NORTHPORT PUBLIC SCHOOL

AUDITORIUM LIGHTING SYSTEM DESIGN

PROJECT MANUAL

October 20, 2026

Consultant:

CSD Group

Owner:

Northport Public School

Included Documents:

RFP
Bid Form
General Requirements
Specifications
Drawings

SECTION 00 1116 – INVITATION TO BID

1.1 PROJECT INFORMATION

A. Notice to Bidders: Bidders are invited to submit bids for Project as described in this Document.

B. Project Identification: Northport Public School Auditorium

1. 104 S Wing St, Northport, MI 49670

C. Owner: Northport Public Schools

D. Consultant: CSD Group.

E. Project Description: Project consists of updating the lighting system, including the house lights, within the auditorium.

F. Construction Contract: Bids will be received for the following Work:

1. General Contract – Lighting.
    a. GC will work with Owner's representatives to coordinate installation timeframes.
    b. All Theatrical Lighting installation work will be performed under the General Contract.
    c. All Electrical contract work will be performed under the General Contract.
    d. All painting, repair, and other incidental construction work will be performed under the General Contract.
2. The project will utilize Prevailing Wage.

1.2 SUBMITTAL AND OPENING

A. A. Owner will receive sealed bids until the bid time and date via sealed envelope. Owner will consider bids prepared in compliance with the Instructions to Bidders issued by Owner, and delivered as follows:

1. Bid Date: Friday, December 4, 2026.
2. Bid Time: 2:00 p.m., local time.
3. Location: Northport Public School, 104 S Wing St, Northport, MI 49670
4. Submit not less than three (3) copies of the bid on the supplied bid form.

B. Bids will be opened at 2:15pm at the above location.

C. By making a Bid, each Bidder represents that the Bidder has read and understands the Project Documents, has visited the site, has become familiar with local conditions affecting the Work, has correlated observations with the requirements of the Documents, and has based the Bid upon the materials, systems and equipment required by the Documents.

1.3 PREBID CONFERENCE

A. A prebid conference for all bidders will be held via zoom. Date and time are To Be Determined. Tours of the facility can be arranged on an as-need basis at the site: 104 S Wing St, Northport, MI 49670.

B. Sub-bidders, potential suppliers, and other interested persons may attend.

C. An attendance sheet will be circulated. Bidders must identify themselves as such on the attendance sheet. Sub-bidders and others are requested to indicate their trade or specialty. Identified Bidders will be notified whenever an Addendum is issued.

1.4 DOCUMENTS

A. Online Procurement and Contracting Documents: See bid advertisement for document location.

B. Bidders and Sub-bidders shall promptly notify the Designer of ambiguities, inconsistencies or errors discovered in examining the Documents or the site and local conditions, so that the Designer may issue written clarifications to all Bidders. The Designer may issue Addenda before receipt of bids, to modify the Documents. In the space provided in the Bid Form, bidders shall acknowledge receipt of such Addenda.

1. Questions and RFI's regarding the documents and project scope shall be submitted to the consultant at this email address: tim@hav.design
2. All questions submitted to the consultant will be answered via written addendum.
3. All questions must be submitted by 2pm on Monday, November 23, 2026.
4. Questions submitted after that time will not be answered.

C. Bids shall be based on products indicated in the Documents. No substitutions may be made without prior approval from the Designer. Procedures for product substitution requests and approvals are outlined in the bid documents.

1.5 TIME OF COMPLETION

A. A. Bidders shall begin the Work on receipt of the Notice to Proceed and shall complete the Work within the Contract Time.

1. Installation is expected to commence on or around February 1, 2027, and complete by April 14, 2027.

1.6 BIDDER'S QUALIFICATIONS

A. Bidders must have a local business presence (within 250 miles of the project site) for long-term service and support of the systems.

B. Bidders must be properly licensed under the laws governing their respective trades and be able to obtain insurance and bonds required for the Work. Costs for these items shall be clearly identified on the bid form.

1. A Bid Bond, in an amount not less than 5% of the Bid amount, in a form acceptable to the Owner will be required of all bids.
2. A Performance Bond, a separate Labor and Material Payment Bond in a form acceptable to Owner will be required of the successful Bidder.
3. Insurance in a form acceptable to Owner will be required of the successful Bidder.

END OF SECTION 00 1116

SEALED BILL LABEL

Separate, or fold over, the label on the line below, and affix to the exterior of sealed container so information is clearly visible for Bid Submission. Ensure label is attached in a manner to prevent accidental removal or defacement. Label shall serve as sole identification for sealed bid at submission.

BID TO: Northport Public School
Attention: Neil Wetherbee
104 S Wing St, Northport, MI 49670

BID FROM: _____

_____

_____

PROJECT: NORTHPORT PUBLIC SCHOOLS AUDITORIUM LIGHTING UPGRADES

INCLUDING ADDENDA: Addendum No.____Dated_____
Addendum No.____Dated_____

DUE: 2:00 pm on December 4, 2026

Bid Proposal Form for
Northport Public Schools Auditorium
Lighting Upgrades

The undersigned bidder hereby offers, in the amount stated below, to furnish all labor, materials, tools, equipment, apparatus, facilities, transportation and permits for the construction of the above noted project if this offer is accepted by the project client.
Bidder shall hold the lump sum prices for all work for 60 calendar days from the bid due date. The project client reserves the right to

Section 26 09 61 – Appendix A (use figures only)

Equipment Total	$_____
Miscellaneous Total	$_____
Labor Total	$_____
Project Management Total	$_____

Total Base Bid **$_____Lump Sum**

Acknowledge receipt of Addenda:

Addendum # 1 _____

Addendum # 2 _____

Addendum # 3 _____

Alternate Pricing:

Alternate # 1 $_____Lump Sum

Alternate # 2 $_____Lump Sum

Alternate # 3 $_____Lump Sum

Signature: _____ Dated:_____

Printed Name:_____ Title:_____

Email:_____

Familial Relationship Disclosure Form

All Bidders must complete the following familial disclosure and attach this information to the bid.

By the attached sworn and notarized statement, we are disclosing the following familial relationship(s) that exist between the owner or any employee of the bidder and any member of the Northport Public School Board, Owners, or employees. Northport Public School will not accept a Proposal that does not include this sworn and notarized disclosure statement.

Disclose any familial relationship and complete the form below in its entirety:

The following are familial relationships as described above (provide employee name, family contact name, family contact position and familial relationship or NONE.)

_____

_____

_____

_____

_____

_____

Signature(s): _____Title_____

Name of firm:

STATE OF MICHIGAN
COUNTY OF _____ } SS

On this _____, 20_____, before me a Notary Public in and for said county, personally appeared _____, agent of the said firm _____ and who acknowledged the same to be his free act and deed as such agent.

_____
Notary Public

AFFIDAVIT OF COMPLIANCE – IRAN ECONOMICS SANCTIONS ACT
Michigan Public Act No. 517 of 2012

The undersigned, the owner or authorized office of the below-named contractor (the "Contractor"), pursuant to the compliance certification requirement provided in the Northport Public Schools (the "School") Request for Proposals Northport Public Schools Auditorium Lighting Upgrades (the "RFP"), hereby certifies, represents and warrants that the Contractor (including its officers, directors and employees) is not an "Iran linked business" within the meaning of the Iran Economics Sanctions Act, Michigan Public Act No. 517 of 2012 (the "Act"), and that in the event Contactor will not become an "Iran linked business" at any time during the course of performing any services under the contract.

The Contractor further acknowledges that any person who is found to have submitted a false certification is responsible for a civil penalty of not more than $250,000.00 or 2 times the amount of the contract or proposed contract for which the false certification was made, whichever is greater, the cost of the School's investigation, and reasonable attorney fees, in addition to the fine. Moreover, any person who submitted a false certification shall be ineligible to bid on a request for proposal for three (3) years from the date it is determined that the person has submitted the false certification.

CONTRACTOR:

_____
Name of Contractor

By: _____

Its: _____

Date: _____

STATE OF MICHIGAN
COUNTY OF _____ } SS

This instrument was acknowledged before me on the _____ day of _____, 20__,

by _____.

_____
,Notary Public

_____County, _____

My Commission Expires: _____

Acting in the County of: _____

Contract Exceptions

Check one Box

☐ Bidder takes no exception to, and agrees to comply with all sections, terms, conditions and/or requirements of the Contract Documents.

☐ Bidder proposes the following exceptions to the Contract Documents:

Paragraph Number	***Explanation***
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

NOTE:
Exception(s) to any bid sections, terms, conditions and/or requirements deemed excessive for any reason by the Owner and/or Designer may result in disqualification of Bid.

Certificate of Liability Insurance

Certificate of Worker's Compensation Insurance

Sample Contract

The School expects each vendor to include its appropriate purchase or leasing documents in its Proposal for consideration by the School. Submitted contractual documents of the successful vendor may be subject to negotiation, and the following terms and conditions shall be included or incorporated into any purchase or leasing document between the School and the selected vendor. For purposes of these provisions, "Contractor" means the successful vendor; and "Agreement" means the contractual document entered into between the School and the successful vendor.

1. **Insurance**. Contractor agrees that it shall maintain commercial general liability and automobile liability coverage with minimum combined single limit, bodily injury and property damage liability of not less than One Million Dollars ($1,000,000.00) per occurrence/aggregate. Contractor further agrees that it shall maintain workers' compensation coverage with statutory limits and will also maintain employers' liability coverage with a limit of at least Five Hundred Thousand Dollars ($500,000.00) for each accident. School District is to be included as an additional insured on both the commercial and general liability. The general liability are to be issued on an occurrence-made basis. Contractor agrees to provide the School with current, valid insurance certificates evidencing required coverages under the Agreement with required policies or certificates of insurance properly endorsed to give the School at least thirty (30) days' notice of cancellation or material reduction of insurance coverage. Insurance provided by Contractor must be placed with insurers that meet a minimum Best financial rating of A:10.
2. **General Indemnification**. Contractor agrees to indemnify and hold harmless and defend the School from and against any and all claims, costs, expenses, damages, and liabilities, including reasonable attorney's fees, arising out of the (i) negligent act or willful misconduct of the Contractor, its officers, directors, employees and agents; (ii) any breach of the terms of the Agreement by Contractor; or (iii) any breach of any representation or warranty by Contractor under the Agreement.
3. **Governing Law**. The Agreement shall be construed in accordance with, and its performance governed by, the laws of the State of Michigan.

SECTION 00 2113 – GENERAL REQUIREMENTS

1.1 SUMMARY OF WORK

A. Work Covered by Contract Documents

1. This project consists of lighting systems upgrades to the Northport Public School Auditorium.
2. The Instructions to Bidders, Project Manual, Request for Proposals, dated October 9, 2024, issued by owner, General Requirements and Owner-Contractor Agreements, are a part of all divisions and all contract documents. The order of precedence for interpretation shall be the Agreement between Owner and Contractor, RFP, the Instruction to Bidders, the Project Manual, the General Conditions and the Contractor's Proposal. Execution of the Contract signifies that the Contractors are fully knowledgeable with all requirements of all divisions and documents. No claims for additional compensation will be entertained or paid to any Contractor on account of its failure to be fully informed of all requirements of all Contract Documents.

B. Replace Theatrical Lighting systems with new Lighting systems in the Northport Public School Auditorium.

1.2 CONTRACTS

A. Construct the work of each contract under a separate lump-sum/fixed price contract with the Owner. Coordination of the work will be provided as specified herein.

B. Contractors shall carefully examine all drawings and read all divisions of the specifications and Contract Documents and shall include all Work required of them for a complete project.

C. Requirements for a specific trade or contract will generally be described in that portion of the Specifications or Drawings related to that trade or contract. Such requirements may, however, be described in other sections of the Contract Documents. Contractors will be held responsible for having carefully examined all drawings and read all divisions of the specifications and all contract documents to avoid omissions or duplications and to ensure a complete job.

D. Each Contractor is deemed to be fully informed about conditions relating to the construction of the Project and the employment of labor thereon by execution of the Contract. The Contractor will not be relieved of its obligation to furnish all material and labor necessary to carry out the provisions of the Contract.

E. Any claim by the Contractor of an inability to meet any requirement set forth on the Contract Documents, or that any requirement of these documents is impractical or unreasonable, will not be recognized, unless the claim was made at the time the Contractor's proposal was submitted, and specific provision is made for such claim in the Contract.

F. Unless otherwise specified, the Contractor shall supply all labor, supervision, materials, transportation, apparatus, fuel, energy and tools, necessary for the entire and proper completion of the Work. It shall perform all Work herein described in a workmanlike manner in accordance with the Contract Documents and shall provide everything properly incidental thereto as shown on the drawings, stated in the specifications or reasonably implied there from.

G. Each Contractor shall be responsible for its own Work and every part thereof, and all Work of every description used in connection therewith. It shall specifically and distinctly assume all risks of damage or injury from whatever cause to property or persons used or employee on or in connection with his Work, and undertake and promise to indemnify, defend and hold harmless the Owner, Architect and District against all claims rising out and or on account of any such damage or injury.

H. Each Contractor shall be held responsible for the execution of a satisfactory and complete piece of Work in accordance with the true intent of the drawings and specifications. It shall provide without extra charge all incidental items required as a part of its Work, even though not particularly specified or indicated. If it has good reason for objecting to the use of any material, application or method of construction as shown or specified, it shall make report of such objection to the District and obtain proper adjustment before the Contract is executed.

I. Should any material or workmanship be found defective or in any way contrary to the Contract, it may be rejected by the Owner regardless of its state of completion and same must be remedied or removed by the Contractor at no additional cost or expense to Owner.

1.3 WORK BY OTHERS

A. Work on the Project which is excluded from this Contract is as follows:

1. Materials testing
2. Asbestos abatement

1.4 WORK SEQUENCE

A. Construct Work in stages to accommodate the Owner's use of the premises during the construction period, as applicable.

B. Bidders are to assume that their Work will be coordinated in a manner consistent with industry practice and the efficient coordination of all trades and that are to recognize that the sequence and pace of their work may be dictated by other trades.

1. Calendar dates associated with the completion of work of any particular contract are not assured.
2. All Bidders recognize and will accept modifications to the schedule which, in the opinion of the Northport Public School, are reasonable for the general interest of the Project as a result of allowable time extensions (formally or informally approved) in any contract, and that such modifications are inherent to the construction process and shall not qualify as a basis for extra compensation from the Owner.
3. The Bidder, in submitting a proposal for a particular bid category, agrees to commit the necessary resources to complete the Work activities of the bid category within a period of time not longer than the planned duration. Work included in a bid category, but not specifically defined by a work activity, is to be accomplished in a reasonable manner in conjunction with other work of the bid category, and in such a way as to avoid complication of or to delay the work of other bid categories.

1.5 CONTRACTOR USE OF PREMISES

A. Each Contractor shall limit its use of the premises for Work and for storage related specifically to the Work, to allow for Work by other Contractors.

B. Use of the premises will be coordinated by the Northport Public School.

C. Each Contractor shall assume complete responsibility for the protection and safekeeping of their products stored on site.

D. Each Contractor shall move its stored products, which interfere with operation of the Owner.

E. Each Contractor shall obtain and pay for the use of additional storage or Work areas if needed for operations.

1.6 PARTIAL OWNER OCCUPANCY

A. Each Contractor shall schedule his operations for completion of portions of the Work, as designated in Schedule for the Owner's occupancy prior to substantial completion of the entire work.

1.7 PROJECT COORDINATION

A. It shall be the responsibility of the Northport Public School to coordinate and expedite all phases of construction. All separate Contractors shall fully cooperate with the Northport Public School.

B. Contractors shall assist the Northport Public School in coordinating, scheduling and timing of construction activities to ensure orderly progress of the Work.

C. Each Separate Contractor shall

1. Within ten (10) days of receipt of Notice of Pending Award of Contract, submit to the Northport Public School a list of the Contractor's principle staff, including on-site superintendent. Coordinate the work of its employees and Sub-contractors.

2. Expedite its Work to assure compliance with schedules.
3. Coordinate its Work with that of other separate Contractors and Work by Owner. Contractor will prepare and submit coordination drawings wherever close and careful coordination is required.
4. Comply with directions and instructions of the Northport Public School.
5. Verify dimensions shown on the drawings and obtain all measurements required for proper execution of Work.
6. Place sleeves and inserts correctly for pipes, conduits and similar items required for its Work, in forms, walls, partitions, and floors. All said Work shall be done in cooperation with the affected Contractors. All items shall be placed in ample time so as not to delay concrete operations. Do not place sleeves so they pass through beams, girders, and similar construction, unless locations are approved by the Architect.
7. Each Contractor shall see that sleeves and inserts are kept in their proper positions and not displaced by the placing of concrete or other construction Work. The separate Contractors of the Mechanical and Electrical Work involved shall be responsible for inclusion of these items in the Work and shall advise the District and Architect of all changes of sleeves and inserts locations.

1.8 CONSTRUCTION ORGANIZATION AND START-UP

A. The successful contractor shall establish on-site lines of authority and communications. Contractor will:
   1. Conduct the pre-construction meetings.
   2. Conduct progress meetings.
   3. Establish procedures and lines of communication:
      a. Submittals
      b. Reports and records
      c. Recommendations
      d. Coordination drawings
      e. Schedules
   4. Contract Documents:
      a. Consult with Designer to obtain interpretation.
      b. Assist in resolution of questions or conflicts which may arise.
      c. Transmit written interpretations to other Contractors, and to other concerned parties.
   5. Assist in obtaining permits and approvals:
      a. Building permits and special permits required for permanent improvements or for temporary facilities.
      b. Verify that Contractors and Sub-Contractors have obtained permits for inspections and for temporary facilities.

1.9 CUTTING AND PATCHING NEW WORK

A. Each Contractor whose Work requires it, shall be responsible for all cutting, fitting and patching, including excavation and backfill, required to complete the Work in accordance with Contract Documents or to:
   1. Properly fit parts together or to receive Work of other Contractors.
   2. Uncover portions of the Work to provide for installation of ill-timed Work.
   3. Remove and replace defective Work.
   4. Remove and replace work not conforming to requirements of Contract Documents.
   5. Provide routine penetrations of non-structural surfaces for installation of piping and electrical conduit.

B. Preparation

1. Provide adequate temporary support as necessary to assure the structural value or integrity of the affected portion of the Work.
2. Provide devices and methods to protect other portions of the Project from damage.
3. Provide protection from the elements for that portion of the Project which may be exposed by cutting and patching work and maintain excavations free from water.

C. Performance

1. Execute cutting and demolition by methods which will prevent damage to other Work, and will provide proper surfaces to receive installation of repairs.
2. Execute excavating and backfilling by methods which will prevent settlement or damage to other Work.
3. Employ the original installer or fabricator to perform cutting and patching in accordance with Contract Documents for:
   a. Weather-exposed or moisture-resistant elements.
   b. Sight-exposed finished surfaces.
4. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances and finishes.
5. Restore Work which has been cut or removed; install new products to provide completed Work in accordance with requirements of Contract Documents.
6. Fit Work airtight to pipes, sleeves, ducts, conduit and other penetrations through surfaces.
7. Maintain Fire Wall penetrations.
8. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes:
   a. For continuous surfaces, refinish to nearest intersection.
   b. For an assembly, refinish the entire unit.

1.10 EQUAL OPPORTUNITY FOR EMPLOYMENT (MICHIGAN)

A. Each Contractor will comply with all applicable provisions of the Federal Civil Rights Act and the Michigan Fair Employment Practices Act, and the violation of either shall be cause for cancellation of this contract.

B. Each Contractor, in accordance with the Michigan Fair Employment Practices Act, to the extent such act is applicable, shall not discriminate against any employee or applicant for employment, to be employed in the performance of such contract, with respect to the hire, tenure, terms, conditions or privileges of employment, or any matter directly or indirectly related to employment because race, color, religion, national origin or ancestry (or age or sex, except where based on a bona fide occupational qualification). Contractor shall not maintain or provide for his employees any segregated facilities.

1.11 SHOP DRAWINGS, PRODUCT DATA, SAMPLES

A. All submittals shall be clearly identified with project name and location, and Contractor's name. The Northport Public School shall indicate its review by means of his stamp, with his initials and date of review, prior to submitting to the Architect for review.

B. Shop drawing details shall be identified by reference to sheet and detail, schedule of room or door numbers shown on Contract Documents.

C. Product data copies shall be clearly marked to identify pertinent products, models, or part numbers; shall show performance characteristics and capacities, dimensions and clearances required, and during or piping diagrams and controls.

D. Samples shall be of sufficient size and quantity to clearly illustrate functional characteristics of the product with related parts and attachment devices, showing full range of color, texture and pattern.

E. Shop drawing submissions unless otherwise noted, shall be electronically transmitted.

F. Product data submissions, unless otherwise noted or otherwise instructed at the pre-construction meeting, shall be electronically transmitted.

G. Sample submissions, unless otherwise noted or otherwise instructed, shall consist of three (3) physical samples.

H. Each Contractor shall submit a list of dates for the proposed shop drawings delivery schedules for the Northport Public School's review within ten (10) days of Notice of Pending Award.

I. Allow three (3) weeks for initial review. Allow additional time if further review is required with other disciplines.

J. It is the Contractor's sole responsibility to submit shop drawings, coordination drawings, product data and samples in a timely fashion for review and approval, including resubmittals if necessary. No time extensions will be allowed for failure to submit these items.

1.12 SPECIAL SCHOOL CONSTRUCTION POLICIES

A. There will be no Radios, Boom Boxes, CD Players, or similar items allowed on the jobsite. Failure to comply can result in the removal from site.

B. There will be no smoking or tobacco allowed on property. Failure to comply can result in the removal from site.

1.13 STARTING OF SYSTEMS

A. See specifications for requirements on starting, testing, adjusting and balancing of equipment and systems appropriate to the Scope of Work associated with each Bid Category.

1.14 CONTRACT CLOSE OUT: SUBSTANTIAL COMPLETION

A. Before Contractor requests inspection for certification of substantial completion, complete the following:

1. Complete final clean-up requirements as directed by the Northport Public School, including touch-up and otherwise repair and restore marred exposed surfaces.

B. The following items must be completed before final acceptance and final payment is made:

1. All Work and Punch List items must be completed.
2. Final Application for Payment must be submitted and approved for payment.
3. All guarantees and warranties must be submitted.
4. Final waiver of lien and sworn statements must be submitted with Application for Payment.
5. Record drawings, maintenance manuals, and similar record documentation must be submitted.
6. All items of Work for Contractor must be approved by regulatory agencies such as, but not limited to, the State Fire Marshall, Health Department, Mechanical Inspector and Electrical Inspector.
7. Submit a copy of the Architect's final punch list signed by Contractor's representative, stating that each item has been completed or otherwise resolved for acceptance.
8. Consent of surety to final payment must be submitted.

1.15 SPARE PARTS AND MAINTENANCE MATERIALS

A. Each Contractor shall retain all loose and small detachable parts of the apparatus and equipment furnished under his contract, as well as keys and tools required for maintenance, until the completion of the work. Each Contractor shall then turn same over to the Owner, or his representative designated to receive them and obtain from him an itemized receipt thereof in triplicate. He shall retain one copy of this receipt for finally payment for the work.

END OF SECTION 00 2113

SECTION 26 0961 - THEATRICAL LIGHTING CONTROL SYSTEM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Some information contained in this specification is also found on the associated drawings and in the following specification sections. Work shown on drawings or described in other spec sections is deemed to be in both.

B. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 GENERAL DESCRIPTION

A. This Section includes equipment for stage lighting systems, including fixtures, lamps, relays, dimmers, controls, and distribution components.

B. This section includes equipment for stage lighting motorized hoist systems, including motors, mounting hardware, control interfaces, and emergency equipment. Additional hardware may be required for mounting of the equipment listed.

C. All components of the system shall be of the manufacturer's most recent generation of products at the time of shipping and installation.

D. The term "Installing Contractor" shall refer to the Electrical Contractor or direct subcontractor of the Electrical Contractor performing the work of this section.

E. The approved product is to be manufactured or supplied (if not manufacturer standard product) by Electronic Theatre Controls of Middleton, WI. All other products, if not listed in section 2.1.A. below, are to be listed as a voluntary alternate.

1.3 REFERENCE STANDARDS

A. ANSI E1.11-2024 Entertainment Technology – USITT DMX512-A

B. ANSI E1.3-2021(R2021) Entertainment Technology – 0-10V Analog Control Specification

C. ANSI E1.31-2018 Entertainment Technology – Lightweight Streaming Protocol for Transport of DMX512 using ACN

D. ANSI/IES LP-16-22 Lighting Practice: Documenting Control Intent Narratives and Sequence of Operations

E. ANSI/IES RP-41-20 Recommended Practice: Lighting Theaters and Worship Spaces

F. NEMA WD 6 - Wiring Devices - Dimensional Requirements; National Electrical Manufacturers Association; 2002 (R2008).

G. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements

1.4 STANDARDS

A. All equipment and installation practices, where applicable standards have been established, shall be built and installed to the standards of the following institutions:

1. Underwriters Laboratories, Inc. (UL)
2. NFPA 70, National Electric Code (NEC)
3. United States Institute for Theater Technology (USITT)
4. Entertainment Services and Technology Association (ESTA)
5. Institute of Electrical and Electronics Engineers (IEEE)
6. American National Standards Institute (ANSI)
7. Illumination Engineering Society, North America (IESNA)
8. Building Industry Consulting Service International (BICSI)

9. Electronic Industries Alliance (EIA)
10. Telecommunications Industry Association (TIA)

1.5 SCOPE

A. The Theatrical Lighting Vendor (TLV) and EC shall both be responsible for providing a complete and functional system to the Owner at the completion of the project.

B. Lighting System Scope

1. The existing dimming racks and dimming controllers are to be removed and returned to the owner for recycling as they see fit.
2. Theatrical lighting fixtures are to be removed by the TLV from the space and returned to the Owner for disposal or re-purpose in other areas. .
3. (2) new power control panels are to be installed.
   a. Panel RP-A is a motorized breaker panel.
   b. Panel RP-B is a standard relay panel with connected breaker section
4. New DMX distribution hardware will be installed to provide control of the new system.
5. The existing 400 amp disconnect will be remain and main circuit breakers will be added to the new power panels for secondary protection.
6. The existing theatrical distribution strips and boxes are to remain and be renumbered per a new circuiting schedule, unless otherwise noted.
   a. The theatrical circuits throughout the space are to be modified as noted.
   b. Existing wiring is to be tested and repaired as appropriate (Refer to NEC for pipe and wiring restrictions).
7. Two (2) new plug boxes are to be added at the rear of the audience space, along with new DMX distribution.
8. Existing architectural lighting circuits are to remain, unless otherwise noted. TL drawing set for reference and for design and illuminance requirements.
9. All wires are to be clearly marked at source and cable destination for circuit and location.
10. All the existing raceways, cabinets, ducts, circuit breakers and ancillary equipment associated with the original theatrical lighting system, that are not being directly re-used in the new system, shall be removed as part of the project.
11. New entry station light switches will be installed to allow basic lights to be turned on within the space. New wiring will be pulled to the light switches as needed.
12. New LED profile, Fresnel, par, and cyclorama fixtures will be installed in the space. See drawings for general locations and quantities. Consultant to provide a site-specific fixture layout to the TL vendor prior to installation.
13. A new ETC ION XE 20 lighting console shall be installed as part of this project.
14. New houselight and worklight luminaires shall be integrated into the new theatrical lighting system.
15. A new lighting touch panel will be installed on the proscenium wall in the stage left wing, and a portable version will be added to the control booth.
16. Patch, repair, and paint any floors and walls where equipment has been removed.
17. See drawings for locations of all equipment to be installed.

C. Architectural Stations Programming Scope (Functionality)

1. The possibilities and flexibility of the specified systems are vast and therefore it is beyond the scope of this specification to detail every possible control and programming decision. Because of this, the TL Vendor is required to meet with the Venue Manager (and any other

persons of the Owner's choice) for a Programming Functionality Meeting. This meeting shall be a minimum of two (2) hours in length. During this meeting, the TL Vendor is to explain, clarify, coordinate, and develop a comprehensive plan for how to leverage the power of the systems, but most importantly, LISTEN to the Owner and develop a system that fulfills their use scenarios as best as possible. The TL Vendor can request that the Consultant and /or Architect join this meeting to offer insights and help discussions advance. Topics during this meeting should include at a minimum:

a. Simple User control options (number of lighting presets, function or each button, etc.)

b. Advanced User control options (adjusting colors, recording new presets, time clock functionality, levels of access).

2. There shall be two (2) programming sessions with the owner to define the programming for the architectural control station and touch screen. One (1) session prior to submittals, and one (1), session prior to completion of system commissioning of the project.

3. There shall be two (2) additional, 1-hour sessions provided for within 6-months of the owner taking possession of the space for programming touch-up with the owner.

4. The programming for these spaces is a very important part of the success of this project. As such, the TL vendor and Manufacturer should include ample time for implementation, testing, and updates. The programmer should be WELL VERSED in programming and setting up the products designed in this system.

D. Theatrical Lighting Vendor Scope

1. The system shall be supplied to the Owner through a Theatrical Lighting Vendor (TLV).

2. The TLV is to provide a new theatrical lighting system, with controls, fixtures, and ancillary hardware, as indicated.

3. The complete installation shall be supervised by the TLV through completion of the project.

4. All electrical work shall be completed by a licensed electrical contractor.

5. The TLV and EC shall both be responsible to provide a complete and functional system to the Owner at completion of the project.

6. All components necessary for a complete and working system shall be included, whether or not they are specifically addressed in this specification.

7. The TLV is to provide O&M data to the Owner at time of completion as well as As-Built drawings of the installed system.

8. Supply three (3) sets of the bound materials to the Owner at the time of completion.

E. Manufacturer Scope

1. All architectural controls programming shall be coordinated with the project electrical engineer and shall be programmed to meet the mandatory lighting control provisions of the Local Energy Code.

2. All low-voltage terminations including, but not limited to, architectural control stations, plug-in receptacle interface stations, inter-rack control wiring, and control network cabling shall be performed by an Authorized Factory Technician of the dimming system manufacturer. The dimming system manufacturer's price to the Installing Contractor must be inclusive of this service.

3. The dimming system manufacturer, via the TLV, shall provide all system and control hardware to the project.

4. There are to be a minimum of two (2) site visits (other than the system energization and low voltage termination visits) as required by the construction management team. These site

visits shall be made by the factory or local representative of the manufacturer as approved by the Architect/Engineer.

5. The local representative of the manufacturer, making the site visits, shall have at least three (3) continuous years of experience in designing and/or installing theatrical lighting systems.
6. There shall be three (3) separate training sessions, other than the above visits, to educate up to 6 persons in the working of the lighting console and other supplied lighting hardware. The system maintenance training shall be approximately 1 hour. The console training session shall be up to three (3) hours.
7. The owner shall have the option of videotaping the training sessions if they so choose.
8. Videotaping shall not be the responsibility of the Electrical Contractor or the Manufacturer's Representative.

F. Electrical Contractor Scope

1. All wiring is to be installed by the Electrical Contractor (EC) and shall meet local code requirements.
2. All installation, labor, and electrical products (including, but not limited to, wire, conduit, hardware, and other items as may be required) shall be supplied by the Electrical Contractor (EC).
3. All new conduits in the stage area or areas exposed to viewing by the public shall be painted by the EC to match the surrounding surfaces.
4. All additional electrical switch gear for the dimming system including, but not limited to, circuit breakers, fused disconnects, main breakers, electrical panel boards, etc. shall be the responsibility of the Electrical Contractor. Neither the dimming control manufacturer nor any of their representatives shall be responsible for these components of the system.
5. Line voltage wiring is to have (1) one hot wire and (1) one neutral wire per every controlled circuit, plus (1) one ground, in the house and stage lighting. Provide additional ground wires as required by NEC.
6. All wiring is to be tested for shorts and other damage prior to system energization.
7. Temporary lighting is the responsibility of the Electrical Contractor. The power control panels are not to be energized prior to factory start-up unless the manufacturer approves other arrangements.
8. EC is solely responsible for providing, pulling, and labeling low voltage cabling, providing junction boxes, surface raceway, and conduit as required, and leaving cabling unterminated per the system manufacturer's requirements.
9. All low-voltage cabling associated with the Theatrical Lighting System shall be run in conduit unless specifically authorized by the Engineer for special circumstances. Actual length of dimming system cabling, allowable wiring topologies, and system layout shall be verified during the project approval process.
10. The Electrical Contractor shall be responsible for scheduling the low-voltage terminations with the Authorized Factory Technician of the dimming system manufacturer.
11. The Electrical Contractor shall provide an interface between the theatrical lighting control system and the fire alarm system only if required by code and if the existing egress lighting is not sufficient.

1.6 SUBMITTALS

A. Shop Drawings

1. Ten (10) sets of B-size shop drawings AND a quality (PNY, SanDisk, or equal) USB drive with all documents in an electronic format, shall be furnished for approval within 30 days of award of contract. Prior to fabrication of equipment, one set shall be returned

appropriately marked as the approval document. Submittal drawings shall be customized for the individual job. Generic factory-standard drawings are not acceptable and will be rejected.

2. Complete Bill of Materials, inclusive of all products specified and unspecified, and all manufacturer services provided.
3. Product Data: For fixtures, lamps, distribution components, and control systems, including dimensions and data on features and components. Include data on ratings and features of devices.
4. Detail dimmer racks showing arrangements, characteristics, and circuit assignments of various modules. Include elevation views of front panels indicating devices and controls. Include illustrations and dimensioned outline drawings.
5. Wiring Diagrams: Detail wiring for power distribution and control systems and differentiate between manufacturer-installed and field-installed wiring.
   a. Point-to-point control risers shall be detailed for individual sub-networks (i.e. each DMX universe, handheld remote focus unit, Ethernet-based network, dimmer status network, architectural control network, etc.).
   b. Point-to-point control risers shall also include a composite/overall diagram encompassing all control network wiring.
6. Of the (10) ten required sets mentioned above, the Electrical Contractor shall be furnished with four (4) sets of these B-size drawings for his/her use. The Electrical Contractor shall keep the most current set of drawings on the job site and record “as-built” information on the same.

B. The owner shall be supplied with three (3) sets of "as-built" drawings AND a quality (PNY, SanDisk, or equal) USB drive with all documents in an electronic format, at the completion of the installation. These drawings shall be part of an operations and maintenance manual covering all major items installed. As-Builts shall be provided in electronic format to the Owner in addition to the hard copies noted above.

C. Maintenance Data: For fixtures, distribution components, software, operating manuals, instructional videotapes, and controls to include in maintenance manuals specified in Division 1.

1.7 ACTION SUBMITTALS

A. With bid:

1. Bill of materials
2. Installer qualifications as outlined in 1.8.E.

B. Shop drawings shall be submitted electronically or, if paper, in no less than four (4) copies for approval unless additional copies are required by the General Conditions. One set will be returned to the Architect for transmittal to the Contractor from the Consultant marked "No Exceptions Taken", "Make Corrections Noted", or Resubmit Rejected". Drawings marked other than "No Exceptions Taken" shall be revised and resubmitted until no exceptions are taken. Fabrication may begin on items marked "Make Corrections Noted" while drawings are being revised and resubmitted for final approval. Include:

1. Product Data: Indicate compliance with reference standards, current performance data, application recommendations and product limitations.
2. Shop Drawings: Assembly and installation drawings showing product components in assembly. General system drawings shall be scaled no less than 1/4"=1’-0”. Details shall be scaled as necessary to clearly illustrate the Contractor’s intent.

C. As-Built Drawings and Maintenance/Operation Manuals shall be furnished as required by Division 1. Items to be included in the Manuals are:

1. Safety rules and safety directions for operation. Maximum load limits for all assemblies.
2. As-built drawings and schematic diagrams.
3. List of components for all assemblies, with part/model numbers, including manufacturers' addresses and phone numbers.
4. Inspection check sheets with maintenance schedules.
5. Copy of Sequence of Operations (SOO) documentation, created by the owner or lighting designer.
6. Name, address, and telephone number of manufacturer, installer, architect, and consultant for guidance of future service personnel.

1.8 QUALITY ASSURANCE

A. To ensure a uniform installation and single responsibility, the lighting control system shall be the product of one manufacturer. This manufacturer shall have manufactured electronic lighting controls for a minimum of 10 years.

B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction.

C. Comply with NFPA 70.

D. If the TLV does not have both ETCP certifications listed below, the consultant / owner shall have final approval or refusal to use the TLRV listed for the work.

E. Installer:

1. Project manager or project foreman for the Theatrical Lighting System installation shall have certification from the ESTA Entertainment Technician Certification Program (ETCP) as an Entertainment Electrician. Documentation of this shall be provided with the bid.
2. The installers shall have been installing similar equipment on projects of similar scope for no less than five (5) years.
3. The installer shall be a dealer/installer for the primary theatrical lighting control equipment and the primary theatrical rigging equipment.

1.9 APPROVED VENDORS

A. Sound Environments, Traverse City, MI (231) 946-1496

B. CSD Group, Fort Wayne, IN (260) 918-3500

C. Blue Sky Integration, Kentwood, MI (616) 407-1104

D. Advanced Lighting & Sound, Troy, MI (248) 817-2092

E. Force Technologies, Niles, MI (269) 687-9798

F. Fantasee Lighting, Bellville, MI (734)699-7200

1.10 SUBSTITUTIONS

A. Base bid shall be based on the specified equipment

B. Any alternates or product substitutions shall be confirmed and approved by the Consultant prior to bidding.

C. The Consultant may request a working mockup of any proposed substitutions.

1.11 EQUIPMENT FABRICATION AND ENERGIZATION

A. Fabrication shall begin only after submittal drawings have been processed by the Engineer and a written notice to proceed has been delivered to the manufacturer at the manufacturer's place of business.

B. Energization of dimming system equipment shall not commence without the authorization of the manufacturer’s representative.

1.12 WARRANTY

A. The manufacturer warrants to the original owner or retail customer that for a period of three years from date of energization of the permanently installed system, its products will be free from defects in materials and workmanship under normal use and service.

B. Parts and service shall be available for all system components for a minimum of ten years after the date of energization of the permanently installed system or the delivery of any portable product.

PART 2 - PRODUCTS

2.1 EQUIPMENT

A. See appendices with the specification for specific Manufacturer and Model numbers for each system and subsystem.

B. Cross reference all drawings to the equipment list as shown in the appendices. Contractor shall provide a complete and functional system as designed regardless of whether a specific component is specifically noted in the Appendix.

C. Report any conflicts between the Equipment List and the drawings to the Project Engineer/Consultant. In case of a conflict the contractor shall provide the more stringent or costly option.

D. All equipment shall be new and shall be the manufacturer’s newest and most current version of the product.

E. All fixtures shall include a safety cables, Aluminum C-Clamp, and power cable.

F. Provide a $10,000.00 allowance as part of the project for design or hardware changes/additions that may be required.

2.2 REQUESTS FOR ALTERNATE EQUIPMENT

A. Requests for equipment to be considered as alternates shall be considered under the following circumstances:

1. Alternate requests shall be submitted to the consultant.
2. Show the original item specified and the proposed alternate.
3. Provide a shop drawing showing how the equipment integrates to the rest of the system.
4. Provide a demo piece of equipment for testing by the consultant (if requested).
5. Install the specified equipment if the request is denied.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with manufacturer's written instructions and Electrical Division "Basic Electrical Materials and Methods."

B. Set all permanently mounted items level, plumb, and square with ceilings and walls.

C. Indicated mounting heights are to bottom of unit for suspended items and to center of unit for wall-mounted items.

D. The installation of all fixed theatrical lighting in its entirety, including but not limited to houselights, work lights, and architectural lighting, black pipe, fittings, hardware, and accessory items shall be the responsibility of the Electrical Contractor.

E. All portable theatrical lighting fixtures and related accessories shall be installed and made ready for use by the owner before the date of system energization. This process shall be overseen by qualified, knowledgeable individual(s) having at least (3) years professional experience in hanging, focusing, and maintaining theatrical lighting fixtures, or equivalent. These requirements

are part of the Theatrical Lighting / Rigging Vendors contractual responsibility and shall be included in the contractor's bid.

F. Programming for the system shall be completed by the TLV or Factory turn-on technician. In general, each entry station shall be programmed to control the space in which it is installed.

G. The process for completing the fixture installation by the TLV includes, but is not limited to:

1. Unpacking the fixtures in a clean environment.
2. Any required assembly of yokes, pipe clamps, safety cables, lenses, cord sets, connectors, and other fixed accessories. Pipe clamp fixture mounting stud shall be extended to its proper operation position in the clamp.
3. For non-LED fixtures, lamping the fixture in a proper manner.
4. For non-LED fixtures, bench focusing the fixture and checking for proper operation.
5. Transporting fixtures to catwalks, booms, pipe battens, and other lighting positions specifically intended for the hanging of theatrical lighting fixtures.
6. Hanging the fixture from the lighting position and locking the pipe clamp in place. Fixtures shall be placed at the lighting positions accordingly using logical and reasonable criteria based on the type of fixture and beam spread.
7. Circuiting each fixture to an available dimming system receptacle.
8. Opening all shutters, irises, dousers, etc. and pointing the fixture in the general direction of the area that the lighting position was intended to illuminate.
9. Tightening all knobs, bolts, etc. so that the fixture is secure and aiming cannot change without again loosening the knobs, bolts, etc.
10. The placement of all other user-changeable fixture accessories including but not limited to spare lenses, spare lamps, boom arms, spare clamps, patterns, pattern holders, gels, color frames, removable irises, donuts, top hats, two-fers, extension cables, etc. in a storage location acceptable to the Owner.

H. The Owner shall be responsible for all changes made to theatrical lighting fixtures after this work has been completed by the Theatrical Lighting Vendor. The TLV shall not be responsible for any of the following:

1. Owner-specific fixture locations, such as for a performance or event.
2. Owner-specific fixture aiming, focusing, or shutter cuts, such as for a performance or event.
3. Any modification of user-changeable accessories as referenced herein, such as for a performance or event.

3.2 TERMINATIONS AND LABELING

A. All low-voltage terminations, system startup and commissioning, and testing shall be performed by an Authorized Factory Technician of the dimming system manufacturer.

B. Label each lighting outlet, network interface, relay module, and dimmer module with unique designation. Make designations on elevated components readable from floor.

3.3 WIRING

A. All line voltage wiring is to be installed by the Electrical Contractor (EC) and meet the most recent edition of the NEC adopted by authority having jurisdiction, including all applicable amendments and supplements.

B. All DMX control cabling shall be installed per manufacturer's shop drawings and shall conform to all applicable standards.

C. All DMX wiring shall use Belden 1583A (Cat5e), Belden 2412 (Cat6), Belden 2148A (Cat6A), or Belden 9729 for DMX512A wiring. DMX wiring shall be daisy-chain.

D. All architectural control wiring shall use manufacturer specified low voltage wiring for interconnect between stations. All wiring shall be manufacturer's recommendation topology between devices.

E. All low-voltage cabling associated with the Theatrical Lighting System and Motorized Hoist System shall be run in conduit unless specifically authorized by the Engineer for special circumstances.

F. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A and UL 486B.

3.4 QUALITY CONTROL

A. Schedule visual and mechanical inspections and electrical tests with at least fourteen days advance notice.

B. Inspect each fixture, outlet, module, control, and item of equipment for defects, finish failure, corrosion and physical damage, nationally recognized testing laboratory labeling, and nameplate.

C. Exercise and perform operational tests on mechanical parts and operable devices according to manufacturer's written instructions.

D. Check tightness of electrical connections with torque wrench calibrated within previous six months.

E. Verify proper protective device settings, fuse types, and ratings.

F. Test the continuity of all circuits.

G. Connect each outlet to a fixture and a dimmer output circuit so each dimmer module, dimmer control and output circuit, outlet, and fixture in a typical operating mode will be sequentially tested. Set and operate controls to demonstrate fixtures, outlets, dimmers, and controls in a sequence that cues and reproduces actual operating functions for a typical system of the size and scope installed. Include operation and control of houselights and control of stage lights from each control location and station, including optional plug-in control console outlet locations. Record fixture and outlet assignments, control settings, operations, cues, and observations of performance.

3.5 CLEANING AND ADJUSTING

A. Owner Adjustments: Conduct one on-site visit to help make program changes and system and equipment adjustments within one year of Substantial Completion.

B. At completion of architectural software configuration that is satisfactory to the Owner and the Engineer/Consultant, a copy of final software configuration shall be recorded to a data USB drive (provided by theatrical lighting vendor) and turned over to the owner. This USB drive shall be placed near or in the architectural control rack or other location suitable to the Owner.

C. Repair scratches and mars of finish to match original finish. Clean fixtures, devices, and equipment internally and externally using methods and materials recommended by manufacturers.

Appendix A - Theatrical Lighting and Rigging Equipment

[ETR]= Existing To Remain

Qty	Make	Model	Description
Power Management			
1	ETC	IQ48	Architectural Power Control Panel, 48 space, 208/120V 3P, 4W + GND **[RP-A]**
1	ETC	IQ DOOR 120-48S	IQ panel Surface mount door
48	ETC	IQ SM B20	Smart 20A motorized breaker
1	ETC	IQ-MB200A65K	Main Breaker: 120/208 V, 200 A, 65 kA SCCR

1	ETC	EBDK	Emergency bypass detection kit
1	ETC	ERP-24R1-29B1-ML3P	Echo Relay Panel with 24 1-pole relays, 29 1-pole breakers, 120/208 V 3P 4W+G main lug input
1	ETC	ERP-SMD	Echo surface mount door
1	ETC	ERP-200A3P22kAMCB	120/208 V 3 pole 200A breaker with 22 kA SCCR rating
1	ETC	ERP-LVD	0-10V dimming control card
Lighting Control			
1	ETC	ION Xe20-2K	2000 channel control console
2	HP	W2Z50A8#ABA	Touch screen monitor
1	ETC	P-TS7-E-4	Paradigm rack-mount touch panel **[SMP]**
1	ETC	P-TS7-PE	Paradigm portable touch panel **[BMP]**
1	ETC	P-TS7-RM	Paradigm 7" Touch Screen rack-mount kit with custom plate for mounting in existing SMP location.
5	ETC	PI1001-_F	1 button Paradigm Inspire button station - *verify color w/ owner's rep*
Network Control [LNCR1]			
1	ETC	DIN14-P-ACP/SPS	DIN14 Enclosure w/ P-ACP-D and P-SPS-D
1	ETC	HDR-60-24	24V power supply
Network / DMX Interfaces			
1	ETC	ECPB N/N	Net/Net interface station **[BPS]**
1	ETC	ECPB N/N	Net/Net interface station **[SPS]**
4	ETC	PB2	2-gang, 3.5" deep backbox with Nomex barrier
11	ETC	ECPB DMXO	DMX output plate
6	ETC	ECPB PB1	1-gang, 3.5" deep backbox
5	ETC	SBB1 w/ Ubolt	Surface mount backbox with Ubolt
Network Control [LNCR2]			
1	ETC	DIN28	DIN Rail panel
1	ETC	RSN-OPTO-DBOX	16-port DMX opto-splitter
1	ETC	RSN-DMX4-DIN	DIN rail mounted 4-port net to DMX gateway (1 SPARE)
1	ETC	CISNO 3100 SERIES	DIN rail mounted 12-port network switch with POE
1	ETC	HDR-60-24	24V power supply
Lighting Distribution			
2	ETC	9102B	Surface mount plug box with (2) stage ping outlets on 2 switched circuits.
1	ETC	Numbering set	Complete labeling set to renumber all existing distribution with revised circuit configuration.
Lighting Fixtures			
2	ETC	CSSPOTVMVS/410	ColorSource Spot V with shutter barrel, 5 deg. lens, black ***(Type SP-1)***
8	ETC	CSSPOTVMVS/414	ColorSource Spot V with shutter barrel, 10 deg. lens, black ***(Type SP-2)***

18	ETC	CSSPOTVMVS/419	ColorSource Spot V with shutter barrel, 14 deg. lens, black ***(Type SP-3)***
10	ETC	CSSPOTVMVS/2550EDLT	ColorSource Spot V with shutter barrel, 25-50 deg. zoom lens, black ***(Type SP-4)***
4	ETC	414LT LENS	14 Deg lens tube only
6	ETC	CSPARVZMV	RGBIL LED par fixture with 17-41 deg zoom ***(Type PR-1)***
9	ETC	CSCYC	ColorSource Cyclorama, black ***(Type CY-1)***
17	ETC	CSFRESVMV	ColorSource Fresnel V, black ***(Type FR-1)***
6	ETC	400BD	4-leaf barn door with extension ring
72	Light Source	MAB	Mega-Clamp, Aluminum C-clamp for 1.65" to 2" OD, 600lb rated, black
72	Fehr Bros.	30"SC-B	30" safety cable, black
35	Accu-Cable	DMX-06	6' DMX Cable-- *Qty as required for circuiting*
40	Accu-Cable	DMX-10	10' DMX Cable-- *Qty as required for circuiting*
2	Accu-Cable	DMX-25	25' DMX Cable-- *Qty as required for circuiting*
40	Blizzard	PCT-INTER-1406	6' TRUE 1 Fixture Jumper--*Qty as required*
60	Blizzard	PCT-INTER-1410	10' TRUE 1 Fixture Jumper--*Qty as required*
6	Blizzard	PCT-INTER-1425	25' TRUE 1 Fixture Jumper--*Qty as required*
6	Blizzard	PCON-INTER-1406	6' PowerCON Fixture Jumper--*Qty as required*
10	Blizzard	PCON-INTER-1410	10' PowerCON Fixture Jumper--*Qty as required*
2	Blizzard	PCON-INTER-1425	25' PowerCON Fixture Jumper--*Qty as required*
6	Lex Products	A5025	TRUE1 to powerCON blue adapter, 1ft length
6	Lex Products	A5024	powerCON grey to TRUE1 adapter, 1ft length
6	Lex Products	T1PA-A	5' Edison plug to True1 receptable
Labor			
			*Programming - per 8-hour Day
			*Engineering/PM
			*Custom plates
Wiring			
			*Network wire
			*Control wire

NOTES:

1. Cable packages are for reference only. Provide the appropriate quantities and connections for the fixture package shown. Provide (2) specified clamps and (2) 18” safety cables for all automated fixtures.

2. Provide unit pricing for each theatrical fixture with specified accessories (safety cables, clamps, lenses, etc).

3. Part numbers and quantities are provided for reference only. The contractor shall provide a complete and functional system regardless of whether products are included in this list. Cross-reference all parts to the associated drawings and report any conflicts to the consultant. In case of conflict the contractors shall supply the greater quantity or cost impact.

4. Provide 4 additional data and power cables for each length in addition to the quantities required to connect all the specified fixtures. Additionally, provide all required RJ-45 to 5 pin DMX adapters needed for connection to any lights that require an RJ-45 connection.

5. Supply fixture counts and accessories per 26 09 61 Appendix A. All fixtures may not be shown in the drawings.

END OF SECTION 26 09 61

TASK	FURNISH	INSTALL
AC POWER, CONDUIT, RACEWAYS, ELECTRICAL BACKBOXES, JUNCTION BOXES, PULL BOXES, CABLE TRAYS, FLOOR BOXES AND OTHER CABLE INFRASTRUCTURE	EC	EC
THEATRICAL LIGHTING CABLE	TL	TL
THEATRICAL LIGHTING EQUIPMENT AND RACK	TL	TL
TERMINATIONS OF THEATRICAL LIGHTING CABLE	TL	TL
VOICE/DATA NETWORK CABLE, CATV-CAT6 CABLE	DC	DC
VOICE/DATA NETWORK AND NETWORK ELECTRONICS	DC	DC
GENERAL ROOM LIGHTING DIMMING SYSTEMS (MULTI-ZONE)	EC	EC
LOW VOLTAGE CONTROL WIRING	EC	EC
THEATRICAL LIGHTING FIXTURES	TL	TL
LIGHTING CONSOLE DESK, OTHER TECHNICAL FURNITURE	GC	GC
CABLE MANAGEMENT HARDWARE AT RACKS AND CONSOLES	TL	TL
FLOOR BOXES INCLUDING INTERNAL BRACKETS, TEMPORARY COVERS, AND PERMANENT COVERS	EC	EC
CUSTOM CONNECTOR PLATES FOR FLOOR BOXES, BACK BOXES	TL	TL
LOW VOLTAGE CONTROL WIRING TERMINATIONS	TL	TL
SUPPLY HIGH VOLTAGE AND LINE VOLTAGE WIRE	EC	EC
TERMINATE HIGH VOLTAGE AND LINE VOLTAGE WIRE	EC	EC

AV - AUDIO VIDEO CONTRACTOR
GC - GENERAL CONTRACTOR
DC - DATA COMMUNICATIONS CONTRACTOR
EC - ELECTRICAL CONTRACTOR
FC - FURNITURE CONTRACTOR
O - OWNER

GENERAL DIVISION OF RESPONSIBILITIES

The Electrical Contractor or "EC" will be responsible for the following:

*All high voltage wiring/terminations contained within this drawing set. Scope includes, but is not limited to:

PROVISION AND INSTALLATION OF:

*Conduit, gang boxes, pull boxes, and pull string required for the theatrical lighting system.

*All junction boxes and in-wall enclosures required for the theatrical lighting system. Sizes of all junction boxes and enclosures will be indicated on the theatrical lighting drawings. All junction boxes, pull boxes, and wall mounted enclosures are to be clearly labeled with permanent marker. Refer to theatrical lighting drawings for labeling.

*AC power circuits, outlets, and interconnection of power to each lighting location.

*All AC power circuits, outlets, power panels and interconnection of power to the lighting equipment racks and panels.

*Wherever possible, all theatrical lighting circuits shall be supplied from the same theatrical lighting electrical panel.

*
*
*

CONDUIT GUIDELINES:

*EMT should be used when possible.

*The EC shall provide pull boxes where appropriate.

*The EC shall provide pull lines in all conduit.

*All conduit to be sized by the EC in accordance with all applicable federal and local codes.

*All conduit paths, routing and installation methods shall be verified with architect and/or consultant prior to installation.

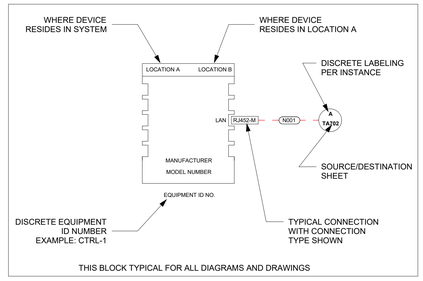
*Use of flex conduit is prohibited without proper approval from the theatrical lighting contractor.

*The overall theatrical lighting system requires extensive conduit to be furnished and installed by the EC per the specifications contained within this drawing set. If site conditions prevent conduit to be installed for any particular system(s), or if any conduit is deleted by the EC, the EC shall (at no additional cost) furnish and install all plenum wire that is to be contained within said conduit.

ADDITIONAL RESPONSIBILITIES

PREFIX	EQUIPMENT NAME ABBREVIATIONS
BD	BLUE DOME LIGHT
CON	DEVICE CONTROLLER
CPU	COMPUTER
DMX	DMX PLATE
ES	ENTRY STATION
JB	JUNCTION BOX
L	LIGHTING FIXTURE
LJ	LIGHTING JUNCTION BOX
LNCR	LIGHTING NETWORK CONTROL RACK
LTC	LIGHTING CONTROL
LTD	LIGHTING DIMMER
PB	LIGHTING PLUGBOX
PS	LIGHTING PLUGSTRIP
PSU	POWER SUPPLY
RMT	REMOTE CONTROL
RP	RACK PANEL
RX	RECEIVER
SEQ	POWER SEQUENCING DEVICE
TP	TOUCH PANEL
TX	TRANSMITTER

EQUIPMENT NAME ABBREVIATIONS



THIS BLOCK TYPICAL FOR ALL DIAGRAMS AND DRAWINGS

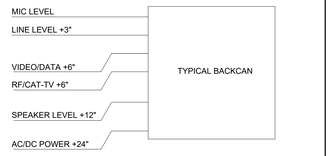
SCHEMATIC DEVICE KEY

CONDUIT SPACING GUIDELINES

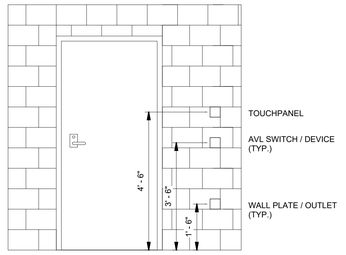
NOTES:

1. All conduit spacing referenced from mic level signals.

2. All distances are minimum required spacing. Where it is not possible to maintain adequate separation, keep parallel groupings to an absolute minimum using 90 degree crossings wherever possible or necessary.



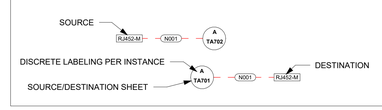
CONDUIT SEPARATION TOLERANCES AND TYPES



NOTE: ALL MOUNTING HEIGHTS FOR AVL BOXES IN THIS PROJECT MEASURED TO CENTER OF BOX

MOUNTING HEIGHT DETAIL

THE FOLLOWING ILLUSTRATION SHOWN IS USED WHEN A CONNECTION NEEDS TO BE BROKEN AND CONTINUED WITHIN A DRAWINGS SHEET. AN INTRA/SHEET FLAG WILL BE USED AND NUMBERED (LABELED) TO SHOW THE CONNECTION IS CONTINUED ELSEWHERE ON THE SHEET.



CABLE CONNECTION FLAGS

CONDUIT GENERAL NOTES FOR ELECTRICAL CONTRACTOR

- EC to provide and install all conduit, backboxes, gutter boxes, terminal cans, raceways, cable trays and access panels unless otherwise noted.

- EC to install pull lines in all conduits.

- EC shall not substitute conduit type without written permission from the consultant.

- Conduit runs are drawn for illustration only. Actual conduit paths & interim boxes to be determined by the EC.

- EC may increase the size of junction boxes, gutters & conduit as needed in the event that a conflict exists.

- EC to provide and install all high voltage (120V - 240V) cable and fixtures unless otherwise notes.

- Install applicable size pull boxes after 270 deg. of bend or if conduit run is more than 100'.

- Label all conduit for destinations such as box numbers and/or room locations.

- Deburr all rough edges to prevent cable abrasion.

- Ensure all conduits are free from debris & water.

- Ensure all in ground pull boxes and vaults are weather proof & free of debris & water.

- Ensure conduit is electrically isolated from all equipment racks & enclosures.

SYMBOL	CONDUIT SIZE	CODE	CONDUIT TYPES
1	3/4"	EMT	ELECTRICAL METALLIC TUBING
2	1"		
3	1 1/4"	PVC	POLY-VINYL CHLORIDE
4	1 1/2"		
5	2"	RGD	GALVANIZED RIGID METAL
6	3"		
7	4"	FLX	FLEXIBLE METALLIC TUBING
8	6"		
9	8"	PLS	FLEXIBLE PLASTIC TUBING
10	12"	WMT	WIRE MOLD TRACK
11	6" CABLE TRAY	IMC	INTERMEDIATE METAL CONDUIT
12	12" CABLE TRAY	EXST	EXISTING CONDUIT
13	NO CONDUIT		

CONDUIT NOTES & COORDINATION

CODE	GENERAL ABBREVIATIONS
AFF	ABOVE FINISHED FLOOR
AV	AUDIO VISUAL CONTRACTOR
DC	DATA COMMUNICATIONS CONTRACTOR
EC	ELECTRICAL CONTRACTOR
EXS	EXISTING EQUIPMENT
FBO	FURNISHED BY OTHERS
FC	FURNITURE CONTRACTOR
FL	FLUSH MOUNT
FOH	FRONT OF HOUSE
GC	GENERAL CONTRACTOR

CODE	GENERAL ABBREVIATIONS
LAN	LOCAL AREA NETWORK
NTS	NOT TO SCALE
O	OWNER
OFE	OWNER FURNISHED EQUIPMENT
RCP	REFLECTED CEILING PLAN
RK	RACK MOUNT
SR	SURFACE MOUNT
SSH	STANDARD SWITCH HEIGHT
SWL	SAFE WORKING LOAD
TBD	TO BE DETERMINED
UON	UNLESS OTHERWISE NOTED

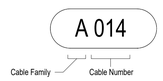
GENERAL ABBREVIATIONS

CABLE TYPES - TL

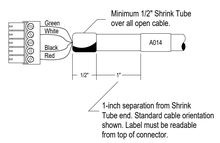
CODE	DESCRIPTION	MAKE	MODEL
C	(3) #16 AWG STRANDED WIRES		
C5	CATEGORY 5 DATA WIRING	BELDEN	1583A
C6	CAT6 - 4 UNSHIELDED, TWISTED PAIR	BELDEN	2412
DMX	DMX LIGHTING CONTROL CABLE	BELDEN	1583A
P2	CONTROL WIRE - 1 PR 22 GA W/SHIELD	BELDEN	9451
P4	CONTROL WIRE - 2 PR 18 GA W/SHIELD	WEST PENN	440
RS232	CUSTOM CONTROL CABLE	CUSTOM	CUSTOM
U	UNISON CABLING - (1) #14 AWG STRANDED WIRE, (1) BELDEN 8471	BELDEN	8471
UV	UNISON CABLING - (1) #14 AWG STRANDED WIRE, (1) BELDEN 8471, (2) #16 AWG STRANDED WIRES	BELDEN	8471

FAMILY	SIGNAL TYPE
A	Serial
B	Broadband
C	Video
D	DVI Video
E	Digital Media
F	Fiber Optic
G	AES/EBU
H	HDMI
I	IR/S
J	Optical Audio
K	Control Network
L	Line-Level
M	Microphone
N	Network
O	I/O
P	Power
Q	Component Video
R	Relay
S	Speaker
T	DMX
U	UTP Signal
V	Digital Video
W	RGB Signal
X	Antenna
Y	Y/C S-Video
Z	SDI Video

CABLE LABEL DETAIL

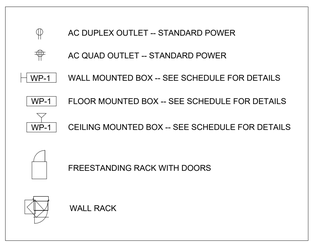


SHRINK WRAP DETAIL

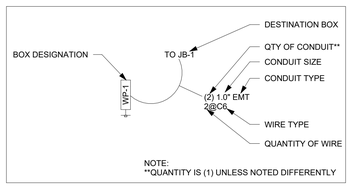


NOTES:
1. All exposed cable strip-points must have heat-shrink tubing applied.
2. Consult project documents for specific colors if required.

CABLE LABELING



TL PLAN SYMBOLS



WIRE PULL PLAN/RCP DETAIL

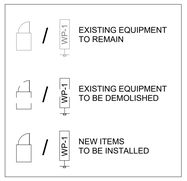
SHEET LIST - TL SERIES

NUMBER	NAME
TL001	TL SYMBOLS, NOTES, DIVISION OF LABOR
TL002	TL SCHEDULES
TL101	TL EXISTING PLAN - FIRST FLOOR
TL102	TL EXISTING PLAN - SECOND FLOOR
TL111	TL EXISTING ARCH. LIGHTING RCP - FIRST FLOOR
TL201	TL PLAN - FIRST FLOOR
TL202	TL PLAN - SECOND FLOOR
TL203	TL PLAN - CATWALK
TL211	TL ARCH. LIGHTING RCP - FIRST FLOOR
TL301	TL SECTIONS, ELEVATIONS
TL302	TL SECTIONS, ELEVATIONS CONT.
TL401	TL DETAILS
TL701	TL CONTROL SCHEMATIC
TL702	TL DISTRIBUTION SCHEMATIC

TO BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR = GREEN

TO BE PROVIDED AND INSTALLED BY THE THEATRICAL LIGHTING CONTRACTOR = PURPLE

COLOR CODE KEY - TL



LINE STYLE KEY

CSD
CUSTOM + SOUND + DESIGNS
AUDIO | VIDEO | CONTROL | ACOUSTICS

Revisions

No	Date	Description
1	10.20.2026	100% CONSTRUCTION DOCUMENTS

NORTHPORT PUBLIC SCHOOL

AUDITORIUM RENOVATION

3003 Ryan Road, New Haven, IN 46774

SHEET TITLE

TL SYMBOLS, NOTES, DIVISION OF LABOR

Issue :	100% CONSTRUCTION DOCUMENTS
Project Number :	NPS1
Designed By :	TGH
Drawn By :	ADF
Checked By :	TCK
Date Issue :	10.20.2026

TL001

10/17/2024 4:13:03 PM

TL BOX SCHEDULE

BOX #	LOCATION	TYPE	MOUNTING HEIGHT	MOUNTING TYPE	BOXES BY	DEVICE / CONN. PLATE BY	COMMENTS
BPS	CTRL BOOTH 410C	2 GANG	1' - 6"	SURFACE	EXST	EXST	
CTRL1	CTRL BOOTH 410C	2 GANG	3' - 2"	SURFACE	EXST	EXST	
DGI-1	STAGE 411	9700 DMX GRIDIRON	32' - 4"	SURFACE	EC	TL	
DGI-2	STAGE 411	9700 DMX GRIDIRON	32' - 4"	SURFACE	EC	TL	
DGI-3	STAGE 411	9700 DMX GRIDIRON	32' - 4"	SURFACE	EC	TL	
DO1	AUDITORIUM 410	1 GANG	29' - 10"	SURFACE	EC	TL	
DO2	AUDITORIUM 410	1 GANG	29' - 10"	SURFACE	EC	TL	
DO3	AUDITORIUM 410	1 GANG	21' - 6"	SURFACE	EC	TL	
DO4	AUDITORIUM 410	1 GANG	21' - 6"	SURFACE	EC	TL	
DO5	AUDITORIUM 410	1 GANG	14' - 6"	SURFACE	EC	TL	
DO6	AUDITORIUM 410	1 GANG	14' - 6"	SURFACE	EC	TL	
DO7	STAGE 411	1 GANG	21' - 0"	SURFACE	TL	TL	
DO8	STAGE 411	1 GANG	21' - 0"	SURFACE	TL	TL	
DO9	STAGE 411	1 GANG	21' - 0"	SURFACE	TL	TL	
DO10	STAGE 411	1 GANG	1' - 6"	SURFACE	TL	TL	ETC SURFACE BACKBOX
DO11	STAGE 411	1 GANG	1' - 6"	SURFACE	TL	TL	ETC SURFACE BACKBOX
DO12	STAGE 411	1 GANG	1' - 6"	SURFACE	TL	TL	ETC SURFACE BACKBOX
DO13	STAGE 411	1 GANG	1' - 6"	SURFACE	TL	TL	ETC SURFACE BACKBOX
ES-1	HALL 410B	1 GANG	3' - 6"	FLUSH	EXST	TL	
ES-2	HALL 410B	1 GANG	3' - 6"	FLUSH	EXST	TL	
ES-3	HALL 410A	1 GANG	3' - 6"	FLUSH	EXST	TL	
ES-4	AUDITORIUM 410	1 GANG	3' - 6"	FLUSH	EXST	TL	
ES-5	AUDITORIUM 410	1 GANG	3' - 6"	SURFACE	EC	TL	
FP-1	STAGE 411	9103A	0' - 0"	FLUSH	EXST	EXST	
FP-2	STAGE 411	9103A	0' - 0"	FLUSH	EXST	EXST	
FP-3	STAGE 411	9103A	0' - 0"	FLUSH	EXST	EXST	
FP-4	STAGE 411	9103A	0' - 0"	FLUSH	EXST	EXST	
FP-5	STAGE 411	9103A	0' - 0"	FLUSH	EXST	EXST	
FP-6	STAGE 411	9103A	0' - 0"	FLUSH	EXST	EXST	
HPS	AUDITORIUM 410	FL500P	0' - 0"	FLUSH	EXST	EXST	
LJB-1	PWR RM 413A	36x6x6	7' - 6"	SURFACE	EC	TL	
LNCR1	STAGE 411	DIN LG	2' - 6"	WALL	TL	TL	
LNCR2	STAGE 411	DIN LG	2' - 6"	WALL	TL	TL	
PB-3	AUDITORIUM 410	9102A	0' - 1"	SURFACE	TL	TL	
PB-4	AUDITORIUM 410	9102A	0' - 1"	SURFACE	TL	TL	
SMP	STAGE 411	4 GANG	3' - 6"	FLUSH	EXST	EXST	
SPS	STAGE 411	2 GANG	1' - 6"	SURFACE	TL	TL	

TL PANEL SCHEDULE

BOX #	LOCATION	TYPE	ELECTRICAL	MOUNTING HEIGHT	MOUNTING TYPE	BOX & CONDUIT BY	DEVICE / CONN. PLATE BY	COMMENTS
DIS-TL	STAGE 411	Disconnect Switches	240V - Fusible 400A	2' - 6"	SURFACE	EC	EC	DISCONNECT MAY NOT BE REQUIRED IF NEW HOUSE LIGHTING IS INSTALLED AS PART OF THE UPGRADE TO THE PAC.
EDBK	PWR RM 413A	ETC - EBDK	Emergency Bypass Detection Kit	4' - 0"	SURFACE	TL	TL	
RP-A	PWR RM 413A	ETC - Sensor IQ48 - Surface Mount	3Ø, 4-Wire, 120-208V	2' - 0"	SURFACE	TL	TL	
RP-B	PWR RM 413A	ETC - Echo Relay Panel	3Ø, 4-Wire, 120-208V	2' - 0"	SURFACE	TL	TL	

TL ENTRY STATION SCHEDULE

BOX #	LOCATION	BOX & CONDUIT BY	DEVICE / CONN. PLATE BY	BUTTON 1	BUTTON 2	BUTTON 3	BUTTON 4
ES-1	HALL 410B	EXST	TL	LIGHTS			
ES-2	HALL 410B	EXST	TL	LIGHTS			
ES-3	HALL 410A	EXST	TL	LIGHTS			
ES-4	AUDITORIUM 410	EXST	TL	LIGHTS			
ES-5	AUDITORIUM 410	EC	TL	LIGHTS			

TL FIXTURE SCHEDULE

LABEL	MAKE	MODEL	DEVICE BY	COUNT
CY-1	ETC	CSCYC	TL	9
FR-1	ETC	CSFRESVMV	TL	17
PR-1	ETC	CSPARVZMV	TL	6
SP-1	ETC	CSSPOT45S/410LT	TL	2
SP-2	ETC	CSSPOT45S/414LT	TL	8
SP-3	ETC	CSSPOTDBS/419EDLT	TL	18
SP-4	ETC	CSSPOTDBS/42550LT	TL	10

Branch Panel: RP-A

Location: PWR RM 413A
Mounting: Wall-Mounted (Surface)
Enclosure Cabinet

Volts: 3-phase, 4 wire, 120-208V
Phases: 3
Wires: 4

A.I.C. Rating: 22000
Mains Type: 208WYE/120V, 3P, 4W, + GND
Mains Rating: 400 A
MCB Rating: 200A

Notes:

Circuit Number	Circuit Description	Type/Seq.	Location	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Location	Type/Seq.	Circuit Description	Circuit Number
1	R1	20A MOTORIZED BREAKER	PS-1	20 A	1	1200 VA			1200 VA			1	20 A	PS-1	20A MOTORIZED BREAKER	R2	2
3	R3	20A MOTORIZED BREAKER	PS-1	20 A	1		1200 VA			1200 VA		1	20 A	PS-1	20A MOTORIZED BREAKER	R4	4
5	R5	20A MOTORIZED BREAKER	PS-1	20 A	1			1200 VA			1200 VA	1	20 A	PS-1	20A MOTORIZED BREAKER	R6	6
7	R7	20A MOTORIZED BREAKER	PS-1	20 A	1	1200 VA			1200 VA			1	20 A	PS-1	20A MOTORIZED BREAKER	R8	8
9	R9	20A MOTORIZED BREAKER	PS-2	20 A	1		1200 VA			1200 VA		1	20 A	PS-2	20A MOTORIZED BREAKER	R10	10
11	R11	20A MOTORIZED BREAKER	PS-2	20 A	1			1200 VA			1200 VA	1	20 A	PS-2	20A MOTORIZED BREAKER	R12	12
13	R13	20A MOTORIZED BREAKER	PS-2	20 A	1	1200 VA			1200 VA			1	20 A	PS-2	20A MOTORIZED BREAKER	R14	14
15	R15	20A MOTORIZED BREAKER	PB-1	20 A	1		1200 VA			1200 VA		1	20 A	PB-1	20A MOTORIZED BREAKER	R16	16
17	R17	20A MOTORIZED BREAKER	PB-2	20 A	1			1200 VA			1200 VA	1	20 A	PB-2	20A MOTORIZED BREAKER	R18	18
19	R19	20A MOTORIZED BREAKER	PS-3	20 A	1	1200 VA			1200 VA			1	20 A	PS-3	20A MOTORIZED BREAKER	R20	20
21	R21	20A MOTORIZED BREAKER	PS-3	20 A	1		1200 VA			1200 VA		1	20 A	PS-3	20A MOTORIZED BREAKER	R22	22
23	R23	20A MOTORIZED BREAKER	PS-3	20 A	1			1200 VA			1200 VA	1	20 A	PS-3	20A MOTORIZED BREAKER	R24	24
25	R25	20A MOTORIZED BREAKER	PS-4	20 A	1	1200 VA			1200 VA			1	20 A	PS-4	20A MOTORIZED BREAKER	R26	26
27	R27	20A MOTORIZED BREAKER	PS-4	20 A	1		1200 VA			1200 VA		1	20 A	PS-4	20A MOTORIZED BREAKER	R28	28
29	R29	20A MOTORIZED BREAKER	PS-4	20 A	1			1200 VA			1200 VA	1	20 A	PS-5	20A MOTORIZED BREAKER	R30	30
31	R31	20A MOTORIZED BREAKER	PS-5	20 A	1	1200 VA			1200 VA			1	20 A	PS-5	20A MOTORIZED BREAKER	R32	32
33	R33	20A MOTORIZED BREAKER	PS-5	20 A	1		1200 VA			1200 VA		1	20 A	PS-5	20A MOTORIZED BREAKER	R34	34
35	R35	20A MOTORIZED BREAKER	PS-5	20 A	1			1200 VA			1200 VA	1	20 A	FP-1,2	20A MOTORIZED BREAKER	R36	36
37	R37	20A MOTORIZED BREAKER	FP-1,2	20 A	1	1200 VA			1200 VA			1	20 A	FP-3,4	20A MOTORIZED BREAKER	R38	38
39	R39	20A MOTORIZED BREAKER	FP-3,4	20 A	1		1200 VA			1200 VA		1	20 A	FP-5,6	20A MOTORIZED BREAKER	R40	40
41	R41	20A MOTORIZED BREAKER	FP-5,6	20 A	1			1200 VA			1200 VA	1	20 A	FP-5,6	20A MOTORIZED BREAKER	R42	42
43	R43	20A MOTORIZED BREAKER	PB-3, 4	20 A	1	1200 VA			1200 VA			1	20 A	PB-3, 4	20A MOTORIZED BREAKER	R44	44
45	R45	20A MOTORIZED BREAKER	SPARE	20 A	1		1200 VA			1200 VA		1	20 A	SPARE	20A MOTORIZED BREAKER	R46	46
47	R47	20A MOTORIZED BREAKER	SPARE	20 A	1			1200 VA			1200 VA	1	20 A	SPARE	20A MOTORIZED BREAKER	R48	48
				Total Load:		19200 VA			19200 VA			19200 VA					
				Total Amps:		160 A			160 A			160 A					

Legend:

Branch Panel: RP-B

Location: PWR RM 413A
Mounting: Wall-Mounted (Surface)
Enclosure Cabinet

Volts: 3-phase, 4 wire, 120-208V
Phases: 3
Wires: 4

A.I.C. Rating: 22000
Mains Type: 208WYE/120V,3P,4W,+GND
Mains Rating: 200 A
MCB Rating: 160 A

Notes:
RESERVED FOR ARCHITECTURAL LIGHTING. DIMMING CONTROL, WHERE SPECIFIED, TO BE 0-10V.

Circuit Number	Circuit Description	Type/Seq.	Location	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Location	Type/Seq.	Circuit Description	Circuit Number
1	H1	20A RELAY	HOUSE FRONT	20 A	1	1920 VA			1920 VA			1	20 A	HOUSE FRONT	20A RELAY	H2	2
3	H3	20A RELAY	HOUSE MID	20 A	1		1920 VA			1920 VA		1	20 A	HOUSE MID	20A RELAY	H4	4
5	H5	20A RELAY	HOUSE REAR	20 A	1			1920 VA			1920 VA	1	20 A	HR VESTIBULE	20A RELAY	H6	6
7	H7	20A RELAY	HL VESTIBULE	20 A	1	1920 VA			1920 VA			1	20 A	HR STEPS	20A RELAY	H8	8
9	H9	20A RELAY	HL STEPS	20 A	1		1920 VA			1920 VA		1	20 A	DSR DL	20A RELAY	H10	10
11	H11	20A RELAY	DSC DL	20 A	1			1920 VA			1920 VA	1	20 A	DSL DL	20A RELAY	H12	12
13	H13	20A RELAY	CATWALK WRKS	20 A	1	1920 VA			1920 VA			1	20 A	STAGE WORKS	20A RELAY	H14	14
15	H15	20A RELAY	RUNNING LTS - BLUE	20 A	1		1920 VA			1920 VA		1	20 A	AISLE LIGHTS	20A RELAY	H16	16
17	H17	20A RELAY	SPARE	20 A	1			1920 VA			1920 VA	1	20 A	SPARE	20A RELAY	H18	18
19	H19	20A RELAY	SPARE	20 A	1	1920 VA			1920 VA			1	20 A	SPARE	20A RELAY	H20	20
21	H21	20A RELAY	SPARE	20 A	1		1920 VA			1920 VA		1	20 A	SPARE	20A RELAY	H22	22
23	H23	20A RELAY	SPARE	20 A	1			1920 VA			1920 VA	1	20 A	SPARE	20A RELAY	H24	24
25	CTRL PWR	20A STD BREAKER	PANEL PROCESSOR	20 A	1	1920 VA			1920 VA			1	20 A	LNCR1	20A STD BREAKER	C1	26
27	C2	20A STD BREAKER	LNCR2	20 A	1		1920 VA			1920 VA		1	20 A	SPARE	20A STD BREAKER	C3	28
29	C4	20A STD BREAKER	SPARE	20 A	1			1920 VA			1920 VA	1	20 A	EM. BATTERY FEED	20A STD BREAKER	C5	30
				Total Load:		19200 VA			19200 VA			19200 VA					
				Total Amps:		160 A			160 A			160 A					

Legend:

CSD
CUSTOM • SOUND • DESIGNS
ANN ARBOR · DENVER · ATLANTA

Revisions

No	Date	Description
1	10.20.2026	100% CONSTRUCTION DOCUMENTS

NORTHPORT PUBLIC SCHOOL

AUDITORIUM RENOVATION

3003 Ryan Road, New Haven, IN 46774

SHEET TITLE

TL SCHEDULES

Issue :	100% CONSTRUCTION DOCUMENTS
Project Number :	NPS01
Designed By :	TGH
Drawn By :	ADF
Checked By :	TCK
Date Issue :	10.20.2026

TL002

10/19/2026 4:13:58 PM

EXISTING FLOOR POCKET



EXISTING STAGE LEFT FADER CONTROL PANEL



DEMO NOTES - TL	
#	NOTES
1	EXISTING DIMMING RACKS AT THIS LOCATION TO BE REMOVED AS PART OF THE PROJECT.
2	GC TO REMOVE EXISTING LOW PIPE ON THE CATWALK RAILING FACING THE STAGE
3	EXISTING FLOOR POCKET TO BE CLEANED OF ALL DEBRIS. ALL CONNECTIONS TO BE TESTED AND REPAIRED AS NECESSARY.
4	ALL CONNECTIONS TO BE TESTED AND REPAIRED AS NECESSARY.
5	EXISTING FADER CONTROL PANEL AT THIS LOCATION TO BE REMOVED. EXISTING WIRING TO BE TESTED AND REPAIRED AS NEEDED FOR RE-USE. EXISTING BACKBOX AND CONDUIT TO REMAIN AND BE PROTECTED FOR RE-USE IN PROJECT.
6	EXISTING ENTRY STATION TO BE REMOVED. EXISTING WIRING TO BE TESTED AND REPAIRED AS NEEDED FOR RE-USE. EXISTING BACKBOX AND CONDUIT TO REMAIN AND BE PROTECTED FOR RE-USE IN PROJECT.
7	EXISTING LIGHTING CONSOLE TO BE REMOVED AND TURNED OVER TO THE OWNER.
8	EXISTING PLUG STATION PLATE TO BE REMOVED ALONG WITH ALL ASSOCIATED WIRING. EXISTING BACKBOX AND CONDUIT TO REMAIN AND BE POTECTED FOR RE-USE IN PROJECT.
9	EXISTING HPS TO BE CLEANED OF ALL DEBRIS. EXISTING WIRING WITHIN FLOORBOX ENCLOSURE TO BE REMOVED. BACKBOX AND CONDUIT TO REMAIN AND BE PROTECTED FOR RE-USE IN PROEJCT.
10	EXISTING AISLE LIGHT POWER SUPPLY AT THIS LOCATION TO REMAIN AND BE RE-USED IN THE PROJECT

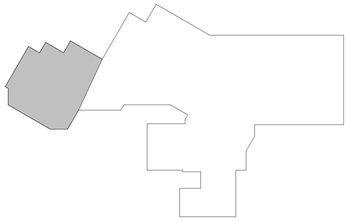
FP-5 (D80-82)
FP-3 (D77-79)
FP-1 (D74-76)
FP-6 (D80-82)
FP-4 (D77-79)
FP-2 (D74-76)
DR(A)
DR(B)
SMPTE
1.0" EMT 1@U
TO DR-A
EXST. EMT 1@DMX
ES



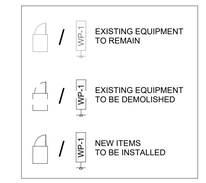
EXISTING DIMMING RACKS



EXISTING FLOOR BOX



KEYPLAN - AREA OF WORK



LINE STYLE KEY

TO BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR =	GREEN
TO BE PROVIDED AND INSTALLED BY THE THEATRICAL LIGHTING CONTRACTOR =	PURPLE

COLOR CODE KEY - TL

1 TL EXISTING PLAN - FIRST FLOOR - AUDITORIUM, LOBBY
3/16" = 1'-0"

CSD
CUSTOM • SOUND • DESIGNS

Revisions		
No	Date	Description
1	10.20.2026	100% CONSTRUCTION DOCUMENTS

NORTHPORT PUBLIC SCHOOL

AUDITORIUM RENOVATION

3003 Ryan Road, New Haven, IN 46774

SHEET TITLE

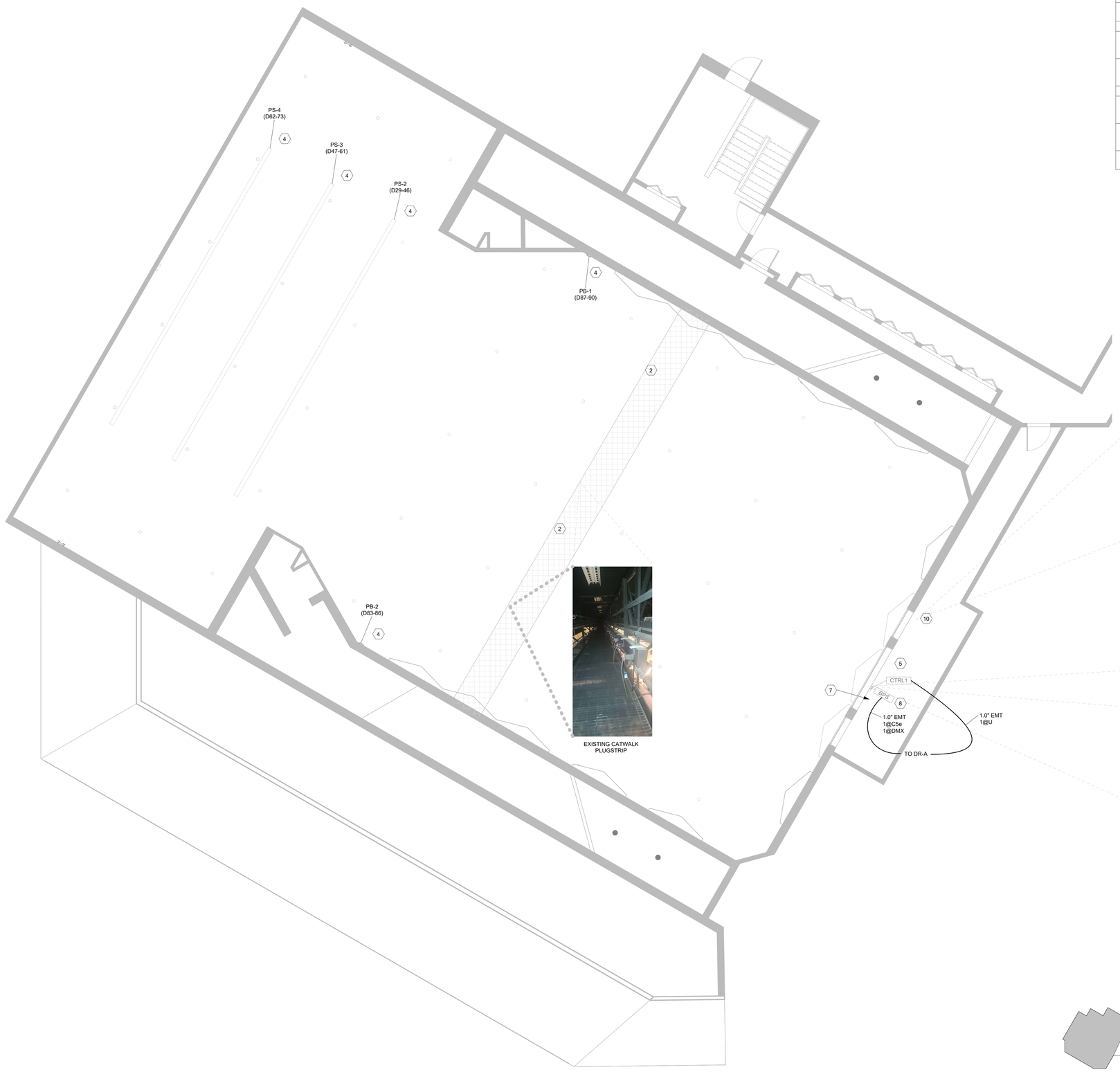
TL EXISTING PLAN - FIRST FLOOR

Issue :	100% CONSTRUCTION DOCUMENTS
Project Number :	NP-01
Designed By :	TGH
Drawn By :	ADF
Checked By :	TCK
Date Issue :	10.20.2026

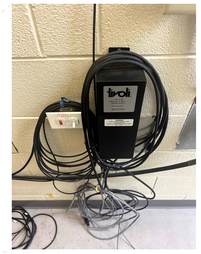
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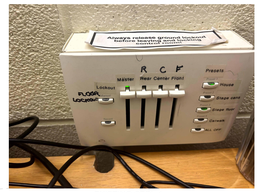
DEMO NOTES - TL	
#	NOTES
1	EXISTING DIMMING RACKS AT THIS LOCATION TO BE REMOVED AS PART OF THE PROJECT.
2	GC TO REMOVE EXISTING LOW PIPE ON THE CATWALK RAILING FACING THE STAGE
3	EXISTING FLOOR POCKET TO BE CLEANED OF ALL DEBRIS. ALL CONNECTIONS TO BE TESTED AND REPAIRED AS NECESSARY.
4	ALL CONNECTIONS TO BE TESTED AND REPAIRED AS NECESSARY.
5	EXISTING FADER CONTROL PANEL AT THIS LOCATION TO BE REMOVED. EXISTING WIRING TO BE TESTED AND REPAIRED AS NEEDED FOR RE-USE. EXISTING BACKBOX AND CONDUIT TO REMAIN AND BE PROTECTED FOR RE-USE IN PROJECT.
6	EXISTING ENTRY STATION TO BE REMOVED. EXISTING WIRING TO BE TESTED AND REPAIRED AS NEEDED FOR RE-USE. EXISTING BACKBOX AND CONDUIT TO REMAIN AND BE PROTECTED FOR RE-USE IN PROJECT.
7	EXISTING LIGHTING CONSOLE TO BE REMOVED AND TURNED OVER TO THE OWNER.
8	EXISTING PLUG STATION PLATE TO BE REMOVED ALONG WITH ALL ASSOCIATED WIRING. EXISTING BACKBOX AND CONDUIT TO REMAIN AND BE POTECTED FOR RE-USE IN PROJECT.
9	EXISTING HPS TO BE CLEANED OF ALL DEBRIS. EXISTING WIRING WITHIN FLOORBOX ENCLOSURE TO BE REMOVED. BACKBOX AND CONDUIT TO REMAIN AND BE PROTECTED FOR RE-USE IN PROEJCT.
10	EXISTING AISLE LIGHT POWER SUPPLY AT THIS LOCATION TO REMAIN AND BE RE-USED IN THE PROJECT



EXISTING CATWALK PLUGSTRIP



EXISTING AISLE LIGHT POWER SUPPLY

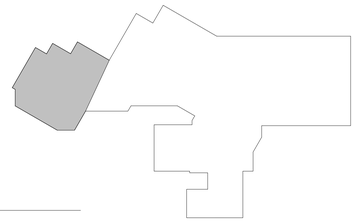


EXISTING CTRL-1



EXISTING BPS

1 TL EXISTING PLAN - SECOND FLOOR - AUDITORIUM, LOBBY
3/16" = 1'-0"



KEYPLAN - AREA OF WORK

EXISTING EQUIPMENT TO REMAIN

EXISTING EQUIPMENT TO BE DEMOLISHED

NEW ITEMS TO BE INSTALLED

LINE STYLE KEY

TO BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR = GREEN

TO BE PROVIDED AND INSTALLED BY THE THEATRICAL LIGHTING CONTRACTOR = PURPLE

COLOR CODE KEY - TL

CSD
CUSTOM + SOUND + DESIGNS

Revisions		
No	Date	Description
1	10.20.2026	100% CONSTRUCTION DOCUMENTS

NORTHPORT PUBLIC SCHOOL

AUDITORIUM RENOVATION

3003 Ryan Road, New Haven, IN 46774

SHEET TITLE

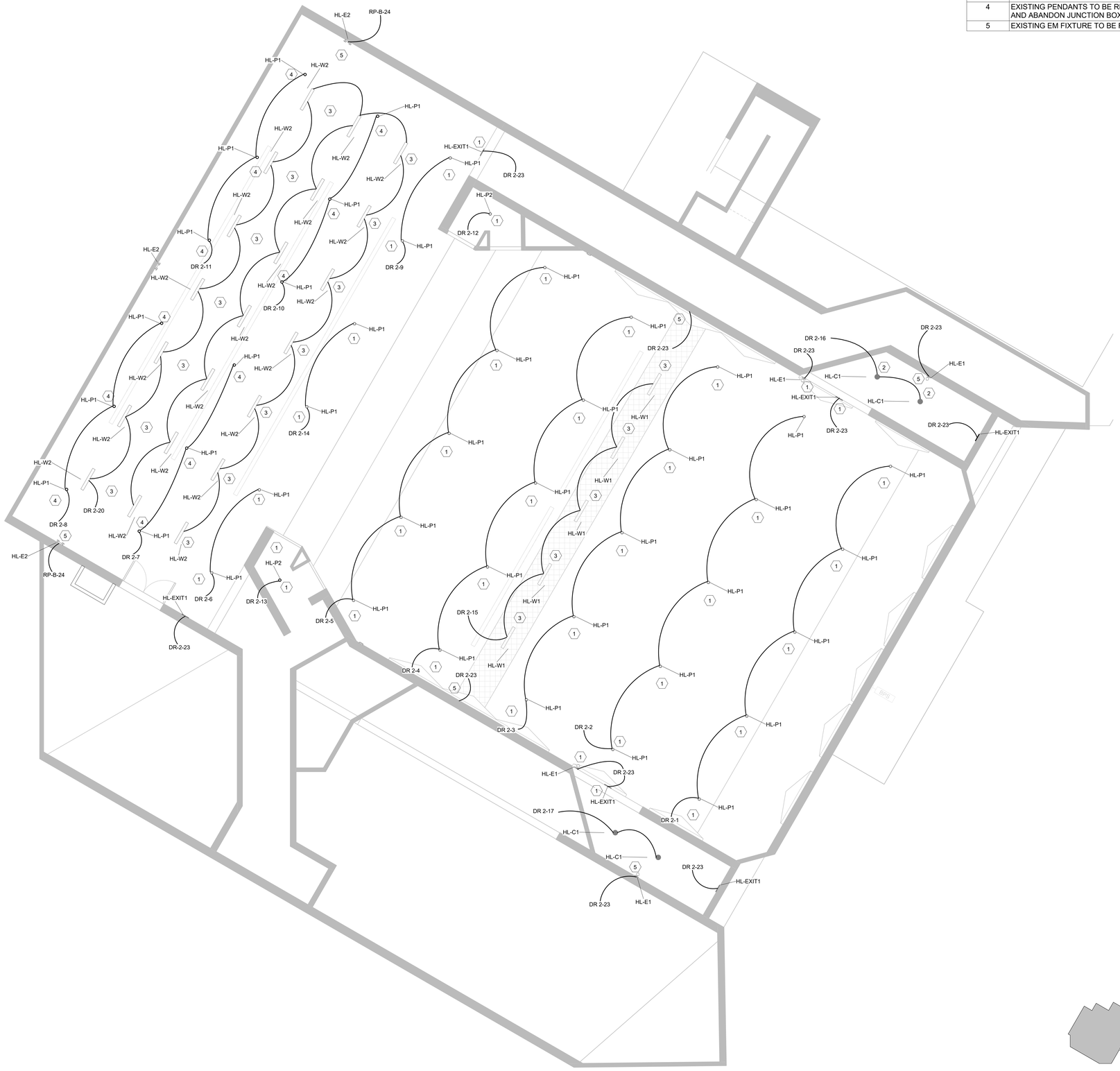
TL EXISTING PLAN - SECOND FLOOR

Issue :	100% CONSTRUCTION DOCUMENTS
Project Number :	NPS01
Designed By :	TGH
Drawn By :	ADF
Checked By :	TCK
Date Issue :	10.20.2026

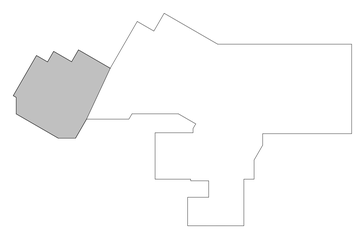
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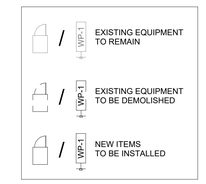
DEMO NOTES - ARCH. LIGHTING	
#	NOTES
1	EXISTING PENDANTS TO BE REMOVED. PROTECT JUNCTION BOX, WIRING, AND CONDUIT FOR RE-USE IN PROJECT.
2	EXISTING RECESSED DOWNLIGHT TO BE REMOVED. PROTECT JUNCTION BOX, WIRE, AND CONDUIT FOR RE-USE IN PROJECT.
3	EXISTING CATWALK AND STAGE WORKLIGHT TO BE REMOVED. PROTECT, JUNCTION BOX, WIRING, AND CONDUIT FOR RE-USE IN PROJECT.
4	EXISTING PENDANTS TO BE REMOVED. RETAIN JUNCTION BOX. REMOVE WIRING BACK TO SOURCE. COVER JUNCTION BOX AND ABANDON JUNCTION BOX AND CONDUIT IN PLACE.
5	EXISTING EM FIXTURE TO BE REMOVED. PROTECT JUNCTION BOX, WIRING, AND CONDUIT FOR RE-USE IN PROJECT.



1 TL EXISTING ARCHITECTURAL LIGHT RCP - FIRST FLOOR
3/16" = 1'-0"



KEYPLAN - AREA OF WORK



LINE STYLE KEY

TO BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR =	GREEN
TO BE PROVIDED AND INSTALLED BY THE THEATRICAL LIGHTING CONTRACTOR =	PURPLE

COLOR CODE KEY - TL

CSD
CUSTOM + SOUND + DESIGNS
ENGINEERING ACOUSTICS

Revisions

No	Date	Description
1	10.20.2026	100% CONSTRUCTION DOCUMENTS

NORTHPORT PUBLIC SCHOOL

AUDITORIUM RENOVATION

3003 Ryan Road, New Haven, IN 46774

SHEET TITLE

TL EXISTING ARCH. LIGHTING RCP - FIRST FLOOR

Issue :	100% CONSTRUCTION DOCUMENTS
Project Number :	NP-01
Designed By :	TGH
Drawn By :	AOF
Checked By :	TCK
Date Issue :	10.20.2026

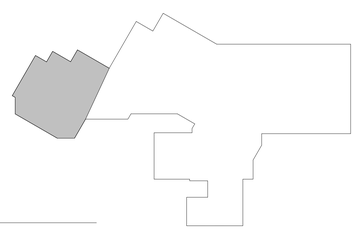
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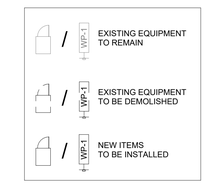
GENERAL NOTES - TL	
#	NOTES
1	ALL EXISTING LOW-VOLTAGE CONDUIT RUNS TO THE OLD LIGHTING CONTROL PROCESSOR RACK TO BE RE-ROUTED TO/THRU LJB-1 AS APPROPRIATE
2	INTEGRATE NEW C6 WIRING INTO EXISTING CABLE SWAG FOR STAGE ELECTRIC. PROVIDE STRAIN RELIEF AS APPROPRIATE
3	REINSTALL EXISTING PS-1 BETWEEN TOP RAILS. PROVIDE APPROPRIATE HANGER BRACKET AS NEEDED TO INSTALL
4	INSTALL NEW ETC FACTORY CIRCUIT LABELS ON EXISTING PANEL TO MATCH NEW CIRCUITING IN FLOOR POCKET / PLUGSTRIP / PLUGBOX
5	INSTALL NEW ENTRY STATION IN EXISTING BACKBOX. RE-TERMINATE EXISTING WIRE TO NEW ENTRY STATION
6	EXTEND / SHORTEN EXISTING FEEDER CABLE / LOAD CABLES AS NEEDED FOR CONNECTION TO NEW RELAY PANEL(S).
7	COORDINATE JUNCTION BOX LOCATION WITH EXISTING GRID IRON JUNCTION BOXES.
8	INSTALL NEW ENTRY STATION IN NEW SURFACE MOUNT BACKBOX. EC TO PROVIDE NEW WIRE TO NEW ENTRY STATION. TLV TO TERMINATE DURING SYSTEM ENERGIZATION.
9	INSTALL NEW LCD TOUCH SCREEN CONTROL STATION IN NEW SURFACE MOUNT BACKBOX. EC TO PULL NEW CAT-6 WIRE RUN BACK TO PANEL LNCR. EC TO PROVIDE FLAT BLANK 5-GANG COVER PLATE. NEW SURFACE BOX TO BE MOUNT ON TOP OF BLANK.
10	EC TO PULL NEW CAT-6 WIRE RUN BACK TO PANEL LNCR. EC TO PROVIDE FLAT BLANK 3-GANG COVER PLATE.
11	TLV TO PROVIDE ETC SBB-1 SURFACE NOUNT BACKBOX AT THIS LOCATION FOR DMX OUTPUT PLATES.



1 TL PLAN - FIRST FLOOR - AUDITORIUM, LOBBY
3/16" = 1'-0"



KEYPLAN - AREA OF WORK



LINE STYLE KEY

TO BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR =	GREEN
TO BE PROVIDED AND INSTALLED BY THE THEATRICAL LIGHTING CONTRACTOR =	PURPLE

COLOR CODE KEY - TL

CSD
CUSTOM + SOUND + DESIGNS

Revisions		
No	Date	Description
1	10.20.2026	100% CONSTRUCTION DOCUMENTS

NORTHPORT PUBLIC SCHOOL

AUDITORIUM RENOVATION

3003 Ryan Road, New Haven, IN 46774

SHEET TITLE

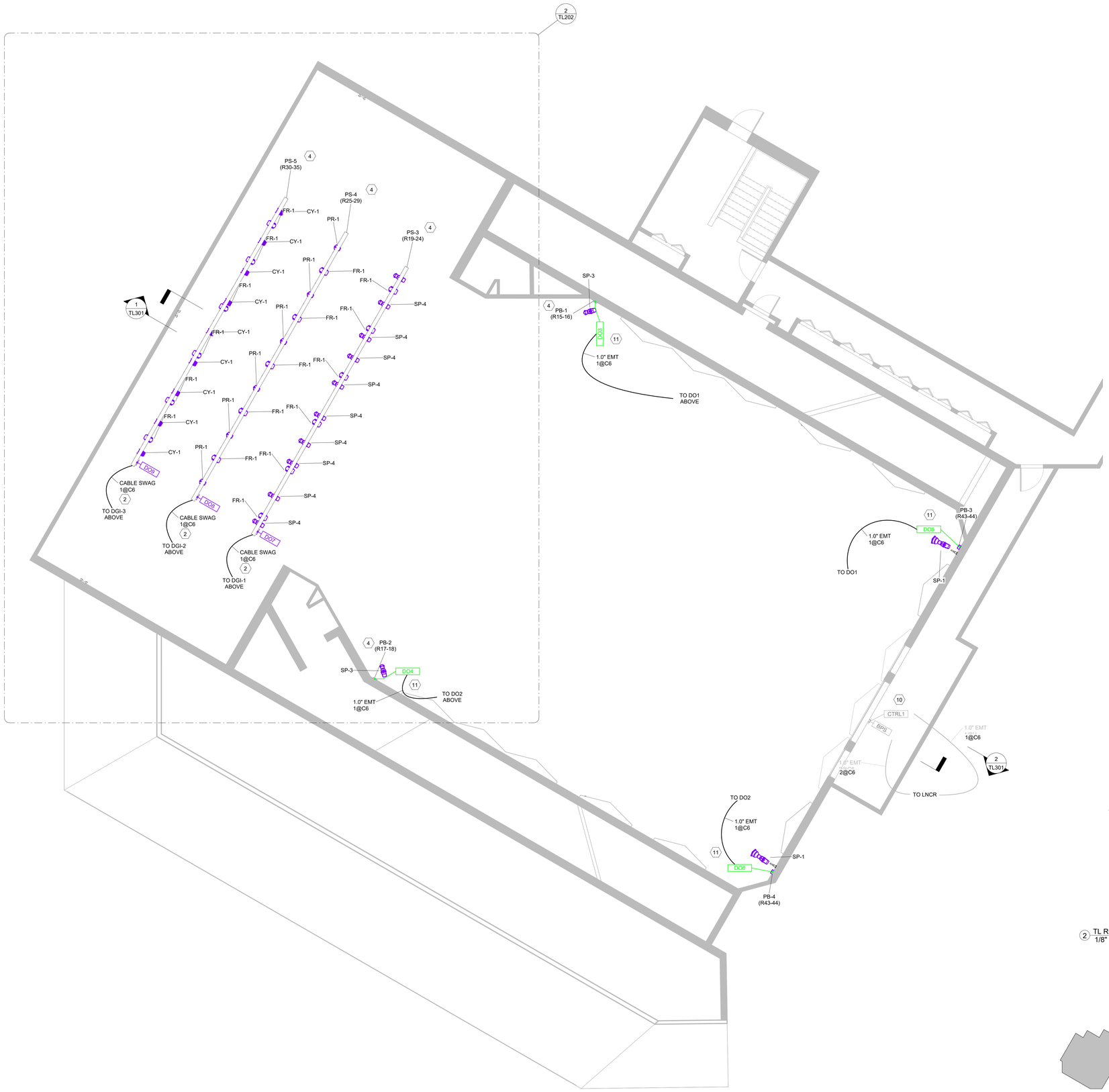
TL PLAN -
FIRST FLOOR

Issue :	100% CONSTRUCTION DOCUMENTS
Project Number :	NP-01
Designed By :	TGH
Drawn By :	ADF
Checked By :	TCK
Date Issue :	10.20.2026

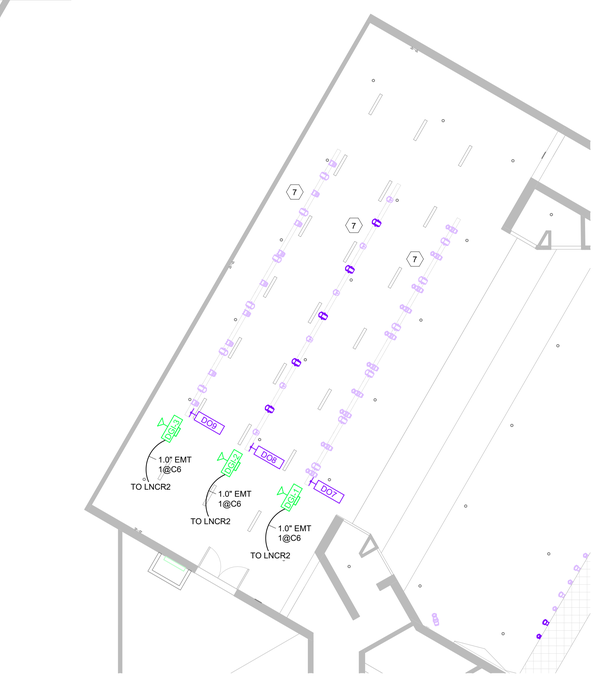
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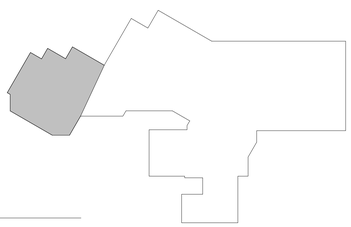
GENERAL NOTES - TL	
#	NOTES
1	ALL EXISTING LOW-VOLTAGE CONDUIT RUNS TO THE OLD LIGHTING CONTROL PROCESSOR RACK TO BE RE-ROUTED TO/THRU LJB-1 AS APPROPRIATE
2	INTEGRATE NEW C6 WIRING INTO EXISTING CABLE SWAG FOR STAGE ELECTRIC. PROVIDE STRAIN RELIEF AS APPROPRIATE
3	REINSTALL EXISTING PS-1 BETWEEN TOP RAILS. PROVIDE APPROPRIATE HANGER BRACKET AS NEEDED TO INSTALL
4	INSTALL NEW ETC FACTORY CIRCUIT LABELS ON EXISTING PANEL TO MATCH NEW CIRCUITING IN FLOOR POCKET / PLUGSTRIP / PLUGBOX
5	INSTALL NEW ENTRY STATION IN EXISTING BACKBOX. RE-TERMINATE EXISTING WIRE TO NEW ENTRY STATION
6	EXTEND / SHORTEN EXISTING FEEDER CABLE / LOAD CABLES AS NEEDED FOR CONNECTION TO NEW RELAY PANEL(S).
7	COORDINATE JUNCTION BOX LOCATION WITH EXISTING GRID IRON JUNCTION BOXES.
8	INSTALL NEW ENTRY STATION IN NEW SURFACE MOUNT BACKBOX. EC TO PROVIDE NEW WIRE TO NEW ENTRY STATION. TLV TO TERMINATE DURING SYSTEM ENERGIZATION.
9	INSTALL NEW LCD TOUCH SCREEN CONTROL STATION IN NEW SURFACE MOUNT BACKBOX. EC TO PULL NEW CAT-6 WIRE RUN BACK TO PANEL LNCR. EC TO PROVIDE FLAT BLANK 5-GANG COVER PLATE. NEW SURFACE BOX TO BE MOUNT ON TOP OF BLANK.
10	EC TO PULL NEW CAT-6 WIRE RUN BACK TO PANEL LNCR. EC TO PROVIDE FLAT BLANK 3-GANG COVER PLATE.
11	TLV TO PROVIDE ETC SBB-1 SURFACE NOUNT BACKBOX AT THIS LOCATION FOR DMX OUTPUT PLATES.



1 TL PLAN - SECOND FLOOR - AUDITORIUM, LOBBY
3/16" = 1'-0"



2 TL RCP - FIRST FLOOR - STAGE HOUSE
1/8" = 1'-0"



KEYPLAN - AREA OF WORK

EXISTING EQUIPMENT TO REMAIN

EXISTING EQUIPMENT TO BE DEMOLISHED

NEW ITEMS TO BE INSTALLED

LINE STYLE KEY

TO BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR = GREEN

TO BE PROVIDED AND INSTALLED BY THE THEATRICAL LIGHTING CONTRACTOR = PURPLE

COLOR CODE KEY - TL

CSD
CUSTOM • SOUND • DESIGNS

Revisions		
No	Date	Description
1	10.20.2026	100% CONSTRUCTION DOCUMENTS

NORTHPORT PUBLIC SCHOOL

AUDITORIUM RENOVATION

3003 Ryan Road, New Haven, IN 46774

SHEET TITLE

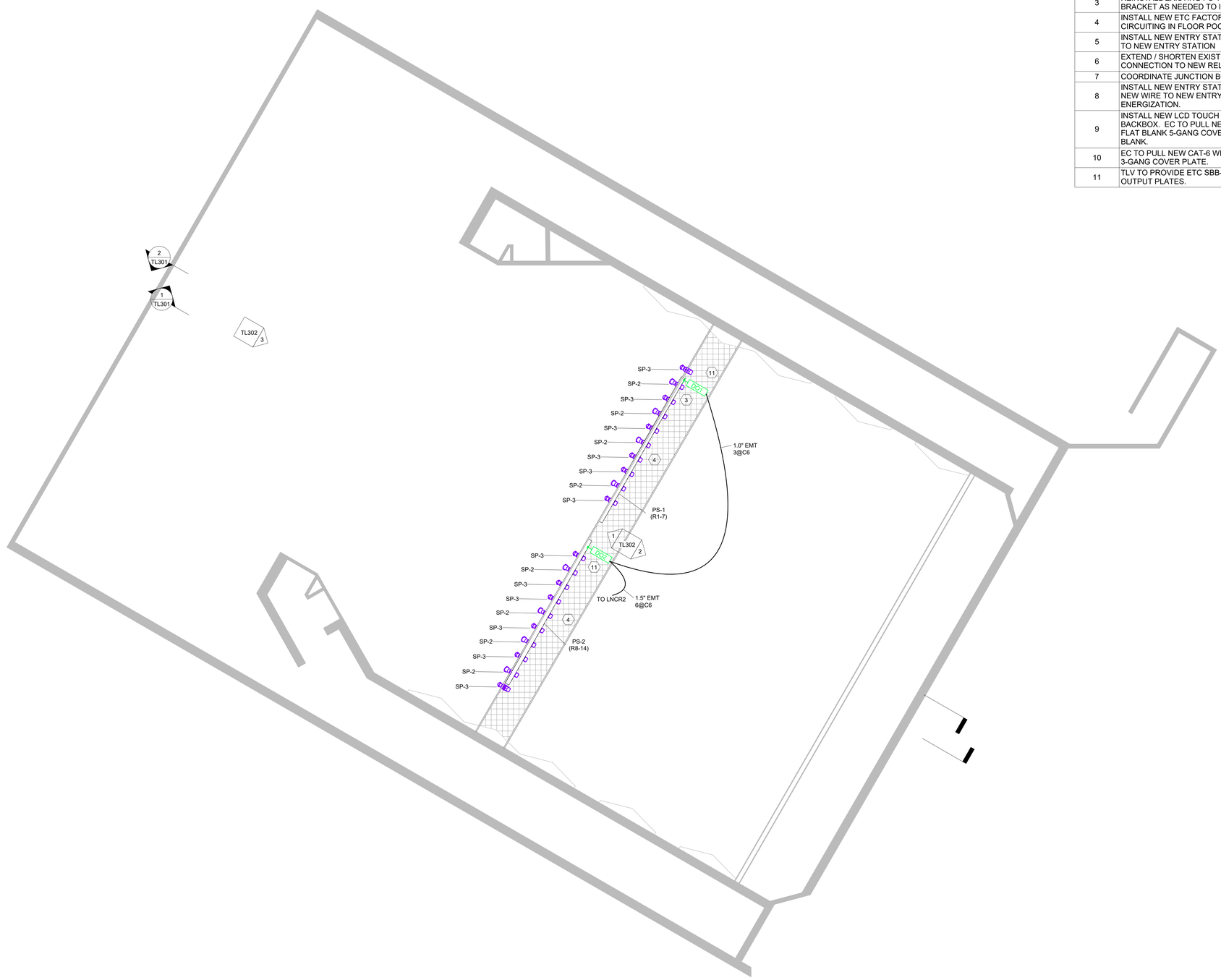
TL PLAN - SECOND FLOOR

Issue :	100% CONSTRUCTION DOCUMENTS
Project Number :	NPS01
Designed By :	TGH
Drawn By :	ADF
Checked By :	TCK
Date Issue :	10.20.2026

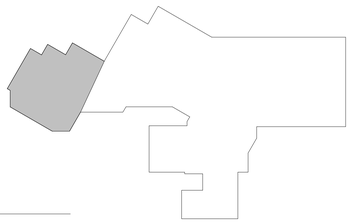
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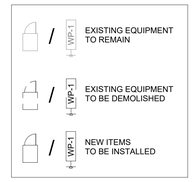
GENERAL NOTES - TL	
#	NOTES
1	ALL EXISTING LOW-VOLTAGE CONDUIT RUNS TO THE OLD LIGHTING CONTROL PROCESSOR RACK TO BE RE-ROUTED TO/THRU LJB-1 AS APPROPRIATE
2	INTEGRATE NEW C6 WIRING INTO EXISTING CABLE SWAG FOR STAGE ELECTRIC. PROVIDE STRAIN RELIEF AS APPROPRIATE
3	REINSTALL EXISTING PS-1 BETWEEN TOP RAILS. PROVIDE APPROPRIATE HANGER BRACKET AS NEEDED TO INSTALL
4	INSTALL NEW ETC FACTORY CIRCUIT LABELS ON EXISTING PANEL TO MATCH NEW CIRCUITING IN FLOOR POCKET / PLUGSTRIP / PLUGBOX
5	INSTALL NEW ENTRY STATION IN EXISTING BACKBOX. RE-TERMINATE EXISTING WIRE TO NEW ENTRY STATION
6	EXTEND / SHORTEN EXISTING FEEDER CABLE / LOAD CABLES AS NEEDED FOR CONNECTION TO NEW RELAY PANEL(S).
7	COORDINATE JUNCTION BOX LOCATION WITH EXISTING GRID IRON JUNCTION BOXES.
8	INSTALL NEW ENTRY STATION IN NEW SURFACE MOUNT BACKBOX. EC TO PROVIDE NEW WIRE TO NEW ENTRY STATION. TLV TO TERMINATE DURING SYSTEM ENERGIZATION.
9	INSTALL NEW LCD TOUCH SCREEN CONTROL STATION IN NEW SURFACE MOUNT BACKBOX. EC TO PULL NEW CAT-6 WIRE RUN BACK TO PANEL LNCR. EC TO PROVIDE FLAT BLANK 5-GANG COVER PLATE. NEW SURFACE BOX TO BE MOUNT ON TOP OF BLANK.
10	EC TO PULL NEW CAT-6 WIRE RUN BACK TO PANEL LNCR. EC TO PROVIDE FLAT BLANK 3-GANG COVER PLATE.
11	TLV TO PROVIDE ETC SBB-1 SURFACE NOUNT BACKBOX AT THIS LOCATION FOR DMX OUTPUT PLATES.



1 TL PLAN - CATWALK - AUDITORIUM, LOBBY
3/16" = 1'-0"



KEYPLAN - AREA OF WORK



LINE STYLE KEY

TO BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR =	GREEN
TO BE PROVIDED AND INSTALLED BY THE THEATRICAL LIGHTING CONTRACTOR =	PURPLE

COLOR CODE KEY - TL

CSD
CUSTOM • SOUND • DESIGNS

Revisions		
No	Date	Description
1	10.20.2026	100% CONSTRUCTION DOCUMENTS

NORTHPORT PUBLIC SCHOOL

AUDITORIUM RENOVATION

3003 Ryan Road, New Haven, IN 46774

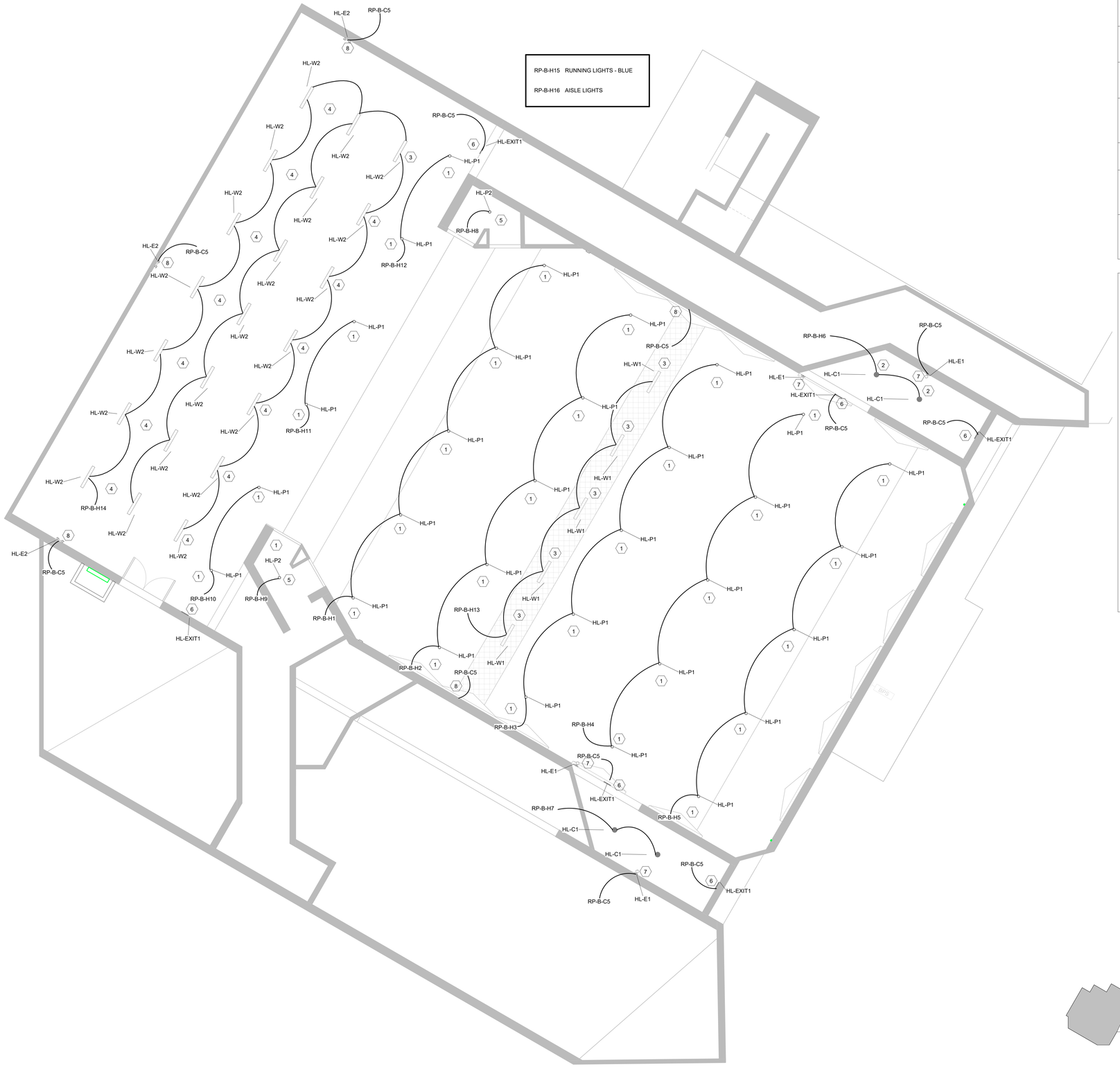
SHEET TITLE

TL PLAN - CATWALK

Issue :	100% CONSTRUCTION DOCUMENTS
Project Number :	NPS01
Designed By :	TGH
Drawn By :	ADF
Checked By :	TCK
Date Issue :	10.20.2026

TL203

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1 TL RCP - NEW ARCHITECTURAL LIGHT RCP - FIRST FLOOR
3/16" = 1'-0"

GENERAL NOTES - ARCH. LIGHTING	
#	NOTES
1	TYPE P1 - PENDANTS TO BE REPLACED WITH A MINIMUM OF A 6" LUMINAIRE, 8000 LUMEN, 3000K CCT, 90 CRI, 0-10V <.1% DRIVER. OPTIC TBD DETERMINED BY ELECTRICAL CONTRACTOR,MATTE BLACK FINISH, CLEAR ANODIZED TRIM, 120V OR MVOLT. APPROVED MANUFACTURERS-ACUITY, CURRENT-HLI, COOPER LIGHTING SOLUTIONS.
2	TYPE R1 - RECESSED DOWNLIGHTS TO BE REPLACED WITH A MINIMUM 1500 LUMEN, 3000K CCT, 0-10V 1% DRIVER. OPTIC TBD DETERMINED BY ELECTRICAL CONTRACTOR. BLACK FINISH, WHITE TRIM, 120V OR MVOLT. APPROVED MANUFACTURERS-ACUITY, CURRENT-HLI, COOPER LIGHTING SOLUTIONS.
3	TYPE W1 - CATWALK WORKLIGHT TO BE REPLACED WITH A MINIMUM 4000 LUMEN LINEAR STRIP, 4000K CCT, 0-10V DRIVER. WIDE OPTIC , WHITE FINISH, LENSED REFLECTOR, 120V OR MVOLT. APPROVED MANUFACTURERS-ACUITY, CURRENT-HLI, COOPER LIGHTING SOLUTIONS.
4	TYPE W2 - STAGE WORKLIGHT TO BE REPLACED WITH 10000 LUMEN LINEAR LOW BAY, 4000K CCT, 0-10V DRIVER. MEDIUM OPTIC , WHITE FINISH, LENSED REFLECTOR, 120V OR MVOLT. APPROVED MANUFACTURERS-ACUITY, CURRENT-HLI, COOPER LIGHTING SOLUTIONS.
5	TYPE P2 - SURFACE MOUNT PENDANTS TO BE REPLACED WITH MINIMUM 1500 LUMEN, 3000K CCT, 90 CRI, 0-10V <.1% DRIVER. OPTIC TBD DETERMINED BY ELECTRICAL CONTRACTOR. BLACK FINISH, ALZAK REFLECTOR, 120V OR MVOLT. APPROVED MANUFACTURERS-ACUITY, CURRENT-HLI, COOPER LIGHTING SOLUTIONS.
6	TYPE EXIT 1 - SURFACE MOUNT EXIT SIGN TO REMAIN IF WORKING PROPERLY. REPLACE WITH SIMILIAR LED SOURCE UNIT IF NOT FUNCTIONING AS REQUIRED FOR CODE COMPLIANCE.
7	TYPE E1 - SINGLE HEAD, SURFACE MOUNT EM LUMINAIRE TO BE REPLACED WITH NEW BY EC. EC TO PROVIDE UPDATED LIFE SAFETY EGRESS LIGHTING CALCULATIONS FOR SPACE. MEET NFPA 101 AND LOCAL CODE. PROVIDE AND INSTALL ADDITIONAL LUMINAIRES IF REQUIRED. APPROVED MANUFACTURERS-ACUITY, CURRENT-HLI, COOPER LIGHTING SOLUTIONS.
8	TYPE E2 - DUAL HEAD, SURFACE MOUNT EM LUMINAIRES TO BE REPLACED WITH NEW BY EC. EC TO PROVIDE UPDATED LIFE SAFETY EGRESS LIGHTING CALCULATIONS FOR SPACE. MEET NFPA 101 AND LOCAL CODE. PROVIDE AND INSTALL ADDITONAL LUMINAIRES IF REQUIRED. APPROVED MANUFACTURERS-ACUITY, CURRENT-HLI, COOPER LIGHTING SOLUTIONS.

ELECTRICAL CONTRACTOR RESPONSIBILITIES:

1. NEW ARCHITECTURAL LIGHTING CALCULATION ARE TO COMPLY, AT A MINIMUM, WITH ANSI/IES RP-41-20. REFER TO ANSI/IES RP-41-20 FOR ADDITIONAL RECOMMENDED LEVELS.
AUDIENCE - HORIZONTAL - 10 FC AVERAGE : 2:1 UNIFORMITY @ FLOOR
AISLES - HORIZONTAL - 1 FC AVERAGE : 3:1 UNIFORMITY @ 30" A.F.F.

2. NEW EMERGENCY EGRESS LIGHTING CALCULATIONS
REFER TO NFPA 101 FOR REQUIREMENTS

3. NEW STAGE WORKLIGHTS
PROVIDE A MINIMUM OF 50 FC ACROSS OVERALL STAGE AREA.

4. NEW ARCHITECTURAL LIGHTING SHOULD COMPLY WITH ANSI/IES TM-30-24 FOR COLOR RENDITION AND SPECTRAL POWER DISTRIBUTION (SPD).

5. ALL AUDIENCE SIDE FIXTURES ARE TO BE 3000K CCT, MINIMUM 80 CRI.

6. ALL WORKLIGHTS ARE TO BE 4000K CCT, MINIMUM 80 CRI.

7. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO PROVIDE A LIGHTING CONTROL SYSTEM INCLUSIVE OF ALL REQUIRED MATERIALS, AND INSTALLATION, FOR ALL NEW LUMINAIRES.

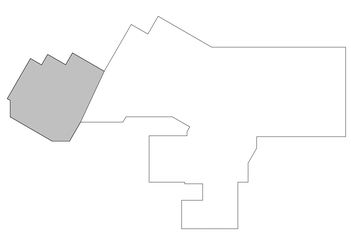
8. REFER TO TL SHEETS AND SPECIFICATION SECTION 26 09 61 FOR ADDITIONAL MANDATORY HARDWARE INTEGRATION AND DIVISION OF RESPONSIBILITIES.

9. COMPLETED SYSTEM SHALL BE COMPLIANT WITH ALL APPLICABLE LOCAL AND NATIONAL CODES INCLUDING, BUT NOT LIMITED TO: NEC, NFPA 101, ASHRAE (IF REQUIRED), IBC, IECC, AND OTHERS.

10. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL LIGHTING CALCULATIONS, PERMITS, AND ENGINEERING STAMPS.

11. CSD WILL APPROVE ALL SYSTEM SUBMITTALS AND LUMINAIRE SUBMITTALS FOR THE PROJECT PRIOR TO RELEASE TO MANUFACTURING.

12. APPROVED LUMINAIRE MANUFACTURES: ACUITY BRANDS LIGHTING, COOPER LIGHTING SOLUTIONS, CURRENT - HLI.



KEYPLAN - AREA OF WORK

EXISTING EQUIPMENT TO REMAIN

EXISTING EQUIPMENT TO BE DEMOLISHED

NEW ITEMS TO BE INSTALLED

LINE STYLE KEY

TO BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR = GREEN

TO BE PROVIDED AND INSTALLED BY THE THEATRICAL LIGHTING CONTRACTOR = PURPLE

COLOR CODE KEY - TL

CSD
CUSTOM • SOUND • DESIGNS
FORT WAYNE INDIANAPOLIS

Revisions		
No	Date	Description
1	10.20.2026	100% CONSTRUCTION DOCUMENTS

NORTHPORT PUBLIC SCHOOL

AUDITORIUM RENOVATION

3003 Ryan Road, New Haven, IN 46774

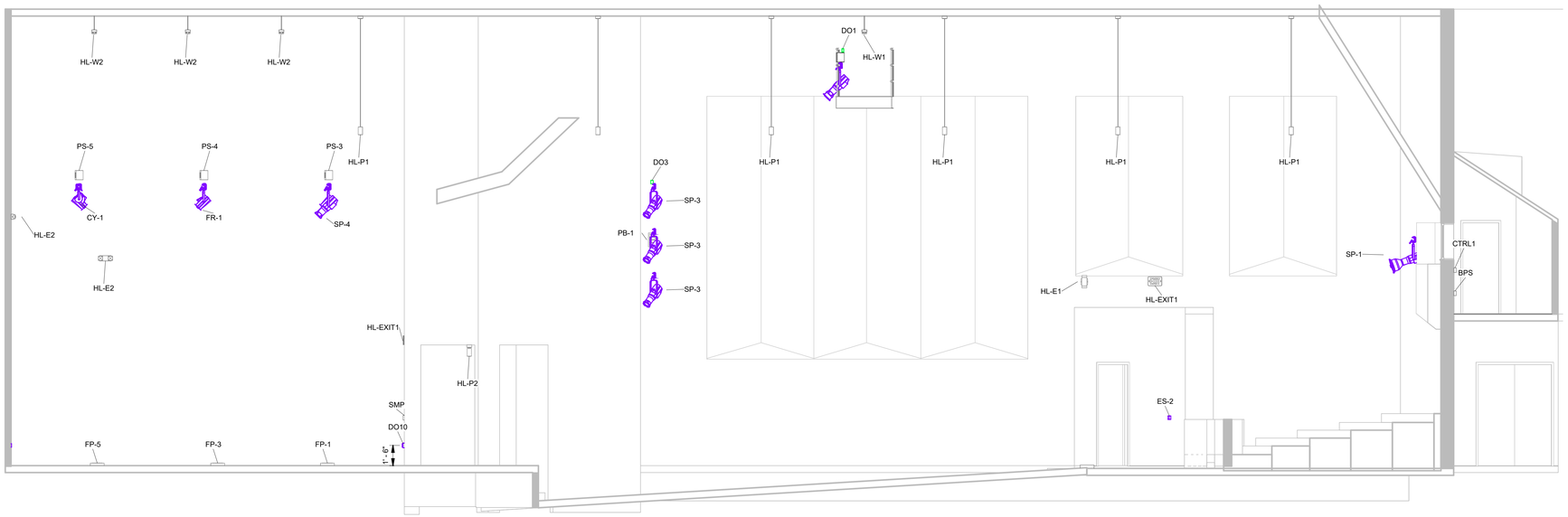
SHEET TITLE

TL ARCH. LIGHTING RCP - FIRST FLOOR

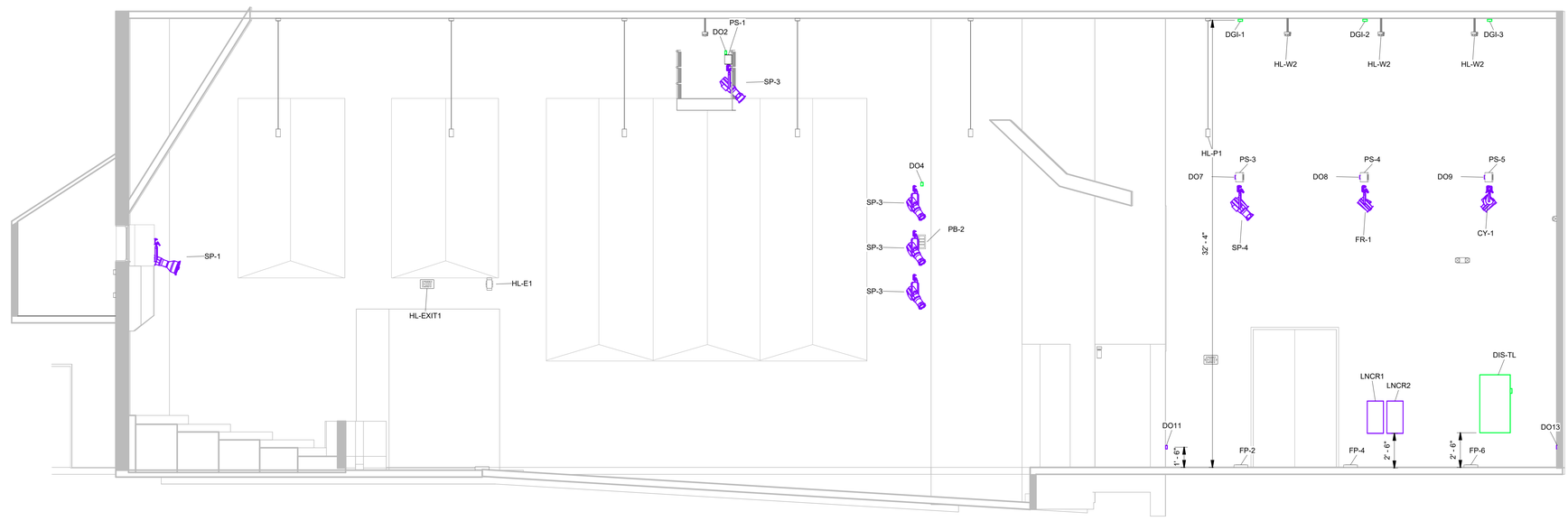
Issue :	100% CONSTRUCTION DOCUMENTS
Project Number :	NP-01
Designed By :	TGH
Drawn By :	AOF
Checked By :	TCK
Date Issue :	10.20.2026

TL211

10/17/2025 4:14:08 PM



1 TL SECTION - AUDITORIUM NORTHEAST
1/4" = 1'-0"



2 TL SECTION - AUDITORIUM SOUTHWEST
1/4" = 1'-0"

CSD
CUSTOM + SOUND + DESIGNS

Revisions

No	Date	Description
1	10.20.2026	100% CONSTRUCTION DOCUMENTS

NORTHPORT PUBLIC SCHOOL

AUDITORIUM RENOVATION

3003 Ryan Road, New Haven, IN 46774

SHEET TITLE

TL SECTIONS, ELEVATIONS

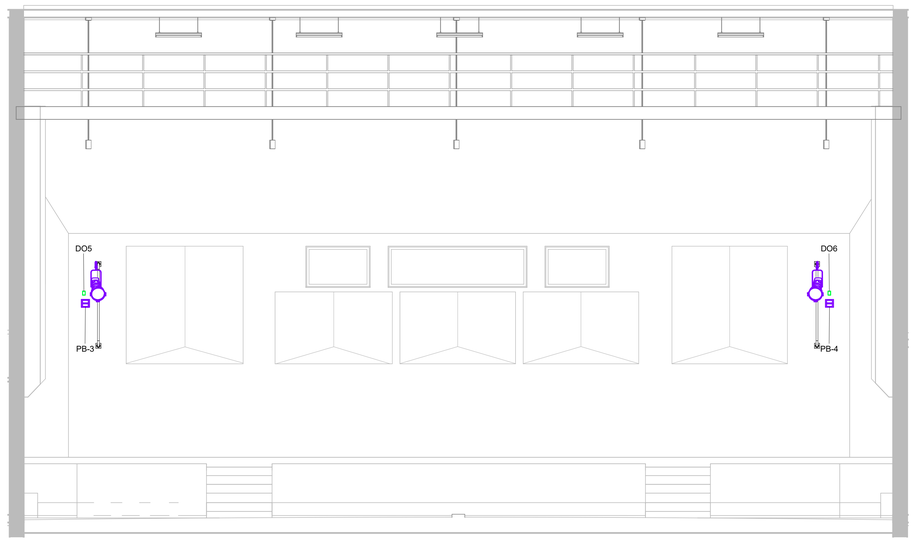
Issue :	100% CONSTRUCTION DOCUMENTS
Project Number :	NPS01
Designed By :	TGH
Drawn By :	ADF
Checked By :	TCK
Date Issue :	10.20.2026

TL301

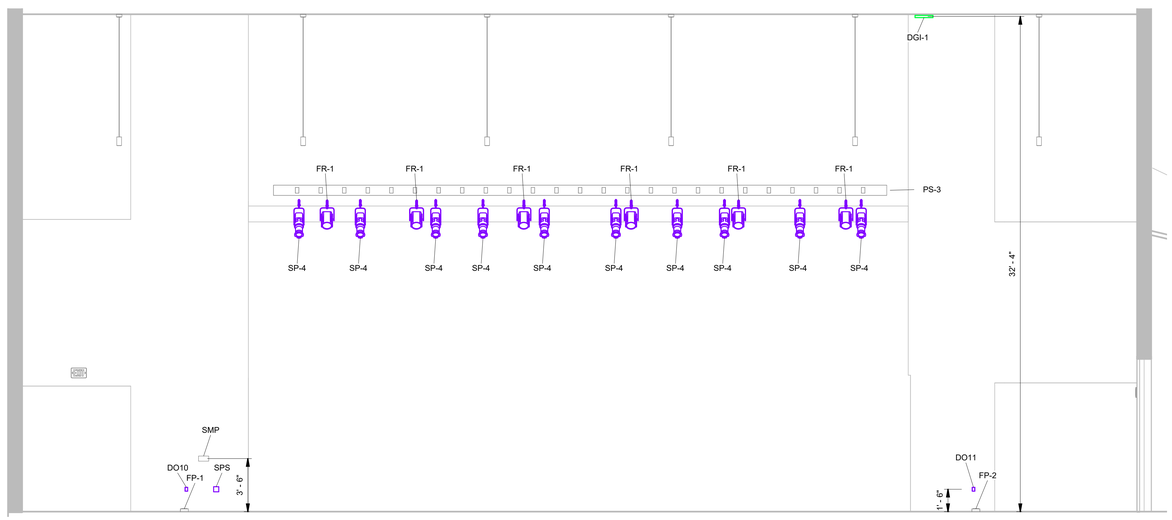
10/19/2024 4:14:11 PM



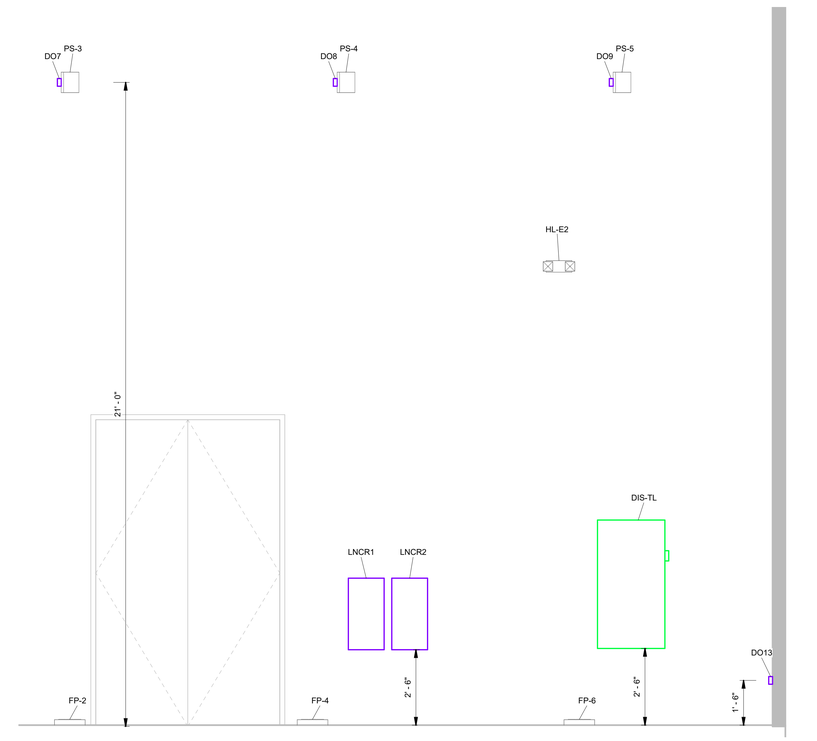
1 TL ELEVATION - AUDITORIUM NORTHWEST
1/4" = 1'-0"



2 TL ELEVATION - AUDITORIUM SOUTHEAST
1/4" = 1'-0"



3 TL ELEVATION - STAGE SOUTHEAST
1/4" = 1'-0"



4 TL ELEVATION - STAGE RIGHT WING
1/2" = 1'-0"

CSD
CUSTOM + SOUND + DESIGNS

Revisions			
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NORTHPORT PUBLIC SCHOOL

AUDITORIUM RENOVATION

3003 Ryan Road, New Haven, IN 46774

SHEET TITLE

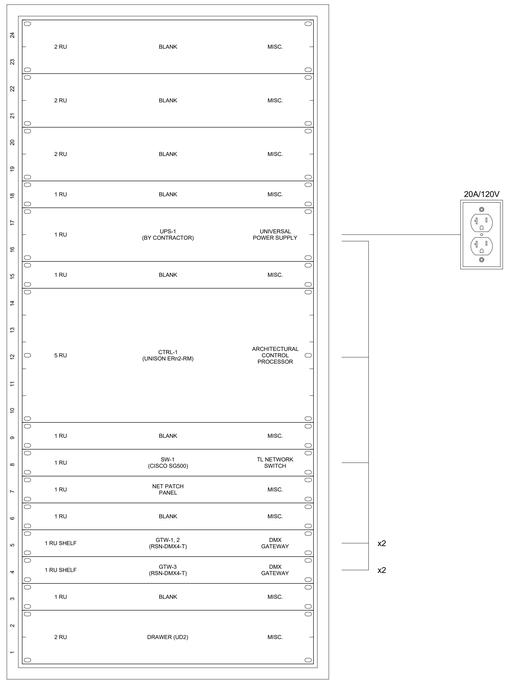
TL SECTIONS, ELEVATIONS CONT.

Issue :	100% CONSTRUCTION DOCUMENTS
Project Number :	NP-01
Designed By :	TGH
Drawn By :	ADF
Checked By :	TCK
Date Issue :	10.20.2026

TL302

10/19/2024 4:16:14 PM

LNCR
DWR-24-22
24 RU WALL RACK



LNCR

1 TL DETAIL - LNCR LAYOUT
3" = 1'-0"

CSD
CUSTOM + SOUND + DESIGNS
AUSTIN · DENVER · DUBLIN · ATLANTA · ASHEVILLE

Revisions

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NORTHPORT PUBLIC SCHOOL

AUDITORIUM RENOVATION

3003 Ryan Road, New Haven, IN 46774

SHEET TITLE

TL DETAILS

Issue :	100% CONSTRUCTION DOCUMENTS
Project Number :	NP-01
Designed By :	TGH
Drawn By :	ADF
Checked By :	TCK
Date Issue :	10.20.2026

TL401

10/19/2026 4:45:14 PM

CONTROL BOOTH

SR WING

DISTRIBUTED AREAS

DATA/NETWORK WIRE
DMX WIRE
CONTROL WIRE
UNISON WIRE
UNISON + POWER WIRE

SCHEMATIC LINE TYPES - TL

PROJ. ROOM A201 DESKTOP
VIDEO IN HDMI
HP
E24i G5 FHD
TDIS-1

PROJ. ROOM A201 DESKTOP
VIDEO IN HDMI
HP
E24i G5 FHD
TDIS-2

<<PORTABLE>>
CTRL BOOTH DESKTOP
NET RJ452-M
ETC
P-TS7-PE
BMP

PORTABLE ETHERNET CABLE

ETC ION Xe20
CONTROL CONSOLE

CONTROL BOOTH WALL
RJ452-M NET PoE
RJ452-M NET PoE
ETC
NET/NET
BPS

DSL WALL SMP
NET RJ452-M PoE
ETC
P-TS7-E-4
SMP

CONTROL BOOTH WALL
RJ452-M NET PoE
RJ452-M NET PoE
ETC
NET/NET
SPS

TO LOAD CIRCUITS
(TYP OF 48 - 20A 2-WIRE CIRCUITS)

ETC
IQ48 BREAKER
PANEL WITH
48 SINGLE-POLE
MOTORIZED
BREAKERS

200A MCB (IQ-
MB200A65K)
MAIN BREAKER

RP-A

3Ø, 4 WIRE + GND
120V / 208V / 60 Hz.
400A MAX.
(BY OTHERS)

TO LOAD CIRCUITS
(TYP OF 29 - 20A 2-WIRE CIRCUITS)

200A MCB
(ERP-200A3P22KMCB)
MAIN BREAKER

RP-B

ETC ERP RELAY
PANEL WITH 24
SINGLE-POLE 20A
RELAYS AND
29 SINGLE-POLE
BREAKERS

3Ø, 4 WIRE + GND
120V / 208V / 60 Hz.
200A MAX.
(BY OTHERS)

SENSE IN
10A-TAP
SENSE OUT

FROM FIRE ALARM
ALARM IN
SENSE IN
CC OUT
EBDK

1Ø, 2 WIRE + GND
100-277V 50/60 Hz.
20A MAX.
(BY OTHERS)

LNCR2

SIDE STAGE LNCR
RJ452-M NET NET RJ452-M
RJ452-M NET NET RJ452-M SERVICE PORT
RJ452-M NET NET RJ452-M
RJ452-M NET NET RJ452-M
RJ452-M NET NET RJ452-M
RJ452-M NET NET RJ452-M
CISCO
3100 SERIES
SW-1

LNCR1

P-ACP-DIN
P-SPMMK2-DIN
HDR-60

1Ø, 2 WIRE + GND
120V / 60 Hz.
20A MAX.
FROM PANEL RP-B-C2

CATWALK RAILING
XLR-5M DMX OUT
ETC
DMXOUT
DO1

CATWALK RAILING
XLR-5M DMX OUT
ETC
DMXOUT
DO2

HR TORM WALL
XLR-5M DMX OUT
ETC
DMXOUT
DO3

HL TORM WALL
XLR-5M DMX OUT
ETC
DMXOUT
DO4

HR REAR WALL WALL
XLR-5M DMX OUT
ETC
DMXOUT
DO5

HL REAR WALL WALL
XLR-5M DMX OUT
ETC
DMXOUT
DO6

SL WING WALL
XLR-5M DMX OUT
ETC
DMXOUT
DO10

SR WING WALL
XLR-5M DMX OUT
ETC
DMXOUT
DO11

USL WALL WALL
XLR-5M DMX OUT
ETC
DMXOUT
DO12

USR WALL WALL
XLR-5M DMX OUT
ETC
DMXOUT
DO13

SR WING LNCR2
PHX72 DMX OUT DMX IN RJ452-M
PHX72 DMX OUT
PHX72 DMX OUT
PHX72 DMX OUT
PHX72 DMX OUT
PHX72 DMX OUT
PHX72 DMX OUT
PHX72 DMX OUT
PHX72 DMX OUT
TO DGI-1 (DO7)
TO DGI-2 (DO8)
TO DGI-3 (DO9)
PHX72 DMX OUT
PHX72 DMX OUT
PHX72 DMX OUT
PHX72 DMX OUT
PHX72 DMX OUT
PHX72 DMX OUT
ETC
RSN-OPTO-DBOX
SPLT-1

SIDE STAGE LNCR
PHX72 DMX OUT NET IN RJ452-M
PHX72 DMX OUT
PHX72 DMX OUT
PHX72 DMX OUT
ETC
RSN-DMX4-DIN
GTW-1

ES-1 TO ES-5
(TYP. OF 5)
PI1001

1 TL SCHEMATIC - AUDITORIUM LIGHTING CONTROL
NOT TO SCALE

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CSD
CUSTOM + SOUND + DESIGNS

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NORTHPORT PUBLIC SCHOOL

AUDITORIUM RENOVATION

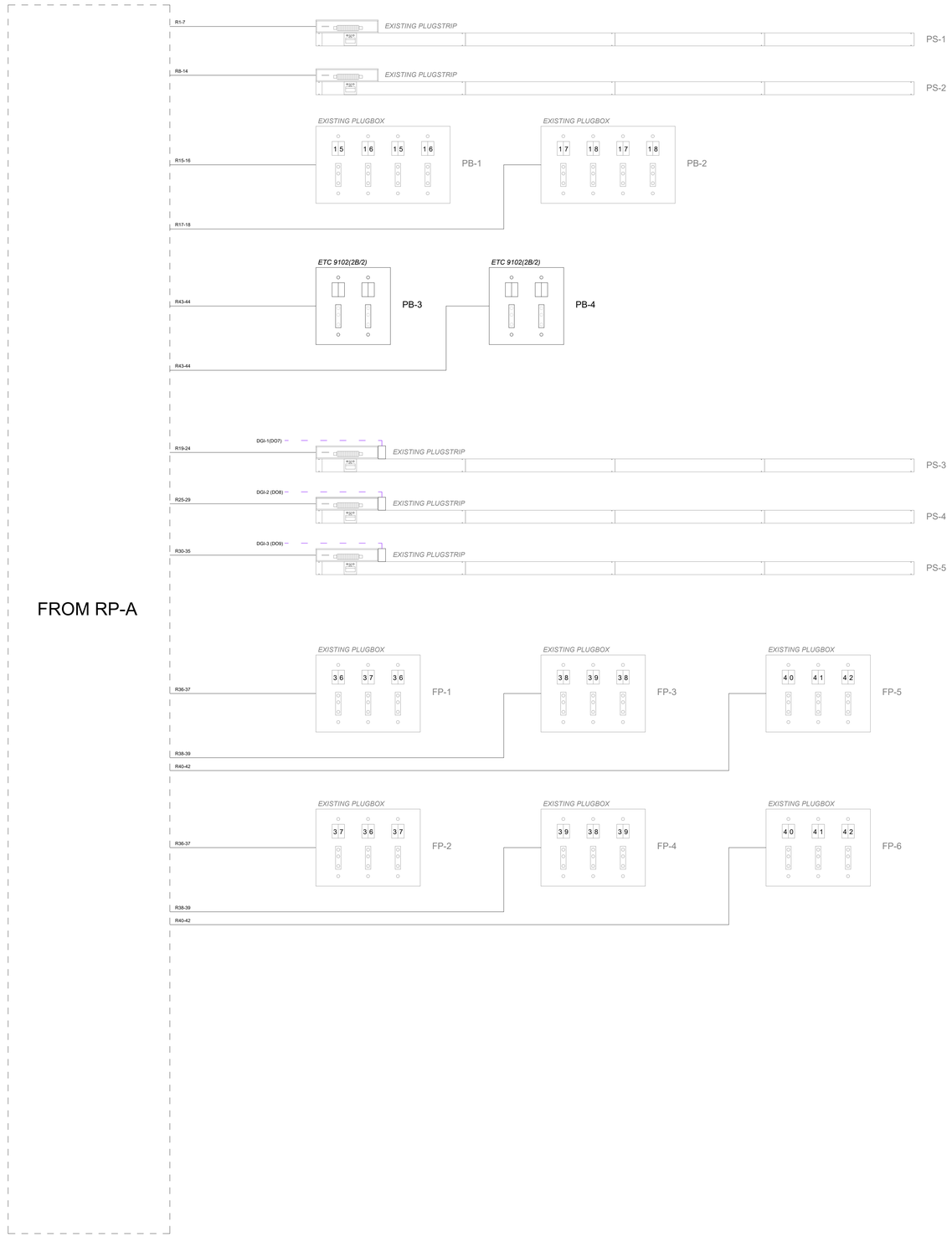
3003 Ryan Road, New Haven, IN 46774

SHEET TITLE

TL CONTROL SCHEMATIC

Issue :	100% CONSTRUCTION DOCUMENTS
Project Number :	NP-01
Designed By :	TGH
Drawn By :	ADF
Checked By :	TCK
Date Issue :	10.20.2026

TL701



CATWALK ELECTRICS

HOUSE TORMENTORS, REAR WALL

STAGE ELECTRICS

STAGE

1 TL SCHEMATIC - AUDITORIUM LIGHTING DISTRIBUTION
NOT TO SCALE

CSD
CUSTOM + SOUND + DESIGNS

Revisions		
No	Date	Description
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NORTHPORT PUBLIC SCHOOL

AUDITORIUM RENOVATION

3003 Ryan Road, New Haven, IN 46774

SHEET TITLE

TL DISTRIBUTION SCHEMATIC

Issue :	100% CONSTRUCTION DOCUMENTS
Project Number :	NP-01
Designed By :	TGH
Drawn By :	ADF
Checked By :	TCK
Date Issue :	10.20.2026

TL702

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