

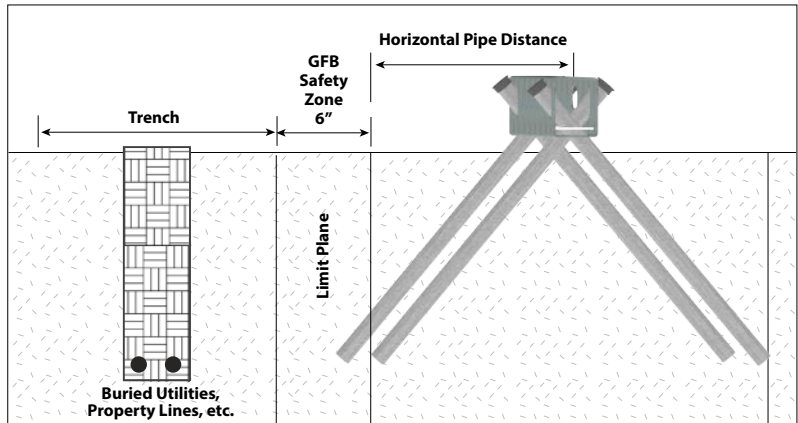


OVERVIEW

The Ground Frame Foundation System provides a solid, stable, and efficient foundation that captures and preserves the supporting strength and natural functions of the Earth’s soil and provides a connection to the structure above.

IMPORTANT NOTE:

- Ensure all permits have been obtained.
- Check for buried utilities, mark on site as per local building codes.
- Have all required tools and equipment outlined on page 2.
- Wear proper personal protective equipment (PPE).

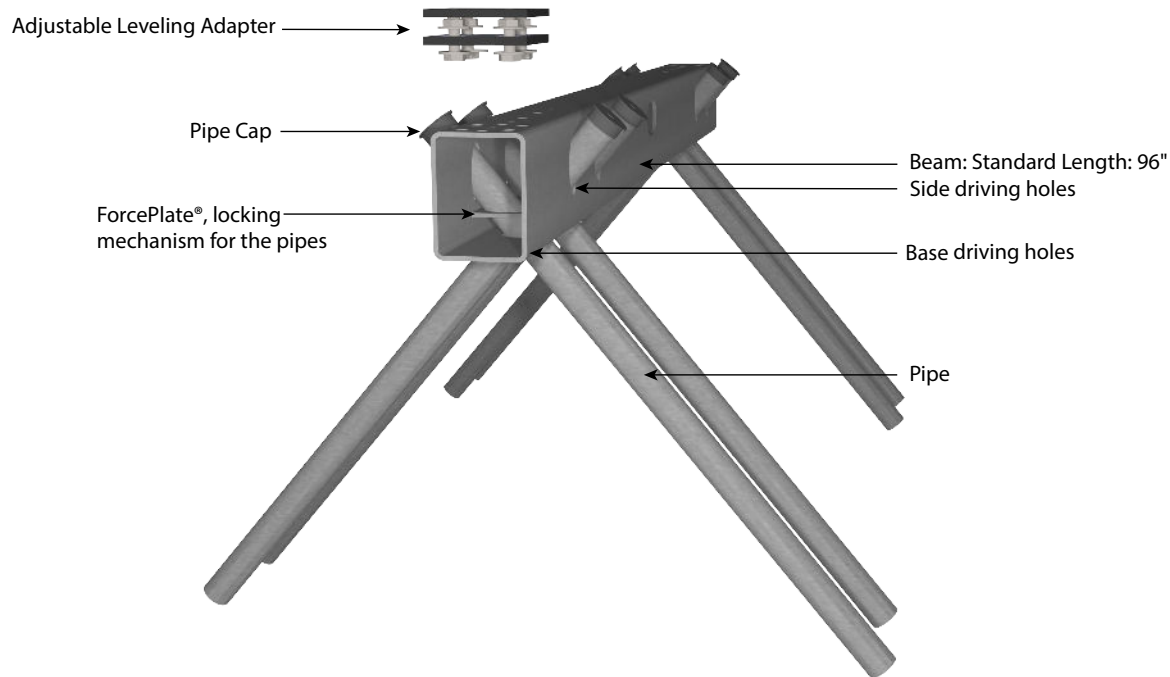


Horizontal Pipe Distance

Measured from horizontal center of anchor bolt to vertical pipe end limit

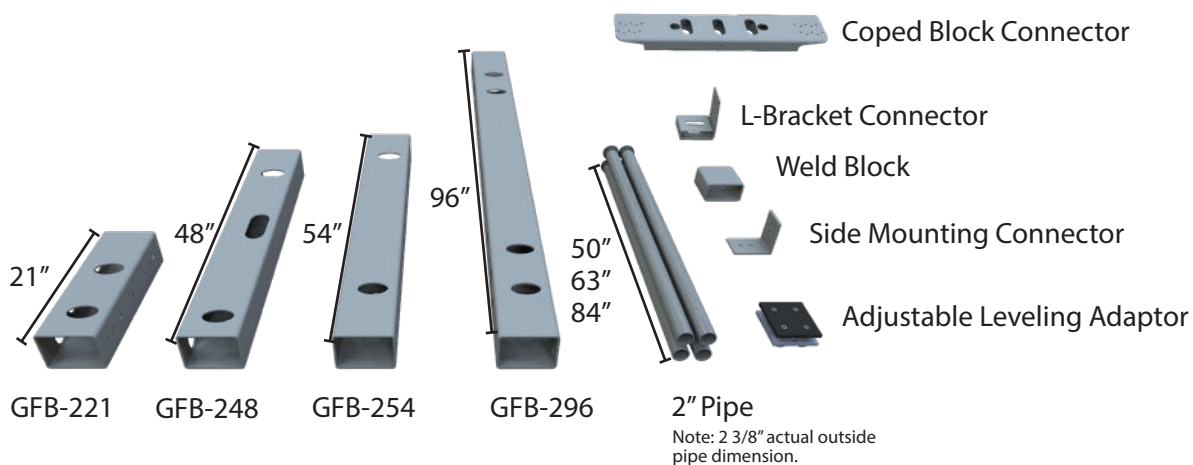
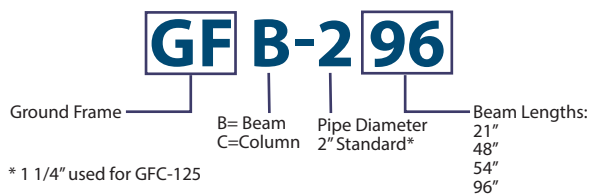
Pipe Length (Inches)	Horizontal Pipe Distance (inches)
	Pipe at 90 degrees Perpendicular to limit plane
50	29
63	38
84	51

GROUND FRAME CONTAINER OVERVIEW



GROUND FRAME SMART PART NUMBERS

Simplify field inventory checks using our smart part numbers.



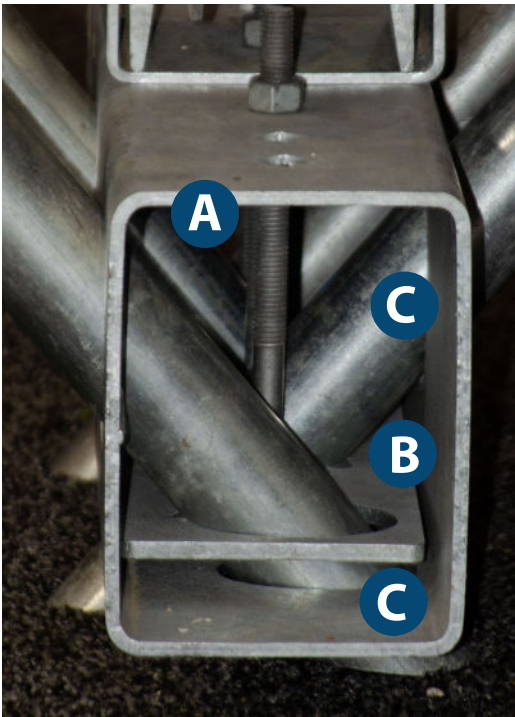


A shovel with a wooden handle and a metal head, positioned vertically. The handle is light-colored wood, and the head is dark metal with a flat, rectangular blade.

[illegible]

Note: Download template at groundframes.com

BEFORE YOU BEGIN
Check Pipes for Proper Slide



- A Anchor bolt
- B ForcePlate®
- C Driving holes - side and base

The anchor bolt and ForcePlate® are factory set for proper pipe slide, but may have altered during shipping and handling.

Pipes should easily slide through holes. If pipes do not easily slide, loosen locking bolt. **Do NOT force the pipes through the beam/ column holes.**

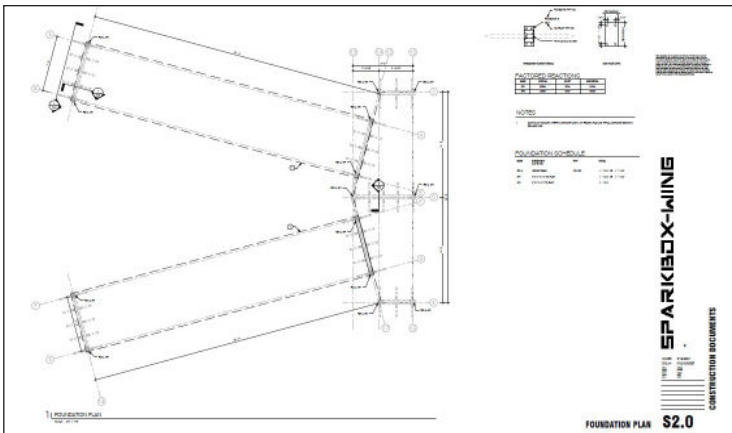
If the bolt is fully loosened and the pipes do not easily slide, contact Ground Frame customer service.

Do	Don't
Follow the instructions in this guide.	Proceed without reading this guide.
Use only specified hardware.	Substitute hardware
Review troubleshooting tips to safely remove pipes or adjust pipes.	Force pipes past obstructions

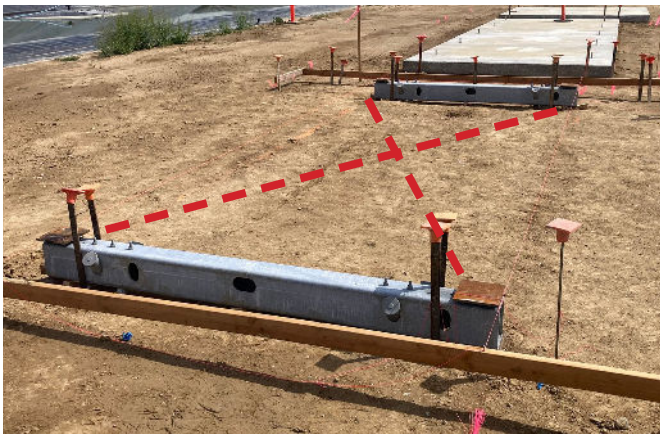
SITE PREPARATION



1. Using the dimensioned layout as a guide, establish the container border with a string line. Ensure alignment with string line.



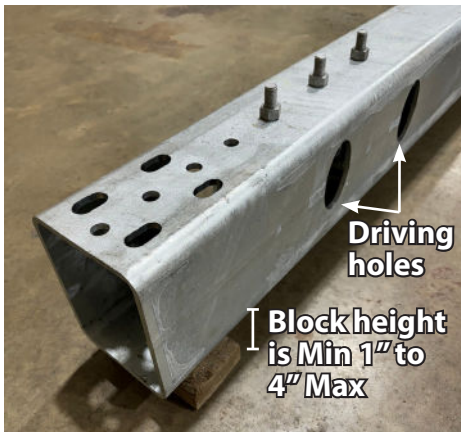
2. Clear and level site as per approved plans. Ensure proper site drainage and desired floor height.



3. Measure diagonally to ensure the border is squared.



4. Find the elevation of a "Master Corner" (the highest corner).



5. Block and shim the end of the steel beams to the same level as the master corner or within leveling plate adjustability range. Minimum block height is 1" and maximum height is 4" for frost heave. Ensure driving holes remain open and are not blocked by shims.



6. Verify all outer dimension according to the dimensioned layout. Ensure steel beams are plumb, level, and square to the overall layout.



Best practice is to cradle the beam with 4 stakes to ensure it stays on layout when driving pipes. Continue to page 7 for pipe installation.

PIPE INSTALLATION

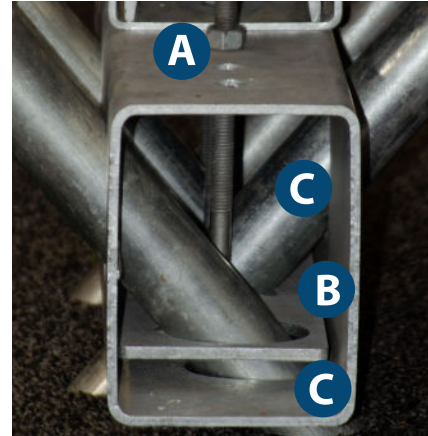
Ground Frame strongly recommends using a minimum two-person crew for pipe driving.

Ground Frame pipes are not refusal driving systems. All pipes must be driven to their full length to provide specified bearing, uplift and lateral capacities.



7. Upon leveling completion, gather and stage Ground Frame pipes.

- A** Anchor bolt
- B** ForcePlate®
- C** Driving holes - side and base



8. Ensure the pipe can easily slide through the side driving hole.

Important Note: If pipe does not easily slide, loosen the nut (on top of beam), lowering the ForcePlate®.



9. To ensure the pipe maintains the proper angle, hold it against the upper ellipse of the side driving hole.



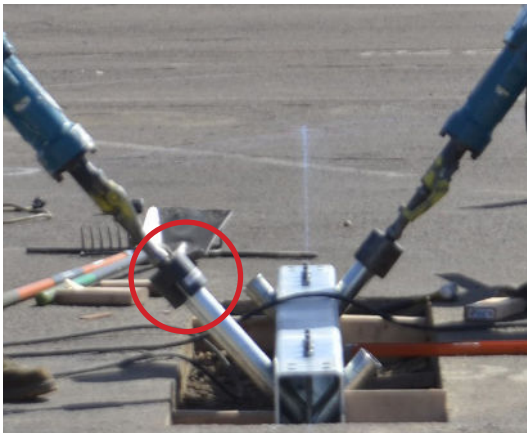
10. Using a sledgehammer, drive the pipe in a few inches, to maintain the proper angle.

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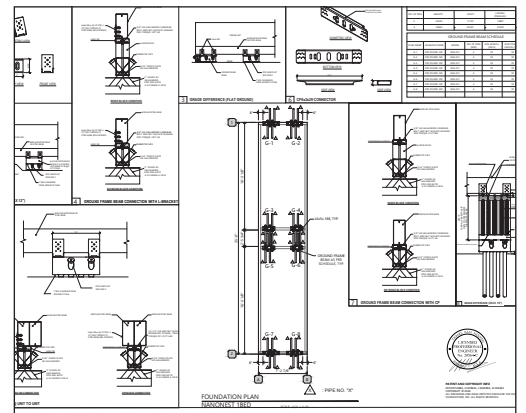
11. Prepare the driving log.

Note: Download template at groundframes.com

12. While holding the pipe up, drive the pipe through the side driving hole, using the jackhammer with the pipe driving bit.

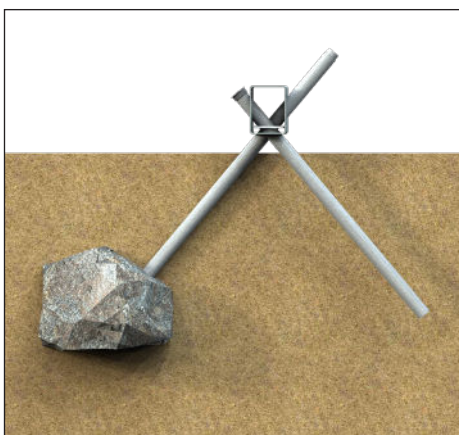


13. Stop driving prior to bit hitting the beam.

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14. After each pipe installation note time in driving log.

Tip: Take dimensioned layout, number each beam, and denote the driving time for each side of the beam (A, B, C, D).



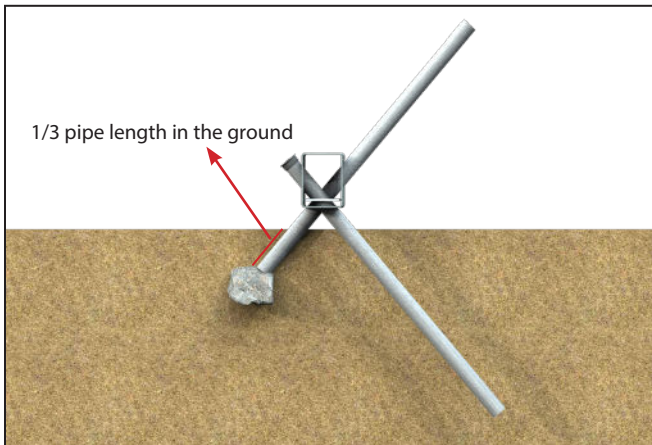
15. When pipe hits an obstruction, follow the troubleshooting steps found on page 10.



16. Install pipe caps on top of each pipe.

TROUBLESHOOTING

SHALLOW OBSTRUCTION: ~1/3 Pipe Length in the Ground



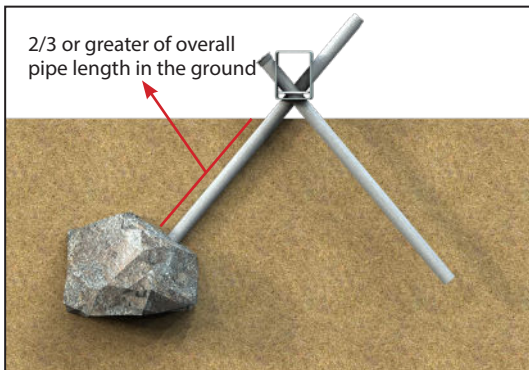
1. Remove pipe.

Tip: Simultaneously spin and pry pipe, using two pipe wrenches with two people.

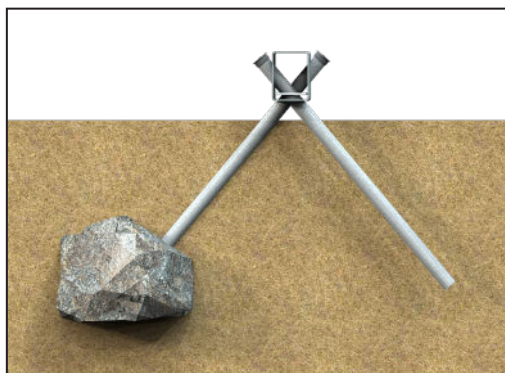
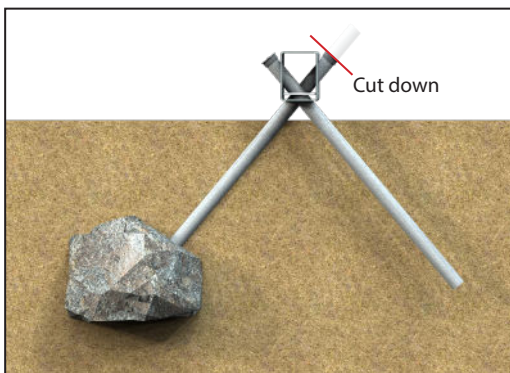
2. Remove obstruction and recompact soil in 6" lifts.

3. Redrive pipe.

DEEP OBSTRUCTION: 2/3 Pipe Length in the Ground



1. Using a sledgehammer, strike the pipe, 3-5 blows, to ensure pipe refusal.



2. Cut the remaining portion of the pipe, above the Ground Frame beam, and cap.

Important Note: Indicate the length of the pipe that was cut off in the driving log.