

# “Building To Standard Is Not An Option”



Mid-Atlantic  
Construction  
Safety Council

The Cynwyd Club | 332 Trevor  
Lane Bala Cynwyd, PA 19004

Presented by: Joe Morris  
March 8, 2019



An Exelon Company

# Agenda

- **Introduction & Background**
  - *Who am I and why am I here ?*
- **Description of Exelon Governance Structure**
  - *PHI Service Territories*
- **Current Exelon Quality Initiatives**
  - *Pepco OH Distribution Quality Pilot*
  - *EU-wide Quality Initiative*
- **“Building to Standard is NOT an Option”**
  - *Field examples & Case Studies*
- **West Penn Power Incident Review**
- **Questions**
  - *Closing remarks.*



# Who am I and why am I here ?

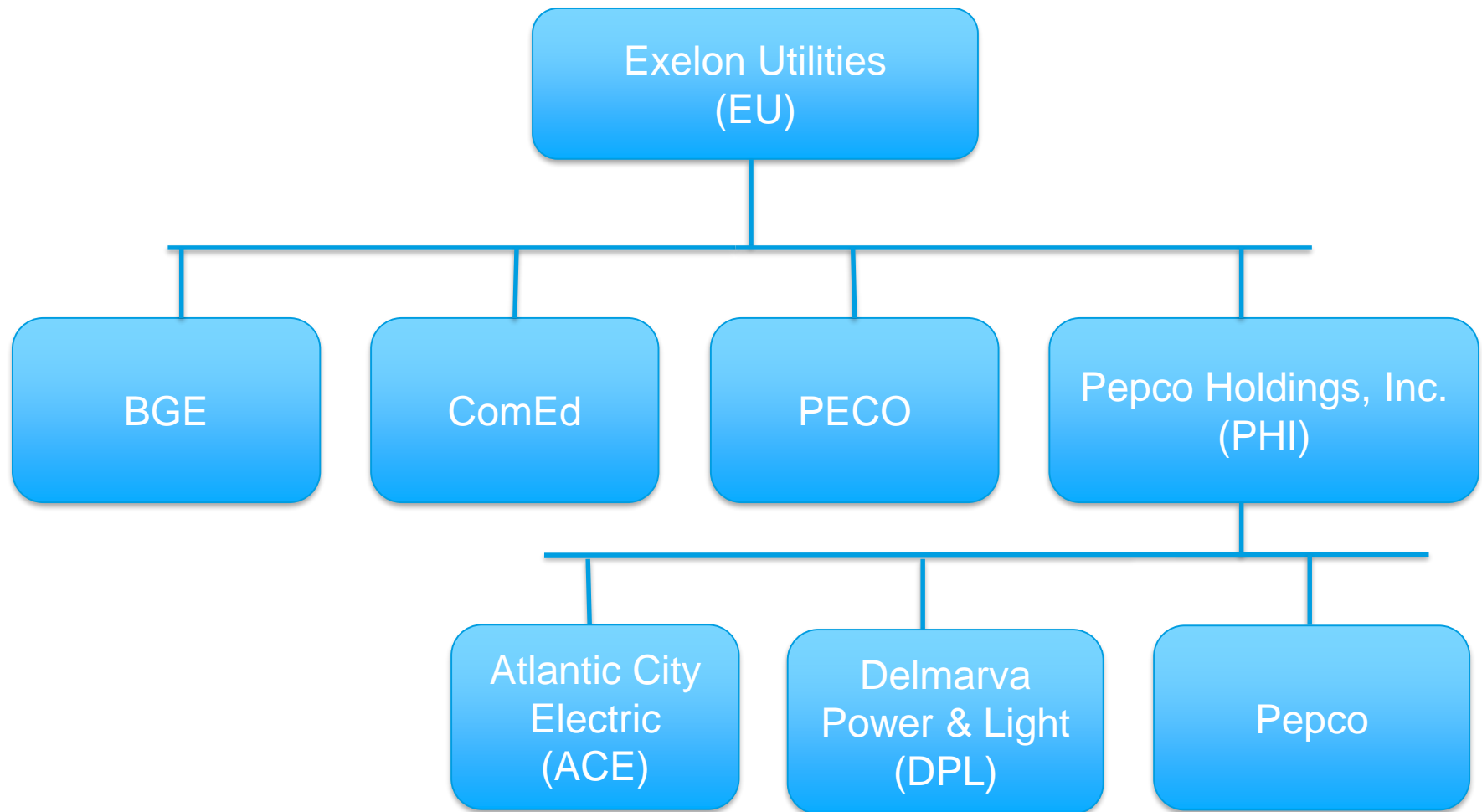
Joseph Morris

- Sr. QA & Control Specialist (Pepco Holdings, Inc.)
  - 23 + yrs. Field Construction, Operations, Project Management Quality & Safety Experience
  - 12 + yrs. Utility QA Experience
    - 10yrs – PECO
    - 2 + yrs. – PHI
- Sr. QA & Control Specialist
- Project Management Degree
  - ISO 9001:2015 Lead Auditor Certification.

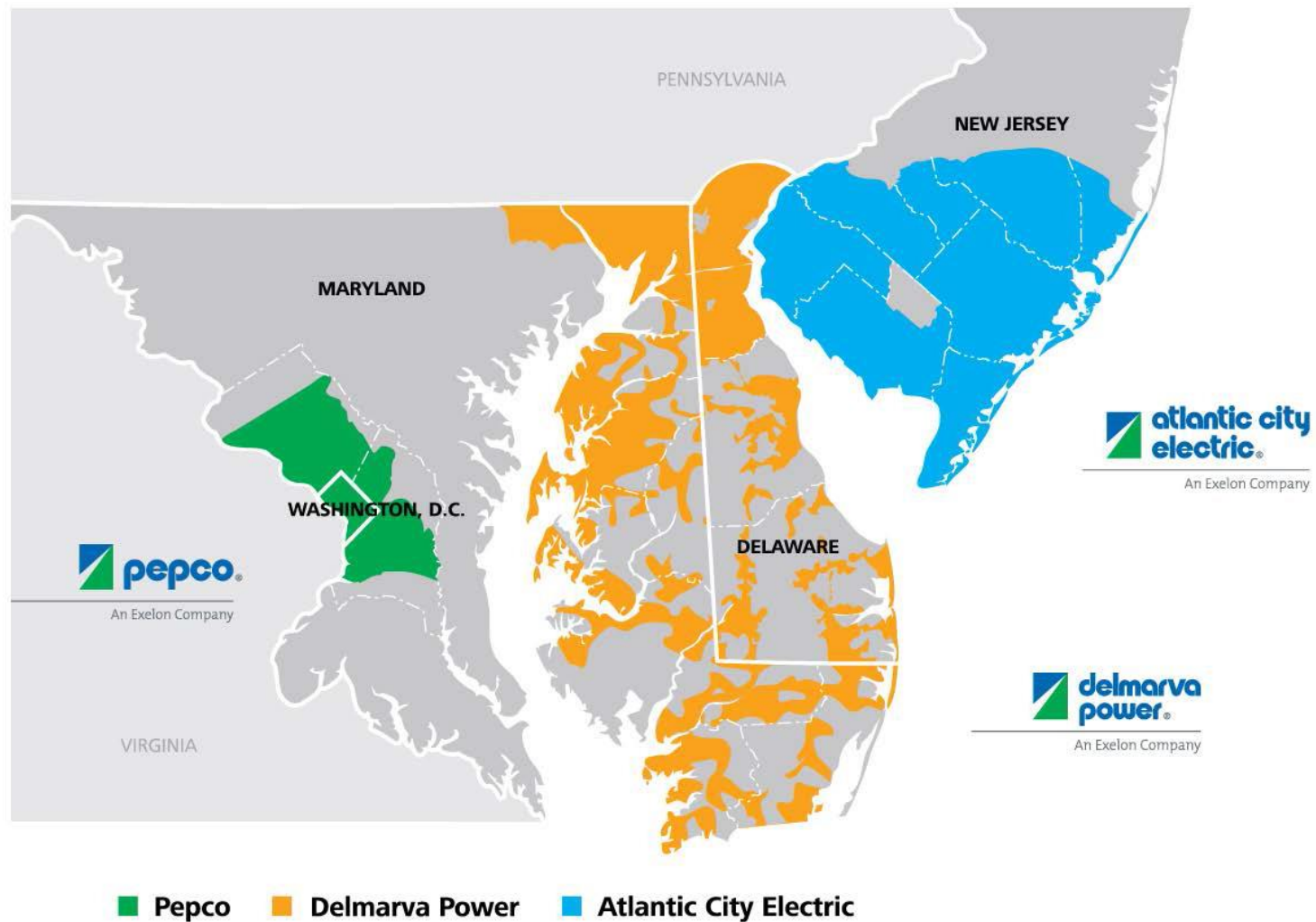
Make you aware of;

- Current Exelon & Industry QA/QC Landscape
- QA/QC 2019 & Beyond

# Exelon Governance Structure ( Related to Contracting - COC's )



# Pepco Holdings, Inc. (Service Territory)



# Current Exelon Quality Initiatives



## Pepco OH Distribution Quality Pilot

- The Bar Tech Group ( 3<sup>rd</sup> party quality inspections)
- 1 Business Analyst , 3-4 field inspectors
- On Pepco footprint for 7 months  
( inspection data next slide)
- Approval to expand to ACE & DPL
- Approval to expand to other disciplines of work

## EU-wide Quality Initiative

- Quality tool recommendations
- Define EU common quality checklist for standard inspections
- Identify a baseline process and methodology for the Quality Management Organization

# Pepco OH Distribution Quality Pilot



## QC Performance Summary

Month	Items Deviated	Items Inspected	Deviation Rate Based on Items	Locations Deviated	Locations Inspected	Deviation Rate Based on Locations
August	451	4295	10.50%	204	305	66.89%
September	520	4729	11.00%	251	423	59.34%
October	431	4406	9.78%	242	460	52.61%
November	412	3004	13.72%	152	201	75.62%
December	341	3163	10.78%	150	266	56.39%
January	215	2591	8.30%	97	255	38.04%
Totals:	2370	22188	10.68%	1096	1910	57.38%

# Pepco OH Distribution Quality Pilot (“Vendor Led” – Contractor (COC) Self-Reporting )

— %Inspected (Total) — %Inspected (Bid Jobs) - - - Minimum %Inspected

QA Inspections	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
Total Jobs	133	130	139	145	132	110	98	90	105	96	89	82	1349
Total Bid Jobs (P2P)	4	4	6	7	8	1	0	1	3	4	3	3	44
Total Inspections	36	29	43	45	56	50	106	111	133	98	96	52	855
Total Bid Job Inspections	25	29	21	22	21	1	0	16	41	32	56	30	294
Total Unsat Inspections	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Observation points	275	336	323	379	391	541	6890	9851	2298	1456	1006	513	24259
Total Unsat Observation points	1	0	0	0	0	0	0	0	0	4	8	3	16
%Inspected (Total)	27.1%	22.3%	30.9%	31.0%	42.4%	45.5%	108.2%	123.3%	126.7%	102.1%	107.9%	63.4%	63.4%
%Inspected (Bid Jobs)	625.0%	725.0%	350.0%	314.3%	262.5%	100.0%	0.0%	1600.0%	1366.7%	800.0%	1866.7%	1000.0%	668.2%
Minimum %Inspected	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%

Quality Pilot –  $2370 / 22188 = 10.68\%$  Deviation Rate ( 6 month sample size )

COC – Self-reporting  $16 / 24259 = 0.07\%$  Deviation Rate ( YTD sample size )



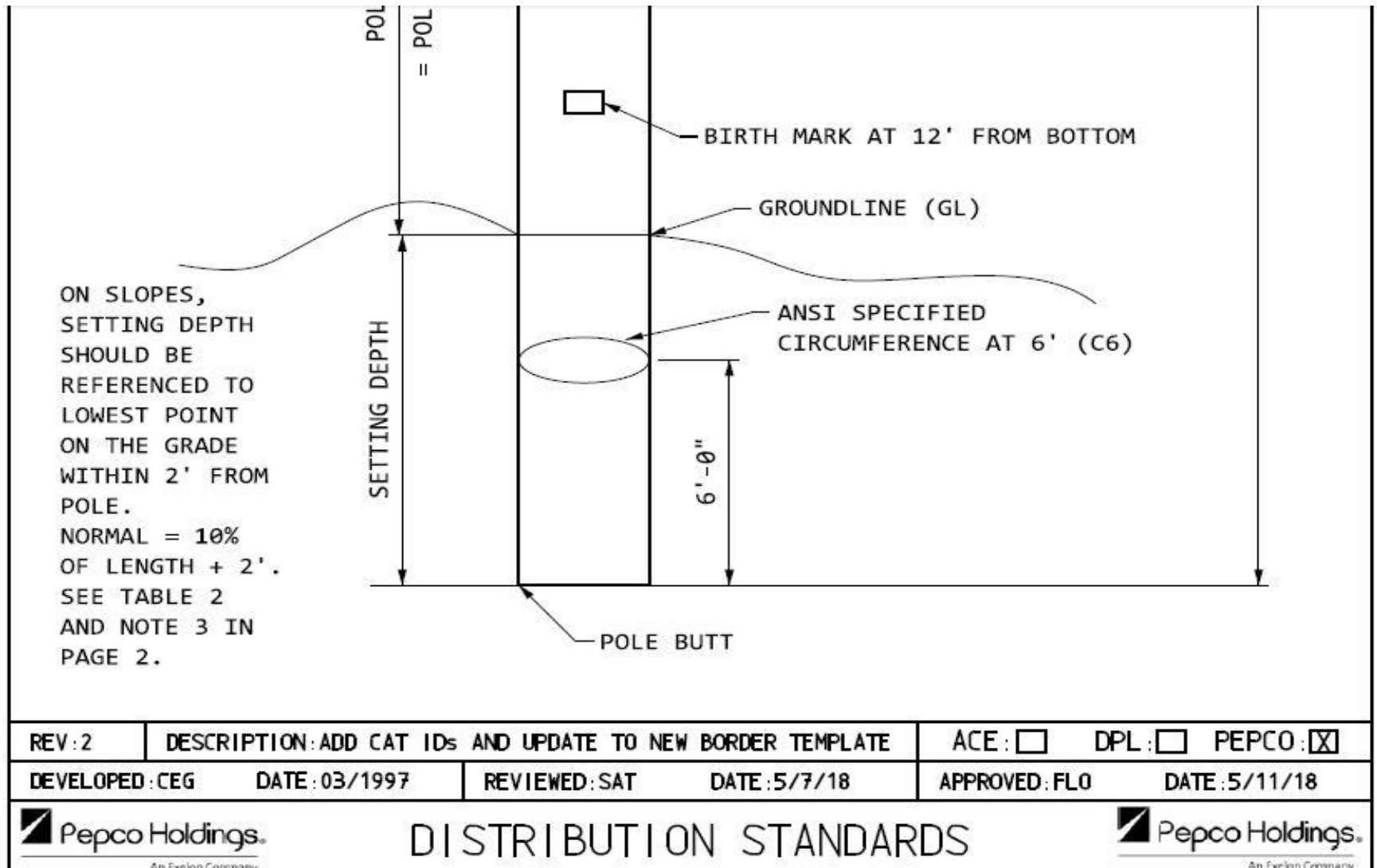
# “Building to Standard is NOT an Option”



- Pole installed was 45 foot
- Installed per WO
- Standards call for a 50 foot pole with a transformer on it (not shown).

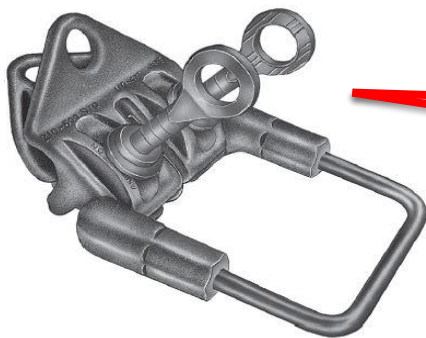
**Engineering Deviation**

# Standard # 1268



# “Building to Standard is NOT an Option”

- No stirrups installed

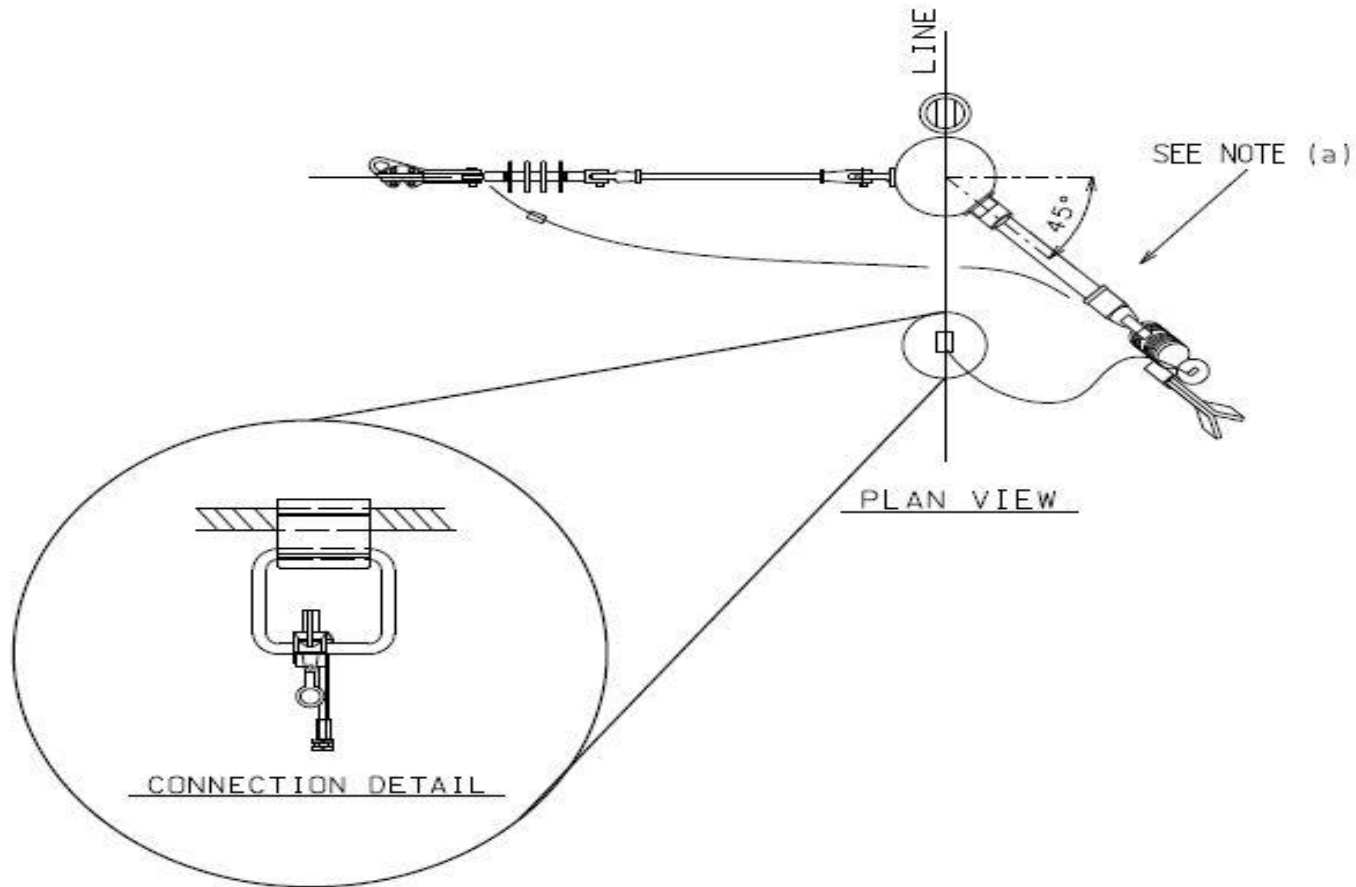


- Required by Std. 0595
- Not in Stock

**Supply Deviation**



# Standard # 0595



# “Building To Standard Is Not An Option”

## Case Studies

- “Quality is not simply a theoretical idea about how to cut costs and make better products and services. Quality is about anticipating the consequences of errors, carelessness, and inefficiency, and putting processes in place to ensure they don’t occur.”
- The value of paying attention to the details of your quality processes contained in your Quality Management System (QMS) are paramount as you will see in the following examples;



# “Building to Standard is NOT an Option”

## Florida International University bridge Collapse - 2018

- “Designers overestimated the strength of a section of a Florida International University pedestrian bridge & underestimated the load on that same section.”
- “The investigation to examine the collapse, review the construction process as well as the corrective action taken once the cracking was observed.”

Peer Check

Corrective Action



Video by DroneBase shows the collapsed pedestrian bridge at Florida International University in the Miami area on Thursday, March 15, 2018. (DroneBase)

# “Building to Standard is NOT an Option”

Boston “Big dig” - 2006



- “The use of epoxy anchor adhesive with no lap resistance was the cause of a fatal rock fall in a tunnel in Boston Big Dig on July 10, 2006.”

- Oct 29, 2015 report “heavy corrosion on concrete joints, missing cover plates and corrosion and is hanging over interstate highways.”

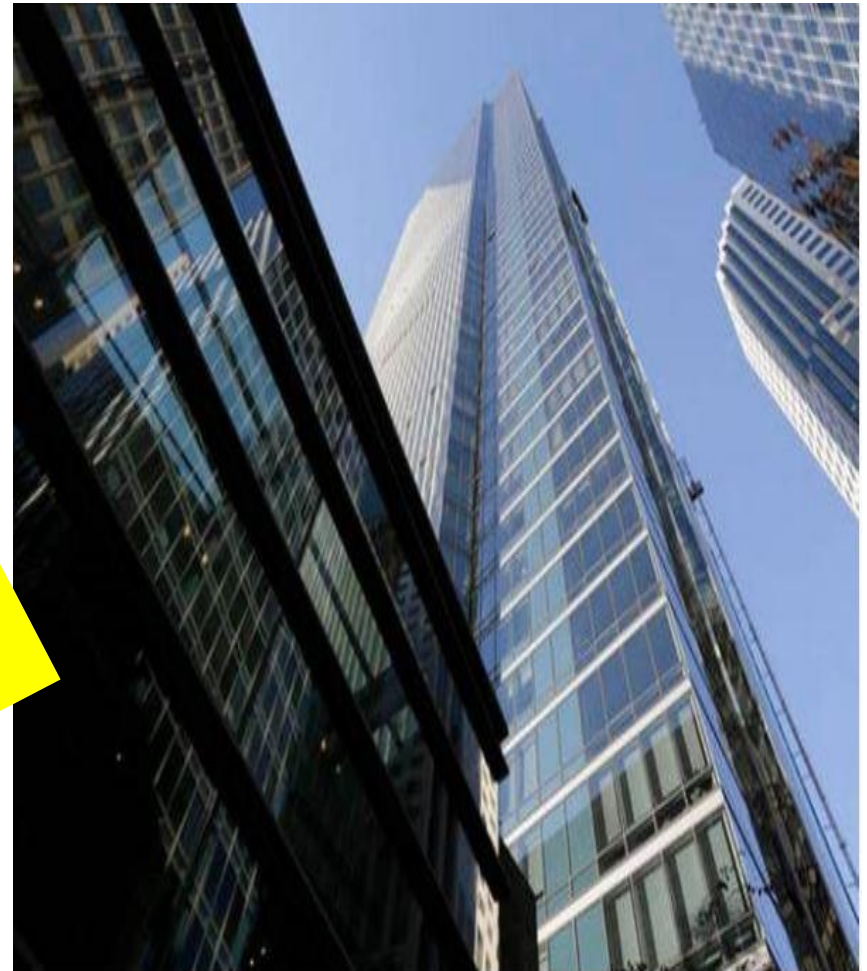


# “Building to Standard is NOT an Option”

Millennium Tower San Francisco - 2009

- Completed ten years ago, the tower so far has sunk 16 inches
- “shows no immediate sign of stopping.”

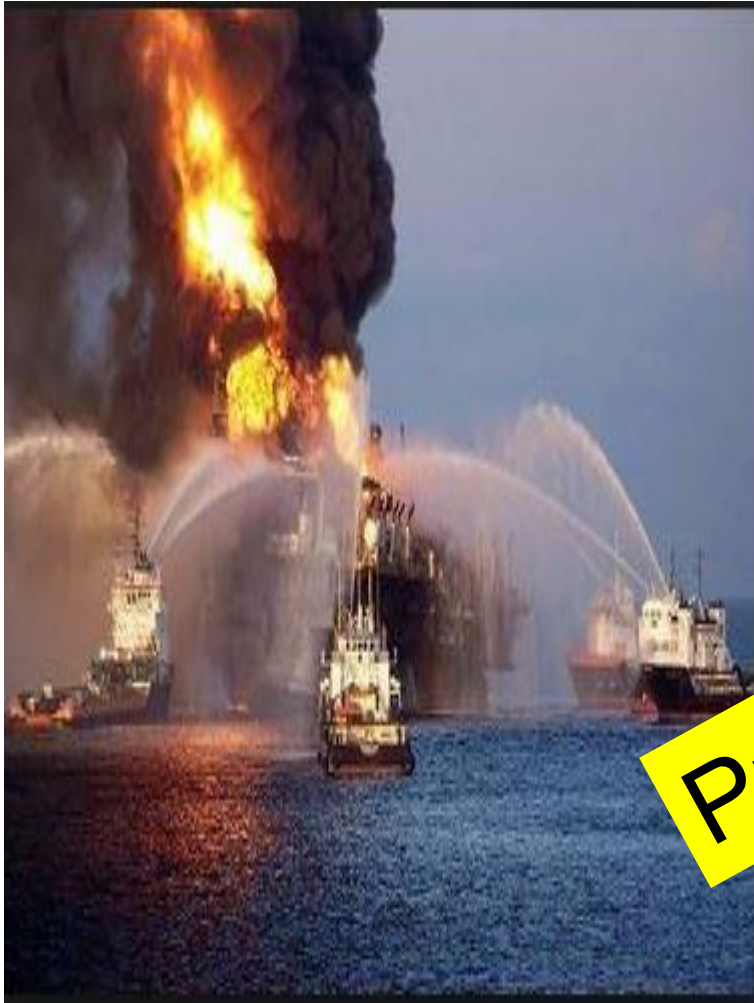
- Exchanges between the Department of Inspection and the Building Department have not been as open as they should be. Neither made that information public.





# “Building to Standard is NOT an Option”

## Deepwater Horizon Oil Rig Explosion - 2010



- “Culture of Quality was subordinated to cost-cutting and procedural shortcuts to try and get the drilling project, which was five weeks behind schedule, back on track”

- Replacing a mixture of cement with a lighter, cheaper material for effective mud protection against blowouts because of cost overruns.

**Product/Material Control**

- Using the cement used in the casing would have taken 10 hours of time and cost \$128,000.
- Current cost projections of catastrophe > \$ 60 Billion (BP)

# “Building to Standard is NOT an Option”

## NASA Challenger Disaster - 1986

- Seven crew members died, a \$3 billion-dollar orbital vehicle was lost, and NASA's Space Shuttle program was suspended for 32 months.
- The official cause of the disaster was the failure of an O-ring to prevent hot gases from leaking through the joint in the right solid rocket motor during liftoff.
- The disaster was a point of contention for years prior to the disaster, that any concerns had been either poorly communicated or ignored in favor of maintaining project delivery on-time and on-budget

**Risk Analysis — Failure of NASA's QMS**  
The design flaw was a known defect but was incorrectly categorized as an acceptable risk



# “Building To Standard Is Not An Option”

## Case Studies Conclusion

- “Quality needs to live in every part of an organization, from the C-suite to the shop floor and the field. Quality also spans the entire industry of which each organization is a part. However, “Quality” can’t simply become a mantra that organizations speak about in loose terms and assume will become a philosophy that subconsciously permeates each worker and magically produces results. Quality must be praxis, not lip-service to vague ideals, especially when the consequences of getting it wrong can be so high.”

# “Building to Standard is NOT an Option” — Field Safety Issues



We should all be empowered to stop unsafe work & report any unsafe conditions!!





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# West Penn Power Incident Review

- Carrie Goretzka, 39, was killed on June 2, 2009 when she went outside her home to retrieve her cell phone from her car to call 911 after she saw a backyard tree burning because the line had again overheated, cutting power to her house. The energized line fell on her, killing her. It was a clear day.



# West Penn Power Incident Review

- West Penn Power was found negligent for failing to have its employees use a wire brush and allowing its employees to use knives or pliers to clean conductors when installing splices on its lines.
- West Penn settles fatal power line case for \$105M
- Hastings Conductor Cleaning Brush, \$ 35.91





# West Penn Power Incident Review



Her two daughters now 12 & 14 years old!



Questions ??

**Thank You !!**