

Hydraulic Bracing and Sheeting: Engineered Protection from United Rentals

A revolutionary solution for highway and utility excavations

Oklahoma DOT Interstate 44

Sherwood Construction chooses United Rentals' hydraulic bracing for landmark performance, targets early completion incentives.

Project stats

Name: Perryman Ditch drainage project

Objective: Funnel storm water to the Arkansas River

Cost: \$42 million

Start date: January 2009

Original estimated completion: December 2010

Revised estimated completion: November 2009



Snapshot

The single most expensive project ever put up for bid by the Oklahoma Department of Transportation involves construction of an underground drainage structure and frontage road along I-44 in preparation for widening the highway. The initial phase involves a 1.25-mile-long concrete drainage structure 30 ft. underground that will extend along the north side of I-44 and must be in place before the interstate can be expanded to six lanes and ramps upgraded.

Solution

Following site evaluation and needs assessment, United Rentals Trench Safety specified an engineered Groundforce® Mega Brace hydraulic sheeting and bracing system that has delivered:

- **Safety:** High load resistance ground support waling beam set at depth of 50 ft., spans 25-ft. clear width.
- **Productivity and cost savings:** Eliminates the need to weld every 20 feet, for rapid install.
- **Environmental protection:** Trench width narrowed by two thirds compared to traditional sheeting; less disruptive to surroundings.

This project is now expected to finish approximately one year ahead of schedule.

See reverse side for product features and work-range schematic.



Consider it done.™

Rentals • Sales • Service • Supplies

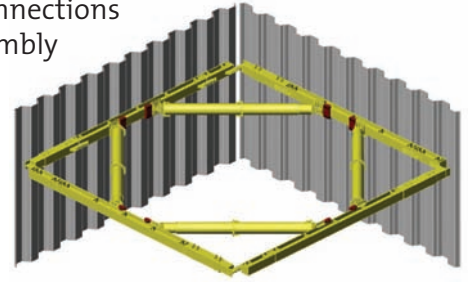
800-UR-RENTS
unitedrentals.com

Mega Brace

- Ideal for excavations/pits where greater open/clear spans are required
- Clear openings up to 50' – no crossing support
- Heavy duty modular hydraulic bracing ranging from 3.0m to 20.0m in length
- Positive support for excavations – reduces the need for multiple layers of static walers and the use of tie backs
- Typical applications: underground storage tanks, pump/lift stations, soil remediation, ground water problems
- Cost savings – eliminates cutting and welding of beams
- United Rentals Trench Safety offers for rent or sale hydraulic excavator mounted hammers to vibrate sheeting and beams into the ground

Super Mega Brace

- The strongest heavy duty bracing frame available, ranging from 12.0m to 22.0m without the need for cross strutting
- With a similar modular format to the Mega brace, this hydraulic bracing system can also be used as a waling beam when supported with suitable struts
- Reduced deflection due to an increased stiffness
- Simple pin connections for quick assembly on site
- Ideal for large underground tank installations



LEG REF.	OPERATING RANGE (m)		WEIGHT (kg)	LEG LENGTH BETWEEN SHEETED FACES (m)																				
	MIN.	MAX.		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
4	3.0	4.0	1161	[Diagram showing a single beam with a hydraulic unit at the 0m mark]																				
5	4.0	5.0	1578	[Diagram showing a single beam with a hydraulic unit at the 0m mark]																				
6	5.0	6.0	1995	[Diagram showing a single beam with a hydraulic unit at the 0m mark]																				
7	6.0	7.0	1928	[Diagram showing a single beam with a hydraulic unit at the 0m mark and a 3m extension from 5m to 8m]																				
8	7.0	8.0	2345	[Diagram showing a single beam with a hydraulic unit at the 0m mark and a 3m extension from 5m to 8m]																				
9	8.0	9.0	2288	[Diagram showing a single beam with a hydraulic unit at the 0m mark and a 5m extension from 5m to 10m]																				
10	9.0	10.0	2705	[Diagram showing a single beam with a hydraulic unit at the 0m mark and a 5m extension from 5m to 10m]																				
11	10.0	11.0	3122	[Diagram showing a single beam with a hydraulic unit at the 0m mark and a 5m extension from 5m to 10m]																				
12	11.0	12.0	3055	[Diagram showing a single beam with a hydraulic unit at the 0m mark, a 5m extension from 5m to 10m, and a 3m extension from 13m to 16m]																				
13	12.0	13.0	3472	[Diagram showing a single beam with a hydraulic unit at the 0m mark, a 5m extension from 5m to 10m, and a 3m extension from 13m to 16m]																				
14	13.0	14.0	3410	[Diagram showing a single beam with a hydraulic unit at the 0m mark, a 7m extension from 5m to 12m, and a 3m extension from 13m to 16m]																				
15	14.0	15.0	3827	[Diagram showing a single beam with a hydraulic unit at the 0m mark, a 7m extension from 5m to 12m, and a 3m extension from 13m to 16m]																				
16	15.0	16.0	3770	[Diagram showing a single beam with a hydraulic unit at the 0m mark, a 7m extension from 5m to 12m, and a 5m extension from 15m to 20m]																				
17	16.0	17.0	4177	[Diagram showing a single beam with a hydraulic unit at the 0m mark, a 10m extension from 5m to 15m, and a 3m extension from 13m to 16m]																				
18	17.0	18.0	4360	[Diagram showing a single beam with a hydraulic unit at the 0m mark, a 10m extension from 5m to 15m, and a 3m extension from 13m to 16m]																				
19	18.0	19.0	4303	[Diagram showing a single beam with a hydraulic unit at the 0m mark, a 10m extension from 5m to 15m, and a 5m extension from 15m to 20m]																				
20	19.0	20.0	4720	[Diagram showing a single beam with a hydraulic unit at the 0m mark, a 10m extension from 5m to 15m, and a 5m extension from 15m to 20m]																				