



The Aga Khan Award for Architecture

1995 ARCHITECT'S RECORD

1199.IND

I. IDENTIFICATIONProject Title CENTRAL INSTITUTE OF EDUCATIONAL TECHNOLOGYStreet Address Sri Aurbindo MargCity New Delhi Postal Code 110 016 Country India**II. PERSONS RESPONSIBLE****A. Architect/Planner**

Architectural Assistants : A.Mathur

Name Raj Rewal-Raj Rewal Associates (B.S.Grover, Ashok Sharma, Rana Ram)Mailing Address E-12, Defence ColonyCity New Delhi Postal Code 110 024 Country IndiaTelephone 4611495/4625428 Facsimile 91114611495 Telex Nil**B. Client**Name National Council of Educational Research & TrainingMailing Address Sri Aurbindo MargCity New Delhi Postal Code 110 016 Country IndiaTelephone 666047 Facsimile Nil Telex 73024**C. Project Affiliates**

Please list those involved in the project and indicate their rôles and areas of responsibility (e.g. engineers, contractors, economists, master craftsmen, other architects, clients, etc.).

Name	Rôle
<u>VIJAY REWAL</u>	<u>STRUCTURAL ENGINEER</u>
<u>AHLUWALIA CONTRACTS</u>	<u>BUILDER</u>
<u>ABDUL RAHMAN</u>	<u>CRAFTSMAN IN-CHARGE</u>
<u>RAISUDIN & LUXMAN</u>	<u>CRAFTSMEN</u>
<u>B.S.GROVER</u>	<u>ASSISTANT ARCHITECT</u>
<u>RANA RAM</u>	<u>ASSISTANT ARCHITECT</u>
<u>A.MATHUR</u>	<u>ASSISTANT ARCHITECT</u>

III. ARCHITECT'S BRIEF

Please describe the initial project programme.

India has the third largest pool of Scientists and Engineers in the World. At the same time 30% of its population is illiterate. It was conceived by the Central Institute of Educational Technology (C.I.E.T.) that an Indian satellite would broadcast via television and radio, educational programmes for children living in far flung rural areas. The function of the C.I.E.T. building is to house a school for communication which is fully equipped to the highest professional standards to produce broadcast quality programmes for teaching aids for children through community networks. The requirements include two Television Studios, two Sound Studios, Technical Control rooms, Workshop, Seminar rooms, Rehearsal areas and projection facilities, Library, Canteen and Administrative areas. The building would be extensively used by child artists, teachers and media personalities who would participate in programmes.

Design was influenced by two important criteria.

1. The building is in close proximity to Historic Qutab Minar and Mehrauli Complex of monuments.
2. Red sandstone is an important design element of Delhi's Historic monuments and is still an affordable building material. Stone Craftsmen are an integral part of the building team.

IV. EVOLUTION OF DESIGN CONCEPTS

Please describe the history of the project, from its conception to its final construction and actual use.

The Design concept is based on creating two interlinked courtyards, one small near the entrance and the second built around the existing tree, to function as an open air multi-purpose Television studio. The bigger courtyard comprises open air stage and amphitheatre and it is enclosed at the ground floor by entrance hall, artists rooms and canteen with the existing tree as the focal point of activities. The courtyard is in fact evocative of "Madarsa", traditional schools and surrounded on the upper three levels by passages linking library, audio-visual and administrative activities. The upper two floors have decreasing floor areas resulting in roof terraces over looking the central courtyard or the surrounding parks. The upper level terraces can function as outdoor discussion rooms and are interspread with balconies which can be utilised for filming the activities within the courtyard for a variety of Television performances.

V. CONSTRUCTION DETAILS

A. Description of Materials

(please also indicate if locally produced or imported and whether fabricated on-site or elsewhere)

1. Foundations Reinforced cement concrete.
2. Principal Structural Members R.C.C. columns and Beams supporting a dia-grid concrete slab.
3. Infill Red sand stone built in with unripe Brick.
4. Rendering of Façades or Exterior Finishes Natural Red sandstone and exposed concrete column.
5. Floors Kotah stone flooring in public areas and terrazzo floor in other areas. Red sandstone in courtyards.
6. Ceilings Exposed concrete.
7. Roofing Red sandstone and Brick
8. Other elements (please specify) Red sandstone screens and Jalis (trellis)

B. Construction Technology

Indicate the basic construction technology, methods, details or systems.

In situ R.C.C. frame of circular columns supporting a pre fabricated waffle slab (dia-grid) of concrete manufactured on the site.

C. Type of Labour Force (please indicate percentage) 30% Skilled Workers 70% Unskilled Workers

D. Origin of Labour Force * Domestic Foreign

VI. TIMETABLE

(please specify year and month)

- A. Commission 1986
- B. Design: Commencement 1986 Completion
- C. Construction: Commencement 1987 Completion 1989
- D. Date of Project Occupancy July 1989

VII. AREAS AND SURFACES

Site and Building Area (please indicate in square metres)

1. Total Site Area 6517.66 sq.mts.
2. Total Ground Floor Area 3,325 sq.mts.
3. Total Combined Floor Area 10,666 sq.mts.
(including basement(s), ground floor(s) and all upper floors)

VIII. ECONOMICS

Please specify the amounts in local currency. Provide the equivalent in US dollars. Specify the date and the rate of exchange for US dollars at that time.

	Amount in Local Currency	Amount in US dollars	Exchange Rate	Date
A. Total Initial Budget	<u>4,00,00,000</u>	<u></u>	<u></u>	<u></u>
B. Cost of Land	<u>X</u>	<u></u>	<u></u>	<u></u>
C. Analysis of Actual Costs				
1. Infrastructure	<u></u>	<u></u>	<u></u>	<u></u>
2. Labour	<u>33%</u>	<u></u>	<u></u>	<u></u>
3. Materials	<u>33%</u>	<u></u>	<u></u>	<u></u>
4. Landscaping	<u>7%</u>	<u></u>	<u></u>	<u></u>
5. Professional Fees	<u>4%</u>	<u></u>	<u></u>	<u></u>
6. Other	<u></u>	<u></u>	<u></u>	<u></u>
D. Total Actual Costs (without land)	<u>4,38,27,100</u>	<u></u>	<u></u>	<u></u>
E. Actual Cost per sq.m.	<u>4,112</u>	<u></u>	<u></u>	<u></u>
F. Cost Comparison				

Please indicate how the costs of this project relate to typical building costs in the country:

* Average Above Average Below Average

G. Sources of Funds

1. Please indicate the percentage of funds that came from:

Private Sources * Public Sources

2. If funding was public, what percentage was from:

* Local Sources * National Sources International Sources

IX. PROJECT SIGNIFICANCE AND IMPACT

In what way is this project important ?

The building deals with the theme of modernity and Tradition. How to faithfully translate a modern brief and at the same time draw upon the traditions of Delhi's Indo Islamic culture? The media school in Delhi for the Central Institute of Educational Technology carries the conceptual values of a "Madarsa" (traditional school) in a new idiom. The entrance courtyard and the central square linked together through a central axis are evolved on the principles of historic buildings of Delhi and Agra, but fulfill the contemporary requirements of a foyer, amphitheatre and open air television studio in a new vocabulary of design. Verandhas, balconies and upper level terraces have on occasions been utilised as galleries for ceremonies. The courtyard graced by an existing tree has been used for performances and has tremendous potential for media facilities.

Project Importance :

The project's importance lies in fulfilling a relatively new and unique institutional programme, one which is at the forefront of evolving modern educational strategies and the tools needed to implement them in Delhi. The C.I.E.T. building is geared to prepare programmes which can be beamed through satellites to remote village and small towns.

Traditional MADARSA a spatial enclosure was conceived to be the focus of the C.I.E.T. alongwith a small amphitheatre. The arrangement has been widely used and proving to be a success with children and educationalists.

The infill external walls are clad with red sandstone, again based on modular pattern which allows a system of proportions and variation in facade treatment. Red and beige colour sandstones are still the cheapest materials around Delhi and Agra and have been extensively utilised with natural texture for building parapets and geometrically patterned jalis.

The fluctuating passages form a link around the courtyards on the 1st, 2nd and 3rd floor, which are interspered with small, partially enclosed roof terraces. The balconies and parosols (chattris) on these terraces modulate the light, provide viewing platforms and emphasise the axis through the courts.

Please note: The submission of this Record is a prerequisite to candidacy for the Award. All information contained in and submitted with the Record will be kept strictly confidential until announcement of the Award is made. Subsequently, such material may be made available by the Aga Khan Award for Architecture and you hereby grant the Aga Khan Award for Architecture a non-exclusive licence for the duration of the legal term of copyright (and all rights in the nature of copyright) in the Material submitted to reproduce the Material or licence the reproduction of the same throughout the world.

Name (please print) RAJ REWAL

Signature Raj Rewal

Date 29th Nov. 1994

01 DEC. 1994

5/5



The Aga Khan Award for Architecture

ARCHITECT'S RECORD

CONFIDENTIAL

I. IDENTIFICATION

Project Title CENTRAL INSTITUTE OF EDUCATIONAL TECHNOLOGY

Street Address Sri Aurbindo Marg

City New Delhi Postal Code 110 016 Country India

Telephone 6864801 Facsimile Nil Telex _____

II. PERSONS RESPONSIBLE

A. Architect/Planner

Architectural Assistants:

Name Raj Rewal-Raj Rewal Associates (B.S. Grover, Ashok Sharma, Rana Ram)

Mailing Address E-12, Defence Colony

City New Delhi Postal Code 110024 Country India

Telephone 611495/4625428 Facsimile 9111611495 Telex Nil

B. Client

Name National Council of Educational Research & Training

Mailing Address Sri Aurbindo Marg

City New Delhi Postal Code 110 016 Country India

Telephone 666047 Facsimile Nil Telex 73024

C. Consultants (e.g. Engineers, Economists, Sociologists, Historians, etc.) Engaged by Architect

Name Vijay Rewal(Structure) Mohamed Shaheer(Landscape)

Mailing Address E-76, Greater Kailash I 156, Zakir Bagh, New Delhi

City New Delhi Postal Code 110048 Country India

Telephone 6444394 Facsimile _____ Telex _____

D. Master Craftsman/Contractor

Name Ahluwalia Contracts(India)Pvt Ltd

Mailing Address B-4/205, Safdarjung Enclave

City New Delhi Postal Code 110029 Country India

Telephone 607442 Facsimile _____ Telex _____

III. USE

- A. Specify type(s) of use School for communication and media to prepare films for childrens education
- B. User(s) or Occupant(s)
1. Occupation/Profession Persons connected with Media and Education
2. Income Level (check one) _____ High _____ Medium _____ Low ☒ Mixed
- C. Specify any change(s) between planned and actual use:
- No

IV. PROJECT TIMETABLE

(Please specify year and month)

- A. Design: Commencement 1986 Completion _____
- B. Construction: Commencement 1987 Completion 1989
- C. Date of Project Occupancy July 1989

V. PROJECT ECONOMICS

(Please specify amount, currency and date of transaction)

	Amount	Currency	Date
A. Total Initial Budget	<u>Approx 4,00,00,000</u>	<u>Rupees</u>	_____
B. Cost of Land	<u>Not applicable</u>	_____	_____
C. Analysis of Actual Costs			
1. Infrastructure	<u>10%</u>	_____	_____
2. Labour	<u>25%</u>	_____	_____
3. Materials	<u>50%</u>	_____	_____
4. Landscaping	<u>6%</u>	_____	_____
5. Professional Fees	<u>4%</u>	_____	_____
6. Other	<u>4%</u>	_____	_____
D. Total Actual Costs (without land)	<u>4,38,27,100</u>	<u>Rupees</u>	_____
E. Actual Cost per sq.m.	<u>4112</u>	<u>Rupees</u>	_____
F. Cost Comparison			

Please indicate how the costs of this project relate to typical building costs in the country (check one):

☒ Average _____ Above Average _____ Below Average

G. Sources of Funds

1. Please indicate the percentage of funds that came from:

_____ Private Sources ☒ _____ Public Sources

2. If funding was public, what percentage was from:

_____ Local Sources ☒ _____ National Sources _____ International Sources

VI. CONSTRUCTION DETAILS

A. Site and Building Area (please indicate in square metres)

1. Total Site Area 6517.66 Sq.mtrs
2. Total Ground Floor Area 3,425 sq.mtrs
3. Total Combined Floor Area 10,666 sq.mtrs
(including basement(s), ground floor(s) and all upper floors)

B. Construction and Technology

Describe the structural system and the basic method of construction. For restoration projects, please describe the techniques used in the conservation of the original structure.

Framed reinforced concrete structure based on circular columns at 5 meters centres supporting a square clear span of 10 meters. The concrete slab is formed by a dia grid of coffer units, 90 cms wide, pre cast on the site. The infill external walls are clad with red sandstone for waterproofing.

C. Description of Materials

(please also indicate if locally produced or imported and whether fabricated on-site or elsewhere)

- | | |
|--|--|
| 1. Foundations | Reinforced cement concrete |
| 2. Principal Structural Members | Reinforced cement concrete columns & beams supporting a square dia grid of concrete. |
| 3. Infill | 2nd class brick walls |
| 4. Rendering of Facades or Exterior Finishes | Red sandstone slabs, natural quarry finish
2 cms thick |
| 5. Floors | Kotah stone in public places, terrazo in offices,
and sound proof vinyl in studios. |
| 6. Ceilings | Exposed concrete in general and accoustic
ceiling in studios |
| 7. Roofing | Sandstone and brick cover on koba waterproofing. |
| 8. Other elements (please specify) | Hand made stone Jalis (trellis)
railing and louvers |

D. Type of Labour Force (please indicate percentage)

20 Skilled Workers 80 Unskilled Workers

E. Origin of Labour Force

✓ Domestic Foreign

VII. GENERAL GEOGRAPHY AND CLIMATE

Please describe the local climatic and geographic characteristics and the extent to which these have been taken into consideration in the design process.

The building is located in Delhi and designed in response to scorchingly hot summer days, mild evenings and sunny winters. Cool shadows and air currents are built around the two courtyards which act as light and air-wells.

VIII. EVOLUTION OF DESIGN CONCEPTS

Please describe the history of the project, from its conception to its final construction and actual use.

India has the third largest pool of Scientists and Engineers in the world. At the same time 30% of its population is illiterate. It was conceived by the Central Institute of Educational Technology (C.I.E.T) that an Indian satellite would broadcast via television and radio, educational programmes for children living in far flung rural areas. The function of the C.I.E.T building is to house a school for communication which is fully equipped to the highest professional standards to produce broadcast quality programmes for teaching aids for children through community networks. The requirements include two Television Studios, two Sound Studios, Technical Control rooms, Workshop, Seminar rooms, Rehearsal areas and projection facilities, Library, Canteen and Administrative areas. The building would be extensively used by child artists, teachers and media personalities who would participate in programmes.

The Design concept is based on creating two interlinked courtyards, one small near the entrance and the second built around the existing tree, to function as an open air multi-purpose Television studio. The bigger courtyard comprises open air stage and amphitheatre and it is enclosed at the ground floor by entrance hall, artists rooms and canteen with the existing tree as the focal point of activities. The courtyard is in fact evocative of "Madarsa", traditional schools and surrounded on the upper three levels by passages linking library, audio-visual and administrative activities. The upper two floors have decreasing floor areas resulting in roof terraces overlooking the central courtyard or the surrounding parks. The upper level terraces can function as outdoor discussion rooms and are interspersed with balconies which can be utilised for filming the activities within the courtyard for a variety of Television performances.

IX. PROJECT SIGNIFICANCE AND IMPACT

In what way is this project important ? Please describe the aspects of the project which represent a particular achievement (for example the technical, economic, or social achievement, or its response to culture, climate, etc.).

The building deals with the theme of Modernity and Tradition. How to faithfully translate a modern brief and at the same time draw upon the traditions of an Indo Islamic culture? The media school in Delhi for the Central Institute of Educational Technology carries the conceptual values of a "Madarsa" in a new idiom. The entrance courtyard and the central square linked together through a central axis are evolved on the principles of traditional buildings of Delhi and Agra, but fulfill the contemporary requirements of a foyer, amphitheatre and open air television studio. Verandhas, balconies and upper level terraces have on occasions been utilised as galleries for ceremonies. The courtyard graced by an existing tree has been used for performances and has tremendous potential for media facilities.

The structure of the building is based on a dia grid of pre fabricated waffle slabs, supported by circular concrete columns at approximately 5 meters on the periphery, creating a clear span of 10 meters in the middle, which forms the basic unit of design. The multiples of the square module and its variations of projecting balconies and recessed floors create a richness and complexity based on structural order and contribute to the character of the building.

The aim was to create spatial geometry based on a basic modular order which can have infinite variations to suit the functional planning requirements.

The infill external walls are clad with red sandstone, again based on modular pattern which allows a system of proportions and variation in facade treatment. Red and beige colour sandstones are still the cheapest materials around Delhi and Agra and have been extensively utilised with natural texture for building parapets and geometrically patterned jalis.

The fluctuating passages form a link around the courtyards on the 1st, 2nd and 3rd floor, which are interspered with small, partially enclosed roof terraces. The balconies and parosols (chattris) on these terraces modulate the light, provide viewing platforms and emphasise the axis through the courts.

X. PRESENTATION REQUIREMENTS

- A. The materials described below are the minimum requirements for project presentation. These materials will be used in the preparation of standardised presentations to be constituted by the Award office and reviewed by the Master Jury. Subsequently, they will form part of the permanent Award archives and may be made available for public consultation.

The submission materials should be clearly identified and should not be bound or mounted. For slides and photographs, a list of captions should be provided for each image; the name(s) of photographer(s) and date(s) of photography should also be specified.

1. Map indicating location of project in city, community, neighbourhood, or landscape.
2. Ten (10) photographs; preferred and maximum size for A4 presentation (18 x 24 centimetres).
3. Twenty (20) slides; 24 x 36 millimetres.
4. Drawings; preferred and maximum size for A3 format presentation (29,7 x 42 centimetres).
Site, Roof, and Massing Plans;
Floor Plan(s);
Elevations;
Sections.
5. Curriculum Vitae, or Firm's Prospectus.

- B. The submission of additional materials is encouraged. Please specify any appended materials not listed above.

- C. Please indicate other sources of information on the project(s), e.g. publications, personal contacts, etc.

Architecture + Design	India
Technique&Architecture	France
Casabella	Italy
Architecture	
Contemporaine Annual	Switzerland

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Signature

Raj Rewal

Name (please print) RAJ REWAL

Date May 25, 1991.

All materials should be forwarded to:

The Aga Khan Award for Architecture

Award Procedures
32, chemin des Crêts-de-Pregny
1218 Grand-Saconnex
Geneva, Switzerland

Telephone: (22) 798 90 70

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