The Cambridge Hospital

1493 Cambridge Street, Cambridge, Massachusetts 02139 (617) 498-1000

To: Robert W. Healy, City Manager
From: John G. O'Brien, Hospital Administrator
Date: May 14, 1993
Re: Hospital Facilities Master Plan: Project Alternatives

In our extensive and comprehensive Facilities Master Planning Process, we reviewed many alternatives prior to determining the Project concept as we know it today. Enclosed are narratives which describe the alternatives we explored:

(1) Additional Parking Capacity on-site

(2) Alternative Sites for the New Hospital-Based Building

(3) Providing Services at an Off-Site Location

PROJECT ALTERNATIVES

Additional Parking Capacity On-Site

The Hospital's parking capacity was developed at a time when we had a smaller staff and limited traffic, principally visitors to patients on the inpatient units. Our parking lots include the following: Camelia Avenue (123 spaces), Line Street and rear Cahill (149 spaces) and off-site lot (70 spaces). The two latter lots are used by employees (including physicians). The Camelia Avenue lot is primarily used by physicians, patients, and visitors. Ambulance traffic also enters from Cambridge Street through the Camelia lot. With our dramatic growth in activity, higher degree of turnover by ambulatory patients, and larger staff, additional capacity has been required. Many users of the hospital utilize off-street parking in Cambridge and Somerville.To alleviate the present shortfall, we have already implemented off-site parking and shuttle service for employees and developing incentives for carpooling and public transportation.

Several alternatives were considered to address the need for additional parking on-site to support patient activity:

- o building a multi-level garage on Line Street
- o building a multi-level garage next to the new building
- o building parking capacity underground, under the new building

The hospital had proposed a parking garage on the Line Street site about seven years ago and received tremendous opposition from the community. Also, the Line Street location would not be conveniently located to where the patient services would be located, particularly problematic for patients who are infirm and in inclement weather. With the entrance/exit to the garage on Line Street or Cambridge Street, traffic congestion would result.

Building a garage next to the new buiiding would not be acceptable to the character of the immediate residential neighborhood and would have resulted in less square footage (and a building with less desirable and less efficient configuration) in the new building.

The underground alternative was deemed the most preferable from the following standpoints: proximity to ambulatory services, entrance to the garage off a main street, and aesthetics.

Our facilities master plan calls for the development of three levels of parking capacity below grade which would provide 318 spaces, with 259 net additional spaces (existing surface parking in the Camelia lot would be displaced by the new building) as well as developing alternatives to employees to reduce on-site parking.

PROJECT ALTERNATIVES

Alternative Sites for the New Hospital-Based Building

The Hospital has explored the construction of a new building on the hospital campus, primarily to support the future development of ambulatory services, for several years. In the planning process, the scope of the project grew to encompass renovation and modernization of inpatient and support areas as well. In the planning process several alternative locations for new square footage were carefully considered. These included the following:

o new construction on the Line Street parking lot

o renovation of, and construction of an addition to, the Cahill building

o demolition of an existing old boiler plant on the Camelia Avenue lot followed by new construction on that site

o a new building adjacent to the main building on the site of the old building, followed by an addition onto the third floor of our main building

Building on the Line Street lot would have posed several barriers, including our need to purchase the property, the immediate neighborhood's opposition to construction on that lot (which emerged in 1984 when the hospital proposed construction of a parking garage on the site), and the separation of a new clinical building from ancillary and other support services.

Renovation and construction of the Cahill building was no longer a consideration once the emergency decision was made in December 1990 to renovate the two upper floors for secure and voluntary adult psychiatry units in the face of the imminent closure of Metropolitan State Hospital. Constructing an addition onto the Cahill building would not yield sufficient square footage to accommodate our projected growth.

The most desirable location for a new building which emerged from the planning process was the following: the footprint in the Camelia Avenue parking lot (adjacent to the main hospital) which encompasses the site of the existing old boiler plant, and which has its southeast corner formed by the main building where the psychiatric and medical emergency departments are currently located. This land is owned by the City of Cambridge. Existing traffic and circulation patterns would not change but would be improved because of routing of emergency and non-emergency pedestrian, vehicular and ambulance traffic.

Constructing the new building next to the hospital main structure allows for close relationship to ancillary services, and direct expansion of existing departments as well as excellent functional relationships between services. For example, the emergency department will be expanded into the new building from its current first floor location. Its critical relationship to radiology will be maintained. The orthopedics and podiatry service is programmed for the first floor of the new building, addressing the critical physical relationship of orthopedics to radiology and emergency which does not presently exist. The surgical service will be modernized on the third floor of the main building and new construction, enabling the critical adjacencies between the ORs, recovery, surgical day care, and maternity service on a single floor for excellent patient flow and increased safety.

This concept was further improved when engineering study showed that two additional levels could be built onto the existing three level section of our main building. The space created in this infill area is ideally suited for patient care units, like the intensive care unit, because it offers the size, configuration and engineering to house the ICU and provides excellent functional relationships to other services.

PROJECT ALTERNATIVES

Providing Services at an Off-site Location

The Cambridge Hospital's facilities master plan project was programmed through extensive and comprehensive efforts of the Strategy and Program Subcommittee of the Hospital's Facilities Master Planning Process. The proposed concept represents the consensus of medical staff, administrative and Board leadership. In the process, consideration was given to the balance between hospital and community-based practice sites (including the capacity of our neighborhood health centers). Also, much consideration was given to appropriately sized spaces, functional adjacencies and relationships (locations of departments relative to one another), and cost implications of developing space for the individual service areas.

The project includes new construction as well as extensive renovation of existing spaces. Services which have been programmed for the new building (and which would be relocated from their current locations) include the following: ambulatory pediatrics, orthopedics and podiatry, women's center, Zinberg Clinic, primary care center, surgery and surgical specialties, eye, and dental, medical specialties, cardiology, and ambulatory diagnostic and treatment unit. Services which have been programmed in space which straddles the existing main building and new construction include the following: medical and psychiatric emergency service, pathology and laboratories, maternity service, surgical service, and intensive care unit. Space in the Main and Cahill buildings will be renovated and modernized for inpatient units and support services. Renovations to the Macht building will accommodate expansion of outpatient psychiatry services.

The project was programmed in a comprehensive manner, taking into account all existing buildings on the hospital campus, and can not easily be unbundled. Factors which influenced the decision to develop additional space on-site versus at an off-site location include the following:

o Many parts of the project includes expansion of existing inpatient and diagnostic and treatment services which can not be moved to an off-site location, e.g. emergency department, intensive care unit, radiology, and operating rooms.

o Relationships between the hospital's services are critical. Examples include orthopedics and podiatry to radiology and the emergency department; surgical day care to the surgical suite and recovery area; Zinberg Clinic to the inpatient units. With the growth of managed care systems, the proximity between emergency and primary care services is increasingly important. Many patients rely on high technology diagnostic services like cat scan and cardiovascular services where it would not be cost-effective to duplicate equipment at a satellite location.

o From a risk management perspective the hospital's code team and emergency department provide necessary backup to ambulatory patients whose situations worsen. In a life-threatening situation, the delayed response from an ambulance ride may be the difference between life and death. Support areas such as the laboratories are critical to be located at the hospital for providing "stat" tests and storing blood for emergency procedures.

o Clustering the ambulatory services in a single building fosters co-management and multidiscipinary care of patients, facilitates referrals and consultations and a tight referral network (particularly important for HMO contracting and managed care), and builds colleagueship among providers. Clustering examination and treatment areas promotes sharing and creates more efficient utilization of space.

o Given the size of our medical staff and availability of specialists, a critical mass of physician presence needs to be maintained at the hospital for providing coverage, consultations, and teaching. For many specialty areas, a single attending is available (e.g. infectious disease, neurology, ob/gyn) at a given time.

o Primary care services at the hospital provide additional choice for patients, of provider and site of service. The hospital-based primary care services (adult, pediatrics, ob/gyn and psychiatry) serve as the "health center" for many residents of neighborhoods which are not directly served by one of the hospital's neighborhood health centers. For several health plans, the preferred provider contract is restricted to hospital-based physician practice sites.

o Development of space off-site is not always a less expensive alternative. Buildout/renovation of office space to accommodate health care services in accordance with health care codes and regulations requires extensive plumbing, electrical, and other support systems.

o In developing satellite services, careful attention must be paid to the market characteristics of the area, including other competing health care providers. In the Central Square vicinity, The Cambridge Hospital already operates the Windsor Street and Riverside neighborhood health centers and will soon open a senior health clinic in the city-wide comprehensive senior center.

14.

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EXECUTIVE DEPARTMENT
ROBERT W. HEALY
City Manager

RICHARD C. ROSSI
Deputy City Manager

May 17, 1993

To The Honorable, The City Council:

In response to an inquiry made for information on alternative sites for the new Hospital-based building, please find attached a response from John G. O'Brien, Hospital Administrator.

Very truly yours,

Robert W. Healy
City Manager

RWH/mev
attachment

Consent Agenda #14 S-241
RE: Alternative sites for new hospital building.

In City Council,
May 17, 1993

Charter Right Exercised
by Councillor Toomey
5/24/93 No action taken —
placed on file under rule 19