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**Joe Tantarelli**

- Safety consultant with SafeStart since 2012
- Nearly 5 decades experience in heavy equipment construction and training
- Progressed from laborer to operator to manager to training specialist.
- Conference speaker



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**Statistics**

November 17, 2016

**Ohio worker's death highlights grim 2016 national stat: trench collapse fatalities have more than doubled**  
OSHA cites 23-year-old man's employer for willful, serious safety violations

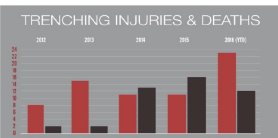
**WASHINGTON TOWNSHIP, Ohio** - OSHA cited an Ohio company after a **33-year-old employee was crushed to death in June 2016 as he was digging soil out of the 32-foot trench** in Washington Township, when the trench walls around him collapsed - burying him in thousands of pounds of dirt. Rescue workers recovered his body a few hours later.

He is one of 23 workers killed, and 12 others who reported injuries in trench collapses in 2016. Trench collapses are rarely survivable. One cubic yard of soil can weigh up to 3,000 lbs. - the weight of a small automobile - giving a worker in a trench little chance of survival when walls of soil collapse.

"Trench deaths have more than doubled nationwide since last year - an alarming and unacceptable trend that must be halted," said Dr. David Michaels, assistant secretary of labor for the Occupational Safety and Health Administration. "There is no excuse. These fatalities are completely preventable by complying with OSHA standards that every construction contractor should know."

An investigation by the U.S. Department of Labor's Occupational Safety and Health Administration found his employer, KRW Plumbing LLC, did not provide trench cave-in protection for its employees. OSHA cited the company for two willful and two serious safety violations on Nov. 9, 2016, after the agency completed its investigation into the June 15, 2016, death and a subsequent investigation opened in October 2016.

The employee was part of a crew installing a sewer line at a residential home.



**Do you think this was his first encounter with a trench collapse?**

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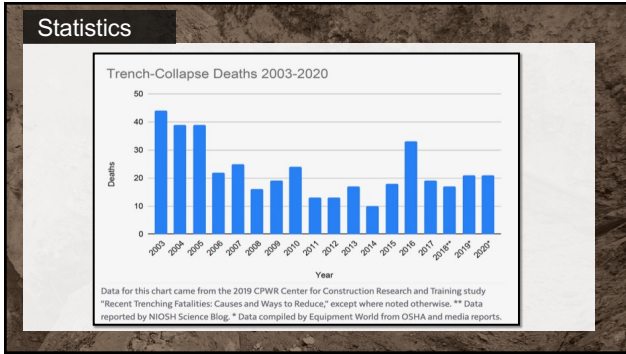
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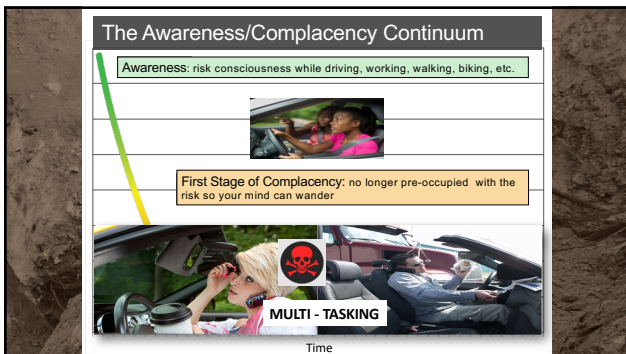
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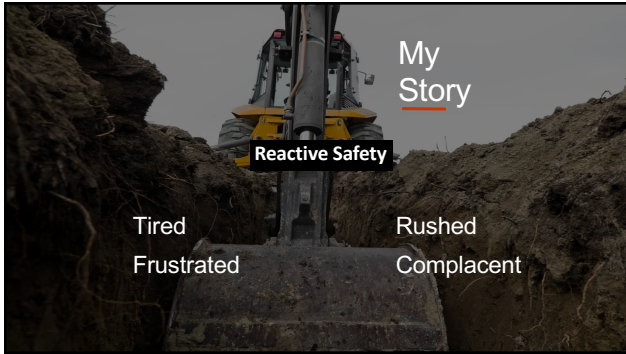
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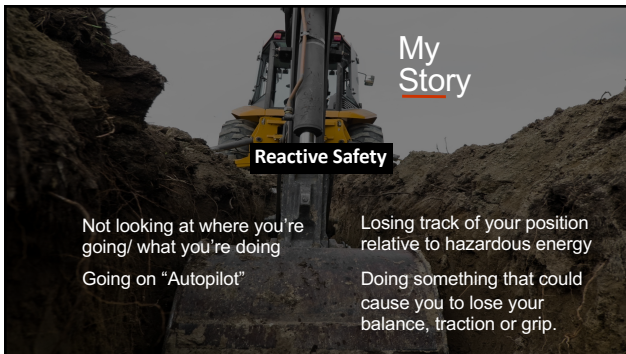
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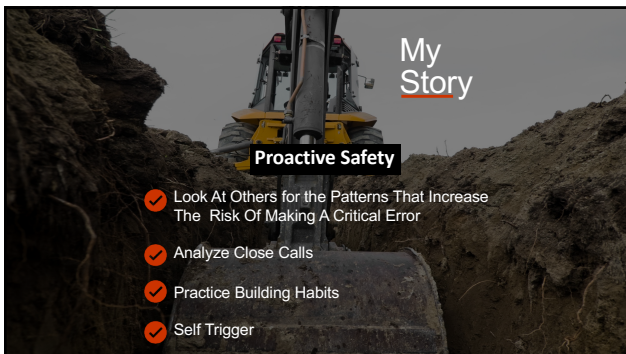
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**Safety Orientation?**

1. Hurry up and get the pipe buried in the trench before it buries you.
2. The longer the trench is open, the more chance it's going to cave in.
3. If the trench caves in but doesn't kill you right away, just hang tight because there's going to be a second cave-in. And that second collapse is going to be more catastrophic than the first one—and You Will Die.



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**0 Let's Go Back In Time**  
Way back.

**OK. Not quite that far back!**



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**1983 June 6th**  
That's more like it.



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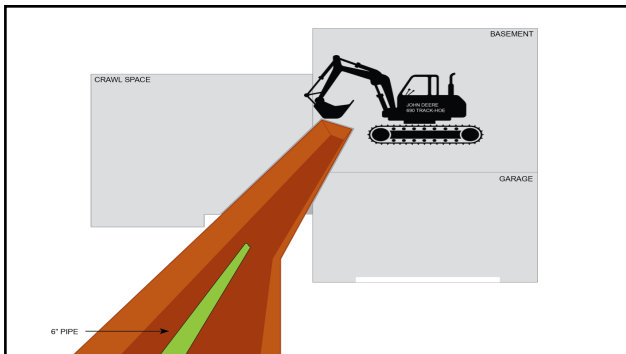
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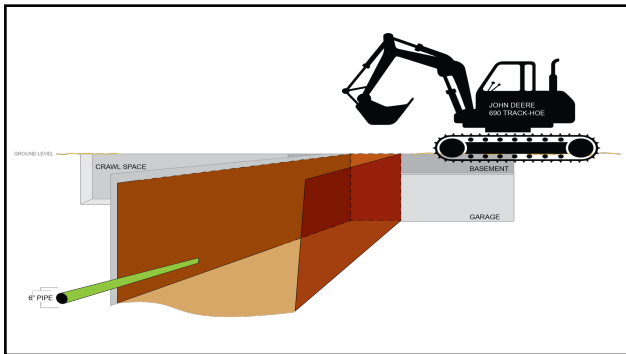
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...Until This Happened

Buried Alive,  
A Survivor's Story



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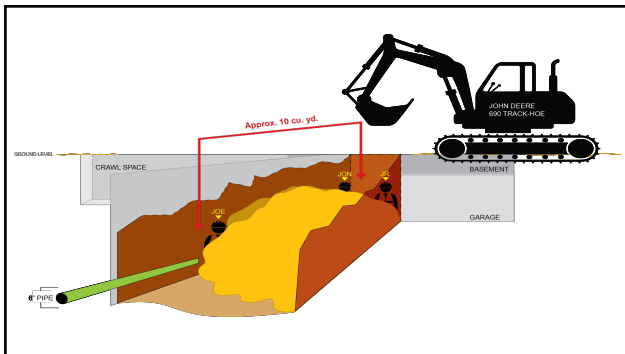
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- Physical  
    Could've been
- (Personal) Emotional  
    worse.
- (Inflicted) Emotional



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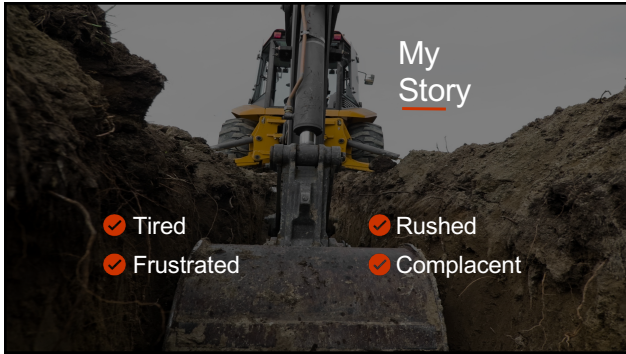
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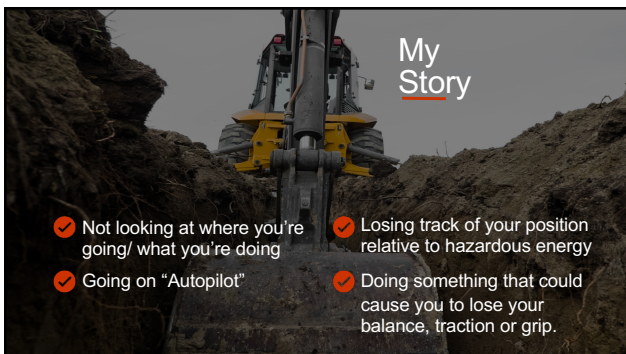
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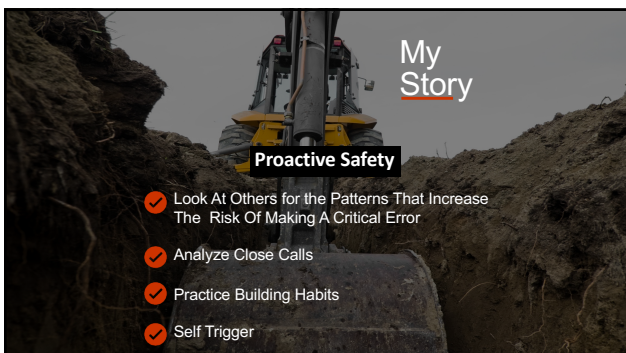
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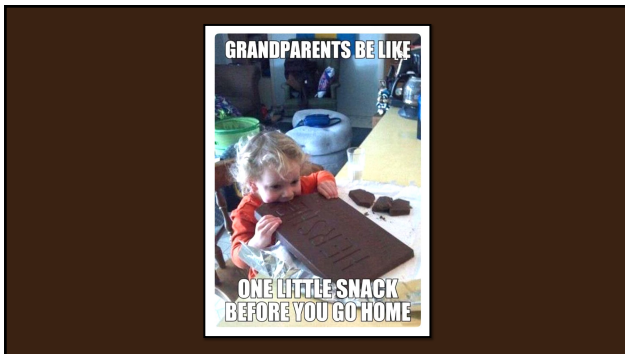
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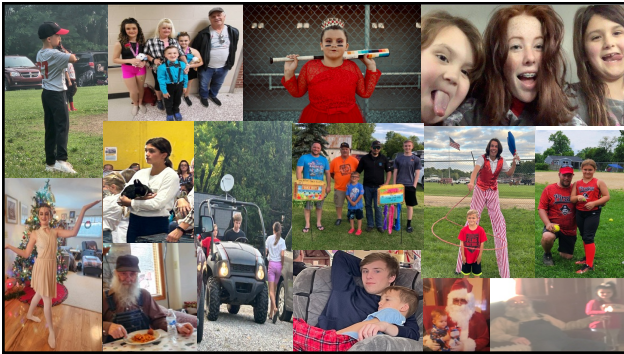
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**Human Factors Framework**

**Human factors** are the people elements of systems and conditions that influence performance and reliability.

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**Analyze My Incident**

**Internal Factors**

- Fatigue
- Frustrated with situation
- Rushing to finish job
- Overconfidence

**Thinking**

- Decision-making
- Attention— Just get it done

**Actions**

- NOT having conversations
- NOT flagging issues

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### Analyze My Incident

**Technical Systems**

- engineering
- process
- equipment
- safety management system

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**Outcome Reliability**

- safety
- production
- quality
- organizational performance

**People Systems**

- work team
- supervisory skills
- organizational culture

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### Thank You for Attending Today's Presentation!

Scan the QR code for a selection of resources on the **human factors framework** discussed in this session.

[safestart.com/cp1](http://safestart.com/cp1)

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 joe@safestart.com  
 (740)-725-4226

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