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THEATRE CONSULTANT

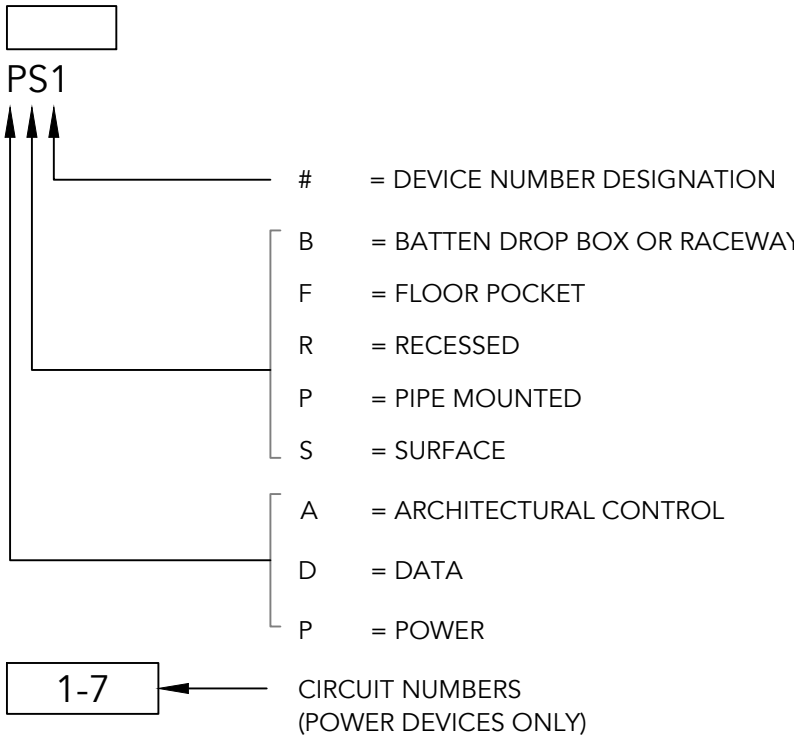
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## TE DRAWING NOTES

- THE ELECTRICAL CONTRACTOR (EC) SHALL CROSS REFERENCE THESE DRAWINGS AND THE ELECTRICAL DRAWINGS BEFORE ORDERING FIXTURES OR ROUGH-IN. THE EC SHALL NOTIFY THE THEATRE CONSULTANT OF ANY DISCREPANCIES IN LOCATION OR FIXTURE TYPE. WORK ON THESE PAGES IS COORDINATED WITH THE GENERAL CONDITIONS, DIVISION 26 AND WITH SECTION 116133 STAGE RIGGING.
- THESE DRAWINGS SHOW LAYOUTS, LOCATIONS AND TYPES OF EQUIPMENT FOR THE STAGE, HOUSE AND WORK LIGHT SYSTEM AND THE CONTROL SYSTEM. DETAILS ON WIRE AND CONDUIT SIZES ARE FOUND ON THE ELECTRICAL ENGINEERS' DRAWINGS.
- POWER WIRING AND LOW VOLTAGE CONTROL WIRING SHALL BE RUN IN SEPARATE CONDUIT. LONG PARALLEL RUNS IF OR LONGER OF THE TWO CONDUITS SIDE BY SIDE SHALL NOT BE PERMITTED.
- EACH CIRCUIT REPRESENTS A 20A, 120VAC CIRCUIT AND HOME RUN TO THE RELAY PANEL.
- EACH CIRCUIT SHALL HAVE TWO WIRES AND SHALL BE GROUNDED. COMMON NEUTRALS SHALL NOT BE PERMITTED.
- EACH CIRCUIT IS WIRED DIRECTLY TO THE RELAY PANEL AND IS PROTECTED BY AN INTEGRAL CIRCUIT BREAKER. ADDITIONAL PROTECTION IS NOT REQUIRED.
- THE PANELS, WIRING DEVICES AND CONTROL DEVICES SHALL BE SET INTO PLACE BY THE EC. IT SHALL BE THE WORK OF THE EC TO RUN ALL CONDUIT AND WIRING FOR LINE VOLTAGE AND LOW VOLTAGE CIRCUITS.

## KEY TO SYMBOLS

### STANDARD WIRING DEVICE

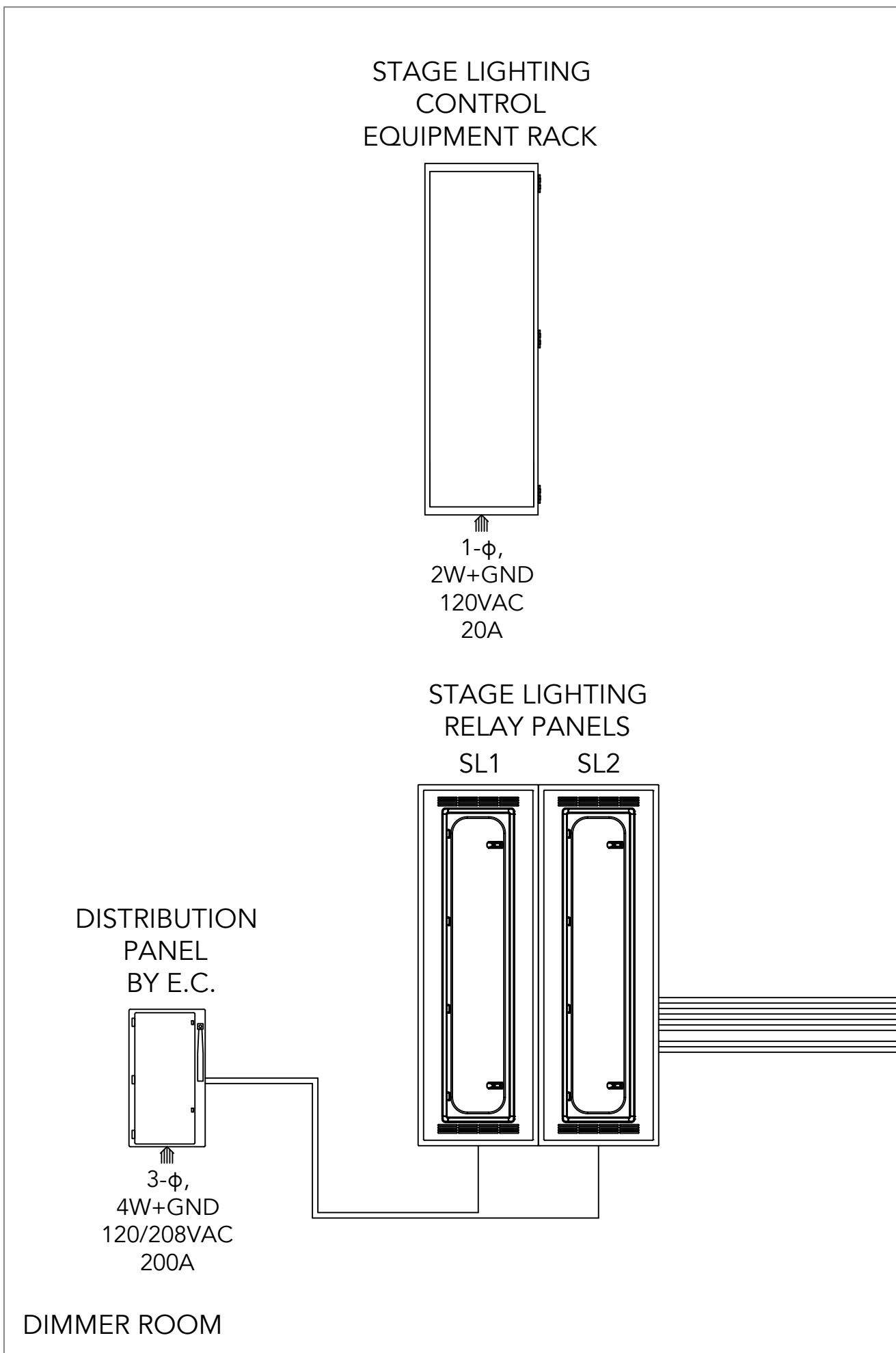
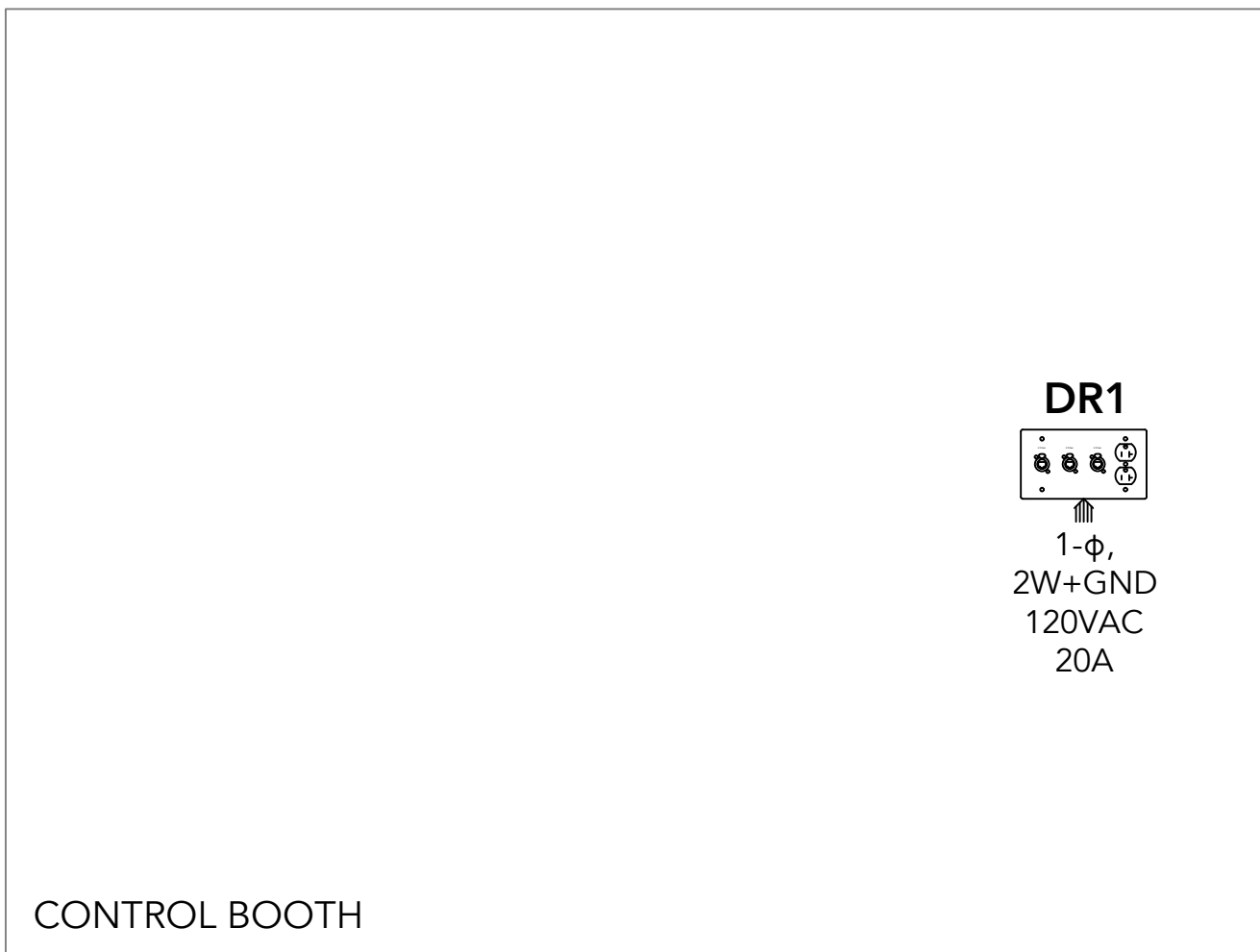


### STANDARD CONNECTORS

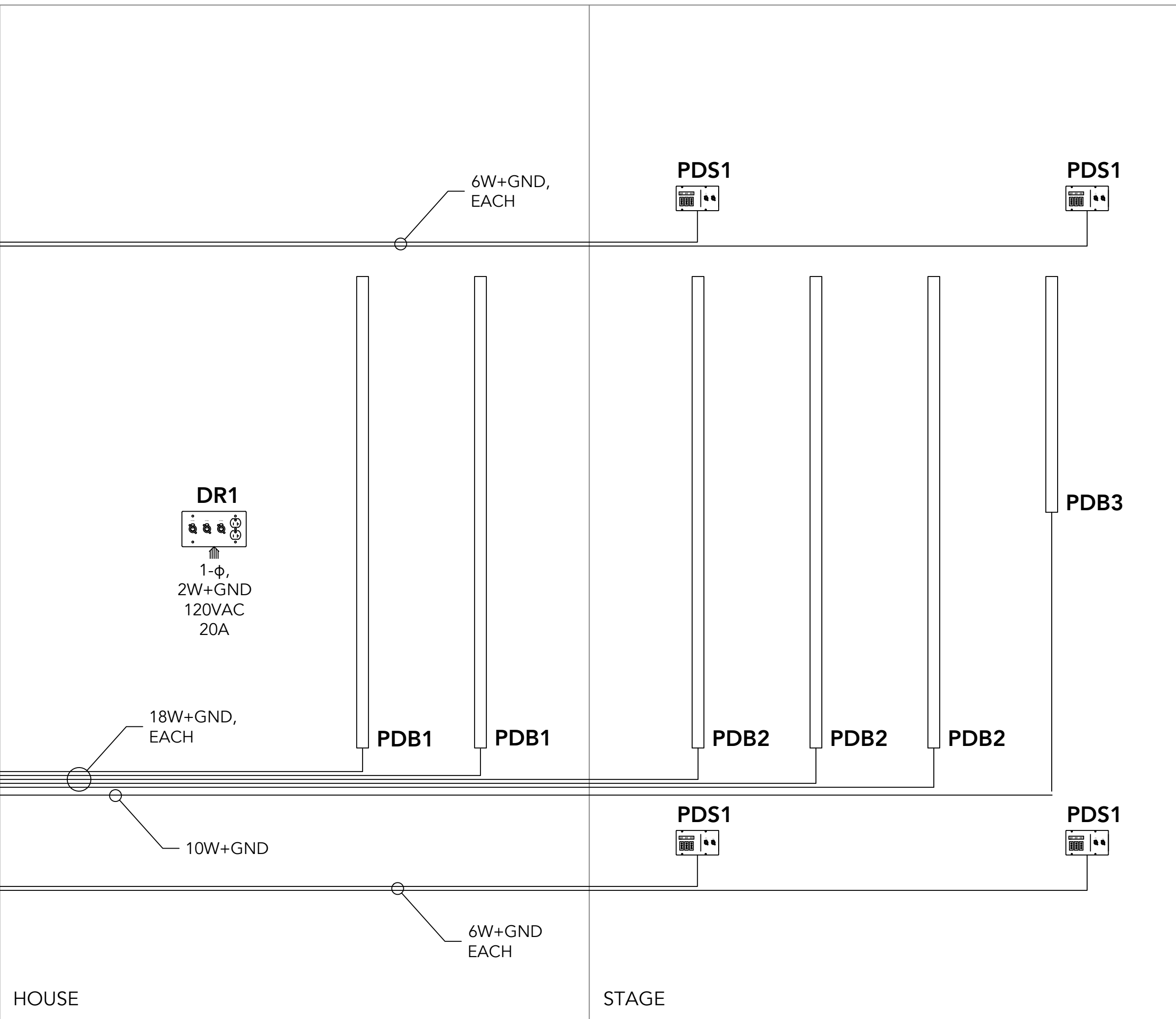
- (NOT TO SCALE)
- 20A 2P&G "STAGE PIN"
  - 50A 2P&G "STAGE PIN"
  - 6 CIRCUIT 20A VEAM
  - NEMA LS-20 "TWIST LOCK"
  - POWERCON TRUE1 TOP
  - 15/20A CONVENIENCE OUTLET
  - XLRS "DMX"
  - RJ45 "NET"

## ABBREVIATIONS

|      |   |
|------|---|
| CIR  | CIRCUIT                                 |
| COND | CONDUCTORS                              |
| CONT | CONTINUOUS                              |
| DMX  | DMX112                                  |
| DS   | DOWN STAGE (TOWARD THE AUDIENCE)        |
| DSL  | DOWN STAGE LEFT (WHEN FACING AUDIENCE)  |
| DSR  | DOWN STAGE RIGHT (WHEN FACING AUDIENCE) |
| EC   | ELECTRICAL CONTRACTOR                   |
| EE   | ELECTRICAL ENGINEER                     |
| FOH  | FRONT OF HOUSE                          |
| GJB  | GROUND JUNCTION BOX                     |
| GND  | GROUND                                  |
| HL   | HOUSE LEFT (WHEN FACING STAGE)          |
| HR   | HOUSE RIGHT (WHEN FACING STAGE)         |
| LSI  | LIGHTING SYSTEM INTEGRATOR              |
| MFR  | MANUFACTURER                            |
| RFU  | REMOTE FOCUS UNIT                       |
| RTC  | RIGGING TRADE CONTRACTOR                |
| SL   | STAGE LEFT (WHEN FACING AUDIENCE)       |
| SR   | STAGE RIGHT (WHEN FACING AUDIENCE)      |
| TBD  | TO BE DETERMINED                        |
| TC   | THEATRE CONSULTANT                      |
| US   | UP STAGE (FARTHEST FROM THE AUDIENCE)   |
| URL  | UP STAGE LEFT                           |
| USR  | UP STAGE RIGHT                          |
| W    | WIRE                                    |

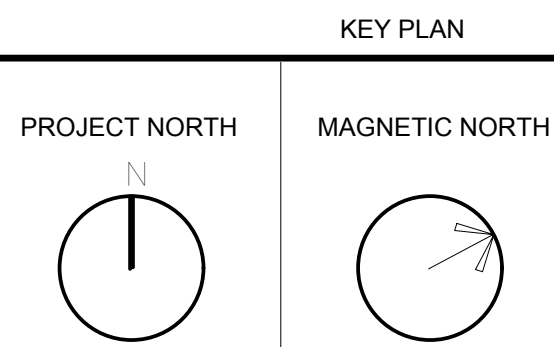
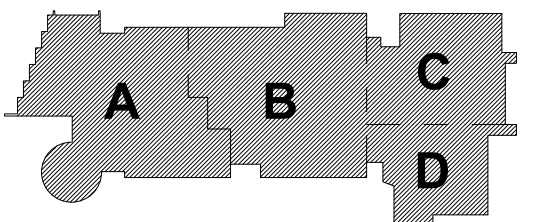


1 POWER RISER  
N.T.S.



MSBA DESIGN  
DEVELOPMENT  
SUBMISSION

August 4, 2022

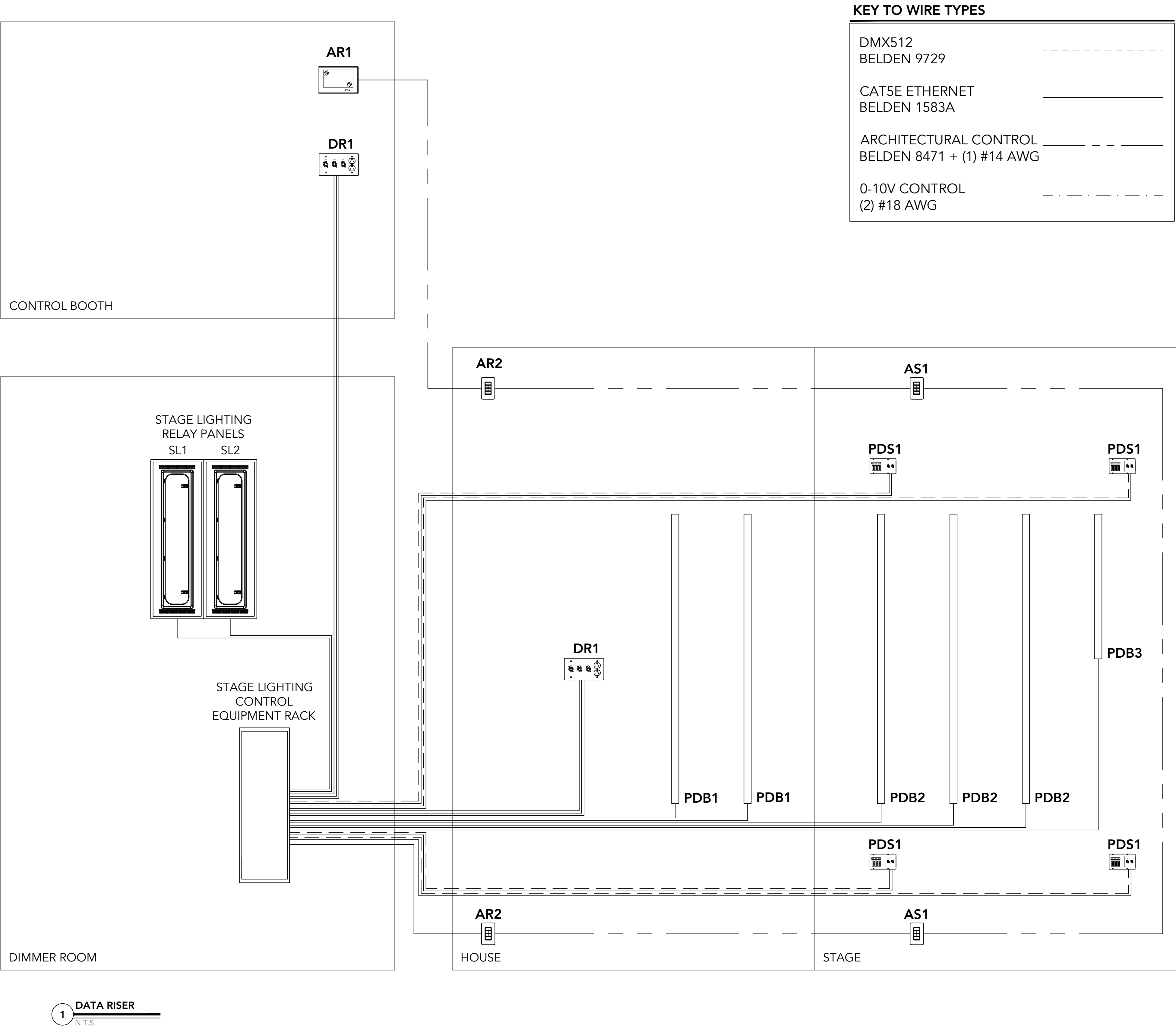


THEATRE  
ELECTRICS  
POWER RISER

Scale: NTS  
Job No.: 20202  
Drawn By: JL  
Date: August 4, 2022

TE-1.0

THE WORK ON THIS SHEET IS ASSOCIATED WITH SECTIONS  
116153, 260963, AND 265113 UNLESS NOTED



DMX512 CABLING AND INSTALLATION

1. THE ELECTRICAL CONTRACTOR (EC) SHALL BECOME FAMILIAR WITH THE INSTALLATION REQUIREMENTS FOR ANSI/ESTA DMX512 SYSTEMS PRIOR TO BEGINNING INSTALLATION. IT IS RECOMMENDED THAT THE EC REVIEW *RECOMMENDED PRACTICE FOR DMX512 A GUIDE FOR USERS AND INSTALLERS* BY ADAM BENNETTE, WHICH COVERS BOTH ANSI/ESTA 1.11 DMX512 AND ANSI/ESTA 1.20 RDM SYSTEMS. THE BOOKLET IS A FREE DOWNLOAD AT [HTTP://TSP.ESTA.ORG/FREESTANDARDS](http://tsp.esta.org/freestandards) AT THE BOTTOM OF THE PAGE.
2. DO NOT PURCHASE OR INSTALL CABLE THAT IS NOT:
  - 2.1. LISTED AS APPROVED IN THE STAGE LIGHTING CONTROL SYSTEM SHOP DRAWINGS, OR
  - 2.2. APPROVED BY THE STAGE LIGHTING SYSTEM INTEGRATOR PRIOR TO SHOP DRAWINGS APPROVAL.
3. THE CABLE SHALL BE SUITABLE FOR EIA-485 (RS-485) USE WITH TWO OR MORE LOW-CAPACITANCE TWISTED PAIRS, WITH OVERALL BRAID AND FOIL SHIELDING. CONDUCTORS SHOULD BE 24 AWG (7/0.2) OR LARGER FOR MECHANICAL STRENGTH AND TO MINIMIZE VOLT DROP ON LONG LINES.
4. ALL PERMANENT DMX CABLES SHALL BE INSTALLED IN CONDUIT.
5. FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS INCLUDED WITH THE SHOP DRAWINGS. PAY PARTICULAR ATTENTION TO CABLE/PIN CONNECTIONS TO AVOID CROSS-WIRING.
6. DMX CABLE RUNS CONTROLLING PERMANENTLY INSTALLED DEVICES SHALL HAVE NO MORE THAN 30 DEVICES PER RUN. THE EC SHALL PLAN ALL DMX CABLE RUNS ACCORDINGLY. TOUCH-AND-GO CONNECTIONS AND "Y" CABLES ARE NOT PERMITTED. DMX SIGNAL MUST BE PASSED ALONG VIA THE DEVICES' INTEGRAL INPUT/OUTPUT CONNECTORS.
7. ALL DMX CABLE RUNS THAT END IN AN OPERATING DEVICE SHALL BE TERMINATED BY A 110-130 OHM 1/4 WATT RESISTOR BETWEEN THE DATA LINES AND INSTALLED IN A SUITABLE ENCLOSURE. THE EC AND STAGE LIGHTING SYSTEM INTEGRATOR SHALL COORDINATE THE NUMBER OF TERMINATORS REQUIRED. CABLE RUNS THAT END IN A DMX INPUT OR OUTPUT 5-PIN XLR JACK THAT IS NOT PART OF AN OPERATING DEVICE (SUCH AS A DATA DISTRIBUTION FACEPLATE) DO NOT REQUIRE TERMINATION.
8. TERMINATE ALL DMX CABLE RUNS BY:
  - 8.1. SWITCHING ON THE LAST DEVICE'S INTEGRAL TERMINATOR.
  - 8.2. ATTACHING A 5-PIN XLR OR RJ45 (DEPENDENT ON THE DEVICE) TERMINATOR TO THE LAST DEVICE'S DMX OUT PORT. THESE TERMINATORS ARE AVAILABLE FROM THE STAGE LIGHTING SYSTEM INTEGRATOR.
9. THE EC SHALL SET THE START DMX ADDRESS ON ALL LIGHT FIXTURES, POWER SUPPLIES, AND OTHER DATA RECEIVING DEVICES ACCORDING TO THE LIGHTING CONTROL SHOP DRAWINGS AND/OR THE LP DRAWINGS AT THE TIME OF FIXTURE INSTALLATION. FOLLOW MANUFACTURER'S INSTRUCTIONS SO THAT THE ADDRESS IS HELD IN MEMORY UNTIL THE LIGHTING CONTROL SYSTEM IS COMMISSIONED.

0-10V CABLING AND INSTALLATION

1. THE EC SHALL CONFIRM THE SOURCE CURRENT OF EACH FIXTURE TYPE AND VERIFY THAT THE TOTAL CURRENT DOES NOT EXCEED THE CAPACITY OF THE CONTROLLER. NOTIFY ARCHITECT AND LIGHTING DESIGNER IF ADDITIONAL 0-10V OUTPUTS ARE NEEDED TO OVERCOME THE LIMITATION.
2. 0-10V CONTROL CABLE RUNS SHOULD NOT EXCEED 300'. IF THIS IS NOT POSSIBLE NOTIFY ARCHITECT AND THEATRE CONSULTANT AND COORDINATE ALTERNATE LOCATION FOR THE 0-10V CONTROL DEVICE.
3. INSTALL CLASS 1 AND CLASS 2 WIRING IN SEPARATE CONDUITS PER NEC.
4. 0-10V WIRING SHOULD USE SHIELDED PAIR WIRING WITH THE SHIELD GROUNDED TO EARTH AT THE CONTROLLER.
5. THE EC SHALL CONFIRM THE CURRENT OF EACH FIXTURE TYPE AND VERIFY THAT THE TOTAL CURRENT DOES NOT EXCEED THE CAPACITY OF THE CONTROLLER. IF

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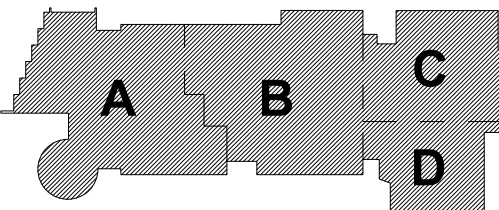
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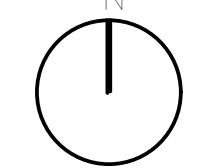
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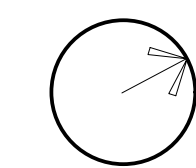


KEY PLAN

PROJECT NORTH



MAGNETIC NORTH



THEATRE  
ELECTRICS  
DATA RISER

Scale: NTS

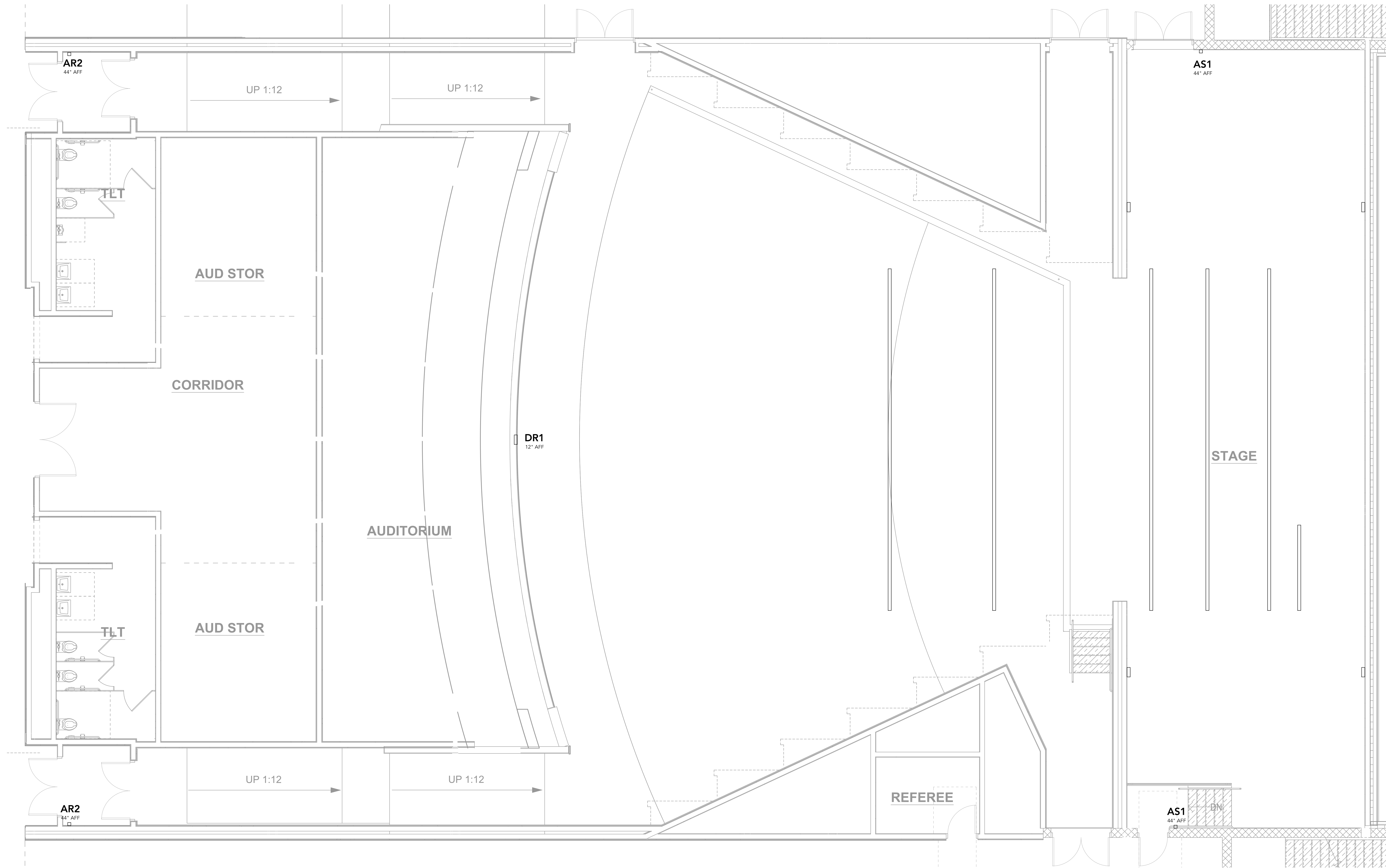
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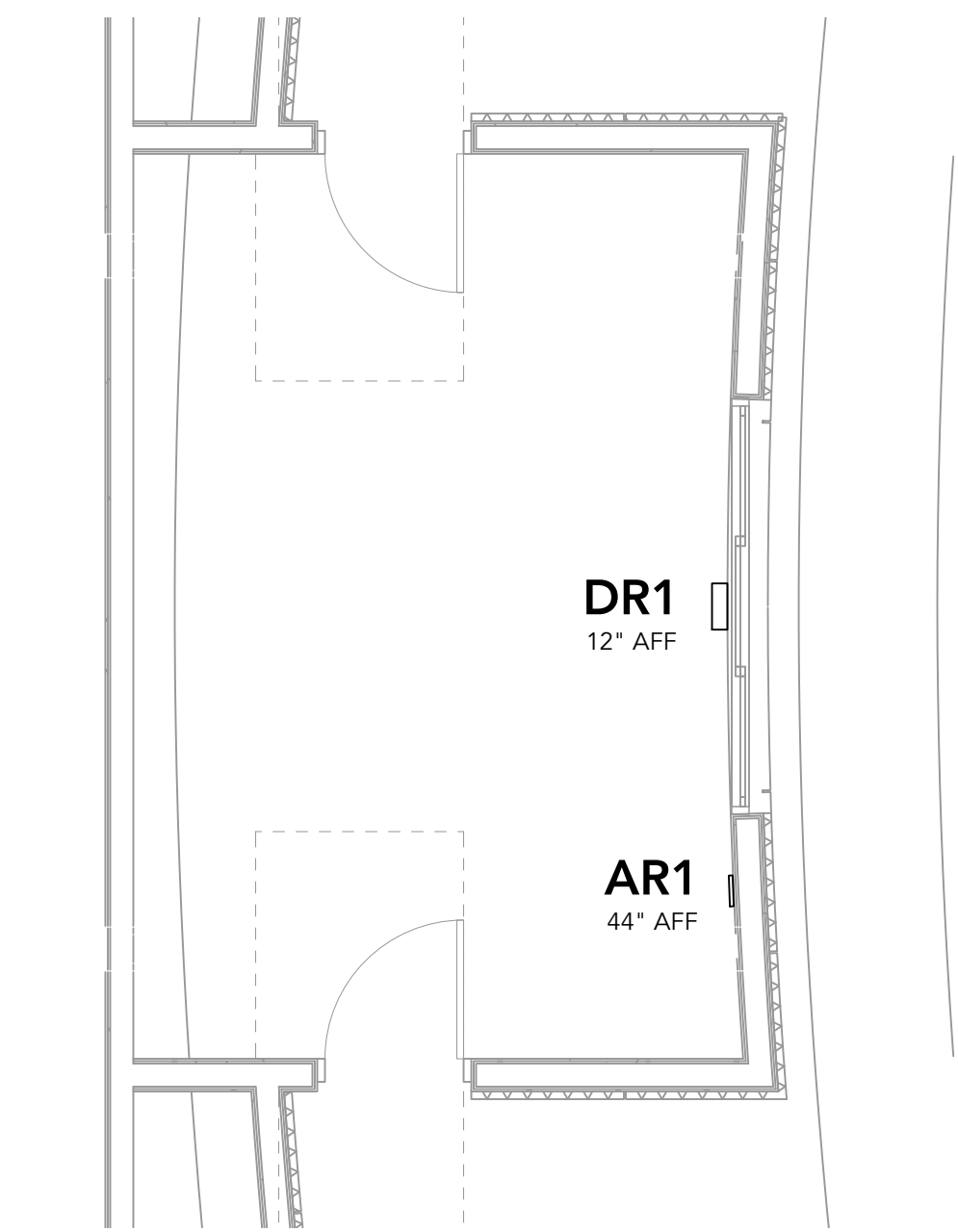
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TE-1.1

THE WORK ON THIS SHEET IS ASSOCIATED WITH SECTIONS  
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1 HOUSE AND STAGE DEVICE PLACEMENT  
1/4" = 1'-0"



2 CONTROL BOOTH DEVICE PLACEMENT  
1/4" = 1'-0"

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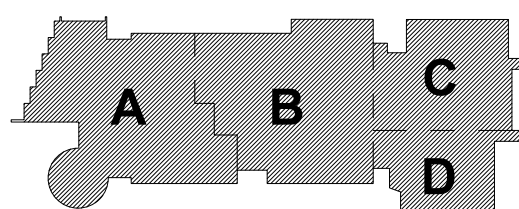
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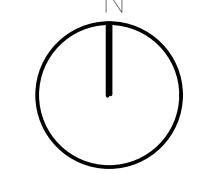
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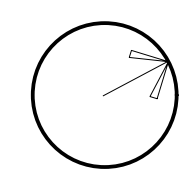


KEY PLAN

PROJECT NORTH



MAGNETIC NORTH



THEATRE  
ELECTRICS  
PLACEMENT

Scale: AS NOTED

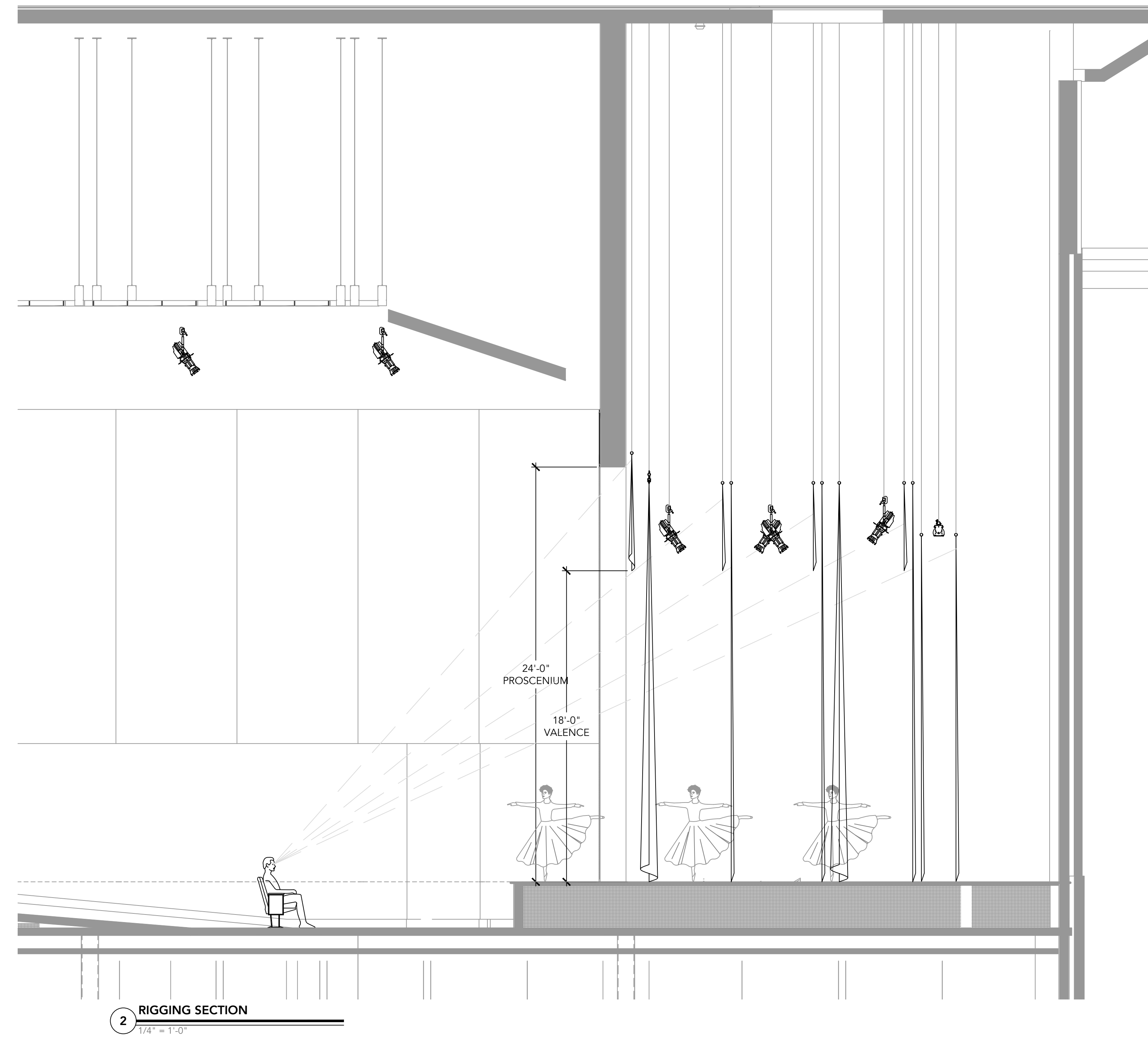
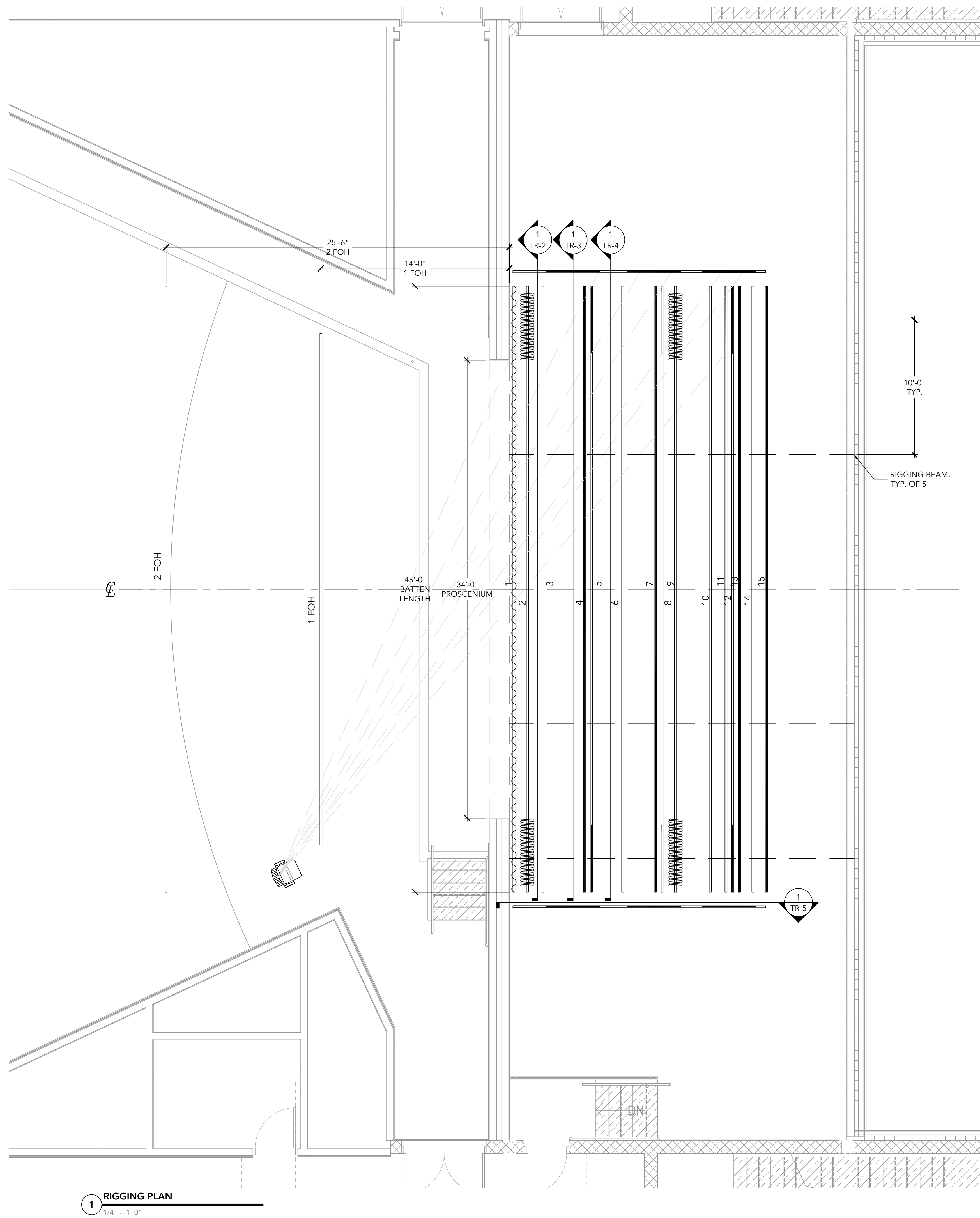
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TE-2

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| HANGING SCHEDULE |                    |                            |               |                                   |
|------------------|--------------------|----------------------------|---------------|-----------------------------------|
| LINESET NO.      | USE                | DISTANCE FROM PLASTER LINE | BATTEN HEIGHT | REMARKS                           |
| 2 FOH            | #2 FOH             | -25'-6"                    |               |                                   |
| 1 FOH            | #1 FOH             | -14'-0"                    |               |                                   |
| 1                | VALENCE            | 0'-4"                      | 24'-10"       |                                   |
| 2                | HOUSE CURTAIN      | 1'-4"                      | 23'-6"        | COORD. HT. WITH HOUSE CURTAIN HT. |
| 3                | 1ST ELECTRIC       | 2'-6"                      | 21'-8"        |                                   |
| 4                | #1 BORDER          | 5'-7"                      | 23'-0"        |                                   |
| 5                | #1 LEGS            | 6'-1"                      | 23'-0"        |                                   |
| 6                | 2ND ELECTRIC       | 8'-5"                      | 21'-8"        |                                   |
| 7                | #2 BORDER          | 10'-10"                    | 23'-0"        |                                   |
| 8                | #2 LEGS            | 11'-4"                     | 23'-0"        |                                   |
| 9                | MID-STAGE TRAVELER | 12'-4"                     | 23'-0"        |                                   |
| 10               | 3RD ELECTRIC       | 14'-11"                    | 21'-8"        |                                   |
| 11               | #3 BORDER          | 16'-1"                     | 23'-0"        |                                   |
| 12               | #3 LEGS            | 16'-7"                     | 23'-0"        |                                   |
| 13               | SCRIM              | 17'-1"                     | 20'-0"        |                                   |
| 14               | 4TH ELECTRIC       | 18'-1"                     | 21'-0"        |                                   |
| 15               | CYCLORAMA          | 19'-1"                     | 20'-0"        |                                   |

TR DRAWING ABBREVIATIONS

CIR. CIRCUIT  
COND. CONTINUOUS  
DMX DMX12  
DS DOWN STAGE (TOWARD THE AUDIENCE)  
DSL DOWN STAGE LEFT (WHEN FACING AUDIENCE)  
DSR DOWN STAGE RIGHT (WHEN FACING AUDIENCE)  
EC ELECTRICAL CONTRACTOR  
EE ELECTRICAL ENGINEER  
FOH FRONT OF HOUSE  
GJB GRID IRON JUNCTION BOX  
GND GROUND  
GUC GALVANIZED UTILITY (AIRCRAFT) CABLE  
HL HOUSE LEFT (WHEN FACING STAGE)  
HR HOUSE RIGHT (WHEN FACING STAGE)  
MFR MANUFACTURER  
RC RIGGING CONTRACTOR  
SE STRUCTURAL ENGINEER  
SL STAGE LEFT (WHEN FACING AUDIENCE)  
SR STAGE RIGHT (WHEN FACING AUDIENCE)  
SLI STAGE LIGHTING INTEGRATOR  
SR STAGE RIGHT (WHEN FACING AUDIENCE)  
TBD TO BE DETERMINED  
TC THEATRE CONSULTANT  
US UP STAGE (FARTHEST FROM THE AUDIENCE)  
URL UP STAGE LEFT  
USR UP STAGE RIGHT

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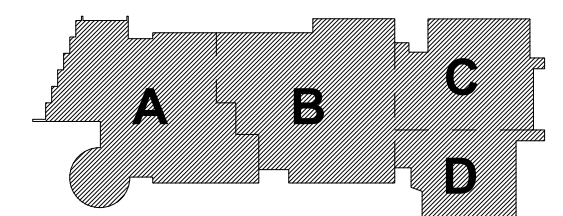
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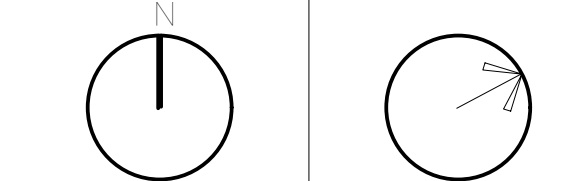
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KEY PLAN

PROJECT NORTH MAGNETIC NORTH

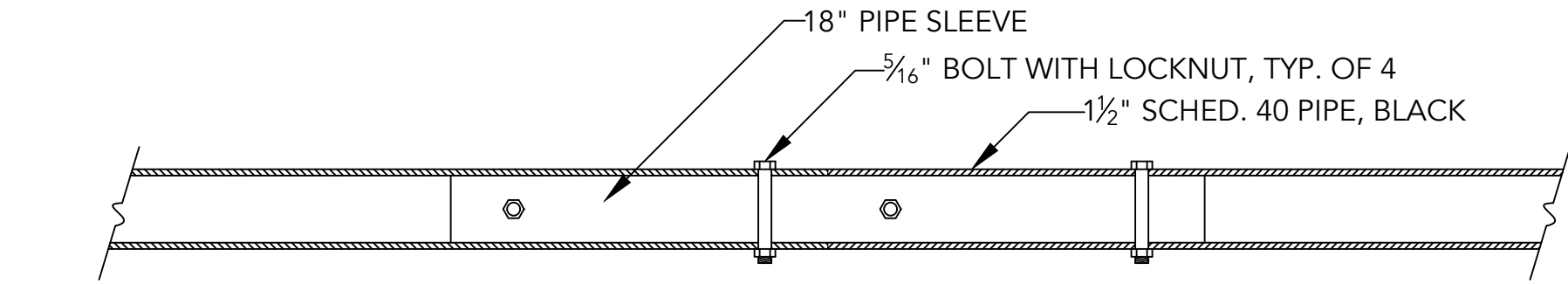
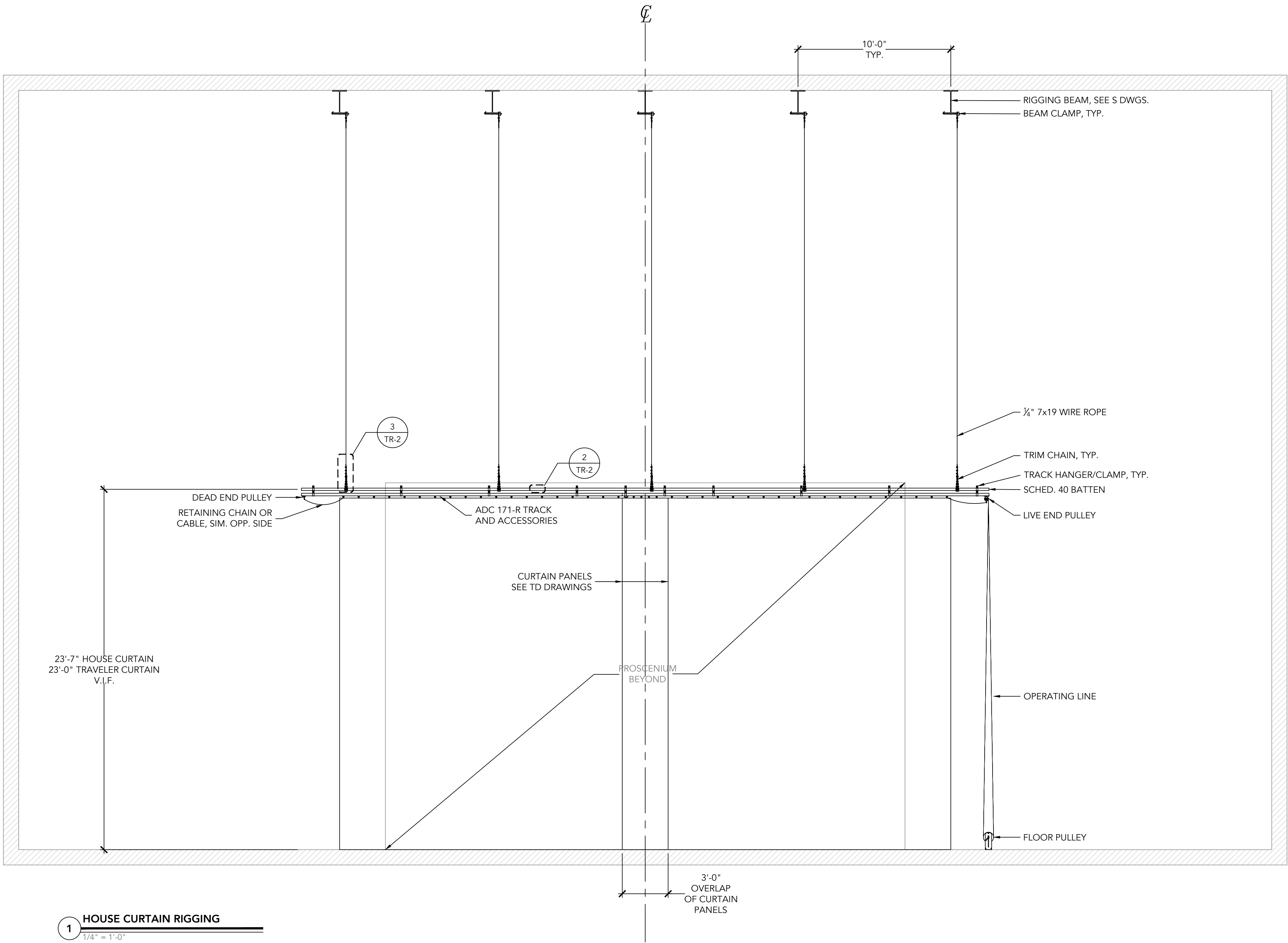


THEATRE RIGGING  
PLAN, SECTION  
AND SCHEDULE

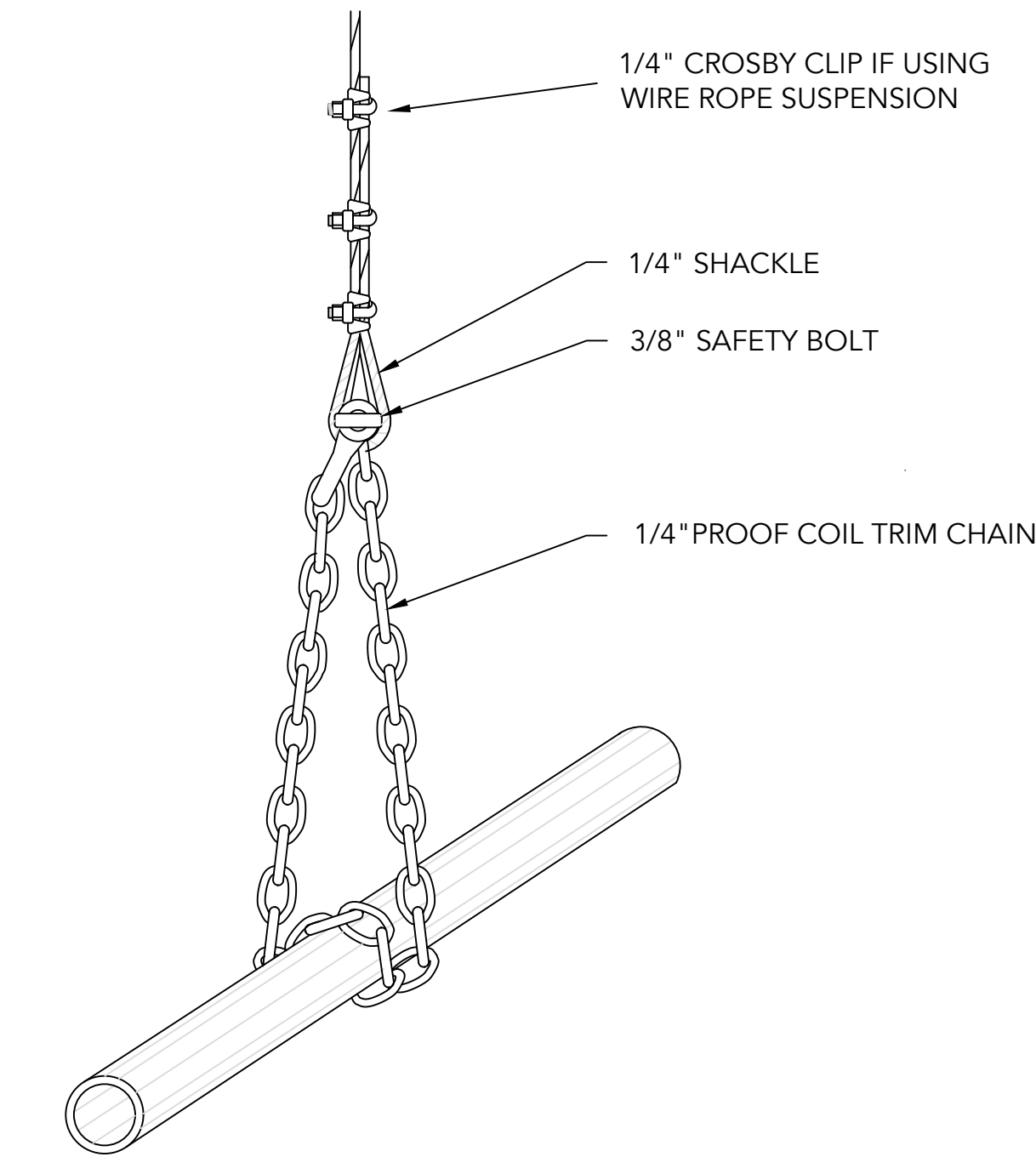
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TR-1

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NOTE:  
ALL BATTENS SHALL BE CAPABLE OF SUPPORTING A MINIMUM 30 LBS/FT OF UNIFORMLY DISTRIBUTED LOAD. BATTENS SHALL BE CAPABLE OF SUSTAINING A POINT LOAD OF 100 POUNDS AT MID-SPAN BETWEEN ANY TWO SUSPENSION POINTS WITH A MAXIMUM SPAN DEFLECTION OF 1/180 OF THE SPAN.



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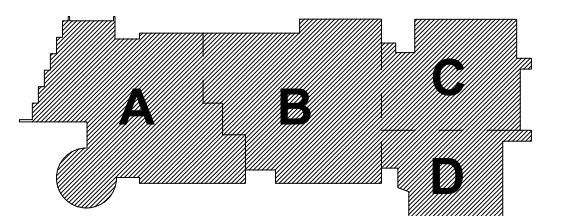
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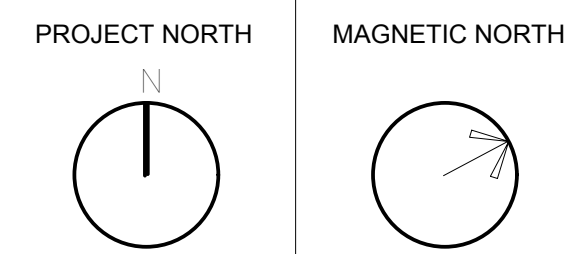
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KEY PLAN



THEATRE RIGGING TRAVELER CURTAINS

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Drawn By: J.L.  
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