

CRITICAL PATH PLANNING

• LAND PLANNING

• MANAGEMENT CONSULTING

• PLANT LOCATION

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August 11, 1987

Subject: Monitoring Report #1

C.S. Mott Community College

Capital Improvement Program 1987 to 1991

Master Planning Phase 1, Flint, Michigan

Project: 87,44

Date of Planning and Monitoring: August 10, 1987 (working day 155).

(Working days referred to are the corresponding working day number to the calendar date as found in the 4 year working day calendar, starting January 2, 1987 (working day 1). This working day calendar will be used as a reference base throughout the work on this project. Copies were distributed to those attending this session.)

Monitored from: issue #1, sheet SM1

(Note: Issue #1, sheet SM 1 was prepared August 10, 1987 (working day 155)).

Actions taken:

- Made general review of total project
- Identified characteristics of individual projects to be accomplished within the phase 1 master planning.
- Prepared list of factors by which to select critical projects
- Prepared partial summary network model for bond funding, roof repairs and replacement, Gilkey Creek, and Mott Memorial Building renovation, along with preparation of the phase 1 master plan report.

Those attending:

- Sharon Johnson - Dean of Business Affairs, Mott Community College
- Junior Paul - Facilities Director, Mott Community College
- Jerry Harburn - Tomblinson, Harburn & Associates
- Ron Campbell - Tomblinson, Harburn & Associates
- Jim Tomblinson - Tomblinson, Harburn & Associates (in meeting part time)
- John Whitehead - Tomblinson, Harburn & Associates (in meeting part time)

General Summary

This session was the initial planning and scheduling meeting on the project, and the work accomplished dealt primarily with efforts to establish project criteria so as to better evaluate timing, planning, costs, and scheduling of the various jobs that make up the full program. Notes were kept of the meeting, a full copy of which are enclosed. In the notes the key points are identified by hand asterisks and underlining. Reference will be made to the notes in this monitoring report.

The total program consists of approximately 24 individual projects as outlined in exhibit A, entitled Proposed Capital Outlay Projects and dated, on the last page of that exhibit, January 9, 1987 (working day 6). The projects are listed also by name only in section 2.8 of the meeting notes.

In the meeting minutes list notice that in front of each project there is a y, an ny, or a yn in parenthesis at the front of the project description. A full explanation of these symbols is given in section 2.8 prior to the listing of the project name.

In general, a (y) meaning yes, indicates that the project is to be integrated into the phase 1 planning program being prepared as a part of this work.

Those projects that are indicated by a (n) for no, are projects that are to be implemented independent of phase 1 planning. These are listed in section 2.10 of the report.

Projects that are to be implemented independently of phase 1, but do have some relationship to the master planning program, are indicated with a (yn), yes/no or (ny), no/yes. They are indicated in section 2.11 of the project notes.

At this session, our main focus was on projects that are to be integrated into phase 1 planning. There are about 15 of these and they are listed in section 2.9 of the project notes. Because of the complexities of the various projects being considered, particularly in relationship to their release and financing and also to space availability, it was decided at this point that an effort would be made to identify factors of importance in assigning priorities of construction and timing to each of the projects. A full list of the factors considered are given in item 2.12.1 in the meeting notes. This is entitled random list of possible factors.

These factors were further refined as shown in sections 2.12.2 and are listed there in ascending order of importance to the total program as seen through the collective eyes of those at the meet-

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ing. The factor weight assigned was selected from a range of 01 to 10. A 01 factor weight indicates that the item is of little or no importance in setting a priority. A weight of 10 indicates the item is of prime importance in setting priority of project implementation.

To summarize the weights assigned to each factor, a copy of the factors and their weights is given below.

Factor Weight	Factor Description
02	External political impacts
04	Cash flow demanded by funding sources
04	Internal political impacts
05	Security - security and making facilities safe to be in or around
07	Energy conservation/effective use of energy
07	General construction business level
07	Upgrading facilities to improve teaching and learning process
10	Availability of space to implement project
10	Personal safety of facility users - that other than security.

In the factor weights it is recognized that most groups and individuals have different criteria by which they assigned weights to the factors. Those above were the factor weights decided upon as a tentative set of weights during our meeting on August 10, 1987 (working day 155). For further definition of the factors please see section 2.12.2 in the project notes.

Once the initial factor weighting was done, a further use of the rating system was explained in assignment of factor values for each project. Two projects were selected as samples. Project #4, the old student ramp repairs and project #9, Mott Memorial Building. Value assignments are shown in section 2.13.1 and 2.13.2 of the notes.

Once the factor weights have been assigned, each project is evaluated, relative to its value in satisfying the criteria. For instance, in evaluating the old student ramp repairs, and considering to the factor entitled availability of space to implement project, it was felt that the ramp being available for work at any time desired, gave it a high value in satisfying this factor requirement. Notice the factor weight is 10 and for a value of factor for the project, the group selected a 8. Thus, giving the total impact of this factor on the project, a value of 80 out of a possible 100. This is a relatively high total value weight rating.

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Once each of the factors has been valued for a project, the total of the products of the factor weights times the project factor value indicates the feelings of the group, as to which projects are the most important to focus upon.

In our sample projects, the total factor weight/value rating of the old student ramp repairs, project #4, was 279 (see line 2.13.1 in notes).

For sample project #9, Mott Memorial Building, the total project factor weight/value was 369 (see item 2.13.2 in notes). Thus, the Mott Memorial project should be given a higher priority of attention than the old student ramp repair project.

As each of the projects is evaluated in this matter, they will all assume a ranked position of importance and thus, hopefully, the project team can concentrate on those that are the most important for immediate attention.

This method of rating the projects and establishing priorities of attention should be explained fully to agencies charged with approving the projects. In addition, other groups whose work impacts upon selection of projects within the program should also be consulted to determine their degree of agreement with the assigned importance.

The system permits a full explanation of the reasons behind the selection of any given project within the program to occupy the priority it does. The purpose of establishing the rating system is to help identify the relative importance of projects.

To carry the planning process another step, we prepared a summary network model for additional evaluation. This network model is entitled sheet SM1, issue #1 and was distributed to those at the meeting. In the network, we showed an assumed sequence for issuing bonds. Undoubtedly, this logic and duration plan will have to be revised as additional information becomes available. Because of the extent of the full program and the time span it encompasses, it was decided to recommend that bonds be issued in more than one group. Probably, the bond issues should be split into issue A and issue B, each being for approximately 5 million dollars, with the second (issue B) being approximately one year later than the first (issue A). The network model shows the steps in the bond issue A. This logic and its durations will be carefully reviewed by the college financial staff.

Also shown in the network model is the preparation and submittal of the phase 1 master plan report. This document is due to be submitted by October 12, 1987 (working day 199). Once it is reviewed, revised, and given a final review, the projects can be

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released so far as the master plan report is concerned for phase 1 implementation.

This should allow the college and its consultants to select and retain professional service firms for the various projects to be accomplished. Three of these projects were shown on the summary diagram, roof repair and replacement (project #1), Gilkey Creek improvement (project #19), and Mott Memorial/Gorman (projects #9 and #3).

Of particular interest is the work to be done in the Mott Memorial Building and Gorman project. This work depends heavily upon the moving of the University of Michigan out of the Mott Memorial Building. Once the building is vacated, it can be remodeled and occupied by the C.S. Mott Community College staff. Present indications are that the building might be available from U. of M. in the fall, 1988. If this is the case, all work should be timed to coincide to this building vacation date, which is when the building would be available for construction work.

Probably the design team for the Mott Memorial Building renovation could be selected in the fall and winter of 1987 and once the bond money was released, contract documents for the project could be prepared. When these are completed, construction proposals will be received, analyzed, a contractor selected, and a recommendation made to the C.S. Mott Community College Board. Upon authorization a construction contract can be executed and work begun on the improvements.

In the network model, it was shown that these improvements could possibly start in early November, 1988, with occupancy of the Mott Memorial Building by late May, 1989. This would allow work to begin at the Gorman facility in late May, 1989 and possibly it could be reoccupied and back in service again in early April, 1990.

This type analysis is very important to setting the time frame and schedule within which the various projects in the program can be accomplished. I strongly recommend that we complete the same type of planning for the remaining projects. Once cost estimates are made and are available for further evaluation, costs can be assigned to each of the design and construction activities, and a projected money flow obtained for further evaluation, if desired.

Of prime importance now, however, is to establish the priority of each project, the sequence in which the projects are to be generally accomplished, and the requirements for freeing up each project.

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Another element of importance is that a large share of the program concerns equipment procurement and installation. It is good to tie equipment procurement and installation closely to the facility construction plan of work in order to be able to place the equipment in the right position and with the right services as the project that houses it is being built. This demands careful and full attention to details of the program.

We were not able to plan any major equipment procurement, although preliminary budgeting has been accomplished and some criteria established for the information needed about pieces of equipment. Sharon Johnson prepared a list of items to be identified for each piece of equipment and will work with Junior Paul on this matter.

Another item discussed in some detail was the content of the master plan. A review of this discussion is given in item 2.17 of the notes. Of special importance is identification of the various project delivery systems that might be possible to utilize in completing each of the projects within the program. Most of the projects will probably be awarded on a hard money competitive basis. However, this is not necessarily the case on all projects and I suggest that a set of delivery system alternatives be evaluated.

A project delivery system is defined as a method of assembling, grouping, organizing, and managing project resources so as to best accomplish project goals and objectives. There are many ways to implement a project within a program. The college, its consultants, and its contractors must always try to optimize the use of the resources to improve project delivery potential. We shall discuss this in more detail as the phase I master planning proceeds.

Copies of all material prepared at this session have been provided to those who attended. I shall be in touch with Mr. Harburn shortly to determine future meeting and planning needed. A single copy of this report is being sent to Mr. Harburn for his use and for further distribution.

This project has an important role to play in the continuing physical improvement of the C.S. Mott Community College. It can be an exciting and interesting program and great care should be taken to plan it thoroughly and well.

Ralph J. Stephenson, P.E.

RJS:gmj
TO: Mr. Gerald Harburn

October 6, 1987

Subject: Monitoring Report #2

C.S. Mott Community College

Capital Improvement Program 1987 to 1991

Master Planning Phase 1 - Flint, Michigan

Tomblinson, Harburn & Associates - Architects, Engineers, & Planners

Project: 87,44

Date of Monitoring: September 30, 1987 (working day 191)

Monitored from: Issue 1, sheet SM 1, dated August 10, 1987 (working day 155)

Actions taken:

- Made general review of total project
- Prepared classification system for projects listed in exhibit A, proposed capital outlay projects dated January 9, 1987 (working day 6) and prepared by Junior Paul
- Discussed scope of initial presentation to be made to Mott staff on October 12, 1987 (working day 199) by THA
- Established tentative network modeling format to accompany initial presentation on October 12, 1987 (working day 199)

Those attending:

Sharon Johnson - Dean of Business Affairs, Mott Community College

Junior Paul - Facilities Director, Mott Community College

Jerry Harburn - THA

Ron Campbell - THA

Ralph J. Stephenson, P.E. - Consultant

General Summary

The meeting focused mainly on the scope of presentation to be made by THA to the C.S. Mott Community College staff on October 12, 1987 (working day 199). Of particular interest in this early meeting will be the definition of those projects for which special state grant funding might be available. We identified several programs that could well occupy high priority positions with the state legislature and potentially be favorably considered for grant funding.

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These were:

- 01 roof repair/replacement
- 02 asbestos removal
- 16 energy management systems
- 03 Gorman Building renovation/remodeling and utilization
- 09 Mott Memorial Building repairs/remodeling and utilization
- 14 exterior signage, lighting and walks

(The numbers above indicate the number assigned to the project in exhibit A, proposed capital outlay projects, January 9, 1987 (working day 6)).

Two other projects were added to this list as possibilities. These were:

- remodel Mott Science Building to classrooms
- remodel Curtis Building to classrooms

Thus, overall, the focus of the October 12, 1987 (working day 199) presentation could well be to identify where these projects fit into the total program and into the schedule of funding releases. There are potentially 5 major sources of funding: bond issues, optional legislative grants, general fund contribution, interest on the bond issues, and legislative matching funds.

For the purpose of our discussion today, we assumed the following funding availabilities:

- Bond issue B - \$4.0 million - to be sold in May, 1988
- Bond issue C - \$1.6 million - to be sold in June, 1989
- Optional legislative grant - \$3.0 million
- General fund contribution - \$1.3 million
- Interest on bond issue - \$0.7 million
- Legislative matching funds - \$? million

→ Add A \$4.4

In conversations with President Moore, Sharon Johnson determined that the thrust of the presentation at the October 12, 1987 (working day 199) meeting would best be concentrated on how to allocate monies from the optional legislative grant to those projects that are most likely to be of strong interest to both the college and the state. As noted above, we identified those projects as those listed previously.

In addition, it was felt critical to identify the assumptions to be made relative to early work on the phase 1 master planning. Therefore, Sharon Johnson in further conversations with President Moore, identified several points of assumption that are listed in the attached meeting notes on page 4 and 5 under

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item 2.1. These assumptions are to be confirmed by Sharon Johnson with President Moore at an early date. They are critical to the immediate planning effort, most particularly, they will also strongly influence the overall planning that will follow the initial presentations.

Key dates in the immediate future presentation work are as follows:

- October 12, 1987 (working day 199) - make major verification report to college staff and president
- October 14, 1987 (working day 201) - prepare and print an agenda for board meeting
- October 16, 1987 (working day 204) - agenda goes to board
- October 26, 1987 (working day 209) - board meeting
- November 2, 1987 (working day 214) - request to go to state requesting matching funds from capital outlay committee

There is a possibility the initial report from THA will not necessarily be taken to the board for action since it will deal fundamentally with the matter of projects under the proposed legislative grant. This item will be reviewed and decided upon at the college staff level.

Early classification of projects was focused on trying to establish a set of projects (1A) that would be considered in the early analysis and another (1B) that would be considered in the subsequent analysis. However, this breakdown by funding source; either the bond issue, the optional legislative grant, the general fund contribution, or the legislative matching funds that might be available.

The allocations of projects to these funding sources is shown in the accompanying notes on pages 5 and 6, item 2.2. For convenience, these allocations are duplicated below and shown under bond issue A, bond issue B, bond issue C, state grant, and capital outlay.

Bond issue A - \$4.4 million - to be sold October 15, 1987 (working day 202)

- ✓ 01A - roofs, repair/replacement
- ✓ 06A - facilities management equipment
- ✓ 07A - chiller motor protection and bearing replacement
- ✓ 08A - Gorman boiler re-tubing
- ✓ 10A - overhead door replacement, Wagner auto lab
- ✓ 11A - Durham pool exhaust system
- ✓ 19A - Gilkey Creek improvement
- ✓ 24A - instructional equipment

✓ mean complete
of 1985
12/19/90

4.4
4.0
1.4

10.00 +
interest

Have spent about
1,000,000

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✓ *mean complete*
12/19/90

Bond issue B - \$4.0 million - to be sold May, 1988

- ✓ 01B - roofs, repair/replacement
- part* 02B - asbestos removal
- 03B - Gorman renovation
- part* 04B - old student ramp repairs
- part* 05B - ramps A and B
- ✓ 06B - facilities management equipment
- 09B - Mott Memorial matching money *never got*
- ✓ 11B - Durham pool exhaust system
- ✓ 12B - Ballenger field house heating and piping
- ✓ 14B - exterior signage
- ✓ 15B - electrical primary upgrade
- ✓ 16B - energy management system
- 17B - administrative complex remodeling
- part* 18B - furniture and office equipment
- part* 21B - minor remodeling
- ✓ 22B - computer and telephone system
- 23B - renovation of Ballenger field house and Durham pool
- ✓ 24B - instructional equipment

Bond issue C - \$1.6 million - to be sold in June, 1989

- part* 02C - asbestos removal
- 03C - Gorman renovation
- part* 04C - old student ramp repairs
- 09C - Mott Memorial matching money *never got*
- ✓ 12C - Ballenger field house heating and piping
- part* 13C - surface parking
- ✓ 14C - exterior signage, lighting and walkways
- ✓ 16C - energy management system
- 17C - administrative complex remodeling
- 20C - maintenance building (*Facilities and bldg*)
- part* 21C - minor remodeling
- ✓ 22C - computer and telephone system (listed in detail 01)
- 23C - renovation of Ballenger field house and Durham pool
- ✓ 24C - instructional equipment

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State grant - \$3.0 million - dependent on legislative grant

09G - Mott Memorial matching money *not granted*

Capital outlay - \$? - dependent on legislature

part 01CO - roofs, repairs/replacement

part 02CO - asbestos removal

14CO - exterior lighting - *plan / done*

✓ 16CO - energy management system

Additional projects suggested at meeting

to work remodel Mott Science Building to classroom facilities

remodel Curtis Building to classroom facilities

The tabulation above was prepared by Junior Paul at our meeting and should be considered very preliminary and subject to further detailed evaluation as master planning efforts continue. However, we will use the allocation to prepare a logic network model, unquantified, to show the graphic allocation of these projects and the steps that must be taken to bring the projects on line.

I shall prepare this network and have it printed and forwarded to Mr. Harburn at THA for further distribution and analysis. It is presently desired to have this network model available to incorporate in the October 12, 1987 (working day 199) meeting with the Mott staff and the president.

Quantification of plan, at present, is difficult and will, in general, not be a part of the logic plan until further studies of the projects and their scope of work is made. It will be important, however, to clearly identify the scope of work as proposed within each project funding classification.

I suggest that the network logic plan be mounted on hard board and that the items under each classification be indicated with a color code. This will help to identify the overall breakdown, and later to interrelate the projects from funding phase to funding phase.

Of prime importance emerging from our session today, was first, the establishment of a project and funding classifications system that will allow an analyses on a step by step bases to be made of the projects outlined in Exhibit A for proposed capital outlay projects.

The second item of major importance that emerged was the generation of assumptions to be made for the initial master planning work in phase 1. These were referred to earlier in this report.

The third item of importance was the establishment of high priority programs that could be eligible for state legislative funding.

RALPH J. STEPHENSON, P. E., P. C.
CONSULTING ENGINEER

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Attached to this monitoring report is a set of the notes taken during our session on September 30, 1987 (working day 191). These have been somewhat edited since the meeting and I suggest a careful review be made of these edited notes to insure that they are an accurate tabulation of the material covered in the session.

I shall be in touch with Mr. Harburn shortly to set the next planning and monitoring session.

Ralph J. Stephenson, P.E.

RJS:gy

To: Mr. Gerald Harburn

November 1, 1987

Subject: Monitoring Report #3

C.S. Mott Community College

Capital Improvement Program 1987 to 1991

Master Planning Phase 1 - Flint, Michigan

Tomblinson, Harburn & Associates - Architects, Engineers, & Planners

Project: 87,44

Date of Monitoring: October 22, 1987 (working day 207)

**Monitored from: Issue 2, dated September 30, 1987 (working day 191), sheets
SMA, SMB, and SMC**

Actions taken:

- Made general review of project
- Established tentative start and finish dates for several bond issue A activities
- Updated sheet SMA to issue 3, dated October 22, 1987 (working day 207)

Those attending:

Sharon Johnson - Dean of Business Affairs, Mott Community College

Junior Paul - Facilities Director, Mott Community College

Jerry Harburn - Tomblinson, Harburn & Associates

Ralph J. Stephenson, P.E. - Consultant

General Summary

The main purpose of this session was to establish possible starting dates for the various funding packages in bond issue A. We also carried this process further by estimating durations for several project activities and updating the network model to reflect this information.

It is, apparently, the intent to sell bond issue A by the end of October, 1987; to print and deliver the bond issue A by mid November, 1987; and for funds to be released for the bond issue A by late November, 1987. It is expected to have bond issue funds available by November 24, 1987 (working day 230). Thus, work is expected to start on many of the projects anticipated to be done in bond issue A in the very near future.

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A brief review of each of these is given below.

Project 01A - Roof repair and replacement

It is expected to select and retain a design team for this project within a week, after which contract documents will be prepared and bids received for approval at the January, 1988 board meeting. A contract will be executed and the roof repairs made with a tentative completion set for early July, 1988.

Project 06A - Facilities management equipment

This is an ongoing project and it was decided at our meeting to set a tentative target end date for completion of the work by the morning of June 1, 1988 (working day 362).

Project 10A - Overhead door replacement - Wagner Auto Lab

Requests for proposals on this work are out and should be available by November 24, 1987 (working day 230). A contract is to be executed by early December, 1987 with installation to proceed immediately after. Present target for completion of installation is the morning of January 15, 1988 (working day 265).

Project 07A - Chiller motor protection and bearing replacement

This project will be released for design in early November, 1987 and documents for the work should be completed by early December, 1987. This will allow proposals to be received and the contract executed by late December, 1987, and the motors and bearings replaced by early May, 1988.

Project 08A - Gorman boiler re-tubing

A design team is to be retained by the end of October, 1987. Documents will be prepared and issued and the contract issued by late December, 1987. Installation of the re-tubing is expected to be complete in early April, 1988.

Project 11A - Durham pool exhaust system

A consultant will be selected by late October, 1987 with documents presently scheduled to be completed by early December, 1987. Proposals should be received in late January, 1988 and work can probably begin in early February, 1988 with completion presently set for mid May, 1988.

Project 19A - Gilkey Creek improvement

This work should be released and a consultant selected by late November, 1987. Preparation of documents will be complete in early January, 1988 with actual construction work to begin in early March, 1988 and to be completed by September, 1988.

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At our meeting it was also decided that several other programs should be included in part in bond issue A. Due to the press of time, we did not add these at our session. Portions of the programs listed below will be included in bond issue A.

- Project 02A - Asbestos removal
- Project 03A - Gorman renovation
- Project 04A - Old student ramp repairs
- Project 05A - Ramps A and B
- Project 15A - Electrical primary upgrade
- Project 16A - Installation of energy management systems

These additional programs will be placed into the work to be accomplished with the funding from bond issue A in part. They also will remain a part of funding from bond issue B.

In all of these additional projects it should be possible for the college and their consultants on the master planning work to assign tentative starting dates and durations. I shall discuss this with Mr. Harburn in the future to see what additional information can be placed on our base network models, sheet SMA, SMB, and SMC.

At our meetings, I issued to Mr. Harburn for his distribution, the updated sheet SMA, issue 3, dated October 22, 1987 (working day 207). It should be noted that this diagram does not have an updating issue number in the title block. However, it can be identified by the number \$632,000 located in the upper right corner of the network model. The issue number has been added to the diagram in the record file.

I shall be in touch with Mr. Harburn to confirm the next project planning and monitoring session with him and the project team.

Ralph J. Stephenson, P.E.

RJS: gau
To: Mr. Gerald Harburn

RALPH J. STEPHENSON, P. E., P. C.
CONSULTING ENGINEER

November 30, 1987

Subject: Monitoring Report #4

C.S. Mott Community College

Capital Improvement Program 1987 to 1991

Master Planning Phase 1 - Flint, Michigan

Tomblinson, Harburn & Associates - Architects, Engineers, & Planners

Project: 87:44

Date of Monitoring: November 23, 1987 (working day 229)

Monitored from: Issue 2, dated September 30, 1987 (working day 191), sheets SMA, SMB, and SMC.

Actions taken:

- Discussed current status of program with Mr. Paul and Mr. Harburn
- Discussed numbering system to be used for network project referencing
- Prepared summary block diagrams of work proposed under bond issue A (sheet B-A, issue 1, dated November 23, 1987 (working day 229))

Those attending:

Junior Paul - Facilities Director - Mott Community College

Jerry Harburn - Tomblinson, Harburn & Associates

Ralph J. Stephenson, P.E. - Consultant

General Summary:

The capital improvements program group made a presentation to the president of the college on November 10, 1987 (working day 220). At this meeting, there was reviewed several administrative policy matters on which decisions are needed. These are listed in the accompanying notes under point 4.1.1, letters A through K.

In addition, at this session, the availability of the Mott Memorial Building was tentatively assumed at October 3, 1988 (working day 448). There has been no major indication that this date will change. However, periodic reviews should be made to determine if the vacation of the space will actually occur by this date. Also, a determination should be made soon as to what fixtures, furnishings, and equipment (FFE) are to remain when the U. of M. vacates the space.

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In addition, the numbers of parking spaces made available, provision of custodial and security services, and provision of utilities, are all matters that must be resolved in respect to vacation of the U. of M. space in the Mott Memorial Building.

I suggest that the needs for information be made in writing by the planning group to those concerned, so a formal resolution of the items can be obtained.

On November 12, 1987 (working day 222), a presentation was made to the president and the management committee. The several items discussed at this meeting are briefly described under point 4.1.2 in the notes of November 23, 1987 (working day 229).

There were a considerable number of assignments given to the various staff members by the president at this November 12, 1987 (working day 222) session. The findings of the various people will be important to the study underway at present. I suggest a careful review of the points brought out in these two management sessions be made and a course of actions as required plotted from them.

It was noted at our session that the President and the Dean of Business Administration has given Mr. Paul authorization to spend up to \$10,000 upon his approval per project for A/E services. This should help considerably in providing needed flexibility in obtaining design assistance for the various projects under consideration.

A major part of our session dealt with reviewing the numbering system for the projects under consideration. Although, this may seem to be a relatively routine matter, it is complicated by qualifications placed upon certain on the programs and the possibility that various projects will be carried out with funding from different sources during the life of the program.

An additional qualification on project identification was established on October 27, 1987 (working day 210) by publication of a list of projects under construction. In this list, projects were listed by consecutive numbers. It appeared at our meeting that it was desirable to record this number within the base project identification in some manner.

With this set of conditions, it was decided to assign to each specific project a unique number that would allow it to be positively identified. The basis of this numbering system is described in 4.3 and 4.4 in the attached notes.

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Briefly, the first two digits indicate the project number in the original Exhibit A - Proposed Capital Outlay Projects, dated January 9, 1987 (working day 6) prepared by Mr. Paul. These projects were identified 1 through 24. An additional project #25 was added later. Additional projects are to be added from as they are put into the program.

The letter suffix following the original project number indicates the source of the funding. An A indicates the funding will come from bond issue A, B from bond issue B, C from bond issue C, and CO from funds from the Capital Outlay Committee.

An additional identifier has been added to the project number in parenthesis following the letter suffix. This number indicates the number assigned to the project in the document entitled Bond Issue Projects Under Construction, dated October 27, 1987 (working day 210). In this, are described 15 major projects. These are noted in section 4.3 of the meeting notes.

To review, the project number will consist of the original number assigned in the Proposed Capital Outlay Projects, Exhibit A. The letter or letters suffix will indicate the source of the funding, and the number in parenthesis will represent the number assigned in the Projects Under Construction document of October 27, 1987 (working day 210).

All together, there are 57 different projects in the full list. Some of these have costs assigned where such costs have been estimated. All the projects will have a cost ultimately assigned to it and will be assigned a specific position in the implementation program.

Once we completed preparation of the project list, it was decided to prepare a summary block diagram of the various projected included under bond issue A. These projects are as follows:

- 01A(04) - Roofs, repair and replacement
- 02A(--) - Asbestos removal
- 03A(15) - Gorman renovation
- 04A(13) - Old student ramp repairs
- 05A(14) - Ramps A and B
- 06A(07) - Facilities management equipment
- 07A(01) - Chiller motor protection and bearing replacement

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- 08A(03) - Gorman boiler retubing
- 10A(02) - Overhead door replacement, Wagner Auto Lab
- 11A(05) - Durham pool exhaust sytem
- 15A(08) - Electrical primary upgrade
- 16A(10) - Energy management system
- 19A(12) - Gilkey Creek improvement
- 24A(06) - Instructional equipment needs from areas listed

These were each given a starting and completion date as shown on sheet #B-A, issue 1, dated November 23, 1987 (working day 229). This information was then converted to a bar chart form sheet BA, indicating the information on a time scaled bar chart. In addition, the information on a time scaled bar chart. In addition, the information was converted to a project chart in which a listing of the activities, along with the duration, the early start, and the early finish, appeared. These were arrayed in project number sequence.

It is possible to assign costs to each of these projects, and then by pro-rating properly over the life of the project, determine the approximate cash flow to be expected on the job. This will probably be done in subsequent planning sessions as the need for the cost information appears.

Overall, the program now has been reasonably well documented and as the pending questions are resolved and decisions made on them, the program will move into each of the various project stages as determined by the program staff.

A copy of the meeting notes is attached to this monitoring report. Other material produced at the session was given to Mr. Paul and Mr. Harburn at the meeting for their use in a presentation, the evening of November 3, 1987 (working day 208).

I shall be in touch with Mr. Harburn shortly to set the next planning and evaluation session. It probably will be held sometime in early or mid January, 1988. At this meeting we should, again, review the current status of the work and determine what further information should be provided relative to the planning of the total program.

RALPH J. STEPHENSON, P. E., P. C.
CONSULTING ENGINEER

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C.S. Mott Community College
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It might be well to consider preparing a more detailed network model for the full implementation process, particularly if a cash expenditure projection is to be made.

Ralph J. Stephenson, P.E.

RJS:gmy

To: Gerald Harburn

RALPH J. STEPHENSON, P.E., P.C.
CONSULTING ENGINEER

January 29, 1988

Subject: Monitoring Report #5

C.S. Mott Community College

Capital Improvement Program 1987 to 1991

Master Planning Phase 1 - Flint, Michigan

Tomblinson, Harburn, & Associates - Architects, Engineers, &
Planners

Project: 87:44

Date of Monitoring: January 22, 1988 (working day 270)

Actions taken:

- Reviewed current status of work
- Reviewed details of planning meeting held on January 21, 1988 (working day 269) with President Moore, the management committee of Mott Community College, and Jerry Harburn
- Began definition of terms relative to project structuring

Those attending:

Jerry Harburn - Tomblinson, Harburn, & Associates

Ralph J. Stephenson, P.E. - Consultant

General Summary

This session was primarily a review meeting to discuss the current status of the work and to review the discussions that Mr. Harburn had with President Moore and the management committee of Mott Community College on January 21, 1988 (working day 269). At this meeting, President Moore requested modification of projects 09B, and added two additional programs to the major list; projects 26B, library renovation and 27B, Curtice Building renovation.

It should be noted that the numbers and the letters given above refer to the original proposed capital outlay project list, exhibit A, prepared by Junior Paul and dated January 9, 1987 (working day 6). Projects will be added to this list as they are put into the program.

There is another numbering reference system in use that was assigned on October 27, 1987 (working day 210) for interim purposes. This project number will be shown wherever appropriate in parenthesis, following the original capital outlay number. Thus, for the three projects noted above, 09B, 26B, and 27B; the 26B and the 27B projects

Monitoring Report #5
C.S. Mott Community College
Page two

are designated as new programs to be added to the original exhibit A project list.

President Moore also requested some options with the Mott Memorial Building relative to the day care center, music department, relocation and renovation, and additional classrooms. This data is outlined in the attached set of meeting notes from the session on January 22, 1988 (working day 270).

We next evaluated the impact of the Walker Engineering Report on the old student parking facility (projects 04A, 04B, and 04C). A summary of the alternatives possible is given in the Walker report and from it, the President has made a recommendation from the table 1 alternatives. It has generally been decided to keep the present deck in operation with minimum repairs for 2 or 3 years while vacating any areas of the ramp that may need major renovation. The current program assumes future demolition of the entire deck while retaining surface parking and student access across Gilkey Creek and the ravine.

Of critical importance is the continuing questioning of when the Mott Memorial Building will be vacated by the University of Michigan. Apparently, there is some concern that this will be moved to a later date than the presently assumed point of vacation of October, 1988. This matter should be continually checked since much of the work in the entire renovation program of the Mott Memorial Building, will depend upon vacation of the facility by the University of Michigan. Mr. Harburn will follow this closely.

Other matters of importance reviewed at the meeting on January 21, 1988 (working day 269) included a discussion of the channel 28 relocation, determination by the management committee of area allocations for various programs, and a review of the negotiated sale of the Walnut Street storage building.

Projects in work, as of January 22, 1988 (working day 270) are reviewed in the attached minutes of our meeting on page 5 under 6.1.3.

To help in identifying responsibility and authority patterns, four definitions were discussed with Mr. Harburn and recommendations made for the definitions to be used. These are contained in the meeting minutes under 2.1, 2.2, 2.3, and 2.4. The definitions should be reviewed carefully by the college staff and THA to insure that they are appropriate. It would be well to begin assembly of a set of definitions of the various parties to be involved and what their roles will be so as to avoid management confusion as the various projects in the total program unfold. Tracking of the entire program will require that a clear cut definition of projects, as well as those involved, be maintained at all times.

RALPH J. STEPHENSON, P. E., P. C.
CONSULTING ENGINEER

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C.S. Mott Community College
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I recommend wherever possible that all references be related to the exhibit A proposed capital outlay project list, dated January 9, 1987 (working day 6) as updated in our periodic planning and monitoring reviews. As new projects are added to this list, they will be numbered consecutively with the source of funding identified. Thus, it will be possible to keep good tracking records on the various projects in the program.

I shall be in touch with Mr. Harburn shortly to determine the need for additional planning and monitoring sessions. A copy of our meeting minutes is attached to this monitoring report for reference.

Ralph J. Stephenson, gmy
Ralph J. Stephenson, P.E.

RJS:gmy

To: Gerald Harburn

CRITICAL PATH PLANNING

• LAND PLANNING

• MANAGEMENT CONSULTING

• PLANT LOCATION

RALPH J. STEPHENSON, P.E., P.C.
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April 18, 1988

Subject: Monitoring Report #6

C. S. Mott Community College

Capital Improvement Program - 1987 to 1991

Master Planning Phase 1 - Flint, Michigan

Tomblinson, Harburn & Associates - Architects, Engineers &
Planners

Project: 87:44

Date of Monitoring: April 7, 1988 (working day 324)

Actions taken:

- Discussed occupancy schedule and impacts of University of Michigan's move out of the Mott Memorial Building
- Prepared summary network models for installation of energy management, primary electrical upgrade and telephone/data communications systems
- Prepared summary network model for early major moves into the vacated Mott Memorial Building.

Those attending:

Sharon Johnson - Dean of Business Affairs - Mott Community College

Junior Paul - Facilities Director - Mott Community College

Jerry Harburn - THA

Ralph J. Stephenson, P.E. - Consultant

General Summary

We first discussed the implications of the projected move from the Mott Memorial Building by the University of Michigan. This move has not yet been set firmly by the university and has prevented Mott Community College planning to proceed with less predictability than is desirable. It appears now that the move might be made anytime between September and the end of the year, 1988. However, it appears that the new facility into which the U. of M. is to move will be ready for the earlier move date. Nevertheless, until the university communicates the official date to Mott, the planning is conjectural.

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Mott Community College
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Therefore, in our meeting today, our major effort was to first plan the installation of three important portions of the total program. These were:

- 16A - Energy Management System
- 15A - Primary Electrical Upgrade
- 22A - Telephone/data Communications System

The model is shown on sheet EPT-1, issue 1, dated April 7, 1988 (working day 324). This plan of work shows the major front end items needed to get each of the three programs into field construction. Assumptions were made on the issue of construction documents, award of contracts, and start and completion of field work for each of the three.

The networks, along with bar chart translations of each, were printed and left with the project team for their guidance and monitoring.

Our second major item of work was to analyze the early moves of Mott Community College functions subsequent to the move out of Mott Memorial. To do this, an assumption was made that the vacation of the building would be done by groups of areas. The groupings were tentatively designated as A, B, C, and D. Specific areas assigned to each group were not defined by name, but were designated as those areas needed by Mott to accomplish certain phases of remodeling. These release points are as follows:

<u>Group vacated</u>	<u>Vacated area remodeled to</u>
A	New business department
B	New food lab area
C	New executive administration area
D	New channel 28 office area

Each of the remodelings noted above lead to an occupancy that permits remodeling to proceed further at the vacated areas. The sequencing of subsequent moves is shown in the master move network, sheet MMS-1, issue 1, dated April 7, 1988 (working day 324).

No durations were assigned to the move sequences, since it will not be possible to plan with any certainty until the move out by the University of Michigan has been set and officially confirmed by the university.

The move sequencing shown graphically on sheet MMS-1 is described in the meeting notes taken during our planning session. Copies of these notes were given to those at the meeting. I suggest they be further distributed to those concerned with the Capital Improvements Program,

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Mott Community College
Page three

since they illustrate the critical nature of the Mott Memorial Building moveout relative to short, medium, and long range planning, and the commitment of funding.

Another important element of the move sequence is a decision on the content of the moves and the uses to be made of the freed space. There is a considerable lead time required prior to start of construction during which several activities must be accomplished.

In broad terms, these include, prior to the start of construction:

1. Prepare program of space use
2. Select architect/engineer & execute design contract
3. Prepare early design work for new space use
4. Review and approve early design work for new space use
5. Prepare and issue contract documents for each new major space use
6. Solicit and receive proposals for construction work at each new space to be remodeled
7. Construct new remodeled space
8. Move into new remodeled space

In addition to the above, plans must be made concurrently for how and when the University of Michigan is going to move out of the space, and the condition the space will be in when Mott Community College is ready to start remodeling work.

It should be remembered that as the domino movement of occupancies continues, that spaces vacated must be remodeled and occupied just as quickly as possible if a high occupancy effectiveness is to be maintained by MCC. This matter is one that will require thinking considerably beyond the first of the moves out of Mott Memorial Building.

The material prepared in this meeting, as noted above, has been printed and given to those attending. Therefore, no copies are attached to this report. The report, as in the past is being sent to Mr. Harburn for his further distribution.

I shall be in touch with Mr. Harburn shortly to determine the need, and to set the dates of subsequent meetings.

Ralph J. Stephenson, P.E.

gmy
To: Mr. Jerry Harburn

OPTICAL PATH PLANNING

- LAND PLANNING
- MANAGEMENT CONSULTING
- PLANT LOCATION

RALPH J. STEPHENSON, P. E., P. C.
CONSULTING ENGINEER

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June 6, 1988

Subject: Monitoring Report #7

C.S. Mott Community College

Capital Improvement Program - 1987 to 1991

Master Planning Phase 1 - Flint, Michigan

Tomblinson, Harburn, & Associates - Architects, Engineers & Planners

Project: 87:44

Date of Monitoring: May 25, 1988 (working day 358)

Actions taken:

- Briefly reviewed actions to be taken to initiate work on Mott Memorial Building renovation
- Reviewed master move sequence network
- Continuing preparing definitions of move sequences to Mott Memorial Building.

Those attending:

Sharon Johnson - Dean of Business Affairs - Mott Community College
(in meeting part time)

Junior Paul - Facilities - C.S. Mott Community College

Jerry Harburn - THA

Ralph J. Stephenson - Consultant

General Summary

It currently appears the University of Michigan will vacate the Mott Memorial Building sometime in August or early September, 1988. Apparently, there has been no official word as yet but informal indications are the move will occur about this time. Therefore, we continued focusing our attention at this session on the building areas that will be freed up by the move and how Mott Community College will accomplish the domino move renovation and occupancy.

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C.S. Mott Community College
Page two

As a result of our discussions, we refined the move definitions started in our previous session. In the meeting on April 7, 1988 (working day 324), we had defined four moves; A, B, C, and D, dealing respectively with the new business department, the new food lab area, the new executive administration area, and the new channel 28 office area.

In our re-evaluation of these moves, we voided or superseded moves A, C, and D and it was decided that move B would be restudied. The following move sequences are now considered to be the current official designations:

- Move E - flexible scheduling - to-be-announced
- Move F - social sciences
- Move G - departments to be determined, may include business
- Move H - dental assistance programs
- Move I - executive administration - supersedes move C
- Move J - classroom space at Curtice
- Move K - University Center
- Move L - Accounting
- Move M - Resolution of Channel 28 location - supersedes move D
- Move N - Resolution of Child Care program

A brief definition of each of these moves is given in the set of meeting notes provided to Mr. Harburn at the session on May 25, 1988 (working day 358).

The key elements of information about each move include the following:

1. What the conditions are under which the move can be initiated
2. The physical areas to be vacated
3. The location out of which the occupants of the new space will move
4. Date of area vacation; the approximate date by which the new area will be vacated
5. Physical work required to make new area usable
6. Design work required initiate required remodeling of space
7. Furniture, fixtures, and equipment to be left in new area by U. of M., or others

Monitoring Report #7
C.S. Mott Community College
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8. Department or group to occupy the new space
9. Approximate date of occupancy

Early moves in the U. of M. vacation sequence are very important to the Mott program. Therefore, at a meeting to be held on May 27, 1988 (working day 360), Mr. Harburn will recommend which rooms should be occupied for each sequence as the U. of M. moves out.

We were not able, due to the press of time, to prepare a network model of the summary move plan. However, by our next planning meeting, we should have adequate authoritative details on the vacation program and the desired space moves, to prepare a detailed plan of action, showing the overall move sequence.

I shall be in touch with Mr. Harburn shortly to set the date of our next planning session.

Ralph J. Stephenson, P.E.

RJS:gmy
To: Gerald Harburn

CRITICAL PATH PLANNING

- LAND PLANNING
- MANAGEMENT CONSULTING
- PLANT LOCATION

RALPH J. STEPHENSON, P. E., P. C.
CONSULTING ENGINEER

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July 21, 1988

Subject: Monitoring Report #8

C.S. Mott Community College

Capital Improvement Program - 1987 to 1991

Master Planning Phase 1 - Flint, Michigan

Tomblinson, Harburn, & Associates - Architects, Engineers & Planners

Project: 87:44

Date of Monitoring: July 15, 1988 (working day 393)

Actions taken:

- Reviewed activities from previous meeting on May 25, 1988 (working day 358)
- Reviewed move sequences prepared in previous planning sessions
- Discussed boundary definitions for various design packages
- Prepared summary network model for MacKenzie, Knuth & Klein design work
- Prepared summary network model for Gazall & Reno design work
- Began preparation of data base for storage of specific geographic location information in remodeling

Those attending:

Jerry Harburn - Tomblinson, Harburn, & Associates

Robert Mengle^{De}, AIA - MacKenzie, Knuth & Klein - came in about 9:52 AM, left at noon

Robert Gazall - Gazall & Reno - came in about 2:20 PM

Ron Reno - Gazall & Reno - came in about 2:20 PM

Ralph J. Stephenson, P.E. - Consultant

Monitoring Report #8
C.S. Mott Community College
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Notes were made of the discussion items at this session and a copy of these is attached for distribution. Also attached is a copy of the abbreviations currently being used in the various notes and diagrams for the project. A copy of the meeting notes were left with Mr. Harburn. However, minor revisions have been made to these subsequent to our meeting, therefore, the attached corrected copy should be used.

Currently, project design architects and engineers have been selected for several of the move sequences. At present, these move sequences primarily concern remodeling of the Mott Memorial Building (MMB).

MacKenzie, Knuth, & Klein (MKK) have been retained to prepare documents for:

- Move E (to be announced flexible scheduling)
- Move F - (social sciences, classroom & office)
- Move I - (executive administration)
- Move K - (University Center)
- Move L - (accounting)
- Move M - (Channel 28)
- Move N - (child care) Note: This work is on hold pending grant approval
- Unassigned areas at the first floor and other special sections

In addition, Mr. Harburn mentioned that he had been authorized to select a design firm to start schematics for work on Move J (classroom space at Curtice).

Construction work is in progress on installation of the energy management system, the electrical primary update work is under construction, and communications system design has been started. An exterior sign package has been authorized for preliminary design studies.

Also, an independent preliminary inspection of food services facilities has been authorized by the college at the existing Mott Science, Mott Memorial, and Sarvis Center. Gilkey Creek improvements were proposed upon recently but it is felt that better costs will be obtained if it is bid again in February, 1989.

Relative to master planning status of the project as of July 15, 1988 (working day 393), the following items were discussed with Mr. Harburn.

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C.S. Mott Community College
Page three

- The music, art and theatre programs will remain in the College and Culture Center
- Community education is to remain at the Reuther Center
- An independent study of electric and gas consumption at Mott Memorial Building has been authorized
- A surface parking design team will be needed soon after the master plan is approved
- The master plan is now being completed by Tomblinson, Harburn & Associates. It will be submitted to the college in August, 1988.

THA has also been authorized to set material and equipment standards for the entire project, and to make recommendations to the college. The purpose of this standardization is to keep design and construction nature and quality consistent throughout the project.

A new plastics lab has been authorized by the college and THA will review the program, location, and the budget. Selection of a design firm is currently being evaluated.

One of the major activities engaged in at this meeting was to identify the detailed scope of work of as many of the move sequences as possible. We also reviewed methods of designating the work within the project. There are several classification systems that could be used. Move designations are one of the basic features of each remodeling packages. However, there is also a geographic designation for each of the packages, and, in addition, a description of the work by the design team assigned to undertake the design. There has also been carried through a set of numbered project identifications relating back to very early work on the entire program.

For current purposes of our study, we decided to continue describing the moves that would occur and then subclassified the geographic and other elements that are a part of each move.

In the attached notes you will see that the work assigned to each of the two design architects, MacKenzie, Knuth, & Klein; and Gazall & Reno, have been described by both the move designation and by the room numbers that presently exist within the boundaries of their design work. Thus, a moderate cross referencing is possible.

I did some very preliminary work on methods by which the various elements of the program can be incorporated into a flexible data base for ease of retrieval and selective sorting. I shall continue to work on this on a nominal basis and attempt to have it ready for our next planning and monitoring session.

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C.S. Mott Memorial College
Page four

We consulted with each of the two design firms presently engaged in the early design for the Mott Memorial Building. These firms are MacKenzie, Knuth, & Klein; and Gazall & Reno. Network models showing the work activities necessary from today on through to MCC occupancy of the space were prepared for each of the two firms. The Gazall & Reno work is shown on G & R 1, issue 1, dated July 15, 1988 (working day 393) and the work of MacKenzie, Knuth, & Klein was shown on sheet MKK 1, issue 1, dated July 15, 1988 (working day 393).

Copies of these networks were left with Mr. Harburn. If additional copies are needed they can be made easily upon request from the file disk.

Early indications are that the scope of work for each of the moves as described in monitoring report #7, dated June 6, 1988, remains substantially the same, with some minor modifications made to the dates and the areas encompassed. Details of these moves is given in the report notes of May 25, 1988 (working day 358).

As other design teams are retained we will prepare additional descriptions of the design packages, and also prepare network models for preparation and issuance of the design documents.

In some of the early remodeling for the Mott Memorial Building there is little work to do except cleaning the space and moving in. This work is now anticipated to begin shortly after the University of Michigan vacates the space, presently planned for September 1, 1988 (working day 427). High priority Move E work, which is the to-be-announced-flexible-scheduling, can be accomplished in a relatively short time and it is the intent to have this space in operation by September 6, 1988 (working day 429). Meanwhile, work remaining in the MKK design package will also continue through to completion with occupancy of the space being considered by September 1, 1989 (working day 682). It may be possible in some cases to occupy selected areas earlier than September 1, 1989 (working day 682) and an interim occupancy date of January 3, 1989 (working day 511) is also being reviewed to see if some spaces can be ready by then. This will be made a part of our plan of work as we do additional planning of the space moves.

Detailed discussions about the rooms to be included in the move sequences were held by THA with the college on June 28, 1988 (working day 381). At this meeting the Mott Memorial Building first, second, third, and fourth priority room releases were identified by Ms. Sharon Johnson and confirmed in a memo from her to Mr. Hughes, dated June 28, 1988 (working day 381). This is the document we are following at present in relationship to Moves E and F (to be announced flexible scheduling and special science and office grouping).

In addition to our work at our session today, we also printed out a

RALPH J. STEPHENSON, P. E., P. C.
CONSULTING ENGINEER

Monitoring Report #8
C.S. Mott Community College
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full set of meeting notes that had been prepared since our first session in August, 1987. These notes were provided with a table of contents and will be made a part of the appendix in the master plan report. It should be understood that this set of notes does not include a full set of meeting information from our session on July 15, 1988 (working day 393).

I shall be in touch with Mr. Harburn shortly to determine the future planning and monitoring needs of the program and set the date of our next session.

Ralph J. Stephenson, P.E.

RJS:gmy

TO: Mr. Gerald Harburn
Further distribution to be by Mr. Harburn

CRITICAL PATH PLANNING

• LAND PLANNING

• MANAGEMENT CONSULTING

• PLANT LOCATION

RALPH J. STEPHENSON, P.E., P.C.
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October 21, 1988

Subject: Monitoring Report #9

C.S. Mott Community College

Capital Improvement Program 1987 to 1991

Master Planning Phase 1 - Flint, Michigan

Tomblinson, Harburn Associates - Architects, Engineers & Planners

Project: 87:44

Date of Monitoring: October 6, 1988 (working day 451)

Actions taken:

- Reviewed current status of project
- Prepared monitored network of sheet mkk1, issue 2, dated September 7, 1988 (working day 430)
- Updated issue 2 network model sheet mkk1, dated September 7, 1988 (working day 430)
- Prepared network model for telecommunication design and approval work, sheet tcl, issue 3, dated October 8, 1988 (working day 453)
- Prepared meeting notes and distributed to those at session
- Discussed need for continuing project management by Mott Community College staff at a technical level

Those attending

Junior Paul - Facilities Director, Mott Community College

Gerald Harburn - Tomblinson, Harburn Associates

Joseph King - Manager computer operations and data communications
for Mott Community College

Thom Stephenson - Controlled Temperature, Inc.

Marshall Weingarden - Communication Advisors, Inc.

Phillip R. Ziegler - Controlled Temperature, Inc.

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C.S. Mott Community College
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John Whitehead - Tomblinson, Harburn Associates
Larry Braidwood - Newkirk Electric (in meeting part time)
Rick Clemons - Newkirk Electric (in meeting part time)
Robert Mengel, AIA - MacKenzie, Knuth & Klein (in meeting part time)
Ralph J. Stephenson, P.E. - Consultant

General Summary

This session focused on the telecommunication, computer and energy management systems to be used in the Mott Community College program. Most of the consultants and staff involved in this work effort attended the session, and we discussed the details of three of the major programs including the original exhibit A list. These were:

15. Electrical primary upgrade
16. Energy management system
22. Computer and telephone systems

Our discussions were based upon the fact that Mott Community College will take over the major portion of Mott Memorial Building on Friday, October 14, 1988 (working day 457). Much of the existing equipment and controls will be left in the Mott Memorial Building by the University of Michigan when they move to their new facility.

We also discussed the current status of ongoing projects and this review can be found in the attached notes of our meeting under section 5.4 on pages 2 through 5.

The current status of the energy management systems work is given in the attached notes under 5.4.2 on pages 3 and 4, and the status of the computer and telephone systems work is reviewed in these notes under 5.4.3, pages 4 and 5.

A network model was prepared for telecommunication design and approval work and is shown on sheet tccl, issue 3, dated October 8, 1988 (working day 453). It shows work required to complete the telecommunications management software package, the telecommunications telephone system working drawings. These are to be submitted to Mott Community College for their review and comment in late October, 1988. After the review and comment, and processing of the necessary revisions, proposals will be solicited for the

Monitoring Report #9
C.S. Mott Community College
Page three

telecommunications package and contractors selected for the work.

Because of the gap between when this work will be done, and the date of the January, 1989 board meeting of the college, it is not expected to have contracts executed for the telecommunications work until early February, 1989. It may be that this work can be put under contract earlier if a special board meeting can be called to approve the award. The matter will be reviewed by the college and consultant staff.

Another part of our work dealt with monitoring the current status of moves E, F, I, K, L, M and N listed below:

- Move E - To be announced flexible scheduling
- Move F - Social sciences classrooms and offices
- Move I - Executive administration
- Move K - University Center
- Move L - Accounting
- Move M - Channel 28
- Move N - Child care

The Channel 28 move will not be made until mid October, 1989. Child care, move N, is presently on hold, depending grant approval.

The Mott move into the E, priority 1 space was completed on September 6, 1988 (working day 430), very close to the desired target.

So far as design work on moves F, I, K and L, the schematic package for this work at the first and second floors of the Mott Memorial Building has been completed and submitted for review by the Mott Community College executive committee. They are expected to review this material soon and work then will proceed into design development followed by preparation of construction documents.

It is still expected that the construction documents for moves F, I, K, and L will be issued on March 6, 1989 (working day 555). This should allow renovation work to begin on selected sequences in the field by late May, 1989. Completion of remodeling for move K is expected to be completed by November 10, 1989 (working day 732). Remodeling for moves F and I is planned for completion by August 31, 1989 (working day 681).

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C.S. Mott Community College
Page four

With the Channel 28 move out of the Mott Memorial Building presently set for October 15, 1989 (working day 669), renovation of that space to accounting (move L) is planned for completion by early April, 1990. The television move out and remodeling for accounting should be studied further since it presently is not fixed as to the total time frame involved.

The total program for the renovation of the college is now beginning to gain momentum and it would be wise for the college to consider how they can best manage the total program by a combination of their in-house staff and the consultants who are presently doing the design and planning work. Even though the consultants are charged with the responsibility for such planning and design, many internal administrative and technical matters must be resolved on an on-going basis.

Therefore, careful attention will have to be given to the project internally for it to be properly managed. This matter is presently being addressed by the college staff and the consultants to the program.

As noted above, attached to this report is a copy of the meeting minutes from our session on October 6, 1988 (working day 451). Copies of the network models prepared were printed and issued at the meeting by Mr. Harburn and provided to those attending.

I shall be in touch with Mr. Harburn shortly to set the next planning and monitoring session.

Ralph J. Stephenson, P.E.

RJS:gmy

To: Mr. G. Harburn
Further distribution to be by Mr. Harburn

CRITICAL PATH PLANNING

- LAND PLANNING
- MANAGEMENT CONSULTING
- PLANT LOCATION

RALPH J. STEPHENSON, P. E., P. C.
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November 26, 1988

Subject: Monitoring Report #10

C.S. Mott Community College

Capital Improvement Program 1987 to 1991

Master Planning Phase 1 - Flint, Michigan

Tomblinson, Harburn Associates - Architects, Engineers and
Planners

Project: 87:44

Date of Monitoring: November 17, 1988 (working day 481)

Actions taken:

- Reviewed current overall status of project
- Discussed current status of energy management system design and installation
- Discussed current status of telecommunications system design and installation
- Reviewed MCC president's direction and priorities for entire project
- Discussed current unofficial additional moves being considered by the college executive staff.

Those attending:

Junior Paul - MCC - Facilities

Eula Kirk - MCC - Director of Computer Center (in meeting part time)

Jerry Harburn - THA

Joseph King - MCC - Manager computer operations and data
communications

Gary Boothroyd - Control Pak - Engineering manager (in meeting
part time)

Marshall Weingarden - Communication Advisors, Inc. (in meeting part
time)

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Page two

Phillip R. Ziegler - Controlled Temperature, Inc. (in meeting
part time)

Robert Mengel, AIA - MKK

Ralph J. Stephenson, P.E. - Consultant

Energy Management System (item 16, exhibit A)

We first reviewed the status of requests for payment by the contractor. Apparently, these are all currently clear and there are no pending payment requirements at present.

The design status of various systems was reviewed next and these results are contained in the attached meeting notes under item 5.2.

In general, design for the student center and Mott Science Building EMS is complete. The design for the Curtis Building is about 90% complete and at the Durham Pool and Mott Memorial Building, design has not yet begun. Design work for EMS at the Durham Pool and the Mott Memorial Building will start in early and mid December, 1988 respectively. Other design priorities are to be set at a later date.

Construction work status on the energy management system is outlined in section 5.3 of the meeting notes attached. In general, the student center work is complete except for final adjustment of the system which is to be done as the host computer is installed. Mott Science Building work will begin in mid November, 1988. Curtis Building work is about 50% complete, with a projected completion for January 4, 1989 (working day 513). Mott Memorial Building work will tie closely to the owner's interim use and the building remodeling.

Durham Pool construction work has proceeded under a separate contract to where it is about 90% complete. The remainder of the work will be tied into energy management work presently to be designed starting in December, 1988.

Computer and telephone systems

The first order of business was to review interfaces with the energy management system. For this discussion the group was narrowed down to the following:

Junior Paul - MCC - Facilities

Joseph King - MCC - Manager computer operations and data communications

Gary Boothroyd - Control Pak - Engineering manager

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Marshall Weingarden - Communication Advisors, Inc.
Phillip R. Ziegler - Controlled Temperature, Inc.

Remaining people at the meeting were involved in monitoring the discussion, and reviewing items of concern resulting from the discussion among the above.

The overall problem addressed at this session seemed to be whether the energy management system was to be used through the EXL hard drive with a connection to the serial port. There were many topics reviewed and a full list of these is given under item 6.1.3 in the meeting notes. These notes were reviewed in detail by those attending, comments made, and revisions incorporated in the meeting notes at the session.

It is presently the intent to reconvene the energy management system and data communications group on December 1, 1988 (working day 490). The agenda for this next meeting includes making a final determination of the interface between the energy management system and the telephone and data communication system, all related to the pc's and EXL.

In addition, it is the intent at this meeting to set all design and construction parameters.

Those expected to attend include the following:

Junior Paul - MCC - Facilities
Eula Kirk - MCC - Director of Information Systems
Joseph King - MCC Manager computer operations and data communications
Mark Hope - MCC - Manager of Administrative Systems
John Whitehead - Partridge Associates - Director of Electrical Engineering
Phillip R. Ziegler - Controlled Temperature, Inc.
Marshall Weingarden - Communication Advisors, Inc.
Gary Boothroyd - Control Pak - Engineering Manager
Kevin Immeck - Prime Computer

The meeting will be on Thursday, December 1, 1988 at Mr. Paul's office in the Mott Science Building and will start at 9:30 A.M.

At our session today we also updated the telecommunications network model sheet tel to issue 4, dated November 17, 1988 (working day 481).

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This network reflects revised assumptions made in our meeting and was provided to all those attending including Mr. Weingarden who will, to a large extent, drive the work on through to December 1, 1988 (working day 490) when the telecommunications report will be submitted to the Mott Community College staff and communications committee for review and study.

Presently, it is expected that proposals for telecommunications systems installation will be received by January 20, 1989 (working day 525) and that board approval of the award could be given by the end of February, 1989 at the regular MCC board meeting. This matter will be checked further by those involved.

President's direction and priorities for entire project

In a meeting held on November 15, 1988 (working day 479) the president of Mott Community College met with the management committee, and Mr. Junior Paul and Mr. Gerald Harburn also attended the meeting. Observations of Mr. Paul and Mr. Harburn are informally recorded in the meeting notes attached to this monitoring report, in section 7 on pages 5, 6, and 7. It should be understood that these comments were derived from unofficial notes of Mr. Paul and Mr. Harburn. The purpose of including them in regular monitoring meeting notes is to insure that a proper understanding was had of the directions and priorities.

Since the meeting discussions with the president was somewhat complex, I have not made an effort to summarize the results in this monitoring report but refer instead to section 7 of the Thursday, November 17, 1988 (working day 481) meeting minutes accompanying this monitoring report.

An item of importance resulting from the meeting with the president was the addition of four potential moves to those currently being worked upon. For help in maintaining a tracking record of the moves we have designated these as moves P, Q, R, and S.

Other move designations are described in the various meeting notes and monitoring reports issued previously.

In Monitoring Report #6, dated April 18, 1988, moves A, B, C, and D are described briefly. In Monitoring Report #7, dated June 6, 1988, moves E through N are mentioned and again described briefly. Subsequent monitoring reports have evaluated the current situation for each move in relation to the original designation. Thus, we are maintaining a tracking record through the assignment of consecutively lettered move designations.

A brief description of each of the additional moves under considera-

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tion as an administrative option is given below.

Move P - Biology, chemistry and physics move from Mott Science (biology), and from Gorman (chemistry and physics) to Mott Memorial Building chemistry.

Move Q - Music shifts from Dort Music Center to Mott Memorial Building.

Move R - Chemistry moves from Gorman first and second floors to Mott Memorial Building. (Note that the meeting notes distributed at our session on November 17, 1988 (working day 481) contained an extra word "day" after MMB. This should probably be deleted and probably has been in the attached notes.) Day care moves from Woodside Church to first floor of Gorman.

Move S - Chemistry moves from Gorman first and second floors to Mott Memorial Building. Dental to move from Mott Children's Health Center to second floor of Gorman.

Again, it should be stressed that these are presently being considered as administrative options by the college executive staff. They are not officially added to our list of moves but will maintain the letter assigned above for future consideration.

General Summary

Overall, the project is undergoing a major re-evaluation at present and must be tracked carefully to insure that the revised plans of work still maintain conformance to the program to which financing has been allocated. This is a very important item to monitor since much of the work will still have to be done in progressive financing steps.

As a procedural note, we are still, in our major discussions, considering that the Exhibit A items contain the master project numbering system.

We are also considering, as noted above, that move designations given to the various shifts in use at the facilities, will be maintained uniquely until superseded. Any superseded move will be noted as such.

At our next planning and monitoring session I suggest we review in its entirety the lists and designations of projects and programs to insure that all are in general conformance with what is planned and desired.

I shall be in touch with Mr. Harburn shortly to set the date for our next planning and monitoring session. Meanwhile, please accept my

RALPH J. STEPHENSON, P. E., P. C.
CONSULTING ENGINEER

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best wishes for a pleasant and satisfying holiday season.

Ralph J. Stephenson, gy
Ralph J. Stephenson, P.E.

RJS: gmy
To: Mr. Gerald Harburn
Further distribution to be by Mr. Harburn

• LAND PLANNING

• MANAGEMENT CONSULTING

• PLANT LOCATION

15064 WARWICK ROAD
DETROIT, MICHIGAN 48223
PHONE 273-5026

February 10, 1989

Subject: Monitoring Report #11

C.S. Mott Community College

Capital Improvement Program 1987 to 1991

Master Planning Phase 1 - Flint, Michigan

Tomblinson, Harburn Associates - Architects, Engineers
and Planners

Project: 87:44

Date of Monitoring: January 26, 1989 (working day 528)

Actions taken:

- Reviewed current overall status of project
- Prepared network model for exhibit A, project 13, phase 1 site improvements
- Prepared network model for exhibit A, project 9 window replacement at Mott Memorial Building
- Prepared network model for exhibit A, project 19, Gilkey Creek improvements
- Reviewed issues that currently need Mott Community College attention

Those attending:

Junior Paul - MCC - Facilities

Jerry Harburn - THA

Robert Mengel, AIA - MKK

James R. Saule, AIA - President Commercial Institutional Division -
SSOE (in meeting part time)

Dennis A. Wood - RLS - Project manager - SSOE (in meeting part time)

Ralph J. Stephenson, P.E. - Consultant

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General

The meeting minutes, as well as the network models prepared at this session, were duplicated and distributed to those at the meeting by Mr. Harburn. I have made minor revisions to the meeting minutes, and attached to this copy is a corrected copy to be distributed as Mr. Harburn requires.

Current Project Status

At present, some portions of the Mott Memorial moves F, I, K, and L have been worked upon, and some rooms have been refurbished and occupied. These are listed on page 2 of the attached meeting minutes.

Student services in Curtice are on hold as of mid December, 1988 and much of the work remaining at Mott Memorial has also been placed on hold, including executive administration, move I; the University Center, move K; and accounting, move L.

All work today focused on the projects at the college that have been released for design and presumably for construction. The reference numbers used in the reports below refer to the designations in the exhibit A proposed capital outlay projects dated August 10, 1987 and updated from time to time over the past two years.

Project 13, phase 1 - Parking and site improvements

This work is being designed presently by SSOE, who are preparing and about ready to submit the schematic design and estimated cost package to Mott and THA for review and approval. It was expected that this material would be available on February 6, 1989 (working day 535). From there the project will move on through design development and into preparation of contract documents.

Approval of work for construction and actual start of field operations is presently planned for a mobilization and move on site date of April 26, 1989 (working day 592). Phase 1 site improvements are to be complete the evening of September 1, 1989 (working day 683). This work is shown on sheet SW1, issue 1, dated January 26, 1989 (working day 528). Copies of the network models were printed at our session and distributed to those involved.

Mott Memorial Building window replacement, exhibit A, project 9

This project is a part of the total Mott Memorial work and apparently has been released for design and presumably construction.

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At present, MKK is preparing the contract document package for submission to major regulatory agencies. This submission is expected to be made on February 23, 1989 (working day 548). The network model showing the work plan is on sheet MKK 2, issue 4, dated January 26, 1989 (working day 528). Copies of this network model were provided to those concerned at our meeting.

While the regulatory agencies are reviewing and commenting on exterior window wall documents, completion of the documents and issuance of them for proposals will occur. It will be necessary, however, to have the regulatory approvals by the point where a contractor is recommended to the college.

Under present plans, it is expected to be possible for the window replacement contractor to mobilize and move on site by April 26, 1989 (working day 592). This is targeted so as to permit completion of window replacement the evening of September 1, 1989 (working day 683).

Presently, the work plan seems to be feasible and will be considered the sequence to be followed until further revisions are deemed necessary.

Gilkey Creek improvements, exhibit A, project 19.

Presently, THA and Gould are completing the Gilkey Creek document package for issue to contractors, and the regulatory agencies. It is expected that work in the field can begin with mobilization and move on site by March 24, 1989 (working day 569) with early field operations. Completion of Gilkey Creek work is presently scheduled for the evening of September 1, 1989 (working day 683).

The plan of work presently in effect for this project is shown on sheet G1, issue 1, dated January 26, 1989 (working day 528). Copies of the network were distributed at our meeting to those involved.

Issues needing Mott Community College attention

There was considerable discussion about items that currently require attention from Mott Community College staff. These items are listed on page 4 of the meeting minutes attached to this monitoring report. For ease of reference these are summarized below.

1. A decision is required on near future design and planning for the University Center.
2. A clarification of the TV 28 lease commitment is needed. Are they staying through May, 1989? If so, what course of action is to be followed subsequent to that?

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3. A clarification is needed on the child care program.
4. A decision is needed on relocation of the dental assisting and dental hygiene facilities.
5. Planning status information is needed on the reuse of Curtice-Mott space.
6. A decision on the use of unassigned areas, mainly the administrative complex; the second floor of the Mott Memorial Building; and the first floor auditorium complex at the Mott Memorial Building is needed.

Of particular importance is the decision on the use of the administrative complex.

7. Information is needed on current planning progress for the trade tech area.
8. Information is needed on the music department move back to the campus.
9. Information is needed on the current theater program planning progress.
10. Information is needed on current plans for the Reuther Center.
11. Information is needed on the Gorman Building use planning and re-evaluation.
12. Information on the relocation status of chemistry, biology and physics to the Mott Memorial Building from Mott Science and Gorman is needed.
13. Information on the status of greenhouse planning at Mott Memorial Building is needed.
14. Information on the status of Ballenger Field House renovation is needed.

General Summary

Overall, project work on the limited Mott Community College planning construction program is moving relatively well. However, it is essential that careful comparisons be made of the original plan of work so that the achievement of the master plan goals and objectives can be stated; the plans of work established; and the movement toward achieving this master plan can be maintained on a steady pace.

RALPH J. STEPHENSON, P.E., P.C.
CONSULTING ENGINEER

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I suggest at a near future meeting we again review the total program and re-establish priorities as may be necessary to again give a full view of the Capital Improvement Program and the master planning for phase 1.

It is essential to maintain a full perspective of such a complex program as the expansion if the individual components and projects are to be successfully achieved.

I shall be in touch with Mr. Harburn shortly to set the next planning and monitoring session.

Ralph J. Stephenson, P.E.

RJS:gmy
To: Mr. G. Harburn

OPTICAL PATH PLANNING

• LAND PLANNING

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RALPH J. STEPHENSON, P.E., P.C.
CONSULTING ENGINEER

15064 WARWICK ROAD
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March 20, 1989

Subject: Monitoring Report #12

C.S. Mott Community College

Capital Improvement Program 1987 to 1991

Master Planning Phase 1 - Flint, Michigan

Tomblinson, Harburn Associates - Architects, Engineers,
and Planners

Project: 87:44

Date of Monitoring: March 13, 1989 (working day 560)

Actions taken:

- Monitored and updated Exhibit A project 13 plan of work (site improvements)
- Monitored and updated Exhibit A project 9 plan of work (window replacement)
- Monitored and updated Exhibit A project 19 plan of work (Gilkey Creek work)
- Reviewed and discussed issues requiring MCC attention
- Made overall review of all Exhibit A projects

Those attending:

Junior Paul - MCC - Facilities

Jerry Harburn - THA

Robert Mengel, AIA - MKK (in meeting part time)

Dennis A. Wood - SSOE (in meeting part time)

Ralph J. Stephenson, P.E. - Consultant

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General

Material prepared at this session was duplicated and distributed to those at the meeting by Mr. Harburn. I made revisions, however, to the meeting notes subsequent to the session so as to improve their readability. This set of revised notes with a table of contents is attached.

While reviewing and evaluating current work at our planning and monitoring session today, it is noticeable that much of the project activity in producing contract documents is nearing completion. It further appears that a large amount of the work in progress will be moved into the field by early May, 1989 with completion planned for the pm of September 1, 1989 (working day 683).

Many upcoming projects are currently on hold or are being deferred awaiting program decisions and issues to be resolved by MCC and others. These items are tabulated in a summary review under the Exhibit A recap below.

It presently then appears that if additional projects are desired to be implemented within the phase 1 master planning effort but are not brought into the programming and design phase soon, that the entire capital improvement program will slow considerably, perhaps to a point where it may be difficult to again regain effective momentum.

I suggest the MCC staff responsible for this capital improvement effort, make a careful and thorough review to see what course of action is desired over the next few months. As has been stressed frequently in our work, lead times required in project planning and design prior to construction are considerable and must be started well in advance of field work if the work is to be accurately funded and correctly implemented.

I spoke briefly with Mr. Harburn and Mr. Paul of this matter and they will take steps to focus the college's executive attention to the need for ongoing attention to project programming and resolution of outstanding issues.

Current Project Status - Exhibit A project 13 - parking and site improvements

Monitored from issue #1, dated January 26, 1989 (working day 528)

A full review of this project is given in the project notes attached. In general, as for all current projects, we first monitored status by measuring progress against the current network

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model. This resulted in a network model on which the current status is indicated graphically. Next the current plan of work was updated to reflect the current position of the project. Logic and duration adjustments were made to show what was needed to bring the job back on schedule as required. Next an early start early finish bar chart was printed for ease of scheduling review.

These three documents, the monitoring, the update, and the schedule were then printed and issued to those attending the session by Mr. Harburn. Copies are available as required from Mr. Harburn.

In general, site improvement construction documents are almost complete and it is expected to begin field work May 2, 1989 (working day 596). Construction of site improvements under this contract is to be complete by the pm of September 1, 1989 (working day 683).

Current Project Status - Exhibit A project 9 - Mott Memorial Building - window replacement

Monitored from issue #1, dated January 26, 1989 (working day 528)
Contract documents are currently being reviewed for issue to contractors to prepare and submit construction proposals.

Field work is expected to begin by May 1, 1989 (working day 595). Installation is to be completed by September 1, 1989 (working day 683). To be watched carefully is procurement of window materials. A fuller description of the current project status is given in attached meeting notes.

Material issued at our session included the monitored network, the updated diagram, and the bar chart schedule of the updated materials.

Current Project Status - Exhibit A project 19 - Gilkey Creek improvements

Monitored from issue #1, dated January 26, 1989 (working day 528).

Construction proposals have been submitted and it is expected a contractor will be selected shortly. Construction is to start in mid April, 1989. Completion of Gilkey Creek improvements is planned for September 1, 1989 (working day 683). For a fuller review of this project, see the attached project meeting notes.

As with the other projects reviewed at our session, a monitored network, an updated diagram, and the bar chart of the updating was issued to the staff involved.

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Review of issues needing MCC attention - as of 3/13/89

We made a quick check of those items described in our previous meeting and described in Monitoring Report #11, dated February 10, 1989 on pages three and four. Items covered in our session today were discussed in the same order as they appeared in Monitoring Report #11.

It appears from the analysis and review that there is a strong need for the college to address each of these in the immediate future if they desire to maintain momentum on the overall capital improvement program. Many items on this list are essential to maintaining ongoing program and design efforts to keep physical improvement work moving toward ultimate completion.

There also are some time restraints built into the funding progress. It might be well in the near future to review these restraints relative to bonding and other sources of funding to insure that they still can be satisfied. Again, this action was beyond the scope of our discussion today, however, it should be given attention in the near future by the MCC executive staff.

For general review, the items discussed today included the following:

1. Design and planning of the University Center
2. TV 28 lease commitments
3. Clarification of the child care program
4. Dental assisting and dental hygiene relocation
5. Reuse of Curtice/Mott space
6. Use of unassigned areas
7. Planning for the trade tech area
8. Music department move back
9. Theater program
10. Reuther Center planning
11. Gorman Building planning and re-evaluation
12. Relocation of chemistry, biology and physics

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13. Greenhouse planning
14. Ballenger field house renovation

For details of each please refer to the attached meeting notes.

Overall Review of Exhibit A projects

The original document from which the current project list derived its numbering system from 1 through 24 was entitled Exhibit A, proposed capital outlet projects. It was prepared in August, 1987 and showed 24 projects that generally made up the proposed program for college improvements. In our session today, Mr. Paul, Mr. Harburn, and I reviewed each of these in detail and prepared a brief summary statement as to their current position. This information is shown in the meeting notes accompanying this report.

Overall progress has been reasonably good but today's review, as with the others, indicates that the capital improvement program originally conceived is beginning to slow and will need careful attention from the college to regain good forward movement. As mentioned previously, there is presently a large amount of work that will be moved into the field over the summer, 1989 and will be completed by September, 1989.

It will be essential to continue moving projects into the early program and design pipeline to maintain an ongoing improvement effort. I suggest a careful study of the 24 original programs and a re-evaluation of the ongoing financing efforts needed to fund the work.

General Summary

Overall, project progress has been fair to good. There are signs of slowness in the release of additional projects to come on line, but this can be resolved by careful evaluation of the pending work load.

I shall be in touch with Mr. Harburn shortly to determine future planning and monitoring needs. Meanwhile, the graphic material prepared at this session has been distributed to those concerned.

The meeting notes attached to this monitoring report have been edited as noted above and should be distributed to those normally receiving monitoring reports.

Ralph J. Stephenson, P.E.

RJS:gmy
To: Gerald Harburn

• PATH PLANNING

• LAND PLANNING

• MANAGEMENT CONSULTING

• PLANT LOCATION

4 pgs

RALPH J. STEPHENSON, P. E., P. C.
CONSULTING ENGINEER

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PHONE 273-5026

May 23, 1989

Subject: Monitoring Report #13

C.S. Mott Community College

Capital Improvement Program 1987 to 1991

Master Planning Phase 1 - Flint, Michigan

Tomblinson, Harburn Associates - Architects, Engineers,
& Planners

Project: 87:44

Date of Monitoring: May 11, 1989 (working day 603)

Actions taken:

- Reviewed current project status
- Reviewed portions of exhibit A, project #9, moves H, F, K, L, M, N, and Q.
- Prepared network model for dental assistance program - Project #9, sheet DA1. issue #1, dated May 11, 1989 (working day 603)
- Prepared network model for Mott Memorial Building Center renovation - Project #9, sheet MMK, issue #6, dated May 11, 1989 (working day 603)

Those attending:

Junior Paul - MCC - Facilities

Jerry Harburn - THA

Bernie Darenkamp - THA - Mechanical staff engineer (in meeting part time)

Robert Mengel, AIA - MKK (in pm meeting only)

Ralph J. Stephenson, P.E. - Consultant

General Summary:

Material resulting from this session was duplicated and distributed by Mr. Harburn. However, subsequent to the meeting, I edited the meeting notes and there are some minor differences in these as compared to the rough notes distributed by Mr. Harburn earlier.

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Our major work at this session consisted of evaluating Mott Memorial Building remodeling, including the moves involved in the dental assistance program and those involved in the central area renovation. It was felt desirable to look at these programs in some detail and to prepare projected network models of the work to be done beginning the planning as of the morning of May 11, 1989 (working day 603).

Dental Assistance Program (Project #09, move H)

This program is currently on hold. However, it is one of the improvement sequences that was felt desirable to review since it is a relatively complex and important project. There has been some work done on this project over the past several months.

We first made a detailed review of move H as it was defined earlier on May 25, 1988 (working day 358). This work is summarized in page 1-section 6.2 of meeting minutes.

We next updated the definition of move H in page 2, section 6.3. A new tentative completion date was set for the pm of June 19, 1990 (working day 885).

Rooms to be remodeled were selected and the various activities to be done for the project were identified along with activities done to date. This information is shown on the network model, issue #1, sheet DA1, dated May 11, 1989 (working day 603).

The current status of the project is that the Gazell & Reno design group has prepared a dental scheme E to be submitted for MCC staff review. Concurrently, the college will determine what existing dental equipment is to be relocated and what new equipment is to be purchased. Upon a thorough analysis of the dental scheme E and the dental equipment acquisitions, G & R (Gazell & Reno) will complete, prepare, and submit the full contract document package for scheme E. Meanwhile, the college will prepare specifications for new dental equipment and receive proposals for this equipment.

As procurement for dental equipment proceeds, G & R will complete contract documents and submit them to the regulatory agencies, including labor, health, and fire marshall for review and comment. This work in turn results in the retention of a contractor to do the work and authorization to purchase new equipment for the facility.

Present plans are to have the dental remodeling contract award approved by the board on September 19, 1989 (working day 693). This should allow construction of the new facility to proceed. The facility is expected to be operative by the pm of June 19, 1990 (working day 885).

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The entire sequence as noted above is shown on sheet GA1, issue #1, dated May 11, 1989 (working day 603). Copies of this diagram and the bar charts have been printed and distributed to Mr. Harburn for his use, and for further distribution to those concerned. Meanwhile, we shall monitor the project from this issue at succeeding planning and monitoring sessions.

Rehabilitation of Mott Memorial Building center portion (Project #09)

As part of our work today we prepared a new network model for remodeling of the MMB center portion to generic classroom and office space. This is part of MKK's work and is shown on sheet MMK #3, issue 6, dated May 11, 1989 (working day 603).

The moves include work as previous encompassed in move F, (social sciences, classroom, and office), move K (University Center), move L (accounting), move M (Channel 28), and move Q (shift of music from Dort Music Center to Mott Memorial Building).

Details of this move as previously planned was originally shown in our meeting minutes of July 15, 1988 (working day 393). An updating of these move details as of May 11, 1989 (working day 603) indicate that moves F, G, I, K, L, M, and N now comprise the major center portion remodeling, but the scope of the work has changed.

Details of these moves and their location is given in the attached meeting minutes. A brief summary for immediate reference is listed below.

- Move F - remainder of social sciences to be occupied in September, 1989
- Move G - departments are yet to be determined. This will be the group to occupy the former social science areas.
- Move I - executive administration. This supersedes move C and has a tentative occupancy date of July, 1989.
- Move K - the University Center. No target has currently been set for the occupancy of this area.
- Move L - accounting, is on hold.
- Move M - (resolution of channel 28 location). This move superseded Move D and is currently in leasing negotiating.
- Move N, child care program, is on hold pending funding.

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The network model that was prepared for this work shows a generic design program having a construction start of February 13, 1990 (working day 795). This date is tentative and subject to further evaluation and planning. Copies of the network model were distributed to those concerned.

The exact scope of work to convert unassigned space to generic classroom and office facilities is still undefined. Efforts will be made in the next several weeks to more clearly outline the work scope and the uses to which the spaces are to be put.

General

I shall be in touch with Mr. Harburn shortly to set the next planning and monitoring session. The entire program should be continuously evaluated to determine action needed and resolve the various items that restrain full working operations. This matter is under review by the project team and will be given concurrent attention by those involved at executive levels of Mott Community College.

Ralph J. Stephenson, P.E.

RJS:gmy
To: Gerald Harburn

October 5, 1989

Subject: Monitoring Report #14
C. S. Mott Community College
Capital Improvement Program 1987 to 1991
Master Planning Phase 1 - Flint, Michigan
Tomblinson, Harburn Associates - Architects, Engineers &
Planners

Project: 87:44

Date of monitoring: September 19, 1989 (working day 693)

Actions taken:

- Reviewed current status of work
- Updated network model of Mott Memorial remodeling to generic classroom & office space - sheet MMK3, issue #7, dated 9/19/89 (working day 693)
- Updated network model of Mott Memorial remodeling to Dental Hygiene space - sheet DA1, issue #2, dated 9/19/89 (working day 693).

Note: Minor revisions were made on the title block of this sheet subsequent to the meeting on 9/19/89, including addition of the new issue and date, and revision of the sheet title to "Dental Hygiene Renovation Program".

- Updated network model of Mott Memorial remodeling to Music Department space - sheet MMK4, issue #7, dated 9/19/89 (working day 693)
- Prepared and issued meeting notes to those attending.

Those attending:

Sharon Johnson - MCC, Dean - in meeting in pm only

October 5, 1989

Junior Paul - MCC Facilities
Jerry Harburn - THA
Robert Mengel - MKK
Ralph J. Stephenson - consultant

General Summary:

Construction has moved well over the summer and most of the programs in work are currently meeting major targets.

Several upcoming programs were discussed at our session, and a brief summary of the material reviewed is given below. Meeting notes and other material prepared at this meeting was duplicated and distributed by Mr. Harburn.

Move F (remainder of social sciences)

Design and construction work required is minor and for the main part will be done by the MCC staff. The current target date for occupancy is January 2, 1990 (working day 765).

Move G (natural and social sciences advising center)

Move G will be made after the social sciences move F is complete, probably about January 8, 1990 (working day 769). Design and construction is relatively minor and will be done by the MCC staff.

It was noted in the meeting that the MCC administration should determine the move participants by early fall, 1989.

Move H (dental hygiene)

For this move to be implemented, a second bond issue must be approved and the bonds sold. We updated the network model for the project shown on sheet DA1 to issue 2, dated September 19, 1989.

The election is currently set for June, 1990 and it has been assumed that

October 5, 1989

money will be available from the bond issue by July 25, 1990 (working day 909) for release of the design team to prepare contract documents.

Meanwhile however, MCC can continue their work on determining dental equipment reuse and new needs as shown in the plan of work.

It appears from the updating of the previous plan of work updated, that completion of the facility, and move in and make operative will be in mid August, 1991. We will continue to monitor and plan this project at subsequent meetings.

Move I (executive administration - supersedes move C)

This project is also dependent on the second bond issue and their sale expected to be in June and July, 1990. Work required for the remodeling is moderately complex architectural, mechanical and electrical installation. However design of the facility will be held for the time being. Date of occupancy will be determined at a later date.

Move K (University Center)

Move K is dependent on the approval and sale of the second bond issue expected in June and July of 1990. The space will be generic classroom space except for Ferris State. Some landscaped open space planning may be used.

Schematics and design development have been authorized. Construction documents are yet to be released by the College. Financing will be out of current bond funding. The planned date of occupancy is September, 1990.

Move L (Accounting)

This project is on hold as of September 19, 1989 (working day 693). For the work to proceed the second bond issue and sale in June and July, 1990 must be approved and completed. The move is presently related to the possible move of Channel 28.

October 5, 1989

Move M (Channel 28 relocation - supersedes move D)

The current Channel 28 lease expires in October, 1990. This space must be vacated to allow move L of accounting into the area. No word was available at our meeting regarding the plans of Channel 28.

Move N (Child care program)

The current arrangement for child care space in Woodside will end September 29, 1989 (working day 702). A decision on the near future location of the child care program must be made immediately.

Move O (Music)

Move D will be to the MMB 1st floor south. The program is to be financed out of current funding with occupancy planned for September, 1990. The projected start of construction is in mid to late March, 1990. Authorization has been given for preparation of schematics and of design development packages. Still needed is authorization for preparation of construction documents and maintenance of construction administration.

The updated network model for the work program, sheet MMK4, issue 7, dated September 19, 1989 (working day 693) was printed and issued at our meeting.

General

I shall be in touch with Mr. Harburn shortly to determine future planning and monitoring needs of the program.

Ralph J. Stephenson PE

Ralph J. Stephenson PE PC
Consulting Engineer
December 21, 1990

Subject: Monitoring Report #15
C. S. Mott Community College
Capital Improvement Program
Tomblinson, Harburn Associates - Architects, Engineers &
Planners

Project: 87:44

Disks: rjs #105, 168, 174, 220

Date of monitoring: December 19, 1990 (wd 248 - 1990 base wd calendar)

Actions taken:

- Standardized Mott Memorial Building area designations
- Reviewed potential uses of available Mott Memorial Building spaces
- Reviewed proposed and in work design and construction programs
- Reviewed exhibit A projects yet to do . Exhibit A was the original master plan phase 1 project list used as a work reference over the past 3 years
- Identified potential key domino move sequences over next 2 years
- Prepared and issued network models for potential key domino move sequences Z, Y, X, W and T
- Prepared and issued unedited meeting notes to those attending

Those attending:

Junior Paul - MCC Facilities
Jerry Harburn - THA
Ralph J. Stephenson - consultant

Mott Memorial Area Designations

The Mott Memorial Building has been expanded and remodeled many times over the past few years. As a result the geographic reference designation of various areas is sometimes confusing to those not familiar with the building. Since the MMB is a pivotal element in the master planning and improvement program Mr. Paul, Mr. Harburn and I discussed how to more clearly designate the various areas and levels so references to the MMB would be consistently conveyed to those involved. We suggested adopting the following standard terminology.

- SE - Southeast wing - located at far southeast corner of building

SE-1 - First floor
SE-2 - Second floor

- WW - West wing - located at far west side of building
 - WW-S - Service level
 - WW-T - Terrace level
 - WW-1 - First floor
 - WW-2 - Second Floor
- NW - North wing - located at far north side of building
 - NW-1 - First floor
 - NW-2 - Second floor
- EW - East wing - located east of, and parallel to, the west wing
 - EW-1 - First floor
 - EW-2 - Second floor
- SW - South wing - located at far south side of building
 - SW-1 - First floor
 - SW-2 - Second floor
- AU - Auditorium - located at far southwest corner of building
- BR - Boiler room - located at far northeast corner of building

These designations should be reviewed by those involved in the MMB planning. However they will be used in this and subsequent monitoring and planning reports.

Potential uses and upgrading of Mott Memorial Building spaces

Over a near future period additional space will probably become available in the MMB. Two important current space use considerations include 1.) the second floor at the southeast wing where the proposed dental area is to be located, and 2.) the Channel 23 tv space at the west wing terrace level and at the north wing first floor.

A brief discussion was held regarding utilization of these spaces. Some proposed uses are listed below.

Dental area at SE-2 - rough in mechanical and electrical already in place

Dental
Classrooms
Offices

Channel 23 area at WW-T

Shipping and receiving
Printing and duplicating
Offices
Special purpose classrooms
Mott television production - educational

Channel 23 area at NW-1

Classrooms
Accounting and purchasing
Human resources
Offices - 3 existing offices
Student study area

Also discussed was the possibility of locating the middle college program administrative office in the dean's vacated office.

It was noted that due to past staggered expansion of the MMB updating of some area mechanical and electrical systems should be studied. This is a rather complex matter but will have to be given careful attention in the relatively near future.

Proposed design and construction programs

Currently several projects are in work. These include:

- Restoration of the old student parking ramp (exhibit A, item 4)
Design work is to be completed by the end of February, 1991. Construction is to begin in March, 1991 and the restoration is to be complete by the fall of 1991.
- Site work project #2 - MCC will select engineer by January 29, 1991

Module A - Site improvement work adjacent the proposed Facilities building.

Included in this work is preparation of a new survey of the project #2 area. Module A work is to be completed during the summer of 1991.

Ralph J. Stephenson PE PC
Consulting Engineer
December 21, 1990

Module B - Site improvement work along Gilkey Creek and Horrigan Drive, and intersection studies at Court & Longway with Horrigan Drive.

Module B work is to be completed during the summer of 1992.

- New ramp parking - building #12 in the phase one master plan
- Facilities Management Building (exhibit A, item 20) - located near the Gorman and the Trade Technical buildings

Schematic design is currently in work with construction due to begin in April, 1991.

Occupancy of the new Facilities Management building will free up space in the Curtice/Mott building. This is one of several domino move sequences that were discussed in our meeting.

- Renovation of vacated Curtis/Mott facilities management space

There is some thought that this construction program could begin sometime in the fall of 1991. A use presently being considered is for college administration offices.

Review of Exhibit A projects yet to do

- Item 03 - Gorman building renovation - currently being studied. No authentic word available at our meeting on when the project will proceed.
- Item 17 - Administrative complex remodeling - currently being studied as part of the electronics domino move (program moves Z and Y - see descriptions below)
- Item 23 - Renovation of Ballenger field house and Durham pool - currently part of ongoing refurbishing and upgrading studies.

Key domino moves

A domino move is a design/construction/occupancy program that progresses in sequential fashion similar to how pushed dominoes fall in sequence when stacked adjoining each other.

The nature of new construction and reuse of space at Mott Community College make good domino move planning essential to the success of any program of improvement.

During our meeting we identified five key domino moves that should be examined for implementation. These were designated as program moves Z, Y, X, W and T.

- Program move Z
 - + Relocate facilities from Curtice/Mott to new Facilities Management building
 - + Relocate electronics from Curtice/Mott to Trade Tech

- Program move Y - follows program move Z
 - + Relocate administration from Curtice/Mott to vacated facilities and electronics areas
 - + Relocate academic services from College Center to vacated administrative area
 - + Vacated academic services reverts to student, conference and community use

- Program move X
 - + Relocate admissions to vacated classrooms in Curtice/Mott
 - + Vacated admissions reverts to conference

- Program move
 - + Relocate school of arts and humanities from Curtice/Mott west 1 to Curtice/Mott west 2
 - + Expand student services in College Center into vacated arts and humanities at Curtice/Mott west 1

- Program move T
 - + Relocate printing and duplicating to vacated electronics space in Curtice/Mott or to vacated channel 28 space in Mott Memorial Building
 - + Relocate business office from Curtice/Mott to vacated printing and duplicating
 - + Relocate academic services from College Center to old vacated business offices in Curtice/Mott
 - + Vacated academic services in College Center revert to student, conference and community use

Ralph J. Stephenson PE PC
Consulting Engineer
December 21, 1990

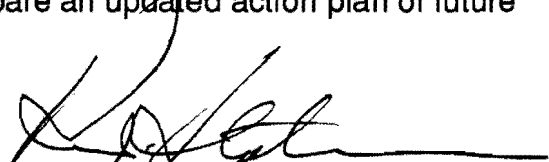
After we had defined the key domino move sequences we prepared network models of the sequences and put estimated durations on program move Z activities. These networks were printed for immediate use by Mr. Paul and Mr. Harburn. I have since reviewed the models and made some minor revisions. The updated issue #2 is enclosed with this report.

Notice that only activities from 01 to 22 have been assigned durations. Thus dates from the network should only be used for activities 01 through 22 and for the start of activity 28.

No durations have been assigned as yet to program move X tasks.

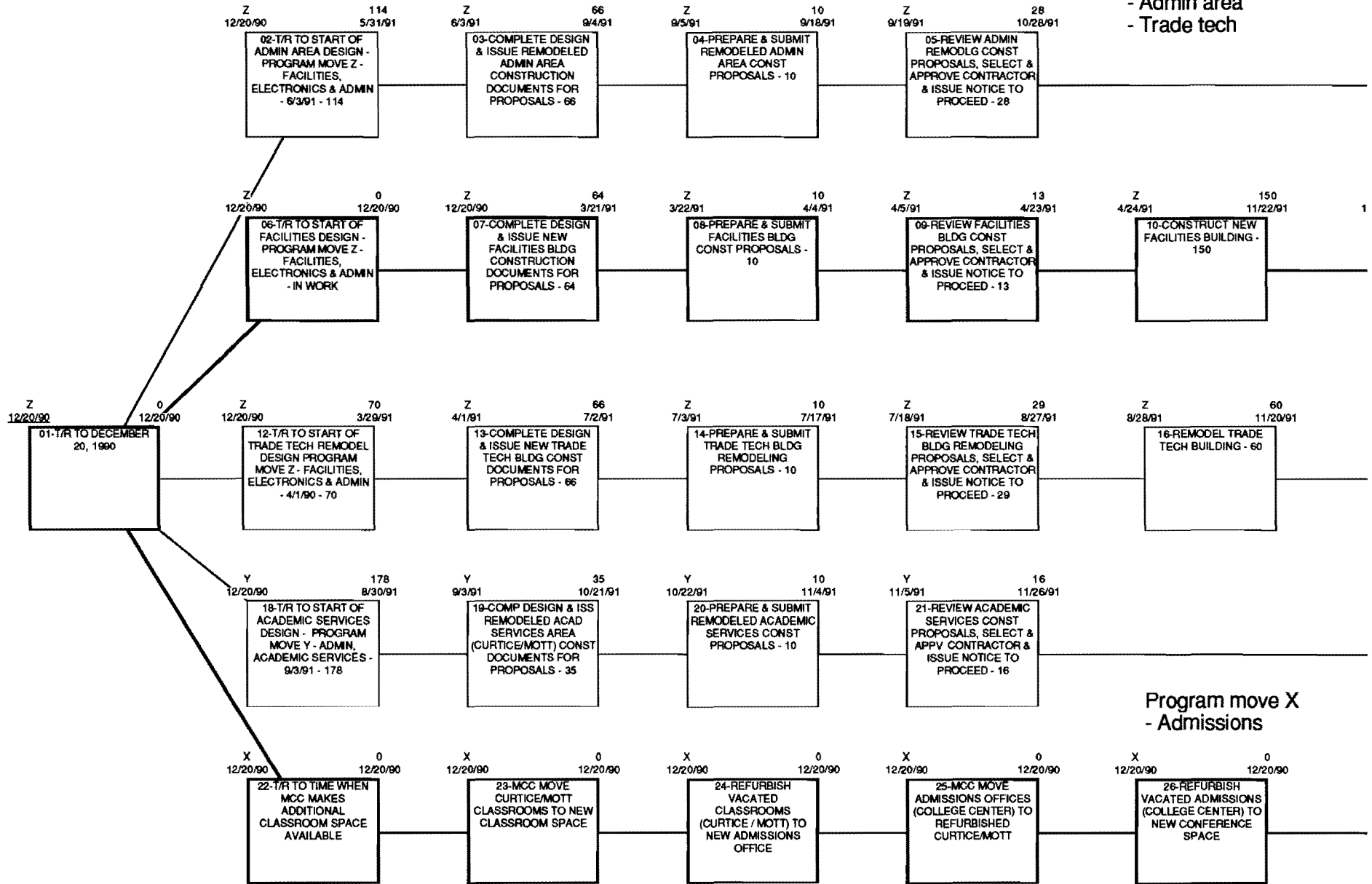
General

An overview of the total program work accomplished during the past three years indicates that good progress has been made toward achieving phase 1 objectives. I suggest that since there have been many physical plant improvements at the college over these three years that it may be time to prepare an updated action plan of future program implementation.



Ralph J. Stephenson PE

Program move Z
 - Facilities
 - Electronics
 - Admin area
 - Trade tech



Program move X
 - Admissions

**NETWORK MODEL FOR
C. S. MOTT COMMUNITY
COLLEGE - FLINT,
MICHIGAN**

Tomblinson, Harburn Associates, Project
Coordinator, Architects/Engineers
Flint, Michigan

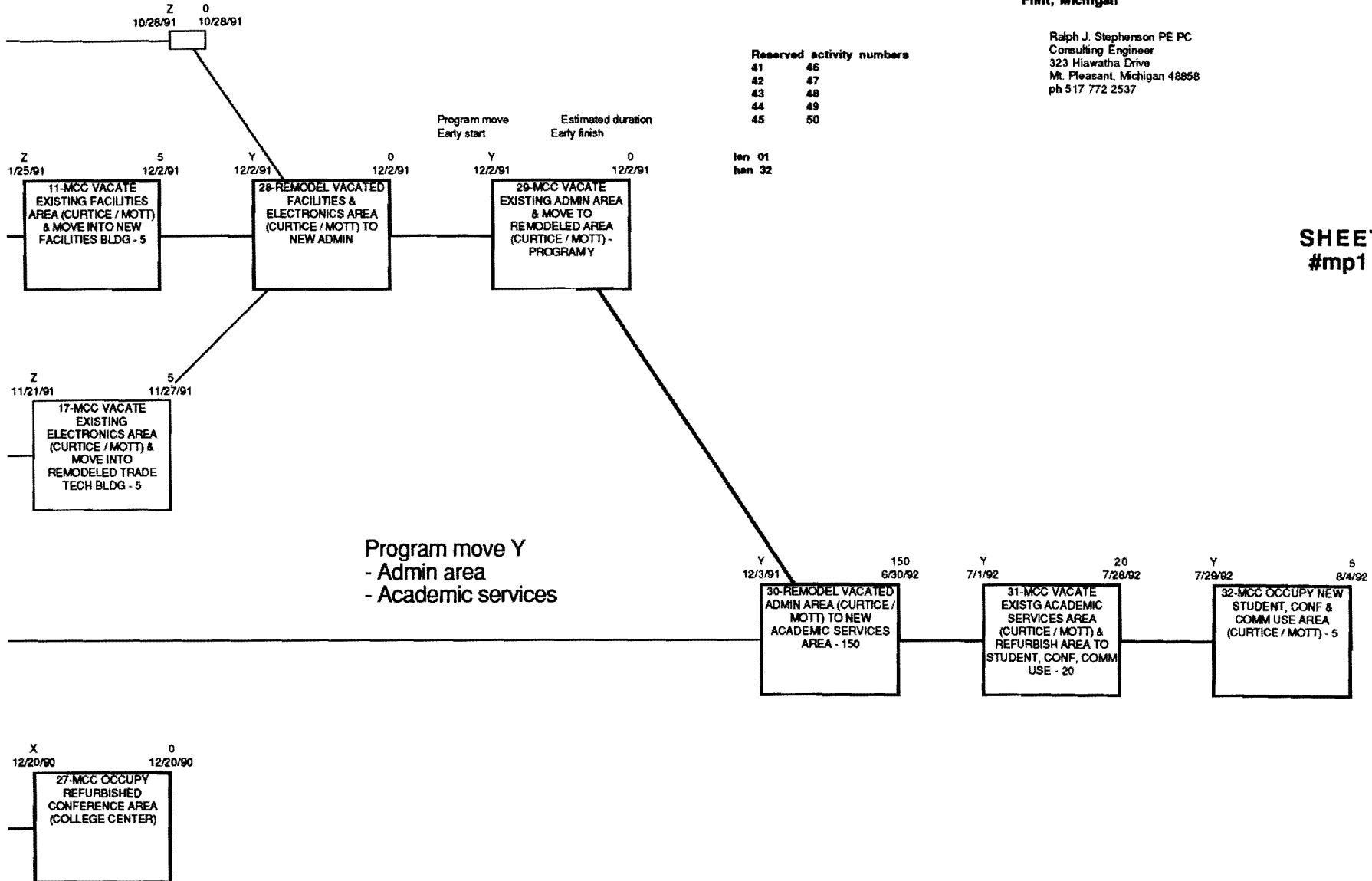
Ralph J. Stephenson PE PC
Consulting Engineer
323 Hiawatha Drive
Mt. Pleasant, Michigan 48858
ph 517 772 2537

Issue #1 - December 19, 1990
Issue #2 - December 21, 1990
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disk #220

Reserved activity numbers

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**SHEET
#mp1**

Ralph J. Stephenson PE PC
Consulting Engineer
May 9, 1991

Subject: Monitoring Report #16
C. S. Mott Community College
Capital Improvement Program
Tomblinson, Harburn Associates - Architects, Engineers &
Planners

Project: 87:44

Disks: rjs #105, 168, 174, 220

Date of monitoring: April 24, 1991 (wd 336)

Actions taken:

- Reviewed programs for Facilities Management building, Site Work #2 and Durham Pool exterior renovation
- Prepared summary network models for design and construction of Facilities Management building, Site Work #2 program and Durham Pool exterior renovation - issue #1, dated April 24, 1991 (wd 336)
- Prepared and issued unedited meeting notes to those attending
- Printed and issued network models prepared during meeting to those attending

Those attending:

Junior Paul - MCC Facilities
Jerry Harburn - THA
Ralph J. Stephenson - consultant

Facilities Management Building (exhibit A. item #20)

Construction documents for the Facilities Management Building are currently in work and are to be issued on May 21, 1991 pm (wd 356). Construction proposals are to be due the pm of June 6, 1991 (wd 367) and the Board is expected to approve the proposals and the contractor at their June, 1991 meeting. The contractor could probably move on site in early July, 1991. Plans are now to complete the facility and move into the building by the pm of December 13, 1991 (wd 500).

Regulatory review and approvals are needed as early as possible. Presently the intent is to submit for these on May 22, 1991 am (wd 356) and to assume approval will be obtained by the am of July 2, 1991 (wd 384) when it is expected to issue a letter of intent for start of construction. Under this schedule of operations mobilization and

Ralph J. Stephenson PE PC
Consulting Engineer
May 9, 1991

move on site will be on July 3, 1991 (wd 385). Construction is currently expected to be completed by the pm of December 13, 1991 (wd 500).

A summary network model of the work was prepared and issued at our meeting to Mr. Harburn and Mr. Paul. A copy is attached to this report.

Site work #2 (no comparable exhibit A item)

Site work #2 module A is the site improvement work adjacent the new Facilities Management Building and is to be done during the summer of 1991.

Module B is the site improvement work along Gilkey Creek and Horrigan Drive, and intersection studies at Court and Longway with Horrigan Drive. This work is expected to be completed during the summer of 1992.

An aerial survey is to be flown for site work #2 in late April and early May, 1991. This survey will be used in the preparation of the program for the work and for preparing schematics, design development and construction documents. Presently the intent is to issue construction documents for contractor proposals on the pm of December 18, 1991 (wd 503) and to award contracts for construction work in early 1992.

A summary network model of the site work #2 was prepared and issued at our meeting to Mr. Harburn and Mr. Paul. A copy of this work plan is attached.

Durham Pool Exterior Renovation (exhibit A. item #23)

The Durham Pool construction documents are to be issued on May 21, 1991 pm (wd 356). Construction proposals are to be due the pm of June 6, 1991 (wd 367) and the Board is expected to approve the proposals and the contractor at their June, 1991 meeting. The contractor could probably move on site in early July, 1991. Plans are now to complete renovation work by the pm of November 8, 1991 (wd 476). It should be noted that the pool must be kept in operation during construction, and that there may be some instruction conducted in the building throughout the year.

Presently it is the intent to submit documents for regulatory review and approval on May 22, 1991 am (wd 356) and to assume approval will be obtained by the am of July 2, 1991 (wd 384) when it is expected to issue a letter of intent for start of construction.

Ralph J. Stephenson PE PC
Consulting Engineer
May 9, 1991


Documents will probably have to be submitted to the state fire marshal and the state health department..

A summary network model of the work was prepared and issued at our meeting to Mr. Harburn and Mr. Paul. A copy is attached.

General

A set of rough meeting notes was prepared and distributed during our session. These notes have been edited and minor revisions made. A copy of the edited notes are included with the monitoring report.

I shall be in touch with Mr. Jerry Harburn shortly to determine the need, the time and the location of subsequent meetings.



Ralph J. Stephenson PE

Ralph J. Stephenson PE PC
Consulting Engineer
November 18, 1991

Subject: Monitoring Report #17
C. S. Mott Community College
Capital Improvement Program
Tomblinson, Harburn Associates - Architects, Engineers &
Planners

Project: 87:44

Disks: rjs #105, 168, 174, 220

Date of monitoring: November 12, 1991 (wd 477)

Actions taken:

- Updated summary network model for design and construction of Site Work #2 program
- Printed and issued network models prepared during meeting to those attending

Those attending:

Junior Paul - MCC Facilities
Jerry Harburn - THA
Jim Sporer - CHMP
Ralph J. Stephenson - consultant

Site work #2 (no comparable exhibit A item)

The primary assignment at this session was to update the issue #1 summary network model, dated April 24, 1991 (wd 336) for design and construction of the site work #2 program. Mr. Sporer provided the primary input relative to design sequencing and timing. A copy of the updated model was printed out and distributed at the meeting. There were some subsequent minor editing revisions to this model and they were incorporated into the copy attached to this report.

According to the issue #2 model dated November 12, 1991 (wd 477), the site work #2 contract document package is to be submitted for THA and owner review on the pm of December 17, 1991 (wd 502). The package is to be issued for proposals on the pm of January 21, 1992 (wd 525). The mandatory walk through of the site is currently set for January 29, 1992 (wd 530), with proposals due on the pm of February 19, 1992 (wd 546).

A contract award is to be approved by the Board at their March 23, 1992 (wd 568)

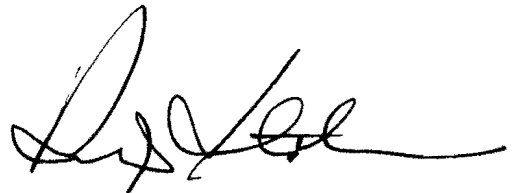
Ralph J. Stephenson PE PC
Consulting Engineer
November 18, 1991

meeting. The letter of intent is to be issued on March 24, 1992 (wd 568) with move on to the site set to begin the am of April 7, 1992 (wd 579).

Completion of construction is presently set for the pm of August 28, 1992 (wd 681).

General

I shall be in touch with Mr. Jerry Harburn shortly to determine the need, the time and the location of subsequent meetings on the Mott Community College planning program.

A handwritten signature in black ink, appearing to read 'R. Stephenson', written in a cursive style.

Ralph J. Stephenson PE

Ralph J. Stephenson PE PC
Consulting Engineer
January 23, 1992

Subject: Monitoring Report #18
C. S. Mott Community College
Capital Improvement Program
Tomblinson, Harburn Associates - Architects, Engineers &
Planners

Project: 87:44

Disks: rjs #105, 168, 174, 220, and 270

Date of monitoring: January 21, 1992 (wd 524)

Actions taken:

- Reviewed current status of Mott Community College facilities master planning
- Reviewed current status of MCC improvement program
- Set project priority list in accordance with current MCC requirements
- Prepared summary networks for high priority 1992 MCC improvement projects
- Prepared selected bar charts for evaluating immediate project actions to be taken
- Printed and distributed meeting notes for session

Those attending:

Sharon Johnson - MCC Dean - in pm meeting
Junior Paul - MCC Facilities
Jerry Harburn - THA
Ralph J. Stephenson - consultant

General Notes:

The purpose of this review session was to gain an overview of the major physical improvement project work to be accomplished over the next three year period. Special attention was given the actions needed for 1992 projects. These included:

- **mcc 014 - Parking ramp A restoration**
Start restoration - April 29, 1992 (wd 595)
Complete restoration - August 30, 1992 (wd 681)
- **mcc 018B - Dental clinic renovation**

Ralph J. Stephenson PE PC
Consulting Engineer
January 23, 1992

Start renovation - May 4, 1992 (wd 598)
Complete renovation - August 30, 1992 (wd 681)

- **mcc 022 - Site work 2**
Start construction - April 29, 1992 (wd 595)
Complete construct traffic and parking work - August 25, 1992 (wd 678)
Complete install landscaping - October 15, 1992 (714)
- **mcc 025 - Campus wide fire alarm and warning system**
Start construction - March 9, 1992 (wd 558)
Complete construction - August 15, 1992 (wd 671)
- **mcc 040 - Thompson Road renovation**
Start 1st phase renovation - May 5, 1992 (wd 599)
Complete 1st phase renovation - August 28, 1992 (wd 681)
Start 2nd phase renovation - September 1, 1992 (wd 682)
Complete 2nd phase renovation - December 3, 1992 (wd 748)
- **mcc 042 - College Center mechanical renovation**
Start construction - March 9, 1992 (wd 558)
Complete construction - May 29, 1992 (wd 617)

It is to be noted that the above dates are estimates as of January 22, 1992 (wd 525). They might be revised as financial planning and design work proceeds.

We prepared summary network models for the parking ramp A restoration, the dental clinic renovation, site work 2, and the Thompson Road renovation. The campus wide fire alarm and warning system, and the College Center mechanical renovation were prepared by me subsequent to our meeting.

All of the networks have been consolidated into a single sheet of diagrams and the printouts are enclosed with this monitoring report. They have been left unassembled so as to provide some flexibility in their duplication and use.

I have also prepared and enclosed a bar chart translation of the combined network models for work on the six projects. This shows the early starts and finishes with unshaded bars, and the late starts and finishes with shaded bars.

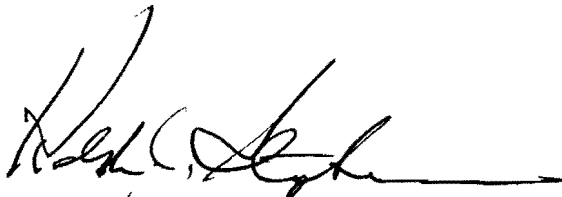
The rough meeting notes for our session were distributed at the meeting. However

Ralph J. Stephenson PE PC
Consulting Engineer
January 23, 1992

these have been edited and rearranged for ease of reading. A copy of the edited notes is attached to this report.

General

I shall call Mr. Jerry Harburn shortly to determine the dates for subsequent meetings on various elements of the MCC program that are to be planned and monitored over the next few months.



Ralph J. Stephenson PE