



General Information

61st Highway Geology Symposium

Oklahoma City, Oklahoma

August 23-26, 2010

The Oklahoma Department of Transportation and the Oklahoma Geological Survey are hosting the 61st Highway Geology Symposium scheduled for August 23 through August 26, 2010. The Symposium will be held at the Skirvin Hilton Hotel in Downtown Oklahoma City.

The Location

The 61st Highway Geology Symposium will be held at the Skirvin Hilton Hotel in the heart of downtown Oklahoma City. Visit the Hotel's website @ http://www1.hilton.com/en_US/hi/hotel/OKCSKHF-The-Skirvin-Hilton-Oklahoma-City-Oklahoma/index.do . A block of rooms have been reserved at a reduced rate of \$145.00 per night. This discount rate is good for 3 days prior and 3 days after the Symposium. Individuals may make reservations by phone or online. When making reservations by phone, specify that you will be attending the Highway Geology Symposium.

Reservations : 1-800-445-8667 , ask for the Skirvin in OKC.

To reserve online, enter the check-in and check-out dates, hit GO, then enter HGS in the Group/Convention Code for the group discount rate. The cut-off date to receive this reduced rate is August 2, 2010

The Skirvin is within easy walking distance to the Bricktown Canal & Entertainment District, <http://www.bricktownokc.com/> , The Oklahoma City Arts Museum, <http://www.okcmoa.com/> , and the Oklahoma City National Bombing Memorial, <http://www.oklahomacitynationalmemorial.org/> .

Getting There

From Will Rogers World Airport:

Go north on Terminal Drive towards Amelia Earhart Lane. Terminal Drive becomes S. Meridian Avenue. Take the ramp towards I-44/Downtown. Merge onto Airport Road. Merge onto I-44 E / OK-3W / OK-74 N via exit on left. Merge onto I-40 E / US-270 E via exit 120B towards Fort Smith. Take exit 150A turn left onto South Walker Avenue. Turn right onto Sheridan and make a left on Broadway. Turn right onto Park Ave.

From the West :

Take exit 150A turn left onto South Walker Avenue. Turn right onto Sheridan and make a left on Broadway. Turn right onto Park Ave

From the North:

Take I-35 S to I-40 W. Exit at Robinson Avenue. Turn right onto Robinson Avenue and continue for 2 blocks. Turn right onto Sheridan and continue for 1 block. Turn left onto Broadway continue for 2 blocks take right on Park Avenue.

Directions from the East:

Take I-40 to Robinson continue for 2 blocks. Turn right on Sheridan and take a left on Broadway. Turn right on Park Ave.

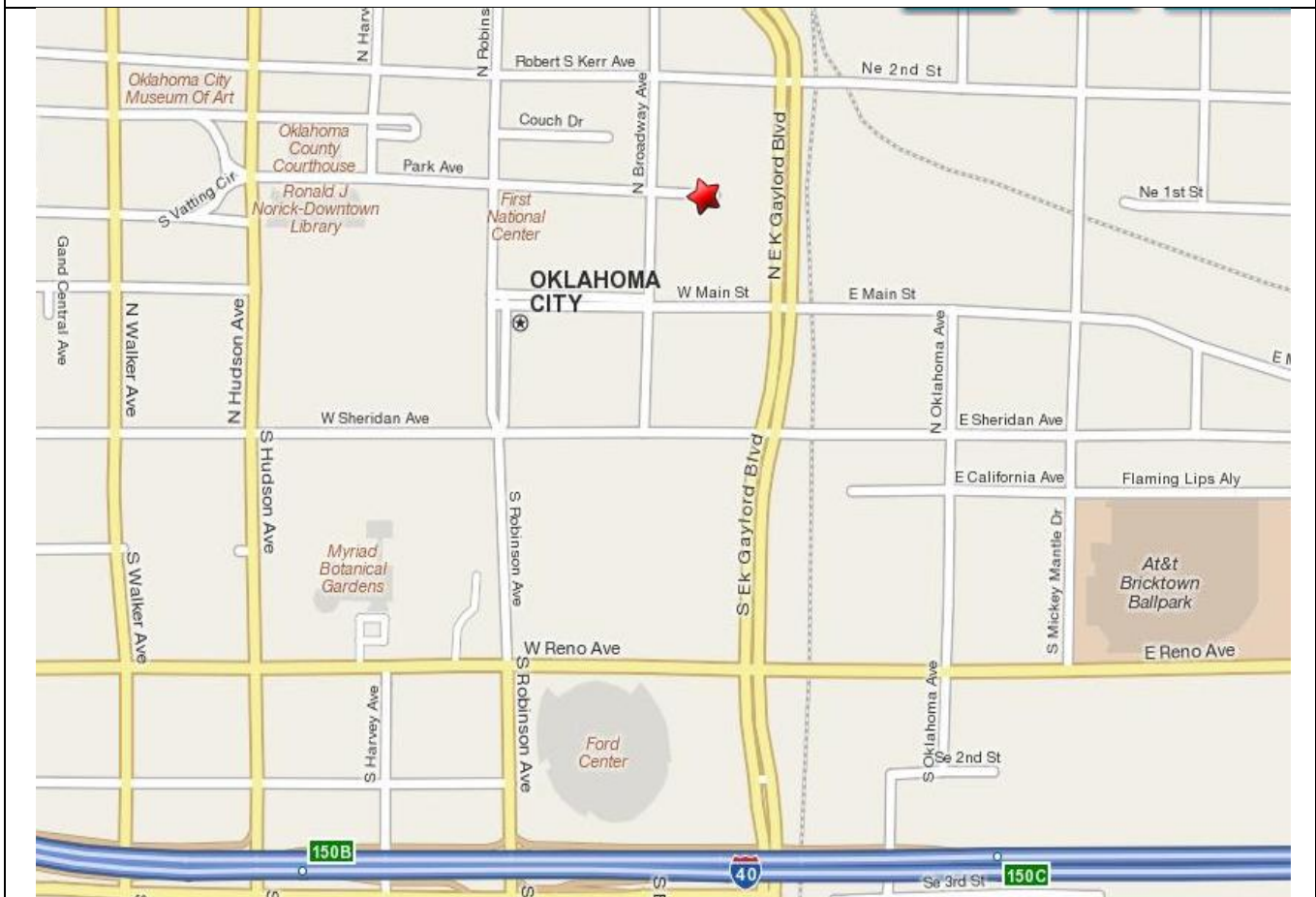
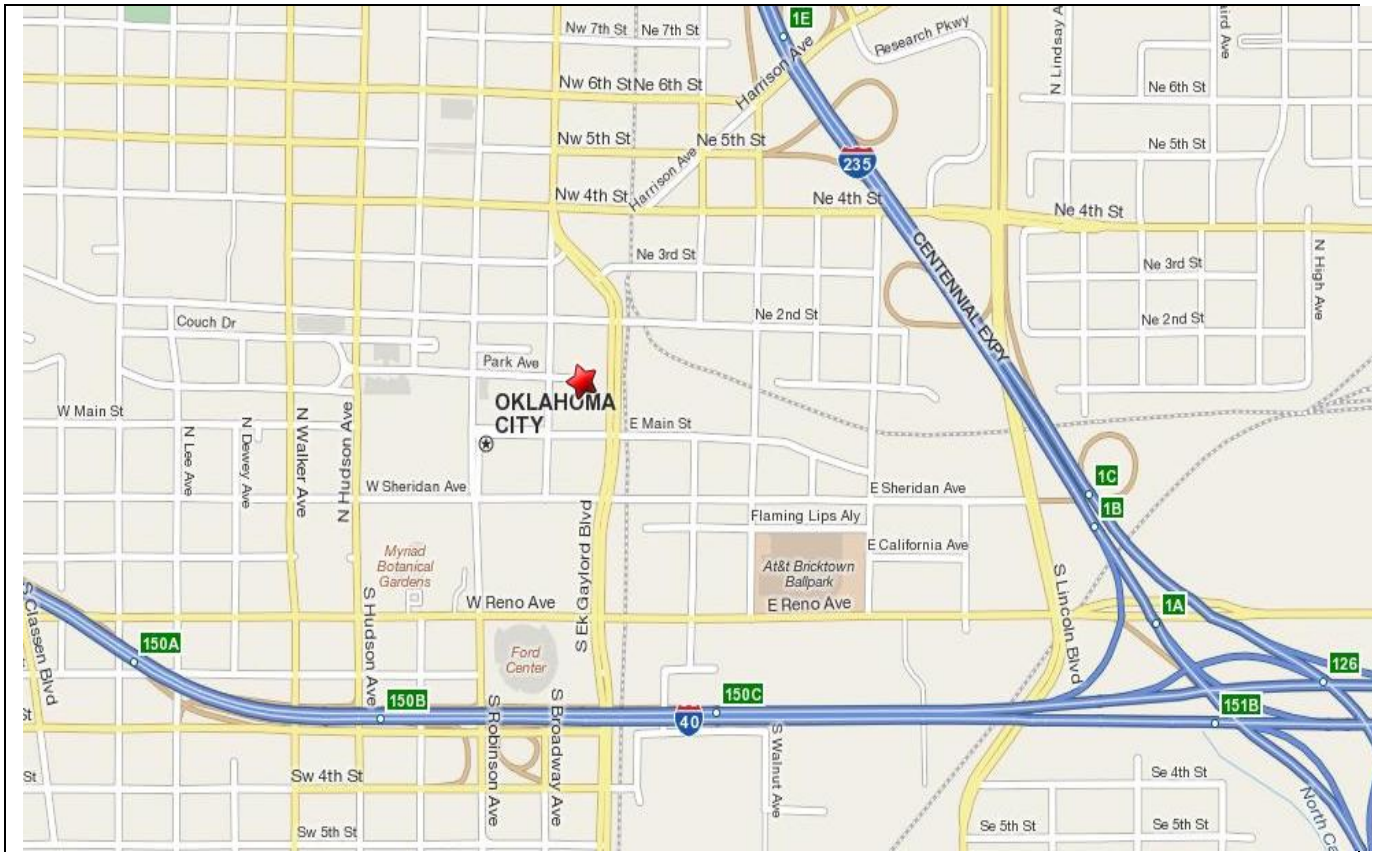
Directions from the South:

Take I-35 N to I-40 W. Exit at Robinson Avenue. Turn right onto Robinson Avenue and continue for 2 blocks. Turn right onto Sheridan and continue for 1 block. Turn left onto Broadway continue for 2 blocks take right on Park Avenue.

For those attendees flying in to Will Rogers Airport, transportation to the Skirvin Hotel will be available by way of an Oklahoma Department of Transportation courtesy van. The van will leave from the airport on the hour from 12:00 PM to 6:00 PM Sunday, August 22nd and from 8:00 AM to 5:00PM Monday, August 23rd.

There will be someone at the baggage claim area at the airport to direct you to the van.

Return transportation to the airport will be available from the Skirvin on Thursday, August 26th, beginning 6:00 AM and continuing on the hour until 4:00 PM and also from 6:00 AM until 12:00 PM on Friday August 27th.



PRELIMINARY PROGRAM

The preliminary program is presented to give an idea of the papers to be presented and the sequence of the symposium events. The final program will list all authors and co-authors. Titles and times may change. Updates will be posted to the Website for your information.

If you should have any questions, please contact Jeff Dean at 405-522-0988 or jdean@odot.org.

For planning purposes, the general schedule is:

Monday, August 23, 2010

11:00 AM-5:30 PM HGS Registration

12:00 PM - 5:00 PM

TRB Session - Asset Management in a World of Dirt

5:30 PM -7:30 PM

Welcome reception/ Ice Breaker Social

Tuesday, August 24, 2010

7:00 AM Breakfast Buffet provided

7:00 AM HGS Registration

8:30 AM to 4:30 PM **Guest Field Trip**

8:00 AM **Welcome, Opening remarks**

8:10 AM - 8:40 AM

Geology and Mineral Resources of Oklahoma
Luza, Krukowski

Technical Session I Geotechnical Applications

8:40 AM to 9:00 AM

Geotechnical Engineering for a Super-load Delivery over Pennsylvanian Highways -
Ruppen, Gaffney, Saylor

9:00 AM to 9:20 AM

Case Study Using Geotechnical Instrumentation to Monitor Fill Foundation Stability -
Buche, Kane

9:20 AM to 9:40 AM

Using TDA (lightweight Tire Derive Aggregate) as a Green Alternative for Reconstruction of a Landslide Road Failure -
McCormick

9:40 AM to 10:00 AM

Influence of various Cementitious Additives on the Durability of Stabilized Subgrades -
Solanki, Zaman

10:00 AM to 10:20 AM - Break

Technical Session II Geotechnical Applications

10:20 AM to 10:40 AM

Safe and Sound, Missouri Department of Transportation, Design - Build Program of Replacing 554 Bridges -
Szturo

10:40 AM to 11:00 AM

Understanding the Behavior of Integral Abutment Bridges Through Field Instrumentation -
Muraleetharan, Miller, Hanlon

11:00 AM to 11:20 AM

Importance of Soils Suction in Pavement Foundations -
Bulut

11:20 AM to 11:40 AM

Effects of Sample Preparation Method on Aggregate Shape Characteristics -
Singh, Zaman, Commuri

11:40 AM to 12:00 PM

Influence of Moisture Content on the Pullout Capacity of Geotextile Reinforcement in Marginal Soils -
Hatamie, Miller

12:00PM to 1:20PM - Buffet Lunch provided

Technical Session III Slope Stabilization and Mitigation

1:20 PM to 1:40 PM

The Latest in Testing Procedures and Technological & Installation Developments in Rockfall Protection Barriers -
Kalejta

1:40 PM to 2:00 PM

Rockfall Mitigation Field Techniques and Design -
Wagner, Kane

2:00 PM to 2:20 PM

Emergency Rock Slope Stabilization in the Ocoee Gorge, US Route 64, Polk County, Tennessee -
Bateman, Smerkanicz, Sneyd

2:20 PM to 2:40 PM

Emergency Rock Remediation I-40 -
Journeaux

2:40 PM to 3:00 PM

Flexible Facing Analysis for Soil Nailing -
Brunet, Lovekin, Bertolo

3:00 PM to 3:20 PM

Use of Dimensional Modeling for Sizing Flexible Barriers Installations that Mitigate Debris Flow Natural Hazards -
Amend

3:20 PM to 3:40 PM - Break

**Technical Session IV
Case Histories**

3:40 PM to 4:00 PM

Construction of the Amelia Earhart Bridge -
Henthorne

4:00 PM to 4:20 PM

**Bridge Over Snake River: Geotechnical
Engineering on Unstable ground -** Hood, Norrish,
Martens

4:20 PM to 4:40 PM

**Road and Housing Construction on Reclaimed
Coal Mine Spoil Undergoes Settlement Damage
in Southwest Indiana -** West, Johansen

4:40 PM to 5:00 PM

Assessment of the Garvin Landslides -
Reidenbach, Nevels

5:00 PM to 5:20 PM

**Subsurface Stabilization of Problematic Soil
Areas, President George Bush Turnpike -**
Gregory

5:20 PM to 5:40 PM

**North Slope Landslide Investigation, US-62
Chickasha, Oklahoma -** Reidenbach, Nevels

5:40 PM

Field Trip Overview

ADJOURN FOR THE DAY

**6:00 PM to 7:00 PM Steering Committee
Meeting**

Wednesday, August 25, 2010

6:30 AM Boxed Breakfast provided (to take on bus)

7:00 AM to 5:30 PM - Field Trip, Lunch provided

6:00 PM to 7:00 PM Social Hour

7:00 PM to 10:00 PM - Banquet

Thursday, August 26, 2010

7:00 AM Breakfast Buffet provided

**Technical Session V
Geophysical and Imaging Applications/
Site Investigation Techniques**

8:00 AM to 8:20 AM

**Mapping Soft-Soil Zones and Top-of-Bedrock
Beneath High-Traffic Areas of Honolulu, Sirles,
Batchko**

8:20 AM to 8:40 AM

**Subsurface Geotechnical Exploration
Enhancement Through the Use of Refraction
Microtremor (ReMi) Geophysical Survey
Techniques -** Satterfield, Roth, Hundley, Bryant,
Miller

8:40 AM to 9:00 AM

**Continuous Subsurface Profiling of Roads
Using MASW
(Multi-Channel Analysis of Surface Waves) -**
Lee

9:00 AM to 9:20 AM

**Determination of In-Situ Density of Planned
Roadway Cuts in Cemented and Coarse-Grained
Soils Using Geophysical Methods to Estimate
Earthwork Factors -** Frechette

9:20 AM to 9:40 AM

**Geophysical Methods Mapping Subsurface
Evaporite Features Aid Roadway Geometric
Design -** Homan, Sirles

9:40 AM to 10:00 AM

**Using LiDAR Laser Scanning for Geotechnical
Characterizations in Rock -** Priznar, Coxon

10:00 AM to 10:20 AM - Break

10:20 AM to 10:40 AM

**Karst Features in Limestone Evaluated Utilizing
an Accoustic Televiewer, New I-70 Mississippi
River Bridge, St. Louis, Missouri -** Keller

10:40 AM to 11:00 AM

**Site Characterization and Remediation in Karst
Terrain -** Fisher, McWhorter, Fisher

11:00 AM to 11:20 AM

**Geotechnical Investigation to Support Design of
an ADA Compliant Access Ramp on the South
Rim of the Grand Canyon at Mather Point
Overlook, Grand Canyon National Park, Arizona
-** Mitchell

11:20 AM to 11:40 AM

**Improving Geotechnical Site Investigation
Techniques in Missouri -** Maerz, Loehr, Magner,
Miller

11:40 AM to 12:00 PM

**Crowder - Blocker Road Bridge -Root Cause of
4 feet of Embankment Settlement -** Marick,
Mackiewicz

12:00 PM to 12:20 PM

**Use of DMT for Subsurface Characterization :
Strengths and Weaknesses -** Lim, Ebrahimi

12:20 PM CLOSING REMARKS-ADJOURN

Additional Information

Midyear Transportation Research Board Session

Session Title – “ Asset Management in a World of Dirt”

The half day session will focus on Geotechnical Asset Management, GAM. Presentations will address the status of integration of GAM into Transportation Asset Management and on such details as asset inventory, condition surveys, and performance standards or service life of geotechnical assets. The session will be co-sponsored by TRB Committees AFP10 and AFP20

Tuesday Guest Trip

The Guest Trip will begin with an air conditioned trolley tour of historic Guthrie.

Guthrie was the territorial and later the first state capital for Oklahoma. Guthrie is nationally significant because of its outstanding collection of late nineteenth and early twentieth-century commercial architecture. The Guthrie Historic District has been designated a National Historic Landmark. At noon on April 22, 1889, cannons resounded at a 2-million acre (8,000 km²) section of Indian Territory, launching president Benjamin Harrison's "Hoss Race" or Land Run of 1889. During the next six hours, about 10,000 people settled in what became the capital of the new Territory of Oklahoma: Guthrie. Within months, Guthrie became a modern brick and stone "Queen of the Prairie" with municipal water, electricity, a mass transit system, and underground parking garages for horses and carriages.

Enjoy lunch at the Victorian Tearoom in Guthrie, just up the street from the first state capital building.

Visit their website @ <http://guthrievictoriantearoom.net/> . After lunch, spend some free time in the local antique shops and art galleries of Guthrie

The return to Oklahoma City will include a stop at Pop's on historic Route 66 in Arcadia. <http://www.pops66.com/> . At Pop's you'll get to cool off with a cold soda of your choice of the over 500 selections available.

The final stop of the Guest Trip will be the National Cowboy & Western Heritage Museum in OKC where you'll get an idea of the Old West as it really was. Visit their website @ <http://www.nationalcowboymuseum.org/> .

Wednesday Field Trip

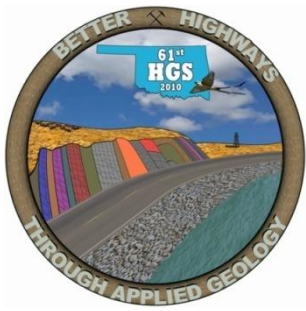
The field trip for the 2010 HGS will visit several stops within the Arbuckles region of south central Oklahoma. The stops will highlight the complex geology of the Arbuckle Mountains which include steeply dipping and vertical layers of limestone, dolomite and shale. Highway geology will focus on the engineering challenges faced during the design and construction of a 150 ft cut through the Arbuckles as part of the I-35 alignment through this section of the state. These challenges include presplitting tilted carbonate rocks, conglomerates, sinkholes, faults and joint systems as well as highly plastic clay shales. Additional locations will include Lunch at Lake Murray, and a mid afternoon geology tour of the Turner Falls area.

Professional Development Hours, PDH's

Twelve PDH's will be credited for attending and participating in the Highway Geology Symposium. PDH certificates will be available to those professionals maintaining records for their qualifying PDH credits for license renewal.

61st HGS Polo Shirt

Each paid registrant will receive a Cutter & Buck, Dry Tec Polo shirt commemorating the 61st Highway Geology Symposium. Due to the time necessary to order the shirts and have them embroidered by the start of the symposium, we ask that you return your paid registration by no later than August 2, 2010. We cannot guarantee that shirts will be available for symposium attendees who register later than August 2. [See the registration form for details about ordering a shirt.](#)



61st Highway Geology Symposium Oklahoma City, Oklahoma August 23-26, 2010

Registration Form

Register by August 2, 2010 to save \$50.00 on the HGS registration fee and to take advantage of the Symposium hotel rate

Complete this Form or Register ON LINE at www.highwaygeologysymposium.org.

REGISTRANT INFORMATION:

Name: _____ Affiliation: _____
 Street Address: _____
 City: _____ State: _____ Zip Code: _____
 Phone#: _____ Fax#: _____ E-Mail: _____
 Guest Name: _____

Registering as: (Please check all that apply)

- | | | | |
|---|---|---|--|
| <input type="checkbox"/> Steering Committee | <input type="checkbox"/> State Government | <input type="checkbox"/> Student | <input type="checkbox"/> Exhibitor* |
| <input type="checkbox"/> Speaker | <input type="checkbox"/> Participant | <input type="checkbox"/> Federal Government | <input type="checkbox"/> Sponsor* |
| <input type="checkbox"/> TRB | <input type="checkbox"/> Guest | <input type="checkbox"/> Local Planning Committee | * Registration Fee Paid Via Exhibitor/Event Sponsor Registration |

Conference Registration /Guest and Additional Fees: (Please check all that apply)

- | |
|--|
| <input type="checkbox"/> @ \$250.00 Full Registration /\$300.00 if received AFTER Aug. 2, 2010 |
| <input type="checkbox"/> @ \$125.00 Full Student Registration (School ID Required) |
| <input type="checkbox"/> @ \$35.00 TRB Session, Monday 12:00-5:00 PM |
| <input type="checkbox"/> @ \$45.00 Wednesday Night Banquet (Guest) |
| <input type="checkbox"/> @ \$45.00 Tuesday Guest Tour |
| <input type="checkbox"/> @ \$35.00 Wednesday Geology Field Trip (Guest) |
| <input type="checkbox"/> @ \$40.00 Guest Polo Shirt |
| \$ _____ = Total Amount Due |

Full Registration includes: HGS Technical Sessions and Refreshment Breaks., CD of Proceedings, Monday Social, Tuesday Breakfast & Lunch, Wednesday Boxed Breakfast, Field Trip with Lunch, Banquet, and Thursday Breakfast
Student Registration includes above, less polo shirt, which may be purchased separately

Please select Banquet Menu Choice (all meals include: Mixed Greens Salad, Lyonnais Potatoes, Green Beans Almondine, and either Dark Chocolate Baby Bundt Cake or Traditional Carrot Cake)

- | | | |
|---|---|---|
| Registrant <input type="checkbox"/> Cornish Hen | <input type="checkbox"/> Grilled OK Center Cut Strip Loin | <input type="checkbox"/> Bronzed Salmon |
| Guest <input type="checkbox"/> Cornish Hen | <input type="checkbox"/> Grilled OK Center Cut Strip Loin | <input type="checkbox"/> Bronzed Salmon |

Sponsorship and Vendor Opportunities: Details posted on the HGS Website or contact Jeff Dean: 405-522-0988 or by E-mail (jdean@odot.org).

Lodging Details: Conference rates available through The Skirvin Hilton Hotel
http://www1.hilton.com/en_US/hi/hotel/OKCSKHF-The-Skirvin-Hilton-Oklahoma-City-Oklahoma/index.do.

See the HGS Website: <http://www.highwaygeologysymposium.org/> to follow updates.

Payment or signed purchase order must accompany Registration. Symposium Tax ID is 56-1713732

Method of Payment: (Please Select One)

- Check Enclosed (Make check payable to: 61st Highway Geology Symposium)
 Payment is being processed (purchase order documentation enclosed)
 Charge to: Master Card Visa **(processed through Pay Pal; on-line registrations only)**

Credit Card# _____ Expiration Date: _____ 3-Digit Code (back of card): _____

Cardholder Name: **(must be exactly as on card account)** _____

Cardholder Address: **(must be exactly as on card account)** _____

SHIRT SIZES (indicate shirt size for registrant and/or guest. Shirts tend to run large)

- MEN'S REGULAR** **MEN'S TALL** **WOMEN'S REGULAR**
- HGS Registrant S M L XL 2XL 3XL 4XL
- Guest Shirt S M L XL 2XL 3XL 4XL

Return completed Registration Form to:
 61st Highway Geology Symposium
 c/o Jeff Dean
 1213 East Drive
 Edmond, OK 73034
jdean@odot.org
 Phone: 405-522-0988

Paid Registration must be received by August 2, 2010 in order to secure a shirt