PORTION OF GOVERNMENT LOT 5
NE 1/4, SE 1/4 SEC. 7, TWN 24N, RNGE 5E, W.M.
MERCER ISLAND, WA

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

LEGEND

- CB (TYPE 1)
- STMH (TYPE 11)
- SANITARY SEWER MH
- WATER VALVE
- WATER METER/SERVICE
- FIRE HYDRANT
- UTILITY POLE
- GUY WIRE
- TELEPHONE CABINET
- SIGN
- CONIFER TREE
- DECIDUOUS TREE
- MAIL BOX
- PK NAIL
- MON IN CASE/
- EX REBAR / PIPE AS NOTED

SURVEY NOTES

INSTRUMENT: SPECTRA FOCUS 35 TOTAL STATION
METHOD USED: FIELD TRAVERSE WITH ACTUAL FIELD MEASUREMENTS AND ANGLES WAC 332-130-090
DATE OF SURVEY: AUGUST 2018
BASIS OF BEARING: SW GENESEE ST
BENCHMARK: CITY OF MERCER ISLAND #2069
REBAR IN 1.5" IRON PIPE, INTERSECTION OF SE 34TH & 97TH AVE SE
(ELE = 53.19' NAVD 88)
SITE BENCHMARK: SSMH LOCATED ON 97TH AVE SE
RIM EL = 81.25' NAVD 88)
REFERENCES: SP NO. M.I. SUB 0002-002
REC #20000516900001
LLR NO. SUB08-004
REC# 20090206900004

SSMH
RIM EL = 54.45'

MON IN CASE
REBAR IN IRON PIPE

120.07'(M) 120.00'(SP)
S00°05'04"W
332.45'

TL# 0724059013

MON IN CASE
REBAR AND CAP
IN CASE

TL# 0724059032

FND IRON PIPE
0.25' NORTH OF
CALC CORNER

N89°51'56"W WOOD FENCE
101.00'

6" CEDAR

FENCE EASEMENT
REC#20190118000364

TL# 0724059125

INV EL = 54.33'-24"

FND REBAR & CAP
11.50' SOUTH OF
CALC CORNER

SSMH
RIM EL = 81.25'
INV EL = 73.55' N,S

TL# 0724059092

TL# 0724059012

S00°05'04"W
99.80'

S00°05'04"W
81.30'

EX HOUSE

20' ASPHALT

FOUND PK AND SHINER
TOP OF WOOD POST

S89°42'31"W
5.67'

N89°54'56"W 100.00'

20' ACCESS &
UTILITY EASEMENT.
REC#20190118000364

20.0'
EX DRIVEWAY

EX GARAGE

WOOD
DECK

SHED

FND REBAR & CAP
0.21' WEST OF CALC
CORNER

S79°45'08"W
102.66'

WOOD
FENCE

WIRE
FENCE

FND REBAR & CAP
0.13' WEST OF CALC
CORNER

EX STMH
RIM EL = 70.94'
INV EL = 56.64-24"

12"FIR
14"FIR
16"FIR
18"FIR
16"MAPLE
12"CEDAR
8"FIR

LEGAL DESCRIPTION

THAT PORTION OF GOVERNMENT LOT 5, SECTION 7, TOWNSHIP 24 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS;
BEGINNING AT A POINT 921.44 FET WEST AND 30.00 FEET NORTH OF THE SOUTHEAST CORNER OF SAID GOVERNMENT LOT 5;
THENCE NORTH PARALLEL WITH THE EAST LINE OF SAID GOVERNMENT LOT 220.00 FEET;
THENCE EAST ALONG A LINE 250.00 FEET NORTH AND PARALLEL WITH THE SOUTH LINE OF SAID GOVERNMENT LOT, 100.00 FEET;
THENCE NORTH PARALLEL WITH SAID EAST LINE, 100.00 FEET;
THENCE EAST PARALLEL WITH SAID SOUTH LINE 100.00 FEET;
THENCE SOUTH PARALLEL WITH SAID EAST LINE 320.00 FEET;
THENCE WEST PARALLEL WITH SAID SOUTH LINE 200.00 FEET TO THE POINT OF BEGINNING.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGON.

REVISED 3/1/2019

RECORDER'S CERTIFICATE No. _____
Filed for record this___day of_____,20__ at___ M
in book____of_____at page_____ at the request
of _____

Mgr. Supt. of Records

LAND SURVEYOR'S CERTIFICATE
This map correctly represents a survey made by me or under my direction in conformance with the requirements of the Survey Recording Act at the request of In Our Backyard, LLC in August 2018

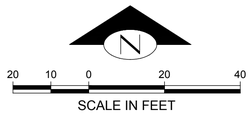
Certificate No. 38992

DAN M. TOUMA
STATE OF WASHINGTON
38992
REGISTERED
PROFESSIONAL LAND SURVEYOR

TOUMA ENGINEERS AND LAND SURVEYORS, PLLC
255 SW 41st STREET
RENTON, WASHINGTON 98057
425-251-0665 OFFICE
425-251-0625 FAX

BOUNDARY & TOPOGRAPHY
3440 97TH AVE SE
MERCER ISLAND, WA 98040

DWN. BY	DATE	JOB NO.
DJH	AUGUST 2018 MARCH 2019	1019-004-018
CHKD. BY	SCALE	SHEET
DMT	NOTED	1 OF 1



KEY NOTES:		
KEY	NOTE:	DETAIL/ SHEET
1	INSTALL TEMPORARY INLET PROTECTION ON EX SD INLET OR CLOSEST SD INLET DOWNSTREAM OF SITE	B/C05
2	INSTALL TEMPORARY STABILIZED CONSTRUCTION ENTRANCE	C/C05
3	INSTALL APPROX 356 LF PERIMETER PROTECTION*	A/C05
4	TREE PROTECTION FENCING	TP/C01
5	EX DWY TO REMAIN	-
6	PROPOSED STOCKPILE LOCATION. CONTRACTOR TO DETERMINE FINAL LOCATION IN FIELD	-
7	CONTRACTOR TO SWEEP STREET DAILY OR MORE OFTEN IF NECESSARY TO REMOVE TRACKED SEDIMENT	-
8	EX GARAGE, WOOD DECK, AND SHED HAVE BEEN DEMOLISHED AND EX DWY HAS BEEN EXTENDED TO PROPERTY LINE	-
9	PROTECT EX HOUSE DURING CONSTRUCTION	-
10	EXISTING TREES TO REMAIN. CONSULT WITH ARBORIST IF TREE REMOVAL IS REQUIRED OR IF DISTURBANCE WILL OCCUR WITHIN DRIPLINE OF EX TREES (TYP)	-
11	TREE 13 TO BE REMOVED PER ARBORIST REPORT	-
12	NO DISTURBANCE WITHIN DRIPLINE OF EXCEPTIONAL TREE (INCLUDING NO COMPACTION OR PARKING) PER ARBORIST RECOMMENDATIONS	-

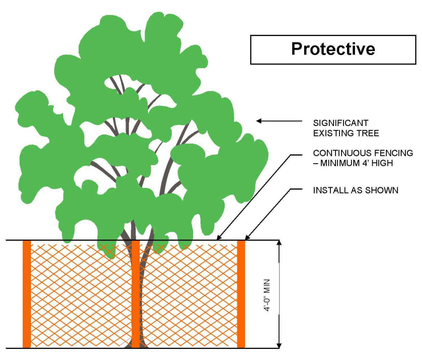
* INSTALL PERIMETER PROTECTION, SUCH AS SILT FENCING, COMPOST SOCKS, OR STRAW WATTLES IN ACCORDANCE WITH VOL II OF THE 2014 DOE STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON

LEGEND:

- STABILIZED CONSTRUCTION ENTRANCE
- ASPHALT
- X — PERIMETER PROTECTION
- TREE PROTECTION FENCING
- STOCKPILE LOCATION

POST-CONSTRUCTION SOIL QUALITY AND DEPTH NOTES:

1. A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE.
2. MULCH PLANTING BEDS WITH 2 INCHES OF ORGANIC MATERIAL.
3. USE COMPOST AND OTHER MATERIALS THAT MEET ORGANIC CONTENT OUTLINED IN BMP T5.13 OF THE DOE MANUAL



1. PROTECTIVE FENCING SHALL BE LOCATED WHERE SHOWN ON PLANS. FENCE SHALL COMPLETELY ENCIRCLE TREE(S) AT THE DRIPLINE OR BEYOND. AVOID DRIVING POSTS OR STAKES INTO MAJOR ROOTS. FENCE MUST REMAIN UP THROUGHOUT PROJECT.
2. NO STOCKPILING OF MATERIALS, GRADE CHANGES, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING. PLEASE CALL ARBORIST FOR MITIGATION MEASURES IF FENCING MUST COME DOWN.
3. TREATMENT OF ROOTS EXPOSED DURING CONSTRUCTION: FOR ROOTS OVER 1" IN 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 WITH CONTINUOUS IRRIGATION, TO PREVENT DRYING. COVER WITH SOIL AS SOON AS POSSIBLE—3" OF MULCH RECOMMENDED.

S:\DSG\FORMS\TreeFencing 08/2009

TREE PROTECTION FENCING
NOT TO SCALE
TP C01

TREE PROTECTION STANDARDS:

1. TREE PROTECTION FENCING SHALL BE ERECTED AT PRESCRIBED DISTANCE PER ARBORIST REPORT. FENCES SHALL BE CONSTRUCTED OF CHAIN LINK AND BE AT LEAST 4 FEET HIGH.
2. INSTALL HIGHLY VISIBLE SIGNS ON PROTECTION FENCING SPACED NO FURTHER THAN 15 FEET APART. SIGNS SHALL STATE "TREE PROTECTION AREA-ENTRANCE PROHIBITED", AND "CITY OF MERCER ISLAND" CODE ENFORCEMENT PHONE NUMBER.
3. NO WORK SHALL BE PERFORMED WITHIN PROTECTION FENCING UNLESS APPROVED BY PLANNING OFFICIAL. IN SUCH CASES, ACTIVITIES WILL BE APPROVED AND SUPERVISED BY A "QUALIFIED TREE PROFESSIONAL".
4. THE ORIGINAL GRADE SHALL NOT BE ELEVATED OR REDUCED WITHIN PROTECTION FENCING WITHOUT THE PLANNING OFFICIAL AUTHORIZATION BASED ON RECOMMENDATIONS FROM A QUALIFIED PROFESSIONAL.
5. NO BUILDING MATERIALS, SPOILS, CHEMICALS OR SUBSTANCES OF ANY KIND WILL BE PERMITTED WITHIN PROTECTION FENCING.
6. PROTECTION FENCING SHALL BE MAINTAINED UNTIL THE PLANNING OFFICIAL AUTHORIZES ITS REMOVAL.
7. ENSURE THAT ANY APPROVED LANDSCAPING WITHIN THE PROTECTED ZONE SUBSEQUENT TO THE APPROVED REMOVAL OF PROTECTION FENCING BE PERFORMED WITH HAND LABOR.

IN ADDITION TO THE ABOVE, THE PLANNING OFFICIAL MAY REQUIRE THE FOLLOWING:

A. IF EQUIPMENT IS AUTHORIZED TO OPERATE WITHIN THE ROOT ZONE, THE AREA WILL BE MULCHED TO A DEPTH OF 6" OR COVERED WITH PLYWOOD OR SIMILAR MATERIAL TO PROTECT ROOTS FROM DAMAGE CAUSED BY HEAVY EQUIPMENT.
B. MINIMIZE ROOT DAMAGE BY EXCAVATING A 2-FOOT DEEP TRENCH, AT EDGE OF PROTECTION FENCING TO CLEANLY SEVER THE ROOTS OF PROTECTED TREES.
C. CORRECTIVE PRUNING TO AVOID DAMAGE FROM MACHINERY OR BUILDING ACTIVITY.
D. MAINTENANCE OF TREES THROUGHOUT CONSTRUCTION PERIOD BY WATERING AND FERTILIZATION.

GENERAL NOTE:

1. REFER TO 'ARBORIST TREE INVENTORY REPORT AND RETENTION PLAN' CREATED BY ANDREW LYON AND DATED 6/14/2019 (REVISED 5/8/2020) FOR ADDITIONAL TREE PROTECTION MEASURES AND INFORMATION.

PROJECT INFORMATION:
3440 97TH AVE SE
MERCER ISLAND, WA 98040

OWNER/APPLICANT:
IN MY BACKYARD, LLC
4701 W MERCER WAY
MERCER ISLAND, WA 98040

ARCHITECT:
J DESIGNS
2425 SW ROXBURY ST,
SEATTLE, WA 98106
PH: (206) 234.4469

CIVIL ENGINEER:
DAVIDO CONSULTING GROUP, INC.
9706 4TH AVE NE, SUITE 300
SEATTLE, WA 98115
PH: (206) 523.0024
CONTACT: BEN IDDINS, P.E.

SURVEYOR:
TOUMA ENGINEERS AND LAND SURVEYORS, PLLC
255 SW 41ST STREET,
RENTON, WA 98057
PH: (425) 251.0665

GEOTECHNICAL ENGINEER:
EARTH SOLUTIONS NW LLC
1805 136TH PLACE NE SUITE 201
BELLEVUE, WA 98005
PH: (425) 449-4704

No.	DATE	BY	REVISION
1	6/5/2020	BI	REVISIONS PER CITY REVIEW COMMENTS
2	8/20/2020	BI	REVISIONS PER CITY REVIEW COMMENTS

LEED AP
LEED ACCREDITED PROFESSIONAL™ & THE RELATED ACRONYM, & THE LEGACY LEED AP LOGO ARE TRADEMARKS OWNED BY THE U.S. GREEN BUILDING COUNCIL & ARE AWARDED TO INDIVIDUALS WHO HAVE DEMONSTRATED LEED GREEN BUILDING CERTIFICATION INSTITUTE.

9706 4TH AVE NE
SUITE 300
SEATTLE, WA 98115
P: 206.523.0024
F: 206.523.1012
www.dcgengr.com

DCG civil structural

CALL 811
2 BUSINESS DAYS BEFORE YOU DIG
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

BENJAMIN R. IDDINS — STATE OF WASHINGTON — 54900 — REGISTERED PROFESSIONAL ENGINEER
Digitally Signed by Benjamin R. Iddins
Date: 2020.08.28 09:19:43 -07'00'

BASE MAP/TOPOGRAPHY PROVIDED BY OTHERS. DCG CANNOT BE HELD LIABLE FOR ACCURACY. CONTRACTOR SHALL FIELD VERIFY GRADES, UTILITIES, & ALL OTHER EX FEATURES & CONDITIONS. IF CONDITIONS ARE NOT AS SHOWN &/OR PLANS CANNOT BE CONSTRUCTED AS SHOWN, CONTACT DCG PRIOR TO CONSTRUCTION.

OWNER: IN MY BACKYARD, LLC
4701 W MERCER WAY
MERCER ISLAND, WA 98040

PROJECT: 3440 97TH AVE SE
MERCER ISLAND, WA 98040
SMALL PARCEL ESC PLAN

PROJ. MANAGER:	BI
DESIGNED BY:	LG
DRAWN BY:	JA
CHECKED BY:	BI
SCALE:	SCALE
DATE: 8/27/2020	REV. 2
SHEET	1 OF 6

SHEET NUMBER
C01

CAD FILE NUMBER: \\DCG\LOCAL\FILES\SHARED\DCG\CLIENTS-CIVIL\VALERE DEV\FLOPMENT\3440 97TH AVE SE MERCER ISLAND\WORKING\3440 97TH AVE SE MERCER ISLAND.DWG
LAST MODIFIED BY: DREW - SAVE DATE: 8/27/2020 1:49 PM - SHEET SET: 3440 97TH AVE SE - ORIGINAL SHEET SIZE: ANSI FULL BLEED D (34.00 X 22.00 INCHES)
AUTOCAD VERSION: CIVIL 3D 2018

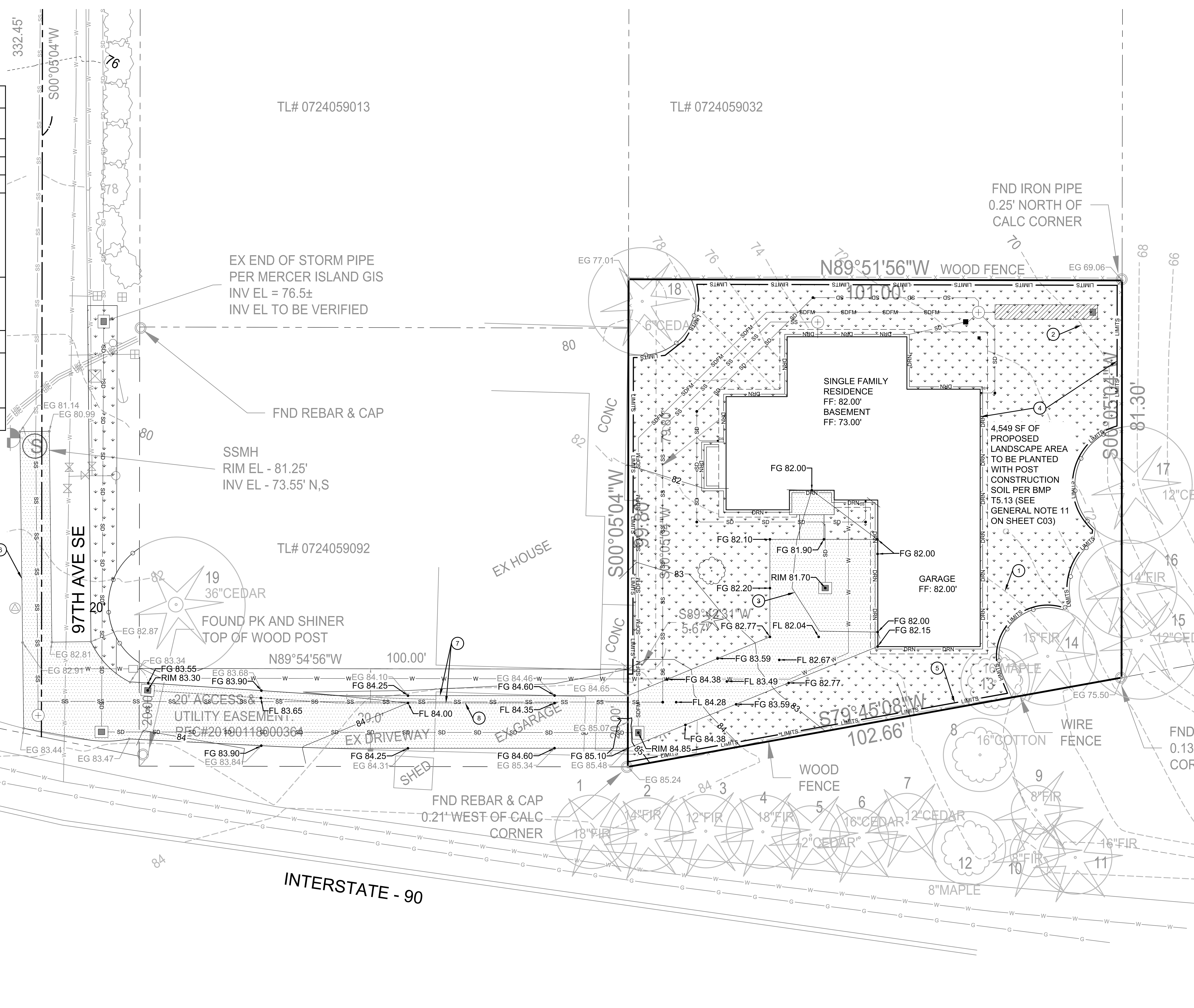
SCALE IN FEET

KEY NOTES

KEY	DESCRIPTION	DETAIL/ SHEET
1	EX MINOR CONTOUR (TYP)	-
2	EX MAJOR CONTOUR (TYP)	-
3	PROPOSED CONTOUR (TYP)	-
4	AMEND ALL DISTURBED PERVIOUS AREAS THAT WILL REMAIN PERVIOUS IN ACCORDANCE W/ BMP T5.13 IN CHAPTER 5 OF VOLUME V OF THE 2014 STORMWATER MANAGEMENT MANUAL FOR WESTERN WASHINGTON	-
5	LIMITS OF DISTURBANCE. PRIOR TO START OF CONSTRUCTION, CONTRACTOR TO STAKE LIMITS OF DISTURBANCE FOR ARBORIST SITE INSPECTION	-
6	SAWCUT EX ASPHALT AND MATCH EG	-
7	INSTALL ASPHALT THICKENED EDGE ALONG NORTH EDGE OF ACCESS EASEMENT DRIVEWAY (FLOWLINE 3" BELOW TOP OF THICKENED EDGE)	-
8	FLOWLINE OF ASPHALT THICKENED EDGE	-

LEGEND:

- ASPHALT
- LANDSCAPE
- TREE PROTECTION FENCING
- LIMITS OF DISTURBANCE



CALL 811
2 BUSINESS DAYS BEFORE YOU DIG
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

BASE MAP/TOPOGRAPHY PROVIDED BY OTHERS. DCG CANNOT BE HELD LIABLE FOR ACCURACY. CONTRACTOR SHALL FIELD VERIFY GRADES, UTILITIES, & ALL OTHER EX FEATURES & CONDITIONS. IF CONDITIONS ARE NOT AS SHOWN &/OR PLANS CANNOT BE CONSTRUCTED AS SHOWN, CONTACT DCG PRIOR TO CONSTRUCTION.

No.	DATE	BY	REVISION
1	6/5/2020	BI	REVISIONS PER CITY REVIEW COMMENTS
2	8/20/2020	BI	REVISIONS PER CITY REVIEW COMMENTS

LEED AP™ — LEED ACCREDITED PROFESSIONAL & THE RELATED ACRONYM, & THE LEGACY LEED AP LOGO ARE TRADEMARKS OWNED BY THE U.S. GREEN BUILDING COUNCIL & ARE AWARDED TO INDIVIDUALS UNDER LICENSE BY THE GREEN BUILDING CERTIFICATION INSTITUTE.

DCG civil structural
9706 4TH AVE NE SUITE 300 SEATTLE, WA 98115
P: 206.523.0024
F: 206.523.1012
www.dcgengr.com

BENJAMIN J. IDDINS, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER
Digitally signed by Benjamin J. Iddins Date: 2020.08.27 16:00:01 -07'00'

OWNER: IN MY BACKYARD, LLC
4701 W MERCER WAY
MERCER ISLAND, WA 98040

PROJECT: 3440 97TH AVE SE
MERCER ISLAND, WA 98040
GRADING PLAN

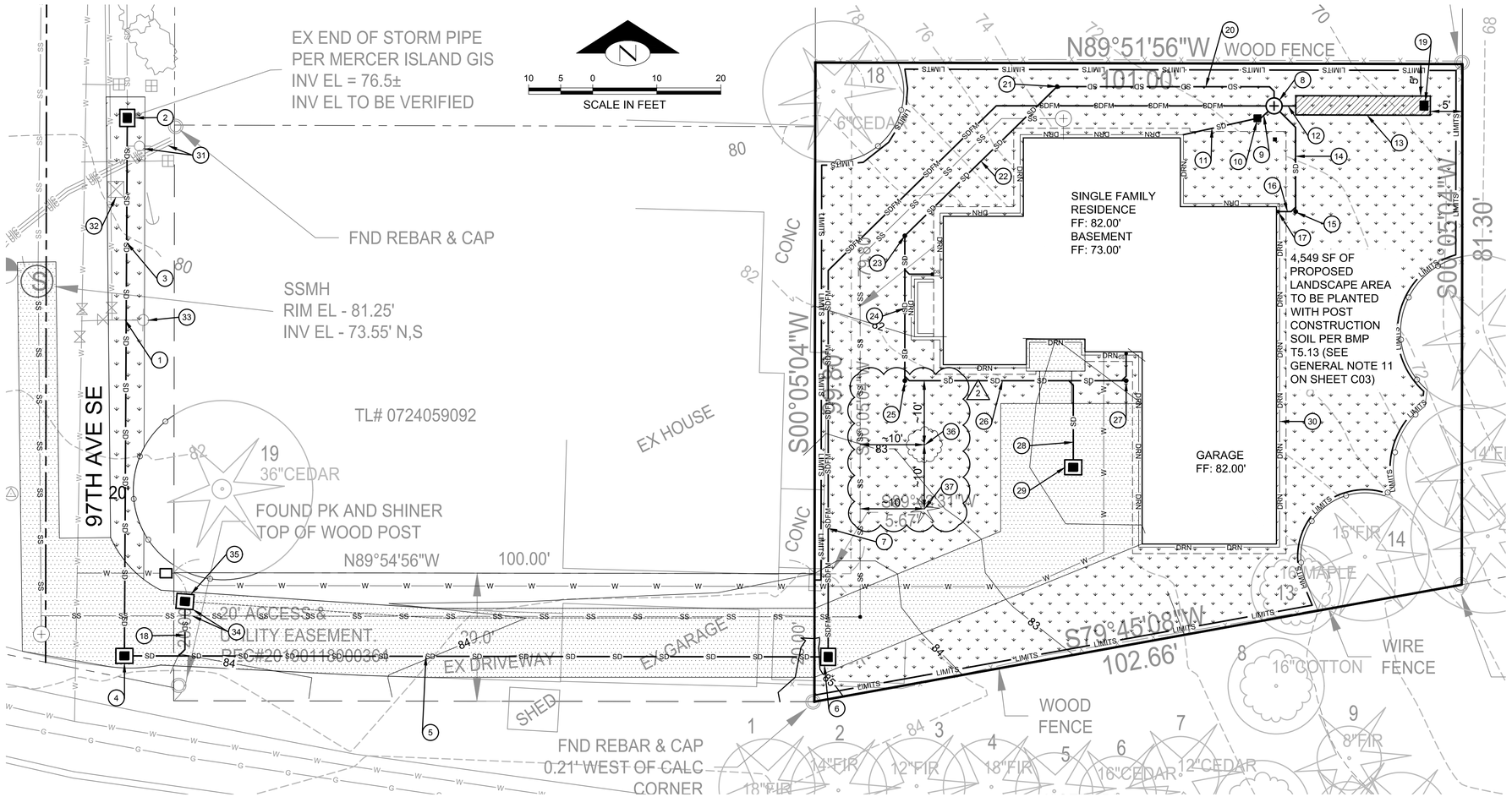
PROJ. MANAGER:	BI
DESIGNED BY:	LG
DRAWN BY:	JA
CHECKED BY:	BI
SCALE:	SCALE
DATE: 8/27/2020	REV. 2 / SHEET 2 OF 6

SHEET NUMBER
C02

CAD FILE NUMBER: \\DCG.LOCAL\FILESHARE\DCG\CLIENTS-CIVIL\VALERE DEVELOPMENT\3440 97TH AVE SE MERCER ISLAND\DWG\DRAWINGS\3440 97TH AVE SE MERCER ISLAND.DWG
LAST MODIFIED BY: DREW - SAVE DATE: 8/27/2020 1:49 PM - SHEET SET: 3440 97TH AVE SE - ORIGINAL SHEET SIZE: ANSI FULL BLEED D (34.00 X 22.00 INCHES)
AUTOCAD VERSION: CIVIL 3D 2018

KEY NOTES

KEY	DESCRIPTION	DETAIL/ SHEET
1	SD & WATER CROSSING 10" SD IE 78.31± 8" WATER IE 76.10± MAINTAIN MIN 1.0' VERTICAL SEPARATION AT CROSSING	-
2	CB - TYPE 1 W/ SOLID, LOCKING LID RIM 79.50 10" IE (S) 77.10 12" IE (N) 76.50± 2' MIN SUMP CONTRACTOR TO CONFIRM IE OF EX 12" CONCRETE PIPE AND ADJUST ONSITE STORM SYSTEM AS NECESSARY	E/C05
3	80 LF 10" DI @ 2.00% MIN SLOPE	-
4	CB - TYPE 1 W/ SOLID, LOCKING LID RIM 83.46 10" IE (E) 80.57 10" IE (N) 80.47 2' MIN SUMP	E/C05
5	109 LF 10" DI @ 2.00% MIN SLOPE	-
6	CB - TYPE 1 W/ SOLID, LOCKING LID RIM 85.10 3" IE (N) 83.33 (SDFM) 10" IE (W) 82.75	E/C05
7	140 LF 3" PVC SDFM	-
8	STORMWATER PUMP STATION W/ SOLID LOCKING LID RIM 71.29 4" IE (N,SW,SE) 68.80 6" IE (E) 65.00 3" SDFM IE (W) 69.00 SUMP PER MANUFACTURER'S RECOMMENDATIONS	I/C06
9	2 LF 4" PVC SD @ 2.00% MIN SLOPE	-
10	12" AREA DRAIN RIM 71.40 4" IE (E) 69.00 4" IE (W) 69.10 (FTG DRN) 2' MIN SUMP	-
11	4" SOLID WALL PVC FOOTING DRAIN TIGHTLINE FROM BASEMENT LEVEL FOOTING DRAIN @ 2.00% MIN SLOPE 4" IE 70.00 @ BUILDING	-
12	2 LF 6" PVC SD TO BE LAID FLAT 6" IE 65.00	-
13	21 LF 36" Ø CMP FOR 148 CF EMERGENCY STORMWATER PUMP STATION STORAGE 36" IE 65.00	-
14	16 LF 4" PVC SD @ 2.00% MIN SLOPE	-
15	4" SDCO RIM 72.95 4" IE 69.60	F/C05
16	4" PVC ROOF DOWNSPOUT TIGHTLINE @ 2.00% MIN SLOPE & 2' MIN COVER (TYP)	-
17	4" ROOF DOWNSPOUT (TYP)	-
18	8 LF 6" SD @ 2.00% MIN	-
19	12" ACCESS PORT W/ OPEN GRATE LID FOR EMERGENCY OVERFLOW PATH IN CASE OF A PUMP FAILURE RIM 68.75	-
20	36 LF 4" PVC SD @ 2.00% MIN SLOPE	-
21	4" SDCO RIM 73.10 4" IE 70.60	F/C05
22	33 LF 4" PVC SD @ 2.00% MIN SLOPE	-
23	4" SDCO RIM 80.64 4" IE 77.95	F/C05
24	23 LF 4" PVC SD @ 2.00% MIN SLOPE	-
25	4" SDCO RIM 82.42 4" IE 78.45	F/C05
26	35 LF 4" PVC SD @ 2.00% MIN SLOPE	-
27	4" SDCO RIM 82.00 4' IE 79.15	F/C05
28	13 LF 4" PVC SD @ 2.00% MIN SLOPE	-
29	CB - TYPE 1 W/ OPEN-GRATE LID & OIL WATER SEPARATOR RIM 81.70 4" IE (N) 79.30 2' MIN SUMP	D&E/C05
30	PERIMETER FOOTING DRAIN - 4" PERFORATED PVC PIPE IN 6" MIN WASHED GRAVEL. WRAPPED IN NON-WOVEN FILTER FABRIC (TYP)	-
31	PROTECT EX POWER POLE AND UNDERGROUND POWER SERVICE DURING CONSTRUCTION	-
32	PROTECT EX MAILBOX DURING CONSTRUCTION AND REPLACE IN-KIND IF DAMAGED	-
33	PROTECT EX FIRE HYDRANT AND SERVICE DURING CONSTRUCTION	-
34	1' MIN CLEARANCE REQUIRED BETWEEN SSS & EDGE OF CB	-
35	CB - TYPE 1 W/ OPEN-GRATE LID & OIL WATER SEPARATOR RIM 83.30 6" IE (S) 80.90 2' MIN SUMP	D&E/C05
36	NEW TREE 2" MIN CALIPER WESTERN SERVICEBERRY "AMELANCHIER ALNIFOLIA"	-
37	NEW TREE 2" MIN CALIPER SHORE PINE "PINUS CONTORTA"	-



LEGEND:

- ASPHALT
- LANDSCAPE
- TREE PROTECTION FENCING
- LIMITS — LIMITS OF DISTURBANCE

DRAINAGE NOTES:

ROOF DRAINS:

1. NUMBER AND SIZE SHALL BE IN CONFORMANCE WITH THE UNIFORM PLUMBING CODE.
2. DOWNSPOUTS SHALL BE TIED INTO A NON-PERFORATED, RIGID, SMOOTH-BORE PIPE, WHICH DRAINS TO AN APPROVED STORM SYSTEM.
3. DRAINPIPE SHALL MEET MATERIAL STANDARDS FOR D2729 FOR P.V.C. PIPE, GR F-405 FOR SMOOTH-BORE H.D.P.E. PIPE.
4. PROVIDE CLEANOUTS AT THE UPPER END OF THE SYSTEM AND AT EACH CUMULATIVE CHANGE OF DIRECTION IN EXCESS OF 135 DEGREES.
5. ALL PIPE FITTINGS SHALL BE MADE OF THE SAME MATERIAL AS THE STRAIGHT PIPE. GLUED JOINTS SHALL USE A BONDING AGENT RECOMMENDED BY THE PIPE MANUFACTURER.

FOOTING DRAINS:

1. FOOTING DRAINS SHALL BE INSTALLED AROUND ALL FOUNDATIONS WHICH ENCLOSE A CRAWL SPACE, CELLAR, BASEMENT, GARAGE OR OTHER BUILDING SPACE.
2. DRAINS SHALL BE CONSTRUCTED OF PERFORATED PIPE INSTALLED AT THE BASE OF THE FOOTING.
3. DRAIN PIPE SHALL MEET MATERIAL STANDARDS FOR D2729 FOR P.V.C. PIPE, WITH THE PERFORATIONS DIRECTED DOWNWARD.
4. GRANULAR BACKFILL SHALL BE PLACED AROUND AND ABOVE THE FOOTING DRAIN TO A DEPTH OF 2/3 OF THE HEIGHT OF THE WALL.
5. A FILTER FABRIC SHALL BE USED TO PREVENT SOIL PARTICLES FROM ENTERING THE FOOTING DRAIN. IT IS PREFERABLE THAT THE FABRIC BE PLACED BETWEEN THE GRANULAR BACKFILL AND THE NATIVE SOILS.

DRIVEWAY/PARKING AREA DRAINS:

1. LARGE IMPERVIOUS AREAS USED FOR PARKING OR MANEUVERING OF VEHICLES SHALL BE SLOPED TO DRAIN TO ONE OR MORE CATCH BASINS.
2. THE BASINS SHALL BE TIED INTO THE ON-SITE STORM DRAINAGE SYSTEM USING NON-PERFORATED PIPE OF THE SAME MATERIALS.
3. AT LEAST ONE CATCH BASIN SHALL HAVE AN OIL SEPARATOR TO CLEAN THE WATER, OIL AND SILT PRIOR TO ENTERING THE APPROVED STORM SYSTEM.
4. IN AREAS WHERE THE OFF-SITE STORM SYSTEM IS INADEQUATE, ON-SITE DETENTION OF RUNOFF MAY BE REQUIRED. (CONTACT THE DEVELOPMENT ENGINEER FOR MORE INFORMATION).

GENERAL:

1. SLOPE ALL DRAIN LINES AT 2% MINIMUM TOWARD THE OUTLET.
2. PROVIDE CLEANOUTS OR CONTROL STRUCTURES AS APPROPRIATE.
3. ALL DRAINAGE PIPING AND STRUCTURES ARE SUBJECT TO INSPECTION PRIOR TO BACKFILLING.
4. ROOF AND FOOTING DRAINS MAY BE COMBINED BEYOND THE LOWEST POINT OF THE FOOTING DRAIN.
5. USE SAND COLLARS AT CB CONNECTIONS TO P.V.C. PIPE.
6. UNLESS OTHERWISE SPECIFIED, 6" STORM DRAIN PIPE FOR ROOF DRAINS AND SEWER PIPE SHALL BE SDR35 PVC PIPE.
7. ALL FOOTING DRAIN AND PERFORATED PIPE SHALL BE D2729 PVC PIPE WITH THE PERFORATIONS DIRECTED DOWNWARDS.
8. ALL PERF PIPE SHALL BE 4" DIAMETER UNLESS OTHERWISE SHOWN.
9. CONTRACTOR TO VERIFY INVERTS OF STORM DRAIN IN ROW AND ADJUST ONSITE STORM SYSTEM AS NECESSARY.
10. CONTRACTOR TO FIELD LOCATE AND REROUTE ANY POTENTIAL UTILITY CONFLICTS WITH DETENTION FACILITY PRIOR TO CONSTRUCTION.
11. THE LAWN AND LANDSCAPE AREAS ARE REQUIRED TO PROVIDE POST-CONSTRUCTION SOIL QUALITY AND DEPTH IN ACCORDANCE WITH BMP T5.13. THE PROJECT CIVIL ENGINEER MUST PROVIDE A LETTER OF CERTIFICATION TO ENSURE THAT THE LAWN AND LANDSCAPE AREAS MEET THE POST-CONSTRUCTION SOIL QUALITY AND DEPTH REQUIREMENTS SPECIFIED ON THE APPROVED PLAN SET PRIOR TO FINAL INSPECTION OF THE PROJECT. CONTRACTOR MUST PROVIDE CIVIL ENGINEER W/ INFORMATION PROVING THE POST-CONSTRUCTION SOILS MEET THESE REQUIREMENTS.

No.	DATE	BY	REVISION
1	6/5/2020	BI	REVISIONS PER CITY REVIEW COMMENTS
2	8/20/2020	BI	REVISIONS PER CITY REVIEW COMMENTS

LEED AP

LEED ACCREDITED PROFESSIONAL® & THE RELATED ACRONYM, & THE LEGACY LEED AP LOGO ARE TRADEMARKS OWNED BY THE U.S. GREEN BUILDING COUNCIL® & ARE AWARDED TO INDIVIDUALS WHO DEMONSTRATE THE GREEN BUILDING CERTIFICATION INSTITUTE.

9706 4TH AVE NE
SUITE 300
SEATTLE, WA 98115

P: 206.523.0024
F: 206.523.1012
www.dcgeng.com

DCG civil structural

CALL 811
2 BUSINESS DAYS
BEFORE YOU DIG
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

BENJAMIN J. IDDINGS
STATE OF WASHINGTON
Digitally signed by Benjamin Iddings
Date: 2020.08.28 10:00:22 -07'00'
549[illegible]
REGISTERED PROFESSIONAL ENGINEER

BASE MAP/TOPOGRAPHY PROVIDED BY OTHERS. DCG CANNOT BE HELD LIABLE FOR ACCURACY. CONTRACTOR SHALL FIELD VERIFY GRADES, UTILITIES, & ALL OTHER EX FEATURES & CONDITIONS. IF CONDITIONS ARE NOT AS SHOWN &/OR PLANS CANNOT BE CONSTRUCTED AS SHOWN, CONTACT DCG PRIOR TO CONSTRUCTION.

OWNER: IN MY BACKYARD, LLC
4701 W MERCER WAY
MERCER ISLAND, WA 98040

PROJECT: 3440 97TH AVE SE
MERCER ISLAND, WA 98040
DRAINAGE PLAN

PROJ. MANAGER:	BI
DESIGNED BY:	LG
DRAWN BY:	JA
CHECKED BY:	BI
SCALE:	SCALE

DATE:	REV.	SHEET
8/27/2020	2	3 OF 6

SHEET NUMBER
C03

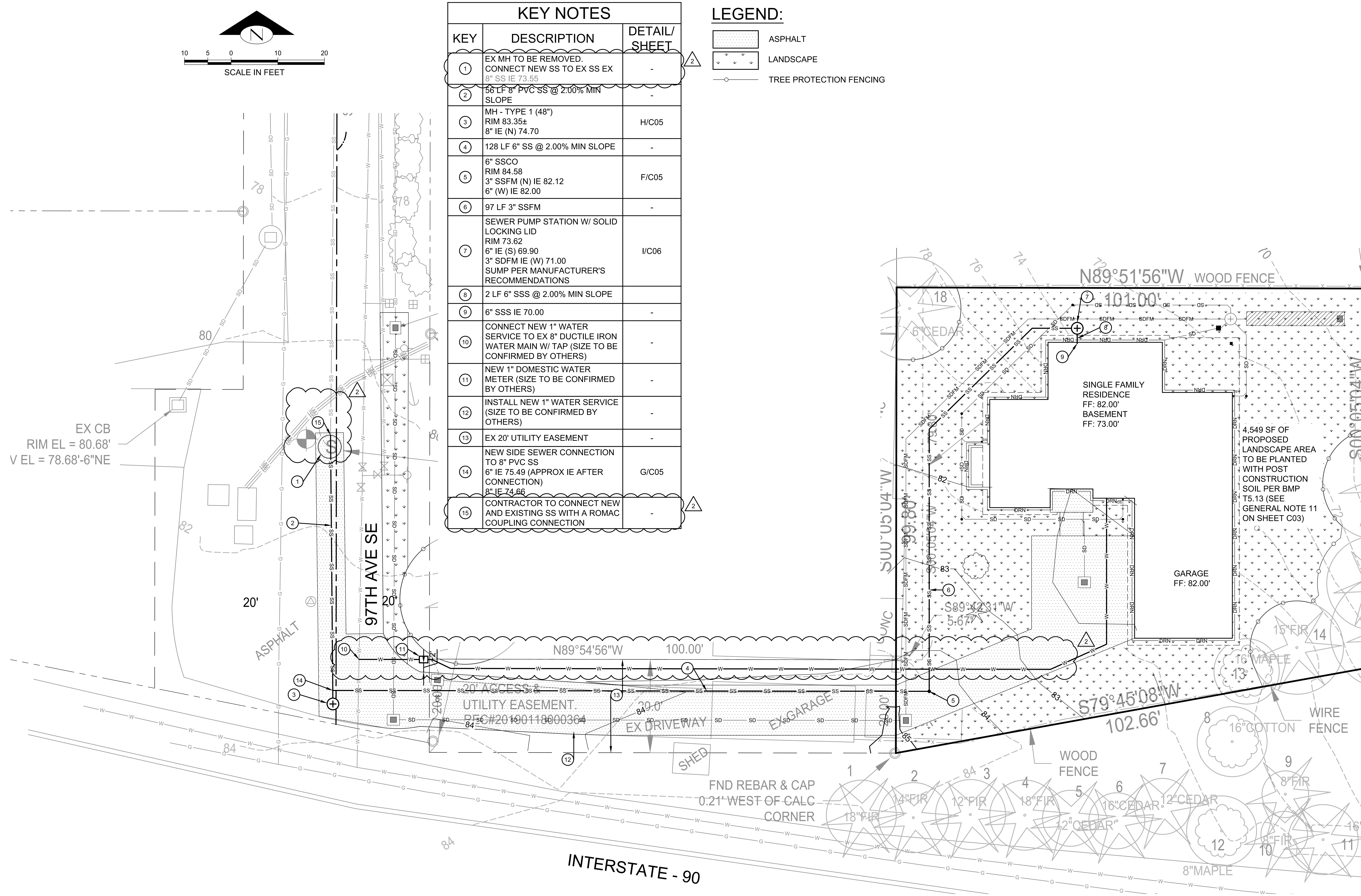
CAD FILE NUMBER: I:\DCG\LOCAL\FILES\SHARED\DCG\CLIENTS-CIVIL\VALERE DEVELOPMENT\3440 97TH AVE SE MERCER ISLAND\DWG\3440 97TH AVE SE MERCER ISLAND.DWG
LAST MODIFIED BY: DREW - SAVE DATE: 8/27/2020 1:49 PM - SHEET SET: 3440 97TH AVE SE - ORIGINAL SHEET SIZE: ANSI FULL BLEED D (34.00 X 22.00 INCHES)
AUTOCAD VERSION: CIVIL 3D 2018

KEY NOTES

KEY	DESCRIPTION	DETAIL/ SHEET
1	EX MH TO BE REMOVED. CONNECT NEW SS TO EX SS EX 8" SS IE 73.55	-
2	56 LF 8" PVC SS @ 2.00% MIN SLOPE	-
3	MH - TYPE 1 (48") RIM 83.35± 8" IE (N) 74.70	H/C05
4	128 LF 6" SS @ 2.00% MIN SLOPE	-
5	6" SSCO RIM 84.58 3" SSFM (N) IE 82.12 6" (W) IE 82.00	F/C05
6	97 LF 3" SSFM	-
7	SEWER PUMP STATION W/ SOLID LOCKING LID RIM 73.62 6" IE (S) 69.90 3" SDFM IE (W) 71.00 SUMP PER MANUFACTURER'S RECOMMENDATIONS	I/C06
8	2 LF 6" SSS @ 2.00% MIN SLOPE	
9	6" SSS IE 70.00	-
10	CONNECT NEW 1" WATER SERVICE TO EX 8" DUCTILE IRON WATER MAIN W/ TAP (SIZE TO BE CONFIRMED BY OTHERS)	-
11	NEW 1" DOMESTIC WATER METER (SIZE TO BE CONFIRMED BY OTHERS)	-
12	INSTALL NEW 1" WATER SERVICE (SIZE TO BE CONFIRMED BY OTHERS)	-
13	EX 20' UTILITY EASEMENT	-
14	NEW SIDE SEWER CONNECTION TO 8" PVC SS 6" IE 75.49 (APPROX IE AFTER CONNECTION) 8" IE 74.66	G/C05
15	CONTRACTOR TO CONNECT NEW AND EXISTING SS WITH A ROMAC COUPLING CONNECTION	-

LEGEND:

- ASPHALT
- LANDSCAPE
- TREE PROTECTION FENCING



No.	DATE	BY	REVISION
1	6/5/2020	BI	REVISIONS PER CITY REVIEW COMMENTS
2	8/20/2020	BI	REVISIONS PER CITY REVIEW COMMENTS

LEED AP™

LEED ACCREDITED PROFESSIONAL & THE RELATED ACRONYM, & THE LEGACY LEED AP LOGO ARE TRADEMARKS OWNED BY THE U.S. GREEN BUILDING COUNCIL & ARE AWARDED TO INDIVIDUALS UNDER LICENSE BY THE GREEN BUILDING CERTIFICATION INSTITUTE.

9706 4TH AVE NE
SUITE 300
SEATTLE, WA 98115

P: 206.523.0024
F: 206.523.1012
www.dcgengr.com

DCG civil structural

CALL 811
2 BUSINESS DAYS BEFORE YOU DIG
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

Digitally signed by Benjamin Ibbins
Date: 2020.08.27 10:00:55 -07'00'

BASE MAP/TOPOGRAPHY PROVIDED BY OTHERS. DCG CANNOT BE HELD LIABLE FOR ACCURACY. CONTRACTOR SHALL FIELD VERIFY GRADES, UTILITIES, & ALL OTHER EX FEATURES & CONDITIONS. IF CONDITIONS ARE NOT AS SHOWN &/OR PLANS CANNOT BE CONSTRUCTED AS SHOWN, CONTACT DCG PRIOR TO CONSTRUCTION.

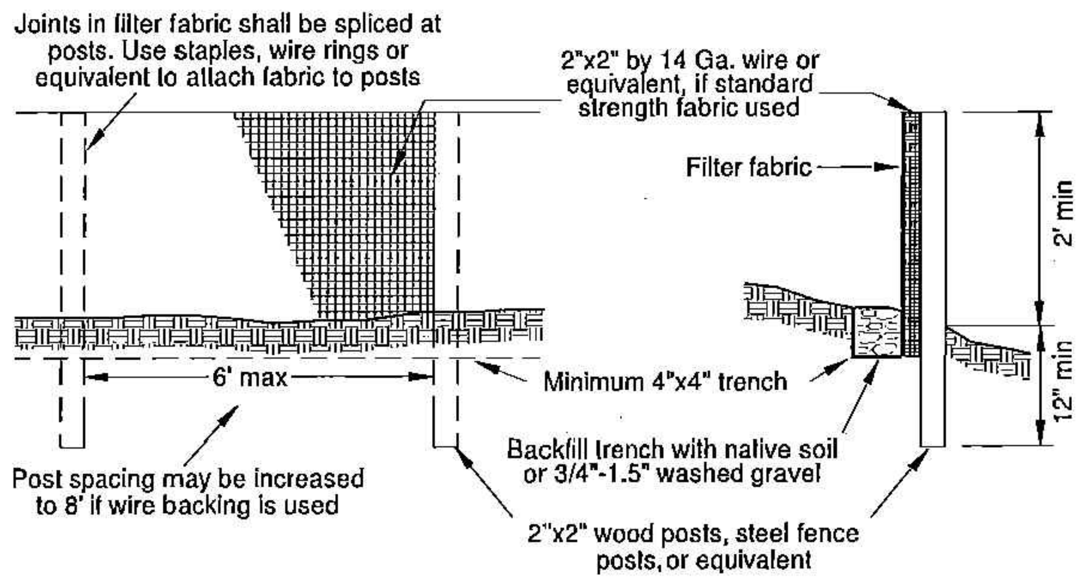
OWNER: IN MY BACKYARD, LLC
4701 W MERCER WAY
MERCER ISLAND, WA 98040

PROJECT: 3440 97TH AVE SE
MERCER ISLAND, WA 98040
UTILITY PLAN

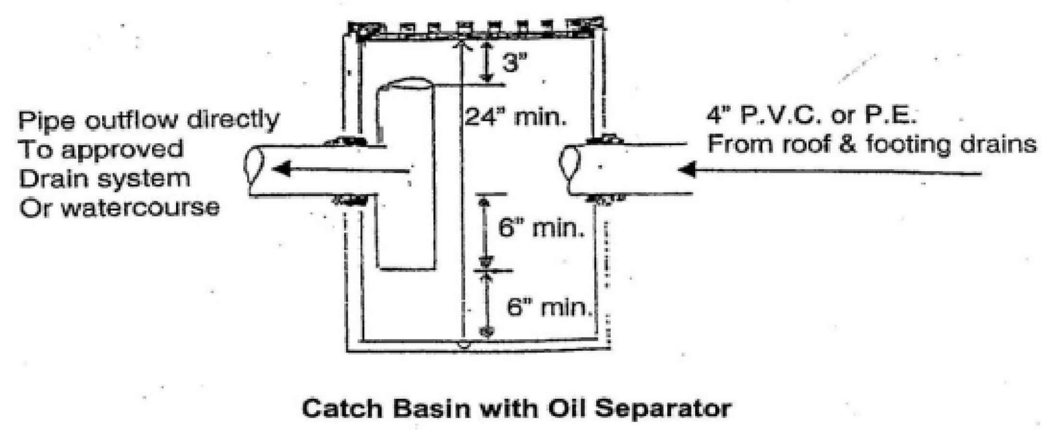
PROJ. MANAGER:	BI
DESIGNED BY:	LG
DRAWN BY:	JA
CHECKED BY:	BI
SCALE:	SCALE
DATE: 8/27/2020	REV. 2 / SHEET 4 OF 6

SHEET NUMBER
C04

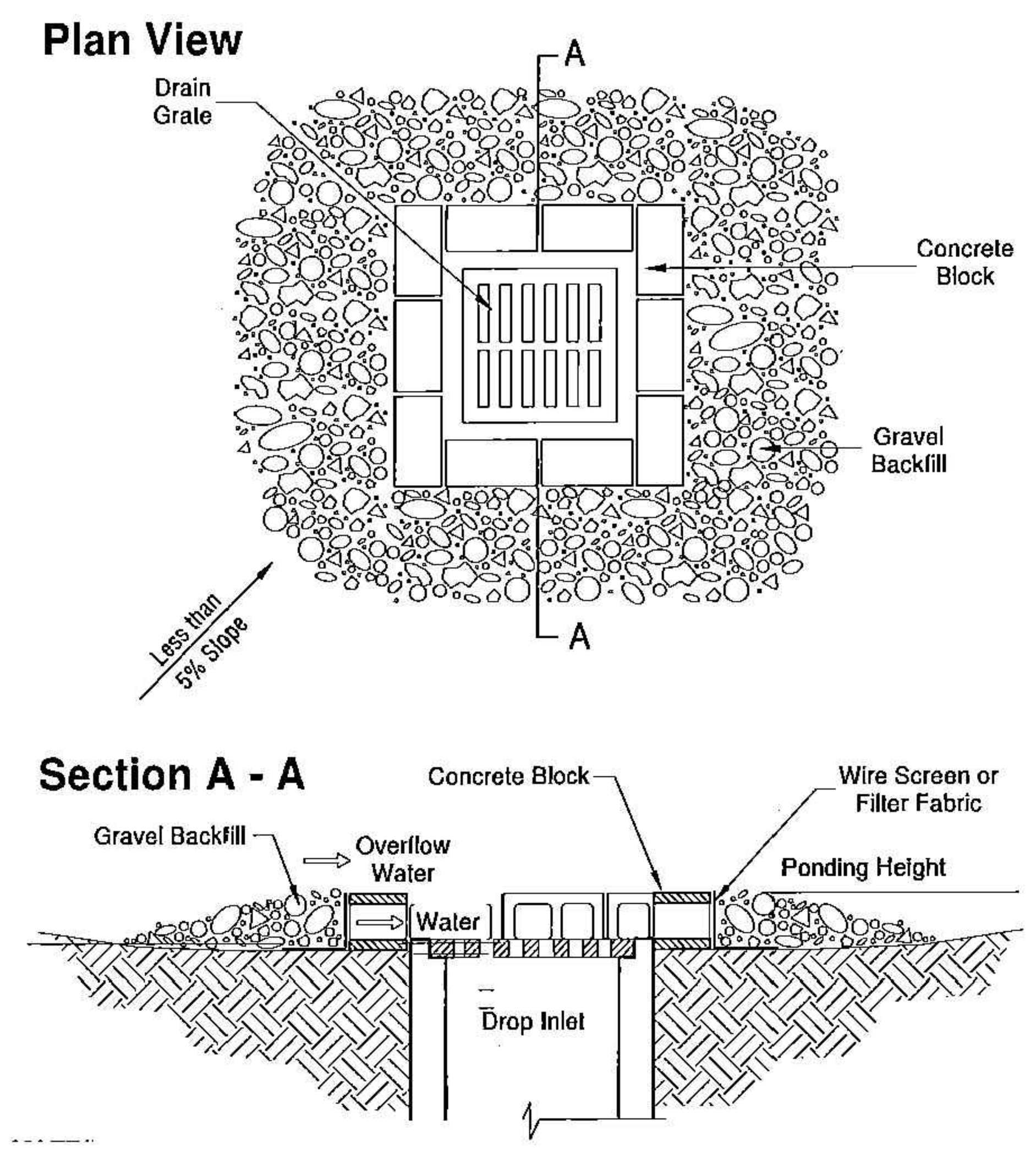
CAD FILE NUMBER: \\DCG.LOCAL\FILESHARE\DCG\CLIENTS-CIVIL\VALERE DEVELOPMENT\3440 97TH AVE SE MERCER ISLAND\DWG\DRAWING\3440 97TH AVE SE MERCER ISLAND.DWG
LAST MODIFIED BY: DREW - SAVE DATE: 8/27/2020 1:49 PM - SHEET SET: 3440 97TH AVE SE - ORIGINAL SHEET SIZE: ANSI FULL BLEED D (34.00 X 22.00 INCHES)
AUTOCAD VERSION: CIVIL 3D 2018



SILT FENCE
D.O.E. FIGURE 4.20
NOT TO SCALE
A / C01

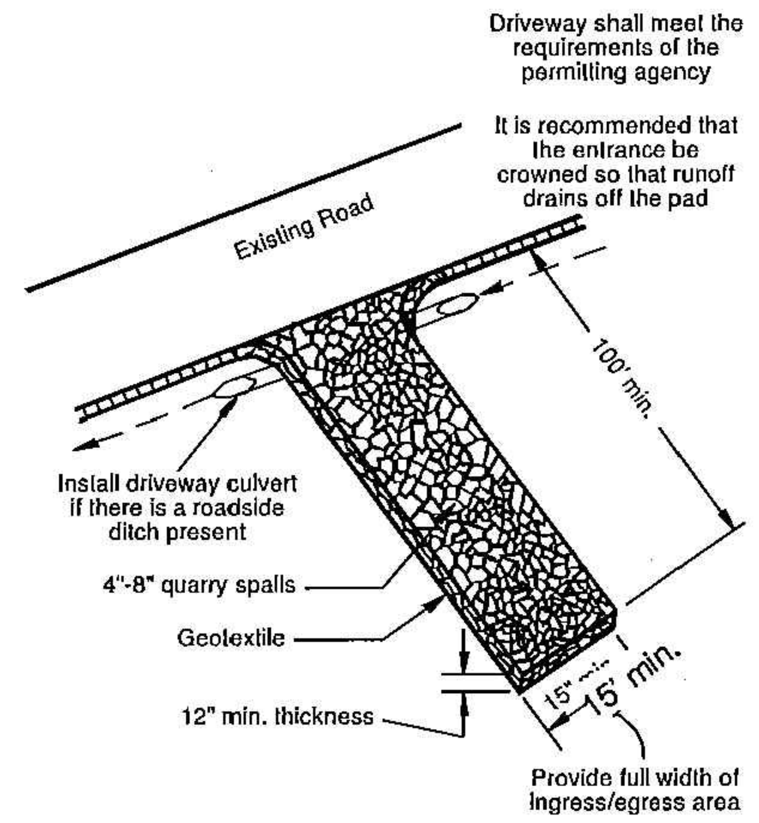


CB W/ OIL/WATER SEPARATOR
NOT TO SCALE
D / C03

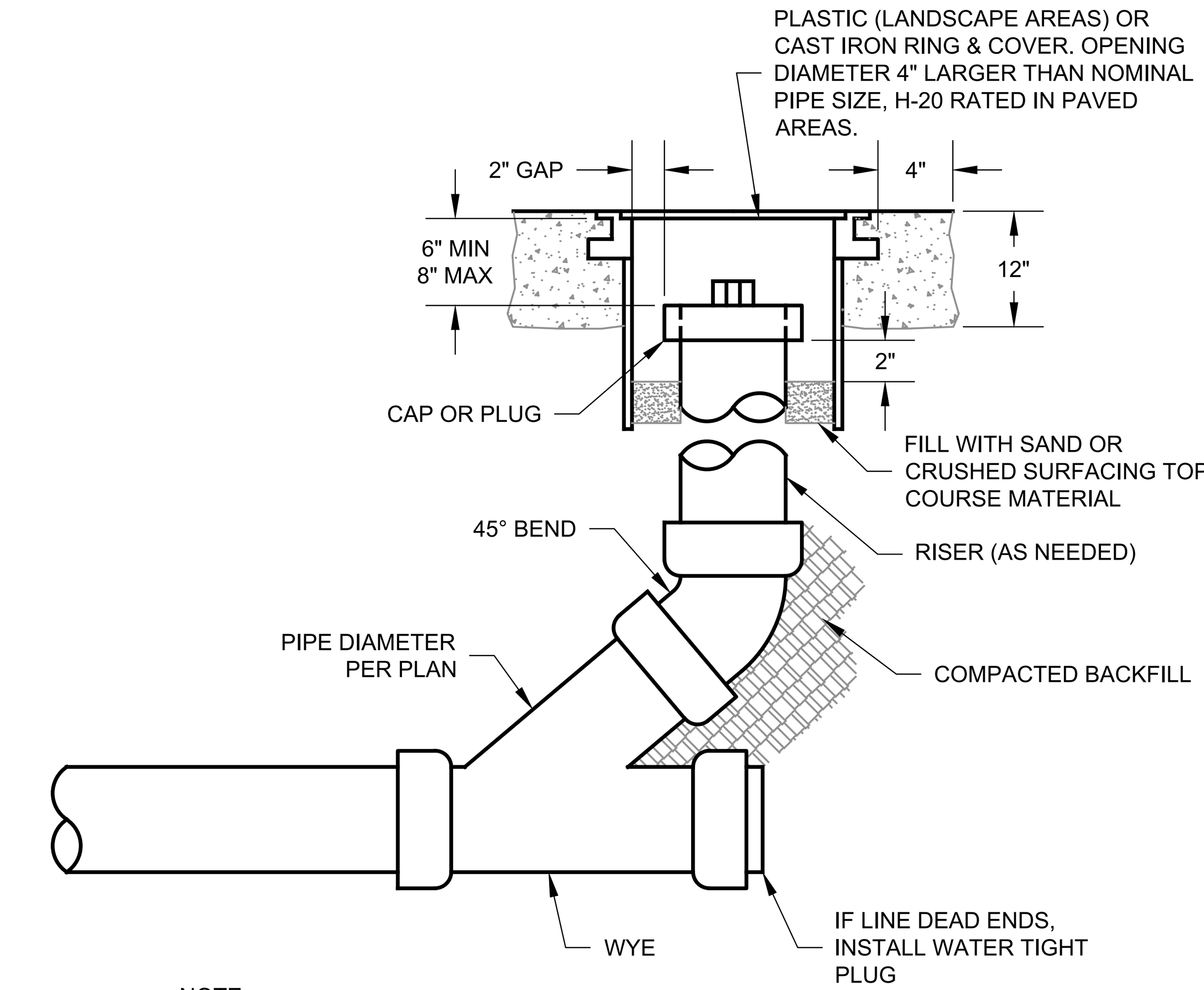


Notes:
1. Drop inlet sediment barriers are to be used for small, nearly level drainage areas. (less than 5%)
2. Excavate a basin of sufficient size adjacent to the drop inlet.
3. The top of the structure (ponding height) must be well below the ground elevation downslope to prevent runoff from bypassing the inlet. A temporary dike may be necessary on the dowslope side of the structure.

TEMPORARY INLET PROTECTION
NOT TO SCALE
B / C01



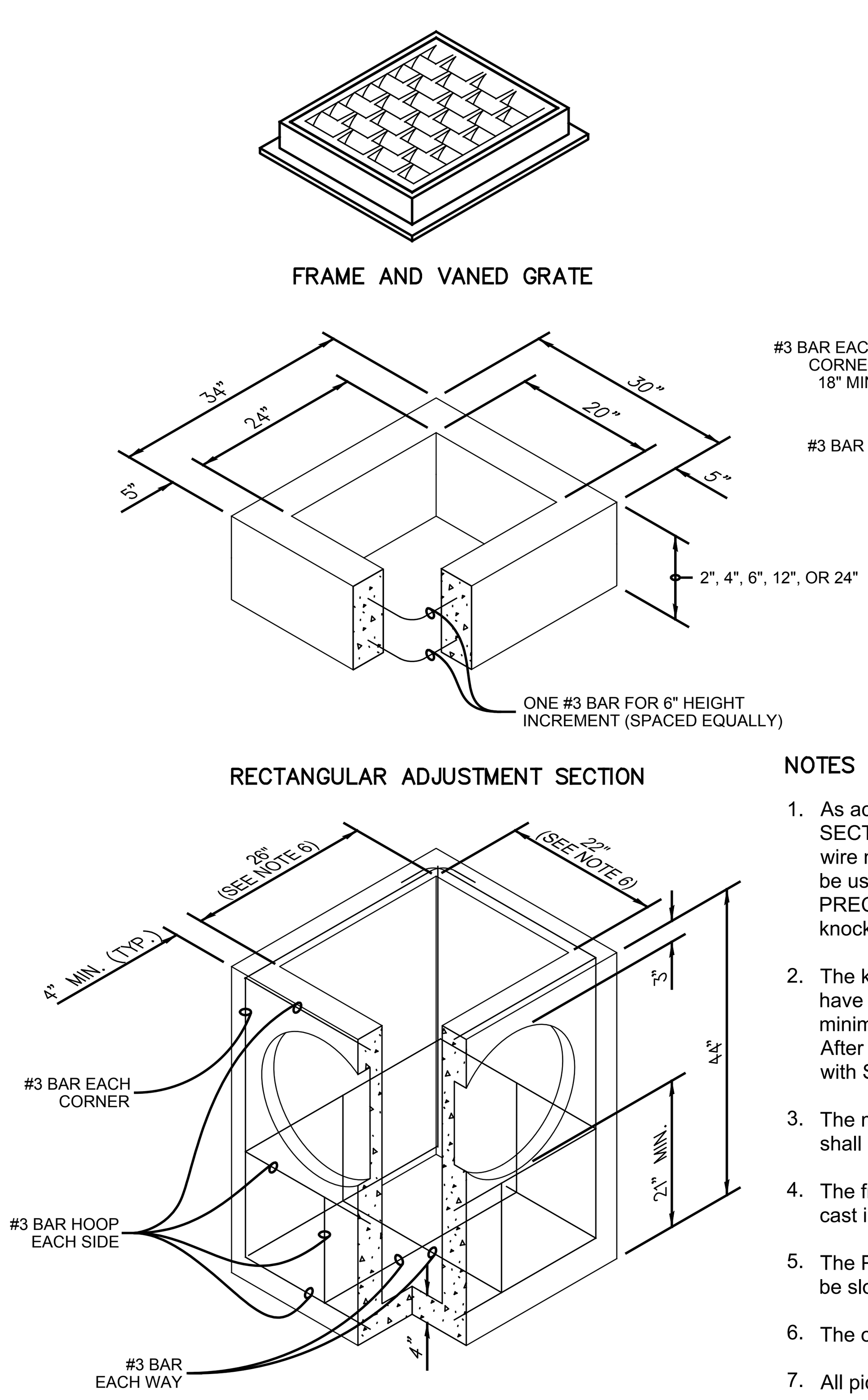
STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE
C / C01

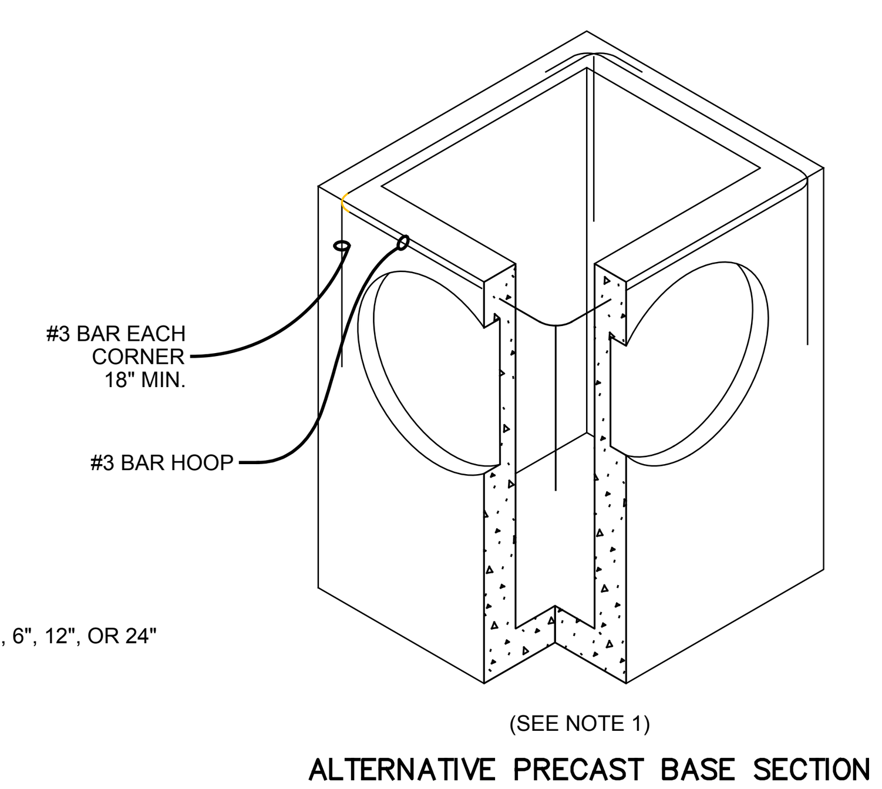


NOTE

CAST IRON COVER SHALL READ "SEWER", "STORM" OR "CO."

STORM DRAIN & SEWER CLEANOUT
NOT TO SCALE
F / C03 & C04





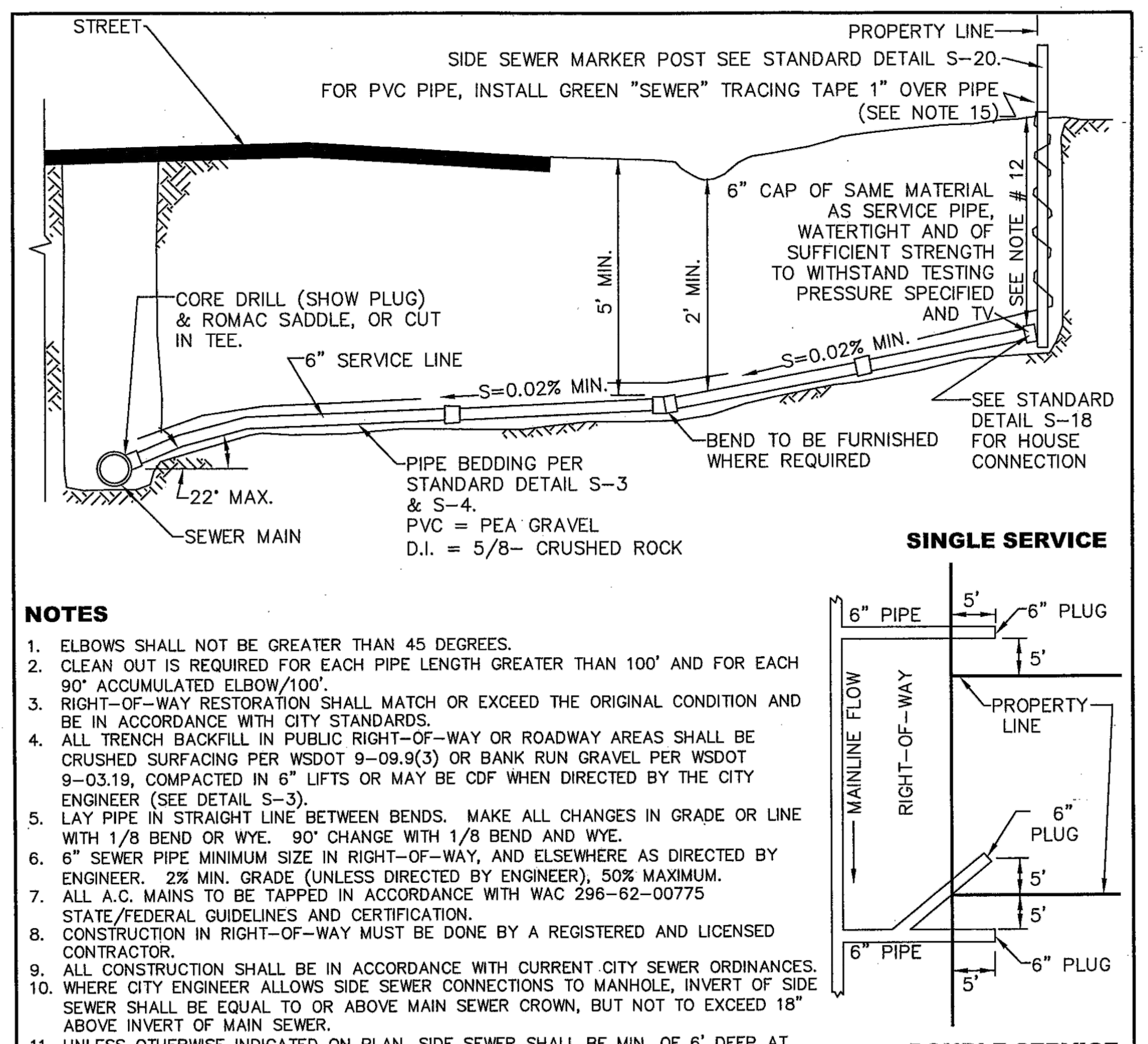
PIPE ALLOWANCES	
PIPE MATERIAL	MAXIMUM INSIDE DIAMETER
REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CPSSP* (STD. SPEC. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. 9-05.12(2))	15"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

NOTES

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

CATCH BASIN TYPE 1
PER WSDOT STD PLAN B-5.20-00
NOT TO SCALE
E / C03

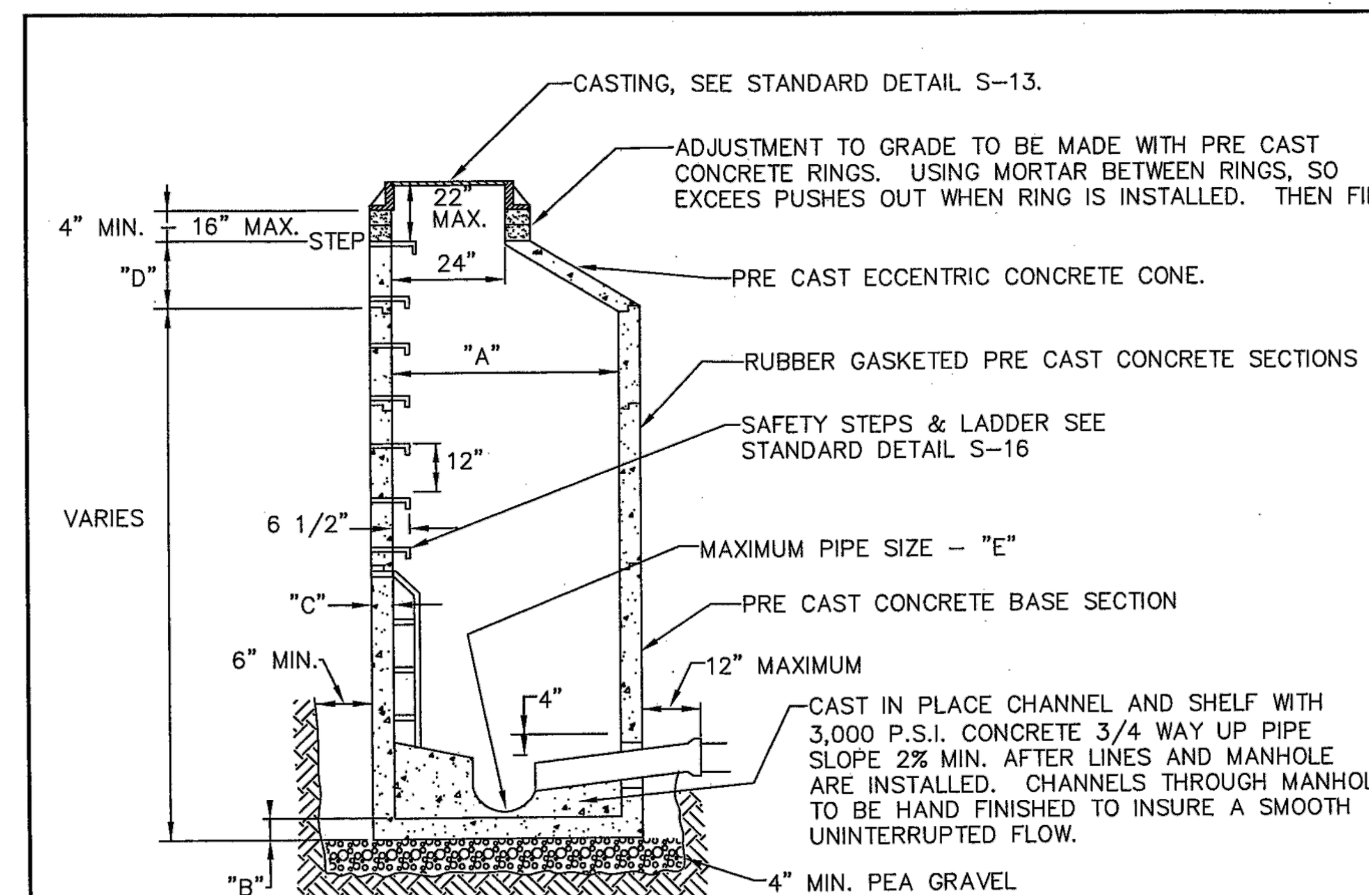


NOTES

1. ELBOWS SHALL NOT BE GREATER THAN 45 DEGREES.
2. CLEAN OUT IS REQUIRED FOR EACH PIPE LENGTH GREATER THAN 100' AND FOR EACH 90° ACCUMULATED ELBOW/100'.
3. RIGHT-OF-WAY RESTORATION SHALL MATCH OR EXCEED THE ORIGINAL CONDITION AND BE IN ACCORDANCE WITH CITY STANDARDS.
4. ALL TRENCH BACKFILL IN PUBLIC RIGHT-OF-WAY OR ROADWAY AREAS SHALL BE CRUSHED SURFACING PER WSDOT 9-09.9(3) OR BANK RUN GRAVEL PER WSDOT 9-03.19, COMPACTED IN 6" LIFTS OR MAY BE CDF WHEN DIRECTED BY THE CITY ENGINEER (SEE DETAIL S-3).
5. LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH 1/8 BEND OR WYE. 90° CHANGE WITH 1/8 BEND AND WYE.
6. 6" SEWER PIPE MINIMUM SIZE IN RIGHT-OF-WAY, AND ELSEWHERE AS DIRECTED BY ENGINEER. 2% MIN. GRADE (UNLESS DIRECTED BY ENGINEER), 50% MAXIMUM.
7. ALL A.C. MAINS TO BE TAPPED IN ACCORDANCE WITH WAC 296-62-00775 STATE/FEDERAL GUIDELINES AND CERTIFICATION.
8. CONSTRUCTION IN RIGHT-OF-WAY MUST BE DONE BY A REGISTERED AND LICENSED CONTRACTOR.
9. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT CITY SEWER ORDINANCES.
10. WHERE CITY ENGINEER ALLOWS SIDE SEWER CONNECTIONS TO MANHOLE, INVERT OF SIDE SEWER SHALL BE EQUAL TO OR ABOVE MAIN SEWER CROWN, BUT NOT TO EXCEED 18" ABOVE INVERT OF MAIN SEWER.
11. UNLESS OTHERWISE INDICATED ON PLAN, SIDE SEWER SHALL BE MIN. OF 6' DEEP AT PROPERTY LINE, OR 5' LOWER THAN THE LOWEST ELEVATION, WHICH EVER IS LOWER.
12. ALL PIPE MATERIALS NOT TO STANDARDS WILL BE ABANDONED AND REPLACED WITH DUCTILE IRON OR PVC PIPE OF THE SAME SIZE.
13. IF A BUILDING SEWER IS TO SERVE MORE THAN ONE PROPERTY, BY JOINT AGREEMENT OF THE OWNERS, AN APPROVED EASEMENT INSURING THAT ALL PROPERTIES INVOLVED SHALL HAVE PERPETUAL USE OF THE SIDE SEWER, HAVING PROVISIONS FOR OPERATION, MAINTENANCE, RECONSTRUCTION AND FOR ACCESS FOR REPAIR PURPOSES, SHALL BE SIGNED BY THE OWNERS. THIS EASEMENT SHALL BE RECORDED WITH THE COUNTY AUDITOR. A SIX INCH (MINIMUM) DIAMETER PIPE SHALL BE USED FOR THE COMMON LINE AND A SIX INCH CLEANOUT EXTENDING TO WITHIN 12 INCHES OF THE GROUND SURFACE SHALL BE PROVIDED AT THE WYE WHERE THE UPPER GRADE CONNECTIONS ARE MADE. BACKWATER VALVES SHALL BE INSTALLED ON SERVICE LINES UPSTREAM OF THE CONNECTION TO THE SHARED SIDE SEWER.
14. THE CITY ENGINEER MAY REQUIRE BACKWATER VALVES ON SIDE SEWERS WHEN DEEMED NECESSARY. THE EFFECTIVE OPERATION AND MAINTENANCE OF ANY BACKWATER VALVE SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE SIDE SEWER.
15. UTILITY PIPE TRACER TAPE SHALL BE DETECTABLE BELOW GROUND SURFACE, COLOR CODED, WITH UTILITY NAME PRINTED ON TAPE. CONDUCTIVE WARNING TAPE REQUIRED OVER ALL WATER PIPE. TAPE SHALL BE MANUFACTURER'S STANDARD PERMANENT, BRIGHT-COLORED, CONTINUOUS PRINTED PLASTIC TAPE, ALUMINUM BACKED, INTENDED FOR DIRECT-BURIAL SERVICE. TAPE SHALL BE NOT LESS THAN 6" WIDE X 4 MILS THICK.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
SIDE SEWER CONNECTION AND STUB
6-5-2009 | NO SCALE | S-17
REV DATE | APPROVED

SIDE SEWER CONNECTION AND STUB
NOT TO SCALE
G / C04



	"A"	"B"	"C"	"D"	"E"
48" MH	48"	6" MIN.	5" MIN.	24" MIN.	21" I.D.
54" MH	54"	8" MIN.	5.5" MIN.	24" MIN.	24" I.D
60" MH	60"	8" MIN.	6" MIN.	42" MIN.	30" I.D.

NOTES

1. PRE CAST SECTIONS SHALL BE REINFORCED PER ASTM SPECS FOR CORRESPONDING SEWER PIPE.
2. SAFETY STEPS, 1" MINIMUM, SEE STANDARD DETAILS S-16. STEPS IN PRE CAST BASE SECTION MAY BE CAST IN PLACE OR MOVABLE SAFETY LADDER GROUTED IN PLACE.
3. ALL HOLES FOR PIPE SHALL BE BLOCKED OUT AT THE TIME OF CASTING THE SECTION.
4. ALL RUBBER GASKETED MANHOLES SHALL BE FURNISHED WITH RUBBER GASKET JOINT CONFORMING ASTM C-443.
5. MINIMUM 2% SLOPE ACROSS MANHOLE.
6. SEE STANDARD DETAIL S-13 FOR MANHOLE FRAME AND COVER.
7. CONNECTION TO MANHOLE WITH PVC PIPE REQUIRES A PVC x CONCRETE ADAPTER.
8. ALL PIPE THROUGH MANHOLE WALL SHALL HAVE A "KOR-N-SEAL" WITH "WEDGE KORBAND" MANUFACTURED BY NPC. INC. OR APPROVED EQUAL.
9. BEDDING AND FOUNDATION MATERIAL REQUIRED AS SHOWN ON DETAIL AND AS NOTED IN THE SPECIFICATIONS.
10. LOCATION OF MANHOLE STEPS SHALL NOT BE OVER FLOW LINES AND SHALL BE APPROVED BY THE CITY ENGINEER.

CITY OF MERCER ISLAND
STANDARD DETAILS
SEWER
TYPE 1 MANHOLE 48" – 60"
6-5-2009 | NO SCALE | S-5
REV DATE | APPROVED

TYPE 1 MANHOLE
NOT TO SCALE
H / C04

No.	DATE	BY	REVISION
1	6/5/2020	BI	REVISIONS PER CITY REVIEW COMMENTS
2	8/20/2020	BI	REVISIONS PER CITY REVIEW COMMENTS

LEED AP TM
LEED ACCREDITED PROFESSIONAL & THE RELATED ACRONYM & THE LEGACY LEED AP LOGO ARE TRADEMARKS OWNED BY THE U.S. GREEN BUILDING COUNCIL & ARE AWARDED TO INDIVIDUALS UNDER LICENSE BY THE GREEN BUILDING CERTIFICATION INSTITUTE.

9706 4TH AVE NE
SUITE 300
SEATTLE, WA 98115
P: 206.523.0024
F: 206.523.1012
www.dcgengr.com
D|C|G civil structural

CALL 811
2 BUSINESS DAYS BEFORE YOU DIG
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

BENJAMIN J. IDDINS, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER
Digitally signed by Benjamin Iddins
Date: 2020.08.28 10:01:16 -07'00'

BASE MAP/TOPOGRAPHY PROVIDED BY OTHERS. DCG CANNOT BE HELD LIABLE FOR ACCURACY. CONTRACTOR SHALL FIELD VERIFY GRADES, UTILITIES, & ALL OTHER EX FEATURES & CONDITIONS. IF CONDITIONS ARE NOT AS SHOWN &/OR PLANS CANNOT BE CONSTRUCTED AS SHOWN, CONTACT DCG PRIOR TO CONSTRUCTION.

OWNER: IN MY BACKYARD, LLC
4701 W MERCER WAY
MERCER ISLAND, WA 98040

PROJECT: 3440 97TH AVE SE
MERCER ISLAND, WA 98040
ESC & DRAINAGE DETAILS

PROJ. MANAGER:	BI
DESIGNED BY:	LG
DRAWN BY:	JA
CHECKED BY:	BI
SCALE:	SCALE
DATE: 8/27/2020	REV. 2 / SHEET 5 OF 6

SHEET NUMBER
C05

CAD FILE NUMBER: \\DCG.LOCAL\FILESHARE\DCG\CLIENTS-CIVIL\VALERE DEVELOPMENT\3440 97TH AVE SE MERCER ISLAND\DWG\DRAWING\3440 97TH AVE SE MERCER ISLAND.DWG
LAST MODIFIED BY: DREW - SAVE DATE: 8/27/2020 1:49 PM - SHEET SET: 3440 97TH AVE SE - ORIGINAL SHEET SIZE: ANSI FULL BLEED D (34.00 X 22.00 INCHES)
AUTOCAD VERSION: CIVIL 3D 2018

SANITARY SIDE SEWER PUMP SPECIFICATIONS

GENERAL DESCRIPTION	SUBMERSIBLE SEWAGE EJECTOR PUMP
DESIGN FLOW & TDH	28 GPM @ 15.34' TDH (BASED ON FORCE MAIN DIAM. AND LENGTH PER PLAN DOUBLED TO ACCOUNT FOR MINOR LOSSES)
MINIMUM SOLIDS HANDLING	2" MIN
PUMP EFFICIENCY	PER MANUFACTURER'S RECOMMENDATIONS OPERATING RANGE
PUMP ELECTRICAL	SINGLE PHASE
PUMP CONTROLS	PER MANUFACTURER'S RECOMMENDATIONS
PUMP MOUNTING & DISCHARGE	PER MANUFACTURER'S RECOMMENDATIONS
DISCHARGE MANIFOLD	PER MANUFACTURER'S RECOMMENDATIONS
FORCE MAIN & FITTINGS	3" (USED FOR TDH CALCS. CAN USE 2" MIN UP TO 4" MAX BUT REQUIRES RECALCULATION OF TDH)
CONTROL/FLOAT SPECIFICATIONS	PER MANUFACTURER'S RECOMMENDATIONS

NOTES:

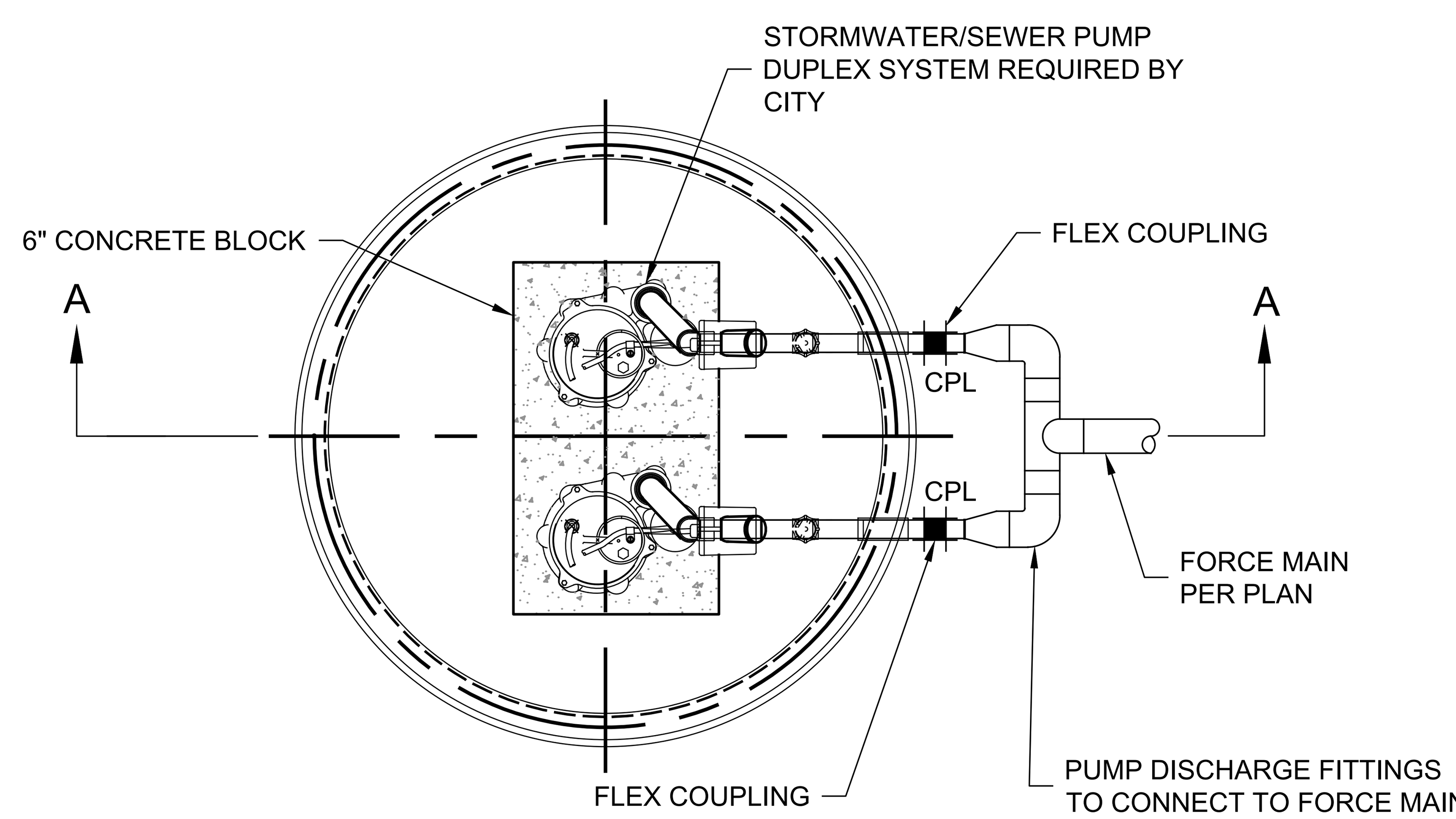
1. THESE SPECIFICATIONS ARE SCHEMATIC IN NATURE AND SHALL BE CONFIRMED BY THE SUPPLIER AND CONTRACTOR.
2. PUMP FLOATS/CONTROLS AND DISCHARGE VALVES SHALL BE FIELD TESTED AND ADJUSTED TO ACHIEVE DESIGN FLOW AND OPTIMUM PUMP CYCLE TIMES PER MANUFACTURER'S RECOMMENDATIONS.
3. DUPLEX PUMP STATION IS REQUIRED.

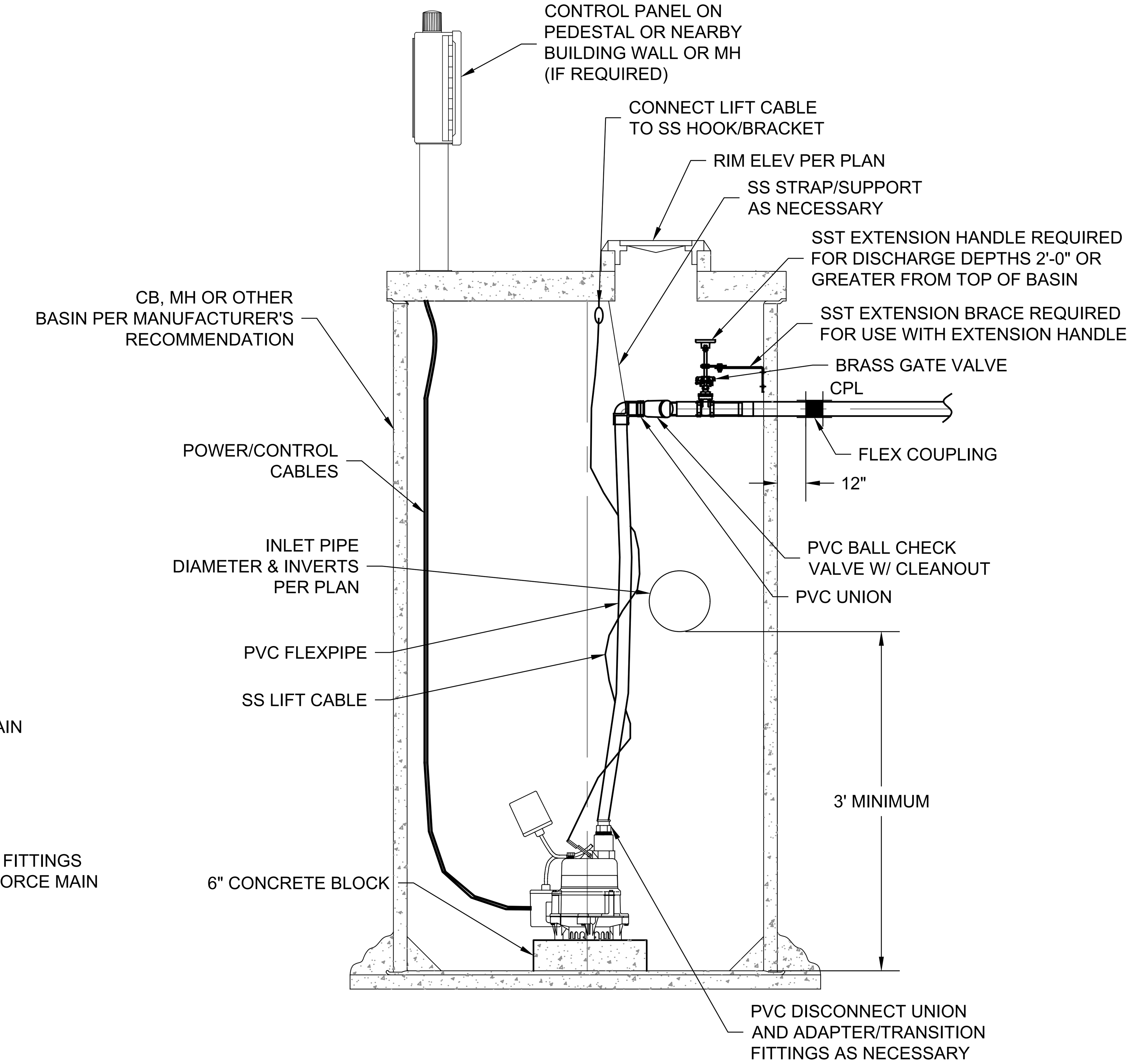
STORMWATER PUMP SPECIFICATIONS

GENERAL DESCRIPTION	SUBMERSIBLE STORMWATER EJECTOR PUMP
DESIGN FLOW & TDH	40 GPM @ 18.20' TDH (BASED ON FORCE MAIN DIAM. AND LENGTH PER PLAN DOUBLED TO ACCOUNT FOR MINOR LOSSES)
MINIMUM SOLIDS HANDLING	3/4" MIN
PUMP EFFICIENCY	PER MANUFACTURER'S RECOMMENDATIONS OPERATING RANGE
PUMP ELECTRICAL	SINGLE PHASE
PUMP CONTROLS	PER MANUFACTURER'S RECOMMENDATIONS
PUMP MOUNTING & DISCHARGE	PER MANUFACTURER'S RECOMMENDATIONS
DISCHARGE MANIFOLD	PER MANUFACTURER'S RECOMMENDATIONS
FORCE MAIN & FITTINGS	3" (USED FOR TDH CALCS. CAN USE 2" MIN UP TO 4" MAX BUT REQUIRES RECALCULATION OF TDH)
CONTROL/FLOAT SPECIFICATIONS	PER MANUFACTURER'S RECOMMENDATIONS

NOTES:

1. THESE SPECIFICATIONS ARE SCHEMATIC IN NATURE AND SHALL BE CONFIRMED BY THE SUPPLIER AND CONTRACTOR.
2. PUMP FLOATS/CONTROLS AND DISCHARGE VALVES SHALL BE FIELD TESTED AND ADJUSTED TO ACHIEVE DESIGN FLOW AND OPTIMUM PUMP CYCLE TIMES PER MANUFACTURER'S RECOMMENDATIONS.
3. DUPLEX PUMP STATION IS REQUIRED.
4. DESIGN FOOTING DRAIN FLOW IS ASSUMED TO BE LESS THAN OR EQUAL TO 10 GPM. GEOTECHNICAL ENGINEER TO OBSERVE INSTALLATION OF FOOTING DRAINS TO VERIFY FLOWRATE IS ADEQUATE. IF HIGHER RATES ARE OBSERVED IN THE FIELD, CONTACT ENGINEER.





PUMP GENERAL NOTES:

1. IF A PUMP IS REQUIRED TO CONNECT THE SIDE SEWER FORCE LINE TO A SIDE SEWER OR PUBLIC MAIN, THE PERMITTEE SHALL ATTACH A COPY OF THE PUMP MANUFACTURER'S SPECIFICATIONS TO THE SIDE SEWER PERMIT APPLICATION. THE PUMP SPECIFICATIONS SHALL INCLUDE GALLONS PER MINUTE (GPM) AND THE TOTAL SYSTEM HEAD (STATIC HEAD AND DYNAMIC HEAD).
2. PUMPS SHALL BE SPECIFICALLY DESIGNED FOR THE APPLICABLE USE (E.G., DRAINAGE DISCHARGES OR WASTEWATER DISCHARGES) USING THE PUMP MANUFACTURER'S RECOMMENDED OPERATING GUIDELINES.
3. NO MORE THAN ONE PROPERTY SHALL BE CONNECTED TO ANY PUMP SYSTEM, INCLUDING THE FORCE-LINE.
4. SEPARATE PUMP SYSTEMS (WET WELLS, PUMPS, ETC) ARE REQUIRED FOR DRAINAGE AND WASTEWATER APPLICATIONS, IF PUMPING IS REQUIRED OR PROPOSED.
5. A DUPLEX PUMP SYSTEM IS REQUIRED UNLESS OTHERWISE APPROVED BY THE CITY OF MERCER ISLAND.
6. PROJECTS WHICH PROPOSE PUMP SYSTEMS AND ARE LOCATED WITHIN A DESIGNATED GEOLOGIC HAZARD AREA MAY BE SUBJECT TO ADDITIONAL SIDE SEWER AND GEOTECHNICAL REQUIREMENTS PER THE CITY OF MERCER ISLAND.
7. THE DISCHARGE PIPE (FORCE-LINE) SHALL HAVE A NON-CORROSIVE CHECK-VALVE, A "QUICK-RELEASE" CONNECTOR/FITTING, AND A NON-CORROSIVE GATE-VALVE TO FACILITATE PUMP REMOVAL. THE PIPE SHALL HAVE A MINIMUM INSIDE DIAMETER OF TWO-INCHES FOR INJECTOR PUMPS, ONE-AND-ONE QUARTER-INCHES FOR GRINDER PUMPS, OR THREE-INCHES FOR DUPLEX PUMP SYSTEMS, OR PER MANUFACTURER RECOMMENDATIONS. THE DISCHARGE FORCE LINE SHALL BE PVC SCHEDULE 40 OR SCHEDULE 80 OR DUCTILE IRON OR AS APPROVED BY THE SITE INSPECTOR.
8. A FORCE-LINE PIPE MAY NOT CONNECT DIRECTLY TO A PUBLIC MAIN. PRIOR TO CONNECTING TO THE PUBLIC MAIN OR ENCROACHING ON THE PUBLIC PLACE, THE FORCE-LINE SHALL DISCHARGE INTO A STANDARD, GRAVITY-FLOW SECTION OF SIDE SEWER PIPE THAT IS AT LEAST 10 FEET IN LENGTH (SEE EXHIBIT 11).
9. FORCE-LINE SECTIONS OF PIPE ARE REQUIRED TO HAVE "PIG PORTS" FOR THE FOLLOWING TWO CONDITIONS: A. A MAXIMUM OF 100 FOOT INTERVALS; AND B. WHEREVER FITTING BENDS TOTAL 135°.
10. THE FORCE-LINE PIPE LOCATED OUTSIDE THE BUILDING SHALL BE PRESSURE TESTED PER REQUIREMENTS OF PART V SECTION Q, TESTING. DPD ALSO REQUIRES THAT THE PUMP BE OPERATIONAL PRIOR TO FINALIZING THE SIDE SEWER PERMIT.
11. THE PUMP SHALL BE INSTALLED IN A CHAMBER THAT IS READILY SERVICEABLE. THE TANK SHALL BE MADE OF NON-POROUS, NON-CORROSIVE, STRUCTURALLY SOUND MATERIAL SUCH AS PLASTIC, FIBERGLASS, STAINLESS STEEL, OR CONCRETE. IF A CONCRETE TANK IS USED, A FIBERGLASS REINFORCED PLASTIC OF POLYURETHANE HYBRID POLYMER RESIN OR EQUIVALENT SHALL BE INSTALLED IN THE CONCRETE CHAMBER. THE LINER MAY BE CAST INTEGRAL WITH THE PRECASTING OF THE MAINTENANCE HOLE OR FIELD ASSEMBLED AND SEALED IN THE PRECAST CONCRETE SECTIONS.
12. PUMP SYSTEMS SHALL BE DESIGNED AND INSTALLED TO PROVIDE EASY ACCESS FROM THE GROUND SURFACE TO ALL MECHANICAL AND ELECTRICAL DEVICES.
13. AN AUDIBLE ALARM SYSTEM IS RECOMMENDED FOR PUMP SYSTEMS.
14. AN ELECTRICAL PERMIT IS REQUIRED FOR AN ELECTRICAL HOOKUP OF A PUMP IF A NEW CIRCUIT IS REQUIRED FOR THE PUMP.
15. PUMPS LOCATED WITHIN A BUILDING ARE SUBJECT TO SEATTLE-KING COUNTY DEPARTMENT OF PUBLIC HEALTH INSPECTION.
16. PUMP SYSTEMS SHALL BE OWNED, OPERATED, MAINTAINED, REPAIRED, AND REPLACED (AS NEEDED) BY PROPERTY OWNER(S) SERVED BY SUCH SYSTEM.
17. THE PUMP SYSTEMS SHALL HAVE DUAL, ALTERNATING PUMPS WITH EMERGENCY ON-SITE, BACK-UP POWER SUPPLY AND AN EXTERNAL ALARM SYSTEM FOR SYSTEM FAILURE AND HIGH WATER LEVEL INDICATOR.
18. THE PRIVATE PROPERTY OWNER(S) SHALL BE RESPONSIBLE FOR ANY AND ALL CLAIMS FOR INJURIES AND DAMAGE DUE TO THE OPERATION OR NON-OPERATION OF THE PUMP SYSTEM.

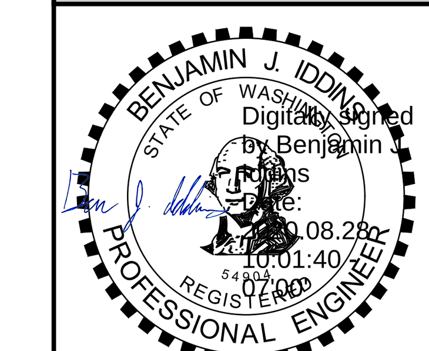
DUPLEX PUMP STATION (I) C03 & C04

No.	DATE	BY	REVISION
1	6/5/2020	BI	REVISIONS PER CITY REVIEW COMMENTS
2	8/20/2020	BI	REVISIONS PER CITY REVIEW COMMENTS

LEED AP™ — LEED ACCREDITED PROFESSIONAL" & THE RELATED ACRONYM, & THE LEGACY LEED AP LOGO ARE TRADEMARKS OWNED BY THE U.S. GREEN BUILDING COUNCIL & ARE AWARDED TO INDIVIDUALS UNDER LICENSE BY THE GREEN BUILDING CERTIFICATION INSTITUTE.

D|C|G civil structural
9706 4TH AVE NE
SUITE 300
SEATTLE, WA 98115
P: 206.523.0024
F: 206.523.1012
www.dcgengr.com

CALL 811
2 BUSINESS DAYS BEFORE YOU DIG
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)



BASE MAP/TOPOGRAPHY PROVIDED BY OTHERS. DCG CANNOT BE HELD LIABLE FOR ACCURACY. CONTRACTOR SHALL FIELD VERIFY GRADES, UTILITIES, & ALL OTHER EX FEATURES & CONDITIONS. IF CONDITIONS ARE NOT AS SHOWN &/OR PLANS CANNOT BE CONSTRUCTED AS SHOWN, CONTACT DCG PRIOR TO CONSTRUCTION.

OWNER: IN MY BACKYARD, LLC
4701 W MERCER WAY
MERCER ISLAND, WA 98040

PROJECT: 3440 97TH AVE SE
MERCER ISLAND, WA 98040
PUMP STATION DETAILS

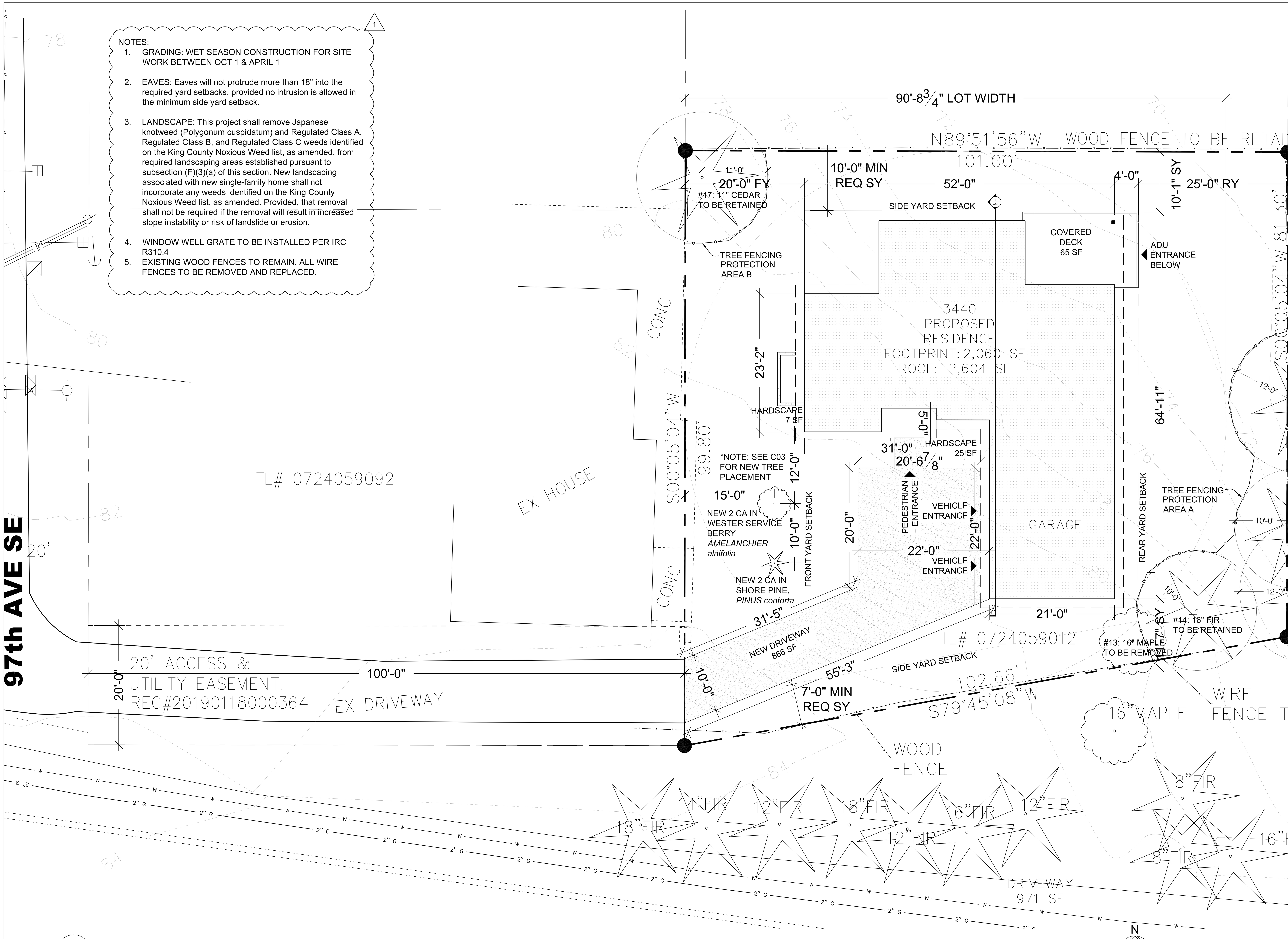
PROJ. MANAGER:	BI
DESIGNED BY:	LG
DRAWN BY:	JA
CHECKED BY:	BI
SCALE:	SCALE
DATE: 8/27/2020	REV. 2 — SHEET 6 OF 6

SHEET NUMBER
C06

CAD FILE NUMBER: \\DCG.LOCAL\FILESHARE\DCG\CLIENTS-CIVIL\VALERE DEVELOPMENT\3440 97TH AVE SE MERCER ISLAND\DWG\DRAWING\3440 97TH AVE SE MERCER ISLAND.DWG
LAST MODIFIED BY: DREW - SAVE DATE: 8/27/2020 1:49 PM - SHEET SET: 3440 97TH AVE SE - ORIGINAL SHEET SIZE: ANSI FULL BLEED D (34.00 X 22.00 INCHES)
AUTOCAD VERSION: CIVIL 3D 2018

NOTES: 1

1. GRADING: WET SEASON CONSTRUCTION FOR SITE WORK BETWEEN OCT 1 & APRIL 1
2. EAVES: Eaves will not protrude more than 18" into the required yard setbacks, provided no intrusion is allowed in the minimum side yard setback.
3. LANDSCAPE: This project shall remove Japanese knotweed (Polygonum cuspidatum) and Regulated Class A, Regulated Class B, and Regulated Class C weeds identified on the King County Noxious Weed list, as amended, from required landscaping areas established pursuant to subsection (F)(3)(a) of this section. New landscaping associated with new single-family home shall not incorporate any weeds identified on the King County Noxious Weed list, as amended. Provided, that removal shall not be required if the removal will result in increased slope instability or risk of landslide or erosion.
4. WINDOW WELL GRATE TO BE INSTALLED PER IRC R310.4
5. EXISTING WOOD FENCES TO REMAIN. ALL WIRE FENCES TO BE REMOVED AND REPLACED.



1 SITE PLAN

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

PROJECT TEAM:

OWNER:
RICK POSMANTUR
IN MY BACKYARD, LLC

SURVEYOR: DAN TOUMA
425.251.0665

ENGINEER:
MULHERN & KULP
215.646.8001

GENERAL CONTRACTOR:
VANN LANZ
206.499.1277

ASSESSOR'S PARCEL NUMBER:

072405-9012

LEGAL DESCRIPTION:

BEG AT A PT 921.44 FT W & 30 FT N OF SE COR GL 5 TH N PLL E LN SD GL 220 FT TH E 100 FT TH N 100 FT TH E 100 FT TH S 320 FT TH W 200 FT TO POB LESS STATE HWY

SCOPE:

CONSTRUCT (1) NEW SINGLE FAMILY RESIDENCE W/ ADU (REF PERMIT#: ADU19-008).

LAND USE COMPLIANCE:

ZONE: R9.6
LOT SQ FT: 8,800 SF

2

GROSS FLOOR AREA:
19.02.020.D 8,800* 45% = 3,960SF max allowed
525 SF (GARAGE) + 930 SF (BSMT) - 535 SF (BSMT AREA EXCLUSION) + 1,538 SF (FL1) + 1,497 SF (FL 2) - 90 SF (STAIRS) + 60 SF (CLG HT MODIFIER) =
PROVIDED: 3,925 SF

LOT COVERAGE:
19.02.020.F 8,800*40% = 3,520SF max allowed
2,604 (ROOF) + 866 (DRIVEWAY):
TOTAL PROVIDED: 3,470 SF

LOT SLOPE: 84'-69'=15' * 100 / 141'11" =
10.6 DEGREE SLOPE

HARDSCAPE:
WALKWAYS: 25 SF
DECKS UNCOVERED: 65 SF
WDW WELL RET WALL: 7 SF
TOTAL PROVIDED: 97 SF

HEIGHT LIMIT:
19.02.020.E MAX ALLOWED: 30 FT
PROVIDED: 28'-2.5"

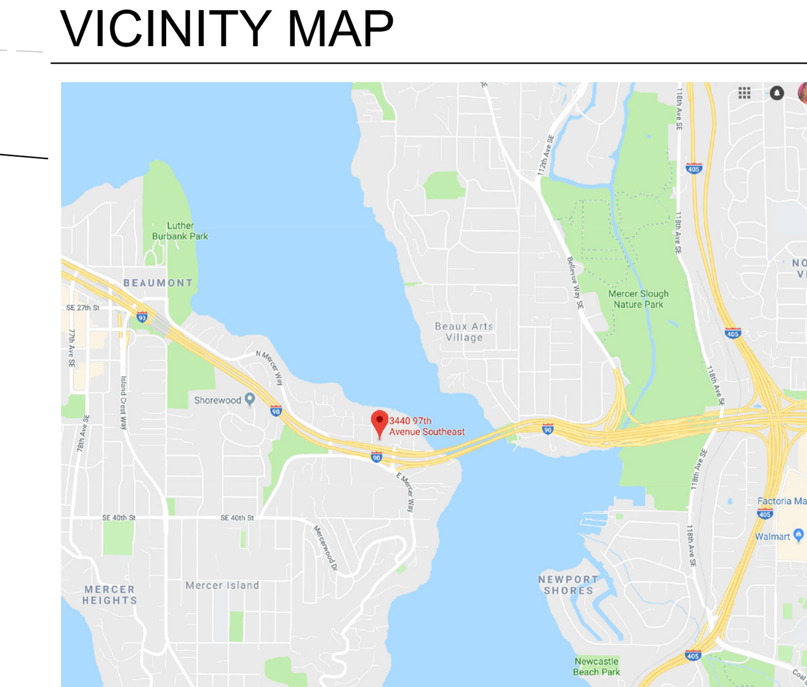
YARDS:
19.02.020.G FY MIN REQ: 20'
PROVIDED: 20'-3.5"
RY MIN REQ: 25'
PROVIDED: 25'-.25"
SY MIN REQ: 17%
PROVIDED: 8'-7" & 11'-7"

TREE REQUIREMENTS:
MIN 30% of existing trees to be retained.
PROVIDED: 66% RETAINED

PARKING: REQ: (2) space per dwelling unit.
PROVIDED: (2)

INDEX:

VICINITY MAP



J DESIGNS
4606 MARINE VIEW DR
TACOMA, WA 98422
206.234.4469
JACQUELINE@JDESIGNSSEATTLE.COM

SUBMITTAL	DATE
INTAKE	2/4/2019
RE-DESIGN	3/8/2019
RE-SUBMIT	6/14/2019
RE-SUBMIT	7/24/2019
RE-SUBMIT	8/6/2019
CORR 1	3/2/2020
CORR 2	9/10/2020

SUN CREEK HOUSE
3440 97TH AVE SE
MERCER ISLAND, WA

DRAWING INFORMATION

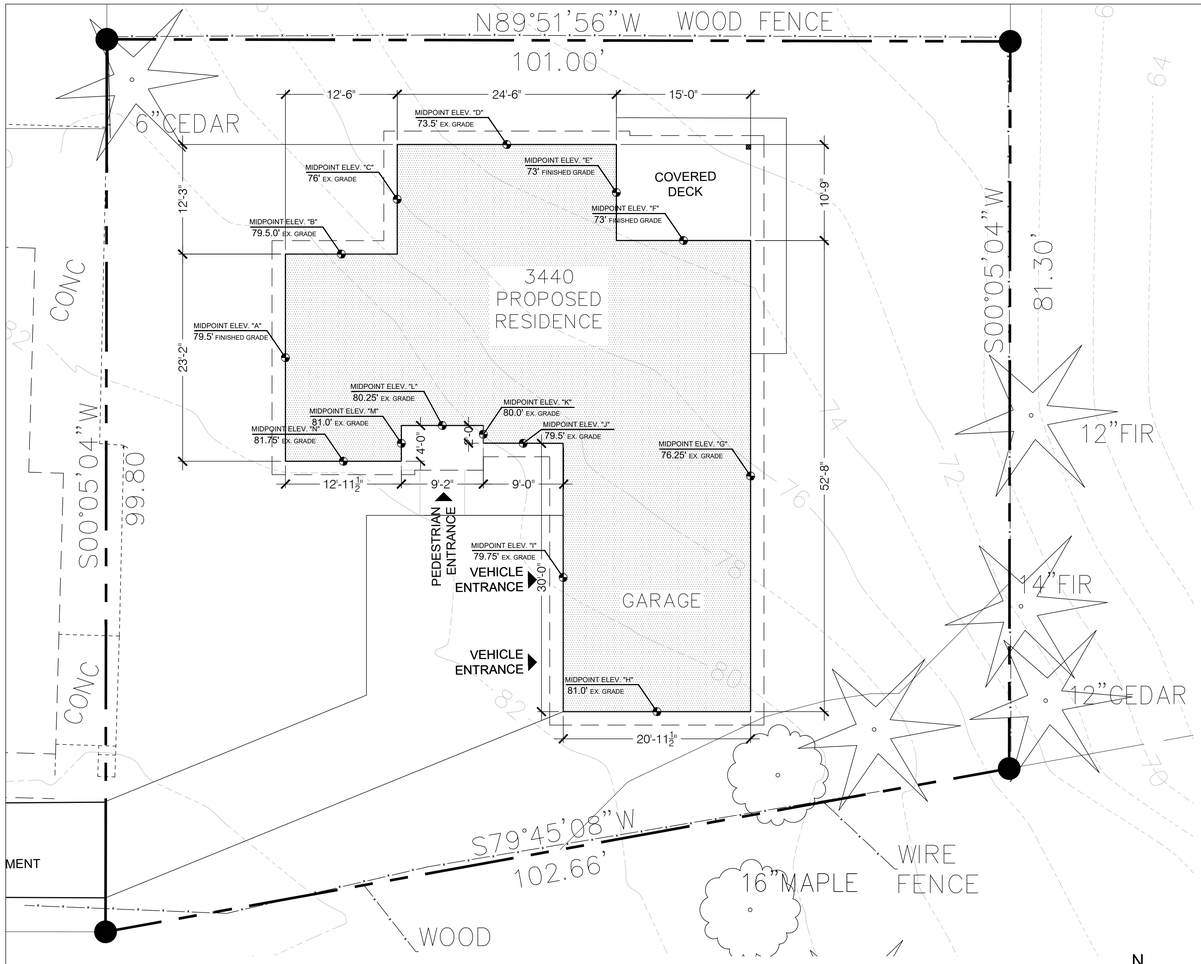
OWNER:
MY BACKYARD, LLC

PROJECT# 1901-198

DRAWING NAME:
SITE PLAN

2 1

A1.0

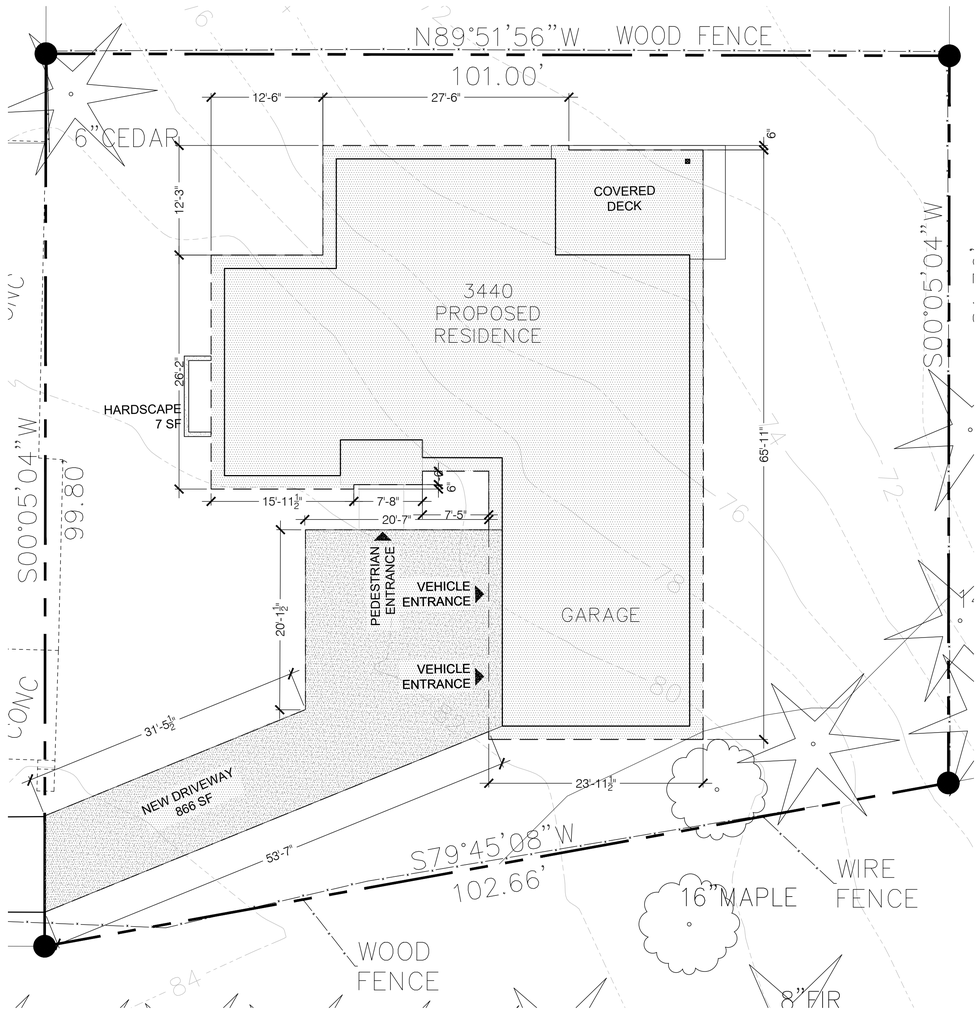


1 AVERAGE BUILDING ELEVATION DIAGRAM

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

AVE GRADE CALCS

	Finished Grade	Existing Grade		Wall Length		
A	**79.5**	81	x	23.2	=	1844.4
B	79.5	**79.5**	x	12.3	=	977.9
C	76	**76**	x	12.5	=	950.0
D	73.5	**73.5**	x	24.5	=	1800.8
E	**73**	73.5	x	10.75	=	784.8
F	**73**	73.75	x	15	=	1095.0
G	76.25	**76.25**	x	52.7	=	4018.4
H	81	**81**	x	21	=	1701.0
I	79.75	**79.75**	x	30	=	2392.5
J	79.5	**79.5**	x	9	=	715.5
K	80	**80**	x	2	=	160.0
L	82	**80.25**	x	9.2	=	738.3
M	81	**81**	x	4	=	324.0
N	81.75	**81.75**	x	13	=	1062.8
				Total	=	18565.2
						/
				Perimeter	=	239.15
				Average Grade	=	**77.6**
					+	30 ft
				Height Limit	=	**107.6**



2 LOT COVERAGE DIAGRAM

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

LOT COVERAGE: 8,800*40% = 3,520SF max allowed
PROVIDED: 3,464 SF

J DESIGNS

4606 MARINE VIEW DR
TACOMA, WA 98422
206.234.4469
JACQUELINE@
JDESIGNSSEATTLE.COM

SUBMITTAL	DATE
INTAKE	2/4/2019
RE-DESIGN	3/8/2019
RE-SUBMIT	6/14/2019
RE-SUBMIT	7/24/2019
RE-SUBMIT	8/6/2019
CORR 1	3/2/2020
CORR 2	9/10/2020

SUN CREEK HOUSE
3440 97TH AVE SE
MERCER ISLAND, WA

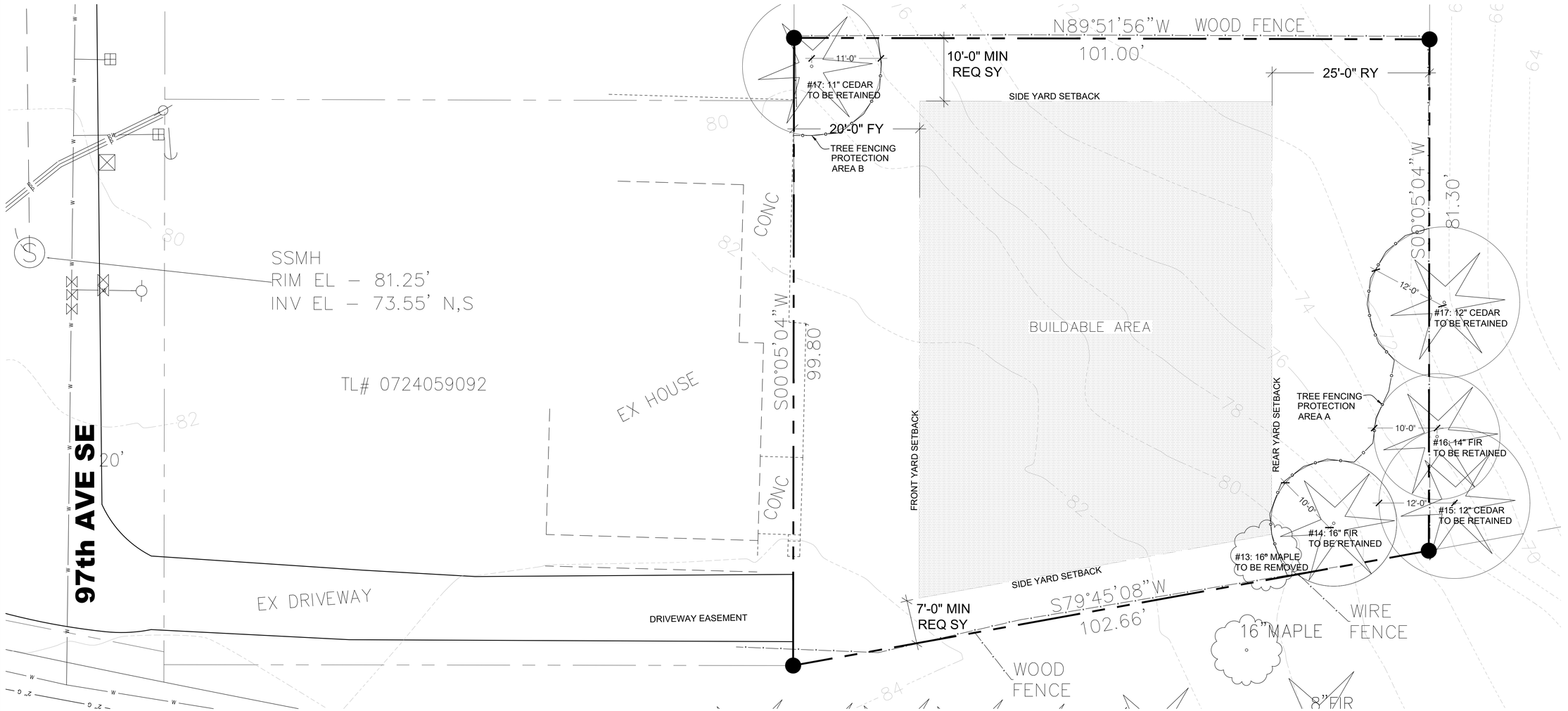
DRAWING INFORMATION

OWNER:
MY BACKYARD, LLC

PROJECT# 1901-198

DRAWING NAME:
DIAGRAMS

A1.1



1 BUILDING PAD AREA DIAGRAM

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

N

J DESIGNS

4606 MARINE VIEW DR
TACOMA, WA 98422
206.234.4469
JACQUELINE@
JDESIGNSSEATTLE.COM

SUBMITTAL	DATE
INTAKE	2/4/2019
RE-DESIGN	3/8/2019
RE-SUBMIT	6/14/2019
RE-SUBMIT	7/24/2019
RE-SUBMIT	8/6/2019
CORR 1	3/2/2020
CORR 2	9/10/2020

SUN CREEK HOUSE
3440 97TH AVE SE
MERCER ISLAND, WA

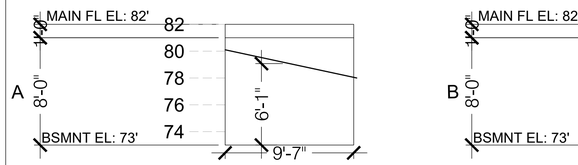
DRAWING INFORMATION

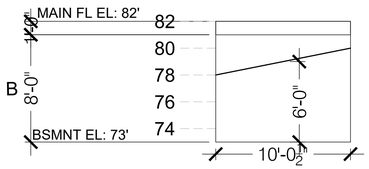
OWNER:
MY BACKYARD, LLC

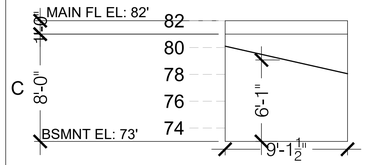
PROJECT# 1901-198

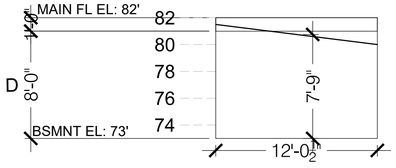
DRAWING NAME:
DIAGRAMS

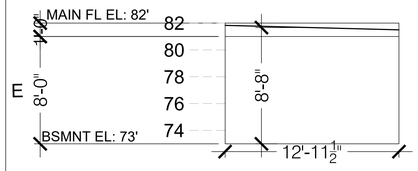
A1.2

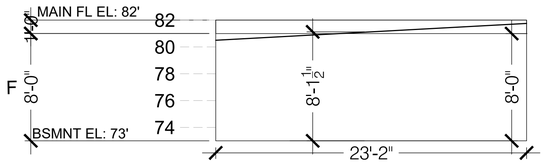


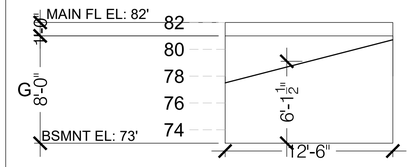


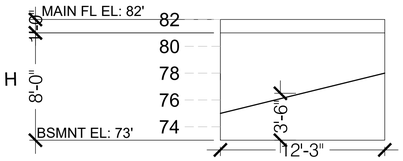


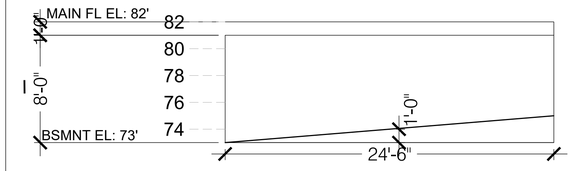


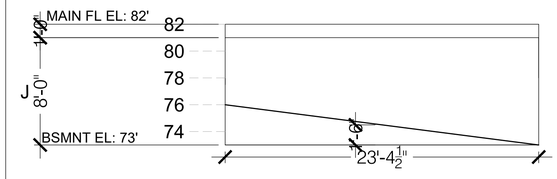


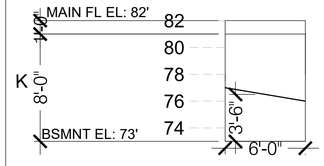


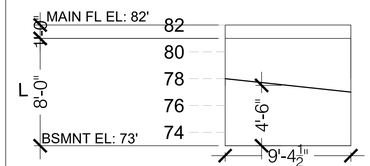






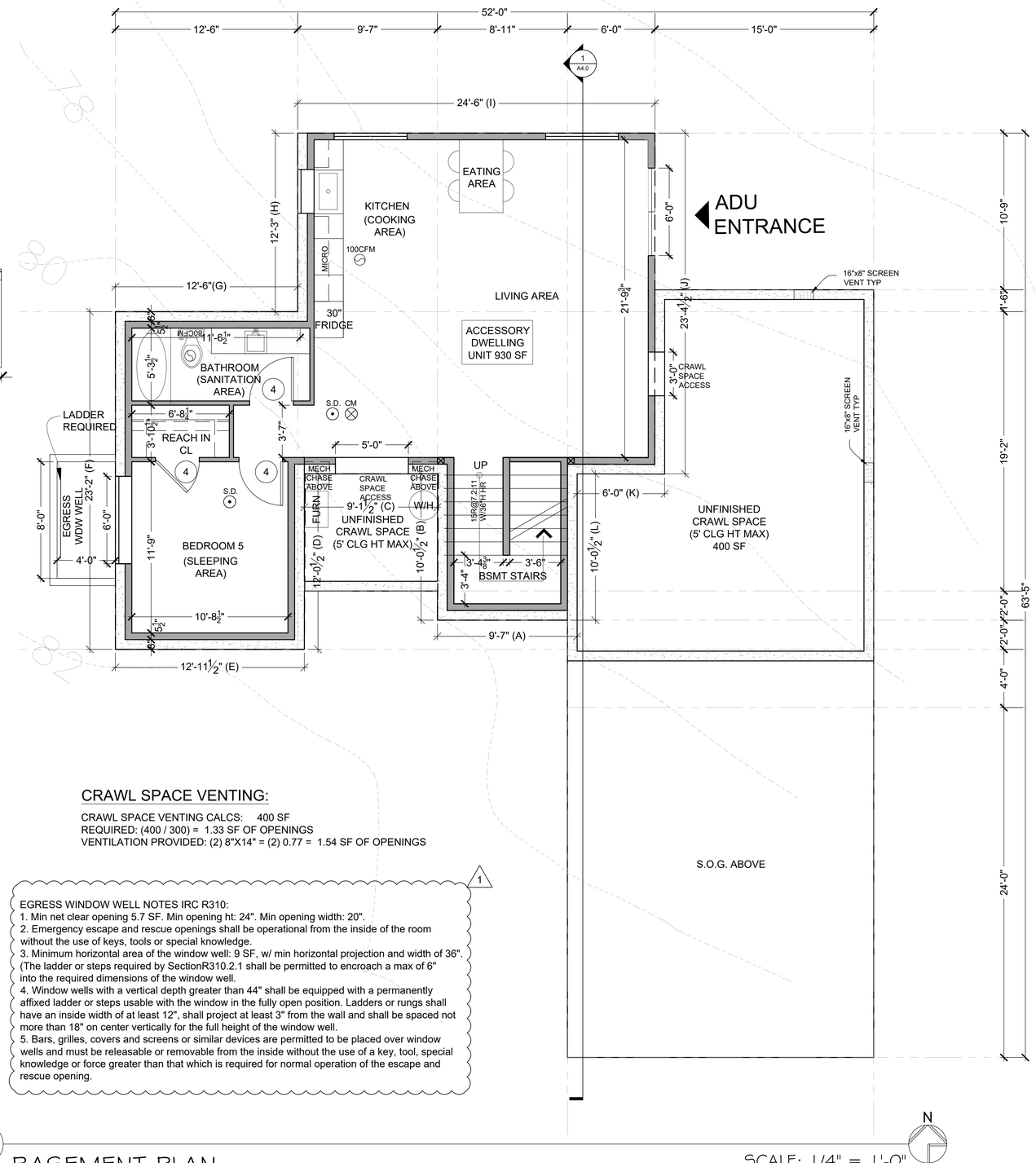






BASEMENT COVERAGE CALCS:
A 9.6' X 76% = 7.3'
B 10' X 75% = 7.5'
C 9.1 X 76% = 6.9'
D 12' X 97% = 11.6'
E 13' X 100% = 13'
F 23.2. X 100% = 23.2'
G 12.5' X 76% = 9.5'
H 12.3 X 44% = 5.4'
I 24.5' X 13% = 3'
J 23.4' X 19% = 4.4'
K 6 X 44% = 2.6'
L 9.4 X 56% = 5.3'
TOTALS 165', N/A, 99.7'

886 SF * 99.7' / 165' = 535 SF
EXCLUDED BASEMENT FLOOR AREA



CRAWL SPACE VENTING:

CRAWL SPACE VENTING CALCS: 400 SF
REQUIRED: (400 / 300) = 1.33 SF OF OPENINGS
VENTILATION PROVIDED: (2) 8"X14" = (2) 0.77 = 1.54 SF OF OPENINGS

EGRESS WINDOW WELL NOTES IRC R310:
1. Min net clear opening 5.7 SF. Min opening ht: 24". Min opening width: 20".
2. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools or special knowledge.
3. Minimum horizontal area of the window well: 9 SF, w/ min horizontal projection and width of 36". (The ladder or steps required by SectionR310.2.1 shall be permitted to encroach a max of 6" into the required dimensions of the window well.
4. Window wells with a vertical depth greater than 44" shall be equipped with a permanently affixed ladder or steps usable with the window in the fully open position. Ladders or rungs shall have an inside width of at least 12", shall project at least 3" from the wall and shall be spaced not more than 18" on center vertically for the full height of the window well.
5. Bars, grilles, covers and screens or similar devices are permitted to be placed over window wells and must be releasable or removable from the inside without the use of a key, tool, special knowledge or force greater than that which is required for normal operation of the escape and rescue opening.

BSMNT WALL COVERAGE DIAGRAMS

1 BASEMENT PLAN

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

J DESIGNS
4606 MARINE VIEW DR
TACOMA, WA 98422
206.234.4469
JACQUELINE@
JDESIGNSSEATTLE.COM

SUBMITTAL	DATE
INTAKE	2/4/2019
RE-DESIGN	3/8/2019
RE-SUBMIT	6/14/2019
RE-SUBMIT	7/24/2019
RE-SUBMIT	8/6/2019
CORR 1	3/2/2020
CORR 2	9/10/2020

SUN CREEK HOUSE
3440 97TH AVE SE
MERCER ISLAND, WA

DRAWING INFORMATION

OWNER:
MY BACKYARD, LLC

PROJECT# 1901-198

DRAWING NAME:
FLOOR PLAN

A2.0

NOTES:

1. EXTERIOR LIGHTING SHALL BE SHIELDED AND DIRECTED AWAY FROM RESIDENTIALLY ZONED LOTS.

2. FACTORY BUILT FIREPLACE TO BE ZERO-CLEARANCE, AND LISTED, LABELED, & TESTED IN ACCORDANCE WITH UL 127. REQUIRES 6 SQ INCHES MIN OF OUTSIDE COMBUSTION AIR.

3. PROVIDE AN APPROVED CARBON & SMOKE ALARM OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOM.

4. EXTERIOR WINDOW & DOOR HEADERS SHALL BE INSULATED WITH A MIN OF R-10 INSULATION.

5. A MIN OF 75% OF PERMANENTLY INSTALLED LAMPS IN LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS.

6. EXHAUST AIR SHALL VENT DIRECTLY TO THE EXTERIOR OF THE BUILDING PER M1501.1 and M1506.2

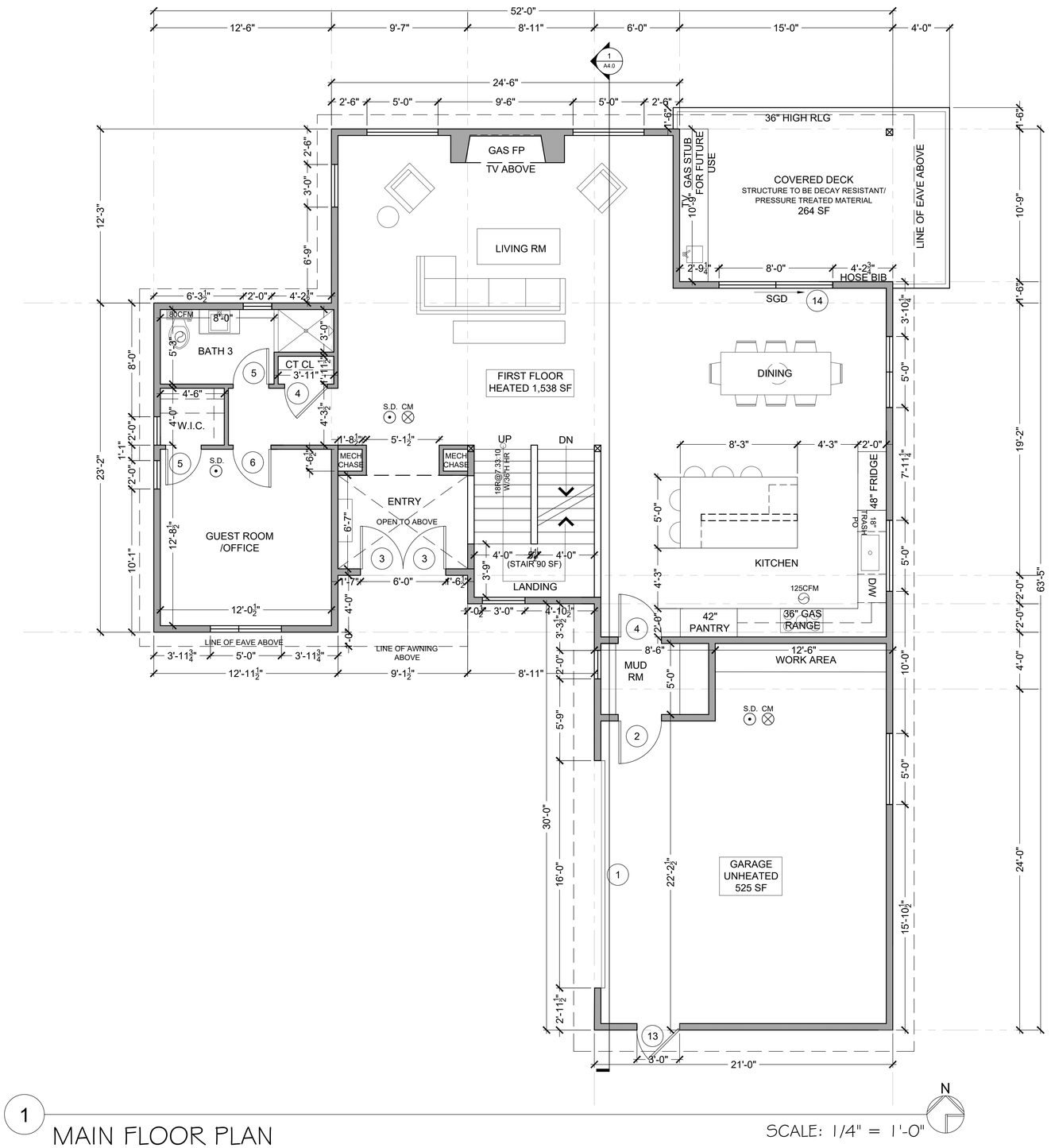
7. ALL INTERIOR DOORS WILL HAVE $\frac{1}{2}$" UNDERCUT ABOVE FINISHED FLOOR.

8. CONCEALED WALL SPACES (MECHANICAL CHASES) TO HAVE FIRE BLOCKING PER IRC R302.11

ENERGY COMPLIANCE NOTES:

7. SUM OF 3.5 ENERGY CREDITS BY OPTIONS SELECTED:

.5PT	1A: EFFICIENT BUILDING ENVELOPE	VERT FEN U= .28, FLR= R-38, SOG=R-10
1PT	3A: HIGH EFFICIENCY HVAC EQUIP	GAS FURNACE WITH MIN AFUE OF 96% Rheem RTGH-95DVLN-1
.5PT	5A: EFFICIENT WATER HEATING	MAX FLOW RATES FOR ALL SHOWERHEAD AND KITCHEN FAUCETS SHALL BE RATED 1.75GPM OR LESS & ALL OTHER LAV FAUCETS SHALL BE RATED AT 1.0 GMP OR LESS.
1.5PT	5C: EFFICIENT WATER HEATER	MIN EF .91"



1 MAIN FLOOR PLAN

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

J DESIGNS

4606 MARINE VIEW DR
TACOMA, WA 98422
206.234.4469
JACQUELINE@
JDESIGNSSEATTLE.COM

SUBMITTAL	DATE
INTAKE	2/4/2019
RE-DESIGN	3/8/2019
RE-SUBMIT	6/14/2019
RE-SUBMIT	7/24/2019
RE-SUBMIT	8/6/2019
CORR 1	3/2/2020
CORR 2	9/10/2020

SUN CREEK HOUSE
3440 97TH AVE SE
MERCER ISLAND, WA

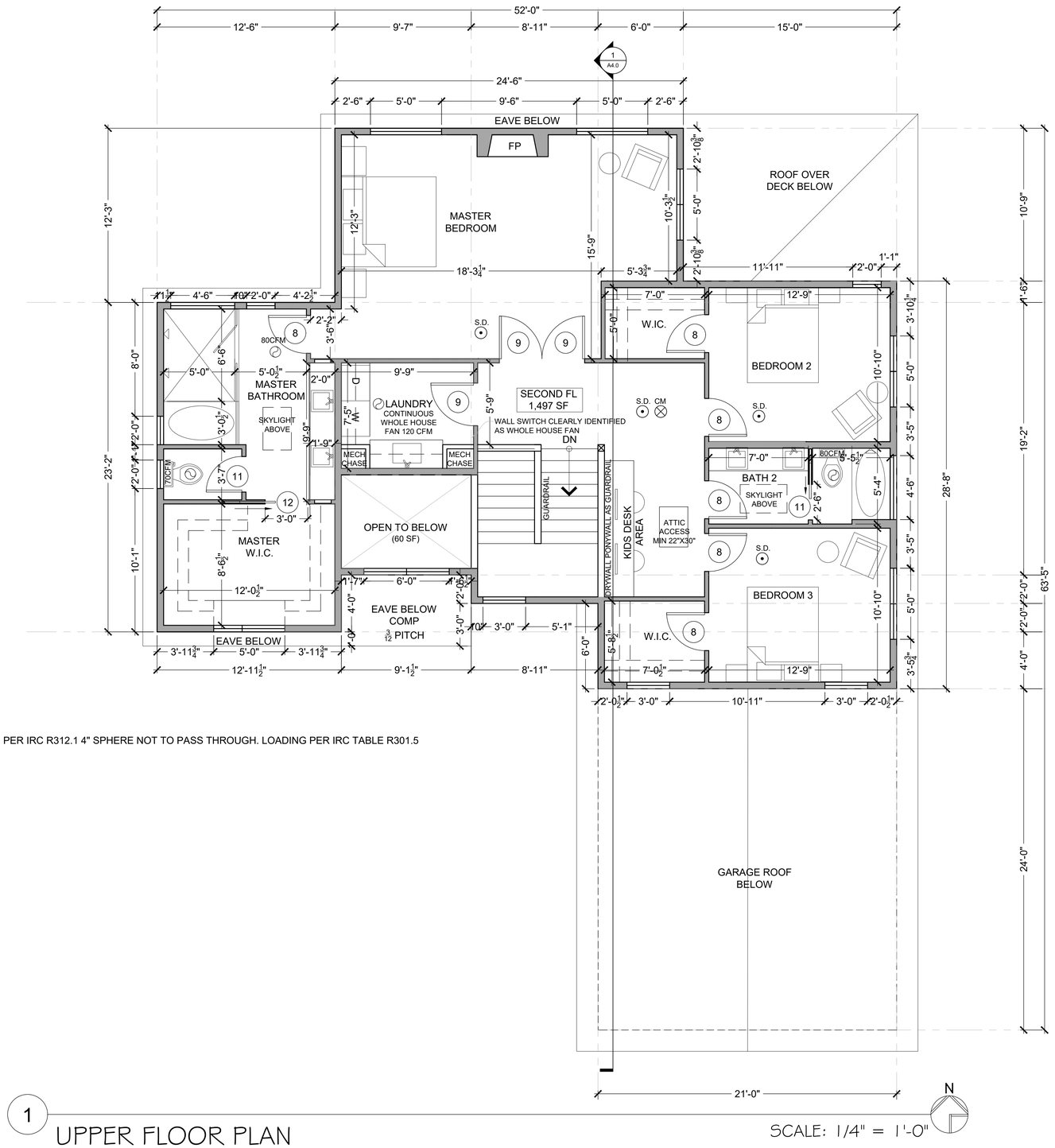
DRAWING INFORMATION

OWNER:
MY BACKYARD, LLC

PROJECT# 1901-198

DRAWING NAME:
FLOOR PLAN

A2.1



NOTES:

1.GUARDRAILS: PER IRC R312.1 4" SPHERE NOT TO PASS THROUGH. LOADING PER IRC TABLE R301.5

1 UPPER FLOOR PLAN

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

J DESIGNS

4606 MARINE VIEW DR
TACOMA, WA 98422
206.234.4469
JACQUELINE@
JDESIGNSSEATTLE.COM

SUBMITTAL	DATE
INTAKE	2/4/2019
RE-DESIGN	3/8/2019
RE-SUBMIT	6/14/2019
RE-SUBMIT	7/24/2019
RE-SUBMIT	8/6/2019
CORR 1	3/2/2020
CORR 2	9/10/2020

SUN CREEK HOUSE
3440 97TH AVE SE
MERCER ISLAND, WA

DRAWING INFORMATION

OWNER:
MY BACKYARD, LLC

PROJECT# 1901-198

DRAWING NAME:

ROOF PLAN

A2.2

1

NOTES:
VENTILATION AND INDOOR AIR QUALITY (VIAQ)

A. Continuously operating whole house fan is proposed.
B. Provide outdoor air inlet with 4 sq. in. min net free area conforming to WA State VIAQ for each habitable space.

ROOF VENTILATION

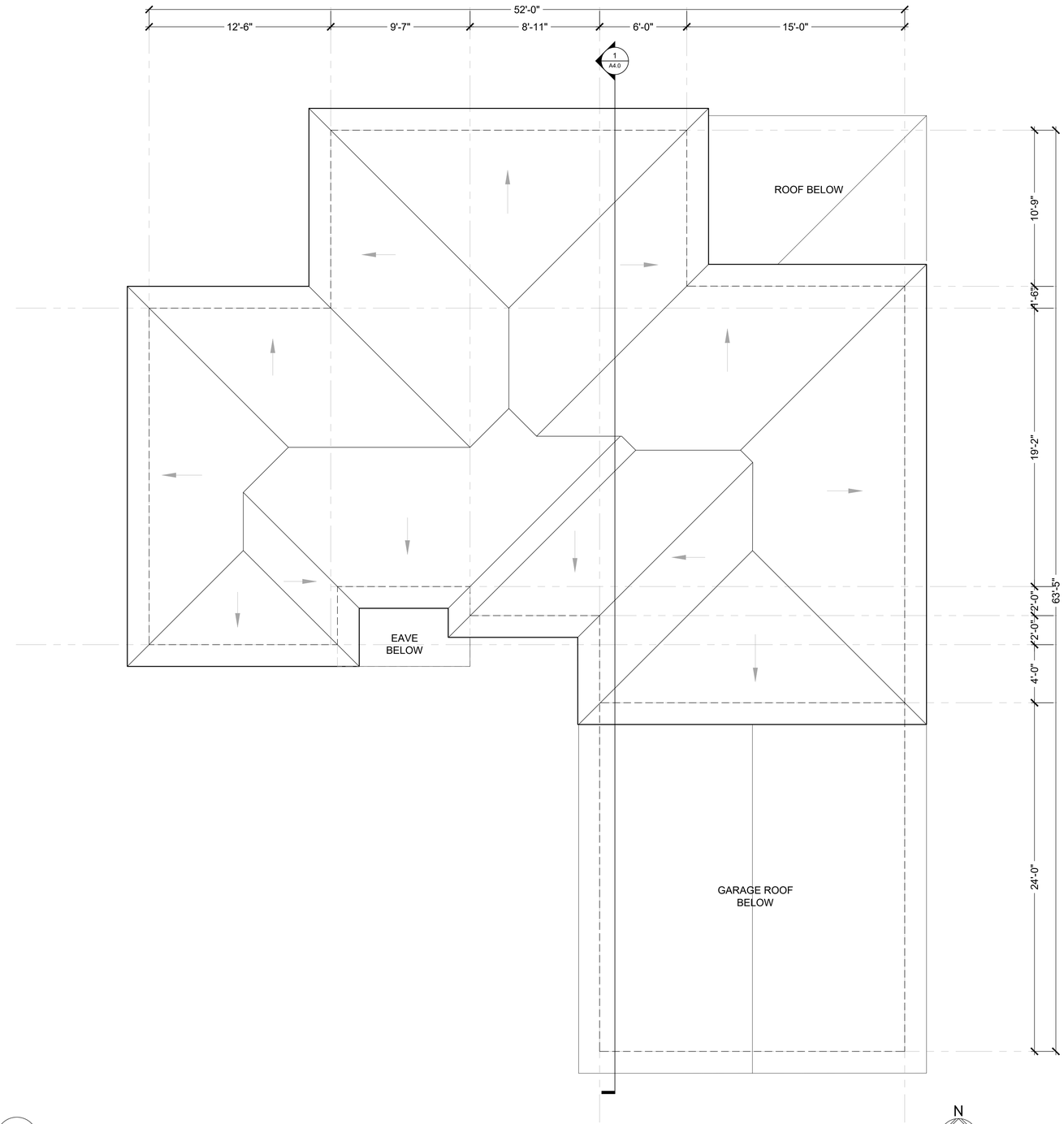
ROOF AREA OVER HEATED SPACE: 2,061 SF

VENTILATION REQUIRED:
(2,061 sf / 150) x144 si/sf = 1,978.6 si req'd

PROPOSED PARAPET VENTS:
Provide continuous 1" strip at underside of eave
w (2) 2.5" dia. holes/lf at blocking

EAVES - 238.8 lf X 9.8 si/lf = 2,332.4 si

TOTAL VENTILATION PROVIDED: 2,332.4 si > 1,978.6 si



1 ROOF PLAN

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

J DESIGNS

4606 MARINE VIEW DR
TACOMA, WA 98422
206.234.4469
JACQUELINE@
JDESIGNSSEATTLE.COM

SUBMITTAL	DATE
INTAKE	2/4/2019
RE-DESIGN	3/8/2019
RE-SUBMIT	6/14/2019
RE-SUBMIT	7/24/2019
RE-SUBMIT	8/6/2019
CORR 1	3/2/2020
CORR 2	9/10/2020

SUN CREEK HOUSE
3440 97TH AVE SE
MERCER ISLAND, WA

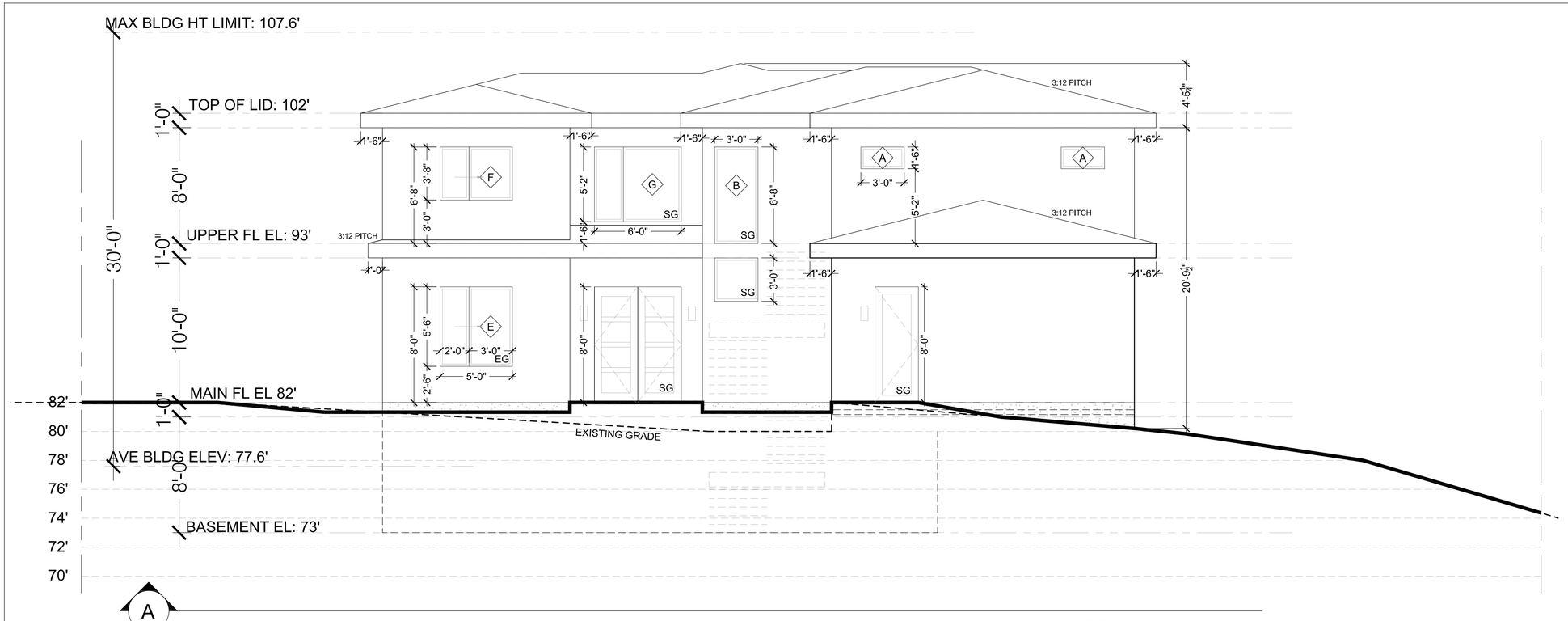
DRAWING INFORMATION

OWNER:
MY BACKYARD, LLC

PROJECT# 1901-198

DRAWING NAME:
ROOF PLAN

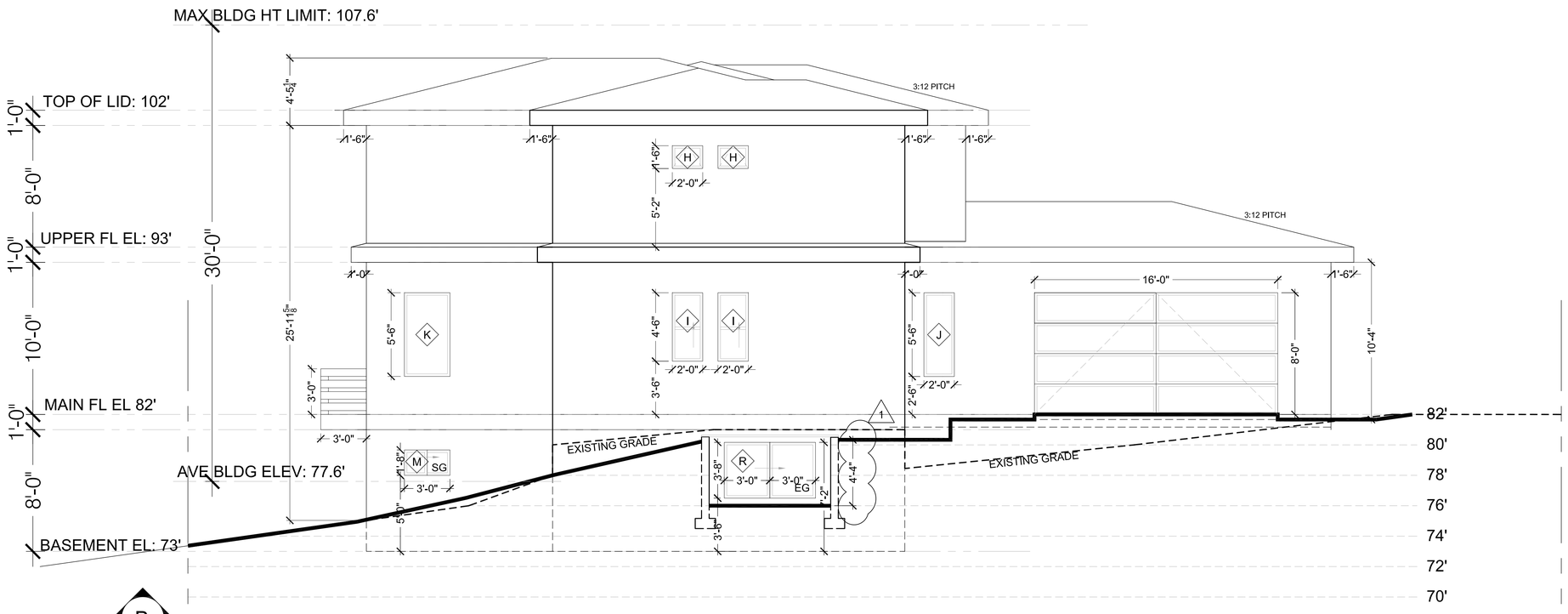
1
A2.3



A

SOUTH ELEVATION

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



B

WEST ELEVATION

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

J DESIGNS

4606 MARINE VIEW DR
TACOMA, WA 98422
206.234.4469
JACQUELINE@
JDESIGNSSEATTLE.COM

SUBMITTAL	DATE
INTAKE	2/4/2019
RE-DESIGN	3/8/2019
RE-SUBMIT	6/14/2019
RE-SUBMIT	7/24/2019
RE-SUBMIT	8/6/2019
CORR 1	3/2/2020
CORR 2	9/10/2020

SUN CREEK HOUSE
3440 97TH AVE SE
MERCER ISLAND, WA

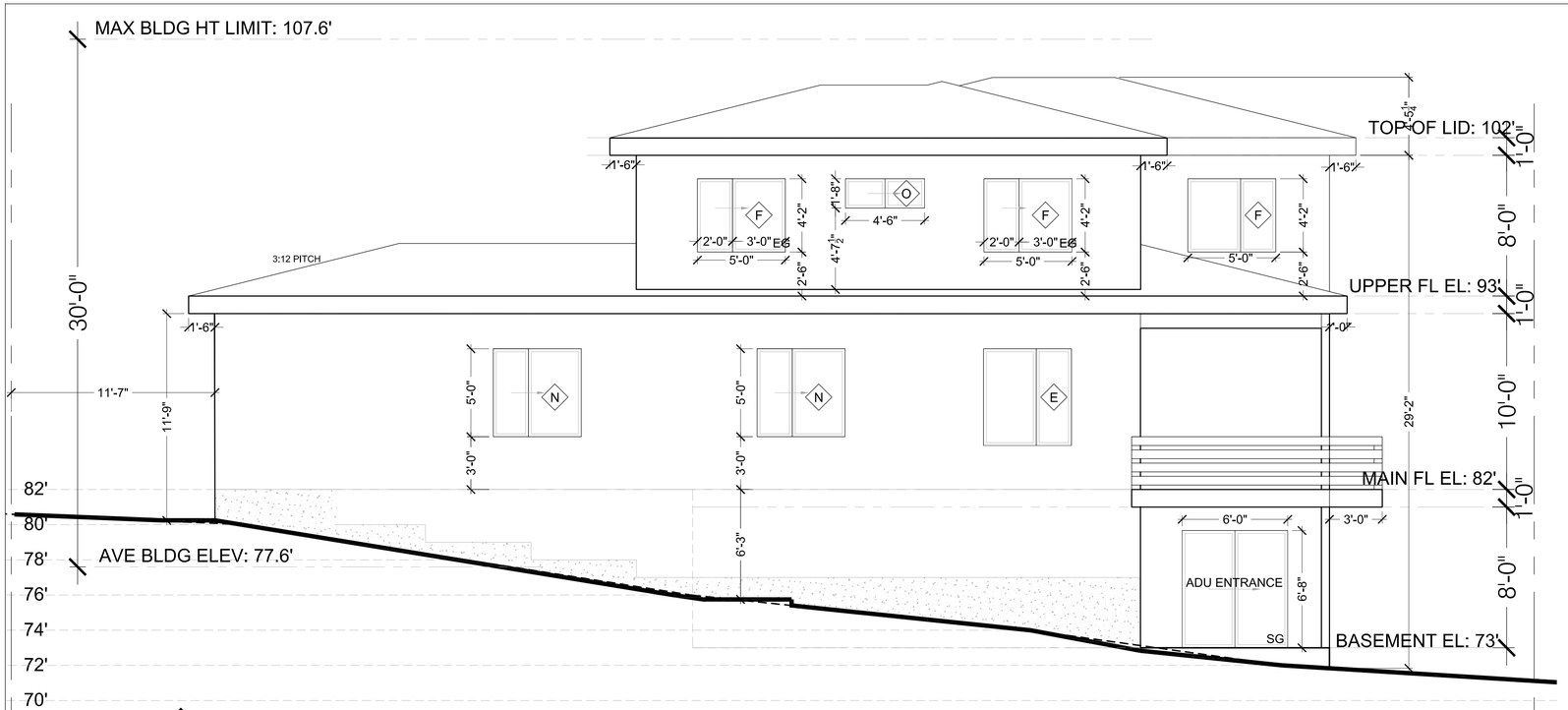
DRAWING INFORMATION

OWNER:
MY BACKYARD, LLC

PROJECT# 1901-198

DRAWING NAME:
ELEVATIONS

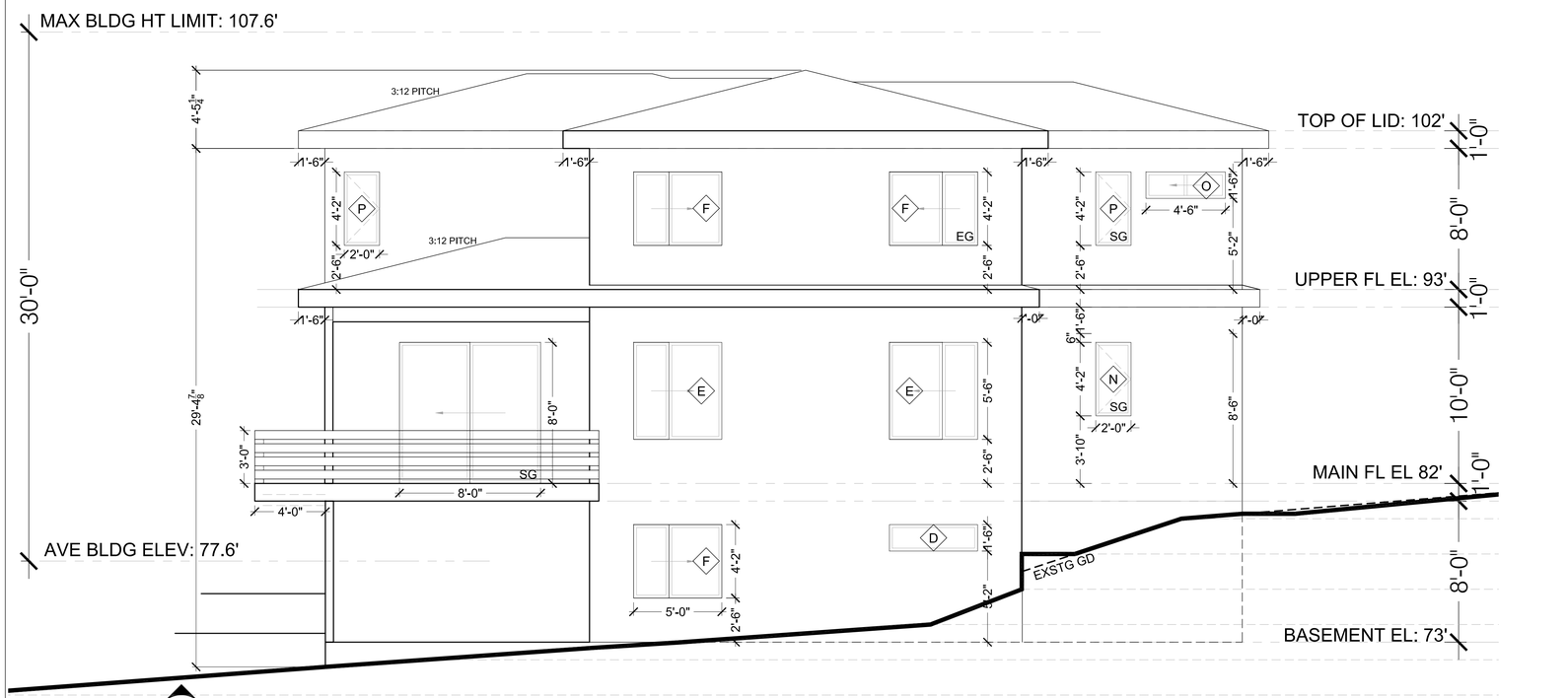
2 / 1
A3.0



C

EAST ELEVATION

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



D

NORTH ELEVATION

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

WINDOW SCHEDULE

NO.	SIZE	TYPE	# OF TYPE	MAT'L	MFR	MODEL	U-FACTOR	NOTES
A	3'-0" x 1'-6"	FIX	2	VINYL	ATRIUM	9000 PICTURE WDW	0.28	
B	3'-0" x 6'-8"	FIX	1	VINYL	ATRIUM	9000 PICTURE WDW	0.28	SAFETY GLASS
C	3'-0" x 3'-0"	FIX	1	VINYL	ATRIUM	9000 PICTURE WDW	0.28	SAFETY GLASS
D	5'-0" x 1'-6"	FIX	1	VINYL	ATRIUM	9000 PICTURE WDW	0.28	
E	5'-0" x 5'-6"	SL	1	VINYL	ATRIUM	9000 HORIZ SLIDER	0.28	
F	5'-0" x 4'-2"	SL	2	VINYL	ATRIUM	9000 HORIZ SLIDER	0.28	EGRESS
G	6'-0" x 5'-2"	FIX	1	VINYL	ATRIUM	9000 PICTURE WDW	0.28	SAFETY GLASS
H	2'-0" x 1'-6"	AWN	2	VINYL	ATRIUM	9000 HORIZ SLIDER	0.28	
I	2'-0" x 4'-6"	SH	2	VINYL	ATRIUM	9000 HORIZ SLIDER	0.28	
J	2'-0" x 5'-6"	FIX	1	VINYL	ATRIUM	9000 PICTURE WDW	0.28	
K	3'-0" x 5'-6"	FIX	1	VINYL	ATRIUM	9000 PICTURE WDW	0.28	
M	3'-0" x 1'-8"	SL	1	VINYL	ATRIUM	9000 HORIZ SLIDER	0.28	
N	5'-0" x 5'-0"	SL	2	VINYL	ATRIUM	9000 HORIZ SLIDER	0.28	
O	4'-6" x 1'-6"	SL	2	VINYL	ATRIUM	9000 HORIZ SLIDER	0.28	
P	4'-2" x 2'-0"	CSMT	2	VINYL	ATRIUM	9000 CASEMENT	0.28	
Q	5'-0" x 2'-0"	FIX	2	VINYL	ATRIUM	9000 PICTURE WDW	0.28	
R	6'-0" x 3'-8"	SL	1	VINYL	ATRIUM	9000 HORIZ SLIDER	0.28	EGRESS

WINDOW NOTES:

1. ALL WINDOWS AND DOORS SHALL BE LABELED "NFRC certified".
2. SG = SAFETY GLASS
3. EG = EGRESS
   a. ALL EGRESS (EMERGENCY ESCAPE AND RESCUE OPENINGS) SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SF (5 SF AT GROUND LEVEL)
   b. THE MIN NET CLEAR OPENING SHALL BE 24" HIGH X 20" WIDE.
   c. THEY SHALL HAVE A MAX SILL HT OF 44" ABOVE FINISHED FLOOR TO THE BOTTOM OF THE CLEAR OPENING.
   d. EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WITHOUT THE USE OF KEYS, TOOLS OR SPECIAL KNOWLEDGE.
4. GENERAL CONTRACTOR SHALL PROVIDE MANUFACTURER'S DATA ON ALL WINDOWS SHOWING COMPLIANCE WITH THE 2015 WASHINGTON STATE ENERGY CODES.
5. DIMENSIONS INDICATE ROUGH FRAMED OPENINGS - MANUFACTURER TO SIZE WINDOWS ACCURATELY

DOOR SCHEDULE

NO.	SIZE	FUNCTION	STYLE	MAT'L	MFR	MODEL	NOTES
1	16'-0" x 7'-0"	OVERHEAD	FROSTED GLASS & ALUMINUM	MTL			
2	3'-0" x 8'-0" x 1⅜"	SWING	FLUSH	WOOD	SIMPSON	FIRE RATED	20 MIN RATED SELF CLOSING
3	3'-0" x 8'-0" x 1¾"	SWING	EXT 5 LITE	WOOD	SIERRA PACIFIC		SG, U-VALUE: 0.28 CLEAR
4	3'-0" x 8'-0" x 1¾"	SWING	FLUSH	WOOD	SIMPSON	INTERIOR 20	
5	2'-6" x 8'-0" x 1⅜"	SWING	FLUSH	WOOD	SIMPSON	INTERIOR 20	
6	2'-8" x 8'-0" x 1⅜"	SWING	FLUSH	WOOD	SIMPSON	INTERIOR 20	
7	2'-6" x 6'-8" x 1⅜"	SWING	FLUSH	WOOD	SIMPSON	INTERIOR 20	
8	2'-8" x 6'-8" x 1⅜"	SWING	FLUSH	WOOD	SIMPSON	INTERIOR 20	
9	3'-0" x 6'-8" x 1⅜"	SWING	FLUSH	WOOD	SIMPSON	INTERIOR 20	
10	3'-0" x 6'-8" x 1½"	BARN DOOR	SHAKER W MIRROR	WOOD W/ MIRROR	SIMPSON	INTERIOR 20	
11	2'-6" x 6'-8" x 1⅜	POCKET	FLUSH	WOOD	SIMPSON		
12	3'-0" x 6'-8" x 1⅜	POCKET	FLUSH	WOOD	SIMPSON		
13	3'-0" x 8'-0" x 1¾"	SWING	EXT FULL LITE	WOOD	SIERRA PACIFIC		SG, U-VALUE: 0.28 CLEAR
14	8'-0" x 8'-0" x 1¾"	SLIDER	EXT FULL LITE	VINYL	ATRIUM	SL 890 Series	SG, U-VALUE: 0.28

DOOR NOTES:

1. GENERAL CONCTRACTOR SHALL PROVIDE MANUFACTURER'S DATA ON ALL WINDOWS SHOWING COMPLIANCE WITH THE 2015 WASHINGTON STATE ENERGY CODES.
2. DIMENSIONS INDICATE DOOR SIZES, NOT ROUGH OPENINGS, VERIFY ALL DOOR TYPES AND HARDWARE W/OWNER PRIOR TO ORDERING.
3. ALL DOORS WITH GLAZING TO BE NFRC CERTIFIED AND LABELED.
4. DOORS SEPARATING UNHEATED AND HEATED SPACE TO BE U=.28 MAX PER WSEC 2015.

J DESIGNS

4606 MARINE VIEW DR
TACOMA, WA 98422
206.234.4469
JACQUELINE@
JDESIGNSSEATTLE.COM

SUBMITTAL	DATE
INTAKE	2/4/2019
RE-DESIGN	3/8/2019
RE-SUBMIT	6/14/2019
RE-SUBMIT	7/24/2019
RE-SUBMIT	8/6/2019
CORR 1	3/2/2020
CORR 2	9/10/2020

SUN CREEK HOUSE
3440 97TH AVE SE
MERCER ISLAND, WA

DRAWING INFORMATION

OWNER:
MY BACKYARD, LLC

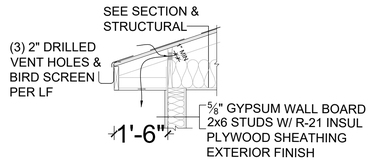
PROJECT# 1901-198

DRAWING NAME:

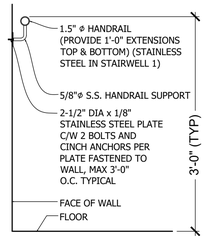
ELEVATIONS

2 1

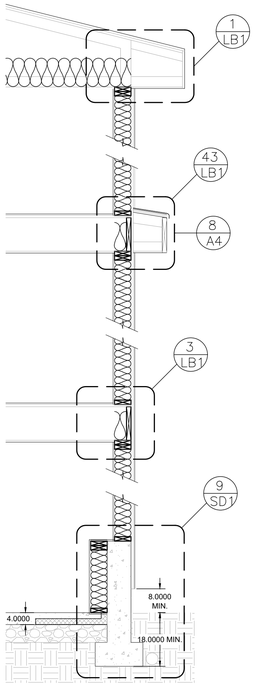
A3.1



2 EAVE VENT DTL
SCALE: 1/2" = 1'-0"

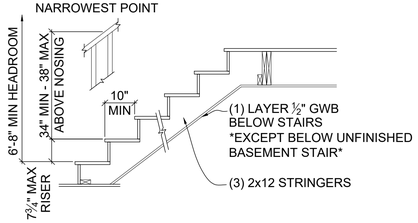


3 HAND RAIL (TYP) DTL
SCALE: 1/2" = 1'-0"



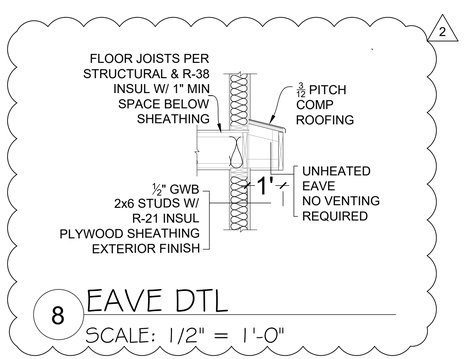
NOTES:

- SPACING BTWN INTERMEDIATE GUARDRAIL MEMBERS TO BE A MAXIMUM OF 4" CLEAR SUCH THAT A SPHERE OF 4" DIA SHALL NOT PASS THROUGH ANY OPENING.
- HANDRAIL ENDS SHALL BE RETURNED OR SHALL TERMINATE IN THE NEWEL POSTS OR SAFETY TERMINALS PER SBC 1009.11.5
- MIN STAIR TREAD WIDTH OF A WINDER TO BE 6" AT NARROWEST POINT

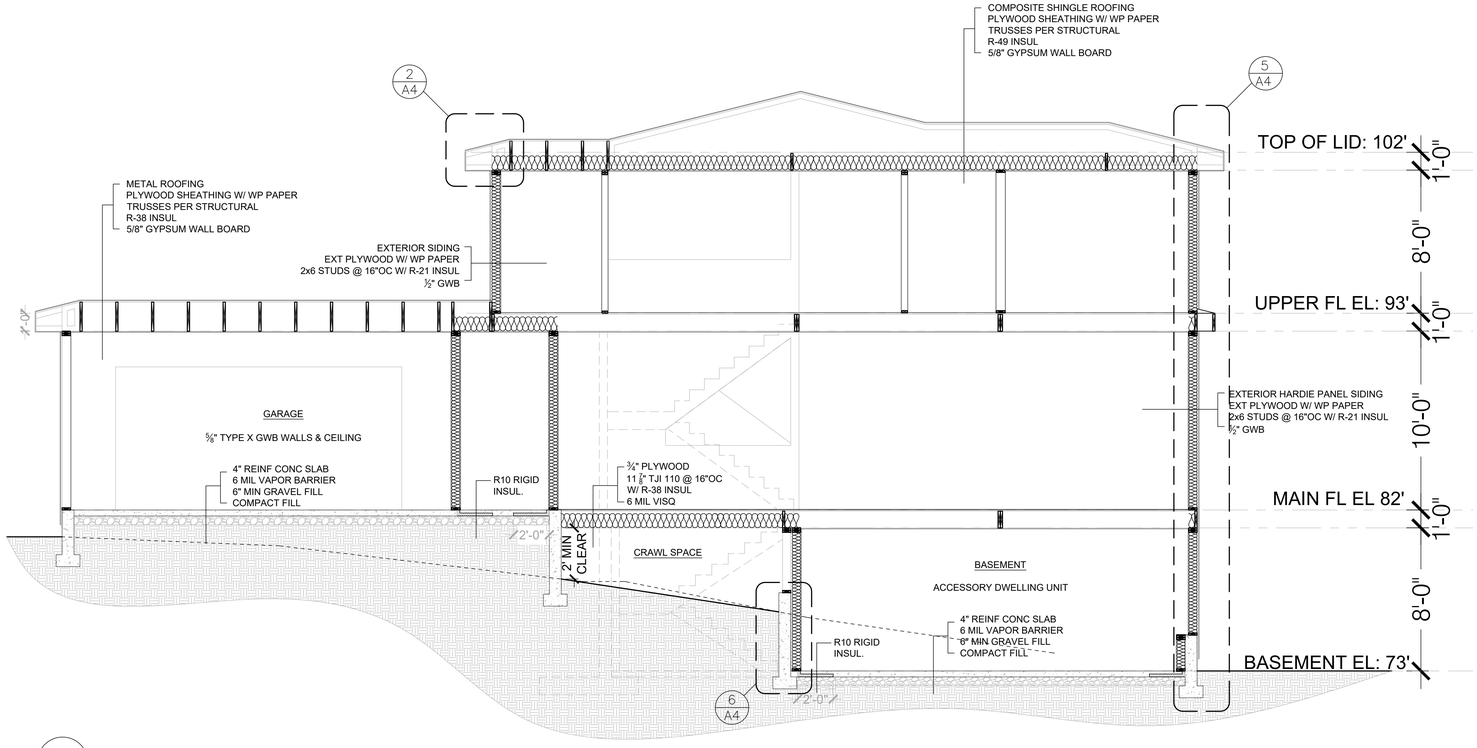


4 STAIR (TYP) DTL
SCALE: 1/2" = 1'-0"

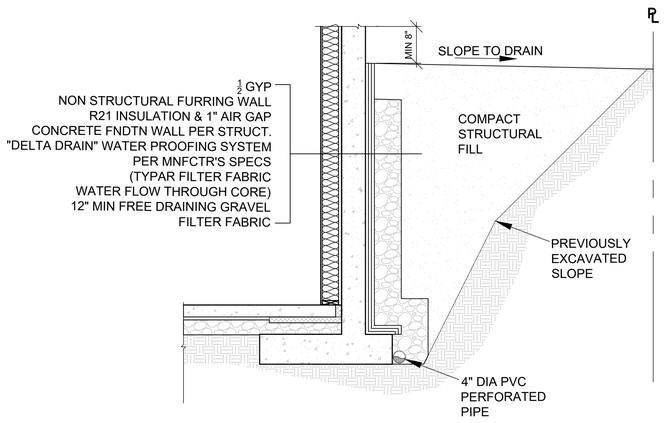
5 EXT. WALL ASSMBLY (TYP) DTL
SCALE: 1/2" = 1'-0"



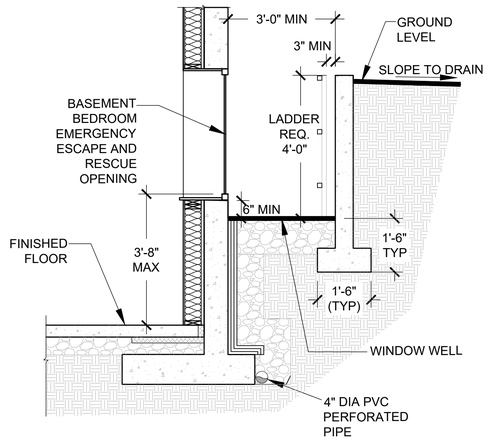
8 EAVE DTL
SCALE: 1/2" = 1'-0"



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



6 BSMNT WATER-PROOFING DTL (TYP)
SCALE: 1/2" = 1'-0"



7 WINDOW WELL DETAIL (TYP)

NOTE:
1. ALL FOOTINGS ARE PLANNED AT DEPTH WHERE MEDIUM-DENSE SOIL IS ANTICIPATED. IF THE CONTRARY IS DISCOVERED PLACE STRUCTURAL FILL DIRECTLY ON COMPETENT SOIL AND CONSULT GEOTECHNICAL ENGINEER.

2. DO NOT DIRECT DOWN SPOUTS TO FOOTING DRAIN.

3. RECOMMENDED TEMPORARY EXCAVATIONS & SLOPES PER GEO REPORT:

FILL, (REGARDLESS OF IN-SITU DENSITY:	1.5H:1V
WHERE GROUNDWATER SEEPAGE IS DISCOVERED:	1.5H:1V
LOOSE TO MED DENSE SOILS:	1.5H:1V
MEDIUM TO DENSE NATIVE SOIL:	1H:1V

*ANY PROPOSED STEEPER TEMPORARY CUTS MUST BE APPROVED BY ESNW.

J DESIGNS
4606 MARINE VIEW DR
TACOMA, WA 98422
206.234.4469
JACQUELINE@
JDESIGNSSEATTLE.COM

SUBMITTAL	DATE
INTAKE	2/4/2019
RE-DESIGN	3/8/2019
RE-SUBMIT	6/14/2019
RE-SUBMIT	7/24/2019
RE-SUBMIT	8/6/2019
CORR 1	3/2/2020
CORR 2	9/10/2020

SUN CREEK HOUSE
3440 97TH AVE SE
MERCER ISLAND, WA

DRAWING INFORMATION

OWNER:
MY BACKYARD, LLC

PROJECT# 1901-198

DRAWING NAME:
SECTION

2
1
A4.0

GENERAL NOTES

A. These notes are in abbreviate form. The intent is to further define those areas of work not clearly delineated on the drawings. The quality of workmanship throughout shall be first class and all materials shall meet or exceed the normal industry standards applicable in each case.

B. All work is to be performed in strict compliance with the 2015 Washington State Energy Code, Residential Provisions, and all applicable provisions of prevailing local, state, and federal codes and ordinances, including appropriate licensing laws including any local amendments.

C. Notify and consult with Designer if discrepancies are found between drawings and site conditions and/or building or zoning requirements prior to start of work. Any consequences resulting from these discrepancies will be the Contractors sole responsibility and expense if Designer is not consulted before area in question is constructed.

D. Contractor shall verify field conditions prior to start of work. If measurements or conditions differ from drawings, notify Owner prior to start of work. Bring any conflicts to the attention of the Designer whereupon a final decision will be made.

E. Dimensional strings are generated by a computer drafting program that usually rounds the dimension to the nearest ⅛ of an inch. Therefore, it would be possible that a string of multiple dimensions and an overall dimensions of the same string could vary by ⅛ of an inch. Please notify the Designer whether a verification of a dimension is needed or dimensions to 1/16" are required.

F. Do not scale drawing. During the reprographic process, proportions may have been altered. Use written dimensions. Where conflicts exist, notify the Designer immediately.

G. Contractor to maintain in force at all times, insurance as required by Article II of the General Conditions of the Contract for Construction, AIA Document A201. Certificates evidencing said insurance shall be provided to the Owner, prior to commencement of any work.

H. Contractor is solely responsible for all construction means and methods and shall maintain the structural integrity of any construction until all final lateral and vertical load carrying systems are completed - approvals from the Designer do not extend to approval of construction means and methods

I. Drawings are for a complete installation with full-functional assemblies - contractor is to field verify all dimensions and conditions prior to any work and shall be responsible for all work and materials including those finished by subcontractors.

GENERAL REQUIREMENTS

A. Provide all required temporary facilities and all temporary utilities as required to keep facility in operation during construction. Contractor is responsible for all costs associated with temporary facilities and temporary utilities

B. Construction Barricades: Provide construction barricade as required to keep Public and Employees safe, following all applicable federal, state and city cods and regulations.

DRAWINGS / PERMITS BY OTHERS

It is the contractor's responsibility to provide additional drawings and permits as required to complete this project. The following list is by no means meant to be comprehensive, rather suggestive of the possible types of additional permits, drawings, and submittals that may be required during the course of the project. Depending on the project, some of the following permits, drawing, and submittals could come up including others not listed below:

- Provide information to City regarding disposal of excess soil. (if any)
- Provide Design / obtain Permit for any required Shoring Work. (if any)
- Provide Drawings / obtain Permit for Plumbing Work
- Provide Drawings / obtain Permit for Electrical Work
- Obtain Permit for Storm Sewer Design & Hook-Up
- Obtain Street Use Permits for any Street Work. (if any)
- Apply & pay for required Water Meters.

Any deferred submittal shall be submitted to the Building Department for review and approval. (if any)

SOILS AND SITE WORK PER 401.4 (site-specific geotechnical reports shall govern)

A. Excavation cuts are to be no steeper than 1:1, horizontal to vertical.

B. Fill to be free of debris, organic contaminants and rock fragments larger than 6 inches. Use free-draining sand or sand and gravel conditioned to appropriate moisture content for adequate compaction. Fill shall contain no more than 5% fines relative to the fraction passing the ¾" sieve. For house, slab or pavement areas, compaction of fill to be at least 95% of the maximum dry density (MDD) per ASTM D-1557 testing procedures. Utility trench backfill in settlement-sensitive areas to be compacted at least 90% of the MDD, except for the top 2 feet which should be compacted to 95% of the MDD.

C. Structural fill to be placed in loose layers of not more than 8" layers for heavy equipment, or 4" for lightweight compaction equipment. Fill should be conditioned to the proper moisture content for compaction. Compact each lift before placing subsequent layers

D. For footings supported on structural fill, the zone of structural fill should extend laterally out from the looting edges a distance at least equal to the thickness of the structural fill. Structural fill placed beneath footing should be compacted to at least 95% of the MDD in accordance with ASTM D-1557.

E. All exterior and interior footings to be at least 18" and 12" respectively below the lowest finished adjacent grade.

F. Crawl space per R408.

FRAMING (Site-specific structural engineering shall govern)

A. All materials and workmanship shall conform to the requirements of the drawings, notes, specifications, and all applicable codes and ordinances.

B. All frame construction shall conform to minimum standards of IBC/IRC. Fastening requirements to be in accordance with IBC. See Structural Drawings Structural Notes, and specifications for any other notes that may relate specifically to grades and sizing of all framing member.

C. Columns and posts located on concrete or masonry floors or decks exposed to the weather or to water splash or in basements and which support permanent structures shall be supported by concrete piers or metal pedestals projecting above floors unless approved wood of natural resistance to decay or treated wood is used. The pedestals shall project at least 6 inches above exposed earth and at least 1 inch above such floors.

Per IBCpenetrations, soffits, drop & cove ceilings

- Wood/Earth seperation per R317

D. Maintain all integrity of required 1 hour separations between different Occupancy Types. See Drawings and details for Required One and Two Hour Party Walls between units.
- Garage/Dwelling per R302.5 & 302.6

E. Where installation includes manufactured products, comply with the manufacturer's applicable instructions and recommendations for installation. Verify rough-in dimensions for equipment and provide buck-outs, backing and jacks as required.

F. All Guardrails per R312 to be 36" high minimum from finished floor line. Openings in railing assemblies are not to exceed 4" in one direction. Guardrails and handrails to withstand a 200 lb/sf concentrated load applied in any direction at any point along the top. Guardrail in-fill components (all those except the handrail), balusters and panel fillers shall be designed to withstand a horizontally applies normal load of 50 lbs on an area equal to 1 square foot. This load need not be assumed to act concurrently with any other live load requirement. Handrails to be between 1½" dia. and 2" dia. with clearance of 1½" between rail and wall surface. mount between 34" and 38" off stair nosing.

G. DECKING: All wood exposed to weather, such as wood used for deck framing including decking, railings, joists, beams, and posts shall be pressure treated or of wood with natural resistance to decay.

H. Unless noted otherwise, dimensions are to face of studs, face of foundation walls, centerline of columns, centerline of doors and windows. When exterior walls are dimensioned as 6", they include ½" sheathing over 2x6 studs @ 16" oc.

INSULATION AND GLAZING PER R40

A. Service hot water pipes shall be insulated per WSEC table R403.5.1.

B. All wall and ceiling insulation shall have a vapor retarder (such as craft paper faced insulation, a special interior paint, vapor retardant foil or other approved vapor retarders) facing to be installed on the interior side of wall/ceiling/floor.

C. Insulation and facing material shall have a flame spread index not to exceed 25 with smoke developed not to exceed 450 per IRC R316.

D. Int. denotes standard framing 16inches on center with headers insulated with a minimum of R-10 insulation.

E. Section R403.1:
- A residential energy compliance certificate complying with SEC R401.3 is required to be completed by the design professional or builder and permanently posted within 3' of the electrical panel prior to final inspection.
- Fenestration U-factors and SHGC
- Type and efficiency of heating/cooling/service water heating equipment.
- Duct leakage rates and test conditions
- Blower door air leakage results (if conducted)

F. Section 403.2.2 Sealing
Ducts to be leak tested in accordance with WSU RS-33 in accordance with either of following:
- Post construction test: Max 4 cfm/100 sq.ft conditioned floor area at pressure differential of 0.1" w.g. (25 Pa), with registers sealed
- Rough-in test: Max 4 cfm/100 sq.ft conditioned floor area at pressure differential of 0.1" w.g. (25 Pa),@0.1" w.c.,with registers. Max 3cfm if air handler not installed.

G. R402. Building air leakage testing, verified as having air leakage rate not exceeding 5 air changes per hour. Testing to be conducted with blower door at a pressure of 0.2 inches w.g. (50 Pascals). The written test results shall be signed by tester and provided to code official. Testing shall be performed after creation of all penetrations of the building thermal envelope.

H. Section R403.1.1:
- Each dwelling unit is required to be provided with at least one programmable thermostat for the regulation of temperature.
- Min. weekday/weekend 5-2 programmable schedule.
- For primary system, min. 2 programmable setback periods/day.
- Heating only: temperature range= 55-70 degrees F
- Cooling only: temperature range= 78-85 degrees F
- Combined heating/cooling: temperature range = 55-85 degrees F.

J. Section R404 High Efficacy Luminaries.
- 75% of permanent lighting fixtures to be high efficacy lamps

K. Additional Energy Efficiency Requirements R406
- Small Dwelling unit (need 1.5 points from Table R406.2): less than 1500sf conditioned floor area & less than 300 sf fenestration area
- Medium Dwelling unit (need 3.5 points from Table R406.2)
- Large Dwelling unit (need 4.5 points from Table R406.2): over 5000 sf conditioned floor area

Table 406.2 - Energy Credits

Option	Description	Credit(s)
1a	Efficient Building Envelope 1a	0.5
1b	Efficient Building Envelope 1b	1.0
1c	Efficient Building Envelope 1c	2.0
2a	Air Leakage Control and Efficient Ventilation 2a	0.5
2b	Air Leakage Control and Efficient Ventilation 2b	1.0
2c	Air Leakage Control and Efficient Ventilation 2c	1.5
3a	High Efficiency HVAC Equipment 3a	1.0
3b	High Efficiency HVAC Equipment 3b	1.0
3c	High Efficiency HVAC Equipment 3c	1.5
3d	High Efficiency HVAC Equipment 3c: Ductless Split System Heat Pumps, Zonal Control	1.0
4	High Efficiency HVAC Distribution System	1.0
5a	Efficient Water Heating 5a	0.5
5b	Efficient Water Heating 5b	1.0
5c	Efficient Water Heating 5c	1.5
5d	Efficient Water Heating 5d	0.5
6	Renewable Electric Energy	0.5

VENTING NOTES

A. Section R806 IRC - Enclosed attics and rafter spaces formed where ceilings are applied directly to the underside of the roof rafters shall have cross ventilating openings protected against the entrance of rain or snow. Ventilating openings shall be provided with corrosion resistant wire mesh, with ⅛" (3.2mm) to ¼" (6.4mm) openings.

B. The total net free ventilation area shall be not less than 1/150 of the area of each space to be ventilated, except that the area may be 1/300 provided that 50 to 80 percent of the required ventilation area is located in the upper portion and at least 3 feet above eave or comic vents with the balance being provided eave or cornice vents, or if a vapor retarder not exceeding a 1 perm rating is installed on the WARM SIDE of the insulation. See calculations in the drawings.

C. Where vents occur, baffling of the vent opening shall be provided so as to deflect the incoming air above the surface insulation. Insulation shall not block the free flow of air. A minimum of a one inch (25.4) space shall be provided between the insulation and the roof sheathing at the location of the vent.

D. M1507.3.4.2 Fan Noise. Whole -house fans located 4 feet or less from the interior grille shall have a sone rating of 1.0 or less measured at 0.1 inches water gauge. Manufacturer's noise ratings shall be determined as per HVI 915 home ventilating institute loudness testing and rating procedure. Remotely mounted fans shall be acoustically isolated from the structural elements of the building and from attached ductwork using insulated flexible duck or other approved material.

E. M1507.3.4.3 Fan Controls. The whole-house ventilation fan shall meet the requirements of sections M1507.3.2 and M1507.3.2.1

F. M1507.3.4.4 Outdoor air inlets. Outdoor air shall be distributed to each habitable space by individual out door air inlets. Where outdoor air supplies are separated from exhaust points by doors, provisions shall be made to ensure air flow by installation of distribution ducts, undercutting doors, installation of grilles, transoms, or similar means. Doors shall be undercut to a minimum of ½ inch above the surface of the finish flooring covering.

DOORS AND WINDOWS

A. Doors as selected by Owner, but must meet code, egress, hardware, requirements as per below:

B. See floor plans for sizes. Rating and required u-values shall be per plan and as set forth on this sheet. See schedules attached or in drawings. All exterior doors, windows and skylights shall be NFRC certified and shall meet SEC 502.4 for leakage.

C. All Dwelling Units shall have dead-bolts that have thumb-turn to the inside.

D. Electric Garage Door to be installed by Company familiar with Safety Requirements.

E. All doors with required fire rating shall comply with provisions in this section, and shall be self closing and latching with no hold-opens. fire doors and dampers shall have an approved label or listing mark, identifying the fire-protection rating permanently affixed at the factory per IBC 715.3.3 All treated doors to have 3 hinges per leaf. When spring hinges are used for self-closing requirements, not less than half of the hinges are to be spring hinges.

F. All glazing within 24" of a door, or within 18" from a floor surface to be tempered, including any glass shower or tub doors. Additionally, glazing within 5 feet of the bottom or top of stairways where the sill is less than 60" AFF shall be safety glazed. IRC R308.3 & 308.4 specifies other hazardous locations also requiring safety glazing.

G. Egress windows from sleeping rooms and basements with habitable space w/o sleeping room to have a minimum net clear opening of 5.7 SF, minimum of 24" clear height, 20" minimum clear width, with maximum sill height of 44" above finished floor per IRC R310.

H. SKYLIGHTS per R308.6

DRYWALL FINISH

A. Provide ½" gypsum wall board for non-rated assemblies and 5/8" type "x" gypsum wall board for 1-hour rated assemblies with all exposed joints and fastener heads smooth and flush with surface of board. joints taped and prepared for application of finish. use water-resistant board at all wet areas to 4'-0" AFF.

B. "Recommended Specifications for the Application and Finishing of Gypsum Board," latest edition, as published by the Gypsum Association (also published as ANSI 97.1 and "Using Gypsum Board and Ceiling," latest edition).

C. When gypsum board is used as a base for tile or wall panels for tub, shower or water closet compartment walls, water resistant gypsum backing board shall be used per IRC section R702.4.2.

MECHANICAL

A. HVAC and Plumbing work shall be performed in a "Bidder-Design" manner. The Contractor shall submit such systems separately for permit.

B. It is the Contractor's responsibility to design systems that meet all requirements and codes. Contractor shall submit drawings, pay for, and obtain permit and perform work in a manner that meets or exceeds the recognized workmanship standards for the industry.

C. All drawings are to be submitted for review and approval to the Owner before performing work.

D. Heating is electric or gas either piping of hydronic heat or forced air via duct and furnace, to be determined. All furnaces shall be listed and labeled by an approved agency and installed per listed specifications.

E. IC Chapter 24 covers fuel gas applications

F. appliances intended for installation in closets, alcoves or confined spaces shall be sl listed per code, IMC.

G. appliances installed in garages or other areas where they may be subject to mechanical damage shall be suitable guarded against such damage by being installed behind protective barriers or by being elevated or located out of the normal path of vehicles.

H. Equipment located in a garage and capable of igniting flammable vapors shall be installed with the pilots and burners or heating elements and switches at least 18 inches above the floor level.

I. Appliances designed to be in a fixed position shall be securely fastened in place. Supports for appliances shall be designed and constructed to sustain vertical and horizontal loads within the stress limitations in the building code and IMC.

J. Verify types, Manufacturer, and locations of all plumbing fixtures and faucets with Owner prior to purchasing and/or installing.

K. Vent outlet for gas appliances shall be 3' minimum away from operable windows, and 10' minimum away from fresh air intakes per WSEC and IRC chapter 24

WATER CONSERVATION NOTES

A. Showers to be equipped to limit water flow to 2.5 CFM

B. Toilets to meet State Energy Code.

FIREPLACE NOTES (see IRC Chapter 10; Pre-fab metal per R1002, R1003, R1005)

A. Gas fireplace shall be approved by the building official as applicable for safe use or comply with applicable nationally recognized standards as evidenced by the listing and labeling by an approved agency such as the EPA.

B. Instruction manuals for installation, operation repair and maintenance shall be left and attached to the appliance by the installer.

C. Direct vent outlet for fireplace shall be 3' minimum away from operable windows, and 10' minimum away from fresh air intakes per per WSEC.

VENTILATION per SRC M1507

A. Continuously operating whole house fan is proposed.

B. Provide outdoor air inlet with 4 sq. in. min net free area for each habitable space.

INDOOR AIR QUALITY NOTES

A. Range exhaust & dryers: Domestic kitchen range ventilation and domestic clothes dryers shall be of metal and have smooth interior surfaces. Ducts shall be substantially airtight and shall comply with the provisions of Chapter 6 UMC. Exhaust ducts shall terminate outside the building and be equipped with back-draft dampers.

B. Moisture exhaust ducts for clothes dryers shall terminate on the outside of the building and shall be equipped with a back-draft damper. Screens shall NOT be installed at the duct termination. Ducts for exhausting clothes dryers shall NOT be connected or installed with sheet metal screws or other fasteners which will obstruct the flow.

C. Unless otherwise permitted or required by the dryer manufacturer's installation instructions and approved by the building official, dryer exhaust ducts shall not exceed a total combined horizontal and vertical length of 14 feet including two 90-degree elbows. Two feet shall be deducted for each 90-degree elbow in excess of two.

SMOKE ALARM / DETECTORS PER IRC R314

A. Smoke alarms shall be installed in the following locations:
1. Each sleeping room
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms
3. On each additional habitable story of the dwelling, including basements

B. When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedroom over background noise levels with all intervening doors closed. All smoke alarms shall be listed and installed in accordance with the provisions of IRC and the household fire warning equipment provisions of NFPA 72. Primary power to come from building wiring per IRC R314 from commercial source with battery back-up.

C. Provide an approved carbon monoxide alarm on each level of the dwelling per R315.

FIRE-RESISTIVE REQUIREMENTS

A. CONSTRUCTION PER R302
- Interior & exterior bearing walls, & non-bearing walls to be type V_B construction as required
- Floors & floor/ceilings to be type VB construction
- Roofs & roofs/ceilings to be type VB construction

NOTE: All garage interior walls, ceilings, structural support systems exposed therein, and voids under stairs shall be 1-hour construction per plans and details.

B. TYPES OF CONSTRUCTION: Standards of Quality - Construction materials shall be labeled appropriately, as required by the local municipality, showing that they comply with local code standards for such materials as building paper, decking material, foam plastics, wall and roofing materials.

C. FIRE RESISTIVE MATERIALS & SYSTEMS: Fire resistance ratings of walls, floors, roof assemblies shall meet criteria set forth in IBC or based on submitted information showing equivalent fire resistive rating.

D. FIRE BLOCKING AND DRAFTSTOP per R302.11, R302.12, 502.12 and R602.8

E. PROTECTION OF STRUCTURAL MEMBERS: Thickness of protection over structural members shall be as per IBC. See wall types and sections in these drawings for specifics.

F. COLUMN JACKETING: Where fire resistive covering on columns is exposed to injury from moving vehicles or other means, contractor shall protect area from damage and deterioration.

ELECTRICAL

A. Electrical work shall be performed in a "Bidder-Design" manner. The contractor shall submit such systems separately for permit.

B. It is the Contractor's responsibility to design systems that meet all requirements and codes. contractor shall submit drawings, pay for, and obtain permit and perform work in a manner that meets or exceeds the recognized workmanship standards for the industry.

C. All drawings are to be submitted for review and approval to the Owner before performing work. Specific attention is to be paid regarding Owner-requested locations of electrical, phone and computer cabling port locations.

D. Proper protection shall be provided around recessed light fixtures per manufacturer's recommendations so that overheating will not occur. Recessed light fixtures to be IC rated.

E. At least 75% of permanent lighting fixtures to be high efficacy lamps - WSEC R404

STAIRS

A. IRC R311.7, min 36" wide, max riser = 7¾" , min tread = 10". Hand rails shall not project more than 4½" into the 36" clear pathway on either side.

B. LANDINGS: There shall be a floor of landing at the top and bottom of each stairway except a door swinging except a door swinging away from the stairs is ok for interior stairs. The width of each landing shall not be less then the width of the stairway served, min 36" in the direction of travel. Max 2% slope.

C. HANDRAILS: 34" to 38", min 1½" clear from wall, continuous from full-length of flight where risers are. Handrail ends shall be returned or terminate in newel posts or safety terminals. new posts can interrupt handrails at turns. The lowest tread may have a volute, turnout or newel. Handrails shall be of the two type listed in IRC 311.7 or provide equivalent graspability.

SECURITY per Seattle Residential Code Section R329

A. Provide building entrance locks and observation ports at approx. 60" AFF in accordance with this section.

SOUND TRANSMISSION CONTROL per Seattle Residential Code section R330

A. Assemblies separating dwelling units shall provide:
- At walls: airborne sound insulation at STC 45 per, ASTM E 90.
- At floor-ceiling airborne and impact sound insulation at an "Impact Insulation Class" (IIC) or min. 50 per ASTM E 492

B. Fire-resistive integrity shall be maintained.

MINIMUM AREAS FOR HABITABLE ROOMS per R304:
- Common room: 120 SF; Cooking + Living or Living + Sleeping: 150 SFKitchens are exempt from minimum area and dimensions.
- IRC DEFINITION OF HABITABLE SPACE: A space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, storage or utility spaces and similar areas are not considered habitable spaces.

CEILING HEIGHT per IRC R305

A. Habitable spaces/rooms, hallways, corridors, bathroom, toilet rooms, laundry rooms and basements shall have a ceiling height not less than 7 feet measured from FINISH floor to FINISH ceiling. Beams at least 4 feet on center can project into space 6 inches.

B. SLOPED CEILINGS: Not more than 50% of the REQUIRED floor area of a room/space is permitted to have a sloped ceiling less than 7 feet or a portion less than 5 feet, (i.e. minimum REQUIRED bedroom is 70 SF per R304.3, so at least 35 SF of a bedroom needs to have ceiling heights over 7 feet and the other 35 SF over 5 feet.

GARAGE requirements per R309
ATTIC ACCESS per R807
WEATHER PROTECTION per R703 & R903

J DESIGNS
4606 MARINE VIEW DR
TACOMA, WA 98422
206.234.4469
JACQUELINE@
JDESIGNSSEATTLE.COM

SUBMITTAL	DATE
INTAKE	2/4/2019
RE-DESIGN	3/8/2019
RE-SUBMIT	6/14/2019
RE-SUBMIT	7/24/2019
RE-SUBMIT	8/6/2019
CORR 1	3/2/2020
CORR 2	9/10/2020

SUN CREEK HOUSE
3440 97TH AVE SE
MERCER ISLAND, WA

DRAWING INFORMATION

OWNER:
MY BACKYARD, LLC

PROJECT# 1901-198

DRAWING NAME:

GENERAL NOTES

A5 1

GENERAL STRUCTURAL NOTES

FOUNDATION

- DESIGN IS BASED ON 2015 INTERNATIONAL RESIDENTIAL CODE
- DESIGN LOADS:
  - SOIL ..... 2,000 PSF ALLOWABLE BEARING PRESSURE
- CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS IN 28 DAYS, U.N.O.:
  - f'c = 3,000 psi: ..... FOUNDATION WALLS
  - 3,000 psi: ..... FOOTINGS
  - 2,500 psi: ..... INTERIOR SLABS ON GRADE
  - 3,500 psi: ..... GARAGE & EXT. SLABS ON GRADE
  - fy = 60,000 psi
- ALL CONCRETE EXPOSED TO THE WEATHER SHALL NOT HAVE LESS THAN 5% OR MORE THAN 7% AIR ENTRAINMENT.
- FOUNDATION WALL DESIGN IS BASED ON BACKFILL SOIL CLASSIFICATIONS OF SC, ML-CL, OR CL (60 pcf) SOIL.
- TYPICAL REINFORCEMENT DETAILS: LAP ALL REBAR 24" MIN.; BEND BARS AND LAP AT CORNERS; PROVIDE 6" HOOK INTO SUPPORTING FOOTINGS WHEN FOOTINGS INTERSECT; PROVIDE 3" MINIMUM COVER AT THE BOTTOM BARS AND 1 1/2" COVER AT THE SIDES.
- FOUNDATION WALLS SHALL BE BRACED, PRIOR TO BACKFILLING, BY EITHER ADEQUATE TEMPORARY BRACING OR INSTALLATION OF FIRST FLOOR DECK.
- ALL FOOTINGS SHALL BEAR BELOW FROST LINE. CONSULT SOILS REPORT/ LOCAL MUNICIPALITY FOR MINIMUM DEPTH BELOW GRADE.
- FOOTINGS AND SLABS ON GRADE SHALL BEAR ON VIRGIN SOIL OR 95% COMPACTED FILL.
- PROVIDE CONTROL JOINTS AT ALL INSIDE CORNERS OF SLAB EDGES, AND OTHER LOCATIONS WHERE SLAB CRACKS ARE LIKELY TO DEVELOP. (15'-0" O.C.)
- FASTEN SILL PLATES TO FOUNDATION WALLS WITH 5/8" DIA. ANCHOR BOLTS W/ MIN. 3"x3"x 1/4" PLATE WASHERS (EDGE OF WASHER TO BE LOCATED WITHIN 1/2" OF EXTERIOR EDGE OF SILL PLATE) @ NUTS @ 6'-0" O.C. @ 2-STORY & 4'-0" O.C. @ 3-STORY CONDITIONS W/ 7" MIN. EMBEDMENT INTO CONC. PROVIDE A MINIMUM OF 2 ANCHORS PER PLATE, 12" MAXIMUM FROM PLATE ENDS, U.N.O. (SEE FND. DETAILS).
- ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT W/ CONCRETE OR MASONRY FOUNDATION SHALL BE PRESERVATIVE TREATED HEM FIR #2.
- BUILDER TO VERIFY CORROSION-RESISTANCE COMPATIBILITY OF HARDWARE & FASTENERS IN CONTACT W/ PRESERVATIVE-TREATED WOOD. CONTACT LUMBER & HARDWARE SUPPLIERS TO COORDINATE.

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
HD-1	SIMPSON STHD14 (R.I.) HOLD-DOWN
HD-5	SIMPSON CS16 STRAP TIE (14" END LENGTH)
HD-6	SIMPSON MSTC40 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)
HD-7	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

MEANS & METHODS NOTES

THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS FINISHED AND ALL PLAN, DETAIL, AND NOTE SPECIFICATIONS HAVE BEEN COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURES AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS, AND TIE-DOWNS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING AND BRACING REQUIRED TO STABILIZE AND PROTECT EXISTING AND ADJACENT STRUCTURES AND SYSTEMS DURING COURSE OF DEMOLITION AND CONSTRUCTION OF THE PROJECT.

STRUCTURAL DESIGN AND SPECIFICATIONS ASSUME THAT ALL SUPPORTING AND NON-SUPPORTING ELEMENTS IN CONTACT WITH FLOOR FRAMING ARE LEVEL, INCLUDING, BUT NOT LIMITED TO; FOUNDATIONS, SLABS ON GRADE, BEAMS, WALLS, AND NON-BEARING ELEMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LEVELNESS AND MAKE ADJUSTMENTS AS NECESSARY, INCLUDING CONSIDERATION OF THOSE AREAS THAT MAY BE WITHIN CONTRACTUAL, INDUSTRY, OR WARRANTY TOLERANCES.

ADDITIONAL NOTES FOR TRUSS & I-JOIST MANUFACTURER

ROOF TRUSS, FLOOR TRUSS AND ENGINEERED JOISTS SHALL BE DESIGNED TO MEET THE DIFFERENTIAL DEFLECTION CRITERIA BELOW, UNLESS NOTED OTHERWISE ON PLAN. MULHERN & KULP CANNOT BE HELD RESPONSIBLE FOR ANY STRUCTURAL ISSUES RELATED TO ANY BUILDING COMPONENT IF COMPONENT SHOP DRAWINGS ARE NOT SUBMITTED TO MHK FOR REVIEW PRIOR TO FABRICATION, DELIVERY, OR INSTALLATION.

TRUSSES SHALL BE DESIGNED SO THAT DIFFERENTIAL DEFLECTION BETWEEN ADJACENT PARALLEL TRUSSES OR GIRDER TRUSSES DOES NOT EXCEED THE FOLLOWING:

A. ROOF TRUSSES:
   1/4" DEAD LOAD
B. FLOOR TRUSSES, ATTIC TRUSSES, & I-JOISTS:
   1/8" DEAD LOAD
C. FLOOR TRUSSES & ATTIC TRUSSES ADJACENT TO FLOOR FRAMING BY OTHERS:
   LIMIT ABSOLUTE TRUSS DEFLECTION TO 3/16" DEAD LOAD. (NOT DIFFERENTIAL DEFLECTION)

LOADING AND DESIGN PARAMETERS

GRAVITY DESIGN LOADS:

DEAD LOAD (PSF):

ROOF TRUSS TOP CHORD :	10
ROOF TRUSS BOTTOM CHORD :	7
GLASS ROOF	10
FLOOR (I-JOISTS) :	10
TILE FLOORS :	10

LIVE LOAD (PSF):

ROOF :	20
RESIDENTIAL LIVING AREAS :	40
RESIDENTIAL SLEEPING AREAS :	30
RESIDENTIAL WOOD DECKS :	60
GARAGE :	50

SNOW LOAD:

GROUND SNOW LOAD (P_g) (PSF) :	25
FLAT ROOF SNOW LOAD (P_f) (PSF) :	25
SNOW EXPOSURE FACTOR (C_e) :	0.9
SNOW LOAD IMPORTANCE FACTOR (I) :	1.0
THERMAL FACTOR (C_t) :	1.2

LATERAL DESIGN LOADS:

WIND LOAD: (IBC 1609)

SPEED (V_{ult}) (MPH) :	110
WIND RISK CATEGORY :	II
IMPORTANCE FACTOR (I_w) :	1.0
EXPOSURE CATEGORY :	C
INTERNAL PRESSURE COEFF. (GC_{pi}) :	±0.18
TOPOGRAPHIC FACTOR (K_{zt}) :	1.0

SEISMIC LOAD: (IBC 1613)

SEISMIC RISK CATEGORY :	II
SEISMIC IMPORTANCE FACTOR (I_e) :	1.0
MAPPED SPECTRAL RESPONSE :	
S_s: 1.384	S_1: 0.532
SITE CLASS :	D
SPECTRAL RESPONSE COEFF. :	
S_{ds}: 0.923	S_{d1}: 0.532
SEISMIC DESIGN CATEGORY:	D
BASIC SEISMIC-FORCE-RESISTING SYS : LIGHT FRAMED WALLS W/WOOD STRUCTURAL PANELS	
ULTIMATE BASE SHEAR	
TRANS: 16k	LONG: 16k
SEISMIC RESPONSE COEFF. (C_s) :	
TRANS: 0.142	LONG: 0.142
RESPONSE MODIFICATION FACTOR (R) :	
TRANS: 6.5	LONG: 6.5
ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE	

SLAB ON GRADE

4" CONC. SLAB ON 6 MIL VAPOR BARRIER ON 4" MIN. GRANULAR FILL ON 95% COMPACTED FILL/VIRGIN SOIL

GARAGE SLAB

4" CONC. SLAB ON 4" MIN. GRANULAR FILL ON 95% COMPACTED FILL/VIRGIN SOIL

PORCH SLAB

4" CONC. SLAB ON GRADE ON 6 MIL VAPOR BARRIER ON 4" MIN. GRANULAR FILL ON 95% COMPACTED FILL/VIRGIN SOIL

LATERAL BRACING NOTES

THIS HOME HAS BEEN ENGINEERED TO RESIST LATERAL FORCES RESULTING FROM:
110 MPH WIND SPEED, EXP. C
(ASCE 7-10 WIND MAP, PER IRC R301.2.1.1)
RISK CAT. 2 & SEISMIC CAT. D2.

110 MPH WIND IN 2015 IRC MAP

ENGINEERED DESIGN WAS COMPLETED PER 2015 IBC (SECTION 1609) & ASCE 7-10, AS PERMITTED BY R301.1.3 OF THE 2015 IRC. ACCORDINGLY, THIS MODEL, AS DOCUMENTED AND DETAILED HEREWITHIN, IS ADEQUATE TO RESIST THE CODE REQUIRED LATERAL FORCES, AND DOES NOT NEED TO CONFORM TO THE PRESCRIPTIVE PROVISIONS OF R602.10.

STANDARD EXTERIOR WALL SHEATHING SPECIFICATIONS

- 7/16" OSB OR 15/32" PLYWOOD:

  FASTEN SHEATHING W/ 2½"x0.131" NAILS @ 6"O.C. AT ALL SUPPORTED PANEL EDGES AND 12" O.C. IN THE PANEL FIELD. ALL SHEATHING SHEET PANEL EDGES SHALL OCCUR OVER WALL FRAMING MEMBERS OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT PANEL EDGE. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED PER THIS SPECIFICATION U.N.O. ON PLANS.

3" o.c. EDGE NAILING (WHERE NOTED ON PLANS)

- 7/16" OSB OR 15/32" PLYWOOD:

  ONLY AT LOCATIONS INDICATED ON PLANS - SHEATHE WALL SHOWN WITH 7/16" OSB. FASTEN SHEATHING W/ 2½"x0.131" NAILS @ 3" O.C. AT EDGES AND 12" O.C. AT CENTER. ALL SHEATHING SHEET PANEL EDGES SHALL OCCUR OVER WALL FRAMING MEMBERS OR 2x HORIZONTAL BLOCKING SHALL BE PROVIDED TO SUPPORT PANEL EDGE AND 3" O.C. FASTENING.

NOTES:

1. LATERAL ANALYSIS ASSUMES STUD SPACING @ 16" o.c.
2. ALL SHEAR WALLS SHALL HAVE DBL TOP PLATES FASTENED TOGETHER W/ 3"x0.131" NAILS @ 8" o.c. USE (12)8d's"x0.135" NAILS AT EA. LAP SPLICE, (6) EA. SIDE OF JOINT (TYP. U.N.O)
3. ALL EXTERIOR WALLS ARE CONTINUOUSLY SHEATHED.
4. ALL INTERIOR SHEAR WALLS AND EXTERIOR WALLS ARE SHEATHED ABOVE AND BELOW OPENINGS.
5. WHERE OSB/PLYWOOD SHEATHING IS APPLIED TO BOTH FACES OF A SHEAR WALL, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.

LEGEND

- INTERIOR BEARING WALL
- BEARING WALL ABOVE (B.W.A.), OR SHEARWALL ABOVE (S.W.A.)
- BEAM / HEADER
- INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL W/ 3" o.c. EDGE NAILING
- AREA OF FLOOR SYSTEM DESIGNED FOR TILE
- METAL HANGER
- INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- INDICATES HOLDDOWN.

GENERAL STRUCTURAL NOTES

DESIGN PARAMETERS

- DESIGN IS BASED ON 2015 INTERNATIONAL RESIDENTIAL CODE
- WOOD FRAME ENGINEERING IS BASED ON NDS, "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" - LATEST EDITION.

GENERAL FRAMING

- EXTERIOR BEARING WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. (w/ DOUBLE TOP PLATE) HEM FIR (HF) "STUD" GRADE LUMBER, OR BETTER, U.N.O.
- INTERIOR BEARING WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) @ 16" O.C. (w/ DOUBLE TOP PLATE) HEM FIR (HF) "STUD" GRADE LUMBER, OR BETTER, U.N.O.
- ALL NON-BEARING INTERIOR STUD WALLS SHALL BE CONSTRUCTED WITH 2x "STUD" GRADE MEMBERS SPACED @ 24" O.C. (MAX.)
- ALL WALLS TALLER THEN TYP. PLATE HEIGHT SHALL BE CONSIDERED BALLOON FRAMED & SHALL BE CONSTRUCTED FROM FLOOR TO UNDERSIDE OF FRAMING AT NEXT LEVEL. B.F. WALLS SHALL BE 2x4 OR 2x6 (AS SHOWN ON PLANS) HEM FIR (HF) #2 GRADE LUMBER, OR BETTER.
- ALL HEADERS SHALL BE SUPPORTED BY (1)2x JACK STUD & (1)2x KING STUD, MINIMUM.
  - THE NUMBER OF STUDS SPECIFIED AT A SUPPORT INDICATES THE NUMBER OF JACK STUDS REQUIRED, U.N.O..
- ALL 2x6 AND LARGER SOLID SAWN BEAMS/HEADERS SHALL BE HEM FIR #2 (HF #2) OR BETTER. ALL 4x6 AND LARGER SOLID SAWN LUMBER SHALL BE DOUG FIR #2 (DF #2) OR BETTER.
- ALL FRAMING LUMBER SHALL BE KILN DRIED TO 15% MC (KD-15).
- ALL TYP. NAIL FASTENER REQUIREMENTS ARE NOTED IN GENERAL NOTES, IN DETAILS, OR ON PLANS. ALL NAILS SPECIFIED ARE MIN. DIAMETER AND LENGTH REQUIRED FOR CONNECTION. ALL HANGER NAILS SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS FOR MAX CHARTED CAPACITY. NOTE: HANGERS USE COMMON NAIL DIAMETERS NOT TYPICAL FRAMING GUN NAILS.
- FASTEN ALL BEAMS TO COLUMNS W/ (4) 3"x0.131" TOENAILS (MIN), TYP. U.N.O.
- PROVIDE SOLID BLOCKING IN FLOOR SYSTEM UNDER ALL POSTS & HOLD-DOWNS CONTINUOUS TO FOUNDATION/BEARING. BLOCKING TO MATCH POST ABOVE.
- ENGINEERED LUMBER TO MEET OR EXCEED THE FOLLOWING:
  - LSL MEMBERS - Fb=2325 PSI; Fv=310 PSI; E=1.55x10^6 PSI
  - LVL MEMBERS - Fb=2600 PSI; Fv=285 PSI; E=2.0x10^6 PSI
  - GLB MEMBERS - Fb=2400 PSI; Fv=265 PSI; E=1.8x10^6 PSI; DF/DF
- ENGINEERED LUMBER POSTS TO MEET OR EXCEED THE FOLLOWING:
  - LVL MEMBERS - Fb=2400 PSI; Fc⊥=2500 PSI; E=1.8x10^6 PSI
- FACE NAIL MULTI-PLY 2x BEAMS & HEADERS W/ 3-ROWS OF 3"x0.131" NAILS (MIN.) @ 12" O.C. STAGGERED. APPLY NAILING FROM BOTH FACES @ 3-PLY OR MORE CONDITIONS. UTILIZE 2 ROWS OF NAILS FOR 2x6 & 2x8 MEMBERS.
- ALL MEMBERS SPECIFIED AS MULTI-PLY 1¾" SHALL BE FASTENED TOGETHER PER MANUFACTURER. EQUIVALENT WIDTH SOLID MATERIAL MAY BE USED AS EQUAL.
- FASTEN 2x WOOD PLATES TO TOP FLANGE OF STEEL BEAMS W/P.A.F.s ("HILTI" X-U PINS OR EQUAL) @ 16" O.C. STAGGERED, OR 1/2" DIA. BOLTS @ 48" O.C., STAGGERED.
- REFER TO IRC FASTENING SCHEDULE TABLE R602.3(1) FOR ALL CONNECTIONS, TYP. U.N.O.

FLOOR FRAMING

- I-JOISTS/TRUSSES SHALL BE DESIGNED BY MANUF. TO MEET OR EXCEED L/480 LIVE LOAD DEFLECTION CRITERIA AND SHALL RUN CONTINUOUS OVER SUPPORTS WHEREVER POSSIBLE. ALL LOADS SHOWN ON PLAN FOR MANUF. DESIGNS ARE ASD LEVEL LOADS, U.N.O. (EXCLUDES STONE/MARBLE OR WET BED CONSTRUCTED FLOORS - CONTACT MHK FOR EXCLUDED DESIGNS).
- ALL METAL I-JOIST/TRUSS HANGERS SHALL BE SPECIFIED BY I-JOIST/TRUSS MANUFACTURER, UNLESS OTHERWISE NOTED.
- I-JOIST/TRUSS SHOP DRAWINGS SHALL BE SUBMITTED TO ARCHITECT AND ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY.
- 2x FLOOR JOISTS HAVE BEEN DESIGNED TO MEET OR EXCEED L/360 LIVE LOAD DEFLECTION CRITERIA.
- TYPICAL 2x JOIST HANGERS (U.N.O. ON PLANS):
  - SINGLE PLY: SIMPSON LUS210
  - DOUBLES: SIMPSON LUS210-2
- FLOOR SHEATHING SHALL BE 23/32" A.P.A. RATED 'STURD-I-FLOOR' 24" O.C. EXPOSURE 1 (OR APPROVED EQUAL) WITH TONGUE AND GROOVE EDGES. FASTEN TO FRAMING MEMBERS W/ GLUE AND 2 ½" x 0.131" NAILS @ 6"o.c. @ PANEL EDGES & @ 12"o.c. FIELD.
- ALL FLUSH CONNECTIONS SHALL BE CONNECTED WITH HANGER APPROPRIATE FOR MEMBER SIZE, U.N.O.
- FASTEN HANGERS TO SINGLE PLY FLUSH BEAMS W/ 1½" LONG NAILS.

ROOF FRAMING

- FASTEN EACH ROOF TRUSS TO TOP PLATE W/ (3) 3"x0.131" TOENAILS (MIN.) & (1) 'SIMPSON' SDWC15600 SCREW @ ALL BEARING POINTS. PROVIDE (2) 'SIMPSON' SDWC15600 SCREWS AT 2-PLY GIRDER TRUSSES, (3) SIMPSON' SDWC15600 SCREWS AT 3-PLY GIRDER TRUSSES AT ALL BEARING POINTS.
- FASTEN EACH ROOF RAFTER TO TOP PLATE WITH (1) 'SIMPSON' SDWC15600 SCREW. PROVIDE (2) 'SIMPSON' SDWC15600 SCREWS AT FLUSH BEAMS IN THE ROOF - AT ALL BEARING POINTS.
- ROOF SHEATHING SHALL BE 7/16" A.P.A. RATED SHEATHING 24/16 EXPOSURE 1 (OR APPROVED EQUAL). FASTEN TO FRAMING MEMBERS W/ 2 ½" x 0.131" NAILS @ 6"o.c. AT PANEL EDGES & @ 12" O.C. AT INTERMEDIATE SUPPORTS. ROOF SHEATHING SHALL EXTEND BELOW ALL INSTANCES OF OVERFRAMING. BLOCKING SHALL BE INSTALLED AS REQUIRED TO LIMIT ROOF SHEATHING SPANS TO 24" MAX.
- ALL METAL HANGERS SHALL BE SPECIFIED BY THE TRUSS MANUFACTURER, UNLESS OTHERWISE NOTED.
- ROOF TRUSS SHOP DRAWINGS SHALL BE SUBMITTED TO ARCHITECT AND ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY.
- ROOF TRUSS SHOP DRAWINGS & CALCULATIONS SHALL BE PREPARED BY A WASHINGTON STATE LICENSED ENGINEER AND SHALL BE DESIGNED FOR UNBALANCED SNOW LOADING PER ASCE7-10, SECTION 7.6.
- ERECT AND INSTALL ROOF TRUSSES PER WTCA & TPI'S BCSI 1-08 "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES."
- FASTEN OVER-FRAMED TRUSS SETS TO TRUSSES BELOW W/ (2) 3"x0.131" TOENAILS AT EA. TRUSS.
- SUPPORT PORCH & SHORT SPAN ROOF TRUSSES (UP TO 6' TRIB.) W/2x6 LEDGER FASTENED TO FRAMING W/(3) 3"x0.131" NAILS @ 16" O.C.
- FASTEN ALL INTERIOR NON-BEARING PARTITION WALLS TO TRUSS BOTTOM CHORD ABOVE WITH SIMPSON STC CLIPS AT 24" O.C. MAX. PROVIDE BLOCKING BETWEEN THE TRUSS BOTTOM CHORDS AS REQUIRED FOR THE PARALLEL CONDITIONS.

seal:

© copyright : MULHERN & KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Brookside Ave, Building 4 • Ambler, PA 19002
p 215-646-8001 • mulhernkulp.com

M&K project number: 01A-18094

project mgr: NJM
drawn by: NJD
issue date: 01-21-19

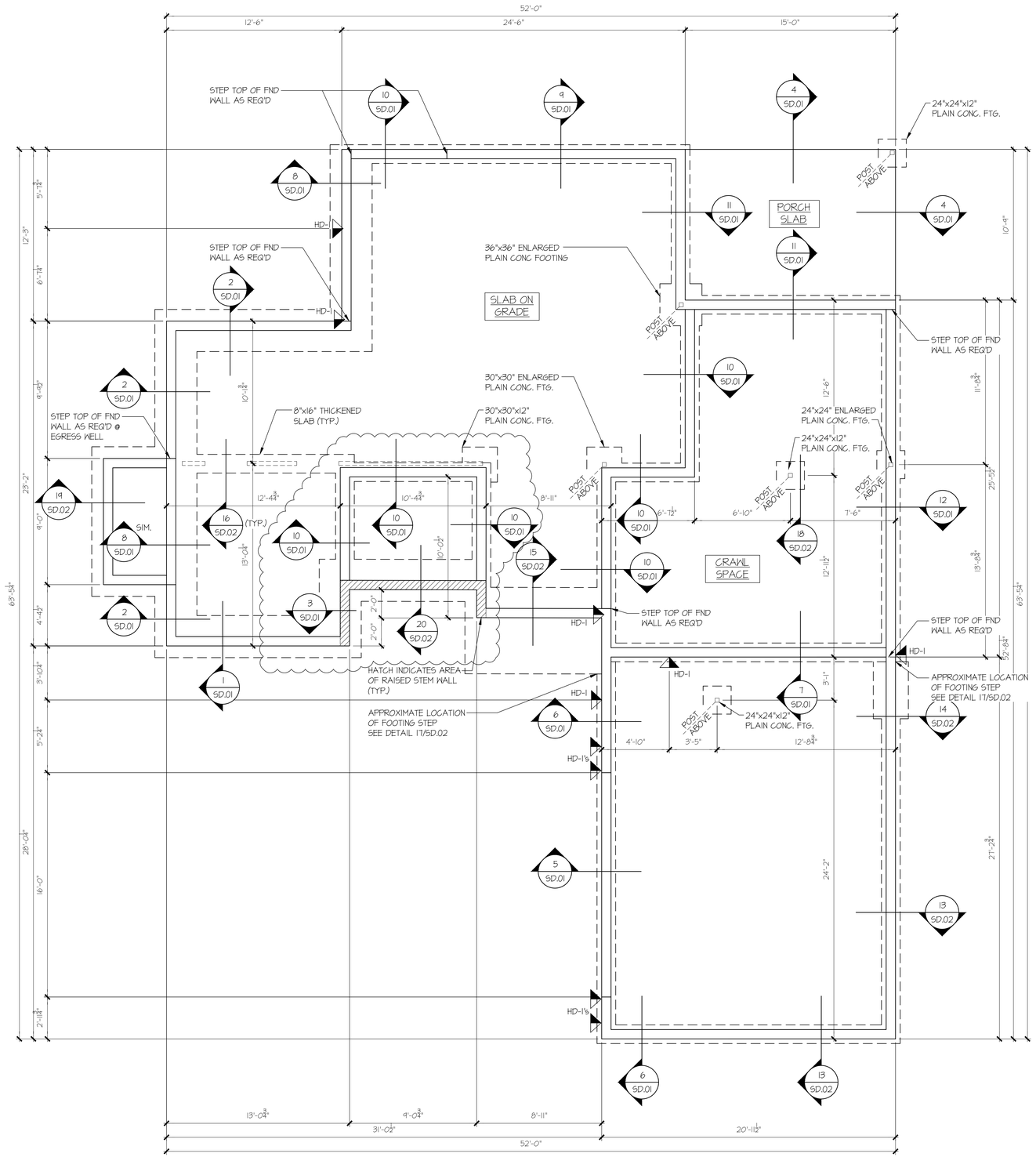
REVISIONS:

date:	initial:
03/08/2019 ARCH REVISIONS	NJD
02/28/2020 PLAN REVIEW	NJD
08/18/2020 PLAN REVIEW	RJZ

STRUCTURAL NOTES

3440 97TH AVE.
MERCER ISLAND, WASHINGTON

sheet: S-0



FOUNDATION PLAN

1/4" = 1'-0"

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
HD-1	SIMPSON STHD14 (R.J) HOLD-DOWN
HD-5	SIMPSON CS16 STRAP TIE (14" END LENGTH)
HD-6	SIMPSON MSTC40 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)
HD-7	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

LEGEND

- INTERIOR BEARING WALL
- BEARING WALL ABOVE (B.W.A.), OR SHEARWALL ABOVE (S.W.A.)
- BEAM / HEADER
- INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL w/ 3" o.c. EDGE NAILING
- AREA OF FLOOR SYSTEM DESIGNED FOR TILE
- METAL HANGER
- INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- INDICATES HOLDOWN.

REFER TO S-0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

NICHOLAS J. MARTIGNETTI STATE OF WASHINGTON 46478 REGISTERED PROFESSIONAL ENGINEER

seal:

© copyright : MULHERN & KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Brookside Ave, Building 4 • Ambler, PA 19002
p 215-646-8001 • mulhernkulp.com

M&K project number: 01A-18094

project mgr:	NJM
drawn by:	NJD
issue date:	01-21-19

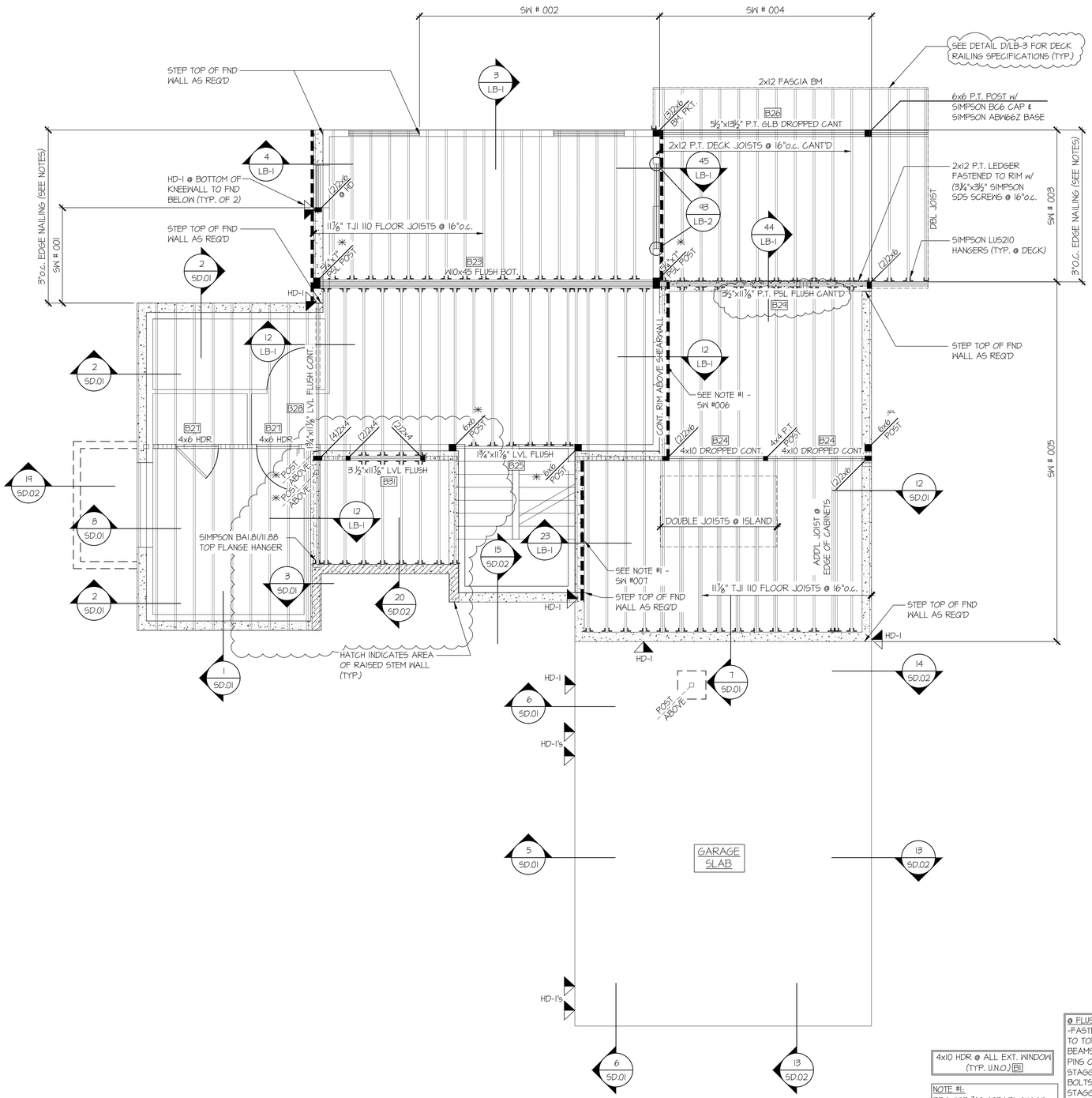
REVISIONS:

date:	initial:
03/08/2019 ARCH REVISIONS	NJD
02/28/2020 PLAN REVIEW	NJD
08/18/2020 PLAN REVIEW	RJZ

FOUNDATION PLAN

3440 97TH AVE.
MERCER ISLAND, WASHINGTON

sheet: S-1.0



1ST FLOOR FRMG PLAN

¼" = 1'-0"

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
HD-1	SIMPSON STHD14 (R.U.) HOLD-DOWN
HD-5	SIMPSON CS16 STRAP TIE (14" END LENGTH)
HD-6	SIMPSON MSTC40 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)
HD-7	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

LEGEND

- INTERIOR BEARING WALL
- BEARING WALL ABOVE (B.W.A.), OR SHEARWALL ABOVE (S.W.A.)
- BEAM / HEADER
- INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL w/ 3" o.c. EDGE NAILING
- AREA OF FLOOR SYSTEM DESIGNED FOR TILE
- METAL HANGER
- INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- INDICATES HOLDOWN.

REFER TO S-0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

4x10 HDR @ ALL EXT. WINDOW (TYP. U.N.O.) B1

NOTE #1:
PROVIDE ⅞" OSB/ PLYWOOD SHEATHING AT KNEEWALL FASTENED PER TYP. EXT. WALL SHEATHING SPEC. DO NOT BLOCK PANEL EDGES. THIS WALL ONLY. (SEE NOTES)

@ FLUSH STL. BEAMS:
-FASTEN 2x WOOD PLATES TO TOP FLANGE OF STEEL BEAMS W/P.A.F.S ("HILTI" X-U PINS OR EQUAL) @ 16" O.C. STAGGERED, OR 1/2" DIA. BOLTS @ 48" o.c., STAGGERED. (TYP.)
-FASTEN BOTTOM FLANGE OF STEEL BEAM TO POST @ EA. END w/ (4) ¼"x 2½" SIMPSON SDS SCREWS EA. SIDE OF BEAM.
-PROVIDE 2x PACKOUT w/ (2) ½" DIA. THRU BOLTS AS REQ'D FOR HANGER CONNECTION

NICHOLAS J. MARTIGNETTI
STATE OF WASHINGTON
56478
REGISTERED
PROFESSIONAL ENGINEER

seal:

© copyright : MULHERN & KULP
Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Brookside Ave, Building 4 • Ambler, PA 19002
p 215-646-8001 • mulhernkulp.com

M&K project number: 01A-18094

project mgr: NJM
drawn by: NJD
issue date: 01-21-19

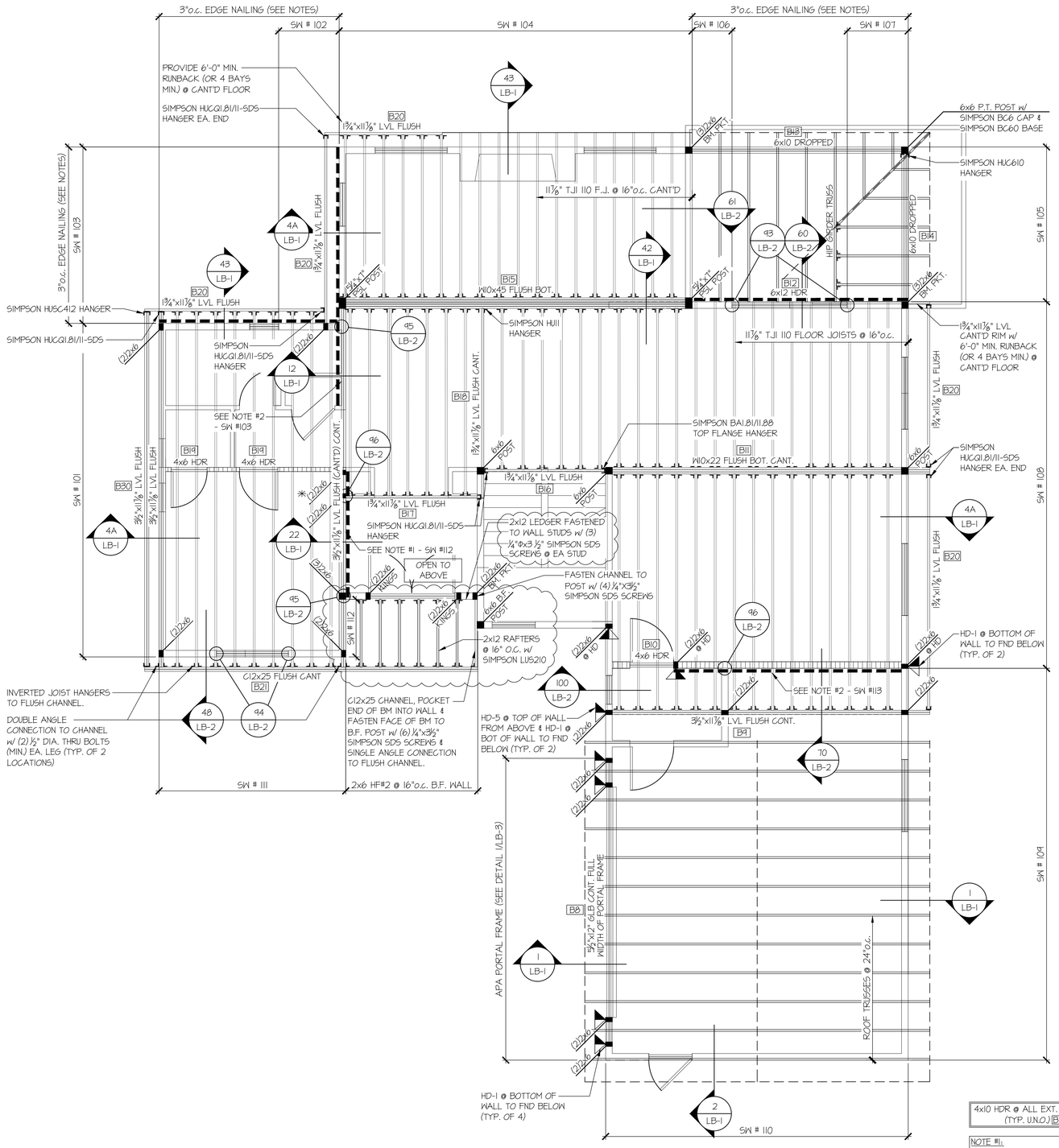
REVISIONS:

date:	initial:
03/08/2019 ARCH REVISIONS	NJD
02/28/2020 PLAN REVIEW	NJD
08/18/2020 PLAN REVIEW	RJZ

1ST FLR. FRMG. PLAN

3440 97TH AVE.
MERCER ISLAND, WASHINGTON

sheet: S-2.0



2ND FLOOR FRMG PLAN

¼" = 1'-0"

HOLD-DOWN SCHEDULE	
SYMBOL	SPECIFICATION
HD-1	SIMPSON STHD14 (R.U) HOLD-DOWN
HD-5	SIMPSON CS16 STRAP TIE (14" END LENGTH)
HD-6	SIMPSON MSTC40 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)
HD-7	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

LEGEND

- INTERIOR BEARING WALL
- BEARING WALL ABOVE (B/W.A.), OR SHEARWALL ABOVE (S/W.A.)
- BEAM / HEADER
- INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL w/ 3" o.c. EDGE NAILING
- AREA OF FLOOR SYSTEM DESIGNED FOR TILE
- METAL HANGER
- INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- INDICATES HOLDDOWN.

REFER TO S-0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

4x10 HDR @ ALL EXT. WINDOW (TYP. U.N.O.) B1

NOTE #1:
PROVIDE 7/16" OSB/ PLYWOOD SHEATHING FASTENED PER TYP. EXT. WALL SHEATHING SPEC. (SEE NOTES)

NOTE #2:
PROVIDE 7/16" OSB/ PLYWOOD SHEATHING FASTENED PER 3"o.c. EXT. WALL SHEATHING SPEC. (SEE NOTES)

@ FLUSH STL. BEAMS:
-FASTEN 2x WOOD PLATES TO TOP FLANGE OF STEEL BEAMS W/P.A.F.S ('HILTI' X-U PINS OR EQUAL) @ 16" O.C. STAGGERED, OR 1/2" DIA. BOLTS @ 48" o.c., STAGGERED. (TYP.)
-FASTEN BOTTOM FLANGE OF STEEL BEAM TO POST @ EA. END w/ (4) ¼"x 2½" SIMPSON SDS SCREWS EA. SIDE OF BEAM.
-PROVIDE 2x PACKOUT w/ (2) ½" DIA. THRU BOLTS AS REQ'D FOR HANGER CONNECTION

NICHOLAS J. MARTIGNETTI
STATE OF WASHINGTON
56478
REGISTERED
PROFESSIONAL ENGINEER

seal:

© copyright : MULHERN & KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Brookside Ave, Building 4 • Ambler, PA 19002
p 215-646-8001 • mulhernkulp.com

M&K project number: 01A-18094

project mgr: NJM
drawn by: NJD
issue date: 01-21-19

REVISIONS:

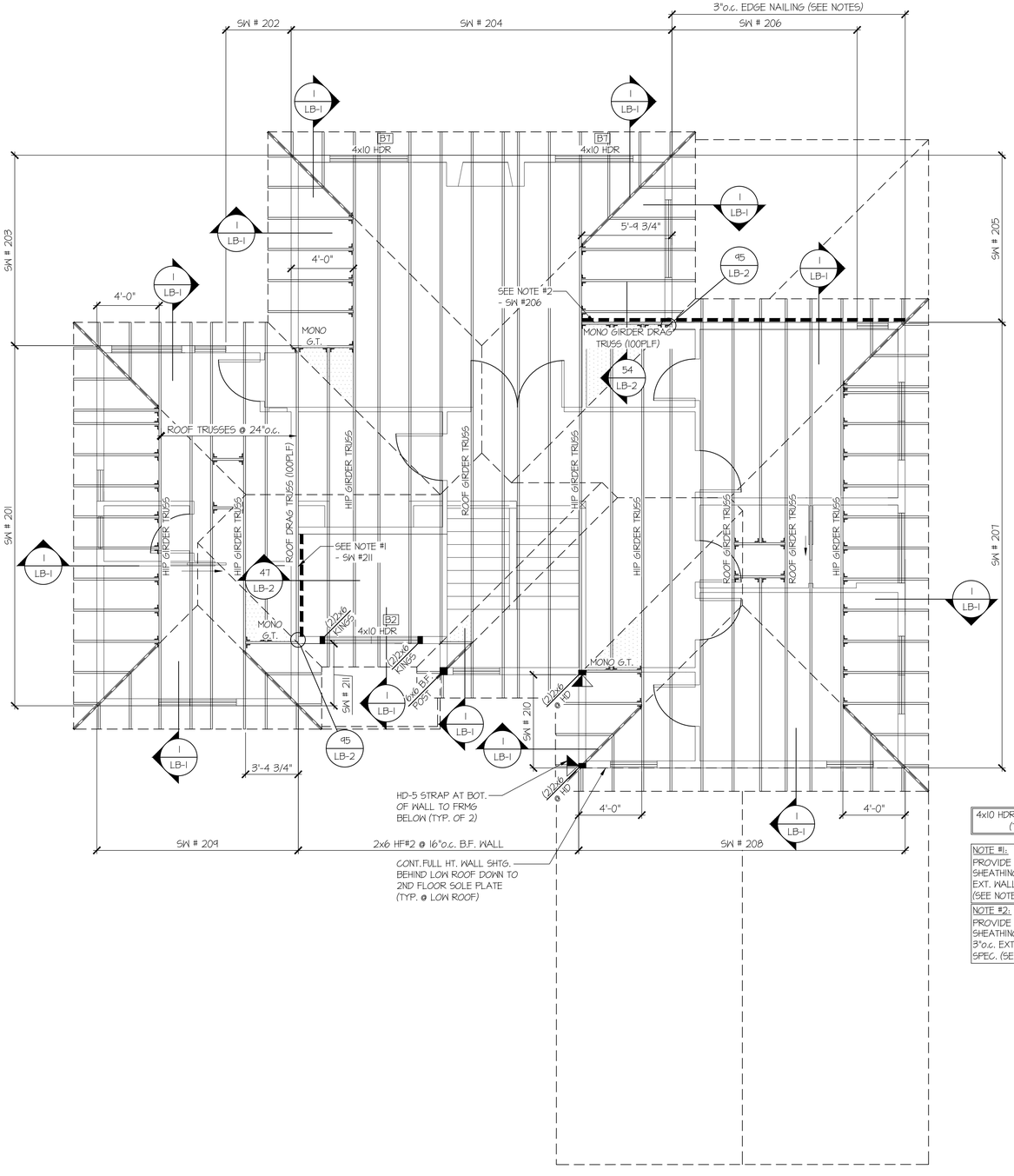
date:	initial:
03/08/2019 ARCH REVISIONS	NJD
02/28/2020 PLAN REVIEW	NJD
08/18/2020 PLAN REVIEW	RJZ

2ND FLR FRMG PLAN

3440 97TH AVE.

MERCER ISLAND, WASHINGTON

sheet: S-2.1



4x10 HDR @ ALL EXT. WINDOW (TYP. U.N.O.) B1

NOTE #1:
PROVIDE 7/16" OSB/ PLYWOOD SHEATHING FASTENED PER TYP. EXT. WALL SHEATHING SPEC. (SEE NOTES)

NOTE #2:
PROVIDE 7/16" OSB/ PLYWOOD SHEATHING FASTENED PER 3"o.c. EXT. WALL SHEATHING SPEC. (SEE NOTES)

ROOF FRAMING PLAN

1/4" = 1'-0"

HOLD-DOWN SCHEDULE

SYMBOL	SPECIFICATION
HD-1	SIMPSON STHD14 (R.U) HOLD-DOWN
HD-5	SIMPSON CS16 STRAP TIE (14" END LENGTH)
HD-6	SIMPSON MSTC40 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)
HD-7	SIMPSON MSTC66 STRAP TIE (CENTER STRAP ON FLOOR SYSTEM U.N.O.)

LEGEND

- INTERIOR BEARING WALL
- BEARING WALL ABOVE (B.W.A.), OR SHEARWALL ABOVE (S.W.A.)
- BEAM / HEADER
- INTERIOR SHEAR WALL PANEL OR EXTERIOR SHEAR WALL w/ 3" o.c. EDGE NAILING
- AREA OF FLOOR SYSTEM DESIGNED FOR TILE
- METAL HANGER
- INDICATES POST ABOVE. PROVIDE SOLID BLOCKING UNDER POST OR JAMB ABOVE.
- INDICATES HOLDOWN.

REFER TO S-0 FOR TYPICAL STRUCTURAL NOTES & SCHEDULES

NICHOLAS J. MARTIGNETTI — STATE OF WASHINGTON — 66478 — REGISTERED PROFESSIONAL ENGINEER

seal:

© copyright : MULHERN & KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Brookside Ave, Building 4 • Ambler, PA 19002
p 215-646-8001 • mulhernkulp.com

M&K project number: 01A-18094

project mgr: NJM
drawn by: NJD
issue date: 01-21-19

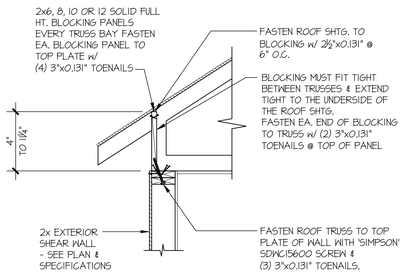
REVISIONS:

date:	initial:
03/08/2019 ARCH REVISIONS	NJD
02/28/2020 PLAN REVIEW	NJD
08/18/2020 PLAN REVIEW	RJZ

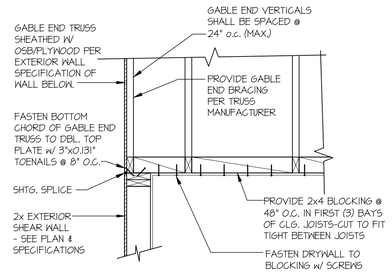
ROOF FRMG. PLAN

3440 97TH AVE.
MERCER ISLAND, WASHINGTON

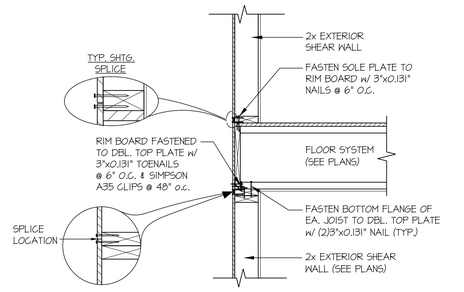
sheet: S-3.0



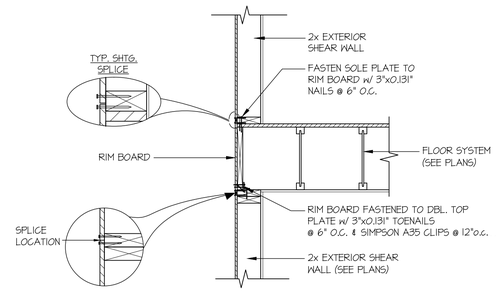
1 **TYPICAL SHEAR TRANSFER DETAIL @ ROOF**
SCALE: 3/4"=1'-0" HEEL HEIGHT BETWEEN 4" - 11¼"



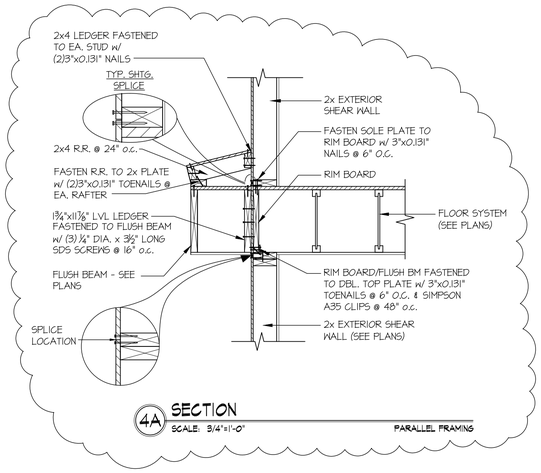
2 **TYPICAL GABLE END DETAIL**
SCALE: 3/4"=1'-0"



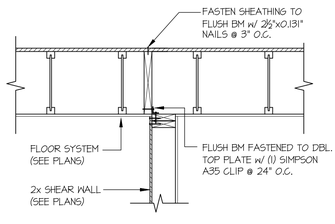
3 **SECTION**
SCALE: 3/4"=1'-0" PERPENDICULAR FRAMING



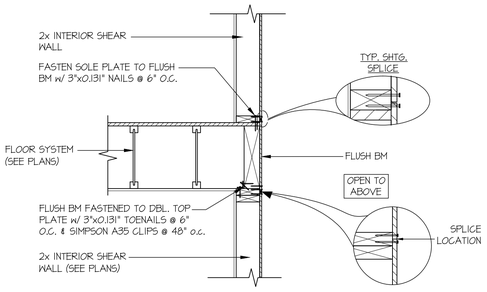
4 **SECTION**
SCALE: 3/4"=1'-0" PARALLEL FRAMING



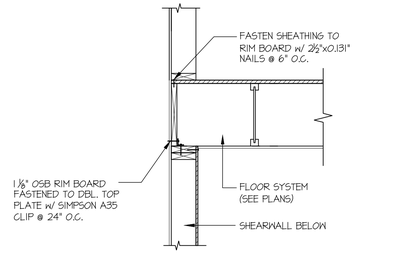
4A **SECTION**
SCALE: 3/4"=1'-0" PARALLEL FRAMING



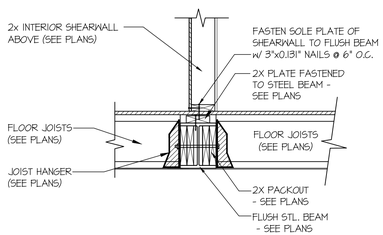
12 **SECTION**
SCALE: 3/4"=1'-0"



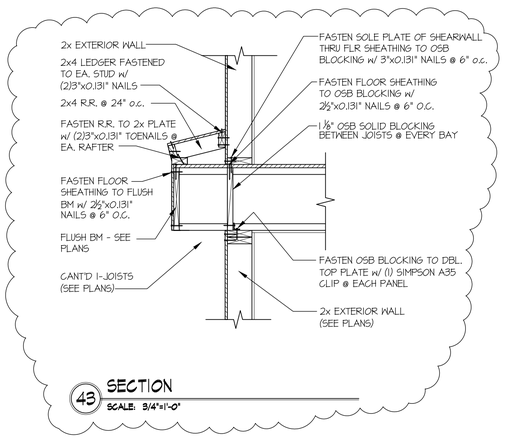
22 **SECTION**
SCALE: 3/4"=1'-0" EDGE OF FRAMING



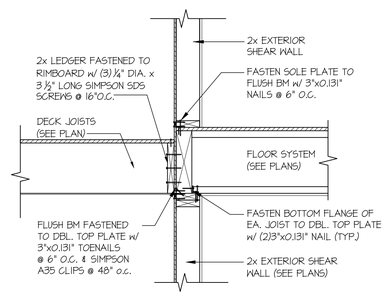
23 **SECTION**
SCALE: 3/4"=1'-0" EDGE OF FRAMING



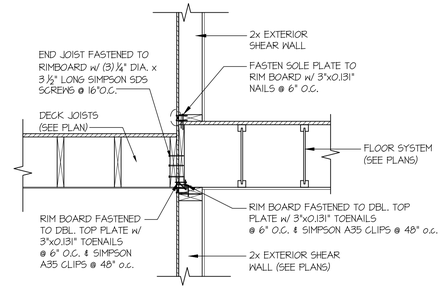
42 **SECTION**
SCALE: 3/4"=1'-0"



43 **SECTION**
SCALE: 3/4"=1'-0"



44 **SECTION**
SCALE: 3/4"=1'-0"



45 **SECTION**
SCALE: 3/4"=1'-0"

seal:

NICHOLAS J. MARTINOTTI
STATE OF WASHINGTON
56478
REGISTERED
PROFESSIONAL ENGINEER

© copyright : MULHERN+KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Brookside Ave, Building 4 • Ambler, PA 19002
p 215-646-8001 • mulhernkulp.com

M&K project number: 01A-18094

project mgr:	NJM
drawn by:	NJD
issue date:	01-21-19

REVISIONS:

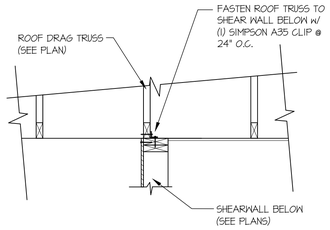
date:	initial:
03/08/2019 AHJ REVISIONS	NJD
02/28/2020 PLAN REVIEW	NJD
08/18/2020 PLAN REVIEW	RJZ

STRUCTURAL DETAILS

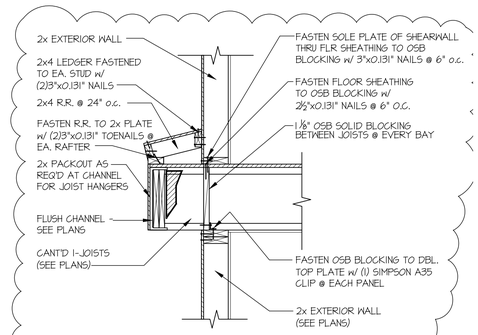
3440 97TH AVE.
MERCER ISLAND, WASHINGTON

sheet:

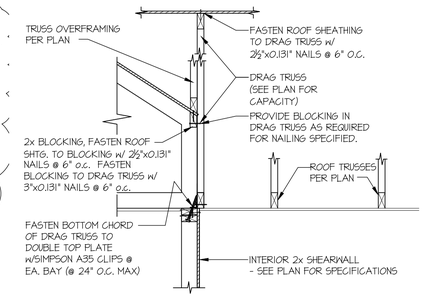
LB-1



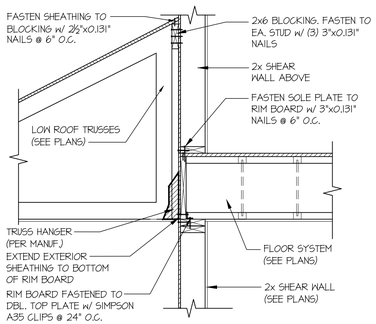
47 SECTION
SCALE: 3/4"=1'-0"



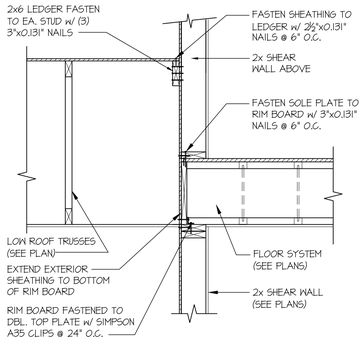
48 SECTION
SCALE: 3/4"=1'-0"



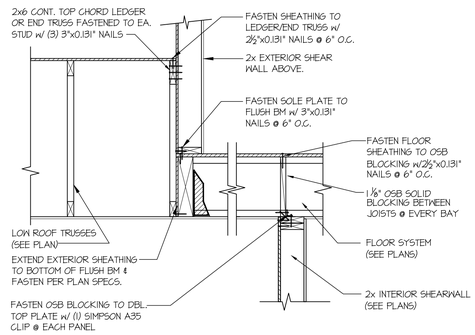
54 SECTION
SCALE: 3/4"=1'-0"



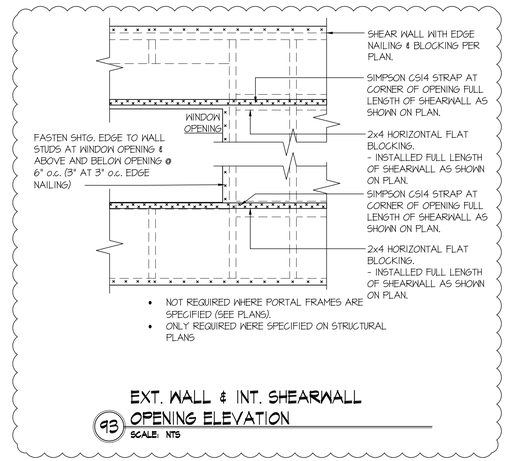
60 SECTION
SCALE: 3/4"=1'-0"



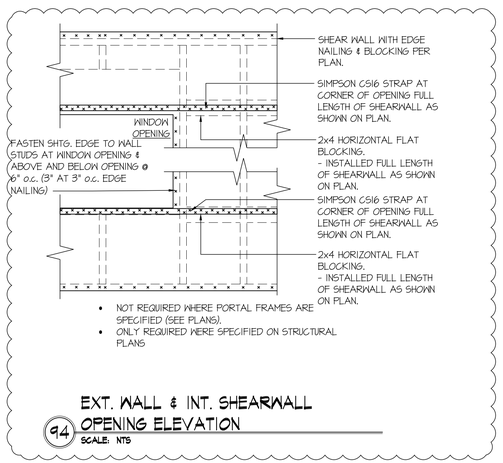
61 SECTION
SCALE: 3/4"=1'-0"



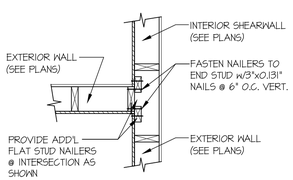
70 SECTION
SCALE: 3/4"=1'-0"



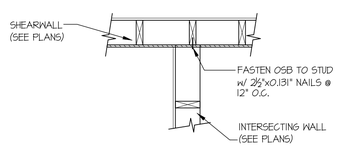
EXT. WALL & INT. SHEARWALL
93 OPENING ELEVATION
SCALE: NTS



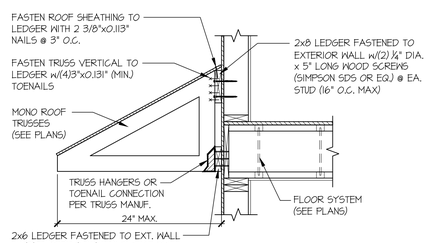
EXT. WALL & INT. SHEARWALL
94 OPENING ELEVATION
SCALE: NTS



SHEAR TRANSFER DETAIL @
95 INTERSECTING INT. SHEARWALL
SCALE: 3/4"=1'-0" SHTG. ON SAME FACE



SHEAR TRANSFER DETAIL @
96 INTERSECTION
SCALE: 3/4"=1'-0"



00 TYPICAL PENT ROOF DETAIL
SCALE: 3/4"=1'-0" (22x34)

seal:

© copyright : MULHERN+KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Brookside Ave, Building 4 • Ambler, PA 19002
p 215-646-8001 • mulhernkulp.com

M&K project number:
01A-18094

project mgr:	NJM
drawn by:	NJD
issue date:	01-21-19

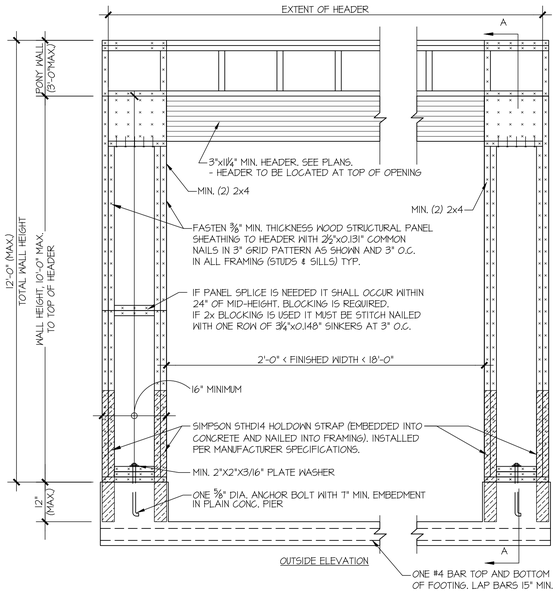
REVISIONS:

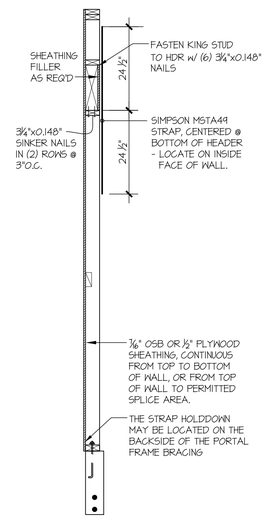
date:	initial:
03/08/2019 AHJ4 REVISIONS	NJD
02/28/2020 PLAN REVIEW	NJD
08/18/2020 PLAN REVIEW	RJZ

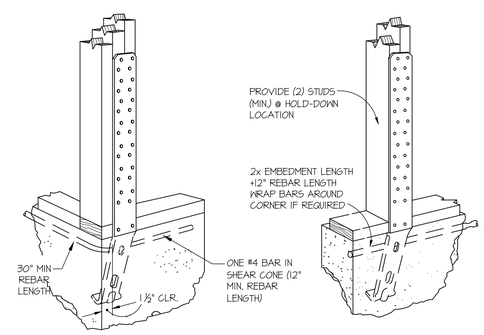
STRUCTURAL DETAILS

3440 97TH AVE.
MERCER ISLAND, WASHINGTON

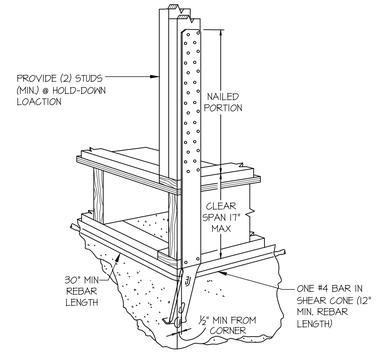
sheet:
LB-2



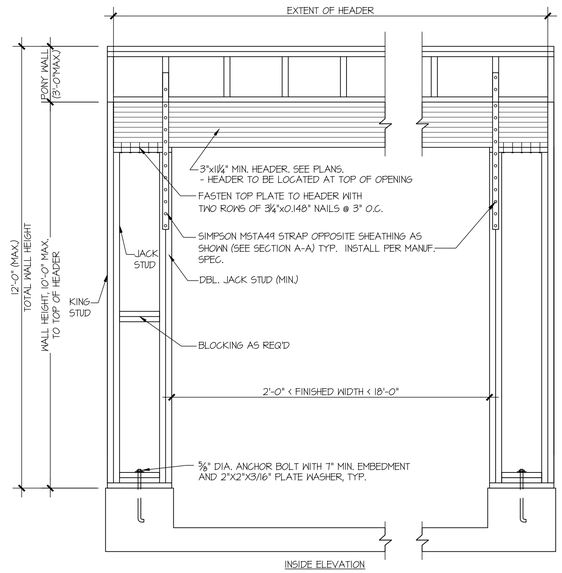


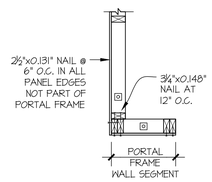


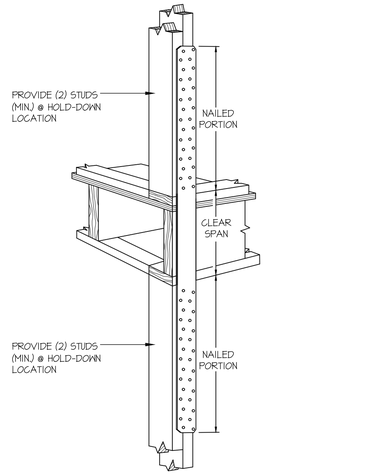
A TYPICAL HOLD-DOWN INSTALLATION
NOT TO SCALE — SIMPSON STHD HD @ FOUNDATION



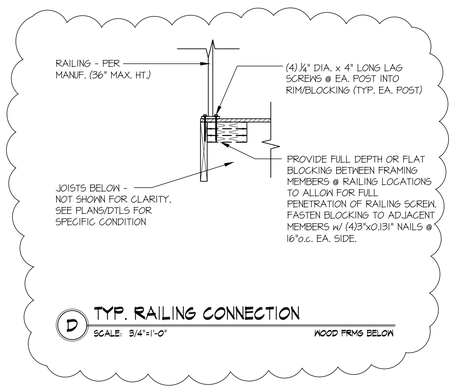
B TYPICAL HOLD-DOWN INSTALLATION
NOT TO SCALE — SIMPSON STHD HD @ FLOOR FRAMING







C TYPICAL HOLD-DOWN INSTALLATION
NOT TO SCALE — SIMPSON STRAP HD @ FLOOR FRAMING



D TYP. RAILING CONNECTION
SCALE: 3/4"=1'-0" — WOOD FRMG BELOW

1 APA PORTAL FRAME DETAIL WITH HOLDOWNS
SCALE: N.T.S.

seal:

© copyright : MULHERN & KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Brookside Ave, Building 4 • Ambler, PA 19002
p 215-646-8001 • mulhernkulp.com

M&K project number: 01A-18094

project mgr: NJM
drawn by: NJD
issue date: 01-21-19

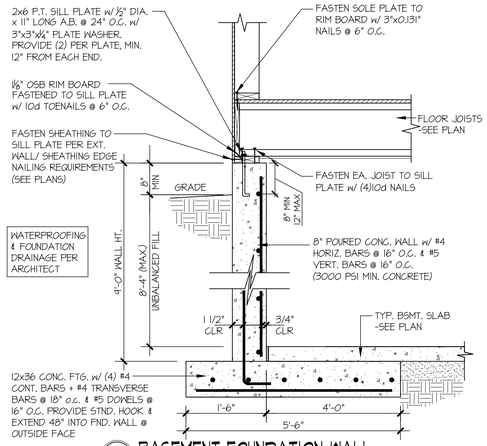
REVISIONS:

date:	initial:
03/08/2019 ARCH REVISIONS	NJD
02/28/2020 PLAN REVIEW	NJD
08/18/2020 PLAN REVIEW	RJZ

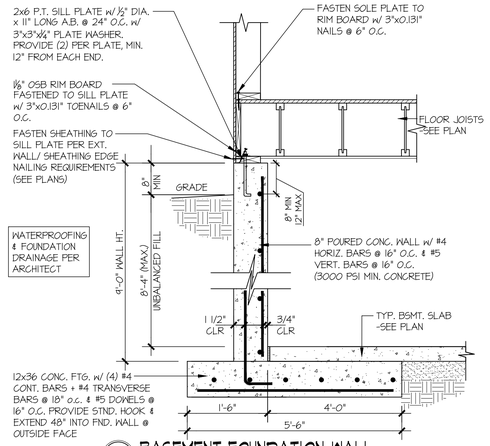
STRUCTURAL DETAILS

3440 97TH AVE.
MERCER ISLAND, WASHINGTON

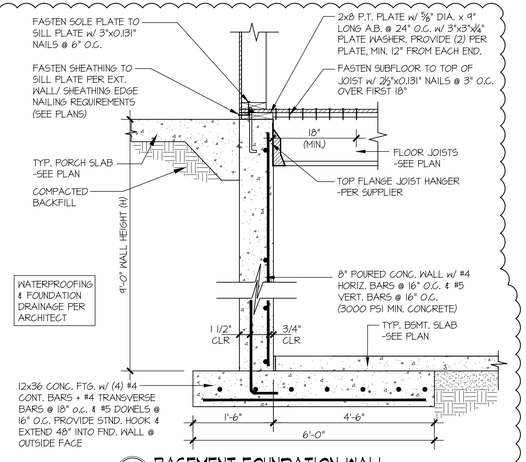
sheet: LB-3



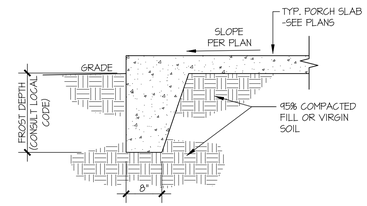
1 BASEMENT FOUNDATION WALL
SCALE: 3/4"=1'-0" 60 PCF SOIL



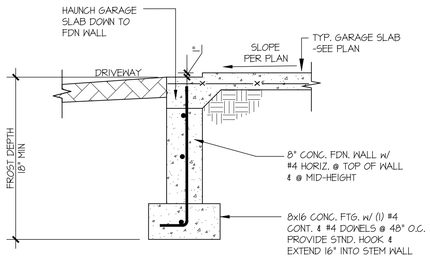
2 BASEMENT FOUNDATION WALL
SCALE: 3/4"=1'-0" 60 PCF SOIL



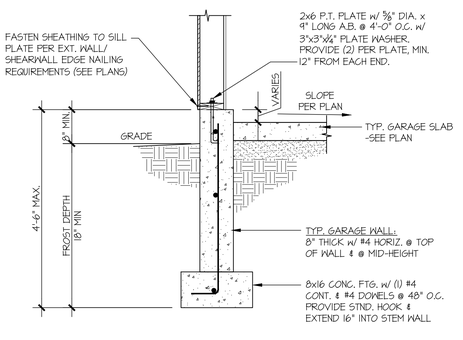
3 BASEMENT FOUNDATION WALL
SCALE: 3/4"=1'-0" W/ PORCH



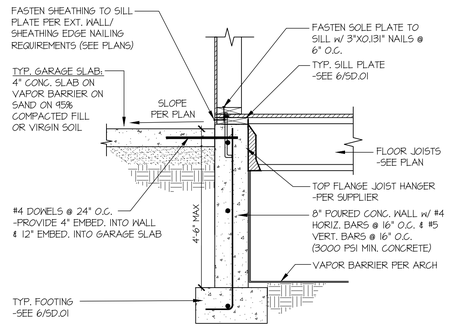
4 TYPICAL FOOTING @ PORCH SLAB
SCALE: 3/4"=1'-0"



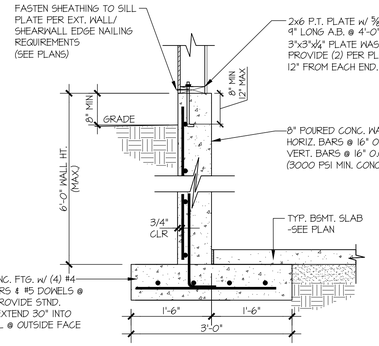
5 TYPICAL CONCRETE FOOTING @ GARAGE DOOR OPENING
SCALE: 3/4"=1'-0"



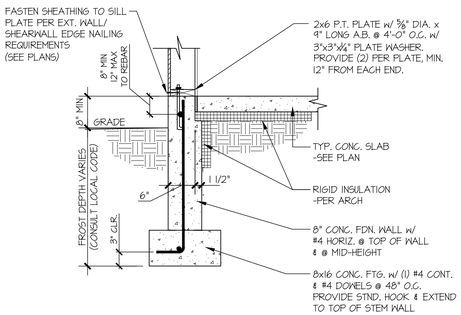
6 TYPICAL EXT. GARAGE FOUNDATION
SCALE: 3/4"=1'-0"



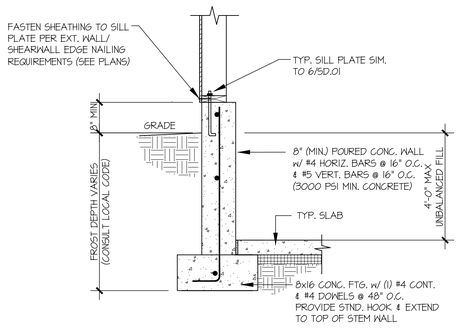
7 TYPICAL CRAWLSPACE FOUNDATION @ GARAGE
SCALE: 3/4"=1'-0"



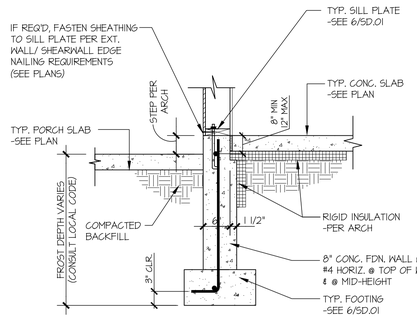
8 CANTILEVERED FOUNDATION WALL
SCALE: 3/4"=1'-0"



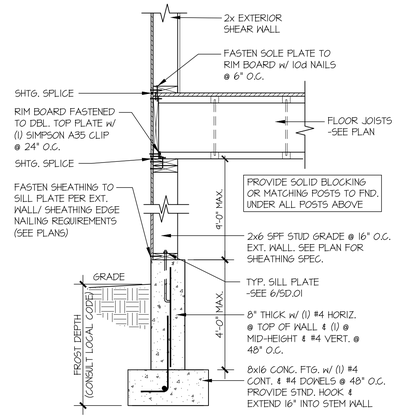
9 TYPICAL SLAB ON GRADE PERIMETER FOOTING
SCALE: 3/4"=1'-0"



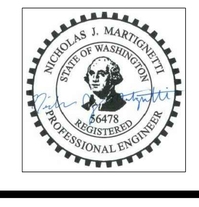
10 WOOD WALL @ LOW GRADE
SCALE: 3/4"=1'-0"



11 TYPICAL SLAB ON GRADE FOOTING @ GARAGE
SCALE: 3/4"=1'-0"



12 ALT. WOOD WALL @ LOW GRADE
SCALE: 3/4"=1'-0"



seal:

© copyright : MULHERN & KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Brookside Ave, Building 4 • Ambler, PA 19002
p 215-646-8001 • mulhernkulp.com

M&K project number: 01A-18094

project mgr:	NJM
drawn by:	NJD
issue date:	01-21-19

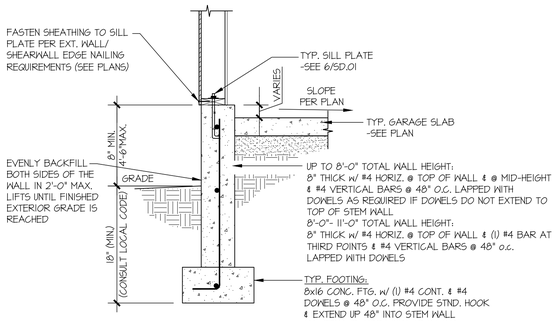
REVISIONS:

date:	initial:
03/08/2019 ARCH REVISIONS	NJD
02/28/2020 PLAN REVIEW	NJD
08/18/2020 PLAN REVIEW	R.JZ

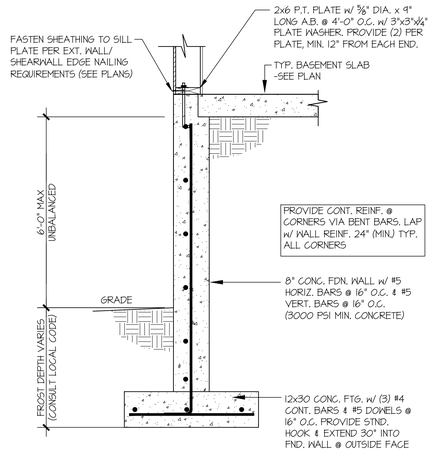
FOUNDATION DETAILS

3440 97TH AVE.
MERCER ISLAND, WASHINGTON

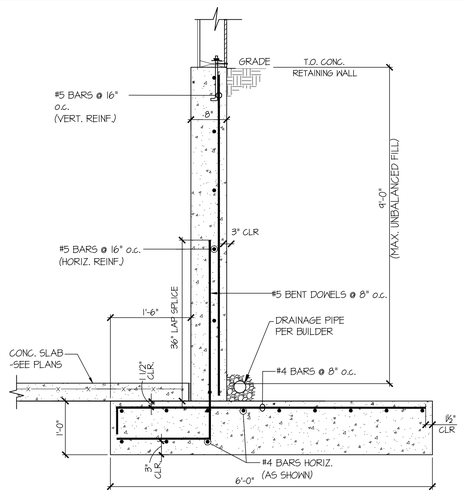
sheet: SD.01



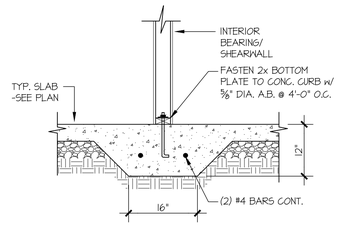
13 TYPICAL EXT. GARAGE FOUNDATION
SCALE: 3/4"=1'-0"



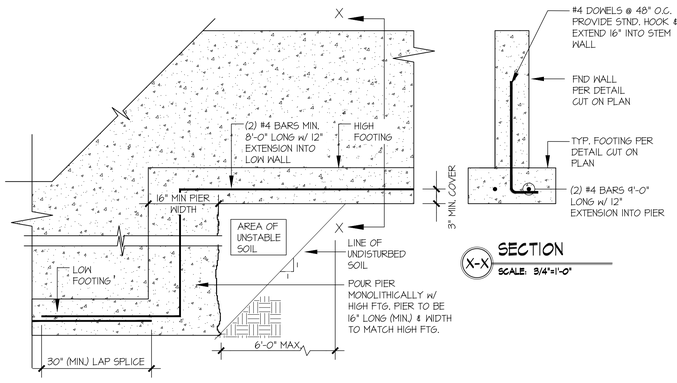
14 SECTION
SCALE: 3/4"=1'-0"



15 CONCRETE RETAINING WALL AT STAIRS
SCALE: 3/4"=1'-0"

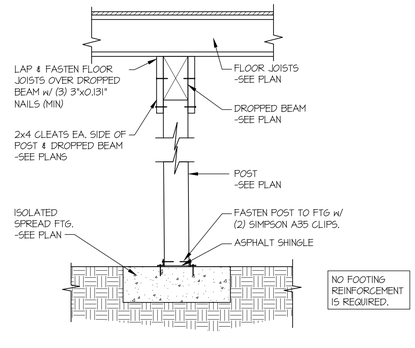


16 TYPICAL THICKENED SLAB @ INTERIOR BEARING WALL
SCALE: 3/4"=1'-0"

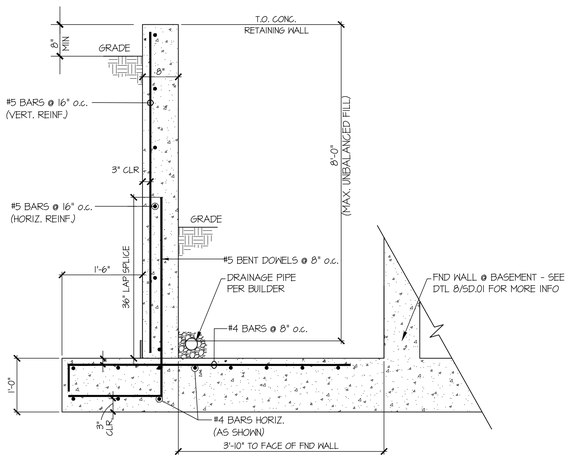


X-X SECTION
SCALE: 3/4"=1'-0"

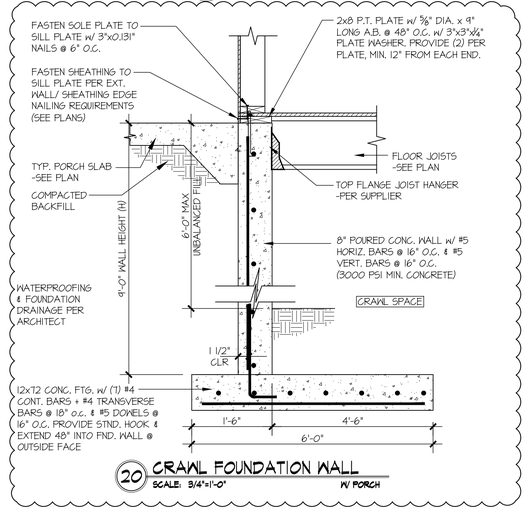
17 TYPICAL STEPPED FOOTING
SCALE: 3/4"=1'-0"



18 TYPICAL CRAWL SPACE FOOTING DETAIL
SCALE: 3/4"=1'-0"



19 CONCRETE RETAINING WALL AT EGRESS
SCALE: 3/4"=1'-0"



20 CRAWL FOUNDATION WALL
SCALE: 3/4"=1'-0" W/ PORCH

seal:

© copyright : MULHERN & KULP Structural Engineering, Inc.

MULHERN+KULP
RESIDENTIAL STRUCTURAL ENGINEERING
300 Brookside Ave, Building 4 • Ambler, PA 19002
p 215-646-8001 • mulhernkulp.com

M&K project number: 01A-18094

project mgr:	NJM
drawn by:	NJD
issue date:	01-21-19

REVISIONS:

date:	initial:
03/08/2019 ARCH REVISIONS	NJD
02/28/2020 PLAN REVIEW	NJD
08/18/2020 PLAN REVIEW	R.JZ

FOUNDATION DETAILS

3440 97TH AVE.
MERCER ISLAND, WASHINGTON

sheet:
SD.02