



Cambridge Redevelopment Authority

336 MAIN STREET • CAMBRIDGE, MASSACHUSETTS 02142 • PHONE (617) 492-6800

March 26, 1982

Report #1

City Council
City Hall
Cambridge, Massachusetts 02139

Re: Status Report
Kendall Square Urban Renewal Area
Project No. Mass. R-107

The Honorable, City Council:

The following information regarding the status of development activities is presented for your information.

Parcel 2

The Authority has concluded negotiations with Boston Properties for the development of the ten-acre so-called NASA "surplus land" north of Broadway and has advertised its intent to enter into a development agreement.

In anticipation of executing this agreement, Boston Properties has entered into a letter of intent with BIOGEN, Inc. for the construction of a 65,000 s.f. building. Upon execution of the development agreement, the Authority will be prepared, after building design review, to enter into a supplemental land disposition contract in order that construction of this facility can begin.

The concept design plan for Parcel 2 provides for the construction of 420,000 to 770,000 s.f. of space. As an interim step, the Authority has authorized Boston Properties to commence preliminary construction activities prior to the execution of a supplemental land disposition contract, subject to the execution of the development agreement.

Parcels 3 & 4

In accordance with the terms of the overall master plan framework and concept design plan for these parcels, Boston Properties has completed and fully rented Five Cambridge Center, a 250,000 s.f. building fronting on Main Street and constructed on the first

individual parcel. Construction of the 225,000 s.f. Four Cambridge Center, fronting on Broadway, is well underway with initial occupancy scheduled for the Fall of this year. Construction of a structured parking facility featuring a fully-landscaped roof-top available to the public is expected to be completed within 12 months. Boston Properties also has entered into a letter of intent with the Whitehead Institute and shall be submitting a development proposal for Authority consideration. As a part of the City's efforts to determine what it can expect to gain should the Whitehead Institute locate in Kendall Square, the City Manager and the City Assessors have negotiated the terms and conditions of an in-lieu-of tax payment agreement. That agreement, in draft form, is being reviewed by Authority Counsel in order that it may be incorporated into the deed transferring the land to Boston Properties thereby protecting the City's interest. Although the Authority has not received a formal development proposal from Boston Properties, the Authority is prepared to review such a proposal from the standpoint of jobs and revenue generation, design considerations, effect on continuing the established momentum of development and the extent to which it meets the development guidelines, and master plan framework for Cambridge Center. The total private sector financial commitment to date in these parcels is in excess of \$70-million, with a total anticipated investment at completion estimated at more than \$200-million.

Supplementary Activities

Reinforcing private sector development, construction has begun on a replacement traction power substation by the MBTA and design development work has been completed on the modernization of, and platform lengthening for, the Kendall Square Station.

The Authority has completed significant public improvements intended to support private investment. To date, required underground utilities and surface improvements have been constructed with other work scheduled for this construction season.

The Authority has concluded its land acquisition negotiations with the MBTA and now holds title to all of the real estate required for development activities in Parcels 3 and 4.

MASTER PLAN
CAMBRIDGE CENTER



BINNEY ST.

BROADWAY

THIRD ST.

MAIN ST.

to Longfellow Bridge

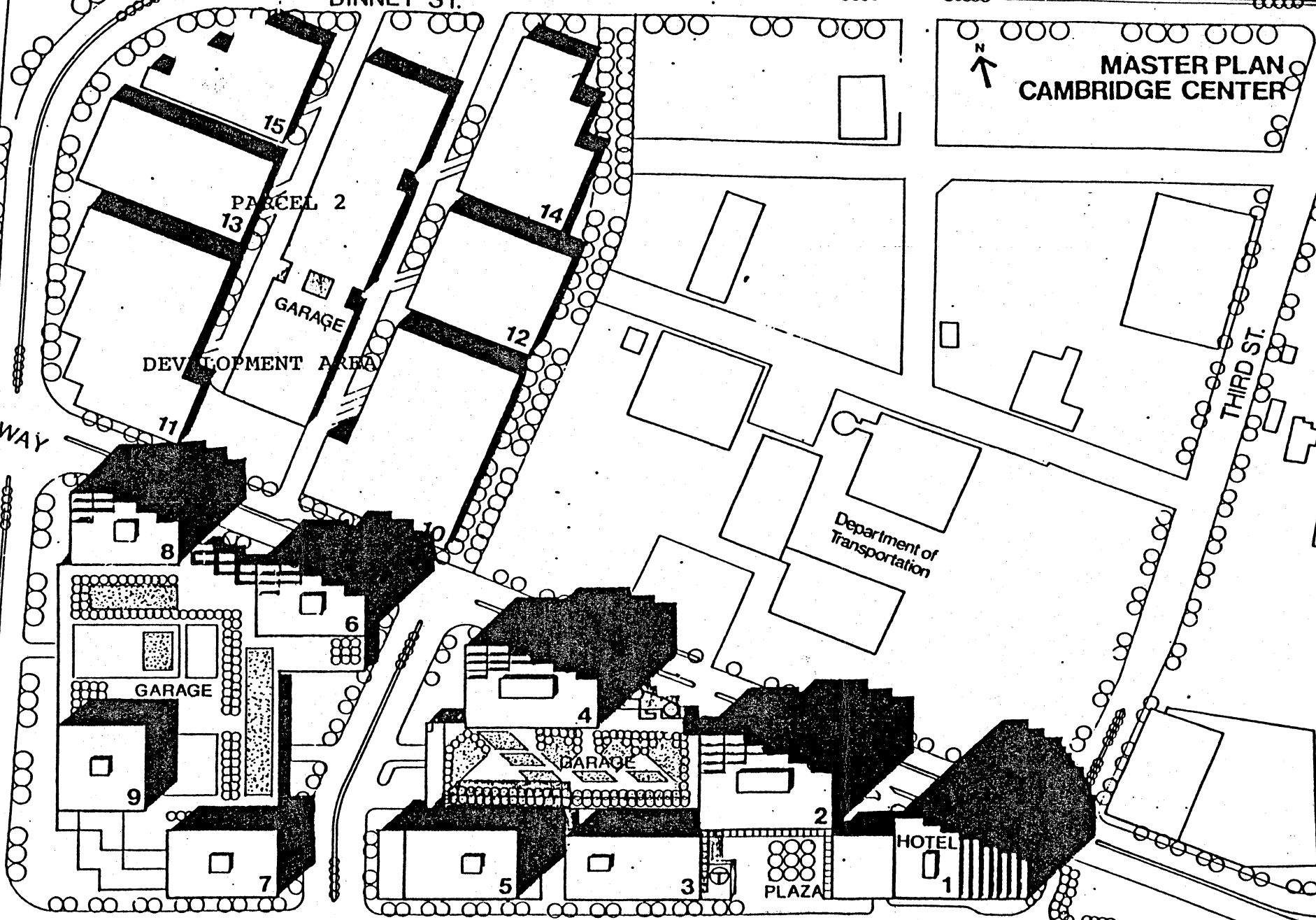
PARCEL 2
DEVELOPMENT AREA
GARAGE

Department of
Transportation

Draper
Laboratory

Technology
Square

Massachusetts Institute of Technology



15

13

14

12

11

8

6

GARAGE

9

7

4

GARAGE

5

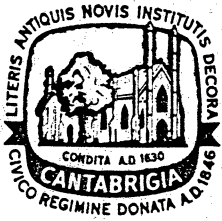
3

2

PLAZA

HOTEL

1



Cambridge Redevelopment Authority

336 MAIN STREET • CAMBRIDGE, MASSACHUSETTS 02142 • PHONE (617) 492-6800

March 26, 1982

Report #2

City Council
City Hall
Cambridge, Massachusetts 02139

Re: Employment in the Biotechnology Sector

The Honorable, City Council:

A major new industry based upon the combining of the ages-old fermentation industry with the latest advances in the biological sciences is becoming a factor in contemporary society. New in concept, the industry goes under several names: Applied Genetics, Recombinant DNA (rDNA), General Engineering and Biotechnology.

Until recent years, the industry was not noticed other than by the scientists, entrepreneurs and investors who were intrigued by the possibility of being a part of the birth of the "next new industry," following the lead of the semiconductor, integrated circuit, computer, transistor, electronics and other high technology industries. But as perception of the promised birth is heightened by times of economic hardship, two questions present themselves:

1. Jobs--how many, what kind?
2. Where will this new industry be located?

It is extremely difficult to project the number and type of jobs in an industry whose form has yet to appear and which, once it does take shape, may not resemble traditional industries in structure or employment profile. It may be easier to predict the location of this new industry. There appear to be three prime candidate locations in the United States: San Diego, Calif.; the San Francisco Bay Area; and Cambridge/Boston, Mass. This is because the scientific talent that is contributing to the advance of the technology of rDNA is concentrated in these three areas. At least one of the three--San Diego--is also campaigning vigorously to attract such industries, using the resources of several divisions of its Chamber of Commerce plus the San Diego Economic Development Corporation, an arm of the city.

THE PROCESS

There is a well-established route traveled by many companies in the evolution of high-technology industries:

1. The technology is often invented and developed inside a university laboratory, or by scientists working in independent research facilities.
2. Capital and technology come together nearby to form small companies which nourish the technology and try to bring products to market.
3. Some of these small companies thrive in a shake-out process. Large corporations invest and build companies in promising areas.

It can be assumed that this process will take place in all three of the likely locations in the U.S. and that all three will host a mixture of companies, large and small, across the very wide spectrum that Applied Genetics presents. Cambridge/Boston is abreast of the other areas in terms of companies and jobs. Whether it will continue to gain its share of new jobs in this market is uncertain at this time.

THE INSTITUTIONS

Common to the three candidate areas are strong universities--in the West, campuses of Stanford and the University of California, with strong medical schools and science departments both in San Diego and the Bay Area; Harvard and M.I.T. in Cambridge/Boston.

Both California areas have an established base of independent, non-profit research institutions in the biological sciences. To provide direct comparison for examining the future in Cambridge, attention is focused upon San Diego, where two major independent biological research institutions are located, the Salk Institute for Biological Studies and the Scripps Clinic and Research Foundation. The Salk Institute, although somewhat larger, corresponds in many respects to the Whitehead Institute for Biomedical Research, proposed for the Kendall Square area.

TYPES OF EMPLOYMENT

Studies by the Office of Technology Assessment in the U.S. Congress, as well as an examination of data collected by the San Diego Economic Development Corporation, indicate three classes of employers are appearing:

1. The research-based organizations, some for the profit to be gained by selling their research results to other companies, some purely for research without anticipation of profit.

2. Small-scale production facilities, such as those being constructed to produce insulin and interferon by new processes.

Jobs for Scientists, Engineers, Managers

Organizations that are primarily focused upon research can be expected to have a high concentration of highly-trained, highly-education personnel. The growth of this industry in Cambridge can therefore be expected to provide employment for the numerous graduates of Harvard, M.I.T., Tufts, B.U. and the many other prestigious universities nearby who must now leave the Cambridge area for employment elsewhere.

Secure Jobs for Which Training Will Be Provided

But in addition, these research institutions employ numerous workers without advanced skills, many in jobs that have not existed previously. Workers will need to be trained for these jobs and candidates no doubt easily be identified within the Cambridge job market. Because companies will invest heavily in such training, these jobs will offer unusual long-term security. Such has been the case here with various electronics industries, and elsewhere, and, as will be shown, is the experience in the health sciences industry and other scientific industries in San Diego, although figures for types of employment are not readily available.

Jobs in Support Services

Further, the growth of this Applied Genetics industry will place demands upon support services, necessitating growth in firms that provide this support--such as transportation, food services, offices and technical supplies, business equipment, repairs and maintenance, insurance and financial services, building cleaning, trash removal and other support services--resulting in an increased number of jobs of a more traditional nature.

Two examples of employment profiles are illustrative:

I. RESEARCH-BASED ORGANIZATIONS

The Whitehead Institute for Biomedical Research, which has been proposed for the Kendall Square Urban Renewal Area, has projected that it would employ 200 persons. Approximately 75 percent of these employees would be categorized as scientific personnel (scientists, post-doctoral fellows, graduate students, laboratory scientific personnel).

However, one quarter of the employees would be workers providing support services. These would include administrative workers,

laboratory support workers, maintenance workers and security guards. The Whitehead Institute has estimated the annual payroll for these workers at \$700,000.

II. MANUFACTURING-BASED ORGANIZATIONS

The Office of Technology Assessment (OTA) has published the results of an intensive examination of the impact on the application of the genetic engineering process to the production of a single product. The product selected for this process was acetaminophen (APAP), a widely-used pharmaceutical product commonly known by the trade name used by its major manufacturer: Tylenol.

"Tylenol" is one of many products that might be suitable for conversion from traditional production to one being fermentation of engineered strains of bacteria, according to the OTA study. A total of more than 100 compounds in 17 different product categories was identified.

SAN DIEGO

The history of what might be called "The San Diego Case" is perhaps relevant. In the last 1950's, San Diego was a community with a dying aerospace industry, a stagnant tourist industry and a growing unemployment rate. It was a community beginning to experience, for the first time, conflict in communities where there were concentrations of persons who had been unemployed for long periods of time and among whom there seemed little likelihood of profitable employment soon.

The city government made two related moves at that time:

1. It actively encouraged the siting of a campus of the University of California on government-owned land to the city's north. That campus was to be the location of a medical school and school of science.
2. The city gave biologist Jonas Salk a no-strings gift of 27 acres of prime ocean-front land on which to erect an institute for biological research.

Later the city took further action: It zoned the area near the campus and the adjacent Salk Institute to encourage the siting of "clean companies"--companies and research organizations in science-related activities, particularly in the health sciences. Much of the land was dormant, abandoned military bases, rural property or other unproductive land.

Today, the city lists approximately 30 scientific companies or other organizations in that "science zone," with employment totaling approximately 10,000 persons.

Nearby, but outside the "zone," the city lists another 65-70 science-oriented firms. The seeds sprouted and thrived and San Diego seems to have sprouted and prospered as well from what it describes as "an abundance of clean, high-technology companies."

San Diego civic boosters continue to pay court to companies in the health sciences, boasting of its "national and international reputation as a health sciences center." Citing an "atmosphere of scientific excellence" focused around the new university campus, Salk and Scripps, the city's Chamber of Commerce promotes San Diego as a city "zoned for prosperity," and "zoned for success."

THE FUTURE

How much money will be spent in this Applied Genetics industry in the future? How much money will the industry earn? How many jobs will there be?

The estimates vary widely. There are many factors that will influence the outcome besides basic market forces. But the world investment community, with conservative reputation, has already invested more than a billion dollars in companies whose assets are scientists with ideas. These investors apparently believe these companies will prosper and grow by capturing a significant proportion of many markets.

How large is the potential market for these companies?

According to the OTA study, the current market value of key products in the five basic areas where Applied Genetics will have its greatest impact--pharmaceuticals, chemicals, food, agriculture and energy--is \$27 billion. What portion of the total market will ultimately be captured by Applied Genetics companies, and what share will wind up in Cambridge/Boston, is difficult to predict. The total market is vast, and growing, as are the opportunities for Cambridge. Added to this market are entries on a growing list of products that can only be produced through genetic engineering and are beginning to find wide application.

THE SCENARIO

For Cambridge, the most likely scenario would be for its universities and independent research laboratories to continue to provide the intellectual resources that will attract corporations eager to invest in new manufacturing plants and facilities utilizing the new rDNA technology. Research performed at Harvard and M.I.T. led to the establishment of numerous electronics-based laboratories, consulting companies and manufacturing plants that found it convenient and necessary to be near the source.

The "genetic revolution" has already spawned several major companies, such as Biogen, and many other smaller ones, in Cambridge and nearby. The near future could bring other companies seeking to be near the fountainhead of rDNA research--and inside a community with a history of demonstrated success in high technology companies.



Cambridge Redevelopment Authority

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March 26, 1982

Report #3

City Council
City Hall
Cambridge, Massachusetts 02139

Re: Proposed Employment Services Program

The Honorable, City Council:

The Cambridge Center development in the Kendall Square Urban Renewal project is expected to produce more than 7,000 permanent jobs. A considerable portion of these will be non-professional jobs. In addition, more than 2,000 temporary construction jobs are being created from project development activities in both the private and public sector.

The basic document governing activities in the project is the Urban Renewal Plan. It contains specific objectives with respect to the creation of job opportunities for Cambridge residents. The Cambridge City Council, from time to time, has expressed its policy of emphasizing the importance of job opportunities for Cambridge residents, a policy the Cambridge Redevelopment Authority is exerting every effort to implement.

In an attached letter, Boston Properties, the developer of Cambridge Center, not only has recognized the goal of increased opportunities for Cambridge resident employment, but has proposed to cooperate fully in a course of action essential to meeting that goal.

Consequently, it would be recommended that the City Council approve the formation of a Cambridge Resident Employment Council, comprised of Boston Properties, other developers in the Eastern Cambridge area, the Cambridge Community Development Department, the Chamber of Commerce, the Business Education Department of Cambridge Rindge & Latin School, the Eastern Middlesex Human Resource Development Authority, the State Division of Employment Security, the Cambridge Department of Human Services, the Office of the City Manager, and the Cambridge Redevelopment Authority.

This Council would promptly enlist the direct support of the Eastern Middlesex Human Resource Development Authority offices

on Essex street, and the State Division of Employment Security offices on Green street to serve as a central location for job posting and job employment training and other related information. The Cambridge Resident Employment Council would stimulate a local hiring mentality and move to identify and consolidate training opportunities made available by both the private and public sectors.

DAVID BARRETT
VICE PRESIDENT

March 24, 1982

Mr. Joseph F. Tulumieri
Executive Director
Cambridge Redevelopment Authority
336 Main Street
Cambridge, MA 02142

Re: Resident Employment at Cambridge Center

Dear Joe:

This letter will confirm the discussions we have had concerning the approach that Boston Properties proposes to take to increase the extent of Cambridge resident employment at Cambridge Center as far as possible.

We recognize that increased opportunities for Cambridge resident employment is one of the explicit goals of the urban renewal program, and that it is a primary goal of the project in the view of the City Council, the City Manager, and the Cambridge Redevelopment Authority. As the private sector developer of the project, we want to make clear our willingness to cooperate fully in a continuing effort to achieve this goal.

At the same time, our own perspective is that this should be done in a manner that will add to the attractiveness of Cambridge Center as a location for prospective tenants since it is closely related to a key aspect of locational choice that will affect decisions made by those who might locate in Cambridge Center: the availability of a work force that can give growing companies the confidence that their labor requirements can be met both for their initial needs and for their long term expansion.

Letter to Mr. Tulimieri
March 24, 1982
Page 2

Boston Properties' experience and abilities is primarily in the area of real estate development and not in manpower and employment issues. However, we believe that there are a number of steps that we can take, which I can briefly summarize as follows:

First, we will act as a single point of contact for dealing with all of the present and future tenants at Cambridge Center.

Second, we will actively work to obtain the cooperation of our tenants in a course of action designed to increase the opportunities for Cambridge resident employment at Cambridge Center. The most important activity in this regard that we can presently identify is to establish a process for the flow of information about forthcoming job opportunities at Cambridge Center in a manner that will bring these to the attention of Cambridge residents who might be interested in and suitable for such jobs. We will work with you and other representatives of the city to establish and improve as necessary the means for doing this. (For example, our own assessment is that one or more central locations in the city that already serve, or would serve, as a common employment listing location--such as the D. E. S. office on Green Street and EMHRDA office on Essex Street--would be the most effective for such a purpose; they could be used as common job-posting locations for any other job information being developed in other developing areas of the city, and would give residents one or more central locations at which they could obtain all such information in a convenient manner.)

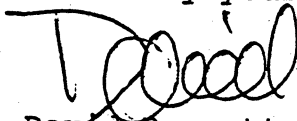
Third, we will work with you and other public agency representatives as are appropriate to establish an accurate, up-to-date description of the work force available at Cambridge Center, and in the city generally, to use in informing present and prospective tenants about the nature and quality of the available labor pool, and, in relation to this, where the opportunity presents itself, to develop training programs (either through public agencies or, where possible, at private companies themselves) to qualify those seeking employment for new or different jobs. As you know, we have already met with representatives of the Authority and EMHRDA to discuss both of these issues.

Fourth, we will continue to work with you in an effort to make the activities outlined above work successfully and to develop any other approaches that might prove useful in increasing Cambridge resident employment at Cambridge Center.

Letter to Mr. Tulumieri
March 24, 1982
Page 3

While our commitment to take the steps outlined above is unilateral, we strongly believe that the success of these efforts will be directly affected by the extent of the cooperative attempt by ourselves and the city to achieve these ends, and we look forward to working with you towards these objectives.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "David Barrett".

David Barrett
Vice President

DB/mag



CITY OF CAMBRIDGE

CAMBRIDGE, MASSACHUSETTS 02139
Tel. 498-9011

EXECUTIVE DEPARTMENT
ROBERT W. HEALY
City Manager

March 29, 1982

To the Honorable, the City Council:

With respect to Awaiting Report Item No. 8 relative to the proposed Whitehead Institute in the Kendall Square area, enclosed please find reports from the Cambridge Redevelopment Authority as follows:

1. A general status report for the Kendall Square project.
2. A report on employment in the biotechnology sector.
3. A proposed employment services program which we believe responds to the City Council's expressed concerns with respect to the availability of jobs for Cambridge residents.

Very truly yours,


Robert W. Healy
City Manager

RWH/mbf
Enc.

Agenda Item Number One

S-329

Re: response to Awaiting Report Item No. 8
regarding the proposed Whitehead Institute
in Kendall Square.

In City Council,

March 29, 1982

3/29/82

COMMUNICATIONS

Placed

ON

File