

MSL: MONTHLY PROGRESS REPORT NO. 5

Design and Construction of The New Proposed Medical Stores
Warehouse Hubs: Choma - Zambia

Submitted: S.H Mazakaza

Designation: Project Manager

Report Period: 1st - 31th December, 2017

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**Design and Construction of a New Medical Warehouse in
Choma, Zambia.**

2.0 Project Data

2.1 Project Team

Item No	Designation	Organization/Name
1.	Employer:	United Nations Development Programme (UNDP)
2.	Beneficiary:	Medical Stores Limited (MSL)
3.	Supervisors Project Focal Person Project Manager (External Consultant) Assistant Project Manager (External Consultant) Clerk of Works (Consultant)	UNDP / D. Kampamba UNDP/ S.H. Mazakaza UNDP/ D.K Pfumbauta UNDP/ B. Kaoma
4.	Contractor:	Hua Chang Ltd
5.	Design Consultants Architects Quantity Surveyors Mechanical Engineers Electrical Engineers Civil & Structural Engineers	CM Architects MNL Associates DH Engineering Consultants. Utilink Consultants. Civil Links Engineering Designers Limited
6.	Insurer (Works & Designs):	Advantage Insurance

7.	Subcontractors:	<ul style="list-style-type: none"> • Vortex Electrical • Win link • BJ Cooling • Cochrane • Leading Century
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2.2 Program Schedule

Item	Activity	Contract Date
2.2.1	Letter of Award Date:	17/07/2017
2.2.2	Contract Signing Date:	18/07/2017
2.2.3	Site Handover Date:	26/07/2017
2.2.4	Possession of Site:	26/07/2017
2.2.5	Contract Commencement Date:	18/07/2017
2.2.6	Notice to Commencement Date:	03/08/2017
2.2.7	Contract Period:	Five (05) Months
2.2.8	Contract Completion Date:	15/12/2017
2.2.9	Extension to Contract:	N/A
2.2.10	Revised Contract Completion:	N/A

2.3 Financials

Item	Description	Amount
2.3.1	Contract Amount (USD):	USD1,438,125.81
2.3.2	Approved Variations to Date (USD):	N/A
2.3.3	Revised Contract Amount(USD) :	N/A
2.3.5	Payment certified to date	USD\$ 1,242,540.70
2.3.6	Penalties per day (USD):	USD\$ 500.00

2.4 Performance

Item	Description	Percentage	Ahead	Delay
2.4.1	Percentage of Contract Period Lapsed:	100.0%		
2.4.2	Percentage of Contract Value Certified:	90.0%		
2.4.3	Planned Percentage of Completion			
2.4.4	Actual Percentage of Completion to Date	95.00%		

3.0 Attendance

During the period under review, the United Nation Development Programme (UNDP), Medical Stores Limited (MSL) and Hua Chang Ltd attended all site inspections and site meeting held during the month. The Design Team also attended the inspections and site meetings.

4.0 Progress

The month under review covered the following activities shown in the table below, the table includes related periods and accomplishments.

Table 1: Mobilization Activity

No.	Activity	State Date	Finish Date	Progress	Comments
1	Contract Award	17/07/17	17/07/17	100%	completed
2	Compile & Submit Safety Plan	18/07/17	18/07/17	100%	completed
3	Method Statement	18/07/16	18/07/17	100%	completed
4	Detailed Set of Drawings	18/07/16	18/07/17	100%	completed

Table 2: Site Establishment

No.	Activity	Start Date	Finish Date	Progress	Comments
1	Receive Access to Site	18/07/17	18/07/17	100%	completed
2	Erect Hoarding	19/07/17	26/07/17	100%	completed
3	Clear Site & Bulk Excavation	19/07/17	04/08/17	100%	completed
4	Erect Offices & Store	19/07/17	05/08/17	100%	completed
5	Subcontractor engagement	19/07/17	22/08/17	100%	completed
6	Installation & Connection of Services	03/08/17	10/08/17	100%	completed

Table 3: Warehouse Building

No.	Activity	State Date	Finish Date	Progress	Comments
1	Setting Out	04/08/17	08/08/17	100%	completed
2	Foundation Excavations	08/08/17	14/08/17	100%	completed
3	Blinding in excavations	14/08/17	17/08/17	100%	completed
4	Reinforcement and foundation footings	17/08/17	30/08/17	100%	completed
5	Foundation block work	30/08/17	09/09/17	100%	completed
6	Backfilling and compaction	11/09/17	19/09/17	100%	completed
7	Floor Slab reinforcement & Concrete	19/09/2017	28/09/2017	100%	completed
8	Fabrication of structural of steel columns, beams, and erection	28/09/17	13/10/17	100%	completed
9	Bond decking for the office	13/10/17	19/10/17	100%	completed
10	Roof insulation and covering	19/10/17	27/10/17	100%	completed
11	Block work and walling	20/10/17	11/11/17	100%	completed
12	Electrical, plumbing, data, cctv and access control first fix	11/09/17	28/11/17	100%	Completed
13	Doors, windows and partitioning	11/11/17	29/11/17	100%	Completed
14	Plastering internally and externally	11/11/17	30/11/17	100%	Completed
15	Painting internally and externally	07/11/17	14/12/17	97%	Behind schedule - Delay Critical
16	Electrical, plumbing, data, cctv and access control second fix	29/11/17	14/12/17	90%	Behind schedule - Delay Critical
17	Floor and Wall Tiling	30/11/17	09/12/17	100%	Completed

No.	Activity	State Date	Finish Date	Progress	Comments
18	Ceiling Installations	30/11/17	08/12/17	95%	Behind schedule - Delay critical
16	Air conditioning second fix	28/11/17	22/12/17	90%	Behind schedule - Delay Critical
19	External works <ul style="list-style-type: none"> ➤ Clear view fence ➤ Guard house ➤ civil works ➤ Electrical reticulation ➤ Water reticulation ➤ Sewer systems 	24/07/17	30/11/17	97%	Behind schedule – Delay Critical

4.1 Scheduled activities of the week

The following were the scheduled major activities scheduled for the month:

- (i) Electrical, plumbing, data, cctv and access control second fix
- (ii) Ceiling works
- (iii) Painting works
- (iv) General External works

4.2 Attained activities and progress

The following were the actual attained activities during the month and their milestones

4.2.1 Electrical, Data, CCTV, Access control and Plumbing works

- Electrical second fix – 90%
- Plumbing second fix – 80%
- Data second fix – 90%

The overall progress on item is 90% complete

4.2.2 Ceiling works

- Installation of ceiling grids to the first floor –100%
- Installation of ceiling grids to the ground floor –100%
- Installation of ceiling panels on grids on the first floor – 90% (remaining panels awaits electrical and air-conditioning installations)
- Installation of ceiling grids on the ground floor – 100%
- Installation of ceiling panels – 80%

The overall progress generally on ceiling works is 95%.

4.2.3 Painting works

- Generally final painting to the storage Warehouse is 98% complete
- General final Painting to the office area – 96%

The overall progress generally on painting is currently at 97%.

4.2.4 Air-conditioning Installations

- Installation of air conditioning –90% (all ceiling cassettes are installed in the office area.

The overall progress generally on this item is 90% complete

4.2.5 Aluminum doors and windows

- Installation of aluminum doors and windows complete with glazing –100%

The overall progress generally on this item is 100% complete

4.2.6 Installation of hand rails for the internal staircase

- Installation of hand railings internally –100%

The overall progress generally on this item is 100% complete

4.2.7 Installation of Kitchen unit

- Installation of kitchen units –100%

The overall progress generally on this item is 100% complete

4.2.8 Cold room Installations

- Installation of cold room casing –100% (Other mechanical installation to the cold room awaits power connection).

The overall progress generally on this item is 80% complete

4.2.9 Dock levelers and roller shutter doors

- Installation of dock levelers and roller shutter doors –100%

The overall progress generally on this item is 100% complete

4.2.11 Construction of the disabled ramp

- Disabled ramp construction –90%

The overall progress generally on this item is 100% complete

4.2.12 Construction of the fire escape staircase

- Fire escape staircase construction –55%

The overall progress generally on this item is 55% complete

4.2.13 External works

- Installation of Kerbing stones – 100% complete.
- Construction of the guard house – 98% complete
- Casting of concrete drive way panels – 100% complete
- Interlocking pavers on the drive way and car park – 100% complete
- Interlocking pavers around the building – 95% complete
- Construction of manholes, septic tank and soak away – 95% complete
- Water and Electrical reticulation – 90% complete

The overall progress on this item generally is 97% complete

The pictures below show the latest progress of the works on site as at 30/12/17.



Figure 1: Front view and painting externally



Figure 2: Side view main building externally



Figure 3: Office building internally



Figure 4: Staircase in the office building



Figure 5: Mechanical installations



Figure 6: Kitchen units



Figure 7: Warehouse internally



Figure 8: Warehouse main entrance



Figure 9: Fire escape staircase



Figure 10: Civil works



Figure 11: Guard house

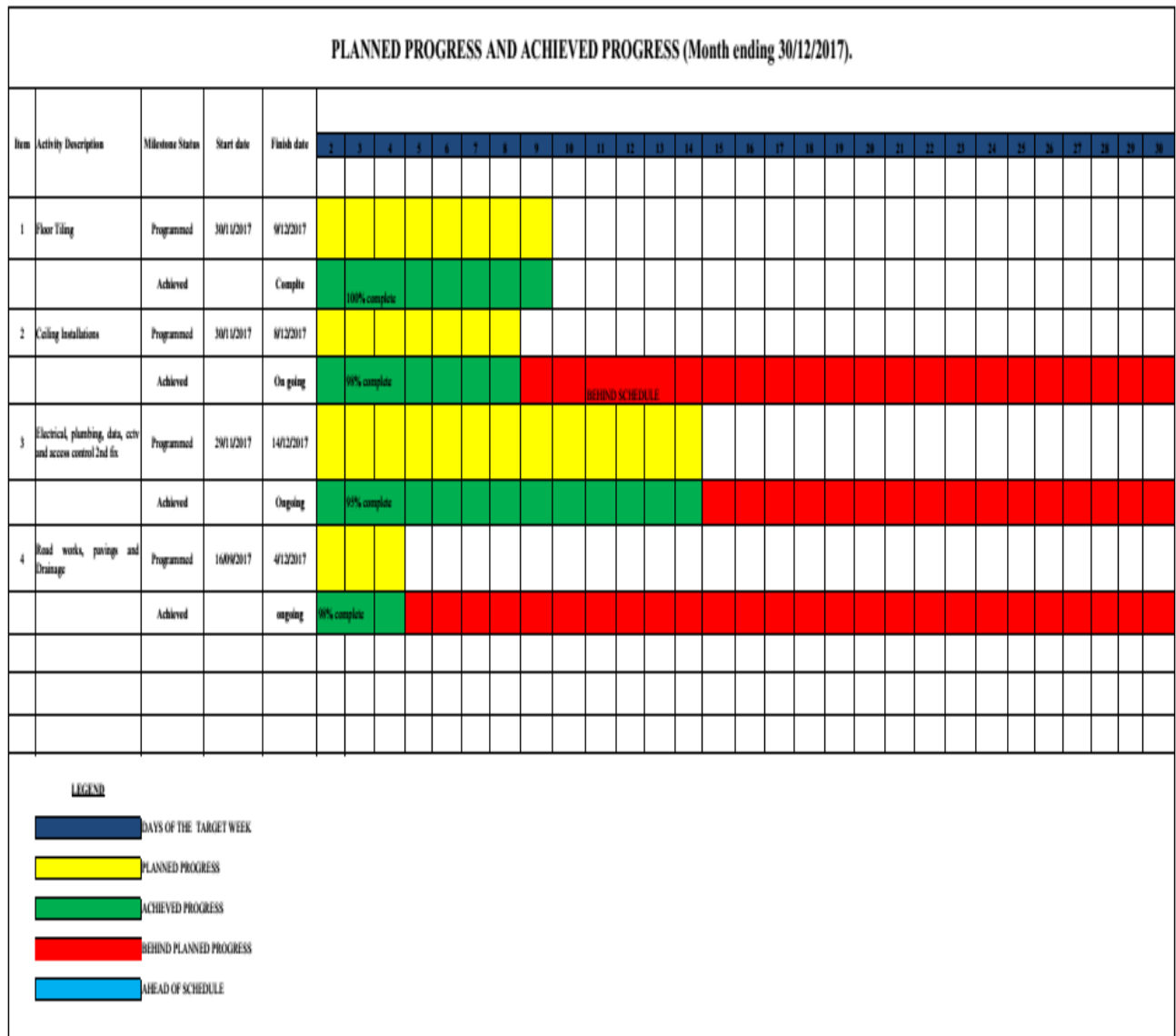


Figure 12: External works

5.0 Progress Analysis (Programmed and achieved Progress)

The general progress of the project is currently at 95%. With regard to the planned progress the project is behind schedule by two (2) weeks and the contractor has applied for extension of time to the project manager for approval. The process of approval is in progress and will be concluded by 30th December 2017.

For Gantt chart representation, please refer to figure 8 shown below.



5.1 Delayed Activities

The following activities are behind schedule;

- (i) **Ceiling installations.** Substantially ceiling installations have been completed, the delay on the installation of ceiling panels waits electrical and air conditioning installations. As soon as electrical and air conditioning installations are done installations of ceiling panels will be completed within a day or two.
- (ii) **Painting works.** This activity is about 97% complete. The remaining 5% covers touch ups to the warehouse and final painting to the guard house
- (iii) **Pavings and drainage, external water reticulation, electrical reticulation and Sewer reticulation.** This activity is about 97% complete. With clear weather, this activity can be completed within 7 days.
- (iv) **Mechanical installations (Air conditionings).** This activity is 95% complete. It is likely to finish within the 7 days especially after the industrial break.
- (v) **Clear view fence installation.** The clear view fence is not yet on site. As soon the material is delivered on site, installation can be done within seven days.
- (vi) **Fire escape staircase.** This activity is now 55% complete.
- (vii) **Installation of plumbing and electrical fittings.** Fitting of Electrical and plumbing fittings have not yet commenced.
- (viii) **ZESCO connections.** This activity is also pending.

6.0 Quality Assessment of Works

The quality of work executed by the contractor so far is of acceptable standard and meets the expected minimum specifications.

7.0 Health and Safety

The contractor is compliant on protective clothing, safety shoes and all other necessary protective gear.

No accident or accident was recorded on site during this month.

8.0 Waste Management

The Waste Management Plan is generally being followed. There was however, a lapse in the control of dust pollution, which has been mitigated on, by the dewatering process to areas prone to dust emissions.

The bulk soil which is being excavated has no pollutants and is being dumped off site. The disposal does not require Environmental Council of Zambia approval by virtue of the “Normal” status of the soli constituents.

9.0 Documents Submission

The following documents were submitted as stipulated in the contract.

No.	Document Reference	Approved		Comments
		Yes	No	
I	Advance Payment Guarantee	✓		
ii	Performance Guarantee	✓		
ii	Contractor's –	✓		
iv	Construction working method submitted by the Contractor	✓		
v	Environmental Management Plan submitted by the contractor	✓		
vi	Quality Assurance Management Plan submitted by the Contractor	✓		
Vii	Site Health & Safety Plan submitted by the Contractor	✓		

viii	Bill Board Design submitted by the Contractor	✓		
ix	Purchase Order.			
x	Site Office Layout Plan submitted by the Contractor	✓		

10.0 Financial Matters

The client is up to date with the payments to the contractor.

11.0 Contractual/Technical Matters

11.1 Subcontracting

The Contractor has engaged all the necessary subcontractors involved in the execution of the project. All subcontractors engaged have reported on site and works are in progress. The following works are yet to be subcontracted:

The following have been subcontracted and approved by the project manager.

- Air Conditioning Installation (Vortex Electrical Limited)
- Chiller Installation (BJ Cooling)
- Security Installation (Win-link)
- Dock-leveler Equipment Installation
- Communication Systems Installation (Win-link)
- Electrical Installation (Vortex Electrical)
- Aluminum installation (Leading Century)

11.2 Designs

The Design Team are working on the various disciplines with the following pending.

- (i) Drawings had been submitted to the council for scrutiny. MSL furnished the design team with Certificate of Incorporation, Title Deed or Offer Letter indicating ownership of the Land for the Process to start. MSL to re-issued actual offer letter for the current site. Feed back on the application is being awaited.
- (ii) Applications for Permanent Power on Site had been submitted to ZESCO and the reference number has been issued to MSL for action by MSL.
- (iii) Working Drawings have been issued to the Project Manager and have been approved pending finalization of technical details and have also been issued to the contractor for works construction.

11.3 Insurance

The contractor provided the Contractor's-All-Risk Insurance Policy, Advance Payment, and the Performance Guarantees.

11.4 Communication

2.4.1. All communication to be managed effectively, between the client, the contractor, and the design team and vice versa, should be channeled through the Project Manager. The contractor and their design team have been advised to fully read the entire contract to avoid unnecessary assumptions, which might have negative impact on the project in terms of expected deliverables.

12.0 Resources

12.1 Labour/Personnel

The table below shows the labour personnel for the contractor on site this month ending 30/12/17. The labour force comprise of both local and foreign personnel. The labour force was adequate for the activities scheduled for the month.

Table 6: Personnel Data

Description	Number	Males	Females	Disabled	Foreign	Local
Site Manager	1	✓			✓	
Site Engineers	2	✓			✓	
Foreman	6	✓			✓	
Skilled Labour	21	✓				✓
Unskilled Labour	49	✓	✓			✓
Total Employees on Site	68	67	1	0	9	59

12.2 Plant and Equipment

The following table shows plant and equipment available on site as at 30/12/17.

Table 7: Equipment on Site

No	Description	Plant No.	Model/Capacity	Quantity
1	Tipper	ABT 8939	20 tone	1
2	Plate compactor		YSH 90L-2 /2880r/min	4
3	Poker vibrator		ZN -90 / 2840r/min	2
4	Concrete Mixer		JZC 350 / 12-14m3/Hr	2
5	Block making machine			1
6	Steel bending machine		GW 40 / 5-10r/min	1
7	Lifting truck (Crane)	BAC 1469	KSQS 200 / 20 tone	1
8	Pick Up	BAB 2050	Toyota Hilux	1
9	Light truck	BAF 5235	5 tone Hino	1

The equipment and plant had been adequate for the activities scheduled for the month.

13.0 Materials

Materials deployed for the current works on site is adequate and meets the minimum required standard.

14.0 Construction Activity Progress Projection Plan

The following activities are scheduled for the next four weeks, ending 30/01/2018 considering the extension of time is put into effect to that end.

Table 8: Progress projection plan

Item No.	Activity	State Date	Finish Date	Comments
1	Plumbing access control and data 2 nd fix	29/11/17	14/12/17	100% to be achieved by 15/01/18
3	Ceiling installation	30/11/17	08/12/17	100% to be achieved by 15/01/18
4	Electrical and air conditioning 2 nd fix	28/11/17	22/12/17	100% to be achieved by 15/01/18
5	Painting internally and externally	07/12/17	14/12/17	100% to be achieved by 15/01/18
6	External works – Clear view, road, paving and drainage.	16/09/17	04/12/17	100% to be achieved by 15/01/18
7	Works completion list	04/12/17	05/12/17	100% to be achieved by 20/01/18
8	Snagging	05/12/17	05/12/17	100% to be achieved by 20/01/18
9	Repair defects	6/12/17	14/12/17	100% to be achieved by 30/01/18
10	Hand over to Client	15/12/17	15/12/17	100% to be achieved by 31/01/18

15.0 Conclusion/Recommendation

The project is behind schedule and is estimated at 95% complete on the overall against 100% planned. An application for extension of time had been lodged by the contractor for project completion by 15/01/2018 and external recommendation made by the Project Manager to UNDP for final approval.

The contractor is to provide a revised work program for all outstanding works which must be completed by 15/01/2018.

Mitigation measures over potential delays are being instituted by timely delivery of materials to site and both increased personnel and working hours for outstanding works. The Project Manager through the Clerk of works will closely monitor the delayed activities and ensure that potential delays do not occur or become critical over other subsequent activities. The works on the project meets the quality of standards stated in the contract. The contract to provide a revised work programme for all outstanding (approved) works, which must be completed by 15th January. 2018.