

April 15, 1982

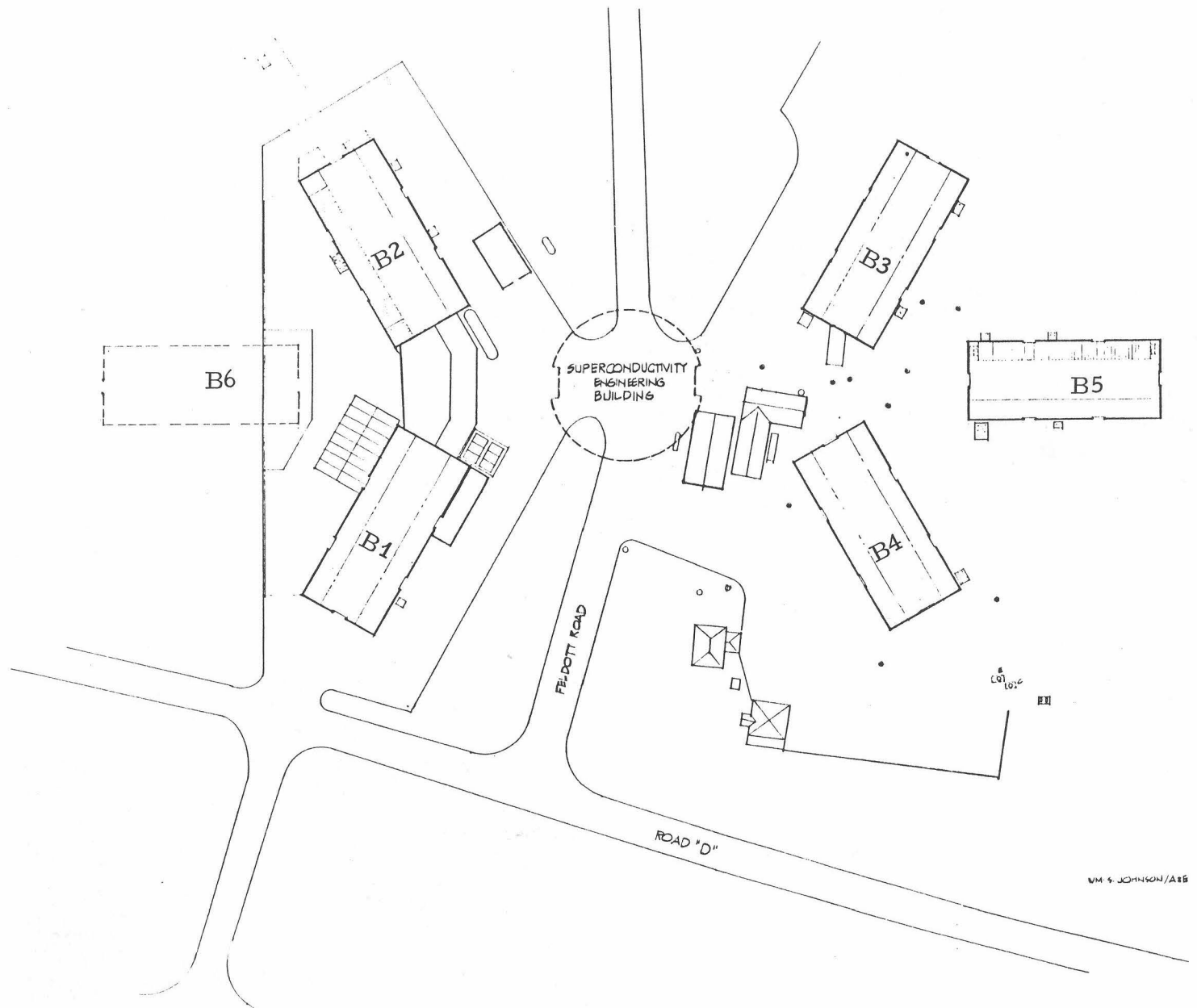
FERMI NATIONAL ACCELERATOR LABORATORY

FermiNews

INDUSTRIAL AREA FUTURE DIAGRAMMED

As high-energy physics at Fermilab prepares to enter the new age of cryogenics with the installation of the Energy Saver, the individuals responsible for plotting the Laboratory's future are faced with a multitude of new problems, as well as new challenges.

At the heart of much of this activity is the Industrial Area. Since 1976, when the first Saver coil was wound in Industrial #1 on a prototype of the current production-scale winder, the Industrial Area has functioned as design center, R&D trial ground, assembly facility, and testing laboratory for the new generation of cryogenic magnets. Now, with the production of Saver magnets slated to be complete by this fall, the →



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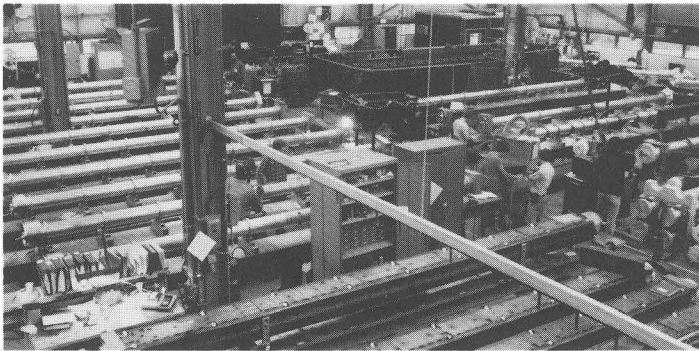
Proposed Industrial Area Complex showing locations of buildings.

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manpower and space devoted to magnet assembly will be turned around according to plans which call for a new emphasis on operation and maintenance of the Saver, and the beginning of the next phase of high-energy physics, the high field program. According to Acting Deputy Director Phil Livdahl, "Completion of the Saver assembly phase frees people and space for new jobs. The task now is to organize the people and the space to meet all the new challenges our program will create."

Taking into consideration existing structures, and buildings still in the planning stage, the new Industrial Area will look like this:

Industrial #1. This building will remain the permanent home for Superconducting Magnet Test Facilities (MTF) and the conventional Main Ring Magnet Measurement Facility. As many as 50 magnets of the Doubler/Saver generation will pass through here each year for repair or upgrade work.



The MTF itself will be rearranged to provide more space and versatility for this work. The existing test systems will be converted to handle the future measurement needs of low current dipole and quadrupole magnets to be used in the Tevatron II program. In addition, a new generation of magnets, the High Field, or 10 Tesla magnets, will begin development here. These High Field magnets are the beginning of a 10-year program which will lead to even higher energies generated by even larger machines than the current Saver.

Industrial #2. Long the home for maintenance and repair of experimenter and conventional Main Ring magnets, Industrial #2 contains facilities for sand blasting, large coil impregnation, and other major

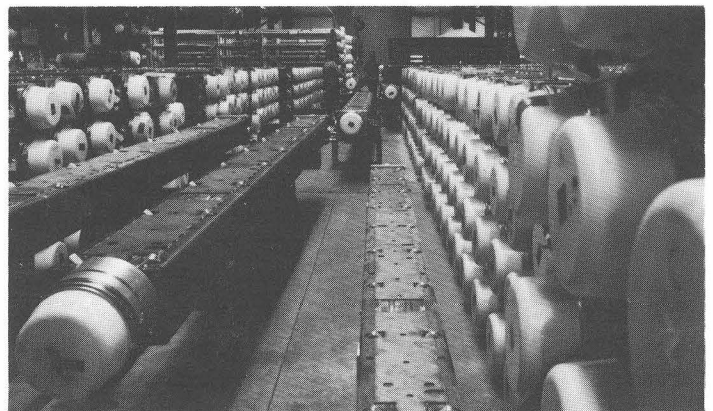
procedures. In addition, this building is home to the Laboratory's only recognized Radioactive Safe Machine Shop.

Plans call for Industrial #2 to continue to provide these activities for the life of the Laboratory, with some minor adjustments as more space becomes available in new industrial buildings.

Industrial #3. Since its construction in 1976, Industrial #3 has been the site for production-scale Saver magnet coil fabrication. The intention is to consolidate assembly tooling for all Saver magnet components in this building in order to maintain a capability for repair or low-rate assembly of additional magnets as the need arises. The present warm-measurement test facilities will be converted to use for further superconducting magnets of the low-current quadrupole and dipole variety, as well as further High Field development.

Industrial #4. The newest member of the Industrial Area began its life as a storage area for Saver magnets, and the fabrication site for the E-605 super coils. With completion of the E-605 coils, the entire building is now stocked with magnets, spool pieces, and cryostats awaiting the summer shutdown, when they will be hauled into the Main Ring to become the Energy Saver.

In 1983, with Energy Saver installation well underway, about one-third of Industrial #4 will be required for storage of Saver components. The rest of the space will be contested by four major activities, each of which would like to own **all** the remaining space. These four are component assembly for the Colliding Detector Facility, superconducting magnet assembly over



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FERMILAB HOSTS NEW YORK LIGHT OPERA COMPANY

by Jane Green

The New York Light Opera Company returns to Ramsey Auditorium at 8 p.m. on Saturday, May 15, 1982. This irresistible evening of European Operetta features two reviews, "Only Offenbach: A Soufflé of Song" and "On a Liltng Refrain: A Celebration of European Operetta." Included in these collections are songs from such favorites as "Die Fledermaus," "The Merry Widow," "La Périchole," and "The Gypsy Baron."

A capacity crowd delighted in the New York Light Opera Company's performance at Fermilab in 1980. Critics regard this all new show as even better than the troupe's previous presentation. The players perform with "sophistication, gaiety, and elegance." They have a "razor-sharp wit" and a "sense of style and fun as splendid as their costumes." Musically, the quartet is known for tonal beauty and stunning clarity.

Tickets for this evening of operetta are now on sale at the Information Desk in the atrium of Wilson Hall. Admission is \$6, all seats reserved. Telephone 840-3353 for information and reservations; phone reservations are held for five days, but due to the great demand for tickets, those not paid for in five working days will be released for sale.



The New York Light Opera Company

The May 12, 1982, speaker in the year-long seminar series on Arms Control and International Security will be Dr. John Steinbruner, Director of Foreign Policy Studies at The Brookings Institute, Washington, D. C. His talk will be "The Implications of Command Vulnerability."

SPEAKER SURVEYS SUBMARINES

"Submarines in Strategic and Tactical Roles" to be delivered by Dr. Richard Garwin is the seventh lecture in Fermilab's series on Arms Control and International Security at 8:30 p.m. April 22 in Ramsey Auditorium.

HUTCHINS TO DISCUSS VIOLIN

"Technical Problems and Violin Research" will be presented by Carleen Hutchins, Catgut Acoustical Society, Inc. at the Physics Colloquium Wednesday, April 21, at 4 p.m. in Ramsey Auditorium.

Simple as well as highly sophisticated modern measurement techniques are revealing considerable information on the complicated interactions between the nonlinear bowed string and the complex couplings of the inside air and the wood of the violin box which function to produce beautiful sounds. Specific problems will be discussed and illustrated.

The speaker is associated with IBM Thomas J. Watson Research Center and Harvard University. He has made contributions in the design of nuclear weapons and in instruments and electronics for research in many branches of physics and communications. He was a member of the President's Science Advisory Committee 1962-65 and 1969-72, and of the Defense Science Board 1966-69. His work for the government has included studies on anti-submarine warfare, new technologies in health care, sensor systems, military and civil aircraft, and satellite and strategic systems, from the point of view of improving such systems as well as assessing existing capabilities.

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and above space available in Industrial #3, conventional magnet assembly for Tevatron I and Tevatron II, and Tevatron I R&D work space.

Obviously, even with the building of Industrial #5, the Laboratory has more future plans than present space. (When asked how a "winner" will be selected from among the four competitors, Phil Livdahl shrugged, smiled and said, "I'll ask the Director!")

Industrial #5. Slated for completion in November of 1982, Industrial #5 will be dedicated to the assembly and testing of conventional magnets for Tevatron I and II. Beyond 1985, analysis magnets for experimental areas will be fabricated and tested in this area.

Industrial #6 and Superconductivity Engineering Building. Both of these proposed buildings have been submitted to DOE every year since 1980 as line item construction requests. But, due to the by-now-familiar funding shortages, other, more immediately needed projects have siphoned off funds.

Pending the hoped-for DOE and Congressional approval, these two structures would round-out and complete a centralized Industrial Area where all phases of magnet assembly and development could be undertaken.

No building is currently available for the assembly of large detector components on site. As a result, Users who construct their detectors at the Laboratory must do so in the experimental area itself. Industrial #6 would function as a much needed User Experimental Equipment Assembly Area, a facility Livdahl characterizes as "a serious, much-needed, long-term requirement."

The Superconductivity Engineering Building is envisioned as a central location for all engineering, drafting, procurement, design, fabrication, and assembly functions growing out of Fermilab's new superconductivity program. As of now, these activities are scattered site-wide, and, while they've been enormously successful, they've carried the extra

burden of coordinating a group working toward a common goal from widely scattered physical locations.

This building will also house a substantial machine shop which will support all of the activities of the six industrial buildings in the complex as well as the B0 detector building which is adjacent to the industrial area.

SWIMMING TAGS FOR SALE MAY 3

The Fermilab swimming pool will open for the 1982 season on Saturday, May 29. Season pool tags will go on sale May 3 at the following locations: Reception Desk, Wilson Hall; Housing Office, Aspen East; ES/Magnet Prod. Office, 43 Feldott. Season tags will also be sold at the pool opening weekend, May 29-31. The 1982 prices are family, \$50; couple, \$35; single, \$20; daily, \$2.

Pool operating hours will be weekdays 6 a.m. to 8 a.m., adult swim (16 and over), no lifeguard on duty; 11 a.m. to 7 p.m. family swimming, guard on duty. Weekends and holidays the pool will be open from 9 a.m. to 7 p.m. for family swimming, guard on duty. At all times adult swim is from 7 p.m. to 9 p.m., no guard, and the pool is closed between 9 p.m. and 6 a.m., no swimming allowed.

Swimming instructions will be offered for children beginning June 29. Individuals may register with lifeguards at the pool beginning June 7. Fee for instructions will be \$15 per child. Questions regarding the swimming pool may be directed to Helen McCulloch, Recreation Office, ext. 3126.

STOCKROOMS CLOSE MAY 17-21

Site stockrooms located in the Wilson Hall Catacombs and Site 38 Warehouse will take annual audited inventories the week of May 17-21, 1982. The Wilson Hall Stockroom will close May 17 and 18, and the stockroom at Site 38 will close May 19-21. Contact Gene Guyer, ext. 3808 for information.

Fermilab is operated by Universities Research Association, Inc. under contract with the U. S. Department of Energy. Ferminews is published biweekly by the Publications Office, P. O. Box 500, Batavia, IL 60510, phone (312) 840-3278.