

## Applied Technology Council

*Advancing Engineering for Hazard Mitigation:  
40 Years of Progress*

**Erleen Hatfield, PE, SE**  
**Buro Happold**

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**ATC** Applied Technology Council

### Current ATC Approach

- ATC develops state-of-the-art structural engineering applications and resources for mitigating the effects of natural and other hazards on the built environment.
  - Hazards such as: Earthquake, Flood, Wind, Blast

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**ATC** Applied Technology Council – [www.atcouncil.org](http://www.atcouncil.org)

### ATC Startup

- Founding Impetus: Poor performance of engineered buildings in 1971 San Fernando EQ
- Incorporated in 1973 as a non-profit organization
- Established Founding Principles:
  - Primary Mission: *Advance structural engineering practice through the development of state-of-the-art consensus engineering guidelines, based on available research*
- Primarily focused on Earthquake Hazards
- Based in San Francisco
- Produces guidelines and aids for Hazard Mitigation

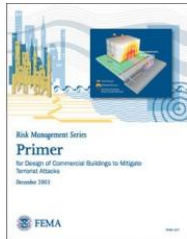
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**ATC 20**  
PROCEDURES FOR POSTEARTHQUAKE SAFETY  
EVALUATION OF BUILDINGS

- Published two weeks before the 1989 Loma Prieta, California, earthquake
- Used to evaluate 10's of thousands of buildings since then
- Defacto national standard for postearthquake safety evaluation of buildings
- ATC-20-1 *Field Manual* updated in 2005 to include new data and information

## Publications



- Primer on Mitigation of Terrorists Attacks



- Design Guide on Floor Vibrations



- Field Manual: Safety evaluation of buildings after wind storms and floods

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## Current Publications

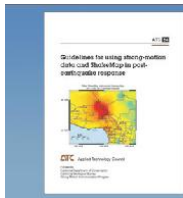
- Building Seismic Hazard Mitigation
- Bridge and Lifeline Seismic Hazard Mitigation
- Other Seismic Hazard Mitigation Topics
- Wind and Flood Hazard Mitigation
- Blast Effects Mitigation
- Floor Vibrations
- ATC Subscription Program
- SAC Reports: Steel Moment-Frame Bldg Seismic Hazard Mitigation
- Event Proceedings
- NEHRP Consultants Joint Venture Products



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## Technical Rigor

- ATC creates resources for Structural Engineers!



- Prepared by leading experts
- Diverse spectrum of engineering opinion
- Non-proprietary, objective & state-of-the-art
- Exhaustive quality review

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## Wind Speed Calculator



The purpose of the "Wind Speed Web Site" is to provide users with a site specific wind speed using the GPS coordinate system. On this website, users can retrieve wind speeds from ASCE 7-10, ASCE 7-05 and ASCE 7-93. Wind speeds are also provided for serviceability purposes for 10, 25, 50 and 100-year return periods.

The reason this utility is needed is that the spatial resolution of the wind speed maps that are displayed in ASCE 7 are not sufficient to determine a site-specific wind speed. There are no reference city or town locations on the ASCE 7 maps and while county boundaries are shown, the resolution is affected when the maps are expanded large enough to distinguish the boundaries and approximate the city locations.

To find the windspeed for a specific area, select one of the following methods:

- Click the radio button for decimals and enter latitude and longitude in the spaces in decimal form and select "Get Windspeed" or
- Click the radio button for address and enter the desired address. Select "Find" to auto-populate the latitude and longitude and select "Get Windspeed" or
- Find the site on the map, right click the mouse and the latitude and longitude will

Decimal (Enter Decimal Value)  
 Latitude Longitude  
   
 Address (Enter Complete Address Below)  
   
 US Virgin Islands  
 Guam  
 American Samoa  
 Hawaii

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**WINDSPEED BY LOCATION**

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**Search Results**

Latitude: 40.7079  
Longitude: -74.0110

**ASCE 7-10 Wind Speeds (3-sec peak gust MPH):**

Risk Category I: 105  
Risk Category II: 115  
Risk Category III-IV: 122  
MRI\*\* 10 Year: 76  
MRI\*\* 25 Year: 85  
MRI\*\* 50 Year: 90  
MRI\*\* 100 Year: 96

ASCE 7-05: 104  
ASCE 7-93: 80

**ATC Applied Technology Council**

A Nonprofit Corporation  
Advancing Engineering Applications for Hazard Mitigation  
California, Delaware, Virginia

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**2014 Webinar Program:**

- NIST GCR 12-917-21 Report: Soil-Structure Interaction for Building Structures (ATC-83 Project)
- NIST Technical Brief 8: Seismic Design of Steel Special Concentrically Braced Frame Systems (ATC-103 Project)
- NIST GCR 13-917-30 Report: Use of High-Strength Reinforcement for Earthquake Resistant Concrete Structures (ATC-98 Project)
- NIST GCR 11-917-15 Report: Selecting and Scaling Earthquake Ground Motions for Performing Response-History Analyses (ATC-82 Project)

**What's New?** ATC is pleased to announce the startup of a web site that allows the user to find site-specific ultimate wind speeds used in the latest standard published by the American Society of Civil Engineers. You can navigate to this website by clicking the "Windspeed" tab in the menu bar above. The web site was developed with the financial help of the ATC Endowment Fund and is free of charge to users.

**Available Products.** The library of completed ATC products includes more than 100 publications on key issues in structural, earthquake, wind, and coastal engineering. Some are available as free download and others can be purchased through ATC's online store. [More...](#)

## Resources for Engineers

- <https://www.atccouncil.org>

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## Questions?

- Erleen Hatfield, Buro Happold  
[erleen.hatfield@burohappold.com](mailto:erleen.hatfield@burohappold.com)
- Sissy Nikolaou, WSP USA  
[Sissy.Nikolaou@wsp.com](mailto:Sissy.Nikolaou@wsp.com)

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