



**Maintenance & Operations**  
**Safety Policy Statement**  
**I-1**

**Personal Protective Equipment (PPE) & Safety Training**

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1. **Purpose:** To emphasize safety in the workplace. It is the responsibility of employees and supervisors to become familiar with and ensure safe work practices. The North Carolina State Employees' Safety and Health Handbook is provided to all incoming employees at UNC Charlotte. This handbook is required reading. It highlights many of the basic safety and health regulations applicable to general industry. Employees and Supervisors must build upon these basic rules by seeking out additional safety guidelines applicable to particular jobs and/or work assignments. The University's Safety & Health Manual provides additional guidance, policy and procedure to be implemented and followed for various jobs on campus. Many of the State and University Policies reflect guidance and/or requirements set forth by the Federal Occupational Safety & Health Act (OSHA) and the State of North Carolina's Occupational Safety & Health Act; two additional sources for safe work practices.
2. **Safety Training:** Supervisors are required to recommend and schedule safety training that is necessary to keep all employees aware of hazards involved in the workplace and maintain records of that training.
3. **Personal Protective Equipment (PPE):** Supervisors are to conduct a workplace hazard assessment for each employee's position and identify the appropriate PPE to be used by the employee during the execution of his work. Records of the evaluation shall be maintained and coordinated with the Safety Office.
4. **Equipment:** Supervisors shall keep an adequate stock of PPE on hand consistent with the anticipated workload. Foul weather gear (jackets, pants & boots) shall also be available for employees to use during inclement weather.
5. **Supervisors Review & Inspect:** Supervisors are to periodically review routine work assignments to ensure not only the quality of the work, but that safe work practices are being followed. On new or unique assignments, supervisors shall review with the employees assigned the work, the safety equipment needed and procedures to be followed before work begins.
6. **Employee Responsibility:** Review work assignments, understand and follow safe work practices. Bring to the attention of your supervisor any concerns related to your safety or that of others.

**Maintenance & Operations**  
**Safety Policy Statement**  
**I-2**  
**MSDS's & Airborne Hazards**

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1. **Purpose:** To provide information on precautions required in use of paints, solvents, or other maintenance and cleaning products. Employees must read the product label and Material Safety Data Sheet (MSDS) prior to opening or using paints, solvents, and other maintenance and cleaning products. Manufacturers may change their formulations for products introducing chemicals that may be hazardous to your health and require special precautions noted on the label and/or MSDS.
2. **MSDS:** Each shop and Zone will maintain an MSDS binder containing Material Safety Data Sheets for all products used by the Shop or Zone. It shall be in a readily accessible area and all employees are to be trained in its use. Supervisors shall insure it is up-to-date and that duplicate copies are provided to the University Safety Director and maintained within the M&O Director's office.
3. **Airborne hazards:** Prior to using some products, special precautions may be required to limit airborne exposure to noxious or harmful fumes. Special precautions may include the use of personal protective equipment and even the shut down of HVAC equipment. In extreme cases, work may have to be scheduled when occupants will be absent for a number of days. If you have any doubt in the proper use of any product, consult with your supervisor, the Maintenance & Operations Director and/or the University Safety Director.

**SAFETY FIRST!**

Laurance H. Howell, P.E.  
Maintenance & Operations Director

**Maintenance & Operations**  
**Safety Policy Statement**  
**I-3**  
**Fire Protection Valves**

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1. **Purpose:** The purpose of this policy is to provide information on handling fire protection valves. Fire protection valves which are to be shut off for routine servicing or repair will be reported to the Safety Office 48 hours in advance of the scheduled shut-off. A shut-off tag will be used for all shut-offs. During weekends, holidays and after working hours, valve closings will be reported to the Campus Police.
2. **Locations:** The locations of all fire protection valves and post indicator valves are shown in a listing maintained by Shop 12 and the Director of Maintenance & Operations. The Director of Maintenance & Operations is responsible for ensuring the periodic inspection of each of these valves. All valves must be in the open position at all times and are to be safety wired and/or locked open. Shop 12 (HVAC) and the Zones will maintain listings and locations of valves under their areas of responsibility.
3. **Inspections:** Shop 12 (HVAC) and the Zones will inspect all valves and maintain a weekly/monthly inspection log as appropriate (NFPA25) noting open condition and any evidence of tampering or damage. Access to all valves must be immediately available and no materials or equipment shall be stored so as to block access. Any valves showing signs of tampering shall be reported to the Director of Maintenance & Operations immediately.
4. **Reports:** Shop 12 and the Zone shall include a note within their monthly report to M&O that all valves were inspected and note any discrepancies and corrective action taken.

Laurance H. Howell, P.E.  
Maintenance & Operations Director

**Maintenance & Operations**  
**Safety Policy Statement**  
**I-4**  
**Safety Shoes**

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1. **Purpose:** To provide M&O employees guidance for selecting safety shoes. Safety shoes shall meet the American National Standards Institute (ANSI) standard Z41 PT 91 (or PT 99).
2. **Discussion:** Safety shoes for M&O employees need to protect workers' feet from falling objects (impact) and/or rolling objects (crushing). Ankle support and slip resistance are also desirable features for the environment in which employees work and for the duties performed. Employees such as the HVAC mechanics, electricians and others who currently work with or around electrical devices need the added protection of non-conductive toes and an electrical hazard (EH) rated shoe. Safety shoes meeting these requirements must carry the ANSI markings on the shoe. (There is no ANSI standard for slip resistance or ankle support; thus no marking).
3. **Appropriate Safety Shoes:** The minimum requirements for safety shoes include a five inch top for ankle support, a slip resistant sole, and a non-conductive toe meeting ANSI Z41 PT91 (or PT99) with an I/75 C/75 rating. For any employee working with or in a position requiring exposure to electrical wiring, equipment or devices the shoe must carry an "EH" rating. Individual PPE assessments may indicate additional attributes such as moisture resistance and/or puncture resistant soles. Be sure to review specifics with your supervisor before purchase.
4. **Sample Marking:** For your information, I'll give you a sample of the marking on a shoe and translate what the marking means.

ANSI Z41 PT 91 M 1/75 C/75 EH PR

"ANSI Z41 PT 91" designates the industry standard for construction and testing of the shoes themselves. The PT means that the shoes meet the 1991 standard. For protection against impact or crushing both the 1991 and 1999 standards provides adequate protection.

"M" means male. Shoes may also be marked "F" for female.

"I/75" means that the safety toe could withstand 75 pounds of slow, continuous crushing without compressing to a point that would injure the toes.

"C/75" means that the safety toe could withstand 75 pounds of slow, continuous crushing without compressing to a point that would injure the toes.

"PR" means that the entire sole of the shoe meets the standard requirements for puncture resistance.

"EH" means the shoe is rated for electrical hazards.

5. **Local Vendors: Saf-Gard Safety Shoe Company**, 3116 North Sharon Amity Road, Charlotte, NC 28205 carries a wide variety of safety shoes which will meet the requirements. Phone 704-568-8180. The Wolverine Style WW 4626 is one shoe meets the requirements.
6. **Reimbursement:** Reimbursement for Safety Shoes is limited to one pair in a 12-month period and at the rate authorized by the State of North Carolina which is currently \$80.00. Procedures for reimbursement are set by the Facilities Business Office.

Laurance H. Howell, P.E.  
Maintenance & Operations Director

**- REVISED -**  
**Maintenance & Operations**  
**Policy Statement**  
**II-1**  
**Utilities Locates**

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1. **Purpose:** To establish procedures for requesting and conducting underground utilities location and marking. Underground utilities include University-owned utilities as well as public companies. Duke Energy, Piedmont Natural Gas, Bell South and Time Warner have underground utilities on campus.
  
2. **Locating University-owned Utilities:** Maintenance and Operations (M&O) is responsible for locating and marking the University-owned utilities. Requests for utility locates must be made by "Work Request" a minimum of forty-eight (48) hours in advance to ensure the Electric Shop and HVAC Shop will have time to respond. Work requests shall be accompanied by a current utility site plan of the general area (obtainable from Design Services) with the specific area for the locate clearly marked. Work requests shall clearly note the date and time the markings need to be in place so the markings can be placed just ahead of the need to ensure they do not wear off.
  
3. **Locating Public Utilities on Campus:** Locating and marking of the public utilities which are on campus is accomplished through a private company known as 1-Call. Their toll free number is 1-800-632-4949. M&O is not responsible for contracting or coordinating 1-Call services. The project manager/person requesting utility locations is responsible for coordinating 1-Call services.
  
4. **Color of Markings:** It is important that the color coding of the markings conform to known standards. Facilities Management shops will follow the code below: (Other paint manufacturers may be used as long as the color matched the Crown # and the paint is suitable for underground markings)

Electrical	Red	Crown #1240
Water	Blue	Crown #1241
Irrigation	Blue/Pink*	Crown #1241/1247
Telecommunications	Orange	Crown #1244
Steam/Condensate	Yellow/Blue*	Crown #1243/1241
Natural Gas	Yellow	Crown #1243
Cable TV	Orange/White*	Crown #1244/1245
Sewer	Green	Crown #1242

Cooling Tower Water	Blue/White*	Crown #1241/1245
Chilled Water	Blue/Green	Crown #1241/1242

\* The color with the asterisk (\*) will be used to spray two one foot long stripes diagonally across the primary color. Spacing of diagonal marks will be not more than ten feet apart.

5. Once utility markings have been made, the HVAC and Electric Shop Supervisors will e-mail the requestor a notice that the utility locates are complete and specifically state which utilities were marked and if a utility is not present in the area. If utilities are known or the supervisor has reason to believe there are utilities in the area which could not be located, he will so state and advise of suspected locations and reasons for his suspicions.

6. Shop Supervisors will notify the project manager and the Design section supervisor if certain utilities are missing from the campus utility maps or are shown in the wrong location.

7. Contractor is ultimately responsible for safeguarding the campus utilities and related public company utilities.

Laurance H. Howell, P.E.  
Maintenance & Operations Director

**Maintenance & Operations**  
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**II-2**  
**Excavation & Trenching**

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1. **Purpose:** To provide clarifying information in regards to excavation and trenching being conducted by M&O personnel in accordance with UNC Charlotte's Safety Policy. All supervisors and those staff members engaged in excavation and trenching operations shall be thoroughly familiar with UNC Charlotte's Safety Policy.
2. **Background:** Most excavation and trenching on campus by M&O personnel will be to repair broken or leaking water lines, steam lines and/or sewer lines. On occasion there will be trenching for electrical and communications work. This work may be performed by University Employees or Contractors. In either case the University's Safety Policy must be adhered to.
3. **Responsibilities:** Before beginning any excavation, the estimated locations of utilities such as electric, steam, telephone, natural gas, water and sewer must be determined. M&O has established a policy for requesting utility locates. The shop supervisor/project coordinator shall ensure utility locations and hazards are identified beforehand. The shop supervisor/project coordinator shall also assemble the members of the "dig team", including a "competent" person, to review the purpose of the excavation, hazards that are present and individual responsibilities and safeguards. If there is a utility in the immediate area of the dig which may be impacted, the shop supervisor/project coordinator shall include an appropriate representative of that utility on the dig team during planning and execution.
4. **Additional Requirements:** Lockout and tagout procedures may need to be employed to safeguard employees from live steam, natural gas, water or electrical power. Air monitoring and confined space rules may also apply. You will find additional procedures and responsibilities spelled out in the UNC Charlotte Safety Manual for Trenching, Confined Space Entry and Lockout/Tagout. The project coordinator shall be familiar with all these requirements.

Laurance H. Howell, P.E.  
Maintenance & Operations Director

**Maintenance & Operations  
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II-3  
Access to Facilities Restricted by Gender**

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1. Supervisors shall make every attempt to assign work requests within facilities restricted to a certain gender to members of the same gender. Should that not be possible, Supervisors will assign as they deem appropriate.
2. Employees that are assigned work in a gender specific area shall request a member of the appropriate sex to check the facility and report if it is all clear.
3. This may seem burdensome, but there are members of the opposite sex who cannot hear and cannot speak who would not be able to acknowledge their presence in response to an audible announcement.

Laurance H. Howell, P.E.  
Maintenance & Operations Director

**Maintenance & Operations  
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II-4  
Utility Cart Security**

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1. All utility carts assigned to the shops residing in the Maintenance & Operations Building shall return those carts to the secure fenced in area across from the old Grounds Building (new SDI warehouse) at the end of each work day.
2. Grounds and other shops residing in the new Building "J" by the Facilities Management Building shall secure their utility carts at the end of the work day within the new FM Compound behind Building "J".
3. The Zones shall secure their carts at the RUP's in the areas designated and in the manner prescribed by the Zone Supervisor.
4. Shop supervisors shall ensure employees are aware of this policy and implement the same.

Thank you all for your cooperation.

Laurance H. Howell, P.E.  
Maintenance & Operations Director

**Maintenance & Operations  
Policy Statement  
II-5  
Safety Practices Review and Report**

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1. **Purpose:** To establish a review procedure to ensure OSHA training is completed as required and employees utilize safe practices in the field.
2. **Reviews:** All Shop & Zone Supervisors shall schedule and complete periodic reviews of their Shop's/Zone's safety practices not less than once per year. Such reviews shall include; a review of the Lockout/Tagout procedures used in the field by personal observation and report, an accuracy review of the forms on file for Lockout/Tagout and confined space entry, a random review of the safe work practices employed by their staff on various projects as compared to those which should be employed, and a review of job briefings conducted/or not and content thereof.
3. **Reporting:** Each Supervisor shall prepare a written report of their findings addressing each of these items and other safety related issues along with their OSHA Training Matrix for the previous year by January 15.

Laurance H. Howell, P.E.  
Maintenance & Operations Director

**Maintenance & Operations  
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II-6  
After Hours Access/Sales by SDI Warehouse**

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1. **Purpose:** To establish after hours procedures for accessing the SDI warehouse to obtain materials in case of an emergency.
2. No Maintenance & Operations employees shall access the SDI Warehouse after hours without proper authority.
3. Should any M&O personnel need to access the SDI Warehouse to obtain parts for emergency work during non-working hours (when it is closed), they shall contact their supervisor, or the M&O Director in the supervisor's absence.
4. The Supervisor or M&O Director will confirm the urgency and arrange to have the warehouse opened.
5. All parts that are withdrawn in this manner must be documented on the pick tickets provided and the individual taking the parts must identify them by common name and part number and list quantity taken. No parts are to be removed without authorization and proper documentation.
6. Facility will not be opened to unauthorized personnel or left unsecured. Personnel having access ability and authorized to permit access to facility for business purposes after non-working hours are as follows:

Maintenance & Operations Director  
Shop 11 – Electrical Supervisor  
Campus Police

Laurance H. Howell, P.E.  
Maintenance & Operations Director

(See attached SDI Log)

# SDI LOG FOR STOCK PICK UPS AFTER OPERATION HOURS

DATE	WORK REQUEST NUMBER	ITEM NUMBER	QTY	BADGE ID #	SIGNATURE FOR RECEIVED MATERIAL
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					