Journeyman/Senior Team Events

Journeyman/Senior Team Rules

2016 FLORIDA LINEMAN COMPETITION

Journeymen Teams

Journeymen teams for the Florida Lineman Competition are comprised of three participants:

1. At least one of the climbers must be a Lineman with a minimum of two years of experience.
2. An Apprentice may climb with a Lineman but must have at least three years experience in an apprenticeship program.
3. If the Groundman is a Lineman he may substitute for either climber if needed. The Groundman does not have to be a Lineman but cannot substitute for the climbing Lineman at any time. One alternate per team will be allowed. The alternate must be a Lineman, if substituting for a climbing team member.

Senior Journeyman Team Division

Journeyman teams in the Senior Division will be competing with the other Journeyman teams and in the same events listed for this competition. Judging and scoring will be based on the same criteria as the standard event specifications. Awards will be presented separately for this division. There must be a minimum of three teams registered to forego this division during the event. Teams will be notified in the event of shortage of registrations and given the option to continue as a standard Journeyman team.

Senior Journeyman Teams must meet the following criteria in order to compete:

1. Both climbing competitors must be or have been a Journeyman Lineman and be age 45 or above effective on the date of the competition.
2. The Groundman does not have to meet the age requirements unless in the event the Groundman were to substitute as a climbing competitor for any event.
3. Team members may change their roles for each individual event as long as the Groundman meets the age requirement.
4. One alternate per team will be allowed. The alternate must be a Lineman meeting the age requirement, if substituting for a climbing team member. Once the alternate is inserted into the team they must stay for the duration of the event.

Each team is required to provide one judge for the competition. Scoring is based on correct work procedures and safety. Utility supervisors and foremen are the judges and will follow set guidelines. Each team will participate in five mandatory events.

Judges

1. Each team is required to submit a judge for the competition.
2. All judges must have previous lineman experience or be an operating utility supervisor.
3. Judges will be required to attend a mandatory meeting on Friday, March 11.

Mandatory Full Fall Arrest

The FMEA Lineman's Competition requires the mandatory use of personal fall protection for all Journeyman team and Apprentice climbing events. Fall protection systems shall be supplied by the competitor and be used in accordance with the manufacturer's specifications along with the use of a secondary work positioning strap or lanyard while transitioning around attachments on the pole. While using the secondary positioning strap or lanyard the competitor shall not get into a position to allow for a free fall greater than 0.6 meters (2 feet).

Fairness and Consistency must be shown

Each judge is encouraged to be competitor-friendly but must also be shown due respect by each competitor. If a judgment call could be considered questionable, the team will be given the benefit of the doubt. The competition event is intended to be a fun time for all and should not become stressful to either the participants or the judges.

Judging Irregularities

Should the Chief Judge observe inconsistencies in judging, he or she shall advise the Event Judge on the inconsistencies. If the discrepancies continue, the Event Judge shall be replaced with an alternate judge.

4kV Alley Arm Bell Replacement

Mean Time: 15 Minutes
Drop Dead Time: 18 Minutes

Event Summary

Team will be required to replace all three sets of 8" suspension bells on an 8 ft. light arm built with alley arm construction. Team will not be allowed to float or support/hold any of the phases just by hand while replacing the bells, but you may support them with link sticks/layout arm etc. from the pole or alley arm. Team cannot lay phases on the arm. There will be three sets of new bells on the ground and they must be used. The phase being worked may be uncovered, but any other phase inside the M.A.D. of 25" must be covered while work is being performed. All cotter keys **must** face the pole. Neutral may be floated, but must be covered either way.

Event Specifications:

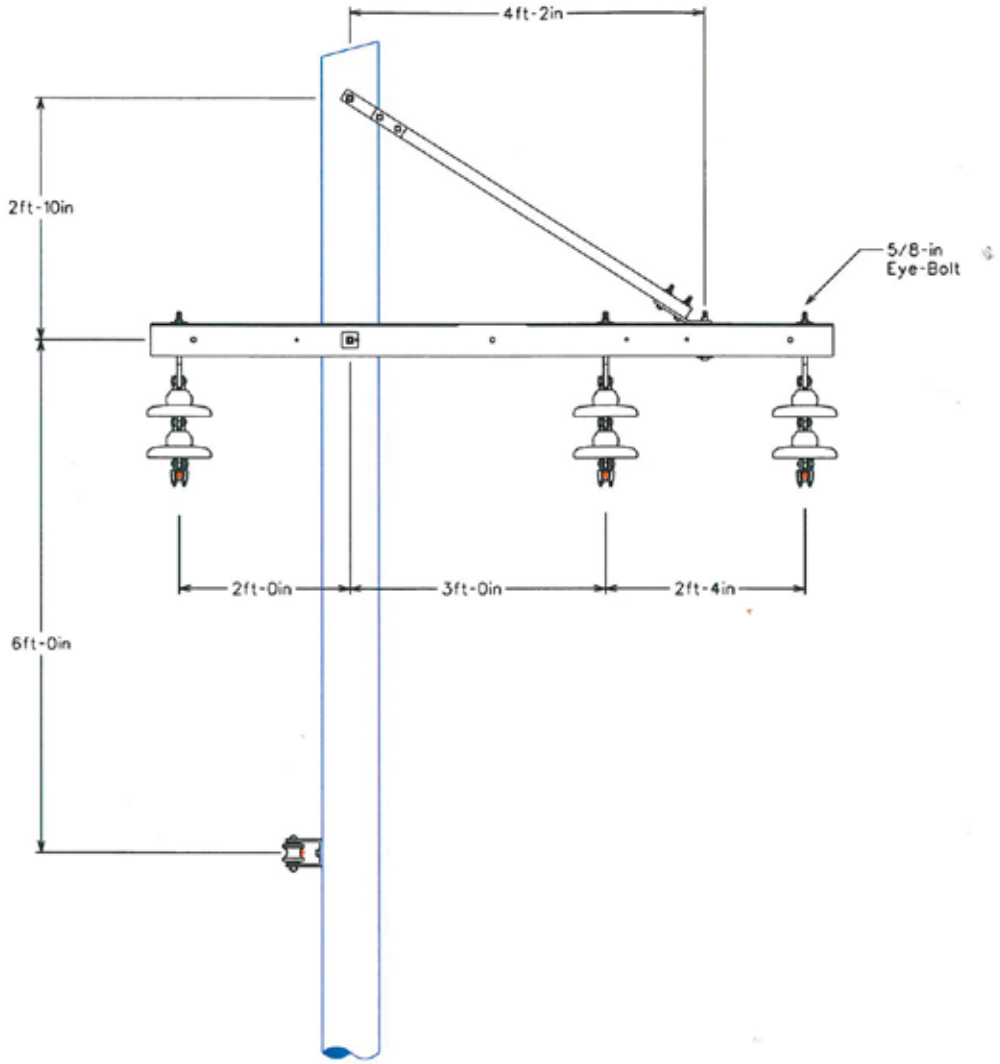
1. Team will have 5 minutes to set up, and all tools may be laid out on a competitor supplied tarp in the designated work area during this time.
2. Time starts at the judge's signal with the fall arrest system detached from the pole.
3. Rubber gloves will be required ground-to-ground.
4. There will be a 2 point deduction for any cotter keys not facing the pole when time is called.
5. Time will stop when the work is complete and the last climber makes contact with the ground. The fall arrest must still be attached to the pole for inspection / verification of proper adjustment.

Teams must provide their own:

Tarp, handlines, personal tools etc.
Guts, blankets, pin hoods, hard cover etc.
Linksticks- Strain, Spiral, Roller, your choice 12" min.
Collar ropes, slings, chokers your choice for rigging
Fiberglass layout arms your choice

4kV Alley Arm Bell Replacement

NONE	NON-STANDARD 8-FT CROSSARM	ASSEMBLY



Event Photos/Specs

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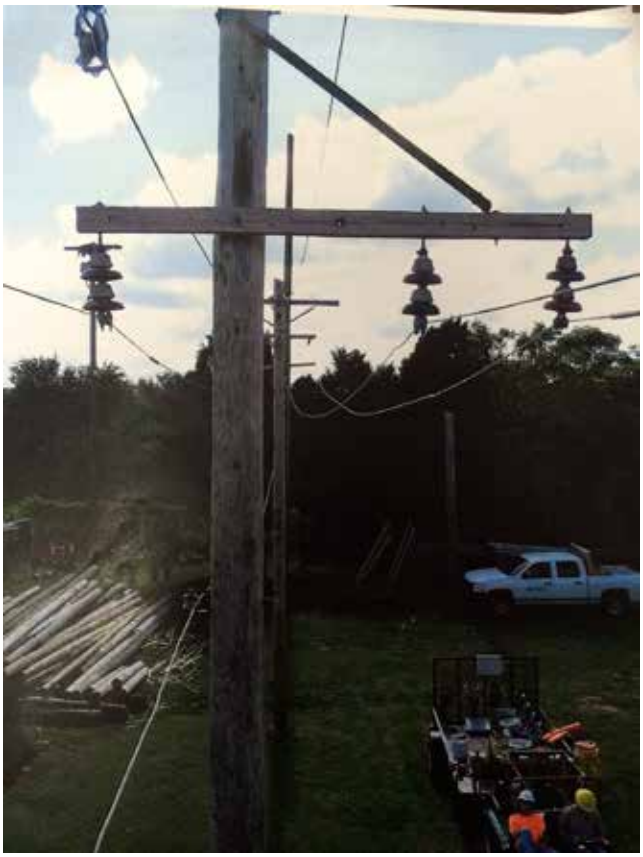
2016 FLORIDA LINEMAN COMPETITION

4kV Alley Arm Bell Replacement



4kV Cross Arm Change Out

Mean Time: 8 Minutes
Drop Dead Time: 10 Minutes

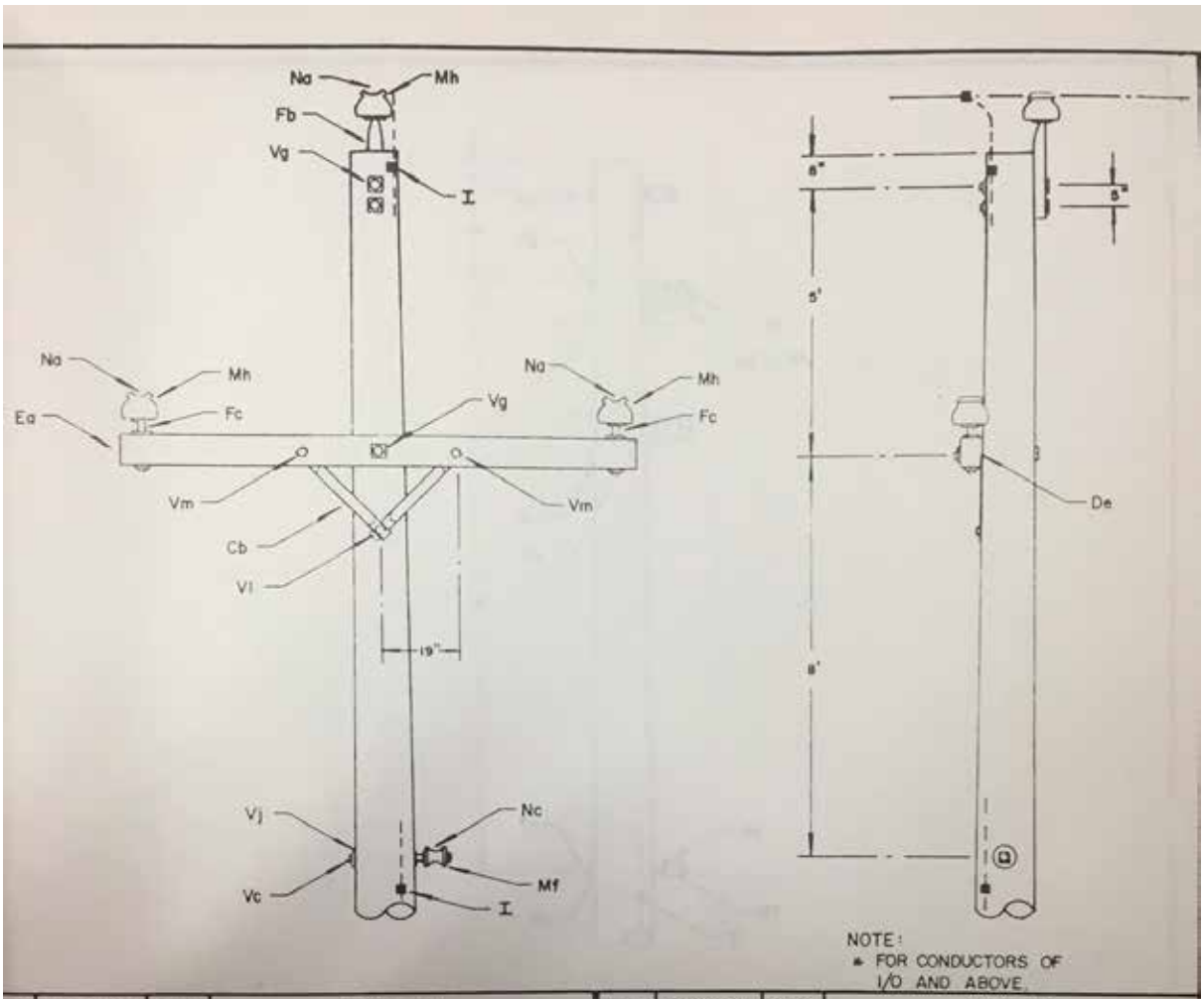
Event Summary:

Team will replace a 10' wooden cross arm w/ steel flat braces and insulators. The two phase conductors will be 1/O AAAC, and are considered energized at 4kV. A complete set of all necessary hardware will be available on the ground at each event pole. The new cross arm and insulators will be assembled after time starts. Competitors will replace existing cross arm with new equipment and re-secure conductors with new wrap-lock ties. All insulators must be removed from cross arm with the nut/square washers back on the stud bolts before the event is considered complete.

Event Specifications:

1. Team will have 5 minutes to set up, and all tools must be laid out on a competitor supplied tarp in the designated work area.
2. Time starts at the judge's signal with the fall arrest system detached from the pole.
3. The new cross arm will be made up after the event starts.
4. Lineman may assist the groundman with rigging the new cross arm but will not be allowed to wear climbing tools while assisting without gaff guards on.
5. The neutral (both sides and clevis) must be covered
6. The phases must have two points of control at all times while tying and untying (both linemen with one hand each while tying and untying will be accepted)
7. Conductors can be floated as long as they are covered properly to protect from incidental contact.
8. Conductors are secured on am F neck pin insulator with 1/O AL wrap lock ties. (Screwdriver may be used to remove wrap lock ties, no knives or pliers)
9. After new cross arm is installed, conductors must be re-secured with wrap-lock ties. (Screwdriver may be used to install wrap lock ties, no knives or pliers).
10. The old rubber grommet may fall to the ground; the new one must be installed.
11. Time will stop when the work is complete and the last climber makes contact with the ground. The fall arrest must still be attached to the pole for inspection / verification of proper adjustment.

4kV Cross Arm Change Out



ITEM	STOCK NO.	QTY.	MATERIAL
Cb	04 3025	2	BRACE CROSSARM WOOD
De	04 4076	1	GAIN STEEL
Ea	04 5004	1	CROSSARM WOOD 6 PIN
Fb	04 8010	1	PIN POLE TOP
Fc	04 8020	2	PIN STEEL
I	12	4	CONNECTOR
Mf	14 1018	1	INSULATOR SEC. SPOOL
Mh	14 1030	3	INSULATOR PIN
Na	14 20	3	INSULATOR TOP TIE

ITEM	STOCK NO.	QTY.	MATERIAL
Nc	14 31..	1	TYGUARD
Vc	49 07..	1	BOLT UPSET 5/8" x ..
Vg	49 30..	3	BOLT MACHINE 5/8" x .. *(4)
Vj	49 5010	7	WASHER SQUARE *(8)
Vl	49 6010	1	LAG SCREW 1/2" x 4"
Vm	49 7010	2	CARRIAGE BOLT 3/8" x 4 1/2"
Vi*	49 3057	2	BOLT MACHINE 1/2" x 7"
Ca*	04 3020	1	BRACE-X-ARM WOOD ANGLE

Drawn By J. GARDNER
Approved By E.O.S.C.
Approved By
Date Approved 2/20/70

ORLANDO UTILITIES COMMISSION
500 South Orange Ave.
ORLANDO, FLORIDA

7.2/12.5 KV PRIMARY
2φ CROSSARM CONSTRUCTION
0° TO 5° ANGLE

Date 10/27/65
Date Revised 2/18/70 - J. BALLENGER
Section 3 Page 1

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Event Photos/Specs

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4kV Cross Arm Change Out

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12kV Pin Insulator Change

Mean Time: 12 Minutes
Drop Dead Time: 15 Minutes

Event Summary:

This event consists of replacing the pin-type insulator and standoff bracket in the middle position on a 3-phase pole (vertical construction). The primary conductor will be 1/O AAC and will be tied in with a preformed top tie with a rubber grommet. The primary will be worked with hotsticks (i.e. Wire tongs and saddles), and minimum approach distance must be maintained.

Event Specifications:

1. Team will have 5 minutes to set up, and all tools may be laid out on a competitor supplied tarp in the designated work area during this time.
2. Time starts at the judge's signal with the fall arrest system detached from the pole.
3. Rubber gloves will be required ground to ground.
4. All material must be sent up and down in a bag.
5. The neutral (both sides and clevis) must be covered.
6. Primary must be covered with rated hard cover on both sides; top and bottom only as long as MAD is maintained.
7. Wire tongs and saddles must be installed before any part of the tie is removed and must remain in place until tie is complete. Two points of control maintained at all times.
8. The old rubber-tube grommet may fall to ground without a deduction.
9. The new rubber-tube grommet must be installed on conductor. (Due to the complexity of installation, the new grommet may fall to the ground without a deduction. However, it must be sent back up on the handline and installed prior to completing the event).
10. Time will stop when the work is complete and the last climber makes contact with the ground. The fall arrest must still be attached to the pole for inspection / verification of proper adjustment.

Event Photos/Specs

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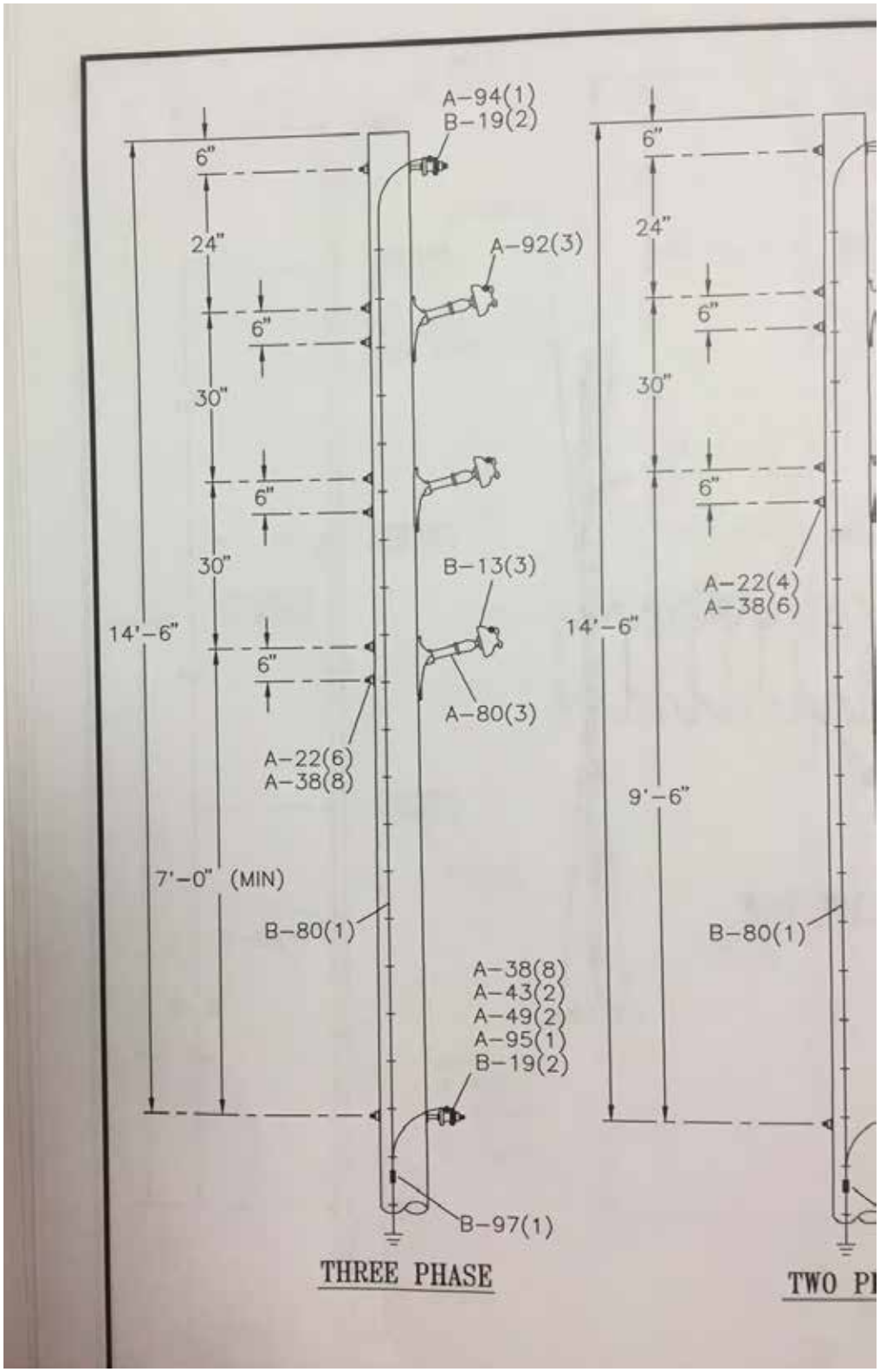
12kV Pin Insulator Change



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Event Photos/Specs

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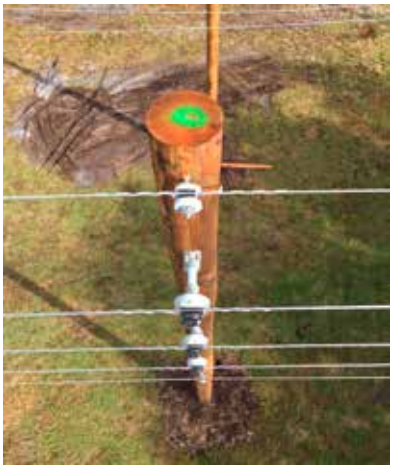
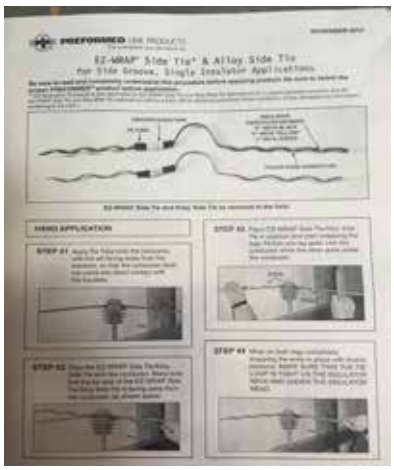
12kV Pin Insulator Change





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Open Delta Transformer Change Out

Mean Time: TBD
Drop Dead Time: TBD

Event Summary:

1. This event is simulated energized at 12 kV. Teams will replace a 15 KVA transformer weighing approximately 235 lbs. on a two phase straight-line overhead structure with #2 Quadraplex secondary wire. The old transformer will be lowered to the ground and then pulled back up simulating a new transformer.

Event Specifications:

1. Team will have 5 minutes to set up, and all tools must be laid out on a competitor supplied tarp in the designated work area.
2. Time starts at the judge's signal with the fall arrest system detached from the pole.
3. Climbers must wear class II minimum rubber gloves ground to ground.
4. The neutral and neutral clevis must be covered with rated cover-up before ascending above.
5. NESC 2012 minimum approach distance must be maintained at all times.
6. The primary jumper must be disconnected from the main line during this event.
7. All permanent connections must be brushed.
8. Secondary voltage must be checked for bad before de-energizing the existing transformer and also on the new transformer prior to hooking up the secondary leads. The transformer must be de-energized when the secondary leads are connected.
9. Cutout must be utilized to drop or pick-up load and must be done so in the proper order. A rated hot stick must be utilized to open/close cutout, the fuse must be replaced.
10. The transformer must be lowered and raised using blocks (3-2 blocks minimum) and a manufactured rated transformer gin.
11. Time will stop when the work is complete and the last climber makes contact with the ground. The fall arrest must still be attached to the pole for inspection / verification of proper adjustment.

Event Photos/Specs

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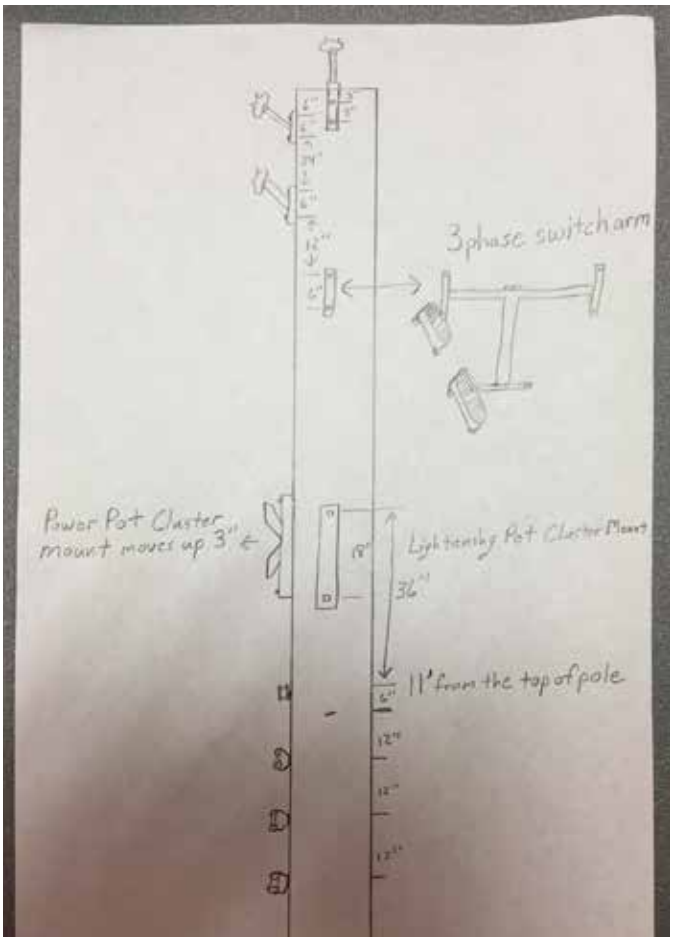
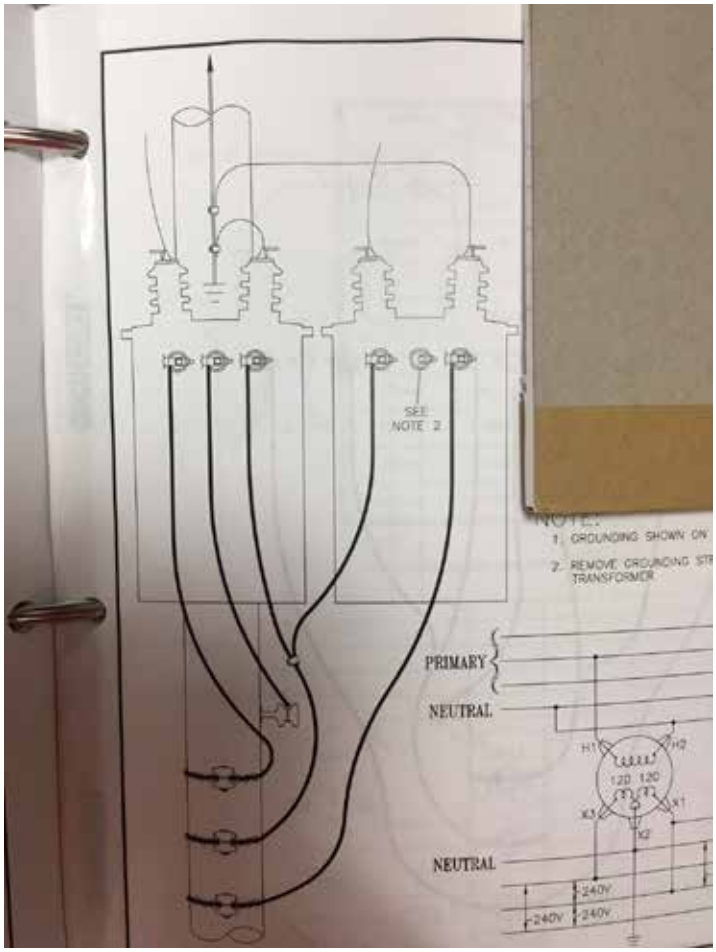
Open Delta Transformer Change Out





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Event Photos/Specs

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Open Delta Transformer Change Out

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Vertical Hurtman Rescue with AED

Mean time: 4 minutes/Drop Dead: 8 minutes

This team event will be run one time with all three team members participating to rescue the hurt man. Teams have 5 minutes to set up and ask questions. The switch (cutout) feeding the transformer must be opened before the climber can step onto the pole. It will be opened from the ground using an extendo stick and rubber gloves. The stick must be off the ground and the body anytime it is touching anything energized. The climber must wear rubber gloves ground to ground. Lineman will split handline and loop bottom part of handline around mannequin's legs. Then take the top part and wrap around the pole a minimum of one and a half wraps, take the rope under mannequin's arms and tie three half hitches (the splice cannot be part of the knot). The mannequin can then be lowered to the ground while the third member of the team uses the bottom part of handline tied to the mannequin's legs to pull mannequin on to the tarp. You must attempt to keep the mannequin off of the pole and hardware. There will be NO gigs for incidental contact of the mannequin on the pole, neutral or service provided the tagman is making an honest attempt. The mannequin must land with all of this body on the tarp provided, and he must hit the ground gently as if it where a real person. A 10x10 tarp will be provided and placed 5' from pole centered under switch. Once the mannequin is on the ground the team members will apply AED pads to the mannequin's chest and push the button on the machine to begin AED functions. (Competitors will not be required to apply the pads to the bare chest, they will apply over the clothing).

1. Time starts at judges signal with all team members at least an arm's length from pole and extendo stick.
2. All rubber gloves will be in glove bag cuffs down with no fingers protruding.
3. Lineman's belt and hooks will be on the ground opposite the switch side of the pole.
4. Extendo stick will be lying flat on tarp fully retracted.
5. All three team members must be used. One must climb, one must open switch, and one must tag the mannequin.
6. Time will stop when mannequin is on the tarp, AED pads are applied, and team calls for time. Slack must be on the handline and extendo stick must be fully retracted and back on tarp.
7. Climber will stay on pole and help hang mannequin.
8. Team will close switch back after time stops. Any team member can close it back and work gloves can be used.
9. You must use the eye to open and close switch.
10. When time starts extendo stick will be lying flat on tarp and must be back on tarp fully retracted before time will stop.
11. Climber must stay in 5 foot circle while he has his gaffs on.
12. Rubber gloves or work gloves must be worn anytime you are working or handling tools and equipment.
13. You must cut the Bashlin 57-A insert. There will be a 10 point deduction for cutting the belt in the wrong place
14. The blade of the climber's knife must not be exposed while climbing.
15. Judges will use a 4" PVC conduit between the rope and the mannequin to evaluate the rope knot, the eye splice can not be in any part of the knot.
16. You may use any standard knot or hitch on the mannequin's legs that can be easily removed (including placing the rope through the hook, but it must not come off).

Teams will provide their own:

Extendo Stick

Event Photos/Specs

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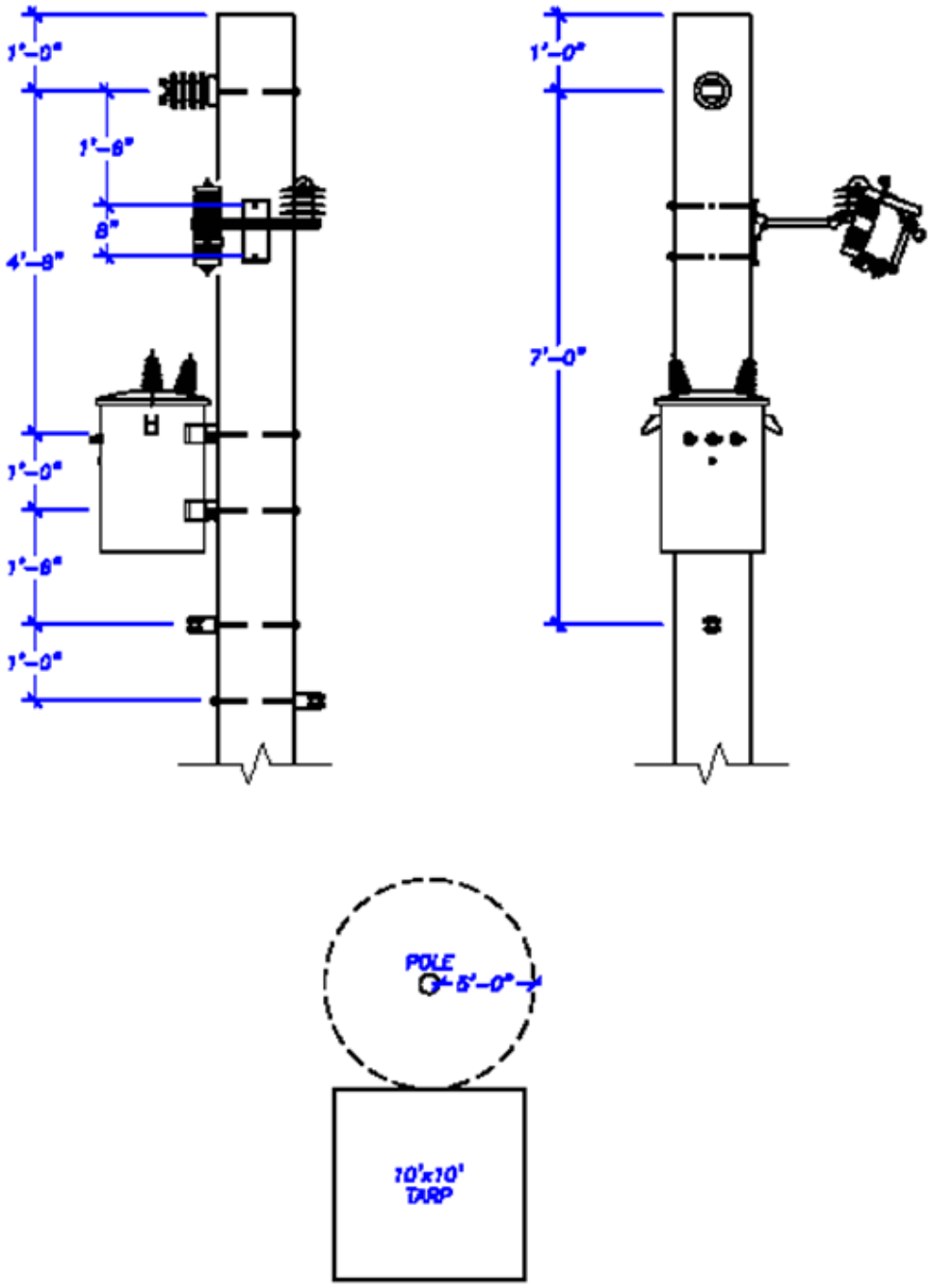
Vertical Hurtman Rescue with AED



Apprentice Events

Apprentice Rules

Apprentices

1. Unlimited number of apprentices per organization.
2. Apprentices must have worked four or fewer years in an apprentice program.

Mandatory Full Fall Arrest

The FMEA Lineman's Competition requires the mandatory use of personal fall protection for all Journeyman team and Apprentice climbing events. Fall protection systems shall be supplied by the competitor and be used in accordance with the manufacturer's specifications along with the use of a secondary work positioning strap or lanyard while transitioning around attachments on the pole. While using the secondary positioning strap or lanyard the competitor shall not get into a position to allow for a free fall greater than 0.6 meters (2 feet).

Fairness and Consistency must be shown

Each judge is encouraged to be competitor-friendly but must also be shown due respect by each competitor. If a judgment call could be considered questionable, the team will be given the benefit of the doubt. The competition event is intended to be a fun time for all and should not become stressful to either the participants or the judges.

Judging Irregularities

Should the Chief Judge observe inconsistencies in judging, he or she shall advise the Event Judge on the inconsistencies. If the discrepancies continue, the Event Judge shall be replaced with an alternate judge.

Change Out Lamp and Photocell

Mean Time: 4 minutes
Drop Dead: 6 minutes

Event Summary:

This event will test the apprentice's climbing skills, dexterity and speed. The apprentice will climb a 30' wood pole and change out a 100W HPS lamp and photocell on a cutoff type street light with a 3' street light arm.

Event Specifications:

1. Apprentice will have 5 minutes to set up in the designated work area.
2. Apprentice will wear leather gloves for this entire event.
3. Time starts at the judge's signal with the fall arrest system detached from the pole.
4. The apprentice will have a handline connected to a tool or nose bag, with a lamp and photocell in it.
5. Once the apprentice has ascended the pole and gets into working position, the handline must be attached to the pole. The apprentice will pull the bag up and secure at the top of the pole.
6. The apprentice will proceed to remove the photocell and then the lamp, in that order. They must be installed in the opposite order.
7. Once replaced, the apprentice must lower the nose bag to the ground, and railroad the handline before dropping it out, and descending the pole.
8. After the apprentice is on the ground, they must remove all climbing tools, install gaff guards, and roll up the handline.
9. Time stops when the handline is rolled up, and the apprentice calls time.

Change Out Lamp and Photocell

Hurtman Rescue

Mean Time: 4 minutes
Drop Dead: 8 minutes

Event Summary:

Time starts at the judge's signal with apprentice standing at least an arm's length from pole in any direction. Note: The apprentice's belt, hooks and rubber gloves in bag attached to belt will be lying on the ground at arm's length.

Event Description:

1. Looking at the pole from the cross arm side, the hand line will be hung on the right side simulating an injury to a right-handed person. The hurt man will hang on the cross arm side of the pole with both ends of the safety straps through the braces. Note: Always take a minimum of one complete wrap around the cross arm before lowering the hurt man.
2. Mannequin should be tied under arms with three half hitches. Note: (eye splice should not be used as part of the hitches). The half hitch is the only acceptable knot. A 4"conduit will be used to measure tightness of knot.
3. Be sure to call out "headache" loudly when you drop your hand-line sheave. The sheave will be dropped in the 5' circle radius at the base of the pole.
4. A Bashlin belt 57-N will be used on the mannequin. You must cut the Bashlin 57-A insert. There will be a 10-point deduction for cutting the belt in the wrong place.
5. Mannequin must be lowered smoothly to the ground without coming into contact with the pole.
6. Apprentice must climb down the pole smoothly and safely. Time will stop when the apprentice has both feet on the ground. The fall arrest must remain attached for proper adjustment verification by the event judge. Note: There must be one gaff in the pole at all times when climbing down the pole.
7. The apprentice must use the hand-line provided.
8. Rubber gloves will be required for this event. Gloves must be worn ground-to-ground.

Event Photos/Specs

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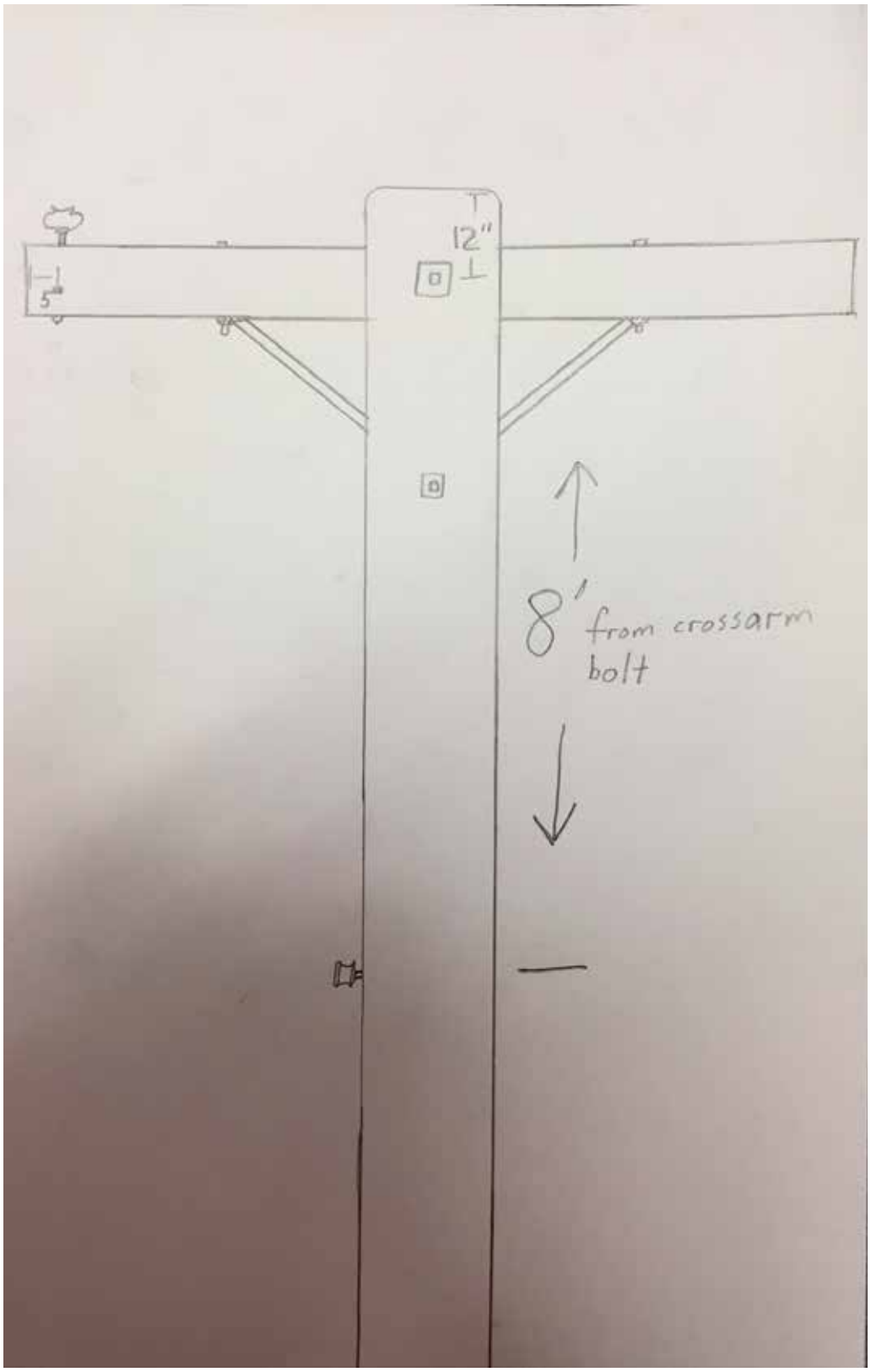
Hurtman Rescue



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2016 FLORIDA LINEMAN COMPETITION

Hurtman Rescue

Material Transfer

Mean Time: 10 minutes
Drop Dead: 12 minutes

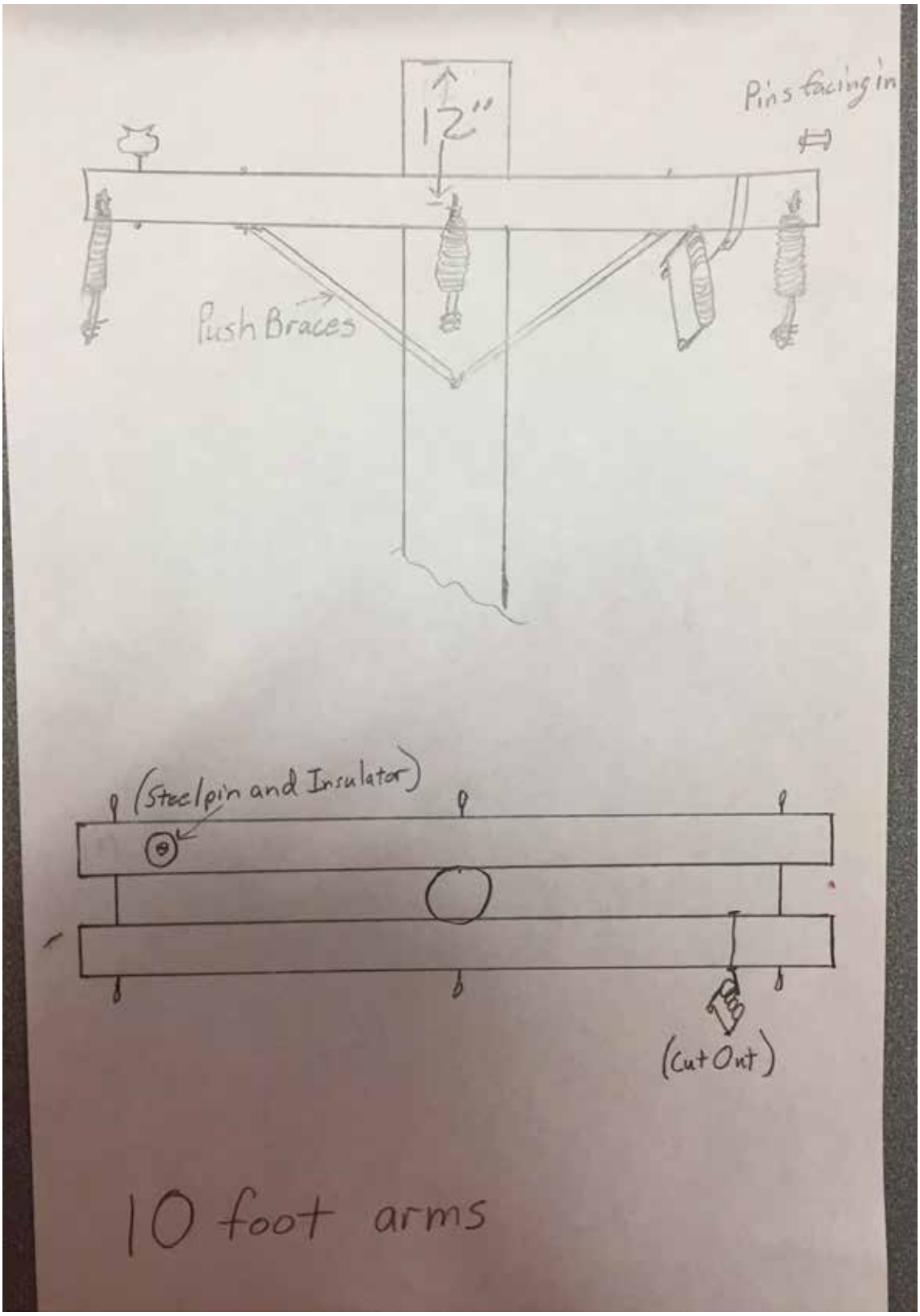
Event Summary:

This event consists of transferring material from one side of a set of double cross arms rigged as a deadend pole. Apprentice will move (3) sets of deadend insulators and shoes from one side of the pole to the other. The apprentice will also have to relocate one cutout and one F-neck pin insulator from one side to the other. The sequence for the material to be moved does not matter, only that all material will be moved to the opposite side of the pole from where the apprentice starts the event.

Event Specifications:

1. Apprentice will have 5 minutes to set up in the designated work area.
2. Time starts at the judge's signal with the fall arrest system detached from the pole.
3. The apprentice must carry a handline and must be attached to the pole when the apprentice gets into working position.
4. All pins on the deadend insulators and shoes must have the cotter key facing in towards the pole.
5. All hardware must be properly tightened with the appropriate tool (i.e. ratchet wrench or adjustable wrench)
6. Apprentice must railroad handline before dropping it out and descending the pole. Failure to do so will result in a 2 point deduction.
7. Time stops when the apprentice's first foot touches the ground. The fall arrest must remain attached for proper adjustment verification by the event judge.

Material Transfer



Event Photos/Specs

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Material Transfer

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Pole Top Pin Insulator Change Out

Mean Time: 5 minutes
Drop Dead: 8 minutes

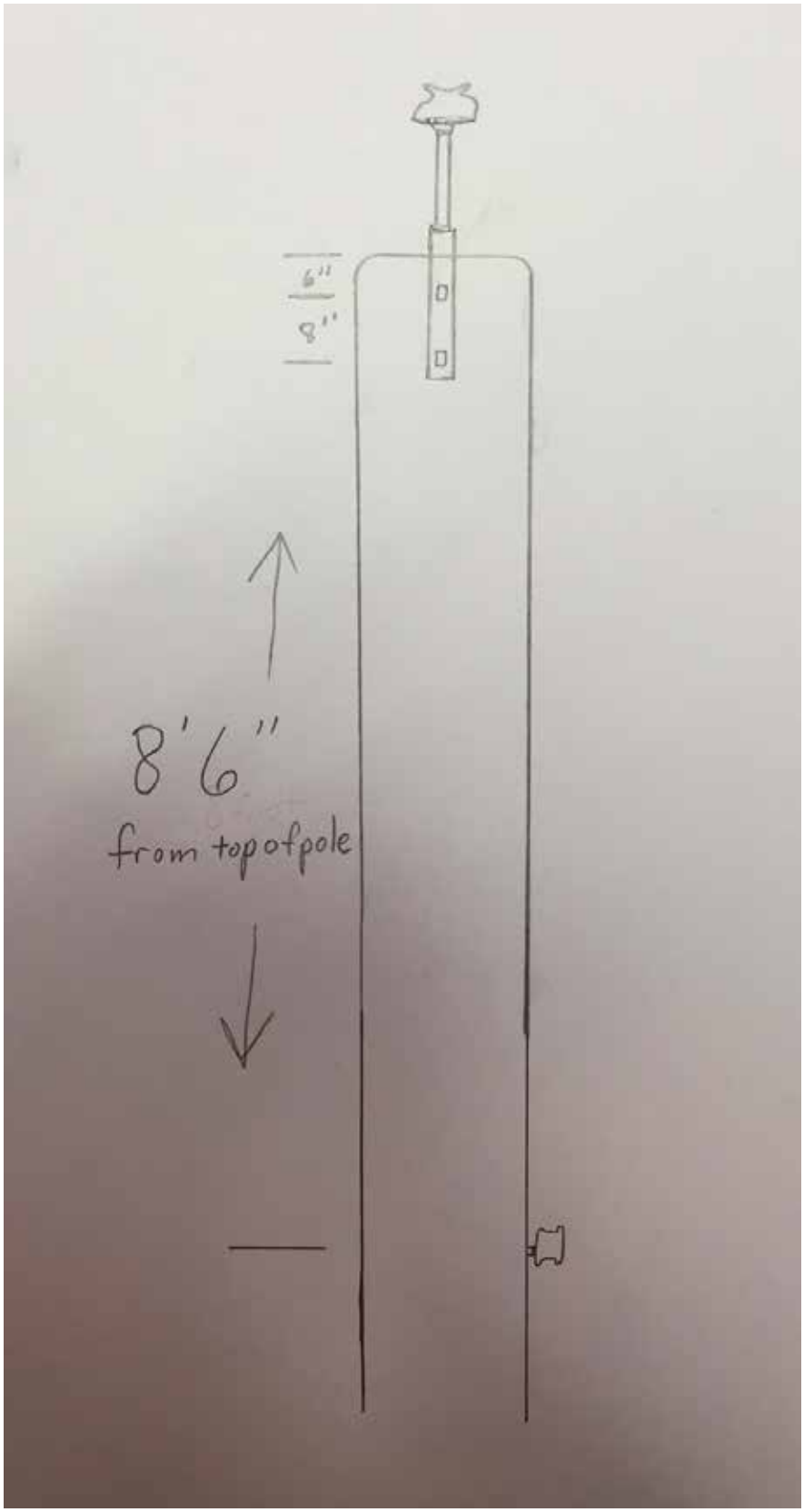
Event Summary:

This event consists of changing out the pole top insulator that is tied in with a preform wrap-lock with a rubber grommet. The event will be considered de-energized and grounded; therefore, rubber gloves will not be required. The apprentice must raise and lower all material in a bag attached to the handline.

Event Specifications:

1. Apprentice will have 5 minutes to set up in the designated work area.
2. Time starts at the judge's signal with the fall arrest system detached from the pole.
3. The apprentice must change out the pole top pin insulator.
4. All material will be raised and lowered in a material bag (including rubber grommet).
5. The new rubber grommet must be used.
6. A handline (not a straight line) is required for all raising and lowering of material.
7. The handline must be attached to the pole when the apprentice gets into working position.
8. A screwdriver may be used to remove the preform wrap lock (no knife or pliers).
9. Apprentice must railroad handline before dropping it out and descending the pole.
10. Time stops when the apprentice's first foot touches the ground. The fall arrest must remain attached for proper adjustment verification by the event judge.

Pole Top Pin Insulator Change Out



Event Photos/Specs

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Pole Top Pin Insulator Change Out

Secondary Spool Replacement

Mean Time: 10 minutes
Drop Dead: 12 minutes

Event Summary:

This event will consist of replacing the center secondary spool and preform tie on a transformer pole with open wire secondary conductors. They must climb the pole, remove jumper attached with a Parallel Grove Clamp to the center conductor, and change out the spool. The apprentice must open the cutout to the transformer prior to ascending the pole and close it from the ground to complete the event.

Event Specifications:

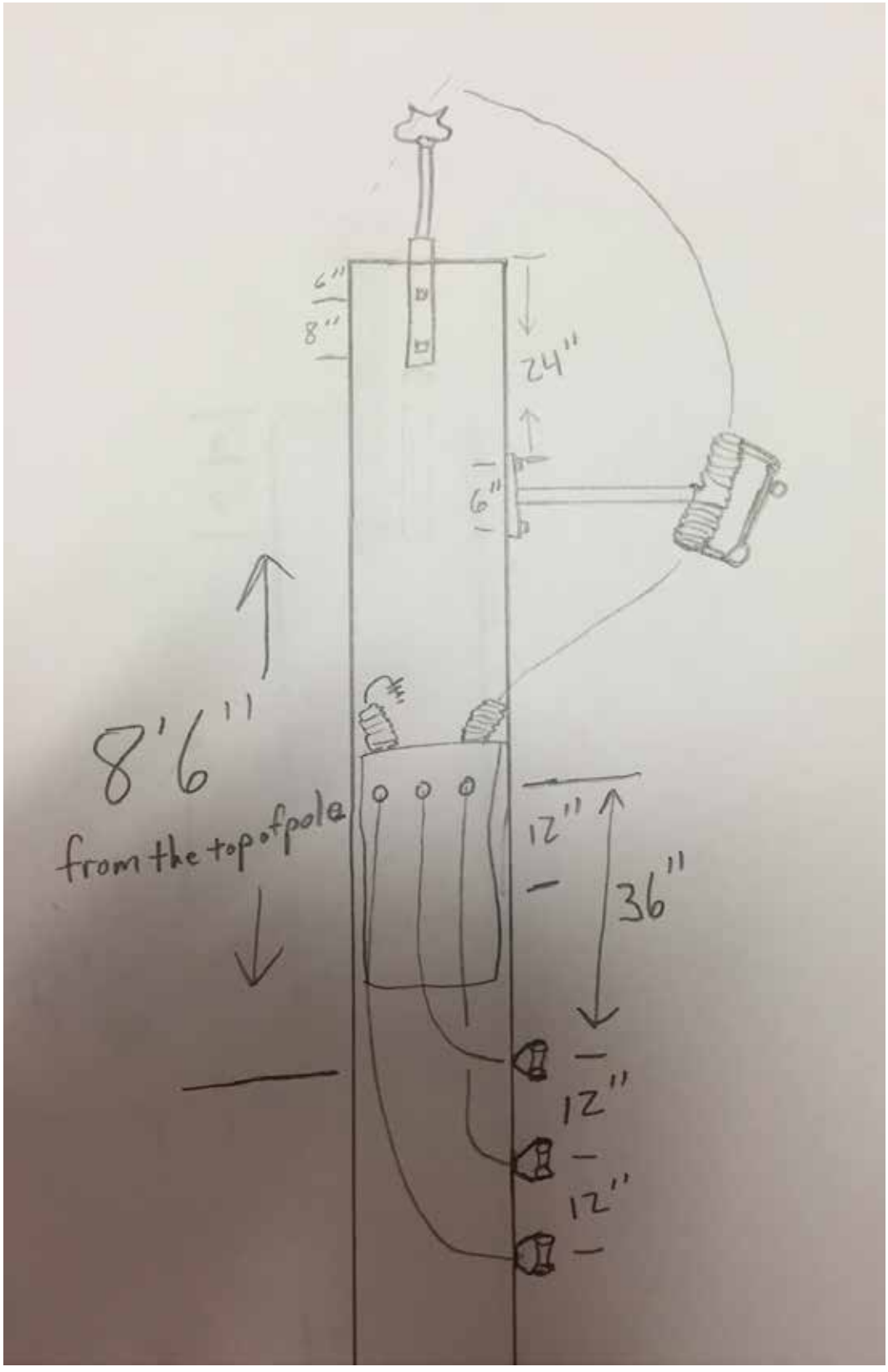
1. Apprentices will have 5 minutes to set up in the designated work area. Climbing tools must be laid out at least an arm's length from the pole without the fall arrest attached.
2. Time starts at the judge's signal.
3. Apprentice will open the cutout and fully retract the extendo on the tarp prior to tooling up. (You must hotstick the ring when opening and closing the door)
4. Rubber gloves must be worn ground to ground.
5. Leather gloves must be worn for work on the ground (including using extendo)
6. The apprentice must carry a handline and must be attached to the pole when the apprentice gets into working position.
7. Wire brush must be used on permanent connections.
8. Apprentice must railroad handline before dropping it out and descending the pole.
9. A new preform tie and spool will be issued to the apprentice and must be used.
10. Time stops when the apprentice is on the ground and closes the cutout.

Event Photos/Specs

FMEA • 16th Annual Florida Lineman Competition • March 11-12, 2016 • Orlando

2016 FLORIDA LINEMAN COMPETITION

Secondary Spool Replacement



To view large scale photos please visit www.publicpower.com/florida-lineman-competition-questions-for-the-judges-forum/

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