

TABLE OF CONTENTS

SECTION I	SAFETY ADMINISTRATION AND RESPONSIBILITIES		
	POLICY STATEMENT		
	INTRODUCTION		
101	Purpose	5	
102	Objectives	5	
103	Scope	6	
104	Responsibilities	6	
SECTION II	INCIDENT INVESTIGATION AND REPORTING		
200	Incident Investigation and Reporting	8	
201	Personal Injury Incident Reporting	10	
202	Vehicle Incident	10	
203	Equipment Damage	10	
SECTION III	SAFETY MEETINGS		
300	Purpose	11	
301	Supervisory Personnel	11	
302	Group Safety Meetings	12	
303	On-The-Job Safety Meetings (tailgate meetings)	12	
SECTION IV	VEHICLE SAFETY		
400	Operation of City Vehicles		12
401	Operating City Vehicles	13	
SECTION V	HAZARD COMMUNICATION PROGRAM		
500	Introduction and Purpose	16	
501	Objectives	16	
502	Procedures	16	
SECTION VI	CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)		
600	Purpose	18	
601	Policy	18	
602	Practice	18	
603	Responsibilities	20	
SECTION VII	GENERAL SAFE PRACTICES		
700	Welding	24	
701	Chain Saw Operations	29	
702	Office Safety	30	
703	Pesticide Use	31	
704	Signs, Signals, Barricades	33	
705	Personal Protective Equipment	34	
706	Ladder Safety	35	
707	Shop Safety	38	
708	Incident Prevention Signs and Tags	41	
709	Flammable/Combustible Liquid Storage	42	

710	Extreme Weather Conditions	43
711	New/Transfer Employees Safety Orientation	44
712	Sanitation	45
713	Lab Safety	46
714	Mower Safety	48
SECTION VIII SAFE DRIVER AWARD PROGRAM		
800	Statement of Purpose and Policy	48
801	Eligibility and Award Criteria	48
802	Awards	49
803	Name Submission and Evaluation	49
804	Award Presentation	49
SECTION IX SAFETY AND HOUSEKEEPING INSPECTIONS		
900	Purpose	50
901	Responsibility	50
SECTION X HAND TOOLS		
1000	General Equipment	50
SECTION XI SPECIFIC SAFETY		
1100	Tree Trimming	51
1101	Surveying Operations	52
SECTION XII MAINTENANCE AND CONSTRUCTION EQUIPMENT		
1200	General	52
1201	Slow Moving Vehicles	53
1202	Dozers	53
1203	Aerial Devices	53
1204	Flatbed Trailers	54
1205	Front-End Loaders	54
1206	Maintainers	54
1207	Platforms (Sign Trucks, Spreaders, Etc.)	55
1208	Tractor Mowers	55
1209	Rotary Brooms and Street Sweepers	55
1210	Elevated Work Platforms, Towers, Scaffolding	55
1211	Materials Handling and Storage	56
1212	Lifting and Carrying	56
1213	Fire Prevention	57
1214	First Aid	57
1215	Poison Ivy	57
1216	Snakes	57
SOP LIST		59
FORMS LIST		59

Revision Number 2, 2008 (Compiled and edited by Mike Hackworth, Bi-City Safety Manager, 1994)

SAFETY PROGRAM POLICY STATEMENT

The Cities of Texarkana, Arkansas and Texarkana, Texas

Prepared by and Directed by:
The Texarkana Water Utilities

Safety Programs are undertaken to assure the welfare of City Employees and the Public they serve. In today's budget minded environment, municipalities are realizing the benefits derived by the elimination or reduction of job related injuries. In most cases, the involved workforce will carry the lessons of safety programs into their respective homes and other places of commonly shared interest including schools, churches and civic organizations.

The responsibility for safety is shared. All department heads, division managers and supervisory personnel at all levels of each city are directed to make safety a matter of continuing concern and to stress its equal importance to all other operational activities. All employees are charged with the responsibility for cooperation and support of the objectives of this safety program. There is no substitute for safety. The success of this effort is directly proportional to the loss control objectives that are stressed at all levels.

Employees are directed and encouraged to adopt the attitude that the "Safe Way" to perform a job is the most efficient and cost effective way. It is the only acceptable way of doing any task. The success of our Safety Program depends upon the announced and demonstrated interest of management plus the sincere and consistent examples set by supervisors as well as the concerned efforts of all employees.

HAROLD BOLDT
City Manager
Texarkana, Arkansas

F. LARRY SULLIVAN
City Manager
Texarkana, Texas

INTRODUCTION

The cities of Texarkana, Arkansas, Texarkana, Texas and Texarkana Water Utility, (hereinafter referred to as “the city”), has issued this revision of the Bi-City Safety Manual. It prescribes safety standards city employees are expected to follow.

Each employee is required to follow the rules and procedures described in the Bi-City Safety Manual. Supervisors are instructed to enforce these requirements.

The following definitions apply to the words “shall,” “should,” and “may” when they are used in the Bi-City Safety Manual.

SHALL - a mandatory requirement. Where certain requirements are described with the “shall” stipulation, it is mandatory that these requirements be met.

SHOULD - an advisory condition. Where the word “should is used, it is considered to be an advisable usage, recommended but not mandatory.

MAY - a permissive condition. No requirement for implementation is required.

Supervisors shall check periodically to determine that each non-office employee and each office of record has the **Bi-City Safety Manual** readily available and that employees are familiar with the rules that apply to their particular jobs.

NOTE: Non-office employees are those who are directly associated with maintenance and construction as well as those who work in various department shops.

It is emphasized that a job cannot be performed safely solely by following rules. Rules can only assist in safe performance. Ultimately, safety depends on the knowledge, skill, and attitude of each individual employee.

Willful or repeated violations of requirements found in the **Bi-City Safety Manual** require disciplinary action as outlined in the Texarkana, Arkansas, and Texarkana, Texas Personnel Manuals. **Supervisors** are responsible for the enforcement of safety rules and standards. The safety manager shall monitor all areas of the safety program and notify the appropriate supervisor in writing of any violations with recommendations. Supervisors shall respond as to action taken.

(The term "City of Texarkana" when used in this publication represents Texarkana Arkansas, Texarkana Texas and Texarkana Water Utilities, unless otherwise specifically stated)

SECTION I:

SAFETY ADMINISTRATION AND RESPONSIBILITIES

101 - Purpose

1. Safety Program

The purpose of the Safety Program is to establish a system to insure the safety and health of every City employee. By providing a safe work place and by working safely, each employee's ability to earn a gainful living is protected, as is the City's ability to deliver services to citizens in an efficient manner.

2. Safety Manual

The purpose of the Bi-City Safety Manual is to provide management levels of the City's work force assistance in implementing and maintaining a safety program within their respective areas of operation. As changes and new developments occur effecting the safe operations of the City, revisions and updates will be made to this manual as needed.

102 - Objectives

The objective of the Safety Program is prevention of incidents. An incident, as referred to in this manual, is any unplanned event that produces unintended personal injury, equipment damage or property damage. When an incident occurs, chance is largely the determining factor as to degree of loss. Therefore, prevention of all incidents must be the objective of safety effort rather than only those where the potential for serious loss is most apparent.

Other than "Acts of God", incidents are preventable and the result of causes related to unsafe and inefficient procedures or methods, unsafe physical conditions, unsafe equipment, unsafe personal acts and usually one or more of these factors in combination.

Since incidents usually result from the same deficiencies that adversely affect productivity, costs, employee relations and public relations, the safety record is a reliable guide to the general effectiveness of supervision.

The City of Texarkana will achieve safe working conditions by:

1. Pursuing a continuous inspection effort of all City facilities, vehicles, and work procedures to identify and correct hazardous working conditions and practices;
2. Investigating and reviewing all incidents involving City employees and property to determine the cause of the incident and to outline preventive measures;
3. Providing adequate job training and continuing safety instruction to all employees;
4. Developing reasonable, practical, and safe job procedures for City operations and continuously reviewing them for improvement; and
5. Establishing protective equipment guidelines for employees and requiring its use.

103 - Scope

1. Safety considerations shall be consistently incorporated with other management efforts by placing continual emphasis on the refinement of operational procedures, healthful working conditions, and employee discipline and incentives. These considerations can be accomplished in several ways with safety committees, safety coordinators, staff meetings, safety meetings, technical and special committees, and other effective means of management to address safety requirements and responsibilities. The requirements and guidelines in the manual are the minimum requirements and they shall in no way be construed to limit divisional and departmental initiatives to implement more detailed and comprehensive procedures.
2. Due to the diversity of operations within our City governments and the differences in the organizational structure within various departments, it is recognized that certain procedures in the program cannot be equally applied by all departments. There are some details, which might be impossible or impractical for one department to implement while another department would have no difficulty in applying all of them. Therefore, managers are expected to formulate and implement alternative methods when necessary insuring that the program objectives are not compromised.

104 - Responsibilities

DEPARTMENT HEADS

All Department Heads have full authority and total responsibility for maintaining safe and healthful working conditions within their jurisdiction whether it be in the field, in the shop, or in the office. Although personnel exposure to hazards varies widely from division to division, it is expected that an unrelenting effort will be directed toward controlling injuries, collision, liabilities and waste of materials in each. Therefore all Department Heads shall:

1. Insure that policies and procedures set forth herein are complied with by all personnel under their direction;
2. Provide the leadership and positive direction essential in maintaining firm safety policies as a prime consideration in all operations;
3. When necessary, devote a portion of staff meetings to a review of departmental incidents and to discuss plans to bring about more positive incident reduction. This will vary with the frequency and severity of incidents and the degree of hazardous operations involved in each department;
4. Demonstrate a personal concern in departmental incidents by interviewing directly or through a responsible representative, each worker and his/her Supervisor who has:
 - A. Lost work time from an occupational type injury because of negligence;
 - B. Been involved in a vehicular collision because of failure to comply with traffic laws.

DIVISION MANAGERS

All Division Managers (or equivalent) shall be fully responsible and accountable to their Department Heads for compliance with the provisions of the program within his/her department. Each Division Manager shall insure that:

1. All hazardous tasks are covered by specific, published work rules to minimize injury and property damage potential;
2. All personnel are briefed and fully understand department work procedures and existing policies that enforce their use;

3. All employees, new and old, are trained and, when necessary, re-trained in the accepted way each hazardous job must be accomplished;
4. All employees are instructed in and understand the use of and need for personal protective equipment for specific hazardous jobs;
5. Necessary safety equipment and protective devices for each job are available, and used, and used properly;
6. Safety suggestions and written comments from employees are encouraged, and those that are feasible are adopted. These ideas with possible general application are forwarded to the Safety Office;
7. All incidents are thoroughly investigated, recorded and promptly reported.

SUPERVISORS

The full potential of effective incident prevention can only be realized when supervisors cooperate without reservation in all phases of the Safety Program. Their close contact with the work environment and the people performing the work make them the best qualified to translate safety principles into incident prevention on the job. They must know each job they supervise to recognize hazardous situations. They must constantly sell the wisdom of observing safety procedures established for their work force and the use of prescribed protective equipment. They must enforce the safety procedures and rules that apply to the work they supervise. The following is a list of safety obligations for supervisors. They will:

1. Provide continuing safety instruction while issuing daily work assignments to focus attention upon potential hazards and changes in work conditions and procedures;
2. Continuously observe and evaluate work conditions and work procedures to detect and correct unsafe conditions and practices;
3. Promptly investigate incidents and complete required reports;
4. Be receptive to, and encourage employees to report unsafe practices and conditions and to submit practical suggestions for correction;
5. Participate in training courses designed to increase their professional knowledge and safety supervision principles and techniques;
6. Maintain high standards in housekeeping and sanitation in the work environment;
7. Inspect his/her immediate assigned work areas for the purpose of correcting unsafe conditions or acts that can be corrected within the scope of their authority.

EMPLOYEES

As a condition of employment, employees are required to exercise due care in the performance of their work to prevent injuries to themselves and to their fellow workers and to conserve materials. Each employee shall:

1. Report all unsafe conditions to his/her supervisor;
2. Keep work areas clean and orderly at all times;
3. Report all incidents immediately to his/her supervisor;

4. Obey all safety rules and follow published work instructions. If any doubt exists about the safety of a job, the employee shall stop and get instructions from his/her supervisor before continuing work;
5. Operate only machines and equipment that he/she has been authorized and trained to operate;
6. Use only prescribed equipment for the job and handle it properly;
7. Take an active part in the Safety Program.

SAFETY MANAGER

The Safety Manager is responsible for daily management of the Safety Program. He/she is fully responsible for the coordination of this program, and shall take all actions deemed essential to produce a positive reduction in incidents. Specifically, he/she shall:

1. Develop and implement a Safety program incorporating the current practices and procedures adopted by the safety profession as the most effective in preventing occupational injuries/illnesses, and in the elimination/control of hazards, vehicle incidents, liabilities, and damage to equipment and material;
2. Consult directly with all management personnel and employees on safety matters and provide the necessary guidance to ensure effective administration of this program;
3. Periodically attend department/division safety meetings to promote maximum understanding of this program and its objectives;
4. Ensure that a thorough investigation is conducted of all incidents to identify situations that would require immediate attention to prevent serious injury or property damage and subsequently to provide recommendation for correction of same;
5. Take follow-up action to ascertain that corrective action has been taken to prevent recurrence of incident(s);
6. Fully utilize the assistance available from all sources on matters pertaining to safety and health;
7. Publicize information that will apprise management and employees of trends that call for corrective measures.
8. Establish an inspection program to include an annual inspection of all facilities; and
9. Establish a program for reviewing departmental incident experience.

SECTION II

INCIDENT INVESTIGATING AND REPORTING

200 - Incident Investigating and Reporting

Purpose

1. Incident investigation is important and necessary if future incidents are to be prevented. Investigations are made to obtain information through which recommendations for corrective action can be developed. Corrective action may involve additional training, mechanical revision, and direct supervision or enforcement measures.

2. Investigations are primarily concerned with finding the "cause" of the incident and are not necessarily concerned with fixing "blame". Investigations must be kept objective, factual, and free from the "punishment" motive, otherwise they will do more harm than good. This is not to say that responsibility may not be fixed where personal failure has caused the incident, or that such person should be excused from the consequences. However, the investigation itself is concerned only with the facts and the investigating individual or group is best kept free from involvement with the consequences.
3. The principal purposes of an incident investigation therefore are:
 - A. To learn incident causes so that similar incidents may be prevented by mechanical improvement, better supervision and employee instruction.
 - B. To publicize the particular hazard among employees and their supervisors and to direct attention to incident prevention in general.
 - C. To determine facts bearing on legal liability.
4. All personal injuries, motor vehicle incidents and equipment damage occurrences will be investigated by the immediate line supervisor. The investigation report will be filled out in its entirety and all signatures obtained and forwarded to the Safety Office within 24 hours of the occurrence.
 - A. If employee signature cannot be obtained (due to lost time), a copy of the report may be sent to the Safety Office without the employee's signature only. Once the employee returns to work, signature will be placed on original by employee and sent to the Safety Office.
5. The Safety Office shall be notified immediately of the following situations:
 - A. Serious work-related injuries/illnesses or fatalities that included City of Texarkana employees or contractors. Serious injuries/illnesses are defined as:
 - (1) Single injury as a result of a motor vehicle incident;
 - (2) Two or more persons injured in a single incident;
 - (3) Single injury/illness requiring immediate hospitalization.
 - B. Fires and explosions at city facilities resulting in:
 - (1) Activation of fire protection systems (sprinklers);
 - (2) Response by Emergency Response Team (ERT) and/or local Fire Department;
 - (3) Damage to facilities or equipment.
 - C. Building Evacuation (not drills);
 - D. Electrical contact incidents (regardless of severity).

The Safety Manager will notify the City Manager of all serious injuries.

DEFINITION OF TERMS

1. Personal Injury Incident:

An incident in which an employee suffers an injury that may or may not require medical attention or result in lost time or restricted duty.

2. Vehicle Incident:

An incident involving collision or contact between a City vehicle and another vehicle, equipment, property or a person resulting in damage or injury.

3. Equipment Damage Incident:

An incident involving damage to a City vehicle or piece of equipment, but without collision or contact with another vehicle, equipment, property or person.

201 - Personal Injury Incident Reporting

INCIDENT REPORTING

All personal injury incidents and vehicle incident/equipment damage incidents will be reported to the employee's supervisor as soon as possible following the incident/incident. The supervisor will investigate the incident to determine the cause of incident and make recommendations on how the incident could be prevented in the future. The immediate line supervisor of the injured employee shall conduct the investigation by completing a copy of the **RISK MANAGEMENT REPORT OF INCIDENTS/INCIDENTS** report (see Forms Page). This report must be completed in its entirety and all signatures obtained and forwarded to the appropriate office as follows: TEXARKANA TEXAS REPORTS MUST BE SUBMITTED WITHIN 48 HOURS TO THE RISK MANAGEMENT OFFICE, TEXAS CITY HALL (RISK MANAGEMENT WILL FAX A COPY OF THE REPORT TO THE SAFETY OFFICE); TEXARKANA ARKANSAS REPORTS MUST BE SUBMITTED TO ARKANSAS PERSONNEL OFFICE, ARKANSAS CITY HALL, WITH A COPY TO THE SAFETY OFFICE WITHIN 48 HOURS OF THE INCIDENT/INCIDENT; TEXARKANA WATER UTILITY REPORTS MUST BE SUBMITTED TO TWU PERSONNEL OFFICE, 801 WOOD STREET, WITH A COPY TO THE SAFETY OFFICE WITHIN 48 HOURS OF INCIDENT/INCIDENT. If employee signature cannot be obtained, refer to page 7. **All incidents/injuries OTHER THAN FIRST AID will be reported to the Safety Office as soon as possible at 798-3820 or 793-0610 (fax).**

Eligibility for Injury Leave is covered in the appropriate City Personnel Policy Handbook.

202 - Vehicle Incident

Employees will immediately report all vehicle incidents to their supervisor. All vehicle incidents involving damage to any City vehicle or private vehicle that is damaged while conducting City business will be reported on **RISK MANAGEMENT REPORT OF INCIDENTS/INCIDENTS** (see Forms page 61) See reporting procedures in Section 201, page 9. If the incident occurs on a street, highway, parking lot, park grounds, or other public thoroughfare, the Police Department shall be notified. Employees are not to move the vehicle until the incident has been investigated by a police officer. If an employee is injured as a result of a vehicle incident, **A RISK MANAGEMENT REPORT OF INCIDENTS/INCIDENTS** will be completed in accordance with section 201. (see Forms on page 61) Any employee who has been involved in a work-related incident which involves an injury to person or property may be required to undergo drug testing through urinalysis or blood in accordance with current city personnel policy.

203 - Equipment Damage

All equipment damage incidents shall be reported using a **RISK MANAGEMENT REPORT OF INCIDENTS** report (see Forms, page 61) See reporting procedures in Section 201, page 9. Equipment damage includes all collision and non-collision incidents involving vehicles, off-road equipment such as tractors, front-end loaders, or other heavy equipment. (Non-collision incidents include vandalism and acts of crime)

Procedures at Traffic Incident Scenes

- Take whatever actions are necessary to prevent additional incidents and injuries.
- **No written or other forms of statements shall be given by employees except to:**
 - **representatives of the city**
 - **law enforcement officers**
 - **safety manager**
- **Do not comment on whom or what caused the incident. Do not admit that you caused the incident.**
- Call the appropriate law enforcement agency.
- Render all possible aid to the injured, law enforcement officers, and other authorized persons at the incident scene.
- If needed, call an ambulance and wrecker service.
- Contact your supervisor or acting supervisor.

NOTE: It is the supervisor's responsibility to investigate incidents involving employees under his/her supervision.

- Obtain photographic documentation and/or a video recording of the incident scene and vehicles involved.
- Take appropriate steps to eliminate the causes of the incident, both those attributed to employees and those due to unsafe conditions, tools, equipment, or work environment
- obtain a copy of the police report

Forms

1. RISK MANAGEMENT REPORT OF INCIDENTS/INCIDENTS (PAGE 61)

SECTION III

SAFETY MEETINGS

300 - Purpose

Safety meetings are an integral part of the safety program. Their function is to arouse and maintain interest in incident prevention, to develop attitudes sympathetic to the safety program; and most important of all to educate employees in every factor entering into safe performance of their duties.

The Safety Manager will provide assistance to Department Heads, Division Managers and Supervisors as required for compliance with this section.

SAFETY MEETINGS

Regularly scheduled safety meetings have proven to be imperative in a successful safety program. Safety meetings at each operational level present an effective method of acquainting all employees with safety provisions pertinent to their work.

301 - Supervisory Personnel

All departments and divisions of the City shall hold regular supervisor meetings. Each supervisor of City personnel shall regularly attend these meetings. The time, place and duration of these meetings should be determined by the responsible operating head. Safety issues and topics can and should be incorporated with other management meetings in lieu of a separate meeting for safety. Each department head and division manager should then schedule safety meetings for subordinate supervisors or ensure that information is properly passed along. These safety topics and issues discussed among supervisors can be reviews of previous incident experiences, discussion of specific hazards, preventive measures and review of pertinent safety provisions.

302 - Group Safety Meetings

Each division shall hold formal safety meetings at least monthly for field operations and quarterly for administrative offices.

A written record of these meetings will be made by means of completing a copy of the attached "*Report of Safety Meeting Attendance*". A copy of the completed report shall be kept on file in the supervisor's office. The purpose of this requirement is to document attendance and accountability for information discussed. These meetings are most effective when used to discuss previous incident experiences, safety goals, specific hazards or conditions, preventive measures, and to present safety awards. The meeting should be both well prepared and timely in order to gain maximum interest and effort.

303 - On-the Job Safety Meetings (tailgate meetings)

Safety meetings and instructions at or near the job site can provide practical means of training field personnel in incident prevention. Field supervisors should conduct short "on-the-job" safety meetings, preferably at the beginning of a shift, a week, or an unusual or new job. These meetings can be utilized to discuss and instruct crews on safe practices that are required in order to perform the assigned duties. They can also be used to check equipment and tools, review past incident experiences and related matters.

TAILGATE MEETINGS

Hold regular weekly meetings and special meetings before starting new operations (responsibility of the foreman).

1. Schedule regular meetings for same day and time each week.
2. Start on time. Limit to 10- minutes.
3. Keep control - concentrate on safety.
4. Plan the meeting. Use notes on incidents that occurred and unsafe practices noted during the week and hazards and safe practices for work ahead.
5. Encourage suggestions and discussion.
6. Keep notes on items discussed and decisions made.
7. Follow up to see that decisions are carried out.

SAFETY VIDEOS

Safety videos are available at the safety office, and may be checked out for use in safety meetings. The safety office is located at 1000 Jefferson Street, Texarkana, Arkansas.

SECTION IV

VEHICLE SAFETY

400 - Operation of City Vehicles

1. The operation of City vehicles or any moveable City equipment on the roadways and streets is indispensable in conducting City business, and a loss of any vehicle due to incident and/or abuse will adversely affect the overall mission capability of the City.

2. All drivers of City vehicles, and those using their personal vehicles in pursuit of City business, shall comply with all applicable state laws as well as the requirements of the City of Texarkana. Any employee who operates a City vehicle or who uses his/her personal vehicle while doing City business is required to report suspension or revocation of his/her driver's license to his/her supervisor.
3. No employee shall be directed to operate a vehicle for which he/she does not have the appropriate classification of driver's license. This is a minimum requirement and in no way restricts departments from being more restrictive in their use in demands to operate heavy equipment.
4. No person shall drive or be required or permitted to drive a City-owned vehicle while under the influence of any alcoholic beverage or narcotic drug. Workers who are taking prescription drugs, which may affect the safety of the individual, shall discuss this with their supervisor before driving while on City duty.
5. Since all City drivers are working for the public, they should remember that they are being observed by same and will be held accountable for their actions.

401 - Operating City Vehicles

1. Employees shall operate all equipment in accordance with its designed use, taking into consideration traffic and conditions surrounding the use of the vehicle, and the safety of others.
2. All drivers of City vehicles shall comply with all state, county and local rules and regulations governing the safe and legal operation of vehicles.
3. **SEAT BELTS shall be worn and secured at all times when the vehicle is moving.**
4. The driver shall be responsible for assuring that all passengers are seated and properly secured before moving the vehicle. Under no circumstances shall passengers ride on fenders, running boards, the tops of vehicles, or any place not designed for passengers. Employee drivers are responsible to secure all doors and check seat belts prior to moving the vehicle. Extra caution should be used when closing sliding doors on vans or other vehicles.
5. Trucks transporting materials shall secure said material tightly to prevent movement in transport. All cargo that extends beyond the end of the bed shall be clearly marked with a red cloth not less than (16) sixteen inches square. At night, red lights shall be used.
6. Lights, brakes and so forth shall be checked before leaving the vehicle at the end of the working day. Any malfunction of the vehicle shall be reported to the immediate supervisor no later than the end of a normal working day.
7. Drive defensively and observe all traffic laws.
8. Flashing lights shall be turned on and traffic cones in place whenever a vehicle or piece of equipment is stopped where work is being performed, or whenever it obstructs traffic. Vehicles and/or equipment shall not be parked where they obstruct traffic unless it is absolutely necessary.
9. Particular care shall be exercised in backing. Do not back blindly. All equipment operators shall be assigned a "spotter" when operations require backing without an operational backup alarm or when vision to the rear is obstructed from the operator's seat.
10. Remember: A driver is held responsible for the vehicle he/she is driving, the passengers riding and the load he/she is carrying.
11. Perform daily checkout procedures on all vehicles and equipment prior to utilization. Complete checkout forms and notify immediate supervisor and fleet maintenance if repairs are required.

12. During any hauling operations, loads shall be tarped whenever designated by the immediate supervisor.
13. Operators must constantly be aware of surrounding conditions, i.e., ground personnel, overhead lines, pedestrians and other hazardous conditions.
14. All elevating blades and buckets will be landed, the brakes will be set, and the equipment properly secured before leaving at the end of the work shift. No keys will be left in any equipment or vehicle.
15. All tailgates will be secured (closed) while traveling.
16. When backing to connect with any trailing equipment, the operator of the equipment should make certain that everyone is in the clear, and use a second person for a guide.
17. Keep vehicle in gear: All vehicles must be kept in gear at all times while traveling downhill.
18. Loaders: Always keep bucket low while moving. Loaders shall not be moved with bucket extended to full height. The bucket shall be dropped to a low height before moving from digging site to dump site. Loaders will not be used as man hoists at any time.
19. Other employees shall not stand or sit on any part of the equipment/vehicle while it is moving; this does not include equipment such as collectors or distributors working alleys or a traffic crew picking up traffic control devices.
20. Parking equipment: When equipment/vehicle is parked, use any appropriate measure to insure that there is no movement, including, but not limited to:
 - Parking brake in gear
 - Motor off**
 - Wheels turned to curbs
 - Chock wheels
 - Lower accessory equipment attachments
21. Supervisor's Responsibility: Crew supervisors shall "ground" vehicles upon learning such vehicles are unsafe, no matter how urgent the need for such vehicle; proper repairs shall be made before it is placed back in service.

Never stand on the pavement beside a vehicle except in a properly barricaded and signed maintenance or construction area.

No more than three persons may ride in the front seat of a car or truck cab at the same time. There shall be a safety belt for each person.

Riding on the outside of any automotive equipment is prohibited, including pick-up beds.

Employees must not ride on towed equipment except to perform an operation for which the equipment is designed.

Do not attempt to mount or dismount moving vehicles or equipment.

Running boards shall be kept clean to prevent slips and falls. Non-skid material is recommended on steps and running boards.

Never sit on the tailgate of a truck while in motion.

Special care should be taken in working around truck tailgates. Keep hands clear of all pinch points. Do not place fingers underneath the bottom of a tailgate swinging from the top. In removing and replacing tailgates, be sure you have an adequate number of personnel and/or proper equipment to do the job. All automotive equipment must be equipped with a first aid kit and fire extinguisher.

Signing shall be accomplished in accordance with the appropriate Arkansas or Texas Manual on Uniform Traffic Control Devices.

Safety chains are required and shall be used on all towed equipment.

Vehicles shall not be left operating and unattended (out-of sight). Vehicles shall be turned off, left in gear or park, and the wheels chocked if necessary. (*Does not apply to off-the-road heavy equipment*)

Operators' Reporting Responsibility

If an employee who drives for the city is convicted, including probation and appeals, of a moving traffic violation, the employee must notify his/her supervisor of the occurrence within the first five workdays that he/she is present for duty after the conviction, probation, or appeal action. An employee who fails to report an event as described in this subparagraph will be subject to disciplinary action in accordance with the applicable City Personnel Manual.

Employees who are involved in an incident regardless of the extent of damage or injury while driving on city business or operating motorized equipment for the city are required to report incidents to their supervisor immediately if not incapacitated. This requirement exists so that drug and alcohol tests can be conducted if appropriate.

An employee who is involved in an incident which requires a written report under Texas/Arkansas law (see NOTES), while driving a personal vehicle off duty shall report the incident to his/her supervisor within the first five workdays during which the employee is present for duty. Failure to report such incidents may result in disciplinary action in accordance with the applicable City Personnel Manual.

NOTE: Texas law requires the driver of a vehicle involved in an incident not investigated by a law enforcement officer and resulting in injury or death to any person, or damage to the property of any one person, including himself, to the apparent extent of at least \$500 dollars, to forward a written report to the Department of Public Safety within 10 days after the incident. Law enforcement officers are not required to investigate incidents that meet these criteria; however, if they do a written report must be forwarded to the Department of Public Safety. (Ref: Tex. Rev. Civ. Stat. Ann, Article 6701d, Sec. 44)

NOTE: The driver of every motor vehicle who is involved in any incident within the State of Arkansas which results in damage to the property of any one person in excess of \$500 dollars, or which causes the injury or death of any person regardless of who is at fault will file a Arkansas Motor Vehicle Incident Report (SR-1) to the Department of Public Safety.

An employee, who drives for the city and receives a DUI/DWI, must notify his/her supervisor of this action on the first workday after the conviction, probation, or appeal action. This is required regardless of how often an employee drives for the city. If an employee does not report the conviction, probation, or appeal action, and it is subsequently discovered by the city, the employee will be subject to disciplinary action in accordance with the applicable City Personnel Manual.

SECTION V

HAZARD COMMUNICATION PROGRAM

500 - Introduction and Purpose

In 1983, The Occupational Safety and Health Administration established a chemical safety standard entitled "Hazard Communication" (29CFR 1910.1200). This standard is intended to reduce the number of chemically related occupational illnesses and injuries in the workplace. The purpose of this section is to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees.

It is the intent of the City of Texarkana to comply with the law and to protect its employees from chemical hazards. Therefore, this section is provided to ensure all City employees are aware of the provisions of the Hazard Communications Program and perform the requirements of it.

501 - Objectives

1. Establish procedures to ensure that labels, Material Safety Data Sheets, and employee information meet the requirements of the Act.
2. Identify procedures used to evaluate hazards in the workplace.
3. Provide a list of hazardous chemicals known to be present in the various departments and/or individual work areas and the City of Texarkana as a whole.
4. Describe methods to be used to inform employees of hazards associated with routine and non-routine tasks involving hazardous chemicals.
5. Describe methods the City of Texarkana will use to inform contractor employers of the hazardous chemicals their employees may be exposed to while performing their work.

502 - Procedures

CHEMICAL LISTS

1. Departments will:
 - A. Conduct a survey and make a list of hazardous substances that are used in their operations. The lists will include, at a minimum: the department name, chemical or material name, manufacturer's name and address, and where the substance is used.
 - B. Keep a copy of the list in the department and forward one copy to the Safety Office.
 - C. Provide for updates to the list, as additional hazardous substances are acquired.
2. The Safety Office will:
 - A. Retain a master list, specific to work areas, of all hazardous substances used in the City.
 - B. Retain a Material Safety Data Sheet for each hazardous substance on the master list.

3. Departments will:
 - A. Make a list(s) available, upon request, to employees, Fire Department Personnel, State and City Health officials, and others requesting it.
 - B. Notify the Safety Office of any new chemical purchased to be added to the City master list.

MATERIAL SAFETY DATA SHEETS (MSDS)

1. Departments will:
 - A. Obtain a MSDS for each hazardous substance used in their operation. These are available from the maker or supplier of the substance.
 - B. Forward a copy of each MSDS to the Safety Office.
 - C. Ensure that MSDS's are readily available for review and clearly prominent at all times.

TRAINING

The city is required under the Hazard Communication standard (OSHA 1910.1200) to establish an Employee Information training Program for employees routinely exposed to hazardous chemicals. This training and information will be provided

for the covered employees at the time of initial assignment and whenever a new category of hazardous chemicals is introduced in city operations. All employees exposed to hazardous materials have, or will have received information and training in-group, "classroom" format. All new employees will receive training as part of their new employee orientation. This training will include the existence and purpose of the Hazard communication Program, responsibilities of facility personnel, labeling provisions, how to read and understand a Material Safety Data Sheet (MSDS), and provision for information and training. Employees will also receive instruction on operations in their work areas where hazardous chemicals are present, methods employees can use to detect the presence of hazardous chemicals, physical and health hazards of chemicals in their work area, personal protective measures, and measures taken by the facility to protect employees from the hazardous chemical exposures. Three videos, "The Safety Triangle", "Detection and Prevention", and "The MSDS, The Key to Compliance", are available at the Bi-City Safety Office, 9th and Jefferson, to assist in instructing new and transfer employees in Hazardous Communication. **The written program "Hazard Communication Program" dated 1998 shall be made available to all affected employees.**

TRAINING RECORDS

1. Each Department will:
 - A. Maintain training records for their employees. Records will be subject to inspection upon request of safety or health personnel. Records will provide, as a minimum, the:
 - (1). Name of individual(s) providing training.
 - (2). Date and location where training was provided.
 - (3). Chemical and/or common name of the hazardous chemical or material employees have been trained about.
 - (4). Printed or typed name, job position, and signature of individual receiving the training.

NOTE: Non-employees, such as contractors or sub-contractors, who are employed temporarily by the City, should be notified of potential chemical hazard exposures. This notice is to be provided by the department contracting party who engages their services. Such notice should include the type of exposure, the name(s) of chemical(s) present, and the location of Material Safety Data Sheets on the substance(s). The contractor(s) should then be encouraged to take appropriate protective measures.

LABELING

Hazardous warning markings and labels are necessary to clearly show the hazardous nature of the contents of containers during all stages of storage, handling, use and disposal. When packages or containers are removed from a labeled container for use or further distribution, the continuity of information must be preserved. All labels shall identify the hazardous chemical(s) or material(s) contained and provide appropriate hazard warnings. Supervisors shall ensure that as products are removed from a shipping container, or subsequent unit packaging, appropriate labels are applied to the product prior to its use or further distribution. Labels shall be placed in such a manner so that they do not obscure other warnings, instructions or product information.

SECTION VI

CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)

600 - Purpose

To establish the minimum requirements for the control of all equipment energy sources (electrical, hydraulic and pneumatic) during the cleaning, servicing or maintenance of machines or equipment in which the unexpected energization or start up of the machines or equipment, or release of stored energy could cause injury to employees.

601 - Policy

The City Of Texarkana will take all reasonable measures to provide a safe workplace. All City of Texarkana operations will be performed in a manner that will prevent any undesirable effects to City of Texarkana employees, assets, the local community and the environment. The provisions of this section and the applicable documents describe safe work practices that will enhance the safety of personnel performing service or maintenance activities to equipment.

The use of lockout or tagout procedures shall not be used over extended periods of time as substitutes for permanent safeguards, proper engineering, or proper safe work practices.

602 - Practice

GENERAL

- A. This section applies to the control of energy during servicing and/or maintenance of machines and equipment.
- B. Servicing and/or maintenance which take place during normal operations are covered by this section only if:
 - (1). An employee is required to remove or bypass a guard or other safety device; or
 - (2). An employee is required to place any part of his/her body into an area on a machine or piece of equipment where work is actually performed upon the material being processed (point of operation) or where an associated danger zone exists during a machine operating cycle.

NOTE: Exception to paragraph B (2): Minor tool changes and adjustments, and other minor servicing activities, which take place during normal operations, are not covered by this section if they are routine, repetitive, and integral to the use of the equipment, provided that the work is performed using alternative measures which provide effective protection.

- C. This section does not apply to the following:
- (1). Work on cord and plug connected electric equipment for which exposure to the hazards of unexpected energization or start up of the equipment is controlled by the unplugging of the equipment from the energy source and by the plug being under the exclusive control of the employee performing the servicing or maintenance.
 - (2). Hot tap operations involving transmission and distribution systems for substances such as gas, steam, water or petroleum products when they are performed on pressurized pipelines, provided that:
 - (a). continuity of service is essential;
 - (b). shutdown of the system is impractical; and
 - (c). documented procedures are followed, and special equipment is used which will provide effective protection for employees

DEFINITIONS

- A. *Affected employee* is 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 or tag-out, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.
- B. *Authorized employee* is a person who locks out or tags out machines or equipment in order to perform the 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 under this section.
- C. "*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 if 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.
- D. *Energized* means connected to an energy source or containing residual or stored energy.
- E. *Energy isolating device* means a mechanical device that physically prevents the transmission or release of energy, including but not limited to the following:
- (1). A manually operated electrical circuit breaker;
 - (2). A disconnect switch;
 - (3). A manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors and, in addition, no pole can be operated independently;
 - (4). A line valve;

- (5). A block;
 - (6). Any similar device used to block or isolate energy (push buttons, selector switch, and other control devices are not energy-isolating devices).
- F. *Energy source* means any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.
 - G. *Hot tap* means a procedure used in the repair, maintenance and services activities which involves welding on a piece of equipment (pipelines vessels or tanks) under pressure, in order to install connections or appurtenances. It is commonly used to replace or add section of pipeline without the interruption of service for air, gas, water, steam, and petrochemical distribution systems.
 - H. *Lockout* means 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.
 - I. *Lockout device* means a device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in a safe position and prevent the energizing of a machine or equipment.
 - J. *Normal production operations* mean the utilization of a machine or equipment to perform its intended production function.
 - K. *Servicing and/or maintenance* means workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and the maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or -jamming 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.
 - L. *Setting up* means any work performed to prepare a machine or equipment to perform its normal production operations.
 - M. *Tag-out* means 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.
 - N. *Ta-gout device* means 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.

603 - Responsibilities

- 1. Division Managers (or equivalent) are responsible for:
 - A. Assuring that each authorized employee shall receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control;
 - B. Assuring that each affected employee shall be instructed in the purpose and use of the energy control procedures;

- C. Assuring that all other employees whose work operations are or may be in an area where energy control procedures may be utilized, shall be instructed about the procedure and about the prohibition relating to attempts to restart or re-energize machines or equipment which are locked out or tagged out.
- D. Making a survey to locate and identify all isolating devices to be certain which switches, valves or other energy isolating devices apply to the equipment located within their organization to be locked or tagged out. More than one energy source (electrical, mechanical, or others) may be involved. This list will be maintained in the appropriate supervisor's office. A copy of the list will be sent to the Safety Office.

HAZARDOUS ENERGY CONTROL PROCEDURE

- 1. Application of control.
 - A. The established procedure for the application of energy control (the lockout or tagout procedures) shall cover the following elements and shall be done in the following sequence:
 - (1). Preparation for shut down. Before an authorized or affected employee turns off a machine or equipment, the authorized employee shall have knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled, and the method or means to control the energy.
 - (2). Machine or equipment shutdown. The machine or equipment shall be turned off or shut down using the procedures established for the machine or equipment. An orderly shutdown must be utilized to avoid any additional or increased hazard(s) to employees as a result of equipment stoppage.
 - (3). Machine or equipment isolation. All energy-isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy sources(s).
 - (4). Lockout or tag-out device application. Lockout or tag-out devices shall be affixed to each energy-isolating device by authorized employee. Lockout devices, where used, shall be affixed in a manner that will hold the energy isolating devices in a "safe" or "off" position. Tag-out devices, where used, shall be affixed in such a manner as will clearly indicate that the operation or movement of energy isolating devices from the "safe" or "off" position is prohibited. Where tag-out devices are used with energy isolating devices designed with the capability of being locked, the tag attachment shall be fastened at the same point at which the lock would have been attached; where a tag cannot be affixed directly to the energy isolating device, the tag shall be located as close as safely possible to the device, in a position that will be immediately obvious to anyone attempting to operate the device.
 - (5). Stored energy. Following the application of lockout or tag-out devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained, and otherwise rendered safe. If there is a possibility of re-accumulation of stored energy to a hazardous level, verification of isolation shall be continued until the servicing or maintenance is completed, or until the possibility of such accumulation no longer exists.
 - (6). Verification of isolation. Prior to starting work on machines or equipment that have been locked out or tagged out, the authorized employee shall verify that isolation and de-energization of the machine or equipment have been accomplished.
 - (7). Release from lockout or tag-out. Before lockout or tag-out devices are removed and energy is restored to the machine or equipment, procedures shall be followed and actions taken by the authorized employee(s) to ensure the following:

- (a). The work area shall be inspected to ensure that nonessential items have been removed and to ensure that machine or equipment components are operationally intact.
- (b). The work area shall be checked to ensure that all employees have been safely positioned or removed; before lockout or tag-out devices are removed and before machines or equipment are energized, affected employees shall be notified that the lockout or tag-out devices have been removed; after lockout or tag-out devices have been removed and before a machine or equipment is started, affected employees shall be notified that the lockout or tag-out device(s) have been removed.
- (c). Each lockout or tag-out device shall be removed from each energy-isolating device by the employee who applied the device.

2. Additional requirements.

- A. In situations in which lockout or tag-out devices must be temporarily removed from the energy isolating device and the machine or equipment energized to test or position the machine, equipment or component thereof, the following sequence of actions shall be followed:
 - (1). Clear the machine or equipment of tools and materials;
 - (2). Remove employees from the machine or equipment area;
 - (3). Remove the lockout or tag-out devices;
 - (4). Energize and proceed with testing or positioning;
 - (5). De-energize all systems and reapply energy control measures in accordance with procedures set forth in this section to continue the servicing and/or maintenance.

3. Outside servicing personnel engaged in activities covered by the scope and application of this section shall be required to comply with all City lockout/tag-out procedures.

4. When servicing and/or maintenance is performed by a crew, department or other group, they shall utilize a procedure which affords the employees a level of protection equivalent to that provided by the implementation of a personal lockout or tag-out device.

5. When a tag-out device is used on an energy-isolating device that is capable of being locked out, the tag-out device shall be attached at the same location that the lockout device would have been attached, and the tag-out program will provide a level of safety equivalent to that obtained by using a lockout program. Additional means to be considered as part of the demonstration of full employee protection shall include the implementation of additional safety measures such as the removal of an isolating circuit element, blocking of a controlling switch, opening of an extra disconnecting device, or the removal of a valve handle to reduce the likelihood of inadvertent energization.

6. Exception: Documented procedures for the control of potentially hazardous energy for a particular machine or equipment are not required when all of the following elements exist:

- (1). The machine or equipment has no potential for stored or residual energy or re-accumulation of stored energy after shutdown that could endanger employees.
- (2). The machine or equipment has a single energy source that can be readily identified and isolated.
- (3). The isolation and locking out of that energy source will completely de-energize and deactivate 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.
 - (8). There have been no incidents involving the unexpected activation of re-energization of the machine or equipment during servicing or maintenance, utilizing this exception.
7. Locks, tags, chains, wedges, key blocks, adapter pins, self-locking fasteners, or other hardware shall be provided for isolating, securing or blocking of machines or equipment from energy sources.
8. Lockout devices and tag-out devices will be singularly identified; will be the only device(s) used for controlling energy; will not be used for other purposes; and will meet the following requirements:
- (1). be capable of withstanding the environment to which they are exposed for the maximum period of time that exposure is expected;
 - (2). be constructed and printed so that exposure to weather conditions or wet and damp locations will not cause the tag to deteriorate or the message on the tag to become illegible;
 - (3). will not deteriorate when used in corrosive environments such as areas where acid or alkali chemicals are handled and stored;
 - (4). will be standardized within the City of Texarkana in at least one of the following criteria: color, shape, size, and additionally, in the case of tag-out devices, print and format will be standardized;
 - (5). will be substantial enough to prevent removal without the use of excessive force or unusual techniques, such as with the use of bolt cutters or other metal cutting tools;
 - (6). will be substantial enough to prevent inadvertent or incidental removal. Tag-out device attachment means will be of a non-reusable type, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one-piece, all-environment-tolerant nylon cable tie;
 - (7). will indicate the identity of the employee applying the device(s); and
 - (8). will warn against hazardous conditions if the machine or equipment is energized and will include a legend such as the following: **DO NOT START, DO NOT OPEN, DO NOT ENERGIZE, DO NOT OPERATE.**
2. Training and Communication Requirements
- A. Each authorized employee shall receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy available in the workplace, and the methods and means necessary for energy isolation and control.
 - B. Each affected employee shall be instructed in the purpose and use of the energy control procedure.

- C. All other employees whose work operations are or may be in an area where energy control procedures may be utilized, will be instructed about the procedure, and about the prohibition relating to attempts to restart or re-energize machines or equipment which are locked out or tagged out.
- D. When tag-out systems are used, employees will also be trained in the following limitations of tags:
 - (1) Tags are essentially warning devices affixed to energy isolating devices, and do not provide the physical restraint on those devices that is provided by a lock.
 - (2) When a tag is attached to an energy isolating means, it is not to be removed without authorization of the authorized person responsible for it, and it is never to be bypassed, ignored, or otherwise defected.
 - (3) Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations are or may be in the area, in order to be effective.
 - (4) Tags and their means of attachment must be made of materials that will withstand the environmental conditions encountered in the workplace.
 - (5) Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.
 - (6) Tags must be securely attached to energy isolating devices so that they cannot be inadvertently or incidentally detached during use.
- E. Employee retraining.
 - (1) Retraining will be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment or processes that present a new hazard, or when there is a change in the energy control procedures.
 - (2) Additional retraining will also be conducted whenever a periodic inspection reveals that there are deviations from energy control procedures.
 - (3) The retraining will reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.
 - (4) All training will be certified to include each employee's name and date of training.

SECTION VII

GENERAL SAFE PRACTICES

700 - Welding

- 1. General Instructions
 - A. The appropriate personal protective equipment must be worn at all times while welding.
 - B. Clothing contaminated with flammable substances must not be worn during welding operations.

- C. All hand shields, goggles, and helmets shall be equipped with a clear cover glass to protect the filter lenses from splatter. The cover glass will be discarded when it is splattered or pitted to the point that good vision is affected.
 - D. Welding will not be performed in any locations without prior approval of the supervisor responsible for authorizing cutting and welding operations in areas not specifically designed or approved for such processes.
 - E. Good housekeeping will be maintained at all times around welding operations.
 - F. All cables or hoses will be neatly coiled and stored where they will not be damaged or create stumbling hazards.
 - G. Tanks, drums and pipe lines which have contained or might be suspected of having contained flammable liquids or explosives will be cleansed of all hazardous material and purged of flammable gases or vapors before welding operations are started. In addition, the container may be filled with an inert gas or water. Welding will never be performed on a container that may be sealed or plugged which would prevent expanding gases from escaping.
 - H. Welding operations will not be permitted in or near rooms containing flammable vapors, liquids, or dust unless the area is properly cleaned and ventilated.
 - I. An employee equipped with suitable fire extinguishing equipment will be stationed at operations where sparks or heat from the weld is a possible source of fire. He/she will remain until all danger has passed.
 - J. Only noncombustible material, preferably metal, will be used to support work. Material that is to be cut or welded should not be placed on a concrete floor.
 - K. After welding is completed the operator should mark the hot metal or provide some type of warning to prevent other employees from receiving serious burns from touching the material.
 - L. When welding operations are performed six feet or over above floor or ground, a scaffold with toe boards and handrails must be used or the welder will wear a safety belt to prevent falling.
2. Electric Welding and Cutting Procedures.
- A. Only a qualified operator, thoroughly instructed in the performance of work and the practice of protection from injury to themselves and others working nearby, will be permitted to do any type welding.
 - B. Clothing, which will protect all parts of the body from the rays of the arc and from hot metal sparks, should be worn while welding.
 - C. Following is a list of the proper shade of lenses to be worn in the helmet:
 - (1). Arc welding and cutting when using over 400 amperes, or 5/16" and 3/8" rod, Shade No. 14.
 - (2). Arc welding and cutting when using over 200 amperes, but not exceeding 400 amperes, or 3/16", 7/32", and 1/4" rod, Shade No.12.
 - (3). Arc welding and cutting when using over 75 amperes but not to exceed 200 amperes, or 1/16", 3/32", 1/8", and 5/32" rod, Shade No. 10.

- D. Electric welding operations, where practicable, will be located in special rooms or booths; otherwise, the operations will be screened or enclosed to prevent workers or passers-by from looking directly at the arc, and also to protect them from reflected rays as much as possible.
 - E. Frames of all portable electric welding machines operated from electric power circuits will be effectively grounded.
 - F. Before starting welding operations the welder will make certain:
 - (1). that all electrical connections are securely made;
 - (2). that arc will be properly screened;
 - (3). that nearby workers are warned against looking at the arc; and
 - (4). that the proper fire extinguisher is on hand and ready for instant use.
 - G. When the operator has occasion to leave his work or stop work for any appreciable time, the main switch in the equipment will be opened.
 - H. Equipment, when not in use, will be completely disconnected from the source of power and electrodes removed from the electrode holder.
 - I. Operators will be provided a container into which they will dispose electrode stubs. Electrode stubs will not be discarded on the floor.
 - J. Before striking an arc, helmets will be lowered into position and kept there until welding has stopped.
 - K. Worn arc welding cables will be replaced to prevent damage from short circuits.
3. Gas Welding and Cutting Procedures.
- A. Only qualified operators, thoroughly instructed in the performance of the work and practices of protection from injury to themselves and others working nearby, will be permitted to do any type welding.
 - B. The following is a list of the proper shades of lenses to be worn in the goggles:
 - (1). For light acetylene welding and cutting, shade No. 5.
 - (2). For acetylene cutting and medium welding, shade No. 6 or 7.
 - (3). For heavy acetylene welding, shade No. 8 or 9.
 - C. Regulators or reducing valves will be used on both oxygen and fuel gas cylinders to reduce the pressure and maintain an even pressure of gas for the torches.
 - D. Welding operators will not repair or test regulators except when trained to do so.
 - E. Leaky or "creeping" regulators will be withdrawn from service.
 - F. When regulators are connected for use but are not in use, the pressure-adjusting device will always be released. Cylinder valves will never be opened until the pressure-adjusting device on the regulator is fully released.

- G. Only qualified employees using proper procedure will attach regulators or reducing valves to gas cylinders.
 - H. Workers will stand to one side and away from regulator gauge faces when opening cylinder valves. Valves will be opened slowly to avoid straining regulator mechanism or causing gauge faces to be blown out.
 - I. A hammer or other unusual method of force will never be used for opening cylinder valves.
 - J. Copper fittings and copper tubing will not be used to conduct acetylene gas.
 - K. Cylinders will be kept far enough away from welding or cutting operations so that sparks, hot slag, or flame will not reach them.
 - L. Cylinders will not be handled with oily or greasy hands or gloves.
 - M. All pressure will be released from both regulator diaphragms after shutting off a cylinder, to avoid the possibility of having gases in the chamber that may leak and cause a fire.
 - N. If cylinder valves cannot be opened with normal pressure or if a cylinder is received in a damaged condition, it will not be used. No attempt will be made to repair it.
 - O. If a leak is discovered at a connection, the cylinder valve must always be shut off before tightening the connection.
 - P. Only the special wrench provided will be used for operating acetylene cylinder valve and this wrench will be kept in position on the valve stem while the cylinder is in use.
 - Q. Cylinder valves on acetylene cylinders will not be opened more than one and one-half turns of the spindle (half turn preferred).
 - R. Acetylene will not be used at a pressure in excess of fifteen pounds per square inch gauge pressure. Cylinders will not be drained below twenty-five pound pressure because below this the acetone is drawn up from the cylinder, gumming up the hose, fittings, etc.
 - S. Operators will never test for leaks with matches or other open flames. Leaks may be determined by applying soapy water on the fittings and watching for bubbles.
 - T. Oxygen cylinders and fittings will be kept away from oil or grease. Also, oily or greasy substances will be kept away from cylinders, valves, couplings, regulators, hose, or other apparatus.
4. Care, Use and Testing of Welding Hose.
- A. Oxygen and acetylene hose should be of different colors.
 - B. Long lengths of hose should be avoided. When they must be used, care will be taken that the hose does not become kinked or tangled, and that it is protected from being run over by trucks, stepped on, or otherwise damaged.
 - C. Long lengths of hose should be suspended overhead high enough to permit unobstructed passage of persons and vehicles.
 - D. Leaks in hose or connections will be properly repaired at once. Wire or tape will not be used for repairs.

- E. All hose will be examined weekly for leaks, worn places, loose connections, etc.
 - F. The hose will be protected from flying sparks, hot slag, and hot objects, and kept from coming in contact with grease and oil.
 - G. Portions of hose damaged by flashbacks will be replaced.
 - H. New hose will have talc blown out before putting it to use; only air, filtered of oil mist, scale or rust, will be used.
 - I. Torches will never be hung from a regulator or other equipment so that they come in contact with the sides of gas cylinders.
 - J. When extinguishing the flame, the operator will first close the acetylene valve and then the oxygen.
 - K. Torches will be lighted with friction lighters only. Never attempt to light or relight a torch from hot metal in a cavity or hole where gases may accumulate.
 - L. Workers will be carefully instructed concerning the eye hazards involved and the value of wearing eye protectors.
 - M. To prevent flying scale from getting into eyes, goggles should not be removed until the work has cooled.
 - N. Should an operator leave his job or stop work for any appreciable time, both the oxygen and acetylene cylinder valves will be closed and all pressure released from the regulator by opening the torch valves momentarily; then closing the torch valves and releasing the pressure adjusting screws.
 - O. Because of the possibility of leaky valves, unlighted torches will not be left in confined areas such as tool boxes during lunch hours or when leaving work for other reasons.
 - P. In manifold welding operations, each cylinder valve will be closed, the main supply valve will be closed, and the regulator thumbscrews will be backed out at the end of shift operations.
5. Procedure for Handling and Storage of Cylinders.
- A. Compressed gas cylinders will be stored, handled and tested in accordance with the provisions of the Compressed Gas Association, Handbook of Compressed Gases and 29CFR 1910.252, General Requirements.
 - B. Knocks, falls, or rough handling are likely to damage the cylinders, valves, or fuse plugs, cause leakage, or may even result in an explosion. Compressed gas cylinders must be handled carefully.
 - C. Cylinder valves must be closed before moving the cylinder from one location to another, or when cutting or welding operations are finished.
 - D. All cylinders stored in an upright position will be securely fastened to prevent falling.
 - E. A sling (rope, chain, or cable) will never be used to lift cylinders. A crane may be used to lift cylinders when an approved cradle or platform is provided to hold the cylinders.
 - F. Valve protection caps must never be used for lifting cylinders from one vertical position to another.
 - G. The transfer of oxygen or acetylene from one cylinder to another is prohibited.

- H. Before moving a cylinder, the operator will check to see that the cap is on straight and try to turn it in a clockwise direction until sure it is hand tight.
- I. If possible, an approved cylinder truck will be used for cylinders in use; otherwise, they must be anchored in some manner to prevent falling.
- J. Tampering with safety devices on cylinders or cylinder valves will not be permitted.
- K. Acetylene cylinders will be kept always upright and not lying on their sides. Cylinders that have been stored on their sides must be placed in an upright position for at least two hours prior to use.
- L. If a leak should develop at a fuse plug or other safety device, the cylinder will be removed to the out-of-doors well away from any source of ignition. The cylinder will be tagged plainly, the supplier notified, and his instructions followed as to its return.
- M. Valve protecting caps will be assembled to cylinders when they are not connected for use.
- N. When compressed gas cylinders containing flammable gases or oxygen are stored in the open, a separate storage area will be provided. This storage area will be located in a minimum distance of 100 feet from buildings and open combustible storage areas.
- O. Cylinder storage areas will be separated from flammable gas cylinders storage areas by not less than 30 feet.
- P. Cylinders should be stored in groups as small in height and area as is practicable with aisles between groups of such width that spread of fire from group to group is minimized and will be accessible for periodic inspections. Empty cylinders will be segregated.
- Q. Cylinders should not be subjected to excessive changes in temperature, as this will change the pressure in them. Covers of non-flammable or fire resistant materials will be used to protect the cylinders against the direct rays of the sun. Proper ventilation will be provided under the covers of outside storage to carry off leakage of oxygen and flammable gases with sufficient air space (not less than 18 inches) maintained between the cylinders and the cover to keep the temperature of the cylinders below 125 F.
- R. Smoking is prohibited within 50 feet of compressed gas cylinder storage and "No Smoking" signs must be conspicuously posted.

701 - Chain Saw Operations

1. Saws will be inspected daily to assure that all handles and guards are in place and tight, that all controls function properly, and that the muffler is operative.
2. Operators will follow manufacturer's instructions as to operation and adjustment.
3. Saws will be fueled in safe areas only and not under conditions conducive to fire such as near employees who are smoking, hot engine, etc.
4. Saws will be held with both hands during operation.
5. Saws will be started at least 10 feet away from fueling area.
6. Saws will be started only on the ground or when otherwise firmly supported.
7. Operators shall be certain of footing and will clear away brush that might interfere before starting to cut.

8. Engine fuel will not be used for starting fires or as a cleaning solvent.
9. Saws will be shut off when they are carried for a distance greater than from tree to tree or in hazardous conditions such as slippery surfaces or heavy underbrush. Saws shall be at idle speed when carried short distances.
10. Saws will be carried in a manner to prevent bodily contact with the chain and muffler.
11. Saws will not be used to cut directly overhead or at a distance that would require the operator to relinquish a safe grip on the saw.
12. Saws shall be kept sharp, well lubricated and properly tensioned at all times.
13. All saws must have spark-arresting mufflers.
14. Personal protective equipment required:

A. hard hat	D. full-face shield	G. chaps
B. <i>safety boots/shoes</i>	E. no loose clothing	
C. gloves	F. ear plugs or muffs	

702 - Office Safety

1. Good housekeeping in the office is a must. Keep your desk and cabinets clean and orderly.
2. An open drawer of a desk or cabinet is a hazard that can cause you or others to trip or collide. Keep drawers and cabinet doors closed.
3. The standard four-drawer filing cabinet can cause injury if it upsets as a result of opening a heavily loaded top drawer. (Open only one drawer at a time.)
4. Use handles when closing desk drawers, files and doors.
5. All chairs should be used sensibly. Do not tilt them or slump back. If not designed to do these functions, the added strain on the chairs can cause them to break or slip, resulting in injury to the occupant. Do not keep defective chairs in use.
6. If you must reach high or do any climbing, use a safe ladder and not makeshift boxes, cabinets, etc. Do not use a chair for climbing.
7. Do not attempt any electrical repairs.
8. Cords on electrically operated machines and telephones create a tripping hazard when left on the floor or on walkways. Arrange the work area to avoid this hazard, or provide protective electrical cord channel cover.
9. When using extension cords, place them so that they do not lie in a traffic area (tripping hazard) or through doors that may be closed and cut the cord. Extension cords should only be used as temporary wiring and should not be substituted for the fixed wiring of a building.
10. Do not remove the ground prong of a three-prong plug. Electrical equipment with a three-prong plug requires a three-hole receptacle. If an adapter must be used to accommodate a two-prong receptacle, have maintenance personnel assure that the adapter is properly grounded.

11. Walk, do not run. When walking in hallways, keep to the right, especially at corners.
12. Do your reading at your desk, not while walking.
13. When using stairways, take your time and use handrails.
14. Do not stand and talk in front of a closed door that may be suddenly opened.
15. Avoid spilling or splashing liquids on the floor (coffee, tea, soda, etc.). If you spill it, clean it up, do not walk off and leave it to cause someone's fall.
16. Slips of paper, a pencil, or even a paper clip on the floor can cause a slip or fall. Remember good housekeeping.

703 - Pesticide Use

In order to achieve the highest degree of safety in the use of toxic pesticides by City of Texarkana employees, this section has been devised to specify the equipment, procedures and controls necessary to this end.

1. Personal Protective Equipment
 - A. Spraying crewmembers will utilize the Personal Protective Equipment specified in the Material Safety Data Sheet for the pesticide being used.
 - B. Rubberized apron or raincoat will be worn during mixing of emulsifiable concentrates.
 - C. Spraying crewmembers are required to wear rubber boots during all phases of chemical handling.
 - D. Close-fitting, forearm length chemical gloves shall be worn during mixing and whenever chemical exposure dictates their use.
 - F. Chemical goggles with indirect venting will be used while mixing and whenever chemical exposure dictates their use.
 - G. All above clothing and equipment shall in no circumstances be taken home by the crewmember.
 - H. All of the equipment will be washed at the end of each day's spraying operations with soap and water.
 - I. All clothing and safety equipment will be maintained and stored by the person it is issued to.
 - J. Emergency eye wash kit, soap and potable water will be on site during all spraying operations.
2. Procedures for Storage, Transportation, Mixing and Spraying.
 - A. Storage of Chemicals.
 - (1). Chemicals should be stored in accordance with the label and the MSDS for the product.
 - (2). When chemicals are received, they should be stored and locked in a posted area as soon as possible.
 - (3). All chemicals will be stored in appropriate containers with manufacturer labels attached.
 - (4). The storage area should be dry and cool and have enough insulation to keep the chemicals from freezing or overheating.

- (5). Do not store chemicals near food, feed, seed, drinking containers or anything that could be contaminated.
 - (6). Inspect and inventory pesticide containers weekly to ensure against leakage, contamination and overstocking. Records of such inspection shall be kept and available at all times.
- B. Transportation of Pesticides/Chemicals.
- (1). Store chemical containers aboard truck or trailer in such a manner to ensure against spillage or breakage in the event of quick stops, severe bumps, etc. Do not transport chemicals inside the passenger compartment.
 - (2). If any pesticide/chemical is spilled in or from the vehicle, it will be immediately cleaned up. Personal protective equipment and correct clean-up procedures will be used.
- C. Mixing Chemicals/Pesticides.
- (1). All protective clothing and equipment will be worn during all phases of mixing operation.
 - (2). Assure that employee mixing has read and understands all label directions and precautions.
 - (3). Chemicals are to be mixed only in the open air.
 - (4). Chemical containers must be opened carefully to avoid splashing.
 - (5). Chemical should be poured carefully to avoid spilling.
 - (6). Chemicals spilled on skin will be washed off immediately with soap and water. The supervisor will be contacted immediately.
 - (7). Clothing contaminated with spilled chemicals will be changed immediately and laundered before being worn again.
 - (8). Crewmembers mixing chemicals will refrain from smoking, eating or drinking until after washing thoroughly.
- D. Pesticide Spraying Procedure.
- (1). Wear required protective clothing and equipment.
 - (2). To prevent spillage of chemicals, check out application equipment for:
 - a. Leaking hoses, pumps or connections, and plugged, worn dripping nozzles.
 - (3). Use water to correctly calibrate spray equipment before use.
 - (4). The chemical will be applied at times and under conditions specified on the label.
 - (5). No more than the recommended amount of the chemical may be applied.
 - (6). Chemical spraying will never be done under unfavorable weather/wind conditions.

- (7). Material Safety Data Sheets (MSDS) will be available for emergencies.

704 - Signs, Signals and Barricades

Construction warning signs shall be used at all times when work involving an immediate hazard exists in the public right of way. Employees should never be permitted to perform work operations where they are exposed to traffic hazards unless adequate protection is provided by one or more of the following protective measures:

1. An enclosed protected area outlined by adequate barricades, traffic cones or signs.
2. Under the protection of a flagman, or the displaying of high-level warning flags between the employee and traffic flow.
3. Work vehicles parked between employee and traffic flow; with advance warning devices positioned either at the end of or mounted on a vehicle facing approaching traffic.

TRAFFIC BARRICADES AND SIGNS

1. Barricades and signs shall be properly placed before any street construction or maintenance activity begins in which employees shall be subject to hazards or where the public may be subject to driving hazards.
2. Hazard signs, cones, barricades and other traffic warning devices shall be used whenever work is being performed in public right-of-way. Signs indicating that there is work ahead shall be placed at least one hundred (100) feet (or four times the speed limit) ahead of work whenever possible. Signs and barricades shall be constructed and used in compliance with the appropriate state manual on uniform traffic control devices for streets and highways.

FLAGGING

1. When operations are such that signs and barricades do not provide the necessary protection, a flag person shall be provided.
2. An orange vest shall be provided to each flag person. For nighttime conditions, similar outside garments shall be reflectorized.
3. Hand signaling by flagmen shall be by use of red flags at least 18 inches square or sign paddles, and in periods of darkness, red lights.
4. Signaling directions by flagmen shall conform to the appropriate state manual on uniform traffic control devices for streets and highways.
5. Flag persons shall be provided at work sites to stop traffic as necessitated by work progress or to maintain continuous traffic flow past a work site at reduced speeds to help protect the work crew. For both of these functions, the flag person must, at all times, be clearly visible to approaching traffic for a distance sufficient to permit proper response by the motorist to the flagging instructions, and to permit traffic to reduce speed before entering the work site. In positioning flag persons, consideration must be given to maintaining color contrast between the flag person's protective garments and the environment.
6. The flag person shall not personally direct traffic to proceed or give any hand signals of any kind. Instead, an official traffic control device shall be used when it is safe for traffic to proceed.
7. Orange vests shall be worn by all employees who work on or near the public right-of-way.

705 - Personal Protective Equipment

GENERAL REQUIREMENTS

Protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

1. Eye and Face Protection
 - A. Protective eye and face equipment shall be required where there is a reasonable probability of injury that can be prevented by such equipment. In such cases, supervisors shall make conveniently available a type of protector suitable for the work to be performed, and employees shall use such protectors. No unprotected employee shall knowingly be subjected to a hazardous environmental condition. Suitable eye protectors shall be provided where machines or operations present the hazard of flying objects, glare, liquids, injurious radiation, or a combination of these hazards.
 - B. Protectors shall meet the following minimum requirements:
 - (1). They shall provide adequate protection against the particular hazards for which they are designed.
 - (2). They shall be reasonably comfortable when worn under the designated conditions.
 - (3). They shall fit snugly and shall not unduly interfere with the movements of the wearer.
 - (4). They shall be durable.
 - (5). They shall be capable of being disinfected.
 - (6). They shall be easily cleanable and should be kept clean and in good repair.
2. Gloves or similar hand protection shall be worn at all times as supplied and prescribed by the supervisor.
 - A. When handling wire, wire rope, or refuse.
 - B. Proper gloves shall be worn when handling chemicals that may irritate the hands.
3. Employees must wear hearing protection while working in areas of high intensity and/or high frequency noise.
4. Employees in the following areas, when working where there is a possible danger of head injury from impact, or from falling or flying objects, or from electrical shock and burns or when so instructed by their supervisor, are required to wear hard hats on the job site.
 - A. Building and Code Enforcement Inspectors.
 - B. Engineering Field Inspectors.
 - C. All other employees visiting hazardous job sites.

5. Respirator Protection. Standard Operation Procedure (SOP) #008, Respiratory Protection, contains requirements for the use of respirators to protect employees against oxygen deficient atmospheres and occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors in the workplace. All employees required to wear a respirator shall be given a copy of the Respiratory Protection SOP. Supervisors shall ensure that employees follow the requirements of the SOP.
6. Safety Hats. Safety hats shall be worn by employees and visitors when:
 - outside vehicles at all outdoor worksites; this includes those who occasionally visit worksites whether on the road surface or right-of-way.
 - working in areas where there is a danger of head injury from impact, or falling or flying objects, or from electrical shock or burns.
 - performing any task requiring safety hat protection as described elsewhere in the Bi-City Safety Manual or Safety SOP.
 - doing excavation work.

ONLY DIELECTRIC SAFETY HAT ACCESSORIES SHALL BE USED WHILE WORKING IN AREAS WHERE EMPLOYEES ARE SUBJECT TO ELECTRICAL SHOCK. SAFETY HATS SHALL MEET THE SPECIFICATIONS CONTAINED IN AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) Z89.2 FOR ELECTRICAL HAZARDS.

Safety Vests. Safety approved safety vests shall be worn by employees and visitors when:

- outside vehicles at all outdoor worksites on the road surface or the right-of-way. This includes those who occasionally visit these worksites.

Foot Protection

- Safety footwear shall be worn during any type of activity or in any environment that would increase the likelihood of foot injury.

706 - Ladder Safety

1. Portable wood ladders.
 - A. All wood parts shall be free from sharp edges and splinters. They shall be sound, and free from shake, wane, compression failures, decay, or other irregularities. Low-density wood shall not be used.
2. Portable stepladders.
 - A. Stepladders longer than 20 feet shall not be supplied. Stepladders shall be of three types:
 - (1). Type I - Industrial stepladder, 3 to 20 feet for heavy duty, such as utilities, contractors, and industrial use.
 - (2). Type II - Commercial stepladder, 3 to 12 feet for medium duty, such as painters, offices, and light industrial use.
 - (3). Type III - Household stepladder, 3 to 6 feet for light duty, such as light household use.
 - B. A metal spreader or locking device of sufficient size and strength to securely hold the front and back sections in open positions shall be a component of each stepladder. The spreader shall have all sharp points covered or removed to protect the user. For Type III ladder, the pail shelf and spreader may be combined in one unit (the so-called shelf-lock ladder).

3. Single/Two-section ladders.
 - A. Single ladders longer than 30 feet shall not be supplied.
 - B. Two-section ladders longer than 60 feet shall not be supplied. All ladders of this type shall consist of two sections, one to fit within the side rails of the other, and arranged in such a manner that the upper section can be raised and lowered.
4. Care of ladders.
 - A. Ladders shall be maintained in good condition at all times, the joint between the steps and side rails shall be tight, all hardware and fittings securely attached, and the movable parts shall operate freely without binding or undue play.
 - B. Metal bearings of locks, wheels, pulleys, etc., shall be frequently lubricated.
 - C. Frayed or badly worn rope shall be replaced.
 - D. Safety feet and other auxiliary equipment shall be kept in good condition to insure proper performance.
 - E. Ladders shall be inspected frequently and those that have developed defects shall be withdrawn from service for repair or destruction and tagged or marked as "Dangerous, Do Not Use."
 - F. Rungs should be kept free of grease and oil.
5. The following safety precautions shall be observed in connection with the use of ladders:
 - A. Portable rung and cleat ladders shall, where possible, be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is one-quarter of the working length of the ladder (the length along the ladder between the foot and the top support). The ladder shall be so placed as to prevent slipping, or it shall be lashed, or held in position. Ladders shall not be used in a horizontal position as platforms, runways, or scaffolds.
 - B. Ladders for which dimensions are specified should not be used by more than one man at a time nor with ladder jacks and scaffold planks where use by more than one man is anticipated. In such cases, specially designed ladders with larger dimensions of the parts should be procured.
 - C. Portable ladders shall be so placed that the side rails have a secure footing. The top rest for portable rung and cleat ladders shall be reasonably rigid and shall have ample strength to support the applied load.
 - D. Ladders shall not be placed on boxes, barrels, or other unstable bases to obtain additional height.
 - E. Ladders with broken or missing steps, rungs, or cleats, broken side rails, or other faulty equipment shall not be used; improvised repairs shall not be made.
 - F. Short ladders shall not be spliced together to provide long sections.
 - G. Ladders made by fastening cleats across a single rail shall not be used.
 - H. Ladders shall not be used as guys, braces, or skids, or for uses other than their original intended purposes.

- I. Tops of the ordinary types of stepladders shall not be used as steps.
 - J. No ladder should be used to gain access to a roof unless the top of the ladder shall extend at least 3 feet above the point of support, at eave, gutter, or roofline.
 - K. The user should equip all portable rung ladders with non-slip bases when there is a hazard of slipping. Non-slip bases are not intended as a substitute for care in safely placing, lashing, or holding a ladder that is being used upon oily, metal, concrete, or slippery surfaces.
 - L. The bracing on the back legs of stepladders is designed solely for increasing stability and not for climbing.
6. Portable metal ladders.
- A. Rungs and steps shall be corrugated, knurled, dimpled, coated with skid-resistant material, or otherwise treated to minimize the possibility of slipping.
 - B. The length of single ladders or individual sections of ladders shall not exceed 30 feet. Two-section ladders shall not exceed 48 feet in length and over two-section ladders shall not exceed 60 feet in length.
 - C. Based on the nominal length of the ladder, each section of a multi-section ladder shall overlap the adjacent section by at least the number of feet as follows:
 - (1). Up to and including 36 feet.....3 feet overlap.
 - (2). Over 36, up to and including 48 feet.....4 feet overlap.
 - (3). Over 48, up to 60 feet.....5 feet overlap.
7. Metal stepladders.
- A. Stepladders shall not exceed 20 feet in length.
 - B. The bottoms of the four rails are to be supplied with insulating non-slip material for the safety of the user.
 - C. A metal spreader or locking device of sufficient size and strength to securely hold the front and back sections in the open position shall be a component of each stepladder. The spreader shall have all sharp points or edges covered or removed to protect the user.
8. Care of metal ladders.
- A. Ladders must be maintained in good usable condition at all times.
 - B. If a ladder is involved in any of the following, immediate inspection is necessary:
 - (1). If ladders tip over, inspect ladder for side rails dents or bends, or excessively dented rungs; check all rung-to-side-rail connections; check hardware connections; check rivets for shear.
 - (2). If ladders are exposed to oil and grease, equipment should be cleaned of oil, grease or slippery materials. This can easily be done with a solvent or steam cleaning.

- (3). Ladders having defects are to be marked and taken out of service until repaired by either maintenance department or the manufacturer.

9. Safety precautions.

- A. Portable ladders are designed as a one-man working ladder based on a 200-pound load.
- B. The ladder base section must be placed with a secure footing.
- C. The top of the ladder must be placed with the two rails supported, unless equipped with a single support attachment.
- D. When ascending or descending, the climber must face the ladder.
- E. Ladders must not be tied or fastened together to provide longer sections. They must be equipped with the hardware fittings necessary if the manufacturer endorses extended uses.
- F. Ladders should not be used as a brace, skid, guy or gin pole, gangway, or for other uses than that for which they were intended, unless specifically recommended for such use by the manufacturer.
- G. Portable ladders shall have nonconductive side rails if they are used where the employee or the ladder could contact exposed energized parts.
- H. Metal ladders will be marked with stencil or decal "Caution - DO NOT USE NEAR ELECTRICAL EQUIPMENT."

707 - Shop Safety

1. General requirements for all machines.

- A. One or more methods of machine guarding shall be provided to protect the operator and other employees in the machine area from hazards such as those created by point of operation, ongoing nip points, rotating parts, flying chips and sparks.
- B. Machine guards shall be affixed to the machine where possible and secured elsewhere if for any reason attachment to the machine is not possible. The guard shall be such that it does not offer an incident hazard in itself.
- C. The point of operation of machines, whose operation exposes an employee to injury, shall be guarded. The guarding device shall be in conformity with any appropriate standards therefore, or, in the absence of applicable specific standards, shall be so designed and constructed as to prevent the operator from having any part of his/her body in the danger zone during the operating cycle.
- D. Special hand tools for placing and removing material shall be such as to permit easy handling of material without the operator placing a hand in the danger zone. Such tools shall not be in lieu of other guarding, but can only be used to supplement protection provided.
- E. Machines designed for a fixed location shall be securely anchored to prevent walking or moving.

2. Woodworking tools.

- A. All fixed power driven woodworking tools shall be provided with a disconnect switch that can either be locked or tagged in the off position.

- B. All portable, power-driven circular saws shall be equipped with guards above and below the base plate or shoe. The upper guard shall cover the saw to the depth of the teeth, except for the minimum arc required to permit the base to be tilted for bevel cuts. The lower guard shall cover the saw to the depth of the retraction and contact with work. When the tool is withdrawn from the work, the lower guard shall automatically and instantly return to the covering position.
- C. Operations:
 - (1). All guards must be in place before machine is operated.
 - (2). Cracked saw blades will not be used.
 - (3). No maintenance or repairs will be attempted until the power has been cut off at the saw and the wall disconnect locked out/cut off in accordance with Section VI, Lockout Tagout.
 - (4). Dust and wood particles will be removed from saw tables with a brush or other suitable device after the saw has been cut off.
 - (5). Employees will wear snug fitting clothing. Gloves, loose or torn clothing, neckties, or finger rings will not be worn.
 - (6). Eye and ear protection will be worn when operating woodworking machinery.
 - (7). "Horseplay" or anything that will distract operator's attention while machine is in motion is strictly prohibited.
 - (8). Approved push sticks will be used on small pieces so that hands may be kept away from the blade of the saw.

3. Power-operated hand tools.

- A. Electric power operated tools shall either be of the approved double-insulated type or properly grounded.
- B. The use of electric cords for hoisting or lowering tools shall not be permitted.
- C. Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming incidentally disconnected.
- D. Compressed air shall not be used for cleaning purposes except where reduced to less than 30 psi and then only with effective chip guarding and personal protective equipment.
- E. Only employees who have been trained in the operation of the particular tool in use shall be allowed to operate a powder-actuated tool.
 - (1). The tool shall be tested each day before loading to see that safety devices are in proper working condition. The method of testing shall be in accordance with the manufacturer's recommended procedure.
 - (2). Tools shall not be loaded until just prior to the intended firing time. Neither loaded nor empty tools are to be pointed at any employees. Hands shall be kept clear of the open barrel end. Loaded tools shall not be left unattended.

- (3). All tools shall be used with the correct shield, guard, or attachment recommended by the manufacturer.
4. Hand tools.
 - A. Supervisors shall not issue or permit the use of unsafe hand tools.
 - B. Wrenches, including adjustable, pipe, end, and socket wrenches shall not be used when jaws are sprung to the point that slippage occurs.
 - C. Impact tools, such as drift pins, wedges, and chisels, shall be kept free of mushroomed heads.
 - D. The wooden handles of tools shall be kept free of splinters or cracks and shall be kept tight in the tools.
5. Abrasive wheel machinery.
 - A. Abrasive wheels shall be used only on machines provided with safety guards that shall cover the spindle end, nut, and flange projections. The safety guard shall be mounted so as to maintain proper alignment with the wheel, and the strength of the fastenings shall exceed the strength of the guard.
 - B. Work rests shall be used to support the work on offhand grinding machines. They shall be of rigid construction and designed to be adjustable to compensate for wheel wear. Work rests shall be kept adjusted closely to the wheel with a maximum opening of one-eighth inch to prevent the work from being jammed between the wheel and the rest, which may cause wheel breakage. The work rest shall be securely clamped after each adjustment. The adjustment shall not be made with the wheel in motion.
6. Jacks - Loading, marking and operation.
 - A. The operator shall make sure that the jack used has a rating sufficient to lift and sustain the load.
 - B. The rated load shall be legibly and permanently marked in a prominent location on the jack by casting, stamping, or other suitable means.
 - C. At no time shall an employee get under a jacked vehicle in the absence of a firm foundation without a jack stand of adequate weight support and another individual present.
 - D. The operator shall watch the stop indicator, which shall be kept clean, in order to determine the limit of travel. The indicated limit shall not be overrun.
 - E. After the load has been raised, it shall be cribbed, blocked, or otherwise secured at once.
 - F. All jacks shall be properly lubricated at regular intervals.
 - G. Each jack shall be thoroughly inspected at times which depend upon the service conditions. Inspections shall be not less frequent than the following:
 - (1). For constant on intermittent use at one locality, once every 6 months;
 - (2). For jacks sent out of shop for special work, when sent out and when returned;
 - (3). For a jack subjected to abnormal load or shock, immediately before and immediately thereafter;

- (4). Repair or replacement parts shall be examined for possible defects;
- (5). Jacks that are out of order shall be tagged accordingly, and shall not be used until repairs are made.

7. Servicing single piece rim wheels.

- A. Tires shall be completely deflated by removal of the valve core before demounting.
- B. Mounting and demounting of the tires shall be done only from the narrow ledge side of the wheel. Care shall be taken to avoid damaging the tire beads while mounting tires on wheels. Tires shall be mounted only on compatible wheels of matching bead diameter and width.
- C. Nonflammable rubber lubricant shall be applied to bead and wheel mating surfaces before assembly of the rim wheel, unless the tire or wheel manufacturer recommends against the use of rubber lubricant.
- D. If a tire-changing machine is used, the tire shall be inflated only to the minimum pressure necessary to force the tire bead onto the rim ledge while on the tire changing machine.
- E. If a bead expander is used, it shall be removed before the valve core is installed and as soon as the rim wheel becomes airtight (the tire bead slips onto the bead seat).
- F. Tires may be inflated only when contained within a restraining device, positioned behind a barrier or bolted on the vehicle with the lug nuts fully tightened.
- G. Tires shall not be inflated when any flat, solid surface is in the trajectory and within one foot of the sidewall.
- H. Employees shall stay out of the trajectory when inflating a tire.
- I. Tires shall not be inflated to more than the inflation pressure stamped in the sidewall unless the manufacturer recommends a higher pressure.
- J. Tires shall not be inflated above the maximum pressure recommended by the manufacturer to seat the tire bead firmly against the rim flange.
- K. No heat shall be applied to a single piece wheel.
- L. Cracked, broken, bent, or otherwise damaged wheels shall not be reworked, welded, brazed or otherwise heated.

708 - Incident Prevention Signs and Tags

1. General

- A. Signs and symbols shall be visible at all times when work is being performed, and shall be removed or covered promptly when the hazards no longer exist.
- B. Danger signs shall be used only where an immediate hazard exists.
- C. Danger signs shall have red as the predominating color for the upper panel; black outline on the borders; and a white lower panel for additional sign wording.

- E. Caution signs shall be used only to warn against potential hazards or to caution against unsafe practices.
- F. Caution signs shall have yellow as the predominating color; black upper panel and borders; yellow lettering of "caution" on the black panel; and the lower yellow panel for additional sign wording. Black lettering shall be used for additional wording.
- G. Exit signs, when required, shall be lettered in legible red letters, not less than 6 inches high, on a white field and the principal stroke of the letters shall be at least three-fourths inch in width.
- H. Safety instruction signs, when used, shall be white with green upper panel with white letters to convey the principal message. Any additional wording on the sign shall be black letters on the white background.
- I. Directional signs, other than automotive traffic signs specified in paragraph J of this section, shall be white with a black panel and a white directional symbol.
- J. Traffic signs. Construction areas shall be posted with legible traffic signs at points of hazard. All traffic control signs or devices used for protection of construction workmen shall conform to American National Standards Institute D6.1-1971, Manual on Uniform Traffic Control Devices for Streets and Highways.
- K. Incident prevention tags shall be used as a temporary means of warning employees of an existing hazard, such as defective tools, equipment, etc. They shall not be used in place of, or as a substitute for, incident prevention signs.

709 - Flammable/Combustible Liquid Storage

- 1. Flammable and combustible liquids shall be stored in approved storage cabinets.
- 2. Design, construction, and capacity of storage cabinets.
 - A. Maximum capacity - not more than 60 gallons of Class I or Class II liquids, nor more than 120 gallons of Class III liquids may be stored in a storage cabinet.
 - B. Storage cabinets shall be labeled in conspicuous lettering, "Flammable - Keep Fire Away."
 - C. Metal cabinets constructed in the following manner shall be deemed to be in compliance:

The bottom, top, door, and sides of cabinet shall be at least No. 18 gauge sheet iron and double walled with 1 ½ - inch air space. Joints shall be riveted, welded or made tight by some equally effective means. The door shall be provided with a three-point lock, and the doorsill shall be raised at least 2 inches above the bottom of the cabinet.
 - D. Wooden cabinets constructed in the following manners shall be deemed in compliance:

The bottom, sides, and top shall be constructed of an approved grade of plywood at least 1 inch in thickness, which shall not break down or delaminate under fire conditions. All joints shall be rabbetted and shall be fastened in two directions with flathead wood screws. When more than one door is used, there shall be a rabbetted overlap of not less than 1 inch. Hinges shall be mounted in such a manner as not to lose their holding capacity due to loosening or burning out of the screws when subjected to the fire test.

Container Type	Flammable liquids class IA	Flammable liquids class IB	Flammable liquids class IC	Combustible liquids class II	Combustible liquids class III
Glass or approved plastic	1 pt	1 qt	1 gal	1 gal	1 gal
Metal (other than DOT drums)	1 gal	5 gal	5 gal	5 gal	5 gal
Safety Cans	2 gal	5 gal	5 gal	5 gal	5 gal
Metal drums (DOT specs)	60 gal	60 gal	60 gal	60 gal	60 gal
Approved portable tanks	660 gal	660 gal	660 gal	660 gal	660 gal

710 - Extreme Weather Conditions

1. Cold weather.

Employees who work outside in cold weather can develop hypothermia. Hypothermia results when the body loses heat faster than it can produce it.

First, the blood vessels constrict to try to conserve vital internal heat. Hands and feet are affected first. If the body continues to lose heat, involuntary shivers begin. Further heat loss produces speech difficulty, forgetfulness, and loss of manual dexterity, collapse, and possibly death. Therefore, employees should keep their heads, neck and hands covered in cold weather. It is important to have a dead air space between the warm body and clothing and the outside air. Many layers of relatively light clothing and an outer shell of wind proof material will maintain body temperature much better than a single heavy garment worn over ordinary indoor clothing. Employees should also make sure that their clothing allows some venting for perspiration. Because wet skin will freeze more rapidly than dry skin, employees should keep as dry as possible in cold weather.

2. Hot weather.

Extremely hot weather can result in several heat-related disorders.

A. Heat Rashes.

Heat rash is characterized by profuse, tiny, raised red vesicles (blister-like) on affected areas and prickling sensations during heat exposure.

- (1). Prevention - Cool sleeping quarters or convection to allow skin to dry between heat exposure. Wear loose-fitting cotton undergarments.
- (2). Treatment - Mild drying lotions. Skin cleanliness to prevent infections.

B. Heat Syncope.

Heat syncope is fainting while standing erect and immobile in heat.

- (1). Prevention - Acclimatization. Intermittent activity to assist venous return to heart.

(2). Treatment - Remove to cooler area. Recovery typically is prompt and complete.

C. Heat Cramp.

Heat cramps are painful intermittent spasms of involuntary muscles following hard physical work in a hot environment. Cramps usually occur after heavy sweating and often begin at the end of a work shift.

(1). Prevention - In non-acclimatized workers, provide balanced replacement beverage during work periods.

(2). Treatment - Balanced fluids by mouth.

D. Heat Exhaustion.

Heat exhaustion is profuse sweating, weakness, rapid pulse, dizziness, nausea and headache. The skin is cool and sometimes pale and clammy with sweat. Body temperature is normal or subnormal. Nausea, vomiting and unconsciousness may occur.

(1). Prevention - Acclimatize workers using a breaking-in schedule for five to seven days, if possible. Balanced fluids to be kept at all times and taken frequently during work shift.

(2). Treatment - Remove to cooler environment. Administer balanced fluids by mouth. Place cool, wet towels or blankets over victim. Keep at rest until urine volume and control is balanced. If patient becomes unconscious or begins vomiting, get emergency medical assistance.

E. Heat Stroke.

Heat stroke is characterized by diminished or no sweating. The body skin is hot, dry and flushed. Increased body temperature, if uncontrolled, may lead to delirium, convulsions, coma, and even death. Medical care is urgent.

(1). Prevention - Medical screening of workers. Placement based on health and physical fitness. Acclimatization for five to seven days by graded work and heat exposure. monitor workers during sustained work in severe heat.

(2). Treatment - Immediate and rapid cooling by immersion in chilled water with massage or wrapping in wet sheet with vigorous fanning with cool, dry air. Avoid over-cooling. Seek emergency medical assistance.

711 - New/Transfer Employee Safety Indoctrination

All new and transferred employees shall receive proper safety indoctrinations from their responsible supervisor in the safe performance of their assigned duties. This shall include all written and unwritten generally known safety rules, standards, and directives. If possible, the new/transfer employee should be assigned to work with a safety-minded employee during the first few weeks. The employee should be checked at frequent intervals, asked about any problems that may have arisen, and reminded of safe practices. Any tendency to overlook safety procedures should bring a prompt and vigorous warning. (*See New/Transfer Employee Safety Orientation Form*)

1. General Requirements

A. Housekeeping.

- (1). All places of employment, passageways, storerooms, and service rooms shall be kept clean and orderly and in a sanitary condition.
- (2). The floor of every workroom shall be maintained in a clean and, so far as possible, a dry condition. Where wet processes are used, drainage shall be maintained, and false floors, platforms, mats, or other dry standing places should be provided where practicable.
- (3). To facilitate cleaning, every floor, working place, and passageway shall be kept free from protruding nails, splinters, holes, or loose boards.

B. Aisles and passageways.

- (1). Where mechanical handling equipment is used, sufficient safe clearances shall be allowed for aisles, at loading docks, through doorways and wherever turns or passage must be made. Aisles and passageways shall be kept clear and in good repairs, with no obstruction across or in aisles that could create a hazard.
- (2). Permanent aisles and passageways shall be appropriately marked.

C. Covers and guard rails; Covers and/or guardrails shall be provided to protect personnel from the hazards of open pits, tanks, chutes, vats, ditches, etc.

D. Potable water.

- (1). Potable water shall be provided in all places of employment, for drinking, washing of the person, cooking, washing of foods, washing of cooking or eating utensils, washing of food preparation or processing premises, and personal service rooms.
- (2). Portable drinking water dispensers shall be designed, constructed, and serviced so that sanitary conditions are maintained, shall be capable of being closed, and shall be equipped with a tap.
- (3). Open containers such as barrels, pails, or tanks for drinking water from which the water must be dipped or poured, whether or not they are fitted with a cover, are prohibited.
- (4). A common drinking cup and other common utensils are prohibited.

E. Non-potable water.

- (1). Outlets for Non-potable water, such as water for industrial or fire fighting purposes, shall be posted or otherwise marked in a manner that will indicate clearly that the water is unsafe and is not to be used for drinking, washing of the person, cooking, washing of food, washing of cooking or eating utensils, washing of food preparations or processing premises, or personal service rooms, or for washing clothes.
- (2). Construction of Non-potable water systems or systems carrying any other Non-potable substance shall be such as to prevent back flow or back siphonage into a potable water system.

1. General Rules.
 - A. Incidents and spills - Eye Contact: Promptly flush eyes with water for a prolonged period (15 minutes) and seek medical attention. Ingestion: Encourage the victim to drink larger amounts of water. Skin Contact: Promptly flush the affected area with water and remove any contaminated clothing. If symptoms persist after washing, seek medical attention. Clean-up: Promptly clean up spills, using appropriate protective apparel and equipment and proper disposal.
 - B. Avoidance of "routine" exposure: Develop and encourage safe habits; avoid unnecessary exposure to chemicals by any route; Do not smell or taste chemicals. Vent apparatus that may discharge toxic chemicals (vacuum pumps, distillation column, etc.) into local exhaust devices. Inspect gloves and test glove boxes before use. Do not allow release of toxic substances in cold rooms and warm rooms, since these have contained re-circulated atmospheres.
 - C. Choice of chemicals: Use only those chemicals for which the quality of the available ventilation system is appropriate.
 - D. Eating, smoking, etc.: Avoid eating, drinking, smoking, gum chewing, or application of cosmetics in areas where laboratory chemicals are present; wash hands before conducting these activities. Avoid storage, handling, or consumption of food or beverages in storage areas, refrigerators, glassware or utensils that are also used for laboratory operations.
 - E. Equipment and glassware.
 - (1). Handle and store laboratory glassware with care to avoid damage; do not use damaged glassware. Use extra care with Dewar flasks and other evacuated glass apparatus; shield or wrap them to contain chemicals and fragments should implosion occur. Use equipment only for its designed purpose.
 - F. Exiting: Wash areas of exposed skin well before leaving the laboratory.
 - G. Horseplay: Avoid practical jokes or other behavior that might confuse, startle or distract another worker.
 - H. Mouth suction: Do not use mouth suction for pipetting or starting a siphon.
 - I. Personal apparel.
 - (1). Confine long hair and loose clothing. Wear shoes at all times in the laboratory but do not wear sandals, perforated shoes, or sneakers.
 - J. Personal housekeeping.
 - (1). Keep the work area clean and uncluttered, with chemicals and equipment being properly labeled and stored; clean up the work area on completion of an operation or at the end of each day.
 - K. Personal protection.
 - (1). Assure that appropriate eye protection is worn by all persons, including visitors, where chemicals are stored or handled. Wear appropriate gloves when the potential for contact with toxic material exists; inspect the gloves before each use, wash them before removal, and replace them periodically.

- (2). Use appropriate respiratory equipment when air contaminant concentrations are not sufficiently restricted by engineering controls. Use any other protective and emergency apparel and equipment as appropriate.
 - (3). Avoid use of contact lenses in the laboratory unless necessary; if they are used, inform supervisor so special precautions can be taken.
 - (4). Remove laboratory coats immediately on significant contaminations.
- L. Planning: Seek information and advice about hazards, plan appropriate protective procedures, and plan positioning of equipment before beginning any new operation.
- M. Unattended operations: Leave lights on, place an appropriate sign on the door, and provide for containment of toxic substances in the event of failure of a utility service (such as cooling water) to an unattended operation.
- N. Use of hood.
- (1). Use the hood for operations that might result in release of toxic chemical vapors or dust. As a rule of thumb, use a hood or other local ventilation device when working with any appreciably volatile substance with a TLV of less than 50 ppm.
 - (2). Confirm adequate hood performance before use; keep hood closed at all times except when adjustments within the hood are being made; keep materials stored in hoods to a minimum and do not allow them to block vents or air flow.
 - (3). Leave the hood "on" when it is not in active use if toxic substances are stored in it or if it is uncertain whether adequate general laboratory ventilation will be maintained when it is "off".
- O. Vigilance: Be alert to unsafe conditions and see that they are corrected when detected.
- P. Waste disposal.
- (1). Assure that the plan for each laboratory operation includes plans and training for waste disposal.
 - (2). Deposit chemical waste in appropriately labeled receptacles and follow all other waste disposal procedures of the Chemical Hygiene Plan.
 - (3). Do not discharge to the sewer concentrated acids or bases; highly toxic, malodorous, or lachrymatory substances; or any substances which might interfere with the biological activity of waste water treatment plants, create fire or explosion hazards, cause structural damage or obstruct flow.
- Q. Working alone: Avoid working alone in a building; do not work alone in a laboratory if the procedures being conducted are hazardous.

714 - Mower Safety

- 1. Power lawn mowers.
 - A. All power-driven chains, belts, and gears shall be so positioned or otherwise guarded to prevent the operator's incidental contact therewith, during normal starting, mounting, and operation of the machine.

- B. A shutoff device shall be provided to stop operation of the motor or engine. This device shall require manual and intentional reactivation to restart the motor or engine.
 - C. All positions of the operating controls shall be clearly identified.
 - D. The words, "Caution. Be sure the operating control(s) is in neutral before starting the engine," or similar wording shall be clearly visible at an engine starting control point on self-propelled mowers.
2. Walk-behind and riding rotary mowers.
- A. The mower blade shall be enclosed except on the bottom and the enclosure shall extend to or below the lowest cutting point of the blade in the lowest blade position.
 - B. Guards which must be removed to install a catcher assembly shall comply with the following:
 - (1). Warning instructions shall be affixed to the mower near the opening stating that the mower shall not be used without either the catcher assembly or guard in place.
 - (2). The catcher assembly or the guard shall be shipped and sold as part of the mower.
2. Riding rotary mowers.
- A. Openings shall be placed so that grass or debris will not discharge directly toward any part of an operator seated in a normal operator position.
 - B. Mowers shall be provided with stops to prevent jack knifing or locking of the steering mechanism.
 - C. Vehicle stopping means shall be provided.
 - D. Hand-operated wheel drive disengaging controls shall move opposite to the direction of vehicle motion in order to disengage the drive. Foot-operated wheel drive disengaging controls shall be depressed to disengage the drive. Deadman control, both hand and foot operated, shall automatically interrupt power to a drive when the operator's actuating force is removed.

SECTION VIII

SAFE DRIVER AWARD PROGRAM

800 - Statement of Purpose and Policy

The Safe Driver Award Program is designed to encourage safe driving habits, reduce costs, and provide formal recognition of individual drivers who establish and maintain superior driving records.

801 - Eligibility and Award Criteria

1. All divisions with full-time employees whose primary position is to operate City-owned vehicles on a regular basis in the performance of their normal duties are eligible for participation in this program. The Safety Office will budget for funds for the Program.
2. In order for the individual driver to be eligible for the Safe Driver Award, he/she must have no preventable incidents for a period of one (1) fiscal year. The determination of preventable or non-preventable incidents will be made by an Incident Review Board.

- Drivers are subject to a three-year proving period. Any time a driver has a preventable incident during the proving period, he/she starts over again at year one. A driver may earn a one- or two-year award several times, but he/she earns a three-year award only once. After the three-year award is earned, the driver is no longer required to start at year one in the event of a preventable incident. His/her award advances by one year for each incident-free year completed, even if he/she has an incident during an interim year. Example:

Driver, John Doe, received a three-year award for the year 1991. During the year 1992, he had an incident that was judged by an Incident Review Board to be preventable and, therefore, is not eligible for an award that year. If he has no preventable incidents during 1993, he will be eligible for the four-year award.

802 - Awards

The Safe Driver Award consists of a designated year Safe Driver Pin *and patch*. The specific design and material of these pins shall be determined by the Safety Manager according to the award period. Other specific awards may be instituted from time to time as designated by the City Manager(s) or Department Head with assistance from the Safety Manager.

803 - Name Submission and Evaluation

Division Managers shall submit to the Safety Manager the names of proposed award recipients. The Safety Manager shall review for validation of non-preventable, incident-free driving, and eligibility. Upon approval by the Safety Manager, the list of award recipients will be finalized. The deadline for submitting names of award recipients is October 15 of the new fiscal year. The following format will be used:

Driver's Name	Driver's License Number	Date of Last Preventable Incident	No. of Continuous Incident-Free Years Driving a Commercial Vehicle	Now Eligible for Year Award
---------------	-------------------------	-----------------------------------	--	-----------------------------

-
-

804 - Award Presentation

Winners of awards shall be announced as soon as possible after the end of the fiscal year. The appropriate director, or designated representative, shall present the awards in a manner that is the most effective in recognizing award recipients.

Safe Driver Awards will be presented as follows:

- One to Nine Years.....Safety Pin *and Patch*
- 10 Year.....Belt Buckle
- 10 to 14 Years.....TBA
- 15 Years to 25 Years.....Safety Plaque

SECTION IX

SAFETY AND HOUSEKEEPING INSPECTIONS

900 - Purpose

Inspections are a tool for locating and reporting unsafe conditions and activities that have the potential to cause injury, incident and/or property damage. Inspections should be viewed positively. That is, rather than faultfinding and being critical, they should be used as an opportunity for fact-finding. Inspections will help give Administrators, Maintenance and Operations Directors, a good understanding of the condition of their facilities.

901 - Responsibility

Supervisors should conduct a formal inspection of his/her immediate work area at least on a monthly basis.

SECTION X

HAND TOOLS

1000 - General

- Use the right tool for the job. Screwdrivers are not pry bars and wrenches are not hammers.
- Tools should be maintained in good condition and inspected daily. Tools should not be used with cracked or split handles.
- Tools should never be thrown, left in a high place where they might fall, or left where they might cause a tripping hazard.
- Do not pull knives or other sharp-edged tools toward the body.
- When striking metal against metal, safety eye protection shall be worn.
- When filing sharp-edged tools, hold the file so if it slips you will not be cut by the sharp edge of the tool or injured by the file.
- When not in use, store tools in a safe place. Tools should always be stored with the sharp edges protected.
- Repairing of tools requires special skills. If you have not been trained in the repairing of tools, do not attempt it.
-

AXES

- Keep axes sharp and well honed. Assure that the handle to head connections are tight and safe.
- Make sure you have a clear circle in which to swing. Remove brush and shrubbery and overhead vines.
- Be sure of your footing.
- When you are not using the ax, protect the blade with a sheath. If you have no guard, carry the ax at your side. If the blade is single, keep the edge down.
- Eye protection shall be worn when using axes.
- Leather gloves should be worn when using axes.

CROWBARS OR PRY BARS

- Do not use makeshift tools for the job and do not use extensions (cheaters).
- Do not use pry bars to snap metal bands.

FILES

- Files are extremely hard. Do not use them as a pry, a center punch, chisel, or other tool.
- Do not use a worn or broken file, or one without a handle. A washer-type guard should be used in front of the handle.
- Eye protection shall be worn when using files.

HAMMERS

- Avoid using a steel hammer on hardened steel surfaces. Use a soft metal hammer or one with a plastic, wood, or rawhide head, if possible.
- Safety eye protection shall be used for protection against flying chips, nails, or scale.

MACHETES

- Be sure other persons are clear of your swing.
- Watch for overhead vines or brush that will deflect your blow.
- The path of the blade should never be directed at your legs, or any other part of your body.
- Keep machetes sharp and sheathed when not in use.
- Safety goggles shall be worn when using machetes.

LAWN EDGERS AND WEED-EATERS

- Follow precautions for working with other small air-cooled gasoline engines.
- Keep the blade/string clear of everything except items to be cut.
- Safety eye protection shall be worn.
- Hearing protection should be worn.
- Foot guards shall be attached when operating weed-eaters.

SECTION XI

SPECIFIC SAFETY

1100 – Tree Trimming

- Safety hats, safety eye protection, and safety footwear shall be worn when trimming trees.
- Axes shall not be used when working in trees.
- Sharp-edge tools shall be transported with sharp edges protected. They shall not be transported in the cab of a vehicle.
- Do not throw saws or other objects out of trees.
- If a ladder is used to enter a tree, support the ladder by both rails, not by a rung, and lash it in place.
- No trimming operations shall be undertaken where there is any possibility of contact with electric wires.
- Care shall be taken not to place your weight on unsound limbs.
- Load brush and limbs onto truck properly and keep your work site clean.
- Use a safety harness and lanyard.

- Only aerial devices are to be used where mechanized equipment is required for hoisting personnel trimming trees.
- Hearing protection should be used when operating chainsaws.
- Tree trimming shall not be performed during lightning storms.

1101 – Surveying Operations

- All survey crewmembers shall wear safety vests and safety hats.
- High-top safety footwear is required.
- Safety eye protection shall be worn.
- Instrument personnel should set up in the roadway only when absolutely necessary. Instruments and tapes shall not be left unattended on roadway.
- Instruments shall be put together or taken apart clear of traffic lanes.
- A flagger shall be used when instrument personnel are working in the travel lanes.
- Do not climb fences or other obstructions carrying instruments.
- When working near high voltage wires, extreme caution shall be taken to prevent the contact with equipment, chains, metallic tapes, etc.
- A survey chain shall not be thrown or placed where wind or other conditions may move the chain so as to constitute a hazard to traffic or other workers.
- Machetes shall be sheathed when not in use. Extreme caution shall be used in handling machetes.
- Proper traffic control devices in accordance with the appropriate Arkansas/Texas Manual on Uniform Traffic Control Devices shall be used when instruments/equipment are on or adjacent to the roadway.

SECTION XII

MAINTENANCE AND CONSTRUCTION EQUIPMENT

1200 - General

- All equipment operators shall be assigned a “spotter” when operations require backing without an operational backup alarm or when vision to the rear is obstructed from the operator’s seat. Blind backing is prohibited.
- All equipment shall have installed and operational the prescribed safety equipment, lights, flags, and devices. Rearview mirrors shall be installed and used. Operators of equipment shall use safety seat belts when provided. Placards and emblems shall be maintained in a clean and serviceable condition.
- Regular inspections shall be made on all equipment and necessary action taken to remedy unsafe conditions.
- Belts, pulleys, sheaves, gears, chains, shafts, clutches, drums, flywheels, and other reciprocating or rotating parts of equipment shall be guarded.
- Platforms, foot walks, steps, ladders, handholds, guardrails, and toeboards shall be installed on all equipment where they are needed to provide safe ascent and descent.
- Employees shall use steps, handholds, etc. provided and shall not jump on and off equipment.
- Positive means should be provided: to prevent starting equipment in any gear other than neutral and from any position other than the operator’s seat; and, to prevent the equipment from being started by unauthorized persons.
- When work is completed, equipment shall be set and locked so that it cannot be released, dropped, or activated in any manner.
- Equipment shall not be refueled while the engine is running.
- Smoking or the use of open flames on or in the immediate vicinity of gasoline-operated equipment while it is being refueled is prohibited.
- Solvents with a flash point of 100 degrees F or below shall not be used for cleaning parts and equipment. Gasoline, naphtha, toluene, are but a few of the flammable liquids in this category. Kerosene with a flash point of 130 degrees F now contains an additive that is harmful to the skin and caution should be exercised in its use.

- Appropriate gloves shall be worn.
- Gasoline, fuel oil, and other flammable liquids shall not be stored on equipment except in fuel tanks or approved safety containers that are properly secured.
- Fuel tank openings should not be located in such a position that spills or overflows can run down on hot motors, exhaust pipes, or batteries.
- Equipment supported by hoists or jacks shall be blocked before work is permitted underneath.
- Debris, oil, grease, oily rags, asphalt, or waste shall not be allowed to accumulate on equipment.
- Safe load capacity and operating speeds shall be posted on all equipment and shall not be exceeded. Automotive equipment traveling to and from work sites should operate at or below normal highway speeds. Posted speed limits shall not be exceeded.
- Employees shall not ride on the outside of equipment, regardless of the speed or how short the distance, except on that equipment that has a safe platform designed for that purpose.
- Keep equipment a safe distance from excavations.
- Equipment shall be used only for the purpose for which it is designed. (For example: excavators, front-end loaders, etc, shall not be used to hoist personnel.)
- Loose instruments, tools, etc., shall not be carried in equipment, but held securely in racks or boxes permanently installed. Loose items can cause severe injury in the event of an incident.
- Non-automotive equipment should be hauled and not deadheaded when practical.
- If deadheading is necessary, travel out of the lanes of traffic where possible. When traveling with a front-end loader, the bucket should be positioned no higher than 18 inches off the road. Keep a sharp lookout to the rear.
- Equipment shall be stored with adequate clearance between vehicles and in a manner to facilitate hooking up or any other operation that might be required.
- Safety chains shall be installed, properly connected, and used on all equipment towed on roads and highways. Two chains are required on all towed units. Chains and associated hardware shall be of sufficient strength to withstand loads that may be expected during trailer detachments due to hitch/tongue failures. Safety chains shall be installed in such a manner and of sufficient length to permit them to be crossed underneath the trailer tongue to form a cradle should the hitch disconnect.
- In addition to the towing hitch and safety chains, a breakaway system shall be installed and utilized. This system will engage the brakes should the unit break away from the towing vehicle. The system must keep the brakes engaged for a minimum of 20 minutes. In a trailer not equipped with brakes, a maximum speed of 35 mph shall not be exceeded.

1201 - Slow-Moving Vehicles

- Tractor-mowers, front-end loaders, and any other slow-moving equipment designed to operate at a maximum speed of 25 mph or less shall be equipped with a Slow-Moving Vehicle Emblem. A Slow-Moving Vehicle Emblem shall be covered if the equipment is being towed faster than 25 mph.

1202 - Dozers

- Dozer operators shall wear the following protective wear: safety hat, safety glasses or goggles, and gloves. Safety ear protection and dust respirators shall be worn if applicable. Dozers shall be equipped with a rollover protective system (ROPS) to protect the operator from rollover and from falling branches and trees. The installation and use of safety belts is mandatory.
- The dozer blade should be kept close to the ground for balance when the machine is traveling up a steep grade.
- The operator should exercise extreme care when operating dozers around excavations and undercut earth.
- The operator shall not allow other persons to get on the dozer while it is in motion.

1203 - Aerial Devices

- Personnel in the buckets shall wear safety harnesses and lanyards that are tied off to the bucket or boom.
- Use personal protective equipment, as job requires.

- Observe proper precautions against electrical hazards both aloft and on the ground.
- Vehicle and outriggers shall be properly positioned and sufficiently blocked.
- Do not overload or overextend the boom.
- Do not overreach from bucket.
- The truck shall not be moved while the boom is in its raised position.
- The boom or bucket shall not be swung against obstructions and the boom shall not be moved into positions that interfere with traffic.
- Do not paint fiberglass buckets and booms; they should be washed with a mild solution of soap and water and inspected for cracks.
- A thorough daily inspection should be made before beginning operations.
- Only trained personnel shall be permitted to operate aerial devices.
- Do not drill holes in the bucket.
- Follow manufacturer's recommendation for dielectric testing of aerial devices.
- Employees in the bucket shall wear rubber gloves when working close to energized conductors or equipment.

1204 - Flatbed Trailers

- Special care shall be exercised on loading equipment on trailers
- Tilt-tops shall be secured.
- Equipment shall be properly positioned and secured with a minimum of 4 load binders and 4 chains.
- Low guide rails shall be installed on flatbed trailers to prevent equipment from slipping off trailer during loading operations.
- Safety chains shall be properly connected to the towing vehicle.
- Keep trailers free of loose items.
- Trailers equipped with electric brakes shall have a breakaway system that locks the brakes should the trailer be incidentally disconnected. The system shall be checked and maintained in an operable condition.

1205 - Front-End Loaders

- Front-end loaders are easily tipped over and shall be operated with extreme caution.
- When front-end loaders are operated around stockpiles or other loose material or when there is a "drop off", extreme care shall be taken to see that the loader remains on reasonably stable and level ground.
- Never deadhead with the bucket more than 18 inches off the ground.
- Front-end loaders shall not be used as work platforms.
- Front-end loaders shall be equipped with rollover protective systems. Safety belts shall be installed and worn.
- The loaded bucket shall not be raised except when the loader is on reasonably level ground.

1206 - Maintainers

- It shall be the responsibility of the operator to make certain safety lights are operable and flags are in place at all times. Flags shall be mounted on each upper corner of the moldboard when operating near the traveled-way.
- The maintainer blade shall be placed in the travel position when not in use.
- If driving down a steep grade, the transmission shall be in low range or low gear to create additional braking power.
- When the maintainer is parked for extended periods or overnight, the operator shall remove the ignition key, place the blade on the ground, set the parking brake and lock the cab, if lockable.
- Operators of maintainers should avoid, when practical, grading operations opposing traffic. When it becomes necessary to oppose traffic, headlights should be turned on in addition to warning lights.

1207 - Platforms (Sign Trucks, Brooms, Spreaders, Etc.)

- Platforms shall be of sturdy construction.
- A safety rail shall be built on the open sides of all platforms.
- The platform shall be so located that any controls can be easily reached without strain or awkward positions.
- No employee shall stand on moving equipment for any purpose without the benefit of a safety rail and, where needed, safety harnesses and lanyards.
- Hydraulically operated platforms shall have a positive means built into them to prevent the platform from falling.
- Shops built platforms are to meet or exceed the safety criteria in the above items. Final inspection and approval shall be by a competent person.

1208 - Tractor-Mowers

- Mowers shall have amber safety lights in operation and flags affixed when mowing near the travel lanes or shoulders.
- Mower blades adjusted approximately 5 inches (or more) from surface will prevent many objects from being thrown by blades.
- Conventional tractor-mowers shall not be operated on a slope greater than 3 to 1.
- The engine shall be shut off and the mower blades stopped before any work is performed on the mower and when anyone is near the mower blades.
- When required to clear the blades or work under the mower, the mower shall be blocked or otherwise secured to prevent falling.
- If operating on unusual terrain where the ground surface may be hidden by tall grass, the operator shall take precautionary measures to avoid any hidden erosion in which a wheel of the tractor might fall.
- A screen guard shall be installed behind the operator's position on tractor with rear-mounted mowers, and behind and on each side of the operator's position on tractors towing "bat wing" mowers.
- Chain, belt, and drive shaft guards shall be kept in good repair on all mowers.
- The operator shall be especially careful around small bridge and culvert abutments. (Tractors have turned over when one of the wheels dropped into the hole at the end of these structures.)
- Do not raise mower while on a slope. Doing so will shift the center of gravity.
- Tractors shall be equipped with rollover protective systems (ROPS). Safety belts shall be installed and worn.
- Safety hats and safety eye protection shall be worn by tractor-mower operators.
- NIOSH/MSHA approved dust respirators shall be worn in dusty conditions.
- All rotary type mowers for highway mowing must be equipped with link chain skirts (guards) on all sides to break the momentum of rocks and other objects hurled from beneath the cage by the mower blade. The link chain skirts (guards) shall have a steel cable laced horizontally through the next to last strand of chain on the outside row only, or some other suitable means such as a rubber shield placed outside of the chain guards to serve as an additional means of deflecting thrown objects.

1209 - Rotary Brooms and Street Sweepers

- Safety eye protection shall be worn.
- NIOSH/MSHA approved dust respirators shall be worn.
- It shall be the responsibility of the operator to ensure the lights are operable and flags are in place.

1210 - Elevated Work Platforms, Towers, and Scaffolding

- Employees who are required to work in high places should be in good physical condition.
- Towers shall have permanent ladders installed and should be equipped with a climbing device for attaching a safety harness.

- Employees shall be properly trained in the procedures, hazards, and safety equipment prior to being assigned to duties requiring climbing or working while on towers.
- Scaffolds shall be designed to support at least four times the anticipated weight of employees and materials.
- Scaffold platforms shall be guarded on all exposed sides.
- A safe means shall be provided for access to scaffold platforms.
- A safety harness with a lifeline shall be worn at all times when working in high places.
- It is preferable to permanently install catwalks, railing, handholds, means of attaching safety lines, etc., on permanent structures that require periodic painting and maintenance.
- When working at elevated heights of six feet or more above ground/water each employee shall be protected from falling by a guardrail system, safety net system, or personal arrest system.
- U.S. Coast Guard-approved life jacket or buoyant vest shall be worn when working over water.

1211 - Materials Handling and Storage

- Mechanical equipment in the form of forklifts, pallet jacks, dollies, etc., shall be used when and where possible.
- Neatness and orderliness are essential in warehousing and material storage.
- Leather gloves shall be worn when handling heavy or sharp-edged objects.
- When unpacking boxed materials, nails shall be pulled.
- Nails shall be removed from opened boxes used for storage or material carrying.
- In stacking, each stack should have a firm foundation.
- Round objects shall be blocked or bracketed so that they cannot roll.
- Tiers shall be cross-piled or tied so they support each other if possible.
- Material shall not be piled so high as to cause unsafe lifting and handling.
- Care should be taken to see that stacked material does not lean toward aisles or protrude into aisles. Aisles shall be clearly outlined by painted lines or plastic tape.
- Flammable materials shall be stored in a separate area away from heat sources.
- “No Smoking” signs shall be posted where needed in warehouse and storage areas.
- Materials shall not be stored so as to block aisles, fire escapes, fire protection equipment or electrical panels.
- When mechanical lifting devices are used, loads shall be secure and workers shall not get under loads at any time.
- Fibrous packing conducive to spontaneous combustion shall be removed from warehouses immediately.
- Avoid splinters, slivers, projecting nails, burrs, and rough or slippery surfaces.
- Keep fingers away from pinch points, especially when setting down materials.
- Wipe off greasy, wet, slippery, or dirty objects before you try to handle them and keep hands free of oil and grease.
- Safety footwear shall be worn when handling heavy materials.
- Heavy materials should be stored on racks and shelves above knee level to reduce employee exposure to strain and sprain injuries when lifting.

1212 - Lifting and Carrying

- **Do not lift more than you can handle comfortably. When necessary, get assistance.**
- Never carry a load that you cannot see over or around.
- Always keep the shoulders parallel to the hips when lifting, and do not twist.
- Feet should be placed with one foot alongside the object to be lifted and one behind. Feet comfortably spread give greater stability; the rear foot is in position for the upward thrust of the lift.
- Use the sit-down position and keep the back straight - but remember that “straight” does not mean “vertical”. A straight back keeps the spine, back muscles, and organs of the body in correct alignment. It minimizes the compression of the abdomen that can cause hernia.
- Gripping with palms is one of the most important elements of correct lifting. The fingers and the hands are extended around the object you’re going to lift. Use the full palm; fingers alone have very little power. Pull load in between knees and as close to body as possible.

- Tuck in the chin so your neck and head continue the straight back line and keep your spine straight and firm.
- Position body so its weight is centered over the feet. This provides a more powerful line of thrust and ensures better balance. Start the lift with a thrust of the rear foot.
- Manual lifting should be kept to a minimum. **The use of carts, dollies, forklifts, and other mechanical lifting devices should be used instead of manual lifting whenever possible.**

1213 - Fire Prevention

- Clear passageways shall be maintained to extinguishers and exits.
- Oily rags, waste, etc., shall be disposed of in metal cans with covers and shall be emptied daily.
- Precautions against fire and explosions shall be taken where flammables with a low flashpoint are stored or used.
- Spilled flammable liquids should be cleaned up at once.
- Gasoline and other flammable liquids should not be stored on equipment, except for one day's supply. Approved safety containers are required.
- Containers of flammable liquids shall be secured in vehicles before transporting.
- All buildings shall be equipped with fire extinguishers.
- All vehicles and major pieces of equipment including forklifts shall be equipped with fire extinguishers.
- The size, type, and quantity of extinguishers installed shall conform to NFPA standards.
- Each employee should know how to operate the type of extinguisher installed at their work locations and which type to use on each class of fire.
- Fire extinguishers shall be readily accessible and not mounted in an area of immediate danger.
- Fire extinguishers shall be tagged to indicate that annual inspections were completed.

1214 - First Aid

- First aid kits shall be provided in all work areas.

1215 -Poison Ivy

- Poison ivy (or oak) may occur as a vine or as a shrub.
- The leaves vary greatly; all, however, have three leaflets. The upper surface of the leaf has a gloss, waxy appearance and is dark green. The lower surface may be a light green with fine hairs in some cases.
- The color of the leaves changes to a red or orange in the fall.
- Small flowers grow on the plants in clusters. They are white with a greenish tint.
- If the plant bears fruit, it is in clusters, white or ivory with a green tinge, and it is the approximate size of a pea.
- One normally cannot be poisoned merely by proximity to these plants except from the soot or smoke of burning plants.
- While some people are not immediately sensitive to these plants, they may develop sensitivity on later exposures. The sensitivity of any person varies at different times.
- The hazard is greatest in spring and summer when the sap is most abundant.
- **Exposure** to the plants usually results in a rash in from a few hours to several days or more after exposure. The skin becomes red. Blisters appear, and usually there is itching, and as the symptoms progress, there may be swelling and fever.
- Exposure to tools, such as machetes and axes, and from vehicles and clothing used in area where the plants grow also result in injury.
- **Prevention.** Avoid direct contact with the plant. This may be accomplished by wearing long sleeve shirts and using gloves to prevent direct skin exposure with the plant.
- A barrier cream may also be used to minimize the exposure. The barrier cream should be applied before the employee starts work for the day, and after each hand washing.

- There are four poisonous snakes in our area: Rattlesnake, Copperhead, Coral, and Water Moccasin.
- More people are bitten by the rattlesnake and copperhead than the other two snakes.

Precautions:

Rattlesnake

- Wear boots or leg protectors when walking/working in areas where a high concentration of snakes are known to exist.
- Look before stepping/walking
- Be especially observant when walking along trails where rattlesnakes often wait for small game, rats, etc., and strike at any moving object.
- If possible, don't walk through snake-infested areas at night.
- Don't reach into crevices, holes in rocks, or behind rocks that obstruct vision.
- Listen for sound of rattles; if heard, stop immediately; look for the snake, find it, move or back away slowly.
- Don't walk close to rock walls, fences, if possible.
- Remember that a coiled snake can strike a distance of about one third of its length.

Copperhead (Copperheads seldom bite unless disturbed)

- Be especially watchful when lifting an object off the ground. Copperheads often stay under cover and strike when their cover is lifted.

Water Moccasin

- Water moccasins seldom bite people.
- They usually won't bite unless disturbed, stepped on, or otherwise touched.
- Watch for water moccasins in creeks, rivers, marshes, lakes, ponds, and even in rural backyard swimming pools.

Coral Snake

- Coral snakes do not have fangs.
- To break the skin they must chew the flesh.
- They are usually not aggressive unless cornered.
- When they do bite, they usually bite the thin skin of the hands between the fingers or thumbs.
- A coral snake can be recognized by the color of the bands around its body - if a "Black band touches a yellow band it is a coral snake. **Remember: black touching yellow will kill a fellow**"

THE FOLLOWING STANDARD OPERATING PROCEDURES (SOP'S) ARE INCLUDED IN THIS MANUAL BY REFERENCE:

SOP # 001 - Permit Required Confined Space Entry
SOP # 002 - Storm/Sanitary Sewer Entry
SOP # 003 - Excavation/Trenching and Shoring
SOP # 004 - Respiratory Protection (Rescinded)
SOP # 005 - Electrical Safety Related Work Practices
SOP # 006 - Inspection/Testing of Lifting Devices
SOP # 007 - Cutting/Welding in Confined Space
SOP # 008 - Respiratory Protection (Supersedes SOP # 004, Respiratory Protection)
Safety Instruction # 001 - Fall Protection For Employees
Safety Instruction # 002 - Motor Vehicles - Material Handling Equipment - Mechanical Equipment
Safety Instruction # 003 – Ladders
Safety Instruction #004 – Care and Use of Portable Fire Extinguishers

FORMS (attached):

Risk Management Report of Incidents/Incidents
Confined Space Entry Permit
New/Transfer Employee Safety Orientation Review Sheet
Employee Report of Alleged Unsafe or Unhealthful Working Conditions
Certification
Report of Safety Meeting Attendance

REPORT OF INCIDENTS / INCIDENTS

Must be submitted within 48 hours to General Services

To be completed by supervisor for all incidents



Check Type:

- For Workers comp. claim, complete **Front Section**
- For Liability, Property/equipment, or motor vehicle claims, complete **Back Section**
- For all of the above, complete **Front & Back Section**

WORKER'S COMPENSATION / INCIDENT / INJURY / INCIDENT

Employee Name: _____ Date of Incident: _____

Department #: _____ Time of Incident: _____ am / pm _____

Job Title: _____ Phone #: _____ Supervisor: _____

Employee's Home Address: _____
Street City State Zip County

Home #: _____ D.O.B. _____ Race: _____ Sex: _____ SS# _____

Location or Address of Incident: _____ Police Report # _____

Nature of injury: _____ Body part injured _____

Did you go to a Doctor? Yes No **PLEASE ATTACH DOCTOR SLIP TO THIS FORM**

If **YES** name of Doctor & address: _____

DETAILS OF INCIDENT / INJURY / INCIDENT **Supervisor shall describe how and why incident occurred

Was this incident preventable? Yes No Explain: _____

Has preventive action been taken? Yes No By whom? _____

When? _____ What action was taken? _____

List of all witnesses and phone numbers: _____

MUST BE SUBMITTED WITHIN 48 HOURS TO GENERAL SERVICES

To be completed by Supervisor for all incidents

LIABILITY / PROPERTY / EQUIPMENT / MOTOR VEHICLE / INCIDENT / INCIDENT

Employee Name: _____ Date of Incident: _____
Department #: _____ Time of Incident: _____ am / pm _____
Job Title: _____ Phone #: _____
Supervisor: _____
Vehicle #: _____ Year: _____ Make: _____ Model: _____
Last 4 digits of VIN #: _____ Were Police called? Yes No Police Report # _____
Location or Address of Incident: _____

CITIZEN'S INFORMATION

Owner of vehicle/property _____ Place of emp. & phone # _____
Owner's address: _____
Street City State Zip Phone #
Driver of vehicle: _____ Place of emp. & Phone # _____
Driver's address: _____
Street City State Zip Phone #
Vehicle license #: _____ Year: _____ Make: _____ Model: _____
Owner's Ins. Co.: _____ Driver's Ins. Co.: _____

DETAILS OF INCIDENT / INJURY / INCIDENT **Supervisor shall describe how and why incident occurred

Was this incident preventable? Yes No Explain: _____
When? _____ What action was taken? _____
List of all witnesses and phone numbers: _____
Employee signature: _____ Date: _____
Supervisor signature: _____ Date: _____
Department head signature: _____ Date: _____

CONFINED SPACE ENTRY PERMIT

Texarkana Arkansas – Texas – Texarkana Water Utility

LOCATION OF CONFINED SPACE:	DATE/TIME
PURPOSE OF ENTRY:	DURATION:
AUTHORIZED BY:	EXPIRES ON:
ATTENDANT (S)	AUTHORIZED ENTRANTS:

MEASURES FOR ISOLATING & EQUIPMENT	YES	NO	MEASURES FOR ISOLATING & EQUIPMENT	YES	NO
LOCK-OUT-DE-ENERGIZE-TRY OUT			SCBA		
LINE (S) – CAPPED – BLANKED			AIR-LINE RESPIRATOR		
PURGE – FLUSH AND VENT			AIR-PURIFYING RESPIRATORS & CARTRIDGE		
VENTILATION			ESCAPE ONLY RESPIRATOR		
SECURE AREA (POST AND FLAG)			COMMUNICATIONS EQUIPMENT		
FULL BODY HARNESS W/”D”RING			PROTECTIVE CLOTHING		
TRIPOD EMERGENCY ESCAPE UNIT			HEAD/EYE HEARING PROTECTION (CIRCLE)		
LIFELINES			HOT WORK PERMIT REQUIRED		
FIRE EXTINGUISHER			LIGHTING (EXPLOSION PROOF)		

ATMOSPHERIC MONITORING

TEST (S) TO BE TAKEN	YES	NO	TLV	PEL		1	2	3	4	5	6	7	8
						DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME	DATE TIME
FIELD TEST METER CALIBRATION													
OXYGEN					19.5 – 23.5%								
COMBUSTIBLE GAS					BELOW 10%LEL								
CARBON MONOXIDE			0-25 PPM	055 PPM									
HYDROGEN SULFIDE			0-10 PPM	0-10 PPM									
SULFUR DIOXIDE			0-2 PPM	0-5 PPM									
CL2			0.5 PPM	1 PPM									

INDIVIDUAL CONDUCTING TEST: _____ RESCUE NUMBER _____

NAME OF INSTRUMENT USED	TYPE	IDENTIFICATION NUMBER

STANDBY PERSONS

--	--	--

ENTRY SUPERVISOR AUTHORIZING ALL ABOVE CONDITIONS SATISFIED	
---	--

**NEW/TRANSFER EMPLOYEE SAFETY ORIENTATION REVIEW SHEET
2006**

- Supervisor will review items with new employee before employee begins work; place the original in employees **(801 Wood Street)** personnel file.
- Check off items as information is explained. (Note: Certain items will not apply to all positions).

EMPLOYEES NAME: _____ DATE:

DEPARTMENT: _____ JOB TITLE:

SAFETY

- Review Bi-City Safety Manual with employee.
- If the employee works with or in a work area containing a hazardous chemical, ensure that the employee is given Hazard Communication Training in accordance with Section V of the Bi-City Safety Manual. Hazard Communication Training tapes (VHS), may be obtained by call the Safety Office at 798-3820.
- Review hazardous elements specific to job. (extreme heat, machinery, etc.)
- Review engineering controls designed into operation (guards, exhaust, ventilation, hoists, lights, etc.)
- Review administrative controls in effect (limited exposure time, rotating jobs, distance from operation, etc.)
- Distribute and review use of personal protective equipment required (explain why equipment is needed and ensure that respirators are properly fitted)

FIRE

- Review evacuation procedure in case of fire or disaster. Walk employee through primary and secondary emergency exit routes from his/her work area. Identify all fire extinguishers, type of fire to be used on, and review fire extinguisher operation. Identify area fire alarm pull boxes.

EMPLOYEE AND SUPERVISOR AGREE THIS ORIENTATION HAS BEEN COMPLETED:

Supervisors Signature: _____ Date:

Employees Signature: _____ Date:

**EMPLOYEE REPORT OF
ALLEGED UNSAFE OR UNHEALTHFUL WORKING CONDITIONS**

This form is provided for the assistance of any complainant and is not intended to constitute the exclusive means by which a complaint may be registered with the Safety Office.

The undersigned (check one)

Employee Other (specify) _____

believes that a job safety or health hazard exists at the following place of employment:

Does this hazard(s) immediately threaten serious physical harm? Yes No
If "Yes" checked, immediately contact your supervisor or the Safety Office.

Name of supervisor in charge _____ Telephone _____

Operation/Activity _____

Exact location of worksite _____

1. Kind of operation _____

2. Describe briefly the hazard that exists there including the appropriate number of employees exposed to or threatened by such hazard _____

3. Please indicate your desire:

I do not want my name revealed to the supervisor in charge.

My name may be revealed to the supervisor in charge.

WORK LOCATION	TELEPHONE NO.	DATE
TYPED OR PRINTED NAME OF EMPLOYEE		SIGNATURE

FORWARD THIS FORM TO THE SAFETY OFFICE, 801 WOOD STREET, TEXARKANA WATER UTILITY
Cities of Texarkana, Arkansas - Texarkana, Texas - Texarkana Water Utility
Safety Rules and Standards

CERTIFICATION

I certify that I have received a copy of the Bi-City Safety Manual and that I will become familiar with the contents. I agree to keep and use this manual as a reference while performing duties for the city. I further agree to work in the safest manner possible and to follow the principles and intent of the safety rules and standards contained in the Bi-City Safety Manual.

NOTE: A signed copy of the certification will be made a part of your permanent record.

(Signature)_____

(Typed/Printed Name)_____

(Date)_____

REPORT OF SAFETY MEETING ATTENDANCE

Division/Department: _____ Date/Time: _____

Subject: _____

Name of Employee	Present	Absent	If Absent, Give Reason