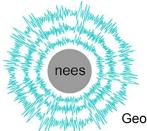
# NEES @ UCSB-BYU

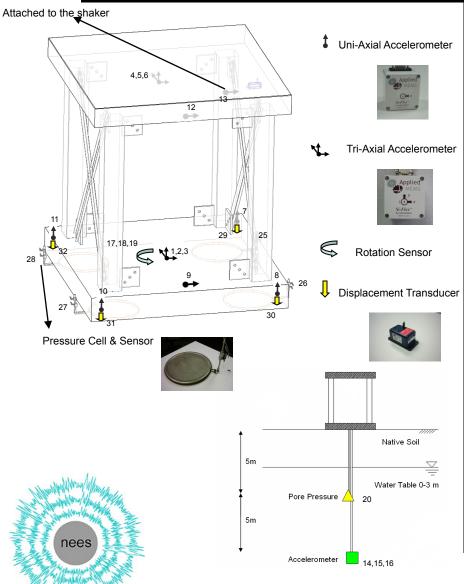
### SFSI STRUCTURE INSTRUMENTATION DETAILS





Rev. 0 Dec 16<sup>th</sup>, 2004

# NEES@BYU

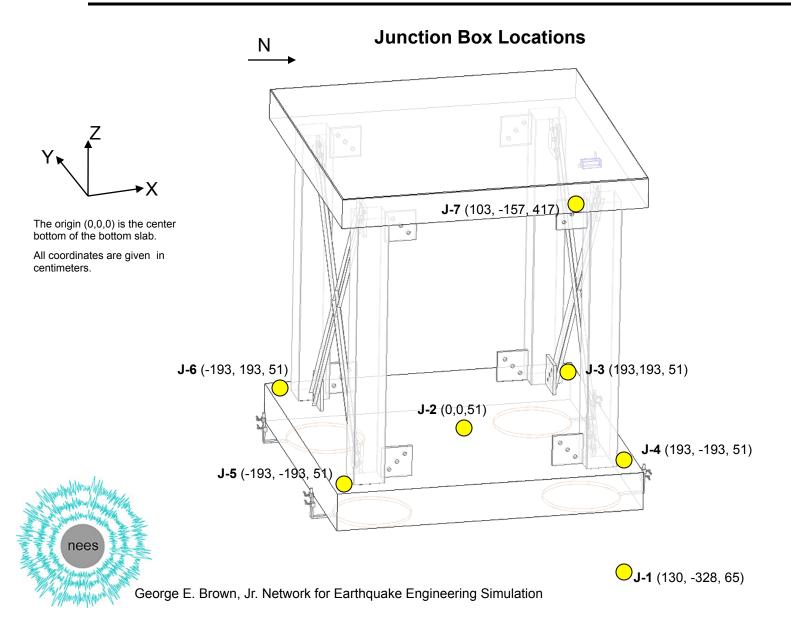


Channel No.	Type of Instrument	Location
1	Tri-axial Accel. (x)	Bottom Slab
2	Tri-axial Accel. (y)	Bottom Slab
3	Tri-axial Accel. (z)	Bottom Slab
4	Tri-axial Accel. (x)	Top Slab
5	Tri-axial Accel. (y)	Top Slab
6	Tri-axial Accel. (z)	Top Slab
7	Uni-axial Accel.	Bottom Slab
8	Uni-axial Accel.	Bottom Slab
9	Uni-axial Accel.	Bottom Slab
10	Uni-axial Accel.	Bottom Slab
11	Uni-axial Accel.	Bottom Slab
12	Uni-axial Accel.	Top Slab
13	Uni-axial Accel.	Shaker
14	Tri-axial Downhole Accel. (x)	Under the Soil
15	Tri-axial Downhole Accel. (y)	Under the Soil
16	Tri-axial Downhole Accel. (z)	Under the Soil
17	Rotation Sensor (x-x)	Bottom Slab
18	Rotation Sensor (y-y)	Bottom Slab
19	Rotation Sensor (z-z)	Bottom Slab
20	Pore Pressure	Under the Soil
21	Spare	-
22	Spare	-
23	Spare	-
24	Spare	-
25	Soil Pressure Sensor	Bottom Slab
26	Soil Pressure Sensor	Bottom Slab
27	Soil Pressure Sensor	Bottom Slab
28	Soil Pressure Sensor	Bottom Slab
29	Displacement Transducer	Bottom Slab
30	Displacement Transducer	Bottom Slab
31	Displacement Transducer	Bottom Slab
32	Displacement Transducer	Bottom Slab

**SFSI Test Structure** 

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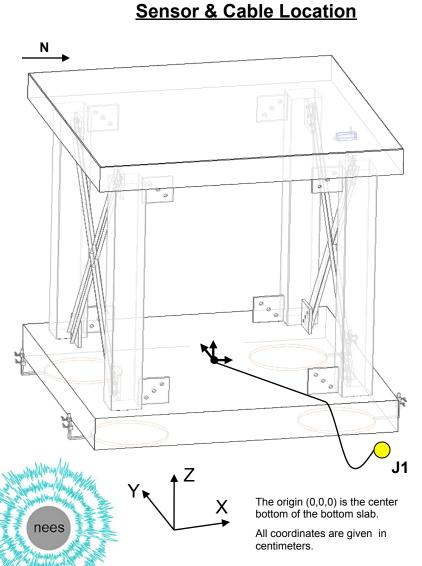
### **SFSI Test Structure**



# NEES@BYU

# **SFSI Test Structure**

#### **Sensor Details**

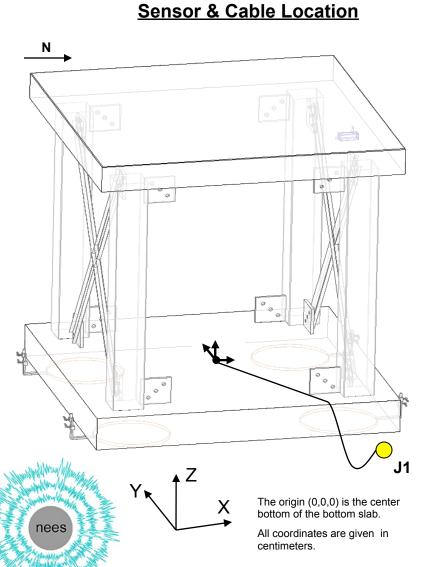


Channel:	1
Measuring:	Acceleration
Sensor Model:	Tri-axial, SF 3000L
Sensor Serial Number:	0254
Sensitivity:	1.218 volts/g
Calibration Date:	
Location Description:	Top of bottom slab (8 cm North of the center)
Coordinates:	(8,0,51)
Orientation(+):	+X North
Comments:	Channel X of Tri-axial Accelerometer.

# NEES@BYU

## **SFSI Test Structure**

#### **Sensor Details**

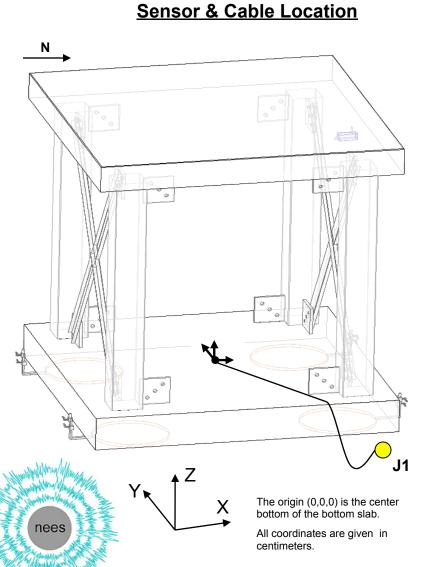


Channel:	2
Measuring:	Acceleration
Sensor Model:	Tri-axial, SF 3000L
Sensor Serial Number:	0254
Sensitivity:	1.224 volts/g
Calibration Date:	
Location Description:	Top of bottom slab (8 cm North of the center)
Coordinates:	(8,0,51)
Orientation(+):	+Y West
Comments:	Channel Y of Tri-axial Accelerometer.

# NEES@BYU

## **SFSI Test Structure**

#### **Sensor Details**

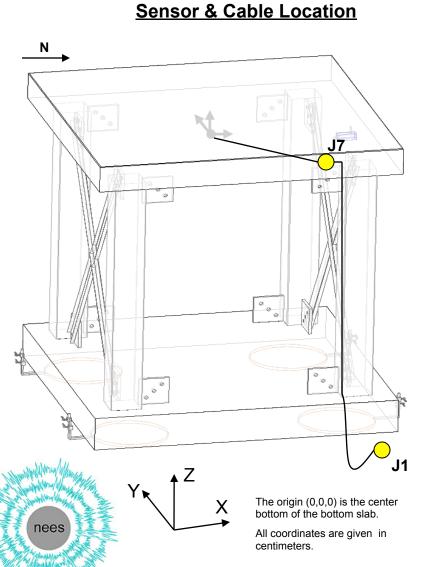


Channel:	3
Measuring:	Acceleration
Sensor Model:	Tri-axial, SF 3000L
Sensor Serial Number:	0254
Sensitivity:	1.218 volts/g
Calibration Date:	
Location Description:	Top of bottom slab (8 cm North of the center)
Coordinates:	(8,0,51)
Orientation(+):	+Z Up
Comments:	Channel Z of Tri-axial Accelerometer.

# NEES@BYU

# **SFSI Test Structure**

#### Sensor Details

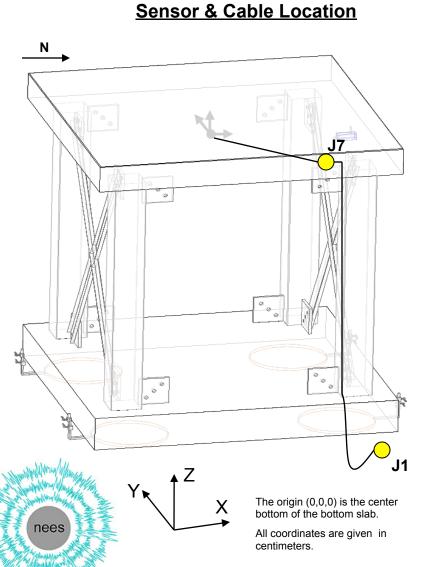


Channel:	4
Measuring:	Acceleration
Sensor Model:	Tri-axial, SF 3000L
Sensor Serial Number:	0255
Sensitivity:	1.2 volts/g
Calibration Date:	
Location Description:	Underneath the top slab (in the center)
Coordinates:	(0,0,417)
Orientation(+):	+X North
Comments:	Channel X of Tri-axial Accelerometer.

# NEES@BYU

# **SFSI Test Structure**

#### **Sensor Details**

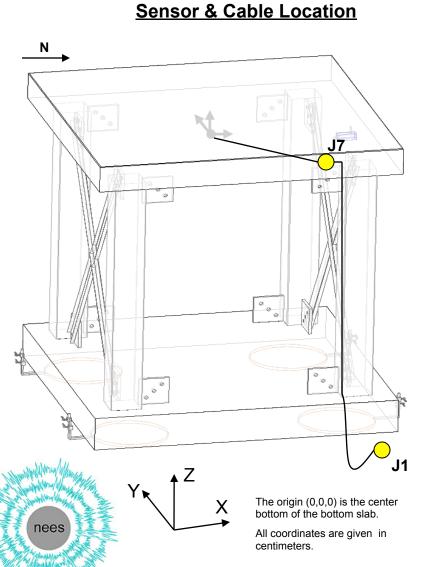


Channel:	5
Measuring:	Acceleration
Sensor Model:	Tri-axial, SF 3000L
Sensor Serial Number:	0255
Sensitivity:	1.254 volts/g
Calibration Date:	
Location Description:	Underneath the top slab (in the center)
Coordinates:	(0,0,417)
Orientation(+):	+Y East
Comments:	Channel Y of Tri-axial Accelerometer.

# NEES@BYU

# **SFSI Test Structure**

#### **Sensor Details**

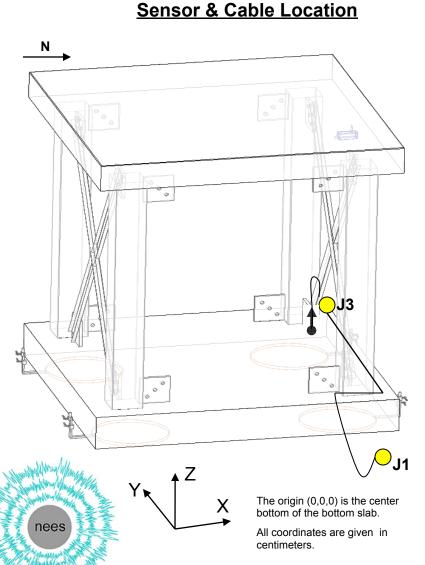


Channel:	6
Measuring:	Acceleration
Sensor Model:	Tri-axial, SF 3000L
Sensor Serial Number:	0255
Sensitivity:	1.178 volts/g
Calibration Date:	
Location Description:	Underneath the top slab (in the center)
Coordinates:	(0,0,417)
Orientation(+):	+Z Down
Comments:	Channel Z of Tri-axial Accelerometer.

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# **SFSI Test Structure**

#### **Sensor Details**

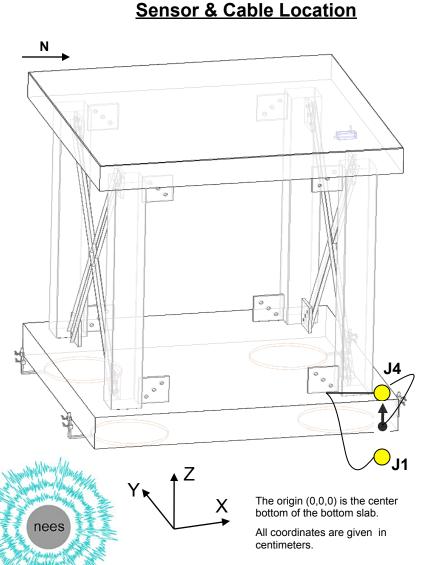


Channel:	7
Measuring:	Acceleration
Sensor Model:	Uni-axial, SF 3000L
Sensor Serial Number:	0317
Sensitivity:	1.218 volts/g
Calibration Date:	
Location Description:	North-West corner of bottom slab
Coordinates:	(187,203,41)
Orientation(+):	Up
Comments:	

# NEES@BYU

## **SFSI Test Structure**

#### **Sensor Details**

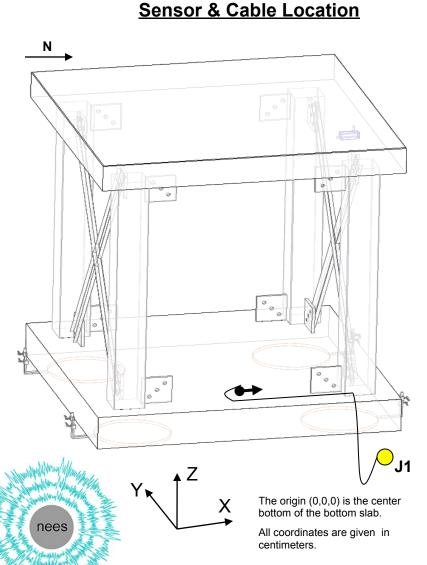


Channel:	8
Measuring:	Acceleration
Sensor Model:	Uni-axial, SF 3000L
Sensor Serial Number:	0316
Sensitivity:	1.228 volts/g
Calibration Date:	
Location Description:	North-East corner of bottom slab
Coordinates:	(187,-203,41)
Orientation(+):	Up
Comments:	

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## **SFSI Test Structure**

#### **Sensor Details**



Channel:	9
Measuring:	Acceleration
Sensor Model:	Uni-axial, SF 3000L
Sensor Serial Number:	0314
Sensitivity:	1.198 volts/g
Calibration Date:	
Location Description:	Top of bottom slab
Coordinates:	(0,-157,51)
Orientation(+):	+X North
Comments:	

# NEES@BYU

Sensor & Cable Location

## **SFSI Test Structure**

### Sensor Details

<u>Sensor</u>	
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J5	
	↓ _ J1
Yr [	X The origin (0,0,0) is the center bottom of the bottom slab.
nees	All coordinates are given in
	centimeters.

Channel:	10
Measuring:	Acceleration
Sensor Model:	Uni-axial, SF 3000L
Sensor Serial Number:	0312
Sensitivity:	1.218 volts/g
Calibration Date:	
Location Description:	South-East corner of bottom slab
Coordinates:	(-187,-203,41)
Orientation(+):	Up
Comments:	

# NEES@BYU

Sensor & Cable Location

## **SFSI Test Structure**

### Sensor Details

<u>3611501</u>	
N →	
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Manufacture Z	↓ _ J1
Yt T	X The origin (0,0,0) is the center bottom of the bottom slab.
nees	All coordinates are given in centimeters.
Without and the second second	

Channel:	11
Measuring:	Acceleration
Sensor Model:	Uni-axial, SF 3000L
Sensor Serial Number:	0318
Sensitivity:	1.201 volts/g
Calibration Date:	
Location Description:	South-West corner of bottom slab
Coordinates:	(-187,203,41)
Orientation(+):	Up
Comments:	

# NEES@BYU

Sensor & Cable Location

## **SFSI Test Structure**

### Sensor Details

<u>3611301</u>	
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Y <sub>k</sub> <sup>Z</sup>	J1
nees	The origin (0,0,0) is the center bottom of the bottom slab. All coordinates are given in centimeters.

Channel:	12
Measuring:	Acceleration
Sensor Model:	Uni-axial, SF 3000L
Sensor Serial Number:	0320
Sensitivity:	1.226 volts/g
Calibration Date:	
Location Description:	Underneath the top slab
Coordinates:	(0,-157,417)
Orientation(+):	+X North
Comments:	

# NEES@BYU

## **SFSI Test Structure**

### Sensor Details

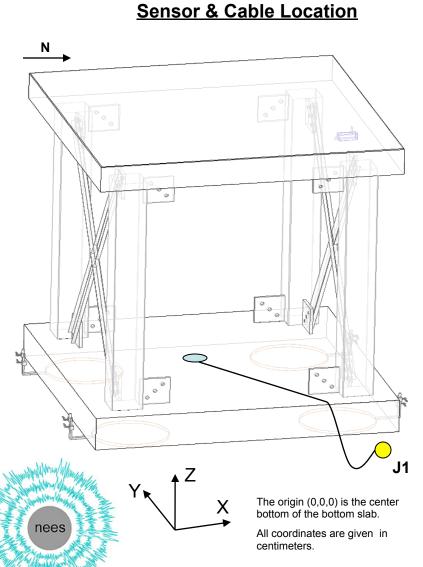
<u>Sensor &amp; (</u>	Cable Location
►	
•••	J7
0	
	J1
	The origin (0,0,0) is the center bottom of the bottom slab. All coordinates are given in centimeters.

Channel:	13
Measuring:	Acceleration
Sensor Model:	Uni-axial, SF 3000L
Sensor Serial Number:	0321
Sensitivity:	1.187 volts/g
Calibration Date:	
Location Description:	Attached to the Shaker
Coordinates:	(68,-113,407)
Orientation(+):	+X North
Comments:	

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## **SFSI Test Structure**

#### **Sensor Details**

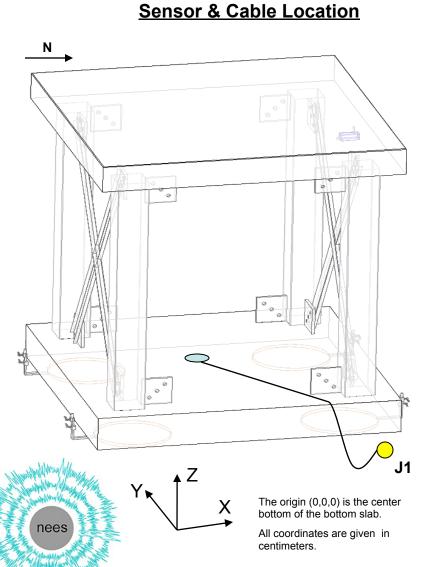


Channel:	14
Measuring:	Acceleration
Sensor Model:	D110-DH
Sensor Serial Number:	013
Sensitivity:	1.204 volts/g
Calibration Date:	5/10/04
Location Description:	10 m under the soil
Coordinates:	(-2.4,0,-1000)
Orientation(+):	+X North
Comments:	Channel X of Downhole Tri-axial Accelerometer

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## **SFSI Test Structure**

### Sensor Details

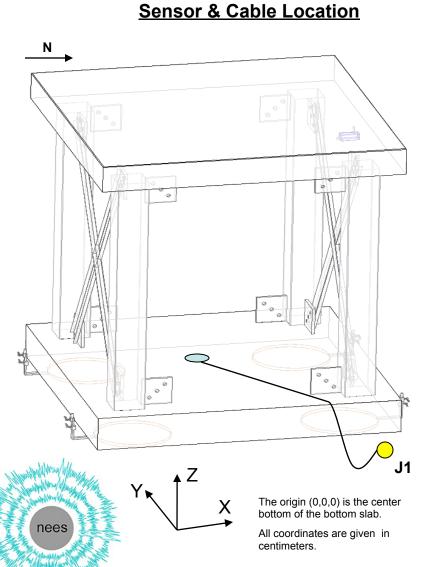


Channel:	15
Measuring:	Acceleration
Sensor Model:	D110-DH
Sensor Serial Number:	026
Sensitivity:	1.237 volts/g
Calibration Date:	5/10/04
Location Description:	10 m under the soil
Coordinates:	(-2.4,0,-1000)
Orientation(+):	+Y East
Comments:	Channel Y of Downhole Tri-axial Accelerometer

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## **SFSI Test Structure**

#### **Sensor Details**



Channel:	16
Measuring:	Acceleration
Sensor Model:	D110-DH
Sensor Serial Number:	002
Sensitivity:	1.242 volts/g
Calibration Date:	5/10/04
Location Description:	10 m under the soil
Coordinates:	(-2.4,0,-1000)
Orientation(+):	+Z Up
Comments:	Channel Z of Downhole Tri-axial Accelerometer

# NEES@BYU

# **SFSI Test Structure**

### Sensor Details

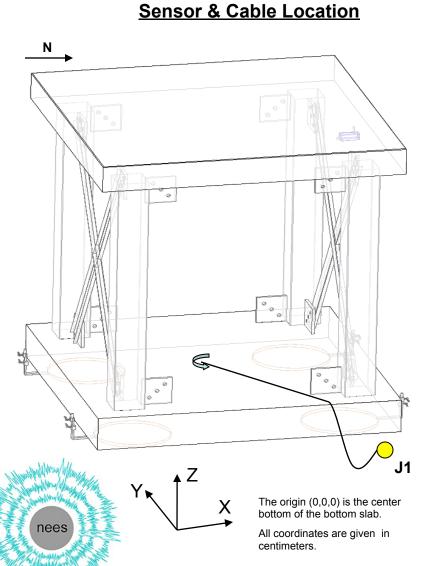
<u>Sensor &amp; Ca</u>	able Location
►	
	•
	J1
	The origin (0,0,0) is the center bottom of the bottom slab. All coordinates are given in centimeters.

Channel:	17
Measuring:	Rotational Acceleration
Sensor Model:	ARS-09
Sensor Serial Number:	1098
Sensitivity:	981 (reading in volts)
Calibration Date:	10/12/2004
Location Description:	Top of bottom slab (10 cm South of the center)
Coordinates:	(-10,0,51)
Orientation(+):	+X North
Comments:	Channel X of Rotation Sensor. Sensor Sensitivity: 97.2 mV/Degree/Sec

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# **SFSI Test Structure**

#### Sensor Details



Channel:	18
Measuring:	Rotational Acceleration
Sensor Model:	ARS-09
Sensor Serial Number:	1040
Sensitivity:	981 (reading in volts)
Calibration Date:	10/12/2004
Location Description:	Top of bottom slab (10 cm South of the center)
Coordinates:	(-10,0,51)
Orientation(+):	+Y West
Comments:	Channel Y of Rotation Sensor. Sensor Sensitivity: 88.2 mV/Degree/Sec

# NEES@BYU

# **SFSI Test Structure**

### Sensor Details

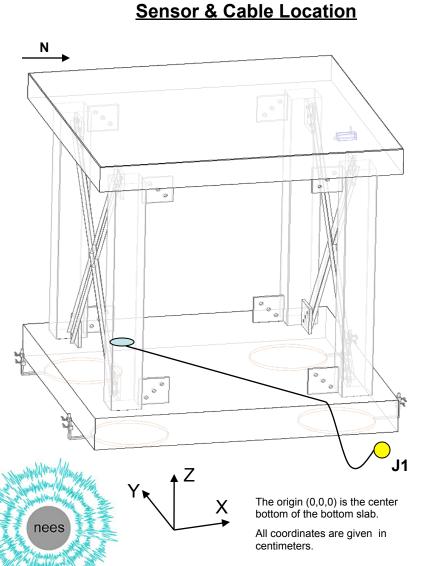
<u>Sensor &amp; Ca</u>	able Location
►	
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	J1
	The origin (0,0,0) is the center bottom of the bottom slab. All coordinates are given in centimeters.

Channel:	19
Measuring:	Rotational Acceleration
Sensor Model:	ARS-09
Sensor Serial Number:	1064
Sensitivity:	981 (reading in volts)
Calibration Date:	10/12/2004
Location Description:	Top of bottom slab (10 cm South of the center)
Coordinates:	(-10,0,51)
Orientation(+):	+Z Up
Comments:	Channel Z of Rotation Sensor. Sensor Sensitivity: 88.9 mV/Degree/Sec

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## **SFSI Test Structure**

### Sensor Details

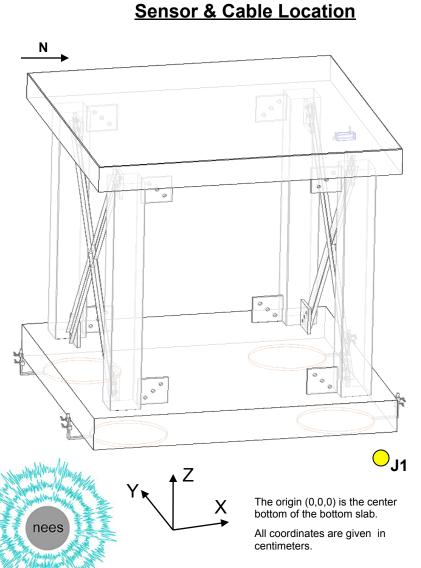


Channel:	20
Measuring:	Pore Pressure
Sensor Model:	
Sensor Serial Number:	
Sensitivity:	
Calibration Date:	
Location Description:	5 m under the soil
Coordinates:	(-43,88,-500)
Orientation(+):	Up
Comments:	Not Installed

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## **SFSI Test Structure**

#### Sensor Details

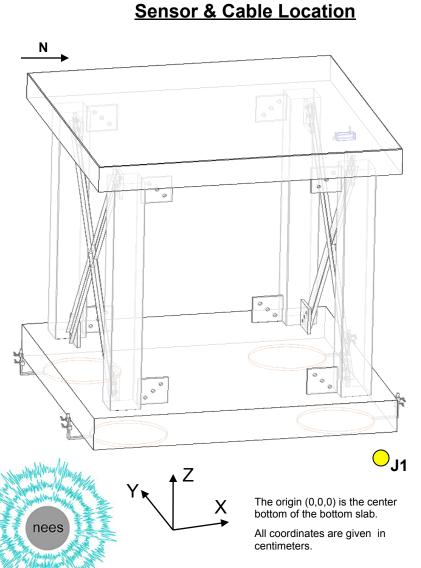


Channel:	21
Measuring:	Spare Channel
Sensor Model:	
Sensor Serial Number:	
Sensitivity:	
Calibration Date:	
Location Description:	
Coordinates:	
Orientation(+):	
Comments:	

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### **SFSI Test Structure**

#### Sensor Details

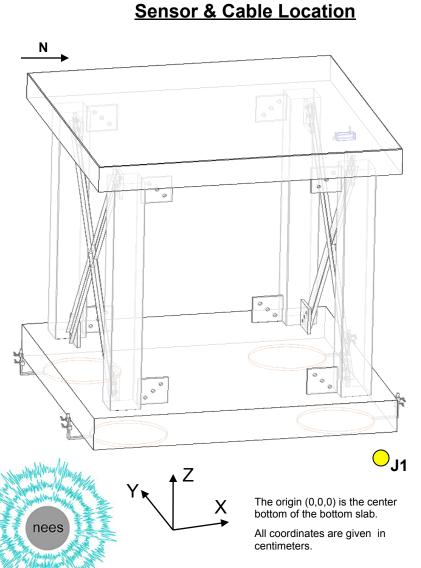


Channel:	22
Measuring:	Spare Channel
Sensor Model:	
Sensor Serial Number:	
Sensitivity:	
Calibration Date:	
Location Description:	
Coordinates:	
Orientation(+):	
Comments:	

# NEES@BYU

## **SFSI Test Structure**

#### Sensor Details

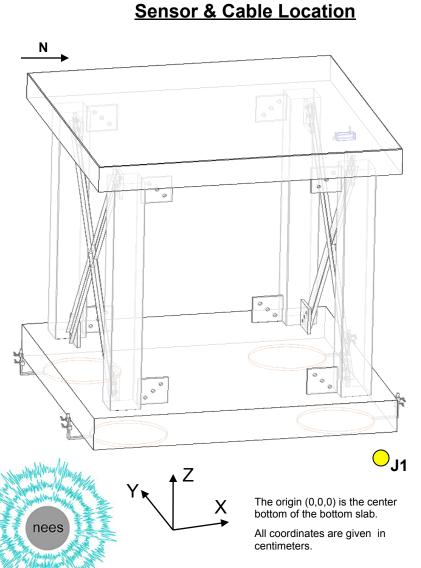


Channel:	23
Measuring:	Spare Channel
Sensor Model:	
Sensor Serial Number:	
Sensitivity:	
Calibration Date:	
Location Description:	
Coordinates:	
Orientation(+):	
Comments:	

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### **SFSI Test Structure**

#### Sensor Details



Channel:	24
Measuring:	Spare Channel
Sensor Model:	
Sensor Serial Number:	
Sensitivity:	
Calibration Date:	
Location Description:	
Coordinates:	
Orientation(+):	
Comments:	

# NEES@BYU

# **SFSI Test Structure**

### Sensor Details

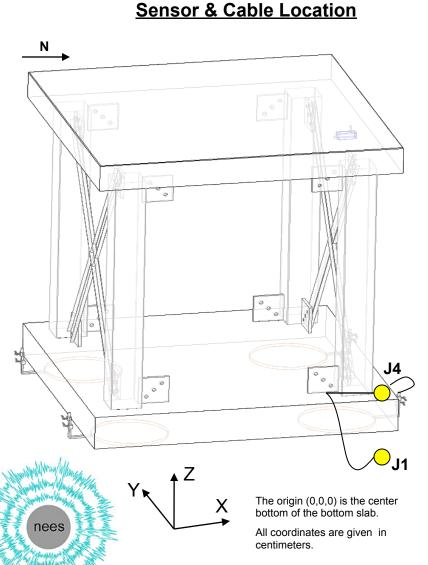
Sensor & (	Cable Location
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	All coordinates are given in centimeters.

Channel:	25
Measuring:	Soil Pressure
Sensor Model:	EPX-V01-100P
Sensor Serial Number:	04E04E11-D28
Sensitivity:	1.2393 mv/psi
Calibration Date:	5/26/04
Location Description:	North-West corner of bottom slab
Coordinates:	(179,179,0)
Orientation(+):	Up
Comments:	Pressure System Sensitivity is equal to: 2.77 e-3 volts/(gr/cm2)

# NEES@BYU

## **SFSI Test Structure**

#### **Sensor Details**

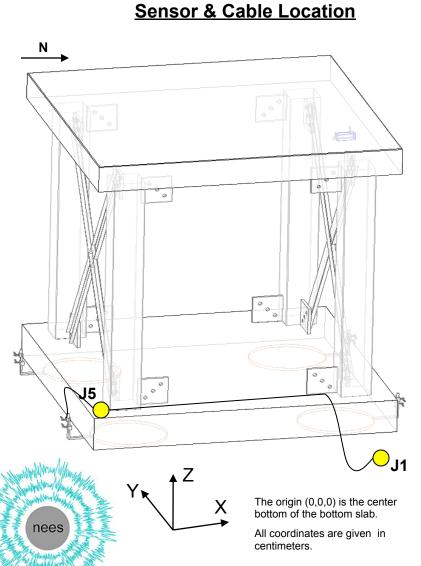


Channel:	26
Measuring:	Soil Pressure
Sensor Model:	EPX-V01-100P
Sensor Serial Number:	04A03F05-K10
Sensitivity:	1.5969 mv/psi
Calibration Date:	1/23/04
Location Description:	North-East corner of bottom slab
Coordinates:	(179,-179,0)
Orientation(+):	Up
Comments:	Pressure System Sensitivity is equal to: 3.56 e-3 volts/(gr/cm2)

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## **SFSI Test Structure**

#### Sensor Details



Channel:	27
Measuring:	Soil Pressure
Sensor Model:	EPX-V01-100P
Sensor Serial Number:	04A03F05-K09
Sensitivity:	1.3403 mv/psi
Calibration Date:	1/23/04
Location Description:	South-East corner of bottom slab
Coordinates:	(-179,-179,0)
Orientation(+):	Up
Comments:	Pressure System Sensitivity is equal to: 2.99 e-3 volts/(gr/cm2)

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Sensor & Cable Location

## **SFSI Test Structure**

### Sensor Details

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A Z	∕_J1
	The origin (0,0,0) is the center bottom of the bottom slab. All coordinates are given in centimeters.

Channel:	28
Measuring:	Soil Pressure
Sensor Model:	EPX-V01-100P
Sensor Serial Number:	04E04E11-D27
Sensitivity:	1.1244 mv/psi
Calibration Date:	5/26/04
Location Description:	South-West corner of bottom slab
Coordinates:	(-179,179,0)
Orientation(+):	Up
Comments:	Pressure System Sensitivity is equal to: 2.51 e-3 volts/(gr/cm2)

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## **SFSI Test Structure**

### Sensor Details

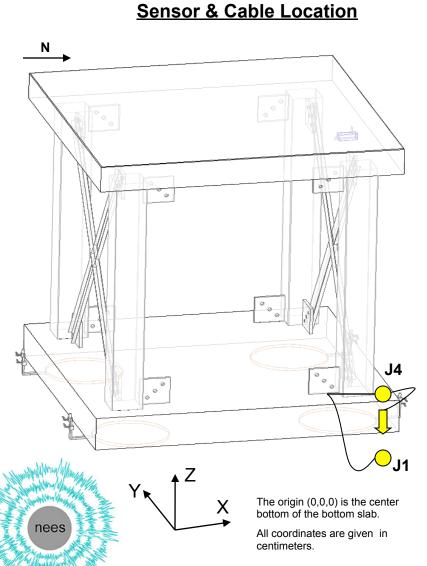
<u>Sensor &amp; C</u>	able Location
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	J1 The origin (0,0,0) is the center bottom of the bottom slab. All coordinates are given in
A MARTIN AND A	centimeters.

Channel:	29
Measuring:	Displacement
Sensor Model:	DT-30-В
Sensor Serial Number:	03-2823
Sensitivity:	0.0648 volts/in
Calibration Date:	7/23/03
Location Description:	North-West corner of bottom slab
Coordinates:	(188,209,25)
Orientation(+):	Up
Comments:	

# NEES@BYU

## **SFSI Test Structure**

#### **Sensor Details**

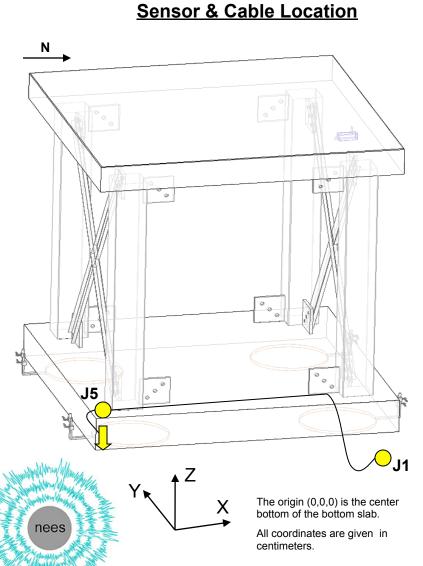


Channel:	30
Measuring:	Displacement
Sensor Model:	DT-30-B
Sensor Serial Number:	03-2826
Sensitivity:	0.0648 volts/in
Calibration Date:	7/23/03
Location Description:	North-East corner of bottom slab
Coordinates:	(183,-209,25)
Orientation(+):	Up
Comments:	

# NEES@BYU

## **SFSI Test Structure**

#### **Sensor Details**



Channel:	31
Measuring:	Displacement
Sensor Model:	DT-30-B
Sensor Serial Number:	03-2824
Sensitivity:	0.0647 volts/in
Calibration Date:	7/23/03
Location Description:	South-East corner of bottom slab
Coordinates:	(-188,-209,25)
Orientation(+):	Up
Comments:	

# NEES@BYU

Sensor & Cable Location

## **SFSI Test Structure**

### Sensor Details

Sensor & Capie Location	
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Munited Ward Manufield	↓Z
Yı	The origin (0,0,0) is the center bottom of the bottom slab.
nees	All coordinates are given in centimeters.
May Manhalan Mark	

Channel:	32
Measuring:	Displacement
Sensor Model:	DT-30-B
Sensor Serial Number:	03-2825
Sensitivity:	0.0648 volts/in
Calibration Date:	7/23/03
Location Description:	South-West corner of bottom slab
Coordinates:	(-183,209,25)
Orientation(+):	Up
Comments:	