

## DESIGNING THE MUSIC COLLEGE IN CENTRAL JAKARTA

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### Abstract:

**Purpose:** This paper was written with the aim of providing a forum that is able to facilitate the enthusiasm of the community, especially in Central Jakarta, in developing their music education after graduating from SMA / SMK equivalent to a higher level to produce potential and quality graduates.

**Research methods:** The research method used in the design uses location data obtained online to take aerial photos of the site, then combined with architectural theory studies, music theory and comparative studies of similar buildings.

**Findings:** The results will then be analyzed to produce a design concept. The design concept combines the order of the structure in the music consisting of an intro, verse, bridge, chorus, and ending. The concept is applied to the zoning order of the site. The composition of the building mass is also inspired by the form of musical notes that are processed based on different functions.

**Implications:** The expressionism design theme is very appropriate to represent the character of the building to make it more iconic and dynamic. The results of the design process are in the form of concepts, working drawings, perspective drawings, and animated videos.

**Keywords:** expressionism, music education, music structure, music college.

### INTRODUCTION

Musicians and music maestro in Indonesia are very diverse where academically they are under-appreciated for their expertise. It is necessary to have an institution that accommodates all forms of formal musical activity. Formal music education in Indonesia is relatively small. Some examples include the State University of Jakarta, Pelita Harapan University, the Indonesian Art Institute (ISI) in several regions in Indonesia, and the Jakarta Arts Institute. The facilities provided are also limited with the less than optimal utilization of space acoustics. Existing colleges still do not have adequate and separate theater facilities.

Jakarta is the center of all activities in the capital city of Indonesia. This metropolitan city has transportation accessibility with complete facilities and infrastructure and is easily accessible in general. A location like this is very much in line with the goal of establishing a music education center.



To overcome this, it is necessary to have a space and place that can facilitate the needs and desires of the community in the art of music by designing a Music College in Central Jakarta. It is hope that this college can produce music experts intellectually, not only having a career in performance but also being able to become part of the quality music industry both domestically and internationally.

Higher education (college) is a continuation level of secondary education that has academic and professional abilities and can apply and develop science, technology, and art [1]. According to the Ministry of National Education, higher education consists of several types, namely academies, polytechnics, colleges, institutes, and universities [2].

Music college is a higher education level which is equivalent to higher education in general. The main function of this building is to carry out formal education in the field of Musical Arts which acts as a means for students to accommodate art appreciation, especially in the field of music in Central Jakarta City.

Music is a collection of sounds harmonized together to produce a single composition. Likewise with architecture that has a complex but still harmonious spatial organization [5]. The structure of the song is a series of music arranged to form a meaningful musical composition. The scope of music runs in the field of architecture which has similarities in the concept of composition [6]. The song structure consists of:

1. Intro is the opening in a song. The intro is the first impression on the music in order to catch the listener's attention and introduce the song to them.
2. Verse is an introductory stanza in music before the chorus.
3. Bridge is a bridge or modulation in the music section between the verse and chorus. The tone of the bridge differs between the verse and the chorus but remains in sync.
4. Chorus or Refrain, is the core part of a song. Repeated more deeply once [3].
5. Interlude is almost the same as intro. The difference is in the middle of the song after the chorus / chorus which connects to the verse. The interlude contains instrumental music without any lyrics.
6. Ending is the final part of a song. The musical composition at the end is slowly disappearing. Activities and User Actors at Music College.Auditorium.

## RESEARCH METHODS

The theme that will be applied to the design refers to expressionist architecture. Expressionist architecture is emphasizing the spiritual and emotional side of the function aspect (form follows function) [4]. Expressionist architecture expresses the architect's freedom of expression in realizing buildings with visual appeal that are not monotonous. In this design theme, we will present building objects as attractive and emotional art. The application of the locality of the local area is realized by the use of ornaments typical of Jakarta's architecture, namely Gigi Balang which has various motifs (Figure 1).



Figure 1. Jakarta Architectural Ornaments  
[Source: Christian [8]]

Regarding this research, a comparative study was conducted with several music institutions as follows.

### 1. Royal College of Music, Sweden

The Royal College of Music is in the center of Sweden. It has an area of 21,600 m<sup>2</sup> with a total of 825 students. It is a local local music institution that has various supporting facilities including various kinds of halls such as: the main concert hall with a capacity of 530 seats, chamber hall, little hall, and small hall kreativiteum. The application of the acoustic system in the hall is very good. The design is not only put forward the function as a silencer and sound reflection. But also shows the aesthetic beauty in terms of visuals. The use of wood elements on the panels, the design of space lighting, and the selection of various colors that are characteristic or expressions in each hall.

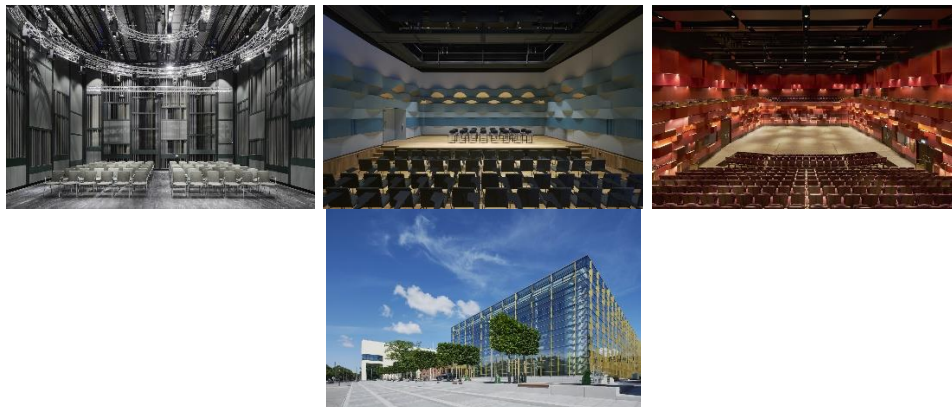


Figure 2. Royal College of Music, Sweden  
[Source: <https://www.archdaily.com/896582/royal-college-of-music-aix-arkitekter>]

### 2. Voxman Music Building, Iowa

Voxman Music Building, located in downtown Iowa United States. Located in an educational district that has open spaces and wide streets. Land area of 17,280 m<sup>2</sup> with a building of 2,800 m<sup>2</sup>. student capacity reaches 1,000 people. It has a main concert hall that can accommodate 700 spectator seats. The acoustic system applied uses a teatroacoustic system that combines various elements of room acoustics, lighting, and safety which are assembled from 946 parametric folding aluminum composite modules. In the piano recital performance area, red acoustic panels are used using wood floor surface material, and the shape of the module is pyramidal in texture. In the main practice area, the ceiling is hung with aluminum reflectors in the shape of a kite with various shapes and holes to create a dramatic lighting effect.

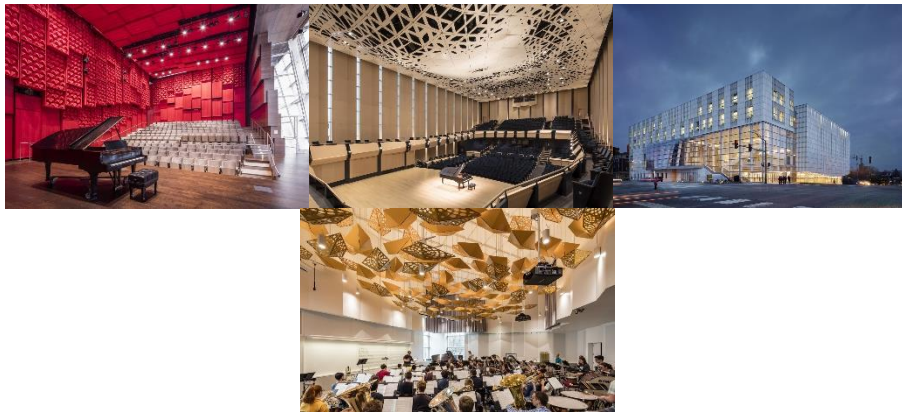


Figure 3. Voxman Music Building

[Source: <https://www.archdaily.com/886640/voxman-music-building-lmn-architects>]

### 3. Pelita Harapan University, Department of Music, Tangerang

Pelita Harapan University Music Department is located in Tangerang. The location is in an educational environment, close to shopping centers, and has easy accessibility. The music department building area reaches 1,200 m<sup>2</sup> with a capacity of 200 students. The main and supporting facilities are quite adequate, consisting of classrooms and practice rooms for each music department. Wood material is used in the acoustic system of the room, located in the common hall which is intended for concerts, music recitals, chambers, and various music seminars.



Figure 4. Music Department Concert Hall

[Source: <https://serpongku.com/uph-festival-25-gala-concert-dari-uph-conservatory-of-music-open-to-general>]

The design method used in designing the “School of Music in Central Jakarta” uses data collection techniques which are divided into: observation, documentation, literature review and precedent studies.

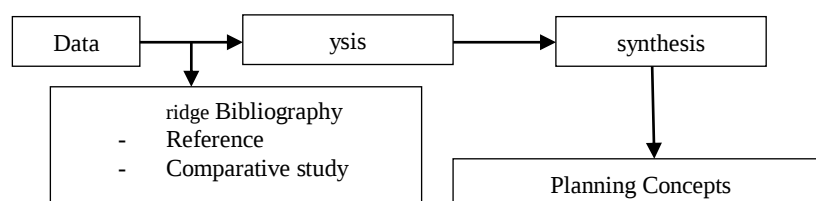


Chart 1. Planning Methodology

[Source: Shania, 2021]

## FINDINGS

The design location for this music college is on Jalan Benjamin Suaeb, Kemayoran District, Central Jakarta. This location has a site area of 5 hectares.

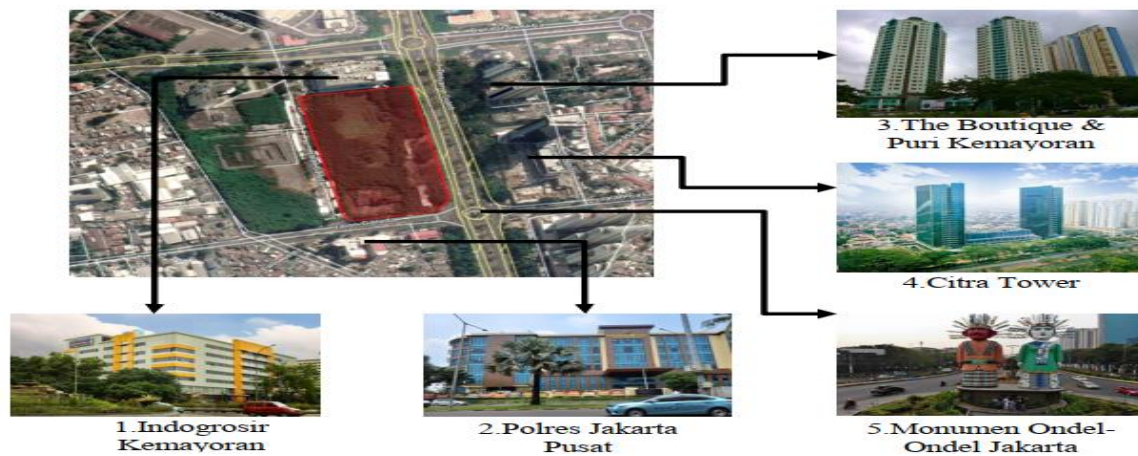


Table 1. Potential and Site Limit  
[Source: Shania, 2021]

| No | Name                          | Potential for the Site                                                                                                                                                                    |
|----|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Indogrosir Kemayoran          | Near shopping center                                                                                                                                                                      |
| 2  | Polres Jakarta Pusat          | High level of security                                                                                                                                                                    |
| 3  | The Boutique & Puri Kemayoran | An apartment that can be used as a temporary residence for students and the potential for access to higher education in music for residents of the apartment.                             |
| 4  | Citra Tower                   | An apartment that can be used as a temporary residence for students and the potential for access to higher education in music for residents of the apartment.                             |
| 5  | Monumen Ondel-Ondel Jakarta   | Every PRJ festival, this statue is always an icon. Make it easier for visitors to find the Music High School building and has the potential to become a new icon of Central Jakarta City. |

According to the DKI government regulations, the site calculation is obtained as follows.

- KDB:  $40\% \times 50,000 = 20,000 \text{ m}^2$
- KLB:  $5 \times 50,000 = 250,000 \text{ m}^2$
- KDH:  $30\% \times 50,000 = 15,000 \text{ m}^2$
- KB : 48
- KTB: 55

## 1. Site Analysis

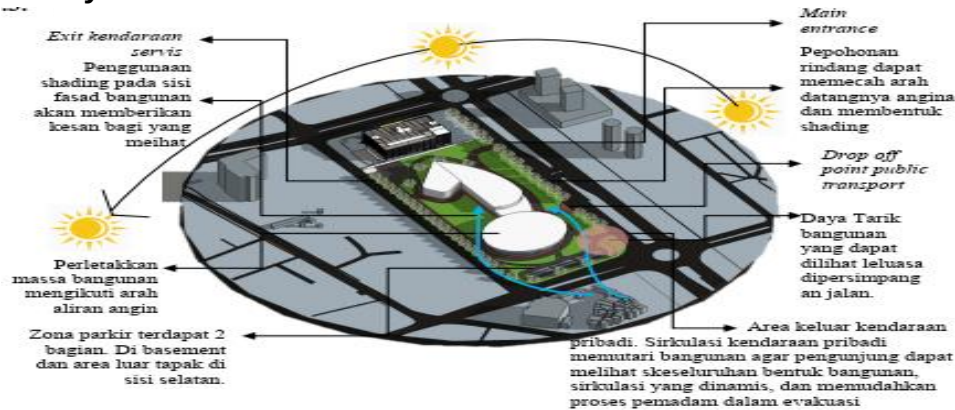


Figure 6. Site Analysis  
[Source: Shania, 2021]

The site design concept adopts harmonious and dynamic musical elements. Place the masses according to the structure of the song (intro, verse, bridge, ending) according to the function of each building, namely (entrance gate, main building, connecting area between different building functions, main building, exit site). Circulation on the tread is circular and dynamic following the shape of the building mass. Central Jakarta is included in the tropics with high sunlight intensity and heavy rainfall. Therefore, to reduce solar heat, use the existing shady vegetation on the east side and the addition of vegetation on the west side to reduce solar heat and make the west side (open garden area) and cool.

The design of the Music College in Central Jakarta combines the concept of a musical structure consisting of an intro, verse, bridge, chorus, and ending. The structure in the music will be applied to the site plan zoning and the facade of the building on the site. Tread is likened to a blank sheet filled with several sets of notes (buildings, road circulation patterns, vegetation and others) which can be called musical scores, where notations play an important role in the formation of a song.

Zoning on the site is adjusted to the function of the building and the shape of the site. Representing the character of a song that is dynamic and flexible, there is an arc. From the zoning form obtained (Figure 6), it will then be used as an initial idea in further design developments.

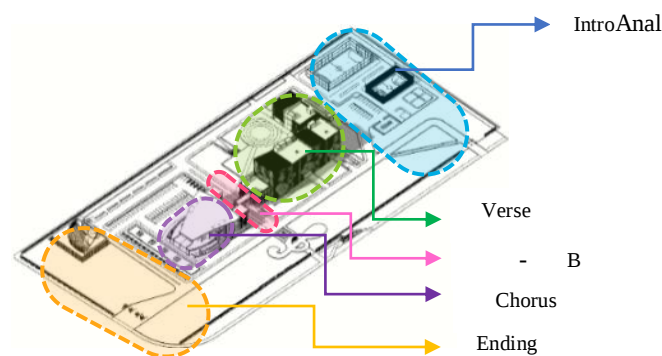


Figure 7. Site Zoning Concept  
[Source: Shania, 2021]

In the design of outdoor space, there are several supporting elements such as an amphitheater, sports area, active garden, pool area, and various types of vegetation.



Figure 8. Outdoor Concept  
[Source: Shania, 2021]

The goal is a means of relaxation from teaching and learning activities.

## 2. Building Design Concept

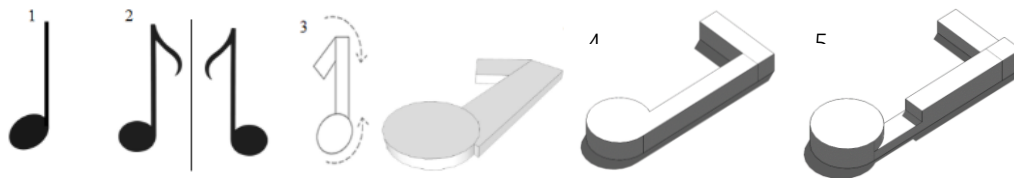


Figure 9. Mass Composition  
[Source: Shania, 2021]

In the process of composing the masses, they also associate elements of the art of music in it as shown in (Figure 9).

1. The basic shape of the building is inspired by the shape of the 1-tap note which is related to the main function of the design, which is an educational building.
2. The building on the site is divided into 2 functions (education and performance). To meet user needs, educational buildings alone are not enough. Because students also need to show their work in a space that can be exhibited by many people as an appreciation event, namely the performance building. This building is accessible to the public.
3. Mass is transformed to be more dynamic and efficient in terms of structure and circulation
4. The basic shape of the building mass in the site
5. So that the building is not monotonous in terms of the skyline, make a difference in elevation.

## 3. Space Program Analysis

The concept of activities in the design of the College of Music in Central Jakarta include education, entertainment, social, arts, and sports. Based on the comparative study, it can be concluded that several parties involved in the Music College in Jakarta are:

Table 2. Actors  
[Source: Shania, 2021]

| No | Actors              | Notes                                                                                                                             |
|----|---------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 1  | Student             | People who continue their education to a higher level.                                                                            |
| 2  | Teaching Staff      | Professional staff to teach students                                                                                              |
| 3  | Visitors            | People who come into buildings with limited access such as concert halls, seminars, administration, parks, and cafeterias.        |
| 4  | Building management | People who manage buildings from administrative to technical such as directors, employees, heads of foundations, and office boys. |

Table 3. Space Size  
[Source: Shania, 2021]

| No.                      | Name of Space                                   | Zoning      | Area (m2)        |
|--------------------------|-------------------------------------------------|-------------|------------------|
| 1                        | R. Reception                                    | Public      | 406,2            |
| 2                        | R. Practice Class                               | Private     | 1.084            |
| 3                        | R. Theory Class                                 | Private     | 2.846,6          |
| 4                        | Library                                         | Private     | 300              |
| 5                        | Ogffice                                         | Private     | 394              |
| 6                        | Labs. Music and Music Studio                    | Semi-public | 679              |
| 7                        | Service (toilet, loading dock, generator, etc.) | Service     | 300              |
| 8                        | Musholla                                        | Service     | 124,8            |
| 9                        | Basement                                        | Service     | 2.100            |
| 10                       | Cafetaria                                       | Public      | 297              |
| 11                       | Auditorium                                      | Semi-public | 180              |
| 12                       | Art Gallery                                     | Public      | 48               |
| 13                       | Labs. Computer                                  | Semi-public | 60               |
| <b>CONCERT HALL</b>      |                                                 |             |                  |
| 1                        | Concert Hall                                    | Public      | 10.619           |
| <b>Total</b>             |                                                 |             | <b>19.438,6</b>  |
| <b>Circulation (30%)</b> |                                                 |             | <b>25.270,18</b> |

#### 4. Structural System Concept

Soil conditions on the site tend to be hard and brownish red. Maximum building floor height is 5 with 1 basement floor. Using the most sturdy bore pile foundation and suitable for all soil conditions. This foundation is used for all buildings and the retaining wall as a retaining wall on the ground basement floor on the site.

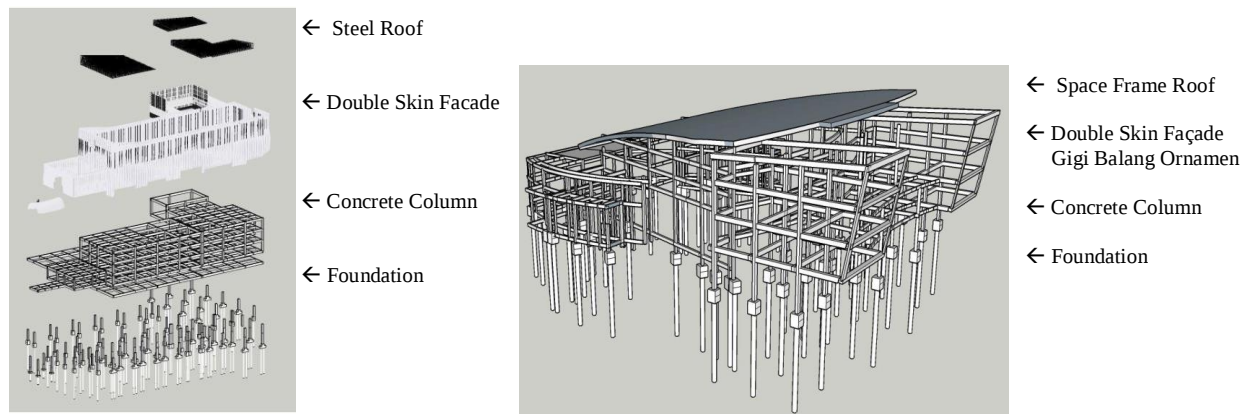
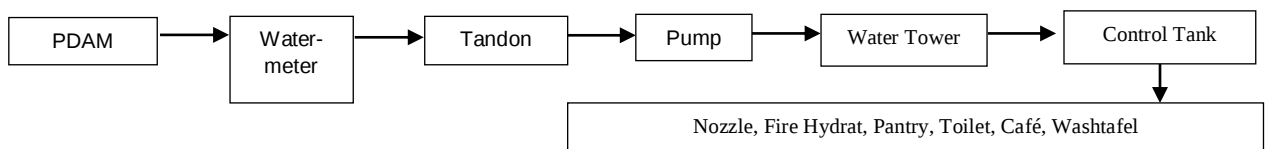


Figure 10. Axonometry Structure  
[Source: Shania, 2021]

## 5. Utility System Concept

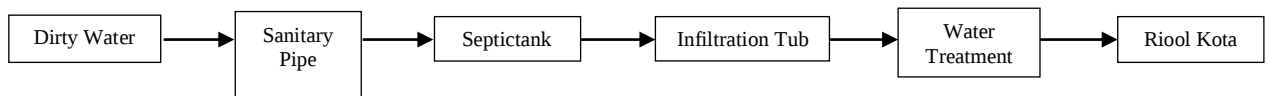
The concept of utility in buildings is described in the following scheme:

### a) Clean Water



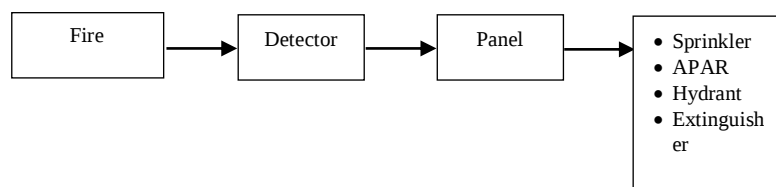
Scheme 1. Clean Water  
[Source: Shania, 2021]

### b) Dirty Water



Scheme 2. Dirty Water  
[Source: Shania, 2021]

### c) Fire Prevention System



Scheme 3. Fire Prevention System  
[Source: Shania, 2021]

The evacuation radius and utilities in the building can be met with a radius of 30m as shown in Figure 11. Among them there are emergency stairs, AHU room, ME room, hydrant, and toilet.

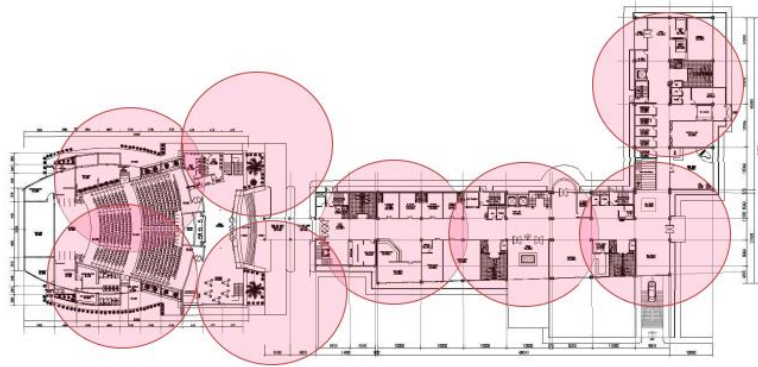


Figure 11. Evacuation Planning  
[Source: Shania, 2021]

## 6. Space Planning

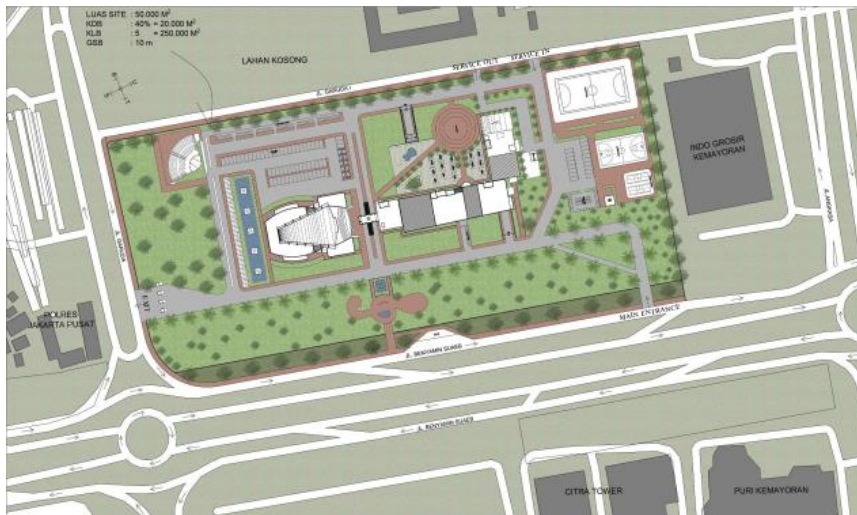


Figure 12. Block Plan  
[Source: Shania, 2021]

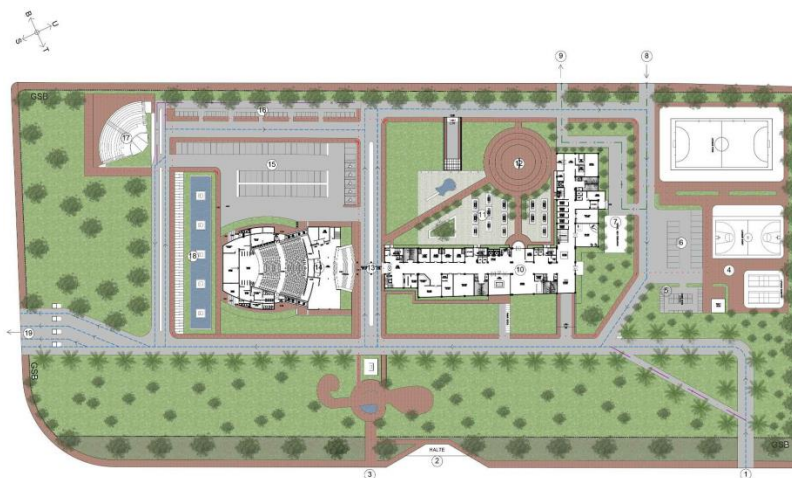


Figure 13. Site Plan  
[Source: Shania, 2021]



Figure 14. Application of Music Concepts in Tread  
[Source: Shania, 2021]

Application of the musical structure on the site (Figure 14).

1. Main entrance is implemented as an intro. Visitors will be seen with vegetation and sports areas (warming up).
2. Verse, in the site is implemented as the first stanza to recognize the main function of the site, namely colleges/educational buildings.
3. Bridges. In the site there are 2 different functions, namely education and performance. In music, to connect tone transitions requires a bridge, so that the resulting sound sounds harmonious. The design applies similar things to the placement of the drop off lobby area in both buildings.
4. The chorus on the site is marked by a concert hall building which is likened to the peak of students in studying. In the music arts major, final year students are required to perform a performance as one of the requirements for graduation.
5. Ending. When the climax begins to fall, the site is marked with a water pool, garden, amphitheater and exit area as a cover from the site.

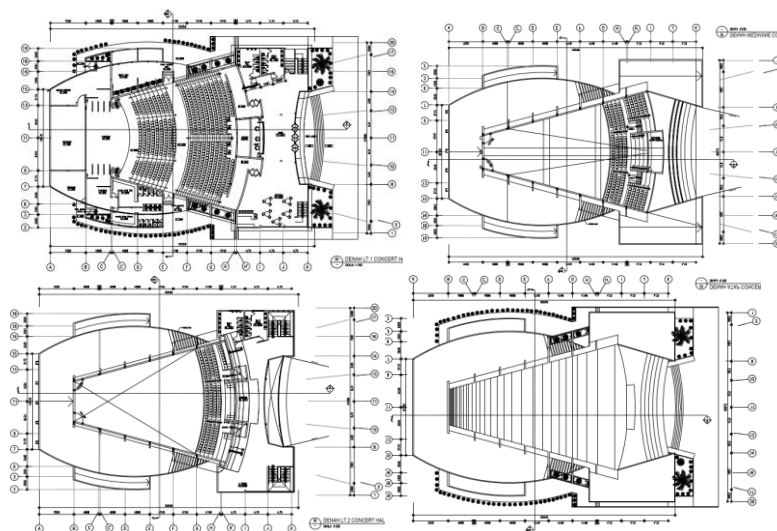
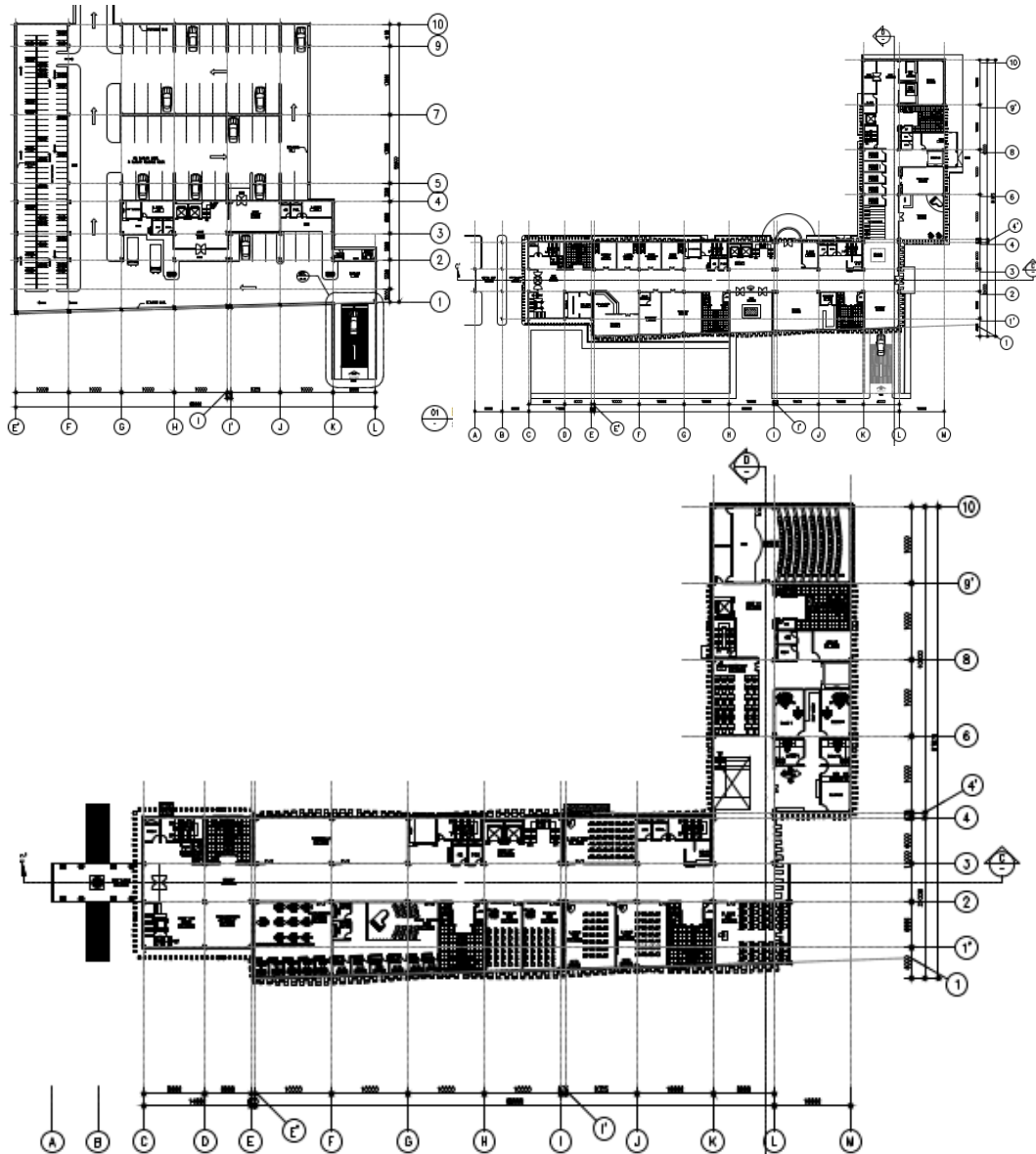


Figure 15. Floor plan 1; Floor plan. mezzanines;  
Floor Plan 2; Concert Hall Roof Plan  
[Source: Shania, 2021]

The concert hall with a capacity of 700 people is used as a musical performance facility that can be accessed by students and the public. There are

2 floors and a mezzanine to meet all the needs and supporting facilities in the concert hall. On the 1st floor there is a lobby, cafeteria, service, counter, sitting area for performances, and a stage. The mezzanine floor only has a balcony sitting area to enjoy the show. On the 2nd floor of the building, there is a management office, void, seating area, operator, and audience seating area.



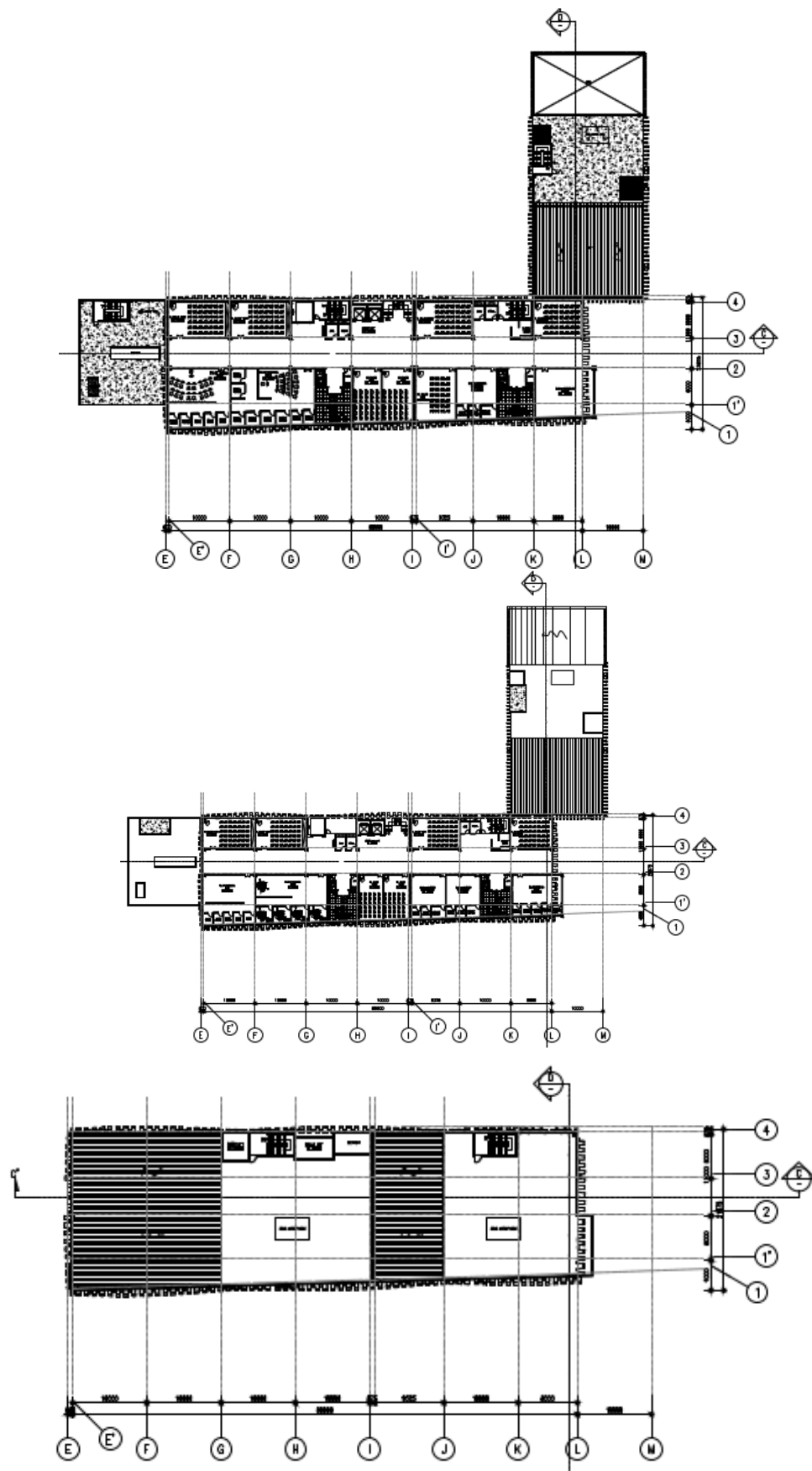


Figure 16. Basement Plan; Floor Plan 1;  
 Floor plan. 2; Floor Plan 3; Floor Plan 4; College Roof Plan  
 [Source: Shania, 2021]

Overall, the shape of the building has an angled shape which is divided into 3 parts which are separated by a dilated structure. The college building has 4 floors and 1 basement floor. On the basement floor, there is a car and motorcycle parking with a capacity of 56 car parks, 2 service parking lots and 134 motorcycle parking lots. On the 1st floor, there are 4 accesses to the building including, the main lobby is on the south side close to the drop off area, lobby 2 is on the east side close to the bicycle parking lot, lobby 3 is on the north side to access the art gallery and commercial music shop, and lobby 4 which has access to the back garden of the music college. The office area, cafeteria, and public rooms are located on the 1st floor. Floors 2-4 of the building contain an auditorium, theory and practical classes.

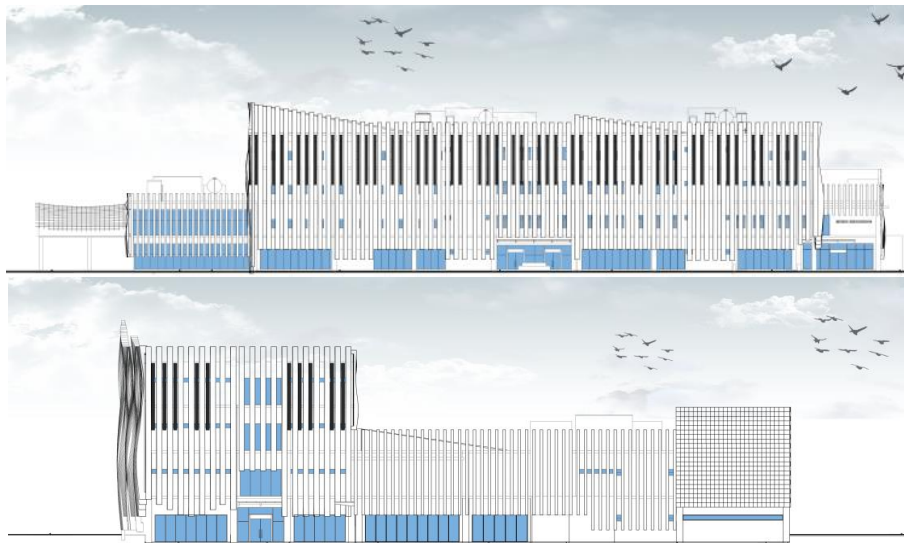


Figure 17. East View: North Music College  
[Source: Shania, 2021]

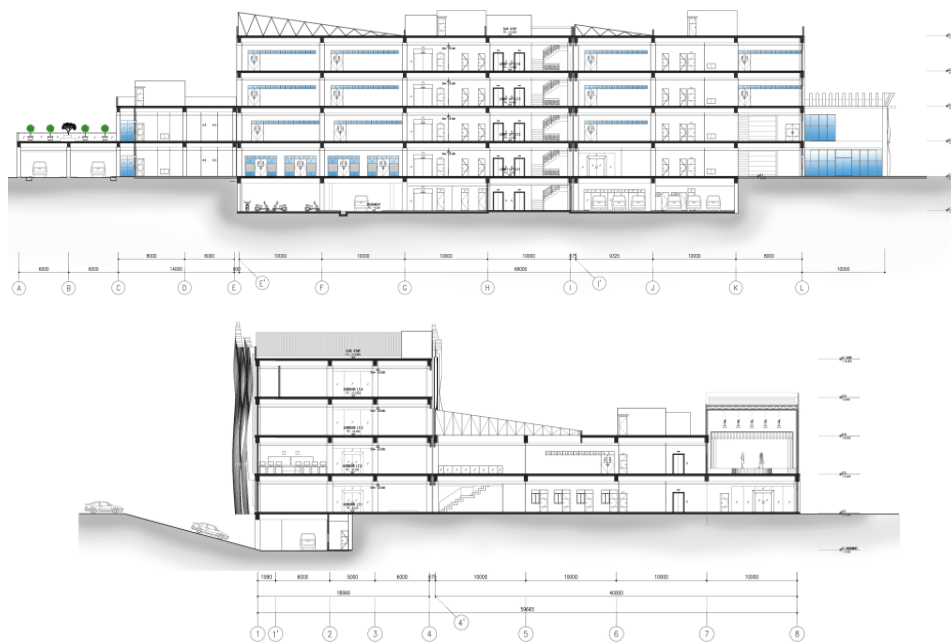


Figure 18. College Music Drawn Section  
[Source: Shania, 2021]

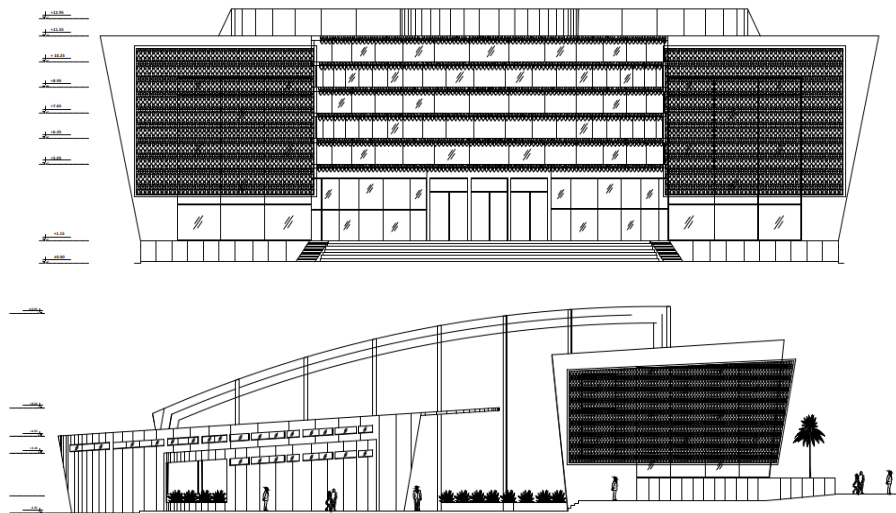


Figure 19. Concert Hall View  
[Source: Shania, 2021]

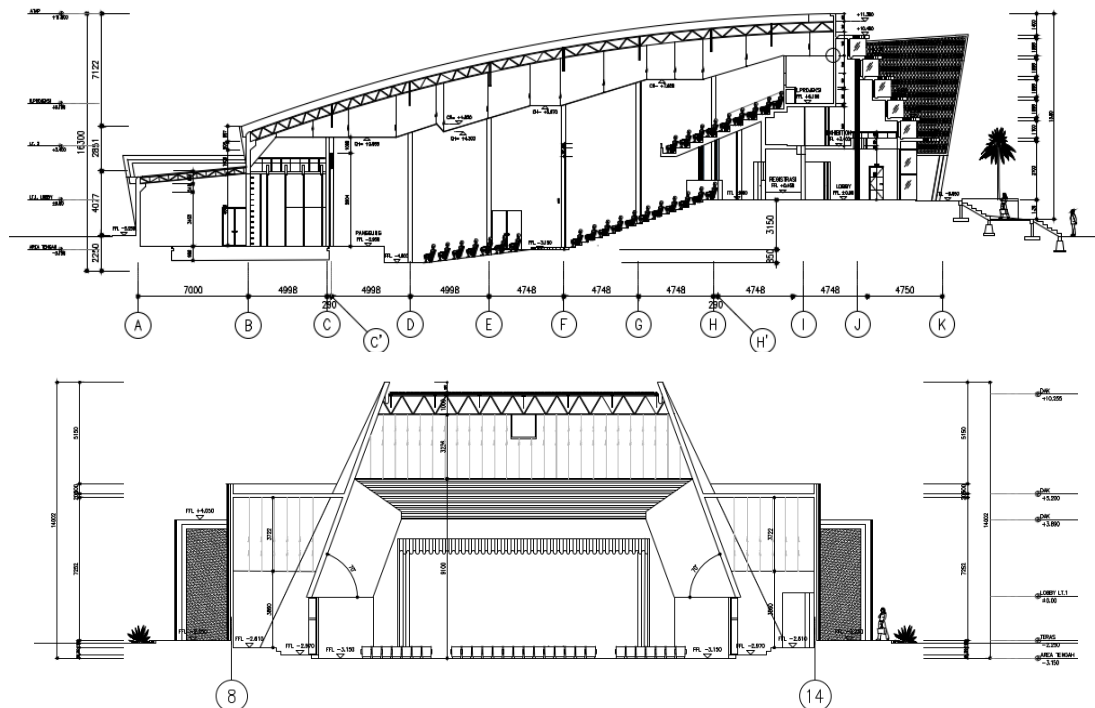


Figure 20. Concert Hall Drawn Section  
[Source: Shania, 2021]

Pedestrian access if you enter the site will feel welcomed because there are pergolas, sculptures, and ponds. The concept of the facade of the college building uses a parametric design with a pattern of aluminum-based piano keys propped up against a wall. The piano keys were chosen in 2 colors, black and white, symbolizing sad (minor) in black and happy (major) in white. In addition, in college majoring in music the basic instrument that must be mastered is the piano. The facade concept of the concert hall building combines Betawi architecture with the addition of ornaments in the form of teeth.



Figure 22. Art Gallery  
[Source: Shania, 2021]

Inside the music college building there is also an art gallery as a display exhibition area. In the concept of interior art gallery applying a flexible concept. The atmosphere in the room can be changed according to the theme. In the design drawing of the College of Music in Central Jakarta, currently inspired by the flow of jazz music. In jazz music sounds slang / chords that collide with each other, discordant, and full of speed. The application to this design is the use of a mural-patterned background that is collided with a work of art in the form of an image. Immerse yourself in the expressive nuances of complex musical forms. Painting characters are painted in quirky colors that contrast with the background color. The walls are also separated with different colors depending on the zone. There is also a display area that contains a series of musical instruments that can be played to complement the sensory experience of visitors.

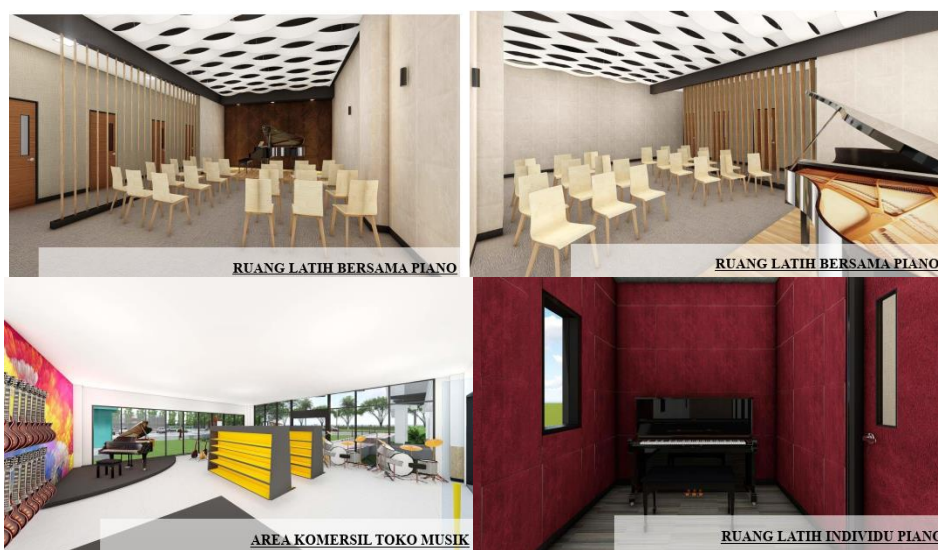




Figure 23. Interior Perspective of Music College  
[Source: Shania, 2021]

In the music college education building, there are several classrooms for instrument theory and practice. In theory classrooms, the concept of space is oriented inward and there are windows for air circulation and natural lighting sources. Placed several light points to liven up the atmosphere of an active space. In the practical classroom, an acoustic system is applied to the interior using silencers, reflectors, and diffusers so that the sound quality produced remains good. To attract people from outside, there are also commercial spaces, namely music shops, music studios, and art galleries.

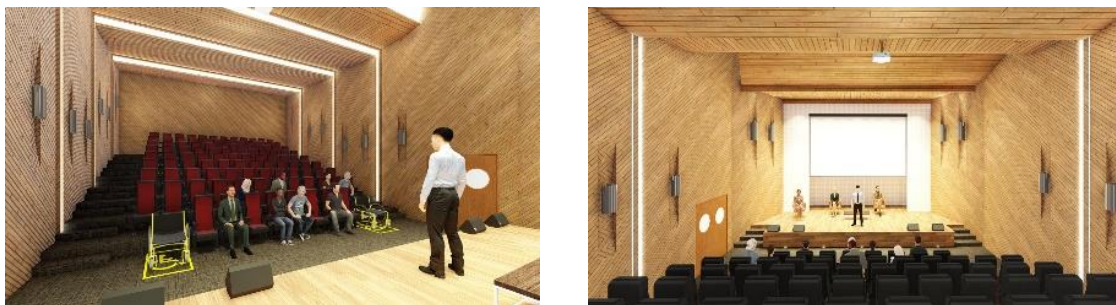


Figure 24. Music College Auditorium  
[Source: Shania, 2021]

The auditorium room is placed on the 2nd floor of the music college education building. The application of acoustics in this room is very necessary to prevent sound leakage from outside and inside the room. The auditorium is used for smaller events such as solo recitals and seminars. The material used is a kind of dampening carpet and wood on the walls, stage floors, and ceilings.

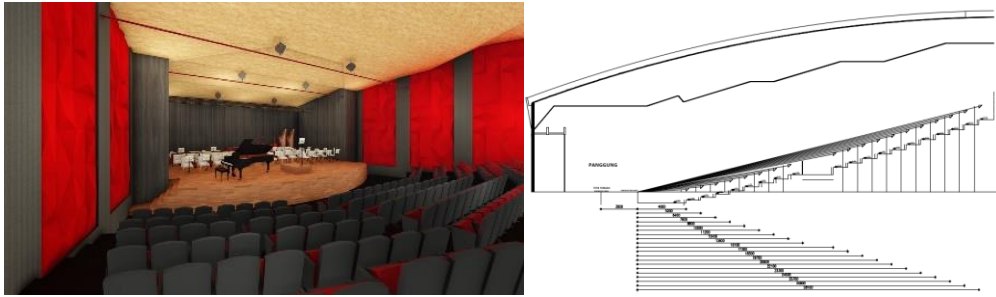


Figure 25. Concert Hall  
[Source: Shania, 2021]

The concert hall is intended for concerts or music performances for students and the public with a capacity of 700 people. The materials used are wood, foam, and carpet to support the acoustic system in the room. The sequence of spectator seats is terraced and there is a balcony to accommodate more spectators.

## CONCLUSION

The design of the Music College in Central Jakarta is a place that accommodates formal music education activities, intended for people who live in Jakarta and surrounding areas who have graduated from college / vocational school or equivalent. The form of site zoning and the appearance of the building express the concept of structure in music, namely intro, verse, bridge, chorus, and ending and the use of acoustics in certain spaces. Locality is applied to the double skin facade of the concert hall building. In addition to adding aesthetics, it also emphasizes the identity of buildings located in Jakarta. The College of Music can be a starting point to develop students' potential in the field of music and become professionals in a musical career that can compete at the local and global level.

## ACKNOWLEDGEMENT

The authors would to say thanks to the supervisors for this research at Universitas Pancasila who have guided and inspired the process of designing the Music College in Central Jakarta. Hopefully this study can be a reference in designing by combining music theory in the basis of architectural design.

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