



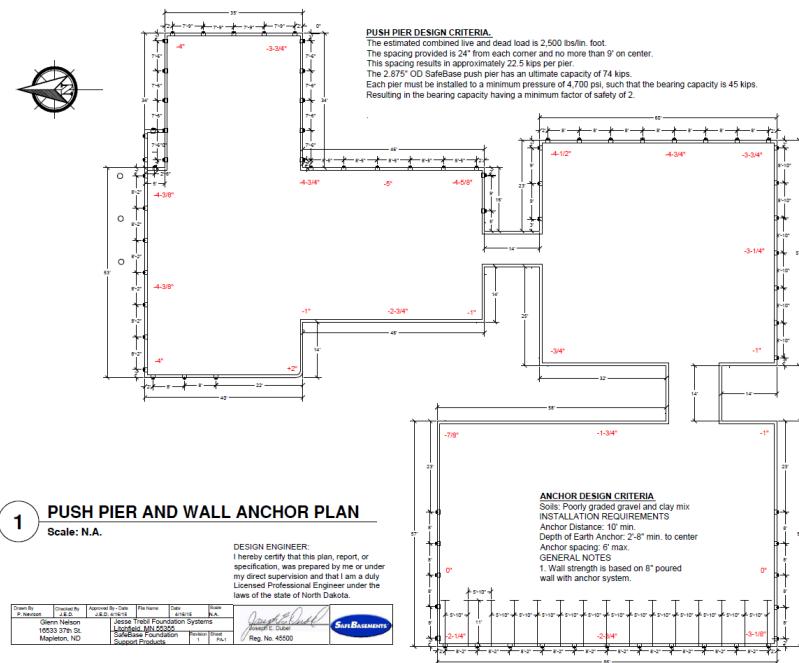
# CASE HISTORY

**SAFEBASE™ 2.875" STANDARD DUTY PUSH PIERS, WALL ANCHORS, AND SAFE BASEMENTS™ WATERPROOFING**

## VALLEY EXPRESS OFFICE RESTORATION



SafeBasements of Minnesota was contacted by Valley Express with concerns regarding cracks and movement within their new Mapleton, North Dakota facility. It was found that there was various amounts of settlement throughout each of the three buildings ranging up to 4-3/4" and the western wall foundation wall of building three (the western addition) was tipping away from the rest of the foundation.



A plan was made to underpin the settling foundation using a total of 80 SafeBase™ 2.875" Standard Duty Push Piers. Portions of each building would be lifted and then void filled with polyurethane foam. To help minimize any swelling of the clay soils, multiple sump pumps were added in each building and drain tile was added around the perimeter. The drain tile was then tied into a larger drainage system with a lift station.



Along the western wall of building three, a total of 15 SafeBase™ Wall Anchors were installed. Before the lift of that portion of the building, cables with turnbuckles were added along the north and south foundation walls. The anchors and turnbuckles were then used to pull the foundation wall back to plumb while the lift cylinders were raising the wall. With the wall back in place, the brackets were tightened and the cables removed.

Multiple storms occurred during installation requiring dewatering of the trench, as can be seen in the photos above.

The weight of the building along the perimeter was given in the original building plans to be nearly 2,500 lbs per linear foot. The piers were installed approximately 8' on center and driven to a depth of 52-55' with a force of 48,000 lbs, creating a factor of safety of 2.4. Installation was completed during the month of June, 2015. Void filling was then performed by Mudpumpers Mudjacking. With the foundation repair completed, Valley Express could be assured in the safety and stability of their new facility for years to come.



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