

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 708 – CAPITAL SUBVENTIONS AND MAJOR SYSTEMS AND EQUIPMENT

Medical Subventions

3MJ – Provision of additional lifts and associated works at Block S of United Christian Hospital

Members are invited to recommend to Finance Committee the upgrading of **3MJ** to Category A at an estimated cost of \$62.6 million in money-of-the-day prices for the provision of additional lifts and associated works at Block S of United Christian Hospital.

PROBLEM

The existing lift services at Block S of United Christian Hospital (UCH) cannot meet present day requirements.

PROPOSAL

2. The Secretary for Health, Welfare and Food proposes to upgrade **3MJ** to Category A at an estimated cost of \$62.6 million in money-of-the-day (MOD) prices for the provision of additional lifts and associated works at Block S of UCH.

/PROJECT

PROJECT SCOPE AND NATURE

3. The scope of **3MJ** comprises –
- (a) construction of a new core with four additional lifts serving G/F to 14/F of Block S, linkage connection to the ward tower on 3/F to 14/F and other miscellaneous areas, including additional fire escape staircase and lift machine room;
 - (b) reinstatement and refurbishment of rooms affected by new connections to the new lift core;
 - (c) modifications to the existing road within the UCH compound with associated external works to accommodate the construction of the new lift core outside Block S; and
 - (d) provision of all necessary building services for the additional accommodation, including air-conditioning, fire services, electrical, plumbing and drainage installations.

4. A site plan of UCH is at Enclosure 1 and three-dimensional perspective drawings are at Enclosures 2 and 3. We plan to start the construction works in August 2004 for completion in December 2006.

JUSTIFICATION

5. Block S of UCH houses major components of the acute services of the hospital, including accident and emergency, operating theatres, diagnostic radiology, pathology and in-patient wards. It is a 20-storey building currently served by four lifts for visitors' use, four lifts for staff and service use, and a lift solely for the transport of sterile supplies. As the engineering code¹ for lift

/services

¹ The "engineering code" refers to "Chartered Institution of Building Services Engineers (CIBSE) Guide D – Transportation Systems in Buildings" published by the CIBSE, which is an internationally recognised reference for lift system design.

services prevailing at the time when Block S was designed could not adequately reflect the lift traffic load of an operating hospital, lift service at Block S has all along been insufficient since the hospital came into operation in 1995. The hospital management has received constant complaints, both from staff and patients, about the gross inadequacy of the lift service. A visitors' satisfaction survey carried out by UCH in December 2000 revealed that of the 1 371 people interviewed, 57% of the interviewees rated the lift service as "poor" or "very poor", and over half of the respondents complained about the long waiting time, which results in overcrowding of the lift lobby with visitors and hospital staff. Disputes over the use of the lifts among visitors are common.

6. The following figures demonstrate gross under-provision of lift services at Block S of UCH -

Name of Hospital	Number of beds	Number of floors	Number of lifts²	Average (beds/lift)
Block S, UCH (present status)	1 021 ³	20	8	128
North District Hospital	618	7	13	48
Tseung Kwan O Hospital	458	10	12	38
Pok Oi Hospital (upon completion of redevelopment)	622	12	17	37

7. The UCH management has introduced measures to alleviate the problem. For instance, visitors' lifts have been designated to serve either the upper floors or the lower floors so that each lift would stop on fewer floors and thus reducing the time for a return trip. However, the situation is still unsatisfactory and some passengers still have to wait for as long as ten minutes to

/take

² This excludes lifts for the transport of sterile supplies.

³ There are a total of 1 417 beds in UCH, with 1 021 in Block S and 396 beds in Block P.

take a lift. The situation is worse if any of the lifts is out of service. In this regard, the average annual breakdown rates and breakdown hours of lift service for the past five years were 83 times and 137 hours respectively. The breakdown rate is about average but the disruptions caused have worsened the already insufficient lift service.

8. The inadequate provision of lifts has adversely affected the efficient operation of UCH. The Hospital has to deploy staff to operate the staff / service lifts to set priorities for patients' transportation and meet the tight schedule for transporting meal trolleys, drugs, dead bodies, specimens, rubbish, etc. Such manual operation of lifts puts additional strain on the tight manpower resources of the hospital.

9. With the provision of four additional lifts, the maximum waiting time can be reduced from ten minutes to three minutes during peak hours, and from around 1.5 minutes to around one minute during non-peak hours.

FINANCIAL IMPLICATIONS

10. Hospital Authority (HA), in consultation with the Director of Architectural Services, estimates the cost of the proposed works to be \$69.4 million in MOD prices, made up as follows –

	\$ million
(a) Piling	13.5
(b) Building	31.8
(c) Building services	14.6
(d) Drainage and external works	4.7
(e) Consultants' fees for	1.3
(i) tender documentation	1.0
(ii) contract administration	0.3

/(f)

	\$ million	
(f) Contingencies	6.7	
Sub-total	<u>72.6</u>	(in September 2003 prices)
(g) Provision for price adjustment	(3.2)	
Total	<u>69.4</u>	(in MOD prices)

_____ A breakdown of the estimate of consultants' fees is at Enclosure 4.

11. We have derived the MOD estimate on the basis of the Government's latest forecast of trend rate of change in the prices of public sector building and construction output for the period 2004 to 2008. The construction floor area (CFA) of the project is around 4 400 square metres (m²). The estimated construction unit cost, represented by building and building services costs, is around \$10 545 / m² of CFA in September 2003 prices.

12. The Board of United Christian Medical Service (UCMS), the ex-parent board of UCH, has undertaken to contribute \$6.8 million in MOD prices towards the capital cost of the project. The proposed amount is lower than the usual 20% contribution required from subvented organisations in similar projects. Given that the proposed project will result in improved services for the community, we accept that the Government's commitment be set at a percentage higher than the usual 80%, subject to the Board of UCMS continuing to use its best endeavours to solicit donations above the pledged level during the course of the project. We therefore propose a commitment of \$62.6 million in MOD prices for this project, calculated as follows –

	\$ million	
(a) Total capital cost	69.4	
(b) Contribution from the Board of UCMS	(6.8)	
Total commitment sought	<u>62.6</u>	(in MOD prices)

13. Subject to Members' approval, HA will phase the expenditure as follows –

Year	\$ million (Sept 2003)	Price adjustment factor	\$ million (MOD)
2004 – 2005	7.2	0.97150	7.0
2005 – 2006	52.8	0.95450	50.4
2006 – 2007	10.9	0.95450	10.4
2007 – 2008	1.7	0.96643	1.6
Total	<hr/> 72.6 <hr/>		<hr/> 69.4 <hr/>

14. HA estimates the annual recurrent expenditure upon completion of the project to be around \$2.1 million.

PUBLIC CONSULTATION

15. HA consulted the Kwun Tong District Council on 2 March 2004 on the proposal. Members of the Council supported the project.

16. We briefed Members of the Legislative Council Panel on Health Services on this project in May 2004 by circulation of a paper. We have not received any adverse comments from Members.

ENVIRONMENTAL IMPLICATIONS

17. This is a non-designated project under the Environmental Impact Assessment Ordinance. Consultants engaged by HA completed a Preliminary Environmental Review (PER) for the proposed works of UCH in January 2001. The PER concluded and the Director of Environmental Protection agreed that the project would not cause long-term environmental impact and that an Environmental Impact Assessment was not necessary.

18. During construction, HA will control noise, dust and site run-off nuisances to within established standards and guidelines through the implementation of mitigation measures in the relevant contracts. These include the use of silencers, mufflers, acoustic lining or shields for noisy construction activities, frequent cleaning and watering of the sites, and the provision of wheel-washing facilities.

19. At the planning and design stages, HA has considered measures to reduce the generation of construction and demolition (C&D) materials. HA will use more prefabricated building elements into the project design to reduce temporary formwork and construction waste. These include dry-wall partitioning and proprietary fittings and fixtures. HA will use suitable excavated materials for filling within the sites to minimise off-site disposal. In addition, HA will require the contractors to use metal site hoardings and signboards so that these materials can be recycled or reused in other projects.

20. HA will also require the contractors to submit a waste management plan (WMP) for approval. The WMP will include appropriate mitigation measures to avoid, reduce, reuse and recycle C&D materials. HA will ensure that the day-to-day operations on site comply with the approved WMP. HA will control the disposal of public fill and C&D waste to designated public filling facilities and landfills respectively through a trip-ticket system. HA will require the contractors to separate public fill from C&D waste for disposal at appropriate facilities and to record the disposal, reuse and recycling of C&D materials for monitoring purposes. HA estimates that the project will generate about 770 cubic metres (m^3) of C&D materials. Of these, HA will reuse 77 m^3 (10%) on site, deliver 539 m^3 (70%) to public filling areas⁴, and dispose of 154 m^3 (20%) at landfills. The notional cost of accommodating C&D waste at landfill sites is estimated to be \$19 250 for this project (based on a notional unit cost⁵ of \$125/ m^3).

/LAND

⁴ A public filling area is a designated part of a development project that accepts public fill for reclamation purpose. Disposal of public fill in a public filling area requires a licence issued by the Director of Civil Engineering.

⁵ This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at \$90 per m^3), nor the cost to provide new landfills (which are likely to be more expensive) when the existing ones are filled. The notional cost estimate is for reference only and does not form part of this project estimate.

LAND ACQUISITION

21. The project does not require land acquisition.




BACKGROUND INFORMATION

22. UCH is an acute general hospital with a capacity of 1 417 in-patient beds. It runs an Accident & Emergency Department and provides a wide spectrum of in-patient, specialist out-patient and ambulatory care services. Its clinical specialties include medicine, surgery, orthopaedics and traumatology, obstetrics and gynaecology, neurosurgery, paediatrics, neonatology, ophthalmology, psychiatry and intensive / coronary care.

23. HA engaged professional consultants in May 2003 to carry out site investigation and detailed design work for the proposed project at a cost of \$3.2 million. HA charged the consultancy fee to block allocation Subhead **8100MX** "Hospital Authority – improvement works, feasibility studies, investigations and pre-contract consultancy services for building projects". The consultant has substantially completed the site investigation and detailed design work.

24. We estimate that the proposed project will create some 217 jobs (117 for labourers and another 100 for professional/technical staff), providing a total employment of 2 604 man-months.




擬建工程的位置圖

title 8003MJ 在基督教聯合醫院S座增設 升降機及進行相關工程 PROVISION OF ADDITIONAL LIFTS AND ASSOCIATED WORKS AT BLOCK S OF UNITED CHRISTIAN HOSPITAL	drawn by	BERNARD MAK	date	01.06.2004	drawing no.	SK-009	scale	1 : 1000
	approved	DAVID CHAN	date	01.06.2004				
	office	 A CHITECTS Planners and Designers				 醫院管理局 HOSPITAL AUTHORITY		



從東面望向工程完成後的新升降機機樓外貌(模擬圖)


VIEW OF BLOCK S FROM EAST DIRECTION UPON COMPLETION (ARTIST'S IMPRESSION)

Title: 8003MJ 在基督教聯合醫院S座增設 升降機及進行相關工程 PROVISION OF ADDITIONAL LIFTS AND ASSOCIATED WORKS AT BLOCK S OF UNITED CHRISTIAN HOSPITAL	drawn by	CECILIA KWONG	date	01.06.2004	drawing no. SK-010	scale N.T.S.
	approved	DAVID CHAN	date	01.06.2004		
	office	 PERCY THOMAS ARCHITECTS Planners and Designers				 醫院管理局 HOSPITAL AUTHORITY



從西面望向工程完成後的新升降機機樓外貌(模擬圖)

VIEW OF BLOCK S FROM WEST DIRECTION UPON COMPLETION (ARTIST'S IMPRESSION)

(title - 8003M) 在基督教聯合醫院S座增設 升降機及進行相關工程 PROVISION OF ADDITIONAL LIFTS AND ASSOCIATED WORKS AT BLOCK S OF UNITED CHRISTIAN HOSPITAL	drawn by	CECILIA KWONG	date	01.06.2004	drawing no.	SK-011	scale	N.T.S.
	approved	DAVID CHAN	date	01.06.2004				
	office	PERCY THOMAS ARCHITECTS Planners and Designers			 醫院管理局 HOSPITAL AUTHORITY			

A6 210 x 297

**3MJ – Provision of Additional Lifts and Associated Works
at Block S of United Christian Hospital**

Breakdown of estimates for consultants' fees ^(Note)

Consultants' staff costs			Estimated fees (\$ million)
A. Tender Documentation			
(a) Architectural	Professional		0.15
	Technical		0.15
(b) Building services	Professional		0.12
	Technical		0.11
(c) Structural engineering	Professional		0.12
	Technical		0.08
(d) Quantity surveying	Professional		0.18
	Technical		0.07
Sub-total			0.98
B. Contract Administration			
(a) Architectural	Professional		0.06
	Technical		0.02
(b) Building services	Professional		0.06
	Technical		0.01
(c) Structural engineering	Professional		0.09
	Technical		0.03
(d) Quantity surveying	Professional		0.04
	Technical		0.01
Sub-total			0.32
Total consultants' staff costs			1.30

Note - The figures given above are based on actual fees payable to consultants, who have been selected through a competitive bidding system.