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Level 2 Design and Visual Communication 2025

**91338 Produce working drawings to communicate
technical details of a design**

EXEMPLAR – PRODUCT DESIGN

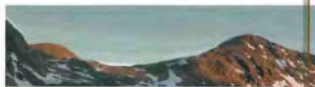
Merit

EVIDENCE OF DESIGN

OUTDOOR LIGHT

BRIEF
 Aim to design a multi-functional outdoor light that is not only aesthetically pleasing but it is designed to encourage social interactions in camping conditions for when it is dark and cold.

SPECIFICATIONS
 The outdoor light must be lightweight so it can be easily carried and portable through outdoor activities. It will contain durable materials that allow the light to endure harsh weather conditions. The functions must be easy to use and operate. It will be aesthetically designed to suit the surrounding outdoor environment. It must have multiple setting to function at different conditions in need of the user.



MATERIALS

LED
 LED lights are known for their energy efficiency, durability in certain conditions, and their range of different colours and styles. This material offers a more cost-effective and sustainable design for an outdoor product.

PLASTIC
 Plastic is very common in product design as it has aspects of versatility and safe use. Plastic is lightweight and durable which allows people to carry a product with ease.

SOLAR PANELS
 Solar panels can be a beneficial aspect in product design. They offer sustainability in the design and are eco-friendly efficient use of a power source. Solar panels can be incorporated into products in unique and innovative ways.

CARBON FIBRE
 Carbon fiber is resistant to rust and corrosion which is useful when you are transporting this product from different outdoor locations. It is sustainable because it offers advantages in terms of recyclability.

KEY FEATURES

- Light will use LED bulbs which are efficient than incandescent bulbs.
- Will also incorporate solar panels to the design to create energy in a sustainable and more environmental-friendly way.
- The lighting modes can be adjustable in certain conditions.
- Will avoid using steel, glass and thick rubber in the design to create a more lightweight design.
- I could use materials like plastic and aluminum on the body casing of the light.
- Will include a collapsible design and use the internal space efficiently.
- Will incorporate several functions in the light to suit the needs of people who are camping and hiking.
- Insect repellent, heat, light and solar charging will be the core functions.
- Will include smart and easy controls to adjust the light to different functions.
- Functions will include:
 - Lantern mode for camping
 - Flashlight mode for travel
 - Night light mode for relaxation
 - SOS flashing light for emergency

SUSTAINABILITY

This multi-functional outdoor light will have incorporated sustainable features in the design such as renewable energy, durable and recyclable materials and a smart and efficient design to reduce environmental impacts. This design will last in several environmental conditions so that it reduces the need for plastic this multi-functional design.

BIO-INSPIRED DESIGN

Some species of Fireflies have unique flashing patterns to help communicate and identify other Fireflies.

The chemical process that generates light in their abdomens results in the emission of light without significant heat generation.



MARKET EVALUATION

\$20.99	\$50.99	\$205.20	\$284.81
Outdoor Solar Light with Motion Sensor Featuring LED solar security lighting. This product is equipped with a motion sensor that detects movement within 30-32 feet. Weather resistant with a PPS waterproof rating. This product is perfect for illuminating driveways, patios or any outdoor space. This product is made out of 30 pieces of LED, plastic and a solar 100-mAh battery.	Outdoor LED Light with Solar Panel Featuring a polycrystalline silicon solar panel at approximately 60-80 square as its illumination range. • It is controlled with a remote. • It is at full power from its time range of 12 hours. • Its material is at a PVC engineering grade plastic material.	Portable Camping Lantern with Bluetooth The features of this product include an integrated Bluetooth speaker - 4-6 hours of charging time - 3 different lighting modes: Bright white, dimmed white and fading -LED technology involved Applications are: • Camping • Hiking	LED Solar Powered Night Parties Lamp • Material plastic • The colour temperature for this product can be adjusted with ranges of Warm light (2700K-3000K), Neutral light (4000K-5000K) and Cold light (6000K) • Voltage range 10V-200V depending on colour • This product is made up of night light mode for relaxation of LED lights. The technology consumes less energy promoting sustainability and efficiency.

CASE STUDY

"Illuminate the adventure, Repel the bite"

FLEXTAIL mosquito repellent is ultralight and easy to carry with only 5.22 oz. It can be set to anywhere by using a built-in magnet, made thanks to being mounted to a tripod.

It combines mosquito repellent and lighting as a multi-functional solution. Ideal for camping, hiking, and home emergencies, ensuring the best experience in various environments.

It has a waterproof protection for humid and rainy conditions.

FLEXTAIL mosquito repellent is ultralight and easy to carry with only 5.22 oz. It can be set to anywhere by using a built-in magnet.

FLEXTAIL
 MOSQUITO REPELLENT

HISTORY OF CAMPING

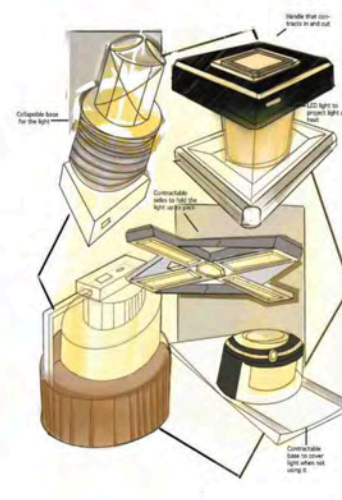
Early days:
 In the past, camping was not a recreational activity but more a survival requirement. Early humans had minimal materials and perfects so they would have had to utilize their existing surroundings and natural tools. Camping was about hunting, warmth, shelter and safety.

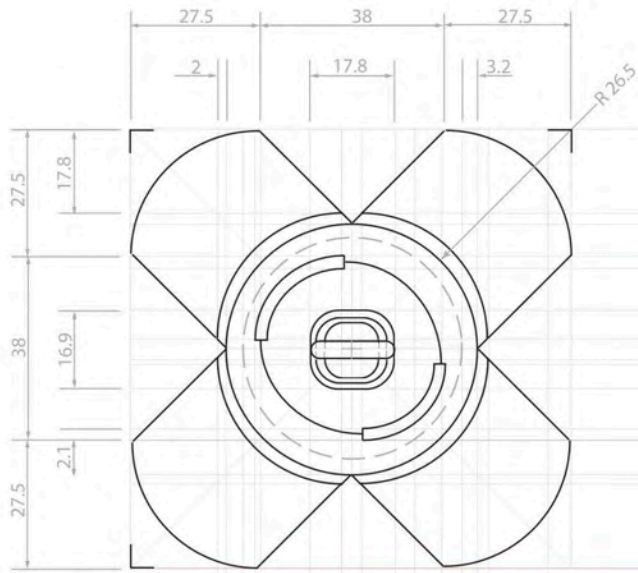
Post WW2:
 Materials like polyester and nylon came into the industry. These materials came in handy for camping as they are water resistant and lightweight. These materials were used for tents and other camping gear. Sleeping bags were invented in the 1950's.

1980s High Tech Gear:
 Towards the 1980's, a significant turning point in the evolution of camping gear started. Materials such as aluminum and titanium became common, and production of many camping products started to accommodate battery-powered devices like flashlights and lanterns came into production. These options have been developed to provide safety.

2000-2020- Smart Camping and Sustainable:
 The use of smart technology has provided Modern-day campers with gadgets that provide comfort, warmth, cooking devices and accessibility to resources. Tents are now equipped with LED lighting, USB charging ports and even Wi-Fi connectivity.

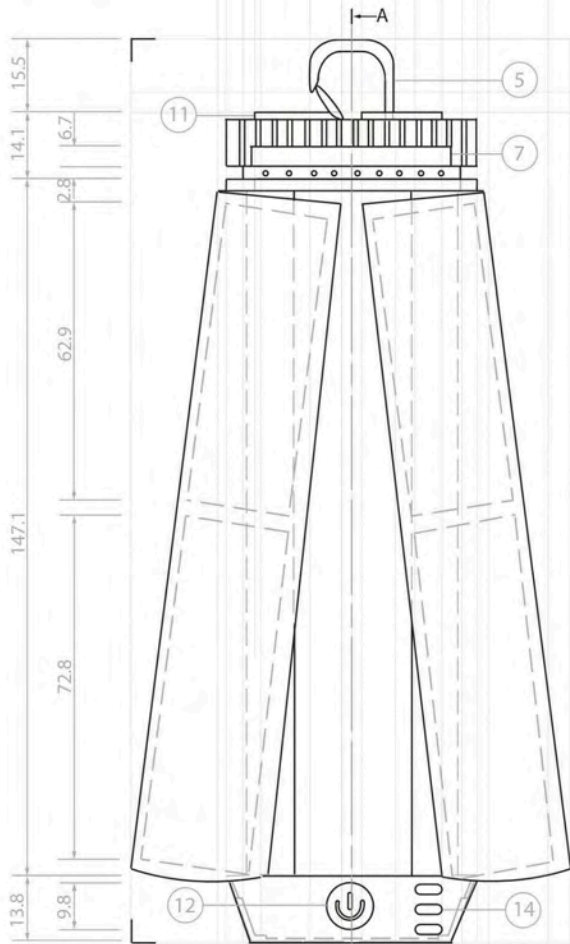
The Future:
 Heading towards the future, further research into sustainability and smart technology will be incorporated into making more camping products. Innovative ideas will be found in these products for comfort, convenience and sustainability.



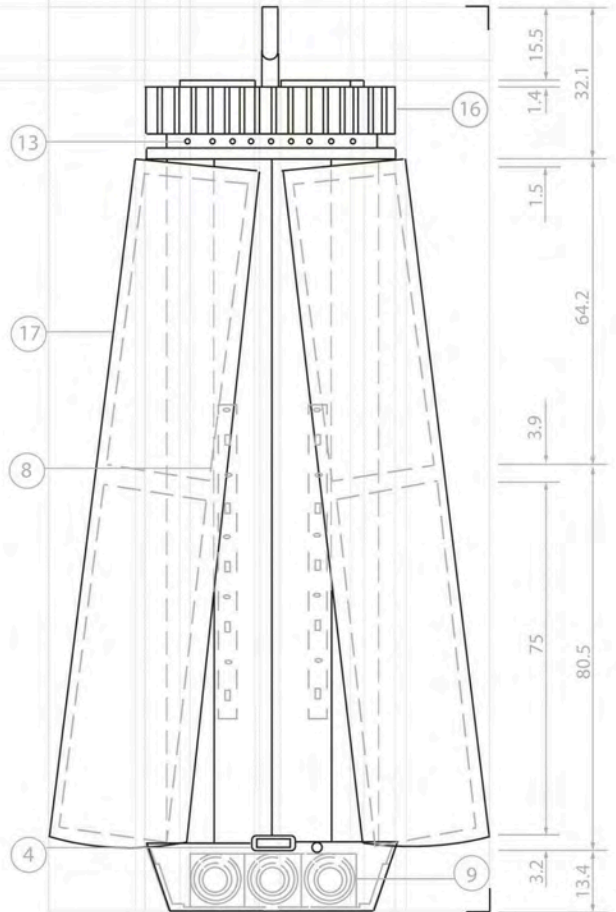


PLAN

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V EV

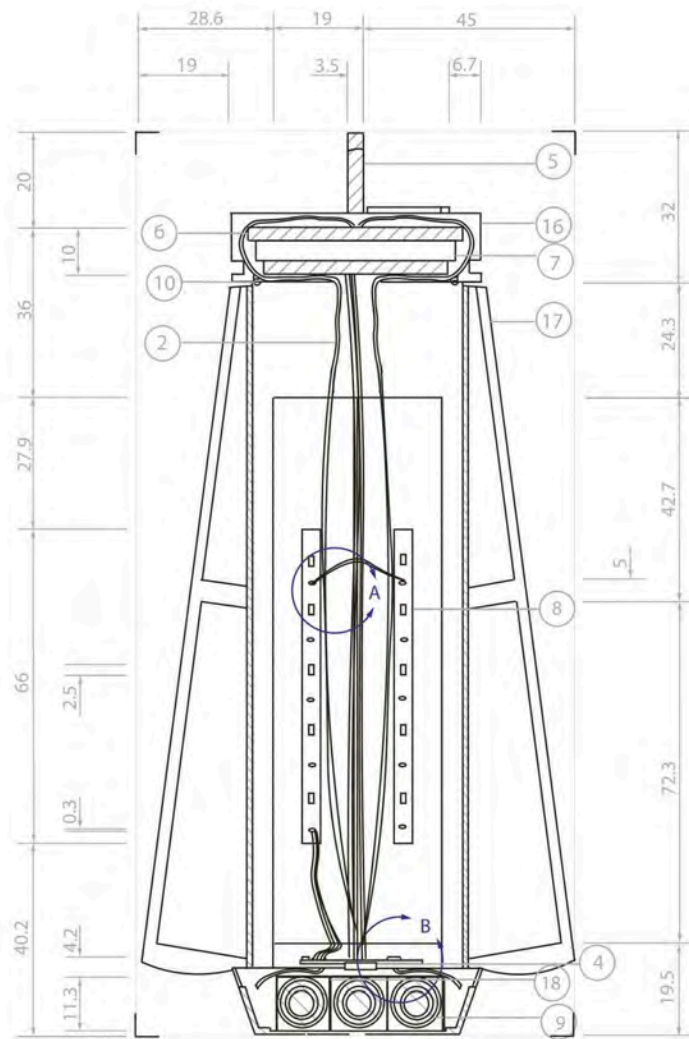


FRONT ELEVATION



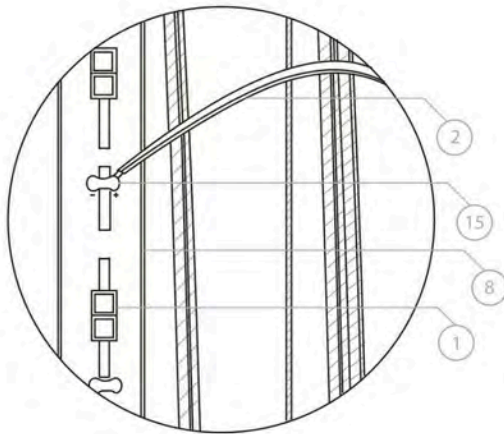
END ELEVATION

05-08-25	SCALE 1:1	ORTHOGRAPHIC PROJECTION-OUTDOOR LIGHT		1 OF 3
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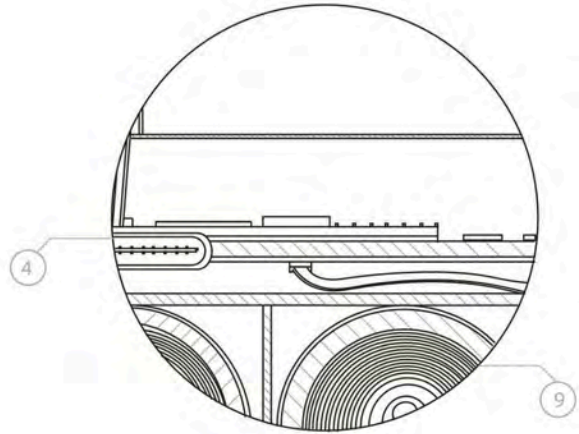


18	SET SCREWS	6	STEEL
17	LIGHT PANEL	4	VARIOUS COMPONENTS
16	TOP COMPARTMENT	1	VARIOUS COMPONENTS
15	SOLDER JOINTS	3	METAL
14	LIGHT FUNCTIONS	3	PLASTIC
13	REPELLENT HOLES	9	METAL
12	POWER BUTTON	1	PLASTIC
11	MAGNET	2	IRON
10	MACHINE SCREWS	4	STEEL
9	BATTERY	3	VARIOUS COMPONENTS
8	LED STRIP	2	LED CHIPS
7	REPLENT PAD	1	FOIL RAP MAT
6	HEATING PAD	2	WIRES AND FILM
5	HANGING HOOK	1	STAINLESS STEEL
4	POWER SOURCE	1	PLASTIC
3	MOTHER BOARD	1	VARIOUS COMPONENTS
2	ELECTRICAL WIRES	8	COPPER
1	LED CHIPS	10	SEMI-CONDUCTORS
ITEM	NAME	QTY	MATERIAL

SECTION A-A
SCALE 1:1

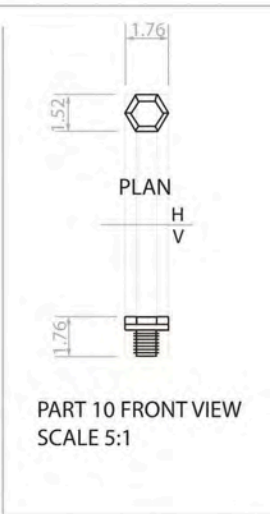
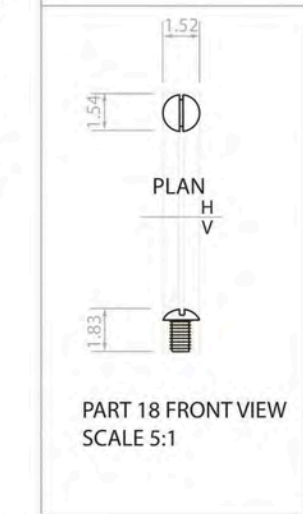
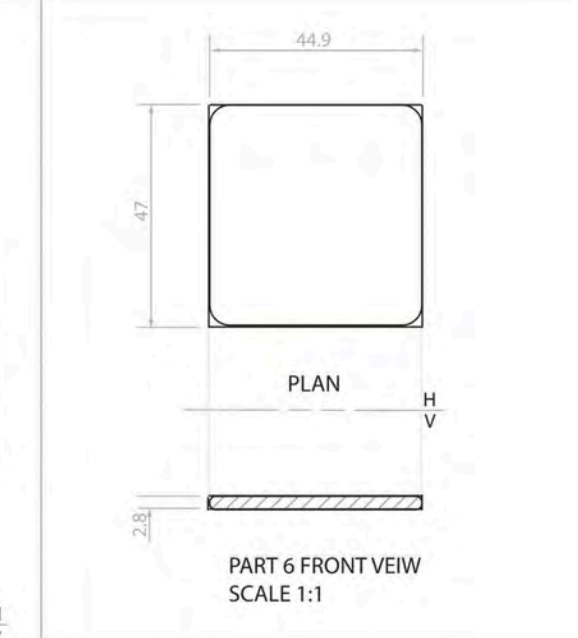
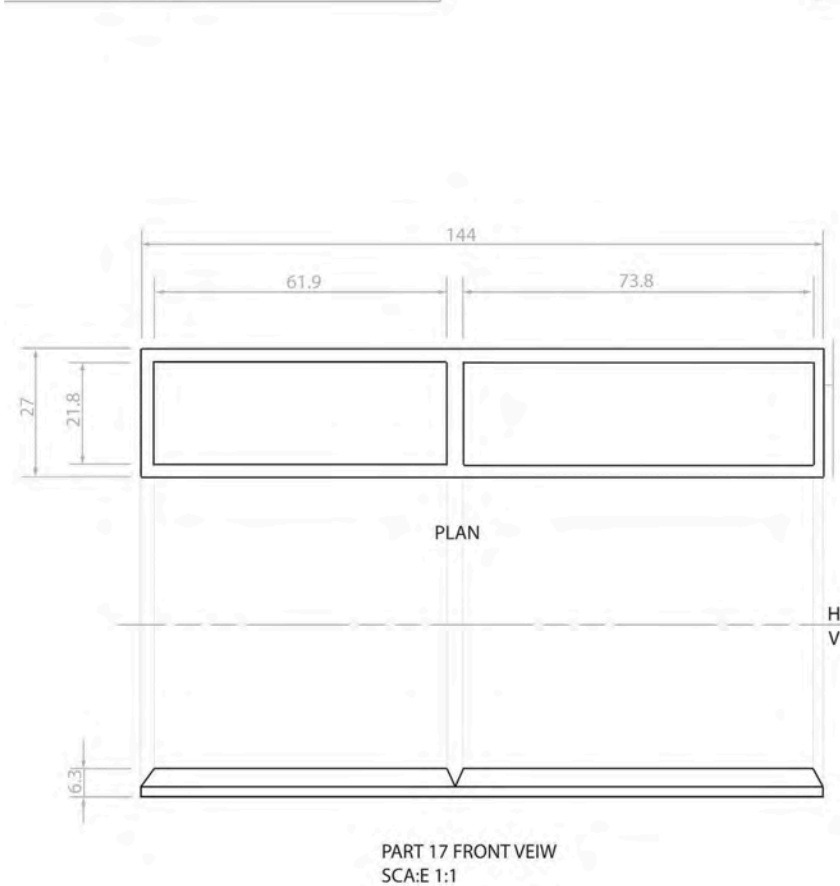
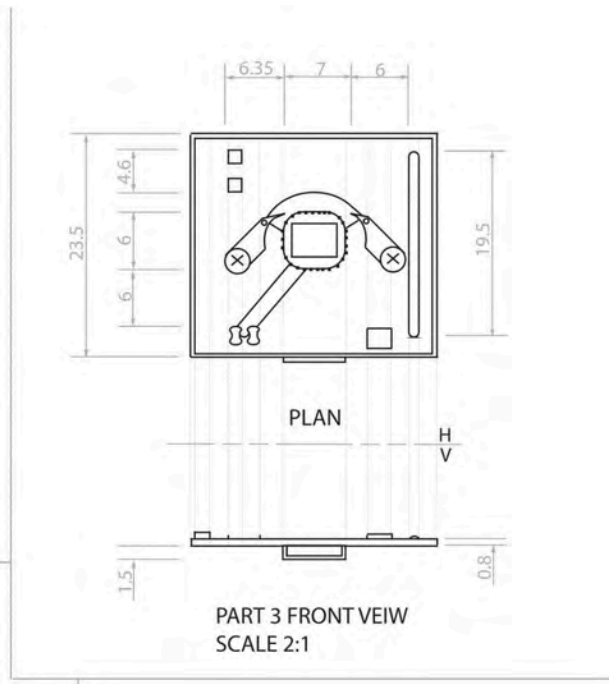
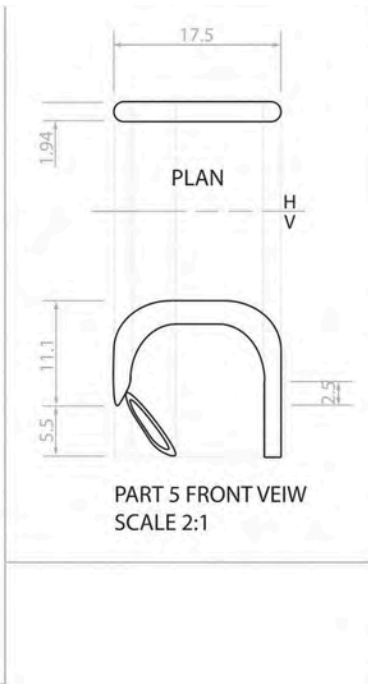
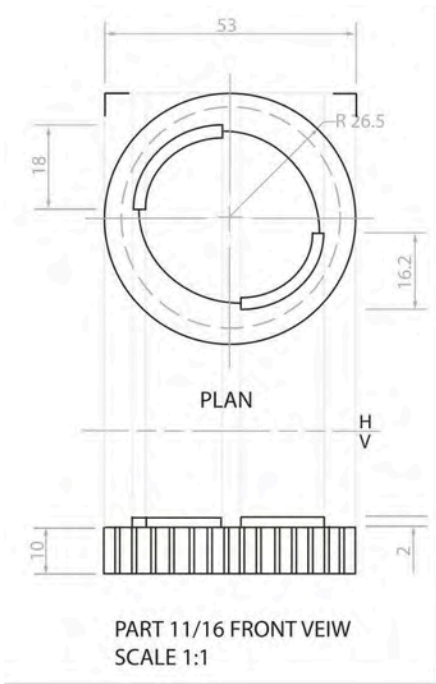


DETAIL A
SCALE 5:1



DETAIL B
SCALE 5:1

05-08-25	SCALE 1:1/5:1	ORTHOGRAPHIC PROJECTION-OUTDOOR LIGHT		2 OF 3
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Merit

Subject: Design and Visual Communication

Standard: 91338

Total score: 05

Marker commentary

This is a clearly linked set of working drawings showing an outdoor light design. The first page has a well set out orthographic view with labelled plan and elevations and accurate scaled dimensions. A parts list / key is used to identify the components which are drawn and labelled later. The cross section and details linked to the section view are accurate but struggle to be informative in showing connections and function of the lamp assembly. The components are correct but are not very extensive.

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Level 2 Design and Visual Communication 2025

**91338 Produce working drawings to communicate
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EXEMPLAR – SPATIAL DESIGN

Merit



Drawing Title: **Ground Floor Plan**

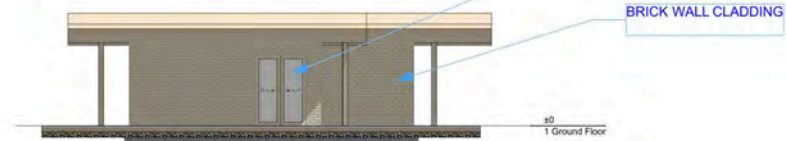
Drawing #: **A103**

Project Name:

Revision #:



North Elevation



East Elevation



South Elevation



West Elevation

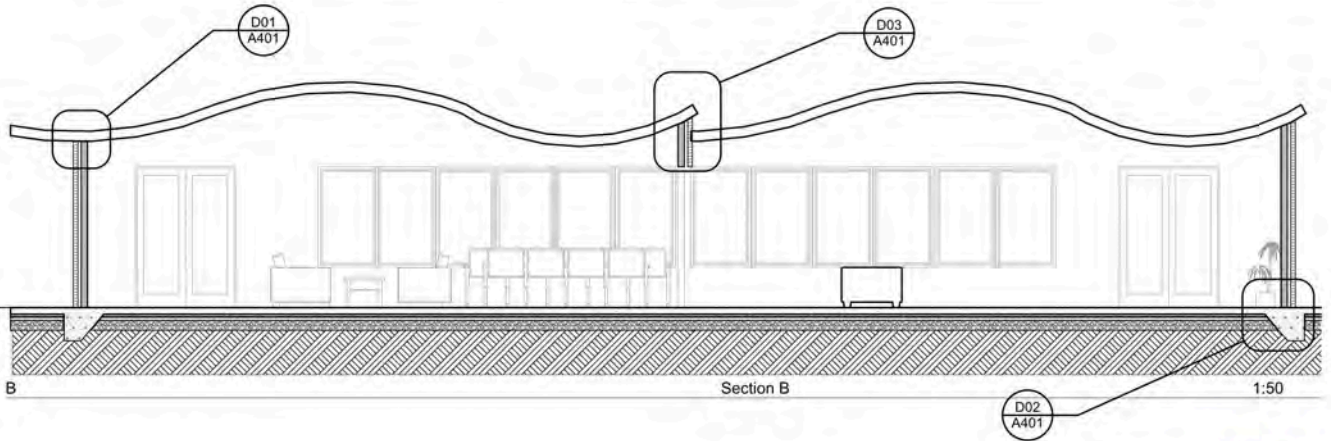
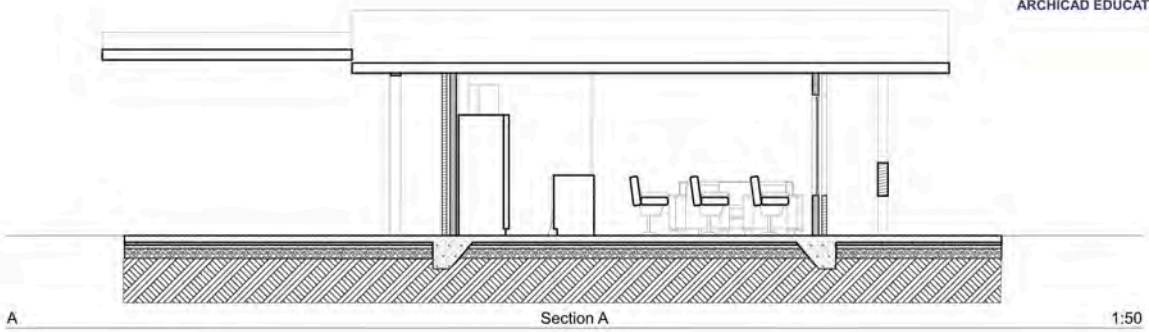
Drawing Title: **Elevations**

Drawing #: **A301**

Project Name:

Revision #:

1:100

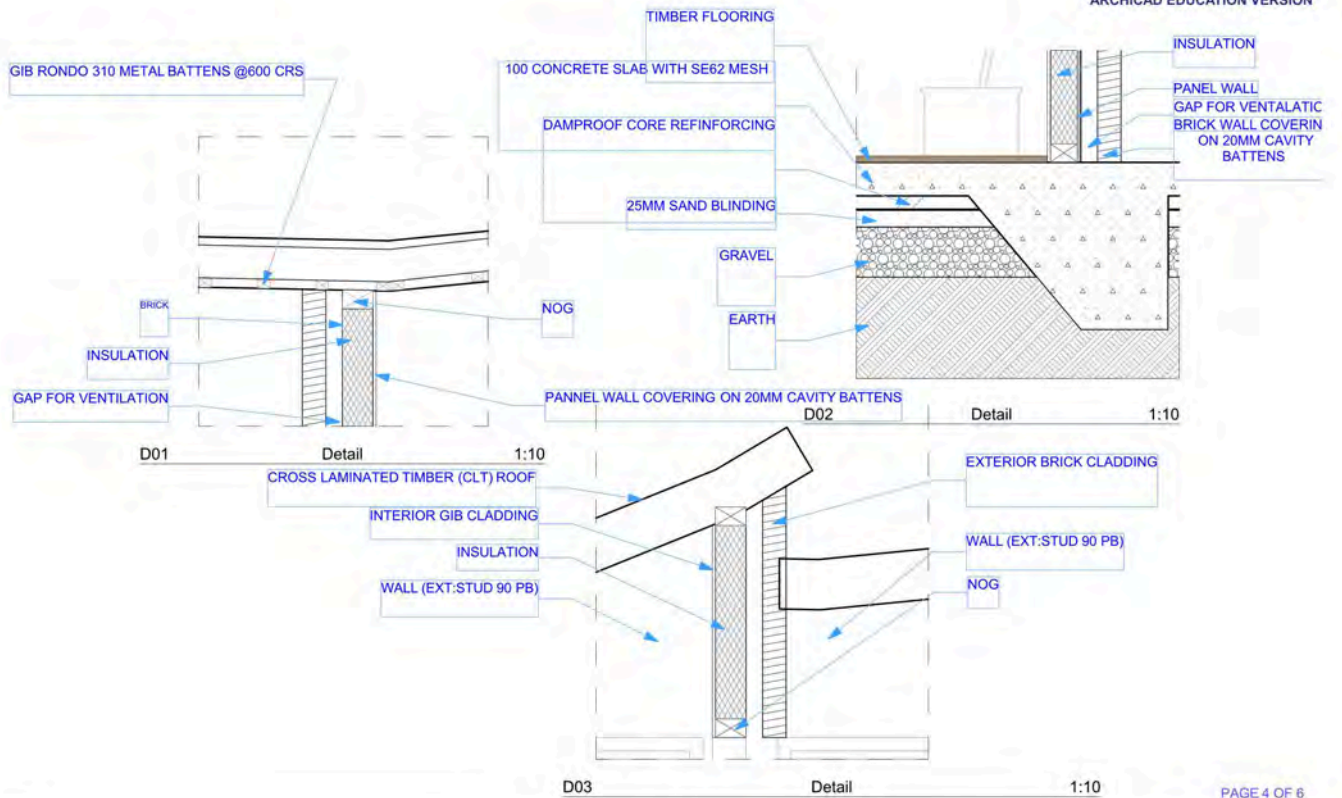


Drawing Title: **Sections**

Drawing #: **A201**

1:50

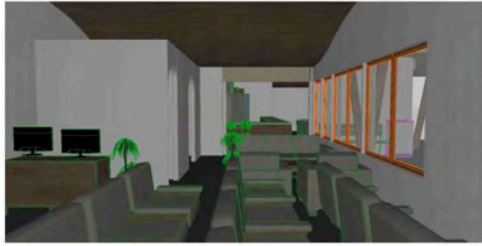
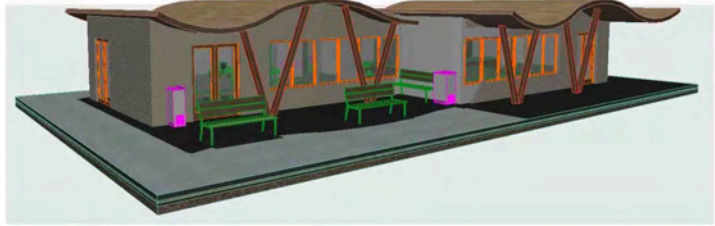
Revision #:



Drawing Title: **Details**

Drawing #: **A401**

Revision #:

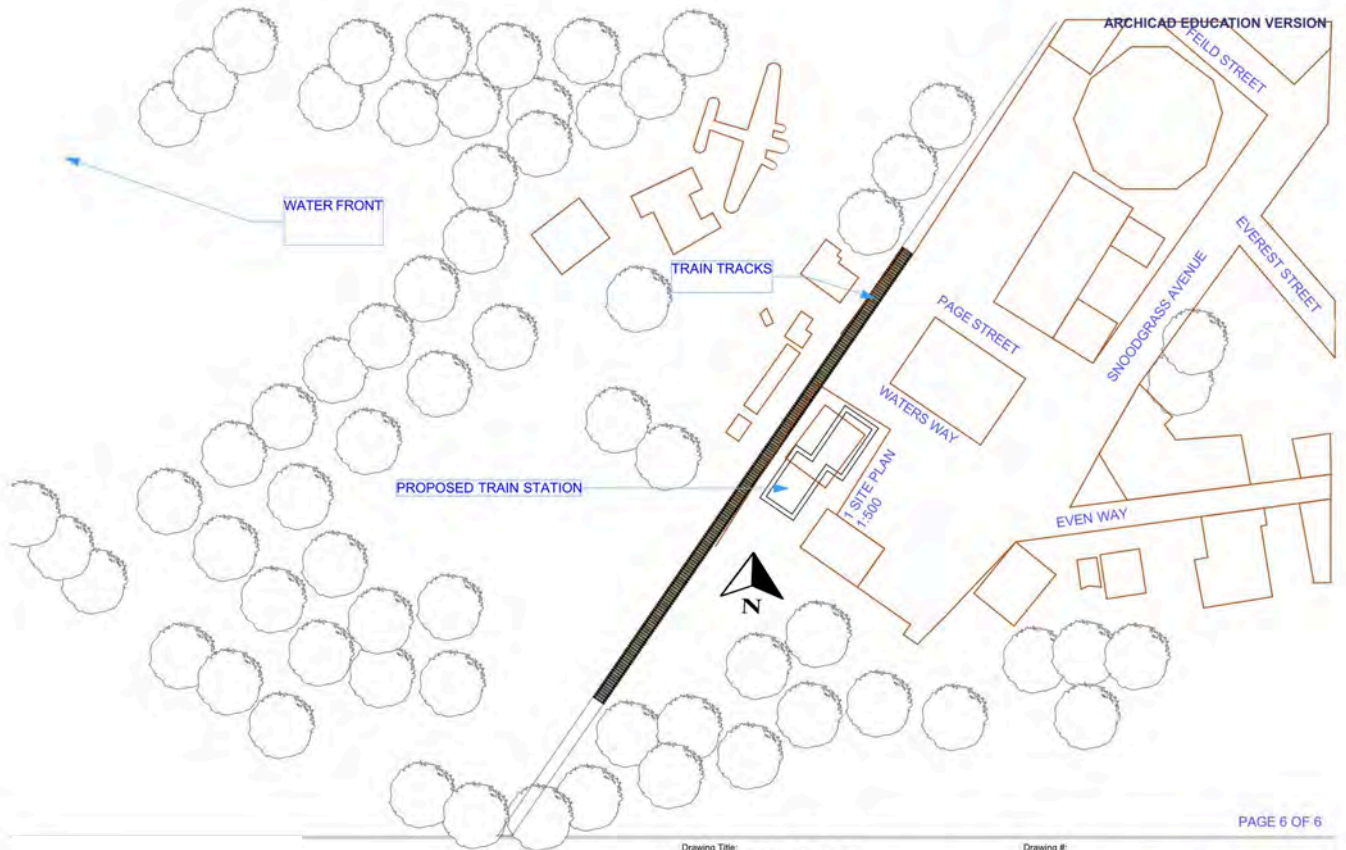


Drawing Title:
Perspective

Drawing #:
A701

Project Name:

Revision #:



Drawing Title:
A101 SITE PLAN

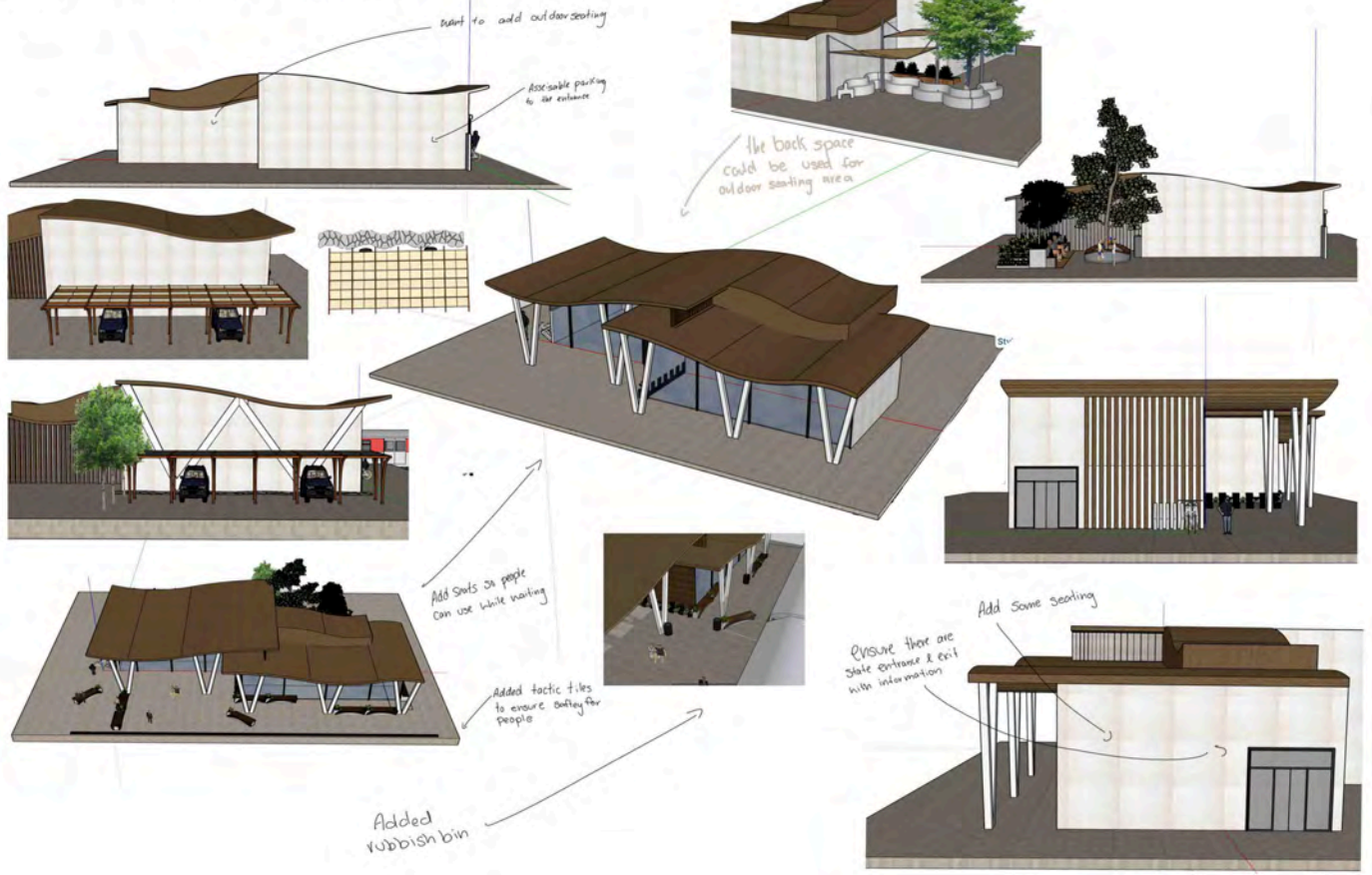
Drawing #:
A115

1:500

Project Name:

Revision #:

Exterior Refining 2



Merit

Subject: Design and Visual Communication

Standard: 91338

Total score: 05

Marker commentary

This set of working drawings clearly communicates the technical details of the design. The drawings include plan views, elevations, cross section, and enlarged construction details. The floor plans, elevations, and cross sections are well connected through accurate labelling and cross-referencing.

The plan views communicate technical details in the form of room fittings, door swings, and windows.

The cross section, drawn at 1:50 scale, conveys the technical details clearly and is well linked back to their location on the floor plans.

This set of drawings lacks coherency for Excellence as the north symbol indicated on the floor plan and site plan do not correlate to the labelling of the elevations and the direction in which they would be viewed. In addition the details, although accurate and referenced correctly, don't add much information to extend beyond what is shown in the cross section.