REFERENCE STANDARDS: REFERENCE TO ASTM AND OTHER STANDARDS INCORPORATE THESE STANDARDS INTO THE CONTRACT AS THOUGH INCLUDED IN THEIR ENTIRETY. REFERENCE TO A SPECIFIC SECTION DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE ENTIRE STANDARD. THE LATEST EDITION OF THE STANDARD SHALL BE USED UNLESS A SPECIFIC DATE IS INDICATED.

<u>DEFINITIONS</u>: THE FOLLOWING DEFINITIONS COVER THE MEANINGS OF CERTAIN TERMS USED IN THESE NOTES:

- "ARCHITECT / ENGINEER" THE ARCHITECT AND THE ENGINEER-OF-RECORD.
- "PREPARED BY A SPECIALTY STRUCTURAL ENGINEER" PREPARED BY OR UNDER THE DIRECT SUPERVISION OF A SPECIALTY STRUCTURAL ENGINEER (SSE) WITH A STRUCTURAL LICENSE ISSUED BY THE STATE OF WASHINGTON. SUBMITTALS SHALL BE STAMPED AND SIGNED BY THE SSE.
- "SUBMIT FOR REVIEW" SUBMIT TO THE ARCHITECT/ENGINEER FOR REVIEW PRIOR TO FABRICATION OR

NOTE PRIORITIES: NOTES ON THE INDIVIDUAL DRAWINGS GOVERN OVER NOTES ON THIS SHEET.

<u>SPECIFICATIONS</u>: REFER TO THE SPECIFICATIONS FOR INFORMATION IN ADDITION TO THAT CONTAINED IN THESE NOTES AND THE STRUCTURAL DRAWINGS.

STRUCTURAL DETAILS: THE STRUCTURAL DRAWINGS ARE INTENDED TO SHOW THE GENERAL CHARACTER AND EXTENT OF THE PROJECT. THEY ARE NOT INTENDED TO SHOW ALL DETAILS OF THE WORK. DETAILS NOTED "TYPICAL" APPLY TO SIMILAR WORK THROUGHOUT THE PROJECT UNLESS NOTED SEPARATELY.

STRUCTURAL RESPONSIBILITIES: THE STRUCTURAL ENGINEER IS RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE PRIMARY STRUCTURE IN ITS COMPLETED FORM.

CONTRACTOR RESPONSIBILITIES: THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND ALL JOB RELATED SAFETY STANDARDS (I.E. OSHA). HE IS RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION. HE SHALL PROVIDE TEMPORARY SHORING, BRACING AND OTHER ELEMENTS REQUIRED TO MAINTAIN STABILITY UNTIL THE STRUCTURE IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE FAMILIAR WITH THE WORK REQUIRED IN THE CONSTRUCTION DOCUMENTS AND THE REQUIREMENTS FOR EXECUTING IT PROPERLY. THE CONTRACTOR SHALL AT HIS DISCRETION EMPLOY A WASHINGTON STATE REGISTERED STRUCTURAL ENGINEER FOR DESIGN OF TEMPORARY BRACING AND SHORING.

DISCREPANCIES: IN CASE OF DISCREPANCIES BETWEEN THE SPECIFICATIONS, REFERENCE STANDARDS AND THE GOVERNING CODE, THE ARCHITECT/ENGINEER WILL DETERMINE WHICH SHALL GOVERN. DISCREPANCIES SHALL **BESIGN COUTTIN**TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.

<u>SITE VERIFICATION</u>: THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE. CONFLICTS BETWEEN THE DRAWINGS AND ACTUAL SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK.

CONSTRUCTION LOADS: LOADS ON THE STRUCTURE DURING CONSTRUCTION SHALL NOT EXCEED THE DESIGN LOADS AS NOTED IN DESIGN REQUIREMENTS BELOW OR THE CAPACITY OF PARTIALLY COMPLETED

ALTERNATES FOR SPECIFIED ITEMS MAY BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR

DESIGN REQUIREMENTS:

DEAD LOADS: ROOF DEA DECK DEA FLOOR DE. WALL DEAI CONCRETE	D LOAD AD LOAD D LOAD	15 PSF 7.5 PSF 11 PSF 12 PSF 150 PCF
LIVE LOADS: ROOF SNO FLOOR LIV DECK LIVE	E LOAD (RESIDENTIAL)	25 PSF 40 PSF 60 PSF
<u>DEFLECTIONS</u> :	TOTAL LOAD DEFLECTION LIMIT LIVE LOAD DEFLECTION LIMIT	L/24 L/36

SOILS AND FOUNDATIONS

REFERENCE STANDARDS: CONFORM TO CBC CHAPTER 18 "SOILS & FOUNDATIONS."

DESIGN SOIL VALUES:

ALLOWABLE FOUNDATION PRESSURE (ASSUMED) 1500 PSF PASSIVE LATERAL PRESSURE 100 PSF/FT COEFFICIENT OF FRICTION

FOOTING DEPTH: EXTERIOR PERIMETER FOOTINGS SHALL BEAR NOT LESS THAN 18 INCHES BELOW FINISH GRADE, OR BY THE GEOTECHNICAL ENGINEER AND THE BUILDING OFFICIAL

IF ADVERSE SOIL CONDITIONS ARE ENCOUNTERED, A SOILS REPORT MAY BE REQUIRED.

CAST-IN-PLACE CONCRETE

<u>REFERENCE STANDARDS</u>: CONFORM TO:

- (1) ALL CONCRETE SHALL BE MIXED AND PLACED IN ACCORDANCE WITH ACI 318-14.
- (2) ACI 301-16 "SPECIFICATIONS FOR STRUCTURAL CONCRETE".

(3) CBC CHAPTER 19 "CONCRETE".

FIELD REFERENCE: KEEP IN CONTRACTOR'S FIELD OFFICE A COPY OF ACI FIELD REFERENCE MANUAL, SP-15(10), "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301) WITH SELECTED ACI AND ASTM REFERENCES".

CONCRETE MIXTURES: CONFORM TO ACI 301 SEC 4 "CONCRETE MIXTURES".

MATERIALS: CONFORM TO ACI 301 SEC 4.2.1 "MATERIALS" FOR REQUIREMENTS FOR CEMENTITIOUS MATERIALS, AGGREGATES, MIXING WATER AND ADMIXTURES.

REINFORCING BARS ASTM A615, GRADE 60, DEFORMED BARS.

SUBMITTALS: PROVIDE ALL SUBMITTALS REQUIRED BY ACI 301 SEC 4.1.2. SUBMIT MIX DESIGNS FOR EACH MIX IN THE TABLE BELOW.

TABLE OF MIX D	ESIGN	I REQUI	REMEI	NTS	
MEMBER TYPE/LOCATION		STRENGTH	MAX	MAX	AIR
	TEST	AGE	AGGR.	W/C	CONT.
	(PSI)	(DAYS)	(INCH)	RATIO	(%)
FOUNDATIONS (RESIDENTIAL)	2,500	28	1		

FORMWORK: CONFORM TO ACI 301 SEC 2 "FORMWORK AND FORM ACCESSORIES". REMOVAL OF FORMS SHALL CONFORM TO SEC 2.3.2 EXCEPT STRENGTH INDICATED IN SEC 2.3.2.5 SHALL BE 0.75 F'C.

MEASURING, MIXING, AND DELIVERY: CONFORM TO ACI 301 SEC 4.3.

HANDLING, PLACING, CONSTRUCTING AND CURING: CONFORM TO ACI 301 SEC 5.

EMBEDDED ITEMS: POSITION AND SECURE IN PLACE EXPANSION JOINT MATERIAL, ANCHORS AND OTHER STRUCTURAL AND NON-STRUCTURAL EMBEDDED ITEMS BEFORE PLACING IN CONCRETE. CONTRACTOR SHALL REFER TO MECHANICAL, ELECTRICAL, PLUMBING, ARCHITECTURAL DRAWINGS AND COORDINATE FOR OTHER EMBEDDED ITEMS.

FSI HELICAL PIERS

BRACKET PLATES - ASTM A36 (MIN YIELD STRESS, Fy = 36 KSI / MIN TENSILE STRESS, Fu = 58 KSI) PIER TUBES - ASTM A500 GRADE B OR C (MIN YIELD STRESS, Fy = 50 KSI / MIN TENSILE STRESS, Fu = 55 KSI) EXTERNAL SLEEVE - ÁSTM A500 GRADE B OR C (MIN YIELD STRESS, Fy = 50 KSI / MIN TENSILE STRESS, Fu = 62 KSI) PIER CAP - ASTM A529 GRADE 50 (MIN YIELD STRESS, Fy = 50 KSI / MIN TENSILE STRESS, Fu = 65 KSI) COIL ROD - ASTM A193 GRADE B7 (MIN YIELD STRESS, Fy = 105 KSI / MIN TENSILE STRESS, Fu = 125 KSI) SHAFT COUPLER - ASTM A513 TYPE 5 (MIN YIELD STRESS, Fy = 70 KSI / MIN TENSILE STRESS, Fu = 87 KSI) SHAFT COUPLING HARDWARE - GRADE 8 BOLTS WITH NUTS HELIX PLATES (ROUND SHAFT) - ASTM A572 GRADE 50 (MIN YIELD STRESS, Fy = 50 KSI / MIN TENSILE STRESS, Fu = 65 KSI)

CONFORM TO AWS D1.1. WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH AWS REQUIREMENTS. USE E70 ELECTRODES OF TYPE REQUIRED FOR MATERIALS TO BE WELDED.

SACRIFICIAL DESIGN THICKNESS - CAPACITIES INCLUDE A SCHEDULED LOSS IN STEEL THICKNESS DUE TO CORROSION FOR BLACK, UNCOATED STEEL. ANCHORS ARE DESIGNED FOR 50-YEAR SCHEDULED SACRIFICIAL THICKNESS LOSS IN ACCORDANCE WITH ICC-ES AC358.

SYSTEM TO BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS. MINIMUM INSTALLATION PRESSURE IS TO BE DETERMINED BY THE FOLLOWING EQUATION:

HELICAL PIER INSTALLATION TORQUE (FT-LB): [DESIGN WORKING LOAD] X [FS = 2] / [EMPIRICAL TORQUE CORRELATION FACTOR, KT = 9 FT^{-1}]

MINIMUM INSTALLATION DEPTH IS 10'-0"± UNO.

NOTIFY ENGINEER IF MINIMUM INSTALLATION CONDITIONS CANNOT BE ACHIEVED.

CONTRACTOR TO REPAIR UTILITY LINES THAT MAY BE DAMAGED DURING INSTALLATION.

HELICAL LEAD AND EXTENSIONS ARE TO BE MECHANICALLY SPLICED WITH GRADE 8 BOLTS WITH NUTS.

TESTING & INSPECTION

CONTINUOUS SPECIAL INSPECTION IS REQUIRED DURING INSTALLATION PER 2015 IBC SECTION 1810.4.12. THE SPECIAL INSPECTOR IS RESPONSIBLE FOR VERIFYING AND RECORDING THE FOLLOWING:

- PROJECT DESCRIPTION (ADDRESS, INSTALLATION DATE, PERMIT NUMBER PILE AND BRACKET CONFIGURATION
- PART DESCRIPTION (PRODUCT MANUFACTURER, BRACKET TYPE, PIER TYPE, PIER OUTSIDE DIAMETER, PIER WALL THICKNESS)
- PIER INCLINATION, LOCATION, DEPTH, AND INSTALLATION PRESSURE ACHIEVED

LOAD TESTING SHALL BE PERFORMED IN ACCORDANCE WITH ASTM METHOD D1143 (QUICK METHOD) ON 20 PERCENT OF PIERS AND WILL BE SELECTED BY THE SPECIAL INSPECTOR. AN ALIGNMENT LOAD (AL) SHALL BE APPLIED TO THE PILE PRIOR TO SETTING THE DEFLECTION MEASURING EQUIPMENT TO ZERO OR A REFERENCE POSITION. THE AL SHALL BE NO MORE THAN 10% OF THE DESIGN LOAD. INCREMENTAL LOADING SHALL BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE.

TEST LOADING COUEDING	HOLD TIME	MAN DEEL FOTION
TEST LOADING SCHEDULE	<u>HOLD_TIME</u>	MAX DEFLECTION
AL (.10 DL MAX)	O MIN.	
0.25 DL	UNTIL STABLE	
0.50 DL	UNTIL STABLE	
0.75 DL	UNTIL STABLE	
1.00 DL	UNTIL STABLE	
1.25 DL	UNTIL STABLE	
1.50 DL	HOLD FOR CREEP TEST (SEE BELOW)	0.04 INCHES
1.25 DL	UNTIL STABLE	
1.00 DL	UNTIL STABLE	
0.75 DL	UNTIL STABLE	
0.50 DL	UNTIL STABLE	
0.25 DL	UNTIL STABLE	

LOAD TESTING CREEP ACCEPTANCE CRITERIA SHALL BE NO GREATER THAN 0.04 INCHES WITHIN A 10 MINUTE PERIOD. IF MOVEMENT IS OBSERVED GREATER THAN 0.04 INCHES WITHIN THE 10 MINUTE PERIOD THE LOAD TEST SHALL BE HELD FOR AN ADDITIONAL 50 MINUTES, THE PIER IS TO BE DEEPENED AND RE-TESTED, OR THE PIER IS TO BE ABANDONED AND REPLACED WITH A NEW PIER. IF THE LOAD TEST IS TO BE HELD THE PIER MOVEMENTS SHALL BE MEASURED AT 15, 20, 30, 40, 50, AND 60 MINUTES. THE CREEP VERSUS THE LOGARITHM OF TIME SHALL BE PLOTTED. IF THE CREEP RATE IS LESS THAN 0.080 INCHES BETWEEN 6 AND 60 MINUTES, THE LOAD TEST SHALL BE CONSIDERED SUCCESSFUL.

HELICAL PIER TEST PRESSURE (PSI): [DESIGN LOAD] X 1.5 / [AREA OF HYDRAULIC RAM].

F	REQUIRE	ED STRUCTURA	AL SPE	CIAL IN	SPECTIONS
SYSTEM		INSPECTION			
or	IBC CODE	CODE or STANDARD	FREQUENCY		REMARKS
MATERIAL	REFERENCE	REFERENCE	Continuous	Periodic	
CONCRETE					
VERIFYING USE OF REQUIRED MIX DESIGN(S)	TABLE 1904.1 1904.2 1908.2 1908.3	ACI 318: CHAPTER 19, 26.4.3, 26.4.4		Х	
CONCRETE PLACEMENT	TABLE 1908.6 1908.7 1908.8	ACI 318: 26.5	Х		

WOOD FRAMING

REFERENCE STANDARDS: CONFORM TO:

(1) IBC CHAPTER 23 "WOOD". (2) NDS - 2018 AND NDS SUPPLEMENT - 2015 "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION".

(3) SDPWS - 2015 "SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC".

<u>SUBMITTALS</u>: SUBMIT SHOP DRAWINGS TO THE ARCHITECT/ENGINEER FOR REVIEW. SHOP DRAWINGS SHALL INCLUDE MEMBER SIZE, SPACING, CAMBER, MATERIAL TYPE, GRADE, SHOP AND FIELD ASSEMBLY DETAILS AND CONNECTIONS, TYPES AND LOCATION OF BOLTS, WELDS AND OTHER FASTENERS. SUPPLY SHOP DRAWINGS FOR THE FOLLOWING:

<u>IDENTIFICATION</u>: ALL SAWN LUMBER AND PRE-MANUFACTURED WOOD PRODUCTS SHALL BE IDENTIFIED BY THE GRADE MARK OR A CERTIFICATE OF INSPECTION ISSUED BY THE CERTIFYING AGENCY.

• <u>SAWN LUMBER</u>: CONFORM TO GRADING RULES OF WWPA, WCLIB OR NLGA.

Member Use	Size	Species	Grade
Light Framing	2x4, 4x4	Doug-Fir Larch	No. 2
Joists & Planks	2x6 - 2x12	Doug-Fir Larch	No. 2
Posts & Timbers	5x5 - 8x8	Doug-Fir Larch	No. 2

• GLUED LAMINATED TIMBER: CONFORM TO AITC 117-04 "STANDARD SPECIFICATIONS FOR STRUCTURAL GLUE-LAMINATED TIMBER OF SOFTWOOD SPECIES, MANUFACTURING AND DESIGN" AND ANSI/AITC A190.1-02 "STRUCTURAL GLUED LAMINATED TIMBER". CAMBER ALL GLULAM BEAMS TO 3500' RADIUS, UNLESS SHOWN OTHERWISE ON THE PLANS.

Member Use	Size	Species	Comb. Symbol
Beams	All	DF/DF	24F-V4

• WOOD STRUCTURAL PANELS (PLYWOOD/SHEATHING): WOOD STRUCTURAL PANELS INCLUDE: ALL VENEER PLYWOOD, ORIENTED STRAND BOARD, WAFERBOARD, PARTICLEBOARD, AND COMPOSITES OF VENEER AND WOOD BASED MATERIAL. CONFORM TO IBC SEC 2303.1.4 "WOOD STRUCTURAL PANELS" BASED ON PRODUCT STANDARD PS 1-09 AND PS 2-10 OF THE U.S. DEPT. OF COMMERCE.

Minimum APA Rating					
Location	Thickness	Span Rating	Panel Grade	Bond	
Floor	19/32"	40/20	B-B	Exterior	

UNLESS NOTED OTHERWISE ON DRAWINGS, INSTALL PANELS WITH LONG DIMENSION ACROSS SUPPORTS AND WITH PANEL CONTINUOUS OVER TWO OR MORE SPANS. END JOINTS SHALL OCCUR OVER SUPPORTS.

• <u>TIMBER CONNECTORS</u>: SHALL BE "STRONG TIE" BY SIMPSON COMPANY AS SPECIFIED IN THEIR LATEST CATALOG AND SHALL BE CALLED OUT BY LETTER AND NUMBER. ALTERNATE CONNECTORS BY OTHER MANUFACTURERS MAY BE SUBSTITUTED PROVIDED THEY HAVE ICBO APPROVAL FOR EQUIVALENT OR GREATER LOAD CAPACITIES. CONNECTORS SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. UNLESS NOTED OTHERWISE, ALL NAILS SHALL BE COMMON.

• <u>WOOD FASTENERS</u>: CONFORM TO IBC SEC 2304.10 "CONNECTIONS AND FASTENERS". UNLESS NOTED OTHERWISE, ALL NAILS SHALL BE COMMON. NAIL SIZES SPECIFIED ON THE DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	LENGTH	DIAMETER
6d	2"	0.113"
8d	2½"	0.131"
10d	3 "	0.148"
12d	3¼"	0.148"
16d	3½"	0.162"

ALTERNATE NAILS MAY BE USED SUBJECT TO REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER. SUBSTITUTION OF STAPLES FOR THE NAILING OF RATED SHEATHING IS SUBJECT TO REVIEW BY THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION. TRUESPEC TYPE NAILS ARE RECOMMENDED FOR EASE OF IDENTIFICATION AFTER INSTALLATION. WHERE 16d COMMON NAILS ARE CALLED OUT FOR WOOD-TO-WOOD CONNECTIONS, 20% MORE 10d COMMON NAILS MAY BE USED IN LIEU OF SPECIFIED 16d NAILS.

NAILING REQUIREMENTS: PROVIDE MINIMUM NAILING IN ACCORDANCE WITH IBC TABLE 2304.10.1 "FASTENING SCHEDULE" EXCEPT AS NOTED ON THE DRAWINGS. NAILING FOR ROOF/FLOOR DIAPHRAGMS/SHEAR WALLS SHALL BE PER DRAWINGS. NAILS SHALL BE DRIVEN FLUSH AND SHALL NOT FRACTURE THE SURFACE OF SHEATHING.

STANDARD STUD CONSTRUCTION: UNLESS NOTED ON THE PLANS, CONSTRUCTION SHALL CONFORM TO IBC SEC 2308 "CONVENTIONAL LIGHT-FRAME CONSTRUCTION".

(1) DECK FRAMING: PROVIDE SOLID BLOCKING AT ALL BEARING POINTS. REFER TO PLANS AND DETAILS FOR ATTACHMENT OF JOISTS AND RAFTERS TO HEADERS AND BEAMS. NAIL ALL MULTI-JOISTS TOGETHER WITH TWO ROWS OF 16d AT 12" OC STAGGERED.

ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS OF ROOF AND FLOOR SHEATHING.

MAY OPT FOR NON-PRESERVATIVE-TREATED WOOD AND ACCEPTS ALL RISKS OF DECAY OR TERMITES.

MOISTURE CONTENT: WOOD MATERIAL USED FOR THIS PROJECT SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19%. REFER TO TESTING & INSPECTIONS FOR THE VERIFICATION OF THESE LIMITS. THE MAXIMUM MOISTURE CONTENT REQUIRED MAY BE LESS THAN 19% IF BASED ON A PARTICULAR CLADDING/INSULATION SYSTEM. REFER TO THE ARCHITECT'S DRAWINGS AND/OR PROJECT SPECIFICATIONS FOR MORE RESTRICTIVE REQUIREMENTS.

PRESERVATIVE TREATMENT: WOOD MATERIALS REQUIRED TO BE "NATURALLY DURABLE OR PRESERVATIVE—TREATED WOOD" IN ACCORDANCE WITH IBC SEC 2304.12, "PROTECTION AGAINST DECAY AND TERMITES" SHALL CONFORM TO THE APPROPRIATE STANDARDS OF THE AMERICAN WOOD-PRESERVERS ASSOCIATION (AWPA) FOR SAWN LUMBER, GLUED LAMINATED TIMBER, ROUND POLES, WOOD PILES AND MARINE PILES. FOLLOW AMERICAN LUMBER STANDARDS COMMITTEE (ALSC) QUALITY ASSURANCE PROCEDURES. PRODUCTS SHALL BEAR THE APPROPRIATE MARK. ALL FASTENERS DRIVEN INTO PRESERVATIVE TREATED WOOD SHALL BE CORROSION RESISTANT IN ACCORDANCE WITH IBC 2304.10.5. IT IS RECOMMENDED ALL WOOD MATERIALS USED IN EXTERIOR UNCONDITIONED SPACES TO BE NATURALLY DURABLE OR PRESERVATIVE-TREATED. WHERE "PT" WOOD MEMBERS ARE INDICATED BUT NOT EXPLICITLY REQUIRED BY IBC SEC 2304.12, THE OWNER

	ABBREVIATIONS					
ADDL ALT ASM B/ BLDG BLKG BTWN CANT Q CLR CONC CONC COND CONN CONT DET DB DBA DBL DF Ø OR DIA DJ DN DP DWG DIR EA ELEV EQ EQUIP EQUIV EW	ADDITIONAL ALTERNATE ASSEMBLY BOTTOM OF BUILDING BLOCKING BETWEEN CANTILEVER CENTERLINE CLEAR COLUMN CONCRETE CONDITION CONNECTION CONTINUOUS DETAIL DROPPED BEAM DEFORMED BAR ANCHOR DOUBLE DOUGLAS FIR DIAMETER DOUBLE JOIST DOWN DEPTH OR DEEP DRAWING DIRECTION EACH ELEVATION EQUAL EQUIPMENT EQUIVALENT EACH WAY EXISTING	FB FDN FT FTG F/ GA GALV GL HD HF HORIZ IBC IN INT IRC KSF L MAX MECH MANUF MFR MIN MISC (N) NO. NTS OC OPP PL PEN PP PRE-MANUF	FLUSH BEAM FOUNDATION FEET FOOTING FACE OF GAGE GALVANIZED GLULAM HOT DIPPED HEM—FIR HORIZONTAL INTERNATIONAL BUILDING CODE INCH INTERNATIONAL RESIDENTIAL CODE KIPS PER SQUARE FOOT LENGTH OR LONG MAXIMUM MECHANICAL MANUFACTURED MANUFACTURED MANUFACTURER MINIMUM MISCELLANEOUS NEW NUMBER NOT TO SCALE ON CENTER OPPOSITE PLATE PENETRATION PARTIAL PENETRATION PRE—MANUFACTURED	PSI PSL PT R RBC REF REQ'D REQ'S RET SCHED SIMP SPEC SQ SF SS STD STRUCT T/ T&B T&G TYP UNO VERT W W/O WWF ±	POUNDS PER SQUARE INCH PARALLEL STRAND LUMBER PRESERVATIVE TREATED RADIUS RESIDENTIAL BUILDING CODE REFERENCE REINFORCING REQUIRED REQUIREMENTS RETAINING SCHEDULE SIMILAR SIMPSON STRONG—TIE COMPANY, INC. SPECIFICATION SQUARE SQUARE SQUARE FOOT/FEET STAINLESS STEEL STANDARD STRUCTURAL TOP OF TOP & BOTTOM TONGUE & GROOVE TYPICAL UNLESS NOTED OTHERWISE VERTICAL WIDTH OR WIDE WITH WITHOUT WELDED WIRE FABRIC PLUS OR MINUS	
(E) EXT E/	EXTERIOR EDGE OF	PSF	POUNDS PER SQUARE FOOT			



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GENERAL NOTES

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REVISIONS

MFR21-047 KEM/CF/JAM

10-26-2021

SHEET NO:

PROJECT DATA

*PROJECT DESCRIPTION: UNDERPINNING AND EXTENSION OF (E)

•PROJECT ADDRESS: 7805 SE 70TH ST, MERCER ISLAND, WA 98040

*COUNTY: KING COUNTY

*PARCEL NO: 056550-0150

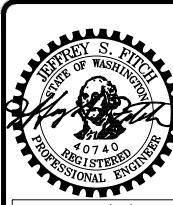
*BUILDING CODE: 2018 IBC & 2018 IRC

*ZONING: SINGLE-FAMILY RESIDENTIAL (R-15)

*SITE AREA: 15,599 Sq-Ft

*EXISTING BUILDING FOOTPRINT: 3,260 SF ((2) STORY)

- ALL WORK AND MATERIAL SHALL CONFORM TO THE REQUIREMENTS
 OF THE CITY OF MERCER ISLAND DESIGN STANDARDS.
- THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND LICENSES BEFORE STARTING CONSTRUCTION.
- 3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, CITY OF MERCER ISLAND 24 HOURS BEFORE STARTING CONSTRUCTION OR RESUMING WORK AFTER SHUTDOWNS, EXCEPT FOR NORMAL RESUMPTION OF WORK FOLLOWING SUNDAYS OR HOLIDAYS.
- 4. THE CONTRACTOR SHALL ASSIST THE ENGINEER IN PREPARING
- 5. SUBCONTRACTOR TO SPECIFY LOCATIONS OF UTILITY STUBS.



EXPIRES: 12/24/22

REMODEL

DO RESIDENCE

7805 SE 70TH MERCER ISLAND, V

SITE PLAN

REVISIONS

PROJECT NO: MFR21-047

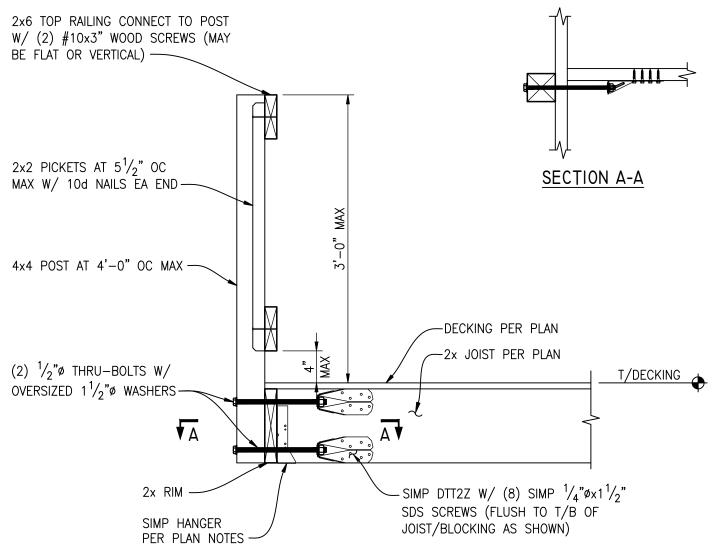
KEM/CF/JAM

10-26-2021

SHEET NO:

EXISTING CONDITIONS

SCALE: NTS



NOTE:

CONTACT ENGINEER OF RECORD IF PREFAB GUARDRAIL SYSTEM IS TO BE INSTALLED **TYPICAL GUARDRAIL DETAIL (PERP)**

2x6 TOP RAILING CONNECT TO POST W/ (2) #10x3" WOOD SCREWS (MAY BE FLAT OR VERTICAL) 2x2 PICKETS AT $5\frac{1}{2}$ " OC SECTION A-A MAX W/ 10d NAILS EA END — 4x4 POST AT 4'-0" OC MAX — -SIMP CS16x1'-6" T&B CENTERED OVER JOIST -DECKING PER PLAN -2x JOIST PER PLAN (2) $\frac{1}{2}$ "ø THRU-BOLTS W/ OVERSIZED 11/2"ø WASHERS--(2) BAYS FULL DEPTH 2x BLOCKING W/ SIMP A35 EA END -SIMP DTT2Z W/ (8) SIMP $\frac{1}{4}$ "øx1 $\frac{1}{2}$ " SDS SCREWS (FLUSH TO T/B OF JOIST/BLOCKING AS SHOWN)

NOTE:

CONTACT ENGINEER OF RECORD IF PREFAB GUARDRAIL SYSTEM IS TO BE INSTALLED

TYPICAL GUARDRAIL DETAIL (PARALLEL)

REF 1/S2.1 FOR CALLOUTS IN COMMON

SCALE: 1"=1'-0"

ÈRAMING -

EXPIRES: 12/24/22

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PLANS & DETAILS

REVISIONS

PROJECT NO:

MFR21-047

KEM/CF/JAM

10-26-2021

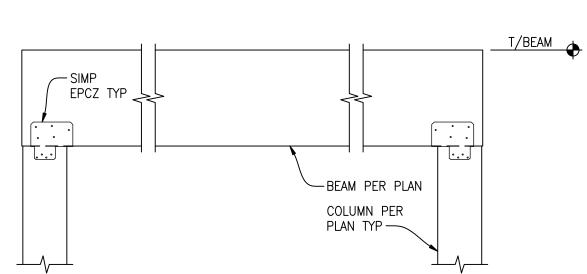
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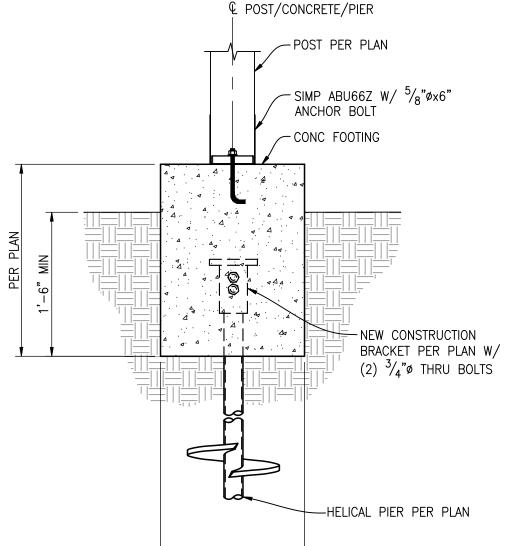
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-BEAM SPLICE AS OCCURS T/BEAM BEAM PER PLAN -SIMP PCZ POST CAP-



TYPICAL COLUMN & BEAM CONNECTIONS

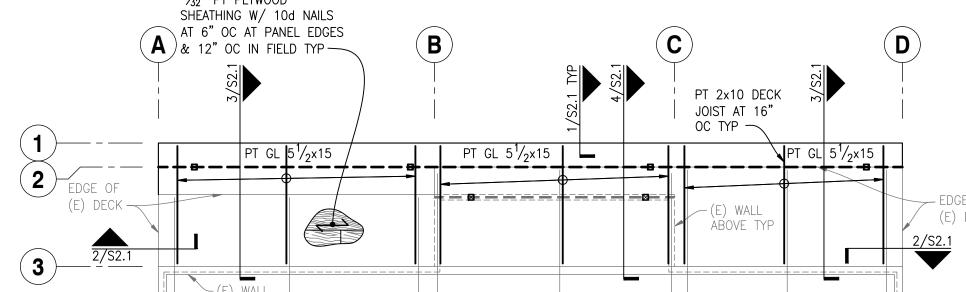
SCALE: 1"=1'-0"



REF PLAN FOR LAYOUT & INSTALLATION REQ'S (N) HELICAL PIER TO (N) FOUNDATION DETAIL

- END OF (E) DECK JOIST LAP (N) DECK JOIST TO (E)
& ATTACH PER PLAN NOTES SHEATHING PER (E) WALL FRAMING — DECK JOIST SIMP LTP4 AT PER PLAN — 16" OC TYP -2x PT BLKG 10d TOE-NAILS EA BAY TYP — AT 12" OC TYP ~ (2) TOE-NAILS AT DECK JOIST TO DECK BEAM PER PLAN— TOP PL TYP —

-24"D x 18" DIAMETER CONCRETE FOOTING, TYP



DECK FRAMING PLAN

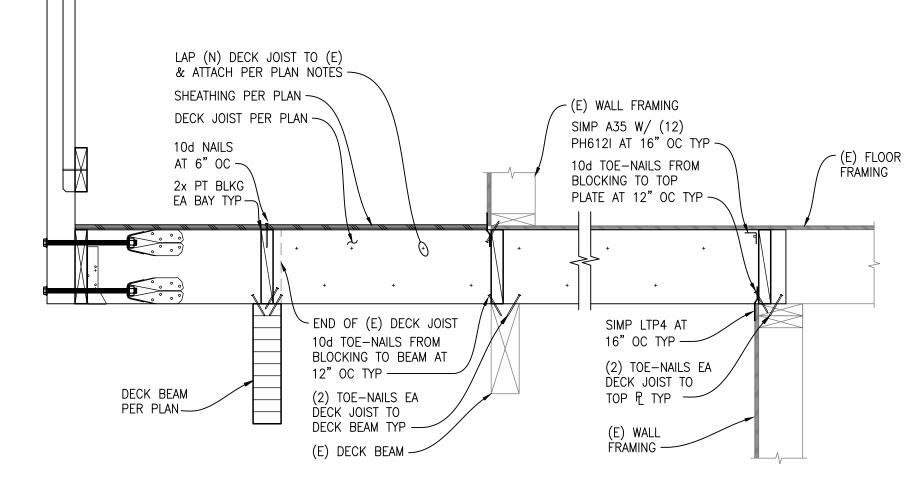
SCALE: $\frac{1}{8}$ "=1'-0"

BELOW TYP



-(E) CANT 2×10 DECK

JOISTS AT 16"OC TYP



WALL PLATES) WHICH SHOW SIGNS OF DRY ROT OR STRUCTURAL DAMAGE.

(E) DECK 10.
■ INDICATES WOOD POST/COLUMN BELOW.

SECTION CUT - DETAIL NUMBER/SHEET NUMBER.

12. INSTALL ALL METAL CONNECTORS PER MANUFACTURERS RECOMMENDATIONS TYP.

13. CONTRACTOR TO NOTIFY ENGINEER OF RECORD OF DISCREPANCIES BETWEEN FIELD CONDITIONS AND THOSE SHOWN IN THESE DOCUMENTS PRIOR TO CONSTRUCTION TYP.

14. ALL FASTENERS AND HARDWARE IN CONTACT W/ PT WOOD, CONCRETE OR MASONRY SHALL BE

HOT-DIPPED ZINC-COATED GALVANIZED STEEL OR STAINLESS STEEL.

15. REFERENCE FRAMING DETAILS FOR DETAILS DENOTED "TYPICAL" FOR ADDITIONAL INFORMATION.

16. NAIL FLOOR SHEATHING TO RIMS AND BLOCKING WITH DIAPHRAGM PANEL EDGE NAILING MINIMUM (TYPICAL UNO).

17. (#) INDICATES LOCATION OF FSI 288 HELICAL PIER W/ FSI NCB NEW CONSTRUCTION BRACKET ((6) TOTAL)

HELICAL PIER INSTALLATION NOTES:

• MAX LOAD TO ANCHOR = 8,512 LBS • 2.875"ø PIPE PILE W/ 0.276" THICK WALL

• 0.375" THICK 10/12" HELIX W/ $\frac{1}{4}$ " FILLET WELDS

EACH SIDE OF HELIX TO PIER • MINIMUM 10'-0" INSTALLATION DEPTH & 2,000 FT-LB

INSTALLATION TORQUE 18. ALL CONSTRUCTION MATERIALS IN THESE DOCUMENTS ARE (N) UNO

DECK FOUNDATION PLAN FRAMING NOT SHOWN FOR CLARITY SCALE: $\frac{1}{8}$ "=1'-0" REF 1/S2.1 FOR CALLOUTS IN COMMON **DECK EXTENSION** SCALE: 1"=1'-0' **DECK FRAMING PLAN NOTES:** 1. REFERENCE S1.1 FOR GENERAL STRUCTURAL NOTES, DESIGN CRITERIA, & ABBREVIATIONS. 2. ALL CONSTRUCTION MATERIALS ON PLANS, ELEVATIONS & DETAILS ARE (N) UNO. 3. ALL EXISTING DIMENSIONS SHALL BE FIELD VERIFIED. ALL DIMENSIONS ARE TO INSIDE FACE OF CONCRETE, OUTSIDE FACE OF CONCRETE OR CENTERLINE OF GRID/STEEL. CONTINUOUS FOOTINGS ARE ¹932" PT PLYWOOD CENTERED UNDER WALLS/STRUCTURAL PANELS. POSTS, BUNDLED STUDS OR COLUMNS TO BE CENTERED ON FOOTING OR WALL PIER. 4. CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY SHORING. 5. ALL WOOD EXPOSED TO CONCRETE, WEATHER, OR WITHIN 8" OF FINISHED GRADE SHALL BE PRESERVATIVE—TREATED. 7. HANGERS: ALL 2x HANGERS TO BE SIMPSON LUS TYPE, UNO. ALL BEAM HANGERS TO BE SIMPSON HU OR HUC TYPE, UNO. 8. ALL EXISTING JOISTS ARE TO BE SISTERED TO NEW JOISTS WITH (2) ROWS OF 16d NAILS AT 12" OC STAGGERED. 9. REPLACE "IN-KIND" ALL EXISTING WOOD MEMBERS (JOISTS, PURLINS, SUBPURLINS, SHEATHING, STUDS,

SCALE: 1"=1'-0"

DECK EXTENSION -COLUMN PER PLAN

PER PLAN