GENERAL NOTES

1. THERE SHALL BE NO VERTICAL OFFSET GREATER THAN 1/2 INCH ALONG THE ENTIRE PATH OF TRAVEL FROM THE PUBLIC WAY.
2. PROVIDE THE FOLLOWING FOR FLOORS AND WALLS IN WATER CLOSET COMPARTMENTS AND SHOWERS:
   A. FLOOR: TOILET ROOM FLOORS SHALL HAVE A SMOOTH, HARD, ABSORBENT SURFACE SUCH AS PORTLAND CEMENT, CONCRETE CERAMIC TILE OR OTHER APPROVED MATERIAL THAT EXTENDS UPWARD ONTO THE WALLS AT LEAST 5 INCHES.
   B. WALLS: WALLS WITHIN 2 FEET OF THE FRONT AND SIDES OF URINALS AND WATER CLOSETS SHALL HAVE SMOOTH, HARD, ABSORBENT SURFACE OF PORTLAND CEMENT, CONCRETE, CERAMIC TILE OR OTHER NON-ABSORBENT SURFACE TO A HEIGHT OF 4 FEET. THE MATERIALS USED IN SUCH WALLS SHALL BE OF A TYPE THAT IS NOT ADVERSELY AFFECTED BY MOISTURE.
   C. ACCESSORIES PROVIDED ON OR WITHIN RESTROOM WALLS SHALL BE INSTALLED AND SEALED TO PROTECT STRUCTURAL ELEMENTS FROM MOISTURE.
3. THIS PROJECT HAS BEEN DESIGNATED WITH A UNIFORM LOAD OF 1.5 POUNDS PER SQUARE FOOT TO SUPPORT THE ADDED LOADS OF A FIRE-SPRINKLER SYSTEM. THE MAIN FRAMING MEMBERS HAVE BEEN DESIGNED TO SUPPORT THE CONCENTRATED LOADS OF A SPRINKLER SYSTEM.
4. PROVIDE FIRE BLOCKING AT ALL FLOOR AND CEILING LEVELS AND AT EIGHT-FOOT VERTICAL INTERVALS.
5. THE ATTIC ACCESS SHALL BE WEATHER STRIPPED & INSULATED TO R-38 ON THE ACCESS PANEL.
6. 1/2 INCH GYPSUM BOARD AT ALL WALLS, CEILINGS. FOR NAILING, REFER TO NAILING SCHEDULE ON STRUCTURAL DRAWINGS. ALL WEATHER STRIPPING, CAULKING, AND SEALING OF EXTERIOR DOORS, WINDOWS, AND BUILDING ENVELOPE OPENINGS, AS REQUIRED BY STANDARDS, SHALL BE SUBJECT TO FIELD INSPECTION.
7. OPEN-ABLE WINDOW AREA SHALL BE GREATER THAN OR EQUAL TO ONE-SIXTEENTH (1/16) OF THE FLOOR AREA.
8. ALL WINDOW/DOOR FLASHING REFER TO FLASHING DETAIL #9 ON SHEET A6.0.
9. PROVIDE A 12" X 12" MIN. OPENING FOR TUB EQUIPMENT ACCESS PANEL.
10. SHOWERS MUST HAVE THE FOLLOWING:
    1. A MIN. INSIDE CLEAR DIMENSION OF 30 INCHES WITHIN A MIN. TOTAL AREA OF 1,024 SQ. IN.
    2. MUST HAVE WATERPROOF WALL FINISH UP @ 70 INCHES ABOVE THE SHOWER DRAIN.
    3. SHOWER CURTAINS OR ENCLOSURES ARE REQUIRED.
    4. SHOWER DOORS MUST BE AT LEAST 22 INCHES WIDE.
11. PROVIDE PEDESTRIAN EXIT IN GARAGE A MIN. SIZE OF 36" X 80".
12. PROVIDE 5/8 INCH TYPE 'X' GYPSUM BOARD ON GARAGE SIDE OF FIREWALL BETWEEN THE GARAGE AND THE DWELLING UNIT AND IT'S ATTIC FROM FLOOR TO ROOF SHEATHING. PROVIDE 5/8 INCH TYPE 'X' GYPSUM BOARD ON GARAGE SIDE OF THE CEILING/FLOOR SYSTEM WHEN THERE IS HABITABLE AREA ABOVE THE GARAGE. THE FIRE BARRIER MAY TERMINATE AT THE CEILING WHERE FIRE BARRIER IS HORIZONTAL AND ALL STRUCTURAL MEMBERS THAT SUPPORT THE FIRE BARRIER ARE PROTECTED BY FIRE RESISTANT CONSTRUCTION NOT LESS THAN 5/8 INCH GYPSUM BOARD OR EQUIVALENT.
13. UPPER CABINETS SHALL BE A MIN. OF 18 INCHES ABOVE FINISHED DECK OR THE HOOD IS TO BE INSTALLED PER MANUFACTURER'S REQUIREMENTS WITH CLEARANCES AS REQUIRED BY THE RANGE/COOKTOP MANUFACTURER'S INSTALLATION INSTRUCTIONS.
14. ALL RADIUS WALLS MUST BE 3/4 INCH PLYWOOD SINGLE AT BOTTOM, DOUBLE AT TOP.
15. ALL GLASS IN DOORS MUST BE LABELED SAFETY GLASS OR TEMPERED GLASS.
16. ALL TUB/SHOWER ENCLOSURE AND GLAZING MUST BE LABELED SAFETY GLASS OR TEMPERED GLASS.
17. GAS FIREPLACE OR DECORATIVE GAS APPLIANCE WITH STANDING PILOT SHALL COMPLY WITH TABLE 4-2 OF THE 2012 IBC.
18. PROVIDE MANUFACTURER'S INSTALLATION INSTRUCTIONS AT JOB SITE FOR INSPECTION FOR THE FIREPLACE/WOODSTOVE.
19. PROPANE LOG LIGHTERS ARE NOT ALLOWED.
20. WHERE THE DRYER EXHAUST DUCT IS CONCEALED WITHIN THE BUILDING CONSTRUCTION, THE EQUIVALENT LENGTH OF THE EXHAUST DUCT SHALL BE IDENTIFIED ON A PERMANENT LABEL OR TAG. THE LABEL OR TAG SHALL BE LOCATED WITHIN 6 FEET OF THE EXHAUST DUCT CONNECTION. THE LABEL OR TAG SHALL INDICATE THE TOTAL LENGTH AND NUMBER OF 90 DEGREE AND 45 DEGREE TURNS OF THE DRYER EXHAUST SYSTEM. THE OWNER AND/OR THE SUPPLIER SHALL VERIFY THAT ANY NEW OR REPLACEMENT DRYER MEETS THE EXHAUST SPECIFICATIONS SHOWN. IRC SECTION M1502.4.6 MODIFIED.
21. FAU LOCATED IN THE MAIN FLOOR GARAGE SHALL HAVE DUCTING THAT IS MIN NO. 26 GAGE SHEET STEEL OR OTHER APPROVED MATERIAL AND SHALL BE SEALED WITH A FIRE BARRIER SEALER/CAULKING AT THE FIREWALL PENETRATION PER M1307.3 AND R302.5.2. NO OPENINGS IN THE DUCTING ARE PERMITTED IN THE GARAGE.
22. ALL WINDOWS SHALL BE RECESSED INSTALLATION PER 'THE RIVIERA LAKE HAVASU' DESIGN REQUIREMENTS.

SITE DATA:

SITE AREA:	15,831	SQ. FT.	0.36 ACRES±
MAIN FLOOR:		3,339	SF
COVERED ENTRY:		116	SF
COVERED PATIO:		482	SF
2-CAR/RV GARAGE:		1,860	SF

NEW CUSTOM RESIDENCE FOR:

MR. & MRS. BLACKWELL

DESIGN SPECIFICATIONS:

OCCUPANCY TYPE:	R-1	
CONSTRUCTION TYPE:	VB	
GOVERNING CODE:	2018 IRC	
SEISMIC DESIGN CATEGORY	D	
DESIGN WIND LOAD:	EXPOSURE "C" 110 MPH	
ALLOWABLE SOIL BEARING PRESSURE:	2000 PSF	
COMPRESSIVE STRENGTH OF CONC. @ 28 DAYS	2500 PSI	
LIVE LOADS:		
ROOF:	20.0	PSF
FLOOR:	40.0	PSF
BALCONY:	--	PSF
DEAD LOADS:	N/A	
ROOF: (STUCCO CEILING)	N/A	
WALL:	15.0	PSF

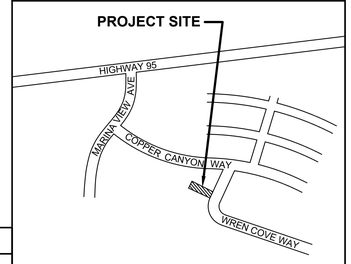
LEGEND:

-STEEL, -CONTINUOUS WOOD MEMBER, -NATIVE SOIL, -MASONRY, -LANDSCAPE, -ENGINEERED FILL, -AGGREGATE, -CONCRETE, -A.C. PAVING, -WOOD BLOCK

REFERENCE SYMBOLS LEGEND:

SYMBOL	DESCRIPTION
ROOM NAME / XXX	ROOM NAME/NUMBER
X	WINDOW CALL OUT
X	DOOR CALL OUT
X	EQUIPMENT LABEL
DETAIL X/X — DETAIL; SHEET DRAWN ON	
X/X	DETAIL CUT REFERENCE
X/X	SECTION CUT REFERENCE
+HEIGHT T.O.	ELEVATION (SECTIONS & PLANS)
X	INDICATES NEW BUILDING GRID LINE.
X	INDICATES EXISTING BUILDING GRID LINE.
	FOOTING & COLUMN SCHEDULE ITEM

VICINITY MAP



PROJECT DATA:

PROPOSED USE:	SINGLE FAMILY RESIDENCE
APN.	109-54-043
SITE ADDRESS:	2441 WREN COVE WAY LAKE HAVASU CITY, AZ
ZONE:	RE
OCCUPANCY:	
SINGLE FAMILY RESIDENCE	R-1
GARAGE	U
PATIO	U
CONSTRUCTION TYPE:	
MAIN BUILDING	VB
FIRE SPRINKLER SYSTEM:	NO

ABBREVIATIONS:

A.B.	ANCHOR BOLT	H.D.	HOLDOWN
ADJ.	ADJUSTABLE	HGR.	HANGER
ABV.	ABOVE	HDR.	HEADER
A.C.I.	AMERICAN CONCRETE INSTITUTE	HT.	HEIGHT
		HORIZ.	HORIZONTAL
A.I.S.C.	AMERICAN INSTITUTE OF STEEL CONSTR.	HSB.	HIGH STRENGTH BOLT
		H.S.	HIGH SIDE
A.S.T.M.	AMERICAN SOCIETY FOR TESTING & MATERIALS	IN.	INCH
		I.D.	INSIDE DIAMETER
APA	AMERICAN PLYWOOD ASSOCIATION	INT.	INTERIOR
		JST.	JOIST
ARCH.	ARCHITECT(URAL)	K or KIPS	1000 lbs
AWS	AMERICAN WELDING SOCIETY	LAM.	LAMINATED
		LB or LBS.	POUNDS
BD.	BOARD	L.S.	LOW SIDE
BF.	BRACED FRAME	LT. WT.	LIGHT WEIGHT
BLK.	BLOCK	LLV	LONG LEG VERTICAL
BLKG.	BLOCKING	M.B.	MACHINE BOLT
BOT.	BOTTOM	MAS.	MASONRY
BLDG.	BUILDING	MAX.	MAXIMUM
BM.	BEAM	MF.	MOMENT FRAME
B.N.	BOUNDARY NAILING	MTL.	METAL
C	CHANNEL	MIN.	MINIMUM
CLG.	CEILING	N.T.S.	NOT TO SCALE
CLR.	CLEAR	NO. or #	NUMBER
COL.	COLUMN	O.C.	ON CENTER
C.M.U.	CONCRETE MASONRY UNIT	OPNG.	OPENING
		OPP.	OPPOSITE
C.J.	CONSTRUCTION JOINT	O.D.	OUTSIDE DIA.
		PL.	PLATE
CONC.	CONCRETE	PENNY(d)	NAILS
CONN.	CONNECTION	PLYWD.	PLYWOOD
CONSTR.	CONSTRUCTION	P.S.F.	POUNDS PER SQUARE FOOT
CONT.	CONTINUOUS	P.S.I.	POUNDS PER SQUARE INCH
DA	DOUBLE ANGLE		
DEMO.	DEMOLISH	PRESS.	PRESSURE
DET.	DETAIL	R.	RADIUS
DIAG.	DIAGONAL	REINF.	REINFORCING
DIA. (Ø)	DIAMETER	REQD.	REQUIRED
DIM.	DIMENSION	RM.	ROOM
DBL.	DOUBLE	SCHED.	SCHEDULE
DWG.	DRAWING	SHTG.	SHEATHING
EA.	EACH	SHT.	SHEET
E.N.	EDGE NAILING	SIM.	SIMILAR
ELEV.	ELEVATION	SLV	SHORT LEG VERTICAL
EOR	ENGINEER OF RECORD	SPEC.	SPECIFICATION
ENGR.	ENGINEER	STGR.	STAGGER
EQ.	EQUAL	STD.	STANDARD
EQUIP.	EQUIPMENT	STL.	STEEL
ES	EDGE SCREW OR EACH SIDE	STIFF.	STIFFENER
		STRUCT.	STRUCTURAL
EXIST (E)	EXISTING	SQ.	SQUARE
EXP.	EXPANSION	SYM.	SYMMETRICAL
FIN.	FINISH	TF	TOP FLANGE
F.N.	FIELD NAILING	THK.	THICK
FM	FACE MOUNT	TS	TUBE STEEL
FLR.	FLOOR	U.B.C.	UNIFORM BUILDING CODE
FTF	FLOOR TO FLOOR	U.N.O.	UNLESS NOTED OTHERWISE
FTG.	FOOTING	VERT.	VERTICAL
FDN.	FOUNDATION	W.	WIDTH
FRMG.	FRAMING	WT.	WEIGHT
GA.	GAUGE	W.W.F.	WELDED WIRE FABRIC
GALV.	GALVANIZED	W.W.M.	WELDED WIRE MESH
GF	GOOD FOR	W.F. W/	WIDE FLANGE WITH
G.L.B.	GLUE LAM BEAM	WS	WOOD SCREW
GRD.	GRADE		

SHEET INDEX:

OWNER DATA:

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16251 FANTASIA LN.
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(714) 319-9495
DEBBIEBLACKWELL1@VERIZON.NET

DESIGNER:

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STRUCTURAL ENGINEER:

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LAKE HAVASU CITY, AZ 86403
PHONE: 928-453-9955
EMAIL: george@azpes.com

BUILDING DEPARTMENT:

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CONTACT: BUILDING OFFICIAL
PHONE: 928-453-4149

SCOPE OF WORK

1. CONSTRUCT A 3,339 SF SINGLE FAMILY RESIDENCE ON 0.36± ACRE LAND.

APPLICABLE BUILDING CODES

2018 INTERNATIONAL BUILDING CODE
2018 INTERNATIONAL RESIDENTIAL CODE W/AMENDMENTS
2018 INTERNATIONAL PLUMBING CODE
2018 NATIONAL ELECTRIC CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL FUEL GAS CODE
2018 INTERNATIONAL FIRE CODE
2010 ADAAG MANUAL

NOTES

REVISIONS:

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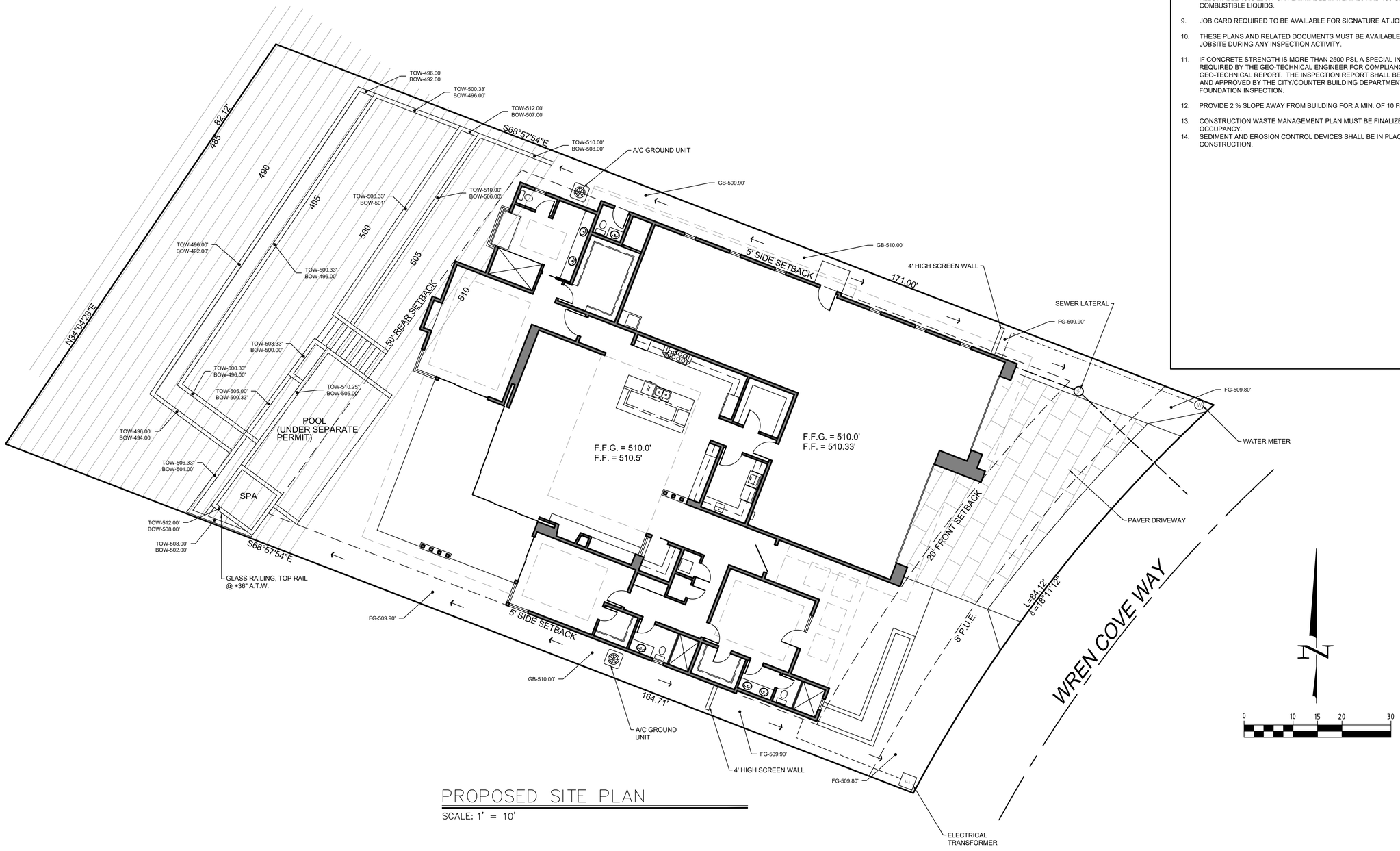
CUSTOM HOME FOR:
MR. & MRS. BLACKWELL
TRACT 2400A LOT 11
2441 WREN COVE WAY
LAKE HAVASU CITY, AZ

JOB NO.:2208 SHEET NO.: A0.1

DATE: 05/22/2022



PROPOSED SITE PLAN

SCALE: 1' = 10'

GENERAL NOTES:

1. CHEMICAL TOILET IS REQUIRED ON-SITE DURING CONSTRUCTION.
2. IF THE PLANS DO NOT ACCURATELY REFLECT THE JOB CONDITIONS OR THE CONSTRUCTION IS NOT PER PLANS, NO INSPECTIONS WILL OCCUR UNTIL AN ADDENDUM IS APPROVED BY THE CITY/COUNTY IS OBTAINED.
3. ANY CHANGES FROM THE APPROVED PLANS DURING THE COURSE OF CONSTRUCTION SHALL CAUSE CONSTRUCTION TO BE SUSPENDED UNTIL SUCH TIME AS THE PLANS CAN BE AMENDED BY THE DESIGNER AND SUBMITTED TO THE CITY/COUNTY FOR REVIEW AND APPROVAL.
4. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF ALL DIMENSIONS, GRADES, AND ALL OTHER CONDITIONS AND CORRELATE AT THE JOBSITE AND REPORT ANY DISCREPANCIES TO THE DESIGNER FOR CLARIFICATION PRIOR TO COMMENCING ANY WORK.
5. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE WORK AND THE COORDINATION OF ALL TRADES AND GOVERNING AGENCIES.
6. THE DESIGNER ASSUMES NO RESPONSIBILITY FOR THE SUPERVISION OF THE WORK AND/OR POSSIBLE ERRORS OR OMISSIONS SHOWN OR INFERRED ON THE DRAWINGS OR THE PROPER EXECUTION OF THE SAME.
7. COMPLIES WITH 2012 IBC, 2012 IRC, 2012 IMC, 2011 NEC, 2012 IPC, 2012 IFGC.
8. THE QUANTITIES OF HAZARDOUS MATERIALS SHALL NOT EXCEED THE ALLOWABLE 1000 LBS. FOR FLAMMABLE MATERIALS AND 100 GALLONS OF COMBUSTIBLE LIQUIDS.
9. JOB CARD REQUIRED TO BE AVAILABLE FOR SIGNATURE AT JOBSITE.
10. THESE PLANS AND RELATED DOCUMENTS MUST BE AVAILABLE AT THE JOBSITE DURING ANY INSPECTION ACTIVITY.
11. IF CONCRETE STRENGTH IS MORE THAN 2500 PSI, A SPECIAL INSPECTION IS REQUIRED BY THE GEO-TECHNICAL ENGINEER FOR COMPLIANCE WITH THE GEO-TECHNICAL REPORT. THE INSPECTION REPORT SHALL BE SUBMITTED TO AND APPROVED BY THE CITY/COUNTER BUILDING DEPARTMENT PRIOR TO THE FOUNDATION INSPECTION.
12. PROVIDE 2 % SLOPE AWAY FROM BUILDING FOR A MIN. OF 10 FEET.
13. CONSTRUCTION WASTE MANAGEMENT PLAN MUST BE FINALIZED PRIOR TO OCCUPANCY.
14. SEDIMENT AND EROSION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO CONSTRUCTION.

NOTES

REVISIONS:

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CUSTOM HOME FOR:
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TRACT 2400A LOT 11
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JOB NO.:2208

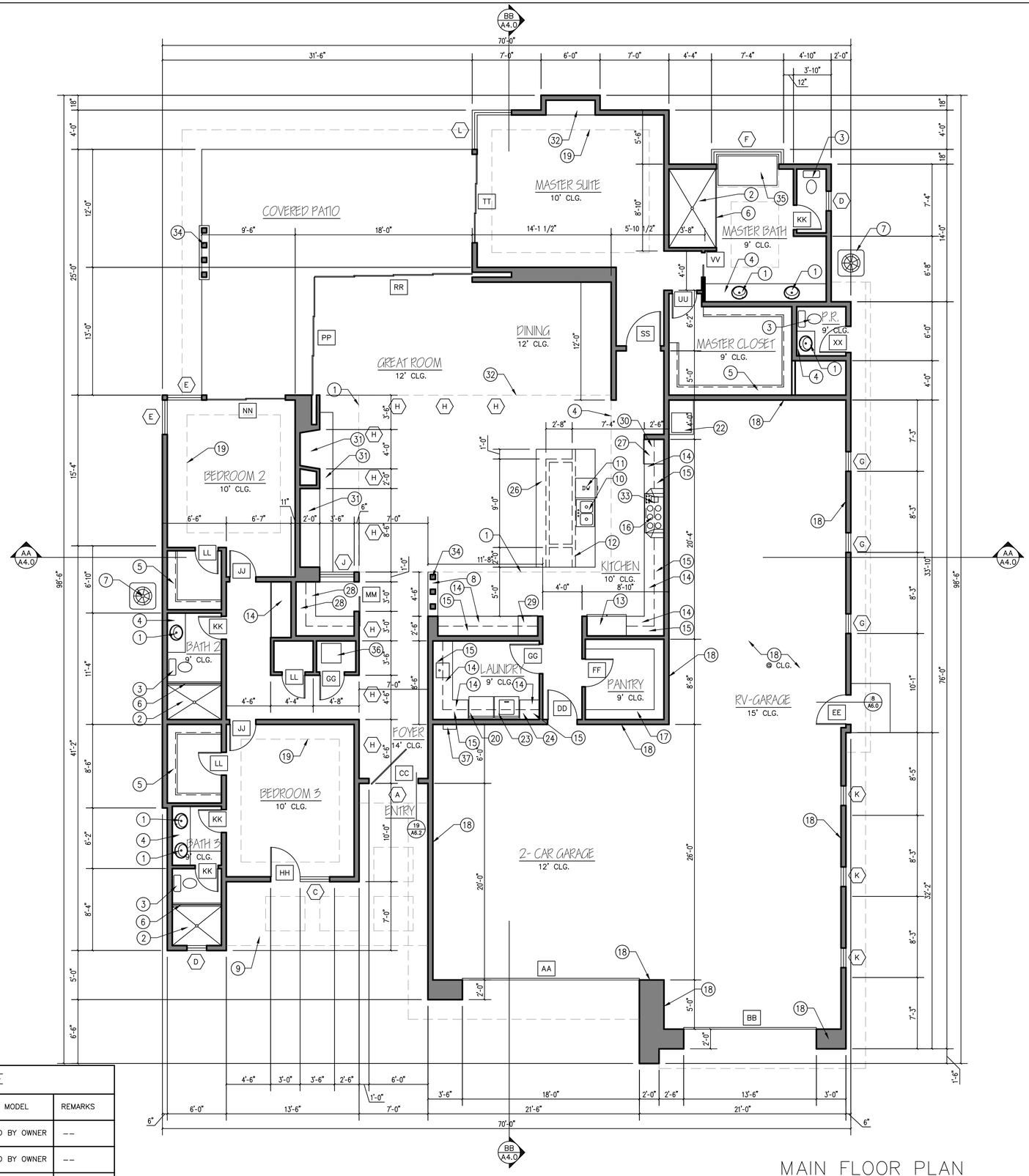
SHEET NO.:

DATE: 05/22/2022

C-1

WATER FIXTURE UNITS PER IPC 2018 TABLE 610.3

FIXTURE DESCRIPTION	QTY.	WATER FU'S	TOTAL WFU'S
BATHROOM TOILET	4	2.5	10
BATHROOM SINK	6	1.0	6
CLOTHES WASHER	1	4.0	4
KITCHEN SINK	1	2.0	2
DISHWASHER	1	1.5	1.5
50 GALLON WATER HEATER	1	4.0	4
SHOWER	3	6.0	18
HOSE BIBB	4	2.5	10
LAUNDRY SINK	1	1.0	1
TUB	1	4.0	4
		TOTAL:	60.5



PLUMBING FIXTURE SCHEDULE

DESCRIPTION	QNTY.	WASTE	VENT	HOT WATER	COLD WATER	TRAP	MANUFACTURER	MODEL	REMARKS
WATER CLOSET BY OWNER	4	3"ø	2"ø	--	3/4"ø	INT.	AMERICAN STANDARD OR EQUAL	TBD BY OWNER	--
LAVATORY BY OWNER	6	1 1/2"ø	1 1/2"ø	1/2"ø	1/2"ø	INT.	AMERICAN STANDARD OR EQUAL	TBD BY OWNER	--
NEW 50 GALLON WATER HEATER (ELECTRIC)	1	--	--	--	3/4"ø	--	AMERICAN STANDARD OR EQUAL	TBD BY OWNER	--

MAIN FLOOR PLAN

SCALE: 3/16" = 1'-0"

NOTES

1 DROP-IN LAVATORY.
2 SHOWER , PROVIDE THERMOSTATIC MIXING VALVE.
3 TOILET, LOW-FLOW TYPE NOT TO EXCEED 1.28 GALLONS PER FLUSH.
4 22" DEEP X 36" HIGH VANITY CABINET.
5 ROD & SHELF.
6 TEMPERED GLASS SHOWER ENCLOSURE.
7 A/C GROUND MOUNTED CONDENSER UNIT MOUNTED ON CONCRETE PAD.
8 LOW ALL TO +36" A.F.G.
9 ROOF OVERHANG, SEE ROOF PLAN.
10 DOUBLE SINK WITH DISPOSAL.
11 DISHWASHER, BY OWNER.
12 2X4 LOW WALL TO +36" A.F.F.
13 REFRIGERATOR, BY OWNER.
14 24" DEEP X 36" HIGH BASE CABINET.
15 12" DEEP UPPER CABINET.
16 PROPANE 6-BURNER COOKTOP.
17 PANTRY SHELVING.
18 5/8" TYPE 'X' GYPSUM BOARD.
19 LINE OF LIGHT SHELF @ +8'-6" A.F.F.
20 LAUNDRY SINK.
21 18" WIDE X 48" HIGH LOW WALL.
22 ELECTRIC FORCED AIR UNIT.
23 CLOTHES DRYER, BY OWNER. VENT TO EXTERIOR.
24 CLOTHES WASHER, BY OWNER.
25 DRYER VENT TO EXTERIOR.
26 36" HIGH ISLAND COUNTERTOP.
27 ELECTRIC WALL OVEN.
28 HOSE BIBB. INSULATE ALL EXPOSED PIPE AND PROVIDE BACKFLOW PREVENTER.
29 UNDER-CABINET WINE FRIDGE.
30 MICROWAVE MOUNTED ABOVE OVEN.
31 CONCRETE STOOP PER R311.3.
32 60" LINEAR PROPANE DIRECT VENT FIREPLACE. PROVIDE MANUFACTURER INSTALLATION SPECS ON SITE FOR BUILDING INSPECTOR.
33 100CFM RANGE HOOD.
34 STEEL COLUMNS, SEE STRUCTURAL.
35 FREE-STANDING SOAKING TUB. PROVIDE THERMOSTATIC MIXING VALVE.
36 FORCED AIR UNIT.
37 TANKLESS HOT WATER HEATER.

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JOB NO.:2208
SHEET NO.:
A1.0
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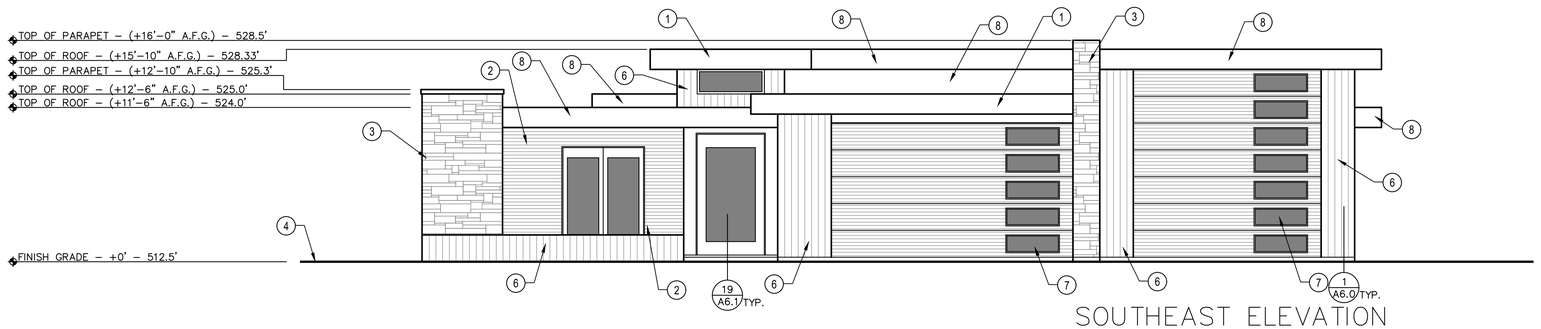
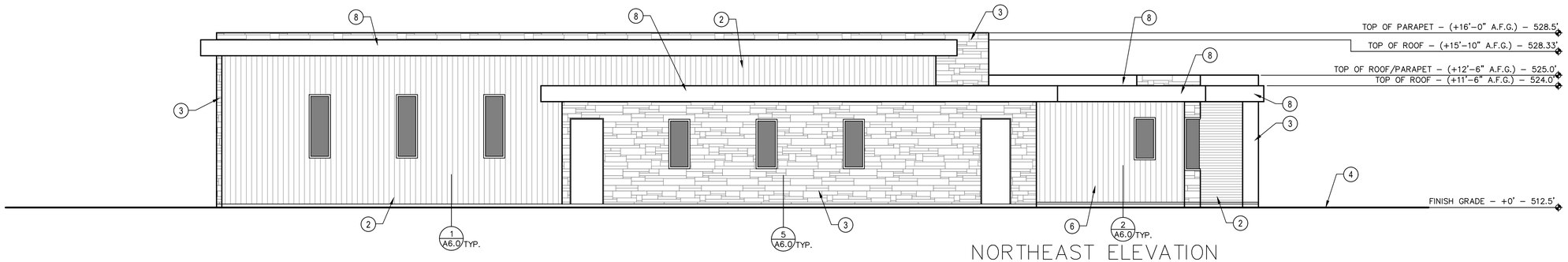


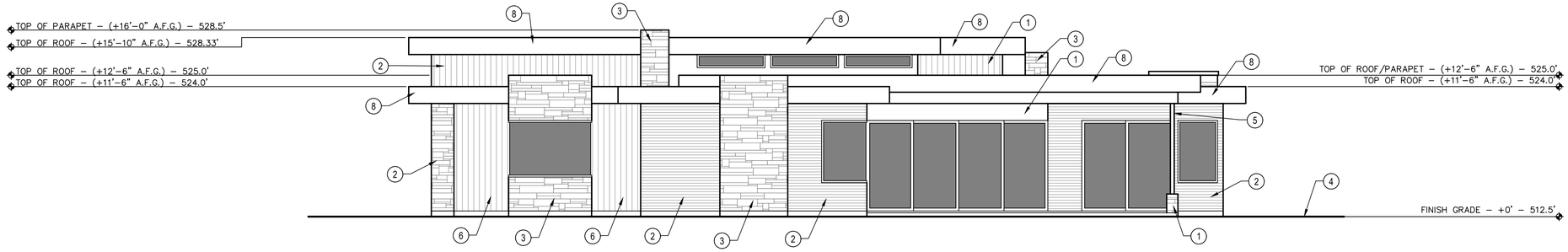
SOUTHEAST ELEVATION

SCALE: 3/16" = 1'–0"



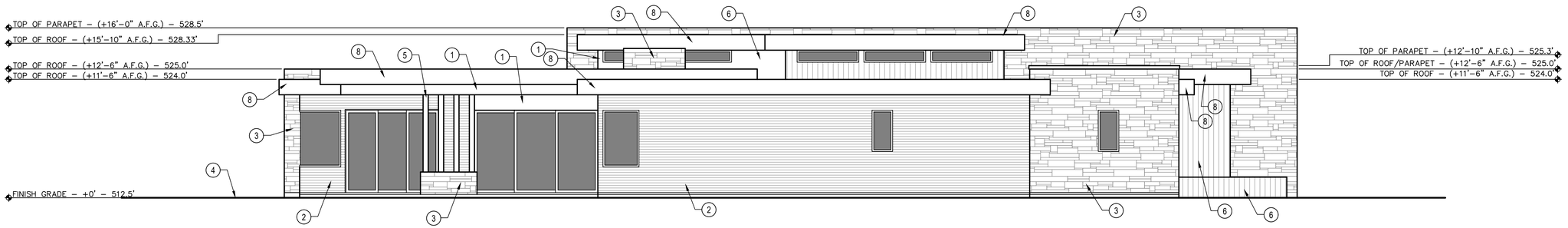
NORTHEAST ELEVATION

SCALE: 3/16" = 1'–0"



NORTHWEST ELEVATION

SCALE: 3/16" = 1'–0"



SOUTHWEST ELEVATION

SCALE: 3/16" = 1'–0"

NOTES

1. 2–COAT STUCCO SYSTEM O/GRADE 'D' BUILDING PAPER O/PLYWOOD OR SHEAR WALL.
2. NICHIHA COMPOSITE SIDING SEE SHEET A6.2.
3. STONE VENEER.
4. LINE OF NATURAL GRADE. SEE SITE PLAN.
5. STEEL COLUMN PER PLAN.
6. EXTERIOR TEXTURED TILE SET VERTICALLY.
7. 60% TINTED GLASS AT GARAGE DOOR.
8. PAINTED METAL FASCIA.

REVISIONS:

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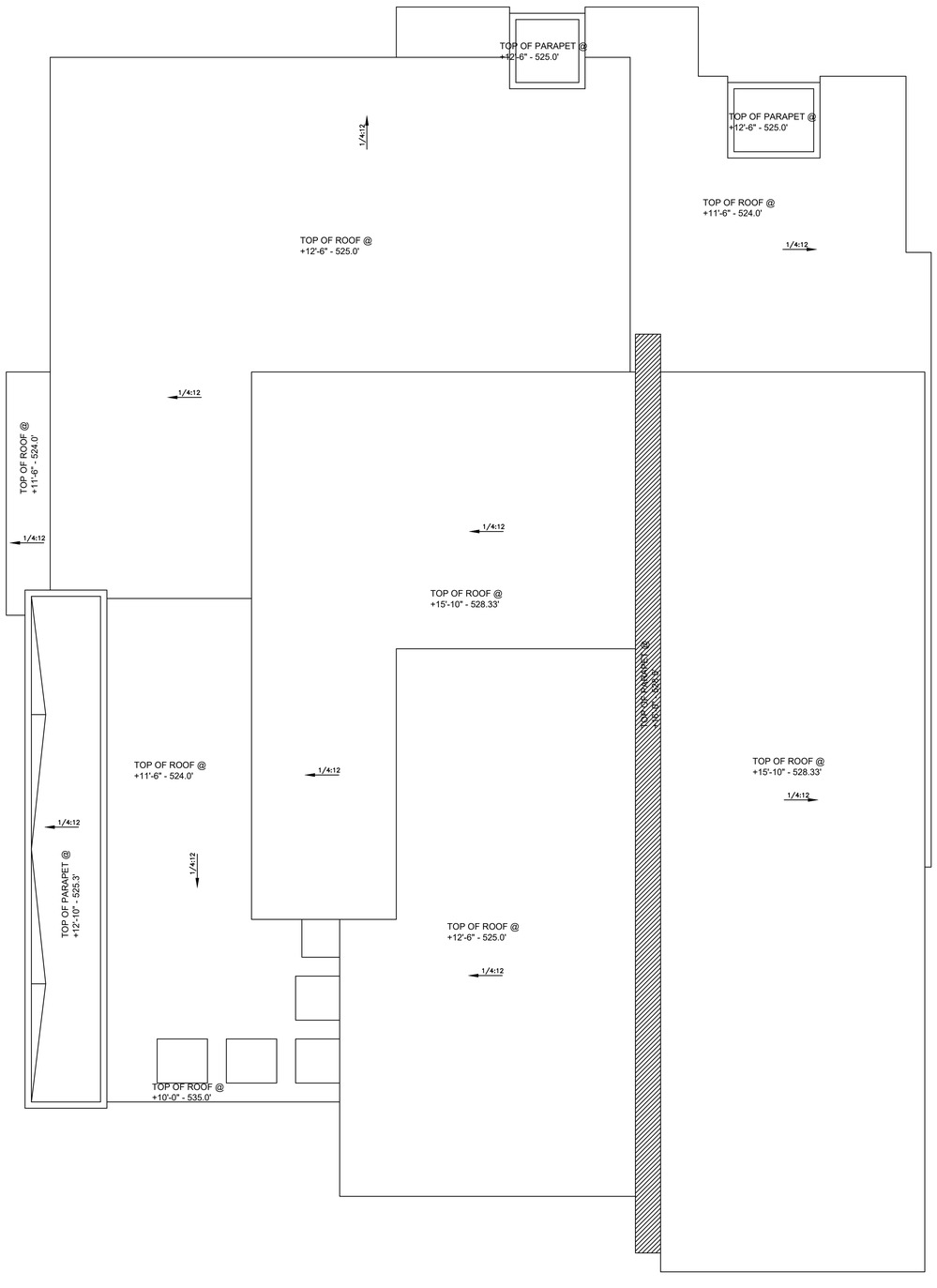

ROOF PLAN

SCALE: 3/16" = 1'-0"

ROOF HEIGHT CALCULATIONS

ROOF AREA AT MAX. HEIGHT: 40% MAX. ALLOWED (16'-0" A.F.G.)
39% ROOF AREA @ +16'-0"

ROOF AREA BELOW MAX. HEIGHT: 60% MIN. ALLOWED
61% ROOF AREA BELOW +13'-0"

ROOFING NOTES

NOTE: ALL ROOFING MATERIAL SHALL BE FOAM ROOFING OR EQUAL AND WILL BE INSTALLED TO CREATE THE SPECIFIED SLOPE IN THE DRAWINGS.

NOTES

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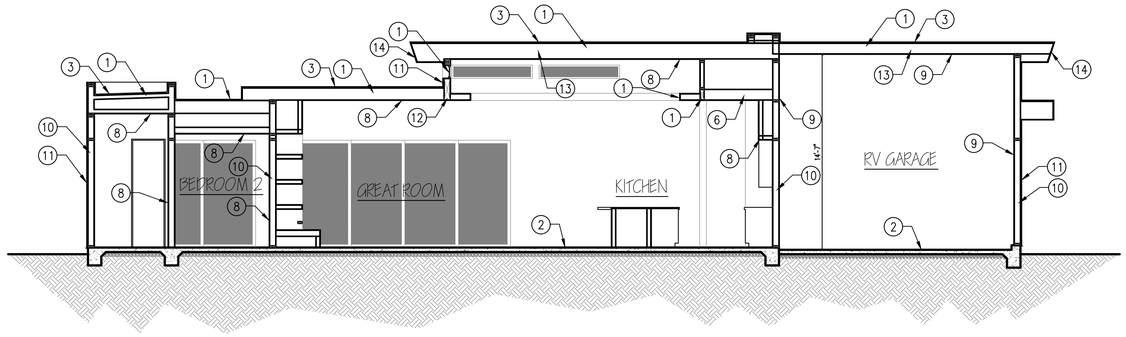
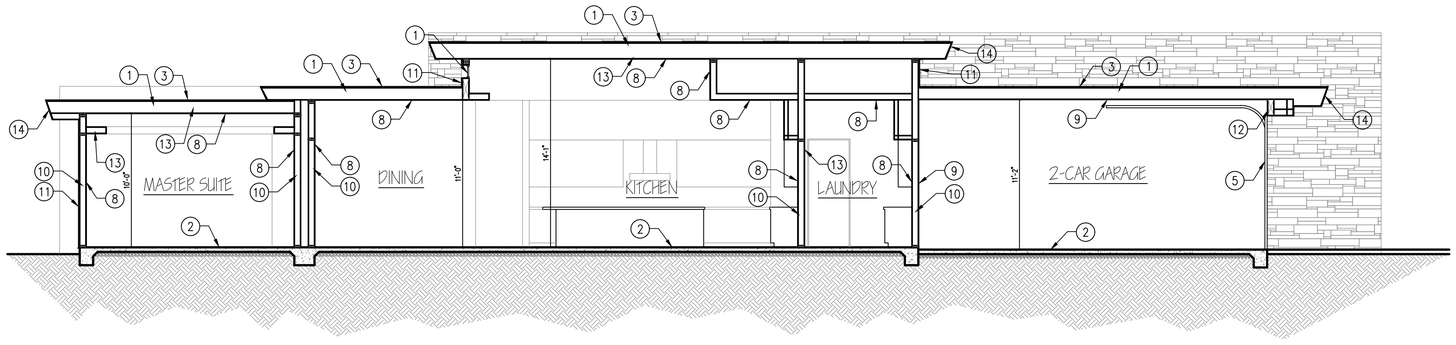
A3.0



BUILDING SECTION – AA

SCALE: 3/16" = 1'-0"



BUILDING SECTION – BB

SCALE: 3/16" = 1'-0"

NOTES

1 ROOF FRAMING W/RADIANT PLYWOOD.
2 4" SLAB ON GRADE, SEE STRUCTURAL PLANS.
3 FOAM ROOFING O/30# FELT.
4 WINDOW, SEE WINDOW SCHEDULE, ELEVATIONS.
5 DOOR, SEE DOOR SCHEDULE.
6 2X CEILING JOIST, SEE STRUCTURAL.
7 2X4 STUD @ 16" O.C.
8 1/2" GYPSUM WALLBOARD.
9 5/8" TYPE 'X' GYPSUM WALLBOARD.
10 2X6 STUD @ 16" O.C. W/R-19 BATT INSULATION.
11 2-COAT STUCCO SYSTEM O/GRADE 'D' BUILDING PAPER O/PLYWOOD OR SHEAR WALL.
12 BEAM, SEE STRUCTURAL PLANS.
13 R-38 ATTIC INSULATION.
14 METAL WRAPPED FASCIA.

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CUSTOM HOME FOR:
MR. & MRS. BLACKWELL
TRACT 2400A LOT 11
2441 WREN COVE WAY
LAKE HAVASU CITY, AZ

JOB NO.:2208

SHEET NO.:

DATE: 05/22/2022

A4.0

DOOR SCHEDULE:

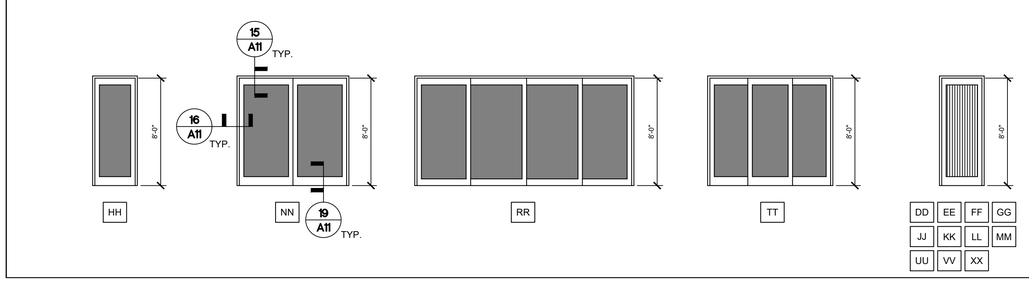
REF.	DESCRIPTION	QTY.	SIZE	DOOR TYPE	DOOR THICKNESS	DOOR CONST.	DOOR FIRE-RATED	DOOR FINISH	DOOR MTRL	SILL HEIGHT A.F.F.	U FACTOR	SHGC	VT VALUE	REMARKS
AA	GARAGE DOOR	1	18'-0" X 10'-0"	RU	MANU	WD	--	PT	WD	-	--	--	--	
BB	GARAGE DOOR	1	14'-0" X 14'-0"	RU	MANU	WD	--	PT	WD	-	--	--	--	
CC	CUSTOM PIVOT ENTRY DOOR	1	5'-0" x 9'-0"	WD	MANU	WD	--	PT	WD	-	--	--	--	GLAZING MUST BE TEMPERED GLASS
DD	1-3/4" SC DOOR	1	3'-0" x 8'-0"	WD	MANU	WD	20-MIN	PT	WD	-	--	--	--	LOCKSET/DEADBOLT 20 MIN. FIRE-RATED, GASKETED, SELF-CLOSING, SELF-LATCHING
EE	SC DOOR	1	3'-0" x 8'-0"	WD	MANU	WD		PT	WD	-	--	--	--	THRESHOLD, WEATHERSTRIPPING, LOCKSET/DEADBOLT
FF	HC DOOR	1	2'-10" x 8'-0"	WD	MANU	WD	--	PT	WD	-	--	--	--	
GG	HC DOOR	1	3'-0" x 8'-0"	WD	MANU	WD	--	PT	WD	-	--	--	--	
HH	SINGLE FRENCH DOOR	1	3'-0" X 8'-0"	WD	MANU	WD	--	PT	WD	-	--	--	--	THRESHOLD, WEATHERSTRIPPING, LOCKSET/DEADBOLT/TEMP. GLASS
JJ	HC DOOR	2	2'-8" x 8'-0"	WD	MANU	WD	--	PT	WD	-	--	--	--	PROVIDE PRIVACY LOCKS AT BATHROOM(S) & TOILET ROOM(S) ONLY
KK	HC DOOR	4	2'-4" x 8'-0"	WD	MANU	WD	--	PT	WD	-	--	--	--	PROVIDE PRIVACY LOCKS
LL	HC DOOR	3	2'-4" x 8'-0"	WD	MANU	WD	--	PT	WD	-	--	--	--	PROVIDE PRIVACY LOCKS
MM	BARN DOOR	1	3'-0" x 8'-0"	WD	MANU	WD	--	PT	WD	-	--	--	--	
NN	SLIDER	1	8'-0" X 8'-0"	SL	MANU	WD	--	PT	WD	-	--	--	--	GLAZING MUST BE TEMPERED GLASS
PP	3-PANEL SLIDER	1	12'-0" X 8'-0"	SL	MANU	WD	--	PT	WD	-	--	--	--	GLAZING MUST BE TEMPERED GLASS
RR	4-PANEL SLIDER	1	16'-0" X 8'-0"	SL	MANU	WD	--	PT	WD	-	--	--	--	GLAZING MUST BE TEMPERED GLASS
SS	PIVOT DOOR	1	4'-0" x 8'-0"	WD	MANU	WD	--	PT	WD	-	--	--	--	
TT	3-PANEL SLIDER	1	9'-0" x 8'-0"	SL	MANU	WD	--	PT	WD	-	--	--	--	TEMPERED GLASS
UU	HC DOOR	2	2'-6" x 8'-0"	WD	MANU	WD	--	PT	WD	-	--	--	--	VENTED AT FAU CLOSET
VV	HC POCKET DOOR	1	2'-6" x 8'-0"	WD	MANU	WD	--	PT	WD	-	--	--	--	
XX	SC DOOR	1	2'-8" x 8'-0"	WD	MANU	WD	--	PT	WD	-	--	--	--	THRESHOLD, WEATHERSTRIPPING, LOCKSET/DEADBOLT

ABBREVIATION

- AL — ALUMINUM
- AT — ARCHED TOP
- ANOD — ANODIZED
- BD — SLIDING BARN DOOR
- BP — BYPASS CLOSET DOOR
- CLR — CLEAR DUAL-GLAZED LOW-E
- CU — CUSTOM
- DBL. — DOUBLE DOOR
- E — EXISTING
- FD — FRENCH DOOR (TEMPERED)
- GA — GARAGE DOOR
- HC — HOLLOW CORE
- MANU — MANUFACTURER
- MTL — METAL (STEEL OR ALUM)
- PD — POCKET DOOR
- PT — PAINT TO MATCH EXISTING
- RU — ROLL-UP DOOR
- SC — SOLID CORE
- SD — SLIDING DOOR (WOOD)
- SL — SLIDING GLASS DOOR (TEMPERED)
- ST — STAINLESS STEEL FINISH
- SF — STOREFRONT DOOR (TEMPERED)
- TEMP — TEMPERED
- VD — DOOR W/ COMBUSTION AIR VENTS
- WD — WOOD

DOOR SCHEDULE NOTES:

1. ALL EXTERIOR GLASS DOOR(S) SHALL BE TEMPERED.
2. ALL EXTERIOR DOOR(S) LEADING TO BUILDING SHALL HAVE AN ALUMINUM THRESHOLD(S) AND BE FULLY WEATHERED STRIPPING.
3. AS PER CBC STANDARDS PROVIDE THE FOLLOWING:
   - 3.1. ALL WATER HEATER ROOM(S) SHALL HAVE CEILING FURRED DOWN TO 7'-0".
   - 3.2. PROVIDE 1 3/8" SOLID CORE DOOR W/ SELF CLOSER AT THE DOOR.
   - 3.3. PROVIDE DEAD BOLTS AND KEYED LOCK AT ALL EXTERIOR DOOR(S). PROVIDE STEEL PLAT AT THE DEAD BOLT STRIKER, SOLID SHIM 6" ABOVE AND BELOW WITH (2) #8x2" SCREWS.
4. ALL WATER HEATER ROOMS SHALL HAVE CEILINGS FURRED DOWN TO 7'-0".
5. PROVIDE A 1 3/8" SOLID CORE DOOR W/ SELF CLOSER AT THE DOOR.
6. MINIMUM WIDTH OF DOOR OPENINGS SHALL BE A CLEAR WIDTH OF 36" FOR ACCESSIBILITY.
7. ALL SHOWER DOORS SHALL BE TEMPERED GLASS GLAZING.
8. IF A NEW TANK WATER HEATER IS INSTALLED, PROVIDE COMBUSTION AIR VENTILATION PER CALCULATIONS BELOW.
9. DOORS BETWEEN THE RESIDENCE AND THE PRIVATE GARAGE SHALL BE SELF-CLOSING AND SELF-LATCHING WHEN BOTH THE GARAGE AND THE RESIDENCE ARE PROTECTED BY AN AUTOMATIC RESIDENTIAL FIRE-SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION R309.6 AND R313.
10. EXTERIOR DOOR WIDTH SHALL BE A MINIMUM OF 36"
11. VERTICAL DROP AT EXTERIOR DOORS SHALL NOT EXCEED 7-3/4".



WINDOW SCHEDULE:

REF.	DESCRIPTION	QTY.	SIZE	WINDOW TYPE	WINDOW GLAZING	GLASS		DOOR STYLE	DOOR FINISH	DOOR MTRL	TOP HEIGHT A.F.F.	U FACTOR	SHGC	VT VALUE	EGRESS OPENING	REMARKS
A	WINDOW	1	50110	FIXED	DP	CLR.	LE	CS	WHT	VY	96"	0.29	0.22	0.50	--	
B	MITER WINDOW	1	26562656	FIXED	DP	CLR.	LE	CS	WHT	VY	96"	0.29	0.22	0.50	--	
C	WINDOW	1	3080	FIXED	DP	CLR.	LE	CS	WHT	VY	96"	0.29	0.22	0.50	--	FRENCH/ TEMPERED
D	WINDOW	2	2040	CAS	DP	CLR.	LE	CS	WHT	VY	96"	0.29	0.22	0.50	--	TEMPERED
E	WINDOW	2	3656	CAS	DP	CLR.	LE	CS	WHT	VY	96"	0.29	0.22	0.50	--	TEMPERED
F	MITER WINDOW	1	1650-74501650	FIXED	DP	CLR.	LE	CS	WHT	VY	96"	0.29	0.22	0.50	--	TEMPERED
G	WINDOW	3	2046	FIXED	DP	CLR.	LE	CS	WHT	VY	96"	0.29	0.22	0.50	--	
H	WINDOW	9	60110	FIXED	DP	CLR.	LE	CS	WHT	VY	166"	0.29	0.22	0.50	--	
J	WINDOW	1	3650	FIXED	DP	CLR.	LE	CS	WHT	VY	96"	0.29	0.22	0.50	--	TEMPERED
K	WINDOW	3	2060	FIXED	DP	CLR.	LE	CS	WHT	VY	124"	0.29	0.22	0.50	--	
L	MITER WINDOW	1	40564056	FIXED	DP	CLR.	LE	CS	WHT	VY	96"	0.29	0.22	0.50	--	

ABBREVIATION

- AT — ARCHED TOP
- CLR — CLEAR
- CS — CLASSIC STYLE
- DP — DUAL PANE
- F — FIXED
- HR — HALF ROUND
- HS — HORIZONTAL SLIDER
- LE — LOW-E
- MTL — METAL
- CAS — CASEMENT
- MTRL — MATERIAL
- OBS — OBSCURED
- PW — PICTURE WINDOW
- R — RENAINNASSANCE
- SH — SINGLE HUNG
- TEMP — TEMPERED GLASS
- VY — VINYL
- WHT — WHITE

WINDOW SCHEDULE NOTES:

1. ALL WINDOW ARE TO BE SUPPLIED BY OTHERS UNLESS NOTED OTHERWISE.
2. ALL OPEN-ABLE WINDOWS SHALL HAVE INSECT SCREENS.
3. ALL WINDOWS SHALL BE INSTALLED TO MANUFACTURE'S SPECIFICATION.
4. 44" MAX. SILL HEIGHT FOR WINDOWS USED AS EMERGENCY EXISTS.
5. FENESTRATION U-VALUES SHALL EQUAL OR BE LESS THAN 0.52.
6. WINDOW SIZES ARE STANDARD NOTATION 48"x24" > 18" DESIGNATES: WIDTH x HEIGHT OF ARCH > (TO) SHORTEST LEG OF ARCH.
7. WINDOWS TO MEET MINIMUM STANDARDS AS ESTABLISHED BY MIN. STANDARDS.
8. ALL WINDOWS WITHIN OF 24" EDGE OF ADJACENT DOORS AND 11. / OR WINDOWS SHALL BE TEMPERED GLASS.
9. BOTTOM OF ALL WINDOWS WITHIN OF 18" HEIGHT OF FINISHED FLOOR SHALL BE TEMPERED GLASS.
10. GLAZING WITHIN 60 INCHES (MEASURED HORIZONTALLY IN A STRAIGHT LINE) OF THE WATER EDGE OF HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, SHOWERS, AND INDOOR OR OUTDOOR SWIMMING POOLS WHERE THE BOTTOM EDGE OF THE WINDOW IS LESS THAN 60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE.
11. WINDOWS WITHIN 36" (MEASURED HORIZONTALLY IN A STRAIGHT LINE) TO A WALKING SURFACE WITH INDIVIDUAL PANE(S) GREATER THAN NINE SQUARE FEET, WHERE TOP EDGE IS GREATER THAN 36 INCHES AND BOTTOM EDGE IS LESS THAN 18 INCHES ABOVE THE FLOOR.

NOTES

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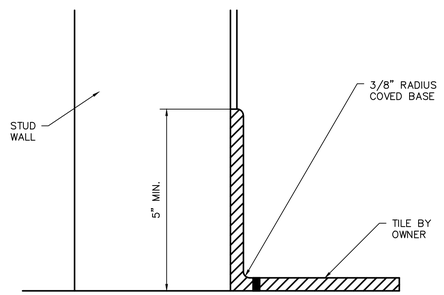
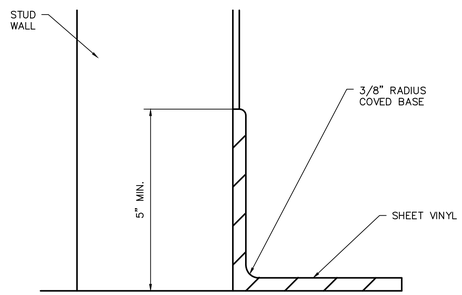
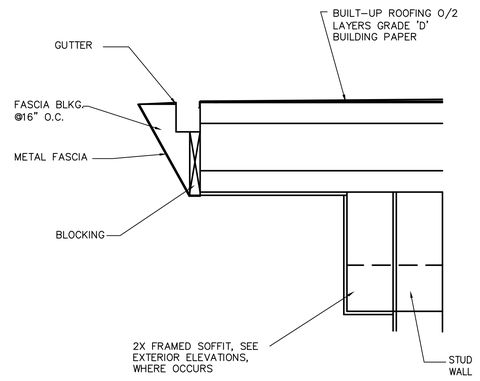


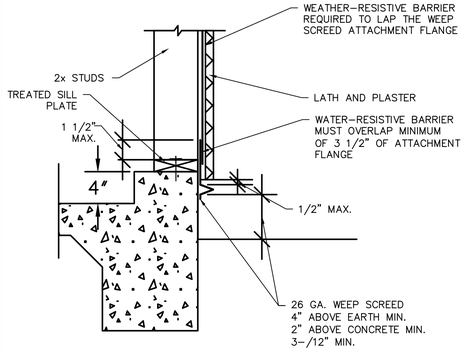
9 TILE COVED BASE DETAIL
SCALE: N.T.S.



6 SHEET VINYL COVED BASE DTL.
SCALE: N.T.S.



4 *TYPICAL OVERHANG*
SCALE: N.T.S.



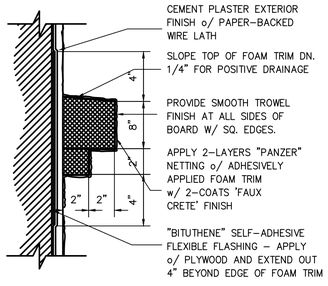
1 WEEP SCREED AT STEM WALL - TYP.
SCALE: N.T.S.

10 WOOD BASE DETAIL
SCALE: N.T.S.

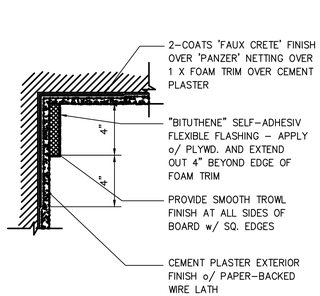
7 CONCRETE BASE DETAIL
SCALE: N.T.S.

5 STONE VENEER DETAIL - TYP.
SCALE: N.T.S.

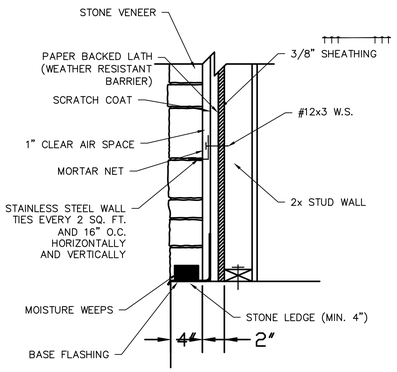
2 WEEP SCREED AT WALL - TYP.
SCALE: N.T.S.



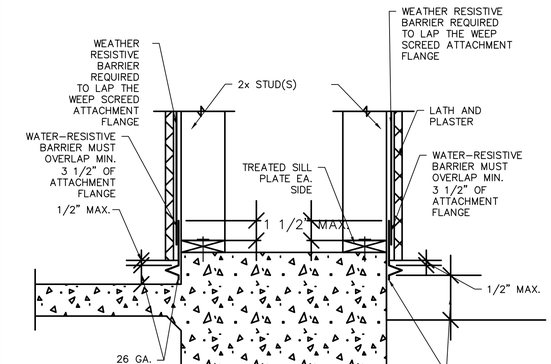
11 *TYP. DOUBLE TRIM DETAIL*
SCALE: N.T.S.



8 *TYP. FLAT TRIM @ CEILING*
SCALE: N.T.S.



5 STONE VENEER DETAIL - TYP.
SCALE: N.T.S.



3 WEEP SCREED AT BOX COLUMN - TYP.
SCALE: N.T.S.

NOTES

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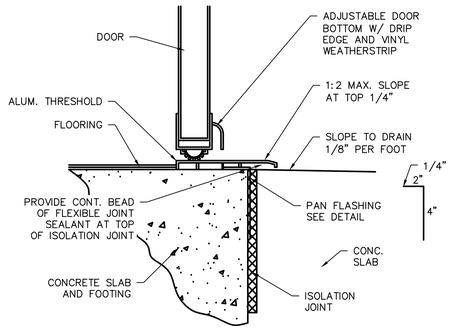
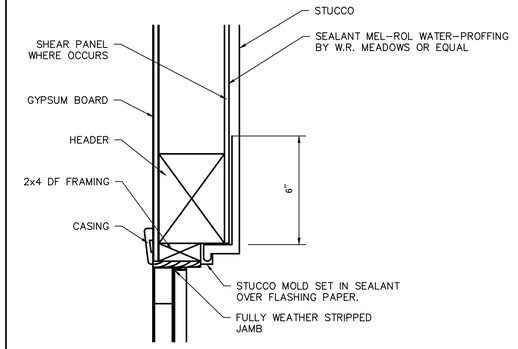


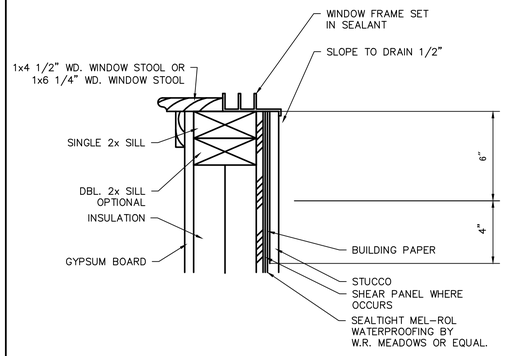
NOTE:
PROVIDE A MAXIMUM OF 1/2" OFFSET AT ALL THRESHOLDS AND AT ANY CHANGE OF FLOORING MATERIAL. OFFSETS GREATER THAN 1/4" REQUIRE A MAXIMUM BEVELED SLOPE OF 1 UNIT VERTICAL TO 2 UNITS HORIZONTAL, EXCEPT THAT LEVEL CHANGES NOT EXCEEDING 1/4" MAY BE VERTICAL.

19 DOOR THRESHOLD - TYP.
SCALE: N.T.S.

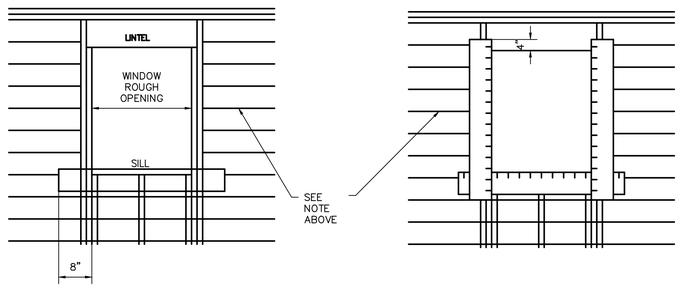
18 NOT USED
SCALE: N.T.S.



15 DOOR HEADER DETAIL - TYP.
SCALE: N.T.S.

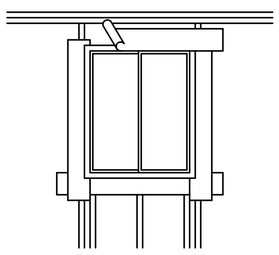


12 WINDOW SILL DETAIL - TYP.
SCALE: N.T.S.



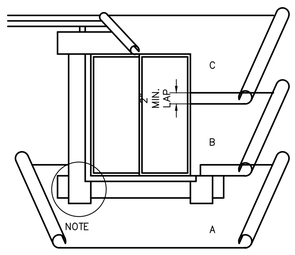
1) ATTACH SILL STRIP WITH TOP EDGE LEVEL WITH ROUGH SILL, EXTEND BEYOND EDGE OF ROUGH OPENINGS AT LEAST 8" SECURE ALL SISALKRAFT OR SIMILAR APPROVED FLASHING MATERIAL WITH GALVANIZED NAILS OR POWER-DRIVEN STAPLES.

2) ATTACH JAMB STRIPS WITH SIDE EDGE EVEN WITH ROUGH – JAMB FRAMING. START STRIP 1" BELOW LOWER EDGE OF SILL STRIP AND EXTEND 4" ABOVE LOWER EDGE OF LINTEL.



3) INSTALL WINDOWS INTO ROUGH OPENINGS WITH SILL AND JAMB FLANGES OVER PREVIOUSLY INSTALLED FLASHING. ATTACH HEAD FLASHING OVER THE WINDOW FLANGE.

THE ABOVE METHOD APPLIES ONLY TO THE MOST COMMONLY USED TYPE OF METAL FRAME (SURFACE MOUNTED), FOR OTHER TYPES OF FRAMES, SPECIAL ATTENTION MUST BE PAID TO THE MANUFACTURER'S RECOMMENDATION.



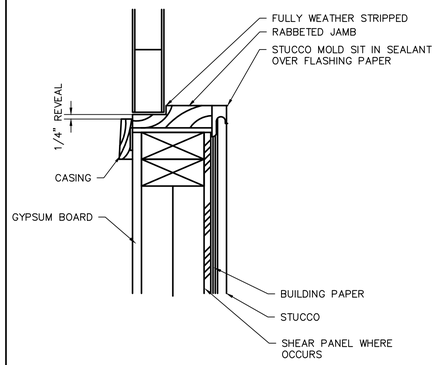
4) COMMENCING AT THE BOTTOM (SOLE PLATE) OF THE WALL, LAY BUILDING PAPER THAT MAY EXTEND ABOVE THE SILL FLANGE LINE ON EACH SIDE OF OPENING (SHOWN AS SHORT DASH LINES). DO NOT SLICE BUILDING PAPER HORIZONTALLY SO THAT THE PAPER WILL LAP OVER THE JAMB STRIPS. INSTALL SUCCESSIVE LINES OF BUILDING PAPER (B,C,D, ETC.) OVER JAMB AND HEAD FLANGES, LAPPING EACH COURSE.

SINCE METHODS OF FLASHING ARE NOT SPECIFIED IN THE CODE THE FOLLOWING PROCEDURE WILL BE CONSIDERED AS AN ACCEPTABLE METHOD FOR THE FLASHING OF METAL WINDOWS IN WOOD FRAME EXTERIOR WALL CONSTRUCTION IN CASES WHERE THE EXTERIOR WALL FINISH IS APPLIED OVER BUILDING PAPER OR FELT. THIS PROCEDURE DOES NOT APPLY TO WATERPROOF PANEL TYPE SIDING.

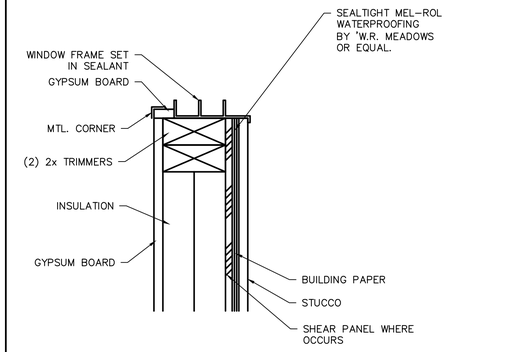
NOTE: LINE-WIRE, WHEN USED AS BACKING TO SUPPORT PAPER BENEATH WIRE LATH (NETTING) FOR PORTLAND CEMENT PLASTER (STUCCO). SHALL BE INSTALLED AS THE FOLLOWING:

1. WIRE GAUGE, SPACING AND ATTACHMENT SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF BUILDING NEWSLETTER 47-1.
2. PERIPHERAL FLASHING AT ALL EDGES OF WALL OPENING MUST COVER THE WIRE BACKING.
3. NO ATTACHMENT DEVICES NOR THE WIRE BACKING SHALL COVER OR PENETRATE THE FLASHING MATERIAL.

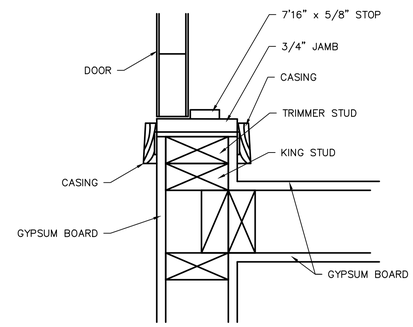
20 OPENING FLASHING DETAIL - TYP.
SCALE: N.T.S.



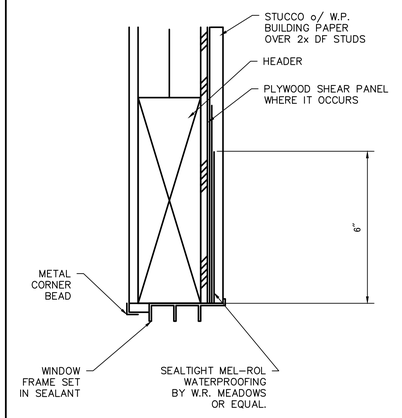
16 DOOR JAMB DETAIL - TYP.
SCALE: N.T.S.



13 WINDOW JAMB DETAIL - TYP.
SCALE: N.T.S.



17 DOOR JAMB AT PREP. WALL - TYP.
SCALE: N.T.S.



14 WINDOW HEADER DETAIL - TYP.
SCALE: N.T.S.

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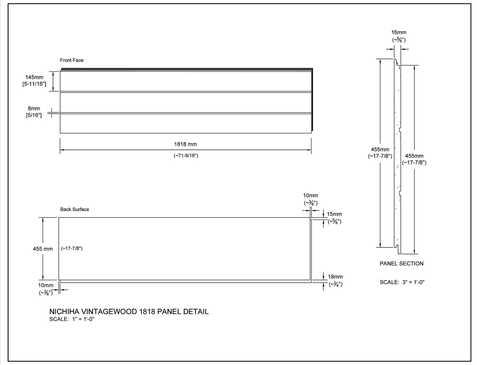
Tele: (602) 750-7898
Email: jdldesigninc@gmail.com

CUSTOM HOME FOR:
MR. & MRS. BLACKWELL
TRACT 2400A LOT 11
2441 WREN COVE WAY
LAKE HAVASU CITY, AZ

JOB NO.:2208
SHEET NO.:
A6.1
DATE: 05/22/2022



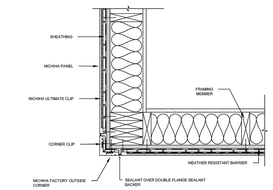
NICHIHA VINTAGEWOOD 1818 PANEL DETAIL
SCALE: 1" = 1'-0"

34 SIDING PANEL DETAIL

SCALE: N.T.S.

NOTES:

1. THIS CONCEPTUAL DETAIL IS A GUIDE FOR INSTALLATION OF NICHIHA PRODUCTS. ARCHITECTS/ENGINEERS/CONTRACTORS ARE RESPONSIBLE FOR SUCCESSFUL APPLICATION WHICH DEPENDS UPON SUBSTRATE DESIGN AND CONSTRUCTION BUILT IN ACCORDANCE WITH BEST PRACTICES AND LOCAL BUILDING CODES.
2. NICHIHA PANEL REPRESENTED HERE IS 5/8" NICHIHA PRODUCT, ADJUST ACCORDINGLY FOR OTHER NICHIHA PRODUCT THICKNESSES.
3. SHEATHING REPRESENTED HERE IS 1/2" PLYWOOD OR 7/16" OSB. IF USING OTHER THICKNESSES ADJUST ACCORDINGLY.



NICHIHA HORIZONTAL AWP OUTSIDE CORNER DETAIL- FACTORY CORNER

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

31 SIDING CORNER DETAIL

SCALE: N.T.S.

NOTES:

1. THIS CONCEPTUAL DETAIL IS A GUIDE FOR INSTALLATION OF NICHIHA PRODUCTS. ARCHITECTS/ENGINEERS/CONTRACTORS ARE RESPONSIBLE FOR SUCCESSFUL APPLICATION WHICH DEPENDS UPON SUBSTRATE DESIGN AND CONSTRUCTION BUILT IN ACCORDANCE WITH BEST PRACTICES AND LOCAL BUILDING CODES.
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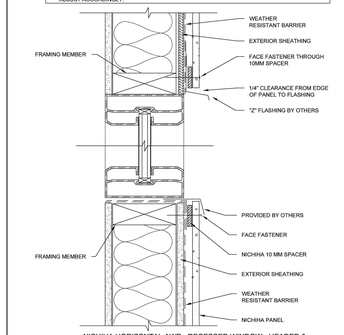


NICHIHA HORIZONTAL AWP - RECESSED WINDOW - HEADER & SILL WITH FLASHING

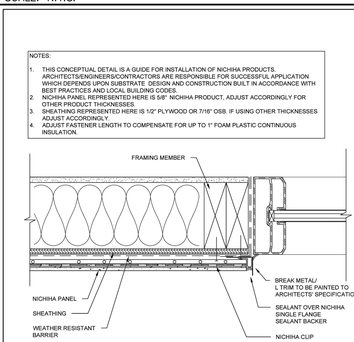
SCALE 3" = 1'-0"

32 SIDING @ WINDOW HEADER/SILL

SCALE: N.T.S.

NOTES:

1. THIS CONCEPTUAL DETAIL IS A GUIDE FOR INSTALLATION OF NICHIHA PRODUCTS. ARCHITECTS/ENGINEERS/CONTRACTORS ARE RESPONSIBLE FOR SUCCESSFUL APPLICATION WHICH DEPENDS UPON SUBSTRATE DESIGN AND CONSTRUCTION BUILT IN ACCORDANCE WITH BEST PRACTICES AND LOCAL BUILDING CODES.
2. NICHIHA PANEL REPRESENTED HERE IS 5/8" NICHIHA PRODUCT, ADJUST ACCORDINGLY FOR OTHER PRODUCT THICKNESSES.
3. SHEATHING REPRESENTED HERE IS 1/2" PLYWOOD OR 7/16" OSB. IF USING OTHER THICKNESSES ADJUST ACCORDINGLY.
4. ADJUST FASTENER LENGTH TO COMPENSATE FOR UP TO 1" FOAM PLASTIC CONTINUOUS INSULATION.



NICHIHA HORIZONTAL AWP - RECESSED WINDOW JAMB - BREAK METAL

SCALE 3" = 1'-0"

33 SIDING @ WINDOW JAMB

SCALE: N.T.S.

NOTES

REVISIONS:

1	

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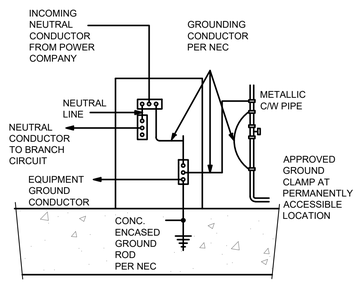
A6.2

ELECTRICAL LOAD CALCULATIONS

TOTAL LIVEABLE SQ. FT = 3,339	@ 3 WATTS =	10,017 WATTS
6 SMALL APPLIANCE CIRCUITS	@ 1500 WATTS =	9,000 WATTS
1 CLOTHES WASHER CIRCUIT	@ 1500 WATTS =	1,500 WATTS
1 MICROWAVE CIRCUIT	@ 1500 WATTS =	1,500 WATTS
1 DISHWASHER CIRCUIT	@ 1500 WATTS =	1,500 WATTS
1 CLOTHES DRYER CIRCUIT	@ 5000 WATTS =	5,000 WATTS
1 OVEN CIRCUIT	@ 8000 WATTS =	8,000 WATTS
SUBTOTAL =		36,517 WATTS
FIRST 10,000 WATTS	@ 100% =	10,000 WATTS
BALANCE OF 26,517 WATTS X 0.4 =	@ 40% =	10,607 WATTS
TOTAL WATTS =		20,607 WATTS
TOTAL AMPS: 20,607 DIVIDED BY 240 VOLTS =		86 AMPS
HVAC UNIT #1 (MAX.) =		40 AMPS
HVAC UNIT #2 (MAX.) =		40 AMPS
RV CIRCUIT =		50 AMPS
PROPOSED AMP USE =		400 AMPS

UFER GROUNDING SYSTEM PER E3608.1.2



RECEPTACLE AND SWITCH NOTES

1. ALL RECEPTACLES MUST BE LOCATED BETWEEN 15" - 48" ABOVE FINISHED FLOOR AND LIGHTING SWITCHES 48" ABOVE THE FINISHED FLOOR OR PLATFORM.
2. BATHROOM LIGHT(S) AND GFCI RECEPTACLE(S) SHALL BE ON A SINGLE SEPARATE CIRCUIT.
3. BATHROOM LIGHTS SHALL BE FLUORESCENT OR HIGH EFFICIENCY LIGHT FIXTURE.
4. RECESSED LIGHTS IN INSULATED CEILINGS MUST HAVE THE FOLLOWING REQUIREMENTS:
   - 4.A. RATED I.C.
   - 4.B. CERTIFIED AIR TIGHT.
   - 4.C. HAVE SEALED GASKET OR CAULK BETWEEN HOUSING AND CEILING.
5. ALL FIXTURES, OUTLETS, AND EQUIPMENT MOUNTED IN / ON THE BUILDING EXTERIOR SHALL BE UL APPROVED FOR WET LOCATION INSTALLATION. PARTIALLY PROTECTED FIXTURES, DEVICES, AND EQUIPMENT MOUNTED SHALL BE UL APPROVED FOR DAMP LOCATION INSTALLATION. RECEPTACLES IN DAMP OR WET LOCATIONS SHALL BE MARKED SUITABLE FOR WET LOCATIONS. E4003.2
6. PROVIDE GFCI RECEPTACLES IN ALL BATHROOM(S) ADJACENT TO EACH BASIN LOCATION.
7. OUTDOOR RECEPTACLES MUST BE WEATHERPROOFED AND GFCI.
8. PROVIDE SWITCHED LIGHTING FIXTURES AT ALL EXIT DOORS.
9. GARAGE DOOR OPENER RECEPTACLES SHALL BE ACCESSIBLE GFI.
10. RECEPTACLES IN HABITABLE ROOMS SHALL BE SPACED SUCH THAT NO POINT ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6 FT. FROM ANY OUTLET. ANY WALL SPACE 2 FT. OR WIDER SHALL HAVE AN OUTLET. E3901.2
11. GFI REQUIRED IN ALL BATHROOMS, KITCHENS AT COUNTER TOPS, BASEMENTS, GARAGE, AND OUTDOORS. E3902
12. PROVIDE BATHROOM RECEPTACLES WITH A SEPARATE 20 AMP CIRCUIT. E3703.4
13. ARC FAULT PROTECTION FOR ALL BRANCH CIRCUITS THAT SUPPLY 120-VOLTS, SINGLE PHASE 15 & 20 AMP OUTLETS INSTALLED IN FAMILY ROOMS, DINING ROOMS, BED ROOMS, LIVING ROMS, SUN ROOMS OR RECREATION, DEN PARLOR, HALLWAYS AND SIMILAR ROOMS. A COMBINATION TYPE OR BRANCH FEEDER TYPE ARC-FAULT CIRCUIT INTERRUPTER INSTALLED TO PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT. E3092.12
14. IN AREAS SPECIFIED IN SECTION E3901.1, ALL 125 VOLT, 15 AND 20 AMPERE RECEPTACLES SHALL BE LISTED TAMPER-RESISTANT-RECEPTACLES. E400.14
15. FACEPLATE GROUNDING SNAP SWITCH, INCLUDING DIMMER AND SIMILAR CONTROL SWITCHES, SHALL BE EFFECTIVELY GROUNDED AND SHALL PROVIDE A MEANS TO GROUND METAL FACE PLATES, WHETHER OR NOT A METAL FACE PLATE IS INSTALLED. E4001.11.1

GENERAL ELECTRICAL NOTES

1. WORKMANSHIP SHALL BE OF THE HIGHEST ORDER, PER NEC ARTICLE 110-12. ANY DEFECTIVE OR DAMAGED EQUIPMENT SHALL BE REPLACED OR REPAIRED IN A MANNER MEETING WITH THE APPROVAL OF THE ARCHITECT/ENGINEER AT NO ADDITIONAL COST TO THE OWNER. ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH NEC STANDARDS.
2. ELECTRICAL PLANS ARE DIAGRAMMATIC ONLY. ALL CONDUIT SHALL BE ROUTED AND CONCEALED UNLESS NOTED ON PLAN OR APPROVED BY THE ARCHITECT/ENGINEER. ROUTING OF RACEWAYS SHALL BE AT THE OPTION OF THE ELECTRICAL CONTRACTOR, UON, AND SHALL BE COORDINATED WITH OTHER TRADES. DO NOT SCALE THE ELECTRICAL PLANS FOR LOCATIONS OF ANY ELECTRICAL, ARCHITECTURAL, STRUCTURAL, CIVIL, OR MECHANICAL EQUIPMENT, ITEMS, OR FEATURES.
3. COORDINATE ELECTRICAL PANEL AND TERMINAL CABINET LOCATIONS AND ROUTING OF CONDUITS WITH FRAMING CONTRACTOR PRIOR TO BEGINNING ANY ROUGH-IN WORK FOR SPECIFIC EQUIPMENT.
4. WHERE EXISTING CONDUIT IS BEING REUSED ON THE SITE, NEW CONDUCTORS SHALL BE PULLED CONTINUOUS AND UN-SPLICED THROUGH THE EXISTING RACEWAY. REMOVE LING EXISTING CONDUCTORS AS REQUIRED AND PROVIDE A PULL ROPE IN THE EXISTING CONDUIT.
5. INSTALL ELECTRICAL EQUIPMENT, LIGHTING, AND RECEPTACLES PER LATEST NEC, CBC.
6. INSTALL NEUTRAL PER EACH CIRCUIT SEPARATELY.
7. 120 VOLT CIRCUIT SHALL BE #12 THHN MIN.
8. ALL CONDUITS SHALL BE EQUIPPED WITH EQUIPMENT GROUND CONDUCTOR PER NEC ARTICLE 250.
9. A FOUR WIRE BRANCH CIRCUIT IS REQUIRED FOR ALL 240 VOLT CIRCUITS SERVING COOKING EQUIPMENT AND CLOTHES DRYER LOCATIONS.
10. MAIN SERVICE AND ALL ELECTRICAL EQUIPMENT (SWITCHGEAR, DISTRIBUTION PANELS) SHALL BE LOCALLY GROUNDED PER NEC ARTICLE 250.
11. PROVIDE MIN. 8 FOOT LONG X 5/8" DIAMETER DRIVEN ROD AS A MAIN GROUNDING MECHANISM. UFER GROUND REQUIRED.
12. PROVIDE DESIGNATED 20 AMP CIRCUITS FOR THE FOLLOWING CIRCUITRY:
    - 12.A. THE TWO SMALL APPLIANCE BRANCH CIRCUITS SERVING THE KITCHEN.
    - 12.B. BATHROOMS.
    - 12.C. LAUNDRY ROOMS.
    - 12.D. BUILT-IN MICROWAVE OVENS.
15. INCANDESCENT LIGHTS CANNOT BE CLOSER THAN 12" FROM THE NEAREST POINT OF A STORAGE AREA ON SHELF IN CLOTHES CLOSETS (AS MEASURED FROM THE FRONT VERTICAL PLANE). OPEN OR PARTIALLY ENCLOSED INCANDESCENT FIXTURES SHALL NOT BE PERMITTED IN CLOTHES CLOSETS.
16. LIGHTING IN BATHROOMS AND KITCHEN SHALL HAVE AN EFFICACY RATING OF AT LEAST 40 LUMENS PER WATT.
17. SMOKE DETECTORS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING'S WIRING AND SHALL BE EQUIPPED WITH A BATTERY BACKUP. THE ALARM SHALL BE AUDIBLE IN ALL SLEEPING AREAS OF THE BUILDING.
19. CLOTHES DRYER AND ELECTRIC RANGES SHALL HAVE A 4-WIRE GROUNDED ELECTRICAL OUTLET.
20. CARBON MONOXIDE DETECTORS SHALL BE INSTALLED IN DWELLING UNITS AND SLEEPING UNITS WITHIN WHICH FUEL-BURNING APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGES. CARBON MONOXIDE DETECTORS SHALL BE LOCATED OUTSIDE OF EACH SEPARATE SLEEPING AREA(S) IN THE IMMEDIATE VICINITY OF BEDROOMS. CARBON MONOXIDE DETECTORS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING'S WIRING AND SHALL BE EQUIPPED WITH A BATTERY BACKUP. WIRING SHALL BE PERMANENT AND WITHOUT A DISCONNECTING SWITCH OTHER THAN AS REQUIRED FOR OVERCURRENT PROTECTION.
21. CEILING FANS SHALL BE SUPPORTED BY OUTLET BOXES LISTED FOR SUCH USE OR BRACE INDEPENDENTLY OF OUTLET BOX.
22. RECESSED INCANDESCENT LIGHTS SHALL MAINTAIN A 3 INCH CLEARANCE TO INSULATION OR BE LISTED TO HAVE INSULATION IN DIRECT CONTACT WITH THE FIXTURE.
23. LUMINAIRES IN WET OR DAMP LOCATIONS SHALL BE MARKED SUITABLE FOR WET LOCATIONS. E4003.2
24. PROVIDE 2 OR MORE 20AMP SMALL APPLIANCE BRANCH CIRCUITS IN THE KITCHEN. E3703.2
25. SMOKE DETECTORS REQUIRE A 3'-0" MINIMUM SEPARATION FROM A/C/ VENTS, CEILING FANS AND BATHROOM DOORS.
26. RECEPTACLES AT KITCHEN ISLAND REQUIRE TO BE INSTALLED MAXIMUM 12" BELOW THE COUNTER TOP WITH A 6" MAXIMUM OVERHANG PER E3901.4.5.

NOTES

REVISIONS:

1	

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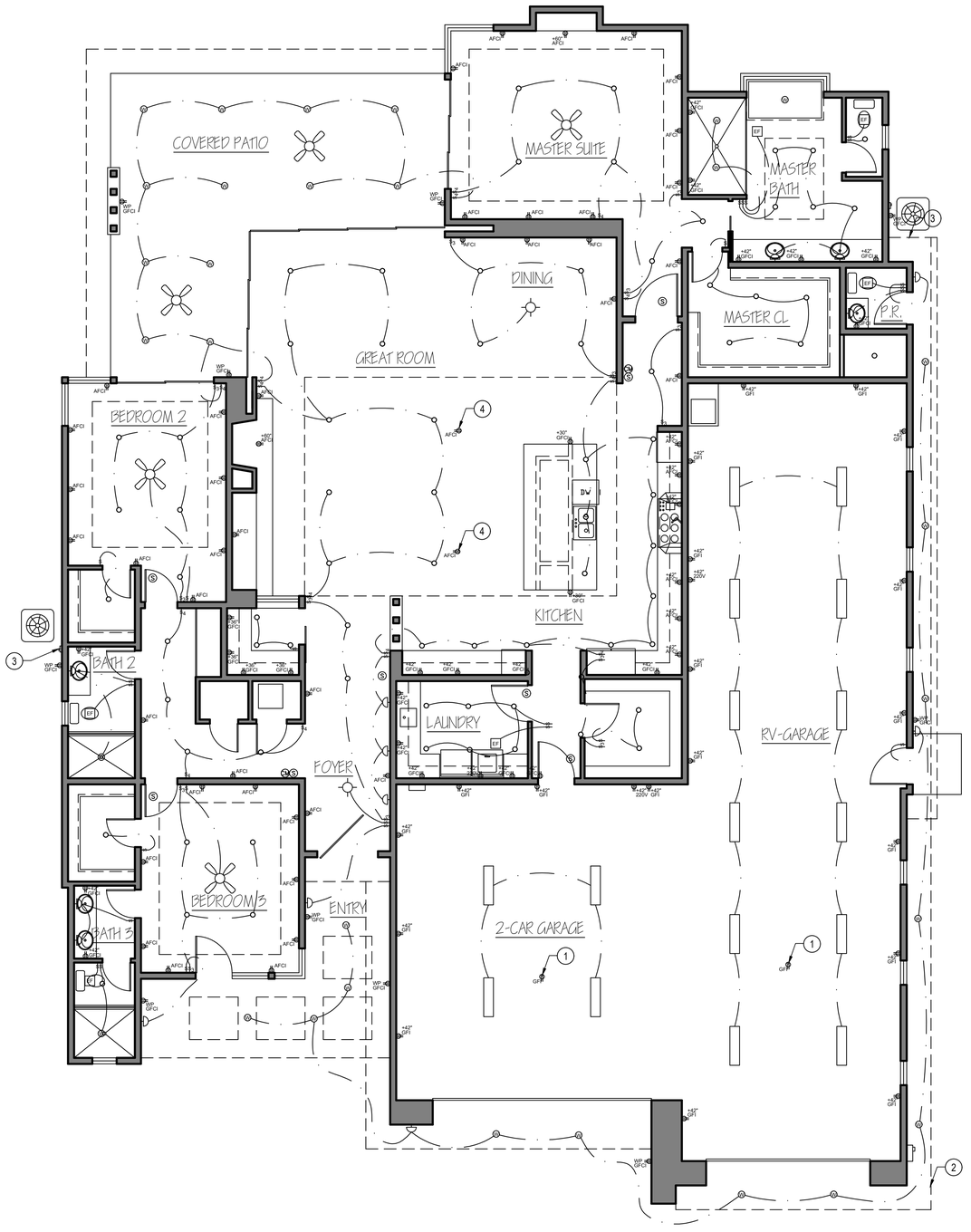

ELECTRICAL/LIGHTING PLAN

SCALE: 3/16" = 1'-0"

NOTES

1 PROVIDE DUPLEX OUTLET IN CELING FOR OPENER.
2 400 AMP SERVICE PANEL.
3 220V DISCONNECT FOR ROOF-MOUNTED A/C UNIT.
4 FLOOR MOUNTED AFI RECEPTACLE.

LIGHTING SYMBOLS

SYMBOL	DESCRIPTION
	SINGLE POLE SWITCH
3	THREE-WAY SWITCH
4	FOUR-WAY SWITCH
D	DIMMER SWITCH
D3	DIMMER SWITCH/ 3-WAY
D4	DIMMER SWITCH/ 4-WAY
	6" DIA. RECESSED DOWNLIGHT
W	6" DIA. RECESSED DOWNLIGHT FOR EXTERIOR AND WET AREAS
L	6" DIA. RECESSED LED DOWNLIGHT
	PENDANT LIGHT
	MINI-PENDANT LIGHT
	UNDERSHELF/ UNDERCABINET STRIP LIGHTING
	SINGLE SIDE-MOUNT STRIP FLUORESCENT DECK LIGHT
	WALL MOUNTED STAIR LIGHT
	6" WALL WASHER
	4' SURFACE MOUNTED 2 TUBE LED FIXTURE
	CEILING FAN/ LIGHT
EF	BATH EXHAUST FAN/ LIGHT
S	HARD-WIRED SMOKE DETECTOR W/BATTERY BACKUP
	WALL SCONCE
	HALOGEN FLOOD LIGHT
	CELING MOUNTED LIGHT
CM	HARD-WIRED CARBON-MONOXIDE DETECTOR W/BATTERY BACKUP
AFCI	ARC-FAULT CIRCUIT INTERRUPTER DUPLEX OUTLET
GFCI	GROUND-FAULT CIRCUIT INTERRUPTER DUPLEX OUTLET
	DUPLEX OUTLET
	DOOR BELL
	EXTERIOR PHOTO CELL SWITCH

REVISIONS:

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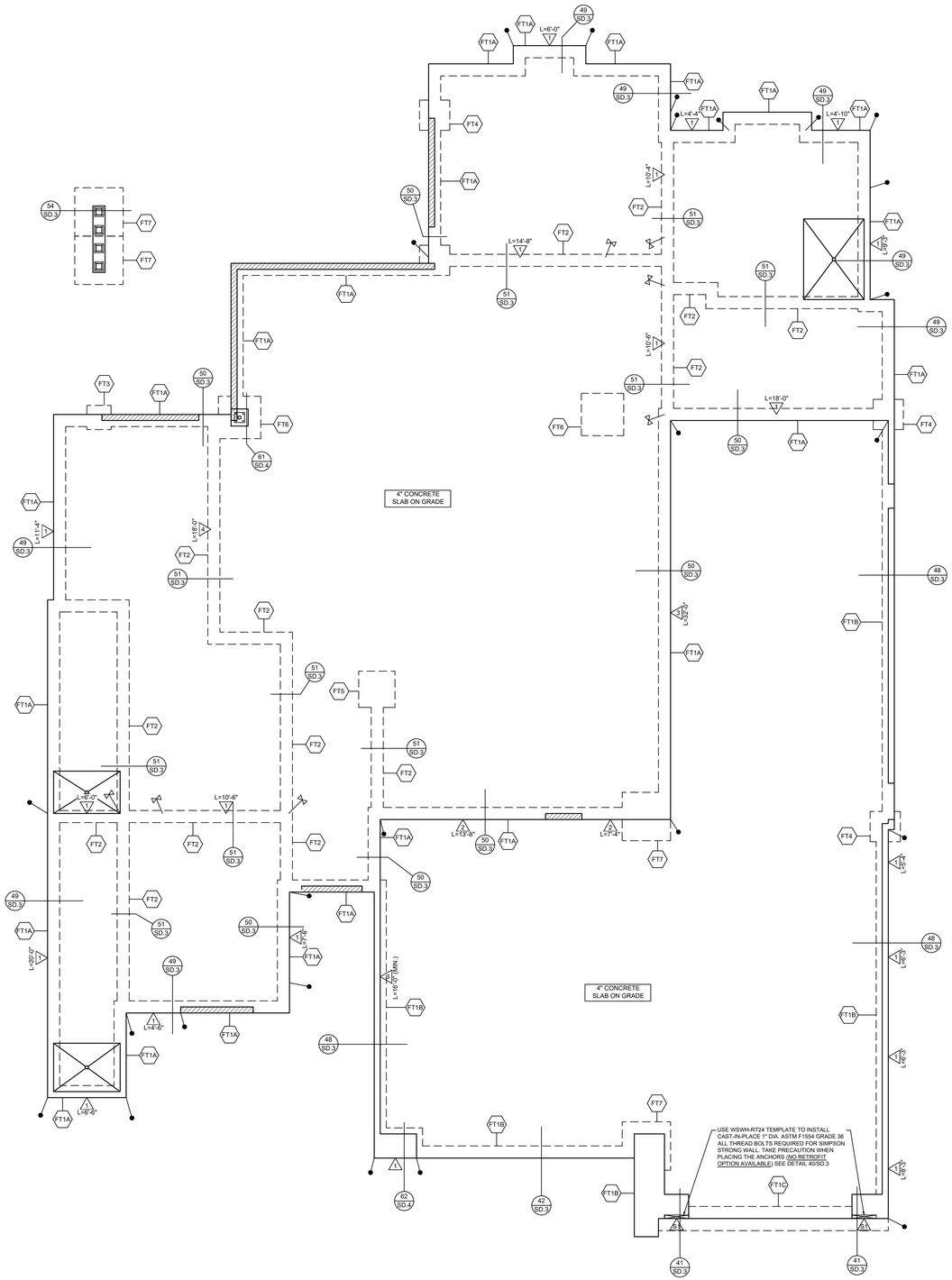

FOOTING SCHEDULE

DESIG.	LENGTH	WIDTH	DEPTH	LENGTHWISE REINFORCEMENT QTY.	SIZE	LENGTH	SPACING	CROSSWISE REINFORCEMENT QTY.	SIZE	LENGTH	SPACING	CAPACITY	NOTE
FT1A	CONT.	12"	20"	2	#4	CONT.	EQ.	-	-	-	-	1250 PLF	(1) TOP, (1) BOTTOM
FT1B	CONT.	12"	14"	2	#4	CONT.	EQ.	-	-	-	-	1288 PLF	(1) TOP, (1) BOTTOM
FT1C	CONT.	24"	18"	8	#4	CONT.	EQ.	-	-	-	-		(4) TOP, (4) BOTTOM
FT2	CONT.	12"	16"	2	#4	CONT.	EQ.	-	-	-	-	1300 PLF	(1) TOP, (1) BOTTOM
FT3	24"	24"	12"	3	#4	18"	EQ.	3	#4	18"	EQ.	5400 LBS	
FT4	30"	30"	12"	4	#4	24"	EQ.	4	#4	24"	EQ.	8438 LBS	
FT5	36"	36"	12"	4	#4	30"	EQ.	4	#4	30"	EQ.	12150 LBS	
FT6	42"	42"	12"	5	#4	36"	EQ.	5	#4	36"	EQ.	16538 LBS	
FT7	48"	48"	12"	6	#4	42"	EQ.	6	#4	42"	EQ.	21600 LBS	

NOTES:
1. f'c=2,500 PSI, 5+/-0.200 PSI. NO SPECIAL INSPECTION REQUIRED.
2. FOOTINGS SHALL BEAR ON SUITABLE UNDISTURBED NATIVE SOILS OR STRUCTURAL COMPACTED FILL (95% COMPACTION), SPECIFIED AND TESTED BY A REGISTERED GEOTECHNICAL ENGINEER.
3. ALL FOOTINGS SHALL BEAR A MINIMUM OF 12" BELOW GRADE OR BELOW THE FROST LINE OF THE LOCALITY, WHICHEVER IS DEEPER.
4. CONTINUOUS FOOTINGS SHALL BE LAPPED AT CORNERS AND INTERSECTIONS WITH 24" MINIMUM LAP SPLICE INTO FOUNDATION WALL (WHERE APPLICABLE).
5. CENTER FOOTING UNDER FOUNDATION WALL U.N.O. (WHERE APPLICABLE).

LEI CONSULTING ENGINEERS AND SURVEYORS, INC. IS NOT A GEOTECHNICAL ENGINEER AND HAS NOT PERFORMED ANY SOIL BEARING OR SLOPE ANALYSIS. LEI HAS DESIGNED THE FOUNDATION IN ACCORDANCE WITH THE MAXIMUM BEARING PRESSURE ALLOWED WHEN NO GEOTECHNICAL REPORT IS PROVIDED. LEI IS NOT LIABLE FOR DAMAGE OR REPAIRS CAUSED BY SETTLEMENT RESULTING FROM OUTSIDE FACTORS OR POOR SOIL CONDITIONS. THE HOMEOWNER/CONTRACTOR ASSUME ALL RISK ASSOCIATED WITH CONSTRUCTION WITHOUT AN ADEQUATE GEOTECHNICAL INVESTIGATION.

HOLDOWN SCHEDULE

SYMBOL	HOLDOWN/STRAP
	LSTHD8 HOLDOWN SEE DETAIL 15/SD.1
	HDU4-SDS2.5 RETROFIT HOLDOWN w/ ⅞" DIA. A36 THREADED ROD ANCHOR EMBEDDED 6" INTO FOOTING w/ SIMPSON SET-XP EPOXY SEE DETAIL 56/SD.3

SIMPSON WSWH NOTES

1. STRONG WALL HIGH STRENGTH WOOD SHEAR WALLS SHALL BE INSTALLED AS PER SIMPSON SPECIFICATIONS.
2. WSWH MAY BE FIELD TRIMMED TO A MINIMUM HEIGHT OF 74⅝". (TRIM TOP OF WALL ONLY - DO NOT TRIM FROM SIDES OR BOTTOM.
3. DRILLING HOLES IN WSWH IS NOT ALLOWED EXCEPT AS SPECIFICALLY FOUNDED BY THE MANUFACTURER. (REFER TO SIMPSON SPECIFICATIONS)
4. ANCHOR BOLT NUTS SHOULD BE FINGER TIGHT PLUS 1/2 TURN.
5. TOP CONNECTION INSTALLS WITH A COMBINATION OF SDS2560Q HEAVY-DUTY CONNECTOR SCREWS & SWS16150 STRONG-WALL SCREWS.
6. TAKE PRECAUTION WHEN INSTALLING CAST-IN-PLACE BOLTS AT CONCRETE FOUNDATION (NO RETROFIT OPTION IS AVAILABLE)
7. CONTACT SIMPSON REPRESENTATIVE GARY PUGMIRE (801-244-7430) WITH QUESTIONS REGARDING THE INSTALLATION OF SIMPSON STRONG WALLS.

SHEAR WALL SCHEDULE [1,4]

DESIG.	MATERIAL	8d NAILS EDGE	8d NAILS FIELD	(2)" 16 GAGE STAPLES EDGE	(2)" 16 GAGE STAPLES FIELD	⅞" ANCHOR BOLT SPACING	CAPACITY WIND	CAPACITY SEISMIC	NOTE
1	⅞" OSB OR CDX PLYWOOD	6"	12"	3½"	12"	32" O.C.	339	241	2,4,5
2	⅞" OSB OR CDX PLYWOOD	4"	12"	2[3]	12"	24" O.C.	495	350	2,4,5
3	½" GYPSUM OR BETTER	6"	12"	-	-	32" O.C.	90	90	4,7
4	½" GYPSUM OR BETTER	4"	12"	-	-	32" O.C.	155	155	4,7
S1	SIMPSON WSWH24x14 HIGH-STRENGTH WOOD SHEAR WALL - SEE DETAILS 38/SD.2, 39/SD.2, 40/SD.2, & 41/SD.3								

NOTES:
1. WALL STUDS ARE TO BE SPACED AT 16" O.C. U.N.O.
2. SHEATH ABOVE AND BELOW OPENINGS IN PERFORATED SHEAR WALLS AS PER THE ADJACENT SHEAR WALL DESIGNATION ON EACH SIDE OF THE OPENING.
3. USE (2) KING STUDS AT EACH END OF SHEAR PANELS (SHEAR WALL CHORDS) U.N.O.
4. ALL PANEL EDGES SHALL BE BLOCKED WITH 2x OR WIDER FRAMING WITH EDGE NAILING AT ALL SUPPORTS AND PANEL EDGES U.N.O.
5. ALL NAILS SHALL BE STAGGERED IN BOTH FACES OF A WALL AND NAIL SPACING IS LESS THAN 3" O.C. ON EITHER SIDE. PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.
6. FRAMING AT ADJOINING PANEL EDGES AND SILL PLATES SHALL BE 3x OR WIDER FOR EDGE NAILING 3" O.C. OR LESS. NAILS AT ADJOINING PANEL EDGES AND INTO SILL PLATES SHALL BE STAGGERED. (DOUBLE) 2x FRAMING STITCH-NAILED WITH STAGGERED 16d NAILS WITH SPACING EQUAL TO THE SHEAR WALL EDGE NAILING IS AN ADEQUATE SUBSTITUTE FOR 3x FRAMING.
7. FASTENERS FOR SHEET ROCK SHEAR WALLS SHALL BE NO. 6 TYPE S OR W DRYWALL SCREWS ⅞" LONG IN LIEU OF 8d NAILS.

LEI
- A Utah Corporation -
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office@lei-eng.com
www.lei-eng.com

Professional Engineer CERTIFICATE 66953 ERIC B. MURRAY Signed: 08/30/2022 ARIZONA U.S.A.

STRUCTURAL ELEMENTS ONLY

WREN COVE LOT #11

LAKE HAVASU CITY, ARIZONA

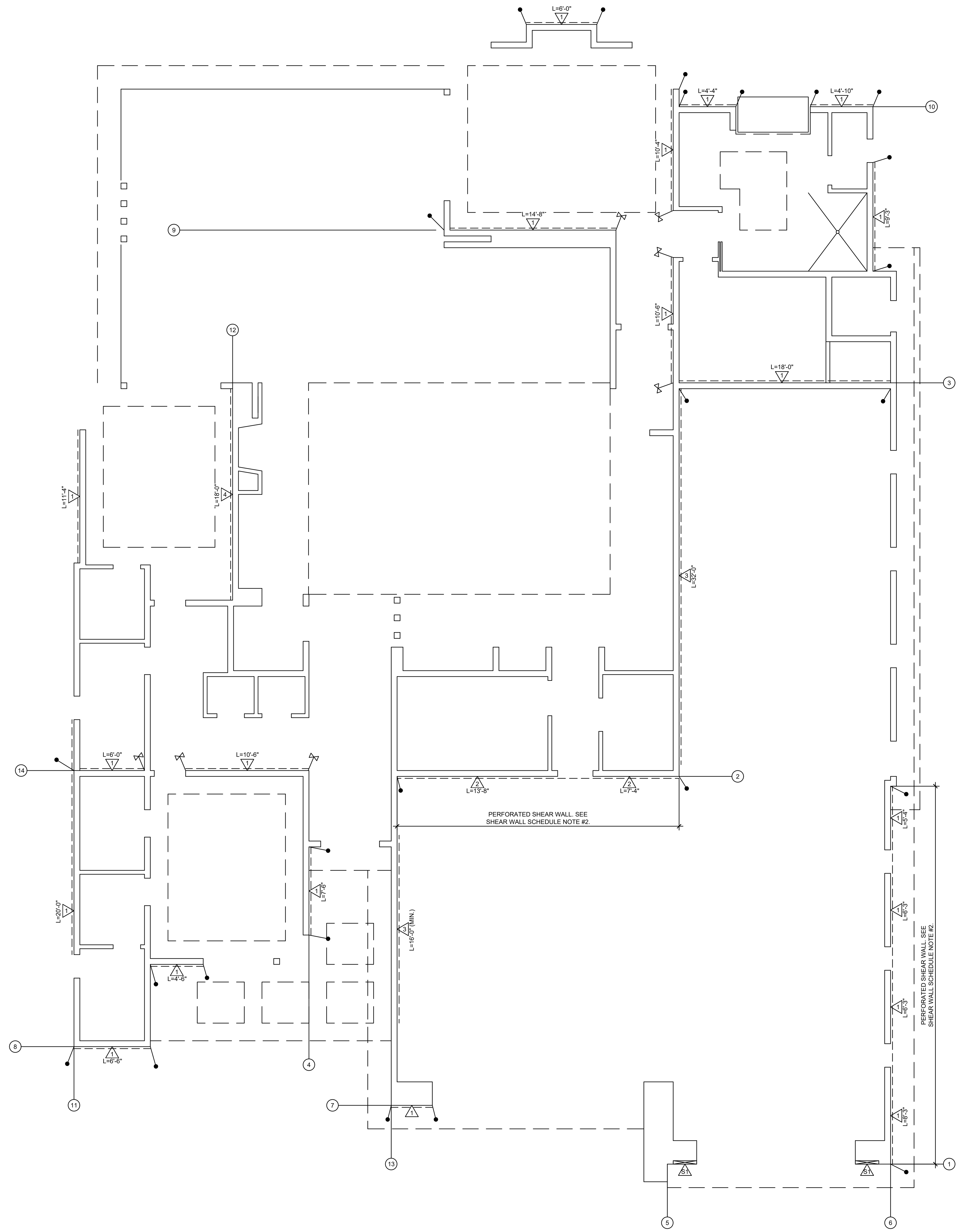
FOOTING & FOUNDATION PLAN

DIMENSIONS SHOWN ON THE STRUCTURAL PLANS ARE FOR CONVENIENCE ONLY. VERIFY ALL DIMENSIONS WITH THE CURRENT ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.

REVISIONS

	DESCRIPTION	DATE	BY
1			
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-

LEI PROJECT #: 2022-2349
DRAWN BY: JMW
CHECKED BY: EBM
SCALE: ¼"=1'-0"
DATE: 8/30/2022
SHEET: S1.0



SHEAR WALL SCHEDULE[1,4]

DESIG.	MATERIAL	8d NAILS		1½" 16 GAGE STAPLES		½" ANCHOR BOLT SPACING	CAPACITY		NOTE
		EDGE	FIELD	EDGE	FIELD		WIND	SEISMIC	
1	⅜" OSB OR CDX PLYWOOD	6"	12"	3½"	12"	32" O.C.	339	241	2,4,5
2	⅜" OSB OR CDX PLYWOOD	4"	12"	2"[6]	12"	24" O.C.	495	350	2,4,5
3	½" GYPSUM OR BETTER	6"	12"	-	-	32" O.C.	90	90	4,7
4	½" GYPSUM OR BETTER	4"	12"	-	-	32" O.C.	155	155	4,7
S1	SIMPSON WSWH24x14 HIGH-STRENGTH WOOD SHEAR WALL - SEE DETAILS 38/SD.2, 39/SD.2, 40/SD.2, & 41/SD.3								

NOTES:
1. WALL STUDS ARE TO BE SPACED AT 16" O.C. U.N.O.
2. SHEATH ABOVE AND BELOW OPENINGS IN PERFORATED SHEAR WALLS AS PER THE ADJACENT SHEAR WALL DESIGNATION ON EACH SIDE OF THE OPENING.
3. USE (2) KING STUDS AT EACH END OF SHEAR PANELS (SHEAR WALL CHORDS) U.N.O.
4. ALL PANEL EDGES SHALL BE BLOCKED WITH 2x OR WIDER FRAMING WITH EDGE NAILING AT ALL SUPPORTS AND PANEL EDGES U.N.O.
5. WHERE PANELS ARE APPLIED ON BOTH FACES OF A WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.
6. FRAMING AT ADJOINING PANEL EDGES AND SILL PLATES SHALL BE 3x OR WIDER FOR EDGE NAILING 3" O.C. OR LESS. NAILS AT ADJOINING PANEL EDGES AND INTO SILL PLATES SHALL BE STAGGERED. (DOUBLE 2x FRAMING STITCH-NAILED WITH STAGGERED 16d NAILS WITH SPACING EQUAL TO THE SHEAR WALL EDGE NAILING IS AN ADEQUATE SUBSTITUTE FOR 3x FRAMING.)
7. FASTENERS FOR SHEET ROCK SHEAR WALLS SHALL BE NO. 6 TYPE S OR W DRYWALL SCREWS 1¼" LONG IN LIEU OF 8d NAILS.

HOLDOWN SCHEDULE

SYMBOL	HOLDOWN/STRAP
—●	LSTHD8 HOLDOWN SEE DETAIL 15/SD.1
—⧗	HDU4-SDS2.5 RETROFIT HOLDOWN w/ ⅝" DIA. A36 THREADED ROD ANCHOR EMBEDDED 6" INTO FOOTING w/ SIMPSON SET-XP EPOXY SEE DETAIL 56/SD.3

SIMPSON WSWH NOTES

1. STRONG WALL HIGH STRENGTH WOOD SHEAR WALLS SHALL BE INSTALLED AS PER SIMPSON SPECIFICATIONS.
2. WSWH MAY BE FIELD TRIMMED TO A MINIMUM HEIGHT OF 74½". (TRIM TOP OF WALL ONLY - DO NOT TRIM FROM SIDES OR BOTTOM.
3. DRILLING HOLES IN WSWH IS NOT ALLOWED EXCEPT AS SPECIFICALLY ALLOWED BY THE MANUFACTURER. (REFER TO SIMPSON SPECIFICATIONS)
4. ANCHOR BOLT NUTS SHOULD BE FINGER TIGHT PLUS 1/2 TURN.
5. TOP CONNECTION INSTALLS WITH A COMBINATION OF SDS25600 HEAVY-DUTY CONNECTOR SCREWS & SWS16150 STRONG-WALL SCREWS.
6. TAKE PRECAUTION WHEN INSTALLING CAST-IN-PLACE BOLTS AT CONCRETE FOUNDATION (NO RETROFIT OPTION IS AVAILABLE)
7. CONTACT SIMPSON REPRESENTATIVE GARY PUGMIRE (801-244-7430) WITH QUESTIONS REGARDING THE INSTALLATION OF SIMPSON STRONG WALLS.

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www.lei-eng.com

Registered Professional Engineer (Civil) CERTIFICATE No. 66953 ERIC B. MURRAY Signed: 08/30/2022 ARIZONA U. S. A.

STRUCTURAL ELEMENTS ONLY

WREN COVE LOT #11

LAKE HAVASU CITY, ARIZONA

MAIN LEVEL SHEAR WALL PLAN

DIMENSIONS SHOWN ON THE STRUCTURAL PLANS ARE FOR CONVENIENCE ONLY. VERIFY ALL DIMENSIONS WITH THE CURRENT ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.

REVISIONS		
1	DESCRIPTION	
	DATE	BY
2	-	
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3	-	
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-		-
5	-	
-		-

LEI PROJECT #: 2022-2349
DRAWN BY: JMW
CHECKED BY: EBM
SCALE: ¼"=1'-0"
DATE: 8/30/2022
SHEET

S2.0

SHEAR WALL SCHEDULE [1,4]

DESIG.	MATERIAL	8d NAILS EDGE	8d NAILS FIELD	15½" 16 GAGE STAPLES EDGE	15½" 16 GAGE STAPLES FIELD	½" ANCHOR BOLT SPACING	CAPACITY WIND	CAPACITY SEISMIC	NOTE
1	⅜" OSB OR CDX PLYWOOD	6"	12"	3½"	12"	32" O.C.	339	241	2,4,5
2	⅜" OSB OR CDX PLYWOOD	4"	12"	2½"	12"	24" O.C.	495	350	2,4,5
3	½" GYPSUM OR BETTER	6"	12"	-	-	32" O.C.	90	90	4,7
4	½" GYPSUM OR BETTER	4"	12"	-	-	32" O.C.	155	155	4,7
S1	SIMPSON WSWH24x14 HIGH-STRENGTH WOOD SHEAR WALL - SEE DETAILS 38/SD.2, 39/SD.2, 40/SD.2, & 41/SD.3								

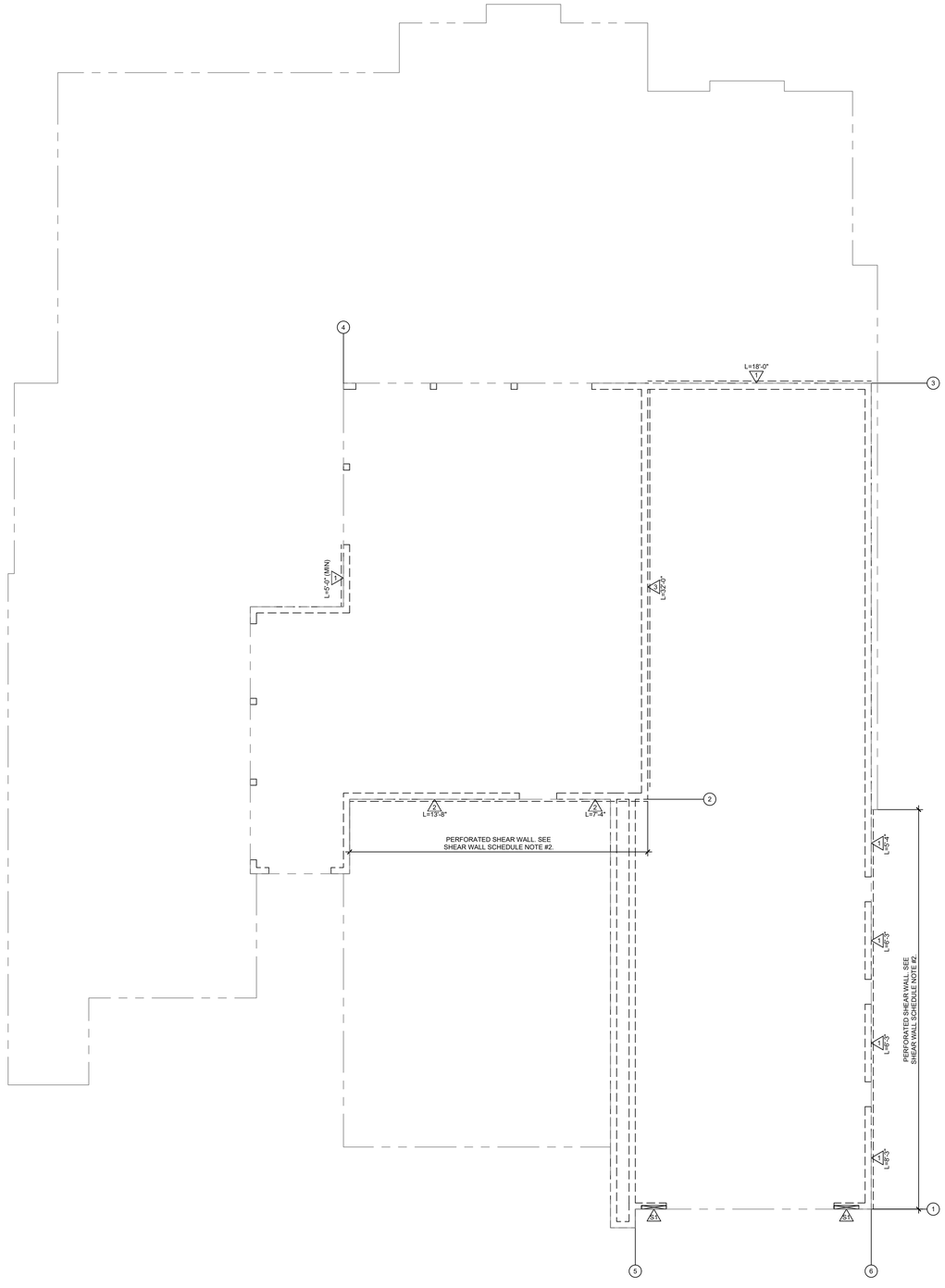
NOTES:
1. WALL STUDS ARE TO BE SPACED AT 16" O.C. U.N.O.
2. SHEATH ABOVE AND BELOW OPENINGS IN PERFORATED SHEAR WALLS AS PER THE ADJACENT SHEAR WALL DESIGNATION ON EACH SIDE OF THE OPENING.
3. USE (2) KING STUDS AT EACH END OF SHEAR PANELS (SHEAR WALL CHORDS) U.N.O.
4. ALL PANEL EDGES SHALL BE BACKED WITH 2x FRAMING OR APPROVED BLOCKING AT ALL SUPPORTS AND PANEL EDGES U.N.O.
5. WHERE PANELS ARE APPLIED ON BOTH FACES OF A WALL AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.
6. FRAMING AT ADJOINING PANEL EDGES AND SILL PLATES SHALL BE 3x OR WIDER FOR EDGE NAILING 3" O.C. OR LESS. NAILS AT ADJOINING PANEL EDGES AND INTO SILL PLATES SHALL BE STAGGERED. (DOUBLE 2x FRAMING STITCH-NAILED WITH STAGGERED 16d NAILS WITH SPACING EQUAL TO THE SHEAR WALL EDGE NAILING IS AN ACCEPTABLE SUBSTITUTE FOR A FRAMING.)
7. FASTENERS FOR SHEET ROCK SHEAR WALLS SHALL BE NO. 6 TYPE S OR W DRYWALL SCREWS ⅞" LONG IN LIEU OF 8d NAILS.

HOLDOWN SCHEDULE

SYMBOL	HOLDOWN/STRAP
●	LSTHD8 HOLDOWN SEE DETAIL 15/SD.1
▽	HDU4-SDS2.5 RETROFIT HOLDOWN w/ ⅞" DIA. A36 THREADED ROD ANCHOR EMBEDDED 6" INTO FOOTING w/ SIMPSON SET-XP EPOXY SEE DETAIL 56/SD.3

SIMPSON WSWH NOTES

1. STRONG WALL HIGH STRENGTH WOOD SHEAR WALLS SHALL BE INSTALLED AS PER SIMPSON SPECIFICATIONS.
2. WSWH MAY BE FIELD TRIMMED TO A MINIMUM HEIGHT OF 7'4½". (TRIM TOP OF WALL ONLY - DO NOT TRIM FROM SIDES OR BOTTOM.
3. DRILLING HOLES IN WSWH IS NOT ALLOWED EXCEPT AS SPECIFICALLY ALLOWED BY THE MANUFACTURER. (REFER TO SIMPSON SPECIFICATIONS)
4. ANCHOR BOLT NUTS SHOULD BE FINGER TIGHT PLUS 1/2 TURN.
5. TOP CONNECTION INSTALLS WITH A COMBINATION OF SDS25600 HEAVY-DUTY CONNECTOR SCREWS & SWS16150 STRONG-WALL SCREWS
6. TAKE PRECAUTION WHEN INSTALLING CAST-IN-PLACE BOLTS AT CONCRETE FOUNDATION (NO RETROFIT OPTION IS AVAILABLE)
7. CONTACT SIMPSON REPRESENTATIVE GARY PUGMIRE (801-244-7430) WITH QUESTIONS REGARDING THE INSTALLATION OF SIMPSON STRONG WALLS.



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CERTIFICATE
66953
ERIC B. MURRAY
Signed: **08/30/2022**
ARIZONA U.S.A.

STRUCTURAL ELEMENTS ONLY

WREN COVE LOT #11

LAKE HAVASU CITY, ARIZONA

HIGH ROOF SHEAR WALL PLAN

DIMENSIONS SHOWN ON THE STRUCTURAL PLANS ARE FOR CONVENIENCE ONLY. VERIFY ALL DIMENSIONS WITH THE CURRENT ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.

REVISIONS

	DESCRIPTION	DATE	BY
1			
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-

LEI PROJECT #: **2022-2349**

DRAWN BY: **JMW**

CHECKED BY: **EBM**

SCALE: **¼"=1'-0"**

DATE: **8/30/2022**

SHEET **S2.1**

FRAMING NOTES

1. PLANS ARE NOT COMPLETE WITHOUT THE STRUCTURAL CALCULATIONS.
2. REFER TO SHEET SD.0 FOR THE GENERAL STRUCTURAL NOTES.
3. ROOF SHEATHING SHALL BE APA RATED 7/16" OSB OR CDX PLYWOOD WITH 8d NAILS AT 6" O.C. EDGE, 12" O.C. FIELD.
4. EXTERIOR STUD WALLS SHALL BE 2x6 @ 16" O.C.U.N.O. GARAGE WALLS MAY BE 2x4 @ 16" O.C. UP TO 10'-0" TALL U.N.O.
5. USE (11) 16d NAILS BETWEEN TOP PLATE SPLICE POINTS ON ALL EXTERIOR AND SHEAR WALLS. PROVIDE A 4'-0" MINIMUM LAP SPLICE.
6. INSTALL ALL SIMPSON HARDWARE PER MANUFACTURER'S SPECIFICATIONS.
7. HOLDOWNS SHALL BE INSTALLED ON (2) FULL HEIGHT KING STUDS (MINIMUM).
8. ROOF RAFTERS TO BE 11⅞" BCI 6000-1.8 DF @ 24" O.C. U.N.O.
9. ALL DETAILS SHALL APPLY IN ALL SIMILAR SITUATIONS.
10. ALL LUMBER NOT PERMANENTLY PROTECTED FROM THE ELEMENTS SHALL BE PRESERVATIVE TREATED OR OF A DECAY RESISTANT SPECIES. CONTACT LEI ENGINEERS AND SURVEYORS, INC. IF A DIFFERENT SPECIES IS TO BE USED.

(P9) POST SCHEDULE

DESIG.	POST SIZE
P1	(1) 2x
P2	(2) 2x
P3	(3) 2x
P4	(4) 2x
P5	(5) 2x
P6	4x4
P7	6x6
P8	5½"x5½" PARALLAM POST
P9	HSS3x3x¼" A500 GR.B-46
P10	HSS6x6x¼" A500 GR.B-46

NOTES:
1. POSTS INDICATE NUMBER OF TRIMMER STUDS WHEN SPECIFIED AT HEADERS. ALL OTHER POST DESIGNATIONS REFER TO FULL HEIGHT KING STUDS U.N.O.
2. INSTALL (1) TRIMMER AND (1) KING STUD EACH SIDE OF EACH OPENING.
3. INSTALL (2) TRIMMER STUDS AT EACH SIDE OF OPENINGS GREATER THAN 6'-0" WIDE U.N.O.
4. INSTALL (3) KING STUDS EACH SIDE OF OPENINGS GREATER THAN 8'-0" WIDE U.N.O.
5. 2x BUILT-UP POSTS SHALL BE THE SAME WIDTH OF THE WALL STUDS U.N.O. (TYP. FRAMED U.N.O.
6. NAIL EACH PLY OF 2x BUILT-UP POSTS W/ 16d NAILS @ 6" O.C. STAGGERED U.N.O.
7. POSTS THAT ARE NOT FRAMED WITHIN A STUD WALL SHALL BE BRACED WITH BC OR AC POST CAP AND PB OR ABA POST BASE U.N.O.

HANGER SCHEDULE

DESIG.	HANGER
H1	LUS210, TYP.
H2	IUS2.37/11.88
H3	IUS2.56/11.88
H4	HUC410
H5	HUC412
H6	MIU4.75/11
H7	HUC05.25/11-SDS
H8	UPSIDE-DOWN HHUS410
H9	U414

RAFTER SCHEDULE

DESIG.	RAFTER
RR1	11⅞" BCI 6000-1.8 DF @ 24" O.C.
RR2	11⅞" BCI 6500-1.8 DF @ 16" O.C.
RR3	11⅞" BCI 6500-1.8 DF @ 12" O.C.
RR4	2x10 DF-L#2 @ 12" O.C.
RR5	2x12 DF-L#2 @ 24" O.C.

LEDGER SCHEDULE

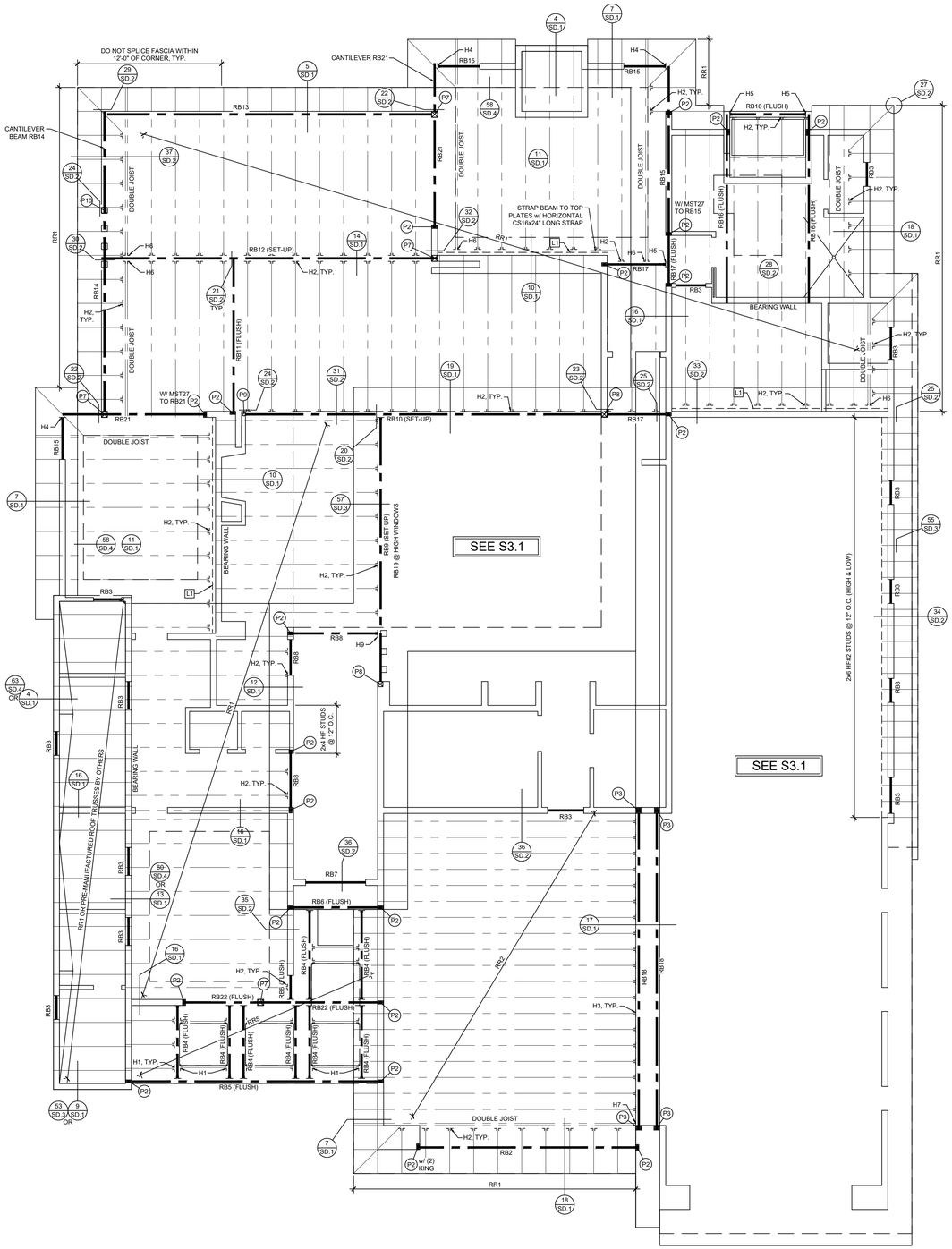
DESIG.	LEDGER
L1	2x12 DF-L#2 LEDGER w/ (2) SDWS22500DB WOOD SCREWS @ 16" O.C. INTO STUDS

SIMPSON WSWH NOTES

1. STRONG WALL HIGH STRENGTH WOOD SHEAR WALLS SHALL BE INSTALLED AS PER SIMPSON SPECIFICATIONS.
2. WSWH MAY BE FIELD TRIMMED TO A MINIMUM HEIGHT OF 7'-6". (TRIM TOP OF WALL ONLY - DO NOT TRIM FROM SIDES OR BOTTOM.
3. DRILLING HOLES IN WSWH IS NOT ALLOWED EXCEPT AS SPECIFICALLY ALLOWED BY THE MANUFACTURER (REFER TO SIMPSON SPECIFICATIONS)
4. ANCHOR BOLT NUTS SHOULD BE FINGER TIGHT PLUS 1/2 TURN.
5. TOP CONNECTION INSTALLS WITH A COMBINATION OF SDS25600 HEAVY-DUTY CONNECTOR SCREWS & SWS16150 STRONG-WALL SCREWS.
6. TAKE PRECAUTION WHEN INSTALLING CAST-IN-PLACE BOLTS AT CONCRETE FOUNDATION (NO RETROFIT OPTION IS AVAILABLE)
7. CONTACT SIMPSON REPRESENTATIVE GARY PUGMIRE (801-244-7430) WITH QUESTIONS REGARDING THE INSTALLATION OF SIMPSON STRONG WALLS.

BEAM SCHEDULE

DESIG.	QTY.	SIZE	TYPE
RB1	2	7¼"x11⅞"	MICROLLAM
RB2	1	6x12	DF-L#2
RB3	1	4x6	DF-L#2
RB4	1	2x12	DF-L#2
RB5	3	7¼"x11⅞"	MICROLLAM
RB6	2	2x12	DF-L#2
RB7	1	6x6	DF-L#2
RB8	2	7¼"x11⅞"	MICROLLAM
RB9	1	5⅛"x21"	GLULAM
RB10	1	W12x106	A992-50 STEEL
RB11	2	7¼"x11⅞"	MICROLLAM
RB12	1	W12x106	A992-50 STEEL
RB13	1	W10x49	A992-50 STEEL
RB14	1	W10x49	A992-50 STEEL
RB15	1	4x10	DF-L#2
RB16	1	7¼"x11⅞"	MICROLLAM
RB17	2	7¼"x11⅞"	MICROLLAM
RB18	1	5⅛"x25½"	GLULAM
RB19	1	6x8	DF-L#2
RB20	1	7¼"x11⅞"	MICROLLAM
RB21	1	5⅛"x15"	GLULAM
RB22	3	2x12	DF-L#2



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office@lei-eng.com
www.lei-eng.com

Professional Engineer CERTIFICATE
66953
ERIC B. MURRAY
Signed: 08/30/2022
ARIZONA U.S.A.

STRUCTURAL ELEMENTS ONLY

WREN COVE LOT #11

LAKE HAVASU CITY, ARIZONA

ROOF FRAMING PLAN

DIMENSIONS SHOWN ON THE STRUCTURAL PLANS ARE FOR CONVENIENCE ONLY. VERIFY ALL DIMENSIONS WITH THE CURRENT ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.

REVISIONS

1 DESCRIPTION	DATE	BY
2 -	-	-
3 -	-	-
4 -	-	-
5 -	-	-

LEI PROJECT #: 2022-2349
DRAWN BY: JMW
CHECKED BY: EBM
SCALE: ¼"=1'-0"
DATE: 8/30/2022
SHEET: S3.0

FRAMING NOTES

1. PLANS ARE NOT COMPLETE WITHOUT THE STRUCTURAL CALCULATIONS.
2. REFER TO SHEET S0.0 FOR THE GENERAL STRUCTURAL NOTES.
3. ROOF SHEATHING SHALL BE APA RATED 7/16" OSB OR CDX PLYWOOD WITH 8d NAILS AT 6" O.C. EDGE, 12" O.C. FIELD.
4. EXTERIOR STUD WALLS SHALL BE 2x6 @ 16" O.C U.N.O. GARAGE WALLS MAY BE 2x4 @ 16" O.C. UP TO 10'-0" TALL U.N.O.
5. USE (11) 16d NAILS BETWEEN TOP PLATE SPLICE POINTS ON ALL EXTERIOR AND SHEAR WALLS. PROVIDE A 4'-0" MINIMUM LAP SPLICE.
6. INSTALL ALL SIMPSON HARDWARE PER MANUFACTURER'S SPECIFICATIONS.
7. HOLDOWNS SHALL BE INSTALLED ON (2) FULL HEIGHT KING STUDS (MINIMUM).
8. ROOF RAFTERS TO BE 11⅞" BCI 6000-1.8 DF @ 24" O.C. U.N.O.
9. ALL DETAILS SHALL APPLY IN ALL SIMILAR SITUATIONS.
10. ALL LUMBER NOT PERMANENTLY PROTECTED FROM THE ELEMENTS SHALL BE PRESERVATIVE TREATED OR OF A DECAY RESISTANT SPECIES. CONTACT LEI ENGINEERS AND SURVEYORS, INC. IF A DIFFERENT SPECIES IS TO BE USED.

(P9) POST SCHEDULE

DESIG.	POST SIZE
P1	(1) 2x
P2	(2) 2x
P3	(3) 2x
P4	(4) 2x
P5	(5) 2x
P6	4x4
P7	6x6
P8	5⅛"x5¼" PARALLAM POST
P9	HSS3x3x¼" A500 GR.B-46
P10	HSS6x6x¼" A500 GR.B-46

NOTES:
1. POSTS INDICATE NUMBER OF TRIMMER STUDS WHEN SPECIFIED AT HEADERS. ALL OTHER POST DESIGNATIONS REFER TO FULL HEIGHT KING STUDS U.N.O.
2. INSTALL (1) TRIMMER AND (1) KING STUD EACH SIDE OF EACH OPENING U.N.O.
3. INSTALL (2) TRIMMER STUDS AT EACH SIDE OF OPENINGS GREATER THAN 6'-0" WIDE U.N.O.
4. INSTALL (2) KING STUDS EACH SIDE OF OPENINGS GREATER THAN 8'-0" WIDE U.N.O.
5. 2x BUILT-UP POSTS SHALL BE THE SAME WIDTH OF THE WALL THEY ARE LOCATED IN, FRAMED U.N.O.
6. NAIL EACH PLY OF 2x BUILT-UP POSTS W/ 16d NAILS @ 6" O.C. STAGGERED U.N.O.
7. POSTS THAT ARE NOT FRAMED WITHIN A STUD WALL SHALL BE BRACED WITH BC OR AC POST CAP AND PB OR ABA POST BASE U.N.O.

HANGER SCHEDULE

DESIG.	HANGER
H1	LUS210, TYP.
H2	IUS2.37/11.88
H3	IUS2.56/11.88
H4	HUC410
H5	HUC412
H6	MIU4.75/11
H7	HUCQ5.25/11-SDS
H8	UPSIDE-DOWN HHUS410
H9	U414

RAFTER SCHEDULE

DESIG.	RAFTER
RR1	11⅞" BCI 6000-1.8 DF @ 24" O.C.
RR2	11⅞" BCI 6500-1.8 DF @ 16" O.C.
RR3	11⅞" BCI 6500-1.8 DF @ 12" O.C.
RR4	2x10 DF-L#2 @ 12" O.C.
RR5	2x12 DF-L#2 @ 24" O.C.

LEDGER SCHEDULE

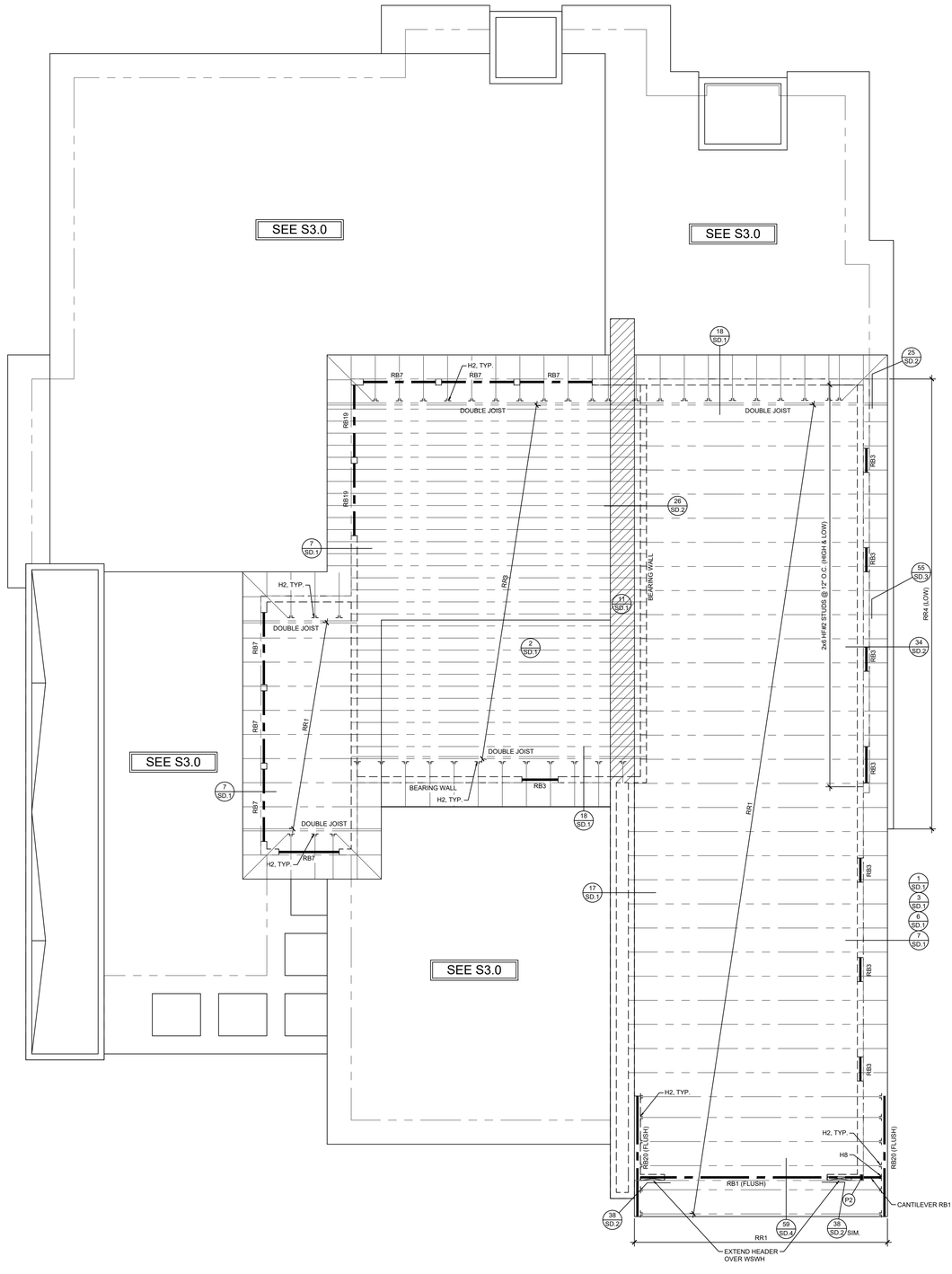
DESIG.	LEDGER
L1	2x12 DF-L#2 LEDGER w/ (2) SDWS22500DB WOOD SCREWS @ 16" O.C. INTO STUDS

SIMPSON WSWH NOTES

1. STRONG WALL HIGH STRENGTH WOOD SHEAR WALLS SHALL BE INSTALLED AS PER SIMPSON SPECIFICATIONS.
2. WSWH MAY BE FIELD TRIMMED TO A MINIMUM HEIGHT OF 7⅛". (TRIM TOP OF WALL ONLY - DO NOT TRIM FROM SIDES OR BOTTOM.
3. DRILLING HOLES IN WSWH IS NOT ALLOWED EXCEPT AS SPECIFICALLY ALLOWED BY THE MANUFACTURER. (REFER TO SIMPSON SPECIFICATIONS)
4. ANCHOR BOLT NUTS SHOULD BE FINGER TIGHT PLUS 1/2 TURN.
5. TOP CONNECTION INSTALLS WITH A COMBINATION OF SDS25600 HEAVY-DUTY CONNECTOR SCREWS & SWS16150 STRONG-WALL SCREWS.
6. TAKE PRECAUTION WHEN INSTALLING CAST-IN-PLACE BOLTS AT CONCRETE FOUNDATION (NO RETROFIT OPTION IS AVAILABLE)
7. CONTACT SIMPSON REPRESENTATIVE GARY PUGMIRE (801-244-7430) WITH QUESTIONS REGARDING THE INSTALLATION OF SIMPSON STRONG WALLS.

BEAM SCHEDULE

DESIG.	QTY.	SIZE	TYPE
RB1	2	1¾"x11⅞"	MICRO'LLAM
RB2	1	6x12	DF-L#2
RB3	1	4x6	DF-L#2
RB4	1	2x12	DF-L#2
RB5	3	1¾"x11⅞"	MICRO'LLAM
RB6	2	2x12	DF-L#2
RB7	1	6x6	DF-L#2
RB8	2	1¾"x11⅞"	MICRO'LLAM
RB9	1	5⅛"x21"	GLULAM
RB10	1	W12x106	A992-50 STEEL
RB11	2	1¾"x11⅞"	MICRO'LLAM
RB12	1	W12x106	A992-50 STEEL
RB13	1	W10x49	A992-50 STEEL
RB14	1	W10x49	A992-50 STEEL
RB15	1	4x10	DF-L#2
RB16	1	1¾"x11⅞"	MICRO'LLAM
RB17	2	1¾"x11⅞"	MICRO'LLAM
RB18	1	5⅛"x28½"	GLULAM
RB19	1	6x8	DF-L#2
RB20	1	1¾"x11⅞"	MICRO'LLAM
RB21	1	5⅛"x15"	GLULAM
RB22	3	2x12	DF-L#2



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CERTIFICATE
66953
ERIC B. MURRAY
Signed: 08/30/2022
ARIZONA U.S.A.

STRUCTURAL ELEMENTS ONLY

WREN COVE LOT #11

LAKE HAVASU CITY, ARIZONA

HIGH ROOF FRAMING PLAN

DIMENSIONS SHOWN ON THE STRUCTURAL PLANS ARE FOR CONVENIENCE ONLY. VERIFY ALL DIMENSIONS WITH THE CURRENT ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.

REVISIONS

1	DESCRIPTION	DATE	BY
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-

LEI PROJECT #: 2022-2349
DRAWN BY: JMW
CHECKED BY: EBM
SCALE: ¼"=1'-0"
DATE: 8/30/2022

SHEET
S3.1

BASIS OF DESIGN

1. GOVERNING BUILDING CODE .... 2018 IBC

2. GRAVITY DESIGN:
   - ROOF DEAD LOAD (TILE) .... 25 PSF
   - ROOF DEAD LOAD (SHINGLES, METAL, MEMBRANE) .... 20 PSF
   - FLOOR DEAD LOAD .... 15 PSF
   - FLOOR LIVE LOAD .... 40 PSF
   - ROOF LIVE LOAD .... 20 PSF

3. SEISMIC DESIGN:
   - LATERAL SYSTEM .... SHEAR WALL
   - ZONE C
   - I 1.0
   - S_S=0.187 S_1=0.112 S_{DS}=0.199 S_{D1}=0.177 R=6.5
   - SITE CLASS (ASSUMED) .... D
   - RISK CATEGORY II

4. WIND DESIGN:
   - BASIC WIND SPEED .... 99 MPH
   - EXPOSURE C

5. SOILS:
   - SOIL BEARING PRESSURE (ASSUMED PER 2018 IBC 1806.2) .... 1500 PSF

GENERAL

1. THE GENERAL CONTRACTOR SHALL:

A. BECOME FAMILIAR WITH ALL PORTIONS OF THE CONTRACT DOCUMENTS AND ENSURE THAT ALL SUBCONTRACTORS ARE FAMILIAR WITH THOSE PORTIONS PERTAINING TO THEIR AREA OF WORK. NO DEVIATIONS WILL BE ALLOWED UNLESS AGREED UPON BY ALL PARTIES IN WRITING PRIOR TO CONSTRUCTION OR FABRICATION.

B. VERIFY ALL DIMENSIONS AND ELEVATIONS. COORDINATE ALL DOORS, WINDOWS, NON-BEARING INTERIOR AND EXTERIOR WALLS, ELEVATIONS, SLOPES, STAIRS, CURBS, DRAINS, RECESSES, DEPRESSIONS, RAILINGS, WATERPROOFING, FINISHES, CHAMFERS, KERFS, ETC.

C. FIELD VERIFY ALL SITE CONDITIONS AND IMMEDIATELY NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER REGARDING ACTUAL CONDITIONS AT THE SITE WHICH ARE NOT PER THE DRAWINGS.

D. COORDINATE ALL WORK BETWEEN THE VARIOUS TRADES AND SUBCONTRACTORS. REPORT ANY MODIFICATIONS TO THE STRUCTURAL PORTION OF THE BUILDING BY OTHER TRADES TO THE ARCHITECT AND STRUCTURAL ENGINEER.

E. BE RESPONSIBLE FOR SAFETY AND PROTECTION IN AND AROUND THE JOB SITE AND/OR ADJACENT PROPERTIES.

2. CONTRACT DOCUMENTS:

A. REFER TO THE SPECIFICATIONS FOR INFORMATION NOT COVERED BY THESE GENERAL NOTES OR THE DRAWINGS.

B. DETAILS, SECTIONS AND NOTES SHOWN ON THE STRUCTURAL DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO ALL SIMILAR SITUATIONS ELSEWHERE, UNLESS NOTED OR SHOWN OTHERWISE.

C. THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE OVER SHOP DRAWINGS UNLESS SPECIFICALLY NOTED OTHERWISE.

D. INFORMATION ON DRAWINGS INDICATING EXISTING CONDITIONS IS BASED ON BEST PRESENT KNOWLEDGE, BUT MAY NOT BE ENTIRELY ACCURATE AND MUST BE FIELD VERIFIED.

3. BUILDING CODE COMPLIANCE:

A. INSPECTION, TESTING, CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF THE GOVERNING BUILDING CODE AND STANDARDS. ASTM AND IBC DESIGNATIONS SHALL BE AS AMENDED TO LATEST DATE UNLESS NOTED OTHERWISE.

4. COORDINATION:

A. COORDINATE AND VERIFY ROOF, FLOOR, AND WALL OPENINGS REQUIRED WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND/OR OTHER DRAWINGS PRIOR TO CONSTRUCTION. REPORT OPENINGS REQUIRED WHICH ARE NOT SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW.

B. COORDINATE ANY CONSTRUCTION SITUATION NOT COVERED BY THESE PLANS, GENERAL NOTES, OR SPECIFICATIONS WITH THE ARCHITECT AND STRUCTURAL ENGINEER.

5. CONSTRUCTION SEQUENCE, SHORING, AND BRACING REQUIREMENTS:

A. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE METHOD, MEANS, AND SEQUENCE OF ALL STRUCTURAL ERECTION EXCEPT WHEN SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS. HE SHALL PROVIDE TEMPORARY SHORING AND BRACING AS HIS METHOD OF ERECTION REQUIRES TO PROVIDE ADEQUATE VERTICAL AND LATERAL SUPPORT DURING ERECTION. THIS SHORING AND BRACING SHALL REMAIN IN PLACE UNTIL ALL PERMANENT MEMBERS ARE PLACED AND ALL FINAL CONNECTIONS ARE COMPLETED, INCLUDING ALL ROOF AND FLOOR ATTACHMENTS.

B. SHORING AND SUPPORTING FORM WORK FOR SUSPENDED CONCRETE OR MASONRY MATERIAL SHALL REMAIN IN PLACE AND SHALL NOT BE REMOVED UNTIL THE STRUCTURAL MEMBERS HAVE ACQUIRED SUFFICIENT STRENGTH TO SAFELY SUPPORT THEIR OWN WEIGHT AND ANY ADDITIONAL CONSTRUCTION, STORAGE, AND/OR OTHER LOADS TO WHICH THEY MAY BE SUBJECTED. IN NO CASE SHALL THEY BE REMOVED PRIOR TO 7 DAYS. RE-SHORING SHALL BE IMMEDIATELY INSTALLED UPON REMOVAL OF SUCH FORMS AND SHALL REMAIN IN PLACE UNTIL 28 DAYS AFTER PLACING OF MATERIAL OR UNTIL MATERIAL HAS REACHED ITS 28 DAY DESIGN STRENGTH, WHICHEVER IS LONGER. DO NOT REMOVE LARGE AREAS OF SHORING BEFORE STARTING RE-SHORING PROCEDURES.

C. NON-BEARING INTERIOR WALLS SHALL BE ADEQUATELY BRACED TO THE STRUCTURE ABOVE WITH ALLOWANCE FOR DEFLECTION OF THE STRUCTURE ABOVE AND/OR BELOW.

D. BUILDING WALLS WHICH RETAIN EARTH MUST BE BRACED AT THE TOP. DO NOT BACKFILL UNLESS BRACING IS PROVIDED OR UNTIL THE COMPLETE FLOOR OR ROOF SYSTEM IS IN PLACE, TYPICAL, UNLESS NOTED OTHERWISE.

6. OMISSIONS AND/OR CONFLICTS:

A. OMISSIONS IN AND/OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER AND SHALL BE RESOLVED BY THE SAME BEFORE PROCEEDING WITH ANY WORK INVOLVED.

B. IN CASE OF CONFLICTS IN THE STRUCTURAL WORK, THE MOST STRINGENT REQUIREMENTS, AS DIRECTED BY THE ARCHITECT AND STRUCTURAL ENGINEER, SHALL BE IMPLEMENTED AT NO ADDITIONAL COST TO THE OWNER.

7. MISCELLANEOUS:

A. DURING AND AFTER CONSTRUCTION, THE CONTRACTOR AND/OR OWNER SHALL KEEP THE LOADS ON THE STRUCTURE WITHIN THE LIMITS OF THE DESIGN.

B. OBSERVATION VISITS TO THE SITE BY REPRESENTATIVES OF THE ARCHITECT AND/OR STRUCTURAL ENGINEER SHALL NOT BE CONSTRUED AS INSPECTION NOR APPROVAL OF CONSTRUCTION.

8. SUBMITTALS:

A. THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION, ERECTION, INSTALLATION, OR OTHERWISE BEING INCORPORATED INTO THE WORK.
REINFORCING STEEL SHOP DRAWINGS.
STRUCTURAL STEEL SHOP DRAWINGS.
ENGINEERED TRUSS DRAWINGS.
* THESE SUBMITTALS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER CURRENTLY REGISTERED IN THE STATE OF LICENSURE OF THE ENGINEER OF RECORD.

B. A MINIMUM OF TWO WEEKS SHALL BE ALLOWED FOR THE REVIEW OF ALL SUBMITTALS BY THE ARCHITECT AND STRUCTURAL ENGINEER.

C. REQUESTS FOR SUBSTITUTIONS SHALL BE SUBMITTED TO THE ARCHITECT AND STRUCTURAL ENGINEER IN WRITING. REASON(S) FOR THE REQUEST AND COST DIFFERENTIALS SHALL BE INCLUDED IN THE REQUESTS. SUBSTITUTIONS ARE NOT ALLOWED UNLESS APPROVED IN WRITING BY THE ARCHITECT AND STRUCTURAL ENGINEER.

SITE PREPARATION

1. REQUIREMENTS

A. DO NOT PLACE FOOTINGS OR FOUNDATIONS ON DISTURBED SOILS, UNDOCUMENTED FILL, DEBRIS, FROZEN SOIL, OR IN PONDED WATER.

B. ALL UNSUITABLE SOILS AND VEGETATION, SUCH AS TOPSOIL, ORGANIC SOILS, UNDOCUMENTED FILL, DISTURBED NATIVE SOILS, AND OTHER DELETERIOUS MATERIALS, SHALL BE REMOVED FROM BELOW FOOTINGS, FOUNDATIONS, AND FLOOR SLABS.

CONCRETE

1. CODES AND STANDARDS:

A. CONCRETE WORK SHALL COMPLY WITH THE AMERICAN CONCRETE INSTITUTE (ACI) EDITIONS OF:

I. ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".

II. ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".

III. ACI 347, "RECOMMENDED PRACTICE FOR CONCRETE FORM WORK".

2. MATERIALS:

A. CEMENT SHALL CONFORM TO ASTM C150, TYPE II, PORTLAND CEMENT.

B. HARD ROCK AGGREGATES SHALL CONFORM TO ASTM C33. LIGHTWEIGHT AGGREGATES SHALL CONFORM TO ASTM C330.

C. WATER SHALL BE POTABLE.

D. AIR ENTERTAINMENT SHALL CONFORM TO ASTM C260.

E. FLY ASH SHALL CONFORM TO ASTM C618.

F. CALCIUM CHLORIDE SHALL NOT BE USED.

3. MIX DESIGNS:

A. ONLY ONE TYPE OF CONCRETE SHALL BE PLACED AT THE SITE AT ANY GIVEN TIME.

B. A MIX DESIGN THAT PRODUCES THE LOWEST SLUMP COMPATIBLE WITH PROPER PLACEMENT SHALL BE USED, 4" MAXIMUM.

C. CONCRETE MIXES SHALL CONFORM TO THE FOLLOWING:

TYPE OF CONCRETE MEMBER	MINIMUM STRENGTH AT 28 DAYS (PSI)	MAX. W/C (RATIO)	DRY WEIGHT (PCF)	MAX AGGREGATE SIZE (INCHES)	AIR ENTRAIN-MENT (%)	MIN. CEMENT PER YARD (LBS)
FOOTINGS:	2500	0.50	145	0'-0 3/4"	3 ±-1	517
FOUNDATION WALLS:	2500	0.45	145	0'-0 3/4"	3 ±-1	564
SLAB ON GRADE:						
INTERIOR	2500	0.45	145	0'-0 3/4"	3 ±-1	564
EXTERIOR	2500	0.45	145	0'-0 3/4"	6 ±-1	564
SLABS ON DECK:						
LT. WT.*	2500	0.53	110	0'-0 3/4"	6 ±-1	564
COLUMNS:	2500	0.45	145	0'-0 3/4"	3 ±-1	564
BEAMS:	2500	0.45	145	0'-0 3/4"	3 ±-1	564

* LT. WT. CONCRETE SHALL HAVE A MIN. SPLITTING TENSILE STRENGTH OF 450 PSI.

D. LIMIT FLY ASH TO 15% OF THE TOTAL CEMENTITIOUS MATERIAL.

E. PEA GRAVEL AGGREGATE AND/OR PLASTICIZER MAY BE USED IN CONGESTED AREAS WHEN REQUIRED TO PROPERLY FILL ALL VOIDS AND/OR FOR WORKABILITY. (CONTRACTOR'S OPTION).

4. CONSTRUCTION:

A. CONCRETE SHALL BE PROPERLY VIBRATED DURING PLACEMENT.

B. PRIOR TO PLACING CONCRETE, CHECK WITH ALL TRADES TO ENSURE PROPER PLACEMENT OF OPENINGS, BLOCK OUTS, SLEEVES, CURBS CONDUITS, BOLTS, INSERTS, EMBEDS, DOWELS, ETC. ANCHOR BOLTS AND DOWELS SHALL BE PLACED PRIOR TO CASTING CONCRETE.

C. CONSTRUCTION JOINTS AND BULKHEADS SHALL BE FORMED WITH A KEY WAY. ALL CONTACT SURFACES, NEW OR EXISTING, AT CONSTRUCTION JOINTS SHALL BE INTENTIONALLY ROUGHENED PRIOR TO CASTING ADJACENT POUR.

D. OPENINGS IN FLOORS AND/OR WALLS SHALL HAVE ADDITIONAL REINFORCING AROUND ALL SIDES OF THE OPENING EQUIVALENT TO THE BARS CUT BY THE OPENING WITH HALF ON EACH SIDE OF THE OPENING OR 2-#5 BARS, WHICHEVER IS GREATER, UNLESS NOTED OTHERWISE. BARS PARALLEL TO THE PRINCIPAL REINFORCING SHALL RUN FULL LENGTH OF THE SPAN. BARS IN THE OTHER DIRECTION SHALL RUN 24 INCHES BEYOND THE EDGE OF THE OPENING OR END WITH A STANDARD HOOK. ALSO PROVIDE 2-#5 x 4'-0" DIAGONAL BARS AT EACH CORNER OF EACH OPENING.

E. NO PENETRATION SHALL BE ALLOWED THROUGH ANY CONCRETE BEAM, JOIST, COLUMN, PIER, OR JAMB WITHOUT THE ARCHITECT'S AND STRUCTURAL ENGINEER'S PRIOR WRITTEN APPROVAL. PENETRATIONS SHALL BE RE-ROUTED AS REQUIRED AT THESE LOCATIONS.

5. FOOTINGS:

A. FOOTINGS SHALL BEAR ON PROPERLY PREPARED MATERIAL. SEE THE SITE PREPARATION NOTES.

B. FOOTINGS SHALL BE CENTERED BELOW THE WALL AND/OR COLUMN ABOVE, TYPICAL UNLESS NOTED OTHERWISE.

C. EXTERIOR FOOTINGS SHALL BEAR BELOW THE EFFECTS OF FROST.

D. PROVIDE 2x4 BEVELED KEY WAYS IN ALL CONTINUOUS WALL FOOTINGS.

E. STAGGER FOOTING CONSTRUCTION JOINTS FROM WALL CONSTRUCTION JOINTS ABOVE BY AT LEAST 6 FEET.

F. REINFORCING IN CONTINUOUS FOOTINGS SHALL BE CONTINUOUS AT CORNERS AND/OR INTERSECTIONS BY PROVIDING PROPER LAP LENGTHS AND/OR CORNER BARS.

G. NO PENETRATIONS SHALL BE ALLOWED THROUGH ANY CONCRETE FOOTING. WHEN CONFLICTS ARISE BETWEEN UNDERGROUND PLUMBING, UTILITIES, ETC., THE FOOTING SHALL BE STEPPED DOWN BELOW THE CONFLICT AND A CONCRETE WALL, PIER, COLUMN, ETC., SHALL BE EXTENDED TO THE FOOTING AS REQUIRED.

H. BEARING SURFACES FOR FOOTINGS WHICH ARE, OR BECOME, UNDERMINED DURING CONSTRUCTION SHALL BE BACKFILLED WITH A LEAN-MIX CONCRETE (1000 PSI MIN.).

6. SLABS ON GRADE:

A. INTERIOR SLABS ON GRADE SHALL BE A MINIMUM OF 4 INCHES THICK, SHALL BEAR ON A 4 INCH MINIMUM LAYER OF FREE-DRAINING GRAVEL, AND SHALL BE REINFORCED WITH #4 BARS AT 24" O.C. BOTH WAYS, TYPICAL UNLESS NOTED OTHERWISE. PROVIDE CHAIRS WITH SAND PLATES FOR PROPER PLACEMENT.

B. LARGE AREAS OF INTERIOR SLABS ON GRADE SHALL BE PLACED IN STRIPS NOT TO EXCEED 120 FEET IN LENGTH NOR 30 FEET IN WIDTH WHICH ARE SUBDIVIDED BY CONSTRUCTION AND/OR CONTRACTION (CONTROL) JOINTS INTO ROUGHLY SQUARES WHOSE SIDES SHALL NOT EXCEED 15 FEET IN EITHER DIRECTION.

C. SEE ARCHITECTURAL FOR EXTERIOR SLABS ON GRADE, TYPICAL, UNLESS NOTED OTHERWISE.

MASONRY VENEER ANCHOR TIES

1. PRODUCTS:

A. MASONRY VENEER ANCHOR TIES SHALL BE ONE OF THE FOLLOWING:

I. DOVETAIL ANCHORS.

II. DX-10 SEISMIC CLIP INTERLOCK SYSTEM BY HOHMANN & BARNARD.

III. ARCHITECT AND STRUCTURAL ENGINEER APPROVED TWO PIECE ADJUSTABLE HOT-DIPPED GALVANIZED TIES.

2. INSTALLATION:

A. MAXIMUM SPACING SHALL BE 16" O.C. HORIZONTAL AND VERTICAL.

B. PROVIDE CONTINUOUS HORIZONTAL GALVANIZED #9 WIRE IN CENTER THIRD OF MORTAR JOINTS AT 16" O.C. ENGAGE #9 WIRE WITH ALL ANCHOR TIES.

C. CONSTRUCTION JOINTS IN MASONRY VENEER WALLS SHALL BE PROVIDED AS PER THE ARCHITECTURAL DRAWINGS, AND SHALL BE SPACED AT A MAXIMUM OF 15'-0" O.C. FOR MASONRY BLOCK VENEER.

REINFORCING STEEL

1. CODES AND STANDARDS:

A. REINFORCING STEEL SHALL COMPLY WITH:

I. AMERICAN CONCRETE INSTITUTE BUILDING CODE & COMMENTARY ACI 318.

II. AMERICAN CONCRETE INSTITUTE "DETAILING MANUAL", ACI 315 (OR SP-66).

2. MATERIALS:

A. REINFORCING STEEL SHALL BE NEW STOCK DEFORMED BARS AND SHALL CONFORM TO ASTM A615, GRADE 60, WITH A DESIGN YIELD STRENGTH OF 60,000 PSI, EXCEPT AS NOTED BELOW.

I. DOWELS TO BE BENT IN THE FIELD DURING CONSTRUCTION SHALL BE ASTM A615, GRADE 40 OR ASTM A706, GRADE 60, "LOW ALLOY STEEL".

II. REINFORCING TO BE WELDED SHALL BE ASTM A706, GRADE 60, "LOW-ALLOY STEEL".

B. MASONRY JOINT REINFORCING SHALL BE MANUFACTURED FROM WIRE WHICH CONFORMS TO ASTM A82.

3. CONSTRUCTION:

A. REINFORCING SHALL BE DETAILED, BOLSTERED, AND SUPPORTED PER ACI 315.

B. REINFORCING STEEL SHALL BE FREE OF LOOSE, FLAKY RUST, SCALE, GREASE, OIL, DIRT, AND OTHER MATERIALS WHICH MIGHT AFFECT OR IMPAIR BOND.

C. REINFORCING SHALL BE CONTINUOUS IN WALLS, BEAMS, COLUMNS, SLABS, FOOTINGS, ETC.

D. SPLICES IN CONTINUOUS REINFORCING SHALL BE MADE IN AREAS OF COMPRESSION AND/OR AT POINTS OF MINIMUM STRESS, TYPICAL UNLESS NOTED OTHERWISE. LAP SPLICES SHALL BE 40 BAR DIAMETERS LONG IN CONCRETE AND 48 BAR DIAMETERS LONG IN MASONRY. MINIMUM LAP SHALL BE 24 INCHES LONG. DOWELS SHALL HAVE A MINIMUM OF 30 BAR DIAMETERS EMBEDMENT. TENSION SPLICES SHALL BE USED IN CONCRETE WHEN SPECIFICALLY NOTED, USE A CLASS B SPLICE. SPLICES IN TOP BARS IN SUSPENDED SLABS AND BEAMS SHALL BE MADE AT MID SPAN. SPLICES IN BOTTOM BARS IN SUSPENDED SLABS AND BEAMS SHALL BE MADE AT SUPPORTS.

E. BENDS SHALL BE MADE COLD. DO NOT USE HEAT. BENDS SHALL BE DONE IN THE FABRICATOR'S SHOP UNLESS SPECIFICALLY NOTED FOR THE FIELD. DO NOT UN-BEND OR RE-BEND A PREVIOUSLY BENT BAR.

F. REINFORCING STEEL IN CONCRETE SHALL BE SECURELY ANCHORED AND TIED IN PLACE PRIOR TO PLACING CONCRETE AND SHALL BE POSITIONED WITH THE FOLLOWING MINIMUM CONCRETE COVER:

- CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH............ 3"
- CONCRETE EXPOSED TO EARTH OR WEATHER:
  - #6 AND LARGER............ 2"
  - #5 AND SMALLER............ 1 1/2"
- CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
  - SLABS AND WALLS, #11 AND SMALLER............ 3/4"
  - BEAMS AND COLUMNS, MAIN REINFORCING OR TIES............ 1 1/2"
  - SLABS ON GRADE............ CENTER OF SLAB

G. REINFORCING STEEL IN MASONRY SHALL BE PLACED PRIOR TO GROUTING AND SHALL BE PLACED, POSITIONED, AND LOCATED ACCORDING TO THE STRUCTURAL DRAWINGS. IT SHALL BE SECURED AGAINST DISPLACEMENT AT INTERVALS NOT TO EXCEED 200 BAR DIAMETERS OR TEN FEET.

H. NO REINFORCING STEEL SHALL BE WELDED UNLESS SPECIFICALLY NOTED AS SUCH. USE E90XX ELECTRODES AND ASTM A706 REINFORCING. COMPLY WITH AWS REQUIREMENTS.

I. EPOXY COATED REINFORCING BARS SHALL BE USED WHEN SPECIFICALLY NOTED. INCREASE LAP SPLICE LENGTHS AS REQUIRED BY THE IBC.

STRUCTURAL STEEL

1. CODES AND STANDARDS:

A. STRUCTURAL STEEL WORK SHALL COMPLY WITH:

I. THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", WITH "COMMENTARY".

II. AISC "CODE OF STANDARD PRACTICE" EXCLUDING SECTIONS 1.51, 3.3 (1ST SENTENCE), 4.2, 7.5.4, AND 7.11.5.

III. AMERICAN WELDING SOCIETY (AWS) "STRUCTURAL WELDING CODE", EXCLUDING ITEMS CONFLICTING WITH AISC REQUIREMENTS.

2. MATERIALS:

A. STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A572 GRADE 50 ENHANCED STEEL. STRUCTURAL STEEL PLATES SHALL CONFORM TO ASTM A36.

B. STRUCTURAL TUBE STEEL SHALL CONFORM TO ASTM A500, GRADE B, WITH A MINIMUM YIELD STRENGTH Fy=46 KSI.

C. STRUCTURAL PIPE SHALL CONFORM TO ASTM A53, WITH A MINIMUM YIELD STRENGTH Fy=36 KSI.

D. HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A325. ALL OTHER BOLTS SHALL CONFORM TO ASTM A307 OR BETTER.

E. WELDED ANCHOR STUDS AND DEFORMED BAR ANCHORS SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS.

3. CONSTRUCTION:

A. FABRICATION SHALL BE DONE IN AN APPROVED FABRICATOR'S SHOP.

B. CAMBER IN BEAMS SHALL BE AS INDICATED ON PLANS.

C. PROVIDE A SHOP COAT OF PAINT ON ALL STEEL ITEMS, EXCEPT AT AREAS OF WELDING AND/OR BOLTING.

D. USE HIGH STRENGTH (8000 PSI MINIMUM AT 28 DAYS), NON-SHRINK, LIQUID EPOXY GROUT BENEATH ALL STEEL BASE PLATES AND BEARING PLATES. MIX GROUT WITH SAND OR PEA GRAVEL AS RECOMMENDED BY THE MANUFACTURER. PLACE GROUT AS SOON AS STEEL MEMBER HAS BEEN PROPERLY POSITIONED AND ALIGNED.

E. WHERE STRUCTURAL STEEL WIDE FLANGE, PIPE, OR TUBE SECTIONS ARE EMBEDDED IN CONCRETE OR MASONRY AND REINFORCING BARS BUTT TO IT, DEFORMED BAR ANCHORS OR REINFORCING BARS WITH THE SAME SIZE AND SPACING AS THE ADJACENT REINFORCING BARS, 48 BAR DIAMETERS LONG, SHALL BE WELDED TO THE STRUCTURAL STEEL. THE MANUFACTURER'S WELDING PROCEDURES SHALL BE ADHERED TO.

4. BOLTED CONNECTIONS:

A. BOLTS SHALL BE 3/4" DIAMETER, UNLESS NOTED OTHERWISE.

B. BOLT SHALL BE BEARING TYPE CONNECTIONS UNLESS NOTED OTHERWISE.

C. STEEL TO STEEL BOLTED CONNECTIONS SHALL BE MADE WITH ASTM A325 HIGH STRENGTH BOLTS AND NUTS, UNLESS NOTED OTHERWISE. BOLTS SHALL CARRY THE IDENTIFYING MARK OF THREE (3) RADIAL LINES.

D. ALL OTHER BOLTED CONNECTIONS SHALL BE MADE WITH BOLTS AND NUTS CONFORMING TO ASTM A307 UNLESS NOTED OTHERWISE, INCLUDING ANCHOR BOLTS.

E. BOLTED CONNECTIONS SHALL BE TIGHTENED AND SHALL HAVE WASHERS AS REQUIRED BY AISC UNLESS NOTED OTHERWISE.

F. ENLARGING OF HOLES SHALL BE ACCOMPLISHED BY MEANS OF REAMING. DO NOT USE A TORCH ON ANY BOLT HOLES.

5. WELDED CONNECTIONS:

A. WELDED CONNECTIONS SHALL BE MADE USING LOW HYDROGEN MATCHING FILLER MATERIAL ELECTRODES, UNLESS NOTED OTHERWISE.

B. WELDERS SHALL BE CURRENTLY CERTIFIED ACCORDING TO AWS WITHIN THE LAST 12 MONTHS. ALL WELDING PROCEDURES SHALL BE PRE-QUALIFIED. WELDERS SHALL FOLLOW WELDING PROCEDURES.

C. WELDING AND GAS CUTTING SHALL BE DONE PER AWS.

D. WELDS SHALL HAVE THE SLAG REMOVED.

GENERAL FRAMING NOTES

1. ALL JOISTS, RAFTERS, POSTS AND HEADERS SHALL BE DOUGLAS FIR LARCH NO.2 OR EQUAL U.N.O. IF TJI'S OR EQUAL ARE USED, THEY MUST BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS. ALSO PROVIDE BRIDGING @ 8' O.C. FOR FLOOR JOISTS.

2. ALL JOISTS AND RAFTERS SHALL HAVE SOLID BLOCKING AT THEIR BEARING POINTS. ROOF JOISTS TO HAVE HURRICANE CLIPS AT 24" O.C. MIN.

3. ALL WOOD/LUMBER PLACED ONTO CONCRETE SHALL BE PRESSURE TREATED OR REDWOOD.

4. ALL WOOD CONNECTIONS MUST CARRY THE CAPACITY OF THE MEMBER, CONTRACTOR IS RESPONSIBLE FOR CONNECTIONS. IF OTHER THAN STANDARD CONNECTIONS ARE REQUIRED, SEE PROJECT ENGINEER FOR ADDITIONAL ASSISTANCE. USE SIMPSON OR EQUAL CONNECTIONS FOR WOOD TO WOOD.

5. ALL COLUMNS SHALL EXTEND DOWN THROUGH THE STRUCTURE TO THE FOUNDATION. ALL COLUMNS SHALL BE BRACED AT ALL FLOOR LEVELS. COLUMNS SHALL BE AS WIDE AS THE MEMBER THEY SUPPORT.

6. ALL EXTERIOR WALLS SHALL BE SHEATHED WITH 3/8" THICK EXP 1 SHEATHING OR EQUAL WITH 8d NAILS @ 6" O.C. EDGES AND @ 12" O.C. IN THE FIELD - BLOCKED, UNLESS OTHERWISE NOTED.

7. ALL FLOOR SHEATHING TO BE 3/4" THICK T&G SHEATHING GLUED AND NAILED WITH 10d COMMON NAILS OR EQUAL @ 6" O.C. EDGES AND @ 10" O.C. IN THE FIELD.

8. VERIFY ALL BEAM SIZES WITH ENGINEERING SPECIFICATIONS.

9. ALL BEAMS AND HEADERS OVER 48" SHALL BE SUPPORTED BY DOUBLE TRIMMERS UNLESS NOTED OTHERWISE.

10. TRUSS MANUFACTURER SHALL PROVIDE ENGINEERING SPECS. FOR ALL TRUSSES.

11. USE 7/16" O.S.B. OR CDX PLYWOOD SHEATHING WITH
8d NAILS @ 6" O.C. AT EDGES OF ROOF
10d NAILS @ 4" O.C. AT GABLE ENDS
SPACE NAILS 12" O.C. ON INTERMEDIATE MEMBERS
STAGGER SHEATHING JOINTS
PLYWOOD PERP. TO RAFTERS AND TRUSSES

12. SOLID BLOCK BETWEEN TRUSSES. HOLD DOWN EVERY 3RD BLOCK FOR ATTIC VENTILATION.

13. ALL OVER FRAME AREAS TO HAVE FULL ROOF SHEATHING BELOW.

14. PROVIDE SQUASH BLOCKING AT RIM JOIST BELOW ALL POSTS FROM ROOF, HEADER OR BEAM POINT LOADS.

15. PROVIDE DOUBLE FLOOR JOISTS BELOW ALL PARALLEL BEARING WALLS

16. ALL FRAMING LUMBER SHALL BE HEM FIR OR BETTER UNLESS A HIGHER GRADE IS NOTED OTHERWISE.

17. GLULAM BEAMS SHALL BE 24F-V4 DF/DF FOR SINGLE SPANS AND 24F-V8 DF/DF FOR MULTIPLE SPANS, AND CANTILEVERED SPANS.

18. ALL RAFTERS AND JOISTS OVER THREE FEET LONG SHALL BE HANGERED IF NOT SUPPORTED BY BOTTOM BEARING. ALL HANGERS AND OTHER WOOD CONNECTIONS MUST BE DESIGNED TO CARRY THE CAPACITY OF THE MEMBER THAT THEY ARE SUPPORTING.

19. FRAMING CONNECTIONS NOTED ON THE DRAWINGS ARE SIMPSON STRONGTIE OR EQUAL. INSTALL WITH THE CATALOG DESIGNATED CONNECTOR IN EACH HOLE.

20. NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED UNLESS SPECIFICALLY SHOWN, NOTED OR APPROVED BY ENGINEER.

21. LAG SCREWS SHALL BE INSERTED IN A DRILLED PILOT HOLE 60%-75% OF THE SHANK DIAMETER BY TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER. ALL NUTS, BOLTS AND LAG SCREWS SHALL BE PROVIDED WITH AN OVERSIZED WASHER.

22. NAILS TO BE COMMON WIRE UNLESS OTHERWISE NOTED

23. ALL BOLT HOLES SHALL BE DRILLED WITH A BIT 1/32" TO 1/16" LARGER THAN THE NOMINAL BOLT DIAMETER.

24. ALL JOINTS IN WALL SHEATHING SHALL OCCUR IN THE MIDDLE OF A PLATE OR BLOCK AND NAILED ON EACH SIDE OF THE JOINT WITH EDGE NAILING PER SHEARWALL SCHEDULE.

25. ALL OVER BUILT ROOF RAFTERS SHALL BE BRACED VERTICALLY TO THE TRUSSES BELOW AT 6'-0" O.C. MAXIMUM IN ORDER TO SPREAD THE LOAD EVENLY OVER THE TRUSSES.

26. PROVIDE 1/2" MINIMUM CLEARANCE BETWEEN TOP PLATE OF INTERIOR PARTITIONS AND BOTTOM CHORD OF TRUSSES (TO ENSURE THAT LOADING WILL BE AS DESIGNED).

27. DOUBLE TOP PLATE WITH MINIMUM 48" LAP SPLICE.

28. COLUMNS AND POSTS LOCATED ON CONCRETE OR MASONRY FLOORS OR DECKS EXPOSED TO THE WEATHER OR TO WATER SPLASH OR IN BASEMENTS, AND WHICH SUPPORT PERMANENT STRUCTURES, SHALL BE SUPPORTED BY CONCRETE PIERS OR METAL PEDESTALS PROJECTING ABOVE FLOORS UNLESS APPROVED WOOD OF NATURAL RESISTANCE BO DECAY OR TREATED WOOD IS USED. THE PEDESTALS SHALL PROJECT AT LEAST 6" ABOVE EXPOSED EARTH AND AT LEAST 1" ABOVE SUCH FLOORS.

29. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE IBC, AND LOCAL ORDINANCES.

30. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO STARTING CONSTRUCTION.

WOOD TRUSS NOTES

1. BOTTOM CHORDS OF TRUSSES, ACTING AS CEILING MEMBERS MUST BE ABLE TO SUPPORT A 10 PSF LIVE LOAD PER IBC REQUIREMENTS.

2. THE TRUSS MANUFACTURER SHALL BE RESPONSIBLE FOR THE DESIGN AND FABRICATION OF THE PRE-ENGINEERED TRUSSES, AND SHALL DESIGN THE TRUSSES PER ATTACHED ENGINEERING SPECS.

3. THE TRUSSES SHALL BE DESIGNED TO CARRY ANY ADDITIONAL LOADS DUE TO MECHANICAL UNITS, OVERHEAD DOORS, ROOF OVERBUILDS, ETC.

4. THE TRUSSES SHALL ALSO BE DESIGNED PER THE IBC, AND LOCAL ORDINANCES.

5. ALL MEMBERS SHALL BE DESIGNED FOR COMBINED STRESSES, BASED ON THE WORST LOADING CONDITION.

6. THE TRUSS MANUFACTURER SHALL INDICATE PROPER BRACING OF COMPRESSION CHORD MEMBERS @ 6'-0" LONG (OR LONGER), AS WELL AS BRACING FOR TRUSS ERECTION.

7. ALL DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO FABRICATION.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE TRUSSES PER THE TRUSS MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS. NO WEB OR CHORD MEMBERS SHALL BE MODIFIED IN THE FIELD.

9. THE PROJECT ENGINEER, OR ENGINEER OF RECORD, IS NOT RESPONSIBLE FOR THE PRE-ENGINEERED TRUSSES, NOR FOR THE INSTALLATION ETC. OF THE TRUSSES. TRUSS PLANT SHALL PROVIDE LICENSED ENGINEERED PLAN. (CONTRACTOR TO VERIFY TRUSS LAYOUT IS CONSISTENT WITH THESE PLANS. ENGINEER SHOULD BE NOTIFIED OF ANY DEVIATION).

10. FABRICATION OF TRUSSES SHALL BE AS APPROVED BY TPI EXCEPT THAT THIS SPECIFICATION SHALL GOVERN WHEN IT EXCEEDS TPI REQUIREMENTS.

11. FABRICATE TRUSSES FROM APPROVED SHOP DRAWINGS.

12. FABRICATE TRUSSES IN JIGS WITH MEMBERS ACCURATELY CUT TO PROVIDE GOOD BEARING AT JOINTS. JOINTS SHALL BE ACCEPTABLE IF THE AVERAGE OPENING BETWEEN ENDS OF MEMBERS IMMEDIATELY AFTER FABRICATION IS LESS THAN 1/16", EXCEPT THAT TRUSS COMPRESSION CHORD JOINTS AT SPLICES AND RIDGES SHALL HAVE FULL CONTACT BETWEEN MEMBERS.

13. EACH CHORD SECTION SHALL BE INVOLVED IN TWO PANEL POINTS BEFORE BEING SPLICED.

14. PROVIDE 1/8" CAMBER FOR EACH 6 FEET OF TRUSS UNLESS OTHERWISE INDICATED.

15. TRUSS FABRICATORS USING METAL PLATES SHALL HAVE PLANT INSPECTED FOUR TIMES PER YEAR BY AN INDEPENDENT TESTING LABORATORY IN ACCORDANCE WITH TPI REGULATIONS AND COPIES OF INSPECTIONS MADE AVAILABLE TO OWNER UPON REQUEST.

MASONRY

1. CODES AND STANDARDS:

A. MASONRY WORK SHALL COMPLY WITH THE AMERICAN CONCRETE INSTITUTE (ACI) 530, "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES".

2. MATERIALS:

A. MASONRY WALL CONSTRUCTION SHALL CONSIST OF OF GRADE N, TYPE II, MEDIUM WEIGHT OR NORMAL-WEIGHT, CLOSED END, CONCRETE MASONRY UNITS (CMU's) CONFORMING TO ASTM C90.

B. MORTAR SHALL BE TYPE "S" AS DEFINED BY THE ACI AND SHALL CONFORM TO ASTM C270, WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS. IT SHALL CONSIST OF 1.0 PART PORTLAND CEMENT, 0.25 TO 0.5 PARTS HYDRATED LIME OR PUTTY LIME, AND 3.5 TO 4.5 PARTS SAND. ALL MEASUREMENTS ARE PARTS BY VOLUME. NO ADDITIVES ARE ALLOWED.

C. GROUT SHALL CONFORM TO ASTM C476 WITH A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS. IT SHALL BE OF A FLUID CONSISTENCY AND SHALL CONSIST OF A MINIMUM OF 1.0 PART PORTLAND CEMENT, 2.25 TO 3.0 PARTS SAND, AND MAY CONTAIN AN ADDITIONAL 1 TO 2 PARTS PEA GRAVEL IF GROUT SPACES ARE 4" OR MORE IN EVERY DIRECTION. ALL MEASUREMENTS ARE PARTS BY VOLUME. DO NOT USE FLY ASH IN GROUT.

D. PRISM TESTS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF F'M=1,500 PSI AT 28 DAYS.

3. CONSTRUCTION:

A. ALL MASONRY BLOCK SHALL BE STORED UNDER COVER AT THE JOB SITE.

B. FACE SHELLS SHALL BE FULLY BEDDED.

C. MORTAR JOINTS SHALL BE TOOLED CONCAVE.

D. DO NOT USE MORTAR FOR GROUT.

E. DO NOT USE ANY FROZEN MATERIAL.

F. GROUT SHALL BE POURED IN ACCORDANCE WITH LOW LIFT PROCEDURES PER THE IBC, TYPICAL, UNLESS NOTED OTHERWISE.

G. GROUT SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION DURING PLACING AND RECONSOLIDATED AFTER EXCESS MOISTURE HAS BEEN ABSORBED BUT BEFORE WORKABLITITY IS LOST.

H. ALL CELLS WHICH CONTAIN REINFORCING, BOLTS, ANCHORS, ETC. AND AS OTHERWISE SPECIFIED SHALL BE GROUTED SOLID. ALL CELLS WHICH ARE TO BE GROUTED SHALL BE CLEAN AND FREE FROM DELETERIOUS MATERIALS.

I. GROUT SOLID AROUND ALL JOIST AND BEAM ENDS, TYPICAL UNLESS NOTED OTHERWISE.

J. HOLES FOR BOLTS IN MASONRY FACE OR END SHELLS SHALL HAVE A DIAMETER TWO INCHES LARGER THAN THE BOLT DIAMETER AND THE HOLE SHALL BE FILLED WITH GROUT.

K. NO PENETRATION SHALL BE ALLOWED THROUGH ANY MASONRY BEAM, COLUMN, PIER, OR JAMB WITHOUT THE ARCHITECT'S AND STRUCTURAL ENGINEER'S PRIOR WRITTEN APPROVAL. PENETRATIONS SHALL BE REROUTED AS REQUIRED AT THESE LOCATIONS.

L. PRIOR TO PLACING MASONRY, CHECK WITH ALL TRADES TO INSURE PROPER PLACEMENT OF OPENINGS, BLOCK OUTS, SLEEVES, CURBS, CONDUITS, BOLTS, INSERTS, EMBEDS, DOWELS, ETC.

4. WALLS:

A. MASONRY WALLS SHALL BE CONSTRUCTED UTILIZING COMMON RUNNING BOND, TYPICAL, UNLESS NOTED OTHERWISE.

B. MASONRY WALLS SHALL BE BUILT AS AN INTEGRAL UNIT AT CORNERS AND INTERSECTIONS. REINFORCING SHALL BE CONTINUOUS AND BACK TO BACK END SHELLS SHALL BE REMOVED.

C. MASONRY WALLS SHALL BE REINFORCED AS FOLLOWS, UNLESS NOTED OTHERWISE.

WALL THICKNESS	VERTICAL REINFORCING	HORIZONTAL REINFORCING
6"	1-#4 @ 32" O.C.	1-#4 @ 48" O.C.
8"	1-#5 @ 32" O.C.	2-#3 @ 48" O.C.
10"	1-#5 @ 32" O.C.	2-#4 @ 48" O.C.
12"	1-#6 @ 32" O.C.	2-#4 @ 48" O.C.

PROVIDE LADDER-TYPE JOINT REINFORCING CONSISTING OF 2-#9 WIRES (3-#9 WIRES AT VENEER) AT 16" O.C. HORIZONTALLY IN ALL MASONRY WALLS. SEE PLANS, SCHEDULES, AND DETAILS FOR OTHER REINFORCING REQUIREMENTS.

D. PLACE VERTICAL REINFORCING IN THE CENTER OF THE WALL UNLESS EACH FACE IS SPECIFIED OR UNLESS NOTED OTHERWISE.

E. VERTICAL REINFORCING SHALL BE DOWELED TO CONCRETE FOOTING OR FOUNDATION WALL BELOW AND TO STRUCTURE ABOVE WITH THE SAME SIZE BAR AND SPACING, TYPICAL, UNLESS NOTED OTHERWISE.

F. PROVIDE VERTICAL REINFORCING IN GROUTED CELL AT ALL CORNERS AND INTERSECTIONS.

G. PROVIDE CORNER BARS AT ALL INTERSECTIONS AND CORNERS. USE SAME SIZE BAR AND SPACING AS THE HORIZONTAL REINFORCING.

H. HORIZONTAL REINFORCING SHALL TERMINATE AT THE ENDS OF WALLS AND AT OPENINGS WITH A STANDARD HOOK.

I. HORIZONTAL REINFORCING SHALL OCCUR AT THE TOP AND BOTTOM COURSE OF ALL MASONRY WALLS EXCEPT THE BOTTOM COURSE HORIZONTAL REINFORCING MAY BE OMITTED WHEN THE WALL IS DOWELED TO A CONCRETE FOUNDATION WALL BELOW.

J. OPENINGS IN WALLS WHICH EXCEED 24 INCHES IN EITHER DIRECTION SHALL BE REINFORCED WITH A MINIMUM OF 2-#5 BARS IN GROUTED SPACE ON ALL SIDES OF THE OPENING, TYPICAL, UNLESS NOTED OTHERWISE. VERTICAL BARS SHALL EXTEND THE FULL HEIGHT OF THE WALL BETWEEN SUPPORTS. HORIZONTAL BARS SHALL EXTEND A MINIMUM OF 24 INCHES BEYOND THE EDGES OF THE OPENING.

K. PENETRATIONS THROUGH ANY MASONRY WALL SHALL BE BUILT INTO THE WALL AS THE WALL IS BEING CONSTRUCTED AND SHALL BE REVIEWED BY THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO INSTALLATION.

L. CONSTRUCTION JOINTS IN REINFORCED MASONRY WALLS SHALL NOT OCCUR AT THE EDGE OF BEAM SUPPORTS AND SHALL BE PROVIDED PER THE STRUCTURAL DRAWINGS.

M. WHERE HORIZONTAL REINFORCING BARS JOINT CONCRETE WALLS, COLUMNS, OR PILASTERS, REINFORCING SHALL BE CONTINUOUS. ALSO, A KEY SHALL BE PROVIDED BETWEEN THE MASONRY AND THE CONCRETE. FILL KEY WITH GROUT.

5. BEAMS:

A. BEAMS SHALL BE BUILT AS AN INTEGRAL PART WITH THE SUPPORT. NO TOOTHING OR DOWELING ONLY WILL BE PERMITTED. MASONRY UNITS WITH ONE END OPEN-ENDED SHALL BE USED IN ALL MASONRY BEAMS. BACK-TO-BACK END SHELLS ARE NOT ALLOWED. GROUT ALL MASONRY BEAMS SOLID FOR FULL DEPTH AND WIDTH SHOWN IN MASONRY BEAM SCHEDULE.

B. REINFORCING IN THE MASONRY BEAM SCHEDULE IS AN ADDITION TO STANDARD WALL REINFORCING.

C. HORIZONTAL REINFORCING BARS IN THE TOP OF THE MASONRY BEAM SHALL BE PLACED IN THE TOP 4 INCHES OF THE BEAM AND SHALL EXTEND A MINIMUM OF 72 BAR DIAMETERS BEYOND THE EDGE OF THE OPENING OR SHALL BE HOOKED IF REQUIRED.

D. HORIZONTAL REINFORCING BARS IN THE BOTTOM OF THE MASONRY BEAM SHALL BE PLACED IN THE BOTTOM 4 INCHES OF THE BEAM AND SHALL EXTEND A MINIMUM OF 24 INCHES BEYOND THE EDGE OF THE OPENING OR SHALL BE HOOKED IF REQUIRED.

E. VERTICAL REINFORCING BARS SHALL HOOK AROUND THE BOTTOM REINFORCING BARS. THEY SHALL ALSO HOOK AROUND THE TOP HORIZONTAL REINFORCING BARS OR EXTEND INTO THE WALL ABOVE THE MASONRY BEAM A MINIMUM OF 48 BAR DIAMETERS.

F. DO NOT SPLICE HORIZONTAL TOP OR BOTTOM BARS, TYPICAL, UNLESS NOTED OTHERWISE.

G. FOR OPENINGS NOT SHOWN, USE SIMILAR BEAM AS SHOWN IN THAT WALL OR TYPE OF WALL FOR SIMILAR OPENINGS. VERIFY WITH THE STRUCTURAL ENGINEER.

H. USE THE FOLLOWING MASONRY BEAM SIZES FOR OPENINGS IN NON-BEARING MASONRY WALLS:

WIDTH OF OPENING (FEET)	BEAM WIDTH (INCHES)	BEAM DEPTH (INCHES)	HORIZONTAL REINFORCING
UP TO 4'-0"	SAME AS WALL	16	2 #5 BOTTOM
UP TO 8'-0"	SAME AS WALL	24	2 #5 TOP & BOTTOM
UP TO 10'-0"	SAME AS WALL	32	2 #5 TOP & BOTTOM

FOR WIDER OPENINGS CONTACT THE STRUCTURAL ENGINEER. SEE THE MASONRY BEAM SCHEDULE FOR ADDITIONAL INFORMATION.

6. COLUMNS:

A. GROUT JAMBS SOLID FOR FULL HEIGHT OF WALL (FLOOR TO FLOOR AND/OR ROOF) AT SIDES OF OPENING; ONE CELL FOR EACH 4'-0" OF SPAN OR PORTION THEREOF. REINFORCE WITH 2-#5 VERTICAL BARS IN EACH GROUTED CELL WITH ONE BAR PLACED AT EACH FACE OF WALL, TYPICAL, UNLESS NOTED OTHERWISE. SEE PLANS, SCHEDULES, AND DETAILS FOR OTHER REINFORCING REQUIREMENTS.

SPECIAL INSPECTION

1. SPECIAL INSPECTION SHALL BE REQUIRED FOR THE FOLLOWING ITEMS PER CHAPTER 17 OF THE IBC:
A. INSTALLATION OF POST-INSTALLED CONCRETE ANCHORS PER MANUFACTURER'S SPECIFICATIONS.
B. MASONRY CONSTRUCTION (TYPE A)
C. FIELD WELDING OF STRUCTURAL STEEL

MINIMUM NAILING SCHEDULE

CONNECTION	NAILING
1. JOIST TO SILL OR GIRDER, TOENAIL	(3) 8d
2. BRIDGING TO JOIST, TOENAIL EACH END	(2) 8d
3. 1"x6" (25mm x 152mm) SUB FLOOR OR LESS TO EACH JOIST, FACE NAIL	(2) 8d
4. WIDER 1"x6" (25mm x 152mm) SUB FLOOR TO EACH JOIST, FACE NAIL	(3) 8d
5. 2" (51mm) SUB FLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL	(2) 16d
6. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL	16d @ 16" (406mm) O.C.
SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS	(3) 16d PER 16" (406mm)
7. TOP PLATE TO STUD, END NAIL	(2) 16d
8. STUD TO SOLE PLATE	(4) 8d, TOENAIL OR (2) 16d, END NAIL
9. DOUBLE STUDS, FACE NAIL	16d @ 24" (610mm) O.C.
10. DOUBLE TOP PLATES, TYPICAL FACE NAIL	16d @ 16" (406mm) O.C.
DOUBLE TOP PLATES, LAP SPLICE	(8) 16d
11. BLOCKING BETWEEN JOIST OR RAFTERS TO TOP PLATE, TOENAIL	(3) 8d
12. RIM JOIST TO TOP PLATE, TOENAIL	8d @ 6" (152mm) O.C.
13. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	(2) 16d
14. CONTINUOUS HEADER, TWO PIECES	6d @ 16" (406mm) O.C. ALONG EACH EDGE
15. CEILING JOIST TO PLATE, TOENAIL	(3) 8d
16. CONTINUOUS HEADER TO STUD, TOENAIL	(4) 8d
17. CEILING JOIST LAPS OVER PARTITIONS, FACE NAIL	(3) 16d
18. CEILING JOIST TO PARALLEL RAFTERS, FACE NAIL	(3) 16d
19. RAFTERS TO PLATE, TOENAIL	(3) 16d
20. 1" (25mm) BRACE TO EACH STUD AND PLATE, FACE NAIL	(2) 8d
21. 1"x8" (25mm x 203 mm) SHEATHING OR LESS TO EACH BEARING, FACE NAIL	(2) 8d
22. WIDER THAN 1"x8" (25mm x 203mm) SHEATHING TO EACH BEARING, FACE NAIL	(3) 8d
23. BUILT-UP CORNER STUDS	16d @ 24" (610mm) O.C.
24. BUILT-UP GIRDER AND BEAMS	20d @ 32" (813mm) O.C. AT TOP & BOTTOM & STAGGERED, (2) 20d AT ENDS & AT EACH SPLICE
25. 2" (51mm) PLANKS	(2) 16d AT EACH BEARING
26. WOOD STRUCTURAL PANELS AND PARTICLEBOARD: 2	
SUBFLOOR AND WALL SHEATHING (TO FRAMING):	
1/2" (12.7mm) AND LESS	6d [3]
19/32" - 3/4" (15mm-19mm)	8d [4] OR 6d [5]
7/8" - 1" (22mm-25mm)	8d [3]
1 1/8" - 1 1/4" (29mm-32mm)	10d [4] OR 8d [5]
COMBINATION SUBFLOOR-UNDERLAYMENT (TO FRAMING):	
3/4" (19mm) AND LESS	6d [5]
7/8" - 1" (22mm-25mm)	8d [5]
1 1/8" - 1 1/4" (29mm-32mm)	10d [4] OR 8d [5]
27. PANEL SIDING (TO FRAMING) 2:	
1/2" (12.7mm) OR LESS	6d [5]
5/8" (16mm)	8d [5]
28. FIBERBOARD SHEATHING: 7	
1/2" (12.7mm)	No. 11 GA [4] 6d [8] No. 16 GA [9]
25/32" (20mm)	No. 11 GA [4] 8d [8] No. 16 GA [9]
29. INTERIOR PANELING	
1/4" (6.4mm)	4d [10]
3/8" (9.5mm)	6d [11]

1. COMMON OR BOX NAILS MAY BE USED EXCEPT WHERE OTHERWISE STATED.
2. NAILS SPACED AT 6 INCHES (152mm) ON CENTER AT EDGES, 12 INCHES (305mm) AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES (152mm) AT ALL SUPPORTS WHERE SPANS ARE 48 INCHES (1219mm) OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305 NAILS FOR WALL SHEATHING MAY BE COMMON, BOX OR CASING.
3. COMMON OR DEFORMED SHANK.
4. COMMON
5. DEFORMED SHANK.
6. CORROSION-RESISTANT SIDING OR CASING NAILS.
7. FASTENERS SPACED 3 INCHES (76mm) ON CENTER AT EXTERIOR EDGES AND 6 INCHES (152mm) ON CENTER AT INTERMEDIATE SUPPORTS.
8. CORROSION-RESISTANT ROOFING NAILS WITH 7/16 INCH DIAMETER (11mm) HEAD AND 1 1/2 INCH (38mm) LENGTH FOR 1/2 INCH (12.7mm) SHEATHING AND 1 3/4 INCH (44mm) LENGTH FOR 25/32 INCH (20mm) SHEATHING.
9. CORROSION-RESISTANT STAPLES WITH NOMINAL 7/16 INCH (11mm) CROWN AND 1 1/8 INCH (29mm) LENGTH FOR 1/2 INCH (12.7mm) SHEATHING AND 1 1/2 INCH (38mm) LENGTH FOR 25/32 INCH (20mm) SHEATHING.
10. PANEL SUPPORTS AT 16 INCHES (406mm) [20 INCHES (508mm) IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED]. CASING OR FINISH NAILS SPACED 6 INCHES (152mm) ON PANEL EDGES, 12 INCHES (305mm) AT INTERMEDIATE SUPPORTS.
11. PANEL SUPPORTS AT 24 INCHES (610mm). CASING OR FINISH NAILS SPACED 6 INCHES (152mm) ON PANEL EDGES, 12 INCHES (305mm) AT INTERMEDIATE SUPPORTS.

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Registered Professional Engineer
CERTIFICATE No. 66953
ERIC B. MURRAY
(Civil)
Signed: 08/30/2022
ARIZONA U. S. A.

STRUCTURAL ELEMENTS ONLY

WREN COVE LOT #11

LAKE HAVASU CITY, ARIZONA

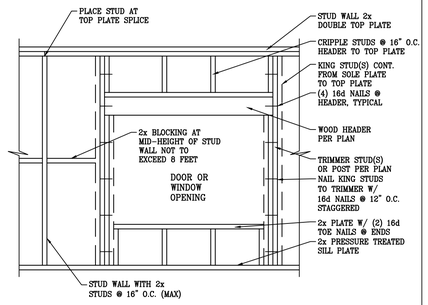
STRUCTURAL NOTES

DIMENSIONS SHOWN ON THE STRUCTURAL PLANS ARE FOR CONVENIENCE ONLY. VERIFY ALL DIMENSIONS WITH THE CURRENT ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.

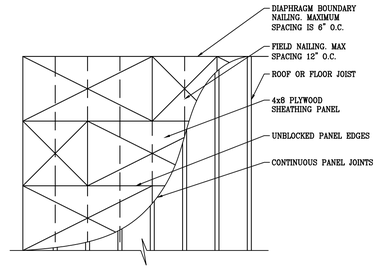
REVISIONS

#	DESCRIPTION	DATE	BY
1			
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-

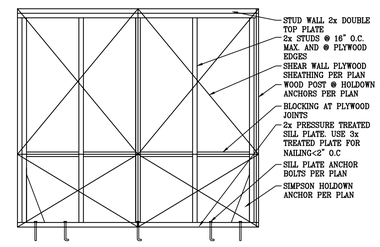
LEI PROJECT #: 2022-2349
DRAWN BY: JMW
CHECKED BY: EBM
SCALE: NTS
DATE: 8/30/2022
SHEET
SD.0



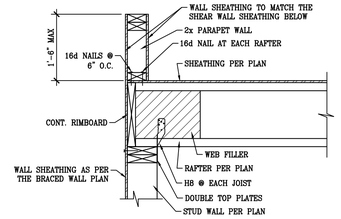
1 TYPICAL WALL FRAMING



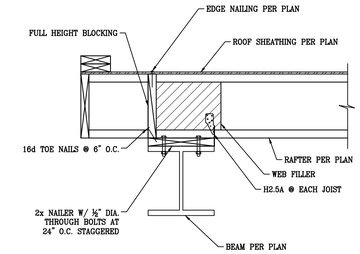
2 UNBLOCKED HORIZONTAL DIAPHRAGM



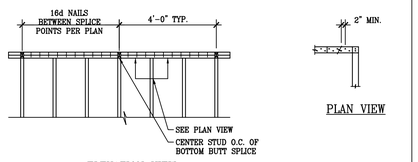
3 TYPICAL SHEAR WALL FRAMING & CONNECTION



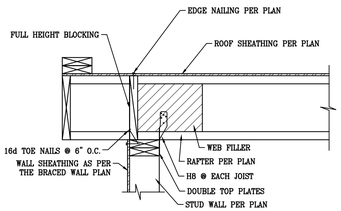
4 PARAPET WALL PERPENDICULAR JOIST DETAIL



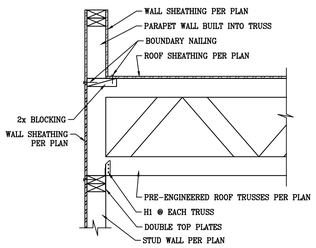
5 JOISTS PERPENDICULAR TO STEEL BEAM



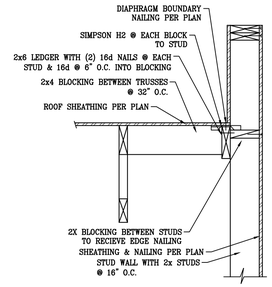
6 STUD WALL TOP PLATE SPLICE CONNECTION



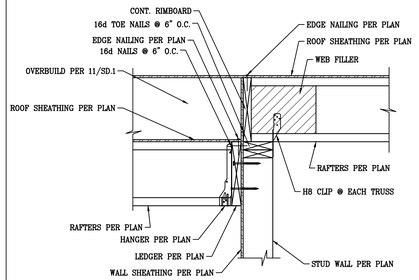
7 ROOF RAFTER PERPENDICULAR TO WALL



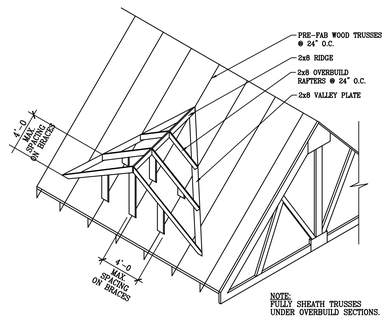
8 ROOF TRUSSES PERPENDICULAR TO STUD WALL



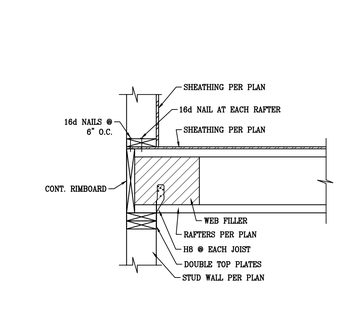
9 PARAPET WALL WITH PARALLEL TRUSS DETAIL



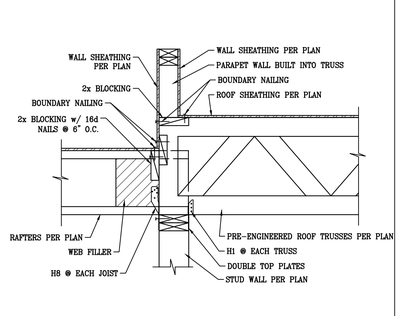
10 RAFTERS PERPENDICULAR TO STUD WALL



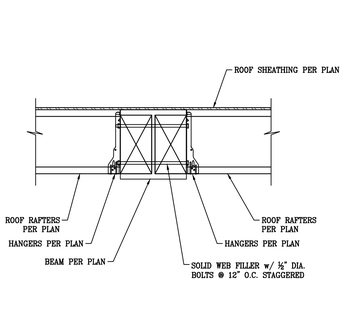
11 ROOF OVERBUILD DETAIL



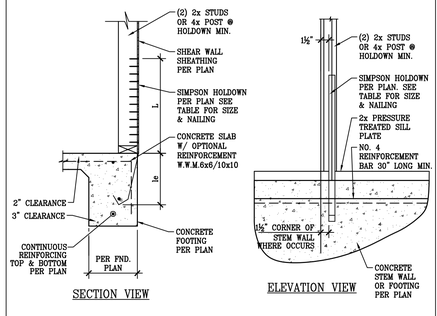
12 PARAPET WALL PERPENDICULAR JOIST DETAIL



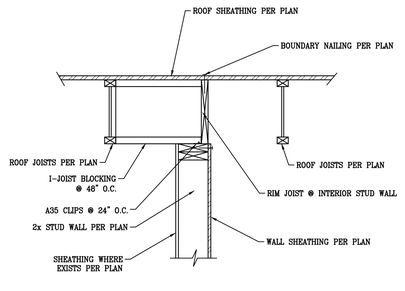
13 ROOF TRUSSES PERPENDICULAR TO STUD WALL



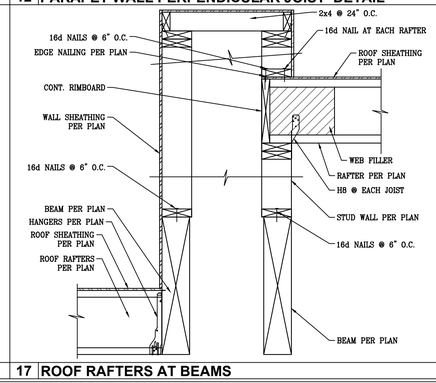
14 RAFTERS AT FLUSH BEAM



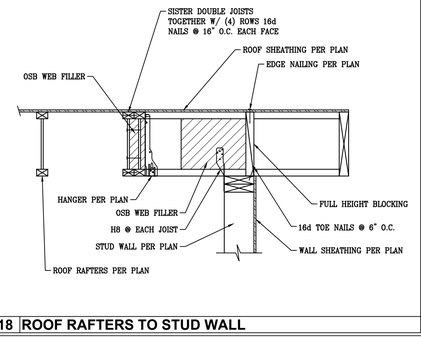
15 SIMPSON HOLDOWN STRAP CONNECTION TYP.



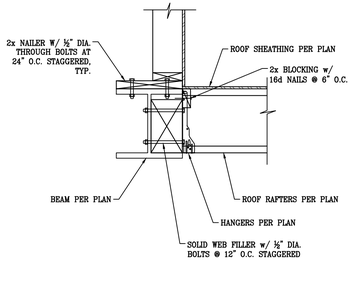
16 SHEAR TRANSFER



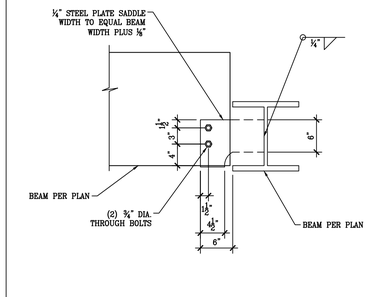
17 ROOF RAFTERS AT BEAMS



18 ROOF RAFTERS TO STUD WALL



19 RAFTERS AT SET-UP BEAM



20 GLULAM BEAM TO STEEL BEAM CONNECTION

LEI
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CERTIFICATE
66953
ERIC B. MURRAY
Signed: 08/30/2022
ARIZONA U.S.A.

STRUCTURAL ELEMENTS ONLY

WREN COVE LOT #11

LAKE HAVASU CITY, ARIZONA

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REVISIONS

	DESCRIPTION	DATE	BY
1			
2			
3			
4			
5			

LEI PROJECT #: 2022-2349

DRAWN BY: JMW

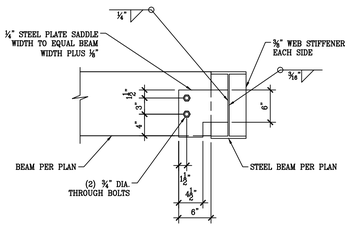
CHECKED BY: EBM

SCALE: NTS

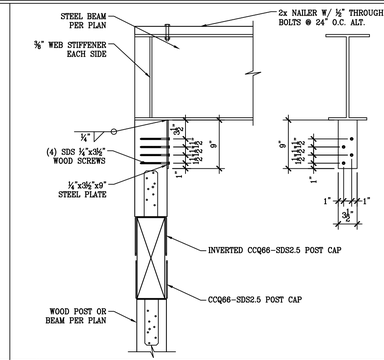
DATE: 8/30/2022

SHEET

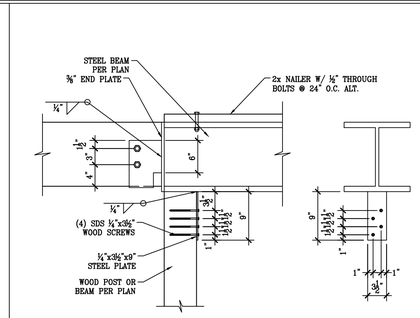
SD.1



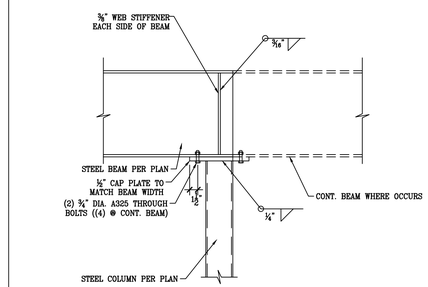
21 | WOOD BEAM TO STEEL BEAM CONNECTION



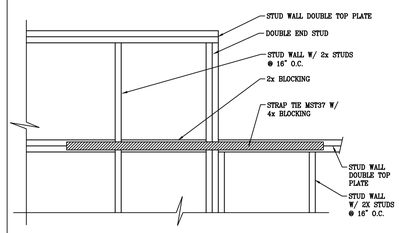
22 | STEEL BEAM TO WOOD POST



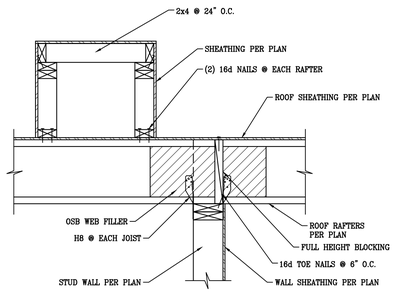
23 | STEEL BEAM TO WOOD POST



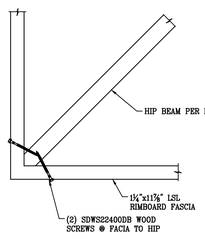
24 | STEEL BEAM CONT. TO STEEL COLUMN



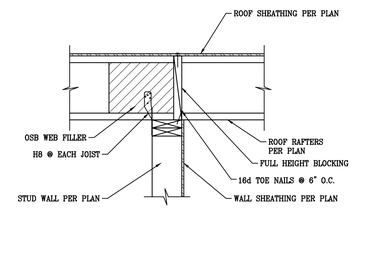
25 | STUD WALL STEP-DOWN CONNECTION



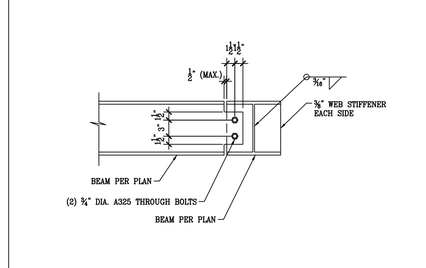
26 | BEARING WALL



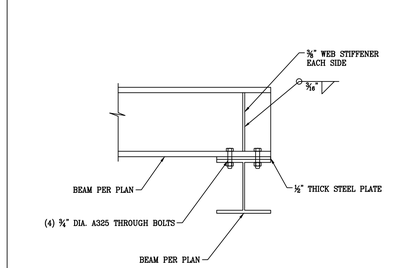
27 | BEAM TO BEAM CONNECTION



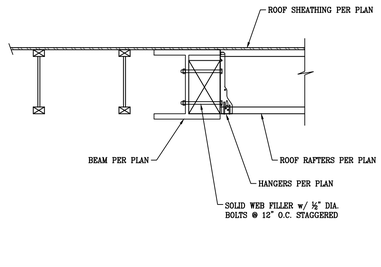
28 | BEARING WALL



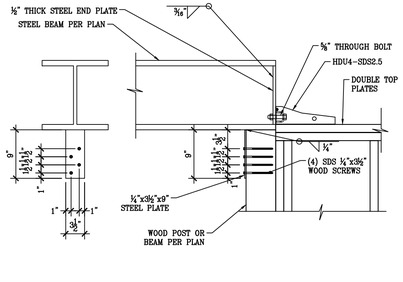
29 | STEEL BEAM TO STEEL BEAM CONNECTION



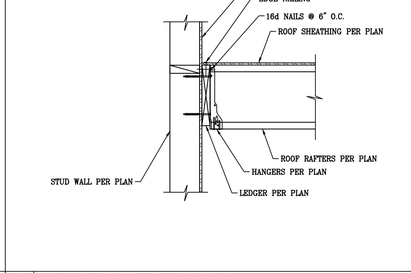
30 | STEEL BEAM TO STEEL BEAM CONNECTION



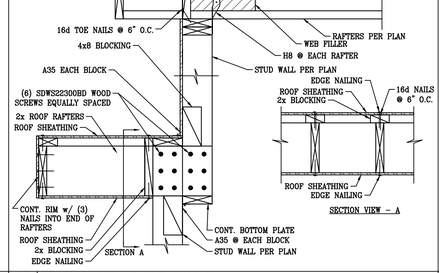
31 | RAFTERS AT SET-UP BEAM



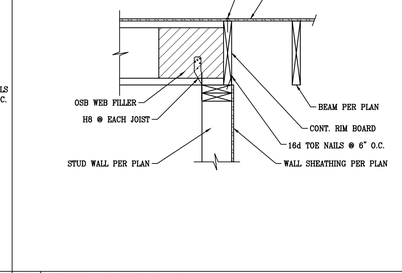
32 | STEEL BEAM TO POST AND TOP PLATES



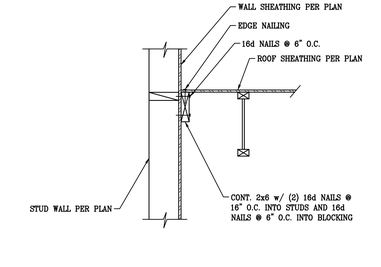
33 | ROOF RAFTERS TO STUD WALL



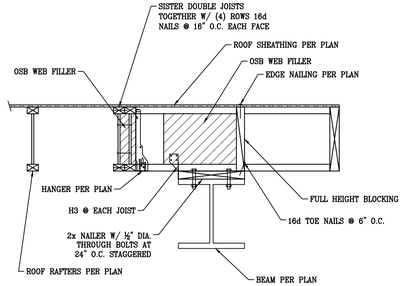
34 | STEEL BEAM CONT. TO STEEL COLUMN



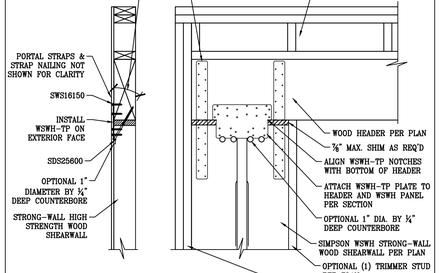
35 | STUD WALL STEP-DOWN CONNECTION



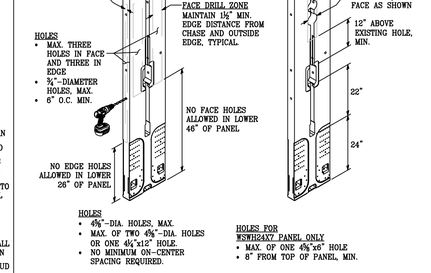
36 | STUD WALL PARALLEL TO RAFTERS



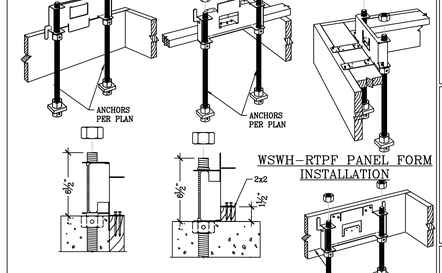
37 | ROOF RAFTERS TO STUD WALL



38 | WOOD HEADER OVER WSWH-PK



39 | WSWH TRIM ZONE & ALLOWABLE HOLES



NOTES:
1. SEE DETAIL 41/SD.3 FOR ANCHORAGE REQUIREMENTS.

40 | WSWH TEMPLATE

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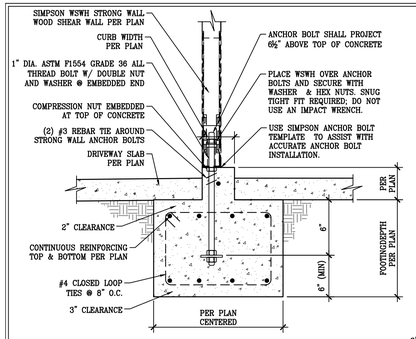
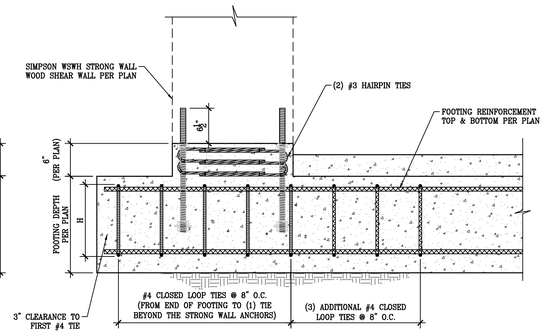
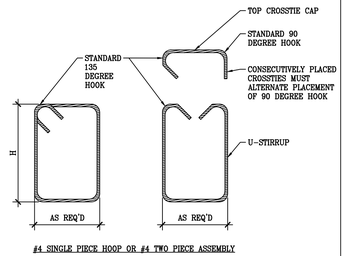
LEI PROJECT #: 2022-2349
DRAWN BY: JMW
CHECKED BY: EBM
SCALE: NTS
DATE: 8/30/2022

SHEET
SD.2



NOTE: SEE DETAIL 40/SD.2 FOR STRONG WALL ANCHOR BOLT TEMPLATE REQUIREMENTS.

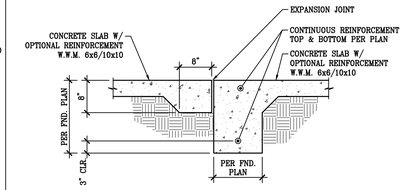




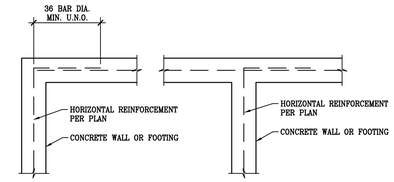
#4 SINGLE PIECE HOOP OR #4 TWO PIECE ASSEMBLY

CLOSED TIE ANCHOR REINFORCEMENT

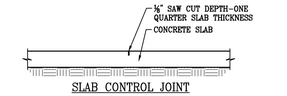
41 WSWH AT CONCRETE CURB & FOOTING



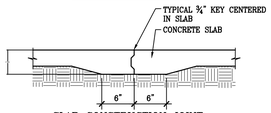
42 CONT. CONC. FOOTING @ GARAGE FRONT DOOR



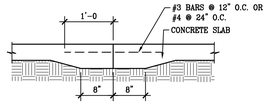
43 CONC. FOOTING CORNER & INTERSECTION REINF.



SLAB CONTROL JOINT

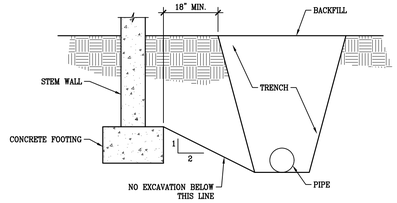


SLAB CONSTRUCTION JOINT

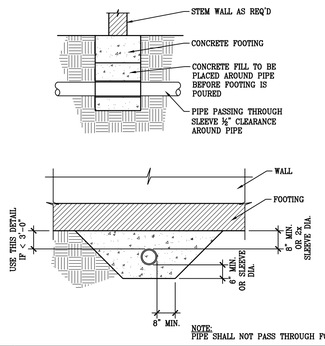


SLAB CONSTRUCTION JOINT

44 CONCRETE SLAB CONTROL JOINTS TYPICAL

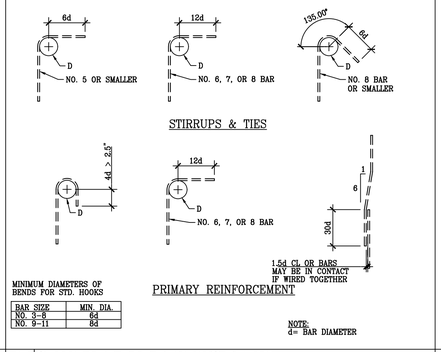


45 TRENCH ADJACENT TO CONCRETE FOOTING



NOTE: PIPE SHALL NOT PASS THROUGH FOOTING

46 PIPE PASSING UNDER CONT. CONC. FOOTING TYP.

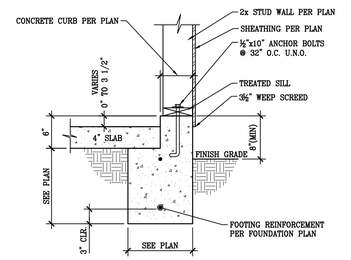


MINIMUM DIAMETERS OF BENDS FOR STD. HOOKS

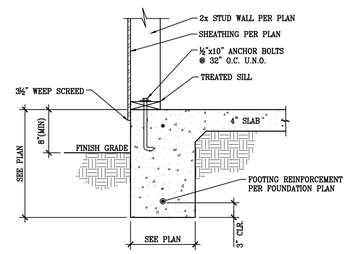
BAR SIZE	MIN. DIA.
NO. 3–8	6d
NO. 9–11	8d

NOTE: d= BAR DIAMETER

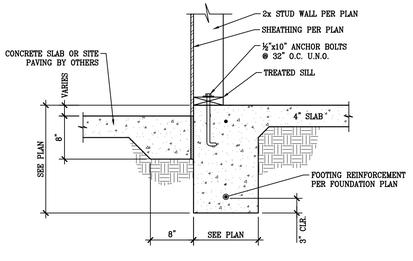
47 STANDARD BAR BENDING DETAIL



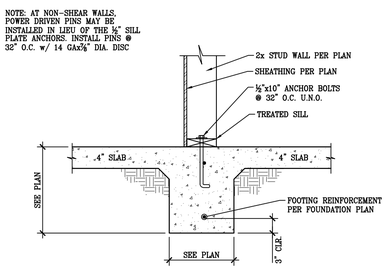
48 6" STEM WALL



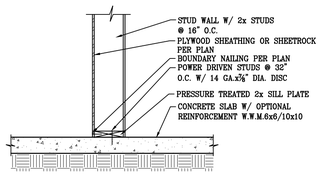
49 CONT. CONCRETE FOOTING FOR EXT. STUD WALL



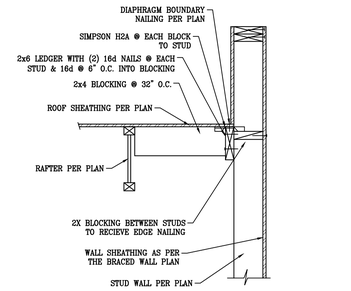
50 CONT. CONCRETE FOOTING ADJACENT TO CONC. SLAB



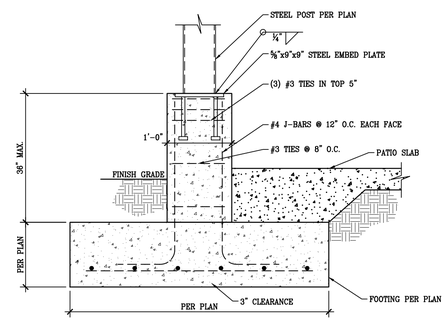
51 CONT. CONC. FOOTING FOR INT. BEARING STUD WALL

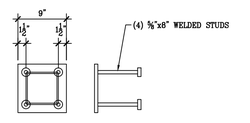


52 NON-BEARING INT. STUD WALL TO CONC. SLAB CONN.



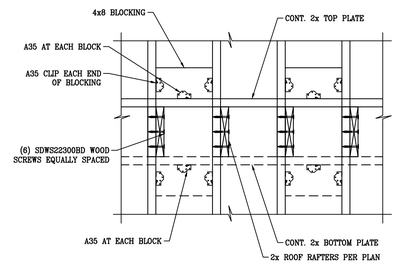
53 PARAPET WALL WITH PARALLEL RAFTER DETAIL



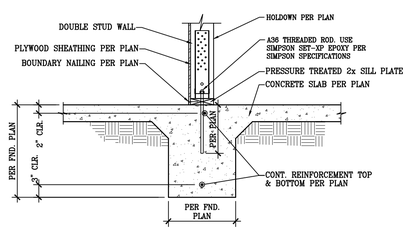


EMBED PLATE

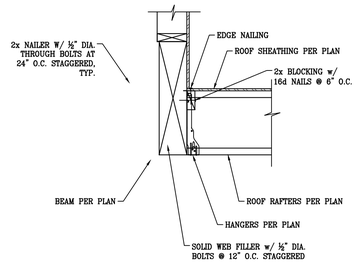
54 STEEL COLUMN TO FOOTING



55 ELEVATION VIEW OF LOW CANTILEVER ROOF



56 RETROFIT HOLDOWN



57 RAFTERS AT SET-UP BEAM

LEI
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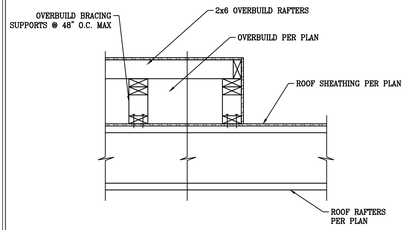
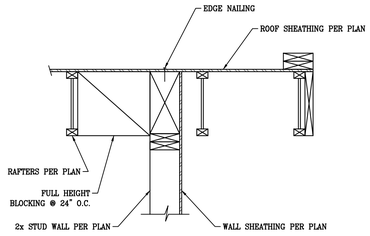
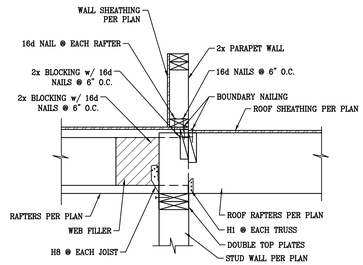
LEI PROJECT #: 2022-2349
DRAWN BY: JMW
CHECKED BY: EBM
SCALE: NTS
DATE: 8/30/2022
SHEET: SD.3



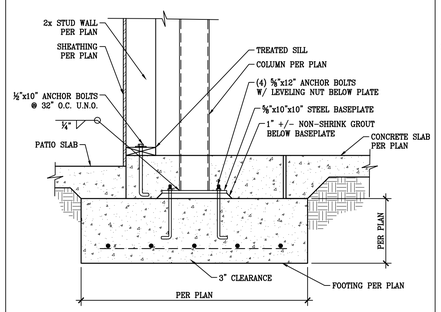
58 SHEAR TRAN`SFER



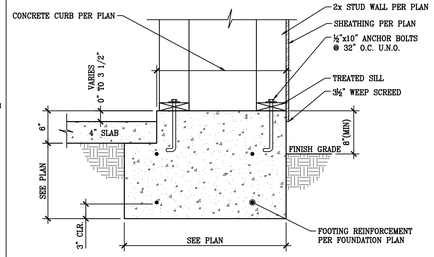
59 BEAM FLUSH AT ROOF RAFTERS



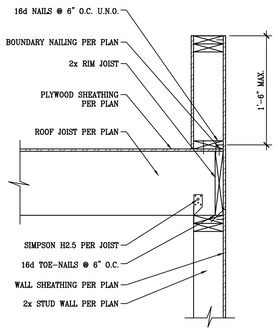
60 ROOF RAFTERS PERPENDICULAR TO STUD WALL



61 STEEL COLUMN @ SPOT FOOTING



62 6" STEM WALL



63 PARAPET WALL PERPENDICULAR TRUSS DETAIL

64 NOT USED

65 NOT USED

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LEI
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Professional Engineer CERTIFICATE 66953 ERIC B. MURRAY Signed: 08/30/2022 ARIZONA U.S.A.

STRUCTURAL ELEMENTS ONLY

WREN COVE LOT #11

LAKE HAVASU CITY, ARIZONA

STRUCTURAL DETAILS

DIMENSIONS SHOWN ON THE STRUCTURAL PLANS ARE FOR CONVENIENCE ONLY. VERIFY ALL DIMENSIONS WITH THE CURRENT ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.

REVISIONS

	DESCRIPTION	DATE	BY
1			
2			
3			
4			
5			

LEI PROJECT #: 2022-2349

DRAWN BY: JMW

CHECKED BY: EBM

SCALE: NTS

DATE: 8/30/2022

SHEET

SD.4