TOWN OF SMITHFIELD

POLICY: WORKPLACE SAFETY AND SECURITY

EFFECTIVE DATE: August 25, 2020 **SUPERCEDES ALL POLICIES DATED BEFORE** August 25, 2020

PURPOSE: The safety and security of the Town of Smithfield and its employees is fundamental. We believe that demonstrating respect and value to every employee involves providing a working environment that is safe and secure for all.

The Town of Smithfield is committed to promoting the health, safety, and welfare of all those who work for or visit Town property. This commitment is achieved by following safe work practices and maintaining property and equipment in safe operating condition.

The Town of Smithfield has established a safety manual and is driven to continuous improvement. This is reflected in our ongoing efforts to:

- Reduce accidents and incidents in the workplace.
- Design processes and activities with consideration for employee/visitor's health and safety.
- Communicate comprehensive emergency response plans.
- Create an open forum for employees to make suggestions to improve the safety program.

POLICY: The Town will continue to search for ways to improve workplace safety and security in partnership with all employees by regular reviews of safety issues and ongoing education and discussions for all staff. Employees must follow all safety rules regarding the usage of office equipment, safety procedures, and actively reduce risks related to the safety and security of fellow employees in relation to the work environment. This document applies to all Town employees and locations. Employees are entrusted to use caution and reasonable judgment in all activities and to notify their supervisor immediately if there is a safety or security risk. Employees who do not follow reasonable safety and security rules will be disciplined up to and including termination.

Each Town Director is responsible to ensure that this procedure is implemented in full.

Each Town Director is responsible for supporting the Safety Philosophy and Procedures.

Each Town Director is responsible for ensuring staff are familiar with this document and associated procedures.

PROCEDURE: In order to keep a safe and secure workplace, it is imperative that all employees be vigilant. If an employee observes conduct that is unsafe or sees a potential safety/security issue, contact your supervising Director as soon as possible. Directors are responsible for addressing safety/security issues in a timely manner.

The following guidelines illustrate how the Safety Process will be administered at all Town locations:

- Management accepts total responsibility for organizing and implementing an effective Safety Process.
- Employees must accept responsibility for whole-hearted cooperation with all aspects of the Safety Process.
- Routine inspections will be conducted to find and eliminate hazardous working conditions or practices which would undermine our efforts at keeping employees safe.
- All employees will be trained on applicable Safety Procedures.

These documents will be reviewed annually for needed changes. Any questions on these procedures shall be directed to the supervising Director or to members of the Smithfield Safety Committee.

- The best way for our employees to meet the objectives of the program is to use an alert, common-sense approach to doing their job. The necessary protective equipment and instructions for its proper use and care will be provided.
- Management will promptly investigate every accident and incident. The investigations will be utilized to determine the facts underlying the incident and appropriate corrective action will be taken to prevent a recurrence. In addition, the information gained will then be incorporated into our communication and training to prevent a recurrence.
- Drills will be conducted periodically with our employees and with local emergency organizations to ensure that we are capable of handling any emergency that may arise at our locations in a safe effective manner. Procedures for emergency situations are found in the site-specific Emergency Action Plan.
- High housekeeping standards will be maintained to prevent injuries and foster pride in the workplace.
- All injuries or accidents shall be reported promptly to a supervisor so that proper first aid or other actions can be taken, and pertinent facts can be recorded while the incident is still fresh in everyone's mind.
- Safety training will be performed by The Rhode Island Interlocal Risk Management Trust ("The Trust") in conjunction with the respective Town Directors.
- Each Director will be responsible for ensuring that the Safety Manual is up to date with the latest revisions, that all superseded sections are promptly removed, and that all personnel are properly trained.
- In order for the Safety Process to be a success at all Town locations, it is essential that each employee recognizes his/her responsibility to conduct themselves in a safe manner and to fully adhere to all of the established safety rules and procedures.

Safety Procedures

These supplemental procedures cover specific Safety programs and compliance initiatives for the Town of Smithfield. The following is a list of the different procedures:

- Work Related Injuries and Modified Duty
- Blood Borne Pathogens
- Electrical Safety
- Hot Work Safety
- Ladder Safety
- Lockout/Tag out
- Personal Protective Equipment
- Excavation and Trenching
- Working at Heights
- Hazard Communication

Contact your supervising Director if you have any questions or concerns regarding employee safety and security.

Randy R. Rossi, Town Manager
Dated: August 25, 2020

Town of

SMITHFIELD

Rhode Island

WORK RELATED INJURIES & MODIFIED DUTY

TOWN OF SMITHFIELD

MODIFIED DUTY / TRANSITIONAL WORK

The Town of Smithfield believes it is in the best interest of the Town and its employees to facilitate the expedient return of staff to full duty after they have been absent due to injury, illness or other medical condition. This policy applies to both personal and work related medical absences. The Town of Smithfield provides the use of Modified Duty / Transitional Work assignments and will, to the extent possible, assist employees by temporarily modifying work assignments, duties or arranging for a temporary transfer until the employee is medically released to resume regular duties or the allocated timeframe has expired.

Sincerely,

Randy R. Rossi, Town Manager

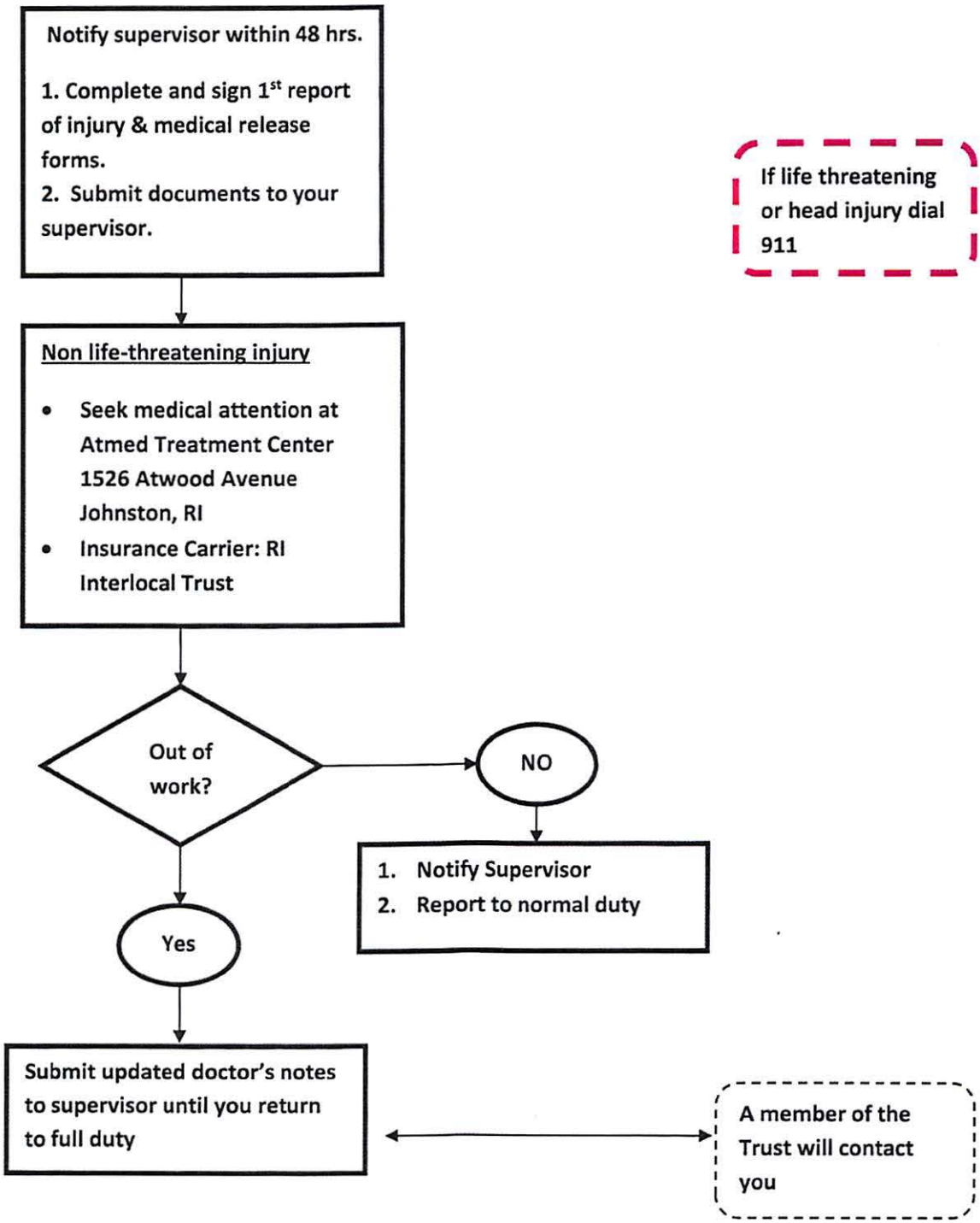
SEEKING MEDICAL ATTENTION

The Town of Smithfield is utilizing Atmed Treatment Center. We encourage all employees who are injured at work (other than a life threatening injury) to seek medical attention at this designated facility.

Atmed Treatment Center
1526 Atwood Ave #100, Johnston, RI 02919
Hours: 8AM–9PM Mon – Friday
8AM- 8PM – Saturday
9AM-8PM- Sunday
Phone: (401) 273-9400

If you have any questions, please contact Sue Pilkington, or Carolyn Dorazio in Human Resources at 401-233-1009.

Work Related Injury Flowchart



WORK RELATED INJURY CLAIM PROCEDURE

When an employee is injured on the job:

When an employee is injured on the job, please follow the process outlined below. Complete all information clearly and accurately.

1. Employee completes a first report of injury form and medical authorization waiver form. This must be completed to authorize payment of incurred bills.

2. Supervisors must review and sign before sending to the Town's Human Resources Department.

3. The Human Resources Department files the claim electronically with our insurance carrier, RI Interlocal Trust.

The ABC's OF A WORK RELATED INJURY

Knowing the ABC's of work related injury will ensure that there is a compliance with the law and the needs of you our injured employee is met.

What is the difference between IOD and Worker's Compensation?

- Police or Firefighter's only- considered Injured on Duty (IOD Claim). In Rhode Island, public safety employees are exempt from the provisions of the Workers' Compensation Act. RI Trust provides a public safety employee injured-on-duty management and insurance program as an automatic coverage enhancement. RI Trust and Blue Cross Municipal Management work closely together to assist with the authorization and IOD process. Blue Cross Medical Management Unit will be responsible for the payment of all medical costs associated with the injured-on-duty claim. Again, it's important to note that The Trust is not responsible for any payment of Injured-on-duty medical bills, but will work cooperatively with Blue Cross/Blue Shield to manage the medical aspect of the claim. Any medical bills associated with injured-on-duty claim can be submitted directly to: Blue Cross/Blue Shield of Rhode Island Medical Management Unit 500 Exchange Street Providence, Rhode Island 02903. Telephone: 800-821-2494 Fax: 401-825-2945.

- All other positions in the Town- considered Worker's Compensation Claims and are managed directly by RI Trust.

When an employee is injured:

Employees must report any work related injury they sustain to their supervisor. Once the employee has reported the injury, the supervisor must immediately report the injury to the Town's Human Resources Department.

What will the insurer do?
In the case of a compensable claim, RI Trust may contact the injured employee to ensure that he or she is receiving the medical attention he or she needs. RI Trust will work with the treating physician to assist the employees return to work as soon as it is practical and medically appropriate. During this time, RI Trust may also conduct a prompt and thorough investigation of the accident.

When does Worker's Compensation become effective?
In Rhode Island, injured employees are eligible to collect lost wages if they are out of work because of their injury more for more than three days. A first report of injury form is completed. If RI Trust approves the claim, the injured employee will receive compensation for his or her lost wages for days he or she is disabled after the first three days directly from RI Interlocal Trust.

WORK RELATED INJURY PROCESS

Employee Responsibilities:

- Report injury immediately to your supervisor
- Promptly complete the First Report of Injury Form and the Medical Release Form
- Work with the insurer by providing them with information required
- Provide medical documentation if the injured employee can't work
- Inform medical provider (s) this is a work related injury
- Do not use personal health care for payment of services provided in conjunction with any workers' compensation claim. Submit a copy of the attached "my Matrixx" form to the doctor and the pharmacy. (See attached form.)
- Pay your healthcare co-share; pension contributions, union dues; private deductions (for worker's compensation claims only.)

Employer Responsibilities:

- Accident Reporting & Investigation
- Provide First Aid (when necessary call 911)
- Record Accurate Description of Accident and Preserve Evidence
- Investigate Accident
- Take pictures whenever possible
- Encourage the injured employee to go to Atmed Urgent Care.
- Encourage the injured employee to work with RI Trust
- Send all documents to the Town's Human Resources Department within 24 hours.

Human Resources Responsibilities:

- Enter the First Report of Injury electronically into RI Trust
- Complete wage statement and send to the insurer (only with lost time cases.)
- Notify payroll if workers' comp.
- Coordinate coming back to work or modified duty plan

RI Trust Responsibilities:

- Initial investigation
- Contact employee to verify accident and disability
- Contact employer to confirm details
- Verify Medical Evidence of Injury and Disability
- Discuss the Case with Medical Providers
- Determine compensability of claim based on investigation
- Authorize indemnity of medical payments

Blue Cross Blue Shield Medical Division Responsibilities:

- Blue Cross Medical Management Unit will be responsible for the payment of all medical costs associated with the injured-on-duty claim. Again, it's important to note that The Trust is not responsible for any payment of Injured-on-duty medical bills, but will work cooperatively with Blue Cross/Blue Shield to manage the medical aspect of the claim. Any medical bills associated with injured-on-duty claim can be submitted directly to: Blue Cross/Blue Shield of Rhode Island Medical Management Unit 500 Exchange Street Providence, Rhode Island 02903 Telephone: 800-821-2494 Fax: 401-825-2945.

Intervention:

- Medical Management and utilization review on all cases
- Independent Medical Exam (IME) when deemed necessary
- Rehabilitation
- Return to work plan with doctor

Return to Work:

- Explore possibilities of modified duty
- Communicate with employee
- Submit doctor's documentation

Modified Duty/ Transitional Work:

The Town may require an employee who is partially disabled to report and perform Modified duty / transitional work that is available, provided that such transitional work is:

- in anticipation of an eventual return to full-time regular duty;
- consistent with the employee's physical capabilities and limitations as mutually determined by the Town's and employee's physicians; and
- such transitional work assignment will not impede the employee's recovery.

The Town may allow an employee who is partially disabled due to an off-duty injury or condition to report and perform Modified-duty/ transitional work available for up to 6 months, extendable at the discretion of the Town Manager. The employee will be re-evaluated on or around the first 90 days to see if an extension is warranted. Modified duty/ transitional work scheduling shall be set on a case by case basis, in a reasonably accommodating manner that is mutually agreeable to the Town Manager, Director, Human Resource Administrator and the employee.

Purpose:

The Town of Smithfield strives to assist employees to return to work at the earliest possible date following an injury or illness. However, this policy is not intended to supersede or modify the procedures applicable to employees eligible for reasonable accommodation or covered under the Americans with Disabilities Act (ADA) or leave benefits under the Family and Medical Leave Act (FMLA). Inquiries about the ADA or FMLA should be directed to the Human Resource Department.

Eligibility

The policy only applies to regular full- and part-time employees who are on leave as a result of an injury or illness.

Modified Duty / Transitional Work

The Town of Smithfield defines "Modified duty" or "transitional work" as temporary, modified work assignments within the worker's physical abilities, knowledge and skills.

When possible, transitional positions will be made available to injured workers to minimize or eliminate time lost from work. The Town of Smithfield cannot guarantee a transitional position and is under no obligation to offer, create or encumber any specific position for purposes of offering placement to such a position.

In the event an employee refuses transitional work (outside the employee's FMLA benefits period) and the employee satisfies the restrictions and ability to perform the transitional position, The Town of Smithfield is not obligated to provide an alternative position. In such cases, The Town of Smithfield will notify the insurance carrier, RI Trust, of the employee's refusal of the transitional work.

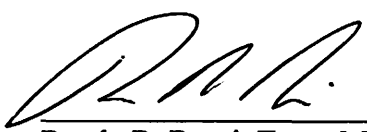
Transitional positions are developed based on the physical capability of the worker, the business needs of the Town and the availability of transitional work. The Town of Smithfield will determine appropriate work hours, shifts, duration and locations of all work assignments. The Town of Smithfield reserves the right to determine the availability, appropriateness and continuation of all transitional work assignments.

It is the responsibility of the employee to provide HR with a current telephone number and address, so the employee may be contacted. The employee must notify HR within 48 hours of any and all changes in medical conditions.

It is the responsibility of the employee or the employee's supervisor to notify HR immediately of any work-related injuries, if the employee misses time from transitional work or of any changes to transitional work assignments. HR will communicate with the insurance carrier or attending physician as necessary.

Any employee returning to a transitional position must not exceed the duties of the position or go beyond the doctor's restrictions. If any medical restrictions change, the employee must immediately notify his or her supervisor and provide the supervisor a copy of the new medical release.

Supervisors will monitor work performance to ensure the employee does not exceed the requirements set by the attending physician.



Randy R. Rossi, Town Manager

6/2018

WORK RELATED INJURY FORM

PERSONAL INFORMATION

Name: _____ Date of Birth: ____/_____/_____

Address: _____ SS#:_____-____-_____

City, State, Zip_____

Phone: (_____)_____ Date of Hire:_____

Occupation:_____

OCCURANCE

Date of accident / injury :_____ Time of accident/injury:_____

Date accident / injury reported:_____ Have you lost any time from work? _____

Address & Location of accident/injury _____

Activity during occurrence: _____

_____

INJURY

Describe the part(s) of the body that were injured and injury (s) sustained:_____

_____

How did accident or injury occur? _____

_____

WITNESSES

1. Name:_____ Phone:_____

2. Name:_____ Phone:_____

SIGNATURES:

Signature of person injured: _____ Date:_____

Signature of Supervisor: _____ Date:_____ Time Notified:____

Medical Record Release Form

Patient/Employee Name _____Date of Injury: _____

Address : _____

City / Town : _____

PATIENT'S AUTHORIZATION

Pursuant to Section 5-37.3 of the General Laws of Rhode Island 1956, as amended, entitled "Confidentiality of Health Care Communications and Information Act", I hereby authorize and direct you, as a healthcare provider, as defined in said Act, to release to my employer, The Town of Smithfield, its agents and employees, any and all medical information from my treating physician and any other health care provider as defined in Section 5-37 of the General Laws of Rhode Island 1956, as amended, rendering treatment to me for sickness or injury causing my inability to perform my duties. The release shall not authorize the release of medical information for any illness or disability not related to the reason for my absence. I further direct you not to give, sell, transfer or in any other way relay such information to anyone other than my said employer without first obtaining my additional written consent therefore on a form stating the need for the proposed use of such information and the need for its transfer to another person.

NOTICE

I understand that:

1. Such information is needed for use by my said employer in connection with its consideration of my medical fitness;

2. All of the information is to be released, including costs incurred;

3. My consent for this release or transfer may be withdrawn at any time in the future, in writing.

4. Such information will not be given, sold, transferred or in any other way relayed to any person without first obtaining my additional written consent therefore on a form stating the need for the proposed use of such information and the need for its transfer to another person;

5. I have received a copy of this information and Notice and have read and understood its content prior to signing it.

_____ _____

Signature of Patient/Employee Date

myMatrixx
good medicine for business

Rhode Island Interlocal Risk Management Trust
Workers' Compensation Prescription Information

Employer:
Please fill out employee information below and provide employee with this document to take to any pharmacy with prescriptions.

RHODE ISLAND INTERLOCAL The Trust RISK MANAGEMENT TRUST	
Employee Name:	
Group#:	10602854
Member ID (SSN):	
Date of Injury:	
Processor:	myMatrixx
Bin#:	014211
Day supply is limited to 30 days for a new injury.	
myMatrixx Help Desk: (844) 276-2515	

Employee:
Rhode Island Interlocal Risk Management Trust has partnered with ***myMatrixx*** to make filling workers' compensation prescriptions easy.

This document serves as a temporary prescription card. A permanent prescription card specific to your injury will be forwarded directly to you within the next 3 to 5 business days.

Please take this letter and your prescription(s) to a pharmacy near you. myMatrixx has a network of over 64,000 pharmacies nationwide. If you need assistance locating a network pharmacy near you, please call myMatrixx toll free at (844) 276-2515.

IF YOU ARE DENIED MEDICATION(S) AT THE PHARMACY PLEASE CALL (844) 276-2515

Pharmacist:
Please obtain above information from the injured employee if not already filled in by employer to process prescriptions for the workers' compensation injury only.

For questions or rejections please call (844) 276-2515. Please do not send patient home or have patient pay for medication(s) before calling myMatrixx for assistance.

NOTE: Certain medications are pre-approved for this patient; these medications will process without an authorization. All others will require prior approval.

FOR ALL REJECTIONS OR QUESTIONS CALL: (844) 276-2515

ACCIDENT INVESTIGATION REPORT

A. Injured Employee Data

Employee Name:	Position:	
Work Location		
Date of Accident	Time of Accident ☐ a.m. ☐ p.m.	Claim Number (if known)
Home Telephone	Work Telephone	Other/Cell Number
Supervisor		Supervisor Telephone Number

B. Accident Description

Instructions: Obtain written and/or recorded statements from injured employee. What happened? What caused the accident? What were the contributing factors? Reconstruct the sequence of events that led to the injury. Attach additional sheets if necessary. This document becomes an official accounting of the facts surrounding the accident. When documenting the facts, include answers to the following questions:

1. Where did the accident happen and who was involved? Provide a full description of the surroundings of the location and the individuals involved.

2. What was happening at the time of the accident and why was it taking place?

3. What were the events leading up to the accident? Describe the sequence in order and when they took place.

4. What exactly caused the injury and how did it happen? What were the mechanics, equipment or tools involved?

5. Describe the injury or injuries incurred. What body part and what kind of injury? (Indicate if no injury occurred.)

6. If a physical injury was avoided, what could have happened to cause an injury?

C. Accident Findings

After review of all facts, what was the hazardous condition, unsafe work practice, or other causal factors (procedure, equipment, people, and environment) that contributed to the accident / injury?

D. Corrective Action

What is recommended to prevent this type of accident from occurring again?

Actions taken to ensure recommendations are considered:

Signature of Supervisor or Accident Investigator	Date	Time ☐ a.m. ☐ p.m.

E. Distribution Instructions

Original: Human Resources

Copies: Employee's Supervisor

TOWN OF SMITHFIELD

"Blood Borne Pathogens Policy"

For the

Department of Public Works
Parks and Recreation
Ice Rink
Senior Center
Town Hall
Police Civilians

1. Purpose

Blood borne pathogens are infectious materials in blood that can cause disease in humans, including Hepatitis B and C and human immunodeficiency virus, or HIV. Knowledge of the health risks associated with potential occupational exposure to Blood Borne Pathogens and the communication of that knowledge to any employee who has risk of occupational exposure to Blood Borne Pathogens are considered high priorities and important objectives in overall worker safety and health.

This Procedure and Exposure Control Plan (Appendix I) has been prepared to inform employees how the Town of Smithfield (hereinafter referred to as "the Town") addresses the potential risks associated with Blood Borne Pathogens.

2. Scope

This procedure and OSHA's Blood Borne Pathogen Standard applies to individuals with a potential occupational exposure to Blood Borne Pathogens.

Some employees have voluntarily received first aid training but are not part of an identified or organized Emergency Response Team. This is done so that they are able to render emergency treatment to themselves and their loved ones. This training also results in increased safety awareness as employees are taught injury prevention. Any employee who renders first aid treatment to another employee does so as a Good Samaritan and is not covered under OSHA's Blood Borne Pathogens Standard.

"Good Samaritan" acts, such as assisting a co-worker with a nosebleed, would not be considered occupational exposure and are not covered by this procedure. In the event of such an occurrence the Town will assist any such employees by providing information on the potential risks, a post exposure medical evaluation, and a HBV vaccination, as appropriate.

3. Responsibility

The Director oversees and manages the blood borne pathogen programs.

The Director will identify which job functions have the potential to come in contact with blood or bodily fluids. Those employees shall be placed into the Blood Borne Pathogen Program.

The Town will provide training, personal protective equipment, and Hepatitis B vaccination at no cost to all employee that are covered by this program.

4. Definitions

- Blood: Human blood, human blood components, and products made from human blood
- Blood Borne Pathogen: A pathogenic microorganism that is present in human blood and can cause disease in humans. These pathogens include, but not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).
- Contaminated: The presence or the reasonable anticipated presence of blood or other potentially infectious materials on an item or surface.
- Decontamination: The physical or chemical means to remove, inactivate, or destroy blood borne pathogens to the point where they are no longer capable of transmitting infectious particles and the surface is safe for handling, use or disposal.
- HBV: Hepatitis B Virus
- HIV: Human Immunodeficiency Virus
- Occupational Exposure: A reasonably anticipated skin, eye, mucous membrane contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.
- Source Individual: Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee.
- Universal Precautions: The assumption is made that all human blood and certain body fluids are known to be infectious for HIV, HBV and other blood borne pathogens. In universal precautions all risk of coming in contact with these fluids is eliminated through proper use of PPE such as rubber gloves and goggles. Proper hygiene and disposal of contaminated material is also included.

5. Reference Documents

Occupational Safety and Health Administration's (OSHA) Blood Borne Pathogens standard 29 CFR §1910.1030.

6. Blood Borne Pathogens Programs

In accordance with OSHA regulations, a written Blood Borne Pathogens Program must be established. The program must address the following:

- A procedure statement
- Assignment of responsibilities
- Determination of potential exposure
- Preventative measures
- Actions taken during an exposure incident
- Vaccinations
- Training
- Recordkeeping

7. Procedure

Training

- Identified Employees will receive annual required training on Universal Precautions and Blood Borne Pathogens
- Training will follow American Red Cross, OSHA, and other applicable guidelines.

Barrier Precautions

- Gloves must be worn when touching blood or bodily fluids, mucous membranes, or non-intact skin and for handling surfaces soiled with blood or bodily fluids. Gloves shall be made readily available to personnel who are trained and authorized to handle contaminated persons or material.
- Masks and protective eyewear must be worn to prevent exposure of mucous membranes of the mouth, nose, and eyes during procedures that are likely to generate splashes or splatters of blood or other bodily fluids.

Hepatitis B Vaccination

- Employees with possible occupational exposure to blood or bodily fluids should be offered, and should be encouraged to participate, in a Hepatitis B vaccination program at no cost to the employee. Contact the Director for more information.
- Vaccination guidelines are as set forth by the American Medical Association.
- Employees who decline the Hep B Vaccine must sign a waiver (Appendix III) indicating that they are aware of the risks associated with Blood Borne pathogens and that the Town made Hep B Vaccine available to them.

Exposures

- All blood and bodily fluids exposure must be reported immediately to your immediate supervisor and the Director.

Disposal

- Biohazard materials that may be generated during an emergency should be cleaned, handled, and disposed of as directed by the Director.
- Blood and bodily fluids that are prepped for disposal by staff should be promptly stored in a safe location and marked as to their contents. Arrangements for shipping materials for off-site disposal should be made with the Director as soon as possible.

8. Incident Reporting & Follow-up

An employee who has been exposed to another person's blood or bodily fluids must report the incident immediately to their Director. Any employee, including those covered under this program and those acting as a "Good Samaritan," who is known to be exposed on the job to HIV, HAV, HBV or HCV will be tested in accordance with federal (OSHA), state, and local requirements. The Director also will request that the exposure source be tested. This testing will be done at the Town's expense. Confidentiality will be maintained for all those involved in incident.

9. Records

Records related to this program will be maintained by Human Resources and shall include the following:

- Records relative to medical testing and vaccination of employees exposed to blood borne pathogens maintained in confidentiality.
- Training records
- Hepatitis B Vaccine Consent/Declination Forms
- Exposure Report Forms

- Incident Reports
- Contractor training records and written plans are maintained by the contracted workforce, although the Town can request evidence of these materials at any time

Appendix I

Exposure Control Plan

Purpose

The purpose of the exposure control plan is to eliminate or reduce occupational exposure to Hepatitis B virus (HBV), human immunodeficiency virus (HIV), and other blood borne pathogens. Compliance with this plan will ensure that all Town employees with potential exposure to blood borne pathogens are trained in the hazards and transmission of exposure as described in 29 CFR 1910.1030: Occupational Exposure to Blood Borne Pathogens. The exposure control plan will be reviewed and updated at least annually or whenever necessary.

Scope

This plan applies to all employees who face potential occupational exposure to blood borne pathogens.

Tasks or jobs which may lead to such exposure are listed below. This exposure determination shall be made without regard to the use of PPE.

- Those rendering first aid or CPR to fellow employees.
- Those who are involved in cleanup of blood or other body fluids.

Responsibility

The Director will be responsible for implementation of this program. He/She shall be designated the Exposure Control Officer.

Exemptions

The Town wants to ensure that all employees understand the risk involved with exposure to blood borne pathogens so that when faced with emergencies, Good Samaritans can make educated decisions to protect themselves from exposure. In the event that a Good Samaritan should become exposed to blood on the job, that person will be offered the HBV vaccine and other medical follow-up including record keeping, testing, and counseling, dependent on the determination of actual exposure, e.g., open wounds, dermatitis, etc.

Control Methods

Controls shall be used to eliminate or minimize employee exposure to blood or other types of infectious material.

Universal Precautions: shall be observed to prevent contact with blood and/or other potentially infectious materials. The term “universal precautions “means that all blood and body fluids shall be considered infectious, as well as any contaminated laundry, equipment, surfaces, etc.

Personal Protective Equipment (PPE): splattering of blood onto skin or mucous membranes (eyes, nose, and mouth) is a recognized mode of transmission of blood borne pathogens. Protection of the mucous membranes of the face and upper respiratory tract is required. It is recognized that the potential for transmission of this nature at the Town buildings described in this Policy is negligible.

PPE consists of, but is not limited to: gloves, goggles, and dust/mist masks, alone or in combination, is appropriate to the situation. PPE will be considered appropriate only if it does not permit blood or other potentially infectious materials pass through to the employee’s work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucus membranes, under normal conditions of use, and for the duration of time which the PPE will be used. If a garment is penetrated by blood, the garment shall be removed immediately or as soon as feasible.

Personal Protective Equipment provided by the Town for exposure to blood borne pathogens consists of:

- Dust/Mist Masks
- Disposable Rubber Gloves
- Goggles/Glasses

Training on the use, care, and disposal of PPE shall be provided to all employees covered by the standard.

Dust/mist masks and protective eye wear are generally not required but should be worn if splashing or splattering of blood or other body fluids is likely. A mask alone is not sufficient protection in this case and should be worn in combination with protective eye wear.

Disposable rubber gloves shall be worn whenever it is reasonable to anticipate blood borne exposures, and when handling or touching contaminated items or surfaces. Gloves shall be replaced as soon as practical when contaminated, torn, and punctured, etc. and shall never be reused.

Exposure Incidents

An exposure incident will be defined as a reasonable risk that an employee has been exposed to an infectious agent. A good definition would be "wet-to-wet" contact; an example would be blood or body fluids coming in contact with an open wound, mucus membranes, or the mouth.

When an exposure occurs:

a) The employee will immediately wash the affected area and notify his/her supervisor.
b) The supervisor will determine if any medical treatment is required. Then contact will be made with the exposure control officer and the leader of the accident investigation team. (The Department Manager should be notified as deemed necessary).
c) An investigation of the incident should begin as soon as possible to determine:
    - Type of exposure
    - Route of exposure
    - Circumstances leading to exposure
d) Complete the Exposure Report Form (Appendix II)
e) If exposure occurred while administering First Aid/CPR or decontamination:
    - Identify and document the source individual.
    - Notify the source individual and attempt to obtain consent to have the individual's blood tested to determine HBV and HIV infectivity. If consent cannot be obtained it shall be documented that legally required consent cannot be obtained. The results will be made available to the exposed employee.
    - The employee will be offered HIV and HBV blood testing. If the employee consents to baseline blood collection but does not give consent at that time for HIV testing, the sample shall be preserved for at least ninety (90) days of the exposure incident, if the employee elects to have the baseline sample tested such testing shall be done as soon as feasible
    - HBV vaccination will be offered.
    - The employee will be offered HIV blood testing 6 weeks after exposure and every six months for a period of two years.

Training

Training will occur at the time of initial employment and on an annual basis for emergency responders. The training will include but not limited to:

- A general explanation of the epidemiology and symptoms of HBV and HIV.
- An explanation of the modes of transmission.
- An explanation of the exposure control program.
- An explanation of the use and limitations of control methods, including universal precautions, engineering controls, work practices, and PPE.
- An explanation of the basis for selection of PPE, its use, limitations, location, removal, decontamination, and disposal.

- Information on the HBV vaccine, including its effectiveness, safety, and the benefits of being vaccinated, method of administration, and that the vaccine will be offered free of charge.
- An explanation of the procedure for exposure incidents, including reporting and post exposure medical follow-up.

Appendix II

Exposure Report Form

Date: _____ Employee Name: _____
Date of Birth _____ Job Title _____
Date of Exposure _____ Time of Exposure _____

Incident Location:
_____

Nature of Incident (Injury, First Aid/CPR, Janitorial).
_____
_____

Describe the task(s) being performed when the exposure occurred
_____
_____

Was personal protective equipment in use at the time of exposure? Yes No

If yes, list: 1. _____ 2. _____
3. _____ 4. _____

Did the PPE fail? Yes / No - If yes explain how below.
_____
_____

What body fluid(s) was the employee exposed to? (blood, tears, vomitus, urine etc.)
_____

What parts of the body became exposed?
_____

Did the employee have any open cuts, sores or rashes that became exposed? Yes No
If yes, type and Location
_____

Estimate the total area of the body that was exposed and for how long.
_____

Source Individual (s) name _____

Did the employee directly treat the Source Individual directly? Yes / No - If yes explain how below.
_____

Appendix III

Hepatitis B Vaccine Consent/Declination Form

Name: _____
(Please Print)

I have been informed of the benefits of the Hepatitis B Vaccine and the hazards of Hepatitis B and have decided.....

Consent
☐ I request to have the Hepatitis B Vaccine series and will follow through on the on series of three shots.

Declination
☐ I understand that due to my occupational exposure to blood or other potentially infectious materials, I may be at risk of acquiring Hepatitis B Virus (HBV) infectious. I have been given the opportunity to be vaccinated with Hepatitis B Vaccine at no charge to myself. However, I decline the Hepatitis Vaccine at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring Hepatitis B, a serious disease. If in the future, I continue to have occupational exposure to blood and other potentially infectious materials and I want to be vaccinated. I can receive the vaccination series at no charge.

Other
☐ I have previously received the shots and I am presently Hepatitis B antibody positive (This may be confirmed with lab results).

_____ _____
Signature Date

TOWN OF SMITHFIELD

"Electrical Safety Policy"

For the

Department of Public Works
Police Department Custodians
Town Hall Maintenance Staff
Senior Center
Parks and Recreation
Ice Rink
Fire Department

Electrical Safety

1. Purpose
To establish a uniform procedure for qualified electrical workers conducting electrician level tasks for the Town of Smithfield (hereinafter referred to as the "Town").

2. Scope
This procedure applies to all Town facilities.

3. Responsibility
The Director of the Department of Public Works (hereinafter referred to as "DPW") is responsible for ensuring that electrical safety procedures are in place, implemented, maintained and followed.

Department Directors are responsible for ensuring that their staff who perform electrical tasks, along with contractors they hire to perform these services, comply with the provisions of this procedure.

All employees of the Town shall comply with the National Fire Protection Association (NFPA) 70E, Standard for Electrical Safety in the Workplace in addition to following all the requirements of this procedure.

All maintenance personnel and electricians are responsible for complying with the provisions of this procedure. This procedure also applies to contractors or construction personnel working in any Town facility.

4. Definitions

- **Arc rating** - The maximum incident energy resistance demonstrated by a material (or a layered system of materials) prior to "breaking open" or at the onset of a second-degree skin burn. This rating is assigned to electrical protective clothing and is normally expressed in calories per square centimeter (cal/cm^2).
- **Current** - (measured in amps/amperage) Term used to describe electric flow. It is current that can cause electric shock.
- **Exposed electrical parts** - Energized parts that can be inadvertently touched or approached nearer than a safe distance by a person. Parts not suitably guarded, isolated, or insulated. Examples include terminal contacts or lugs, and bare wiring.
- **Flash Protection Boundary -** An approach limit distance from exposed live parts within which a person could receive a second degree burn if an electrical arc flash were to occur.
- **Flash Suit** - A complete FR clothing and equipment system that covers the entire body, except for the hands and feet.
- **Ground** - A conducting connection, whether intentional or accidental, between an electrical circuit or equipment and the earth or to some conducting body that serves in place of the earth.
- **Ground Fault Circuit Interrupt (GFCI)** - A device whose function is to interrupt the electric circuit to the load when a fault current to ground exceeds a predetermined value that is less than that required to operate the over-current protective device of the supply circuit.
- **Incident energy** - The amount of energy impressed on a surface, a certain distance from the source, generated during an electrical arc event. One of the units used to measure incident energy is calories per square centimeter (cal/cm^2).
- **Limited Approach Boundary –** An approach limit is a distance from an exposed live part within which a shock hazard exists.
- **NFPA 70E** - Standard for electrical safety in the workplace.
- **Qualified Electrical Worker –** A qualified person trained and knowledgeable of construction and operation of equipment or a specific work method and is trained to recognize and avoid the electrical hazards that might be present with respect to that equipment or work method.
- **Restricted Approach Boundary** – An approach limit distance from an exposed live part within which there is an increased risk of shock, due to electrical arc-over combined with inadvertent movement, for personnel working in close proximity to the live part.
- **Voltage** - Electric potential or potential difference assigned to a circuit or system expressed in volts.

5. Reference Documents

- NFPA 70E: Standard for Electrical Safety in the Workplace
- Evacuation and Emergency Action Plan
- Lock-out/Tag out Procedure
- Personal Protective Equipment Program

6. Electrical Hazards

Electrical Shock

Accidental contact with exposed electrical parts operating at a voltage greater than 50 volts to ground, and having a current greater than 5 milliamperes, can cause serious injury or death. Fatal ventricular fibrillation of the heart can be triggered by a current flow of as little as several milliamperes. Severe injuries, such as deep internal burns, can occur even if the current does not pass through the vital organs or nerves.

Delayed Effects
Damage to the internal tissues may not be apparent immediately after contact with the current. Delayed internal tissue swelling and irritation are possible. Prompt medical attention can help minimize these effects and avoid death or long-term injury.

Arc-Flash
When an electric current passes through the air between two conductors, the temperature can reach 35,000°F. Exposure to these extreme temperatures can result in life threatening burns. The majority of hospital admissions due to electrical accidents are from arc-flash burns, not electrical shocks. Arc-flashes can and do kill at distances in excess of 10 ft.

Arc Blast
The tremendous temperatures of the arc cause an explosive expansion of both metal and the surrounding air in the arc path. For example, copper expands by a factor of 67,000 times when changed from a solid into a vapor. The dangers of this explosion are of high blast pressure wave, high decibel levels of sound and high velocity shrapnel. Finally the material and molten metal is expelled away from the arc at speeds exceeding 700 miles per hour. Arc blasts often cause severe injuries and death.

Other Burns
Other burns suffered in electrical accidents are of two basic types: electrical burns and thermal contact burns. In electrical burns, tissue damage (whether skin deep or deeper) occurs because the body is unable to dissipate the heat caused by the current flow. Typically, electrical burns are slow to heal. Thermal contact burns are those normally experienced from skin contact with the hot surfaces of overheated electric conductors.

7. Live Electrical Work

It is the Town's policy to de-energize live parts, before an employee works on or near them, using the Lock-out/Tag out Procedure. This is the preferred method for protecting workers from electrical hazards. Energized parts that operate at less than 50 volts and less than 1000 watts shall not be required to be de-energized if there will be no increased exposure to electrical burns or to explosion blast due to electric arcs.

In the unlikely event that live electrical work is unavoidable, an energized work plan will be implemented. (See Appendix I).

8. Hazard Control

The following hazard control hierarchy will be used to mitigate Electrical Hazards:

- Engineering controls, such as panels, shields or barriers, to isolate employees from the Energized components.
- Administrative controls, such as the Energized Electrical Work Permit and qualification training.
- Personal protective equipment (PPE) to isolate workers from exposed hazardous electrical conductors.
- Safe work practices to support the development of safe working habits.

Engineering Controls
Engineering controls should be the primary control measure used to reduce the potential for direct contact with exposed and energized electrical components. Engineering controls may include, but are not limited to the following:

- Opaque or transparent non-conductive panels used as barriers. These barriers can have small openings for tool access to allow troubleshooting, measurement, and/or calibration of equipment with access panels open. This arrangement may also allow the safety interlocks to be closed without installation of bypass circuitry.

- Rated non-conductive insulating shields or barriers for energized components that do not need to be manipulated during the work.
- Ground Fault Circuit Interrupters (GFCI's) to supply temporary power during construction, remodeling, maintenance, repair, or demolition of buildings, structures, equipment or similar activities. As required by the NEC, GFCI's will be used for all portable power tools, outdoor work, work on or near conductive surfaces, for resistive heating elements such as heater tapes, wet locations, rooftops, within 6 feet of any wet sink, bathrooms, kitchens and other areas that could present an electrical shock hazard should the worker come in contact with the energized conductor of a tool or instrument.
- Rated insulated barriers mats or gratings to isolate the worker from conductive ground paths while working on exposed and energized electrical components.

Personal Protective Equipment (PPE)
Qualified workers who are potentially exposed to electrical hazards that cannot be controlled through some engineering means must be provided with and use personal protective equipment that is appropriate for the specific work to be performed and the associated hazard level. NFPA 70E defines PPE requirements that will be followed.

Each Town department that performs electrical testing and isolation verification shall be equipped with flash protection PPE suitable for the voltages and current that will be encountered to perform such tasks. Most sites will require at least an 11 cal/cm^2 flash suit with face shield, hard hat, hearing protection, and Class 0 Gloves. Furthermore, all electrical gloves used in those tasks will be tested by an outside vender every 6 months (with or without usage).

Safe Work Practices
Electrical safe work practices must be applied during analysis, diagnostic, and troubleshooting, and manipulative work on energized equipment by a qualified person who has been trained and briefed by a knowledgeable supervisor for the specific tasks the supervisor authorizes. This would include using NFPA 70E to set up Flash Protection, Restricted Approach, and Limited Approach boundaries.

Safe Work Rules
- Never work on "hot" or energized equipment unless it is necessary to conduct equipment troubleshooting
- Use extension cords only as temporary power sources.
- Do not connect too many pieces of equipment to the same circuit or outlet as the circuit or outlet could become overloaded.
- Be sure that ground-fault circuit interrupters (GFCI) are used in high-risk areas such as wet locations (GFCI's are designed to shut off electrical power within as little as 1/40 of a second).
- Plug strips, such as those used on computers, should be plugged directly into outlets and not into extension cords or other plug strips.
- Inspect all equipment periodically for defects or damage.
- All cords that are worn, frayed, abraded, corroded or otherwise damaged must be replaced.
- Always follow the manufacturer's instructions for use and maintenance of all electrical tools and appliances.
- Never touch an electrical appliance and plumbing at the same time.
- Always unplug electrical appliances before attempting any repair or maintenance.
- All electrical devices must be properly grounded with approved three wire plugs unless they are "double insulated". Grounding provides a safe path for electricity to the ground, preventing leakage of current in circuits or equipment.
- Ensure energized parts of electrical equipment operating at 50 volts or more are guarded against accidental contact.

- Know how to respond to emergencies such as electric shock incidents or fires.
- Test every circuit and every conductor every time before you touch it.
- Use personal protective equipment (PPE) in accordance with NFPA 70E and the Town's PPE Program.
- Work on electrical equipment and conductors only when de-energized, unless procedures and safeguards have been established to ensure zero exposure for the worker and other people in the area.
- Lockout/tag out and ground (where appropriate) before working on equipment.
- Treat de-energized electrical equipment and conductors as energized until lockout/tag out, test, and ground procedures (where appropriate) are implemented.
- Positively ensure the correct circuit is identified before lockout and tag out.
- Always consider electrical equipment is energized until positively proven otherwise.
- Use suitably rated electrical devices only as intended.
- Remove or cover all jewelry before performing energized electrical work.
- Know how to shut down equipment in an emergency.
- Know applicable emergency procedures.
- Reset circuit breakers only after the trip problem has been corrected.
- Never drill into a wall or floor slab without manager's approval.
- Never modify or penetrate premises wiring conduit or enclosed wire ways. Only qualified and authorized personnel are allowed to work on premises wiring, conduits or enclosed wiring.
- Verify location of all buried or embedded electrical circuits before digging or cutting.
- Determine the reason that a fuse operated or circuit breaker tripped before replacing or resetting.
- Know where your over-current devices are (i.e. circuit breakers and fuses) so they can be easily and quickly reached in case of emergency.
- When replacing lamps and bulbs, verify that the replacement matches fixture requirements

9. Training

- The Town employs qualified individuals and licensed electricians. It is the responsibility of these individuals to maintain their licenses.
- The Directors will work with The Trust to determine the level of training needed in conjunction with the identified electrical tasks that employees will perform.
- All electricians will attend an NFPA 70E training a minimum of once every 3 years.
- Employees may only perform electrical tasks that they have been specifically trained and/or licensed to perform.

10. Record Retention

- NFPA 70E training for electricians
- Energized Electrical Work Permit
- Calibration stamp for electrical gloves

Appendix I

Energized Electrical Work Permit

Part I: To be completed by the requestor or supervisor of the job	
Description of Circuit & Equipment:	Location:
Description of Work to Be Done:	
Justification of why the circuit cannot be de-energized or the work delayed until the next scheduled outage: Requester/Title: _____	
Part II: To be completed by the qualified person(s) completing the work **Check when Complete**	
(1) Detailed description of procedure to be used in performing the above work:	
(2) Description of safe work practices to be employed:	
(3) Voltage exposure (shock hazard analysis):	
(4) Determination of shock protection boundaries:	
(5) Determination of flash protection boundaries:	
(6) PPE required to safely perform the task:	
(7) Method used to restrict access to the work area:	
(8) Do you agree the above work can be done safely? YES _____ (proceed to Part III) NO _____ (return to requestor) Qualified Person(s): _____ Date: _____ Qualified Person(s): _____ Date: _____ Qualified Person(s): _____ Date: _____	
Part III: To be completed by members of Facilities	
Approvals: **Department Director** **Date** **Requestor/Title** **Date** _____ _____ _____ _____	
Note: When job is finished, forward to Safety Manager for review and retention.	

TOWN OF SMITHFIELD

"Hot Work Safety Policy"

For the

Department of Public Works
and
Parks and Recreation

Hot Work Safety

1. Purpose

To protect personnel from injury and illness and protect property from damage by fire and explosions arising from welding, cutting and associated processes.

2. Scope

This program outlines responsibilities and procedures for the safe preparation and performance of hot work operations. Hot work operations will include any temporary activities, i.e. grinding, cutting, and welding, in areas not designed or intended specifically for that task.

This procedure shall apply to each person performing hot work at the Department of Public Works (hereinafter referred to as "DPW") and Parks and Recreation locations. Persons not trained in hot work operations shall not be assigned to perform such duties. If non-trained personnel are assigned to fire watch duties, this procedure shall also apply to them.

Contractors working at a DPW or Parks and Recreation location shall also be informed of the contents of this procedure and comply with its requirements.

3. Responsibilities

The DPW or Parks and Recreation Director is responsible to ensure that this procedure is implemented in full.

It is responsibility of the DPW or Parks and Recreation Director to ensure that this procedure is followed for all hot work activities.

It is the responsibility of all contractors performing hot work at the DPW or Parks and Recreation locations to comply with this procedure.

4. Procedure

The individual(s) performing work involving open flames or spark-producing operations will:

- Determine if hot work is necessary or if alternative mechanical means can be used
- Assign a designated individual to oversee hot work operations
- When feasible ensure fire-protection systems remain in service during any hot work operation. Establish a fire watch as required during and after the hot work
- Supervise and monitor the hot work during the operation

5. Welding Protection

Welding is the joining of metals by heating them with the possible application of pressure or a filler metal. Besides the danger of high temperatures, a number of byproducts result from the process including fumes and gases that can be a serious health hazard to workers. The welding process has the potential for accidents of many kinds; burns, fire and explosion, eye damage, possible lung irritation and damage, electric shock, and slips and falls. In order to reduce the likelihood of these hazards, the following procedures shall be complied with:

- Designated welding areas will be screened or shielded to protect people in adjacent areas from the radiant energy and spatter of welding and cutting arcs. These booths, screens, or shields shall be made of noncombustible or flame-resistant material and shall permit circulation of air at floor level as well as above the screen.
- Welding equipment, machines, cable, and other apparatus shall be placed so that it does not endanger personnel in corridors, stairwells, or ladders.

6. Safety Hazards

Fire Prevention

Metalworking with tools, such as gas or electrical torches, blow torches or other devices using flames or produce sparks are major fire hazards. Such work requires the following rules to be strictly followed:

- When possible, hot work shall be performed in designated areas designed and constructed to minimize fire risk.
- Hot work areas shall be kept clean, and all accumulations of trash, rags, etc., shall be removed.
- If the object to be welded or cut cannot be moved to the welding area, all fire hazards in the work area shall be controlled. Guards, shields or fire blankets shall be used to confine heat, sparks, and slag.
- Properly identify and keep cylinders and fittings free of oil and grease. Keep cylinders upright and protect them from contacting wires, sparks, and open flames.

Floors and Combustible Materials

All machinery, equipment, materials or other items subject to damage or possible ignition shall be protected with suitable non-combustible material. Welding gas hoses must also be protected.

When hot work operations are performed above grating, decks, or near floor or wall openings, the deck or openings below the operation shall be covered with a noncombustible material. Care must be taken to prevent large pieces of hot slag from remaining on surfaces long enough to cause combustion or damage.
When hot work is performed on walls, floors, and ceilings, the same precautions shall be taken on the opposite side as are taken on the side of the hot work operation. Direct penetration of sparks or heat transfer may introduce a fire hazard to an adjacent area.

When hot work shall be performed, additional personnel shall be assigned to guard against the possibility of fire. If there is a potential for sparks to travel to more than one level it will be necessary to assign more than one person as a fire watch. Fire watch personnel shall be instructed on how to anticipate fires and in the use of fire extinguishers. The fire watch shall continue for at least 30 minutes after the completion of the job to make sure that smoldering fires have not started. (See Fire Watch Duties and Responsibilities section below)

No hot work shall be performed where the application of flammable paints or the presence of other flammable compounds or heavy dust concentrations creates a hazard. The hazard of heavy dust accumulations may be eliminated by wetting the area, however special protection shall be taken to protect against electric shock when performing arc welding in wet areas.

Drums, pails and other containers which contain or have contained flammable liquids shall be kept closed except when the contents are being removed. Empty containers shall be removed to a safe area away from hot work operations or open flames. Drums, containers, or hollow structures which have contained toxic or flammable substances shall be filled with water or cleaned of such substances, ventilated and tested before hot work may commence.

Hazardous Locations
Hot work shall not be permitted in or near rooms containing flammable or combustible vapors, liquids, or dusts; nor shall it be allowed on or inside closed tanks that have held such material until all fire and explosion hazards have been eliminated by approved methods of cleaning and/or purging. All surrounding areas must be thoroughly ventilated, and frequent gas testing provided.

Fire Watch Duties and Responsibilities

- There will always be a fire watch for all Hot Work.
- The fire watch can be from DPW, Parks and Recreation, or a contract employee.
- The fire watch shall not be assigned any other jobs during hot work. If the work involves a sequence of different jobs, some of which are not hot work jobs, the person assigned to fire watch may perform other duties. For example, if hot work is suspended while performing another task. The worker must then be designated as fire watch when hot work resumes.
- The fire watch must be trained on the equipment to be used, such as fire extinguishers. The fire watch shall only fight incipient (beginning stages) fires.
- The fire watch must be able to use a phone in case of emergency and know who to call in the event of an emergency.
- The Supervisor must be sure that the fire watch fully understands the scope of work, including considerations for nearby flammable or combustible storage.
- The fire watch may be required to remain in the work area after the job is complete. This watch must be maintained for at least a half hour after completion of welding or cutting operations to detect and extinguish possible smoldering fires. This requirement is determined by the Supervisor, based on the following guidelines:
    - Appreciable amounts of combustible materials are closer than 35 feet from the work.
    - Wall or floor openings within 35 feet expose appreciable amounts of combustible material.

    - Combustible materials which are adjacent to the opposite side of a metal wall or surface which is being worked on.
- The escape routes from the area should be clearly understood by all involved workers. The fire watch must ensure that the routes are kept clear.

Health Hazards
The most significant health hazard present in the welding process is the generation of fumes and gases. The amount and type of fumes and gases will depend on the welding process, the material being welded, the filler material, and any preservative coatings that may be on the base metal. Any adverse effects will depend on the toxic concentrations and the individual's response to those toxins.

Toxic Gas Effects
Exposure to various gases (carbon monoxide, nitrogen dioxide, ozone, and phosgene) generated during welding may produce one or more of the following effects:

- Inflammation of the lungs (chemical pneumonitis)
- Pulmonary edema (swelling and accumulation of fluids)
- Emphysema (loss of elasticity of the lungs)
- Chronic bronchitis
- Fume effects

Welding fumes are formed as molten metal forms into a vapor and the vapor cools and condenses. These very small particles penetrate the body's nose, upper-respiratory passages and eventually penetrate deep into lung passages. Once in the lungs, they pass into the bloodstream where they can be carried to all parts of the body.

Metal fume fever can occur within a few hours of exposure. The symptoms are similar to the flu and include headache, muscle pain, chills and weakness. Most effects usually pass within 24 hours; however more serious effects can result from exposure to specific metals.

Radiation Burns
Electric arcs and gas flames produce high intensity ultraviolet (UV) and infra-red radiation that has a harmful effect on the eyes and skin upon continued or repeated exposure. Welders who do not protect their faces, necks, and arms may experience severe skin burns.

Eye Damage
Another painful consequence of UV exposure is "Welder's Flash" caused by looking at an arc without appropriate eye protection. Employees describe the pain as being similar to having sand in the eyes. Onset of the condition may be delayed for hours but may require medical attention if severe or prolonged. While this condition is temporary in most instances, permanent damage may be caused by looking directly into a very powerful arc without eye protection.

Whenever possible, arc-welding operations must be isolated so that others will not be exposed to either direct or reflected radiation. Arc welding stations can be enclosed booths painted with non-reflective paint, or inside flameproof curtains/screens which allow the circulation of air at floor level. Adequate ventilation is required, see section 8.0.

Noise
In hot work operations, noise levels can exceed the permissible limits. Hearing protection devices should be worn

Chipping

A welder's tool kit shall include special slag-chipping hammers and chisels. An ordinary carpenter's hammer can splinter and split. Since slag can be sharp, welders must wear safety glasses when performing this operation**.**

Electrical
Several factors can significantly affect the risk of electrical shock to the welder. Inadequate grounding of equipment, worn or damaged cables, or electrode holders, lack of proper gloves, and wet conditions greatly increase the risk to the welder.

- Never touch metal parts with bare skin or wet clothing.
- Inspect equipment for loose connections, bare wires, or cables. Repair or replace damaged parts immediately.
- Use only well insulated electrode holders and cable and make sure the welding machine is properly grounded.
- Do not weld while standing in water or change electrodes while standing on a wet or grounded surface.
- Keep welding cables away from power lines, high tension wires and out of water.
- Avoid the use of metal ladders and conductive tools.
- Do not run welding cables through doors or other pinch points.

7. Personal Protective Equipment

Eye and Face Protection
Welding helmets with filter plates protect users from arc rays and from welding sparks and splatters. They do not protect against slag, chips, grinding fragments, wire wheel bristles and similar hazards. Goggles, helmets, and shields shall be made of material that is thermally and electrically insulated, non-combustible, and opaque to ultraviolet and infrared radiation.

Helmets shall protect the face, forehead, neck, and ears from direct radiant energy.

An outer plate shall be provided to protect the inner filter lens or filter plate. When a lift front type of helmet is used, there must be a fixed impact resistant safety lens or plate on the inside of the frame next to the eyes for protection. All glass lenses and plates shall be marked with the shade number and the letter "H" to designate impact resistance. All lenses shall meet the ANSI Standards for eye protection.

Helmets, goggles, and shields shall be well maintained, and should not be transferred from one employee to another without being cleaned and disinfected.

Protective Clothing
Protective clothing for any hot work operation provides protection to minimize skin burns caused by sparks, splatter, or radiation. Natural materials of a heavy weight are preferable since they are more difficult to ignite. If cotton clothing is worn, it shall be chemically treated with flame resistant materials after each cleaning. Fabric that melts, such as polyester, can cause severe burns and are not recommended. Sparks may lodge in pockets, rolled-up sleeves or cuffs. It is required that sleeves and collars be kept buttoned and pockets removed from the front of clothing. All pockets shall be emptied of flammable or combustible materials, especially cigarette lighters.

- Flame-resistant gauntlet gloves, of leather or other flame-proof material shall be worn during hot work.
- Capes or shoulder covers made of leather shall be worn during overhead hot work operations, when necessary.
- Flame-resistant aprons shall be used to protect the front of the body when additional protection against sparks is needed.
- Fire-resistant leggings and high boots/safety shoes with metatarsal guards are recommended for heavy work.

Ear Protection
Excessive noise can cause permanent hearing loss. Noise shall be controlled at the source when feasible; however, hearing protection is required when engineering controls do not bring noise exposures within allowable limits.

Respiratory Protection
Respiratory protective equipment shall be worn when controls such as ventilation do not reduce air contaminants to allowable levels.

8. Ventilation
Adequate ventilation, either natural or mechanical shall be provided for all welding and related operations. Adequate ventilation depends on:

- Volume and configuration of the space where operations occur.
- Number and type of operations generating contaminants.
- Allowable levels of specific toxic or flammable contaminants being generated. (Refer to Safety Data Sheets or ACGIH Threshold Limit Values.)
- Natural air flow
- Location of the welder's and other person's breathing zones, to the contaminants or source.

Welders and cutters shall take precautions to avoid breathing fumes directly. Correct positioning of the work, proper head placement, and ventilation which directs the plume away from the face are effective avoidance measures. Effective fume removal directs the flow of air across the face of the welder.

Natural Ventilation
Natural ventilation is often acceptable where necessary precautions are taken to keep the welder's breathing zone away from the plume and the following conditions are met:

- Space of 10,000 ft (284m) per welder is provided.
- Ceiling height is more than 16 ft (5m).
- Operation is not done in a confined space.
- Operation is taking place in a building or enclosed room, not a welding booth or screened area, nor does the spaces contain barriers that obstruct cross-ventilation.
- Welding, materials, including welding rods, fluxes, coatings, or base metals, are not composed of:

Antimony	Cadmium	Lead	Ozone
Arsenic	Chromium	Manganese	Selenium
Barium	Cobalt	Mercury	Silver
Beryllium	Copper	Nickel	Vanadium

(If these materials are present, see Mechanical Ventilation)

Mechanical Ventilation
If natural ventilation does not maintain contaminates below the levels specified by OSHA, mechanical ventilation and/or respirators shall be provided. Any welding in confined spaces requires the use of mechanical ventilation. The welder and all other personnel exposed to toxic materials or possible oxygen deficiency shall be provided with clean respirable air. The three types of mechanical ventilation that may be used are local exhaust, local forced, or general dilution ventilation. Local exhaust involves capturing the fume at the source and is preferred to other types of ventilation because the plume does not rise into the welder's breathing zone. There are three types of exhaust systems:

- A fixed extraction system built into the welding bench.
- A portable hood with flexible ducting
- Fume extracting guns or attachments

Local exhaust ventilation and/or respiratory protection is required when working with metal, welding rods, fluxes, or coatings containing stainless steel, zinc and fluorides, no matter where the welding operation is taking place.

Local exhaust ventilation systems shall be designed to achieve a Capture Velocity between 100-200 fpm at the welding location. Capture velocity is the velocity of the air that is required to draw the contaminant into the ventilation system and will vary with distance. With a well-designed system respiratory protection is usually not necessary.

Local forced ventilation should produce an approximate velocity of 100 feet per minute and be maintained for a distance of approximately 2 feet directly above the work area.

Mechanical ventilation may be necessary in addition to local exhaust or local forced ventilation (such as a fan), to maintain airborne contaminants levels below allowable levels or to prevent the accumulation of explosive gas mixtures.

If exhaust fans are not practical, or local exhaust ventilation is not adequate, mechanical air movement shall be used. Precautions shall be taken to ensure that air (containing contaminants) is not dispersed into other work areas.

9. Grinding Safety

Grinding is performed by using an abrasive wheel, made up of individual particles that are bonded together to form a wheel. The hazard associated with an abrasive wheel is that, if not properly mounted and used, the wheel can break apart and explode, sending sections of the wheel flying out at high speeds. The pieces of the wheel can strike the machine operator, causing serious injury and/or death.

Safety Requirements

- Spindle guards shall be in place and secured to the grinder housing.
- Rest plate shall be adjusted to 1/8 inch of the wheel.
- Tongue guard on the top of the grinder shall be adjusted to ¼ inch of the wheel.
- Fixed grinder shields shall be properly positioned and adjusted above the wheel.
- The maximum RPM rating of the wheel is compatible with the RPM rating of the grinder motor.
- New abrasive wheels are visually inspected and ring tested, prior to installation.
- Safety glasses shall be used for all grinding activity.
- Portable grinders shall have operating side handle(s) in place.
- Bench and pedestal grinders shall be permanently mounted.
- Grinder shall have an individual on and off switch.
- Grinding wheels that are viewed to be deficient and/or damaged shall be removed and disposed of ASAP.
- Grinding is considered hot work and requires completion of a hot work checklist. A fire extinguisher is required to be in the area when grinding.
- The above safe guards apply to both portable as well as fixed grinders.

10. Arc Welding and Cutting

Arc welding or cutting requires an electrode lead and a work lead from the source of the current supply. One source is usually connected to the work and the other to the electrode holder. The work cable may provide the ground to the welding machine or in some conditions to a grounded steel structure. The steel structure and connections must be capable of carrying the welding current.

Power Supply

AC or DC power may be used for cutting and welding. Manual welding values should not exceed 600 amps. For automatic machines follow manufacturer's recommendations.

To prevent the accumulation of carbon monoxide and other toxic gases, the engine exhaust of a gasoline-powered generator must be ventilated to an outside atmosphere.

Power units must be relocated or covered to shield against damage from ash, water, chemicals or refuse. Units that become wet must be thoroughly dried and tested before use.

Cables

The electrode lead shall be free of cuts, gouges, and abrasions. Ensure that the plug is dry and in good condition, the receptacle is clean and free of dust, dirt and oxidation. Cable may be repaired if the added insulation is equivalent to the original base covering. To prevent the breakdown of cable insulation keeps welding cables dry and free of grease and oil.

- The local breaker shall be in the off position prior to connecting the work or primary lead.
- Protect cables so that they do not interfere with the movement of personnel.
- Cable shall not be coiled or looped around any part of the body.

Electrodes and Holders

Electrode holders shall be clean and dry, free of arc burns, cracks, and with no "live" parts exposed. Damaged holders will be tagged for repair or replaced.

- Electrode welders shall be well insulated and kept in good repair.
- Welders shall protect themselves from electrical contact with the work or ground by using dry insulating material, gloves and clothing.
- Electrodes holders shall not be cooled by immersion in water.
- When not in use electrode holders shall be placed so that they cannot make electrical contact with persons, conducting objects, fuel or compressed gas tanks.
- If arc welding is suspended for one-half hour or more, all electrodes shall be removed from the holders, the holders secured to prevent accidental contact, and the machine disconnected from the power source.

11. Records

Training records are retained on location.

TOWN OF SMITHFIELD

"Ladder Safety Procedure Policy"

For the

Department of Public Works
Police Department Custodians
Town Hall Maintenance Staff
Parks and Recreation
Senior Center
Ice Rink

1. Purpose

The purpose of this procedure is to control the purchase, use and maintenance of ladders and portable steps used by the Smithfield Department of Public Works (hereinafter referred to as "DPW"), Smithfield Police Department (hereinafter referred to as "Police") custodians, Town Hall maintenance staff, Parks and Recreation, Senior Center, and the Ice Rink.

2. Scope

This procedure is applicable to ladders and portable steps which are the property of the Town of Smithfield.

3. Responsibility

The Director of the DPW is responsible to ensure that this procedure is implemented in full.

Directors at the DPW, Police, Parks and Recreation, Senior Center, Ice Rink, and the Building Official are responsible for ensuring that personnel adhere to the safe use of ladder and steps.

It is the responsibility of all personnel to safely use ladders and steps as per this procedure.

4. Procedures

General

Ladders are under the control of the DPW, Police, Town Hall, Parks and Recreation, Senior Center, and Ice Rink. Contractors are responsible for their own equipment inspections and safety. Generally, ladders are wooden, metal step and extension ladders.

Procurement

Ladders are procured by the Town of Smithfield. The only exception is contractor ladders, which they are responsible to procure. Fiberglass reinforced plastic ladders should be purchased wherever possible. It is important to procure a ladder with the appropriate duty rating. A chart of standardized ladder duty ratings is provided below.

There are five categories of Ladder Duty Ratings:

Type IAA (Extra Heavy Duty)	375 pounds
Type IA (Extra Heavy Duty)	300 pounds
Type I (Heavy Duty)	250 pounds
Type II (Medium Duty)	225 pounds
Type III (Light Duty)	200 pounds

Pre-use inspection

Ladders must be inspected prior to use.

- Ladders must be inspected for:
  - Loose steps or rungs.
  - Loose nails, screws, bolts, rivets, or other metal parts.
  - Cracked, split or broken uprights, rungs or steps.
  - Slivers on uprights, rungs or steps.
  - Defective locks that do not seat properly when the ladder is extended.
  - Deterioration from exposure.

- Ladders Failing Inspection
  - If the ladder is damaged, it cannot be used.
  - Employees identifying the damaged ladder should take out of service by tagging it “Danger - Do Not Use”. The ladder should be further damaged so that no one else can use it and it should be discarded.

A full inspection of ladders in inventory should be performed on an annual basis. Please refer to the Ladder Safety Inspection Checklist in Appendix I.

Use

Employees using ladders must be able to recognize and avoid ladder hazards and be aware of safe practices in setting up, storing, moving and working from this equipment.

- Safe Ladder Setup
  - All ladders must be placed on firm ground.
  - Do not set ladders on boxes, blocks or other objects that might move.
  - Do not lean or reach out while standing on ladders.
  - Secure ladders whenever a danger of slippage might occur.
  - Do not use ladders in high wind or during inclement weather conditions.

- Never set up ladders in front of or around doors, unless the door is posted or locked.
- Do not sit on ladders.
- Use safety shoes or other rubber sole shoes when climbing a ladder.
- Never set ladder up near energized lines or where the ladder, or climber, could come in contact with energized lines.
- If ladder needs to be set up near energized lines, i.e. service to home, contact electric company to install insulated rubber covers on lines, or de-energize lines while work is completed.
- Make sure ladder stand offs, if used, are properly secured to ladder prior to setting up.

- Climbing and Standing on Ladders Safely
  - Always face a ladder when climbing up or down.
  - Avoid carrying materials or tools when climbing a ladder. Climb the ladder first then pull up the materials with a rope.
  - Rungs and steps should be clear of grease, oil, wet paint, snow, and ice before climbing.
  - Do not climb onto a ladder from the side.
  - Do not slide down a ladder.
  - Climb or stand on a ladder with your feet in the center of the rung.
  - Do not stand on the top rung or step of a ladder.
- Proper Use and Care of Ladders
  - Always inspect a ladder for defects before using it.
  - Remove defective ladders from service.
  - Never use metal ladders near exposed electrical wires. (See Safe Ladder Setup)
  - Where warranted, place warning signs or setup barriers around a ladder before use.
  - Do not move a ladder while someone is on it.
  - Never use a ladder when under the influence of alcohol or prescription medications.
  - Do not leave tools or materials on top of ladders.
  - Only one person should be on a ladder at a time.
  - Do not use a ladder on a scaffold.
  - Do not try to rock a ladder to move it.
  - Store wood ladders where they will not be exposed to the elements.
  - Make sure ladders are properly secured when transported.
  - Do not paint wood ladders. Painting could hide potentially dangerous defects.
- Step Ladder Safety
  - Always open a step ladder completely and make sure the spreader is locked before use.
  - Step ladders shall never be used closed and leaning up against any structure.
  - Do not stand higher than the second step from the top of a step ladder.
  - Do not straddle a step ladder.
- Extension Ladder Safety
  - Ladders must be equipped with standard non-slip ladder shoes
  - Extension ladders must not be taken apart to use as separate units
  - The sections of an extension ladder should overlap by 3 feet for a ladder up to 36 feet and 4 feet for a ladder between 36 feet and 48 feet to retain the strength of the ladder.
  - Never splice or tie two short ladders together.
  - When using a ladder for access to a landing, it must extend 3 rungs or 3 feet above the landing.
  - Do not climb higher than the third rung from the top on straight or extension ladders
  - The top of an extension ladder should rest against a flat, firm surface.
  - Elevate and extend these extension ladders only from the ground.
  - When practical, secure extension ladders at both the base and the top.
- Extension Ladder Setup
  - Lay the ladder on the ground when it is collapsed.
  - Have someone foot the ladder or make sure it is braced against something.

- Pick up the ladder and walk it to an upright position, making sure it will not be obstructed by trees or wires.
- Slide the bottom of the ladder outwards to the proper angle and set the feet correctly.
- Always place a ladder so that the horizontal distance from the base to the vertical plane of the support is approximately one-fourth of the ladder length between supports. (For example, place a 12-foot ladder so that the bottom is 3 feet away from the object against which the top is leaning.) Then extend the ladder by pulling the extension line.
- Make sure the rungs on the upper half of the ladder are properly secured by the locking mechanism.
- If possible, tie the ladder off or have someone steady the ladder as you climb it.

- Maintenance, Storage & Repair: Staff using ladders must keep ladders in good condition by:
  - Handling ladders with care.
  - Keeping rungs and steps free of grease and other matter.
  - Contacting their supervisor when they identify a damaged ladder, to have the ladder taken out of service.
  - Storing ladders safely in an area where physical damage cannot occur.

Ladders shall not be stored in stairwells, blocking emergency equipment, or blocking egress.

5. Records

Training records and annual inspections are retained by Directors at the DPW, Police, Parks and Recreation, Senior Center, Ice Rink, and the Building Official.

APPENDIX I

ANNUAL EXTENSION LADDER INSPECTION

Ladder Identification:			Inspector:
Date of Inspection:		PASS ☐	FAIL ☐
Ladder Construction: ☐ Metal ☐ Wood ☐ Fiberglass			Size: _____ft
RUNGS			
Yes	No	N/A	
			Loose Rungs (move by hand)
			Rungs Missing
			Grease, Oil, Slippery Materials
			Cracked, Split, Broken Steps
			Slivers of Rungs
			Loose nail, screw, bolts, or other materials
RAILS			
Yes	No	N/A	
			Grease, Oil, Slippery Materials
			Cracked, Split, Broken Rails
			Slivers of Rails
			Loose nail, screw, bolts, or other materials
EXTENSION LOCKS AND ROPE			
Yes	No	N/A	
			Loose, broken or missing locks
			Locks do not seat properly when ladder is extended
			Rope/Pulley frayed, worn, rotted, or broken
GENERAL			
Yes	No	N/A	
			Movable parts don't operate freely
			Rust, corrosion, or rotted
			Cracked, loose, or missing parts
OTHER			
Yes	No	N/A	
			Damaged or worn non-slip base/shoes
			Other defects that may impair its safe usage
			Labels are attached and legible

ANNUAL STEP LADDER INSPECTION FORM

Ladder Identification:			Inspector:
Date of Inspection:		PASS ☐	FAIL ☐
Ladder Construction: ☐ Metal ☐ Wood ☐ Fiberglass			Size: _____ft
STEPS			
Yes	No	N/A	
			Loose Steps (move by hand)
			Steps Missing
			Grease, Oil, Slippery Materials
			Cracked, Split, Broken Steps
			Slivers of Steps
			Loose nail, screw, bolts, or other materials
RAILS			
Yes	No	N/A	
			Grease, Oil, Slippery Materials
			Cracked, Split, Broken Rails
			Slivers of Rails
			Loose nail, screw, bolts, or other materials
SPREADER			
Yes	No	N/A	
			Loose
			Bend or Broken
			Spreader Stop Broken
PAIL SHELF			
Yes	No	N/A	
			Loose, Cracked or Bent
			Missing or Broken
GENERAL			
Yes	No	N/A	
			Movable parts don't operate freely
			Rust, Corrosion, or Rotted
			Wobbly (when in open position)
OTHER			
Yes	No	N/A	
			Damaged or worn non-slip bases/shoes
			Other defects that may impair its safe usage
			Labels are attached and legible

TOWN OF SMITHFIELD

"Lockout/Tag out Policy"

For the

Department of Public Works
Parks and Recreation
Ice Rink
Senior Center
Town Hall
Police Department
Fire Department

Lockout/Tag out

1. Introduction

Employees of the Town of Smithfield periodically service equipment and machinery that contain hazardous energy, including mechanical equipment, computer storage systems, test units and power drops.

This document sets forth procedures designed to meet the Lockout/Tag out "LOTO" standard for safe work practices in the control of hazardous energy. Its purpose is to ensure that individuals servicing equipment are protected from the unexpected activation of electrical and/or mechanical equipment. It is the policy of the Town of Smithfield that any individual engaging in maintaining, repairing, cleaning, servicing, or adjusting of machinery and equipment abide by the procedures provided in this document.

2. Applicable Regulations / Scope

This Plan covers lockout / tag out procedures for Town of Smithfield employees.

3. Definitions

The following definitions are used throughout this procedure.

Definitions

Affected Employee
An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout/tag out, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.

Authorized Employee
A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an Authorized Employee when that employee's duties include performing servicing or maintenance covered in this report.

Capable of Being Locked Out
An energy-isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy-isolating devices are capable of being locked out if lockout can be achieved without the need to dismantle, rebuild, or replace the energy isolating device or permanently alter its energy control capability.

Energized
Connected to an energy source or containing residual or stored energy.

Energy Isolating Device
A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following:

- A manually operated electrical circuit breaker;
- A disconnect switch;
- A manually operated switch by which the conductors of a circuit can be disconnected from all underground supply conductors, and, in addition, no pole can be operated independently;
- A line valve;
- A block;
- And any similar device used to block or isolate energy.
- Push buttons, selector switches and other control circuit devices are <u>not</u> energy isolating devices.

Energy Source
Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

Lockout
The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout Device
A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

Maintenance and/or Servicing
Workplace activities such as constructing, installing, setting up, adjusting, inspecting, and modifying machines or equipment. These activities include lubrication, cleaning or unjamming of machines or

equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy.

Normal Production Operations
The utilization of a machine or equipment to perform its intended production function.

Setting Up
Any work performed to prepare a machine or equipment to perform its normal production operation.

Tag out
The placement of a tag out device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tag out device is removed by the individual who installed it.

Tag out Device
A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tag out device is removed.

4. Responsibilities

The following sections outline the tasks, responsibilities and duties of personnel who perform lockout/tag out activities.

Each Department Director is responsible for the following:

- Provide training to authorized personnel.
- Maintain a current list of Authorized Employees.
- Ensure that each employee and each contractor engaging in work requiring locking out/tagging out of energy sources understands and adheres to adopted procedures.
- Retain a copy of the outside contractor's lockout/tag out plan on file, when provided, with the project for the required retention time.
- Update the Lockout/Tag out Plan as the addition or modification of equipment, machinery, or operations requires the use of new lockout/tag out devices or procedures.
- Ensure that the lockout/tag out procedures are in compliance with this procedure.
- Ensure sites maintain necessary equipment and resources, including accident prevention signs, tags, padlocks, seals and/or other similarly effective devices.
- Inspect energy control procedures and practices annually to ensure that general and specific lockout/tag out procedures are being followed.
- Inspections must be carried out by authorized personnel other than those employees directly utilizing energy control procedures.
- Inspections will include a review between the inspector and each Authorized Employee, of that employee's responsibilities under the energy control procedure being inspected.
- Certify that periodic inspections have been performed (see Section 9.0 and Town of Smithfield Lockout Tag out Inspection Form)

Maintenance

- Notify the Department Director of changes to lockout/tag out procedures for existing equipment and when new equipment requiring unique LOTO procedures has been installed.
- Prohibit employees untrained in LOTO from performing LOTO activities.

- Maintain LOTO equipment.

Authorized Employees

- Adhere to specific procedures as outlined in this document for tasks that require the use of lockout/tag out procedures as defined.
- Maintain lockout/tag out supplies

Locks and Tags

- All locks must be standardized in at least one of the following criteria:
  - Color
  - Shape
  - Size
- All valves, breakers or other isolating devices which are locked must also bear a tag which reads "Danger, Do Not Operate".
- All equipment which is secured must be test started to prove proper isolation. Test both the local and remote switches (if applicable).
- All locks must be identifiable to the individual who has hung the lock. This may be done by using an identifiable tag, by having an available cross reference index to the number on the lock, a photo of the individual, or by scribing the individual's name onto the lock.
- An employee may not apply or remove another person's lock from the isolating device. The only exception to this is covered by the section "Emergency Removal of Locks".

5. General Energy Control Procedures

This section describes general procedures that must be followed when locking out an energy source from a piece of equipment. Such equipment includes air handlers, cooling towers and circuit breakers. Energy control procedures for other specific machines are located in the appendices. These procedures are valid only for machines and equipment for which all of the following exist:

1. The machine or equipment has no potential for stored or residual energy, or re-accumulation of stored energy after shutdown, which could endanger employees;
2. The machine or equipment has a single energy source which can be readily identified and isolated;
3. The isolation and locking out of that energy source will completely de-energize the machine or equipment;
4. The machine or equipment is isolated from that energy source and locked out during servicing or maintenance;
5. A single lockout device will achieve a locked-out condition;
6. The lockout device is under the exclusive control of the Authorized Employee performing the servicing or maintenance;
7. The servicing or maintenance does not create hazards for other employees.

Preparation for Lockout/Tag out

Locate and identify all isolating devices such as switch(es), valve(s), or other energy isolating devices associated with the equipment to be locked or tagged out. More than one energy source (electrical, mechanical, stored energy, or others) may be involved. If more than one source is identified, machine-specific procedures must be prepared and followed.

Sequence of Lockout or Tag out

1. Notify affected employees that a lockout or tag out system is going to be used and the reason for the lockout/tag out. The Authorized Employee shall know the type and magnitude of energy that the machine, system, or equipment uses and shall understand the hazards thereof.
2. If the machine, system, or equipment is operating, shut it down by the normal shut down procedure (e.g. depress stop button, open toggle switch, depress red EPO switch to the off position, etc.).
3. Locate energy-isolating device(s) (e.g., circuit breaker) and switch to off position. Lockout the energy-isolating devices with assigned individual lock(s) and/or tag(s).

NOTE: Circuit breakers that have been switched to the off position for the purposes of maintaining a unit MUST be "locked out." Placing electrical tape over a breaker is NOT sufficient.

4. After ensuring that no personnel are exposed, and as a check on having disconnected the energy sources, make certain the equipment will not operate and that access cannot be gained. This can normally be done by trying to turn on the equipment.
5. The equipment is now locked and/or tagged out.

Restoring Machines or Equipment to Normal Operations

1. Only the individual who locked out and tagged out the equipment can gain access to the key. **NO** exceptions will be made.
2. After the servicing and/or maintenance is complete and equipment is ready for normal operation, check the area around the machines or equipment to ensure that no one is exposed to hazards.
3. After all tools have been removed from the machine, system, or equipment, guards have been reinstalled, and employees are safely positioned, remove all lockout or tag out devices.
4. Notify affected employees that the equipment has been returned to operating status.

Temporary Removal of Lockout/Tag out Devices

In situations where lockout/tag out devices must be temporarily removed from the energy-isolating device and the machine, system, or equipment energized to test or position the machine, equipment or component thereof, the following sequence of actions will be followed:

1. Remove non-essential items and ensure that machine, system, or equipment components are operationally intact.
2. Have employees who applied the lockout/tag out devices remove the lockout/tag out devices.
3. Notify affected employees that lockout/tag out devices have been removed and ensure that all employees have been safely positioned or removed from the area.
4. Energize and proceed with testing or positioning.
5. De-energize all systems and reapply energy control measures in accordance with previously identified procedures in this section.

Emergency Removal of Locks

The following procedure will be used to remove a lock for emergency or other purposes when the owner of the lock cannot be located.

1. All means should be attempted to contact the person by paging or calling at home.
2. The worker's supervisor or manager should be informed of the situation and the need to remove the lock.
3. The supervisor must personally inspect the work site to ensure that no one is working on the equipment and that no one will be injured should the lock be removed and the equipment energized.
4. Once convinced that safety will be maintained, the supervisor may authorize the lock to be removed.
5. The worker will be informed that the lock was removed when he/she returns to the work. The employee should be counseled or retrained on this procedure to avoid recurrence.
6. The Authorized Employee shall document the reason for the Emergency Removal and the safety procedure followed for the removal of locks, and this record shall be retained with the project file for the required retention time.

Tag out Policy

Although allowable in some instances, the Town of Smithfield prohibits employees from tagging a piece of equipment without placing a lockout device. If it is not feasible to lock out an energy source, contact the Department Director for further instruction.

6. Group Lockout / Tag out

When maintenance and/or servicing of equipment is performed by multiple Authorized Employees, each will affix a personal lockout and/or tag out device (to which he or she has the only authority to remove) to the group lockout device, group lockout box, or comparable mechanism. The personal lockout and or tag out device will be affixed in the group lockout device when he or she begins work, and will be removed when he or she is finished working on the machine or equipment being serviced or maintained.

Group lockout or tag out devices will be used in accordance with the procedures listed in Section 5. Primary responsibility will be given to an Authorized Employee for a set number of employees working under his/her authority and under the protection of a group lockout and/or tag out device.

Shift or Personnel Changes

The following specific procedures shall be utilized during shift or personnel changes to ensure the continuity of lockout and/or tag out protection, including the orderly transfer of lockout and/or tag out devices between off-going and oncoming employees.

- The oncoming employee, in the presence of the off-going employee **immediately** places his/her lock in the lockout device.
- Oral communication will be conducted between the off-going employee and the oncoming employee explaining which machines are locked out/tagged out and why, what work has already been done, and what work still needs to be finished.
- The off-going employee, in the presence of the oncoming employee, removes his/her lock from the lockout device.

7. Contractors

Whenever an outside contractor is engaged in lockout/tag out activities, the Director and the outside contractor should inform each other of their respective lockout/tag out procedures. The Town of Smithfield will ensure that its employees understand and comply with the restrictions and prohibitions of the outside contractor's lockout/tag out plan.

8. **Training and Communication**

Each Department Director will coordinate training for employees who conduct lockout/tag out procedures. Basic training will include the following:

- Review of the OSHA standard, 29 CFR 1910.147
- Recognition of hazardous energy sources
- Type and magnitude of the energy available in the workplace
- Methods and means of energy isolation and control
- Purpose and use of the energy control procedures
- Prohibition relating to attempts to restart or reenergize machines that are locked out or tagged out
- Limitations of tags

Each Department Director maintains records of training. Employees may not participate in lockout/tag out activities without training and approval from the Department Director. Retraining will occur if one of the inspections discussed in Section 9 reveals that there are inadequacies or deviations from the current lockout/tag out procedures. As determined by the Department Director, retraining will also occur as needed whenever an employee has a change in job assignments, there is a change in machines, equipment, or processes that presents a new hazard, or when there is a change in energy control procedures.

9. **Inspections and Plan Updates**

The Department Director will conduct an inspection of the energy control procedures **at least annually** to ensure that the procedures and the requirements of the Lockout/Tag out standard are being followed. This inspection will be performed by an Authorized Employee other than the one(s) using the energy control procedure being inspected. During the inspection, any inadequacies or deviations from actual lockout/tag out procedures or the Lockout/Tag out standard will be corrected and this plan revised accordingly. The inspection will also include a review between the inspector and each authorized and affected employee, to examine the employee's responsibilities under the energy control procedures. Inspections will be conducted using the Town of Smithfield Lockout/Tag out Inspection Form in the Appendix.

The Department Director will certify that the inspections have been performed and identify the machines or equipment on which the energy control procedure was being used, the date of the inspection, the employees included in the inspection, and the person performing the inspection.

10. **Records**

Records related to this procedure will be maintained by the Director and shall include:

- Training
- Annual Lockout/Tag out Periodic Inspection Form

APPENDIX I

TOWN OF SMITHFIELD

Lockout/Tag out Periodic Inspection Form

Inspection Date: _____
Machine, equipment, or system on which the energy control procedure is being utilized:
_____
_____
_____

Inspector

Printed Name	Signature

Employee(s) Inspected

Printed Name	Signature

Inspection Items	Yes	No
Does employee have or have access to adequate lockout/tag out devices?		
Are the proper devices being used?		
Have affected employees been notified?		
Has employee checked that his/her lockout/tag out devices are secured properly?		
Has employee received lockout/tag out training in the last year?		
Have all procedures established in the Lockout/Tag out Procedure been followed?		
Are tag outs legible and clearly displayed?		

Comments/Observations

TOWN OF SMITHFIELD

"Personal Protective Equipment Policy"

For the

Department of Public Works
Parks and Recreation
Ice Rink
Senior Center
Town Hall
Police Civilians

Personal Protective Equipment

1. Purpose
This procedure describes the Town of Smithfield's (hereinafter referred to as "the Town") personal protective equipment (PPE) program.

2. Scope
This procedure addresses the PPE needed to perform various tasks at Town buildings. The procedure is based upon United States OSHA (Occupational Health & safety Administration) regulations.

3. Responsibility
Each Director is responsible for maintaining this procedure, including the PPE Assessments, and managing the overall PPE program which includes employee training and PPE selection and use.

Supervisors and Managers ensure they and their staff are using the required PPE to perform jobs with required PPE.

Employees are responsible to know what PPE is required to perform their duties, how to effectively use the PPE for their safety, complete required training, and wear PPE as required.

4. Definitions

PPE (Personal Protective Equipment) refers to protective clothing or other gear designed to protect the wearer's body or clothing from injury by electrical hazards, heat, chemicals, and infection, for job-related occupational safety and health purposes

5. Procedure

The Director evaluates various job duties with assistance from The Trust to determine the appropriate PPE required to safely perform duties and assigns those PPE requirements by job title using the PPE Hazard Assessment Checklist (see Appendix I).

The Director will coordinate training as needed for employees who require PPE to perform their job duties and communicates PPE changes. The training will be web-based, classroom instruction, or on-the-job.

The Director will provide all necessary PPE.

Departments must notify the Director of any changes in processes, activities or equipment that would necessitate evaluation or re-evaluation of PPE needs, and the Town will conduct the evaluation with assistance from The Trust to make the appropriate recommendations.

The Director will conduct periodic on-site evaluations to verify that personnel are wearing PPE as required.

6. Records

Safety Training records are retained by the Department Director and Human Resources.

Appendix I

Personal Protective Equipment (PPE)

Hazard Assessment Survey and Analysis

Department: _____ **Job Title: _____**

Person performing assessment: _____ Title: _____

THE FOLLOWING HAZARDS HAVE BEEN NOTED – Select all that apply and the corresponding PPE.

Part of Body	Hazard	Required PPE
Hands	❑ Penetration-sharp objects ❑ Penetration-animal bites ❑ Penetration-rough objects ❑ Chemical(s) ❑ Blood ❑ Electrical shock ❑ Vibration-power tools ❑ Other _____	❑ Leather/cut resistant gloves ❑ Leather/cut resistant gloves ❑ General purpose work gloves ❑ Chemical resistant gloves; ❑ Latex or nitrile gloves ❑ Insulated rubber gloves; ❑ Type _____ ❑ Leather gloves ❑ Other _____
Eyes and Face	❑ Impact-flying objects, chips, sand or dirt ❑ UV light-welding, cutting, torch brazing or soldering ❑ Chemical-splashing liquid ❑ Chemical-irritating mists ❑ Hot sparks-grinding ❑ Other _____	❑ Safety glasses w/side shields or ❑ Glasses/goggles w/face shield ❑ Impact goggles ❑ Welding goggles or ❑ Welding helmet/shield w/safety glasses & side shields ❑ Chemical goggles/ face shield ❑ Safety glasses w/side shields ❑ Glasses/goggles w/face shield ❑ Other _____
Ears	❑ Exposure to noise levels while using equipment	❑ Ear muffs or plugs
Respiratory System	❑ Exposure to Chemicals requiring cartridge respirator ❑ Nuisance Dust	❑ Half or Full-Face Respirator (Contact RI Trust to Evaluate) ❑ Dust Mask
Head	❑ Struck by falling object ❑ Struck against fixed object ❑ Other_____	❑ Hard hat/cap ❑ Other_____

CERTIFICATION: I certify that I personally performed the above Hazard Assessment on the date indicated. *This document is a Certification of the Hazard Assessment*.

Print/Signed: _____ Date: _____

TOWN OF SMITHFIELD

"Excavation and Trenching Policy"

for the

Department of Public Works

Excavation and Trenching

1. Purpose

To protect personnel from potential injury, illness, or fatality and to protect property and equipment from damage while working around excavations and trenches.

This program outlines procedures and guidelines for the protection of employees working in and around excavations and trenches. This program is written in accordance with OSHA Standards described in Subpart P (CFR 1926.650) for the construction industry.

Compliance is mandatory to ensure employee protection when working in or around excavations. The programs in this manual on confined space, hazard communication, lock-out/tag-out, respiratory protection, and any other safety programs or procedures deemed essential for employee protection, are to be used in conjunction with this program.

2. Scope

This procedure applies to all projects that require any excavations or trenches.

This procedure applies to all Town of Smithfield (hereinafter referred to as the "Town") employees.

All contractors are responsible for their own operations working in/around excavations and trenches at all Town properties.

3. References

- 29 CFR 1926.650, Subpart P - Excavations
- Excavation Equipment Manufacturer Safety Procedures

4. Responsibilities

The Director of the Department of Public Works (hereinafter referred to as "DPW") is responsible for ensuring that all safety measures are in place, implemented, maintained and followed by all involved employees.

It is the responsibility of the DPW Director to ensure that this procedure is followed for all excavation and trenching activities.

It is the responsibility of all contractors performing excavation and trenching work to conform to the OSHA standards mentioned above.

5. Definitions

- **Aluminum Hydraulic Shoring:** A manufactured shoring system consisting of hydraulic cylinders (cross braces) used with vertical rails (uprights) or horizontal rails (wales). This system is designed to support the sidewalls of an excavation and prevent cave-ins.
- **Bell-bottom pier hole:** a type of shaft or footing excavation, the bottom of which is made larger than the cross section above to form a bell shape.
- **Benching:** A method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near vertical surfaces between levels.
- **Cave-In:** The separation of a mass of soil or rock material from the side of an excavation, or the loss of soil from under a trench shield or support system, and its sudden movement into the excavation, either by failing or sliding, in sufficient quantity so that it could entrap, bury, or otherwise injure and immobilize a person.
- **Competent Person:** One who is capable of identifying existing and predictable hazards in the surroundings or working conditions, which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
- **Cross Braces:** the horizontal members of a shoring system installed from side to side of the excavation. The cross braces bear against either uprights or wales.
- **Duration of Exposure:** The longer an excavation is open, the longer the other factors have to work on causing it to collapse.
- **Excavation:** Any man-made cut, trench, or depression in an earth surface, formed by earth removal.
- **Faces/Sides:** the vertical or inclined earth surfaces formed as a result of excavation work.
- **Hazardous Atmosphere:** An atmosphere which by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic, or otherwise harmful, may cause death, illness, or injury.

- **Protective System:** A method of protecting employees from cave-ins, from material that could fall or roll from an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide necessary protection.
- **Ramp:** an inclined walking or working surface that is used to gain access to one point from another. A ramp may be constructed from earth or from structural materials such as steel or wood.
- **Shield:** A structure that is capable of withstanding the forces imposed on it by a cave-in and thereby protects employees within the structure. Shields can be permanent structures or can be designed to be portable and moved along as work progresses. All shields must be in accordance with 29 CFR 1926.652(c)3 or (c)4.
- **Shoring:** a structure that is built or put in place to support the sides of an excavation to prevent cave-ins.
- **Sloping:** A method of protecting workers from cave-ins by excavating to form sides of an excavation that are inclined away from the excavation to prevent cave-ins. The angle of incline required to prevent a cave-in varies with differences such as soil type, length of exposure, and application of surcharge loads.
- **Support System:** a structure used as underpinning, bracing or shoring, which provides support to an adjacent structure, underground installation, or the sides of an excavation.
- **Surcharge Loads:** Generated by the weight of anything in proximity to the excavation, push starts for a cave-in (anything up top pushing down). Common surcharge loads:
    - weight of spoil pile
    - weight of nearby buildings, poles, pavement, or other structural objects.
    - weight of material and equipment
- **Trench:** A narrow excavation below the surface of the ground, less than 15 feet wide, with a depth no greater than the width.
- **Undermining:** Undermining can be caused by such things as leaking, leaching, caving or over-digging. Undermined walls can be very dangerous.
- **Vibration:** A force that is present on construction sites and must be considered. The vibrations caused by backhoes, dump trucks, compactors and traffic on job sites can be substantial.

6. Hazards

One of the reasons the Town requires a competent person on-site during excavation and trenching are the numerous potential hazardous that may be encountered or created. Hazards include:

- Electrocution
- Gas Explosion
- Entrapment

- Struck by equipment

7. Hazard Controls

Before any work is performed and before any employees enter the excavation, a number of items must be checked and insured:

- Before any excavation, underground installations must be determined. This can be accomplished by contacting the local utility companies and calling dig safe. All underground utility locations must be documented on the proper forms. All overhead hazards (surface encumbrances) that create a hazard to employees must be removed or supported to eliminate the hazard.
- If the excavation is to be over 20 feet deep, it must be designed by a registered professional engineer who is registered in the state where work will be performed.
- Adequate protective systems will be utilized to protect employees. This can be accomplished through sloping, shoring, or shielding.
- The worksite must be analyzed in order to design adequate protection systems and prevent cave-ins. There must also be an excavation safety plan developed to protect employees.
- Workers must be supplied with and wear any personal protective equipment deemed necessary to assure their protection.
- All spoil piles will be stored a minimum of two (2) feet from the sides of the excavation. The spoil pile must not block the safe means of egress.
- If a trench or excavation is 4 feet or deeper, stairways, ramps, or ladders will be used as a safe means of access and egress. For trenches, the employee must not have to travel any more than 25 feet of lateral travel to reach the stairway, ramp, or ladder.
- No employee will work in an excavation where water is accumulating unless adequate measures are used to protect the employees.
- A competent person will inspect all excavations and trenches daily, prior to employee exposure or entry, and after any rainfall, soil change, or any other time needed during the shift. The competent person must take prompt measures to eliminate any and all hazards.
- Excavations and trenches 4 feet or deeper that have the potential for toxic substances or hazardous atmospheres will be tested at least daily. If the atmosphere is inadequate, protective systems will be utilized.
- If work is in or around traffic, employees must be supplied with and wear reflective vests. Signs and barricades must be utilized to ensure the safety of employees, vehicular traffic, and pedestrians.

8. Competent Person Responsibilities

The competent person must be capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and have authorization to take prompt corrective measures to eliminate them and, if necessary, to stop the work.

A competent person is required to:

- Have a complete understanding of the applicable safety standards and any other data provided.
- Assure the proper locations of underground installations or utilities, and that the proper utility companies have been contacted.
- Conduct soil classification tests and reclassify soil after any condition changes.
- Determine adequate protective systems (sloping, shoring, or shielding systems) for employee protection.
- Conduct all air monitoring for potential hazardous atmospheres.
- Conduct daily and periodic inspections of excavations and trenches.
- Approve design of structural ramps, if used.

9. Excavation Safety Plan

An excavation safety plan is required in written form. This plan is to be developed to the level necessary to insure complete compliance with state and local safety standards.

Excavation safety plan factors:

- Utilization of Dig Safe system
- Determination of locations of all underground utilities
- Consideration of confined space atmosphere potential
- Proper soil protection systems and personal protective equipment and clothing
- Determination of soil composition and classification
- Determination of surface and subsurface water
- Depth of excavation and length of time it will remain open
- Proper adherence to all of the Town's applicable safety procedures, this excavation and trenching safety program, and any other coinciding safety programs.

10. Soil Classification and Identification

This procedure defines soil classifications within the Simplified Soil Classification Systems, which consist of four categories: Stable rock, Type A, Type B, and Type C. Stability is greatest in stable rock and decreases through Type A and B to Type C, which is the least stable. Appendix A of the Standard provides soil mechanics terms and types of field tests used to determine soil classifications.

Stable rock is defined as natural solid mineral matter that can be excavated with vertical sides and remain intact while exposed.

Type A soil is defined as:

- Cohesive soils with an unconfined compressive strength of 1.5 tons per square foot (TSF) or greater.
- Cemented soils like caliche and hardpan are considered Type A.

Soil is NOT Type A if:

- It is fissured.
- The soil is subject to vibration from heavy traffic, pile driving or similar effects.
- The soil has been previously disturbed.
- The material is subject to other factors that would require it to be classified as a less stable material.
- The exclusions for Type A most generally eliminate it from most construction situations.

Type B soil is defined as:

- Cohesive soil with an unconfined compressive strength greater than .5 TSF, but less than 1.5 TSF.
- Granular cohesionless soil including angular gravel, silt, silt loam, and sandy loam.
- The soil has been previously disturbed except that soil classified as Type C soil.
- Soil that meets the unconfined compressive strength requirements of Type A soil, but is fissured or subject to vibration.
- Dry rock that is unstable.

Type C soil is defined as:

- Cohesive soil with an unconfined compressive strength of .5 TSF or less.
- Granular soils including gravel, sand and loamy sand.
- Submerged soil or soil from which water is freely seeping.
- Submerged rock that is not stable.

11. Soil Test & Identification

The competent person will classify the soil type in accordance with the definitions in Appendix A on the basis of at least one visual and one manual analysis. These tests should be run on freshly excavated samples from the excavation and are designed to determine stability based on a number of criteria: the cohesiveness, the presence of fissures, the presence and amount of water, the unconfined compressive strength, the duration of exposure, undermining, and the presence of layering, prior excavation and vibration.

The cohesion tests are based on methods to determine the presence of clay. Clay, silt, and sand are size classifications, with clay being the smallest sized particles, silt intermediate and sand the largest. Clay minerals exhibit good cohesion and plasticity (can be molded). Sand exhibits no elasticity and virtually no cohesion unless surface wetting is present. The degree of cohesiveness and plasticity depend on the amounts of all three types and water.

When examining the soil, three questions must be asked: Is the sample granular or cohesive? Fissured or non-fissured? What is the unconfined compressive strength measured in TSF?

Methods of testing soils:

- Visual test: If the excavated soil is in clumps, it is cohesive. If it breaks up easily, not staying in clumps, it is granular.

- Wet manual test: Wet your fingers and work the soil between them. Clay is a slick paste when wet, meaning it is cohesive. If the clump falls apart in grains, it is granular.
- Dry strength test: Try to crumble the sample in your hands with your fingers. If it crumbles into grains, it is granular. Clay will not crumble into grains, only into smaller chunks.
- Pocket penetrometer test: This instrument is most accurate when soil is nearly saturated. This instrument will give unconfined compressive strength in tons per square foot. The spring-operated device uses a piston that is pushed into a coil up to a calibration groove. An indicator sleeve marks and retains the reading until it is read. The reading is calibrated in tons per square foot (TSF) or kilograms per cubic centimeter.
- Thumb penetration test: The competent person attempts to penetrate a fresh sample with thumb pressure. If the sample can be dented, but penetrated only with great effort, it is Type A. If it can be penetrated several inches and molded by light pressure, it is Type C. Type B can be penetrated with effort and molded.
- Shearvane: Measures the approximate shear strength of saturated cohesive soils. The blades of the vane are pressed into a flat section of undisturbed soil, and the knob is turned slowly until soil failure. The dial is read directly when using the standard vane. The results will be in tons per square foot or kilograms per cubic centimeter.

The competent person will perform several tests of the excavation to obtain consistent, supporting data along its depth and length. The soil is subject to change several times within the scope of an excavation and the moisture content will vary with weather and job conditions. The competent person must also determine the level of protection based on what conditions exist at the time of the test, and allow for changing conditions.

12. Excavation Protection Systems

The three basic protective systems for excavations and trenches are sloping and benching systems, shoring, and shields.

The protective systems shall have the capacity to resist without failure all loads that are intended or could reasonably be expected to be applied to or transmitted to the system. Every employee in an excavation shall be protected from cave-ins by an adequate protective system.

- Exceptions to using protective system:
- Excavations are made entirely in stable rock
- Excavations are less than four (4) feet deep and declared safe by a competent person

Sloping and Benching Systems

There are four options for sloping:

- Slope to the angle required by the Standard for Type C, which is the most unstable soil type.
- The table provided in Appendix B of the Standard may be used to determine the maximum allowable angle (after determining the soil type).
- Tabulated data prepared by a registered professional engineer can be utilized.

- A registered professional engineer can design a sloping plan for a specific job.

Sloping and benching systems for excavations four (4) to twenty (20) feet in depth must be constructed under the instruction of a designated competent person.

Sloping and benching systems for excavations greater than twenty (20) feet must be designed and stamped by a registered professional engineer.

Sloping and benching specifications can be found in Appendix B of the OSHA Standard (Subpart P).

13. Shoring Systems

Shoring is another protective system or support system. Shoring utilizes a framework of vertical members (uprights), horizontal members (whales), and cross braces to support the sides of the excavation to prevent a cave-in. Metal hydraulic, mechanical or timber shoring is common examples.

The different examples of shoring are found in the OSHA Standard under these appendices:

APPENDIX C - Timber Shoring for Trenches

APPENDIX D - Aluminum Hydraulic Shoring for Trenches

APPENDIX E - Alternatives to Timber Shoring

14. Shield Systems (Trench Boxes)

Shielding is the third method of providing a safe workplace. Unlike sloping and shoring, shielding does not prevent a cave-in. Shields are designed to withstand the soil forces caused by a cave-in and protect the employees inside the structure. Most shields consist of two flat, parallel metal walls that are held apart by metal cross braces.

Shielding design and construction is not covered in the OSHA Standards. Shields must be certified in design by a registered professional engineer and must have either a registration plate on the shield or registration papers from the manufacturer on file at the jobsite office. **ANY REPAIRS OR MODIFICATIONS MUST BE APPROVED BY THE MANUFACTURER.**

Safety Precautions for Shield Systems

- Shields must not have any lateral movement when installed.
- Employees will be protected from cave-ins when entering and exiting the shield (examples - ladder within the shield or a properly sloped ramp at the end).
- Employees are not allowed in the shield during installation, removal, or during any vertical movement.
- Shields can be 2 ft. above the bottom of an excavation if they are designed to resist loads at the full depth and if there are no indications of caving under or behind the shield.
- The shield must extend at least 18 inches above the point where proper sloping begins (the height of the shield must be greater than the depth of the excavation).

- The open end of the shield must be protected from the exposed excavation wall. The wall must be sloped, shored, or shielded. Engineer designed end plates can be mounted on the ends of the shield to prevent cave-ins.

15. Personal Protective Equipment

It is Town policy to wear a hard hat, safety glasses, and work boots on the jobsite. Because of the hazards involved with excavations, other personal protective equipment may be necessary, depending on the potential hazards present (examples - goggles, gloves, and respiratory equipment).

16. Inspections

Daily inspection of excavations, the adjacent areas and protective systems shall be made by the competent person for evidence of a situation that could result in a cave-in, indications of failure of protective systems, hazardous atmospheres or other hazardous conditions.

- All inspections shall be conducted by the competent person prior to the start of work and as needed throughout the shift.
- Inspections will be made after every rainstorm or any other increasing hazard.
- All documented inspections will be kept on file in the jobsite safety files and forwarded to the Department Head weekly.
- A copy of the Daily Excavation Inspection form is located at the end of this program.

17. Trainings

The competent person(s) must be trained in accordance with the OSHA Excavation Standard, and all other programs that may apply (examples Hazard Communication, Confined Space, and Respiratory Protection), and must demonstrate a thorough understanding and knowledge of the programs and the hazards associated.

All other employees working in and around the excavation must be trained in the recognition of hazards associated with trenching and excavating.

TOWN OF SMITHFIELD

"Working at Heights Policy"

for the

Department of Public Works

Police Custodians

Fire Department

Town Hall Maintenance Staff

Senior Center

Parks and Recreation

Ice Rink

Working at Heights

1. Purpose

To minimize the severity of injuries and minimize the potential for deaths from accidental or unexpected falls while personnel are working at high elevations.

2. Scope

This procedure applies to all work required to be performed at high elevations and on elevated walking/working surfaces. This includes requirements for harnesses and lifelines, railings, and ladders.

This Procedure applies to all Town of Smithfield employees.

This Procedure also applies to all contractors working at high elevations and/or on elevated walking/working surfaces at Town of Smithfield facilities.

3. Responsibility

Each Director is responsible for the ensuring that safety procedures are in place, implemented, maintained and followed.

Employees and contractors are responsible for following safety procedures. Contractors shall be provided with a copy of this safety procedure, and certify that they will follow these procedures, or, supply documentation that their employees performing the work have been provided the necessary training by the contractor to completed the work safely.

4. Definitions

- **Anchorage:** A secure point of attachment for lifelines, lanyards, or deceleration devices. All anchorages used shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds per employee attached.
- **Body Harness:** Straps which may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest, and shoulders with means for attaching it to other components of personal fall arrest system.
- **Connector:** A device which is used to couple (connect) parts of the personal fall arrest system and positioning device together. It may be an independent component of the system, such as a carabineer, or it may be an integral component of part of the system (such as a buckle or D-ring sewn into a body belt or body harness, or a snap-hook spliced or sewn to a lanyard or self-retracting lanyard).
- **Deceleration Device:** Any mechanism, such as a rope grab, rip-stitch lanyard, specially-woven lanyard, tearing or deforming lanyard, automatic self-retracting lifelines/lanyards, etc., which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.
- **Free Fall:** The act of falling before a personal fall arrest system begins to apply force to arrest the fall.
- **Lanyard**: A flexible line of rope, wire rope, or strap which has a connector at each end for connecting the body belt or body harness to deceleration device, lifeline, or anchorage.
- **Lifeline**: A component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline). Also for connection to anchorage's at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.
- **Personal Fall Arrest System:** A system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, or a body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these.
- **Toeboard:** A low protective barrier placed to prevent the fall of materials to a lower level, or to prevent an employees' feet from slipping over the edge of a surface.
- **Walking/working Surface:** Any surface, whether horizontal or vertical on which an employee walks or works, including but not limited to, floors, roofs, ramps, bridges, runways, form work and concrete reinforcing steel but not including ladders, vehicles, or trailers, on which employees must be located in order to perform their job duties.

5. Reference Documents

- 29 CFR 1910.28, Scaffolding;
- 29 CFR 1910.23, Guardrails and Toe boards
- 29 CFR 1910.25-27, Ladders
- 29 CFR 1910.66 App C, Personal Fall Arrest Systems

6. Procedure

Employees working at heights must follow safety procedures to mitigate the chance of personal injury, or injury to others in the surrounding area.

When an employee performs work at heights, the area below shall be marked off to prevent any injury to employees below from falling items. These areas shall be kept clean, orderly, sanitary and dry. Egress routes, aisles and clearances for doorways shall be kept clear with no obstructions across or in aisles that could create a hazard.

The employee must use appropriate personal protective equipment for the task at hand, and to protect from falls, as described below.

7. Personal Fall Arrest Systems
Fall protection shall be used when:

- Working at elevations 6 feet or more above ground on machinery, equipment, components, elevated work platforms and any other areas not adequately guarded by railings.
- Riding or working out of a lift cage or platform, off of ladders, overhead structures or any other phase of work that exposes an employee to a fall.

Personal fall arrest systems consist of an anchorage, connectors, and a body harness and may include a deceleration device, lifeline, or suitable combinations. If a personal fall arrest system is used for fall protection, it must do the following:

- Be no smaller than 0.5 inch nylon or equivalent material;
- Be rigged so that an employee can neither free fall more than 6 feet nor contact any lower level;
- Limit maximum arresting force on an employee to 1,800 pounds when used with a body harness
- Bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet
- Have a nominal breaking strength of 5,000 pounds
- Be attached or secured at a level no lower than the worker's waist to an anchorage or structural member capable of supporting a minimum dead weight load of 5,000 pounds; and
- May be anchored to rigged running cables to provide lateral movement, providing the runner cable and its anchor attachment are capable of supporting a minimum dead weight of 5,000 pounds.
- Not be used for any purpose other than for employee safety. Any lifelines or harnesses used for other purposes shall be destroyed to prevent them from being used subsequently for employee safety;
- Have hardware (exclusive of rivets) capable of withstanding a tensile loading of 3,600 pounds without cracking, breaking or taking a permanent deformation; and be drop-forged steel or equivalent, with a corrosive-resistant finish. Surfaces shall be smooth and free of sharp edges.
- Be inspected by the user prior to each use.

8. Guardrails and Toeboards
A standard toeboard and guardrail is required wherever employees walk near or beneath the open sides of a platform or under similar structures, or could fall from the structure into machinery below.

Every wall opening from which there is a drop of more than four feet shall be guarded.

Every open-sided floor or platform four feet or more above adjacent floor or ground level shall be guarded by a standard railing on all open sides except where there is an entrance to a ramp, stairway or fixed ladder. Toeboard is required per Section 6 above.

Skylights shall be guarded by a standard skylight screen or a fixed standard railing on all exposed sides.

A standard guard railing:

- Consists of top rail and posts.
- Is 42 inches from the upper surface of the top rail to the floor, platform, runway, or ramp.
- Has an intermediate rail spaced halfway between the top rail and the toeboard.
- Has a clearance of at least 1.5 inches between the railing and any other object.
- Shall be designed to withstand a minimum of 200 pounds applied in any direction at any point on the top of a rail.

The standard toeboard shall be approximately four inches in height from the floor to the top edge, with no more than 0.25 inch gap between the toeboard and the floor.

When work must be performed at high elevations and guardrails are not feasible or available, harnesses and lifelines shall be used according to Section 7.0 of this Procedure.

9. Ladders

Fixed ladders shall:

- Withstand a minimum design live, single concentrated load of 200 pounds.
- Be painted to resist deterioration.
- Have side rails at least 16 inches apart, rungs spaced 12 inches apart and shall be free of splinters and burrs.
- Have a preferred pitch of 75º to 90º from horizontal. The maximum acceptable critical range is 75º to 90º from horizontal; and
- Have at least seven inches of clearance between the center line of rungs and the nearest permanent object in back of the ladder.
- Be inspected frequently, and at minimum, conduct an annual inspection with documentation of the inspection.

Fixed ladders longer than 20 feet shall have a cage; and have a landing platform every 30 feet. Fall protection is required on fixed ladders taller than (or that extend beyond) 24 feet.

Fixed ladders longer than 20 feet and used for access for fire fighters or other emergency personnel may be used without cages or other forms of employee fall protection provided measures such as barriers and signs are used to prevent non-emergency use of these ladders.

Portable ladders shall:

- Be maintained in good condition.
- Be inspected frequently, and at minimum, conduct an annual inspection with documentation of the inspection.
- Be tagged “Danger - Do Not Use” and removed from service for repair or destruction if they are found to be defective.
- Be stored where they are not exposed to the elements.
- Have non-slip bases.

Step ladders shall be equipped with a metal spreader or locking device of sufficient size and strength to securely hold the ladder open.

Metal ladders shall not be used near energized electrical equipment.

The top of step-through ladders used to gain access to a roof shall extend at least 3 feet 6 inches above the point of contact and 4 feet for side-step ladders.

All additional requirements for construction and use of ladders shall be according the Ladder Safety Best Practice Procedure.

10. Training

Employees that work at elevations shall be trained according to this procedure and shall understand the importance of selecting proper safety equipment and using proper safety procedures when performing jobs at high elevations. Training will be conducted prior to employees performing any such jobs at Town facilities. Retraining shall be performed as necessary.

Training may include:

- Review of accident statistics and the specifics of any falls, near misses or other accidents from high elevations that could have been prevented by using a harness or lifeline, etc.
- Asking employees to identify job functions in the plant that require use of harnesses or lifelines
- Emphasizing that guardrails and toeboards are required per Section 6.0 of this Procedure.

11. Record Retention

Training records are retained by the Department Directors.

TOWN OF SMITHFIELD

"Hazard Communication Policy"

For the

Department of Public Works
Police Department Custodians
Town Hall Maintenance Staff
Parks & Recreation
Senior Center
Ice Rink

Hazard Communication

1. Purpose

This Hazard Communication procedure has been established to improve communication and training associated with hazardous substances. This program has been designed to help maintain a healthy work environment by increasing employee awareness of workplace chemicals and their potential health effects, safe work practices, and emergency procedures.

2. Scope

This procedure addresses the minimum standard for the use of hazardous chemicals at any Town of Smithfield facility.

This procedure has been written to comply with United States Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1910.1200. It also takes into account changes required for the implementation of the Globally Harmonized System of classification and labelling of chemicals.

3. Responsibility

Directors:

- Responsible for maintaining this procedure and keeping it current with governmental regulations.

Supervisor:

- Responsible for implementing this procedure in their areas. Implementation includes:
    - Notifying the Director about the need to acquire a new chemical that poses unique hazards or hazards significantly different than current chemicals being used.
    - Obtaining SDS when new products are purchased
    - Ensuring employee access/review of the current SDS for each hazardous substance
    - Ensuring employees are trained, including directions for working with chemical(s), and considering non-routine assignments
    - Completing an annual chemical inventory and maintaining SDS book

Employees:

- Responsible for reading and adhering to the precautions outlined on container labels and SDS
- Requesting additional training on hazardous substances with which they are unfamiliar
- Employees are required to follow instruction provided by this program and the HAZCOM training.
- Employees are expected to wear the appropriate PPE when working with chemicals, and following good hygiene practices.
- Employees must appropriately store and label chemicals being used in their work area, and properly dispose of used chemicals.

4. Definitions

- **Chemical:** Any element, chemical compound, or mixture of elements and/or compounds.
- **GHS:** An acronym for The Globally Harmonized System of Classification and Labelling of Chemicals. The GHS is a system for standardizing and harmonizing the classification and labelling of chemicals. It is a logical and comprehensive approach to defining health, physical and environmental hazards of chemicals, creating classification processes that use available data on chemicals for comparison with the defined hazard criteria, and communicating hazard information, as well as protective measures, on labels and Safety Data Sheets (SDS).
- **Hazardous Chemical:** Any chemical that is a physical hazard or a health hazard.
- **Health Hazard:** A chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. The term health hazard includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, neurotoxins, and agents which act on the hematopoietic system and agents which damage the lungs, skin, eyes, or mucous membranes.

- **Physical Hazard:** A chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.
- **Right to Know:** The Town of Smithfield is required to provide information to its employees about the hazardous chemicals to which they are exposed, by means of a hazard communication program, labels and other forms of warning, material safety data sheets and information and training.
- **Safety Data Sheet (SDS):** Information sheet generated by a chemical manufacturer, which includes specific physical and chemical data on a chemical product such as storage requirements, health hazard data, and recommended protection equipment.

5. Reference Documents

US OSHA (OSHA), Hazard Communication Standard - 29 CFR 1910.1200

6. Procedure

Container Labeling: It is the policy of the Town of Smithfield that containers holding hazardous chemicals will be labeled with the following information at a minimum:

- Contents of containers (i.e. name of chemical)
- Appropriate hazard warning (e.g. flammable)

Directors will be responsible for ensuring that hazardous substance containers are labeled and updated in accordance to this policy. If there are containers not labeled, the Director must provide labels immediately or contact the Town of Smithfield Purchasing Agent if assistance is required.

- **Safety Data Sheets**

  Safety Data Sheets (SDS) are maintained by each department.

  It is the responsibility of the employee making a chemical purchase to obtain an SDS for that hazardous substance. If an SDS does not accompany a purchase, it is the responsibility of the person making the purchase to contact the vendor and obtain a copy. Once the SDS is obtained, it must be forwarded to the Director. If the manufacturer or distributor fails to provide the SDS, they should be reported to the Director, and their product must no longer be used or purchased until a SDS has been received.

- **Employee Training and Information**

  Employees working with hazardous chemicals will be trained on the following (as appropriate):
  - An overview of the requirements contained in the Hazard Communication Standard, including their rights under the standard.
  - The GHS labelling system and the requirements associated with it.
  - Location and availability of the written hazard communication program, the required list of hazardous chemicals and SDS.
  - Employee responsibility when making a chemical purchase.
  - Physical and Health Hazards of chemicals in the work areas.
  - How to reduce or prevent exposure to these hazardous substances through usage of control, work practices and personal protective equipment.

- How to read labels and review SDS to obtain appropriate hazard information.
- Details of this Hazard Communication Program.

At the time of initial assignment and/or when new hazardous substances are introduced to a work area, the Director will be responsible for reviewing the above items with employees.

- **Hazardous Material List**
  Supervisors/Directors will maintain a list of hazardous chemicals known to be present at each Town of Smithfield location.

- **Informing Contractors**

To ensure that outside contractors are made aware of the chemicals used/stored on-site, they shall be made aware of the SDS book location and any specific chemical hazards that may exist in their work area.

Similarly, contractors who bring hazardous materials to Town facilities as part of their service duties may be asked to furnish SDS on those products.

- **Hazardous Non-Routine Tasks**
  Periodically, employees may be required to perform non-routine tasks involving the use of hazardous chemicals. Prior to starting work on such projects, Directors with the assistance of the supervisor are responsible for communicating the following information to affected employees:
  - The specific hazards that are anticipated; and
  - Appropriate protective measures to be used (this may include ventilation, personal protective equipment, or other procedures.)

7. Record Retention

Training records will be maintained by each Department Director. SDS are retained on site.