

December 20, 1974

Subject: Monitoring Report #1

Robinson Middle School, Detroit, Michigan

Project: 74:83

Date of Monitoring: December 16, 1974 (working day 245)

**Monitored from Issue #2 and Issue #3 dated November 22, 1974 and
December 16, 1974**

Target Completion Date: Evening of January 31, 1975 (working day 511)

Actions taken:

- Inspected project
- Conferred with project superintendent for A. J. Anderson Company re job progress
- Evaluated job progress
- Participated in planning conference with owner, architect and construction manager

General Summary

Project reporting will be by building section with the northwest sector called A, the southwest B, the northeast C and the southeast D as shown on the working drawings. Presently foundation work is well along in all four sections of the building and strong efforts are being made to complete work on remaining footings.

There have been some problem delays to the project. These are discussed below.

- **Boiler Room**

Boiler room footing revisions were made available on December 9, 1974 (working day 240). Field work was substantially underway as of December 16, 1974 (working day 245). It was necessary to fabricate and deliver

resteel before field work could start.

- Footings along column line B

There are some elevation problems with an existing sewer. This matter is still not totally resolved and is a critical element in construction of foundations.

- Structural Steel Shop Drawings

These are being worked upon. The total package which is expected to be complete by January 2, 1975 (working day 256) will be submitted and checked as one group. Fabrication and delivery of early resteel should be able to start by January 16, 1975 (working day 266) with delivery of early structural steel on February 6, 1975 (working day 281). Joist shop drawings are due on December 19, 1974 (working day 248) and after checking delivery can be expected on the job site by February 17, 1975 (working day 288).

The plan of work for erection of structural steel and joists along with metal deck and edge angles is shown on sheet 3, Issue #3 dated December 16, 1974. This sheet has been printed and distributed to those concerned.

- Elevator Pit dimension check

This has been made and the information is now in the field.

- Soil recommendations

The matter has been resolved.

- Off-site sewer design

The problem of off-site sewer design is still pending and there is some difficulty with adjoining property owners. However, it does not restrain any major building construction work.

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Work in the field is presently moving quite well. Installation of engineered fill is well along in all four sections of the building. If prompt decisions can be made on the matters above, there should be little, if any, difficulty in getting the substructure completely ready for arrival of structural steel on February 6, 1975 (working day 261). If any improvement can be made in delivery of structural steel, I strongly recommend it be encouraged. We will need all of the time available to construct this project and it is going to be critical that close cooperation and dovetailing of actions be accomplished to meet the target completion of December 31, 1975.

As part of our diagramming session, we reviewed a procedure that might be appropriate for letting separate contracts on various elements of the work to encourage greater and more effective minority contractor participation. As pilot element, we isolated the masonry to be erected on the exterior of the building. In reviewing the erection process, it became apparent that a strong need exists to isolate the appropriate packages and to define carefully how proposals are going to be solicited from various contractors. In addition, it is critical that we define the management system to be used on the job.

All working drawings and specs are to be completed on January 15, 1975 (working day 265) and this should unlock the drawings to prepare a masonry unit take-off and to allow the Board of Education technical staff to review the entire contract documents. Concurrent with completion of working drawings, a careful study should be made of the method to be used on the project for breaking it into packages. This is essential. If sizable purchases are to be made of materials to allow allocation to the various subcontractors on a labor/brokerage basis, then Board of Education approval will become a very important element of the process. In fact, reviewing sheet 3 of the work prepared on December 16, 1974, it is apparent that solicitation of masonry package proposals and a selection of the masonry contractor along with purchase of the masonry units and materials constitutes an excessively long sequence. It is entirely possible that with structural steel presently scheduled for a February 6th, 1975 delivery (working day 281) that we could be ready for masonry in the B and D Units on or about March 12, 1975 (working day 305). The contractor selection process must be streamlined so each contractor can build his profitable momentum on the job and maintain it in coordination with others.

I shall be in touch with the Howard Sims' office in the near future to continue our diagramming and planning work. Meanwhile, I shall monitor the job shortly after the first of the year to evaluate field construction status.

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

**To: Mr. Howard Sims
Mr. Harold Varner
Mr. Emmet Hagood**

February 18, 1975

Subject: Monitoring Report #2

Robinson Middle School, Detroit, Michigan

Project: 74:83

Date of Monitoring: February 12, 1975 (working day 30 from 1975/76 working day calendar)

Monitored from Issue #3 dated December 16, 1974, sheets 2 and 3

Current Target Completion Date: Evening of January 31, 1976 (working day 277 from 1975/76 working day calendar)

Actions taken:

- Reviewed current job status
- Diagrammed building up through close-in for most major sections

General Summary

It is expected that all major foundation work will be complete within two weeks - by February 26, 1975 (working day 40). The job is presently ready for structural steel. However, there have been delays to receipt of raw steel, fabrication and delivery of steel to the job site. Presently the structural steel fabricator does not have adequate raw steel to begin fabrication and therefore, is still receiving and stockpiling basic shapes.

Joists are expected to be delivered to the job site on or about February 25, 1975 (working day 39). They will probably be stored on the job site until steel has started up. Presently we have no accurate information regarding delivery of structural steel but have assumed we could begin by March 17, 1975 (working day 53). The sequence of action is shown on sheet 1 where we have restarted the issue numbering for work subsequent to foundation work. Thus, sheet #1 is labeled Issue #1 dated February 12, 1975. We will continue the issue numbers consecutively from this point. On sheet 1 the logic plan includes shaking out safety deck, if required, as part of structural steel erection. It is further assumed that we will be able to erect metal deck, begin placement of in-floor work and start exterior masonry as the various sections of the building are plumbed and bolted.

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CONSULTING ENGINEER

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As part of our meeting discussion we reviewed the methods by which various contracts will be let. The system has not been totally formulated as yet but apparently the building will be divided into several sections for such trades as masonry and roofing and these contracts will then be let section by section to the same or different contractors. To do this will require extensive and careful coordination and planning by the construction manager and the contract administrators. Also, in the case of masonry, it will require timely purchasing of masonry units so that the contractors responsible for installing masonry can draw upon the stockpile without delay to their field operations.

Presently the school board is about to authorize a masonry order and it is anticipated that masonry units can go into manufacture on February 17, 1975 (working day 33). It is expected that delivery of masonry units and materials, including structural glazed tile units, brick and block, will take about three months, bringing these masonry elements to the job on or about May 20, 1975 (working day 99). Meanwhile it will be necessary to solicit proposals and award masonry contracts for contract B41. This is the responsibility of the Board of Education, staff members of the Board of Education, the architect/engineer and the construction manager.

Due to lack of information we were not able to plan much past the point of close-in. Therefore, our next session will concentrate on completing floor slab pours and getting interior rough and finish work in work. I shall be in touch with Mr. Varner soon regarding our next planning session. Meanwhile I shall meet with Mr. William Adams and Mr. Harold Varner of the Howard Sims office to review the methods of letting the various contracts and tying them into a master network diagram.

Ralph J. Stephenson, P. E.

RJS/m

To: Mr. Howard Sims
Mr. Harold Varner
Mr. William Adams

June 24, 1975

Subject: Monitoring Report #3
Robinson Middle School, Detroit, Michigan

Project: 74:83

Date of Monitoring: June 10, 1975 (working day 113)

Monitored from Issue #1 dated February 12, 1975 (for close-in)

**Current Target Completion Date: Has been revised from January 31, 1976
(working day 227) to later in 1976; date
to be set at some point in the future.**

Actions taken:

- Reviewed current job status
- Revised current network diagram, sheet 1, Issue #1 dated February 12, 1975 to Issue #2 dated June 10, 1975

**Note: This network was not issued at the meeting but copies
have been sent to Mr. Adams at the Howard Sims' office**

General Summary

As of June 10, 1975 (working day 113) structural steel erection is just starting with steel arriving on the job and being raised. We revised, as part of our planning work, the structural steel and metal deck erection diagram and presently it is anticipated if no further delays are encountered that structural steel and metal deck will be completely installed and ready to receive deck pours by July 23, 1975 (working day 143).

A major portion of our conference revolved around how we were to get the exterior masonry work underway in timely fashion to dovetail with erection of structural steel. It was assumed that adequate structural steel would be up for masonry to start by about June 24, 1975 (working day 123). This means that work on letting a masonry contract will have to move very rapidly to allow work to start at this early date.

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

In addition, it will be necessary to make some kind of electrical and mechanical arrangement so that work to be built into masonry walls can proceed concurrently with these walls. This appears presently to be a very difficult problem and is being worked upon by the owner, the construction manager and the architect engineer. Our preliminary review of the revised Issue #2 network, sheet 1, dated June 10, 1975 shows that if masonry can proceed immediately as structural steel is erected that we might expect all masonry to be completed by December 24, 1975 (working day 251). However, this is dependent upon timely letting of other contracts that affect masonry erection, such as mechanical and electrical built-in items.

We also reviewed the possible dates for beginning structural floor pours and it was decided here too we would need a contract for setting the necessary electrical and mechanical work in the floor slab to avoid serious problems later in terms of items that were not built in when the slab was poured.

All floor slabs in the building are very critical and it is essential if this project is to maintain momentum it is presently gaining that a method be found to let additional mechanical and electrical trade contracts that will allow the masonry and floor work to proceed.

Another matter discussed in some detail relates to metal deck field fabrication. Presently the metal deck is on the job in standard lengths and cutting will be required where standard sheets will not fit without fabrication. The architect/engineer, the owner, and the metal deck erector, along with the construction manager, will attempt to resolve this problem as soon as possible.

In summary, structural steel erection is just getting underway and it will be critical to follow closely with masonry and floor pours so as to close the building to weather by early winter. We prepared a rough diagram of the structural steel erection and this network will be distributed to all concerned through the architect/engineer.

Ralph J. Stephenson, P.E.

RJS/m

**To: Mr. Howard Sims
Mr. Harold Varner
Mr. William Adams**

January 28, 1976

Subject: Monitoring Report #4

Robinson Middle School, Detroit, Michigan

Project: 74:83

Dates of Monitoring: December 5, 1975 (working day 238)
and January 16, 1976 (working day 266)

**Monitored from Issue #1 and Issue #2 dated December 5, 1975 and
January 16, 1976**

Current Target Completion Date: Has not been set definitively
although in the January 16, 1976
monitoring there was some discussion
about establishing June 1977 as a
target completion point. To this
date, however, a firm completion
date has not been selected.

Actions taken:

- Reviewed current job status
- Continued diagramming interior work for entire school

General Summary

On December 5, 1975 (working day 238) we met to continue diagramming interior work for the school which by then was reasonably well closed in and ready to receive work on underground utilities and slabs on grade. Our major focus at the December 5th meeting was to review the job with the major subcontractors and establish durations for important tasks at each major area of the building.

The discussion was summarized on sheet R1 dated December 5, 1975 where the tasks and durations were established for the academic wing, locker room, gym, fan rooms, kitchen and dining areas and mechanical equipment rooms. The major work at that meeting revolved around obtaining general consensus regarding the division of the areas, the length of time for mechanical and electrical work and the general sequence through the building by various trades.

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RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER

At the January 16, 1976 (working day 266) meeting we continued planning work utilizing data obtained at the December 5th meeting and incorporating it into a diagram that reflects interior work for all sections of the building.

A brief review of the work accomplished at the January 16, 1976 meeting is given below.

As of January 16, 1976 the electrical contractor, his supplier list and his working drawings have been approved; the VAC system shop drawings are in for approval and exterior and stair masonry work had been substantially completed; and equipment drawings for Units A and C have been approved.

Utility work at the interior of the building had not started as of our January 16, 1976 monitoring and this is a very critical part of the work since it releases much of the major masonry and the slabs on grade in the various units. On sheet 1 of the network diagram we planned in detail the slab on grade construction for Units B, D, C and A which are to be constructed in that sequence with the last slab on grade being poured out in the A Unit no later than May 12, 1976 (working day 369). Interior work at the academic wing, second floor, is shown on sheet 2. This is a detail diagram that takes into account the various technical, administrative elements that must precede work in the field. One of the more critical of these presently appears to be approval of sprinkler drawings which I strongly recommend be given a high early priority.

Also, of course, rough interior work is heavily dependent upon early fabrication and delivery of sheet metal ductwork, mechanical piping and whatever electrical rough-in and receptacle work is to proceed at this early date. Our planning for the academic wing second floor (AW2) showed that it should be possible to complete this area by November 1, 1976 (working day 469). (Note: These preliminary manual computations are subject to rechecking.)

Interior work at the first floor of the academic wing (AW1) follows the second floor of the academic wing with preliminary calculations showing a potential completion date of January 27, 1977 (working day 530).

Work at the interior would proceed from the first floor of the academic wing according to our present plan to the locker room and auxiliary gym area (LRA). The plan of action shown on sheet 4, Issue #2, dated January 16, 1976 shows the LRA area complete about October 29, 1976 (working day 468). The reason this area would probably be finished

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CONSULTING ENGINEER

earlier than the AW1 area is because interior finish work there is less complex and of smaller scope than at AW1.

Gym work (G) would follow the LRA areas and tentative completion there is shown at March 9, 1977 (working day 559). Basically the wood floor and finishing at the gym was held to a late date in our plan of work so as to minimize the possibility of damage from adjoining construction activity.

On sheet 5 the kitchen, dining and stage areas (A) were planned. Generally rough interior work at area A such as piping, plumbing, sheet metal duct-work, rough electrical and sprinkler piping will proceed from the gym. A tentative completion date for the A area was set at February 23, 1977 (working day 549). Again, keep in mind that all of the above dates are preliminary, subject to further mathematical and logic check.

Subsequent phone calls after completion of our diagramming indicate that there are some further revisions to the project that make it advisable to hold off making final runs on this series of networks until clarification is obtained. I shall be in touch with Mr. Ted Corriveau and Mr. William Adams regarding these matters.

Meanwhile, as a result of our diagramming on January 16, 1976 resulting in Issue #2, sheets 1, 2, 3, 4 and 5, prints of these sheets were made and distributed at the meeting to the construction manager, the owner and the architect/engineer. I shall proceed to have the networks on sheets 1 through 5, Issue #2, dated January 16, 1976 drafted into final form but will hold off major processing and issue until the logic and durations along with the major movement of interior trades are confirmed by those involved in the management of the project. I shall be in touch with Mr. Adams regarding this matter shortly.

Ralph J. Stephenson, P. E.

RJS/m

To: Mr. Howard Sims
Mr. Harold Varner
Mr. William Adams
Mr. Ted Corriveau
Mr. Mike Boggio

2

March 16, 1976

Subject: Monitoring Report #5

Robinson Middle School, Detroit, Michigan

Project: 74:83

Date of Monitoring: March 11, 1976 (working day 305)

Monitored from Issue #2 dated January 16, 1975

Current Target Completion Dates:

**Academic Wing, second floor (AW2) - September 20, 1976
(working day 439)**

**Academic Wing, first floor (AW1) - December 7, 1976
(working day 494)**

**Locker Room, Auxiliary Gym and Gym (LRA & G) - September 28, 1976
(working day 445)**

**Kitchen, Dining and Stage (A) - December 22, 1976
(working day 505)**

**Note: The monitoring report below evaluates the project
in relation to the above completion targets.**

General Summary

Overall the project is now beginning to pick up momentum in the field as early problems are being resolved. However, there still are some major obstacles to smooth progress on the job. One of the more critical is the restraint on installation of mechanical piping imposed by recent bulletin revisions. Field work on the bulletin will proceed as pricing is being reviewed and approved. Above floor mechanical piping work at the AW2 area is expected to begin Monday, March 15, 1976 (working day 307). This work was originally due to start no later than February 2, 1976 (working day 277) so the current lag over late start in mechanical piping at the second floor is about 28 working days. It is presently projected that some of this time can be picked up since in the assignment of initial durations extra time was built into the duration assignment at the second floor for this work. However, it is a real lag and should be watched carefully.

Another delay area is at the first floor slab on grade in the B Unit. Work on the filling and fine grading at the B area is just now being completed and it is expected that the slab should be poured out within the next week. This section had an early finish of February 11, 1976 (working day 285). Thus, the lag over the early finish target will be about 25 working days. The lag over the late finish at this area is slightly less but presently I strongly recommend that the job be evaluated on the basis of early and late starts and finishes.

I recommended to Mr. Ted Corriveau that a letter be issued from the construction manager's office to all contractors on the job that they will be expected to maintain adherence to early starts and finishes unless deviations from this are specifically approved in writing by the construction manager and the owner.

Another potential delay is in sheet metal ductwork installation at the first floor of the academic wing (AW1). Sheet metal fabrication runs are being revised to correct deviations from fire requirements. These drawings will be complete within the next week and will be submitted to the architect/engineer and the owner for approvals. The delay is critical. I suggest this matter be given immediate attention since sheet metal ductwork at the first floor is due to start at an early and late date of March 29, 1976 (working day 317).

Another item presently lagging is sprinkler piping at the academic wing second floor (AW2). Sprinkler piping at the second floor was due to be about 70% complete by today. An evaluation of the current status of the work indicates it lags by about 10 working days or two weeks. The delay is basically due to excessive interferences by sprinkler mains and branches with other work primarily sheet metal and lights. Installation drawings have been prepared for the sprinkler work and are in the architect/engineer's office for approval. They are expected back by next week. At that time sprinkler installation can resume at the second floor.

It should be noted as of this monitoring that the building chiller has not yet been ordered. This is normally a long lead time item and if we are presently looking for completion of this project by the end of 1976, it is urgent that the matter be addressed and resolved promptly. *

A brief review of the status of each area is given below.

Academic Wing, Second Floor (AW2)

As noted above, the lagging items here are above floor mechanical piping and sprinkler piping. Shortly to start is above ceiling drywall closures. These were due for an early beginning of January 22, 1976 (working day 270). *

They did not start because of interferences with sheet metal ductwork and other above ceiling installation. However, the late start on this item is March 12, 1976 (working day 107) and because of its impact upon ceiling installation, it will be necessary to begin work almost immediately. It will not be possible, if the proposed schedule is to be maintained, to hold off on drywall closures until the majority of the above ceiling work is complete. This will delay installation of acoustic ceiling work and in turn, delay the turnover point for the second floor. *

Generally it can be assumed that work at the second floor takes its current lag of approximately 28 working days from the delay in start of mechanical piping work.

Academic Wing, First Floor (AW1)

Above floor electrical rough-in has started at the ceiling. However, no other major above ceiling work is presently in progress. It was anticipated that above ceiling work would follow construction of the slab on grade. However, as the project falls further behind on installation of the slab on grade, it would be wise to re-examine the possibility of starting above floor off of the graded floor.

Locker Room, Auxiliary Gym (LRA) and Gym (G)

The only work going on in these areas is completion of miscellaneous masonry and grading. No major above floor work is due to start in the LRA area for some time yet. If, however, a jump can be obtained on some of the above floor trades, this would help in recapturing what might be generated into a lag at a later date.

Kitchen, Dining and Stage (A)

Interior masonry at the stage has been substantially completed and the area is presently being readied for construction of the stage floor. Work here is currently in good condition and meeting early start/early finish targets.

General

As of this meeting, we are monitoring the project from the Issue #2 network dated January 16, 1976. (Note: On drawing 1 the date for Issue #2 was inadvertently shown as January 16, 1975. This should be corrected to January 16, 1976.)

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RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER

Eleven sets of the network drawings, sheets 1, 2, 3, 4 and 5, along with eleven sets of the computer printout were issued to Mr. Ted Corriveau and he will distribute them to the owner, the architect and to appropriate major subcontractors. Meanwhile, I shall provide Mr. Corriveau with ten additional sets of drawings 1 through 5 for distribution to additional contractors.

At the monitoring meeting we reviewed in detail the method of using the computer printout and also prepared a work sheet for the project status report from the monitoring date of March 11, 1976 (working day 305) to April 15, 1976 (working day 330). I shall run this project status report in 12 copies and distribute on the following basis:

1 copy	-	Mr. William Adams] ←
1 copy	-	Mr. Mike Boggie	
9 copies	-	Mr. Ted Corriveau	

Mr. Corriveau will review these and distribute them as he sees fit. The project status report will basically identify the status of all tasks in the network that should have started or finished by the monitoring date. It also will project what tasks should start and finish over the next five week period. These reports will be prepared from the observations at each monitoring session.

Ralph J. Stephenson, P. E.

RJS
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To: Mr. Ted Corriveau
Mr. Howard Sims
Mr. Harold Varner
Mr. William Adams
Mr. Mike Boggie

April 16, 1976

Subject: Monitoring Report #6
Robinson Middle School, Detroit, Michigan

Project: 74:83

Date of Monitoring: April 14, 1976 (working day 329)

Monitored from Issue #2 dated January 16, 1976

Current Target Completion Dates:

Academic Wing, second floor (AW2)	-	September 20, 1976 (working day 439)
Academic Wing, first floor (AW1)	-	December 7, 1976 (working day 494)
Locker Room, Auxiliary Gym and Gym (LRA & G)	-	September 28, 1976 (working day 445)
Kitchen, Dining and Stage (A)	-	December 22, 1976 (working day 505)

Note: The monitoring report below evaluates the project in relation to the above completion targets.

505
352
153

General Summary

Overall, the project continues to improve in field performance over previous evaluations. There still are some areas out of sequence, primarily construction of the floor slab on grade but work is beginning to even out and some of the lags reported in the previous monitoring have been recaptured.

One of the most critical items presently is to begin work on the ceiling closures at both the first and second floors and to initiate prime painting so that ceiling work can start. Modular ceilings, flat acoustic ceilings and drywall ceiling suspension were due to begin at the second floor no later than March 29, 1976 (working day 317). Thus, this work is currently lagging. It is important now to initiate finish work on the job just as soon as possible.

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CONSULTING ENGINEER

5/17/76

no work

A major point that came out during the monitoring was that the reheat coils at the second floor air distribution system will not be on the job until at least June 9, 1976 (working day 368). This is critical and I strongly recommend a resolution of this problem be made immediately so ceiling work can start. It may be that it will be necessary to begin installation of ceiling prior to arrival of these units, particularly since if they are delayed until June, it will impose a very serious delay on the ceiling installation.

Sprinkler piping work has picked up and probably will be able to start at the first floor area by Monday, April 19, 1976. This will bring sprinkler piping back pretty well on schedule at the first floor.

Another item from our previous monitoring is that the information on the building chiller is still not available. I suggest its present status be determined in detail since this item is normally a long lead time item and there is considerable work to be done piping the unit up once it arrives on the job.

no work
5/21/76
on job
6/7/76

A brief review of the status of each area is given below:

Academic Wing, Second Floor (AW2)

As noted above, the major lagging item at the AW2 area is the above ceiling drywall closures. These were due to start no later than March 12, 1976 (working day 306). Presently they have not yet been put into work and currently lag the monitoring date of April 14, 1976 (working day 329) by 23 working days. This is a very serious lag and should be corrected immediately. Also, it is desirable to begin priming wall surfaces which adjoin ceiling grid. This work was due to begin no later than March 24, 1976 (working day 314) so currently lags by 15 working days. Ceiling grid at the second floor was due to begin no later than March 31, 1976 (working day 319) and currently lags 10 working days. Of major importance at the second and first floors is the late delivery presently projected on reheat coils in sheet metal ductwork. According to current field information, these reheat coils will not be on the job until June or possibly even July. This, of course, will seriously interfere with work below the ceiling if any delay to ceiling work occurs since ceilings unlock all finish trades below the ceiling level.

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RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER

Academic Wing, First Floor (AW1)

Slab on grade work at the first floor is partially complete at the D and C areas. This work is proceeding slightly out of sequence. However, some above ceiling trades have begun work off the grade dirt and thus, first floor work currently is meeting most targets between early and late starts and finishes. The major exception is installation of above ceiling drywall closure. This work is quite extensive at the first floor and was due to begin no later than April 9, 1976 (working day 326) so currently lags by three working days.

Locker Room, Auxiliary Gym (LRA) and Gym (G)

Work is proceeding at these three areas as a fill-in item. All work here is meeting targets between early and late starts and finishes.

Kitchen, Dining and Stage (A)

Very little work has been done at the A area since the last monitoring. However, work that has been done is well ahead of schedule.

General

At this meeting we monitored from the Issue #2 network dated January 16, 1976. This network has been provided in adequate numbers to Mr. Corriveau of the construction manager so that all major contractors should have copies. I strongly suggest that the distribution of these copies be completed at the earliest possible time since contractors will soon be needing target dates for major interior trades.

At this monitoring I prepared a project status sheet for the period from April 14, 1976 (working day 329) to May 14, 1976 (working day 351). I shall make the project status report run between these dates and distribute it as noted in Monitoring Report #5.

I shall be in touch with Mr. Corriveau to set the next monitoring session.

Ralph J. Stephenson, P. E.

RJS/m

To: Mr. Ted Corriveau
Mr. Howard Sims
Mr. Harold Varner
Mr. William Adams
Mr. Mike Boggio

5/17/76 (752)
- No work on rehab
- Chilton closed 5/2/76
- No work on air handling system
- Carpet selected to be installed
after demolition.

May 19, 1976

Subject: Monitoring Report #7

Robinson Middle School, Detroit, Michigan

Project: 74:83

Date of Monitoring: May 17, 1976 (working day 352)

Monitored from Issue #2 dated January 16, 1976

Current Target Completion Dates:

Academic Wing, second floor (AW2)	September 20, 1976 (working day 439)
Academic Wing, first floor (AW1)	December 7, 1976 (working day 494)
Locker Room, Auxilliary Gym and Gym (LRA & G)	September 28, 1976 (working day 445)
Kitchen, Dining and Stage (A)	December 22, 1976 (working day 505)

Note: The monitoring report below evaluates the project in relation to the above completion targets.

Number of working days to total completion remaining: 153

Actions taken:

- Inspected project
- Reviewed project progress with Mr. Bedard
- Color coded field networks
- Prepared project status report from May 17, 1976 (working day 352) to June 17, 1976 (working day 374)
- Evaluated job progress

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RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER

General Summary

The project, over the last 23 working days (one month), since the previous monitoring, has slowed considerably in the academic wing while still moving relatively well in the locker room, gym and cafeteria area. One reason for the slow movement in the academic wing is the delays to pouring out the first floor slab on grade. This slab on grade was due to be completed in the D section no later than March 26, 1976 (working day 317). Mr. Bedard reports that probably it will be poured out by the end of this week which will give it a lag of about 40 working days.

Meanwhile, some overhead work has proceeded in the north end of AW1 and generally work there is in fairly good shape except for sprinkler piping which presently lags by about 19 working days.

It should be emphasized that one of the original targets of the project was to complete the academic wing in as timely fashion as possible and to allow the locker room, auxiliary gym and gym, kitchen, dining and stage to absorb overflow crew buildup as the job proceeded. However, what has happened now is that the academic wing, both first and second floors, are lagging while the other areas, as noted above, are moving well ahead of late start/late finish targets.

There are also some serious delivery problems. No word is available on when reheat coils will be on the job. It was originally thought they would be here in late June or early July. Since there is no word, Mr. Bedard intends to begin his ceiling grid at the second floor on Wednesday, May 19, 1976 (working day 354) and thus, it will be necessary to install reheat coils through the grid.

The chiller is to be shipped on May 21, 1976 (working day 356) and should arrive on the job one to two weeks later. There is no current word on air handling equipment. This will soon get critical since it will be necessary to set this equipment from the gym floor. To complete masonry at the mezzanine, the equipment is needed. I suggest this be given immediate attention.

Carpet has been selected and a contract awarded. However, because of concern for wear of the carpet if it is installed prior to installation of demountable partitions, this sequence has been changed and the present proposal for carpet installation is on the basis of laying carpet after demountables have been erected. Although this will change the sequence, it probably will not change the overall amount of time required for the total installation process. I shall review this logic with the parties involved at our next monitoring.

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Robinson Middle School
Detroit, Michigan
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RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER

A brief review of other items needed on the job soon is given below.

- Ceiling materials - Modular and flat acoustic materials are presently on the job.
- Plaster materials - not on job as yet.
- Drywall materials - not on job as yet.
- Quarry tile - Mr. Bedard estimates quarry tile will be on the job within one week.
- Egg crate - not on job.
- Toilet room partitions - not on job.

A brief review of the status of each floor is given below.

Academic Wing, Second Floor (AW2)

All above ceiling work is now being completed and the drywall closures have been started along with prime painting. Mr. Bedard feels he will begin acoustic ceilings on Wednesday, May 19, 1976 (working day 354). These ceilings were due to begin no later than March 29, 1976 (working day 317), giving a lag of 37 working days in ceiling work. It should be noted that this late start date is for the modular ceiling suspension. The flat acoustic ceiling suspension grid and conduit had a late start of March 31, 1976 (working day 319). It will be important to move all ceiling work well if any of the current lag is to be recaptured.

As noted above, carpet will now be installed after demountable partitions rather than before. Therefore, demountable partitions are going to be needed on the job shortly and if work can move as presently anticipated, it is possible that within 20 to 30 working days after start of ceiling grid, demountable partitions could begin.

Another item to watch carefully at both floors is installation of quarry tile at the corridors. This is due for a late start of July 16, 1976 (working day 394). Since it is a disruptive trade and will interfere with traffic at the floors, it should be scheduled in at a time where its impact upon job traffic will be minimal.

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RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER

Academic Wing, First Floor (AW1)

Presently the slab on grade at the first floor lags by about 40 working days at the south end. It is expected this slab will be poured out by the end of the week.

Sprinkler work also lags at the first floor, currently by about 19 working days although Mr. Bedard feels that some of this time can be picked up. The measure of lag at the first floor will be in the start of the modular ceiling suspension grid and conduit. This work is due to begin no later than June 3, 1976 (working day 364).

First floor work extended on out to early December and was one of the longer time areas to be completed. Therefore, lags will tend to delay the entire job turnover point.

Not having the slab on grade at the first floor has had a serious impact upon work starting although it is still possible that some pickup in time can be made since much of the sheet metal, piping and electrical work at the north end is already complete.

Above ceiling drywall closures are in work.

Locker Room, Auxiliary Gym (LRA) and Gym (G)

Most interior masonry partitions, above floor sheet metal ductwork and above ceiling rough plumbing are complete or nearly complete at these areas. Major work is currently meeting early start/early finish targets. Care should be taken to evaluate where the work force is to be concentrated. It appears that progress in the academic wing has been slowed by the heavy focus on other areas.

Kitchen, Dining and Stage (A)

The slab on grade in the kitchen, dining and stage area (A) will probably be poured out by the end of the week. This will hit targets between early and late starts and finishes. A critical need for these slabs has arisen since the food service contractor requires masonry to be erected so field measurements can be taken to fabricate food service equipment. Presently Mr. Bedard estimates that masonry in the A area will be complete within two weeks or by June 1, 1976 (working day 362). After field measurements are taken, fabrication of equipment will take about 50 working days. Allowing two days for field measurements, this brings delivery of equipment to the job in mid-August.

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RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER

I suggest we maintain this date so as to have kitchen equipment available and ready to install at as early a date as possible.

It should be pointed out that in order to install food service equipment, most ceiling work above it should be well along so that no damage to the equipment is incurred by those installing ceiling work. Also, all quarry tile floor work should be complete.

Kitchen hoods are presently on the job and should offer no major delay to installation of ceiling work. Mr. Bedard says it is expected to start installation of hoods on Monday, May 24, 1976 (working day 357).

General

Currently the job has slowed from its noticeably good pace a month ago and at the present time major lags are being experienced at the academic wing. I strongly recommend that steps be taken immediately to pull this area of the building back in line with our targets.

As a result of the monitoring I prepared a project status report for the project from May 17, 1976 (working day 352) to June 21, 1976 (working day 376). This will be issued concurrently with the monitoring report.

Ralph J. Stephenson, P.E.

RJS
m

To: Mr. Ted Corriveau
Mr. Howard Sims
Mr. Harold Varner
Mr. William Adams
Mr. Mike Boggio

July 1, 1976

Subject: Monitoring Report #8

Robinson Middle School, Detroit, Michigan

Project: 74:83

Date of Monitoring: June 21, 1976 (working day 376)

Monitored from Issue #2 dated January 16, 1976

Current Target Completion Dates:

**Academic Wing, second floor (AW2) September 20, 1976
(working day 439)**

**Academic Wing, first floor (AW1) December 7, 1976
(working day 494)**

**Locker Room, Auxiliary Gym and Gym (LRA & G) September 28, 1976
(working day 445)**

**Kitchen, Dining and Stage (A) December 22, 1976
(working day 505)**

**Note: The monitoring report below evaluates the project in relation to
the above completion targets.**

Number of working days to total completion remaining: 129

Actions taken:

- Inspected project
- Reviewed project progress with Mr. Bedard and Mr. Friese
- Prepared project status report from June 21, 1976 (working day 376)
through July 21, 1976 (working day 397)
- Evaluated job progress
- Reviewed computer printouts with Mr. Bedard

General Summary

Over the last five weeks there has been some progress made in getting new trades underway. This is particularly noticeable at the second floor where the modular ceiling suspension and grid are now about 85% complete. Even though very little time has been picked up and the lag is still substantially as large or slightly greater than last monitoring, it appears that as new trades and activities are brought to the job that some compression of time on following trades can be achieved.

It is still the intent on the project to complete all work in all units and move off the job by the end of the year - December 30, 1976 (working day 512). It appears this could be achieved if the work plan at the academic wing first floor can be compressed. Presently the lag there is about 25 working days measured against the proposed start of the modular ceiling grid. If this 25 day lag is projected through to the completion of the job, it would mean finishing at the first floor on about January 12, 1976 (working day 519). Thus, the lag over the end of the year is about 7 working days. Overall if continued improvement can be obtained in starting new trades and getting them on the job on a continuing basis, a good share of the present lag could be picked up within the next two months.

In regard to deliveries, apparently reheat coils will now be on the job July 16, 1976 (working day 394). These will have to be put in place through the ceiling grid but apparently this has been worked out in the field. It is also expected to have fan room equipment on the job by July 16, 1976 (working day 394). Equipment will be set immediately and at that time the work on completion of the fan room at the second floor of the gym area can be put back into operation.

Generally ceiling closures have been a source of concern but are now expected to be complete sometime within the next five to eight working days. It will be very important to begin the other types of ceilings at the academic wing including flat acoustic, plaster and drywall. All are due to begin at the second level sometime within the next week and a half.

Quarry tile which was incorrectly reported to be ready to deliver to the job at our last monitoring had not been ordered at that time and now is expected on the job in about 3 weeks. This is a late arrival and although it still will not be past its late start date, it should be installed as soon as possible to avoid excessive disruption to job traffic. Quarry tile, as pointed out before, is a wet trade and its installation demands care and protection which makes it vulnerable to construction traffic. Therefore, installation must be watched carefully. Mr. Bedard says he should be ready for carpet sometime in September although it should be noted that demountable partitions probably will

be able to start sometime within July, probably as early as July 6, 1976 (working day 386). If this is the case, it might be that carpet at the second floor could start earlier although the danger of putting it down and exposing it to construction traffic is considerable. This matter should be evaluated on a continuing basis.

A brief review of the status of each floor is given below.

Academic Wing, Second Floor (AW2)

Modular ceiling suspension and grid are well along at the second floor. This work has proceeded independent of completion of drywall ceiling closures above the ceiling and installation of reheat coils. Other ceilings, the flat acoustic, gym board and plaster, are due to begin sometime next week.

The current lag at the second floor ranges between 47 and 57 working days with a close approximation probably being to the 47 working day lag. This is compared to the lag of 37 working days reported in the previous monitoring report #7. However, as noted above, since additional trade work has now started, it might be possible at this point to begin reducing the lag.

It should be noted that the target end date for the second floor was set at September 20, 1976 (working day 439). If we assume a lag of approximately 49 working days, this gives us a completion of November 29, 1976 (working day 488) which is within the target range for the total job. However, the later finish begins to stack up tasks, particularly near the end of the job. This requires high manpower levels usually unrealistic to achieve. Thus, a progressive completion of the project is far more desirable.

Academic Wing, First Floor (AW1)

The lag at the first floor is presently 12 to 25 working days. Mr. Bedard reports that the ceiling modular grid will probably begin about 2-1/2 weeks from today. This would be about July 9, 1976 (working day 389). The grid was originally due to begin no later than June 3, 1976 (working day 364) which gives a projected lag of 25 working days. It is possible that this lag can be reduced by expediting modular grid work at the first floor. The grid to this point at the second floor went in in about 2-1/2 weeks and this could conceivably, if used as a pattern, reduce the time required at the first floor also.

As noted above, the first floor lag is the critical behind situation to watch since target completion at the first floor is December 7, 1976 (working day 494). Thus, any lag there over about 17 working days puts project finish into 1977.

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RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER

Locker Room, Auxiliary Gym (LRA) and Gym (G)

Work at the LRA area is currently about 9 working days behind, primarily in installation of plaster ceiling suspension and lath. This ceiling was due to begin no later than June 22, 1976 (working day 377). It now is planned to start in about 2 weeks which will give it a beginning of about July 6, 1976 (working day 386). This accounts directly for the 9 working day lag. This lag is not overly serious at this point but is indicative of the need to start additional trades in these areas.

The gym area is presently moving well in line with the current network and meeting targets between early and late starts and finishes.

Kitchen, Dining and Stage (A)

All slabs on grade except at the stage have been completed. Above ceiling mechanical and electrical work is well along and hoods have been hung, although they are not completely hooked up. Work at the kitchen, dining and stage area is presently meeting targets between early and late starts and finishes.

Kitchen equipment is presently stored and should be no major problem. Field measurements have been taken for the coolers and we can still expect delivery of coolers sometime in mid-August.

Overall, this area is in good condition. I recommend that any temptation to work in this area be tempered with the thought that the academic wing presently, particularly at the first floor, is going to need heavy attention in order to finish by the end of the year.

General

Although the project has continued to lose time and lags at this monitoring by slightly more than the previous monitoring, additional trades have been put into work and it presently appears that another phase of work is being entered. This phase is one in which most materials and equipment are available and thus, should allow work to proceed more smoothly and with less interruption in the field. At our next monitoring we will carefully evaluate the advisability of re-diagramming and updating the project out to the end of the job. At this time I would tend to recommend that we update the network during or right following the next monitoring so as to obtain a better handle on the actual completion date that can be expected. I shall be in touch with those concerned prior to the next monitoring.

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

As a part of our work at this monitoring, I prepared a project status report for the project from June 21, 1976 (working day 376) to July 21, 1976 (working day 397). This will be issued concurrently with the monitoring report.

Ralph J. Stephenson, P.E.

**RJS
m**

**To: Mr. Ted Corsiveau
Mr. Howard Sims
Mr. Harold Varner
Mr. William Adams
Mr. Mike Boggio**

August 6, 1976

Subject: Monitoring Report #9

Robinson Middle School, Detroit, Michigan

Project: 74:83

Date of Monitoring: August 4, 1976 (working day 407)

Monitored from Issue #2 dated January 16, 1976

Current Target Completion Dates:

Academic Wing, second floor (AW2)	September 20, 1976 (working day 439)
Academic Wing, first floor (AW1)	December 7, 1976 (working day 494)
Locker Room, Auxilliary Gym and Gym (LRA & G)	September 28, 1976 (working day 445)
Kitchen, Dining and Stage (A)	December 22, 1976 (working day 505)

Note: The monitoring report below evaluates the project in relation to the above completion targets

Number of working days to total completion remaining: 98

Actions taken:

- Inspected project
- Reviewed project progress with Mr. Bedard
- Prepared project status report from August 4, 1976 (working day 407) to September 27, 1976 (working day 444)
- Evaluated job progress
- Reviewed computer printouts with Mr. Bedard

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445
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**Monitoring Report #9
Robinson Middle School
Detroit, Michigan
Page two**

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

General Summary

Over the past six weeks there has been general slowing of the job. The lags appear primarily to be due to lack of progress in drywall, lathing, plastering and acoustic trades. This slowing has increased lags at each area by a considerable amount and should be given immediate attention since the delays now, if projected on through to the end of the job, push the total end date for the project into February of 1977.

In extensive conversations with job management staff, it apparently is still the intent to finish this job by the end of 1976. Presently it appears that the academic wing, second floor, could be completed by the end of the year. The academic first floor is the longest sequence of tasks and is the one extending into February of '77, while the locker room and A area probably also can be finished by the end of the year. However, it will take an intensive effort to accomplish this and one that will require total cooperation from all parties to the contract.

Most deliveries are reported by Mr. Bedard to be in reasonably good shape. A major exception is reheat coils which, to this point, have not been brought to the project site. There is no information as to where they are or when they will be delivered and of course, they do represent a delay to the ceilings of the academic wing. The reason is that they must be installed through the ceiling and naturally there is always some reluctance to proceed aggressively where a chance of damage exists. The lack of these reheat coils has been noted in Monitoring Reports back to April 14, 1976 (working day 329). I suggest that strong efforts be exerted now to get these on the job.

Fan room equipment apparently is all on the job and the equipment is being set now at the gymnasium area. Ceramic tile is due to be delivered to the job site by the end of this week. It is lagging but not causing any major critical delay. Carpet is due to be delivered to the job site in September and will be installed following demountable partitions.

A brief review of each area is given below.

Academic Wing Second Floor (AW 2)

Modular ceiling work at the second floor except for reheat coils and installation of acoustic panels is substantially complete. However, the area lags by about 65 to 70 working days in ceiling work at flat acoustic, drywall, plaster and egg crate areas. These lags are serious, particularly in drywall work and it would be appropriate at this time to expedite installation of these trades to the highest degree possible. Demountable partitions are presently just starting at the north end of the building and working south. Installation of metal panels at the demountables should begin sometime within the next two weeks, probably by Monday, August 9, 1976 (working day 410).

If we project the current lag of about 65 working days past the target completion of September 20, 1976 (working day 439), we obtain a projected completion at the second floor at about January 5, 1977 (working day 514). Again, the major problem here is that with this delay, target end dates are brought closer together than previously. This tends to stack similar trades and may cause problems at the end since manning the job has always been difficult.

Again, to be mentioned is the need at the second floor for reheat coils which presently have not been set firm for delivery.

Academic Wing First Floor (AW 1)

The lag at the first floor has increased to about 43 working days, primarily in installation of ceiling grid for the modular system. This work was due to begin at the first floor no later than June 3, 1976 (working day 364). Thus, ceiling work accounts directly for the current 43 working day lag. Other ceilings at the first floor including the flat acoustic, drywall and plaster also lag at the first floor. Projecting the lag against the current first floor target completion of December 7, 1976 (working day 494) gives a projected completion of February 7, 1977 (working day 537). This is, of course, beyond the desirable end of year target.

Again, the problem is one of trades stacking up as the job nears its end and since manpower has been a problem on the job from the beginning, this stacking is undesirable at the closing areas of the project.

Locker Room, Auxiliary Gym (LRA) and Gym (G)

Work at the LRA area is about 20 working days behind, primarily in installation of plaster ceilings. This is an increase in the lag over the previous monitoring. Generally work here can only be expedited by improving performance on installation of ceiling work.

There is no current lag over late starts and finishes at the gym although we are rapidly approaching the date where installation of drywall and finish painting along with wood floor is due to start. Wood flooring in the gym was due to begin no later than September 10, 1976 (working day 433). However, since the completion date of the gym is shown at November 29, 1976 (working day 488), there appears to be some chance for slippage there if it appears too early to install the wood floor. Wood floor work must be protected from all traffic since once it is laid and finished, the area must be locked to keep all traffic off the finished surface.

Kitchen, Dining and Stage (A)

Quarry tile is in work at the kitchen and most installation there is meeting targets between early and late starts and finishes. Mr. Bedard reports that food service equipment is available and will be brought on the job probably sometime in September. This will be substantially in line with our current target. It should be noted that we are nearing the date when refrigeration work should be started. It has a late start of August 27, 1976 (working day 424). This area will probably be one of the first areas where highly finished equipment is to be installed. Therefore, I recommend that as much heavy work as possible be gotten out of the way so that minimal damage is experienced to installed equipment.

General

The project has, for many reasons, continued to lose time over the past two weeks and much of the delay results from revisions to the work and difficulty in obtaining predictable deliveries and performance from many of the subcontractors. This is becoming a very serious matter and in my opinion, if we still want to maintain an end of the year completion, must be addressed immediately so that manning of the job is maintained at a high level.

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

If we assume the desirable end date as being December 31, 1976 (working day 511) and project the present greatest lag against it, we must recapture approximately 26 working days at the first floor of the academic wing to bring the job home by the end of the year. This is a sizable effort but Mr. Bedard feels that it can be done with cooperation of all parties.

As part of this monitoring, we prepared a project status report for the period from August 4, 1976 (working day 407) to September 27, 1976 (working day 444). This has been distributed to the involved parties.

Ralph J. Stephenson, P. E.

RJ/m

**To: Mr. Ted Corriveau
Mr. Howard Sims
Mr. Harold Varner
Mr. William Adams
Mr. Mike Boggie**

RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER
October 11, 1976

Subject: Monitoring Report #10
Robinson Middle School, Detroit, Michigan

Project: 74:83

Date of Monitoring: Friday, October 1, 1976 (working day 448)

Monitored from Issue #2 dated January 16, 1976

Current Target Completion Dates:

(Note: The below dates are the dates against which this monitoring is evaluated. However, the present target is now to complete the entire project by December 31, 1976 (working day 511).

Academic Wing, second floor (AW2)	September 20, 1976 (working day 439)
Academic Wing, first floor (AW1)	December 7, 1976 (working day 494)
Locker Room, Auxiliary Gym and Gym (LRA & G)	September 28, 1976 (working day 445)
Kitchen, Dining and Stage (A)	December 22, 1976 (working day 505)

Number of working days to total completion remaining to December 7, 1976: 46
(working day 494)

Actions taken:

- Inspected project
- Reviewed project progress with Mr. Bedard
- Evaluated job progress
- Note: A project status report was not prepared at this monitoring

General Summary

Over the past two months there has been a distinct improvement in field work and the previous constant increase in lag has been halted. Generally the project is at a point now where it appears possible it could be completed by the end of the year, if not totally, at least in such form that occupancy could begin. The general feeling on the job is also that of cautious optimism about progress. I believe if the momentum now gained is continued that the present end of year target can be met.

A brief review of each area is given below.

Academic Wing, Second Floor (AV2)

Demountable partitions are well along at the second floor, painting is almost complete, doors and hardware have been moved substantially and toilet rooms have been concentrated on heavily and are now ready for accessories. The lag at the second floor over the above target dates ranges in the neighborhood of 51 working days. This is a substantial reduction over past lags and if the 51 working day lag is used as a rough criteria, the floor could be completed in early or mid-November. This is presently the target of the field forces.

Academic Wing, First Floor (AV1)

Currently the lag at the first floor is about 24 working days, primarily in demountable partition work. This, too, is a sizable decrease in lag from the previous monitoring and represents the result of intensive field work being focused on this area. Presently demountable partitions are well along, as are most other interior finishes at this level.

Leather Room, Auxiliary Gym (LRA) and Gym (G)

The current lag at the leather room and auxiliary gym is about 35 working days with the lag at the gym about 36 working days. These are generally measured against reasonably early targets and in conversations with Mr. Bedard, he does not feel there will be any major problem meeting target end dates presently established. His current goals are to finish the LRA area by mid-November and the gym by the end of December. I believe these are achievable.

Kitchen, Dining and Stage (A)

Presently the lag at this area is about 27 working days, primarily in installation of hard ceilings and board. It appears that the tempo of some of this work will be picked up and the lag reduced over the next two months. The target date for completion by the field forces is presently the end of December. This will be a very tight schedule to meet.

Of prime importance here, as well as at the first floor of the Academic Wing, is the need to complete concrete slab work. Apparently there has been some difficulty with the contractor on the job and steps are being taken to remedy the situation.

General

The project has improved in performance considerably over the past two months and presently the field target of December 31, 1976 (working day 511) appears achievable. I believe it is in order to compliment those who have been involved in this improved work performance in the field and to encourage them to maintain

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RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER

the improved activity to the highest extent possible. The job is still not totally out of the woods but I believe it has been turned around.

Ralph J. Stephenson, P.E.

RJS

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To: Mr. Ted Corniveau
Mr. Edward Sims
Mr. Harold Varner
Mr. William Adams
Mr. Mike Boggie

RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER

December 15, 1976

Subject: Monitoring Report #11
Robinson Middle School, Detroit, Michigan

Projects: 74:83

Date of Monitoring: Wednesday, December 8, 1976 (working day 495)

Monitored from Issue #2 dated January 16, 1976

Current Target Completion: January 3, 1977 (working day 512)

Number of Working Days to January 3, 1977 (working day 512): 17

Actions taken:

- Inspected project
- Reviewed project progress with Mr. Bedard and Mr. White
- Evaluated job progress

Note: A project status report was not prepared at this meeting since the project is now in the last few weeks of construction and can be monitored on a day to day basis in the field.

General Summary

As of December 8, 1976 (working day 495) the project target for substantial completion is now set at January 3, 1977 (working day 512). This appears to be a very tight date although it is reasonable and if work progress continues as well as it has over the past two months, I believe this goal could be reached.

In any event, it appears entirely feasible that a substantial area of the building could be occupied by the owner on that date. Progress has been excellent over the past two months and the field management is to be complimented.

A brief review of each area is given below.

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RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER

Academic Wing, Second Floor (AW2)

Second floor work is now nearly complete and cleanup is underway. Items remaining basically deal with trim and cleanup. One activity that should be given early attention is interior signage. There is a sizable amount of this to be done at the second floor and it should be started shortly.

Academic Wing, First Floor (AW1)

Present work at the first floor is well along with some carpet yet to be installed and installation of other finish trades in respect to ceiling work and painting also to be completed. It appears that this area could be finished within the next 15 working days which completes it by January 3, 1977 (working day 512).

Locker Room, Auxiliary Gym (LRA) and Gym (G)

Locker room work is substantially complete except for cleanup while gym work currently lags the desired target of January 3, 1977 (working day 512) by about 4 working days. Installation of wood floor is the lagging item and is presently in work. However, the subcontractor does not feel he can finish this work until about January 7, 1977 (working day 516). This is slightly later than desired and efforts should be made to compress this time.

Gym equipment installation is well along and the concurrent installation of wood floors and gym equipment should recapture some time at the area.

The folding partition will be on the job December 15, 1976 (working day 500). Installation should take about 3 or 4 working days.

Kitchen, Dining and Stage (A)

The present major lag at this area is in the kitchen where work remaining includes hookup of kitchen equipment. Equipment should be completely set by December 15, 1976 (working day 500) and within another ten days should be hooked up, ready to operate. This brings equipment completion by December 30, 1976 (working day 510).

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Robinson Middle School
Detroit, Michigan
Page three**

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

Generally Mr. Bedard is holding a target of January 3, 1977 (working day 512) for the kitchen, dining and stage areas. There appears to be no major reason why this cannot be done although some finishes such as resilient and wood floor may run out to the end of the job.

General Summary

Overall, the project is in good condition to meet an occupancy date of January 3, 1977 (working day 512). This will not be an easy target and will require careful attention on a continuing basis from here on out. However, progress on the job since the last monitoring on October 1, 1976 (working day 448) has been very good and if the progress rate can be maintained it appears the job will be completed on time.

The work from here on can be monitored and planned on a day to day basis and therefore, unless special conditions require it, this will be the final monitoring inspection of the school. Despite all of the difficulties which have been imposed upon the project, I believe overall the field performance, although starting slowly, has finished in excellent form and that those connected with managing the job at the field level deserve to be complimented. It has been a pleasure monitoring the project and the city should be pleased at the completion of such a significant project under very difficult conditions.

Ralph J. Stephenson, P.E.

**RJS
m**

**To: Mr. Ted Corriveau
Mr. Howard Sims
Mr. Harold Varner
Mr. William Adams
Mr. Mike Boggio**