"	12	VINYL	FIXED/ AWNING	.28 MAX	1" DBL. PANE, LOW-E
J	1	7'-2" X 2'-0"	15	VINYL	FIXED/ AWNING	.28 MAX	1" DBL. PANE, LOW-E
K	1	6'-0" X 5'-0"	30	VINYL	FIXED	.28 MAX	1" DBL. PANE, LOW-E
1	1	3'-0" X 6'-8"	20	VINYL	SINGLE SWING	.28 MAX	1" DBL. PANE, LOW-E, TEMPERED PER ELEVATIONS
NOTES:							

1 WINDOW & DOOR ELEVATIONS & SCHEDULE
Scale: Actual Size



6 FLOOR/ ROOF TYPES
Scale: 1 1/2" = 1'-0"

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- Site Plan
- Notes

Building PERMIT
October 5, 2021

A12

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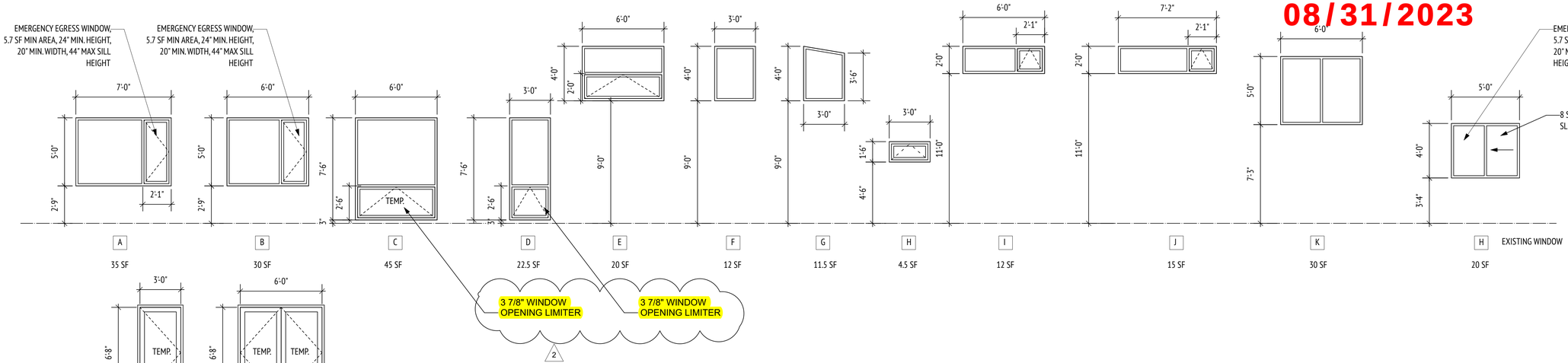
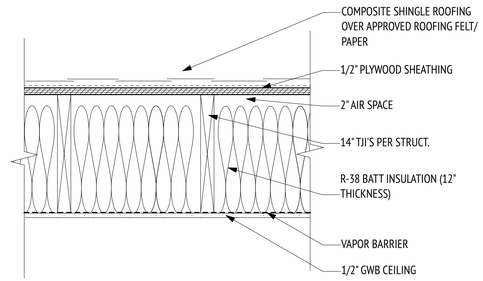
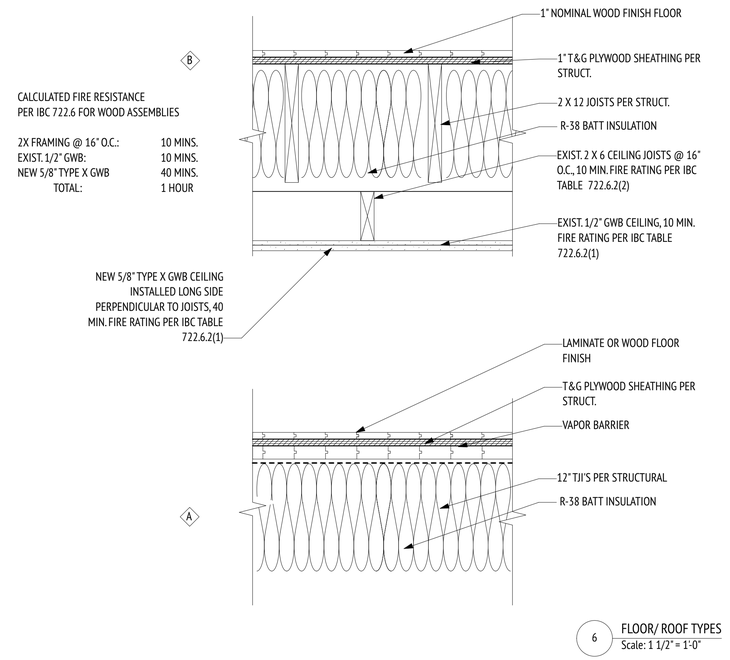


1 WINDOW & DOOR ELEVATIONS & SCHEDULE
Scale: Actual Size





6 FLOOR/ ROOF TYPES
Scale: 1 1/2" = 1'-0"

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2 PERMIT REVISION 08/29/2023
1 PERMIT REVISION 08/09/2023

•Site Plan
•Notes

Building PERMIT
October 5, 2021

A12

SPECIAL INSPECTION REQUIRED

ALL Welding:

Is required to be done by a WABO certified welder and have Special Inspections by a WABO certified Inspection Agency or
Be done in a WABO certified fabrication shop.

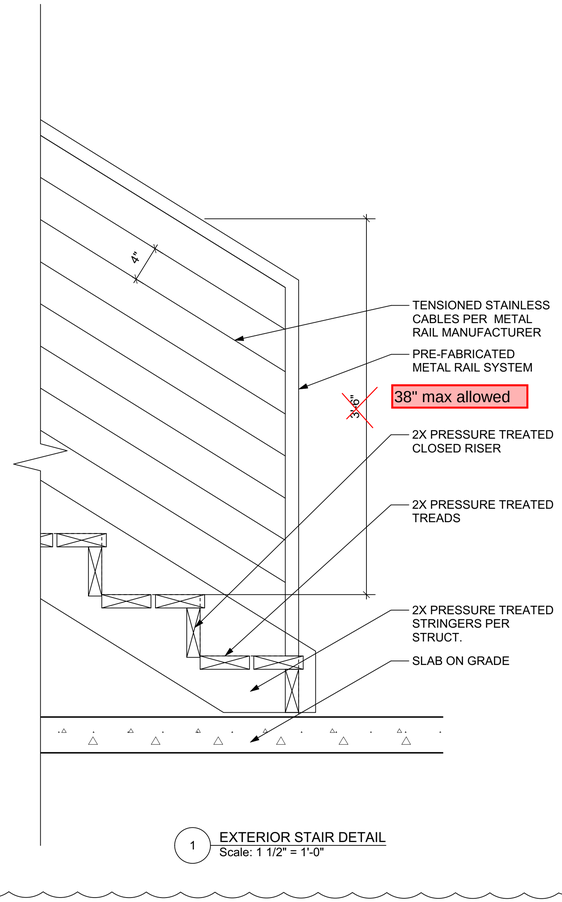
Have either the special inspection report or the WABO fabrication shop certification available on site for the Building Inspector.

R303.8Exterior stairway illumination.
Exterior stairways shall be provided with an artificial light source located at the top landing of the stairway. Stairway illumination shall receive primary power from the building wiring.

R311.7.5.1Risers.
The riser height shall be not more than 73/4 inches (196 mm). The riser shall be measured vertically between leading edges of the adjacent treads.

R311.7.5.2Treads.
The tread depth shall be not less than 10 inches (254 mm)

R311.7.8.1Height.
Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).



1 EXTERIOR STAIR DETAIL
Scale: 1 1/2" = 1'-0"

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A12.1

Window, Skylight and Door Schedule

Project Information
10341 NE 141st Pl
Kirkland, WA 98034

Contact Information
Homero Nishiwaki
homero@ln-arc.com
206-321-1449

	Ref.	U-factor	Qt.	Width Feet	Inch	Height Feet	Inch	Area	UA
Exempt Swinging Door (24 sq. ft. max.)								0.0	0.00
Exempt Glazed Fenestration (15 sq. ft. max.)								0.0	0.00

Vertical Fenestration (Windows and doors)

Component Description	Ref.	U-factor	Qt.	Width Feet	Inch	Height Feet	Inch	Area	UA
window A	VPI	0.28	4	5		7		140.0	39.20
window B	VPI	0.28	3	6		5		90.0	25.20
window C	VPI	0.28	4	5		7	6	150.0	42.00
window D	VPI	0.28	4	3		7	6	90.0	25.20
window E	VPI	0.28	2	5		4		40.0	11.20
window F	VPI	0.28	1	3		4		12.0	3.36
window G	VPI	0.28	1	3		4		12.0	3.36
window H	VPI	0.28	6	3		1	6	27.0	7.56
window i	VPI	0.28	3	6		2		36.0	10.08
window J	VPI	0.28	1	7	2	2		14.3	4.01
window K	VPI	0.28	1	6		5		30.0	8.40
Door 1	Jeld-we	0.28	1	3		6	8	20.0	5.60
Door 2	Jeld-we	0.28	1	6		6	8	40.0	11.20
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
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								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00

	Area	UA
Sum of Vertical Fenestration Area and UA	701.3	196.37
Vertical Fenestration Area Weighted U = UA/Area		0.28

Overhead Glazing (Skylights)

Component Description	Ref.	U-factor	Qt.	Width Feet	Inch	Height Feet	Inch	Area	UA
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00
								0.0	0.00

	Area	UA
Sum of Overhead Glazing Area and UA	0.0	0.00
Overhead Glazing Area Weighted U = UA/Area		0.00
***Total Sum of Fenestration Area and UA** (for heating system sizing calculations)*	701.3	196.37

Simple Heating System Size: Washington State

This heating system sizing calculator is based on the Prescriptive Requirements of the 2018 Washington State Energy Code (WSEC) and ACCA Manuals J and S. This tool will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling loads.

Please complete the green drop-downs and boxes that are applicable to your project. As you make selections in the drop-downs for each section, some values will be calculated for you. If you do not see the selection you need in the drop-down options, please contact the WSU Energy Program at energycode@energy.wsu.edu or (360) 956-2042 for assistance.

Project Information
10341 NE 141st Pl
Lower Unit
kir

Contact Information
Homero Nishiwaki
homero@ln-arc.com

Heating System Type: ○ All Other Systems ● Heat Pump

To see detailed instructions for each section, place your cursor on the word "Instructions"

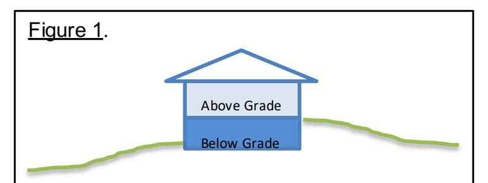
Design Temperature
Instructions — Kirkland — Design Temperature Difference (ΔT) 53
ΔT = Indoor (70 degrees) - Outdoor Design Temp

Area of Building
Conditioned Floor Area
Instructions — Conditioned Floor Area (sq ft): 1,100
Average Ceiling Height
Instructions — Average Ceiling Height (ft): 8.0 — Conditioned Volume 8,800

Component	Selection	U-Factor / F-Factor	X Area / Length	= UA
Glazing and Doors	U-0.28	0.280	250	70.00
Skylights		0.50		---
Insulation — Attic	Select R-Value	No selection		---
Single Rafter or Joist Vaulted Ceilings	Select R-Value	No selection		---
Above Grade Walls *(see Figure 1)*	R-21 Intermediate	0.056	950	53.20
Floors	R-30	0.029	1,100	31.90
Below Grade Walls *(see Figure 1)*	Select R-value	No selection		---
Slab Below Grade *(see Figure 1)*	Select conditioning	No selection		---
Slab on Grade *(see Figure 1)*	Select R-Value	No selection		---

Location of Ducts
Instructions — Conditioned Space — **Duct Leakage Coefficient** 1.00

Sum of UA	155.10	
Envelope Heat Load *Sum of UA x ΔT*	8,220	Btu / Hour
Air Leakage Heat Load *Volume x 0.6 x ΔT x 0.018*	5,037	Btu / Hour
Building Design Heat Load *Air leakage + envelope heat loss*	13,257	Btu / Hour
Building and Duct Heat Load *Ducts in unconditioned space: sum of building heat loss x 1.10; Ducts in conditioned space: sum of building heat loss x 1*	13,257	Btu / Hour
Maximum Heat Equipment Output *Building and duct heat loss x 1.40 for forced air furnace; Building and duct heat loss x 1.25 for heat pump*	16,572	Btu / Hour

Figure 1.


(07/01/13)

Simple Heating System Size: Washington State

This heating system sizing calculator is based on the Prescriptive Requirements of the 2018 Washington State Energy Code (WSEC) and ACCA Manuals J and S. This tool will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling loads.

Please complete the green drop-downs and boxes that are applicable to your project. As you make selections in the drop-downs for each section, some values will be calculated for you. If you do not see the selection you need in the drop-down options, please contact the WSU Energy Program at energycode@energy.wsu.edu or (360) 956-2042 for assistance.

Project Information
10341 NE 141st Pl
Upper Unit

Contact Information
Homero Nishiwaki
homero@ln-arc.com

Heating System Type: ○ All Other Systems ● Heat Pump

To see detailed instructions for each section, place your cursor on the word "Instructions"

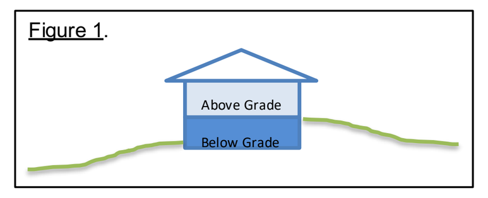
Design Temperature
Instructions — Kirkland — Design Temperature Difference (ΔT) 53
ΔT = Indoor (70 degrees) - Outdoor Design Temp

Area of Building
Conditioned Floor Area
Instructions — Conditioned Floor Area (sq ft): 1,900
Average Ceiling Height
Instructions — Average Ceiling Height (ft): 10.0 — Conditioned Volume 19,000

Component	Selection	U-Factor / F-Factor	X Area / Length	= UA
Glazing and Doors	U-0.28	0.280	350	98.00
Skylights		0.50		---
Insulation — Attic	R-49	0.026	2,000	52.00
Single Rafter or Joist Vaulted Ceilings	Select R-Value	No selection		---
Above Grade Walls *(see Figure 1)*	R-21 Intermediate	0.056	1,750	98.00
Floors	R-38	0.025	300	7.50
Below Grade Walls *(see Figure 1)*	Select R-value	No selection		---
Slab Below Grade *(see Figure 1)*	Select conditioning	No selection		---
Slab on Grade *(see Figure 1)*	Select R-Value	No selection		---

Location of Ducts
Instructions — Conditioned Space — **Duct Leakage Coefficient** 1.00

Sum of UA	255.50	
Envelope Heat Load *Sum of UA x ΔT*	13,542	Btu / Hour
Air Leakage Heat Load *Volume x 0.6 x ΔT x 0.018*	10,876	Btu / Hour
Building Design Heat Load *Air leakage + envelope heat loss*	24,417	Btu / Hour
Building and Duct Heat Load *Ducts in unconditioned space: sum of building heat loss x 1.10; Ducts in conditioned space: sum of building heat loss x 1*	24,417	Btu / Hour
Maximum Heat Equipment Output *Building and duct heat loss x 1.40 for forced air furnace; Building and duct heat loss x 1.25 for heat pump*	30,521	Btu / Hour

Figure 1.


(07/01/13)

LIEN NISHIWAKI ARCHITECTS
homero@ln-arc.com - 206.321.1449

Aguilar Addition

10341 NE 141st Pl
Kirkland WA 98034

8585 REGISTERED ARCHITECT
HOMERO NISHIWAKI
STATE OF WASHINGTON

•Energy Forms

Building PERMIT
October 5, 2021

A13

These requirements apply to all IRC building types, including detached one- and two-family dwellings and multiple single-family dwellings (townhouses).

Project Information	*Contact Information*
Aguilar Addition Lower Unit 10341 NE 141st Pl	Homero Nishiwaki homero@ln-arc.com

Instructions: This single-family project will use the requirements of the Prescriptive Path below and incorporate the minimum values listed. Based on the size of the structure, the appropriate number of additional credits are checked as chosen by the permit applicant.

Provide all information from the following tables as building permit drawings: Table R402.1 - Insulation and Fenestration Requirements by Component, Table R406.2 - Fuel Normalization Credits and 406.3 - Energy Credits.

Authorized Representative _____ ***Date*** 01/11/2021

All Climate Zones (Table R402.1.1)		
	R-Value [a]	**U-Factor [a]**
Fenestration U-Factor [b]	n/a	0.30
Skylight U-Factor [b]	n/a	0.50
Glazed Fenestration SHGC [b,e]	n/a	n/a
Ceiling [e]	49	0.026
Wood Frame Wall [g,h]	21 int	0.056
Floor	30	0.029
Below Grade Wall [c,h]	10/15/21 int + TB	0.042
Slab [d,f] R-Value & Depth	10, 2 ft	n/a

a. *R*-values are minimums. *U*-factors and SHGC are maximums. When insulation is installed in a cavity that is less than the label or design thickness of the insulation, the compressed *R*-value of the insulation from Appendix Table A101.4 shall not be less than the *R*-value specified in the table.
b. The fenestration *U*-factor column excludes skylights.
c. "10/15/21 +5TB" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall at the interior of the basement wall. "10/15/21 +5TB" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. "5TB" means R-5 thermal break between floor slab and basement wall.
d. R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1.
e. For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall.
f. R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.
g. For log structures developed in compliance with Standard ICC 400, log walls shall meet the requirements for *climate zone* 5 of ICC 400.
h. Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 16 inches on center, 78% of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.

Each dwelling unit ***in a residential building*** shall comply with sufficient options from Table R406.2 (fuel normalization credits) and Table 406.3 (energy credits) to achieve the following minimum number of credits. To claim this credit, the building permit drawings shall specify the option selected and the maximum tested building air leakage, and show the qualifying ventilation system and its control sequence of operation.

1. **Small Dwelling Unit: 3 credits**
   Dwelling units less than 1,500 sf in conditioned floor area with less than 300 sf of fenestration area. Additions to existing building that are greater than 500 sf of heated floor area but less than 1,500 sf.
2. **Medium Dwelling Unit: 6 credits**
   All dwelling units that are not included in #1 or #3
3. **Large Dwelling Unit: 7 credits**
   Dwelling units exceeding 5,000 sf of conditioned floor area
4. **Additions less than 500 square feet: 1.5 credits**
   All other additions shall meet 1-3 above

Before selecting your credits on this Summary table, review the details in Table 406.3 (Single Family), on page 4.

Summary of Table R406.2			
Heating Options	**Fuel Normalization Descriptions**	**Credits - select ONE heating option**	**User Notes**
1	Combustion heating minimum NAECA[b]	0.0 ☑	
2	Heat pump[c]	1.0 ☐	
3	Electric resistance heat only - furnace or zonal	-1.0 ☐	
4	DHP with zonal electric resistance per option 3.4	0.5 ☐	
5	All other heating systems	-1.0 ☐	
Energy Options	**Energy Credit Option Descriptions**	**Credits - select ONE energy option from each category [d]**	
1.1	Efficient Building Envelope	0.5 ☐	
1.2	Efficient Building Envelope	1.0 ☐	
1.3	Efficient Building Envelope	0.5 ☐	
1.4	Efficient Building Envelope	1.0 ☐	
1.5	Efficient Building Envelope	2.0 ☐	
1.6	Efficient Building Envelope	3.0 ☐	
1.7	Efficient Building Envelope	0.5 ☐	
2.1	Air Leakage Control and Efficient Ventilation	0.5 ☐	
2.2	Air Leakage Control and Efficient Ventilation	1.0 ☐	
2.3	Air Leakage Control and Efficient Ventilation	1.5 ☐	
2.4	Air Leakage Control and Efficient Ventilation	2.0 ☐	
3.1[a]	High Efficiency HVAC	1.0 ☐	
3.2	High Efficiency HVAC	1.0 ☐	
3.3[a]	High Efficiency HVAC	1.5 ☐	
3.4	High Efficiency HVAC	1.5 ☐	
3.5	High Efficiency HVAC	1.5 ☐	
3.6[a]	High Efficiency HVAC	2.0 ☐	
4.1	High Efficiency HVAC Distribution System	0.5 ☐	
4.2	High Efficiency HVAC Distribution System	1.0 ☑	

Summary of Table R406.2 (cont.)			
Energy Options	**Energy Credit Option Descriptions (cont.)**	**Credits - select ONE energy option from each category [d]**	**User Notes**
5.1[d]	Efficient Water Heating	0.5 ☐	
5.2	Efficient Water Heating	0.5 ☐	
5.3	Efficient Water Heating	1.0 ☐	
5.4	Efficient Water Heating	1.5 ☐	
5.5	Efficient Water Heating	2.0 ☑	
5.6	Efficient Water Heating	2.5 ☐	
6.1[e]	Renewable Electric Energy (3 credits max)	1.0 ☐	
7.1	Appliance Package	0.5 ☑	
	Total Credits	3.5 Calculate Total Clear Form	

a. An alternative heating source sized at a maximum of 0.5 W/sf (equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.
b. Equipment listed in Table C403.3.2(4) or C403.3.2(5)
c. Equipment listed in Table C403.3.2(1) or C403.3.2(2)
d. You cannot select more than one option from any category EXCEPT in category 5. Option 5.1 may be combined with options 5.2 through 5.6. See Table 406.3.
e. 1.0 credit for each 1,200 kWh of electrical generation provided annually, up to 3 credits max. See the complete Table R406.2 for all requirements and option descriptions.
f. Use the single radiobutton in the upper right of the second column to deselect radiobuttons in that group.

Please print only pages 1 through 3 of this worksheet for submission to your building official.

Table 406.3 – Energy Credits (Single Family)		
Option	**Description**	**Credits: SF**
1. EFFICIENT BUILDING ENVELOPE OPTIONS		
Only one option from Items 1.1 through 1.7 may be selected in this category.		
	Compliance with the conductive UA targets is demonstrated using Section R402.1.4, Total UA alternative, where [1-(Proposed UA/Target UA)] > the required %UA reduction.	
1.1	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.24**	0.5
1.2	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.20**	1.0
1.3	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.28** Floor R-38 Slab on grade R-10 perimeter and under entire slab below grade slab R-10 perimeter and under entire slab ***or*** Compliance based on Section R402.1.4: Reduce the Total conductive UA by 5%	0.5
1.4	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.25** Wall R-21 plus R-4 ci Floor R-38 Basement wall R-21 int plus R-5 ci Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab ***or*** Compliance based on Section R402.1.4: Reduce the Total conductive UA by 15%	1.0
1.5	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.22** Ceiling and single-rafter or joist-vaulted R-49 advanced Wood frame wall R-21 int plus R-12 ci Floor R-38 Basement wall R-21 int plus R-12 ci Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab ***or*** Compliance based on Section R402.1.4: Reduce the Total conductive UA by 30%	2.0
1.6	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.18** Ceiling and single-rafter or joist-vaulted R-60 advanced Wood frame wall R-21 int plus R-16 ci Floor R-48 Basement wall R-21 int plus R-16 ci Slab on grade R-20 perimeter and under entire slab Below grade slab R-20 perimeter and under entire slab ***or*** Compliance based on Section R402.1.4: Reduce the Total conductive UA by 40%.	3.0
1.7	Advanced framing and raised heel trusses or rafters Vertical Glazing U-0.28 R-49 Advanced (U-0.020) as listed in Section A102.2.1, *Ceilings below a vented attic* ***and*** R-49 vaulted ceilings with full height of uncompressed insulation extending over the wall top plate at the eaves.	0.5

Table 406.3 – Energy Credits (Single Family)		
Option	**Description**	**Credits: SF**
2. AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION OPTIONS		
Only one option from Items 2.1 through 2.4 may be selected in this category.		
2.1	Compliance based on R402.4.1.2: Reduce the tested air leakage to **3.0 air changes per hour** maximum at 50 Pascals ***or*** For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.3 cfm/sf maximum at 50 Pascals *and*** All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a high efficiency fan(s) (**maximum 0.35 watts/cfm**), not interlocked with the furnace fan (if present). Ventilation systems using a furnace including an ECM motor are allowed, provided that they are controlled to operate at low speed in ventilation only mode. To qualify to claim this credit, the building permit drawings shall specify the option being selected and the maximum tested building air leakage, and shall show the qualifying ventilation system and its control sequence of operation.	0.5
2.2	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to **2.0 air changes per hour maximum at 50 Pascals *or*** For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to 0.25 cfm/sf maximum at 50 Pascals ***and*** All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of **0.65**. [1]	1.0
2.3	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to **1.5 air changes per hour** maximum at 50 Pascals ***or*** For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.25 cfm/sf** maximum at 50 Pascals ***and*** All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of **0.75**. [1]	1.5
2.4	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.6 air changes per hour** maximum at 50 Pascals **or** For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.15 cfm/sf** maximum at 50 Pascals **and** All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of **0.80. Duct installation shall comply with Section R403.3.7**. [1]	2.0

[1] To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.

Table 406.3 – Energy Credits (Single Family)		
Option	**Description**	**Credits: SF**
3. HIGH EFFICIENCY HVAC EQUIPMENT OPTIONS		
Only one option from Items 3.1 through 3.6 may be selected in this category.		
3.1 [2]	Energy Star rated (U.S. North) Gas or propane furnace with minimum AFUE of 95% ***or*** Energy Star rated (U.S. North) Gas or propane boiler with minimum AFUE of 90%. [2]	1.0
3.2 [2]	Air-source centrally ducted heat pump with minimum HSPF of 9.5. [3]	1.0
3.3[2]	Closed-loop ground source heat pump; with a minimum COP of 3.3 ***or*** Open loop water source heat pump with a maximum pumping hydraulic head of 150 feet and minimum COP of 3.6. [3]	1.5
3.4	Ductless mini-split heat pump system, zonal control: In homes where the primary space heating system is zonal electric heating, a ductless mini-split heat pump system with a minimum HSPF of 10.0 shall be installed and provide heating to the largest zone of the housing unit. [4]	1.5
3.5 [2]	Air-source, centrally ducted heat pump with minimum HSPF of 11.0. [4]	1.5
3.6 [2]	Ductless split system heat pumps with no electric resistance heating in the primary living areas. A ductless heat pump system with a minimum HSPF of 10 shall be sized and installed to provide heat to entire dwelling unit at the design outdoor air temperature. To qualify to claim this credit, the building permit drawings shall specify the option being selected, the heated floor area calculation, the heating equipment type(s), the minimum equipment efficiency, and total installed heat capacity (by equipment type).	2.0

[2] An alternative heating source sized at a maximum of 0.5 W/sf(equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.
[3] To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.
[4] To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.

4. HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM OPTIONS		
4.1	All supply and return ducts located in an unconditioned attic shall be deeply buried in ceiling insulation in accordance with Section R403.3.7. For mechanical equipment located outside the conditioned space, a maximum of 10 linear feet of return duct and 5 linear feet of supply duct connections to the equipment may be outside the deeply buried insulation. All metallic ducts located outside the conditioned space must have both transverse and longitudinal joints sealed with mastic. If flex ducts are used, they cannot contain splices. Duct leakage shall be limited to 3 cfm per 100 square feet of conditioned floor area. Air handler(s) shall be located within the conditioned space.	0.5
4.2	HVAC equipment and associated duct system(s) installation shall comply with the requirements of Section R403.3.7. Locating system components in conditioned crawl spaces is not permitted under this option. Electric resistance heat and ductless heat pumps are not permitted under this option. Direct combustion heating equipment with AFUE less than 80% is not permitted under this option. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and shall show the location of the heating and cooling equipment and all the ductwork.	1.0

Table 406.3 – Energy Credits (Single Family)		
Option	**Description**	**Credits: SF**
5. EFFICIENT WATER HEATING OPTIONS		
Only one option from Items 5.2 through 5.6 may be selected in this category. Item 5.1 may be combined with any option.		
5.1	A drain water heat recovery unit(s) shall be installed, which captures waste water heat from all and only the showers, and has a minimum efficiency of 40% if installed for equal flow or a minimum efficiency of 54% if installed for unequal flow. Such units shall be rated in accordance with CSA B55.1 or IAPMO IGC 346-2017 and be so labeled. To qualify to claim this credit, the building permit drawings shall include a plumbing diagram that specifies the drain water heat recovery units and the plumbing layout needed to install it. Labels or other documentation shall be provided that demonstrates that the unit complies with the standard.	0.5
5.2	Water heating system shall include one of the following: Energy Star rated gas or propane water heater with a minimum UEF of 0.80. [5]	0.5
5.3	Water heating system shall include one of the following: Energy Star rated gas or propane water heater with a minimum UEF of 0.91 ***or*** Solar water heating supplementing a minimum standard water heater. Solar water heating will provide a rated minimum savings of 85 therms or 2000 kWh based on the Solar Rating and Certification Corporation (SRCC) Annual Performance of OG-300 Certified Solar Water Heating Systems ***or*** Water heater heated by ground source heat pump meeting requirements of Option 3.3. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency and, for solar water heating systems, the calculation of minimum energy savings.	1.0
5.4	Water heating system shall include one of the following: Electric heat pump water heater meeting the standards for Tier I of NEEA's advanced water heating specification **or** For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier I of NEEA's advanced water heating specification, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. [5]	1.5
5.5	Water heating system shall include one of the following: Electric heat pump water heater meeting the standards for Tier III of NEEA's advanced water heating specification ***or*** For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier III of NEEA's advanced water heating specification, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. [5]	2.0
5.6	Water heating system shall include one of the following: Electric heat pump water heater with a minimum UEF of 2.9 and utilizing a split system configuration with the air-to-refrigerant heat exchanger located outdoors. Equipment shall meet Section 4, requirements for all units, of the NEEA standard *Advanced Water Heating Specification* with the UEF noted above ***or*** For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier III of NEEA's advanced water heating specification and utilizing a split system configuration with the air-to-refrigerant heat exchanger located outdoors, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. [5]	2.5

[5] To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency.

Table 406.3 – Energy Credits (Single Family)		
Option	**Description**	**Credits: SF**
6. RENEWABLE ELECTRIC ENERGY OPTION		
6.1	For each 1200 kWh of electrical generation per housing unit provided annually by on-site wind or solar equipment a 1.0 credit shall be allowed, up to 3 credits. Generation shall be calculated as follows: For solar electric systems, the design shall be demonstrated to meet this requirement using the National Renewable Energy Laboratory calculator PVWATTs or approved alternate by the code official. Documentation noting solar access shall be included on the plans. For wind generation projects designs shall document annual power generation based on the following factors: the wind turbine power curve; average annual wind speed at the site; frequency distribution of the wind speed at the site and height of the tower. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the photovoltaic or wind turbine equipment type, provide documentation of solar and wind access, and include a calculation of the minimum annual energy power production.	1.0
7. APPLIANCE PACKAGE OPTION		
7.1	All of the following appliances shall be new and installed in the dwelling unit and shall meet the following standards: Dishwasher – Energy Star rated Refrigerator (if provided) – Energy Star rated Washing machine – Energy Star rated Dryer – Energy Star rated, ventless dryer with minimum CEF rating of 5.2 To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the appliance type and provide documentation of Energy Star compliance. At the time of inspection, all appliances shall be installed and connected to utilities. Dryer ducts and exterior dryer vent caps are not permitted to be installed in the dwelling unit.	0.5

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Aguilar Addition

10341 NE 141st Pl
Kirkland WA 98034

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October 5, 2021

A14

These requirements apply to all IRC building types, including detached one- and two-family dwellings and multiple single-family dwellings (townhouses).

Project Information	*Contact Information*
Aguilar Addition Upper Unit	Homero Nishiwaki
10341 NE 141st Pl	homero@ln-arc.com

Instructions: This single-family project will use the requirements of the Prescriptive Path below and incorporate the minimum values listed. Based on the size of the structure, the appropriate number of additional credits are checked as chosen by the permit applicant.

Provide all information from the following tables as building permit drawings: Table R402.1 - Insulation and Fenestration Requirements by Component, Table R406.2 - Fuel Normalization Credits and 406.3 - Energy Credits.

Authorized Representative _____ ***Date*** 01/11/2021

All Climate Zones (Table R402.1.1)			
	R-Value [a]	**U-Factor** [a]	
Fenestration U-Factor [b]	n/a	0.30	
Skylight U-Factor [b]	n/a	0.50	
Glazed Fenestration SHGC [b,e]	n/a	n/a	
Ceiling [g]	49	0.026	
Wood Frame Wall [g,h]	21 int	0.056	
Floor	30	0.029	
Below Grade Wall [c,h]	10/15/21 int + TB	0.042	
Slab [d,f] R-Value & Depth	10, 2 ft	n/a	
a	*R*-values are minimums. *U*-factors and SHGC are maximums. When insulation is installed in a cavity that is less than the label or design thickness of the insulation, the compressed *R*-value of the insulation from Appendix Table A101.4 shall not be less than the *R*-value specified in the table.		
b	The fenestration *U*-factor column excludes skylights.		
c	"10/15/21 +5TB" means R-10 continuous insulation on the exterior of the wall, or R-15 continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall at the interior of the basement wall. "10/15/21 +5TB" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. "5TB" means R-5 thermal break between floor slab and basement wall.		
d	R-10 continuous insulation is required under heated slab on grade floors. See Section R402.2.9.1.		
e	For single rafter- or joist-vaulted ceilings, the insulation may be reduced to R-38 if the full insulation depth extends over the top plate of the exterior wall.		
f	R-7.5 continuous insulation installed over an existing slab is deemed to be equivalent to the required perimeter slab insulation when applied to existing slabs complying with Section R503.1.1. If foam plastic is used, it shall meet the requirements for thermal barriers protecting foam plastics.		
g	For log structures developed in compliance with Standard ICC 400, log walls shall meet the requirements for *climate zone* 5 of ICC 400.		
h	Int. (intermediate framing) denotes framing and insulation as described in Section A103.2.2 including standard framing 16 inches on center, 78% of the wall cavity insulated and headers insulated with a minimum of R-10 insulation.		

Each dwelling unit ***in a residential building*** shall comply with sufficient options from Table R406.2 (fuel normalization credits) and Table 406.3 (energy credits) to achieve the following minimum number of credits. To claim this credit, the building permit drawings shall specify the option selected and the maximum tested building air leakage, and show the qualifying ventilation system and its control sequence of operation.

1. **Small Dwelling Unit: 3 credits**
   Dwelling units less than 1,500 sf in conditioned floor area with less than 300 sf of fenestration area.
   Additions to existing building that are greater than 500 sf of heated floor area but less than 1,500 sf.
2. **Medium Dwelling Unit: 6 credits**
   All dwelling units that are not included in #1 or #3
3. **Large Dwelling Unit: 7 credits**
   Dwelling units exceeding 5,000 sf of conditioned floor area
4. **Additions less than 500 square feet: 1.5 credits**
   All other additions shall meet 1-3 above

Before selecting your credits on this Summary table, review the details in Table 406.3 (Single Family), on page 4.

Summary of Table R406.2			
Heating Options	**Fuel Normalization Descriptions**	**Credits - select ONE heating option**	**User Notes**
1	Combustion heating minimum NAECA[b]	0.0 ☐	
2	Heat pump[c]	1.0 ☑	
3	Electric resistance heat only - furnace or zonal	1.0 ☐	
4	DHP with zonal electric resistance per option 3.4	0.5 ☐	
5	All other heating systems	1.0 ☐	
Energy Options	**Energy Credit Option Descriptions**	**Credits - select ONE energy option from each category** [a]	
1.1	Efficient Building Envelope	0.5 ☑	
1.2	Efficient Building Envelope	1.0 ☐	
1.3	Efficient Building Envelope	0.5 ☐	
1.4	Efficient Building Envelope	1.0 ☐	
1.5	Efficient Building Envelope	2.0 ☐	
1.6	Efficient Building Envelope	3.0 ☐	
1.7	Efficient Building Envelope	0.5 ☐	
2.1	Air Leakage Control and Efficient Ventilation	0.5 ☐	
2.2	Air Leakage Control and Efficient Ventilation	1.0 ☐	
2.3	Air Leakage Control and Efficient Ventilation	1.5 ☐	
2.4	Air Leakage Control and Efficient Ventilation	2.0 ☐	
3.1[a]	High Efficiency HVAC	1.0 ☐	
3.2	High Efficiency HVAC	1.0 ☐	
3.3[a]	High Efficiency HVAC	1.5 ☐	
3.4	High Efficiency HVAC	1.5 ☐	
3.5	High Efficiency HVAC	1.5 ☐	
3.6[a]	High Efficiency HVAC	2.0 ☑	
4.1	High Efficiency HVAC Distribution System	0.5 ☐	
4.2	High Efficiency HVAC Distribution System	1.0 ☐	

Summary of Table R406.2 (cont.)			
Energy Options	**Energy Credit Option Descriptions (cont.)**	**Credits - select ONE energy option from each category** [c]	**User Notes**
5.1[d]	Efficient Water Heating	0.5 ☐	
5.2	Efficient Water Heating	0.5 ☐	
5.3	Efficient Water Heating	1.0 ☐	
5.4	Efficient Water Heating	1.5 ☐	
5.5	Efficient Water Heating	2.0 ☑	
5.6	Efficient Water Heating	2.5 ☐	
6.1[e]	Renewable Electric Energy (3 credits max)	1.0 ☐	
7.1	Appliance Package	0.5 ☑	
	Total Credits	6.0 Calculate Total Clear Form	

a. An alternative heating source sized at a maximum of 0.5 W/sf (equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.
b. Equipment listed in Table C403.3.2(4) or C403.3.2(5)
c. Equipment listed in Table C403.3.2(1) or C403.3.2(2)
d. You cannot select more than one option from any category EXCEPT in category 5. Option 5.1 may be combined with options 5.2 through 5.6. See Table 406.3.
e. 1.0 credit for each 1,200 kWh of electrical generation provided annually, up to 3 credits max.
See the complete Table R406.2 for all requirements and option descriptions.
f. Use the single radiobutton in the upper right of the second column to deselect radiobuttons in that group.

Please print only pages 1 through 3 of this worksheet for submission to your building official.

Table 406.3 – Energy Credits (Single Family)		
Option	**Description**	**Credits: SF**
1. EFFICIENT BUILDING ENVELOPE OPTIONS	Only one option from Items 1.1 through 1.7 may be selected in this category. Compliance with the conductive UA targets is demonstrated using Section R402.1.4, Total UA alternative, where [1-(Proposed UA/Target UA)] > the required %UA reduction.	
1.1	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.24**	0.5
1.2	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.20**	1.0
1.3	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.28** Floor R-38 Slab on grade R-10 perimeter and under entire slab below grade slab R-10 perimeter and under entire slab ***or*** Compliance based on Section R402.1.4: Reduce the Total conductive UA by 5%	0.5
1.4	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.25** Wall R-21 plus R-4 ci Floor R-38 Basement wall R-21 int plus R-5 ci Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab ***or*** Compliance based on Section R402.1.4: Reduce the Total conductive UA by 15%	1.0
1.5	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.22** Ceiling and single-rafter or joist-vaulted R-49 advanced Wood frame wall R-21 int plus R-12 ci Floor R-38 Basement wall R-21 int plus R-12 ci Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab ***or*** Compliance based on Section R402.1.4: Reduce the Total conductive UA by 30%	2.0
1.6	Prescriptive compliance is based on Table R402.1.1 with the following modifications: **Vertical fenestration U = 0.18** Ceiling and single-rafter or joist-vaulted R-60 advanced Wood frame wall R-21 int plus R-16 ci Floor R-48 Basement wall R-21 int plus R-16 ci Slab on grade R-20 perimeter and under entire slab Below grade slab R-20 perimeter and under entire slab ***or*** Compliance based on Section R402.1.4: Reduce the Total conductive UA by 40%.	3.0
1.7	Advanced framing and raised heel trusses or rafters Vertical Glazing U-0.28 R-49 Advanced (U-0.020) as listed in Section A102.2.1, *Ceilings below a vented attic* ***and*** R-49 vaulted ceilings with full height of uncompressed insulation extending over the wall top plate at the eaves.	0.5

Table 406.3 – Energy Credits (Single Family)		
Option	**Description**	**Credits: SF**
2. AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION OPTIONS	Only one option from Items 2.1 through 2.4 may be selected in this category.	
2.1	Compliance based on R402.4.1.2: Reduce the tested air leakage to **3.0 air changes per hour** maximum at 50 Pascals ***or*** For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.3 cfm/sf maximum at 50 Pascals *and*** All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a high efficiency fan(s) (**maximum 0.35 watts/cfm**), not interlocked with the furnace fan (if present). Ventilation systems using a furnace including an ECM motor are allowed, provided that they are controlled to operate at low speed in ventilation only mode. To qualify to claim this credit, the building permit drawings shall specify the option being selected and the maximum tested building air leakage, and shall show the qualifying ventilation system and its control sequence of operation.	0.5
2.2	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to **2.0 air changes per hour maximum at 50 Pascals *or*** For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to 0.25 cfm/sf maximum at 50 Pascals ***and*** All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of **0.65**. [1]	1.0
2.3	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to **1.5 air changes per hour** maximum at 50 Pascals ***or*** For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.25 cfm/sf** maximum at 50 Pascals ***and*** All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of **0.75**. [1]	1.5
2.4	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.6 air changes per hour** maximum at 50 Pascals **or** For R-2 Occupancies, optional compliance based on Section R402.4.1.2: Reduce the tested air leakage to **0.15 cfm/sf** maximum at 50 Pascals **and** All whole house ventilation requirements as determined by Section M1507.3 of the *International Residential Code* or Section 403.8 of the *International Mechanical Code* shall be met with a heat recovery ventilation system with minimum sensible heat recovery efficiency of **0.80. Duct installation shall comply with Section R403.3.7**. [1]	2.0

[1] To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.

Table 406.3 – Energy Credits (Single Family)		
Option	**Description**	**Credits: SF**
3. HIGH EFFICIENCY HVAC EQUIPMENT OPTIONS	Only one option from Items 3.1 through 3.6 may be selected in this category.	
3.1 [2]	Energy Star rated (U.S. North) Gas or propane furnace with minimum AFUE of 95% ***or*** Energy Star rated (U.S. North) Gas or propane boiler with minimum AFUE of 90%. [2]	1.0
3.2 [2]	Air-source centrally ducted heat pump with minimum HSPF of 9.5. [3]	1.0
3.3[2]	Closed-loop ground source heat pump; with a minimum COP of 3.3 ***or*** Open loop water source heat pump with a maximum pumping hydraulic head of 150 feet and minimum COP of 3.6. [3]	1.5
3.4	Ductless mini-split heat pump system, zonal control: In homes where the primary space heating system is zonal electric heating, a ductless mini-split heat pump system with a minimum HSPF of 10.0 shall be installed and provide heating to the largest zone of the housing unit. [4]	1.5
3.5 [2]	Air-source, centrally ducted heat pump with minimum HSPF of 11.0. [4]	1.5
3.6 [2]	Ductless split system heat pumps with no electric resistance heating in the primary living areas. A ductless heat pump system with a minimum HSPF of 10 shall be sized and installed to provide heat to entire dwelling unit at the design outdoor air temperature. To qualify to claim this credit, the building permit drawings shall specify the option being selected, the heated floor area calculation, the heating equipment type(s), the minimum equipment efficiency, and total installed heat capacity (by equipment type).	2.0

[2] An alternative heating source sized at a maximum of 0.5 W/sf(equivalent) of heated floor area or 500 W, whichever is bigger, may be installed in the dwelling unit.
[3] To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.
[4] To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and the minimum equipment efficiency.

Table 406.3 – Energy Credits (Single Family)		
Option	**Description**	**Credits: SF**
4. HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM OPTIONS		
4.1	All supply and return ducts located in an unconditioned attic shall be deeply buried in ceiling insulation in accordance with Section R403.3.7. For mechanical equipment located outside the conditioned space, a maximum of 10 linear feet of return duct and 5 linear feet of supply duct connections to the equipment may be outside the deeply buried insulation. All metallic ducts located outside the conditioned space must have both transverse and longitudinal joints sealed with mastic. If flex ducts are used, they cannot contain splices. Duct leakage shall be limited to 3 cfm per 100 square feet of conditioned floor area. Air handler(s) shall be located within the conditioned space.	0.5
4.2	HVAC equipment and associated duct system(s) installation shall comply with the requirements of Section R403.3.7. Locating system components in conditioned crawl spaces is not permitted under this option. Electric resistance heat and ductless heat pumps are not permitted under this option. Direct combustion heating equipment with AFUE less than 80% is not permitted under this option. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating equipment type and shall show the location of the heating and cooling equipment and all the ductwork.	1.0

Table 406.3 – Energy Credits (Single Family)		
Option	**Description**	**Credits: SF**
5. EFFICIENT WATER HEATING OPTIONS	Only one option from Items 5.2 through 5.6 may be selected in this category. Item 5.1 may be combined with any option.	
5.1	A drain water heat recovery unit(s) shall be installed, which captures waste water heat from all and only the showers, and has a minimum efficiency of 40% if installed for equal flow or a minimum efficiency of 54% if installed for unequal flow. Such units shall be rated in accordance with CSA B55.1 or IAPMO IGC 346-2017 and be so labeled. To qualify to claim this credit, the building permit drawings shall include a plumbing diagram that specifies the drain water heat recovery units and the plumbing layout needed to install it. Labels or other documentation shall be provided that demonstrates that the unit complies with the standard.	0.5
5.2	Water heating system shall include one of the following: Energy Star rated gas or propane water heater with a minimum UEF of 0.80. [5]	0.5
5.3	Water heating system shall include one of the following: Energy Star rated gas or propane water heater with a minimum UEF of 0.91 ***or*** Solar water heating supplementing a minimum standard water heater. Solar water heating will provide a rated minimum savings of 85 therms or 2000 kWh based on the Solar Rating and Certification Corporation (SRCC) Annual Performance of OG-300 Certified Solar Water Heating Systems ***or*** Water heater heated by ground source heat pump meeting requirements of Option 3.3. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency and, for solar water heating systems, the calculation of minimum energy savings.	1.0
5.4	Water heating system shall include one of the following: Electric heat pump water heater meeting the standards for Tier I of NEEA's advanced water heating specification **or** For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier I of NEEA's advanced water heating specification, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. [5]	1.5
5.5	Water heating system shall include one of the following: Electric heat pump water heater meeting the standards for Tier III of NEEA's advanced water heating specification ***or*** For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier III of NEEA's advanced water heating specification, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. [5]	2.0
5.6	Water heating system shall include one of the following: Electric heat pump water heater with a minimum UEF of 2.9 and utilizing a split system configuration with the air-to-refrigerant heat exchanger located outdoors. Equipment shall meet Section 4, requirements for all units, of the NEEA standard *Advanced Water Heating Specification* with the UEF noted above ***or*** For R-2 Occupancy, electric heat pump water heater(s), meeting the standards for Tier III of NEEA's advanced water heating specification and utilizing a split system configuration with the air-to-refrigerant heat exchanger located outdoors, shall supply domestic hot water to all units. If one water heater is serving more than one dwelling unit, all hot water supply and recirculation piping shall be insulated with R-8 minimum pipe insulation. [5]	2.5

[5] To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and the minimum equipment efficiency.

Table 406.3 – Energy Credits (Single Family)		
Option	**Description**	**Credits: SF**
6. RENEWABLE ELECTRIC ENERGY OPTION		
6.1	For each 1200 kWh of electrical generation per housing unit provided annually by on-site wind or solar equipment a 1.0 credit shall be allowed, up to 3 credits. Generation shall be calculated as follows: For solar electric systems, the design shall be demonstrated to meet this requirement using the National Renewable Energy Laboratory calculator PVWATTs or approved alternate by the code official. Documentation noting solar access shall be included on the plans. For wind generation projects designs shall document annual power generation based on the following factors: the wind turbine power curve; average annual wind speed at the site; frequency distribution of the wind speed at the site and height of the tower. To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the photovoltaic or wind turbine equipment type, provide documentation of solar and wind access, and include a calculation of the minimum annual energy power production.	1.0
7. APPLIANCE PACKAGE OPTION		
7.1	All of the following appliances shall be new and installed in the dwelling unit and shall meet the following standards: Dishwasher – Energy Star rated Refrigerator (if provided) – Energy Star rated Washing machine – Energy Star rated Dryer – Energy Star rated, ventless dryer with minimum CEF rating of 5.2 To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the appliance type and provide documentation of Energy Star compliance. At the time of inspection, all appliances shall be installed and connected to utilities. Dryer ducts and exterior dryer vent caps are not permitted to be installed in the dwelling unit.	0.5

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geappliances.com/appliance/GE-Top-Control-with-Stainless-Steel-Interior-Dishwasher-with-Sanitize-Cycle-Dry-Boost-with-Fan-Assist-GD

KITCHEN SMALL APPLIANCES LAUNDRY AIR & WATER SMART APPLIANCES

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/ GE® Top Control with Stainless Steel Interior Dishwasher with Sanitize Cycle & Dry Boost with Far

GE® Top Control with Stainless Steel Interior Dishwasher with Sanitize Cycle & Dry Boost with Fan Assist

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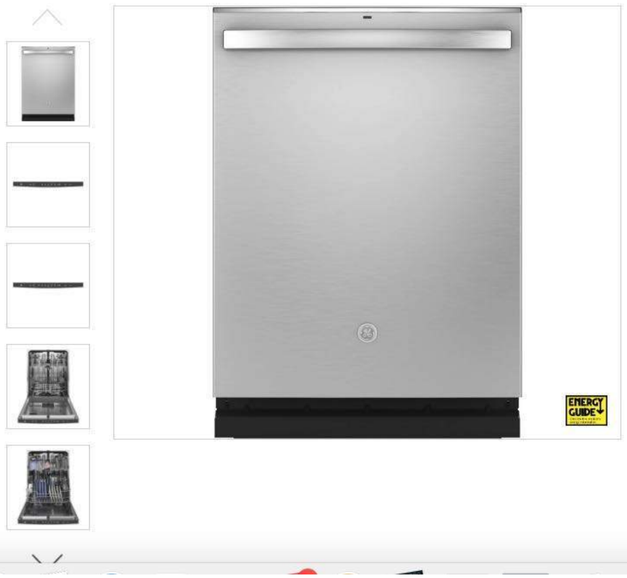

geappliances.com/appliance/GE-ENERGY-STAR-27-7-Cu-Ft-Fingerprint-Resistant-French-Door-Refrigerator-GFE28GYNFS

GE® ENERGY STAR® 27.7 Cu. Ft. Fingerprint Resistant French-Door Refrigerator

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GE® 24" 2.4 Cu. Ft. ENERGY STAR® Front Load Washer with Steam

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geappliances.com/appliance/GE-24-4-1-Cu-Ft-Front-Load-Ventless-Condenser-Electric-Dryer-with-Stainless-Steel-Basket-GFT14ESSM

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GE® 24" 4.1 Cu.Ft. Front Load Ventless Condenser Electric Dryer with Stainless Steel Basket

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Urban Forestry Services, Inc.

Arboricultural Consulting

Title: Aguilar Addition, Kirkland, WA
Tree Protection Plan and Level 2 Tree Risk Assessment

Prepared for: Mr. Dennis Aguilar
10341 NE 141st Pl
Kirkland WA, 98034

Prepared by: Urban Forestry Services, Inc.
Christina Pfeiffer
ISA Certified Arborist ® #PN-0124A
Anna Heckman
ISA Certified Arborist® # PN-6153B

Date: March 26, 2018

Contents:

Summary

The large Douglas fir on the Aguilar property at 10341 NE 141st pl. in Kirkland, Washington meets the criteria for a significant tree as defined in the City of Kirkland municipal code. Proposed construction activities will cross into the Perimeter Critical Root Zone (PCRZ) of this tree. Building materials should be removed at this time and tree protection fence installed in keeping with the attached City of Kirkland tree protection fence detail.

Introduction

As requested by Mr. Dennis Aguilar, Urban Forestry Services consulting arborists visited the property at 10341 NE 141st pl. in Kirkland, Washington on March 16, 2018. The purpose of this visit was to assess a large Douglas fir, *Pseudotsuga menzeisii* and provide recommendations for tree retention and protection as called for in the City of Kirkland municipal code for a Major Tree Retention Plan. The large Douglas fir located in the north-east corner of the front yard is in good condition with a healthy, dense canopy. Retaining this tree will satisfy the city canopy retention credit requirements (Photo 1).

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Planning, Managing & Restoring Urban Greenspaces

Findings and Recommendations

Tree #1 Douglas Fir (Pseudotsuga menziesii) 23.4-inches d.b.h.
Perimeter CRZ radius = 23.4 feet Interior CRZ radius = 12-feet

This tree is in good condition with a solid trunk and dense dark green foliage. Several large lateral structural roots are visible at the soil surface 14 feet from the trunk. The drip line has a radius of 18 feet. The Critical Root Zone (CRZ) for this tree has a radius extending 23.4 feet from the trunk (See the attached UFS, Inc. CRZ explanation sheet). Shallow structural roots can be expected to be found outside the CRZ near the house and driveway and extending into the area of construction.

Photo 1. Retaining this Douglas fir tree satisfies the canopy retention credit requirements.

Recommendations:

1. Remove all materials currently stored beneath the tree. Use great care to avoid damaging the large surface roots. Observe and follow #3 of the City of Kirkland Tree Protection Fence Detail.

2. Protect roots from damage and soil from compaction. Install tree protection fence prior to the start of construction. This fence will be placed at 23.4 feet from the tree or up to the edge of existing pavement (see drawing detail). No storage or construction work shall occur within the fence without permit approval.

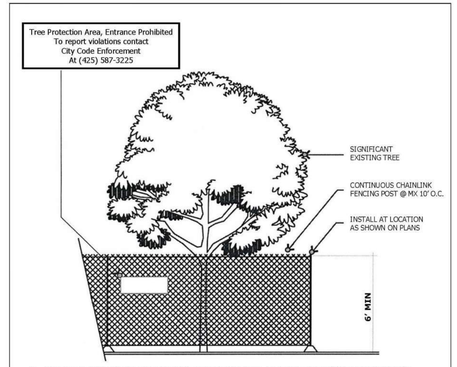
3. Based on the age and vigor of this tree, it should be able to tolerate limited impacts within the Perimeter CRZ. Any work required within the Perimeter CRZ should be assessed and monitored by a consulting arborist so that the least destructive options and methods are used. To safely retain this tree, no excavation or trenching is to occur within the Interior CRZ (See attachment for CRZ Explanation). In addition, there should be no pruning of the large surface roots within the Interior CRZ. Hand digging, or the use of an air spade are recommended to achieve trenching if required while keeping larger roots intact.

4. Any roots 2-inches or more in diameter encountered outside the Perimeter CRZ during excavation activities should be cleanly cut. Watch for these larger size roots to prune and avoid pulling and tearing roots with equipment before they are cut.

This report and recommendations should fulfill the arborist report component for the City of Kirkland Major Tree Retention Plan requirements. The tree is located 29.5 from the house. Its location should be correctly shown on the plans prior to drawing in the Perimeter and Interior CRZ.

Photo 2. The orange tool handle is at the Perimeter CRZ. The building materials need to be moved outside of the Perimeter CRZ radius. This view is looking south from the edge of the

Photo 3. Larger surface roots are visible within a 6-foot radius from the main trunk (arrow). The orange handled tool in the foreground shows where surface roots extend out over 12-feet away from the trunk. These larger diameter surface roots require protection through construction.



1. MINIMUM SIX (6) FOOT HIGH TEMPORARY CHAINLINK FENCE SHALL BE PLACED AT THE CRITICAL ROOT ZONE OR DESIGNATED LIMIT OF DISTURBANCE OF THE TREE TO BE SAVED. FENCE SHALL COMPLETELY ENCIRCLE TREE(S). INSTALL FENCE POSTS USING PIER BLOCK ONLY. AVOID POST OR STAKES INTO MAJOR ROOTS. MODIFICATIONS TO FENCING MATERIAL AND LOCATION MUST BE APPROVED BY PLANNING OFFICIAL.
2. TREATMENT OF ROOTS EXPOSED DURING CONSTRUCTION: FOR ROOTS OVER ONE (1) INCH DIAMETER DAMAGED DURING CONSTRUCTION, MAKE A CLEAN STRAIGHT CUT TO REMOVE DAMAGED PORTION OF ROOT. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP TO PREVENT DRYING AND COVERED WITH SOIL AS SOON AS POSSIBLE.
3. NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING. FENCING SHALL NOT BE MOVED OR REMOVED UNLESS APPROVED BY THE CITY PLANNING OFFICIAL. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY UNDER THE SUPERVISION OF THE ON-SITE ARBORIST AND WITH PRIOR APPROVAL BY THE CITY PLANNING OFFICIAL.
4. FENCING SIGNAGE AS DETAILED ABOVE MUST BE POSTED EVERY FIFTEEN (15) FEET ALONG THE FENCE.

TREE PROTECTION FENCING DETAIL
(for public and private trees)

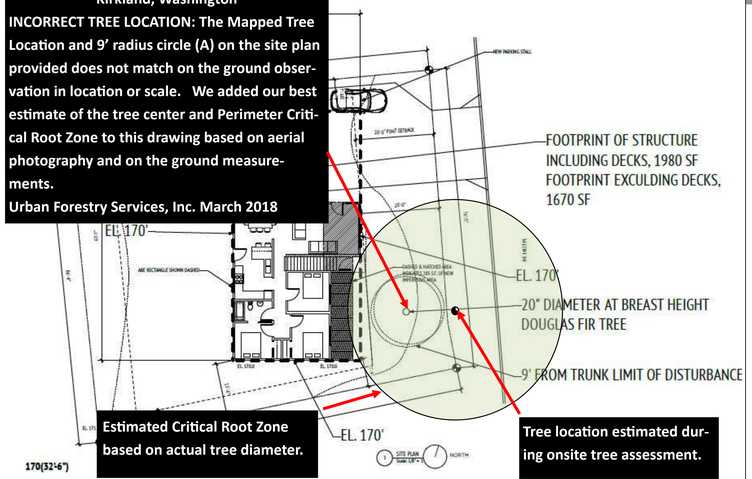
LIEN NISHIWAKI ARCHITECTS
homero@lnarc.com · 206.321.1449

Aguilar Addition

10341 NE 141st Pl
Kirkland WA 98034

8585 REGISTERED ARCHITECT
HOMERO NISHIWAKI
STATE OF WASHINGTON

Aguilar Site Map,
10341 NE 141st Pl.
Kirkland, Washington
INCORRECT TREE LOCATION: The Mapped Tree Location and 9' radius circle (A) on the site plan provided does not match on the ground observation in location or scale. We added our best estimate of the tree center and Perimeter Critical Root Zone to this drawing based on aerial photography and on the ground measurements.
Urban Forestry Services, Inc. March 2018



Estimated Critical Root Zone based on actual tree diameter.

Tree location estimated during onsite tree assessment.

Urban Forestry Services, Inc.

Arboricultural Consulting | Wholesale Tree Nursery

General Tree Protection Guidelines

1. These Guidelines pertain to any disturbance, use or activity within the Critical Root Zone of any retained tree on this project. See attached **Critical Root Zone Explanation**. The owner's arborist and general contractor shall meet onsite before any site work begins to discuss and agree on the methods used to protect the retained trees during construction.

2. No soil disturbance shall take place before tree protection fences are installed. All evaluated trees to be retained within these areas are clearly illustrated on the Site Plan. The owner's arborist and contractor shall confirm on site which trees are to be removed and those to be retained. Directional felling of trees to be removed will be completed with great care not to damage retained trees.

3. The **Tree Protection Site Plan** shows the recommended location of the Tree Protection Fence (TPF). Immediately after clearing and grading stakes are set in the field, the owner's arborist, during review and discussion with the contractor will make a final determination on the tree protection requirements depending on construction limits and impact on major roots. The arborist may adjust clearing limits in the field so that, in his/her opinion, tree roots are protected while necessary work can proceed.

4. The Tree Protection Fence (TPF) shall be installed along the clearing limits, with special consideration of the Critical Root Zone (CRZ) of trees to be preserved. The CRZ of a tree is generally described as an area equal to 1-foot radius for every 1-inch diameter of tree. For example, a 10-inch diameter tree has a CRZ of 10-foot radius. Work within that area may be limited to hand work. The Tree Protection Fence (TPF) shall be constructed with a steel posts driven into the ground with 6-ft. chain link fence attached. The arborist upon consultation with the contractor shall determine the placement of the fence and the extent and method of clearing near preserved trees. Additional follow-up determinations may be required later on in the project. See attached **Critical Root Zone Explanation**.

5. Where the CRZ includes an area covered by hardscape, the TPF can be placed along the edge of the hardscape if and until it is removed. After removal, the available CRZ should be backfilled with soil up to 6 inches deep and protected with the TPF.

6. No parking, storage, dumping, or burning of materials is allowed beyond the clearing limits or within the TPF.

7. Tree protection signs shall be attached to the fence only and shall be shown as required on the Site Plan. They should read "Protect Critical Root Zone (CRZ) of trees to be retained."

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Email: jimb-ufsinc@wavecable.
www.urbanforestryservices.

Planning, Managing, & Restoring Urban Greenspaces

No soil disturbance, parking, storage, dumping, or burning of materials is allowed beyond the Tree Protection Fence. Work within this area shall be reviewed with and approved by the owner's arborist. Call Jim Barborinas of Urban Forestry Services, Inc. 360-770-9921 for Questions."

8. Where vehicular access is required within the CRZ of any preserved tree that is not protected with hardscape, the soil shall be protected with 18" of woodchips and/or plywood or metal sheets to protect from soil compaction and damage to roots of retained trees.

9. The Tree Protection Fence will not be moved without authorization by the owner's arborist or City. The Fence shall be left up for the duration of the project.

10. Great care shall be exercised when landscaping within the CRZ of any tree. Roots of preserved trees and other vegetation shall not be damaged by planting or irrigation lines. The owner's arborist shall review the Landscape Plan and approve those activities within the CRZ of retained trees

11. The owner's arborist will determine to what extent backfilling is allowed within the CRZ of a preserved tree. Only sandy, gravelly pit run is recommended for backfilling. Grade cuts are usually more detrimental than grade filling within the CRZ.

12. Trees recommended for maintenance and approved by the owner, shall be pruned for deadwood, low hanging limbs, and proper balance, as recommended for safety, clearance or aesthetics. An International Society of Arboriculture Certified Arborist is recommended to perform the pruning. ANSI A300 American Standards for Pruning shall be used. Limbs of retained trees within 10 feet or more, of any power line depending on power line voltage, may only be pruned by a Utility Certified Arborist. This pruning must be coordinated with the local power company or a private company with this certification.

13. Required work may result in the cutting of roots of retained trees. Severed roots of retained trees shall be cut off cleanly with a sharp saw or pruning shears. No pruning paint on trunk or root wounds is recommended. Severed roots shall be covered immediately after final pruning with moist soil or covered with mulch until covered with soil. Excavation equipment operators shall take extreme care not to hook roots and pull them back towards retained trees. This work shall be under the direct supervision of the owner's arborist.

14. If clearing is performed during the summer, supplemental watering and/or mulching over the root systems of preserved trees may be required by the owner's arborist. He or she should be notified in this event. Supplemental watering and mulching over the root systems of root impacted or stressed trees are strongly recommended to compensate for root loss and initiate new root growth. Long periods of slow drip irrigation will be most effective. Water once per week and check soils for at least 12 inches infiltration. This work shall be under the direct supervision of the owner's arborist.

15. Additional tree protection recommendations may be required as needed.

The owner's arborist may be required to monitor work when disturbance occurs near retained trees and shall make periodic site visits to report to the owner and city if tree protection guidelines are being followed.

The owner's arborist shall make a final site visit to report on retained tree condition following completed work and shall report to the city to release the bond for the retained trees.

•Energy Forms

Building PERMIT
October 5, 2021

A16

GENERAL REQUIREMENTS

SUMMARY OF WORK
Project consists of new construction as shown on these Contract Documents used in coordination with the Architectural and other discipline's documents.

DEFINITIONS
The following acronyms are used throughout these structural notes:
- IBC - Governing code, including local amendments
- SER - Structural Engineer of Record per these Contract Documents
- UNO - unless noted otherwise
- ASTM - American Society for Testing and Materials

GOVERNING CODE
All design and construction shall conform to the 2018 International Building Code and local jurisdiction amendments.

Reference to ASTM and other standards shall refer to the latest edition designated by IBC Chapter 35. Refer to the specifications for information in addition to that covered by these structural notes and drawings.

DOCUMENTS
Structural Documents shall be used in conjunction with Architectural Documents for all bidding and construction.

Drawings indicate general and typical details of construction. Typical details and general notes shall apply even if not specifically denoted on plans, UNO. Where conditions are not specifically indicated similar details of construction shall be used, subject to review and approval by the Architect and the SER.

Existing structural information, designated as (E) on the structural drawings, has been compiled from information furnished by various sources and is not necessarily field-verified by the engineer. Dimensions relating to existing structures are intended for use as guidelines only; all dimensions shall be field-verified by the contractor prior to start of construction. Notify the Architect of any discrepancies.

These Contract Documents and any materials used in preparation of them, including calculations, are the exclusive property of the SER and can be reproduced only with the permission of the SER.

WARRANTY
The SER has used that degree of care and skill ordinarily exercised under similar circumstances by members of the profession in this locale and no other warranty, either expressed or implied, is made in connection with rendering professional services.

OWNER RESPONSIBILITY
The owner shall retain a Special Inspector to perform the special inspection requirements required by the building official and as outlined in the Special Inspection section below.

DESIGN CRITERIA

BUILDING CATEGORY
Structural Risk Category II
Importance factors for snow and seismic are listed with the loading criteria.

LIVE LOADS - FLOOR AND ROOF
Live loads indicated with * are reducible per IBC
Partition loading has been added per IBC

Residential:

Uninhabitable attics without storage	10 psf
Uninhabitable attics with storage	20 psf
Uninhabitable attics portions over 4'-0" high	20 psf
Habitable attics and sleeping areas	30 psf
Residential floor	40 psf
Residential decks	40 psf

LIVE LOADS - SNOW
Numbering below is per IBC Section 1603.1.3:
1. Flat-Roof Snow Load: Pf = 2.5 psf
2. Snow Exposure Factor: Ce = 1.2
3. Snow Importance Factor: Is = 1.0
4. Thermal Factor: Ct = 1.0

LATERAL LOADS - WIND
Numbering below is per IBC Section 1603.1.4:
1. Ultimate Design Wind Speed (3-second gust): Vult = 98 mph
2. Risk Category: II
3. Wind Exposure: B
4. Internal Pressure Coefficient = +/- 0.18
5. Components and Cladding:
   The following working loads may be used in lieu of calculations:

   Uplift at roof
   - in field - 35 psf
   - at edges - 35 psf
   - at corner - 20 psf

   Overhangs
   - at edges - 35 psf
   - at corner - 45 psf

   Walls
   - at field ± 20 psf
   - at corner ± 25 psf

6. Topographic factor: Kzt = 1.0
7. Directionality factor: Kd = 0.85
8. Enclosure classifcation: Enclosed
9. Gust Effect Factor: G = 0.85
10. Design Base shear: North/South = 12 kips; East/West = 22 kips
11. Analysis procedure: Directional

LATERAL LOADS - EARTHQUAKE
Numbering below is per IBC Section 1603.1.5:
1. Risk Category: II
2. Seismic Importance Factor: Ie = 1.0
3. Mapped Spectral Response Acceleration Parameters: Ss = 1.264 g; S_1 = 0.442 g
4. Site Class: D; F_A = 1.20 ; F_V = 1.86
5. Design Spectral Response Acceleration Parameters: S_{DS} = 1.01 g; S_{D1} = 0.547 g
6. Seismic Design Category: D
7. Basic Seismic Force-Resisting Systems:
   - Vertical Elements: Light-Framed Wood Walls Sheathed with Wood Structural Panels;
   - Diaphragms: Plywood structural panels;
8. Design Base Shear: 15 kips
9. Seismic Response Coefficient: Cs = 0.156
10. Response Modification Coefficient: R = 6.5
11. Analysis Procedure: Equivalent Lateral Force Procedure

Additional Items:
- Building Location: 47.728° N, 122.202° W
- Building Height = 25 feet
- Redundancy Factors:
  - North/South Direction = 1.0
  - East/West Direction = 1.0

CONTRACTOR PERFORMANCE REQUIREMENTS

DESIGN DOCUMENTS
Contractor shall verify all dimensions and all conditions at the job site, including building and site conditions before commencing work, and be responsible for same. All discrepancies shall be reported to the Architect before proceeding with work. Any errors, ambiguities and/or omissions in the contract documents shall be reported to the Architect immediately, in writing. No work is to be started before correction is made.

Contractor shall verify and/or coordinate all dimensioned openings and slab edges shown on the contract documents. Some dimensions, openings and embedded items are shown on the structural drawings. Others may be required. Refer to architectural drawings for size and location of curbs, equipment pads, wall and floor openings, architectural treatment, embeds required for architectural items and dimensions. Refer to mechanical, plumbing, electrical and fire protection drawings for size and location of all openings for ducts, piping, conduits, etc. Submit openings to Architect for review.

Do not scale drawings. Use only field verified dimensions. When electronic plan files are provided for the Contractor's detailing convenience, it shall be noted that the electronic files are not guaranteed to be dimensionally accurate. The Contractor uses them at their own risk. The published paper documents are the controlling Contract Documents. Electronic files of detail sheets and notes will not be provided.

CONTRACTOR-INITIATED CHANGES
Contractor-initiated changes shall be submitted in writing to the Architect for review and acceptance prior to fabrication or construction. Changes shown on shop drawings only will not satisfy this requirement.

INSPECTIONS
The Contractor shall coordinate with the building department for all building department required inspections.

TEMPORARY SHORING AND BRACING
The Contractor shall provide temporary bracing as required until all permanent connections and stiffening have been installed. The Contractor is responsible for the strength and stability of all partially completed structures including but not limited to concrete or masonry walls, steel framing and erection aids. The Contractor shall, at their discretion, employ the aid of a licensed Structural Engineer to design all temporary bracing and shoring necessary to complete the work described in these contract documents. The Contractor shall be responsible for all required safety standards, safety precautions and the methods, techniques, sequences or procedures required in performing their work. For concrete construction refer to ACI 318 - Section 26.11.2 "Removal of Formwork".

SAFETY PROCEDURES
Contractor shall be responsible for all safety precautions and the methods, techniques, sequences or procedures required to perform the contractor's work. The Structural Engineer has no overall supervisory authority or actual and/or direct responsibility for the specific working conditions at the site and/or for any hazards resulting from the actions of any trade contractor. The Structural Engineer has no duty to inspect, supervise, note, correct, or report any health or safety deficiencies to the Owner, Contractors, or other entities or persons at the project site.

RENOVATIONS

DEMOLITION
Contractor shall verify all existing conditions before commencing any demolition. Shoring shall be installed to support existing construction as required and in a manner suitable to the work sequences. Demolition debris shall not be allowed to damage or overload the existing structure. Limit construction loading (including demolition debris) on existing floor systems to 40 psf.

EXISTING CONCRETE
Existing reinforcing shall be saved where and as noted on the plans. Saw cutting, if and where used, shall not cut existing reinforcing that is to be saved.

- All new openings through existing walls, slabs and beams shall be accomplished by saw cutting wherever possible.
- Contractor shall verify all existing conditions and location of members prior to cutting any openings.
- Small round openings shall be accomplished by core drilling, if possible.
- Where new reinforcing terminates at existing concrete, dowels epoxy grouted into existing concrete shall be provided to match horizontal reinforcing, unless noted otherwise on plans.

EXISTING WOOD
Contractor shall check for dryrot at all areas of new work. All rot shall be removed and damaged members shall be replaced or repaired as directed by the Structural Engineer or Architect.

BUILDING MOVEMENT

All non-structural wall connections shall account for construction tolerances, column shortening and beam deflections. In addition, all design components shall accommodate a typical vertical movement at each floor of 3/4" due to variable live loading. This displacement will occur at the free end of cantilever beams and at midspan of simple span beams. Non-structural walls shall accommodate typical lateral movements of 1/2" between adjacent floors perpendicular and/or parallel to the wall.

Wall attachments shall not apply any lateral loads to the bottom flange of beams. If attachment is made to the bottom of beams, additional inclined struts bracing the bottom flange or other equivalent means to counteract this force shall be provided by the Contractor.

SHOP DRAWINGS AND SUBMITTALS

SHOP DRAWING & SUBMITTAL REVIEW (including Deferred Structural Components)
The contractor must review and stamp the shop drawings & submittals for review. SER will only review submittals for items shown on SER documents. Submittals for Deferred Structural Components will receive cursory review by SER for loads imposed on primary structure. SER will review shop drawings for general conformance with design concept of the project and general compliance with the information given in the Structural Contract Documents. Review of submittals does not constitute approval or acceptance of unauthorized deviation from Contract Documents.

Corrections or comments made on shop drawings during this review do not relieve contractor from compliance with the requirements of the plans and specifications.

Contractor responsible for:
- Reviewing, approving, stamping and signing submittals prior to submittal to Architect and SER
- Timing submittals to allow two weeks of review time for the SER and time for corrections and/or resubmittal
- Conformance to requirements of the Contract Documents
- Dimensions and quantities
- Verifying information to be confirmed or coordinated
- Information solely for fabrication, safety, means, methods, techniques and sequences of construction
- Coordination of all trades

Resubmittals shall be clouded and dated for all changes to the submittal. Only clouded portions of resubmittal will be reviewed and SER's review stamp applies to only these areas.

SUBSTITUTIONS
Substitutions shall be submitted in writing prior to submittal of shop drawings. Shop drawings bearing substitutions will be rejected. Submit engineering data to substantiate the equivalence of the proposed items. The SER's basic services contract does not include review of substitutions that require re-engineering of the item or adjacent structure. Nor does the SER's contract cover excessive review of proposed substitutions. The fees for making these reviews and/or redesign shall be paid by the contractor. Reviews and approvals shall not be made until authorization is received.

SHOP DRAWINGS AND SUBMITTALS (cont'd)

SUBMITTALS
Shop drawings and material submittals shall be submitted to the Architect and SER prior to any fabrication or construction for the following structural items. Submittals shall include one reproducible and one copy; reproducible will be marked and returned. If deviations, discrepancies, or conflicts between shop drawings submittals and the contract documents are discovered either prior to or after shop drawing submittals are processed by the SER, the Contract Documents control and shall be followed.

- Construction sequence description
- Contractor quality control testing procedures when required in specifications
- Concrete mix designs
- Concrete accessories material specification, size and location
- Glued laminated members (certificates shall be on site and be available upon request)
- Engineered wood beams (certificates shall be on site and be available upon request)
- Deferred Structural Components listed below

DEFERRED STRUCTURAL COMPONENTS
Components referred to as Deferred Structural Components shall comply with these notes. These elements have not been permitted under the base building application. The contractor will be required to submit the component system documents to the building official for approval. The documents shall be stamped and signed by an engineer licensed by the state where the project is located. The deferred structural components shall not be installed until the design and submittal documents have been approved by the building official.

Prior to building department submittal, the deferred structural components submittals shall receive cursory review by SER for loads imposed on primary structure and general conformance with design concept of the project and general compliance with the information given in the Structural Contract Documents. Review of submittals does not constitute approval or acceptance of unauthorized deviation from Contract Documents. Submittals of contractor-designed components shall include the designing professional engineer's stamp and signature, as noted above. The submittal shall be approved by the component vendor prior to review by the SER. The designing professional is responsible for code conformance and all necessary connections not specifically called out on architectural or structural contract documents.

Submittals shall include details of connections to primary structure that indicate magnitude and direction of all loads imposed at point of connection. Design criteria shall be provided with submittal and calculations shall be made available upon request.

The following list includes the items that are defined as Deferred Structural Components. Refer to other discipline's contract documents for additional deferred components that may require structural design and details. Connections of these elements shall not induce torsion on structural members. Deferred Structural Components shall be manufactured, delivered, handled, stored, and field erected in conformance with instructions prepared by the component vendor.

Deferred structural components:
- Plywood web joists
- Pre-manufactured wood trusses
- Continuous rod holdown systems

GEOTECHNICAL

GENERAL CRITERIA
Allowable soil pressure and lateral earth pressure are assumed and therefore must be verified by a Geotechnical Inspector or the building official. If soils are found to be other than assumed, notify the Structural Engineer for possible foundation redesign.

Unless noted otherwise, footings shall be centered below columns or walls.

INSPECTIONS
All prepared soil-bearing surfaces shall be inspected by the owners Geotechnical Inspector (or building official) prior to placement of reinforcing steel and concrete. Inspections shall be made per IBC Table 1705.6.

BEARING VALUES
All footings shall bear on undisturbed soil and shall be lowered to firm bearing if suitable soil is not found at elevations shown. Exterior footings shall bear a minimum of 18" below the finished ground surface. Footing elevations shown on plans (or in details) are minimum depths and for guidance only; the actual elevations of footings must be established by the Contractor in the field working with the Geotechnical Inspector.

Allowable vertical bearing soil pressure = 1,500 psf
Allowable lateral bearing soil pressure = 100 psf

SUBGRADE PREPARATION
Prepare subgrade per the Geotechnical Report, summarized as follows: All footings shall be cast on undisturbed firm natural soils that are free of organic materials. Footing excavation shall be free of loose soils, sloughs, debris and free of water at all times. If organic silt and/or fill material is encountered at subgrade elevations, overexcavate a minimum of 2'-0" below the design foundation subgrade elevation prior to placing footings. The overexcavated areas shall be backfilled with structural fill compacted to 95% proctor per ASTM D-1557 or a lean concrete mix.

EXISTING UTILITIES
The Contractor shall determine the location of all adjacent underground utilities prior to any excavation, shoring, pile driving, or pier drilling. Any utility information shown on the plans and details are approximate and not verified by the SER. Contractor is to provide protection of any utilities or underground structures during construction.

DRAINAGE
Drainage systems, including foundation, roof and surface drains, shall be installed as directed by the Geotechnical Report. Vapor retarder placed below slab-on-grade shall conform to ASTM E 1643 and ASTM E 745.

SHEET INDEX

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Engineer's Stamp

PETER A. OPSAHL — STATE OF WASHINGTON — 24234 — REGISTERED PROFESSIONAL ENGINEER — 02/21/2018

Project Title

Aguilar Addition

10341 NE 141st Place
Kirkland, WA 98034

Project Information

Project No.	17-148-01
Checked By	PO

Issue

PERMIT SET	02/21/2018
3 REVISION 3	03/04/2022

Department Approval

Sheet Title

Structural General Notes

Sheet Number

S1.01

CONCRETE

CAST-IN-PLACE CONCRETE

Concrete materials shall conform to the following:

Portland cement:	Type 1, ASTM C150
Fly ash (if used):	ASTM C618 class F or C
Slag cement (if used):	ASTM C989
Lightweight aggregates:	lightweight aggregates shall not be used without prior approval of SER and building department
Normal weight aggregates:	ASTM C33
Sand equivalent:	ASTM C33
Water:	Potable per ASTM C94
Air entraining admixtures:	ASTM C260
Chemical admixtures:	ASTM C494
Flowable concrete admixtures:	ASTM C1017

Durability requirements of concrete mixes shall conform to building code. These requirements include water-cementitious material ratios, minimum compressive strengths, air entrainment, type of cement, and maximum chloride ion content.

CONCRETE STRENGTH REQUIREMENTS TABLE

Location	Strength f'c (psi)	Max Agg Size	Max W/C Ratio	Total Air Content	Fly Ash Content	Exposure...			
						F	S	P	C
LEAN MIX SOIL REPLACEMENT...	1,500	SAND	1.5...	-	-	F1	S0	P0	C1
FOUNDATIONS, GRADE BEAMS,...	4,500	1"	0.44	4.5%	15-20%	F1	S0	P0	C1
WALLS, COLUMNS, ALL OTHER CONCRETE	4,500	3/4"	0.40	6%	20-30%	F2	S0	P0	C1

* 28-DAY CONCRETE STRENGTH
^ 3-DAY CONCRETE STRENGTH

CONCRETE STRENGTH REQUIREMENTS

Concrete shall be mixed, proportioned, conveyed and placed in accordance with IBC Section 1904, 1905, 1906 and ACI 301, including testing procedures. Concrete shall attain a 28-day strength of f'c = 3,000 psi for purposes of weathering, and accommodate placement, while f'c = 2,500 psi is required for strength. Special inspection is not required for concrete with a 28-day strength greater than f'c = 2,500 psi for purposes of weathering per IBC 1704.6.

CONCRETE MIXTURES

Mixes shall be proportioned to meet compliance requirements of ACI 318 Section 26.4.3. Slump, W/C ratio, admixtures and aggregate size will be determined by the contractor. Submit documentation of concrete mixture characteristics for review by the SER before the mixture is used and before making changes to mixtures already in use. Documentation shall comply with ACI 318 Section 26.4.4.

All concrete, including slab on grade, shall contain an acceptable water-reducing admixture conforming to ASTM C494 and be used in strict accordance with the manufacturer's recommendations.

All concrete which is exposed to freezing and thawing in a moist condition or exposed to deicing chemicals shall contain an air entraining agent, conforming to ASTM C260. Total air content shall be adjusted per ACI 318 for mix designs with smaller nominal aggregate size. The amount of entrained air shall be measured at the discharge end of the placing nozzle. Entrained air shall be as noted ± 1.0% by volume. Air-entrainment shall not be used at slabs that will receive a smooth, dense, hard-troweled finish.

Trucks hauling plant-mixed concrete shall arrive on-site with a field ticket indicating the maximum gallons of water that can be added at the site not to exceed the total water content in the approved mix design.

Concrete shall be deposited as nearly as practicable in its final position to avoid segregation due to rehandling or flowing. Concrete shall be thoroughly consolidated by suitable means during placement and shall be thoroughly worked around reinforcement, embedded items, and into corners of forms.

FORMWORK AND ACCESSORIES

Concrete construction shall conform to ACI 301 "Specifications for Structural Concrete" and the Building Code, including testing procedures. See specifications and/or architectural documents for formwork requirements. Installation shall adhere to ACI 301. Conduits and pipes of aluminum shall not be embedded in concrete construction.

See architectural drawings for exact locations and dimensions of door and window openings in all concrete walls. See mechanical drawings for size and location of mechanical openings through concrete walls. See architectural drawings for all grooves, notches, chamfers, feature strips, color, texture, and other finish details at all exposed concrete surfaces, both cast-in-place and precast. See structural details for reinforcing around openings.

Contractor shall submit the proposed locations of construction joints to the Architect for acceptance before starting construction. Erico Lenton Formasaver (IAPMO-UES-ER-0129) may be used as an alternate to the roughened joint. All construction, control, and isolation joints for slabs on ground shall be in accordance with the typical details.

Concrete accessories and embedded items shall be coordinated with Architectural and all other Contract Documents and suppliers' drawings before placing concrete. Wet-setting of anchor rods, reinforcing, hardware, etc. is not allowed in concrete. Anchor rods, reinforcing, hardware, etc. shall be firmly tied in place prior to concrete placement.

Refer to Architectural documents for waterstops, damp proofing, and soil retaining wall drainage requirements at concrete and at concrete joints (construction joints, slab to wall joints, curb to slab joints, etc).

CURING AND FINISHES

Protect and cure freshly placed concrete per ACI 305.1 in hot conditions, ACI 306.1 in cold conditions, and ACI 308.1 " Specification for Curing Concrete". All exposed edges and corners shall have 3/4" chamfer, UNO. Concrete flatwork shall be sloped to provide positive drainage. Coordinate finish with architectural contract documents.

At the time of application of finish materials or special treatment to concrete, moisture content of concrete shall conform to requirements in finish material specifications. Where vapor sensitive coverings are to be placed on slabs on grade, conform strictly to slab covering manufacturer's recommendations regarding vapor retarder and granular fill requirements below the slab.

CONCRETE CRACK MAINTENANCE

Cracking occurs in concrete structures due to inherent shrinkage, creep, and the restraining effects of walls and other structural elements. Most cracking due to shrinkage and creep will likely occur over the first two years of the life of the structure; further concrete movement due to variations in temperature may persist. Cracks that result in water penetration will need to be repaired to protect reinforcing. Other cracking may be repaired at the owner's discretion for aesthetical reasons or performance of applied finishes. Prior to repairing cracks, a structural engineer should be consulted to provide direction on which cracks to repair and on whether observed cracks may affect the strength of the structure.

REINFORCEMENT IN CONCRETE AND MASONRY

REINFORCING STEEL

Reinforcing steel shall conform to ASTM A615 (including supplement S1), Grade 60, Fy = 60,000 psi, except any bars specifically so noted on the drawings shall be Grade 40, Fy = 40,000 psi.

HIGH-STRENGTH THREADED BARS

High-strength threaded bars (stressed and non-stressed) shall be Dywidag Threadbars with appropriate anchorage plates, nuts, and couplers as manufactured by Dywidag International Inc.

WELDED WIRE REINFORCING

Welded Wire Reinforcing (WWR) shall conform to ASTM A185. Lap splice adjacent mats of welded wire fabric a minimum of 8" at sides and ends. In equipment pads, use minimum WWR 6x6-W2.1xW2.1, UNO.

PROCEDURES

Reinforcing steel shall be detailed (including hooks and bends) in accordance with ACI 315 "Details and Detailing of Concrete Reinforcement". Lap all reinforcement in accordance with "The Reinforcing Splice and Development Length Schedule" on these documents. If table is not provided, lap all reinforcing by 40 bar diameters. Provide corner bars at all wall and footing intersections.

Reinforcing steel shall be adequately supported to prevent displacement during concrete and grout placement. Bars shall be bent cold.

Bars partially embedded in concrete shall not be field bent, unless specifically so detailed or approved by the SER.

Mechanical connection of continuous reinforcing bar shall be used where shown on documents and may be substituted for lap splices if approved by the SER. Such connections shall develop at least 125% of the specified yield strength of the bar. Acceptable connectors shall be the Erico Lenton Plus Standard Coupler (ER-3967), Dayton Superior Bar-Lock L Series (ER-5064), or approved equal.

Welding or tack welding of reinforcing bars to other bars or to plates, angles, etc, is prohibited, except where specifically approved by the SER. Where welding is approved, it shall be done by AWS/WABO-certified welders using E9018 or approved electrodes. Welding procedures shall conform to the requirements of AWS D1.4. Any Grade 60 reinforcing bars indicated on drawings to be welded shall conform to ASTM A706. Reinforcement complying with ASTM A615 (S1) may be welded only if material property reports indicating conformance with welding procedures specified in AWS D1.4 are submitted. Welding within 4" of cold bends in reinforcing steel is not permitted.

ANCHORAGE

Post-installed anchors shall not be installed without prior approval of engineer of record unless noted otherwise on the plans.

ADHESIVE ANCHORS

Adhesive anchors (threaded rods or reinforcing bar) specified on the drawings shall be installed using "AT-XP" anchoring adhesive as manufactured by the Simpson Strong-Tie Company. Install in strict accordance with IAPMO Report Number ER-263 (into concrete) or ER-281 (into masonry). At concrete masonry or brick masonry applications, bolts shall be installed into fully-grouted cells. Rods shall be ASTM F1554 Gr.55, unless noted otherwise. Special inspection of installation is required.

EXPANSION ANCHORS

Expansion anchors into concrete and concrete masonry units shall be "Strong Bolt 2" as manufactured by the Simpson Strong-Tie Company. Install in strict accordance with ICC Report Number ESR-3037 (into concrete) or IAPMO Report Number ER-240 (into masonry), including minimum embedment requirements. At concrete masonry or brick masonry applications, bolts shall be installed into fully-grouted cells. Substitutes proposed by contractor shall be submitted for review with ICC reports indicating equivalent or greater load capacities. Special inspection of installation is required.

WOOD

MATERIAL CRITERIA

Framing lumber shall be kiln dried or MC-19 (unless more stringent criteria are required in these notes or on the drawings) and graded and marked in conformance with the latest WCLIB "Standard Grading Rules No. 17 for West Coast Lumber". Furnish to the following minimum standards:

WOOD STANDARDS

Member	Grade	Moisture Content
4x BEAMS & POSTS, 6x POSTS	DF #2	MC19
4x TREATED BEAMS & POSTS, AND 6x TREATED POSTS	DF #2	MC19
2x JOISTS, RAFTERS, BUILT-UP BEAMS, AND HEADERS	DF #2	MC19
2x, 3x FLATWISE & EDGEWISE BLOCKING	DF STANDARD	MC19
3x NAILERS ON STEEL BEAMS	DF #2	MC19
2x4 AND 2x6 STUDS	DF STUD	MC19
3x STUDS	DF #2	MC19
2x4 PLATES	DF STANDARD	KD15
2x6 PLATES	DF #2	KD15
2x, 3x, AND 4x TREATED PLATES, LEDGERS	DF #2	KD15

MOISTURE CONTENT AND CARE OF MATERIAL DURING CONSTRUCTION

All 2x studs and plates shall be kiln dried. The Contractor shall take measures to minimize exposure of sawn lumber and engineered wood products to moisture during construction. Excessive changes in moisture content during construction may result in swelling and shrinkage of a single story level in the magnitude of 1/2". This may create problems where multi-story wood construction joins multi-story concrete wall construction. All wood framed construction shall have maximum moisture content not to exceed 10% at time of fur-out, which shall be verified by a testing agency hired by the Owner. These test results shall be submitted to the Architect and Structural Engineer of Record for review prior to installation and interior drywall installation is performed. In addition, pre-loading the entire wood building with the interior drywall while the building is being dried out is recommended before wood ledgers are attached to concrete shear walls.

Wood joists and beams supporting topping slabs or subjected to construction loading shall have a maximum live load deflection of l/600. The contractor shall be responsible for ensuring that the moisture content of wood members supporting concrete or construction loads is, and remains, at 10% or less. Wood framing with higher moisture contents before, or during, the placement of topping slabs or subjected to construction loading are subject to excessive creep. Contractor to provide means to maintain the moisture content as required to prevent creep.

VERTICAL SHRINKAGE

Allow for 1/2" of wood shrinkage/compression at each level (including foundation). Values are cumulative for the height of the building. Building systems such as mechanical, electrical, plumbing, fire sprinklers, etc. shall have flexible components that account for the potential wood shrinkage/compression. Architectural finishes shall also account for the potential wood shrinkage/compression.

TREATED WOOD

All wood framing in direct contact with concrete or masonry, exposed to weather, or that rest on exterior foundation walls and are located within 8" of earth, shall be pressure-treated with an approved preservative per IBC section 2303.1.9. Cut or drilled sections of treated material shall be treated with an approved preservative per IBC section 2303.1.9. See IBC section 2304.12 for additional requirements.

WOOD (cont'd)

GLU-LAMINATED MATERIAL

Glu laminated members shall be fabricated in conformance with ANSI/AITC A190.1 AND ASTM D3737, Stress Class 24F-1.8E. Each member shall bear an AITC identification mark and shall be accompanied by an AITC certificate of conformance. All simple span beams shall be douglas fir combination 24F-V4, fb = 2,400 psi, fv =265 psi and all cantilevered beams and columns shall be Douglas fir combination 24F-V8, fb = 2,400 psi, fv = 265 psi unless noted otherwise. Camber all simple span glu laminated beams to 3,500' radius or zero camber, unless shown otherwise on the plans.

STRUCTURAL COMPOSITE LUMBER

Manufactured lumber, PSL, LVL, and LSL, shall be manufactured under a process approved by the national research board. Each piece shall bear a stamp or stamps noting the name and plant number of the manufacturer, the grade, the national research board number, and the quality control agency. All PSL, LVL and LSL lumber shall be manufactured in accordance with ICC Report ESR-1387. LVL lumber shall be manufactured using veneer glued with a waterproof the requirements of ASTM D2559 with all grain parallel with the length of the member. The members shall have the following minimum properties:

MINIMUM DESIGN PROPERTIES FOR COMPOSITE LUMBER

Grade	Orientation	E (ksi)	Fb (psi)	Fcll (psi)	Fv (psi)
1.55E LSL	BEAM	1,550	2,325	2,170	310
2.0E LVL	BEAM	2,000	2,600	2,510	285
1.8E PSL	COLUMN	1,800	2,400	2,500	190
2.0E PSL	BEAM	2,000	2,900	2,900	290

Design shown on plans is based on Trus-Joist products manufactured by the Weyerhaeuser Corporation. Alternate manufacturers may be used subject to review and approval by the Architect and Structural Engineer of Record, alternate joist hangers and other hardware may be substituted for items shown provided they have ICC approval for equal or greater load capacities. All joist hangers and other hardware shall be compatible in size with members provided.

PLYWOOD WEB JOISTS

Prefabricated plywood web joist design shown on plans is based on Trus-Joist products manufactured by the Weyerhaeuser Corporation. Alternate plywood web joist manufacturers may be used provided they conform with the ICC evaluation service reports ESR-1387 and ESR-1153 and are subject to review and approval by the Architect and Structural Engineer of Record. Alternate plywood web joists must have equivalent section properties and allowable stresses to those previously specified to be considered. Alternate joist hangers and other hardware may be substituted for items shown provided they have ICC approval for equal or greater load capacities. All joist hangers and other hardware shall be compatible in size with plywood web joist provided. All necessary bridging, blocking, blocking panels, stiffeners, etc., shall be detailed and furnished by the manufacturer. All permanent and temporary bridging shall be installed in conformance with manufacturer's specifications. The following deflection criteria shall be maintained with all alternates.

- Floor live load deflections shall be limited to span/480 (span/360 at 100 psf live load).
- Roof total load deflections shall be limited to span/240.
- Specified plywood web joists at floors have been designed for a minimum TJ-Pro rating of 40 in addition to the maximum allowable deflections noted above.

Alternative framing members at shear wall rim / blocking locations may be used, provided ICC reports or manufacturer's test data are submitted. The submitted data shall verify the ability of the alternative members to provide equivalent or greater shear capacities using the specified nail and anchor sizes and spacing.

WOOD STRUCTURAL PANELS

Wood structural panels shall be APA rated sheathing, exposure 1 durability classification, in conformance with USDOC PS 1, ASTM D 5457 and IBC 2303.1.5 and table 2304.8(2).

Oriented strand board (OSB), shall be in accordance with USDOC PS 2, and of equivalent thickness, exposure rating and span rating and may be used in lieu of plywood pending OSB substitution approval by Architect.

Contractor to ensure OSB is protected to prevent warping during installation.

FASTENERS

Fasteners shall conform to the following requirements, unless noted otherwise. Splitting shall be avoided at all wood fasteners:

Bolts	NDS section 12.1.3
Lag screws	NDS section 12.1.4
Wood screws	NDS section 12.1.5
Nails	NDS section 12.1.6
Wood-to-wood connection bolts	ASTM A307
Steel-to-wood connection bolts	ASTM A307
Anchor rods (7" embed min)	ASTM F1554 grade 36 with threaded ends and welded nut at end (provide higher grade at holdown rods where indicated)

Thru-bolt and anchor rod holes shall be at least 1/32" but no more than 1/16" larger than bolt/rod diameter. Clearance holes for lag screw shanks shall have the same diameter as the lag shank and the same penetration depth as the length of the unthreaded shank. Lead holes for threaded portion of lag screws shall have a diameter of 55 to 60% of lag screw shank diameter and shall extend the length of the threaded portion of the lag screw.

Fasteners exposed to earth, weather or located in pressure preservative or fire retardant treated wood shall comply with the criteria listed in the "Metal Products in Contact with Treated Lumber" section.

FRAMING CONNECTORS

Timber connectors called out by letters and numbers shall be "Strong-Tie" by the Simpson Strong-Tie Company. Equivalent devices by other manufacturers may be substituted, provided they have ICC approval for equal or greater load capacities.

All connectors shall be installed in accordance with the manufacturer's recommendations. Provide number and size of fasteners as specified by manufacturer. All shims shall be seasoned and dried and the same grade (minimum) as members connected. All nails shall be as called out in the "Fasteners" section of this sheet, unless noted otherwise. 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. Where connector straps connect two members, place one-half of the nails or bolts in each member.

METAL PRODUCTS IN CONTACT WITH TREATED LUMBER

Simpson hardware in contact with ACQ, CA, or CBA pressure-preservative treated wood shall have a Zmax finish (G185 HDG per ASTM A653) or shall be post hot-dip galvanized (per ASTM A123 for connectors and ASTM A153 for fasteners) unless noted otherwise. Exception: type 304 or 316 stainless steel connectors and fasteners are required for the following applications:

- ACQ, CA, or CBA treatments with ammonia where members are used in exterior applications.
- All ACZA treatments
- Retention levels greater than 0.40 pcf for ACQ, 0.41 pcf for CBA-A, or 0.21 pcf for CA-B treatments.

Stainless steel connectors require matching stainless steel fasteners. Zmax and post hot-dip galvanized connectors require fasteners galvanized per ASTM A153. Thru-bolts and anchor rods used in dry conditions shall be permitted to be of mechanically deposited zinc coated steel with coating weights in accordance with ASTM B 695, class 55 minimum. See IBC section 2304.10.5.1 and "Framing Connectors" section on this sheet for additional requirements.

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Engineer's Stamp

Project Title

Aguilar Addition
10341 NE 141st Place
Kirkland, WA 98034

Project Information

Project No.	17-148-01
Checked By	PO

Issue

PERMIT SET	02/21/2018
1 PERMIT RESPONSE	07/17/2018

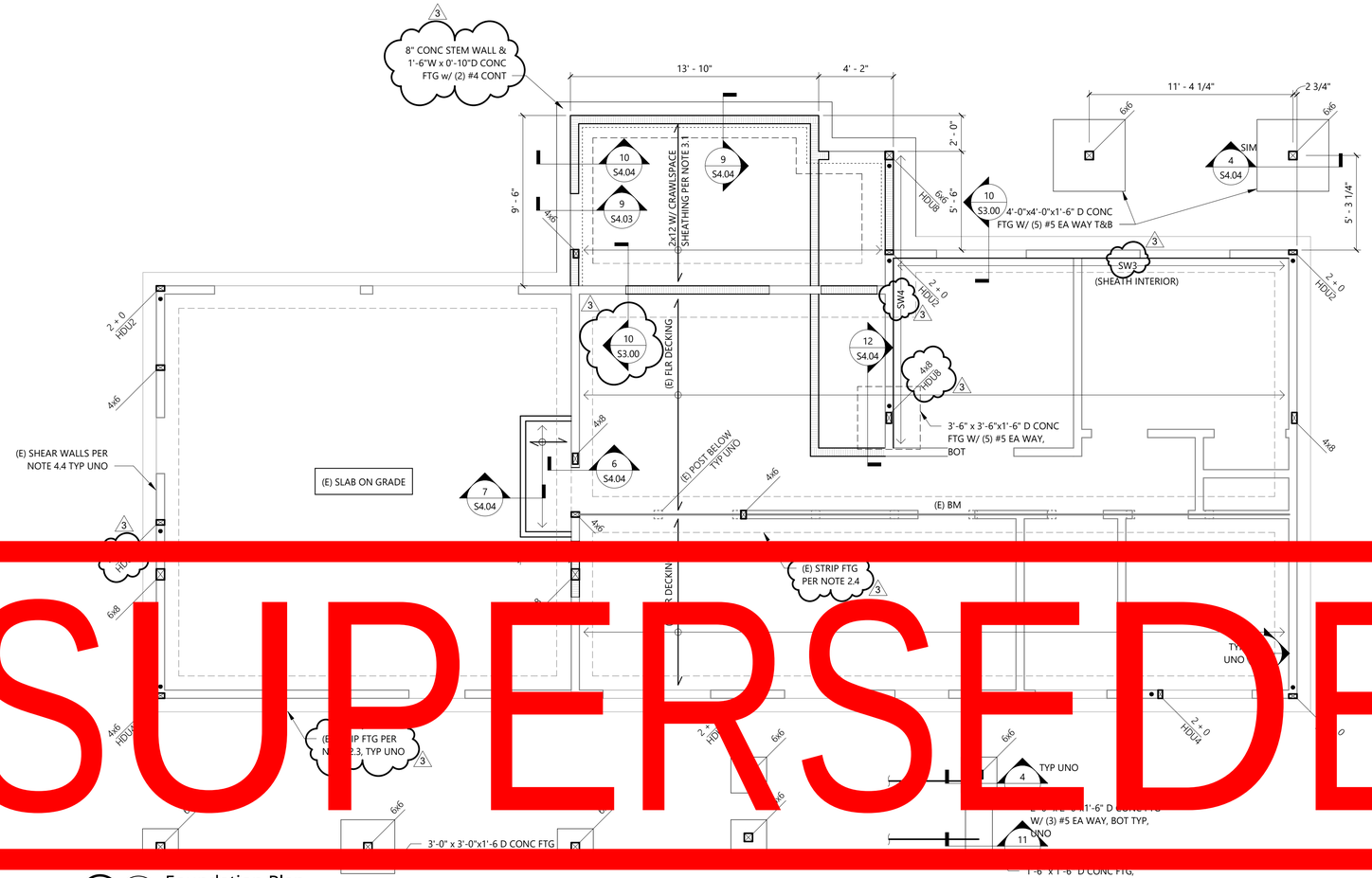
Department Approval

Sheet Title

Structural General Notes

Sheet Number

S1.02



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

North

FOUNDATION PLAN NOTES

1. GENERAL

1.1. ELEVATION AT TOP OF SLAB SHALL BE XX'-X", UNO.
ELEVATION AT TOP OF FOOTING SHALL BE XX'-X" BELOW TOP OF SLAB, UNO.

[-X'-X"] INDICATES ELEVATION AT TOP OF FOOTING, MEASURED IN FEET.

FOOTING ELEVATIONS SHOWN ARE FOR CONTRACTOR CONVENIENCE AND BIDDING ONLY. FINAL ELEVATIONS SHALL BE DETERMINED BY ON-SITE VERIFICATION BY SOILS ENGINEER, BUT SHALL NOT BE SHALLOWER THAN THOSE SHOWN ON THIS PLAN. REFER TO STRUCTURAL GENERAL NOTES FOR ADDITIONAL INFORMATION.

1.2. GRID LINES ARE TO FACE OF STUD AND CENTERLINE OF COLUMN. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.

2. FOUNDATIONS

2.1. EXCAVATE, BACKFILL, AND PREPARE SOILS AS REQUIRED PER STRUCTURAL GENERAL NOTES AND GEOTECHNICAL REPORT.

2.2. STEP FOOTINGS FOR UNDERGROUND PIPING AND AS REQUIRED PER TYPICAL STEPPED FOOTING DETAIL.

2.3. (E) FOUNDATIONS SUPPORTING WALLS ARE ASSUMED TO BE 8" THICK x 1'-2" TALL CONCRETE STEM WALL ON 10" THICK x 2'-0" WIDE CONTINUOUS FOOTINGS. CONTRACTOR TO VERIFY.

2.4. (E) FOUNDATIONS SUPPORTING CRAWL SPACE POSTS ARE ASSUMED TO BE 10" THICK x 2'-0" WIDE CONTINUOUS FOOTINGS. CONTRACTOR TO VERIFY.

3. FLOORS

3.1. FLOOR SHALL BE 23/32" APA-RATED SHEATHING, (48/24) EXPOSURE 1, TONGUE & GROOVE, GLUED AND NAILED. WHERE BLOCKED DIAPHRAGM IS NOTED ON PLAN, USE 2x FLAT BLOCKING AND 'Z' CLIPS AT UNSUPPORTED PANEL EDGES.

NAIL SHEATHING AS FOLLOWS:

FLOOR BOUNDARY (BN).....10d @ 6"
PANEL EDGES (EN).....10d @ 6"
OTHER SUPPORTS, FIELD NAILING.....10d @ 10"
BLOCKING, INTERIOR RIM JOISTS & STRUTS.....10d @ 4"

NAILS SHALL BE DRIVEN FLUSH WITH THE FACE OF SHEATHING. GLUE SHALL CONFORM TO APA AFG-01.

3.2. TYPICAL RIM JOISTS SHALL BE MINIMUM 1 1/2" LSL, UNO. REFER TO SHEAR WALL SCHEDULE FOR ADDITIONAL REQUIREMENTS AT RIMS.

4. WALLS AND COLUMNS ABOVE

4.1. STRUCTURAL WALL STUDS AT THIS LEVEL SHALL BE AS FOLLOWS, UNO:

EXTERIOR WALLS.....2x6 @ 16" OC
INTERIOR WALLS.....2x6 @ 16" OC

SEE DETAIL SHEET S4.00 FOR TYPICAL WALL FRAMING REQUIREMENTS AND FOR TYPICAL SHEARWALL REQUIREMENTS. FRAME ALL SHEARWALL INTERSECTIONS PER TYPICAL DETAILS. STRAP ALL SHEAR WALL OPENINGS PER 7/S4.02 AND 8/S4.02.

4.2. ALL NEW EXTERIOR WALLS SHALL BE SW6, UNO.

4.3. USE (1) KING STUD AND (1) TRIMMER STUD AT EXTERIOR HEADERS AT THIS LEVEL.

4.4. EXISTING SHEAR WALLS ARE 1/2" PLYWOOD WITH 10d @ 4" OC EDGE NAILING AND 10d @ 12" OC FIELD NAILING. CONTRACTOR TO VERIFY.

LEGEND

SWx	SHEAR WALL PER4/S4.00).
STHD	SIMPSON STRAP TIE HOLDOWN USE (2) 2x MIN HOLDOWN STUDS. SEE S4.03.
HDU	SIMPSON TENSION TIE HOLDOWN USE (2) 2x MIN HOLDOWN STUDS. SEE S4.03.
K + t	NUMBER OF KINGS PLUS TRIMMERS, UP FROM THIS LEVEL.

SUPERSEDED

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Engineer's Stamp

PETER A. OPSAHL — STATE OF WASHINGTON — 24234 — REGISTERED PROFESSIONAL ENGINEER — 07/17/2018

Project Title

Aguilar Addition
10341 NE 141st Place
Kirkland, WA 98034

Project Information

Project No.	17-148-01
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PERMIT SET	02/21/2018
1 PERMIT RESPONSE	07/17/2018
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Department Approval

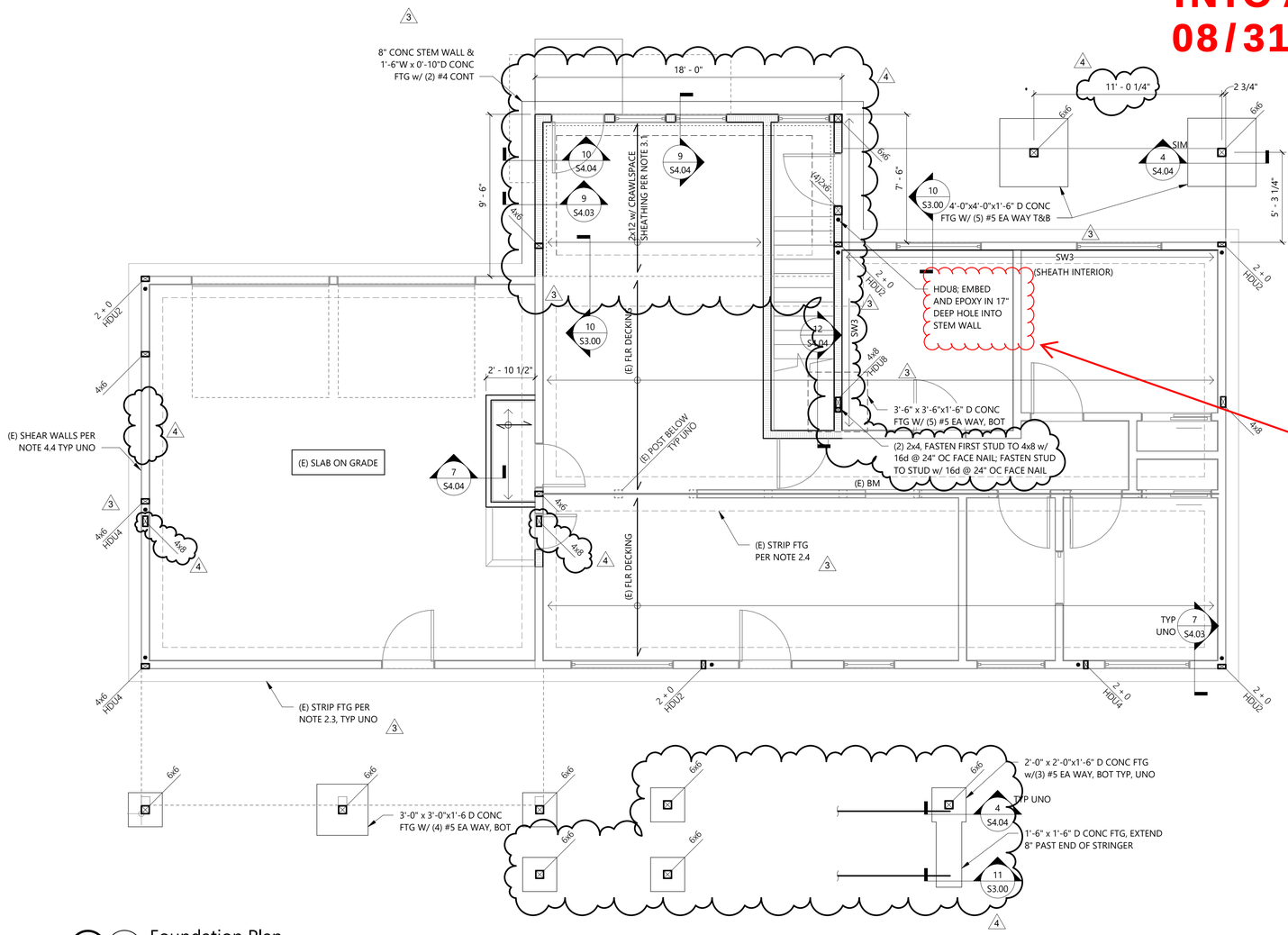
Sheet Title

Foundation Plan

Sheet Number

S2.00

INSERT REVISED PAGES INTO APPROVED SET 08/31/2023



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

North

FOUNDATION PLAN NOTES

1. GENERAL

1.1. ELEVATION AT TOP OF SLAB SHALL BE XX'-X", UNO.
ELEVATION AT TOP OF FOOTING SHALL BE XX'-X" BELOW TOP OF SLAB, UNO.

[-X'-X"] INDICATES ELEVATION AT TOP OF FOOTING, MEASURED IN FEET.

FOOTING ELEVATIONS SHOWN ARE FOR CONTRACTOR CONVENIENCE AND BIDDING ONLY. FINAL ELEVATIONS SHALL BE DETERMINED BY ON-SITE VERIFICATION BY SOILS ENGINEER, BUT SHALL NOT BE SHALLOWER THAN THOSE SHOWN ON THIS PLAN. REFER TO STRUCTURAL GENERAL NOTES FOR ADDITIONAL INFORMATION.

1.2. GRID LINES ARE TO FACE OF STUD AND CENTERLINE OF COLUMN. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.

2. FOUNDATIONS

2.1. EXCAVATE, BACKFILL, AND PREPARE SOILS AS REQUIRED PER STRUCTURAL GENERAL NOTES AND GEOTECHNICAL REPORT.

2.2. STEP FOOTINGS FOR UNDERGROUND PIPING AND AS REQUIRED PER TYPICAL STEPPED FOOTING DETAIL. 3

2.3. (E) FOUNDATIONS SUPPORTING WALLS ARE ASSUMED TO BE 8" THICK x 1'-2" TALL CONCRETE STEM WALL ON 10" THICK x 2'-0" WIDE CONTINUOUS FOOTINGS. CONTRACTOR TO VERIFY.

2.4. (E) FOUNDATIONS SUPPORTING CRAWL SPACE POSTS ARE ASSUMED TO BE 10" THICK x 2'-0" WIDE CONTINUOUS FOOTINGS. CONTRACTOR TO VERIFY.

3. FLOORS

3.1. FLOOR SHALL BE 23/32" APA-RATED SHEATHING, (48/24) EXPOSURE 1, TONGUE & GROOVE, GLUED AND NAILED. WHERE BLOCKED DIAPHRAGM IS NOTED ON PLAN, USE 2x FLAT BLOCKING AND 'Z' CLIPS AT UNSUPPORTED PANEL EDGES.

NAIL SHEATHING AS FOLLOWS:

FLOOR BOUNDARY (BN).....10d @ 6"
PANEL EDGES (EN).....10d @ 6"
OTHER SUPPORTS, FIELD NAILING.....10d @ 10"
BLOCKING, INTERIOR RIM JOISTS & STRUTS.....10d @ 4"

NAILS SHALL BE DRIVEN FLUSH WITH THE FACE OF SHEATHING. GLUE SHALL CONFORM TO APA AFG-01.

3.2. TYPICAL RIM JOISTS SHALL BE MINIMUM 1 1/2" LSL, UNO. REFER TO SHEAR WALL SCHEDULE FOR ADDITIONAL REQUIREMENTS AT RIMS.

4. WALLS AND COLUMNS ABOVE

4.1. STRUCTURAL WALL STUDS AT THIS LEVEL SHALL BE AS FOLLOWS, UNO:

EXTERIOR WALLS.....2x6 @ 16" OC
INTERIOR WALLS.....2x6 @ 16" OC

SEE DETAIL SHEET S4.00 FOR TYPICAL WALL FRAMING REQUIREMENTS AND FOR TYPICAL SHEARWALL REQUIREMENTS. FRAME ALL SHEARWALL INTERSECTIONS PER TYPICAL DETAILS. STRAP ALL SHEAR WALL OPENINGS PER 7/S4.02 AND 8/S4.02.

4.2. ALL NEW EXTERIOR WALLS SHALL BE SW6, UNO.

4.3. USE (1) KING STUD AND (1) TRIMMER STUD AT EXTERIOR HEADERS AT THIS LEVEL.

4.4. EXISTING SHEAR WALLS ARE 1/2" PLYWOOD WITH 10d @ 4" OC EDGE NAILING AND 10d @ 12" OC FIELD NAILING. CONTRACTOR TO VERIFY.

LEGEND

SWx	SHEAR WALL PER#/S4.00).
STHD	SIMPSON STRAP TIE HOLDOWN USE (2) 2x MIN HOLDOWN STUDS. SEE S4.03.
HDU	SIMPSON TENSION TIE HOLDOWN USE (2) 2x MIN HOLDOWN STUDS. SEE S4.03.
K + t	NUMBER OF KINGS PLUS TRIMMERS, UP FROM THIS LEVEL.

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Engineer's Stamp

SHAWN ROBERTS — STATE OF WASHINGTON — 47548 — REGISTERED PROFESSIONAL ENGINEER — 07/11/2023

Project Title

Aguilar Addition
10341 NE 141st Place
Kirkland, WA 98034

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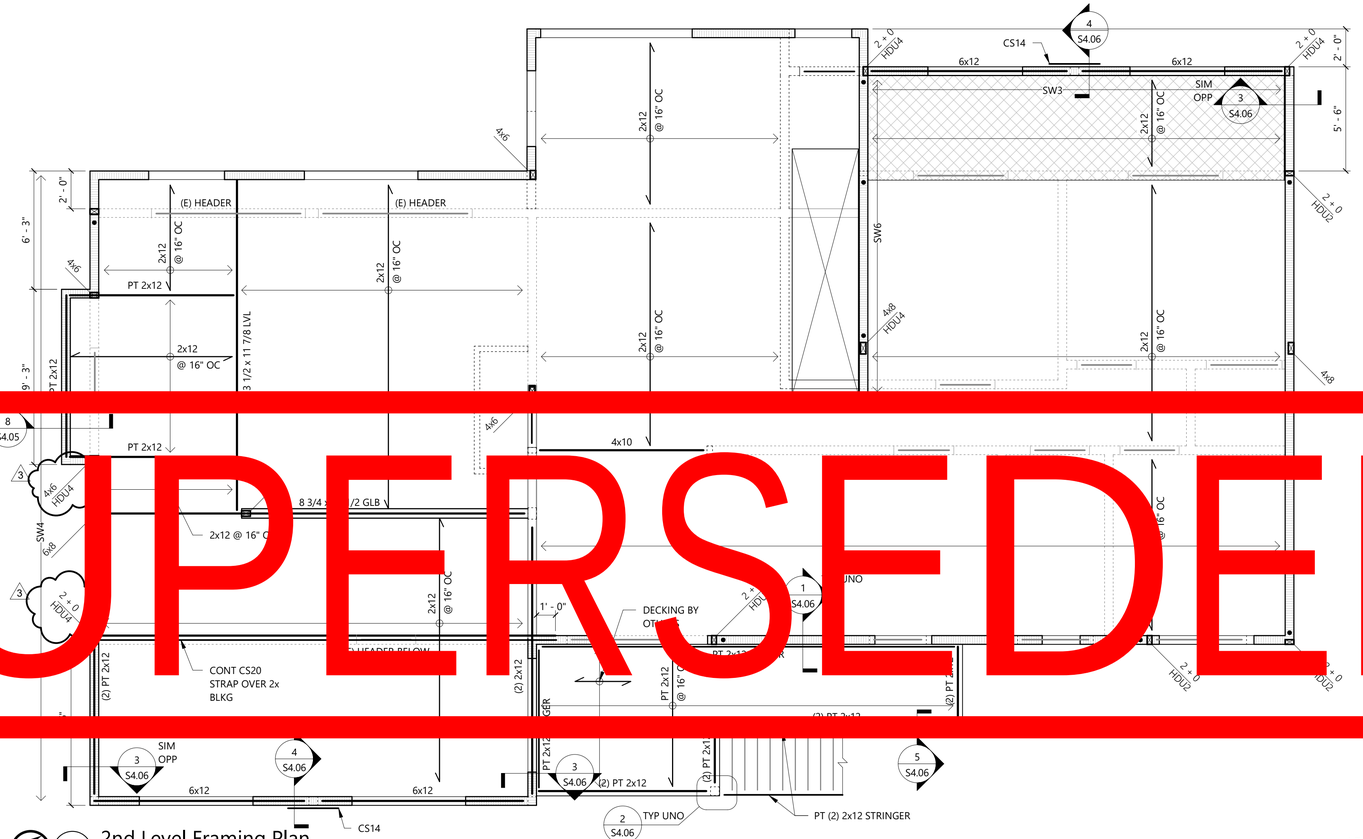
Department Approval

Sheet Title

Foundation Plan

Sheet Number

S2.00



1 2nd Level Framing Plan
Scale: 1/4" = 1'-0"

North

WOOD FLOOR FRAMING PLAN NOTES

1. GENERAL

1.1. ELEVATION AT TOP OF SHEATHING SHALL BE PER ARCH, UNO.

1.2. GRID LINES ARE TO FACE OF STUD AND CENTERLINE OF COLUMN. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.

2. FLOORS

2.1. FLOOR SHALL BE 23/32" APA-RATED SHEATHING, (48/24) EXPOSURE 1, TONGUE & GROOVE, GLUED AND NAILED. WHERE BLOCKED DIAPHRAGM IS NOTED ON PLAN, USE 2x FLAT BLOCKING AND 'Z' CLIPS AT UNSUPPORTED PANEL EDGES.

NAIL SHEATHING AS FOLLOWS:

FLOOR BOUNDARY (BN).....10d @ 6"
PANEL EDGES (EN).....10d @ 6"
OTHER SUPPORTS, FIELD NAILING.....10d @ 10"
BLOCKING, INTERIOR RIM JOISTS & STRUTS.....10d @ 4"

NAILS SHALL BE DRIVEN FLUSH WITH THE FACE OF SHEATHING. GLUE SHALL CONFORM TO APA AFG-01.

2.2. TYPICAL RIM JOISTS SHALL BE MINIMUM 1 1/2" LSL, UNO. REFER TO SHEAR WALL SCHEDULE FOR ADDITIONAL REQUIREMENTS AT RIMS.

2.3. TYPICAL HEADER SHALL BE 4x10 DF NO. 2, UNO.

2.4. DECK FRAMING SHALL BE TREATED LUMBER, UNO.

3. WALLS

3.1. STRUCTURAL WALL STUDS AT THIS LEVEL SHALL BE AS FOLLOWS, UNO:

EXTERIOR WALLS.....2x6 @ 16" OC
INTERIOR WALLS.....2x6 @ 16" OC

SEE DETAIL SHEET S4.00 FOR TYPICAL WALL FRAMING REQUIREMENTS AND FOR TYPICAL SHEARWALL REQUIREMENTS. FRAME ALL SHEAR WALL INTERSECTIONS PER TYPICAL DETAILS. STRAP ALL SHEAR WALL OPENINGS PER 7/S4.02 AND 8/S4.02.

3.2. ALL EXTERIOR WALLS SHALL BE SW6, UNO.

3.3. USE (1) KING STUD AND (1) TRIMMER STUD AT EXTERIOR HEADERS AT THIS LEVEL, UNO.

LEGEND

- STRUCTURAL WALL BELOW WITH HEADER (CONT WALL PLATES)
- STRUCTURAL WALL BELOW WITH FLUSH BEAM (BREAK WALL PLATES)
- STRUCTURAL WALL THIS LEVEL WITH CONT SILL PLATE AT OPENING
- STRUCTURAL WALL THIS LEVEL WITH BREAK IN SILL PLATE AT OPENING.
- FLOOR JOIST & EXTENT. SEE NOTE 3.
- BEAM PER PLAN OR HEADER PER NOTE
- JOIST HANGER
- SWx — SHEAR WALL PER4/S4.00
- STHD — SIMPSON STRAP TIE HOLDOWN USE (2) 2x MIN HOLDOWN STUDS. SEE S4.03.
- HDU — SIMPSON TENSION TIE HOLDOWN USE (2) 2x MIN HOLDOWN STUDS. SEE S4.03.
- K + t — NUMBER OF KINGS PLUS TRIMMERS, UP FROM THIS LEVEL.
- BLOCKED DIAPHRAGM PER 3/S4.02

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Engineer's Stamp

PETER A. OPSAHL — STATE OF WASHINGTON — 24234 — REGISTERED PROFESSIONAL ENGINEER — 07/17/2018

Project Title

Aguilar Addition
10341 NE 141st Place
Kirkland, WA 98034

Project Information

Project No.	17-148-01
Checked By	PO

Issue

	PERMIT SET	02/21/2018
1	PERMIT RESPONSE	07/17/2018
3	REVISION 3	03/04/2022

Department Approval

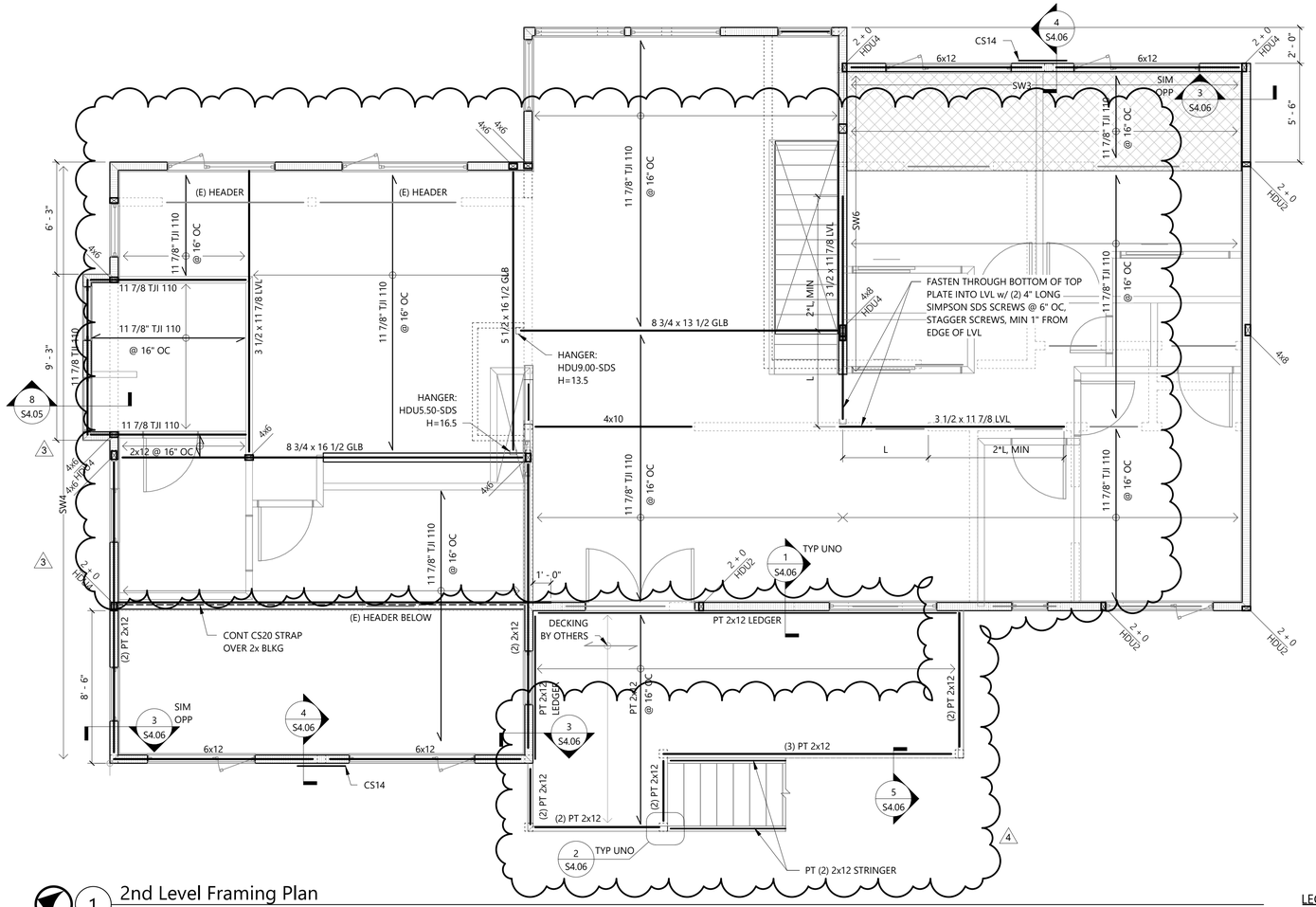
Sheet Title

Upper Level Framing Plan

Sheet Number

S2.01

INSERT REVISED PAGES INTO APPROVED SET 08/31/2023



1 2nd Level Framing Plan
Scale: 1/4" = 1'-0"

North

WOOD FLOOR FRAMING PLAN NOTES

1. GENERAL

1.1. ELEVATION AT TOP OF SHEATHING SHALL BE PER ARCH, UNO.

1.2. GRID LINES ARE TO FACE OF STUD AND CENTERLINE OF COLUMN. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.

2. FLOORS

2.1. FLOOR SHALL BE 23/32" APA-RATED SHEATHING, (48/24) EXPOSURE 1, TONGUE & GROOVE, GLUED AND NAILED. WHERE BLOCKED DIAPHRAGM IS NOTED ON PLAN, USE 2x FLAT BLOCKING AND 'Z' CLIPS AT UNSUPPORTED PANEL EDGES.

NAIL SHEATHING AS FOLLOWS:

FLOOR BOUNDARY (BN).....10d @ 6"
PANEL EDGES (EN).....10d @ 6"
OTHER SUPPORTS, FIELD NAILING.....10d @ 10"
BLOCKING, INTERIOR RIM JOISTS & STRUTS.....10d @ 4"

NAILS SHALL BE DRIVEN FLUSH WITH THE FACE OF SHEATHING. GLUE SHALL CONFORM TO APA AFG-01.

2.2. TYPICAL RIM JOISTS SHALL BE MINIMUM 1 1/2" LSL, UNO. REFER TO SHEAR WALL SCHEDULE FOR ADDITIONAL REQUIREMENTS AT RIMS.

2.3. TYPICAL HEADER SHALL BE 4x10 DF NO. 2, UNO.

2.4. DECK FRAMING SHALL BE TREATED LUMBER, UNO.

3. WALLS

3.1. STRUCTURAL WALL STUDS AT THIS LEVEL SHALL BE AS FOLLOWS, UNO:

EXTERIOR WALLS.....2x6 @ 16" OC
INTERIOR WALLS.....2x6 @ 16" OC

SEE DETAIL SHEET S4.00 FOR TYPICAL WALL FRAMING REQUIREMENTS AND FOR TYPICAL SHEARWALL REQUIREMENTS. FRAME ALL SHEAR WALL INTERSECTIONS PER TYPICAL DETAILS. STRAP ALL SHEAR WALL OPENINGS PER 7/S4.02 AND 8/S4.02.

3.2. ALL EXTERIOR WALLS SHALL BE SW6, UNO.

3.3. USE (1) KING STUD AND (1) TRIMMER STUD AT EXTERIOR HEADERS AT THIS LEVEL, UNO.

LEGEND

- STRUCTURAL WALL BELOW WITH HEADER (CONT WALL PLATES)
- STRUCTURAL WALL BELOW WITH FLUSH BEAM (BREAK WALL PLATES)
- STRUCTURAL WALL THIS LEVEL WITH CONT SILL PLATE AT OPENING
- STRUCTURAL WALL THIS LEVEL WITH BREAK IN SILL PLATE AT OPENING.
- FLOOR JOIST & EXTENT. SEE NOTE 3.
- BEAM PER PLAN OR HEADER PER NOTE
- JOIST HANGER
- SWx — SHEAR WALL PER4/S4.00)
- STHD — SIMPSON STRAP TIE HOLDOWN USE (2) 2x MIN HOLDOWN STUDS. SEE S4.03.
- HDU — SIMPSON TENSION TIE HOLDOWN USE (2) 2x MIN HOLDOWN STUDS. SEE S4.03.
- K + t — NUMBER OF KINGS PLUS TRIMMERS, UP FROM THIS LEVEL.
- BLOCKED DIAPHRAGM PER 3/S4.02

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Engineer's Stamp

SHAWN ROBERTS — STATE OF WASHINGTON — 47548 — REGISTERED PROFESSIONAL ENGINEER — 07/11/2023

Project Title

Aguilar Addition

10341 NE 141st Place
Kirkland, WA 98034

Project Information

Project No.	17-148-01
Checked By	PO

Issue

	PERMIT SET	02/21/2018
1	PERMIT RESPONSE	07/17/2018
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4	REVISION 4	07/11/2023

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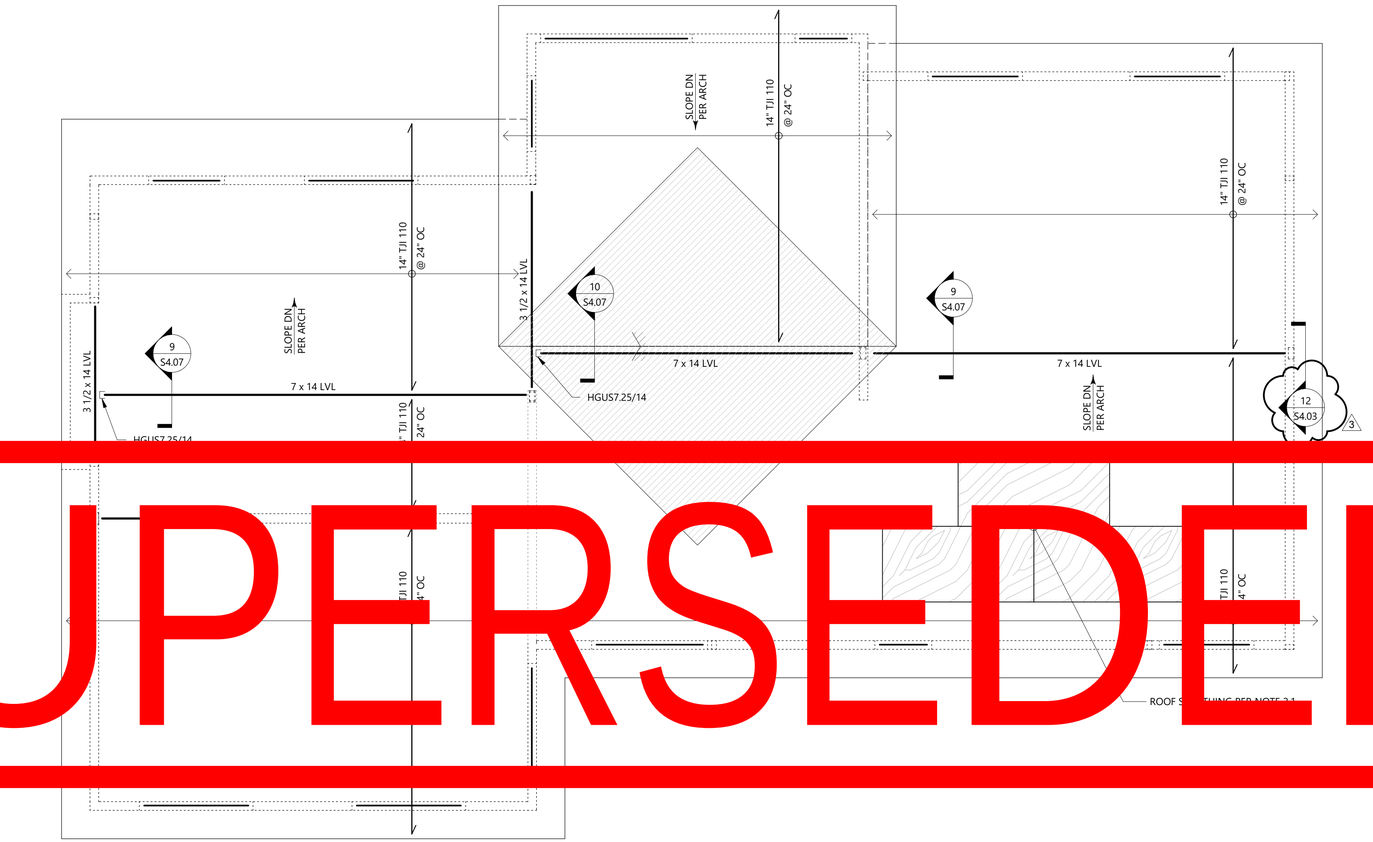
Sheet Title

Upper Level Framing Plan

Sheet Number

S2.01



1 Roof Framing Plan

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

North

WOOD ROOF FRAMING PLAN NOTES

1. GENERAL

1.1. ELEVATION AT TOP OF SHEATHING SHALL BE PER ARCH, UNO.

1.2. GRID LINES ARE TO FACE OF STUD AND CENTERLINE OF COLUMN. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.

2. ROOF

2.1. ROOF SHEATHING SHALL BE 19/32" APA RATED SHEATHING (32/16), EXPOSURE 1. WHERE BLOCKED DIAPHRAGM IS NOTED ON PLAN, USE 2x4 FLAT BLOCKING AND 'Z' CLIPS AT UNSUPPORTED PANEL EDGES.

NAIL SHEATHING AS FOLLOWS:

ROOF BOUNDARY (BN).....10d @ 6"
PANEL EDGES (EN).....10d @ 6"
OTHER SUPPORTS, FIELD NAILING.....10d @ 12"
BLOCKING, INTERIOR RIM JOISTS & STRUTS.....10d @ 6"

NAILS SHALL BE FLUSH WITH THE FACE OF SHEATHING.

2.2. TYPICAL RIM JOISTS SHALL BE MINIMUM 1 1/2" LSL, UNO. REFER TO SHEAR WALL SCHEDULE FOR ADDITIIONAL REQUIREMENTS AT RIMS.

2.3. TYPICAL INTERIOR HEADER SHALL BE 4x10 DF NO.2 UNO. RIM IS HEADER AT EXTERIOR WALLS. DO NOT SPLICE RIM OVER OPENINGS.

LEGEND

- STRUCTURAL WALL BELOW WITH HEADER (CONT WALL PLATES)
- STRUCTURAL WALL BELOW WITH FLUSH BEAM (BREAK WALL PLATES)
- FLOOR JOIST & EXTENT. SEE NOTE 3.
- BEAM PER PLAN OR HEADER PER NOTE
- JOIST HANGER
- INDICATES OVERFRAMING

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Engineer's Stamp

PETER A. OPSAHL — STATE OF WASHINGTON — 24234 — REGISTERED PROFESSIONAL ENGINEER
04/21/2018

Project Title

Aguilar Addition
10341 NE 141st Place
Kirkland, WA 98034

Project Information

Project No.	17-148-01
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Issue

PERMIT SET	02/21/2018
3 REVISION 3	03/04/2022

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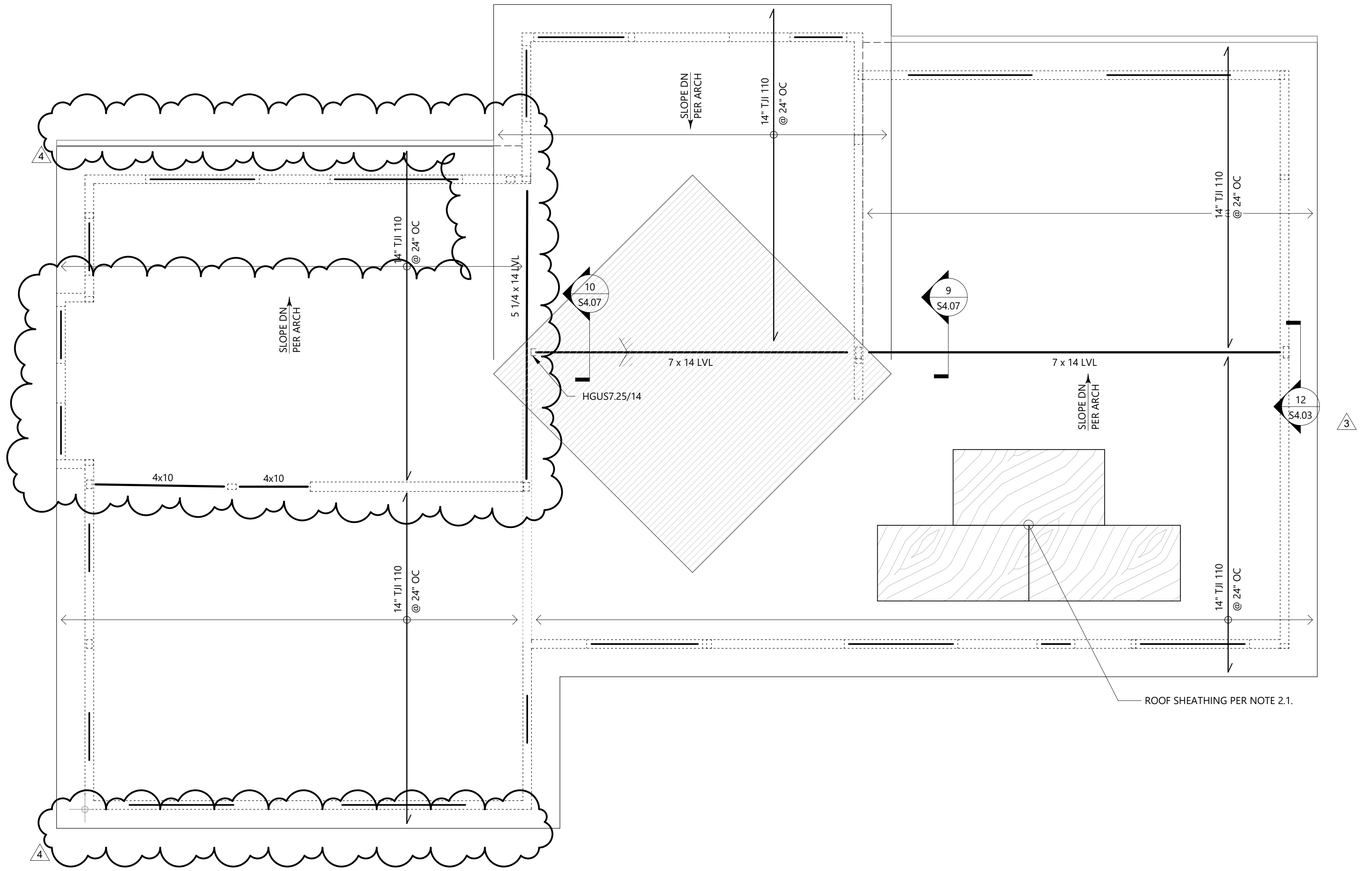
Sheet Title

Roof Framing Plan

Sheet Number

S2.02

INSERT REVISED PAGES INTO APPROVED SET 08/31/2023



1 Roof Framing Plan
Scale: 1/4" = 1'-0"

North

WOOD ROOF FRAMING PLAN NOTES

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OTHER SUPPORTS, FIELD NAILING.....10d @ 12"
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NAILS SHALL BE FLUSH WITH THE FACE OF SHEATHING.

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2.3. TYPICAL INTERIOR HEADER SHALL BE 4x10 DF NO.2 UNO. RIM IS HEADER AT EXTERIOR WALLS. DO NOT SPLICE RIM OVER OPENINGS.

LEGEND

- STRUCTURAL WALL BELOW WITH HEADER (CONT WALL PLATES)
- STRUCTURAL WALL BELOW WITH FLUSH BEAM (BREAK WALL PLATES)
- FLOOR JOIST & EXTENT. SEE NOTE 3.
- BEAM PER PLAN OR HEADER PER NOTE
- JOIST HANGER
- INDICATES OVERFRAMING

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Engineer's Stamp

SHAWN ROBERTS — STATE OF WASHINGTON — 47548 — REGISTERED PROFESSIONAL ENGINEER — PROFESSIONAL ENGINEER
07/11/2023

Project Title

Aguilar Addition
10341 NE 141st Place
Kirkland, WA 98034

Project Information

Project No.	17-148-01
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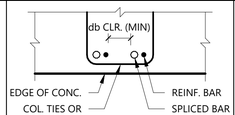
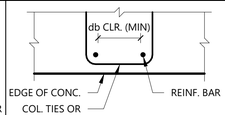
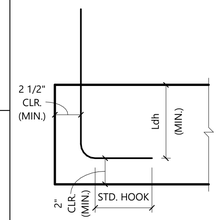
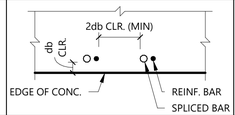
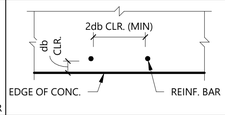
Roof Framing Plan

Sheet Number

S2.02

REINFORCING BAR LAP SPLICE & DEVELOPMENT LENGTH DIAGRAMS

The following conditions must be met in order to use the Reinforcing Bar Lap Splice & Development Length Tables

	Lap Splices	Straight Bar Development	Hooked Bar Development
CLASS 1: Bars enclosed by column ties or beam stirrups			
CLASS 2: No enclosure			
Where conditions for Classes 1 & 2 are not met	MULTIPLY LENGTHS SHOWN IN SCHEDULE BY 1.5	MULTIPLY LENGTHS SHOWN IN SCHEDULE BY 1.5	

NOTES:
1. ALL BARS SHALL BE DEVELOPED & ALL SPLICES LAPPED PER ACE 318 FOR TENSION, UNO. TABLE MAY BE USED WHERE CONDITIONS MEET CRITERIA NOTED IN DIAGRAMS.
2. TABLES ARE APPLICABLE FOR NORMAL WEIGHT CONCRETE, ONLY.
3. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" DEPTH OF CONRETE CAST BELOW THEM. (WALL HORIZONTAL REINFORCEMENT IS EXEMPT)
4. WHERE BARS OF DIFFERENT SIZE ARE LAP SPLICED, SPLICE LENGTH SHALL BE THE LARGER OF:
   - DEVELOPED LENGTH OF LARGER BAR
   - SPLICE LENGTH OF SMALLER BAR
5. WHERE MINIMUM STRAIGHT BAR DEVELOPMENT LENGTH CONNOT BE ACHIEVED, USE WITH STANDARD HOOK
6. REFER TO CONCRETE COVER TABLE FOR MINIMUM CONCRETE COVER REQUIREMENTS.

REINFORCING BAR LAP SPLICE & DEVELOPMENT LENGTH TABLE

f'c = 4,500 psi Grade 60 Reinforcing

Bar Size	Min Lap Splice Lengths (Ls)		Min Straight Bar Development Lengths (Ld)		Min Hooked Bar Embedment Lengths...
	Top Bars	Other Bars	Top Bars	Other Bars	
#3	23"	17"	17"	13"	7"
#4	30"	23"	23"	18"	9"
#5	38"	29"	29"	22"	11"
#6	45"	35"	35"	27"	13"
#7	66"	51"	51"	39"	16"
#8	76"	58"	58"	45"	18"
#9	85"	66"	66"	50"	20"
#10	96"	74"	74"	57"	23"
#11	107"	82"	82"	63"	25"

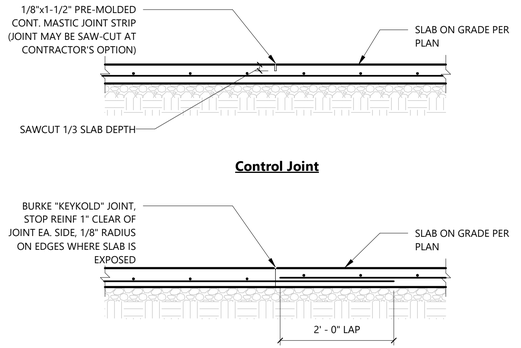
CONCRETE COVER FOR REINFORCING STEEL

Reinforcing Bar Location	Min Concrete Cover
UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#6 BARS AND LARGER)	2"
FORMED SURFACES EXPOSED TO EARTH OR WEATHER (#5 BARS AND SMALLER)	1 1/2"
COLUMNS AND BEAMS w/ BARS ENCLOSED IN STIRRUPS, TIES OR SPIRAL REINF	1 1/2"...
SLABS, JOISTS AND INTERIOR FACES OF WALLS (#6 BARS AND LARGER)	db + 5/8"
SLABS, JOISTS AND INTERIOR FACES OF WALLS (#5 BARS AND SMALLER)	3/4"
2-HOUR AND 3-HOUR SLABS	(REFER TO PLAN...
CLEAR SPACING BETWEEN PARALLEL BARS IN A LAYER (BARS ENCLOSED IN...	1"
CLEAR SPACING BETWEEN PARALLEL BARS IN A LAYER (NO STIRRUPS/TIES)	2db
CLEAR SPACING BETWEEN (2) OR MORE PARALLEL LAYERS	1"

NOTES:
1. WHERE A THICKNESS OF COVER REQUIRED FOR FIRE PROTECTION IS GREATER THAN THAT SPECIFIED IN THIS TABLE, THE GREATER THICKNESS SHALL BE USED.

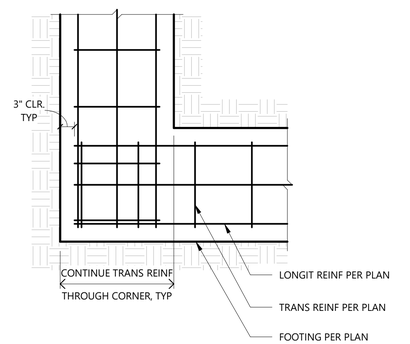
1 Reinforcing Bar Lap Splice & Development Length Tables
Scale: 1 1/2" = 1'-0"

4 Concrete Cover for Reinforcing Steel
Scale: 3/4" = 1'-0"

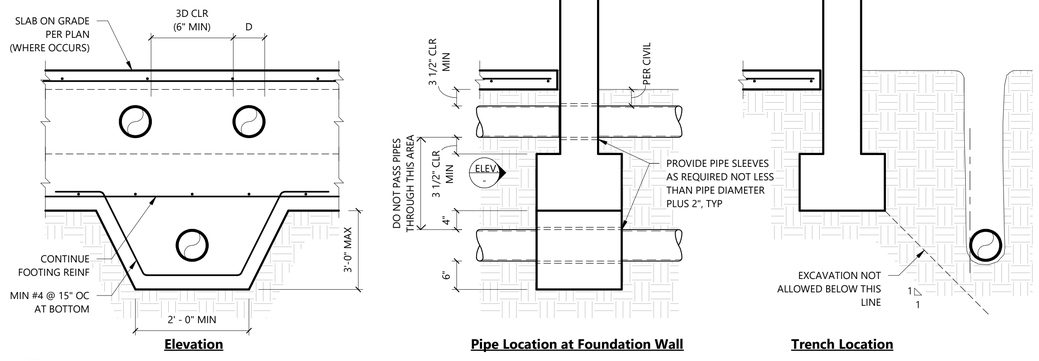


NOTES:
1. SAWED JOINTS SHALL BE MADE AS SOON AS THE JOINT CAN BE CUT WITHOUT EDGES RAVELING AND WITHIN 24 HOURS OF SLAB PLACEMENT.
2. SAWED JOINTS SHALL BE FITTED WITH SEALENT AS COORDINATED WITH THE ARCHITECT.

8 Typical Joints in Slab on Grade
Scale: 3/4" = 1'-0"

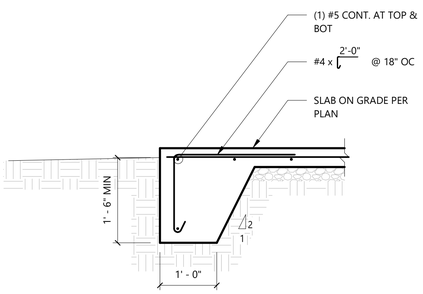


5 Typical Footing Intersection
Scale: 3/4" = 1'-0"

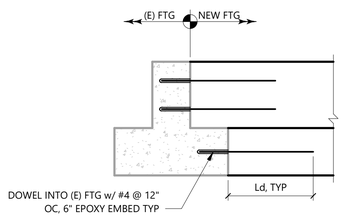


NOTES:
1. USE THIS DETAIL FOR ALL UTILITES PASSING UNDER OR ADJACENT TO FOOTING.
2. STEP FOOTING DOWN TO PASS BELOW PIPES IF NEEDED.

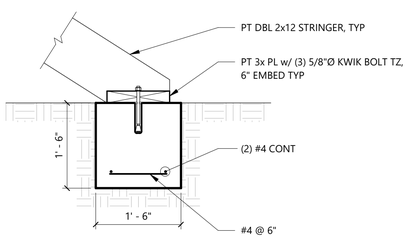
6 Typical Pipe and Trench Locations
Scale: 3/4" = 1'-0"



9 Typical Thickened Slab Edge
Scale: 3/4" = 1'-0"



10 Detail
Scale: 3/4" = 1'-0"



11 Detail
Scale: 3/4" = 1'-0"

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Project Title

Aguilar ADU Addition

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Project Information

Project No.	17-148-01
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Issue

PERMIT SET	02/21/2018
1 PERMIT RESPONSE	07/17/2018

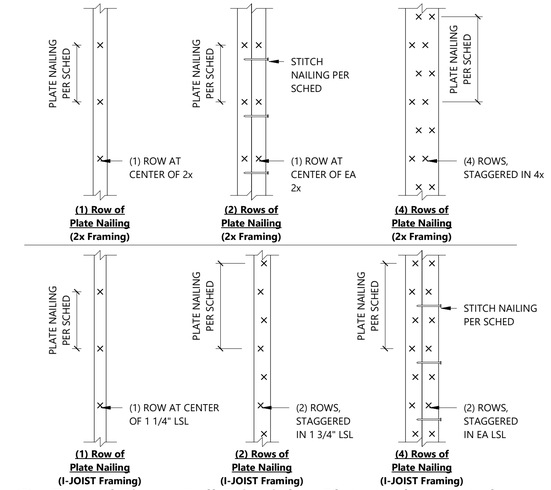
Department Approval

Sheet Title

Concrete Details

Sheet Number

S3.00



1 Typical Shear Wall Schedule - Plate Nailing Details
Scale: 1 1/2" = 1'-0"

SHEARWALL SCHEDULE (DOUG FIR FRAMING)

Mark	Sheathing (15/32" Plywood)	Nailing		Framing			Shear Transfer				Capacity	
		(EN)...	Field	Min Stud & Blkg ...	Sill Plate	Top...	(A)...	(B)...	(C)...	(D)...	Seismic	Wind
SW6	(1) SIDE	10d @ 6"	10d @ 12"	2x	2x	(2)2x	5/8"Ø @ 3'-5"	A35 @ 26" or LPT4 @ 24"	16d @ 6" or 1/4x6" SDS SCREWS @ 14"	16d @ 5" OR 1/4x6" SDS SCREW @ 13"	310 PLF	435 PLF
SW4	(1) SIDE	10d @ 4"	10d @ 12"	3x	2x	(2)2x	5/8"Ø @ 2'-3"	A35 @ 18" or LPT4 @ 16"	(2) ROWS 16d @ 7" or 1/4x6" SDS SCREWS @ 9"	16d @ 3" OR 1/4x6" SDS SCREW @ 8"	460 PLF	645 PLF
SW3	(1) SIDE	10d @ 3"	10d @ 12"	3x	2x	(2)2x	5/8"Ø @ 21"	A35 @ 13" or LPT4 @ 12"	(2) ROWS 16d @ 6" or 1/4x6" SDS SCREWS @ 7"	(2) ROWS 16d @ 5" OR 1/4x6" SDS...	600 PLF	840 PLF
SW2	(1) SIDE	10d @ 2"	10d @ 12"	3x	2x	(2)2x	5/8"Ø @ 16"	A35 @ 10" or LPT4 @ 9"	(3) ROWS 16d @ 6" or (2) ROWS 1/4x6" SDS...	1/4x6" SDS SCREW @ 5"	770 PLF	1078 PLF
SW3-2	(2) SIDES	10d @ 3"	10d @ 12"	3x	3x	(2)2x	5/8"Ø @ 15"	A35 + LPT4 @ 13"	(4) ROWS 16d @ 6" or (2) ROWS 1/4x6" SDS...	1/4x6" SDS SCREW @ 3"	1200 PLF	1680 PLF
SW2-2	(2) SIDES	10d @ 2"	10d @ 12"	3x	3x	(2)2x	5/8"Ø @ 12"	A35 + LPT4 @ 10"	(3) ROWS 1/4x6" SDS SCREWS @ 8"	1/4x6" SDS SCREW @ 2"	1540 PLF	2155 PLF

SHEAR WALL SCHEDULE NOTES:

1. IN ADDITION TO FRAMING REQUIREMENTS OF S/S4.00, PROVIDE FRAMING AT SHEAR WALLS AS INDICATED.
2. SEE SCHEDULE FOR SHEATHING AND NAILING REQUIREMENTS. LUMBER GRADE AS INDICATED OR BETTER. STAGGER PANEL JOINT EA SIDE OF WALL WHERE SHEATHING IS REQUIRED BOTH SIDES OF WALL.
3. ALL FRAMING MEMBERS RECEIVING EDGE NAILING FROM ABUTTING PANEL EDGES SHALL NOT BE LESS THAN SIZES INDICATED. IN LIEU OF 3x STUDS, BUILT-UP STUDS SHOWN IN 2/S4.00 MAY BE SUBSTITUTED.
4. BLOCK ALL PANEL EDGES.
5. NAIL SIZES PER NAIL SIZE TABLE. DRIVE ALL NAILS FLUSH W/ FACE OF SHEATHING. TOLERANCE +1/16" TO -0. STAGGER NAILING WHERE NECESSARY TO PREVENT SPLITTING OF LUMBER.
6. PLATES ON CONCRETE SHALL BE TREATED. SEE GENERAL NOTES.
7. CONNECT SHEATHING & STUDS AT SHEAR WALL INTERSECTIONS AS INDICATED.
8. WHERE ONLY ONE HOLDOWN IS SPECIFIED, LOCATE ON OPEN-SIDE OF HOLDOWN STUDS. SEE WALL ELEVATION.
9. THE PLANS AND SECTIONS SHOWN HERE SCHEMATICALLY DEMONSTRATE THE TYPICAL CONNECTION DESIGNED BY THE ENGINEER OF RECORD. ALTERNATE CONNECTIONS MUST BE APPROVED IN WRITING BY THE ENGINEER OF RECORD.

TYPICAL NAIL LENGTH TABLE

Nail Size	Nail Diameter	Typical Nail Length (UNO)
6d	0.113"Ø	2"
8d	0.131"Ø	2 1/2"
10d	0.148"Ø	3"
16d	0.162"Ø	3 1/2"

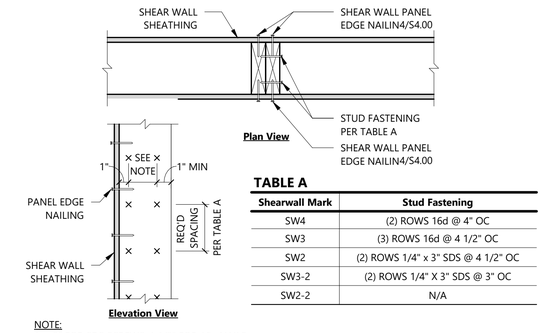
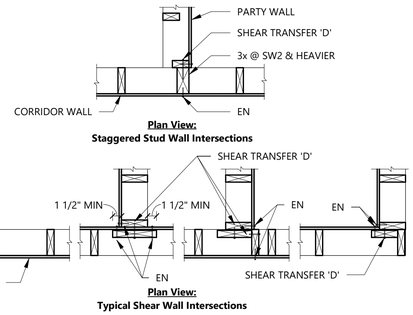


TABLE A

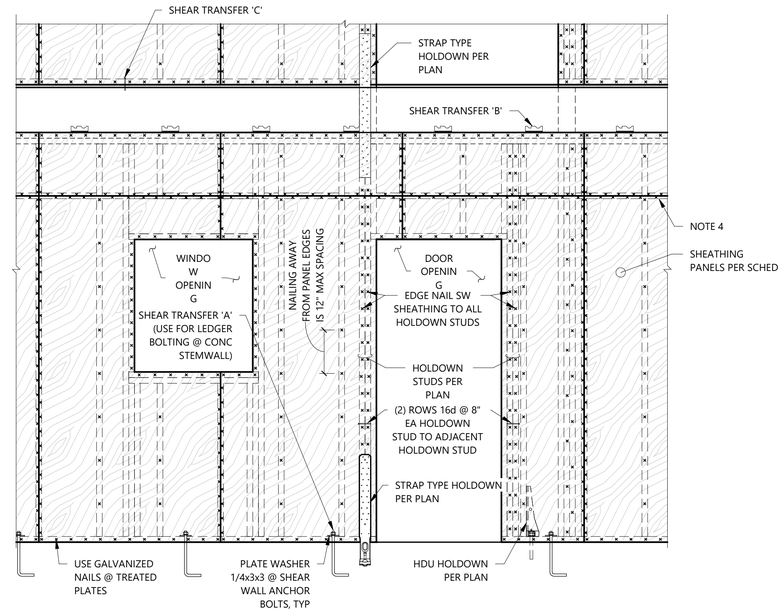
Shearwall Mark	Stud Fastening
SW4	(2) ROWS 16d @ 4" OC
SW3	(3) ROWS 16d @ 4 1/2" OC
SW2	(2) ROWS 1/4" x 3" SDS @ 4 1/2" OC
SW3-2	(2) ROWS 1/4" X 3" SDS @ 3" OC
SW2-2	N/A

NOTE:
1. 3" FOR SDS SCREWS, 1 1/2" FOR 16d NAILS

2 Alternative Built-up 2X Option at Abutting Panel Edge
Scale: 1 1/2" = 1'-0"



3 Typical Shear Wall Intersections
Scale: 3/4" = 1'-0"



4 Shear Wall Framing w/ Holdowns

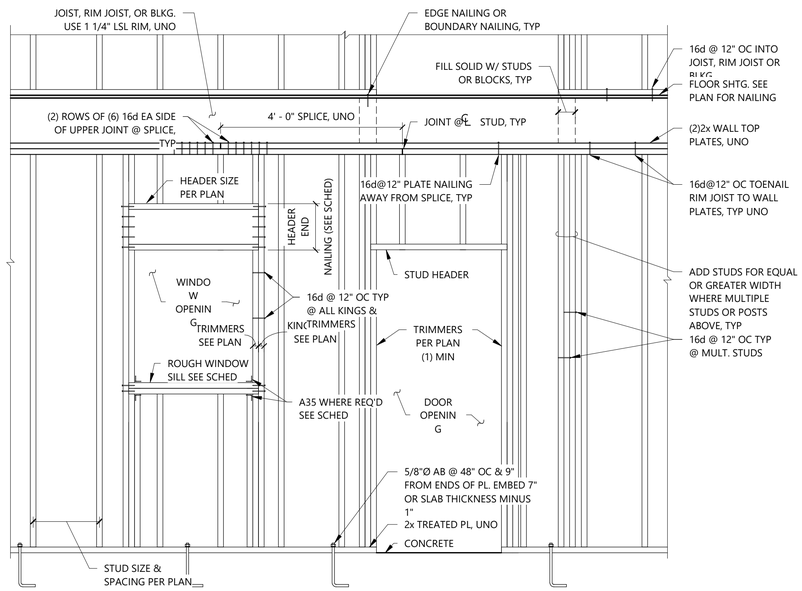
ROUGH WINDOW SILL

Horiz Rough...	Number of...	End Attachment	Reference
0'-0" to 6'-0"	1	(2) 16d END NAILS	S/S4.00
> 6'-0"	2	(2) 16d END NAILS + A35 EA END @ E...	S/S4.00

MINIMUM FASTENING SCHEDULE (UNO)(PER IBC 2012, TABLE 2304.10.01)

NO.	CONNECTION	NAILING, LOCATION (UNO)
1	BLOCKING BETWEEN CEILING JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING ABOVE	(3) 8d, TOENAIL EACH END
2	BLOCKING BETWEEN RAFTERS OR TRUSS NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS	(2) 8d, TOENAIL EACH END
3	FLAT BLOCKING TO TRUSS AND WEB FILLER	16d FACE NAIL
4	CEILING JOISTS TO TOP PLATE	(3) 10d, TOENAIL
5	CEILING JOIST NOT ATTACHED TO PARALLEL RAFTER, LAPS OVER PARTITIONS (NO THRUST)	(3) 16d
6	COLLAR TIE TO RAFTER	(3) 10d
7	RAFTER OR ROOF TRUSS TO TOP PLATE	(3) 10d, TOENAIL
8	ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS; OR ROOF RAFTER TO 2" RIDGE BEAM	(2) 16d, END NAIL
9	STUD TO STUD (NOT AT BRACED WALL PANELS)	16d @ 24" O.C., FACE NAIL
10	CONTINUOUS HEADER TO STUD	(4) 8d, TOENAIL
11	TOP PLATE TO TOP PLATE, AT END JOINTS	(8) 16d, EACH SIDE OF END JOINT, FACE NAIL (MINIMUM 24" LAP SPLICE LENGTH EACH SIDE OF EN...
12	SILL PLATE TO JOIST, RIM JOIST OR BLOCKING (NOT AT BRACED WALL PANELS)	16d @ 16" O.C., FACE NAIL
13	SILL PLATE TO JOIST, RIM JOIST OR BLOCKING AT BRACED WALL PANELS	(3) 16d @ 16" O.C., FACE NAIL
14	STUD TO SILL PLATE	(4) 8d, TOENAIL OR (2) 16d, END NAIL*
15	TOP PLATE TO STUD	(2) 16d, END NAIL
16	TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS	(2) 16d, FACE NAIL
17	1" BRACE TO EACH STUD AND PLATE	(2) 8d, FACE NAIL
18	1" x 6" SHEATHING OR LESS TO EACH BEARING	(2) 8d, FACE NAIL
19	1" x 8" AND WIDER SHEATHING TO EACH BEARING	(3) 8d, FACE NAIL
20	JOIST TO SILL, TOP PLATE OR GIRDER	(3) 8d, TOENAIL
21	RIM JOIST, OR BLOCKING TO TOP PLATE, SILL OR OTHER FRAMING BELOW	8d @ 6" O.C., TOENAIL
22	1" x 6" SUBFLOOR OR LESS TO EACH JOIST	(2) 8d, FACE NAIL
23	2" SUBFLOOR TO JOIST OR GIRDER	(2) 16d, BLIND AND FACE NAIL
24	2" PLANKS (PLANK & BEAM - FLOOR & ROOF)	(2) 16d, EACH BEARING, FACE NAIL
25	BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS	20d @ 32" O.C., FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES AND (2) 20d AT EN...
26	LEDGER STRIP SUPPORTING JOISTS OR RAFTERS	(3) 16d, EACH JOIST OR RAFTER, FACE NAIL
27	JOIST TO RIM JOIST	(3) 16d, END NAIL
28	BRIDGING OR BLOCKING TO JOIST, RAFTER OR TRUSS	(2) 8d, EACH END, TOENAIL

*USE (4) 16d END NAIL STUDS TO TOP AND SILL PLATES AT 2x10 STUDS



5 Typical Wall Framing

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PETER A. OPSAHL — STATE OF WASHINGTON — 24234 — REGISTERED PROFESSIONAL ENGINEER — 02/21/2018

Project Title

Aguilar Addition

10341 NE 141st Place
Kirkland, WA 98034

Project Information

Project No.	17-148-01
Checked By	PO

Issue

PERMIT SET	02/21/2018

Department Approval

Sheet Title

Wood Details

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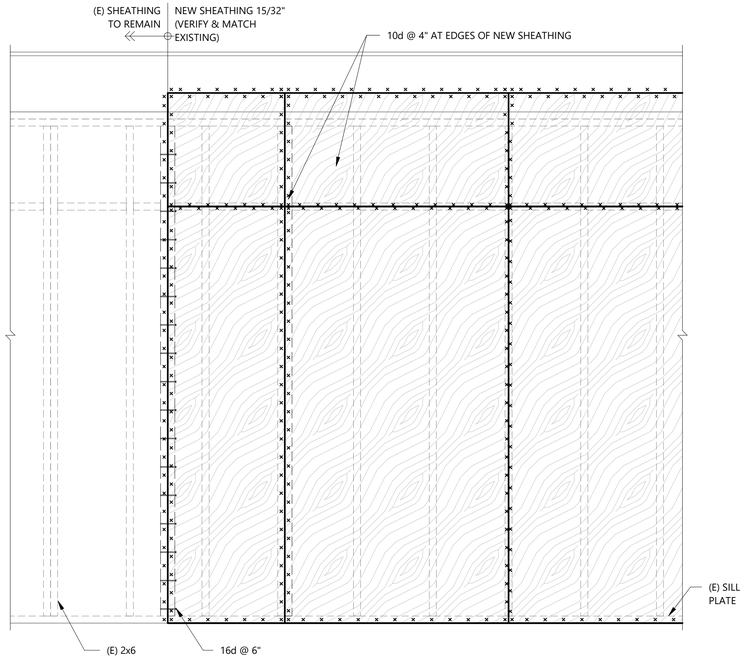
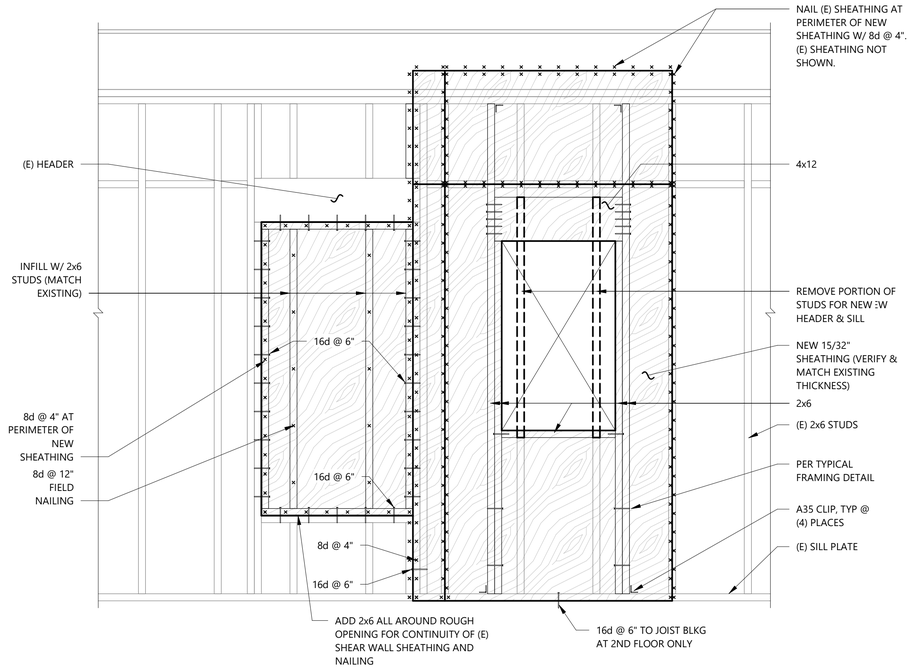
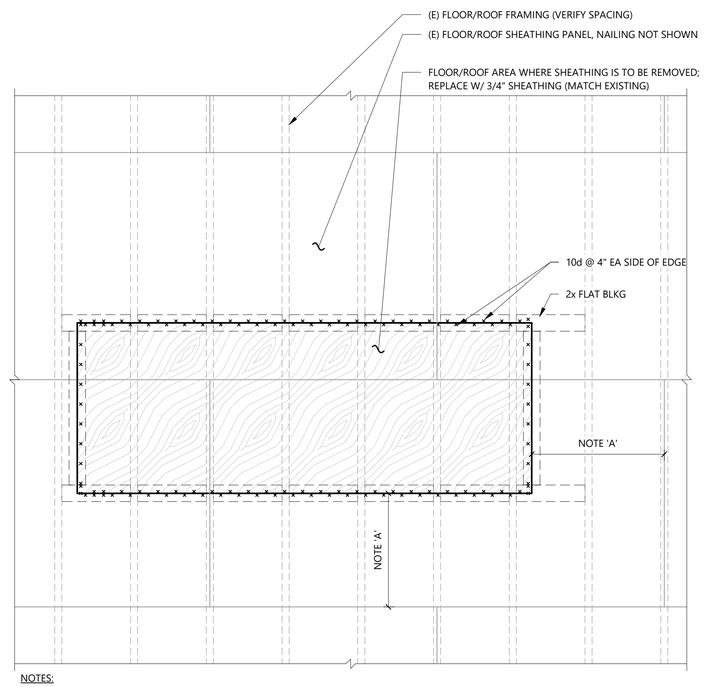


1 New Sheathing @ (E) Wall
Scale: 3/4" = 1'-0"

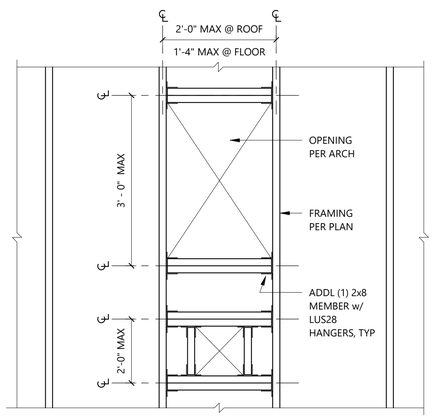


2 (E) Window Infill & New Window Framing @ (E) Framing
Scale: 3/4" = 1'-0"



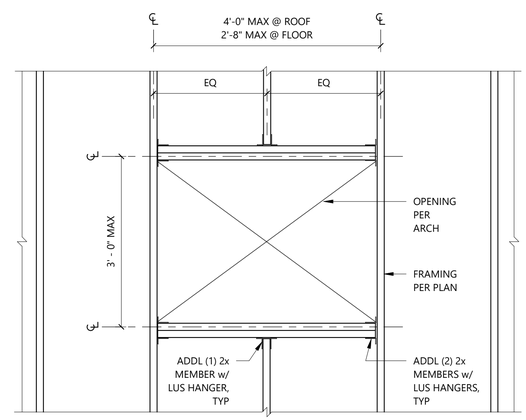
NOTES:
A. MINIMUM PANEL DIMENSION IS 24". WHERE REMOVED PORTION OF SHEATHING ENCROACHES INTO THIS MINIMUM DIMENSION, REMOVE PANEL BACK TO PANEL EDGE.

3 Plan @ Floor/Roof Sheathing
Scale: 3/4" = 1'-0"



NOTE:
1. CONTR TO COORD SIZES AND LOCATIONS OF ALL MECH OPENINGS WITH MECH DRAWINGS.

4 Typical Rough Openings (2'-0" max)
Scale: 3/4" = 1'-0"



NOTE:
1. CONTR TO COORD SIZES & LOCATIONS OF ALL MECH OPENINGS W/ MECH DRAWINGS.

5 Typical Rough Openings (4'-0" max)
Scale: 3/4" = 1'-0"

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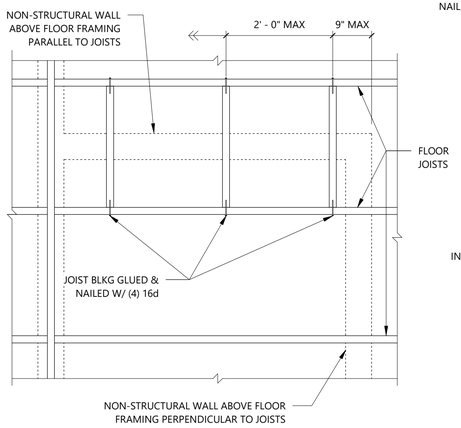
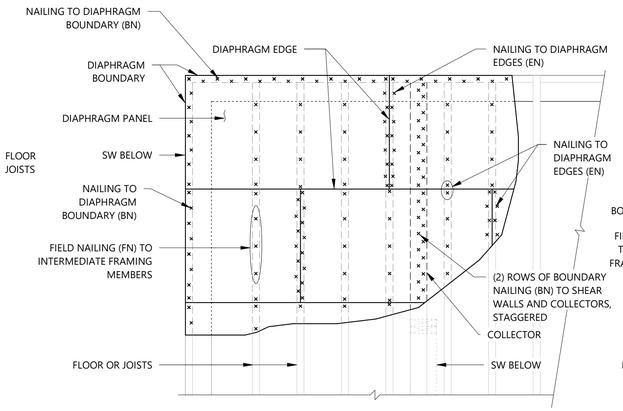
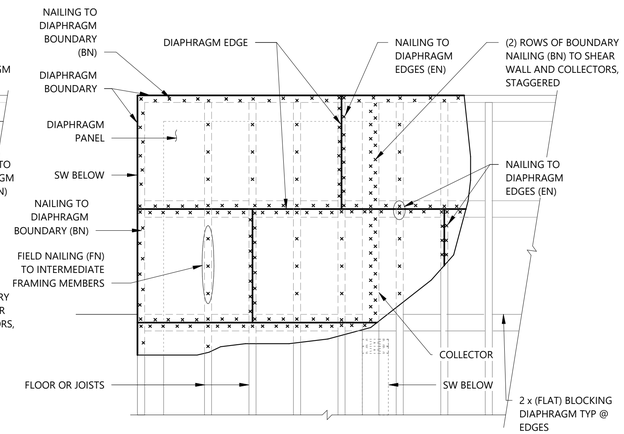


1 Floor Joist Blocking at Non-Structural Walls Above
Scale: 3/4" = 1'-0"



NOTES:
1. BEARING AND SHEAR WALL INTERSECTIONS SHALL BE CONSIDERED DIAPHRAGM BOUNDARIES, TYP

2 Unblocked Plywood Roof/Floor Sheathing Layout
Scale: 3/4" = 1'-0"

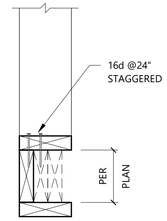


NOTES:
1. BEARING AND SHEAR WALL INTERSECTIONS SHALL BE CONSIDERED DIAPHRAGM BOUNDARIES, TYP

3 Blocked Plywood Roof/Floor Sheathing Layout
Scale: 3/4" = 1'-0"

HEADER END NAILING

NOMINAL...	END...
4	(4) 16d
6	(6) 16d
8	(8) 16d
10	(10) 16d
12	(12) 16d
14	(14) 16d
16	(16) 16d
18	(18) 16d

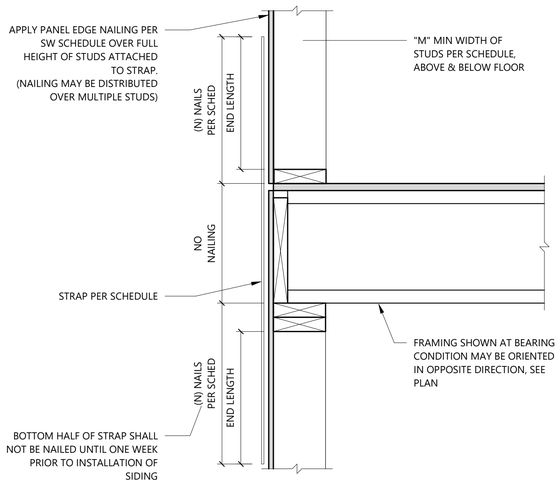


Section

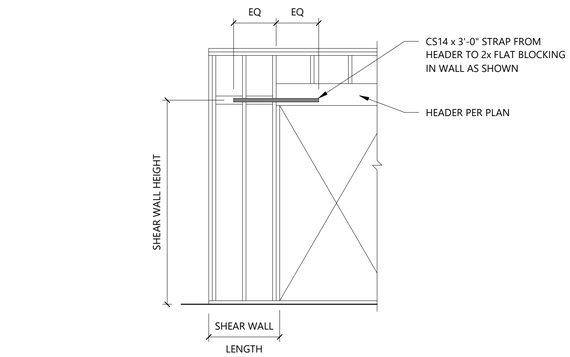
4 Header End Nailing
Scale: 1 1/2" = 1'-0"

STRAP SCHEDULE

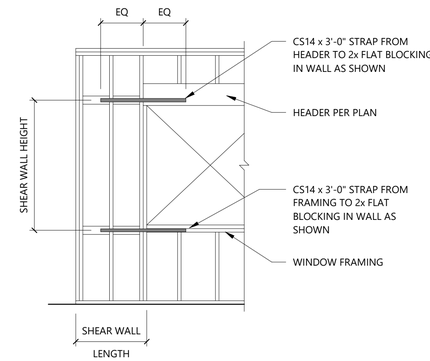
Mark	M	End Length	N	Fastener Type	Capacity
CS14	1 1/2"	1' - 2"	13	0.131" x 2 1/2"	1,705 lb
CS20	1 1/2"	9"	14	0.131" x 2 1/2"	1,030 lb



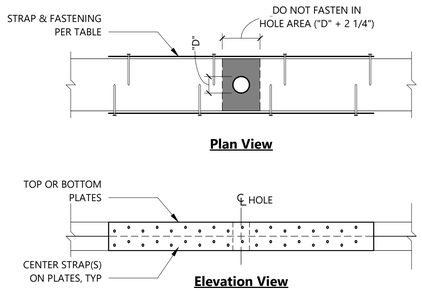
5 Typical Strap Schedule
Scale: 1 1/2" = 1'-0"



7 Typical Force Transfer at Door
Scale: 3/8" = 1'-0"



8 Typical Force Transfer at Window
Scale: 3/8" = 1'-0"



REINFORCING AT BEARING PLATE PENETRATION

Plate...	Hole Diameter...	Strap
2x4	0" < "D" < 1"	NO STRAP REQUIRED
	1" < "D" < 2 1/4"	CMSTC16 W/ (8) 16d SINKERS EA SIDE OF HOLE...
2x6	0" < "D" < 1 3/4"	NO STRAP REQUIRED
	1 3/4" < "D" < 3...	CMSTC16 W/ (13) 16d SINKERS EA SIDE OF...
2x8	0" < "D" < 2 1/2"	NO STRAP REQUIRED
	2 1/2" < "D" < 4"	CMSTC16 W/ (14) 16d SINKERS EA SIDE OF...
2x10	0" < "D" < 3"	NO STRAP REQUIRED
	3" < "D" < 6"	CMSTC16 W/ (21) 16d SINKERS EA SIDE OF...

9 Typical Reinforcing at Bearing/Shear Wall Plate Penetration
Scale: 1 1/2" = 1'-0"

EXTERIOR/BEARING/SHEAR WALL...

Stud...	Max Depth of Edge C...	Min Stud Depth...
2x4	7/8"	2 5/8"
2x6	1 3/8"	4 1/8"

Notes:
1. No cutting or notching is allowed in shear wall compression studs.
2. No cutting or notching is allowed in shear wall plates except as allowed in x/Sx.xx & x/Sx.xx.

NON-BEARING WALL STUDS

Stud...	Max Depth of Edge C...	Min Stud Depth...
2x4	1 3/8"	2 1/8"
2x6	2 1/8"	3 3/8"

EXTERIOR /BEARING /SHEAR WALL...

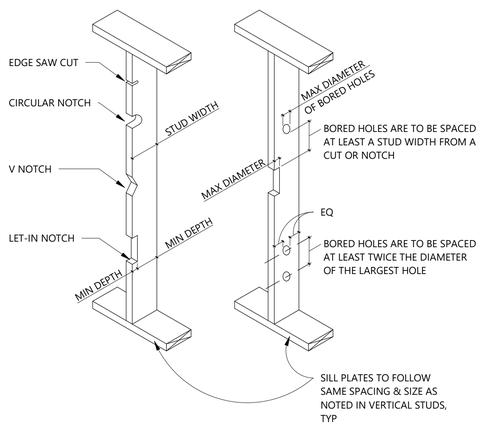
Stud...	Max Diameter of Hole	Min Depth Remainin...
2x4	1 3/8"	5/8" EA SIDE OF HOLE
2x6	2 1/8"	5/8" EA SIDE OF HOLE

Notes:
1. Borings shall not be made at the same section where cut or notch has been made.
2. No holes are allowed in shear wall compression stud...

NON-BEARING WALL STUDS

Stud...	Max Diameter of Hole	Min Depth Remainin...
2x4	2"	5/8" EA SIDE OF HOLE
2x6	3 1/4"	5/8" EA SIDE OF HOLE

Notes:
1. Borings shall not be made at the same section where cut...



11 Allowable Holes and Notches in Wood Studs
Scale: 1 1/2" = 1'-0"

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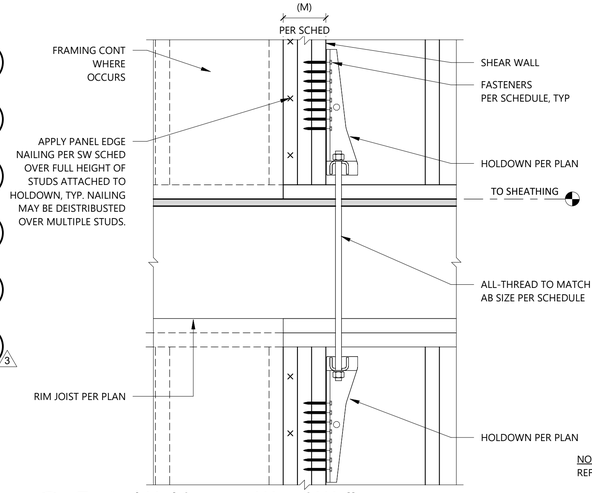
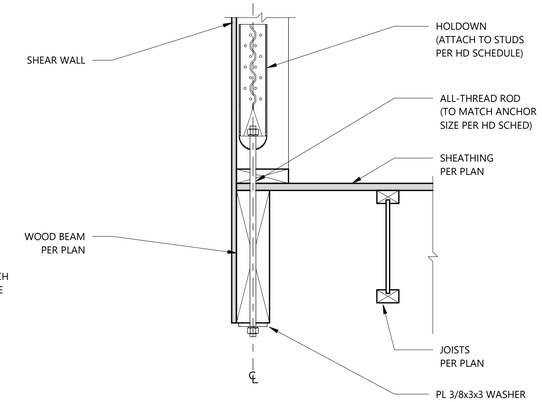
HOLDOWN SCHEDULE

Mark	Framing Attachment		Anchorage			Capacity	
	M	Fasteners (SDS 1/4 X 2 1/2)	D	Anchor Type	Embed	Seismic (Mid-Wall / Corner / End Wall)	Wind (Mid-Wall / Corner / End Wall)
HDU2	3"	6	4 1/4"	5/8"Ø	1'-6"		
HDU4	3"	10	4 1/4"	5/8"Ø	1'-6"		
HDU8	4 1/2"	20	4 1/4"	7/8"Ø	1'-6"		
HDU2-PI	3"	6	3"	5/8"Ø EPOXY	1'-0 1/2"	2,645 lb	2,645 lb
HDU4-PI	3"	10	3"	5/8"Ø EPOXY	1'-0 1/2"	3,926 lb	3,926 lb
HDU8-PI	4 1/2"	20	3"	7/8"Ø EPOXY	1'-5 1/2"	7,870 lb	7,870 lb

NOTES:
1. INSTALL ALL HOLDOWNS PER MANUFACTURER'S INSTRUCTIONS.
2. PLACEMENT OF ALL ANCHORS IS BASED ON CAST-IN-PLACE INSTALLATION, UNO. POST-INSTALLED ANCHORS SHALL NOT BE INSTALLED WITHOUT PRIOR APPROVAL OF ENGINEER OF RECORD.
3. "M" INDICATES MINIMUM DEPTH OF WOOD FRAMING MEMBER ATTACHED TO HOLDOWN. ALL FRAMING MEMBERS SHALL BE DOUG-FIR, UNO.
4. PLACEMENT OF ALL POST-INSTALLED ANCHORS (HDU-PI) IS BASED ON SIMPSON SET-XP EPOXY.
5. "D" INDICATES MINIMUM DISTANCE FROM END OF CONCRETE WALL/FOOTING AT CORNER AND WALL END CONDITIONS. REFER TO ELEVATION AND SECTION FOR PLACEMENT DETAILS. UNLESS NOTED OTHERWISE: THE DISTANCE FROM ANY ANCHOR TO THE END OF CONCRETE WALL/FOOTING SHALL BE NO LESS THAN TWICE THE EMBEDMENT DEPTH NOTED IN THE SCHEDULE.

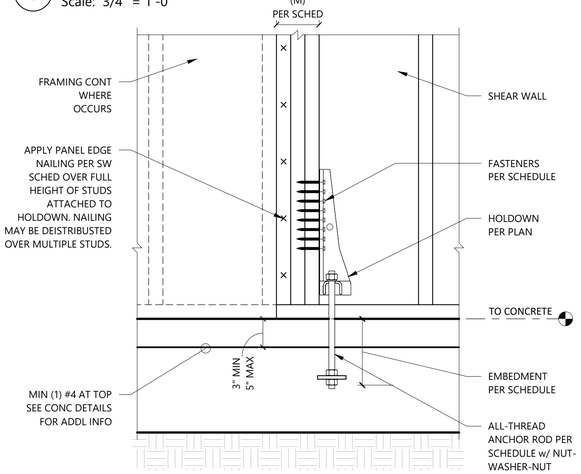
3



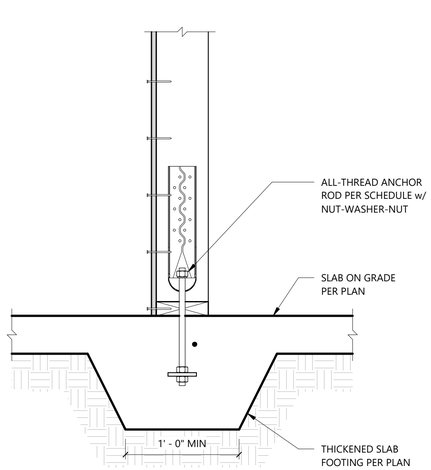


NOTES:
REFER TO TYPICAL HOLDOWN SCHEDULE FOR ADDITIONAL REQUIREMENTS.

1 Typical Holdown Schedule
Scale: 3/4" = 1'-0"

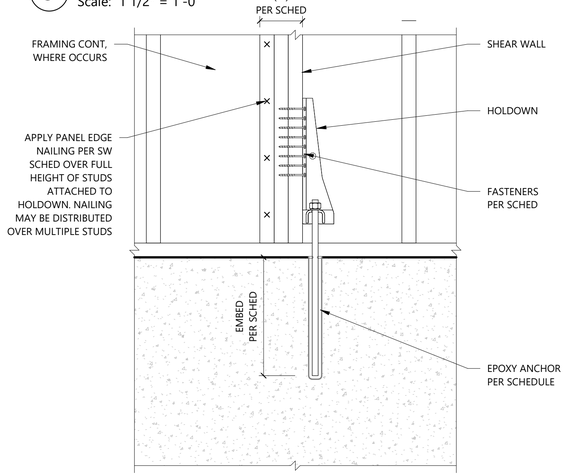


HDU-AB Elevation



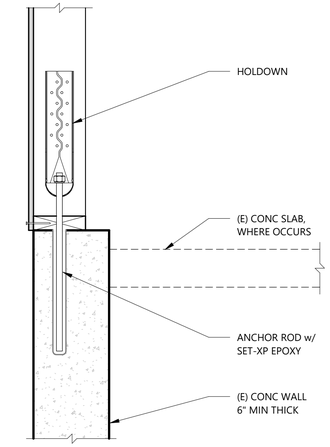
Section of HDU-AB

3 Typical Holdown at Wood Wall
Scale: 1 1/2" = 1'-0"



HDU-PI Elevation

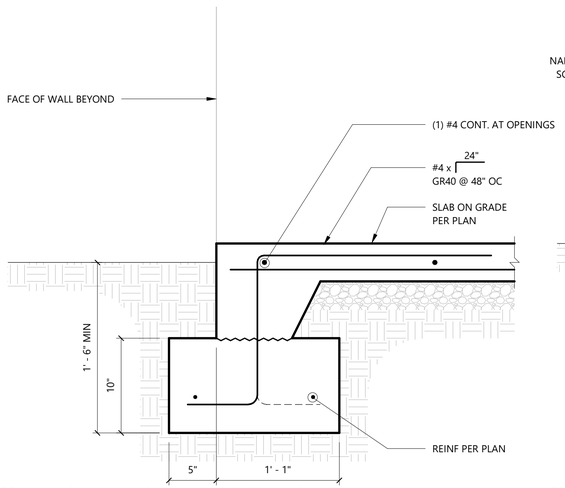
4 Typical Holdown to Wood Beam
Scale: 1 1/2" = 1'-0"



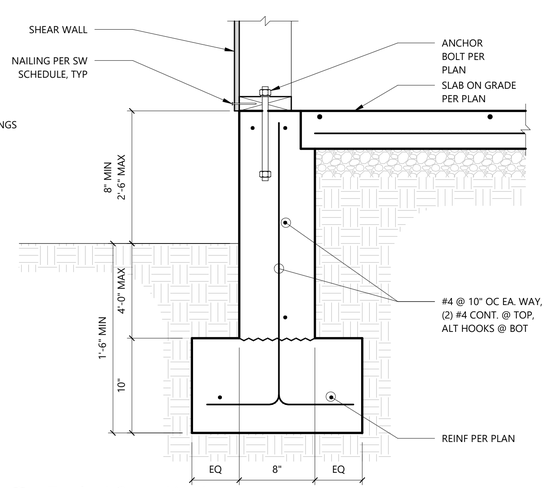
Section of HDU-PI

5 Typical Holdown - Anchor Bolt
Scale: 1 1/2" = 1'-0"

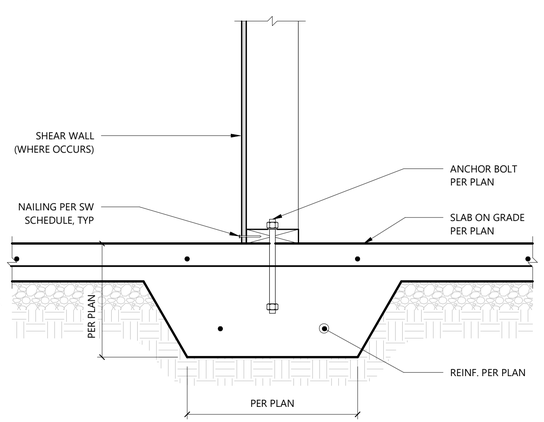
7 Typical Holdown - Post-Installed
Scale: 1 1/2" = 1'-0"



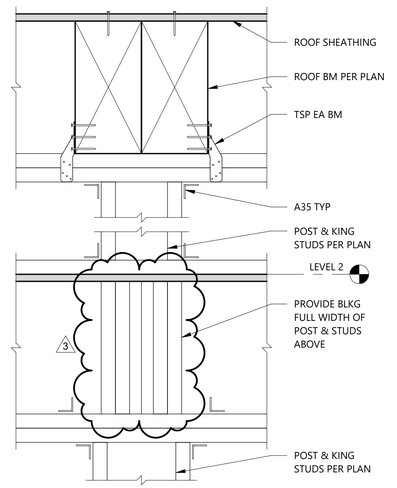
9 Typical Footing at Wall Opening
Scale: 1 1/2" = 1'-0"



10 Typical Stem Wall
Scale: 1 1/2" = 1'-0"



11 Typical Thickened Slab Strip Footing
Scale: 1 1/2" = 1'-0"



3 Detail
12
Scale: 1 1/2" = 1'-0"

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Engineer's Stamp

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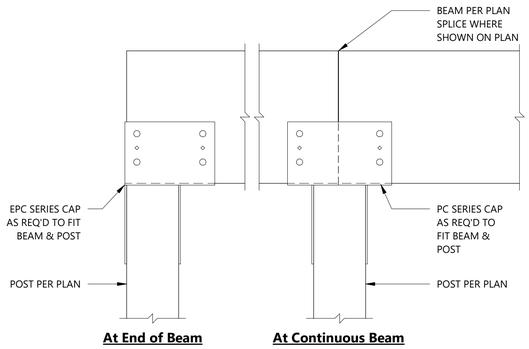
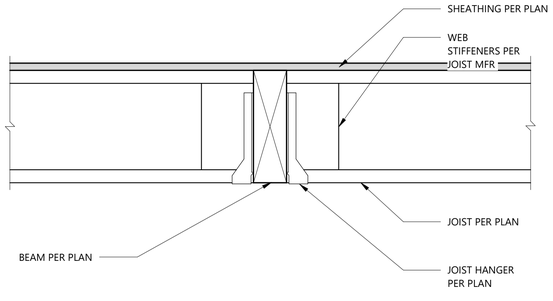
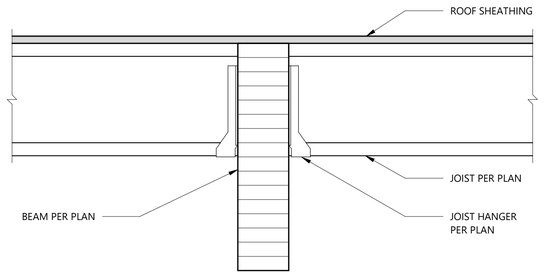


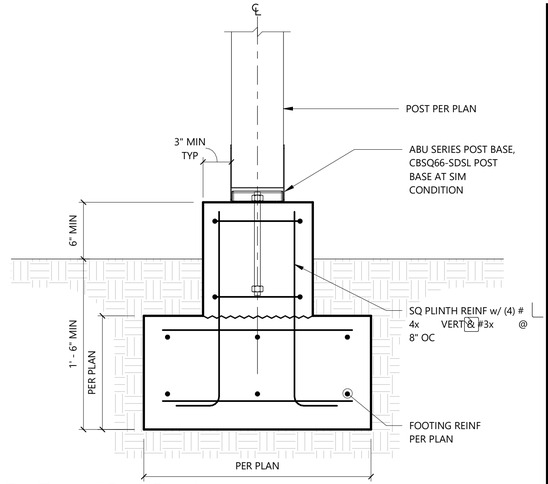
1 Typical Beam over Post
Scale: 1 1/2" = 1'-0"



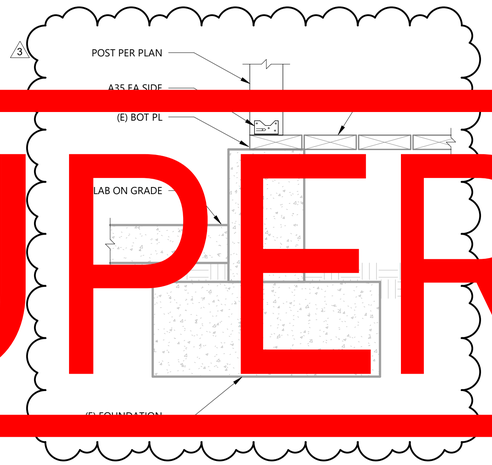
2 Typical Flush Beam Connection
Scale: 1 1/2" = 1'-0"



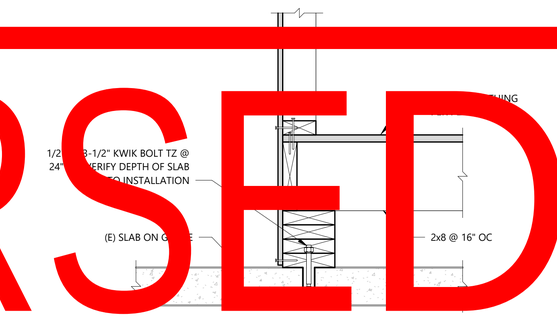
3 Roof Framing at Drop Beam
Scale: 1 1/2" = 1'-0"



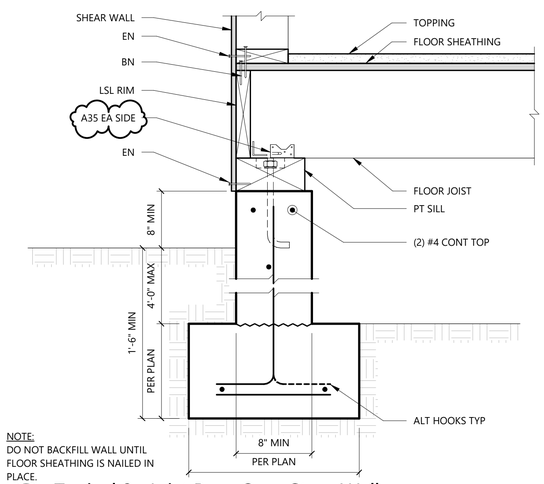
4 Typical Post Footing
Scale: 1 1/2" = 1'-0"



6 Typical Post Footing at Existing Slab
Scale: 1 1/2" = 1'-0"

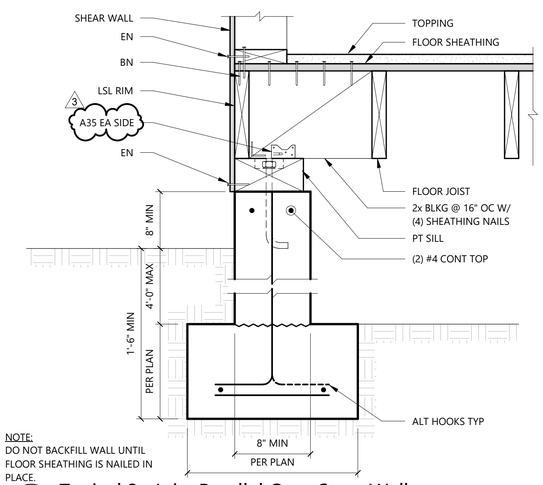


7 Detail
Scale: 1 1/2" = 1'-0"



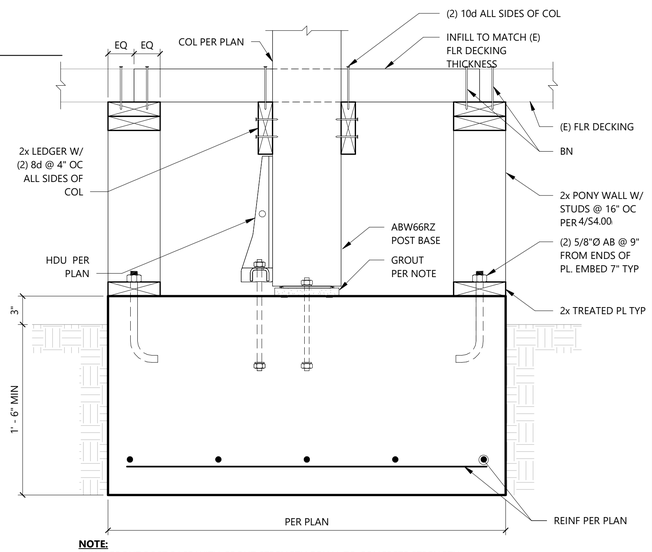
NOTE:
DO NOT BACKFILL WALL UNTIL FLOOR SHEATHING IS NAILED IN PLACE.

9 Typical 2x Joist Perp Over Stem Wall
Scale: 1 1/2" = 1'-0"



NOTE:
DO NOT BACKFILL WALL UNTIL FLOOR SHEATHING IS NAILED IN PLACE.

10 Typical 2x Joist Parallel Over Stem Wall
Scale: 1 1/2" = 1'-0"



NOTE:
FULLY GROUT POST BASE WITH GROUT STRENGTH EQUAL TO CONCRETE STRENGTH

12 Detail
Scale: 1 1/2" = 1'-0"

LUND OPSAHL
1201 First Avenue South, Suite 310
Seattle, Washington 98134
206-402-5156 www.lundopsahl.com

Engineer's Stamp

PETER A. OPSAHL
STATE OF WASHINGTON
24234
REGISTERED PROFESSIONAL ENGINEER
04/21/2018

Project Title

Aguilar Addition
10341 NE 141st Place
Kirkland, WA 98034

Project Information

Project No.	17-148-01
Checked By	PO

Issue

PERMIT SET	02/21/2018
1 PERMIT RESPONSE	07/17/2018
3 REVISION 3	03/04/2022

Department Approval

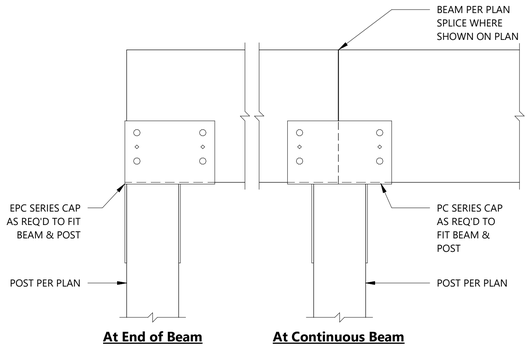
Sheet Title

Wood Details

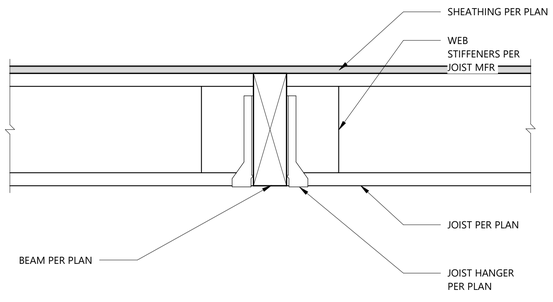
Sheet Number

S4.04

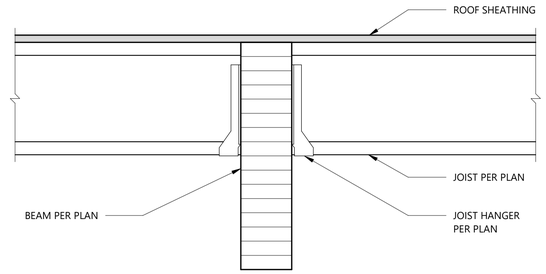
INSERT REVISED PAGES INTO APPROVED SET 08/31/2023



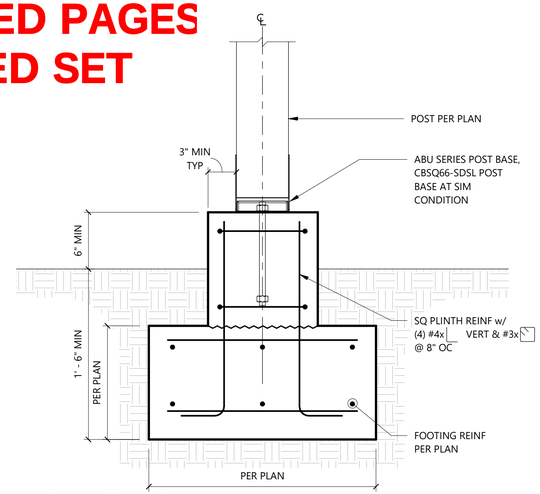
1 Typical Beam over Post
Scale: 1 1/2" = 1'-0"



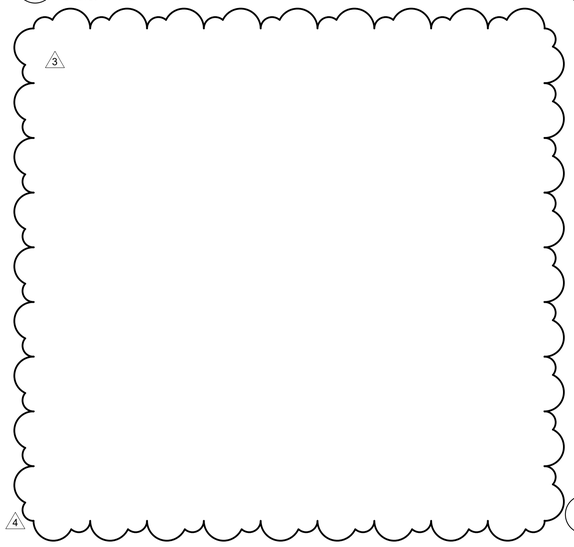
2 Typical Flush Beam Connection
Scale: 1 1/2" = 1'-0"



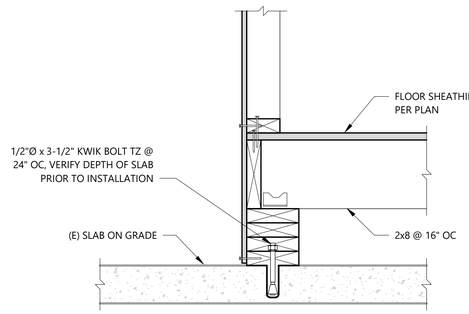
3 Roof Framing at Drop Beam
Scale: 1 1/2" = 1'-0"

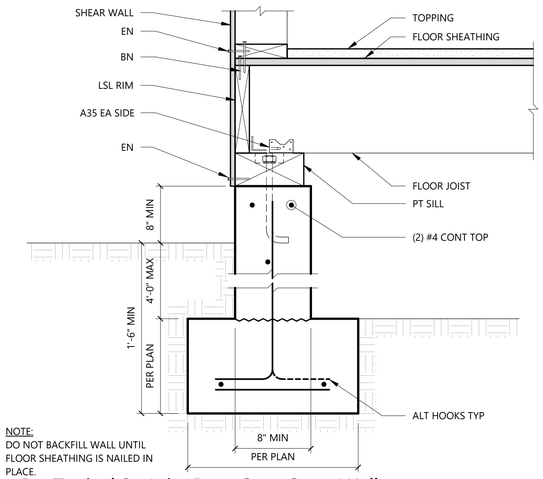


4 Typical Post Footing
Scale: 1 1/2" = 1'-0"



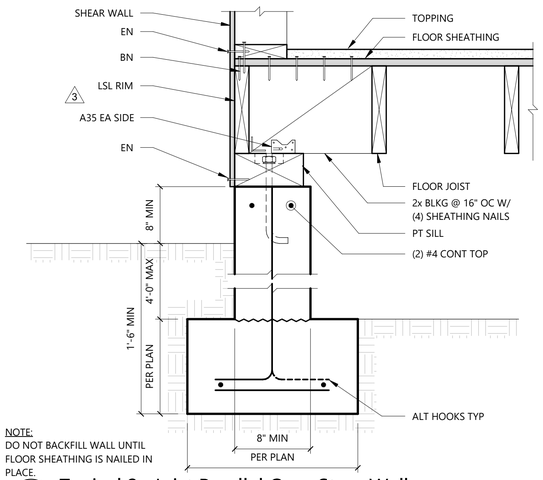
7 Detail
Scale: 1 1/2" = 1'-0"





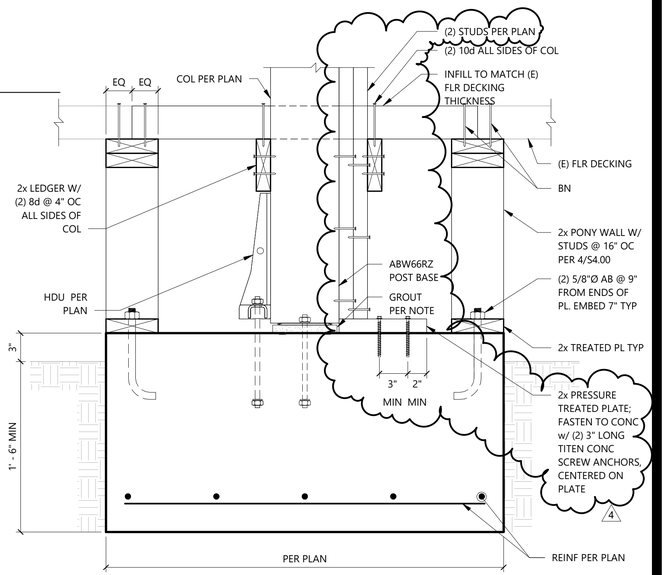
NOTE:
DO NOT BACKFILL WALL UNTIL FLOOR SHEATHING IS NAILED IN PLACE.

9 Typical 2x Joist Perp Over Stem Wall
Scale: 1 1/2" = 1'-0"



NOTE:
DO NOT BACKFILL WALL UNTIL FLOOR SHEATHING IS NAILED IN PLACE.

10 Typical 2x Joist Parallel Over Stem Wall
Scale: 1 1/2" = 1'-0"



NOTE:
FULLY GROUT POST BASE WITH GROUT STRENGTH EQUAL TO CONCRETE STRENGTH

12 Detail
Scale: 1 1/2" = 1'-0"

LUND OPSAHL
1201 First Avenue South, Suite 310
Seattle, Washington 98134
206-402-5156 www.lundopsahl.com

Engineer's Stamp

Project Title

Aguilar ADU
10341 NE 141st Place
Kirkland, WA 98034

Project Information

Project No.	17-148-01
Checked By	PO

Issue

	PERMIT SET	02/21/2018
1	PERMIT RESPONSE	07/17/2018
3	REVISION 3	03/04/2022
4	REVISION 4	07/11/2023

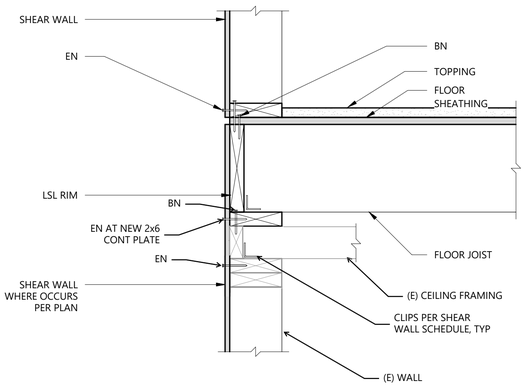
Department Approval

Sheet Title

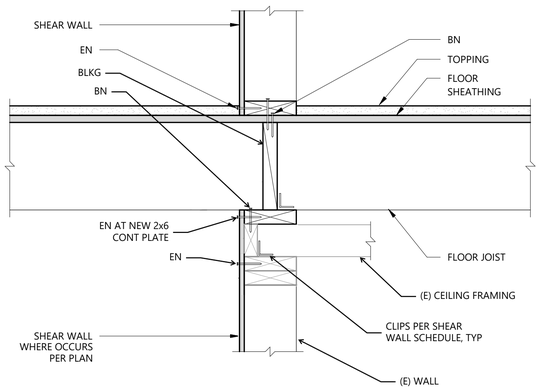
Wood Details

Sheet Number

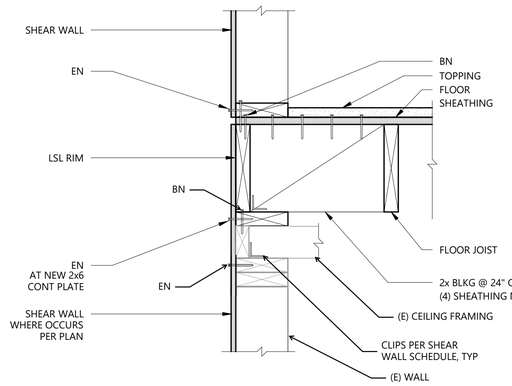
S4.04



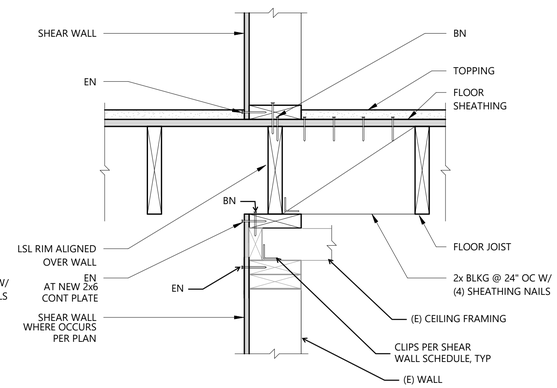
1 Typical 2x Joist Perp
Scale: 1 1/2" = 1'-0"



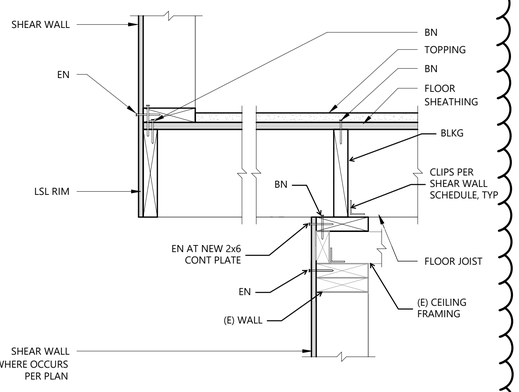
2 Typical 2x Joist Perp at Interior Wall
Scale: 1 1/2" = 1'-0"



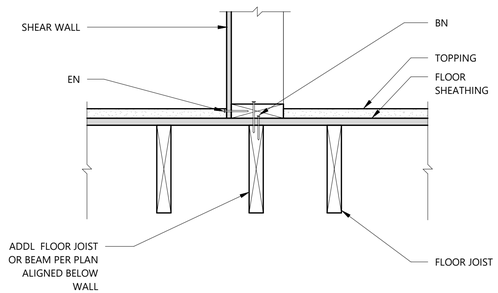
5 Typical 2x Joist Parallel
Scale: 1 1/2" = 1'-0"



6 Typical 2x Joist Parallel at Interior Wall
Scale: 1 1/2" = 1'-0"



8 Typical 2x Joist Cantilever
Scale: 1 1/2" = 1'-0"



9 Typical 2x Joist Parallel below Shear Wall
Scale: 1 1/2" = 1'-0"

3

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Engineer's Stamp

Project Title

Aguilar Addition

10341 NE 141st Place
Kirkland, WA 98034

Project Information

Project No.	17-148-01
Checked By	PO

Issue

PERMIT SET	02/21/2018
3 REVISION 3	03/04/2022

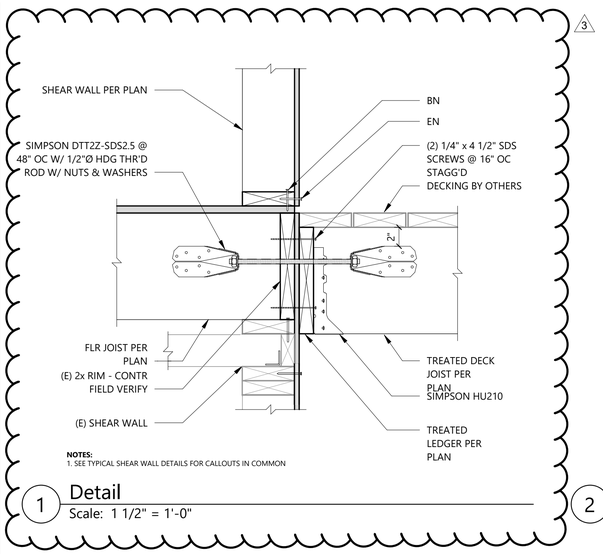
Department Approval

Sheet Title

Wood Details

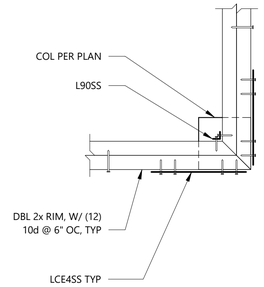
Sheet Number

S4.05



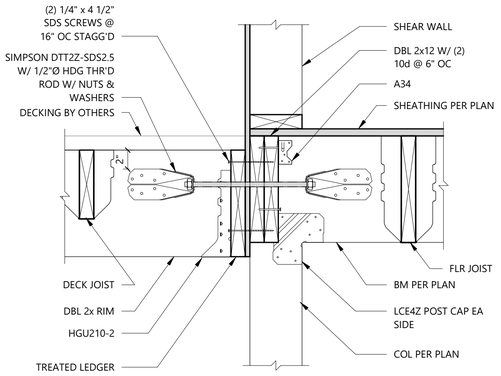
NOTES:
1. SEE TYPICAL SHEAR WALL DETAILS FOR CALLOUTS IN COMMON

1 Detail
Scale: 1 1/2" = 1'-0"



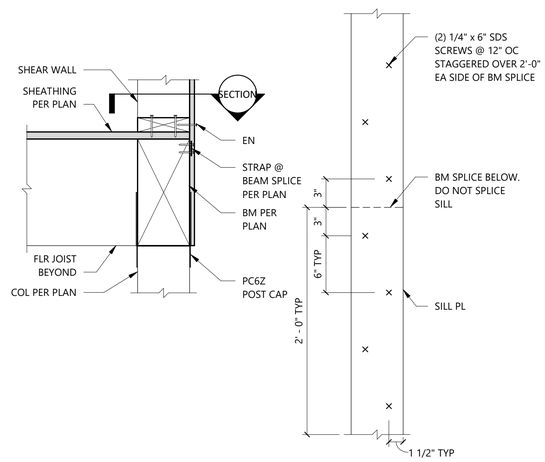
NOTE:
RIM ORIENTATION VARIES PER PLAN

2 Detail
Scale: 1 1/2" = 1'-0"



NOTE:
OMIT DECK FRAMING AND CONNECTIONS AT SIM CONDITION

3 Detail
Scale: 1 1/2" = 1'-0"



SECTION

4 Detail
Scale: 1 1/2" = 1'-0"

5 Detail
Scale: 1 1/2" = 1'-0"

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1201 First Avenue South, Suite 310
Seattle, Washington 98134
206-402-5156 www.lundopsahl.com

Engineer's Stamp

Project Title

Aguilar ADU

10341 NE 141st Place
Kirkland, WA 98034

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1	PERMIT RESPONSE	07/17/2018
2	REVISION 3	03/04/2022

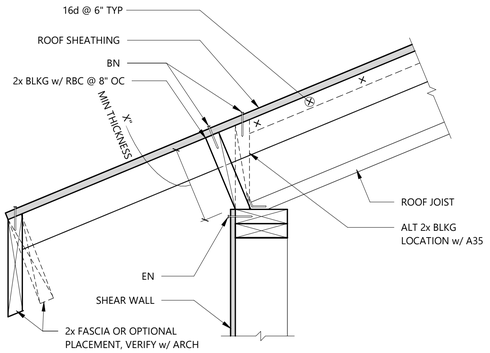
Department Approval

Sheet Title

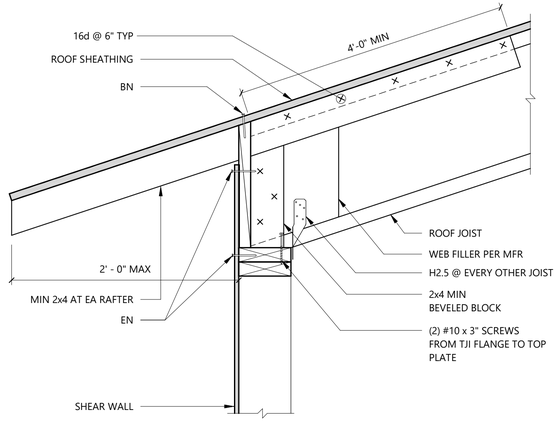
Wood Details

Sheet Number

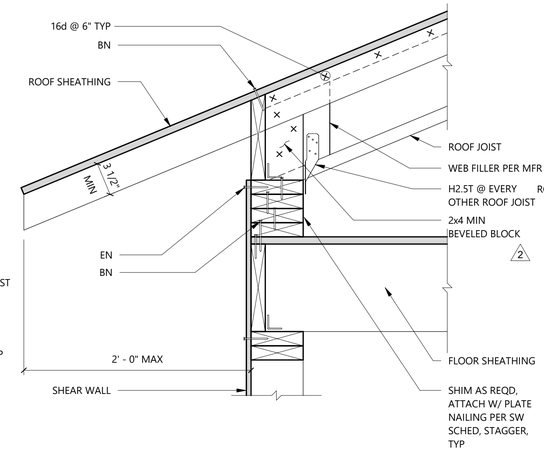
S4.06



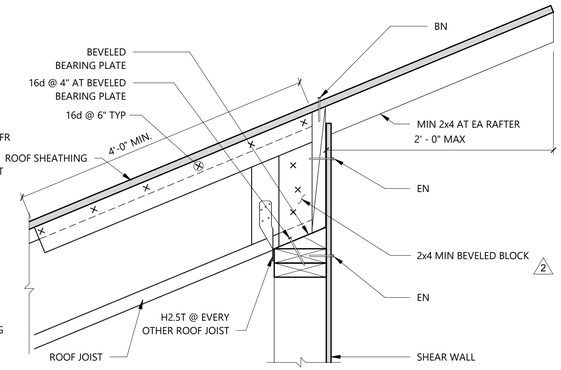
1 Typical I-Joist Rafter
Scale: 1 1/2" = 1'-0"



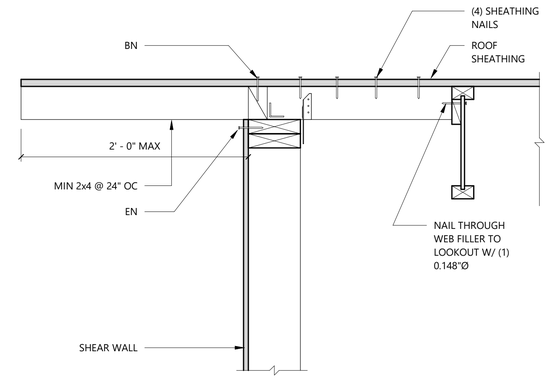
2 Typical I-Joist Rafter Perp
Scale: 1 1/2" = 1'-0"



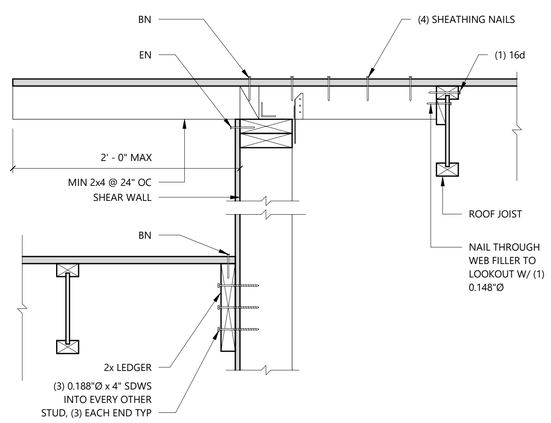
3 Typical I-Joist Rafter Perp at Floor
Scale: 1 1/2" = 1'-0"



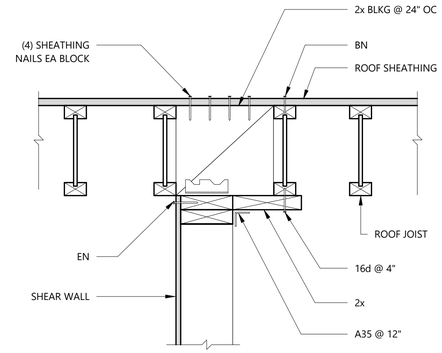
4 Typical I-Joist Rafter Perp High
Scale: 1 1/2" = 1'-0"



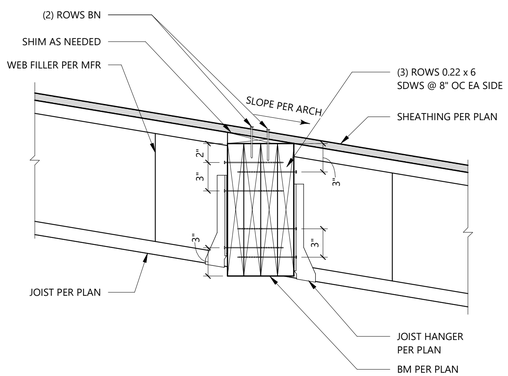
5 Typical I-Joist Rafter Parallel
Scale: 1 1/2" = 1'-0"



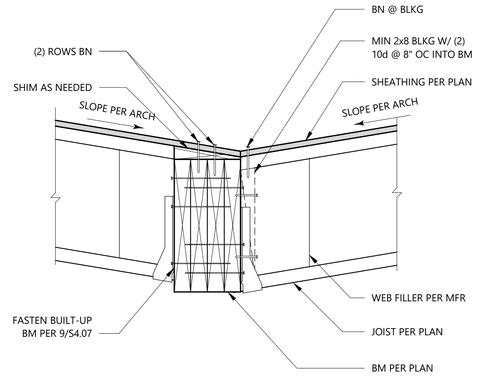
6 Typical I-Joist Rafter Parallel at Step
Scale: 1 1/2" = 1'-0"



7 I-Joist Roof Framing at Interior Shearwall
Scale: 1 1/2" = 1'-0"



9 Typical Flush Beam Connection
Scale: 1 1/2" = 1'-0"



10 Section
Scale: 1 1/2" = 1'-0"

LUND OPSAHL
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Seattle, Washington 98134
206-402-5156 www.lundopsahl.com

Engineer's Stamp

Project Title

Aguilar Addition

10341 NE 141st Place
Kirkland, WA 98034

Project Information

Project No.	17-148-01
Checked By	PO

Issue

PERMIT SET	02/21/2018
1 PERMIT RESPONSE	07/17/2018
2 PERMIT RESPONSE	08/31/2018

Department Approval

Sheet Title

Wood Details

Sheet Number

S4.07

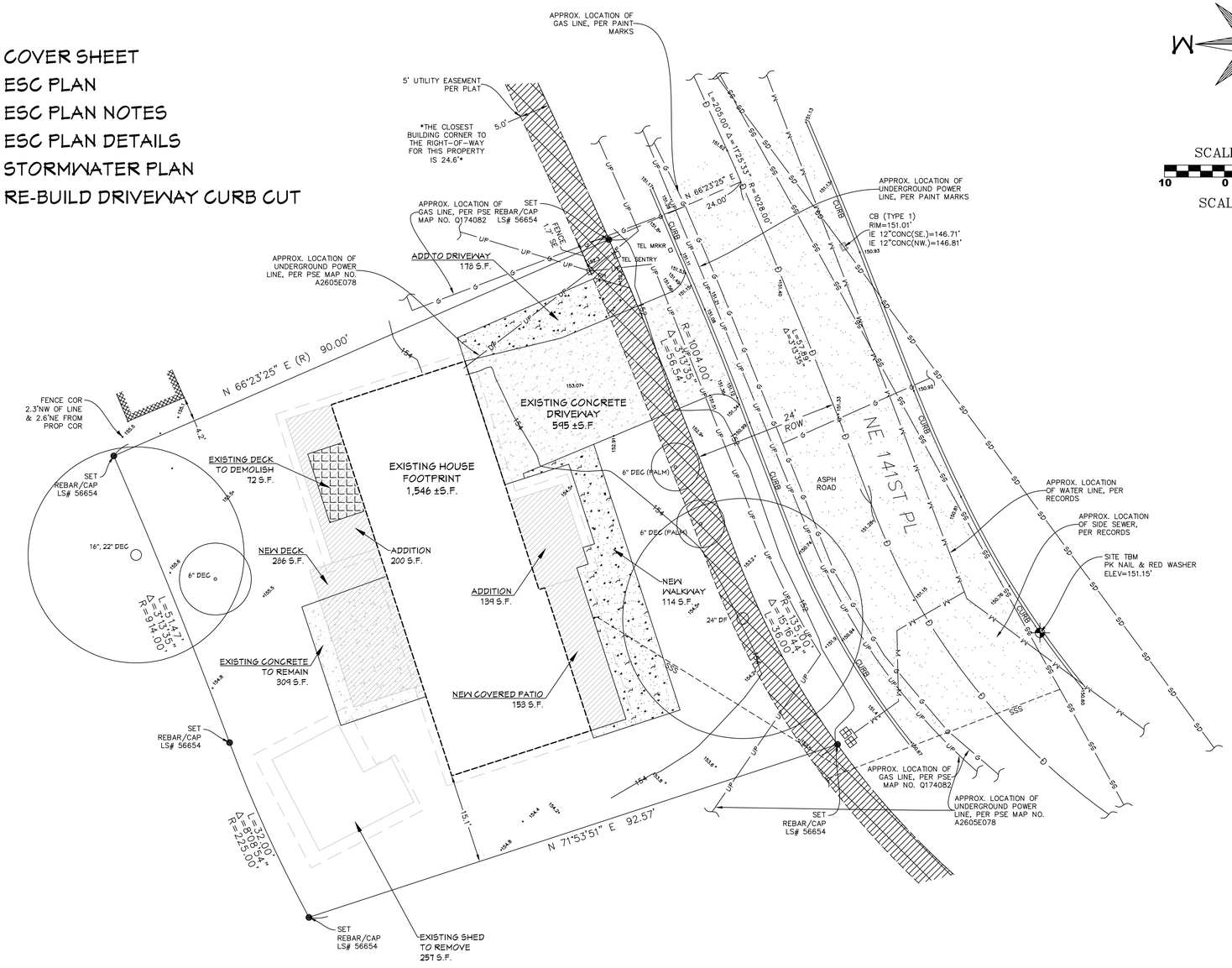
INSERT REVISED PAGES
INTO APPROVED SET
01/12/2026

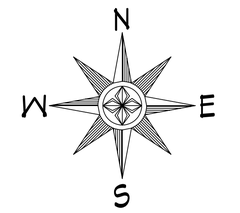
POST-ISSUANCE 2

1/12/26 (DJL)
BSF21-07891

Approval of Sheets 1/6,

INDEX:





SCALE: 1" = 10'

SCALE IN FEET

OWNER:

10341 PROPERTY LLC
(425) 273-8234
fmartinez@alphadevelopersllc.com

LEGAL DESCRIPTION:

SUN VILLAGE PLAT BLOCK: PLAT LOT: 59

TAX PARCEL NO.:

8143000590

EXISITNG CONDITION

Land Cover Type	S.F.	Acre	Pervious	Impervious
Pervious Landscape	4955	0.191	X	
Total Pervious	4955	0.191	X	
Existing building (Including eaves)	1762	0.040		X
Existing backyard structure (Including eaves)	407	0.002		X
Existing Driveway	595	0.032		X
Existing backyardconcrete area	309	0.009		X
Existing deck (on second floor)	72	0.009		X
Total Impervious	3145	0.083		X
Total site	8100	0.186		

PROPOSED CONDITION

Land Cover Type	S.F.	Acre	Pervious	Impervious
Pervious Landscape	4163	0.096	X	
Total Pervious	4163	0.096	X	
Proposedbuilding (Including eaves)	2101	0.040		X
Driveway	773	0.032		X
New walkway	315	0.007		X
New patio	153	0.009		X
New deck (on second floor)	286	0.009		X
Existing backyardconcrete area	309	0.009		X
Total Impervious	3937	0.09		X
Total site	8100	0.186		

NEW AND REPLACED IMPERVIOUS SURFACE = 3937 - 3145 = 792 S.F.

THE PROJECT IS SUBJECT TO BASIC DRAINAGE REVIEW.

NO.	Date	Revesion/Issue

Advanced Civil Solutions
12569 SE 72nd ST
NEWCASTLE, WA 98056
Tel: (206) 602-7452
A.CivilSolutions@gmail.com

EXP. 6/3/2026
12/10/2025

DESIGNED BY: B.A
DRAWN BY: B.A

JOB TITLE: AGUILAR ADDITION
ADDRESS: 10341 NE 141ST PL
KIRKLAND, WA 98034

SHEET TITLE: SITE PLAN

SHEET NO: C1.0
SHEET:

INSERT REVISED PAGES
INTO APPROVED SET
01/12/2026

POST-ISSUANCE 2

1/12/26 (DJL)
BSF21-07891

Approval of Sheets 2/6,

N
W E
S

SCALE: 1" = 10'

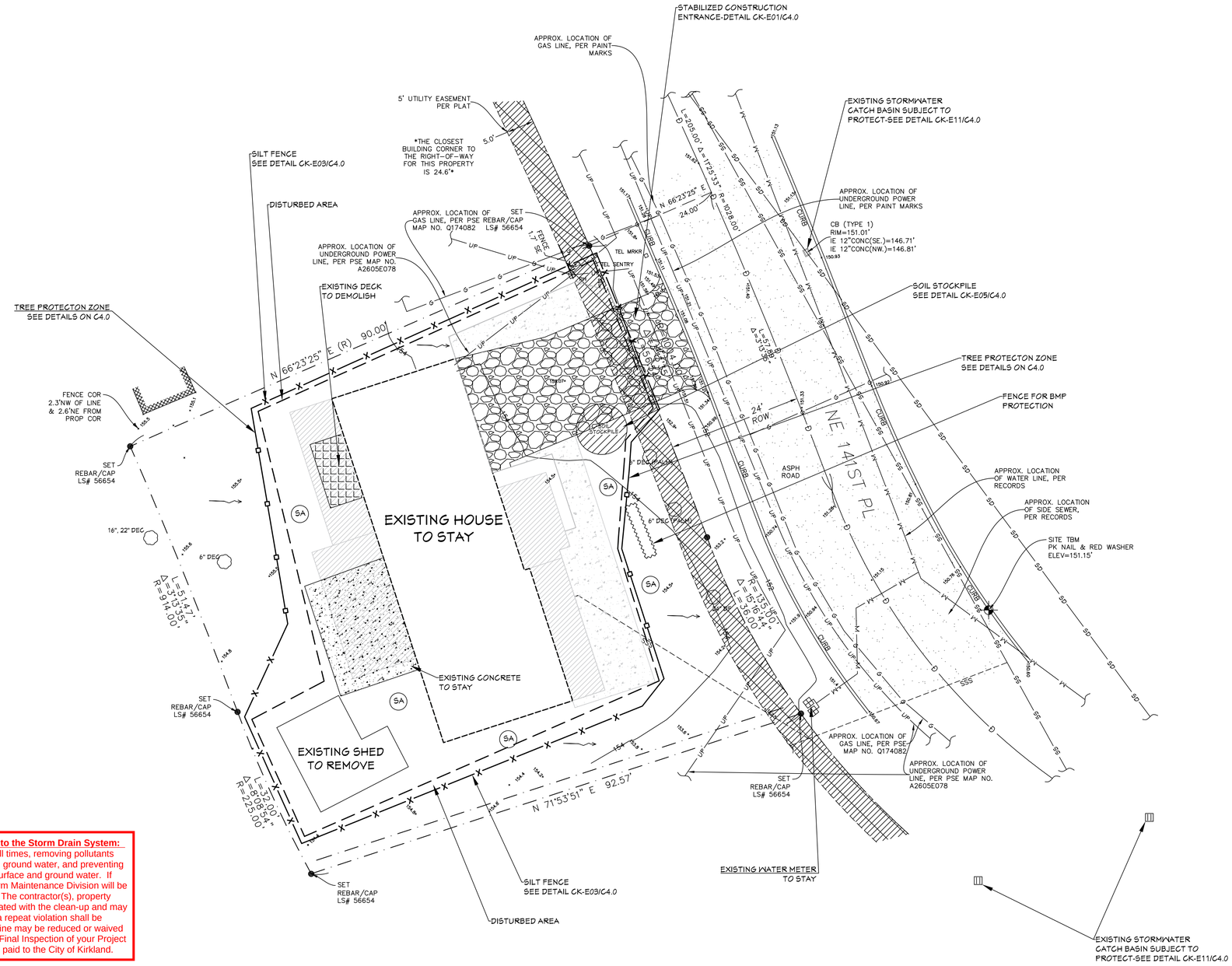
10 0 10 20

SCALE IN FEET

LEGEND

- WATER METER
- SANITARY SEWER CLEANOUT
- STREET STORM DRAIN CATCH BASIN
- W — WATER LINE
- SS — UNDERGROUND SEWER LINE
- SD — STORM DRAIN PIPE
- X — SILT FENCE
- TREE PROTECTION FENCE
- DISTURBED AREA
- CONSTRUCTION ENTRANCE
- CONCRETE
- TREE
- FLOW DIRECTION
- SOIL STOCKPILE
- SA — SOIL AMENDMENT AREA SEE DETAIL CK-E12/C4.0

Illicit Discharges and Connections (Municipal Code 15.52) are prohibited into the Storm Drain System: Contractor is responsible for keeping streets clean and free of contaminants at all times, removing pollutants from a private system that enters the municipal storm system and/or surface and ground water, and preventing an illicit discharge (KMC 15.52) into a the municipal storm drain system and/or surface and ground water. If your construction project violates Municipal Code 15.52, the City of Kirkland Storm Maintenance Division will be called to clean the public storm system, and other affected public infrastructure. The contractor(s), property owner, vendor, and any other responsible party may be charged all costs associated with the clean-up and may also be assessed a fine (KMC 1.12.200). The minimum fine is $500. A fine for a repeat violation shall be determined by multiplying the surface water fine by the number of violations. A fine may be reduced or waived for persons who immediately self-report violation to the city at 425-587-3900. A Final Inspection of your Project will not be granted until all costs associated with the clean-up, and penalties, are paid to the City of Kirkland.



NO.	Date	Revesion/Issue

Advanced Civil Solutions

12569 SE 72nd ST
NEWCASTLE, WA 98056

Tel: (206) 602-7452
A.CivilSolutions@gmail.com

EXP. 6/3/2026
12/10/2025

DESIGNED BY: B.A	JOB TITLE: AGUILAR ADDITION
DRAWN BY: B.A	ADDRESS: 10341 NE 141ST PL KIRKLAND, WA 98034

SHEET TITLE: ESC PLAN

SHEET NO: C2.0

SHEET:

INSERT REVISED PAGES
INTO APPROVED SET
01/12/2026

POST-ISSUANCE 2

1/12/26 (DJL)
BSF21-07891

Approval of Sheets 3/6,

EROSION/SEDIMENTATION CONTROL PLAN NOTES

1. THE APPROVED CONSTRUCTION SEQUENCE SHALL BE AS FOLLOWS:

   a. CONDUCT PRE-CONSTRUCTION MEETING.
   b. FLAG OR FENCE CLEARING LIMITS.
   c. POST SIGN WITH NAME AND PHONE NUMBER OF TESC SUPERVISOR.
   d. INSTALL CATCH BASIN PROTECTION DOWNSTREAM AND AS DETERMINED BY THE CITY INSPECTOR.
   e. GRADE AND INSTALL CONSTRUCTION ENTRANCE(S).
   f. INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.).
   g. CONSTRUCT SEDIMENT PONDS AND TRAPS.
   h. GRADE AND STABILIZE CONSTRUCTION ROADS.
   i. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DIKES, PIPE SLOPE DRAINS, ETC.) SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT.
   j. MAINTAIN EROSION CONTROL MEASURE IN ACCORDANCE WITH CITY OF KIRKLAND STANDARDS AN MANUFACTURER'S RECOMMENDATIONS.
   k. RELOCATE EROSION CONTROL MEASURES OR INSTALL NEW MEASURES SO THAT AS SITE CONDITIONS CHANGE, THE EROSION AND SEDIMENT CONTROL IS ALWAYS IN ACCORDANCE WITH THE CITY TESC MINIMUM REQUIREMENTS.
   l. COVER ALL AREAS WITHIN THE SPECIFIED TIME FRAME WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING, CRUSHED ROCK OR EQUIVALENT.
   m. STABILIZE ALL AREAS THAT REACH FINAL GRADE WITHIN 7 DAYS.
   n. SEED OR SOD ANY AREAS TO REMAIN UNWORKED FOR MORE THAN 30 DAYS.
   o. UPON COMPLETION OF THE PROJECT, ALL DISTURBED AREAS MUST BE STABILIZED AND BEST MANAGEMENT PRACTICES REMOVED IF APPROPRIATE.

2. CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS CLEAN AND FREE OF CONTAMINANTS AT ALL TIMES AND FOR PREVENTING AN ILLICIT DISCHARGE (KMC 15.52) INTO A THE MUNICIPAL STORM DRAIN SYSTEM. IF YOUR CONSTRUCTION PROJECT CAUSES AN ILLICIT DISCHARGE TO THE MUNICIPAL STORM DRAIN SYSTEM, THE CITY OF KIRKLAND STORM MAINTENANCE DIVISION WILL BE CALLED TO CLEAN THE PUBLIC STORM SYSTEM, AND OTHER AFFECTED PUBLIC INFRASTRUCTURE. THE CONTRACTOR(S), PROPERTY OWNER, VENDOR, AND ANY OTHER RESPONSIBLE PARTY MAY BE CHARGED ALL COSTS ASSOCIATED WITH THE CLEAN-UP AND MAY ALSO BE ASSESSED A FINE (KMC 1.12.200). THE MINIMUM FINE IS $500. A FINE FOR A REPEAT VIOLATION SHALL BE DETERMINED BY MULTIPLYING THE SURFACE WATER FINE BY THE NUMBER OF VIOLATIONS. A FINE MAY BE REDUCED OR WAIVED FOR PERSONS WHO IMMEDIATELY SELF-REPORT VIOLATION TO THE CITY AT 425-587-3900. A FINAL INSPECTION OF YOUR PROJECT WILL NOT BE GRANTED UNTIL ALL COSTS ASSOCIATED WITH THE CLEAN-UP, AND PENALTIES, ARE PAID TO THE CITY OF KIRKLAND.
3. CONSTRUCTION DEWATERING DISCHARGES SHALL ALWAYS MEET WATER QUALITY GUIDELINES LISTED IN COK POLICY E-1. SPECIFICALLY, DISCHARGES TO THE PUBLIC STORMWATER DRAINAGE SYSTEM MUST BE BELOW 25 NTU, AND NOT CONSIDERED AN ILLICIT DISCHARGE (PER KMC 15.52.090). TEMPORARY DISCHARGES TO SANITARY SEWER REQUIRE PRIOR AUTHORIZATION AND PERMIT FROM KING COUNTY INDUSTRIAL WASTE PROGRAM (206-477-5300) AND NOTIFICATION TO THE PUBLIC WORKS CONSTRUCTION INSPECTOR.
4. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF KIRKLAND STANDARDS AND SPECIFICATIONS.
5. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE SET BY SURVEY AND CLEARLY FLAGGED IN THE FIELD BY A CLEARING CONTROL FENCE PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE OR REMOVAL OF ANY GROUND COVER BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE PERMITTEE / CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
6. APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G., SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
7. THE IMPLEMENTATION OF THIS ESC PLAN AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THERESPONSIBILITY OF THE PERMITTEE/CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED.
8. A COPY OF THE APPROVED ESC PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
9. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS. WHEREVER POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
10. THE ESC FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS ON THE APPROVED PLANS. LOCATIONS MAY BE MOVED TO SUIT FIELD CONDITIONS, SUBJECT TO APPROVAL BY THE ENGINEER AND THE CITY OF KIRKLAND INSPECTOR.
11. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED (E.G., ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.) AS NEEDED FOR UNEXPECTED STORM EVENTS. ADDITIONALLY, MORE ESC FACILITIES MAY BE REQUIRED TO ENSURE COMPLETE SILTATION CONTROL. 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 THEIR ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES OVER AND ABOVE THE MINIMUM REQUIREMENTS AS MAY BE NEEDED.
12. THE ESC FACILITIES SHALL BE INSPECTED BY THE PERMITTEE/CONTRACTOR DAILY DURING NON-RAINFALL PERIODS, EVERY HOUR (DAYLIGHT) DURING A RAINFALL EVENT, AND AT THE END OF EVERY RAINFALL, AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING. IN ADDITION, TEMPORARY SILTATION PONDS AND ALL TEMPORARY SILTATION CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED, PERMANENT DRAINAGE FACILITIES ARE OPERATIONAL, AND THE POTENTIAL FOR EROSION HAS PASSED. WRITTEN RECORDS SHALL BE KEPT DOCUMENTING THE REVIEWS OF THE ESC FACILITIES.
13. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN 48 HOURS FOLLOWING A STORM EVENT.
14. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
15. ALL DENUDED SOILS MUST BE STABILIZED WITH AN APPROVED TESC METHOD (E.G. SEEDING, MULCHING, PLASTIC COVERING, CRUSHED ROCK) WITHIN THE FOLLOWING TIMELINES:
    - MAY 1 TO SEPTEMBER 30 – SOILS MUST BE STABILIZED WITHIN 7 DAYS OF GRADING.
    - OCTOBER 1 TO APRIL 30 – SOILS MUST BE STABILIZED WITHIN 2 DAYS OF GRADING.
    - STABILIZE SOILS AT THE END OF THE WORKDAY PRIOR TO A WEEKEND, HOLIDAY, OR PREDICTED RAIN EVENT.
16. THE LONG-TERM USE OF PLASTIC COVERING ON A SITE SHALL BE LIMITED TO ONE WET SEASON (OCTOBER 1 TO APRIL 30). AFTER THAT, THE SITE WILL BE REQUIRED TO HYDROSEED OR INSTALL OTHER TESC METHODS AS APPROVED BY THE PUBLIC WORKS DEPARTMENT.
17. WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST GERMINATING GRASSES SHALL BE APPLIED AT AN APPROPRIATE RATE (EXAMPLE: ANNUAL OR PERENNIAL RYE APPLIED AT APPROXIMATELY 80 POUNDS PER ACRE).
18. WHERE STRAW MULCH IS REQUIRED FOR TEMPORARY EROSION CONTROL, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF 2".
19. ALL LOTS ADJOINING OR HAVING ANY NATIVE GROWTH PROTECTION EASEMENTS (NGPE) SHALL HAVE A 6' HIGH TEMPORARY CONSTRUCTION FENCE (CHAIN LINK WITH PIER BLOCKS) SEPARATING THE LOT (OR BUILDABLE PORTIONS OF THE LOT) FROM THE AREA RESTRICTED BY THE NGPE AND SHALL BE INSTALLED PRIOR TO ANY GRADING OR CLEARING AND REMAIN IN PLACE UNTIL THE PLANNING DEPARTMENT AUTHORIZES REMOVAL.
20. CLEARING LIMITS SHALL BE DELINEATED WITH A CLEARING CONTROL FENCE. THE CLEARING CONTROL FENCE SHALL CONSIST OF A 6-FT. HIGH CHAIN LINK FENCE ADJACENT THE DRIP LINE OF TREES TO BE SAVED, WETLAND OR STREAM BUFFERS, AND SENSITIVE SLOPES. CLEARING CONTROL FENCES ALONG WETLAND OR STREAM BUFFERS OR UPSLOPE OF SENSITIVE SLOPES SHALL BE ACCOMPANIED BY AN EROSION CONTROL FENCE. IF APPROVED BY THE CITY, A FOUR-FOOT HIGH ORANGE MESH CLEARING CONTROL FENCE MAY BE USED TO DELINEATE CLEARING LIMITS IN ALL OTHER AREAS.
21. OFF-SITE STREETS MUST BE KEPT CLEAN AT ALL TIMES. IF DIRT IS DEPOSITED ON THE PUBLIC STREET SYSTEM, THE STREET SHALL BE IMMEDIATELY CLEANED WITH POWER SWEEPER OR OTHER EQUIPMENT. ALL VEHICLES SHALL LEAVE THE SITE BY WAY OF THE CONSTRUCTION ENTRANCE AND SHALL BE [illegible] OF ALL DIRT THAT WOULD BE DEPOSITED ON THE PUBLIC STREETS.
22. ROCK FOR EROSION PROTECTION OF ROADWAY DITCHES, WHERE REQUIRED, MUST BE OF SOUND QUARRY ROCK, PLACED TO A DEPTH OF 1' AND MUST MEET THE FOLLOWING SPECIFICATIONS: 4"-8" ROCK/40%-70% PASSING; 2"-4" ROCK/30%-40% PASSING; AND 1"-2" ROCK/10%-20% PASSING. RECYCLED CONCRETE SHALL NOT BE USED FOR EROSION PROTECTION, INCLUDING CONSTRUCTION ENTRANCE OR TEMPORARY STABILIZATION ELSEWHERE ON THE SITE.
23. IF ANY PART(S) OF THE CLEARING LIMIT BOUNDARY OR TEMPORARY EROSION/SEDIMENTATION CONTROL PLAN IS/ARE DAMAGED, IT SHALL BE REPAIRED IMMEDIATELY.
24. ALL PROPERTIES ADJACENT TO THE PROJECT SITE SHALL BE PROTECTED FROM SEDIMENT DEPOSITION AND RUNOFF.
25. AT NO TIME SHALL MORE THAN 1' OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED IMMEDIATELY FOLLOWING REMOVAL OF EROSION CONTROL BMPS. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
26. ANY PERMANENT RETENTION/DETENTION FACILITY USED AS A TEMPORARY SETTLING BASIN SHALL BE MODIFIED WITH THE NECESSARY EROSION CONTROL MEASURES AND SHALL PROVIDE ADEQUATE STORAGE CAPACITY. IF THE PERMANENT FACILITY IS TO FUNCTION ULTIMATELY AS AN INFILTRATION OR DISPERSION SYSTEM, THE FACILITY SHALL NOT BE USED AS A TEMPORARY SETTLING BASIN. NO UNDERGROUND DETENTION TANK, DETENTION VAULT, OR SYSTEM WHICH BACKS UNDER OR INTO A POND SHALL BE USED AS A TEMPORARY SETTLING BASIN.
27. ALL EROSION/SEDIMENTATION CONTROL PONDS WITH A DEAD STORAGE DEPTH EXCEEDING 6" MUST HAVE A PERIMETER FENCE WITH A MINIMUM HEIGHT OF 3'.
28. THE WASHED GRAVEL BACKFILL ADJACENT TO THE FILTER FABRIC FENCE SHALL BE REPLACED AND THE FILTER FABRIC CLEANED IF IT IS NONFUNCTIONAL BY EXCESSIVE SILT ACCUMULATION AS DETERMINED BY THE CITY OF KIRKLAND. ALSO, ALL INTERCEPTOR SWALES SHALL BE CLEANED IF SILT ACCUMULATION EXCEEDS ONE-QUARTER DEPTH.
29. PRIOR TO THE OCTOBER 1 OF EACH YEAR (THE BEGINNING OF THE WET SEASON), ALL DISTURBED AREAS SHALL BE REVIEWED TO IDENTIFY WHICH ONES CAN BE SEEDED IN PREPARATION FOR THE WINTER RAINS. THE IDENTIFIED DISTURBED AREA SHALL BE SEEDED WITHIN ONE WEEK AFTER OCTOBER 1. A SITE PLAN DEPICTING THE AREAS TO BE SEEDED AND THE AREAS TO REMAIN UNCOVERED SHALL BE SUBMITTED TO THE PUBLIC WORKS CONSTRUCTION INSPECTOR. THE INSPECTOR CAN REQUIRE SEEDING OF ADDITIONAL AREAS IN ORDER TO PROTECT SURFACE WATERS, ADJACENT PROPERTIES, OR DRAINAGE FACILITIES.
30. ANY AREA TO BE USED FOR INFILTRATION OR PERVIOUS PAVEMENT (INCLUDING A 5-FOOT BUFFER) MUST BE SURROUNDED BY SILT FENCE PRIOR TO CONSTRUCTION AND UNTIL FINAL STABILIZATION OF THE SITE TO PREVENT SOIL COMPACTION AND SILTATION BY CONSTRUCTION ACTIVITIES.
31. IF THE TEMPORARY CONSTRUCTION ENTRANCE OR ANY OTHER AREA WITH HEAVY VEHICLE LOADING IS LOCATED IN THE SAME AREA TO BE USED FOR INFILTRATION ORPERVIOUS PAVEMENT, 6" OF SEDIMENT BELOW THE GRAVEL SHALL BE REMOVED PRIOR TO INSTALLATION OF THE INFILTRATION FACILITY OR PERVIOUS PAVEMENT (TO REMOVE FINES ACCUMULATED DURING CONSTRUCTION).
32. ANY CATCH BASINS COLLECTING RUNOFF FROM THE SITE, WHETHER THEY ARE ON OR OFF THE SITE, SHALL HAVE ADEQUATE PROTECTION FROM SEDIMENT. CATCH BASINSDIRECTLY DOWNSTREAM OF THE CONSTRUCTION ENTRANCE OR ANY OTHER CATCH BASIN AS DETERMINED BY THE CITY INSPECTOR SHALL BE PROTECTED WITH A "STORM DRAIN PROTECTION INSERT" OR EQUIVALENT.
33. IF A SEDIMENT POND IS NOT PROPOSED, A BAKER TANK OR OTHER TEMPORARY GROUND AND/OR SURFACE WATER STORAGE TANK MAY BE REQUIRED DURING CONSTRUCTION, DEPENDING ON WEATHER CONDITIONS.
34. DO NOT FLUSH CONCRETE BY-PRODUCTS OR TRUCKS NEAR OR INTO THE STORM DRAINAGE SYSTEM. IF EXPOSED AGGREGATE IS FLUSHED INTO THE STORM SYSTEM, IT COULD MEAN RE-CLEANING THE ENTIRE DOWNSTREAM STORM SYSTEM, OR POSSIBLY RE-LAYING THE STORM LINE.
35. RECYCLED CONCRETE SHALL NOT BE STOCKPILED ON SITE, UNLESS FULLY COVERED WITH NO POTENTIAL FOR RELEASE OF RUNOFF.

NO.	Date	Revesion/Issue

Advanced Civil Solutions
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NEWCASTLE, WA 98056
Tel: (206) 602-7452
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EXP. 6/3/2026
12/10/2025

DESIGNED BY: B.A	JOB TITLE: AGUILAR ADDITION	SHEET TITLE: ESC PLAN NOTES	SHEET NO: C3.0
DRAWN BY: B.A	ADDRESS: 10341 NE 141ST PL KIRKLAND, WA 98034		SHEET:

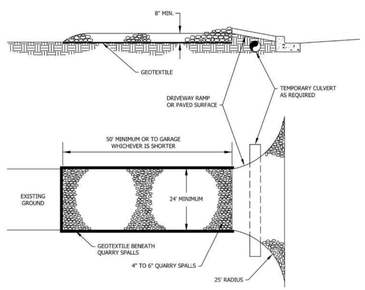
INSERT REVISED PAGES
INTO APPROVED SET
01/12/2026

POST-ISSUANCE 2

1/12/26 (DJL)
BSF21-07891

Approval of Sheets 4/6.

LAST REVISED:01/2020



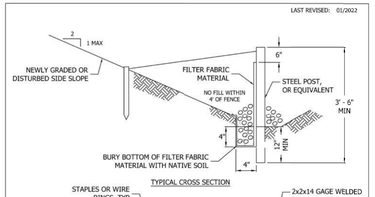
SINGLE FAMILY

NOTES:

1. PAD SHALL BE REMOVED AND REPLACED WHEN SOIL IS EVIDENT ON THE SURFACE OF THE PAD OR AS DIRECTED BY THE CITY CLEARING AND GRADING INSPECTOR.
2. PAD SHALL BE INSTALLED IN PLANTING STRIP AS APPROPRIATE.
3. PAD THICKNESS SHALL BE INCREASED IF SOIL CONDITIONS DICTATE AND/OR PER THE DIRECTION OF THE CITY CLEARING AND GRADING INSPECTOR.
4. CONTRACTOR RESPONSIBLE FOR CURB & GUTTER CONDITION.
5. RECYCLED CONCRETE SHALL NOT BE USED FOR THE CONSTRUCTION ENTRANCE DUE TO HIGH LEVELS OF PH.
6. ALTERNATIVE DESIGN ALLOWABLE WITH PUBLIC WORKS APPROVAL.

CITY OF KIRKLAND
PLAN NO. CK—E.01
TEMPORARY SINGLE FAMILY CONST. ENTRANCE

LAST REVISED: 01/2022

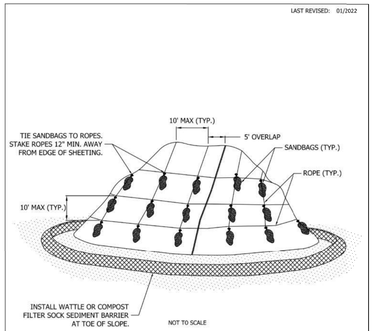


NOTES

1. PREFAB FENCE ALLOWED IF REINFORCED AND APPROVED BY CITY INSPECTOR.
2. FENCE SHALL NOT BE INSTALLED ON SLOPES STEEPER THAN 2:1.
3. JOINTS IN FILTER FABRIC SHALL BE SPLICED AT POSTS. USE STAPLES, WIRE RINGS, OR EQUIVALENT TO ATTACH FABRIC TO POSTS AND FENCE.
4. REMOVE SEDIMENT WHEN IT REACHES 1/3 FENCE HEIGHT.
5. LOCATION OF FENCING SHALL BE AS SHOWN ON APPROVED PLANS OR AS DIRECTED BY THE CITY.
6. MAXIMUM 100' SHEET OR OVERLAND FLOW PATH LENGTH TO SILT FENCE.
7. DO NOT DIRECT FLOWS GREATER THAN 0.5 CFS TO FENCE.
8. SILT FENCE SHOULD NOT BE INSTALLED IN STREAMS OR V-SHAPED DITCHES.
9. FILTER FABRIC SHOULD BE INSTALLED ALONG CONTOURS WHENEVER POSSIBLE.

CITY OF KIRKLAND
PLAN NO. CK - E.03
SILT FENCE

LAST REVISED: 01/2022

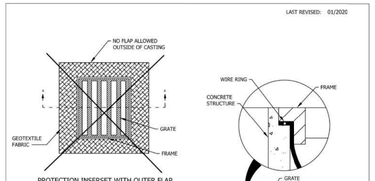


NOTES

1. INSTALL PLASTIC SHEETING VERTICALLY DOWN SLOPE.
2. INSTALL PLASTIC SHEETING SO EDGES OVERLAP AND ARE SHINGLED AWAY FROM PREVAILING WINDS.
3. PLASTIC SHEETING SHALL BE BLACK MIN 6 MIL.
4. COVER MEASURES SHALL BE INSTALLED IF AN AREA IS TO REMAIN UNWORKED FOR MORE THAN SEVEN DAYS DURING THE DRY SEASON (MAY 1 TO SEPTEMBER 30) OR FOR MORE THAN TWO CONSECUTIVE WORKING DAYS DURING THE WET SEASON (OCTOBER 1 TO APRIL 30).
5. DURING THE WET SEASON, EXPOSED STOCKPILE SLOPES WITH AN INCLINE OF 3 HORIZONTAL TO 1 VERTICAL (3H:1V) OR STEEPER AND WITH MORE THAN TEN FEET OF VERTICAL RELIEF SHALL BE COVERED IF THEY ARE TO REMAIN UNWORKED FOR MORE THAN 12 HOURS.

CITY OF KIRKLAND
PLAN NO. CK - E.05
TEMPORARY STOCKPILE

LAST REVISED: 01/2020

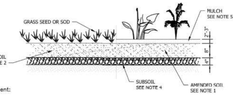


CITY OF KIRKLAND
PLAN NO. CK- E.11
STORM DRAIN PROTECTION INSERT

SOIL AMENDMENT NOTES FOR BMP T5.13

LAST REVISED: 01/2019

REFERENCE: WA STATE DEPT. OF ECOLOGY'S STORMWATER MANAGEMENT MANUAL FOR W. WA



Notes for Soil Amendment:

General:

1. For planting areas, the minimum acceptable organic matter content by dry weight is 10% (loss-on-ignition testing).
2. For turf areas, the minimum acceptable organic matter content by dry weight is 5% (loss-on-ignition testing).
3. A minimum organic-amended depth of 8 inches (except in tree protection areas) is required.
4. Subsoil shall be scarified 4 inches below amended layer to produce 12-inch depth of un-compacted soil.
5. Planting beds should be mulched after planting with 2 to 3 inches of organic material such as arborist wood chip mulch.
6. Soil amendment cannot be placed in overly saturated soils. It is recommended that the soil amendment be placed between May 1 and October 1, when soils are typically driest and less subject to compaction.
7. Prior to soil installation, applicant will submit soil test verification, including tests from either supplier or contractor (depending on option chosen) to verify organic matter content and that compost meets WAC specifications. Soil verification test method must meet ASTM D2974. The verification shall clearly state the following (at a minimum): test date, test method used, testing company, and loss-on-ignition (LOI) results.

For projects 4 lots or less — you must import amended soil meeting the requirements below:

1. For planting beds, a mix by volume of 40% compost (meeting WAC 173-350-220) with 60% mineral aggregate is pre-approved to meet the organic matter content by dry weight (loss-on-ignition test).
2. For turf areas, a mix by volume of 25% compost (meeting WAC 173-350-220) with 75% mineral aggregate is pre-approved to meet the organic matter content by dry weight (loss-on-ignition test).

For projects 5 lots or greater — you may either import amended soil meeting the requirements above or follow Option 1 or Option 2 below:

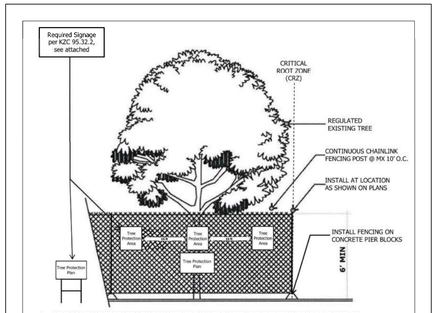
Option 1 — Amending Existing Disturbed Topsoil:

1. For planting beds, 3 inches of compost (meeting WAC 173-350-220) on 9 inches scarified or tilled soil (total amended depth of 12") is pre-approved to meet the organic matter content by dry weight (loss-on-ignition test).
2. For turf areas, 1.75 inches of compost (meeting WAC 173-350-220) on 10 inches scarified or tilled soil (total amended depth of 12") is pre-approved to meet the organic matter content by dry weight (loss-on-ignition test).

Option 2 — Amending Stockpiled Topsoil from Cleared Areas:

1. Stockpile and cover soil with 3 inches of wood chips, weed barrier, or other breathable materials that sheds moisture yet allows air transmission.
2. Test stockpile material (prior to adding compost) for organic matter content to determine whether additional compost must be tiled into the stockpiled material to meet the required organic matter content by dry weight (loss-on-ignition test).
3. After the stockpiled material has been tied, a soil sample will be taken by the applicant/contractor for every 5,000 sf or every lot (whichever is less) to test that the site meets the required organic matter content by dry weight (loss-on-ignition test).

CITY OF KIRKLAND
PLAN NO. CK—E.12
SOIL AMENDMENT



1. MINIMUM SIX (6) FOOT HIGH CHAINLINK FENCE SHALL BE PLACED AT THE CRITICAL ROOT ZONE (CRZ) OR DESIGNATED TREE PROTECTION ZONE (TPZ) OF THE TREE TO BE SAVED. FENCE SHALL BE INSTALLED PER APPROVED TREE FENCING PLAN CONFIGURATION. INSTALL FENCE POSTS USING PIER BLOCK ONLY. AVOID POST OR STAKES INTO MAJOR ROOTS. MODIFICATIONS TO FENCING MATERIAL AND LOCATION MUST BE APPROVED BY PLANNING OFFICIAL.
2. NO ENTRY, GROUND DISTURBANCE, STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING. FENCING SHALL NOT BE MOVED OR REMOVED UNLESS APPROVED BY THE CITY PLANNING OFFICIAL. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY UNDER THE SUPERVISION OF THE ON-SITE ARBORIST AND WITH PRIOR APPROVAL BY THE CITY PLANNING OFFICIAL.
3. TREATMENT OF ROOTS EXPOSED DURING CONSTRUCTION OUTSIDE OF TREE FENCE AREA: FOR ROOTS OVER ONE (1) INCH DIAMETER DAMAGED DURING CONSTRUCTION, MAKE A CLEAN STRAIGHT CUT TO REMOVE DAMAGED PORTION OF ROOT. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP TO PREVENT DRYING AND COVERED WITH SOIL AS SOON AS POSSIBLE.
4. TREE PROTECTION AREA FENCING SIGNAGE MUST BE POSTED EVERY FIFTEEN (15) FEET ALONG THE FENCE AS DETAILED ABOVE (SEE SHEET 3 - ATTACHED)
5. SITE PLANS SHOWING APPROVED TREE RETENTION/PROTECTION SHALL BE DISPLAYED ON DEVELOPMENT SITES IN PLAIN VIEW WITH GENERAL CONTRACTOR OR OTHER RESPONSIBLE PARTY'S PHONE NUMBER (SEE SHEET 4 - ATTACHED)

TREE PROTECTION FENCING DETAIL
(for public and private trees)

TREE PROTECTION AREA

Entrance Prohibited

No work, excavation, trenching, material storage, cleaning, or dumping is allowed behind this fence.

DO NOT REMOVE OR RELOCATE THIS FENCE.

This fencing must remain in its approved location throughout construction.

To report violations contact: City Code Enforcement At (425) 587-3600.

INSTRUCTIONS

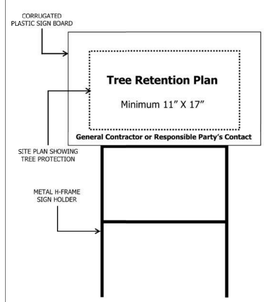
- Install fence securely using concrete pier blocks
- Fence panels should be securely attached by clamping together or other methods approved by Planning Official
- Plastic laminate both the **Tree Protection Area Sign (8.5" x 11")** & **Tree Protection Plan (11" x 17")** for weather resistance
- Affix the laminated signs to the tree protection fencing using zip or twist ties, wire, or twine at the circles shown in the corners
- Place signs on fencing so it is visible to construction personnel and, to the greatest extent possible, from the street
- Keep the sign in a readable condition for the entire duration of the project
- Display *second* **Tree Protection Plan (11" x 17")** at the front of the project site (see next page for instructions)
- For information on these requirements contact the Planning & Building Department planning official at 425-587-3600
- Should pruning be needed outside of the tree protection area, see instructions below

Proper Pruning

Three-Cut Pruning Method
When pruning branches outside the tree protection area use the three-cut method:

- Cleanly cut using the "three-cut" method to avoid tearing / pealing remaining bark
- Do not cut branches flush with the trunk or stem – leave the branch bark ridge and collar or about 1 inch of space

Tree Protection Plan Sign Installation Instructions



Construction:

Frame
- Metal H-frame sign holder (alternative durable materials such as wood stakes accepted)
- Minimum 24" height

Sign
- Corrugated plastic weather resistant sign board
- Laminate or use clear tape to affix Tree Retention Plan to sign board
- Include general contractor or responsible party's contact information
- Minimum size of site plan shall be 11" x 17"

Placement
- Insert sign firmly into ground at front of project site
- Sign must be viewable from the street

Maintenance
- Maintain sign in good, readable condition until project completion

NO.	Date	Revesion/Issue

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EXP. 6/3/2026
12/10/2025

DESIGNED BY: B.A
DRAWN BY: B.A

JOB TITLE: AGUILAR ADDITION
ADDRESS: 10341 NE 141ST PL KIRKLAND, WA 98034

SHEET TITLE: ESC PLAN DETAILS

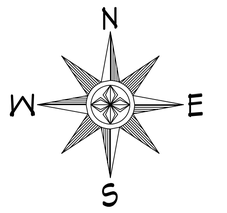
SHEET NO: C4.0
SHEET:

INSERT REVISED PAGES
INTO APPROVED SET
01/12/2026

POST-ISSUANCE 2

1/12/26 (DJL)
BSF21-07891

Approval of Sheets 5/6,



SCALE: 1" = 10'

10 0 10 20

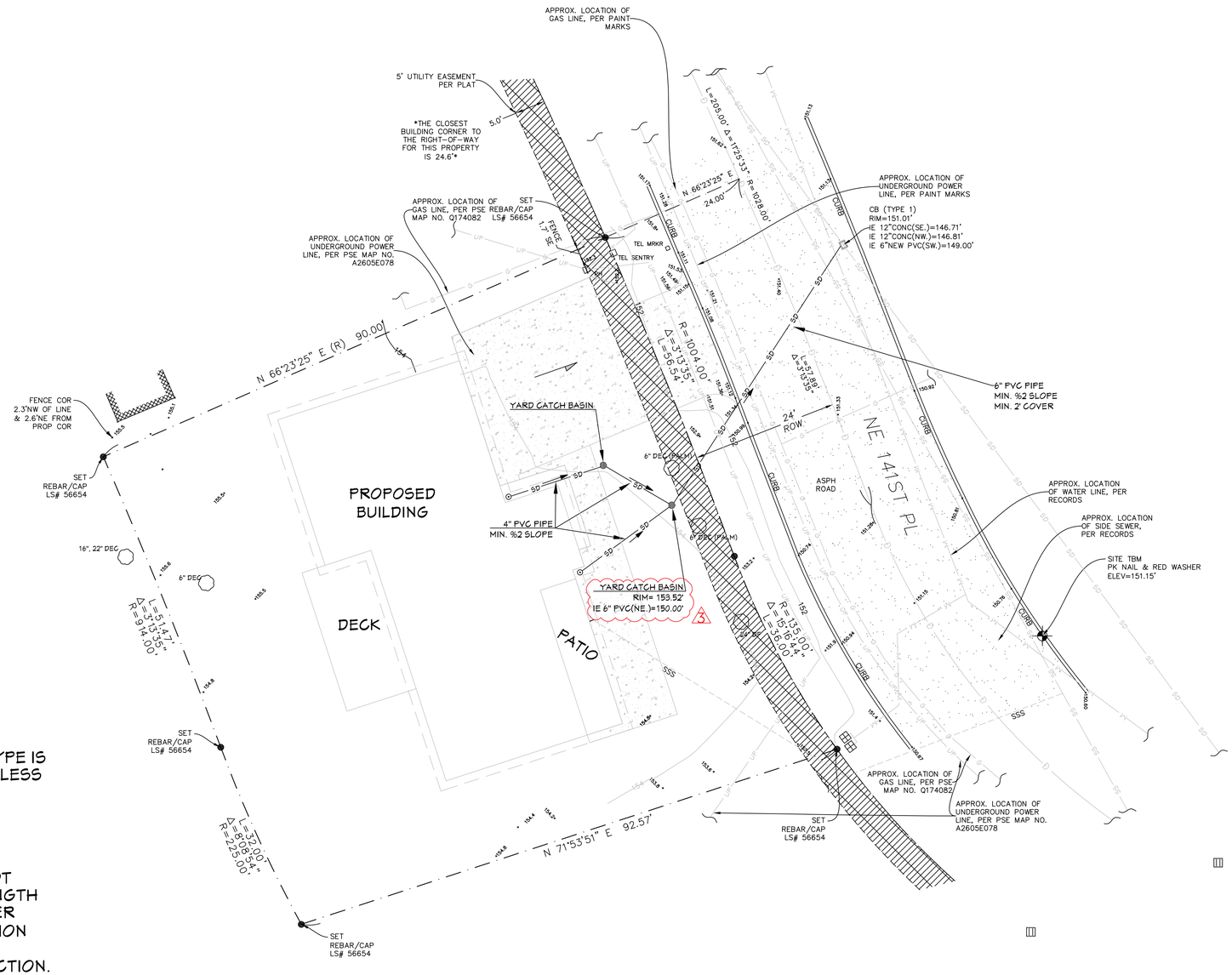
SCALE IN FEET

LEGEND

- WATER METER
- SANITARY SEWER CLEANOUT
- STREET STORM DRAIN CATCH BASIN
- DOWNSPOUT
- DRAIN POP-UP EMITTER
- YARD DRAIN CATCH BASIN
- W — WATER LINE
- SS — UNDERGROUND SEWER LINE
- SD — STORM DRAIN PIPE
- CONCRETE
- TREE

NOTES:

1. BASED ON THE SOIL SURVEY WEBSITE, THE SOIL TYPE IS KITSAP SILT LOAM WITH AN INFILTRATION RATE OF LESS THAN 0.2 IN/HR.
   NOTE: BASED ON THIS RATE BIORETENTIONS AND INFILTRATION BMPs ARE INFEASIBLE.
2. THERE IS NOT ENOUGH LENGTH AVAILABLE FOR DISPERSION.
   NOTE: THE AVAILABLE AREA DOWNSLOPE DOES NOT PROVIDE THE MINIMUM REQUIRED DISPERSION LENGTH AS OUTLINED IN THE KING COUNTY SURFACE WATER DESIGN MANUAL (KCSWDM). THEREFORE, DISPERSION BMPS ARE NOT FEASIBLE FOR THIS SITE.
3. THE FEASIBLE BMP IS A PERFORATED PIPE CONNECTION.
   NOTE: GIVEN THE SITE CONSTRAINTS AND SOIL LIMITATIONS, A PERFORATED PIPE SYSTEM CONNECTED TO A TIGHTLINE DISCHARGE OR AN APPROVED DOWNSTREAM FACILITY IS CONSIDERED THE MOST PRACTICAL OPTION FOR STORMWATER MANAGEMENT.
4. THE MINIMUM TRENCH LENGTH REQUIRED IS 10 FEET.



NO.	Date	Revesion/Issue
3	1/8/2026	Revision 3

Advanced Civil Solutions

12569 SE 72nd ST
NEWCASTLE, WA 98056

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EXP. 6/3/2026
1/8/2026

DESIGNED BY: B.A

DRAWN BY: B.A

JOB TITLE: AGUILAR ADDITION

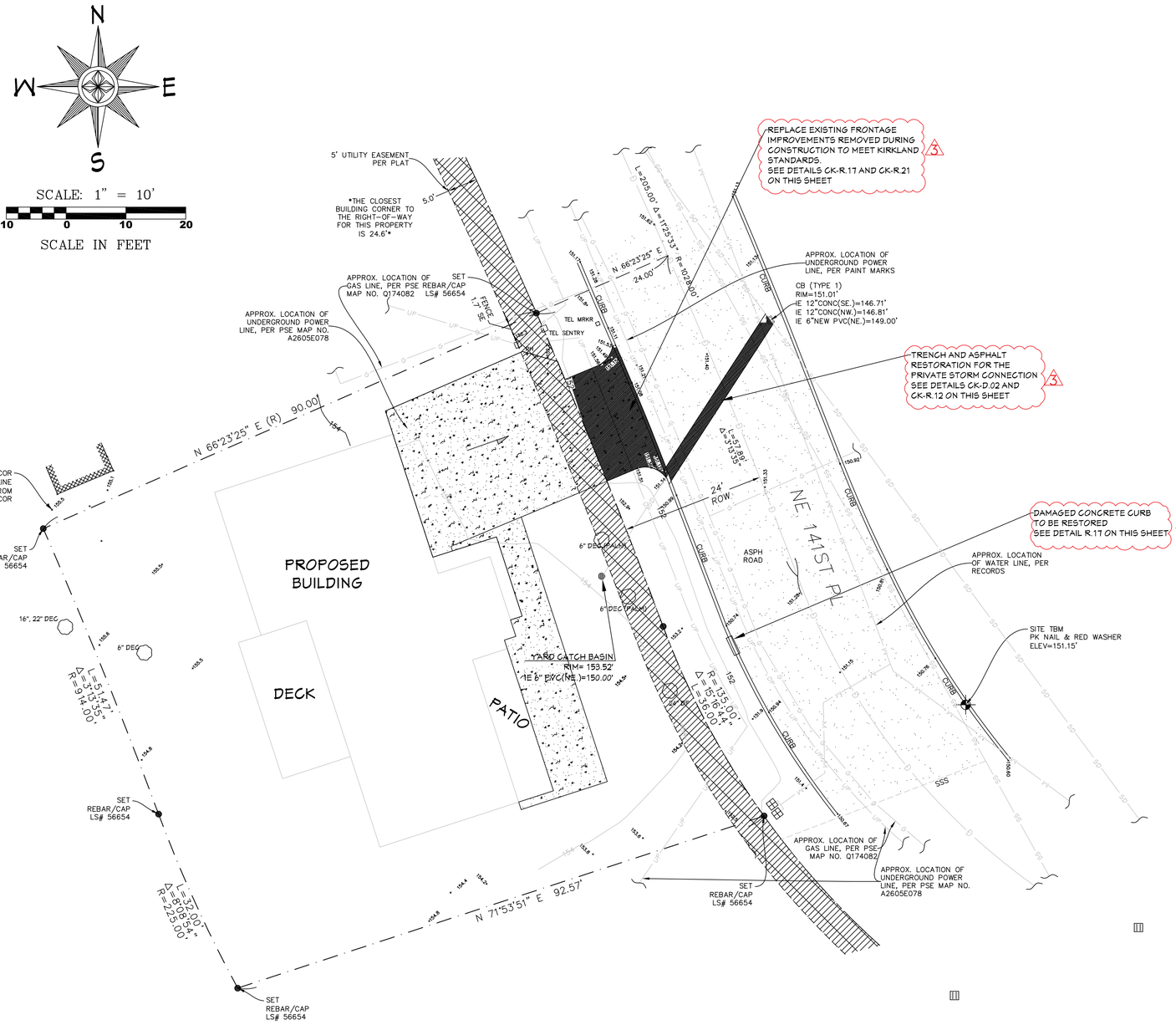
ADDRESS: 10341 NE 141ST PL
KIRKLAND, WA 98034

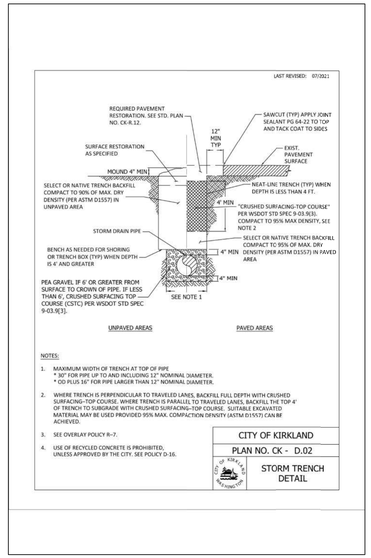
SHEET TITLE: DRAINAGE PLAN

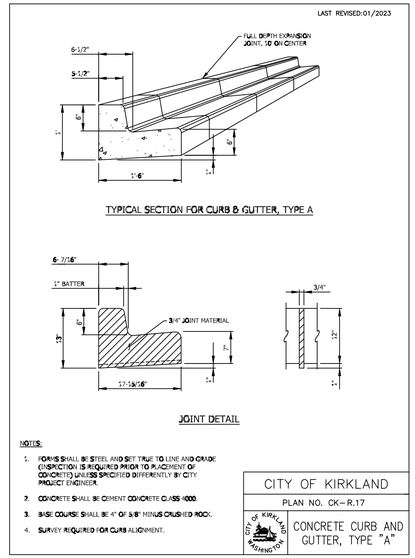
SHEET NO: C5.0

SHEET:

INSERT REVISED PAGES INTO APPROVED SET 01/12/2026







Repair and/or replace any public improvements impacted by demolition or construction activities, including but not limited to adjacent curb/gutter, sidewalk panels, landscaping, electric or communication conduits and boxes, storm drains, and other utilities.

POST-ISSUANCE 2

1/12/26 (DJL)
BSF21-07891

Approval of Sheets 6/6,

NO.	Date	Revesion/Issue
2	12/10/2025	Revision 2
3	1/8/2026	Revision 3

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EXP. 6/3/2026
1/8/2026

DESIGNED BY: B.A
DRAWN BY: B.A

JOB TITLE: AGUILAR ADDITION
ADDRESS: 10341 NE 141ST PL KIRKLAND, WA 98034

SHEET TITLE: RE-BUILD DRIVEWAY CURB CUT

SHEET NO: C6.0
SHEET: