# DOE RUN
## AT SUNSET COVE ESTATES

# UNIT 6
## BUCKLEY

### 2317 SUNDOWN COURT
### ANACORTES, WASHINGTON

### PARCEL #: P133756

PROJECT DESCRIPTION: NEW CONSTRUCTION OF TWO-STORY SINGLE-FAMILY RESIDENCE. UNIT 6 IN 9-UNIT DEVELOPMENT
ZONING DESIGNATION: R-2


jd design
JIM DUNLAP
(360) 982-0535
JIM@JDDESIGNDRAFTING.COM


## PROPERTY INFO.

SITE ADDRESS:
2317 SUNDOWN COURT
ANACORTES, WASHINGTON 98221

PARCEL #: P133756
ASSESSOR'S TAX #: 4711-100-000-0000
QTR: SW, SEC: 21, TWN: 35, RNG: 01
PARCEL SIZE: 1.61 ACRES (13,962 S.F.)

PROPERTY OWNER:
DOE RUN AT SUNSET COVE ESTATES, LLC
1004 COMMERCIAL AVE. #541
ANACORTES, WASHINGTON 98221

## SQ. FT. INFO.

| | |
|---|---|
| MAIN FLOOR CONDITIONED: | 1193 S.F. |
| UPPER FLOOR CONDITIONED: | 1492 S.F. |
| TOTAL CONDITIONED: | 2685 S.F. |
| GARAGE: | 453 S.F. |
| MAIN FL. COVERED PATIO AT FRONT: | 14 S.F. |
| MAIN FL. COVERED PATIO AT BACK: | 176 S.F. |
| UPPER FL. COVERED BALCONY: | 98 S.F. |
| TOTAL COVERED OUTDOOR SPACE: | 288 S.F. |

NOTE: SQUARE FOOTAGE IS MEASURED TO THE OUTSIDE FACE OF WALLS OF ALL FINISHED SPACE. STAIRWELLS ARE COUNTED ONCE, APPROX. HALF ON TOP FLOOR, HALF ON BOTTOM. OPEN TO BELOW SPACES ARE NOT INCLUDED IN CALCULATIONS. GARAGE AND UNCONDITIONED AREAS ARE CALCULATED SEPARATELY.

## LOT COVERAGE

| | |
|---|---|
| HOUSE FOOTPRINT INCLUDING COVERED PATIO AREAS: | 1878 S.F. |

NOTE: LOT COVERAGE CALCULATIONS FOR 9-UNIT DEVELOPMENT INCLUDED ON PAGE A2.

## FIRE AREA

| | |
|---|---|
| MAIN FLOOR FIRE AREA: | 1878 S.F. |
| UPPER FLOOR FIRE AREA: | 1636 S.F. |
| TOTAL FIRE AREA: | 3514 S.F. |

NEAREST FIRE HYDRANT: 50' TO WEST OF PROPERTY LINE AS SHOWN ON PAGE A2

## BUILDING CODES

CONSTRUCTION WILL COMPLY WITH:

| | |
|---|---|
| BUILDING & STRUCTURAL | 2015 IRC |
| MECHANICAL | 2015 IRC |
| PLUMBING | 2015 UPC |
| ENERGY & VENTILATION | 2015 WSEC |

## GENERAL NOTES

- HOUSE WILL BE HEATED BY FURNACE LOCATED IN ATTIC OR GARAGE.
- WATER WILL BE HEATED BY TANKLESS WATER HEATER LOCATED IN GARAGE.
- WATER SUPPLIED BY CITY OF ANACORTES.

## DRAINAGE NOTES

- DOWNSPOUT AND FOOTING DRAINS TO BE TIGHTLINED IN 4" PVC AND CONNECTED TO 12" PVC MAIN LINE. 12" PVC TO BE RUN TOWARD SOUTHEAST OF PROPERTY TO DETENTION POND AS NOTED ON SITE PLAN.
- KEEP DRIVEWAYS/PAVED AREAS SLOPING AWAY FROM BUILDINGS.
- NOTE: FOR COMPLETE DRAINAGE PLANS SEE CIVIL ENGINEERING SET PAGE C3 "DRIVEWAY, DRAINAGE, SEWER AND WATER PLANS & DETAIL" AND C4 "BIORETENTION SWALE & POND MODIFICATIONS DETAILS"

## EROSION CONTROL NOTES

- CONTRACTOR TO INSTALL SILT FENCING ON DOWN SLOPE SIDE OF ENTIRE EXTENTS OF EACH SITE UNDER CONSTRUCTION. SILT FENCING TO REMAIN UNTIL ALL CONSTRUCTION IS COMPLETED AND LANDSCAPE IS IN PLACE.
- IN ADDITION TO SILT FENCING COVER ALL STOCKPILED SOIL WITH STRAW OR VISQUEEN.
- NOTE: FOR COMPLETE EROSION CONTROL DETAILS AND SPECIFICATIONS SEE CIVIL ENGINEERING SET PAGE C2 "SITE PLAN & EROSION CONTROL & GRADING" AND PAGE C5 "ECS DETAILS"

## ENERGY CREDITS

THIS RESIDENCE IS A MEDIUM DWELLING UNIT (1500 - 5000 S.F.) WHICH WILL REQUIRE 3.5 CREDITS

| OPTION | DESCRIPTION | CREDITS |
|---|---|---|
| 1A | EFFICIENT BUILDING ENVELOPE: VERTICAL FENESTRATION U = 0.28 FOR EVERY WINDOW SLAB ON GRADE R-10 PERIMETER UNDER UNCONDITIONED SPACE (GARAGE) & UNDER ENTIRE CONDITIONED SPACE. | 0.5 |
| 2A | AIR LEAKAGE CONTROL AND EFFICIENT VENTILATION: ALL HOUSE VENTILATION MET WITH HIGH EFFICIENCY FAN (MAX. 0.35 WATTS/CFM) NOT INTERLOCKED WITH FURNACE FAN. BLOWER TEST RESULTS TO BE 3.0 AIR CHANGES PER HOUR MAXIMUM. COMPLIANCE BASED ON R402.4.1.2. | 0.5 |
| 3A | HIGH EFFICIENCY HVAC EQUIPMENT: GAS FURNACE WITH MINIMUM AFUE OF 94% | 1.0 |
| 5C | EFFICIENT WATER HEATING: GAS WATER HEATER WITH MINIMUM EF OF 0.91 | 1.5 |
| TOTAL CREDITS | | 3.5 |

## DRAWING INDEX

| PG # | TITLE | COMMENTS | REVISIONS |
|---|---|---|---|
| A1 | COVER PAGE | | |
| A2 | OVERALL SITE PLAN | | |
| A3 | LANDSCAPE PLAN | | |
| A4 | FOUNDATION PLAN | | |
| A5 | FOUNDATION DETAILS | | |
| A6 | MAIN FLOOR PLAN WITH SHEAR WALL NOTES | | |
| A7 | UPPER FLOOR PLAN WITH SHEAR WALL NOTES | | |
| A8 | LOWER ROOF & UPPER FLOOR FRAMING PLAN | | |
| A9 | UPPER ROOF FRAMING PLAN & DETAILS | | |
| A10 | BUILDING SECTIONS | | |
| A11 | ELEVATIONS NORTH & EAST | | |
| A12 | ELEVATIONS SOUTH & WEST | | |
| S1 | STRUCTURAL DRAWINGS | | |
| S2 | STANDARD STRUCTURAL SPECIFICATIONS | | |

**UNIT 6**
**BUCKLEY**

PROJECT: NEW CONSTRUCTION OF TWO-STORY SINGLE-FAMILY RESIDENCE (UNIT 6 OF 9)
**DOE RUN AT SUNSET COVE ESTATES, LLC**
SITE ADDRESS: 2317 SUNDOWN COURT
ANACORTES, WASHINGTON
PARCEL #: P133756

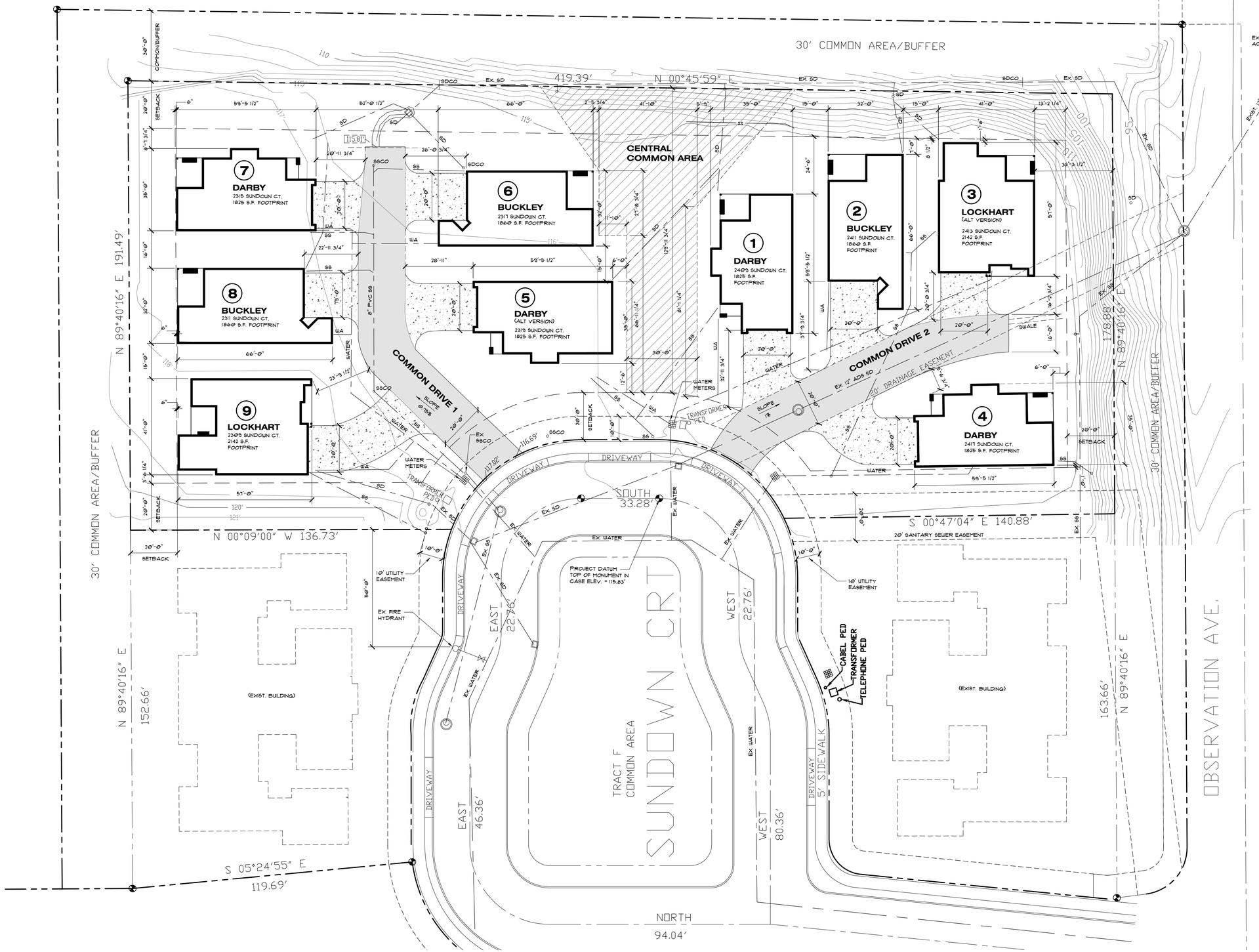
PAGE DESCRIPTION:
**COVER PAGE**

DRAWN BY JAD
SCALE 1/4" = 1'-0" UNO
JD JOB# 1122NC17-FREE
DATE 05/23/2018

REVISIONS

**A1**

# DOE RUN AT SUNSET COVE ESTATES
# OVERALL SITE PLAN




## OVERALL SITE PLAN

SCALE: 1" = 20'-0"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**UNIT 6**
**BUCKLEY**

PROJECT: NEW CONSTRUCTION OF TWO-STORY SINGLE-FAMILY RESIDENCE (UNIT 6 OF 9)

**DOE RUN AT SUNSET COVE ESTATES, LLC**

SITE ADDRESS: 2317 SUNDOWN COURT
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PAGE DESCRIPTION:

**OVERALL SITE PLAN**

## PROJECT DETAILS

DOE RUN AT SUNSET COVE ESTATES IS A 9-UNIT DEVELOPMENT, FEATURING 3 DIFFERENT HOUSE MODELS: DARBY, BUCKLEY, AND LOCKHART. THERE WILL BE 3 OF EACH MODEL, PLACED AS SPECIFIED IN THE OVERALL SITE PLAN.

LOT IS 1.67 ACRES (73,362 S.F.)

## EROSION CONTROL & DRAINAGE NOTES

FOR COMPLETE EROSION CONTROL DETAILS AND SPECIFICATIONS SEE CIVIL ENGINEERING SET PAGE C2 'SITE PLAN & EROSION CONTROL & GRADING' AND PAGE C5 'ECS DETAILS'

FOR COMPLETE DRAINAGE PLANS SEE CIVIL ENGINEERING SET PAGE C3 'DRIVEWAY, DRAINAGE, SEWER AND WATER PLANS & DETAIL' AND C4 'BIORETENTION SWALE & POND MODIFICATIONS DETAILS'

## LOT COVERAGE

### BUILDING FOOTPRINTS

| UNIT # | BUILDING FOOTPRINT (INCL. COVERED PORCHES) |
|---|---|
| UNIT 1 | 1825 S.F. |
| UNIT 2 | 1878 S.F. |
| UNIT 3 | 2124 S.F. |
| UNIT4 | 1825 S.F. |
| UNIT 5 | 1825 S.F. |
| UNIT 6 | 1878 S.F. |
| UNIT 7 | 1825 S.F. |
| UNIT 8 | 1878 S.F. |
| UNIT 9 | 2124 S.F. |
| TOTAL BUILDINGS: | 17,182 S.F. |

### PAVED SURFACES

| | |
|---|---|
| COMMON DRIVES | 5114 S.F. |
| DRIVEWAYS | 5536 S.F. |
| TOTAL PAVED: | 10,650 S.F. |

### COMMON AREA

CENTRAL COMMON AREA 6154 S.F.

## LEGEND

- PAVED COMMON DRIVE
- PAVED DRIVEWAY
- CENTRAL COMMON AREA
- PROPERTY LINE
- BUILDING SETBACK
- LINE OF BUILDING FOOTPRINT

| | |
|---|---|
| DRAWN BY | JAD |
| SCALE | AS NOTED |
| JD JOB# | 1122NC17-FREE |
| DATE | 10/16/2017 |

REVISIONS
06/11/2018 UNIT 7 FTPRT

**A2**

# DOE RUN AT SUNSET COVE ESTATES
# LANDSCAPE PLAN

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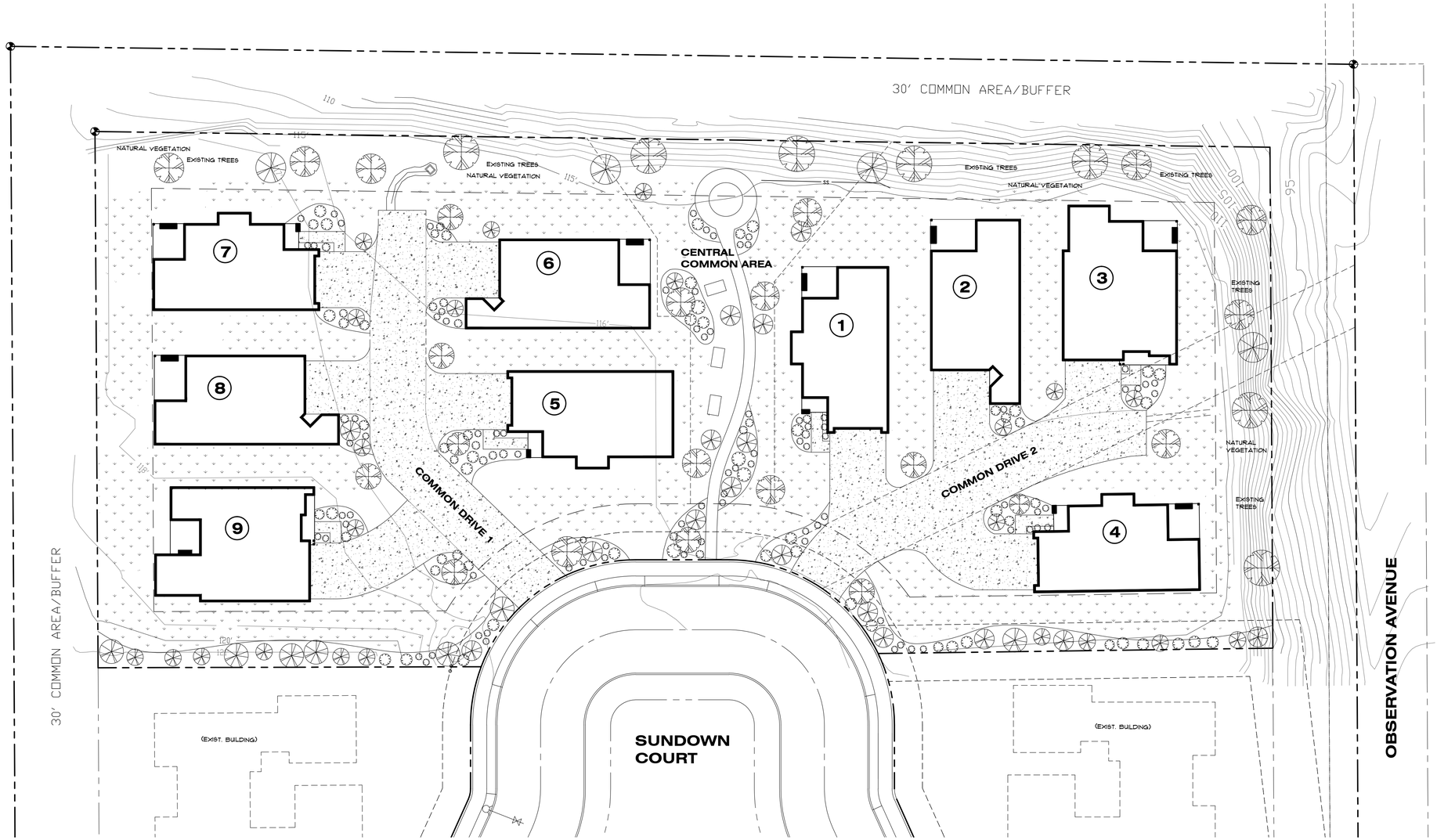


NORTH

## LANDSCAPE PLAN

SCALE: 1" = 20'-0"

## LANDSCAPE NOTES

APPROXIMATELY 43,000 S.F. OF THE 73,362 S.F. LOT WILL BE LANDSCAPED WITH EITHER GRASS OR PLANTED AREAS (THIS IS APPROXIMATELY 58% OF THE LOT).

ALONG THE EDGES OF THE EAST AND SOUTH PROPERTY LINES THERE ALREADY EXISTS AN ABUNDANCE OF TREES IN THE NATURAL VEGETATED AREA. THESE TREES WILL ALL BE RETAINED, AS MUCH AS POSSIBLE. GRASS WILL BE PLANTED UP TO THIS NATURAL VEGETATION AREA. THESE TREES THAT ARE RETAINED IN THE NATURAL VEGETATION AREA WILL BE INCLUDED IN THE TOTAL COUNT OF 1 TREE PER 1000 S.F. OF PROPERTY: 74 TREES TOTAL. ADDITIONAL TREES WILL BE PLANTED AS NEEDED THROUGHOUT PARCEL, IN ORDER TO EQUAL THE TOTAL NUMBER OF 74.

NO MORE THAN 30% OF NEW TREES PLANTED WILL BE OF THE SAME SPECIES.

EVERGREEN TREES SHALL BE MIN. 8' TALL, WHILE DECIDUOUS TREES SHALL HAVE MIN. 1 1/2" CALIPER AT CHEST HEIGHT.

## LEGEND

- EVERGREEN TREE
- DECIDUOUS TREE
- SHRUB/BUSH
- PAVED SURFACE
- GRASS
- PROPERTY LINE
- BUILDING SETBACK
- LINE OF BUILDING FOOTPRINT

**UNIT 6**
**BUCKLEY**

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**DOE RUN AT SUNSET COVE ESTATES, LLC**

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PAGE DESCRIPTION:
**LANDSCAPE PLAN**

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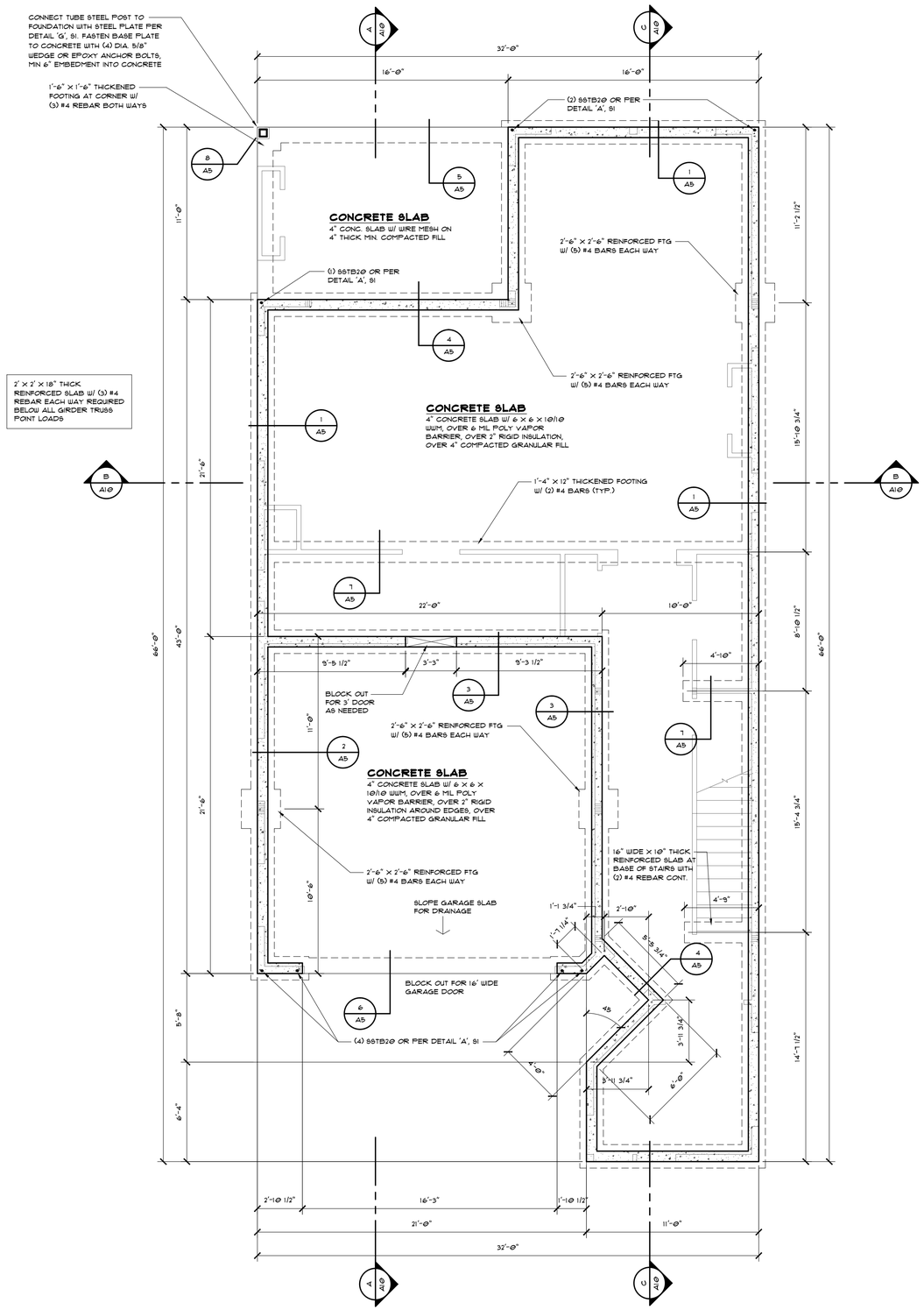
| DRAWN BY | JAD |
| SCALE | AS NOTED |
| JD JOB# | 1122NCI7-FREE |
| DATE | 10/16/2017 |

REVISIONS
06/11/2018 UNIT 7 FTPRT

**A3**




NORTH

## FOUNDATION PLAN

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

## FOUNDATION NOTES

- WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD.
- ENGINEERING SPECIFICATIONS, NOTES AND DRAWINGS ACCOMPANIED WITH PLANS TO SUPERCEDE ALL INFORMATION ON ARCHITECTURAL DRAWINGS. FOR ANY DISCREPANCIES BETWEEN ENGINEERING AND ARCHITECTURAL DRAWINGS REFER TO ENGINEERING.
- FOOTINGS ARE TO BEAR ON UNDISTURBED LEVEL SOIL DEVOID OF ANY ORGANIC MATERIAL AND STEPPED AS REQUIRED TO MAINTAIN 18" DEPTH BELOW GRADE.
- COVER CRAWL SPACE GRADE WITH HIGH DENSITY POLYETHYLENE HIGH QUALITY VAPOR RETARDER. LAP EDGES 12" MIN. AND EXTEND 12" MIN. UP FOUNDATION WALL.
- FILL UNDER SLABS ON GRADE TO BE MIN. 4" DEPTH GRANULAR MATERIAL COMPACTED TO 95%.
- CONCRETE SLABS TO HAVE CONTROL JOINTS AT 25' MAX. INTERVALS EACH WAY.
- CONCRETE SIDEWALKS TO HAVE 3/4" TOOLED JOINTS AT 5' O.C. EACH WAY.
- WIRE MESH TO BE USED IN CONCRETE SLABS, POSITIONED 1-1/2" FROM BOTTOM OF SLAB.
- USE HIGH DENSITY POLYETHYLENE HIGH QUALITY VAPOR RETARDER UNDER CONCRETE SLABS IN GARAGE AND BASEMENT.
- A WATERPROOF MEMBRANE IS TO BE USED ON FOUNDATION WALLS BELOW GRADE.
- A DRAIN TILE WITH HOLES, NOT SLITS, IS TO BE USED. DRAIN TILE IS TO BE POSITIONED SO THAT HOLES ARE FACING DOWN.
- A LAYER OF ROUND, WASHED, DRAINAGE-GRADE GRAVEL IS TO BE USED OVER DRAIN TILE, NEXT TO FOOTINGS. 30-LB. FELT PAPER IS TO BE USED OVER THE GRAVEL.
- ALL BOTTOM PLATES AND ANY LUMBER IN CONTACT WITH CONCRETE TO BE PRESSURE TREATED.
- BEAM POCKETS IN CONCRETE TO HAVE 12" AIRSPACE AT SIDES & ENDS WITH MIN. BEARING OF 3".
- FOLLOW ALL JOIST FRAMING DETAILS PER MANUFACTURER.
- PROVIDE BLOCKING ABOVE ALL BEARING WALLS AND BEAMS.
- ALL CONNECTORS AND FASTENERS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED OR EQUIVALENT PROTECTION.
- ACCESS SHALL BE PROVIDED TO ALL UNDER-FLOOR SPACES. ACCESS OPENING THROUGH PERIMETER WALL SHALL BE NOT LESS THAN 18" X 24". IF ANY PORTION OF THROUGH-WALL ACCESS IS BELOW GRADE AN AREAWAY NOT LESS THAN 18" X 24" SHALL BE PROVIDED (IRC R408.4)
- CONTRACTOR TO COORDINATE FOUNDATION & SLAB BLOCK-OUTS W/ MECH. & ELECT. FOR SIZE & LOCATIONS.
- ALL CONCENTRATED LOADS FROM ROOF TRUSSES MUST BE TRANSFERRED TO THE FOUNDATION WITH A BUILT-UP POST AND FOOTINGS AS REQUIRED. VERIFY LOCATIONS WITH TRUSS ENGINEER AND/OR STRUCTURAL ENGINEER.

NOTE: THERE SHALL BE NO CRAWL SPACE THEREFORE NO CRAWL SPACE VENTILATION OR CRAWL SPACE ACCESS IS NEEDED.

## FOUNDATION LEGEND

- FOUNDATION STEM WALL
- FOUNDATION FOOTING
- OUTLINE OF WALLS OF SUPPORTED FLOOR

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**UNIT 6**
**BUCKLEY**

PROJECT: NEW CONSTRUCTION OF TWO-STORY SINGLE-FAMILY RESIDENCE (UNIT 6 OF 9)

# DOE RUN AT SUNSET COVE ESTATES, LLC

SITE ADDRESS: 2317 SUNDOWN COURT
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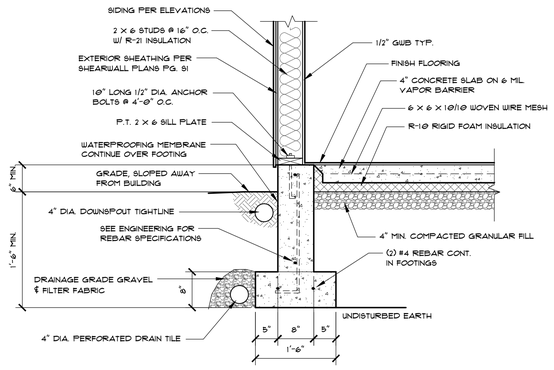
PAGE DESCRIPTION:

# FOUNDATION PLAN

| | |
|---|---|
| DRAWN BY | JAD |
| SCALE | 1/4" = 1'-0" UNO |
| JD JOB# | 1122NC17-FREE |
| DATE | 05/23/2018 |

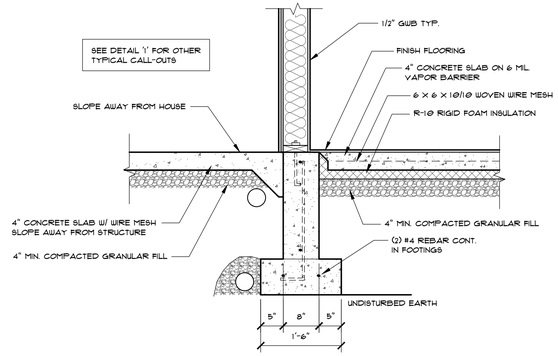
REVISIONS

**A4**



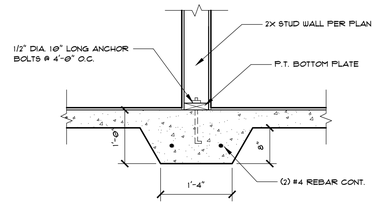

## 1 TYP. FND. WALL DETAIL

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



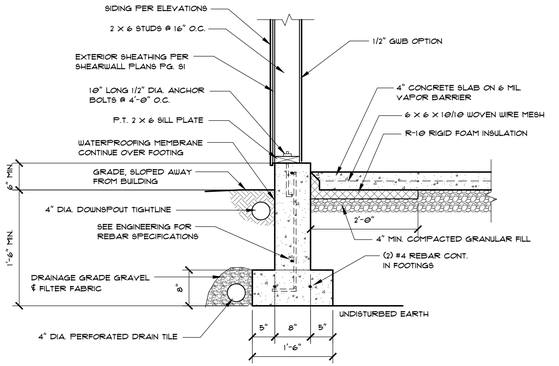

## 4 HOUSE @ PATIO DETAIL

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



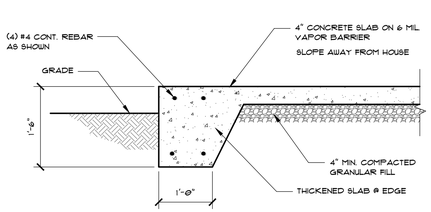

## 7 THICKENED FOOTING DETAIL

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



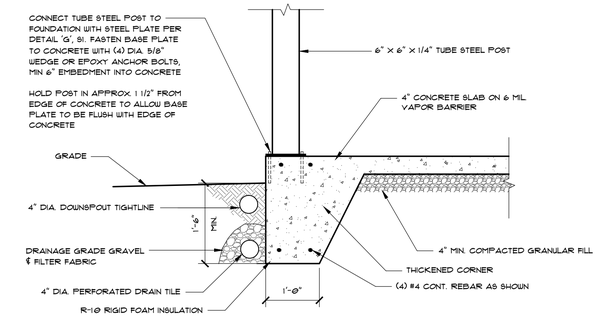

## 2 GARAGE WALL DETAIL

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



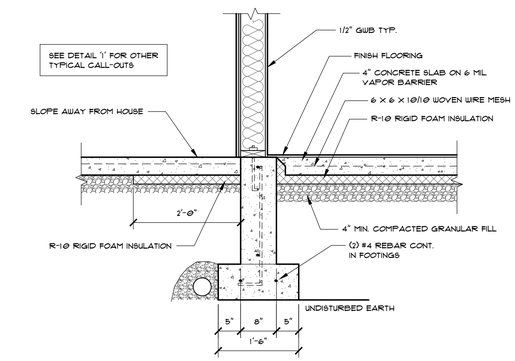

## 5 PATIO EDGE DETAIL

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



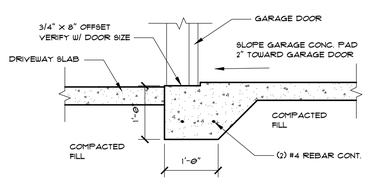

## 8 POST FOOTING DETAIL

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




## 3 HOUSE @ GARAGE DETAIL

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




## 6 GARAGE FOOTING DETAIL

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

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# FOUNDATION DETAILS

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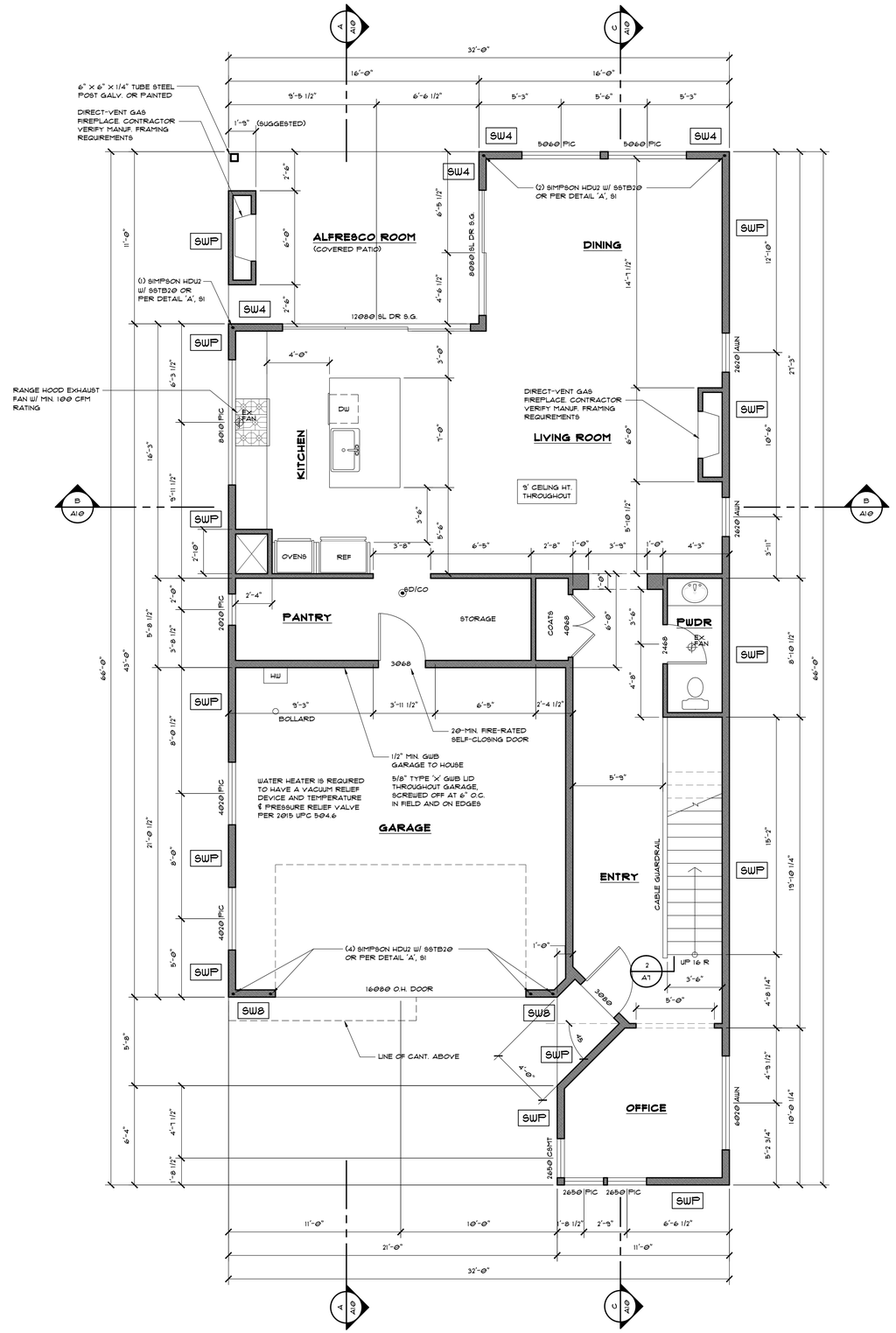
REVISIONS

**A5**




## SHEAR WALL PLANS

SEE SHEAR WALL TABLE, S1 FOR MORE INFORMATION

| | |
|---|---|
| SWP | UNLESS NOTED OTHERWISE, SHEAR WALLS TO BE SWP, PRESCRIPTIVE SHEAR WALL. 7/16" OSB OR 15/32" PLY ON ONE SIDE OF WALL, UNBLOCKED, WITH 8D NAILS AT 6" O.C. ALONG EDGES, 12" O.C. IN THE FIELD. HOLD DOWNS ARE NOT REQUIRED. |
| SW4 | SHEAR WALL 4 PER SHEAR WALL TABLE, S1. 7/16" OSB OR 15/32" PLY ON ONE SIDE OF WALL, BLOCKED, WITH 8D NAILS AT 3" O.C. ALONG EDGES, 12" O.C. IN THE FIELD. HOLD DOWNS ARE REQUIRED. |
| SW8 | SHEAR WALL 8 PER SHEAR WALL TABLE, S1. 7/16" OSB OR 15/32" PLY ON BOTH SIDES OF WALL, BLOCKED, WITH 8D NAILS AT 4" O.C. ALONG EDGES, 12" O.C. IN THE FIELD. HOLD DOWNS ARE REQUIRED. |

NORTH

## MAIN FLOOR PLAN

SCALE: 1/4" = 1'-0"
1193 S.F. LIVING SPACE
453 S.F. GARAGE

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## FLOOR PLAN NOTES

- WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD.
- CONFIRM ALL DOOR, WINDOW, CLOSET, AND ANY OTHER ROUGH OPENING SIZES WITH OWNER/ CONTRACTOR PRIOR TO WALL CONSTRUCTION.
- ALL WOOD IN CONTACT WITH CONCRETE MUST BE PRESSURE TREATED MATERIAL. USE CORROSION RESISTANT FASTENERS WHEN IN CONTACT WITH PRESSURE TREATED LUMBER.
- ALL EXTERIOR WALLS (EXCEPT GARAGE) TO BE FRAMED WITH 2 X 6 STUDS AT 16" O.C. AND SHEATHED WITH 7/16" OSB PLYWOOD OR BETTER WITH 15# BUILDING PAPER.
- EXTERIOR GARAGE WALLS TO BE FRAMED WITH 2 X 4 STUDS AT 16" O.C. AND SHEATHED WITH 7/16" OSB PLYWOOD OR BETTER WITH 15# BUILDING PAPER.
- ALL INTERIOR WALLS TO BE FRAMED WITH 2 X 4 STUDS AT 16" O.C. AND SHEATHED WITH 1/2" GYPSUM WALLBOARD UNLESS NOTED OTHERWISE.
- ALL GLASS TO HAVE LOW E (@.40) GLAZING. GLAZING IN HAZARDOUS LOCATIONS TO BE TEMPERED PER IRC SECTION R308. SEE R308.4 FOR DEFINITION OF HAZARDOUS AREAS.
- PROVIDE SMOKE DETECTORS ON OR NEAR THE CEILING OF EACH FLOOR, IN ALL BEDROOMS, AND JUST OUTSIDE EACH BEDROOM. SMOKE DETECTORS TO BE WIRED TO THE ELECTRICAL SYSTEM WITH BATTERY BACKUP (IRC R317.1 & R317.2).
- BEDROOMS TO HAVE AT LEAST ONE WINDOW MEETING THE FOLLOWING CONDITIONS: WINDOW SILLS TO BE WITHIN 44" OF FINISHED FLOOR WITH A NET CLEAR OPENING OF 5.7 SQ. FT. MIN. THE OPENING TO HAVE MIN. CLEAR OPENING HEIGHT OF 24" AND WIDTH OF 20" (IRC SECTION R310).
- ALL SHOWER AREAS TO BE FINISHED WITH A SMOOTH, HARD & NON-ABSORBENT MATERIAL TO MIN. 72" ABOVE DRAIN INLET. THIS MATERIAL TO BE INSTALLED OVER WATER RESISTANT PLASTER BOARD.
- TOILETS TO BE LOCATED IN AREA WITH MIN. 30" WIDTH OF TOTAL FINISHED CLEARANCE, AND HAVE CLEARANCE OF MIN. 21" IN FRONT OF TOILET. TOILETS TO BE LIMITED TO 1.6 GALLONS PER FLUSH.
- PROVIDE ATTIC ACCESS WITH REMOVABLE PANEL WITH MIN. 22" X 30" OPENING AND 30" UNOBSTRUCTED HEAD ROOM. FRAME WITH 2 X 12 MEMBERS.
- PROVIDE EXHAUST FAN IN KITCHEN AT MIN. 100 CFM AND BATHROOMS AT MIN. 50 CFM. ALL FANS AND DRYER EXHAUST TO BE VENTED TO OUTSIDE OF RESIDENCE.
- PROVIDE MIN. 1/2" GWB OR EQUIVALENT TO GARAGE SIDE, BETWEEN GARAGE AND RESIDENCE AND/OR GARAGE AND ATTIC (IRC R302.6).
- PROVIDE 1-HR. FIRE-RESISTIVE CONST. 5/8" TYPE 'X' GWB ON GARAGE LID FOR FIRE SEPARATION UNDER HABITABLE SPACE ABOVE GARAGE (IRC R302.6).
- DOOR BETWEEN HOUSE AND GARAGE TO BE 1-1/2" THICK SOLID CORE, 20-MIN. SELF-CLOSING FIRE-RATED DOOR (R302.5.1).
- PROVIDE FIRESTOPS AT ALL APPLICABLE LOCATIONS, INCLUDING HOLES AND ANY OPEN AREAS.
- ALL ELEMENTS AND SWITCHES FOR FURNACE AND WATER HEATER TO BE 18" MIN. ABOVE SLAB.

## STAIR NOTES

- STAIRS TO BE FRAMED WITH MIN. (3) 2 X 12 STRINGERS, ONE AT EACH SIDE AND ONE AT CENTER. PROVIDE FIRE BLOCKING BETWEEN STRINGERS AT TOP, MIDDLE AND BOTTOM, AND BETWEEN STUDS ALONG THE RUN OF THE STAIRS.
- MINIMUM HEADROOM CLEARANCE TO BE 6'-8" VERTICALLY ABOVE TREAD NOSING TO NEAREST OBJECT ABOVE.
- STAIRS TO HAVE MAX. RISE OF 7-3/4" AND MIN. RUN OF 10" WITH NOSING OF 3/4" TO 1-1/4". NO RISER TO BE LESS THAN 4". DIMENSIONS BETWEEN RISE AND RUN ARE NOT TO VARY MORE THAN 3/8".
- ENCLOSED USABLE SPACE UNDER STAIRS TO BE 1-HR. FIRE-RESISTIVE CONST. 5/8" TYPE 'X' GWB.
- STAIRWAYS WITH 4 OR MORE RISERS TO HAVE AT LEAST ONE CONTINUOUS HANDRAIL AT 34" - 38" ABOVE TREAD NOSING WITH ENDS RETURNED TO TERMINATE INTO WALL OR NEWEL POST.
- HANDRAILS TO HAVE GRIP PORTION NOT LESS THAN 1-1/4" OR MORE THAN 2" IN CROSS SECTIONAL DIMENSION WITH 1-1/2" BETWEEN WALL AND HANDRAIL.

## GUARDRAIL NOTES

- ALL UNENCLOSED FLOORS, LANDINGS, BALCONIES OR PORCHES THAT ARE MORE THAN 30" ABOVE GRADE OR FLOOR BELOW SHALL BE PROTECTED BY A GUARDRAIL THAT IS MIN. HEIGHT OF 36".
- OPEN GUARDRAILS SHALL HAVE INTERMEDIATE RAILS SUCH THAT A 4" DIA. SPHERE CANNOT PASS THROUGH AT ANY POINT.
- GUARDRAILS SHALL BE ATTACHED TO THE STRUCTURE IN SUCH A MANNER TO WITHSTAND A SINGLE CONCENTRATED LOAD OF 200 LBS. APPLIED IN ANY DIRECTION AT ANY POINT ALONG THE TOP.

**UNIT 6**
**BUCKLEY**

PROJECT: NEW CONSTRUCTION OF TWO-STORY SINGLE-FAMILY RESIDENCE (UNIT 6 OF 9)
**DOE RUN AT SUNSET COVE ESTATES, LLC**
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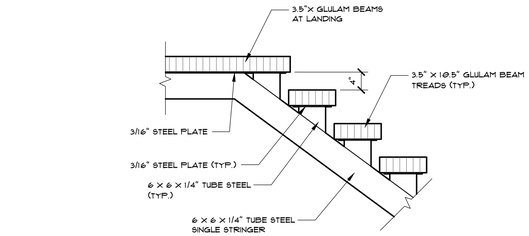
PARCEL #: P133756

PAGE DESCRIPTION:
**MAIN FLOOR PLAN**

| | |
|---|---|
| DRAWN BY | JAD |
| SCALE | 1/4" = 1'-0" UNO |
| JD JOB# | 1122NC17-FREE |
| DATE | 05/23/2018 |

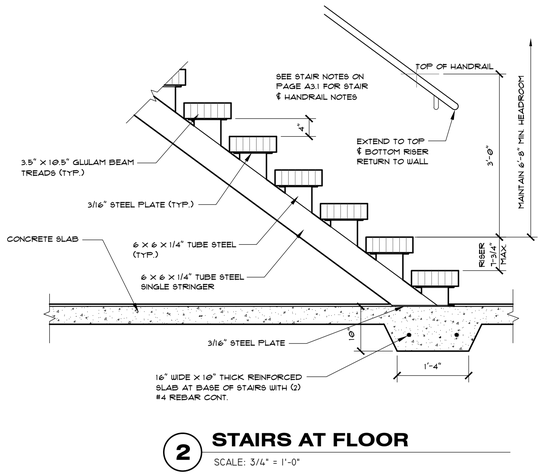
REVISIONS

**A6**




## 1 STAIRS AT LANDING

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




## 2 STAIRS AT FLOOR

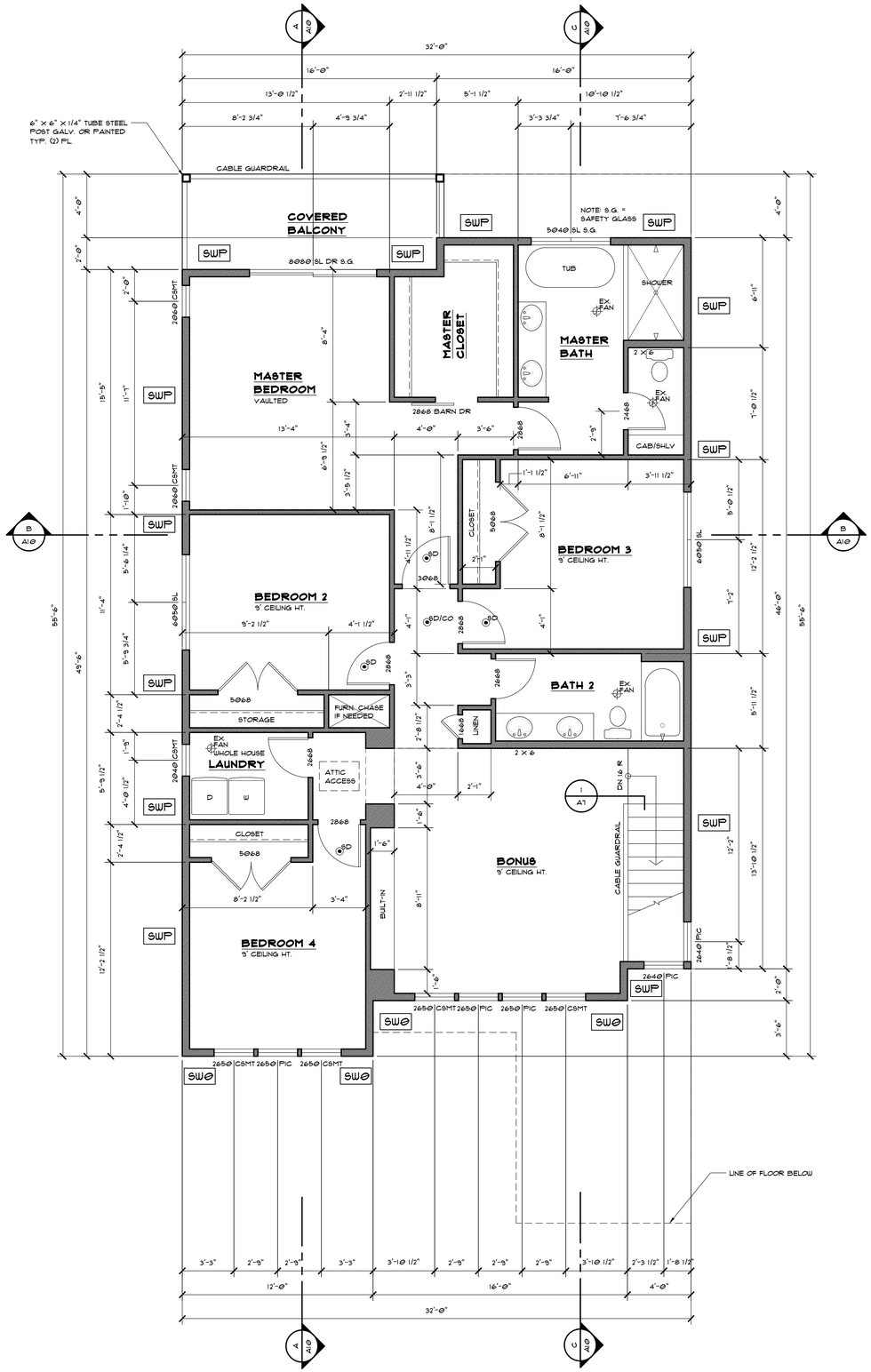
SCALE: 3/4" = 1'-0"

### SHEAR WALL PLANS

SEE SHEAR WALL TABLE, S1 FOR MORE INFORMATION

SWP — UNLESS NOTED OTHERWISE, SHEAR WALLS TO BE SWP, PRESCRIPTIVE SHEAR WALL. 7/16" OSB OR 15/32" PLY ON ONE SIDE OF WALL, UNBLOCKED, WITH 8D NAILS AT 6" O.C. ALONG EDGES, 12" O.C. IN THE FIELD. HOLD DOWNS ARE NOT REQUIRED.

SWE — SHEAR WALL @ PER SHEAR WALL TABLE, S1. 7/16" OSB OR 15/32" PLY ON ONE SIDE OF WALL, BLOCKED, WITH 8D NAILS AT 3" O.C. ALONG EDGES, 12" O.C. IN THE FIELD. HOLD DOWNS ARE NOT REQUIRED.




## UPPER FLOOR PLAN

NORTH

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

1492 S.F. LIVING SPACE

## ENERGY CODE NOTES

- CONTRACTOR TO ADD ADDITIONAL FRAMING OR BLOCKING AS REQUIRED TO MEET CURRENT ENERGY CODE REQUIREMENTS.
- AIR LEAKAGE. SOLE PLATE IS TO BE CAULKED OR GLUED TO FLOOR. RIM JOIST BETWEEN STORIES TO BE CAULKED/SEALED. ALL HOLES IN BUILDING ENVELOPE ARE TO BE CAULKED/SEALED INCLUDING BUT NOT LIMITED TO ELECTRICAL, PLUMBING & HVAC PENETRATIONS. OUTLETS, SWITCH BOXES AND RECESSED FIXTURES ON EXTERIOR WALLS OR CEILINGS ARE TO BE CAULKED/SEALED WITH APPROVED SEALANT, OR HAVE FOAM GASKETS INSTALLED. ALL RECESSED LIGHTS ARE TO BE IC RATED, AIR TIGHT & SEALED TO SURROUNDING GWB. ROUGH OPENING AROUND ALL WINDOWS & DOORS TO BE SEALED/CAULKED.
- ALL CEILING EXHAUST FAN DUCTING TO BE INSULATED AS PER CODE, TO HAVE AS FEW BENDS AS POSSIBLE, AND TO TERMINATE AT THE EXTERIOR OF THE BUILDING.
- INSULATION TO FILL ALL EXTERIOR WALL CAVITIES. DO NOT COMPRESS. CUT TO FIT AROUND WIRES, PIPES & OUTLET BOXES.
- ALL HVAC DUCTS INSTALLED OUTSIDE THE HEATED HABITABLE SPACE TO HAVE SEALED JOINTS, CORNERS & BOOTS, AND INSULATED IN ACCORDANCE WITH WSEC 2015 EDITION SPECIFICATIONS ("WSEC 2015").
- A ONE PERM OR LESS VAPOR RETARDER (IE: KRAFT PAPER, PVA PAINT, ETC.) IS TO BE INSTALLED ON THE WARM SIDE OF ALL INSULATION.
- ALL RECESSED LIGHT FIXTURES IN THE THERMAL ENVELOPE TO BE CERTIFIED UNDER ASTM E-283 AND SO LABELED, OR SEALED AROUND THE EXTERIOR IN AN APPROVED MANNER TO BE AIR TIGHT.
- ALL WATER PIPES IN UNHEATED SPACES TO BE INSULATED IN ACCORDANCE WITH WSEC 2015.
- EXTERIOR DOORS TO BE ADJUSTED SO WEATHER-STRIPPING, THRESHOLD, & DOOR SWEEP ARE WORKING PROPERLY & SEAL WELL.
- BLOWN-IN ATTIC INSULATION TO BE INSTALLED IN STRICT CONFORMANCE WITH MANUFACTURERS RECOMMENDATIONS FOR DENSITY & COVERAGE. PROVIDE VENT BAFFLES AS REQUIRED & INSULATE & WEATHER-STRIP ATTIC ACCESS DOOR.
- PROVIDE MAKEUP AIR WITH FRESH AIR DUCTED DIRECTLY INTO THE RETURN AIR PLENUM OF THE FURNACE SYSTEM. INSULATE THE DUCT IN ACCORDANCE TO WSEC 2015. PROVIDE DAMPER TO REGULATE INCOMING FRESH AIR.
- ALL GAS COMBUSTION APPLIANCES, EXCEPT STOVES & CLOTHES DRYERS, TO HAVE COMBUSTION AIR DUCTED DIRECTLY TO THEM.
- ALL COMBUSTION EXHAUSTS TO BE SEPARATED BY A MIN. 3' VERT. & 10' HORIZ.

## WHOLE-HOUSE VENTILATION

ONE OF THE FOLLOWING METHODS WILL BE USED TO MEET THE REQUIREMENTS OF THE INTERNATIONAL MECHANICAL CODE (IMC) CHAPTER OF THE 2015 IRC:

(A) A SINGLE WHOLE-HOUSE EXHAUST FAN, WHICH CAN PERFORM DOUBLE DUTY AS A ROOM SPOT FAN, IS REQUIRED. FAN MUST BE CONTROLLED BY TIMER SET TO OPERATE MIN. OF 8 HOURS PER DAY. THE CFM CAPACITY OF FAN MUST BE 0.25 W.G. AND HAVE MAX. SONE (NOISE) RATING OF 1.5. MIN. SIZE OF FAN MUST BE 109 CFM.

(B) FRESH AIR WILL BE CIRCULATED BY THE CENTRAL FORCED AIR FURNACE SYSTEM. FURNACE MUST HAVE FRESH AIR INTAKE DUCT AND BLOWER MUST BE ACTIVATED BY TIMER TO CIRCULATE DAILY.

| INSULATION VALUES | |
|---|---|
| WALLS | |
| ABOVE GRADE R-21 | BELOW GRADE R-21 |
| CEILING | |
| FLAT R-49 | VAULTED R-38 |
| FLOOR | |
| CRAWL SPACE* R-30 | SLAB ON GRADE R-10 |

* R-30 INTENDED FOR USE WITH 9 1/2" I-JOISTS. IF 11 7/8" I-JOISTS USED THEN R-38 INSULATION TO BE INSTALLED.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**UNIT 6**
**BUCKLEY**

PROJECT: NEW CONSTRUCTION OF TWO-STORY SINGLE-FAMILY RESIDENCE (UNIT 6 OF 9)

# DOE RUN AT SUNSET COVE ESTATES, LLC

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# UPPER FLOOR PLAN

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| DRAWN BY | JAD |
| SCALE | 1/4" = 1'-0" UNO |
| JD JOB# | 1122NC17-FREE |
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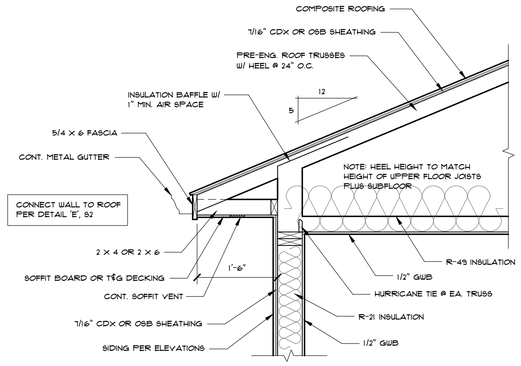
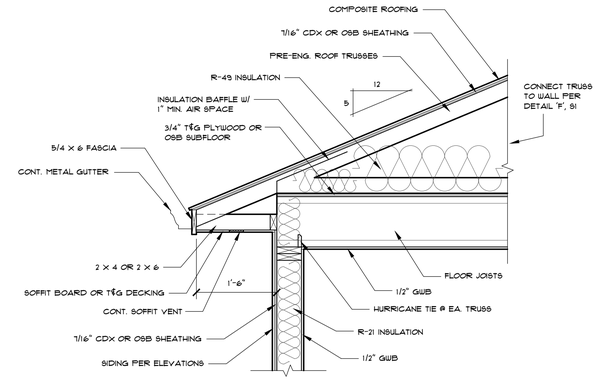
REVISIONS

**A7**



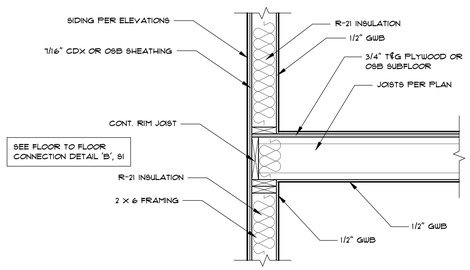

## 1 TRUSS/EAVE DETAIL

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



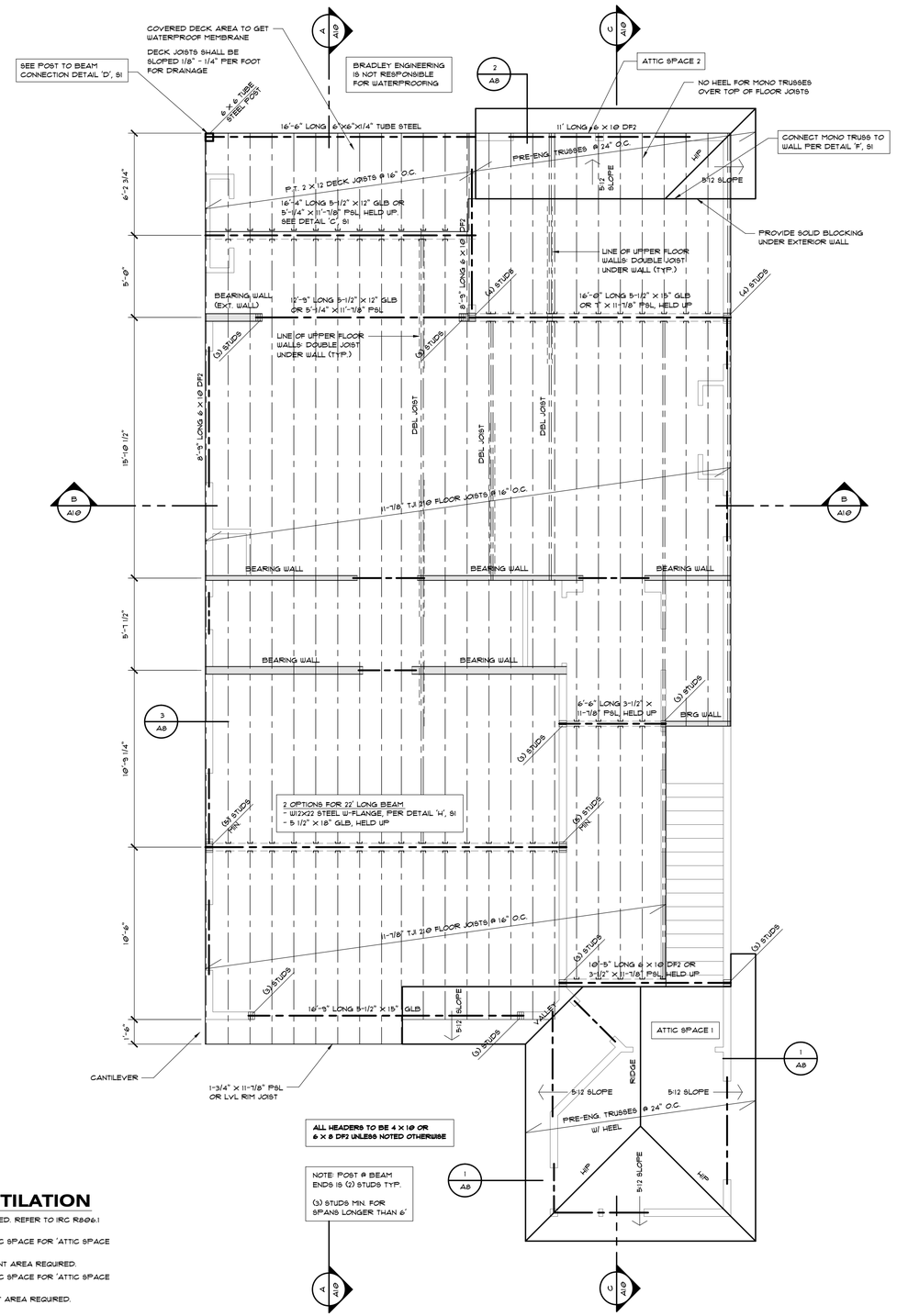

## 2 TRUSS/EAVE DETAIL

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




## 3 TYP. WALL DETAIL

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




## LOWER ROOF FRAMING & UPPER FLOOR FRAMING PLAN

NORTH

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

## ATTIC VENTILATION

ATTIC VENTILATION REQUIRED. REFER TO IRC R806.1 AND R806.2.

SQUARE FOOTAGE OF ATTIC SPACE FOR 'ATTIC SPACE 1' = 112 S.F.

1/2/300 = @.51 S.F. NET VENT AREA REQUIRED.

SQUARE FOOTAGE OF ATTIC SPACE FOR 'ATTIC SPACE 2' = 62 S.F.

62/300 = @.2 S.F. NET VENT AREA REQUIRED.

PROVIDE MIN. 1/150 OF ATTIC AREA, OR 1/300 IF HALF IS AT EAVE AND REMAINDER AT MIN. 3' ABOVE PLATE LINE. OPENINGS TO BE COVERED WITH 1/8" CORROSION RESISTANT METAL MESH OR EQUAL. EAVE OR CORNICE VENT SHALL NOT BE BLOCKED. MAINTAIN MIN. 1" AIR SPACE BETWEEN INSULATION AND ROOF SHEATHING AT THE LOCATION OF THE VENT.

FOR OPEN EAVE SOFFIT USE BIRD BLOCK TRUSS BLOCKING, WITH (3) 1 1/2" DIA. HOLES AND MESH SCREEN COVERING THE HOLES, BETWEEN EACH TRUSS.

FOR CLOSED EAVE SOFFIT USE CONTINUOUS SOFFIT VENTING.

## FLOOR FRAMING NOTES

- WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD.
- ENGINEERING SPECIFICATIONS, NOTES AND DRAWINGS ACCOMPANIED WITH PLANS TO SUPERCEDE ALL INFORMATION ON ARCHITECTURAL DRAWINGS. FOR ANY DISCREPANCIES BETWEEN ENGINEERING AND ARCHITECTURAL DRAWINGS REFER TO ENGINEERING.
- REFER TO FLOOR FRAMING PLAN FROM FLOOR JOIST MANUFACTURER/SUPPLIER. FLOOR JOIST MANUFACTURER/SUPPLIER SHALL PROVIDE AND SUBMIT ENGINEERED DESIGN TO THE BUILDING DEPARTMENT FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION.
- PROVIDE TEMPORARY BRACING AS REQUIRED UNTIL ALL PERMANENT CONNECTIONS AND STIFFENERS HAVE BEEN INSTALLED.
- FOR FLOOR SHEATHING USE 3/4" CDX OR OSB STURDI-FLOOR T&G, GLUE AND NAIL W/ RING SHANK 8D'S @ 6" EDGES & 12" IN FIELD U.N.O. FACE GRAIN PERPENDICULAR TO SUPPORTS.
- PROVIDE BLOCKING BETWEEN I-JOISTS AT INTERIOR BEARING LOCATIONS WHERE THERE IS A LOAD BEARING WALL ABOVE.
- PROVIDE TIMBERSTRAND RIMS WHERE FLOOR JOISTS BEAR AT EXTERIOR WALLS.
- ALL EXTERIOR WALLS ASSUMED TO BE BEARING.
- ALL BEAMS AND HEADERS TO BE 4 X 10 DF #2 OR 6 X 8 DF #2 U.N.O.
- JOIST HANGERS & CONNECTIONS TO BE 'SIMPSON' U.N.O.
- ALL CONNECTORS AND FASTENERS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE HOT DIPPED GALVANIZED OR EQUIVALENT PROTECTION.

## ROOF NOTES

- TRUSSES TO BE SPACED AT 24" O.C. UNLESS NOTED OTHERWISE.
- ROOF PITCH IS TO BE 5:12 ON WEST SIDE OF HOUSE, 3.5:12 ON EAST SIDE.
- ROOFING MATERIAL IS COMPOSITE.
- OVERHANGS ARE 18" WITH CONTINUOUS METAL GUTTER THROUGHOUT.
- FASCIA SHALL BE 5/4 X 6 WITH CONTINUOUS METAL GUTTER.
- ALL BEAMS & HEADERS TO BE 4 X 10 DF #2 OR 6 X 8 DF #2 UNO.
- PROVIDE SOLID BLOCKING OVER SUPPORTS.
- TRUSSES/RAFTERS TO BE SHEATHED WITH 7/16" CDX OR OSB SHEATHING WITH 15# FELT OR BETTER. USE PLYWOOD SHEATHING ON ALL SOFFITED AREAS.
- PROVIDE ROOF CROSS VENTILATION FOR EACH SEPARATE SPACE WHERE APPLICABLE.

## TRUSS NOTES

- TRUSS MANUFACTURER SHALL PROVIDE DESIGN DETAILS AND ENGINEERING FOR ALL TRUSSES. COPY TO BE AVAILABLE ON SITE FOR FRAMING INSPECTIONS.
- ALL TRUSSES SHALL CARRY THE MANUFACTURER'S STAMP.
- ALL TRUSSES SHALL BE STORED, INSTALLED & BRACED PER MANUFACTURER'S SPECIFICATIONS.
- TRUSSES SHALL NOT BE ALTERED IN THE FIELD WITHOUT THE APPROVAL OF THE BUILDING OFFICIAL AND/OR APPROVED ENGINEERING CALCULATIONS PROVIDED BY THE TRUSS MANUFACTURER.
- ROOF TRUSSES TO BE SHEATHED WITH 7/16" CDX OR OSB SHEATHING WITH 15# FELT OR BETTER. USE PLYWOOD SHEATHING ON ALL SOFFITED AREAS.
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NOTE: ROOF TRUSSES AND FLOOR JOISTS SHOWN IN DRAWING ARE FOR SCHEMATIC PURPOSES ONLY. FOR TRUSS PLACEMENT, DESIGN AND ENGINEERING REFER TO TRUSS DESIGN & SPECIFICATIONS FROM TRUSS SUPPLY COMPANY. FOR FLOOR JOIST LAYOUT REFER TO JOIST DESIGN & SPECIFICATIONS FROM FLOOR JOIST SUPPLIER.

## FLOOR & ROOF FRAMING LEGEND

- FLOOR JOIST
- BEAM/HEADER
- OUTLINE OF WALLS OF FLOOR BENEATH
- OUTLINE OF SUPPORTED FLOOR/EXTENTS OF FLOOR JOISTS
- BEARING WALL
- LINE OF ROOF/EXTENTS OF UPPER FLOOR LIVING SPACE
- OUTLINE OF UPPER FLOOR WALLS
- JOIST HANGER
- POST

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**UNIT 6**
**BUCKLEY**

PROJECT: NEW CONSTRUCTION OF TWO-STORY SINGLE-FAMILY RESIDENCE (UNIT 6 OF 9)

# DOE RUN AT SUNSET COVE ESTATES, LLC

SITE ADDRESS: 237 SUNDOWN COURT
ANACORTES, WASHINGTON
PARCEL #: P133756

PAGE DESCRIPTION:

## LOWER ROOF FRAMING & UPPER FLOOR FRAMING PLAN & DETAILS

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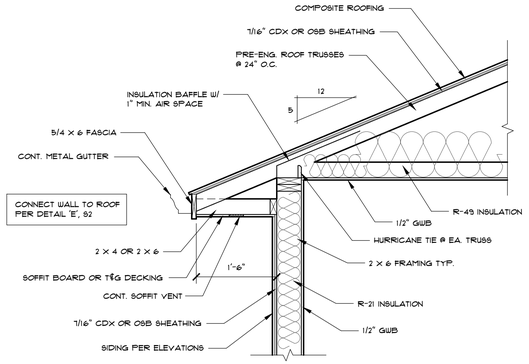
| DRAWN BY | JAD |
| SCALE | 1/4" = 1'-0" UNO |
| JD JOB# | 1122NC17-FREE |
| DATE | 05/23/2018 |

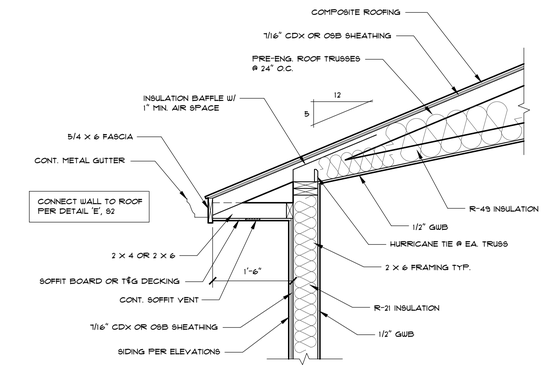
REVISIONS

**A8**




## 1 TRUSS/EAVE DETAIL

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




## 2 SCISSOR TRUSS/EAVE DETAIL

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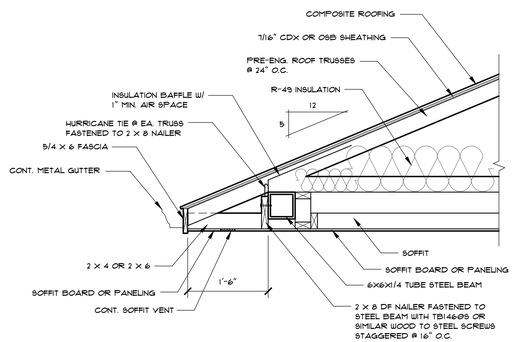


## 3 TRUSS/EAVE DETAIL

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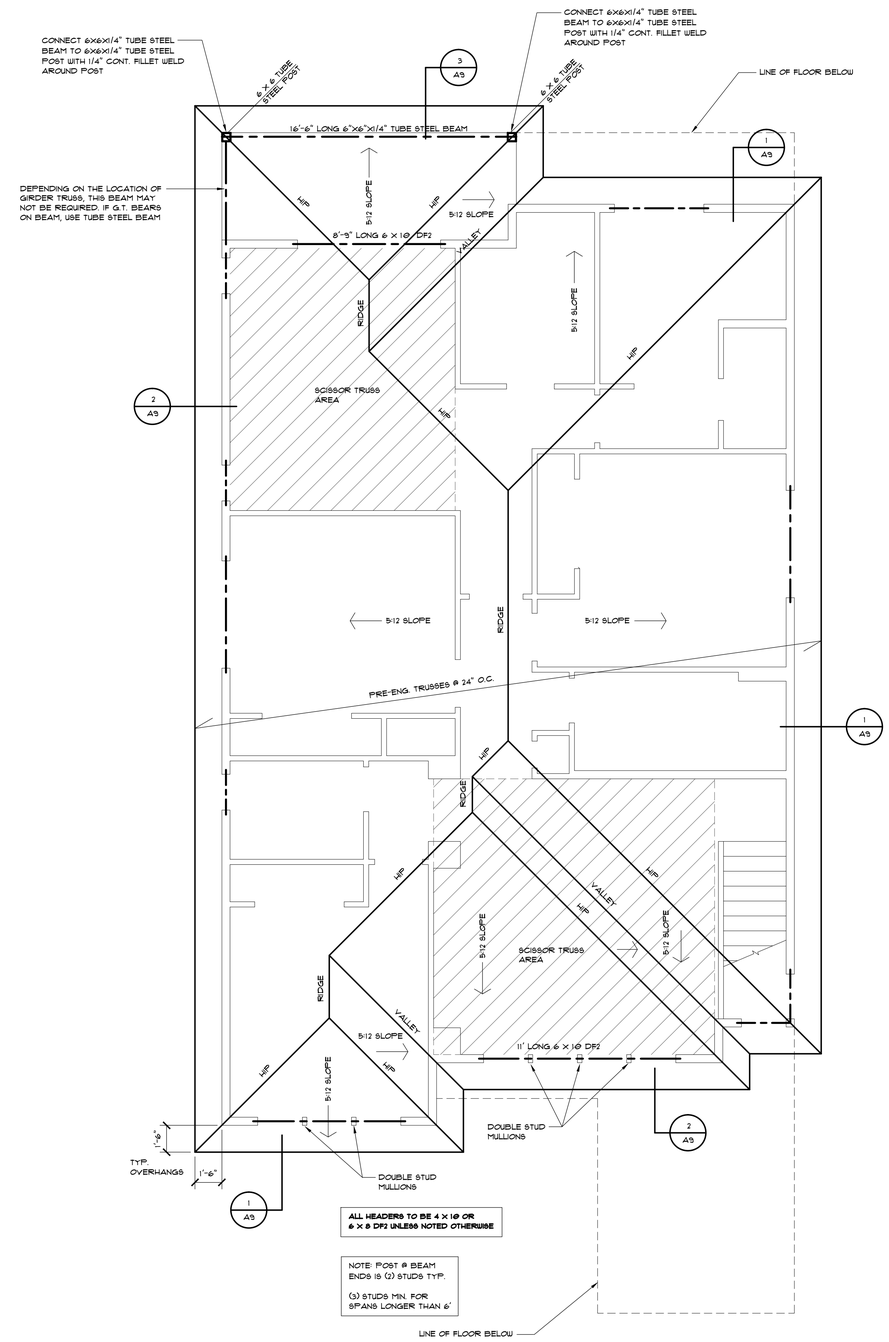


## UPPER ROOF FRAMING PLAN

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

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## ROOF NOTES

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- FASCIA SHALL BE 5/4 X 6 WITH CONTINUOUS METAL GUTTER.
- ALL BEAMS & HEADERS TO BE 4 X 10 DF #2 OR 6 X 8 DF #2 UNO.
- PROVIDE SOLID BLOCKING OVER SUPPORTS.
- TRUSSES/RAFTERS TO BE SHEATHED WITH 7/16" CDX OR OSB SHEATHING WITH 15# FELT OR BETTER. USE PLYWOOD SHEATHING ON ALL SOFFITED AREAS.
- PROVIDE ROOF CROSS VENTILATION FOR EACH SEPARATE SPACE WHERE APPLICABLE.

## TRUSS NOTES

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## ATTIC VENTILATION

ATTIC VENTILATION REQUIRED. REFER TO IRC R806.1 AND R806.2.

SQUARE FOOTAGE OF ATTIC SPACE = 1636 S.F.

1636/300 = 5.45 S.F. NET VENT AREA REQUIRED.

PROVIDE MIN. 1/150 OF ATTIC AREA, OR 1/300 IF HALF IS AT EAVE AND REMAINDER AT MIN. 3' ABOVE PLATE LINE. OPENINGS TO BE COVERED WITH 1/8" CORROSION RESISTANT METAL MESH OR EQUAL. EAVE OR CORNICE VENT SHALL NOT BE BLOCKED. MAINTAIN MIN. 1" AIR SPACE BETWEEN INSULATION AND ROOF SHEATHING AT THE LOCATION OF THE VENT.

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## ROOF FRAMING LEGEND

- OUTLINE OF ROOF
- HIDDEN LINE OF ROOF
- BEAM/HEADER
- OUTLINE OF WALLS BENEATH
- VAULTED OR HIGHER CEILING AREA
- POST

**UNIT 6**
**BUCKLEY**

PROJECT: NEW CONSTRUCTION OF TWO-STORY SINGLE-FAMILY RESIDENCE (UNIT 6 OF 9)

**DOE RUN AT SUNSET COVE ESTATES, LLC**

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PAGE DESCRIPTION:

**UPPER ROOF FRAMING PLAN & DETAILS**

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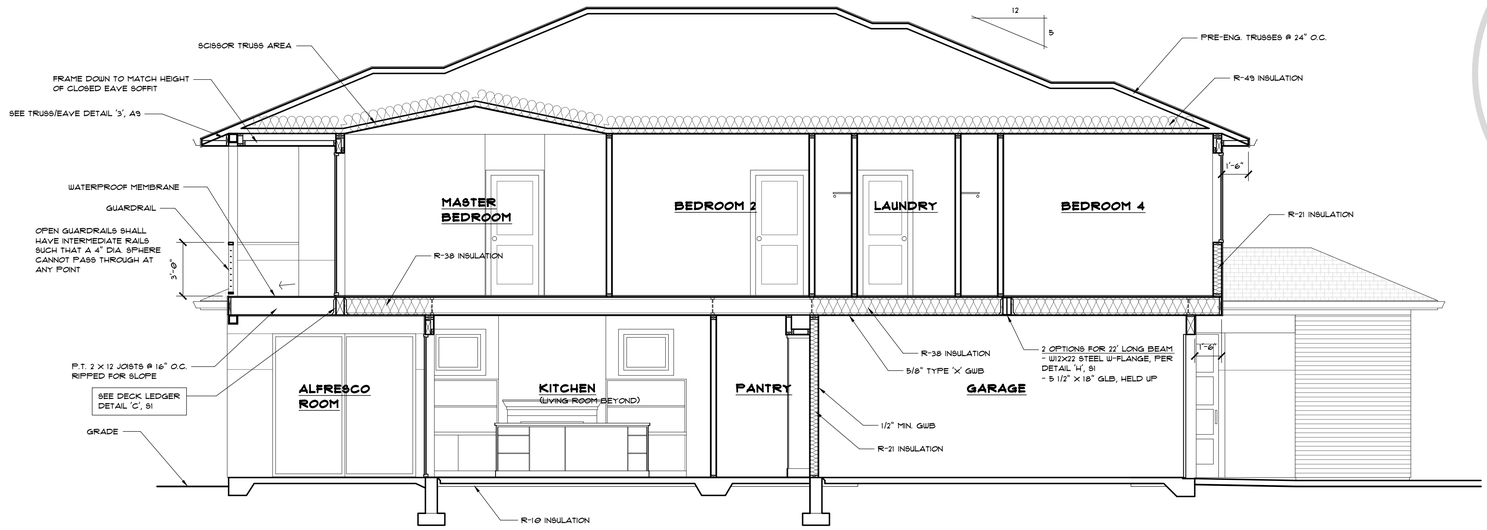
| DRAWN BY | JAD |
| SCALE | 1/4" = 1'-0" UNO |
| JD JOB# | 1122NCI7-FREE |
| DATE | 05/23/2018 |

REVISIONS

**A9**




## BUILDING SECTION A - A

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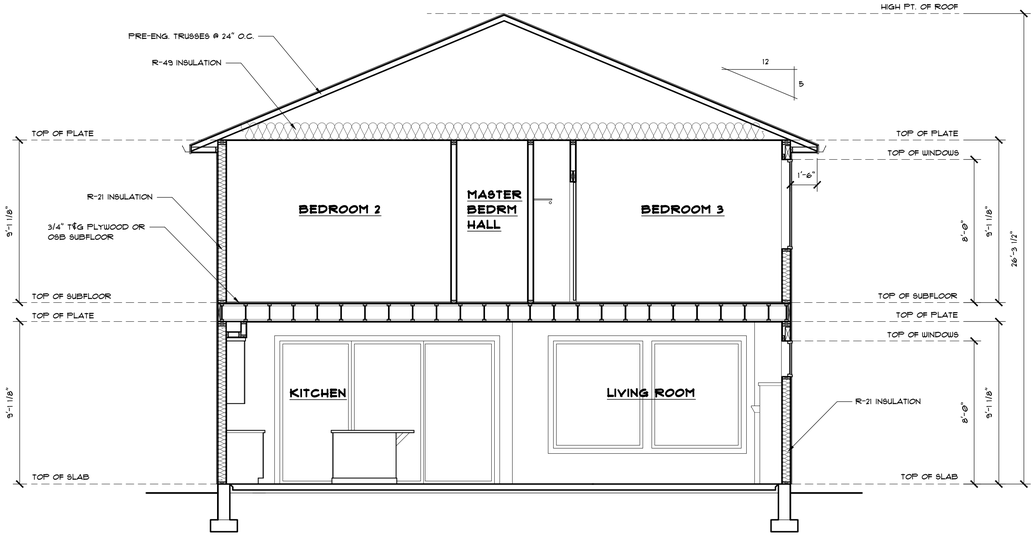


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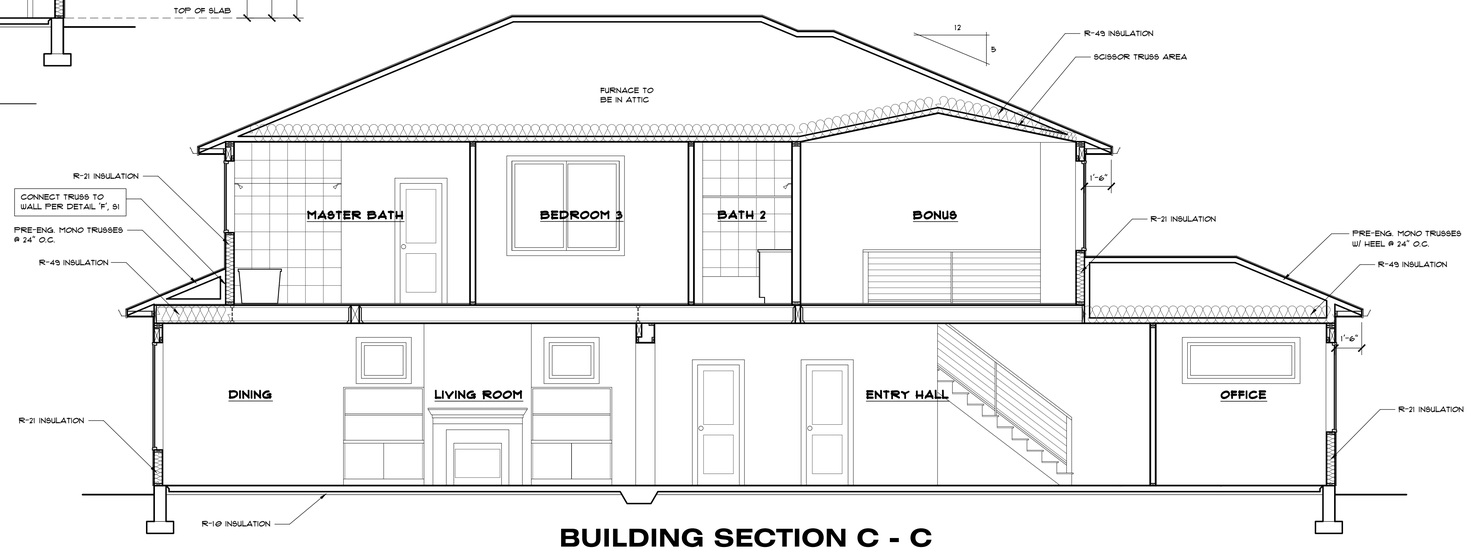


## BUILDING SECTION C - C

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

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**UNIT 6**
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PAGE DESCRIPTION:

# BUILDING SECTIONS

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| SCALE | 1/4" = 1'-0" UNO |
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| DATE | 05/23/2018 |

REVISIONS

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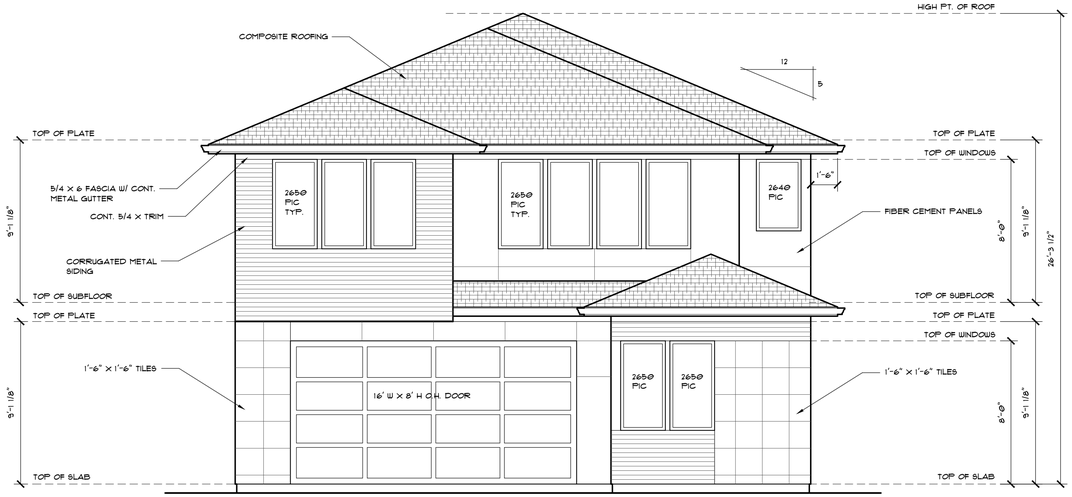


## NORTH ELEVATION

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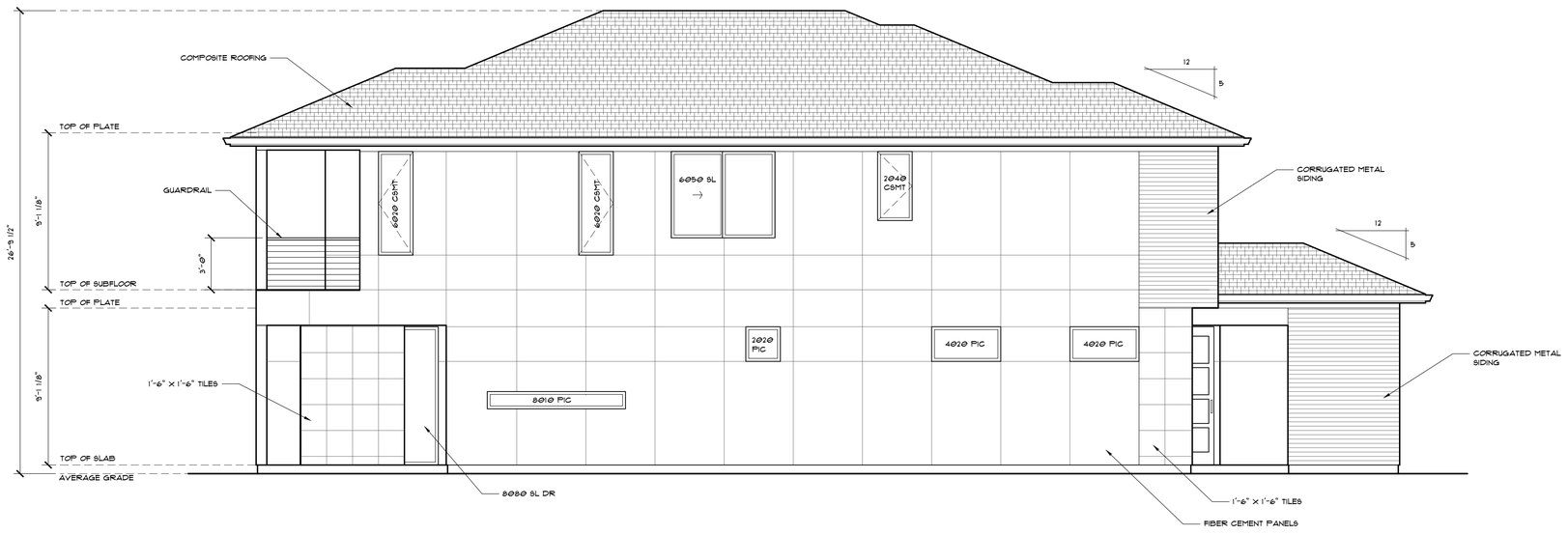


## EAST ELEVATION

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

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PARCEL #: P133756

PAGE DESCRIPTION:

**ELEVATIONS NORTH & EAST**

| | |
|---|---|
| DRAWN BY | JAD |
| SCALE | 1/4" = 1'-0" UNO |
| JD JOB# | 1122NC17-FREE |
| DATE | 05/23/2018 |

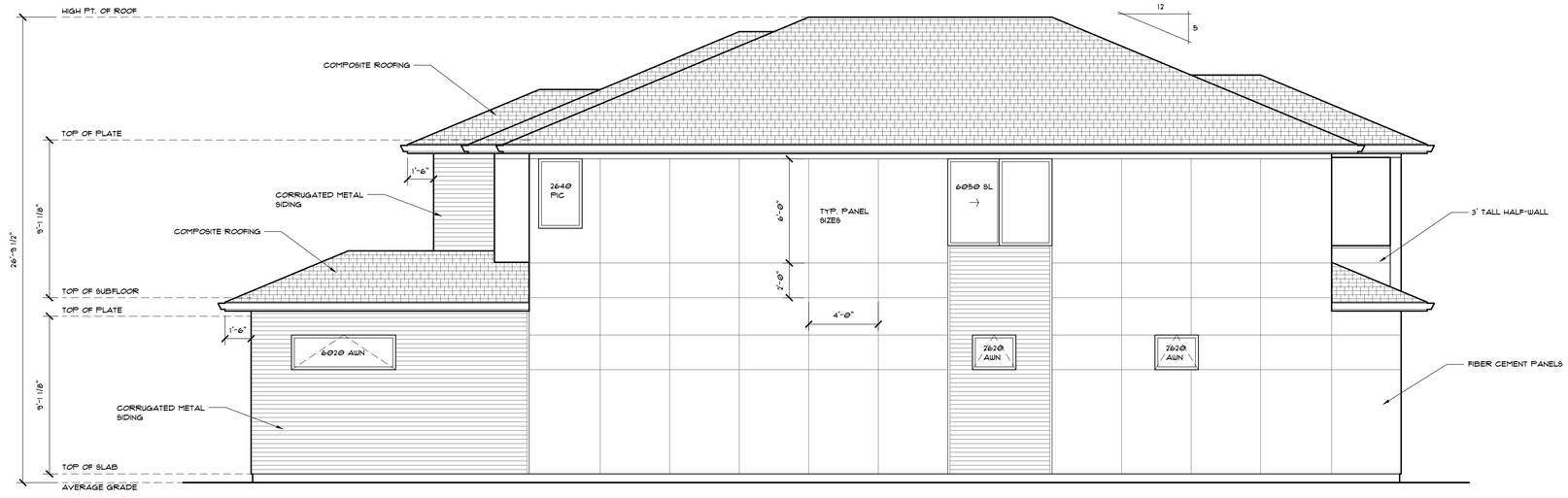
REVISIONS

**A11**

jd design
JIM DUNLAP
(360) 982-0535
JIM@JDDESIGNDRAFTING.COM


## SOUTH ELEVATION

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




## WEST ELEVATION

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

**UNIT 6**
**BUCKLEY**

PROJECT: NEW CONSTRUCTION OF TWO-STORY SINGLE-FAMILY RESIDENCE (UNIT 6 OF 9)

# DOE RUN AT SUNSET COVE ESTATES, LLC

SITE ADDRESS: 2317 SUNDOWN COURT
ANACORTES, WASHINGTON
PARCEL #: P133756

PAGE DESCRIPTION:

# ELEVATIONS SOUTH & WEST

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| DRAWN BY | JAD |
| SCALE | 1/4" = 1'-0" UNO |
| JD JOB# | 1122NC17-FREE |
| DATE | 05/23/2018 |

REVISIONS

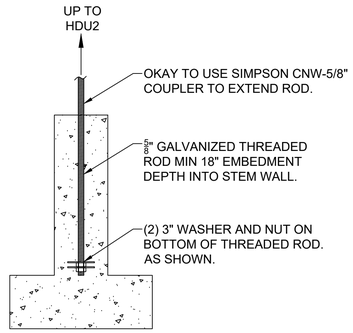
**A12**

## SHEAR WALL TABLE

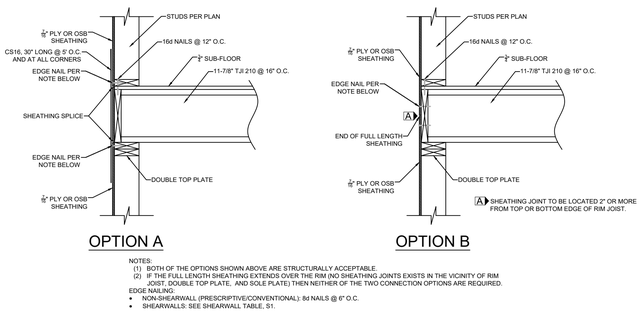
| WALL | PANEL SHEATHING | SHEATHING ON ONE OR BOTH SIDES OF WALL | EDGES BLOCKED OR UNBLOCKED | NAIL SIZE ② | EDGE NAILING / FIELD NAILING DISTANCE (MAX) | LOAD TRANSFER ③ | CONNECTION AT SILL/SOLE PL. | MIN. THICKNESS OF EDGE MEMBERS & SILL PLATE | LATERAL RESISTANCE (PLF | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | WIND | SEISMIC |
| SWP | 7/16" OSB OR 15/32" PLY ① | ONE | UNBLOCKED | 8d | 6" / 12" O.C. | NO | 8d @ 6" O.C. | 2X (NOMINAL) | 300 | 240 |
| SW0 | 7/16" OSB OR 15/32" PLY ① ④ | ONE | BLOCKED | 8d | 3" / 12" O.C. | YES | (3) 16d PER 16" | 2X (NOMINAL) | 685 | 490 |
| SW4 | 7/16" OSB OR 15/32" PLY ① | ONE | BLOCKED | 8d | 3" / 12" O.C. | YES | (3) 16d PER 16" | 2X (NOMINAL) | 685 | 490 |
| SW8 | 7/16" OSB OR 15/32" PLY ① | BOTH | BLOCKED | 8d | 4" / 12" O.C. | YES | (3) 16d PER 16" | 2X (NOMINAL) | 980 | 700 |

① PLY = CDX, C-C, OR C-D PLYWOOD. OSB OF SIMILAR THICKNESS AND SPAN RATING MAY BE SUBSTITUTED FOR PLYWOOD.
② NAILS SHALL BE COMMON OR GALVANIZED BOX, UNLESS NOTED OTHERWISE.
③ FOR WALLS DESIGNED TO HAVE LOADS TRANSFERED AROUND THE WINDOW OPENINGS, DOUBLE STUDS MUST BE PLACED ON EITHER SIDE OF EACH WINDOW WITH EDGE NAILING ALONG BOTH STUDS.
④ NO HOLD-DOWNS ARE REQUIRED FOR THIS SHEARWALL

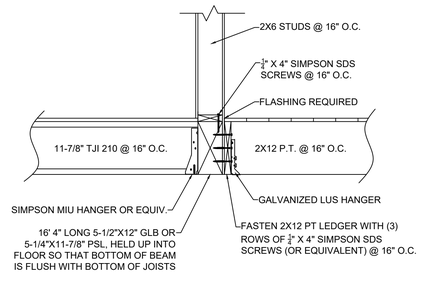
NOTES:
(1) AS AN ALTERNATIVE TO THE SSTB20 HOLD-DOWN ANCHOR BOLTS, USE 5/8" ALL-THREAD/THREADED ROD A-307 WITH A MINIMUM EMBED OF 10". USE SIMPSON EPOXY-TIE BOLT SYSTEM WITH "SET" HIGH STRENGTH EPOXY. CONCRETE MUST BE AT LEAST 7 DAYS OLD.
(2) UNLESS NOTED OTHERWISE, ALL EXTERIOR WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SW-P (PRESCRIPTIVE WALL).
(3) ALL CONNECTIONS NOT SHOWN ABOVE, SHALL CONFORM TO IBC TABLE 2304.9.1.



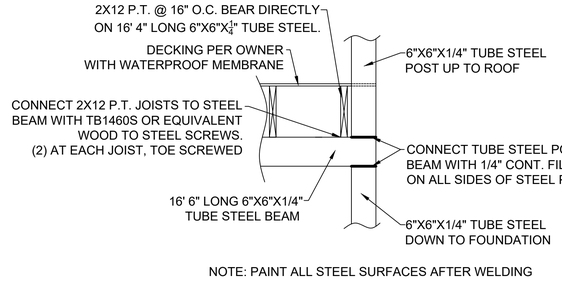

A 5/8" ROD ALTERNATIVE TO SSTB20




B FLOOR TO FLOOR CONNECTION
SCALE: 3/4" = 1' - 0"

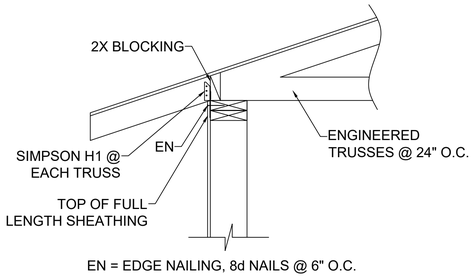



C DECK LEDGER DETAIL
SCALE: 3/4" = 1' - 0"

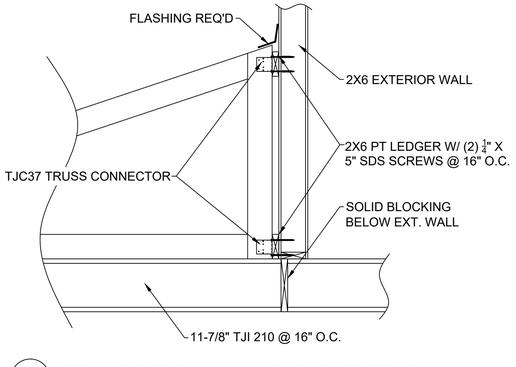



NOTE: PAINT ALL STEEL SURFACES AFTER WELDING

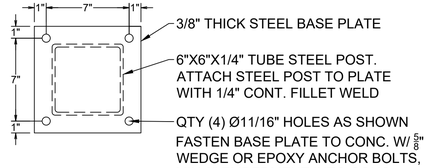
D POST TO BEAM CONNECTION
SCALE: 3/4" = 1'-0"



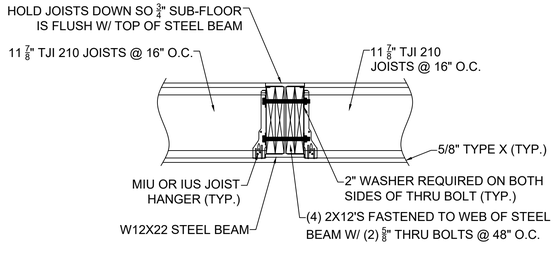

E TYPICAL WALL TO ROOF CONNECTION SCALE: N.T.S.




F TRUSS TO WALL CONNECTION
SCALE: N.T.S.




G STEEL PLATE DETAIL
SCALE: 2" = 1' - 0"




H GARAGE HEADER STEEL OPTION
SCALE: 1" = 1'-0"

DRAWING TO BE PRINTED ON 24"X36" IN ORDER TO BE SCALE

| REVISIONS | DATE | VERSION |
|---|---|---|
| ORIGINAL PLANS | 6/27/2018 | 1 |
| ---- | ---- | ---- |
| ---- | ---- | ---- |
| ---- | ---- | ---- |

DATE 6/27/2018 | VER. 1
ENGINEERED BY P. FINFROCK
CHECKED BY P. FINFROCK
APPROVED BY D. BRADLEY
SCALE N.T.S. | SIZE D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STRUCTURAL DRAWINGS & DETAILS

BUCKLEY UNIT 6 - DOE RUN ESTATES
2317 SUNDOWN COURT
ANACORTES, WA 98221

# STANDARD STRUCTURAL SPECIFICATIONS - 2015 IRC

## INTRODUCTION

The following Standard Structural Specifications are guidelines and structural requirements for the construction of typical residential and commercial structures. The intent of this document is to provide answers for common structural questions and to hold the builder/contractor accountable to satisfy the minimum structural requirements listed herein. Please familiarize yourself with this documents prior to starting construction. Contact the engineer of record with any questions or concerns.

## REFERENCE CODES & STANDARDS

- International Residential Code, IRC 2015
- Washington State Building Code
- National Design Specification for Wood Construction, NDS 2015
- Wood Frame Construction Manual, AWC 2015
- Building Code Requirements for Structural Concrete, ACI 318-11,
- Minimum Design Loads for Buildings And Other Structures, ASCE 7-16
- Steel Construction Manual, 15th Edition, AISC 2015

**DESIGN CRITERIA**

| | DESIGN PARAMETER | VALUE | SOURCE |
|---|---|---|---|
| LATERAL | Seismic Design Category | 'D1' | IBC 1613 |
| | Risk Category | 'II' | IBC Table 1604.5 |
| | Wind Exposure Category | 'B' | IBC 1609.4.3 |
| | Basic Wind Speed (3-second gust) | 110 MPH | IBC Figure 1609.3(1) |
| | Design Wind Load | 16.00 PSF | ASCE 7-16 28.6-1 |

| | LOAD SOURCE | LIVE LOAD | DEAD LOAD |
|---|---|---|---|
| VERTICAL | Roofs | 20 psf | 15 psf |
| | Floors | 40 psf | 12 psf |
| | Decks & Balconies | 60 psf | 10 psf |
| | Ground Snow Load | 25 psf | - |
| | Exterior Wall | - | 12 psf |
| | Interior Wall | - | 10 psf |
| | Interior Partition | - | 8 psf |

Notes:
1. Vertical loads come from 2015 IRC Table R301.5, Minimum Uniformly Distributed Live Loads

**DEFLECTION LIMITS**

| STRUCTURAL MEMBER | LIVE | SNOW | LIVE+DEAD |
|---|---|---|---|
| Roof (plaster ceiling) | L/360 | L/360 | L/240 |
| Roof (non-plaster ceiling) | L/240 | L/240 | L/180 |
| Roof (not supporting ceiling) | L/180 | L/180 | L/120 |
| Floor Members | L/360 | - | L/240 |
| Horizontal Deflection (any case) | - | - | L/200 |
| Farm Buildings & Greenhouses | - | - | L/180 |
| Long Spans (>20 feet) | - | - | L/480 |
| Sliding Glass Doors | - | - | L/600 |

Notes:
1. The above minimum deflection limits are required by the 2015 IRC Table 1604.3. These deflection limits are used unless noted otherwise.

## GENERAL REQUIREMENTS

Codes: All materials and work shall adhere to the minimum requirements of the Reference Codes & Standards listed above. Contractor shall be responsible to comply with OSHA, State Labor, and Industry Standards. Contractor assumes full responsibility of construction methods used, safety provisions employed, and the finished condition of the structure.

Construction Personnel: Only competent personnel familiar with construction and safety practices relevant to the project should be employed to assemble and construct the work.

Construction Methods and Project Safety: The project drawings and specifications represent the finished structure and do not indicate methods, procedures, or sequence of construction. The builder must take necessary precautions to maintain and ensure the integrity of the structure during construction. Bradley Engineering, Inc. will not enforce safety measures or regulations, nor will the owner or designer. Therefore, the contractor shall design, construct, and maintain all safety devices and follow all pertinent regulations.

Temporary Support: The builder must provide adequate temporary support to all walls, roofs, beams, and floors during construction. Design of these supports are not included unless specifically shown. Contractor is responsible for the adequacy of all temporary support systems.

Specifications: All notes, call-outs, and details included within this design package are required unless specifically noted otherwise.

Verification: Verify all dimensions, elevations, and site conditions before starting work. Notify the owner of any discrepancies.

Conflicts: Notes and details on the structural drawings take precedence over the Standard Structural Specifications and typical details. Written dimensions take precedence over scaled drawing dimensions. Structural notes and details on the structural drawings take precedence over the architectural drawings.

Errors: The contractor is responsible to check the plans and site conditions and to notify the architect/designer/engineer of record of any errors or omissions prior to the start of construction.

Changes: Written approval from the engineer of record is required for any structural changes to the provided drawings. Changes may be made "in the field" with written consent of Bradley Engineering. Please provide a red-lined drawing or sketch of desired change(s) to provide context and applicable information.

Substitutions: Provide manufacturer's approved product evaluation reports and a list of all proposed substitutions to the owner for approval before installation.

Similar work: Where construction details are not shown or noted for any part of the project, the area shall be constructed in the same manner as similar work shown on the drawings.

Modification of Structural Members: Cuts, notches, and holes bored in trusses, structural composite lumber, glue-laminated members, or I-joists are prohibited except where permitted by the manufacturer's recommendations or as shown on this page. (See ALLOWABLE HOLES)

Scope of Work: The scope of work of Bradley Engineering, Inc. is limited to the vertical and lateral analysis of the subject structure. Bradley Engineering, Inc. takes no responsibility for items not specifically addressed in the calculations, drawings, or call-outs.

Completion of Work: Submittal of these structural drawings to the client completes the present scope of work and budget of Bradley Engineering, Inc. Other consultation, design, calculations, sketches, inspection, etc. after submittal of this report shall be billed on an hourly basis.

## FOUNDATION

- Allowable Soil Bearing Pressure = 1,500 psf
- Frost Zone Depth = 18 inches (12" within City of Bellingham)

Code: Cast-in-place concrete sizing, placing, and testing shall conform to IBC chapter 19 and ACI 318-11.

Geotechnical Report: Bradley Engineering strongly recommends that a geotechnical report be performed by a qualified geotechnical engineer for all land based construction projects. If this information is not supplied to Bradley Engineering, footings are designed for 1,500 psf allowable soil bearing pressure.

Earthwork: Locate and protect underground or concealed conduit, plumbing, and other utilities where new work is performed. Footings shall bear on undisturbed native soils and/or clean fill compacted in lifts of one foot or less to 95% of a modified proctor per ASTM D1557. Soils shall be firm and unyielding. All organic and deleterious material beneath the footings, foundations, and slabs to be removed and replaced with 4" min. crushed rock compacted to 95% relative compaction. For sub-grade below slabs, 92% relative compaction is acceptable.

Surface Drainage: Finished grades are to be at least 6" below wood siding. Lots shall be graded to drain surface water away from foundation walls. The grade shall fall a minimum of 6 inches within the first 10 feet. If 6 inches of fall is not possible, impervious surfaces shall be sloped a minimum of 2 percent away from the building.

Footings: All footings shall conform to accompanying structural details. Specified footing dimensions are minimums unless noted otherwise. Bottom of footings to be below frost zone (18").

Footing Drains: Footing drains shall be provided at the base of all footings and retaining walls which will have earth placed against them. Washed drain rock must extend to within one foot of finished grade. Footing drains shall be 4" perforated pipe routed down gradient to daylight, unless otherwise specified.

Concrete: Mix and 28 day strength unless noted otherwise:

- Basement walls, interior slabs, and foundations not exposed to weather ..... 2,500 psi
- Garage slabs, porches, steps, and foundations exposed to weather ..... 3,000 psi

Reinforced Concrete: Place all reinforcing per plans, details, and applicable code requirements. Lap all continuous bars 24 X diameter minimum. Reinforcing bars, bolts, anchors, etc shall be securely tied in position prior to concrete placement. Reinforcing steel shall be free of rust and coatings which may inhibit bonding.

Anchor Bolts: Provide $\frac{5}{8}$"x10" long wet-set or expansion anchor bolts @ 4' 0.C. and within 6-12" of corners with 3"x3"x$\frac{1}{4}$" square washers.

Adhesive Anchors: Epoxy anchors in concrete shall be Simpson SET-XP or Hilti HIT-HY 200-R or equivalent, installed per MFG's guidelines. For extreme temperature applications, when long-term temperature exceeds 110°F or is less than 0°F, use Simpson Set-3G.

Concrete Pier Pads: Pre-cast concrete pier pads are an easily installed and low cost alternative to sonotube foundations in certain low-load applications. Such pads may be substituted only if specifically called out in structural drawings.

Waterproofing: Waterproof all basement walls and crawl space foundations below grade.

## CRAWL SPACE

Vapor Barrier: Cover entire crawl space with class I vapor retardant (e.g. 6 mil poly film). Extend 6" up foundation walls.

Access: Access shall be provided to all under-floor spaces. Access openings through the floor shall be a minimum of 18 inches by 24 inches. Openings through a perimeter wall shall be not less than 16 inches by 24 inches.

Foundation Ventilation: Provide a minimum of 1 square foot of crawl space ventilation per 150 square feet of crawl space area. Space vents evenly to provide cross ventilation. Cover with $\frac{1}{8}$" corrosion resistant mesh screen.

## SLAB ON GRADE

Slabs on Grade: See foundation plan for concrete slab thickness, reinforcement, and finish requirements.

Garage Slabs: Unless noted otherwise, garage slab shall be 4" concrete slab with #3 rebar at 24" O.C. each way or 6x6x$\frac{10}{10}$ woven wire mesh, over 6 mil poly vapor barrier over 4" compacted crushed rock. 18" thickened slab with (1) #4 continuous rebar required at garage opening.

Interior Slabs: Unless noted otherwise, interior slabs shall be 4" concrete slab with 6x6x$\frac{10}{10}$ woven wire mesh over 6 mil poly vapor barrier over 2" rigid insulation (where insulation is required) over 4" compacted crushed rock.

Reinforcing: Reinforcing bars or woven wire mesh shall be as noted on plans and shall be placed 1-1/2" above the bottom of the slab.

Drainage: Slabs that drain (garages, porches) shall be sloped $\frac{1}{8}$"-$\frac{1}{4}$" per 1'.

Flatness: Floor slabs shall be level to within $\frac{1}{4}$" in any ten foot length. Flatness shall be checked with a 10 foot straight edge within 24 hours of placement.

Concrete Topping: If specified on drawings, concrete topping may be installed over floor joists. The concrete topping on a floor shall be installed per manufacturer's specifications. The topping shall not exceed 1-1/2" in thickness and shall be less that 18 psf (12 psf per inch thick).

Connection to Interior Walls: Interior walls shall be connected to concrete slab with $\frac{1}{2}$"x10" long anchor bolts @ 6' O.C. or 1/4" split pins @ 32" O.C..

**ALLOWABLE HOLES - TJI Joists & Rafters**

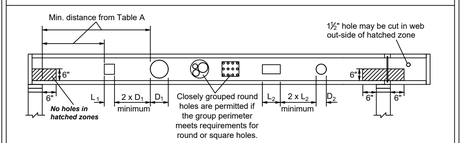



**Table A - Minimum Hole Distance From Support**

| JOIST DEPTH | TJI® | ROUND HOLE SIZE 2" | ROUND HOLE SIZE 3" | ROUND HOLE SIZE 4" | RECTANGULAR HOLE SIZE 2" | RECTANGULAR HOLE SIZE 3" | RECTANGULAR HOLE SIZE 4" |
|---|---|---|---|---|---|---|---|
| 9½" | 210 | 1'-0" | 1'-6" | 2'-6" | 1'-0" | 2'-0" | 2'-6" |
| | 230 | 1'-6" | 2'-0" | 2'-6" | 1'-0" | 2'-0" | 3'-0" |
| | 360 | 1'-6" | 2'-0" | 3'-0" | 1'-6" | 2'-6" | 3'-6" |
| 11⅞" | 210 | 1'-0" | 1'-6" | 2'-0" | 1'-0" | 1'-6" | 2'-6" |
| | 230 | 1'-0" | 1'-6" | 2'-0" | 1'-0" | 2'-0" | 2'-6" |
| | 360 | 1'-6" | 2'-0" | 3'-0" | 1'-6" | 2'-6" | 3'-6" |
| 14" | 210 | 1'-0" | 1'-0" | 1'-0" | 1'-0" | 1'-0" | 2'-0" |
| | 230 | 1'-0" | 1'-0" | 1'-0" | 1'-0" | 1'-0" | 2'-0" |
| | 360 | 1'-0" | 1'-0" | 1'-6" | 1'-0" | 1'-6" | 2'-6" |

**General Notes**
- DO NOT, under any circumstances, cut or notch joist flanges
- Leave ⅞" of web (minimum) at top and bottom of hole
- Round or rectangular holes allowed according to Table A
- 1-1/2" max hole size in cantilever
- For simple span (6' minimum), uniformly loaded joists used in residential applications, one maximum size round hole may be located at the center of the joist span **provided that no other holes occur in the joist**

## WOOD FRAMING

Default Wood Types: Unless noted otherwise, the material for a structural member is as shown:

- Posts & Sawn Joists..... Douglas Fir #2 (D.F.2)
- Beams ..... 4X10 Douglas Fir #2 unless noted otherwise
- Studs, Sills, & Plates ..... Hem/Fir (H.F.) or Douglas Fir (D.F.)
- Blocking & Rim Joists..... Hem/Fir (H.F.) or floor joist material
- Exposed Structural Members ..... Pressure Treated (P.T.) or Cedar
- Glued-Laminated (dry-use) ..... 24F-V4 (GLB)
- Glued-Laminated (wet-use) ..... Rosboro Treated 'X-Beam'

Moisture Content: The max moisture content shall be 19% at the time of installation of connectors, nails, and bolts for framing members.

Pressure Treated Lumber: All members in contact with earth/concrete or exposed to the elements shall be pressure treated (P.T.). Colorless end sealer shall be applied immediately to the ends of members after fabrication and field trimming. Pressure treatment is not required for members protected by a roof or overhang (12" minimum overhang required). Cedar may be used in lieu of typical pressure treated lumber.

- Rosboro Treated 'X-Beam' shall be used for all applications requiring P.T. glulam beams.
- More info: http://www.rosboro.com

Blocking: Provide 2X or engineered lumber full depth solid blocking between joists and rafters at beam and bearing wall locations. Trusses, structural composite lumber, glued-laminated members, and I-joists shall be supported laterally as required by the manufacturer s recommendations.

Bearing: Use a minimum 2-1/2" bearing length for wood framing members unless noted otherwise. Use enough studs to match or exceed beam width unless noted otherwise.

Glued Laminated Members: Glulam beams (GLB) shall conform to the following standards U.N.O.

- Lumber ..... Douglas Fir-Larch combination, 24F-V4
- Laminations ..... 2" Nominal
- Conditions of Use ..... Dry-Use
- Adhesives ..... APA approved moisture-resistant

Engineered Lumber: Engineered lumber offers certain structural advantages over conventional sawn lumber. All engineered lumber must be APA approved. Install per the aforementioned codes and relevant manufacturer's installation guides for each type:

- Wood I-Joists: Used extensively in floor and roof framing (Trus Joist TJI's specified)
- Laminated Veneer Lumber (LVL): Built up on site to reduce heavy lifting (see note below)
- Parallel Strand Lumber (PSL): Ideal for long spans and cantilevers
- Laminated Strand Lumber (LSL): Strong and straight engineered lumber

LVL Option to GLB and PSL's: Multi-ply LVL beams may be used in lieu of PSL or GLB, provided that they are installed according to the following standards:

- 1-3/4" LVL's shall be fastened according to the usage, connector, and connector spacing guidelines considered in International Beams' Technical Bulletin (TB-LVL-2)
- Multi-ply LVL's shall be bolted together with min (3) rows 1/4" self-tapping screws @ 18" O.C., 1.5" minimum embedment required in all members.
- The width and height of the multi-ply LVL beam must be equal or greater than the corresponding dimensions called out on the engineer's structural drawings

Solid Sawn Lumber Option to I-Joists: Solid sawn lumber may be preferred over I-joists due to cost or other reasons. The following solid sawn lumber options may be used in lieu of engineering I-Joists (TJIs) without approval from the engineer of record. Maintain original spacing (e.g. 12", 16", or 24" O.C.)

- 2X10 D.F.2's may be used in lieu of 9.5" TJI 210's
- 2X12 D.F.2's may be used in lieu of 11-7/8" TJI 210's
- Other options may be acceptable, but require approval from the engineer of record

Wood Structural Panels: APA rated sheathing is required for all wood structural panels. Unless noted otherwise, the wood panel for each situation is:

- Roof Sheathing: 1/2" CDX (recommended) or OSB with ply clips or T&G, 10d nails at 6"/12" O.C., no blocking required.
- Prescriptive Exterior Wall Sheathing: 7/16" OSB or 15/32" CD ply, 8d nails at 6"/12" O.C., no blocking
- Exterior Shear Wall Sheathing: per shear wall plans.
- Interior Wall Sheathing: 1/2" Drywall, 10d nails at 6"/12" O.C., no blocking required.
- Floor Sheathing: 3/4" CD or OSB, 8d nails at 6"/12" O.C., glued & nailed.
- Panel Adhesive: Per APA Spec AFG-01

Shear Walls: 3/8" thick (minimum) APA rated sheathing is required for all exterior walls. See shear wall plans and shear wall table for sheathing grade, thickness, and nail spacing.

Stairs: Use (3) 2X12 D.F.2 for stringers

Advanced Framing: Advanced framing is encouraged by B.E. as a cost-effective and structurally adequate alternative to conventional framing. Advanced framing shall conform to the construction standards outlined in APA's Advanced Framing Construction Guide (available on www.apawood.org).

Studs: For headers from 0-6' long, (2) studs are required (1 trimmer and 1 king stud). For spans over 6', use (3) studs (2 trimmers and 1 king stud). Include additional trimmers as specified.

Stud Walls: 2X6 exterior stud walls are typically desirable for insulation/energy code reasons (i.e. not structural reasons). For walls less than 12' tall, it is OK to use 2X4 studs with suitable insulation if preferred by contractor and owner.

Stud Holes & Notching: Notch and hole size may not exceed the following max percentage of stud width:

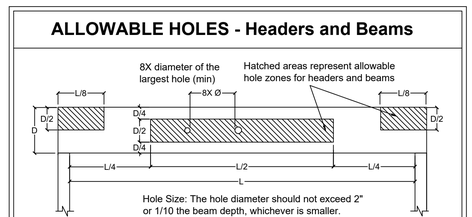
- Bearing walls: Hole - 40% of total stud width, Notch - 25% of total stud width
- Non-bearing walls: Hole - 60% of total stud width, Notch - 40% of total stud width
- In all cases, hole edges must be at least 5/8" from edge of the stud
- If these requirements cannot be met, an additional stud may be installed adjacent to the existing stud and flush against the wall sheathing

## DECKS & BALCONIES

Railings: Guardrails must be 42" high min with max opening size so that a 4" sphere cannot pass through. Guardrails shall be designed to withstand a 200 lb point load applied in any direction and at any location on the top rail and shall be designed to withstand a uniform load of 50 lb/ft applied horizontally to the top rail.

Attachment to House: For decks over 30" above grade, a 1,500-lb deck tension tie is required at each end of the deck: Typically, Simpson DTT2Z's are specified.

**ALLOWABLE HOLES - Headers and Beams**




**General Notes**
- These guidelines are applicable to glued-laminated, solid sawn, and engineered lumber
- Allowed hole zone suitable for headers and beams with **uniform loads only**
- Round holes only
- No holes in cantilevers
- DO NOT cut, notch, or drill holes in headers or beams except as indicated in illustration

**ABBREVIATIONS (Used throughout structural drawings)**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| (E) | Existing | D.F. | Douglas Fir | MAX | Maximum | SPEC. | Specification |
| (N) | New | DBL | Double | MFG | Manufacturer | STD | Standard |
| (R) | Reuse/Remodel | EA. | Each | MIN | Minimum | STR'L | Structural |
| A.B. | Anchor Bolt | ELEV. | Elevation | N.A. | Not Applicable | S.S. | Select Structural |
| ARCH'L | Architectural | EXT. | Exterior | O.C. | On Center | T.O. | Top Of |
| BLD'G | Building | FND | Foundation | Opp. | Opposite | TJI | Trus Joist, I Series |
| BLK'G | Blocking | FTG | Footing | OSB | Oriented Strand Board | TPL | Triple |
| BM | Beam | GALV. | Galvanized | PL. | Plate | TYP. | Typical |
| BTM | Bottom | GLB | Glulam Beam | PLY. | Plywood | UNF. | Unfinished |
| CL'G | Ceiling | GA. | Gauge | P.T. | Pressure Treated | U.N.O. | Unless Noted Otherwise |
| CLR | Clear | G.B. | Gypsum Board | REINF. | Reinforced | V.B. | Vapor Barrier |
| CMU | Conc. Masonry Unit | G.E. | Gable End | REQ'D | Required | VERT. | Vertical |
| CONC. | Concrete | HORIZ. | Horizontal | S.F. | Square Foot | W/ | With |
| CONT. | Continuous | INSUL. | Insulation | SGL | Single | W/O | Without |
| C.S. | Clear Span | INT. | Interior | SIM. | Similar | WD | Wood |

## ROOFS

Manufactured Trusses: Unless stick framing is specified on structural drawings, wood trusses are to be engineered by a truss manufacturer (MFG'R). If truss layout is not provided by truss MFG'R, the engineer assumes that trusses all bear on exterior walls and do not bear on interior walls.

Girder Trusses: Truss MFG'R to be responsible for placement of girder trusses. Install triple studs (min) directly below all girder trusses.

Lateral Bracing: Contractor to install lateral bracing in roof as specified by truss MFG'R.

Headers: Bearing wall headers to be 4X10 or 6X8 D.F.2 min (double 2x10 or triple 2x8 OK). Not required for non-bearing wall headers.

Over-framing: Use 2X6 @ 24" O.C. for all non-structural over-framing U.N.O.

Access: Attic access shall be provided for attics with an area greater than 30 sq. ft and height greater than 30". The minimum opening size is 22"X30".

## FRAMING CONNECTORS

Manufacturer: Simpson Strong-Tie construction connectors are specified, however, any nationally recognized brand (Silver, KC, etc) may be used provided that they are equivalent in their ability to carry all applied loads in all orientations.

Installation: All prefabricated items shall be installed in strict accordance with the manufacturer's recommendations and requirements (locations, exposure, end and edge distances, fasteners, etc.).

Simpson Connectors: Unless noted otherwise, the following Simpson Strong-Tie construction connectors shall be used:

- Post Caps: CBTZ, PCZ/EPCZ, BC/BCS
- Post Bases: CPTZ, PB/PBS, ABA/ABU/ABW
- Joist Hangers: LUC/LU/U/HU/HUC, HUTF/HUSTF (top-flange)
- I-Joist Hangers: IUS/MIU, ITS/MIT/HIT (top-flange)
- Beam Hangers: HU/HUC/HUCQ/HGUS, LEG/MEG/EG (top-flange)
- Rafter Hangers: LSU/LSSU, LRUZ
- Truss and Rafter Connection: H1, H2.5A, or SDWC15600 at each heel to double plate
- Shearwall Holdowns: HDU/DTT with SSTB/PAB. STHD14 or STHD14RJ strap-type hold-downs may be used in lieu of aforementioned holdowns
- Floor-to-floor Strap-Ties: HDU2, MST48
- Deck Tension Ties: DTTZ

Fastener Requirements: The number and size of fasteners connecting wood members shall not be less than that set forth in IBC Table 2304.9.1.

Staples: For roofs, floors and walls, the IRC permits 16 gage wire staples with a min 7/16" dia. crown (per Table R602.3(1) footnote b).

## SPAN TABLES

The following joist and rafter span charts may be used to specify member sizes, provided that the relevant loading conditions (below) are met. For questions on interpreting the charts or for members which do not satisfy the charts' loading conditions, contact the engineer of record.


DEFINITION OF **CLEAR SPAN**: DISTANCE FROM INSIDE OF BEARING POINT TO INSIDE OF OPPOSITE BEARING POINT (i.e. UNSUPPORTED DISTANCE)

**FLOOR JOIST SIZING**

| MAX CLEAR SPAN | MEMBER D.F.2 | MAX CLEAR SPAN WITHOUT GYPSUM LID (WITH 5/8" GYPSUM LID) | MEMBER TJI |
|---|---|---|---|
| 5'-6" | 2X4 D.F.2 | 14'-2" (15'-5") | 9-1/2" TJI 210 |
| 8'-9" | 2X6 D.F.2 | 17'-1" (18'-5") | 11-7/8" TJI 210 |
| 11'-6" | 2X8 D.F.2 | 18'-6" (19'-8") | 11-7/8" TJI 360 |
| 14'-9" | 2X10 D.F.2 | 19'-4" (20'-5") | 14" TJI 210 |
| 17'-6" | 2X12 D.F.2 | 20'-5" (21'-7") | 14" TJI 360 |
| 19'-6" | 2X14 D.F.2 | 20'-10" (22'-0") | 16" TJI 210 |

Loading conditions: Live load = 40 psf; dead load = 10 psf; L/480; TJ Pro Rating = 42, Dry-use; 16" O.C. spacing

**DECK JOIST SIZING**

| MAX CLEAR SPAN | MEMBER |
|---|---|
| 5'-0" | 2X4 P.T. |
| 7'-6" | 2X6 P.T. |
| 10'-0" | 2X8 P.T. |
| 12'-9" | 2X10 P.T. |
| 15'-5" | 2X12 P.T. |
| 18'-0" | 2X14 P.T. |

Loading conditions: Live load = 60 psf; dead load = 10 psf; L/480; Wet-use; 16" O.C. spacing

**ROOF RAFTER SIZING**

| MAX CLEAR SPAN D.F.2 | MEMBER D.F.2 | MAX CLEAR SPAN TJI | MEMBER TJI |
|---|---|---|---|
| 6'-10" | 2X4 D.F.2 | 19'-0" | 9-1/2" TJI 210 |
| 10'-4" | 2X6 D.F.2 | 22'-3" | 11-7/8" TJI 210 |
| 13'-2" | 2X8 D.F.2 | 25'-0" | 11-7/8" TJI 360 |
| 16'-3" | 2X10 D.F.2 | 24'-3" | 14" TJI 210 |
| 18'-10" | 2X12 D.F.2 | 28'-6" | 14" TJI 360 |
| 20'-11" | 2X14 D.F.2 | 25'-9" | 16" TJI 210 |

Loading conditions: Snow load = 25 psf; dead load = 10 psf; L/240; Dry-use; 24" O.C. spacing

| REVISIONS | DATE | VERSION |
|---|---|---|
| ORIGINAL PLANS | 6/27/2018 | 1 |
| ---- | ---- | ---- |
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| ---- | ---- | ---- |

REV. 1
DATE 6/27/2018
ENGINEERED BY P. FINFROCK
CHECKED BY P. FINFROCK
APPROVED BY D. BRADLEY
SCALE N.T.S.
SIZE D


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GENERAL STRUCTURAL REQUIREMENTS

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