

Payments in Lieu of Taxes

December 20, 2018



Resolution 1389

FY 2019 Payments In Lieu of Taxes (PILOTs)

- FY 2019 payments = \$31,550,780
- Increase of \$1.6M or 5.4%
- Increase reflects Century II capital investments, Grid Modernization investments and higher margins

PILOTs Governance

	Established by	Approved by	Basis	Paid
Water & Wastewater	City Charter	KUB Board	Net Plant Value	February
Electric & Gas	State Law	KUB Board & City Council	Net Plant Value & Avg. Operating Margin	June

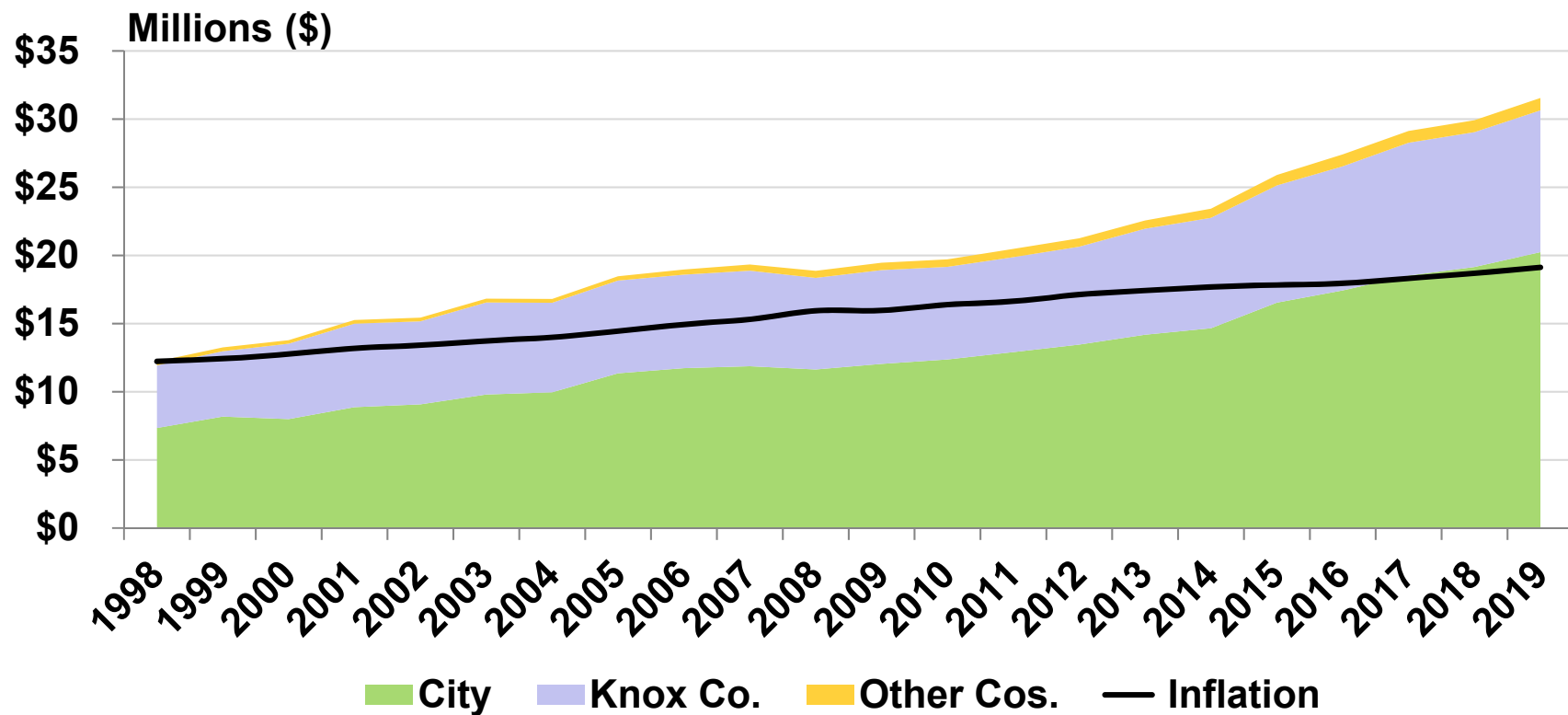
FY 2019 PILOTs by System

	FY 2019	FY 2018	Increase
Electric	\$16,459,902	\$15,542,951	\$916,951
Gas	7,150,052	6,859,312	290,740
Water	3,511,656	3,304,740	206,916
Wastewater	4,429,170	4,218,257	210,913
Total	\$31,550,780	\$29,925,260	\$1,625,520

Payments by Jurisdiction

	FY 2019	FY 2018	\$ Change	% Change
City of Knoxville	\$20,238,463	\$19,144,877	\$1,093,586	5.7%
Knox County	10,401,877	9,888,055	513,822	5.2%
Union County	384,659	350,536	34,123	9.7%
Sevier County	323,267	343,139	(19,872)	(5.8%)
Grainger County	137,481	136,007	1,474	1.1%
Jefferson County	39,024	37,929	1,095	2.9%
Blount County	13,627	12,528	1,099	8.8%
Anderson County	10,779	10,593	186	1.6%
Loudon County	1,603	1,596	7	0.4%
Total	\$31,550,780	\$29,925,260	\$1,625,520	5.4%

KUB PILOTs Have Grown Faster Than Inflation



Resolution 1389 (Electric and Gas PILOTs)

- Requests City Council set electric and natural gas tax equivalent payments for FY 2019 and provides for their distribution
- Total payments = \$23,609,954

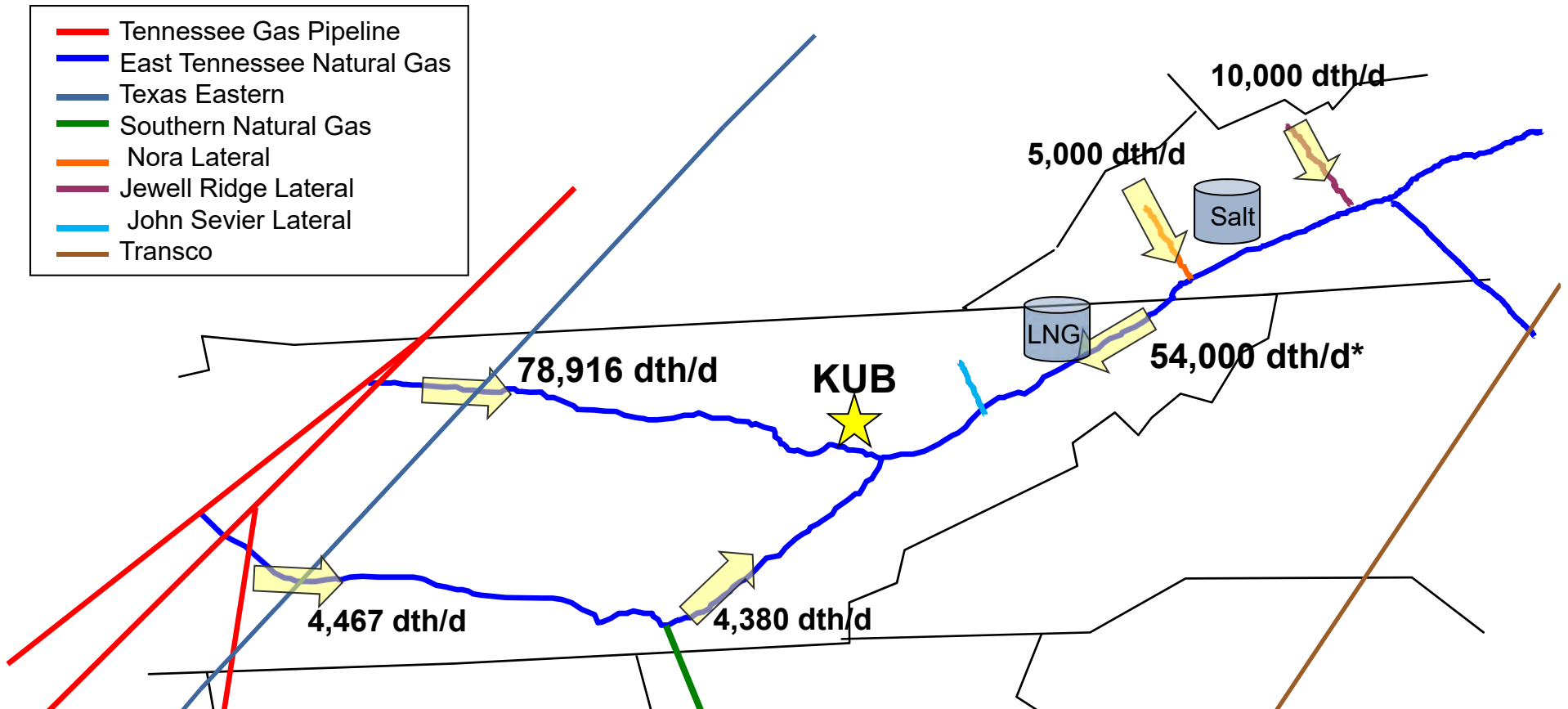
KUB

Gas Supply Update

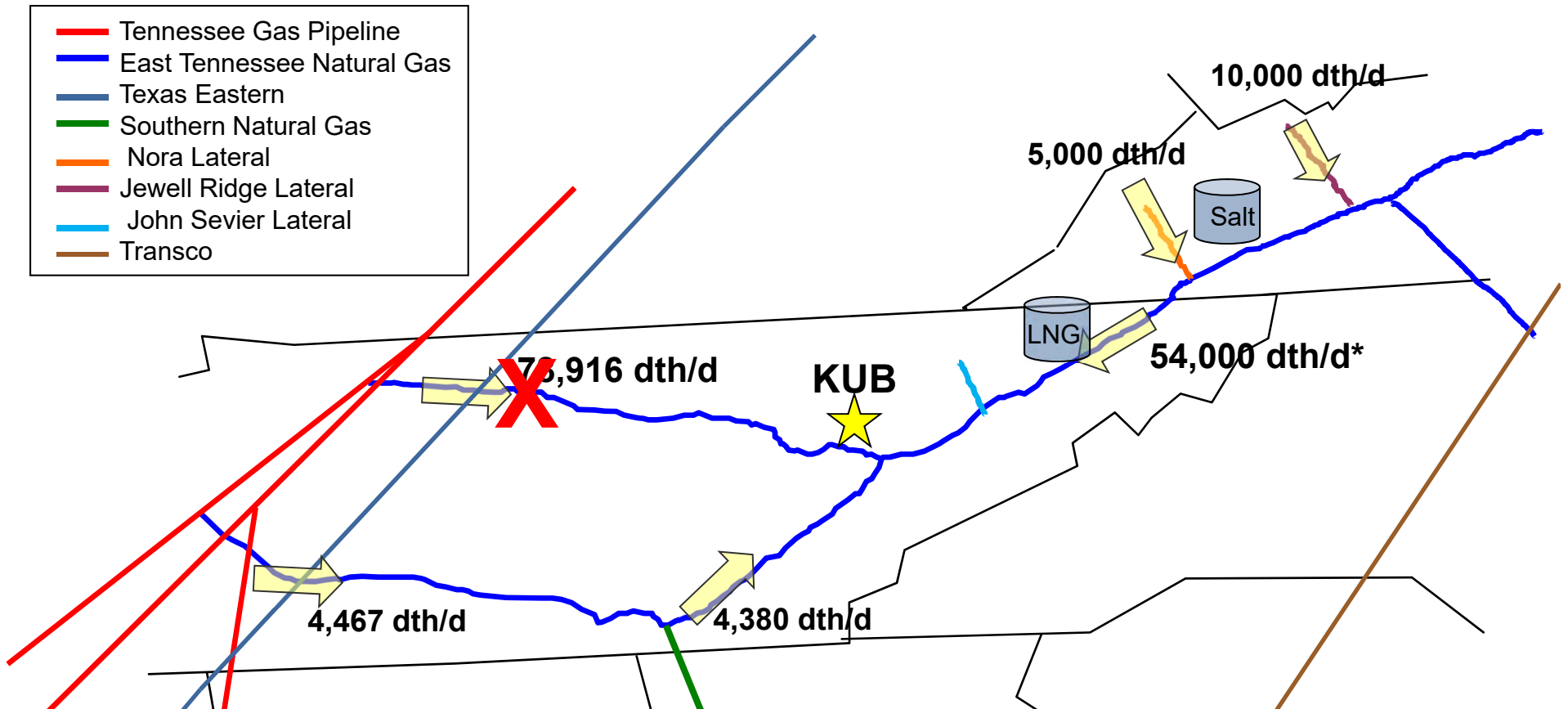
December 20, 2018



KUB's Transportation Portfolio

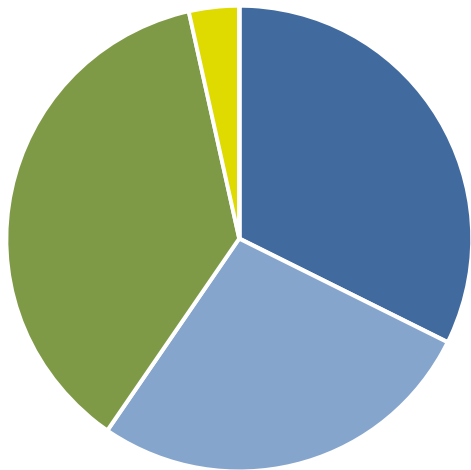


KUB's Transportation Portfolio

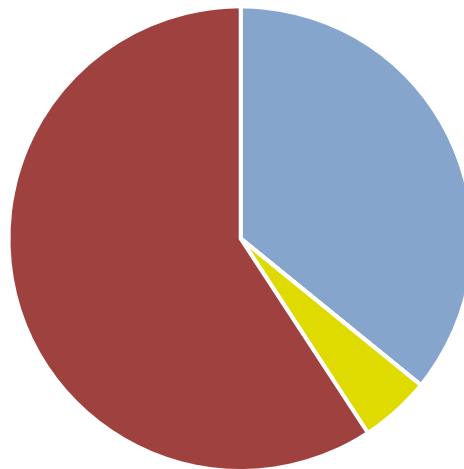


Gas Supply Sources Changing Daily

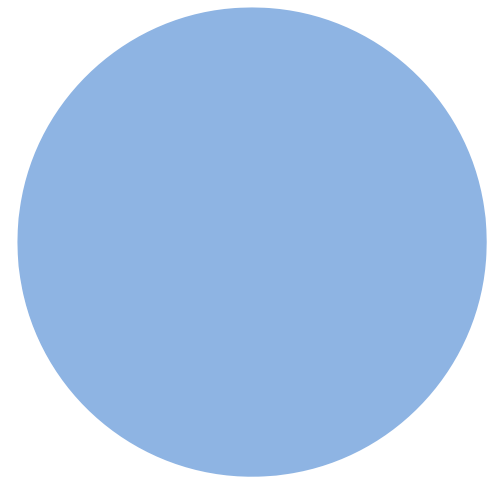
Typical December Day



December 18, 2018



December 19, 2018

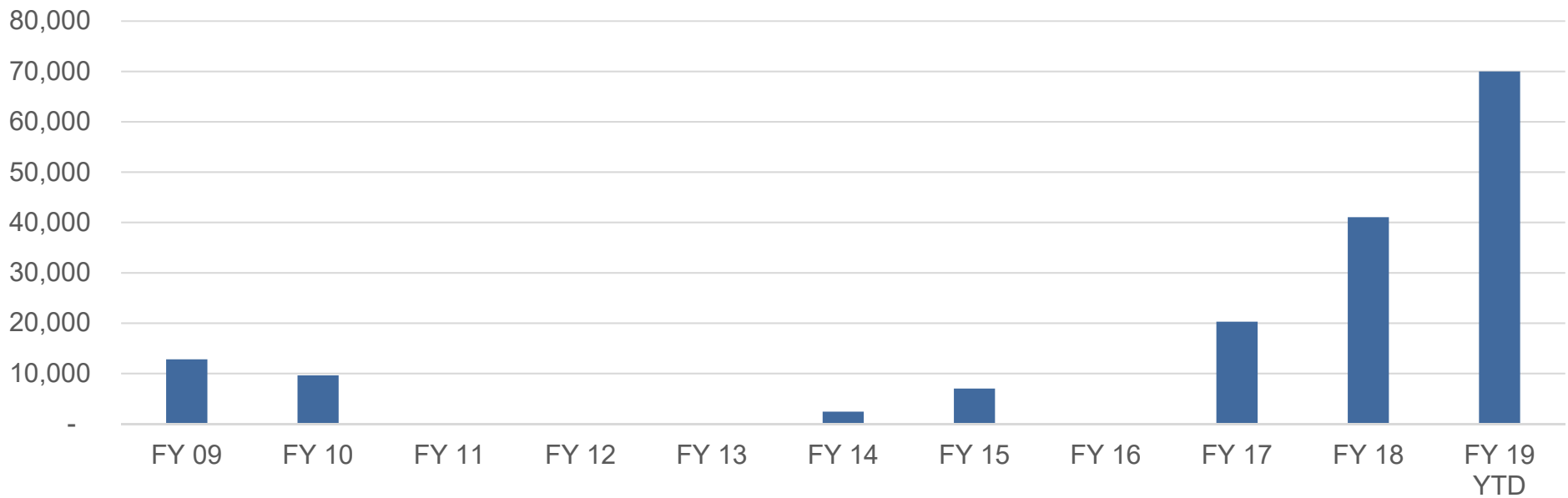


■ Purchases (TGP, Tetco) ■ Purchases (ETNG) ■ Storage - TGP ■ Storage - Saltville ■ Storage - LNG

LNG is Reserved for Peak Day Use

KUB Stores 412,000 dth

Liquefied Natural Gas (LNG) Storage Withdrawals



Actions Taken to Date

- Managing gas supply
- Curtailment of interruptible customers
- Requested voluntary reductions
- Coordination with pipeline & others
- Incident Command Structure/contingency planning

KUB

Energy and Water Education Grant

December 20, 2018



New Grant Award Strengthens Knoxville Partnership

- Southeast Sustainable Communities Fund to provide \$300,000 for education and outreach
- Builds on Smarter Cities Partnership
 - Initiated in 2013
 - Engaged more than 20 community organizations
 - Developed strategies for energy efficiency and education

Grant Partners

- City of Knoxville
- Knoxville Knox County Community Action Committee (CAC)
- Alliance to Save Energy
- Socially Equal Energy Efficiency Development (SEED)
- KUB
- Tennessee Valley Authority (TVA)
- Knoxville-Knox County Emergency Management Agency
- University of Tennessee Extension
- Shelton Group

Energy Education Complements Weatherization Assistance Programs

- Approximately 200 workshops with nearly 2,000 participants over past three years
- Door-to-door outreach
- Informational meetings for clients waiting on services at CAC



Funding Enhances Education and Outreach

- Topics addressed:
 - Energy and water efficiency
 - Healthy homes
 - Emergency preparedness
- Offerings for participants:
 - Workshops with take-home kits
 - Low-cost home improvements
 - “Green House Calls”



Program Complements Current Outreach Efforts

- Customer newsletters
- Go Green East Tennessee ads
- Social media posts
- Website content
- Nearly 50 outreach events in past year



THE FACTS ON LEAKS

- 10** percent of homes have leaks that waste 90 gallons or more per day
- A leaky faucet dripping at the rate of one drip per second can waste more than **3,000 gallons** per year
- Did you know?** Minor water leaks account for more than **1** trillion gallons of wasted water each year and is equal to annual household water use in **11** states
- A shower leaking at **10 Drips** per minute wastes more than **500** gallons per year
- REPAIR** leaks by checking faucet washers and gaskets for wear and replacing them if necessary

KUB

Employee Recognition Program

Awards Presentation

December 20, 2018



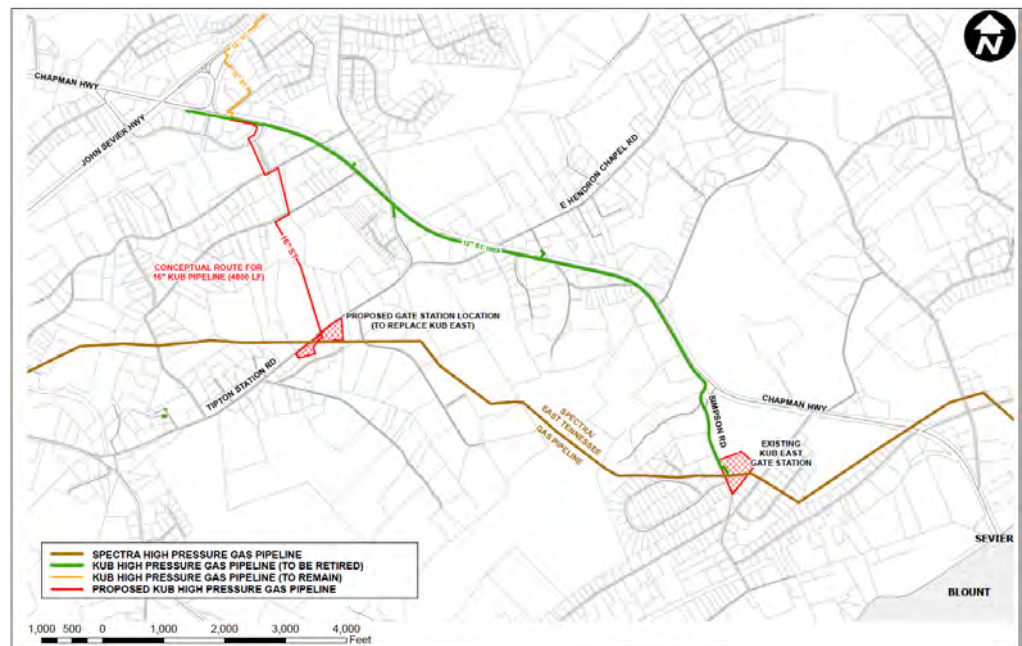
South Knox Main and Gate Station Project

Brooke Sinclair, System Maintenance



Value Engineering = Cost Savings

- Gas main work initiated by Tennessee Department of Transportation (TDOT) Project on Chapman Highway
- Joey recognized an opportunity to move from Chapman Highway, decrease footage of higher pressure pipe, and replace an aging gate station
- Resulted in \$2M in savings



Effective Bid Process = Additional Cost Savings



- Joey and Dallas improved specifications and conducted thorough pre-bid site visits
- Dallas managed the construction project to strictly adhere to the contract and specification documents
- Resulted in additional savings for the main installation

Ahead of TDOT Schedule



Main Installation Completed
August 2018

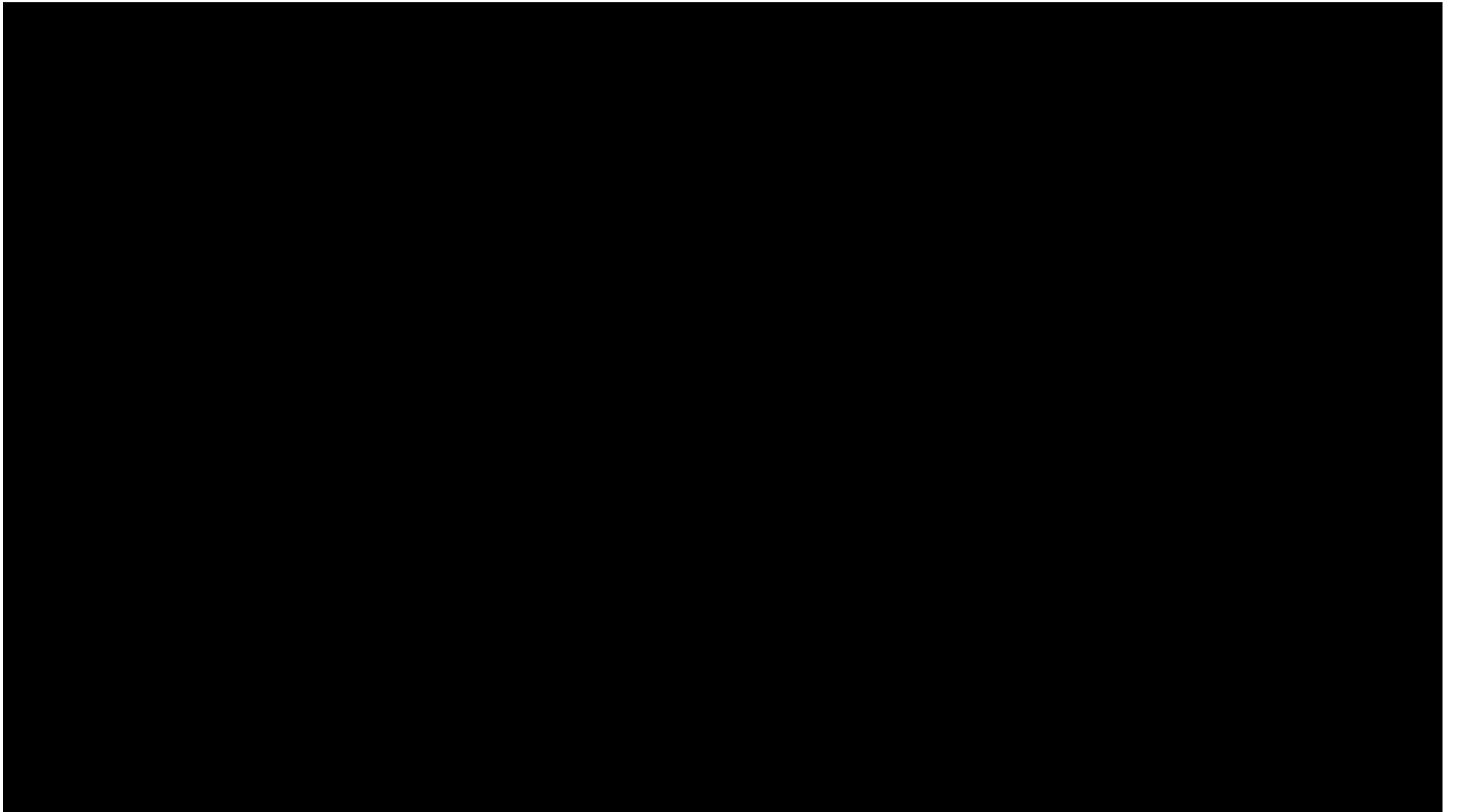


Gate Station Commissioning
December 2018

South Knox Main and Gate Station Project

- Dallas Coplin, Gas Systems Engineering
- Brooke Sinclair, Manager, System Maintenance
- Joey Henry, Water Systems Engineering





Wastewater Solids Laboratory Development

Joshua Johnson, Plant Operations



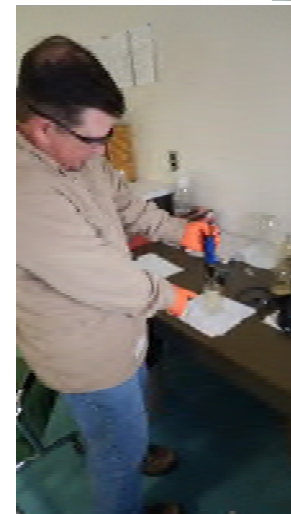
Wastewater Solids Laboratory Development

- Require employees to obtain operator certification from the Tennessee Department of Environment and Conservation (TDEC)
- Part of the certification test is laboratory analysis
- Real-time process evaluation
 - Provides process control analyses for decisions
- All compliance related analysis completed by KUB Water Quality Laboratory



Wastewater Solids Laboratory Development

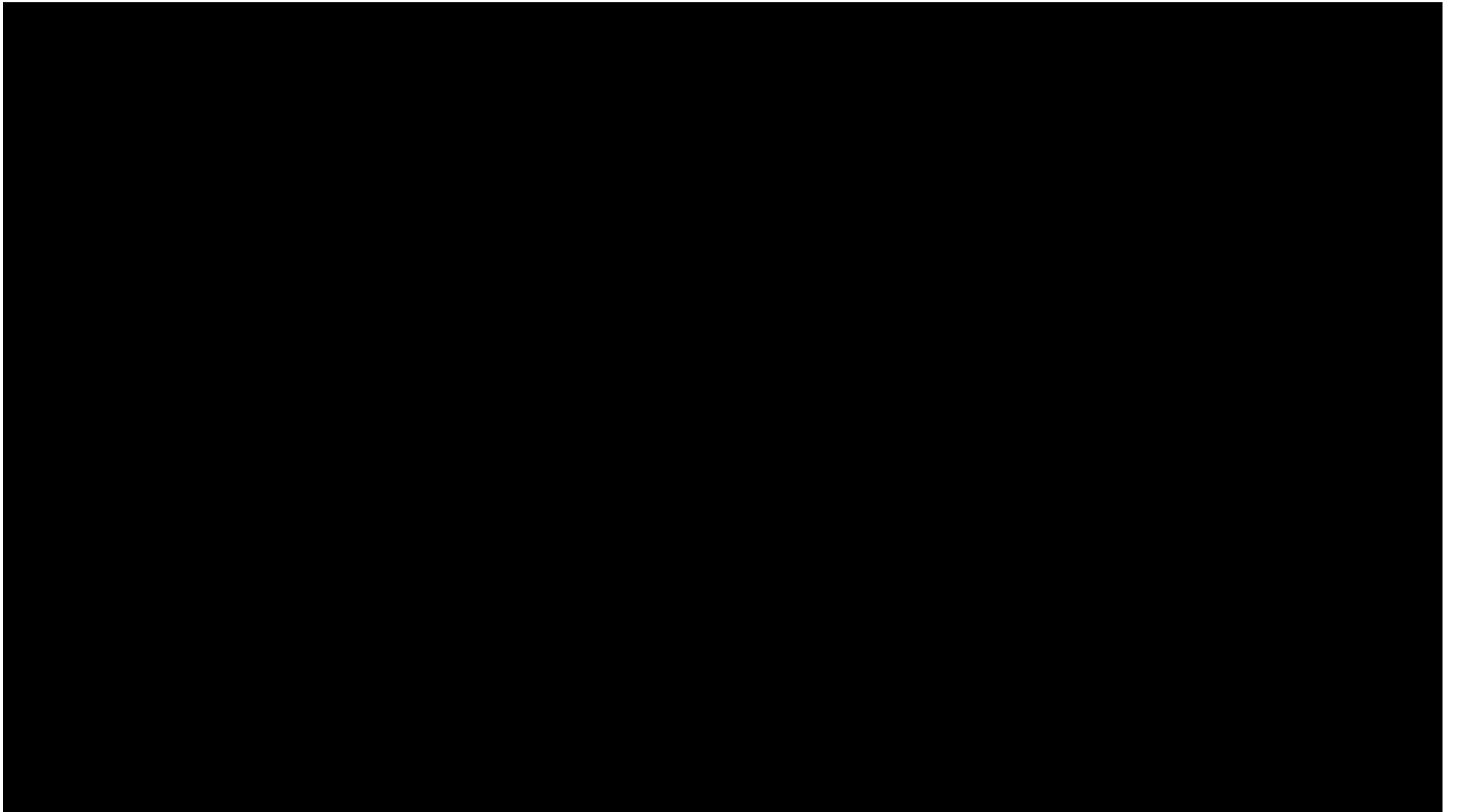
- Recognized opportunity to improve process and support certification process
 - Designed the lab area
 - Utilized existing equipment and procured items
 - Developed written procedures
 - Trained operators
 - Laboratory skills have improved
 - Recent test takers confirmed the hands on experience helped
- Focused on our Blueprint
 - Investing in a skilled, diverse work force
 - Meeting or exceeding regulatory standards



Wastewater Solids Laboratory Development

- Tom Pucci,
Plant
Operations
- Josh Johnson,
Manager,
Plant
Operations





Good Samaritan

Darrin Rhines, Meters Department Lead



Good Samaritan Puts Out Fire

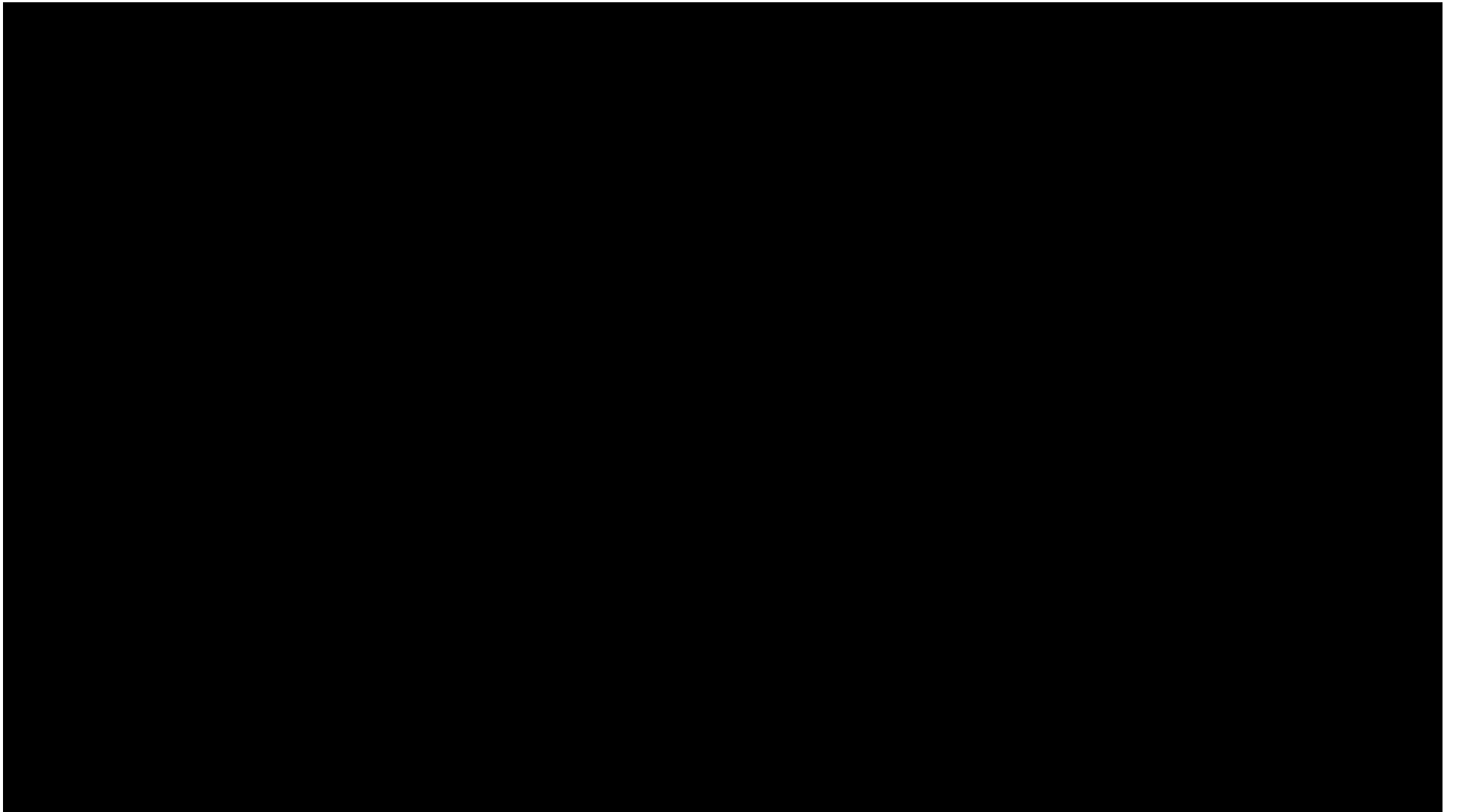
- Enroute to a job in Powell
- Spotted a postal vehicle on fire
- Adam acted quickly and helped extinguish the flames



Good Samaritan

- Adam Owen,
Meters
- Darrin Rhines,
Meters
Department Lead





Work Healthy Program

Deanna Unger, Human Resources



Organizational Impact



- Over 120 hours of industrial athletic training and ergonomic education conducted in FY18
- Recognition of key risks and investment in process modification

Ergonomic Innovation in Grid Modernization

Before



After



Program Outcomes



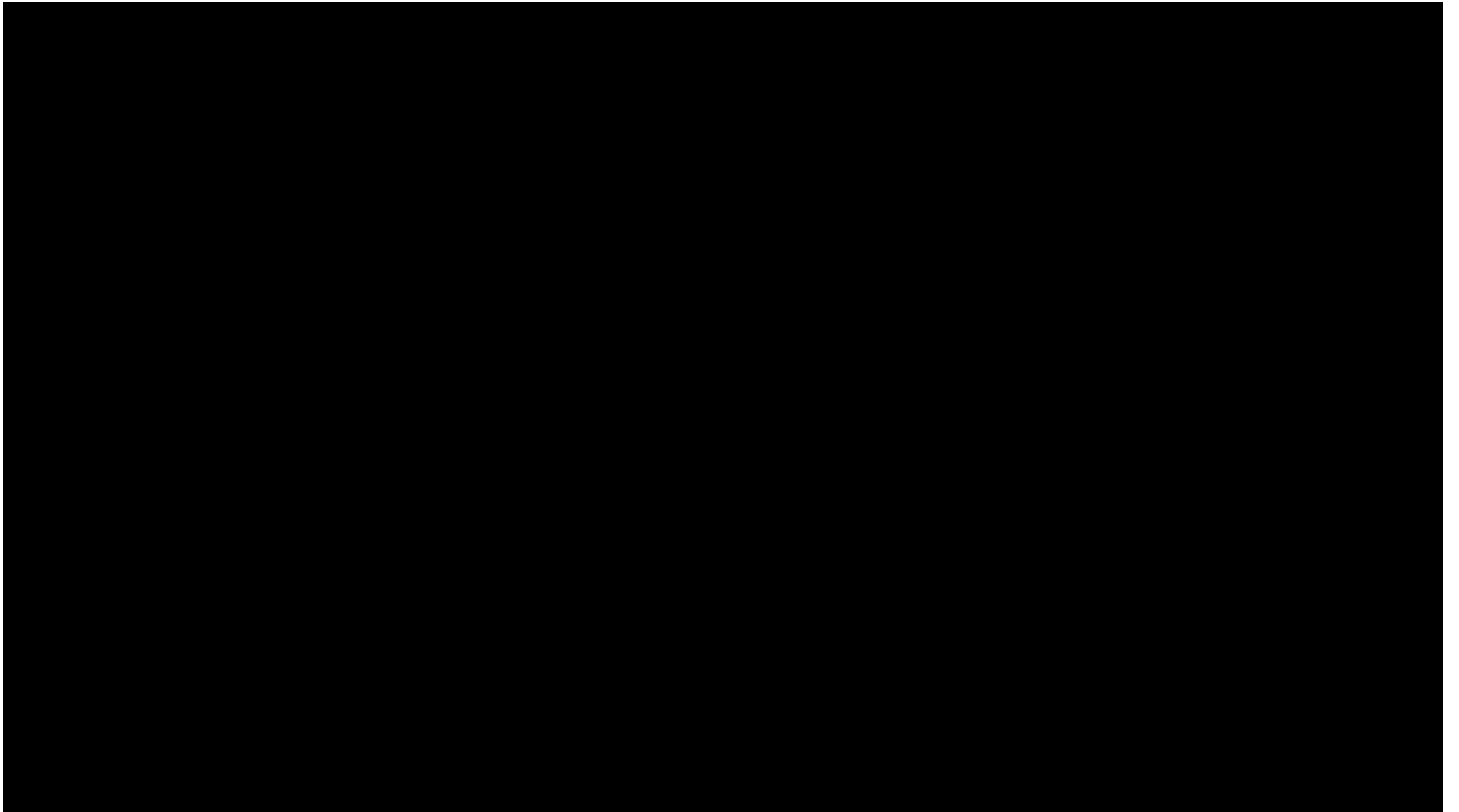
- FY17 strains and sprains
 - 19 total
 - 9 in Overhead Construction (OHC)
- FY 18 strains and sprains
 - 11 total
 - 3 in OHC
- Reduction in work-related surgeries in construction groups

Work Healthy Program

- Kevin Riehn, Safety, Security, & Technical Services
- Emily Smith, Human Resources*
- Mike Smith, Overhead Construction*
- Jeff Hall, Safety, Security, & Technical Services*



**Accepting award for team*



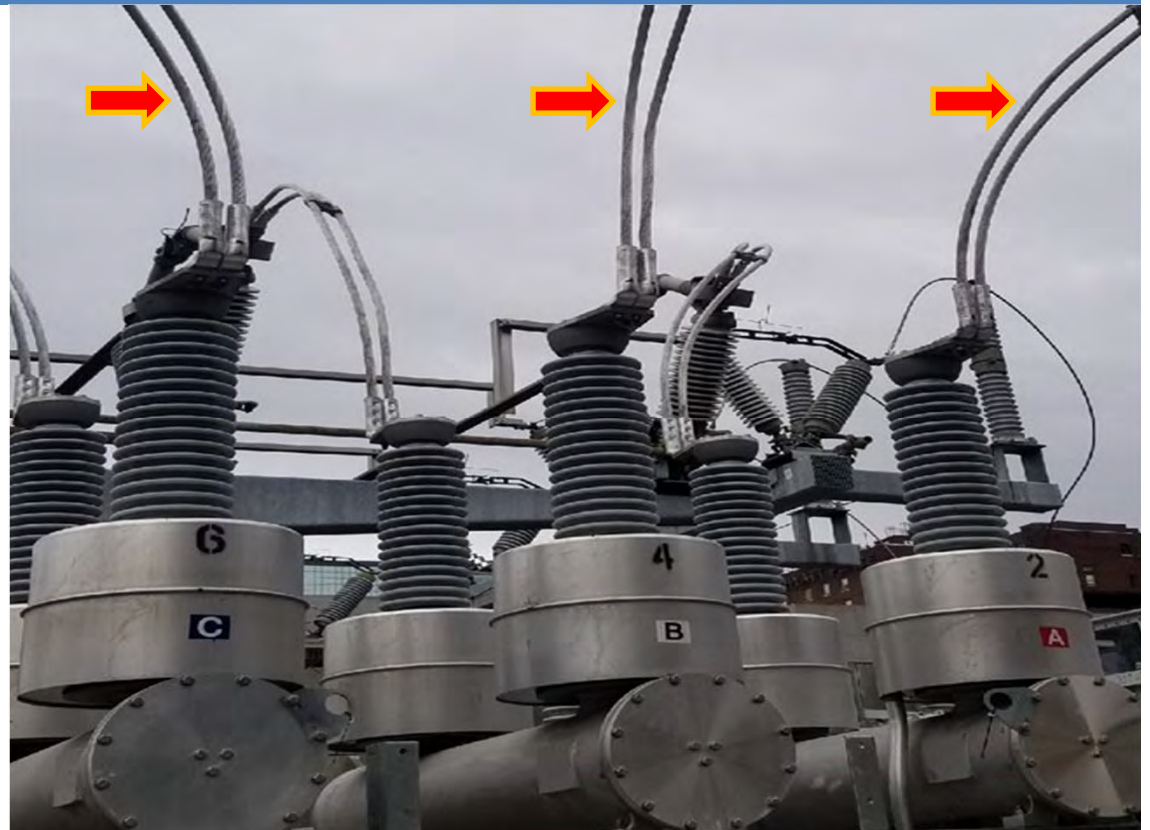
Overhead Construction Ergonomic Improvement

Steve Proffitt, Overhead Construction

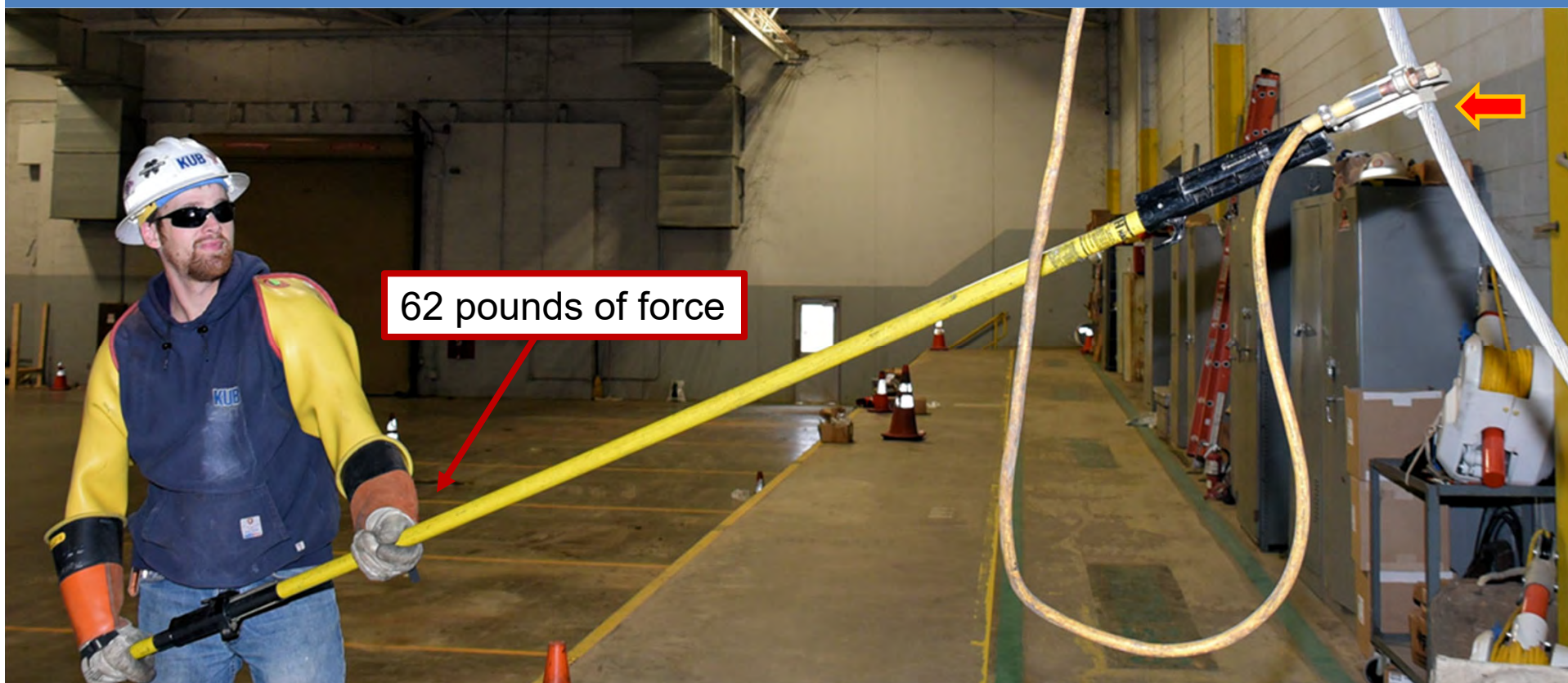


Ergonomic Improvement For Grounding Reduces Shoulder Injuries

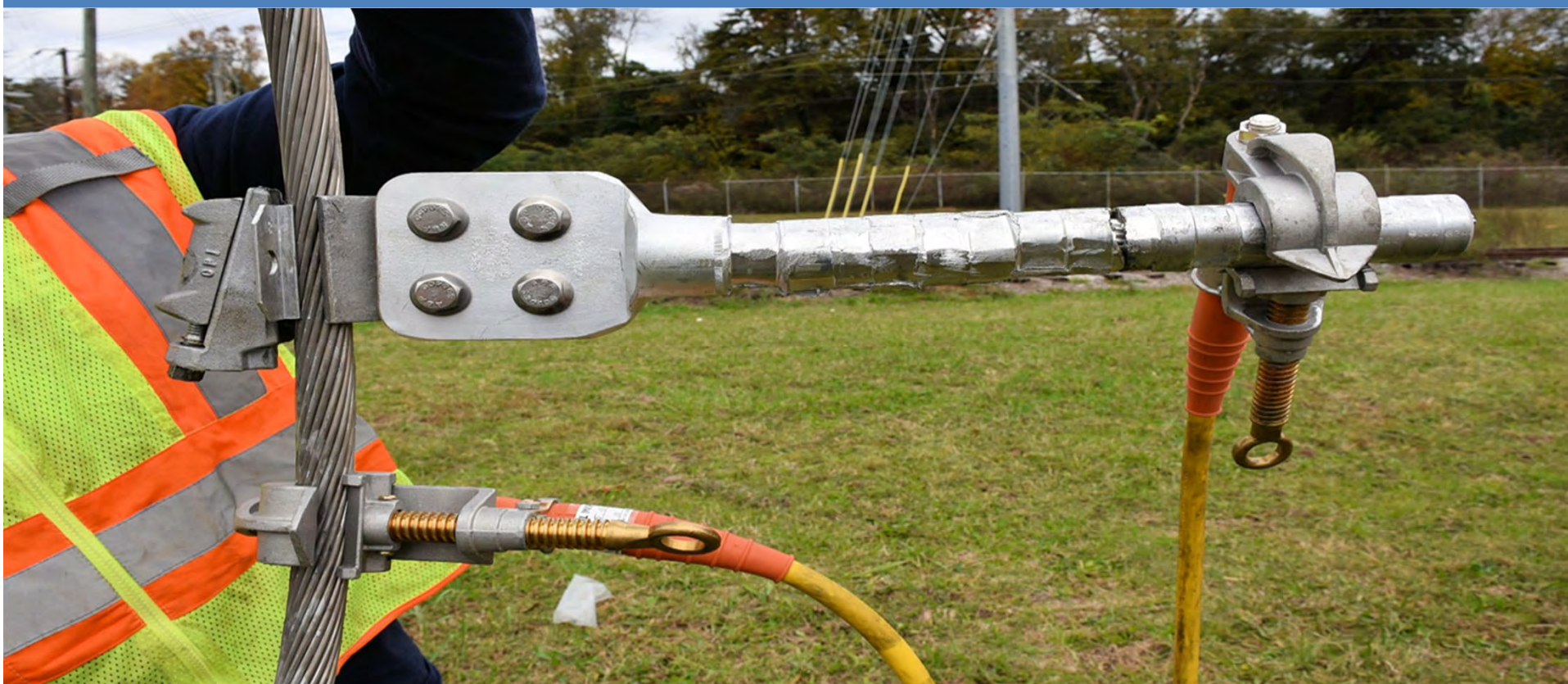
- Breaker must be de-energized, tested and grounded before work is performed
- Shoulder strain created when landing ground on vertical jumpers



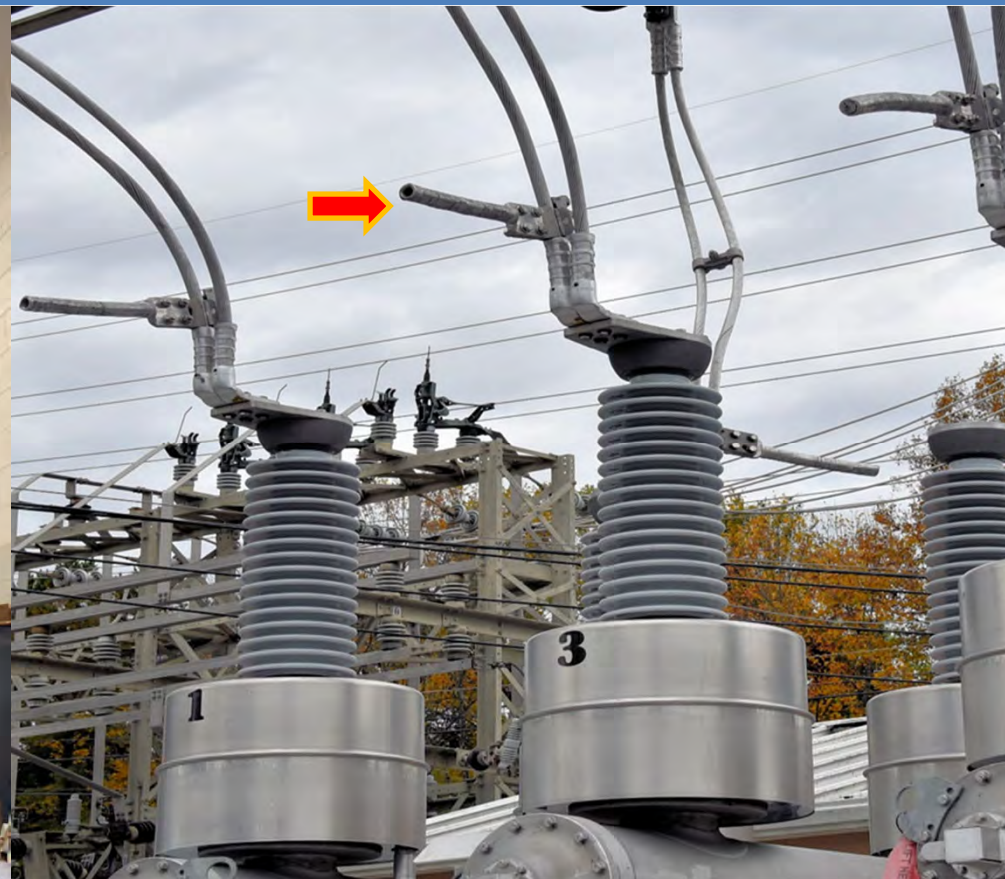
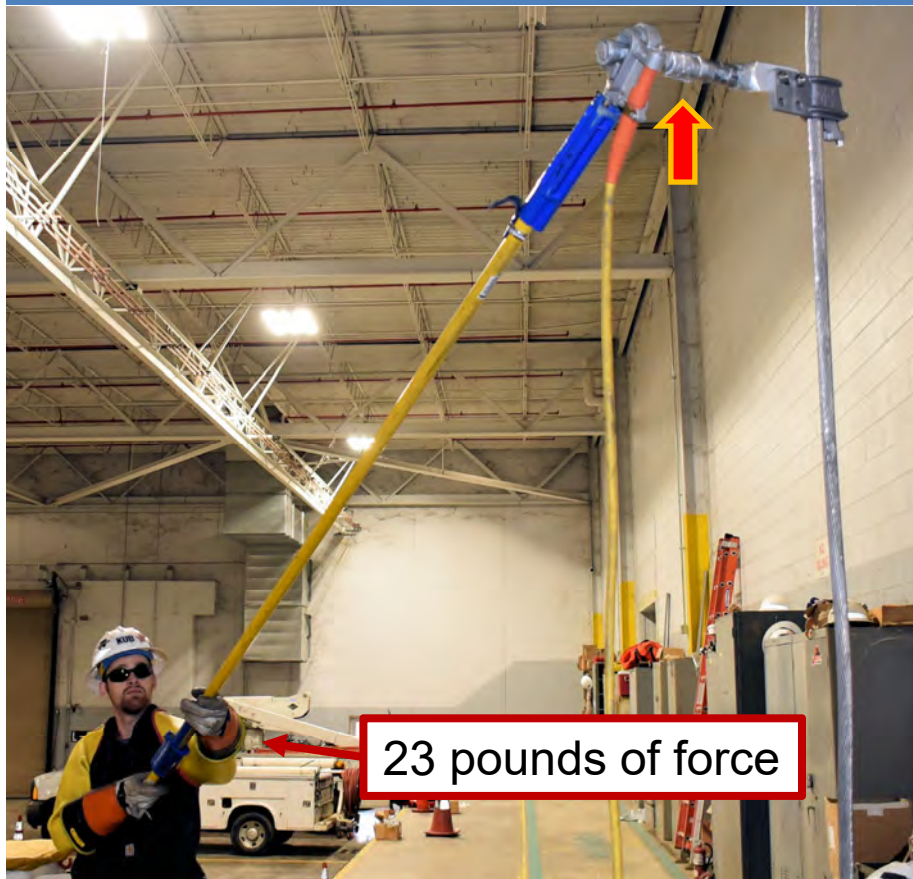
Shoulder Strain Caused By Holding, Pulling, and Twisting To Secure Clamp



Tony Strader Designed Horizontal Post Removing Weight From Task



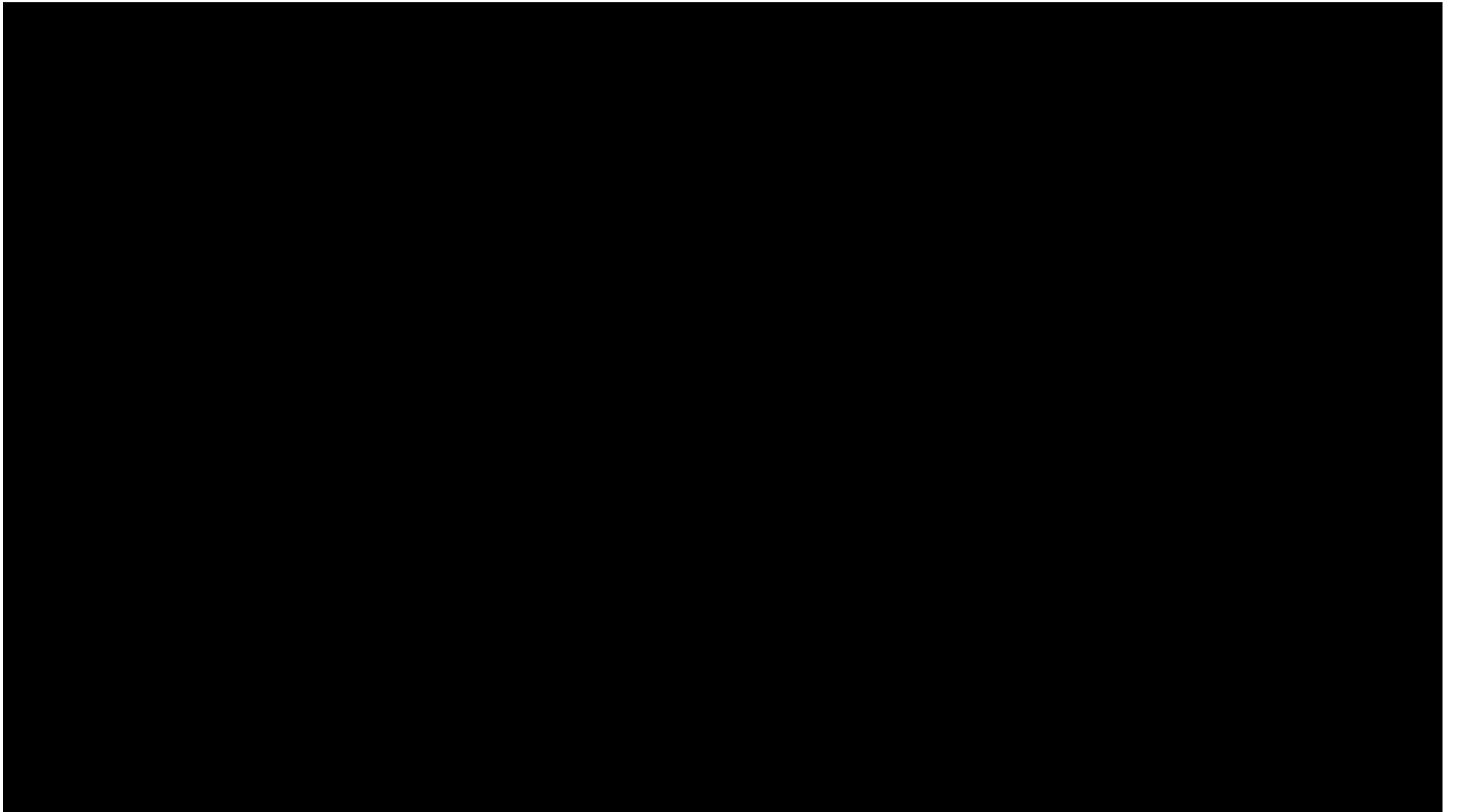
Improvement Results in Less Force



Overhead Construction Ergonomic Improvement

- Steve Proffitt,
Manager,
Overhead
Construction
- Tony Strader,
Overhead
Construction





Hardin Valley Dig in Response

Jamie Davis, Grid Modernization



Hardin Valley Dig In Response

- Third-party contractor impacted 8 inch gas line
- Combination of factors presented unique challenges
- Potential for multi-day response to restore service
- Situation required quick thinking and expertise



Hardin Valley Dig In Response

- Underground Construction was dispatched to respond
- Over a century of experience represented
- Repairs made quickly and safely avoiding a service interruption



Hardin Valley Dig in Response

Back Row:

- Brent Elkins
- Seth Lakin
- Brandon Spoon
- Josh Harris
- Joe Hall
- Randy Rauhuff
- Rick Marsh
- Tyler Hodges
- Randy Skeen

Not Pictured:

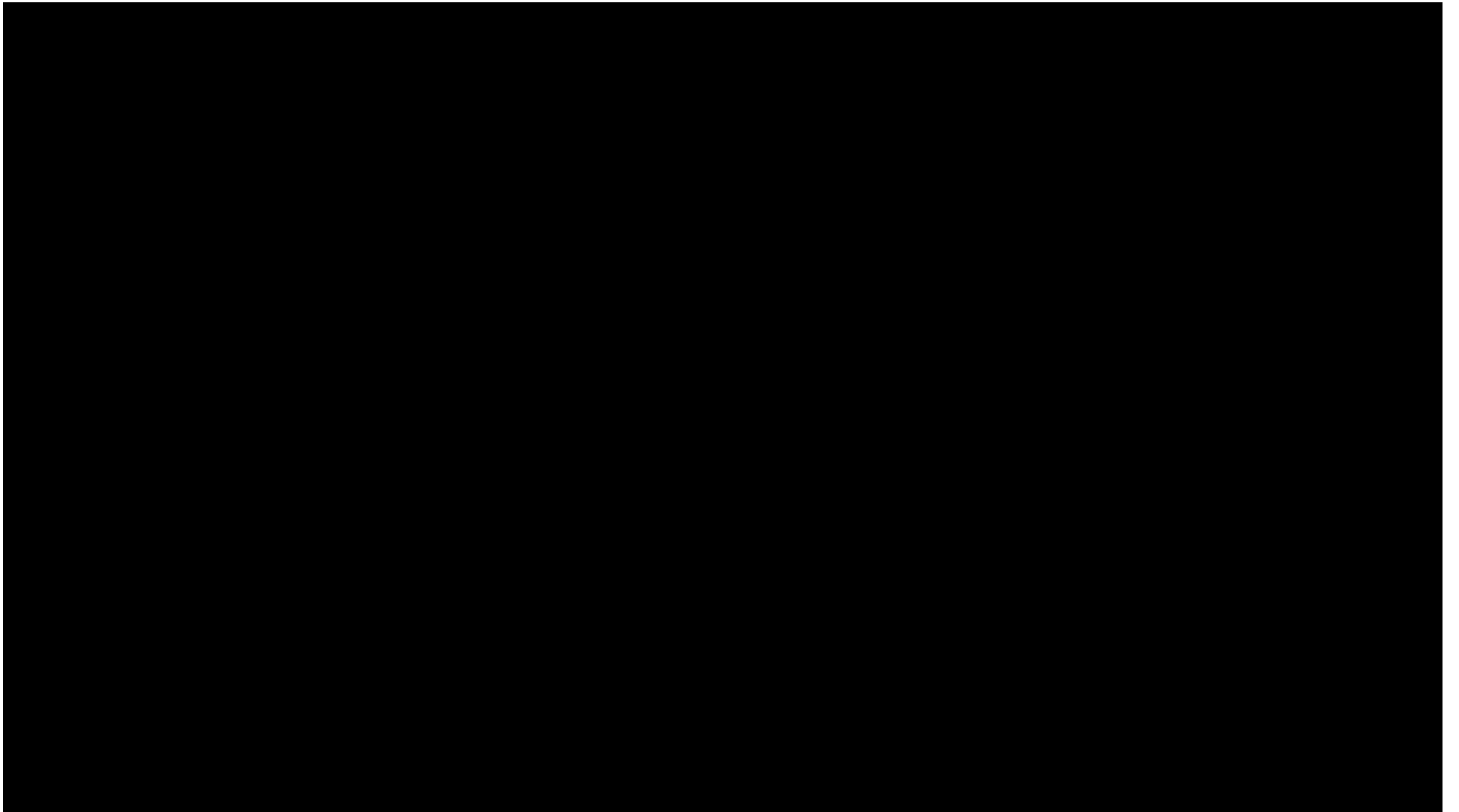
- Brian Harvey

Front Row:

- Robert Dockery*
- Brad Irwin
- Jason Hellard*
- Robert Langston
- Brian Sharp*



**Accepting award for team*



Board Chair Award

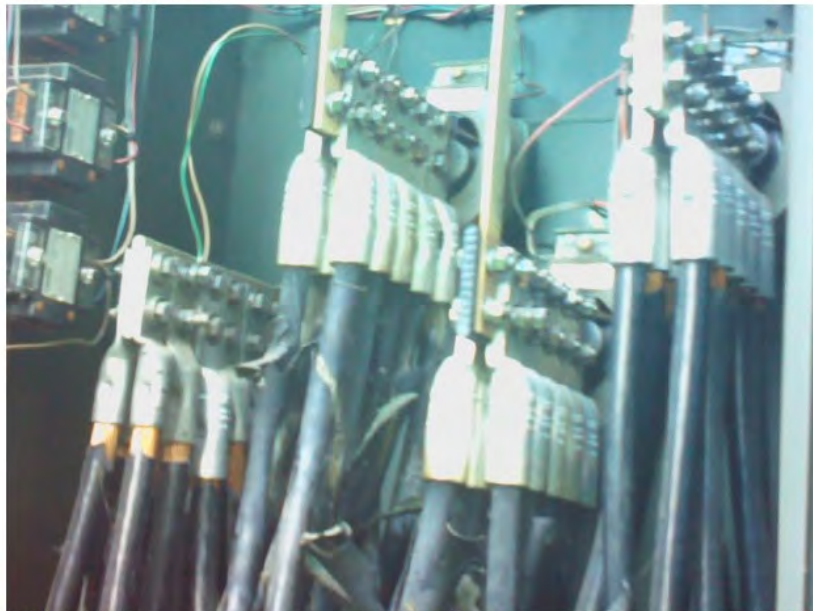
Parkwest Hospital Transformer Team

Bob Colwick, Electric Systems Engineering



Infrared Imaging Results

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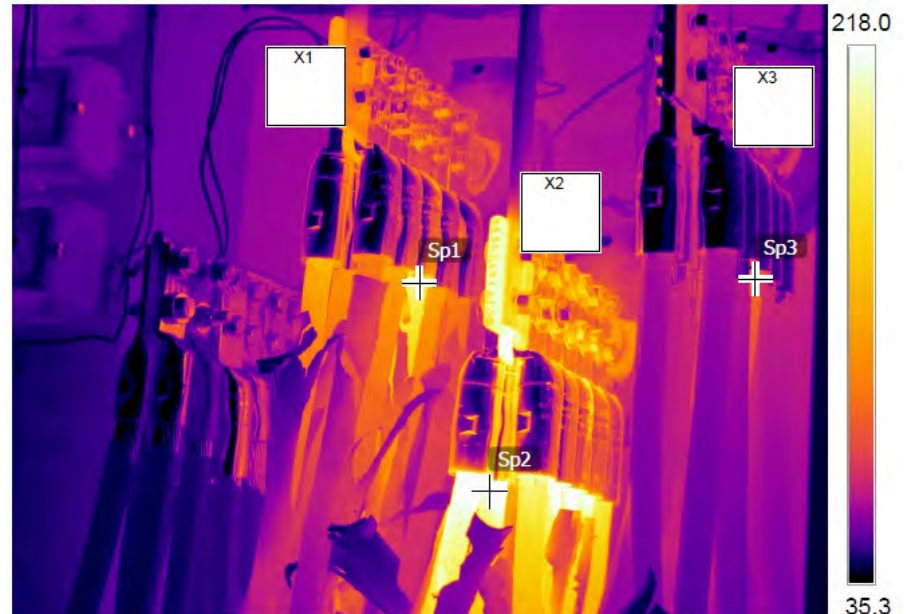
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FLIR T640

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Conductors

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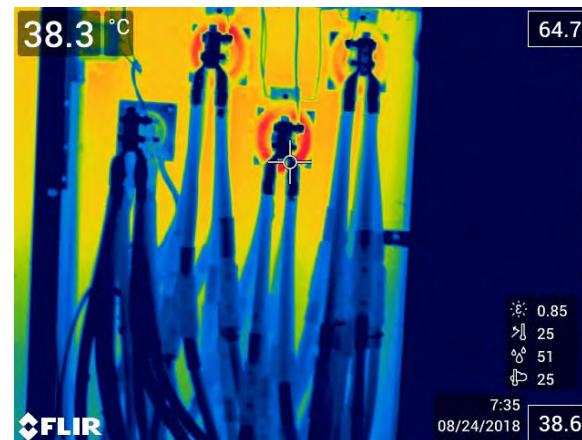
Infrared scan of conductors

Remediation Efforts

- Electrical team started immediate planning to correct issues
 - Key Accounts scheduled an outage with hospital staff
 - Station Management Services Wires and Overhead Construction completed work on Friday evening with no unscheduled power interruptions
 - All work completed in four hours
- Proactive thinking ensured reliable service

Proactive Thinking Ensures Reliability

- Initiated large/critical transformer inspection program
- Improved communications and coordination with hospitals



Parkwest Hospital Transformer Team

Back Row:

- Barry Jones, System Operations
- Dewayne Rankin, Overhead Construction*
- Dustin Troutt, Overhead Construction
- Mike Elliott, Overhead Construction
- Kevin Whittington, Overhead Construction
- Gene Bailey, System Operations
- Keith Maples, Station Management Services
- Mike Miller, Overhead Construction
- Lance Mitchell, Overhead Construction
- Nathan Parker, Station Management Services
- Austin Spears, Station Management Services
- Vinnie Loyacano, Overhead Construction
- Jared Burris, Station Management Services



- Mike Evans, Station Management Services
- Mike Armstrong, Overhead Construction
- Ryan Prorise, Overhead Construction
- Dustin Bailey, Overhead Construction
- Todd Lashley, Overhead Construction
- Kevin Roberts, Station Management Services

**Accepting award for team*

Parkwest Hospital Transformer Team

Front Row:

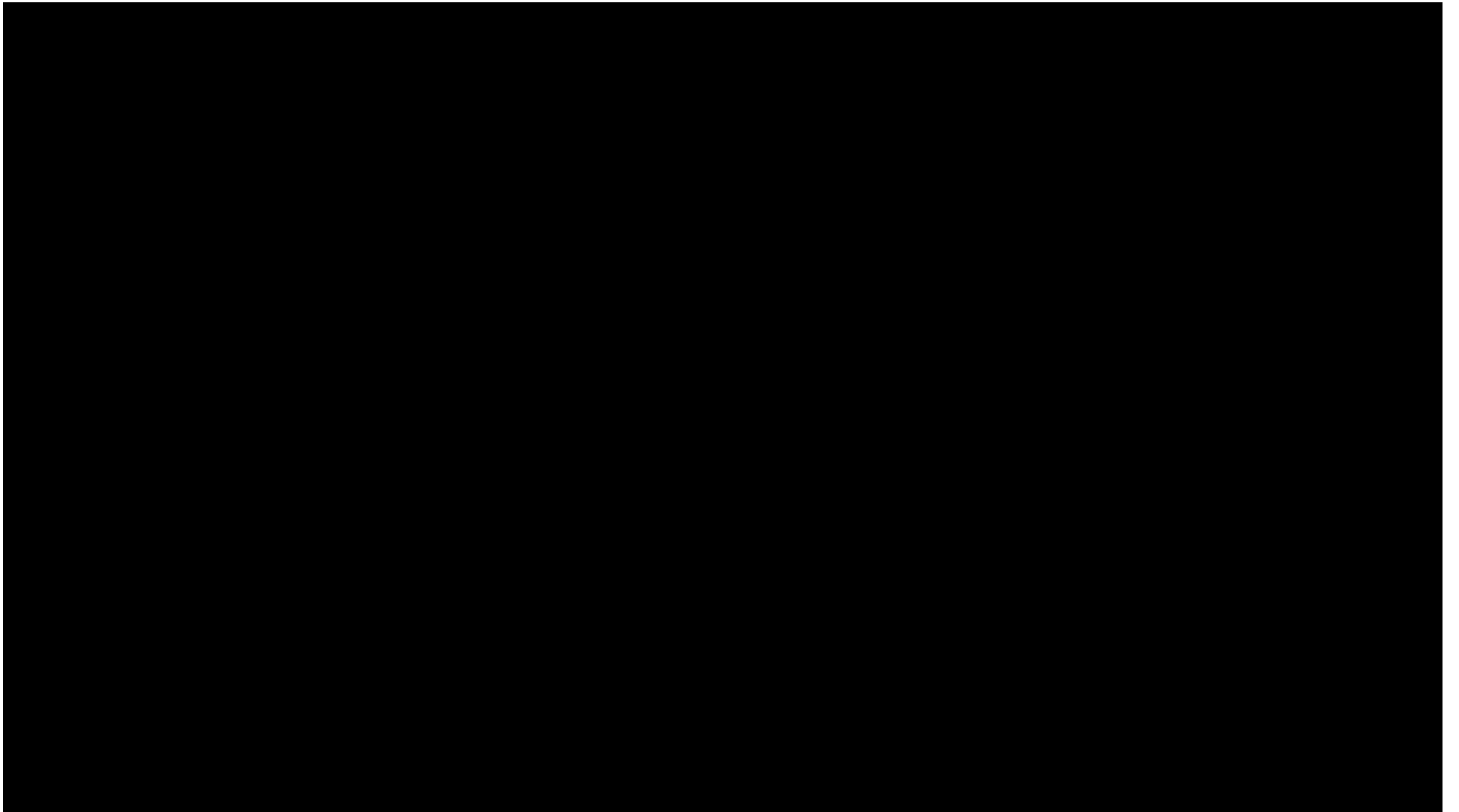
- Joel Henderson, Overhead Construction
- Candace Scruggs, Customer Support & Key Accounts*
- Willy Wilkerson, Overhead Construction
- Tim Ramsey, Station Management Services*
- Mathew Stinnett, Electric Systems Engineering*
- Ron Stewart, Overhead Construction
- Mark Hall, Overhead Construction



Not Pictured:

- Robert Forbes, Overhead Construction

**Accepting award for team*



KUB