# RUDOLF RESIDENCE

# 8253 W MERCER WAY MERCER ISLAND, WA 98040

**OWNER** 

CONSULTANTS

**ARCHITECT** 

206.390.1800

TRWEBB HOMES

SEATTLE. WA 98177

JAMES RUDOLF 500 108TH AVE NE, SUITE 905 BELLEVUE, WA 98004 646.773.2018

**CIVIL ENGINEER** CG ENGINEERING 10303 14TH AVE NW 250 4TH AVE S, SUITE 200 EDMONDS, WA 98020

CG ENGINEERING 250 4TH AVE S, SUITE 200 EDMONDS, WA 98020 425.778.8500 FAX 778.5536 425.778.8500 FAX 778.5536 CONTACT: JARED UNDERBRINK CONTACT: JOE GALUSHA

STRUCTURAL ENGINEER SOIL/GEOTECH ENGINEER GEOTECH CONSULTANTS, INC. 13256 NE 20TH ST, SUITE 16 BELLEVUE, WA 98005 425.747.5618 CONTACT: ROBERT WARD

SURVEYOR LANKTREE LAND SURVEYING, INC 421 "B" ST NE **AUBURN, WA 98002** 253.653.6423

### LEGAL DESCRIPTION

(PER FIDELITY NATIONAL TITLE INSURANCE COMPANY SUBDIVISION GUARANTEE NO. 611086191, DATED SEPTEMBER 10, 2014 AT 12:00AM)

### FOR AUDITOR'S PARCEL NUMBER: 335850 0490

THAT PORTION OF TRACT 572. C. D. HILLMAN'S SEA SHORE - LAKE FRONT GARDEN OF EDEN ADDITION TO THE CITY OF SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 12 OF PLATS. PAGE(S) 44. IN KING COUNTY, WASHINGTON DESCRIBED AS FOLLOWS:

BEGINNING AT AN IRON POST LOCATED AT THE MOST NORTHERLY CORNER OF TRACT 572, SAID IRON POST BEING LOCATED SOUTH 41°40' WEST A DISTANCE OF 37.00 FEET FROM AN INTERSECTION WITH THE CENTERLINE TANGENT PRODUCED OF WEST MERCER WAY, SAID TANGENT HAVING A BEARING OF 50° EAST, AND SAID POST BEING THE INTERSECTION OF THE NORTHWESTERLY MARGIN OF TRAC 572 AND THE SOUTHWESTERLY MARGIN OF COUNTY ROAD (WEST MERCER WAY) RECORDED UNDER RECORDING NUMBER 928842, IN KING COUNTY, WASHINGTON,

AND THE TRUE POINT OF BEGINNING; THENCE SOUTH 41°40' WEST A DISTANCE OF 230.33 FEET: THENCE SOUTH 46°44'44" EAST A DISTANCE OF 100.12 FEET:

THENCE NORTH 41°38'48" EAST A DISTANCE OF 230.33 FEET TO THE SOUTHERLY MARGIN OF WEST MERCER WAY; THENCE NORTH 46°44'44" WEST A DISTANCE OF 100.00 FEET TO THE POINT OF

### SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

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	CIVIL
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C2.1	TEMPORARY EROSION CONTROL PLAN
C3.1	GRADING & DRAINAGE PLAN
C3.2	TREE PLAN
C4.1	WATER & SEWER PLAN

			SURVEY	
	1	SURVEY		
	2	SURVEY		
11			CITE MAILIC	

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١	SW1.2	SITE WALL KEY PLAN
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	ARCHITECTURE
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S7.2	STEEL FRAMING DETAILS

### BASIS OF ELEVATION

**CAUTION!** 

CALL BEFORE YOU DIG!

BURIED UTILITIES EXIST IN THE AREA AND UTILITY

INFORMATION SHOWN MAY NOT BE COMPLETE. CONTACT

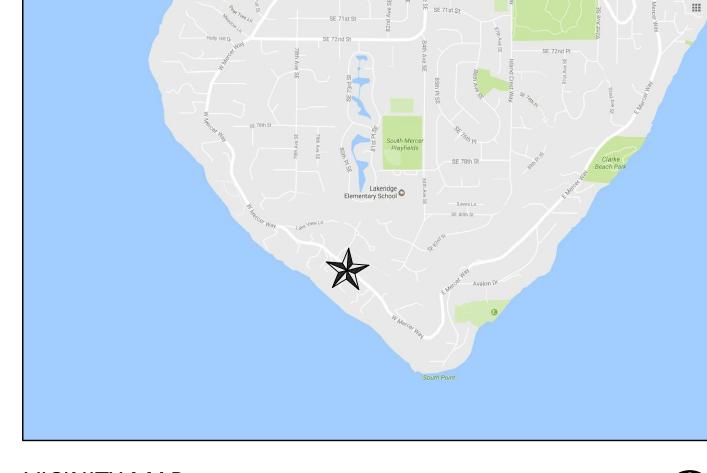
THE ONE- CALL UTILITY LOCATE SERVICE A MINIMUM OF 48

HOURS PRIOR TO CONSTRUCTION

1-800-424-5555

**VERTICAL DATUM FOR THIS SURVEY IS NAVD88** PER CITY OF MERCER ISLAND. CITY OF MERCER ISLAND CONTROL POINT NO. 4332 WAS HELD FOR ELEVATION, BEING 140.594'

PARCEL NUMBER



VICINITY MAP

**EDMONDS, WASHINGTON 98020** 

PHONE (425) 778-8500

FAX (425) 778-5536

DESCRIPTION	PERMIT SUBMITTAL	PERMIT RESUBMITTAL	PERMIT SUBMITTAL	PERMIT RESUBMITTAL					
DATE	04/05/17	03/07/18	05/11/18	06/08/18	01/18/19	05/07/19	07/18/19	08/12/19	
MARK									
DE	SIC	N:						_	/D
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JO	В	NO	:			15	522	27.2	20
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04/05/1

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SHEET:

# **GENERAL NOTES**

### 1. STANDARD SPECIFICATIONS

APPROVAL BY THE CITY OF MERCER ISLAND

- A. ALL WORK TO BE PERFORMED AND MATERIALS TO BE USED SHALL BE IN ACCORDANCE WITH THE WSDOT/APWA 2016 STANDARD SPECIFICATIONS AND STANDARD PLANS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, AS APPLICABLE AND AS MODIFIED BELOW, AND UNLESS OTHERWISE NOTED, SHALL BE SUBJECT TO INSPECTION AND
- B. LOCAL AMENDMENTS TO THE STANDARD SPECIFICATIONS, CONSISTING OF STANDARD DRAWINGS AND SPECIAL TECHNICAL CONDITIONS ARE REFERENCED IN THESE NOTES. COPIES OF THESE DOCUMENTS ARE AVAILABLE AT THE OFFICE OF THE CITY ENGINEER, CITY OF MERCER ISLAND, 9611 SE 36TH STREET, MERCER ISLAND, WA 98040. C. THESE SPECIFICATIONS SHALL BE APPLICABLE FOR, BUT NOT LIMITED TO, PUBLIC AND
- PRIVATE STREETS, DRIVEWAYS, PARKING LOTS, COMMERCIAL AND INDUSTRIAL DEVELOPMENTS, APARTMENTS, ETC. WORK IN PRIVATE DEVELOPMENTS SHALL CONFORM TO THE SAME STANDARDS OF WORKMANSHIP AND MATERIALS AS ARE SPECIFIED WITHIN THE CITY RIGHT-OF-WAY, EXCEPT AS INDICATED ON THE PLANS.
- PRIOR TO CONSTRUCTION, AND IN ADDITION TO ANY OTHER PERMITS REQUIRED, A CITY OF MERCER ISLAND "STREET USE PERMIT" MUST BE OBTAINED FOR ANY AND ALL WORK WITHIN THE CITY RIGHT-OF-WAY.
- IT IS A REQUIREMENT OF THE CITY OF MERCER ISLAND ENGINEERING DEPARTMENT, THAT AN APPROVED SET OF CONSTRUCTION PLANS FOR ALL WORK BE KEPT ON THE CONSTRUCTION SITE AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
- TAPED INSPECTION LINE) SHALL BE NOTIFIED24-HOURS PRIOR TO STARTING ANY TYPE OF CONSTRUCTION INCLUDING CLEARING, SANITARY SEWERS, WATER MAINS, STORM DRAINS,

CURB AND UTTERS. SIDEWALKS. DRIVEWAYS. STREET GRADING AND PAVING.

### **CONTROL OF MATERIAL**

THE SOURCE OF SUPPLY AND A DETAILED LIST OF EACH LIST OF EACH OF THE MATERIALS FURNISHED BY THE CONTRACTOR SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO DELIVER. ONLY MATERIALS CONFORMING TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPROVED BY THE CITY SHALL BE USED IN THE WORK. TESTING OF MATERIALS MAY INCLUDE TESTS OF ACTUAL SAMPLES, MANUFACTURER'S CERTIFICATIONS, APPROVAL OF CATALOGUE CUTS, OR FIELD ACCEPTANCE REPORTS. TESTING OF MATERIALS FOR INCORPORATION IN PRIVATE WORK SHALL BE PERFORMED AT OTHER THAN CITY EXPENSE.

### **EROSION AND SEDIMENTATION CONTROL**

- 1. THE IMPLEMENTATION OF THESE EROSION SEDIMENTATION CONTROL (ESC) PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE PERMIT HOLDER/CONTRACTOR UNTIL ALL CONSTRUCTION IS
- 2. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES IN SUCH A MANNER AS TO INSURE THAT SEDIMENT-LADEN WATER DIES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS, AND MUST BE COMPLETED PRIOR TO ALL OTHER CONSTRUCTION.
- 3. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED (E.G. ADDITIONAL SUMPS, RELOCATION OF DITCHES AND SILT FENCES), AS NEEDED FOR UNEXPECTED STORM EVENTS. ADDITIONALLY MORE ESC FACILITIES MAY BE REQUIRED TO ENSURE COMPLETE SILTATION CONTROL. THEREFORE, DURING THE COURSE OF CONSTRUCTION IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES OVER AND ABOVE THE MINIMUM REQUIREMENTS AS MAY BE NEEDED.
- 4. THE ESC FACILITIES SHALL BE INSPECTED DAILY DURING NONRAINFALL PERIODS, EVERY HOUR (DAYLIGHT) DURING A RAINFALL EVENT AND AT THE END OF EVERY RAINFALL BY THE PERMIT HOLDER/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING. IN ADDITION, TEMP. SILTATION PONDS AND ALL TEMP. SILTATION CONTROLS SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND OR CONSTRUCTION IS COMPLETED, PERMANENT DRAINAGE FACILITIES ARE OPERATIONAL, AND THE POTENTIAL FOR EROSION HAS PASSED.
- ANY AREA STRIPPED OF VEGETATION, INCLUDING ROADWAY EMBANKMENTS WHERE NO FURTHER WORK IS ANTICIPATED FOR A PERIOD OF SEVEN (7) DAYS, SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G. SEEDING, MULCHING, NETTING, EROSION BLANKETS, ETC...).
- 6. ANY AREAS NEEDING ESC MEASURE, NOT REQUIRING IMMEDIATE ATTENTION, SHALL BE
- 7. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A STORM EVENT.
- 8. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER DOWNSTREAM SYSTEM.
- 9. STABILIZED CONSTRUCTION ENTRANCES AND WASH PADS SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL REQUIREMENTS SHALL BE ENFORCED BY THE INSPECTOR TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN OF SILT FROM CONSTRUCTION VEHICLES.
- 10. WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS REQUIRED, FAST GERMINATING GRASSES SHALL BE APPLIED AT AN APPROPRIATE RATE. (E.G. ANNUAL OR PERENNIAL RYE APPLIED AT APPROXIMATELY 80 POUNDS PER ACRE)

### **EROSION AND SEDIMENTATION CONTROL (CONT)**

- 11. WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS REQUIRED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF THREE INCHES.
- 12. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF MERCER ISLAND STANDARDS AND SPECIFICATIONS.
- 13. EROSION/SEDIMENTATION CONTROL FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS IF DEPARTMENT OF ECOLOGY STORMWATER MANAGEMENT MANUAL, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- 14. A COPY OF THE APPROVED EROSION CONTROL PLANS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- 15. TEMPORARY EROSION/SEDIMENTATION CONTROLS SHALL BE INSTALLED AND OPERATING PRIOR TO ANY GRADING OR LAND CLEARING.
- 16. WHEREVER POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.
- 17. ALL CUT AND FILL SLOPES 5:1 (5 FEET HORIZONTAL TO 1 FOOT VERTICAL) OR STEEPER THAT WILL BE LEFT EXPOSED FOR MORE THAN 7 DAYS SHALL BE PROTECTED BY JUTE MATTING, PLASTIC SHEETING, MULCH, OR OTHER APPROVED STABILIZATION METHOD AND PROVIDED WITH ADEQUATE RUNOFF CONVEYANCE TO INTERCEPT RUNOFF AND CONVEY IT TO AN APPROVED STORM DRAIN.
- 18. OFF-SITE STREETS MUST BE KEPT CLEAN AT ALL TIMES. IF DIRT IS DEPOSITED ON THE PUBLIC STREET, THE STREET SHALL BE CLEANED. ALL VEHICLES SHALL LEAVE THE SITE BY WAY OF THE CONSTRUCTION VEHICLE ENTRANCE AND SHALL BE CLEANED OF MUD PRIOR TO EXITING ONTO THE STREET. SILT SHALL BE CLEANED FROM ALL CATCH BASINS WHEN THE BOTTOM HALF BECOMES FILLED WITH SILT.
- 19. ANY CATCH BASIN COLLECTING WATER FROM THE SITE, WHETHER THEY ARE ON OR OFF OF THE SITE, SHALL HAVE THEIR GRATES COVERED WITH FILTER FABRIC DURING CONSTRUCTION
- 20. WASHED GRAVEL BACKFILL ADJACENT TO THE FILTER FABRIC FENCES SHALL BE REPLACED AND HE FABRIC CLEANED IF CLOGGED BY SILT. ALL INTERCEPTOR SWALES SHALL BE CLEANED IF SILT ACCUMULATION EXCEEDS ONE-QUARTER DEPTH.
- 21. IF ANY PORTION OF THE EROSION/SEDIMENTATION CONTROL ELEMENTS ARE DAMAGED OR NOT FUNCTIONING, OR IF THE CLEARING LIMIT BOUNDARY BECOMES NON-DEFINED, IT SHALL BE REPAIRED IMMEDIATELY.

### STORM DRAINAGE CONSTRUCTION

- STORM DRAINAGE PIPE: PIPE SHALL BE CONCRETE OR ALUMINUM METAL, WITHIN THE PUBLIC RIGHT OF WAY. CONCRETE PIPE UP TO AND INCLUDING 24" DIAMETER SHALL BE UNREINFORCED AND SHALL CONFORM TO ASTM C-14. TABLE II, EXTRA STRENGTH, RUBBER GASKETED. CORRUGATED ALUMINUM ALLOY CULVERT PIPE SHALL BE AASHTO M-196, M-197, M-211, AND M-219, HELICAL, GAUGES AND TYPES SHALL BE AS NOTED ON THE PLANS. REINFORCED PIPE SHALL CONFORM TO ASTM DESIGNATION C-76 UNLESS OTHERWISE SPECIFIED. STORM SEWER DETENTION PIPE GREATER THAN 24" DIAMETER SHALL BE RUBBER GASKETED, HELICAL CORRUGATED ALUMINUM PIPE. BEDDING TO BE CLASS "C". GAUGE OF PIPE WILL BE AS SHOWN ON THE PLANS. INSTALLATION SHALL BE IN ACCORDANCE WITH SECTION 7-04 OF THE
- OTHER MATERIALS FOR STORM DRAINAGE CONSTRUCTION REQUIRE WRITTEN APPROVAL OF THE CITY ENGINEER.
- 3. BACKFILL RESTRICTIONS:
- A. BEDDING SHALL CONFORM TO STANDARD PLAN B-11 B. MINIMUM COVER OVER STORM DRAIN SHALL BE 18".

SPECIFICATIONS AND MAY BE SUBJECT TO EXFILTRATION TEST.

C. TRENCH BACKFILL COMPACTED TO 95% OF MAXIMUM DENSITY SHALL BE REQUIRED WHEREVER TRENCH EXCAVATION IS MADE IN PAVED ROADWAY, SIDEWALK OR ANY OTHER AREA WHERE MINOR SETTLEMENT WOULD BE DETRIMENTAL.

### 4. CATCH BASIN:

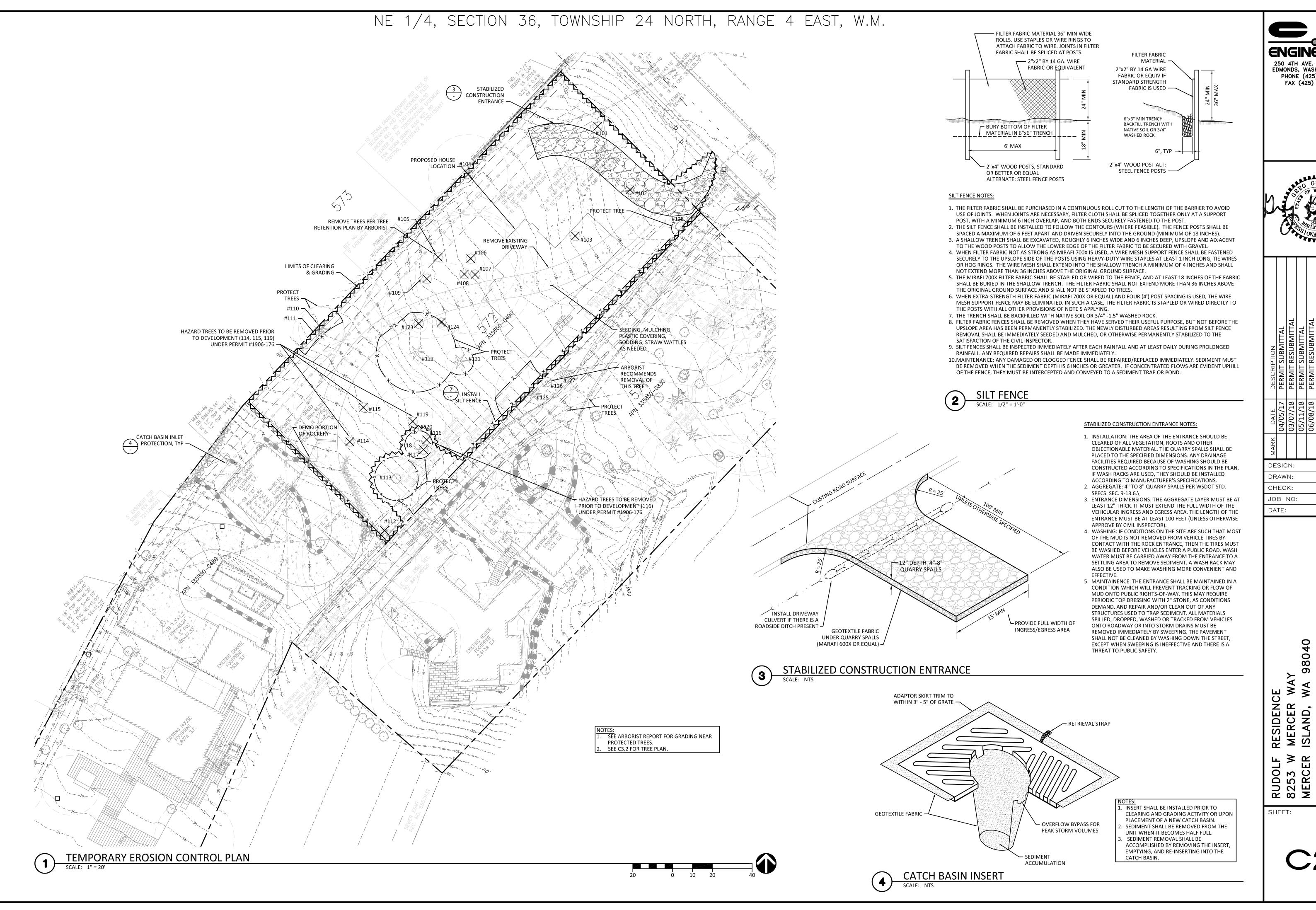
- A. TYPE 1, CATCH BASIN INLET SHALL CONFORM TO SECTION 7-05 OF THE STANDARD SPECIFICATIONS AND AS SHOWN ON STANDARD PLAN B-1. THE MAXIMUM DISTANCE TO INVERT IS 5'0" WITH A MAXIMUM PIPE DIAMETER UP TO 15" FOR CONCRETE PIPE, 18" FOR CMP. THE GRIT DROP CHAMBER IS A MINIMUM OF 18".
- B. TYPE 2, CATCH BASIN INLET SHALL CONFORM TO SECTION 7-05 OF THE STANDARD SPECIFICATION AND AS SHOWN ON STANDARD PLAN B-1B. MAXIMUM PIPE DIAMETER OF 24" FOR CONCRETE PIPE, 30' FOR CMP; A MINIMUM OF 8" BETWEEN HOLES. THE GRIT DROP CHAMBER IS A MINIMUM OF 24".
- CURB INLETS SHALL CONFORM TO SECTION 8-04 OF THE STANDARD SPECIFICATIONS AND AS SHOWN ON STANDARD PLAN B-41.

- A. COVERS FOR CATCH BASINS AND INLETS SHALL CONFORM TO OLYMPIC FOUNDRY CO. #SM50G OR EQUAL FOR SLOPES LESS THAN 3%. WHERE SLOPES EXCEED 3%, USE OLYMPIC FOUNDRY CO. #SM50V. GRATES SHALL BE DUCTILE IRON AND HAVE THE LETTERS "DUCTS" CAST IN THE COVER.
- B. SOLID COVERS FOR MANHOLES, WHERE PERMITTED, SHALL BE 24" DIAMETER, WITH "DRAIN" CAST IN COVER IN 2" LETTERS, CONFORMING TO OLYMPIC FOUNDRY CO. MH43, INLAND FOUNDRY NO. 835, OR APPROVED EQUAL.
- C. DRAINAGE STRUCTURES NOT WITHIN PUBLIC RIGHT-OF-WAY SHALL HAVE LOCKING LIDS.

FRAMES FOR CATCH BASINS AND INLETS SHALL BE OF CAST IRON OR DUCTILE IRON CONFORMING TO OLYMPIC FOUNDRY CO. SM50 OR EQUAL. VANED GRATES(SM50V) SHALL BE INSTALLED WHERE SHOWN ON THE PLANS, EXCEPT THROUGH-CURB INLET FRAMES WHICH SHALL CONFORM TO OLYMPIC FOUNDRY CO. SM52 OR EQUAL.

### LEGEND DESCRIPTION **EXISTING PROPOSED ABBREVIATIONS** PROPERTY LINE ABANDONED MIN MINIMUM ABN ADJACENT PROPERTY LINE BUILDING MJ MECHANICAL JOINT CENTERLINE MON MONUMENT BOTTOM OF WALI CLEARING LIMITS NTS NOT TO SCALE <del>^</del> CENTERLINE SILT FENCE CATCH BASIN OC ON CENTER **CONTOUR LINE** CORRUGATED METAL PIPE PC POINT OF CURVATURE \_\_\_\_\_\_ POINT OF INTERSECTION SANITARY SEWER LINE $- \rightarrow - - SS - \rightarrow - - SS - -$ CONC POST INDICATOR VALVE MANHOLE CONST | CONSTRUCTION PROPERTY LINE STORM DRAIN MAIN **CONCRETE PIPE** POINT OF TANGENCY $- \rightarrow - - SD - \rightarrow - - SD - - -$ STORM DRAIN PIPE PVC POLYVINYL CHLORIDE PIPE CU YD CUBIC YARD POINT OF VERTICAL DOUBLE DETECTOR CHECK ROOF DRAIN INTERSECTION **VALVE ASSEMBLY** FOOTING DRAIN PVMT | PAVEMENT PRESSURE LINE PVT POINT OF VERTICAL TANG. DIAMETER --P---P---P-CATCH BASIN (TYPE 1) RADIUS DUCTILE IRON PIPE CATCH BASIN (TYPE 2) REINF REINFORCEMENT CLEANOUT | Expansion Join | RESTRAINED JOINT ELEV ELEVATION **CLEANOUT AND WYE** RET RETAINING GRADE BREAK EDGE OF PAVEMENT RIGHT |-------- - - - - - - -SURFACE SWALE EXISTING SD STORM DRAIN **>---** · · **>---**DRAINAGE ARROW FIRE DEPT. CONNECTION SECT SECTION WATER LINE FINISHED FLOOR ELEVATION SDMH | STORM DRAIN MANHOLE --- - WA--- WA WATER METER FIRE HYDRANT 0 SQ SQUARE FIRE HYDRANT FLANGE FEET/FOOT SANITARY SEWER SANITARY SEWER GATE VALVE MANHOLE GATE VALVE HIGH POINT X STA STATION STD STANDARD HEIGHT 90° BEND INSIDE DIAMETER STL STEEL THRUST BLOCKING INVERT ELEVATION THRUST BLOCK TB LENGTH/LINE TOC TOP OF CURB LINED CORRUGATED TOW TOP OF WALL CONCRETE PAVEMENT POLYETHYLENE PIPE ASPHALT PAVEMENT LINEAL FOOT TOP TOP ELEVATION CRUSHED SURFACING TYP TYPICAL LOW POINT ROCKERY LEFT VC VERTICAL CURVE 000000000 **~** 20.0 SPOT ELEVATION MAX MAXIMUM W/ WITH TELEPHONE LINE MECH MECHANICAL WM WATER METER POWER LINE MANHOLE GAS LINE --- G--- G--- G-

١		LANDSCAPE
	L1.1	PLANTING PLAN & DETAILS
	L2.1	PLANTING SPECIFICATIONS & STANDARDS
1	L2.2	IRRIGATION SPECIFICATIONS







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04/05/17

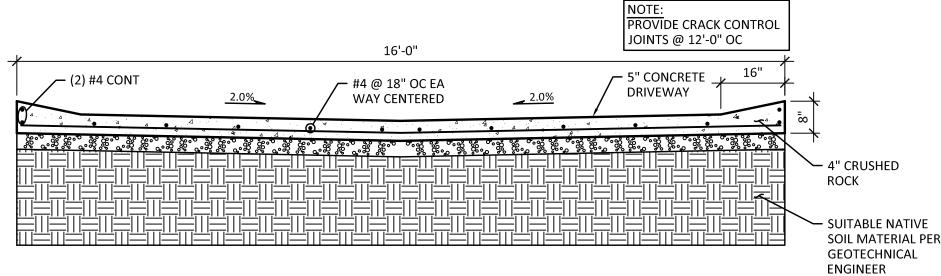


IMPERVIOUS AREAS (SF): = 5,836

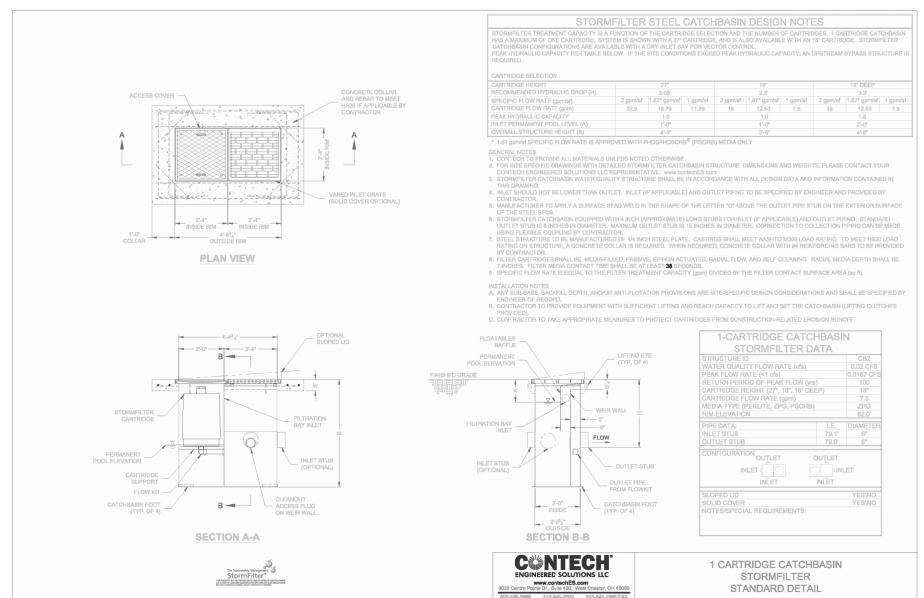
= 2,493 = 8,329 \*NOTE: REFER TO ARCH PLANS FOR LOT COVERAGE CALCULATION

4" DIA PERFORATED PVC PIPE WITH 6" OF 1" MINUS GRAVEL 8" MIN FROM WOOD. ALL AROUND, WRAPPED IN SEE STRUCTURAL DRAWINGS NON-WOVEN GEOTEXTILE FABRIC, SLOPE AT 0.5% MIN. TURN DOWN PERFORATIONS AS SHOWN — FINISHED GRADE -6" DOWNSPOUT TIGHTLINE TO CONVEYANCE SYSTEM @ 0.5% MIN. PLACE NEXT TO FOOTING DRAIN OR AS SHOWN ON GRADING & DRAINAGE PLAN (CONTRACTOR MAY LOCATE ON EITHER SIDE OF FOOTING DRAIN) — LINE OF MAX EXCAVATION. IF SOIL IS OVEREXCAVATED, REPLACE WITH LEAN MIX CONCRETE -► FOOTING

FOOTING AND ROOF DRAIN SECTION



TYPICAL DRIVEWAY CROSS SECTION



STORMFILTER DETAIL

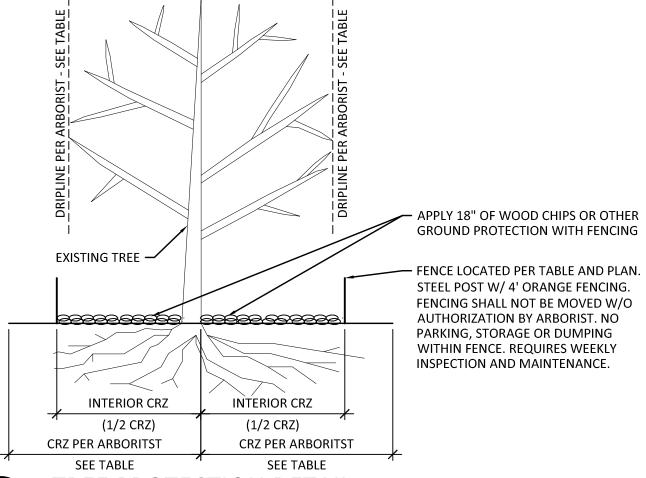
SCALE: 1" = 1'-0"

250 4TH AVE. S., SUITE 200 EDMONDS, WASHINGTON 98020 PHONE (425) 778-8500 FAX (425) 778-5536



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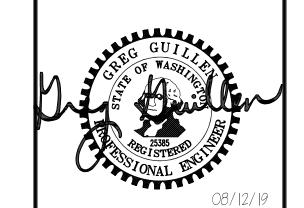




TREE PROTECTION DETAIL SCALE: NTS

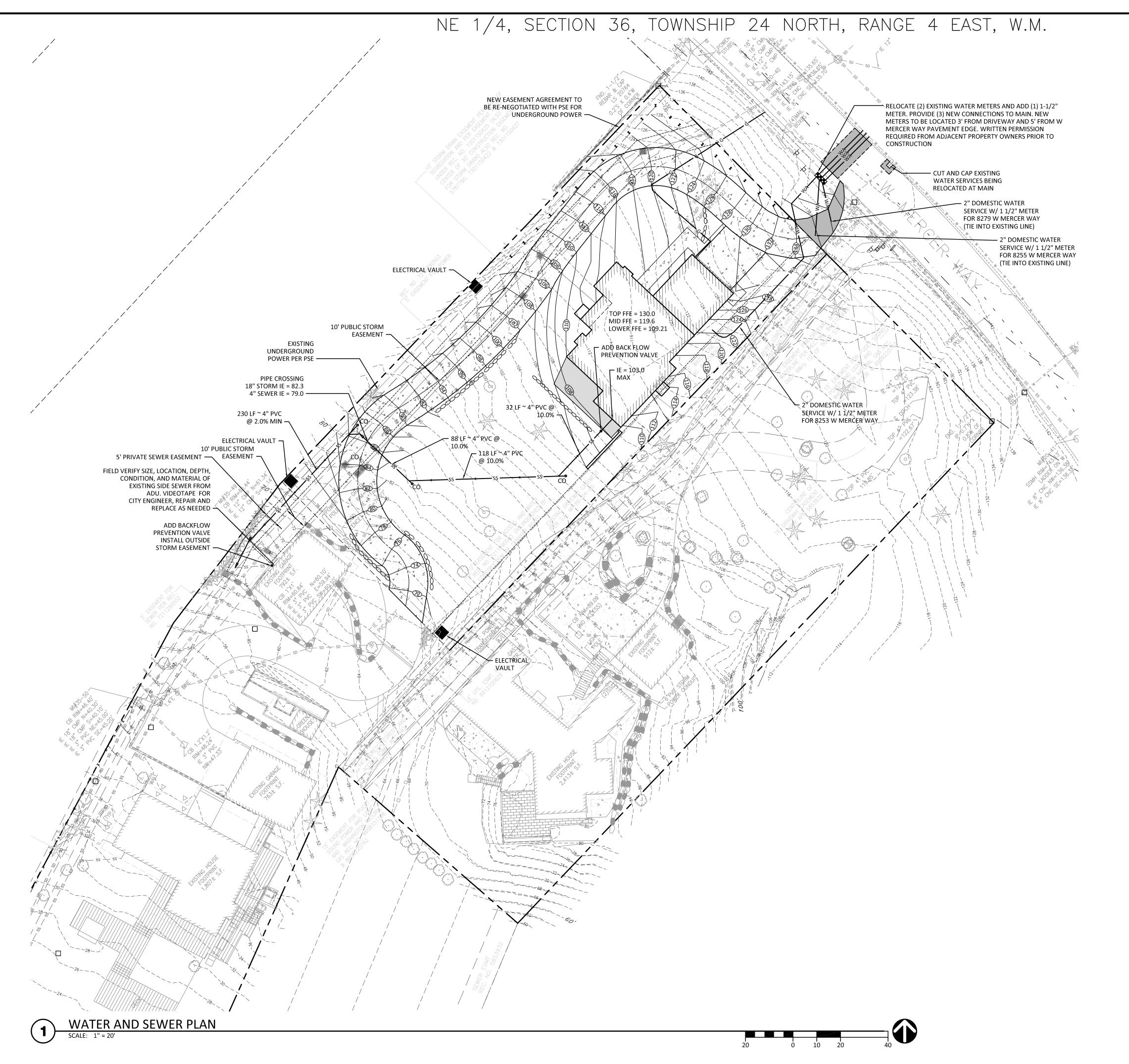
			Dripline		Preservation		
ree#	Species	DBH (in)	(ft)	CRZ (ft)	Value	Arborist Recommendation	Plan
101	Red alder	17.2	14		Low	Remove Tree, Construction Risk of Failure	Remove
102	Red alder	14.8, 12.8, 12.8	20	23.4	Low	Remove Tree, Construction Impact	Remove
103	Cherry	23.5	22	23.5	Low	Remove Tree, Construction Impact	Remove
104	Bigleaf maple	25.9	24	25.9	Low	Remove Tree, Construction Risk of Failure	Remove
	-					Remove Tree, Construction Impact - Retain Tree with Plan	
105	Bigleaf maple	18	12	18	Medium	Adjustments	Remove
	Bigleaf maple	15.4	9.5	15.4	Low	Remove Tree, Construction Impact	Remove
	Bigleaf maple	17.8	18.5	17.8	Low	Remove Tree, Construction Impact	Remove
	Bigleaf maple	13.7	7.5		Low	Remove Tree, Construction Impact	Remove
	Bigleaf maple	16.5	12.8		Low	Remove Tree, Construction Impact	Remove
						Remove Tree, Construction Risk of Failure - Retain Tree with Plan	
						Adjustments. New road development should not impact more	
						than 1/4 critical root zone of tree. Fence around interior crz (15').	
						Excavation within CRZ will be conducted by hand or with	
110	Western red cedar	25.3	11.8	25.3	Medium	pneumatic tool for air excavation.	Retain
	Tresterii rea seaar	25.0	12.0	25.0	i i i i i i i i i i i i i i i i i i i	Remove Tree, Construction Rise of Failure - Retain Tree with Plan	<del></del>
						Adjustments. New road development should not impact more	
						than 1/4 critical root zone of tree. Fence around interior CRZ	
						(15'). Excavation within CRZ will be conducted by hand or with	
111	Western red cedar	29.3	13.5	20.2	  High	pneumatic tool for air excavation.	Retain
	Douglas Fir	29.3	16.5		-	Monitor Tree, Risk of Failure - Remove Tree	Remove
112	Douglas FII	10.1, 3.2	10.3	20.3		Fence Around Dripline, 11'. Retain Tree - Tree Protection	Remove
112	Dacifia madra:	·	11	10.0		·	Poto:-
113	Pacific madrone	(10.59)	11	10.6	High	Required	Retain
							Removed
							under 
			40.		l		permit
114	Bigleaf maple	45	13.5	45	None	Remove Tree, Hazard - Cut to Create a Wildlife Tree	#1906-176
							Removed
							under
							permit
115	Bigleaf maple	15.8, 28 (32.15)	9.5	32.2	None	Remove Tree, Hazard - Create Wildlife Tree	#1906-176
							Removed
							under
							permit
116	Black cottonwood	37.5	5.5	37.5	None	Remove Tree, Hazard - Cut to Create a Wildlife Tree	#1906-176
117	Bigleaf maple	14	6.5	14	Low	Remove Tree, Hazard - Create Wildlife Tree	Remove
						Retain Tree - Monitor Tree, During Construction. Fence Around	
118	Bigleaf maple	17.1	7	17.1	Medium	Interior CRZ (9')	Retain
							Removed
							under
							permit
119	Black cottonwood	35	7.3	35	None	Remove Tree, Hazard	#1906-176
							Remove,
							Retain As A
						Remove; Retain Here As A 30' Tall Habitat Snag. Replaces (6)	Habitat
120	Black cottonwood	38	16	38	Low	Mitigation Trees	Snag
						Retain Tree - Tree Protection Required. Fence Around Interior	
121	Western red cedar	21.3	7	21.3	Medium	CRZ (11')	Retain
						Retain Tree with Plan Adjustments. Fence Around Interior CRZ	
						(23') Arborist Oversight Should Occur During Excavation For The	
						Wall To Assess Root Damage And Impacts To Tree Stability. Air	
					Exceptional -	Excavation Revealed No #122 Roots In Impacted Area (For Wall,	
122	Douglas Fir	45.8	20	45.8	High	New Driveway)	Retain
						Retain Tree - Monitor Tree, During Construction. Fence For 122	
123	Bigleaf maple	10.3	4.5	10.3	Low	Covers Dripline And Interior CRZ.	Remove
	Bigleaf maple	18.2	8.5		Low	Remove Tree, Construction Impact	Remove
						·	
					Exceptional -	   Monitor Tree, Risk of Failure - Tree Protection Required, Monitor	
125	Douglas Fir	32.5	19	32.5		During Construction - Monitor Tree, Construction Impacts	Offsite
	Bitter cherry	14.5	0			Create Wildlife Tree - Remove Tree, Dead	Offsite
	,					,	
					Exceptional -	   Monitor Tree, Risk of Failure - Tree Protection Required, Monitor	
127	Douglas Fir	39.5	18	39.5	1 '	During Construction - Retain Tree With Plan Adjustments	Offsite
14/			10	33.3	WIMIT	Crown Clean Prune - Install Tree Protection Fencing - Monitor	2.15160
128	Bigleaf maple	34	14.3	3/1	None	Tree, Risk of Failure - Cut to Create a Wildlife Tree	Offsite
	Bigleaf maple	18, 18 (25.46)	14.3		None	Remove Tree, Hazard - Cut to Create a Wildlife Tree	Offsite
129	Ingicai mapie	10, 10 (23.40)	12	25.5	INOTIE		onsite
420	Kunga-a	_		_	الممانية	Crown Reduction Prune - Install Tree Protection Fencing -	Official
130	Kwanzan cherry	6	4	6	Medium	Monitor Tree, Construction Impacts	Offsite
401		_		_	0.4	Crown Reduction Prune - Install Tree Protection Fencing -	Ott
131	Kwanzan cherry	6		6	Medium	Monitor Tree, Construction Impacts	Offsite
	l			l	1	Install Tree Protection Fencing - Monitor Tree, Construction	
	Arborvitae				Low	Impacts	Offsite

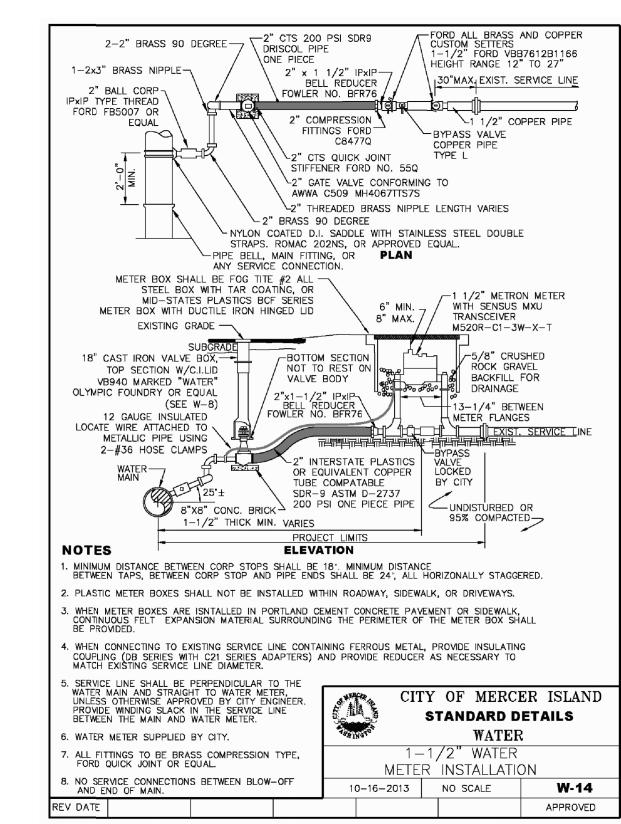
250 4TH AVE. S., SUITE 200 EDMONDS, WASHINGTON 98020 PHONE (425) 778-8500 FAX (425) 778-5536



DESCRIPTION	PERMIT SUBMITTAL	PERMIT RESUBMITTAL	PERMIT SUBMITTAL	PERMIT RESUBMITTAL					
DATE	04/05/17	03/07/18	05/11/18	06/08/18	01/18/19	05/07/19	01/18/19	08/12/19	
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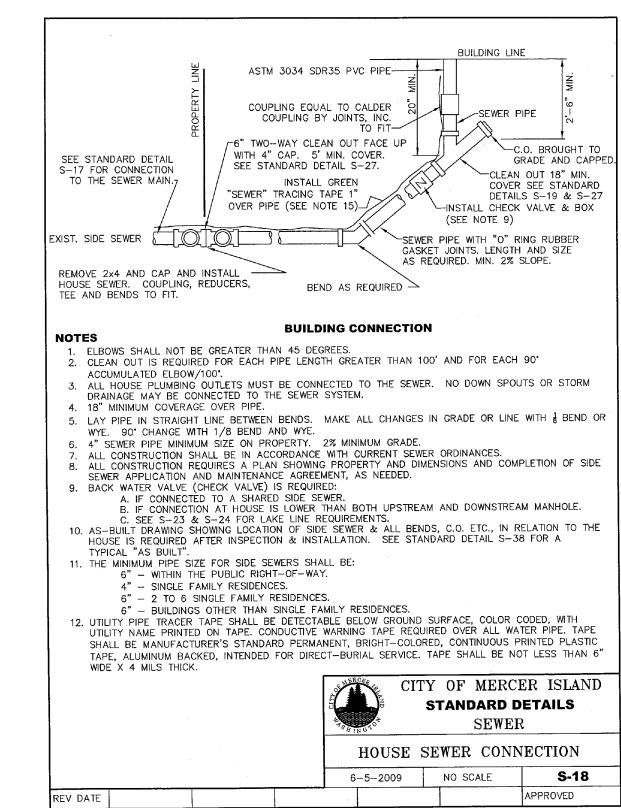
04/05/17





CITY OF MERCER ISLAND STANDARD DETAIL

SCALE: NTS



CITY OF MERCER ISLAND STANDARD DETAIL

SCALE: NTS

NOTE

1. CONTRACTOR TO WORK WITH LOWER HOME OWNERS LANDCAPER TO REMOVE IRRIGATION LINES AND PLANTS THAT CONFLICT WITH INSTALLATION OF NEW SEWER LINE.

CONTRACTOR TO COORDINATE EXACT LOCATION OF NEW/ RELOCATED WATER METERS WITH THE CITY WATER DEPARTMENT DURING CONSTRUCTION.

250 4TH AVE. S., SUITE 200 EDMONDS, WASHINGTON 98020 PHONE (425) 778-8500 FAX (425) 778-5536



DESCRIPTION	PERMIT SUBMITTAL	PERMIT RESUBMITTAL	PERMIT SUBMITTAL	PERMIT RESUBMITTAL						
MARK DATE	04/05/17	03/07/18	05/11/18	06/08/18	01/18/19	05/07/19	07/18/19	08/12/19		
MARK										
DE	DESIGN: VD									
DR	DRAWN: ZOS									

15227.20

04/05/17

CHECK:

JOB NO:

DATE:

RESIDENCE MERCER WAY ISLAND, WA 98040

RUDOLF RES 8253 W MEF MERCER ISLA WATER AN

SHEET:

C4.

### FOR AUDITOR'S PARCEL NUMBER: 335850 0490

THAT PORTION OF TRACT 572, C. D. HILLMAN'S SEA SHORE - LAKE FRONT GARDEN OF EDEN ADDITION TO THE CITY OF SEATTLE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 12 OF PLATS, PAGE(S) 44, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:

BEGINNING AT AN IRON POST LOCATED AT THE MOST NORTHERLY CORNER OF TRACT 572, SAID IRON POST BEING LOCATED SOUTH 41.40' WEST A DISTANCE OF 37.00 FEET FROM AN INTERSECTION WITH THE CENTERLINE TANGENT PRODUCED OF WEST MERCER WAY. SAID TANGENT HAVING A BEARING OF 50° EAST AND SAID POST BEING THE INTERSECTION OF THE NORTHWESTERLY MARGIN OF TRACT 572 AND THE SOUTHWESTERLY MARGIN OF COUNTY ROAD (WEST MERCER WAY) RECORDED UNDER RECORDING NUMBER 928842, IN KING COUNTY, WASHINGTON, AND THE TRUE POINT OF BEGINNING;

THENCE SOUTH 41°40' WEST A DISTANCE OF 230.33 FEET; THENCE SOUTH 46°44'44" EAST A DISTANCE OF 100.12 FEET;

THENCE NORTH 41'38'48" EAST A DISTANCE OF 230.33 FEET TO THE SOUTHERLY MARGIN OF WEST MERCER THENCE NORTH 46'44'44" WEST A DISTANCE OF 100.00 FEET TO THE POINT OF BEGINNING.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

(PER FIDELITY NATIONAL TITLE INSURANCE COMPANY SUBDIVISION GUARANTEE NO. 611092768, DATED JUNE 12, 2015 AT 12:00AM)

### FOR AUDITOR'S PARCEL NUMBER: 335850 0480

TRACTS 505 THROUGH 509 AND A PORTION OF TRACT 572, C.D. HILLMAN'S SEA SHORE LAKE FRONT GARDEN OF EDEN ADDITION TO THE CITY OF SEATTLE, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 12 OF PLATS, PAGE 44, IN KING COUNTY, WASHINGTON;

TOGETHER WITH ADJACENT LAKE WASHINGTON SHORELANDS DESCRIBED AS FOLLOWS:

BEGINNING AT AN IRON POST LOCATED AT THE MOST NORTHERLY CORNER OF TRACT 572, SAID IRON POST BEING LOCATED SOUTH 41' 40' WEST A DISTANCE OF 37.00 FEET FROM AN INTERSECTION WITH THE CENTERLINE TANGENT PRODUCED OF WEST MERCER WAY, SAID TANGENT HAVING A BEARING SOUTH 50° 00' EAST, AND SAID POST BEING THE INTERSECTION OF THE NORTHWESTERLY MARGIN OF TRACT 572 AND THE SOUTHWESTERLY MARGIN OF COUNTY ROAD (WEST MERCER WAY) RECORDED UNDER RECORDING NO. 928842,

THENCE SOUTH 46° 44' 44" EAST A DISTANCE OF 100.00 FEET;

THENCE SOUTH 41' 38' 48" WEST A DISTANCE OF 297.87 FEET TO THE TRUE POINT OF BEGINNING; THENCE NORTH 41° 38' 48" EAST A DISTANCE OF 67.54 FEET;

THENCE NORTH 46° 44' 44" WEST A DISTANCE OF 100.12FEET;

THENCE SOUTH 35° 31' 40" WEST A DISTANCE OF 74.74 FEET; THENCE SOUTH 26° 10' 58" WEST A DISTANCE OF 145.35 FEET;

THENCE SOUTH 20' 49' WEST A DISTANCE OF 26 FEET MORE OR LESS TO THE SHORELINE OF LAKE THENCE SOUTHEASTERLY ALONG SAID SHORELINE TO A POINT FROM WHICH THE TRUE POINT OF BEGINNING BEARS NORTH 22° 07' 36" EAST;

THENCE NORTH 22' 07' 36" EAST A DISTANCE OF 173 FEET MORE OR LESS TO THE POINT OF BEGINNING.

AN EASEMENT FOR INGRESS, EGRESS, AND UTILITIES OVER THAT PORTION OF THE SOUTHEASTERLY 10 FEET OF SAID TRACT 572 LYING NORTHEASTERLY OF THE NORTHEAST LINE OF THE ABOVE DESCRIBED TRACT AND SOUTHWESTERLY OF WEST MERCER WAY.

AN EASEMENT FOR INGRESS AND EGRESS OVER AN EXISTING ROAD AS MORE FULLY SET FORTH IN THAT CERTAIN GRANT FOR "EASEMENT OF ROAD" DATED NOVEMBER 29, 1972, RECORDED NOVEMBER 29, 1972, UNDER RECORDING NO. 7211290503.

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

(PER FIDELITY NATIONAL TITLE INSURANCE COMPANY ALTA COMMITMENT NO. 611089657, DATED NOVEMBER 13, 2014 AT 08:00AM)

### FOR AUDITOR'S PARCEL NUMBER: 335850 0480

LOT 571 OF C-D. HILLMAN'S SEA SHORE LAKE FRONT GARDEN OF EDEN ADDITION TO THE CITY OF SEATTLE, AS PER PLAT RECORDED IN VOLUME 12 OF PLATS, PAGE 44, RECORDS OF KING COUNTY AUDITOR;

**EXCEPT** THAT PORTION THEREOF DEEDED TO KING COUNTY FOR ROAD PURPOSES BY DEED RECORDED

UNDER KING COUNTY RECORDING NO. 982284; SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

### PROCEDURE / NARRATIVE:

A FIELD TRAVERSE USING A FOCUS 30 ROBOTIC TOTAL STATION AND A SPECTRA PRECISION RANGER 3 DATA COLLECTOR SUPPLEMENTED WITH FIELD NOTES AND TOPCON GR5 NETWORK RTK GPS ROVER, WAS PERFORMED, ESTABLISHING THE ANGULAR, DISTANCE, AND VERTICAL RELATIONSHIPS BETWEEN THE MONUMENTS, PROPERTY LINES AND IMPROVEMENTS. THE RESULTING DATA MEETS OR EXCEEDS THE STANDARDS FOR LAND BOUNDARY SURVEYS AS SET FORTH IN WAC 332-130-090.

### BASIS OF BEARING (NAD83/91 PER CITY OF MERCER ISLAND)

BASIS OF BEARING FOR THIS SURVEY IS NAD83/91 PER CITY OF MERCER ISLAND. MERCER ISLAND CONTROL POINT NO. 4332 WAS HELD FOR POSITION, AND A LINE BETWEEN SAID CONTROL POINT NO. 4332 AND CITY OF MERCER ISLAND CONTROL POINT NO. 4358 WAS HELD FOR ROTATION, TAKEN AS NORTH N80'53'30"

### BASIS OF ELEVATIONS (NAVD88 PER CITY OF MERCER ISLAND)

VERTICAL DATUM FOR THIS SURVEY IS NAVD88 PER CITY OF MERCER ISLAND. CITY OF MERCER ISLAND CONTROL POINT NO. 4332 WAS HELD FOR ELEVATION, BEING 140.594'

### ASSESSOR'S PARCEL NUMBERS & AREAS

APN 335850 0490: 23,020.2± SQ. FT. (0.528± ACRES) APN 335850 0480: 23,148.7± SQ. FT. (0.531± ACRES) APN 335850 0830: 29,435.9± SQ. FT. (0.676± ACRES)

### SITE ADDRESSES

APN 335850 0490: 8253 W MERCER WAY, MERCER ISLAND WA, 98040 APN 335850 0480: 8255 W MERCER WAY, MERCER ISLAND WA, 98040

APN 335850 0830: 8275 W MERCER WAY, MERCER ISLAND WA, 98040

### FLOOD INFORMATION

NO FEMA PANEL AVAILABLE FOR THIS AREA.

### DATE OF SURVEY OCTOBER 5, 7, 8, 9 & 10, 2015.

- 1. PLAT OF C. D. HILLMAN'S SEA SHORE-LAKE FRONT GARDEN OF EDEN ADDITION TO THE CITY OF SEATTLE, BY O. O. ROWLAND, AFN 19050801347987
- 2. CECILE LOGAN TRUST SHORT PLAT (MISP NO. 92-1102), BY C&T SURVEYING, AFN 199303179002 3. D. HUBBARD LOT LINE REVISION (MI-86-04-05), BY TRIAD ASSOC., AFN 198612169002
- 4. KING COUNTY ENGINEER'S OFFICE ROAD NO. 987 (42-63), FROM KCRS-MAP VAULT, MARCH 1937 5. KING COUNTY ASSESSOR'S QUARTER SECTION MAP, NE 36-24-04, DATED 9/30/2014

1. ALL DISTANCES SHOWN ON THIS SURVEY ARE IN US SURVEY FEET.

- 2. UTILITIES ARE SHOWN PER SURFACE OBSERVATIONS, UTILITY LOCATE MARKINGS AND OTHER AVAILABLE
- 3. THIS SURVEY IS A RETRACEMENT OF THE DESCRIPTIONS ABOVE AND DOES NOT PURPORT TO SHOW ANY

SPECIAL EXCEPTIONS FOR APN 335850 0490: (PER FIDELITY NATIONAL TITLE INSURANCE COMPANY SUBDIVISION GUARANTEE NO. 611086191, DATED SEPTEMBER 10, 2014 AT

### NOT SURVEY RELATED.

2. PLEASE BE ADVISED THAT OUR SEARCH DID NOT DISCLOSE ANY OPEN DEEDS OF TRUST OF RECORD.

3. RIGHT TO ENTER SAID PREMISES TO MAKE REPAIRS TO THE SEWER PIPE LINE LOCATED ON PROPERTY ADJOINING SAID PREMISES TO THE SOUTH, AS GRANTED BY INSTRUMENT RECORDED UNDER RECORDING NO. 5787790.

4. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:

RECORDING DATE: NOVEMBER 29, 1972 RECORDING NO.: 7211290503 AS DESCRIBED THEREIN (PLOTTED)

5. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO:

IN FAVOR OF: NOT DISCLOSED PURPOSE:

ELECTRIC TRANSMISSION LINE, WATER LINE AND INGRESS AND EGRESS RECORDING DATE: NOVEMBER 29, 1972

RECORDING NO.: 7211290503 AS DESCRIBED THEREIN (PLOTTED) AFFECTS:

6. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:

PURPOSE: DRAINAGE DITCHES, FLUMES, CULVERTS, PIPES, AND ALL NECESSARY CONNECTIONS AND APPURTENANCES 7301150425 RECORDING NO.:

AS DESCRIBED THEREIN (PLOTTED) SPECIAL EXCEPTIONS FOR APN 335850 0480:

(PER FIDELITY NATIONAL TITLE INSURANCE COMPANY SUBDIVISION GUARANTEE NO. 611092768, DATED JUNE 12, 2015 AT 12:00AM) NOT SURVEY RELATED

- 2. PLEASE BE ADVISED THAT OUR SEARCH DID NOT DISCLOSE ANY OPEN DEEDS OF TRUST OF RECORD.
- 3. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:

IN FAVOR OF: PUGET SOUND POWER & LIGHT COMPANY ELECTRIC LINE

JANUARY 24, 1961 RECORDING DATE: RECORDING NO.:

AFFECTS:

AS DESCRIBED THEREIN (FOLLOWS THE UTILITY AS NOW CONSTRUCTED OR AS MAY BE RELOCATED BY

4. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:

IN FAVOR OF: MERCER ISLAND SEWER DISTRICT SEWER PIPE LINE(S) RECORDING DATE: SEPTEMBER 17, 1964

RECORDING NO.: AS DESCRIBED THEREIN (10' WIDE STRIP OF LAND, 5' ON EITHER SIDE OF PIPE LINE AS INSTALLED)

5. AGREEMENT AND THE TERMS AND CONDITIONS THEREOF RECORDING DATE: NOVEMBER 28, 1972

BOUNDARY LINE ADJUSTMENT 6. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:

NOVEMBER 29, 1972 RECORDING DATE: RECORDING NO.: 7211290503 AS DESCRIBED THEREIN (PLOTTED)

7. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:

CITY OF MERCER ISLAND DRAINAGE DITCHES, FLUMES, CULVERTS, PIPES AND ALL NECESSARY APPURTENANCES

7301150422 AND 7301150425 AS DESCRIBED THEREIN (PLOTTED)

8. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:

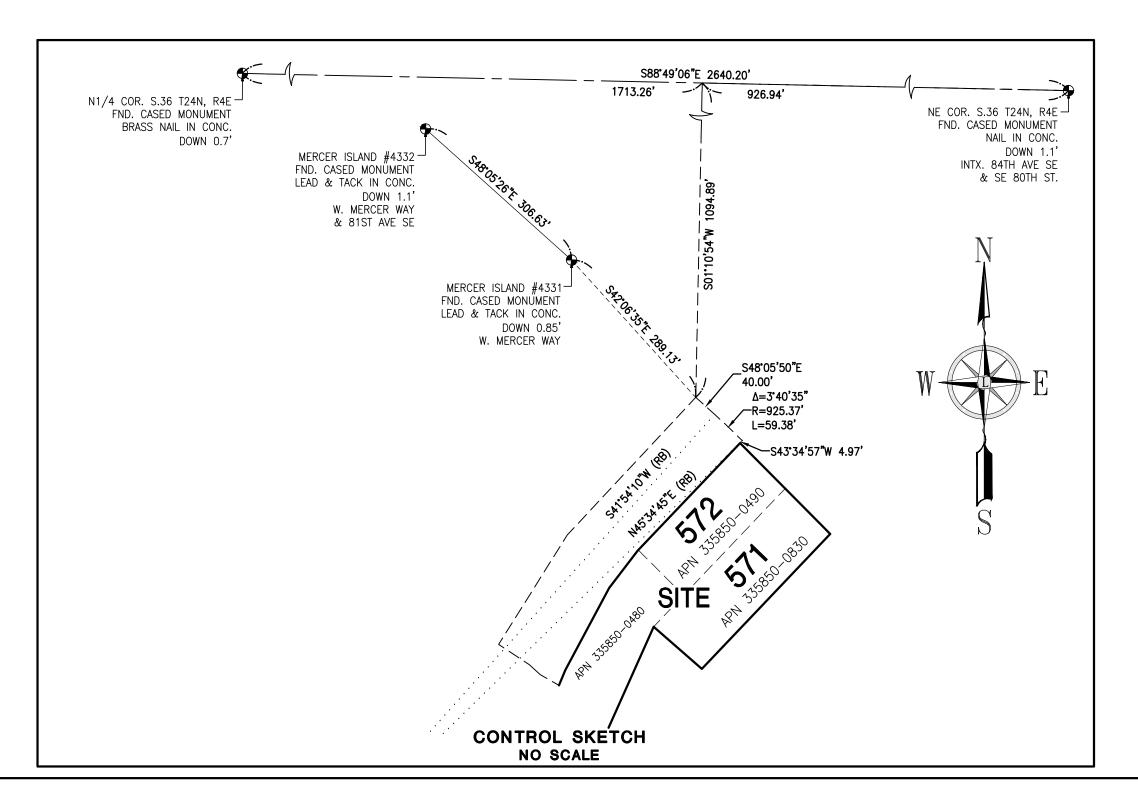
CITY OF MERCER ISLAND STORM DRAINAGE PIPE RECORDING DATE: JANUARY 15, 1973 7301150427 RECORDING NO.: AS DESCRIBED THEREIN (PLOTTED)

9. USE AGREEMENT AND THE TERMS AND CONDITIONS THEREOF:

RECORDING DATE: MARCH 26, 1986 RECORDING NO.: 8603260312

- 10. QUESTION OF LOCATION OF LATERAL BOUNDARIES OF SAID SECOND CLASS TIDELANDS OR SHORELANDS.
- 11. ANY PROHIBITION OR LIMITATION OF USE, OCCUPANCY OR IMPROVEMENT OF THE LAND RESULTING FROM THE RIGHTS OF THE PUBLIC OR RIPARIAN OWNERS TO USE ANY PORTION WHICH IS NOW OR WAS FORMERLY COVERED BY WATER.

12. PARAMOUNT RIGHTS AND EASEMENTS IN FAVOR OF THE UNITED STATES FOR COMMERCE, NAVIGATION, FISHERIES AND THE



SPECIAL EXCEPTIONS FOR APN 335850 0830:

(PER FIDELITY NATIONAL TITLE INSURANCE COMPANY ALTA COMMITMENT NO. 611089657, DATED NOVEMBER 13, 2014 AT 08:00AM)

2. **NOT SURVEY RELATED.** 

3. NOTICE OF ADDITIONAL TAP OR CONNECTION CHARGES AND THE TERMS AND CONDITIONS THEREOF:

RECORDING DATE: DECEMBER 6, 1977 RECORDING NO.: 7712060812

4. A DEED OF TRUST TO SECURE AN INDEBTEDNESS IN THE AMOUNT SHOWN BELOW,

\$1.312.500.00 FEBRUARY 14, 2008

NICHOLAS J LOWE AND RACHEL D LOWE, HUSBAND AND WIFE, AS JOINT TENANTS COMMONWEALTH BENEFICIARY:

MORTGAGE ELECTRONIC REGISTRATION SYSTEMS INC. AS NOMINEE FOR HOMECOMINGS FINANCIAL, LLC, (F/K/A HOMECOMINGS FINANCIAL NETWORK, INC.)

RECORDING DATE: FEBRUARY 20, 2008 RECORDING NO.: 20080220001382

AN AGREEMENT TO MODIFY THE TERMS AND PROVISIONS OF SAID DEED OF TRUST AS THEREIN PROVIDED NICHOLAS J LOWE RACHEL D LOWE, HUSBAND AND WIFE AND GMAC MORTGAGE, LLC

FEBRUARY 27, 2013 RECORDING DATE: RECORDING NO.: 20130227000773

5. A DEED OF TRUST TO SECURE AN INDEBTEDNESS IN THE AMOUNT SHOWN BELOW,

JANUARY 1, 2008

TRUSTOR/GRANTOR: NICHOLAS J LOWE AND RACHEL D LOWE, HUSBAND AND WIFE TRUSTEE: TRUSTEE SERVICES INC.

WATERMARK CREDIT UNION RECORDING DATE: MARCH 12, 2013

20080312002013 RECORDING NO.: THE DEED OF TRUST SET FORTH ABOVE IS PURPORTED TO BE A "CREDIT LINE" DEED OF TRUST. IT IS A REQUIREMENT THAT THE TRUSTOR/GRANTOR OF SAID DEED OF TRUST PROVIDE WRITTEN AUTHORIZATION TO CLOSE SAID CREDIT LINE ACCOUNT TO THE LENDER WHEN THE DEED OF TRUST IS BEING PAID OFF THROUGH THE COMPANY OR OTHER SETTLEMENT/ESCROW AGENT OR

6. A TAX LIEN FOR THE AMOUNT SHOWN AND ANY OTHER AMOUNTS DUE, IN FAVOR OF THE UNITED STATES OF AMERICA, ASSESSED BY THE DISTRICT DIRECTOR OF INTERNAL REVENUE.

PROVIDE A SATISFACTORY SUBORDINATION OF THIS DEED OF TRUST TO THE PROPOSED DEED OF TRUST TO BE RECORDED AT

NICHOLAS & RACHEL LOWE AMOUNT: \$92,205.07 RECORDING DATE: JANUARY 23, 2014 20140123000780

7. IN THE EVENT THAT THE LAND IS OCCUPIED OR INTENDED TO BE OCCUPIED BY THE OWNER AND A SPOUSE OR REGISTERED DOMESTIC PARTNER AS A HOMESTEAD, THE CONVEYANCE OR ENCUMBRANCE OF THE LAND MUST BE EXECUTED AND ACKNOWLEDGED BY BOTH SPOUSES OR BOTH REGISTERED DOMESTIC PARTNERS, PURSUANT TO RCW 6.13 WHICH NOW PROVIDES FOR AN AUTOMATIC HOMESTEAD ON SUCH LAND.

8. IN THE EVENT MATTERS ARE DISCOVERED DURING THE CLOSING PROCESS WHICH WOULD OTHERWISE BE INSURED BY THE COVERED RISKS INCLUDED IN THE POLICY, THE COMPANY MAY LIMIT OR DELETE INSURANCE PROVIDED BY THE AFFECTED COVERED RISK. IN SUCH EVENT, A SUPPLEMENTAL WILL BE ISSUED PRIOR TO CLOSING. GENERAL EXCEPTIONS A THROUGH K WILL NOT APPEAR IN THE ALTA HOMEOWNER'S POLICY.

9. THE COMPANY IS WILLING TO ISSUE AN EXTENDED COVERAGE LENDERS POLICY. GENERAL EXCEPTIONS A THROUGH K, INCLUSIVE, ARE HEREBY DELETED.

ALTA 22-06, ALTA 8.1 AND ALTA 9-06 ENDORSEMENTS WILL ISSUE WITH THE FORTHCOMING LENDERS POLICY.

10. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:

IN FAVOR OF: MERCER ISLAND SEWER DISTRICT PURPOSE: SEWER PIPE LINE AND LINES

RECORDING DATE: AUGUST 5, 1964

AS DESCRIBED IN SAID INSTRUMENT (5 FEET ON EITHER SIDE OF PIPE LINE AS INSTALLED) 11. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:

RECORDING DATE: MARCH 12, 1966

RECORDING NO.: AS DESCRIBED IN SAID INSTRUMENT (PLOTTED) 12. HOLD HARMLESS AGREEMENT AND THE TERMS AND CONDITIONS THEREOF:

RECORDING DATE: JANUARY 15, 1973 RECORDING NO.: 7301150426

AFFECTS:

TREVOR S. LANKTREE P.L.S.

WASHINGTON REGISTRATION NO. 45789

13. RECIPROCAL EASEMENT AGREEMENT AND THE TERMS AND CONDITIONS THEREOF:

RECORDING DATE: DECEMBER 10, 1984

RECORDING NO.: 8412100629 (PLOTTED) 14. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY UPON WHICH IT IS BASED WERE MADE BY ME OR UNDER MY DIRECTION AND CORRECTLY REFLECTS THE CONDITIONS OF THIS SITE AS OF THE DATE OF THE

12/21/2016

PUGET SOUND POWER & LIGHT COMPANY

UNDERGROUND ELECTRIC TRANSMISSION AND/OR DISTRIBUTION SYSTEM PURPOSE:

RECORDING NO .: 8608151306

AS DESCRIBED IN SAID INSTRUMENT (PLOTTED) 15. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:

WASHINGTON NATURAL GAS COMPANY GAS PIPE LINE OR PIPELINES SEPTEMBER 22, 1986 RECORDING DATE:

RECORDING NO.: 8609220762 AS DESCRIBED IN SAID INSTRUMENT (PLOTTED)

16. SEWER EASEMENT AND MAINTENANCE AGREEMENT AND THE TERMS AND CONDITIONS THEREOF:

8710220226 RECORDING NO.:

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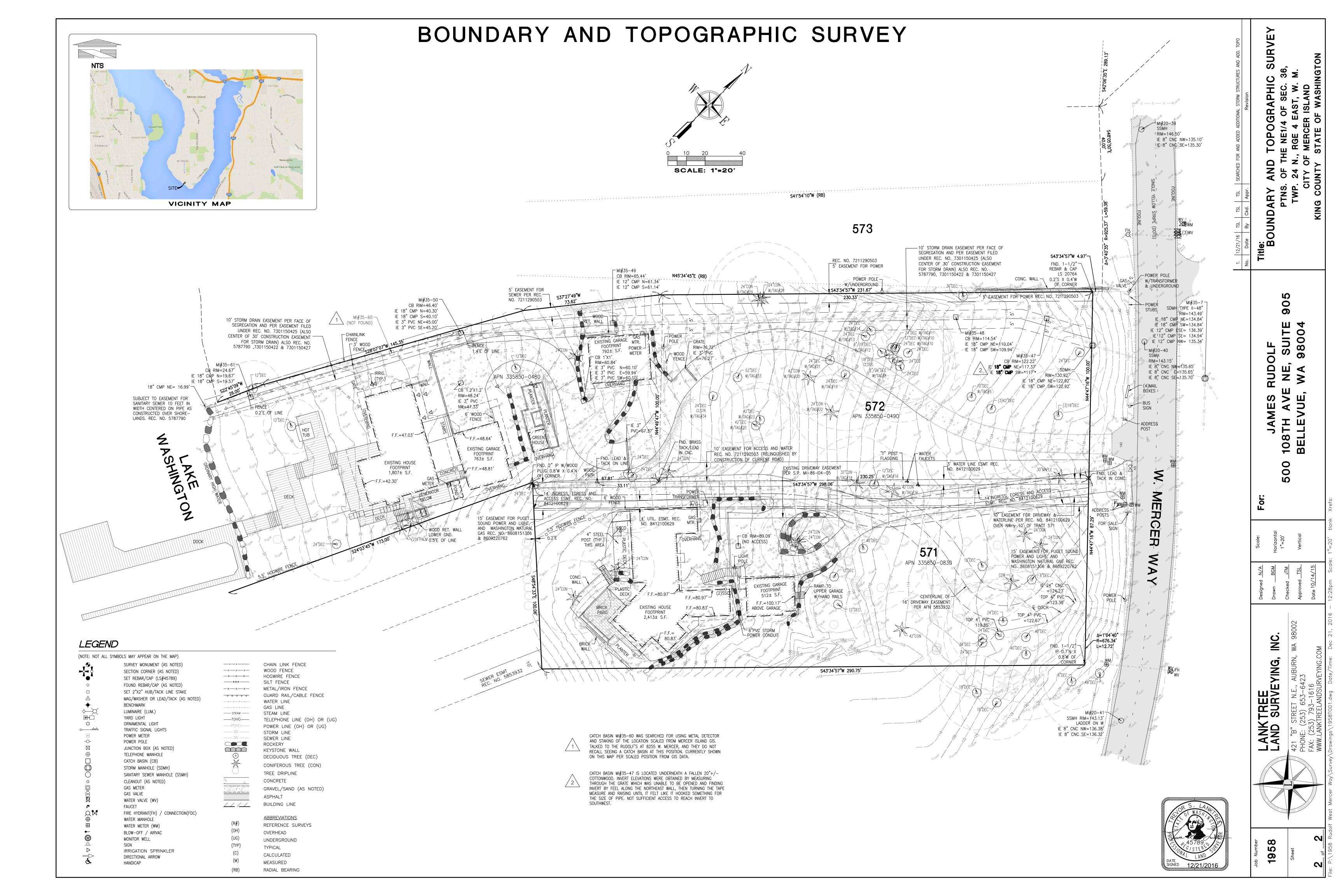
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## STRUCTURAL NOTES

(THESE NOTES ARE TYPICAL UNLESS NOTED OR DETAILED OTHERWISE ON DRAWINGS)

### CODE

ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (IBC), 2015 EDITION. SPECIFICATIONS AND STANDARDS WHERE REFERENCED ON THE DRAWINGS ARE TO BE THE LATEST EDITION.

### **DESIGN LOADS**

REFER TO PRESSURE DIAGRAMS ON SH1.2.

### STATEMENT OF SPECIAL INSPECTIONS

SPECIAL INSPECTIONS ARE REQUIRED AS INDICATED IN THE FOLLOWING TABLE. THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER PRIOR TO COMMENCEMENT OF WORK IN ACCORDANCE WITH CHAPTER 1704.4 OF THE IBC.

**FREQUENCY AND DISTRIBUTION OF REPORTS** - INSPECTION REPORTS SHALL BE PROVIDED FOR EACH DAY ON SITE BY SPECIAL INSPECTOR. STRUCTURAL OBSERVATION REPORTS SHALL BE PROVIDED AFTER EACH OBSERVATION. REPORTS SHALL BE DISTRIBUTED TO THE CONTRACTOR, ARCHITECT, ENGINEER AND BUILDING OFFICIAL.

### **SPECIAL INSPECTION**

OPERATION	CONT	PERIODIC	REMARKS
SOILS			
SHORING		Х	GEOTECH ENGINEER
EXCAVATION & FILL		Х	GEOTECH ENGINEER
SOLDIER PILE INSTALLATION	Х		GEOTECH ENGINEER
CONCRETE			
REINFORCING PLACEMENT		Х	
CONCRETE TEST SPECIMENS	Х		
CONCRETE PLACEMENT	Х		
SHOP & FIELD WELDING			
SINGLE PASS FILLET WELDS ≤ 5/16"		Х	
FILLET WELDS > 5/16"	Х		
PARTIAL & COMPLETE PENETRATION	Х		
OTHER WELDING		Х	

ALL ITEMS MARKED WITH AN "X" SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17. SPECIAL INSPECTION SHALL BE PERFORMED BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE OWNER. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING OFFICIAL SHALL BE FURNISHED WITH COPIES OF ALL RESULTS. ANY INSPECTION FAILING TO MEET THE PROJECT SPECIFICATIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE DESIGN TEAM.

### SHOP DRAWINGS

SHOP DRAWINGS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION:

### 1. SOLDIER PILES

SHOP DRAWINGS SHALL BE REVIEWED, REVISED AS REQUIRED FOR FIELD CONDITIONS, AND DATE STAMPED BY THE CONTRACTOR PRIOR TO REVIEW BY THE ENGINEER. CONTRACTOR SHALL PROVIDE (3) SETS OF SHOP DRAWINGS FOR ENGINEER'S REVIEW. ALLOW TWO WEEKS FOR SHOP DRAWING APPROVAL BY ENGINEER.

ENGINEER'S SHOP DRAWING REVIEW IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AND CONTRACT DOCUMENTS. MARKINGS OR COMMENTS SHALL NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. THE CONTRACTOR REMAINS RESPONSIBLE FOR DETAILS AND ACCURACY, FOR CONFORMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, FOR SELECTING FABRICATION PROCESSES, FOR TECHNIQUES OF ASSEMBLY, AND FOR PERFORMING THE WORK IN A SAFE MANNER.

ENGINEER'S SHOP DRAWING REVIEW OF STRUCTURAL COMPONENTS DESIGNED BY OTHERS IS FOR LOADS IMPOSED ON THE BASIC STRUCTURE. THE COMPONENT DESIGNER IS RESPONSIBLE FOR CODE CONFORMANCE AND ALL CONNECTIONS TO THE BASIC STRUCTURE. SHOP DRAWINGS SHALL INDICATE MAGNITUDE AND DIRECTION OF THE LOADS IMPOSED ON THE BASIC STRUCTURE AND SHALL BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT.

FABRICATION SHALL BEGIN ONLY AFTER SHOP DRAWINGS BEARING THE STAMP AND SIGNATURE OF THE PROJECT ARCHITECT, ENGINEER OF RECORD, AND CONTRACTOR HAVE BEEN RECEIVED.

### FOUNDATIONS: SOLDIER PILES

SOILS REPORT: REPORT NO PREPARED ED DATED:	
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ALLOWABLE SOIL PRESSURE:
PASSIVE EARTH PRESSURE:
COEFFICIENT OF FRICTION:

REFER TO PRESSURE DIAGRAMS

FOOTINGS SHALL BEAR ON FIRM UNDISTURBED EARTH OR 12" OF COMPACTED STRUCTURAL FILL AS REQUIRED AND AT LEAST 18" BELOW ADJACENT EXTERIOR GRADE. ANY FOOTING ELEVATIONS SHOWN IN THE DRAWINGS REPRESENT MINIMUM DEPTHS AND ARE FOR BIDDING ONLY. ACTUAL FOOTING ELEVATIONS ARE SUBJECT TO SITE CONDITIONS AND MUST THEREFORE BE ESTABLISHED BY THE CONTRACTOR. FOOTINGS SHALL BE CENTERED BELOW COLUMNS OR WALLS ABOVE, UNLESS NOTED OTHERWISE.

BACKFILL BEHIND ALL RETAINING WALLS WITH WELL-DRAINING, GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE. PROVIDE DAMPPROOFING AT EXTERIOR FACE OF ALL FOUNDATION WALLS EXPOSED TO EARTH PER ARCHITECTURAL SPECIFICATIONS.

EXCAVATIONS AND DRAINAGE INSTALLATION SHALL BE OBSERVED BY A SOILS ENGINEER RETAINED BY THE OWNER. IF EXCAVATION SHOWS SOIL CONDITIONS TO BE OTHER THAN THOSE ASSUMED ABOVE, NOTIFY THE STRUCTURAL ENGINEER FOR POSSIBLE FOUNDATION REDESIGN.

### CONCRETE

ALL CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED, AND PLACED IN ACCORDANCE WITH SECTION CHAPTER 5 OF ACI 318 AND THE AMERICAN CONCRETE INSTITUTE'S SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301).

ALL CONCRETE SHALL BE STONE-AGGREGATE CONCRETE HAVING A UNIT WEIGHT OF APPROXIMATELY 150 POUNDS

CONCRETE STRENGTHS AT 28 DAYS (f'c) AND MIX CRITERIA SHALL BE AS FOLLOWS:

TYPE OF CONSTRUCTION	f'c	MAXIMUM WATER/CEMENT RATIO	MIN CEMENT CONTENT PER CUBIC YARD	MAXIMUM SHRINKAGE STRAIN
AUGERCAST PILES	4000 PSI	0.50	6 1/2 SACK	N/A
SLABS ON GRADE	3000 PSI	0.55	5 1/2 SACK	N/A
FOOTINGS	3000 PSI	0.55	5 1/2 SACK	N/A
GRADE BEAMS	3000 PSI	0.50	5 1/2 SACK	N/A
WALLS	4000 PSI	0.45	5 1/2 SACK	N/A
ELEVATED SLABS	4000 PSI	0.45	6 1/2 SACK	0.034%
BEAMS, COLUMNS	4000 PSI	0.45	6 1/2 SACK	N/A
ALL OTHER CONC.	2500 PSI	0.45	5 SACK	N/A

THE MINIMUM AMOUNT OF CEMENT LISTED ABOVE MAY BE CHANGED IF A CONCRETE PERFORMANCE MIX IS SUBMITTED TO THE ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, FINE AND COARSE AGGREGATE, WATER, AND ADMIXTURES AS WELL AS THE WATER-CEMENT RATIO, SLUMP, CONCRETE YIELD, AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH CHAPTER 5 OF ACI 318.

ALL CONCRETE EXPOSED TO WEATHER OR TO FREEZING TEMPERATURES SHALL BE AIR-ENTRAINED IN ACCORDANCE WITH ACI 318 TABLE 4.2.1 FOR MODERATE EXPOSURE CONDITION.

### REINFORCING STEEL

REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM A615, AND SHALL BE GRADE 60 (FY = 60,000 PSI), UNLESS NOTED OTHERWISE. GRADE 60 REINFORCING BARS INDICATED ON DRAWINGS TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCING COMPLYING WITH ASTM A615 MAY BE WELDED IF MATERIAL PROPERTY REPORTS INDICATING CONFORMANCE WITH WELDING PROCEDURES SPECIFIED IN AWS D1.4 ARE SUBMITTED.

WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. PROVIDE WELDED WIRE FABRIC IN SHEETS NOT ROLLS. LAP WELDED WIRE FABRIC 12" AT SIDES AND ENDS.

REINFORCING STEEL SHALL BE DETAILED INCLUDING HOOKS AND BENDS IN ACCORDANCE WITH SP-66 AND ACI 318R, LATEST EDITIONS. UNLESS OTHERWISE NOTED, REINFORCING SPLICE LENGTHS AND DEVELOPMENT LENGTHS

MECHANICAL SPLICING OF REINFORCING BARS, WHERE INDICATED ON THE DRAWINGS, SHALL BE BY AN ICBO APPROVED SYSTEM, SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR, AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

REINFORCING SHALL BE PLACED AND ADEQUATELY SUPPORTED PRIOR TO PLACING CONCRETE. WET-SETTING EMBEDDED ITEMS IS NOT ALLOWED WITHOUT PRIOR ENGINEER APPROVAL. BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL NOT BE FIELD BENT UNLESS SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER. REFER TO CHAPTER 7 OF ACI 318 FOR OTHER REINFORCING STEEL REQUIREMENTS.

### MINIMUM LAPS AND EMBEDMENT

SHALL BE PER SCHEDULE.

UNLESS OTHERWISE NOTED, REINFORCING SPLICE LENGTHS AND DEVELOPMENT LENGTHS SHALL BE AS TABULATED

			f'c = 3000 P	SI				
		DEVELOPM	ENT LENGTH		LAP SPLICE			
BAR	TEN:	SION	COMPRESSION	TENS	SION	COMPRESSION		
SIZE	TOP BARS	OTHER BARS	ALL BARS	TOP BARS	OTHER BARS	ALL BARS		
#3	22	17	9	28	22	12		
#4	29	22	11	37	29	15		
#5	36	28	14	47	36	19		
#6	43	33	17	56	43	23		
#7	63	48	20	81	63	27		
#8	72	55	22	93	72	30		

OTE: . ALL LENGTHS ARE IN INCHES.

2. ALL LAP SPLICES ARE CLASS B.

3. "TOP BARS" ARE HORIZONTAL REINFORCEMENT PLACED SUCH THAT MORE THAN 12 INCHES OF

CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.

### CONCRETE COVER ON REINFORCING

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:	3"
CONCRETE EXPOSED TO EARTH AND WEATHER: #6 BARS AND LARGER #5 BARS AND SMALLER	2" 1 1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER: SLABS, WALLS AND JOISTS	3/4"
COLUMN TIES OR SPIRALS AND BEAM STIRRUPS	1 1/2"

### CONCRETE GENERAL NOTES

VERTICAL BARS SHALL START FROM TOP OF FOOTING. HORIZONTAL BARS SHALL START A DISTANCE OF 1/2 THE NORMAL BAR SPACING FROM TOP OF FOOTING AND TOP OF FRAMED SLABS. IN ADDITION, THERE SHALL BE A HORIZONTAL BAR AT A MAXIMUM OF 3" FROM TOP OF WALL AND BOTTOM OF FRAMED SLABS.

PROVIDE CORNER BARS TO MATCH THE HORIZONTAL REINFORCING WITH TENSION LAP SPLICE AT EACH SIDE PER TABLE, OR BEND ONE SIDE OVER TO PROVIDE TENSION LAP.

PROVIDE CONTROL OR CONSTRUCTION JOINTS IN SLABS ON GRADE TO BREAK UP SLAB INTO RECTANGULAR AREAS OF NOT MORE THAN 400 SQUARE FEET EACH. AREAS TO BE AS SQUARE AS PRACTICAL AND HAVE NO ACUTE ANGLES. JOINT LOCATIONS TO BE APPROVED BY THE ARCHITECT.

ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED AND PROPERLY PREPARED IMMEDIATELY PRIOR TO POURING OF CONCRETE. DOWEL STEEL SHALL BE THE SAME SIZE AND SPACING AS MAIN REINFORCING DETAILED BEYOND JOINT.

SEE ARCHITECTURAL DRAWINGS AND MECHANICAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF OPENINGS IN CONCRETE WALLS, FLOORS AND ROOF. UNLESS INDICATED OTHERWISE, REINFORCE AROUND OPENINGS GREATER THAN 12" IN EITHER DIRECTION WITH (2) #5 EACH SIDE AND (1) #5 x 4'-0" DIAGONAL AT EACH CORNER. EXTEND BARS 2'-0" BEYOND EDGE OF OPENING. IF 2'-0" IS UNAVAILABLE, EXTEND AS FAR AS POSSIBLE AND HOOK. HOOK ALL REINFORCING INTERRUPTED BY OPENINGS.

BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL NOT BE FIELD BENT UNLESS SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.

SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES. PROVIDE 3/4" CHAMFER AT ALL CORNERS EXCEPT AS NOTED.

### STRUCTURAL STEEL

STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", LATEST EDITION.

SHAPES SHALL CONFORM TO ASTM A992, Fy = 50 KSI.

PLATES, ANGLES, AND RODS SHALL CONFORM TO ASTM A36, Fy = 36 KSI.

STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B, Fy = 46 KSI.

STEEL PIPE SHALL CONFORM TO ASTM A53 GRADE B, Fy = 35 KSI.

BOLTS CONNECTING STEEL MEMBERS SHALL CONFORM TO ASTM A325-N. BOLTS SHALL BE 3/4"Ø MINIMUM, UNO ANCHOR BOLTS SHALL CONFORM TO ASTM A307.

CONTRACTOR SHALL PROVIDE CONNECTION ADJUSTMENT TOLERANCES TO SATISFY THE REQUIREMENTS OF AISC MANUAL OF STEEL CONSTRUCTION.

UNLESS SPECIFIED AS STAINLESS STEEL, ALL STEEL MEMBERS, SHAPES, BOLTS, AND ACCESSORIES EXPOSED TO WEATHER SHALL BE HOT DIP GALVANIZED.

### WEI DING

WELDING SHALL CONFORM TO AWS "STRUCTURAL WELDING CODE", LATEST EDITION. ALL WELDING SHALL BE DONE WITH 70 KSI LOW HYDROGEN ELECTRODES. WHERE NOT CALLED OUT, MINIMUM FILLET WELD SIZE SHALL BE PER TABLE 5.8 IN AWS D1.1, LATEST EDITION.

WELDING OF REINFORCING BARS SHALL NOT BE PERMITTED UNLESS SPECIFICALLY CALLED OUT ON DRAWINGS OR APPROVED BY STRUCTURAL ENGINEER. WELDING OF GRADE 60 REINFORCING BARS SHALL BE PERFORMED USING LOW HYDROGEN ELECTRODES. WELDING OF GRADE 40 REINFORCING BARS SHALL BE PERFORMED USING E70XX ELECTRODES. SEE REINFORCING NOTES FOR MATERIAL REQUIREMENTS OF WELDED BARS. WELDING WITHIN 4" OF COLD BENDS IN REINFORCING BARS IS NOT PERMITTED.

ALL WELDING SHALL BE DONE BY WASHINGTON ASSOCIATION OF BUILDING OFFICIALS (WABO) CERTIFIED WELDERS.

### PILE CORROSION PROTECTION

ALL PERMANENT PILES SHALL BE PAINTED TO PROTECT AGAINST CORROSION. BEFORE APPLYING PAINT PILES SHALL BE CLEAN AND FREE OF RUST OR DEBRIS. PAINTING SHALL CONSIST OF AN ORGANIC ZINC PRIMER COAT NOT LESS THAN 2.5 MILS DRY FILM THICKNESS. TOP COAT SHALL CONSIST OF AN EPOXY PAINT NOT LESS THAN 3.0 MILS DRY FILM THICKNESS. PILES SHALL BE PAINTED TO 2'-0" BELOW GRADE MINIMUM.

ANY SCUFF MARKS OR SCRATCHES THAT OCCUR DURING CONSTRUCTION SHALL BE REPAIRED WITH A FIELD APPLIED EPOXY PAINT.

### TIMBER LAGGING/SAWN LUMBER

SAWN LUMBER SHALL CONFORM TO GRADING AND DRESSING RULES, WEST COAST LUMBER INSPECTION BUREAU (WCLIB), LATEST EDITION. LUMBER SHALL BE THE GRADE LISTED BELOW:

ALL LAGGING SHALL BE TREATED WITH ACZA WOOD PRESERVATIVE TREATMENT WITH THE LEVELS LISTED BELOW. ANY LAGGING FIELD CUT SHALL HAVE ACZA TREATMENT FIELD APPLIED TO THE CUT END.

	SIZE	SPECIES	GRADE	Fb (PSI)	ACZA TREATMENT
WALL A, B, C, D	6x12	DF	#2	875	0.4 LBS/CU FT
WALL F	4x12	HF	#2	850	NOT REQ'D

### PROCEDURE/CONSTRUCTION SEQUENCING:

### PRECONSTRUCTION MEETING

CONTRACTOR SHALL CALL THE ENGINEERING INSPECTION LINE TO SET UP A PRECONSTRUCTION MEETING PRIOR TO ANY SITE WORK.

### CONCRETE PLACEMENT

CONCRETE SHALL NOT BE ALLOWED TO FREE-FALL TO THE BOTTOM OF THE DRILLED HOLE, BUT SHALL EITHER BE TREMIED OR PUMPED INTO THE HOLE.

### LAGGING

TIMBER LAGGING SHALL BE INSTALLED AT SHORING WALLS. VOIDS BETWEEN LAGGING AND SOIL SHALL BE BACKFILLED IMMEDIATELY AFTER LAGGING INSTALLATION. DRAINAGE BEHIND THE WALL MUST BE MAINTAINED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LIMIT THE AMOUNT OF EXPOSED SOIL WITHOUT LAGGING TO AVOID LOSS OF SOIL. NO MORE THAN 4 FEET OF EXCAVATION SHALL BE EXPOSED BEFORE INSTALLING LAGGING.

EXCAVATIONS SHALL NOT REMAIN UNLAGGED OVERNIGHT

### GENERAL

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL, CIVIL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS FOR COMPATIBILITY BEFORE PROCEEDING. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING.

CONTRACTOR TO SEE ARCHITECTURAL, CIVIL, ELECTRICAL AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF PIPE, VENT, DUCT AND OTHER OPENINGS AND DETAILS NOT SHOWN ON THESE DRAWINGS.

CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTION STABILITY AND TEMPORARY SHORING AS NECESSARY UNTIL PERMANENT SUPPORT AND STIFFENING ARE INSTALLED.

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

DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF A SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.

### UTILITY LOCATION/EXISTING CONDITIONS

THE LOCATIONS OF EXISTING UTILITIES AND SITE FEATURES SHOWN HEREON HAVE BEEN FURNISHED BY OTHERS BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND PROTECT ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN. CG ENGINEERING ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF THE EXISTING UTILITIES AND SITE FEATURES PRESENTED ON THESE DRAWINGS.

CONTRACTOR SHALL LOCATE AND PROTECT ALL UTILITIES DURING CONSTRUCTION AND SHALL CONTACT THE UNDERGROUND UTILITIES LOCATION SERVICE (1-800-424-5555) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE PROJECT SITE BEFORE STARTING WORK AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES.

IF THE ACTUAL FIELD VERIFIED LOCATION OF UTILITIES COULD RESULT IN A CONFLICT WITH THE SHORING, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY THAT OVERHEAD OBSTRUCTIONS, INCLUDING ELECTRICAL LINES, DO NOT INTERFERE WITH USE OF THE CONTRACTOR'S DRILLING EQUIPMENT.

COORDINATE AND ARRANGE FOR ALL UTILITY RELOCATIONS AND/OR SERVICE INTERRUPTIONS WITH THE AFFECTED OWNERS AND APPROPRIATE UTILITY COMPANIES. INTERRUPTIONS TO EXISTING UTILITIES SHALL BE MADE ONLY WITH THE WRITTEN APPROVAL OF THE AUTHORITIES GOVERNING SAID UTILITIES AND WITH A MINIMUM 48 HOURS ADVANCE NOTICE.

EXISTING UTILITY LINES IN SERVICE WHICH ARE DAMAGED DUE TO CONSTRUCTION WORK SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE AND INSPECTED AND ACCEPTED BY OWNER'S REPRESENTATIVE PRIOR TO BACKFILLING.

### **EROSION AND SEDIMENTATION CONTROL**

ALL DISTURBED SOIL AREAS SHALL BE SEEDED OR STABILIZED BY OTHER ACCEPTABLE METHODS FOR THE PREVENTION OF ON-SITE EROSION AFTER THE COMPLETION OF CONSTRUCTION.

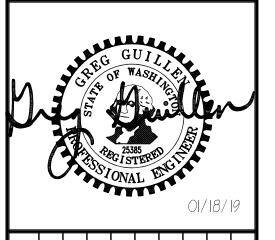
THE CONTRACTOR SHALL KEEP OFF-SITE STREETS CLEAN AT ALL TIMES BY SWEEPING. WASHING OF STREETS WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL.

REFER TO CIVIL DRAWINGS FOR ADDITIONAL EROSION CONTROL INFORMATION.

### EMPORARY SHORIN

CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL INSTALL AND MAINTAIN TEMPORARY SHORING AND BRACING IN ADDITION TO SHORING SHOWN ON THESE PLANS AS NECESSARY TO PROTECT WORKERS, EXISTING BUILDINGS, STREETS, WALKWAYS, UTILITIES AND OTHER EXISTING AND PROPOSED IMPROVEMENTS AND EXCAVATIONS AGAINST LOSS OF GROUND OR CAVING EMBANKMENTS. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVAL OF ANY TEMPORARY SHORING AND BRACING, AS REQUIRED.

250 4TH AVE. S., SUITE 200 EDMONDS, WASHINGTON 98020 PHONE (425) 778-8500 FAX (425) 778-5536



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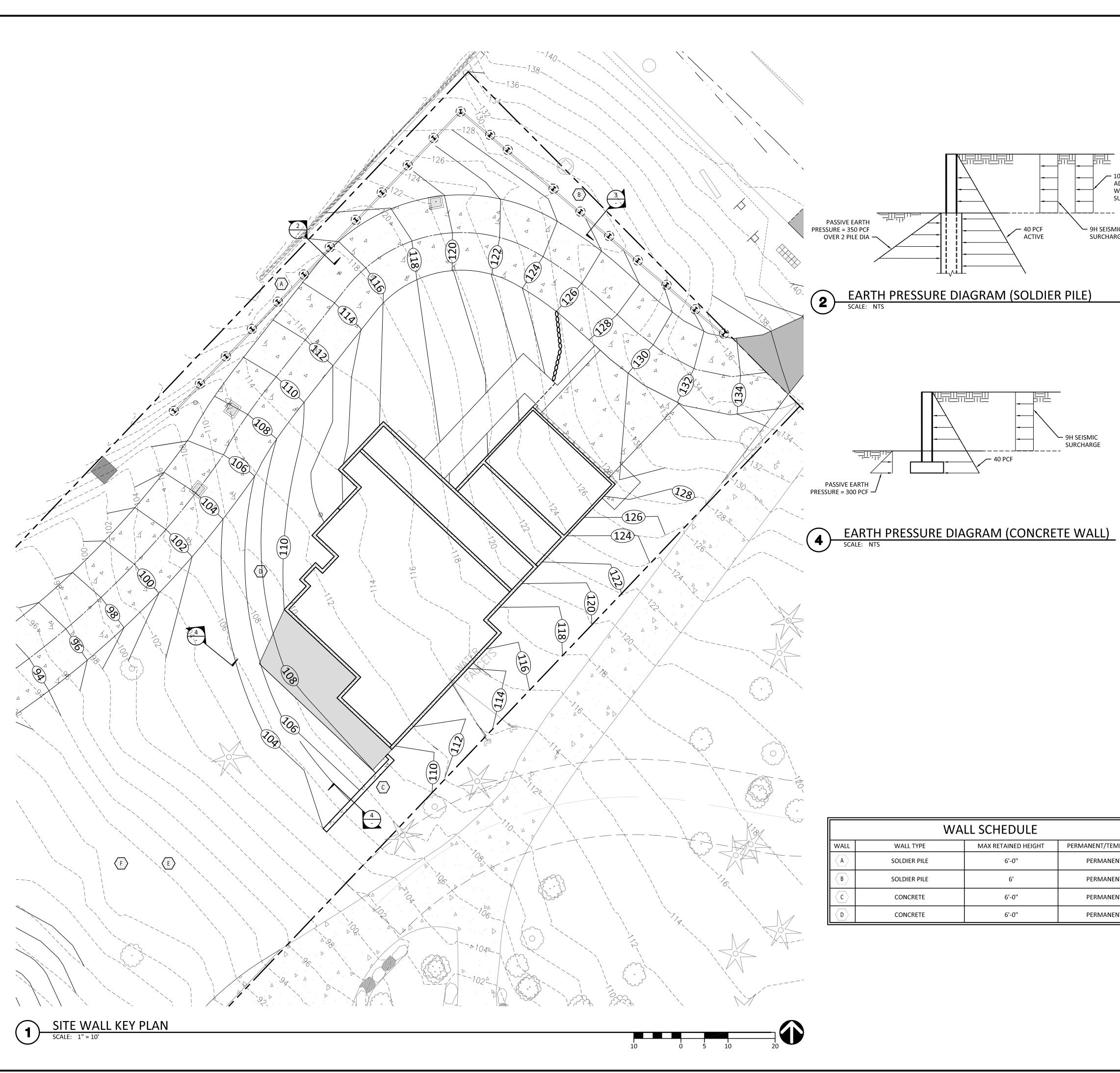
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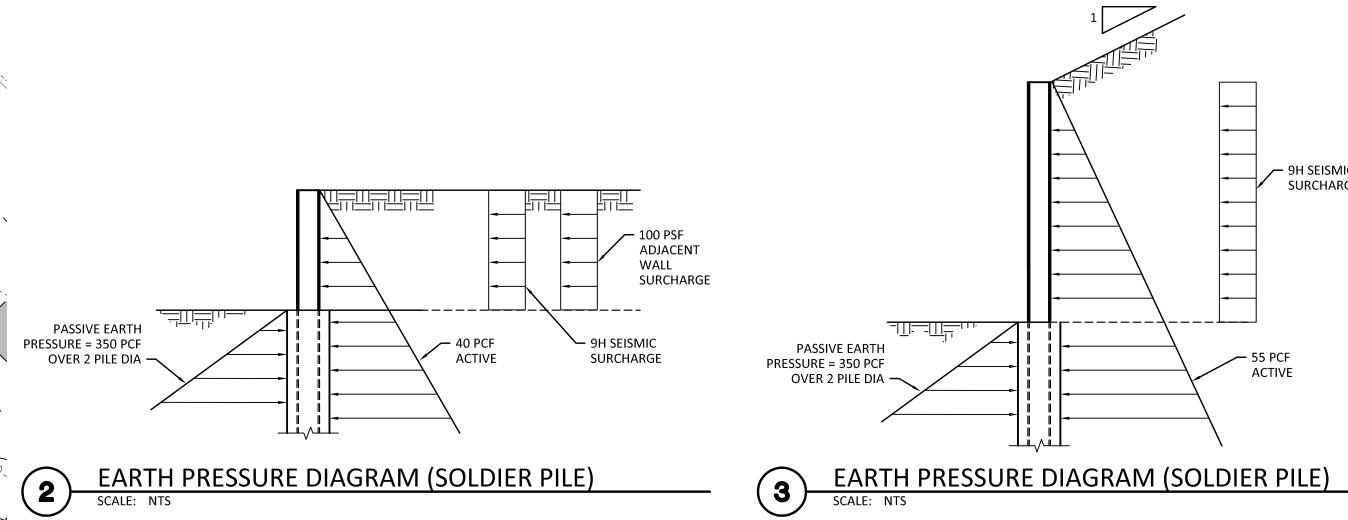
RESIDENCE MERCER WAY ISLAND, WA 98040

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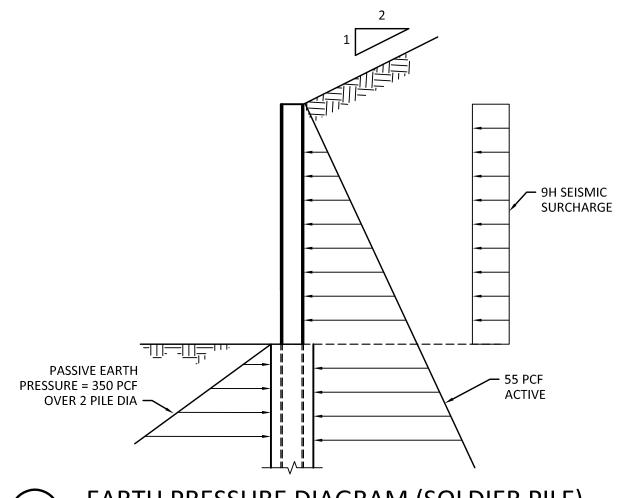
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SW1.1





➤ 9H SEISMIC SURCHARGE



ENGINEERING

250 4TH AVE. S., SUITE 200 EDMONDS, WASHINGTON 98020 PHONE (425) 778-8500 FAX (425) 778-5536

DESIGN:

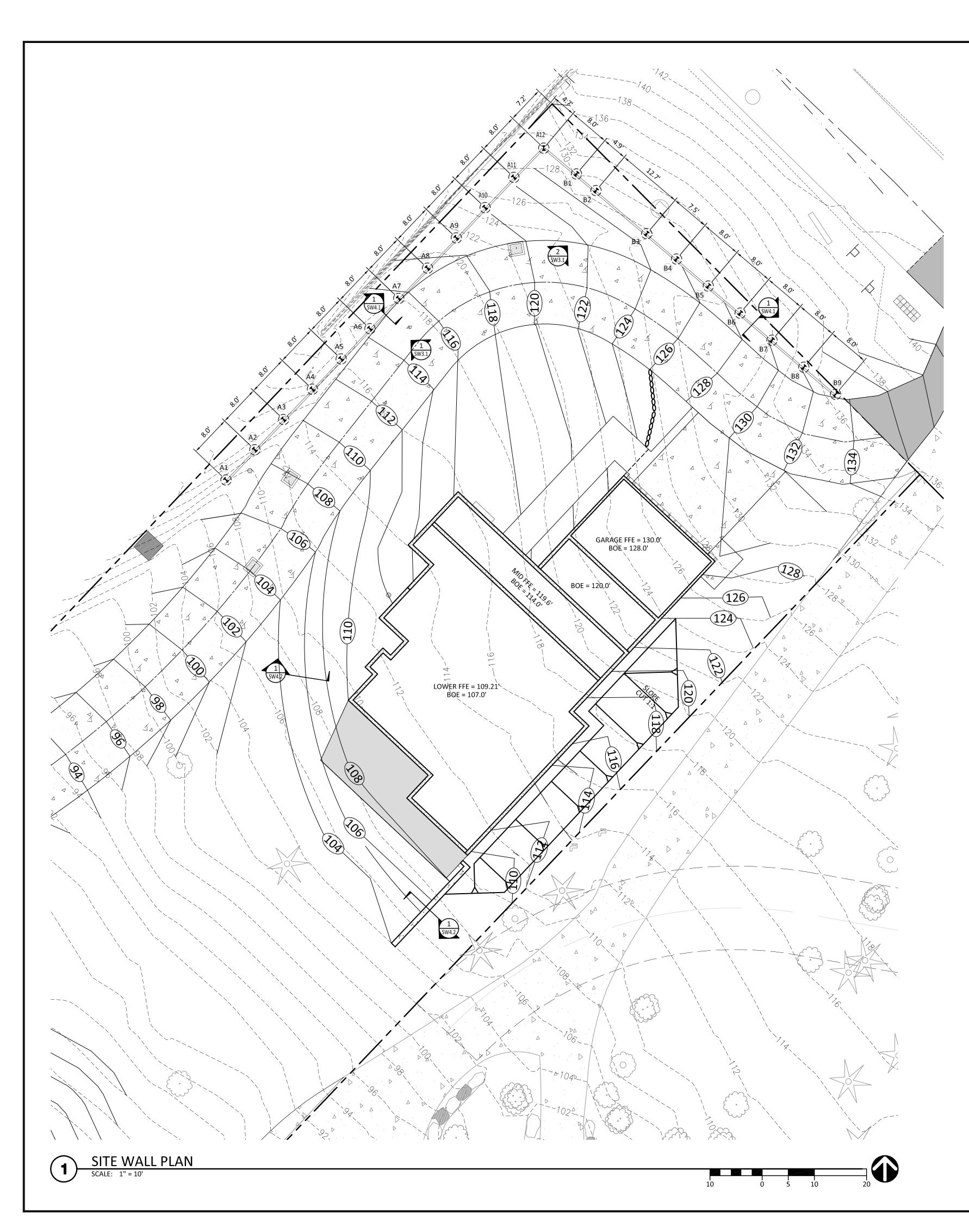
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RUDOLF 8253 W MERCER SHEET:

SW1.2

	WALL SCHEDULE								
WALL	WALL TYPE	MAX RETAINED HEIGHT	PERMANENT/TEMPORARY						
$\langle A \rangle$	SOLDIER PILE	6'-0"	PERMANENT						
B	SOLDIER PILE	6'	PERMANENT						
C	CONCRETE	6'-0"	PERMANENT						
D	CONCRETE	6'-0"	PERMANENT						



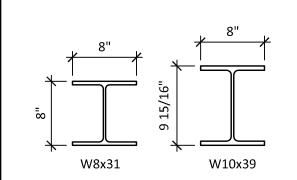


### PLAN NOTE:

1. REFER TO C3.1 FOR ADDITIONAL GRADING INFORMATION.

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	CANTIL	EVERED	SOLDIER	PILE	SCHEDULE	(WALL	<b>A)</b>
PILE(S)	A1-A2	A3-A7	A8	A9-A12			
MIN PILE SHAFT DIA	1'-6"Ø	1'-6"Ø	1'-6"Ø	1'-6"Ø			
MAX RETAINED HT	4'-0"	6'-0"	4'-0"	6'-0"			
	O A NITH		COLDIED		COLLEBILLE	/\A/ A	<b>D</b> \
	CANTIL	EVERED	20FDIEK	PILE	SCHEDULE	(WALL	В)
PILE(S)	B1-B9	EVERED	SOLDIER	PILE	SCHEDULE	(WALL	В)
PILE(S) MIN PILE SHAFT DIA		EVERED	SOLDIER	PILE	SCHEDULE	(WALL	В)

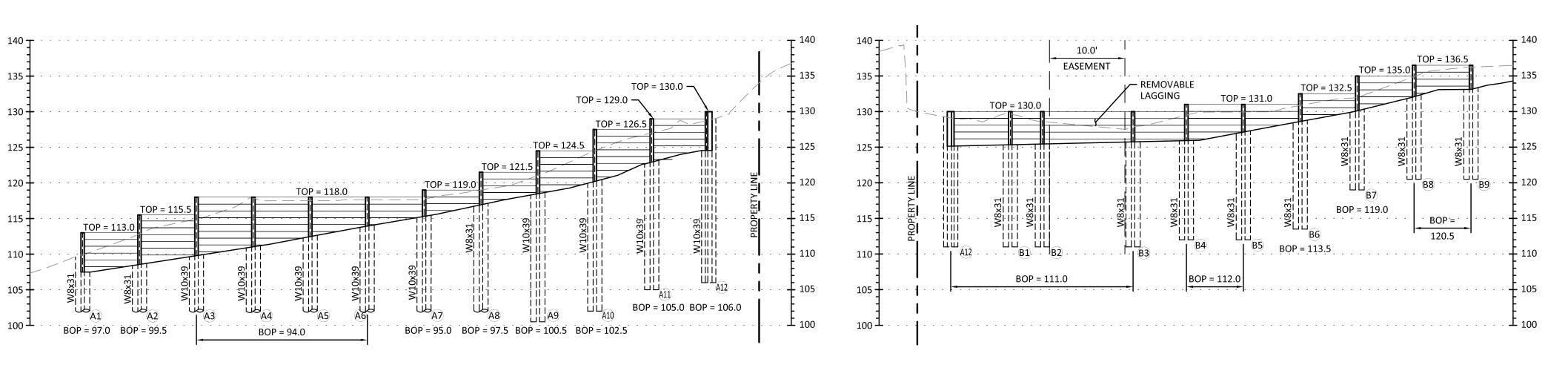


NOTES: 1. CONTRACTOR TO FIELD VERIFY THAT THE MAX. RETAINED HEIGHT IS NOT EXCEEDED.

2. CONTRACTOR TO PROVIDE SUFFICIENT HEIGHT ABOVE FINAL GRADE TO ALLOW FOR ADJACENT PILE LAGGING.
3. REFER TO SHORING DRAWINGS FOR ADDITIONAL INFORMATION.
4. REFER TO THE SHORING PROFILE FOR TOP & BOT. OF PILES

RUDOLF 8253 W MERCER SHEET:

SW2.1



WALL A PROFILE

SCALE: 1" = 10'

WALL B PROFILE

SCALE: 1" = 10'

ENGINEERING

250 4TH AVE. S., SUITE 200
EDMONDS, WASHINGTON 98020
PHONE (425) 778-8500
FAX (425) 778-5536



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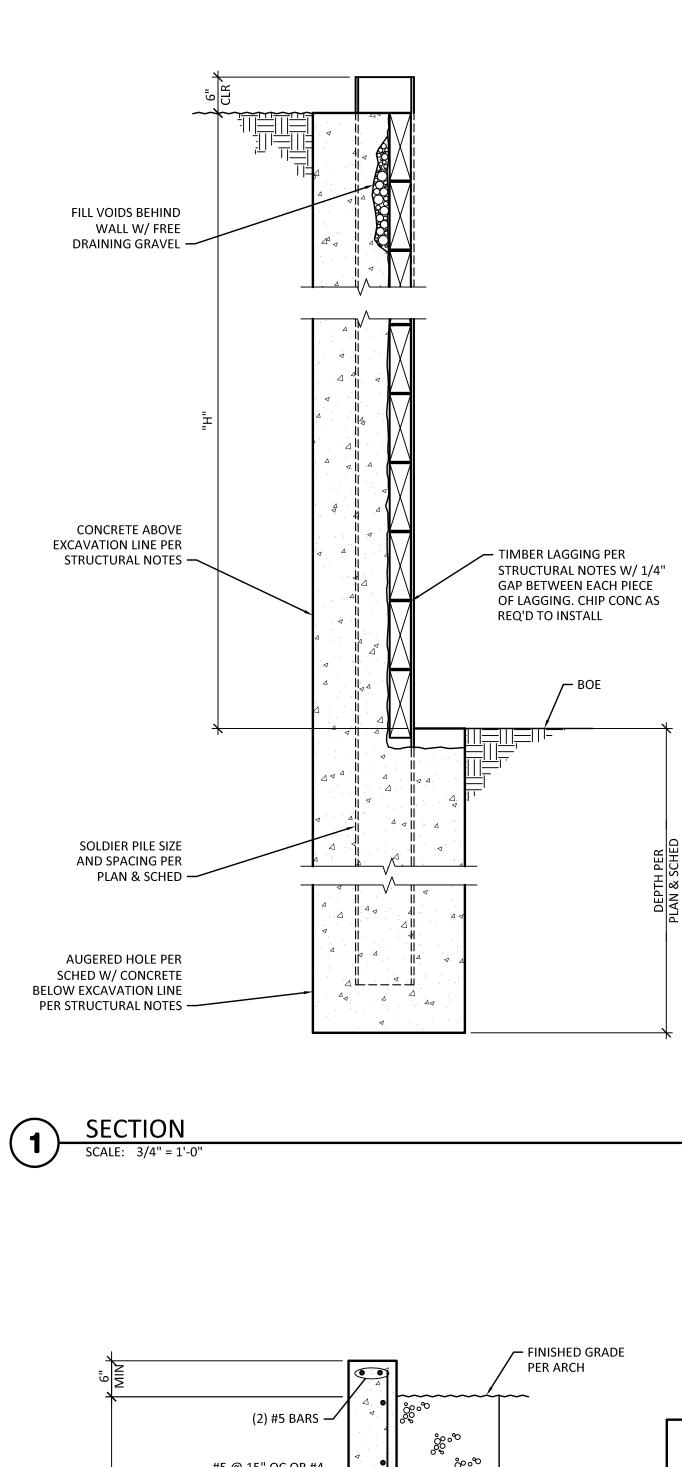
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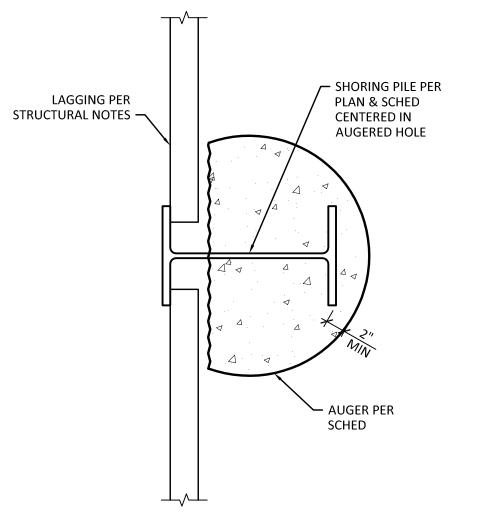
F RESIDENCE W MERCER WAY R ISLAND, WA 98040 WALL PROFILES

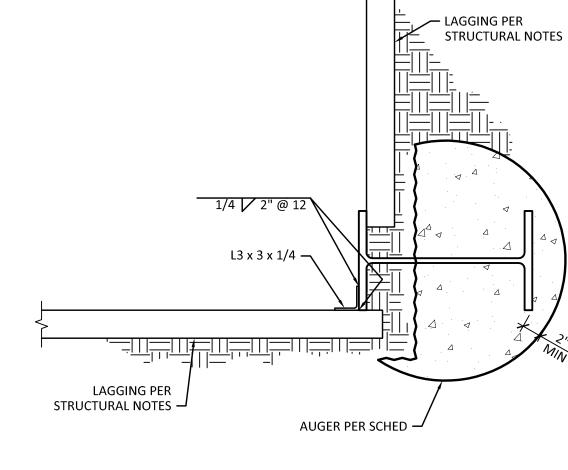
RUDOLF 8253 W MERCER

SW3.1

SITE

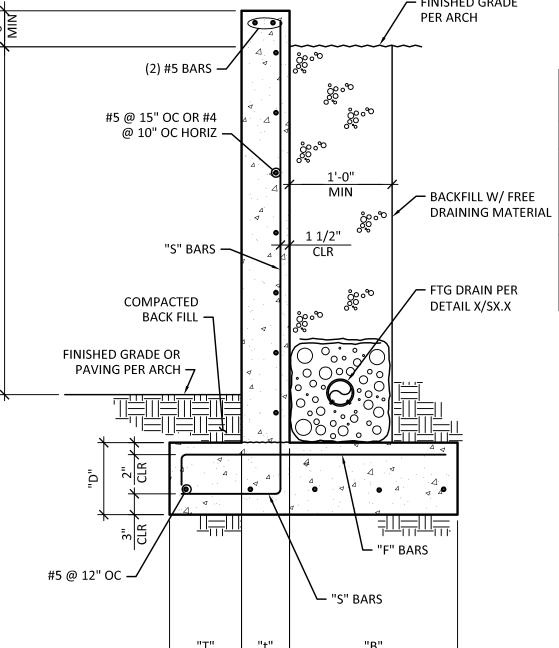






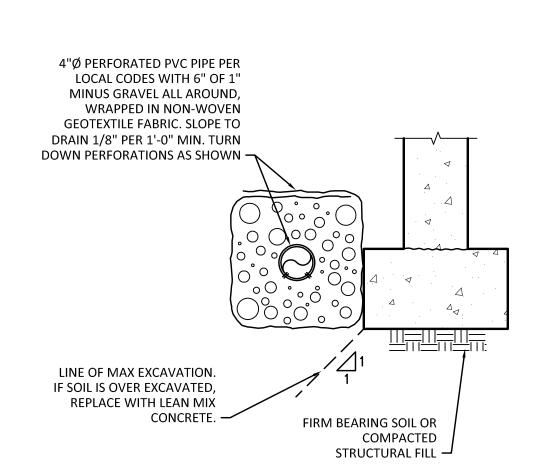
CORNER PILE DETAIL

SCALE: 1" = 1'-0"



R	RETAINING WALL SCHEDULE									
	WALL	GEOMETR	RY		WALL REINFORCING					
MAX "H"	"T"	"B"	"t"	"D"	"S" BARS	"F" BARS				
4'-0"	1'-0"	1'-7"	8"	12"	#4 @ 12" EDGE	#4 @ 18"				
6'-0"	1'-3"	2'-10"	8"	12"	#4 @ 12" EDGE	#4 @ 18"				
		•			_					

1. FOUNDATION SHALL BEAR ON UNDISTURBED NATIVE SOIL PER GEOTECHNICAL REPORT. 2. ALTERNATE HOOK DIRECTION INTO FOOTING EVERY OTHER BAR.



RETAINING WALL SECTION

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

TYPICAL FOOTING DRAIN

SCALE: 1" = 1'-0"

250 4TH AVE. S., SUITE 200 EDMONDS, WASHINGTON 98020 PHONE (425) 778-8500 FAX (425) 778-5536



DESCRIPTION	PERMIT SUBMITTAL	PERMIT RESUBMITTAL				
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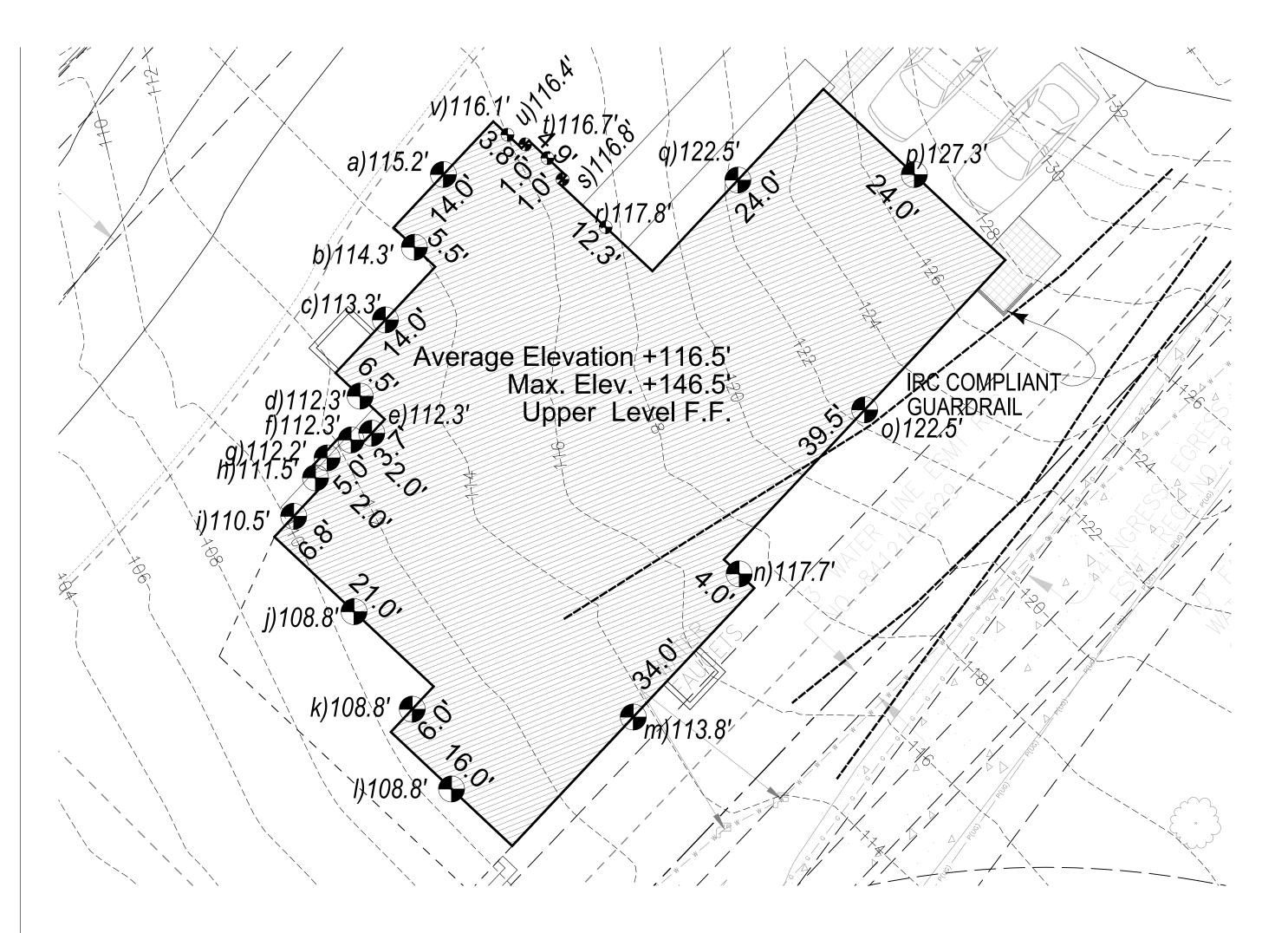
CHECK: JOB NO: 15227.20 DATE: 06/08/18

RESIDENCE MERCER WA WALL

RUDOLF 8253 W MERCER SHEET:

SW4.1

SITE



Value Point 115.2 1612.8 628.7 113.3 1583.4 730.0 415.5 224.6 561.0 223.0 751.4 108.8 2284.8 652.8 6.0 16.0 1740.8 34.0 3869.2 470.8 4.0 4834.8 127.3 3055.2 2940.0 12.3 1448.9

116.8

116.4

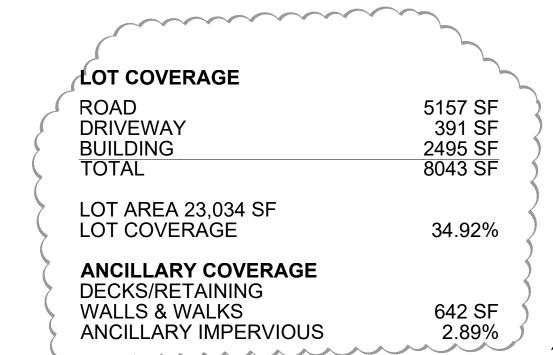
**CALCULATION KEY** 

Elevations Co-Ordinated

Avg. Height. = 29280.6/251.0 = 116.66' = 116.66 + 30.0= **146.66'** 

116.1

1.0



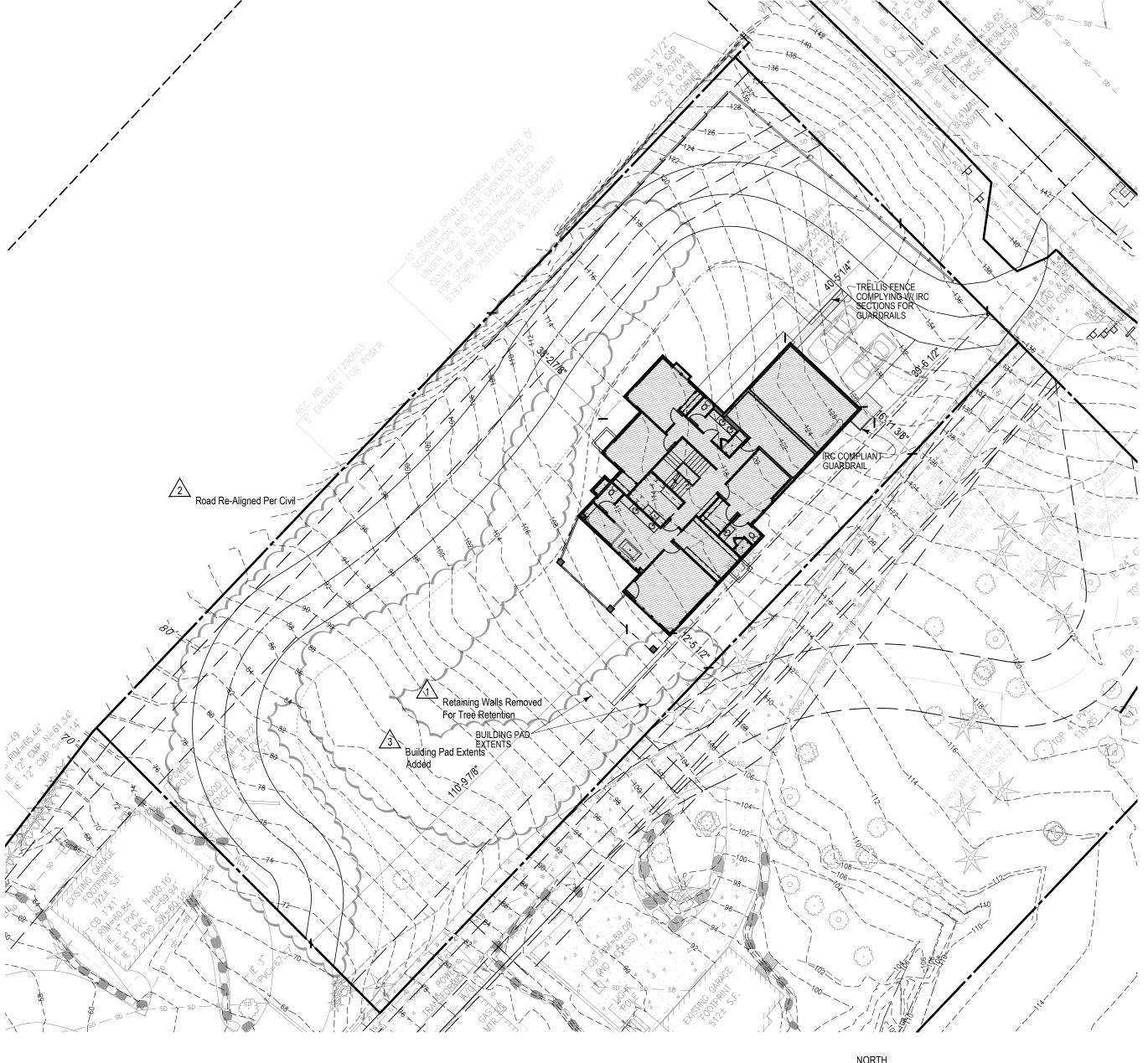
Areas Revised Per New Road Path. Ancillary Impervious Calculations Note Added Per City

Note Added Per City

LANDSCAPED.

Note Added Per City

OF MICC 19.09.090.



**SITE PLAN** 

KNOTWEED (POLYGONUM CUSPIDATUM) AND REGULATED CLASS A, REGULATED

CLASS B, AND REGULATED CLASS C WEEDS IDENTIFIED ON TEH KING COUNTY

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

BUILDING PAD TO BE DEVELOPED IN A MANNER CONSISTENT WITH PROVISIONS

AS PER MICC 19.07.060(D)(1)(D) BECAUSE THE DEVELOPMENT OF A GEOLOGIC

HAZARD AREA IS PROPOSED ALL DISTURBED AREAS OUTSIDE OF BUILDING

FOOTPRINTS AND INSTALLATION OF ALL IMPERVIOUS SURFACES BE

NOXIOUS WEEDS 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

PER MICC 19.02.020(F)(3)(D) TO REMOVE NOXIOUS WEEDS. ("DEVELOPMENT

PROPOSALS FOR A NEW SINGLE-FAMILY HOME SHALL REMOVE JAPANESE

# **CODES:**

PLANS TO COMPLY WITH 2015 INTERNATIONAL RESIDENTIAL CODE (IRC), AND WASHINGTON STATE AMMENDMENTS. ALL APPLICABLE CODES TO BE FOLLOWED.

- 2015 INTERNATIONAL RESIDENTIAL BUILDING CODE (IRC) 2015 INTERNATIONAL BUILDING CODE (IBC) 2015 WASHINGTON STATE ENERGY CODE WAC 51-11
- (WSEC)
- MINIMUM DESIGN LOADS FO BUILDINGS AND OTHER STRUCTURES, ASCE 7-10 (ASCE) 2015 SPECIAL DESIGN PRÒVISIÓNS FOR WIND AND SEISMIC (SDPWS)
- 6. MERCER ISLAND CITY CODE (MICC)

### **BUILDING**

**OCCUPANCY**: CONSTRUCTION TYPE: V-5 R-15 SINGLE FAMILY ZONING: SETBACKS: FRONT 20' REAR 25' SIDE TOTAL 15'; 5'MIN.

MAIN LEVEL FLOOR AREA: MID LEVEL FLOOR ARE 1,669 SF 1,898 SF LOWER LEVEL FLOOR AREA 1.487 SF TOTAL FLOOR AREA 5,054 SF GARAGE AREA 576 SF

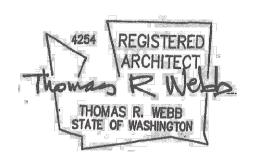
### **FIRE**

COMPLY WITH CURRENT EDITION OF NFPA 13, NFPA 13D, AND NFPA 13R; MERCER ISLAND BUILDING AND FIRE CODE. SEE MUNICIPAL CODE TITLE 17.

POINT OF VISION ARCHITECTURAL SERVICES 1628 46th Street SE, Everett, WA 98203 point\_of\_vision @comcast.net (425)772-8207

**TR Webb Homes** 

- Tom Webb, Architect - 10303- 14th Avenue NW, Seattle, WA 98177 TomW @KDW.net / ( 2 0 6 ) 3 9 0 - 1 8 0 0



New Residence For: **James & Jessica Rudolf** 8253 West Mercer Way Mercer Island, Washington 98040

↑ 6-11-18 Retaining Walls Removed For Tree Retention, 1 Lot Coverage, Various Notes Per City 2 11-12-18 Adjustments Per City Comments 3 3-31-19 Building Pad Extents Added

PERMIT SET 5/15/18

POV1740

DRAWN BY: Site Plan, ABE Calcs

& Project Information SHEET NO

PROJECT INFORMATION

PROJECT MANAGER:

PROJECT NO:

A<sup>7</sup>

							WINDC	W SCHE			
VDW#	WIDTH	Height	AREA(SF)	WDW TYPE	HEAD HEIGHT	UValue	UA	Head	ETAILS Jamb	Sill	Remarks
1	30	60	12.5	COTTAGE	+8'-0"	0.29	3.625				
2	30	60	12.5	COTTAGE	+8'-0"	0.29	3.625				
3	30	72	15	COTTAGE	+8'-0"	0.29	4.35				
4	36	72	18	COTTAGE	+8'-0"	0.29	5.22				SFTY. GL.
5	36	72	18	COTTAGE	+8'-0"	0.29	5.22				SFTY. GL.
6	36	72	18	COTTAGE	+8'-0"	0.29	5.22				SFTY. GL.
7	36	72	18	COTTAGE	+8'-0"	0.29	5.22				SFTY. GL.
8	36	54	13.5	COTTAGE	+8'-0"	0.29	3.915				0111.02.
9	36	54	13.5	COTTAGE	+8'-0"	0.29	3.915				
10	36	72	18	COTTAGE	+8'-0"	0.29	5.22				
11	24	24	4	PICTURE	+8'-0"	0.28	1.12				
12	24	24	4	PICTURE	+8'-0"	0.28	1.12				
		24	4	PICTURE	+8'-0"	0.28	1.12				
13	24		-								
14	24	24	4	PICTURE	+8'-0"	0.28	1.12				
15	24	24	4	PICTURE	+8'-0"	0.28	1.12				
16	24	24	4	PICTURE	+8'-0"	0.28	1.12				
17	18	18	2.25	PICTURE	SEE ELEV.	0.28	.63				
18	18	18	2.25	PICTURE	SEE ELEV.	0.28	.63				
19	18	18	2.25	PICTURE	SEE ELEV.	0.28	.63				
20	18	18	2.25	PICTURE	SEE ELEV.	0.28	.63				
21	18	18	2.25	PICTURE	SEE ELEV.	0.28	.63				
22	18	18	2.25	PICTURE	SEE ELEV.	0.28	.63				
23	60	24	10	PICTURE	+7'-0"	0.28	2.8				
24	26	36	6.5	SINGLE HUNG	SEE ELEV.	0.29	1.885				
25	36	39	9.75	COTTAGE	SEE ELEV.	0.28	2.73		-	1	TRAPEZOID-V.I.F.
26	36	46	11.5	COTTAGE	SEE ELEV.	0.28	3.22				TRAPEZOID-V.I.F.
27	36	39	9.75	COTTAGE	SEE ELEV.	0.28	2.73				TRAPEZOID-V.I.F.
28	30	48	10	COTTAGE	+8'-0"	0.28	2.8				
29	30	48	10	COTTAGE	+8'-0"	0.28	2.8				
30	36	72	18	COTTAGE	+8'-0"	0.29	5.22				EGRESS COMPLIANT WINDOW
31	36	72	18	COTTAGE	+8'-0"	0.29	5.22				EGRESS COMPLIANT WINDOW
32	36	72	18	COTTAGE	+8'-0"	0.29	5.22				EGRESS COMPLIANT WINDOW
33	36	72	18	COTTAGE	+8'-0"	0.29	5.22				EGRESS COMPLIANT WINDOW
34	12	72	6	COTTAGE	+8'-0"	0.29	1.74				SFTY. GL.
35	30	24	5	PICTURE	+8'-0"	0.28	1.4				SFTY. GL.
36	30	24	5	PICTURE	+8'-0"	0.28	1.4				SFTY. GL.
37	30	24	5	PICTURE	+8'-0"	0.28	1.4				SFTY. GL.
38	30	72	15	COTTAGE	+8'-0"	0.29	4.35				SFTY. GL.
39	30	72	15	COTTAGE	+8'-0"	0.29	4.35				SFTY. GL.
40	30	72	15	COTTAGE	+8'-0"	0.29	4.35				SFTY. GL.
41	30	72	15	COTTAGE	+8'-0"	0.29	4.35				
42	30	72	15	COTTAGE	+8'-0"	0.29	4.35				
43	30	72	15	COTTAGE	+8'-0"	0.29	4.35				
44	30	72	15	COTTAGE	+8'-0"	0.28	4.2				
45	30	72	15	COTTAGE	+8'-0"	0.28	4.2				
46	30	72	15	COTTAGE	+8'-0"	0.29	4.35				SFTY. GL.
47	36	72	18	COTTAGE	+8'-0"	0.29	5.22				EGRESS COMPLIANT WINDOW-SFTY. GL.
48	36	72	18	COTTAGE	+8'-0"	0.29	5.22				EGRESS COMPLIANT WINDOW-SFTY. GL.
49	30	48	10	COTTAGE	+8'-0"	0.28	2.8			-	SFTY. GL.
50	36	72	18	COTTAGE	+8'-0"	0.29	5.22				EGRESS COMPLIANT WINDOW- SFTY. GL.
51	36	72	18	COTTAGE	+8'-0"	0.29	5.22				
52	36	72	18	COTTAGE	+8'-0"	0.29	5.22				SFTY. GL.
53	36	72	18	COTTAGE	+8'-0"	0.29	5.22				SFTY. GL.
54	36	72	18	COTTAGE	+8'-0"	0.29	5.22				SFTY. GL.
55	30	72	15	COTTAGE	+8'-0"	0.29	4.35				
56	30	72	15	COTTAGE	+8'-0"	0.29	4.35				
57	30	72	15	COTTAGE	+8'-0"	0.29	4.35				
58	32	54	12	COTTAGE	+8'-0"	0.29	3.48				
59	30	72	15	COTTAGE	+8'-0"	0.29	4.35				EGRESS COMPLIANT WINDOW-SFTY. GL.
	JU	12	13	COLLAGE	+∪ •∪	0.23					LOINEGO OOIVII LIAINT VYIINDOVY"OI TT. GE.
60	32	54	12	COTTAGE	+8'-0"	0.29	3.48				

						E	XTERIOR	DOOR S	SCHEDU	LE	
DD#	WIDTH	l la imbé	ADEA/CE)	APEA/OE) MADIA/TYOP HEAD HEIGHT HIVEL HA DETAILS		Damanka					
DR#	WIDTH	Height	AREA(SF)	WDW TYPE	HEAD HEIGHT	UValue	UA	Head	Jamb	Sill	Remarks
101	36	96	24.0	ENTRY	+8'-0"	0.30	7.2			1	MARVIN DOOR
201	36	96	24.0	ENTRY	+8'-0"	0.30	7.2			-	MARVIN DOOR
301	36	96	24.0	ENTRY	+8'-0"	0.30	7.2				MARVIN DOOR
302	144	96	96.0	SLIDER	+8'-0"	0.30	28.8			-	MARVIN DOOR
303	36	96	24.0	ENTRY	+8'-0"	0.30	7.2				MARVIN DOOR
304	144	96	96.0	SLIDER	+8'-0"	0.30	28.8				MARVIN DOOR
305	36	96	24.0	ENTRY	+8'-0"	0.30	7.2				MARVIN DOOR
TOTAL			312.0				93.6				

SUM OF AREA AND UA 1018.25 296.88 AREA WEIGHTED U = UA / AREA 0.29

### **CITY OF MERCER ISLAND**

**DEVELOPMENT SERVICES GROUP** 

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

PHONE: 206.275.7605 | <u>www.mercergov.org</u>



### 2015 WSEC & IRC Ventilation Worksheet (Effective July 1, 2016)

INFORMATION IN THESE WORKSHEETS MUST BE INCLUDED IN THE CONSTRUCTION DOCUMENTS This set of worksheets has been developed to assist permit applicants with documenting compliance with the 2015 Washington State Energy Code. The following worksheets provide much of the required documentation for plan review. The details, systems, and ratings noted here must also be shown on the drawings.

PRESCRIPTIVE ENERGY CODE COMPLIANCE FOR CLIMATE ZONE MARINE 4

w/ Attic | Ceiling | Wall (Int.)<sup>2</sup> Framed (Above R-Value & Depth R-10 min. R-38 min. | R-21 min. | R-21 min. | R- 10/15/21 Int. + TB | R-30 min. | Fenestration is defined as skylights, roof windows, vertical windows (fixed or moveable), opaque doors, glazed doors, glazed block and combination

opaque/glazed doors. Fenestration includes products with glass and non-glass glazing materials.  $^{2}$  Int. (intermediate framing) denotes standard framing 16" o.c. with headers insulated with a minimum R-10 insulation

Inspection Requests: Online: <a href="https://www.MyBuildingPermits.com">www.MyBuildingPermits.com</a> VM: 206.275.7730

<sup>3</sup> 10/15/21 +TB" means R-10 continuous insulation on the exterior of the wall, or R-15 on the continuous insulation on the interior of the wall, or R-21 cavity insulation plus a thermal break between the slab and the basement wall at the interior of the basement wall. "10/15/21 +TB" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the wall. "TB" means thermal break between floor slab and basement wall.

Whole House Ventilation (Prescriptive)

Please check the appropriate box to describe which of the four prescriptive Whole House Ventilation Systems you will be using AND fill in the required whole house ventilation rate in CFM's. (See "2015 Residential Whole House Ventilation Rate" Handout.) A complete system required by one of the sections noted below must be specified on the drawings. WHOLE HOUSE VENTILATION METHOD Ventilation Rate Intermittent Whole House Ventilation Using Exhaust Fans & Fresh Air Inlets. (IRC M1507.3.4)

Source Specific Exhaust Ventilation & Fan Efficiency

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

Intermittent Whole House Ventilation Using a Heat Recovery Ventilation System (IRC M1507.3.7)

**Minimum Source Specific Ventilation Capacity Requirements** 

Intermittent Whole House Ventilation Integrated with a Forced Air System. (IRC M1507.3.5)

Intermittent Whole House Ventilation using a Supply Fan. (IRC M1507.3.6)

		Bathrooms – Utility Rooms			In-line fan
Γ	Intermittently operating	50 cfr	n min	100 cfm min	
	Continuous operation	20 cfr	n min	25 cfm min	
	Minimum Efficacy (cfm/watt)	1.4 cfm/watt if <90cfm	2.8 cfm/watt if >90cfm	2.8 cfm/watt	2.8 cfm/watt

### Each dwelling unit shall comply with sufficient options from WSEC Table R406.2 so as to achieve the following minimum number of credits as described on the reverse side of this page. **Small Dwelling Unit: 1.5 credits** (Dwelling units less than 1500 SF in conditioned floor area with less than 300 square feet of fenestration area. Additions to existing building that are greater than 500 SF of heated floor area, but less than 1500 SF. TOTAL SQUARE FEET OF FENESTRATION: \_\_\_\_\_ (doors, windows, skylights) Medium Dwelling Unit: 3.5 credits (All dwelling units not included in #1 or #3. Exception: Dwelling units serving R-2 occupancies shall require 2.5 credits. Large Dwelling Unit: 4.5 credits (Dwelling Units exceeding 5000 SF of conditioned floor area. Additions less than 500 SF: 0.5 credits

S:\DSG\FORMS\2017\Building\2015\_WSEC\_IRC\_Ventilation.pdf

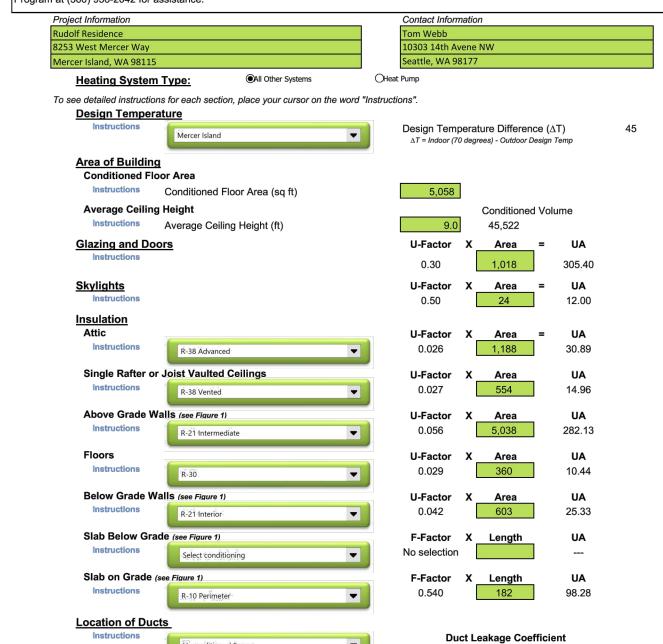
### 2015 WSCE – Table R406.2 – circle the options that you will be using for this project

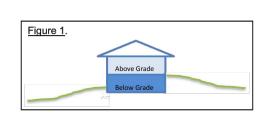
OPTION	DESCRIPTION	CREDIT				
	EFFICIENT BUILDING ENVELOPE 1a:					
	Vertical fenestration U = 0.28					
1a	Floor R-38	0.5				
	Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab.					
	<u>OR</u> Compliance based on Section R402.1.4: Reduce the Total UA by 5%.					
	EFFICIENT BUILDING ENVELOPE 1b:					
	Vertical fenestration U = 0.25					
1b	Wall R-21 plus R-4 Floor R-38	1.0				
	Basement wall R-21 int plus R-5 ci	1.0				
	Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab.					
	OR Compliance based on Section R402.1.4: Reduce the Total UA by 15%.					
	EFFICIENT BUILDING ENVELOPE 1c:					
	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.22					
1.	Ceiling and single-rafter or joist-vaulted R-49 advanced Wood frame wall R-21 int plus R-12 ci Floor R-38	٠, ١				
1c	Basement wall R-21 int plus R-12 ci	2.0				
	Slab on grade R-10 perimeter and under entire slab Below grade slab R-10 perimeter and under entire slab					
	OR Compliance based on Section R402.1.4: Reduce the Total UA by 30%.					
	EFFICIENT BUILDING ENVELOPE 1d:					
1d	Prescriptive compliance is based on Table R402.1.1 with the following modifications: Vertical fenestration U = 0.24. Projects using this	0.5				
rii l	option may not use Option 1a, 1b or 1c.	0.5				
	AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2a:	$\vdash$				
	Compliance based on R402.4.1.2: Reduce the tested air leakage to 3.0 air changes per hour maximum					
	AND All whole house ventilation requirements as determined by Section M1507.3 of the <i>International Residential Code</i> shall be met					
2a	with a high efficiency fan (maximum 0.35 watts/cfm), not interlocked with the furnace fan. Ventilation systems using a furnace including	0.5				
	an ECM motor are allowed, provided that they are controlled to operate at low speed in ventilation only mode.	0.5				
	To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum					
	tested building air leakage and shall show the qualifying ventilation system.					
	AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2b:					
	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 2.0air changes per hour maximum					
2b	AND All whole house ventilation requirements as determined by Section M1507.3 of the International Residential Code shall be met with	1.0				
	a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.70.					
	To qualify to claim this credit, the building permit drawings shall specify theoption being selected and shall specify the maximum tested building air leakage and shall show the heat recovery ventilation system.					
	AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION 2c:					
	Compliance based on Section R402.4.1.2: Reduce the tested air leakage to 1.5air changes per hour maximum.					
	AND All whole house ventilation requirements as determined by Section M1507.3 of the <i>International Residential Code</i> shall be met					
2c	with a heat recovery ventilation system with minimum sensible heat recovery efficiency of 0.85.	1.5				
	To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum					
ات	tested building air leakage and shall show the heat recovery ventilation system.					
	HIGH EFFICIENCY HVAC EQUIPMENT 3a:					
	Gas, propane or oil-fired furnace with minimum AFUE of 94%, or Gas, propane or oiled-fired boiler with minimum AFUE of 92%.	İ				
	Projects may only include credit from one space heating option, 3a, 3b, 3c or 3d. When a housing unit has two pieces of equipment (i.e.,					
3a	two furnaces) both must meet the standard to receive the credit.	1.0				
	To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating					
	equipment type and the minimum equipment efficiency.	<u> </u>				
	HIGH EFFICIENCY HVAC EQUIPMENT 3b:					
	Air-source heat pump with minimum HSPF of 9.0. Projects may only include credit from one space heating option, 3a, 3b, 3c or 3d.	l				
3b	When a housing unit has two pieces of equipment (i.e., two furnaces) both must meet the standard to receive the credit.	1.0				
	To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating	I				
Ш	equipment type and the minimum equipment efficiency.	<u> </u>				
	HIGH EFFICIENCY HVAC EQUIPMENT 3c:	l				
	Closed-loop ground source heat pump; with a minimum COP of 3.3  OR Open loop water source heat pump with a maximum pumping hydraulic head of 150 feet and minimum COP of 3.6. Projects may	l				
3c	only include credit from one space heating option, 3a, 3b, 3c or 3d. When a housing unit has two pieces of equipment (i.e., two	1.5				
	furnaces) both must meet the standard to receive the credit.	1				
	To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating	I				
	equipment type and the minimum equipment efficiency.	L				
	HIGH EFFICIENCY HVAC EQUIPMENT 3d:					
	Ductless Split System Heat Pumps, Zonal Control: In homes where the primary space heating system is zonal electric heating, a ductless	l				
	heat pump system shall beinstalled and provide heating to the largest zone of the housing unit. Projects may only include credit from	l				
3d	one space heating option, 3a, 3b, 3c or 3d. When a housing unit has two pieces of equipment (i.e., two furnaces) both must meet the	1.0				
	standard to receive the credit.  To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the heating					
	equipment type and the minimum equipment efficiency.					

Simple Heating System Size: Washington State

This heating system sizing calculator is based on the Prescriptive Requirements of the 2015 Washington State Energy Code (WSEC) and ACCA Manuals J and S. This calculator will calculate heating loads only. ACCA procedures for sizing cooling systems should be used to determine cooling

The glazing (window) and door portion of this calculator assumes the installed glazing and door products have an area weighted average U-factor of 0.30. The incorporated insulation requirements are the minimum prescriptive amounts specified by the 2015 WSEC. Please fill out all of the green drop-downs and boxes that are applicable to your project. As you make selections in the drop-downs for each section, some values will be calculated for you. If you do not see the selection you need in the drop-down options, please call the WSU Energy Extension Program at (360) 956-2042 for assistance.





2015 WSCE – Table R406.2 - Continued

under this option.

rated at 1.0 GPM or less.

comply with the following requirements

**EFFICIENT WATER HEATING 5b:** 

EFFICIENT WATER HEATING 5c:

accordance CSA B55.1 and be so labeled.

that the unit complies with the standard.

neray power production.

minimum pipe insulation.

Water Heating Systems

Heat Pump Water Heaters

HIGH EFFICIENCY HVAC DISTRIBUTION SYSTEM:

combustion equipment shall be direct vent or sealed combustion

rates for all showerheads, kitchen sink faucets, and other layatory faucets.

shall be allowed, up to 3 credits. Generation shall be calculated as follows:

equipment type and the minimum equipment efficiency.

**OR** Water heater heated by ground source heat pump meeting the requirements of Option 3c.

hammann

DESCRIPTION

All heating and cooling system components installed inside the conditioned space. This includes all equipment and distribution system components such as forced air ducts, hydronic piping, hydronic floor heating loop, convectors and radiators. All

For forced air ducts: A maximum of 10 linear feet of return ducts and 5 linear feet of supply ducts may be located outside the conditioned space. All metallic ducts located outside the conditioned space must have both transverse and longitudinal joints sealed with mastic. If flex ducts are used, they cannot contain splices. Flex duct connections must be made with nylon straps and installed using a plastic strapping tensioning tool. Ducts located outside the conditioned space must be insulated to a minimum of R-8. Locating system components in conditioned crawl spaces is not permitted under this option. Electric resistance heat and ductless heat pumps are not permitted under this option. Direct combustion heating equipment with AFUE less than 80% is not permitted

To qualify to claim this credit, the building permit drawings shall specify theoption being selected and shall specify the heating

All showerhead and kitchen sink faucets installed in the house shall be rated at 1.75 GPM or less. All other lavatory faucets shall be

Plumbing Fixtures Flow Ratings. Low flow plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall

1. Residential bathroom lavatory sink faucets: Maximum flow rate - 3.8 L/min (1.0 gal/min) when tested in accordance with ASME

3. Residential showerheads: Maximum flow rate - 6.6 L/min (1.75 gal/min) when tested in accordance with ASME A112.18.1/CSA

5b OR For R-2 occupancy, a central heat pump water heater with an EF greater than 2.0that would supply DHW to all the units through a co

To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heate

OR Solar water heating supplementing a minimum standard water heater. Solar water heating will provide a rated minimum savings of 85 therms or 2000 kWh based on the Solar Rating and Certification Corporation (SRCC) Annual Performance of OG-300 Certified Solar

OR Electric heat pump water heater with a minimum EF of 2.0 and meeting the standards of NEEA's Northern Climate Specifications for

To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the water heater equipment type and theminimum equipment efficiency and, for solar water heating systems, the calculation of the minimum ener

A drain water heat recovery unit(s) shall be installed, which captures waste water heat from all the showers, and has a minimum efficiency of 40% if installed for equalflow or a minimum efficiency of 52% if installed for unequal flow. Such units shall be rated in

To qualify to claim this credit, the building permit drawings shall include a plumbing diagram that specified the drain water heat recovery units and the plumbing layout needed to install it and labels or other documentation shall be provided that demonstrate

For each 1200 kWh of electrical generation per each housing unit provided annually by on-site wind or solar equipment a 0.5 credit

For solar electric systems, the design shall be demonstrated to meet this requirement using the National Renewable Energy

The wind turbine power curve; average annual wind speed at the site; frequency distribution of the wind speed at the site and

Fo qualify to claim this credit, the building permit drawings shall specify the option being selected and shall show the photovoltaic o wind turbine equipmenttype, provide documentation of solar and wind access, and include a calculation of the minimum annual

Laboratory calculator PVWATTs. Documentation noting solar access shall be included on the plans. For wind generation projects designs shall document annual power generation based on the following factors:

To qualify to claim this credit, the building permit drawings shall specify the option being selected and shall specify the maximum fi

2. Residential kitchen faucets: Maximum flow rate - 6.6 L/min (1.75 gal/min) when tested in accordance with ASME A112.18.1/CSA B125.1.

Water heating system shall include one of the following: Gas, propane or oil water heater with a minimum EF of 0.74

Water heating system shall include one of the following: Gas, propane or oil water heater with a minimum EF of 0.91

equipment type and shall show the location of the heating and cooling equipment and all the ductwork.

779.42 Sum of UA 35,074 Btu / Hour Envelope Heat Load Sum of UA  $X \Delta T$ 22,124 Btu / Hour Air Leakage Heat Load Volume X 0.6 X \( \Delta T X .018 \) **Building Design Heat Load** 57,198 Btu / Hour Building and Duct Heat Load 62,917 Btu / Hour Ducts in unconditioned space: Sum of Building Heat Loss X 1.10 Ducts in conditioned space: Sum of Building Heat Loss X 1 Maximum Heat Equipment Output Building and Duct Heat Loss X 1.40 for Forced Air Furnace Building and Duct Heat Loss X 1.25 for Heat Pump

> New Residence For: **James & Jessica Rudolf** 8253 West Mercer Way Mercer Island, Washington 98040

Forms Updated

TR Webb Homes

10303- 14th Avenue NW, Seattle, WA 98177

TomW @KDW.net / (206) 390-1800

POINT OF VISION

ARCHITECTURAL SERVICES

1628 46th Street SE, Everett, WA 98203

point\_of\_vision @ comcast.net (425)772-8207

Tom Webb, Architect -

ISSUANCE	PERMIT SE
PROJECT INFORMATION	
PROJECT NO:	PO'
PROJECT MANAGER:	
DRAWN BY:	

Energy Schedules & Charts / Requirements

SHEET NO

FOUNDATION DRAINAGE: IRC Section R401.3 Drainage. Surface drainage shall be diverted to an approved point of collection so as to not create a hazard. Lots shall be graded so as to drain surface water away from foundation walls. The grade away from foundation walls shall fall a minimum of 6 inches within the first 10 feet. Exception: Where lot lines, walls, slopes or other physical barriers prohibit 6 inches of fall within 10 feet, drains or swales shall be constructed to ensure drainage away from the structure. Impervious surfaces within 10 feet of the building foundation shall be sloped a minimum of 2 percent away from the building. IRC Section R405.I Concrete or masonry foundations. Drains shall be provided around all concrete or masonry foundations that retain earth and enclose habitable or useable spaces located below grade. Drainage tiles, gravel, or crushed stone drains, perforated pipe or other approved systems or materials shall be installed at or below the area to be protected and shall discharge by gravity or mechanical means into an approved drainage system. Gravel or crushed stone drains shall extend at least I-foot beyond the outside edge of the footing and at least 6 inches above the top of the

footing and be covered with an approved filter membrane material. The top of open joints of drain tiles shall be protected with strips of building paper, and the drainage tiles or perforated pipe shall be placed on a minimum 2 inches of washed gravel or crushed rock at least one sieve size larger than

the tile joint opening or perforation and covered with not less than 6 inches of the same material.

UNDER-FLOOR VENTILATION: IRC Section R408.1 Ventilation. The under-floor space between the bottom of the floor joists and the earth under any building (except space occupied by a basement) shall have ventilation openings through foundation walls or exterior walls. The minimum net area of ventilation openings shall not be less than I square foot for each 150 square feet of under-floor space area, unless the ground surface is covered by a Class I vapor retarder material. When a Class I vapor retarder material is used, the minimum net area of ventilation openings shall not be less than I square foot for each I ,500 square feet of under-floor space area. One such ventilating opening shall be within 3 feet of each corner of the building. IRC Section R408.2

Openings for under-floor ventilation. The minimum net ventilation openings shall not be less than 1 square foot for each 150 square feet of under-floor area. One ventilation opening shall be within 3 feet of each corner of the building. Ventilation openings shall be covered for their height and width with any of the following materials provided that the least dimension of the covering shall not exceed 1/4 inch: I) Perforated sheet metal plates not less than 0.070 inch thick. 2) Expanded sheet metal plates not less than 0.047 inch thick. 3) Cast-iron grill or grating. 4) Extruded load-bearing brick vents. 5) Hardware cloth of 0.035 inch wire or heavier. 6) Corrosion-resistant wire mesh, with the least dimension being 1/8 inch. Exception: The total area of ventilation openings shall be permitted to be reduced to 1/1,500 of the under-floor area where the ground surface is covered with an approved Class I vapor retarder material and the required openings are placed to provide cross ventilation of the space. The installation of operable louvers shall not be prohibited.

ROOF VENTILATION: IRC Section R806.1. Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space be ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of 1/16 inch minimum and 1/4 inch maximum. Ventilation openings having a least dimension larger than 1/4 inch shall be provided with corrosion-resistant wire cloth screening, hardware cloth, or similar material with openings having a least dimension of 1/16 inch minimum and 1/4 inch maximum. Openings in roof framing members shall conform to the requirements of Section R802.7. IRC Section R806.2. The total net free ventilating area shall not be less than 1/150 of the area of the space ventilated except that reduction of the total area to 1/300 is permitted provided that at least 40 percent and not more than 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet above the eave or cornice vents with the balance of the required ventilation provided bt eave or cornice vents. As an alternative, the net free cross-ventilation area may be reduced to 1/300 when a Class I or II vapor barrier is installed on the warm-in-winter side of the ceiling. IRC Section R806.3. Where eave or cornice vents are installed, insulation shall not block the free flow of air. A minimum of a I-inch space shall be provided between the insulation and the roof sheathing and at the location of the vent.

PROTECTION AGAINST DECAY: IRC Section R317.1 Location required. Protection of wood

and wood based products from decay shall be provided in the following locations by the use of naturally durable wood or wood that is preservative-treated in accordance with AWPA UI for the species, product, preservative and end use. Preservatives shall be listed in Section 4 of AWPA UI. I) Wood joists or the bottom of a wood structural floor when closer than 18 inches or wood girders when closer than 12 inches to the exposed ground in crawl spaces or unexcavated area located within the periphery of the building foundation. 2) All wood framing members that rest on concrete or masonry exterior foundation walls and are less than 8 inches from the exposed ground. 3) Sills and sleepers on a concrete or masonry slab that is in direct contact with the ground unless separated from such slab by an impervious moisture barrier. 4) The ends of wood girders entering exterior masonry or concrete walls having clearances of less than 0.5 inch on tops, sides and ends. 5) Wood siding, sheathing and wall framing on the exterior of a building having a clearance of less than 6 inches from the ground or less than 2 inches measured vertically from concrete steps, porch slabs, patio slabs, and similar horizontal surfaces exposed to the weather. 6) Wood structural members supporting moisture-permeable floors or roofs that are exposed to the weather, such as concrete or masonry slabs, unless separated from such floors or roofs by an impervious moisture barrier. 7) Wood furring strips or other wood framing members attached directly to the interior of exterior masonry walls or concrete walls below grade except where an approved vapor retarder is applied between the wall and the furring strips of framing members. IRC Section R317.1.I Field treatment. Field-cut ends, notches and drilled holes of preservative-treated wood shall be treated in the field in accordance with AWPA M4.

WOOD FRAMING IDENTIFICATION: IRC Section R502: Load-bearing lumber, end-jointed lumber, pre-fabricated I-joists, structural glue-laminated timber, preservative treated wood, fire-retardant-treated wood, shall conform to the applicable standards or grading rules of the IRC Section R502 and shall be identified by a grade and/or identification mark.

FASTENERS: IRC Section R317.3.I: Fasteners for preservative-treated wood shall be of hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper. Coating types and weights for connectors in contact with preservative-treated wood shall be in accordance with the connector manufacturer's recommendations. In the absence of manufacturer's recommendations, a minimum o.d. ASTM A 653 type G185 zinc-coated galvanized steel, or equivalent, shall be used. Exceptions: 1) One-half-inch diameter or greater steel bolts. 2) Fasteners other than nails and timber rivets shall be permitted to be of mechanically deposited zinc-coated steel with coating weights in accordance with ASTM B 695, Class 55, minimum.

COLUMNS AND POSTS: IRC Section R317.1.4. Wood columns shall be approved wood of natural decay resistance or approved pressure-preservative-treated wood. Exceptions: I) Columns exposed to the weather or in basements when supported by concrete piers or metal pedestals projecting I inch above a concrete floor or 6 inches above exposed earth and the earth is covered by an approved impervious moisture barrier. 2) Columns in enclosed crawl spaces or unexcavated areas located within the periphery of the building when supported by a concrete pier or metal pedestal at a height more than 8 inches from exposed earth and the earth is covered by an approved impervious moisture barrier. IRC Section R407.3: The columns shall be restrained to prevent lateral displacement at the bottom end. Wood columns shall not be less than 4 inches by 4 inches. Steel columns shall not be less than 3-inch diameter Schedule 40 pipe manufactured in accordance with ASTM-A 53 Grade B or approved equivalent.

WOOD WALL FRAMING: IRC Sections 602.3.1: The size, height and spacing of studs shall be in accordance with Table R602.3 (5). Exceptions: I) Utility grade studs shall not be spaced more than 16 inches on center, shall not support more than a roof and ceiling, and shall not exceed 8 feet in height for exterior walls and load-bearing walls or 10 feet for interior nonload-bearing walls. 2)Studs more than 10 feet in height which are in accordance with Table R602.3.1.

WOOD WALL FRAMING (CONT): IRC Section R602.3.2: Wood stud walls shall be capped with a double top plate installed to provide overlapping at corners and intersections with bearing partitions. End joints in top plates shall be offset at least 24 inches. Joints in plates need not occur over studs. Plates shall not be less than 2-inches nominal thickness and have a width at least equal to the width of the studs. IRC Section R602.3.4: Studs shall have a full bearing on a nominal 2-by or larger plate or sill having a width at least equal to the width of the studs.

### **GENERAL NOTES**

STUDS - DRILLING AND NOTCHING: IRC Section 602.6: Drilling and notching of studs shall be in accordance with the following: 1) Notching. Any stud in an exterior wall or bearing partition may be cut or notched to a depth not exceeding 25 percent of its width. Studs in nonbearing partitions may be notched to a depth not to exceed 40 percent of a single stud width. 2) Drilling. Any stud may be bored or drilled, provided that the diameter of the resulting hole is no more than 60 percent of the stud width, the edge of the hole is no more than 5/8 inch to the edge of the stud, and the hole is not located in the same section as a cut or notch. Studs located in exterior walls or bearing partitions drilled over 40 percent and up to 60 percent shall also be doubled with no more than two successive doubled studs bored. See IRC Section 602.6, figures R602.6(I) and R602.6(2).

DWELLING/GARAGE OPENING PROTECTION: IRC Sections R302.5.1: openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than I -3/8 inches in thickness, solid or honeycomb core steel doors not less than 1-3/8 inches thick, or 20-minute fire-rated doors with self closing device.

DWELLING/GARAGE DUCT PROTECTION: IRC Sections R302.5.2: Ducts in the garage and ducts penetrating the walls or ceilings separating the dwelling from the garage shall be constructed of a minimum No. 26 gage sheet steel or other approved material and shall have no openings into the

DWELLING/GARAGE FIRE SEPARATION: IRC Sections R302.6: The garage shall be separated from the residence and attics with not less than 1/2-inch gypsum board or equivalent applied to the garage side. The garage shall be separated from all habitable rooms above the garage with not less than 5/8-inch Type 'X' gypsum board or equivalent. All structure(s) supporting floor/ceiling assemblies used for separation required by this section shall be not less than 1/2-inch gypsum board or equivalent.

FIREBLOCKING: IRC Sections R302.11: In combustible construction, fire blocking shall be provided to cut off all concealed draft openings (both vertical and horizontal) and to form an effective fire barrier between stories, and between a top story and the roof space. Fire blocking shall be provided in wood-frame construction in the following locations: 1) In concealed spaces of stud walls and partitions, including furred spaces and parallel rows of studs or staggered studs; as follows: 1.1) Vertical at the ceiling and floor levels. 1.2) Horizontally at intervals not exceeding 10 feet. 2) At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings. 3) In concealed spaces between stair stringers at the top and bottom of the run. Enclosed spaces under stairs shall comply with IRC Section R302.7. 4) At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with an approved material to resist the free passage of flame and products of combustion. The material filling this annular space shall not be required to meet the ASTM E 136 requirements. 5) For the fire blocking of chimneys and fireplaces, see IRC Section RI 003.19. 6) Fire blocking of cornices of a two-family dwelling is required at the line of dwelling unit separation. Fire blocking material shall be in accordance with IRC Section R302.11.1.

UNDER-STAIR PROTECTION: IRC Section R302.7: Enclosed accessible space under stairs shall have walls, under-stair surface and any soffits protected on the enclosed side with 1/2-inch gypsum board.

STAIRWAY WIDTH: IRC Section R311.7.1: Stairways shall not be less than 36 inches in clear width at all points above the permitted handrail height and below the required headroom height. Handrails shall not project more than 4.5 inches on either side of the stairway and the minimum clear width of the stairway at and below handrail height, including treads and landings, shall not be less than 31.5 inches where a handrail is installed on one side and 27 inches where handrails are provided on both sides. Exception: The width of spiral stairways shall be in accordance with IRC Section Ril.7.9.1.

STAIRWAY HEADROOM: IRC Section R311.7.2: The minimum headroom in all parts of the stairway shall not be less than 6 feet 8 inches measured vertically from the sloped line adjoining the tread nosing or from the floor surface of the landing or platform on that portion of the stairway. Exception: Where the nosing of treads at the side of a flight extend under the edge of a floor opening through which the stair passes, the floor opening shall be allowed to project horizontally into the required headroom a maximum of 4-3/4 inches.

STAIRWAY TREADS AND RISERS: IRC Section R311.7.4.1: The maximum riser height shall be 7-3/4 inches. The riser shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch. IRC Section R311.7.4.2: The minimum tread depth shall be 10 inches. The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch,

STAIRWAY LANDINGS: IRC Section 'R311.7.6: There shall be a floor or landing at the top and

bottom of each stairway. Exception: A floor or landing is not required at the top of an interior flight of stairs, including stairs in an enclosed garage, provided a door does not swing over the stairs. A flight of stairs shall not have a vertical rise larger than 12 feet between floor levels or landings. The width of each landing shall not be less than the width of the stairway served. Every landing shall have a minimum dimension of 36 inches measured in the direction of travel.

STAIRWAY ILLUMINATION: IRC Section R303.7: All interior and exterior stairways shall be provided with a means to illuminate the stairs, including the landings and treads. Interior stairways shall be provided with an artificial light source located in the immediate vicinity of each landing of the stairway. For interior stairs the artificial light sources shall be capable of illuminating treads and landings to levels not less than 1 foot-candle (11 lux) measured at the center of treads and landings. Exterior stairways shall be provided with an artificial light source located in the immediate vicinity of the top landing of the stairway. Exterior stairways providing access to a basement from the outside grade level shall be provided with an artificial light source located in the immediate vicinity of the bottom landing of the stairway. Exception: An artificial light source is not required at the top and bottom landing, provided an artificial light source is located directly over each stairway section. IRC Section R303.6.1: Where lighting outlets are installed in interior stairways, there shall be a wall switch at each floor level to control the lighting outlet where the stairway has six or more risers. The illumination of exterior stairways shall be controlled from inside the dwelling unit. Exception: Lights that are continuously illuminated or automatically controlled

HANDRAILS: IRC Section R311.7.8: Handrails shall be provided on at least one side of each continuous run of treads or flight with four or more risers. IRC Section R311.7.8.I: Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches and not more than 38 inches. Exceptions: 1) The use of a volute, turnout or starting easing shall be allowed over the lowest tread. 2) When handrail fittings or bendings are used to provide continuous transition from handrail to guardrail, or used at the start of a flight, the handrail height at the fittings or bendings shall be permitted to exceed the maximum height. IRC Section R311.7.8.2. Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1-1/2 inch between the wall and the handrails. Exceptions: 1) Handrails shall be permitted to be interrupted by a newel post at the turn. 2) The use of a volute, turnout, starting easing or starting newel shall be allowed over the lowest tread.

GUARDS: IRC Section R312.1: Guards shall be located along open-sided walking surfaces, including stairs, ramps and landings, that are located more than 30 inches measured vertically to the floor or grade below at any point within 36 inches horizontally to the edge of the open side. Insect screening shall not be considered as a guard. IRC Section R312.2: Required guards at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 36 inches high measured vertically above the adjacent walking surface, adjacent fixed seating or the line connecting the leading edges of the treads. Exception: I) Guards on the open sides of stairs shall have a height not less than 34 inches measured vertically from a line connecting the leading edges of the treads. 2) Where the top of the guard also serves as a handrail on the open sides of stairs, the top of the guard shall not be less than 34 inches and not more than 38 inches measured vertically from a line connecting the leading edges of the treads.

CEILING HEIGHT: IRC Section R305.I: Habitable space, hallways, bathrooms, toilet rooms, laundry rooms and portions of basements containing these spaces shall have a ceiling height of not less than 7 feet. Exceptions: I) For rooms with sloped ceilings, at least 50 percent of the required floor area of the room must have a ceiling height of at least 7 feet and no portion of the required floor area may have a ceiling height of less than 5 feet. 2) Bathrooms shall have a minimum ceiling height of 6 feet 8 inches at the center of the front clearance area for fixtures (Firgure R307. I). The ceiling height above fixtures shall be such that the fixture is capable of being used for its intended purpose. A shower or tub equipped with a showerhead shall have a minimum ceiling height of 6 feet 8 inches above a minimum 30 inches by 30 inches at the showerhead. IRC Section R305.1.1: Portions of basements that do not contain habitable space, hallways, bathrooms, toilet rooms and laundry rooms shall have a ceiling height of not less than 6 feet 8 inches. Exception: I) Beams, girders, ducts or other obstructions may project to within 6 feet 4 inches of the finished floor.

ACCESS: IRC Section R408.4: Access shall be provided at all under-floor spaces. Access openings through the floor shall be a minimum of 18 inches by 24 inches. Openings through a

perimeter wall shall be not less than 16 inches by 24 inches. When any portion of the through-wall access is below grade, an areaway not less than 16 inches by 24 inches shall be provided. The bottom of the areaway shall be below the threshold of the access opening. Through wall access openings shall not be located under a door to the residence. See Section MI 305.1.4 for access requirements where mechanical equipment is located under floors. IRC Section R807.1: Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that exceed 30 square feet and have a vertical height of 30 inches or greater. The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members. The rough-framed opening shall not be less than 22 inches by 30 inches and shall be located in a hallway or other readily accessible location. When located in a wall, the opening shall be a minimum of 22 inches wide by 30 inches high. When access is located in a ceiling, minimum unobstructed headroom in the attic space shall be 30 inches at some point above then access measured vertically from the bottom of ceiling framing members. See Section MI 305.1.3 for access requirements where mechanical equipment is located in attics.

WINDOW WELLS: IRC Section R310.2: The minimum horizontal area of the window well shall be 9 square feet, with a minimum horizontal projection and width of 36 inches. The area of the window well shall allow the emergency escape and rescue opening to be fully opened. Exception: The ladder or steps required by IRC Section R310.2.I shall be permitted to encroach a maximum of 6 inches into the required dimensions of the window well. IRC Section R310.2.I: Window wells with a vertical depth greater than 44 inches shall be equipped with a permanently affixed ladder or steps useable with the window in the fully open position. Ladders or steps required by this section shall not be required to comply with IRC Sections R311.7 and R311.8. Ladders or rungs shall have an inside width of at least 12 inches, shall project at least 3 inches from the wall and shall be spaced not more than 18 inches on center vertically for the full height of the window well.

WINDOW SILLS: IRC Section R312.2,: In dwelling units, where the opening of an operable window is located more than 72 inches above finished grade of surface below, the lowest part of the clear opening of the window shall be a minimum of 24 inches above the finished floor of the room in which the window is located. Operable sections of windows shall not permit openings that allow passage of a 4-inch diameter sphere where such openings are located within 24 inches of the finished floor. Exceptions: 1) Windows whose openings will not all a 4-inch diameter sphere to pass through the opening when the opening is in its largest opened position. 2) Openings that are provided with window fall prevention devices that comply with Section R612.3. 3) Openings the are provided with fall prevention devices that comply with ASTM F2090. 4) windows that are provided with opening limiting devices that comply with Section R612.4.

SAFETY GLAZING: IRC Section R308.4: Per this section provide safety glazing at all hazardous locations.

EMERGENCY ESCAPE AND RESCUE OPENINGS: IRC Section R310.1: Basements, habitable attics and every sleeping room shall have at least one operable emergency escape and rescue opening. Such opening shall open directly into a public street, public alley, yard or court. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches above the floor. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with IRC Section R310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. Emergency escape and rescue openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with IRC Section R310.2 Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way. Exception: Basements used only to house mechanical equipment and not exceeding total floor area of 200 square feet. IRC Section R310.1.I: All emergency escape and rescue openings shall have a minimum net clear opening of 5.7 square feet. Exception: Grade floor openings shall have a minimum net clear opening of 5 square feet. IRC Section R310.I.2: The minimum net clear opening height shall be 24 inches. IRC Section R310.1.3: The minimum net clear opening width shall be 20 inches. IRC Section R310.1.4: Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools or special knowledge.

WATER-RESISTANT GYPSUM BACKING BOARD: IRC Section R702.3.8: Gypsum board used as a base or backer for adhesive application of ceramic tile or other nonabsorbent material shall conform with ASTM C630 or Cl 178. Use of water-resistant gypsum backing board shall be permitted to be used on ceilings where framing spacing does not exceed 12 inches o.c. for 1/2" thick or 16 inches o.c. for 5/8" thick gypsum board. Water resistant gypsum wallboard shall not be installed over a vapor retarder, or on ceilings in a shower or tub compartment. Cut or exposed edges, including those at wall intersections, shall be sealed as recommended by the manufacturer. IRC Section R702.3.8.1: Water-resistant gypsum backing board shall not be used where there will be direct exposure to water, or in areas subject to continuous high humidity.

BATHTUB AND SHOWER SPACES: IRC Section R307.2: Bathtub and shower floors and walls above bathtubs with installed shower heads and in shower compartments shall be finished with a nonabsorbent surface. Such wall surfaces shall extend to a height of not less than 6 feet above the floor

WEATHER RESISTANT SHEATHING PAPER: IRC Section R703.2: one layer of No. 15 asphalt felt, free from holes and breaks, complying with ASTM D226 for Type 1 felt or other approved water-resistive barrier shall be applied over studs or sheathing of all exterior walls. Such felt or material shall be applied horizontally, with the upper layer lapped over the lower layer not less than 2 inches. Where joints occur, felt shall be lapped not less than 6 inches. The left or other approved

material shall be continuous to the top of walls and terminated at penetrations and building appendages in a manner to meet the requirements of the exterior wall envelope as described in Section R703.1. Exception: Omission of the water-resistive barrier is permitted in the following situations: 1) In detached accessory buildings. 2) Under exterior wall finish materials as permitted in Table R703.4. 3) Under paperbacked stucco lath when the paper backing is an approved weather-resistive sheathing paper.

FLASHING: IRC Section R703.8: Approved corrosion-resistant flashing shall be applied shingle-fashion in such a manner to prevent entry of water into wall cavity or penetration of water to the building structural framing components. The flashing shall extend to the surface of the exterior wall finish.

Approved corrosion-resistant flashings shall be installed at all of the following locations:

Flashing at exterior window and door openings shall be installed in accordance with one or more of the following: la) The fenestration manufacturer's installation and flashing instructions, or for applications not addressed in the fenestration manufacturer's instructions, in accordance with the manufacturer's instructions. Where flashing instructions or details are not provided, pan flashing shall be installed at the sill of exterior window and door openings. Pan flashing shall be sealed or sloped in such a manner as to direct water to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage. Openings using pan flashing shall also incorporate flashing or protection at the head and sides. 1b) In accordance with the flashing design or method of a registered design professional. Ic) In accordance with other approved methods.

At the intersection of chimneys or other masonry construction with frame or stucco walls, with projecting lips on both sides under stucco copings. 3) Under and at the ends of masonry, wood or metal copings and sills. 4) Continuously above all projecting wood trim. 5) Where exterior porches, decks or stairs attach to a wall or floor assembly of wood-frame construction. 6) At wall and roof intersections. 7) At built-in gutters.

EXTERIOR COVERING: IRC Section R703: Provide the building with a weather- resistant exterior wall envelope. The exterior wall envelope shall include flashing as described in Section R703.8. Ensure proper fastening for type used, wood siding may not be less than 3/8" thick. See Table R703.4.

HEATING: IRC SectionR303.9 When the winter desing temperature in Table R301.2(1) is below 60 degrees F, every dwelling unit shall be provided the heating facilities capable of maintaining a minimum room temperature of 68 degrees F at a point 3 feet above the floor and 2 feet from exterior walls in all habitable rooms at the design temperature. The installation of one or more portable space heaters shall not be used to achieve compliance with this section.

SMOKE DETECTORS: IRC Section R314.1: All smoke alarms shall be listed in accordance with UL 217

and installed in accordance with the provisions of this code and the household fire warning

equipment provisions of NFPA 72. IRC Section 314.2: Household fire alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detector and audible notification device installed as required by this section for smoke alarms, shall be permitted. The household fire alarm system shall provide the same level of smoke detection and alarm as required by this section for smoke alarms. Where a household fire warning system is installed using a combination of smoke detector and audible notification device(s), it shall become a permanent fixture of the occupancy and owned by the homeowner. The system shall be monitored by an approved supervising station and be maintained in accordance with NFPA 72. Exceptions: Where smoke alarms are provided meeting the requirements of Section R314.4. IRC Section 314.3: 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. Smoke alarms shall be installed in the following locations: 1) In each sleeping room. 2) Outside each separate sleeping area in the immediate vicinity of the bedrooms. 3) On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without on intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level. IRC Section 314.3.1: When alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms located as required for new dwellings. Exceptions 1) Work involving the exterior surface of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, are exempt from the requirements of this section. 2) Installation, alteration or repairs of plumbing or mechanical systems are exempt from the requirements of this section. IRC Section 314.4: Smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection Smoke alarms shall be interconnected. Exceptions: 1) Smoke alarms shall be permitted to be battery operated when installed in buildings without commercial power. 2) Interconnection and hard-wiring of smoke alarms in existing areas shall not be required where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for hard-wiring and interconnection Without the removal of interior finishes.

CARBON MONOXIDE ALARMS: IRC Section R315.1: For new construction, an approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages.

R315.2 Carbon monoxide detection systems. Carbon monoxide detection systems that include carbon monoxide detectors and audible notification appliances, installed and maintained -in accordance with this section for carbon monoxide alarms and NFPA 720, shall be permitted. The carbon monoxide detectors shall be listed as complying with UL 2075. Where a house hold carbon monoxide detection system is installed, it shall become a permanent fixture of the occupancy, owned by the homeowner and shall be monitored by an approved supervising station. Exception: Where carbon monoxide alarms are installed meeting the requirements of Section R314.1, compliance with Section R315.2 is

not required. IRC Section R315.3: Where work requiring a permit occurs in existing dwellings that have attached garages or in existing dwellings within which fuel-fired appliances exist, carbon monoxide alarms shall be provided in accordance with Section R315.1. IRC Section R315.4: Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions.

ADDRESS NUMBERS: IRC Section R319.1: Buildings shall have approved address numbers, building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Address numbers shall be a minimum of 4 inches high with a minimum stroke width of 1/2 inch. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure.

WATER HEATERS: IRC Section P2801.7: In seismic design categories D and townhouses in seismic design category C, water heaters shall be anchored or strapped in the upper one-third (1/3) and in the lower one-third (1/3) of the appliance to resist a horizontal force equal to one-third (1/3) of the operating weight of the water heater, acting in any horizontal direction, or in accordance with the manufacturer's recommendations. At the lower point, a minimum distance of 4 inches shall be maintained above the controls with the strapping. IRC Section P2801.6: Water heaters having an ignition source shall be elevated such that the source of ignition is not less than 18 inches above the

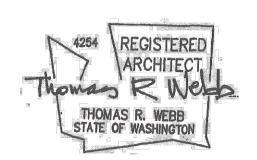
Exception: Elevation of the ignition source is not required for appliances that are listed as flammable vapor ignition resistant.

# TR Webb Homes

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New Residence For:

James & Jessica Rudolf
8253 West Mercer Way
Mercer Island, Washington 98040

_			

PERMIT SET 5/15/18

POV1740

**General Project Notes** 

SHEET NO

PROJECT MANAGER:

DRAWN BY:

**A3** 

### **WALL TYPES**

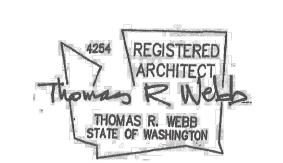
- 2x6 @ 16"O.C.STUD WALL & SHEATHING PER STRUCTURAL-R-21 BATT INSULATION W/ VISQUEEN VAPOR BARRIER & 1/2" GWB ON INTERIOR SIDE
- 2x4 @ 16" O.C.STUD WALL W/ 1/2" GWB EACH SIDE TYPICAL @ ALL INTERIOR WALLS U.N.O.
- 2x4 @ 16"O.C.STUD WALL & SHEATHING PER STRUCTURAL-1/2" GWB ON INTERIOR SIDE.
- 2x6 @ 16"O.C.STUD WALL & SHEATHING PER STRUCTURAL-R-21 BATT INSULATION W/ 5/8" TYPE "X" ON COLD SIDE TO UNDERSIDE OF ROOF SHEATHING -W/ VISQUEEN VAPOR BARRIER &1/2" GWB ON INTERIOR SIDE
- 5 CONCRETE FOUNDATION WALL PER STRUCTURAL 2x4 @ 16" O.C.FURRING R-21 BATT INSULATION 1/2" GWB
- 6 2x6 @ 16"O.C.STUD WALL & SHEATHING PER STRUCTURAL-R-21 BATT INSULATION -1/2" GWB ON COLD SIDE W/ VISQUEEN VAPOR BARRIER & 1/2" GWB ON INTERIOR SIDE

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ISSUANCE	PERMIT SET 5/15/1

PROJEC	T INFORMATION	
PROJE	ECT NO:	POV1740
PROJE	ECT MANAGER:	TW
DRAW	N BY:	BB

**Lower Level Floor Plan** 

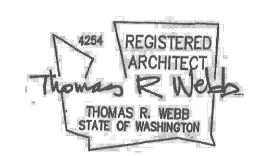
SHEET NO

**A4** 

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New Residence For:

James & Jessica Rudolf
8253 West Mercer Way
Mercer Island, Washington 98040

ISSUANCE PERMIT SET 5/15/18

PROJECT INFORMATION	
PROJECT NO:	POV1740
PROJECT MANAGER:	TW
DRAWN BY:	BB

Mid Level Floor Plan

SHEET NO

**A5** 

- 2x6 @ 16"O.C.STUD WALL & SHEATHING PER STRUCTURAL-R-21 BATT INSULATION W/ VISQUEEN VAPOR BARRIER & 1/2" GWB ON INTERIOR SIDE
- 2 2x4 @ 16" O.C.STUD WALL W/ 1/2" GWB EACH SIDE TYPICAL @ ALL INTERIOR WALLS U.N.O.
- 2x4 @ 16"O.C.STUD WALL & SHEATHING PER STRUCTURAL-1/2" GWB ON INTERIOR SIDE.
- 2x6 @ 16"O.C.STUD WALL & SHEATHING PER STRUCTURAL-R-21 BATT INSULATION W/ 5/8" TYPE "X" ON COLD SIDE TO UNDERSIDE OF ROOF SHEATHING -W/ VISQUEEN VAPOR BARRIER &1/2" GWB ON INTERIOR SIDE
   CONCRETE FOUNDATION WALL PER STRUCTURAL 2x4 @ 16" O.C.FURRING R-21 BATT INSULATION 1/2" GWB
- 6 2x6 @ 16"O.C.STUD WALL & SHEATHING PER STRUCTURAL-R-21 BATT INSULATION -1/2" GWB ON COLD SIDE W/ VISQUEEN VAPOR BARRIER & 1/2" GWB ON INTERIOR SIDE

ALAF	ALARM SCHEDULE				
2015 IRC SE	ECTIONS R314 R315				
SYMBOL	DESCRIPTION	REQUIREMENTS			
SD	SMOKE ALARM	110 V INTERCONNECTED W/ BATTERY BACKUP     INSTALLED ON EACH FLOOR AND IN EACH SLEEPING AREA     LISTED IN ACCORDANCE WITH UL 217 ANO INSTALLED PER THE HOUSEHOLD FIRE WARNING EQUIPMENT PROVISIONS OF NEPA 72			
• SD/CO	COMBINATION SMOKE ALARM CARBON MONOXIDE ALARM	INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS     SMOKE ALARM REQUIREMENTS PER ABOVE     CARBON MONOXIDE ALARMS TO BE INSTALLED IN DWELLING UNITS WITHIN WHICH FUEL-FIRED APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGES     CARBON MONOXIDE ALARMS LISTED AS COMPLYING WITH UL 2034 AND INSTALLED PER MANUFACTURERS INSTALLATION INSTRUCTIONS			

	l					
		SYMBOL	LOCATION	MINIMUM FAN REQUIREMENTS		
		⊗ <sub>50 CFM</sub>	BATH, POWDER, LAUNDRY	• MIN 50 CFM AT 0.25" WG TABLE M1507.3		
IOUSEHOLD IMMEDIATE		®100 CFM	KITCHEN	MINIMUM 100 CFM AT 0.25" WG (IRC TABLE M1507.3) (RANGE HOOD OR DOWN DRAFT EXHAUST FAN RATED AT MIN 100 CFM AT 0.10" WG MAY BE USED FOR EXHAUST FAN REQUIREMENT.)		
TS WITHIN NG UNITS		® <sub>wh</sub>	WHOLE HOUSE FAN	<ul> <li>140 CFM AT 0.25" WG (IRC TABLE M1508.2)</li> <li>WHOLE HOUSE FAN TO OPERATE AT LEAST ONCE EVERY HOURS</li> <li>WHOLE HOUSE FANS LOCATED 4 FT OR LESS FROM INTERIOR GRILLE TO HAVE A SONE RATING Of 1.0 LESS MEASURED AT 0.1" WG</li> </ul>		

2015 IRC SECTIONS M1507 M1508

ALL FANS TO VENT TO OUTSIDE. ALL OTHER REQUIREMENTS OF THE 2015 WSEC AND 2015 IRC SECTIONS M1507 AND M1508 MUST BE MET.

- 1 2x6 @ 16"O.C.STUD WALL & SHEATHING PER STRUCTURAL-R-21 BATT INSULATION W/ VISQUEEN VAPOR BARRIER & 1/2" GWB ON INTERIOR SIDE
- 2x4 @ 16" O.C.STUD WALL W/ 1/2" GWB EACH SIDE TYPICAL @ ALL INTERIOR WALLS U.N.O.
- 3 2x4 @ 16"O.C.STUD WALL & SHEATHING PER STRUCTURAL-1/2" GWB ON INTERIOR SIDE.
- 2x6 @ 16"O.C.STUD WALL & SHEATHING PER STRUCTURAL-R-21 BATT INSULATION W/ 5/8" TYPE "X" ON COLD SIDE TO UNDERSIDE OF ROOF SHEATHING -W/ VISQUEEN VAPOR
- 5 CONCRETE FOUNDATION WALL PER STRUCTURAL 2x4 @ 16" O.C.FURRING R-21 BATT INSULATION 1/2" GWB

BARRIER &1/2" GWB ON INTERIOR SIDE

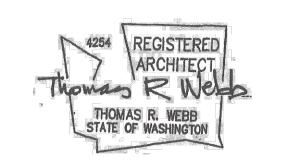
6 2x6 @ 16"O.C.STUD WALL & SHEATHING PER STRUCTURAL-R-21 BATT INSULATION -1/2" GWB ON COLD SIDE W/ VISQUEEN VAPOR BARRIER & 1/2" GWB ON INTERIOR SIDE

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New Residence For: James & Jessica Rudolf 8253 West Mercer Way Mercer Island, Washington 98040

ISSUANCE	PERMIT SET 5/15/18
	_

PROJECT INFORMATION	
PROJECT NO:	POV1740
PROJECT MANAGER:	TW
DRAWN BY:	BB
·	<u> </u>

**Upper Level Floor Plan** 

SHEET NO

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New Residence For:

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Mercer Island, Washington 98040

ISSUANCE	PERIVITI SET 3/13/

PROJECT INFORMATION	
PROJECT NO:	POV1740
PROJECT MANAGER:	TW
DRAWN BY:	BB

**Roof Plan** 

SHEET NO

4 PROVIDED x 180 S.I. = 720 S.I.

18 S.I. x 56 L.F. = 1,008 S.I.

1,408 S.I. > 1,283 S.I. OK

4. HIGH VENTILATION:

5. TOTAL VENTILATION:

TOTAL LOW VENTILATION PROVIDED = 1120 S.I. PROPOSED GAF COBRA 3 RIDGE VENTILATION

18 S.I. / L.F. - 56 L.F. RIDGE VENT PROVIDED

400 S.I. LOW + 1,008 S.I. HIGH = 1,408 S.I. TOTAL

**A7** 

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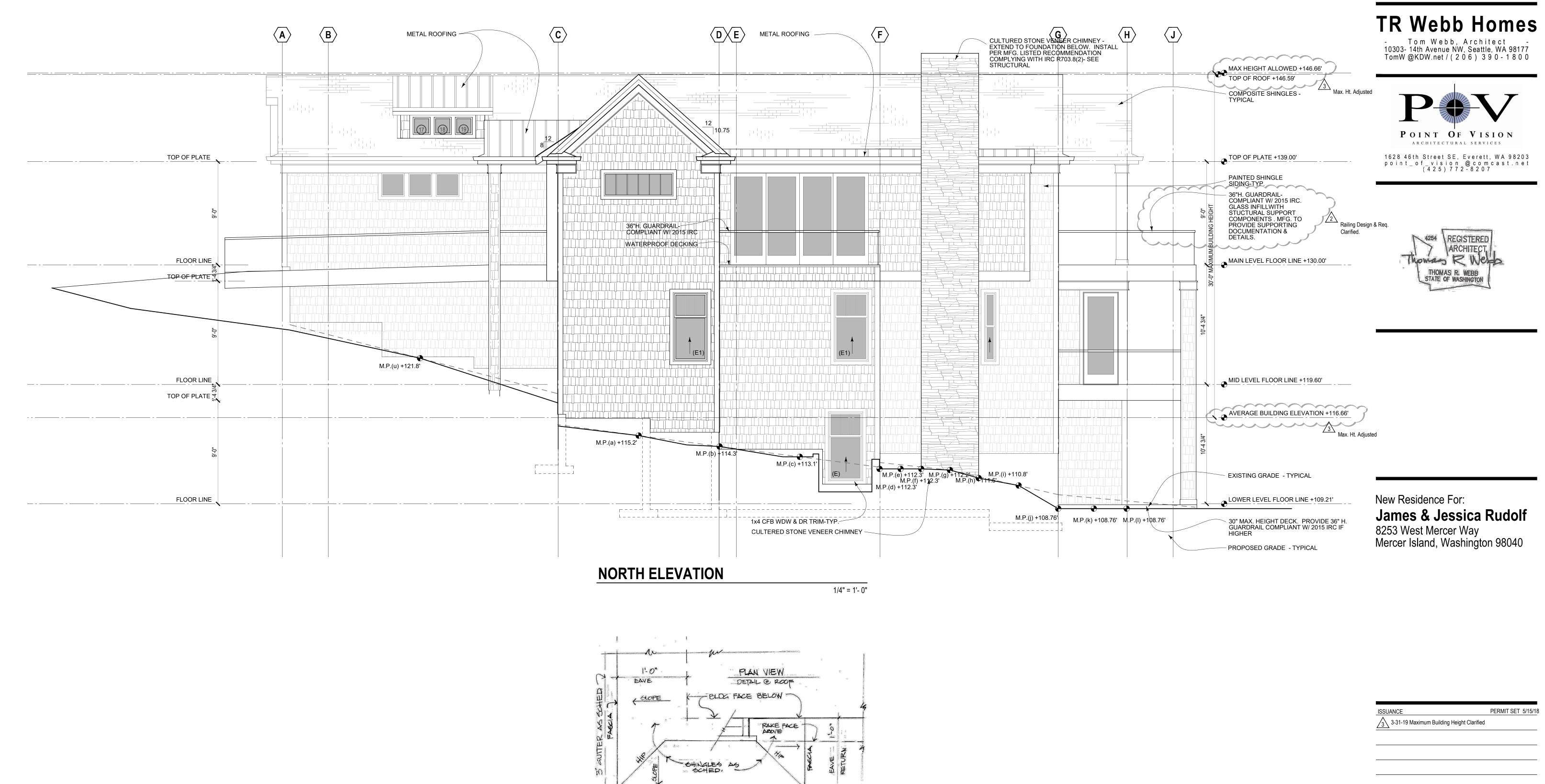
ISSUANCE	PERMIT SET	5/15/18
3-31-19 Maximum Building Height Clarified		

PROJECT INFORMATION	
PROJECT NO:	POV1740
PROJECT MANAGER:	TW
DRAWN BY:	BB

**East Building Elevation** 

SHEET NO

**48** 



FACCIA 3

← EAVE RETURN PLAN @ RAKE CORNER

SIMILAR DESIGN AT VARIOUS PITCHES - VERIFY W/ ARCHITECT

2'-81z"

POV1740
TW
BB

North Building Elevation

SHEET NO

**A9** 

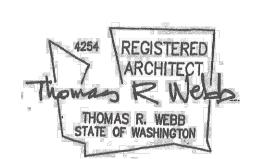
1/4" = 1'- 0"

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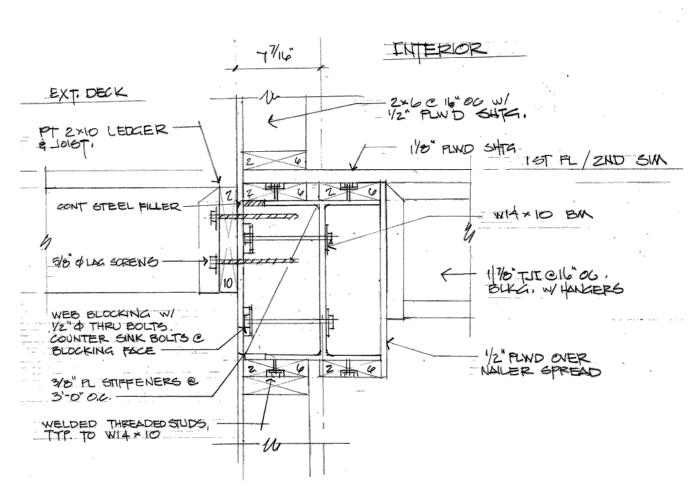


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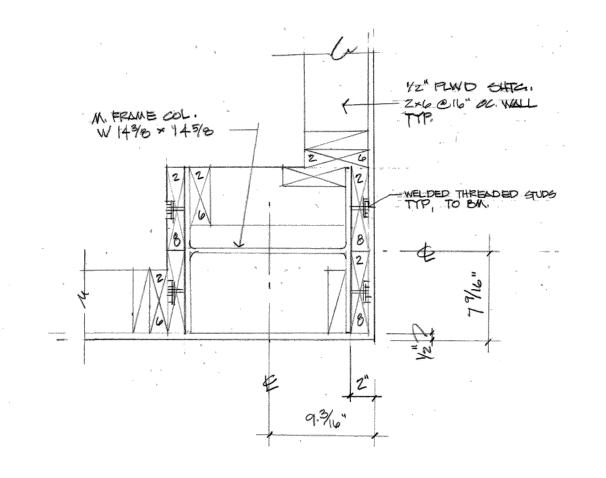
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Mercer Island, Washington 98040



2 DETAIL @ MOMENT FRAME BEAM

1-1/2"= 1'-0" SEE STRUCTURAL DETAIL



MOMENT FRAME DETAIL @ COLUMN

1-1/2"= 1'-0" SEE STRUCTURAL DETAIL

ISSUANCE PERMIT SET 5/15/18

3-31-19 Maximum Building Height Clarified

PROJECT INFORMATION

PROJECT NO: POV1740

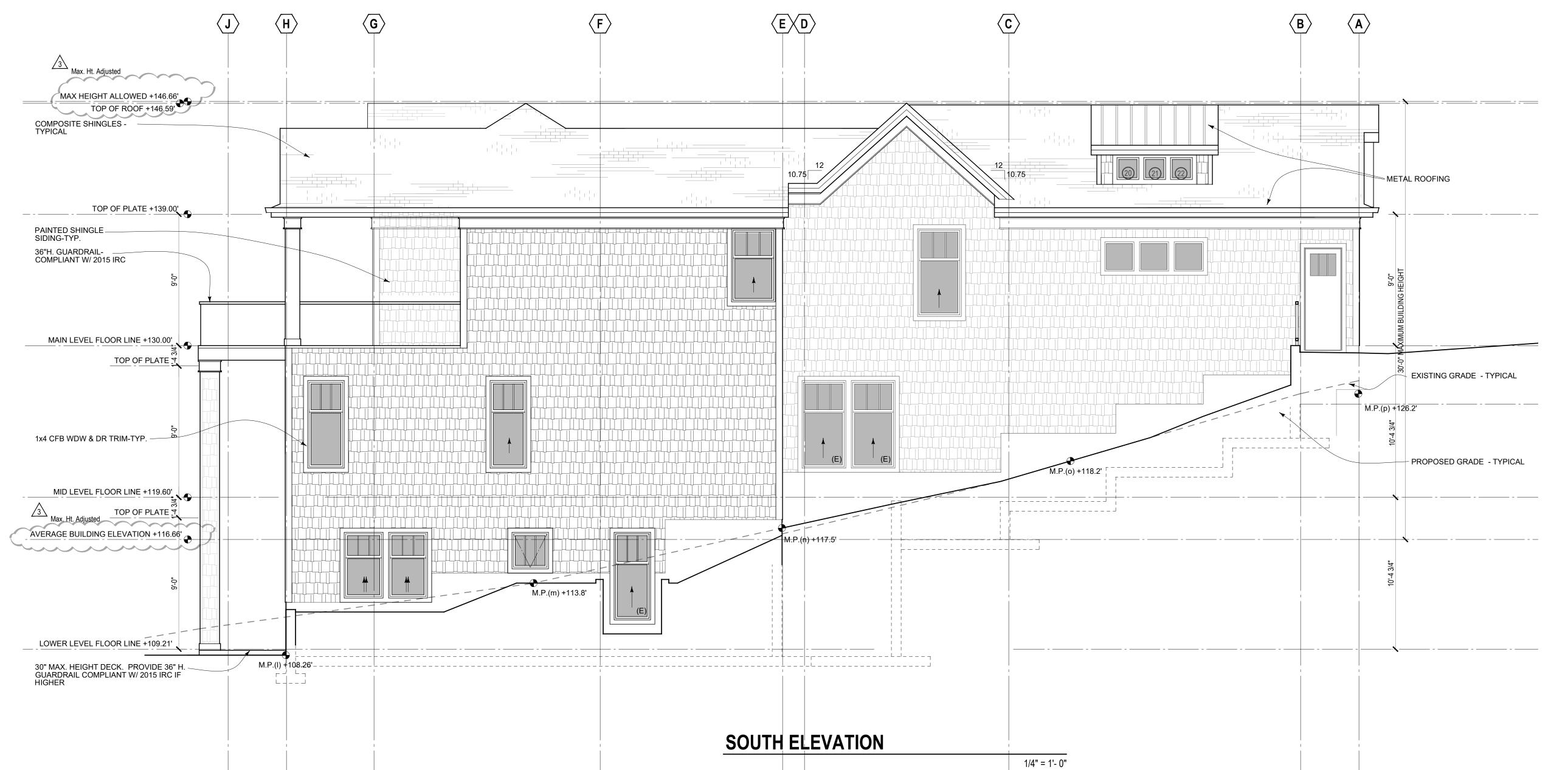
PROJECT MANAGER: TW

DRAWN BY: BB

**West Building Elevation** 

CHEET NO

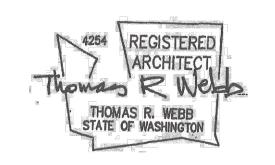
410



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New Residence For:

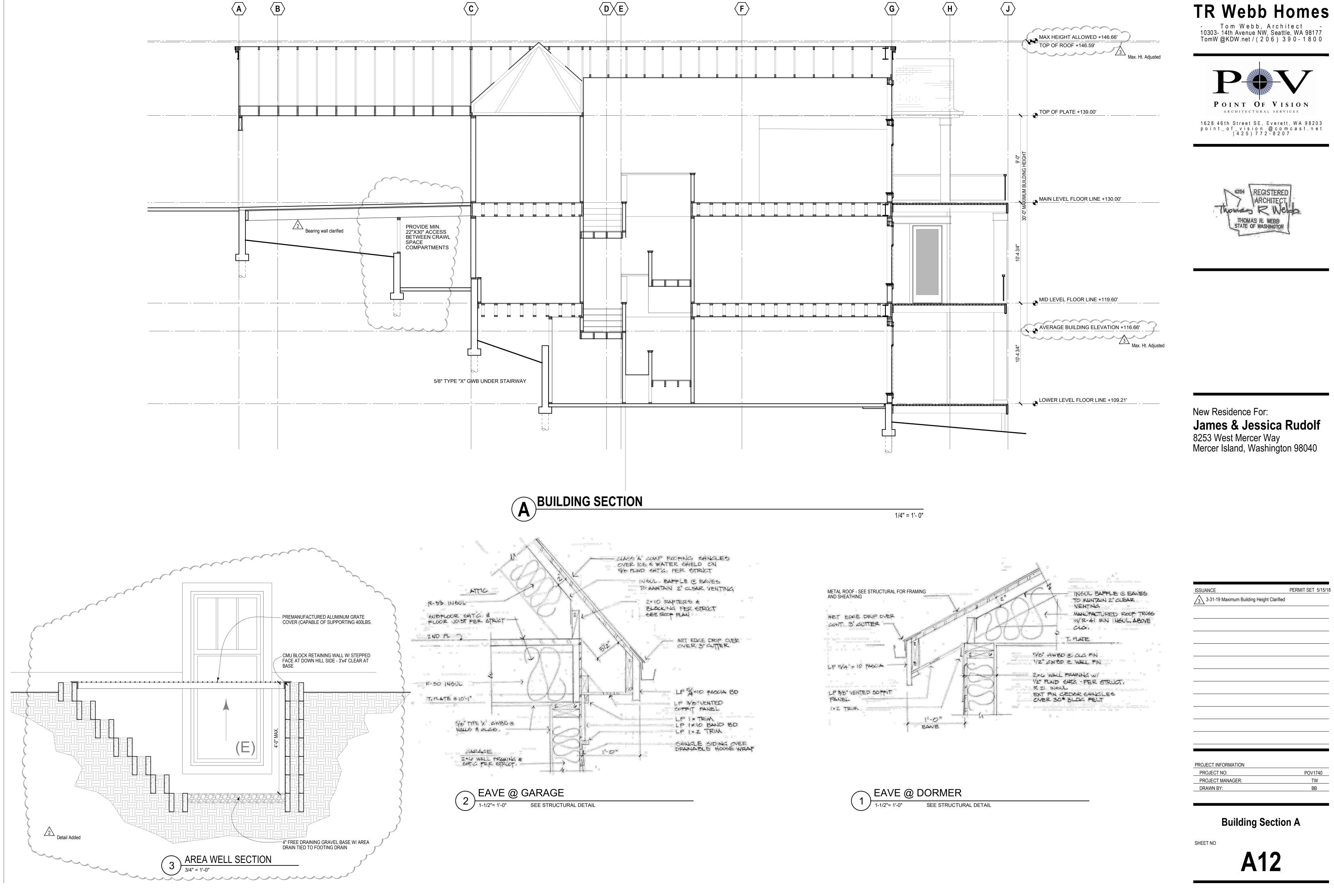
James & Jessica Rudolf
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ISSUANCE	I LINIIII OLI 3/13
3-31-19 Maximum Building Height Clarified	
PROJECT INFORMATION	
PROJECT NO:	POV1740
PROJECT MANAGER:	TW
DD AMAL DV:	DD

South Building Elevation

CHEET NO

**A11** 



PERMIT SET 5/15/18

POV1740

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New Residence For:

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PROJECT INFORMATION
PROJECT NO:
PROJECT MANAGER:
DRAWN BY:
BB

**Building Section B** 

CHEET NO

A13

\\Laptop-hh2a4hd9\c\POV1740 Rudolf Residence\POV1740 A8-14 Building Sections.dwg, 3/31/2019 3:11:36 PM, Dell, Point Of Vision 2017

9

 $\langle 6 \rangle \langle 5 \rangle$ 

BUILDING SECTION

4

**7.57** 

3

1/4" = 1'- 0"

**2** 

\_\_\_\_\_

MAX HEIGHT ALLOWED +146.66'

TOP OF ROOF +146.59'

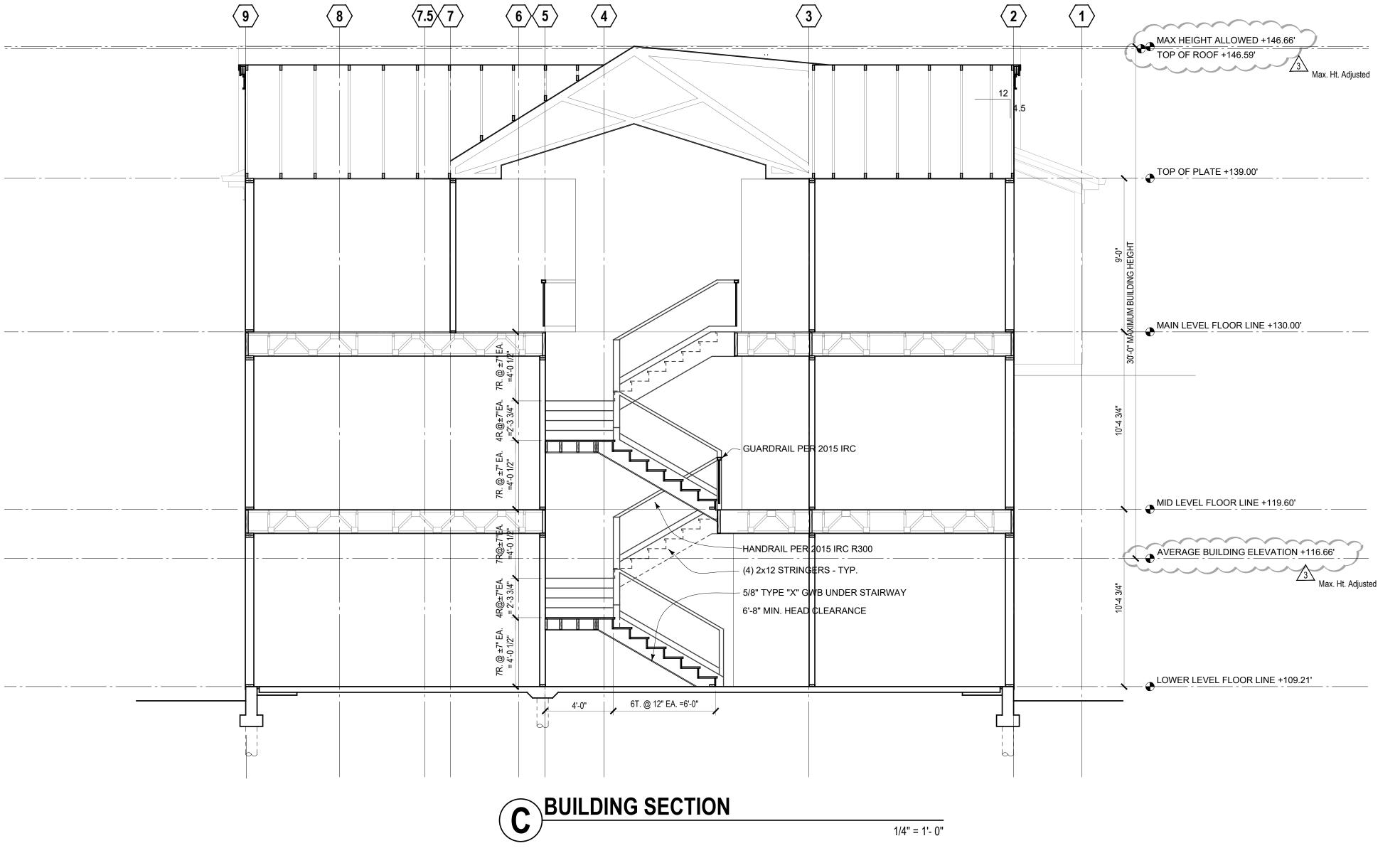
TOP OF PLATE +139.00'

MAIN LEVEL FLOOR LINE +130.00'

MID LEVEL FLOOR LINE +119.60'

LOWER LEVEL FLOOR LINE +109.21

AVERAGE BUILDING ELEVATION +116.66'



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New Residence For:

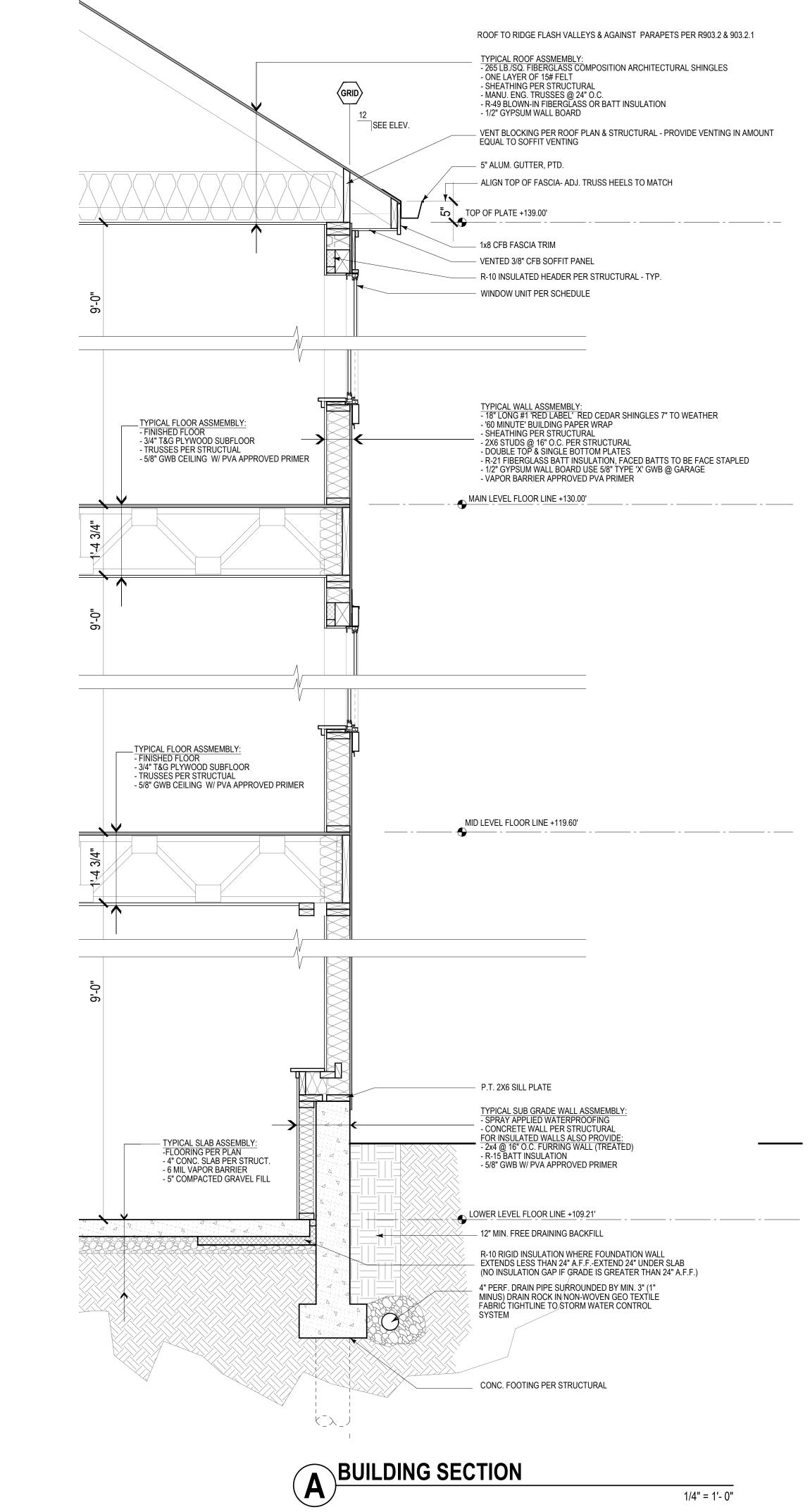
James & Jessica Rudolf
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Mercer Island, Washington 98040

ISSUANCE	PERMIT SET 5/15/1
3-31-19 Maximum Building Height Clarified	
DDO IFOT INFORMATION	
PROJECT INFORMATION PROJECT NO:	POV1740
7.100201110.	1011740

**Building Section C** 

CHEET NO

A14

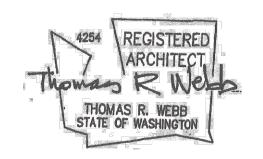


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ARCHITECTURAL SERVICES



New Residence For:

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Mercer Island, Washington 98040

PERMIT SET 5/15/18

PROJECT INFORMATION

PROJECT NO: POV1740

PROJECT MANAGER: TW

DRAWN BY: BB

Typical Wall Section & Details

SHEET NO

A15

## STRUCTURAL NOTES

(THESE NOTES ARE TYPICAL UNLESS NOTED OR DETAILED OTHERWISE ON DRAWINGS)

ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, AND THE INTERNATIONAL BUILDING CODE (IBC), 2015 EDITION. SPECIFICATIONS AND STANDARDS WHERE REFERENCED ON THE DRAWINGS ARE TO BE THE LATEST EDITION.

### **DESIGN LOADS**

DEAD LOADS:	
ROOF	15 PSF
FLOOR	15 PSF
GARAGE FLOOR	55 PSF
LIVE LOADS:	
ROOF (SNOW LOAD)	25 PSF
RESIDENTIAL	40 PSF
DECKS	60 PSF

### EARTHQUAKE LOADS:

EQUIVALENT LATERAL FORCE PROCEDURE PER ASCE 7-10 SECTION	ON 12.8.
SITE CLASS (ASSUMED) SHORT PERIOD SPECTRAL RESPONSE ACCEL (S <sub>S</sub> ) ONE SECOND SPECTRAL RESPONSE ACCEL (S <sub>I</sub> ) SHORT PERIOD DESIGN SPECTRAL RESPONSE ACCEL (S <sub>DS</sub> ) ONE SECOND DESIGN SPECTRAL RESPONSE ACCEL (S <sub>DI</sub> ) RISK CATEGORY SEISMIC IMPORTANCE FACTOR (I <sub>E</sub> ) SEISMIC DESIGN CATEGORY BASIC SEISMIC FORCE-RESISTING-SYSTEM RESPONSE MODIFICATION FACTOR, (R)	D 1.442 0.552 0.961 0.554 II 1.0 D LIGHT-FRAMED WOOD SHEAR WALLS 6.5
REDUNDANCY FACTOR (p) SEISMIC RESPONSE COEFFICIENT ( $C_s$ )	1.0 0.148
W = TOTAL SEISMIC DEAD LOAD AS DEFINED PER ASCE 7-10 SEC BASE SHEAR (V), $V = C_SW = \frac{S_{DS}}{R/I}W$	
D LOADS:	

### SEE PLANS FOR ADDITIONAL DESIGN LOADS.

BASIC WIND SPEED (3 SECOND GUST)

### STATEMENT OF SPECIAL INSPECTIONS

EXPOSURE

SPECIAL INSPECTIONS ARE REQUIRED AS INDICATED IN THE FOLLOWING TABLE. THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER PRIOR TO COMMENCEMENT OF WORK IN ACCORDANCE WITH CHAPTER 1704.4 OF THE IBC.

110 MPH

STEEL CONSTRUCTION - SPECIAL INSPECTION IS REQUIRED IN CONFORMANCE WITH IBC SECTION 1705.2 AND

**CONCRETE CONSTRUCTION** - SPECIAL INSPECTION IS REQUIRED IN CONFORMANCE WITH IBC SECTION 1705.3 AND

LIGHT FRAMED WOOD SHEAR WALLS - SPECIAL INSPECTION IS REQUIRED IN CONFORMANCE WITH IBC SECTION 1705.5 AND 1705.11.2. A PRECONSTRUCTION MEETING IS REQUIRED FOR WOOD FRAMING WITH THE STRUCTURAL ENGINEER, GENERAL CONTRACTOR AND FRAMING CONTRACTOR REPRESENTATIVES PRESENT.

SPECIAL INSPECTION FOR THE ABOVE SYSTEMS SHALL BE AS INDICATED IN THE SPECIAL INSPECTION TABLE BELOW.

STRUCTURAL OBSERVATION OF THE STRUCTURAL SYSTEM BY THE ENGINEER IS NOT REQUIRED.

FREQUENCY AND DISTRIBUTION OF REPORTS - INSPECTION REPORTS SHALL BE PROVIDED FOR EACH DAY ON SITE BY SPECIAL INSPECTOR. STRUCTURAL OBSERVATION REPORTS SHALL BE PROVIDED AFTER EACH OBSERVATION. REPORTS SHALL BE DISTRIBUTED TO THE CONTRACTOR, ARCHITECT, ENGINEER AND BUILDING OFFICIAL.

### SPECIAL INSPECTION

OPERATION	CONT	PERIODIC	REMARKS
SOILS			
SHORING		Х	GEOTECH ENGINEER
EXCAVATION & FILL		Х	GEOTECH ENGINEER
AUGERCAST PILE INSTALLATION	Х		GEOTECH ENGINEER
CONCRETE			
REINFORCING PLACEMENT		Х	
ANCHOR BOLTS		Х	
HOLDOWN PLACEMENT		Х	
CONCRETE TEST SPECIMENS	Х		
CONCRETE PLACEMENT	Х		
ADHESIVE ANCHORS	Х		IF REQ'D
EMBEDDED PLATES		Х	
STRUCTURAL STEEL			
FABRICATION & ERECTION		Х	
HIGH STRENGTH BOLTING		Х	
SHOP & FIELD WELDING			
SINGLE PASS FILLET WELDS ≤ 5/16"		Х	
FILLET WELDS > 5/16"	Х		
PARTIAL & COMPLETE PENETRATION	Х		
OTHER WELDING		Х	
WOOD FRAME			
SHEARWALL & DIAPHRAGM NAILING		Х	SPACING ≤ 4" OC
STRAP NAILING		Х	
DRAG STRUT INSTALLATION		Х	

### ALL ITEMS MARKED WITH AN "X" SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17. SPECIAL INSPECTION SHALL BE PERFORMED BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE OWNER. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING OFFICIAL SHALL BE FURNISHED WITH COPIES OF ALL RESULTS. ANY INSPECTION FAILING TO MEET THE PROJECT SPECIFICATIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE DESIGN TEAM.

### SHOP DRAWINGS

SHOP DRAWINGS FOR THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION:

1. REINFORCING STEEL 4. STRUCTURAL STEEL

2. CONCRETE MIX DESIGN 5. PREMANUFACTURED WOOD TRUSSES 3. GROUT MIX DESIGN 6. WOOD I-JOISTS & ENGINEERED WOOD BEAMS

SHOP DRAWINGS SHALL BE REVIEWED, REVISED AS REQUIRED FOR FIELD CONDITIONS, AND DATE STAMPED BY THE CONTRACTOR PRIOR TO REVIEW BY THE ENGINEER. CONTRACTOR SHALL PROVIDE (3) SETS OF SHOP DRAWINGS FOR ENGINEER'S REVIEW. ALLOW TWO WEEKS FOR SHOP DRAWING APPROVAL BY ENGINEER.

ENGINEER'S SHOP DRAWING REVIEW IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AND CONTRACT DOCUMENTS. MARKINGS OR COMMENTS SHALL NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. THE CONTRACTOR REMAINS RESPONSIBLE FOR DETAILS AND ACCURACY, FOR CONFORMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, FOR SELECTING FABRICATION PROCESSES, FOR TECHNIQUES OF ASSEMBLY, AND FOR PERFORMING THE WORK IN A SAFE

ENGINEER'S SHOP DRAWING REVIEW OF STRUCTURAL COMPONENTS DESIGNED BY OTHERS IS FOR LOADS IMPOSED ON THE BASIC STRUCTURE. THE COMPONENT DESIGNER IS RESPONSIBLE FOR CODE CONFORMANCE AND ALL CONNECTIONS TO THE BASIC STRUCTURE. SHOP DRAWINGS SHALL INDICATE MAGNITUDE AND DIRECTION OF THE LOADS IMPOSED ON THE BASIC STRUCTURE AND SHALL BE STAMPED & SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT.

FABRICATION SHALL BEGIN ONLY AFTER SHOP DRAWINGS BEARING THE STAMP AND SIGNATURE OF THE PROJECT ARCHITECT, ENGINEER OF RECORD, AND CONTRACTOR HAVE BEEN RECEIVED.

### DEFERRED APPROVAL ITEMS

SUBMITTAL DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ARCHITECT OR ENGINEER OF RECORD WHO SHALL REVIEW THEM AND INDICATE THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL

### 1. PREMANUFACTURED WOOD TRUSSES

### FOUNDATIONS: AUGERCAST PILES

SOILS REPORT:	<b>REPORT NO:</b>	JN14348
	PREPARED BY:	GEOTECH CONSULTANTS, INC.
DATED:	10/02/2015	

16"Ø AUGERCAST PILES: VERTICAL CAPACITY:

40.0 KIPS/PILE LATERAL CAPACITY: 8.0 KIPS/PILE MIN. EMBEDMENT DEPTH: 10 FT INTO COMPETENT NATIVE SOILS

LATERAL EARTH PRESSURE UNRESTRAINED:

40 PCF + ANY APPLICABLE SURCHARGE RESTRAINED: 10 PSF x WALL HEIGHT + ANY APPLICABLE SURCHARGE PASSIVE:

AUGERCAST PILES SHALL BE INSTALLED BY AN EXPERIENCED CONTRACTOR. PILES SHALL EXTEND TO THE MINIMUM DEPTHS INDICATED ON THE STRUCTURAL DRAWINGS OR TO THE DEPTHS AS DETERMINED BY THE GEOTECHNICAL ENGINEER ON SITE. THE GEOTECHNICAL REPORT GIVES APPROXIMATE PILE LENGTHS FOR BIDDING PURPOSES ONLY. ALL FINAL PILE LENGTHS ARE SUBJECT TO SITE CONDITIONS & SHALL BE ESTABLISHED IN THE FIELD BY THE GEOTECHNICAL ENGINEER.

FLOATING SLABS SHALL BEAR ON 4 INCHES OF WASHED GRAVEL OVER A 10 MIL VAPOR BARRIER OVER 2 FEET OF STRUCTURAL FILL SUBGRADE. GRADE BEAM ELEVATIONS SHOWN IN THE DRAWINGS REPRESENT MINIMUM DEPTHS AND ARE FOR BIDDING ONLY. ACTUAL FOOTING ELEVATIONS ARE SUBJECT TO SITE CONDITIONS AND MUST THEREFORE BE ESTABLISHED BY THE CONTRACTOR. FOOTINGS SHALL BE CENTERED BELOW COLUMNS OR WALLS ABOVE, UNLESS NOTED OTHERWISE.

BACKFILL BEHIND ALL RETAINING WALLS WITH WELL-DRAINING, GRANULAR FILL & PROVIDE FOR SUBSURFACE DRAINAGE. PROVIDE DAMPPROOFING AT EXTERIOR FACE OF ALL FOUNDATION WALLS EXPOSED TO EARTH PER ARCHITECTURAL SPECIFICATIONS.

EXCAVATIONS AND DRAINAGE INSTALLATION SHALL BE OBSERVED BY A SOILS ENGINEER RETAINED BY THE OWNER. IF EXCAVATION SHOWS SOIL CONDITIONS TO BE OTHER THAN THOSE ASSUMED ABOVE, NOTIFY THE STRUCTURAL ENGINEER FOR POSSIBLE FOUNDATION REDESIGN.

### CONCRETE

ALL CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED, AND PLACED IN ACCORDANCE WITH SECTION CHAPTER 5 OF ACI 318 AND THE AMERICAN CONCRETE INSTITUTE'S SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301).

ALL CONCRETE SHALL BE STONE-AGGREGATE CONCRETE HAVING A UNIT WEIGHT OF APPROXIMATELY 150 POUNDS

CONCRETE STRENGTHS AT 28 DAYS (f'c) AND MIX CRITERIA SHALL BE AS FOLLOWS:

TYPE OF CONSTRUCTION	f'c	MAXIMUM WATER/CEMENT RATIO	MIN CEMENT CONTENT PER CUBIC YARD	MAXIMUM SHRINKAGE STRAIN
AUGERCAST PILES	4000 PSI	0.50	6 1/2 SACK	N/A
SLABS ON GRADE	3000 PSI	0.55	5 1/2 SACK	N/A
FOOTINGS	3000 PSI	0.55	5 1/2 SACK	N/A
GRADE BEAMS	3000 PSI	0.50	5 1/2 SACK	N/A
WALLS	4000 PSI	0.45	5 1/2 SACK	N/A

THE MINIMUM AMOUNT OF CEMENT LISTED ABOVE MAY BE CHANGED IF A CONCRETE PERFORMANCE MIX IS SUBMITTED TO THE ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, FINE AND COARSE AGGREGATE, WATER, AND ADMIXTURES AS WELL AS THE WATER-CEMENT RATIO, SLUMP, CONCRETE YIELD, AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH CHAPTER 5 OF ACI 318.

ALL CONCRETE EXPOSED TO WEATHER OR TO FREEZING TEMPERATURES SHALL BE AIR-ENTRAINED IN ACCORDANCE WITH ACI 318 TABLE 4.2.1 FOR MODERATE EXPOSURE CONDITION.

### REINFORCING STEEL

REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM A615, AND SHALL BE GRADE 60 (Fy = 60,000 PSI), UNLESS NOTED OTHERWISE. GRADE 60 REINFORCING BARS INDICATED ON DRAWINGS TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCING COMPLYING WITH ASTM A615 MAY BE WELDED IF MATERIAL PROPERTY REPORTS INDICATING CONFORMANCE WITH WELDING PROCEDURES SPECIFIED IN AWS D1.4 ARE

WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. PROVIDE WELDED WIRE FABRIC IN SHEETS NOT ROLLS. LAP WELDED WIRE FABRIC 12" AT SIDES AND ENDS.

REINFORCING STEEL SHALL BE DETAILED INCLUDING HOOKS AND BENDS IN ACCORDANCE WITH SP-66 AND ACI 318R, LATEST EDITIONS. UNLESS OTHERWISE NOTED, REINFORCING SPLICE LENGTHS AND DEVELOPMENT LENGTHS SHALL BE PER SCHEDULE.

MECHANICAL SPLICING OF REINFORCING BARS, WHERE INDICATED ON THE DRAWINGS, SHALL BE BY AN ICBO APPROVED SYSTEM, SHALL DEVELOP 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR, AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

REINFORCING SHALL BE PLACED AND ADEQUATELY SUPPORTED PRIOR TO PLACING CONCRETE. WET-SETTING EMBEDDED ITEMS IS NOT ALLOWED WITHOUT PRIOR ENGINEER APPROVAL. BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL NOT BE FIELD BENT UNLESS SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER. REFER TO CHAPTER 7 OF ACI 318 FOR OTHER REINFORCING STEEL REQUIREMENTS.

### MINIMUM LAPS AND EMBEDMENT

UNLESS OTHERWISE NOTED, REINFORCING SPLICE LENGTHS AND DEVELOPMENT LENGTHS SHALL BE AS TABULATED

	f'c = 3000 PSI								
		DEVELOPM	ENT LENGTH		LAP	SPLICE			
BAR	TENSION		TENSION COMPRESSION		TENS	SION	COMPRESSION		
SIZE	TOP BARS	OTHER BARS	ALL BARS	TOP BARS	OTHER BARS	ALL BARS			
#3	22	17	9	28	22	12			
#4	29	22	11	37	29	15			
#5	36	28	14	47	36	19			
#6	43	33	17	56	43	23			
#7	63	48	20	81	63	27			
#8	72	55	22	93	72	30			

f'c = 4000 PSI								
		DEVELOPM	ENT LENGTH		LAP	SPLICE		
BAR	TENS	SION	COMPRESSION	TENS	SION	COMPRESSION		
SIZE	TOP BARS	OTHER BARS	ALL BARS	TOP BARS	OTHER BARS	ALL BARS		
#3	19	15	8	24	19	12		
#4	25	19	10	33	25	15		
#5	31	24	12	41	31	19		
#6	37	29	15	49	37	23		
#7	54	42	17	71	54	27		
#8	62	48	19	81	62	30		

- 1. ALL LENGTHS ARE IN INCHES.
- . ALL LAP SPLICES ARE CLASS B. "TOP BARS" ARE HORIZONTAL REINFORCEMENT PLACED SUCH THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.

### CONCRETE WALL REINFORCING

PROVIDE THE FOLLOWING MINIMUM REINFORCING UNLESS NOTED OR DETAILED OTHERWISE (GRADE 60):

ı			
8" WALLS		#5 @ 15" OC	EA WAY CENTERED
•	CONCRETE COVER ON REINFORCING		

PLACEMENT

3/4"

1 1/2"

CONCRETE EXPOSED TO EARTH AND WEATHER:	
#6 BARS AND LARGER	2"
#5 BARS AND SMALLER	1 1/2'
CONCRETE NOT EXPOSED TO EARTH OR WEATHER:	

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH

### SLABS, WALLS AND JOISTS COLUMN TIES OR SPIRALS AND BEAM STIRRUPS

**CONCRETE GENERAL NOTES** 

VERTICAL BARS SHALL START FROM TOP OF FOOTING. HORIZONTAL BARS SHALL START A DISTANCE OF 1/2 THE NORMAL BAR SPACING FROM TOP OF FOOTING AND TOP OF FRAMED SLABS. IN ADDITION, THERE SHALL BE A HORIZONTAL BAR AT A MAXIMUM OF 3" FROM TOP OF WALL AND BOTTOM OF FRAMED SLABS.

PROVIDE CORNER BARS TO MATCH THE HORIZONTAL REINFORCING WITH TENSION LAP SPLICE AT EACH SIDE PER TABLE, OR BEND ONE SIDE OVER TO PROVIDE TENSION LAP.

PROVIDE CONTROL OR CONSTRUCTION JOINTS IN SLABS ON GRADE TO BREAK UP SLAB INTO RECTANGULAR AREAS OF NOT MORE THAN 400 SQUARE FEET EACH. AREAS TO BE AS SQUARE AS PRACTICAL AND HAVE NO ACUTE ANGLES. JOINT LOCATIONS TO BE APPROVED BY THE ARCHITECT.

ALL CONSTRUCTION JOINTS SHALL BE THOROUGHLY CLEANED AND PROPERLY PREPARED IMMEDIATELY PRIOR TO POURING OF CONCRETE. DOWEL STEEL SHALL BE THE SAME SIZE AND SPACING AS MAIN REINFORCING DETAILED

SEE ARCHITECTURAL DRAWINGS AND MECHANICAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF OPENINGS IN CONCRETE WALLS, FLOORS AND ROOF. UNLESS INDICATED OTHERWISE, REINFORCE AROUND OPENINGS GREATER THAN 12" IN EITHER DIRECTION WITH (2) #5 EACH SIDE AND (1) #5 x 4'-0" DIAGONAL AT EACH CORNER. EXTEND BARS 2'-0" BEYOND EDGE OF OPENING. IF 2'-0" IS UNAVAILABLE, EXTEND AS FAR AS POSSIBLE AND HOOK. HOOK ALL REINFORCING INTERRUPTED BY OPENINGS.

BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL NOT BE FIELD BENT UNLESS SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.

SEE ARCHITECTURAL DRAWINGS FOR ALL GROOVES, NOTCHES, CHAMFERS, FEATURE STRIPS, COLOR, TEXTURE AND OTHER FINISH DETAILS AT ALL EXPOSED CONCRETE SURFACES. PROVIDE 3/4" CHAMFER AT ALL CORNERS EXCEPT AS

### **NON-SHRINK GROUT**

NON-SHRINK GROUT SHALL BE CEMENT-BASED WITH A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI WHEN TESTED IN ACCORDANCE WITH ASTM C-109. GROUT SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

### STRUCTURAL STEEL

STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", LATEST EDITION.

SHAPES SHALL CONFORM TO ASTM A992, Fy = 50 KSI.

PLATES, ANGLES, AND RODS SHALL CONFORM TO ASTM A36, Fy = 36 KSI.

STRUCTURAL TUBING SHALL CONFORM TO ASTM A500 GRADE B, Fy = 46 KSI.

STEEL PIPE SHALL CONFORM TO ASTM A53 GRADE B, Fy = 35 KSI.

BOLTS CONNECTING STEEL MEMBERS SHALL CONFORM TO ASTM A325-N. BOLTS SHALL BE 3/4"Ø MINIMUM, UNO ANCHOR BOLTS SHALL CONFORM TO ASTM A307.

CONTRACTOR SHALL PROVIDE CONNECTION ADJUSTMENT TOLERANCES TO SATISFY THE REQUIREMENTS OF AISC MANUAL OF STEEL CONSTRUCTION.

UNLESS SPECIFIED AS STAINLESS STEEL, ALL STEEL MEMBERS, SHAPES, BOLTS, AND ACCESSORIES EXPOSED TO WEATHER SHALL BE HOT DIP GALVANIZED.

### WELDING

WELDING SHALL CONFORM TO AWS "STRUCTURAL WELDING CODE", LATEST EDITION. ALL WELDING SHALL BE DONE WITH 70 KSI LOW HYDROGEN ELECTRODES. WHERE NOT CALLED OUT, MINIMUM FILLET WELD SIZE SHALL BE PER TABLE 5.8 IN AWS D1.1, LATEST EDITION.

WELDING OF REINFORCING BARS SHALL NOT BE PERMITTED UNLESS SPECIFICALLY CALLED OUT ON DRAWINGS OR APPROVED BY STRUCTURAL ENGINEER. WELDING OF GRADE 60 REINFORCING BARS SHALL BE PERFORMED USING LOW HYDROGEN ELECTRODES. WELDING OF GRADE 40 REINFORCING BARS SHALL BE PERFORMED USING E70XX ELECTRODES. SEE REINFORCING NOTES FOR MATERIAL REQUIREMENTS OF WELDED BARS. WELDING WITHIN 4" OF COLD BENDS IN REINFORCING BARS IS NOT PERMITTED.

ALL WELDING SHALL BE DONE BY WASHINGTON ASSOCIATION OF BUILDING OFFICIALS (WABO) CERTIFIED WELDERS.

ALL GRADES SPECIFIED ARE MINIMUM GRADES REQUIRED. ALL LUMBER SHALL BE IN ACCORDANCE WITH WWPA GRADING RULES, KILN-DRIED TO MC 19 AND OF THE FOLLOWING MINIMUM STANDARDS:

SIZE CLASSIFICATION	SPECIES	GRADE	Fb (PSI)	Fc (PSI)
LIGHT FRAMING (STUDS)	HEM-FIR	STUD	675	800
2x JOISTS AND PLANKS	HEM-FIR	#2	850	-
PLATES AND BLOCKING	HEM-FIR	#2	850	-
6x AND LARGER BEAMS AND STRINGERS	DOUG-FIR	#2	875	-
4x AND SMALLER BEAMS AND STRINGERS	HEM-FIR	#2	850	-
ALL POSTS AND TIMBERS	DOUG-FIR	#1	1200	1000

REFER TO PLAN NOTES, SCHEDULES, AND DETAILS FOR MORE SPECIFIC LUMBER SIZE AND GRADE REQUIREMENTS.

UNLESS NOTED OTHERWISE IN THE PLANS. ALL WOOD AND WOOD-BASED MEMBERS EXPOSED TO WEATHER OR IN CONTACT WITH CONCRETE, MASONRY, OR WITHIN 8" OF SOIL SHALL BE PRESERVATIVE-TREATED BY VACUUM-PRESSURE IMPREGNATION IN ACCORDANCE WITH AWPA STANDARD U1.

### NAILS, BOLTS, AND METAL CONNECTORS FOR WOOD

ALL NAILS SHALL CONFORM TO THE STANDARDS SET FORTH BY THE NATIONAL DESIGN STANDARDS (NDS) FOR WOOD CONSTRUCTION, LATEST EDITION. NAILING NOT SPECIFIED SHALL BE PER IBC TABLE 2304.9.1 NAILING SCHEDULE. ALL NAILS CALLED OUT ON PLANS SHALL BE COMMON NAILS UNLESS NOTED OTHERWISE AND SHALL MEET OR EXCEED THE FOLLOWING MINIMUM GUIDELINES:

NAIL	SHANK Ø	MIN LENGTH
8d COMMON	0.131Ø	2 1/2" SHANK
10d COMMON	0.148Ø	3" SHANK
12d COMMON	0.148Ø	3 1/4" SHANK
16d COMMON	0.162Ø	3 1/2" SHANK

10d BOX NAILS MAY BE SUBSTITUTED FOR 8d COMMON NAILS WITH NO CHANGE IN NAIL SPACING. FRAMING MEMBERS MAY BE NAILED WITH 16d SINKERS (0.148" X x 3 1/4"), BUT ONLY 16d COMMON NAILS SHALL BE USED WHERE 16d NAILS ARE INDICATED IN THIS DRAWING SET. ENGINEER MAY APPROVE OTHER NAILS IF NAIL LABELS ARE SUBMITTED TO ENGINEER PRIOR TO START OF CONSTRUCTION.

ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307, PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. LEAD HOLES FOR LAG BOLTS SHALL BE BORED FOR THE SHANK AND THREADED PORTIONS PER NDS 11.1.3.

CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY SIMPSON COMPANY, CATALOG TO BE THE LATEST EDITION, OR ENGINEER APPROVED EQUAL. CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND WITH THE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY THE MANUFACTURER. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS, SCREWS, OR BOLTS IN EACH MEMBER.

INSTALL SOLID BLOCKING AT ALL BEARING POINTS. ALL SHIMS SHALL BE SEASONED, DRIED, AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED.

### **GALVANIZATION**

UNLESS NOTED OTHERWISE, STEEL CONNECTORS IN CONTACT WITH TREATED WOOD SHALL BE GALVANIZED ACCORDING TO THE FOLLOWING TABLE:

GALVANIZATION	UNTREATED WOOD	CCA-C	SBX	ACQ-C ACQ-D	CBA-A CA-B	OTHER BORATE	ACZA	OTHER PT WOOD
G90	Х	Х	Х					
G185	Х	Х	Х	х	Х	Х		
HDG	Х	Х	Х	х	Х	Х		
STT300	Х	Х	Х	Х	Х	Х	Х	Х

G90 = 0.90 OZ. OF ZINC PER SQUARE FOOT OF AREA

G185 = 1.85 OZ. OF ZINC PER SQUARE FOOT OF AREA HDG = HOT DIP GALVANIZED

### SST300 = TYPE 316L STAINLESS STEEL **RATED SHEATHING**

RATED SHEATHING SHALL BE GRADE C-D INT-APA WITH EXTERIOR GLUE OR OSB SHEATHING WITH EXTERIOR GLUE IN CONFORMANCE WITH IBC STANDARD 2303.1.4.

### TIMBERSTRAND, MICROLLAM, AND PARALLAM MEMBERS

FABRICATED IN CONFORMANCE WITH THE INTERNATIONAL CODE COUNCIL EVALUATION SERVICE (ICC-ES) REPORT NO. ESR-1387 OR CCMC REPORT NO. 12627-R, 08675-R, AND 11161-R. EACH MEMBER SHALL BE IDENTIFIED BY A STAMP INDICATING THE PRODUCT TYPE AND GRADE, ICC-ES OR CCMC REPORT NUMBER, MANUFACTURER'S NAME, PLANT NUMBER AND INDEPENDENT INSPECTION AGENCY'S LOGO. FABRICATOR SHALL BE CERTIFIED. MEMBERS SHALL MEET THE FOLLOWING MINIMUM STANDARDS:

SIZE CLASSIFICATION	SPECIES	GRADE	Fb (PSI)	Fv (PSI	Fc (PSI)
BEAMS & POSTS (d < 9 1/2")	LSL	1.3E	1,700	425	1,835
RIMS & BEAMS (d ≥ 9 1/2")	LSL	1.55E	2,325	310	-
BEAMS & POSTS	LVL	2.0E	2,600	285	2,510
POSTS (d < 9 1/2")	PSL	1.8E	2,400	190	2,500
BEAMS (d ≥ 9 1/2")	PSL	2.2E	2,900	290	-
PSL PLUS*	PSL	1.46	1,830	197	1,508

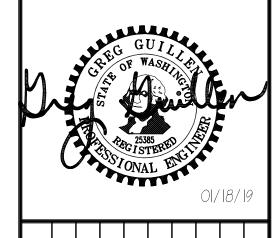
TIMBERSTRAND, MICROLLAM, AND UNTREATED PARALLAM MEMBERS ARE INTENDED FOR DRY-USE APPLICATIONS. UNLESS NOTED OTHERWISE, ENGINEERED WOOD BEAMS EXPOSED TO WEATHER SHALL BE TREATED PER MANUFACTURES RECOMMENDATIONS.

\*PSL PLUS DESIGN PROPERTIES BASED ON A AWDA USE CATEGORY OF UC3B (16% < MC ≤ 28%).

GLUE-LAMINATED TIMBER SHALL BE DOUGLAS FIR, FABRICATED IN CONFORMANCE WITH ANSI/AITC STANDARD A190.1, LATEST EDITION. EACH MEMBER SHALL BEAR AN AITC IDENTIFICATION MARK AND SHALL BE ACCOMPANIED BY AN AITC CERTIFICATE OF CONFORMANCE. FABRICATOR SHALL BE CERTIFIED. MEMBERS SHALL BE OF THE FOLLOWING MINIMUM STANDARDS:

SPAN	COMBINATION	Fb
SIMPLE SPAN BEAMS	20F-V4	2400 PSI





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## STRUCTURAL NOTES

(THESE NOTES ARE TYPICAL UNLESS NOTED OR DETAILED OTHERWISE ON DRAWINGS)

### PRE-MANUFACTURED WOOD TRUSSES

WOOD TRUSSES SHALL BE SIZED AND DETAILED TO FIT DIMENSIONS AND LOADS INDICATED ON THE PLANS. ALL DESIGN SHALL BE IN ACCORDANCE WITH THE ALLOWABLE VALUES AND SECTION PROPERTIES ASSIGNED BY THE BUILDING CODE. SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW PRIOR TO FABRICATION. CALCULATIONS AND SHOP DRAWINGS SHALL BE SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT. TRUSS DESIGN AND SHOP DRAWINGS SHALL BE IN CONFORMANCE WITH IBC 2303.4

PROVIDE TEMPORARY BRACING UNTIL SHEATHING AND PERMANENT BRACING IS INSTALLED. MANUFACTURER SHALL PROVIDE ALL SPECIALTY ITEMS REQUIRED FOR A COMPLETE INSTALLATION OF JOISTS. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

IN THE DESIGN LOAD SECTION, ROOF TRUSSES SHALL BE DESIGNED FOR A BOTTOM CHORD LIVE LOAD OF 10 PSF. TOP AND BOTTOM CHORD LIVE LOAD DO NOT NEED TO BE DESIGNED FOR SIMULTANEOUSLY.

FOR TOP CHORD DESIGN LIVE LOADS, REFER TO THE DESIGN LOAD SECTION. IN ADDITION TO ROOF LOADING LISTED

SEE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOADS AND OPENINGS NOT SHOWN ON THE STRUCTURAL DRAWINGS.

DEFLECTIONS SHALL NOT EXCEED L/360 FOR LIVE LOADS, OR L/240 FOR TOTAL LOADS AT ROOF. DEFLECTIONS SHALL NOT EXCEED L/480 FOR LIVE LOADS, OR L/360 FOR TOTAL LOADS AT FLOOR.

### TYPICAL FRAMING NOTES

1. BEARING WALL FRAMING

### 2x STUDS @ 16" OC FOR ALL SHEAR AND/OR BEARING WALLS UNO.

REFER TO FRAMING PLAN NOTES FOR TYPICAL DOOR & WINDOW HEADERS NOT CALLED OUT ON THE PLANS. HEADERS SHALL BE SUPPORTED BY A MINIMUM OF (1) CRIPPLE AND (1) FULL HEIGHT STUD UNO.

COLUMNS BELOW FLUSH MULTIPLE JOIST BEAMS SHALL BE EQUAL IN WIDTH TO THE BEAM. ALL COLUMNS NOT CALLED OUT OTHERWISE SHALL BE TWO STUDS.

### 2. WALL BASE PLATE ON CONCRETE

WALL PLATES BEARING ON CONCRETE SHALL BE PRESSURE-TREATED. FOR ALL EXTERIOR AND INTERIOR WALLS, BOLT PLATES OR SILLS TO CONCRETE WITH 5/8 INCH DIAMETER ANCHOR BOLTS WITH 7 INCH MINIMUM EMBEDMENT. PLACE AT 5'-0" OC MAXIMUM FOR SHEAR WALLS, AND AT 6'-0" OC FOR BEARING WALLS AND OTHER PARTITIONS. USE MINIMUM OF TWO ANCHOR BOLTS PER SILL AND PLACE ONE WITHIN 12 INCHES OF EITHER END TYPICAL UNLESS NOTED OR DETAILED OTHERWISE. REFER TO SHEAR WALL SCHEDULE. AT ALL SILL PLATE ANCHOR BOLTS, CONTRACTOR SHALL INSTALL 1/4" x 3" x 3" FLAT PLATE WASHERS.

### 3. ROOF AND FLOOR FRAMING

PROVIDE 1 1/2" LSL BLOCKING FOR JOISTS AND RAFTERS AT ALL SUPPORTS AND AT 8'-0" OC MAXIMUM UNO. INSTALL DOUBLE JOISTS UNDER PARTITIONS EXTENDING ONE HALF OR MORE OF THE JOIST SPAN. PROVIDE TRUSS BLOCKING PANELS FOR ROOF TRUSSES AT SUPPORTS AND SHEAR WALLS, AND WHERE INDICATED ON PLANS AND DETAILS.

### 4. DIAPHRAGM NAILING

ALL SHEAR WALLS, FLOOR AND ROOF DIAPHRAGM NAILINGS SHALL BE AS CALLED OUT ON SCHEDULES OR ON THE PLANS. EXTERIOR WALLS NOT INDICATED AS SHEAR WALLS SHALL BE SHEATHED AND NAILED TO SUPPORTING FRAMING WITH 8d NAILS AT 6" OC AT ALL PANEL EDGES AND 12" OC AT ALL INTERMEDIATE SUPPORTS.

THE USE OF NAIL GUNS WILL BE APPROVED IF NAILING INTO THE DIAPHRAGMS CAN BE INSTALLED FLUSH WITH FACE OF SHEATHING. NAIL PENETRATIONS GREATER THAN 1/16" ARE NOT ACCEPTABLE.

### 5. ALLOWABLE STUD AND PLATE PENETRATIONS

CUTTING AND/OR NOTCHING OF WOOD STUDS OR PLATES SHALL NOT EXCEED 25% OF THE STUD/PLATE WIDTH IN EXTERIOR AND BEARING WALLS AND SHALL NOT EXCEED 40% OF THE STUD/PLATE WIDTH IN ANY NON-BEARING PARTITIONS. BORED HOLE DIAMETER IS LIMITED TO 40% OF STUD/PLATE WIDTH IN ANY STUD AND MAY BE 60% IN NONBEARING PARTITIONS OR IF STUD IS DOUBLED. MAINTAIN 5/8" MINIMUM EDGE DISTANCE FROM HOLE EDGE.

### 6. GYPSUM WALLBOARD NAILING

ALL GYPSUM WALLBOARD SHALL BE NAILED TO ALL STUDS AND TOP AND BOTTOM PLATES WITH 6d COOLER NAILS OR NO. 13 GAUGE x 1 5/8" @ 7" OC (5d COOLER NAILS FOR 1/2 INCH GYPSUM SHEATHING). TYPICAL UNLESS NOTED OTHERWISE. INSTALLATION OF GWB SHALL BE SUCH THAT JOINTS ARE STAGGERED ON EACH SIDE OF A SINGLE

### GENERAL

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL, CIVIL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS FOR COMPATIBILITY BEFORE PROCEEDING. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING.

CONTRACTOR TO SEE ARCHITECTURAL, CIVIL, ELECTRICAL AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF PIPE, VENT, DUCT AND OTHER OPENINGS AND DETAILS NOT SHOWN ON THESE DRAWINGS.

CONTRACTOR SHALL BE RESPONSIBLE FOR ERECTION STABILITY AND TEMPORARY SHORING AS NECESSARY UNTIL PERMANENT SUPPORT AND STIFFENING ARE INSTALLED.

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

DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF A SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.

	LEG	END	
DEFINITION	SYMBOL	DEFINITION	SYMBOL
DIRECTION OF FRAMING		NATIVE SOIL	
EXTENT OF FRAMING	$\longleftrightarrow$	GRANULAR FILL	
COLUMNS		STRUCTURAL STEEL	\(\frac{211111111}{2}\)
COLUMN BEARING ON BEAM	(A)	RATED SHEATHING	
BEAM CONTINUOUS OVER SUPPORT	CB	SHEAR WALL (SEE SCHEDULE)	SWX
CONCRETE WALL	5	COLUMN MARK (SEE SCHEDULE)	, ch
BEARING STUD WALL	51111115	FOOTING MARK (SEE SCHEDULE)	FX
NON-BEARING STUD WALL	5	HOLDOWN MARK (SEE SCHEDULE)	♦
BEARING STUD SHEAR WALL	\$MMMM\$	HANGER MARK (SEE SCHEDULE)	<b>(X)</b>
NON-BEARING STUD SHEAR WALL	5////	FLAG NOTE (SEE PLAN NOTES)	$\boxtimes$
CMU WALL	\$XXXXX	STEEL MOMENT FRAME CONN.	<b>-</b>

	ABBRE	VIATIONS	
(A)	ABOVE	GLB	GLUE-LAMINATED BEAM
AB	ANCHOR BOLT	HORIZ	HORIZONTAL
ALT	ALTERNATE	KP	KING POST
ARCH	ARCHITECT	KSI	KIPS PER SQUARE INCH
(B)	BELOW	L	ANGLE
BD	BAR DIAMETER	MECH	MECHANICAL
BLKG	BLOCKING	MF	MOMENT FRAME
BM	BEAM	MTL	METAL
ВОТ	воттом	NS	NEAR SIDE
BRNG	BEARING	ОС	ON CENTER
BTWN	BETWEEN	ОРР	OPPOSITE
CJP	COMPLETE JOINT PENETRATION	PL	PLATE
CLR	CLEAR	PLCS	PLACES
CMU	CONCRETE MASONRY UNIT	PSI	POUNDS PER SQUARE INCH
COL	COLUMN	PSF	POUNDS PER SQUARE FOOT
CONC	CONCRETE	P/T	POST TENSIONED
CONN	CONNECTION	PT	PRESSURE TREATED
CONT	CONTINUOUS	REINF	REINFORCING
COORD	COORDINATE	REQ'D	REQUIRED
DBL	DOUBLE	SCHED	SCHEDULE
DET	DETAIL	SIM	SIMILAR
DIA	DIAMETER	SOG	SLAB ON GRADE
DIM	DIMENSION	STD	STANDARD
DIR	DIRECTION	STIFF	STIFFENER
EA	EACH	STL	STEEL
ELEV	ELEVATION	SYMM	SYMMETRICAL
ES	EACH SIDE	SW	SHEARWALL
EX	EXISTING	тос	TOP OF CONCRETE
EXP	EXPANSION	TOS	TOP OF STEEL
FLR	FLOOR	TOW	TOP OF WALL
FDN	FOUNDATION	TYP	TYPICAL
FTG	FOOTING	UNO	UNLESS NOTED OTHERWISE
FS	FAR SIDE	VERT	VERTICAL
GC	GENERAL CONTRACTOR	WF	WIDE FLANGE





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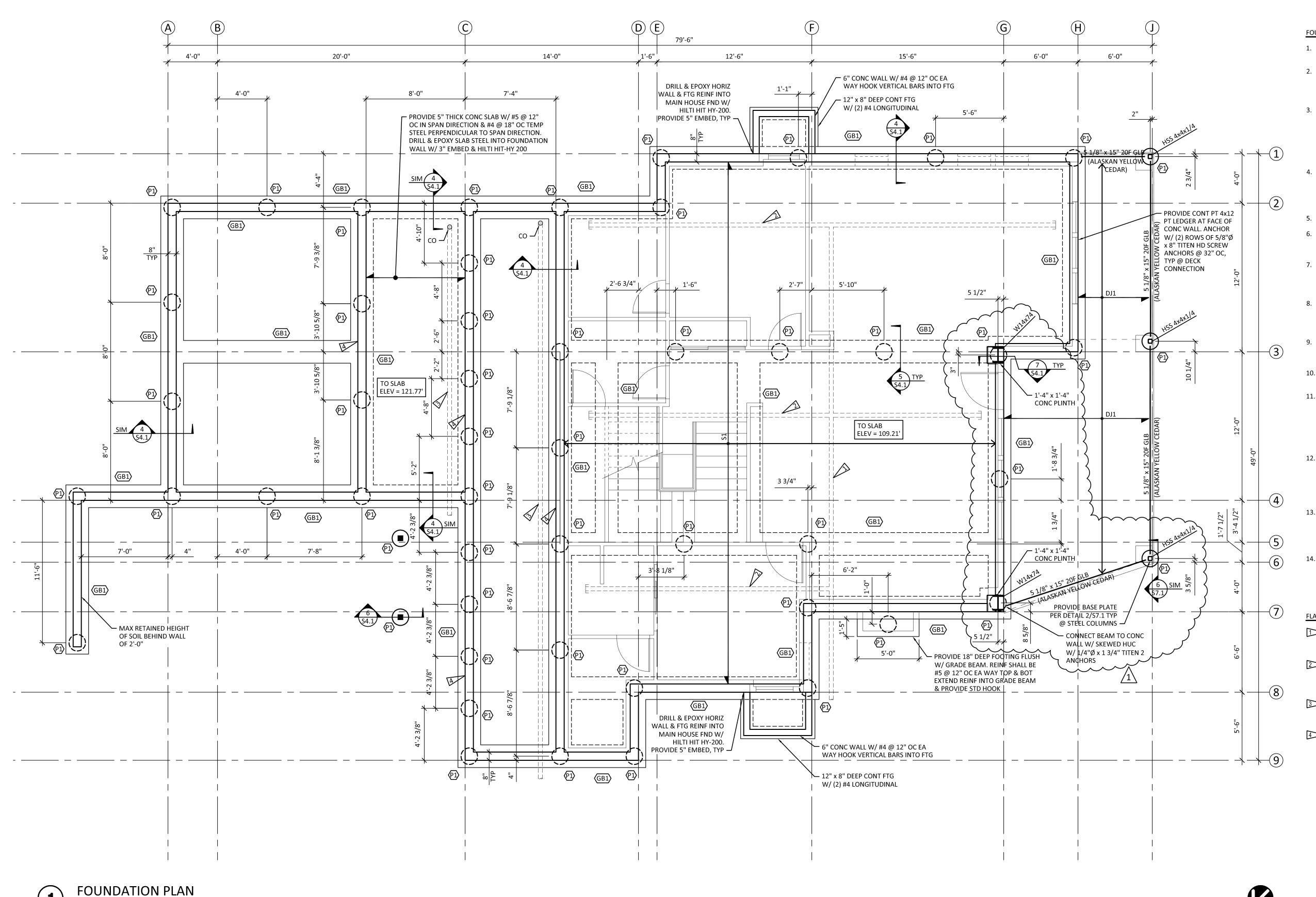
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S12



### FOUNDATION PLAN NOTES:

- 1. PX INDICATES PILE TYPE. REFER TO PILE SCHEDULE ON S3.1 FOR SIZE AND REINFORCEMENT. REFER TO DETAIL 3/S4.1 FOR PILE ELEVATION.
- NOTIFY THE STRUCTURAL ENGINEER AND THE GEOTECHNICAL ENGINEER
  IF OBSTRUCTIONS ARE ENCOUNTERED DURING THE DRILLING PROCESS.
  ALL FINAL PILE LOCATIONS SHALL BE PROVIDED TO THE STRUCTURAL
  ENGINEER FOR REVIEW.
- 3. PILES THAT DO NOT MEET THE ACCEPTANCE CRITERIA OF THE GEOTECHNICAL ENGINEER SHALL BE REPLACED WITH A PAIR OF PILES, ORIENTED SO THAT THEY ARE ORTHOGONAL TO AND CENTERED ON THE ORIGINAL PILE LOCATION. ABANDONED HOLES SHALL BE FILLED WITH GROUT UP TO THE BOTTOM OF GRADE BEAM OR BOTTOM OF SLAB ELEVATION. THE CONTRACTOR SHALL WAIT A MINIMUM OF 24 HOURS BEFORE DRILLING AT NEW PILE LOCATIONS.
- 4. INDICATES 7" STRUCTURAL SLAB W/ #5 BARS @ 10" OC IN DIRECTION OF SPAN. REINF SHALL BE CENTERED IN SLAB.

  SX PROVIDE #4 @ 12" OC TEMPERATURE STEEL PERPENDICULAR TO SLAB SPAN. SLAB SHALL BE POURED OVER A 10 MIL VAPOR BARRIER OVER 4" OF 5/8" CLEAN CRUSHED ROCK OR PEA GRAVEL.
- 5. REFER TO SHEET S4.1 AND S4.2 FOR FOUNDATION DETAILS.
- PLACE ALL REINFORCEMENT PER THE STRUCTURAL NOTES AND FOUNDATION DETAILS. REFER TO SHEET S1.1 FOR ADDITIONAL CONCRETE DETAILING REQUIREMENTS.
- 7. FOUNDATION LEVEL HOLDOWNS ARE SHOWN ON MAIN AND UPPER FLOOR FRAMING PLAN. REFER TO HOLDOWN SCHEDULE ON SHEET S3.1 FOR HOLDOWN TYPES AND MAIN AND UPPER FLOOR FRAMING PLAN FOR HOLDOWN ANCHOR BOLT LOCATIONS.
- 8. REFER TO MAIN AND UPPER FLOOR FRAMING PLAN AND SHEAR WALL SCHEDULE ON SHEET S3.1 FOR LOCATION OF SHEAR WALL ANCHOR BOLTS. ANCHORAGE AT NON-SHEAR WALLS SHALL BE PER STRUCTURAL NOTES
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS, WALL LOCATIONS, AND CONCRETE ROUGH OPENINGS WITH ARCHITECTURAL DRAWINGS AND NOTIFY ALL PARTIES OF ANY DISCREPANCIES.
- REFER TO DETAIL 3/S4.2 FOR PIPE PENETRATIONS THROUGH CONCRETE WALL OR FOOTINGS.
- 11. CONTRACTOR SHALL PROVIDE FOOTING AND SLAB SUBSTRATE PREPARATION, WATERPROOFING, AND BACKFILL & DRAINAGE BEHIND RETAINING WALLS PER GEOTECHNICAL REPORT. GEOTECHNICAL ENGINEER SHALL OBSERVE EXCAVATED SOIL CONDITIONS DURING CONSTRUCTION (AND GROUNDWATER CONDITIONS) AS REQUIRED, AND PROVIDE ADDITIONAL RECOMMENDATIONS IF NECESSARY BASED ON ACTUAL SITE CONDITIONS.
- 12. THE STRUCTURAL ENGINEER SHALL BE CONTACTED PRIOR TO PLACING THE STRUCTURAL SLAB. THIS SLAB SHALL BE PLACED IN DRY WEATHER OR SHALL MEET THE PROVISIONS OF ASTM E-1643 FOR INSTALLATION GUIDELINES FOR USE OF PROTECTION/BLOTTER MATERIAL ABOVE VAPOR BARRIER. MINIMUM VAPOR BARRIER SHALL BE 10 MILS (STEGO WRAP 877-464-7834)
- 13. AT CONCRETE WALLS EXPOSED TO EARTH ABOVE SLAB ELEVATION PROVIDE WATERPROOFING SYSTEM AS FOLLOWS:

  CCW BARRICOAT-S OR R AT 90 WET MILS/60 DRY MILS BY CARLISLE OR ARCHITECT APPROVED EQUAL APPLY MIRA DRAIN 6000 DRAINAGE COMPOSITE OVER SYSTEM.
- 14. PROVIDE 5" THICK CONC SLAB W/ #5 @ 12" OC IN SPAN DIRECTION AND #4 @ 18" OC TEMPERATURE STEEL. DRILL AND EPOXY LAPPED DOWELS TO MATCH SLAB REINF. W/ HILTI HIY HY-200 AND 3" EMBED TYP ALL SIDES

### FLAG NOTES:

- INDICATES 4"Ø PVC TIGHTLINE DRAINAGE SYSTEM CONNECTING SHORING WALL DRAINAGE SYSTEM TO TIE INTO DRAINAGE STUB AT NW CORNER OF BUILDING SEE CIVIL PLANS.
- INDICATES UNDERSLAB DRAINAGE SYSTEM CONSISTING OF 4"Ø PVC PERFORATED PIPE WRAPPED IN MIRAFI 140N OR SUPAC 4NP & IN A 12" x 12" PEA GRAVEL TRENCH SLOPE TO EXTERIOR POINT OF CONNECTION.
- PROVIDE MIRA DRAIN 6000 DRAINAGE MATTING NEAR BOTTOM OF GRADE BEAM & BELOW SLAB ELEVATION SLOPE TO TIE INTO EXTERIOR POINT OF CONNECTION.
- AT WALL RETAINING OVER 4'-0" OF SOIL (BUT NO GREATER THAN 6'-0") PROVIDE #5 VERTICAL BARS @ 12" OC, CENTERED IN WALL. WALLS SHALL RETAIN NO MORE THAN 6'-0" OF SOIL.





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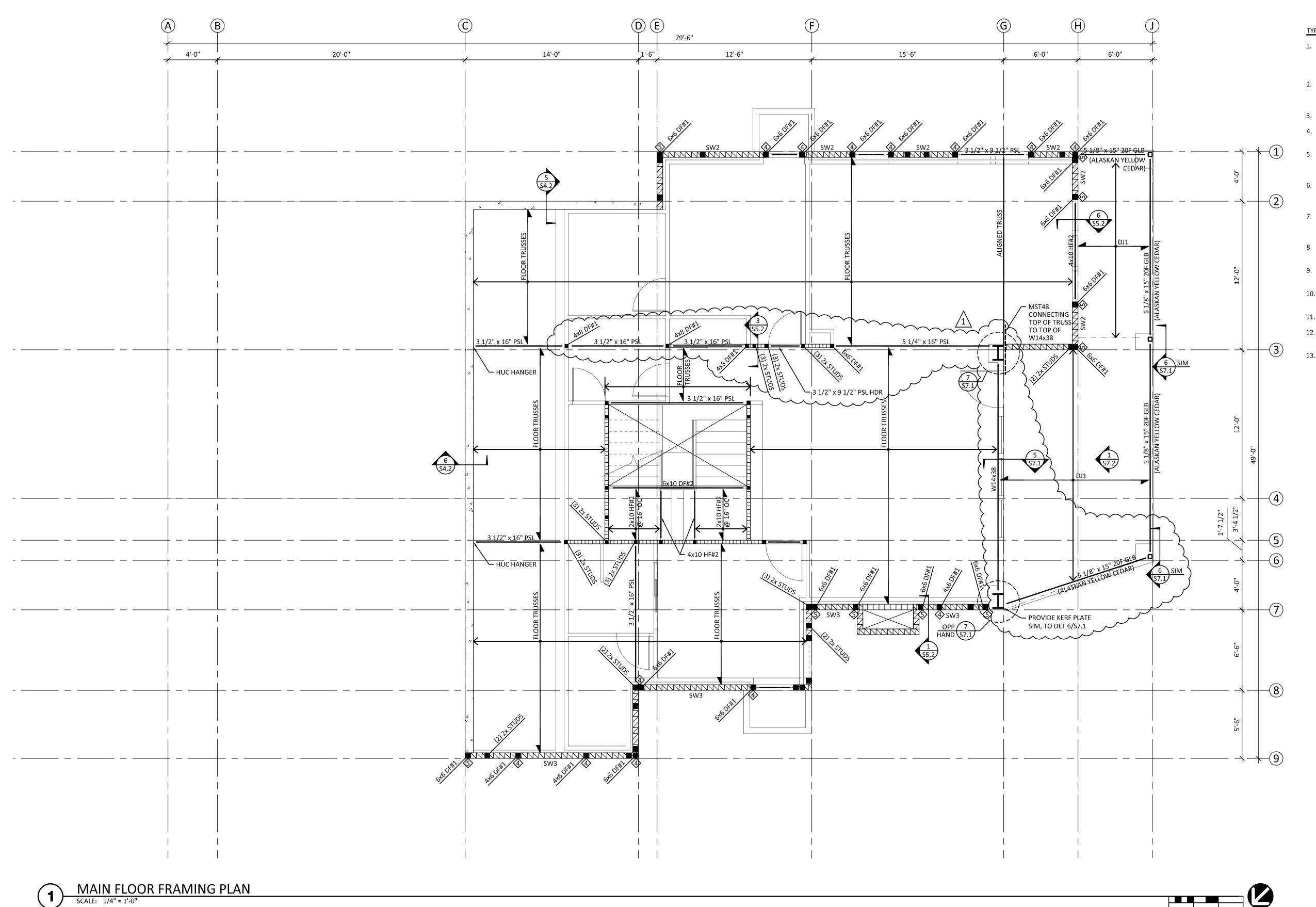
JOB NO:

DATE:

RUDOLF RESIDENCE 8253 W MERCER WAY MERCER ISLAND, WA 98040

SHEET:

S21



### TYPICAL FLOOR FRAMING PLAN NOTES:

- FLOOR SHEATHING SHALL BE 3/4" PI 40/20 W/ 10d COMMON NAILS SPACED AT 6" OC AT ALL DIAPHRAGM BOUNDARIES, PANEL EDGES AND SHEAR WALLS AND 10" OC AT INTERMEDIATE FRAMING. FOR SHEATHING LAYOUT AND NAILING REFER TO DETAIL 2/S5.1
- 2. COLUMNS AND BEARING WALLS SHOWN ON PLANS SHALL BE CONTINUED DOWN TO THE FOUNDATION UNLESS CARRIED BY A BEAM BELOW
- 3. REFER TO SHEET S5.1 THRU S6.1 FOR TYPICAL FLOOR FRAMING DETAILS.
- 4. INDICATES COLUMN BELOW AND BEAM SHALL BE CONTINUED OVER COLUMN, TYP.
- CONTRACTOR SHALL HAVE THE OPTION TO DRILL A 1 1/2"Ø HOLE CENTERED IN THE DEPTH AND AT THE THIRD POINT OF THE SPAN FOR ALL WOOD FLUSH BEAMS SHOWN ON THE PLAN.
- 6. WALLS SHOWN ON THE FRAMING PLANS ARE WALLS BELOW THE FRAMING LEVELS INDICATED. HOLDOWNS SHALL BE PLACED AT THE BASE OF THE WALLS SHOWN.
- 7. TYPICAL HEADERS AT BEARING LOCATION SHALL BE 4x6 HF#2 UNO SUPPORTED BY A MINIMUM OF (1) CRIPPLE STUD AND (1) FULL HEIGHT STUD.
- 8. COLUMNS NOT OTHERWISE SHOWN OR CALLED OUT ON PLAN SHALL BE (2) 2x STUDS.
- UNLESS NOTED OTHERWISE ALL STUDS SHALL BE HF STUD GRADE AND SPACED AT 16" OC.
- 10. UNLESS NOTED OTHERWISE, ALL BEAM-TO-BEAM CONNECTIONS SHALL BE SIMPSON HU SERIES FACE MOUNT HANGERS W/ MAX NAILING.
- 11. ALL EXTERIOR GLU LAM BEAM DECK MEMBERS 20F CEDAR.
- 12. FLOOR TRUSSES SHALL BE PRE-ENGINEERED BY OTHERS & SPACED @ 16" OC, TYP
- 13. DRAG TRUSS ON GRID G FROM GRIDS 1-3 SHALL BE NAILED TO FLOOR DIAPHRAGM @ 4" OC TRUSS MANUFACTURE TO ACCOUNT FOR MST STRAP @ TOP CHORD.





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RAMING PLAN

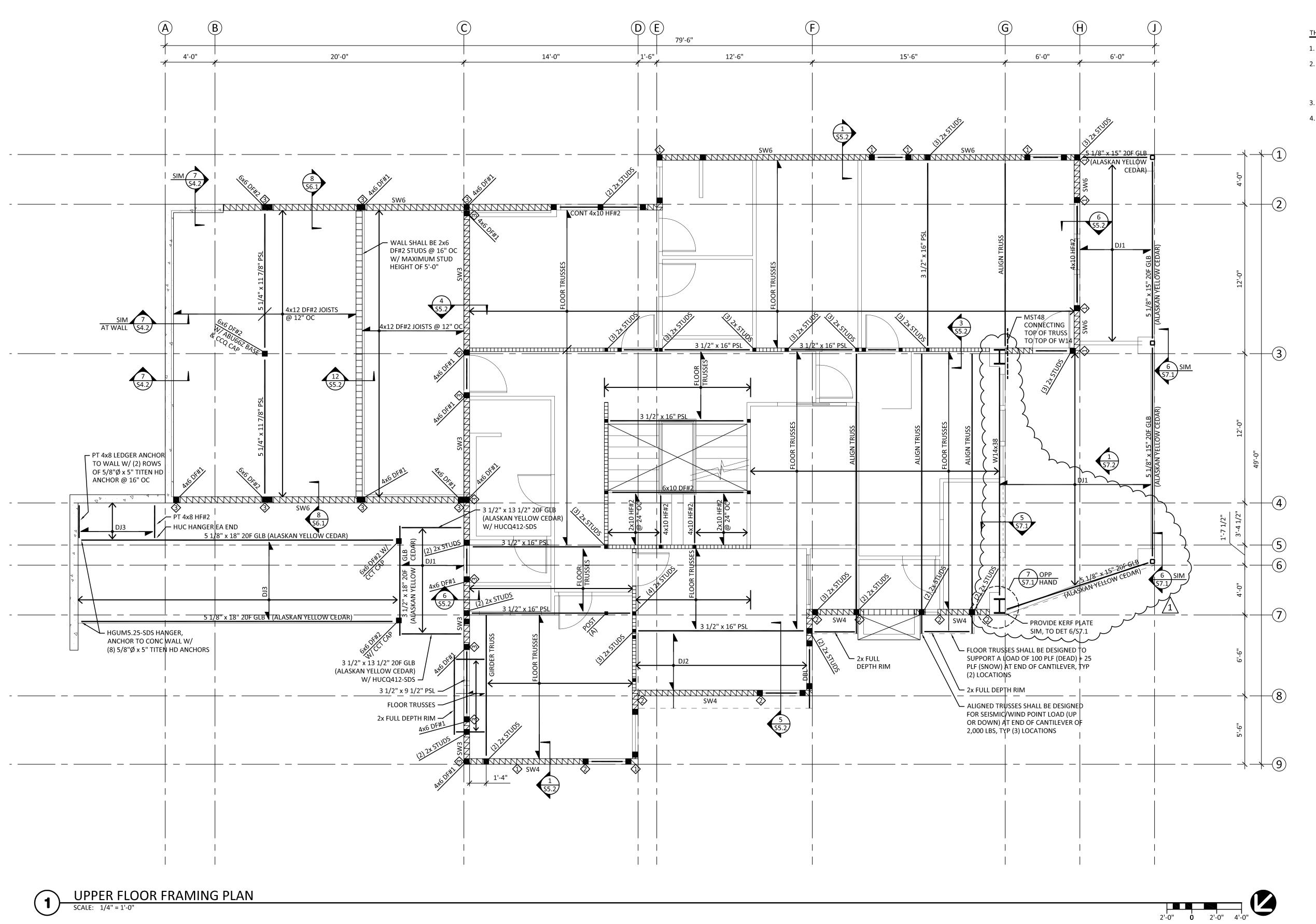
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W MERCER WAY R ISLAND, WA 9804

SHEET.

S2.2



### THIS FLOOR FRAMING PLAN NOTES:

- 1. REFER TO S2.2 FOR TYPICAL FLOOR FRAMING PLAN NOTES
- GARAGE FLOOR SHALL BE 3 1/2" CONCRETE TOPPING SLAB OVER 1 1/8"
  T&G DECKING. CONCRETE SHALL BE REINF W/ #3 @ 18" OC EA WAY.
  FLOOR DECKING SHALL HAVE 16d NAILS @ 6" OC AT ALL PANEL EDGES &
  DIAPHRAGM BOUNDARIES & 10"OC AT INTERMEDIATE FRAMING.
- 3. THE DECK GLU LAM BEAMS ARE CEDAR & WEATHER RESISTANT.
- DRAG TRUSS ON GRID G FROM GRIDS 1-3 SHALL BE NAILED TO FLOOR DIAPHRAGM @ 4" OC TRUSS MANUFACTURE TO ACCOUNT FOR MST STRAP @ TOP CHORD.





DESCRIPTION	PERMIT SUBMITTAL	COMMENT RESPONSE							
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MARK									
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JOB NO:

RAMING PLAN

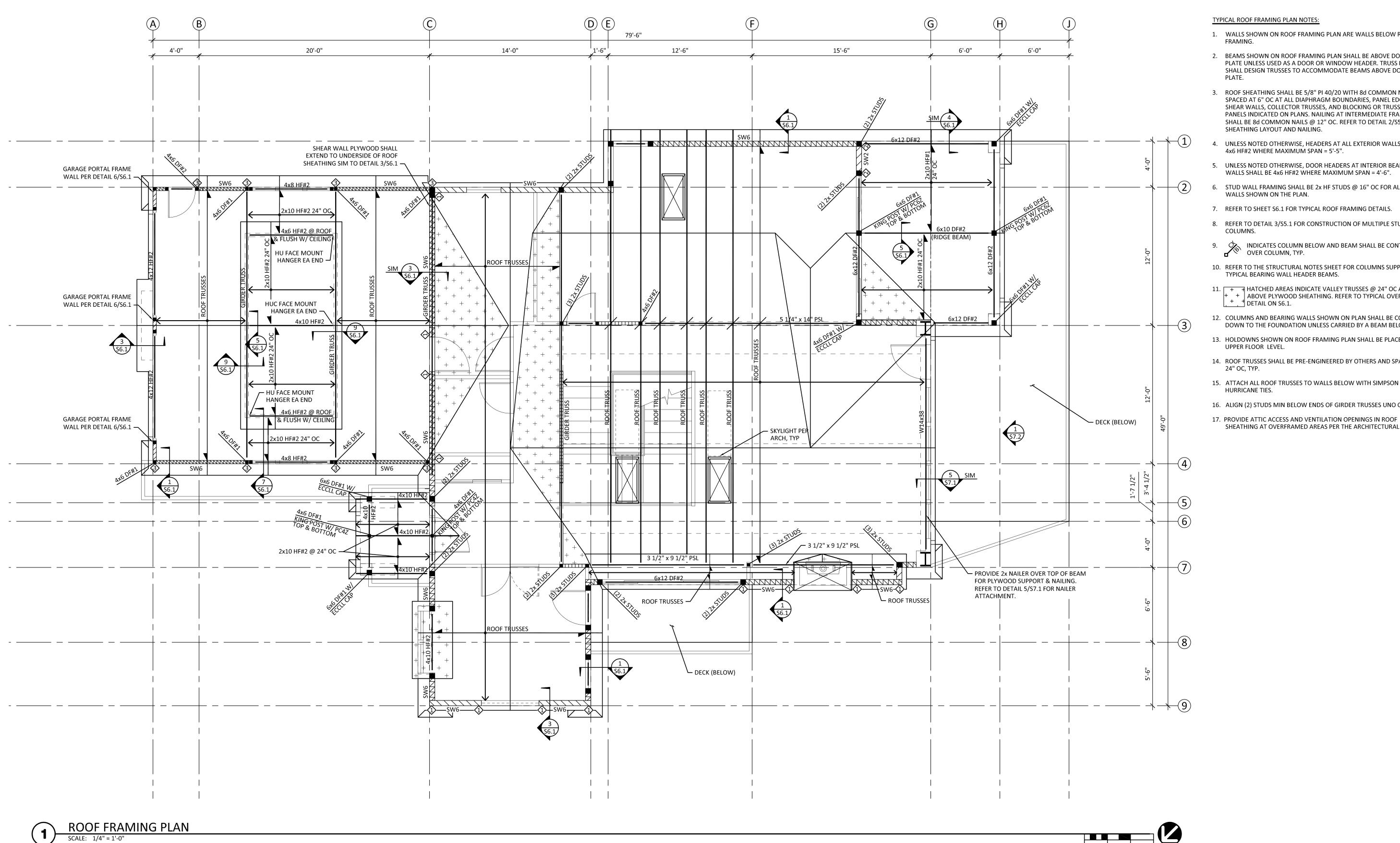
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05/11/18

RUDOLF RESIDENCE 8253 W MERCER WAY MERCER ISLAND, WA 98040

SHEET:

S2.3



### TYPICAL ROOF FRAMING PLAN NOTES:

- 1. WALLS SHOWN ON ROOF FRAMING PLAN ARE WALLS BELOW ROOF
- 2. BEAMS SHOWN ON ROOF FRAMING PLAN SHALL BE ABOVE DOUBLE TOP PLATE UNLESS USED AS A DOOR OR WINDOW HEADER. TRUSS MFR SHALL DESIGN TRUSSES TO ACCOMMODATE BEAMS ABOVE DOUBLE TOP
- 3. ROOF SHEATHING SHALL BE 5/8" PI 40/20 WITH 8d COMMON NAILS SPACED AT 6" OC AT ALL DIAPHRAGM BOUNDARIES, PANEL EDGES, SHEAR WALLS, COLLECTOR TRUSSES, AND BLOCKING OR TRUSS BLOCKING PANELS INDICATED ON PLANS. NAILING AT INTERMEDIATE FRAMING SHALL BE 8d COMMON NAILS @ 12" OC. REFER TO DETAIL 2/S5.1 FOR SHEATHING LAYOUT AND NAILING.
- 4. UNLESS NOTED OTHERWISE, HEADERS AT ALL EXTERIOR WALLS SHALL BE 4x6 HF#2 WHERE MAXIMUM SPAN = 5'-5".
- 5. UNLESS NOTED OTHERWISE, DOOR HEADERS AT INTERIOR BEARING WALLS SHALL BE 4x6 HF#2 WHERE MAXIMUM SPAN = 4'-6''.
- 6. STUD WALL FRAMING SHALL BE 2x HF STUDS @ 16" OC FOR ALL STUD WALLS SHOWN ON THE PLAN.
- 7. REFER TO SHEET S6.1 FOR TYPICAL ROOF FRAMING DETAILS.
- 8. REFER TO DETAIL 3/S5.1 FOR CONSTRUCTION OF MULTIPLE STUD COLUMNS.
- 9. INDICATES COLUMN BELOW AND BEAM SHALL BE CONTINUED OVER COLUMN, TYP.
- 10. REFER TO THE STRUCTURAL NOTES SHEET FOR COLUMNS SUPPORTING TYPICAL BEARING WALL HEADER BEAMS.
- 11. + + HATCHED AREAS INDICATE VALLEY TRUSSES @ 24" OC APPLIED + ABOVE PLYWOOD SHEATHING. REFER TO TYPICAL OVERFRAMING \_\_\_\_\_\_\_\_\_ DETAIL ON S6.1.
- 12. COLUMNS AND BEARING WALLS SHOWN ON PLAN SHALL BE CONTINUED DOWN TO THE FOUNDATION UNLESS CARRIED BY A BEAM BELOW.
- 13. HOLDOWNS SHOWN ON ROOF FRAMING PLAN SHALL BE PLACED ON UPPER FLOOR LEVEL.
- 14. ROOF TRUSSES SHALL BE PRE-ENGINEERED BY OTHERS AND SPACED AT 24" OC, TYP.
- 15. ATTACH ALL ROOF TRUSSES TO WALLS BELOW WITH SIMPSON H2.5 HURRICANE TIES.
- 16. ALIGN (2) STUDS MIN BELOW ENDS OF GIRDER TRUSSES UNO ON PLANS.
- SHEATHING AT OVERFRAMED AREAS PER THE ARCHITECTURAL DWGS.





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**S2.4** 

	CONCRETE PILE SCHEDULE											
MARK	PILE SIZE	PILE REINFORCING	TIES / SPIRALS	LAYOUT	PILE LATERAL CAPACITY							
P1	16"Ø	(6) #6	#3 SPIRAL W/ 3" PITCH (3) TURNS AT TOP & BOT OF CAGE	$\bigcirc$	5 KIPS							

	BEAM AND GIRDER SCHEDULE												
	SI	ZE			STIRRUPS								
MARK	W	D	воттом	ТОР	NO SIZE	SPACING FROM FACE OF SUPPORT							
GB1	22	18	(4) #6	(4) #6	#3	(1) @ 2", BALANCE @ 7" OC							
NOTE	ı												

REFER TO DET 4 & 8/S4.1 FOR PLACEMENT OF REINF.

	SHEAR WALL SCHEDULE												
ТҮРЕ	APA-RATED SHEATHING	MIN FRAMING AT ADJOINING PANEL EDGES (SEE NOTE 5)	SHEAR WALL NAILING AT PANEL EDGES	RIM JOIST OR BLOCK CONN TO TOP PLATE	SILL PLATE NAILING TO RIM/BLKG BELOW	SILL PLATE ANCHOR BOLT TO SLAB OR FOUNDATION	FOUNDATION SILL PLATE SIZE	SHEAR CAPACITY (PLF)					
SW6	15/32" ONE SIDE	2x STUD AND BLKG	0.131"Ø x 2 1/2" @ 6" OC	LTP4 OR A35 @ 24" OC	0.131"Ø x 3 1/4" @ 6" OC	5/8"Ø AB @ 5'-0" OC	2x	242					
SW4	15/32" ONE SIDE	2x STUD AND BLKG	0.131"Ø x 2 1/2" @ 4" OC	LTP4 OR A35 @ 20" OC	0.131"Ø x 3 1/4" @ 4" OC	5/8"Ø AB @ 4'-0" OC	2x	350					
SW3	15/32" ONE SIDE	(2) 2x STUD AND 2x FLAT BLKG	0.131"Ø x 2 1/2" @ 3" OC	LTP4 OR A35 @ 15" OC	0.131"Ø x 3 1/4" @ 3" OC	5/8"Ø AB @ 3'-0" OC	2x	455					
SW2	15/32" ONE SIDE	3x STUD AND 2x FLAT BLKG	0.131"Ø x 2 1/2" @ 2" OC	LTP4 OR A35 @ 12" OC	0.131"Ø x 3 1/4" @ 2.5" OC	5/8"Ø AB @ 2'-6" OC	2x	595					
2SW4	15/32" BOTH SIDES	(2) 2x STUD AND BLKG	0.131"Ø x 2 1/2" @ 4" OC	LTP4 OR A35 @ 10" OC	0.131"Ø x 3 1/4" @ 2" OC	5/8"Ø AB @ 2'-0" OC	2x	706					
2SW3	15/32" BOTH SIDES	(2) 2x STUD AND BLKG	0.131"Ø x 2 1/2" @ 3" OC	LTP4 OR A35 @ 7.5" OC	0.131 x 3 1/4" @ 1.5" OC	5/8"Ø AB @ 1'-6" OC	2x	910					
2SW2	15/32" BOTH SIDES	3x STUD AND BLKG	0.131"Ø x 2 1/2" @ 2" OC	LTP4 OR A35 @ 6" OC	0.131 x 3 1/4" @ 1.5" OC	5/8"Ø AB @ 1'-0" OC	2x	1190					

NOTES:

1. REFER TO THE TYPICAL SHEAR WALL DETAIL.

2. THE VALUES IN THIS TABLE ARE APPROPRIATE FOR HF GRADE STUDS AND HF GRADE PLATES & RIM/BLOCKING. 3. NAILS AT ADJOINING PANEL EDGES SHALL BE STAGGERED EACH SIDE OF THE COMMON JOINT.

4. WHERE PANELS ARE APPLIED ON BOTH FACES OF A WALL, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS, OR FRAMING SHALL BE 3x AT ADJOINING PANEL EDGES AND NAILS SHALL BE STAGGERED.

5. WHERE TABLE SPECIFIES (2) 2x FRAMING, CONNECT (2) 2x STUDS AND BLOCKING AS FOLLOWS: SW3 = (2) 0.131"Ø @ 3.5" OC, 2SW4 = 0.131"Ø @ 2.5" OC, 2SW3 = (2) 0.131"Ø @ 1.5" OC.

6. NOTE THAT 3x FRAMING MAY BE USED IN LIEU OF (2) 2x FRAMING SPECIFIED IN TABLE.

7. INTERMEDIATE FRAMING TO BE WITH 2x MINIMUM MEMBERS. FIELD NAILING 12" OC MAXIMUM.

8. AT ALL 5/8"Ø SILL PLATE ANCHOR BOLTS, INSTALL 1/4" x 3" x 3" PLATE WASHERS. EDGE OF PLATE WASHER SHALL BE WITHIN 1/2" OF SHEATHED EDGE. FOR

DOUBLE SIDED SHEAR WALLS, USE WIDER PLATE WASHERS AS REQUIRED TO MEET THIS REQUIREMENT. 9. PROVIDE A MINIMUM OF 7" EMBEDMENT FOR AB INTO FOUNDATION OR STEM WALL.

10. 7/16" SHEATHING MAY BE USED IN PLACE OF 15/32" SHEATHING PROVIDED ALL STUDS ARE SPACED 16" OC OR PANELS ARE APPLIED WITH LONG DIMENSION ACROSS STUDS.

	HOLDOWN SCHEDULE										
MARK	TYPE	MIN CHORD SIZE	STUD NAILS OR BOLTS	ANCHOR BOLT (SEE NOTE 4)	CAPACITY (LB)						
<u>(1)</u>	MST48	(2) 2x	(17) 16d EA END	-	3,640						
2>	MST72	(2) 2x	(31) 16d EA END	-	6,475						
3>	HDU8	4x DF#2	(20) SDS 1/4" x 2 1/2" SCREWS	7/8"Ø	6,970						
4>	HDU11	6x DF#2	(30) SDS 1/4" x 2 1/2" SCREWS	1"Ø	9,535						
5>	HDU14	6x DF#2	(36) SDS 1/4" x 2 1/2" SCREWS	1"Ø	14,445						

NOTES:

1. REFER TO THE LATEST SIMPSON STRONG-TIE CATALOG FOR ADDITIONAL INSTALLATION REQUIREMENTS. 2. REFER TO DETAIL 7/S5.2 FOR INSTALLATION OF MST FLOOR TO FLOOR STRAPS. REFER TO DETAILS

8 & 9/S5.2 FOR CONNECTION OF STRAP TO BEAM BELOW.

3. INSTALL HD HOLDOWNS AT FOUNDATION WALLS OR THICKENED SLAB FOOTINGS PER DETAIL 4/S4.2.

4. AT ALL HOLDOWN CHORDS, PROVIDE PANEL EDGE NAILING PER SHEAR WALL SCHED.

JOIST SCHEDULE								
MARK	JOIST	SPACING	REMARKS					
DJ1	2x12 HF#2	16" OC	SEE NOTE 2 & 3					
DJ2	1 1/2" x 16" LSL	16" OC	SEE NOTE 1 & 2					
DJ3	2x8 HF#2	16" OC	SEE NOTE 2 & 3					

NOTES.

1. FOR JOIST HANGERS REFER TO THE LATEST SIMPSON STRONG-TIE CATALOG FOR ALL INSTALLATION REQUIREMENTS.

2. SOLID SAWN DECK JOISTS SHALL HANGER OFF THE WALL RIM USING LU SERIES FACE

3. ALL LUMBER EXPOSED TO WEATHER SHALL BE PRESSURE TREATED PER STRUCTURAL

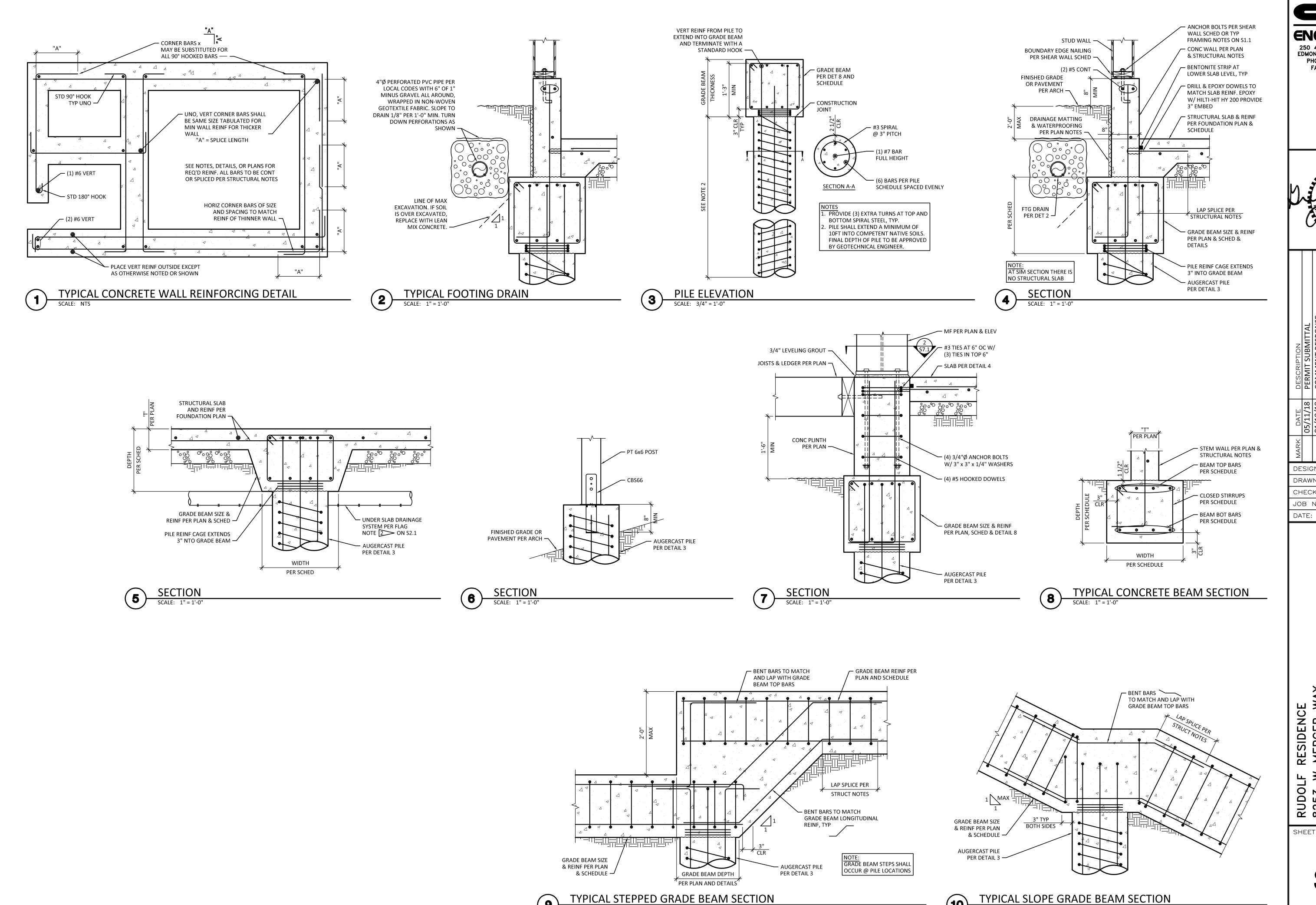




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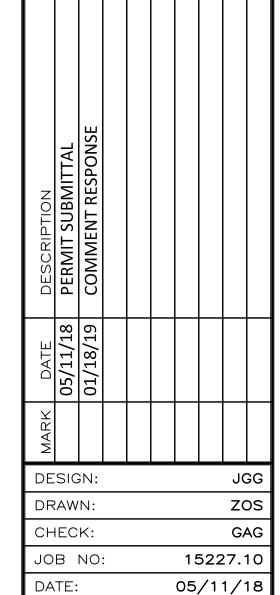
RUDOLF 8253 W MERCER

SCHEDULE



**ENGINEERING** 250 4TH AVE. S., SUITE 200 EDMONDS, WASHINGTON 98020 PHONE (425) 778-8500 FAX (425) 778-5536



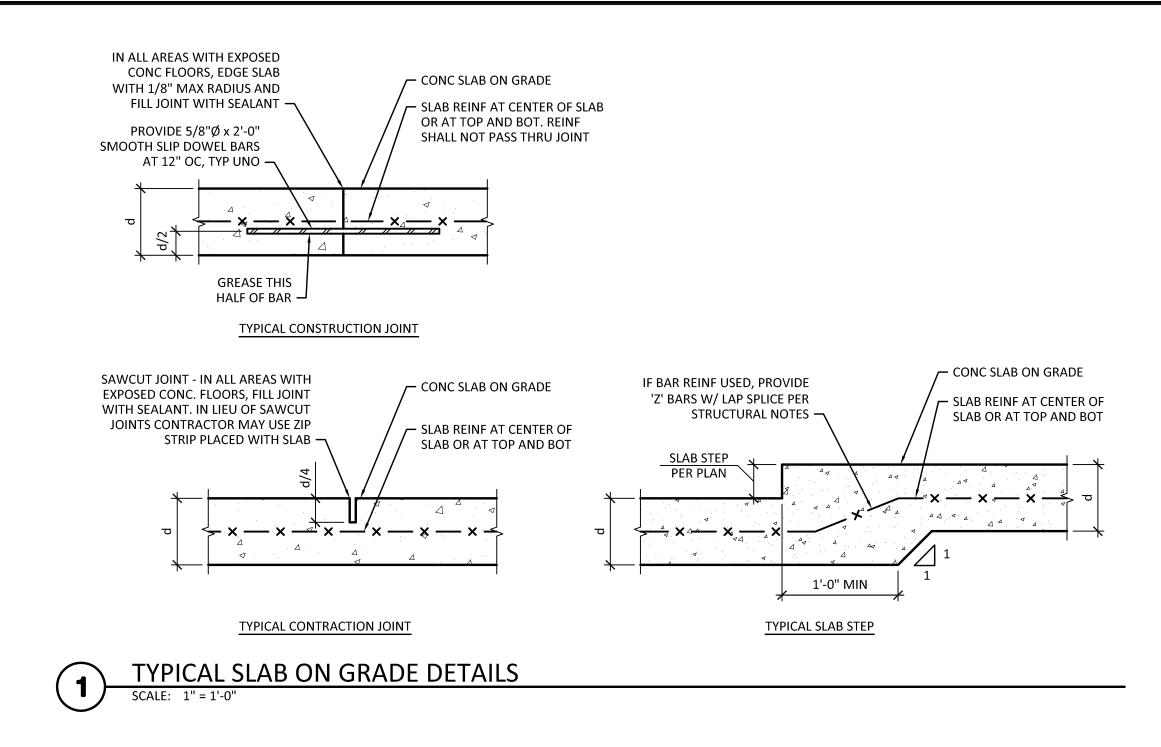


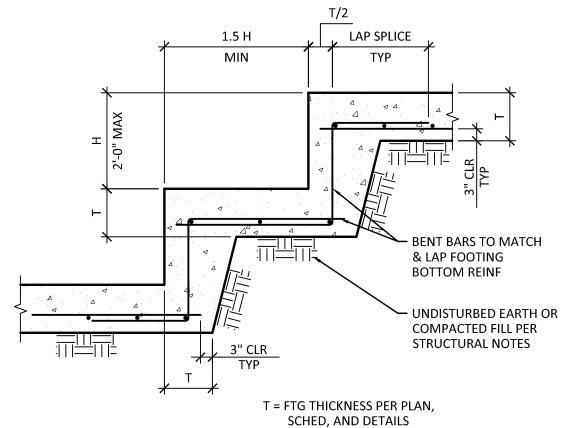
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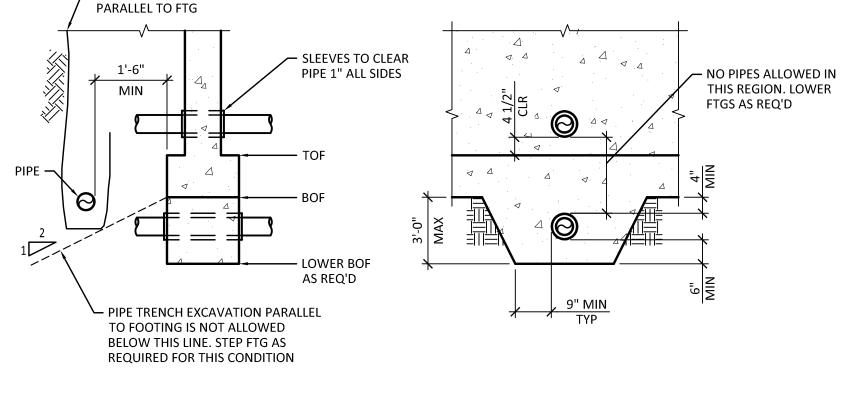
RUDOLF 8253 W MERCER

SHEET:

**S4.1** 







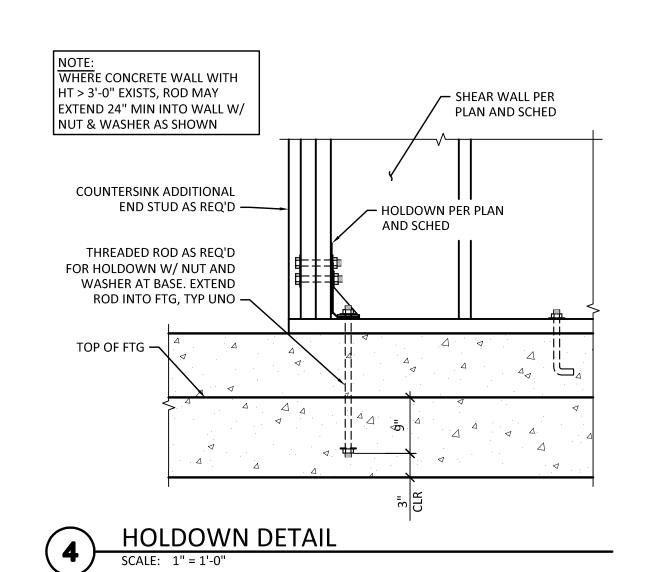
TYPICAL STEPPED WALL FOOTING

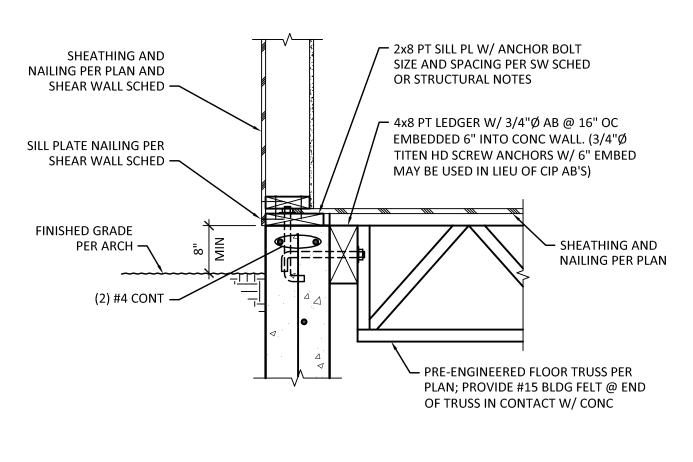
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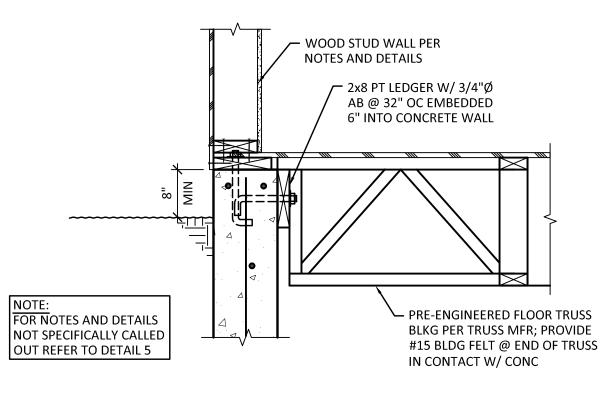
TYPICAL PIPE PENETRATION AT WALLS AND FOOTINGS

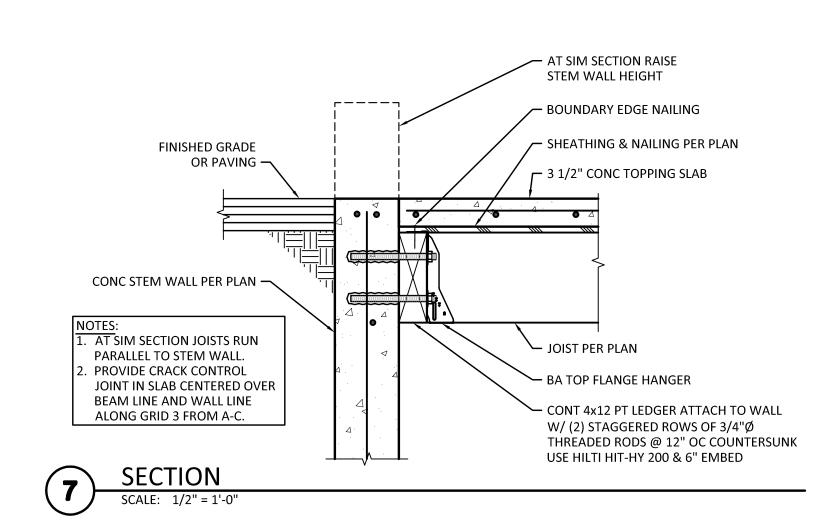
SCALE: 1/2" = 1'-0"

TRENCH EXCAVATION









SECTION

SCALE: 1" = 1'-0"

SCALE: 5 SCALE

SECTION

SCALE: 1" = 1'-0"

RUDOLF RESIDENCE 8253 W MERCER WAY MERCER ISLAND, WA 98040

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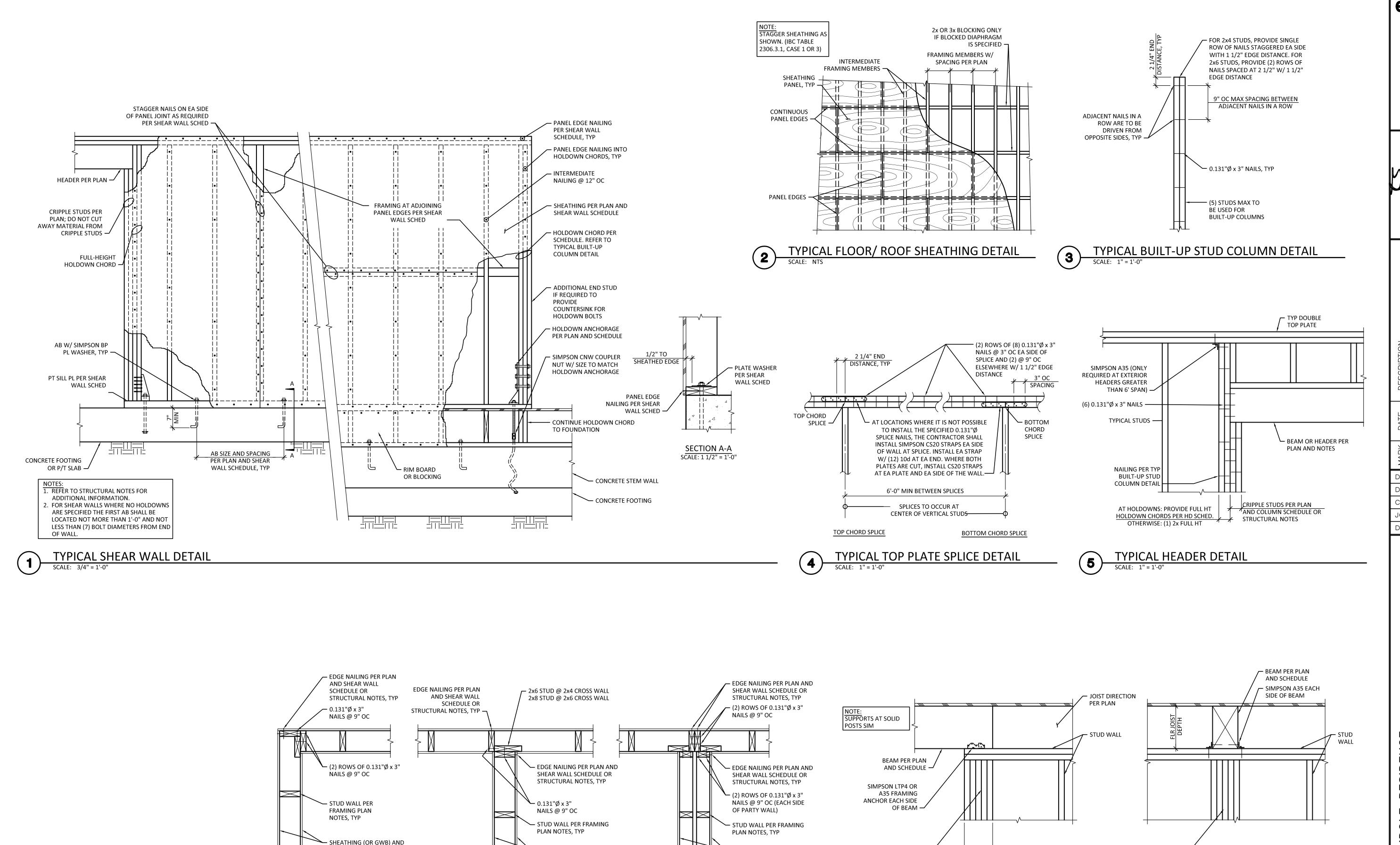
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SHEET:

S4.2



NAILING PER PLAN AND SHEAR

TYPICAL WALL INTERSECTION DETAIL

WALL SCHEDULE OR

A. CORNER INTERSECTION

STRUCTURAL NOTES, TYP

- SHEATHING (OR GWB) AND

WALL SCHEDULE OR

B. 'T' INTERSECTION

STRUCTURAL NOTES, TYP

NAILING PER PLAN AND SHEAR

SOLID OR MULTIPLE

BEAM WIDTH,

MIN UNO

PARALLEL TO STUD WALL

TYPICAL FLUSH BEAM SUPPORT DETAILS

STUD COLUMN PER PLAN —

- SHEATHING (OR GWB) AND

STRUCTURAL NOTES, TYP

WALL SCHEDULE OR

C. PARTY WALL INTERSECTION

NAILING PER PLAN AND SHEAR

SOLID OR MULTIPLE

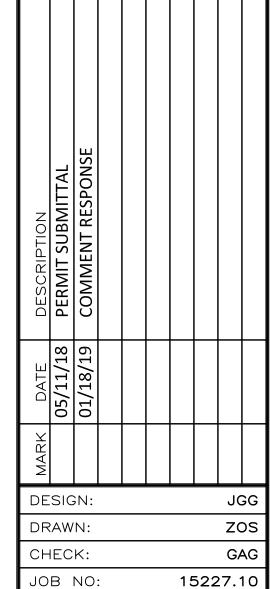
PERPENDICULAR TO STUD WALL

STUD COLUMN PER PLAN —

ENGINEERING

250 4TH AVE. S., SUITE 200
EDMONDS, WASHINGTON 98020
PHONE (425) 778-8500
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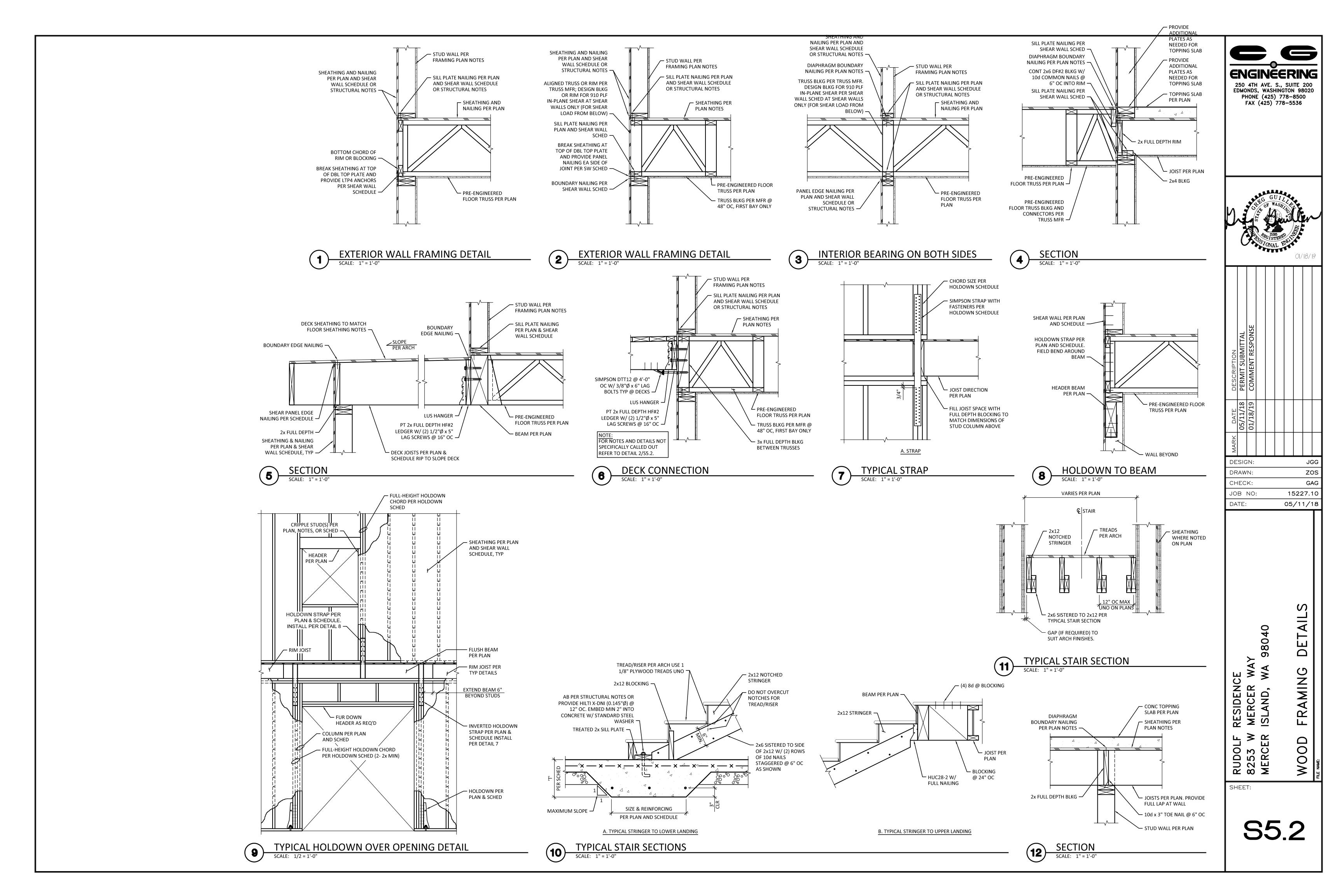
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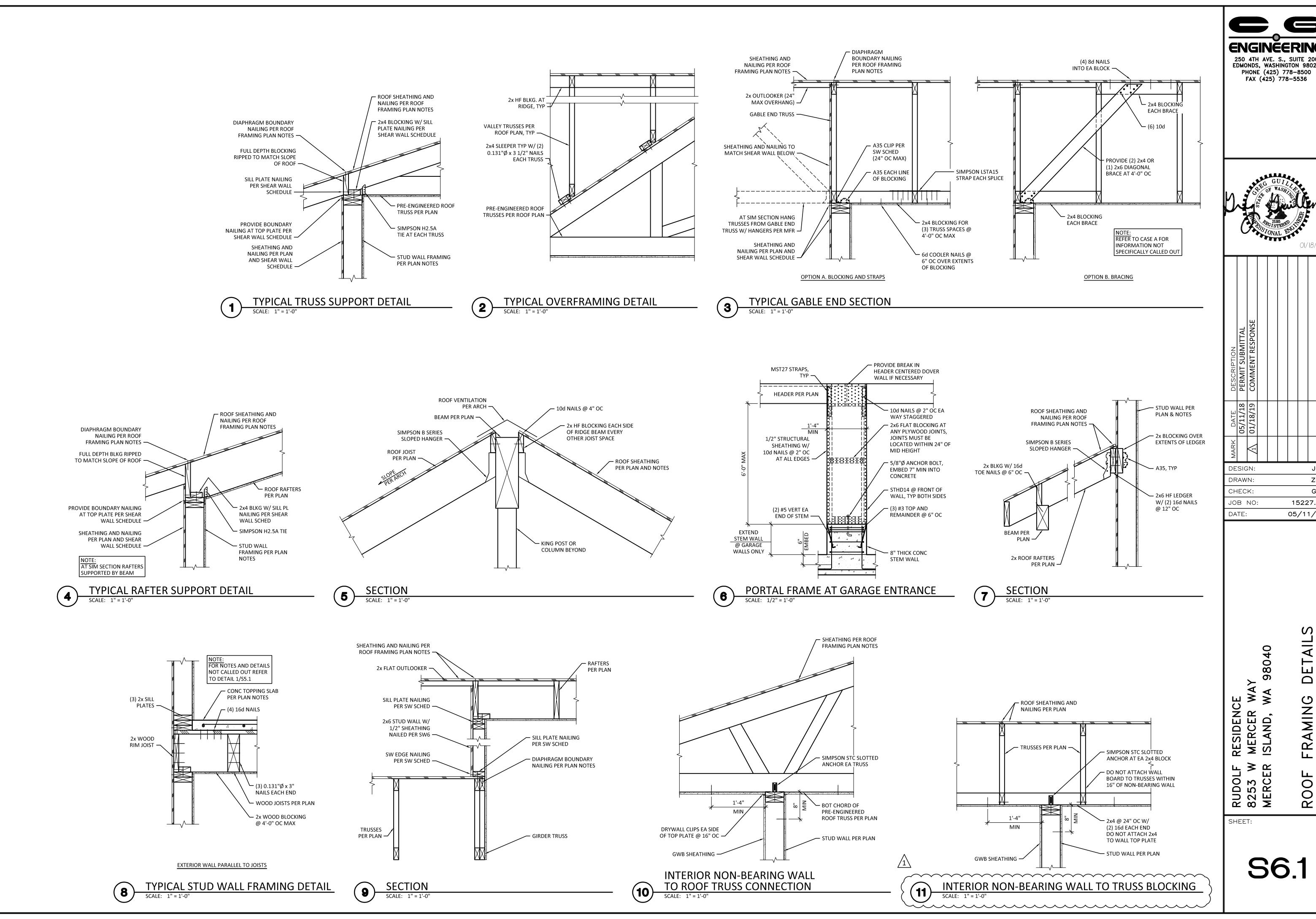
ISLAND, WA 98040
FRAMING DETAILS

RUDOLF RESIDENC 8253 W MERCER MERCER ISLAND,

SHEET:

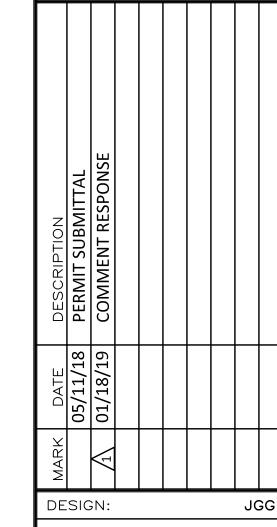
**S5.1** 



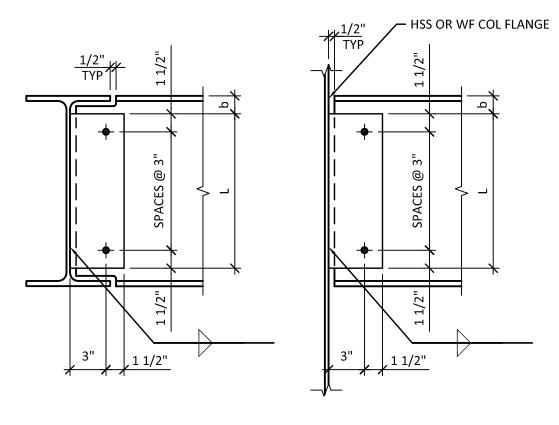


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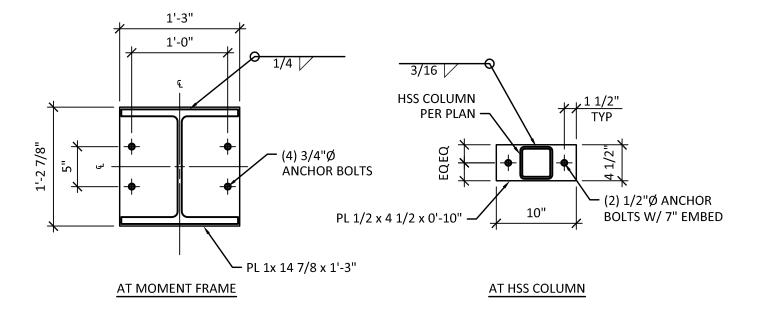


BEAM TO BEAM

BEAM TO COLUMN

BEAM SIZE	NO OF BOLTS	PL LENGTH (L)	PL THICKNESS	WELD SIZE	DIM (a)	DIM (b)
W10	(2) 7/8"Ø	6"	1/4"	1/4"	1 1/2"	1 1/2"
W14	(3) 7/8"Ø	9"	3/8"	5/16"	1 1/2"	1 1/2"
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TYPICAL SINGLE PLATE SHEAR CONNECTION TABLE



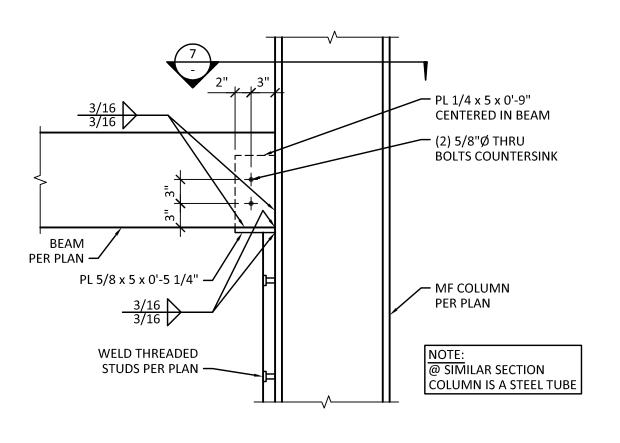
TYPICAL BASE PLATE DETAIL

SCALE: 1"-1'-0"

SCALE: 1 1/2" = 1'-0"

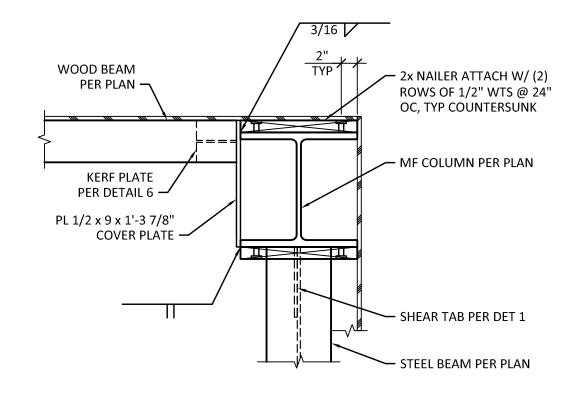
NOT USED

STUD WALL PER FRAMING PLAN NOTES — 2x CONT NAILER ATTACH FLOOR DIAPHRAGM TO BEAM W/ 5/8"Ø WTS BOUNDARY EDGE NAILING -@ 2'-0" OC DECKING PER ARCH -- SHEATHING & NAILING PER PLAN PT 2x12 LEDGER W/ (2) 1/2"Ø LAG - (4) 16d x 3 1/2" NAILS SCREWS @ 16" OC — – 1 3/4" x 11 7/8" LSL LUS HANGER -BLKG @ 4'-0" OC DECK JOIST WOOD FLOOR
TRUSS PER PLAN PER PLAN — SIMPSON DTT12 @ 4'-0" OC W/ 3/8"Ø x 6" LAG BOLTS TYP @ DECKS STEEL BEAM
PER PLAN NAILER, RIP TO FIT CONT WEB BLKG SECURE TO BEAM
W/ (2) ROWS OF 5/8"Ø THRU
BOLTS, STAGGERED @ 4'-0"OC NOTE: AT SIM SECTION GABLE END TRUSS NAILS DIRECTLY TO BEAM NAILER.



**6** KERF PLATE AT STEEL COLUMN

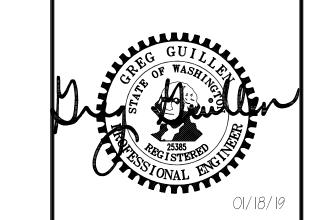
SCALE: 1" = 1'-0"



WOOD BEAM PERPENDICULAR TO MF COLUMN

SCALE: 1" = 1'-0"

250 4TH AVE. S., SUITE 200 EDMONDS, WASHINGTON 98020 PHONE (425) 778-8500 FAX (425) 778-5536

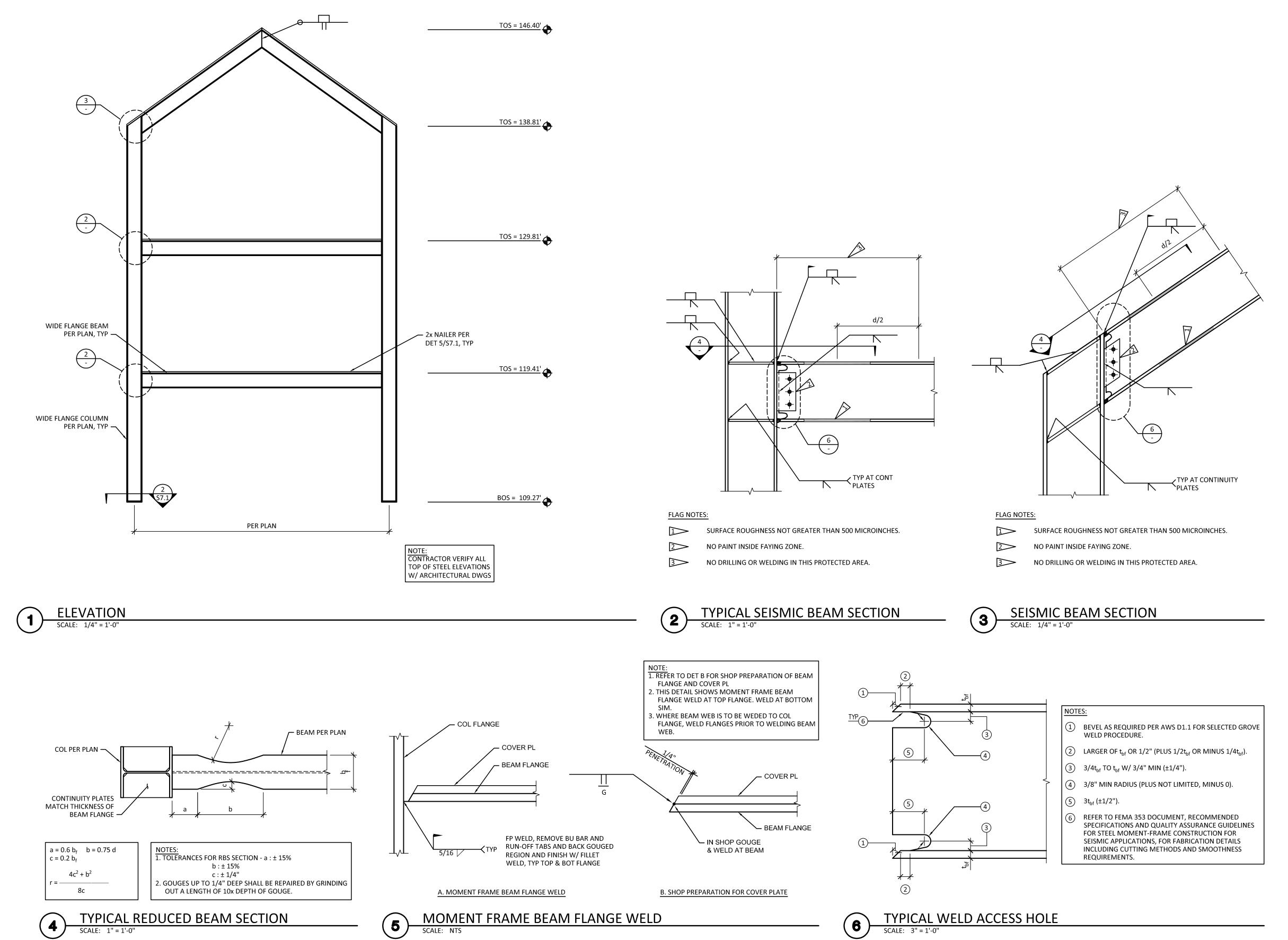


DESCRIPTION	PERMIT SUBMITTAL	COMMENT RESPONSE					
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RUDOLF RESIDENCE 8253 W MERCER WAY MERCER ISLAND, WA 98040 STEEL FRAMING DETAILS

SHEET:

**S7.1** 



ENGINEERING

250 4TH AVE. S., SUITE 200
EDMONDS, WASHINGTON 98020
PHONE (425) 778-8500
FAX (425) 778-5536



MARK DATE DESCRIPTION

O5/11/18 PERMIT SUBMITTAL

O1/18/19 COMMENT RESPONSE

COMMENT RESPONSE

DESIGN: JGG

DRAWN: ZOS

CHECK: GAG

JOB NO: 15227.10

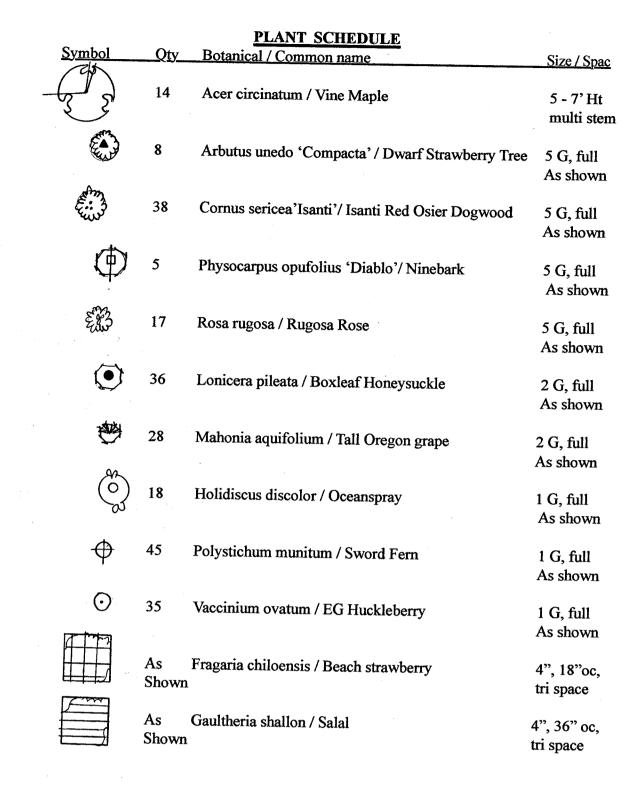
DATE: 05/11/18

D, WA 98040
MING DETAILS

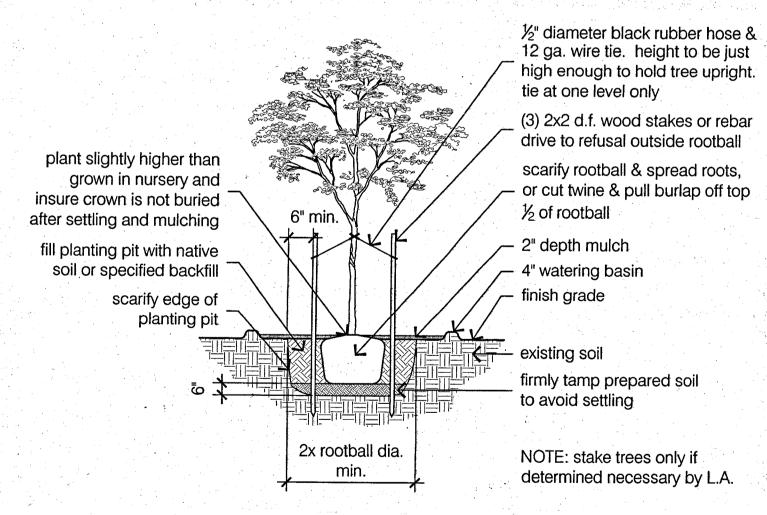
RUDOLF RESIDENCE 8253 W MERCER WAY MERCER ISLAND, WA 980

SHEET:

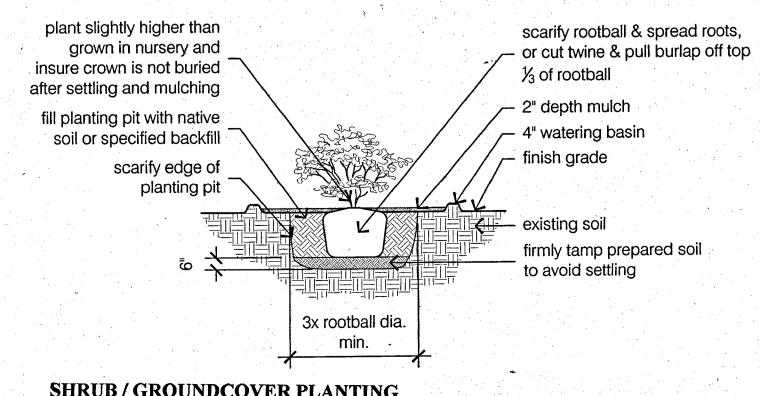
**S7.2** 



Mulch planting beds adjacent to residence with 3" dark bark. Mulch bare soil surfaces (up to moderate slopes) with 3" clean arborist wood chips.



### **DECIDUOUS TREE PLANTING**



SHRUB / GROUNDCOVER PLANTING

FRANCINE ME DAY CERTIFICATE NO 741

RUDOLF RESIDENCE 8253 W MERCER WAY MERCER ISLAND, WA 9

**GUARANTEE AND REPLACEMENT** 

Contractor shall replace, at no additional cost to Owner, any turf or plant materials damaged as a result of improper maintenance attention or procedures. Replacement material shall be of the same size and variety as the dead or damaged material. Replace plant material within two weeks of identification of damage. Alternatives to size, variety and scheduling of replacement only by written permission of Owner.

Contractor is not responsible for losses, repair or replacement of damaged work or plant material resulting from theft, extreme weather conditions, vandalism, vehicular incidents (other than Contractor's vehicles) or the acts of others over whom they have no reasonable control.

Contractor shall inform Owner on a monthly basis of plant losses not covered by warranty and unrelated to the maintenance activities. Provide Owner with the cause of the plant loss, and provide recommendations for replacement along with pricing for replacement.

CONTRACTOR STAFF TRAINING AND EXPERIENCE

Contractor will provide staff able to perform work at the highest standards of horticultural excellence. Key staff shall have current knowledge of best management practices (BMP's) regarding: safety, hazardous materials spill response, plant health, pruning, integrated pest management, pesticide application, and irrigation maintenance. Owner reserves the right to demand the replacement of Contractor's staff who do not meet the owner's standards for safety, professionalism, or horticultural knowledge.

All work shall be performed under the direct on-site supervision of a qualified landscape professional with a minimum of five years combined horticultural education and experience. Preference will be given to an individual with at least a two year horticultural degree or Certified Landscape Technician (CLT), combined with two years work experience, or greater.

All irrigation maintenance and repairs shall be performed by, or under the direct supervision of, a Certified Irrigation Technician (CIT) or Certified Irrigation Auditor.

All pesticide applications shall be performed by a Contractor (or sub-contractor) licensed and insured as a Washington State Commercial Applicator. In addition, the staff doing the pesticide application shall be licensed as Commercial Operators. License numbers will be provided to the Owner prior to award of contract.

All pruning will be performed by, or under the direct on-site supervision of, staff with documented education and training in proper and naturalistic pruning techniques. Pruning of trees greater than six inches DBH will only be performed by an ISA certified Arborist.

OWNER/CONTRACTOR COMMUNICATION

Contractor to provide a supervisor to act on Owner's behalf regarding all matters pertaining to the performance of the Landscape Service. Contractor must notify Owner when the supervisor will be on vacation or other leave of absence and who will serve as a substitute. Provide Owner with an emergency contact list identifying the names, positions held, and phone numbers of key maintenance personnel. Provide mobile and pager numbers for the landscape maintenance manager and site supervisor. Attend meetings and site inspections of the grounds as requested by Owner.

LANDSCAPE SERVICE SCHEDULING

Establish a schedule and Gantt (or equal to) chart for regular maintenance activities by area and submit to Owner for review. Contractor to review proposed schedules with Owner at the regularly scheduled meetings and adjust as necessary to avoid conflicts.

SCOPE OF WORK

GENERAL PRACTICE GUIDELINES FOR MATERIALS AND EXECUTION

This document is intended as a benchmark of the Owner's minimum standards for maintenance, repair and improvements. However, the Owner respects the Contractor as a professional and as such, will take under consideration, any and all recommendations made by the Contractor.

Contractor shall furnish all labor, equipment, and materials necessary to complete the maintenance of turf and plantings, as specified herein. It is the intent of the Owner that this site be maintained in a resource-efficient, sustainable, and cost-effective manner.

Maintenance shall consist of fertilization, soil building, pruning, mowing, irrigation, IPM, weed/insect/disease control, litter control and any other procedures consistent with good horticultural practice necessary to ensure normal, vigorous, and healthy growth of turf and landscape plantings.

When performing any work requiring subsurface excavation, Contractor shall take care to avoid tamage to existing utilities and vegetation. Contractor shall contact Utility Locate

Contractor is encouraged to use non-polluting devices like rakes and brooms when feasible. Owner prefers that blowers and other power equipment are low-decibel, low-fossil fuel consumption, and low-emissions models.

Contractor is encouraged to develop cultural practices which incorporate on-site recycling of organic materials, such as leaves and grass clippings, and the use of recycled materials in its maintenance operations.

MATERIALS AND EXECUTION - INTEGRATED PEST MANAGEMENT AND PESTICIDE APPLICATIONS

INTEGRATED PEST MANAGEMENT (IPM)

Owner strongly encourages environmentally sensitive maintenance practices. The principles of integrated pest management (IPM) shall be employed. The intent is to limit any pesticide (including herbicide) applications through healthy landscape management practices.

IPM is an approach to pest control that utilizes regular monitoring to determine if and when treatments are needed and employs physical, mechanical, cultural, biological, and educational tactics to keep pest numbers low enough to prevent unacceptable damage or annoyance. Additional treatments, such as pesticide applications, are made only when and where monitoring has indicated that the pest will cause unacceptable economic, medical, or aesthetic damage. Treatments are not made according to a predetermined schedule. Treatments are chosen and timed to be most effective and least-hazardous to non-target organisms and the general environment. (adapted from Bio-Integral Resource Center)

Contractor shall consider pesticide applications only as a last resort and only after other methods of control are proven ineffective.

NOXIOUS WEED CONTROL

Noxious Weed Control is mandated by the King County HYPERLINK "http://dnr.metrokc.gov/wis/lands/weeds/weed\_control\_board.htm" Noxious Weed Control Board HYPERLINK "http://dnr.metrokc.gov/wir/lands/weeds/photos/2006Crew.JPG" based on the state weed control law, Chapter 17.10 RCW. Assistance and weed lists (Class A, B, C, Non-designate, and Weeds of concern) are available from the King County Noxious Weed Control Program at HYPERLINK "http://dnr.metrokc.gov/wir/lands/weeds/" http://dnr.metrokc.gov/wir/lands/weeds/, or 206-296-0290.

Control will follow non-chemical IPM control techniques outlined in King County's Best Management Practices, Alerts, and other documents posted on the Noxious Weed website. Pesticide applications can only be considered as a last resort when non-chemical methods have proved ineffective. Follow the specifications listed in section 3.3 Pesticide Applications, above.

Non-designate and Weeds of concern shall be controlled with ongoing IPM and healthy landscape management techniques.

MATERIALS AND EXECUTION - TREES, SHRUBS, VINES, GROUNDCOVER MAINTENANCE

TREES, SHRUBS, VINES AND GROUNDCOVER FERTILIZATION

Fertilize plant materials as indicated below.

Trees, shrubs, including rhododendrons, vines and groundcovers: Fertilize in March or April with slow-release, "bridge" or natural-organic fertilizer. Use 1-2-2 nutrient ratio (N-P-K), or similar, per manufacturer's recommended rates (not to exceed 5-10-10).

Perennials: Fertilize in March and again in June with same fertilizer used above per manufacturer's recommended rates.

Ornamental grasses: Fertilize in October with turf fertilizer approved in turf section above. Fertilize per manufacturer's recommended rates.

TREES, SHRUBS, VINES AND GROUNDCOVER WEED, PEST AND DISEASE CONTROL

<u>Control of Weeds:</u> Use cultural methods (mulch, proper pruning, proper irrigation) to encourage plant health and growth and discourage weeds. Keep planter beds and tree wells free of weeds and debris on a rotational basis, throughout the year by hand pulling or other mechanical means.

Ground covers are to be trimmed so they meet but do not grow over walkways or outside any of the planters.

Use of contact herbicides may be considered during the growing season to control noxious and other difficult to control perennial weeds. A maximum of two applications annually are allowed and included in the work. Use health and environmental hazard information to choose most effective and least hazardous product. Use single active ingredient products only, no tank mixes are allowed.

Use of pre-emergent herbicides is not permitted without prior written approval of Owner on an incident by incident basis. Pre-emergent herbicides may only be used on sites with at least two years of plant establishment. Areas considered for pre-emergent use are limited to tree wells and mulch-only beds without groundcover. Standard maintenance practices called for in this contract must be documented in areas where pre-emergent use is being considered before approval for use will be given (hand weeding, edgings, mulch application, proper pruning) Pre-emergent herbicides are not allowed in planted shrub beds or graveled pedestrian walkways.

Control of Insects and Diseases: Apply insecticide or fungicide to trees, shrubs and ground covers only when significant plant damage would result from not addressing the infestation. Calendar-based spraying is not allowed. Base pesticide application decisions on monitoring for damage, specific pest identification, and proper timing. Control of major disease and insect infestations for trees, shrubs and ground covers is not a part of the contract work and is considered an Additional Service. Regularly monitor all plant material and immediately notify Owner of any need for such control. Contractor is responsible for any damage to plant material incurred as a result of failure to immediately notify Owner of correctable disease and/or insect problems, and Contractor must replace any such damaged plant material at no additional cost to

TREES, SHRUBS, VINES AND GROUNDCOVER PRUNING

Pruning must only be performed by trained personnel in accordance with accepted horticultural practices. Prune to enhance the natural growth and shape of plant materials and intended function of the planting. Plantings are designed to grow together and to the edges of the beds to minimize weed infestation and maximize water conservation. Shearing is only permitted for formal hedges. Prune back branches as needed when interfering with walks, buildings, signage, fire control utilities, site lighting, security/safety visibility, site lighting, and vehicular circulation. Prune dead and broken branches quarterly and more frequently as required.

Street trees shall be pruned to maintain adherence to City or County sight distance requirements, to maintain visibility of street name signs, protect trees from vehicle damage, and maintain pedestrian safety.

Prune clean and just outside the branch collar in accordance with accepted horticultural practices. Pruning must only be performed by trained personnel. Replace plant materials that are disfigured or damaged due to improper pruning at no additional cost to Owner.

Periodically inspect and adjust tree staking and guying to prevent damage to the cambium layer. Remove guys and stakes as soon as trees are established and self-supporting (generally two years or less).

Prune trees as required and appropriate in compliance with ANSI A300 (Part 1), "Tree, Shrub, and Other Woody Plant Maintenance—Standard Practices (Pruning)."

The Additional Services of an ISA-certified arborist are required for pruning on any trees larger than six inches DBH (diameter at breast height as measured at four and one-half feet about the existing grade at the base of the tree) and any branches larger than four inches in diameter. This is considered an additional service.

MATERIALS AND EXECUTION - GENERAL AREA MAINTENANCE

LEAF AND BRANCH REMOVAL

Keep walks, patios, planting beds, roadway gutters and lawn areas free of leaves and branches on a weekly basis throughout the year.

Leaves shall be mulch mowed or left in planting areas throughout winter, spring and summer when leaf fall is not excessive and plant health is not adversely affected. As much as possible, leaves can be blown or raked under the shrubs or groundcover and into the wood chip mulch.

In autumn leaf removal shall occur at each visit as needed to prevent smothering of turf and groundcovers and excessive clumping when mulch mowing. Owner's preference is that whenever safety and plant health are not compromised that leaves remain on-site and are incorporated into mulch under plantings. Remove leaves from site only as needed to maintain a neat appearance and the health of the planting.

Excessive branch and debris cleanup from storm damage is not included in the contract work and is considered an additional service at Owner's request.

LANDSCAPE DEBRIS REMOVAL

Remove biodegradable landscape debris (turf clippings (limited to only those times when mulch mowing is not possible), leaves, branches, annuals, dead plant material, etc.) to yard refuse recycling facility. Acceptable sites include topsoil producing facilities and/or other facilities, which utilize yard waste for landscape purposes. No biodegradable material should be disposed of as garbage, except noxious weed debris.

Remove and properly dispose of moss from curbs, stairs and walkways.

LANDSCAPE TRASH REMOVAL

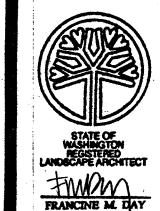
Remove all trash from landscaping beds, turf areas and parking lot to an approved trash container onsite on a weekly basis. For large amounts of trash, or if there is no approved trash container onsite, Contractor shall haul it away for appropriate disposal.

**MULCH REPLACEMENT** 

Once annually Contractor shall replenish mulch to maintain a depth of no less than two inches (2") in all planting areas. All tree wells to be re-mulched annually. Established beds where plant soliage or groundcover completely covers the soil surface require no additional mulch. Keep mulch at least two to three inches (2 – 3") away from the crown of plants and trees.

Mulch shall be medium or fine Hog Fuel wood chips, clean arborists wood chips, shredded leaves, coffee hulls, compost, etc.

"Red" bark mulch or dust shall not be used.



CENTIFICATE NO 741

ITANCINEMORA LANDSCAPE ARCHITECTURE 206.930.7493 WWW.francinemday.com A. Provide a fully automatic bidder designed irrigation system installed by a qualified, licensed Contractor.

1.02 Quality Assurance

A. Perform work in strict accordance with the applicable plumbing, electrical, and health codes.

B. Obtain and pay for all permits and approvals required by the local jurisdictional authorities for the full operation of the system. C. The work is subject to Landscape Architect tests and inspections as specified. Furnish written notice to the Landscape Architect 72 hours

minimum prior to the required test or inspection. D. Include a master valve on the incoming mainline at the backflow preventer location. Advise Landscape Architect if mainline pressure is insufficient to permit the additional pressure loss of a master valve.

1.03 System Coverage

A. Provide full coverage\* in all planted areas. Exercise professional judgement in selection, location, height, and angle of sprinkler heads. Select and locate heads to avoid erosion, spraying building, and excessively washing walks. Shrub and lawn zones, sprinkler heads with widely varied precipitation rates, and differing sun exposures are to be valved separately. (\*Full coverage is defined as head to head coverage with all plants and lawns receiving adequate water).

1.04 Guarantee

A. Guarantee system against defects of installation and material for a period of one (1) year after acceptance of sprinkler system. During guarantee period check, clear, and adjust sprinkler heads and otherwise insure adequate operation of system at maximum three (3) month intervals during the year.

1.05 Submittals

A. Plans - Two (2) sets of irrigation plans showing pipe and head layout, spray pattern, and equipment list.

B. Catalog Cuts - Manufacturer's descriptions of all proposed materials. C. Make submittals to Landscape Architect for review prior to construction. Approval of plans and materials by Landscape Architect does not change the Contractor's responsibility for providing full coverage in planting areas.

1.06 Substitutions

A. Substitutions to the equipment specified will be permitted only with the express written approval of the Landscape Architect and when the substituted item is equal or better in quality than the item originally specified. The final determination for equal rests with the Landscape Architect.

1.07 As-Built Drawings

A. Maintain a current record of all pipes and equipment placement and record any variations from the original design.

B. Dimension pipe and equipment in variance to plans to two permanent structures sufficient for location after burial. C. Submit a neat and legible as-built drawing of complete irrigation system upon completion of irrigation system and prior to releases of final payment. Provide reduced scale copy of plan, plastic encased, for attachment inside controller door.

2.00 Materials

2.01 Meter

A. Per local code.

2.02 Galvanized Pipe and Accessories

A. Pipe - Standard weight steel pipe, electrical resistance weld, ASTM Schedule 40.

B. Fittings - Malleable galvanized fittings.

C. Exterior Coatings - Primer and Matte Black Alkyd Oil Enamel for above grade pipe and fittings. 'Fields 125' bituminous coating for pipe and fittings below grade.

2.03 Plastic Pipe and Fittings

A. Pipe - Mainline: Schedule 40 PVC pipe, manufactured from a Type I, Grade I Polyvinyl Chloride (PVC) compound with a Cell Classification of 12454 per ASTM D1784. The pipe shall be manufactured in strict compliance to ASTM D1785 and D2665 (where applicable). Lateral lines: PVC 1120 or 1220, Class 200 conforming to U.S. Product Standard PS 22-70 and ASTM 2241, marked with manufacturer's name, class of pipe, NSF seal, and date and shift of manufacturing run. Provide uniform, smooth and glossy pipe with no evidence of interior or exterior extrusion marks. Pipe end pre-belled or straight to receive solvent-weld couplings.

2.04 Sprinkler Heads and Nozzles

A. Rainbird, Toro, Weathermatic, or approved equal.

2.05 Risers

A. Plastic bodies - 6" & 12" high pop-up Rainbird 1800 Series, or approved equal.

B. Brass bodies - Only if requested by Owner.

2.06 Automatic Valves

A. 24 volt, normally closed, provide with flow adjustment/shut-off handle and manual bleed cock.

B. Brass, or plastic. Weathermatic 8200CR or 11000CR, or approved equal.

2.07 Master Valve A. Brass only.

2.08 Valve Boxes

A. General - Black or green plastic with bolt down lock-top capability. B. Automatic Valves/Pressure Reducing Valve - Carson 1320B-13B or

approved equal. Lid marked valve.

C. Backflow Preventer - Carson 1730C-12B or approval equal. D. Shut-off Valve - Carson 10" diameter or approved equal.

E. Quick Coupling Valve - Carson 6<sup>st</sup> diameter or approved equal.

2.09 Automatic Controllers

A. 120 volt service with 24 volt output and UL approved, lockable door. Size for minimum of two additional future zones. 14 day capability and option of any 30 minute start of a 24 hour day. Time spread per station 0-60 minutes. Include Master Valve terminal or a pump start terminal for Master Valve operation.

A. UL approved UF and UL marked insulation jackets +/- #14 UF direct burial, solid copper, from controller to valves. ASTM B-3. Red or black for hot side, white for common ground, any third color for auxillary wires. Multi-strand wire is acceptable if distance from controller to furthest valve is less than 500 feet. 3M DBY below grade wire splices. Screw-type and taped splices above grade per code.

2.11 Quick Coupling Valve For Air Blowout

A. Rainbird or approved equal with 1" MPT key.

2.12 Shut-Off Valve

A. Champion Angle Valve, Mueller, or approved equal. Stop and Waste valve where allowed by code. Provide 30" long key for valve operation.

2.13 Backflow Preventer

A. Per State of Washington approved list and as approved by local code. Febco #850 double check valve assembly or approved equal. Include resilient seat gate valve on each end of unit and ½" brass, screwed end, 150# WOG drive valve on downstream side.

2.14 Pressure Reducing Valve

A. Watts #223, Wilkens #500, or approved equal. Contractor has the option of utilizing a pressure reducing valve or automatic valves with pressure reducing capability.

2.15 Check Valves

A. KBI King-Check or approved equal. SAMS (seal-a-matic) may be used with an auto-drain and a gravel sump (minimum 1 CF) at the lowest end of each zone.

3.00 Installation

3.01 Examination

A. Prior to starting work carefully inspect the prepartory work of other trades and verify that such work is acceptable for the installation of this work. Report all unacceptable conditions to the Landscape Architect. Do not begin work until unacceptable conditions have been resolved. Beginning work constitutes Contractor acceptance of conditions.

A. Verify need with local water purveyor. Determine location, size, and type of pipe in the service from the main.

3.03 Trenching

A. Make trenches for irrigation system. Finish trenches free from rock, debris, or sharp articles. Provide depth to acheive minimum 16" cover for shrub beds, 12" for lawn areas, and 16" cover for mainline. Removed unused trench spoils from site.

3.04 Pipe

A. Cut PVC pipe ends at 90 degrees to the pipe length and clean all cutting prior to cementing. Wipe pipe ends clean with rag lightly wetted with PVC thinner. Apply cement with light coat on inside of fitting and

heavier coat on outside of pipe. Insert pipe into fitting and give a guarter turn to seat cement. Wipe excess cement from outside of pipe.

3.05 Sleeving

A. Class 200 PVC, 4" minimum diameter. Schedule 40 under asphalt or crushed rock paving. Verify with Landscape Architect if sleeves are to be installed by others.

3.06 Drip / Spray heads & Risers

A. Set shrub heads with flange flush or slightly below finish grade at a minimum distance of 4 inches from planter edge. Provide double swing joint or flexible swing pipe and spiral barbed fitting (connection at bottom of sprinkler body only) for connection to lateral. B. Install lawn heads flush with finish to clear mowing equipment. Provide three (3) Marlex street ells and one (1) PVC Schedule 80 nipple, or flex pipe connection to lateral (connection at bottom of sprinkler body

3.07 Nozzles

A. Select nozzles to provide full coverage without causing erosion problems, staining of siding, or drift

3.08 Electric Wire

A. Install wire in conduit where required by local code. Bury at sufficient depth to meet local code and in no case less than bottom side of parallel pipe. Bundle control wires and tape at 10' intervals. Tape bundles to adjacent pipe. Install wire in sleeves under all pavement. Splices shall occur at boxes only.

3.09 System Expansion

A. Provide a minimum of two (2) auxillary wires for future valve locations. Run one unconnected spare control wire from the controller though each intermediate valve to terminate at the valve(s) at the ends of the main line. Loop at least 24" of wire at each of the intermediate valve boxes. Mark spare wires at the controllers and in boxes with permanant tag. Coil spare wire in plastic valve box.

3.10 Backfilling Trenches

A. Set pipe to ensure no puncture damage or future settlement. Lay mainline pipe with manufacturer's designations toward top of trench. Compact backfill to no less than 90% density at optimum moisture content. Backfill around sprinkler heads to restrict movement of heads by external force. Repair all trench settlement and finished surface damage due to settling during warranty period.

3.11 Automatic Valves

A. Install in specified valve box. Provide PVC nipple (minimum 4" long) on the inlet side and compression coupling or PVC union on the outlet side. Adjust flow with stem of valve to balance system. Mount valve boxes flush with finish grade unless otherwise indicated on drawings. Install immediately adjacent to walks or curbs (in shrub beds where possible). Provide 6" of pea gravel in bottom of valve box with 6" clear from gravel to underside of valve.

3.12 Master Valve

A. Size to match mainline size.

3.13 Backflow Prevention Unit

A. Install per local applicable code. Verify location with Landscape Architect. Otherwise Contractor is responsible for cost of relocation. Install galvanized ground joint unions on both inlet and outlet sides. Install Double Check Assembly in plastic box with minimum of 6" of gravel at bottom of box. Provide positive and verifiable drainage out of box. If required, install Reduced Pressure Backflow Preventer per code.

3.14 Pressure Reducing Valve

A. Install in plastic valve box with un-marked lid. Set so system does not fog with auto valves wide open.

3.15 Automatic Controller

A. Review exact location with Landscape Architect prior to installation. Connect to 120 volt service. Provide conduit/wire from controller location to valves. Label each station to clearly identify location of each valve.

3.16 Quick Couple Valve

A. Install in a 10" diameter valve box. Ensure valve can be operated from finish grade.

3.17 Shut Off Valve

A. Install in a 10" diameter valve box. If Stop and Waste Valve is allowed by code, provide 1 cubic foot gravel sump beneath valve.

3.18 Check Valves

A. Provide low head check valves on risers of lowest heads to prevent 3.19 Riser Painting

A. Paint all galvanized pipe and fittings with one coat minimum of

specified material. Touch up after assembly.

3.20 System Flushing A. Flush entire system prior to installation of sprinkler heads/nozzles. After capping all risers, remove cap nearest automatic valve, flush, and recap. Repeat this process until last head on circuit is flushed. If a pressure reducing valve is included in system, open wide for maximum pressure during flushing operation.

3.21 Pressure Test

A. Leave all system joints, connections, etc... exposed until after completion and acceptance of pressure test. Cap and open entire system to full main static pressure (pressure reducing valve wide open) for a period of two (2) hours. If static exceeds 80 psi, set PRV at 80 psifor testing laterals. Test mainlines at 100 psi. Visually check joints and connections for leaks. Repair all leaks, however minor. Contractor has the option of using AWWA pressure test (test with approved pressure pump at 100 psi with no more than 5 psi loss in 15 minutes). Deliver written record of test to Landscape Architect.

3.22 Performance Tests

A. Upon completion of system installation and after flushing and pressure tests are completed, operate system in presence of Landscape Architect. Correct all deficiencies until the system is approved.

3.23 Adjusting

A. Substitute or modify up to 5% of total nozzles to accomodate locations and density of plants and ensure full coverage.

3.24 System Familiarization

A. Upon completion of system installation, flushing, and pressure tests, and acceptance of system by Landscape Architect, operate the system in the presence of the Owner. Provide keys and/or other tools necessary to operate/drain/activate the system and spend adequate time with Owner to ensure operation/maintenance/winterization can continue after departure of Contractor. Submit written verification of compliance to Landscape Architect indicating date and persons involved. Contractor is liable for all damage or losses resulting from failure to comply with provisions of this paragraph.

3.25 System Protection

A. Deactivate and drain the system prior to the onset of frezzing seasonand reactivate at the onset of spring season. Accomplish each at least once during the guarantee period. If installation is completed when system is not in use, winterize after testing. Certify by letter the dates of winterization/activation. Repair damage from failure to comply. Purge system with low pressure and low volume compressed air. Do not allow pipe or compressor to get hot to the touch.

3.26 Final Approval

A. Upon completion of all tests, final approval for system will be contingent upon Contractor providing signed and approved sprinkier/piumping/nearth/electrical permits as may be applicable in the area, and as-built drawings of the complete system.

NOTE:

Verify irrigation system will provide sufficient water for plant viability without compromising slope stability.

Verify irrigation system is reviewed and abides by recommendations prepared by urban forestry services, inc. (360) 428-5810

FRANCINE M. DAY

SP

