



Wall of Wind

NHERI Experimental Facility

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# Roadmap of the Support Provided to NHERI WOW EF Users

**The objective of the EF as part of the NHERI program is to enable an external, broadly inclusive, user base to undertake fundamental research in various fields such as:**

- Aerodynamics
- Fluid mechanics
- Wind-induced vibrations
- Aeroelastic instabilities
- Stochastic processes and advanced statistical methods
- Structural reliability and fragility of building systems
- Rain infiltration mechanisms (e.g., direct rain admittance and surface runoff phenomena)
- Aerodynamics Hybrid Simulation
- Non-linear structural behavior under wind loading

## User support is our mission from initial contact through proposal submission and project execution

### Initial Contact

Researcher (PI) contacts the EF's Director or Site Operations Manager (SOM) to discuss a test idea

### Idea Development

EF's SOM schedules the first conference call between the PI and the EF team to discuss the testing needs to support the proposed research  
EF's SOM schedules the follow-up meeting(s) between the PI and the EF team to discuss the test details

### Proposal Development

PI develops a preliminary test plan and shares it with the EF's team for feasibility assessment  
EF's SOM provides the PI with test timeline and budget estimate (refer to Usage Rates and Cost Breakdown document) based on the test plan

### Proposal submission

PI submits the full proposal to NSF

- The emphasis of NHERI program is to have EF resources available to external Users
- EF PIs are not required to be Co-PIs on proposals to be submitted
- When significant EF intellectual input is required (e.g. domain expertise needed to make proposal viable) EF PIs may participate in the proposal
- In any case, EF liaison and support staff will provide all necessary services to Users
- Note:
  - Users may utilize more than one EF for the same project
  - User submits proposal directly to NSF

## Award Notification

PI informs EF's SOM of the awarded project

## Paperwork

PI and EF's SOM fill out NHERI NCO-related forms  
A Service Agreement will be signed between the PI and the WOW  
PI creates project folder on DesignSafe-CI website

## Project Kickoff

EF's SOM schedules tests, [*user safety overview and user training\*\**]  
PI and EF team develop the Experimental Test Protocols

## Pre-testing Setup

PI and EF team work on model design, construction, instrumentation and installation

## Running-time

EF team operates the tunnel and acquire data  
EF team uploads raw data to the project folder on DesignSafe-CI website

## Post-testing

EF team dismantles the test setup  
EF team uploads test documents to the project folder on DesignSafe-CI website

## Service Description:

### Pre-testing Setup

Test planning

Model design, construction and instrumentation

Model installation on the turntable

Use of available instruments (refer to “Facility Test Instrument Inventory” document)

Model conditioning – staff effort (if applicable)

Tunnel preparation

### Running Time

Fan running time

Tunnel operation

Data acquisition

Rain generation (if applicable)

Video recording (if needed)

Model removal from the turntable

### Post-testing

Test setup dismantling

General data processing

Video archiving (data storage supplied to client)

Data archiving (data storage supplied to client)

General report writing

- Current EF budgets include NSF support for basic operations, for example: Staff, facility upgrades, calibration, maintenance, etc.
- Individual proposals may need to include funds for resources that exceed base support (e.g. model construction, special instrumentation, etc.)
- Upon request, EF PI will provide users with specific guidance for budgeting and can review budget requests prior to submission to NSF (Not mandatory but highly recommended)

Service Description	Unit	NHERI Users Rate
Pre-test Setup	Day	\$557
Running Time	Day	\$1,690
Post-testing	Day	\$480



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# Q&A Session

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