

**THE UNIVERSITY OF WYOMING  
MINUTES OF THE TRUSTEES**

**November 16, 1978**

**For the confidential information  
of the Board of Trustee**

THE UNIVERSITY OF WYOMING  
 Minutes of  
 THE TRUSTEES  
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THE UNIVERSITY OF WYOMING  
Minutes of  
THE TRUSTEES  
November 16, 1978

A visitation meeting of the Trustees of The University of Wyoming was called to order by President Hines at 2:30 p.m. on November 16, 1978, in the Board Room of Old Main.

ROLL CALL

The following Trustees answered roll call: Brodrick, Bunning, Chapin, Gillaspie, Hines, McCue, Nolan, Quealy, Thorpe, Wilson, and ex officio members Governor Herschler, McFadden, and Luthi. Trustee members Fordyce, Smith, and ex officio member Schrader were absent. Elliott G. Hays, Vice President for Finance; E. B. Jakubauskas, Vice President for Academic Affairs; E. G. Meyer, Vice President for Research; Reid C. Miller, Chairperson for the Faculty Senate; and James E. Wasserburger, Chairperson for the Staff Council, were also present.

ANNOUNCEMENTS

Mr. Hines read a letter from Trustee Fordyce. Mr. Fordyce is feeling better but he will be unable to attend the meeting of the Trustees.

NORTH CENTRAL ACCREDITATION

The North Central Association of Colleges and Schools performs the accreditation processes approximately every ten years. North Central is looking at institutions from the standpoint of their ability to carry out procedures for planning and accountability to arm themselves for the 1980's. The evaluation team will review the University's ability to design and implement planning processes on a campus-wide basis. The University appointed a task

force committee to prepare for the accreditation. This committee recommends that the University proceed to prepare the type of evaluations and documents requested by North Central. One major undertaking is to develop a system of planning for the University which moves into a cycle of planning, budget preparation, and evaluation of operations on a University-wide basis. North Central will re-visit the University again in two years if the University doesn't initiate the recommended changes. At this time it is not known what resources will be necessary for us to comply with the North Central requirements. The preparation of the 1980-82 budget request will be the beginning of the planning process. Dr. McFadden said the University has a model for estimating enrollments for the next several years, an important information factor in planning.

Mr. McCue moved that Acting President McFadden proceed with all the processes necessary to prepare for the forthcoming North Central accreditation. Mr. Quealy seconded the motion, and it carried.

DAY CARE CENTER

Dr. McFadden reported on the Day Care Center, a private non-profit corporation, which is operated for the benefit of caring for the children of students, faculty, and staff. At present there are 27 children enrolled in the Day Care Center. The Center is in financial difficulty and Chairman Flamboe has met with University administration and requested financial assistance. If the Center does not receive some type of financial assistance, they will have to discontinue operations as they are unable to meet their payroll. Mr. Flamboe has been advised to meet with certain departments at the University to see if a department would be interested in supporting the program and to see if such a program could be used as a training program.

The University does not have funds to support the Center. Further, it was suggested that the Center might want to affiliate with ASUW. Randall Luthi advised that students are sympathetic with the Center's problem but that they are bound by their own ASUW rules.

JOINT MEETING OF PHYSICAL  
PLANT AND ATHLETIC COMMITTEES

President Hines called on Mr. Wilson for a report from the joint meeting of the Physical Plant and Athletic Committees. A copy of the minutes of the November 15, 1978, meeting is attached as Enclosure 1.

1. Lease, Lyman Substation. A request has been received from A.E. King, State Land Commissioner, to review extension of the lease of the inactive Lyman Substation to the present lessee, Sylvester Phillips. Mr. Wilson moved that the Trustees recommend to the State Land Board that the lease be extended for one year at the present price and that a provision be made in the lease for possible sale of all or any portion of the land at any time with a proportionate rebate of rent. The motion was seconded by Mr. Gillaspie, and it carried.

2. Lease, Eden Substation. The Trustees at their September 15, 1978, meeting voted to extend Art Hafey's lease on the Eden Substation for one year with the price of the lease to be negotiated. Mr. Wilson moved that the Trustees extend the lease at the same price of \$1,462 per year and that a provision be made in the lease for possible sale of all or any portion of the land at any time with a proportionate rebate of rent. The motion was seconded by Mr. Nolan, and it carried.

3. Family Practice Center, Cheyenne. The 1977 capital appropriations included the Family Practice Center in Cheyenne and specified that the funds be transferred from the Capitol Building Commission to the Trustees.

There was an appropriation of \$1,400,000 for the facility and a separate appropriation for acquisition of land. The land acquisition has been completed and Governor Herschler has entered into an architectural agreement with Gerald Deines & Associates for the facility which was contemplated to be like the facility in Casper. The architects are at a point where the project is ready to go to bid. However, the projection of costs are far in excess of the funds appropriated. An up-to-date estimate of the costs are \$1,864,000. Mr. Wilson moved that bids be taken in January so that the University can request additional funds from the Legislature for the Family Practice Center in Cheyenne. Mr. Nolan seconded the motion, and it carried.

4. Athletic-Recreational Facilities. Options and alternatives to the architectural plans and cost estimates for the athletic and recreational facilities were discussed in order to meet the figure set by the Trustees and to allow revision of the priority order of certain components. It was the consensus of the committees that Option IV---site work north of Fieldhouse; arena with air supported roof and 15,000 seats; football locker addition (Fieldhouse east) and Fieldhouse first floor east remodel; administration; link to Physical Education building from Fieldhouse; Fieldhouse remodel, north first floor, south first floor, east second floor for wrestling, basketball and volleyball practice; and synthetic floor in Fieldhouse---be presented to the Ad Hoc Legislative Committee on Athletic Facilities. Mr. Wilson moved that the Trustees request the full amount of \$23,824,880 for the above athletic-recreational facilities from the Legislature; and further that alternates 8, 9, and 10---the west Fieldhouse remodel to west wall, two basketball courts and football practice on main floor;

Fieldhouse west extension 137 feet; and multipurpose gym---also be forwarded to the Legislature for consideration in addition thereto. Mr. McCue seconded the motion, and it carried.

Governor Herschler wanted to know what additional University bonding capacity is projected. Mr. Hays explained that it is estimated that an additional \$18,000,000 in revenue bonds could be issued.

5. Half Acre Gymnasium Remodeling. The Half-Acre Gymnasium bids on the remodeling and addition were received November 14. These bids were all reviewed and they are all in excess of available funds. Mr. Wilson moved that the Trustees reject the bids for the Half-Acre Gymnasium remodeling; that the University call for bids in January, prior to the Trustee meeting, with no revisions in the project specifications; and that the Trustees request the needed additional funds from the Legislature. The current estimate is \$610,000. The motion was seconded by Mr. Gillaspie, and it carried.

6. Physical Education Building. Dr. McFadden discussed the costs involved to restore the damage in the Physical Education building and to complete the second floor of that building. Certain modifications to the original plan are necessary in order to pass fire codes. There are numerous problems with the building such as inadequate ventilation in the pool area, rusting of roof joints, temperature deficiencies, gas fumes, plastic piping is needed, etc. Mr. McCue moved to add \$243,500 to the capital projects request in order to restore the Physical Education building and to complete the second floor of this building. The total request for this project would be \$393,500. The motion was seconded by Mr. Bunning, and it carried.

CAPITAL PROJECTS REQUEST

Mr. Hays advised that the University administration was scheduled to meet with the Capitol Building Commission Subcommittee on November 28, 1978.

The University has prepared a suggested list of priorities of capital projects within the following general categories. No priority was suggested between items (a), (b), and (c).

(a) General University Facilities:

Power Plant and Utility Distribution System  
Athletic and Recreational Facilities  
Facilities for Handicapped  
Small Projects  
Site Improvements, Parking, Lighting, etc.  
Property Acquisition  
Storage Building

(b) Specific Program Facilities:

Second Floor, Physical Education Building  
Agricultural Facilities  
Engineering Building, Planning  
Remodeling of Old Library  
Red Buttes Biological Research Facilities

(c) Needed Additional Funds to Complete Approved Projects:

Family Practice Center, Cheyenne  
Half-Acre Gymnasium Remodeling

It was the consensus of the Trustees that the above capital projects should be presented to the Capitol Building Commission's Subcommittee.

SPACE FOR STATE CHEMIST

Mr. Wilson said that the State Chemist, Michael Purko, had advised that the laboratory was in need of additional space. Dr. Purko is presently housed in the Physical Sciences building. Discussion was held concerning additional space that might be made available to Dr. Purko. Mr. Hays said that federal funds were used to construct the building and federal regulations state that the building be used basically for instructional purposes. Dr. Meyer said that when final inspection was held by the federal authorities for approval of the building, the University had trouble justifying existence of the present facilities for the State Chemist. The State Chemist has been

offered space in another building but he would like to remain in the Physical Sciences building. The provisions under which the monies were accepted from the Federal government stated that the building would be used for instructional purposes for 20 years. President Hines asked Dr. McFadden to look into this situation and to report back to the Trustees at a later meeting.

CONFIRMATION OF EXECUTIVE COMMITTEE  
ACTION ON EXTENSION OF  
WILLETT DRIVE

Mr. McCue is hereby on record as not  
participating or voting on this issue

due to a conflict of interest.

At the last meeting the Trustees voted that the Executive Committee be authorized to determine the extent of cost to be assumed by the University for the extension of Willett Drive subject to appropriation of funds by the Legislature. The Executive Committee has determined that \$49,000 would be the proportionate share of costs to be paid by the University for the street improvements for the extension of Willett Drive connecting with the University Heights subdivision. Mr. Brodrick moved that the action of the Executive Committee be confirmed. Mr. Quealy seconded the motion, and it carried.

STAFF COUNCIL AND FACULTY SENATE  
RESOLUTIONS REGARDING REPRESENTATION  
ON THE BOARD OF TRUSTEES

Dr. McFadden advised that he had  
received a Resolution from the Staff

Council wherein they requested ex officio membership on the UW Board of Trustees for the Staff Council Chairperson. Further, the Faculty Senate has requested that the Chairperson of the Faculty Senate be made a member ex officio of the Board of Trustees. Representative Larson has advised that he would consider sponsoring a bill in the next Legislative session requesting Board of Trustee representation for both faculty and staff, if the Trustees will support it.

Mr. Quealy said that considerable discussion has been held previously regarding the propriety of the Trustees giving an opinion as to the constituency of the membership of the Board. In the past, it has been the feeling of the Board that there should be no opinion expressed by the Board as a group. Mr. Quealy moved that the Board as a whole take no position regarding either of these resolutions concerning representation by faculty or staff on the Board of Trustees. Mr. Chapin seconded the motion, and it carried.

Governor Herschler said that he is going to attempt to seek ex officio membership without vote on the Board of Trustees for the Faculty Chairperson.

#### COMPUTER VENDOR SELECTION

Dr. Meyer reviewed the history of the request to the Legislature for the purpose of obtaining computer equipment. / Minutes corrected 12/15/78 as per below. Following approval by the Legislature for the purchase of computer equipment, two task force committees were named to ascertain that our facilities could provide back up for the state system. Members on the Procurement Task Force Committee were Professors James Collins, Theodore Pepin, Samuel Hakes, and Donald Boyer; Kaye Henry from University Support Services; and Herb Allard from DAFC. On the University Services Task Force Committee were Phil Brummitt, Anne Roth, Duane Stoller, Robert Lewis, John Sapp, Larry Sims, Paul Pownall, and Roger Cole. The RFQ was prepared in July. The original call for bids was amended to give vendors further time in order to answer the RFQ and the bid opening date was extended to September 22. Vendor conferences were held prior to issue of the RFQ and before the bid opening to make sure that points were clear and that the intent of the University was understood and that vendors could respond to the RFQ properly. Four vendors submitted proposals:

Correction: Exhibit A, "The Computer Quotation Evaluation Report," is attached as a permanent record.

(1) Amdahl Corporation; (2) Control Data Corporation; (3) IBM Corporation; and (4) Sperry-Univac.

The proposals were evaluated in depth by the two task force committees. Proposals were evaluated by forms which included three components (1) paramount considerations of base needs; (2) major considerations; and (3) considerations. All committee members reviewed the proposals with the same rules and each committee member filled out an evaluation form on each proposal according to the same rules.

The Control Data Corporation proposal was deemed most suitable in terms of technical capability, maintenance requirements, and other operational considerations as well as the favorable cost. Judged slightly below this proposal in capability and at a cost of \$1.5 million more was that of the IBM Corporation. Equipment and software proposed by Sperry-Univac was considered unsuitable for the varied uses to be served, while that proposed by Amdahl Corporation was priced over the purchase budget.

Mr. Bunning moved that the Trustees authorize the University to proceed to negotiate with Control Data Corporation to acquire their computer as detailed in their proposal for an amount not to exceed \$5.9 million. The motion was seconded by Mr. Brodrick, and it carried.

REPORT FROM SEARCH AND  
SCREENING ADVISORY COMMITTEE

President Hines reported that the UW  
Presidential Search and Screening

Advisory Committee has thus far received some 187 nominations for persons to serve as University of Wyoming President. His report noted that 94 have been reviewed by committee members and 16 have thus far been selected for review by the full committee. Nominations close November 30, 1978.

PETITION RE ATHLETIC PROGRAM

Mr. Quealy submitted, without comment,  
the following petition he had received

from avowed Cowboy athletic supporters in the Evanston area.

The undersigned residents of Wyoming and citizens who are sincerely interested in and concerned with the future course and development of the athletic program of the University of Wyoming, request that due consideration be given for selection of a new director of intercollegiate athletics for the University of Wyoming.

President Hines will acknowledge receipt of this petition.

MATTER FOR PRELIMINARY REPORT

Dr. McFadden distributed "Proposals for  
Legislation to Enable Development of

a Modern System for Agricultural Experiments and Demonstrations" to the Trustees. This item will be discussed at the next meeting.

APPROVAL OF MINUTES

President Hines asked for corrections  
or additions to the minutes of the

meeting of October 20, 1978. He requested that under the heading, "Sinking Fund Escrow Bank", on page 11, that the minutes reflect that the following banks submitted proposals:

American National Bank, Cheyenne	\$20,000
Bank of Laramie	4,995
First National Bank of Casper	3,000
First National Bank, Laramie	3,830
First Wyoming Bank, N.A., Cheyenne	2,700
Wyoming National Bank, Casper	5,000

Mr. Bunning moved, Mr. Nolan seconded, and it carried that the minutes of October 20, 1978, as amended, be approved.

ATTORNEY GENERAL'S REPORT

Governor Herschler distributed copies  
of the Attorney General's Report dated

September 7, 1978, dealing with certain allegations made against the University. This report will be discussed further at the Management Council meeting in Casper on December 1, 1978.

ADJOURNMENT AND DATE OF  
NEXT MEETING

There being no other business to come  
before the Trustees, President Hines  
declared the meeting to be adjourned at 4:00 p.m. The next meeting of  
the Trustees is scheduled for December 14-15, 1978.

Respectfully submitted,

*Karleen Anderson*

Karleen Anderson  
Deputy Secretary

MINUTES OF THE  
JOINT PHYSICAL PLANT AND ATHLETIC COMMITTEES  
November 15, 1978

President Paul Hines called the meeting to order at 9:00 A.M. in the Medicine Bow Room of Beta House and asked Willard Wilson, Chairman of the Physical Plant and Equipment Committee to preside.

ROLL CALL        Those present, in addition to Messrs. Hines and Wilson, were Messrs. Brodrick, Gillaspie, McCue, Nolan, Thorpe, Quealy, Luthi, Arnold, Hays, Henry, Jones, McCarty, McFadden, John Woods, Head of the Department of Physical Education, and Gene Dehnert, Bob Corbett, and Walt Bensman of Arena Associates.

LEASE, LYMAN     A request has been received from A. E. King, State Land SUBSTATION Commissioner, to review extension of the lease of the inactive Lyman Substation to the present lessee, Sylvester Phillips. It was moved by Mr. McCue to recommend to the Trustees that they recommend to the State Land Board that the lease be extended for one year at the present price of \$2275 and that a provision be made in the lease for possible sale of all or any portion of the land at any time with a proportionate rebate of rent. The motion was seconded by Mr. Brodrick and it carried.

LEASE, EDEN     The Trustees at their September 15, 1978 meeting voted SUBSTATION to extend Mr. Art Hafey's lease on the Eden Substation for one year with the price of the lease to be negotiated. Mr. Brodrick moved that the recommendation go to the Trustees to extend the lease at the same price of \$1462 per year because of the uncertainty of the future of the Substation and that provision be made in the lease for possible sale of all or any portion of the land at any time with a

proportionate rebate of the rent. The motion was seconded by Mr. Gillaspie and it carried.

FAMILY PRACTICE CENTER, CHEYENNE Mr. Hays explained that the 1977 capital appropriations included the Family Practice Center in Cheyenne and specified that the funds be transferred from the Capitol Building Commission to the Trustees. There was an appropriation of \$1,400,000 for the facility and a separate appropriation for acquisition of land. The land acquisition has been completed and Governor Herschler has entered into an architectural agreement with Gerald Deines & Associates for the facility which was contemplated to be like the facility in Casper. The architects are at a point where the project is ready to go to bid. The projection of costs are far in excess of the funds appropriated. Messrs. Jones and Hays met with Joel Lanphear, acting dean of Human Medicine, and Dr. Howard, head of the Family Practice Center, and went over the project and got from the architects an up-to-date estimate of costs (\$1,864,000). Mr. McCue moved that the recommendation go to the Trustees that they recommend to the Capitol Building Commission that they request the Legislature to appropriate additional funds for the Family Practice Center, estimated to be \$464,000, and that bids be taken in January so the actual amount can be placed before the Legislature at that time. The motion was seconded by Mr. Nolan and it carried.

ATHLETIC-RECREATIONAL FACILITIES Messrs. Corbett and Dehnert presented options and alternatives to the architectural plans and cost estimates for the athletic and recreational facilities in order to meet the figure set by the Trustees and allow revision of the priority order of certain components. Dr. McFadden read a letter from an ad hoc committee of the faculty of the Department of Physical Education expressing their concerns

about the scheduling conflicts anticipated in the facilities. It was the consensus of the committees that Option IV--site work north of Field House; Arena with air supported roof and 15,000 seats; football locker addition (Field House east) and Field House 1st floor east remodel; Administration; link to PE from Field House; and Field House remodel, north 1st floor, south 1st floor, east 2nd floor for wrestling, basketball and volleyball practice--be presented to the Ad Hoc Legislative Committee on Athletic Facilities.

HALF-ACRE GYMNASIUM REMODELING      Bids received November 14 on the remodeling and addition to the Half-Acre Gymnasium were reviewed. All bids were in excess of available funds. Action was deferred until after the meeting with the Ad Hoc Legislative Committee on Athletic Facilities.

RECESS              The meeting was recessed at 11:48 A. M.

LEGISLATIVE AD HOC COMMITTEE      Members of the Physical Plant and Equipment Committee and the Athletic Committee of the Trustees met at 1:00 P. M. with members of the Legislative Ad Hoc Committee on Athletic Facilities. The architects made a presentation of the proposed facilities pointing out the recommendation of the two Trustee committees adopted in their morning meeting and answering questions. Considerable discussion ensued with participation from interested persons in the audience. The meeting adjourned at 3:00 P. M.

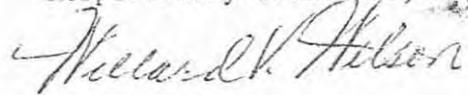
HALF-ACRE GYMNASIUM REMODELING      Meeting of the two Trustee committees resumed at 3:30 P. M. Mr. Brodrick moved that the recommendation go to the Trustees to reject the bids and call for bids in January, prior to the Trustee meeting, with no revisions in the project specifications, and that the Trustees request the needed additional funds from the Legislature. The motion was seconded by Mr. Gillaspie and it carried.

ATHLETIC- Mr. McCue moved that the recommendation go to the Trustees  
RECREATIONAL  
FACILITIES to request the full amount for alternates 1 through 7

(\$23,824,880) from the Legislature with alternates 8, 9 and 10 to be forwarded to the Legislature for consideration in addition thereto.

ADJOURNMENT The meeting was adjourned at 4:00 P. M.

Respectfully submitted,



Willard Wilson  
Chairman, Physical Plant and  
Equipment Committee

## UNIVERSITY OF WYOMING ATHLETIC AND RECREATIONAL FACILITIES

Recommendation from the Physical Plant and Athletic Committees to the Board of Trustees

<u>Option</u>	<u>Description</u>	<u>Project Cost</u>	<u>Contingency</u>	<u>Project Cost and Contingency</u>	<u>Accumulative Total</u>	<u>Start of Construction</u>
1.	Site work north of Field House (without parking lot, north loop drive)	\$ 632,570	5%	\$ 664,200	\$ 664,200	1980
2.	Arena (air supported roof)	12,421,020	10%	13,663,130	14,327,330	1980
3.	Football locker addition (Field House East) and Field House 1st floor east remodel	2,754,830	10%	3,030,320	17,357,650	1980 & 1982
4.	Administration	3,178,940	5%	3,337,890	20,695,540	1980
5.	Field House remodel: North 1st floor, South 1st floor, East 2nd floor for wrestling, basketball and volleyball practice	2,194,680	10%	2,414,150	23,109,690	1982
6.	Synthetic floor in Field House	468,200	10%	515,020	23,624,710	1980
7.	Link to PE from Field House	190,630	5%	200,170	23,824,880	1980
8.	West Field House remodel to west wall, 2 basketball courts and football practice on main floor	1,417,000	10%	1,558,700	25,383,580	1982
9.	Field House West Extension 137' (no fire sprinklers)	1,723,100	10%	1,895,400	27,278,980	1981
10.	Multipurpose gym	1,009,820	5%	1,060,320	28,339,300	1980

## THE COMPUTER QUOTATION EVALUATION REPORT

The Ad Hoc Computer Services Procurement Advisory Committee (CSPAC) and the Computer Services Procurement Task Force (CSPTF) have unanimously selected the Control Data Response as the one that best satisfies the University of Wyoming computer requirements. I, in turn, recommend that we finalize the contract with Control Data as quickly as possible for a software and hardware configuration of no more than \$5,900,000.

As you know, our process of evaluation has been as objective as possible and once the responses to the Request for Quotation (RFQ) were received, we have met this objective by determining whether each of the vendors meet the mandatory requirements, what their overall cost of ownership would be, and how many points each should receive for the considerations stated in the RFQ.

Amdahl and Sperry-Univac were not taken through the whole process. Amdahl was obviously too expensive, due to a change in their oral response plans. Amdahl's overall cost of ownership was over \$7,500,000, and if complete costs were calculated, the cost was probably over \$8,500,000. Amdahl also did not appear to qualify for the 2 1/2 % Wyoming preference, which all others claim. Sperry-Univac simply did not meet the mandatory technical requirements. Some of the known difficulties with the Sperry-Univac response are as follows, with items Number 1 and 2 being the most severe ones:

1. Univac cannot meet the requirement for a large CPU (IBM370/3033) by their own admission in the question and answer session. They cannot even come close to the requirement without the Scientific Accelerator Module (SAM) which is proposed for 1980 delivery, and even then would not expect it to meet the requirement, but it might be "close". SAM is not available for testing and will not be for some time. We sent Sperry-Univac a copy of the notes in which they made this statement. (4.2.1, p.18)
2. Univac did not and cannot handle the data transfer requirements for asynchronous terminals at speeds greater than 2400 BAUD. This violates three specific requirements. (4.2.4.6, p.23)
3. Univac did not meet the requirement for ten delivered customers, but gave two customers with October 1978 deliveries. (9.0, p.37)
4. Univac did not give any basis for reliability judgment, except contact customers. This could possibly be adequate, but is not minor. (9.2, p.38)
5. Univac did not meet the requirements for satisfaction that components are working elsewhere prior to delivery. SAM is the major component involved. (9.1, p.37)

6. Univac did not accept the requirement to demonstrate that the installed equipment functions as represented to the University's satisfaction. (11.3, p.40)
7. Univac cannot be instruction set compatible with two CPUs if only one Floating Point Systems array processor is considered part of the response. (4.2, p.18)
8. Univac has promised a second communication handler (DCP) orally. Without the second DCP they cannot switch the load between CPUs. (4.2.4.6, p.23)
9. Univac did not state their delivery in response. In the question and answer session, Univac stated an April-May 1979 delivery for first phase, which does not meet the requirements. This would be adequate now with the current building schedule. (11.1.1, p.39)
10. Univac did not meet the documentation requirements, but this is minor and probably could be corrected. (6.0-6.5, p. 30-32)

The above list is far from exhaustive, but should be sufficient. There was no overall cost of ownership calculated since they cannot meet the requirements, but it would be over the \$4,800,000 stated on the first page of their bid.

IBM and CDC were both evaluated through the complete process with verification tests run at both companies' test locations. Both substantially met the stated requirements with some doubt about IBM's capability of handling the time sharing load requirements for both the early and the future deliveries. These doubts would be dispelled, or verified if IBM were the winner; however, they were not. CDC is clearly the superior hardware and software package to do the computing job at UW, and the price is over \$1,500,000 less than IBM's. CDC's calculated overall cost of ownership is \$6,348,756, while IBM's is \$8,102,719.90. Hardware and software maintenance was only calculated for a five-year period after delivery, since policies and prices after that time are very likely to drastically change for both companies. IBM's technical point total was 18,590, with CDC's being 20,922; grand totals were for IBM 32,772 and CDC 39,022, with the benefit of doubt given to IBM.

Compatibility requirements with the DAFC Data Services Computer Center were considered and discussed at length both before the RFQ was issued and after the responses were received. Each person concerned directly with the procurement realized the importance of this issue, and Herb Allard served on the Ad Hoc Committee at a substantial cost to DAFC and himself. Compatibility is defined as "capable of existing together in harmony", but many non-computer people define it as identical hardware and software with a momentary back-up of one computer center to the other. There is no practical way the latter definition can be met if the entirely different missions of DAFC and UW are to be met. The CDC proposal does provide substantial compatibility for sharing of work and workloads. It is clear that the UW mission is much better served by the CDC proposal, while IBM has historically better served DAFC. UW Computer Services and DAFC Data Services are working together for sharing and back-up, as indicated by the following joint statement.

## Compatibility Between

### Data Services (DAFC) and Computer Services (UW) Computer Systems

Compatibility is defined by Webster's Dictionary as "capable of existing together in harmony." This definition has certainly been met in the true sense of the word in the last 1 1/2 years and will continue to be maintained. Computer "compatibility" does appear to have different meanings to different people. Since we have already explored the ideas of having identical sets of hardware, software, firmware, redundant switches, and extremely high speed transmission lines between Data Services and Computer Services (Oslund Study), we do need to state a practical set of guidelines for compatibility. These guidelines should recognize the different missions of the two organizations, but allow maximum sharing of resources a practical and cooperative realization. Some of the suggested guidelines might be as follows:

1. Only a very small number of highly critical jobs should be considered to be "back-up" at each site due to expensive maintenance and care.
2. Hardware, software, and firmware need not be identical.
3. Initial program load of an entire system should be avoided if possible, since this brings one site down to satisfy another.
4. Codes must be planned to co-exist at the two sites, including continuing maintenance and update.
5. Any required data base must be planned to be transported by surface or aircraft.
6. Codes must be in usable higher level language such as COBOL, FORTRAN, or BASIC. Further, conversion should be reasonable.
7. Extremely specialized packages and assembly language should be avoided.
8. Each site should have high-speed (6250 BPI) magnetic tape capabilities.
9. Codes should not have to be maintained on a very frequent (daily) basis.
10. Each site should have the capability of supporting "mainline" compilers and major utilities.
11. Each site should have sufficient mass storage to handle the emergency codes.
12. Differences in main memory should be reasonably transparent.
13. The sites should be remotely connected over medium speed lines. The resources of each will then be available to the other.

In summary, I recommend that we accept CDC's proposal within the \$5,900,000 amount. However, we still need to finalize some hardware and software changes, since discussions have revealed that UW will be better served by changes in such areas as storage, software, and some terminal dependent hardware. We can work within this limit (\$5.9 million) by moving the hardware and software maintenance to operating costs. I further recommend that we take the TIELINE software option and allow for the 18-month conversion option (\$167,000) as a possibility, still within the \$5.9 million. Our outside Computer Center Consultants recommended that we keep back some portion (5 - 10%) of our purchase until we have used the equipment for a few months to, again, optimize our software and hardware configuration. This is an excellent suggestion, and I do hope that this is an acceptable approach.

Charles A. Folkner, Director  
Computer Services  
November 16, 1978