

## THE INFLUENCE OF IMPROVING THE ANWAR IDRIS ROAD SECTION ON REGIONAL DEVELOPMENT IN TANJUNGBALAI CITY

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Received : 25 July 2025

Revised : 01 August 2025

Accepted : 10 August 2025

Published : 28 August 2025

DOI : <https://doi.org/10.59733/besti.v3i3.121>

Publish Link : <https://bestijournal.org/index.php/go>

### Abstract

The upgrading of Anwar Idris Road in Tanjungbalai City is an important project that aims to improve the quality of infrastructure and facilitate the movement of goods and services. This study examines the social, economic, and environmental impacts arising from the construction of the road. The results show that the road upgrade provides significant benefits in terms of accessibility and economic opportunities for the community, but also poses challenges such as socio-economic inequality, air pollution, congestion, and land use change. This study suggests the need for more inclusive planning, efficient traffic management, and policies that focus on environmental sustainability to ensure sustainable benefits for the wider community.

**Keywords:** *Road Improvement, Accessibility, Social Impact, Economic Impact, Environmental Impact, Traffic Management, Social Inequality, Tanjungbalai*

## I. INTRODUCTION

### 1.1 Background

Tanjungbalai City, as one of the developing cities in North Sumatra Province, continues to experience changes in various sectors, including the infrastructure sector. One of the important infrastructures that influences regional development is the road network. One of the road sections that has great potential in supporting regional development is the Anwar Idris Road Section. This road section connects several important areas in Tanjungbalai City and has a strategic role in increasing mobility and accessibility for the community and various economic sectors, such as trade, industry, and services. However, although there have been efforts to improve the quality and capacity of road infrastructure, the improvement of the Anwar Idris road section in Tanjungbalai City is an issue that needs to be studied more deeply. The improvement of this road section is not only seen from the physical aspect of the road itself, but also its impact on the development of the surrounding area. Improving road quality has the potential to bring significant changes in land use patterns, increasing economic flows, and improving the quality of life of the people living around the road.

On the other hand, the impact of the improvement of this road section also needs to be seen from the social and environmental aspects. The ease of access offered by the improvement of the road section can encourage the emergence of various new economic activities, both in the trade, housing, and industrial sectors. However, if not managed properly, the improvement of this road also has the potential to cause new problems, such as congestion, environmental problems, and development gaps between regions that can worsen social inequality in Tanjungbalai City. Therefore, it is important to comprehensively analyze the effect of the improvement of Jalan Anwar Idris on regional development in Tanjungbalai City. This study is expected to provide a clearer picture of how the improvement of this road affects the dynamics of social, economic, and regional development in Tanjungbalai City, as well as provide recommendations for better infrastructure planning and management in the future.



Figure 1.1 Improvement of the Anwar Idris Road Section

In recent years, Tanjungbalai City has undergone a significant transformation in terms of infrastructure, one of which is improving the quality and capacity of road sections. One of the road sections that has become the focus of attention is Jalan Anwar Idris, which functions as the main route connecting the city center with other developing areas. The improvement of this road section is expected to have a positive impact on smooth mobility and increased accessibility in various sectors, ranging from trade, transportation, to housing. However, although various efforts have been made to improve the quality of this road, the phenomena that occur in the field indicate several impacts that are quite complex and need attention. On the one hand, the improvement of Jalan Anwar Idris has indeed smoothed the flow of vehicles and shortened travel time between regions. This is expected to encourage economic development in the areas connected by the road, by opening up new business opportunities and increasing trade activities.

However, on the other hand, the phenomenon that emerges is the imbalance in the development of the areas around this road section. Improved road quality tends to attract investors to build commercial and residential projects, which has the potential to cause a spike in land prices around the road section. This can cause a socio-economic shift in the area, where people who previously lived in the area may be marginalized by the increasing cost of living, while other areas that are not covered by this infrastructure remain left behind. In addition, although the flow of vehicles is getting smoother, the increase in high traffic volume also causes congestion problems at certain points, especially during rush hour. Not to mention, the environmental impacts arising from development activities along the road section, such as increased air pollution and noise, further worsen the quality of life of the surrounding community.

These phenomena indicate the complexity in managing road infrastructure that does not only focus on improving the physical road, but also on managing social, economic, and environmental impacts. Therefore, it is important to analyze more deeply the impact of improving Jalan Anwar Idris on regional development and the lives of the people around the area. Improving road infrastructure is one of the important efforts that can drive the progress of a region, especially in supporting accessibility, mobility, and economic development. Jalan Anwar Idris, as a strategic connecting route in Tanjungbalai City, has experienced significant improvements in quality and capacity in recent years. This improvement has great potential in opening up opportunities for regional development, both in terms of economy, social, and urban spatial planning. However, although these infrastructure improvement efforts clearly have a positive impact, there are various phenomena and problems that need to be addressed so that the impact

can be optimal and not cause inequality in society. The urgency of this research is very important to provide a deeper understanding of how the improvement of this road section can affect various aspects of life around the area. Although the improvement of Anwar Idris Road can improve transportation efficiency and accelerate access between regions, its impact on the distribution of regional development and socio-economic inequality is still not clearly mapped. This is an issue that needs to be addressed immediately, considering the potential for social shifts due to uncontrolled land price spikes, as well as increased congestion and environmental problems that need to be addressed with appropriate policies. In addition, unbalanced infrastructure management between areas connected to the main road and those not accessible can create a development gap, which has the potential to worsen the inequality between developed and underdeveloped areas. Therefore, it is important to conduct research that can comprehensively describe the impact of the improvement of Anwar Idris Road on regional development, including in terms of the provision of public facilities, the quality of life of the community, and the potential for economic development in the surrounding area. This research is expected to provide significant contributions to urban development planning, by providing data and information needed by local governments and related parties in formulating sustainable and inclusive policies. With a clearer understanding of the influence of road infrastructure on regional development, it is hoped that the policies taken can maximize the positive potential of road improvements, while minimizing the negative impacts that may arise.

### **1.2 Problem Identification**

The improvement of Jalan Anwar Idris in Tanjungbalai City is part of an effort to improve transportation infrastructure that can support economic growth and regional development. However, although this project can improve connectivity between regions and increase mobility, its impact on the development of the surrounding areas is still not fully understood. Changes in land use patterns, potential economic inequality, as well as problems of congestion and environmental impacts are issues that need to be explored further. Some of the problems that arise due to the improvement of these road sections include the increase in land prices around the road sections, which has the potential to marginalize people with low purchasing power. In addition, the increase in vehicle volume that is not balanced with effective transportation management can cause congestion, which in turn reduces time efficiency and increases air pollution. In fact, the impact of improving road sections on the quality of life of the community, both in terms of accessibility, public services, and economic opportunities, has not been studied in depth. These phenomena highlight the importance of better understanding how the improvement of these road sections affects regional development and the socio-economic life of surrounding communities, and how mitigation efforts can be made to make the impacts more inclusive and sustainable.

### **1.3 Problem Formulation**

Based on the identification of the problems that have been explained, the formulation of the problem in this study is as follows:

1. How will the improvement of Jalan Anwar Idris have an impact on changes in land use patterns around the area?
2. What impact will the improvement of Jalan Anwar Idris have on economic growth and socio-economic inequality in the surrounding area?
3. How does the improvement of Jalan Anwar Idris affect the quality of transportation, including congestion and air pollution, in Tanjungbalai City?
4. To what extent has the improvement of Jalan Anwar Idris impacted the quality of life of the people around the area, especially in terms of accessibility, public services and economic opportunities?
5. What are the challenges faced in managing the social, economic and environmental impacts of the improvement of Jalan Anwar Idris?

### **1.4 Benefits of research**

1. Academic Benefits
  - As a scientific study material in the field of regional and urban planning, particularly regarding the relationship between infrastructure development and regional growth.
  - Contributing to theory related to the impact of road construction on social, economic and spatial changes in urban areas.
2. Practical Benefits
  - a. For Local Governments:

- As evaluation material for the impact of road infrastructure development on city development.
- To be the basis for further development planning so that regional growth is more even and focused.
- Supporting the formulation of transportation and spatial planning policies based on data and community needs.

b. For the Community and Business Actors:

- Providing information regarding the potential for business development around the improved road sections.
- Increasing public understanding of the importance of participation in maintaining and utilizing the infrastructure that has been built.

3. Environmental and Social Benefits

- Assist in sustainable land use planning, so that regional growth does not have a negative impact on the environment.
- Encourage the creation of better accessibility and connectivity between regions, thereby improving social welfare and equitable development.

### 1.5 Scope of Research

In this study, the scope is divided into 3 consisting of material, time, and area, which has the following scope:

1. Scope of Area (Spatial)

The research focused on Jalan Anwar Idris and the surrounding areas that are directly affected by the improvement of the road infrastructure. The study area includes:

- The main corridor of Jalan Anwar Idris, from the starting point to the end of the improved road section.

2. Time Scope (Temporal) This research covers:

- Condition after upgrade, to see the changes that occurred after the project was completed.

3. Scope The substance of this research discusses three main aspects:

- Physical aspects, including changes in road conditions and their impact on regional accessibility and connectivity.
- Socio-economic aspects, including the impact on community economic activities, business patterns, population mobility, and social change.
- Spatial planning and land use aspects, such as shifting land functions from residential to commercial or services, as well as the impact on land values and regional development.

4. Research Limitations

- This study does not cover technical aspects of road construction, such as materials or construction methods.
- The economic analysis is descriptive in nature, not extending to investment analysis or financial feasibility studies of the project.
- Primary data is limited to the results of field observations and interviews with related parties, such as the community, business actors, and local government officials.

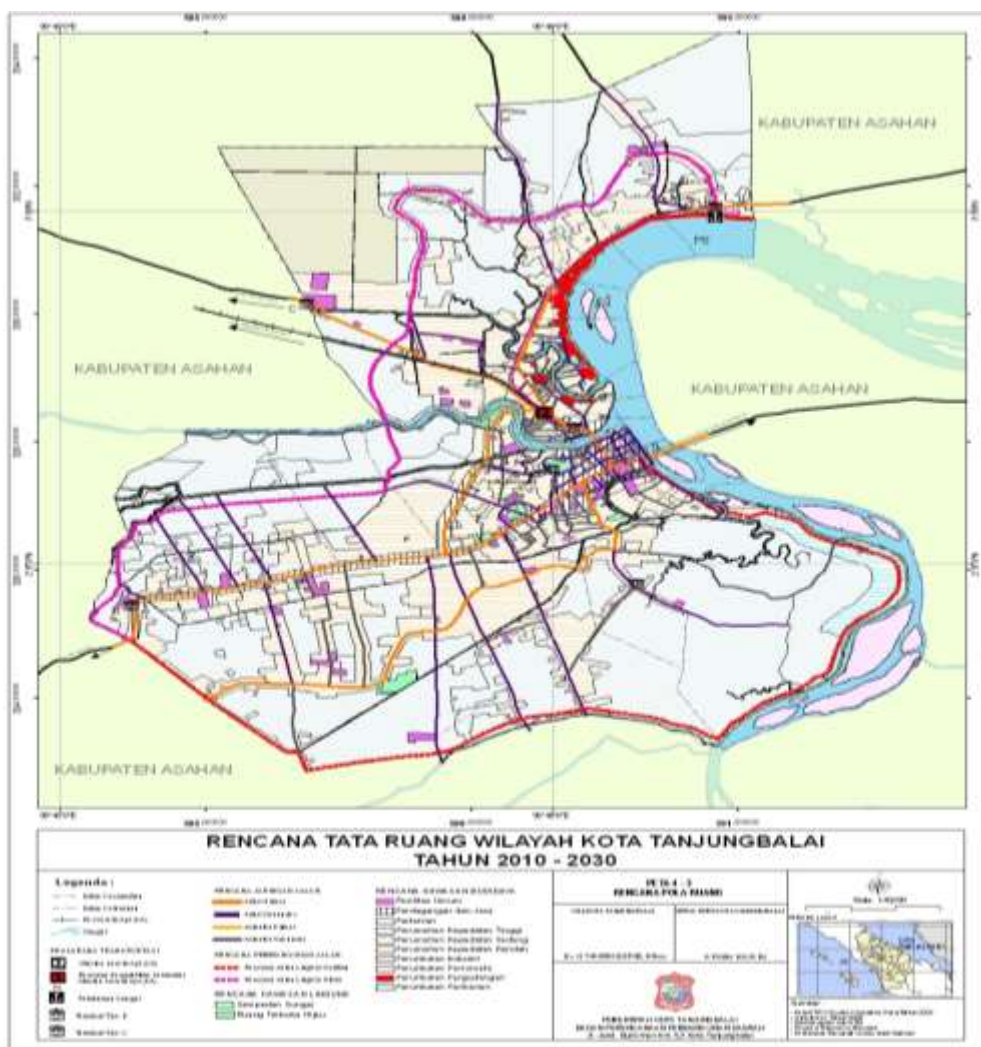


Figure 1. Map of Research Area Scope

## LITERATURE REVIEW

### 2.1 Road Infrastructure Improvement and Its Impact on Regional Development

Road infrastructure improvements play an important role in driving regional development. According to Goh et al. (2022), improving road quality can affect almost all sectors of regional development, from improving accessibility to broader regional integration. Better roads improve the mobility of people and goods, and open up opportunities for new investment. In the context of improving Jalan Anwar Idris, better road quality can reduce travel time between economic centers and facilitate access to public facilities, which in turn supports the growth of local sectors such as trade, industry, and services.

### 2.2 Impact of Road Improvement on Local Economy

Road construction or improvement is often directly related to the economic progress of a region. A study by Harahap (2022) revealed that improving roads reduces transportation costs and increases the efficiency of goods distribution. Improving road quality can speed up the flow of goods and open up new, previously isolated markets, as well as connecting more developed economic areas with more backward areas. In this case, improving the Anwar Idris Road section can open up new opportunities for local entrepreneurs, as well as speed up the distribution of goods in the region.

### 2.3 Road Improvement and Regional Accessibility

Accessibility is one of the main impacts of road construction. Siregar and Arifin (2022) explain that road construction increases regional accessibility, which has a direct impact on increasing employment opportunities, social facilities, and investment attractiveness. Better access also reduces social inequality by giving people more

choices in finding work or accessing basic services such as education and health. Good roads connect residential areas with centers of economic activity, accelerating the growth of the area.

#### **2.4 The Impact of Road Infrastructure Improvement on the Development of Other Infrastructure**

Hasibuan et al. (2022) argue that improving roads also encourages the development of other infrastructure, such as electricity networks, clean water, and health facilities. Better roads attract investors and encourage the government to invest in the development of better public facilities. In Tanjungbalai City, improving the Anwar Idris Road section has the potential to improve the quality of life of residents by increasing access to social facilities and basic infrastructure.

#### **2.5 Social and Environmental Impacts of Road Improvement**

Although road improvements bring many economic benefits, their social and environmental impacts cannot be ignored. Martono (2022) stated that road construction can often cause environmental damage or changes in the social structure of society, such as population relocation or changes in lifestyle. Therefore, in planning the improvement of Jalan Anwar Idris, it is important to pay attention to environmental and social aspects so that this project can provide comprehensive benefits without causing harm to the surrounding community.

### **RESEARCH METHODS**

#### **3.1 Research Approach**

This study uses a qualitative approach with a case study design to better understand the impact of the improvement of Jalan Anwar Idris on regional development in Tanjungbalai City. A qualitative approach was chosen because it can provide a deeper understanding of the perceptions, experiences, and impacts felt by the community and related stakeholders (Goh et al., 2022).

#### **3.2 Types of Research**

This study is a descriptive study that aims to describe the conditions that occur after the improvement of the Anwar Idris Road section. With a descriptive approach, this study focuses on understanding existing phenomena and providing an overview of the changes that occur in the area due to road construction (Siregar & Arifin, 2022).

#### **3.3 Research Location**

This research was conducted in Tanjungbalai City, especially around Jalan Anwar Idris. The selection of this location was based on the ongoing road improvement project, which is believed to have an impact on the development of the area and surrounding community.

#### **3.4 Research Subjects**

The research subjects consisted of two main groups:

- The community around Jalan Anwar Idris directly feels the impact of road improvements, including changes in accessibility, mobility, and quality of life.
- Local stakeholders such as local governments, local entrepreneurs, and city planners are involved in the planning and implementation of road improvement projects.

#### **3.5 Data Collection Techniques**

Data was collected using the following techniques:

- In-depth Interviews: Interviews were conducted with local communities, business owners, and relevant stakeholders to gain perspectives on the impact of road improvements on their lives.
- Field Observation: Researchers will conduct direct observations around Jalan Anwar Idris to identify changes that occur in the area, both in terms of infrastructure, mobility, and economic development.
- Documentation Study: The researcher will collect documents related to road improvement projects and regional planning from relevant government agencies.

#### **3.6 Research Instruments**

The instruments used in this study include:

- Interview Guide: Used to gather in-depth information about the impact of road improvements on regional development. The interview guide will include questions that focus on social, economic, and environmental changes resulting from road improvements (Hasibuan et al., 2022).

- Observation Sheet: Used to record physical changes around Jalan Anwar Idris, such as changes in land use, traffic density, and economic activity.
- Project Documentation: Collecting data regarding the planning and implementation of the project, including the budget, schedule, and objectives of the project.

### **3.7 Data Analysis Techniques**

The collected data will be analyzed using descriptive qualitative analysis techniques. According to Martono (2022), qualitative data analysis aims to understand the meaning behind the observed phenomena and explore the relationships between themes. The steps taken are as follows:

- Data Reduction: Filtering and simplifying data collected from interviews, observations, and documentation.
- Data Categorization: Grouping data into relevant categories, such as social, economic, and environmental impacts.
- Data Interpretation: Analyze data to draw conclusions about the impact of road improvements on regional development.
- Triangulation: To ensure data validity, triangulation was carried out between interviews, observations, and documentation.

### **3.8 Validity of Data**

To ensure the validity of the data, this study will use source triangulation techniques, namely comparing interview results with direct observations and available project documentation (Harahap, 2022). In addition, member checks will be carried out by asking participants to verify their interview results to ensure the accuracy of the information provided.

## **RESULTS AND DISCUSSION**

### **What is the effect of increasing the Jalan Anwar Idris section on changes in land use patterns around the area?**

The improvement of the quality and capacity of Jalan Anwar Idris in Tanjungbalai City has a significant impact on changes in land use patterns in the surrounding area. Wider, better maintained, and more efficient roads in channeling vehicle traffic provide better access between areas, which in turn affects the dynamics of land use around the road.

#### **1. Increasing the economic value of land around Jalan Anwar Idris**

One of the most obvious impacts of the road improvements is the spike in land prices along the road. Better infrastructure increases the attractiveness of the area to investors and property developers. With easier access and shorter travel times, the area around Jalan Anwar Idris has become more desirable for various purposes, such as housing development, shopping centers, offices, and other commercial facilities. As a result, there has been a shift in land use patterns, where previously the area may have been more dominantly used for open land or agriculture, now more is being diverted to residential or commercial development.

#### **2. Changes in Land Use from the Agricultural Sector to the Non-Agricultural Sector**

Before the road improvements, much of the land around Jalan Anwar Idris was used for agricultural activities or vacant land. However, with the construction of better roads and increased accessibility, many landowners chose to convert their land into housing or commercial businesses. The urbanization process triggered by this increased accessibility has encouraged the conversion of land from the agricultural sector to non-agricultural sectors, such as housing, shophouses, and public facilities. This has the potential to reduce the area of agricultural land in the area, which in turn affects food security and the environment.

#### **3. Occurrence of Regional Fragmentation and Inequality in Land Use**

While the upgrading of Anwar Idris Road brings many opportunities, there is also the risk of regional fragmentation and inequality in land use. Areas close to the upgraded road tend to receive more attention in terms of property development, while areas further away or not directly accessible by the road may be left behind. This regional fragmentation can lead to an imbalance between the city center and the outskirts, with areas closer to the main road developing faster, while other areas remain stagnant.

#### **4. Influence on Spatial Planning and Land Management Regulations**

Road improvements also affect urban spatial planning and land use management. Local governments may need to adjust regulations or spatial planning to accommodate the development growth triggered by road improvements. Without proper regulations, land misuse can occur, such as development that is not in accordance with the spatial plan or land misuse for uses that are not in accordance with the designated zone, such as commercial development in areas that should be designated for green open space or housing.

#### **5. Social Impacts of Changes in Land Use Patterns**

In addition to economic impacts, changes in land use patterns also have social implications. Rising land prices can lead to displacement of people, especially low-income people, who are forced to sell their land or move to areas further from the city center. This can put additional pressure on other areas that are not covered by improved road infrastructure, and increase social inequality between people living in developing areas and inaccessible areas. Overall, the improvement of Jalan Anwar Idris in Tanjungbalai City has triggered significant changes in land use patterns in the surrounding area. Although there is positive potential in terms of economic growth and urbanization, there needs to be more attention to spatial management and inclusive development policies so that these changes can provide equitable benefits to all parties and minimize negative impacts, especially related to socio-economic inequality.

#### **What impact will the improvement of Jalan Anwar Idris have on economic growth and socio-economic inequality in the surrounding area?**

The improvement of Jalan Anwar Idris in Tanjungbalai City not only affects the physical aspects of infrastructure, but also has a significant impact on economic growth and socio-economic dynamics in the surrounding area. With the increased accessibility offered by better roads, the potential for economic growth in this area increases, but on the other hand, various challenges related to socio-economic inequality also arise that need to be considered.

##### **1. Increased Economic Activity and Access to Markets**

One of the main impacts of the improvement of Jalan Anwar Idris is to facilitate the flow of goods and services, which in turn increases economic activity in the area. Better roads provide faster access between the city center and the suburbs, facilitating the distribution of goods and services and facilitating the mobility of workers and consumers. This has the potential to strengthen the local trade sector, open up new business opportunities, and increase the competitiveness of products produced by small and medium enterprises (SMEs) around the area. In addition, with the increasing ease of access, investors are also more interested in investing in areas connected by Jalan Anwar Idris, both to build shopping centers, housing, and other commercial infrastructure. This more intensive economic activity can drive faster economic growth, create jobs, and increase the income of people around the area.

##### **2. Increase in Land Value and Property Investment**

Improvements in road infrastructure are usually accompanied by a spike in land prices in the surrounding area. Land that was previously lower in value now becomes more valuable due to the increased attractiveness of the area for property development. This is attractive to investors and property developers who want to take advantage of the now more strategic location. However, the impact of this spike in land prices can create socio-economic inequality, especially for people living in areas with low incomes. People who cannot afford to keep up with rising market prices may be forced to sell their land or move to further areas, leaving them marginalized from the economic development that is taking place. This has the potential to create a gap between people who have access to economic opportunities and those who do not have the ability to compete in an increasingly expensive property market.

##### **3. Socio-Economic Disparities Between Connected and Unconnected Areas**

One of the problems that has emerged as a result of the improvement of Jalan Anwar Idris is the increasingly sharp disparity between areas directly connected by the improved road and areas that are further away or not reached by the infrastructure. Areas connected to this road have the potential to develop rapidly, with increased investment, easy access to markets, and improved quality of life for the community. Conversely, areas that do not have direct access or are isolated from road improvements may remain behind, both in terms of economic development, quality of education, and access to health services. This disparity can further exacerbate socio-economic disparities, with people living in areas better connected by roads tending to enjoy improved quality of life, while people living in more remote areas continue to face limited access and opportunities.

#### **4. Job Creation and Impact on Employment**

Significant road improvements, especially in terms of new commercial and property developments, open up employment opportunities for local residents. The construction, trade and public service sectors are experiencing an increased demand for labor, which can increase the income of local residents. The creation of these jobs can reduce unemployment and improve the standard of living of people in the area. However, if it is not balanced with efforts to improve skills and training for local workers, there is a risk that the jobs created will be filled more by workers from outside the region, which does not provide direct benefits to the local community. This can lead to inequality in the distribution of employment and economic opportunities in the region.

#### **5. Environmental Impact and Quality of Life**

Road improvements can also cause environmental changes that affect people's quality of life. Increased traffic volumes can cause air pollution, noise, and other potential environmental damage. People living around the road, especially those in previously quieter areas, may experience negative impacts in the form of decreased air quality and disruption to the comfort of life. While there is potential for improving the quality of life through better access to public facilities and economic opportunities, negative impacts on the environment can exacerbate social inequality, with only a select few able to access better living spaces, while the majority of society must deal with the adverse impacts of such development. Overall, the improvement of Jalan Anwar Idris has a complex impact on economic growth and socio-economic inequality in the surrounding area. While there is great potential to boost the local economy and create jobs, the challenges of social and economic inequality must still be addressed. Therefore, more inclusive and sustainable planning and management of infrastructure development is essential to ensure that the benefits of road improvements can be felt evenly by all levels of society.

#### **How the improvement of Jalan Anwar Idris affects the quality of transportation, including congestion and air pollution, in Tanjungbalai City**

The improvement of Jalan Anwar Idris in Tanjungbalai City aims to improve transportation infrastructure, smooth traffic flow, and increase travel efficiency in the city. However, as with other road improvement projects, the impact on transportation quality, congestion, and air pollution depends largely on the extent to which road construction is balanced with effective traffic management and environmental policies.

##### **1. Improving Transportation Quality and Accessibility**

One of the main objectives of improving the road section is to improve the quality of transportation by facilitating the flow of vehicles. With wider and better condition roads, vehicles can move more smoothly, reducing travel time between regions, and increasing accessibility to various important facilities in Tanjungbalai City. People who previously had to go through damaged or narrow roads can now enjoy a more comfortable and efficient journey. This of course has a positive impact on the economic sector, where goods and services can be distributed faster and workers can move between regions more easily. This improvement also allows heavy vehicles, such as trucks and other commercial vehicles, to pass more freely, which can help smooth the distribution of goods and support the development of the trade and industry sectors in the region. This improvement in the quality of transportation facilitates the connection between the city center and the suburbs, which opens up new opportunities for local economic development.

##### **2. Potential for Congestion at Certain Points**

Although road improvements can improve overall traffic flow, there is potential for congestion at certain points, especially at poorly managed intersections. Increasing road capacity can attract more vehicles to pass through, including private vehicles, public transportation, and heavy vehicles, which in turn can lead to increased traffic congestion, especially during peak hours. If traffic management is not accompanied by comprehensive transportation system improvements, such as effective traffic light arrangements, the construction of dedicated public transportation lanes, or better parking management, congestion will remain a significant problem. Meeting points or intersections that are not optimal in terms of infrastructure design can result in obstacles to smooth traffic flow, potentially reducing the benefits of road improvements.

##### **3. Impact on Air Pollution**

Road improvements can lead to an increase in the volume of vehicles passing through, which in turn can affect air quality in Tanjungbalai City. Although improving road infrastructure can reduce travel time, increasing the number of vehicles, especially private vehicles and heavy vehicles, has the potential to increase air pollution. More

vehicles on the road will produce greater exhaust emissions, which can worsen air quality, increase CO<sub>2</sub> levels, and cause air pollution. This increase in air pollution can have a negative impact on public health, especially for those living around the improved roads. High air pollution can cause respiratory problems, such as asthma and other lung disorders, and increase the risk of heart disease. In addition, this negative impact also affects the quality of life of the community who must adapt to higher levels of noise and pollution due to the increase in vehicle volume.

#### **4. Solutions to Reduce Congestion and Air Pollution**

To overcome the negative impacts that may arise, such as congestion and air pollution, several steps need to be taken by the city government and related parties. First, there needs to be a more sustainable transportation policy, such as improving the efficient and environmentally friendly public transportation system. The development of bicycle lanes, comfortable pedestrians, and better public transportation facilities can help reduce dependence on private vehicles and reduce congestion. Second, the implementation of technology to manage traffic, such as traffic light settings based on artificial intelligence (AI) to reduce congestion, can help smooth the flow of vehicles and reduce waiting times at intersections. In addition, policies related to vehicle emission restrictions or incentives for the use of environmentally friendly vehicles such as electric cars or electric motorbikes can also help reduce air pollution caused by motor vehicles.

#### **5. Spatial Planning and Environmental Management**

In addition, the management of green open spaces and the development of environmentally friendly areas along the road are also very important to minimize the negative impact on air quality. The government can introduce more green open spaces that function as a counterbalance to air pollution while providing recreational areas for the community. Overall, the improvement of Jalan Anwar Idris has a positive impact on the quality of transportation and accessibility, but also presents challenges in the form of potential congestion and increased air pollution. Therefore, more holistic planning and sustainable policies are needed to manage these impacts, so that the benefits of road improvements can be felt optimally without sacrificing the quality of life of the community and environmental sustainability.

#### **To what extent has the improvement of Jalan Anwar Idris impacted the quality of life of the people around the area, particularly in terms of accessibility, public services and economic opportunities?**

The improvement of Jalan Anwar Idris in Tanjungbalai City has brought significant changes to the lives of people living around the area. With better and more efficient road infrastructure, the impact can be felt in various aspects of life, including accessibility, public services, and economic opportunities. On the other hand, this change also presents challenges that need to be managed properly so that the benefits obtained can be felt by all levels of society.

##### **1. Increased Accessibility and Mobility**

One of the most immediate impacts felt by the community is increased accessibility. Previously, narrow or damaged roads may have limited people's movement, both in carrying out economic activities and in meeting daily needs. With the widening and repair of Jalan Anwar Idris, the community now has easier access to various important facilities, such as markets, hospitals, schools, government offices, and other centers of economic activity. Ease of travel not only saves travel time, but also increases population mobility. People living in the suburbs can now easily access the city center for work or shopping, while those who were previously hampered by poor road conditions can now more easily travel outside the city. This certainly improves the quality of life of the community, because they can access various services and opportunities more quickly and efficiently.

##### **2. Better Access to Public Services**

The improvement of Jalan Anwar Idris also has a positive impact on the accessibility of public services. Health services, education, and government administration have become more accessible to people living around the road. Hospitals, health centers, schools, and government offices that were previously difficult to reach due to poor road conditions are now closer and easier to reach. For example, people who need emergency medical services can now get to the nearest hospital more quickly without having to get stuck in traffic jams or damaged roads. The same goes for education and government administration services, which previously may have taken longer to reach for residents from remote areas. The improvement of this road accelerates access to basic services, which directly contributes to improving the quality of life of the community.

### **3. Increased Economic Opportunities**

The improvement of this road section also opens up greater economic opportunities for the surrounding community. With better access, local entrepreneurs, farmers, and traders can more easily market their products to a wider market. Better accessibility reduces transportation costs, facilitates the distribution of goods, and increases trade efficiency. On the other hand, for large business actors and investors, road improvements increase the attractiveness of this area for investment and business development, such as the construction of housing, shopping centers, and other commercial facilities. For people looking for work, improved accessibility opens up more job opportunities. This infrastructure improvement encourages the development of the trade, service, and industrial sectors, which in turn creates new jobs for local residents. In addition, people can also gain easier access to employment centers that may have previously been difficult to reach, increasing their chances of getting better jobs.

### **4. Impact on Land Prices and Land Use Conversion**

As the quality of the road improves, land prices around the area tend to increase. This increase can have a positive impact on those who own land around the road, as the value of their land becomes higher. However, this can also cause problems for low-income people who are forced to sell their land to meet economic needs. In addition, the conversion of land use from open areas to housing or commercial facilities can increase local government revenue through taxes and levies. However, this can also create socio-economic inequality, where those with greater financial access will benefit from the development, while the less fortunate may be affected by the increased cost of living and higher land price pressures.

### **5. Congestion and Pollution Challenges**

While there are many positive impacts resulting from road improvements, there are also challenges that arise, such as traffic congestion and air pollution. Improving road quality has the potential to attract more vehicles to pass through, both private and commercial vehicles. This increase in vehicle volume can cause congestion during peak hours, which reduces transportation efficiency and increases stress levels for the community. In addition, increasing the number of motorized vehicles risks increasing air pollution, which can negatively impact public health. Higher air pollution can cause respiratory problems, especially for children and the elderly. Therefore, while road improvements improve quality of life in terms of accessibility and economic opportunities, challenges related to congestion and pollution need to be addressed so that people's quality of life is not compromised.

Overall, the improvement of Jalan Anwar Idris has a broad impact on the quality of life of the community around the area. Increased accessibility, ease of access to public services, and greater economic opportunities are the main benefits felt by the community. However, attention is also needed to address challenges such as congestion, air pollution, and socio-economic inequality so that this development can provide sustainable benefits for all levels of society.

### **What are the challenges faced in managing the social, economic and environmental impacts of the improvement of Jalan Anwar Idris?**

The improvement of Jalan Anwar Idris in Tanjungbalai City brings various benefits, both in terms of social, economic, and infrastructure. However, every major road construction project always faces complex challenges, especially in managing social, economic, and environmental impacts. To ensure that the benefits of the improvement of this road section can be felt evenly and sustainably, there needs to be deep attention to the various challenges that arise.

#### **1. Challenges in Managing Social Impact**

##### **a. Socio-Economic Inequality**

Improved road quality, while positive for most people, can lead to greater social inequality. The increase in land and property prices that accompany infrastructure development can benefit landowners, but can also hurt low-income people who cannot access these opportunities. Those living in areas experiencing rising land prices may be forced to sell their land or be marginalized from development, leaving them homeless or facing higher living costs.

##### **b. Changes in Community Lifestyle Patterns**

Significant road infrastructure development can cause changes in people's lifestyles, especially for those who are accustomed to a quieter environment away from the hustle and bustle of the city. Increased vehicle volume, air pollution, and increased noise can reduce the quality of life for people along the road. In addition, rapid increases in

mobility are often accompanied by the emergence of commercial sectors that can change the way of life of local people, which is not always positive.

## **2. Challenges in Managing Economic Impact**

### **a. Impact on Local Entrepreneurs**

Road improvements can open up new economic opportunities by improving the distribution of goods and services and attracting foreign investors to invest in the area. However, there is a risk that local entrepreneurs, especially small and medium-sized ones, may not be able to compete with the presence of large businesses brought in by foreign investors. Small businesses that are unable to compete with large distribution networks and capital may be marginalized, which will only worsen economic inequality in the area.

### **b. Dependence on Road Infrastructure**

As better roads provide increased accessibility, many economic sectors will rely on this infrastructure for the smooth distribution and movement of goods. This makes the region highly dependent on the quality of the newly repaired roads. If the quality of the roads declines due to lack of maintenance or mismanagement, the economic sectors that rely on this infrastructure could be disrupted. In addition, the potential for a surge in vehicle numbers and congestion could also worsen economic efficiency, reduce productivity, and affect trade and industry.

## **3. Challenges in Managing Environmental Impacts**

### **a. Air Pollution and Noise**

Improved road sections will increase the number of vehicles passing through, both private vehicles, public transportation, and heavy vehicles. Although it can facilitate transportation, the increase in the number of vehicles has the potential to cause increased air pollution and noise around the area. Increased air pollution can worsen the quality of public health, especially for those who are susceptible to respiratory diseases and heart disorders. In addition, increased noise due to high traffic volumes can disrupt the comfort of people's lives, especially those living close to newly repaired roads.

### **b. Ecosystem Changes and Loss of Green Open Space**

Road improvements often involve rezoning open spaces and surrounding land, which can impact local ecosystems. Loss of green spaces, agricultural land, or water catchment areas can lead to wider environmental degradation. Changes to more commercial and dense land uses can reduce space for biodiversity and worsen the impacts of flooding and climate change. Therefore, road development planning must consider environmental sustainability, by maintaining a balance between development and nature conservation.

## **4. Challenges in Traffic Planning and Management**

### **a. Congestion and Traffic Management**

Road improvements can lead to more vehicles passing through, which in turn can lead to congestion problems. Traffic congestion in areas with better access can reduce transportation efficiency and increase travel times, especially during peak hours. Although wider roads can accommodate more vehicles, without a good traffic management system, congestion problems can persist and even worsen. Parking management, intelligent traffic light arrangements, and the development of efficient public transportation systems are important challenges in managing the impacts of road improvements.

### **b. Infrastructure Financing and Maintenance**

One of the biggest challenges in managing the impacts of road improvements is financing and maintaining the road infrastructure itself. While new roads can be built quickly, long-term maintenance to ensure the quality of the road remains good is an ongoing task. Without proper maintenance, newly built roads can quickly deteriorate, reducing their benefits to society. Furthermore, to keep roads free of congestion, further investment in traffic management and the development of alternative transportation is needed. Overall, while the improvement of Jalan Anwar Idris can provide many benefits, the challenges associated with social, economic and environmental impacts must be managed wisely. Careful planning, inclusive policies and ongoing maintenance of infrastructure and the environment will greatly determine the extent to which negative impacts can be minimized and the benefits of this project can be felt by all levels of society.

## **CLOSING**

### **Conclusion**

The improvement of Jalan Anwar Idris has a significant impact on the development of the area in Tanjungbalai City. From a social perspective, the improvement of this road opens up better accessibility for the community in accessing public services, such as education, health, and transportation. However, there is the potential for socio-economic inequality, especially for low-income communities, who are marginalized by the spike in land and property prices around the area. From an economic perspective, these road improvements speed the movement of goods and services, increase economic opportunities, and encourage investment, but they can also present challenges for small local businesses who cannot compete with larger businesses moving into the area. On the environmental side, there are negative impacts that need to be considered, such as increased air and noise pollution and changes in the ecosystem due to land conversion. Other challenges also arise in terms of managing traffic congestion, road maintenance, and managing natural resources and the environment. Overall, although the improvement of Jalan Anwar Idris brings various benefits, careful planning and proper impact management are essential so that these benefits can be felt by all levels of society and to maintain environmental sustainability.

### **Suggestion**

1. **Inclusive Development Planning:** Road infrastructure development must take into account the economic diversity of local communities, ensuring that low-income communities are not marginalized by changes in land and property prices.
2. **Efficient Traffic Management:** To reduce potential congestion, better traffic management needs to be implemented, including the development of public transportation and sophisticated traffic management systems.
3. **Improving Environmental Quality:** The government needs to prioritize environmentally friendly policies, such as controlling air pollution, noise, and managing green open spaces that can maintain the balance of the ecosystem.
4. **Sustainable Infrastructure Maintenance:** Adequate budget and mechanisms are needed for the maintenance of roads and related infrastructure to ensure road quality is maintained and long-term benefits are achieved.
5. **Community Involvement in Decision Making:** Local governments should involve communities in the decision-making process related to infrastructure planning and development to ensure their needs are met.

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