



# IMMC SCHOOL OF NURSING BUILDING IMPLOSION

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# IMMC School of Nursing Building Implosion

Demolition of the School of Nursing Building is underway.

Phase 1 is being razed with traditional methods of demolition.

However, Phase 2 Demo is a good candidate for explosive demolition due to its construction, design, height to mass ratio, its proximity to adjacent structures and the time of year this demolition will take place.

Implosion will reduce the patient care safety risks associated with dust, noise, and vibration from the demolition.



### REASONS BUILDING IMPLOSION WAS SELECTED

**Reduced Dust Duration:** Implosion reduces the dust to one day and in a five minute window instead of a month and a half (minimum – assumes no down time due to weather).

**Reduced Noise Duration:** Implosion reduces the length of time that our patients, families and staff are subjected to the constant noise of traditional demolition.

**Reduces Additional HVAC Air Filter Exchanges on Adjacent Buildings:** The time will be concentrated to the date of implosion as opposed to needing to monitor and change filters frequently for the month and half of planned demolition.

**Concentrated Clean-up:** Dedicated crews provide cleanup after the blast. Within 15 minutes the doors can be opened. Overall cleanup may last up to 2 hours after the implosion happens.

**Vibration experienced by collapsing structure is less than or equal to repeated solid impact of falling concrete debris processing of conventional demolition.**

**Reduces Risks Associated with Ice Related to Dust Control:** Once the building has been leveled within the construction zone, debris can be loaded while watering the hole to keep dust down instead of needing to spray water into the air with concern of creating ice.

**Potential Avoidance of Weather Related Delays:** Demolition in winter months on a multi-story building, with traditional demolition methods may incur delays related to work shut downs when weather is below 25 degrees, at which time it is not possible to maintain appropriate dust control. With historic average temperatures, Implosion has the potential to save 1 ½ to 2 months of cold weather delays.

**Implosion Date:**  
**Sunday, March 16, 2014**  
Target Time: 07:00 AM

### **PREBLAST PREPARATIONS:**

- Document existing conditions with pre-blast pictorial survey of the surrounding structures.
- Remove non-load bearing walls, partitions, and debris
- Remove, piping and conduit
- Dykon to load the building with explosives.
- Weaken stairs and elevators
- Wrap all columns to be shot with two layers of chain-link fence and two layers of 10-oz geotech fabric
- Cover 1<sup>st</sup> and 2<sup>nd</sup> floors Northeast and all levels of the North Addition windows with plywood and geotech fabric.
- Identify utilities in street and if necessary and place steel plate and dirt in street next to building
- Hoe ram around selected exterior columns and burn the rebar.

### **DAY OF IMPLOSION:**

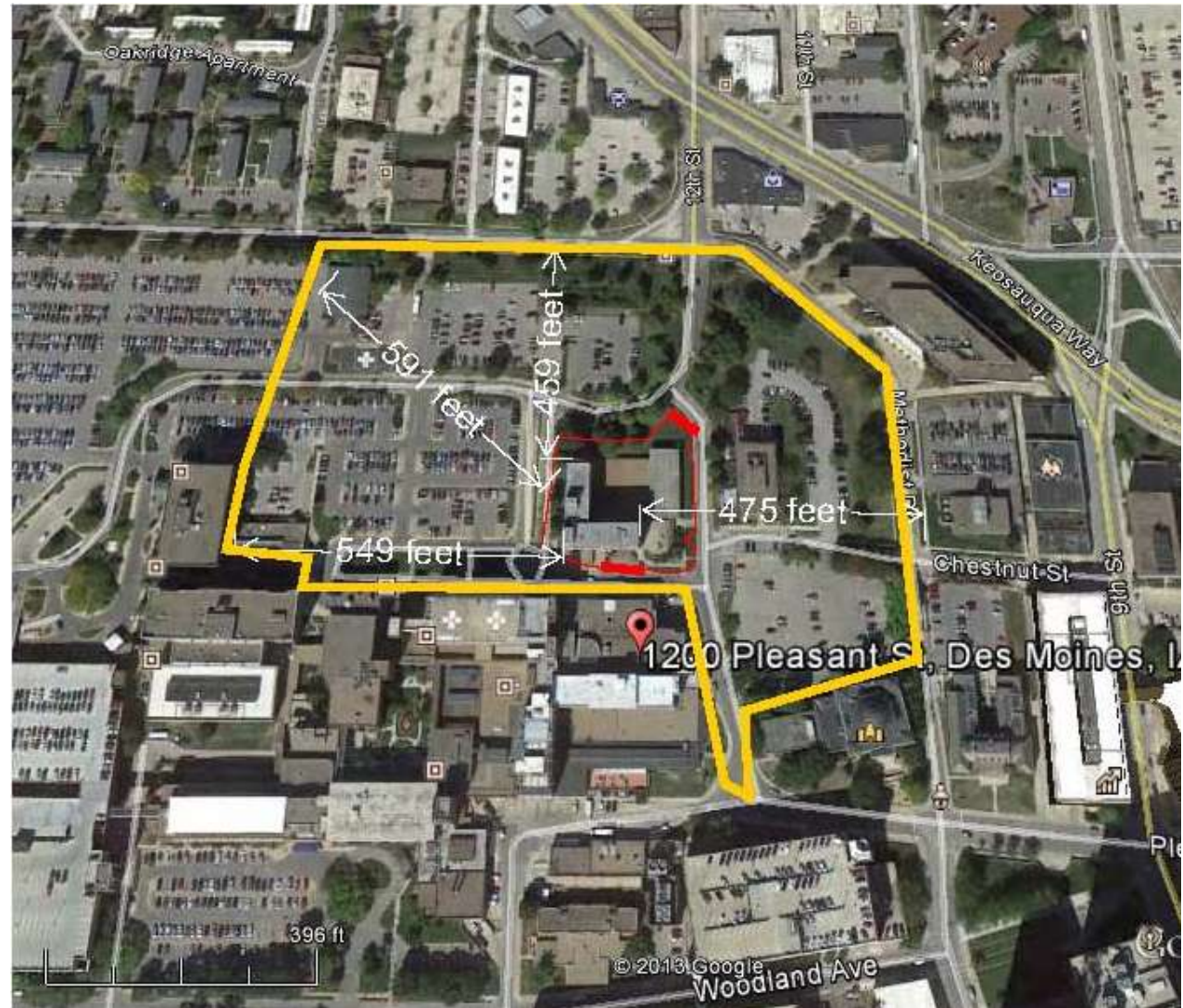
- A series of seismographs will be placed at key areas to monitor ground vibration as well as the associated air blast from the implosion.
- Radioed personnel secure the safety perimeter. Once the area is deemed clear, the final shot connections are made and final countdown will commence.
- The structure will collapse to the ground over a period of (18) seconds.
- A light cloud of dust generated from the demolition will prevail in the immediate vicinity of the site for a brief period of about five minutes or less.

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## Site Security Diagram

*Yellow line indicates secure perimeter boundary on day of implosion*

*Red line represents fence boundary around immediate implosion site.*



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## Site Access Diagram

Yellow area indicates secure perimeter boundary on day of implosion

Red line represents fence boundary around immediate implosion site.

Green line represents traffic access to Iowa Methodist Medical Center during event.

**Fence Boundary at Implosion Site:** The secure fence boundary (outlined in red on image to the left) is already constructed and will be maintained.

**Secure Perimeter:** Prior to and during the implosion, the area is cleared of all people prior to the detonation and a strict safety perimeter will be enforced. A secure site will be maintained through police and safety officers and barricaded roads (shaded in yellow on image to the left).

**Closed Parking Lots:** Parking lots will be closed beginning Wednesday, March 12, 2014 until the site is cleared of dust from the implosion.

**Alternate Exits Required:** Exits from of the hospital near the implosion site will be closed one hour prior to and during the implosion. Alternate Exits from the North and Northeast Additions will be required during this time. Within 15 minutes after the blast, the doors can be opened.

**Nearby Building Protection:** Windows for the Northeast and north wings of the Hospital will be covered with plywood and the façade protected.

**ED Diversion:** IMMC ED will go on diversion during the implosion period.