

FARMHOUSE ART GALLERY

Emma Jackson

ID 3000

November 13, 2024



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Programming Phase

CLIENT PROFILE PROVIDED PER PROJECT REQUIREMENTS

The small barn features a large open area that will serve as the Gallery as well as 2 small offices for Gallery staff and 2 storage spaces. There is an additional vaulted gallery space that is directly over the lower Gallery.

For the gallery lighting, he would like to incorporate a layered lighting plan that is energy efficient. Because the art will be moved around in various arrangements continually, he would like some type of lighting system throughout the gallery spaces to allow for versatility. In addition, he would like the lighting to be unobtrusive and not to detract from the art itself. He would also like accent lighting to highlight the beams that run throughout the Gallery spaces where possible. He would also like to have a couple of pendant luminaires near the windows and at the base of the stairs that replicate the style of the barn that act as focal points for the space inside and out. Lighting in the offices and storage should be functional and energy efficient. Luminaries that feature lamps with a high CRI and a mid-range Kelvin rating are crucial to showing off the art in it's true colors as the artist intended.

A good control system is very important for the gallery. He would like a system that allows for several scenes for daylight hours as well as evening hours. In addition, he'd like to have motion and occupancy sensor lighting included in the control settings. Budget for the gallery for luminaries, the control system and design fees is \$11,000.00

SYNOPSIS

Budget: \$11,000

Gallery:

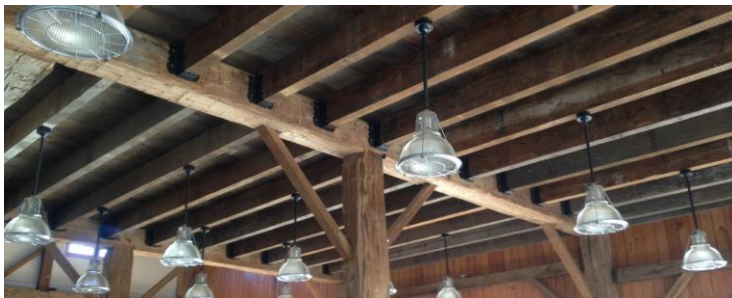
- Energy Efficient
- Versatility
- Unobtrusive
- Accent Highlight Beams
- Focal Points – pendants near stair base
- Vaulted Gallery - directly above gallery
- Functional & Efficient
- High CRI
- Mid-range Kelvin Rating
- Control System
- Scenes for Daylighting
- Motion & Occupancy Sensors Included

RESEARCH & CODES

The property is in uptown New York and as such will be required to meet codes pertaining to the area. The lighting and electrical requirements for your gallery and studio project fall under the 2020 New York State Building Code (NYSBC) and the New York State Energy Conservation Construction Code (NYSECCC), which are based on the International Building Code (IBC) and International Residential Code (IRC). For the gallery, lighting must include energy-efficient systems with occupancy sensors, daylight-responsive controls near windows, and scene-setting dimmers to comply with energy codes. High-CRI lighting (3500–4000K) is essential for accurately displaying artwork, while adjustable track lighting and rustic-style pendant luminaires suit the barn's aesthetic. Emergency lighting and GFCI protection are required in areas exposed to moisture, with AFCI breakers needed for fire prevention in circuits serving gallery spaces. The studio's residential lighting also requires high-CRI fixtures, dimming options, and energy efficiency, with AFCI breakers throughout and GFCI protection near water sources. These systems must align with lighting power density and testing requirements specified by NYSECCC to ensure both functionality and compliance



INSPIRATION



SCHEMATICS

CONCEPT STATEMENT

The lighting design for the gallery aims to enhance the architectural beauty of the barn while focusing on the artwork itself. Carefully placed recessed lighting between the exposed beams illuminates the structure without overpowering the art, while adjustable track lighting ensures flexibility for dynamic displays, including rotating artworks and sculptures. Dimmable luminaires, integrated with advanced control systems, provide the ability to create diverse lighting scenes tailored to different times of day and types of art. The use of high CRI LED lamps at a 3000K color temperature ensures accurate color rendering, essential for showcasing the artist's work. This combination of functional and aesthetic lighting solutions helps maintain the rustic charm of the space while offering versatility and energy efficiency.

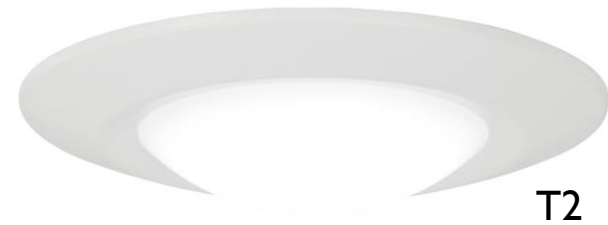
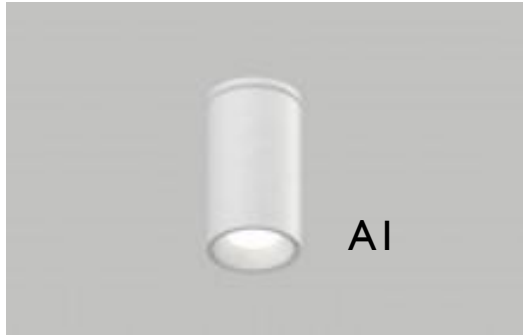


GENERAL SCHEMATICS



DESIGN DEVELOPMENT

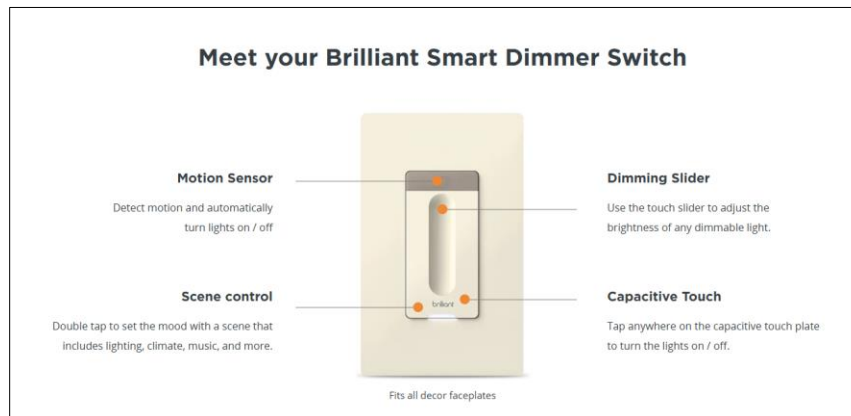
LIGHTING SELECTION



CONTROLS & EFFICIENCY

This art gallery will incorporate multiple control systems to create an efficiency and functional space. The first system is the Brilliant Smart Dimmer Switch, it can be controlled through an app or a smart system like Alexa. It has both motion sensor, scene control and additionally wireless controls. This system will be paired with a ceiling mounted sensor that senses both occupancy and daylighting. This control is made by nlight and the product is nCM xx RJB Family.

Combining these two systems gives a complete, easy to use, veritable, functional and efficient space. With both motion and occupancy sensors it makes it efficient. With the edition of daylighting, you will never be using too much electricity and only as much as needed to make a functional space.



CONSTRUCTION DOCUMENTS

PROJECT
FARMHOUSE -
ART GALLERY

CLIENT
BILL PARMS

CLASS
ID 3000

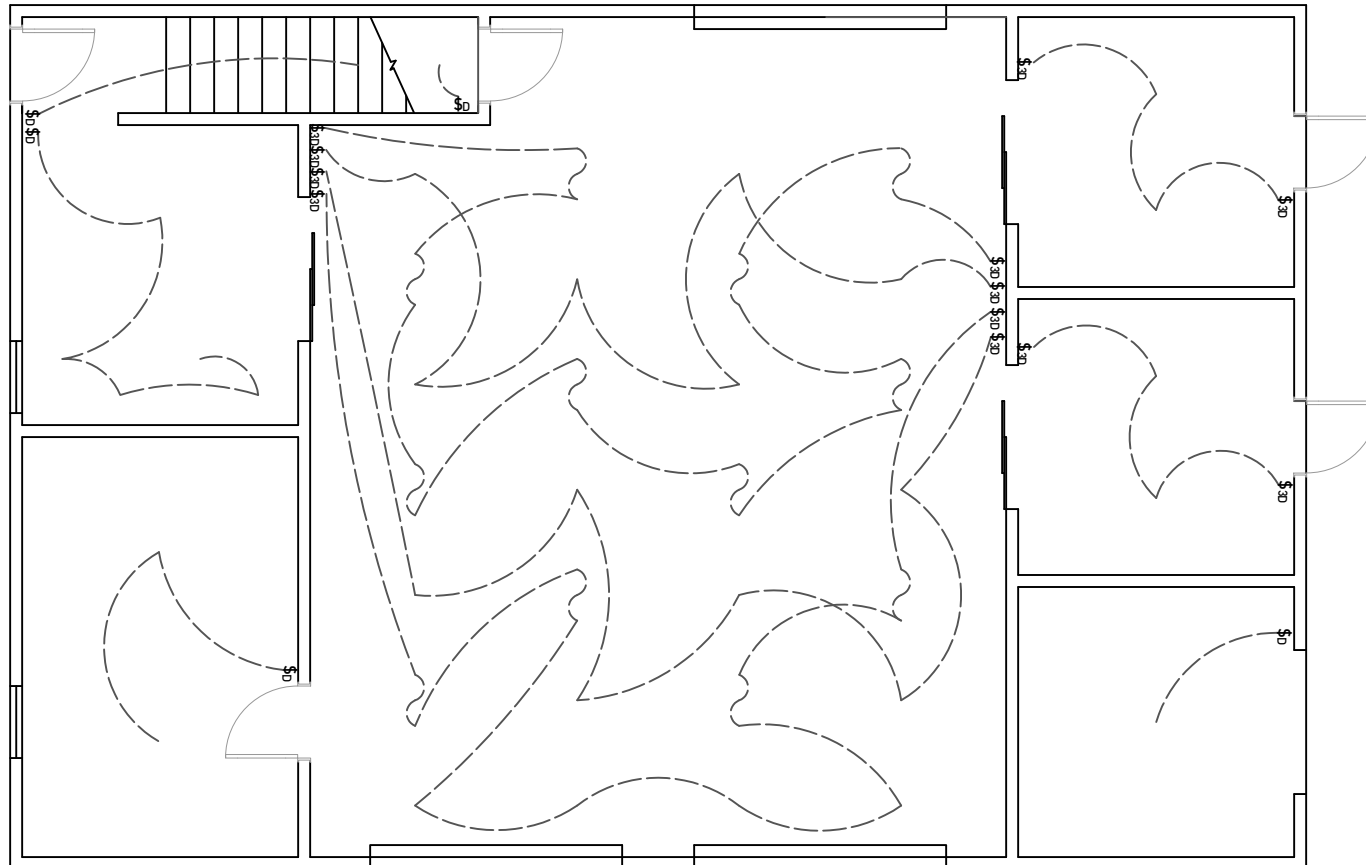
DATE
11/25/2024

NORTH


SHEET NAME
SWITCHING PLAN L1

SHEET NUMBER
3 OF 8

SCALE: 1/8" - 1'



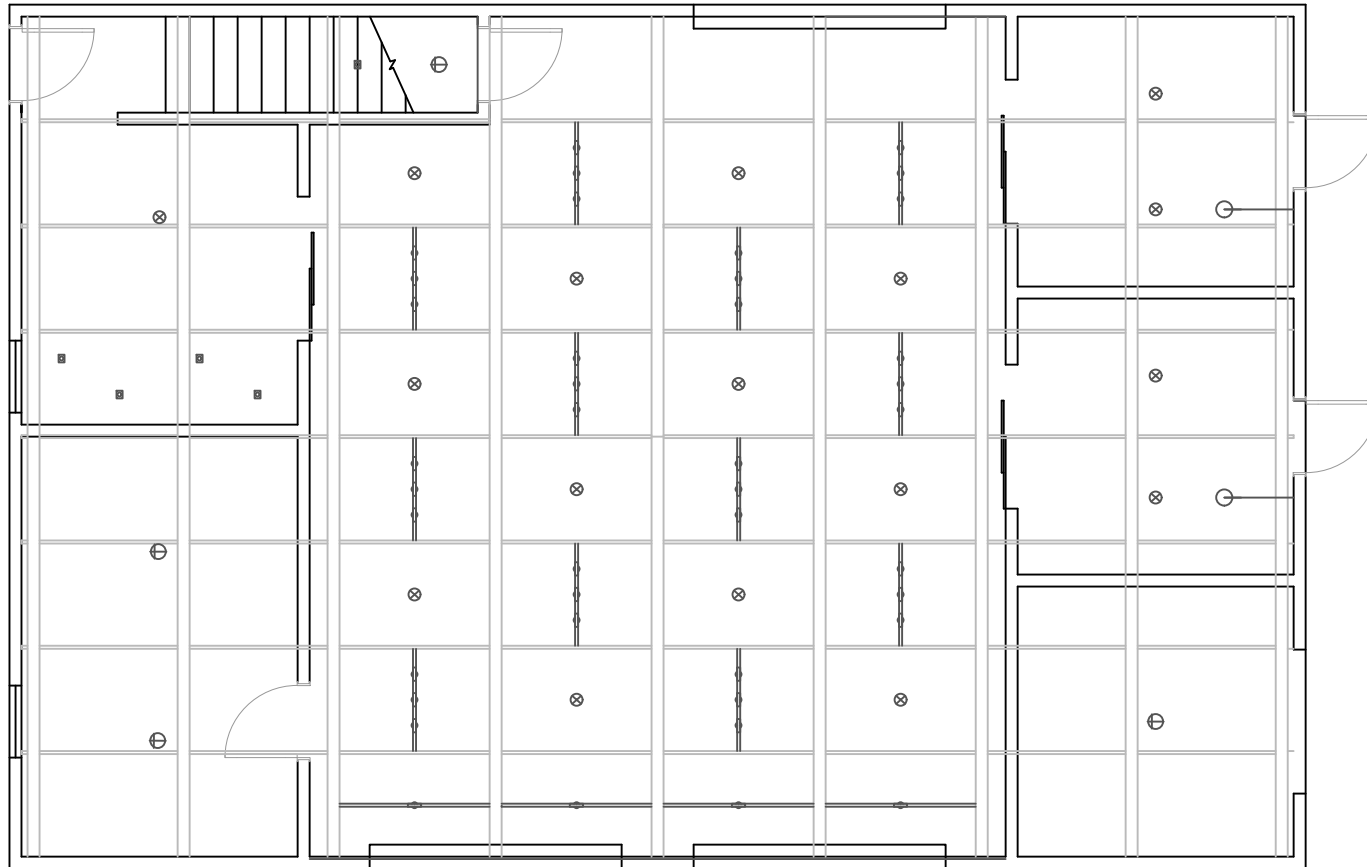
SWITCHING LEGEND

\$ SINGLE POLE SWITCH

\$3 THREE WAY SWITCH

\$D DIMMABLE SWITCH

\$3D THREE WAY DIMMABLE



REFLECTED CEILING LEGEND

- ⊕ T2: 7.5" DIAMETER LED FLUSH MOUNT
- ⊗ A1: 6" DIAMETER SURFACE CYLINDER
- ⬆ C1: 3" DIAMETER R620L TRAC HEAD
- P1: 2" DIAMETER EDISON MINI PENDANT
- ⦿ P2: 8" DIAMETER PLUG IN PENDANT

NOTE: IMAGES MAY NOT BE TO SCALE

NOTES:

CEILING HEIGHT FOR BASE FLOOR IS 10' AFF WHILE VAULTED GALLERY IS 14' AFF. P2 IS A PLUG IN PENDANT THOUGH WILL NEED TO BE HUNG OVER BEAM AND MOUNTED.
ALL SWITCHES ARE THE SAME BRILLIANT SMART DIMMER SWITCH

PROJECT
FARMHOUSE -
ART GALLERY

CLIENT
BILL PARMS

CLASS
ID 3000

DATE
11/25/2024

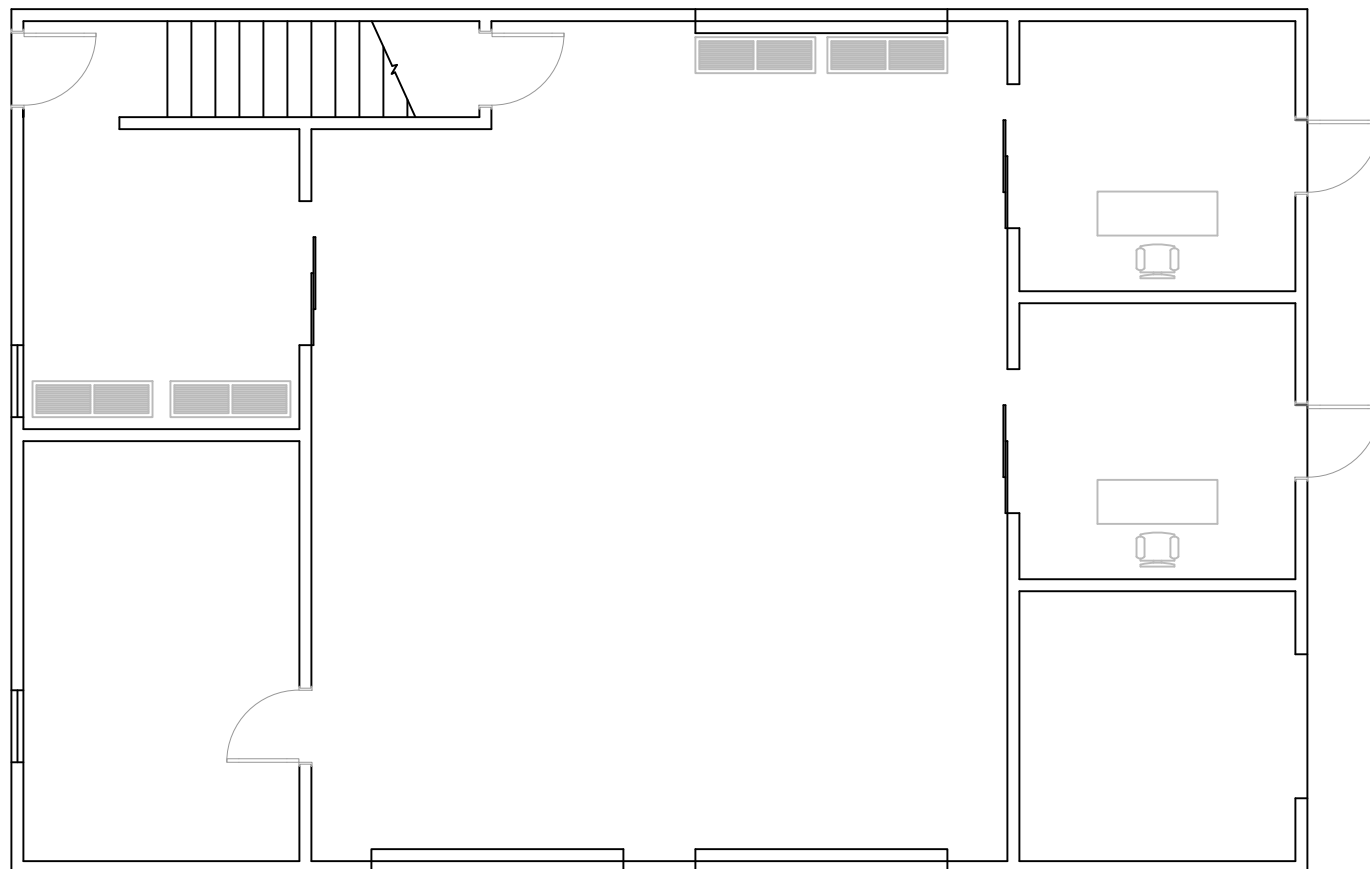
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SHEET NAME
RCPL1

SHEET NUMBER
2 OF 8

SCALE: 1/8" = 1'



PROJECT
FARMHOUSE -
ART GALLERY

CLIENT
BILL PARMS

CLASS
ID 3000

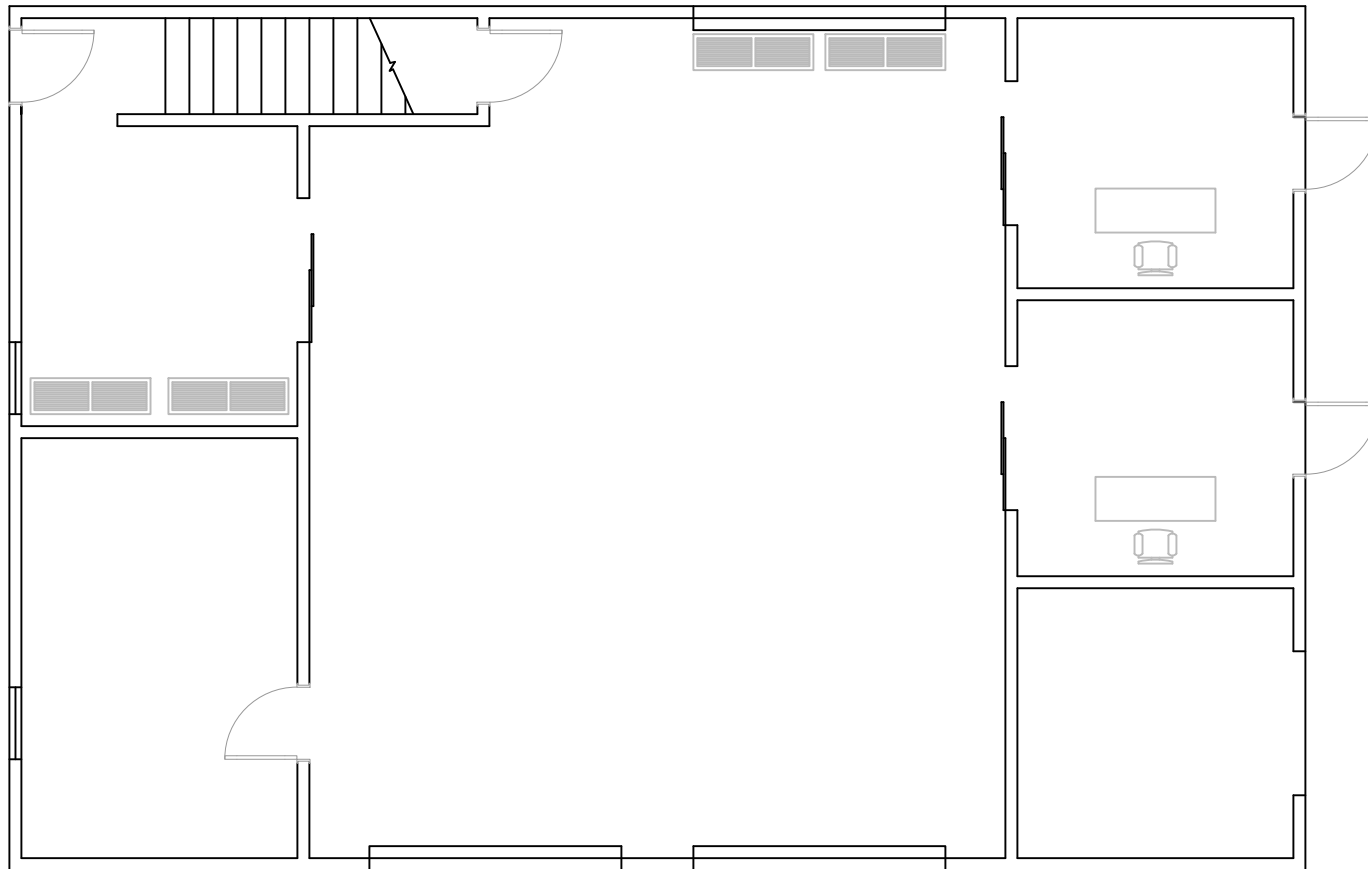
DATE
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NORTH

SHEET NAME
FLOOR PLAN L1

SHEET NUMBER
1 OF 8

SCALE: 1/8" - 1'



PROJECT
FARMHOUSE -
ART GALLERY

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BILL PARMS

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ID 3000

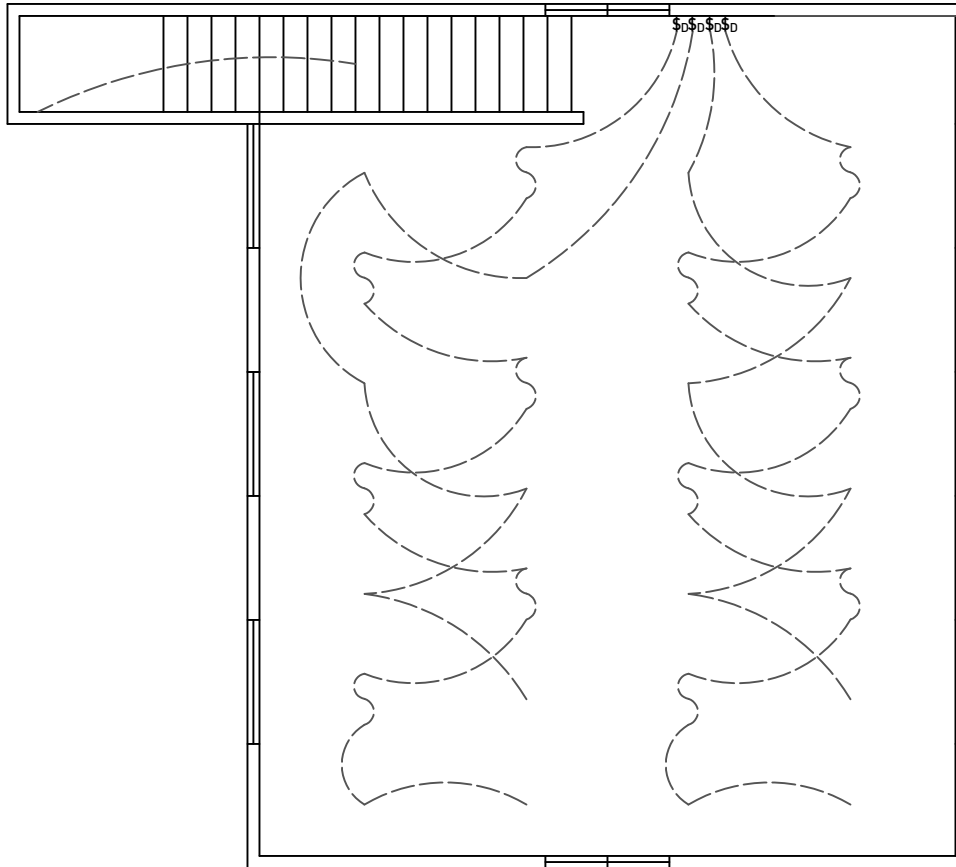
DATE
11/25/2024

NORTH


SHEET NAME
FLOOR PLAN L1

SHEET NUMBER
1 OF 8

SCALE: 1/8" - 1'



SWITCHING LEGEND

- \$ SINGLE POLE SWITCH
- \$₃ THREE WAY SWITCH
- \$_D DIMMABLE SWITCH
- \$_{3D} THREE WAY DIMMABLE

PROJECT
FARMHOUSE -
ART GALLERY

CLIENT
BILL PARMS

CLASS
ID 3000

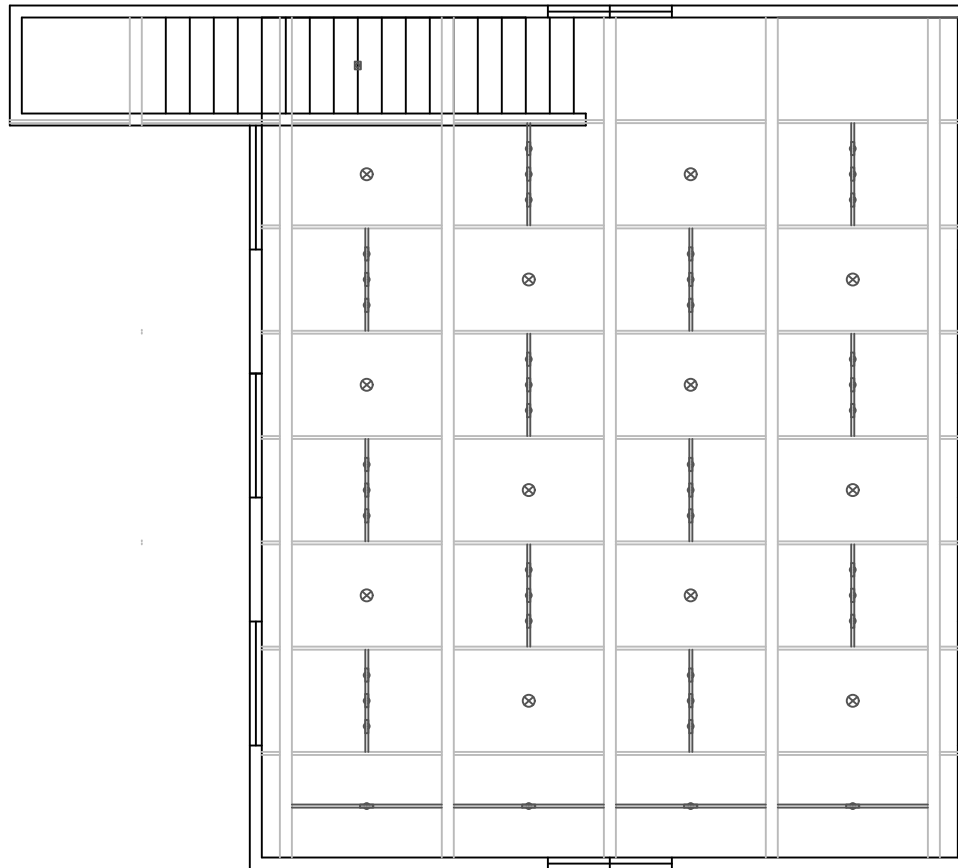
DATE
11/25/2024

NORTH

SHEET NAME
SWITCHING PLAN L2

SHEET NUMBER
7 OF 8

SCALE: 1/8" - 1'



REFLECTED CEILING LEGEND

- ⊕ T2: 7.5" DIAMETER LED FLUSH MOUNT
- ⊗ A1: 6" DIAMETER SURFACE CYLINDER
- ↑ C1: 3" DIAMETER R620L TRAC HEAD
- P1: 2" DIAMETER EDISON MINI PENDANT
- ⊖ P2: 8" DIAMETER PLUG IN PENDANT

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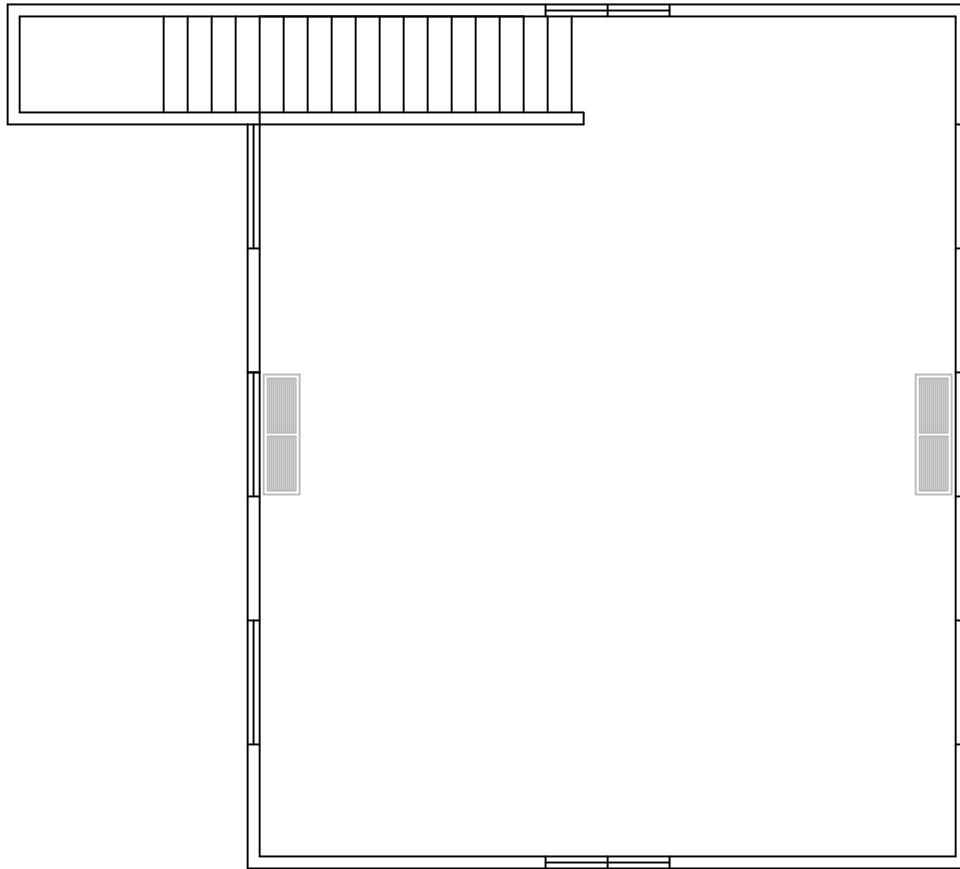
NORTH



SHEET NAME
RCP L2

SHEET NUMBER
6 OF 8

SCALE: 1/8" = 1'



PROJECT
FARMHOUSE -
ART GALLERY

CLIENT
BILL PARMS

CLASS
ID 3000

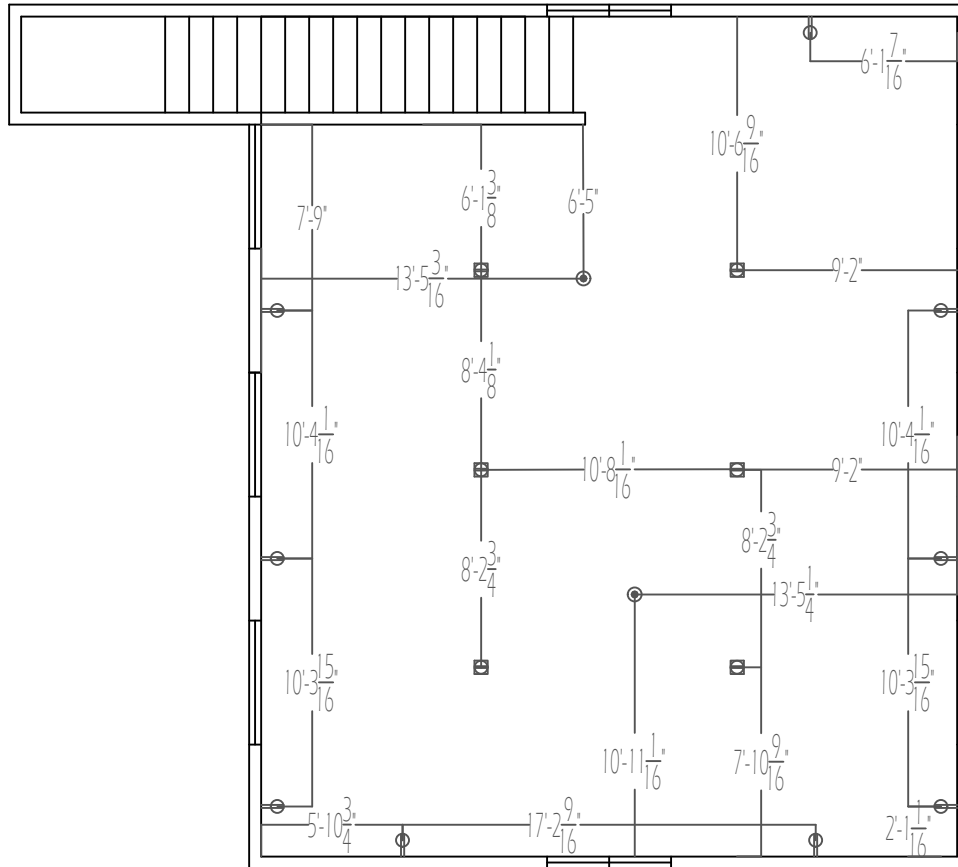
DATE
11/25/2024

NORTH




SHEET NAME
FLOOR PLAN L2

SHEET NUMBER
5 OF 8

SCALE: 1/8" - 1'



ELECTRICAL PLAN

- | | |
|---|--|
|  SINGLE RECEPTACLE OUTLET |  FLOOR DEDICATED CIRCUIT OUTLET |
|  DUPLEX RECEPTACLE OUTLET |  GFI DUPLEX RECEPTACLE OUTLET |
|  OCCUPANCY & DAYLIGHT SENSOR - CEILING MOUNT | |

NOTES:
SINGLE, DUPLEX AND GFI DUPLEX
ARE ALL MOUNTED AT 15" PER ADA

PROJECT
FARMHOUSE -
ART GALLERY

CLIENT
BILL PARMS

CLASS
ID 3000

DATE
11/25/2024

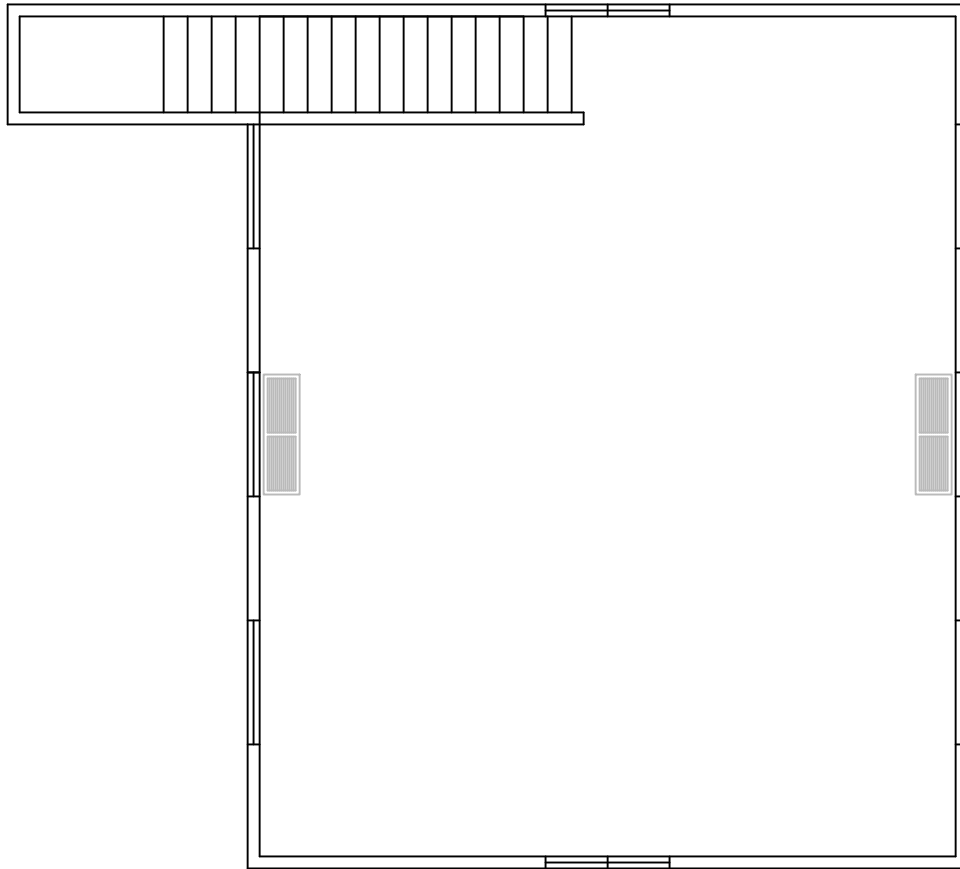
NORTH



SHEET NAME
ELECTRICAL PLAN L2

SHEET NUMBER
8 OF 8

SCALE: 1/8" = 1'



PROJECT
FARMHOUSE -
ART GALLERY

CLIENT
BILL PARMS

CLASS
ID 3000

DATE
11/25/2024

NORTH


SHEET NAME
FLOOR PLAN L2

SHEET NUMBER
5 OF 8

SCALE: 1/8" - 1'

FARMHOUSE

STUDIO & LIVING AREA

Emma Jackson

ID 3000

November 13, 2024



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ENERGY EFFICIENT

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LIGHTING PLAN

FLOOR PLAN

ELECTRICAL PLAN

PROGRAMMING PHASE

CLIENT PROFILE PROVIDED PER PROJECT REQUIREMENTS

The small studio, sits at the back of the property. It houses a small studio and living area on 2 floors that allows Bill the quiet and solitude he seeks when he paints. The property is an inspiration for the landscapes he paints and provides a beautiful backdrop with natural light throughout. It also provides a retreat from his home in the city when he regularly visits the Gallery.

For the studio and living area, create an energy efficient layered lighting plan that includes some portable luminaires in the living area and bedroom. The bay window area on the ground floor will be reserved for canvas and paints but he will have a small living area near the kitchen end of the entry end of the space. He would like to replicate the same character and style as in the Gallery. He also plans to hang art throughout the living area and bedroom as well.

Luminaire style, lamp color and temperature are also important here. He'd also like dimming as an option when switching is considered. Budget for luminaries and design fees for the studio and living area is \$3500.00

SYNOPSIS

Budget: \$3,500

Both Areas:

- Energy Efficient
- Dimming Option
- Art Hung Throughout
- Consider Style, Color & Temperature

Living Area:

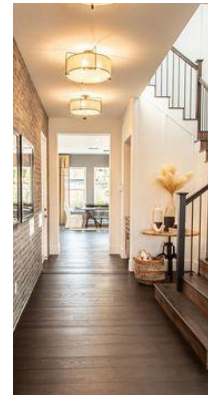
- Portable Luminaires

RESEARCH & CODES

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INSPIRATION



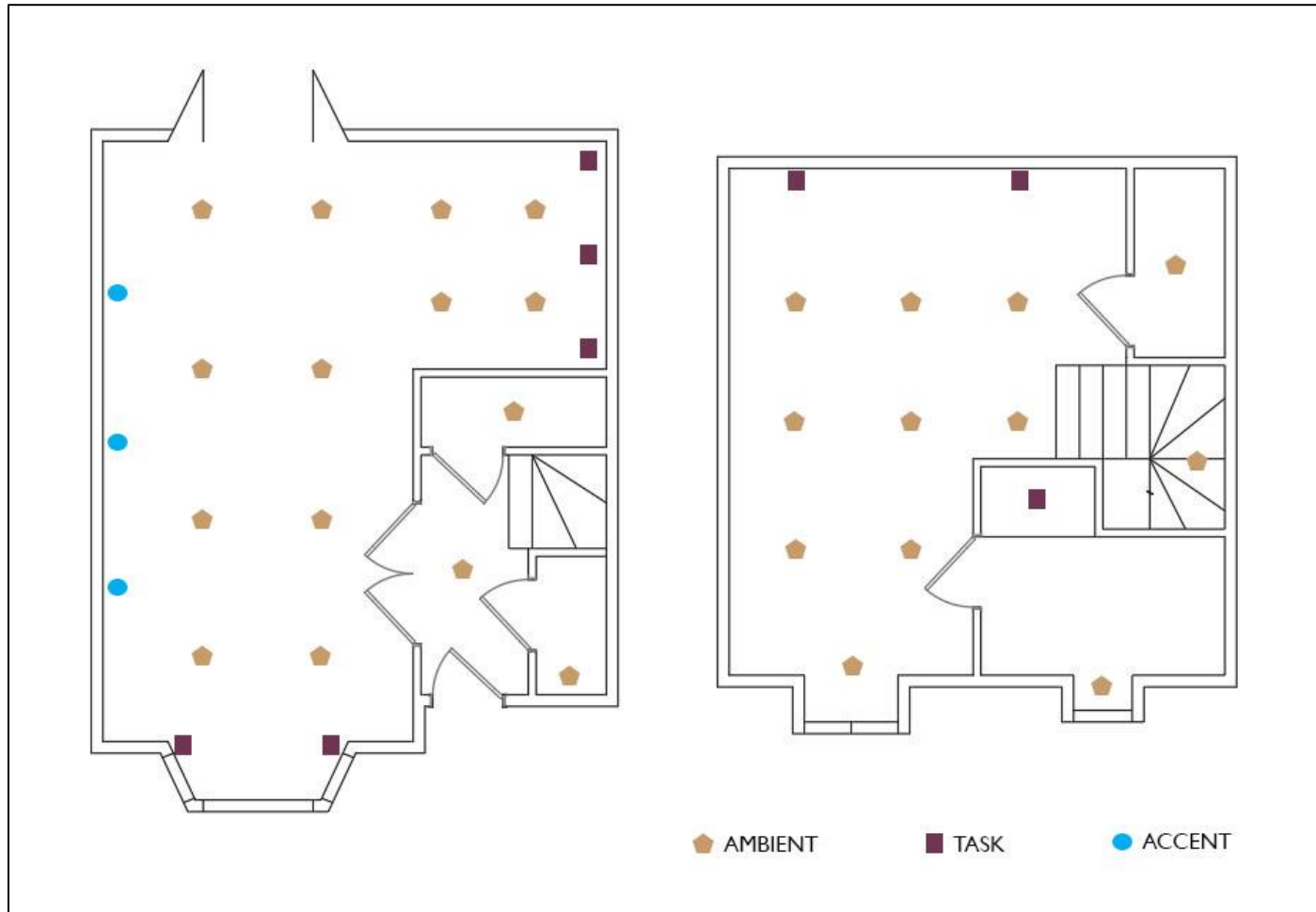
SCHEMATICS

CONCEPT STATEMENT

The studio lighting design is crafted to support Bill Parms' creative process by offering a balance of functionality, comfort, and flexibility. A mix of dimmable, high CRI LED luminaires set at 3000K creates a warm yet neutral light, ideal for detailed artistic work while enhancing color accuracy. Portable luminaires allow for flexibility in adjusting the lighting as needed, ensuring the space adapts to various activities. The design integrates modern technology with rustic elements, using motion sensors and daylighting controls to optimize energy usage without compromising on illumination quality. The lighting layout not only serves the artist's practical needs but also complements the studio's tranquil, creative atmosphere.



GENERAL SCHEMATICS

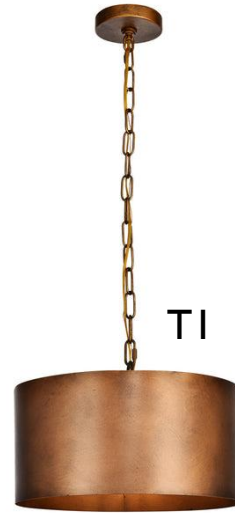


DESIGN DEVELOPMENT

LIGHTING SELECTION



T4



T1



T3



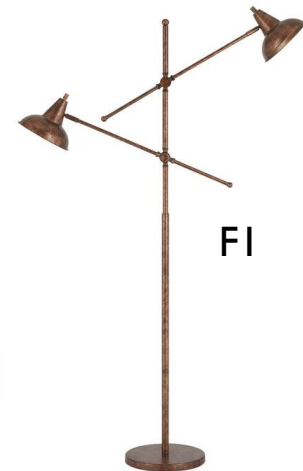
S1



S2



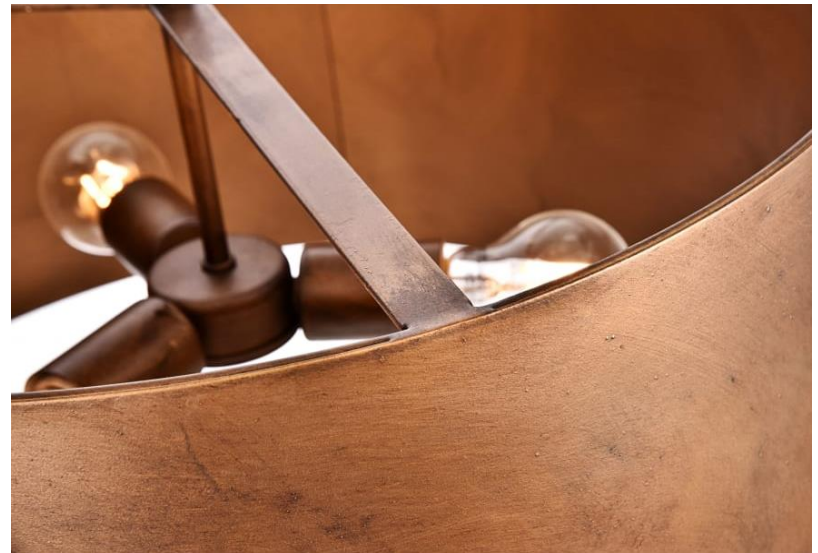
T2



F1

ENERGY EFFICIENT

In the studio, the focus remains on LED efficiency and dimming capabilities. The dimmable LED luminaires provide optimal flexibility, allowing Bill Parmis to adjust the lighting levels based on specific tasks while conserving energy when full brightness is not required. The high CRI LEDs enhance color accuracy for both the art and the work environment, ensuring the space is lit efficiently without compromising the quality of light. While the studio does not feature advanced control systems like occupancy or daylight sensors, the use of LED technology significantly reduces energy consumption compared to traditional lighting. The portable luminaires can be moved as needed, further contributing to energy savings by eliminating the need for fixed, high-wattage fixtures. This simple yet effective approach aligns with energy conservation standards while maintaining a comfortable and well-lit environment for the artist.



CONSTRUCTION DOCUMENTS

PROJECT
FARMHOUSE -
STUDIO/LIVING

CLIENT
BILL PARMS

CLASS
ID 3000

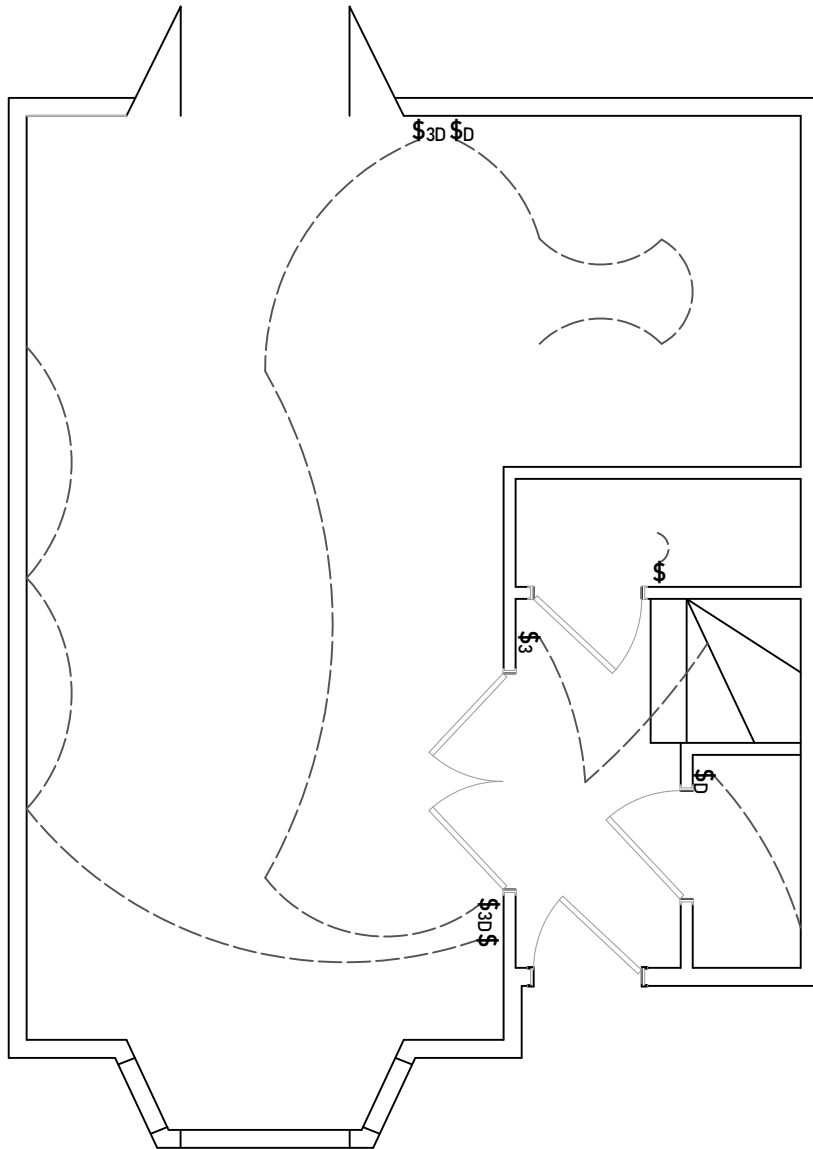
DATE
11/25/2024

NORTH


SHEET NAME
SWITCHING PLAN L1

SHEET NUMBER
3 OF 8

SCALE: 3/16" = 1'



SWITCHING LEGEND

\$ SINGLE POLE SWITCH

\$3 THREE WAY SWITCH

\$D DIMMABLE SWITCH

\$3D THREE WAY DIMMABLE

PROJECT
FARMHOUSE -
STUDIO/LIVING

CLIENT
BILL PARMS

CLASS
ID 3000

DATE
11/25/2024

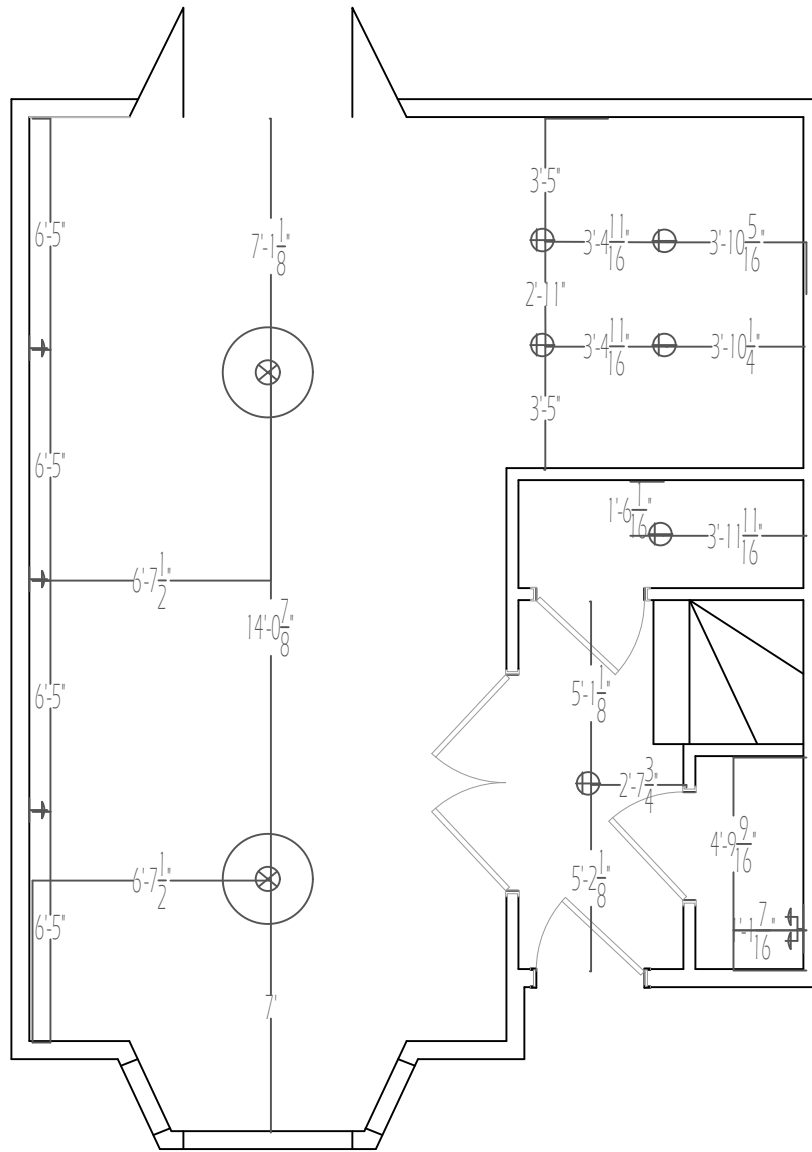
NORTH



SHEET NAME
LIGHTING PLAN L1

SHEET NUMBER
2 OF 8

SCALE: 3/16" = 1'



LIGHTING LEGEND

- S1: 5.5" ONE LIGHT WALL SCONCE
- S2: 7.75" REMY WALL SCONCE
- T1: 15" DIAMETER MIRO PENDANT
- T2: 7.5" DIAMETER LED FLUSH MOUNT
- T3: 16.5" DIAMETER TWO LAMP VANITY
- T4: 24.38" DIAMETER THREE LAMP VANITY

NOTE: SOME IMAGES ARE NOT TO SCALE

NOTES:

CEILING IS 10' TALL - S1 MOUNTED 72" AFF AND S2 MOUNTED AT 48" AFF - T2 IN STAIRWAY IS MOUNTED ON LEVEL 2 CEILING BUT IS A THREE WAY SWITCH AT BOTTOM AND TOP OF STAIRWAY

PROJECT

FARMHOUSE -
STUDIO/LIVING

CLIENT

BILL PARMS

CLASS

ID 3000

DATE

11/25/2024

NORTH



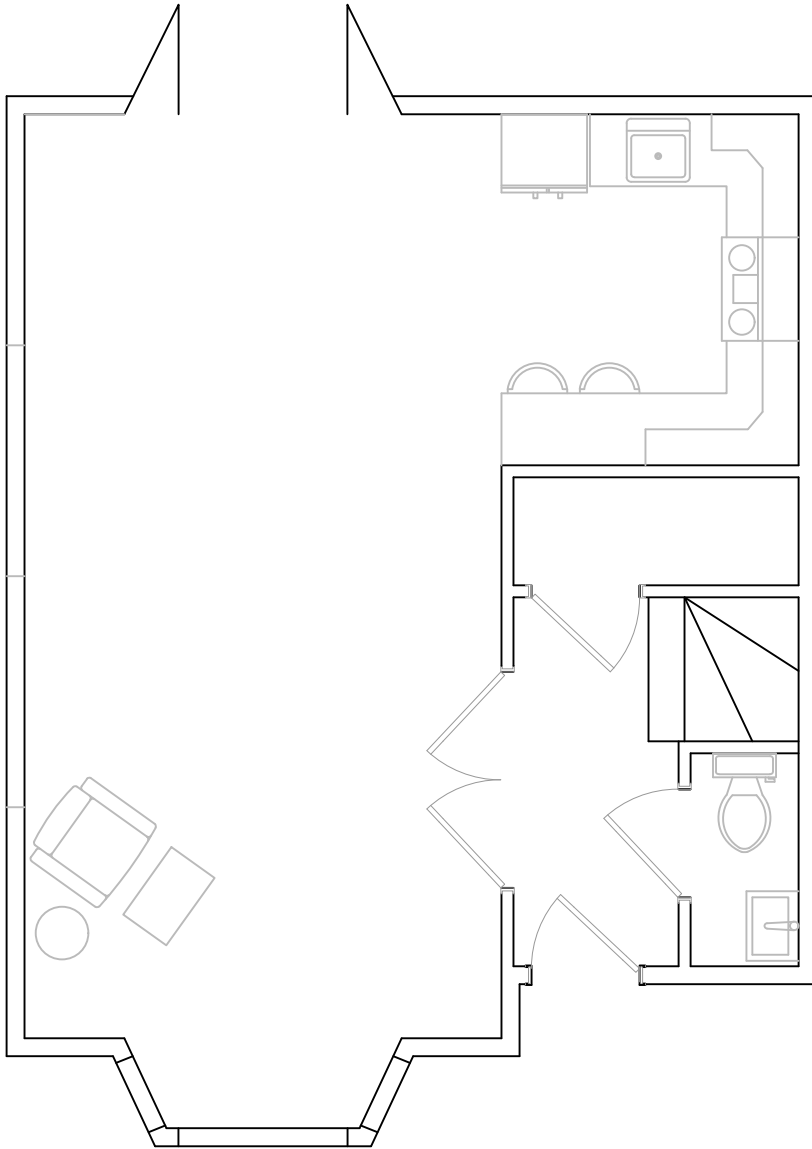
SHEET NAME

FLOOR PLAN L1

SHEET NUMBER

1 OF 8

SCALE: 3/16" - 1'



PROJECT
FARMHOUSE -
STUDIO/LIVING

CLIENT
BILL PARMS

CLASS
ID 3000

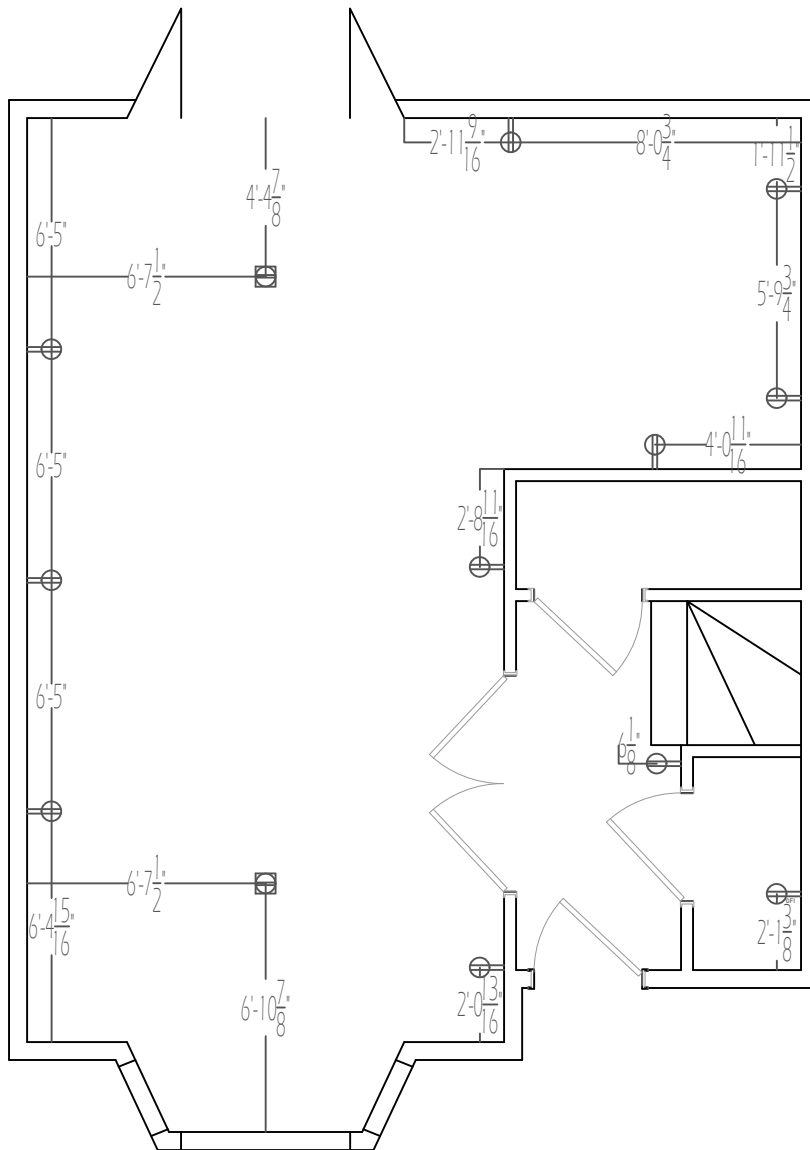
DATE
11/25/2024

NORTH


SHEET NAME
ELECTRICAL PLAN L1

SHEET NUMBER
4 OF 8

SCALE: 3/16" = 1'



ELECTRICAL PLAN

-  SINGLE RECEPTACLE OUTLET
-  DUPLEX RECEPTACLE OUTLET
-  FLOOR DEDICATED CIRCUIT OUTLET
-  GFI DUPLEX RECEPTACLE OUTLET

PROJECT

FARMHOUSE -
STUDIO/LIVING

CLIENT

BILL PARMS

CLASS

ID 3000

DATE

11/25/2024

NORTH



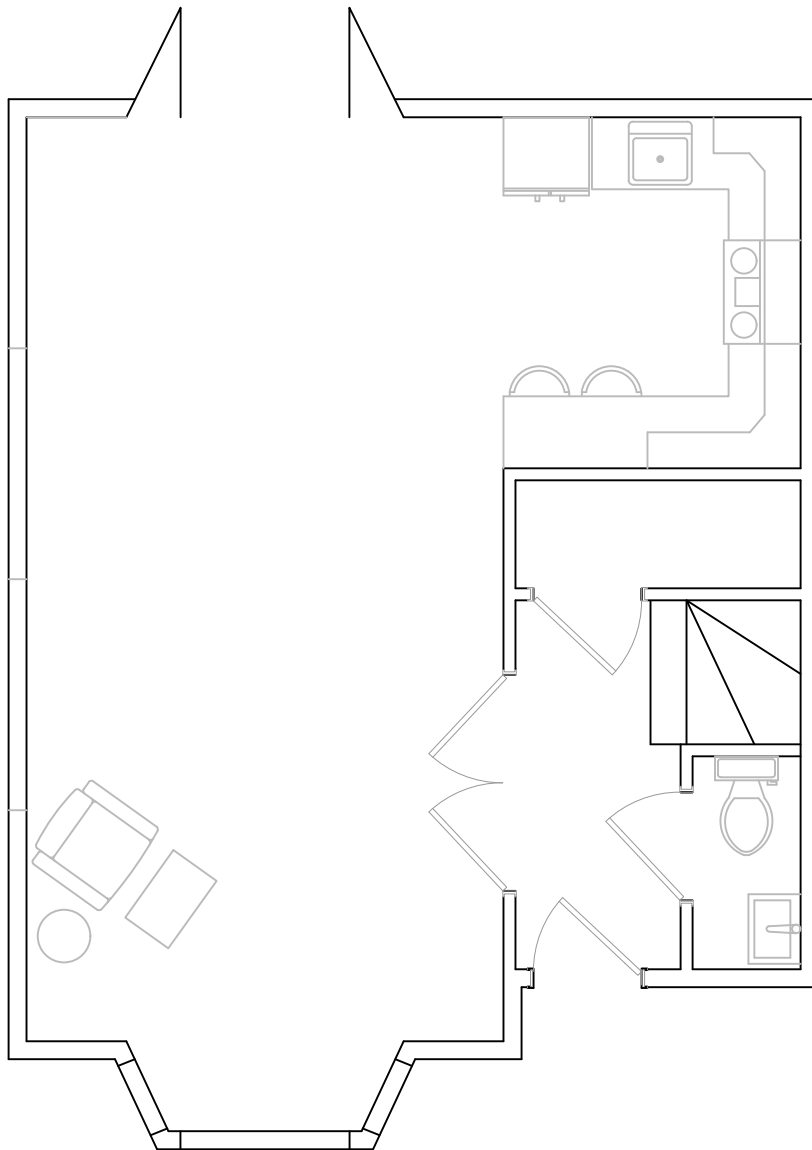
SHEET NAME

FLOOR PLAN L1

SHEET NUMBER

1 OF 8

SCALE: 3/16" - 1'



PROJECT
FARMHOUSE -
STUDIO/LIVING

CLIENT
BILL PARMS

CLASS
ID 3000

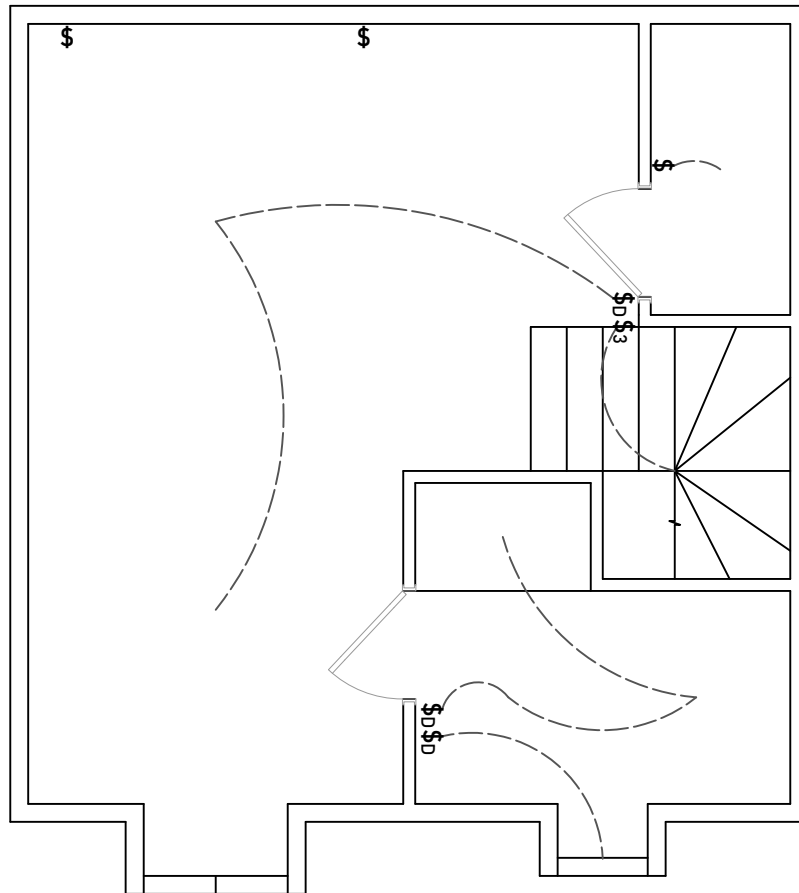
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11/25/2024

NORTH


SHEET NAME
SWITCHING PLAN L2

SHEET NUMBER
7 OF 8

SCALE: 3/16" - 1'



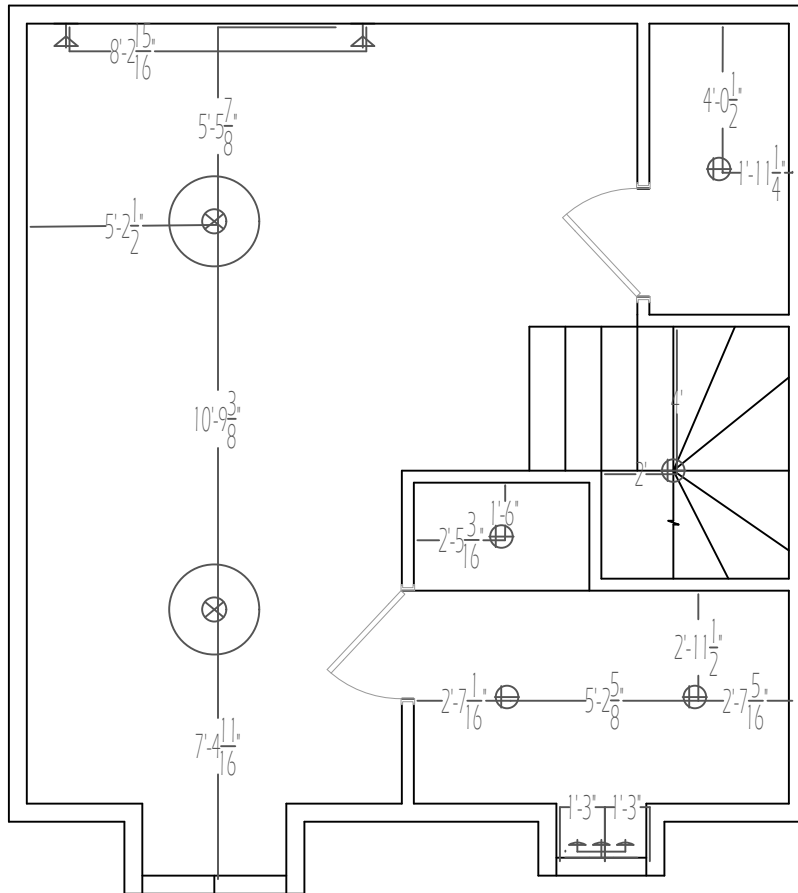
SWITCHING LEGEND

\$ SINGLE POLE SWITCH

\$₃ THREE WAY SWITCH

\$_D DIMMABLE SWITCH

\$_{3D} THREE WAY DIMMABLE



LIGHTING LEGEND

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- ⊞ S2: 7.75" REMY WALL SCONCE
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PROJECT
FARMHOUSE -
STUDIO/LIVING

CLIENT
BILL PARMS

CLASS
ID 3000


DATE
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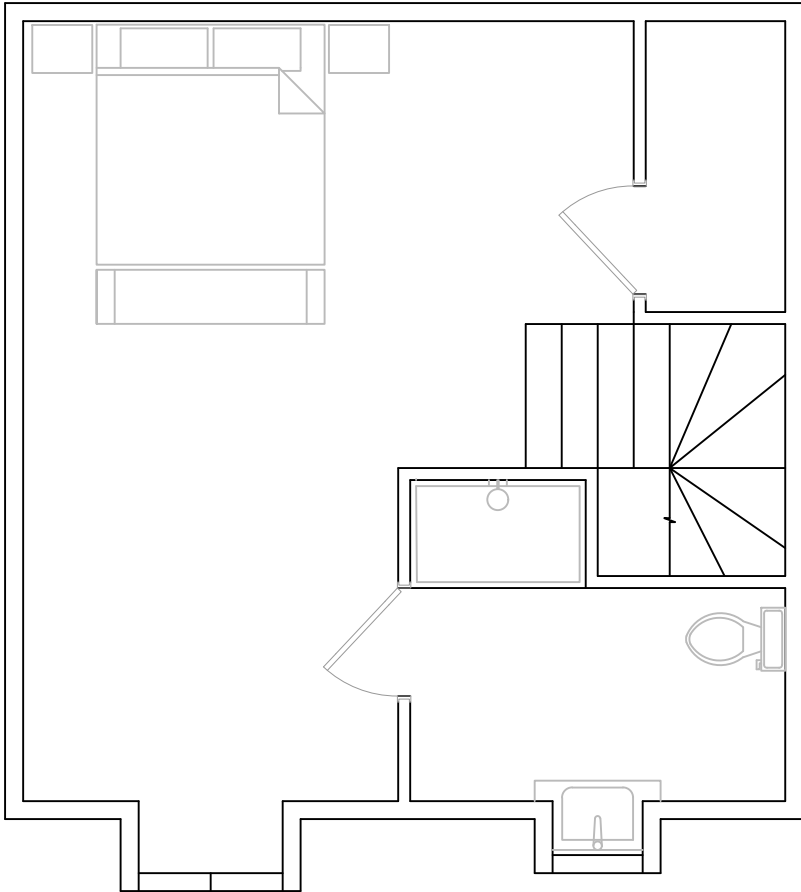
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SHEET NAME
LIGHTING PLAN L2

SHEET NUMBER
6 OF 8

SCALE: 3/16" = 1'

PROJECT FARMHOUSE - STUDIO/LIVING
CLIENT BILL PARMS
CLASS ID 3000
DATE 11/25/2024
NORTH 
SHEET NAME FLOOR PLAN L2
SHEET NUMBER 5 OF 8
SCALE: 3/16" - 1'



PROJECT
FARMHOUSE -
STUDIO/LIVING

CLIENT
BILL PARMS

CLASS
ID 3000

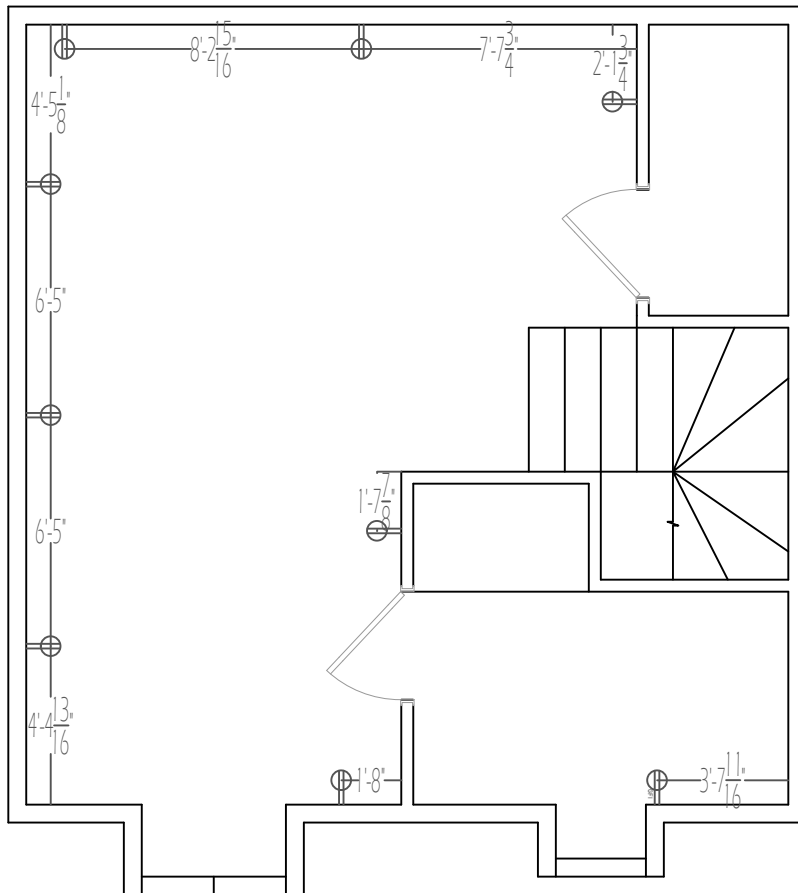
DATE
11/25/2024

NORTH


SHEET NAME
ELECTRICAL PLAN L2

SHEET NUMBER
8 OF 8

SCALE: 3/16" = 1'



ELECTRICAL PLAN

⊖ SINGLE RECEPTACLE OUTLET

⊖= DUPLEX RECEPTACLE OUTLET

⊖ FLOOR DEDICATED CIRCUIT OUTLET

⊖ GFI DUPLEX RECEPTACLE OUTLET

PROJECT

FARMHOUSE -
STUDIO/LIVING

CLIENT

BILL PARMS

CLASS

ID 3000

DATE

11/25/2024

NORTH



SHEET NAME

FLOOR PLAN L2

SHEET NUMBER

5 OF 8

SCALE: 3/16" - 1'

