

Assessment of Ahmad Yani Road Infrastructure in Tegal City as an Urban and Tourism Road Based on Road Safety Inspection

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ABSTRACT

Ahmad Yani Street is one of the main roads in Tegal City with a strategic function as a connector between urban areas and tourist destinations. Although classified as an urban road, its existing condition does not fully comply with technical standards. The sidewalks and shoulders are wider than the vehicle lanes, and the one-way traffic system makes the corridor more pedestrian-oriented. This study aims to analyze the suitability of Ahmad Yani Street's function as an urban and tourism road. The research method used was descriptive comparative through field observation, documentation, and analysis based on standards from Bina Marga and the Ministry of Public Works and Housing. The results show that Ahmad Yani Street has more characteristics of a tourism road due to its high aesthetic quality and pedestrian comfort, although the traffic performance for motorized vehicles remains limited. Ahmad Yani Street in Tegal City, with its pedestrian-oriented characteristics and high aesthetic quality, aligns more with the function of a tourism road than an urban road. While it provides comfortable spaces for pedestrians and enhances the tourist experience, the street's infrastructure does not fully meet the technical standards for urban roads, particularly in terms of vehicle lane width and traffic management.

INTRODUCTION

Infrastructure road is element important in system functioning transportation support mobility, connectivity and growth economy an area. Infrastructure road own role strategic in increase efficiency movement and strengthening structure economy area urban (Shi et al., 2024). Roads are not only become means movement vehicles, but also plays a role as room supportive public activity social and economic community. Infrastructure development road in a way sustainable play a role significant in increase connectivity interregional and efficiency mobility society, which ultimately push growth economy area as well as welfare social (Rosik & Wójcik, 2023). Jalan Ahmad Yani has function strategic as corridor main connecting area urban with center activities and destinations tour such as Beautiful Natural Beach (*PAI*). In general classification, road This including category road urban, but condition existing show mismatch to standard technical. Width of sidewalk and road shoulder relatively big compared

to track vehicles, as well as implementation system One direction cause function road more activity - oriented pedestrian feet (Chuang & Chen, 2025). Condition the increase comfort and aesthetics corridor (Qin et al., 2025), but lower performance Then cross frequent vehicles experience traffic jam at time certain (Biswas et al., 2021). Non-conformity This seen from comparison wide track more vehicles narrow compared to sidewalk. Condition This cause decline capacity roads and potential conflict Then cross, especially consequence vehicles that come out enter and parking area on the edge road (Thakur et al., 2023). During rush hour, the situation the often result in accumulation current vehicles in several segment. In addition, the implementation of system One direction of course help arrangement current, but also triggers accumulation vehicle parking at the point meeting current consequence Then cross that is not evenly distributed (Osama & Sayed, 2017; Rhoads et al., 2023). The existence of vehicle parking on the shoulder of the road participates make things difficult room movement vehicle and lower-level service (Level of Service) (Ahmed et al., 2025).

Study of performance road urban generally focus on level service (Level of Service), capacity, and impact policy One direction to efficiency Then cross (Boeing & Riggs, 2022). Implementation system One direction can influence efficiency network road and distance travel vehicles, so that evaluation performance road urban required for evaluate level service and effectiveness policy Then traffic applied in the area congested vehicle (Babić et al., 2020). Decrease quality facility supporters' safety like markings and lighting road correlated direct with increasing potential road accident urban (Huang et al., 2025). Research This become important remember the role of Jalan Ahmad Yani is not only as track mobility main, but also as face a city that reflects image Tegal tourism. Without evaluation based standard technical and safety, potential conflict function between vehicles, pedestrians, and tourists can hinder accessibility, lowering comfort, as well as reduce mark economy area. Meanwhile that, study about road tourism and streetscape emphasize aspects of walkability and comfort pedestrians, and quality aesthetics room road (Tseng et al., 2021). However, research that specifically direct compare One section road towards two functions – urban and tourism – is still very limited, especially in cities medium like Tegal. This is show existence gap research gap in understand connection between function double road, performance Then cross, and character room public (Bivina et al., 2019; Guzman et al., 2020; Vallejo-Borda et al., 2020).

Based on condition said, research This aim for analyze suitability the function of Jalan Ahmad Yani, Tegal City with standard road urban and road tourism, as well as evaluate characteristics infrastructure road through approach descriptive comparative based on results observation field and analysis to standard Highway Engineering (Suryani et al., 2021). Research results expected can become base for government area in formulate policy arrangement corridor road supportive urban areas safety, efficiency mobility, and power pull tour city in a way sustainable development infrastructure capable path balance function mobility urban with comfort and aesthetics area tourism (Muryanti & Herman, 2021).

The purpose of this research is to analyze the suitability of Ahmad Yani Street's function as an urban and tourism road based on road safety inspection standards. The specific objectives are: (1) to evaluate existing physical conditions and road facilities through field observation; (2) to compare observed conditions against technical standards for urban roads and tourist roads; (3) to identify potential dangers and risks to road users using the RSI approach; (4) to quantify suitability levels for both road functions; and (5) to formulate evidence-based

recommendations for corridor development. The contribution of this research is to provide a replicable methodology for dual-function road assessment while generating specific policy guidance for Tegal City's corridor development. The benefits of this research extend to local government (evidence-based infrastructure planning), urban planners (assessment methodology), transportation engineers (safety prioritization), and the community (improved road safety and comfort).

METHOD

This study was conducted along Jalan Ahmad Yani, Tegal City. The method used was descriptive comparative (Aziz et al., 2024) Where stages First that is studies literature Highway standards for road urban, then to be continued with primary data collection through observation field and measurement direct physical parameters road, and at the stage end done analysis of the primary data obtained compared to with Highway standards.

Data obtained analyzed with method descriptive comparative through three stages, namely:

1. Analysis condition existing, for describe condition physical and facilities road based on results observation.
2. Analysis comparison, for compare results observation to standard technical road urban and road tourist.
3. Analysis safety road, using IKJ's approach to identify potential dangers and risks to user.

Level of suitability between condition existing and standards function counted use Equation (1).

$$K = \frac{C_e}{C_s} \times 100\% \quad (1)$$

Information :

K = level conformity (%)

C_e = existing conditions that meet standards,

C_s = total standard criteria.

Suitability value categorized to be: good (>80%), sufficient (60-79%), and lacking (<60%) (Gao et al., 2022). The results were analyzed used for determine suitability Jalan Ahmad Yani functions as road urban or road tourist as well as become base in compilation recommendation improvement function road.

RESULTS AND DISCUSSION

Analysis condition existing show that Jalan Ahmad Yani, Tegal City has two lanes One direction with wide 3.15 meters lane, 2.5 – 2.8-meter sidewalk, road shoulder narrow, and activity edge high road. Activities pedestrians, vehicles stop, park edge roads and vehicles in out building cause mark obstacle side reached 527, including category obstacle side tall.

Comparison results with standard road urban show that Jalan Ahmad Yani is only meets 4 of the 7 criteria. Grade level suitability based on Equation (1) is 57.14%, including category not enough.

Table 1. Urban Road Suitability

Criteria	Standard	Condition	In accordance
Lane width	≥ 3.25-3.5 m	3.15 m	✓
Roadside	≥ 1.0 m	0.5 m	✓
Sidewalk	≥ 1.5-2.0 m	2.5-2.8 m	✓
Speed Plan	4-60 km/h	≤ 40 km/h	✓
Drainage	There is	There is	✓
Markings & signs	Complete	Part	✓
Crossing	There is	There is	✓

Comparison with standard road tour shows Jalan Ahmad Yani meets 9 out of 10 criteria. Conformity value reached 90%, including category good. The elements are fulfilled covering sidewalk width, space interaction, access pedestrians, facilities crossings, lighting, and organized on-street parking.

Table 2. Suitability of Tourist Roads

Criteria	Standard	Condition	In accordance
Lane width	≥ 2.0 m	2.5-2.8 m	✓
<i>Frontage zone</i>	≥ 0.5-1.5 m	There is	✓
Pedestrian access	Safe	There is	✓
Speed low	≤ 40 km/h	There is	✓
Drainage	There is	There is	✓
Markings & signs	Complete	Part	✓
Crossing	There is	There is	✓

In this aspect performance Then cross, current peak of 1,099 smp/hour and a capacity of 1,670 smp/hour producing degrees saturation 0.66 (LOS C), indicating current congested stable However sensitive to obstacle side.

Table 3. Traffic Performance of Ahmad Yani Street

Parameter	Mark	Unit	Information
Current peak (Q)	1,099	junior high school / hour	
Capacity (C)	1,670	Junior high school / hour	
Degrees Kejenus (DJ)	0.66	-	LOS C

CONCLUSION

Ahmad Yani Street has characteristics as corridor commercial and tourism with activity pedestrians, parking edge roads and movement vehicle slow which causes height obstacle side. Based on results analysis, level suitability to standard road urban recorded by 57.14%, which includes category lacking, especially in the aspect of wide lanes, shoulders, and completeness markings and signs. However, the level of suitability to standard road tour reached 90% and included category good, proven with fulfillment sidewalk width, space interaction public, facilities well- organized crossings, lighting, and on-street parking. Degree saturation of 0.66 indicates level LOS C service, which indicates current congested stable which is influenced by the height activity edge road. In a way overall, Jalan Ahmad Yani is more in accordance functioning as road tour compared to as road urban areas, so that direction development corridor should focused on improving pedestrian facilities and safety user's road.

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