

The Wall Journal™

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THE INTERNATIONAL JOURNAL OF TRANSPORTATION-RELATED ENVIRONMENTAL ISSUES

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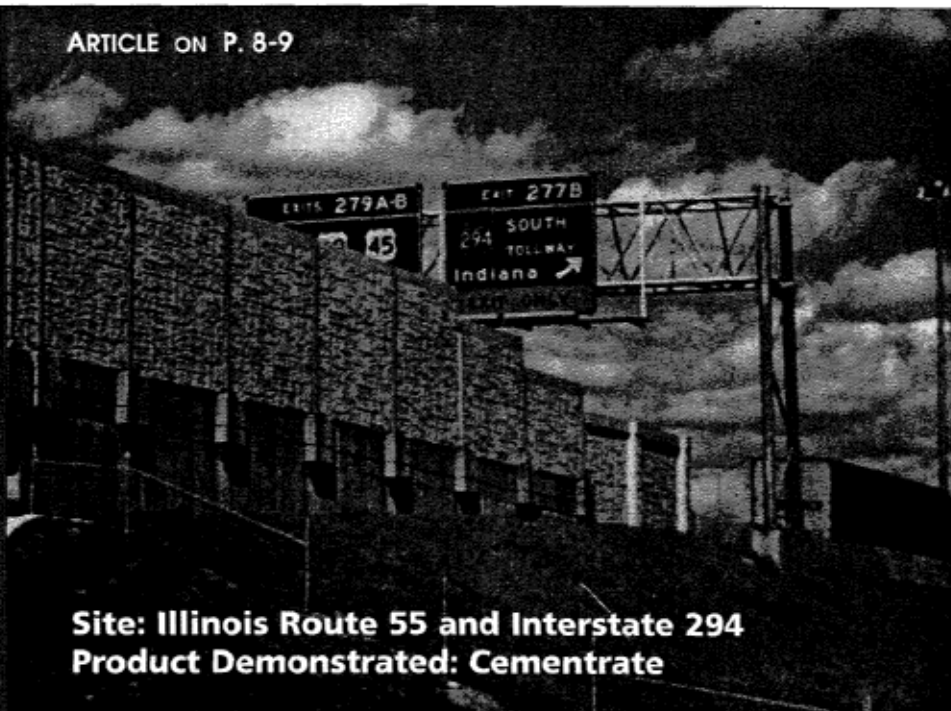
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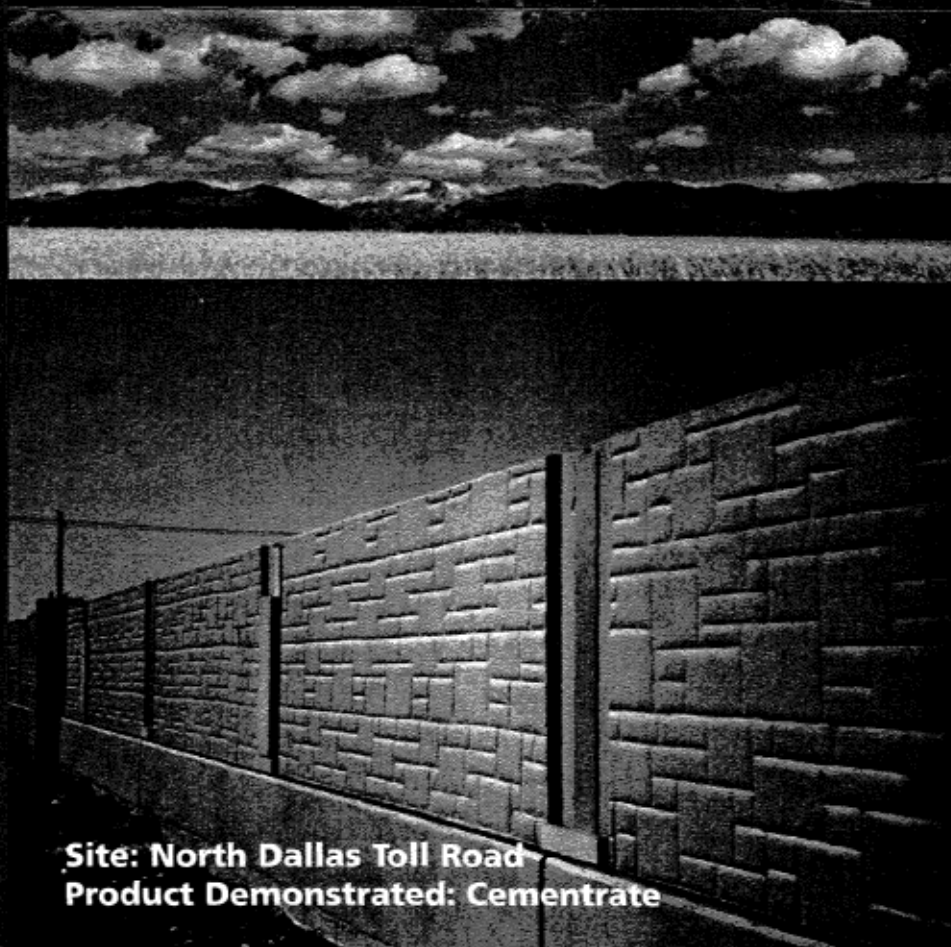
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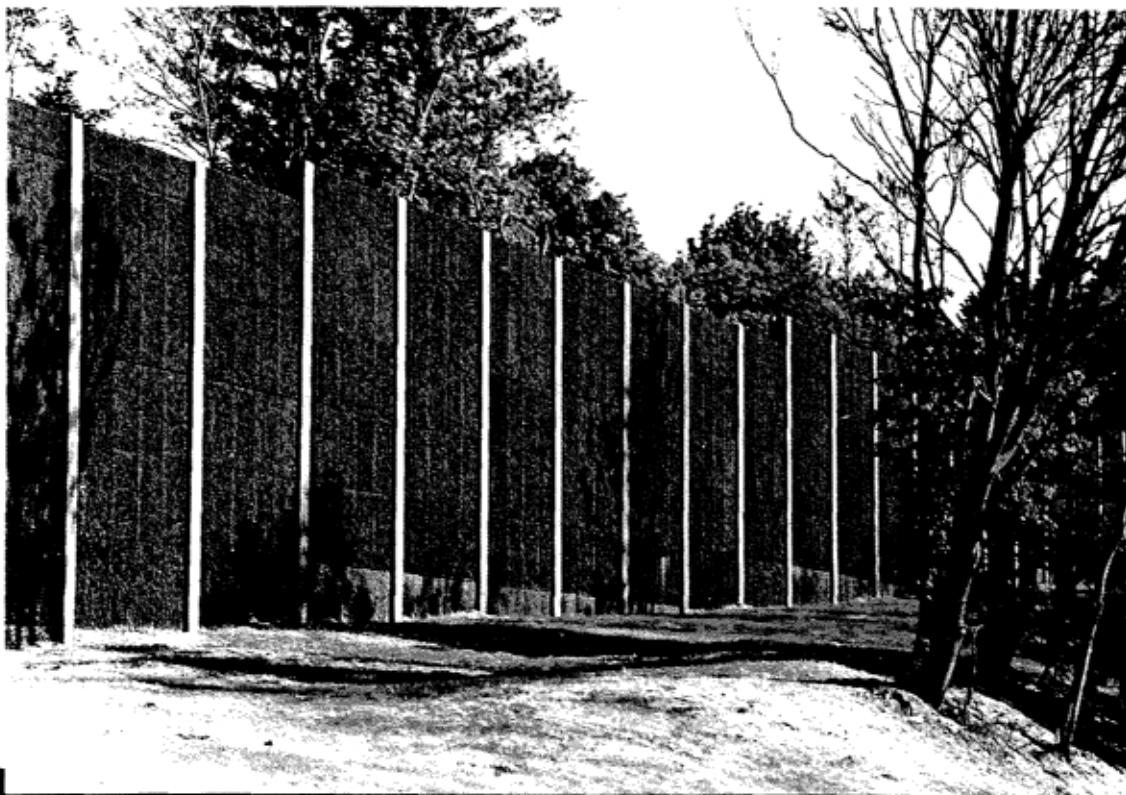


Site: Illinois Route 55 and Interstate 294
Product Demonstrated: Cementrate



Site: North Dallas Toll Road
Product Demonstrated: Cementrate

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Sound absorptive highway noise barriers are becoming specified more and more. To significantly improve the appearance and durability of these structures, more specifiers are relying on Fosroc for:

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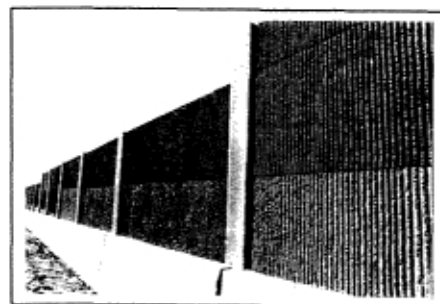
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Tel 800-645-1258
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Editor

El Angove

Director of Publications

John G. Piper

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Subscription and advertising information are shown on page 23.

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Dog? What dog? I don't see a dog. Do you see a dog?

You have to have lived almost as long as I have to remember a television commercial around the 40s or 50s, which featured a bunch of cute little chicks (of the chicken variety), all of whom were scampering across the screen and hopping in and out of pans of chicken feed, I think.

I always felt kind of sorry for the sponsor of the commercial, because I could never remember the product they were trying to sell. But as soon as you saw these little chicks, who were about as big as a ladies' powder puff, you no longer could hear the commercial, because you became totally absorbed in the little chick who was running the fastest and eating the fastest and crying out loudest, "Dog? What dog? I don't see a dog. Do you see a dog?"

Then, slowly, the camera backs up and reveals that the chicks were running in and out between the legs of a huge dog with huge paws who was standing stock still in their midst. If the dog took a step, he probably would squash a chick or two.

I thought that was a great ad, and every time I heard it come on the TV, I would run into the room to watch the little chicks. The little ringleader never stopped running or eating or asking if anyone saw a dog. The ad man certainly got his idea from the nursery story about Chicken Little who thought the sky was falling (or maybe you youngsters never heard of that, either).

But it's amazing how much life is like nursery stories or television commercials. Chicken Little and the Big Dog's little chick have made a deep impression on my life. For more than 50 years, I have felt this ominous pressure hanging over me. It's something like Al Capp's comics character, Joe Bftspk, who always had this dark cloud hovering over him wherever he went (there I go again. I suppose you don't know Indian Joe, the Wolf Lady, Evil Eye Fleagle or Daisy Mae, either). Ah well. Back to the mundane world.

Like the chick, I keep running around, picking at pieces, pasting things together, searching for the higher

ground, trying to get ahead. But, it's tough to really get ahead these days. Too many things are happening too fast. For one thing, my computers get obsolete almost as fast as I buy them. Which means that the software always seems to need updating. Or something better, faster and costlier needs to be bought.

Dashiell Hammett and Ernest Hemingway typed most of their stories on a manual Remington, which never got updated, wore out, broke or crashed. Oh, you had to put a new ribbon in once in a while, but they only cost 79 cents. Their 'laptops' were called portables, which cost way under \$100. Nowadays, our 'portables' are called laptops and they are priced in the thousands of dollars.

I guess maybe I just have a bad case of déjà vu. I've gotten stale over the first 33 issues. A noise barrier is a noise barrier is a noise barrier (how do you like that, Gertrude Stein)? I haven't had any really great stories to publish — I mean blockbusters, ground breakers, monumental constructions. I know they are out there. I need a winner. I want a Tony, or Oscar, or Billy Bob or whatever is the tops in environmental transportation journalism, or whatever.

I may have to do this all by myself. I hate to literally have to start life all over again (without the little chicks). But I do have some plans. I looked into the Web, and a spider looked back at me. I may yet jump into that arena, but the path is not clear, yet.

I am working on some new ideas for format and content, which I'm not ready to divulge. In the meantime, if you have suggestions for a better publication, send them to me as quickly as you can. Good ideas are sought and will be rewarded. ■



FOR IMMEDIATE RELEASE

NTI Helps Transit Trainers Make Connections

The National Transit Institute announces an internet list server for transit trainers. A list server is a subscription service which allows any subscriber to send an e-mail message to all other subscribers. NTI's list server for transit trainers allows any transit trainer with access to internet e-mail the opportunity to communicate with a large number of fellow transit trainers with minimal effort. Any member of the transit trainers list server can send a single message which will be forwarded by the list server to all other subscribers.

E-mail messages sent to the list server might include requests for assistance, inquiries for information, news of interest to other transit trainers, advice about a particular problem, or nearly anything else noteworthy for others in the field. All subscribers receive all messages posted to the list server. Each person can reply either to the list server itself for widespread distribution of the response, or directly to the sender of the original message.

Transit trainers and others involved with human resources in the transit industry are welcomed and encouraged to subscribe to the list. To do so, simply send an e-mail message to: **majordomo@email.rutgers.edu** The subject line should be blank, if possible, and *subscribe transit_trainers* should be the entire body of the message.

The list server will respond with an automated e-mail message welcoming you to the service. Once you have subscribed you will receive all messages posted to the list server. To post a message for distribution to all list subscribers, use the following address: **transit_trainers@email.rutgers.edu** In order to post a message you must be a subscriber and you must send the message from the e-mail address from which you sent your subscription.

The idea for the list server was conceived at NTI Transit Trainers' Workshop last year in San Diego. The workshop is dedicated to facilitating the sharing of transit training ideas, materials, and expertise in the industry. The fifth annual Transit Trainers' Workshop will be held April 5-8 in Houston, Texas (*Ed. Note: By the time you read this, the Workshop will be concluded, but you may wish to know more about it. See second paragraph below*). Hundreds of transit training professionals are expected to gather for four days of skill building and networking. The theme will be Tomorrow's Training Today: People, Performance, and the Bottom Line. Sessions will be presented by transit professionals, university, faculty and staff, and training consultants.

According to Neal Denno, NTI's Assistant Director and creator of the list server, "Many trainers face the same issues and are searching for the same answers. There's no need to reinvent the wheel. The success of the Transit Trainers' Workshop illustrates the benefits of bringing trainers in the industry together. They can save time and money by staying connected with colleagues across the country through opportunities like Transit Trainers' Workshop and the list server."

For more information about how to make connections with transit training colleagues nationwide, call NTI. For information about the Transit Trainers' Workshop contact Carrie Pedersen at 732/932-1700 ext. 11, for information on the list server, contact Neal Denno at 732/932-1700 ext. 50. ■

FOR IMMEDIATE RELEASE
Washington D.C.
February 2, 1998

Contact: Stacy Warner
Manager of Ccommunications
202-842-0555 or press@cerf.org

CERF and Washington State DOT Partner for Environmental Innovation

The Civil Engineering Research Foundation (CERF) has signed a memorandum of understanding with the Washington State Department of Transportation (WSDOT) to help identify new environmental technologies for evaluation. The MOU is intended to encourage a strong linkage between WSDOT and CERF's various Innovation Centers, especially the Environmental Technology Evaluation Center (EvTEC).

WSDOT has implemented plans to verify the performance of environmental technologies in which the evaluation costs will be born by the innovation owners. The CERF Innovation Center model pioneered seeks to do just that. Through the use of volunteer technical experts and the leveraging of available government, industry, and academic resources, CERF's Innovation Centers assess and evaluate market-ready technologies based on well-designed criteria at a cost-savings to technology owners compared to other methods. In this case, by working with the Washington State Department of Transportation, CERF expands its industry network while providing Washington State with a source of information on evaluated technologies.

In particular, the MOU gives WSDOT the opportunity to identify specific technologies or products which meet Washington's particular needs. Technology owners will then be referred to CERF's innovation centers, especially EvTEC, for possible evaluation. In return, CERF will work with WSDOT to help develop partnerships and linkages with other organizations that can complement WSDOT's mission by providing authoritative data of technology evaluation support through such activities as demonstration projects.

For further information concerning the CERF-WSDOT memorandum, EvTEC, or other CERF Innovation Centers, please contact Will Kirksey at 202-842-0555 or evtec@cerf.org ■

CERF and Rensselaer Sign MOU to Support Intelligent Transportation Systems

The Civil Engineering Research Foundation (CERF) has signed a Memorandum of Understanding with Rensselaer Polytechnic Institute (RPI) concerning Intelligent Transportation Systems (ITS). The MOU combines the recognized academic leadership and research facilities of RPI with CERF's international leadership in technology evaluation through programs such as the Highway Innovative Technology Evaluation Center (HITEC).

RPI is an internationally recognized innovator. Its Center for Infrastructure and Transportation Studies (CITS) is known globally for its work in infrastructure and transportation engineering-related research. One of CITS's major thrusts is the analysis, design, development, and testing of ITS. CERF's HITEC program has become equally well known for impartial technology evaluations within the area of transportation-related technology. CERF also conducts research and analysis programs on other infrastructure issues, particularly in infrastructure renewal and advancement towards sustainability. This MOU is intended to link both organizations to further research and innovation in the area of ITS.

The MOU encourages CERF and Rensselaer to seek opportunities to promote their mutual programs and engage in joint conferences, workshops, and other events where they can publicize their new partnership and seek support from design and construction industry sectors. The new alliance will also provide instances for each organization to refer relevant clients and other partners to one another to help expedite research and innovation commercialization. The MOU will help to keep both organizations up-to-date on the latest research and innovation effecting intelligent transportation.

For further information concerning the CERF-RPI memorandum and HITEC, please contact Peter Kissinger at 202-842-0555 or hitec@cerf.org ■

ANNOUNCEMENTS



U.S. Department
of Transportation

**Federal Highway
Administration**

400 Seventh St, S.W.
Washington, D.C. 20590

ANNOUNCEMENT TO DOT STAKEHOLDERS AND INTERESTED PARTIES

The Federal Highway Administration, Office of Environment and Planning, has just gone "on-line" with a new website containing products, research and program information, environmental regulations, and other useful information on environmental areas of national importance. Find out more about the Congestion Mitigation Air Quality Improvement Program, air quality models, transportation conformity, highway traffic noise, wetlands and water quality initiatives, vegetation management, environmental research objectives, and many more interesting areas of primary concern to transportation and environmental planners alike. To access this new web site, use the address:

"<http://www.fhwa.dot.gov/environment>"

For additional information or questions, please contact Noreen Bowles, Office of Environment and Planning at Noreen.Bowles@fhwa.dot.gov or call (202) 366-9173.

NOTICE TO ADVERTISERS AND READERS

From time to time, you surely have noticed that an advertiser's brochure has been inserted into an issue of The Journal. This is a service which is available to all.

The client brochure is attached to the issue by a single staple in the fold of the brochure, which allows the piece to be easily removed from the issue and filed away for further reference.

This service is provided for our domestic mailing database, our Canadian database, our overseas database, or all three.

Since weight is an important factor in mailing, the cost is dependent upon the weight of the brochure and its impact on the postage. We will be happy to quote prices. Call for more info.

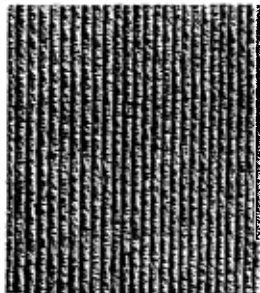
Sorry... We will not sell our databases. — Ed.

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ANNOUNCEMENT

ATTENTION!!!

**The call for entries
for FHWA's 1999
Environmental Excellence Awards
is coming !!!**

WHAT is the Environmental Excellence Awards Program?

This biennial awards program was developed by the Federal Highway Administration (FHWA) to honor those partners, projects, and processes that excel in meeting growing transportation demands, while protecting and enhancing the environment.

WHO is Eligible to Enter?

Anyone may nominate a project, process, person, or group involved in a project or process that has used Federal Highway Administration funding sources to make an outstanding contribution to transportation and the environment. Projects must have been completed after January 1, 1992. Winning entries will be selected by an independent panel of judges from varying backgrounds.

WHEN are the Entries Due?

Entries must be submitted by August 15, 1998, addressed to the Division Administrator at the Federal Highway Administration Division Office in the State in which the entry is located.

WHERE will the Awards be Presented?

Award plaques will be presented to the winners in an Earth Day 1999 ceremony in Washington, D.C.

HOW should Entries be Submitted?

1. Entries should meet as many of the following criteria as possible:
 - Uses effective noise compatible

land use planning strategies

- Uses innovative, cost-effective noise abatement measures
- Provides a substantial reduction of highway traffic noise
- Uses noise abatement measures that are positively received by people
- Abates highway traffic noise and preserves the character and aesthetics of the community
- Demonstrates State and local sharing of responsibilities to abate highway traffic noise

2. Entries must include a completed application form and a summary of the outstanding accomplishments of the group. Summaries must not exceed two typewritten pages, and the font size must be no smaller than 10 point.

3. Entries must include at least two professional-quality glossy prints showing different views associated with the project, process, or person(s) nominated. Each photo should be clearly marked on the back with the entry name, description of the view shown, and photo credits.

4. Entries may include other graphics (the entry name and a description of the graphics must be clearly marked on the back).

5. Five sets of all entry materials must be submitted.

6. All materials submitted become the property of the U.S. Department of

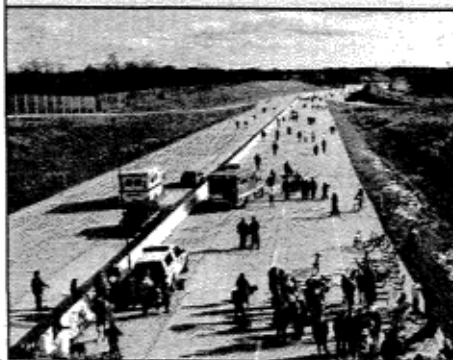
Transportation and may be used by the Department for its purposes. No entry materials will be returned.

For more information or an entry form, call Patricia Cazenias at (202)-366-4085 or Bob Armstrong at (202)-

For those readers who may not remember, The Wall Journal published an article in our Issue No. 28, Mar/Apr 1997, which reported the first Environmental Excellence Award for Excellence in Noise Abatement, presented to Gannett Fleming, Inc. for their work in designing the 581 Connector in Mechanicsburg, PA.

The photo below (from our spread on that article) shows the unusual event of local residents enjoying a stroll along the new highway before it was opened to traffic. If you look closely, you will see people with bicycles, folding chairs, little kids and dogs. The only thing missing is a hot-dog stand.

Hopefully, we will be able to report on another great award and interesting story in 1998.



APRIL 22, 1998
28TH ANNIVERSARY OF EARTH DAY

ALSO THE DAY OF THE FEDERAL HIGHWAY ADMINISTRATION
AWARD FOR ENVIRONMENTAL EXCELLENCE

RANDOM THOUGHTS ON ACOUSTICS AND LIFE

I am between jobs and as I search for work, and as El has some white space that needs filling (fortunately not between his teeth), I have the opportunity to write a bit for this Journal.

First on the job front, some personal observations:

While I was working for my last employer, I felt invulnerable. I was at the top of the profession. I had autonomy, money, and recognition. When I got laid off, ostensibly to save costs but really a political decision, I slowly realized that my confidence was not deserved. I was replaced by a person with no technical training whatsoever, 25 years my junior. So much for job security. But the worst part was that my position, in marketing and corporate development, was not in high demand in North America. If positions were available, I think I could have gotten them, but there must be a position that is going to be open, or that must be created. Both rare occurrences.

For those of you who live near Lancaster PA and have gone to the titillating "wet bonnet" contests at the PA Dutch, followed by a night of "chug molasses until you heave," you will appreciate the analogy of getting hit in the face by a bucket of water as a sobering device. The reality of my vulnerability was quite enlightening. By the time you read this, one of the many leads I have followed may come to fruition. In the meantime, you can write me at the address below.

Second, and last, on the technical front, some comments that will elicit howls of derision: they are based on observations that we are overutilizing technology.

Barriers (I will stick with highway barriers, of particular interest to readers of this journal, but I could discuss many other acoustical components as well).

The main parameters of an infinite barrier are height, transmission loss, and absorption. The height is straightforward, in almost all cases, costs be damned, the higher the barrier the quieter will be the environment on the other side. The measurement is straightforward. But how close must we come? Could the heights be off by six inches, a foot, or three feet with significant difference in results (effectiveness)? Will that make much difference, and if so, how do we know (other than from barrier calculations)? A ruler, graduated in integral meters, is probably as close as one needs to evaluate a height.

But now what about TL? This laboratory method assumes a random incidence (or is it diffuse? two different fields) sound field on both sides. The resulting laboratory number specifically assumes no flanking. The test is not easy, and probably costs more than \$1000. But what do the numbers mean given the barrier is not used as it is tested. But fur-

thermore, are the TL values, even if used in a similar way, helpful to evaluate the barrier? For sure, a high TL will mean more sound will go over, rather than through the barrier, but is the 1 dB TL increment useful? If so, how are they used such that the resolution corresponds to effective changes. If not, what are we doing? (No one should use STC for rating highway barriers).

Perhaps the absorption is the most confusing to me. It is my personal feeling that absorptive barriers are better than non-absorptive ones. But how important is the number? How do we do a good job of using the quantification of absorption to the noise reflected? Can a sound absorption coefficient (should this be random incidence or normal incidence? and is there any real relation for real-world conditions?) differing by 0.1 or 0.2 or more really affect any perceptible result. If one uses the NRC, is an NRC of 0.50 a lot better than 0.70?

This reminds me of a saying I am known for. "Do not violate the first rule of acoustics: never make the same measurements twice." For if you do, both readings are suspect. This is truer as the randomness of the sound and sound field increases, and the common wisdom is that if you measure long enough, and average long enough, you can get good comparison in community noise situations. But what does the average mean? It seems a measurement needs to reflect the metric that matters (I would like to force-feed molasses to the person(s) who gave us the metric Yearly Ldn. What a great metric, since it is almost impossible to measure, to compare human and animal response, and to use).

Instruments

Many of you readers use acoustical measuring instruments. How do you know they are accurate? Some things I know are manufacturers' claims to a Type designation per ANSI S1.4, etc., are not always true and that calibration labs are often wrong, inaccurate, or misleading. In the US, we have no overseeing agency for manufacturers, and the accreditation programs are not widespread and voluntary. So, put more attention to the reputation of your supplier and even more so, attempt to assure yourself that you get what is claimed.

But on a more important note, aside from what we refer to as pissing matches in court and advertising counterclaims, how much more valuable is a Type one compared to a type two in community noise circumstances? I suspect in the scheme of things, from measurement, to community response, to evaluation, there is no difference. ■

(Ed. Note: The identity of the distinguished author of this contemplative critique may be discovered somewhere in the pages of this Issue of The Wall Journal).

Sacrificial Coatings for Concrete Soundwall —

Adding Aesthetics, Weather Protection and Graffiti Shield in One Operation

By David Whelan and Alan Siebenthaler

Fosroc Inc., Preco Precast Division, Georgetown, Kentucky, USA

We are seeing more and more state department of transportation and toll-way authorities allocating funds for new soundwalls as highway traffic increases and new roadways are required or existing roadways are widened. We even see local communities specifying noise walls or concrete fences around their neighborhoods for beautification and of course noise reduction.

However, little attention goes into protecting and preserving these structures from the sun, deicing salts and most of all vandalism. As these walls are erected in increasing numbers in urban areas, a greater emphasis should be placed on their preservation. The most efficient way to accomplish this is through a sacrificial coating, applied in the form of a concrete stain. Fosroc's concrete stains, Cementrate and Cementrate WB (for Water-Based), are acrylic emulsions designed to not only beautify concrete but protect it as well.

A very important function of an acrylic stain is its ability to protect the concrete and steel rebar from the ingress of damaging chemicals or agents such as water and chloride ions.

The problems caused by unwanted chloride ion ingress are well understood and documented. The stain prevents this ingress by its acrylic polymer content, which provides a barrier preventing chloride ions from entering the concrete sound wall.

The same barrier protection mechanism applies for water ingress. Preventing ingress of these destructive agents results in protection against rebar corrosion and concrete deterioration. The protective power of a stain is gauged by its acrylic content. Up to a certain point, the higher the acrylic content, the more difficult it is for water and chloride ions to penetrate into the concrete substrate.

Fosroc's Cementrate and Cementrate WB have 37% and 57% solids by weight respectively. A higher solids by weight percentage not only adds to the protection of a panel but also increases the square footage you receive because more solids stay on the substrate. Other factors such as polymer types and application rates can also affect a stain's protective capability.

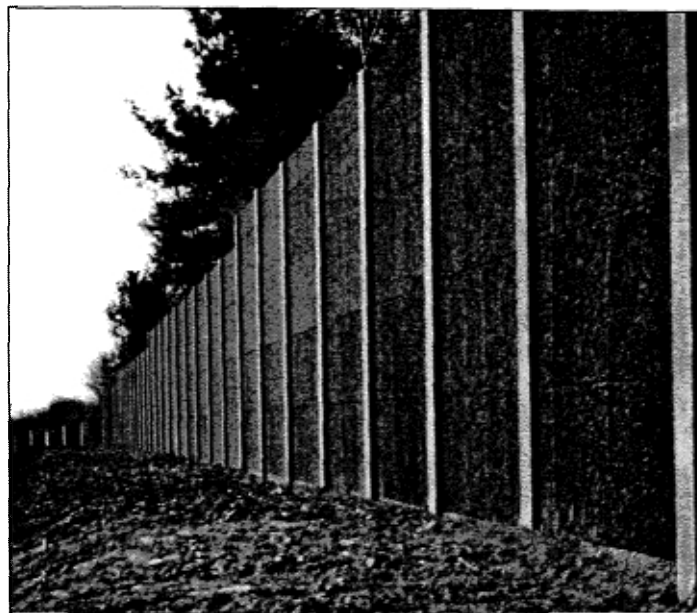
Another protective value of con-

crete stains is a form of graffiti resistance. Acrylic emulsions are considered non-curing coatings which means they can be brought back to their original state. An example of this is when a spoonful of sugar is added to a glass of water, it will dissolve. When the water fully evaporates, the sugar will be left in the bottom of the glass. By adding more water, the sugar is again dissolved. This is unlike an epoxy or a urethane which once cured, can not be brought back to their original state.

The primary advantage of a non-curing film is if graffiti is sprayed on the coated concrete, the spray is absorbed into the stain. Then simply by spraying more stain over the graffiti, you have repaired the problem. Once the stain has been reapplied, the wall should look as good as the day the wall was originally coated. With an epoxy or urethane coating you will be providing protection from graffiti but a solvent must be used to remove the spray. This method is much more labor intensive and messy, which in turn costs the owner more money. Another disadvantage of urethanes and epoxies is that they are generally two and three times



This photo shows the residential side of a 16'-high soundwall along the New Jersey Turnpike. The wall has a rough-raked finish on the top portion, and an exaggerated grapestake form-liner finish at bottom. Earth-tone Cementrate was plant-applied to both textures of the wall prior to jobsite installation.



This photo shows the highway side of the 16'-high soundwall along the New Jersey Turnpike. The wall panels have a vertical fluted face, which is produced by formliners which are placed in the panel forms. Earth-tone Cementrate was plant-applied to the panels and precast posts prior to jobsite installation.

the cost of Cementrate.

Many of today's soundwalls are integrally pigmented which is meant to create color uniformity throughout the panel and is a more attractive finish than grey concrete. Integrally pigmented concrete is a good idea, but creating color uniformity throughout a project which may continue for miles is a near impossibility. Changes to mix design, water to cement ratio or volume of pigment being added to a mix can create noticeable changes to the overall color of a panel. By using a stain you immediately take away the risk of non-uniformity and add those benefits I have already mentioned.

Various states now have more stringent VOC (volatile organic content) laws to help protect our environment. Soon our country will adapt a national law that will severely curtail the use of solvent based products. Fosroc's Preco Division, a leader of specialty coatings to the construction industry, specifically developed Cementrate WB (a water based acrylic stain) for this reason, 8 years ago.

Cementrate WB has an early water resistance that is unique to the concrete

stain industry. This material can be applied to concrete and within 15 minutes is completely impervious to rain. This is especially important when a stain is applied in the field when weather conditions are unpredictable. Most other stains require a minimum of 12 hours before they can accept water. Cementrate WB like its predecessor Cementrate can be applied by spray, brush or roller.

Much of your time, effort and money is spent on producing beautiful soundwall which is meant to last for years. We believe an acrylic concrete stain will add to that beauty, allow for easy cleanup of graffiti and protect it from the elements for years.

Cementrate and Cementrate WB have a ten year history on soundwalls in New Jersey and Virginia with no signs of fading, peeling or any deterioration since its original application. In 1988-89, more than 1.5 million square feet of precast concrete were coated with Cementrate in the precaster's plant in Pennsylvania before being installed along the New Jersey Turnpike. Later, 2.5 million square feet of the Illinois Tollway soundwall were coated with

Cementrate.

Additional Cementrate soundwall projects are located in Maryland, Texas, Massachusetts, Pennsylvania and Wisconsin to name a few states. The tollway authority in Illinois now has a preventative maintenance program that allows for additional applications of Cementrate to be sprayed over existing graffiti.

Fosroc's Preco Division has been a leading supplier to the precast and construction industries for over 45 years. The Preco Division has a wide variety of products that include: chemical retarders for exposed aggregate finishes, concrete sealers and form coatings, plastic rebar spacers and forming accessories, urethanes for producing your own custom molds as well as supplying ready made Greenstreak formliners and a recently introduced EA Toner for toning concrete matrix while providing a protective coating. ■

(For further information, you may reach the authors at

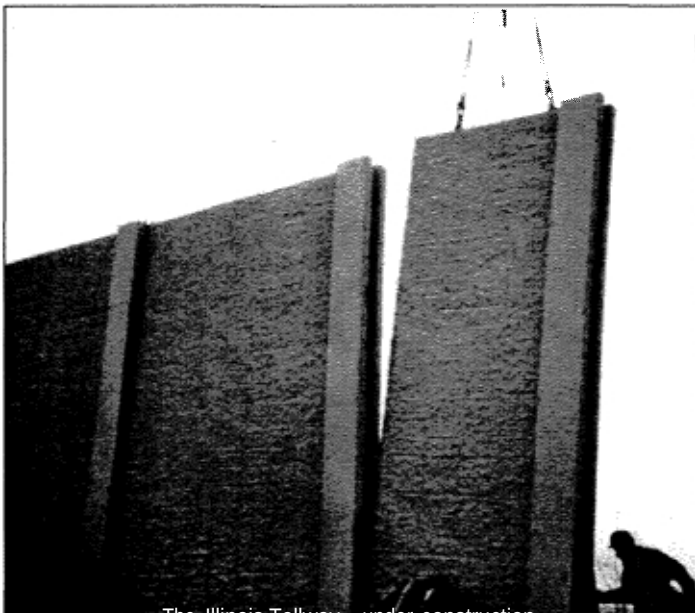
Fosroc Inc.

Construction Division

150 Carley Court

Georgetown, KY 40324

Tel. 800-645-1258 Fax 800-645-3954



The Illinois Tollway - under construction



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TRB COMMITTEE A1F04 ON TRANSPORTATION RELATED NOISE AND VIBRATION

Gregg G. Fleming, Chairman

Those of you who have attended the Summer Conferences of the A1F04 Committee are fully aware of the work which will have been done in the preparation of the professional papers, the presentations, the exhibits, the field trips and all the paraphernalia and planning that goes into that. If you can attend this summer, you will find that all of those things are in place and working just fine, if not even better than ever before.

The 1998 Summer Conference is being hosted by the Florida Department of Transportation; Post, Buckley, Schuh & Jernigan, Inc., Transportation Solution, Inc. and URS Greiner, Inc. If you have questions regarding registration or the meeting in general, contact Win Lindeman of Florida DOT at (850) 488-2914 or Betsy Howard at (850) 922-7203.

We encourage those planning to attend the TRB A1F04 Conference to arrive early or stay and play...

THINGS TO DO IN THE ST. PETERSBURG/TAMPA AREA

St. Petersburg:

The Pier

The Pier is the focal point of St. Petersburg's recent downtown rejuvenation. The waterfront sightseeing/shopping/entertainment complex extends 1/4 mile into Tampa Bay. The Pier dates back to 1889 when it was originally built as a railroad pier. Over the years, it has been redesigned in various ways to its present shape of an inverted pyramid. There are 5 levels of shops and restaurants, an aquarium, observation deck, catwalks for fishing, water-sport rentals and sightseeing boats. Adjacent to the Pier is Straub Park, a scenic 36-acre waterfront park. Admission - Free

Salvador Dali Museum

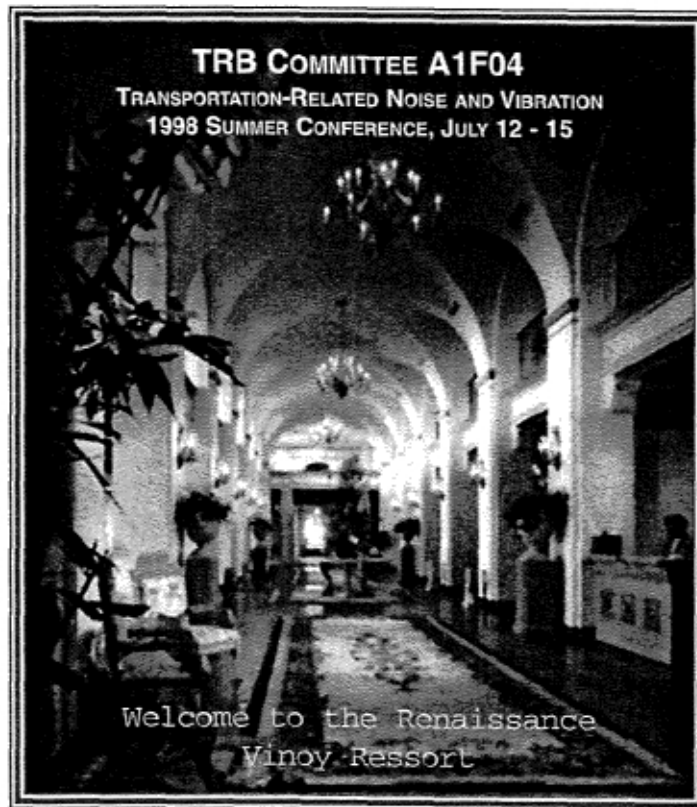
Just south of the Pier is the Salvador Dali Museum. The museum houses the world's largest collection of works by the renowned Spanish surrealist. Assembled over a 40-year period, the collection was donated in 1982 by a Cleveland industrialist and his wife who were friends of Dali. Valued at over \$150 million, the collection includes 94 oil paintings, over 100 watercolors and drawings and 1,300 graphics. Admission - \$5

Museum of Fine Arts

The Museum of Fine Arts resembles a Mediterranean villa on the waterfront. The museum houses a permanent collection of European, American, pre-Columbian and Far Eastern art with works by Fragonard, Monet, Renoir, Cezanne and Gauguin. Other highlights include period rooms with antiques and historical furnishings, plus a gallery of Steuben crystal and world-class rotating exhibits. Admission - \$5 Adults - Free on Sunday

Fort Desoto Park

This is the largest park in the area. The park is made up of 5 islands south of the mainland (Mullet Key, Madelaine Key, St. Jean Key, St. Christopher Key and Bonne Fortune Key). The park consists of 900 acres, 7 miles of waterfront and almost 3 miles of beaches. Fishing piers, shaded picnic sites and camping are also available. The fort, built in 1898, is now listed on the National Register of Historic Places. Admission - Free



John's Pass Village and Boardwalk

John's Pass Village lies on the southern edge of Madeira Beach where Boca Ciega Bay meet the Gulf of Mexico. The 1,000 foot long Boardwalk features buildings which have been converted into shops, art galleries and restaurants. The focal point is the large fishing pier and marina where you can see the commercial and charter fishing boats unloading the daily catch. Admission - Free

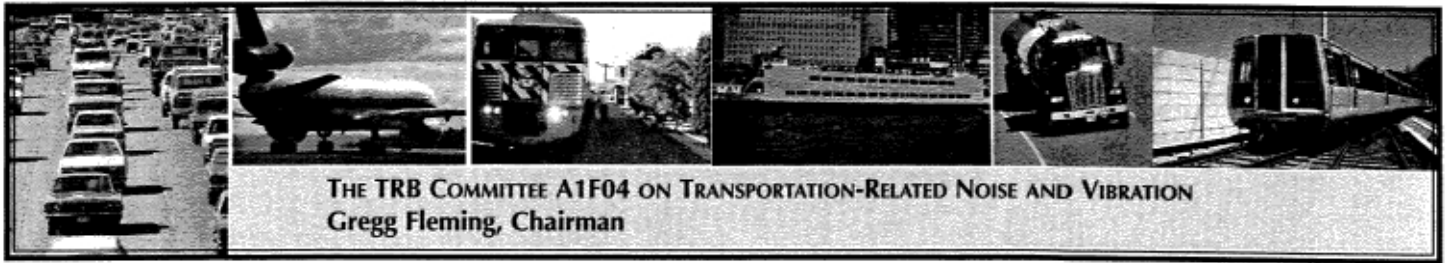
Busch Gardens

Founded 35 years ago as a hospitality garden for the local Anheuser-Busch brewery, this 300-acre family entertainment center has grown to become the most popular attraction on Florida's west coast. Designed to reflect the atmosphere of turn-of-the century Africa, the park contains one of the largest collections of free-roaming wild animals in the U.S., as well as dozens of rides, live entertainment, restaurants, and shops. The park has eight distinct sections: Timbuktu, Morocco, Serengeti Plain, Nairobi, Stanleyville, The Congo, Bird Gardens and Crown Colony. There are more than 3,700 animals, birds and reptiles and many types of live entertainment. Allow at least 8 hours to tour Busch Gardens. Admission - \$31.90 Adults, \$25.50 Children (2 and younger - free).

Adventure Island

Adjacent to Busch Gardens and owned and operated by Busch Entertainment Corp., this is a separate 36-acre outdoor theme park. A favorite with kids and teens, it has 3 swimming pools and several water slide/play areas with names like River of No Return, Gulf Scream, Everglides, Courageous Falls and Tampa Typhoon. There's also an outdoor cafe, picnic and sunbathing areas, games arcade, volleyball complex and dressing room facilities. Admission - \$16.95 Adults, \$14.95 Children (Free under 3).

(continued on page 23)



Since The Wall Journal is read by many hundreds of dedicated environmental specialists who seldom if ever are able to attend the Annual and Summer Conferences of the A1F04 Committee, we felt obliged to publish the minutes of some of the meetings, which we felt would be of interest to you, and would give you a feel for the work these people accomplish.

**Committee A1F04 Meeting Minutes
(Tuesday, January 13, 1998)**

Call to Order

Committee Chairman, Gregg Fleming, called the meeting to order. He then asked for feedback on this year's 2-day compressed schedule versus last year's 3.5 day schedule. By a show of hands, this new schedule was preferred by the majority over last year's. However, Dr. Roger Wayson (UCF) pointed out that the compressed schedule potentially conflicts A1F04 sessions with other committee sessions (e.g., Air Quality Committee). Gregg mentioned the possibility of scheduling committee meetings on Sundays - however, Dr. Ulf Sandberg (Swedish Road & Transport Research Institute) mentioned the difficulty he and other Europeans would have arriving early at TRB on Sundays.

Welcome and Introduction of Members and Guests

Gregg Fleming asked for a round-table introduction. He then passed out the meeting's agenda and the TRB roster for attendees to confirm and check-off their names. Following, Gregg announced a change to the agenda: A short presentation by Jim Cowan (Acentech Inc.) would be added.

Statements by Jon Williams, TRB Staff Liaison

Regarding this year's Annual TRB, Jon Williams announced that there were approximately 7,000 registered participants, one of the largest attendance in TRB history. Jon then discussed several changes in TRB which have occurred for this year's conference:

- (1) The conference will end at noon on Thursday;
 - (2) The videoconferencing of sessions for those who could not attend was discontinued due to poor video transmission quality. Instead, a professional videotape of certain sessions would be made for those unable to attend TRB;
 - (3) A CD-ROM containing all TRB papers is included in the TRB package; and
 - (4) A new TRB process is being implemented where committee members will no longer be rotated off committees. For those committee members with at least 18 years membership, they may be nominated by any current committee member as an "Emeritus Committee Member." The rest of the committee will then vote on the nominated candidate based on a number of criteria, including publication of papers, demonstration of leadership, and participation in special conferences. It is important to note that an "Emeritus Committee Member" does not impose upon the TRB limit of 25 committee member maximum. Further, "Emeritus Committee Members" will be recognized at the TRB Chairman's Luncheon and be included in a special listing in the TRB directory.
- Speaking for Wayne Kober (Section Chairman), Jon made the following announcements:

(1) A joint meeting of all environmental committees will be held in Pittsburgh; (2) A committee self-review has been implemented. The self-reviews will be based on a number of criteria to help committees stay focused and also get help, if required.

(3) Due to the limit that only 40% of TRB papers are published in the annual TRB Record, the excluded papers, also reviewed and deemed worthy of publication, have been gathered in a supplemental TRB publication, "Summary of Transportation-Related Noise Papers from 1997 Annual Meeting." This document is an official, referenceable TRB publication, and was made available at the TRB summer meeting. A number of copies were then distributed at this committee meeting. Jim Byers (PennDOT) suggested that because of the available storage size of the CD-ROM, all papers should be included in the annual Record. Jon agreed to look into this. Roger Wayson also pointed out that his paper would need to be published in the TRB Record in order to receive tenure/academia credit, and that some Universities will not accept the TRB Summary for credit. Gregg assured the committee that he would work with Jon concerning this issue.

**Review of Minutes from January 14, 1997 Meeting -
Gregg Fleming, Chair**

Gregg Fleming spoke about the Environmental Research Needs conference that was held in November 1996. The resultant publication is available. Several copies of the publication were distributed to attendees. In addition, the final TRB Circular on Aircraft Noise Modeling that resulted from the Woods Hole meeting in the Spring of 1996 has also been published. Contact or email (JWilliam@nas.edu) Jon Williams for copies of both documents.

Gregg mentioned the Hovercraft Noise presentation given by Chris Roof (Volpe Center) at last year's conference. Also at last year's conference, an award of appreciation was presented to Howard Jongedyk (FHWA); and the Best Paper award was presented to Lloyd Herman, Michael Finney, and Craig Clum (Ohio U.), and Elvin Pinckney (Ohio DOT).

Gregg then announced that publication of the final-updated ANSI Standard S12.8 on measurement of barrier insertion loss is imminent. The final document is currently in upper-level review with comments being addressed by Paul Schomer (U.S. Army). While the existing standard is still valid, the new standard contains significant improvements, especially in the area of meteorology. The pertinent information/guidance contained within the new standard has been folded into the FHWA publication, "Measurement of Highway Related Noise." Contact Cynthia Lee (617-494-2372) for a copy of this document.

(continued next page)

Reports

Summer 1997 Meeting - Soren Pederson (Ministry of Transportation)

Soren Pederson recapped the 1997 summer TRB conference that was held in Toronto, Ontario (Canada) and hosted by the Ministry of Transportation and Hatch Mott MacDonald. Soren thanked the attendees, sponsors, and exhibitors. In total, there were 103 attendees, 19 presentations, and 3 technical tours. The TRB scholarship program's first year was also a success. Scholarships are funded by conference attendees for the purpose of providing all travel expenses for State DOT representatives who could not otherwise attend. The awardees were Rudy Hendriks (CALTRANS) and Jay Waldschmidt. Gregg Fleming had received only a modest response to the scholarship possibly due to the difficulty most states have getting approval for international travel even if TRB pays. The scholarship fund for this coming summer TRB is expected to be nearly double last year's which means 3 to 5 scholarships will be awarded this year and perhaps the awards will be extended to the aircraft and European community. Gregg will further discuss these awards with the other subcommittee chairmen: Eric Stusnick (Wyle Labs), Ken Polcak (MSHA), and Jim Nelson (Wilson, Ihrig & Associates).

1997/1998 Activities & Sessions Gregg Fleming (Volpe Center)

Gregg Fleming announced the possibility of a joint summer meeting of TRB and NOISE may be held for the year 2000. He has been discussing arrangements and logistics with Betty Anne Kane. The TRB-NOISE joint meeting would essentially bring the highway and aircraft community together. Gregg asked for feedback from the

committee. Chris Menge (HMMH Inc) was concerned about the limited attendance of airport operators. Eric Stusnick noted that the limited attendance was in the past, and not the case anymore. Gregg further pointed out that because NOISE is typically held during the latter half of the week (Wednesday to Friday), TRB's intermingling would be easy since TRB is typically held during the beginning half of the week (Sunday to Wednesday), and where Wednesday could be an "overlap" day.

Aircraft Noise Update Eric Stusnick (Wyle Laboratories)

Eric Stusnick announced that approximately 31 attended this year's aircraft subcommittee meeting. Eric then announced the addition of new aircraft subcommittee member, Lawrence (Larry) Finegold of USAF, and gave a summary of the aircraft subcommittee involvement at the 1997 summer TRB in Toronto. Two papers were presented.

At this year's subcommittee meeting, two papers were presented: (1) An Update on the Status of the Validation of Aircraft Noise Models at Lower Levels of Exposure (by Eric Stusnick of Wyle Labs); and (2) Rotorcraft Noise Model (by Michael Lucas of Wyle Labs). A question concerning sleep disturbance was raised, and a round-table discussion followed. Eric announced that presentations on the ACNIM and the NDADS software will be given during the Transportation Related Noise Issues sessions tomorrow.

Guided-Transit Noise Update Jim Nelson (Wilson, Ihrig & Assoc..)

During the guided transit subcommittee meeting, Jim Nelson discussed the need for papers at the subcommittee meetings. Chris Jenks was asked to provide the current status of the TCRP Project. A presentation on phase one (literary search and preliminary test-

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ing) of the TCRP project was given. Jim then discussed the TCRP model, its software distribution, and further rail corrugation work anticipated for next year.

Jim had asked attendees to discuss their current rail-related projects. Following Jim's conclusion of his committee meeting update, Jay Waldschmidt asked if anyone had ever attended an NTI course on mass transit noise and if they had found the course worthwhile. Several attendees said yes. Gregg Fleming mentioned that the course is taught by Carl Hanson and that he'd heard very good reviews.

Highway Noise Update - Ken Polcak (MSHA)

Ken Polcak announced that approximately 40 members and friends attended this year's highway subcommittee meeting. Of the 40 attendees, 9 state DOTs were represented. Ken highlighted several topics discussed at that meeting: (1) Steve Ronning (FHWA) talked about the Awards dinner later that evening; (2) Soren Pederson discussed last summer's TRB conference; (3) Roger Wayson gave a brief presentation on the development status of the NCHRP Synthesis report on tire-pavement noise; (4) Cynthia Lee (Volpe Center) distributed and discussed a memo on the status of TNM; and (5) Harvey Knauer (Environmental Acoustics Inc.) and Soren Pederson (Catseye Services) discussed their work in the development of an updated Barrier Design manual for the FHWA in cooperation with the Volpe Center.

At the subcommittee meeting, Roger Wayson spoke for Win Lindeman (Florida DOT), who could not attend, regarding this summer's upcoming TRB conference. It will be held at the Renaissance Vinoy Hotel from July 12-15, 1998. Ulf Sandberg briefly discussed recent European highway noise research. Bob Armstrong talked a

bit about TNM status. Next, two presentations were given: (1) Development of FHWA TNM Look-Up Tables (by Cynthia Lee of the Volpe Center); and (2) An International Cooperative Research Program on Development of Porous Elastic Road Surfaces (by Seishi Meiarashi of the Ministry of Construction in Japan).

Following the presentation, Jay Waldschmidt pointed out that there are many tire-pavement noise studies being performed by various State Highway Agencies who should consider pooling their results to avoid repeating research. Gregg Fleming said that he is working on scheduling a special working group session during the summer TRB (either on Sunday afternoon or Wednesday morning). (Note: Roger Wayson pointed out that a Sunday afternoon session may conflict with a "golf tournament" also being scheduled for Sunday. He does not want anyone to miss the first "tee off" at 7 am). The purpose of the session would be to develop a "straw man" outline of research needs, then schedule a follow-on meeting at the next Annual TRB conference (possibly on a Sunday afternoon). Gregg had spoken to Jon Williams who said that half or full-day workshops are possible for Sundays. Gregg may even schedule the full committee meeting for Sunday, with the exception of paper sessions, for a small fee (\$25/person). Roger Wayson then pointed out that Air Quality committee meetings are typically scheduled on Sundays.

Presentation

Two presentations were given: (1) Introduction to the FHWA TNM Training CD-ROM (by Bill Bowlby of Bowlby and Associates); (2) Evaluation of Low-Cost Highway Noise Barriers (by Jim Byers of PennDOT and David Martinelli of Mid-Atlantic Universities Transportation Center).

(continued next page)

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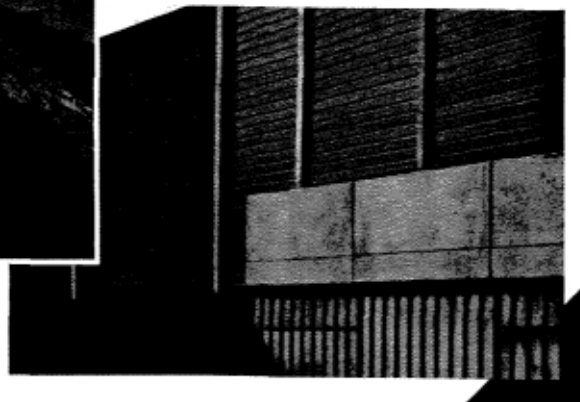
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(Minutes, from page 13)

Following the presentations, Jim Cowan was asked to discuss the addition of a TRB session on the subject of educating the public on transportation noise. He proposed forming a working group in conjunction with Committee AID04. He asked that if anyone with suggestions, comments, and interest should contact him. Larry Finegold said that the FAA and the Air Force already have software developed (ISIS) to educate the public on aircraft noise. Jim replied with concern that the FAA's software content may be too technical even if the development was geared towards the general public. Mike McNerney (U. of Texas) said that the FAA software does contain a highway component and he is trying to apply it to his work at the University of Texas. Eric Stusnick said that there is also an FAA video on aircraft noise. Jim noted the FHWA barrier video that is already available. Contact Cynthia Lee at (617) 494-2372 for a copy of the video. Jim Nelson will speak with Carl Hanson to discuss if there are any rail-related materials available. Bob Green (Woodward-Clyde International) mentioned that Beth Cooper (INCE) is also starting a similar working group. Jim Byers had spoken to the Chairperson of Section F who loved the idea of the working group and will speak to AID04.

Discussion

AIF04 Summer Meeting (1998) - Roger Wayson (UCF)

Roger Wayson announced that the 1998 summer TRB meeting will be held in St. Petersburg, Florida at the Renaissance Vinoy Hotel from July 12-15, 1998. The meeting will be hosted by Florida DOT, UCF, and Transportation Solutions Inc. An initial summer TRB mailing will be sent by Win Lindeman to TRB members. All

who are interested in attending the meeting should reply to the initial mailing in order to receive the full summer package. Because Win would like to send out the initial package by the first week in February, Gregg Fleming asked the three subcommittee chairpersons (Ken Polcak, Eric Stusnick, and Jim Nelson) to send him their subcommittee meeting minutes as soon as possible.

Announcements

Michel Berengier announced that the Fourth International Symposium on Pavement Surface Characteristics of Roads and Airfields will be held in Nantes, France in May 2000. He then distributed brochures of the symposium's preliminary announcement. Domenick Billera (New Jersey DOT) announced that the Internoise 2000 conference will have a transportation noise theme. A brochure will be available at the summer TRB. Jim Nelson relayed an announcement from Carl Hanson that a Rail conference will be in November 1998 in Toulon, France.

Gregg reminded everyone that the three sessions on Transportation-Related Noise Issues will be held later today. At that point, Jay Waldschmidt reminded everyone to be on time for the sessions, and that 22 minutes will be allotted for each presenter. Bill Bowlby announced that Session 309 on Wednesday night will contain a paper on noise.

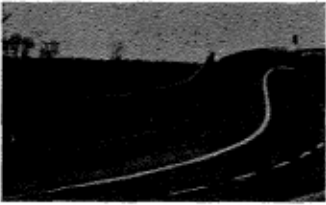
Meeting Adjourned ■

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Atlantic. This water, and this
climate, is warmed by the Gulf of Mexico.
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right there, ready to have the fun
of your life in the middle of June.

Don't mess with my
head. I am a scien-
tist and I don't have
time for fun and
games.

I don't even
know what AIF04
stands for. It's a
computer code.

What the heck. I never have any
fun. The guys keep spamming my
e-mail and taking the memory out
of my laptop. Maybe I ought to
step up and take a wing. Now,
where's that number?



Soren Pederson—Recap of summer TRB meeting in Ontario

**Roger Wayson (University of Central Florida)
Pavement/Tire Noise Synthesis**

NCHRP Project 26-05—Large effort—research has been going on for 30 years. Over 1000 references studied. States surveyed—most states replied to the survey. 50% of the states had investigated this issue—most states would consider re-paving if noise benefits would follow. Asphalt most prevalent. Safety is primary concern. Review indicated differences in measurement techniques. Consequently, UCF's study could not combine data. Many studies involved car interior vs. passby measurements. Differences in tires, pavements, weather conditions, etc. also made it difficult to make direct comparisons.

General Mechanism—tire vibration, horn effect, absorption of pavement, and scattering. Leading and trailing edge generate high freq., middle portion generates low frequencies, and tire air pumping. Pavement parameters—micro, macro megatexture, roughness. Safety versus noise tradeoff. Asphalt is usually quieter, porous asphalt is even quieter. Portland cement is more durable, better friction coeff. Tining adds tonal noise. Exposed aggregate, porous portland cement have been used. These have shown better noise performance in Europe—they have better roadway designs. Other considerations include changes over time, safety (surface friction, snow and ice control), maintenance (cleaning and replacement—pores get filled up), and construction techniques. Summary—lots of data but hard to compare, and safety vs. noise is a major trade-off.

Cynthia Lee (VOLPE) TNM update (see distributed memo)

TNM runtime issues have been addressed. Memo includes comparison of measured vs TNM predicted -barriers will still be built a little high but not as high as predicted by STAMINA. TNM can be purchased (\$400-\$500) through University of Florida (McTrans Center) in CDROM format.

**Soren Pederson & Harvey Knauer—
New Noise Barrier Design Handbook**

This is to replace the old noise barrier design handbook. Harvey is addressing non-acoustical issues; Volpe will address acoustics issues. Text will be supplied to Volpe Center by March. Photos to be included. Considering a video to accompany the manual.

Ulf Sanderson—Tire noise

Goal: eliminate 25% of the noisiest tires on the market. Working with ISO standards organization. Close proximity (trailer—with two microphones). This method provides consistency. Problems—what to use for reference tires. Use average of data of reference tires. November -Internoise in New Zealand. Ulf is organizing a tire noise session. Ulf also mentioned an experiment to determine the relationship between noise and friction. The experiment showed that there is no significant relationship between the two (95% confidence).

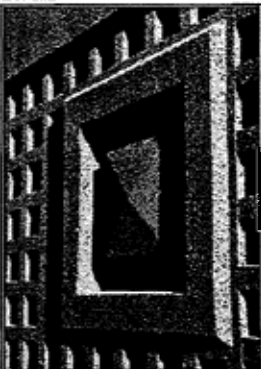
Domenick Billera — NJDOT Update

NJDOT is currently conducting Type II noise barrier studies and cost sharing with communities.

Jim Byers — PennDOT

PennDOT also involved in Type II programs. Wants FHWA to

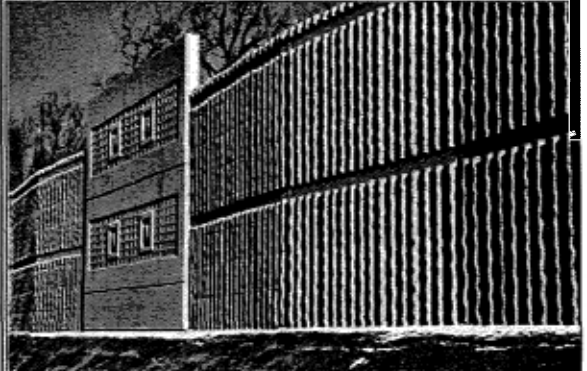
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Close-up detail of one of many architectural patterns available for highlighting long walls and accents as shown in photo below.



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(Minutes, from page 15)

address "feasible and reasonable" in NEPA requirements.

Cary Adkins —VADOT

VADOT is within the top four states in barrier construction nationwide. Working on the "Mixing bowl" I-95, I-395, and I-495 interchange project. Existing noise barriers need to be dismantled because of r.o.w. acquisition.

Soren Pederson, Ontario

Constructing a new freeway that has been in planning for 30 years. Not a single noise barrier was required because of good land use planning. All adjacent land is commercial, industrial, etc. In 1997, \$4 million was spent in noise barrier construction. A lot of opportunity for consultants.

Elvin Pinkney ODOT

Lloyd Herman doing pavement noise studies. Ohio coming up with a standard noise barrier design.

Oklahoma DOT - Dawn Sullivan

Lack of qualified noise consultants. The DOT currently has \$700 million in highway projects.

Louisiana DOT - Noel Ardoin

New at noise issues—developing policies. Noise barriers are now a hot issue in Louisiana.

Maryland DOT—Ken Polcak

Type II program active. Type I projects happening as well. The DOT is asking for 20% cost sharing for Type II projects. The DOT requires local noise control in order to be eligible for Type II noise

barriers. Each county has its own criterion.

TXDOT—Mike McNerny

TXDOT is preparing a noise barrier design guideline to include structural, aesthetics, and acoustics modeling tools. TX has twenty-five districts that are fairly independent and needs some consistency. TXDOT is conducting a quiet pavement study. Had a meeting last week with SAE to test several pavements. BJ Lansburg—Type II survey.

Bob Armstrong — FHWA

Recent development by Federal government to limit Type II projects to areas where homes were there before the highway. 23 CFR has been updated (ask Bob about this). TNM to be released first quarter of 1998. FHWA's Environmental research strategic plan is being developed. New noise brochure with title "Highway Traffic Noise in the US: Problem and Response."

This years' best paper award "Methods to determine Reasonableness and Feasibility for Noise Barriers." Win Lindeman and Roger Wayson.

St Petersburg FL summer TRB meeting to be held at Renaissance Hanoi Hotel July 12-14, 1998. No ties please!

Cynthia Lee (Volpe Center): TNM Lookup Table

TNM Lookup Table and complementary DOS program. This program is a greatly simplified version of TNM—for those that want a quick and dirty noise analysis using the raw TNM emission data.

Program assumes an infinite roadway and barrier. Choose from 5 vehicle types, soft or hard terrain, single barrier at various heights,

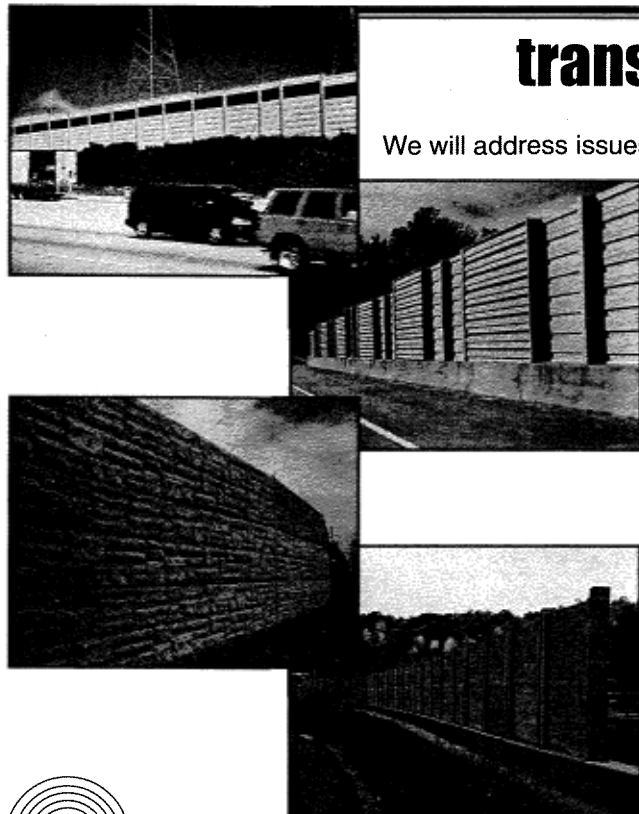
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Sound Transmission Class	38	51	38
Transmission Loss at 125 Hz	23	36	16
Std Panel Height, in. (mm)	24 (610)	48 (1219)	48 (1219)
Std Post Spacing, ft (m)	16 (5)	32.8 (10)	16 (5)
	REFLECTIVE SYSTEMS		
	NoiShield-R	Soundcore	AcoustaWood
Sound Transmission Class	27	51	38
Transmission Loss at 125 Hz	13	36	16
Std Panel Height, in. (mm)	16 (406)	48 (1219)	48 (1219)
Std Post Spacing, ft (m)	10 (3)	32.8 (10)	16 (5)



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receiver distances from 10-100 m. Result is a single Leq value at a given receptor.

Seishi Mearishi — Porous Elastic Road Surfaces

See memo.

Chris Menge - HMMH training course for TNM

Grant Anderson will conduct the course. The course will go on the road.

**Minutes of the Transit Noise Subcommittee
Committee AIF04**

James T. Nelson - Chairman 1/13/98 8:00 am

TCRP—Applied research program -transit operators are the primary customer. \$40million is available through ISTEA. APTA determines projects, TRB actually administrates contracts. In the last five years 230 projects were completed and 88 projects were published.

Problem statements for proposed research are due April 30 1998. Forms available on the web. Annual report out and available (at room 1101). Web site address ww2.ns.edu/trb.crp. WIA prepared the 1997 project wheel/rail noise control manual (TCRPC-3). This program deals with wayside and squeal noise and mitigation measures. Manual comes with software that will identify mitigation measures, etc. Available through APTA or TRB. Follow-up project is a field demonstration -primarily wheel vibration absorbers (2 different types of absorbers) and rail vibration absorbers.

TCRPD-I Rail Corrugation completed by AAR at Pueblo—investigated primary causes of corrugation. D-6 Track design—PB is

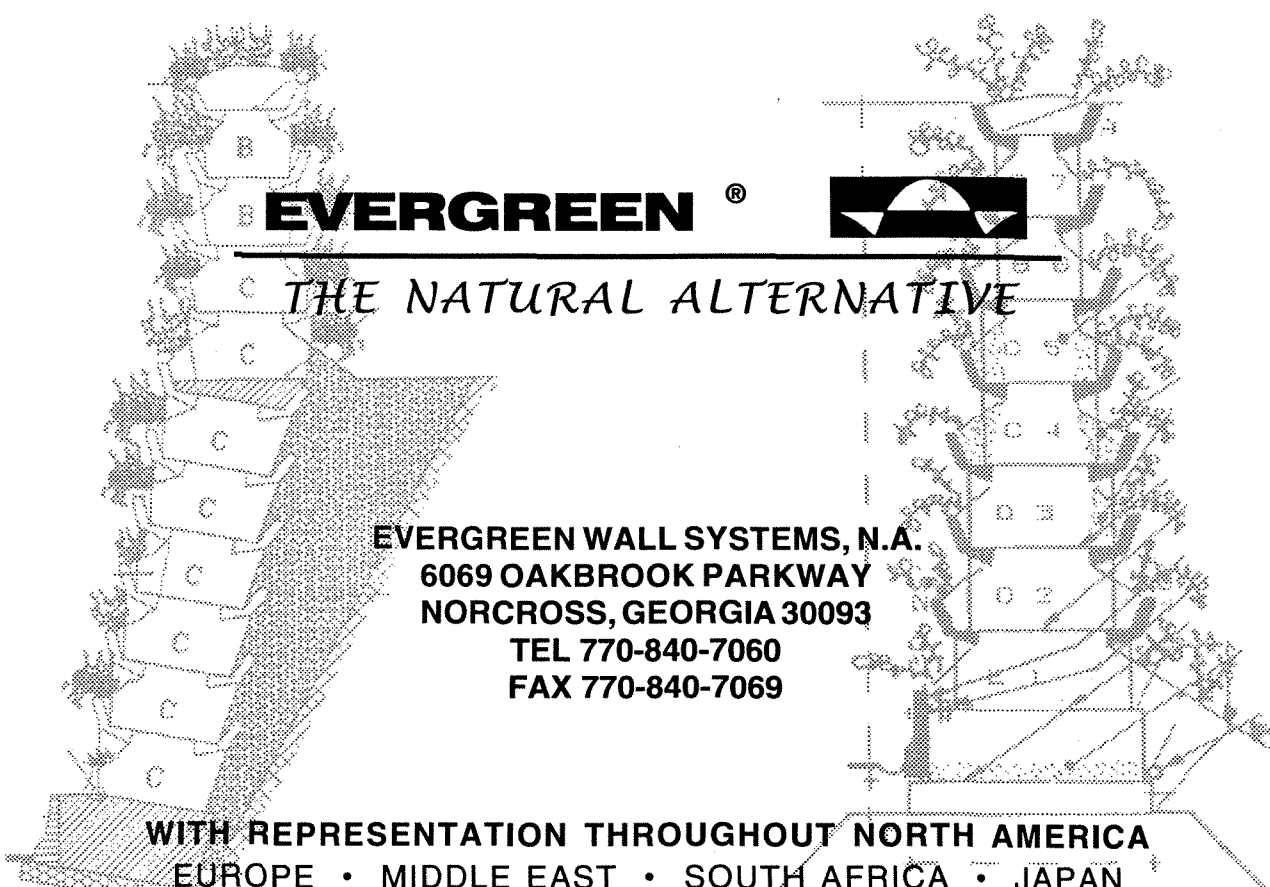
authoring the manual - draft due about 1 month from now. Also a direct fixation fastener project is underway—Battelle is the prime consultant. Test methods are being researched but report will not review or recommend various fasteners.

Jim Sowel — LA MTA—current train operations producing noise that exceed criteria. Studios with poor isolation are affected—ground borne noise an issue. The Board decided to increase criteria up to the level of ambient—already presented this in environmental documents. Cologne egg fasteners used to reduce groundborne noise in the 40-50 Hz range. Steven Wolfe (PB) included the egg fastener in the spec— used at a theater location. First time a soft fastener has been used in U.S. on a switch. U.S. reluctant to try new things like this—also sole source bidding required. Advanced track supplies a version of the cologne egg. This particular fastener is rather large. Price: perhaps \$300 per fastener.

Carl Hanson — HMMH- High speed rail report in peer review cycle. FRA and FHWA review—waiting on FHWA review. Cascade corridor-high speed trains-will use handbook as well as Florida demonstration project. Also in use in Taiwan. High speed rail in US waiting to see what Europeans are doing. Bombardier tests for Amtrak will occur at the Pueblo test track. Will be in service in the fall of 1999. Using german mic. array to test out train. Challenging problem because of train speed.

Bill Jehle—NYCTA—Use ring-damped wheels. Wheel squeal has been virtually been eliminated in NYC. Now have computer program that predicts squeal noise of wheels. Used to use impact hammer. Mentioned 61st St tunnel—wrap around rail fastener—epoxy

(continued next page)



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(Minutes, from page 17)

paddies wearing out after project was dormant for five years, then trains running for 10 years—now replacing with Pandrol fastener. May replace entire track for \$50 million. Existing fastener stiffness one-million lbs. per inch.

Bill ? Rail fasteners—natural rubber 90-100,000 lbs/inch static deflection for NYC and Washington Metro. New approach is to alternate hard and soft fasteners as an alternative to floating slabs. DS Iso rail. 30,000 to 60,000 lbs per inch with lateral restraining device.

Mike Staiano—Working on Baltimore LRT Extension. Noise emission testing for wheel squeal. Using Bochum wheels? 90 ft. radius measurements inside and outside curve. One test indicated squeal free and another test squeal prone. Rigid embedded track. J.Nelson cites very similar situations where squeal condition is intermittent. Very hard to predict. J.Nelson thinks narrowing gauge of track at curves helps reduce crabbing, hence squeal.

Bob ? Woodward Clyde—Community noise issues BN railroad said mitigation measures within their row would be acceptable. Working on Green Line MTA noise assessment. Passby noise differs by 8 dBA for trains going in opposite direction. Peak around 800 Hz, in opposite direction is 1 kHz. Also working on FL high speed rail.

Seishi Mearishi —Porous Elastic Road Surfaces (see memo)

Chris Menge - HMMH training course for TNM

Grant Anderson will conduct the course. The course will go on the road.

FROM: Eric Stusnick, Chairman, Aircraft Noise Subcommittee
RE: Subcommittee Report

The current subcommittee membership is 57. One new member joined the subcommittee this year - Mr. Lawrence Finegold, USAF Noise Effects Branch, AL/OEBN, Wright Patterson Air Force Base, joined the subcommittee this year Ohio.

Nine members of the subcommittee attended the summer AIF04 meeting in Toronto, Ontario, Canada. At that meeting two two papers on aircraft noise were presented:

- Prediction of Aircraft Engine Runup Noise Impacts at Portland International Air-port. Portland. Oregon by Robert E. Brown, Brown-Buntin Associates, Inc., Visalia, CA.

- Improvements in Acoustical Identification of Aircraft at Monitoring Sites by Robert C. Chanaud, Larson-Davis Laboratories, Provo, Utah.

A tour of the Bombardier Aerospace Group Plant was also conducted.

Thirty-one people attended yesterday's Aircraft Noise Subcommittee meeting. Eric Stusnick gave an update of the study of the Validation of Aircraft Noise Models at Lower Levels of Exposure, which Wyle Laboratories is conducting for the NASA-Langley Research Center, and Mike Lucas described the Rotorcraft Noise Model, which Wyle is developing for NASA-Langley. Following the formal presentations, a lively discussion was held on a variety of topics including sleep disturbance by aircraft noise, annoyance to helicopter noise, and harmonization of U. S. noise standards and procedures with those of the European Union.

At Session 231 this afternoon, Eric Stusnick and Terence Thompson of Metron, Inc. will describe the current version of the Aircraft Community Noise Impact Model (ACNIM), which is being

developed for NASA Langley, and its capability to optimize aircraft flight paths to minimize the noise exposure of residents near an airport. At Session 260 this afternoon, Juliet Page of Wyle Laboratories will describe NDADS, which is a computerized system for employing user-enhanced automation procedures to radar tracking data for use in aircraft noise prediction models.

I would like to thank all the members and friends of the subcommittee who have contributed to this year's endeavors and ask for your continued support in the year ahead. ■

Ed. Note: Ordinarily, we would not publish minutes of committee meetings which take place at these conferences, even though they are in the public's realm. There is so much to be seen, read and heard in such a short time, it sometimes makes us miss an important point. The wonderful committee workers are the people who formulate the policies and push the envelope, and I am always amazed at the accuracy and depth of the note-taking. They are great!!!■

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(A1F04 Summer Meeting, from page 10)

Florida Aquarium

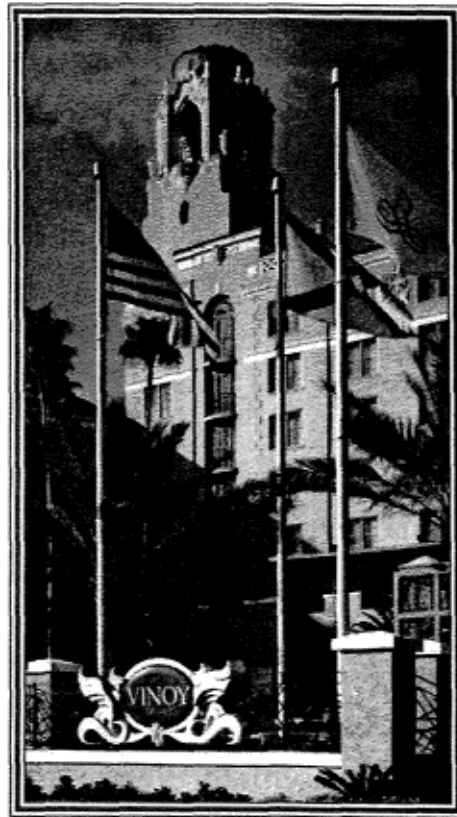
With a shell shaped glass dome, this new \$84 million aquarium stands out along the newly developing strip of waterside attractions between downtown Tampa and Ybor City. It tells the story of Florida's water, from underground sources to open sea. The exhibits contain over 4,300 animals and plants representing 550 species native to Florida. The focus of the aquarium is on the state's wetlands, beaches, bay, saw grass marshes, swamps, mangrove forests and the Everglades. The aquarium also features a half-million gallon Coral Reefs exhibit. Admission - \$12.00

Tampa Museum of Art

Situated on the east bank of the Hillsborough River south of the Tampa Bay Performing Arts Center, this visual arts complex offers seven galleries with changing exhibits ranging from classical antiquities to contemporary art, sculpture, photography and crafts. Permanent exhibits include the Joseph Veach Noble collection of Greek and Roman antiquities and the C. Paul Jenewein sculpture collection. Admission - \$3.50 Adults, \$2.50 Children

Lowry Park Zoo

Recently renovated and expanded with lots of greenery, bubbling brooks, and cascading waterfalls, this 24-acre zoo houses animals in settings that closely resemble their natural habitats. Among the major attractions are a 45-foot aviary in a subtropical forest setting, a wildlife center, showing casing Florida's native plants and animals; and a Florida at night building, specializing in rare nocturnal animals. The zoo offers insight into breeding and rehabilitation through its aviary nursery and manatee hospital. There are also areas devoted to primates, Asian animals and a children's petting zoo. Admission - \$6.50 Adults, \$4.50 Children ■



ATTENTION
Persons and/or firms interested in either securing exhibit space or sponsoring special events (breaks, reception, lunch, etc.) are asked to contact Don Doeblar at URS Greiner in Tampa at (813) 286-1711 as soon as possible since opportunities are limited.

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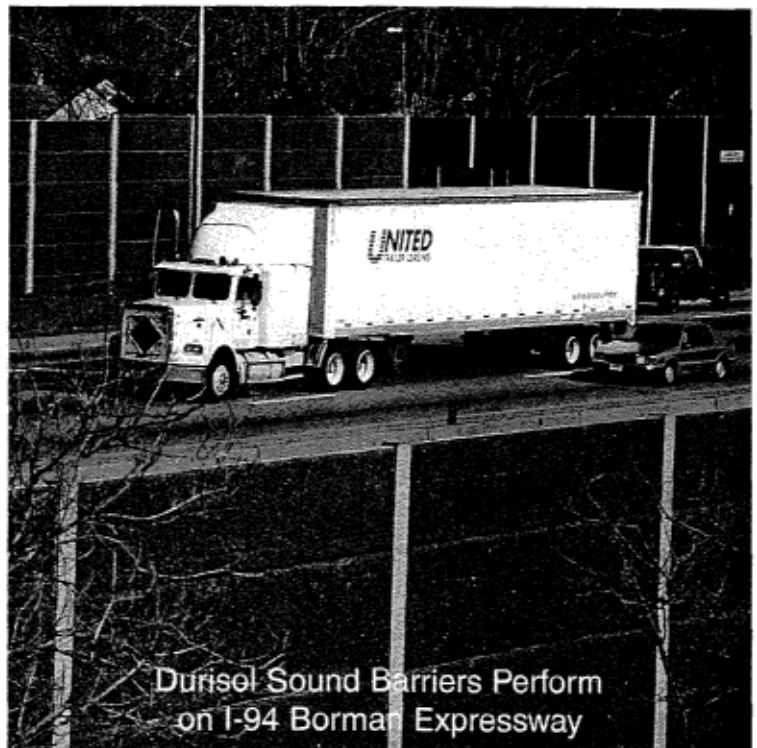
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LETTERS TO THE EDITOR

BARTON-ASCHMAN ASSOCIATES, INC.
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March 6, 1998

I am writing to subscribe to the Wall Journal. Enclosed please find a check for \$20.00 for the next six (6) issues starting with the most recent (I believe, the Jan/Feb 1998) issue. Could you please mail or fax a receipt back to me for expense purposes.

I read an excerpt of the Editor's Corner from Issue 29 about www.com. I believe the web is an excellent medium for distributing the Wall Journal to the readers. I would suggest making it an OPTION for the subscriber to download it for a reduced price, say \$10.00/year or free of charge for readers who don't need or want a nice glossy snail-mail version. It is also a nifty way for researchers and others who type "noise wall" in an Internet search to find the most up-to-date information on the topic.

Thank you for your time and we are awaiting the first Journal in the next few weeks.

Sincerely,

Daniel E. Drake
Associate

FLORIDA DEPARTMENT OF TRANSPORTATION
District Environmental Management Office
Chipley, Florida

March 13, 1998

Dear Mr. Angove:

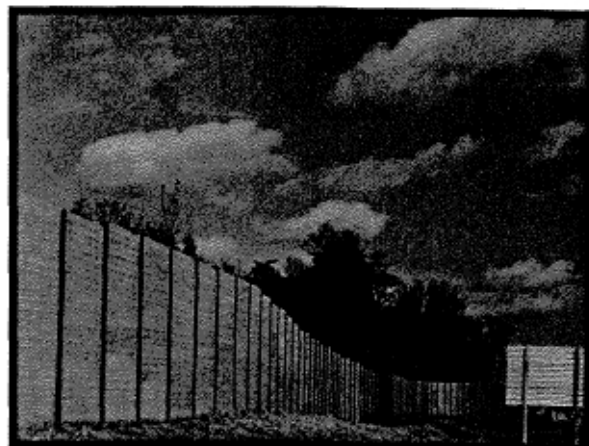
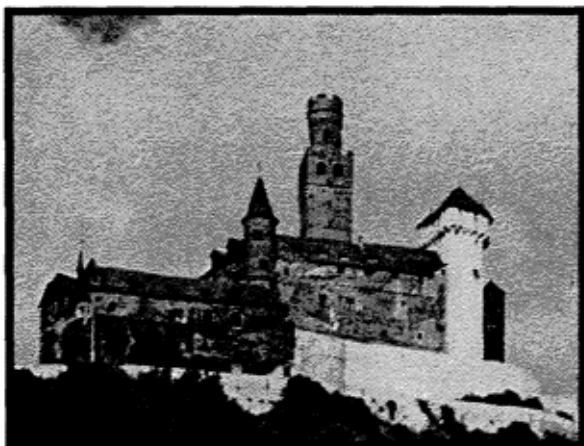
Please register me for a free subscription to The Wall Journal. I am our District Noise Specialist and Mr. Win Lindeman of the FDOT Central Office recently chastised me for not getting your magazine so I could keep up with what's what and who's who in noise.

If you have any questions, please call me at (904) 638-0250, extension 515. Thank you!

Sincerely,

Natalie F. Kent
Environmental Specialist

(ED. NOTE: Natalie, it really disturbs me to hear that Win is chastising his people once again. I thought he was all over that phase in his life, but I guess the strain of putting up all those noise barriers has gotten to him. I'll give him a call to see if I can temper his animus with calming words. If not, and if he continues to chastise you, please let me know and I will get my Pennsylvania muscle man, Harvey Knauer, and we shall make a visit to Tallahassee).



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"Mr. Angove, there's a man on the phone, he sounds really cute, and he says he is from the FBI. I think he wants to catch some bird smugglers who have been living in our warehouse. I don't know what he is talking about. Should I let him in?"



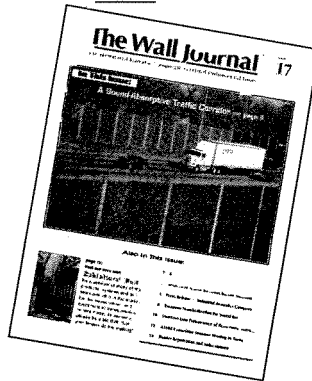
"Darlene, I want you to tell Mr. Cute Face to JxÁÁ;x,UFM A!!! — and don't ever, ever come back!!!"



"Look, we know you're in there. This is the FBI. Agent Adams speaking. Throw out your guns and come out with your hands in the air. You had a clever cover with all those dumb animals you were living with, but we knew you were smuggling sound-absorptive bat guano to sell to the Russians. Too bad for you the stink led us right to your door. You guys ever hear of Saran Wrap?"

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Noise Barrier Project Reports
Fundamentals of Sound
New Product Press Releases
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ANNOUNCEMENT



Richard J. Peppin

Mr. Peppin, who is doing Acoustical Consulting now, was a manager for a firm manufacturing acoustical measuring and analyzing instrumentation before it got into money problems. In his position, he oversaw the sales, marketing, advertising, and technical support for the Eastern half of the USA, Israel, Canada, and Puerto Rico. Previously, he was vice-president for market development for IAC, responsible for the marketing of noise control products for the industrial and architectural industries. Prior to that he was president of Scantek, Inc. where he provided marketing and technical support of acoustical and vibration signal analyzing instruments. He also worked for the U.S. government, consulting and aerospace groups.

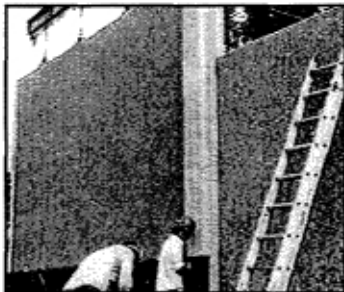
Mr. Peppin is a Registered Professional Engineer, Board Certified in Noise Control Engineering, an Assessor for NIST's NVLAP accreditation program, and a Certified Quality Systems Auditor for the Registrar Accreditation Board. He Chairs ANSI's Acoustical Standards Board. Mr. Peppin, Past President of INCE (and a member since 1976) has been active as Chairperson of ASTM E33.04 on Applications of Acoustical Materials. He is a Fellow of ASME where he chaired two Technical Divisions. He is also a Fellow of the ASA and is a member of the Technical Committees on Architectural Acoustics and on Noise and is Chair of three working groups. He is a member, and Vice-Chair, of ASHRAE TC-2.6, "Sound and Vibration."

Richard J. Peppin received a B.E. degree in Mechanical Engineering from the City College of New York. He holds graduate degrees in Theoretical and Applied Mechanics and in Mechanical Engineering from West Virginia University and Rensselaer Polytechnic Institute, respectively.

Mr. Peppin is also the distinguished author of the article on page 7 of this issue.

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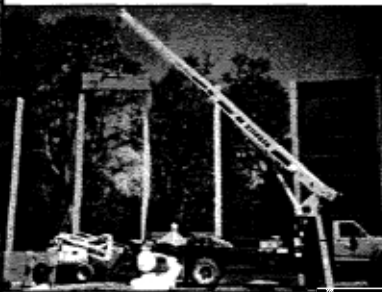
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The Off Ramp

What goes around...

This is to put a whole bunch of people on notice that I will personally be in attendance at the A1F04 Summer Conference in St. Petersburg. I will, at the very least, be on the Conference premises from tea time on Sunday, July 12 and up until the bar closes on Wednesday, July 15. It is entirely possible that I shall also remain in those environs as long as festivities are at hand and flourishing anywhere in the soft summer night's air — no slouch, I.

Now, this is also to put certain people on notice that the old El has retired. No longer is he the *bon vivant*, the smooth *connoisseur*, the lover of fine wine and women, the bartender's best friend by far.

My company credit cards are a thing of the past. They have all been snatched away by the beancounters. It is to pity that my life style is now controlled by Medicare, Social Security and AARP. The worst of it is that I never got the chance to join Club Med.

So, you see guys, the old El is gone, and what you've got here is the Old Boy. I can still belly up to the bar, but I can't find my wallet any more. What I can find is lots of good stuff about you guys I've been saving up for years — sort of like my retirement fund. You all know who I'm talking about,

but I'll give you a clue about one of you.

This happened at the first formal meeting of A1F04. It was in Los Angeles in 1978. One of you was found assembling a band of your fellow members from the bar after dinner, which you then led down the middle of the now deserted streets of downtown L.A. This person then halted the parade, and standing at its head, shouted loudly, "All right! We know you're in there. This is the FBI. Throw out your guns and come out with your hands up!"

In the quiet of that summer night, we could hear windows slamming shut and people yelling at each other. Also, the sound of sirens approaching. The A1F04 group broke up and fled for the hotel.

I can tell you also about the lipstick kiss I found on the mirror in my hotel bathroom when I reached the hotel. I later discovered that the gang leader of the "FBI" was also the perpetrator in that case. With 20 years of stories about this handful of A1F04 members, I don't need a portfolio of stocks and bonds. I've got their retirement funds to work out of.

And, get this one: Win Lindeman sent me a note along with the Invitation and Registration. It read, "El, I'm counting on you to buy my first drink."

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