



Parliamentary Standing Committee on Public Works OF THE SENATE

REPORT

relating to the proposal for

P. W. R. NO.	863
DATE PRESENTED	29 APR 1982
<i>Madeline</i> Clerk of the Senate	

CONSTRUCTION OF LIVING AND TRAINING ACCOMMODATION

at

R.A.A.F. BASE WAGGA,
NEW SOUTH WALES

(Fourth Report of 1982)

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THE PARLIAMENT OF THE COMMONWEALTH OF AUSTRALIA
PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

R E P O R T

relating to the proposal for

CONSTRUCTION OF
LIVING AND TRAINING ACCOMMODATION

at

RAAF BASE WAGGA,
NEW SOUTH WALES

(Fourth Report of 1982)

Australian Government Publishing Service
Canberra 1982

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(Twenty-sixth Committee)

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- 1 Retired 30 June 1981
- 2 Ceased to be member on election as President
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- 3 Appointed 25 August 1981
- 4 Appointed 25 August 1981
- 5 Appointed Vice-Chairman 27 August 1981

PUBLIC WORKS COMMITTEE ACT 1969
ORDER UNDER SUB-SECTION 18(4)

I, SIR ZELMAN COWEN, the Governor-General of the Commonwealth of Australia, acting with the advice of the Federal Executive Council, in pursuance of Sub-Section 18(4) of the Public Works Committee Act 1969, hereby, by this Order, declare that the public work described in the schedule be referred to the Parliamentary Standing Committee on Public Works for consideration and report.

SCHEDULE

CONSTRUCTION OF LIVING AND TRAINING ACCOMMODATION AT RAAF BASE
WAGGA, NEW SOUTH WALES

L.S.

Given under my Hand and the
Great Seal of Australia
on 22 January 1982

ZELMAN COWEN

Governor-General

By His Excellency's Command,
(Signed) D.T. McVEIGH
Minister of State for
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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS

CONSTRUCTION OF LIVING AND TRAINING ACCOMMODATION RAAF BASE, WAGGA, NEW SOUTH WALES

R E P O R T

On 22 January 1982, His Excellency the Governor-General in Council referred to the Parliamentary Standing Committee on Public Works for consideration and report to Parliament the proposal for construction of living and training accommodation at RAAF Base Wagga, New South Wales.

The Committee has the honour to report as follows:

THE REFERENCE

1. The proposal referred to the Committee is for the construction of classrooms with ancillary facilities and sleeping accommodation for 352 airmen (Other Ranks --ORs) and 40 Senior Non-Commissioned Officers (SNCOs) at the RAAF Base, Wagga, New South Wales.

2. The proposal consists of:

- a training complex comprising 15 classrooms, student and staff amenities, and office accommodation for 23 instructional and administrative staff;
- two-storey sleeping accommodation units for 352 airmen and 40 SNCOs;
- associated external engineering services, roads, car park areas and landscaping.

3. The limit of cost estimate is \$7.6 million at October 1981 prices. This estimate includes the following components:

- Building works and services for a classroom - \$1.4 million
- Building works and services for accommodation - \$6.2 million

4. The Committee received written submissions and drawings from the Department of Defence and the Department of Housing and Construction and took evidence from their representatives at a public hearing at RAAF Base, Wagga on 15 March 1982. The Committee also received written submissions and took evidence from the Wagga Wagga City Council and Chamber of Commerce.

5. Prior to the public hearing, the Committee inspected existing accommodation and training facilities at the RAAF Base, Wagga as well as the sites for the proposed buildings.

6. The Committee's proceedings will be printed as Minutes of Evidence.

BACKGROUND

7. Shortly before the Second World War, RAAF Base Wagga occupied land acquired at Forest Hill, 10 kms east of Wagga Wagga. Facilities constructed before and during the war were used by a flying training school and an aircraft depot. The airfield, constructed during the war, is now used by airlines, commuter aircraft, general aviation and the RAAF.

8. Buildings at RAAF Wagga are situated on a 92 hectare site which is bisected by the Wagga-Forest Hill railway line. Generally, sleeping and living accommodation are located north of the railway line and instructional facilities, which include a number of hangars accessible from the airfield, are located in the southern half.

9. RAAF Base Wagga has assumed the major ground training role for the RAAF following a reorganisation which led to the establishment of the RAAF School of Technical Training. The School now carries out 70 per cent of ground training for the RAAF. Radio training is carried out at RAAF Laverton.

10. Role of Wagga The role of RAAF Wagga is to provide:

- technical training for all aircraft trades (except radio) and for motor transport and some engineering trades;
- basic training courses for all engineer branch officers, familiarisation courses for armament and aeronautical engineers;
- training of catering, supply and clerical musterings, dental assistants, physical training instructors and post graduate technical and management courses.

11. Development of Wagga During the war years a number of buildings were constructed of brick but many timber huts were also erected as temporary accommodation. During the 1960s, there was a demand for permanent living, sleeping and instructional accommodation due to the deteriorating condition of many wartime structures and increases in personnel. A number of buildings, designed to overcome these immediate problems were constructed.

12. The Committee examined a proposal to upgrade a number of facilities at Wagga in 1969. The proposal as put to the Committee then consisted of the following elements:

- an electrical and armament training building;
- a catering training school;
- an airmen's recreation centre;
- sleeping accommodation;
- engineering services.

13. In recommending that the proposal proceed, the Committee's Report (Parliamentary Paper 94/1969) mentioned that these buildings would replace buildings, all of temporary construction, built 25 years ago. The Committee further stated that the new buildings represented the more immediate works required over a three to four year period to replace inadequate and unsatisfactory facilities.

14. More recently, other permanent buildings, including a barracks section complex, officers' sleeping quarters and an EDP unit, have been constructed.

15. RAAF School of Technical Training The School conducts basic, conversion and continuation courses for officers, NCOs and other ranks. The majority of personnel are involved in adult training, apprentice training and, beginning in 1982, technology apprentice training. Other courses conducted involve cooks, stewards, clerks, dental assistants and stores personnel. Post graduate courses in technical trades, administration and management are undertaken by selected personnel. Brief descriptions of technical trades courses conducted at RAAF Wagga are below:

- Trade Apprentices are recruited from the 15 to 17 years age group. Apprentices enter the initial training squadron where they undertake 12 months basic engineering training. This is followed by 18 months muster training in either the electrical trades squadron or the mechanical trades squadron. After 2½ years training at Wagga they spend 1½ years field training at a RAAF aircraft depot or unit. After successfully completing 4 years training, apprentices are awarded a proficiency certificate. In 1981, there were 483 apprentices undergoing training at Wagga and 272 apprentices undergoing field training at RAAF units and depots.

- Adult Trainees are recruited from the 17 to 34 years age group. After three months recruit training at RAAF Edinburgh, S.A., they enter

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the technical or non-technical stream at RAAF Wagga. Those in the non-technical stream are attached to the equipment and clerical training flight. Those in the technical stream spend three months in the initial training squadron after which they spend from between 9 to 12 months training in the electrical trades or mechanical trades squadron. Following successful completion of training, they are posted to RAAF units. Recently, it was established that 75 per cent of fitters in the RAAF underwent adult training at RAAF Wagga. In 1981, there were 866 adult trainees undergoing training at RAAF Wagga.

- Technologist Apprentices are a new addition to the training program. At the beginning of 1982, 30 apprentice technologists commenced their training at RAAF Wagga. The aim is to provide the RAAF with highly trained sub-professional systems technicians, capable of operating across trade boundaries to maintain advanced avionic and aircraft systems. Recruits are required to possess slightly higher educational qualifications than apprentices and come from the 16 to 22 year age group. Midway through their three year course at Wagga they will be streamed into one of five fitter musterings for specialised training. After successfully completing their courses, plus up to 2 years on-the-job training at a RAAF unit or depot, they will be awarded a proficiency certificate. After completing a further year of field training, they are awarded a Certificate of Technology by the Royal Melbourne Institute of Technology.

THE NEED

16. The need for the construction of new sleeping and training facilities at RAAF Wagga has arisen from two

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factors. These are, first, an increase in the level of training required both in terms of overall numbers and in the duration of courses, particularly the introduction of the technology apprentice course; and secondly, a consequent shortfall in available sleeping and training accommodation.

17. Increased Training Commitment The level of training commitment now required has increased over recent years. This increase is due to the following factors:

- a small and steady increase in the size of the RAAF;
- an increase in the number of technical personnel required caused by the introduction of sophisticated technology;
- a need for technical personnel to receive more training;
- losses of trained personnel due to non re-engagement leading to a shortfall which has to be made up.

18. Trainee and Staff Increases The increased training commitment will mean additional staff and students will require living accommodation. The RAAF expects the number of staff to increase from 777 personnel in March 1982 (which was not a peak month) to 930 personnel by 1984. Over the same period, the number of trainees will increase from 1285 to 2055. Table 1 below summarises the projected increase by rank and by employment.

TABLE 1 - EXPECTED INCREASE IN STAFF AND TRAINEES, RAAF BASE WAGGA 1982-84

	Officers			SNCOs			Other Ranks			Totals		
	1982	1984	Increase	1982	1984	Increase	1982	1984	Increase	1982	1984	Increase
Staff	90	125	35	285	320	35	402	485	83	777	930	153
Under Training	24	30	6	20	85	65	1241	1940	699	1285	2055	770
Total	114	155	41	305	405	100	1643	2425	782	2062	2985	923

19. Table 1 shows there will be an increase of 153 staff and 770 ORs by 1984. Accommodation requirements for the increase of 41 officers, staff and trainees can be met by utilising existing accommodation and an urgent need to provide more accommodation for them does not exist at present.

20. Accommodation Arrangements Not all 923 additional personnel shown in Table 1 will require on base accommodation. Some staff and SNCO trainees will live off base. The RAAF indicated that to accommodate the additional personnel living off base will require the acquisition of 225 married quarters.

21. Table 2 below summarises by rank the projected numbers of staff and trainees expected to live on and off base.

TABLE 2 - PERSONNEL LIVING ON BASE AND OFF BASE 1984

	Officers			SNCOs			Other Ranks		
	On Base	Off Base	Total	On Base	Off Base	Total	On Base	Off Base	Total
Staff	39	86	125	65	255	320	72	413	485
Trainees	30	-	30	85	-	85	1760	180	1940
Total	69	86	155	150	255	405	1832	593	2425

22. The number of SNCO staff requiring on base accommodation (65) is based on studies carried out by the RAAF which indicate that by the mid-1980s a greater proportion, 15 per cent, of SNCOs would be single and would require on base accommodation. Table 2 shows a total of 320 SNCO staff of which 65 (15 per cent) will require on base accommodation by 1984. The 88 trainee NCOs, shown in Table 2 as also requiring on base accommodation, comprise trainees awaiting the commencement of courses, personnel transitting through Wagga and staff rostered to be on base for short periods, e.g. duty staff.

23. Of the 699 increase in OR trainees, shown in Table 1, about 250 will be technology apprentices, the majority of the balance being trade apprentices and trainees undergoing post graduate technical training. The majority of ORs will require on base accommodation although it is intended that 180 OR adult trainees will live off base.

24. Available Accommodation Present sleeping accommodation capacity at RAAF Wagga is 1474 beds for ORs and 103 beds for SNCOs (total 1577 beds). This capacity is misleading since it assumes that present sleeping accommodation arrangements which are not to Scales and Standards, will continue.

25. Of the 1577 beds available, 104 are in temporary timber huts constructed during the Second World War.

26. In summary, assuming present accommodation arrangements continue, and assuming the forecasts of both increased trainees and staff are met, by 1984 the ORs' sleeping accommodation requirements will be 1832 beds, with 1474 available and the SNCOs' sleeping accommodation requirements will be 153 beds, with 103 available.

27. If the level of increased training is to be met without the provision of additional on base sleeping accommodation, there will therefore be an overall shortage of 408 beds (50 SNCOs and 358 ORs). This shortage assumes present accommodation arrangements will continue and that any residual shortfall can be satisfied by using emergency accommodation.

28. Training Facilities The present trainee population of about 1300 can be accommodated without difficulty in the 87 general purpose classrooms and the 28 special purpose practical rooms and workshops. This assumes a utilisation rate of 70 per cent. A utilisation rate of 80 per cent could be achieved and would cater for a trainee population of 1650 but such an arrangement would create management difficulties.

29. By 1984, the base population will reach 2985 and the number of trainees will be 2055. Even with a classroom/practical room utilisation of 80 per cent (1650 trainees) there would still be a need to cater for a further 400 trainees. The latter deficiency assumes continuation of the present arrangements with the Riverina College of Advanced Education where additional classrooms, to make up for present shortages of on base training facilities, have been hired.

30. Committee's Conclusion If the anticipated growth in trainees and staff at RAAF Wagga is to be met, more accommodation and instructional facilities reflecting present Scales and Standards will need to be provided.

THE PROPOSAL

31. It is proposed to overcome the expected shortage of sleeping accommodation and instructional facilities by providing additional sleeping blocks and classrooms.

32. Sleeping Accommodation Additional sleeping accommodation for 352 ORs and 40 SNCOs is proposed.

33. The OR accommodation will consist of 22 two-storey blocks each of which will accommodate 16 personnel. The blocks will be in two configurations - Type A and B (see plans B and C) and their orientation will be varied to suit site topography and to ensure that bedrooms will receive sunlight at some time of the day.

34. Each floor will have 8 bedrooms with groups of four bedrooms sharing a common room, bathroom and toilet and each floor sharing a laundry.

35. It is proposed to construct three two-storey blocks; two will house 16 SNCOs each and the third 8 SNCOs.

36. The SNCO accommodation will be similar in configuration to the OR Type A accommodation blocks with more floor space and a hand basin in each bedroom. The proposed arrangement of four bedrooms sharing bathroom and toilet

facilities is not to Scales and Standards but the RAAF indicated such an arrangement was unanimously supported by all SNCOs living on base whose views were canvassed.

37. Training Facilities It is proposed to house technology apprentices in a new facility containing 15 classrooms, each with a capacity of 22 students and offices for instructional and support staff.

38. Engineering Services Some augmentation of the existing hydraulic, mechanical and electrical services is also proposed to enable these services to cope adequately with the increased base population and to service the largely unserved western sector of the base. A new road system is also proposed for the western sector. Construction details of the proposed work are at Appendix A of this report.

39. Scope of the Proposal The proposed works will mainly accommodate technology apprentices and increased support staff. If the number of personnel and staff at Wagga increases as predicted, there will be no improvement to existing sleeping and training accommodation for adult trainees and apprentices. Much of the existing living accommodation is antiquated and if the RAAF is to attract and train skilled tradesmen, modern facilities should be provided. In evidence the Department of Defence stated that an estimated \$30 million would be required to complete the replacement of temporary facilities to cope with changing and increased training requirements. Works comprising replacement training, domestic and administration facilities and costing \$18 million are included in the current Five Year Defence Program but the RAAF advised that there is no certainty that the work will proceed within that time.

40. Committee's Conclusion The Committee accepts there is a need to provide modern accommodation at RAAF Wagga, mainly for technology apprentices and agrees with the proposal. There is a further immediate need to replace the

existing temporary accommodation, to improve present accommodation, to rectify unsatisfactory accommodation arrangements and to provide modern instructional facilities on base.

THE SITES

41. The location of the proposed facilities is in accordance with the master plan for RAAF Base Wagga. The function of each component in the reference is compatible with adjacent development and building usage. The sites for all buildings are relatively level.

42. Other Ranks' Accommodation will be located on the mid-eastern boundary of the property. This area is relatively undeveloped and is near the trainees' car park.

43. Senior Non-Commissioned Officers' Accommodation will be located further south of the ORs' accommodation, adjacent to existing SNCOs' mess, accommodation and car park.

44. Classrooms This building will be located opposite the existing Electrical Trades Squadron building in the southern half of the complex. Some temporary Second World War buildings will need to be demolished to clear the site.

45. Committee's Conclusion The sites selected for the ORs' and SNCOs' accommodation and the classroom building for the Certificate of Technology apprentices at RAAF Wagga are satisfactory.

OTHER OBSERVATIONS

46. Female Apprentices As mentioned in the Committee's report on RAAF Laverton (Report No. 1/82), the recruitment of young women as trade apprentices in the RAAF should be reconsidered. The Committee notes that the design of the SNCO and OR accommodation as a number of discrete blocks is suitable for occupation by male or female apprentices. When these facilities are completed, the lack of suitable accommodation for female apprentices at Wagga can therefore no longer be cited as a reason for discouraging their recruitment.

47. There should also be better communication and planning between the Defence recruitment section and the RAAF School of Technical Training to ensure that the level of required trainee intakes is achieved.

ENVIRONMENTAL CONSIDERATIONS

48. In its Forty-fifth General Report, tabled on 25 March 1982, the Committee signalled its intention to examine more fully the compliance of proposals with the Environment Protection (Impact of Proposals) Act 1974. In the case of the works proposed at RAAF Wagga, the Committee was advised that the Administrative Procedures of the Act have been satisfied. Documents provided to the Committee by the Department of Defence indicate that the impact assessment was cursory.

LIMIT OF COST

49. The limit of cost estimate is \$7.6 million at October 1981 prices, made up as follows:

	\$
Classroom building	1 400 000
Accommodation	6 200 000
	<u>7 600 000</u>

PROGRAM

50. The requirement of the Department of Defence is the completion of the classroom building and the sleeping accommodation for ORs by December 1983. Completion of the balance of the accommodation is required early in 1984. This program will require the letting of contracts in mid-1982.

51. Committee's Conclusion The Committee recommends the construction of the work in this reference.

RECOMMENDATIONS AND CONCLUSIONS

52. The summary of recommendations and conclusions of the Committee and the paragraph in the report to which each refers is set out below.

Paragraph

1. IF THE ANTICIPATED GROWTH IN TRAINEES AND STAFF AT RAAF WAGGA IS TO BE MET, MORE ACCOMMODATION AND INSTRUCTIONAL FACILITIES REFLECTING PRESENT SCALES AND STANDARDS WILL NEED TO BE PROVIDED. 30
2. THE COMMITTEE ACCEPTS THERE IS A NEED TO PROVIDE MODERN ACCOMMODATION AT RAAF WAGGA, MAINLY FOR TECHNOLOGY APPRENTICES, AND AGREES WITH THE PROPOSAL. 40
3. THERE IS A FURTHER IMMEDIATE NEED TO REPLACE THE EXISTING TEMPORARY ACCOMMODATION, TO IMPROVE PRESENT ACCOMMODATION, TO RECTIFY UNSATISFACTORY ACCOMMODATION ARRANGEMENTS AND TO PROVIDE MODERN INSTRUCTIONAL FACILITIES ON BASE. 40

	<u>Paragraph</u>
4. THE SITES SELECTED FOR THE ORs' AND SNCOs' ACCOMMODATION AND THE CLASSROOM BUILDING FOR THE CERTIFICATE OF TECHNOLOGY APPRENTICES AT RAAF WAGGA ARE SATISFACTORY.	45
5. THE LIMIT OF COST FOR THE PROPOSED WORKS IS \$7.6 MILLION AT OCTOBER 1981 PRICES.	49
6. THE COMMITTEE RECOMMENDS THE CONSTRUCTION OF THE WORK IN THIS REFERENCE.	51

(M.H. BUNGEY)
Chairman

Parliamentary Standing Committee on Public Works,
Parliament House
CANBERRA, ACT

22 April 1982.

CONSTRUCTION

53. Building Structure The classroom building will have a reinforced concrete frame on raft footings supporting reinforced concrete floor slabs and steel roof trusses. This is the first time that concrete raft footings have been included in the design of a building at RAAF Wagga. A pier and beam design was used previously on other buildings but because of the clay soils and subsequent cracks appearing, this has proved unsatisfactory. The concrete raft footings are designed to cope with the expanding and contracting clay soils.

54. Accommodation blocks will have reinforced concrete floor slabs and load bearing brick walls. The roof structure will be of timber.

55. External Materials The classroom building will have an expressed concrete frame with infill panels of facebrick and glazing to match the adjacent Electrical Trades Squadron building. Glazing on the east and west will be screened with adjustable louvres. The roof will be prefinished metal decking and insulated.

56. The sleeping accommodation for SNCOs and ORs will be finished externally in facebrick with aluminium framed windows and asbestos cement spandrel panels. The roof of the ORs' accommodation will be prefinished metal; for the SNCOs' accommodation the roofing will be tiles. Both roofs will be insulated.

57. Internal Finishes Internal materials have been chosen for their acoustic performance and for their durability. The classroom building will have internal walls of facebrick, carpet and vinyl floors and acoustic ceilings.

58. The sleeping accommodation will have internal walls of brickwork, carpeted floors and plasterboard ceilings.

59. Wet areas in all buildings will be finished with ceramic floors and plasterboard ceilings.

60. Air Conditioning The classroom building will have air conditioning. Toilet and change areas will have mechanical exhaust ventilation.

61. Heating and Ventilation Accommodation buildings will be naturally ventilated. Domestic heating will be provided for each bedroom and common room. Toilets and laundries will have mechanical exhaust ventilation.

62. Fire Protection The classroom building will have an automatic thermal fire detection system, which will be monitored at the base main fire indicator board. Hose reels, manual alarms and portable fire extinguishers will also be provided to all buildings.

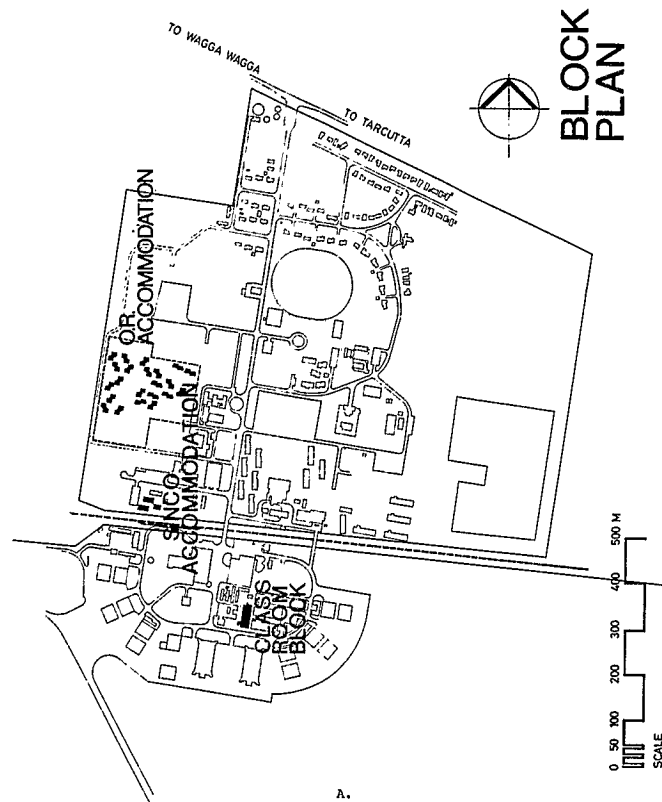
63. External Services The existing water supply has sufficient capacity to provide water for domestic fire fighting services. Water lines pass close to the classroom building and branches will be taken from existing mains to serve the sleeping accommodation.

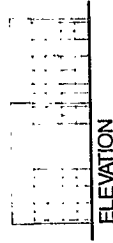
64. Stormwater from the development will be connected to the existing drainage system which has sufficient capacity.

65. The existing sewage treatment works can cope with this development but minor modifications to sewage lagoons will be necessary.

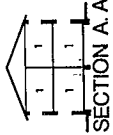
66. The existing road system will need minor modifications to serve the classroom building and the SNCOs' accommodation. The road system will require extension to serve the ORs' accommodation. The ORs' car park has insufficient capacity and further car parks will be necessary.

68. There is sufficient power capacity on the base for the new facilities. The classroom building will be supplied from an existing substation. The high voltage reticulation system will be extended and further substations provided to serve the sleeping accommodation.



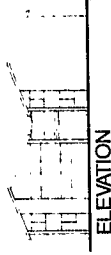


ELEVATION

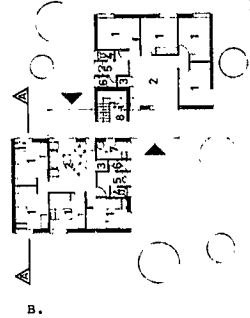


SECTION A. A.

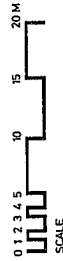
1. BEDROOM
2. COMMON ROOM
3. BOX STORE
4. TOILET
5. VANITY
6. SHOWER
7. LAUNDRY
8. CLENNER



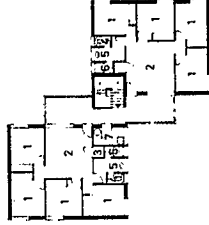
ELEVATION



GROUND FLOOR PLAN



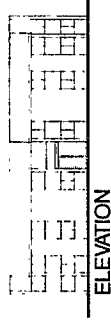
FIRST FLOOR PLAN



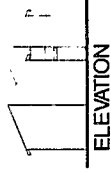
TYPE A

O.R. ACCOMMODATION

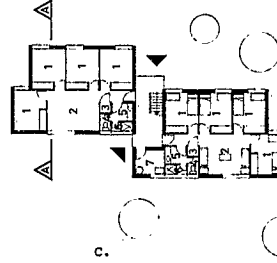
MARCH 1982



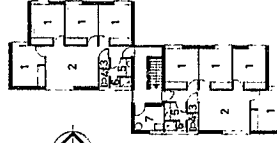
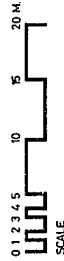
ELEVATION



ELEVATION



GROUND FLOOR PLAN



FIRST FLOOR PLAN

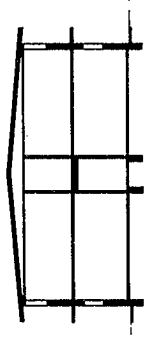
1. BEDROOM
2. COMMON ROOM
3. BOX STORE
4. TOILET
5. VANITY
6. SHOWER
7. LAUNDRY

SECTION A. A.

TYPE B

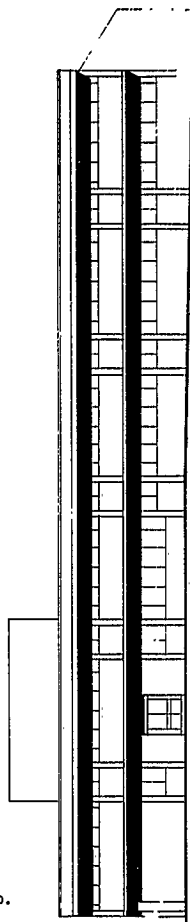
O.R. ACCOMMODATION

MARCH 1982



TYPICAL CROSS SECTION

D.



EAST ELEVATION

ELEVATION & SECTION

CLASSROOM BLOCK

