

FEB 13 1975

HENNEPIN COUNTY

February 10, 1975

Mr. Ralph J. Stephenson
Consulting Engineer
15064 Warwick Road
Detroit, Michigan 48223

Dear Ralph:

At the conclusion of your last visit, January 30th and 31st, I requested you to make a proposal concerning your continuing services for Center Hospital. It is my understanding that you now have basically completed the network scheduling plan for the construction of Center Hospital with the exception of the mechanical spaces. In addition, I hope we have identified the major trouble spots.

I would appreciate your sending the proposal to me so that I can take it up with the Center Hospital Board. I believe I can speak for the Board in thanking you for an excellent job in our construction program for Center Hospital. While we have had some very troublesome problems on this project, I believe they certainly could have been "stickier" if we had not had your assistance.

I would appreciate hearing from you as soon as possible.

Cordially,



Thomas R. Mattison
Associate Administrator

TRM:ab
cc:Mr. Frank S. Walter

- 
- CRITICAL PATH PLANNING
- LAND PLANNING
- MANAGEMENT CONSULTING
- PLANT LOCATION

75:48

RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER

15064 WARWICK ROAD
DETROIT, MICHIGAN 48223
PHONE 273-5026

February 18, 1975

Mr. Thomas R. Mattison
Associate Administrator
Hennepin County General Hospital
5th and Portland South
Minneapolis, Minnesota 55415

Dear Mr. Mattison:

In accordance with our discussions on my January trip to Minneapolis and your letter of February 10, 1975, outlined below is the method by which I feel my ongoing professional services in respect to Center Hospital might be best provided. I appreciated very much the opportunity to talk to the Board and further enjoyed your kind words about my efforts to date in behalf of the project.

I have had some long thinking sessions about how I might best participate to insure that the program maintains adherence to the defined standard of performance expected that we now have shown in our network system. After giving the problem much thought, I recommend that I spend at least one day every four to six weeks, depending upon circumstances, inspecting the project, comparing its progress to our master network, participating in an in-depth policy meeting as we have in the past and preparing an evaluation and report on the project. In this manner we can isolate deviations from the standard of performance quickly and focus optimum attention upon those problems that we have identified and defined.

At present I have three other projects in Minneapolis and therefore, presently may be able to combine travel expenses to your fair city which would reduce the total costs of my continuing involvement in your program. However, I feel that it would be wise to also consider

Mr. Thomas R. Mattison
Associate Administrator
Page two

the costs without these other projects since it is possible some of them may come to a close prior to the date where ending of my participation in Center Hospital is desirable.

As you know, my current fee on the project is \$25.00 per hour, plus out of pocket expenses incurred in the interests of the job. I estimate it would take approximately 10 to 12 hours including an allocation for travel time to complete one visit's work on the project. This, coupled with living and travel expenses, would make the cost of a monitoring range from \$370 - \$500 per trip, depending upon the collateral work that I was involved in on other projects. Further it appears that for my work to be effective that I should consider being involved at least through December of 1975. If we figure a monitoring once per month, this amounts to ten trips to the project. Thus, the cost could range from \$3700 to \$5000 total. Of course, the work I am presently completing for those sections of the building to be drafted and dated is not included in this work since it is presently being done by my technical staff. However, most of this work is drafting and is charged for at rates ranging from \$9.00 to \$11.00 per hour. There are probably another 20 to 40 hours of work to finish the drafted sheets. This, I recommend, be done since it is essential for proper and clear monitoring.

It is my recommendation that you follow a regular monitoring system on the project since we have demonstrated to this point that regular attention to details and problem areas is valuable in correcting potentially disruptive situations at an early date.

Beyond December it appears that by that time the program should be well enough along so that the day to day attention given it by your very competent staff can suffice for monitoring and control.

If special problems arise during the monitoring period that require re-evaluation of the project plan or other such revisions to the current plan of action, these would have to be considered at that time.

**Mr. Thomas R. Mattison
Associate Administrator
Page three**

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

Presently, in my opinion, the field organization is operating in such a manner that the probability of updating requirement is quite low.

Thank you again for your courtesy and I am looking forward to seeing you again in the near future.

Sincerely yours,

Ralph J. Stephenson, P.E.

**RJS
m**

May 23, 1975

Subject: Monitoring Report #5

Center Hospital

Minneapolis, Minnesota

Dates of Monitoring: May 8 and 9, 1975 (working days 346 and 347)

Monitored from Issue #4 dated December 12, 1974

Project: 74:55 and 75:48

(The 75:48 project number is used to identify the monitoring of Center Hospital for the remainder of the job)

Actions taken:

- Inspected project
- Conferred with Mr. Mattison, Mr. Richards, Mr. Anderson and Mr. Myers re job progress
- Evaluated job progress
- Conferred with owner, architect/engineer and general contractors re overall job status

Contract End Date: March 28, 1976 (working day 573)

East Wing (E)

Third Level

At the north end ceiling grid is substantially complete and finish painting is in work. Vinyl wall covering is currently being installed and the area is close to being finished out. Originally it was anticipated this area would be complete by April 3, 1975 (working day 322). However, there have been some delays to delivery of doors and case work which have slowed the need for pushing to complete this section. Although it would be desirable to complete the floors at the early finishes so as to move progressively up and out of the job, this may prove difficult due to miscellaneous delays that are imposed upon each floor's work sequence. It should be understood, however, that the delay to finishing is currently not holding up other work on the project and really means that several areas are going to have to be brought to

completion concurrently.

At the third level south, the cafeteria area, wall studs and hollow metal are presently being installed. In-wall work is also started in this area. It was decided to field measure for food service equipment prior to completion of gyp board walls and these dimensions are being guaranteed. Field measurements were due to be completed by June 5, 1975 (working day 366) so this work has proceeded slightly ahead of schedule. Work on stud walls currently lags early starts and early finishes by ten working days. However, the early field measuring should recapture all of this lag. Present delivery of food service equipment is holding at October 28, 1975 (working day 466) but it is hoped this date can be bettered.

Fourth Level

The current lag over early starts and early finishes at the fourth level north is approximately 55 working days and at the fourth level south approximately 35 working days. These lags have been caused by a revision to the sequence due to interior rough work progress making certain areas available earlier than originally anticipated. By moving into these areas as they were completed, a better sequencing for the total job was possible. The 55 and 35 working day lags at the fourth level, therefore, are counter-balanced by ahead situations at the upper levels.

At the fourth level acoustic ceiling grid is substantially complete, light fixtures are well along and finish painting is in work at the north end. Doors, trim, millwork and case work are not yet on the job and could pose some delay problems. However, presently the contractor is working around these conditions. The expected early finish date for the fourth level north was May 23, 1975 (working day 336) and for the south level south June 5, 1975 (working day 366). However, as mentioned above, the current lag is counter-balanced by the ahead condition at the upper levels and therefore, should cause no major turnover problems.

Fifth Level

Current lags over the early starts and early finishes at the fifth level are 55 working days at the north end and 45 working days at the south end. Again, these lags have been caused by a revision to the work sequence. The situation is not serious since the lags are, as with the fourth level, balanced by ahead conditions at the upper levels.

At the fifth level acoustic ceiling suspension grid conduit is presently being installed and light fixtures are well along at the south end.

The target completion early finish date for the fifth level north was May 7, 1975 (working day 346) and at the south end May 21, 1975 (working day 356). The lag over these dates will currently not cause any major turnover problems relative to the hospital move. However, the lag does increase the possibility of bunching up concurrent work needed to finish off each level in the east wing.

Sixth Level

As of May 8, 1975 (working day 246) partition work and gyp board ceiling are well along with prime painting just beginning. Work at the sixth level is approximately 30 working days ahead of early starts and early finishes. This was made possible by a revision to the lower level sequencing. The ahead condition is expected to balance out the lags at the third, fourth and fifth levels.

Seventh Level

Gyp board is just starting to be installed on stud walls. Most studs are in place with mechanical and electrical in-wall work well along. Currently wall work at the seventh level is approximately 65 working days ahead of the present plan of work.

Eighth Level

Wall studs are substantially complete at the eighth level with in-wall work now being installed. Generally interior installation is approximately 90 working days ahead of early starts and early finishes at the eighth level north.

* * * * *

Bridge

Close-in work on the upper levels of the bridge is practically complete and close-in of the skyway level is now proceeding with installation of the work at the soffit of the bridge. The building presently is in the dry and interior work is moving in generally excellent condition.

Fourth Level (B4)

Sheet rock on the sub-ceiling is presently being installed and the project is currently about 6 working days ahead of early start/early finish target dates.

**Monitoring Report #5
Center Hospital
Minneapolis, Minnesota
Page four**

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

Bridge (Continued)

Third Level (B3)

Most rough work at the interstitial space has been installed and is approximately 19 working days ahead of early start/early finish target dates.

Second Level (B2)

Interstitial space, sheet metal ductwork and mechanical piping are just beginning and are slightly ahead of schedule.

Bridge Skyway Level (BSW)

The skyway level is the mechanical equipment room on the bridge structure. It is anticipated by the mechanical contractor that it will take 3 to 4 months for installation of equipment at this level. This would bring completion of mechanical installation to about late September. There appears to be no major difficulty except that some access will be needed for late arriving equipment. This matter has been worked out in the field between the general and mechanical contractor.

West Two Bays

Fourth Level

The lag over the projected completion date of the fourth level south is currently about 37 working days. However, this is not critical since the floor was shown as being completed considerably earlier than required. Again, however, as with the east wing, delays to finishing will mean that the work will bunch up as the project nears the punching out period.

At the fourth level plumbing fixtures are being installed and final mechanical, electrical and architectural trim items are being installed.

There has been a delay on the utility columns and walls and they are now scheduled to be delivered to the job site on May 27, 1975 (working day 358). However, since this is a long flat time level, relative to the target completion, the late delivery should cause no serious problems provided they do arrive in late May. Installation of the vinyl tile and base will be held until the utility columns and walls are complete.

West Two Bays (Continued)

Third Level

Current lags at the third level are approximately 17 working days on the south half. Door delivery has been a problem although it is now expected that all remaining doors on the west building will be on the job June 2, 1975 (working day 362). Utility walls have been held by a late delivery but are expected on the job soon. This lag is somewhat similar in impact to the lag at the fourth level and should cause no major turnover problems provided all work does not get carried down to the target date area.

Second Level

Second level work at the west two bays is in excellent shape and well ahead of current early start/early finish targets.

Communications Center and Lower Level Work

Work at this area has been delayed pending submission of revised prices for changes to the communications center plan. The delays to communications center work are now becoming very serious and I strongly recommend that intensive efforts be made to expedite this area so it can proceed immediately.

Delivery of the console is still holding at July 1, 1975 (working day 383). As recommended previously, I suggest a visual - on the site - inspection be made to insure that the communications center console is going to be available and that it is of the dimensional nature currently expected. This area of the building is still one of the most critical of all and must be given constant attention to insure it will be ready in adequate time to service other sectors of the job.

Skyway Level (Library)

Work at the skyway level is currently meeting target dates well in line or ahead of early starts and early finishes. Stud walls are being installed currently and work there is moving well.

First Level (Auditorium)

Work is substantially complete at the interstitial space and the area is about ready to receive wood ceiling suspension conduit and lights. Currently the lag at the auditorium is approximately ten working days over the early starts

First Level (Auditorium - Continued)

and early finishes. However, it has a target completion date of October 28, 1975 (working day 467) and thus, could be allowed to slip slightly if necessary. Presently the auditorium is being used primarily as a fill-in area.

First Level Shop Area

Work at the shop area is well ahead of our current early start/early finish targets since it was found possible to begin installation of studs and gyp board earlier than had been anticipated.

There apparently are some changes at the first level and these should be followed carefully to insure that they are processed promptly.

* * * * *

On Friday, May 9, 1975 (working day 347) the fifth major review meeting was held with the owner, the architect/engineer and the general contractor. We discussed potential problem areas of importance and considered in detail those items that appeared to be worthy of discussion to avoid delays and difficulties on the job.

In previous reports we have referred to the various pending problem areas by reference numbers. Since many of these problem areas have now been resolved, this report will cover the discussion by subject.

Punching Out Procedures

There was again considerable discussion about the method by which the project should be punched out. Specification provisions were reviewed and apparently there is some difference as to the method by which each of the two separately designed areas is to be punched out. However, it was further agreed that the architects would get together with the owner and the contractors within two weeks to work out and establish a mutually satisfactory procedure that would be consistent within the project.

There are several policy matters that deal with formal acceptance of the area, as well as with warranty provisions that are heavily dependent upon the punching out procedures to be used. These matters should be resolved early.

It was further agreed that the initial areas to be punched out and used as a standard were the west wing south fourth level and the east wing north fourth level, unless other areas are ready sooner. This matter will be worked out as a field detail.

Hospital Move-In

Considerable discussion ensued regarding the method by which the Center Hospital project would be occupied. The owner pointed out that there are some differences in the move-in philosophies between existing facilities and the new hospital. However, these differences can be accommodated within the present planning work. It was emphasized by all parties that to move in, occupy and use any small part of the total facility would require much of the total building work to be done and operating. Ongoing discussion of the hospital move-in procedures will be made a part of the regular review meetings with the owner, the architect/engineer and the contractors.

Scheduled Delivery System Installation

There is some consideration of assigning the installation of the scheduled delivery system to the general contract. This matter is to be reviewed further by the contractor with the owner's representative.

Apparently shop drawings have been submitted in part for the system but will have to be expedited considerably to get them all in and reviewed expeditiously. All parties concerned agreed that they would work on this.

The redesign of the area adjoining the communications center in the basement presently is a source of concern since many problems are visible to all if major changes are to be made. A decision was made at this meeting that the general contractor would proceed with work on the communications area as soon as it is released. Care must be taken, however, to insure that the revised area outside the communications center does not cause interferences within the communications center that will be difficult to correct later. This matter must be followed carefully and continuously.

Owner Supplied Equipment at the Cafeteria

Mr. Richards will check on the physical requirements for all owner supplied equipment at the cafeteria to insure that no dimensional surprises will be encountered. He will report back in the near future.

Monitoring Report #5
Center Hospital
Minneapolis, Minnesota
Page eight

Owner Monitoring Equipment

The owner promised to get the required information on the monitoring equipment and issue a proposal request by May 16, 1975 (working day 352). This matter should be followed by all concerned.

Communications Center Console

It was agreed that a check would be made as noted above on this console to insure that it will be on the job by July 1, 1975 (working day 383).

Auditorium Work

A question arose as to whether the auditorium is a critical element of the building. The owner responded that presently it is not and therefore, a slight lag in that area while using it as fill-in work could presumably be allowable.

Bridge Roof Coping

The detail of the bridge roof coping which is currently restraining completion of roof close-in of the building will be discussed and resolved by May 13, 1975 (working day 349).

Medical and Utility Columns and Walls

There has been some problem maintaining timely delivery of these elements and they are now becoming critical to finishing off the levels. The contractor said that he will focus additional effort on getting them on the job but if necessary, would appreciate owner help to assist in this effort. Presently it appears that the contractor can handle it by himself.

Doors

Doors are presently a minor delivery problem but dates have been committed for shipment to the job site and the problem should be resolved within the next month and a half.

Ceiling Interferences at Cafeteria

The apparent ceiling interferences at the cafeteria were resolved during the day by a field inspection. The ceiling may have to be dropped a small amount in this area and presently a check is being made of the problems that might be encountered by lowering the ceiling.

Monitoring Report #5
Center Hospital
Minneapolis, Minnesota
Page nine

Early Occupancy of Leased Areas

Mr. Anderson reviewed the needs for partial occupancy of isolated areas in the building. As noted above, much of the facility would have to be operational in order to provide services to these isolated areas. Therefore, the matter of setting early operating occupancy was deferred to a later date.

Smoke Detectors at 7th, 8th and 9th Levels

This matter was reviewed in detail at the construction meeting on Thursday and discussed further at the Friday conference. The architect/engineer will check on the problem.

Annunciator Characteristics for Demand Delivery System

This matter is currently being reviewed and checked by the architect/engineer.

Fire Alarm Interfaces with the Demand Delivery System

This matter will be checked out by the owner and the architect/engineer.

Cafeteria Signing

Apparently the signing is nearly complete and will be submitted to the owner the week of May 12, 1975 for review. It should be released to the contractor by the early part of June. This should be no major problem.

General Summary

Overall the project appears to be moving quite well although a dislocation of sequence in the east wing has caused the lower levels there to lag. However, upper level work is in excellent condition and counter-balances the lags at the lower level. Bridge work is in good condition and presently meeting the most major early start/early finish target dates. Work at the west two bays is in generally good condition although the upper levels lag early starts/early finishes by a small amount.

Work at the lower level in the west two bays is a source of great concern since it includes the communications center as well as the area that is being restudied as a result of scheduled delivery system revisions. These areas must be given high priority attention and resolved if we are to complete the installation work there as currently planned.

**Monitoring Report #5
Center Hospital
Minneapolis, Minnesota
Page ten**

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

Auditorium work is moving reasonably well although it slightly lags early starts and early finishes. Library work is well ahead of schedule. Shop interior work at the ground level is also in excellent condition.

Overall I would say that the project is currently in good field shape and that although problems still do exist, relative to administrative processing, that there has been a considerable improvement in the total management of the job.

Ralph J. Stephenson, P. E.

**RJS
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**To: Mr. Tom Mattison
Mr. Les Johnson
Mr. John Anderson
Mr. Richard Hanson
Mr. Donald A. Myers, Jr.**

July 9, 1975

Subject: Monitoring Report #6
Center Hospital
Minneapolis, Minnesota

Date of Monitoring: June 26, 1975 (working day 380)

Monitored from Issue #4 dated December 12, 1974

Contract End Date: March 29, 1976 (working day 573)

Working days remaining: 193

Project: 75:48

Actions taken:

- **Inspected project**
- **Reviewed project with owner's, contractor's and architect's field and office staffs**
- **Evaluated job progress**

General

Currently several strikes are in effect in the Minneapolis area and the project is completely shut down by pickets. Current strikes with their starting dates are as follows:

Roofers **Monday, May 19, 1975 (working day 353)**
Settled June 5, 1975 (working day 365)

Iron workers **Tuesday, May 20, 1975 (working day 354)**

Asbestos workers **Monday, June 2, 1975 (working day 362)**
(pipe coverers)

Operating engineers at **Tuesday, June 3, 1975**
sand, gravel and concrete **(working day 363)**
block suppliers

**Monitoring Report #6
Center Hospital
Minneapolis, Minnesota
Page two**

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

Masons	Monday, June 16, 1975 (working day 372)
Carpenters	Monday, June 16, 1975 (working day 372)
Laborers	Monday, June 16, 1975 (working day 372)

There appears no present consensus about when the strike might end since it presently is revolving around relatively small economic differences between contractors and the trades but also concerns language of picketing clauses. These clauses are proving difficult to resolve and thus, make it impossible to predict with any accuracy what kind of settlement plans might be expected.

Also, since there are many trades on strike, the difficulty of predicting which might settle first makes it hard to anticipate now in what manner the project may be put back into work. I recommend that upon settlement of the strikes and return to work we re-evaluate each section and update the diagram pertaining to that particular area. I shall stay in touch with Mr. Anderson regarding this matter.

It should be pointed out to all parties concerned that although field trades and the sand and gravel operators are on strike, that other work of an administrative, approval, fabrication and decision-making nature can continue. Presently the project has several decision-making and administrative areas that require attention and can be carried out ideally during this strike.

The current status of each major area of the building is reviewed below.

East Wing (E)

Third Level (E3)

As of June 26, 1975 (working day 380), the north half of the third level is relatively close to completion. When the job was closed, acoustic ceiling panels were being installed, vinyl wallcovering was nearly complete and mechanical/electrical/architectural trim items were in work. A major difficulty at the third floor, as well as at other floors, is delivery of case work. Case work is being brought to the job site at the rate of about one truck load per week. Shipments consist of similar components for all floors so that at no intermediate period is all case work for any single floor on the project. If work were presently in

**Monitoring Report #6
Center Hospital
Minneapolis, Minnesota
Page three**

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

progress, this would pose severe difficulties. However, it may be that by the end of the strike all case work components will be on the job and each floor can proceed with its total components being available.

The north half of the east wing third floor is still considered to be one of the early areas to be finished after the strike and presently is to be used for setting punchout criteria.

At the third level south, cafeteria and kitchen area, studs are substantially complete and blocking and board work will begin as soon as work at the site once again starts up. Some acoustic ceiling suspension has been installed although most of this will have to await arrival and installation of food service equipment.

Some discussion was held regarding the shape of columns and the details needed to achieve the round form called for. Mr. Meyer of Mortenson will resolve this problem.

Lobby signing is presently being reviewed for approval by Mr. Richards. There is a possibility of some ceiling revisions being required for lighting at the sign walls.

Currently the delivery date of food service equipment on October 28, 1975 (working day 466) is being held. Hoeds are now on the job.

Fourth Level (E4)

Doors and millwork were in work at the fourth level and most acoustic ceiling suspension, grid and conduit are complete. As of the start of the strike, light fixtures were just being completed and architectural/mechanical and electrical trim was being started.

Case work is the delay here as discussed under the third level above, and will restrain installation of vinyl floor tile and base.

Fifth Level (E5)

Acoustic ceiling suspension, grid and conduit are substantially complete and most light fixtures at acoustic ceiling are installed. Vinyl wallcovering is substantially complete except at the area being finished near the construction hoist entrance.

Monitoring Report #6
Center Hospital
Minneapolis, Minnesota
Page four

Sixth Level (E6)

Acoustic ceiling suspension, grid and conduit are substantially complete at the sixth level and light fixtures are about 50% complete.

At the upper levels doors have not yet been delivered to the job and current information on a delivery time is considered unreliable by the general contractor.

Monitoring equipment at the sixth floor has been released and there is a proposal request for case work modifications presently in work.

Seventh Floor (E7)

Taping and sanding of gyp board on studs is complete at the north and just starting at the south. Some items are being reviewed for possible change including mirrors, paper towel dispensers and lights in the intensive care and pediatric units. Also, difficulty is expected upon resumption of work in relation to galley equipment. This equipment is fabricated and ready for delivery to the job. However, it is being held pending a decision by Mr. Ticon of the county board. Some possible changes are being anticipated but it is to be urged that the board release this equipment just as quickly as possible since if changes are to be made, modifications will be necessary to be made to the drawings for the revised layouts. Apparently the decision was to have been made by Wednesday, June 25, 1975 (working day 379). However, this decision was deferred to a later date.

Eighth Level (E8)

Studs are complete at the eighth level with in-wall mechanical and electrical currently in work.

Comments for seventh floor galley equipment also apply at the eighth level.

Ninth Level (Equipment fan room)

Presently this area is in relatively good condition. Although a technical report was not available regarding its current status, the general contractor reports that no major problems are presently existant at this level.

Monitoring Report #6
Center Hospital
Minneapolis, Minnesota
Page five

Bridge Level

Precast edge soffit panels were being erected at the time of the strike. The remainder of the soffit panels will be erected subsequent to the strike. It is estimated they may take as much as 22 more working days (one month) to install. After completion of soffit panels, a topping will be poured at the mechanical equipment room, equipment set and the equipment room completed.

There is still some difficulty in obtaining desired revisions to the roof coping and a third system is now being priced. This information will be reviewed and hopefully a decision made in the very near future.

Corrective work on the roof will also be taken, following the strike. However, the general contractor anticipates this work will be of relatively short duration and should not delay work progress when the project resumes.

Fourth Level (B4)

Gyp board is substantially complete on studs and ceilings and taping and sanding were about to begin when the strike started. This taping and sanding work was due to begin on June 27, 1975 (working day 351).

Third Level (B3)

As of the strike point, studs were nearly complete at the third level with mechanical/electrical in-wall work well along. Lead lined gyp board was being installed at the time of the work delay.

Second Level (B2)

As of the strike, sheet metal work was just being completed prior to installing sub-ceiling runner channels and stud wall and ceiling channels. This work is now expected to resume about 10 working days after the strike is over.

Bridge Skyway Level (BSW)

As noted above, the skyway level which is the mechanical equipment level at the bridge will be ready for topping once the soffit panels suspended from the bridge are installed. It is still expected that installation and activation of equipment at this area will take about three months after topping is available.

Monitoring Report #6
Center Hospital
Minneapolis, Minnesota
Page six

Bridge Skyway Level (BSW) (continued)

A detailed discussion of the later delivery of the equipment room due to the strike was conducted at the meeting. Presently it does not appear that the delay to this area of the building will cause any major difficulties in winter operation. However, I recommend that the impact of a delay to activation of this equipment room be continually examined to see if it does influence any partial turnover of interior areas.

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West Two Bays

Fourth Level (W4)

Work here as of the start of the strike had been brought to the point where major finish work was substantially or totally complete. A problem that still seriously affects the job is delivery of utility columns and walls. At our previous monitoring on May 8, 1975 (working day 346) the delivery date had been set for May 22, 1975 (working day 356). As of June 26, 1975 (working day 380), there is still no authentic word on delivery of these units and apparently severe difficulty is being experienced in getting commitments from the supplier.

It appears it might be appropriate at this time, since these utility units are critical to finishing work that the architect/engineer discuss the problem with the supplier direct to see if some means of getting the systems on the job at an early date can be devised.

The other major problem at the west two bays and at the fourth floor revolves around the galley equipment situation described earlier for the east wing. This galley equipment is presently on hold and upon resumption of construction will delay completion of the fourth floor in the west two bays.

It is expected presently that this fourth level will be the punchout criteria level for the west wing. Therefore, in that respect, it becomes very important to obtain all approvals necessary to complete the floor finish work.

**Monitoring Report #6
Center Hospital
Minneapolis, Minnesota
Page seven**

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

Third Level (W3)

Presently work is fairly far along on the finish trade installation. Utility walls are a problem as described for the fourth level. Doors at the third level are still not on the job although it is possible they will be shipped in the next load which would include all doors for the west two bays.

The galley equipment and layout problem at the third level is similar to that at the fourth level.

Second Level (W2)

A large share of the finish work at the second level is also complete and presently doors and case work are major holdup items along with utility columns, to completion of flooring and other finish material.

Communications Center and Lower Level Work

It was decided at this conference that the west lower level should be divided into a communications area and an inhalation pulmonary area. The reason for this is that work at the communications area can proceed presently with no major holdups to the work. Thus, when the strike is over, above ceiling rough mechanical and electrical work will move to completion, followed by related interior work. However, at the inhalation pulmonary area, a proposal request is presently being issued for revisions due to relocation considerations of the above-ceiling conveyor system. Once revisions have been priced and the changes accepted, this work will also proceed as soon as the strike is over. Thus, the intent is to move ahead as rapidly as possible and complete all work at the lower level in as short a time as possible. The lower level being the communications center is absolutely critical for early occupancy of the job.

At our meeting it was mentioned that the console will be ready for delivery on July 1, 1975 (working day 383) and that delivery will be made whenever the job is in such condition as to accept the equipment properly.

Skyway Level (Library)

Prior to the strike, work at the library was proceeding as trades and space were available. Presently there is a considerable amount of mechanical equipment belonging in the skyway level at the bridge sitting in the skyway level space at the west two bays. Until this equipment is moved, work there will proceed only on a fill-in basis. The equipment will be moved off from the skyway level when topping has been poured at the bridge mechanical equipment room. It is expected this topping pour will be one of the high priority items when the trades are back to work.

First Level (Auditorium)

The contractor has installed some of the gyp board walls prior to construction of the wood ceiling suspension. Motorized curtain supports apparently are available and can be installed whenever appropriate. The auditorium is not a major critical area and thus as with the library, will be worked as crews and material are available. Once the strike has been settled, it would be wise to replan the auditorium to insure it will be available when required.

First Level (Shop area)

Gyp board is installed and substantially taped and sanded. This work is presently in good condition and ahead of our projected plan of work shown on Issue #5 dated January 31, 1975. There is a possibility that resilient floor at the store will be replaced with quarry tile. The contractor cautioned that we should be aware of the lead time required on deliveries of hard tile. These deliveries have been running as much as 12 to 16 weeks following approval of the material.

* * * * *

Referring to monitoring report #5 dated May 23, 1975, several specific items were reviewed. Below is a current report of the status of each.

Punching Out Procedures

These procedures have been set and the parties to carry them out appointed. It has been agreed that the punching out procedure will be the same for both the east and the west wings. Sample areas to be used for punching out remain the fourth floor in the west two bays and the third floor north in the east wing. It is estimated that following the strike the west wing fourth floor will be available in about 15 working days. At the east wing

**Monitoring Report #6
Center Hospital
Minneapolis, Minnesota
Page nine**

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

Punching Out Procedures (continued)

third floor north there will be a slightly longer time required due to late deliveries of case work and subsequent installation of floor tile.

At the request of several in the conference, the two architects will prepare a joint letter of procedure which describes the details of the punching out procedure to be used. It was also decided at this meeting that the interstitial space may be punched out preceding the floor space.

Hospital Move-In

There is still some possibility that a staggered move-in to MMC spaces might be desired as Center Hospital is brought to completion. Therefore, this matter was again reviewed at our conference and the problems that must be solved to accomplish this stated and discussed. It was decided that Mr. John Anderson would resolve this matter over the next few weeks with Mr. Les Johnson and Mr. Tom Mattison.

In relation to the total move-in to the Center Hospital spaces, the general contractor has been briefed on the basic concepts of the move and brought up to date on the method by which the move-in will occur. It would be wise sometime during the next two months and subsequent to settlement of the strikes to again review move-in procedures and data with the general contractor so that a smooth transition is made.

Scheduled Delivery System Installation

The installation of the scheduled delivery system has been turned over to the general contractor and he is now working on the administrative elements of this contract. All shop drawings have been submitted and approved for both the vertical and horizontal runs. Redesign of the inhalation therapy area at the lower level of the west two bays still is an unresolved matter and it was decided at this meeting that once the proposal request for the changes was approved and the work authorized it would proceed immediately.

Owner Supplied Equipment at the Cafeteria

The physical requirement check for owner supplied equipment at the cafeteria has not been made. It will be done sometime in the near future.

Monitoring Report #6
Center Hospital
Minneapolis, Minnesota
Page ten

Smoke Detectors at 7th, 8th and 9th Levels

This change is presently in on a proposal request.

Annunciator Characteristics for Demand Delivery System

This matter is still being checked out and will be reported on at the next progress meeting.

Cafeteria Signing

Signing is presently being reviewed by the owner.

General Summary

Overall, the project is totally stopped by the present series of strikes resulting in picketing at the job. As of the start of the strike, work on the project was in relatively good condition except for some isolated delivery and decision problems. With the excellent work progress on the job prior to the strike, if momentum can again be built up after the strike, it appears possible presently to recapture a portion of the lost time. This matter will be evaluated upon return to work.

Ralph J. Stephenson, P. E.

RJS
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To: Mr. Tom Mattison
Mr. Les Johnson
Mr. John Anderson
Mr. Richard Hanson
Mr. Donald A. Myers, Jr.

of the entire report.

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

November 12, 1975

Subject: Monitoring Report #7
Center Hospital
Minneapolis, Minnesota

Date of Monitoring: November 4, 1975 (working day 471)

Monitored from Issue #4 dated December 12, 1974

Contract End Date: March 29, 1976 (working day 573)

Note: This does not take into account any recently granted extensions resulting from strikes in 1975

Working days remaining: 102

Project: 75:48

Actions taken:

- Inspected project
- Reviewed project with owner's, contractor's and architect's field and office staffs
- Evaluated job progress
- Prepared completion, punchout and acceptance network plan

General

Currently all strikes in the Minneapolis area have been settled and there are no present work stoppages in construction trades on the project. The sprinkler fitters settled their strike and were back on the job October 27, 1975 (working day 465). They went out on July 1, 1975 (working day 383) giving a total strike length of 82 working days. Thus, at present on through to May or June of next year it appears there should be relatively few problems with construction work stoppages.

Monitoring Report #7
Center Hospital
Minneapolis, Minnesota
Page two

A major part of our work at this session revolved around establishing projected completion dates for systems work and for each of the specific areas of the Center Hospital facility. These were put into network form (sheets 1, 2 and 3) for review and reference and will be discussed below. A brief review of the status of each major area of the project is as follows:

East Wing (E)

Third Level (E3)

As of November 4, 1975 (working day 471) kitchen equipment was due to be delivered on November 5, 1975 (working day 472) as compared to the originally projected date of October 27, 1975 (working day 466). This equipment had not yet begun arriving on the job on November 5, 1975 (working day 472) but is expected momentarily.

There has been some difficulty in maintaining ceiling heights because of the large amount of mechanical and electrical work above ceilings. However, all holds have been released as of November 3, 1975 (working day 470) and work there should now proceed with minimal interruptions.

At the north third floor, most work is done to the point where ceilings can be finished and interior work completed. The area presently is being used for construction headquarters on the project and there is a desire to maintain this area as a field office as long as possible. Therefore, it was decided that the third floor in total would be one of the later areas to be turned over for punching out.

According to our projected planning on completion of each floor, it is anticipated by the general contractor to be complete with the third floor east by February 16, 1976 (working day 544). It should be noted that each of the anticipated completion dates given in subsequent parts of this report is currently the best projected estimate of the general contractor. They are still subject to further review and analysis.

Generally the third floor east wing should have no major difficulties in completing by current target projected dates.

Fourth Level (E4)

A portion of this floor was used for establishing the punching out criteria. The interior work currently is in good condition with some trim items and a small amount of acoustic work remaining to be completed along with vinyl and carpet flooring. The floor is anticipated to be ready for punching out on approximately November 24, 1975 (working day 485).

Fifth Level (E5)

Most work has been completed at the 5th floor with the exception of finish painting and miscellaneous mechanical and electrical trim items. Plumbing fixtures and accessories are being installed and carpet is currently being laid. The projected punching out date for the 5th floor east is currently November 24, 1975 (working day 485).

Sixth Level (E6)

Most ceiling work is complete at the sixth floor with painting in process. Acoustic ceiling panels are being installed along with plumbing fixtures, toilet room accessories, curtain tracks and trim items. Vinyl floor is also in work with carpet yet to be laid. Current projected punch out date for the sixth floor is December 15, 1975 (working day 499).

Seventh Level (E7)

Doors, trim and millwork are ready to be installed and work is continuing on ceiling installation. Wall covering is well along as is finish painting and trimming out. Plumbing fixtures and toilet room accessories are being currently installed. The punchout target for the seventh floor is currently December 15, 1975 (working day 499).

Eighth Level (E8)

Doors, trim and millwork are being installed along with case work. Acoustic ceiling suspension, grid and conduit are also in work at this level. Painting is well along. Current projected punchout date for the eighth floor is January 12, 1976 (working day 519).

Ninth Level (Equipment fan room)

This area is in relatively good condition and it is expected that punching out can proceed at the ninth floor on or about February 9, 1976 (working day 539).

Monitoring Report #7
Center Hospital
Minneapolis, Minnesota
Page four

Tenth and Eleventh Levels (E10 and E11)

These are equipment levels and it is expected to be able to punch out on January 26 and 27, 1976 respectively (working days 528 and 529).

* * * * *

Bridge (B)

Most exterior work at the bridge is complete although revisions to the roof coping are still to be made. For all intents and purposes, the exterior work is no delay to the project completion.

Bridge Fourth Level (B4)

This area has been punched out and corrections are presently being processed.

Bridge Third Level (B3)

Most work at the bridge third level is complete and the area is to be punched out on Monday, November 10, 1975 (working day 475). Interstitial space at the third level has been punched out and most corrections made.

Bridge Second Level (B2)

Installation of gyp board, taping and sanding is just being completed and the area is about ready for prime painting. It is currently expected to begin punching out the interstitial space on December 1, 1975 (working day 489) and the floor level space on December 8, 1975 (working day 494).

Bridge Skyway Level (BSW)

Most mechanical equipment has been moved into the skyway level and installation is proceeding. It appears presently that there is from 10 to 12 weeks longer required to complete installing the equipment room with punching out the interstitial space due to begin on January 30, 1976 (working day 531). Punching out the fan room proper is expected to begin on February 11, 1976 (working day 539).

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Monitoring Report #7
Center Hospital
Minneapolis, Minnesota
Page five

West Two Bays

(In our work at this monitoring it was decided to refer to the bridge and west two bays as the west wing, eliminating the current identification of them as separate building elements. For the purpose of this report, however, the identity of the west two bays is kept separate. In subsequent reports it will be merged with the bridge work. On the networks for completion, punchout and acceptance, sheets 1 through 3, Issue P1 dated November 4, 1975 the west wing two bays and bridge work are combined.)

Fourth Level (W4)

This area has been punched out both at the interstitial space and at the floor level. Corrections are presently in progress.

Third Level West (W3)

This area is substantially complete with the interstitial space punched out and corrected. The floor level is due to be punched out starting November 10, 1975 (working day 475).

Second Level (W2)

Trimming out of the floor is presently in work with punchout expected to start on the interstitial space December 1, 1975 (working day 489). Punching out the floor level space is currently due to begin on December 8, 1975 (working day 494).

Communications Center and Lower Level Work

Presently the communications center console is due to be shipped to the job site on November 21, 1975 (working day 484). It should arrive sometime early the week of November 24, 1975 and installation will proceed immediately.

There are some problems that surround completion of software packages for various systems needed to make the hospital operational. However, these can only be followed on a day to day basis and I strongly recommend that the various computational software packages be identified explicitly and responsibility for following their processing be assigned on a definitive basis.

Monitoring Report #7
Center Hospital
Minneapolis, Minnesota
Page six

Overall, communications center work appears to be in relatively good condition to receive equipment and occupancy. It is planned to punch this space out starting November 12, 1975 (working day 477) so that installation of equipment can begin at an early date. Punching out of the inhalation therapy area at the lower level is currently projected to begin on February 23, 1976 (working day 538).

Skyway Level (Library)

Work at the library has not been moved too far ahead of its position as of the previous monitoring in June 1976. The major reason for this was that there was a need to await removal of the mechanical equipment for the skyway level prior to beginning intensive work at the library. Presently it is expected to punch out the skyway level interstitial space on January 30, 1976 (working day 531) and the floor level space on February 11, 1976 (working day 539).

First Level (Auditorium)

Work is proceeding on interior finishes at the auditorium level although this area has been used as somewhat of a fill-in while focusing on other more critical areas. Presently it is expected to complete the first floor level and to start punching out the interstitial space by December 29, 1975 (working day 508) and the floor level space on January 5, 1976 (working day 514).

First Level (Shop area)

Present targets are to maintain the same punchout starts for the shop area at the first level as for the auditorium.

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Qw part of our monitoring, we met with the major parties to the design and construction on the Center Hospital project and reviewed several current items. These are discussed at random below.

- The current target for patient move-in to the entire new facility is now tentatively set sometime in late April or early May 1976. There may be some early move-ins and these were reviewed in considerable detail. The desires of MMC relative to early moves

are outlined in a memo from Mr. Craig Ames to Mr. John Anderson dated November 4, 1975. Essentially MMC would like to occupy the cardiac cath lab at the third level bridge, the labor and delivery rooms on the fourth floor of the east wing, the communications area at the lower level of the west two bays, and patient rooms on the east third, fifth and sixth floors. It appears that many of these requests can be met if it is possible to move into the spaces without imposing excessive operational problems on the various hospital systems. These matters were discussed in great detail with Mr. Richards, Mr. Cushing and Mr. Ames and will be followed with the help of Mr. Anderson over the next few weeks.

- The process of punching out has been agreed to consist of first, completing the space, next punching it out (PO), followed by punchout corrections (POC) and then a final inspection (FI). After the final inspection there may be immediate owner acceptance (OA) or this action may be delayed for a period of time depending upon the needs of the owner and the contractors. It was decided that the financial and legal implications of the various steps would be explored in detail over the next few weeks by the owner in conjunction with the architects and the contractor.
- A brief discussion was held regarding any pending major changes that might influence punching out or completion dates currently set. It was agreed that there are no major potential problems currently. There are some minor problems to be resolved but these are recognized and being worked on at present.
- Activation of the communications center was discussed at length and it was agreed that work there should be able to be completed by the time a major need for the center is felt.

- **The techniques of punching out were brought up and it is to be continually urged that of prime importance is to distribute promptly (within one week or less) a full list of all items appearing in the punch list. All parties to the project agreed that they would review this matter and attempt to expedite preparation of all punch lists.**

- **As part of our work on establishing punchout procedures, we also identified the various systems punchout starting dates. These are shown on sheets 1 and 2, Issue P1 dated November 4, 1975. Copies of the diagram have been issued to Mr. Richards, Mr. Anderson, Mr. Cushing, Mr. Myers and Mr. Cox.**

The systems were broken into the following major categories:

- **medical gases**
- **domestic water**
- **natural gas**
- **hot and chilled water**
- **waste**
- **steam**
- **air distribution**
- **demand delivery system**
- **scheduled delivery system**
- **fire alarm**
- **nurses' call**
- **public address**
- **sprinkler**
- **building automation**
- **electrical distribution**
- **elevators**

It was agreed that the nurses' call system would be punched out with the floor space in which it was located. All other systems are to be completed and punched out independent from work at the floor levels or floor spaces.

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Monitoring Report #7
Center Hospital
Minneapolis, Minnesota
Page nine

Presently it appears that most of the systems can be completed, ready for punching out by the end of this year, except for the demand delivery system. Therefore, the current target on most is sometime between November 4, 1975 (working day 471) and the beginning of 1976.

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