



# Medan International Convention Center in North Sumatera Province (Expressionism Architecture)

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**Abstract.** Medan is the capital province of North Sumatera in Indonesia. Medan has developed to become one of the metropolitan cities in Indonesia and the heart of economic growth in North Sumatera. Nowadays, Medan is the core of commercial and economic in Indonesia. As the business city, Medan needs a facility as a medium for many activities such as meeting, incentive, conference, an exhibition in world scale. Constructing Medan International Convention Center will be helpful for Medan society and surroundings in needing the daily needs by construction the multi-purpose building. Convention center is one of the valid proof in the convention industry, giving the economic contribution to the city. Considering the substantive investment in the convention center in last years enhances the competition among the businessmen. During the process of designing the Medan International Convention Center uses the method by doing library study which aims to gain the explanation about the program, the field study in gaining the physical data which is needed and literature study as the reference or comparison in designing. Medan International Convention Center can be visited 4000 until 7000 people. The theme of expressionism architecture applies to the building which will show the shape that it can communicate and create the feeling and emotion of the function itself. Finally, this building has the proper function, having the good and visual interest.

**Keyword:** architecture, convention, expressionism, international

## 1. Introduction

Medan is the center of government, industry, culinary, and business in North Sumatera. The economic growth enhances continuously; it makes the more it raises the demand for the new function to provide many activities such as meeting, incentive, conference, exhibition either on national or international scale. Medan is hoped to become the prime mover for the entrepreneurs and MICE industry in the west area of Indonesia and become the destination colleague of other MICE such as Bali, Jakarta, Manado, Makasar, and others. Moreover, if it observes from the accomplishment side of PDRB Medan which is also dominated by sectors MICE for instance trade, hotel, and restaurant where the contribution of these gain 26% from PDRB Medan. Development of MICE industry (Meeting, Incentive, Conference, dan Exhibition) aims to increase the image of North Sumatera as the safe destination tourism. The cooperation between

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local and country in maintaining the investment, caused by the quality of MICE industry for instance by inviting the high number of tourists, living in the period, affecting the world promotion, the amount of money which is used, and giving the pride even strengthening the diplomacy country [2].

The result of Passenger Exit Survey (PES) The Ministry of Tourism in 2013 recorded 25% foreign tourists who visit Indonesia because they followed the MICE activities. The expenditure of MICE tourists about USD 2.200 per person compares the domestic tourists (leisure). Constructing the convention has increased for last several years which becomes a trend in business. This case due to Medan has a high investment opportunity for a convention center such as the strategic position in Southeast Asia, the facilities and the tourism potency in North Sumatera. Although the current convention does not provide all the activities so there have been some conventions which finally must stop operating [1]. Therefore, it needs that there must be the program or plan to be able to provide the social activities which are slightly bigger and more multi-purpose.

Medan International Convention Centre as the location which will be conducted the conference, all social activities, hoping of being able to become a landmark of Medan so that whoever wants to use will feel the different room experience with the expressionism architecture building style. Development of Medan International Convention Center will be adorable for Medan society and surroundings in needing the daily needs by constructing the multi-purpose building which is designed the international scale, so it will be opened to need the necessity for the building in that scale activities. Thus, this will increase the international credibility to come to Medan, and next will affect the investment enhancement to North Sumatera especially and Indonesia commonly.

## **2. Literature Review**

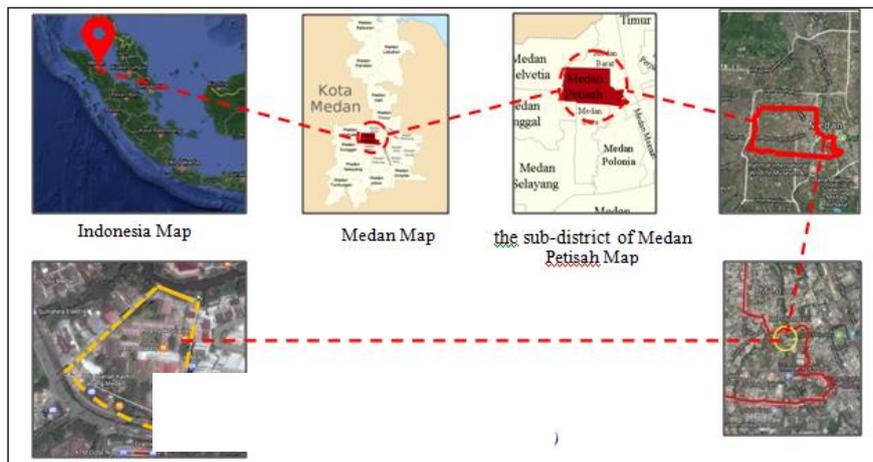
### **2.1 Object Description**

The scope of the case in this project is an international convention place in the central area of Medan. Based on the literature study, comparative study, direct survey and appropriate location analysis then selected the project location in Kapten Maulana Lubis street, where the stand is the current Wisma Benteng. The assessment and designing this housing apply the concept of the expressionism architecture.

### **2.2 Location and Site**

The project is located in Medan which the capital province of North Sumatera is the center area of WPP E, being in a development area locates in the sub-district of Medan Petisah. The project is located in Jl. Kapten Maulana Lubis. Based on General Plan of Urban Spatial Planning (RUTRK) Medan which is in the sub-district of Medan Petisah, and including in Areas of

Development E (WPP E) for the housing area, office affairs, trade, conservation, recreation, golf course and town forest. Geographically, the location is in  $3^{\circ}35'23.4''\text{LU}$  and  $98^{\circ}40'23.5''\text{BT}$ , located in the center of the town of Medan. Concerning the graphic illustration related to the location of the project as follows (Figure 1).



**Figure 1.** Location Map

### 2.3 Theme Review

The theme which is used to accomplish various problems about the process of designing this building is the expressionism architecture. This is a theme which can convey the message and impression from the result of the building to people who see it [3]. The shape of the building can achieve through several approaches which suit to the function itself [4]. The designing of *Convention Center* concept is how to apply the expressionism in the building which is dynamic, elegant, active and full of comfort in the shape and character of the building is designed. Afterwards, It is created to have the dynamic and full of interest which can be felt by people when seeing it and will appear the response from people who enjoy or use it. The *Convention Center's* planning emphasizes the uniqueness and characteristics which are in the building because the aesthetics factor becomes this building as the icon of the meeting place which is in Medan. Then, it actualizes in using the rooms and turning the room effectively and efficiently so that the *Convention Center* commonly is felt comfortable and succeeds.

### 3. Methodology

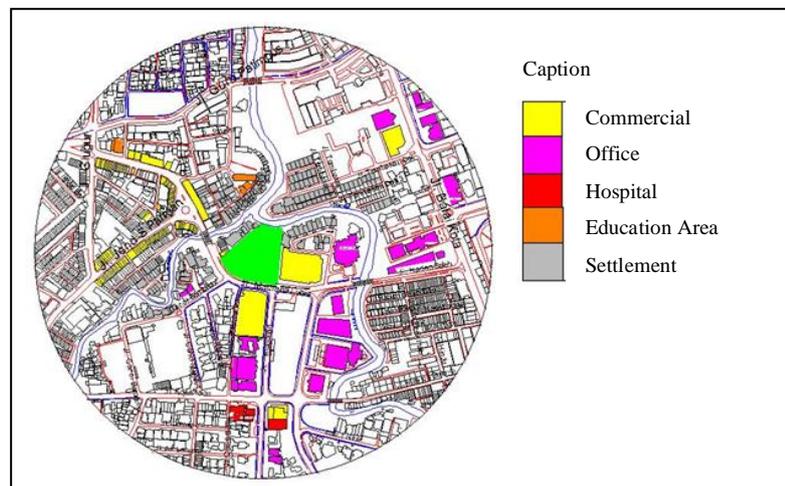
There are several methods which are conducted in programming this project Medan International Convention Center. For instance, election the location by doing the data collection with the literature study, observation study in region and comparison, interview and comparative study. Then, the concept approach uses by analysis and synthesis method. Afterwards, the last program approach is the result of analysis study, and it will synthesize by combining the source of data in the field, literature and empirical experience can assess in the analysis step. The result is then processed to become a plan of concept and program as an idea and strategy of problem-solving in the basic concept related to the theme of the program.

Combining all the concepts is the conclusion which is realized to be work picture which has been measured such as sketch picture, visibility, deduction, plans, detail, and plans perspectives.

## 4. Result and Discussion

### 4.1 Land allocation analysis

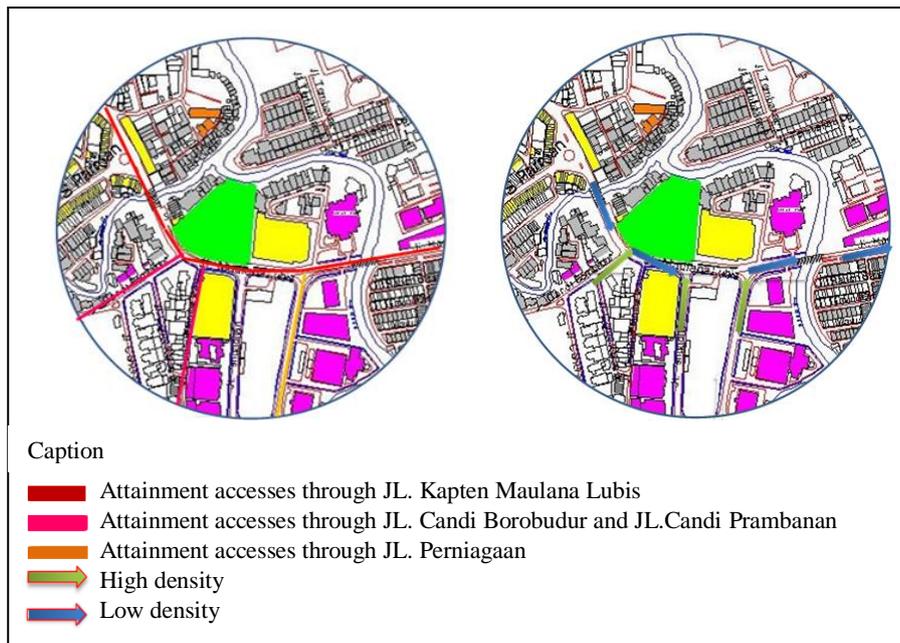
Land allocation for public space is as suitable as Master Plan RUTRK Medan. Based on Spatial Development Plan (RTRW) Medan in 2010-2030, the location of the project is in secondary collector road. Commercial and office affairs are the main generator activities in this area (Figure 2). The high building with the mixed-used function dominates in this area. As for, office affairs around this area is the mayor office of Medan, DPRD office of North Sumatera, Mandiri Bank office, Mega Bank office, the representative office of Bank Indonesia Bank and Forum Nine building.



**Figure 2.** Map of land allocation

### 4.2 Circulation Analysis

In Kaptan Maulana Lubis street is in the south area of the site (Figure 3) at the time which can be very crowded and traffic jam. These cases due to the junction of traffic lights and many of vehicles pass the main street. They happen the leap of visitors in the morning and evening which will affect the entrance and exit of the location project. To solve the traffic jam, providing the own road for vehicle driving which will enter and come out, separate with the public transportation track and locate the entrance and exit far away from the traffic jam area to avoid occurring the traffic jam around that area.



**Figure 3.** circulation map

#### 4.3 The use and activity Analysis

The users on the project “*Medan International Convention Center*” are first, *the committee* who is the party organizes the activity. Secondly, *the executive* is the party who supervises, executes, and gives the service of facilities which are needed by them and visitor. It consists of two parts which are the visitors (invitation for guests in exhibition and ceremony such as a wedding, concert, and others), and the visitors (either the domestic visitor or foreign visitors who have the business purpose, commercial, rent the place which needs the special room).

Types of the activity is Convention, is the meeting activity conducted by a group of people such as industry, the businessmen, and government staffs. The *exhibition* is the activity to show off several shapes of an object such as trade, art, and service trade. The *presentation* is to present something entertainingly such as art, drama, concert, and others. *Culinary* is to gather while having the food and beverage and *supportive group activity*, to support the sustainable such as management, building technique and other which are for living the mobility of human being in the building.

#### 4.4 Basic Concept

The concept which will apply in designing this Convention Center is how to apply the expressionism building which has elegance, dynamic, and comfort into the shape and character of the building designed as suitable as the characteristics and character of a market target which are the businessmen. Expressionist comes from the word related to the convention which can be seen from the types and activities which has the characteristics of formal, closed, busy and crowded. So, expressionism concept which is taken based on the characteristics of solution from

a busy and crowded convention. Busy + crowded + full >> Solution = Big, wide, large, elegant dan comfortable.

Based on the solution of crowded characteristics is belonged to the expressionism concept on the shape of the building which accommodates the visitor busily, example the building must be seen mass which has a facade and elegant, luxurious, and iconic roof. The concept of expressionist building firstly starts the strong border to create the sturdy, and it consists of the straight and curve (Figure 4).

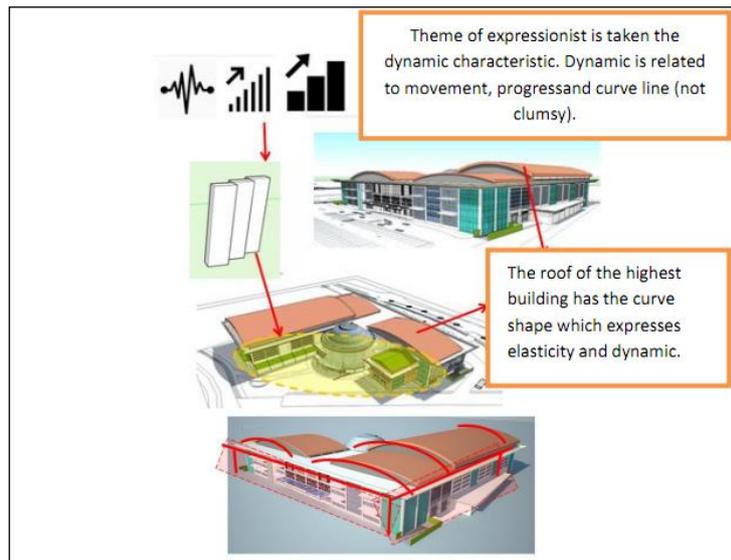


Figure 4. The perspective of building

#### 4.5 Concept of Layout

The ground floor is the public area which loads the main lobby and ballroom at the south side. It consists of the meeting room and convention hall/flexible room which becomes the main room of the building. At the north side consists of the opened culinary for the public. Then, the west area is the back area of service (Figure 5).

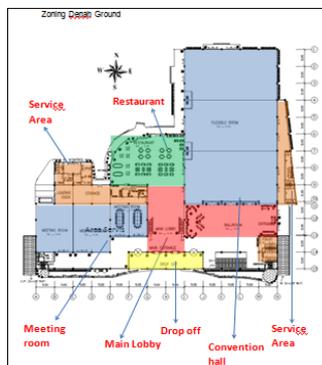
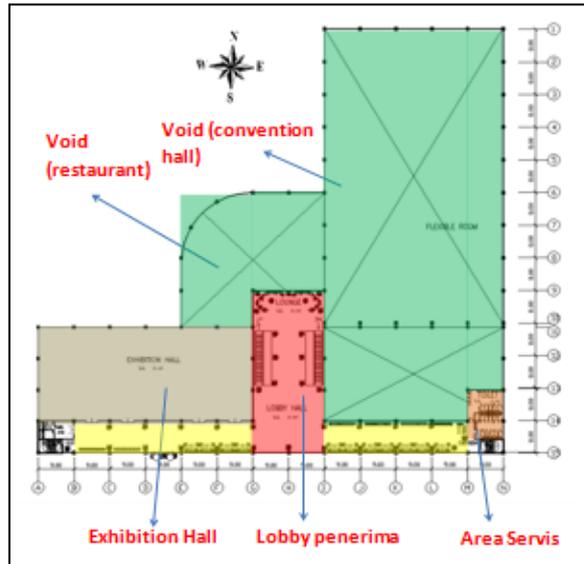


Figure 5. Ground floor

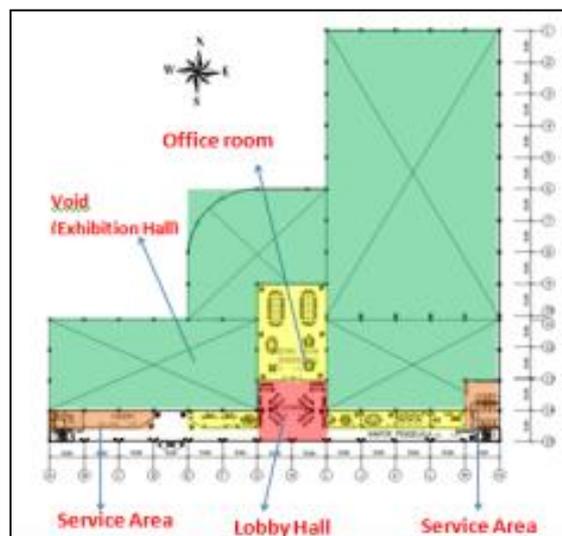
The first floor is the public area which loads exhibition hall room for 1000 people as the capacity. Along the corridor towards an exhibition, room can be found the waiting room and

gallery exhibition on every single side. The exhibition area is the core area on the first floor because of the biggest area (Figure 6).



**Figure 6.** First floor

The highest floor is the private area which is specialized for only the organizer and staffs then the function of the upstairs is the office of the organizer. There will be the meeting room, manager room, general manager, staff, and others. Afterwards, pantry and lounge will support the activity of organizers every day (Figure 7).



**Figure 7.** Second floor

Horizontal zone divided into the front area there is parking area, food, and beverage, lobby hall and in back area, there is service area and waterfront area (Figure 8).The division of vertical zoning at the bottom there are public areas such as basement, ball room, lobby hall, and at the top is a part of office room and exhibition hall (Figure 9).

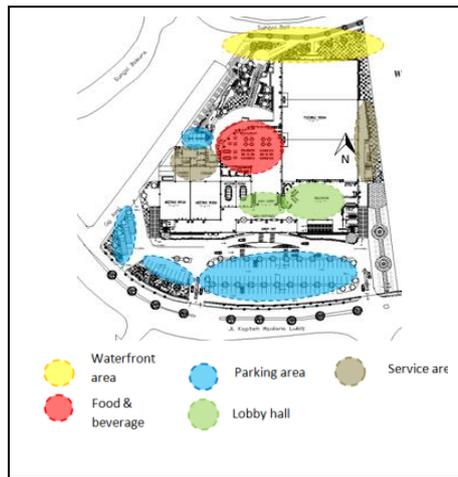


Figure 8. Horizontal Zoning

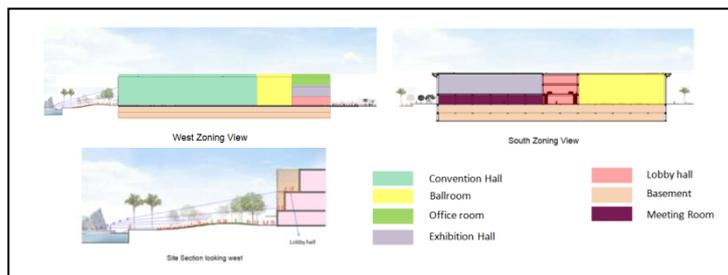
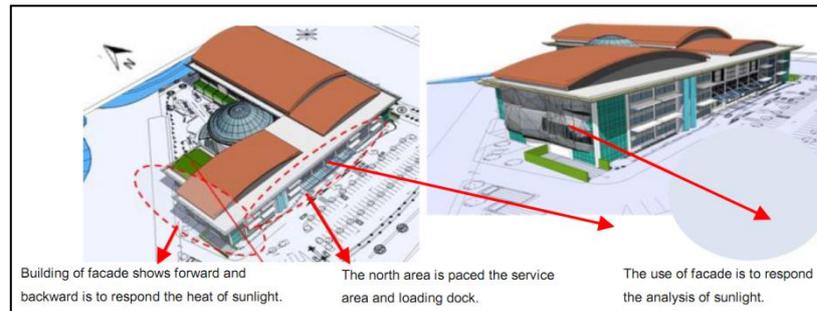


Figure 9. Vertical Zoning

#### 4.6 Concept of Mass and Countenance

The building materials use in the outer area (outer wall and the cover of the roof) is: On *Convention area*, beyond section which uses for being modified with the mirror and ventilation are made of Zinalume materials (Figure 11). The use of this building is to create the massive impression at *convention area*, and glass materials are the wall of the exhibition area which aims to create the good impression meanwhile the cover of the roof uses Zinalume. The system of structure uses as rigid frame considering the height of the building is not high enough or does not belong to the structure building. For the convention and auditorium room uses the system of broad spread structure (Figure 10). Then, the roof itself uses spaceframe as the same as the picture below because it lies until 80 meters. Besides that, the shape of the building or sketch room has box-shaped. Afterwards, for the spreading of the board will be used if the use of spaceframe in transporting the roof materials to the location.



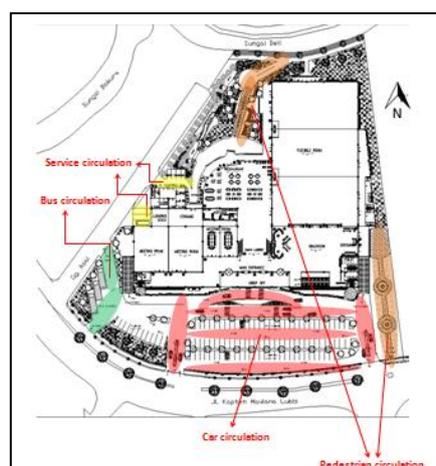
**Figure 10.** Perspective of building



**Figure 11.** Front visible (the top of left), backside (the top of right), the left (the bottom of left), and the right (the bottom of right)

#### 4.7 Concept of circulation

The circulation in the location consists of three accesses which are vehicle, walker, and service vehicle circulation. The access to entrance and exit is for car, motorcycle, and bus through the street of Kaptan Maulana Lubis. The access to the entrance and exit is for service vehicle through the main aisle. Separation of circulation responds the result of the analysis to create regularity and pleasure in and out. The concept applies to the fair circulation system, which signage is clear, and able to be reached from all sorts of direction (Figure 12).



**Figure 12.** Concept of circulation

#### 5. Conclusion

Medan International Convention Center is the multi-purpose building to conduct a meeting, celebration, conference, exhibition which is in Kaptan Maulana Lubis street. The target of the visitor is the businessmen or entrepreneurs and society which are either from the local or

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international class. Through the approach of expressionism architecture theme, the building has the strength. For instance, the capacity is big which loads 4000-7000 visitors who needed the needs of businessmen such as *flexible hall (convention and lecture, and boarding room), meeting room, and exhibition hall*, the strategic location and the center of Medan. By the development of land allocation, the center of business and the aesthetic designing reflects based on the realization of expressionism theme which applies the dynamic, elegant, luxurious, and iconic concept in the mass form, interior, roof and facade building.

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