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(Board members who also are officers are listed on Page 2)



Louis Berger Group and the U.S. Department of Justice, Federal Bureau of Prisons receives the ACRA Quality Product Award for their comprehensive mitigation project. Above is the former Fairview State Hospital for the criminally insane, part of an institutional farm complex in Canaan Township, Pennsylvania, that was impacted by the proposed new prison. (see Page 14)

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ACRA's Mission

Our mission is to promote the professional, ethical and business practices of the cultural resources industry, including all of its affiliated disciplines, for the benefit of the resources, the public, and the members of the association by:

- promoting and supporting the business needs of cultural resources practitioners;
- promoting professionalism in the cultural resources industry;
- promoting and providing educational and training opportunities for the cultural resources industry; and
- promoting public awareness of cultural resources and its diverse fields.

A basic tenet of ACRA's philosophy is the cost efficiency of private-sector firms in meeting the need for expertise in cultural resource management. ACRA is strongly opposed to unfair competition from tax-supported contracting programs. We believe that a greater benefit to society, and to the resources, derives from the existence of a healthy community of tax-paying, job-generating, private-sector CRM businesses.

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MESSAGE FROM THE PRESIDENT

Submitted By Ian Burrow

Most people, myself included, dislike change. Like it or not, change is coming to the American Cultural Resources Association. By the end of next year we need to have a new system in place for managing ACRA, once Tom Wheaton retires as our Executive Director.

How are we going to do this? We have set up a strong Strategic Planning Committee, chaired by immediate Past-President Chris Dore. This committee is charged with clarifying the vision for the organization over the coming years, and with presenting the Board with a firm recommendation for the management structure by the end of this year.

While this will be a difficult task, it is also a tremendous opportunity for us to stand back a little and think about what we want ACRA to be.

In my year as President-Elect I became increasingly aware of the unique and increasingly respected place ACRA has in the historic preservation/ CRM community at the National level. Through our consultant Nellie Longworth we have our finger on the pulse of events in Washington. The dedicated work of Jo Reese earned us respect and fair hearing in the development of the Federal Communication Commission's (FCC) Programmatic Agreement (PA) on what will continue to call "cell towers." Our personal representations to the Small Business Administration on the potentially harmful impact of their proposed changes on some of our members were instrumental in getting the changes withdrawn for revision.

It's obvious we will have to continue to be vigilant. The FCC's PA contains provisions that could set a precedent for circumventing some aspects of Section 106 compliance. Strenuous efforts have recently been made in the House of Representatives to avoid all environmental mandates for the border security fence near San Diego, predictably portraying those who oppose such waivers as soft on national security and terrorism. We know that there are members of Congress and property-rights advocates who are looking to substantially weaken federal legislation protecting cultural resources.

This public, national role for ACRA, will remain a central concern. But ACRA's mandate is to serve its members in other ways too. Some current activities:

- Next year we will be undertaking another of our salary surveys of the CRM industry. This provides member firms with very useful information not obtainable elsewhere

- We are working actively with SRIF on the development of the Business of CRM Workshop: survey results for this workshop are in, and we have a good sense of the best way to market these now (regional meetings appear to be the best venue).
- We continue to press for better coverage of CRM in higher education, and are close to producing tabulated information on all the CRM programs we know about.

For me, the biggest member benefit remains the Annual Conference. Those of us who attended the meeting in Riverside, California, a few weeks ago, experienced the usual combination of stimulating and out-of-the ordinary sessions on different aspects of our profession, the convivial company of our fellows in CRM, and an interesting venue (the Mission Inn is one of the greatest buildings I've ever been in). Many thanks to Jeff Altschul and Statistical Research, Inc., and to ESRI for their organization and sponsorship of this great meeting.

Our 2005 conference, in Washington D.C. on 8th-12th November, promises to be a special event. Our very first conference was in D.C., and 10 years later we are coming back. This time we are planning to showcase ACRA to legislators and decision makers, and you will have opportunities to meet with these people, help them understand how important our work is, and to communicate our unique perspective as private companies in the public realm. If you've never been to an ACRA conference before, this is the one to attend!

Between now and then, however, I am appealing you to spend some time thinking about ACRA's future, and how you think we can best manage the organization so that it supports us all in our companies, and fights for CRM at the national level. There is already a good conversation in progress on our members-only list serve. We need everyone's input. Please pitch in, or email me (ianbacra@msn.com) or Chris Dore (cdore@srircrm.com) with your thoughts.

I'm honored to be serving as President of ACRA during this time of change. On a personal note, it is very gratifying, as an immigrant from the UK who knew very little about all this back in 1988, to be entrusted with such a position. Chris Dore did a terrific job last year, making my transition much easier. I believe in this association and I hope you do too.

GOVERNMENT RELATIONS COMMITTEE ANNUAL REPORT

Submitted at the annual Redlands Board Meeting, September 30, 2004, in Redlands, California.

Cell Tower Subcommittee

This subcommittee committee has been very active and has submitted a separate report (see Page 5).

Competitive Outsourcing Subcommittee

This subcommittee has been inactive as the White House weakened congressional bills for outsourcing.

Sacred Lands

HR 2419 is not currently under consideration and the subcommittee has been inactive. Tom Lennon was asked if he wished to remain on committee.

Information on a proposed tribal data base mapping project was passed on to the membership on January 5, 2004.

Government Contracting Subcommittee

Colin Busby still on subcommittee, Mike Polk has resigned. Joe Trnka added to committee in January.

Major activities:

- ACRA supported Pennsylvania CRM firms in their fight to repeal PA Senate Bill 879 (known as ACT 70). On October 20, 2003, ACRA's President sent a letter to Governor Edward Rendell and approximately 20 key representatives and senators outlining ACRA's position. It is ACRA's position that Pennsylvania taxpayers should be subsidizing permit requirements for privately funded developers, that business opportunities should be restored to private-sector CRM

contractors, and that cultural resources should be considered in the project review process. The full letter was placed for review on the ACRA website.

- Mike Polk, former chair of this subcommittee, put together a NPS forum for the Redlands conference. If this committee is to continue, an interested committee head must be found, probably from the west.
- Small Business Administration (SBA) Proposed Changes. SBA proposed changes to the definition of a small business that would have affected the majority of small and medium sized ACRA firms. ACRA officers met with SBA officials on May 4, 2004. An announcement on this issue was published in the April ACRA Newsletter.
- Alabama Historical Commission. ACRA sent a letter to AHC questioning their workshop on training archaeologists to conduct architectural surveys.
- National Trust Amicus brief. ACRA agreed to join National Trust in signing the Southard v. Pye brief; however, the brief has been tabled.
- On June 18th, ACRA responded to letter from ACHP dated May 28th soliciting input on archaeological issues.

Congressional legislation

Nelly Longworth has prepared a status report (see Page 8).

CELL TOWER SUBCOMMITTEE ANNUAL REPORT

By Jo Reece, Chair, Cell Tower Subcommittee

Since March 2004, which was my last summary for the Government Relations Committee and ACRA Board, the focus of the Subcommittee has continued to be the Nationwide Programmatic Agreement regarding Section 106 Review on the FCC's Undertakings. At that time, the Telecommunications Working Group meetings were done. The cellular, broadcast, and tower industry representatives were lobbying individual commissioners and their staffs, which you could see from the ex parte filings at the FCC's website tracking comments on the proposed programmatic agreement.

The FCC has made an effort to include tribal governments in the process, perhaps because the lack of including tribes was holding back the Advisory Council on Historic Preservation (ACHP) from approving the agreement. They have developed a web-based system that tribes can use to ask that proposed undertakings in a particular area be reviewed by them.

The industry had a number of issues, beginning with a disagreement that the Section 106 process even applies to the cellular industry. Most recently, it seems that an agreement on the wording of particular exclusions (sites to be exempted from any Section 106 review) has been made, with the help of the National Trust. Among the industry groups has been the Wireless Coalition to Reform Section 106 (headed by John Clark of Perkins Coie), but other short-lived groupings of different companies have formed to collectively argue for their positions to the commissioners.

A PA has not been issued since the FCC's public version in June 2003, but it has continued to be modified, undoubtedly. As of September 10, 2004, the FCC signed the Nationwide PA and had sent it on to the National Conference of State Historic Preservation Officers and the Advisory Council on Historic Preservation for their signatures. It is expected to be officially completed by the end of September. It is not expected to become public until that time.

Subcommittee Members:

Jo Reese (Chair), Archaeological Investigations Northwest, Inc.

Aaron Smith, Cultural Resource Analysts, Inc.

Marion Almy, Archaeological Consultants, Inc.

Nellie Longworth

THE FEDERAL COMMUNICATION COMMISSION (FCC), NCSHPO AND ACHP SIGNED THE PROGRAMMATIC AGREEMENT ON TELECOMMUNICATIONS TOWERS

By Nellie L. Longsworth

After almost three years in discussion between the wireless industry, the Advisory Council, the National Conference of SHPO, tribes, the FCC and interested groups including ACRA, the Programmatic Agreement has been signed and will go into effect later this year.

The last meeting of the group took place in January 2004 and, since then, comments have been received and industry has aggressively pushed to further streamline the process. Some have challenged the broad definition of "undertaking." Others, including the Congress, have noted that for Section 106, the Council was originally limited to consider only properties determined "eligible for the National Register" by the Keeper. Over the years, the process has evolved and the determination of eligibility has become the responsibility of the applicant...the industry complains that this requirement is an unnecessary financial and time-consuming burden.

The current PA has redefined the mechanism for identifying historic properties. Applicants responsibility for determination of historic properties within the APE (Area of Potential Effect) are limited to the review of 5 sets of records available in the SHPO/THPO offices or are publicly available sources identified by the SHPO/THPO. They include:

1. Properties listed on the National Register;
2. Properties the Keeper has determined are eligible for the National Register;
3. Properties in the process of being nominated to the National Register as certified by the SHPO/THPO;
4. Properties that SHPO/THPO records have previously been determined eligible by a consensus of the SHPO/THPO and another Federal agency or local government representing HUD;
5. Properties within the SHPO/THPO inventory evaluated by the SHPO/THPO and found to meet National Register Criteria.

Finding none of the above within the APE, the applicant does not have to identify historic properties nor evaluate the significance any identified properties within the indirect (visual) APE. However, the applicant in finding historic properties through the above process will provide a list of identified properties to the SHPO/THPO and consulting parties. As a safeguard, the SHPO/THPO may find that the APE includes other properties that are considered eligible for the National Register and these will be taken into account for effect. For tribes and their concern about traditional cultural and religious sites, the FCC or applicant will assist in evaluating such significance and this can include a field survey.

A further area of concern to the CRM industry is that surveys will not be required if an undertaking is unlikely to cause direct effect on archaeological resources. Disagreements on this will be referred to the FCC. Specifically, a survey

will not be required when construction will occur on ground that has been previously disturbed to at least two feet. A survey will also not be required when geomorphological evidence indicates that cultural-resource bearing soils do not occur within the project area nor may occur at greater than two feet below the proposed construction depth.

In a victory for ACRA's participation in the working group, the PA recommends that experts who meet the Secretary of Interior's professional qualifications do identification, evaluation, and assessment. The PA does not require Secretary-qualified experts to carry out Section 106 or determine when there are historic properties within the indirect (visual) APE but encourages the use of experts with relevant experience. Professional archaeologists are to be used when doing archaeological work and other professionals are to perform historic building and structure work.

The FCC PA can be downloaded from www.fcc.gov. Scroll down the center section to 10/06/04 – FCC Adopts Nationwide Programmatic Agreement for Streamlining Review Process for Communication Towers.

10TH ANNUAL ACRA CONFERENCE NOVEMBER 8-11, 2005

The 10th Annual ACRA Conference will be held at the Hotel Monaco, Washington D.C. Next year's conference, which will focus on government issues, is scheduled to start one day early, on Wednesday, to afford attendees an opportunity to meet with their legislators.

The Hotel Monaco is the former Tariff Building, built in the mid-nineteenth century. This Registered National Landmark is Washington, DC's first all-marble building. For a preview of the hotel visit www.monaco-dc.com



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LEGISLATIVE UPDATE - A YEAR IN REVIEW

By Nellie L. Longworth, Consultant to Government Affairs Committee

The Government Affairs Committee of ACRA has had a busy year responding to legislative and regulatory initiatives that could benefit or become a serious detriment to the cultural resource management industry. In some cases, we have operated with members of the Board and their consultant. In other cases, we have joined other groups on joint letters and communications to show the extent of proposed legislation on our profession.

Communicating with the Congress has become a task in itself. Letters now sent through the mail take weeks to get through the equipment to determine that they are safe for the recipient. Email has become so prevalent that members and staff are deluged. Faxes work the best, even though they require sending them in the middle of the night to insure that they get through without repeated busy signals. Of course, personal meetings are still the best contacts, though the expanded security and closed streets add many minutes to accessing government and congressional office buildings.

The issues have included new rules at the Small Business Administration, continued work on the FCC programmatic agreement, FY05 appropriations, the Highway bill, and others. The Congress and Administration have held all the cards with GOP majorities in each. The Advisory Council has undertaken an archaeology initiative and has included ACRA in the project. The Preserve America Program has captured the attention of the White House through ACHP Chairman John Nau and the First Lady has recognized 169 Preserve America communities throughout the nation.

The election – both the White House and the Congress – will prelude a most interesting year ahead.

ISSUE: **Small Business Administration Proposed New Size Standards**

Last spring, the Small Business Administration (SBA) published a change in rules in the Federal Register for determining eligibility for federal small business set asides. The change was to scrap the current reliance on gross receipts in favor of using the number of employees, including temps, as the determinant. Instead of basing small business on \$6 million in gross receipts or less, eligibility would be based on 50 or fewer employees. In effect, this meant that CRM firms making significantly less than \$6 million could be considered large businesses due to temps and seasonal employees and, therefore, would be unable to compete for the SBA set asides.

Nellie Longworth arranged a meeting with Gary Jackson, SBA Assistant Administrator for Size Standards, that included President Chris Dore and President-Elect Ian Burrow. The meeting went well with ACRA stating clearly our concerns about the proposed change. ACRA's concerns were taken seriously by the SBA administrator and the Office of Advocacy. The visit – reinforced by letters from many ACRA firms – led to action by the Office of Advocacy to withdraw the proposed rules and go back to the drawing board.

The proposed rules were withdrawn on July 1, 2004, and the staff has begun revising the rules. It is hoped that an advance notice of rulemaking will be published in the Federal Register before the end of the year. A series of public hearings is planned throughout the country with small business and trade associations being invited to attend. ACRA's concerns were echoed by others.

ISSUE: FY05 Interior Appropriations – Historic Preservation Fund, BLM, NPS, LWCF

Congress has been stalled on many issues as elections approach, including an energy bill, the SAFETEA Transportation measure and the FY05 appropriations. Only one of 13 appropriations bills has been completed to date that lays the groundwork for many thousand-page omnibus bills, which are loaded with special interests.

Fortunately, the Interior FY05 Appropriations measure was completed in the House last summer and the Senate finally completed appropriations committee consideration last week, paving the way for a Senate floor vote. The table below shows the action to date that is not terribly encouraging but does reflect the

budget crisis facing our nation at this time. It does, however, insure that States' offices will be funded, tribal programs will have operating money and Save America remains a popular program with both Administration and Congress.

The Advisory Council funding in the House bill is \$4.6 million, 0.6 million above the current authorization. There will be a strong effort to complete their reauthorization measure by September 30, 2004 (HR 3223, S2469), which would create permanent funding "as may be necessary to carry out this Title."

..continued on Page 10

Interior / Historic Preservation Fund FY05 Appropriations to Date

	<u>FY04</u>	<u>President 05</u>	<u>House 05</u>	<u>Senate 05*</u>
SHPOs	\$34.5 mil	\$34 mil	\$34.57 mil	\$38 mil
Tribes	\$2.9 mil	\$3 mil	\$2.963 mil	\$3.25 mil
Save America's				
Treasures	\$33 mil	\$30 mil	\$30 mil	\$30 mil**
HBCU	\$3 mil	0	\$4 mil	0
Trust Sites	\$.5 mil	0	0	0
Preserve America	N/A	\$10 million	0	0**
HPF Totals	\$73.9 mil	\$77 mil	\$71.533 mil	\$71.25 mil
BLM	\$1.66 bil	\$1.759 bil	\$1.700 bil	\$1.766 bil
NPS	\$2.327 bil	\$2.360 bil	\$2.270 bil	\$2.360 bil
LWCF	\$445,000	\$314,000	\$140,000	\$552,000

* Senate has completed Appropriations Committee action, but not voted on the measure on the floor – changes are possible

** The Senate showed interest in Preservation America but due to tight fiscal times, did not appropriate (but mentioned) \$2 million of Save America's Treasures monies for Preserve America.

ISSUE: SAFETEA Highway Reauthorization.

TEA21, the nation's Highway bill, "sunset" on September 30, 2003. However, four extensions have moved the deadline for reauthorization to September 30, 2004, and there are many who doubt that SAFETEA will be finalized this year.

Both House and Senate have passed versions of SAFETEA and 83 conferees have been working to produce a compromise on bills that are far apart on many important issues, including the total 6-year funding level. All negotiators are unhappy with the Administration's refusal to move from their \$256 billion total 6-year funding level. Late word is the conferees are talking about a \$299 billion cap, with \$284 billion in guaranteed funding. Proponents of a 95 per cent return on their state gasoline trust fund contribution, including Sen. McCain, are raising red flags that it is not possible at the \$299 billion level. The House had originally requested total funding of \$283 billion and the Senate \$318 billion.

Areas of greatest interest to ACRA are retaining Section 106 and 4(f) in a meaningful "streamlined" way, supporting monies to the States to cover environmental review activity, and developing a maintenance policy for the National Interstate Highway system that takes into account its eligibility for listing the National Register.

Action Taken:

Position on environmental review: When Section 106 is undertaken and produces an agreement in writing by SHPO/TPHO, this will satisfy review and 4(f) will not be needed. If there is disagreement on the findings of Section 106, 4(f) will be required. 4(f) is required for all National Historic Landmarks

Joint letter with Society for Historical Archaeology (SHA) was sent to the House and Senate Committees February 3, 2004. On March 2,

2004, letters were faxed to all 12 members of the Senate Environmental and Public Works Committee, Subcommittee on Transportation and Infrastructure and 75 members of the House Transportation and Infrastructure Committee. ACRA joined with AASHTO, National Trust, NCSHPO, Preservation Action, SHA and SAA to send letter to all 83 conferees in support of Voinovich Amendment in the Senate bill.

The concluding action by the 108th Congress on SAFETEA was to extend consideration for eight months - May 2005.

ISSUE: Archaeology Initiative of the Advisory Council on Historic Preservation.

In May, the Advisory Council on Historical Preservation (Council) announced an archaeological initiative that would explore three areas: specific guidance on a variety of topics to assist users of the Section 106 process, revisions to the ACHP's 1988 policy on human remains and grave goods, and strategies to capitalize on archaeological resources for heritage tourism and public educational opportunities. The Council has invited comments from the professional archaeological community including the ACRA.

Action Taken: Ian Burrows, as President-Elect sent comments from ACRA to the Council as did professional archaeological organizations. The Council is now requesting responses from tribes and State Archaeologists, hoping to have a compilation of issues to present to the Council at its November meeting in Charlottesville, VA.

ISSUE: Reauthorization of the Advisory Council on Historic Preservation (ACHP) – HR 3223, S 2469

The current authorization for the ACHP is for \$4 million through FY05 (September 30, 2004). The FY05 President's budget requests \$4.6 million, a level sustained by the both the full House and Senate Appropriations Committee.

Two bills - HR 3223 and S 2469 - have been introduced and were the subject of a hearing last summer. The bills are identical and seek the following changes:

- Three new members will be appointed, which will increase the quorum to eleven.
- A designee may sit in for the Governor.
- Authorization for funding would be permanent and includes the language "such amounts as may be necessary to carry out this title."
- Financial and Administrative Services can be provided by the DOI or another agency or private entity that makes an agreement with the Council.
- The Council would be given authority to solicit as well as accept funding.

Lastly, the Council can enter into a cooperative agreement with any Federal agency that administers a grant or assistance program for the purpose of improving the program in meeting the purposes and policies of the Act, can review and evaluate Federal Grant programs and make recommendations to the head of any Federal agency, the President and Congress on the effectiveness of the grant programs, including recommendations for appropriate funding levels.

All parties interested in this measure have decided it would be unnecessary to push for enactment in this Congress since both House

and Senate have supported a funding level of \$4.6 million for FY05 without an increase in the authorization level.

ISSUE: Other Federal Legislative Issues Being Monitored

The measures being monitored include the Indian Contracting and Federal Land Management Demonstration Project Act (Senate), The Hibben Center for Archaeological Research (Senate), an increase in penalties for violations of ARPA and NAGPRA (Senate), Galisteo Basin Archaeological Protection Act (passed in the Senate), and Native American Sacred Land Bill (House). Nellie Longworth has the lead on these bills.

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GEOPHYSICAL SURVEY IN ARCHAEOLOGY

Submitted by Education Committee, White Papers Subcommittee

Overview

Geophysical survey in terrestrial archaeology most often refers to ground-based subsurface mapping using a variety of different sensing technologies. Those most commonly used in archaeology are magnetometry, electrical resistance, ground penetrating radar (GPR) and electromagnetic (EM) earth conductivity. These technologies provide excellent resolution of many types of archaeological features, are capable of high sample density surveys of very large areas, and of operating under a wide range of local conditions. Other established and emerging sensing technologies are also finding use in archaeological applications.

Geophysical survey has long been a standard archaeological tool of archaeology in Europe, particularly Great Britain. Despite early beginnings, it is only slowly gaining acceptance in North America. This is in part because North American archaeology poses unique challenges that have spurred the development of instrumentation and survey design. With an increasing numbers of skilled practitioners and the development of equipment and methodologies suited for North American sites, highly successful surveys are becoming the norm.

No geophysical survey method should be applied indiscriminately. Soils, geology, surface conditions, vegetation and terrain, expected feature type, size, composition, and depth, modern impacts, and many other factors must be considered in determining feasibility, appropriate instrumentation, and a cost-effective survey design. Although mathematical models may be applied to survey design problems, field conditions are difficult to quantify. In spite of ongoing progress, initial site assessment remains largely subjective, as does the interpretation of survey results. Archaeological and geophysical knowledge and geophysical survey experience remain critical in understanding how the archaeological record is expressed geophysically.

The use of multiple methods is good practice in most field applications. Because each geophysical method responds to different soil properties, multiple data sets are complementary rather than redundant. One type of cultural

feature, for example a plowed down mound, may be readily detected with one type of instrumentation (i.e. resistance and earth conductivity) and largely invisible to another (i.e. magnetometry). Again, differing geophysical imaging of a cultural anomaly by different technologies may enhance the interpretation gained from by a single technology. For example, a resistance high might correlate with a bipolar magnetic anomaly, identifying (depending on the cultural context) a possible hearth, whereas either anomaly by itself would be ambiguous.

Most ground-based surveys divide a survey area into a series of square or rectangular survey "grids" (terminology can vary). Each grid is surveyed by taking readings at regular intervals along regularly spaced transects. Successive transects are surveyed until the grid is completed. The value and position of each data point is recorded, generally automatically and in digital format, and the data are handled and analyzed using computer software. Occasionally, geophysical instruments are also used for less formal "scanning" of areas of interest.

Application concerns

Cost Efficiency

Continuing advances in equipment design have made it possible to survey large areas quite rapidly, while simultaneously improving the quality and resolution of results. As a general rule, the cost of doing geophysical surveys (measured by the area covered) has been steadily going down while the resolution of these same surveys (measured in density and accuracy of readings) has been going up. When this cost is factored into the overall cost of doing archaeological research (using, in addition, traditional techniques), both that overall cost can be reduced and the quality of the results can be enhanced through the incorporation of geophysical survey technologies. For example, the cost of a geophysical survey may often be offset by a reduction in the cost of required exploratory excavation and associated analysis and curation. Furthermore, a high-resolution geophysical map can allow researchers to more tightly tailor research

design to site conditions resulting in a more appropriate sample of excavated data with a limited budget. Geophysical methods have been most typically employed on large, complex sites as elements of long-term research designs. However, geophysical survey can be an extremely effective (and cost efficient) approach for studying smaller or more ephemeral sites as well. It fits well into contemporary cultural resource management archaeology structured around Sec. 106 evaluation both because it can reduce the costs of evaluation and, at the same time, provide a more accurate assessment of archaeological significance.

Survey speed (and therefore cost) is heavily dependent on logistical factors such as survey design, vegetation, and the layout of the survey area, and these should be anticipated in the planning process. The cost of crop damage, if it cannot be avoided, should be considered as well.

Data Sample Density

Data sample density, often expressed in samples per square meter, determines the effective resolution of a survey as well as the rate of coverage (although this is being offset by equipment advances). Sample density is therefore a compromise between cost and the likelihood of resolving anticipated features of interest. No meaningful consideration of survey design or budget can occur without considering sample density. Although appropriate sample densities differ between each instrument, the sample interval should be proportional to the scale and contrast of anticipated features. Appropriate transect intervals for mapping of archaeological features typically range from 0.25 to 1 meter, with multiple readings per linear meter along each transect.

Fast and efficient reconnaissance surveys over a very large area are sometimes employed. These may be used to define areas with a high probability of containing archaeological features that can then be subjected to more rigorous (and expensive) high-resolution survey strategies. Reconnaissance surveys may also be used to define the extent of an occupation or more ephemeral landscape patterning such as ancient boundaries, roads, trails, drainage or irrigation systems, and fields, even where no tangible archaeological features survive. Reconnaissance surveys typically apply different geophysical methods than

standard high-resolution survey (topsoil magnetic susceptibility for example), and employ a sampling strategy that is considerably coarser, with transect intervals ranging from one to ten meters.

Spatial Control

The usefulness of survey results depends on accurately locating cultural anomaly sources within the survey area. Accurate and repeatable spatial control is critical in both grid layout and data collection. It is strongly recommended that the survey grid system be permanently referenced using corrected GPS, permanent datums, or other suitable means. Whenever practicable, the geophysical survey grid should use the same coordinate system as the site grid used for other types of archaeological exploration.

Interpretation of Geophysical Survey Results

The results of a geophysical survey are generally presented graphically. This is because anomalies of cultural origin are often recognized by their spatial patterning rather than by their numeric values alone. In a graphic form, it is easier to recognize cultural patterns, distinguishing them from natural patterns where they exist, and easier to visualize the physical phenomena causing the detected anomalies. Interpretation of survey data must be an ongoing process involving both archaeological geophysicists and archaeologists that are familiar with the specific cultural and geological context.

Rarely are geophysical phenomena explicitly interpretable. While cultural interpretations may sometimes be posited based on geophysical data, these should be considered hypothetical and subject to testing. Some level of ground truthing (limited invasive exploration) is generally required as part of the interpretive process. This may use a variety of traditional archaeological exploration techniques, including probing, coring, surface stripping, trenching, shovel testing, or formal excavation. A successful testing strategy is rapid and systematic, minimizes impact to the site, and considers areas with negative geophysical results as well as apparent anomalies. The testing strategy should be designed to address specific questions bearing upon the interpretation of survey results, for example:

..continued on Page 14

- Have preliminary interpretations correctly identified archaeological features?
- Can more ambiguous anomalies be identified (or dismissed) as archaeological features?
- What is the specific physical composition of the features?
- Can the cultural and geological contexts of the features be better defined?
- What is the state of preservation or integrity of the features?

Insights gained into the archaeological record, feature composition, and geology inform all subsequent stages of interpretation and research. Because interpretation has both physical and cultural aspects, continuing collaboration between archaeologist and geophysicist is very important. The results of geophysical surveys and ground truthing should always be used in conjunction with other available sources of information to understand the general site context, to locate features for excavation, and to understand the results of excavation within the greater site context.

Integrating Geophysical Methods

Geophysical methods are most successful as part of an integrated, flexible, multi-stage research design. Planning for geophysical survey should be considered from the inception of a project, and the potential information that geophysical data may offer should be anticipated. Planning of a hypothetical project might anticipate the following stages:

- Define research goals
- Site reconnaissance, sample collection
- Assess feasibility
- Develop appropriate survey design
- Conduct survey
- Develop preliminary interpretations
- Ground truthing
- Refine interpretations
- Excavation
- Model site context integrating excavation, geophysical, environmental, historical, and other available data

Flexibility must be designed into every stage of the research program, as survey findings cannot be reliably predicted, and because each stage will inform subsequent stages.

Close communication should be maintained between archaeologist and geophysicist throughout the research program. The insight of the geophysicist into every stage of planning and interpretation can be invaluable. The archaeologist can also contribute significantly to the field of archaeological geophysics. Data from ground truthing and excavation are critical to ongoing progress in understanding the relationship between geophysical data and the archaeological record, and improvement in survey methods and techniques. Minimally, the geophysical surveyor should be supplied with reports of archaeological investigations associated with their work.

As geophysical methods become increasingly common, their future use should be anticipated even when they are not part of current research plans. Noting conditions that might affect geophysical methods and collecting small samples of soils, rock, and cultural materials may be invaluable in the future. Very critical, and often overlooked, is the effect of –metal artifacts left on sites by archaeologists themselves. Wire pin flags, nails, datums, etc. that are deliberately or accidentally left on sites, can have a very detrimental effect on magnetic or electromagnetic data. Whenever possible, plastic, wood, or aluminum substitutes should be used for these items. It is hoped that these considerations will be reflected in standard archaeological practices in the near future.

Specialist Standards and Training

Although there have been valuable geophysical surveys performed by non-specialist archaeologists, a high degree of training and experience is necessary to achieve consistent success. The cost of geophysical instrumentation can also be prohibitive. Archaeological geophysics is quite distinct in its emphasis and methods from other geophysical disciplines. The demands of extremely high resolution of generally shallow and very subtle phenomena have resulted in a very different methodology than that of other applications of geophysical sensing. Practitioners must also have an understanding of site formation, site structure, feature composition, and

archaeological method and theory in order to make competent cultural interpretation and recommendations.

At this time, practitioners of archaeological geophysics come from a diverse range of backgrounds, as there has not been, until recently, formal specialist training in this field in the United States. Criteria for selecting a practitioner might include:

- A demonstrated ability to conduct a technically competent and cost-efficient survey
- A demonstrated ability to make reasonable cultural interpretations and recommendations based on geophysical data
- Effective reporting and meaningful post-survey support
- A record of success in survey and interpretation in a variety of physical settings and site types
- Success in cultural and physical contexts similar to that of a proposed project
- Consistent use of a flexible, and site-specific approach to research design integrated with traditional archaeological field techniques

In recent years, a number of universities in this country have begun offering training and degree programs in archaeological geophysics. These programs are certain to result in the evolution of standards and greater use and availability of geophysical techniques.

Online Resources:

North American Database of Archaeological Geophysics
<http://www.cast.uark.edu/nadag/>

Geophysical Data in Archaeology: A Guide to Good Practice
<http://ads.ahds.ac.uk/project/goodguides/geophys/>

Geophysical Surveys in Archaeology: Guidance for Surveyors and Sponsors
http://www.cecer.army.mil/techreports/Hargrave_ATAGS/Hargrave_ATAGS.pdf

This White Paper represents a consensus based on contributions by archaeological geophysicists employed by several firms within ACRA.

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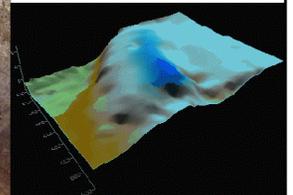
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LOUIS BERGER GROUP RECEIVES ACRA'S QUALITY PRODUCT AWARD

By Charissa Wang, Chair Awards Committee

The 2004 ACRA Awards luncheon presentation took place in the Galleria of the Mission Inn. The guest speaker and presenter was Ian Burrow, Vice President of Hunter Research, Inc., and incoming president of ACRA.

This year's jury was pulled from diverse geographical locations and backgrounds. Vivian Majtenyi, a historic architect with Hardlines Design Company in Columbus, Ohio, specializes in the documentation and renovation of historic buildings. Patrick O'Bannon, Director of Historical Research Associates' Cultural Resources Division, is a former president of ACRA and the National Council on Public History, and has nearly three decades of experience in CRM. Loretta Lautzenheiser, President and owner of Coastal

Carolina Research, Inc., a company of cultural resources professionals based in Tarboro, North Carolina, is also a former president of ACRA.

Each year, jurors have the option to NOT make an award in a specific category, if they feel the nomination did not demonstrate work or goals that are innovative, substantial, comprehensive, or otherwise unique. This year, for the first time, jurors chose to exercise this option. ACRA's award categories are for Industry, Public Service, and Quality Product. This year's jury elected to make an award in just one category, Quality Product, despite entries in the other categories.

The ACRA Quality Product Award recognizes an ACRA company's innovative or long-term research, preservation of a cultural resource for future generations (such as a building or archeological site), or an outstanding report, brochure, book, etc. This year's Quality Product Award recognizes the comprehensive, varied and substantial nature of the research and documentation to mitigate the adverse effects on two National Register-eligible historic properties during the planning and construction of a new penitentiary.

This year's award recognizes The Louis Berger Group, Inc. and the U.S. Department of Justice, Federal Bureau of Prisons, for Mitigation Projects in Canaan Township, Pennsylvania. One juror noted the "pretty impressive" collection of materials (all of which were "well done") that demonstrated the range and variety of mitigation that is possible. Another cited the "quality of information provided," which were "highly



Ian Burrow (left) and Christopher Dore (right) present ACRA's Quality Product Award to Kay Simpson of the Louis Berger Group.



One of the railroad markers donated to local historical societies.

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informative and well designed.” Other comments noted the overall quality of the other submittals, but praised this nomination as “very readable” that “conveys the story in an accessible format.”

This project was sponsored by the U.S. Department of Justice, Federal Bureau of Prisons over a period of four years. The two properties impacted by the proposed new prison include an institutional farm complex and a former railroad line. The final work products included HABS documentation of the farm complex, a historical monograph for each property, and a historical booklet for each property. Mitigation also included

the removal, conservation and donation of eight railroad markers to area historical societies. In addition, the Louis Berger Group, Inc. worked on museum interpretive panels, video documentaries, public presentations, and the planning/construction of a rail trail.

The award was presented by incoming ACRA president Ian Burrow and out going ACRA president Christopher Dore. Kay Simpson of the Louis Berger Group, Inc. was present to receive the award.

ACRA

EDITION

6150 East Ponce de Leon Ave., Stone Mountain, GA 30083

ACRA's Members-Only Listserv

ACRA now has an online discussion group just for members. "MembersOnly" is a listserv that operates much the same way as ACRA-L, with the exception that it is only available to ACRA members. Its purpose is to offer the board, members, and the executive director a venue to share the latest news from ACRA; promote dialogue between members on current issues; and enable members to post announcements or inquiries.

To subscribe to the list, a member must contact ACRA's Executive Director, Tom Wheaton. Once you have supplied Tom with your e-mail address, he will subscribe you to this list. Contact Tom at 770-498-5159 or e-mail: tomwheaton@newsouthassoc.com.

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This publication's purpose is to provide members with the latest information on the association's activities and to provide up-to-date information on federal and state legislative activities. All comments are welcome.

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