



*Agendas for 203rd meeting of
Finance and Contract Committee,
Municipal Corporation Chandigarh*

Date: 23.12.2010

Time: 03.00 p.m.

Venue: Committee Room

AGENDA ITEM NO. 1

Subject:- Confirmation of minutes of 202nd meeting of the Finance and Contract Committee held on 10.11.2010 at 11.00 a.m. in the Committee Room of MC, Chandigarh.

AGENDA ITEM NO. 2

Subject:- Permission to continue Library-cum-Reading Room in the Panchayat Ghar, Kajheri beyond 16.12.2010 for one year.

Kusum Arora Memorial Trust (Regd.) Sector-44/B Chandigarh has been running charitable Library-cum-Reading room in one room of Panchayat Ghar in village Kajheri on free of charges since April, 2003 with the permission of village Panchayat.

The village Kajheri has since been transferred to Municipal Corporation, Chandigarh and as such the said Panchayat Ghar became the property of the Municipal Corporation, Chandigarh.

Permission upto 16.12.2010 was granted vide letter No.MC/Estate/2010/267 dated 18.01.2010 for one year with the approval of F&CC in its meeting held on 21.12.2009 vide Agenda Item No.11 free of charges and on the same terms and conditions as agreed by the village Panchayat Kajheri. Now the said trust has sought permission beyond 16.12.2010 for one year.

The Kusum Arora Memorial Trust (Regd.) has also been short listed by the Social Welfare Department Chandigarh Administration as a recognized trust.

The matter is placed before F & CC for consideration and take decision as to whether the said trust should be allowed to continue to run Library-cum-reading room in Panchayat Ghar free of charges or otherwise.

**Sd/-
Additional Commissioner,
Municipal Corporation,
Chandigarh**

AGENDA ITEM NO. 3

Subject: Estimate for purchase of 01No **Gypsy Hard Top Euro 4 Model for** inspection vehicle in lieu of condemned vehicle Gypsy No. CH01G1-0146 under the charge E.E.MCPH Division No.3, Chandigarh.

Public Health Division No.3 of Municipal Corporation, Chandigarh looks after the works of operation and maintenance of water supply, distribution system, tubewells feeding directly to the distribution system, tertiary treated distribution network, original works of laying of distribution network and original works of boring and installation of deep tubewells for drinking water and irrigation network under JNNURM Project for whole of Chandigarh city & 9 villages alongwith various rehabilitation colonies & slums etc.

With the above mentioned works being undertaken by this division, water supply being essential service are required to be carried out immediately without losing any time, as and when complaint is received, are as follow:-

1. To undertake the repair works of breakdowns in the water supply distribution lines and to make them functional within minimum possible time so that the public faces minimum inconvenience.
2. To supply water at adequate pressure in the early morning hours to the residents of the city and to attend the complaints of low water pressure in morning and evening supply hours.
3. To inspect the complaint of muddy water supply and to get them rectified.
4. To inspect operation/mtc. of tubewells/boosters in the supply hours. To attend immediately the complaints of defects in tubewells.
5. To check working of chlorinators of tubewells especially in slums and rehabilitation colonies where water supply is tubewell based only. To remove defects in chlorinators in the minimum possible time so that the public does not receive any unchlorinated water.
6. To take samples of water for chlorination from the public taps in slums, rehabilitation colonies and city in the morning as well as in the evening so as to minimize chances of outbreak of diseases.

7. To check misuse of drinking water by the public in early morning hours and to take the required remedial action.
8. To rectify defects/breakdown in drinking water/irrigation water supply system and to repair it in minimum possible time specially during summer season.
9. To check the irrigation network system under JNNURM project being a date bound work.
10. Operation & Maintenance of Fountains in various sectors.

The vehicle is required in M.C.P.H. Divn. No.3, Chandigarh for supervision of all public Health works under Division No.3 Chandigarh. The whole city of from sector 1 to 56 Chandigarh, Incl. Area Ph-I&II alongwith all colonies and slums and 9 nos. villages for Running & Mtc. of water supply lines, Tubewall and Tertiary Treated water line from Sewerage Treatment plant located near Ph-11 Mohali to Rajindra Park . under the jurisdiction of Municipal Corporation , Chandigarh

It is proposed that 01No new **Gypsy Hard Top Euro 4 Model** may be purchased, as this is required in lieu of condemned vehicle No. CH01G-0146. The vehicle was condemned in F&CC meeting . The rate contract exists for this year and complete cost of one unit is around ` 5.23 Lacs at Chandigarh. As this division is looking after the Mtc. of water supply of whole of the Chandigarh alongwith villages, rehabilitation colony & slums etc. This vehicle for supervision to control over the area is must. So the estimate comprising of 01No new **Gypsy Hard Top Euro 4 Model** is proposed . The recurring expenditure will also be less as compared to other vehicles. Keeping in view these factors, an estimate amounting to ` 5.23 Lacs has been prepared for procurement of such a vehicle.

As such, an estimate amounting to ` **5.23 Lacs** duly allowed by the competent authority is placed before the **Finance & Contracts Committee** for its consideration and approval. The expenditure shall be chargeable to the Head:- “4215-(P) W/S & Sanitation- Machinery & equipment”

Budget details:-

Major Head/Head of Account	4215- Water Supply & Sanitation- Machinery and equipment
Budget Demanded/ Allocation	6.00 Lacs
Total amount of estimates approved during 01-4-2010 to till date under this Head of Account.	--
Expdt. incurred during current financial year till date	--
Estimate submitted but not approved to till date	7.56 Lacs
Balance	6.00 Lacs
Amount of this estimate	5.23 Lacs

S.E. M.C.P.H.

E.E.M.C.P.H.-3

AGENDA ITEM NO. 4

Subject: - Providing and fixing 60mm thick interlocking paver blocks from H.No.221 to 364 in sector 30-A, Chandigarh.

(Approx. Amount: - Rs.31.26 lacs)

The area councilor, Sh. Davinder Singh Babla has requested to provide the paver blocks in front of H.No.221 to 364 in Sector 30-A, Chandigarh to facilitate the general public.

Accordingly, a rough cost estimate amounting to Rs.31.26 lacs has been prepared for arranging administrative approval and allotment of funds. The estimate includes the following scope of works:-

1. Dismantle of kerb, channel and tiles.
2. Carriage of earth by mechanical transport.
3. P/F Kerbs and channels.
4. Cement Concrete 1:8:16
5. P/F 60mm thick interlocking paver blocks.

The expenditure on this work shall be charged under Head “4217 (P) Roads & Bridges”.

The budget allocation cost of already approved estimate and expenditure incurred under this head is as under:

1. Budget allocation for the year 2010-11	Rs.821.50 lacs
2. Total amount of spill over works up to 31.03.10	Rs. 70.06 lacs
3. Total amount of estimate sanctioned after 1.04.10	Rs.704.21 lacs
4. Total of Sr. No.2 & 3	Rs.774.27 lacs
5. The expenditure incurred during current financial year	Rs.310.16 lacs

The agenda is placed before the Finance & Contract Committee for its consideration and approval please.

S.E. (B&R) M.C

E.E.R-II, M.C

AGENDA ITEM NO. 5

Subject: Rough Cost Estimate for the work of providing and fixing 60 mm thick paver blocks on pedestrian pathway around the parks in Rehabilitation of Slum Dwellers and EWS Housing Scheme, Sector 56, (Extension-I), Chandigarh.

(Amount Rs. 29.06 lacs)

The Chief Architect Department of Urban Planning, Chandigarh Administration has supplied layout architectural drawings for Rehabilitation of Slum Dwellers and EWS Housing Scheme, Sector 56 (Extension-I) showing 6'-0" wide pedestrian pathways around parks and 17'-0" wide bay parking in front of existing Gurudwara/Mandir to facilitate the residents of this area.

Accordingly, this rough cost estimate has been framed amounting to Rs. 29.06 lacs. The scope of the work taken in the estimate is as under:

1. Dismantling existing kerbs and channels.
2. Earth work in excavation by mechanical means hydraulic excavator.
3. Carriage of earth by mechanical transport including loading and unloading lead up to 2 kms.
4. Deduct of disposed soil not leveled and neatly dressed.
5. Preparation of sub grade.
6. Fixing of new PCC kerb and channel
7. P/F new kerbs and channels.
8. P/L in position C.C. 1:8:16 mixed with mechanical mixer.
9. P/F 60 mm paver block

The expenditure on this work shall be charged under Head "4217 (P) Providing basic amenities in Rehabilitation Colonies ." The budget estimates, budget allocation, amount of already approved estimates and expenditure under this head for Roads Division No.3 is as under:-

i.	Budget Allocation for the year 2010-11	Rs.550.00 lacs
ii.	Total amount of spillover works	Rs.42.98 lacs
iii.	Total amount of estimates	Rs.203.67 lacs
iv.	Total of Sr.No. 2 & 3	Rs.246.65 lacs
v.	Expenditure incurred during current financial year.	Rs.47.96 lacs

The matter is, therefore, placed before the Finance and Contract Committee for its consideration and approval please.

E.E.Roads-3, M.C.

AGENDA ITEM NO. 6

Subject: Supply of PCC Benches at Hort.Store which are to be fixed as requirement for various development works.

(Amount:Rs.25.49 lacs)

As per decision taken in the meeting of FOSWAC and also directed by Worthy C.E.M.C for reserve of PCC Benches in Horticulture Store which are to be fixed against urgent demand.

Accordingly this rough cost estimate amounting to Rs.25.49 lacs has been prepared. The same has been approved by worthy Commissioner, M.CChandigarh for placing before the Finance and Contract Committee. The scope of work taken in this estimate is as under:-

P&F PCC Benches 450 nos.

The expenditure on this work will be charged to the head “ 4217 (P) –Landscaping.

The budget estimate, budget allocation is as under:-

- | | | | |
|-----|--------------------------------------------|---|----------------|
| i) | Budget Allocation (for the year 2010-2011) | : | Rs.411.00 lacs |
| ii) | Expenditure incurred upto 30.11.2010. | : | Rs. 69.69 lacs |

The matter is placed before the Finance and Contract Committee for its consideration and approval.

S.E.(B&R) M.C.

E.E.(H) M.C.

AGENDA ITEM NO. 7

Subject: Providing and Fixing of Multiplay Activity/ Play System in Parks of Sector 27 C&D, Chandigarh.
(Amount:Rs.18.95 lacs)

For the improvement of various Parks in Sector 27 C&D by Providing Multiplay Activity/ Play System for children of all group desired by the Area Councillor Ward No.18 Sh.Devinder Singh Babla.

Accordingly this rough cost estimate amounting to Rs.18.58 lacs has been prepared for P&F of Multiplay System in four nos. Parks in Sec.27 C&D, Chandigarh. The same has been approved by worthy Commissioner, M.C., Chandigarh for placing before the Finance and Contract Committee. The scope of work taken in this estimate is as under:-

P&F of Multiplay System (09) 04 nos.

The expenditure on this work will be charged to the head “ 4217 (P) –Landscaping.

The budget estimate, budget allocation is as under:-

I)	Budge Allocation (for the year 2010-2011)	:	Rs.411.00 lacs
II)	Expenditure incurred upto 25.11.2010	:	Rs.69.69 lacs.

The matter is placed before the Finance and Contract Committee for its consideration and approval.

S.E.(B&R) M.C.

E.E.(H) M.C.

AGENDA ITEM NO. 8

**Subject: - ESTIMATE FOR THE WORK OF PROVIDING AIR CONDITIONING SYSTEM
JANJ GHAR SECTOR 47, CHANDIGARH.**

Amount Rs. 15.40 lacs

The B&R wing of M.C Chandigarh has recently renovated the Janj Ghar sector 47, Chandigarh, where 3 nos. multipurpose hall have also been constructed as per Architecture drawings these halls to be made air-conditioned with up to date standards. Keeping in view of above the area has been surveyed by the SDE MCPH Sub/Divn. No,14, and accordingly the rough cost estimate amounting to Rs. 15.40 lacs including the cost of 3% contingency and P.E. charges has been prepared.

It has been proposed to install 11 no. cassette type A.C's of 3.0 ton cooling capacity and 9 no. split type A.C's of 2.0 ton capacity along with voltage stabilizers, drain pipe M.S stand and additional copper pipe.

As such as for the estimate amounting to Rs. 15.40 lacs duly allowed by the competent authority is hereby placed before the F& CC for consideration and approval. The expenditure shall be chargeable to Head 4217 –Plan (Civic work).

Total budget provision for the year 2010-11 Rs.11.25 Lacs.

Expenditure incurred up to till date Rs 171436.00.

SEMC(PH)

EEMCPH-4

AGENDA ITEM NO. 9

Subject:- Regarding auction of clubbed PPA of Fun Republic, Manimajra and PPA of Tourist Buses Parking, Manimajra.

The Finance & Contract Committee in its 192nd meeting held on 15.2.2010 against agenda item No.16, the following decision was taken:-

“After deliberation, the Committee decided to fix Rs.6.00 lac as reserve price for allotment of Tourist Buses Parking Manimajra.”

After re-fixing of reserve price of Rs.6.00 lac in respect of Tourist Buses Parking, Manimajra, sealed applications were invited for allotment of Tourist Buses Parking, Manimajra along with other vacant Paid Parking Areas by giving advertisement in leading news papers but no bid was received from any body at the time of opening of technical bids on 28.4.2010, 9.9.2010, 4.10.2010, 25.10.2010, 11.11.2010. It is pertinent to mention here that Paid Parking Area of Tourist Buses Parking, Manimajra even clubbed with Fun Republic Manimajra and combined technical bids were called for by giving public notice in the leading news papers on 24.11.2010 by fixing the reserve price as under:-

Sr. No.	Description	Reserve Price In Lacs.
1.	Reserve price of F.R. Manimajra equal to 75% of the previous bid amount of Rs.21.84 Lacs	16.38
2.	Reserve price of PPA of Tourist Buses Parking, Manimajra as fixed by F&CC	6.00
3.	Total clubbed reserve price of both above mentioned PPAs.	22.38

No technical bid was received on 03.12.2010 in respect of clubbed PPA of Fun Republic Manimajra and PPA of Tourist Buses Parking, Manimajra.

In view of combined reserve price of Rs.22.38 Lacs, it seems that nobody is interested to give auction of clubbed PPA of Fun Republic, Manimajra and PPA of Tourist Buses Parking, Manimajra, therefore, it shall be appropriate to consider the matter by F&CC to reduce the reserve price suitably.

The matter is placed before Finance & Contract Committee for consideration and taking appropriate decision.

Sd/-
Addl. CMC-I

AGENDA ITEM NO. 10

Estimate for the work of “Providing of wire gauge wooden door shutters in water supply houses located in Water Works Sector-12, 26, 32, 37, 39 & 20/C Chandigarh.

The water supply houses for maintenance staff have been constructed at various Water Works i.e. Sector-12, 26, 32, 37, 39 & also at Sector 20/C Chandigarh. These houses were constructed long ago & the wire gauge door shutters were not provided in these houses. The residents are regularly demanding for the provision of the same. As per survey carried out by field officers, 764 number wire gauge door shutters in different type of water supply houses are required to be provided for 204 number houses located in different sectors. It is imperative to mention that the provision of wire gauge shutters is need based and the same are also provided by the Engineering Department Chandigarh Administration in new Govt. houses. As such, it is proposed to provide wire gauge wooden door shutters in water supply houses on the existing chowkhats as the space for same is available. Thus, the estimate duly checked for ` 25.58 Lacs has been allowed by the competent authority to be placed before the Finance & Contract Committee for consideration and approval.

Accordingly, the agenda is hereby placed before the Finance & Contract Committee for consideration. The expenditure will be charged to Head 4215- Water Supply & Sanitation Capital Outlay (Plan) - Renovation of Civil Works and more funds will be demanded in RBE. The detail of Budget allocation is as under:

Budget Details:

Major Head/ Head of Account	4215- Water Supply & Sanitation Capital Outlay (Plan) - Renovation of Civil Works
Total Budget Allocation	Rs.150.00 Lacs.
Amount of Estimates already sanctioned	Rs.(3.00+41.24+39.17+83.40=166.81) Lacs
Estimates under process	Rs.22.26 Lacs.
Upto date expenditure	Rs.9.39 Lacs
Amount of present estimate	Rs.25.58 Lacs.

AGENDA ITEM NO. 11

SUBJECT: ESTIMATE FOR THE WORK OF "CONSTRUCTION 10 NO WATCH TOWERS/ OBSERVATION POSTS ALONG BOUNDARY WALL FOR SECURITY PURPOSES AT WATER WORKS, SECTOR-39, CHANDIGARH."

A meeting to review the security arrangement of water works, Sector-39 was held during 2009 (minutes attached) wherein it was suggested to implement various points discussed in the meeting. As per minutes of meeting, it was decided to increase the height of existing boundary wall by two feet and to provide angle iron posts & fencing, construction of cycle track-cum-service lane i.e. concrete path, construction of watch towers, security lights, provisions of CCTV Cameras and metal detectors etc. Thus for security of water works sec. 39, Chandigarh, it is proposed to construct 10 no. watch towers/ observation posts of 20 feet height by using mild steel sections and contingent items along boundary wall of water works. The other provisions i.e. Raising the height of existing boundary wall by two feet and to provide angle iron posts & fencing, construction concrete path, provision of CCTV Cameras and metal detector etc. have been covered under separate estimates. Thus the estimate for construction of watch towers duly checked for **Rs. 22.26 Lacs** has been allowed by the competent authority to be placed before the Finance & Contract Committee for consideration and approval.

Accordingly the agenda is hereby placed before Finance and Contract Committee. The expenditure will be charged to *Head: 4215 – W/S & Sanitation Capital outlay (Plan) –Renovation of Civil works.* and more funds will be demanded in RBE. However the detail of Budget allocation is as under:

Budget Details:

Major Head/Head of Account	4215 – W/S & Sanitation C.O.L (P) –Renovation of Civil works.
Total Budget Allocation	Rs. 150.00 Lacs
Amount of Estimates already sanctioned.	Rs. (3.00 +41.24 + 39.17 + 83.40 = 166.81) Lacs
Estimates under process	Rs. 25.58 Lacs
Up to date expenditure	Rs. 9.39 Lacs
Amount of present Estimate	Rs. 24.28 Lacs

AGENDA ITEM NO. 12

Subject: - Providing Light on V-5 road Sector 22-A&B/C&D Chandigarh.

This estimate has been framed for Providing Light on V-5 road Sector 22-A&B/C&D, Chandigarh. On this V-5 Road, Sector 22-A&B/C&D, Chandigarh, the Street Light has been provided on the composite electricity distribution L.T. lines and being maintained by the U.T. Electricity Wing. Now the V-5 Road has been widened to its maximum width, the pole to pole distance is too high and there are dark patches/darkness on the V-5 Road, Sector 22-A&B/C&D, Chandigarh. As this is an overcrowded Sector due to the reason being city's most commercial/market area.

The Area Councillor has requested that new Street Light through underground cable system may be provided by the Municipal Corporation, Chandigarh for proper lighting of the V-5 Road to avoid any mis-happening/accident as the traffic density is too high on these roads.

It is proposed that new Street Light Poles alongwith underground cable through DWC pipe and new 150 Watt SVL Fittings will be installed and already installed 150 Watt SVL Fittings on the Electricity Poles will be reused on the new work. Hence this estimate amounting to **Rs.16.75 lacs** has been framed for according administrative approval under **4217 (P) Electrification**.

Agenda is placed before the Finance & Contract Committee for its consideration and decision please.

S.E. (B&R),
M.C. Chd.

E.E. (Elect.)
M.C. Chd.

AGENDA ITEM NO. 13

SUBJECT: ESTIMATE FOR THE WORK OF "UPGRADATION, SUPPLYING, INSTALLING, TESTING & COMMISSIONING OF TOTALLY ENCLOSED HT SOFT STARTER, CONTROL PANEL SUITABLE FOR MOTORS OF 1050 HP PUMPS(785 k w INDUCTION MOTORS 3 PHASE-6.6 K.V.) INSTALLED AT WATER WORKS KAJAULI (PB.) (AGAINST AUG. OF WATER SUPPLY SCHEME PHASE-III, CHANDIGARH.)"

Four phases of Augmentation Water Supply Scheme for Chandigarh to bring 20 MGD canal water from Kajauli under each phase has been implemented and commissioned to meet the drinking water requirement of Chandigarh. The Phase-I, II & IV of water supply scheme has been completed and commissioned by Punjab Water Supply and Sanitation Deptt., during the year 1982-83, 1988-89 and 2006 respectively and Phase-IV by Engg Deptt, Chandigarh Administration during year 1994-95. Three no. pumping sets each of 1050 HP have been installed to pump raw water to Chandigarh from water works Kajauli. These pumps sets are operated through 785 KW 3 phase induction motors and electricity to motors is directly feeded from HT panels. Due to high voltage the heavy machinery give frequent troubles in running and faults occur at time and again, which increases the maintenance cost. Thus for protection and smooth running of motors, 3 No HT soft starters are required to be installed for the longer life of machinery as these were not earlier installed for Phase III machinery like already installed against phase-IV and to be installed against Phase-I&II by Punjab water supply & Sanitation deptt. The provision of high voltage soft starters will result in better efficiency, lesser number of break downs and thus reduce the expenditure on maintenance. Therefore the estimate duly checked for **Rs. 33.54 Lacs** has been allowed by the competent authority to be placed before the Finance and Contract Committee for consideration and approval.

Accordingly the agenda is hereby placed before the Finance and Contract Committee for consideration. The expenditure will be charged to head: 4215 – Water Supply and Sanitation (Plan) – Replacement of pumping machinery and more funds will be demanded in RBE. However the detail of Budget allocation is as under:

Budget Details:

<i>Major Head/Head of Account</i>	<i>4215 – Water Supply and Sanitation (Plan) – Replacement of pumping machinery</i>
Total Budget Allocation	Rs. 100.00 Lacs
Amount of Estimates already sanctioned.	Rs. (13.27+333.05 = 346.32) Lacs
Estimates under process	Rs. (53.45+96.25+9.96+28.33 = 187.99) Lacs
Up to date expenditure	Rs. 11.82 Lacs
Amount of present Estimate	Rs. 33.54 Lacs

SE MC (PH)

EE MC PH-1

AGENDA ITEM NO.14

SUBJECT: ESTIMATE FOR THE WORK OF "SUPPLYING, LAYING, TESTING AND COMMISSIONING OF SINGLE CHAMBER DOUBLE FLANGE AIR VALVES 200MM (8") DIA AT VARIOUS RD'S ON EXISTING PSC PIPE LINE FOR AUG. OF WATER SUPPLY SCHEME PHASE-III FROM WATER WORKS KAJAULI TO WATER WORKS SECTOR 39, CHANDIGARH."

Four phases of Augmentation Water Supply Scheme for Chandigarh to bring 20 MGD canal water from Kajauli under each phase has been implemented and commissioned to meet the drinking water requirement of Chandigarh. The Phase-I, II & IV of water supply scheme has been completed and commissioned by Punjab Water Supply and Sanitation Deptt., during the year 1982-83, 1988-89 and 2006 respectively and Phase-IV by Engg Deptt, Chandigarh Administration during year 1994-95.

The kinetic CI air valves 200mm i/d were also installed at 1200mm dia PSC /MS Rising mains from water works Kajauli to water works, Sec-39, Chandigarh to avoid the bursting of pipe/ joints. With the passage of time, the air valves on PSC pipe line laid under Phase-III have been repaired many times. The spares of the valves like orifice plug, HP balls, LP balls, rubber packing etc are very costly and not readily available in the market. As the supply of raw water is very essential so it is proposed to replace the existing CI Air valves with the new ones of ductile iron. 40 No. such old C.I. Air valves at different locations are proposed to be replaced with new single chamber Ductile Iron Air valves of 200mm dia to ensure better and un-interrupted supply of raw water to Chandigarh. The suitable credit for old CI Air valves to be dismantled has been considered in the estimate. Thus the estimate duly checked for **Rs. 30.09 Lacs** has been allowed by the competent authority to be placed before the Finance and Contract Committee for consideration and approval.

Accordingly the agenda is hereby placed before the Finance and Contract Committee for consideration. The expenditure will be charged to head: 4215 – Water Supply and Sanitation (Plan) – Laying of additional pipe lines and more funds will be demanded in RBE. However the detail of Budget allocation is as under:

Budget Details:

<i>Major Head/Head of Account</i>	<i>4215 – Water Supply and Sanitation (Plan) – Laying of additional pipe lines</i>
Total Budget Allocation	Rs. 205.00 Lacs
Amount of Estimates already sanctioned.	Rs. (26.80 +21.00+23.62 = 71.42) Lacs
Estimates under process	Rs. (13.05 + 14.17 +22.63 + 49.34 + 151.51 = 250.70) Lacs
Up to date expenditure	Rs. 79.91 Lacs
Amount of present Estimate	Rs. 30.09 Lacs

SE MC (PH)

EE MC PH-1