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Tar Heel Church
Construction
Calls for Special
Skills



What Contractors Need to
Learn About Public-Private
Partnerships

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#### What Contractors Need to Learn About Public-Private Partnerships

ARTHUR MURRAY

- The North Carolina Construction News

The mid-February sun pours through the atrium of the gleaming 242,000-square-foot building in downtown Winston-Salem, illuminating and warming the crowd taking the grand tour of one of the newest examples of public-private partnerships in North Carolina. Wake Forest BioTech Place is so new it still glistens in that unseasonably bright sunshine, the diamond in a setting littered by factories and other buildings that once were part of the R.J. Reynolds Tobacco Co. campus that dominated the city.

The \$100 million building is part of

Piedmont Triad Research Park and has been in the works in some form or another since the park began being developed in 1992. About 450 people will work in the building by the middle of next year. The largest tenant, with about 350 of the employees, is the Wake Forest Baptist Medical Center, which has moved its departments of biochemistry, biomedical engineering, microbiology and immunology, and physiology/pharmacology into the new surrounds. Other tenants include Allegacy Federal Credit Union, Carolina Liquid Chemistries and a business incubator.

The project was put together by Wake Forest Baptist, Baltimore-based developer





Concorde Construction completed the adaptive reuse of the Belvedere Theater building into Belvedere Family Dentistry in the Greenway Business Center developed by the Charlotte Mecklenburg Development Corporation. CMDC is a private-public partnership between the City of Charlotte, Mecklenburg County and the Charlotte Chamber of Commerce.

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and owner Wexford Science and Technology, which specializes in research buildings, and strong economic and community support from Winston-Salem, Forsyth County, the state of North Carolina and the federal government. The project was made possible through the state Mill Tax Credits program and federal New Market and Historic Tax Credits totaling about \$34 million. The city and county also joined forces to split the cost of \$6.2 million in infrastructure upgrades. Dan Cramer, executive vice president for Wexford, says those credits were vital to the company signing on for the project in 2009. "We all came in knowing there were credits available," he says. "There's no way we could do this project without this."

Retrofitting of the two former Reynolds warehouses began in 2010 and took about 18 months. Both buildings were stripped to the basic building structure on the interior and refitted with new mechanical, HVAC and electrical systems, fire protection and vertical transportation systems to bring them up to current commercial code standards. More than 1,400 people worked on the project, with about 75 percent of that total coming from local contractors and subcontractors. "The new facility is a wonderful example of the benefits of public-private partnerships designed to breathe new life into once blighted areas," says Doug Edgeton, president of the park.

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## Tar Heel Church Construction Calls for Special Skills



The North Carolina Construction New

North Carolina has long been known for its large faith community, and thousands of churches practice their ministries in large cities and small towns across the state. As a result, it's difficult to find a Tar Heel contractor who has not worked on church related-projects.

But the contractors that regularly build religious facilities realize that these kinds of projects require a particular set of skills and a unique approach that they have carefully cultivated. And in a community where trust is highly valued, and relationships play an even greater role than in other sectors, that cultivation has paid off – not only in terms of the amount of work won, but in terms of self-satisfaction and serving a higher calling.

"These projects are very rewarding – to see how excited the congregation is and to know that we have helped them fulfill their mission," says Mark Dunnagan, vice president, preconstruction services, for Winston-Salem- based Frank L. Blum Construction Company. "More than any other kind of project, it is truly a team effort."

Since 1954, Blum has built 105 religious facilities, generally accounting for about 20-25% of its revenues. Earlier this year the company started construction on a multi-use building for worship and youth/community programs for St. Mary's Episcopal Church in High Point

At Edifice, Inc. in Charlotte, there is an informal group of employees called the Cornerstone Group, who "have a shared passion to help churches be good stewards

of the resources they have," explains senior vice president Bryan Knupp. "It's not just about sticks and bricks, but how those sticks and bricks can best help fulfill the vision of ministry leaders.'

Church-related work accounts for about 20-30% of Edifice's revenues, and it has completed 75 of those projects in the last 20 years across the Carolinas. A recent project is Hopewell Baptist Church in Monroe, completed last July and which was honored with an Award of Merit from the ABC of the Carolinas Excellence in Construction Awards. Other recent projects include Elevation Baptist Church in Knightdale and St. Mark Catholic Church in Charlotte. Both projects won ABC of the Carolina Eagle Awards.

Please see page 4



Hopewell Baptist Church is built on a 17+ acre site in Monroe. The 20,023 square foot building serves as the first of a three phase master campus development.



**Elevation Baptist Church** 

#### **Tar Heel Church**

Continued from page 3

"When you work with churches, you need to be more emotionally and passionately engaged," says Tom Booth, vice president of Hardin Construction Company in Raleigh. "You need to focus on the real work — which is Christ's." About 20% of the company's revenues in the Carolinas is church-related work; projects generally range in size from \$6 to \$30 million.

There are also business and practical differences in how religious facilities get built. They begin even before a contractor is chosen. Although budget and fees are an important focus of the selection process, "that's when the relationship is really started – they want to be comfortable with who is doing their project," says Dunnagan.

The ultimate contract is rarely a pure Construction Management at-Risk or a Design-Build agreement. Knupp calls it "a negotiated team approach – where we all ultimately work for the church. It provides healthy checks and balances."

The contractor also knows that the preconstruction process will be lengthy — perhaps as long as 12-18 months. It's not unusual for it to take longer to plan a project than to actually construct it. For example, Edifice spent four years in preconstruction with Christ Lutheran Church in Charlotte. Now under construction, it'll take about 14 months to construct.

"You have to be patient," Dunnagan comments. "The industry used to pass many preconstruction issues to the designers, but



not any more. It is better for the entire team to address things sooner and be advocates for the owner."

Edifice takes the same approach. "The church brings its wish list, and we bring a reality check. We provide valuable tools to help match their vision to reality," Knupp says. "We respect the architects and work in concert with them, giving them good information in terms of constructability and pricing."

Another reason preconstruction takes so long is that the contractor is typically working with a 6-12-member building committee. It is generally made up of volunteers (and sometimes staff) who may or may not have construction knowledge. The contractor must be prepared for lots of night meetings.

"We are usually about efficiency and how to drive down prices," Dunnagan observes. "But when you are dealing with people with many different points of view who all have a vested interest, the process may not be that cut and dry. So we always build in extra time for preconstruction so we can help them make thoughtful decisions."

Adds Booth, "You have to ask the right questions to get the most insightful answers so you can understand their needs. How many services do they have? How many people attend? What is their past and projected growth? Parking is always an issue. You have to be collaborative."

Although the contractor deals day in and day out with the committee chair and regularly with the full committee, the entire congregation may also get involved. That could mean the contractor makes presentations to the general membership or is available for questions from them. Blum Construction takes a pro-active approach and usually produces a regular newsletter to keep members updated. Hardin schedules hard hat tours for members after construction has begun. Edifice supplies links via their Facebook page to live on-site construction cameras. These cameras communicate, document and share real time construction progress with anyone who wishes to access it. Pastors may also choose to communicate regularly with their congregations though emails or newsletters.

There are lots of decisions to make in the preconstruction stage. Owners of every kind of building have to balance what they want with what they can afford, but it is



often more complicated with a religious facility. "This is about their spiritual lives," says Blum marketing manager Donna Emmary. "They care deeply about how a building will function and look."

"This is the time when critical decisions are made and when budget expectations and scope expectations need to match," Dunnagan notes.

Funding is more complicated, too. A church may begin with an initial fundraising goal, but may not be able to meet it in time or, on the other hand, feel they can raise more or receive an unexpected large donation. Lending institutions' policies vary and have different requirements for how much of the goal the church must have received pledges for or have in hand before monies are freed up for construction.

Contractors don't help the churches raise funds, but they do often help them find financial institutions that are church-friendly and may help them put together their loan application.

Church facilities are often complex structures. Knupp says they are more complex than commercial, retail, office, warehouses or even school buildings.

"Though services are mostly held on Sundays, churches are very active all week long. They use space for lots of different purposes," Booth observes. "They are sophisticated multi-purpose buildings. A fellowship hall may be used for worship and for youth programs, like a gym. It may also need a kitchen. You have to work around that schedule and plan for pedestrian and vehicular traffic flow." Access for disabled church members may also be an issue.

Sanctuaries are no longer simple buildings either. "They have intricate architectural features and complex acoustical and sight-line requirements. It takes a skilled team," Knupp says.

Sanctuaries are also increasingly hightech with sophisticated projection, imagery and lighting equipment that include large screens and video cameras. Some are set up to create streaming video for the web.

Such structures require experienced subcontractors in highly specialized fields, such as building steeples. Sanctuaries require high-finish and highly detailed work, "so not everyone can come in and do it," Dunnagan says.

Booth says it is not unusual for the committee to want to work with particular subcontractors because they have a personal relationship and past experience with the church. "But you have to make sure the church's choices have the necessary experience and skills, or else find ways to engage them in a positive and productive manner."

At the end of the day, the contractors who pursue church-related projects find that the final project is more than worth the hard work to build it.

"Building religious facilities is not for everyone – it's a definite niche," Dunnagan says. "It requires a unique skill set, and you have to like it. And we do."

Notes Knupp, "Commercial work is easier and more profitable, but this is more than a job for us. We get to use our skills to help see God honored at the local ministry level. It's a privilege to use our gifts to build quality facilities that meet their mission needs."

#### **NC Churches Embrace Sustainability**

STAFF WRITER

- The North Carolina Construction News

The NC Sustainable Energy Association reports North Carolina churches are benefiting from sustainable practices. In January, more than 50 clergy, laity and community members gathered at United Church of Chapel Hill for the first Transition Congregation workshop in the nation.

The workshop is part of a larger, global initiative known as the Transition Town movement that aims to reduce local communities' dependency on oil and builds sustainability in the community.

The United Church of Chapel Hill and



North Carolina Interfaith Power & Light, a North Carolina Council of Churches' program that promotes renewable energy alternatives, co-sponsored the workshop.

Furthermore, several churches across the state have gone solar including the First Congregational United Church of Christ in Asheville, Myers Park Baptist Church in Charlotte, Temple Emmanuel in Greensboro, and the Montreat Conference Center in Montreat.

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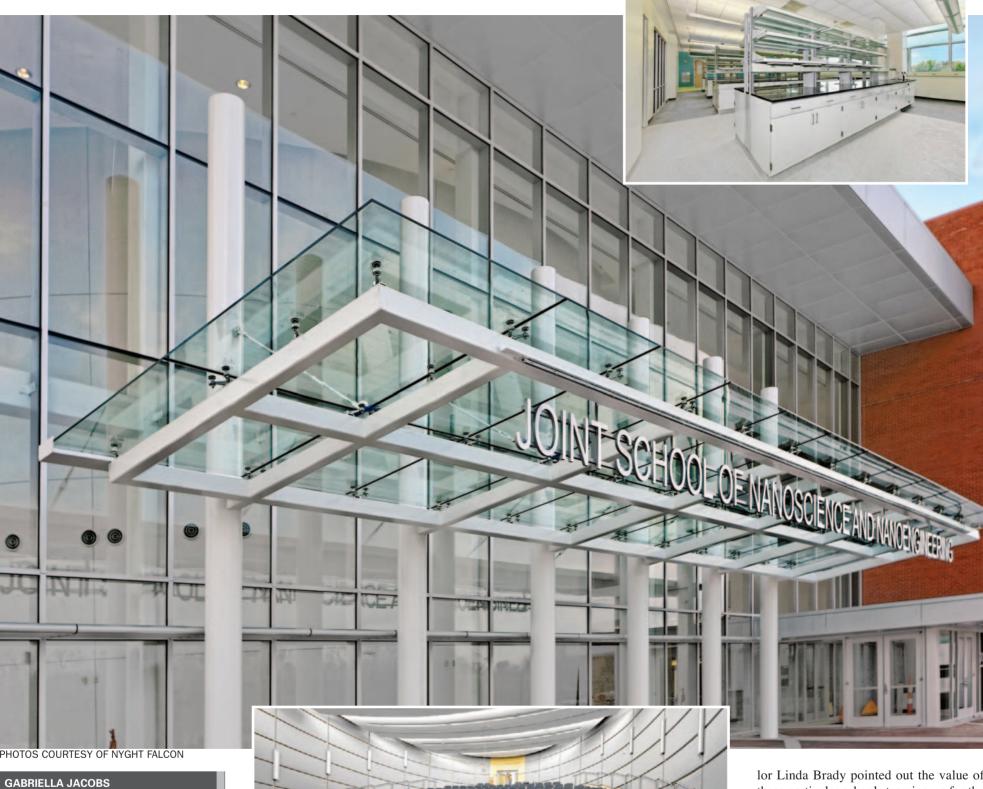




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Nanoscience School Spurs Collaboration and Regional Economic Growth



A coach has a whistle. A symphony conductor has a baton. Both leaders use their special tools to smoothly integrate all the

players into a beautiful whole.

Fortunately, a commercial construction team has Building Information Modeling. That, says Ken Grube of Samet Corp, is largely why the highly complex, \$64 million Joint School for Nanoscience and Nanotechnology (JSNN) in Greensboro was

completed successfully.

The JSNN building, at Gateway University Research Park, is a collaboration of North Carolina A & T State University and The University of North Carolina at Greensboro.. Users of this four-level, 105,000-square-foot building specialize in work at the molecular and atomic level. Nanoscience is the study of atoms and mol-

ecules smaller than 100 nanometers –or about 1,000 times smaller than the width of a human hair. City, county and state leaders anticipate long-range academic and regional economic benefits. They foresee the nanoscience school as a place where state-of-the-art learning and research will occur, sparking innovation and ultimately, business growth that benefits the region.

The JSNN's fellow tenants at the Gateway University Research Park are the USDA's East National Technology Support Center, and Advaero LLC, a composites company that's a commercial spin-off from North Carolina A&T State University's Division of Research and Economic Development.

At the groundbreaking, UNCG Chancel-

lor Linda Brady pointed out the value of these particular schools teaming up for the project. "By leveraging the strengths of our two universities and their historic significance, one, a historically black university, and the other, formerly the Woman's College of the University of North Carolina, we understand that the whole is greater than the sum of the parts," she said, adding it's "a united front for education, economic development and technological advancement."

"The Joint School of Nanoscience and Nanoengineering is an exciting partnership between North Carolina A&T State University and the University of North Carolina at Greensboro that builds on each institution's educational and research strengths in engineering and science respectively. Through our collaborative efforts and the significant

#### **Nanoscience School**

Continued from page 5

investments in world class faculty and educational and research facilities, we are positioned to more significantly aid in enhancing the economic competitiveness of the region through job creation" said A&T Chancellor Harold L. Martin Sr.

Just as the pair of universities came together, a joint venture of construction professionals provided construction services. Samet Corporation, in Greensboro, has been a major player in the southeast construction market for more than 50 years. Its portfolio includes a wide range of industrial, retail, office, education, civic, religious and residential structures. The Barton Malow Company, a Southfield, MI contractor with special expertise in laboratories and research based facilities, and SRS Inc., Gallatin, TN, bringing both private and government work experience, participated in the joint venture.

One of the goals for the project was to have at least twice as many minority-owned companies participate in the project. That goal was not only met but exceeded. John Merrill, executive director of the Gateway University Research Park, reported 27 percent minority participation in







the project. "Gateway was established to promote economic development in the region and success in achieving significant minority participation is just one example of how we achieved that goal," Merrill added. Merrill also noted that more than 95 percent of the subcontracted firms were from the Triad area.

The key to that achievement was doing more than simply advertising for bidders, said Monte Edwards, executive vice president at SRS. "We really engaged the companies, for example, by making phone calls and having mixers to get to know them," he said. The construction managers also helped the companies do necessary paperwork and pre-qualify for bids, he said.

"We set out to engage local, small and minority business owners because that was very important to the owners. It was an express wish of the client, which we thought was great because those are our values, too," added Edwards.

Construction of the JSNN project began in December 2009 and ended in December 2011. At times, as many as

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#### **Nanoscience School**

Continued from page 6

450 workers were on site.

The attractive building, with its glass wall system and sleek angles, has lecture/seminar space, dedicated biophysics, chemistry and related areas, and other modern teaching features. What makes it extraordinary, however, is a 7,000-square-foot cleanroom with nine air handlers, which Grube calls "like a hospital on steroids."

"This was a unique commercial project for anyone in the Southeast United States, because of the technical requirements for a Class 100 level cleanroom," Grube said. Its complexities were far greater than a hospi-

When a project has such unusual requirements, requiring multiple managers and subcontractors, chaos could ensue. BIM ensured it didn't.

"This project had so much piping and ductwork, if we hadn't coordinated it with BIM we would still be building it right now. It eliminated conflicts and kept track of changes," Grube said. "We were able to coordinate in the 3D platform before we put things together in the field. This was a textbook example of the value of using BIM for a project."

AC Corp. of Greensboro was proud to perform the HVAC/mechanical work on the Nanoscience project. Project manager Derek Bull, project manager of the Greensboro-based firm, said the company employed best practices in clean technology from beginning to end in the construction process. "Building Information Modeling

(BIM) 3-D modeling was necessary to ensure all the mechanical equipment fit into a very tight footprint, theoretically saving on change orders, waste and remakes in the field," Bull said.

"Our office is only six miles away from the project site, so we were able to custombuild much of the equipment in our shop. The local economy benefited because all of our people working on the project live in the Triad region," Bull added.

AC collaborated with the general contractor, electrical contractor and engineering team to complete the work on time and on budget.

Greensboro-based Absolute Recycling Contractors (ARC) handled the recycling needs of the high profile LEED project. President Chad Morris said, "The goal of recycling 95% of the waste from the project would scare some companies away, as would the request to paint each dumpster a separate color to ease the separation of recyclables by the crew on the ground. We had fun with it and even decided to make a special camouflaged dumpster as a salute to our troops."

As the project came to a close and all of the information was compiled, ARC had recycled well over the 95% mark set for the project, helping the JSNN achieve 3 points toward LEED certification.

Reflecting on the project, Grube points out that the Greensboro area always has been known as a place for higher education, and the JSNN pushes that into the future. This level of facility and its research capabilities are going to "catapult" the area into the 21st Century. He adds: "It's really going to open some doors."

PHOTO COURTESY OF NYGHT FALCON



#### **New NC Construction News Website**

STAFF WRITER – The North Carolina Construction News

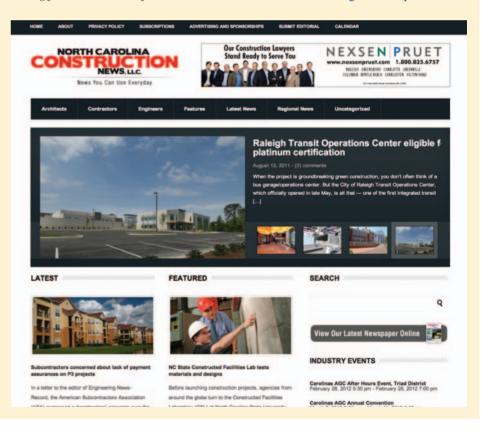
We are excited to announce Qudeso's launch of the new NC Construction News website viewable at <a href="www.ncconstructionnews.com">www.ncconstructionnews.com</a>. Although Qudeso has been working with NC Construction News in a smaller capacity for some time, we were challenged by Bob Kruhm and his team to redesign their existing site in an effort to improve the viewer experience online. Bob and his team expressed wanting to have a site which allowed their readers the opportunity to more easily locate news relevant to them. They also wished to improve on several features though their backend control panel which would allow their writers to more easily manage and post news online.

Below is a listing of some of the new key features and improved user experience you'll notice on the new site.

- Allowance for graphics on Featured and Latest News Articles driving more attention to the primary articles
- Addition of an Events Calendar which displays upcoming events hosted by various associations and organizations within the construction industry.
- Formation of new Article Categories including Architects, Contractors and Engineers
- More simplified navigation
- Improved placement of sponsorship advertisements to increase their exposure without taking away from the news
- Inclusion of Newsletter signup which links directly to NCCN's email campaign system

We at Qudeso would like to thank NC Construction news for the opportunity to partner with them on this project and hope the readers enjoy the new site.

Randall Graham is Co-Founder of Qudeso, a North Carolina-based full service marketing firm. For more information call 877-478-3376 or email rgraham@qudeso.com





#### **Public-private partnerships**

Continued from page 2

Public-private partnerships, in which the government contributes resources - land, money or tax breaks to encourage development and the private partner also contributes to financing, could do more across the state, and contractors are pushing the state for more advances in the process. It's not just a handout. The developments contribute long- and short-term growth in employment, and they also increase the tax value of blighted property.

The city of Durham has benefited from the development of Durham Bulls Athletic Park, the renovation of the American Tobacco Co. campus and other projects. Durham has invested about \$270 million in public funds in the project but attracted \$450 million in private investment. Meanwhile downtown employment has increased from about 3,800 in 1995 to more than 14,000 now. Kevin Dick, director of the



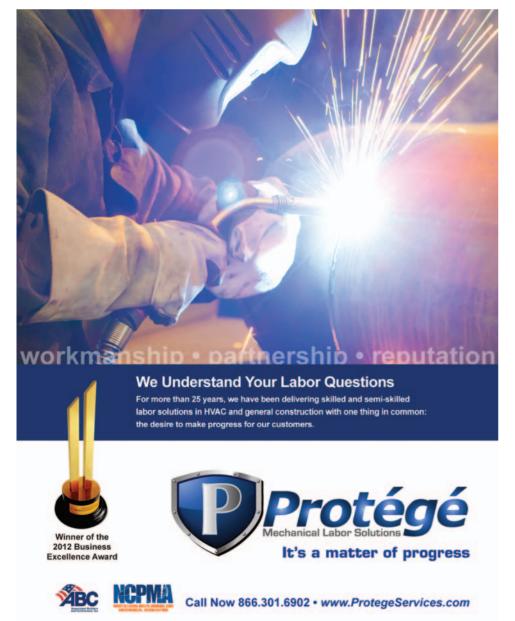
city's Office of Economic and Workforce Development, says it was an easy decision to back the projects. "If government doesn't get involved in these economic-development projects, it doesn't happen."

A similar public-private partnership recently was completed in Charlotte. Earlier this year, Concorde Construction Co. completed the renovation of the Belvedere Theater building in the Queen City into Belvedere Family Dentistry. The theater was built in the 1950s and for many years was the centerpiece for the area that is now called the Greenway Business Center, a 30-acre business park. Concorde worked with the Charlotte Mecklenburg Development Corp. on the project.

As with the efforts in the other two regions, the Charlotte project is expected to rejuvenate a part of the city that had been left behind by progress in other areas. Some contractors in the state welcome the opportunity to work on such projects, particularly during the economic downturn, when purely private projects often have trouble



More than 300 people gathered inside the four story atrium at the grand opening of Wake Forest Biotech Place in the Piedmont Triad Research Park. The 242,000-square-foot research center was renovated and repurposed over the last 18 months by Baltimore-based Wexford Science + Technology. PHOTOS COURTESY OF WIEH PHOTOGRAPHY







The city of Durham has benefited from public-private partnerships that sparked the development of Durham Bulls Athletic Park and renovations of the American Tobacco Co. campus.

PHOTOS COLIBTESY OF IB BOOS

finding financing. A key to the PPPs, some contractors say, is that they do create new funding sources, such as toll roads and parking decks, that they provide for a level playing field for those interested in the construction work and that the construction work otherwise would not have been done.

Perry Safran, founder of the Raleighbased Safran Law Offices, is a backer of the partnerships and hopes they will be expanded. "The key here is successful projects will lead to more opportunity — and government does not have to be the leader, but the process needs more flexibility," Safran says.

That's something everyone agrees on. Where the disagreement comes is in how to provide the flexibility.

The General Assembly has been considering a massive rewrite of the state's laws governing public-private partnerships with some lawmakers looking to a model adopted in neighboring Virginia.

Dave Simpson, who handles N.C. government relations and is the building director for the Carolinas AGC (Associated General Contractors), says the association is wary about change. "We like the idea of public-private construction—if you're talking about construction that otherwise would not be undertaken, there is a level playing field for bidders, since you are asking about public funds, and both sides have financial stakes in the project—that is the private entity provides for financing other than just tapping existing revenues." However, he says, "We continue to have concerns about

making sure there's a level playing field for all qualified people in the construction industry."

In particular, he says, he's concerned that the Virginia model allows for unsolicited bids, in which a contractors can propose unsolicited projects that they've been preparing for months, giving other companies only 60 days to prepare and submit a competing proposal. "You're talking about less transparency, because there's no sealed bids."

Moreover, Simpson says, any changes in the law won't solve the overriding problem - a lack of money for public projects in general. He said previous proposed legislation would allow for another delivery method, in this case design-build, when the focus should be on getting new revenues for design and construction. "We need funding," he says. "There is probably \$10 billion in infrastructure needs out there. The UNC system says it needs \$3 billion by itself. The General Assembly has approved \$120 million for infrastructure needs for the state; it is a proverbial drop in the bucket and even that money is being withheld because of budget issues."

Legislative experts don't expect the Virginia model to pass this year, but there could be tweaks in the process. Simpson just hopes that the changes will include more money for public projects. "We'll continue to monitor the situation very carefully," he says. We'd be having our heads in the sand if we acted like there were enough private projects out there now."

# **Subcontractors Concerned About Lack** of Payment Assurances on PPP Projects

**STAFF WRITER**- The North Carolina Construction News

In a letter to the editor of Engineering News-Record, the American Subcontractors Association (ASA) expressed subcontractors' concerns over the lack of payment assurances on projects financed through public-private partnerships.

"ASA is concerned that existing federal and state laws establishing payment assurances for subcontractors and suppliers may not apply to projects financed through P3s," 2011-12 ASA president Kerrick Whisenant wrote in Subcontractors Raise Issues on P3 Projects" in the February 27 issue of ENR. The letter was in response to ENR's Jan. 30 special report, which focused on P3s.

At the core of the issue is that mechanic's lien laws generally do not apply to construction on public land, but federal, state or local governments often own the real estate on which projects financed

through P3s are built. Meanwhile, payment bonds may be required on contracts awarded by public owners, but the owners or primary contracting entities on P3 projects may be private or partially private. 'Thus, neither mechanic's liens nor payment bonds may provide payment assurances to subcontractors and suppliers on P3 projects," Whisenant wrote. "[Subcontractors and suppliers] pay their laborers, suppliers and taxes even before submitting an invoice for their work to their prime-contractor client. When subcontractors harbor doubts about getting paid for their work, they may choose to charge higher prices to account for their increased risk or simply choose not to bid on such work at all. Ultimately, such projects will either cost more or not have the expertise of the best firms in the construction industry." ASA is educating federal and state legislators about the need for subcontractor payment protections on P3 projects.