FORM

## DECLARATION BY PERSON RESPONSIBLE FOR PREPARING AN APPLICATION FOR APPROVAL OF THE ERECTION OF THE BUILDING IN TERMS OF SECTION 4 OF THE ACT

(To be completed and submitted for all applications prepared in accordance with the provisions of Regulation A2)				
To: (Name of Local Authority)				
*Erf/Holding/Portion No.:				
*Township/Agricultural holding/Farm name:				
Street address:				
Nature of project:				
SECTION 1: DECLARATION BY OWNER				
*I / We (Name of owner,				
of				
(Address)				
Tel. No.:				
hereby confirm that *I / We have appointed				
(Name of person registered in a professional category of registration in terms of one of the councils for the professions identified in the Council for the Built Environment Act, 2000 (Act No. 43 of 2000))				
Registration number:				
Category of registration:				
to declare in terms of Regulation A2(1)(g) how the applicable functional regulations are to be satisfied, and *I / we understand and accept that the onus is on *me / us to $-$				
i) inform the above-named professional when the work is due to start on site, and if any changes are made as to how the functional regulations are to be satisfied, or any changes in the appointment of competent persons are made before the completion of the building; and				
ii) extend the above appointment to meet the requirements of Regulations A19(8) and A19(9 where applicable.				
Signature of owner Date:				
(* Delete that which does not apply.)				

SECTION 2: DECLARATION BY APPOINTED PROFESSIONAL PERSON	
,	me)
Address	
Геl. No.:	
of (If representing a partnership, association, company or incorporated body, the name thereof)	
accept the appointment made in section 1 and declare, to the best of my knowledge, that functional regulations are to be satisfied as set out in Schedule A, with the assistance of competent persons, if any, named in Schedule B, and undertake to update this schedule whenever a change in approach to satisfying these Regulations arises.	the
confirm the following:	
a) Occupancy/building classification (see Regulation A20)	
o) Site sensitivity level	

Classification <sup>a</sup>	Tick the row <sup>b</sup> which best describes the project
Low sensitivity site A site that is neither identified as, nor exhibits, any evidence of environmental or heritage significance and does not require Environmental Impact Assessment (EIA), Heritage Impact Assessment (HIA) or Social Impact Assessment (SIA) studies to be undertaken before development. Low sensitivity sites are normally, but not exclusively, within already developed urban areas.	
Medium sensitivity site A site which exhibits some evidence of environmental or heritage significance for which EIA, HIA or SIA studies are not required by the government agencies involved.	
High sensitivity site A site identified as of special environmental or heritage significance and which will require EIA, HIA or SIA studies to be undertaken to define the parameters for development, for example, declared protected areas and urban conservation areas.	

<sup>&</sup>lt;sup>a</sup> The inherent importance of the site in environmental or heritage terms, as defined by the National Heritage Resources Act, 1999 (Act No. 25 of 1999), the National Environmental Management Act, 1998 (Act No. 107 of 1998), and the Local Government: Municipal Systems Act, 2000 (Act No. 32 of 2000).

b Tick **one** row only.

Signature of professional person	Date:
Registration number:	
Category of registration:	

#### SCHEDULE A: MEANS BY WHICH REGULATION AZ4 IS TO BE SATISFIED Occupancy/Building classification . . . . . . . (see Regulation A20) 3 5 Applicability to Means of satisfying requirements of functional regulations application (tick relevant boxes in columns 4 or 5) (tick column 2 or 3) Deemed-to-satisfy requirements contained in the relevant Regulation Yes No Regulation parts of SANS 10400 AZ4(1)(b)(ii) B: Structural The structural system of the building design complies with the requirements of parts H, J, K, L, M or N of SANS 10400, or in the case of timber buildings with the requirements of SANS 10082 □ is the subject of a rational design or a rational assessment □ is the subject of an Agrément certificate The following competent persons are to be appointed: □ competent person (structures) to design and inspect the structures competent person (civil engineering) to design and inspect the services in dolomite land competent person (dolomite land) to categorize dolomite land The dimensions of any room or space are in accordance with П **Dimensions** the detailed requirements of SANS 10400-C A change in level, the design of ramps and driveways, or D: П **Public safety** access to swimming pools and swimming baths is in accordance with the detailed requirements of SANS 10400-D F: Site The provision of sanitary facilities is in accordance with the П operations detailed requirements of SANS 10400-F The excavation relating to a building **Excavations** □ is less than 3,0 m deep and is in accordance with the detailed requirements of SANS 10400-G is the subject of a rational design or a rational assessment (or A geotechnical investigation in accordance with the rules **Foundations** □ is to be carried out has been carried out and is available for use The foundations for the building are in accordance with П □ SANS 10400-B the detailed requirements of SANS 10400-H The foundations to the extension/addition to an existing building are the same as the existing foundations, which have performed satisfactorily The following competent persons are to be appointed: □ competent person (civil engineering) in respect of deep footings, soil rafts, compaction of in-situ soil or sub-surface drainage

competent person (geotechnical) in respect of geotechnical

solutions or soil improvements that are required

1	2	3	4	5
Applicability to application (tick column 2 or 3)		5)	Means of satisfying requirements of functional regula (tick relevant boxes in columns 4 or 5)	tions
Regulation Yes No			Deemed-to-satisfy requirements contained in the relevant parts of SANS 10400	Regulation AZ4(1)(b)(ii)
J: Floors			<ul> <li>Floors in any laundry, kitchen, shower room, bathroom or room containing a toilet pan or urinal are in accordance with the detailed requirements of SANS 10400-J</li> </ul>	
			Suspended floors are in accordance with  the requirements of SANS 10400-B and SANS 10400-T the requirements of SANS 10082 the detailed requirements of SANS 10400-J	
			Slabs supported on the ground are in accordance with  SANS 10400-B SANS 10400-H the detailed requirements of SANS 10400-J or a competent person (civil engineering) is to be appointed in respect of the slabs or fills	
K: Walls			The structural strength and stability of a wall is in accordance with  SANS 10400-B and SANS 10400-T the detailed requirements of SANS 10400-K	
			The roof fixing is in accordance with  □ SANS 10400-B  □ the detailed requirements of SANS 10400-K	
			<ul> <li>The water penetration through a wall is in accordance with the detailed requirements of SANS 10400-K</li> </ul>	
L: Roofs			<ul> <li>Roof coverings and waterproofing systems are in accordance with the detailed requirements of SANS 10400-L</li> </ul>	
			Flat roofs or related gutters are  in accordance with the detailed requirements of SANS 10400-L; or the subject of a rational design or rational assessment (or both)	
			The roof assembly and any ceiling assembly, in addition to complying with the requirements of SANS 10400-C, are  in accordance with the detailed requirements of SANS 10400-L and the roof assembly is supported on walls that comply with the requirements of SANS 10400-K  in accordance with SANS 10400-B and SANS 10400-L	
the requirements			<ul> <li>Gutters and downpipes, if any, are sized in accordance with the requirements of SANS 10400-R</li> </ul>	
			The fire resistance and combustibility of the roof assembly or any ceiling assembly are in accordance with  the detailed requirements of SANS 10400-L SANS 10400-T	

1	2	3	4	5
Applicability to application			Means of satisfying requirements of functional regula	tions
(tick column 2 or 3)		5)	(tick relevant boxes in columns 4 or 5)	
Regulation Yes No		No	Deemed-to-satisfy requirements contained in the relevant parts of SANS 10400	Regulation AZ4(1)(b)(ii)
M: Stairways			Stairways are in accordance with	
			□ SANS 10400-B and SANS 10400-T □ the detailed requirements of SANS 10400-M	
			Walls, screens, railings or balustrades to such stairway are in accordance with the requirements of	
			<ul><li>SANS 10400-B and SANS 10400-T</li><li>SANS 10400-K and SANS 10400-T</li></ul>	
N: Glazing			The type and fixing of glazing is in accordance with	
			<ul><li>□ SANS 10400-B</li><li>□ the detailed requirements of SANS 10400-N</li></ul>	
			<ul> <li>The selection of the glazing is in accordance with the detailed requirements of SANS 10400-N</li> </ul>	
and room containing a toilet pan complies with the req		room containing a toilet pan complies with the requirements of SANS 10400-T and the detailed requirements of		
			The ventilation is in accordance with the requirements of SANS 10400-T and	
			<ul> <li>□ is in accordance with the detailed requirements of SANS 10400-O</li> <li>□ is the subject of a rational design</li> </ul>	
P: Drainage			The design of the drainage system is	
			□ in accordance with the detailed requirements of SANS 10400-P	
			<ul> <li>the subject of a rational design or rational assessment (or both)</li> <li>the subject of an Agrément certificate</li> </ul>	
Q: Non-water- borne means			The means of sewage disposal where water-borne sewerage disposal is not available	
of sanitary disposal			is in accordance with the detailed requirements of SANS 10400-Q	
			<ul> <li>is the subject of a rational design or rational assessment (or both)</li> <li>is the subject of an Agrément certificate</li> </ul>	
			<ul> <li>comprises pail closets which are emptied by or on behalf of a local authority</li> </ul>	
R: Stormwater			The means for the control and disposal of stormwater is	
disposal			<ul> <li>in accordance with the detailed requirements of SANS 10400-R</li> <li>the subject of a rational design</li> </ul>	
			The means for the control and disposal of stormwater in interconnected complexes is the subject of a rational design	

1	2	3	4	5
Applicability to application (tick column 2 or 3)		·)	Means of satisfying requirements of functional regulations (tick relevant boxes in columns 4 or 5)	
Regulation	Yes	No	Deemed-to-satisfy requirements contained in the relevant parts of SANS 10400	Regulation AZ4(1)(b)(ii)
S: Persons with disabilities			The means for providing facilities for persons with disabilities is  in accordance with the detailed requirements of SANS 10400-S  the subject of a rational design	
T: Fire protection			The fire protection measures provided are  in accordance with the detailed requirements of SANS 10400-T  the subject of a rational design or rational assessment	
V: Space heating			<ul> <li>The provision of space heating is in accordance with the detailed requirements of SANS 10400-V</li> </ul>	
W: Fire installation	□ The fire installations comply with the detailed requirements of SANS 10400-W			
			The supply of water is  in accordance with the detailed requirements of SANS 10400-W  the subject of a rational design	
XA: Energy efficiency in buildings			<ul> <li>The building</li> <li>has an orientation, shading, services and building envelope in accordance with SANS 10400-XA</li> <li>is the subject of a rational design which demonstrates that energy usage is equivalent to or better than that which would have been achieved by compliance with the requirements of SANS 10400-XA</li> <li>has a theoretical energy usage performance that is less than or equal to that of a reference building.</li> </ul>	

#### SCHEDULE B: APPROVED COMPETENT PERSON APPOINTMENTS

(Attach duly completed Form 2 to this Form. Schedule B is to be completed before plan approval.)

(Altacit daily completed Form 2 to this Form. Ochedule B is to be completed before plan approval.)					
1	2	3			
Category of competent person	Nature of duties	Name of person			
Competent person	registered as a professional architect or professional eng	ineer			
Competent person	<b>Duty 1</b> : Demonstrating compliance with the requirements of the National Building Regulations in terms of Regulation AZ4(1)(b)(ii)				
	satisfying the definitions provided in SANS 10400 in relati d in terms of a specific part of SANS 10400	on to the duties that			
Competent person (built environment)	<b>Duty 2</b> : Rational design and rational assessment of flat roofs and related gutters				
Competent person (civil engineering)	<b>Duty 3</b> : Design and inspection of services in dolomite land in terms of SANS 10400-B				
	<b>Duty 4</b> : Specify and inspect, as relevant, deep footings, soil rafts, compaction of in-situ soil or sub-surface drains in terms of SANS 10400-H				
	<b>Duty 5</b> : Design and inspect slabs and fills in terms of SANS 10400-J				
	<b>Duty 6</b> : Rational design of control and disposal of stormwater in terms of SANS 10400-R or Regulation R1(3)				
	<b>Duty 7</b> : Rational design of control and disposal of stormwater in interconnected complexes in terms of SANS 10400-R				
Competent person (dolomite land)	<b>Duty 8</b> : Categorization of dolomite land in terms of SANS 10400-B				
Competent person (engineering geology) or Competent person (civil engineering)	<b>Duty 9</b> : Rational design or assessment of excavations in terms of SANS 10400-G or Regulation G1(3)				
Competent person (fire protection)	<b>Duty 10</b> : Rational design or rational assessment of fire protection system in terms of SANS 10400-T or Regulation T1(2)				
Competent person (geotechnical)	<b>Duty 11</b> : Undertake geotechnical investigation in accordance with the requirements of SANS 10400-H or Regulation F3				
	<b>Duty 12</b> : Design and inspect geotechnical solutions or soil improvements in terms of SANS 10400-H				
Competent person (mechanical engineering)	<b>Duty 13</b> : Rational design of ventilation system in terms of SANS 10400-O and Regulation O4				
Competent person (sanitation)	<b>Duty 14</b> : Rational design or rational assessment of drainage system in terms of SANS 10400-P or Regulation P2(2)				
	<b>Duty 15</b> : Rational design or rational assessment of sewage disposal in terms of SANS 10400-Q or Regulation Q3				

1	2	3				
Category of competent person	Nature of duties	Name of person				
Competent person (structures)	<b>Duty 16</b> : Rational design or rational assessment of structural system in terms of SANS 10400-B taking account of parts H, J, K, L, M, N of SANS 10400 or Regulations A1(3)(e) and A23(4)					
	<b>Duty 17:</b> Rational design of roof in terms of parts B and L of SANS 10400 where the foundations, floors and walls are in accordance with the rules provided in parts H, J and K of SANS 10400					
Competent person (wet services)	<b>Duty 18</b> : Rational design of supply of water to fire installations in terms of SANS 10400-W or Regulation W4					
	<b>Duty 19</b> : Rational design which demonstrates energy usage is equivalent to or better than that which would have been achieved by compliance with the requirements of SANS 10400					
	not satisfying the definitions provided in SANS 10400 in rormed in terms of a specific part of SANS 10400*	elation to the duties				
* Insert data in columns 1 to 3, state duty number and attach more pages, if necessary.						

FORM APPLICATION FOR ACCEPTANCE AS AN APPROVED COMPETENT PERSON IN TERMS OF REGULATION A19		
	(To be completed and submitted for all appointments in terms of Regulation A19)	
То:	(Name of Local Authority)	
*Erf/Holding	g/Portion No.:	
*Township/	Agricultural holding/Farm name:	
Street addr	ess:	
Nature of p (Insert	roject:	
SECTION	1: DECLARATION BY OWNER	
*I / We		
of		
Tel. No.:		
hereby con	firm that *I / We have appointed	
	(Name of Competent Person)	
Professiona	al registration number:	
(Insert i	n council:	
	Regulation A19(1) as the Competent Person for the work, duties and responsibilities $\sin$ , and *I / we understand and accept that the onus is on *me / us to $-$	
i) inform th	ne Competent Person when the work is due to start on site; and	
which th	e local authority in writing should the appointment be terminated before the work for is person was appointed is completed, and to make another appointment in terms of on A19(2);	
	he above appointment to meet the requirements of Regulations A19(7) and A19(8) pplicable	
Signature o	of owner Date:	
(* Delete tha	nt which does not apply.)	

S	ECTION 2: DECLARATION BY APPOINTED COMPETENT PERSON
Α	
ΕI	el. No.: Fax. No.: mail:
ad	(If representing a partnership, association, company or incorporated body, the name thereof) ccept the appointment made in section 1 and undertake and accept full responsibility for
i)	*The rational design/rational assessment/geotechnical investigation in respect of the above project and in accordance with the *rational design/rational assessment/geotechnical investigation requirements of the National Building Regulations for the applicable work described herein, and, where relevant, for the inspection, in respect of work contemplated in section 3 of this Form, and accept that the provisions of Regulations A19(6), (7) and (8), and, where applicable, Regulation A14 shall apply to the duties and responsibilities of any appointment;
ii)	providing the local authority with such drawings, details and particulars as are and may be required by the National Building Regulations;
iii)	notifying the local authority in writing should
	<ul><li>a) it appear that any work is being carried out in a manner which might endanger the strength, stability or serviceability of the building or any adjoining building, structure or property; and</li><li>b) my appointment be terminated before the work for which I was appointed is complete;</li></ul>
iv	submitting to the local authority in terms of section 14(2A) of the National Building Regulations and Building Standards Act, Form 4 on completion of the relevant work, where required, and
v)	maintaining contact with the owner of the project as to when my services may be required,
ar	nd declare that –
i)	I am competent to undertake the *rational design/rational assessment/geotechnical investigation and any associated inspection work in relation to the applicable work(s) contemplated in section 3 of this Form and in support of my declaration of competence submit that (tick appropriate option)
	□ I satisfy the relevant definition for competent person contained SANS 10400 in all respects in
	relation to the works contemplated; or □ I have the necessary qualifications, experience and contextual knowledge to undertake such work as set out in the attached declaration**;
ii)	I shall satisfy Regulation AZ4 by (tick appropriate option)
	<ul> <li>complying with all the relevant requirements of SANS 10400; or</li> <li>reliably demonstrating, or predicting with certainty, to the satisfaction of the appropriate local authority, that an adopted building solution has an equivalent or superior performance to a solution that complies with the relevant requirements of SANS 10400;</li> </ul>
iii)	I am/am not* an employee of the owner and have/do not have* professional indemnity cover;
iv	my professional registration is current and is not suspended or terminated and is appropriate in relation to the services required; and
v)	all the information given is, to the best of my knowledge and belief, true and correct.
Si	gnature of Competent Person Date
	rofessional registration number:
	Delete that which does not apply.)  * Attach declaration setting out qualifications, experience and contextual knowledge relating to the work contemplated.)

SECTION 3: DESCRIPTION OF APPLICABLE WORK							
Tick if		Initials of:					
applicable	Nature of duties	Owner	Competent person				
	Duty 1: Demonstrating compliance with the requirements of the National Building Regulations in terms of Regulation AZ4(1)(b)(ii)						
	Duty 2: Rational design and rational assessment of flat roofs and related gutters						
	Duty 3: Design and inspection of services in dolomite land in terms of SANS 10400-B						
	Duty 4: Specify and inspect, as relevant, deep footings, soil rafts, compaction of in-situ soil or sub-surface drains in terms of SANS 10400-H						
	Duty 5: Design and inspect slabs and fills in terms of SANS 10400-J						
	Duty 6: Rational design of control and disposal of stormwater in terms of SANS 10400-R or Regulation R1(3)						
	Duty 7: Rational design of control and disposal of stormwater in interconnected complexes in terms of SANS 10400-R						
	Duty 8: Categorization of dolomite land in terms of SANS 10400-B						
	Duty 9: Rational design or assessment of excavations in terms of SANS 10400-G or Regulation G1(3)						
	Duty 10: Rational design or rational assessment of fire protection system in terms of SANS 10400-T or Regulation T1(2)						
	Duty 11: Undertake geotechnical investigation in accordance with requirements of SANS 10400-H or Regulation F3						
	Duty 12: Design and inspect geotechnical solutions or soil improvements in terms of SANS 10400-H						
	Duty 13: Rational design of ventilation system in terms of SANS 10400-O and Regulation O4						
	Duty 14: Rational design or rational assessment of drainage system in terms of SANS 10400-P or Regulation P2(2)						
	Duty 15: Rational design or rational assessment of sewage disposal in terms of SANS 10400-Q or Regulation Q3						
	Duty 16: Rational design or rational assessment of the structural system in terms of SANS 10400-B taking account of parts H, J, K, L, M, N of SANS 10400 or Regulations A1(3)(e) and A23(4)						
	Duty 17: Rational design of roof in terms of parts B and L of SANS 10400 where the foundations, floors and walls are in accordance with the rules provided in parts H, J and K of SANS 10400						
	Duty 18: Rational design of supply of water to fire installations in terms of SANS 10400-W or Regulation W4						
	Duty 19: Rational design which demonstrates energy usage is equivalent to or better than that which would have been achieved by compliance with the requirements of SANS 10400.						

# SECTION 4: ACCEPTANCE OF APPOINTED COMPETENT PERSON BY LOCAL AUTHORITY

AU	JINOKII I
	sed on the information and undertakings provided, the competent person is (tick relevant x(es))
	accepted as an approved competent person
	not accepted as an approved competent person for the following reasons:
	<ul> <li>incorrect or incomplete information has been provided (Regulation A19(9)(c)(i));</li> <li>is not in possession of the required professional indemnity insurance cover (Regulation A19(9)(c)(ii));</li> <li>is not professionally registered with a relevant statutory council (Regulation A19(9)(c)(iii));</li> <li>is inadequately qualified or has insufficient experience or contextual knowledge to make the required determinations (Regulation A19(9)(c)(iv));</li> <li>is under investigation by a relevant disciplinary tribunal (Regulation A19(9)(c)(v)).</li> </ul>
For	r and on behalf of the Local Authority:
Sig	gnature

#### FORM DECLARATION BY A COMPETENT PERSON APPOINTED TO DESIGN A COMPONENT OR AN ELEMENT OF A SYSTEM

(This form is to be completed:

• by those persons who are not appointed in terms of Form 2; and

before the commencement of any construction or installation activities.
This form shall be submitted to the approved competent person, i.e. the person who assumes overa responsibility for the system.)
TO: APPROVED COMPETENT PERSON:
(Name of competent person approved in terms of Form 2,
*Erf/Holding/Portion No.:
*Township/Agricultural holding/Farm name:
Street address:
Nature of project:
SECTION 1: DECLARATION BY APPOINTED COMPETENT PERSON
I,
Address
Tel. No.: Fax. No.:
Email:
of
undertake and accept full responsibility for –
i) *the rational design/rational assessment in respect of:
(Describe scope of work,
in accordance with the *rational design/rational assessment requirements of the Nationa Building Regulations, and for the inspection, where relevant.
ii) providing the Approved Competent Person with such drawings, details and particulars as are and may be required for such person to discharge his obligations in terms of the Nationa Building Regulations;
iii) notifying the approved competent person in writing should –
<ul> <li>a) it appear that any work is being carried out in a manner which might endanger the strength, stability or serviceability of the building or any adjoining building, structure o property; and</li> </ul>
b) my appointment be terminated before the work for which I was appointed is complete;

- iv) informing the Approved Competent Person when the work is due to start on site and when the work is completed; andv) completing and submitting section 3 to the Approved Competent Person, where the work
- relates to the structural fire protection or fire installation system and when requested to do so on completion of the relevant work for which I am responsible, where relevant.

and declare that -

- i) I am competent to undertake the \*rational design/rational assessment and any associated inspection work in relation to the applicable work(s) contemplated in this Form and in support of my declaration of competence submit that (tick appropriate option):
  - I satisfy the relevant definition for competent person contained in SANS 10400 in all respects in relation to the works contemplated; or
  - □ I have the necessary qualifications, experience and contextual knowledge to undertake such work as set out in the attached declaration\*\*:
- ii) I shall satisfy Regulation AZ4 by (tick appropriate option)
  - □ complying with all the relevant requirements of SANS 10400; or
  - reliably demonstrating, or predicting with certainty, to the satisfaction of the appropriate local authority, that an adopted building solution has an equivalent or superior performance to a solution that complies with the relevant requirements of SANS 10400;
- iii) I am/am not\* an employee of the owner and have/do not have\* professional indemnity cover;
- iv) my professional registration is current and is not suspended or terminated and is appropriate in relation to the services required; and
- v) all the information given is, to the best of my knowledge and belief, true and correct.

Signature of Competent Person	Date
Professional registration number:	Registration council:
(Insert number and Engineering Council of South Afric	a (ECSA)/South African Council for the
Architectural Professions (SACAP /South African Council for	or Natural Scientific Professions (SACNSP)

(\* Delete that which does not apply.)

(\*\* Attach declaration setting out qualifications, experience and contextual knowledge relating to the work contemplated.)

SECTION 2: CRITICAL DESIGN INFORMATION		
(Competent person to complete section or attach information to this form)		
Design assumptions and criteria:		
Specifications for materials:		
Drawings prepared to communicate design to constructor or installer:		
Nature and extent of inspections during construction:		
Features requiring special attention:		
SECTION 3: CERTIFICATE OF COMPLETION OF THE STRUCTURAL OR FIRE PROTECTION OR FIRE INSTALLATION SYSTEM		
I,		
hereby certify that for the above project, the portion of *		
<ul> <li>the structural system</li> <li>the fire protection system</li> <li>the fire installation system</li> </ul>		
for which I have taken responsibility has, to the best of my knowledge, been designed and **constructed/erected/installed in accordance with the application in respect of which approval was granted in terms of section 7 of the Act and that it satisfies the requirements of the National Building Regulations.		
Signature of Competent Person		
Professional registration number:		
(* Tick relevant box(es).) (** Delete that which does not apply.)		

#### FORM 4

## CERTIFICATE OF COMPLETION OF THE STRUCTURAL, FIRE PROTECTION, FIRE INSTALLATION SYSTEM OR ENERGY USAGE IN A BUILDING