General Guidelines for Telecommunication Workers when Attaching to Electric Utility Assets

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Contents

Definitions

ANSI – American National Standards Institute (used in the utility business to set various standards for engineering and safety equipment.)

ASTM – American Society for Testing and Materials (used in the utility business to set various standards for electrical engineering and equipment.)

Attaching Utility – The communications vendor that has been given permission to attach its asset to the owner of the pole or structure being used.

Authorized – Given explicit permission by the local utility to work within given parameters on or near their assets.

Capacitor – A device, similar in nature to a battery, that holds a certain amount of stored energy to be used in improving power quality.

Cover-up – Literally a cover, generally made of a specific type of rubber or plastic that when used, may provide a barrier for electrical workers.

Cutout – a small mechanical gate that can be opened or closed to provide a point of isolation on the utility conductor. Generally used in conjunction with a fuse.

De-energized – a line that has been effectively connected to ground. A line that does not have the ability to become live.

Disconnect – a switch that can be used to isolate a section of utility conductor.

Energized – live. A conductor that is either carrying energy or has the ability to do so.

FR/AFR – Flame Resistant or sometimes "Arc" and Flame Resistant. (See NFPA)

Guying – A structural component of a pole line. Guys are wires of varying gauge that are strategically placed in order to provide maximum support for the pole line. Poles at the end of line or at a sharp angle will have more guying needs than poles in the middle of a straight run.

HRC – Hazard Risk Category – this is a series of levels of clothing protection for arc and flame protection. General use in the electric utility business is HRC 2.

Job Planning / JSA / Tailboard – Often used synonymously, although technically a JSA (Job Safety Analysis) is a more directed/detailed approach and a tailboard is meant to be performed at the jobsite. Both can be effectively used for job planning.

MPJU Agreement – Master Joint Pole Use Agreeement

NESC – National Electrical Safety Code – The legislated code book used in the United States for determining minimum engineering and safety standards for utility construction.

NFPA – National Fire Protection Association – The American organization that set the original standards for protective clothing in electrical environments. (See HRC)

PPE – Personal Protective Equipment - Includes, but is not limited to, hard hats, work boots, safety eyewear and traffic vests.

Recloser – A device (either electronic or mechanical) that will open in response to a rise in current and return the circuit to normal for a specific number of times.

Riser Pole – A line pole that has a primary cable running vertically along it. See the Image (Scenario 2) in the NESC attachment section.

General Guidelines for all Telecommunications Employees

100: Roles and Responsibilities

Sections 100-107 are general guidelines that should be followed to enhance safety awareness and work practices. These guidelines are written to clarify that the responsibility for safety rests on both the employer (company) and employee (worker). The employer should designate an employee in charge to represent the company. The employee in charge is responsible for making sure employees adhere to the work rules and the employee should assume responsibility for following safety rules.

Safety Officer

This is the company representative who is responsible under Cayman Law to provide site orientations and ongoing safety programming as required to all contract staff at a worksite. The Safety Officer is required to have the requisite knowledge, training and experience to recognise the hazards of the work and provide guidance on procedures and barriers to be used in controlling these hazards.

The Contractor's Safety Officer should be clearly identified on your daily job planning form. He/She may also hold supervisor duties as well.

For more information see *The Labour Law – Construction Industry Regulations 2008 Part II, Section 4.*

Supervisor

This is the company representative who will be responsible for ***organising the work*** at the worksite each day. The supervisor may conduct the pre-job hazard review (tailboard) or he/she may delegate this task to a competent individual. The company's supervisor shall be available to discuss any concerns workers or visitors to the site have regarding safety.

101: Job Planning

All work must be properly planned, taking into account all *workers*, the general public, *approved work procedures*, equipment, and the physical and environmental conditions at the *workplace*. The purpose of this process is to establish a *safe work area*, by identifying the job steps, hazards and appropriate barriers. The steps to be taken in case of an *emergency* shall also be documented. Job plans shall be available upon request at all job sites and be kept on file for a minimum of 12 months.

It is expected that the company has their own job planning procedure - including appropriately detailed forms for use in the field.

Regardless of the type of job planning tool used - the following items shall be included in every job plan:

- Date and location of the work
- Brief summary of the overall job to be completed (can use a work order number if available)
- Names of staff present
- Name and signature of the supervisor or designate
- Major job steps
- Major hazards identified
- Listing of all procedures/barriers used to control/minimize risk

Sample Job Planning/Job Safety Analysis forms are attached at the end of this document

102: Safety Meetings

It is expected that each company conduct safety meetings **at reasonable, documented intervals.** Monthly safety meetings are recommended.

These meetings are opportunities for workers to discuss safety concerns in a more formal setting without having to be concerned about their work performance. These meetings can take many forms, but at a minimum, they must have documented minutes and action logs. How you conduct your safety meetings is at your discretion, but to provide some guidance here are sample discussion points you may choose to use as a standing agenda:

- Review past or current incidents
- Review any work observations and their safety implications
- Review any new safety policies/procedures
- Invite your DataLink Contact to review safety concerns
- Review the safe operation of any new tools
- Provide a round table discussion for all to present any safety issues/concerns they may have

103: Inspections/Work observations

It is expected that each company conduct workplace inspections/observations **at reasonable, documented intervals.** Weekly inspections/work observations are recommended.

These inspections can take many forms, but at a minimum, they must be documented and archived. How you conduct your inspections is at your discretion, but to provide some guidance, here are sample inspection points that you may choose to include in a form for your use (or as guidewords to assist in directing your inspection):

- Check the daily job plan - ensure that adequate detail is shown for high risk tasks and the method used to control these risks.
- Review traffic protection needs and go over the requirements in this handbook.
- Review any special Personal Protective Equipment ("PPE") requirements - chaps, ballistic nylon, Fire Retardant ("FR") Clothing, hearing, etc.
- Talk with new or young workers - go over the job plan with them again and ensure that they were given adequate time to review and understand the requirements.

104: Safety Reporting

It is expected that each company report all incidents/accidents/near misses/hydrocarbon spills and any hazards. Do not assume that the incident is too minor to report. Please report all concerns to your own supervisor and your DataLink Contract Coordinator immediately.

Reporting and dealing with reported concerns can have a large positive effect on your safety performance and culture. Help foster a culture where reporting near misses (or near 'hits') is a positive learning experience.

105: Housekeeping

It is expected that each company will keep their work areas as organised as is reasonable given the work and environment. This includes, but is not limited to the following considerations:

- Store trash in proper containers
- Ensure chemicals are used, stored and disposed of as per manufacturer and regulation requirements
- Keep walkways clear - ensure pedestrians have a clear, safe area in which to move
- When working at height - ensure that small tools, debris cannot be accidentally dropped
- When working on customer/resident properties - ensure the utmost care is taken to minimize damage and ensure the site is left in a clean, safe condition

106: Personal Protective Equipment (PPE)

From *The Labour Law - Construction Regulations 2008*

1. **Hard hats:** Approved hard hats meeting specifications contained in ANSI Z89.1-1981 or Z89.2-1971, or both, shall be worn by all operatives on open construction sites and at all times where there is a risk of head injury from falling objects and where instructed by the Safety Officer.

2. **Safety Glasses and Goggles:** Safety glasses or goggles which meet ANSI Z87 shall be worn by all operatives whenever and wherever flying debris is likely and where instructed by the Safety Officer.

3. **Prescription glasses:** Operatives shall supply their own prescription glasses and wear them. The glasses shall either meet ANSI Z87, or suitable eye protection shall be worn over them.

4. **Gloves:** Gloves shall be worn when handling equipment, materials or chemicals that may cause cuts or skin complaints and where instructed by the Safety Officer.

5. **Footwear:** Safety steel toe-cap footwear shall be required by the Safety Officer where and when he determines that there is an increased risk of foot injury.

6. **Non-operatives:** Non-operatives (company office staff, project owners, architects, engineers, government inspectors, guests and all others) shall wear such safety protection as is determined by the Safety Officer to be necessary at any given time, based upon his assessment of the level of risk at that time.

107: Special PPE Considerations (in addition to those above)

7. Hearing Protection: For work in areas where the noise level exceeds 85db, appropriate hearing protection is required to lower the levels below 85db.

8. Arc and Flame Rated Clothing: For work within proximity to energised equipment. The clothing must meet either NFPA 70E requirements for HRC 2 clothing or have been tested and rated to a minimum ATPV value of 8 calories.

8. Face Shields: For work involving making or breaking load in flash areas or when specialised tools are being used which would require extra protection (e.g. grinders). Face shields shall be worn with a minimum HRC 2 level of protection and meet all ANSI specifications for impact resistance.

9. Insulated Rubber Gloves: For work within proximity to energised equipment. The gloves must meet the appropriate ASTM voltage class rating and have a valid test date clearly visible on the glove. Approved leather protectors must be used at all times and gloves shall be stored properly after use.

10. Leg Protection: Appropriate leg protection (chaps, ballistic nylon) shall be worn when operating a chainsaw.

11. Traffic Protection / High Visibility Clothing: Appropriate high visibility clothing shall be worn when working on roadways and thoroughfares. If working at night, appropriate retro-reflective (silver) striping shall be present on the garment.

108: Environmental

It is expected that each company will adhere to all applicable environmental requirements. These include, but are not limited to, the following:

- Proper handling and disposal of all rags and other absorbents used to clean hydrocarbon spills
- When bringing chemicals of any description onto worksites prior approval is required
- Approval requirements include procedures for proper handling, storage and transportation of your chemicals and the availability of material data sheets (MSDS)

Discuss with the *Cayman Islands Department of Environment* if you are unsure of your environmental responsibilities.

Requirements for Specific Work Environments*

200: Working in the Vicinity of Energized Electrical Power Assets

This section requires that communications employees maintain minimum approach distances between the communication employee and the electric supply lines and equipment. Communication companies can expect Datalink to Focus on these areas during routine quality inspections

Limits of Approach

For all workers who are not authorised by the local electrical utility (CUC), the following chart shows the minimum clearance distances allowed between any exposed energised equipment and the worker; if workers are holding tools, this is the minimum clearance between the tool and the energised piece.

It is expected that the contractor will have an observer on the ground watching these distances to ensure that they are not encroached upon.

Voltage	Minimum Safe Distance
All secondary (600 volts and below)	40 inches*
Primary Distribution (up to 15,000 volts)	10 feet
Transmission (69,000 volts)	16 feet

*Only permitted with previous agreements with CUC - otherwise 10 feet.

These limits must not be encroached upon to complete work.

Note: The use of rubber cover-up DOES NOT PERMIT you to encroach on these limits without permission.

201 Summary of the Master Pole Joint Use Permit Application Procedure[1]

Information on Seeking Approvals to Allow for 3rd Party Attachments on CUC-Owned Assets

1. The Attaching Utility must have a permit to attach from Datalink.

2. Prior to issuing the Permit - DataLink reviews the application to determine acceptance and the make-ready work requirements, if any.

   Note:

   a. Refer to **DEFINITIONS** Section I, sub-category S and **MAKE-READY WORK/INSTALLATION** Section VII of the Master Pole Joint Use Agreement for details on what constitutes Make-Ready Work.

   b. DataLink may be unable to grant and provide approval to attach to some poles. In such cases DataLink will decline the request and return the updated form; indicating the request was rejected, to the requesting Attaching Utility. Refer to **Exclusion of Poles from Joint Use** listed under the SCOPE OF AGREEMENT Section II, sub-category B of the Master Pole Joint Use Agreement.

3. If Make-Ready work is necessary (may include tree-trimming, pole replacement or changes to plant separation) - DataLink will proceed to have this completed prior to issuing the permit to attach.

4. Once the permit is issued – the attaching utility is authorized to make attachments in the designated location within their 'Assigned Space'. That is, LIME to attach at the bottom of their space, Logic to attach at the bottom of their space, DataLink to attach at the top of their space and Infinity to attach at the top of their space.

   Note:

   a. Refer to **DEFINITIONS** Section I, sub-category D and E of the Master Pole Joint Use Agreement, as amended in some instances by Deeds, for more information on **'Applicable Standards' and 'Assigned Space'.**

[1] Please See Master Pole Joint Use Agreement for Further Details

202 Summary of NESC Requirements for 3RD Party Attachments

Attachment Height

1. Adequate separation between licensees at pole to be maintained (ie.) CATV, Telephone or Fiber attachment bolt.
2. Maintain 40” (inches) from secondary conductors and 10’ (feet) from all primary voltages as per National Electric Safety Code (NESC) requirements.
3. Maintain minimum of 18’ (feet) ground clearance above street, road, driveway crossings or potential driveable areas. Note, lowest contracted space attachment starts at 18ft – 6in.
4. Maintain minimum 15’ 6” ground clearance at mid-span over areas that are not or will not be subject to vehicular traffic.
5. If additional height (separation) is required to maintain ground clearances, or mid span separation, adjustments are to be made in 6” (inch) increments with prior approval by asset owner.

Measuring

6. The minimum 40” (inches) separation distance from secondary wires shall be measured vertically below the lowest of the following items:
    a. Crossarm Bolt
    b. Bottom of open or potentially open disconnect blades
    c. Bottom of open or potentially open fused cutout fuse holder.
    d. Bottom of stress cone or molded termination of primary underground cable at risers (Shielded Cable).
    e. Top of riser pipe or molding on secondary or service risers (Unshielded Cable)
    f. Bottom of 3 or 4 position secondary rack
    g. Bottom of secondary or neutral bracket or clevis
    h. Bottom of transformer tanks
    i. Bottom of any frame (rack) mounted equipment such as capacitor, reclosers,

Holes/Alterations

7. Each licensee shall be allotted one attachment height (elevation) on each pole.
8. Licensee shall not double drill (cross drill) wood or fiberglass poles at corners. Bands shall be used as necessary.
9. No bands allowed on steel poles. Cross drilling allowed on steel poles with 6” separation.

10. All holes in pole, new and existing, shall be 6" (inches) apart. If 6" separation cannot be maintained, CUC approved steel banding shall be used except steel poles.

Strengthening of Poles - Guying

11. All necessary guying to be installed prior to installing support messenger. Asset owner will be responsible for ensuring guying is designed and installed to adequately support all fixtures and plant.
12. Licensee shall not double drill (cross drill) wood or fiberglass poles at corners. Bands shall be used as necessary.
13. When installing slack spans, care is to be taken so as not to place excessive loading or cause additional movement of existing facilities.

Grounding

14. Messengers shall be effectively grounded.
15. Multiple messengers on the same pole shall be bonded together – this is normally done through the use of a common ground (pole ground).
16. If a grounding provision is not available, the 1st telecommunications attacher on the pole will be responsible for installing an adequate ground. The ground conductor shall be made of copper and not be less than AWG No. 6. As per #15, all further attachments to this pole will use this ground for their own provision.
17. It is the responsibility of each telecommunications attacher to ensure the integrity of the ground prior to connection.

Excess Fiber Left on Poles

18. Communications companies shall take every reasonable opportunity to ensure that excess loops of fiber are promptly removed from poles.
19. Outside of the hurricane season, an allowance of four (4) weeks is given for slack loops of fiber to remain on utility assets – after this time, at the discretion of the Owner Utility, the excess fiber loops may be removed by Owner Utility, if they're not removed by the Attaching Utility. Every effort will be made to contact the Attaching Utility prior to removal.
20. It is understood that during hurricane season (June 1 – Nov 1) companies should be prepared to remove the excess fiber (slack loops) sooner, especially in instances where a storm making landfall on Grand Cayman is eminent. During these dates, slack loops of fiber will be allowed to remain on utility assets for two (2) weeks; however Attaching Utility must remove slack loops within three (3) working days of the announcement of a storm hitting the island and/or upon notification in writing from the Owner Utility.
21. It should be noted that at any time during emergency operations – the Owner Utility may remove communications assets if required for worker or public safety.

Mid-Span Drop

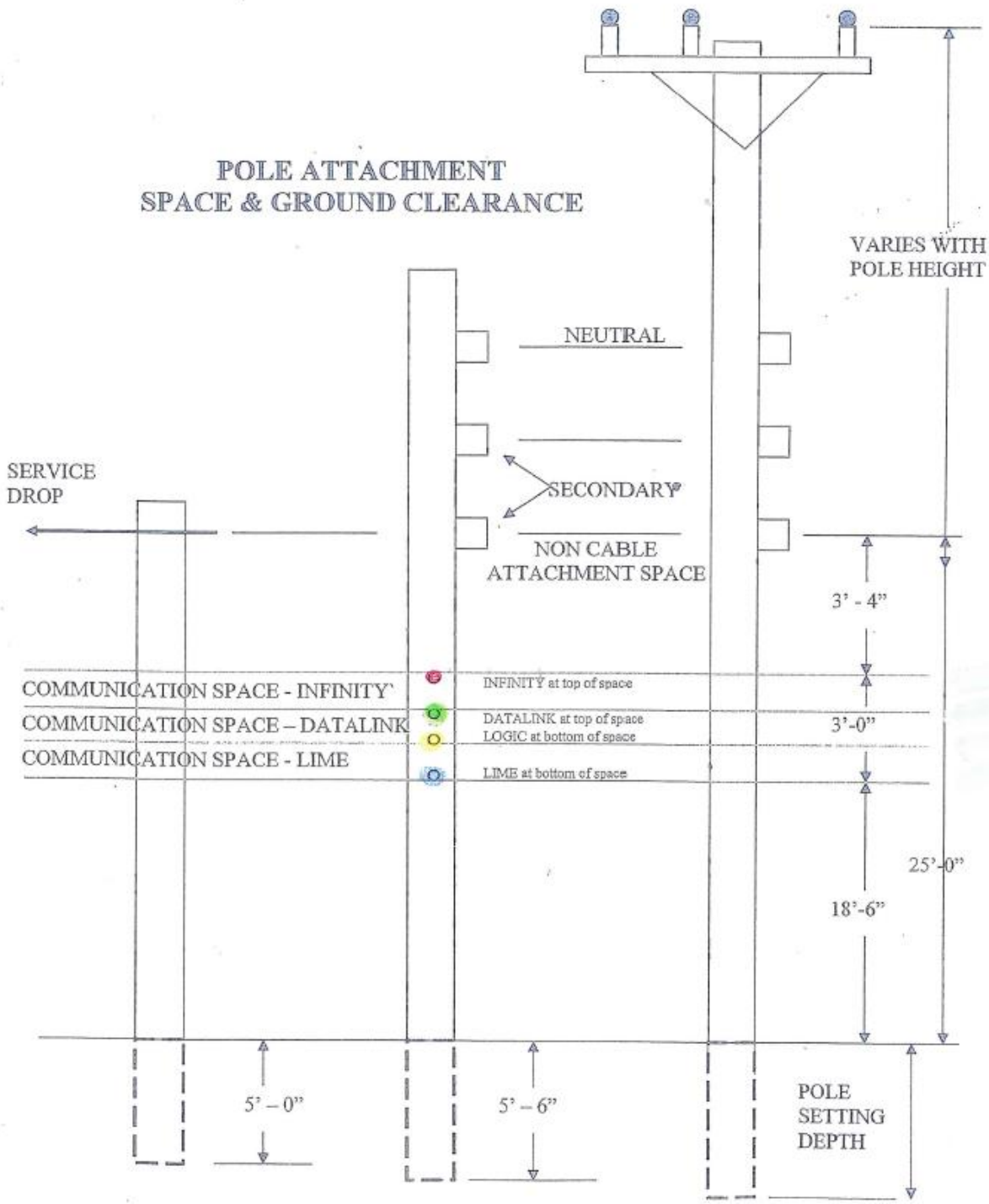
22. Mid-span fiber drops are allowed for fiber optic cables with a maximum of two (2) fiber strands.
23. Mid-span fiber drops shall not cause any major strain on the infrastructure. When a straight line is drawn between the two poles that are either side of the drop location, the mid-span fiber drop should not pull the main fiber from this center line.

Equipment on Poles

24. The Owner Utility will only allow small equipment to be installed on the poles such as Distribution Point (DP) boxes and splice cases. Attaching Utility should notify the Owner Utility of each equipment attachment.
25. The equipment must be mounted between 12ft – 16ft on the poles.
26. The Owner Utility will allow a maximum of two of this type of telecommunication equipment per pole on a first come first serve basis. The third prospective Attaching Utility will be directed to attach to a near by pole and overlash their cables, in accordance to the standards in the MPJU Agreement to the designated point if needs be.

Attachments

1. Pole Attachment Space and Ground Clearance Diagram



2. Joint Use Permit Request Form – Template

JOINT USE PERMIT REQUEST

REQUEST#: _____ FROM COMPANY: _____ NAME: _____

REQUEST DATE: _____ TO COMPANY: DataLink NAME: _____

DRAWING INCLUDED (Y/N): No CUC W/O#: _____
POLE WORK (REQUIRED BY): _____ W/O#: _____
ATTACHMENT WORK: (Y/N): _____
OTHER:

APPROVED: _____ DATE: _____

LOCATION: BLOCK _____ PARCEL _____

REASON FOR WORK:

NEW SERVICE [X] UPGRADING [ ] DETERIORATION [ ] CLEARANCE [ ]

OTHER (SPECIFY) _____

STRUCTURE TABLE-RECORD INITIAL ACTIVITY ONLY

ACTV.	LOCATION OF POLE	EXISTING POLE #	POLE #	EXISTING POLE HEIGHT	ATTACHMENT HEIGHT			
					DataLink	LIME	LOGIC	C3
					20' 6"	18' 6"	19' 6"	21' 6"

RECOMMENDATIONS: _____

ACTIVIITY CODES (ACTV): ATTACHMENT APPLICATION:(A) ATTACH. CABLE: (C) TRANSFER:(T) GUY:(Y)
MISC.WORK FOR C&W:(M) PLACEMENT POLE:(P) REPLACEMENT POLE:(R) MODIFICATION FRAMING:(X)

A) REQUEST: ACCEPTED [ ] REJECTION: [ ] SIGNED: _____ DATE: _____

REASON FOR REJECTION: _____

B) POLE INSTALLATION COMPLETE: _____ SIGNED: _____
C) TRANSFERS COMPLETE CUC: _____ SIGNED: _____
D) TRANSFERS COMPLETE LOGIC: _____ SIGNED: _____
E) POLES REMOVED: _____ SIGNED: _____
F) MISC. WORK COMPLETED: _____ SIGNED: _____

Refer to the MASTER POLE JOINT USE AGREEMENT for comprehensive details of the Agreement.

204 Working at Heights

Working at height (above 6 feet[2]) requires that workers employ one of three approaches to fall protection. [3]

Listed from most to least complex:

- **Travel Restraint -** Limiting (by any means necessary, including ropes, guardrails, visible barriers, body belts) the workers ability to access an area where he/she could free fall more than 6 feet.
- **Work Positioning / Fall Restriction -** To be used when the worker is using a structure (including permanent or properly secured ladders) as a work platform. This approach considers that the platform is providing a layer of fall protection on its own, so less engineered approaches to fall protection can be employed. A common example is the use of a simple body belt and lanyard to maintain work positioning on a ladder.
- **Fall Arrest -** A fully-engineered and appropriately rated system. The system commonly includes a full-body harness with appropriate attachment points, properly rated multi-action connectors and a shock absorbing lanyard. This must be used whenever a potential free-fall risk exists and when working in specific high-risk work environments (e.g. working from a bucket of an aerial device and working in a confined space).

[2] *The Labour Law – Construction Industry Regulations 2008 Part VI, Section 13.*

[3] This is a detailed topic that requires training and equipment. The intention of this guide is to reinforce these concepts only.

From *The Labour Law – Construction Regulations 2008 and CUC Internal Safety Policy*

EQUIPMENT	REGULATORY REQUIREMENT
Scaffolds	• A scaffold shall be used where there is no solid construction to stand on and where the work cannot be done safely while standing on a ladder. • Manufacturers' guidelines shall be followed at all times. • A scaffold shall be erected only by trained individuals. • Unstable objects or makeshift devices to increase the working height of a scaffold shall not be used, and portable ladders as a means of increasing the working height may be used only after the Safety Officer has determined that the stability of the structure has not been compromised and adequate fall protection is in place. • Straddling, standing on, or working outside of, the guardrail is prohibited. • **A worker shall not position himself, or use tools or equipment, where there is a possibility of contacting an energized overhead line;** if any portion of the body of the worker will or is **likely to come within 20 feet of an energized line,** an electrical utilities provider shall be contacted for additional requirements.
Fall Arrest Systems	**A safety harness and lanyard shall be worn in any of the following circumstances** • on all scaffolds with incomplete decking or incomplete guardrails; • on sloping roofs; • within 6 feet of the edge of floors or roofs where there is no edge protection; • **in any unprotected elevated position 6 feet or more.** **Further requirements** • The operator of a workplace shall ensure that a worker using a harness or lanyard is trained to wear it correctly and to use it safely. • A lanyard shall be fastened to the full body harness and secured to an object…that is capable of holding 5, 000 pounds… • A lanyard shall not allow a fall of 5 feet or more. • A harness or lanyard shall be inspected daily by the person using it.

Ladders	• A ladder shall be inspected prior to use. • A ladder with loose, broken or missing rungs, split or bent side rails, or other defects shall be removed from service. • A ladder (other than a stepladder) shall extend approximately 3 feet above a safe landing or parapet wall. • A ladder shall be set up with a 4-vertical to 1-horizontal slope. • Ladders should preferably rest on the Poles and not the cables or equipment. If the Attaching Utility wishes to rest a ladder on its own cable, it should be done within the guidelines of the NESC or similar standard. **A metal ladder or wire-reinforced wooden ladder shall not be used near an energised electrical conductor**. Regarding Stepladders: • Spreaders shall be locked in place and legs fully extended. • The top two steps of a stepladder shall not be used for standing. • Stepladders shall be used at 90 degrees to the work; not adjacent to the work. **Only communication workers with the required equipment and training as specified in the Master Pole Joint Use Agreement shall be permitted to use temporary ladders mid-span.**
Aerial Devices	Aerial devices/boom trucks shall be operated within: • the limitations of the manufacturers' specifications; • current legislation; and • the *Safe Limits of Approach* • Aerial devices/boom trucks shall be visually inspected for structural, mechanical and hydraulic defects, including holding valve checks, each day, prior to the equipment being used. These inspections shall be performed in accordance with manufacturers' specifications and current legislation, and shall be documented. • *Workers* shall not be allowed to remain in the bucket of an aerial device during *emergency* lowering operations when pressure on the hydraulic system is manually released. • An approved safety harness attached to an approved lanyard system, shall be worn by any employee in the aerial device.

205 Working on Roadways

From *The Labour Law – Construction Regulations 2008*

25. (1) Where a hazard exists, signs, signals and barricades warning of that hazard shall be put in place and be visible at all times.

    (2) A street, road, highway or other public thoroughfare that is closed to traffic shall be protected by barricades on which shall be placed secure and highly visible warning signs or signals.

    (3) Barricades shall be located at the nearest intersecting street, road, highway or other public thoroughfare on each side of the blocked section.

    (4) Open trenches and other excavations at locations referred to in paragraph (2) shall be provided with suitable signs, signals or barricades to ensure adequate protection to the public; obstructions such as piles of materials and equipment shall be provided with similar warnings.

    (5) The barricades and obstructions referred to in this regulation shall be illuminated by means of warning signs or signals from sunset to sunrise.

    (6) Materials stored on or alongside a street, road, highway or other public thoroughfare shall be so placed, and the work at all times shall be conducted, so as to cause minimum obstruction and inconvenience to the public.

    (7) Anything that is placed due to a hazard shall be removed when the hazard no longer exist.

Working on Cayman roadways and thoroughfares requires the application of reasonable traffic control methods. Always err on the side of caution regarding traffic control. If you decide that the level of control is more than what is necessary for your safety, you can remove cones/shorten tapers to accommodate after watching traffic response.

Many roadways in Cayman are too narrow to allow for working vehicles to be present and allow the free flow of traffic. If you are concerned about your level of traffic control **stop work immediately, review the job plan and discuss alternatives.**

These may include but are not limited to:

- Starting work at a less busy time of day
- Requesting a road closure with traffic control persons present (flagmen)
- Requesting RCIP officers in busy intersections/roadways to assist in controlling the flow of traffic.

The following are guidelines to assist in your job planning process. If you have concerns, please contact your DataLink Contract Coordinator for clarification.

- *Workplace barriers around vehicles should consist of at least ten (10) cones for heavy-duty vehicles and at least eight (8) for other operational vehicles. This includes applicable space for tapering or guiding traffic when applicable.*
- *Wherever possible, barriers around vehicles shall be on the traffic side and shall be at the front and the rear sections of the vehicle to alert oncoming traffic. These barriers shall consist of both signs and cones.*

(See attachments for Sample Traffic Setups)

206 Chainsaws and Wood Chippers

Chainsaws:

1. Gasoline-powered chainsaws shall be equipped with an anti-kickback chain or device and a chain brake.
2. Workers must be trained and competent in the use and maintenance of chainsaws.
3. No one other than the operator shall be within 6 feet of a chainsaw in operation.

See *Section 106: Personal Protective Equipment* for protective clothing requirements.

Wood Chippers:

1. Prior to servicing, the ignition should be in the off position and the key removed or the chipper shall be otherwise rendered inoperable.
2. See *Section 106: Personal Protective Equipment* for protective clothing requirements.
3. Workers shall not stand or walk directly in front of the exhaust chute when the chipper is operating.
4. When feeding brush into a chipper, workers shall wear loose fitting gloves and stand to one side of the feeder chute to prevent injury due to kickback.
5. Do not use hands or feet to push brush past the face of the feeder chute.
6. Do not tamper with any safety interlocks / devices installed by the manufacturer for worker safety.

207 Trenching and Shoring

From *The Labour Law - Construction Regulations 2008, Section 28.*

- Excavations and trenches shall be inspected by a Safety Officer daily and after every significant rainfall to determine if they are safe.
- Ladders or steps shall be provided in all trenches 4 feet or more in depth and shall be located so as to require no more than 25 feet of lateral travel before having access or egress.
- Material excavated shall be stored at least 2 feet from the edge of the excavation or trench and shall be stored so as to prevent material from falling into the excavation.
- All trenches and excavations shall be barricaded during times when no work is taking place to prevent persons from walking into them.
- A barricade may consist of steel reinforcing rods driven into the ground with caution tape strung between.

List of Attachments

- NESC Joint Use Setup Scenarios
- Job Safety Analysis Form 3A/B
- Incident Reporting Form 4A
- Traffic Protection – Set-ups with minimum Requirements 5A – 5E
- Worksite Observation Assessment Sheet Form 6A/B

NESC Attachment Scenarios

Scenario1: Primary Circuit with 3 Single Phase Transformers Banked – Feeding Services and Open Bus Secondary Conductors.

Scenario 2: Primary Circuit with Underground Primary Transition with Open bus secondary underbuild.

Sample of **Job Safety Analysis Form 3A**

Job Safety Analysis Form 3A Sample Only

Job / Activity Name: Extend Weather head		**W/O #** #######	**Start Date:** 00/00/00	**Valid Through:** 00/00/00
Department / Group Name: Lines/Planning	**Bldg / Area Location(s):** House #21 Spinnaker Way	**PPE requirements:** ☐Hard Hat, ☐Steel toe Boots, ☐Safety Glasses ☐Visible clothing ☐Safety Vest ☐ Work Gloves ☐Rubber Gloves ☐Harness/Lanyards ☐FR Clothing		
Scope of Work {Work Order Attached ☐} Extend weather head and replace service wire on pole #				

Hazard Identification List: SELECT HAZARDS ASSOCIATED WITH TASK

☐ Falling from heights ☐ falling objects /structures ☐ Dangerous trees ☐ live apparatus ☐ exposed energized conductors ☐ Limits of approach ☐ Underground utilities ☐ Traffic conditions ☐ Public safety☐ Confined space ☐ Condition of structures ☐ Weather conditions ☐ Terrain ☐ Other utilities ☐ Pole in Poor Condition

Step	Job Step	Major Hazards	Controls
1.	Area Set Up	Traffic, Pedestrians, Live Equipment	Cones, signs, Barricades, rubber gloves, service de-energized, rubber coverup
2.	Set up scaffolding	Falls from heights, Load shifting, Stability, Live lines	Proper rigging, harness/lanyard, scaffold inspections daily, scaffold levelling, utilize proper lifting techniques, work gloves rubber coverup
3.	Set up ladder	Falls from heights, load shifting, Stability	Fiberglass ladder, place on firm footing, non-slip feet, Structure inspection, ladder tied off, harness/lanyard
4.	Extend weather head/ change service wire	F/H Live lines,	Harness/lanyard, rubber gloves, proper rigging

Sample of **Job Safety Analysis Form 3B**

Job Planning Sample 3B

Worker: I understand and will adhere to the steps, hazards, and controls in this JSA. I understand that performing steps out of sequence may pose hazards that have not been evaluated nor authorized. I will contact the person who authorized my work prior to continuing, if the scope of work changes or new hazards are introduced.

I understand that I am authorized and required to stop work that I believe to be unsafe.

WORKER REVIEW, SIGN & DATE

Name (print) Signature Date

Authorizer (administrative or functional supervisor, foreman, POC) I have reviewed the steps, hazards and controls described in this Job Plan with all workers listed above and authorize them to perform the work. Workers are qualified (that is, licensed or certified, as appropriate, and in full compliance with Caribbean Utilities Company requirements) to perform this activity.

PERSON IN CHARGE OF JOB SITE

Name (print) Signature Date

CUC Supervisor/Foreman/Crew Leader

☐ I have communicated unique hazards, boundary conditions, and other items as required with the authorizer or listed worker(s) and have coordinated this job with affected parties. Listed workers are released to perform described scope of work.

List boundary conditions, notes, etc: CUC SUPERVISOR, LINE CREW, OR PLANNER

Name (print) Signature Date

Reviewed by: David Watler Revised by: Bill Shewan Revision Date: April 14, 2014

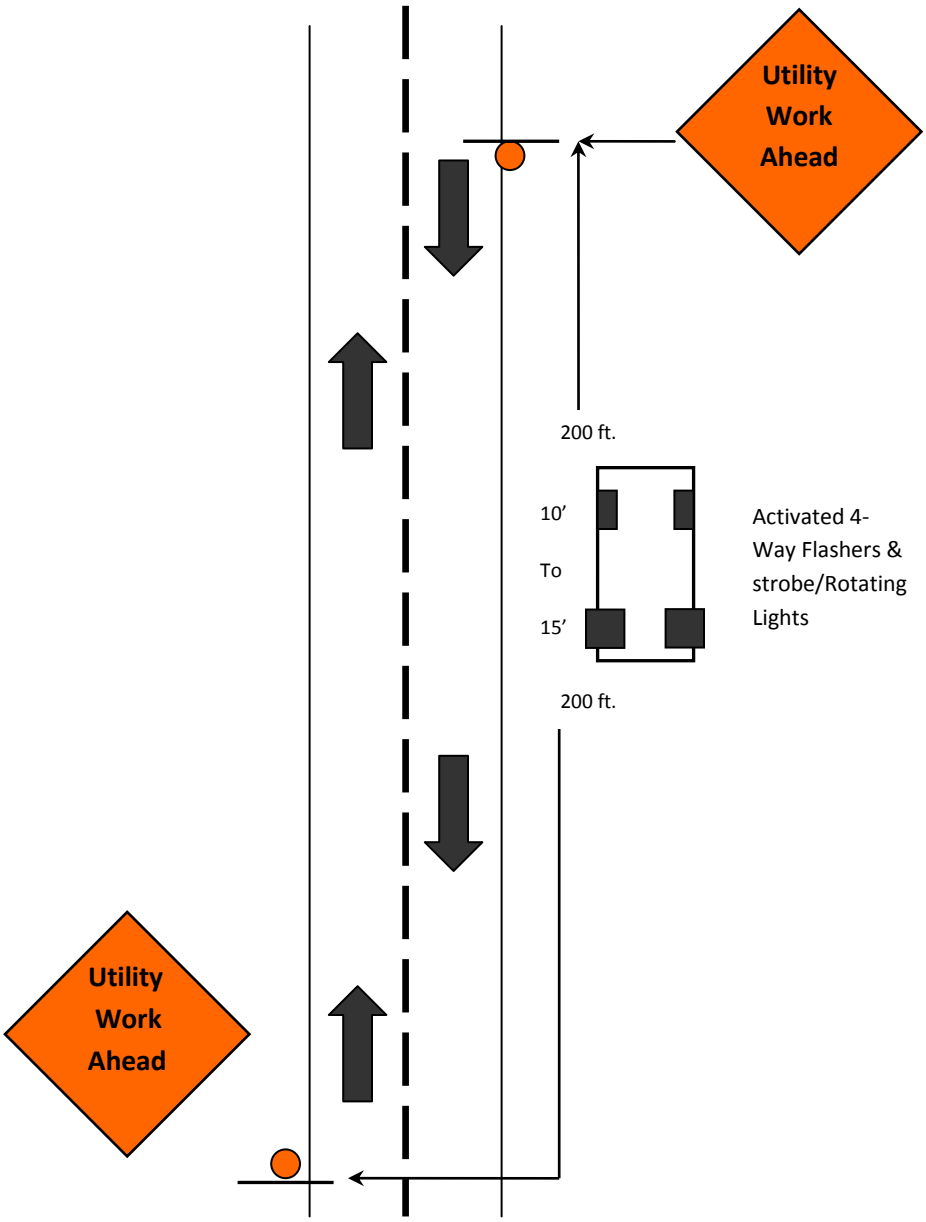
Sample of **Incident Reporting Form 4A**

INCIDENT REPORTING FORM 4A

LOCATION/DEPARTMENT:		
DATE & TIME OF OCCURRENCE:		
DID THE ACCIDENT RESULT IN:	**Medical Aid? Y/N** **Lost time? Y/N** **Near Miss? Y/N**	
LIST EMPLOYEES INVOLVED:	**Name**	**Job Title**
DESCRIPTION OF THE ACCIDENT / NEAR MISS	**DESCRIBE THE PROTECTION OR METHODS IN PLACE TO REDUCE OR ELIMINATE THE RISK**	
LIKELY CAUSE(S) OF UNWANTED EVENT: **1.** **2.** **3.**		
CHANCE OF RECURRENCE? (circle one)	**High** **Moderate** **Low**	
ACTIONS TAKE TO PREVENT RECURRENCE: **1.** **2.** **3.**	**PERSON RESPONSIBLE AND DATE FOR COMPLETION** **NAME:** **DUE DATE:** **NAME:** **DUE DATE:** **NAME:** **DUE DATE:**	
SUPERVISOR'S SIGNATURE *(SIGN OFF WHEN ALL ACTIONS COMPLETED)* Date:		

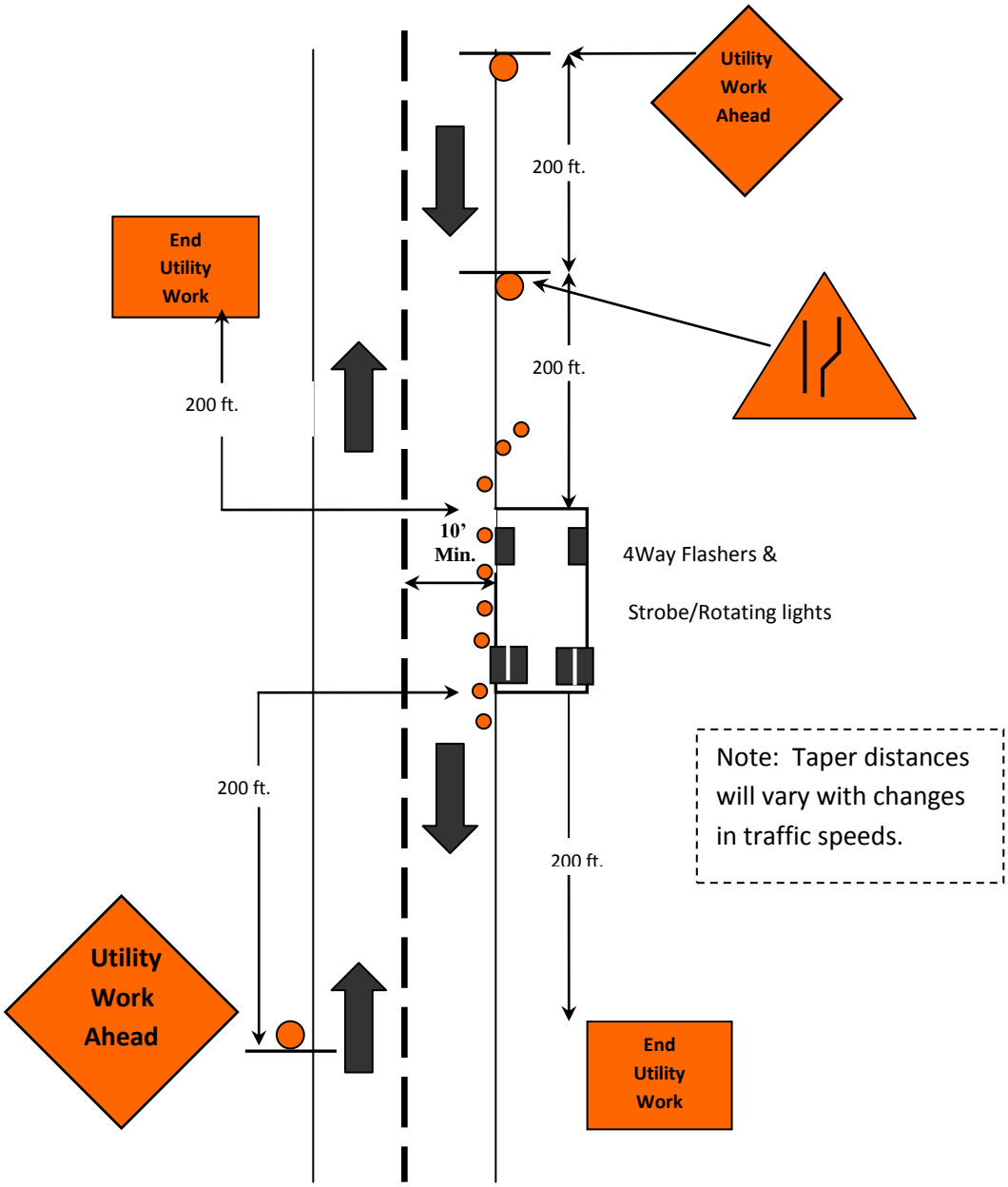
Traffic Protection

Outside the Shoulder 5A



Traffic Protection

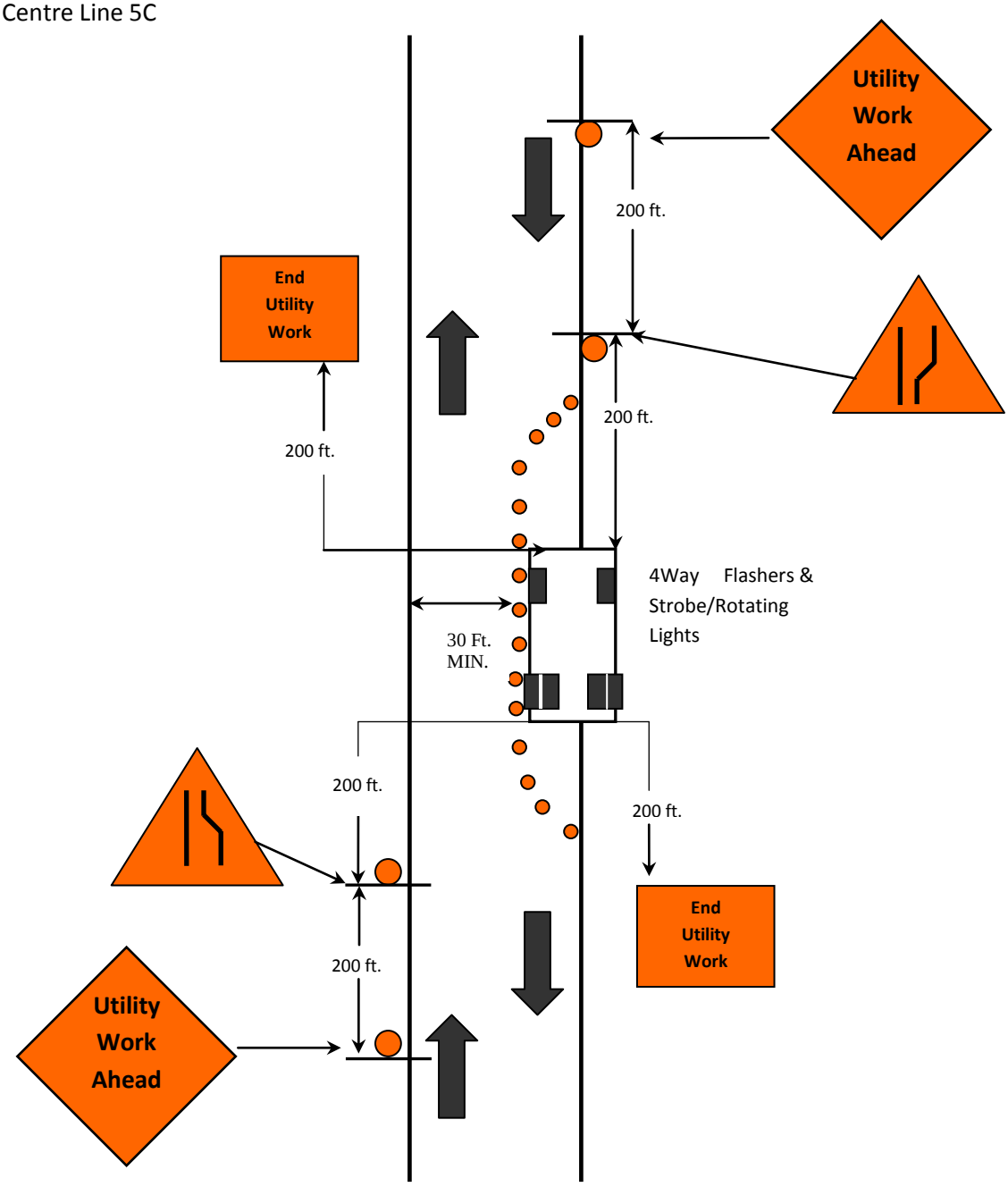
On the Shoulder 5B



Traffic Protection

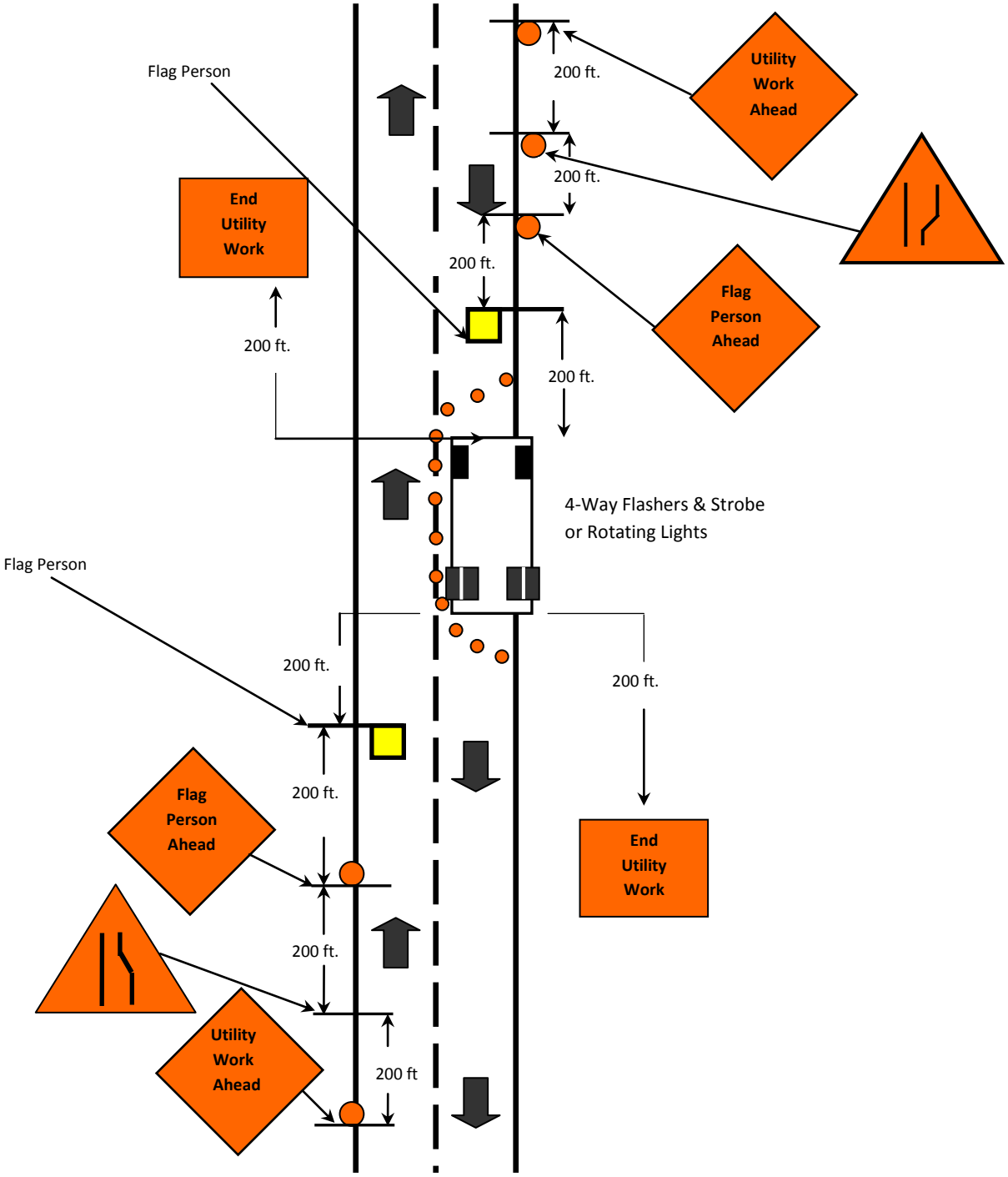
Low Volume Roadway

No Centre Line 5C



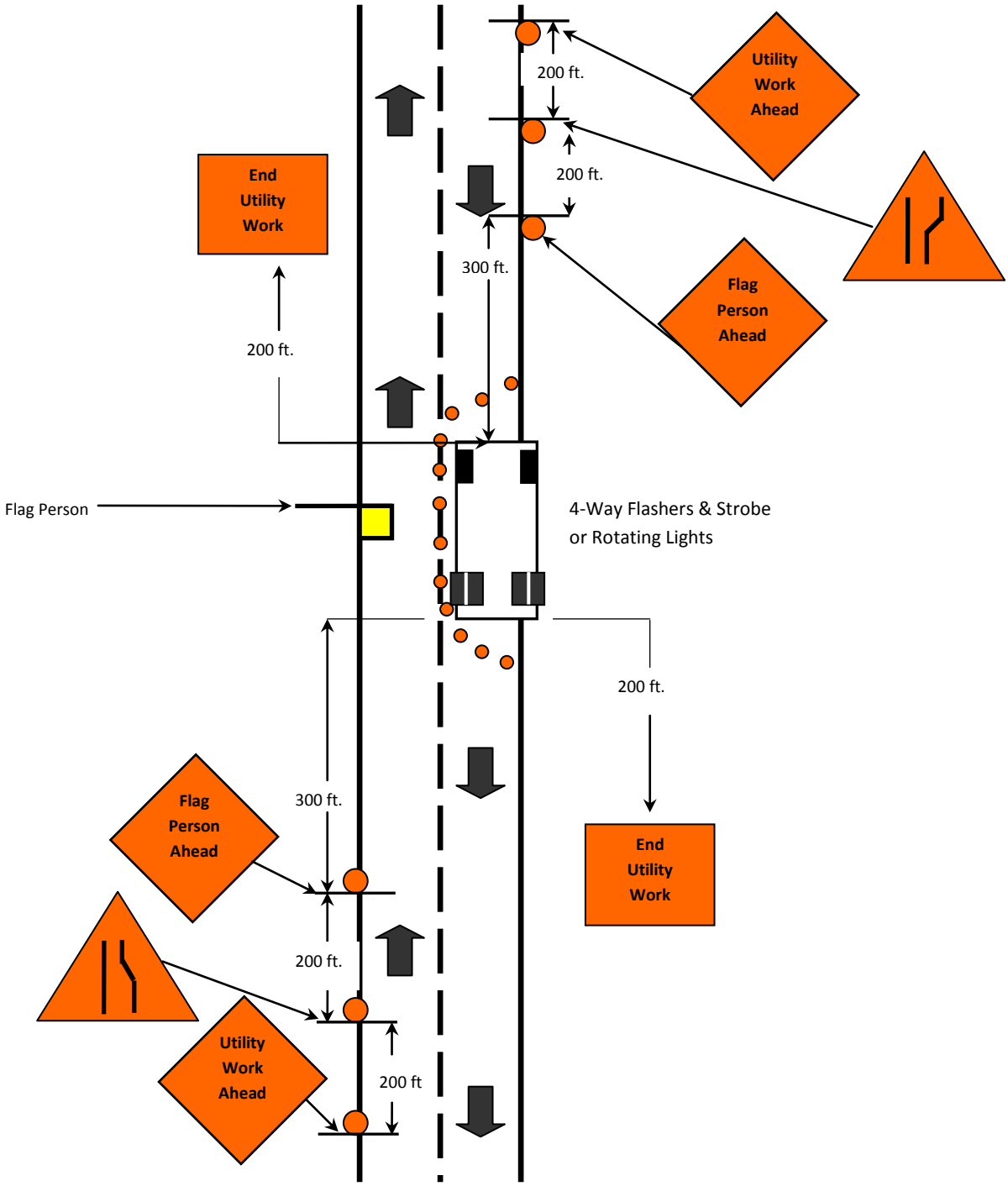
Traffic Protection

Lane Closure - 2 Lane Roadway (2 Flag Persons) 5D



Traffic Protection

Lane Closure - 2 Lane Low-Flow (1 Flag Person) 5E



Sample of **Worksite Observation Assessment Sheet Form 6A** (front)

Worksite Observation Assessment Sheet Form 6A

Department /Contractor	Date of Observation
Manager/Site Foreman	Time of Observation (24 hr)

Type of Inspection:	Specific Location (road, block and parcel, building)	☐ - Plant
☐ - Observation		☐ - Administration
☐ - Routine		☐ - Sub-station
☐ - Other _____		☐ - Transmission & Distribution

Site Information

Location	Vehicles in use? Y/N	# of employees on site	Name of Employees engaged in activities (If more; attach page)
Job Type	If yes, # of vehicles in operation		1. _____
Manager/Site Foreman	Vehicle ID #(s)		2. _____
			3. _____
			4. _____
			5. _____
			6. _____

Items Presented

Person(s) Responsible for Corrective actions				
Job Plan/Tailboard Document Hazards/Barriers identified: ☐ Electrical ☐ Mechanical ☐ Chemical	☐ Yes	☐ No	☐ N/A	Notes Written and available for view Y/N
Vehicle Set-up ☐ Suitable Location ☐ Braking Device ☐ Chocks/Outrigger pads ☐ Public Safety ☐ Grounding	☐ Yes	☐ No	☐ N/A	Notes Vehicle in good working order Y/N
Traffic Control ☐ Cones ☐ Signs ☐ Flashers/Hazard lights	☐ Yes	☐ No	☐ N/A	Notes
Work Protection ☐ Visible Tags ☐ Visible clearance Sheet/ Switching Order ☐ Form ☐ Area Grounding/Bonding ☐ Visible Permit to Work	☐ Yes	☐ No	☐ N/A	Notes
Work Method and Procedures Visible ☐ Cover-Up ☐ Rigging ☐ Limits of Approach ☐ Appropriate Tools /Equipment available	☐ Yes	☐ No	☐ N/A	Notes

OBSERVATIONS

Notes & Illustrations	General Requirements
	Fire Extinguishers ☐ Sanitary Facilities ☐ Lunch Area ☐ Drinking Water ☐ First Aid Kits ☐ Emergency lights ☐ Eye Wash Station · Oxygen Pac ·

Compliance	Item & Hazard
Housekeeping ☐ Floor /clear from obstruction/ slip hazards ☐ Exits/Signs Marked /Illuminated ☐ Entrance Signs Marked /Illuminated ☐ Storage clear from obstruction	

Sample of **Worksite Observation Assessment Sheet Form 6A** (back)

Compliance	Item & Hazard
Safety Management ☐ Fire (available) ☐ Safety (available) ☐ Emergency (available) ☐ Energy Control Procedure (available) ☐ Environmental (available) ☐ Accident/Incident Reporting forms (available)	
Personnel Protective Equipment ☐ Gloves ☐ Fall Arrest ☐ Safety footwear ☐ Vest/coveralls ☐ Hard-hats ☐ Eye protection ☐ Hearing protection ☐ Breathing apparatus	
Signs ☐ Stored Chemicals (MSDS identified) ☐ Warning signs visible ☐ PPE Signs visible (head, eyes, hearing) ☐ Noise warning signs visible ☐ Smoking signs visible ☐ High voltage sign displayed correctly ☐ Operational signs in place (stop, etc) ☐ Flammable material signs visible	
Storage Facilities ☐ Aisles ☐ Racks (poles/ transformers) ☐ Compressed gas (secured) ☐ Chemicals (secured, area ventilated, PPE available)	
Portable Tools & Equipment · Welding equipment (capped, tagged and secured) · Electrical cords (defective, cut/frayed, trip hazards) · HV /Control panels (secured and identified) · Material Handling (chains & slings, visual defects) · Forklift (tires w/ thread, lights, horns, seatbelts) · Ladders (tagged out of service, visual inspection)	
Tools · All machinery guards in place · Emergency button(s) in operation · Hydraulic/pneumatic hose checked for leakage · Defective equipment marked & tagged	
Testing & Monitoring (Record Keeping) · Lifting equipment tests available (attach copy) · Pressure vessels (good working order) · Crane inspections & equipment (documents) · HV tools (hot sticks, gloves, aerial devices) · Engine alarm system operational (gauges)	
Building Equipment (FACMAN & Production) · Handrails, walkways (visual inspection) · Waste disposal (container available) · Plant compound free of debris & trip hazards · General signs (traffic control & parking visible) · Bulk storage (hazard & leak free, seams checked) · Fire hoses and portable hydrant (visual)	

Inspection completed by	**Attached documentation**
Sign _____ Print Name _____ Date of Completion _____ Time of Completion (24hr) _____	☐ Photos ☐ Hazard Assessment Form ☐ Work Method Form ☐ Employee Listing ☐ Other(s) _____