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**NUEVA ECIA UNIVERSITY OF SCIENCE AND TECHNOLOGY**

Cabanatuan City, Nueva Ecija, Philippines

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**COLLEGE OF ENGINEERING**

***Manong, Diyan na Lang po sa Tabi!:***  
**An Innovative, Recreational,  
Doublewide, and All-Terrain  
Traditional Jeepney**

**JOHN MICHAEL A. DEL ROSARIO**

**FHIL WILLIAM M. BENEDICTO**

**MARK JOSHUA W. DE BELEN**

**BRYANT JHON S. SANCHEZ**

**REYNALD M. FERNANDO**

**JOHN MARK A. CALILIW**

**JEMUEL A. VALDEZ**

**ADRIAN V. PACIS**

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**GE 7: SCIENCE, TECHNOLOGY, AND SOCIETY**

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**RATIONALE**

Modern science has developed new inventions that enhance life through different technologies, and the transportation system is no exception. A good example of how time changes the world is in the jeepney, an iconic vehicle that has been an integral part of Filipino culture and daily life for many decades. New improved safety features, better mileage for fuel, and greener technology characterize the modernization of jeepneys, and they satisfy the global calls for sustainability while improving metropolitan mobility. The major drawback, however, is that the traditional jeepneys will eventually be retired into obscurity and left unutilized.

The project focuses on converting a traditional passenger jeepney into a compact, eco-friendly recreational camper vehicle. This new scheme for reusing and rebuilding the conventional jeepney transforms the previous functionality, adds value by preserving its significance, and gives a refreshing functionality with cultural and meaningful reuse. This will give jeepney owners a chance to sell their vehicles to the project instead of scrapping them and regain financial value from what would otherwise be a lost asset.

The project will also open the way back for employment by those carrying out Jeepneys' redesign, conversion, and alteration processes. This job may be handled by mechanics and designers, among other qualified manpower. This makes for economic development and gives people a chance to gain specific skills in vehicle modification. Through this project, alternative uses for the old jeepneys are now open to the small entrepreneurship area because converted jeepneys may serve as income-generating products for new or existing businesses.

This project hopes to contribute to sustainable development, cultural preservation, and economic innovation. It will creatively reimagine the traditional jeepney's use and ensure that these symbols of Filipino heritage continue to serve communities while promoting eco-friendly and community-centered solutions to the challenges posed by modernization.



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### **METHODOLOGY**

In this project, a traditional jeepney will be redesigned and repurposed as a compact, versatile camper vehicle. This transformation will combine the iconic design of the traditional jeep with practical modifications to support comfortable and efficient travel. The project will involve a series of enhancements focused on maximizing space utility, comfort, and functionality while maintaining the cultural aesthetic of the jeepney.

#### **Structure Modification**

The dimensions of the jeepney will be modified to achieve a length of 10.668 meters, a height of 3.698 meters, and a width of 2.75 meters. These adjustments are designed to optimize space and functionality, enhancing the overall comfort and utility of the vehicle while maintaining stability and structural integrity.

An all-terrain wheel system and air suspension chair will be integrated into the jeepney design to enhance its performance across diverse terrains. These additions aim to ensure smoother and more comfortable travel experiences for passengers while improving the vehicle's adaptability to challenging road conditions.

Another modification involves installing a side door near the rear section of the passenger seating area. This addition will allow easier access to the awning canopy area, providing passengers with convenient entry and exit. Furthermore, the side door will facilitate quick access to nearby amenities, such as a sink, restroom, and water dispenser.

The windows will also be upgraded to modern sliding designs, enhancing both functionality and aesthetic appeal. This modification will contribute a contemporary look to the vehicle, providing passengers with a more visually pleasing and practical experience.

#### **Additional Features**

Incorporating additional features will further enhance the functionality of the jeepney. One such feature is the installation of a retractable awning canopy on the side where the new door is located. This canopy will provide a versatile space that can accommodate seating arrangements with chairs and a table, creating an area for relaxation



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or dining. Additionally, it can serve as additional compact cooking area, offering added convenience for extended trips and stops.

The installation of a water tank and water pump is another functional enhancement to the jeepney. The water tank provides a reliable supply of water for an extended period, ensuring that passengers have access to water when needed. The water pump further enhances convenience by enabling easy refilling from external water sources and efficient distribution within the vehicle. Together, these additions significantly improve the jeepney's self-sufficiency and readiness for longer trips.

The water tank will be mounted on the vehicle's roof, with a metal platform installed directly above it. This platform, equipped with side railings, provides additional space for passengers, creating a safe and elevated area that can be utilized when parked at a campsite. This setup not only optimizes space within the vehicle but also offers passengers an extra area for relaxation or activities.

Another addition to the roof will be the installation of a roof tent, providing an additional sleeping area for passengers. This feature enhances the vehicle's utility, especially during extended trips or camping stays. To ensure adequate lighting, floodlights will be mounted on the roof, offering powerful illumination even in dark or low-light areas. Finally, a ladder will be positioned on the side of the jeepney, providing convenient access to the roof, including the tent and other elevated features.

Additional modifications will also be made to the interior of the jeepney. A key enhancement will be the installation of a comfort room, providing passengers with greater convenience and privacy during longer trips. This will be achieved by incorporating glass and aluminum dividers, ensuring both durability and a modern aesthetic.

### **Equipment and Furniture**

Adjacent to the comfort room, a dedicated kitchen area will be incorporated into the jeepney's interior. This space will feature a counter with a built-in countertop stove, sink, and faucet, providing essential facilities for cooking and cleaning. Additionally, drawers will be installed for the organized storage of kitchen equipment and utensils. This



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thoughtful design enhances the vehicle's functionality, offering passengers the convenience of preparing meals while on the move or during extended trips.

The comfort room will be further enhanced with the addition of a toilet bowl and shower, providing essential facilities for personal hygiene. These installations will ensure that passengers have access to basic amenities, contributing to a more comfortable and convenient travel experience.

At the rear-most section of the jeepney, foldable beds and a table will be added to maximize space and provide additional comfort for passengers. These foldable features offer flexibility, allowing the area to be transformed into a resting or dining space when needed.

A study table will be incorporated to enhance the jeepney's functionality, providing passengers with a dedicated space for work or study. Adjacent to the study table, a refrigerator will be installed, offering convenient storage for food and beverages.

To maximize storage capacity, hanging cabinets will be installed above the foldable beds and study table. These cabinets will provide additional space for storing personal belongings, travel essentials, or other items, ensuring a clutter-free environment inside the jeepney.

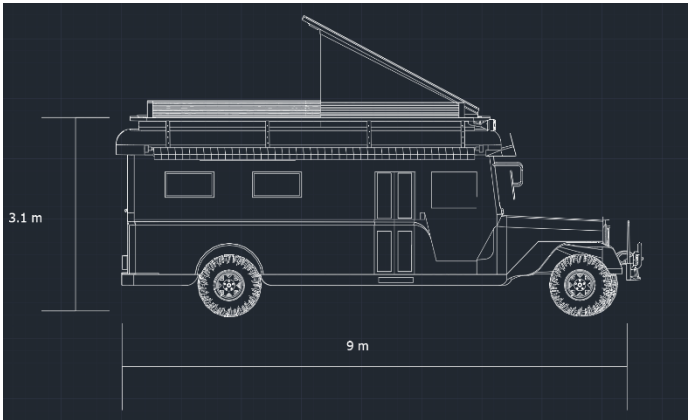
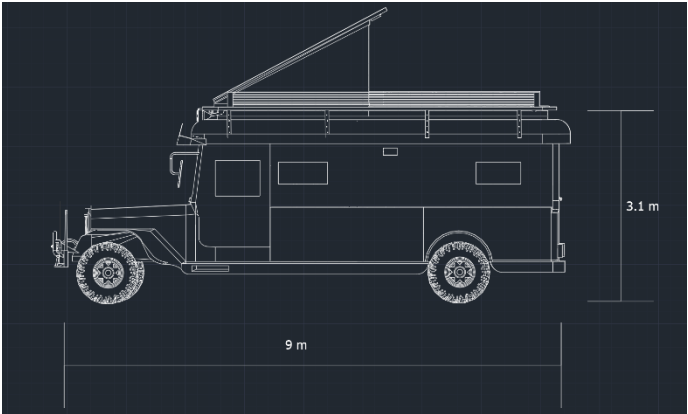
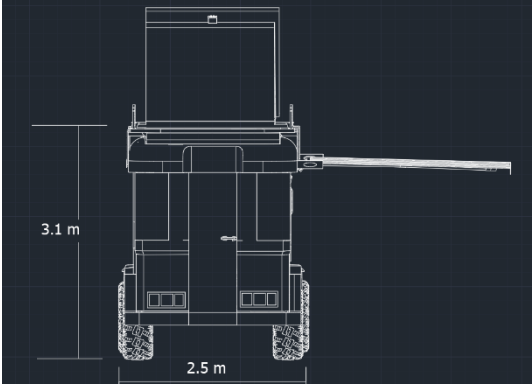
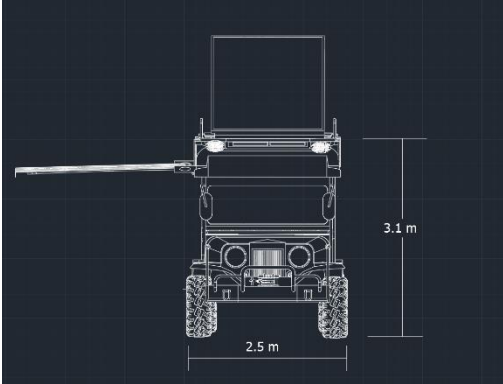
### **Electricity Power Source**

A solar panel will be installed above the roof tent, providing a sustainable energy source for the jeepney. The solar panel will be complemented by an inverter and batteries, which will be housed beneath the foldable beds. This system ensures that the jeepney can generate and store energy efficiently. When there is a sufficient sunlight source, electricity can be generated directly from the solar panel while simultaneously charging the battery. This dual functionality ensures that when sunlight becomes limited or unavailable, the battery can serve as an alternative power source, maintaining a continuous supply of electricity.



BLUEPRINT

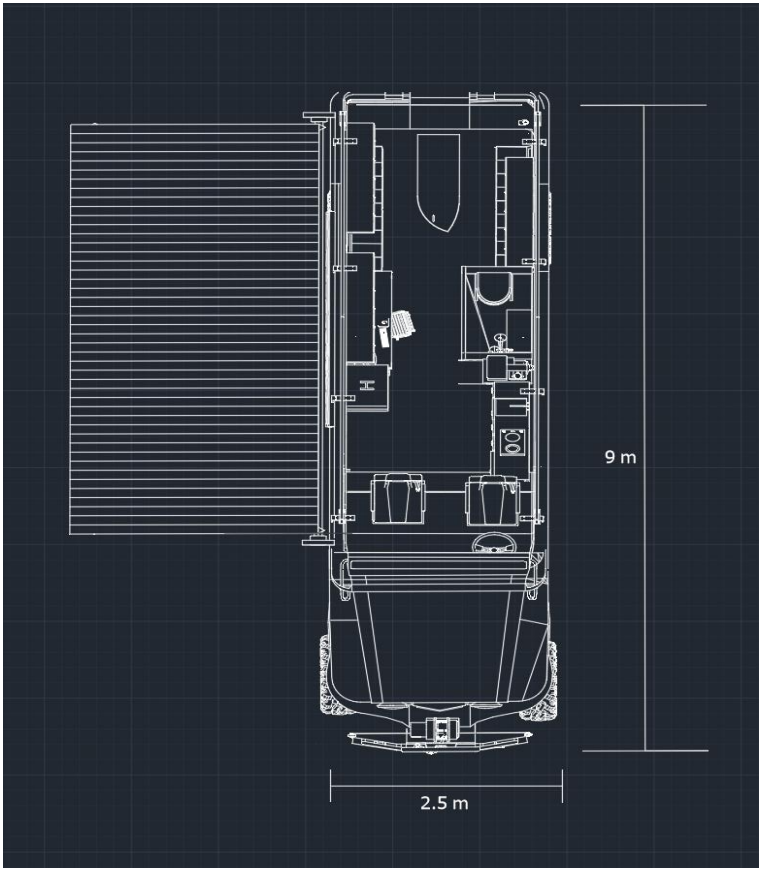
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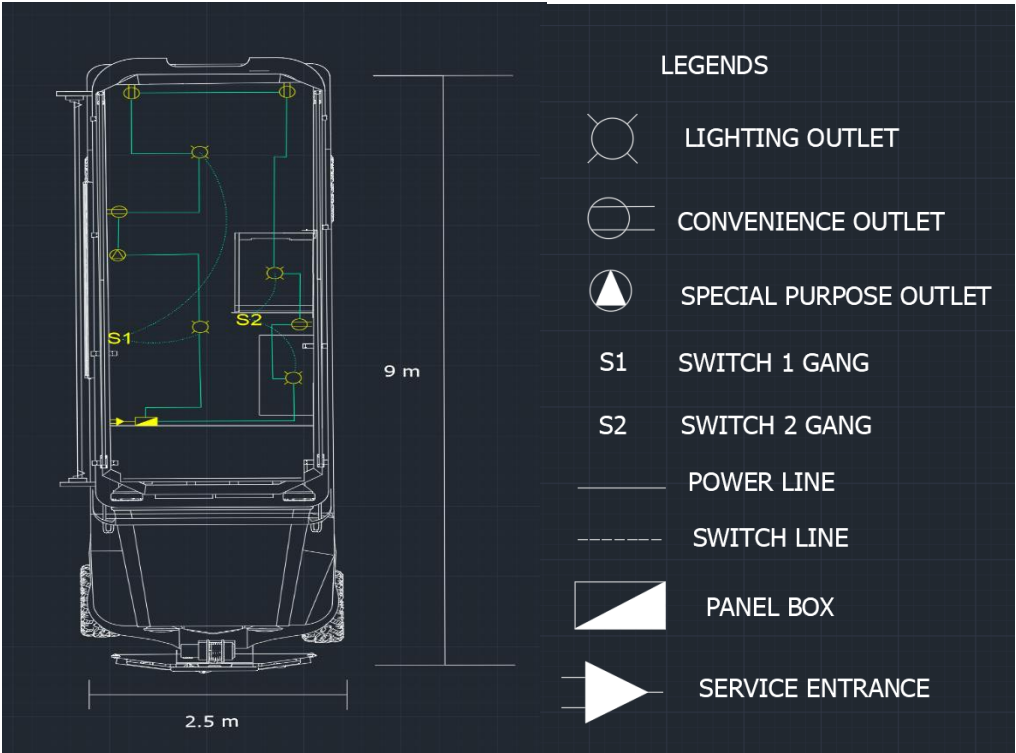


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Floor plan



Electrical plan





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**PROJECT COST**

	Quantity	PRICES
<b>COCKPIT AREA</b>		
Air Suspension Chair	2	10,000
<b>Subtotal</b>		20,000
<b>KITCHEN</b>		
Countertop Stove	1	9,000
Folding Faucet	1	5,000
Sink	1	4,400
Ref	1	10,000
Water filter	1	2,300
Gas	1	500
<b>Subtotal</b>		31,200
<b>TOILET AND BOWL</b>		
Bowl	1	7,500
Shower	1	900
Bidet	1	440
<b>Subtotal</b>		8,840
<b>ROOF</b>		
Roof tent	1	19,000
Flood Lights	3	2,500
<b>Subtotal</b>		26,500
<b>EQUIPMENT</b>		
Water pump	1	6,000
Solar panel	2	30,000
Battery	2	36,000
48v DC to AC Inverter	1	25,000
Battery Regulator	1	200
<b>Subtotal</b>		97,200
<b>CUSTOMIZATION AND LABOR (ESTIMATED)</b>		200,000
<b>Total</b>		<b>383740</b>





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**CLOSING STATEMENT**

The modified jeepney is changing the way people travel in the Philippines by turning the traditional jeep into a vehicle that's also a place to sleep. This new design makes travel more comfortable, offering features like sleeping areas, storage, and even small cooking or bathroom spaces. It's a combination of convenience, mobility, and comfort, perfect for people who want to travel freely without always needing a hotel.

With this jeep, travelers can explore different places without worrying about where to stay. They can enjoy nature, stop at scenic spots, and go on longer trips while still having a comfortable place to rest. This kind of jeep makes travel easier and more flexible, allowing people to take "home" with them on the road.

By offering both transport and a place to sleep, these modified jeepneys also promote sustainability by reducing the need for extra hotels or campsites. This new way of traveling could change how people think about both transportation and temporary living spaces, especially in a culture where the jeep is already a symbol of adventure and flexibility.



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