

Live Work Maintenance on Legacy Double Circuit 144kV H Frame Structures

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Abstract 482

2022 CIGRE Session - Calgary – November 1st, 2022



cigre
For power system expertise



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Background

1. ATCO Electric

- a) 11500km of Transmission lines
- b) 62000km of Distribution lines

2. Several decades of builds

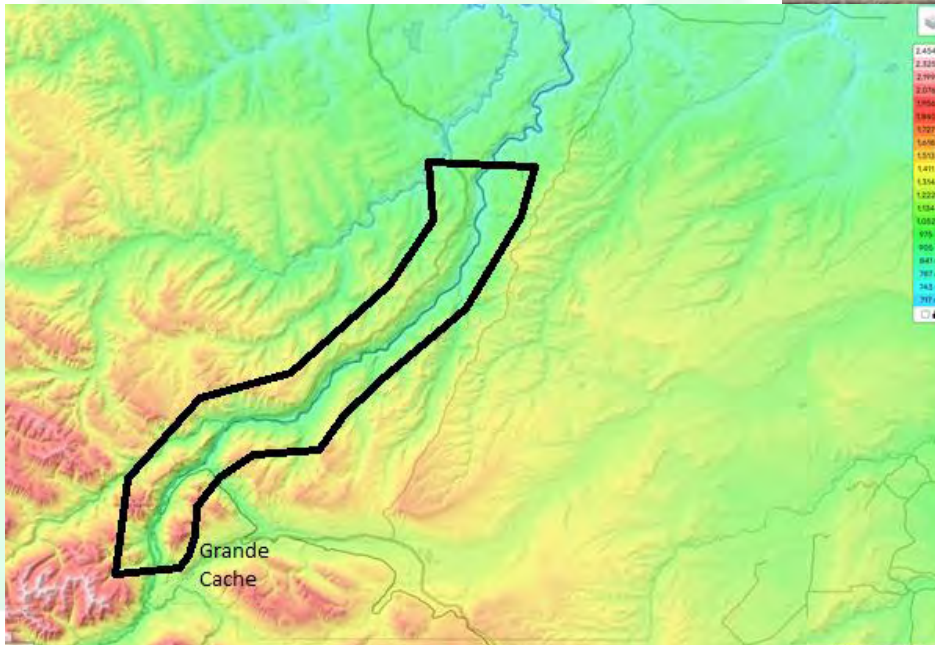
- a) ~ 1940's



Project Details

1. 7L80/7L20 Line

1. 1968-1972 builds, D/C for ~6km
2. Topography
3. Wooden cross arms



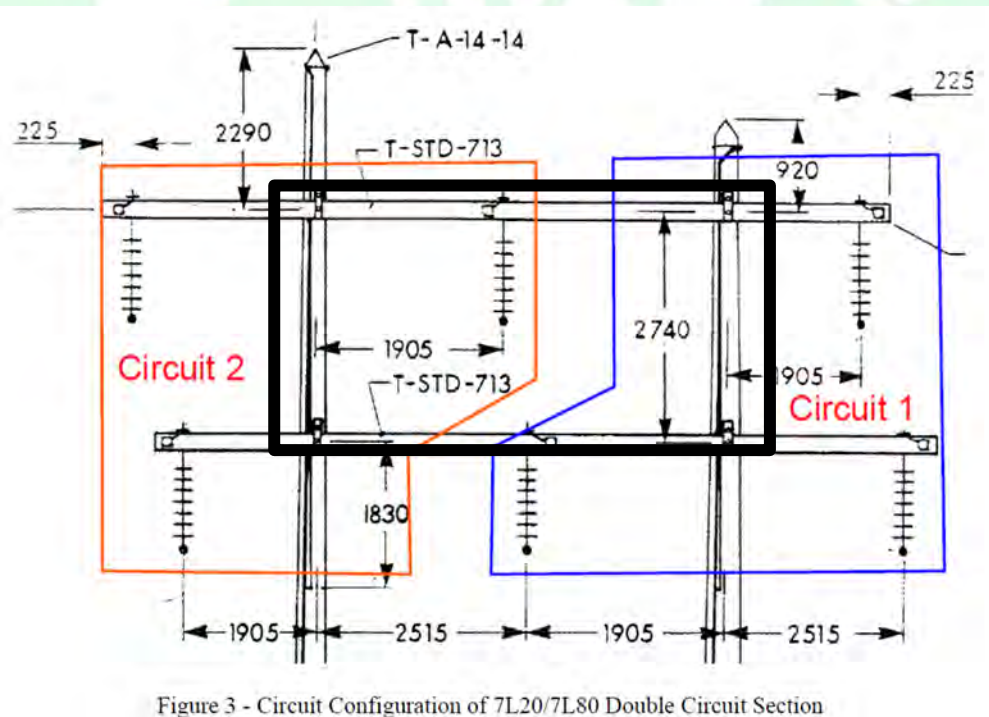
Risk Assessment

1. ROW width and access
2. Legacy construction standards



Risk Assessment

1. ROW width and access
2. Legacy construction standards



Options

1. Temporary Bypass
2. Permanent Re Route
3. Use of TIF Arms
4. Live Line Restoration



Limitations of completing work

1. Weather limits
2. Tools & techniques
 - a) Live Line methods
3. Construction access
 - a) Terrain
 - b) Overlapping ROWs
4. System constraints
 - a) Conflict with generation



Selected Option

1. Live Line Restoration

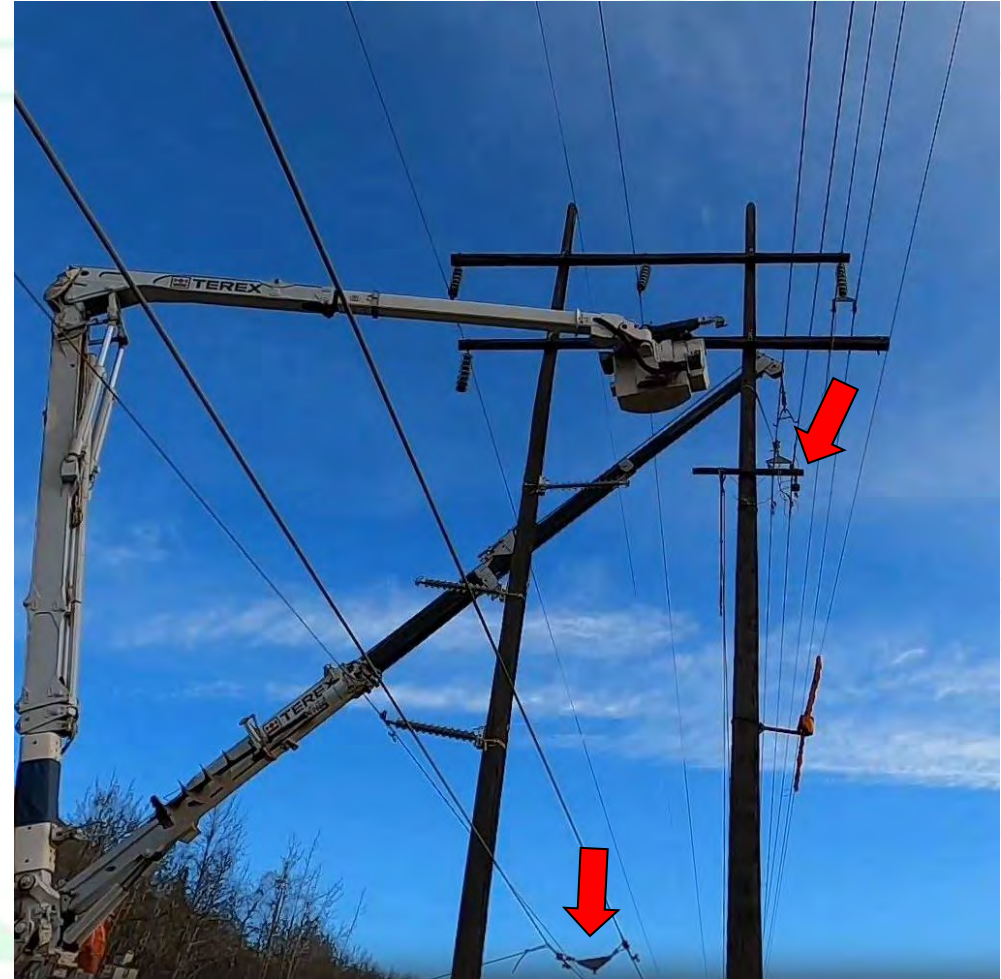
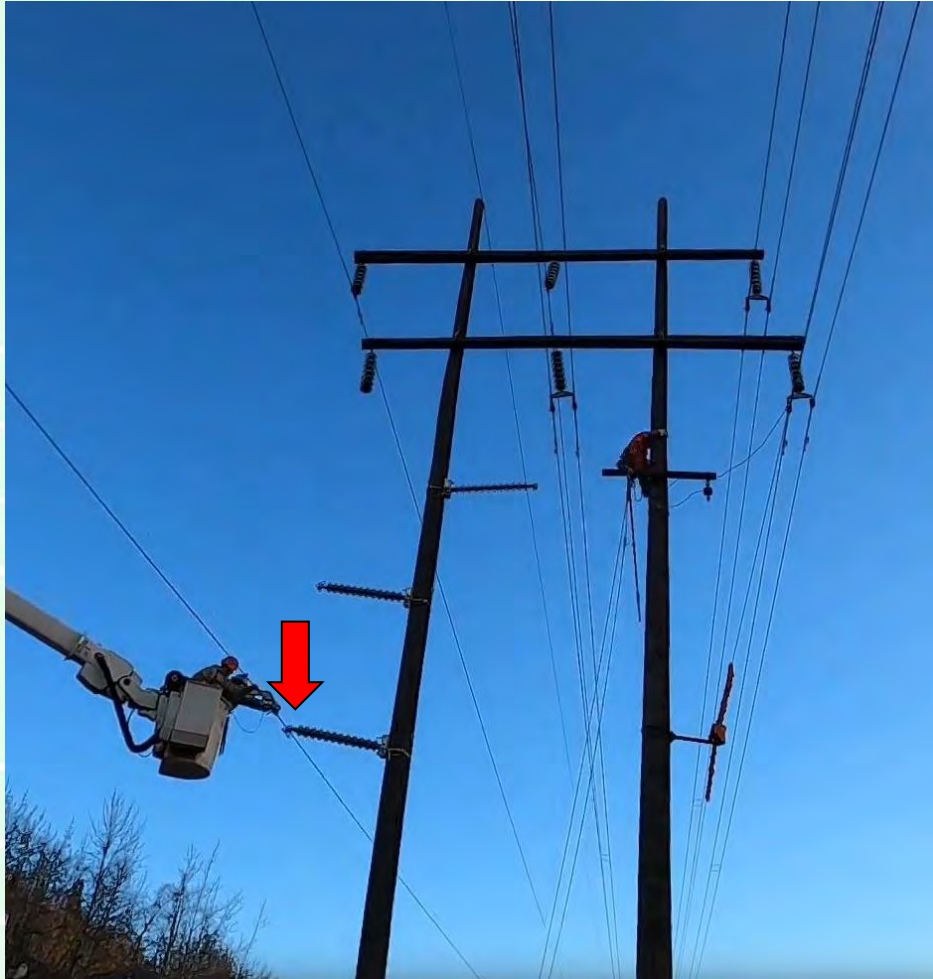
1. Service continuity in Grande Cache
2. Maintain generation
3. Most cost effective
4. Reduced construction time
5. Fewer equipment requirements
6. Existing poles in good condition



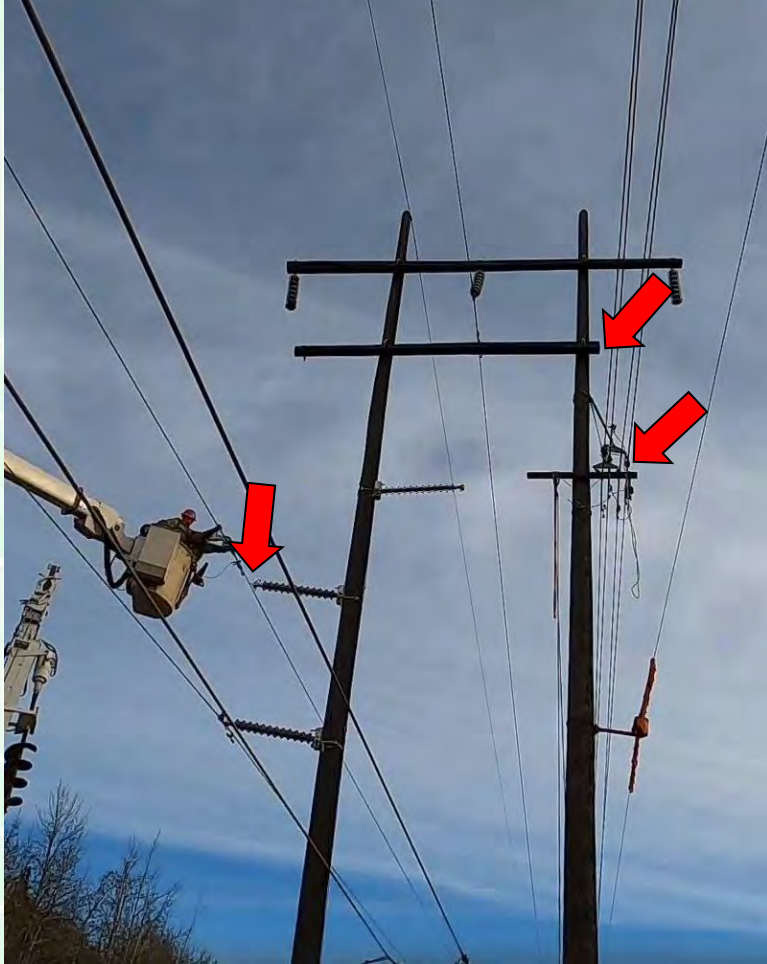
Execution of Work



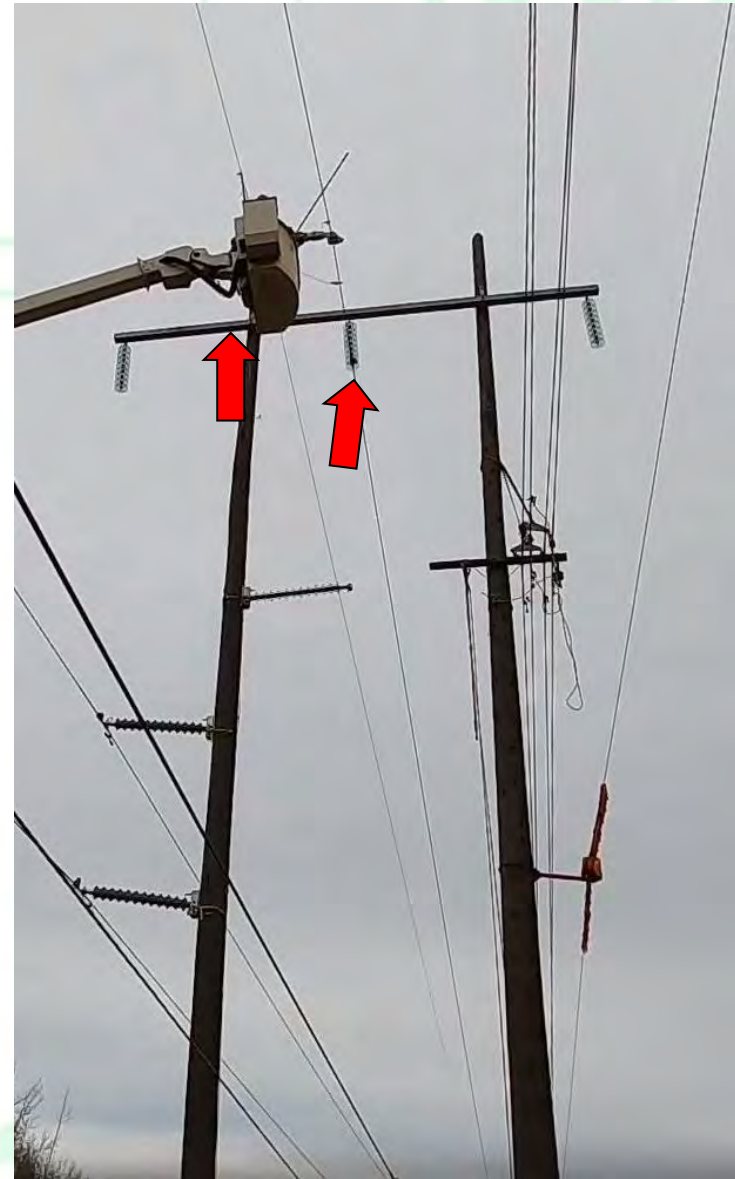
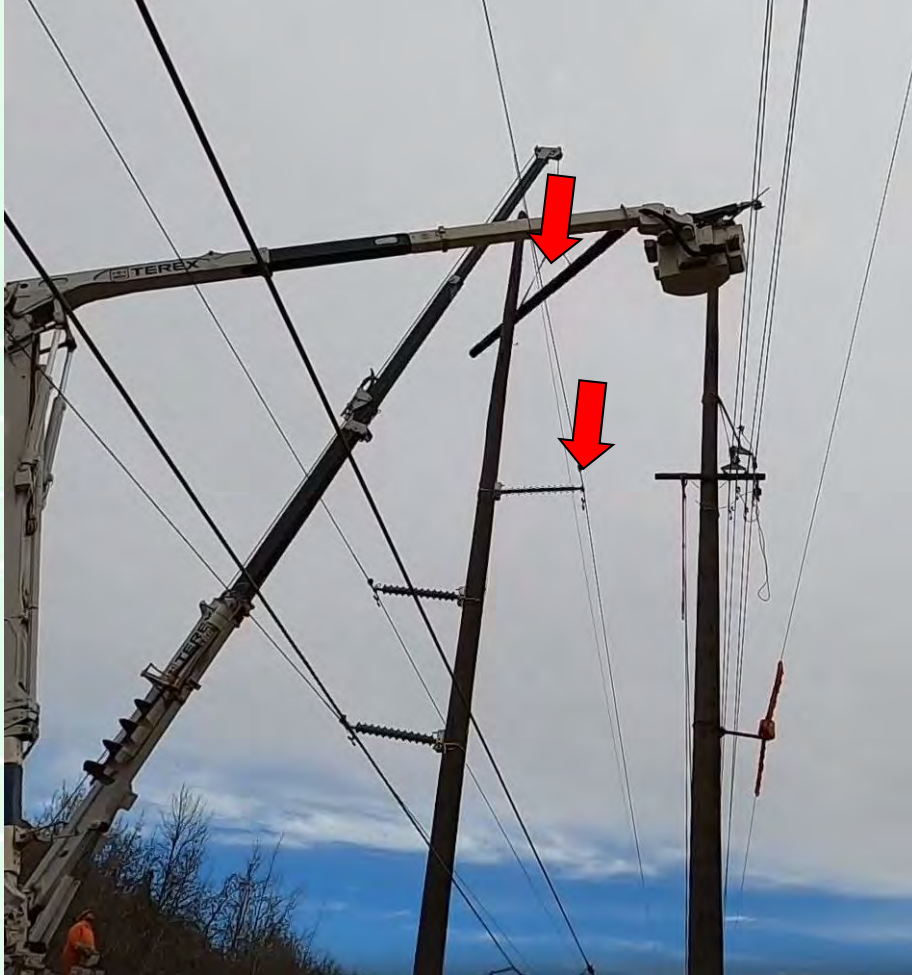
Execution of Work



Execution of Work



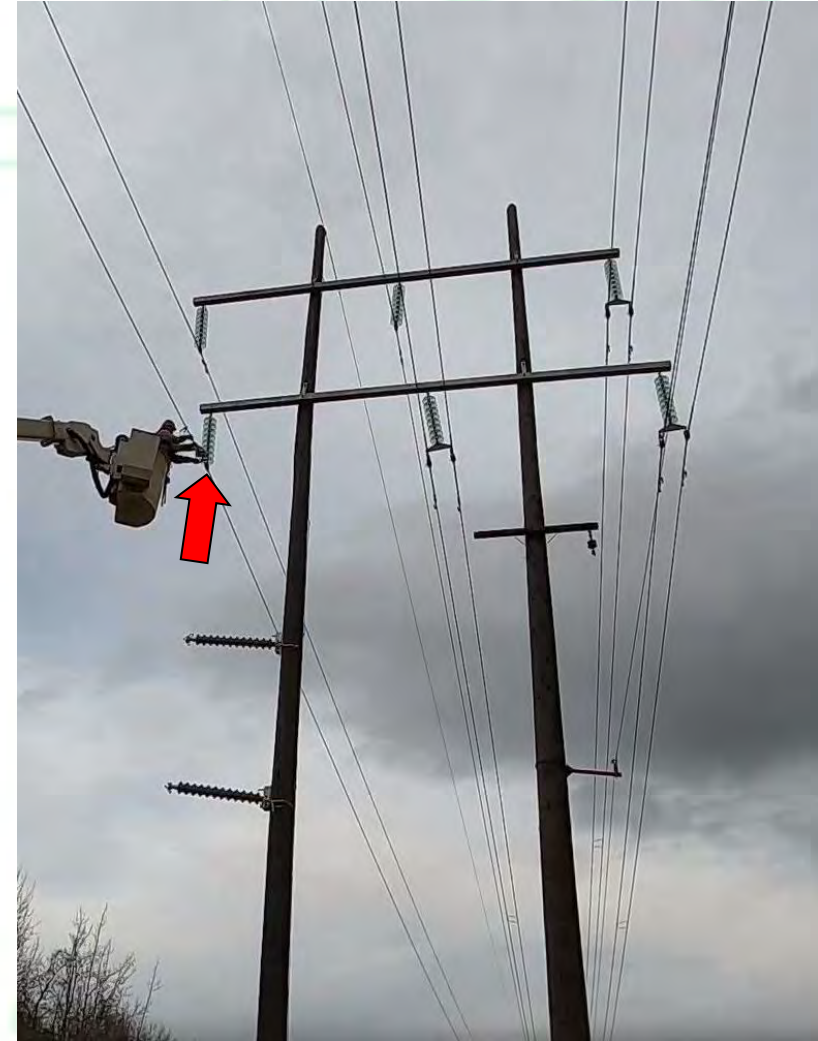
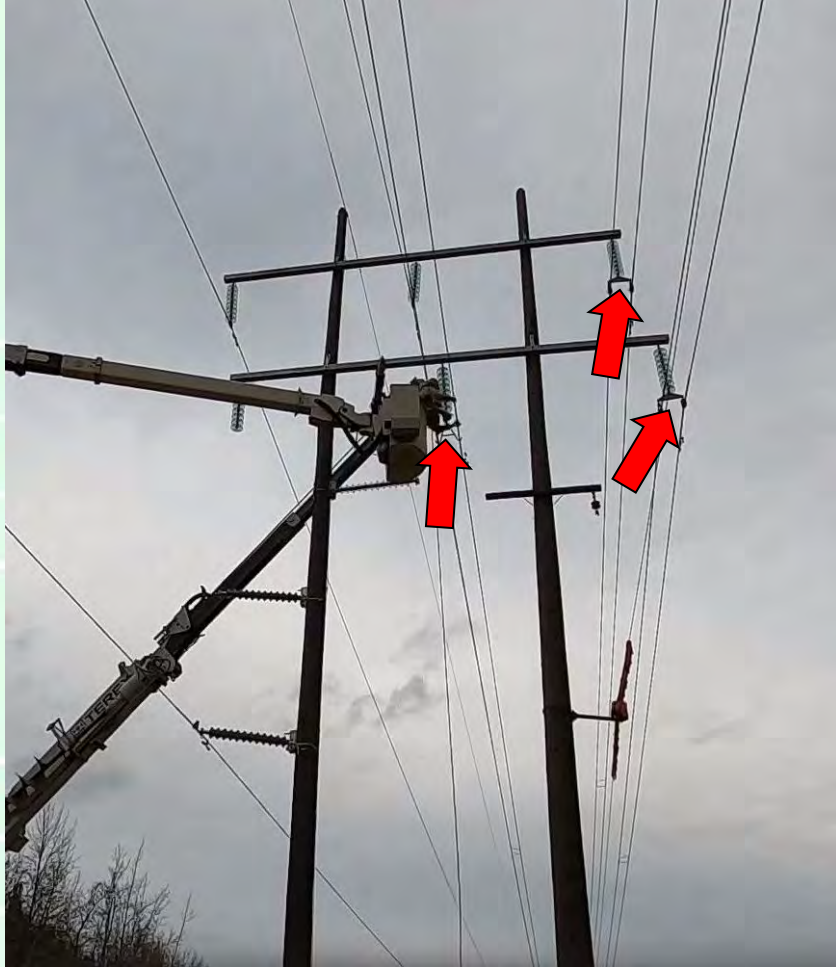
Execution of Work



Execution of Work



Execution of Work



Questions

