

<b>Design Loads</b>	
Roof	100 PSF
Floor	50 PSF
Wind	115 MPH, Exposure C
Seismic design category	C
Maximum soil bearing pressure	2500 PSF
Minimum soil bearing pressure	0 PSF
Equivalent Fluid Pressure	
At-Rest	55 PCF
Active	65 PCF

On-site soil conditions are assumed for foundation design purposes. Any deviations in the assumed conditions shall be reported to Yampa Valley Engineering, Inc. which may require substantial design changes. The contractor/owner is proceeding with the assumed on-site conditions at their own risk.

The design herein and all construction standards shall utilize the 2018 International Building Code.

**Concrete:**

- Place footings on firm, undisturbed natural soil. Footings placed on compacted fill shall require the approval of a geotechnical engineer.
- No concrete shall be poured on frozen sub-grade or be subject to freezing conditions until fully cured.
- All concrete form work shall be adequately braced and tied to form true lines, square corners and plumb walls. Trench forming is not allowed.
- All cast-in-place concrete shall be type I/II and develop 3,000 PSI compressive strength in 28 days.
- All concrete work and reinforcement detailing shall be in accordance with ACI Building Code 301 and 318.
- All reinforcing shall be deformed bars conforming to ASTM A615 grade 60. Deformed bars specified to be field bent, stirrups, and ties can be grade 40, UNO.
- Welded wire fabric shall conform to ASTM 185 and shall be lapped 1 full mesh at splices and be tied together.
- Concrete protection for reinforcement shall be:
  - 3" minimum for concrete cast against earth
  - 2" minimum for concrete poured in forms
  - 3/4" in slabs and walls, not exposed to weather
- Reinforcement shall be fabricated and placed per ACI 315. Make all bars continuous around corners. Lap splices shall be a minimum of 50 bar diameters.
- Slabs, footings, and walls shall not have joints in a horizontal plane. Any stop in concrete work (cold joints) must be made at a third point of span with vertical bulkheads and horizontal shear keys. Continue top bar in wall down through corners of openings for 2'-0" & tie with a vertical bar 3' from opening.
- Anchor bolts shall be spaced at 36" O.C. and within 12" of each foundation corner or end of mudsill plate. Anchor bolts shall have 7" minimum concrete penetration.
- Provide all accessories necessary to support reinforcing at positions shown on the plans and in accordance with ACI 318.
- All concrete walls shall be mechanically vibrated.
- Floor slabs shall be placed with construction joints per the geotechnical report or 10ft max spacing and/or as shown on the plans.

**Metals:**

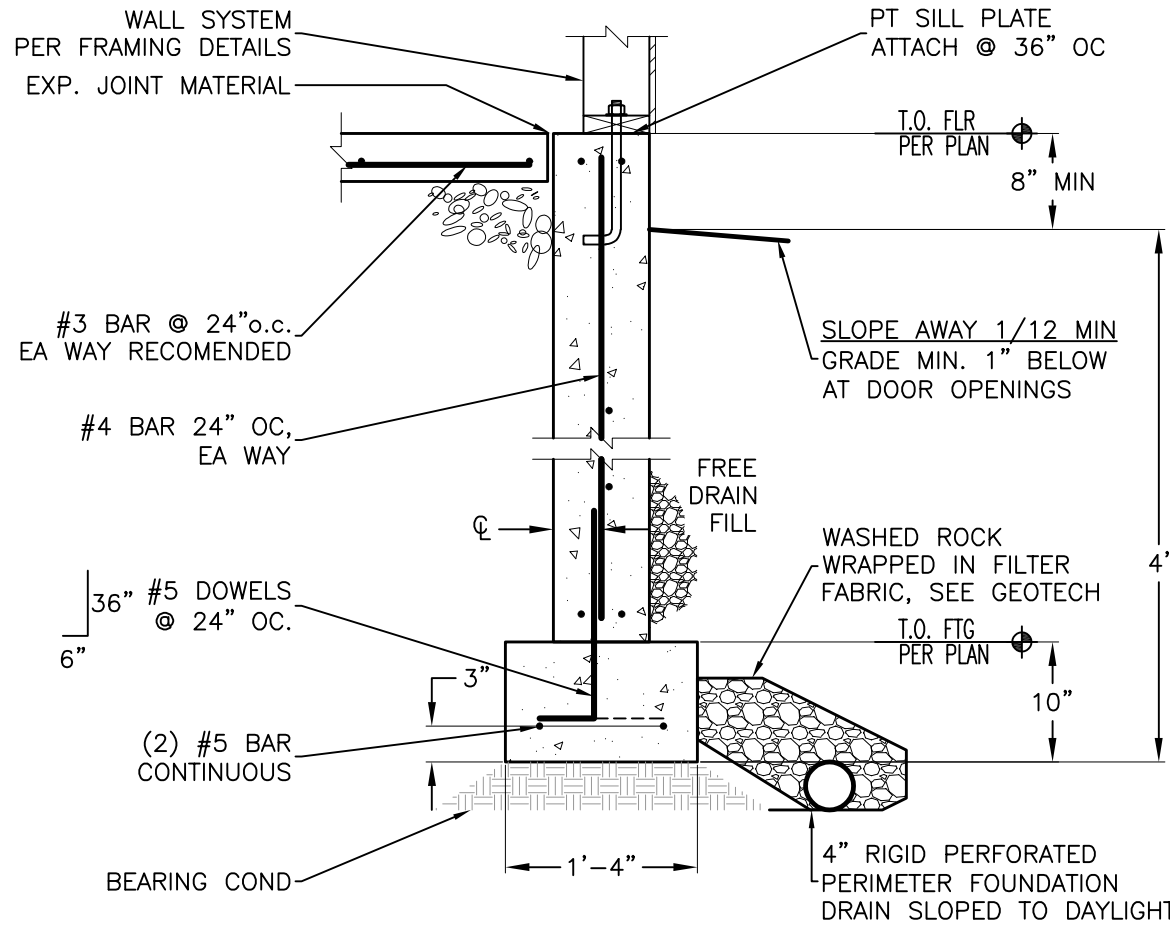
- All steel shall conform to the following:
  - Beams: A992
  - Angles & miscellaneous: ASTM A36
  - Bolts: ASTM 307
  - Tube Columns: ASTM A500, Grade B 4ksi
- Miscellaneous clips, anchors and connectors shall be Simpson strong tie or approved equal, unless otherwise noted. Products shall be installed in accordance with manufacturer's instructions.

**Carpentry:**

- All framing not specifically shown, detailed, or drawn on plan shall comply with the non-engineered requirements specified in the IRC.
- Minimum nailing and wood structural panel attachments shall be as specified in TABLE #R602.3(1) of the IRC. Additional nailing or attachment required for connections are per plan.
- All treated lumber shall be treated in accordance with AWPA Standard U1 to the requirements of the intended use.
- All 2"-4" thick dimensional framing lumber shall be visually graded, S-dry with the following minimum design values:
  - Wall framing: SPF Stud grade or better, E=1,200,000 psi, Fb=675 psi, Ft=350 psi, Fv=135 psi, Fc<sub>⊥</sub>=425 psi, Fc<sub>||</sub>=725 psi
  - Joist or Rafter:
    - SPF No.2 or better, E=1,400,000 psi, Fb=875 psi, Ft=450 psi, Fv=135 psi, Fc<sub>⊥</sub>=425 psi, Fc<sub>||</sub>=1,150 psi
    - DF-L (N) No.1/No.2 or better, E=1,600,000 psi, Fb=850 psi, Ft=500 psi, Fv=180 psi, Fc<sub>⊥</sub>=625 psi, Fc<sub>||</sub>=1400 psi
- All 2"-4" dimensional lumber in contact with concrete or masonry shall be treated and have the following minimum design values:
  - Hem-Fir No.2 or better, E=1,300,000 psi, Fb=850 psi, Ft=525 psi, Fv=150 psi, Fc<sub>⊥</sub>=405 psi, Fc<sub>||</sub>=1300 psi
- All 5" thick and greater dimensional timber framing lumber shall be visually graded, S-dry with the following minimum design values:
  - Beams: DF-L (N) No.1 or better, E=1,600,000 psi, Fb=1,300 psi, Ft=675 psi, Fv=170 psi, Fc<sub>⊥</sub>=625 psi, Fc<sub>||</sub>=925 psi
  - Columns: DF-L (N) No.1 or better, E=1,600,000 psi, Fb=1,200 psi, Ft=825 psi, Fv=170 psi, Fc<sub>⊥</sub>=625 psi, Fc<sub>||</sub>=1,000 psi
- All structural glued laminated beams shall be AITC stressed rated and have the following minimum design values:
  - Single Span: (24F-V4) E=1,800,000 psi, Fbc=2,400 psi, Fbt=1,450 psi, Fc<sub>⊥</sub>=650 psi, Fv=265 psi, SG=0.50
  - Multiple Span: (24F-V8) E=1,800,000 psi, Fbc=2,400 psi, Fbt=2,400 psi, Fc<sub>⊥</sub>=650 psi, Fv=265 psi, SG=0.50
- All engineered wood shall be True Joist or approved equivalent with the following minimum design values:
  - LVL: E=1,900,000 psi, Fb=2,600 psi, Ft= 1,555 psi, Fc<sub>⊥</sub>=750 psi, Fc<sub>||</sub>=2,510 psi, Fv=285 psi, SG=0.50
  - LSL: E=1,300,000 psi, Fb=1,700 psi, Ft= 1,075 psi, Fc<sub>⊥</sub>=680 psi, Fc<sub>||</sub>=1,400 psi, Fv=400 psi, SG=0.50
  - PSL: E=2,000,000 psi, Fb=2,900 psi, Ft= 2,025 psi, Fc<sub>⊥</sub>=750 psi, Fc<sub>||</sub>=2,900 psi, Fv=290 psi, SG=0.50
- All prefabricated wood I-joists shall be True Joist or approved equivalent with the following minimum design values:
  - 9 1/2" TJI 210: Mr=2,860 ft-lbs, V=1,330 lbs, EI=167x10<sup>6</sup> sq.in.-lbs
  - 11 1/8" TJI 210: Mr=3,620 ft-lbs, V=1,655 lbs, EI=283x10<sup>6</sup> sq.in.-lbs
  - 11 1/8" TJI 360: Mr=6,180 ft-lbs, V=1,705 lbs, EI=419x10<sup>6</sup> sq.in.-lbs
  - 14" TJI 210: Mr=4,280 ft-lbs, V=1,945 lbs, EI=415x10<sup>6</sup> sq.in.-lbs
  - 14" TJI 360: Mr=7,335 ft-lbs, V=1,955 lbs, EI=612x10<sup>6</sup> sq.in.-lbs
- Rim Joist: Per Manufacturer
- All Roof sheathing shall be:
  - MIN. 1 1/2" APA Rated 40/20 Exp. 1
- All Floor sheathing shall be:
  - MIN. 2 1/2" APA Rated 48/24 Exp. 1 T&G, glued and nailed.
- All Wall sheathing shall be:
  - MIN. 3/4" APA Rated 24/16 Exp. 1.
- All prefabricated I-joists, pre-engineered trusses, specified connectors shall be installed per manufacturers specifications.
- Wood framing members, including wood sheathing, that are in contact with exterior foundation walls and are less than 8 inches from exposed earth shall be of naturally durable or preservative-treated wood.
- ALL EXTERIOR WALLS SHALL BE SHEATHED. Exterior walls shall be a minimum 2 x 6 @ 16" OC, UNO.
- Interior bearing walls shall be 2x6 @ 16", UNO. For bearing walls perpendicular to floor framing provide full height solid blocking between bays. For bearing walls parallel to floor framing provide additional double floor joists under bearing wall or balloon frame bearing wall below to underside of sheathing.
- Interior partitions (non load bearing) shall be 2x4 @ 16". Support partitions with 2x4 blocking @ 24" between joists, top and bottom.
- All loads, point or distributed, shall have have continuous uninterrupted path to foundation. 2x squash blocks between floor assembly to match column above.
- Provide solid blocking between joists at all supports, beams or bearing walls. Provide 1x4 cross-bridging or 2x blocking at not over 8' on center for all wood joists.
- Minimum header size shall be 2-2x10's, UNO.
- All king and trimmer studs per plan. Minimum 1 king and 1 trimmer stud at wall openings. All headers consisting of two or more LVL's shall have minimum 2 trimmers and 1 king.

**Erection Requirements:**

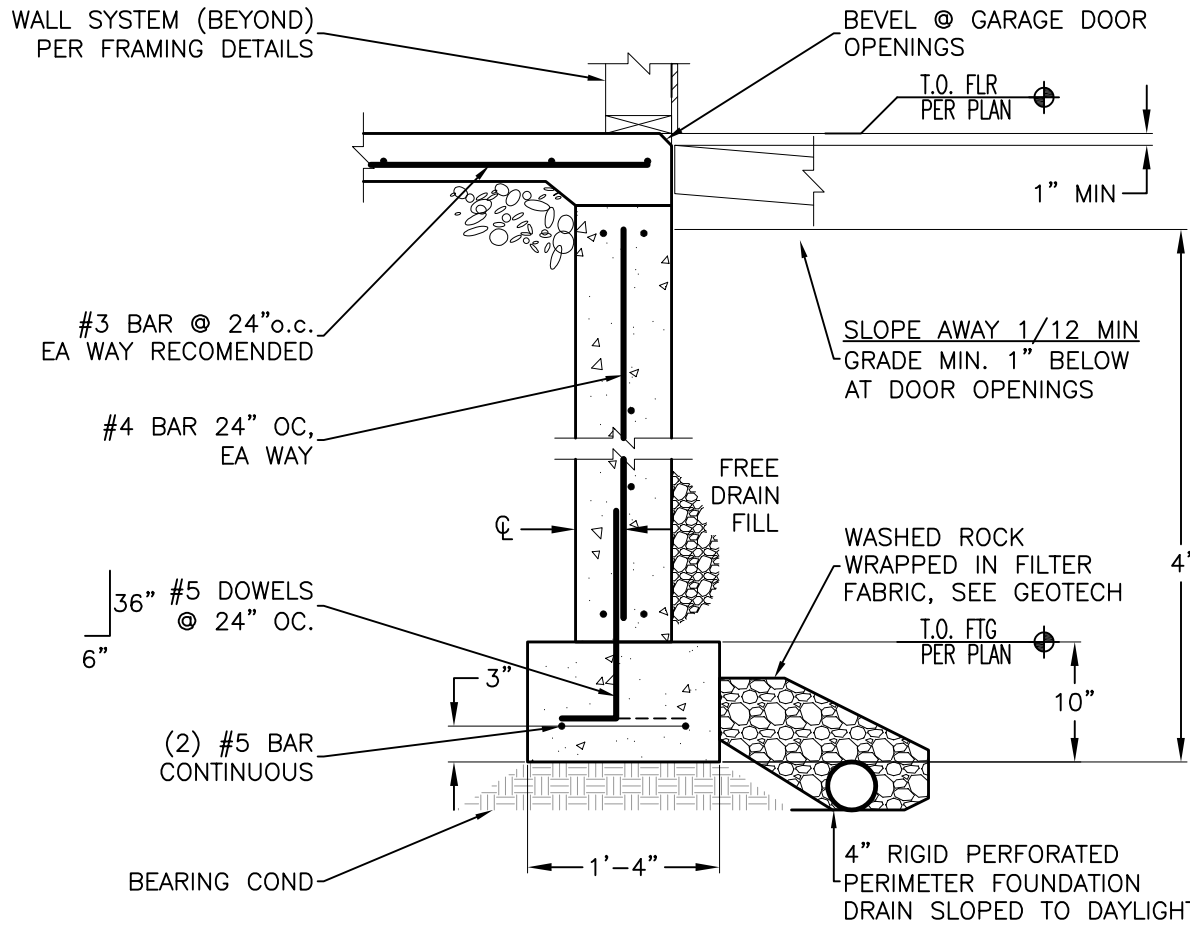
- Do NOT scale construction documents, if a dimension is necessary and not shown, Yampa Valley Engineering shall be contacted for dimension needed for construction.
- If a discrepancy exists between the architectural and structural drawings, Yampa Valley Engineering shall be contacted immediately to rectify the discrepancy.
- All structural elements are shown in final erected position. The contractor is responsible for all sequence of construction, shoring, bracing, or temporary work associated to achieve the final structure.
- The main level floor shall be installed prior to the backfill of any foundation wall or adequate bracing must be provided by the contractor to ensure foundation wall stability.
- The basement slab shall be installed and cured prior to the backfill of any foundation wall or adequate bracing must be provided by the contractor to ensure foundation wall stability.
- Expansive soils may or may not be present on-site. All concrete slabs on grade shall be separated from all building finishes to allow for slab movement. Slab movement is caused by numerous conditions, the owner/contractor should take the necessary precautions to limit slab heave. Yampa Valley Engineering shall not be held liable for damage caused by slab movement.



- NOTES:
- MAINTAIN 3" COVER FOR CONC. POURED ON EARTH. 2" FOR FORMED CONC.
  - ENERGY CODE DETAILS PER ARCHITECTUAL PLANS.

1 CONCRETE WALL

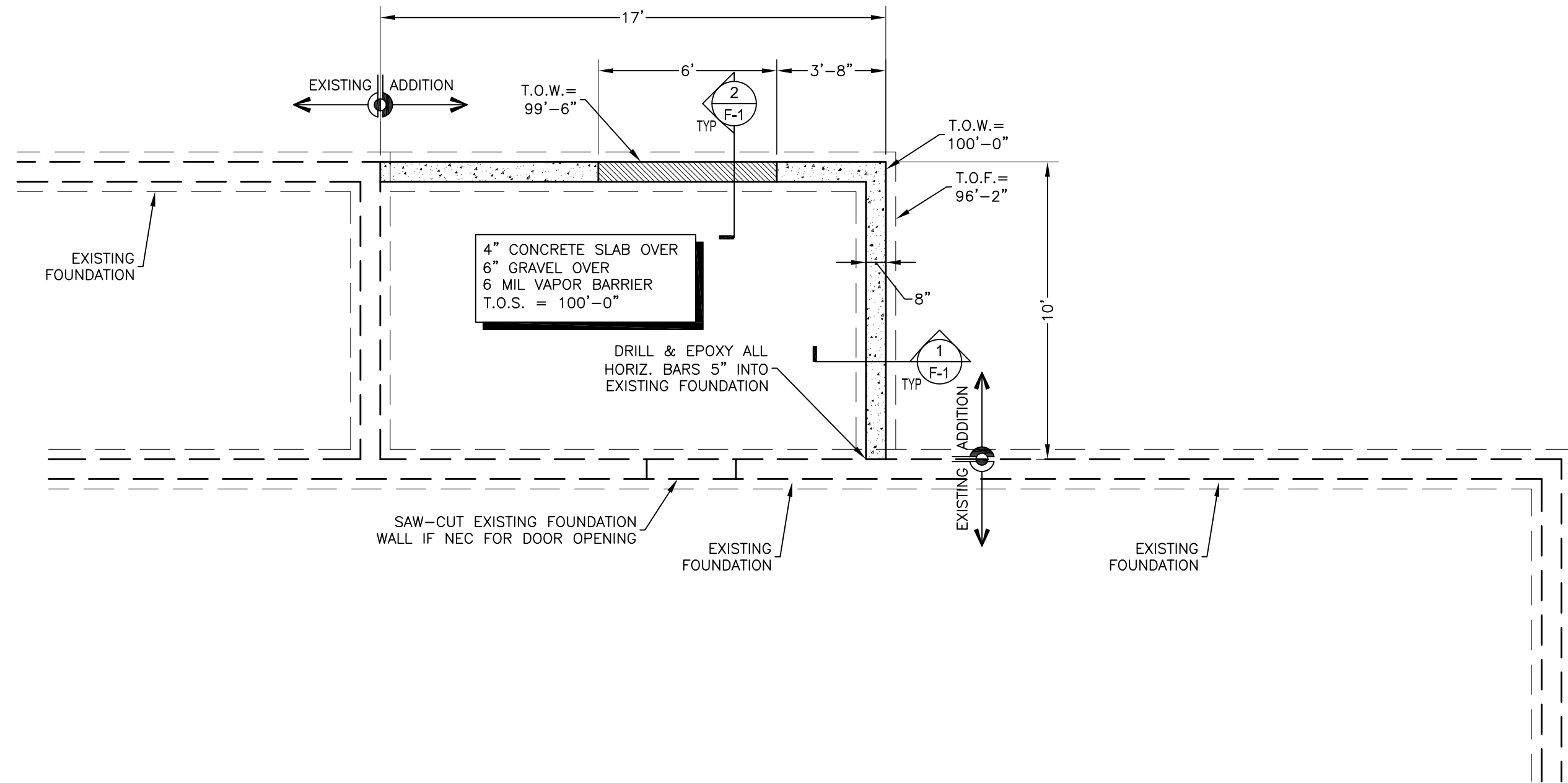
NO SCALE



- NOTES:
- MAINTAIN 3" COVER FOR CONC. POURED ON EARTH. 2" FOR FORMED CONC.
  - ENERGY CODE DETAILS PER ARCHITECTUAL PLANS.

2 CONCRETE WALL @ DOOR OPENING

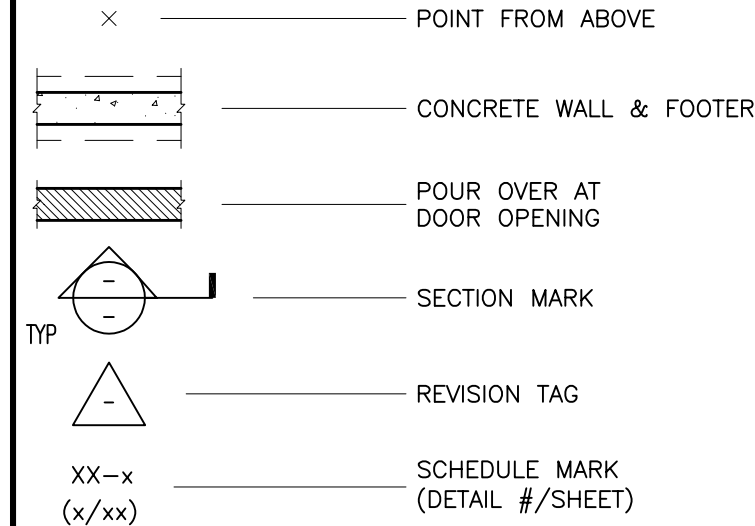
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1 FOUNDATION PLAN

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

FOUNDATION SYMBOLS



**YVE,**  
YAMPA VALLEY ENGINEERING, INC.

**STRUCTURAL  
MECHANICAL  
ENGINEERING  
DESIGN  
DRAFTING  
SERVICES**

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PLANS FOR:  
**VISTA VERDE RANCH OUTPOST**

60880 COUNTY ROAD 129  
CLARK, COLORADO

Reviewed for  
Code Compliance

03/03/2022

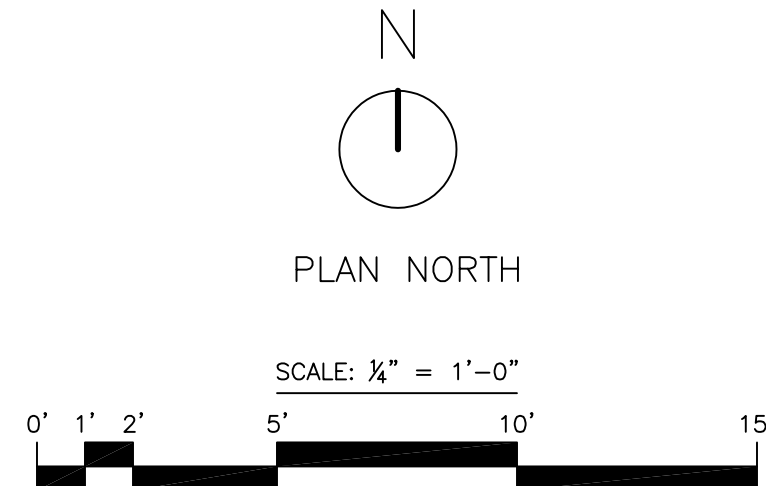
JOB NO.: 21-074  
DRAWN: JAS  
DATE: 01-06-22

REVISIONS

NO.	DATE	DRAWN

SHEET NUMBER

**F-1**



FRAMING SYMBOLS

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POINT FROM ABOVE

■

COLUMN TO BELOW

└─┐

JOIST OR RAFTER w/  
HANGER PER PLAN  
(WHERE SPECIFIED)

└─┐

HEADER OR BEAM w/  
HANGER PER PLAN  
(WHERE SPECIFIED)

○

SECTION (#/SHEET)

△

REVISION

YVE,

YAMPA VALLEY ENGINEERING, INC.

STRUCTURAL  
MECHANICAL  
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Reviewed for  
Code Compliance

03/03/2022

N

PLAN NORTH

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

0' 1' 2' 5' 10' 15'

PLANS FOR:

VISTA VERDE RANCH OUTPOST

60880 COUNTY ROAD 129

CLARK, COLORADO

JOB NO: 21-074

DRAWN: JAS

DATE: 01-06-22

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SHEET NUMBER

S-1