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The New ANSI Standard A10.34 – 2001 (R2005)

Protection of the public on or adjacent to construction sites



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Presentation outline

- Handouts – these slides, the ANSI Standard A10.34 (21-pages) and overview document (5-pages)
- Accredited Standards Committee on Safety in Construction and Demolition Operations, A10
- The ANSI Standard A10.34 – protection of the public on or adjacent to construction sites
- What it covers
- Who it covers
- What it requires
- Appendix A – The Public Hazard Control Plan (PHCP)
- How to prepare a PHCP
- Leading causes of GL losses
- Best in class programs for minimizing GL losses
 - Public exposures
 - Crane accidents
 - Utility work
- Questions?

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Accredited Standards Committee on Safety in Construction and Demolition Operations, A10

- The A10 Committee meets 2 times a year - meetings are open to the public
- The ASSE is the secretariat for the A10 Committee
- Members come from industry, associations, insurance, unions, etc. --- see membership roster
- Contractors include: Barton-Malow, Chicago, Bridge & Iron, Clark Construction, Gilbane, The Industrial Company and Turner Construction
- The A10 ANSI publications --- 48 topics to protect workers and the public – see list
- One purpose of these standards is to serve as guides to governmental authorities having jurisdiction over subjects within the scope of the A10 Committee
- The ANSI publications are guidelines for contractors, labor and equipment manufacturers to follow
- Approval of an ANSI standard does not imply that all members voted for its approval
- Zurich has one member on this subgroup, Harry Galer, a Risk Engineer
- Use of the American National Standards are purely voluntary

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The ANSI Standard A10.34– protection of the public on or adjacent to construction sites

- First published in 2001 (8-11-01)
- Revised in 2005 (11-16-05)
- Cost \$37 for ASSE members; \$63 from ANSI website
- Establishes comprehensive safety guidelines for employers, contractors, building owners and rescue personnel to protect the public from construction hazards in the air, on land or at sea
- Establishes the necessary elements of a Public Hazard Control Plan (PHCP)
- Provides safety requirements to protect members of the general public from hazards associated with construction, maintenance, repair and demolition of structures in public areas
- The key goal of the A10.34 subgroup is to provide a standard that allows users to recognize and proactively react to potential hazards during the stages of planning and actual work on a construction project to prevent tragic interactions between the public and construction operations

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The ANSI Standard A10.34 – what it covers

- The standard covers virtually all construction, new or renovated office buildings in city environments, roadway construction, work on or near harbors, waterways, airports and light, commercial and home building construction projects
- It also includes public protection from the deterioration of structures that may result in spalling concrete, loose components and other falling debris hazards
- The standard does not apply to the protection of employers or their employees
- It intends to protect the public by providing recommended elements and activities
- It covers: hoisting, cutting, welding, forming, pouring, shoring and re-shoring of concrete, blasting, pile driving, trenching and other activities that can jeopardize public safety

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The ANSI Standard A10.34 – who it covers

- The project constructor is responsible for implementing the standard as appropriate to the degree of potential hazards to the public
- “Public” is defined to include all persons and property not affiliated with the construction project
- “Public” includes invitees to the construction project who are not employed by the project constructor or subcontractors
- The project constructor has an obligation to evaluate each subcontractor’s planned activities for its impact on the public
- This evaluation shall be undertaken at the time construction is being planned, when subcontracts are finalized and as necessary during construction
- When a hazard is identified, appropriate actions to abate the hazard shall be devised and implemented

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The ANSI Standard A10.34 – what it requires

- Restricting public access to the jobsite – a site security plan
- Controlling vibrations and subsidence to adjacent structures
- Controlling pollution, dust, fumes, mists, smoke and vapors
- Controlling radiation and welding flash exposures to the public
- Shielding offsite lighting so that they do not create a public hazard
- Preventing falling or windborne objects from harming the public by using barricades or nets
- Guarding the public from cranes, motor vehicles or other machinery or equipment – traffic hazards
- Alerting the public of loud noises from construction operations
- Making sure that walkways near construction sites are both accessible, safe and adequately lighted
- Properly storing hazardous materials and substances
- Assessing structures before drilling or trenching takes place
- Developing emergency actions plans at sites under construction
- Developing a plan to control public protests
- Developing a plan to handle bomb threats

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The ANSI Standard A10.34 – Appendix A – Public Hazard Control Plan (PHCP)

- A non-mandatory advisory section intended to assist the reader in complying with the standard
- A simple project with limited or no public exposure could have a non-written plan and verbal understanding and communications/training of affected workers and jobsite entities
- Refers to a written "Public Hazard Protection Plan"
- This is the same thing as the "Public Hazard Control Plan"
- The PHCP should be prepared by a "qualified person"
- A "qualified person" is a person who, by possession of recognized degree, certificate or professional standing or by extensive knowledge, training and experience, has demonstrated ability to solve or resolve problems relating to subject matter of this standard
- The PHCP shall be "communicated to appropriate authorities"
- The PHCP shall be updated as new hazards arise or if subcontractors or conditions change

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How to prepare a Public Hazard Control Plan (PHCP)

- Appendix A can be used as the PHCP outline
- The PHCP shall name a person responsible for:
 - Monitoring and inspections
 - Accident investigations
 - Public notices, complaints and community relations
- The PHCP shall name persons to develop action plans and implement actions to minimize hazards to the public
- The PHCP shall list persons authorized to access the security area after hours
- Emergency action plans shall be developed, as needed:
 - Flood, hurricane, tornado, serious inclement weather
 - Fire
 - Electrical outage
 - Chemical leak or spill
 - Medical emergency, fatality, multiple injury accident
 - Catastrophe or collapse
 - Crime against property on the jobsite
 - Crime against persons on the jobsite
- Personnel on the jobsite shall be instructed about the above procedures

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How to prepare a Public Hazard Control Plan (PHCP)

- A specific plan to address public contempt or protest as follows:
 - These could be public contempt or violence, public protests, pickets or blockages
 - This plan shall deal with members of the public who purposely place themselves or others at risk by failing to observe or heed warnings or other directives or safety precautions
 - This may require notification to agencies with authority to control public activities, e.g., the police or fire department, and cessation of all construction activities that may cause a hazard until the public is controlled
- A specific plan for handling bomb threats or other violence as follows:
 - Bomb or arson threats
 - Threats of violence to construction site employees
 - Suicide attempts/threats
 - Other
 - The plan shall include immediate notification to and interfacing with appropriate authorities

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The ANSI Standard A10.34– Appendix A – Public Hazard Control Plan (PHCP)

- The PHCP shall consider and evaluate the following 3 hazards:
 - Noise
 - Construction activities that produce noise levels above the local jurisdiction permissible levels shall be identified and appropriate action to minimize public exposure shall be taken
 - Where sudden or loud impact noises may startle or present a hazard, appropriate actions to notify the public shall be taken
 - When sudden or continuous noise may interfere with other audible warnings, such as, back-up alarms or horns, or where traffic control or emergency vehicle response is affected, appropriate actions shall be taken to notify the public. These appropriate actions may include visual signals, warning signs, barricades and/or flag persons and shall be deployed in addition to audible warnings.
 - Dust, fumes, mists, smoke and vapors
 - Operations which produce airborne contaminants that present a hazard to the public shall be controlled
 - Traffic hazards
 - Construction operations interacting with the public or taking place above or adjacent to vehicular, pedestrian, maritime, rail or air traffic shall be addressed

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How to prepare a Public Hazard Control Plan (PHCP)

- The A10.34 standard provides jobsite specifications for the following hazards:
 - Pedestrian hazards
 - Lighting
 - Radiation
 - Machinery and vehicles
 - Falling objects, windborne objects
 - Security
 - Pollution
 - Utilities
 - Hazardous materials and substances
 - Injuries and damage
 - Vibrations and subsidence

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Leading causes of GL losses involving the public

- Public exposures including:
 - Site perimeter
 - Attractive nuisance potential
 - Jobsite housekeeping
 - Site security and
 - Keeping objects from falling onto the public (nets, toe boards, protected public access zones, etc.)
- Crane accidents
- Trenching and excavation for utility work:
 - Foundation collapse
 - Utility strike and loss of use (downtime)

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Best in class programs to address public exposures

- 100 percent fencing of the project site
- Daily inspection of fences, locks and gates
- Daily inspection of toe boards and other debris prevention devices
- Use of easy to read signs – where is the project office?
- All visitors are required to sign-in and wear approved PPE
- Daily sweeping of sidewalks and adjoining areas
- Daily enforcement of housekeeping requirements – all trades
- Daily dust control of the site
- Use of wheel washes
- Use of certified flaggers
- Use of certified equipment operators for all construction equipment
- Approved traffic control plans when closing lanes
- Dedicated material delivery times to minimize traffic congestion at the site
- Dedicated trash pick-up times to minimize traffic congestion
- Back-up alarms on all trucks, forklifts and construction equipment
- Daily inspection of traffic control devices
- Night lighting or security service

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Top 5 causes of crane accidents

- Crane improperly set-up, not adequately supported or not level
- Operator unaware of gross load
- Operator unable or fails to use the load chart
- Power line contact
- Wind and other weather factors

The above cause 90% of all crane accidents

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Best in class programs for utility work

- Competent person training and education
- Only open up the amount of trench you can complete that shift
- Use of proper temporary shoring
- Use of certified equipment operators
- Proper grade control by survey crews or others
- Keeping water out of the trench
- Evaluating side loads parallel to the trench
- Use of utility locator services prior to digging
- Use of a sound work plan – job hazards analysis and making sure all tools, material and equipment are on-hand, staged and ready to go

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