

SUBMISSION DRAWINGS
OF
COTTAGE PERIMETER FOUNDATION

DATE : 13 SEPTEMBER, 2025

Address:
11391 Country Road 535, Lavon,TX 75166

PROJECT / ADDRESS :			CONSULTANTS:	STRUCTURAL ENGINEER :
COTTAGE PERIMETER FOUNDATION 11391 Country Road 535, Lavon, TX 75166			Matrix PDM Engineering Inc. robertserinrenee@gmail.com	ROBERTS, ERIN RENEE PE# 126463
OWNER NAME :			Steven & Heather Moore	
SHEET TITLE:			TITLE	
REVISIONS				
DATE	No.	DESCRIPTION		
SEP 13, 2025	00	--		
	01	--		
JOB No.:				
DATE: SEP 13, 2025		SHEET		
BLOCK NAME		S-1		
SCALE: AS SHOWN				

GENERAL NOTES:

Governing Standers

- 2021 International Residential Code (IRC) and 2021 International Building Code (IBC) as adopted by jurisdiction.
- ASCE 7-16, risk category ii.
- ACI 318, ACI 301.
- AISC steel construction manual.
- Hud 24 cfr 3285/3280 (referenced for manufactured housing components as applicable).
- Site hazards (per asce hazard report)
- Basic wind speed: 105 mph vult, exposure c, risk cat ii.
- Frost depth: 12" minimum embed below finished grade.
- Ice load: 1.5" radial ice at 36 mph gust.
- Rainfall intensity: 7.82 in/hr (15-minute), 3.58 in/hr (60-minute).

Foundation System Summary

- Primary system: continuous reinforced concrete grade beam and stem wall (8"x 30" overall: 12" footing + 18" stem).
- Supplemental system: ground screws (svks bau f 76(3.5)x3000, hot-dip galvanized) used under girders for settlement and span support. not a primary foundation element.
- See sheet S-3 for ground screw layout and design values, and sheet S-6 for embedment details.

Concrete & Reinforcement

- Concrete: f'c =3000 psi minimum, water-cement ratio ≤ 0.50, air-entrainment per exposure.
- Reinforcement:Astm A615 grade 60.
- minimum cover: 3" against earth, 2" against formed surfaces.
- Beam reinforcement: 2-#5 top + 2-#5 bottom continuous; #3 ties @12" o.c., tightened to @6" within 2' of corners and t-joints.

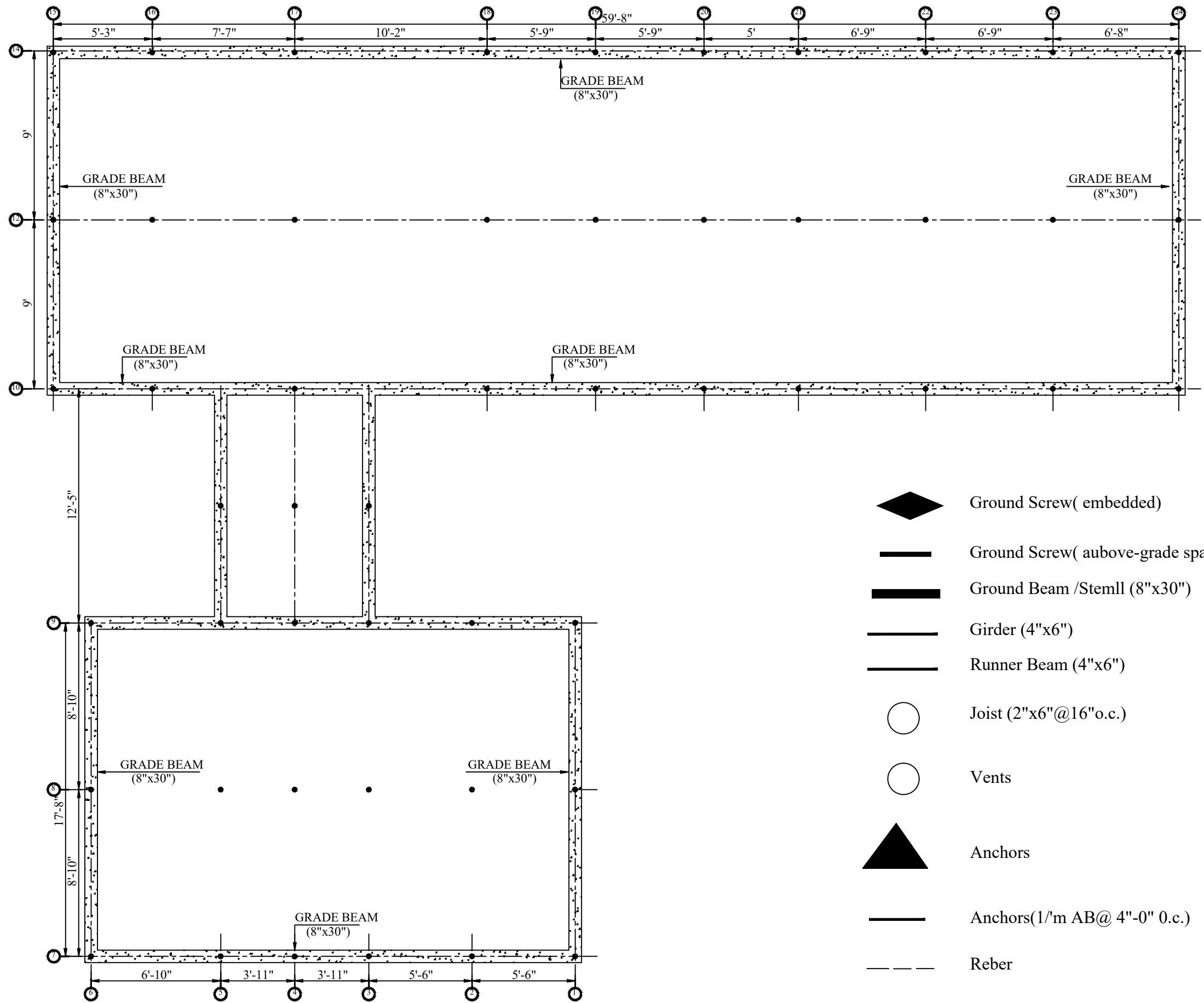
Anchorage & Uplift Summary

- Provide ½" anchor bolts @4'-0" o.c. maximum, 7" embedment, with 3 plate washers."
- Hold-downs required at braced wall panel ends as noted.
- Strap ground screw head brackets to framing wherever used for uplift transfer.
- Crawlspace ventilation.
- Provide Crawlspace Ventilation per IRC Calculation (net free vent area distributed around perimeter) per IRC R408.2".

Termite Protection

- Provide termite protection per irc r318 and local jurisdiction.

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GRADE LAYOUT PLAN

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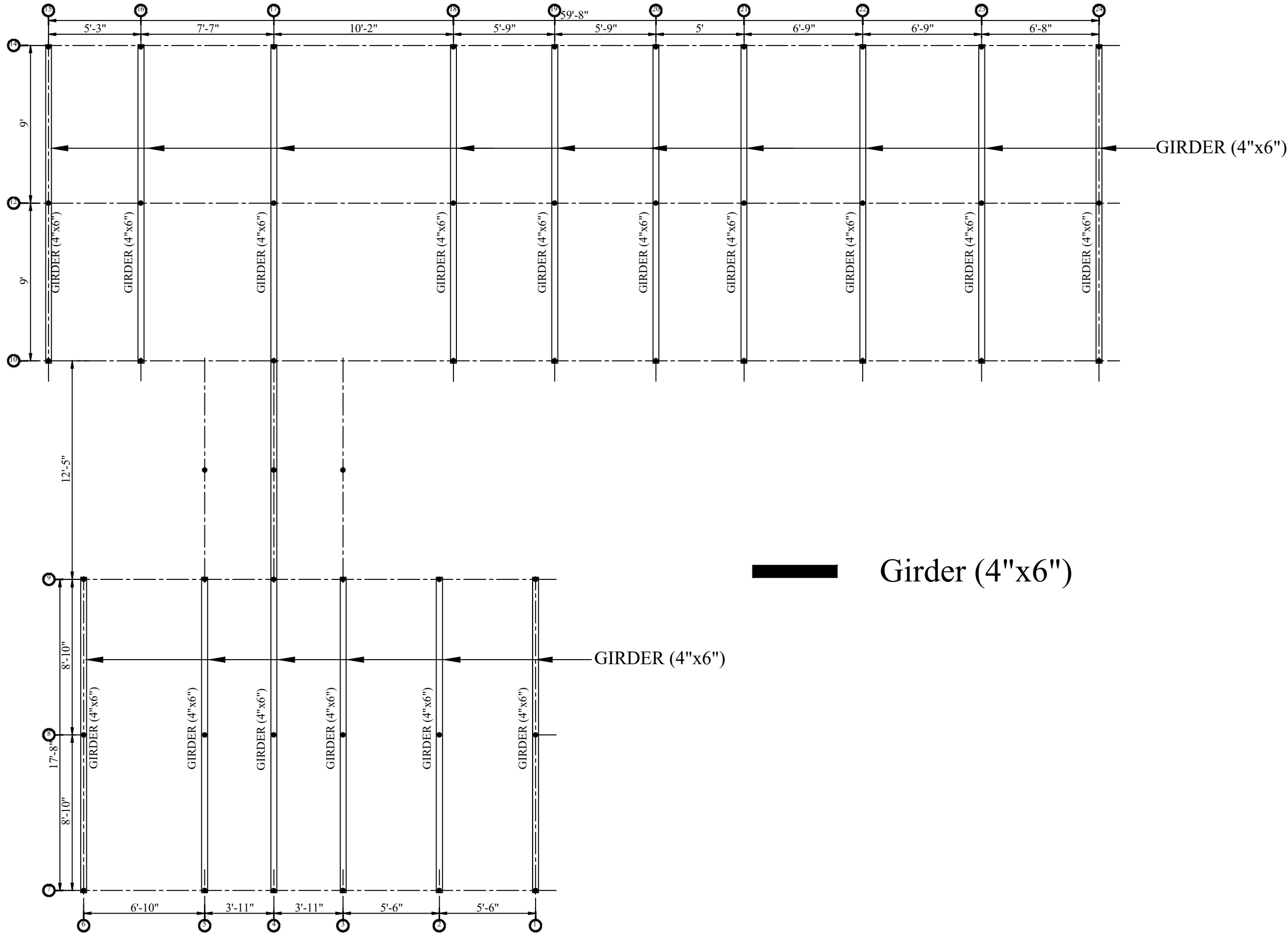
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S-2

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GIRDER LAYOUT PLAN

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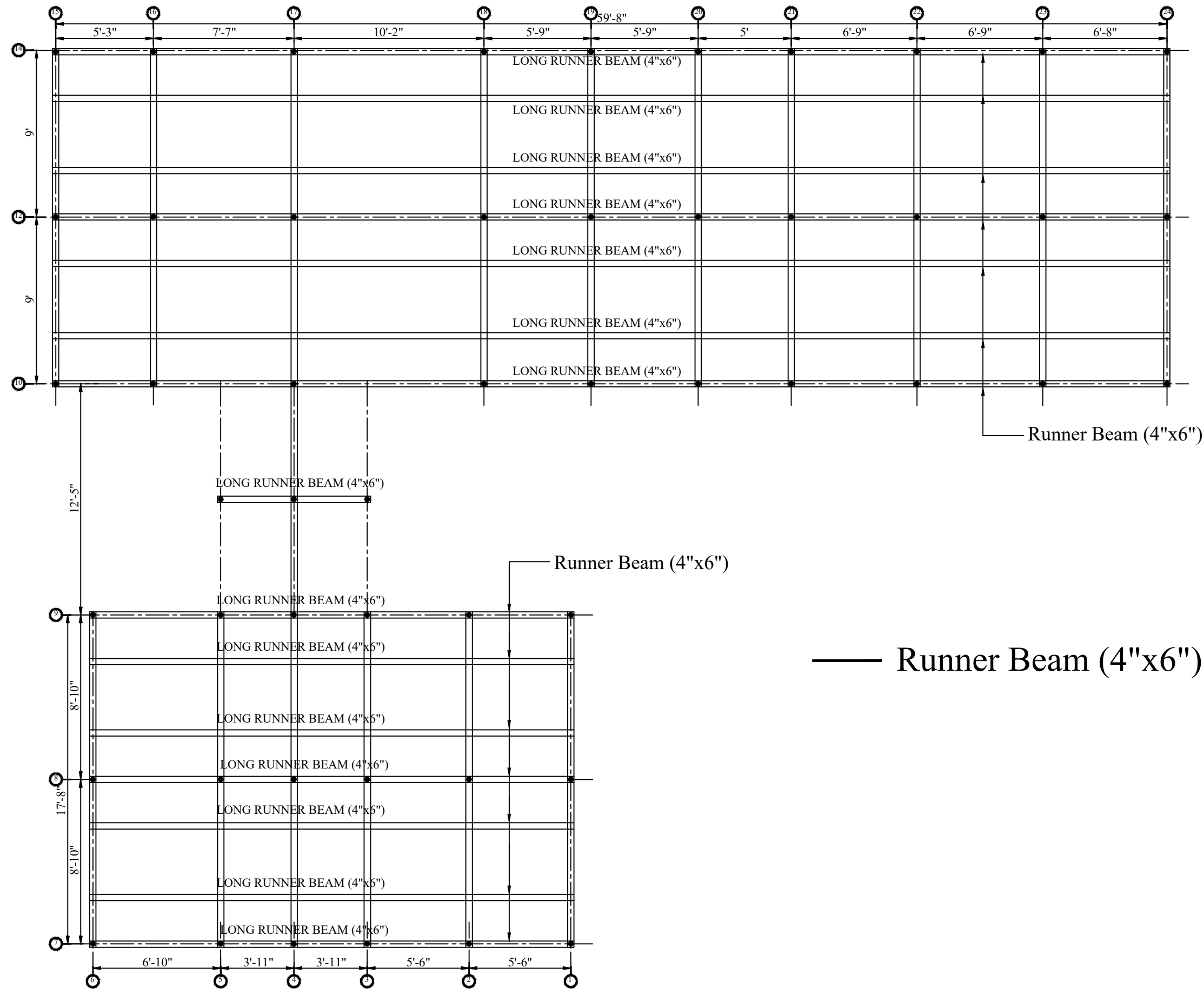
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S-3

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JOIST LAYOUT PLAN

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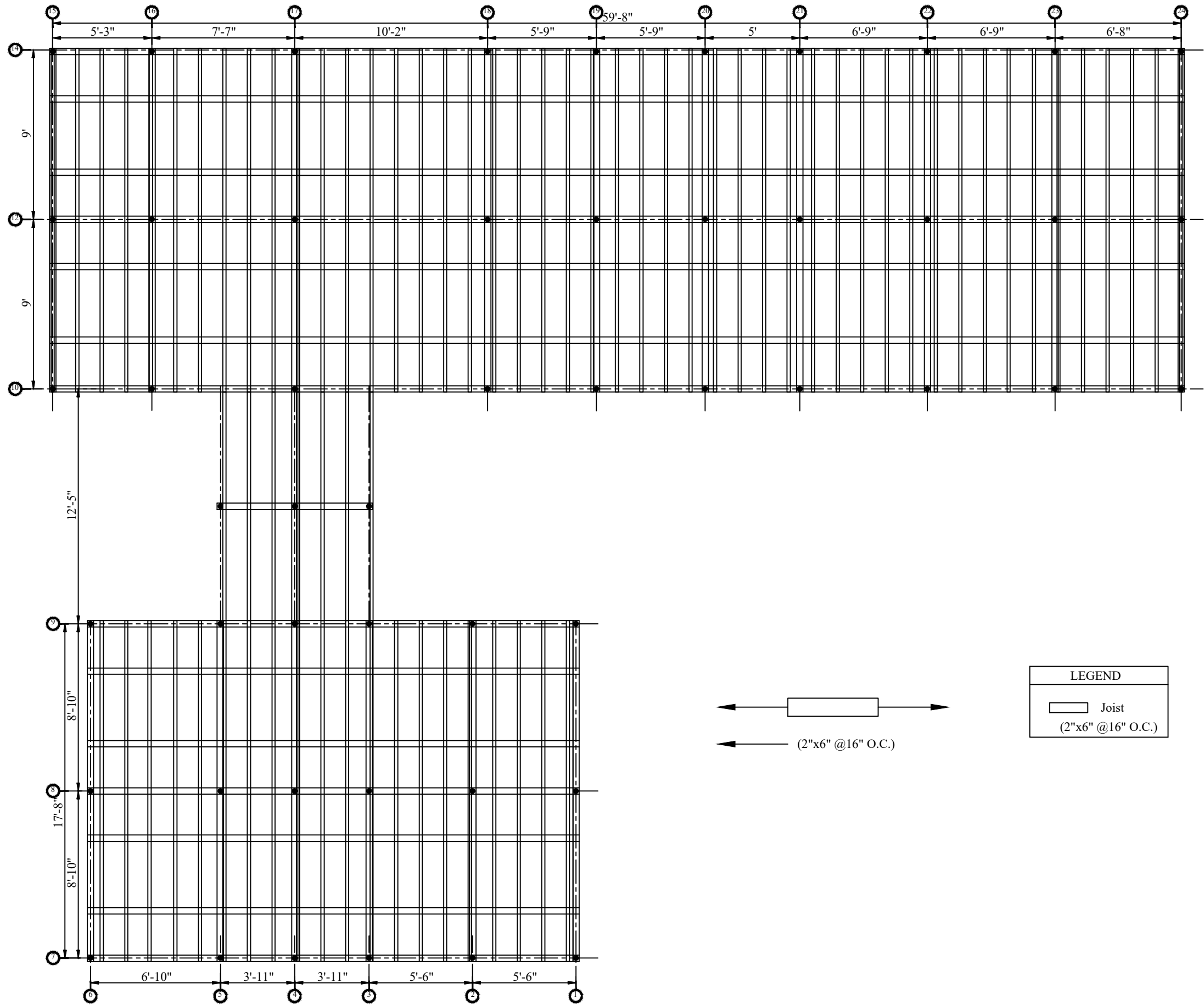
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FLOOR JOIST LAYOUT PLAN
PLY FLOOR JOIST 2"X6" @16"O.C(not LVL Joists)

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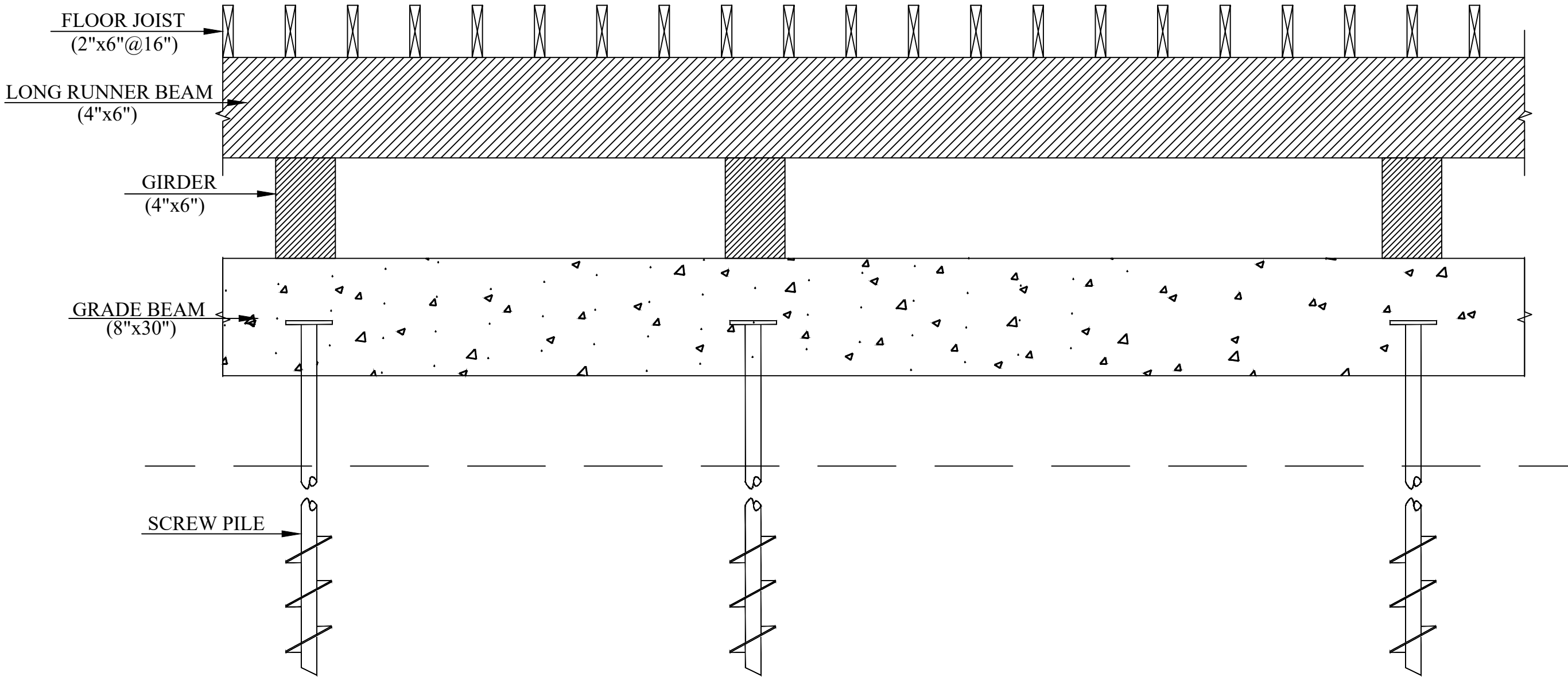
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TYPICAL DETAILS OF FOUNDATION

DETAILS

Ground Screw Embedded
Flange Plate Embedded, 3 into Grade Beam:
Provide Rebar Tie Detail Option nA0r Option B; Pe to Cofil.

Frost
12"
2-#5 TOP +2 # 5 Bottom;
#3 Ties@ n12", Tighten @5' WI
Of Corners-Joints.

2F
FROST
CO-4P SBV
SVKS BAU F 76 (3,5)X3000

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S-6

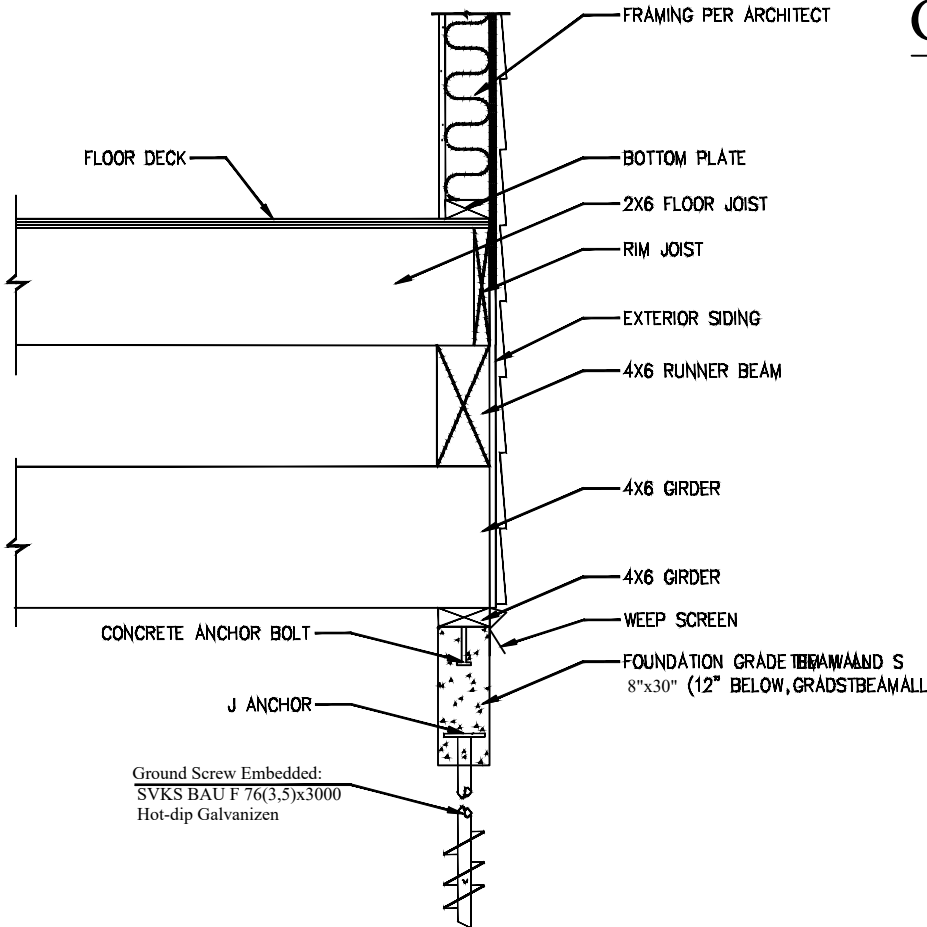
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Spec Sheet Content (SVKS BAU F 76(3.5)×3000)
Product:
* Model: SVKS BAU F 76(3.5)×3000
* Material: Hot-dip galvanized structural steel
* Shaft Diameter: 76 mm (3.0 in)
* Helix/Thread Length: 3000 mm (118 in)
* Flange Plate: Welded top plate with predrilled bolt slots
Allowable Capacities (per manufacturer, ASD values):
* Axial Compression (Downward): 2.5 kips (11.1 kN)
* Axial Tension (Uplift): 1.2 kips (5.3 kN)
* Lateral Capacity: 0.8 kips (3.6 kN)
* Settlement Limit: ≤ ½" under working load

Installation Requirements:
* Minimum Embedment Depth: 12" below frost line (≥42" below grade for Lavan, TX)
* Installation Torque: ≥3.5 kN·m (2,580 ft-lb) verified during install
* Alignment: Vertical tolerance ±2°
* Flange Plate Embedment: Minimum X" into grade beam (see S-6 detail)

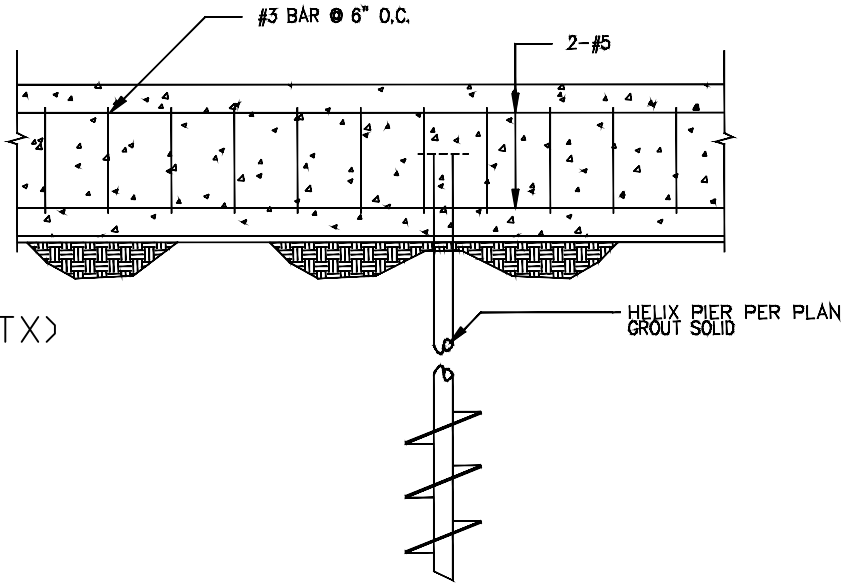
Rebar Tie Options (per PE selection):
* Option A: Two #4 J-hooks each side
* Option B: 4-bolt clamp plate with stirrup wrap

Standards/Certifications:
* ASTM A123 (Hot-Dip Galvanizing)
* ASTM A36 / A500 Grade C steel

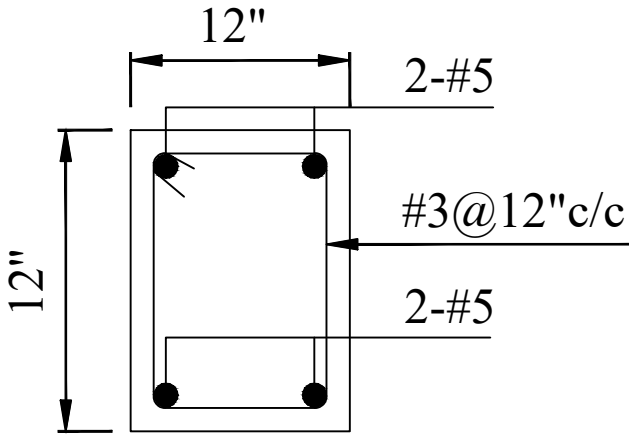


GRADE BEAM DETAIL

N.I.S.



GRADE BEAM ELEVATION



GRADE BEAM

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