INSTITUTE OF SCIENCE AND TECHNOLOGY

Industrial Development Division
663-1511 Area Code 313

December 16, 1963

The University of Michigan
Post Office Box 618
Ann Arbor, Michigan 48107

Mr. Francis B. Smith
Chief, Instrument Research Division
NASA Langley Research Center
Hampton, Virginia

Dear Mr. Smith:

This volume of letters of endorsement is in support of our Location Proposal for the Electronics Research Center of the National Aeronautics and Space Administration.

While some substantive support will be evident on quick perusal, the letters as a whole reflect the enthusiastic endorsement of the unified presentation on behalf of Southeastern Michigan. This unity of purpose, for a region containing individually strong representatives of industry and education, has been extremely gratifying to all of us connected with this project, and we are pleased to share this endorsement with your survey committee.

Cordially yours,

Hansford W. Farris

Hansford W. Farris
Associate Director

HWF:rf

ENDORSEMENTS FOR

A LOCATION PROPOSAL FOR THE

ELECTRONICS RESEARCH CENTER OF THE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Submitted to the
NASA Site Survey Committee

Through The University of Michigan
By the Southeastern Michigan Region

December 1963

MICHIGAN STATE UNIVERSITY EAST LANSING

OFFICE OF VICE PRESIDENT FOR RESEARCH DEVELOPMENT

SCHOOL FOR ADVANCED GRADUATE STUDIES • OFFICE OF THE DEAN

December 2, 1963

President Harlan Hatcher
The University of Michigan
Ann Arbor, Michigan

Dear President Hatcher:

In the absence of President Hannah, I am taking the liberty of acknowledging your communication of November 22 requesting our support to have the $50 million Electronics Research Center located in Michigan. On November 22 President Hannah addressed a communication to Mr. Francis Smith, a copy of which is attached, confirming that Michigan State University strongly supports the establishment of the NASA Electronics Research Center in the state.

It has been a pleasure to work with Dr. Farris in the development of a joint proposal. No doubt he has by this time had an opportunity to express to you our sincere support in this entire endeavor.

Sincerely,

Milton E. Muelder
Vice President and Dean

MEM:bm

Encl.

COPY

MICHIGAN STATE UNIVERSITY East Lansing

Office of the President - John A. Hannah

November 22, 1963

Dear Mr. Smith:

I wish to take this opportunity to confirm that Michigan State University would welcome the establishment of the NASA Electronics Research Center in Michigan. Exceptionally strong university resources are provided within a relatively small triangle embracing Michigan State University in East Lansing, the University of Michigan in Ann Arbor, and Wayne State University in Detroit, all within one to one and one half hour's drive. Attractive sites for your facility would include locations available in the metropolitan area surrounding Michigan State University. We believe the NASA site committee will definitely wish to consider these along with other possibilities within the triangle referred to above. Complementing scientific capabilities and an industrial community with appreciable resources is a social and cultural milieu which would be very attractive to the professional and technical personnel who would staff your research facility.

Michigan State University will be happy to cooperate with NASA either individually or jointly with the other large Michigan state universities as well as to work with the industrial and business communities of the state to relate resources to the requirements and needs of NASA. We are participating along with other interests of the state in a formal proposal which will be submitted later. Nonetheless I am happy to indicate at this time the strong interest of Michigan State University to support this important research center.

Michigan State University will be represented by Dr. Milton E. Muelder, Vice President for Research Development. Please feel free to communicate with him on any matter relating to our participation in this endeavor.

Sincerely,

President

Mr. Francis B. Smith
Chief. Instrument Research Division
NASA Longley Research Center
Hampton, Virginia

rj
cc: M. E. Muelder

WAYNE STATE UNIVERSITY

DETROIT, MICHIGAN 48202

OFFICE OF THE VICE PRESIDENT
GRADUATE STUDIES AND RESEARCH

November 29, 1963

Dr. H. William Farris
Institute of Science and Technology
University of Michigan
Ann Arbor, Michigan

Dear Dr. Farris:

As you know, Wayne State is most anxious to participate in a collaborative effort of universities and industries to obtain the NASA Electronics Research Center for the State of Michigan. I understand that plans for using this approach were agreed upon at the meeting last Friday in Ann Arbor. We have accordingly moved with speed to prepare the attached information which should be helpful in the preparation of an area proposal.

Because of the unavoidably tight time schedule the information enclosed is not voluminous, but since the proposal itself will probably be succinct, the brevity of our contribution may actually make the collative task easier.

Members of the Wayne State staff will contact you over the next two weeks concerning additional contributions or steps to be taken in the proposal effort. The two persons carrying principal responsibility for our involvement are Professor Forest Brammer, Chairman of the Department of Electrical Engineering, and Mr. Eruce W. Pinc of my staff.

I trust that the area proposal will be one of a successful series of cooperative efforts jointly sponsored by the universities and industries of Michigan. As suggested in the enclosure, perhaps a formal organization--a non-profit corporation or a consortium--will emerge which can be used from time to time to attain other objectives of mutual interest to the several universities and industries of our State.

Very sincerely yours,

Randall M. Whaley
Vice President
for Graduate Studies and Research

RMW/hm

Enclosure
cc: President C. B. Hilberry
Vice President R. Sawyer

PHILIP A. HART
MICHIGAN

COMMITTEES:
COMMERCE
JUDICIARY

United States Senate

WASHINGTON, D.C.

November 21, 1963

Dr. Harlan Hatcher, President
University of Michigan
Ann Arbor, Michigan

Dear Doctor:

Thank you for your letter on the NASA electronics center location. It is heartening to know we now have an opportunity to present what I know will be a good case for Ann Arbor. Earlier this year I had expressed my strong concern on this point to NASA officials.

Today Dr. R. A. Boyd met with NASA officials here in Washington. My office indicated to him that we will be helpful in any manner we can, and I have assurances that every opportunity will be given to the University of Michigan and the Ann Arbor area to make a presentation.

With every best wish,

Sincerely,

Philip Hart

United States Senate

COMMITTEE ON PUBLIC WORKS

November 21, 1963

Dr. Harlan Hatcher
Office of the President
The University of Michigan
Ann Arbor, Michigan

Dear Dr. Hatcher:

Thank you for your letter of November 19 regarding the efforts of the University of Michigan to obtain the proposed $50 million NASA Electronics Research Center.

I am aware of the potential importance of this facility and am working with Senator Hart to see that the University of Michigan proposal receives all possible consideration.

With all good wishes,

Sincerely,

Pat. McNamara

PAT. McNAMARA, U.S.S.

WILLIAM S. BROOMFIELD
18TH DISTRICT, MICHIGAN

DISTRICT OFFICE ADDRESS:
1029 S. WASHINGTON
ROYAL OAK, MICHIGAN

FOREIGN AFFAIRS
COMMITTEE

WASHINGTON ADDRESS:
1422 HOUSE OFFICE BUILDING

Congress of the United States
House of Representatives
Washington, D. C.

November 26, 1963

Dr. Harlan Hatcher, President
University of Michigan
Ann Arbor, Michigan

Dear President Hatcher:

It would be an honor to assist in presenting Michigan's case to the NASA site committee in regard to the proposed Electronics Research Center. I have asked Mr. Roy Gast of my staff to help in the preparation of the necessary statements and he can be reached here in my Washington office.

My best wishes for success in this worthwhile effort.

Sincerely,

Bill Broomfield

William S. Broomfield, M. C.

WSB/mw

ELFORD "AL" CEDERBERG
REPRESENTATIVE IN CONGRESS
10TH DISTRICT, MICHIGAN

HOME ADDRESS:
BAY CITY, MICHIGAN

WASHINGTON OFFICE:
1206 HOUSE OFFICE BUILDING
WASHINGTON 25, D.C.
PHONE: CA 4-3121, EXT. 3561

Congress of the United States
House of Representatives
Washington, D. C.

COMMITTEE:
APPROPRIATIONS

SUBCOMMITTEES:
STATE, JUSTICE, JUDICIARY
AND COMMERCE

MILITARY CONSTRUCTION

WILLIAM H. HACKETT
ADMINISTRATIVE ASSISTANT

November 26, 1963

Dr. Harlan Hatcher
President
The University of Michigan
Ann Arbor, Michigan

Dear Doctor Hatcher:

I have just read with interest your letter advising me that you have notified the Chairman of the Survey Committee the University of Michigan is interested in having the $50 million Electronics Research Center located in our State.

I will certainly be glad to assist other members of the delegation in emphasizing your request to the Committee.

Sincerely yours,

Elford A. Cederberg

EAC:lk

CHARLES E. CHAMBERLAIN
SIXTH DISTRICT, MICHIGAN

COMMITTEES:
ARMED SERVICES
HOUSE ADMINISTRATION

Congress of the United States
House of Representatives
Washington, D. C.

November 30, 1963

Dr. Harlan Hatcher
President
The University of Michigan
Ann Arbor, Michigan

Dear Dr. Hatcher:

Thank you very much for your letter of November 19th alerting me to the interest of The University in having the proposed Electronics Research Center located in southeastern Michigan.

I appreciate your calling this matter to my attention and will be greatly interested in learning more of the developments.

With my kindest regards, I am

Sincerely yours,

Charles E. Chamberlain

CEC:AC

JOHN D. DINGELL
15TH DIST., MICHIGAN

COMMITTEES:
INTERSTATE AND FOREIGN COMMERCE
MERCHANT MARINE AND FISHERIES
SELECT COMMITTEE ON SMALL BUSINESS

Congress of the United States
House of Representatives
Washington, D. C.

November 26, 1963

Dr. Harlan Hatcher, President
The University of Michigan
Ann Arbor, Michigan

Dear Dr. Hatcher:

Thank you for your letter of November 19 with regard to the proposed $50 million Electronics Research Center for the National Aeronautics and Space Administration.

I shall, of course, be more than happy to do anything I can to be of help on this matter. Please let me know when the proposal is ready to be submitted to NASA in order that I may contact the appropriate authorities in behalf of the University of Michigan and follow through to be sure the University is given every possible consideration.

With every good wish,

Sincerely yours,

John D. Dingell
Member of Congress

C

GERALD R. FORD
FIFTH DISTRICT, MICHIGAN

WASHINGTON, D.C., ADDRESS:
HOUSE OF REPRESENTATIVES
WASHINGTON, D.C.

GRAND RAPIDS, MICHIGAN, ADDRESS:
425 CHERRY STREET SE.
GRAND RAPIDS 2, MICHIGAN

COMMITTEE ON APPROPRIATIONS

Congress of the United States
House of Representatives
Washington, D. C.

November 26, 1963

Mr. Harlan Hatcher
President
University of Michigan
Ann Arbor, Michigan

Dear Harlan:

Your letter of November 19th in reference to the proposed Electronics Research Center for the National Aeronautics and Space Administration has been received.

I certainly do agree that the location of this center would be a tremendous stimulent to the growth of our State and you may be sure I will cooperate 100 percent. Frank Meyer, my Administrative Assistant, will be happy to work with your staff in any way he can be helpful.

Thank you for writing and please let me know your suggestions on how I can best assist in presenting the case for Michigan.

Warmest personal regards.

Sincerely,

Gerald R. Ford, M. C.

GRF:l

MARTHA W. GRIFFITHS
17TH DISTRICT, MICHIGAN

COMMITTEES:
WAYS AND MEANS
JOINT ECONOMIC

WASHINGTON OFFICE:
1516 HOUSE OFFICE BLDG.

DISTRICT OFFICE:
14815 GRAND RIVER
DETROIT 27, MICHIGAN
BROADWAY 3-9151

Congress of the United States
House of Representatives
Washington, D. C.

November 27, 1963

President Harlan Hatcher
Office of the President
The University of Michigan
Ann Arbor, Michigan

Dear President Hatcher:

This is to acknowledge your letter of November 20. It is my hope that the University of Michigan proposal to locate the Electronics Research Center in Southeastern Michigan meets with success. A member of my staff, Miss Marilynne Mikulich, will be most happy to assist you in this effort.

Sincerely yours,

Martha W. Griffiths

Martha W. Griffiths
Member of Congress

MWG:mm

JAMES HARVEY
8TH DISTRICT, MICHIGAN

1626 LONGWORTH OFFICE BUILDING
TELEPHONE: CAPITOL 4-3121, EXT. 2806

DISTRICT OFFICE:
1232 NORTH MICHIGAN
SAGINAW, MICHIGAN
PLEASANT 2-8172

COMMITTEES:
BANKING AND CURRENCY
PUBLIC WORKS

Congress of the United States
House of Representatives
Washington, D.C. 20515

December 5, 1963

Mr. Harlan Hatcher
President
The University of Michigan
Ann Arbor, Michigan

Dear Mr. Hatcher:

Thank you for your letter of recent date and also for the accompanying copy of the letter to Mr. Francis B. Smith.

I will certainly be glad to be of all possible help in any way I can be of service. I have designated my Administrative Assistant, Jim Sparling, who will be pleased to be of assistance whenever the schedule permits.

With all good wishes,

Sincerely,

James Harvey, M. C.

JH/ds

JOHN LESINSKI
16TH DIST., MICHIGAN

HOME OFFICE:
1028 MONROE AVENUE
DEARBORN, MICHIGAN

COMMITTEE ON
APPROPRIATIONS

Congress of the United States
House of Representatives
Washington, D. C.

November 26, 1963

Dr. Harlan Hatcher
President
University of Michigan
Ann Arbor, Michigan

Dear Dr. Hatcher:

Thank you for your letter of November 19, regarding an interest of the University in having the $50 million Electronics Research Center located on the University grounds.

I shall be pleased to do all I can to help you. As to someone from my staff to work with the people, if I am not here personally, you might get in touch with my secretary, Miss Margaret Matus, who will give you the full cooperation of my office.

With best wishes, I am

Sincerely yours,

John Lesinski

JOHN LESINSKI
Member of Congress

JL/crm

GEORGE MEADER
2D DISTRICT, MICHIGAN

COMMITTEES:
GOVERNMENT OPERATIONS
JUDICIARY

Congress of the United States
House of Representatives
Washington, D. C.

November 27, 1963

Dr. Harlan Hatcher, President
The University of Michigan
Ann Arbor, Michigan

Dear President Hatcher:

This will acknowledge your letter of November 19, 1963, which arrived during my absence from Washington. In fact, I had intended to discuss this matter with you at the Ohio State luncheon on Saturday until the tragedy occurred the afternoon previously.

I will be very glad to help all I can in the presentation to NASA regarding the location of the Electronics Research Center in Southeastern Michigan, and would suggest your people might contact Jon Law on my staff, who is a recent graduate of The University of Michigan.

I am enclosing a copy of a letter I have written to Francis B. Smith, the Chairman of the Survey Committee.

Sincerely,

George Meader

GM:gmh
Enclosure

GEORGE MEADER
2D DISTRICT, MICHIGAN

COMMITTEES:
GOVERNMENT OPERATIONS
JUDICIARY

Congress of the United States
House of Representatives
Washington, D. C.

November 27, 1963

Mr. Francis B. Smith, Chief
Instrument Research Division
NASA Langley Research Center
Hampton, Virginia

Dear Mr. Smith:

President Harlan Hatcher of The University of Michigan has written to me concerning the possibility of locating the NASA Electronics Research Center in Southeastern Michigan, enclosing a copy of his letter to you of November 8, 1963.

The 2nd Congressional District, which I represent, is composed of four counties -- Lenawee, Jackson, Monroe and Washtenaw and, naturally, I am very much interested in doing anything I can to facilitate full consideration of this area as a suitable site for this Research Center. Presumably The University of Michigan personnel working on the preparation of the proposal are fully aware of all of the requirements and criteria your committee will be considering but, if there is any way in which I or my staff can be of assistance in connection with the submission of this proposal, please let me know.

Naturally, I would be interested in being kept advised of developments as they occur from time to time.

Sincerely,

George Meader

GM:gmh

✓ cc - Dr. Harlan Hatcher

JAMES G. O'HARA
7TH DISTRICT, MICHIGAN

WASHINGTON OFFICE:
1109 HOUSE OFFICE BUILDING

Congress of the United States
House of Representatives
Washington, D. C.

DISTRICT OFFICES:
13½ N. GRATIOT
MT. CLEMENS, MICHIGAN
TEL.: 465-0911

311 McMORRAN BLVD.
PORT HURON, MICHIGAN
TEL.: YU 5-8281

November 22, 1963

Harlan Hatcher, President
The University of Michigan
Ann Arbor, Michigan

Dear Mr. Hatcher:

Thank you for your letter informing me of your activities to obtain the proposed NASA Electronics Research Center for southeastern Michigan. As you suggested, I have written to Mr. Francis Smith, endorsing your proposal. A copy of my letter is enclosed.

I have also spoken to Representative Neil Staebler about this matter. I intend to offer him all possible assistance.

My administrative assistant, Mr. Richard Warden, would be happy to work with your staff in completing details of the presentation to NASA. He can be reached at this office.

Very truly yours,

JAMES G. O'HARA
Member of Congress

JGO'H/nk

Enc.

JAMES G. O'HARA
7TH DISTRICT, MICHIGAN

WASHINGTON OFFICE:
1741 HOUSE OFFICE BUILDING

Congress of the United States
House of Representatives
Washington, D. C.

DISTRICT OFFICES:
32909 UTICA ROAD
FRASER, MICHIGAN
TEL.: PRESCOTT 2-3440

311 BROAD STREET
PORT HURON, MICHIGAN
TEL.: YUKON 5-8281

November 22, 1963

Mr. Francis B. Smith
Chief, Instrument Research Division
NASA Langley Research Center
Hampton, Virginia

Dear Mr. Smith:

I understand that Harlan Hatcher, President of the University of Michigan, has suggested southeastern Michigan as a possible site for the proposed NASA Electronics Research Center. I want to endorse President Hatcher's suggestion and express the hope that your committee will give his case every possible consideration.

I am confident that our nation's space program would find its rapid progress further increased by locating the Research Center in southeastern Michigan. The superb industrial and educational facilities of this area require no elaboration. These facilities together with the experience of Michigan's engineers and scientists in space work make this area ideal for this aspect of NASA's operations.

Very truly yours,

JAMES G. O'HARA
Member of Congress

JGO'H/nk

HAROLD M. RYAN
14TH DISTRICT, MICHIGAN

COMMITTEE:
PUBLIC WORKS

Congress of the United States
House of Representatives
Washington, D. C.

106 OLD HOUSE OFFICE BUILDING
WASHINGTON 25, D.C.
TELEPHONE: CAPITOL 4-3121
EXTENSION 6261

DISTRICT OFFICE:
14939 E. WARREN AVENUE
DETROIT 24, MICHIGAN
TELEPHONE: 885-0810

20515

December 6, 1963

Mr. Harlan Hatcher, President
The University of Michigan
Ann Arbor, Michigan

Dear Mr. Hatcher:

I wish to acknowledge your recent communication relative to the establishment of NASA's $50 million Electronics Research Center in Michigan.

I have already contacted the Administrator of NASA endorsing the idea that Michigan and the Detroit area be given every consideration for the establishment of such a Center.

As soon as I receive a reply from the Administrator of NASA, you will be advised accordingly.

You may rest assured that I will do everything possible to obtain this facility for our great State of Michigan.

Sincerely yours,

Harold M. Ryan

HMR:jb:k

HAROLD M. RYAN
Member of Congress

City of Detroit

EXECUTIVE OFFICE

JEROME P. CAVANAGH
MAYOR

November 27, 1963

The Honorable Harlan Hatcher, President
University of Michigan
Ann Arbor, Michigan

Dear President Hatcher:

It has come to my attention that a group of university, industry and industrial development representatives, upon the initiative of the University of Michigan, are considering a united effort to convince the National Aeronautics and Space Administration to locate its proposed multi-million dollar electronics research center in southeastern Michigan.

Since it appears that the Midwest will receive serious consideration from the Site Committee, I agree that we should do our utmost to point out to NASA the many obvious advantages of locating in southeastern Michigan.

The City of Detroit will be happy to cooperate in this joint effort. Would you please have your representative on this project get in touch with my assistant, John P. Casey, regarding participation by the City of Detroit and the Mayor's Committee for Industrial and Commercial Development. We welcome the opportunity to assist in this effort, which could benefit all of us in southeastern Michigan.

Sincerely yours,

Jerome P. Cavanagh

Mayor

JPC:mm

Applied Dynamics, Inc. / 2275 PLATT ROAD, ANN ARBOR, MICHIGAN / AREA CODE 313 / PHONE 662-4493

November 22, 1963

Dr. Harlan Hatcher
President, Univ. of Michigan
Ann Arbor, Michigan

Dear Dr. Hatcher:

Thanks very much for your letter of November 19, 1963 concerning the proposed NASA Electronics Research Center.

All of us at Applied Dynamics agree that it is highly desirable to have NASA select Michigan for its new Research Center. We will be pleased to work with you on your proposal to NASA in any way you feel constructive within the bounds of our capability.

This matter is of sufficient importance to us that all matters concerning this program will be handled from this office.

We look forward to providing positive assistance on your program.

Sincerely,

William W. Wood

William W. Wood
President

WWW:rs

THE Bendix CORPORATION

FISHER BUILDING • DETROIT 2, MICHIGAN

OFFICE OF THE PRESIDENT

December 4, 1963

Dr. Harlan Hatcher
President
The University of Michigan
Ann Arbor, Michigan

Dear Dr. Hatcher:

I have been delayed a few days in acknowledging your letter of November 19 concerning the survey of a site for the NASA Electronics Research Center inasmuch as I wished to discuss this with Dr. O'Neal and with several members of my staff.

We are all in hearty agreement with the effort you propose to make to present a Michigan case in the strongest way possible, and I wish to assure you of our desire to cooperate in every way.

I understand from Dr. O'Neal that he has already discussed the matter with some of the Committee. I think that he is probably as well posted on the general situation as any member of my staff would be, and I, therefore, would nominate him as the individual in the best position, both geographically and information wise, to assist in the program.

Inasmuch as we are a substantial contractor of NASA and particularly at many geographic locations, I feel that we as a company will have to govern our attitudes accordingly, but we would desire to assist in every way to help present the outstanding qualifications of the southeastern Michigan area.

Sincerely,

M. P. Ferguson

cc: Dr. R. D. O'Neal

THE Bendix CORPORATION 63-100-08

BENDIX SYSTEMS DIVISION · ANN ARBOR, MICHIGAN

3 December 1963

The University of Michigan
Institute of Science and Technology
Ann Arbor, Michigan

Attention: Dr. Hansford W. Farris
Associate Director

Dear Dr. Farris:

Thank you for your letter of November 26 and for the pleasure of meeting with your committee. We all appreciate the leadership which the University is providing for this most worthwhile undertaking.

The Bendix Corporation fully endorses your efforts to obtain the proposed NASA Electronics Research Center for Southeastern Michigan. We shall be happy to provide you with a formal letter of endorsement under separate cover.

I have asked Mr. J. F. Clayton, Director of Planning for the Systems Division, to represent us in this activity. You may call on him for any assistance you feel necessary. In addition, our Director of Public Relations, Mr. D. Schurz, is available to assist the University Relations Department in their part of the project.

The factual data that you have requested on the Bendix Corporation and its position in electronics is contained in Attachment A. I should like to address myself in this note to three other important considerations to the success of our proposal.

During the past three years the State of Michigan generally and the Southeastern area in particular have become thoroughly awakened to the research and development requirements of the new advanced technologies. The need for University-Industry cooperation has been recognized to extend far beyond the traditional role of supply and demand for junior engineering and scientific graduates. As a result we have had a number of University-Industry symposia and seminars to find solutions to these mutual problems. You have proposed, in the course of the current discussions, that a permanent and formal approach be initiated encompassing all major universities and all technology based industries. We completely agree with such a proposal and look forward to participating in such a program with you whether or not our area is favored with the NASA center.

It is our understanding of the NASA planning for the Electronics Research Center that a rather modest rate of build up is envisioned. During the build up period the research staff might well be short of experimental facilities. Bendix Systems Division would be pleased to provide to the NASA staff use of its own facilities on a cost only basis. In Attachment B the major instrumentation facilities of the Division are summarized. Of special importance is the Thermal Vacuum Test Laboratory and Vibration Laboratory described on pages 20-24. Bendix would propose to permit NASA use of these facilities on a reasonably long term basis with no fee. Naturally this proposal would apply only to in-house NASA experiments for which they would not normally contract outside. For the purpose of the current proposal we can make available copies of any of the photographs contained in this brochure.

During the past several weeks our senior staff and myself have done considerable thinking about the proposed electronics center and its possible location. Although certainly not a directly analogous situation, I recall that we in Bendix undertook a similar site selection analysis prior to locating the Systems Division in Ann Arbor in 1957. Besides the scientific and cultural atmosphere centered around the University of Michigan we included of necessity other factors internal to the Corporation. Having been here now for seven years we have learned some new facts about Ann Arbor. These new facts are not easily observable to outsiders - we did not predict them - and we feel that they might well be the overriding reason in a site decision for the NASA center.

Many of these things you will know as well as we. What we can offer is statistically significant experience in the practical administration of electronics engineers and scientists comparable to those required by NASA.

Ann Arbor, Michigan, very uniquely in the United States, has a completely professional atmosphere. It is a city and area where to be a professional man in engineering and science is to be in the first rank of the community. The 1960 census revealed that 38.7% of the adult population of Ann Arbor were college graduates - the highest percentage of any city in the United States.

This atmosphere extends far beyond the University of Michigan. It encourages supporting enterprises, both civic and private, to meet the highest standards. A principal example of this is our elementary and senior high schools. Last year the Ann Arbor High School placed 9th in the nation for national merit scholarships in competition with the best public and private schools. We have found that the impact of this atmosphere has especial

impact on the professional man's family. Children go to school in the Ann Arbor area in an atmosphere where intellectual and cultural achievement is the norm. Juvenile delinquency is unfashionable.

We have analyzed these factors from our own experience; we find them of overriding importance in acquiring and holding our professional staff.

During the period 1958-1961 we grew from less than 50 professionals to over 800. About 75% of these were electronics engineers and scientists. Our records show that:

- Proximity to The University of Michigan made recruiting of junior engineers relatively easy as was predicted.
- Professional and cultural atmosphere of Ann Arbor made recruiting of senior engineers even easier. This had not been predicted.
- Ann Arbor had tremendous appeal to college-educated wives of professionals.
- Southern California was easiest area from which to recruit.
- 98.5% of current and past professional employees are happy with area. This attitude is independent of original home including New England and California.

This experience suggests that we enjoy an environment uniquely suited to NASA requirements. This is a competitive advantage which could well serve as a dominant theme in our proposal.

Very truly yours,

THE BENDIX CORPORATION
BENDIX SYSTEMS DIVISION

R. D. O'Neal

R. D. O'Neal
Vice-President Aerospace Systems

jc
Encls.

Attachment A

The Bendix Corporation

Electronics Research and Development in Southeastern Michigan

The Bendix Corporation is comprised of 26 domestic divisions and 10 foreign subsidiaries. Annual sales are approximately $800 million. 72% of these sales are to agencies of the United States Government, principally the Department of Defense and NASA. More than 1/2 of these government sales are for electronic products and systems.

Corporate Headquarters of Bendix are located in Detroit. In the State of Michigan Bendix operates 7 separate plants.

The Central Research Laboratory of the Corporation was shifted from a concentration on mechanical and automotive products in 1948 when principal emphasis was given to electronics. Since that time the Laboratory has been expanded and moved to a new location in Southfield, Michigan just outside Northwest Detroit. Of the over 300 professional engineers and scientists at Bendix Research approximately 170 work in electronics fields.

In 1957 Ann Arbor, Michigan was chosen by Bendix for the site of a new central corporate division devoted to major system programs. Established with a nucleus of 20 people total, the Bendix Systems Division now employs approximately 775 of which more than 300 are professional engineers and scientists. 75% of these work in one or more of the electronics disciplines.

Total outside sales of the two Southeastern Michigan Divisions in 1963 was approximately $26 million of which 75% was for research and development, products, and systems requiring advanced electronics technology. Bendix Systems Division currently holds prime contracts in an Air Force communications system, a NASA lunar roving vehicle, an Air Force airborne instrumentation system, and a number of others in the fields of guidance and control, nuclear instruments, physics of hypersonic flight and others.

In addition to contract work substantial corporate sponsored research is carried out at Bendix Systems in electronics. Among current programs are included: navigation and control of deep space probes, navigation on the lunar surface, remote control of lunar vehicles, transmitters and receivers and planetary communications, rapid scan spectrophotometers and space radiation effects on microelectronic circuits.

As in past years research in radiation effects on electronics is carried out using the reactor facility at the University of Michigan's Phoenix Memorial Laboratory.

At Bendix Research Labs. electronics research is presently underway in:

Microelectronics

- Basic research in solid state physics aimed at understanding phenomena in semiconductors.
- Applied research in thin film technology.
- Development of process techniques for fabrication of integrated microcircuits.
- Design and fabrication of microelectronics circuits for specific applications.

Image Intensification

Applied research and development in photocathodes, electron multipliers and electron optics.

Special Instrumentation

- Miniature thin film devices for detecting concentrations of specific gaseous elements in a composite atmosphere.
- Particle detectors for satellite and space probe applications.
- Time-of-Flight Mass Spectrometers for both laboratory and space vehicle-borne applications.
- Microwave gaging devices capable of non-contact gaging with micro-inch sensitivity.

Radar Systems

Antenna ranges and sophisticated physical simulation facilities for the development of---

- Special antennas - all frequencies.
- Radar signal processing techniques.
- Seekers for missile guidance.
- Surface mapping radar.
- Space rendezvous and docking sensors.

Microwave Components

- SHF, solid state signal sources.
- Harmonic multipliers and phase shifters.
- Extremely wide band, SHF, modulators and demodulators.
- Miniature microwave components.

Operational Computation

- Analog, digital, and hybrid computers for special applications.
- Analog to digital to analog converters.
- Extremely high speed digital logic.
- Analytical stereoplotters.

Electronic Tubes

- High power microwave electron beam tubes of both TWT and crestatron type.
- Thermionic diode converters for space power applications.

Extreme Environments Electronics

- Analytical techniques, physical testing, design and fabrication of electronic circuits to operate in the combined environment of nuclear radiation and extreme temperature.

Bendix developments in microwave tubes and especially the crestatron is in cooperation with the Electron Physics Lab. at the University of Michigan.

Bendix has enjoyed a steady growth in electronics in the Southeastern Michigan environment. Availability of professional and skilled technician staff is excellent. In Ann Arbor especially the environment is attractive to electronic scientists. Plans have already been made for a substantial expansion of the Bendix Systems Division. The plan is shown on Page 2 of the Bendix Systems Division Facilities attachment.

Burroughs Corporation

6071 SECOND AVENUE • DETROIT 32, MICHIGAN
OFFICE OF THE VICE PRESIDENT

December 5, 1963

Dr. Harlan Hatcher
President
University of Michigan
Ann Arbor, Michigan

Dear Dr. Hatcher:

In reply to your letter of November 9, 1963, the joint efforts of Michigan universities, industry and State officials to locate the proposed NASA Research Center in Southeastern Michigan has the unqualified support and endorsement of Burroughs Corporation.

For many years, Burroughs has supported the view that Michigan and particularly, the Southeastern area, could well serve as the electronic center of the midwest. Today, we feel even more strongly that to maintain a sound economy in Michigan we must expand this State's electronic capability if not to establish it as an electronic center.

Southeastern Michigan represents an outstanding industrial climate with a reputation of getting things done. Michigan universities are ranked among the top in our country. The basic requirements for molding an electronic center in Michigan have been met. It is our hope that we will now be able to rapidly accelerate Michigan's economy and electronic growth by locating the NASA Research Center in Southeastern Michigan.

Sincerely,

P. S. Mirabito
Vice President

PSM:MVB

CHRYSLER
CORPORATION

LYNN A. TOWNSEND
PRESIDENT

November 26, 1963

Dear Harlan:

This will acknowledge your letter of November 19 about the preparations of the University of Michigan's proposal for a Mid-West Electronic Center.

We had Mr. Vern Biasell attend last Friday's meeting. We will follow this very closely and whenever and wherever we can participate we will submit, for the approval of your staff and organization, those items which will be helpful to the proposal.

Sincerely,

Dr. Harlan Hatcher
President
The University of Michigan
Ann Arbor, Michigan

LAT:dkl

ISE—SPACE GROUP

CHRYSLER
CORPORATION

December 6, 1963

Dr. Hansford W. Farris
Associate Director
Institute of Science and Technology
The University of Michigan
Post Office Box 618
Ann Arbor, Michigan 48107

Dear Dr. Farris:

I am enclosing, with this letter, a booklet containing information on the activities of the Chrysler Corporation that are felt to be appropriate for inclusion in or with the Electronic Research Center proposal. The data covers the operations of Chrysler with particular emphasis on Defense-Space activities, the personnel and facilities engaged in this work, and a brief listing of some of the major government programs.

Chrysler is in complete consonance with the objectives of the unified effort in support of the bid for the Center in Southeastern Michigan. It fully appreciates the importance of diversification and the tremendous advantages that could be accrued with the location of the Electronic Research Center in this area.

It is suggested that in recognition of the rapidly increasing role of electronics in our every day lives and in all forms of industry, it would appear to be in the best interests of the government to spread the base of electronic activities to provide maximum benefits to and from the primary industrial areas of the Nation. This is an alternative solution to sole concentration in the areas where electronic activities are already firmly entrenched.

P. O. BOX 757, DETROIT 31, MICHIGAN

Chrysler is also well aware of the advantages to be gained through close university-industry relationships. This was evidenced by the agreement initiated by Chrysler with the University of Michigan in October 1962. This agreement was framed by Lynn A. Townsend, Chrysler Corporation President, and the University's President, Harlan Hatcher. President Hatcher said, at that time, that he hoped that it might serve as a pattern for other Michigan industries. It called for the University and Chrysler to work closely together -- in consultation, research investigations, and advanced engineering in the various space-defense fields.

University talent and facilities embracing many disciplines have been employed in joint activities in support of various space and defense programs. These activities have been carried out in the past and will continue in the future. This team work has been mutually beneficial.

It has been my pleasure to work as Chrysler's liaison representative for university functions and activities. I will continue to be available to assist you in this specific endeavor as well as other joint activities. If, after reviewing the submitted booklet you have need for additional information or clarification, please do not hesitate to call on me.

Yours very truly,

L. R. Biasell
Manager
Research and Development

LRB:mp

Enclosure

Conductron Corporation

343 SOUTH MAIN STREET
ANN ARBOR, MICH.

NE (313) 665-9741

REPLY TO:
P.O. BOX 614

260 W. BEACH AVE.
INGLEWOOD, CALIF.

PHONE (213) 674-4021
REPLY TO: P.O. BOX 4007

November 29, 1963

Professor H. W. Farris
Associate Director, Industrial Development Division
Institute of Science and Technology
The University of Michigan
P. O. Box 618
Ann Arbor, Michigan

Dear Bill:

Conductron Corporation is interested in continuing to support the combined efforts of the industrial and academic worlds of Michigan to persuade the Federal Government to locate the proposed NASA Electronics Center in southeastern Michigan.

Therefore, in accordance with your request to the industrial representatives attending the meeting chaired by you on 22 November, and your letter of 27 November 1963, I attach (enclosure #1) a copy of the TWX I sent to the 13 representatives from southeastern Michigan and our two Senators requesting their support. Enclosure #2 is likewise in response to your request and is submitted as contributing to one of the three criteria for location of the Electronics Center: "Evidence of Industry-University Cooperative Ventures."

You also requested the industry representatives to comment upon their specific contractual relationships with NASA. Over the past 16 months, Conductron has had two contracts (with several addenda to each) totaling about $300,000. Negotiations for additional work are now underway. Under these two contracts we have provided NASA with professional findings and advice on the topics of lunar properties and satellite radar cross sections.

In regards to unique test facilities, Conductron has a radar range a few miles south of Ann Arbor, the most sensitive of its type in the Free World. As an inducement to NASA to locate in this area, we would be willing to let NASA use this range for their in-house experimentation on a "non-profit" basis. By NASA "in-house experimentation," I visualize that personnel of the Electronics Center will be doing internal studies, analogous to the in-house work now done by NASA at Ames and Langley. There may be occasions when the engineer or scientist conducting this study wishes to personally make radar measurements or evaluate an antenna pattern which we would authorize him to do on a non-profit basis. Obviously the Conductron radar range represents a facility in the area which NASA would not have to duplicate and we would be anxious to make it available to them on other than

an "in-house research" basis in accordance with our standard rates. Conductron's 1620 digital computer and optical analog computer would be made available on a similar basis.

In the same vein, I suggest that the University, as an inducement to NASA propose that Master and Ph.D. candidates working in the Electronics Center on original material have this material, if it meets the University's academic standards, considered as thesis material. Furthermore, the University might consider making reduced fees available to NASA doctoral candidates.

Our 1962 Annual and Progress Reports, copies attached as enclosures #3 and #4, will provide you with source information on our corporation's strength and potential in electronics and the capabilities of our scientific and engineering manpower. We will be pleased to answer specific questions.

Conductron Corporation feels very strongly that even if this approach to NASA does not bear fruit, a continued effort should be made to generate a formal, recognized industrial-academic group to foster meaningful cooperation between the two and to accelerate the growth of a joint, enlightened intellectual atmosphere. It is clear from the successes of the Los Angeles, San Francisco Bay, and Boston areas in obtaining research and development contracts from the Government that this atmosphere is essential if our area is to obtain its fair share of governmental research and development business. In this respect, Barton S. Pulling, Col., USAF (Ret.), Ext. 238, or 239 and Dr. Robert E. Machol, Ext. 291, or 292 will be available to represent Conductron Corporation and to work with you and those people whom you specify to create the required atmosphere.

I have alerted my Vice-President and representative in Washington, Mr. William Weitzen, of what we are doing and he will keep in touch with Col. Pulling or Dr. Machol and one or the other will pass on to you such information as may be worthwhile.

Sincerely,

Kip

Keeve M. Siegel
President

Enclosures (4)

Conductron Corporation

PHONE (313) 665 9741
REPLY TO:
P.O. BOX 614

343 SOUTH MAIN STREET
ANN ARBOR, MICH.

260 W. BEACH AVE.
INGLEWOOD, CALIF.
PHONE (213) 674-4021
REPLY TO: P.O. BOX 4007

22 November 1963

Dr. Harlan Hatcher, President
The University of Michigan
Ann Arbor, Michigan

Dear Harlan:

In response to your letter of 19 November, the Conductron Corporation is willing to assist in obtaining the Electronics Research Center of NASA for this area.

I am designating Col. Barton Pulling, Ret., to work with your people in completing the details of the presentation to NASA.

Sincerely,

Keeve M. Siegel
President

Conductron Corporation

RELATIONSHIPS BETWEEN CONDUCTRON CORPORATION AND THE UNIVERSITY OF MICHIGAN

In the three years of Conductron's existence its relationships have been warm and close. For example:

(1) Conductron has let five contracts totalling over $200,000 to The University of Michigan.

(2) The University has submitted numerous joint proposals in which Conductron was a prospective subcontractor. For example, three such proposals recently submitted to the National Institute of Health are still active. Similarly, there have been numerous joint proposals in which The University of Michigan was a prospective subcontractor to Conductron Corporation--five of these have been to the National Aeronautical and Space Administration and numerous others to various branches of the Armed Forces.

(3) Conductron Corporation has employed numerous consultants from The University of Michigan on various contracts, as well as Conductron sponsored in-house research. At the present time there are eight such contracts in effect for consultantships.

(4) The University and Conductron Corporation have an agreement for exchange of library privileges. Naturally thus far this has involved principally the utilization of the magnificent library facilities of the University by Conductron personnel.

(5) Conductron personnel have done considerable teaching at the University. In particular, three high ranking employees of Conductron Corporation hold part-time professorships at The University of Michigan in which capacity they teach courses or direct doctoral candidates, or both. In addition, at least six other Conductron employees have lectured at The University of Michigan on a professional basis as part of the University's program of instruction.

(6) There is also a close relationship among the lower levels of scientific and engineering personnel at Conductron Corporation and the University. Specifically, more than twenty Conductron employees have been enrolled in graduate courses while employed at Conductron. This should be viewed as a benefit to both organizations. It supplies employment and practical experience to graduate students who are already located in Ann Arbor, or it helps bring prospective graduate students to Ann Arbor.

The above listing includes those items which are most easily made specific and quantitative. However, the most important relationship between the University and Conductron is an informal one: the academic and intellectual atmosphere fostered in the Corporation by its proximity to the University, the lectures, colloquia and cultural events sponsored by the University which are partaken in by Conductron employees and the even less tangible but nonetheless significant contacts maintained at the social and fraternal level by innumerable professional members of both organizations.

More important than the above is the existence of corporations in this area which want to be near a University, helps mold the industrial way of life and as a result Ann Arbor remains an excellent environment both to work in and also more important, to live in. We feel if the NASA Electronics Center came to Ann Arbor, NASA would find that the Center would enjoy a negligible turnover rate.

CONSUMERS POWER COMPANY
GENERAL OFFICES • JACKSON, MICHIGAN

December 2, 1963

B. G. CAMPBELL
VICE PRESIDENT

Professor Hansford W. Farris
Associate Director
Institute of Science and Technology
University of Michigan
P.O. Box 618
Ann Arbor, Michigan

Dear Professor Farris:

It was a pleasure to attend your meeting of Friday, November 22, 1963, which was called to bring together various business, industrial and educational people of Michigan for the purpose of reviewing desirable approaches, procedures and techniques to be developed and followed in making a formal presentation to the NASA Study Committee charged with recommending a site for the proposed new NASA Electronics and Research Center.

Realizing that some may wish to embroil this worthwhile endeavor in politics we nevertheless endorse this effort as desirable for all of Michigan and will support it with assistance from qualified personnel. If financial help is required in the future, we will review our participation at the time of need.

Due to the nature of the recent national tragedy we have delayed contacting our Congressional representatives; however, we plan to talk with them this week to enlighten them on the proposed presentation from Michigan. These initial contacts will be made by Mr. H. L. Brewer, Director of Area Development for our Company. They will be followed later by contacts from Mr. A. H. Aymond, Chairman of the Board, and Mr. J. H. Campbell, President of the Company.

It is recognized that Michigan may not be successful in getting favorable consideration for the new NASA Electronics and Research Center. However, we believe it desirable to develop and establish an integrated university industry relationship for future programs.

As requested in the attachment to your letter of November 26 the liaison representative for this effort will be Mr. H. L. Brewer.

Very truly yours,

B. G. Campbell

BGC/phh

CC: AHAymond
JHCampbell
HLBrewer

CROSSLEY ASSOCIATES, INC.
A HEWLETT-PACKARD AFFILIATE
Precision Electronic Instrumentation and Components
DETROIT CLEVELAND PITTSBURGH

Please reply to
14425 W. EIGHT MILE ROAD
DETROIT 35, MICHIGAN
342-5700

December 9, 1963

Dr. H. W. Ferris
Institute of Science and Technology
University of Michigan
Ann Arbor, Michigan

Dear Dr. Ferris:

We would like to lend our support to your bid for Michigan to be the location of a NASA Electronics Laboratory. We feel that Michigan has an ideal industrial and educational climate for such a facility.

As representatives of the Hewlett-Packard Company for over twenty years, we have an intimate knowledge of all phases of the electronics industry. We feel that our broad experience with instrumentation applications and measurement techniques would be useful to the technical personnel of the proposed NASA Electronics Laboratory.

We also provide an instrumentation calibration repair facility in Detroit. It is staffed by experienced service technicians who also participate in a continuing training program at the Hewlett-Packard factory. Our Chicago office maintains a stock of repair parts for the Midwest requirements.

The Hewlett-Packard Company has developed many new electronic measurement techniques, some of which were made possible through close relationships between Hewlett-Packard and university and government research activities. We, therefore, are strongly in favor of the development of new research centers which pool the resources of educational institutions, government activities and industrial firms. A NASA Electronics Laboratory in the Detroit-Ann Arbor area should develop into an extremely valuable asset for both the Midwest and the entire country.

Please let us know whenever we can be of assistance to your office or to the University of Michigan.

Sincerely,

CROSSLEY ASSOCIATES, INC.

B. L. Sadler
Manager, Eastern Region

BLS:bn

TELEPHONE WOODWARD 2-2100

THE DETROIT EDISON COMPANY

2000 SECOND AVENUE
DETROIT 26, MICHIGAN

DONALD F. KIGAR
EXECUTIVE VICE PRESIDENT

November 27, 1963

Dr. William Ferris
Institute of Science and Technology
University of Michigan
Ann Arbor, Michigan

Dear Dr. Ferris:

It was our pleasure to attend the conference concerning a proposal to locate the NASA Electronics Research Center in Southeastern Michigan. The following commentary reflects the composite of several of the questions presented for consideration. Since the more significant research oriented industries were well represented, no attempt has been made to answer those questions which we expect will be covered fully by these conferees.

For several years Detroit Edison has endeavored to continually strengthen the economy of Southeastern Michigan by creating additional job opportunities. Within the last few years it became more apparent that new industries, complimentary to the existing manufacturing concerns, provided the necessary means to further augment and stabilize an already established growth pattern. The result of creating a broader based socio-economic condition is fundamental to maintaining this state's national industrial status as well as in providing its citizens with additional opportunities to obtain gainful employment. Consequently, we have focused considerable attention to attracting the sophisticated industries requiring personnel with advanced degrees in science, engineering and management, recognizing that these people constitute an invaluable resource in providing necessary leadership to maintain the high standard of prosperity that has been established in Michigan.

The construction of NASA's Electronics Research Center in Southeastern Michigan will contribute significantly to these efforts now being made to attract new and diversified industry.

Detroit Edison with a capability in excess of four million kilowatts has six thermo electric generating stations operating in a closely integrated transmission and subtransmission network system.

The degree of integration as well as the generation facilities helps make possible unusually high standard of service. The service is accepted with satisfaction by large industries with the attendant very large motor and welder momentary electrical surges.

Frequency is closely controlled. It varies normally less than 0.01 cps. Statistically, three times a year, frequency may be lowered by about 0.1 cps for a fifteen minute period.

In the Detroit Edison laboratory, advanced research is conducted involving all aspects of science and engineering. These investigations are directed principally in the field of energy sources. Here dedicated researchers continually probe the unknown in an effort to advance technology to meet the challenges of tomorrow. This well equipped facility is recognized throughout the industry.

Permits to operate the world's first commercial fast breeder thermo nuclear reactor have been granted recently by the A.E.C. The Enrico Fermi Atomic Reactor has a design capability of 150 mw and is now operating at criticality on a test basis.

During the seven year construction period as well as subsequent to construction completion, outstanding nuclear scientists, engineers, physicists, chemists and metalurgists have been attracted to this area and to the challenge presented in this significant field of endeavor. With the addition of highly trained personnel to complement this scientific staff and to operate this nuclear facility, the Fermi project has helped in creating an aura of science and technology in Southeastern Michigan.

We believe Southeastern Michigan is in an excellent competitive position to attract the Electronics Research Center. It is our opinion that the advantages to NASA and to the area of a location in Southeastern Michigan are so great that a thorough and complete effort to demonstrate these advantages is well warranted. If it is advisable to form a steering committee, we will be happy to participate.

We appreciate this opportunity to participate in this project. Please be assured of our wish to help.

Very truly yours,

Donald F. Kigar

Donald F. Kigar

Electro-Voice®

INCORPORATED

BUCHANAN, MICHIGAN

November 26, 1963

Mr. Harlan Hatcher
The University of Michigan
Ann Arbor, Michigan

Dear Mr. Hatcher:

The writer has just received your letter of November 19, 1963 concerning an effort to have a NASA research center located in Michigan. We at Electro-Voice believe that such a research center could be of considerable benefit to our state in general.

We would be pleased to contribute any information or assistance which you may require. The writer believes that a meeting regarding this proposal was held last week. If such is the case, you may already have all the information and assistance you require.

Please feel free to contact the writer at any time.

Sincerely yours,

ELECTRO-VOICE, INC.

Wayne A. Beaverson

Wayne A. Beaverson
Vice President, Engineering

mf

Ford Motor Company

ARJAY R. MILLER
PRESIDENT

THE AMERICAN ROAD
DEARBORN, MICHIGAN

November 27, 1963

Mr. Harlan Hatcher, President
The University of Michigan
Ann Arbor, Michigan

Dear President Hatcher:

In response to your request I have asked Mr. Michael Ference, Jr. to arrange for assistance in the preparation of your Electronic Research Center proposal to NASA. I am confident that if such a comprehensive research center were located in southeastern Michigan it would contribute immeasurably to the economic and scientific growth of our state.

I am hopeful that the NASA Site Committee will be persuaded to recommend this geographical area for the site.

Sincerely,

Arjay R. Miller

LEAR SIEGLER, INC. / INSTRUMENT DIVISION
110 IONIA AVENUE, N. W.
GRAND RAPIDS 2, MICHIGAN
451-1542: AREA CODE 616

OFFICE OF THE PRESIDENT

November 26, 1963

Dr. Harlan Hatcher
President, The University of Michigan
Ann Arbor, Michigan

Dear Sir:

We are most happy for the opportunity to contribute data for the University of Michigan proposal for the NASA Electronics Research Center. In fact, we initiated compilation of relevant data just prior to receipt of your letter.

Instrument Division information will be forwarded to Mr. Herbert Norder, who is Director of our Ann Arbor Research Facility (2320 Washtenaw Avenue, telephone 665-0625). He is serving as project leader in assembling our portion of the total proposal, and we suggest your people contact him for working details.

If we may be of further assistance in any other area, do not hesitate to call on us.

Sincerely,

Joseph M. Walsh

Joseph M. Walsh

MICHIGAN BELL TELEPHONE COMPANY

1365 CASS AVENUE • DETROIT 26, MICHIGAN

WILLIAM M. DAY
PRESIDENT

AREA CODE 313
TELEPHONE 393-4411

November 27, 1963

Mr. Harlan Hatcher, President
The University of Michigan
Ann Arbor, Michigan

Dear Harlan:

I want to let you know that you have my wholehearted support in your efforts to obtain the National Aeronautics and Space Administration proposed Electronics Research Center for southeastern Michigan.

I feel that a Center such as this would be of tremendous value to the economy of our state and would be of considerable value in furthering the industry-university relationship which is so vital to our future growth.

Mr. Robert W. Fezzey of our company attended the meeting your people conducted last Friday, November 22 and I have asked him to assist your staff in any way possible in order to complete the details of your NASA proposal. Mr. Fezzey is acquainted with some of the personnel in your Institute of Science and Technology and the office of Research Administration.

I am extremely hopeful that your endeavors will be successful.

Sincerely,

Bill

ONE WOODWARD AVENUE • DETROIT 26, MICHIGAN

RALPH T. McELVENNY PRESIDENT

MICHIGAN CONSOLIDATED GAS COMPANY

December 9, 1963

Dr. Hansford W. Farris
Associate Director
Institute of Science & Technology
The University of Michigan
Ann Arbor, Michigan

Dear Dr. Farris:

Mr. Frank Thompson and Mr. Robert Gage of our System companies have given me the details of the effort now underway, and in which the University of Michigan is taking a leading part, to persuade the National Aeronautics and Space Administration to locate a proposed $50 million electronics research center in Michigan. I want you to know that this undertaking has our full and enthusiastic support.

There can be no question that the University of Michigan, together with Michigan State University and Wayne State University and the many diversified industries located in the Detroit-Ann Arbor-Lansing triangle, constitute one of the Nation's foremost reservoirs of technology, research and general business know-how. The contributions made by these centers of learning and technology are world-famous. It is clearly in the national interest that NASA be fully informed of the advantages to be gained by locating its electronic research center in Michigan.

I am particularly happy with the decision to make the presentation to NASA a cooperative venture, thus uniting the leadership of all schools and all industries. There is no substitute for teamwork.

I have asked both Mr. Thompson and Mr. Gage to render all the assistance we possibly can to help bring the NASA electronics center to Michigan. I know you will receive enthusiastic and strong support in all areas in the State and in all sectors of our economy.

My very best wishes for success.

Sincerely,

Ralph T. McElvenny

NATIONAL BANK OF DETROIT
DETROIT 32, MICHIGAN

DONALD F. VALLEY
CHAIRMAN

November 27, 1963

Dr. Harlan Hatcher, President
The University of Michigan
Ann Arbor, Michigan

Dear Harlan:

This is in response to your letter of November 19th regarding the $50 million Electronics Research Center.

The Council for Economic Expansion in Michigan is naturally keenly interested in having this activity come to Michigan and I telephoned Mr. B. M. Conboy to cooperate fully with you in this effort.

Sincerely yours,

DFV

Omni Spectra, Inc.
"MICROWAVE ELECTRONICS"
8844 PURITAN AVENUE • DETROIT 38, MICHIGAN • AREA CODE 313 • 342-0100

November 27, 1963

Professor H. W. Farris
Institute of Science and Technology
University of Michigan
Ann Arbor, Michigan

Dear Dr. Farris:

We are pleased to submit the following information and comments in support of an area proposal to NASA for a location of an electronics research center in Michigan.

Our company was started in March, 1962 for the manufacture of microwave components and associated instrumentation for the electronics market. Rather than copy existing component designs and merely become another manufacturer, we have developed a complete line of new products which are far smaller and lighter in weight - generally without sacrificing performance. We consider our product lines to be state of the art and virtually everything that we now manufacture either is being used or has potential usage in some NASA program.

Our quality control program is patterned on NASA 200-2 specifications and we are an approved vendor to several large NASA contractors. Our products have all been developed out of company funds. Although we have experienced more dollar volume of sales to date to the Department of Defense than to NASA, it is quite reasonable to believe that the presence of a center such as you consider could influence our future product planning to better awareness of NASA's specific requirements.

Our product lines are now broad enough that the systems manufacturer may commit an entire microwave subsystem to use of our components and connectors. We can also supply the necessary test instrumentation. We have given a great deal of consideration to selection and incorporation of materials that are suitable for use in severe environments, including the environments of space.

The services and facilities of the Detroit area were a major consideration in deciding to locate our manufacturing company in Michigan. A factor I believe not well understood nationally is that the Detroit area excels in metalworking and allied trades. The services, facilities and capabilities of local vendors are the finest available. Although not publicized nearly enough, this can be easily verified by noting not only the breadth and state of the art nature of work carried out, but also by noting the large number of non-Michigan manufacturers on both East and West coasts who regularly make use of these facilities on a production basis for high quality piece parts and processing. To be noted in this regard is that the local facilities to which I refer are not engaged in supplying the automotive manufacturers (generally more specialized, larger volume vendors do this). They are truly geared to the support of development and manufacturing needed for the space age. Also to be noted, since NASA is most interested in quality control, is the high level of quality control; probably the best in the nation.

Another factor that is most important to consider is that the support needs of modern electronics development work has changed drastically in the past two decades. No longer is the large quantity supply of coils, condensers and transformers the pressing problem. Far more important are the mechanical aspects of design and manufacturing; for piece parts, materials handling and processing.

Our staff members are well acquainted with research and graduate studies that are current in local universities. As we progress I am certain that we will see a step-up in cooperative activity between our company and research groups in the local universities.

Our staff presently includes five graduate engineers including one holding a PhD degree. Even after almost two years of operation and development of our product lines, thirty percent of our budget is devoted to research and development that is continually providing new products. We have found adequate technical staff at all levels available in this area. Through our personal knowledge we are confident we shall be able to successfully recruit required additional staff from among those who desire to either stay in Michigan or those who have graduated from Midwestern universities and wish to return to this area to work and to live.

Our development capability, the know-how of our staff, our test and measurement facilities as well as our standard catalog type products could lend a great deal of support to NASA in-house development programs.

I would favor the establishment of a permanent organization for the promotion of Industry-University cooperation.

Very truly yours,

OMNI SPECTRA, INC.

John H. Bryant
President

/nd
Enc. Mailer

cc: V. J. McHenry

Sarton

SPARTON CORPORATION

JACKSON • MICHIGAN

JOHN J. SMITH
PRESIDENT

December 6, 1963

Mr. Harlan Hatcher, President
The University of Michigan
Ann Arbor, Michigan

Dear Mr. Hatcher:

In reply to your letter of November 19, I have asked our Mr. J.A. Stewart, Vice President and General Manager of our Sparton Electronics Division at Jackson, Michigan to give any assistance which might be helpful as it relates to the University of Michigan's presentation to NASA of the advantages of opening an electronic research center in the Southeastern Michigan area.

In accordance with the above decision, Mr. Stewart has submitted appropriate letters to Mr. Hansford W. Ferris, Honorable Philip Hart, Honorable Charles E. Chamberlain and Honorable George Meader.

The establishment of this proposed research center in Michigan would certainly be helpful to the University of Michigan, as well as promote engineering and other scientific growth in the State.

Sincerely,

JJS:fs
cc: Honorable George Romney

TELEPHONE: STATE 4-9131

SPARTON ELECTRONICS

military electronics equipment, specializing in miniaturization and high reliability equipment for communications and navigation, anti-submarine warfare, components and special products

JACKSON, MICHIGAN

December 3, 1963

INSTITUTE OF SCIENCE AND TECHNOLOGY
The University of Michigan
Post Office Box 618
Ann Arbor, Michigan

Attention: Mr. Hansford W. Farris, Associate Director

Dear Mr. Farris;

I am pleased to inform you that the action you are spearheading to gain consideration of Michigan as a location for a NASA Research Facility has the support of Sparton Electronics Division of Sparton Corporation. In compliance with the request for information you made in the meeting held at Cooley Electronics Laboratory on November 22, 1963, we offer the following:

1. Copies of letters sent to Senator Hart, Congressman Meader and Congressman Chamberlin.

2. Letter of endorsement, signed by J. A. Stewart, indicating Sparton Electronics support of the effort to obtain consideration of Michigan as a location for NASA's proposed Electronic Research Center.

3. A copy of the Sparton Corporation annual report for 1963, a copy of a Sparton Electronics facility brochure, a copy of a company qualifications section from a recent proposal and a summary of current backlog are included with this letter. These documents contain information relating to Sparton's strength, potential objectives, facilities, and capabilities.

4. Regarding University - Industry programs, Sparton Electronics believes this to be one of several approaches which must be taken in order to maintain pace with the increasing complexity of military systems and equipment. Other approaches to augmenting company capability include natural growth, acquisition, combined efforts and contractor/sub-contractor relationships. Sparton subscribes to the principal of an integrated and formal approach to University - Industry programs as evidenced by the present relationship existing with the University of Michigan Cooley Electronics Laboratory.

5. The activities at Sparton Electronics Division of Sparton Corporation have been re-oriented during the past eight years to provide maximum effectiveness in the field of government electronics with specific emphasis on military electronics.

6. Our long range plans call for expansion in several different geographic areas. We do not see any major change in these plans resulting from the establishment of a NASA research facility in Michigan. As the enclosures clearly show, we have now a major facility in this area. Future growth of this present facility will be governed by many local factors, including of course, the obvious advantages of a local NASA facility. Obviously, our existing capability to design, manufacture, and test prototype equipment in support of research would be an important asset to a nearby NASA research organization.

Our office in Washington is being advised of this overall program and will aid in everyway possible. All information they can pick up will be passed on to your office.

SPARTON

I have been designated as the representative your office should contact for any subsequent activity on this program.

Very truly yours,

Sparton Electronics
Division of
Sparton Corporation

Charles F. Boyle

CFB/jr

Enclosures: Copy of letter sent to Senator Hart
Copy of letter sent to Congressman Meader
Copy of letter sent to Congressman Chamberlin
Letter of endorsement signed by J. A. Stewart
Sparton Corporation 1963 Annual Report
Sparton Electronics Facility Brochure
Sparton Electronics Qualifications
Summary of Sparton Electronics Backlog

Whirlpool
CORPORATION

ADMINISTRATIVE CENTER • BENTON HARBOR, MICHIGAN

ELISHA GRAY II
CHAIRMAN OF THE BOARD

November 26, 1963

Mr. Harlan Hatcher, President
The University of Michigan
Ann Arbor, Michigan

Dear Mr. Hatcher:

I was glad to receive your letter indicating your intention to make a proposal to locate an Electronics Research Center for NASA in Southeastern Michigan. I am strongly in favor of this proposal and I am asking Mr. William Mahaffay to assist you in any way he can with the presentation to NASA.

Sincerely,

Elisha Gray

cc: Mr. W. Mahaffay

228 NORTH LASALLE STREET • CHICAGO 1, ILLINOIS • PHONE: FRanklin 2-0190

Please address reply to:
L. W. VON TERSCH
CHAIRMAN OF THE BOARD
E. E. DEPARTMENT
MICHIGAN STATE UNIVERSITY
EAST LANSING, MICHIGAN

December 9, 1963

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ANNUAL NEC
October 28-29-30, 1963

To: Board of Directors, National Electronics Conference

From: L. W. Von Tersch, Chairman

As briefly discussed in the Board meeting of November 20, 1963, the following resolution has been prepared for your consideration. If approved, a copy of the resolution will be sent to (1) Mr. Francis B. Smith, Chief of the Instrument Research Division, Langley Research Center, Hampton, Virginia, chairman of the site selection committee for NASA; (2) all organizations in the midwestern area who are preparing proposals for NASA concerning site selection; and (3) the elected representatives of the concerned midwestern states.

> "The National Electronics Conference, Inc., through its Board of Directors, advises the National Aeronautics and Space Administration of its endorsement of the Midwest Area as the proper environmental location for the proposed Electronics Research Center. It is our collective desire that due consideration be given the several States represented in NEC. Your attention is called to the unique composition of NEC, embracing educational institutions of higher learning, professional societies representing electrical and electronics engineers, and active participants from industry. Such cooperative effort is actively molding the Midwest, and we are confident that the Electronics Research Center would find a stimulating and rewarding association in the locale of our sponsors and participants."

L. W. Von Tersch

Approved by the 1963 National Electronics Conference Board of Directors at its Annual Meeting, December 11, 1963.

Hansford W. Farris
Secretary

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
SOUTHEASTERN MICHIGAN SECTION
1963-1964

November 19, 1963

Dr. Hansford W. Farris,
Associated Director
Institute of Science & Technology
Industrial Development Division
University of Michigan
Ann Arbor, Michigan

NASA Center for Research

Dear Mr. Farris:

At a recent meeting of the Southeastern Michigan Section of the Institute of Electrical and Electronics Engineers, the endeavors of institutions, industry, and individuals to obtain the proposed NASA Center for research was brought to our attention.

We would like to let you know that our entire section which is composed of some 2,000 engineers full heartily encourages and endorses your efforts and your endeavors to have this research center located in Michigan.

Please call upon us if and when we can be of service, and we wish you success.

K. E. Jamison,
Secretary

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cc: Mr. Frank Klaes, Chairman