

MANUAL FOR USE IN THE
SURVEY OF THE PHYSICAL
CONDITION OF SCHOOL BUILDINGS

EDUCATION FINANCE PROJECT
INDONESIA

Unesco Regional Office for Education in Asia
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Introduction

The main purpose of this manual is to provide a methodology that will allow relatively unskilled persons to carry out a survey of the physical condition of school buildings and to prepare an estimate of the cost to bring the buildings into a reasonable state of repair and, to determine the extent of the shortages of teaching and other ancillary accommodation in the schools and to prepare an estimate of cost of providing this additional accommodation.

Additionally, an analysis of the data collected by the Survey Teams will assist in the establishment of reliable information on the number of teaching and other built spaces available; the number of schools sharing buildings; the number of schools having specialized teaching spaces, i.e. laboratories, workshops, etc; the classification of buildings as to the state of repair; the number of schools which are in need of urgent redevelopment; the number of schools having inadequate water electrical and sanitary installations.

It is important to recognize that this manual merely present guidelines for assessing the physical condition of the school buildings and provides related cost information that can be used by persons other than architects and engineers in arriving at global estimates and to minimize the inconsistencies in the assessment of the physical condition of the buildings that are bound to arise where several survey teams are engaged to carry out the work. The manual is not intended for use in the preparation of a detailed schedule of works for the rehabilitation and redevelopment of the school buildings which can only be done by well qualified and experienced personnel.

The feasibility of giving standard costs for rehabilitation work such as those proposed in this manual has been questioned on the grounds that this is specialists work and that the extent of the work will vary from school to school or even from building to building. But again the point needs to be stressed that it is not intended that the Survey Teams prepare detailed schedule of works, but simply to arrive at a global estimate of the work to be done for budgetary planning. After all is said and done, if the techniques of estimating the cost of new building works on a cost per square metre basis is acceptable then it follows that the same technique can be used for estimating repair work.

At first glance, it may seem that the methodology for estimating the cost of the repair and rehabilitation of the buildings is unnecessarily detailed and complex, providing as it does several categories of condition and related costs, but providing the job is approached systematically, the Survey Teams should have no real problem in assessing the physical condition of the buildings and arriving at an estimated cost of the repairs. It is felt that once the Survey Teams become familiar with the use and interpretation of the guidelines and have had some experience in using the methodology, the work will progress expeditiously.

Undoubtedly there will be some instances where the inexperience of the Survey Teams will place them in a quandary of not knowing what course of action to follow. It might be that the buildings are old and dilapidated and the Teams may find it difficult to classify them or it may not be readily apparent that the existing buildings can be expanded or where new buildings can be placed on the site.

Some examples of these more difficult cases are described later in the manual which may assist the Survey Teams to reach a decision, but the Teams should keep in mind that these difficult case can always be referred back to someone having more experience. The Team should concentrate on collecting the essential data rather than spending a lot of time searching for a solution to a problem for which there may be no solution. Even if the Survey Team should make a wrong decision, the consequences will not be disastrous as we are only concerned with making global estimates, which fortunately have a coincidence of over and under estimation which tend to cancel out.

Section 1. Composition of the Survey Teams

The survey of any particular school is best undertaken by two persons so that the work can be shared. Generally it will take some 2 to 4 hours to make a survey, since there are always a few formalities to go through by way of explaining the purpose of the survey to the principal, calling for data on the enrolments and on the utilization of the buildings etc. Thus whilst one of the team is obtaining this data, the other member of the team can proceed to prepare a sketch plan of the buildings.

The advantage of a two man team will also become clear, when assessing the physical condition of the buildings since one member of the team can call out the overall dimensions of the room and the category of the condition, whilst the other team member enters the information in the forms and records whatever additional information is required. The two man team can also share the work load in preparing the cost estimates and assessing the additional accommodation needs. One member can work on the rehabilitation costs and the other member on the additional accommodation costs.

The Team will find it that it is more convenient to calculate the cost of the rehabilitation work and the cost of the additional accommodation on their return to their office on base.

Section 2. Preparation of a sketch plan of the school buildings

The Team will find that a sketch plan of buildings and site will be of great help to them in making a survey of the buildings.

Often the schools have a line diagram of the buildings, and the site showing the layout of the various rooms and the Team should enquire if a copy is available for their use as this will save them the work of preparing a sketch plan. If this diagram is not available then the Team will have no option but to prepare their own drawing. Although a high degree of accuracy is not required in drawing this sketch plan, in that it need not be done precisely to scale, nevertheless, it should be drawn with some care so that the Team is left with a reasonably clear picture of the school site and buildings.

Fortunately there is a great deal of standardization in school building. Classrooms in any one particular buildings are invariably of the same size. Columns and verandah posts are spaced at regular intervals, verandahs and corridors are normally of the same width. Rooms in two storey buildings are usually built one over the other i.e. the first floor plan repeats the ground floor plan. This standardization greatly facilitates the preparation of the sketch plans as will the use of the squared paper to plot the outline of the buildings and site and the Team will find it convenient to assume that one square measures 2 metres in both directions.

Having prepared or obtained a sketch plan of the buildings the Team should then identify the various building blocks and number them for cross referencing on Forms SPF/1, SPF/3 and SPF/4. The term "building block" generally refers to a building which is separate from other buildings on the site, see Figure 1.

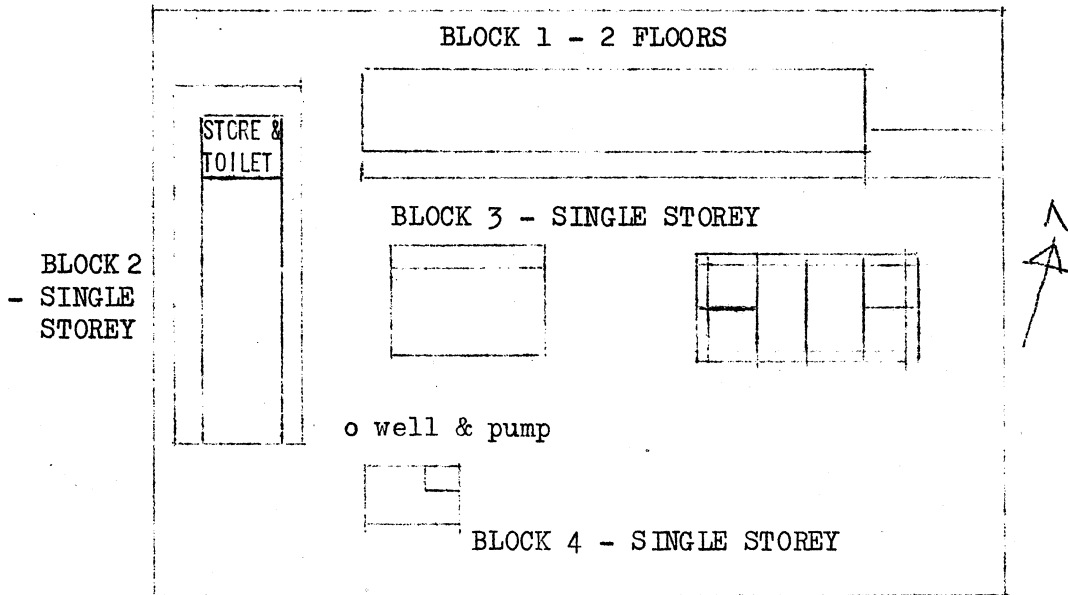


FIGURE 1.

On some sites of old schools, small and often inadequate outbuildings are often pressed into use due to an acute shortage of accommodation or it may be that a temporary building is being used. At some schools it may be found that the staff and students have erected small sheds for animals or similar buildings. The Survey Team would be well advised to exclude these parts of the school facilities from their survey, simply on the grounds that they are difficult to categorize and that in any case the inadequate outbuilding is almost certain to be demolished whenever the school is redeveloped.

The next step is to number the rooms consecutively in each block and these numbers will be cross referenced and entered into column 1 of Form SPF/3 (Guidelines for assessment of the physical condition of the buildings internally).

In addition to providing a means of reference, the preparation of the sketch plan, the identification of the blocks of buildings and the numbering of the rooms, before actually carrying out the detailed survey of the physical condition of the buildings, will provide the opportunity for the team to familiarise itself with the general layout and condition of the buildings and thus they will be in a better position to plan a course of action.

Section 3. Classification of buildings

School buildings are often classified as "semi-permanent" or "permanent". Broadly, this classification can be equated to buildings constructed with timber and roofed with corrugated iron (semi-permanent) or with bricks and mortar and roofed with clay tiles or with concrete flats (permanent). This classification is not altogether realistic since both types of buildings, in normal circumstances, have a life span of 30 years or more.

There is also the implied suggestion that one class of building is superior to another and the recipients of the "inferior" class of building may feel that they are being unfairly treated. The continued use of these classifications may well deprecate against the use of perfectly good local material and prejudice the local community against any effort to introduce more economical forms of construction.

Three classes of construction are proposed in ANNEX 1 for use in this manual for costing the repair and rehabilitation of the existing buildings and for estimating the cost of providing the additional accommodation needed to bring the schools up to the scale of accommodation.

It might be that some buildings will be encountered that cannot be readily classified, for example, a building constructed with bamboo framed walls and roofed with atap. To simplify matters, this type of building, of which there will not be many, should be included as Class I for costing purposes.

Section 4. Building Costs

The building costs for both the rehabilitation work, itemized in ANNEXES 4, 5 and 6 and for the construction of additional accommodation have been based on current costs for Jakarta as follows:-

- CLASS I Rps. 35,000 per square metre based on the cost of the INPRES primary school buildings for Jakarta.
- CLASS II Rps. 57,400 per square metre based on the lower cost for Class III buildings set down in the instruction issued by the Ministry of Finance Ref: 184/d.IV/VII/1976
B-15.6/III.0/7/1976
- CLASS III Rps. 84,250 per square metre based on the lower cost of Rps. 71,400 per m² plus 18% for multi-storey work as in the above mentioned instruction.

The costs per square metre given above include an allowance of 7½% for design fee, 5½% for supervision and 15% for site development. The percentage allowances for design and site development have been excluded from the elemental rehabilitation costs per m² in ANNEXES 4, 5 and 6.

As the above costs have been based on rates ruling in Jakarta, they will need to be adjusted to take into account the variation in building costs from province to province. The provincial cost indices are listed in ANNEX 10.

If the manual is to be used over a long period of time, and as building costs are certain to rise, provision must be made to up-date these costs. The simplest way is to use a percentage allowance which can be obtained from the Ministry of Finance and the total costs can be readily adjusted on Form SPF/6 - SUMMARY OF COSTS. New tables of unit costs need only to be issued if there is a fundamental change in the basic building costs.

Section 5. Building Cost Indices

The provincial Building Costs Indices listed in ANNEX 10 have been based on the index given in the Ministry of Finance instruction Ref. 184/D.IV/VII/1976 and as the costs per m² in ANNEX 1 and the Unit costs B-15.6/III.O/7/1976 given in ANNEXES 4, 5 and 6 are based on rates ruling in Jakarta which has the Base Cost Index of 100 they will need to be adjusted to take into account the variation in costs from province to province. The building costs in the provinces having an index of less than 100 will be lower than in Jakarta and conversely will be higher in those provinces having an index greater than 100. For example:-

Assuming the cost of providing additional accommodation at a school in Lampung Province which has a Building Cost Index of 87 has been first estimated at Rps. 102,035,000 on the Base Cost Index of 100, the adjustment to these costs would be:-

$$\text{Rps. } 102,035,000 \times \frac{87}{100} = \text{Rps. } 88,770,450$$

or in Kalimantan Tengah Province having a Building Cost Index of 134, the adjusted cost would be:-

$$\text{Rps. } 102,035,000 \times \frac{134}{100} = \text{Rps. } 136,727,000$$

It should be noted that the adjustment for the variation in costs from Province to Province must be made to both the rehabilitation and new construction costs.

These provincial cost indices are indicative only since costs will vary within any province depending on the availability of materials or the difficulty in recruiting labour or in transportation of materials but they will be sufficient for the purpose of arriving at global estimates of the type required for this survey.

Section 6. The cost of bringing the schools up to standard

In order to assess the cost of the additional accommodation needed to bring up the schools to an acceptable standard it is essential that the existing accommodation is measured against an acceptable standard. To this end, schedules of minimum scale of accommodation are included in ANNEX 7 for SD schools, ANNEX 8 for SMP schools and ANNEX 9 for SMA schools. These schedules have been based on the draft recommended schedules of accommodation prepared by the PROYEK PEMBAKUAN SARANA PENDIDIKAN JAKARTA^{1/} and wherever a maximum and minimum number of rooms has been listed, in this document the minimum scale has been taken.

The above mentioned document proposes a limited range of standard sized schools. Although this is administratively convenient in that it will enable standard type plans to be prepared, this limited range may lead to instances where, unless extreme care is taken in locating the schools, they may be too large or too small for the needs of school population. Whatever standard type plans are prepared they should be capable of logical expansion.

By comparison with existing standards, the proposed scale of accommodation may appear to be generous, but in terms of what might be considered as a reasonable provision of accommodation for a school to function efficiently the proposed scales of accommodation and areas per place compare favourably with many countries in the Region^{2/}. However when these scales of accommodation are joined to the building costs, the results are quite alarming.

For example, a primary school to accommodate 480 pupils (SD Tipe A, ANNEX 7) built say in Jakarta, where it must be assumed that all future school buildings be two or three storeys high, (CLASS III building ANNEX 1) would cost in the region of \$615 per place and a secondary school to accommodate 1155 students (SMA Tipe A, ANNEX 9) would cost in the region \$1,100 per place. These costs are among the highest in the Region, including countries such as Japan and Australia^{3/}. Some economy of space might be made to the proposed scales of accommodation, but the root of the cause is in the high building costs prevailing which is a perennial topic for discussion within Indonesia.

It was originally thought that the method to be used in estimating the cost of providing the additional accommodation, would be to identify the units of accommodation lacking at the existing schools and to cost them at standard unit costs. This method had to be abandoned because of the complexity arising from the variety in the units of accommodation, which stem from the proposed scales of accommodation, and their related costs. It is now proposed to simplify matters by basing the cost of the additional accommodation on a basic cost per square metre plus an allowance for remodelling the existing school buildings. Although this is not very precise it is considered that the resulting costs will be sufficient for planning and programming purposes. An example of the use of this method is given in the section "Worked examples and explanatory notes for completing the forms."

^{1/} PROYEK PEMBAKUAN SARANA PENDIDIKAN JAKARTA, Departemen Pendidikan dan Kebudayaan, Pembakuan Bangunan dan Perabot Sekolah. November 1976.

^{2/}, ^{3/} Unesco Regional Office for Education in Asia, Bangkok, BULLETIN No. 17, pp. 114-115, Bangkok, 1976.

Section 7. School sites

Draft standards^{4/} of recommended areas of land for the various types and levels of schools are given in ANNEX 11 but the Survey Teams should not be unduly concerned if the area of sites of the schools they survey do not measure up to these standards, as it is extremely unlikely that sites in towns and cities will provide these areas.

All that the Survey Teams can do and should do is to record the data relating to the site - Form SPF/1 and to make some enquiries of the Head Teacher or the School Association as to the possibility of obtaining more land adjacent to the present school. The final decision as to what can be done to improve the existing situation where the site is extremely limited can only be given by the competent school authorities.

Beyond giving this simple advice it is virtually impossible to give guidelines as to what might be done where the site is very small. Whereas it is possible within certain limitations to expand the area of buildings even on a restricted site and guidelines can be given to illustrate how this might be done there is little that can be said on how to expand the site if there is no land available. Such matters as advocating the use of compulsory acquisition procedures, or to cut back the number of children attending the school or relocating the school do not fall within the competence of the Survey Team.

Where school sites are small and land costs are high, it may be more economical to build play space. This might be achieved by leaving the ground floor of the building open and by using the flat roof. A common feature of the schools in Hong Kong.

Section 8. The suitability of the existing school facilities for future development

The guidelines given in ANNEX 2 and 3 for the physical survey of the physical condition of the buildings are such that they can be used in the majority of cases by relatively untrained personnel to arrive at a reasonable sound judgement as to the general condition of the buildings and to prepare an estimate of the cost of bringing the buildings into a good state of repair.

There will, however, be some cases where the Survey Teams may be at a loss as to what action they should take. In cases of real doubt, then the team should collect all relevant data concerning the enrolments, and the schools using the buildings; prepare sketch plan of the existing site and buildings and a brief report on the general condition of the buildings and the site and refer the case back to a competent authority, giving their reasons why they have referred this particular school complex for further consideration. But in other "difficult" cases the following examples may assist the Survey Teams to reach a decision in similar situations.

4/ PROYEK PEMBAKUAN SARANA PENDIDIKAN, JAKARTA. Departemen Pendidikan dan Kebudayaan, Pembakuan Bangunan dan Perabot Sekolah, November 1976.

Case 1.

Where the buildings are very dilapidated and which might come within the 6th category, in ANNEXES 2 and 3, there may be no alternative but to completely redevelop the school. As a general rule, where the cost of repairing the building exceeds 60% of the cost of new work, then budgetary provision should be made for rebuilding. Associated with this decision to rebuild a decision may have to be made as to whether or not the new buildings should be of the same class as the existing buildings, (i.e. whether or not to build single or multi-storey buildings). Again, as a general rule, all new construction in cities and major towns should be at least 2 storeys high - in other words, the new buildings should be CLASS III buildings and costed accordingly.

Case 2.

There will also be instances where the buildings as a whole, although they may be in a reasonable state of repair, are unsuitable for their continued use as school buildings. A case in point would be the school SMP NEGARA LIX in Godok, Jakarta.

This school is in a densely populated area and is using the two upper floors of what was an hotel. The school has an enrolment of about 1,000 pupils both in the primary and middle school and operates in two sessions. In many aspects the school has reasonably good accommodation - it has toilets, staff rooms, the classrooms are in fair condition, there is a place where the pupils can obtain some food and drink. But it has only one narrow staircase, which is a bad state of repair, leading to the only entrance and exit through a narrow, crowded lobby and many of the additions to the original building are built with a light timber frame. Should a fire ever break out, and there is an ever present danger of this happening as cooking is done on charcoal fires, these upper storeys will become a death trap for the occupants. This building SHOULD NOT BE USED as a school until such time as extensive alterations have been carried out, including the provision of a fire escape staircase. There is little that the survey Team can do in such a case as this beyond bringing it to the notice of the concerned authorities and recommending that urgent action should be taken. The Team should however collect the data on the enrolment but the decision as to whether to remodel the existing premises or whether to provide new buildings can be left to the competent authorities who will also prepare any cost estimates.

Case 3.

Another example would be the school campus shared by Denah Sekolah Sebendja and Denah Sekolah Merdeka, Jalan Raya Matraman, Figure 2. The buildings are shared by a State SD and SMP school and a private TK, SD and SMP school. The ownership of the land is vested in a private association and the State school shares the accommodation, rent free. The front building has foundations for additional floors; the rear single storey classroom block is in good condition and there is a newly built science laboratory. The central block and the outbuildings, shown shaded on the drawing, were originally a private house and are being used by the schools.

The rooms being used as classrooms, are small, badly lit and generally substandard. These old buildings are not worth spending money on and the school as a whole needs to be redeveloped. This is another situation where all that the Survey Team can do is collect the data and refer the case back to Kabupaten or Provincial level for a decision and final costing.

Case 4. Expansion of existing school facilities

One of the decisions which the survey Teams may have to make is whether or not the existing facilities are capable of expansion, either to provide additional accommodation or to accommodate additional students.

In the majority of cases it will be self evident that land is available for new buildings. However, many of the school sites in the cities and towns are small and the existing buildings already occupy most of the land and it may not be readily apparent where the new buildings can be erected. The only remaining option may be to partially demolish or reconstruct the existing single storey buildings. The technical aspect as to the best way that this can be done is not the concern of the Survey Teams. This is a matter for the architect and engineer to deal with, if and whenever the school is to be developed. The task of the Survey team is to assess the cost of this redevelopment and not to provide a design solution.

As an illustration of this point one can consider the case of SEKOLAH SD PADEMANGAN I & II, Figure 3 and it will be seen that the existing buildings occupy most of the site which has an extent of about 1530 m². The enrolment at the time of the survey was 500 pupils in 11 classes in the morning session and 477 pupils in 12 classes in the afternoon session and corresponds to SD Tipe A, ANNEX 7. The existing accommodation, totalling about 483 m² consists of 8 classrooms, 1 small room for the Head Teachers and 6 toilet units and the existing buildings are CLASS I type.

The additional accommodation, amounting to 780 m² of new buildings required to bring the school up to the minimum standard of accommodation shown in ANNEX 7 is as follows:-

<u>Unit</u>	<u>M²</u>
1 classroom	56
1 laboratory	56
1 library	56
1 sports/cultural hall	360
1 Head Teacher	56
1 staff room	56
1 store room	56
1 cafeteria	28
1 prayer room	56
Additional toilets	
Total	780 m ²

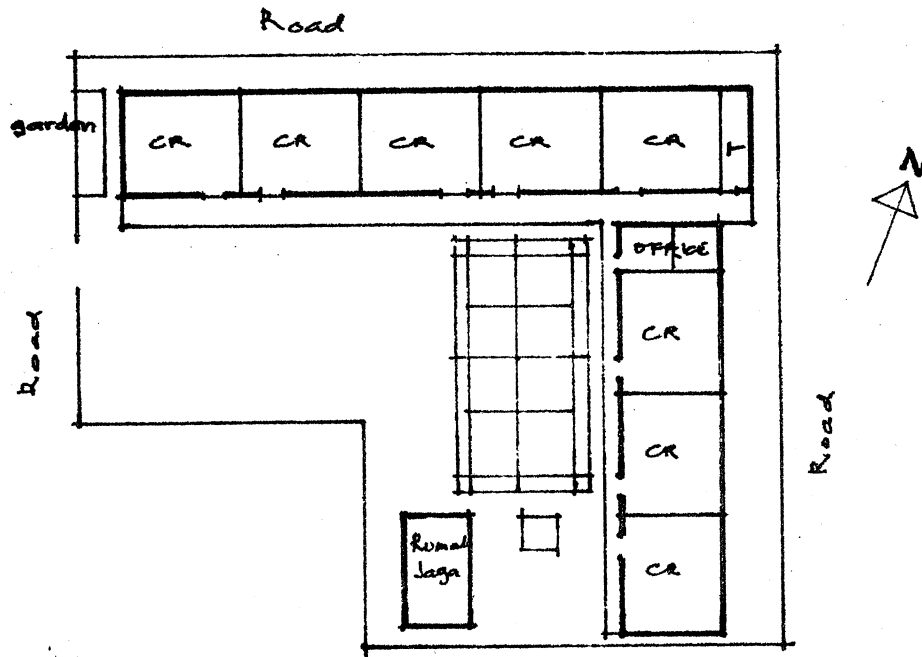


FIGURE 3.

It is very clear from Figure 3 that there is no land available on which to erect this amount of new buildings (equivalent to 1.6 times the area of existing buildings). The only recourse is to partially overbuild and reconstruct the existing buildings and the new buildings will need to be 2 or 3 floors high, i.e. CLASS III buildings. The costing of this additional accommodation and the remodelling and partial reconstruction of the existing buildings on Form SPF/5 using the rates for CLASS III buildings ANNEX 1 should provide sufficient funds for the new work. The Survey Team should not be overly concerned as to how the new buildings can be arranged on the site or the extent of the reconstruction work, this is a matter for the architect. The task of the Survey Team, as it has repeatedly been stated, is confined to preparing an estimate of cost to bring the existing buildings into a good state of repair, to assess what additional accommodation is required and what it would cost, to bring the school up to an accepted standard.

Case 5

Where the school facilities are being shared by schools of different levels, for example a primary school in the morning and SMP school in the afternoon, the Team should treat the SMP school as the principal school and any assessment for additional accommodation would be based on the SMP requirements. Although in many respects, the sharing of facilities by different level schools is unsatisfactory, unless they have been designed for the purpose, generally it is more satisfactory for a lower level school to be accommodated in the facilities designed for a higher level school, than the other way round.

Case 6

There may be cases where the enrolment and/or the number of classes in a school does not precisely correspond to one of the school classifications by type as listed in ANNEXES 7, 8 or 9. For example an SD school having an enrolment of 240 pupils in 6 classes cannot directly be classified as either TIPE B or TIPE C (ANNEX 7) and therefore an interpolation has to be made when an assessment of additional accommodation requirements has to be made. In such cases the additional area of accommodation will need to be adjusted proportionately to the numbers actually enrolled in the school and the school TIPE having the number of pupils nearest to the actual enrolment. In the above example, TIPE C school most closely relates to the school in the example in terms of number of pupils and classes and thus the adjustment of the total net area m² of accommodation would be as follows :-

$$\text{Total net area m}^2 \quad 274 \times \frac{240}{180} = 365 \text{ m}^2$$

Case 7

Where, as in the worked example, 4 schools are sharing the existing buildings on the same site, 2 schools in the morning having a total enrolment of 698 pupils and 2 schools in the afternoon session having a total enrolment of 587 pupils. It does not seem logical that there should be this artificial separation of schools, occupying the same buildings and grounds, (although it is a fairly common practice) and presents an unnecessary complication in defining boundaries of the school and in assessing the additional accommodation requirements. In such cases, for the purpose of this survey only and as the morning schools have the largest enrolment and number of classes, it is suggested that the two morning schools are combined and treated as one school, thus allowing the buildings to be located as a whole. Any assessment of additional accommodation requirements to be done on a pro-rata basis as for case 6 above and as shown in the worked example. In every case use the lesser of two net areas m².

Section 9. Economic feasibility

The question may arise as to whether it is better to extend the life of the existing school by repairing and remodelling the existing buildings and providing additional accommodation or to demolish the existing buildings and construct a completely new school building.

One such and relatively simple method of evaluating the cost implications would be to assess the difference in cost of the new school building and the value of the existing buildings plus the present value of the new buildings (i.e. an amount invested at X% for Y years which accumulate the capital outlay required at the end of the period).

An example of the calculations involved in this method of evaluation might be as follows :-

i) Cost of the new buildings

Total net area m ²	1616	^{1/}
Add 15% circulation area	<u>242</u>	
Total area	1858 m ²	

^{1/} Cost of building 1858 x Rps 84,250 Rps 156,570,000
(From form SPF/5)

ii) Deduct

(a) Value of existing buildings retained
1106 m² x 0.65 x Rps 35,000 Rps 25,161,000

(b) Present value of new school at
12% for 25 years
Rps 156,570,000 x 0.0588 ^{2/} 9,206,000 34,367,000

Amount available for rehabilitation
and providing additional
accommodation Rps 122,203,000

There are other factors to be taken into account but are not readily quantifiable, such as, whether the resultant conversion fully exploits the site or whether it will be functionally efficient as a new building. What will be the expected live of the remodelled building before substantial remodelling and reconstruction is required.

A period of 25 years has been assumed in the above example as being a reasonable forecast of the life of the school and the present bank rate of 12% has been used for calculating the present value of the school. A limited range of present value factors for various rates of interest and number of years is given below :-

No of years	Rate per cent				
	8	9	10	11	12
20	0.2145	0.1784	0.1486	0.1240	0.1036
25	0.1460	0.1159	0.0923	0.0736	0.0588
30	0.0994	0.0754	0.0573	0.0437	0.0334

^{1/} Area of existing building taken from Form SPF/5 and adjusted by the reciprocal of the factor 0.35 used in estimating the case of remodeling and reconstruction of the existing buildings.
used to is derived

^{2/} The factor/calculate the present value of 1 Rupiah/ from the formula

$$\frac{1}{(1+i)^n}$$

where n = the number of years
i = the rate of interest

The forms to be used in making the survey
of the physical condition of the school buildings

SURVEY TENTANG KEADAAN FISIK BANGUNAN		
Surveyed oleh	Kompleks sekolah	
Tgl:	Kabupaten	Propinsi

	PENELITIAN KEADAAN FISIK BANGUNAN ² SEKOLAH		SPF/1
Diteliti oleh	Kompleks sekolah		GEN
Tgl:	Kabupaten	Propinsi	

KETERANGAN SINGKAT BANGUNAN DAN BAHAN BANGUNAN					
	Blok No.1	Blok No.2	Blok No.3	Blok No.4	Blok No.5
Tahun didirikan					
Didirikan oleh	Kontrak/GR	Kontrak/GR	Kontrak/GR	Kontrak/GR	Kontrak/GR
Jumlah lantai					
Bahan atap					
dinding					
rangka					
langit ²					
lantai					
pintu/jendela					
sekatan dinding					
KLASIFIKASI BANGUNAN					

PENGELUARAN TAHUNAN RATA ² UNTUK PEMELIHARAAN					
	Blok No.1	Blok No.2	Blok No.3	Blok No.4	Blok No.5
Bangunan					
Lokasi tanah					
Perkakas rumah					

KETERANGAN UMUM TENTANG LOKASI TANAH			
Jumlah luas lokasi tanah		m ²	Fasilitas olah raga
Luas bangunan		m ²	Jumlah lapangan :
" tempat bermain bertembok		m ²	- basketball
" tempat bermain tak bertembok		m ²	- volleyball
" kebun sekolah		m ²	- badminton
" petak pertanian		m ²	
" tempat parkir, dsb.		m ²	Jalur atletik
			Lapangan sepakbola
			Lapangan hockey

PELAYANAN JASA (Tandai kotak bersangkutan)					
Sekolah memp - listrik	<input type="checkbox"/>	PLM	<input type="checkbox"/>	generator sendiri	<input type="checkbox"/>
- air	<input type="checkbox"/>	PAM	<input type="checkbox"/>	sumur	<input type="checkbox"/>
- gas	<input type="checkbox"/>	GASN	<input type="checkbox"/>	gas botol	<input type="checkbox"/>
- saluran buangan kototan	<input type="checkbox"/>	PEMOA	<input type="checkbox"/>	tangki septic	<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

KETERANGAN :

SPF/ 2/A	SURVEY TENTANG KEADAAN FISIK BANGUNAN.	
SD	Kompleks sekolah	Surveyed oleh
	Kabupaten	Propinsi
		Tgl :

PEMAKAI GEDUNG (Nama/jenis sekolah yang menempati)			
Sekolah pagi		Sekolah petang	
Sekolah 1	G/P/A	Sekolah 4	G/P/A
Sekolah 2	G/P/A	Sekolah 5	G/P/A

PERINCIAN PENDAFTARAN MURID											
Sekolah 1	Jml: Kelas	Jumlah murid			Jml: rata ²	Sekolah 4	Jml: Kelas	Jumlah murid			Jml: rata ²
		L	P	Jumlah				L	P	Jumlah	
Kelas 1						Kelas 1					
2						2					
3						3					
4						4					
5						5					
6						6					
Jumlah						Jumlah					
Jml: Guru						Jml: Guru					
Jml: Lain ²						Jml: Lain ²					
Sekolah 2	Jml: Kelas	Jumlah murid			Jml: rata ²	Sekolah 5	Jml: Kelas	Jumlah murid			Jml: rata ²
		L	P	Jumlah				L	P	Jumlah	
Kelas 1						Kelas 1					
2						2					
3						3					
4						4					
5						5					
6						6					
Jumlah						Jumlah					
Jml: Guru						Jml: Guru					
Jml: Lain ²						Jml: Lain ²					

PEMAKAI RUANGAN						Keterangan
Jenis ruang	Jumlah	Sekolah 1	Sekolah 2	Sekolah 4	Sekolah 5	
Teori						
Laboratorium						
Perpustakaan						
Serbaguna						
Senan/Kesenian						
Kepala/Administrasi						
Guru						
Gudang						
Km. Mandi/Murid						
Km. Mandi/Guru						
Warung						
Ibadah						
Penjaga						

	SURVEY TENTANG KEADAAN FISIK BANGUNAN		SPF/2/R
Surveyed oleh	Kompleks sekolah		SMP
	Kabupaten	Propinsi	

PEMAKAI GEDUNG (Nama/jenis sekolah yang menempati)			
Sekolah pagi		Sekolah petang	
Sekolah 1	G/P/A	Sekolah 4	G/P/A
Sekolah 2	G/P/A	Sekolah 5	G/P/A

PERINCIAN PENDAFTARAN MURID											
Sekolah 1	Jml: Kelas	Jumlah murid			Jml: rata ²	Sekolah 4	Jml: Kelas	Jumlah murid			Jml: rata ²
		L	P	Jumlah				L	P	Jumlah	
Kelas 1						Kelas 1					
2						2					
3						3					
Jumlah						Jumlah					
Jml: Guru						Jml: Guru					
Lain ²						Lain ²					
Sekolah 2	Jml: Kelas	Jumlah murid			Jml: rata ²	Sekolah 5	Jml: Kelas	Jumlah murid			Jml: rata ²
		L	P	Jumlah				L	P	Jumlah	
Kelas 1						Kelas 1					
2						2					
3						3					
Jumlah						Jumlah					
Jml: Guru						Jml: Guru					
Lain ²						Lain ²					

PEMAKAI RUANGAN						
Jenis Ruangan	Jumlah	Sekolah 1	Sekolah 2	Sekolah 4	Sekolah 5	Keterangan
Teori						
Laboratorium						
Perpustakaan						
Serbaguna						
Senan/Kesenian						
UKS/BP						
Kepala						
Administrasi						
Guru						
Gudang						
K. Mandi Murid						
K. Mandi Guru						
Koperasi/Cafeteria						
Ibadah						
Penjaga						

SPF/2/C	SURVEY TENTANG KEADAAN FISIK BANGUNAN	
SMA	Kompleks sekolah	Surveyed oleh
	Kabupaten	Propinsi
		Tgl:

PEMAKAI GEDUNG (Nama/Jenis sekolah yang menempati)			
Sekolah pagi		Sekolah petang	
Sekolah 1	Type G/P/A	Sekolah 3	Type G/P/A
2	Type G/P/A	4	Type G/P/A

PERINCIAN PENDAFTARAN MURID											
Sekolah 1	Jml: Kelas	Jumlah murid			Jml: rata	Sekolah 2	Jml: Kelas	Jumlah murid			Jml: murid
		L	P	Jumlah				L	P	Jumlah	
IPA	Kelas 1					IPA					
	2										
	3										
IPS	Kelas 1					IPS					
	2										
	3										
Bahasa	Kelas 1					Bahasa					
	2										
	3										
Jumlah					Jumlah						
Jml: Guru					Jml: Guru						
" Lain ²					" Lain ²						

PEMAKAI RUANGAN						
Jenis Ruang	Jumlah	Sek. 1	Sek. 2	Sek. 3	Sek. 4	Keterangan
Teori						
Laboratorium Fisika						
Biologi						
Kimia						
Laboratorium IPA						
Serbagana						
Bengel Mesin						
- Kayu						
- Seni						
- Jasa						
Lab Bahasa						
Perpustakaan						
Kesenian/Senam						
UKS/BP						
Kepala						
Administrasi						
Guru						
K. Mandi - Murid						
- Guru						
Gudang						
Koperasi						
Ibadah						
Penjaga						

Survey oleh	SURVEY TENGGANG KEADAAN FISIK BANGUNAN		Indeks Biaya Daerah	SPF/4
Tgl:	Sekolah Kompleks		GEN	
	Kabupaten	Propinsi	Lembar	of

BAHAN/MATERIAL	BLOK 1		BLOK 2		BLOK 3		BLOK 4		BLOK 5	
	Bangunan KELAS	Bangunan KELAS	Bangunan KELAS	Bangunan KELAS	Bangunan KELAS	Bangunan KELAS	Bangunan KELAS	Bangunan KELAS	Bangunan KELAS	Bangunan KELAS
	Categori	Biaya Rehab M2	Categori	Biaya Rehab M2	Categori	Biaya Rehab M2	Categori	Biaya Rehab M2	Categori	Biaya Rehab M2
Alap										
Dinding										
Lantai serambi										
Saluran air										
Sanitasi/Septic tank										
Pompa air/sumur										
Jumlah biaya rehab M2		Luas M2		Luas M2		Luas M2		Luas M2		Luas M2
Jumlah luas M2 (Col. 4 SPF/)		x		x		x		x		x
Tambah 20% untuk lorong?										
Jumlah luas M2										
Jumlah biaya rehabilitasi*										

*(Jumlah biaya rehabilitasi = Jumlah luas M2 x Jumlah biaya rehab M2)

Jumlah biaya rehabilitasi Blok 1-5
 Penyesuaian dengan Indeks biaya daerah
 Jumlah biaya rehabilitasi - Bg' luar - untuk Ikhtisar - SPF/6

PERKIRAAN BIAYA UNTUK MEMENUHI KEKURANGAN PERKAKAS SEKOLAH	Murid	Guru	Teori	Kantor	Keterangan
BANGKU SEKOLAH					
Jumlah bangku - yang ada (SPF/3.)					
(murid tercatat) - yang diperlukan					
- kekurangan					
Biaya per unit (kira2)					
Perkiraan biaya memenuhi					
Kekurangan bangku					
Penyesuaian dengan indeks biaya					
Jumlah biaya pertakas sekolah					

Jumlah biaya memenuhi kekurangan
 Perkakas sekolah untuk Ikhtisar - SPF/6

1

2

3

	SURVEY TENTANG KEADAAN FISIK BANGUNAN	SPF/6
Survey oleh	Kompleks sekolah	
Tgl:	Kabupaten	Propinsi

IKHTISAR BIAYA KIRA²

Ikhtisar biaya rehabilitasi, bagian dalam SPF/3 lembar	1	
	2	
	3	
	4	
	5	
	6	
	Jumlah	

Ikhtisar biaya rehabilitasi, bagian luar SPF/4 lembar	1	
	2	
	Jumlah	
	Tambah 10% biaya tak terduga	
	Jumlah biaya rehabilitasi	

Biaya untuk memenuhi kekurangan perkakas sekolah SPF/4

Biaya tambahan akomodasi yang diharapkan SPF/5 lembar	1	
	2	
	Jumlah	

Biaya kira² untuk air

	Jumlah	
	Tambahkan untuk naiknya biaya membangun %	
	JUMLAH BESAR	

SURVEY TENTANG KEADAAN FISIK BANGUNAN		SPF/5
Survey oleh	Kompleks sekolah	
Tgl:	Kabupaten	Propinsi

BIAYA KIRA UNTUK MENJADIKAN SEKOLAH YANG ADA MEMENUHI STANDARD

Nama Sekolah

EVALUASI KEPERLUAN AKOMODASI

Luas net akomodasi yang ada ^{1/}		m ²
Tambah 20% untuk Lorong ²		m ²
Jumlah luas akomodasi yang ada		m ²
Jumlah luas akomodasi yang diperlukan ^{2/}		m ²
Kurangi luas net akomodasi yang ada		m ²
Tambahan luas net akomodasi yang diharapkan		m ²
Tambah 15% untuk Lorong ²		m ²
Jumlah luas tambahan akomodasi yang diharapkan		m ²

BIAYA KIRA²

Pembangunan baru KELAS

Modifikasi dan rekonstruksi bangunan² yang ada

Biaya m ² ^{5/}	Luas m ²	Jumlah Biaya
x	^{3/}	
x 0.35 x	^{4/}	
	Jumlah	
	Tambah 10% biaya tak tergada	
	Jumlah	
	Penyesuaian dengan indeks biaya	
	Jumlah umum untuk ikhtisar	

- 1/ Σ dari jumlah col. 4. SPF/3
- 2/ Dari Annex 7, 8 atari 9 - Ikhtisar dari skala akomodasi
- 3/ Jumlah luas akomodasi tambahan
- 4/ Jumlah luas akomodasi yang ada
- 5/ Dari Annex Ikhtisar biaya bangunan

KLASIFIKASI BANGUNAN

Diusulkan tiga macam klasifikasi bangunan untuk memperhitungkan biaya perbaikan dan rehabilitasi gedung² yang ada dan untuk mengira-ngirakan biaya memenuhi akomodasi tambahan yang diperlukan supaya sekolah² memenuhi skala akomodasi seperti termaktub di annexes Ini adalah:

- Kelas I. Bangunan sederhana satu lantai dibangun menurut Program Sekolah Dasar INPRES, yang perinciannya membolehkan penggunaan bahan² alternatif, seperti dinding kayu, dinding bata atau balaks; dengan atau tanpa jendela berkaca, lantai tembok atau tegel, dan atap dari genteng, seng gelombang atau asbes semen. Tidak ada instalasi listrik.
- Kelas II. Bangunan satu lantai, dengan dinding bertulang beton, bata atau batako ditembok di kedua belah, lantai tembok atau tegel, atap genteng atau asbes semen gelombang, dengan instalasi listrik dan sanitasi. Gedung² marom ini lebih kukuh dari KELAS I. dan biasanya terdapat di kota², di mana peraturan membangun lebih ketat, atau di mana gedung² dibangun oleh Departemen Pekerjaan Umum.
- Kelas III. Gedung dua lantai atau lebih, dibangun dengan tembok beton bertulang, bata atau batako ditembok di kedua belah, lantai tembok atau tegel, jendela berkaca, atap genteng, asbes semen gelombang, atau tembok rata, dengan instalasi listrik dan sanitasi. Gedung² macam ini hanya terdapat di kota² besar.

Gedung² Kelas I. dan Kelas II. tersebut diatas menurut klasifikasi gedung untuk kantor atau sekolah seperti tercantum dalam instruksi Ref. 184/D.IV/VII/1976 dari Departemen Keuangan. B-15.6/III.0/7/1976

BIAYA BANGUNAN UNTUK DIPAKAI MENGIRA-NGIRAKAN BIAYA

UNTUK MENGADAKAN AKOMODASI TAMBAHAN (Ref.SPF/5)

KELAS I	Rps. 35,000 per M ²
KELAS II	Rps. 57,400 per M ²
KELAS III	Rps. 84,250 per M ²

HARGA TAMBAHAN SEMUA MACAM BANGUNAN INDEKS HARGA DASAR PROPINSI 100 (JAKARTA)

<u>Perabot</u> - Perabot kelas (meja & bangku)	per place	Rps. 12,500
Meja guru dan kursi	" "	Rps. 20,000
Almari	per unit	Rps. 50,000
Papan Tulis	" "	Rps. 12,000
Papan Pengumuman	" "	Rps. 12,000

Air dan sanitasi - harga bergantung kepada ukuran sekolah sbb.:					
Jumlah murid	± 1200	± 900	± 500	± 300	± 100
	Rps.	Rps.	Rps.	Rps.	Rps.
Pompa air listrik dan tank penyim panan	1,500,000	1,100,000	750,000	450,000	250,000
Septic tank	2,700,000	2,000,000	850,000	450,000	150,000
Pompa tangan dan sumur	70,000	70,000	70,000	70,000	70,000

GUIDELINES FOR ASSESSING THE PHYSICAL CONDITION OF THE BUILDINGS - EXTERNALLY

Element	Category 1	Category 2	Category 3	Category 4	Category 5	Category 6
Roof		Generally in a good state of repair not leaking with less than 5% damaged tiles or roofsheeting. All timber framing in good condition. Roof drainage in good condition. Exposed timbers need re-painting.	Minor evidence of leaks. Not more than 10% damaged tiles on roof sheeting. Minor repairs to roof framing in roof drainage. Repaint exposed timber iron and steelwork.	Roof leaking. 10-25% roof tiles or sheeting damaged. Evidence of termites in timbers. 5% of fascia boards and soffit lining to be renewed. 10% of gutters and rain water pipes to be renewed. Repaint exposed timber, iron and steelwork.	Roof leaking badly. Up to 50% of roof tiles damaged or defective. Structural defects in roof framing. Strong evidence of termites in roof timbers. 50% Guttering and rain water pipes need renewal. Repaint exposed timber, iron and steelwork.	
Walls		Minor defects in plaster or boarding in patches not exceeding 1 m ² in area. Verandah posts and soffit lining in good condition. Repaint walls, exposed iron and steelwork.	Defective plaster or boarding in patches not exceeding 1 m ² in area. Verandah posts in good condition. Minor defects to eaves soffit lining. Repaint walls, etc.	Up to 20% plaster to be renewed. 50% repointing of brickwork. Termite in boarding and up to 20% to be renewed. Bottom of verandah posts to be renewed. 15% of soffit lining to be repaired. Minor settlement of foundations. Repaint walls, etc.	Up to 50% renewal of plaster or boarding. 100% repointing of brickwork. Partial rebuilding due to settlement. Renewal of 30% verandah posts and soffit lining. Repaint walls, etc.	
Flooring to verandahs and plinth apron		Make good defective patches in surface not exceeding 1/2 m ² in area.	Defective patches in surface not exceeding 1 m ² in area.	Up to 25% of surface to be renewed. Minor settlement.	Up to 50% of surface to be renewed 25% to be taken up and relaid due to settlement.	
Surface drains		Not blocked, defective patches to lining not exceeding 1/2 m ² in area.	Not blocked, defective patches to lining not exceeding 1 m ² in area. Not more than 5% of covers damaged.	Blocked and requiring cleaning. Up to 30% of lining requiring renewal. Minor settlement. 10% covers to be renewed.	Blocked and requiring cleaning. Up to 50% lining to be renewed. 15% of drain to be relaid due to settlement.	
Sanitation/Septic tank		Cleaning minor blockages.	Clean out and minor repairs to drainage system.	Septic tank full, requiring emptying. Major repairs to drainage system.	Septic tank leaking, requires renewal. Extensive renewal of drainage system.	
Well and Pump		In good condition with cover. Pump operating water clean, minor defects to cement lining and apron.	In good condition, pump operating repairs required to cement lining and apron. Cover in need of repair.	Renewal of cover and concrete apron overhaul pump. Renew storage tanks.	Water suspect. Pump broken. Investigate further since new well may be required.	

NO WORK REQUIRED FOR NEXT FIVE YEARS

If the buildings are in such a poor condition that they cannot be categorized in any of the 5 categories, then technical advice should be sought

Level of illumination

Classrooms
Laboratories etc.

- illumination can be considered satisfactory if area of windows is equivalent to 15% of floor area.
- illumination can be considered satisfactory if area of windows is equivalent to 20% of floor area.

Element	Category 1	Category 2	Category 3	Category 4	Category 5	Category 6
Ceiling		Less than 5% of sheeting to be renewed. Make good plaster in patches not exceeding ½ m ² . Repaint.	Up to 10% of sheeting to be renewed. Make good plaster in patches not exceeding 1 m ² . Repaint.	Up to 25% renewal of sheeting or plaster. Minor repairs to ceiling framing. Repaint.	Up to 50% renewal of sheeting or plaster. Major repairs to ceiling framing. Repaint.	
Floor		Make good concrete or tiled surface in patches not exceeding ½ m ² .	Make good surface in patches not exceeding 1 m ² . Renewal of rotted or defective boarding in small areas.	Up to 20% renewal of surface. Make up level of floor due to subsidence. Renew defective boarding and joists up to 20% of area.	Up to 50% renewal of surface. Take up 30% and relay concrete or timber floor due to subsidence or through termite attack or rot.	
Walls		Make good plaster or renew boarding in small areas not exceeding ½ m ² . Repaint.	Make good plaster or renew boarding in areas not exceeding 1 m ² . Repaint.	Up to 20% plaster or boarding to be renewed, minor settlement of foundations. Repaint.	Up to 50% renewal of plaster or boarding. Partial rebuilding due to termite attack or settlement of foundations. Repaint.	
Windows and doors		Require repainting. Renewal of odd pane of glass, hinge or fastener.	Require repainting. Renewal of 10% glass. Renewal of 20% missing fasteners.	Require repainting. Renewal of 10% rotted or broken frames and sashes or broken door panels.	Require repainting. Renewal of up to 30% rotted or broken frames and sashes. Replace 20% broken doors.	
Services - sanitation		Repair leaking water pipes, over haul flushing systems.	Repair leaking water pipes, replace broken taps, repair flushing systems. Renew up to 10% corroded pipes.	Renew up to 30% rusted and corroded pipes. Renew up to 25% sanitary fittings.	Renew up to 50% rusted and corroded pipes. Renew up to 25% sanitary fittings.	
- electrical		Replace missing lamps or tubes	Replace missing lamps. Refix fittings where loose.	Replace defective fittings.	Wiring suspect or appears dangerous. Fittings missing.	
Chalkboard		Repaint and minor repairs. Should have size not less than 2.40 x 1.20	Where chalkboard is made up with boards which have shrunk thus leaving cracks, but is otherwise adequate. Should have size not less than 2.40 x 1.20	Badly split and damaged.	Completely useless.	
Furniture		Not more than 10% requiring minor repairs, i.e. fixing a new back rest.	Not more than 20% requiring repairs, new backs, broken leg, etc.	Up to 40% requiring repairs and 10% requiring renewal.	Up to 40% requiring repairs and 25% requiring renewal either beyond repair or unsuitable.	
Storage/Cupboard		Minor repairs i.e. rehang doors, refix lock.	Repair damaged door and replace lock.	Minor repairs to frame replace one door.	Major repairs to frame replace both damaged doors.	

If the buildings are in such a poor condition that they cannot be categorized in any of the 5 categories, then technical advice should be sought.

NO WORK REQUIRED FOR NEXT FIVE YEARS

HARGA REHABILITASI BAHAN-BAHAN PER M2 LUAS LANTAI - BANGUNAN KELAS I
 INDEKS HARGA DASAR PROPINSI (JAKARTA) 1977

Bahan/Material	Golongan 1 Rps.	Golongan 2 Rps.	Golongan 3 Rps.	Golongan 4 Rps.	Golongan 5 Rps.	Golongan 6 Rps.	
BAGIAN LUAR	Tidak ada perubahan sama 5 tahun jang akan datang						
Atap		288	1440	2017	3804	Kalau bangunan ada dalam keadaan sedemikian rupa sehingga tidak dapat digolongkan dalam 5 golongan, harus dicari saran teknis.	
Dinding		392	849	2610	3418		
Lantai serambi		71	350	613	912		
Saluran air		20	88	155	231		
Sanitasi/Septic tank		28	86	200	300		
Pompa air/sumur		14	35	84	140		
Jumlah Bagian Luar		813	2848	5679	8805		
BAGIAN DALAM							
Langit-langit		540	884	1058	1391		
Lantai		236	658	1182	1843		
Dinding		518	1037	1387	1496		
Jendela dan pintu		1315	1822	2227	2682		
Jasa - Sanitasi	151	584	934	1215			
- Listrik	-	-	-	-			
Papan Tulis	26	95	178	270			
Perabot	200	726	1370	2075			
Cupboard	40	105	294	420			
Jumlah Bagian Dalam	3026	5911	8630	11392			
Jumlah	3839	8759	14309	20197			

HARGA REHABILITASI BAHAN-BAHAN PER M2 LUAS LANTAI - BANGUNAN KELAS II
 INDEKS HARGA DASAR PROPINSI (JAKARTA) 1977

Bahan/Material	Golongan 1 Rps.	Golongan 2 Rps.	Golongan 3 Rps.	Golongan 4 Rps.	Golongan 5 Rps.	Golongan 6 Rps.	
BAGIAN LUAR	Tidak ada perubahan seama 5 tahun jang akan datang						
Atap		510	1694	3714	5571		
Dinding		697	1309	2382	4462		
Lantai serambi		82	124	329	1428		
Saluran air		13	96	168	250		
Sanitasi/Septic tank		33	105	192	350		
Pompa air/sumur		21	56	117	225		
Jumlah Bagian Luar			1356	3384	6902	11286	
BAGIAN DALAM							
Langit-langit			789	1224	1624	2414	
Lantai		427	1069	1712	2225		
Dinding		1393	1715	2443	3051		
Jendela dan pintu		1698	2208	2719	3329		
Jasa - Sanitasi		93	371	649	965		
- Listrik		294	883	1031	1532		
Papan Tulis		26	95	178	270		
Perabot		200	726	1370	2075		
Cupboard		400	105	294	420		
Jumlah Bagian Dalam		4960	8396	12020	16281		
Jumlah		6316	11780	18922	27567		

Kalau bangunan ada dalam keadaan sedemikian rupa sehingga tidak dapat digolongkan dalam 5 golongan, harus dicari seran teknis

HARGA REHABILITASI BAHAN-BAHAN PER M2 LUAS LANTAI - BANGUNAN KELAS III
 INDEKS HARGA DASAR PROPINSI (JAKARTA) 1977

Bahan/Material	Golongan 1 Rps.	Golongan 2 Rps.	Golongan 3 Rps.	Golongan 4 Rps.	Golongan 5 Rps.	Golongan 6 Rps.	
BAGIAN LUAR	Tidak ada perubahan sama 5 tahun jang akan datang						
Atap		272	1940	4531	8546	Kalau bangunan ada dalam keadaan sedemikian rupa sehingga tidak dapat digolongkan dalam 5 golongan, harus dicari saran teknis	
Dinding		926	1061	3390	5162		
Lantai serambi		291	840	2978	2910		
Saluran air		51	204	357	531		
Sanitasi/Septic tank		33	105	192	350		
Pompa air/sumur		21	56	117	225		
Jumlah Bagian Luar		1594	4206	11565	17724		
BAGIAN DALAM							
Langit-langit		783	893	1053	1743		
Lantai	290	609	1742	3021			
Dinding	1083	1871	3275	4865			
Jendela dan pintu	1704	2385	3066	4911			
Jasa - Sanitasi	193	967	1354	2012			
- Listrik	259	1040	1810	2690			
Papan Tulis	26	95	178	270			
Perabot	200	726	1370	2075			
Cupboard	40	105	294	420			
Jumlah Bagian Dalam	4578	8691	14142	22007			
Jumlah	6172	12879	25707	39731			

SKALA MINIMUM AKOMODASI

SEKOLAH DASAR

	Tipe A		Tipe B		Tipe C		Tipe D	
Jumlah Murid	360-480		180-360		90-180		60-90	
Kelompok Belajar	12		9		6		6	
Jenis Ruang	No.	Luas Total m ²	No.	Luas Total m ²	No.	Luas Total m ²	No.	Luas Total m ²
Teori	9	504	6	336	3	168	1	84
Laboratorium	1	56					-	-
Perpustakaan	1	56	-	-	-	-	-	-
Serbaguna	1	360	1	240	-	-	-	-
Senam/Kesenian					-	-	-	-
Kepala Sekolah/ Administrasi	1	56	1	56	1	56	1	42
Guru	1	56	1	28				
Gudang	1	56	1	28	1	14		
Km.Mandi Murid *	12		6		3		2	
Guru *	2		-	-	1		1	
Warung	1	28	1	28	-	-	-	-
Ibadah	1	56	1	56	-	-	-	-
Penjaga	1	36	1	36	1	36	1	36
Jumlah Luas net m ²		1264		808		274		162
Luas net.m ² tempat		2.63		2.24		1.52		1.80

* Angka menunjukkan jumlah kamar mandi, dsb. yang harus disediakan.

Luas net = Ukuran Luas di antara muka-dalam keempat dinding.

Luas net M²/tempat = Jumlah luas net M² ÷ jumlah murid maksimum,

$$\text{yaitu Luas net M}^2/\text{tempat Tipe A} = \frac{1264}{480} = 2.63 \text{ M}^2$$

SKALA MINIMUM AKOMODASI
SEKOLAH MENENGAH PERTAMA

Jenis Ruang	Tipe A		Tipe B		Tipe C		Tipe D	
	1200-1400		800-900		400-480		250-280	
	33		23		12		7	
No.	Luas Total m ²	No.	Luas Total m ²	No.	Luas Total m ²	No.	Luas Total m ²	
Teori	25	1600	17	1088	8	512	4	256
Laboratorium	3	360	3	360	2	240	1	120
Perpustakaan	4	400	3	300	2	200	1	100
UKS/BP	2	60	2	60	1	30	1	30
Serbaguna	5	700	4	560	2	280	1	140
Senam/Kesenian	1	800	1	600	1	500	1	300
Kepala Sekolah	1	30	1	20	1	20	1	20
Administrasi	1	48	1	40	1	32	1	24
Guru	1	130	1	100	1	50	1	40
Gudang	1	80	1	64	1	50	1	40
Km. Mandi Murid *	36		25		15		9	
Guru *	4		3		3		2	
Koperasi/Cafeteria	2	100	1	50	1	50	1	50
Ibadah	2	120	2	90	2	60	1	15
Penjaga	2	72	1	36	1	36	1	36
Jumlah Luas net m ²		4,500		3,368		2,060		1,171
Luas net m ² tempat		3.21		3.74		4.29		4.18

* Angka menunjukkan jumlah kamar mandi, dsb. yang harus disediakan.

Luas net = Ukuran Luas di antara muka-dalam keempat dinding.

Luas net M²/tempat = Jumlah Luas net M² ÷ jumlah murid maksimum,
yaitu Luas net M²/tempat Tipe B = $\frac{3368}{900} = 3.74 \text{ M}^2$

SKALA MINIMUM AKOMODASI
SEKOLAH MENENGAH ATAS

Jenis Ruang	Tipe A		Tipe B		Tipe C		Tipe D	
	900-1155		500-840		200-420			
	33		24		12			
	No.	Luas Total m ²	No.	Luas Total m ²	No.	Luas Total m ²	No.	Luas Total m ²
Teori	22	1584	15	1080	6	432		
Lab Fisika	1	140	1	140	-	-		
Biologi	1	140	1	140	-	-		
Kimia	1	140			-	-		
Laboratorium IPA	-	-	-	-	1	140		
Serbaguna	1	140	1	140	1	140		
Bengkel Mesin	1	210	1	210				
Kayu	1	280	1	280	1	280		
Seni	1	140						
Jasa	1	70	1	70	1	70		
Lab Bahasa	1	98	1	98	1	98		
Perpustakaan	1	300	1	200	1	100		
Kesenian/Senam	1	1600	1	1000	1	800		
UKS/BP	1	60	1	30	1	30		
K. Mandi Murid *	35		25		20			
Guru *	6		4		1			
Kepala Sekolah	1	30	1	30	1	30		
Administrasi	1	80	1	50	1	50		
Guru	1	155	1	125	1	65		
Gudang	1	100	1	80	1	50		
Koperasi/Cafetaria	1	80	1	60	1	50		
Ibadah	2	90	2	60	1	30		
Penjaga	2	72	2	72	1	36		
Jumlah Luas net m ²		5509		3865		2401		
Luas net m ² tempat		4.77		4.60		5.72		

* Angka menunjukkan jumlah kamar mandi, dsb. yang harus disediakan.
 Luas net = Ukuran Luas di antara muka-dalam keempat dinding.
 Luas net M²/tempat = Jumlah Luas net M² ÷ jumlah murid maksimum,
 yaitu Luas net M²/tempat Tipe A = $\frac{5077}{1155} = 4.77 \text{ M}^2$

INDEKS BIAYA DAERAH

Indeks biaya berikut didasarkan atas penyesuaian persentase daerah menurut peraturan Departemen Keuangan (Ref. 184/D.IV/VII/1976 yang sekarang berlaku untuk tahun 1977).
B-15.6/III.0/1976

JAKARTA INDEKS BIAYA DASAR 100

<u>Propinsi</u>	<u>Indeks biaya</u>	<u>Propinsi</u>	<u>Indeks biaya</u>
D.I. Aceh	90	Bali	95
Sumatara Utara	93	Nusa Tenggara Barat	97
Sumatara Barat	94	Nusa Tenggara Timur	108
Sumatara Setatan	95	Kalimantan Timur	154
Riau	148	Kalimantan Tengah	134
Jambi	100	Kalimantan Barat	118
Bengkulu	100	Kalimantan Selatan	112
Lampung	87	Sulawesi Tengah	95
Jawa Barat	92	Sulawesi Selatan	82
Jawa Tengah	94	Sulawesi Tenggara	88
D.I. Yogyakarta	92	Sulawesi Utara	103
Jawa Timur	95	Malaku	102
		Irian Jaya	153

LUAS M² LOKASI TANAH DARI SEKOLAH^{1/}

SEKOLAH DASAR

	<u>Tipe A</u>	<u>Tipe B</u>	<u>Tipe C</u>	<u>Tipe D</u>
Jumlah Murid	480	360	180	90
Jumlah Luas ² M ²	6,590	4,209	2,340	1,600
Luas/Tempat M ²	13.70	11.70	13.00	17.80

SEKOLAH MENENGAH PERTAMA

	<u>Tipe A</u>	<u>Tipe B</u>	<u>Tipe C</u>	<u>Tipe D</u>
Jumlah Murid	1,400	900	480	280
Jumlah Luas ² M ²	22,140	18,828	15,472	13,154
Luas/Tempat M ²	15.80	20.90	32.20	47.00

SEKOLAH MENENGAH ATAS

	<u>Tipe A</u>	<u>Tipe B</u>	<u>Tipe C</u>
Jumlah Murid	1,150	850	400
Jumlah Luas ² M ²	30,308	25,860	16,890
Luas/Tempat M ²	26.40	30.40	42.20

S.D. INPRES

	<u>6 Kelas</u>	<u>12 Kelas</u>
Jumlah Murid	240	480
Jumlah Luas ² M ²	1,500	3,000
Luas/Tempat M ²	6.25	6.25

^{1/} PROYEK PEMBAKUAN SARANA PENDIDIKAN JAKARTA, Departemen Pendidikan dan Kebudayaan, Pembaknan Bangunan dan Perabot Sekolah Dengan, 1976.

EXPLANATORY NOTES FOR THE COMPLETION
OF THE FORMS

FORM SPF/1. EXPLANATORY NOTES

- Box 1. The block numbers are to correspond with block numbers on the sketch plan.
Insert year of construction for each block if this is known.
Built by Contractor or Community (GR) delete one.
Insert number of floors for each block.
Give brief description of materials used in construction, i.e. Roof - clay tiles; Walls - brick; Ceiling - asb/cement etc.
Classification of building: Refer to ANNEX 1 and insert appropriate classification.
The term "Block" generally refers to a building which is separate from other buildings on the site (Figure 1 Section 2) or part of a building which is more conveniently dealt with as separate units as in the worked example.
- Box 2. Experience has shown that the schools have little information on the cost of maintenance. Nevertheless the questions should be asked and whatever information is available it should be recorded.
- Box 3. Most schools know the extent of the site, but some estimation of the areas of the other items may be required to be done by the survey team. Note the area of the buildings relates to the area of ground occupied by the building, which is not necessarily the same as the total floor area.
- Box 4. Tick the appropriate box if the school has any of these services. Use blank spaces to denote other services or source of supply.
- Box 5. For recording any general comment, relating to the condition of the school buildings, site or any other relevant information. For example, one block of the buildings may be in a derelict condition, in which case the team would record this information together with a notation that this block has been excluded from the survey so far as rehabilitation work is concerned and that the cost of replacement has been included in Form SPF/5.

FORM SPF/2A/SD, 2B/SMP, 2C/SMA. EXPLANATORY NOTES

This form is to be used for collecting general data concerning the use of the facilities; i.e. the number of schools, by level and type using the facilities, the accommodation available and the details of the enrolment for each school. Use Form SPF/2A/SD for primary schools, Form SPF/2B/SMP for SMP schools and Form SPF/2C/SMA for SMA schools.

Box 1. Insert the names of the schools using the facilities in the morning and afternoon sessions. Indicate whether the school is a government school (G), a private school (P) or an aided school (A).

e.g. Sekolah 1 Pademangan I G/P/A

Box 2. Every effort should be made to collect the enrolment data for all of the schools as it is necessary to select the biggest school (i.e. the school having the greatest number of pupils enrolled and/or the largest number of classes) which will be used as the basis for assessing the additional accommodation requirements. As it may not be possible to collect the enrolment data for both sessions in one visit to the school, it is suggested that the Teams forewarn the school of their intended visit with a request that all data be made ready for them. Use additional forms for collecting the enrolment data, if need be, but record all other data on the primary form.

Box 3. Enter the total number of units of accommodation available in the column marked "Jumlah" and in the other columns insert the number of rooms being used by that particular school. A comparison of this data will give some indication of the extent of room sharing and would form the basis on which to assess the deficiencies in certain types of accommodation. Record any unusual use of the rooms, i.e. Classrooms being used as living quarters; the aula being used as classrooms.

General note: Where the facilities are being shared by schools of different levels, the Team should treat the higher level school as the principal school and should use the relevant form for recording the data but at the same time complete the enrolment data for the lower level school on its relevant form. For example, if the facilities are used by an SD school in the morning session and an SMP school in the afternoon session, the Team should complete Form SPF/2B/SMP in all respects but only fill in the enrolment data on Form SPF/2A/SD for the SD school. The assessment of any additional accommodation requirements in such a case would be based on the SMP school. Although in many respects the sharing of facilities by different level schools is unsatisfactory, unless they have been designed for this purpose, it is more satisfactory for a lower level school to be accommodated in the facilities designed for a higher level school, than the other way round.

FORM SPF/3. EXPLANATORY NOTES

General note: The survey of the internal physical condition is best done, room by room, in each block of building. Generally the Team will find it convenient to use separate sheets for each block and to summarise the total cost of the rehabilitation works on Form SPF/6. However there is no reason why two blocks having the same CLASS of building should not be combined on the one sheet if the buildings are small and lend themselves to such a combination.

Box 1. The BLOCK No. and the CLASS of building should correspond to the numbering on the sketch plan and Form SPF/1.

Box 2. (reading horizontally)

Column 1. Insert the room number cross referenced to the sketch plan.

Column 2. Briefly describe the type of room; e.g. Classroom = CR; Administration = Adm., etc.

Column 3. Insert the dimensions of the room (Note: in most cases the dimensions of the rooms can be estimated by counting the ceiling panels, which measure 1 metre x 1 metre, or counting the floor tiles which measure 20 cm x 20 cm).

Column 4. Calculate the area of the room from the dimensions in Column 3.

Columns 5 - 11.

Refer to the guidelines given in ANNEX 3, assess the condition of each element (i.e. ceiling, walls), and insert the category of condition in the appropriate column space.

Columns 12 and 13.

Insert the number of seats available. As there is a great variety of classroom furniture, ranging from single desks and chairs to four seater desks and benches, the term "seat" is used to denote a chair (or bench space) and desk space for each pupil and teacher.

Column 14. Refer to the guidelines in ANNEX 3 and insert the category of condition.

Column 15. Insert the number of storage cupboards, whether free standing or built-in.

Column 16. Refer to the guidelines in ANNEX 3 and insert the category of condition.

Column 17. For recording any relevant notes, such as "room badly lit", "floor needs complete renewal", "room too small", etc.

Box 3. Line (i) Sum the areas in Column 4 and the number of seats in Columns 12 and 13 and the number of storage cupboards in column 15 and enter the result in the appropriate space.

Line (ii) Determine the average category of condition for each element in Columns 5 - 11 and Columns 14 and 15. This may be done by the usual method of adding together all the category numbers in a column and dividing the sum by the number of entries in that column: Round off the result to the nearest whole number (e.g. 2.3 = 2 or 2.5 = 3).

Line (iii) Refer to ANNEXES 4, 5 or 6 (depending on the CLASS of building) and enter the corresponding cost per m² for each element in the appropriate column space and sum these costs, horizontally, to arrive at the total cost rehabilitation per m². This total cost per m² multiplied by the total area m² (from column 4) will give the total cost of rehabilitation. Adjust for the provincial cost index and transfer the total to Form SPF/6 to summarise all costs.

FORM SPF/4. EXPLANATORY NOTES

EXTERNAL PHYSICAL CONDITION OF THE BUILDINGS

- Box 1. The block numbers to correspond with the block numbering on the sketch plan and Form SPF/1. The classification of the building is to correspond with the classification on Form SPF/1. See also explanatory notes for form SPF/3 as regards the combining of blocks.
- Box 2. Survey the external physical condition of the buildings, systematically, block by block. Use additional sheets (Form SPF/4) if there are more than 5 blocks of buildings.
- Step 1. Refer to the guidelines in ANNEX 2; assess the category of condition of each element (i.e. roof, walls, etc.) and insert the category number in the appropriate space.
- Step 2. Refer to ANNEXES 4, 5 or 6 (depending on the CLASS of building) and enter the corresponding cost per m² for each element in the appropriate space. Sum the elemental costs per m² to obtain the total cost rehabilitation per m².
- Step 3. Insert the total area m² from Column 4 Form SPF/3 (for each block) in the appropriate space and add 20% for circulation area (i.e. corridors, verandahs, etc.) to give the total area m² for each block.
- Step 4. The total cost of rehabilitation, externally, is obtained by multiplying the total area m² by the total cost rehabilitation per m².
- Step 5. The total cost of rehabilitation for each block is summed horizontally and after making the adjustment for the provincial cost index is transferred to the summary cost sheet, Form SPF/6.

COST OF MAKING GOOD SHORTAGES OF FURNITURE

- Box 3. Owing to the complexity in the range of furniture, the cost of making good any shortages has of necessity been limited to the provision of desks and chairs (or their equivalent) and storage cupboards in classrooms, offices and teacher's rooms. The minimum standard would be:-

Classrooms	1 chair and desk for each pupil (or the equivalent bench and desk space) 1 chair and desk for the teacher 1 storage cupboard
Administration	1 desk and chair for each staff member, including the Principal of the school 1 storage cupboard for each staff member
Teachers room	1 desk and chair for each teacher 1 storage cupboard to each two teachers

The steps to be followed to arrive at the cost of making good shortages of furniture are:-

- Step 1. Transfer the total number of seats and storage cupboards available, from columns 12, 13 and 15 Form SPF/3 to the appropriate spaces in Box 3.
- Step 2. The number of pupils and staff members can be obtained from Box 2, Forms SPF/2A, 2B or 2C using the data from the biggest school and the corresponding furniture needs can be calculated in accordance with the above minimum scale.
- Step 3. The number of furniture units required is obtained by subtracting the number obtained in step 2 from the number obtained in step 1. (If there is a surplus or there is a sufficiency of furniture, nothing further need be done).
- Step 4. The unit cost of the furniture is obtained from ANNEX 1. and the estimated cost of making good the shortages in furniture is arrived at by simply multiplying the required number of units by the unit cost. After adjustment for the Provincial Building Cost index, transfer the result to Form SPF/6.

FCRM SPF/5. EXPLANATORY NOTES

The steps to be followed to arrive at the estimated cost of the additional accommodation to bring the school up to standard are:-

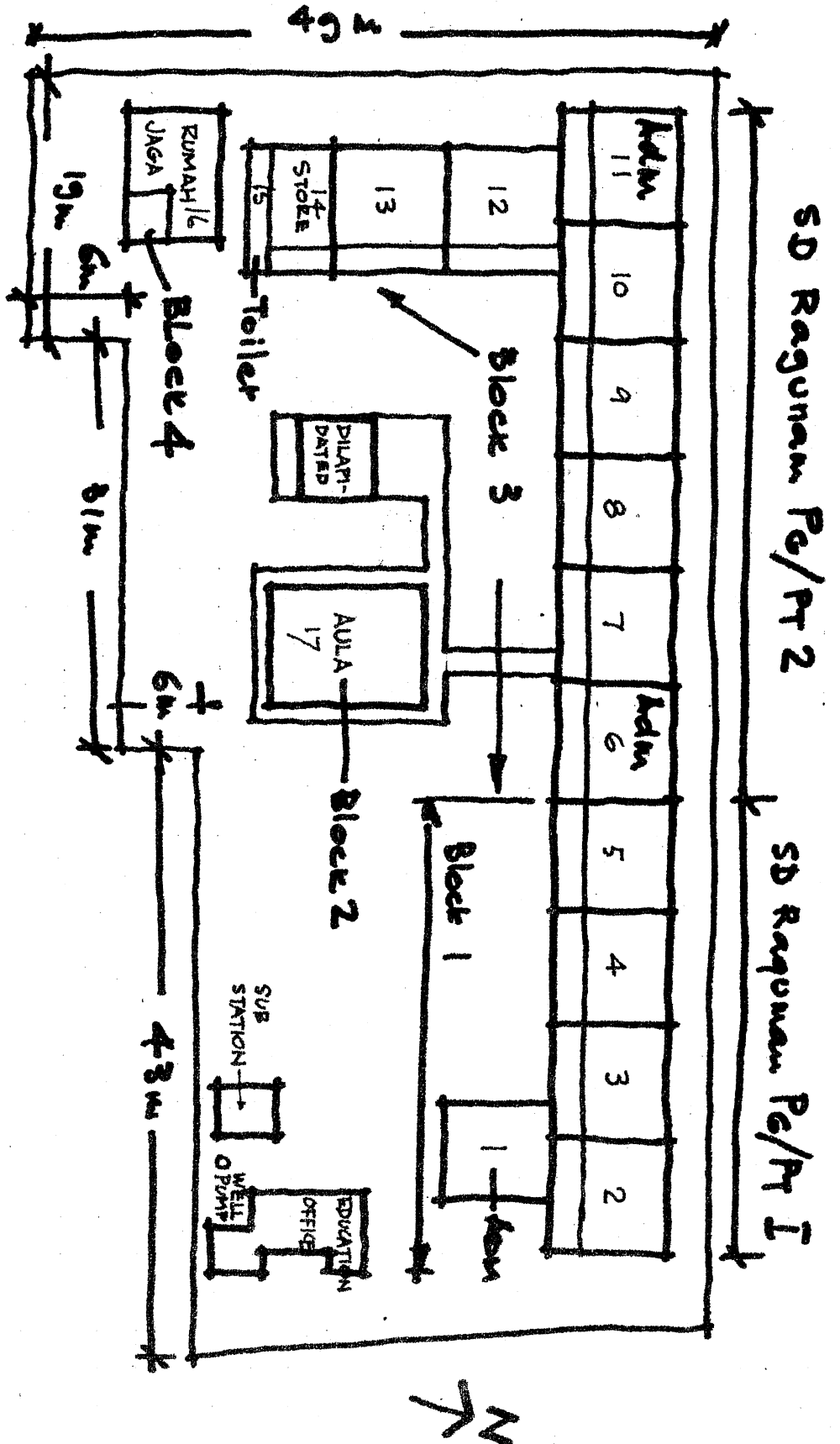
- Step 1. Classify the selected school to correspond with one of the school types listed in ANNEXES 7, 8 or 9 and in relation to its enrolment and number of classes. Where this cannot precisely be done then an interpolation must be made. For example a primary school having an enrolment of 630 pupils in 15 classes could be classified as SD Tipe A 630/480 (i.e. 480 being the nearest number of pupils to 630 - ref. ANNEX 7). This classification would also indicate that the total net area m² of the minimum scale of accommodation must be increased by the same proportion.
- Step 2. Calculate the total net area m² of accommodation available in the existing school. This can be obtained by summing the totals of area m² in Column 4 SPF/3. In this regard small outbuildings and derelict structures should be excluded.
- Step 3. Add 20% for circulation area (Corridors, verandahs, etc.). This gross total is needed when it comes to assessing the cost of remodelling the existing buildings.
- Step 4. Determine the total net area m² of accommodation required for the type of school in question, which is obtained from ANNEX 7 for SD schools, ANNEX 8 for SMP schools and ANNEX 9 for SMA schools. Adjust this total in the case where the existing school cannot be precisely classified as in step 1 above, in this example the total net area m² would need to be adjusted as $1264 \times \frac{630}{480} = 1659 \text{ m}^2$
- Step 5. Deduct the total net area m² of available accommodation - Step 1 to give the additional net area m² of accommodation required.
- Step 6. Add 15% for circulation area and to give the total net area m² of additional accommodation required.
- Step 7. Determine the class of building for the new construction (i.e. the additional accommodation requirements) and the cost per m² by reference to ANNEX 1 and multiply this cost per m² by the total area m² of additional accommodation resulting from Step 5.

The following general rules may assist the Survey Teams in determining the CLASS of building for estimating the cost of the new construction:-

- i) For schools in cities and major towns, always select CLASS III (Buildings having two or more floors).
 - ii) At those schools, other than in cities and major towns, where there is obviously sufficient land on which to erect the new construction, select the same classification as for the existing buildings.
 - iii) At those schools where there appears to be insufficient land available for the new construction, always select CLASS III buildings.
- Step 8. Using the same cost per m² as in Step 7, multiply this by the total area of existing accommodation - Step 3. The factor of 0.35 is used to adjust the basic cost per m² to a reasonable figure for remodelling or partial reconstruction of the existing buildings.
 - Step 9. Sum the total from Steps 7 and 8 and add an allowance of 10% for unforeseen work.
 - Step 10. Adjust the total cost from Step 9 by the appropriate Provincial Buildings Cost Index (ANNEX 10) to arrive at the total cost and transfer this to the Summary Cost Sheet, Form SPF/6.

A WORKED EXAMPLE

SURVEY TENTANG KEADAAN FISIK BANGUNAN		
Surveyed oleh	Kompleks sekolah Ragunan	
Tgl:	Kabupaten	Propinsi Jakarta



	PENELITIAN KEADAAN FISIK BANGUNAN ² SEKOLAH		SPF/1
Diteliti oleh XY	Kompleks sekolah RAGUMAN		GEN
Tgl: 10.5.76	Kabupaten	Propinsi JAKARTA	

KETERANGAN SINGKAT BANGUNAN DAN BAHAN BANGUNAN					
	Blok No.1	Blok No.2	Blok No.3	Blok No.4	Blok No.5
Tahun didirikan	1935	1935	1970	1970	
Didirikan oleh	Kontrak/GR	Kontrak/GR	Kontrak/GR	Kontrak/GR	Kontrak/GR
Jumlah lantai	1	1	1	1	
Bahan atap	clay tiles	clay tiles	clay tiles	clay tiles	
dinding	brick	brick/dado	brick	brick	
rangka					
langit ²	asb/cement	-	asb/cemen	asbes/cement	
lantai	conc/tiles	concrete	conc/tiles	conc/tiles	
pintu/jendela	wood/glazed	open	wood/glazed	wood glazed	
sekatan dinding	brick	none	brick	brick	
KLASIFIKASI BANGUNAN	1	1	1	1	

PENDELURBAN TAHUNAN RATA ² UNTUK PEMELIHARAAN					
	Blok No.1	Blok No.2	Blok No.3	Blok No.4	Blok No.5
Bangunan	Rps 200,000 on block 1		1972 for roof repairs		
Lokasi tanah					
Perlekas rumah					

KETERANGAN UMUM TENTANG LOKASI TANAH			
Luas lokasi tanah	3220 m ²	Fasilitas olah raga	
Luas bangunan	1074 m ²	Jumlah lapangan :	
" tempat bermain bertembok	- m ²	- basketball	-
" tempat bermain tak bertembok	1266 m ²	- volleyball	-
" kebun sekolah	35 m ²	- badminton	-
" petak pertanian	m ²		
" tempat parkir, dsb.	- m ²	Jalur atletik	-
		Lapangan sepakbola	-
		Lapangan hockey	-

PELAYANAN JASA (Tandai kotak bersangkutan)					
Selolah memp - listrik	<input type="checkbox"/>	PLM	<input type="checkbox"/>	generator sendiri	<input type="checkbox"/>
- air	<input checked="" type="checkbox"/>	PAM	<input type="checkbox"/>	sumur	<input checked="" type="checkbox"/> sumur/pompa tangan
- gas	<input type="checkbox"/>	GASN	<input type="checkbox"/>	gas botol	<input type="checkbox"/>
- saluran buangan kototan	<input checked="" type="checkbox"/>	PEMDA	<input type="checkbox"/>	tangki septic	<input checked="" type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>

KETERANGAN : Old toilet block very dilapidated and unusable - should be demolished.

Note: for costing - School needs an additional water pump.

SPF/ 2/A	SURVEY TENTANG KEADAAN FISIK BANGUNAN	
SD	Kompleks sekolah RAGUMAN	Surveyed oleh X7
	Kabupaten	Propinsi JAKARTA Tgl : 10.9.76

PEMAKAI GEDUNG (Nama/jenis sekolah yang menempati)					
Sekolah pagi			Sekolah petang		
Sekolah 1	SD Ragunan P61	G/P/A	Sekolah 4	SD Ragunan PT1	G/P/A
Sekolah 2	SD Ragunan P62	G/P/A	Sekolah 5	SD Ragunan PT2	G/P/A

PERINCIAN PENDAFTARAN MURID											
Sekolah 1	Jml: Kelas	Jumlah murid			Jml: rata ²	Sekolah 4	Jml: Kelas	Jumlah murid			Jml: rata ²
		L	P	Jumlah				L	P	Jumlah	
Kelas 1	2	48	28	76	38	Kelas 1	2	48	37	85	43
2	2	44	35	79	39	2	1	20	19	39	39
3	2	39	38	77	38	3	1	23	20	43	43
4	1	22	18	40	40	4	1	18	20	38	38
5	1	18	19	37	37	5	1	19	18	37	37
6	1	20	18	38	38	6	1	17	15	32	32
Jumlah	9	191	156	347		Jumlah	7	145	129	274	
Jml: Guru		4	6	10		Jml: Guru		3	7	9	
Jml: Lain ²		1	2	3		Jml: Lain ²		1	1	2	
Sekolah 2	Jml: Kelas	Jumlah murid			Jml: rata ²	Sekolah 5	Jml: Kelas	Jumlah murid			Jml: rata ²
Kelas 1	2	40	38	78	39	Kelas 1	2	42	39	81	
2	2	42	38	80	40	2	2	40	38	78	
3	2	35	44	79	40	3	1	21	22	43	
4	1	20	19	39	39	4	1	22	18	40	
5	1	18	20	38	38	5	1	20	17	37	
6	1	19	18	37	37	6	1	18	16	34	
Jumlah	9	174	177	351		Jumlah	8	163	150	313	
Jml: Guru		3	9	12		Jml: Guru		4	6	10	
Jml: Lain ²		1	2	3		Jml: Lain ²		1	2	3	

PEMAKAI RUANGAN						
Jenis ruang	Jumlah	Sekolah 1	Sekolah 2	Sekolah 4	Sekolah 5	Keterangan
Teori	10	4	6	4	6	
Laboratorium	-	-	-	-	-	
Perpustakaan	-	-	-	-	-	
Serbaguna	-	-	-	-	-	
Senan/Kesenian Aula	1	1	-	1	-	Used by kelas 1, 2, 3 as R. Teori
Kepala/Administrasi	3	1	1	1	1	Sek. 1 & 4 share
Guru	-	-	-	-	-	
Gudang	1	-	1	-	1	
Km. Mandi/Murid	5	-	5	-	5	
Km. Mandi/Guru	1	-	1	-	1	
Warung	-	-	-	-	-	
Ibadah	-	-	-	-	-	
Penjaga	1					common to all schools.

No. Blah **XY** SURVEY TERANG BENDAH FISIK BANGUNAN Propinsi **JAKARTA** Index Biaya Daerah **100** SPF/3 GEN
 No. Blah **10.2.76** Sekeloa Kompleks **RAGUMAN** Kabupaten Sheet **2** of **2**

REHABILITASI FISIK BANGUNAN - BAGIAN DALAM DAN KIRAZ BIA-A REHABILITASI															
No. Ruangan (1)	Urutan (2)	Ukuran (3)	Luas m ² (4)	Lenggi ² (5)	Lantai (6)	Dinding (7)	Jendela/Pintu (8)	Air/Kesahatan (9)	Listrik (10)	Papanulis (11)	Perabot		Alatari		Keterangan (17)
											Jml: Kursi (13)	Jml: Kursi (14)	Jml: (15)	Kondisi (16)	
6	Adm	8x7	56	2	1	2	2	-	-	1	5	1	9	1	
7	CR	8x7	56	2	1	2	2	-	-	1	1	1	2	1	
8	CR	8x7	56	2	1	2	2	-	-	2	1	1	2	1	
9	CR	8x7	56	2	1	2	2	-	-	2	1	1	2	1	
10	CR	8x7	56	2	2	2	2	-	-	1	6	1	8	1	Room rather dark.
11	Adm	8x7	56	2	2	1	2	-	-	1	1	1	1	2	
12	CR	8x7	56	2	1	1	2	-	-	2	1	1	2	2	
13	CR	8x7	56	3	1	2	2	-	-	-	-	-	-	-	
14	Gudg	8x3.5	28	3	1	2	2	-	-	-	-	-	-	-	
15	R.M	8x1.5	12	3	2	2	2	2	-	-	-	-	-	-	
16	Jaga	9x4	36	2	1	2	2	1	-	-	-	-	-	-	
Jumlah luas m ² /kursi			524	2	1	2	2	1.5	-	1	246	17	25	1	
Kategori: Kondisi rata2				540	-	518	1315	100	-	-					
No. B. Perabot m ²															
Jumlah biaya rehabilitasi															
Jml: biaya* rehat m ²															
Jml: luas m ² (Col.4)															
Jumlah biaya rehabilitasi															

Persewaan dengan indeks biaya
 JUMLAH UMUM BAGIAN DALAM BLOK — UNTUK IKHTISAR — SPF/6
 (* Jumlah biaya rehat m² = 2 Colis 5 - 11 plus Colis 15. 17)

1,296,852

2473 x 524

1,296,852

Survey oleh **xy** SPF/3
 Tgl: **10.9.76** GEN
 SURVEY TERANG KEMAMPUAN FISIK BANGUNAN Index Biaya 100
 Sekolah Kompleks **PAGUMARAN** Kabupaten Propinsi **JAWABARA**
 Daerah Daerah

KEMAMPUAN FISIK BANGUNAN - BAGIAN DALAM DAN KIRAZ BILAYA REHABILITASI

Sheet 1 of 2

Ruang No. (1)	Urutan (2)	Ukuran (3)	Luas M ² (4)	Langit 2 (5)	Lantai (6)	Dinding (7)	Jendela/Pintu (8)	Air/Kesihatan (9)	Listrik (10)	Papan tulis (11)	Perabot			Alatari		Keterangan (17)		
											Jml: Kursi (12)	Jml: Kursi (13)	Kondisi (14)	Jml: (15)	Kondisi (16)			
1	Aula	8x8	72	2	1	2	2	-	-	-	6	3	6	2	-			
2	CR	8x7	56	2	1	2	2	-	-	3	40	1	3	-	-	Windows partially obstructed		
3	CR	8x7	56	2	2	2	2	-	-	3	40	1	2	1	1	by door light poor in afternoon		
4	CR	8x7	56	3	2	3	3	-	-	3	42	1	3	1	2			
5	CR	8x7	56	4	2	4	3	-	-	3	40	1	2	1	1	wall badly cracked at ceiling level		
17	Aula	12x8,5	102	-	3	4	-	-	-	4	96	3	3	-	-	Being used by kelas 1, 2 & 3		
																Toilet adjacent to aula derelict needs to be demolished		
																Note:		
																School needs additional toilet and water pump.		
											258	13	9	2				
Jumlah luas M ² /kursi											398							
Kategori kondisi rata											3	2	3	3	3	2		
Luas Rehab M ²											884	236	1037	1315				
											4977	x	398	40	2			Jumlah biaya rehabilitasi
																		1,989,845

Penyesuaian dengan Indeks biaya **100**
 JUMLAH UMUM BAGIAN DALAM BLOK **DIPTUK. IKHTISAR - SPF/6**
 (* Jumlah biaya rehab M² = 2 Col 5 - 11 plus Col 15, 17)
1,981,000

vey oleh	SURVEY TENGANG KEADAAN FISIK BANGUNAN		Indeks Biaya Daerah	SPF/4
Igl:	Sekolah Kompleks Rasuman	Kabupaten	Propinsi Jakarta	GEN
			Lembar <u>1</u> of <u>1</u>	

KEADAAN FISIK BANGUNAN - BAGIAN LUAR - & KIRA2 BIAYA REHABILITASI	BLOK 1		BLOK 2		BLOK 3 4		BLOK 4		BLOK 5	
	Bangunan KELAS 1	Biaya Rehab M2	Bangunan KELAS 1	Biaya Rehab M2	Bangunan KELAS 1	Biaya Rehab M2	Bangunan KELAS 1	Biaya Rehab M2	Bangunan KELAS 1	Biaya Rehab M2
BAHAN/MATERIAL	3	1440	3	1440	1	-	1	-	1	-
Atap	2	392	2	392	2	392	2	392	2	392
Dinding	2	71	4	613	1	-	1	-	1	-
Lantai serambi	-	-	-	-	1	-	1	-	1	-
Saluran air	-	-	-	-	1	-	1	-	1	-
Sanitasi/Septic tank	-	-	-	-	1	-	1	-	1	-
Pompa air/sumur	-	-	-	-	2	14	2	14	2	14
Jumlah biaya rehab M2		1903		2445						
Luas M2	296		102		524		524		524	
Jumlah luas M2 (Col. 4 SPF/)	59		20		104		104		104	
Tambah 20% untuk lonjong	355	1903	122	2445	628	406	628	406	628	406
Jumlah luas M2		675,565		298,290		254,368		254,368		254,368
Jumlah biaya rehabilitasi*										

*(Jumlah biaya rehabilitasi = Jumlah luas M2 x Jumlah biaya rehab M2)

Jumlah biaya rehabilitasi Blok 1-24
 Penyesuaian dengan Indeks biaya daerah
 Jumlah biaya rehabilitasi - Bg' luar - untuk Iktisar - SPF/6
 1,228,823
 1,229,000

PERKIRAAN BIAYA UNTUK MEMENUHI KEKURANGAN PERKAKAS SEKOLAH	Murid	Guru	ALMARI (tempat penyimpanan)	Tecni	Kantor	Keterangan
BANGUNAN SEKOLAH						
Jumlah bangku - yang ada (SPF/3)	504	30	Jumlah almari - yang ada (SPF/3)	11	23	
(murid terdatab) - yang diperlukan	542*	28	- yang diperlukan	14	19	
- kekurangan	38	-	- kekurangan	3	-	
Biaya per unit (kira2)	12,500	20,000	Biaya per unit (kira2)	50,000	50,000	
Perkiraan biaya memenuhi	475,000	-	Perkiraan biaya memenuhi	150,000	-	
Kekurangan bangku	-	-	Kekurangan tempat penyim.panan	-	-	
Penyesuaian dengan indeks biaya	-	-	Penyesuaian dengan indeks biaya	-	-	
Jumlah biaya perikakas sekolah	475,000	-	Jumlah biaya tempat penyim.panan	150,000	-	

* No adjusted to take into account that Kelas 1 & 2 operate in 2 classes.

Jumlah biaya memenuhi kekurangan
 Perkakas sekolah untuk iktisar - SPF/6
 625,000

SURVEY TENTANG KEADAAN FISIK BANGUNAN		SPF/5
Survey oleh X J	Kompleks sekolah RAGUMAN	
Tgl: 10.9.76	Kabupaten	Propinsi Jakarta

BIAYA KIRA UNTUK MENJADIKAN SEKOLAH YANG ADA MEMENUHI STANDARD

Nama Sekolah SD Tipe C, 720/360 (18 kelas x 40 = 720 - SPF/2A)

EVALUASI KEPERLUAN AKOMODASI

Luas net akomodasi yang ada^{1/}
 Tambah 20% untuk Lorong^{2/}
 Jumlah luas akomodasi yang ada

Jumlah luas akomodasi yang diperlukan^{2/}
 Kurangi luas net akomodasi yang ada
 Tambahan luas net akomodasi yang diharapkan
 Tambah 15% untuk Lorong^{2/}
 Jumlah luas tambahan akomodasi yang diharapkan

922	m ²
184	m ²
1106	m ²
1616	m ²
922	m ²
694	m ²
104	m ²
798	m ²

808 x 720 / 360

BIAYA KIRA²

Pembangunan baru KELAS

Modifikasi dan rekonstruksi bangunan² yang ada

Biaya m ² 5/	Luas m ²	Jumlah Biaya
Rps 84,250 x	798	3/ 67,231,000
84,250 x 0.35 x	1106	4/ 32,613,000
Jumlah		99,844,000
Tambah 10% biaya tak tergada		9984,000
Jumlah		109,828,000
Penyesuaian dengan indeks biaya		-
Jumlah umum untuk ikhtisar		109,828,000

1/ Σ dari jumlah col. 4. SPF/3
 2/ Dari Annex 7, 8 atari 9 - Ikhtisar dari skala akomodasi
 3/ Jumlah luas akomodasi tambahan
 4/ Jumlah luas akomodasi yang ada
 5/ Dari Annex Ikhtisar biaya bangunan

	SURVEY TENTANG KEADAAN FISIK BANGUNAN	SPF/6
Survey oleh	Kompleks sekolah	
Tgl:	Kabupaten	Propinsi

IKHTISAR BIAYA KIRA²

Ikhtisar biaya rehabilitasi, bagian dalam SPF/3 lembar 1

1	1,981,000
2	1,296,000
3	
4	
5	
6	
Jumlah	3,277,000

Ikhtisar biaya rehabilitasi, bagian luar SPF/4 lembar 1

1	1,229,000
2	
Jumlah	1,229,000
Tambah 10% biaya tak terduga	450,000
Jumlah biaya rehabilitasi	4,956,000

Biaya untuk memenuhi kekurangan perkakas sekolah SPF/4 625,000

Biaya tambahan akomodasi yang diharapkan SPF/5 lembar 1

1	109,828,000
2	
Jumlah	109,828,000

Add additional water pump (Annex 1) Biaya kira² untuk air 750,000

Jumlah	116,159,000
Tambahkan untuk naiknya biaya membangun %	-
JUMLAH BESAR <i>Rps</i>	116,159,000