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SC: Plans Online

#### WINNER: Innovative Management - Small Project

#### Plans Online Statewide

SCDOT has made 1.9 million digitally scanned image files of roadway construction plans available at the click of a button on the Internet. This 13-year project replaced the old, cumbersome method of reviewing plans in person.

South Carolina has the fourth largest statemaintained highway system in the nation, with more than 41,000 miles of roadways and 8,344 bridges. For decades, the only way to access state highway plans was to use a card catalogue system to order plans and then wait a few days for them to be delivered to a central location. SCDOT employees began working to convert highway plans to digital files in 1997. Today, the Plans Online system is available internally to SCDOT employees and externally to surveyors, engineers, city, county, and local offices requiring access to the plans to complete their work, greatly improving efficiency and reducing costs.







For Immediate Release August 22, 2011

Contact: Tony Dorsey tdorsey@aashto.org 202-624-3690

## Judges Select the Best Transportation Projects in the Southeastern Region

LOUISVILLE, Ky. – Projects that improve traffic flow, modernize our transportation systems for current and future needs, and shorten construction times are being recognized today as winners of America's Transportation Awards at the annual meeting of the Southeastern Association of State Highway and Transportation Officials.

"States are adapting to their current economic situations," said Susan Martinovich, AASHTO president and director of the Nevada Department of Transportation. "The innovation that is emerging and the efficiency in which projects are completed deserve recognition from the public and I am thrilled to see them honored for their hard work."

AASHTO, AAA, and the U.S. Chamber of Commerce cosponsor the annual awards competition to recognize the best transportation projects in America using three main categories – *On Time, Under Budget*, and *Innovative Management*.

Ten transportation projects from five state DOTs were entered into this year's Southeastern competition. Four states received awards today.

In the *On Time* category: the **Florida Department of Transportation** won for its I-10 to I-95 Interchange: "The Big I" project (medium project division) and the **Kentucky Transportation Cabinet** won for its Newton Pike Extension project (small project).

Three states received awards in the *Innovative Management* category: **Kentucky** won its second award for its US 68/KY 80 Land between the Lakes project (medium project), the **West Virginia Department of Transportation** won for its Fairmont-Gateway Connector (medium project), and the **South Carolina Department of Transportation** took honors for its Plans Online venture (small project).

**South Carolina** also picked up an award in the *Under Budget* category for its I-385 Rehabilitation project (small project).

These winners will now compete with others from around the country for the national Grand Prize and People's Choice Award, which will be presented at the AASHTO Annual Meeting, Oct. 16 in Detroit. The Grand Prize is awarded to the state DOT project receiving the greatest number of points in judging by a panel of experts. The separate People's Choice Award is presented to the transportation project that receives the greatest number of online votes from the general public. Online voting will begin Aug. 31.

Learn more about all the winning projects and the competition at <a href="www.AmericasTransportationAward.org">www.AmericasTransportationAward.org</a>.

The American Association of State Highway and Transportation Officials (AASHTO) is the "Voice of Transportation" representing State Departments of Transportation in all 50 states, the District of Columbia, and Puerto Rico. AASHTO is a nonprofit, nonpartisan association serving as a catalyst for excellence in transportation. Follow us on Twitter at <a href="http://twitter.com/aashtospeaks">http://twitter.com/aashtospeaks</a>.



For Immediate Release August 31, 2011

Contact: Tony Dorsey tdorsey@aashto.org 202-624-3690

## **Ten Best American Transportation Projects Vie for Top Honors**

States to Compete for National Grand Prize and People's Choice Award

Washington, D.C. – All across America, transportation projects are saving taxpayers money while introducing innovative ideas and strategies to end those unbearable commutes and make our drives safer. Some of those projects will now have the chance to earn major bragging rights.

The American Association of State Highway and Transportation Officials (AASHTO), AAA, and the U.S. Chamber of Commerce are today announcing the top 10 finalists in the 2011 America's Transportation Awards competition and are releasing a new video showcasing these outstanding projects.

The 10 finalists received the highest number of overall points during four regional contests, representing each part of the country. A total of 40 projects from 29 states were judged in three categories: "On Time", "Under Budget", and "Innovative Management."

The 10 projects are now competing for the America's Transportation Awards' Grand Prize, selected by a panel of judges. The People's Choice Award will be decided by popular vote of the general public. Online voting begins today and will continue through Oct. 7, 2011 at <a href="https://www.AmericasTransportationAward.org">www.AmericasTransportationAward.org</a>. The two awards will be presented Oct. 16 at the AASHTO Annual Meeting in Detroit.

"Each of these 10 projects truly exemplifies all that is right with our national transportation system," said John Horsley, executive director of AASHTO. "The America's Transportation Award competition allows us to honor and recognize projects that save taxpayers money, offer new and innovative ideas to the industry that help every driver, and make our commutes easier and safer."

#### Top 10 finalists:

- 1. **Florida I-10 to I-95 Interchange: "The Big I":** Finishing six months ahead of schedule, the Florida Department of Transportation reconstructed the I-10/I-95 interchange, a project that consisted of 17 bridges, 21 ramps, and 25 lane miles built over and around traffic moving through one of the busiest interchanges in the state. Countless taxpayer dollars and commuting headaches were saved.
- 2. **Kansas K-23 Practical Improvement project:** Time and taxpayer money were saved when the Kansas Department of Transportation used practical design strategies to rebuild 17 miles of a two-lane road in western Kansas. The project removed deteriorated asphalt and widened the road as well.
- 3. **Kentucky Newtown Pike Extension:** In order to accommodate the 2010 World Equestrian Games, the Kentucky Transportation Cabinet had to extend the Newtown Pike in a very short period of time. The project, designed to improve traffic flow into downtown Lexington, finished on schedule, two full weeks before the Games, even with unanticipated work added to the project.

- 4. **Massachusetts Phillipston Heavy Lift Bridge Replacement:** This \$3.3 million project by the Massachusetts Highway Department became the fastest bridge replacement in state history when it used Self Propelled Modular Transporters for bridge replacement for the first time.
- 5. **Michigan The Fix on I-196 project:** This \$40 million project by the Michigan Department of Transportation used more than 100 community meetings and significant public partnership efforts that enabled the completion of the two-mile segment of I-196 near Grand Rapids during a single construction season.
- 6. **Montana Shiloh Road:** This project by the Montana Department of Transportation improved safety and mobility along a 4.5-mile stretch of Shiloh Road, formerly a quiet dirt road that had grown into a critical commuter corridor. The \$25 million project kept the road open with very few detours and delays.
- 7. New Hampshire Hampton Toll Plaza Conversion to Open Road Tolling: This \$17 million New Hampshire Department of Transportation project to convert to open-road tolling was competed on a fast-tracked, 16-month schedule, after it was determined that the 16-lane toll plaza did not have adequate capacity to handle seasonal traffic demands.
- 8. **South Carolina Plans Online project:** South Carolina Department of Transportation saved time and taxpayer money by creating a database of 1.9 million digitally scanned image files of roadway construction plans, available at the click of a button online. This 13-year project replaced the old, cumbersome method of reviewing plans in person.
- 9. **Utah SR-171 3500 South Reconstruction:** The \$41 million Utah Department of Transportation project rebuilt 1.2 miles of urban arterial, converting it from a 5-lane road into an 8-lane boulevard that serves as the major east/west transportation corridor for the Salt Lake Valley without disrupting local businesses.
- 10. **Washington Operation I-5 Partnership to Relieve Congestion:** The Washington State Department of Transportation encouraged a coalition of organizers to join forces to creatively solve the traffic problem that stretched for miles through a military base nestled between Tacoma and Olympia, an area seeing robust growth in economy and population.

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The American Association of State Highway and Transportation Officials (AASHTO) is the "Voice of Transportation" representing State Departments of Transportation in all 50 states, the District of Columbia, and Puerto Rico. AASHTO is a nonprofit, nonpartisan association serving as a catalyst for excellence in transportation. Follow us on Twitter at <a href="http://twitter.com/aashtospeaks">http://twitter.com/aashtospeaks</a>.



For Immediate Release September 28, 2011 Contact: Tony Dorsey tdorsey@aashto.org 202-624-3690

## Online Voting Extended for America's Transportation Awards Competition

Public Will Decide People's Choice Winner

Washington, D.C. – The American Association of State Highway and Transportation Officials, AAA, and the U.S. Chamber of Commerce announced today a one-week extension for online voting in the America's Transportation Awards competition.

The winning state will be awarded a \$10,000 prize to give to a charity or nonprofit of its choosing. The original cutoff date for public voting was Friday, Oct. 7. The voting will now continue through the end of the day on Friday, Oct. 14.

Ten state projects are competing for the People's Choice Award, which will be decided by popular vote of the general public. Online voting is available at <a href="www.AmericasTransportationAward.org">www.AmericasTransportationAward.org</a>. These same top 10 projects are also competing for the national Grand Prize, which will be decided by a panel of judges, and another \$10,000 will be awarded to that winner. The two awards will be presented Oct. 16 at the AASHTO Annual Meeting in Detroit.

The 10 finalists received the highest number of overall points during four regional contests, representing each part of the country. A total of 40 projects from 29 states were judged in three categories: "On Time," "Under Budget," and "Innovative Management."

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From SCDOT.org

#### **GENERAL**

### South Carolina DOT Project Vies for National People's Choice Award

Oct 4, 2011, 14:38

In the Running to Win \$10,000 to Give Back to Community

For Immediate Release

Contact: Tony Dorsey

tdorsey@aashto.org

202-624-3690

Washington, D.C. – South Carolina Department of Transportation's Plans Online project has a chance to bring in some serious cash to South Carolina and win the title of the public's favorite transportation project in America.

The project is one of 10 state projects now competing for the People's Choice Award in the America's Transportation Award competition, sponsored by the American Association of State Highway and Transportation Officials (AASHTO), AAA, and the U.S. Chamber of Commerce. Winner of the People's Choice Award will be decided by popular vote of the general public and will receive \$10,000 to donate to a charity of their choice. Online voting is available at <a href="https://www.AmericasTransportationAward.org">www.AmericasTransportationAward.org</a>. These same top 10 projects are also competing for the National Grand Prize, which will be decided by a panel of judges, and another \$10,000 will be awarded to that winner. The two awards will be presented Oct. 16 at the AASHTO Annual Meeting in Detroit.

SCDOT's Plans Online project made 1.9 million digitally scanned image files of roadway construction plans available at the click of a button online. This creative project took 13 years to implement, and replaced the cold, cumbersome method of reviewing plans in person. For decades, the only way to access state highway plans was to use a card catalogue system to reserve plans and wait a few days for them to be delivered to a central location. Now, any surveyor, engineer, or city, county, or local office requiring access to these plans can simply access the database to find them online.

This process continues to save taxpayers money by making this process much quicker and efficient, and has been recognized for its innovation by the America's Transportation Award competition.

"SCDOT is proud of this achievement - making it easier than ever for the public to access state highway plans through our Plans Online project," said South Carolina Secretary of Transportation Robert St. Onge. "We also would like to commend AASHTO for this opportunity to compete for the People's Choice Award and a chance to provide \$10,000 to a charity in South Carolina."

Voting for the ATA People's Choice Award will continue through the end of the day on Friday, Oct. 14.

-30-

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America's Transportation Award Small Project – Innovative Management SASHTO Region

South Carolina Department of Transportation Plans Online

The year 2010 was one of paramount achievement for the South Carolina Department of Transportation – it culminated the completion of the scanning of all of the roadway and bridge construction plans, but more importantly it signified the release of the SCDOT Plans Online system to the public. The goal set back in 1997 was realized on May 20, 2010 with the official announcement at the annual SC Society of Professional Land Surveyors Convention.

The SCDOT Plans Online system makes the millions of sheets of roadway plans available at the click of a button via the internet. Plans Online is based on a yearly subscription fee of \$60.00 per company or individual and is available to surveyors, engineers, municipalities and other entities requiring access to plans to conduct business. [Due to changes in the Freedom of Information Act after September 11, 2001, all bridge construction plans are not shared. Bridge plans must be requested and approved prior to release.] Within the first two months of release, over 200 subscribers had signed up; this included individuals, surveying companies, large engineering consultant firms, lawyers, city, county, and other offices. The impact was immediate. Instead of phone calls for requests for plans, the only phone calls the Plans Storage Office received were from gratified customers who now had instant access to a wealth of design history in the roadway plans.

To appreciate the magnitude of what has been captured by this project; one should know that South Carolina is the 4<sup>th</sup> largest state-maintained highway system in the Nation which includes 41,459 miles of roadways and 8,344 bridges. This translates into over 1.9 million sheets of roadway and bridge plans physically stored on Shop Road in Columbia, SC. There are 46 different counties in South Carolina comprised of interstate, US and SC routes, and secondary roads. These roads and bridges combine to make up 120,000 sets of plans in two categories – "as-let" and "as-built". The as-let plans provide information on roadways, drainage, alignment, right of way, construction and structural information as they were designed and let to contract for construction. The as-builts provide additional information on any construction changes to the design during the construction of the project.

For decades, SCDOT employees and the public had only one way to access the plans – physically. The employee searched through a card catalog by County and Road and made a request to the Plans Storage Office. The Plans Storage Office traveled to the storage warehouse to retrieve the plans and brought them back to Headquarters. The employee or public person making the request then traveled to Headquarters to review the plans. Only one person was able to review the plans at a given time (versus online access where any number of people can view them at one time). Then if the set of plans requested did not have the information you were looking for, you would need to repeat the request process for another set of plans. This constituted a time frame of 3-5 business days where you were trying to gather the information necessary to complete your project design.

In addition to the time lost waiting, multiple handlings of the sets of plans further deteriorated the condition of the sheets. The plans date back to 1908 – some without dates could be slightly earlier. One important aspect achieved through this project was disaster recovery. The warehoused plans have faced many challenges: leaking roofs, mold and mildew, rodents, a fire, and the inevitable – aging. The torn and battered pages needed to be electronically captured before the information could be lost.

Electronically scanning each and every sheet of the roadway and bridge plans became the goal of the SCDOT Design Automation team in late 1997. This would streamline the access and further protect the condition of the drawings so the valuable information could be used for many more years to come. The viability of having instant access to design information pertinent to your project was a vision worth attaining.

In 1997 with the introduction of a large format scanner at SCDOT capable of scanning drawing sheets 22-inches by 36-inches, the Design Automation team began scanning and indexing plans, using part-time University of South Carolina engineering students to help with the tedious process. The first plans to be scanned were the as-let plans. As-lets are design plans that are let to contract for construction. The electronic image files were captured in black and white as a \*cal format and later a \*tif format. Abbeville County was scanned first, and then county after county until the 46<sup>th</sup> county, York, was scanned. Each individual sheet took approximately 4 seconds to scan. Each set of plans was scanned, indexed and added to a Microsoft Access database.

The initial intranet version of the Plans Online was developed internally and released to employees in 2001. The system utilized the software from Cartesian Products, Inc. – CPC Viewer. The CPC Viewer automatically filtered out noise from the poor quality of the physical plan sheet and made the scanned image appear crisp and new on the internet. The software also incorporated the best-of-breed features such as document navigation, scaling, rotation, anti-aliased images, and extensive redline annotation capabilities requiring only the Internet Explorer program. The employees loved the new system and soon couldn't remember the long cumbersome process they previously faced requesting plans through the Plans Storage Office. The 1500 plus users were able to view the plan sheets instantly from the Internet Explorer by searching keywords like County, Route, File Number or Let Date. Access to plans had never been easier. With growing demand for access to plans, Design Automation continued scanning the as-lets, adding additional counties of plans to the system. As quickly as the number of sheets mounted, so did the database size. The concepts to scan the engineering drawings to digital images and to utilize the "cheap" Internet technology for access have proven to be the best solution.

By 2005, the realization that they were accomplishing something big, Design Automation turned to an outside vendor – tsaAdvet (Falcon) – for enhancing its document management needs. The switch to a legacy document management system using the Microsoft SQL database provided faster search return results for the users. Internally each year, the SCDOT employees perform approximately 500,000 searches of roadway and bridge plans. The use of Falcon software allowed the SCDOT flexible solutions to control the security of the documents and the integrity of the data required to maintain such a large system. Sophisticated controls in the software allowed multi-value keyword fields for enhancing the search capabilities for the users. The Falcon software also provided customized indexing and administrative tools which allowed the office scanning and indexing to push the scanning to its limits.

In 2008, the as-builts were scanned by two outside scanning service companies in color \*pdf format to capture the red-line changes to the plans made during the construction of the project. Research into the best color scanners available and the images outputted for quality and file size was investigated and a 200 dpi Adobe pdf format was decided upon to meet State archiving requirements. At some points during the project, the companies were delivering 15,000 scanned plan sheets to the SCDOT every week. A rigorous quality assurance and indexing check was performed by the team internally on each set of deliverables. With the Falcon software, the SCDOT Design Automation team was able to batch upload and batch index the many sets of plans. While it took approximately ten years of part-time scanning to

complete the as-lets, the as-builts were completed in two and a half years in 2010 around the same time the Plans Online was released to the public. The as-lets totaled 751,760 black and white images for a total storage space of 730 gigabytes and the as-builts totaled 1,139,871 color images for a total storage space of 2,555 gigabytes.

While internal employees were reaping the benefits of having instant access to plans, the public was still having difficulties getting access to the plans. Engineers and surveyors had to call the Plans Storage Office and provide the precise location of the plans needed. The Plans Storage Office would then research the plans internally on Plans Online for the requestor, plot the plans to full size and charge the requestor \$0.75 to \$1.25 per sheet. For larger companies with lots of requests – this could really add up throughout the year. These fees generally only covered the cost of plotting not the time the Plans Storage Office spent, so both sides were losing valuable man-hours in the research process. At one point, a computer was set up for the public to come in and review the plans for themselves to help narrow down the number of sheets needed. This helped save some time and money but it still required the outside engineer or surveyor to travel and spend time researching. In 2009, with letters from the SC Society of Professional Land Surveyors and the SC Council of Engineering and Surveying Societies requesting the system be made available and with the budget working out in favor to support the additional hardware and setup required, the SCDOT was able to initiate a contract with tsaAdvet (Falcon) to assist in releasing the plans on the internet.

In January 2010, tsaAdvet worked with the SCDOT to set up the DMZ, servers, ftp, and all the components it took to make the information available electronically via the internet. It took a couple more months to define security procedures and to convert the old \*cal files to \*tif format for faster pdf publishing speeds on the internet before a version could be released for testing. Next, a selected group of consultants and surveyors were asked to test the system and with no true concerns, the announcement of availability was made on May 20, 2010 to the SC Society of Professional Land Surveyors Convention. Shortly after, it was announced at the annual SC American Council of Engineering Companies (ACEC) conference for the engineering communities.

The only look back is the satisfaction of achieving a dream – to scan the all of the 1.9 million roadway and bridge construction plans and to have everyone, internally and externally, be able to have instant access to Plans Online to view the entire design history of every roadway and bridge project in the State of South Carolina.

# The South Carolina Society of Professional Land Surveyors

121 Executive Center Dr., Suite 248 Columbia, South Carolina 29210-8419 Phone: 803-856-7820 Fax: 803-750-7523 E-mail: scspls@bellsouth.net www.scspls.com

18 April 2011

American Society of State Highway And Transportation Officials 444 North Capital St. NW Washington, DC 20001

Dear Judges,

I would like to request your consideration of the South Carolina Department of Transportation (SCDOT) Plans Online webservice for the 2011 Presidents' award. The SCDOT has partnered in the past with the South Carolina Geodetic Survey (SCGS) to achieve a nationally recognized VRS network. Now SCDOT is leading the region with their Plans Online Library. The program is just barely a year old, and is already seeing significant usage. The website provides an invaluable asset to citizens of the state. For a low annual subscription fee (\$60), surveyors and consultants now have access to thousands of road plans 24 hours a day, 7 days a week, anywhere that internet service is available. Plans Online eliminates travel time resulting in cost savings to surveyors, consultants, and the public. It saves travel related fuel resulting in direct environmental benefits. It saves DOT employee time resulting in savings to the taxpayer. Since the plans are provided in a digital format, it saves paper. This program is already a winner for the State of South Carolina. I hope that you consider it to be a winner as well.

Sincerely,

Dale C. Swygert, PLS President SCSPLS

Dale C Swypest



April 20, 2011

Presidents' Award Committee American Association of State Highway and Transportation Officials 444 North Capital St. NW, Suite 249 Washington, DC 20001

Dear Judges:

On behalf of the American Council of Engineering Companies of South Carolina, I submit for consideration the South Carolina Department of Transportation <u>Plans Online</u> web service for the AASHTO Presidents' Award.

This website provides easy access to thousands of road plans 24/7/365 to engineers, surveyors and others. Naturally this service is available wherever one has access to the Internet.

This service is cost effective to the SCDOT and to those seeking this information. The department does not have personnel retrieving plans when requested, and the user has access at any location, therefore, not having to travel to a SCDOT facility.

To minimize cost for setting up and maintaining the system, the department charges users a minimal annual subscription fee of \$60. <u>Plans Online</u> is already in use and has gained high marks from its subscribers.

Others states who may not have this system should certainly consider it, and hopefully AASHTO sees this innovative program worthy of the Presidents' Award.

Sincerely,

Joe S. Jones

**Executive Director** 



#### SMITH SURVEYORS, INC.

### CELEBRATING 100 YEARS 6907-C Calhoun Memorial Highway Easley, SC 29640

April 19, 2011

American Association of State Highway and Transportation Officials 444 N Capital Street NW Suite 249
Washington, D.C. 20001

Dear Judges:

Smith Surveyors, Inc is so grateful and excited about the improvements that the SCDOT has made in making Highway/Road Plans in the state of South Carolina available to surveyors online at their website. This information has been difficult to find in the past and involved much time and effort which equates to added expense when doing a survey. The new system along with the Street Finder featured on the SCDOT website allows us to find the roads based on county name and the name of the highway, road or street and the system supplies the state numbers, if the road is maintained by the state. We then move to the Plans Online section of the website and use the number(s) provided by the Street Finder to secure the needed plans. The saving to us is that we do not have to drive to the local DOT offices to pick up copies of plans and we get finished with our work in a shorter period of time which allows us to do more work. This has certainly helped our budget.

When we first were allowed to try the new system we were not sure how well it would work but were very pleasantly surprised at how easy it is to use. The team at the SCDOT is to be commended for their efforts and the execution of a well planned system. They certainly are deserving of the America's Transportation Award.

Sincerely,

Marjorie Phillips

**Executive Administrator/VP** 

Smith Surveyors, Inc

## **Mitchell Surveying**

## P. 0. Box 1051 Woodruff, S. C., 29388

(864) 476-6237

Date:

April 20, 2011

American Association of State Highway And Transportation Officials 444 N. Capitol Street NW Suite 249 Washington, D. C. 20001

Dear Judges:

Recently The South Carolina Department of Transportation has made available Going Live with "Plans-On Line" to the professional land surveyors in South Carolina.

This is a tremendous help to our profession. We can now sit at a computer and access on line highway right-of-way plans for the entire state. No longer do we have to travel to the different county SCDOT offices to get right-of-way information and plans. This reduction in travel time and expenses has resulted in a more efficient use of our time and allowed more of our monetary resources to be used for needed software and equipment updates. This service is also available 24 hours a day seven days a week and no longer do we have to wait for working hours or days.

Many thanks and our greatest appreciation to SCDOT for making this resource available to the land surveyors.

Sincerely,

Joe E. Mitchell PLS 4039

LA WITHER

**THE CONNECTOR • FALL 2010** 

# Plans library goes digital

Your plan is now only a few clicks away

By Bob Kudelka

rom manholes on Main Street in Pickens to drainage ditches along I-26 in Charleston, the details of every state road and bridge are found in 1.5 million sheets of plans stored on Shop Road in Columbia.

For decades, employees and the public had only one way to access plans – and it wasn't easy.

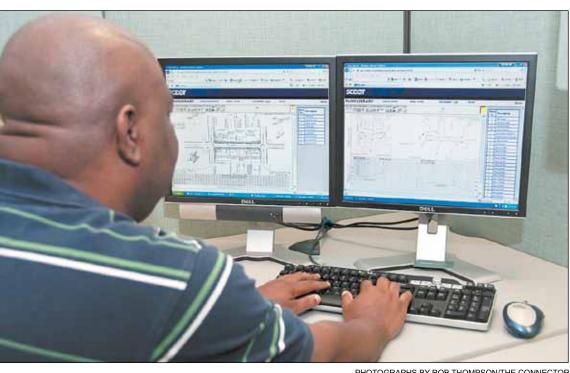
"If you wanted to get a set of plans at Headquarters, there was a card catalogue arranged alphabetically by county," said Charlie Smoak, Hydraulic Design Support Engineer who joined SCDOT in 1974. "There was a deck of cards for each county and road plans were listed by Interstate, US Routes or SC Routes. Secondary roads had many cards unsorted with information.

"You had to go through maybe 30 cards to find the road you wanted, which was a real waste of time. Then you had to reserve the plans, wait a couple of days for them to be delivered from the block house to Headquarters.

"You might find out you got



Mark Lorick files a set of plans that has been scanned into the Plans Online system. More than 1.7 million sheets of plans are stored at the SCDOT storage facility on Shop Road in Columbia.



PHOTOGRAPHS BY ROB THOMPSON/THE CONNECTOR

Calvin Johnson demonstrates how plans are accessed through the SCDOT intranet.

the wrong set of plans and have to go through the whole process again. Only one person could review a set of plans at one time."

In the late 1990s, employees in what was then called Road Design began to dream: Wouldn't it be great if all the plans could be accessed at your computer?

"It was a dream to think about scanning and accessing it," said Peter Yeh, Design Automation Engineer.

The dream was ambitious.

After all, going digital in this case was not a job to be undertaken lightly. SCDOT has the fourthlargest state maintained highway system in the nation. Depending on the length and complexity of a road, plans for one route alone can be hundreds of sheets. That means hundreds of thousands of sheets of plans would have to be converted to digital images.

In 1997, Road Design began scanning and indexing plans, using USC engineering students to help with the tedious process.

And so it began, with plans in Abbeville County scanned first and York County last. One 22inch by 36-inch sheet at a time, taking 4 seconds each.

"The cumbersome part was labeling every sheet and indexing everything," said Mark Lorick, Administrative Coordinator in the Plans Storage Office at Headquarters. "The actual scanning was the easiest part."

As more and more plans were scanned in what became known as "Plans Library," word got around quickly.

"Other offices heard about it and wanted to access it," Yeh said. "In no time, the whole SC-DOT heard about it and wanted to access it."

With a link on the intranet, "Plans Library" became a convenient way for employees to access road and bridge plans simultaneously. "It transformed paper drawings into a digital engineering knowledge base," Yeh said.

The scanning was divided into two parts: "As Let" plans, which are recorded precisely as the contractor was instructed to build a project by SCDOT; and "As Built" plans, which include any modifications during construction.

The "As Let" plans took eight years to scan and were finished in 2005, with 751,760 black and white image files taking up 730 gigabytes of storage. The "As Built" plans are to be finished by the end of 2010 and would contain just over 1 million color images using 2,273 gigabytes of storage space.

This past spring, plans went online for the public to access for the first time through a subscription service. By the fall, "Plans Online," a subsystem of "Plans Library," already had more than 200 subscribers, primarily surveyors and consultants, Lorick

"Plans Online" includes the same plans that employees access on the intranet except for bridge plans, which are not included due to security reasons in the wake of the Sept. 11, 2001, terrorist attacks.

Having the plans online for the public saves DOT time and money in having to look up plans and retrieve them for a customer. It also is convenient for public users to access what they need from their computer.

"It's a great tool," said Jonathan Smith of Sinclair & Associates, a civil architecture firm in Summerville and Duncan. "It's really convenient to pull up a plan at the office or house. I appreciate everybody's work to get it up and running.'

"While in the comfort of my office, I can now get the same information that used to require a drive across the county to visit my friends at the DOT office," said Ben Christensen, a surveyor in Aiken.

Lorick said: "We've had a lot of positive feedback. Everybody who uses it is happy with it."

"I see it as a valuable tool that can be used for in-house employees as well as consultants and surveyors to see our plans and not have to visit Headquarters or one of our District Offices to obtain that information," Smoak said.









SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION.

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Welcome to the SCDOT Plans Online

Plans Online is SCDOT's extranet access to as-let road construction plans of highways on the state highway system. Plans are placed into an electronic archive after projects are awarded to contract which is typically within one month of the highway letting

FAOS

Access to Plans Online is available to surveyors, consultants, and other entities based on a yearly subscription. Please read the Disclaimer and then complete the Subscription process to join.

Username

Logon

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## SCDOT Plans Online Extranet - Search Form



#### **SCDOT Plans Online**

#### Extranet - Search Results

🚺 لاک	10.469	CHARLESTON	S-1035			RD S-265	NORTHWESTERLY	1956-10-31
(i) (ii)	10.498	CHARLESTON	S-1065			RD S-1066(PENNY CIR.)	RD S-51	1956-10-31
W 🕦	10.463	CHARLESTON	S-1000			RD S-63	SUMMERVILLE CITY LIMITS	1959-07-30
W 🕦	10.467	CHARLESTON	S-1006			RD S-726	RD S-1592	1959-08-20
ن نز	10.474	CHARLESTON	S-1028	FAP S-1544 (1)	HARBORVIEW ROAD	SE OF SC RTE 171	RD S-94	1960-05-16
🚺 للو	10.479	CHARLESTON	S-1032	FAP FH-34-B		BERKELEY COUNTY LINE	US RTE 17	1960-04-19
ن نز	10.479.2	CHARLESTON	S-1032	FAP FH 34-B		BERKELEY CO LINE	US RTE 17	1962-04-13
W 🕦	10.483	CHARLESTON	S-1036		BEAUFAIN STREET	RD. S-103 (ASHLEY AVE.)	RD. S-104 (KING ST.)	1960-07-16
نالاً	10.483	CHARLESTON	S-1037		CANNON STREET	RD. S-47 (RUTLEDGE AVE.)	RD. S-104 (KING ST.)	1960-07-16
W 🕦	10.483	CHARLESTON	S-1038		CHURCH STREET	RD. S-1048 (TRADD ST.)	RD. S-1049 (WATER ST.)	1960-07-16
W 🕦	10.483	CHARLESTON	S-1039		DUCAN STREET	RD. S-1044 (PITTS ST.)	COMMING STREET	1960-07-16
JI 🕦	10.483	CHARLESTON	S-1040		GADSDEN STREET	RD. S-393 (BEAUFAIN ST.)	RD. S-555 (BULL ST.)	1960-07-16
نالاً	10.483	CHARLESTON	5-1041		HAMPTON PARK DRIVE	MOULTRIE STREET NLY	RD. S-1030 (CLEVELAND ST)	1960-07-16
ن نز	10.483	CHARLESTON	5-1042		LINE STREET	RD, S-99 (PRESIDENT ST.)	US RTE. 17/52 (MEETING)	1960-07-17

#### SCDOT Plans Online

Extranet - Document Set

	Filename -		Sheet #	Description
۹ 🗓	10.4790001.pdf	1A		COVER SHEET
۹ 🗓	10.4790002.pdf	1		TITLE SHEET
۹ 🗓	10.4790003.pdf	2		TYPICAL SECTION
۹ 🗓	10.4790004.pdf	2A		TYPICAL SECTION
۹ 🗓	10.4790005.pdf	3		INTERSECTION STANDARD
۹ 🗓	10.4790006.pdf	4		SUPERELEVATION STANDARD
۹ 🗓	10.4790007.pdf	5		TRAFFIC CONTROL DEVICES
۹ 🗓	10.4790008.pdf	6		PLAN & PROFILE
۹ 🗓	10.4790009.pdf	7		PLAN & PROFILE
۹ 🗓	10.4790010.pdf	8		PLAN & PROFILE
۹ 🗓	10.4790011.pdf	9		PLAN & PROFILE
۹ 🗓	10.4790012.pdf	10		PLAN & PROFILE
۹ 🗓	10.4790013.pdf	11		PLAN & PROFILE
۹ 🗓	10.4790014.pdf	12		PLAN & PROFILE
۹ 🗓	10.4790015.pdf	13		PLAN & PROFILE
۹ 🕦	10.4790016.pdf	14		PLAN & PROFILE
Q (i)	10.4790017.pdf	15		CULVERT AND BRIDGE