

**Supplementary Document 19:  
Technical Specification for Infrastructures and  
Equipment in Anambas and Bintan Subprojects**

Indonesia: Coral Reef Rehabilitation and  
Management Program—Coral Triangle Initiative  
Project

I. **INDICATIVE STANDARD DESIGNS AND DESCRIPTIONS OF MAIN INFRASTRUCTURE PROPOSED FOR SUBPROJECTS ANAMBAS AND BINTAN UNDER COREMAP—CTI 2014-2018** (Indicative designs as per MMAF Regulation and Technical Guideline - PERATURAN MENTERI KELAUTAN DAN PERIKANAN REPUBLIK INDONESIA NOMOR PER.33/MEN/2012)

A. **Marine Protective Area Office (Using Multipurpose Office/Surveillance Office)**

1. **Definition.** The marine protected area (MPA) Office is a multipurpose building used as an office and/or surveillance SDKP that serves as a place to facilitate and conduct MPA related activities by MPA/fisheries/surveillance officers and community surveillance groups (*Pokmaswas*).

2. General requirements for providing surveillance and community surveillance group office/building with priority areas:

- (i) There are fisheries activities (fishing, processing and marketing of fishery and fish farming) and conservation / monitoring activities;
- (ii) Availability of human resources (Supervisor, staff from MMAF, Fisheries and PPNS);
- (iii) Presence of community surveillance groups (*Pokmaswas*);
- (iv) With marine resources and fisheries, which are the subject of protection and utilization; and
- (v) With unit supervisor in the area (*Satker*).

3. Technical Requirements

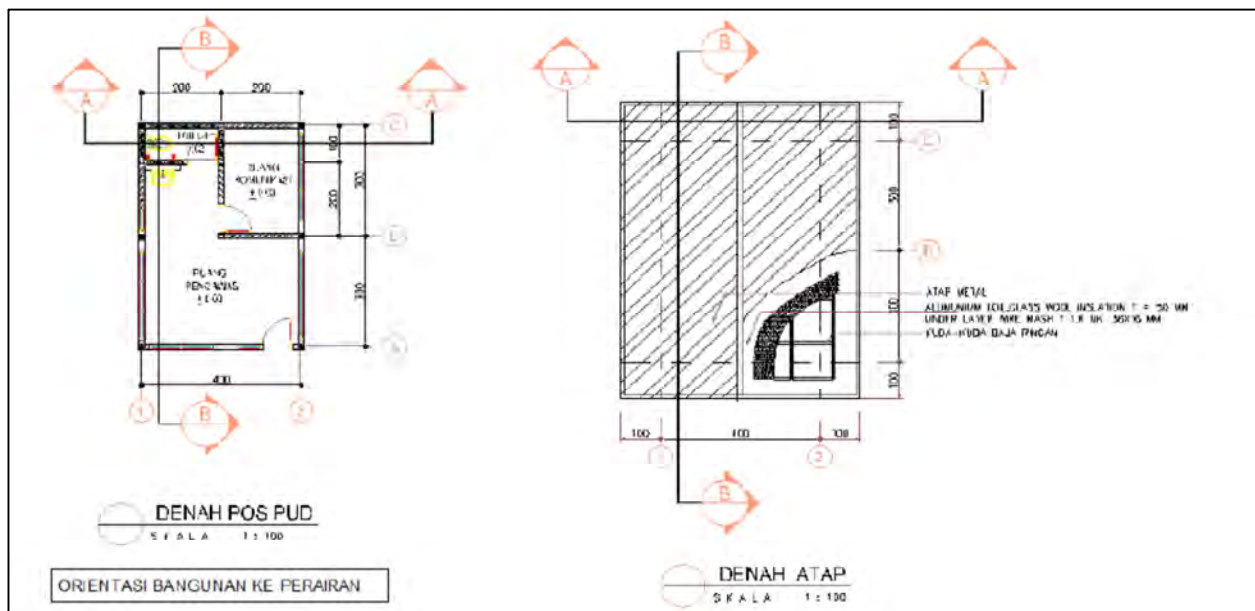
- (i) **Availability of Land.** For procurement of surveillance building, land must be provided by the District/City Government with the requirements: easy access as well as close to the fishing activities (fishing port, Fish Landing Base, Fish Auction, place Aquaculture, Fishing Locations). Size of the land shall be adjusted to the needs of the office to be built by local government or UPT.
- (ii) **Building Model and Construction.** Building models can be built with the 1 floor and 2 floors model. The building must have rooms/space for work space, communications room, kitchen/pantry, bathroom/toilet. MPA/surveillance building SDKP consists of two types namely building supervision SDKP Public Inland Marine Surveillance Building (PUD) and Public Marine Aquatic Surveillance Building/(PUL) with the following criteria:
  - (a) **Public Inland Marine Surveillance Building (PUD).** Built around the area of inland waters (reservoirs, lakes, etc.) with a minimum area of 4 hectares; the building area of 24 m<sup>2</sup>; 1st floor building; and consists from a supervisor, communications room, pantry and toilet.
  - (b) **Public Marine Aquatic Surveillance Building (PUL).** Built around marine waters; the building area of 60 m<sup>2</sup>; 2nd floor building; and consists

from a supervisor, communications room, pantry, warehouse/store-room, parking space and toilets.

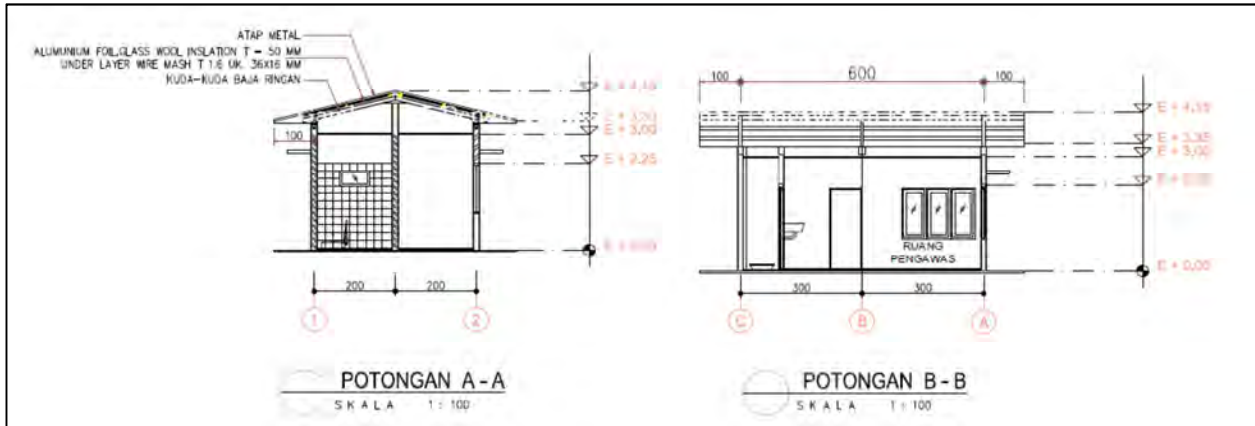
- (iii) Construction of buildings made of reinforced concrete structures, masonry/brick, metal roof and on the front of the building bearing the information board: offices/post surveillance of Marine Resources and Fisheries District/City concerned.
- (iv) If it is difficult to find reinforced concrete materials for the construction in the area, it can use other materials (wood and tin) considering the function of the building.
- (v) Procurement of furniture.
- (vi) Construction can be supplemented with furniture including desks/office chair, filing cabinets and other furniture as required.

#### 4. Technical Specification

**Figure 1a. Public Inland Marine Surveillance Building/  
Bangunan Pengawasan Perairan Umum Darat (PUD)**



**Figure 1b. Public Inland Marine Surveillance Building/  
Bangunan Pengawasan Perairan Umum Darat (PUD)**



**Figure 1c. Public Inland Marine Surveillance Building/  
Bangunan Pengawasan Perairan Umum Darat (PUD)**

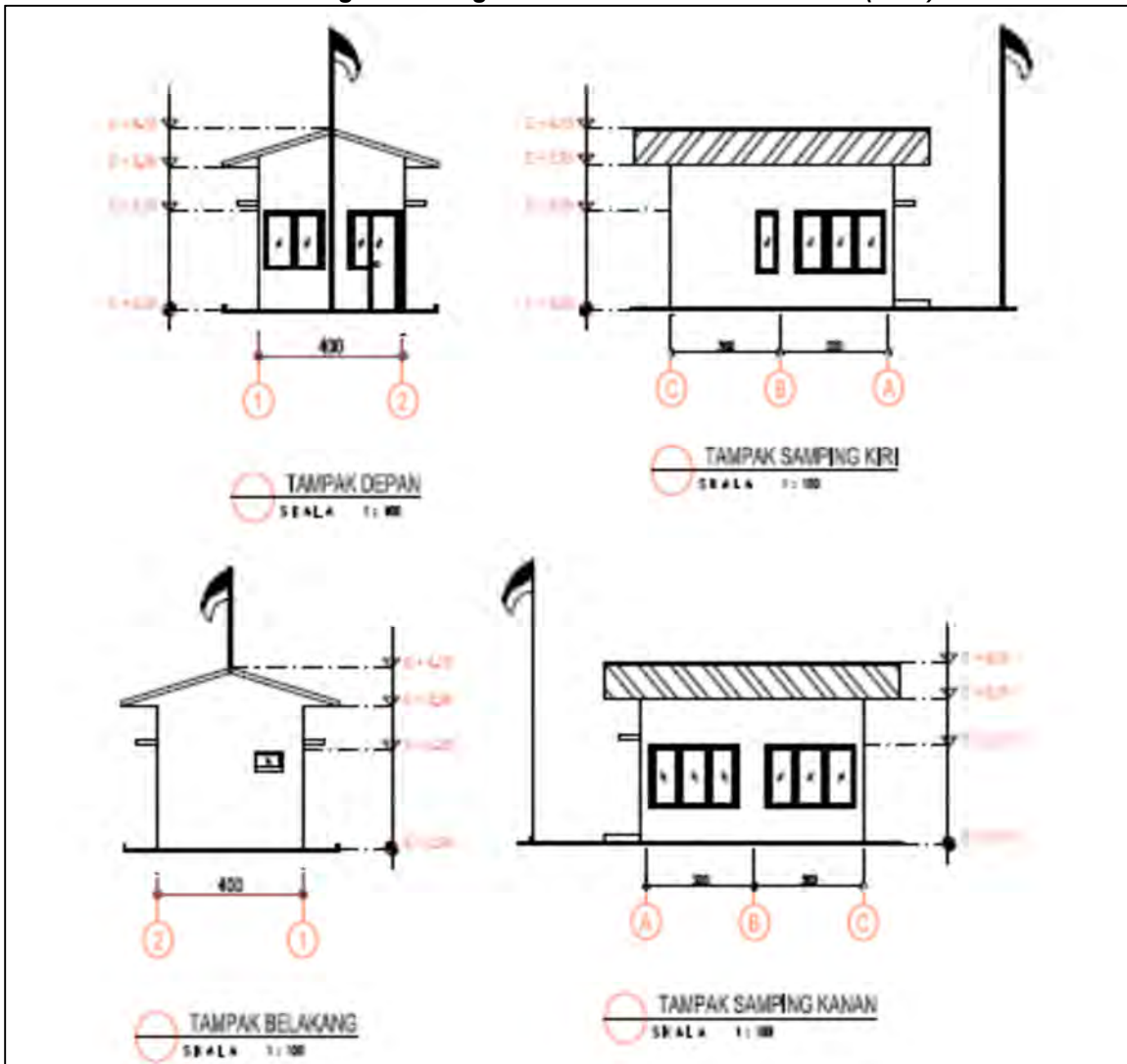


Figure 2a. Public Marine Aquatic Surveillance Building/  
 Bangunan Pengawasan Perairan Umum Laut (PUL)

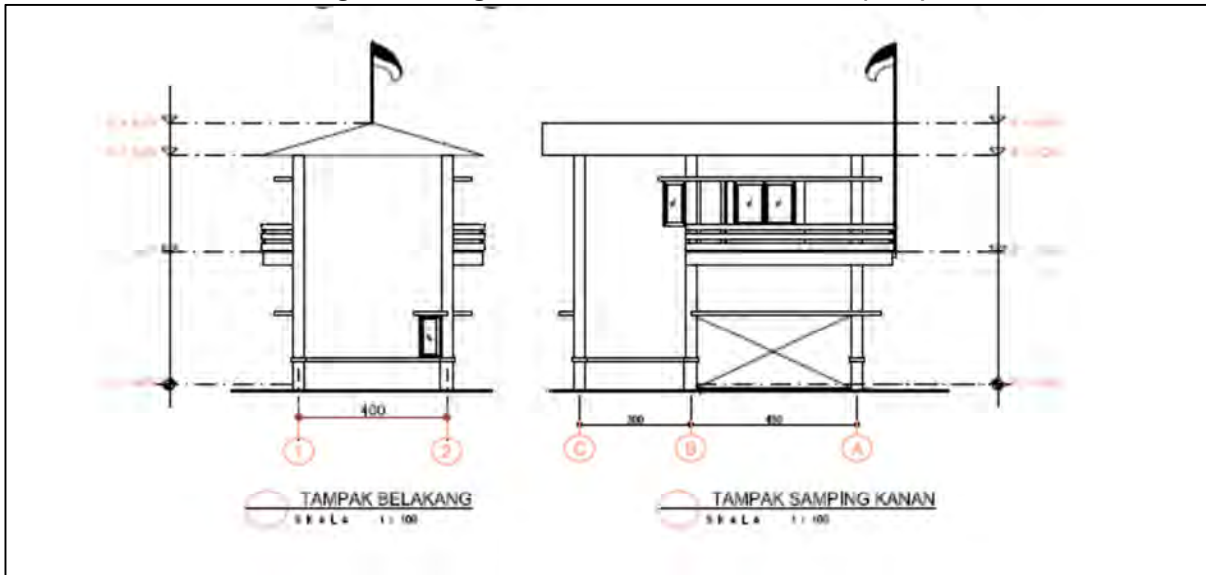
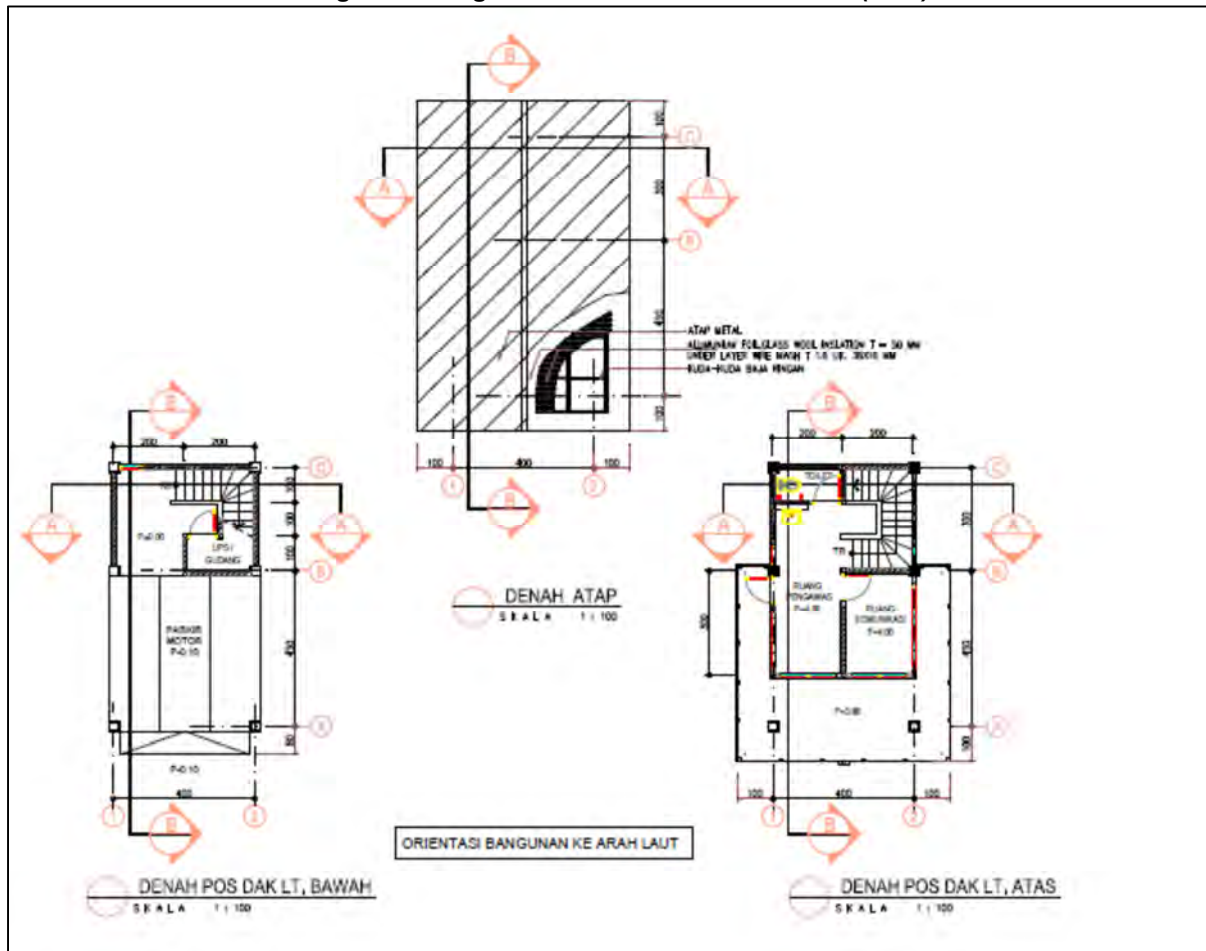


Figure 2b. Public Marine Aquatic Surveillance Building/  
 Bangunan Pengawasan Perairan Umum Laut (PUL)



**Figure 2c. Example of a Public Marine Aquatic Surveillance Building/  
*Bangunan Pengawasan Perairan Umum Laut (PUL) in Anambas***



**B. Information Center**

- (i) The room and interior design lay out are in such a way as to attract visitors;
- (ii) Building information center is expected to have natural shade, according to the local tradition/culture;
- (iii) Number of rooms are tailored to the needs, such as the workspace for responsible person (manager) and staff (tour guides and others), audiovisual room, a display/ information room, and the bathroom / toilet, warehouses and other rooms regarded as important; and
- (iv) Building materials are expected to minimize the use of concrete construction, and maximize the use of natural material, building construction in accordance with the local culture, as well as promote environmental conservation aspects.



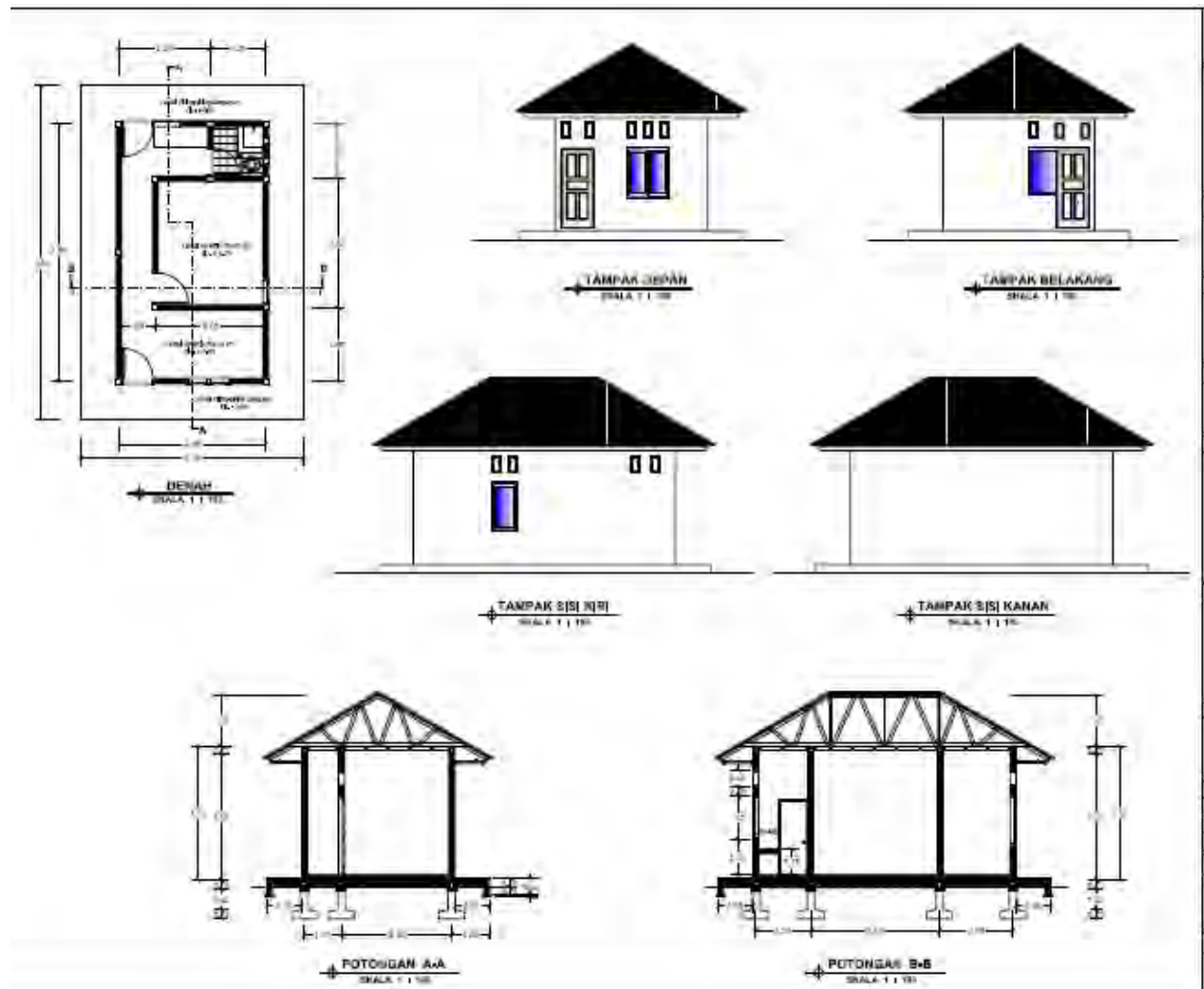
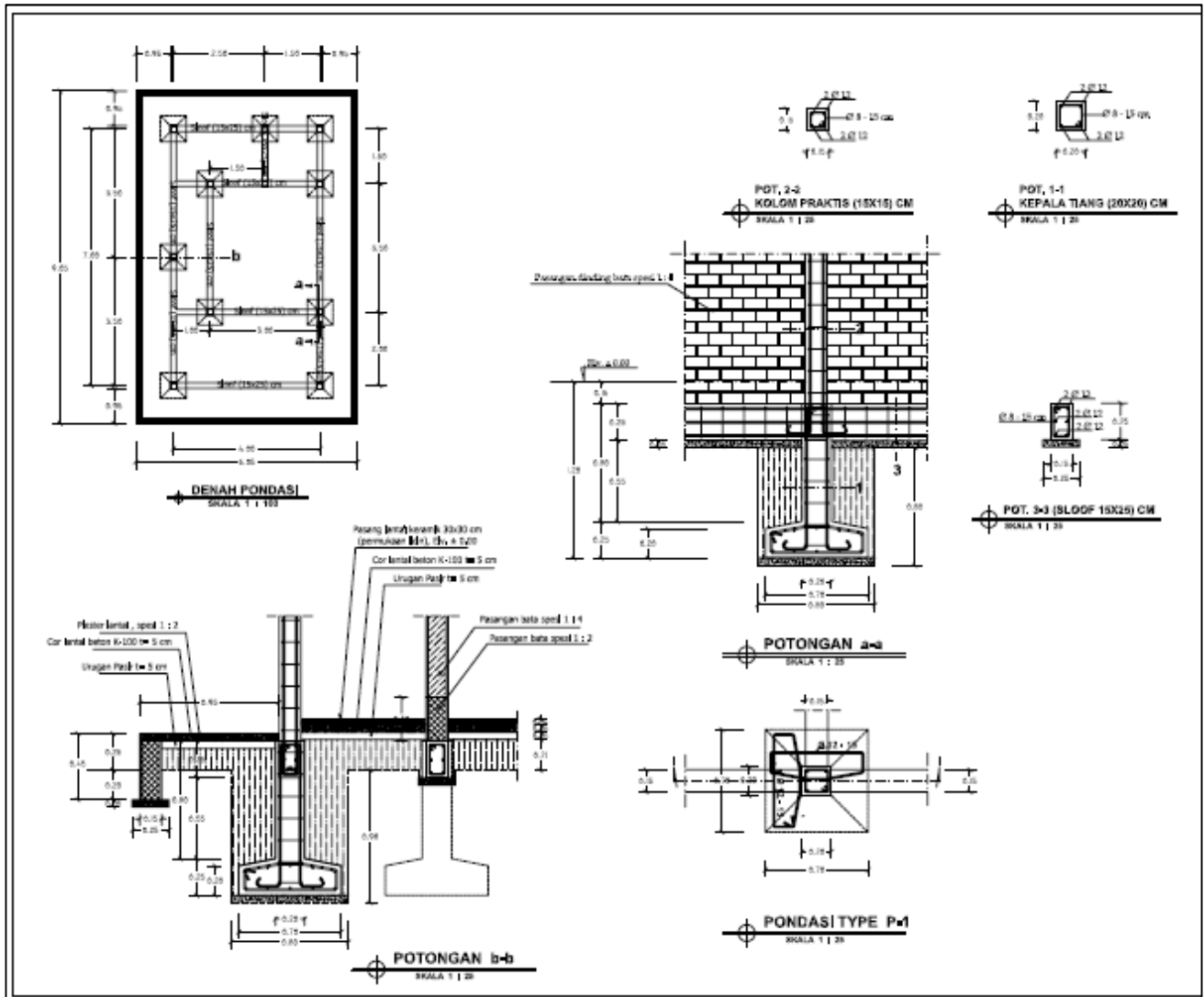
Figure 3a. Information Center – *Pondok Informasi*

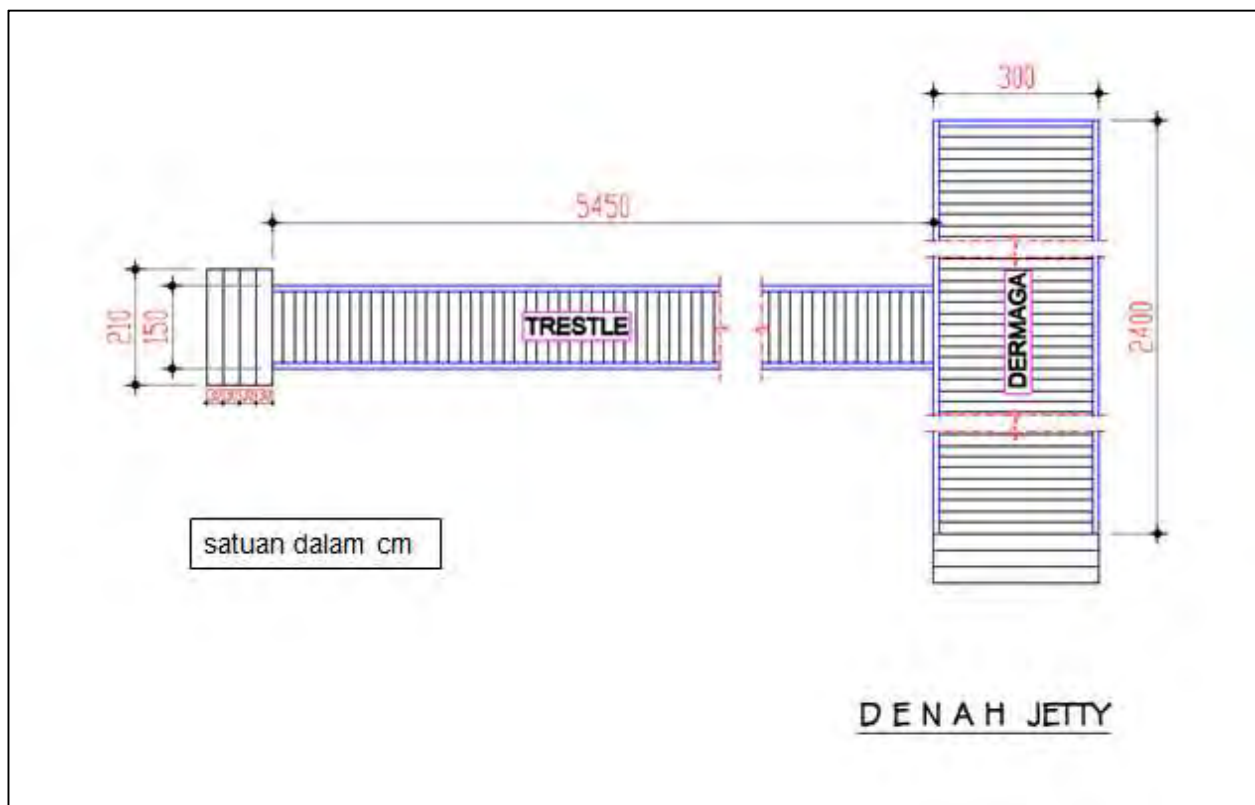
Figure 3b. Information Center – *Pondok Informasi*





**C. Jetty**

- (i) A landing stage or small pier at which boats can dock or be moored;
- (ii) Can be attached to or extended from the shore or an MPA / surveillance office or fish landing site;
- (iii) Can vary in length depending on tidal movements (low and high tide) and mooring / docking capacity need;
- (iv) Materials can be preferably non-combustible materials and easy to maintain but may be wooden or concrete (cement) with pillars or mixed (pillars and beams concrete, flooring boards hardened plastik / wooden) with fire prevention measures.

**Figure 4a. Jetty Design (simple design)**

**Figure 4b. Jetty Example from Antang Fishing Port, Anambas (with conveyor belt connected to ice factory in the background and Surveillance Office on the right side with blue roof)**



#### D. Surveillance Post/ Station

- (i) Functions as the place for the officer to supervise and control the area;
- (ii) Enables the officers to stay longer in the surveillance post/station;
- (iii) Designed to function as a place to stay while officers in surveillance and supervision, so space at a minimum consists of workspace-cum-living room, communications room, bedroom, and bathroom/toilet;
- (iv) Designed with adjustable according to size availability of land, with the architectural style of the local tradition/culture and promotes aspects of the environment dominated by natural surrounding, with construction sought aspects of the environment such as stage house;
- (v) Built by minimizing the concrete building (model stage), priority to use wood or other natural materials that are easily available in the area; and
- (vi) Built in accordance with zone designation and/or in an open location with a relatively close distance from shore, so that the supervisor can observe activities in the area of marine conservation.

Figure 5a. Surveillance Post / Pos Jaga

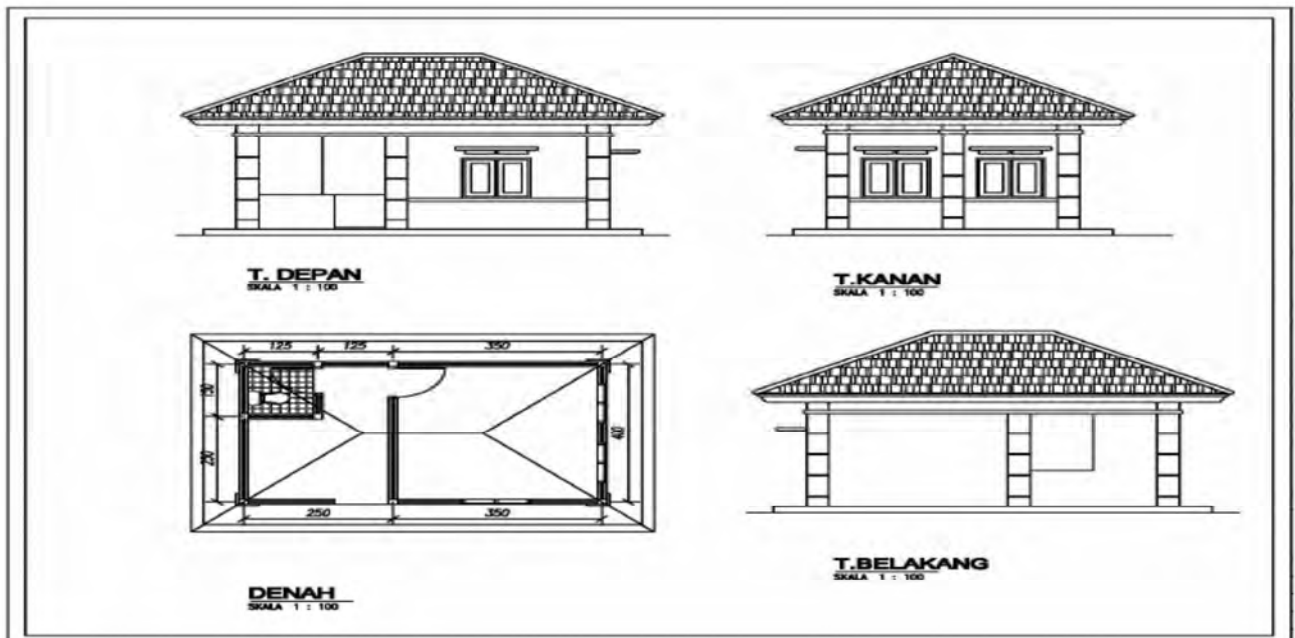


Figure 5b. Surveillance Post / Pos Jaga

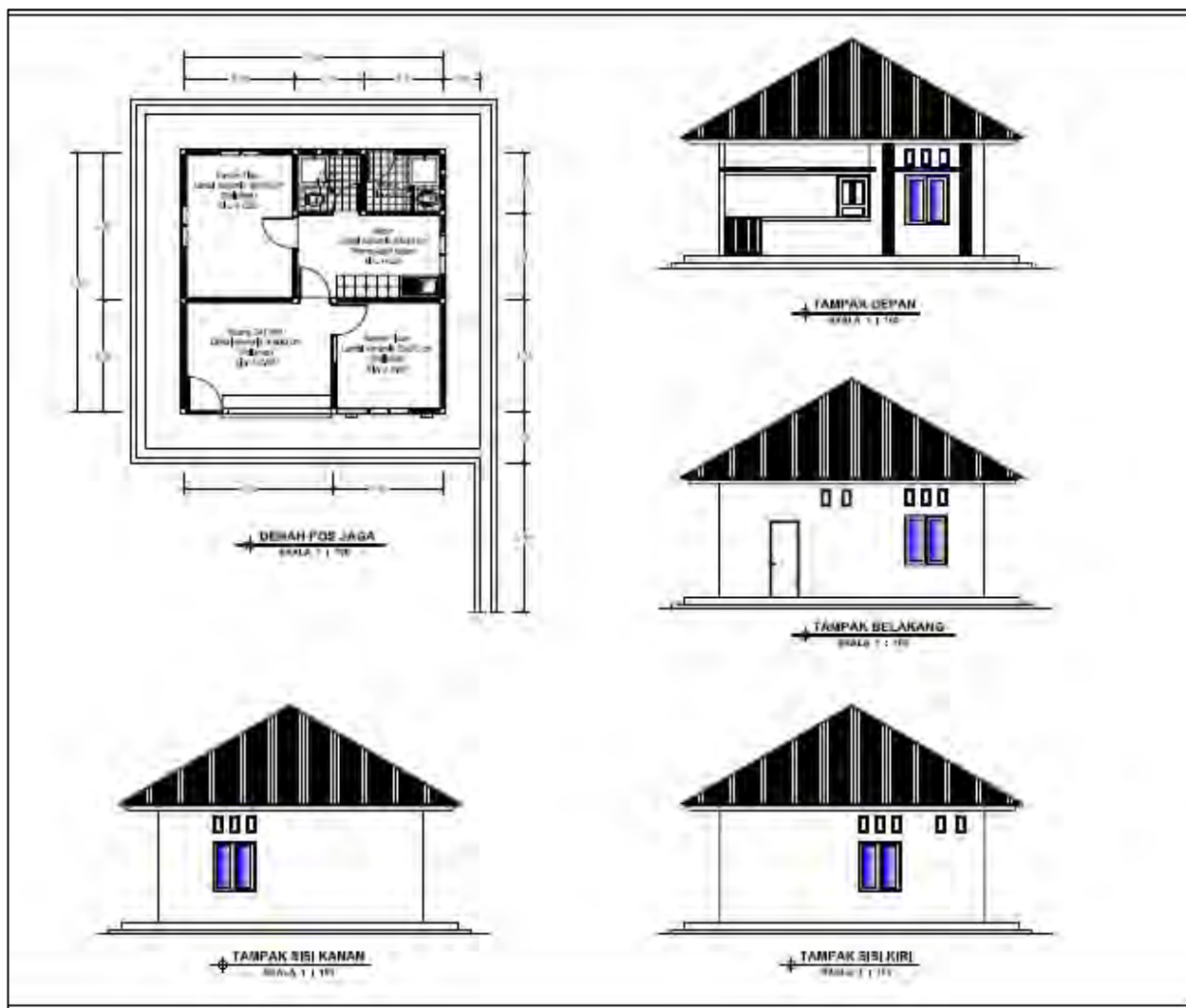


Figure 5c. Surveillance Post / Pos Jaga

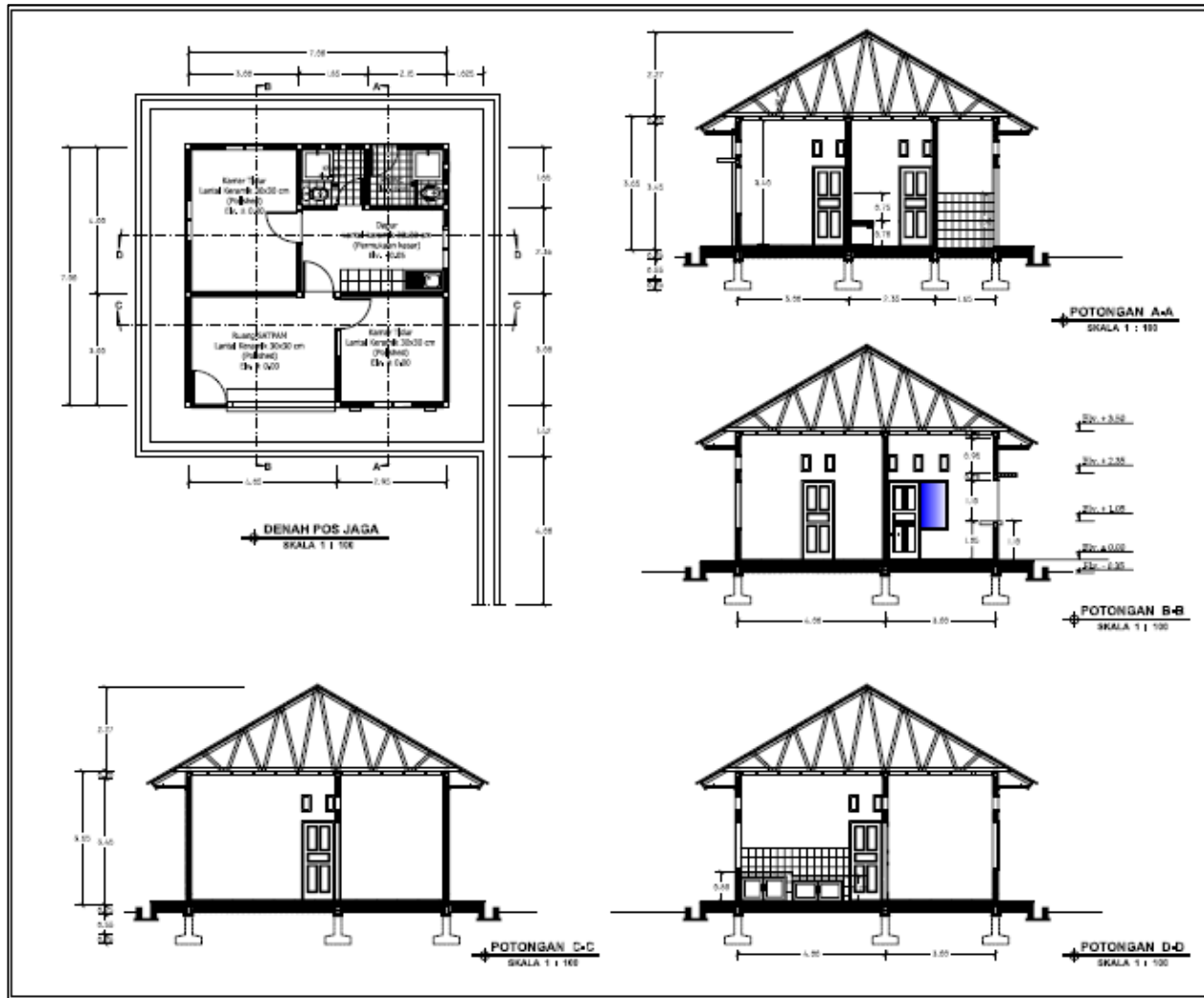


Figure 5d. Surveillance Post / Pos Jaga (examples)

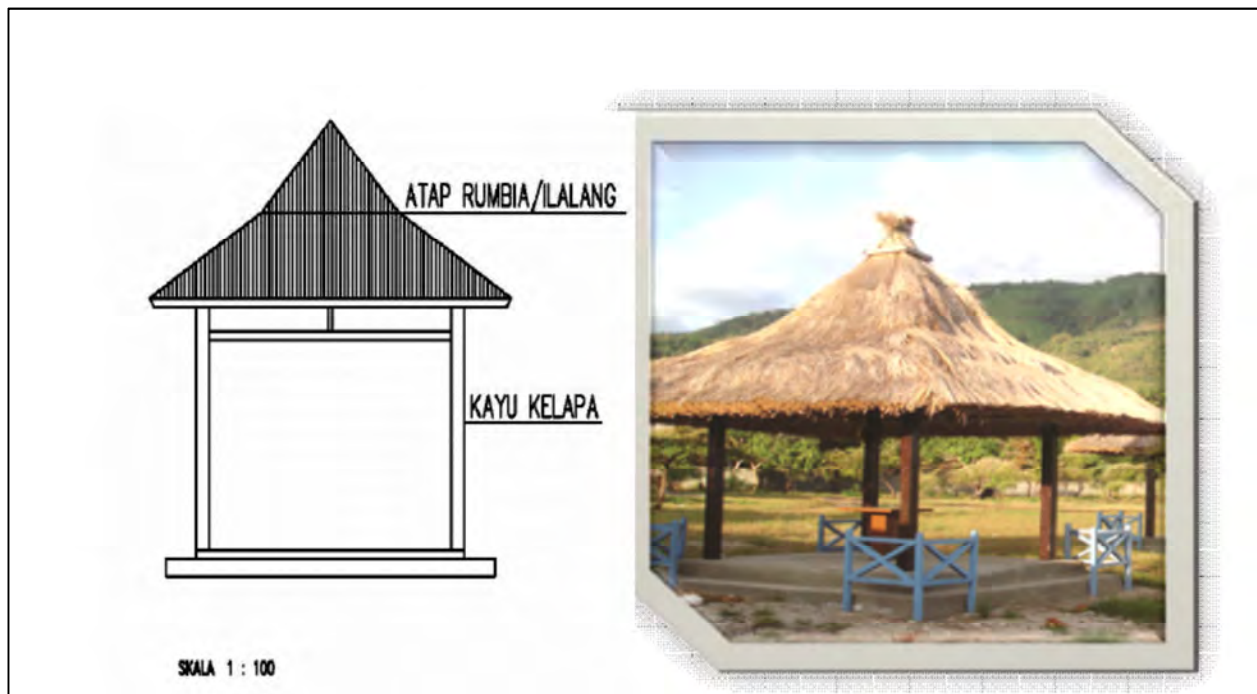


## E. Gazebo/Shelter

Shelter:

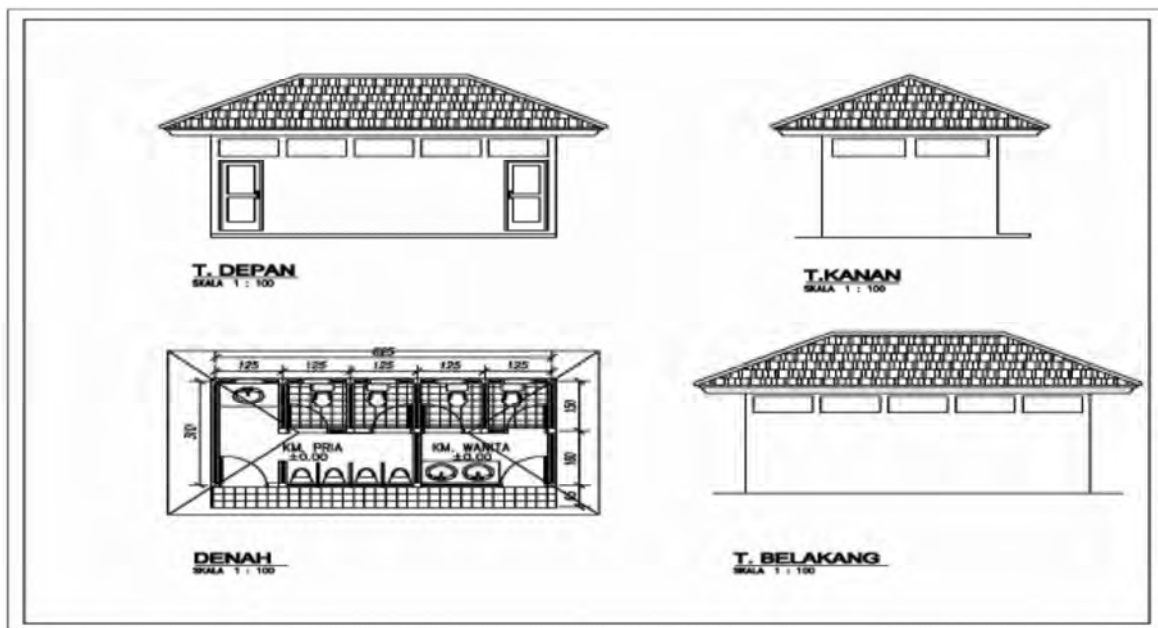
- (i) Location of shelter must comply with the designation set out in a management plan and zoning;
- (ii) Functions as a shelter, a place for visitors to rest/relax while enjoying the views in the area;
- (iii) construction of a shelter should be dominated by natural materials that are easily available around the site with local architectural style. If necessary to have cement construction, then construction needs to promote natural relief so as to maintain embedding in natural surroundings;
- (iv) shelter materials should predominantly be from wood, with roofs made of environment friendly material, such as palm leaves tassel, fibers and / or other roof types with local architectural design;
- (v) Shelter must be have labeled / written information, such as a simple information boards , i.e. "Shelter protected area ....."

**Figure 6. Gazebo / Shelter (examples)**



**F. Public Washroom**

- (i) Public washrooms should not be established on water bodies or too close to shoreline that might affect sea water;
- (ii) Design and building materials must be tailored to the needs and environment friendly;
- (iii) Equipped with clean water and supporting equipment such as buckets, tubs and so on.




**Figure 7. Public Washroom**









**II. INDICATIVE TECHNICAL SPECIFICATIONS FOR SIMPLE FISH PROCESSING EQUIPMENT PROPOSED FOR SUBPROJECTS ANAMBAS AND BINTAN UNDER COREMAP-CTI 2014-2018 (as per MMAF Regulation and Technical Guideline - PERATURAN MENTERI KELAUTAN DAN PERIKANAN REPUBLIK INDONESIA NOMOR PER.33/MEN/2012)**

5. These specifications are indicative and in some processing groups planning expansion, consolidation, and diversification, the specifications will be reviewed and updated at start of implementation.




**A. Technical Specifications Simple Processing Equipment**

No	Equipment	Specification	Picture
1	Preparation Table	Material made from stainless steel and solid to hold the loads up to 100 kg	
2	Knife	Material made from stainless steel with plastic handle	
3	Cutting Board	Material made from acrylic/plastic	

No	Equipment	Specification	Picture
4	Grinder	Material full stainless steel, capacity at least 80 kg/hour	
5	Silent Cutter	Material full stainless steel, minimum capacity 2 kg	
6	Meatball Forming Machine	Stainless steel material can form for meatballs minimum 6,000/hour	

No	Equipment	Specification	Picture
7	Frying/Boiling Saucepan	Material stainless steel	
8	Digital Scale	Capacity 5 kg/11 lb, LCD display, electricity or batteries power	
9	Hand Sealer	Length 30 cm	

No	Equipment	Specification	Picture
10	Chest Freezer	Volume 300 liter, Non-CFC	
11	Nugget Forming Machine	Made from acrylic, with 12 hole cast nuggets	
12	Meat Slicer Machine	Speed 1,200 – 1,600 rpm	

No	Equipment	Specification	Picture
13	Pressing Equipment	Manual, inner tube made of stainless steel, equipped with a pump/hydraulic jack, capacity 3 ton	
14	Spinner Machine	Stainless steel material, capacity at least 10 kg, and equipped with regulator speed	
15	Noodles Stir Machine	Power 220-240 volt; Capacity of 10-15 kg; Tube and stirrer are made of stainless steel, frame is made of iron	



No	Equipment	Specification	Picture
16	Noodle Forming Machine	Production capacity 80 - 100 kg/hour Material stainless steel	
17	Sausage Forming Machine (Manual)	Stainless steel material, tube dimensions dough at least 16 cm long, and mold dimension 3.2 cm	
18	Dryer Table (Para-para)	Rack: wood, plastic netting Pole: Wood 1 Unit consists of 2 pole	
19	Meat Bone Separator	Made from stainless steel	

- B. Examples of frying pan and packaging equipment from POKMAS Bandeng Fish Processing Group, Malang Rapat, Bintan)

Figure 1. Frying Pan



Figure 2. Packaging equipment





Figure 3. Packaging equipment



Figure 4. Packaging equipment



Figure 5. Packaging / weighing equipment

