

TAMPA ELECTRIC COMPANY
Energy Supply
WORK AREA PROTECTION PROGRAM



TABLE OF CONTENTS

<u>TITLE</u>	<u>PAGE #</u>
PURPOSE / INTRODUCTION	1
RESPONSIBILITY	1
EMPLOYEE TRAINING	1-2
GENERAL REQUIREMENTS	2
Barriers - Overview	2
Barricades - Overview	2
Hazard Protection	3
Hazard Communication	3
Coordination of Work	4
Lighting	4
Protection of Floor Openings and Exposed Edges	4
Appropriate Use and Installation of Barricade Tape	5 - 7
Access to Equipment and Emergency Exits	7
Periodic Inspections	8
Removal of Barriers/Barricades	8
PERIODIC POLICY EVALUATION	8
APPENDIX A – GLOSSARY	9 - 10
APPENDIX B – TAGS & SIGNS	11 - 12
APPENDIX C – BARRIER/BARRICADE EQUIPMENT	13

TAMPA ELECTRIC COMPANY

Energy Supply

WORK AREA PROTECTION PROGRAM



PURPOSE

This program is intended to outline the accepted practices of protecting personnel at Tampa Electric facilities by limiting and/or preventing access into those areas where potentially hazardous work may be taking place, or a hazard has been identified. This is generally accomplished through the installation of temporary barriers and barricades, including, but not limited to: Caution Tape, Danger Tape, orange cones, movable barricades, jersey barricades, wooden railings, scaffold pole railing, flashing lights, and signage.

Scaffold has its own program within Energy Supply. Refer to that program for guidance regarding scaffolding.

INTRODUCTION

TAMPA ELECTRIC is dedicated to providing a safe and healthful workplace for its employees and contractors by communicating information concerning work area protection to all affected employees and contractors.

This program contains the following elements:

- Responsibilities
- Employee Training, including Documentation.
- General Requirements
- Periodic Policy Review

RESPONSIBILITY

Each Director is responsible for the implementation and maintenance of the Work Area Protection Program at their facility.

The Joint Departmental Committee Safety Programs is responsible for reviewing, maintaining, and revising this program, as necessary. Responsibilities supporting this objective may be assigned to others as designated.

All Personnel (employees, contractors, and visitors) are responsible for using and respecting barriers and barricades according to their designed purpose and within the requirements of this program.

EMPLOYEE TRAINING

Target Audience – All employees of Tampa Electric, Energy Supply.

TAMPA ELECTRIC COMPANY ENERGY SUPPLY WORK AREA PROTECTION PROGRAM



Frequency – Initially provided by the immediate supervisor and on an as needed basis thereafter.

Methods – Training shall be accomplished through Computer-Based Training (CBT) or classroom training, by PowerPoint presentation with video, or other training materials determined adequate by the Safety Department.

At a minimum, the content of the training shall include the details of the contents of this program.

Documentation

All training will be documented electronically in Cority. Classroom training will require the attendees to sign a roster and that information will later be transferred into Cority. When Computer Based Training is used, the training may be documented in the separate CBT program database until it is transferred into Cority.

GENERAL REQUIREMENTS

Barriers and barricades are intended to be utilized as means of communicating and protecting personnel from a variety of hazards in the workplace.

The use of barriers, barricades and barricade tape requires that the individual in charge of the hazard being barricaded or their designee perform inspections while the barrier or barricade tape is installed. These inspections are required to ensure that the barrier/barricade continues to provide the appropriate protection, access restriction and warning to the hazard.

Barriers – Overview

Barriers, also known as “hard barriers”, provide physical protection, as opposed to simply a visual warning. Barriers may be erected to provide physical protection from a variety of hazards, including fall hazards around floor edges, roof edges, floor openings, etc.

Examples of barriers include temporarily erected walls, fences, or guardrails.

Barricades – Overview

Barricades provide a temporary visual warning without structural integrity. Examples include, but are not limited to; orange cones, flashing lights, stanchions, and tape. Barricade tape may be yellow and black to denote “Caution”, red and black to denote “Danger”, white to indicate “Danger-Asbestos”, or magenta and yellow to denote “Caution Radiation Area”.

TAMPA ELECTRIC COMPANY ENERGY SUPPLY WORK AREA PROTECTION PROGRAM



Hazard Protection

The following hazards are examples that require protection for personnel in the form of barriers with barricade tape:

- Where personnel could be within 5 feet of an excavation, well, pit, shaft, or other type of hole
- Where personnel could be near open-sided floors, walkways, or platforms with a distance four feet or greater to the next lower level
- Where personnel could be above or next to dangerous equipment that they could fall into or onto

The following hazards are examples that require protection for personnel in the form of barricade tape:

- Where personnel may be exposed to falling objects
- Where personnel could enter areas within the swing radius of a crane structure or counterweight
- Where exposed electrical conductors are present
- Where overhead crane use is occurring
- Where any slipping or tripping hazard may be present
- Where any other temporary or newly discovered hazard may exist
- Where x-raying of equipment is in progress
- Where asbestos work is taking place
- Where there is an increased risk of exposure to chemicals
- Where personnel could be exposed to a suspended load of any type

Hazard Communication

Barriers or barricades shall have an information tag (Appendix B) posted on all sides and at a minimum be placed every 25 feet. All information on the tag should be legible and the minimum required information shall include:

- Specific identification of the hazard(s)
- Date the barrier or barricade is erected
- Expected date of removal
- Printed full name of the person responsible for placement of the barrier or barricade
- Name of this person's employing company and a contact phone number

TAMPA ELECTRIC COMPANY ENERGY SUPPLY WORK AREA PROTECTION PROGRAM



Coordination of Work

When multiple workgroups are utilizing the same barrier or barricade, the job, project, and site supervisors shall coordinate with each other to ensure the information tag reflects all the hazards present in the area.

Lighting

Lighting in the area must be considered for nighttime applications. Where general lighting is not adequate to provide appropriate warning to personnel, additional area lighting and/or yellow flashing lighting at the barrier or barricade should be installed. Consideration should be given to the type of traffic in the area and how that affects visibility; for example, vehicles may need to be warned earlier and at a higher level of visual warning than pedestrians.

Protection of Floor Openings and Exposed Edges

Guard open-sided floors, walkways, and platforms 4 feet or more in height from the next lower level with railing that at a minimum meets the OSHA requirements of standard guardrails, as found in [29 CFR 1926.502\(b\)](#). Alternately, floor opening covers that meet the standard requirements are acceptable.

Barricade Tape may only be used when it is not feasible to immediately erect guardrail systems or floor covers. Barricade Tape shall be used to temporarily demarcate the fall exposure until the fall exposure is eliminated. The person responsible for creating the fall exposure hazard is responsible to ensure that the Barricade Tape is erected according to the general barricade tape guidelines and the additional following guidelines:

- When Barricade Tape is used, the tags must provide the typical information for a barricade, plus the words "Danger – 100% Fall Protection required beyond this point."
- Barricade Tape will be erected no closer than 15 feet from the fall exposure. It still shall be confined as much as practical to only the 15-foot perimeter around the fall hazard. If the 15-foot perimeter cannot be maintained, the job, project, or site supervisor shall consult with Station Management and a Safety Professional to develop an alternative plan and the Safe Work Practices (SWP) deviation process shall be followed.
- A Fall Protection Plan will be developed and contain the minimum requirements where necessary, to facilitate working inside the 15-foot perimeter of the fall hazard. Designated anchorage (tie-off) points shall be properly determined for personal fall arrest systems (harness, lanyard, anchorage).

TAMPA ELECTRIC COMPANY ENERGY SUPPLY WORK AREA PROTECTION PROGRAM



Appropriate Use and Installation of Barricade Tape

The proper function of each type of tape is, as follows:

- **Yellow Barricade Tape (Caution Tape):** The wording on the tape shall be "CAUTION". Personnel required to enter the area must understand and be protected from the hazard(s). Yellow Barricade Tape shall be used for, but not limited to, the following:
 - Excavations less than 4 feet in depth
 - Identification of trip hazards
 - Identification of low hanging hazards or protruding hazards
 - Identification of slipping hazard i.e., wash down, water spray
 - Identification of small particle debris, such as water blasting debris, dusting or paint overspray

- **Red Barricade Tape (Danger Tape):** No personnel other than those assigned to repair the hazard may enter a barricaded area (Danger Tape). There shall be no personnel who enter the area simply for convenience of passage from one area to another.

- Red Barricade Tape and/or Barriers shall not be installed without communicating to Station Control Room (Polk & Bayside) or Watch Engineer (Big Bend).

Authorization to enter a barricaded area for work NOT addressing the hazard shall be approved as follows:

- If work is currently occurring within the barricaded area, approval to enter the space must be obtained from the person in charge of the work or the contact person on the danger tag, and a discussion of the hazards must take place.
- If no work is currently occurring within the barricaded area, approval to enter the space must be obtained from the person in charge of the work or the contact person on the danger tag. If job lead or danger tag contact person cannot be contacted, Superintendent of Plant Operations (SPO) or Operations Team Leader will assess the situation and allow access, if deemed safe.

Red Barricade tape shall be used for, but not limited to, the following:

- Overhead work, with the potential for falling objects, including hot particles
- Live exposed electrical components
- Around the swing radius of equipment with rotating structures i.e., mobile cranes
- Steam leaks
- Leaks of toxic or harmful gases
- Unguarded rotating equipment
- Fall potential hazards due to unprotected elevated surfaces or exposed openings. Barricade Tape may only be used when it is not feasible to immediately erect guardrail systems or floor covers.

TAMPA ELECTRIC COMPANY ENERGY SUPPLY WORK AREA PROTECTION PROGRAM



- **White Asbestos Barricade Tape:** This barricade tape is to be considered equal to Red Danger Tape; no personnel are allowed within the barricaded area unless they are directly addressing the asbestos hazard. Signage is required on this tape. Signage must state "Danger - Asbestos ". Red barricade tags shall be used in conjunction with Asbestos Barricade tape.
 - White Barricade Tape and/or Barriers shall not be installed without notifying Station Control Room (Polk & Bayside) or Watch Engineer (Big Bend).
- **Magenta (purple)/Yellow Barricade Tape (Radiation Tape):** This barricade tape is to be considered equal to Red Danger Tape; no personnel are allowed within the barricaded area unless they are performing radiography. Signage is required on this tape. Signage must state "CAUTION RADIATION AREA – DANGER - KEEP OUT – RADIOGRAPHY IN PROGRESS"
 - Magenta/Yellow Barricade Tape and/or Barriers shall not be installed without notifying Station Control Room (Polk & Bayside) or Watch Engineer (Big Bend).

All Barricade tape shall be erected around the perimeter of the hazard or potential hazard. It shall be confined as much as practical to only the area in which it is needed, not by ease of attachment points. If needed, cones or portable stanchions may be used as fastening points. It shall be erected far enough away from the hazard or potential hazard to provide for safety of personnel who are just outside of the barricade taped area, i.e., it is placed to alert and inform personnel, in a sufficient amount of time, to take appropriate evasive action(s) to avoid potential harm from the hazard.

Barricade tape should be erected so that it is approximately 42" (standard handrail height) from the walking surface.

Barricade tape shall be placed so that it does not present a hazard itself. Additionally, placement shall consider the given environmental conditions and its potential deteriorating effects.

Where a hazard is created from equipment and/or structure requiring repair and/or maintenance, the person erecting the barricade should ensure that a workorder is written with the Safety Reason Code and that it has been entered into the electronic workorder system (WORKMAN).

Each Station shall establish a procedure for tracking of barricade tape that is expected to be in use for more than 24 hours.

All uses of barriers and barricade tape require additional informational signage or tags (Appendix B). If signage is damaged or lost, the purpose of the barrier or barricade shall be respected, and personnel must respond accordingly.

TAMPA ELECTRIC COMPANY ENERGY SUPPLY WORK AREA PROTECTION PROGRAM



If barricade tape is found lying on the ground, personnel shall respect the barricade tape in accordance with the purpose described in this program. The downed barricade tape shall be reported to the person in charge of the work or the contact person on the danger tag. If the person responsible for the barricade tape cannot be reached, contact the Superintendent of Plant Operations (SPO) or Operations Team Leader and they will determine if the barricade tape needs to be replaced or removed.

When the hazard(s) has been eliminated and/or all the work that created the hazard has been completed, the barricade shall be removed.

Access to Equipment and Emergency Exits

Danger, Asbestos and Radiation Barricade Tape, and/or Barriers, shall not be installed without notifying Station Control Room (Polk & Bayside) or Watch Engineer (Big Bend).

When placing barricades or barriers, consideration shall be given to accessibility of plant operations equipment, as well as safe passageway to this equipment.

Where a blocked passageway or access way provides the only access to equipment required for Plant Operations, the Superintendent of Plant Operations (SPO) or Operations Team Leader must provide prior approval.

Blocking of equipment required for Plant Operations requires the job, project, or site supervisor to:

- Obtain approval from the SPO or Operations Team Leader on duty.
- Provide and communicate alternate means to access equipment.
- Develop a communication plan to notify all affected Operations personnel.
- Develop a plan for interim measures that can be taken during the times when the equipment cannot be safely accessed.
- Plan for timely removal/control of the hazard during the times where the equipment must be accessed to ensure the safety of plant operations.

Blocking of the only emergency exit path from an area should only be considered as a last resort action. Other actions shall be considered first, for example, erection of barriers to the hazard, erection of temporary overhead falling object protection, or erection of protective temporary walls.

Where a blocked passageway or access way provides the only emergency exit path from an area, the passageway may not be blocked without accomplishing the following items:

- Obtain Operations Manager or their designee's approval.
- Develop a communication plan for notifying all affected employees.
- Develop a plan for timely removal/control of the hazard during an emergency evacuation.
- Develop a plan for ensuring communication and planning for shift-to-shift turnover, where multiple shifts of personnel are involved.

TAMPA ELECTRIC COMPANY ENERGY SUPPLY WORK AREA PROTECTION PROGRAM



Periodic Inspections

The integrity of barriers and barricades must be retained throughout the hazard. To ensure that the barrier or barricade maintains adequate notification and warning it shall be inspected.

Each location or business unit shall develop a process to inspect, barriers and barricade tape.

- Barricade tape is in place to warn / protect from a hazard being created from active work in progress and shall be inspected each day that work is being performed.
- Barricade tape in place to warn / protect from a hazard (i.e., faulty grating, trip hazards, etc) shall be in place and inspected at least weekly.
- A higher inspection frequency may be warranted as based upon the given environmental conditions and their potential deteriorating effects of the installed barrier or barricade tape.

All the tags on the barrier or barricades shall be dated and initialed by the inspector for each inspection conducted. Additionally, the inspector shall inspect that the tags remain legible and replace them as necessary, duplicating the information listed on the front of the tag (previous inspection dates and initials do not require duplication on a replacement tag).

Removal of Barriers/Barricades

Prior to removal of barriers or barricades, the person responsible for the hazard(s) or designee shall ensure that the hazard(s) have been completely mitigated. Barriers or barricades shall not be removed where hazard(s) are still present.

Station Control Room (Polk & Bayside) or Watch Engineer (Big Bend) shall be notified when Barriers and or Red, Asbestos, Radiation Barricade tape have been removed.

All components of the barrier or barricade tape shall be removed and returned to proper storage or discarded. Items such as residual barricade tape shall not be left behind. It is important to understand that abandoned barrier or barricade components create confusion. Per this program, downed barricade tape shall be treated as erected tape, so simply pulling down tape and leaving it lying in a pile to the side could be confused with an erected barricade.

PERIODIC PROGRAM EVALUATION

Each location or business unit management is responsible for periodically evaluating their location / business unit compliance with this program so that the effectiveness of the program may be maintained.

The Joint Department Committee (JDC) shall review this program at least every three (3) years.

The safety department will initiate review of this program if regulatory requirements change.

TAMPA ELECTRIC COMPANY ENERGY SUPPLY WORK AREA PROTECTION PROGRAM



APPENDIX A – GLOSSARY

(Page 1 of 2)

Barricade - An obstruction to deter the passage of persons or vehicles such as tapes, cones, or A-frame type wood or metal structures intended to warn and to limit access to a hazardous area or potentially hazardous condition. Barricades do not provide structural capacity required for fall protection.

Barricade Tape - Barricade tape is intended as a temporary measure to provide a visual warning to a temporary hazardous or potentially hazardous condition.

Barriers - A physical obstruction which is intended to prevent contact with energized lines or equipment or to prevent unauthorized access to a work area. Barriers provide physical protection for fall hazards around floor edges, roof edges, floor openings, etc. Barriers must be capable of resisting a force of at least 200 pounds applied downward or outward (towards the hazard).

Exit route - A continuous and unobstructed path of exit travel from any point within a workplace to a place of safety (including refuge areas). An exit route consists of three parts: The exit access; the exit; and the exit discharge. (An exit route includes all vertical and horizontal areas along the route.)

Floor opening - An opening measuring 12 inches or more in its least dimension, in any floor, platform, pavement, or yard through which persons may fall, such as a hatchway, stair or ladder opening, pit, or large manhole. Floor openings occupied by elevators, dumb waiters, conveyors, machinery, or containers are excluded from this subpart.

Guardrail - A vertical barrier, consisting of, but not limited to, top rails, midrails, and posts, erected of standard strength and construction to prevent personnel from falling off a platform or walkway to lower levels.

Handrails – Railings used on stairways designed to be grasped by the hand while ascending or descending the stairs. They are supported by posts or fixed directly to a wall.

Signs - The warnings of hazard, temporarily or permanently affixed or placed, at locations where hazards exist.

Standard railing - A vertical barrier erected along exposed edges of a floor opening, wall opening, ramp, platform, or runway to prevent falls of persons.

Tags - Temporary signs, usually attached to a piece of equipment or part of a structure, to warn of existing or immediate hazards.

Toeboard - A vertical barrier at floor level erected along exposed edges of a floor opening, wall opening, platform, runway, or ramp to prevent falls of materials.

**TAMPA ELECTRIC COMPANY
ENERGY SUPPLY
WORK AREA PROTECTION PROGRAM**



APPENDIX A – GLOSSARY

(Page 2 of 2)



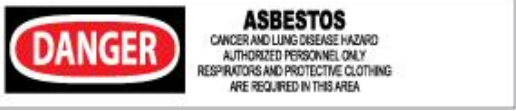

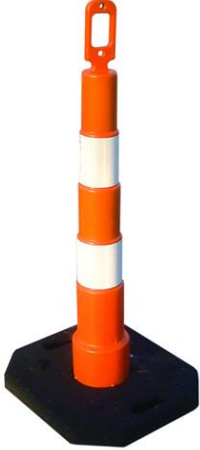
Unprotected sides and edges - Each person on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 4 feet or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.

Wall opening - An opening at least 30 inches high and 18 inches wide, in any wall or partition, through which persons may fall, such as a chute opening.

**TAMPA ELECTRIC COMPANY
ENERGY SUPPLY
WORK AREA PROTECTION PROGRAM**



APPENDIX C – BARRIER/BARRICADE EQUIPMENT

	<p>“Danger Do Not Enter” Barricade Tape</p>
	<p>“Caution” Barricade Tape</p>
	<p>“Asbestos Danger Cancer & Lung Disease Hazard” Barricade Tape</p>
	<p>Polyvinyl Chloride Orange Traffic Cones (36 in)</p>
	<p>“Grip and Go” Channelizer Stanchion (42 in.)</p>

**TAMPA ELECTRIC COMPANY
ENERGY SUPPLY
WORK AREA PROTECTION PROGRAM**

