

August 3, 1983

Subject: Monitoring Report #1
Radison Hotel At Seven Corners
Minneapolis, Minnesota
Witcher Construction Company

Project: 83:13

Date of Monitoring: July 26, 1983 (working day 145)

Monitored from Issue #3 dated June 27, 1983 (working day 125)

Actions taken:

- Briefly inspected project site
- Reviewed network model logic for structure and close in
- Prepared typical floor diagram and set starting dates for gyp board
- Prepared network model for meeting and ballroom areas (MBR)
- Rechecked low rise structure and food service and utility area (FSU) plan
- Began tying construction of FF & E to building construction work

General Summary

During our session we simulated needs of the project for various soft opening dates. A final decision has not yet been made on what target soft opening should be set, but the work today was designed to help establish the cost and schedule implications of early and late dates.

To the present, we have completed network models for the following:

- foundations
- tower structure
- low rise structure
- tower close in
- low rise close in

Monitoring Report #1
Radison Hotel at Seven Corners
Page two

- typical room floor at tower
- interior work at food service and utility area
- interior work at meeting and ballroom area
- preliminary procurement work

Still remaining to be diagrammed are the:

- dining area
- lobby and office area
- exterior canopy area
- site work
- utility floor including pool, mechanical rooms, and service areas
- completion of procurement

At our next session we should concentrate heavily on these areas so that the final tying together of the FF & E and building work can be done.

Most of our focus at this meeting was on checking the revised floor pour sequence at the tower. Present plans are to work from west to east at the tower structure and to achieve close in so we can start hanging board at the tower sometime near December 29, 1983 (working day 254). It should be kept in mind that this schedule for starting drywall is based upon an accelerated plan action that might be desired by the owner. In such a case it will probably be necessary to provide as much as a month and a half additional heat to maintain working conditions on drywall. This is in addition to the original estimated costs of the program.

Another item that must be watched very carefully is erection of exterior masonry. The initial plan was to erect the east masonry from a scaffold and the west masonry from a swing stage suspended from the 9th or 10th floors. The difficulty with this plan is that it requires a long wait to bring the structure up to the point where the swing stage can

Monitoring Report #1
Radison Hotel at Seven Corners
Page three

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

be erected and west end masonry started. Some of our discussions at this session revolved around the possibility of scaffolding the entire job which would mean that some method of support off the low rise roof would be required. This will be studied in more detail, and we will hold setting the sequence of masonry until the method of erection has been decided upon.

Current work in the field is moving well even though Northern States Power Company has not freed up the site as of July 26, 1983 (working day 145). However, there was some discussion that NSP had completed their work the afternoon of July 26, 1983 (working day 145) and that full scale field operations could proceed. This should be confirmed.

At present, excavation and backfilling is under way, wall and column footings and foundation walls and piers are in work, and some backfilling has begun. The network model was updated to reflect the current status of the work, and in our discussions it was decided that we should plan to start forming at the 2nd floor about August 5, 1983 (working day 153). The sequence will then move from the 2nd floor, and from the balcony slab work, to the west to east sequence that has been planned and shown on the structural network sheets, Issue #3 dated June 27, 1983 (working day 125).

It should be noted that the assumption being made presently is that post-tensioning can either be made from tensioning slots cast into concrete or with full access to the post-tensioning end. A field determination will be made generally as to which is the more appropriate of the two techniques.

Overall, it is planned that the structure of the building can be completed by late February or early March, 1984. It is intended to start the exterior skin of the building with stud walls and sash by about September 20, 1983 (working day 184). Present assumptions are that low rise structural steel could be on the job by September 16, 1983 (working day 182) and the low rise closed in by about January 10, 1984 (working day 261).

The low rise area is a critical area since it is where many of the long lead time items are installed and where close interaction, particularly in the food service and utility area, is needed with the FF & E

Monitoring Report #1
Radison Hotel at Seven Corners
Page four

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

contractor. At our meeting we checked over the food service and utility network model and also prepared a network plan for the meeting and ballroom area (MRB). This new diagram is shown on sheets #14 and #15 Issue #4 dated July 26, 1983 (working day 145). At our next session we shall continue with our planning work at the low rise and lower areas of the hotel and tie them together with the FF & E procurement and installation.

I left with Mr. Dick Redmond two drafted sheets showing procurement work for the general contract operations on the hotel. Generally, the work is broken into three or four major activities - award contract, prepare and submit shop drawings, review and approve shop drawings, and fab and deliver materials and equipment. I suggested to Mr. Redmond that he fill in as many of the starting points and durations as possible so that we can get a better handle than we have at present on delivery of the various long lead time items. He will review this material in detail.

Meanwhile, I shall have the revisions which we made to our network model at this monitoring drafted into final form, the diagrams dated and issued just as soon as possible. At present, I am having the reference key plans, elevations and sections of the facility prepared, and will issue these as soon as they are complete.

I shall be in touch with Mr. Mike Redmond shortly to set the next planning and monitoring session for the hotel work. At this session I suggest we meet with the FF & E people once again to insure that our plans of work are compatible. Meanwhile, if there are any revisions from those items we discussed or agreed upon at our session last week, please let me know.

Ralph J. Stephenson, P.E.

RJS:sps

To: Mr. Mike Redmond

cc: Mr. Richard Redmond

September 11, 1983

Subject: Monitoring Report #2
Radisson Hotel at Seven Corners
Minneapolis, Minnesota
Witcher Construction Company

Project: 83:13

Date of Monitoring: August 30, 1983 (working day 170)

Monitored from Issue #4 dated July 26, 1983 (working day 145)

Actions taken:

- Reviewed network models for revisions to structure and close in
- Set masonry sequence
- Began preparation of action schedule summary bedsheet
- Completed network models for lobby, office, and dining areas (LOD)
- Completed canopy area (CA) network

General Summary

Currently the project is moving very well with the balcony, 2nd floor, and 3rd floor slab poured out. Fourth floor slabs are due to be poured out September 1, 1983 (working day 1720) and September 2, 1983 (working day 173) at the west and east respectively. It was decided that the improved construction plan for the concrete sequence should be reflected in the network. Therefore, Mr. Dick Redmond and Mr. Ray Yerigan reviewed the revised sequence, and we incorporated it into the network model which will be redrafted and issued.

The effect of the compressed pour schedule gives us a better balance for erection of west and east masonry. The two halves of the buildings will be closed in with masonry on a more closely aligned schedule than was the case previously. However, because the compressed pour schedule allows additional flexibility in supporting

Monitoring Report #2
Radisson Hotel at Seven Corners
Page two

the swing stage the masonry total completion dates are still relatively the same, as are the start of interior finish work at each floor.

For the most part we are maintaining the same scheduled starts and finishes of interior finish work at each floor as we reported previously. Start of finish work at the 3rd level is presently December 30, 1983 (working day 255) to begin hanging board. Completion of all finish work at the 14th floor is the evening of August 3, 1984 (working day 408). These dates at present appear to tie in well with the FF & E work. However, Mr. Dick Redmond will meet with the FF & E contractor to confirm the sequence and dates as presently being used as being satisfactory.

We next made revisions to the low rise close in and the various interior low rise areas necessitated by the changes to the structure. At the low rise structure, we have separated erection of masonry from erection of structural steel with the intent that the masonry can be chased to permit steel to be erected independent of masonry. Thus, we were able to re-evaluate and compress to some extent work at the food service area and at the meeting and ballroom areas. These networks were revised and will be issued in the revised form.

We also completed diagramming the lobby, office, and dining area (LOD) and the calculations on that will be made as soon as all interconnections are established from the interior areas that precede it, namely the food service area (FSU) and the meeting and ballroom areas (MBR).

At the canopy (CA) the work required is installation of the canopy ceiling followed by installation of the lobby curtain wall. We set this sequence, but no starting date was assigned since Mr. Yerigan is not certain whether the work can be deferred until next year or whether it should be done prior to cold weather this year. He will study the matter in more depth and make a decision shortly.

At this time, we have most of the areas diagrammed with the exception of the utility floor, site work, and completion of procurement. We shall address these at our next session, particularly procurement planning, since the compressed schedule will require very close attention be paid to procuring critical materials such as hollow metal, structural steel, rough in at the food service area, curtain wall at the lobby, and others. I shall

Monitoring Report #2
Radisson Hotel at Seven Corners
Page three

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

be in touch with Mr. Mike Redmond shortly to set up the next planning session. Meanwhile, as the sheets are drafted we will forward them to Mr. Richard Redmond for his study and distribution.

Ralph J. Stephenson, P.E.

RJS:sps

To: Mr. Mike Redmond

cc: Mr. Richard Redmond

December 19, 1983

Subject: Monitoring Report #3
Radisson Hotel at Seven Corners
(Radisson Metrodome Hotel)
Minneapolis, Minnesota
Witcher Construction Company

Project: 83:13

Date of Monitoring: December 7 and 8, 1983 (working day 239
and 240)

Monitored from Issue #6 dated September 19, 1983 (working
day 183)

Actions taken:

- Inspected project
- Reviewed project status with Mr. Dick Redmond and
Mr. Ray Yerigan
- Evaluated current job status
- Updated selected network model sheets to Issue #7 dated
December 8, 1983 (working day 240)
- Reviewed FF & E projections

General Summary

Currently the tower floor and roof decks are nearly all poured out, and it is expected to complete the last pour at the penthouse roof by December 16, 1983 (working day 246). Exterior wall studs are erected through the 13th floor at the east and work is in progress at the 14th floor. Wall studs at the west are being held pending receipt of head receptors for windows. Some sash is installed up through the 6th floor although the radius windows have not yet been started. Masonry at the west is erected to the 6th floor. At the east it is erected through the 9th floor and work is presently in progress at the 10th floor. The swing stage at the west end is currently being moved to the 14th floor west.

Overall, progress on closing in the building is fairly good although the large amounts of snow encountered the

latter part of November (some 30" in two snowfalls) has made the building somewhat difficult to work in and consequently close in has been hampered. Nevertheless, it is still the intent to maintain targets as established in the Issue #5 network model dated August 29, 1983 (working day 169) and shown on sheets #7m #8, and #9.

At the low rise, structural steel is substantially up and trimmed, most metal deck is on and this work is being completed along with nailers to allow start of roofing by Monday, December 12, 1983 (working day 242). Roofing was due to begin no later than November 18, 1983 (working day 227), so the projected lag is about 15 working days over target early start/early finish dates.

To evaluate the true position of the low rise, we made a detailed analysis of the necessary late start dates, and it appears now it will be essential to have spray on fireproofing at the food service and utility area (FSU) begin no later than December 22, 1983 (working day 250). This is essential since the sequence leads to key milestone dates that are necessary for Witcher and the FF & E contractor, CSA, to achieve. Our review of the FF & E work (fixtures, furnishings, and equipment) indicates that their main movement onto the job will be between June 1, 1983 (working day 363) and June 12, 1983 (working day 370). They will be moving into various areas of the project as described in sheet T-2 Issue #6 dated September 19, 1983 (working day 182). Some of the more important dates discussed at our session are listed below: (All dates from sheet T-2)

- ✓ - Food service equipment installation to start - 6/1/84 (working day 363) (Item #5)
- ✓ - Laundry equipment to be requested on job by March 1, 1984 (working day 298). Mr. Yerigan would like to place this equipment as quickly as possible to avoid delaying close in of the building (Item #6)
- ✓ - Millwork on first floor to start 6/1/84 (working day 363) (Item #7)
- ✓ - CSA would like to use ballroom for storage on 6/1/84 (working day 363) (item #8)
- FF & E to start at 3rd floor office 7/16/84 (working day 393) - Will be occupied 8/1/84 (working day 405) (Item #9)

Monitoring Report #3
Radisson Hotel at Seven Corners
Page three

- Vinyl wall covering to start at guest rooms 1/27/84 (working day 274). Initial work will be started at the 4th floor and will move from 4 to 5 to 3 to 6 and then on up (item #10).
- Start carpet at 4th floor June 12, 1984 (working day ⁵270) (item #11)
- Soft opening date being held at September 4, 1984 (working day 428)

Using the above information to set late finish dates particularly at low rise areas indicates that work is rapidly becoming very critical. Projecting back to the diagram on network model sheets #12, #13, #26, #27, #28, and #29 we find that the early start of spray on fireproofing at the food service and utility area was set at November 28, 1983 (working day 232) while the late start established from our work today is December 22, 1983 (working day 250). Present plans are to have the roof on and some heat in the building at the low rise area by December 16, 1983 (working day 246). This should allow spray on to begin provided the joists have been wrapped with lath far enough ahead to permit spray on to be initiated. Presently this is a very critical set of operations since it leads to completion of rough work at the FSU area, start of studs, start of wall and ceiling gyp board, and the moving to the meeting and ballroom area (MBR) on wall studs and hanging board, and from there on to the lobby, office and dining areas (LOD) on wall board, taping, sanding, and finishing.

It is desired by the FF & E contractor to have the lobby office and dining area (LOD) available for start of fixturing by June 1, 1984 (working day 363). Therefore, it can be seen that initiation of sequential work at the food service and utility area is essential if a well planned and properly spaced out pattern of work is to be maintained.

There is some potential for reducing durations on certain activities along the more critical of the paths but it is best at this point of the job not to consider that such concessions can be made comfortably or effectively. In addition, it should be noted that there are several paths that have low amounts of float time available and that these also must be watched if we are to meet the full range of target dates.

At the food service area present plans are to start installation of food service equipment by June 1, 1984 (working day 363). Dimensions are being held on wall work at this

area so field measurements should not be necessary and fabrication of equipment should be in work shortly. An item to be examined in detail soon is the storage requirements for meeting and ballroom areas. The present network model issue #7 dated December 8, 1983 (working day 240) shows early finish of the MBR area at May 3, 1984 (working day 343), with the late finish being the desired start of storage space by CSA, the FF & E contractor, by June 1, 1984 (working day 363). Finish work in the area leads through light fixtures, carpet and resilient base, installation of operable partition, completion of acoustic ceiling panels, and then clean up and move out. Thus, when this area is completed by Witcher it will have all the finish trades except FF & E work installed. This means that special care will have to be taken when permitting storage in the area, so as to avoid damage to installations that could be affected by the storage process.

The close communication presently maintained between CSA and Witcher should make it possible to complete most of the work on the project on a mutually cooperative basis. The relationships have been excellent to date, and it appears that both organizations are moving well in their individual assignments. It would be appropriate, in my opinion, to have a major review meeting soon with CSA to insure that the conditions as outlined on sheet T-2 Issue #6 dated September 19, 1983 (working day 183) are still valid.

Resulting from our meeting was a decision to make three sets of revisions to the current network model. These include:

1. Show late starts and late finishes on all low rise interior work.
2. Revise the network model for the interior of the 3rd, 4th, and 5th floors to show the revised sequence of 4 to 5 to 3 to 6 and then on out through to the top of the building.
3. To show the late starts and late finishes on the 3rd, 4th, and 5th floor interior network models.

I shall have this work done in the very near future and forward it to Mr. Dick Redmond for his use in the office and field. Meanwhile, as noted above, I left sheets #12, #13, #26, #27, #28, and #29 with Mr. Dick Redmond for his use in reviewing the revisions proposed and the late starts and late finishes with Mr. Ray Yerigan. When Mr. Redmond has completed this review, he will send me these sheets for updating of the network model.

Monitoring Report #3
Radisson Hotel at Seven Corners
Page five

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

Meanwhile, I will be in touch with Mr. Mike Redmond soon to set the next monitoring session. I recommend we evaluate the job carefully over the next several weeks so as to identify any potential delays that might interfere with meeting our critical FF & E milestone dates.

Ralph J. Stephenson, P.E.

RJS:sps

To: Mr. Richard Redmond

cc: Mr. Mike Redmond

M

RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER

January 28, 1984

Subject: Monitoring Report #4
Radisson Hotel at Seven Corners
(Radisson Metrodome Hotel)
Minneapolis, Minnesota
Witcher Construction Company

Project: 81:13

Date of Monitoring: January 23, 1984 (working day 270)

Monitored from Issues #5 and #7, dated August 29, 1983 (working day 169) and December 8, 1983 (working day 240) respectively

Actions taken:

- Reviewed project status with Mr. Dick Redmond and Mr. Ray Yerigan
- Evaluated current job status
- Reviewed FF & E projections
- Discussed current project condition with Mr. Mike Redmond

General Summary

The project is currently being monitored from Issue #7 dated December 8, 1983 (working day 240) sheets #12, #13, #26, #27, #28 and #29 for the low rise areas. We monitored tower work from updated sheets #14, #15, and #16 Issue #7 dated December 8, 1983 (working day 240) for third, fourth, and fifth floor interior work. Upper floors of the project were monitored from Issue #5 dated August 29, 1983 (working day 169).

In the high rise, hanging of board is proceeding reasonably well in accordance with the network model plans. However, taping and sanding at the floors is not yet started and currently lags at the fourth floor by about 14 working days. It was due to begin on January 3, 1984 (working day 256) and will start today January 23, 1984 (working day 270). It should be noted that this lag will affect the ability to start vinyl, and we should reproject our vinyl start date correspondingly at the 4th floor. It was hoped to begin vinyl there no later than January 26, 1984 (working day 273). This will probably have to be delayed for 7 - 10 working days because of the lag in taping and sanding. Mr. Yerigan intends to make every

effort to pick up this lag, and by compressing longer durations it appears it will be possible to at least recapture a portion of the delay.

Low rise work is in fair condition with current delays being experienced due to spray on fireproofing and fiberglass duct work lags. It is critical to improve performance on these two trades since they unlock most of the other work.

A brief detailed description of each area is given below:

Structure and close in

Concrete work at the tower was completed by about December 30, 1983 well ahead of the projected completion of January 20, 1984 (working day 269). Masonry is erected through the 11th and part of the 12th floor with sash being installed close behind. The building presently is reasonably dry to weather and in such condition that interior finish work at lower levels can begin. Roofing should pose no delay to moving on up with finish work. For all intents and purposes the high rise is closed in to weather at the tower levels.

At the low rise the roof is nearly complete although there are some local areas that still must be closed in. Glass has not been erected at the low rise nor have the mullions and bulkheads at the lobby clerestory area. However, interior finish work could proceed at the lower areas with miscellaneous protection.

Food service and utility (FSU)

Spray on fireproofing is about 75% complete at this area and should be completed in the very near future. The lag in fireproofing is currently about 8 working days. Overhead fiberglass duct work has not yet begun and the current lag in duct work is 15 working days. Sprinkler piping has not started either, and the lag in it is about 5 working days currently. The lag in duct work should be corrected just as quickly as possible since it poses a restraint on many trades that are to start within the next two or three weeks.

The kitchen area is critical since it is here that the bulk of the food service work is to be installed, and the area itself is important to be finished early so that proper training and run in can be accomplished.

Target FF & E dates at the kitchen include:

- Installation of kitchen hoods which should be able to start within the next several days

- Installation of food service equipment due to begin June 1, 1984 (working day 363) and be completed by the evening of July 20, 1984 (working day 398)
- Completion of the full area and moving out by the evening of May 31, 1984 (working day 363). The full completion date of May 31, 1984 (working day 363) is a desired date by which it is expected that Witcher work at the area will be complete.

Meeting and ballroom areas (MBR)

Spray on fireproofing is in work and most upper partition track is complete. The joists have been wrapped with mesh and are ready to finish the spray on fireproofing. Some masonry has been put into work.

The current lag at the MBR area is about 4 working days in spray on fireproofing. However, it will be important to insure that the above floor rough mechanical and electrical work is ready to proceed as soon as spray on fireproofing is complete. Duct work was due to begin no later than January 30, 1984 (working day 275), and it is very important that this date be met if we are to finish by the desired target of the evening of May 31, 1984 (working day 363). It is desired by the FF & E contractor to use the ballroom for storage, and his requested date for move in to that area was June 1, 1984 (working day 363). We shall attempt to maintain this target.

Lobby, office, and dining (LOD)

The floor slab has been poured out at the lobby, office, and dining area. No spray on fireproofing at the steel structure has yet begun.

Some overhead work, primarily mechanical and electrical piping and conduit, has been started. Presently there is no lag at the LOD over late starts and late finishes; however, we are maintaining a target completion of the evening of May 31, 1984 (working day 363) so as to allow start of equipment and millwork by the FF & E contractor on June 1, 1984 (working day 368).

Canopy area

Most of the black iron suspension is installed, and it expected plastering could begin as early as January 25, 1984 (working day 272). This will give a projected lag of 35 working days over our desired late start in the Issue #7 network model dated December 8, 1983 (working day 240). There does not appear to be any major need for canopy completion at an early date; therefore, this long lag is not a serious problem.

Tower interior work

Presently, studs are erected through the 12th floor with in wall electrical work in place through the 9th floor. Mechanical work in studs is complete through the 11th floor. Drywall has been hung at the 4th floor and will be completed at the 5th floor the evening of January 24, 1984 (working day 271). Drywall will be complete on the 6th floor the evening of January 27, 1984 (working day 275). From the 6th floor board will be hung at the 3rd floor starting about January 27, 1984.

Taping and sanding has not yet begun but is expected to start January 23, 1984 (working day 270) at the 4th floor. This work was originally due to begin no later than January 3, 1984 (working day 256) so lags about 14 working days. It is felt by Mr. Yerigan that the drywaller will be able to recapture the lag in the next few weeks and bring interior finish for the floor work back on target. This will be desirable since at all floors the initial activity that drives the work is taping and sanding, and it will be essential to maintain a regular turnover cycle on each floor starting on 4 and moving on up to 14.

It was decided at our session that we would maintain all of the target completions for each interior floor as shown on sheets #14 through #25. The target start for carpet at the 4th floor was set at June 12, 1984 (working day 370) and it appears presently that this date can be met. In fact, it is possible if the FF & E contractor desires, that they could start with interior finish work such as carpet at an earlier date. This will be discussed with the FF & E contractor by Mr. Dick Redmond and Mr. Ray Yerigan.

At the 3rd floor, it is the intent to set the laundry equipment just as quickly as possible so the least amount of damage or difficulty will be experienced in bringing this heavy equipment into the job.

Overall, the dates as outlined on pages 2 and 3 of Monitoring Report #3 dated December 19, 1983 (working day 247) still hold for FF & E work with the exception that vinyl wall covering will probably not be able to start at the guest rooms by January 27, 1984 (working day 274). The reason is the current lag in taping and sanding which may move that date back by as much as 10 - 15 working days. However, it would still be wise to get vinyl on the job as early as possible.

General

Overall, the project is moving fairly well although there are some local dislocations that must be given careful and prompt

Monitoring Report #4
Radisson Hotel at Seven Corners
Page five

RALPH J. STEPHENSON, P. E.
CONSULTING ENGINEER

attention immediately. Of great importance is to meet regularly with the FF & E contractor to insure that their deliveries and their work is being fitted to the current time schedule set by the general and specialty contract work.

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

Ralph J. Stephenson, P.E.

RJS:sps

To: Mr. Richard Redmond

cc: Mr. Mike Redmond