

Procedure Title:	Barricades, Signs, Signals & Traffic Control	SOP Number:	SOP-100-03-PR-038
Procedure Owner:	Corporate HSE	Issuing Authority:	Chief Safety Officer

BARRICADES, SIGNS, SIGNALS & TRAFFIC CONTROL

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1.0 PURPOSE

The purpose of this procedure is to establish the minimum requirements for Barricades, Signs, Signals & Traffic Control for STIS DBA Southeast Texas Industrial Services.

2.0 SCOPE

This procedure applies to all HenSu Holdings employees, contractors, subcontractors and visitors associated with an HenSu Holdings site.

3.0 RESPONSIBILITIES

The following personnel have responsibilities defined in this procedure:

- HenSu Holdings Managers
- HenSu Holdings Supervisors
- HenSu Holdings Employees
- HenSu Holdings Contractors
- HenSu Holdings Subcontractors
- HenSu Holdings Visitors

4.0 PROCEDURE

Each site shall make every attempt to prevent the possibility of incidents and accidents to employees while performing work activities through compliance with safety regulations, training of employees to properly perform their job activities and through employee involvement in safe work activities.

4.1 BARRICADES

4.1.1 General

- 4.1.1.1 Barricades shall be used to alert employees to potential hazards and indicate if authorization, protective measures, or protective equipment is required.
- 4.1.1.2 A tag shall be affixed to each side of the barricade. (See Exhibit 7.1 for example). The tag shall be in a conspicuous location and shall contain the following information:
 - The date the barricade was erected
 - The reason for the barricade
 - The name of the Supervisor responsible for the barricaded area and how they can be reached (radio channel, phone number, etc.)
- 4.1.1.3 Barricades shall be erected on all sides where entry to the area may be gained and be a minimum of 42 inches high, neat, uniform, and as level as possible.
- 4.1.1.4 Barricades shall be a minimum of Three (3) feet back from the edge of excavations, holes, platforms, and roofs unless a protective barricade is used. When personnel are exposed to a fall of six (6) feet or greater (4 feet General Industry), the barricade shall be a minimum of six (6) feet away from the leading edge of the vertical drop.
- 4.1.1.5 Protective barricades shall meet the requirements of CFR Title 29, 1926.500 Fall Protection when they are installed.
- 4.1.1.6 Barricades shall have flashing lights when used on roadways or walkways after dark.
- 4.1.1.7 Hard barricades shall have an entrance, opening, or gate whenever possible.

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- 4.1.1.8 Tape should not be used in high wind locations or when the barricade is to be in place for longer than one (1) day of work.
- 4.1.1.9 If a barricade is to be in place longer than one (1) day, a more rigid barricading system should be used, (i.e. plastic chain, fencing, etc.)
- 4.1.1.10 Barricades shall be required around certain work areas. They include but are not limited to:
- Excavations.
 - Floor and roof openings including skylights.
 - Edges of roofs and elevated platforms.
 - Beneath overhead work areas.
 - Wherever necessary to warn employees of the potential for falling in, through, or off.
 - Hazardous material spill locations.
 - An incident scene when the site must be preserved.
 - Hydro, pneumatic and hydro-pneumatic testing of vessels and piping.
 - Lifting and Rigging activities to ensure personnel do not travel under suspended loads
 - Swing radius of cranes and equipment counterweights.
 - Overhead Power lines when required to be barricaded. Barricades or tape shall be Red and signs shall have as a minimum, DANGER OVER HEAD POWER LINES.
 - Working near or around pressurized operating systems such as Fuel Gas, Instrument Air, Process Water, and Steam; if the work has potential to affect personnel or industrial operations.

4.1.2 Erecting Barricades

- 4.1.2.1 Personnel that erect barricades shall be protected from recognized hazards while installing and removing barricades i.e. Falling from heights, Excavations, Confined Space, Hazardous gas vapors, Vehicle Traffic, Heavy Equipment Operations, Maritime, Work over/around water.
- 4.1.2.2 Prior to erecting a barricade, the tag shall be filled out. The proper material, color, type, gates and posts shall be established and communicated to the personnel installing the barricade by their supervisor.

4.2 SIGNS

- 4.2.1 Signs shall be placed on barricade stands, posts, or other suitable surfaces.
- 4.2.2 Signs shall be placed in visible locations, before work starts and shall be removed to proper storage areas when they are no longer needed.
- 4.2.3 Signs shall be in English or a language suitable to the workers, legible and maintained in a usable condition.

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4.3 SIGNALS

- 4.3.1 Signals may be used in conjunction with barricades and signs to support certain activities or routing of travelling personnel.
- 4.3.2 Mobile and Overhead Crane signals and signalling requirements are found in SOP-100-03-PR-019 Mobile Crane and SOP-100-03-PR-036 Overhead Crane.

4.4 TRAFFIC CONTROL

- 4.4.1 All employees exposed to traffic shall wear high-visibility work vests.
- 4.4.2 Pedestrians always have the right-of-way.
- 4.4.3 Flaggers shall be utilized to direct traffic flow.
- 4.4.4 All employees involved in traffic control, including flaggers, shall be trained per their respective duties.
- 4.4.5 The use of signs, barricades and other control measures shall be used to protect workers from traffic hazards.
- 4.4.6 Flaggers shall be provided with and utilize proper hand-signaling devices.

4.5 USE OF YELLOW-BLACK BARRICADE TAPE

- 4.5.1 Yellow-black tape is used to indicate caution or warning. An employee may enter such areas only after reviewing the barricade tag and taking the necessary precautions.

4.6 USE OF YELLOW-MAGENTA BARRICADE TAPE

- 4.6.1 Yellow-magenta tape is used to restrict access to a work area where a radioactive material is present or where X-rays are being performed. Entry is prohibited without the authorization of the supervisor of the radiation work.

4.7 USE OF RED BARRICADE TAPE

- 4.7.1 Supervision in the absents of HSE shall control and issue all Red Tape for the site barricade effort
 - 4.7.1.1 Red barricade tape is used to indicate danger. No one may enter a red barricaded area unless the supervisor signing the barricade tag specifically authorizes entry and the entrant has met the requirements indicated on the tag.
 - 4.7.1.2 Tape should not be used in high wind locations or when the barricade is to be in place for longer than one (1) day.
 - 4.7.1.3 If barricade is to be in place longer than one (1) day, a more rigid barricading system shall to be used.
 - 4.7.1.4 When a supervisor feels that a red barricade is necessary, the site HSE Manager, or the Project Superintendent if there is not an HSE Manager, shall be contacted to assess the situation.
 - 4.7.1.5 A walk down of the area shall be done and a review of the hazard assessment conducted.

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4.7.1.6 When it is not possible to eliminate or control the hazard, the site HSE Manager or Project Superintendent shall authorize the use of the red barricade and establish the requirements for entering the barricade.

4.8 REMOVAL OF TEMPORARY BARRICADES

4.8.1 Temporary barricades shall be removed promptly by the supervisor who installed them once they are no longer needed.

4.9 POPULATION CONTROL

4.9.1 When lifting material overhead in a congested area, in lieu of a barricade, a sky watch, wearing a high-visibility vest using a horn or whistle, may be used to ensure no one walks under a load.

4.9.2 The sky watch shall precede the load to ensure the pathway is clear.

5.0 REFERENCES

SOP-100-03-PR-019	Mobile Crane
SOP-100-03-PR-036	Overhead Crane
Title 29 Code of Federal Regulations (CFR) Part 1926	Subpart G (1926.200, 1926.201, 1926.202, and 1926.203)
Title 29 Code of Federal Regulations (CFR) Part 1910	Subpart J (1910.144 and 1910.145)
Manual of Uniform Traffic Control Devices (MUTCD)	Part VI

6.0 TERMINOLOGY

Barricade	<p>An obstruction to deter the passage of persons or vehicles.</p> <ul style="list-style-type: none"> A barricade can be a sign, a barrier, orange traffic cones, highly visible tape, painted ground markings, etc. Barricades are used to signify warning, caution, and danger and to prevent or restrict access to the area. Barricades may be permanent or temporary barricades. Permanent barricades are fixed, painted structures or barriers such as gates, chains, concrete firewalls, or toe-walls. They are intended to convey a permanent warning or caution regarding entering the area. They shall indicate if specific authorization, control measures, and/or protective equipment are required to enter the area. Temporary barricades are generally erected for a specific purpose and intended for quick and easy removal. Examples are colored tape, a sign, sawhorses, safety cones, etc. All temporary Barricades shall have a tag.
Signals	Signals are moving signs, provided by workers, such as flaggers, or by devices, such as flashing lights, to warn of possible or existing hazards
Signs	The warnings of a hazard, temporarily or permanently affixed or placed, at locations where hazards exist
Site	Any location where HenSu Holdings personnel are involved in work activities.

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7.0 EXHIBITS

7.1 BARRICADE TAG (example)

