

**DANGER:****CONSTRUCTION ZONE**

Accidents cost everyone involved. As a contractor, there are many activities on the “to do” list every day. Schedules possibly need to be adjusted because of a weather event, lead time for materials was much longer than anticipated or simple tasks are more detailed and time consuming than originally planned. If any of these are the case, the last thing anyone wants to add to that already busy schedule is a downtime due to an accident on the jobsite. This slows everything that was in the plan to a screeching halt. There is more time gone from the critical path than was originally planned. Together, we can take a few steps to ensure that everyone involved does their part for a smooth and safe concrete placement. A well-planned day doesn't need to be stressful. More planning done in the set-up of a concrete placement can reduce the likelihood of an accident. It also gives CalPortland the opportunity to provide the best service possible.

Many things go into a successful concrete placement. It takes extreme coordination between many parties. As the supplier, there are quite a few items that we rely on to ensure the safety of everyone around. A pre-construction meeting can be beneficial on a project to get everyone acquainted with the plan and discuss any issues leading up to the job. Hazards can be addressed for each scope of work which can then be addressed by the contractor that specializes in that type of activity. The general contractor can lay out the

guidelines for the project. The contractor may have company policies that everyone on site will need to follow and possibly prepare plans. The pre-task plans can be looked at and all parties that are involved with the work be given the potential hazards to which they may be exposed.

A pre-pour planning meeting can also be an effective tool to combat the hazards of a complex concrete delivery. Whether it be the pump, ground conditions, traffic or grade, many hazards can make every delivery process a unique challenge. A mixer truck has some characteristics that make it a unique vehicle on a jobsite. The high center of gravity, weight distribution, and constantly changing load dynamics all add an element of difficulty to a seemingly simple task. The pre-pour meeting can address many of the elements in a safety plan.

We have divided our focus for ready-mix truck safety for a construction site into three general areas: BELOW GRADE, ON GRADE and OVERHEAD.

**BELOW GRADE:**

All underground tanks on site should be located and clearly marked prior to concrete delivery. Structures like septic tanks may hold up very well under the weight of a pickup truck but are no match for a fully loaded ready-mix truck at up to 75,500 pounds (10,000 pounds per back tire!). Are there buried utility hazards that need to be identified and marked? Additionally, newly backfilled utility trenches can present another hazard for a truck either because there is less than optimal compaction or failure of the utility structures that

have been buried. Do you need trench plates at these locations? Ready-mix trucks must stay a minimum distance away from open trenches; one foot for every foot of trench depth (1:1 ratio) if the soil is well compacted. The distance should be more if soils are questionable.



#### **ON GRADE:**

Do we need traffic control (flaggers) at the project entrance? If there is not enough room on the project site, do we need to close a lane on public streets for staging delivery trucks and/or a deceleration and acceleration lane? Is the entrance near an intersection requiring a police traffic officer? Is there a private bridge that must be crossed to get to the truck discharge location? If so, is there a certified weight limit established for the bridge and is the bridge sufficient to handle the truck and payload? Does the booster on truck need to be down and pressurized to meet the weight limits on the bridge? Are there ramps or steep grades on the project site that should be identified?

Personnel should not cross in front of or behind a truck in motion. According to the National Ready

Mix Concrete Association (NRMCA), 50% of the ready-mix concrete truck accidents that happen on a construction site occur when the truck is backing up. A ready-mix truck in reverse should ALWAYS be accompanied by a spotter who is very familiar with the appropriate hand signals (see the signals attached in this article). They **must** stay within mirror site of the driver until the truck is safely in position to begin to unload.

Here are some important truck clearance measurements to always consider:

Ready-mix trucks should have a minimum 9 feet of width clearance on stable ground.

Ready-mix trucks require a minimum of 12.5 feet of vertical clearance for any hazards.

Ready-mix trucks require at least 35 feet for the truck length to fit.

Providing a wash out area for the trucks yields many benefits. Doing so prevents additional charges on the ticket for washout back at the ready-mix plant. It also helps jobs remain in compliance with federal and local regulations regarding concrete washout. Lastly, it prevents automotive and windshield damage to motorists on public roadways which promotes and maintains good community relations while benefitting the bottom line. Providing a wheel wash or equivalent will have similar positive results. Preventing track-out onto public roadways will save time and money by eliminating resulting vehicle damage and roadway clean-ups.

#### **OVERHEAD:**

Low hanging trees can present a definite obstacle blocking a truck from getting to the desired off-load location and should be trimmed back prior to the arrival of the truck. Roof eaves of houses should also be considered. Concrete pump booms

can accidentally come in contact with overhead power lines creating a life-threatening situation. The pump becomes energized and very possibly so does the ready-mix truck.



*(diagram from HSSE World)*

The lives of the pump operator, the person handling the discharge hose as well as the ready-mix truck driver and any workers in the general vicinity are in jeopardy. **Identify all overhead power line locations and mark them well.** Review these locations with everyone at the pre-pour meeting.

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CalPortland has experienced staff and resources available to answer questions about jobsite conditions and access. Please contact your sales representative or dispatcher to schedule a site visit or to have a discussion over the phone.

Back Copies of  
***CONCRETE SOLUTIONS***

now available at:

[www.CalPortland.com/Products/  
Concrete/](http://www.CalPortland.com/Products/Concrete/)

See back issues under the "Reference"  
heading on the right sidebar.

**At the end of this issue we have included a Jobsite Safety Checklist. If your company does not currently have one, we encourage you to copy this list and use it on every project you work on in the future. Construction sites are dynamic areas, changes to conditions are numerous and continuous. A jobsite safety assessment may have to take place and be updated on a regular basis as conditions change.**

*Please note information contained in this newsletter is for educational purposes only and should only be used as a guide.*



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# READY MIX TRUCK SIGNALS

STANDARD SIGNALS FOR MIXER DRIVERS & CONTRACTORS GUIDES



**DRIVE IN**



**BACK IN**



**BACK UP**



**PULL  
FORWARD**



**STOP**



**RAISE CHUTE**

**LOWER CHUTE**



**START  
POURING**



**MORE  
WATER**



**STOP  
POURING**

Job Name/Location: \_\_\_\_\_

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_



## JOBSITE SAFETY CHECKLIST

*(This list is designed to be a guide for safety on construction projects. It encompasses many of the common safety concerns associated with ready-mix concrete trucks that need to be addressed. It is not represented as a list to cover every possible safety concern.)*

### GENERAL

- Emergency Phone Number: **911** or \_\_\_\_\_
- Are Material Safety Data Sheets (MSDS) for products used available and On-Site?

### BELOW-GRADE

- Are underground tanks located and marked?
- Are buried utilities located and marked?
- Are newly backfilled trenches located and marked or have trench plates been placed?
- Are open trenches located and marked?

### ON-GRADE

- Does the ready-mix truck need to cross access roads or driveways leading to the pour site? If so, are they substantial enough to support the weight of the truck and payload and is there enough room for the truck to fit?
- Have weather conditions degraded access to the pour site?
- Is traffic control needed at the entrances( flaggers)?
- Is a closed lane on the adjacent street needed to stage trucks?
- Is a police traffic control officer needed at an adjacent intersection?
- Is there a private bridge that must be crossed? Is a certified weight certificate available?
- Are personnel responsible for assisting backing in a ready-mix truck knowledgeable with the appropriate hand signals?
- Is there a designated truck washout area on site that is easily accessible to the ready-mix trucks?

### OVERHEAD

- Are there low hanging tree branches that need to be trimmed prior to the arrival of the ready-mix truck?
- Are there roof eaves that will prevent the ready-mix truck from reaching the off-load location?
- Are there overhead power lines that need to be identified and their location shared with pump or crane operators?