

August 6, 1986

Subject: Monitoring Report #1  
Grand Traverse Resort Village Conference Center  
(GTRVCC)  
Acme, Michigan

Project: 86:37

Date of Monitoring: July 17, 1986 (working day 139)

Actions taken:

- Briefly inspected project site from tower
- Reviewed overall conditions and target dates for project
- Began preparing laundry list of activities to be completed
- Prepared summary network model for entire project sheet SM-1, Issue #1 dated July 17, 1986 (working day 139)
- Prepared detailed network model through completion of substructure and partial erection of structural steel sheet #1, Issue #1 dated July 17, 1986
- Reviewed overall program with Mr. Robertson and Mr. Pursifull

General Summary

This initial planning meeting on the project was to start detailed modeling of the project and to generate an overall time structure in which the project is to be built. Present plans are to start active field work on the substructure by August 4, 1986 (working day 151) and to be ready to erect structural steel, trusses, joists, and metal deck by September 15, 1986 (working day 180). The desired completion target for the entire project is early June, 1987.

Our summary planning indicates that this is going to be a very tight time schedule to achieve. In the summary network model, sheet SM-1, Issue #1 dated July 17, 1986 (working day 139) the completion date shown was June 12, 1986 (working day 370) which is slightly later than desired. We shall make an ongoing evaluation of this end date and the potential for meeting or bettering it in each of our subsequent planning and monitoring sessions.

Monitoring Report #1  
Grand Traverse Resort Village Conf. Center  
Page two

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

The overall summary diagram indicates that if structural steel can begin by September 15, 1986 (working day 180), the exterior of the building can be closed sufficiently to weather to construct the slab on grade starting in December, 1986. This will then free interior finish work to start in mid or late December, 1986. However, the sequence presently under consideration considers above floor rough interior work will begin directly following about two-thirds of the structural steel erection, plumbing, and bolting. Since the floor slab on grade might not be in place by that time if held until after the building is closed to weather, overhead rough trades might have to work off the native subbase. This matter should be checked immediately to determine if it is a feasible plan of action.

Again, the tight schedule and the shortness of the remaining good construction weather in 1986 make it imperative that all elements that concern closing this building to the weather be given top priority attention immediately.

We are planning to meet again on Thursday, August 14, 1986 (working day 159) at which time we shall make an effort to complete the detailed diagram up through close in and complete as much of the interior rough and finish work networks as time will permit. Copies of the summary network model and the detailed network models were left with Mr. Robertson and Mr. Pursifull for further study. I shall maintain direct contact with Mr. Robertson relative to our planning and monitoring sessions.

Ralph J. Stephenson, P.E.

RJS:sps

To: Mr. Ross Pursifull  
cc: Mr. Donald G. Robertson

Subject: Monitoring Report #2 Sept. 4, 1986

Grand Traverse Resort Village Conference Center  
(GTRVCC)

Acme, Michigan

Project: 86:37

Date of Monitoring: August 14 and 15, 1986 (working day 159 & 160)

Actions taken:

- Briefly inspected project from upper tower floors
- Updated summary network model to Issue #2 dated August 14, 1986 (working day 159)
- Updated substructure, superstructure, and close in model sheet #1, to Issue #2 dated August 14, 1986 (working day 159)
- Evaluated current procurement status
- Reviewed project with Mr. Don Robertson and Mr. Doug Maddeline
- Reviewed project with Mr. Don Robertson and Mr. Ross Pursifull
- Evaluated current project status
- Prepared preliminary network model for interior work at ball room area (BR) of convention center.

General Summary

As of August 14, 1986 (working day 159) substructure construction is proceeding fairly well. The original work sequence plan of Issue #1 dated July 17, 1986 (working day 139) was based on interior and exterior footings in the area east of the column line 20 being built initially, then moving west in successive stages toward the west end. This sequence has been revised and at present exterior wall footings and foundation walls are being built along the south wall, moving from east to west. Next the west exterior wall footings and walls will be built and then the footings and walls along the north line.

The major reason for this change is that deep existing utilities in the areas east of column line 20 made it more appropriate to work around the perimeter of the building as an initial work effort. Interior footings and walls will proceed as areas are freed up by deep utility work east of column line 20.

Monitoring Report #2  
Grand Traverse Resort Village Conference Center  
Page two

Present plans are to be ready for structural steel by Sept. 22, 1986 (working day 185). Structural steel erection has been divided into 4 sequences, numbered SQ 1 through SQ 4. The following areas are included in each sequence:

- SQ 1 - area east of column line 20
- SQ 2 - area at the south side, column lines S to Q 3 and 20 to 31.
- SQ 3 - area at the north side, column Q 3 to A and 20 to 25
- SQ 4 - area from column Q 3 to A and 25 to 31

It is expected presently that all steel detailing and erection of floor and roof metal deck will be done by Nov. 13, 1986 (working day 223).

Following closely will be erection of exterior studs and sheeting, including masonry required to flash the roofing to exterior stud walls. In addition, block back up, beginning at the south, will proceed on around from south to west elevations and then to the north wall of the facility.

Roofing will follow behind studs and sheeting with completion of roofing to critical dry now expected by Dec. 3, 1986 (working day 236). Horizontal dry in of the building probably will be accomplished slightly earlier.

Slab on grade work is expected to begin closely behind sequence 1 and 2 structural steel. The initial activities are installation of underground utility work followed by filling, fine grading and pouring out of the slab on grade. Present plans are to pour out slab on grade in sequence 4 by Nov. 12, 1986 (working day 222). However, the initial slab on grade at sequence 1 which will be east of column line 20 could be accomplished as early as Oct. 23, 1986 (working day 186).

It is planned to start rough interior overhead work just as quickly as possible, either off the ground or off the slab on grade, depending on what is available for a working platform. It will be critical to get this overhead work underway concurrently with installation of slab on grade since the two must be closely related to each other so that when the building is closed in finish interior work can start.

Another activity accomplished at our planning and monitoring session was to update the summary network model sheet SM 1 to Issue #2 dated August 14, 1986 (working day 159). In this network we have compressed the plan of work so that completion of the facility is now shown at the morning of June 1,

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

Monitoring Report #2  
Grand Traverse Resort Village Conference Center  
Page three

1987 (working day 361). This is a very tight schedule and it should be cautioned that the project will have to be tightly expedited, of particular importance will be early procurement of all materials and equipment needed for constructing the foundation, erecting steel and deck, and erecting all close in items for the building.

At our next meeting we shall concentrate on these as well as subsequent procurement items that will be critical for early completion. At our next session we shall also continue to review the interior diagrams and identify individual areas that should be isolated and identified for diagramming.

Meanwhile, network models of all diagrams prepared at this session have been printed, reduced, and sent to Mr. Ross Pursifull and Mr. Don Robertson, including a bar chart of network model sheet #1.

Ralph J. Stephenson, P.E.

RJS:gmj  
To: Mr. Ross Pursifull  
Mr. Donald Robertson

September 23, 1986

Subject: Monitoring Report #3  
Grand Traverse Resort Village Conference Center  
(GTRVCC)  
Acme, Michigan

Project: 86:37

Date of Monitoring: September 17, 1986 (working day 182)

Actions taken:

- Inspected project from tower
- Reviewed overall project progress with Mr. Robertson and Mr. Maddeline
- Reviewed progress of substructure and slab on grade work with Mr. Chadwick
- Prepared network model for east service area at grade (ESG) interior work
- Prepared laundry list for north service area at grade (NSG)
- Evaluated current project progress
- Reviewed project with Mr. Ross Pursifull and Mr. Donald Robertson

General Summary

As of September 17, 1986 (working day 182) the project is moving fairly well in the field despite some difficult weather in September, 1986. Since the beginning of field work in early August, 1986, Mr. Robertson estimates that the project has lost about 7 working days to weather. Just recently the Traverse City area had 3.5 inches of rain over a 3 to 5 day period. These wet conditions have tended to slow installation of the substructure and underground utility work.

However, the field forces have moved the project in such fashion that it should be ready to receive structural steel when it arrives on the job September 29, 1986 (working day 190). This delivery is about 1 week later than the original target date of September 22, 1986 (working day 185). However, the steel contractor has indicated that it might be possible to recapture the lost time by using multiple crews. Although this might prove difficult, it is a feasible objective to strive for.

Monitoring Report #3  
Grand Traverse Resort Village Conference Center  
Page two

Meanwhile, installation of deep underground utilities has proceeded at the east end of the project and backfilling there is being brought to slab on grade elevation. The first section of the slab on grade at the east end of the building was poured September 17, 1986 (working day 182). The slab on grade contractor intends to stay ahead of the structural steel erection, completing the slab on grade at the area east of column line 20 by September 29, 1986 (working day 190).

From there the slab on grade sequence will move in the same projected sequence as is intended for structural steel. From sequence 1, which is the area east of column line 20, construction will move to sequence 2, the area at the south side column line S to Q and 20 to 31. From there it will go to the SQ 3 area, column line Q 3 to A and 20 to 25, and complete out at sequence 4, the area from column Q 3 to A and 25 to 31.

If slab on grade construction can stay ahead of structural steel, the slab on grade at the ball room area will be left out for erection access.

A possible deterrent to completing slab on grade work will be the need for information about food service equipment. Mr. Robertson is following this, and will try to obtain enough information so rough in plumbing work can proceed ahead of the anticipated slab on grade sequencing.

There has been a major cost reduction effort made by the owner on the project and several changes are presently pending. Costing is complete on a budget basis for these changes, but it is essential to get working drawings and specifications showing the changes so costs can be firmed up, and work can proceed in the field.

Items that have changed that are of critical importance currently include the following:

1. Revisions to the roof structure must be made to accommodate roof top units. This is very important since steel is presently planned to arrive on the job September 29, 1986 (working day 190). Some refabrication will be essential.
2. A decision will have to be made on the gas service and whether it is to be brought in from the existing tower mechanical court or from the boulevard. The cost of the system will probably determine which route selection is made.

Monitoring Report #3  
Grand Traverse Resort Village Conference Center  
Page three

3. Power service must be picked up at the tower mechanical court. There is no current problem with this.

The mechanical and electrical decisions that have to be made will probably not impact on slab on grade work in the building. However, fall and winter weather is rapidly approaching. Therefore, anything that is to be installed on the site should be put in place as quickly as possible.

We discussed procurement in some detail and below is listed a brief resume of the current status of contracts and delivery of key items. The status is as of September 17, 1986 (working day 182):

- Mechanical contract awarded about 10 working days ago
- Electrical contract awarded last week
- Masonry contract awarded last week
- Miscellaneous iron contract awarded last week
- Dry wall contract awarded this week
- Painting contract awarded this week
- Folding partition contract awarded this week
- Carpentry contract awarded last week
- Roofing contract awarded this week
- Sash and curtain wall contract awarded last week
- Hollow metal to be let this week
- Overhead doors to be let this week
- Sprinkler contract not let
- Food service equipment contract not let
- Hard tile contract to be let this week
- Resilient tile contract to be let this week
- Movie screen awarded last week
- Wood doors contract to be let this week

Monitoring Report #3  
Grand Traverse Resort Village Conference Center  
Page four

Overall, procurement is in fairly good shape but must be watched carefully to insure that all key trades are awarded promptly.

We also talked briefly about FF & E installation. The FF & E work is probably going to be awarded to Mr. Tom Hoch and we should be in touch with him shortly to discuss the roles to be played in planning installation. Questions to be answered include the following:

1. When should FFE planning work be started?
2. Who is going to participate in the detailed planning of FFE?
3. What is the role of the Grand Traverse Resort Village CM in FFE work?

Apparently the CM group will be actively involved in monitoring the contract. I shall plan to work with Mr. Robertson and through him with Mr. Hoch to do the planning on FFE work.

At our next session we should continue diagramming the interior areas of the project and also begin concentrating on planning the pool area. There apparently is no difficulty in constructing the pool area in the required time. However, design drawings are needed immediately to help make basic decisions.

The next planning and monitoring session is presently set for October 15, 1986 (working day 202). I shall be in touch with Mr. Robertson to confirm this date. Meanwhile, I shall print the network models prepared at this session and forward them to Mr. Pursifull and Mr. Robertson for their use.

Ralph J. Stephenson, P.E.

RJS: gmy  
To: Mr. Ross Pursifull  
Mr. Donald Robertson

October 21, 1986

Subject: Monitoring Report #4

Grand Traverse Resort Village Conference Center (GTRVCC)

Acme, Michigan

Project: 86:37

Date of Monitoring: October 15, 1986 (working day 202)

Actions taken:

- Inspected project from tower
- Reviewed overall project progress with Mr. Robertson
- Reviewed progress of substructure and slab on grade work with Mr. Chadwick and Mr. Basch
- Prepared network model for mezzanine support area east of column line 20 (MSA)
- Updated network model for east ground level service area (ESG)
- Completed ballroom, prefunction and north support area diagram (BPS)
- Evaluated current project progress
- Reviewed project with Mr. Ross Pursifull and Mr. Donald Robertson

General Summary

Structural steel arrived on the job site Tuesday, September 30, 1986 (working day 191). It was due to be on site September 22, 1986 (working day 185). Thus, it arrived about 6 days later than had been desired and anticipated. As of October 15, 1986 (working day 202) steel had been erected in sequence #1 and sequence #2. Sequence #3 had just started on October 15, 1986 (working day 202). Structural steel in sequence #1 is being detailed and as detailing proceeds, metal deck erection is to follow behind. No detailing work had been done in sequence #2 as yet. It will be very important that detailing and metal deck work follow closely behind erection of steel since the ability to erect exterior masonry along with other rough interior and skin trades, depends upon structural steel being detailed and bolted.

Exterior block backup at the south wall was expected to begin by October 16, 1986. It may be able to meet this date provided

Monitoring Report #4  
Grand Traverse Resort Village Conference Center  
Page two

access to the building can be gained by the mason contractor. There are some backfilling problems at the south side and these must be cleared before the mason can gain access to this area of the building.

Meanwhile, slab on grade work has proceeded well and is slightly ahead of our proposed current plan. At sequence #1 a portion of the floor slab on grade has been completed. The remainder is expected to be poured out by October 23, 1986 (working day 208). This work was to be completed by October 23, 1986 (working day 208).

At sequence #2 the slab on grade was completed about October 6, 1986. It was due to be completed no later than October 24, 1986 (working day 209). At sequence #3 and #4 underground utility work is about 50% complete and filling and fine grading about 25% complete. It is expected to have about 25% of the slab on grade at sequence #3 and #4 complete by October 23, 1986 (working day 208). The remainder of these slabs will have to wait upon completion of the structural steel. The condition of the sub base at sequence #3 and #4 areas is poor due to the heavy rains and heavy traffic. Therefore, there is some consideration being given to possibly stabilizing the sub base with lime. This method has been widely used on such sub bases in other areas having similar soil, and should pose no major difficulties.

Overall, evaluating current work in the field, it appears that the project lag is about 7 working days in structural steel erection. Again to be emphasized is the need to follow closely behind the erection of structural steel with detailing. This is critical.

At our session we also reviewed the current status of procurement work. A brief review of procurement is given below:

- Carpentry contract - let
- Dry wall contract - let
- Electrical contract - let
  - Shipping primary switchgear October 31, 1986 (working day 214)
  - Shipping primary transformer December 12, 1986 (working day 243)
  - Shipping cable - no word
- Elevator - no word on delivery

Monitoring Report #4  
Grand Traverse Resort Village Conference Center  
Page three

- Escalator - no word on delivery
- Fire protection - let  
Contract let on October 14, 1986 (working day 201).  
No current word on approvals
- Folding partition contract - no word on delivery
- Food service equipment - field measurement of wall locations must be taken; affects fabrication of coolers, tables, cabinets, shelving, and other special built items
- Walk in coolers - to be on job February 2, 1986 (working day 277)
- Remainder of food service equipment - on job March 16, 1987 (working day 307)
- Hard tile contract - let  
Need to resubmit samples
- Hollow metal contract - let  
No word on deliveries
- Masonry contract - let
- Mechanical contract - let  
All shop drawings have been submitted and approved.
- Roof top air unit deliveries  
Shipping 20 ton November 21, 1986 (working day 229)  
Shipping 30 ton November 7, 1986 (working day 219)  
Shipping 25 ton November 21, 1986 (working day 229)  
Shipping 30 ton November 10, 1986 (working day 220)  
Air handler on mezzanine shipping November 10, 1986 (working day 220)  
Condensing unit on roof shipping November 25, 1986 (working day 231).
- Miscellaneous iron contract - let
- Movie screen contract - let
- Overhead door contract - let
- Painting contract - let  
No paint colors selected as yet

Monitoring Report #4  
Grand Traverse Resort Village Conference Center  
Page four

- Resilient tile contract - let
- Roofing contract - let
- Sash and curtain wall contract - let  
No word on delivery
- Sky lights  
Shop drawings have been approved.
- Toilet accessories - let
- Toilet partitions - let
- Wood door contract - let

We briefly discussed installation of fixtures, finishings, and equipment. It appears that Tom Hoch is to be the FF & E designer and contractor. Don Robertson will contact Mr. Hoch to decide how we are to proceed with planning of his work.

As part of our session today we also completed the preliminary network model for the mezzanine support area east of column line 20 (MSA). This network will be put into final form and sent to Mr. Robertson. We also revised the network model for the east ground level service area (ESG) adding in expected delivery dates for food service equipment. This network will also be completed and copies forwarded to Mr. Robertson for his use.

A thorough review was made of the ballroom, prefunction and north support network (BPS). Apparently the time frame and logic for it are satisfactory. We shall put this in final form and print it suitable for distribution by Mr. Robertson. I shall get this material to him and to Mr. Pursifull just as quickly as possible.

Our next planning and monitoring session is currently set for November 25, 1986. I shall be in touch with Mr. Robertson to confirm the date.

Ralph J. Stephenson, P.E.

RJS: gmy  
TO: Mr. Donald Robertson  
CC: Mr. Ross Pursifull

December 3, 1986

**Subject: Monitoring Report #5**

**Grand Traverse Resort Village Conference Center (GTRVCC)**

**Acme, Michigan**

**Project: 86:37**

**Date of Monitoring: November 25, 1986 (working day 231)**

**Actions taken:**

- Inspected project
- Reviewed overall project progress with Mr. Donald Robertson and Mr. Doug Maddelein
- Prepared network model for construction of pool with Mr. Chuck Chadwick
- Reviewed project with Mr. Ross Pursifull and Mr. Don Robertson

**General Summary**

As of November 25, 1986 (working day 231) work is adhering fairly well to targets between early and late starts and finishes. The substructure of the building is substantially complete and the slab on grade is complete. It was poured out November 24, 1986 (working day 230). It was due to be poured out by November 12, 1986 (working day 222).

Structural steel was completed about November 7, 1986. It was due to have been completed November 13, 1986 (working day 223). Metal deck erection is complete except at the elevator shaft where masonry is still being erected. This deck should be in place next week.

Roofing is about 10% complete, not counting the plaza roof east of column line 20. This area is roofed and ready to water test before laying insulation, gravel, and concrete. This intent is to lay protective visqueen and insulation this year; pouring out the concrete deck next spring.

Spray on fireproofing started at spandrels on November 22, 1986 (working day 230) and is somewhat behind the planned installation relative to early starts and early finishes. There was considerable discussion as to whether spray on fireproofing should be pursued aggressively now or whether it should be deferred until the building is substantially closed in. Early application of spray on at some of the spandrels is essential prior to the close in of the building. However,

Monitoring Report #5  
Grand Traverse Resort Village Conference Center  
Page two

in interior areas, spray on could proceed somewhat later, dependent upon the amount of space available above mechanical and electrical installation to allow room for the spray on access to the steel. Spray on is a very difficult trade to mesh with other operations since it is nearly impossible to work in areas where spray on is being applied.

I recommend that careful attention be given to this now and that wherever possible during good weather, spray on proceed just as aggressively as possible. This will clear the interior areas for rough trades and allow work to proceed without later interruption.

Present plans are to activate roof top units by December 10, 1986 (working day 241). This in conjunction with close in work now in progress should allow interior rough and finish trades to proceed without delays.

At present, exterior masonry block backup is nearly completed on the south wall and being erected on the west elevation. The north elevation is rapidly being closed in and sash is about to start at the south elevation near the main stairway.

Inside the building, above floor rough mechanical and electrical work is moving well except for sprinkler piping which at present appears to be eating into early float time. I strongly recommend that float time available to the rough overhead trades, not be used too early in the interior work process. However, with sprinkler piping, there are a few items to be resolved before work can begin. These are being worked on at present and it appears that sprinkler piping will begin in production within the next one to two weeks.

Some interior masonry partition erection has been started and most interior rough trades are meeting targets presently between early and late starts and finishes. Again, care must be taken not to use excessive float time during the early stages of the work since it is almost certain to be needed as we enter later finishing stages of the job.

Mr. Maddelein and I next reviewed the status of procurement. A brief summary of this discussion follows:

- Switchgear - on job
- Primary transformer - on job and being installed
- Cable - no word
- Elevator - to be delivered January 26, 1987 (working day 272)

Monitoring Report #5  
Grand Traverse Resort Village Conference Center  
Page three

- Escalator - to be delivered January 26, 1987 (working day 272)
- Fire protection - design must be resolved before fabrication of pipe can begin
- Folding partition - approved shop drawings should be available by November 25, 1986 (working day 231). No word on delivery. However, should be about 12 weeks from receipt of shop drawings.
- Food service equipment - walk in cooler delivery presently set for February 2, 1987 (working day 277). Remaining food service equipment due March 16, 1987 (working day 307).
- Ceramic tile - samples have been approved. No apparent problem with delivery
- Hollow metal - many frames on job; others will be on job as needed
- Roof top units - all on job except for chiller. Chiller to be on site December 5, 1986 (working day 238)
- Miscellaneous iron - stairs #1 and #2 to be delivered on December 22, 1986 (working day 249). This date should be confirmed.
- Movie screen - no word on delivery. No apparent problem.
- Overhead doors - no word on delivery. No apparent problem.
- Paint colors - not selected as yet.
- Resilient tile - has been selected. No apparent problem.
- Sash and curtain wall - available. Being installed.
- Skylights - to be delivered December 3, 1986 (working day 236)
- Toilet partitions - no apparent problem with delivery. It should be noted that toilet partitions will be essential to full occupancy of the building. This item is normally a problem material and should be watched carefully.
- Wood doors - no apparent delivery delays.

Mr. Chuck Chadwick and I, with Mr. Doug Maddelain reviewed the time and planning frame work for the swimming pool to be built to the south of the convention center. This pool work is pre-

Monitoring Report #5  
Grand Traverse Resort Village Conference Center  
Page four

sently set to begin in spring, 1987 and we made a brief, rough diagram based upon certain assumptions. From our planning I recommend we give serious attention as to how some pool work might be constructed now or later in the winter. The problem with the pool is that it appears there may be as much as 30 to 50 working days required to construct the pool shell, install underground utilities, construct the service building housing toilet room, showers and equipment, and to install the equipment and construct the pool aprons. This is a sizable amount of work and to assume it can be done easily, starting in mid April, 1987 and be completed by early June, 1987, bears some close examination.

In any event, design work should start just as soon as possible and I recommend that pool configurations be resolved and approved so full working drawings can be put into work immediately. This also would allow the pool contractor to obtain long lead items and prevent potential delay to construct the pool complex.

Mr. Robertson and I also discuss the installation of fixtures, finishings, and equipment (FF&E). Apparently design work is proceeding at present and Mr. Robertson will arrange a meeting with Mr. Hoch in the near future to plan the FF&E installation.

In summary, the project is moving relatively well but still must be given close day to day attention to complete close in prior to the onset of colder weather and heavy participation. Also it will be essential that heat be made available within the building in the very near future. Presently, it appears that the building can be closed to weather and interior work proceed without excessive difficulty.

Of concern is installation of sprinkler piping along with the application of spray on fireproofing. These two trades presently show some signs of lagging early starts and more than desirable use of early float time. The pool, as noted above, also should be given attention now and if possible some work completed prior to next spring.

I shall be in touch with Mr. Robertson shortly to set the next planning and monitoring meeting. At this meeting it would be well to have Mr. Hoch or his representative present to begin our detailed planning of the installation of FF&E.

Ralph J. Stephenson, P.E.

RJS:gmj  
TO: Mr. Don Robertson  
Mr. Ross Pursifull

February 3, 1987

Subject: Monitoring Report #6

Grand Traverse Resort Village Conference Center (GTRVCC)  
Acme, Michigan

Project: 86:37

Date of Monitoring: January 28, 1987 (working day 274)

Actions taken:

- Inspected project
- Reviewed overall project progress with Mr. Don Robertson and Mr. Doug Maddelein
- Prepared network model for construction of interior work at the lobby area
- Reviewed project with Mr. Ross Pursifull and Mr. Don Robertson

General Summary

As of January 28, 1987 (working day 274) all substructure and superstructure work is complete. Most face brick has been erected, and roofing is complete except for ballast and the concrete walk deck at plaza areas.

All remaining close in work will be done as weather permits. At present, the project is closed to weather and dry. All roof top equipment is set and hooked up except for the chiller. The chiller is yet to be piped. There were some problems in setting the chiller due to difficulty in getting to the building with a crane.

All skylights are installed and glazed. The store front at the lobby is complete except for a few special pieces of spandrel glass. These have been ordered and will be on the job in 4 to 5 weeks.

At the west end of the building the large access door has been revised, along with the adjoining overhead access door to the ballroom. There was a need for larger size openings and revisions were made now while it is possible to change the size of the rolling curtain at minimum cost. Delivery of the doors will be in 4 to 5 weeks.

The emergency generator will be delivered in early February, 1987. There was no authentic information at present as to

Monitoring Report #6  
Grand Traverse Resort Village Conference Center  
Page two

whether the base was installed. This matter will be checked since it is important to have the base in place when the generator is on the job.

#### East Service Area

Monitored from sheet ESG 1 issue #3 dated October 15, 1986 (working day 202).

As of January 28, 1987 (working day 274) spray on fireproofing is about 65% complete; sheet metal ductwork about 30% complete; overhead rough mechanical piping about 70% complete; sprinkler piping about 95% complete; and rough electrical above floor work about 95% complete. Interior masonry is substantially done and metal studs and wall work is about 95% complete. No board has been hung as yet. Quarry tile at service areas is in progress and about 70% complete. Coolers are expected on the job January 28, 1987 (working day 274).

Presently, it appears that all major activities at the east service area are meeting targets between early and late starts and finishes.

There have been some minor revisions including revisions to the office layout. Drawings for this area are needed just as quickly as possible. Also ductwork is to be revised above the north/south service corridor ceiling. Drawings for this work were received on January 26, 1987 (working day 272).

Presently, field measurements for food service equipment are in work and the equipment itself is expected the first part of March, 1987. Original delivery of food service equipment was set for March 16, 1987 (working day 307). Even though the area is presently meeting targets between early and late starts and finishes, I suggest careful attention be given the food service section of the building over the next few weeks, since it is trending fairly close to late starts and late finishes at present.

There is not much FF & E work to do at the east service area, and probably if it starts in mid April, 1987, it could be completed in time.

#### East Mezzanine Support Area

Monitored from issue #1 dated October 15, 1986 (working day 202) sheet MSA 1.

The air handling unit and switchgear are set and the switchgear

Monitoring Report #6  
Grand Traverse Resort Village Conference Center  
Page three

is hooked up with permanent power available. The air handling unit is being connected at present.

Sprinkler piping and above floor electrical work is nearly complete. Sheet metal ductwork is about 20% complete, mechanical piping above floors is about 33% complete, studs and in wall work are well along and nearly complete. No board has been hung as yet.

There is some masonry yet to be erected and this will be completed after the studs are installed.

Protection window frames are set, no glass is in as yet.

Overall, mezzanine work is currently meeting targets between early and late starts and finishes. There are no major problems on the horizon.

Ballroom Prefunction and North Service Areas

Monitored from issue #3 dated October 15, 1986 (working day 202)  
sheet BPS 2.

Above floor rough mechanical, electrical and architectural work is substantially complete at these areas. Metal studs and in wall work are well along and nearly complete. About 55% of the gyp board is hung, and taping and sanding is about 20% complete. The most complicated areas here are the hard ceiling soffit framing. Framing work is about 55% complete with soffit and fascia board about 30% to 40% hung. Taping and sanding is about 20% complete.

Careful attention must be given to taping and sanding since it is now beginning to approach the late finish dates in the network model.

At this time, most major activities in the area are meeting or bettering early and late starts and finishes. Apparently, it is the intent to have more dry wall people, primarily tapers and sanders, on the job Monday, February 2, 1987 (working day 277).

In general, the area is moving reasonably well but care must be taken to keep up the pace on hanging, taping, and sanding dry wall.

There are changes being made at the north service area including modification of some ductworks, a revision of the ceiling, and revisions to light fixtures. Probably this work can be accommodated within the target end dates presently being held. However, any revisions from here on must be kept to an absolute minimum if the finish date of the total project is to be maintained.

Monitoring Report #6  
Grand Traverse Resort Village Conference Center  
Page four

### Pool

There is no current word on when pool construction will begin. The shape of the pool is still being discussed and current drawings are being redone to reflect the latest decisions. When it is approved, it will be given to the pool contractor so as to allow him to initiate whatever early procurement and front end work must be done.

In the network model sheet F1, issue #3 dated November 25, 1986 (working day 231), it appeared that the pool would take about 61 working days to construct. We had anticipated that pool construction could start in the field by mid or late March, 1987. This brought completion of the pool, as shown in that network model, to mid June, 1987, later than desired.

I recommend that close attention be given to expediting preparation of contract documents for this element of the work and that a careful study be made of the sequence to see if it is possible to compress the current plan of work and to achieve an earlier completion date than shown.

### Lobby Area

Because of difficulties in maintaining progress at the lobby area, consistent with progress in other main areas of the convention center, we decided to prepare a separate diagram for this work. This was labeled issue #1 dated January 28, 1987 (working day 272). The network was prepared on a flip chart sheet with Mr. Doug Maddelein and durations were assigned in accordance with what presently appears to a reasonable time to complete the work at the lobby. This area is special, containing a feature stair, very complex ceiling reveals, soffits and fascias and an escalator.

At present, it appears we will be able to complete the area by May 1, 1987 (working day 341). It is a very tight schedule and the finish date is somewhat later than what would be desired. The critical installation is the escalator itself. Other work, aside from the escalator installation could probably be finished in late March or early April, 1987.

I shall put this network model into final form and issue it to Mr. Robertson and Mr. Maddelein in the near future for their review and study.

### FF & E Work

Mr. Robertson and I talked briefly about the integration of FF & E with the construction networks. He has spoken to Mr. Tom Hoch about FF & E starting dates and durations for FF & E

Monitoring Report #6  
Grand Traverse Resort Village Conference Center  
Page five

work. It presently appears that Mr. Hoch can complete his work within the time frames shown in the current network models.

Therefore, at this session we did not make a detailed evaluation of fixtures, furnishings and equipment installation. I shall check with Mr. Robertson again at our next session to see if there is any need for further planning the installation of FFE work.

General

Overall, the project is still maintaining adherence to most major time targets and meeting critical early and late starts and finishes. In the ballroom area, it will be necessary to continue expediting installation of dry wall. Of prime importance from here on to completion is to minimize the changes to the work. The target completion of the job May 1, 1987 (working day 341) is only 67 working days from the current date. Presently, there is good reason to believe that this date can be met, provided pending revisions and decisions are resolved properly.

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

Ralph J. Stephenson, P.E.

RJS:gmj  
TO: Mr. Donald Robertson  
CC: Mr. Ross Pursifull

April 1, 1987

**Subject: Monitoring Report #7**

**Grand Traverse Resort Village Conference Center (GTRVCC)**

**Acme, Michigan**

**Project: 86:37**

**Date of Monitoring: March 18, 1987 (working day 309)**

**Actions taken:**

- Inspected project
- Reviewed overall project progress with Mr. Don Robertson
- Updated network model for construction of pool area
- Reviewed project with Mr. Ross Pursifull and Mr. Don Robertson

**General Summary**

As of March 18, 1987 (working day 309) most activities in the main building are meeting targets between early and late starts and finishes. At the ballroom, prefunction and north service areas (BPS), work has proceeded well, and measuring by present progress, should have little difficulty in being complete by late April, 1987. Some vinyl wall covering has been started at the ballroom areas and it is anticipated that FF & E installation activity will pick up and move along to completion with the base building work.

At the east service ground level area, work has also moved well and presently, food service equipment is being set and aligned in this portion of the building. There have been some delays to acoustic ceiling work, but there are not expected to interfere or slow down installation of food service equipment. The work at the east service ground level area should be able to be completed by late April, 1987. Concurrently any FF & E work to be installed there will also be brought to completion.

At the mezzanine support area east of column line 20 (MSA) work is also proceeding well although ceiling work has fallen behind our projected network model issue #1, dated October 15, 1986 (working day 202). However, it is to be noted that this network set completion of base building work at the mezzanine by March 16, 1987 (working day 307). Therefore, there still is additional time although the job has moved somewhat slower than had been anticipated. There should be no major difficulty in finishing this mezzanine by the target date of late April, 1987.

Monitoring Report #7  
Grand Traverse Resort Village Conference Center  
Page two

At the pool area some earth moving and layout has been done. However, active work is not expected to start until March 23, 1987 (working day 312). The previous network model we had been using to measure progress, issue #3, dated November 25, 1986 (working day 231) showed start of work in the field on March 23, 1987 (working day 312) with a completion in mid June, 1987. This finish date was not acceptable and therefore, Mr. Robertson and I revised the network model to issue #4, dated March 18, 1987 (working day 309).

In this plan of action we compressed critical activities to determine what was needed to bring the project to within acceptable boundaries. Through this compression we were able to show a completion of clean up and move out of the pool area by the morning of May 29, 1987 (working day 360). The plan of action is a very tight plan, and will have to be expedited every step of the way. It will be imperative that work begins just as quickly as possible.

I left a copy of the pool network on the GT disk and the network model is available to staff for running and use as required.

In addition to copying the pool diagram on the GT disks, I also copied all network models for the projects to date. These are now available to the construction staff of Grand Traverse Resort Village. They have networks both for initial project at the tower, the low rise, and the existing lobby remodeling, along with later diagrams prepared for phase 2 of the work.

At present, it appears that the need for additional monitorings is minimal and I shall not plan to again inspect the job unless there is a special need.

It has been a good project and the construction staff deserves a great deal of credit for the good work they have done on a complex facility.

I have told Mr. Robertson if there is any need for additional assistance from me, he should have no hesitation to call.

Best of luck on the grand opening.

Sincerely yours,

Ralph J. Stephenson, P.E.

RJS:gmj  
TO: Mr. Ross Pursifull  
Mr. Don Robertson