

Addendum 1

February 22, 2022

Addition and Renovation to: Norris Middle School
 5 Norris Square
 Norris, TN 37828

To: Prime contractors and all others to whom drawings and specifications have been issued. This Addendum forms part of the Contract Documents. It supplements and modifies them as follows:

A. Specifications:

- **Section 01 10 00 – Summary:** Owner-installed, or separate contract, work will include Polished Concrete Finishing.
- **Section 03 35 43 – Polished Concrete Flooring:** Added verbiage clarifying Owner installation. Section remains in project manual for reference.
- **Section 08 80 00 - Glazing:** Interior glass for Window Type 3 was changed to M-1, one-way mirror glass.

B. Drawings:

- **Sheets C100 – C801_ADD1:** Driveway extension was reconfigured due to slope.
- **Sheet A201 – Door Schedule, Window Types, and Details_ADD1:** Interior glass for window Type 3 was changed to M-1, one-way mirror glass.
- **Sheets M101, M102:** New HVAC controls tied into existing building system.
- **Sheets E101 – E401:** Relocation and revision of some lighting and electrical items.

C. Attachments:

1. All specifications and drawings mentioned above.

END OF ADDENDUM

Job Number: 210042.04

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PART 1 GENERAL

1.01 WORK INCLUDED

- A. Furnish all labor, materials, and equipment, and perform all work to construct, as specified herein and as shown on the accompanying drawings entitled "Addition and Renovation to: Norris Middle School", 5 Norris Square, Norris, TN 37828. The renovation shall be constructed complete and ready for occupancy except for the items specifically excluded in "Work Not Included".
- B. The work shall include selective demolition, building construction, plumbing, heating, ventilating and air conditioning; electrical work; and special equipment, as shown and specified.
- C. Patch any existing work damaged by construction.

1.02 WORK NOT INCLUDED

- A. The following items of work will be provided by the Owner or by others under separate contracts:
 - 1. Wayfinding signage.
 - 2. Toilet accessories not included on drawings: OFCI.
 - 3. Movable furniture unless specifically shown on the drawings and specifications.
 - 4. Security System Equipment.
 - 5. Telephone System Equipment.
 - ~~6.~~ 6. Computer System Equipment.
 - ~~6-7.~~ 6-7. Polished Concrete Finishing.
 - ~~7-8.~~ 7-8. Any other items noted on the drawings as Not in Contract (NIC); or Owner Furnished Contractor Installed (OFICI).
- B. The following work in connection with the items listed in paragraph 1.02A preceding shall be part of the General Contract work:
 - 1. Verification of correct location of electrical receptacles, telephone outlets, water and waste connections and similar outlets to suit equipment arrangement.
 - 2. Provision of telephone outlet boxes and conduit turned out above ceiling for use by owner's telephone contractor.

1.03 OCCUPANCY OF THE BUILDING DURING CONSTRUCTION

- A. The Contractor shall schedule and organize his work in such a manner and use such methods that will interfere as little as possible with other work in progress on the site and with the operation of adjacent buildings.
- B. The Building will be occupied during the course of construction. The Contractor shall schedule his work in a manner to minimize disruption of use of existing facilities by his construction activities.

1.04 CONTRACTOR'S USE OF PREMISES

- A. Before construction is started the Contractor shall confer with the Architect and the Owner and arrange for available trucking and storage space for the delivery of materials, storage space for materials and equipment, and parking space for his workmen.
- B. Construction operations and storage of materials and equipment shall be restricted to areas of the site mutually agreed upon and in such a manner as not to block access of fire fighting equipment to the building and facilities.

- C. Construction vehicular traffic and the operation of construction equipment such as cranes, bulldozers, and other similar equipment shall be carefully supervised and controlled to avoid damage to existing structures and facilities which are to remain in place.

1.05 VERIFICATION OF DIMENSIONS

- A. Dimensions, elevations, and locations shown on the drawings in reference to existing structures and utilities are the best available data obtainable but are not guaranteed by the Architect or the Owner and the Architect and the Owner will not be responsible for their accuracy.
- B. Before proceeding with any work dependent upon the data involved, the Contractor shall field check and verify all dimensions, grades, line levels, or other conditions of limitations at the site and building to avoid construction errors. If any work is performed by the Contractor or by his Subcontractors prior to adequate verification of applicable data, any resultant extra cost for adjustment of work to conform to existing limitations shall be borne by the Contractor without reimbursement or compensation by the Owner.

1.06 CONTROL POINTS AND LAYOUT

- A. The initial lines, grades, and dimensions necessary for the location and control of the work under the Contract are shown on the Contract Drawings.
- B. The Contractor shall provide for himself all additional and supplementary lines and grades as may be necessary to layout the work and ensure proper control of the work until completed. It shall be the Contractor's responsibility to satisfy himself as to the accuracy of all measurements before construction.

1.07 SUBSTANTIAL COMPLETION OF THE WORK

- A. Upon substantial completion of any phase of the work, the Owner shall assume complete responsibility for the maintenance and operation of the heating, ventilating and air conditioning system and service utilities in that portion of the project.
- B. The Owner shall also become responsible for all other maintenance and damage and ordinary wear and tear and, with the exception of items under guarantee, the cost of repairs or restoration during the period between substantial and final completion.
- C. The Owner shall have the responsibility to have in effect all necessary insurance for protection against any losses not directly attributable to the Contractor's negligence.
- D. Upon substantial completion, payments for work in the substantially complete portion of the work shall be released to the Contractor, except for the retainage and an amount to cover the cost of the incomplete or deficient items included in the punch list made at the inspection to determine substantial completion. This amount shall be approximately the value of the punch list items as estimated by the Architect.
- E. The Contractor shall arrange a schedule so that punch list items are completed in the designated time by working during regular working hours. The Contractor shall be afforded access to the occupied portion of the building to perform this work during regular working hours.

1.08 ENVIRONMENTAL HAZARDOUS PRODUCTS, MATERIALS, WASTE

- A. Do not incorporate in the Work hazardous materials or products as currently defined in the Resource Conservation and Recovery Act of 1976 (RCRA), the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), or Environmental Protection Agency (EPA) regulations, rules, or requirements, as amended, unless the Contract Documents give no other option than to provide a material or product which contains a hazardous material, component, constituent, waste, or leachate. In studying the Contract Documents and carrying out the Work, report at once to the Designer the

discovery of a product or material which contains hazardous materials, components, constituents, waste, or leachate.

- B. Do not incorporate in the Work a product or material which contains concentrations of a constituent, component, or material above the threshold levels which would require adherence to hazardous waste disposal regulations as currently defined or could cause a release or threat of release of a hazardous substance at a level that would require a remedial response or removal action as currently defined by RCRA, CERCLA, or the EPA.
- C. Select materials and products meeting specified requirements which comply with EPA requirements as regards hazardous materials content. In making requests for substitutions, determine that materials and products proposed for substitution comply with RCRA, CERCLA, and EPA requirements.

1.09 BUILDING PRODUCTS USE

- A. It is the responsibility of the Contractor to inform himself concerning the application of the products he uses to follow the directions of the Architect and manufacturer.
- B. In the event of disagreement between the Contract Documents and the manufacturer's directions, the Contractor will obtain written instructions from the Architect before proceeding with the installation.
- C. If the Contractor has knowledge of or reason to believe the likelihood of failure, he will transmit such knowledge to the Architect, and ask for written instructions before proceeding with the work.

1.10 OWNERSHIP OF REMOVED MATERIALS AND EQUIPMENT

- A. All removed existing materials and equipment designated to be removed which are not to remain the property of the Owner or are not noted to be reused in the new work shall become the property of the Contractor and shall be removed from the premises and site and disposed of by him.

1.11 SEPARATE CONTRACTS

- A. The Owner may award separate contracts in connection with the project. The work in any such separate contracts may proceed simultaneously with the execution of this Contract. The Contractor shall coordinate operations with any separate contractors. The Contractor will be required in the arrangement for the storage of materials and in the detailed execution of the work. The Contractor, including his subcontractors, shall keep himself informed of the progress and the detailed work of separate contractors and shall notify the Architect immediately of the lack of progress or defective workmanship that will interfere with his own operations. Failure of the Contractor to keep informed of the work progressing on the site and failure to give notice of lack of progress or defective workmanship by separate contractors shall be construed as acceptance of him of the state of the work as being satisfactory for proper coordination with his own work.
- B. The separate contractors will provide competent foremen or supervisors for the installation of their equipment, and they are to confer with the Contractor and his subs and other separate contractors where required regarding connections and installations.

1.12 DISCRETIONARY FUND

- A. The General Contractor shall include in the base bid an amount equal to **\$100,000** included in the Base Bid which shall constitute a discretionary fund. This fund shall be used at the discretion of the Architect and the Owner. Upon completion of the work, the Contractor shall credit his final request for payment in the amount of all or any unused portion of this fund.

MBI #210042.04
ANDERSON COUNTY BID #2218

SECTION 01 10 00
SUMMARY

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

PART 1 - GENERAL

1.01 SCOPE:

A. Owner will accomplish Work of this section, included here for reference; and will coordinate this Work with the Contractor's schedule.

A.B. Furnish all labor, materials, equipment and supervision to provide and install polished concrete in areas indicated on the drawings.

1.02 REFERENCES:

A. American Concrete Institute (ACI):

1. ACI 302.1R Guide for Concrete Floor and Slab Construction

B. ASTM International:

1. ASTM C309 Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.
2. ASTM C171 Standard Specification for Sheet Materials for Curing Concrete.
3. ASTM C779 Standard Test Method for Abrasion Resistance of Horizontal Concrete Surfaces.

C. Reunion Internationale des Laboratoires D'Essais et de Recherches sur les Materiaux et les Constructions (RILEM):

1. Rilem Test Method 11.4 Standard Measurement of Reduction of Moisture Penetration Through Horizontal Concrete

D. National Floor Safety Institute (NFSI):

1. NFSI Test Method 101-A Standard for Evaluating High-Traction Flooring Materials, Coatings, and Finishes.

1.03 PERFORMANCE REQUIREMENTS:

A. Provide polished flooring that has been selected, manufactured and installed to achieve the following:

1. Abrasion Resistance: ASTM C779, Method A, high resistance, no more than 0.008 inch wear in 30 minutes.
2. Reflectivity: Increase of 35% as determined by standard gloss meter.
3. Waterproof Properties: Rilem Test Method 11.4, 70% or greater reduction in absorption.
4. High Traction Rating: NFSI 101-A, non-slip properties.

B. Design Requirements:

1. Hardened Concrete Properties:
 - a. Minimum Concrete Compressive Strength: 3500 psi (24 MPa).
 - b. Normal Weight Concrete: No lightweight aggregate.
 - c. Non-air entrained.
2. Placement Properties:
 - a. Natural concrete slump of 4 1/2 inches - 5 inches. Admixtures may be used.
 - b. Flatness Requirements:
 - i. Overall FF 40.
 - ii. Local FF 20.
3. Hard-Steel Troweled (3 passes) Concrete: No burn marks. Finish to ACI 302.1R, Class 5 floor.

1.04 ACTION SUBMITTALS:

- A. General: Submit listed action submittals in accordance with Division 01.
- B. Shop Drawings: Indicate information on shop drawings as follows:
 - 1. Typical layout including dimensions and floor grinding schedule.
 - 2. Plan view of floor and joint pattern layout.
 - 3. Areas to receive colored surface treatment.
 - 4. Hardener, sealer, densifier in notes.
- C. Product Data: Submit product data, including manufacturer's SPEC-DATA® product sheet, for specified products.
 - 1. Material Safety Data Sheets (MSDS).
 - 2. Preparation and concrete grinding procedures.
 - 3. Colored Concrete Surface, Dye Selection Guides.

1.05 INFORMATIONAL SUBMITTALS:

- A. Quality Assurance:
 - 1. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties as cited in 1.03 Performance Requirements.
 - 2. Certificates:
 - a. Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
 - b. Letter of certification from the National Floor Safety Institute confirming the system has been tested and passed phase Two Level of certification when tested by Method 101-A.
 - c. Current contractor's certificate signed by manufacturer declaring contractor as an approved installer of polishing system.
 - 3. Manufacturer's Instructions: Manufacturer's installation instructions.

1.06 CLOSEOUT SUBMITTALS:

- A. Warranty: Submit warranty documents specified.
- B. Operation and Maintenance Data: Submit operation and maintenance data for installed products.
 - 1. Include:
 - a. Manufacturer's instructions on maintenance renewal of applied treatments.
 - b. Protocols and product specifications for joint filing, crack repair and/or surface repair.

1.07 QUALITY ASSURANCE:

- A. Qualifications:
 - 1. Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.
 - 2. Installer trained and holding current certification for installation by manufacturer.
 - 3. Manufacturer Qualifications: Manufacturer capable of providing field service representation during construction and approving application method.
- B. Regulatory Requirements.
 - 1. NFSI Test Method 101-A Phase Two Level High Traction Material.
 - 2. Applicable Building Codes

C. Mock-Ups:

1. Mock-Up Size: 100 s.f. sample panel at jobsite at location as directed under conditions similar to those which will exist during actual placement.
2. Mock-up will be used to judge workmanship, concrete substrate preparation, operation of equipment, material application, color selection and shine.
3. Allow adequate time for inspection of mock-up before proceeding with work.
4. When accepted, mock-up will demonstrate minimum standard of quality required for this work. Approved mock-up may remain as part of finished work.

1.08 PRE-INSTALLATION MEETING:

- A. Pre-installation meeting: To be attended by the Architect, General Contractor, Concrete Sub-Contractor, and Polished Concrete Sub-Contractor.
- B. Issue a proposed agenda to all parties requested to attend not less than 5 working days prior to the meeting. Include:
 1. Environmental requirements
 2. Scheduling and phasing of work
 3. Coordinating with other work and personnel
 4. Protection of adjacent surfaces.
 5. Surface preparation
 6. Repair of defects and defective work prior to installation
 7. Cleaning
 8. Installation of polished floor finishes.
 9. Application of liquid hardener, densifier.
 10. Protection of finished surfaces after installation.
- C. Convene a minimum of two weeks before starting work of this section.

1.09 WARRANTY:

- A. Time Period: Warrant that the Polished Concrete Floor will maintain its luster and overall appearance with reasonable cleaning for (36) months from date of Final Acceptance.
- B. Repairs:
 1. Repair unsatisfactory conditions promptly at no additional cost to the Owner.
 2. Emergency repairs may be made by the Owner without relieving the Contractor of his warranty obligations.
 3. Delays of more than 30 days for repair work will allow the Owner to proceed with such repairs at the Contractor's expense.

PART 2 PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Ensure manufacturer has minimum 5 years experience in manufacturing components similar to or exceeding requirements of project.

2.02 PRODUCTS/SYSTEM

- A. Manufacturer: L & M Construction Chemicals, Inc., 14851 Calhoun Rd., Omaha, NE 68152-1140; Telephone: (800) 362-3331, (402) 453-6600; Fax: (402) 453-0244; website: www.LMCC.com or alternate manufacturer approved by Architect prior to bidding:

B. Products/Systems:

1. Hardener, Sealer, Densifier: Proprietary, water based, odorless liquid, VOC compliant, environmentally safe chemical hardening solution leaving no surface film.
 - a. Basis of Design: L & M Construction Chemicals, Inc., FGS Hardener Plus.
2. Joint Filler: Semi-rigid, 2-component, self-leveling, 100% solids, rapid curing, polyurea control joint and crack filler with Shore A 80 or higher hardness.
 - a. Basis of Design: L & M Construction Chemicals, Inc., Joint Tite 750.
3. Oil Repellent Sealer: Ready to use, silane, siloxane and fluoropolymers blended water-based solution sealer, quick drying, low-odor, oil and water repellent, VOC-compliant and compatible with chemically hardened floors.
 - a. Basis of Design: L & M Construction Chemicals, Inc., Petrotex.
4. Concrete Dyes: Fast-drying dye, packaged in premeasured units ready for mixing with VOC exempt solvent; formulated for application to polished cementitious surfaces.
 - a. Basis of Design: L & M Construction Chemicals, Inc., Vivid Concrete Dyes.
 - b. Color: As selected by Architect.
5. Cleaning Solution: Mild liquid concrete cleaner and conditioner containing wetting and emulsifying agents; biodegradable, environmentally safe and certified High Traction by National Floor Safety Institute (NFSI).
 - a. Basis of Design: L & M Construction Chemicals, Inc., FGS Concrete Conditioner.
6. Finish: Standard Medium gloss (MG-2), 800 grit.

2.03 SOURCE QUALITY CONTROL

- A. Ensure concrete finishing components and materials are from single manufacturer.

3 PART III - EXECUTION

3.01 MANUFACTURERS INSTRUCTIONS

- A. Compliance: Comply with manufacturer's written data, including product technical bulletins, product catalog installation instructions, product carton installation instructions.
- B. Use installers certified by the manufacturer.

3.02 EXAMINATION

- A. Site Verification of Conditions:
 1. Verify that concrete substrate conditions, which have been previously installed under other sections or contracts, are acceptable for product installation in accordance with manufacturer's instructions prior to installation of concrete finishing materials.
- B. Verify Concrete Slab Performance Requirements.
 1. Verify concrete is cured to 3500 psi strength.
 2. Verify concrete surfaces received a hard steel-trowel finish (3 passes) during placement.

3.03 PREPARATION

- A. Ensure that manufacturer's requirements for environmental conditions have been satisfied prior to installation. Verify that concrete has cured under appropriate conditions for the required amount of time and that slab has been exposed to climate-controlled conditions for the required length of time prior to installation.
- B. Ensure surfaces are clean and free of dirt and other foreign matter harmful to performance of concrete finishing materials.

- C. Examine surface to determine soundness of concrete for polishing.
- D. General Contractor to remove surface contamination.

3.04 INSTALLATION

A. Floor Surface Polishing and Treatment:

1. Provide polished concrete floor treatment in entirety of slab indicated by drawings. Provide consistent finish in all contiguous areas.
2. Apply floor finish prior to installation of fixtures and accessories.
3. Diamond polish concrete floor surfaces with power disc machine recommended by floor finish manufacturer. Sequence with coarse to fine grit using dry method.
 - a. Comply with manufacturer's recommended polishing grits for each sequence to achieve desired finish level. Level of sheen shall match that of approved mock-up.
 - b. Expose aggregate in concrete surface only as determined by approved mock-up.
 - c. All concrete surfaces shall be as uniform in appearance as possible.
4. Dyed and Polished Concrete:
 - a. Locate demarcation line between dyed surfaces and other finishes.
 - b. Polish concrete to final finish level.
 - c. Apply diluted dyes to polished concrete surface.
 - d. Allow dye to dry.
 - e. Remove residue with dry buffer; reapply as necessary for desired result.
5. Apply FGS Hardener Plus, Hardener, Densifier as Follows:
 - a. First coat at 250 ft²/gal (6.25 m²/L).
 - b. Second coat at 350 ft²/gal (8.75 m²/L).
 - c. Follow manufacturer's recommendations for drying time between successive coats.
6. Remove defects and re-polish defective areas.
7. Finish edges of floor finish adjoining other materials in a clean and sharp manner.

3.05 ADJUSTMENTS

- A. Polish to higher gloss those areas not meeting specified gloss levels per mock-up.
- B. Fill joints flush to surface.

3.06 OWNER ORIENTATION

- A. Upon completion and acceptance, the Polished Concrete Contractor shall instruct the Owner's maintenance personnel in the operation, maintenance of the polished concrete floor system. Furnish copies of all user guides, available parts lists, specifications and information on trouble shooting.

3.07 CLEANUP

- A. Keep all areas of work clean, neat and orderly at all times.
- B. Clean up and remove all excess materials and debris from the entire work area prior to Final Acceptance.
- C. Sweep or vacuum floor thoroughly.
 1. Do not wash stained concrete until after time period recommended by manufacturer.
 2. Damp-mop floor to remove marks and soil.

3.08 PROTECTION

- A. Protect installed product from damage during construction.

- B. Protect with EZ Cover™ by McTech Corp., (866) 913-8363, www.ezform.net, or comparable product approved by Architect.

END OF SECTION

PART I GENERAL

1.01 SCOPE:

- A Furnish all labor, materials and equipment, and perform all work to install glass in doors, in windows in exterior walls, and in fixed-glass hollow metal view windows on the interior.

1.02 RELATED DOCUMENTS:

- A Applicable provisions of the General Conditions, Supplementary Conditions and Division 1, General Requirements, apply to the work under this section.

- 1. Section 07 92 00 – Joint Sealants.

1.03 QUALITY OF GLASS:

- A Glass shall meet or exceed the requirements of Federal Specifications DD-G-451C and each piece of glass shall bear factory applied label. Tempered glass shall meet the requirements of Federal Specification DD-G-1403B. Glass shall be equal to that manufactured by Vitro Architectural Glass; Libby-Owens-Ford Company; or ASG Industries.

- B Provide insulating glass units permanently marked either on spacers or at least one component lite of units with appropriate certification label of the Insulating Glass Certification Council.

1.04 SUBMITTALS:

- A Product Data: For each glass product and glazing material indicated.

- B Samples: For the following product, in the form of 12-inch- (300-mm-) square Samples for glass.

- 1. Insulating glass for each designation indicated.

- C Glazing Schedule: Use same designations indicated on Drawings for glazed openings in preparing a schedule listing glass types and thicknesses for each size opening and location.

- D For solar-control low-e-coated glass, provide documentation demonstrating that manufacturer of coated glass is certified by coating manufacturer.

- E Qualification Data: For installers.

1.05 WARRANTY:

- A Submit written warranty signed by manufacturer of insulating glass agreeing to furnish replacements for insulating glass units that suffer failure of seal (as indicated by dust accumulation on inner surfaces, fogging, or accumulation of vision obstructing film on inner surfaces) during normal usage due to causes other than breakage, improper maintenance, or improper cleaning. Replacements shall be furnished F.O.B. point of manufacturer, freight allowed Project site, within the specified warranty period indicated below

- 1. Insulated Glass: Manufacturer's standard, ten year minimum period.
- 2. Float Glass: Manufacturer's standard, five year minimum period.

PART II PRODUCTS

2.01 TYPES OF GLASS:

- A Glass for use in exterior entrance doors and elsewhere as required by Federal and State Safety Glazing Laws shall be tempered safety glass conforming to requirements of Federal Safety Standard 16CFR1201.

- B. Insulated glass in exterior windows shall be Twindow 1" thick insulated glass with 1/2" air space and two 1/4" Lites, interior lite clear, exterior lite clear, as manufactured by Vitro Architectural Glass and shall meet the certification requirements of I.G.C.C. for a Class CBA rating. Glass shall meet the quality criteria of Federal Specification DD-G-451D. Coatings shall be applied under controlled factory conditions of the manufacturer.
1. Low-E Coating or Film: Pyrolytic or sputtered on second or third surface.
 2. Low-E Insulating glass units shall have a Maximum U value of 0.29, a Maximum Shading Coefficient of 0.37 and a Maximum Solar Heat Gain Coefficient of 0.29

~~C. Interior glass shall be 1/4" thick clear uncoated, fully tempered float glass Type I (transparent glass, flat), Class 1 (clear) conforming to requirements of Federal Safety Standard 16CFR1201.~~

~~C. Type M-1, Transparent One-Way Mirror: Mirror quality float glass with pyrolytic (hard coat) type coating located on high light level surface of glass; ASTM C1376.~~

~~1. Thickness: 1/4 inch.~~

~~2. Glass Tint: Grey.~~

~~3. Glass Type: Fully tempered.~~

~~4. Lighting Ratio: Maintain at least 8:1 lighting level ratio between coated side (bright-observed side) and uncoated side (dim-observer side).~~

2.02 GLASS SIZES:

- A Obtain glass sizes at the building or from manufacturer of frames and sashes into which glass is to be set. Responsibility for correct glass size rests with the Contractor.

2.03 GLAZING MATERIAL:

- A Unless factory glazing is provided, elastic glazing compound shall be Pecora Chemical Company Channel Glazing Compound M-251, or equal products of Tremco or DAP. Butyl tape shall be Tremco Polyshim Tape.

2.04 GLAZING ACCESSORIES:

- A Grills (False Muntins) Provide aluminum grills (muntin bars) as manufactured by Allmetal Inc. of 8 mm x 18 mm contour cross section similar to those in configuration shown on the drawings. Grills shall have baked-on organic coating in color to match aluminum clad wood windows for application as grills between the glass.
- B. Unless factory glazing is provided, elastic glazing compound shall be Pecora Chemical Company Channel Glazing Compound M-251, or equal products of Tremco or DAP. Butyl tape shall be Tremco Polyshim Tape.

3PART III EXECUTION

3.01 GLAZING:

- A Bottom of glass shall be set on wood or plastic setting blocks and similar spacers shall be used at vertical edges of glass to maintain proper clearance from metal and wood frames.
- B In hollow metal glass window frames and doors, bed glass in elastic glazing compound to prevent rattling and carefully install removable metal glazing beads. On exterior doors and windows, back-putty glazing bead to insure watertightness.
- C Glazing shall not be done when temperature is below 40° F. Sash and frames shall be dry and free from dust when glazed. Remove all excess glazing compound and stains from sash, frames and glass immediately after glazing.

D Glazing procedures shall conform to recommendations outlined in the Glazing Manual of the Flat Glass Marketing Association. Basic points of good practice shall include: clean cut edges, no nipping or seamed edges, edge openings in a true plane, and resilient setting blocks at quarter points.

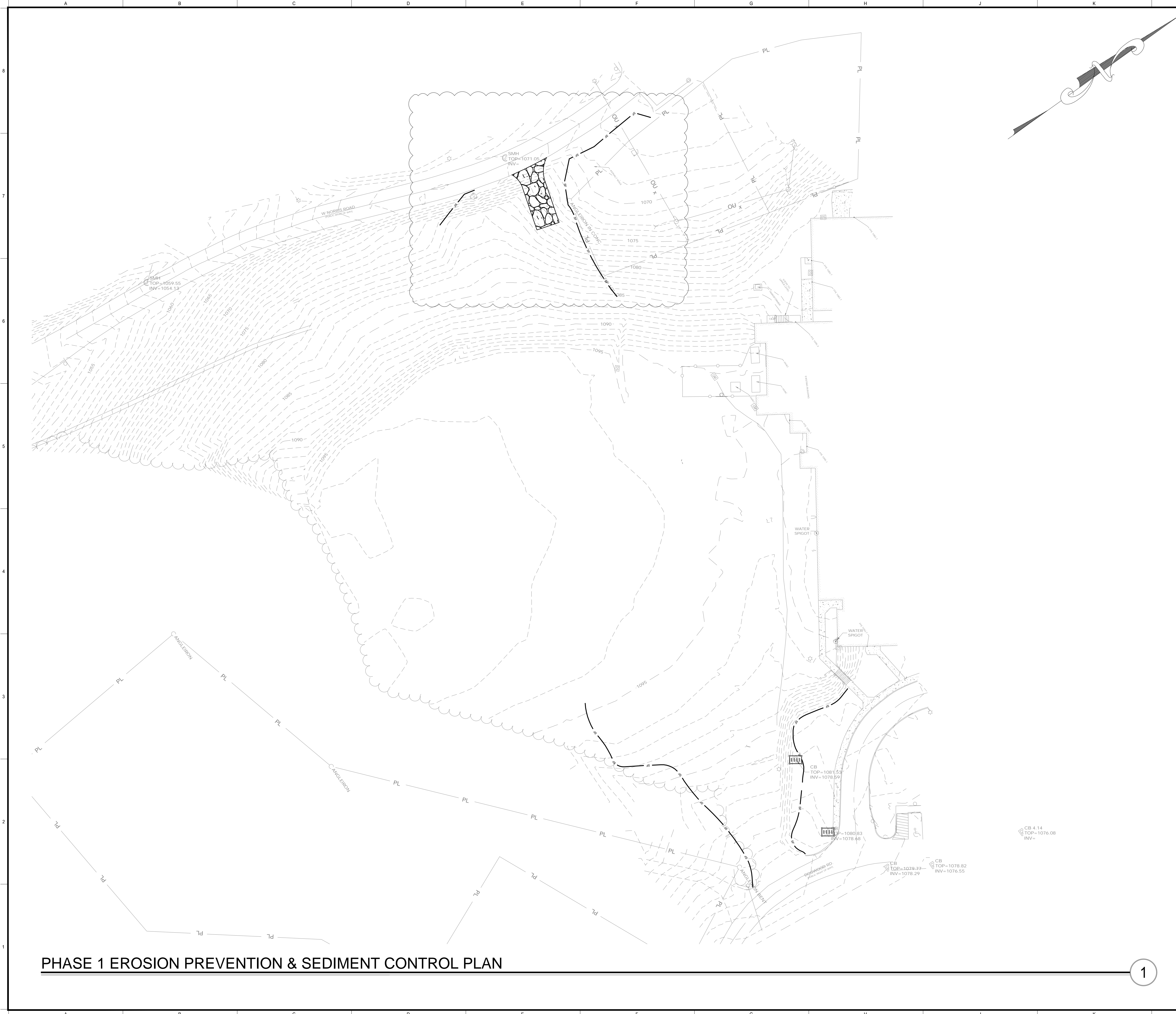
3.02 GLASS BREAKAGE:

A Replace all breakage caused in executing the work or by faulty installation. Improperly set glass or glass which does not fully meet the requirements for its grade will not be accepted. At completion of work, glass shall be whole and free from cracks, scratches, and rattles.

3.03 CLEANING:

A Just before final inspection of the building, clean and wash glass and remove all labels.

END OF SECTION



GENERAL SHEET NOTES

1. SEE SHEET C001 FOR CIVIL NOTES AND LEGENDS

EROSION CONTROL LEGEND

- SF SILT FENCE; SEE DETAIL 3/C800
- CONSTRUCTION EXIT; SEE DETAIL 1/C800
- INLET PROTECTION; SEE DETAIL 4/C800

PHASE 1 EROSION PREVENTION & SEDIMENT CONTROL PLAN

1

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GRAPHIC SCALE
40 0 20 40 80 120
1 INCH = 40'

MBI

ENGINEER:

MBI COMPANIES INC.
299 N. WEISGARBER ROAD
KNOXVILLE, TN 37919

PHONE: (865) 584-0999
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PROJECT INFORMATION

PROJECT:

**AN ADDITION & RENOVATION TO:
NORRIS MIDDLE SCHOOL**

PROJECT ADDRESS:

5 NORRIS SQUARE
NORRIS, TN 37858

PROJECT NO.: 21004-04

ACTIVE DESIGN PHASE

- FOR REVIEW ONLY
- FOR PERMITTING ONLY
- SCHEMATIC DESIGN
- DESIGN DEVELOPMENT
- CONSTRUCTION BIDDING
- CONSTRUCTION DOCUMENTS
- AS-BUILT RECORD SET

REVISION INFORMATION

NO.	DATE	DESCRIPTION
1	02/22/2022	ADDENDUM #1

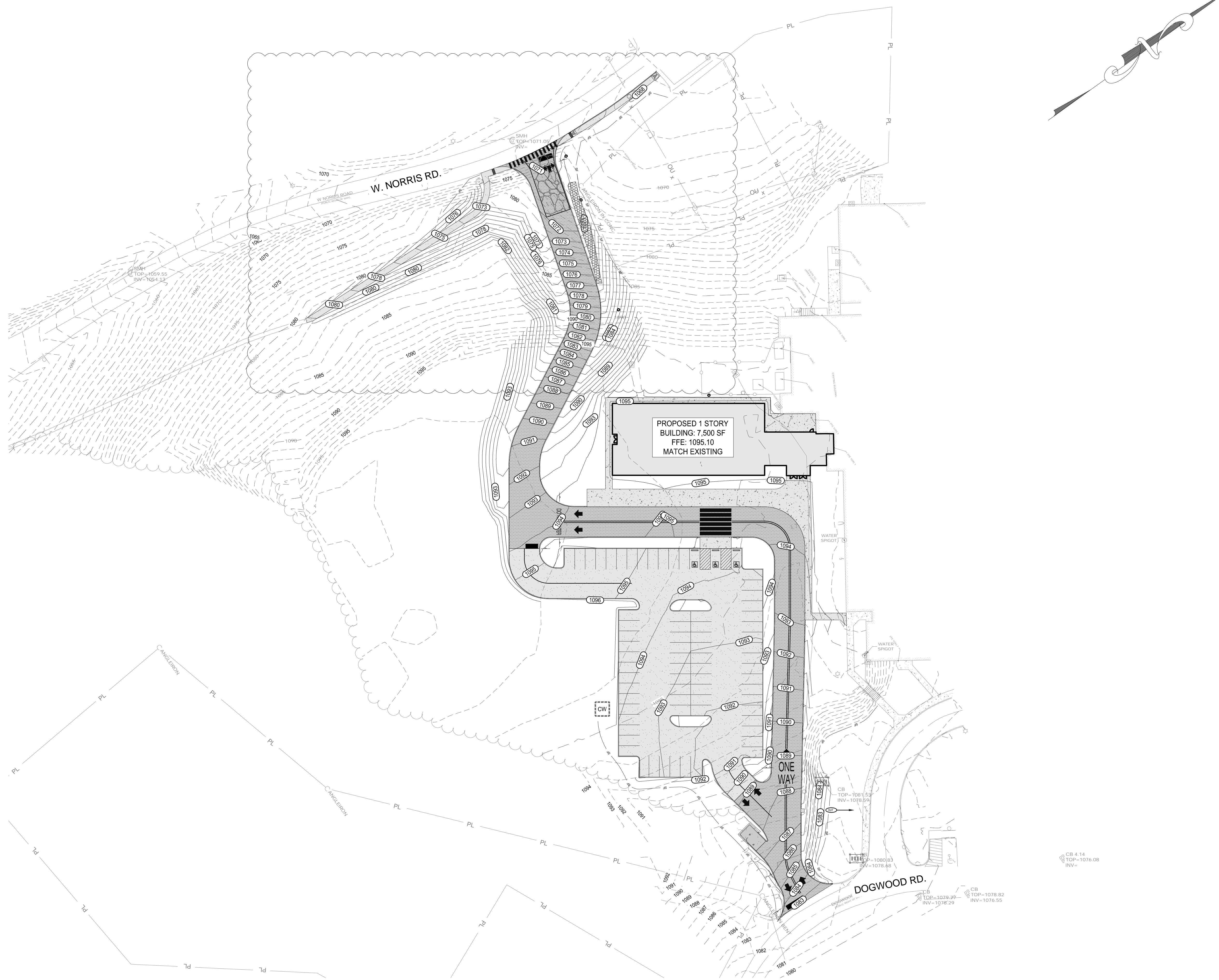
KEY PLAN

SHEET INFORMATION

SHEET ISSUED: 02/04/2022
DESIGNED BY: I.A.J.
DRAWN BY: I.A.J.
REVIEWED BY: C.B.T.
SHEET TITLE:

PHASE 1 EROSION PREVENTION & SEDIMENT CONTROL PLAN

SHEET NO.: **C100**



PHASE 2 EROSION PREVENTION & SEDIMENT CONTROL PLAN

GENERAL SHEET NOTES:

1. SEE SHEET C001 FOR CIVIL NOTES AND LEGENDS

EROSION CONTROL LEGEND

- SF SILT FENCE; SEE DETAIL 3/C800
- CONSTRUCTION ENTRANCE; SEE DETAIL 1/C800
- INLET PROTECTION; SEE DETAIL 4/C800
- OUTFALL
- CW CONCRETE WASHOUT; SEE DETAIL 5/C800
- PS PERMANENT STABILIZATION; SEE SEED MIXTURE TABLES BELOW
- SLOPE MATTING; SEE DETAIL 2/C800

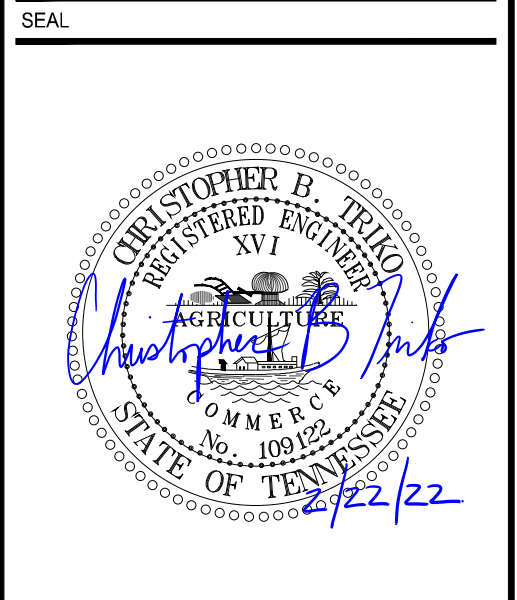
PERMANENT SEED MIXTURES (TDOT)

GROUPS	SEEDING DATES	GRASS SEEDS	PERCENT
A	FEBRUARY 1 TO JULY 1	KENTUCKY 31 FESCUE	80%
		KOREAN LESPEDEZA	15%
		ENGLISH RYE	5%
B	JUNE 1 TO AUGUST 15	KENTUCKY 31 FESCUE	55%
		ENGLISH RYE	20%
		KOREAN LESPEDEZA	15%
		GERMAN MILLET	10%
B1	APRIL 15 TO AUGUST 15	BERMUDAGRASS (HULLED)	70%
		ANNUAL LESPEDEZA	30%
C	AUGUST 1 TO DECEMBER 1	KENTUCKY 31 FESCUE	70%
		ENGLISH RYE	20%
		WHITE CLOVER	10%
C1	FEBRUARY 1 TO DECEMBER 1	KENTUCKY 31 FESCUE	70%
		CROWN VETCH	25%
		ENGLISH RYE	5%



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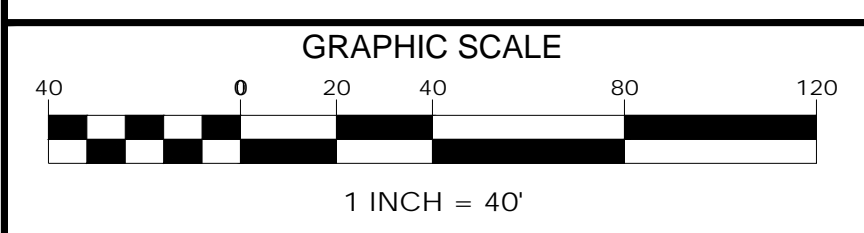
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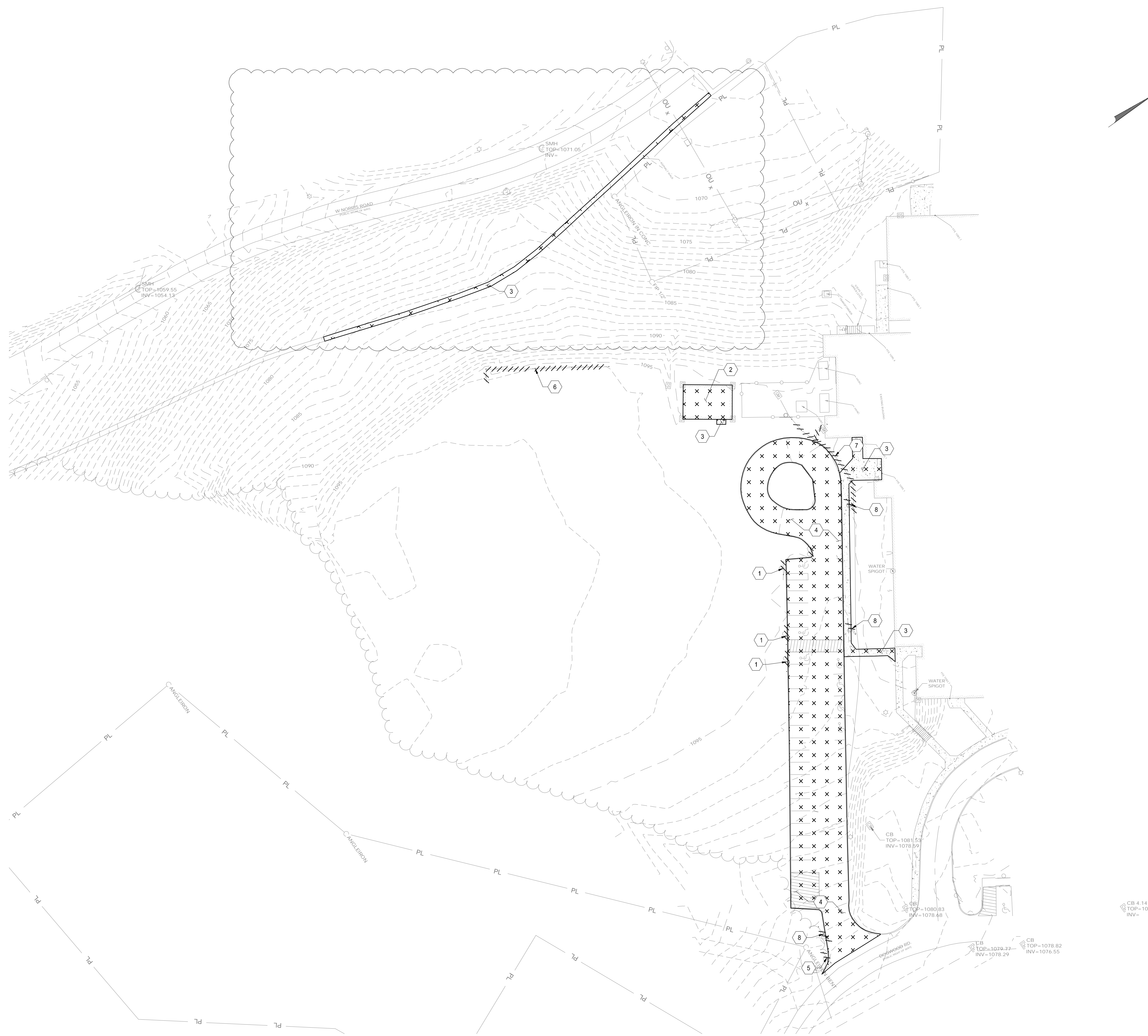
PHASE 2 EROSION PREVENTION & SEDIMENT CONTROL PLAN

SHEET NO.: **C101**



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GENERAL SHEET NOTES:

1. SEE SHEET C001 FOR CIVIL NOTES AND LEGENDS

DEMOLITION LEGEND

- //// //// //// //// TO BE REMOVED
- | | | | | | |
|---|---|---|---|---|---|
| x | x | x | x | x | x |
| x | x | x | x | x | x |

 TO BE DEMOLISHED

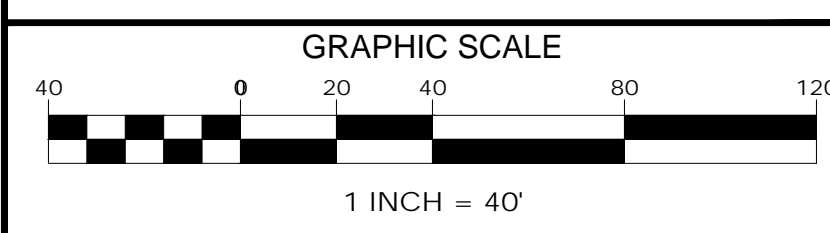
DEMOLITION KEYED NOTES

- 1 REMOVE EXISTING "ADA PARKING SPACE" SIGN
- 2 DEMOLISH EXISTING SHED
- 3 DEMOLISH EXISTING SIDEWALK
- 4 DEMOLISH EXISTING ASPHALT AND CURB
- 5 REMOVE EXISTING "STOP" SIGN
- 6 REMOVE EXISTING FENCE
- 7 REMOVE EXISTING GAS LINE, BY LOCAL UTILITY
- 8 REMOVE EXISTING "NO PARKING" SIGN

SITE DEMO PLAN

1

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NORRIS, TN 37858

PROJECT NO.: 21004-04

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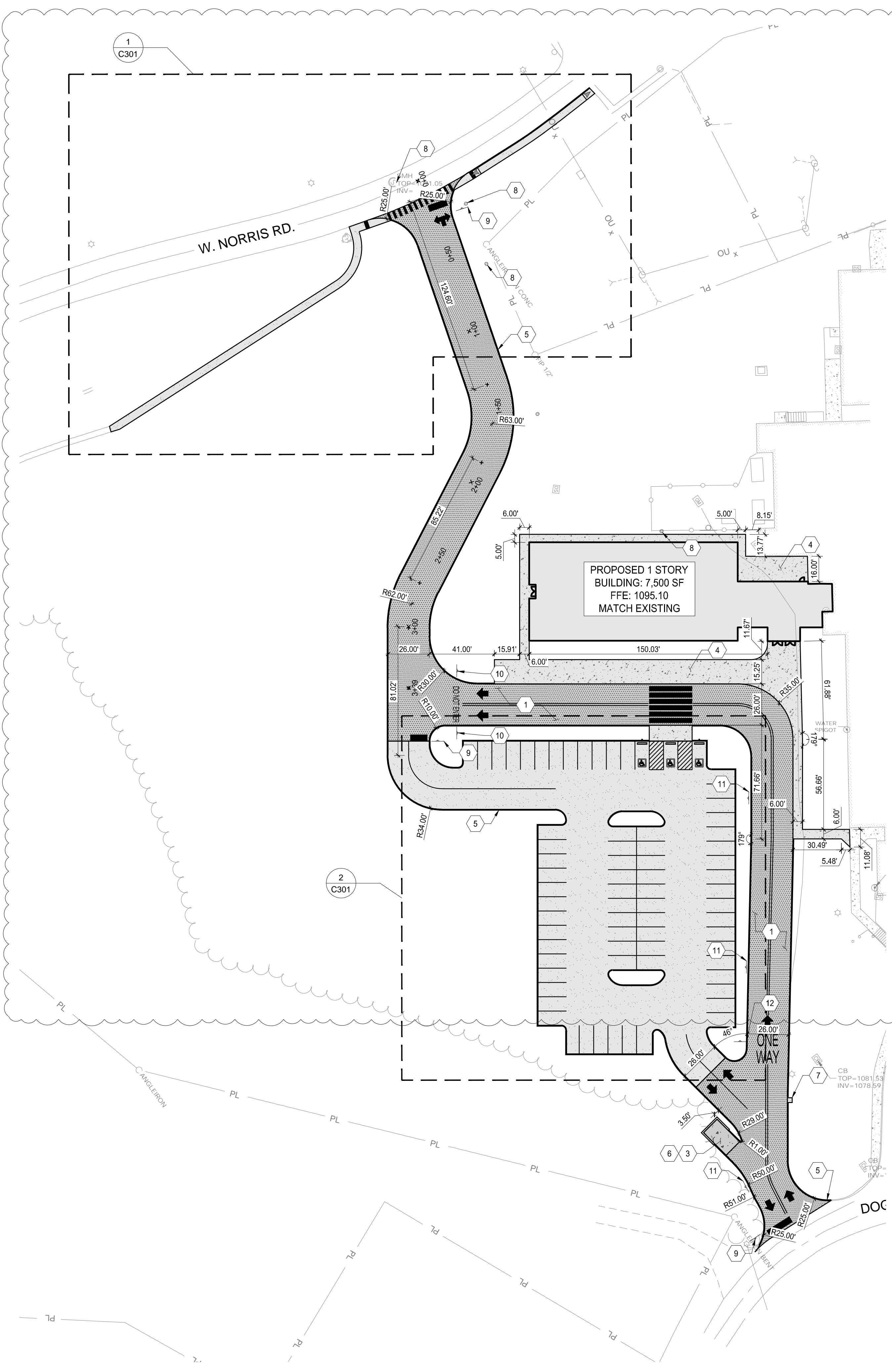
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SHEET ISSUED: 02/04/2022
DESIGNED BY: I.A.J.
DRAWN BY: I.A.J.
REVIEWED BY: C.B.T.
SHEET TITLE:

SITE DEMOLITION PLAN

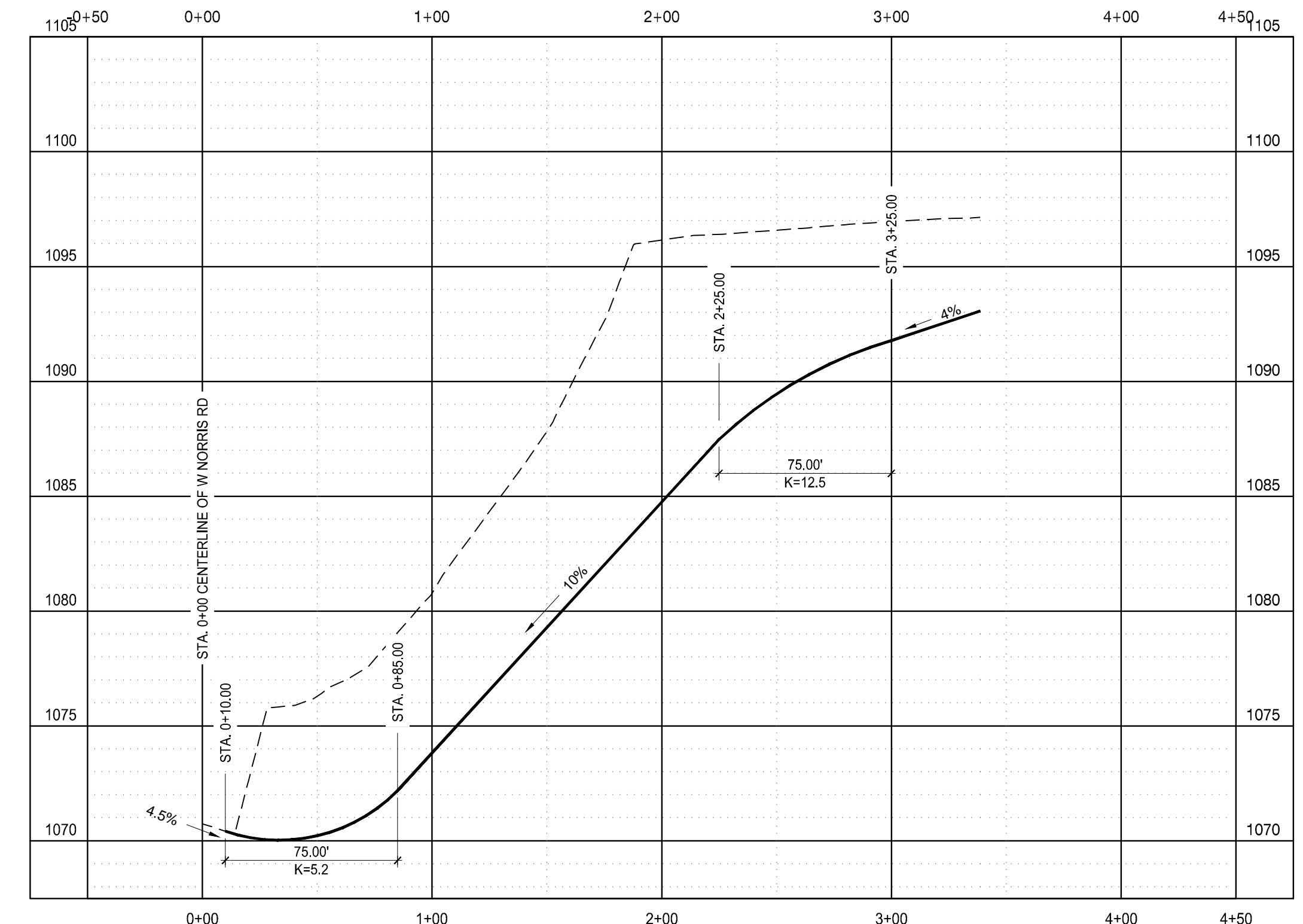
SHEET NO.: **C200**



SITE LAYOUT PLAN

1

CONTRACTOR TO PROVIDE SIGNAGE TO WARN AND PROTECT THE PUBLIC FROM CONSTRUCTION ACTIVITIES



ENTRANCE ROAD PROFILE

SCALE: H: 1" = 50'-0" V: 1" = 5'-0"

2

GENERAL SHEET NOTES:

- SEE SHEET C001 FOR CIVIL NOTES AND LEGENDS
- FOR TYPICAL PARKING SPACE LAYOUT, SEE 1/C802
- ALL RADII NOT LABELED ARE TO BE R3.00'

AREAS & CALCULATIONS

IMPERVIOUS AREA		PROPOSED		TOTAL INCREASE	
EXISTING	Acres	Acres	Acres	Acres	Acres
0.54	23,390	1.63	70,843	1.09	47,453
sqft		sqft		sqft	

DISTURBED AREA		TOTAL SITE AREA		DISTURBED AREA	
EXISTING	Acres	Acres	Acres	Acres	Acres
12.3	535,788	2.48	10,029	2.48	10,029
sqft		sqft		sqft	

PARKING CALCULATION	
PROVIDED	REQUIRED
70	70
REGULAR	REGULAR
ACCESSIBLE	ACCESSIBLE
TOTAL	TOTAL
73	73

SITE LEGEND

- PAINTED DOUBLE STRIP, COLOR TO BE YELLOW
- PAINTED 'ONE WAY' LETTERS, COLOR TO BE WHITE; SEE DETAIL 8/C802
- PAINTED DIRECTIONAL ARROWS, COLOR TO BE WHITE; SEE DETAIL 8/C802
- PAINTED PEDESTRIAN CROSSWALK, COLOR TO BE WHITE; SEE DETAIL 9/C802
- PAINTED STOP BAR, COLOR TO BE WHITE; SEE DETAIL 8/C802
- PAINTED 'DO NOT ENTER' LETTERS, COLOR TO BE WHITE; SEE DETAIL 8/C802

SITE KEYED NOTES

- HEAVY DUTY ASPHALT PAVING; SEE DETAIL 2/C801
- LIGHT DUTY ASPHALT PAVING; SEE DETAIL 2/C801
- CONCRETE PAVING; SEE DETAIL 2/C801
- CONCRETE SIDEWALK; SEE DETAIL 1/C801
- CONCRETE CURB; SEE DETAIL 3/C801
- WASTE ENCLOSURE; SEE ARCHITECTURAL SHEETS FOR DETAILS
- CURB CUT WITH CONCRETE APRON; SEE DETAIL 5/C801
- SANITARY SEWER STRUCTURE; SEE SHEET C600 FOR DETAILS
- POLE MOUNTED 'STOP' SIGN; SEE DETAIL 7/C802
- POLE MOUNTED 'DO NOT ENTER' SIGN; SEE DETAIL 7/C802
- POLE MOUNTED 'NO PARKING' SIGN; SEE DETAIL 7/C802
- POLE MOUNTED 'ONE WAY' SIGN; SEE DETAIL 7/C802

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PROJECT INFORMATION

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PROJECT ADDRESS: 5 NORRIS SQUARE, NORRIS, TN 37858

PROJECT NO.: 21004-04

ACTIVE DESIGN PHASE

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SCHEMATIC DESIGN

DESIGN DEVELOPMENT

CONSTRUCTION BIDDING

CONSTRUCTION DOCUMENTS

AS-BUILT RECORD SET

REVISION INFORMATION

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KEY PLAN

SHEET INFORMATION

SHEET ISSUED: 02/04/2022

DESIGNED BY: I.A.J.

DRAWN BY: I.A.J.

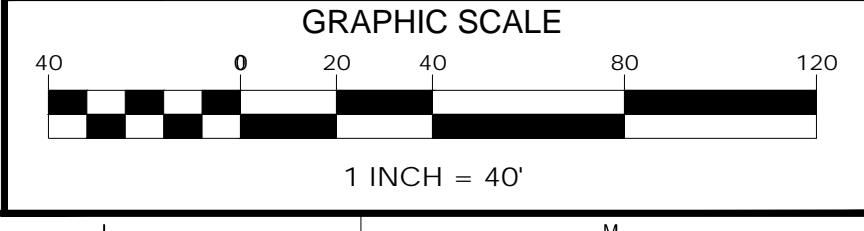
REVIEWED BY: C.B.T.

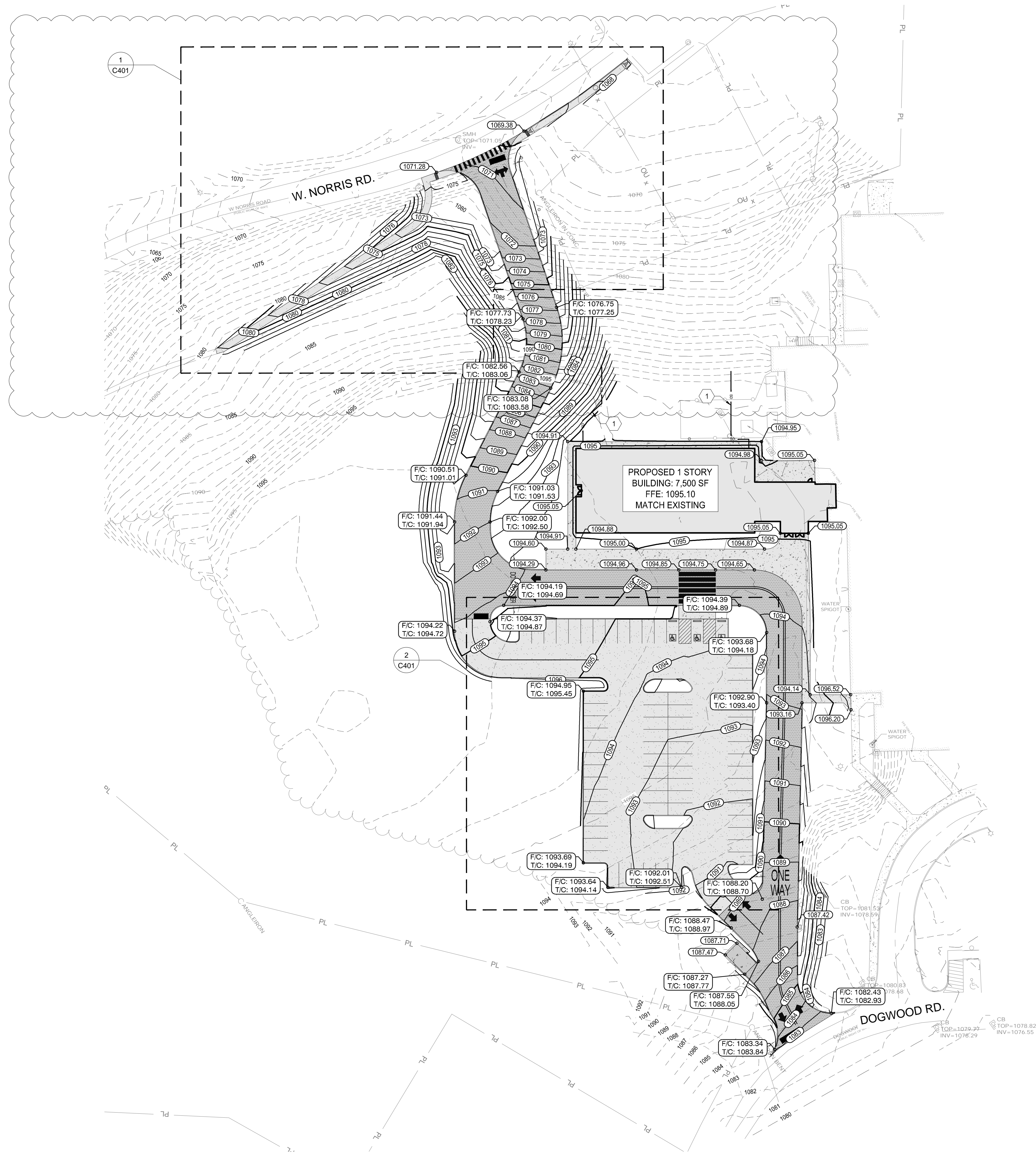
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SITE LAYOUT PLAN

SHEET NO.: **C300**

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SITE GRADING AND DRAINAGE LAYOUT PLAN

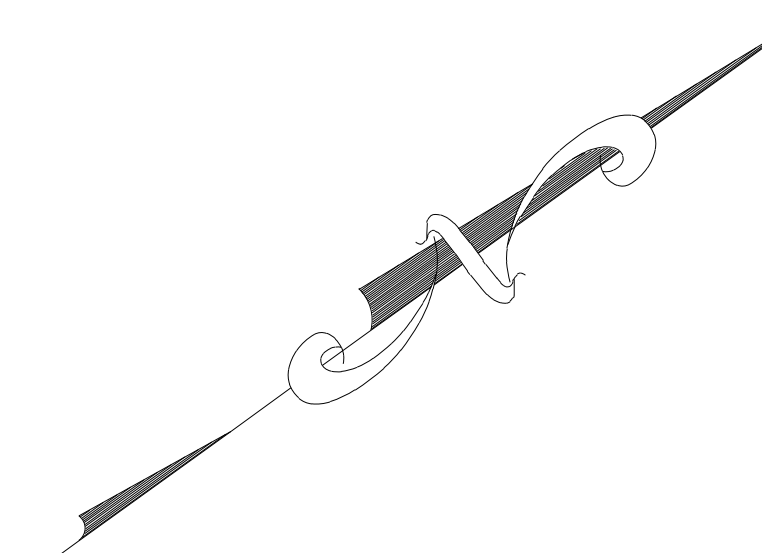
1

GENERAL SHEET NOTES

1. SEE SHEET C001 FOR CIVIL NOTES AND LEGENDS

GRADING KEYED NOTES

1 8" PVC ROOF DRAIN PIPE; MIN. SLOPE 1% UNTIL DAYLIGHT; SEE DETAIL 4/C803

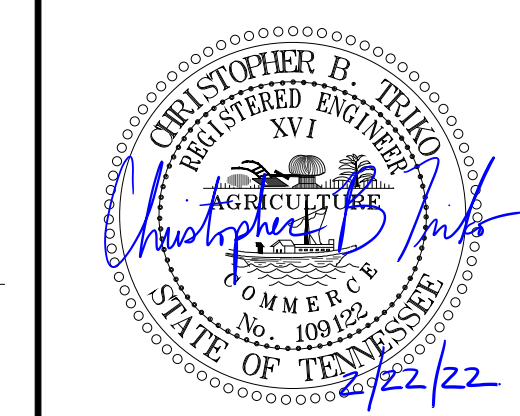


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NORRIS, TN 37858

PROJECT NO.: 21004-04

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KEY PLAN

SHEET INFORMATION

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DESIGNED BY: I.A.J.
DRAWN BY: I.A.J.
REVIEWED BY: C.B.T.
SHEET TITLE:

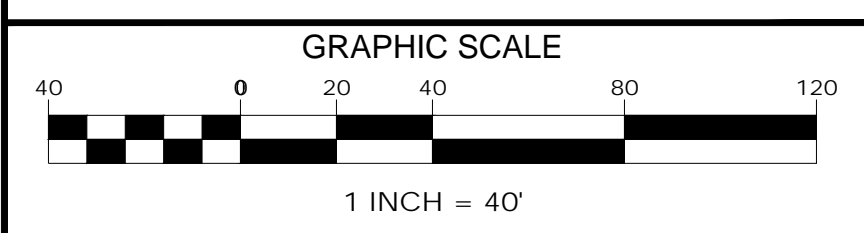
SITE GRADING AND DRAINAGE PLAN

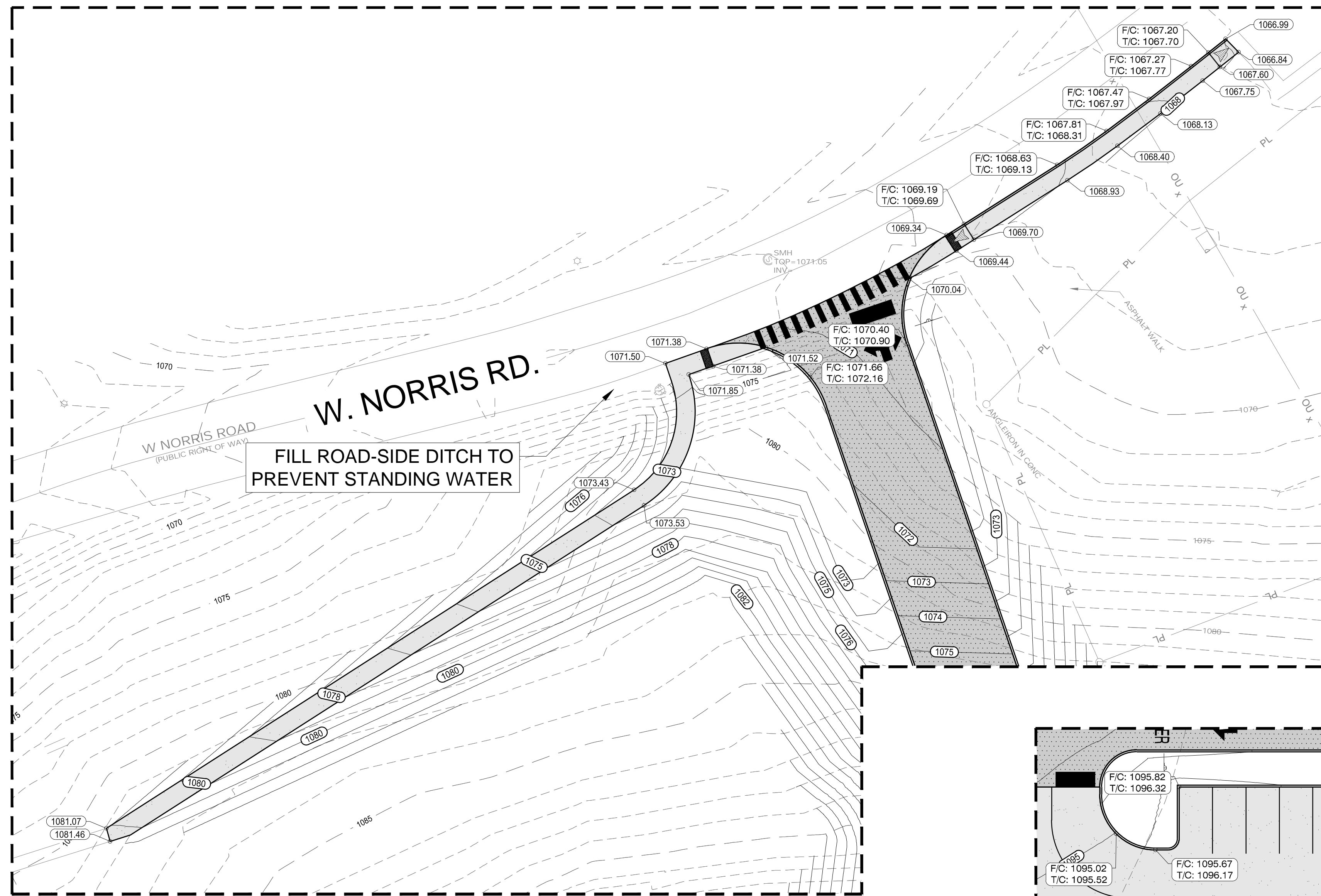
SHEET NO.:

C400



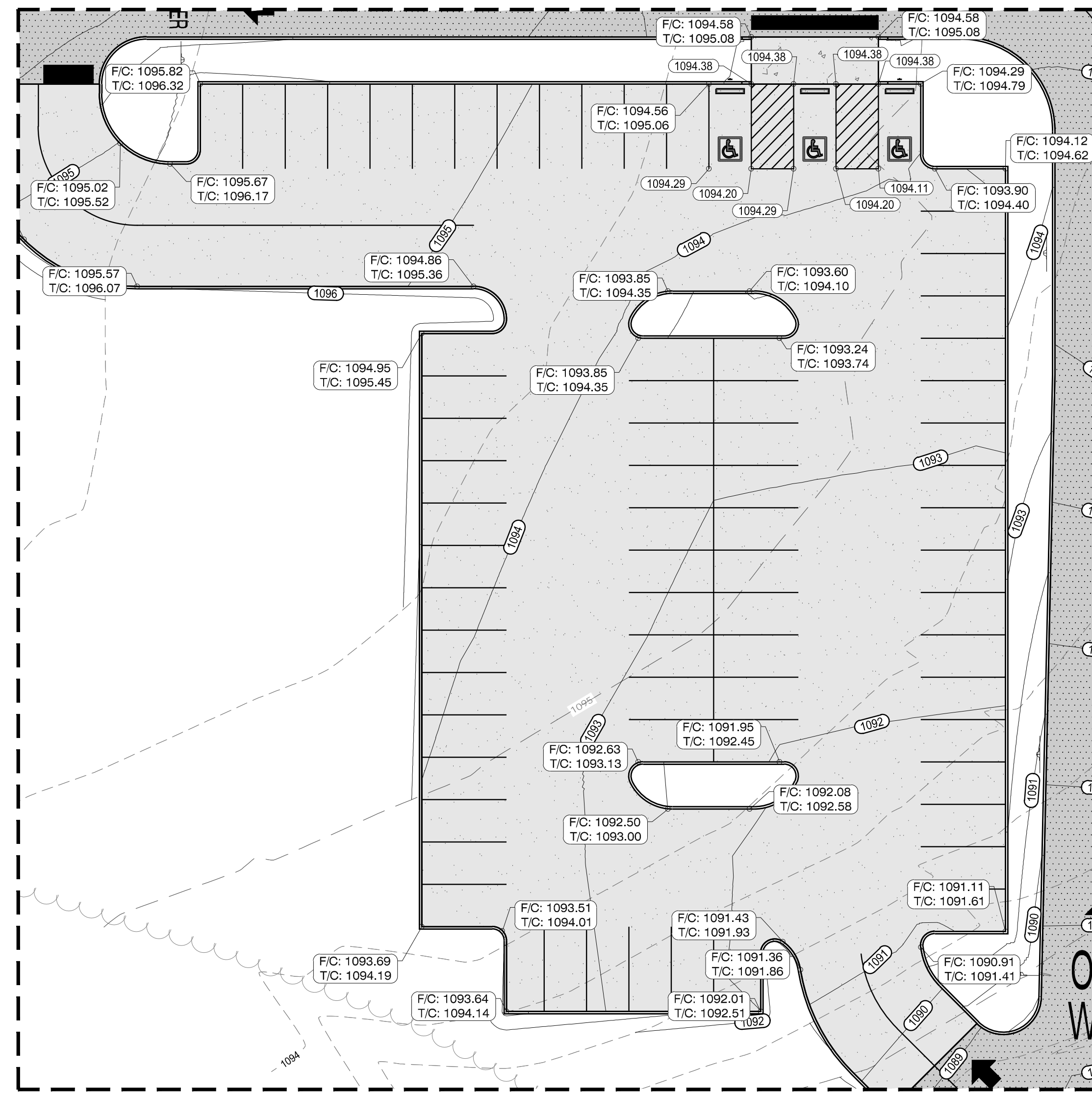
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WALKING PATH GRADING PLAN

1



PARKING LOT GRADING PLAN

2

GENERAL SHEET NOTES:

1. SEE SHEET C001 FOR CIVIL NOTES AND LEGENDS

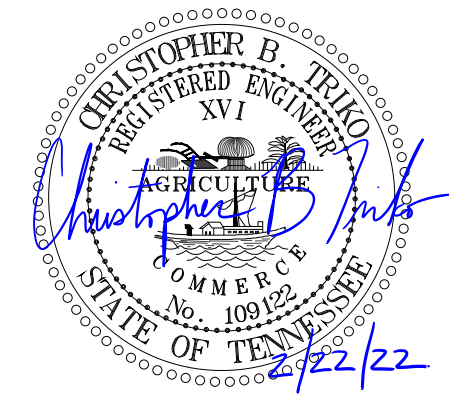


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PROJECT INFORMATION

PROJECT:

AN ADDITION & RENOVATION TO:
NORRIS MIDDLE SCHOOL

PROJECT ADDRESS:

5 NORRIS SQUARE
NORRIS, TN 37858
21004-04

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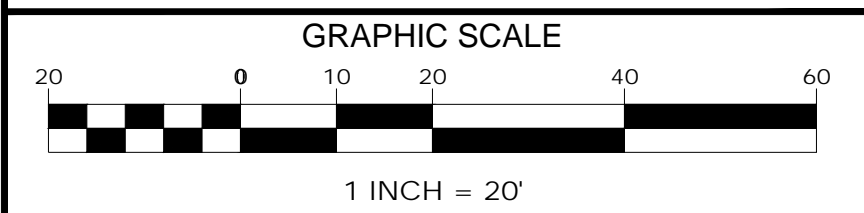
KEY PLAN

SHEET INFORMATION

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DESIGNED BY: I.A.J.
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REVIEWED BY: C.B.T.
SHEET TITLE:



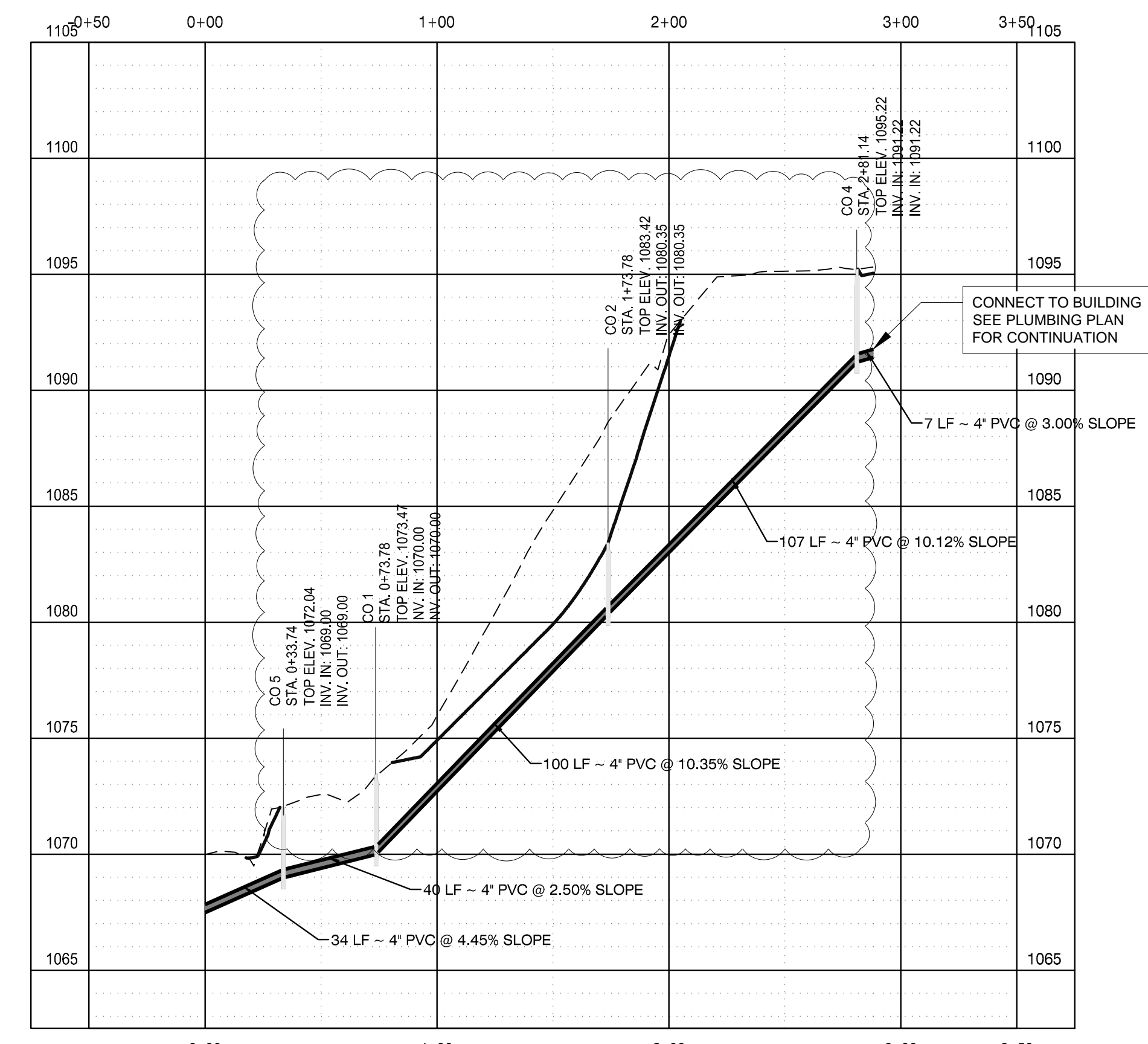
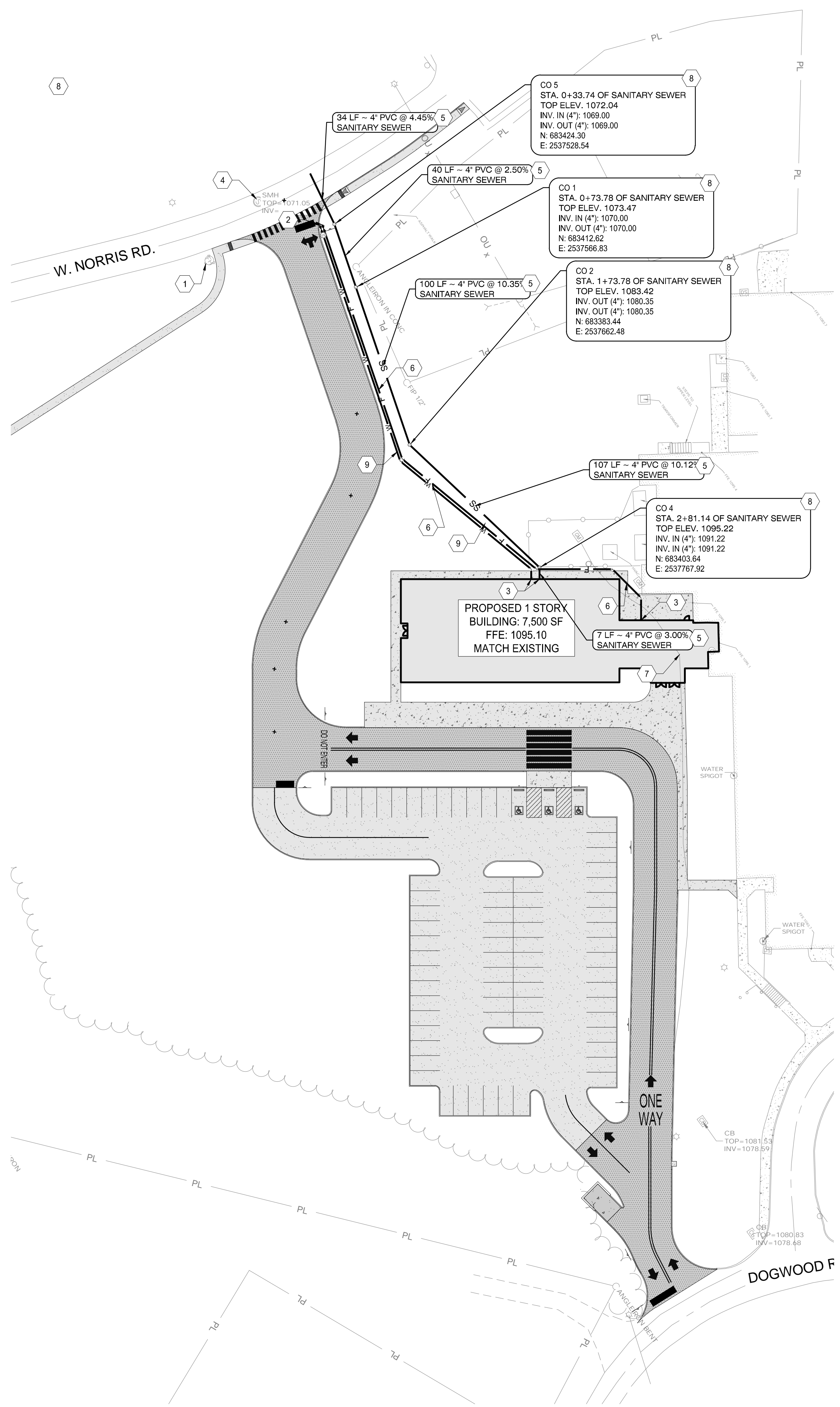
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ENLARGED GRADING PLANS

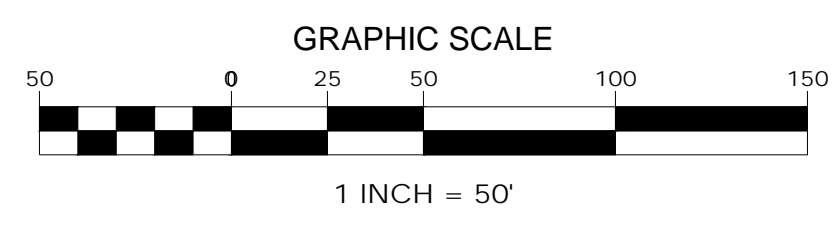
SHEET NO.:

C401



SANITARY SEWER 1

SCALE: H: 1" = 50'-0" V: 1" = 5'-0"



SITE UTILITY PLAN

GENERAL SHEET NOTES

- SEE SHEET C001 FOR CIVIL NOTES AND LEGENDS
- COORDINATE ALL UTILITY CROSSINGS; SEE DETAIL 2/C803
- FIELD LOCATE ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION. DETERMINE LOCATED, SIZE, MATERIAL & INVERTS. REPORT ANY DISCREPANCIES TO OWNER & ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION & INSTALLATION.

UTILITY CONTACTS

WATER NORRIS WATER COMMISSION 20 CHESTNUT ST NORRIS, TN 37828 (865) 494-7645	SEWER NORRIS WATER COMMISSION 20 CHESTNUT ST NORRIS, TN 37828 (865) 494-7645
GAS POWELL-CLING UTILITY DISTRICT 203 E 1ST ST ROCKY TOP, TN 37769 (865) 426-2822	ELECTRIC CLINTON UTILITIES BOARD 1001 CHARLES G. SEEVERS BLVD CLINTON, TN 37717 (865) 457-9232

PROFILE LEGEND



UTILITY LEGEND

- PIPE FITTING; SEE DETAIL 5/C803
- PIPE TEE; SEE DETAIL 5/C803
- GATE VALVE; SEE DETAIL 7/C803
- WATER METER BY LOCAL UTILITY
- CO-CLEANOUT; SEE DETAIL 6/C803

UTILITY KEYED NOTES

- EXISTING FIRE HYDRANT
- WATER LINE CONNECTION BY LOCAL UTILITY COMPANY. COORDINATE TAP & WATER METER LOCATIONS.
- FOR CONTINUATION SEE PLUMBING PLAN
- CONNECTION TO EXISTING MANHOLE; BY LOCAL UTILITY
- 4" ASTM D3034 SDR35 PVC BUILDING SANITARY SEWER SERVICE LINE @ 2.0% MIN. SLOPE; SEE DETAIL 1/C803
- 6" C-900 PVC FIRE PROTECTION SERVICE LINE; SEE DETAIL 1/C803
- GAS SERVICE LINE; TO BE RELOCATED BY LOCAL UTILITY
- SANITARY SEWER CLEANOUT; SEE DETAIL 6/C803
- 2" POTABLE WATER (PVC CLASS 200); SEE DETAIL 1/C803

MBI

ENGINEER:

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SHEET ISSUED: 02/04/2022
DESIGNED BY: I.A.J.
DRAWN BY: I.A.J.
REVIEWED BY: C.B.T.
SHEET TITLE:

811 Know what's below. Call before you dig. In Tennessee call 811 or 1-800-351-1111

GRAPHIC SCALE

40 0 20 40 80 120

1 INCH = 40'

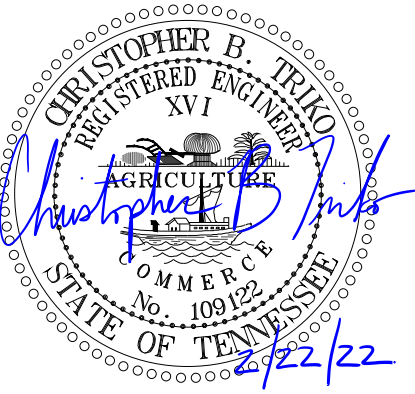
SITE UTILITY PLAN

SHEET NO.: **C500**

ENGINEER:
 MBI COMPANIES INC.
 299 N. WEISGARBER ROAD
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CONSULTANT

SEAL



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PROJECT INFORMATION

PROJECT:

**AN ADDITION & RENOVATION TO:
 NORRIS MIDDLE SCHOOL**

PROJECT ADDRESS:

5 NORRIS SQUARE
 NORRIS, TN 37858

PROJECT NO.: 210042-04

ACTIVE DESIGN PHASE	
<input type="checkbox"/>	FOR REVIEW ONLY
<input type="checkbox"/>	FOR PERMITTING ONLY
<input type="checkbox"/>	SCHEMATIC DESIGN
<input checked="" type="checkbox"/>	DESIGN DEVELOPMENT
<input type="checkbox"/>	CONSTRUCTION BIDDING
<input type="checkbox"/>	CONSTRUCTION DOCUMENTS
<input type="checkbox"/>	AS-BUILT RECORD SET

REVISION INFORMATION

NO.	DATE	DESCRIPTION
1	02/22/2022	ADDENDUM #1

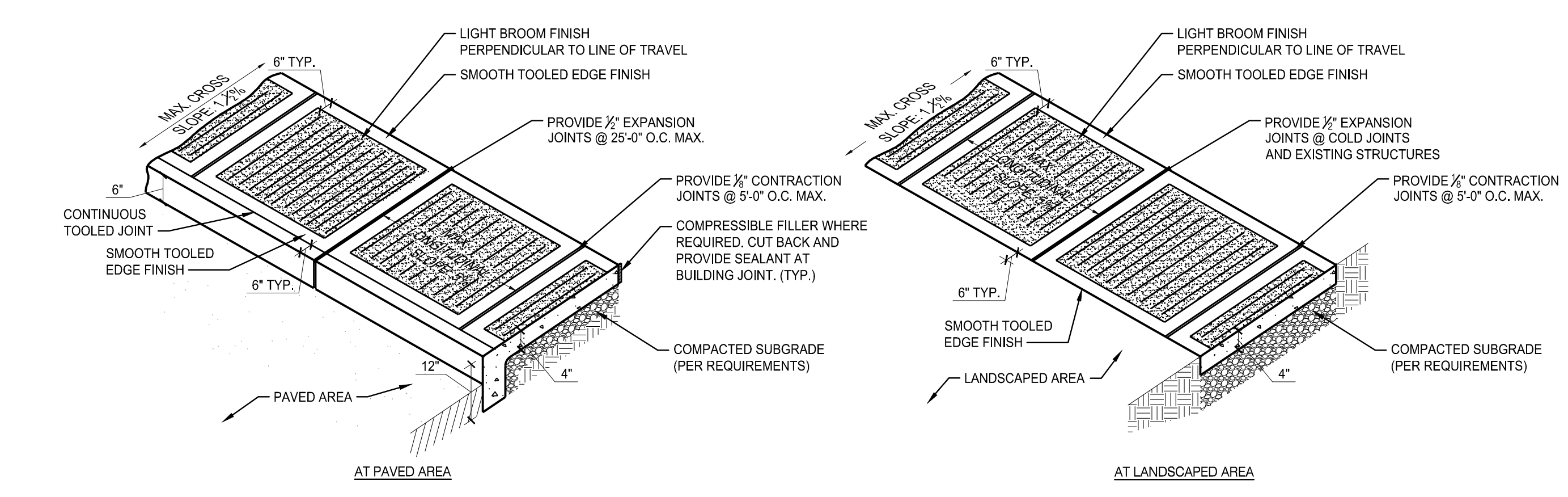
KEY PLAN

SHEET INFORMATION

SHEET ISSUED: 02/04/2022
 DESIGNED BY: I.A.J.
 DRAWN BY: I.A.J.
 REVIEWED BY: C.B.T.
 SHEET TITLE:

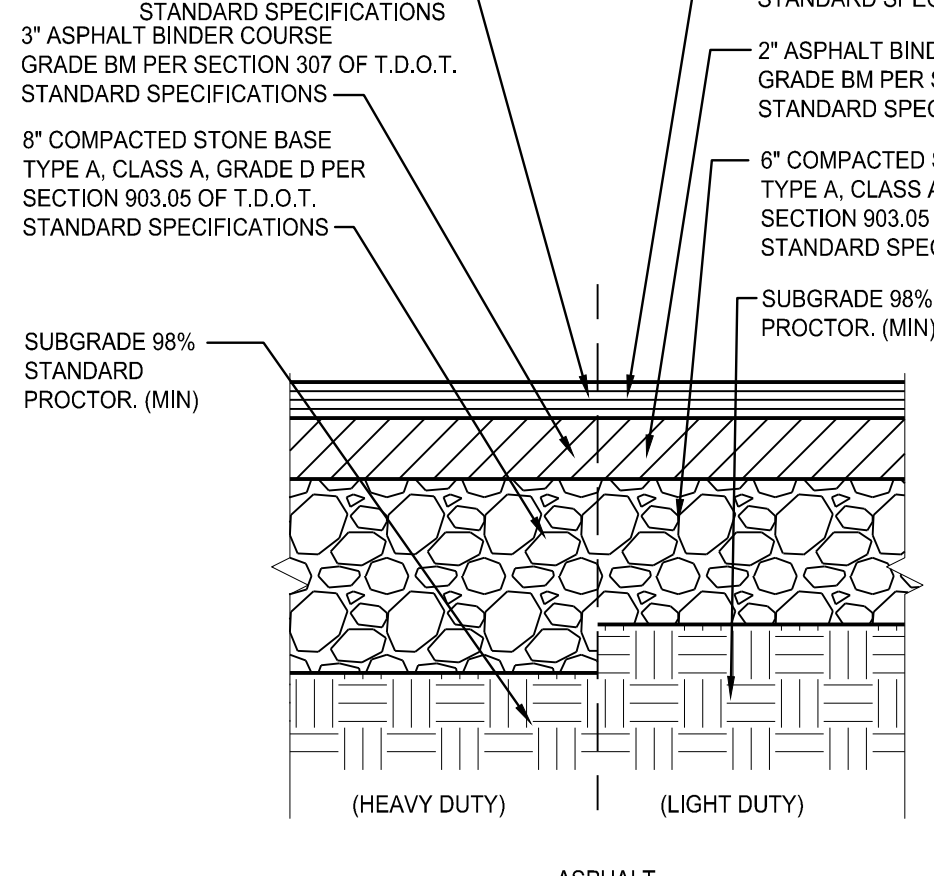
CIVIL DETAILS

SHEET NO.: C801



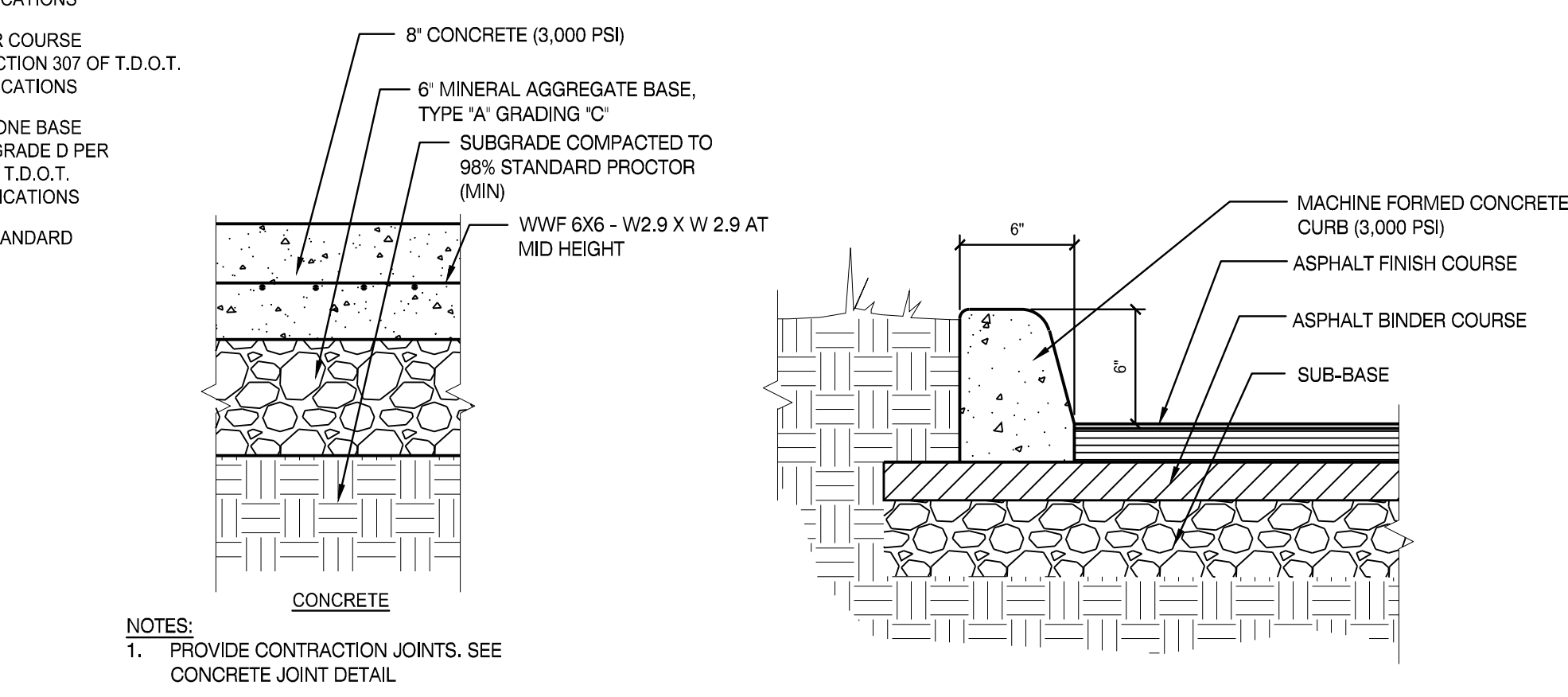
CONCRETE SIDEWALK

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PAVING SECTIONS

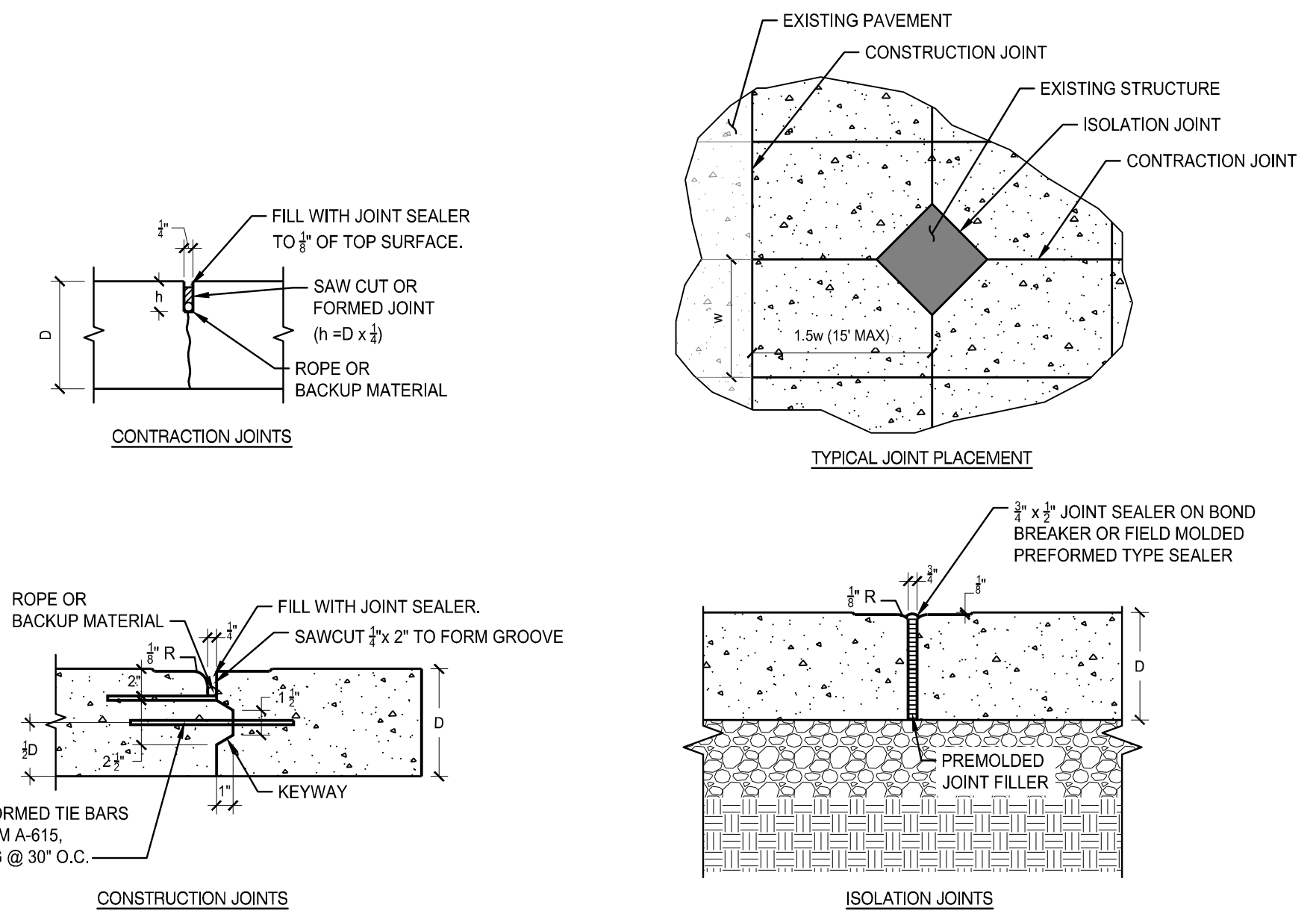
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CONCRETE CURB

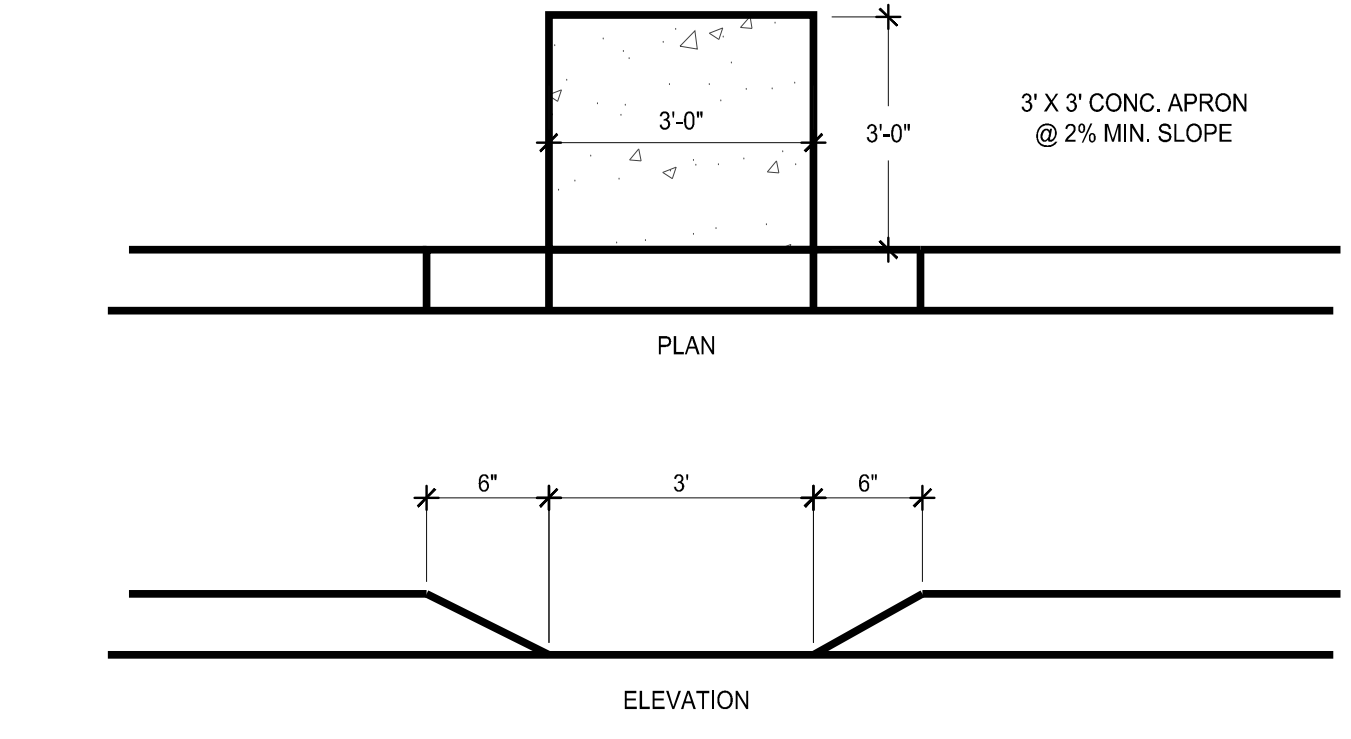
3

- NOTES:
- JOINT SPACING SHALL BE UNIFORM AND TYPICALLY LESS THAN 30xSLAB THICKNESS. IN NO CASES SHALL JOINT SPACING EXCEED 15'
 - THE LENGTH OF JOINT SPACING SHALL NOT EXCEED 1.5w
 - SAWING OF THE JOINTS SHALL BEGIN AS SOON AS THE CONCRETE HAS HARDENED SUFFICIENTLY TO PERMIT SAWING WITHOUT EXCESSIVE RAVELING BUT IN NO CASE LONGER THAN 18 HOURS AFTER POURING. ALL JOINTS SHALL BE SAWS BEFORE UNCONTROLLED SHRINKAGE CRACKING OCCURS. IF NECESSARY, THE SAWING OPERATIONS SHALL BE CARRIED ON BOTH DAY AND NIGHT REGARDLESS OF WEATHER CONDITIONS. A STANDBY SAW SHALL BE AVAILABLE IN THE EVENT OF BREAKDOWN.
 - THE CONCRETE SHALL BE THOROUGHLY CONSOLIDATED AGAINST AND ALONG THE FACES OF ALL FORMS AND ALONG THE FULL LENGTH AND ON BOTH SIDES OF ALL JOINTS.
 - THE JOINTS CAN BE COMPLETELY FILLED WITH SEALANT MATERIAL OR PREMOULDED JOINT FILLER CAN BE INSERTED IN THE JOINT FIRST TO REDUCE THE AMOUNT OF SEALANT REQUIRED.
 - SEALER TO BE POURED TO WITHIN 1/2" OF TOP OF PAVEMENT.
 - PRIOR TO SEALING, JOINT SURFACES MUST BE CLEANED AND FREE OF CURING COMPOUND, RESIDUE, LAITANCE AND ANY OTHER FOREIGN MATERIAL.
 - THE SURFACE SHOULD BE DRY WHEN THE SEALANT IS POURED.
 - THE CONCRETE SHALL BE DEPOSITED ON A MOIST GRADE IN SUCH MANNER AS TO REQUIRED AS LITTLE REHANDLING AS POSSIBLE. PLACING SHALL BE CONTINUOUS BETWEEN TRANSVERSE JOINTS WITHOUT THE USE OF INTERMEDIATE BULKHEADS. NECESSARY HAND SPREADING SHALL BE DONE WITH SHOVELS, NOT RAKES. WORKMEN SHALL NOT BE ALLOWED TO WALK ON THE FRESHLY MIXED CONCRETE WITH BOOTS OR SHOES COATED WITH EARTH OR FOREIGN SUBSTANCES.
 - ALL JOINT DOWELS MUST BE LEVEL, TRUE AND ADEQUATELY SUPPORTED SO THERE IS NO MOVEMENT DURING THE PLACEMENT OF CONCRETE.
 - TRANSVERSE CONSTRUCTION JOINTS ARE NECESSARY FOR PLANNED INTERRUPTIONS, AND WHERE EMERGENCY INTERRUPTIONS SUSPEND OPERATIONS FOR 30 MINUTES OR MORE.
 - ALL JOINTS & JOINT SEALANTS SHALL MEET T.D.O.T.'S STANDARDS AND SPECIFICATIONS.



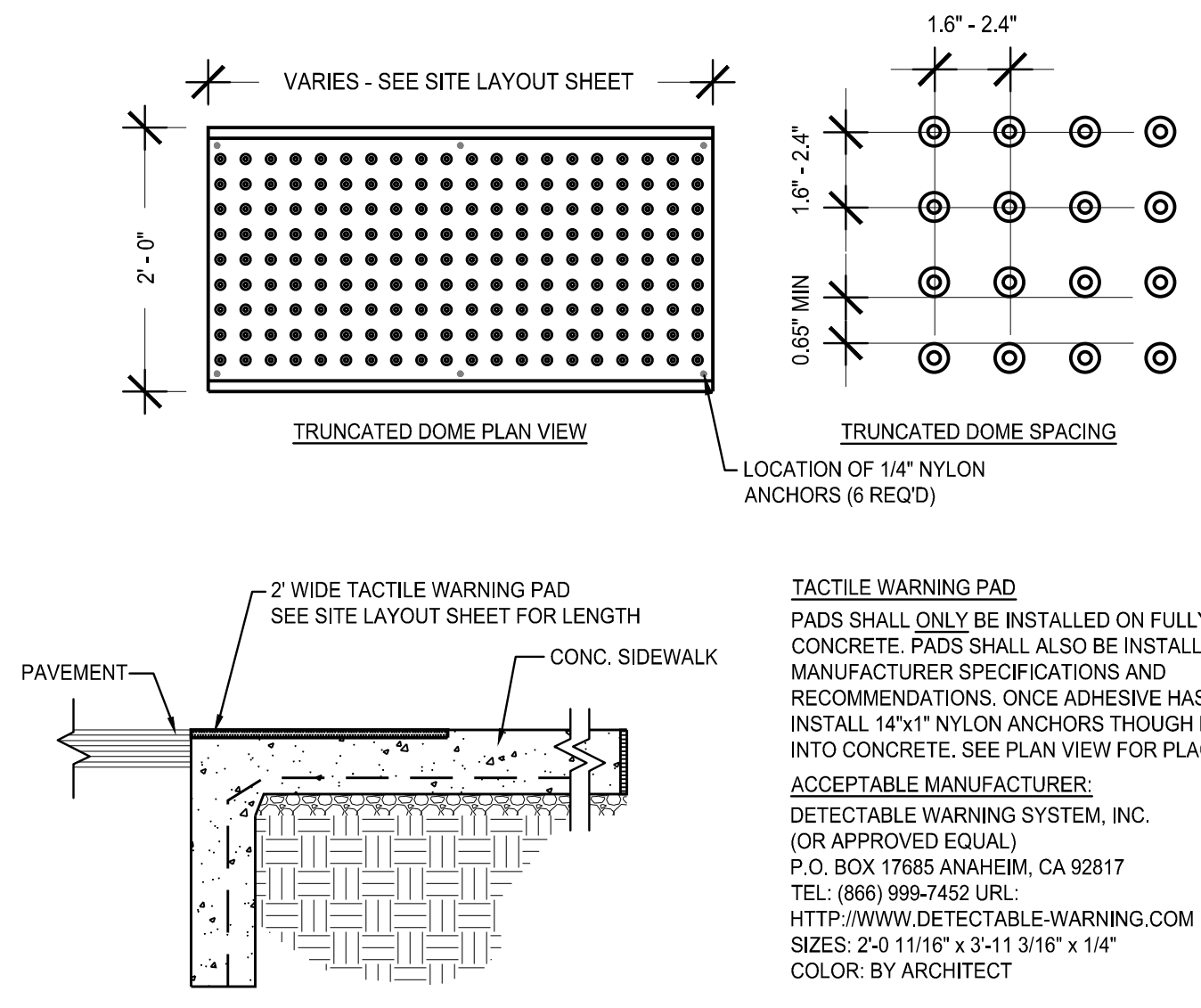
CONCRETE JOINTS

4



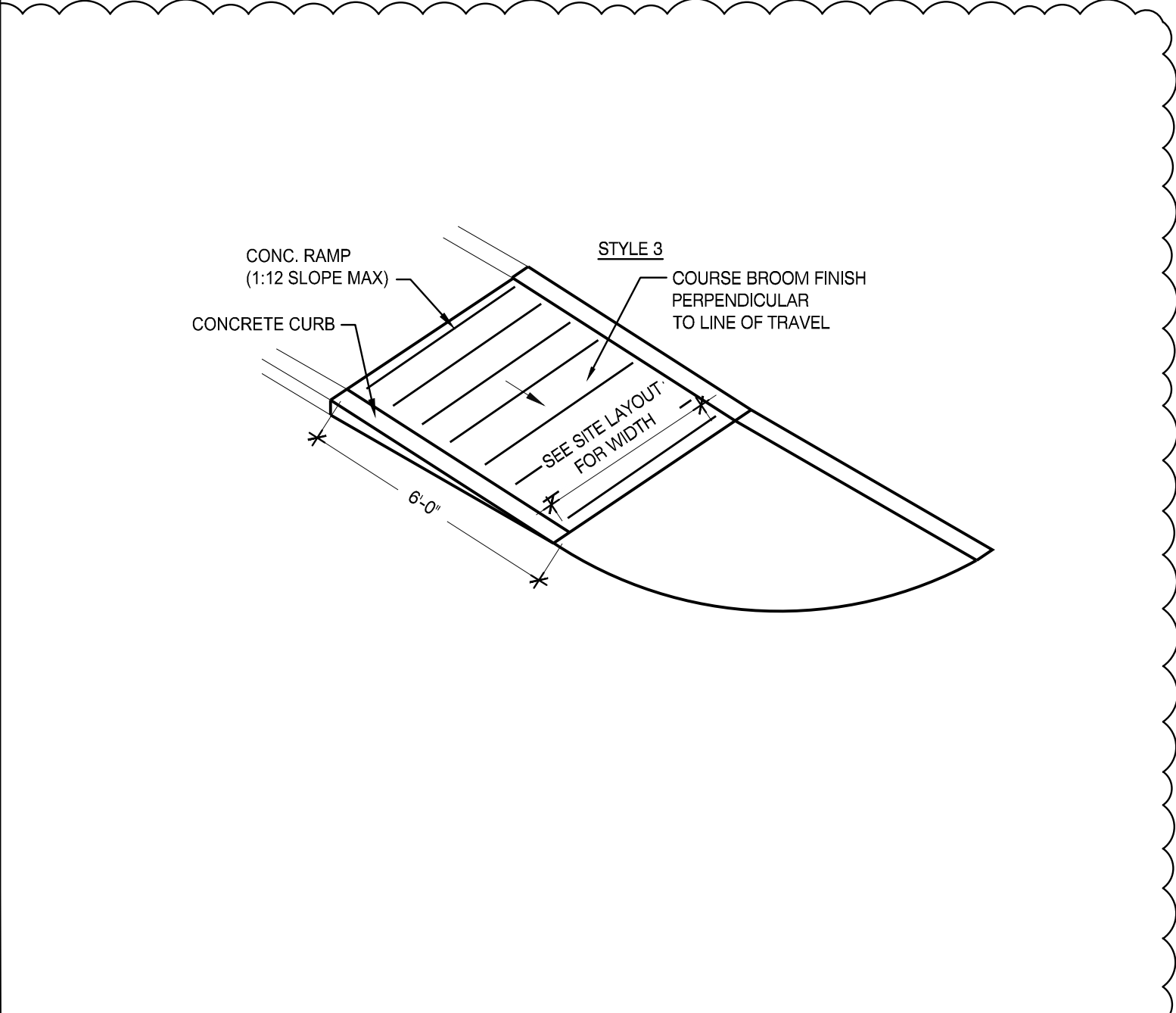
CONCRETE APRON

5



TACTILE WARNING PAD

6



ADA SINGLE RAMP

7

SZVAV AIR HANDLING UNIT SEQUENCE OF OPERATION (PAU-(1-6))

BUILDING AUTOMATION SYSTEM INTERFACE:

THE BUILDING AUTOMATION SYSTEM (BAS) SHALL SEND THE CONTROLLER OCCUPIED BYPASS, MORNING WARM-UP / PRE-COOL, OCCUPIED / UNOCCUPIED AND HEAT / COOL MODES. IF COMMUNICATION IS LOST WITH THE BAS THE CONTROLLER SHALL OPERATE USING DEFAULT MODES AND SETPOINTS. THE BAS SHALL ALSO SEND THE CONTROLLER A DUCT STATIC PRESSURE SETPOINT, DISCHARGE AIR TEMPERATURE SETPOINT, AND VENTILATION AIRFLOW SETPOINT, EACH CALCULATED BY OPTIMIZATION ROUTINES IN THE BAS.

OCCUPIED MODE:

DURING OCCUPIED PERIODS, THE SUPPLY FAN SHALL RUN CONTINUOUSLY AND THE OUTSIDE AIR DAMPER SHALL OPEN TO MAINTAIN THE CURRENT AIRFLOW SETPOINT. THE UNIT CONTROLLER SHALL CONTROL THE SUPPLY FAN VFD, THE DX COOLING SHALL STAGE AND GAS HEAT SHALL MODULATE TO MAINTAIN THE CURRENT DISCHARGE AIR TEMPERATURE SETPOINT. IF ECONOMIZING IS ENABLED THE OUTSIDE AIR DAMPER SHALL MODULATE TO MAINTAIN THE CURRENT DISCHARGE AIR TEMPERATURE SETPOINT.

UNOCCUPIED MODE:

WHEN THE SPACE TEMPERATURE IS BELOW THE UNOCCUPIED HEATING SETPOINT OF 60.0 DEG. F (ADJ.) THE SUPPLY FAN VARIABLE FREQUENCY DRIVE (VFD) SHALL BE ENABLED AND OPERATE AS NECESSARY. THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED AND THE GAS HEAT SHALL BE ENABLED. WHEN THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED HEATING SETPOINT OF 60.0 DEG. F (ADJ.) PLUS THE UNOCCUPIED DIFFERENTIAL OF 4.0 DEG. F (ADJ.) THE SUPPLY FAN AND THE GAS HEAT SHALL BE DISABLED.

WHEN THE SPACE TEMPERATURE IS ABOVE THE UNOCCUPIED COOLING SETPOINT OF 85.0 DEG. F (ADJ.) THE SUPPLY FAN VARIABLE FREQUENCY DRIVE (VFD) SHALL BE ENABLED AND OPERATE AS NECESSARY. THE OUTSIDE AIR DAMPER SHALL OPEN IF ECONOMIZING IS ENABLED AND REMAIN CLOSED IF ECONOMIZING IS DISABLED AND THE DX COOLING SHALL BE ENABLED. WHEN THE SPACE TEMPERATURE FALLS BELOW THE UNOCCUPIED COOLING SETPOINT OF 85.0 DEG. F (ADJ.) MINUS THE UNOCCUPIED DIFFERENTIAL OF 4.0 DEG. F (ADJ.) THE SUPPLY FAN AND THE DX COOLING SHALL BE DISABLED AND THE OUTSIDE AIR DAMPER SHALL CLOSE.

OPTIMAL START:

THE BAS SHALL MONITOR THE SCHEDULED OCCUPIED TIME, OCCUPIED SPACE SETPOINTS AND SPACE TEMPERATURE TO CALCULATE WHEN THE OPTIMAL START OCCURS.

MORNING WARM-UP MODE:

DURING OPTIMAL START, IF THE AVERAGE SPACE TEMPERATURE IS BELOW THE OCCUPIED HEATING SETPOINT A MORNING WARM-UP MODE SHALL BE ACTIVATED. WHEN MORNING WARM-UP IS INITIATED THE UNIT SHALL ENABLE THE SUPPLY FAN, RETURN FAN AND HEATING. THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED. WHEN THE AVERAGE SPACE TEMPERATURE REACHES THE OCCUPIED HEATING SETPOINT (ADJ.), THE UNIT SHALL TRANSITION TO THE OCCUPIED MODE.

PRE-COOL MODE:

DURING OPTIMAL START, IF THE AVERAGE SPACE TEMPERATURE IS ABOVE THE OCCUPIED COOLING SETPOINT, PRE-COOL MODE SHALL BE ACTIVATED. WHEN PRE-COOL IS INITIATED THE UNIT SHALL ENABLE THE FAN AND COOLING OR ECONOMIZER. THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED, UNLESS ECONOMIZING. WHEN THE AVERAGE SPACE TEMPERATURE REACHES OCCUPIED COOLING SETPOINT (ADJ.), THE UNIT SHALL TRANSITION TO THE OCCUPIED MODE.

OPTIMAL STOP:

THE BAS SHALL MONITOR THE SCHEDULED UNOCCUPIED TIME, OCCUPIED SETPOINTS AND SPACE TEMPERATURE TO CALCULATE WHEN THE OPTIMAL STOP OCCURS. WHEN THE OPTIMAL STOP MODE IS ACTIVE THE UNIT CONTROLLER SHALL MAINTAIN THE SPACE TEMPERATURE TO THE SPACE TEMPERATURE OFFSET SETPOINT.

OCCUPIED BYPASS:

THE BAS SHALL MONITOR THE STATUS OF THE "ON" AND "CANCEL" BUTTONS OF THE SPACE TEMPERATURE SENSORS. WHEN AN OCCUPIED BYPASS REQUEST IS RECEIVED FROM A SPACE SENSOR, THE UNIT SHALL TRANSITION FROM ITS CURRENT OCCUPANCY MODE TO OCCUPIED BYPASS MODE AND THE UNIT SHALL MAINTAIN THE SPACE TEMPERATURE TO THE OCCUPIED SETPOINTS (ADJ.).

COOLING MODE:

THE UNIT CONTROLLER SHALL USE THE DISCHARGE AIR TEMPERATURE SENSOR AND DISCHARGE AIR TEMPERATURE COOLING SETPOINT TO DETERMINE WHEN TO INITIATE REQUESTS FOR COOLING. DISCHARGE AIR SETPOINT SHALL BE MAINTAINED BY MODULATING THE ECONOMIZER OR STAGING THE DX COOLING AS REQUIRED TO MAINTAIN THE DISCHARGE AIR SETPOINT.

HEATING MODE:

THE UNIT CONTROLLER SHALL USE THE DISCHARGE AIR TEMPERATURE SETPOINT AND DISCHARGE AIR TEMPERATURE SENSOR TO DETERMINE WHEN TO INITIATE REQUEST FOR HEATING. WHEN THE DISCHARGE AIR TEMPERATURE FALLS 10.0 DEG. F BELOW THE DISCHARGE AIR TEMPERATURE SETPOINT, THE HEATING WILL MODULATE TO MAINTAIN THE SUPPLY AIR TEMPERATURE TO SETPOINT.

ECONOMIZER:

THE SUPPLY AIR SENSOR SHALL MEASURE THE DRY BULB TEMPERATURE OF THE AIR LEAVING THE EVAPORATOR COIL WHILE ECONOMIZING. WHEN ECONOMIZING IS ENABLED AND THE UNIT IS OPERATING IN THE COOLING MODE, THE ECONOMIZER DAMPER SHALL BE MODULATED BETWEEN ITS MINIMUM POSITION AND 100% TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SETPOINT. THE ECONOMIZER DAMPER SHALL MODULATE TOWARD MINIMUM POSITION IN THE EVENT THE MIXED AIR TEMPERATURE FALLS BELOW THE LOW LIMIT TEMPERATURE SETTING. COMPRESSORS SHALL BE DELAYED FROM OPERATING UNTIL THE ECONOMIZER HAS OPENED TO 100%.

FILTER STATUS:

A DIFFERENTIAL PRESSURE SWITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FILTER WHEN THE FAN IS RUNNING. IF THE SWITCH CLOSSES FOR 2 MINUTES AFTER A REQUEST FOR FAN OPERATION A DIRTY FILTER ALARM SHALL BE ANNUNCIATED AT THE BAS.

CAV AIR HANDLING UNIT SEQUENCE OF OPERATION (PAU-7/PAU-8)

BUILDING AUTOMATION SYSTEM INTERFACE:

THE BUILDING AUTOMATION SYSTEM (BAS) SHALL SEND THE CONTROLLER OCCUPIED BYPASS, MORNING WARM-UP / PRE-COOL, OCCUPIED / UNOCCUPIED AND HEAT / COOL MODES. IF COMMUNICATION IS LOST WITH THE BAS THE CONTROLLER SHALL OPERATE USING DEFAULT MODES AND SETPOINTS. SPACE TEMPERATURE SETPOINT, AND VENTILATION AIRFLOW SETPOINT, EACH CALCULATED BY OPTIMIZATION ROUTINES IN THE BAS.

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DURING OCCUPIED PERIODS, THE SUPPLY FAN SHALL RUN CONTINUOUSLY AND THE OUTSIDE AIR DAMPER SHALL OPEN TO MAINTAIN THE CURRENT AIRFLOW SETPOINT. THE UNIT CONTROLLER SHALL ENABLE/DISABLE THE SUPPLY FAN, THE DX COOLING SHALL STAGE AND GAS HEAT SHALL MODULATE TO MAINTAIN THE CURRENT DISCHARGE AIR TEMPERATURE SETPOINT. IF ECONOMIZING IS ENABLED THE OUTSIDE AIR DAMPER SHALL MODULATE TO MAINTAIN THE CURRENT DISCHARGE AIR TEMPERATURE SETPOINT.

UNOCCUPIED MODE:

WHEN THE SPACE TEMPERATURE IS BELOW THE UNOCCUPIED HEATING SETPOINT OF 60.0 DEG. F (ADJ.) THE SUPPLY FAN SHALL BE ENABLED. THE OUTSIDE AIR DAMPER SHALL REMAIN CLOSED AND THE GAS HEAT SHALL BE ENABLED. WHEN THE SPACE TEMPERATURE RISES ABOVE THE UNOCCUPIED HEATING SETPOINT OF 60.0 DEG. F (ADJ.) PLUS THE UNOCCUPIED DIFFERENTIAL OF 4.0 DEG. F (ADJ.) THE SUPPLY FAN AND THE GAS HEAT SHALL BE DISABLED.

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ECONOMIZER: (PAU-7 ONLY)

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EXISTING BMS FRONT END

1. THE EXISTING BMS IS AN AUTOMATED LOGIC CONTROL SYSTEM. THIS CONTROL SYSTEM SHALL TIE INTO THAT.

MBI

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CONSULTANT

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PROJECT INFORMATION

PROJECT:

AN ADDITION &
RENOVATION TO:
NORRIS MIDDLE
SCHOOL

PROJECT ADDRESS:

5 NORRIS SQUARE,
NORRIS, TN 37828

PROJECT NO.: 210042-04

ACTIVE DESIGN PHASE

- FOR REVIEW ONLY
 FOR PERMITTING ONLY
 SCHEMATIC DESIGN
 DESIGN DEVELOPMENT
 CONSTRUCTION BIDDING
 CONSTRUCTION DOCUMENTS
 AS-BUILT RECORD SET

REVISION INFORMATION

NO.	DATE	DESCRIPTION	REV #1
1	2/22/22		

KEY PLAN

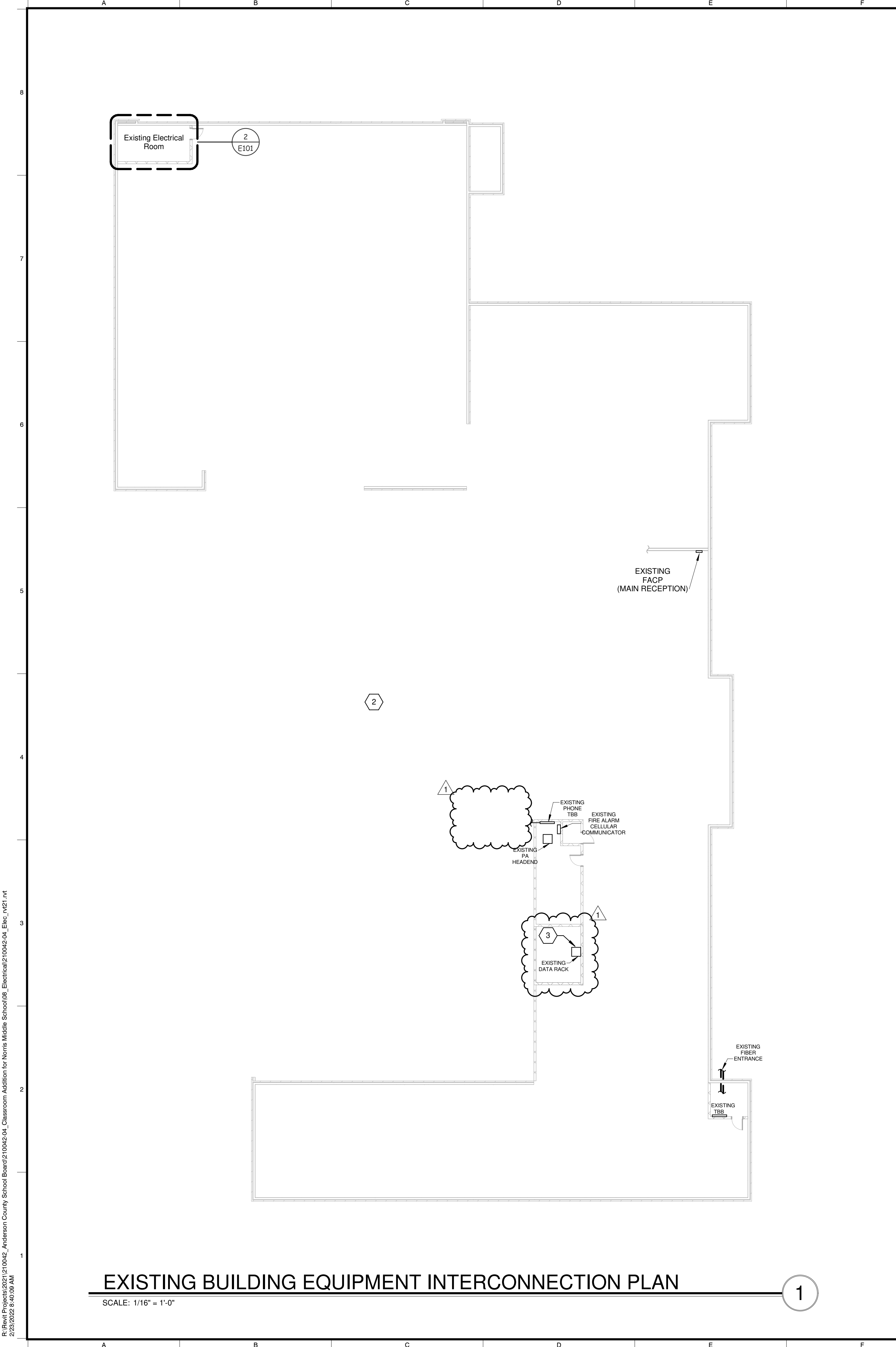
SHEET INFORMATION

SHEET ISSUED: 2/4/2022
DESIGNED BY: DF
DRAWN BY: DF
REVIEWED BY: JCB
SHEET TITLE:

HVAC CONTROLS

SHEET NO.:

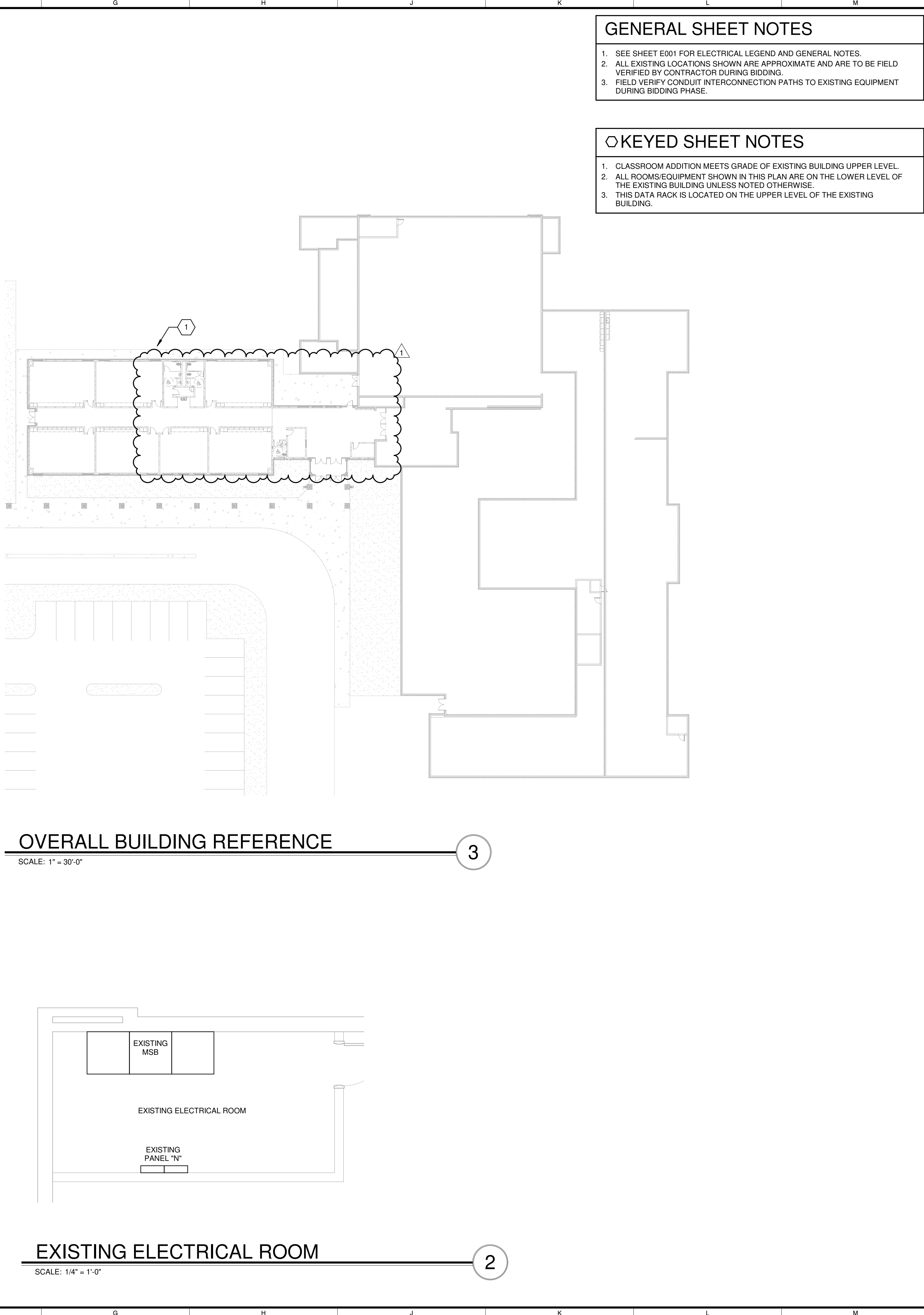
M202



EXISTING BUILDING EQUIPMENT INTERCONNECTION PLAN

SCALE: 1/16" = 1'-0"

1



EXISTING ELECTRICAL ROOM

SCALE: 1/4" = 1'-0"

2

GENERAL SHEET NOTES

1. SEE SHEET E001 FOR ELECTRICAL LEGEND AND GENERAL NOTES.
2. ALL EXISTING LOCATIONS SHOWN ARE APPROXIMATE AND ARE TO BE FIELD VERIFIED BY CONTRACTOR DURING BIDDING.
3. FIELD VERIFY CONDUIT INTERCONNECTION PATHS TO EXISTING EQUIPMENT DURING BIDDING PHASE.

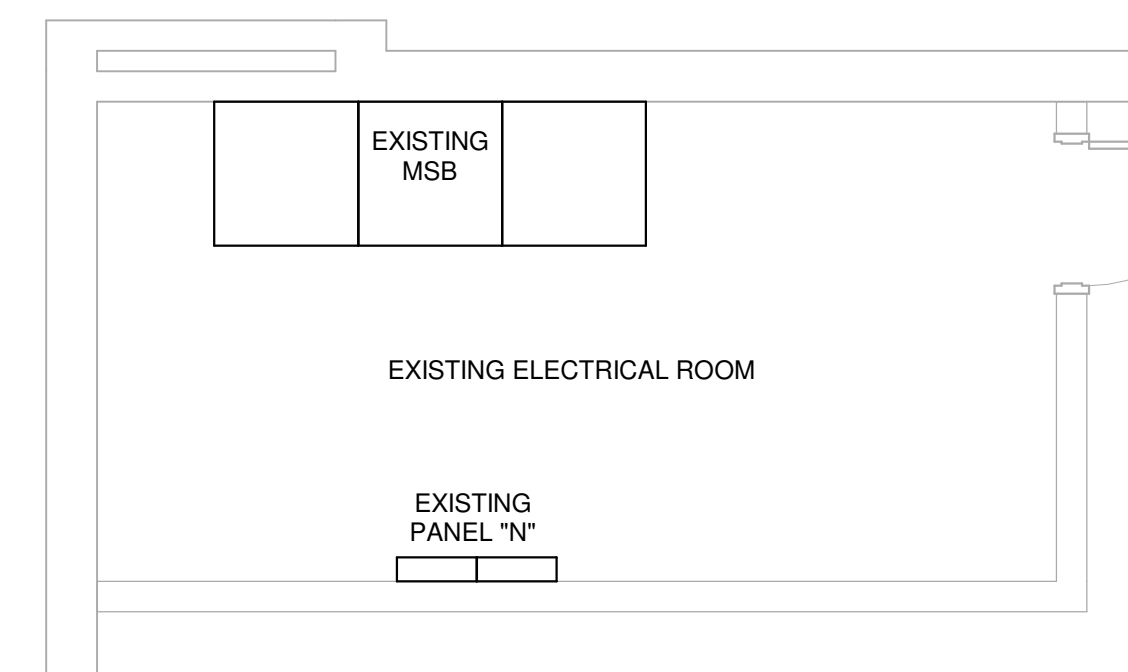
KEYED SHEET NOTES

1. CLASSROOM ADDITION MEETS GRADE OF EXISTING BUILDING UPPER LEVEL.
2. ALL ROOMS/EQUIPMENT SHOWN IN THIS PLAN ARE ON THE LOWER LEVEL OF THE EXISTING BUILDING UNLESS NOTED OTHERWISE.
3. THIS DATA RACK IS LOCATED ON THE UPPER LEVEL OF THE EXISTING BUILDING.

OVERALL BUILDING REFERENCE

SCALE: 1" = 30'-0"

3



MBI

ARCHITECT:

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 KNOXVILLE, TN 37919
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CONSULTANT

ELECTRICAL ENGINEER:

STEPHEN M. NEWLIN JR.

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PROJECT ADDRESS:

5 NORRIS SQUARE,
NORRIS, TN 37828

PROJECT NO.: 210042-04

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SCHEMATIC DESIGN

DESIGN DEVELOPMENT

CONSTRUCTION BIDDING

CONSTRUCTION DOCUMENTS

AS-BUILT RECORD SET

REVISION INFORMATION

NO.	DATE	DESCRIPTION
1	02/22/2022	Addendum #1

KEY PLAN

SHEET INFORMATION

SHEET ISSUED: 02/04/2022

DESIGNED BY: WAH

DRAWN BY: WAH

REVIEWED BY: SMN

SHEET TITLE:

EXISTING BUILDING EQUIPMENT INTERCONNECTION PLAN

SHEET NO.: **E101**

P:\Buck\Projects\2021\101042_Ardersen County School Board\210042-04_Classroom Addition for Norris Middle School\06_Electrical\210042-04_Elec_v021.rvt
 2/22/2022 10:40:29 AM

GENERAL SHEET NOTES

1. SEE SHEET E001 FOR ELECTRICAL LEGEND AND GENERAL NOTES.

KEYED SHEET NOTES

1. EXTEND CONDUIT AND WIRING FROM FLOORBOX UNDERGROUND TO NEAREST FULL-HEIGHT WALL UP IN WALL AND OVERHEAD TO CORRESPONDING CIRCUIT BREAKER.
2. PROVIDE JUNCTION BOX ABOVE CEILING FOR ADA AUTOMATIC DOOR.
3. PUSH BUTTON FOR ADA AUTOMATIC DOOR CONTROL. COORDINATE WITH OWNER AND DOOR SUPPLIER FOR INSTALLATION. WIRE PER MANUFACTURER SPECIFICATION.
4. FIELD VERIFY EXACT MOUNTING HEIGHT OF RECEPTACLES FOR DATA RACK WITH OWNER PRIOR TO ROUGH-IN.

MBI

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1	02/04/2022	Addendum #1

KEY PLAN

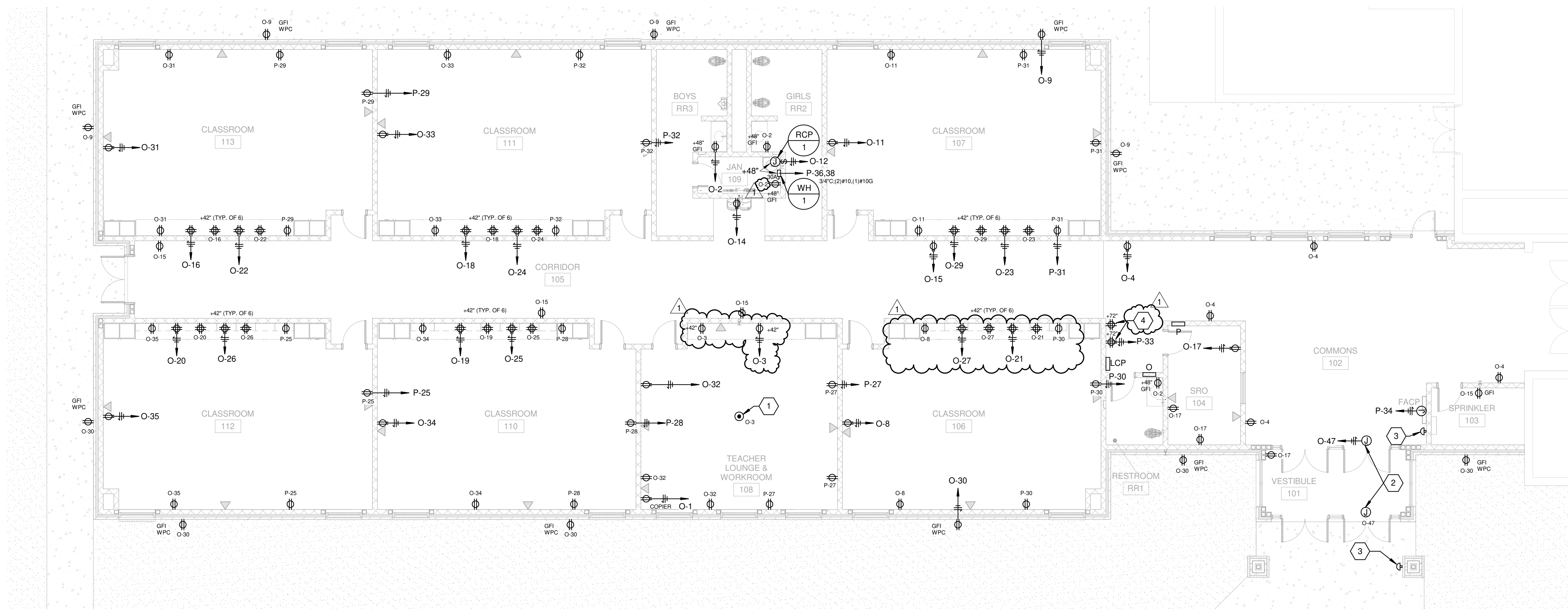
SHEET INFORMATION

SHEET ISSUED: 02/04/2022
DESIGNED BY: WAH
DRAWN BY: WAH
REVIEWED BY: SMN
SHEET TITLE:

CLASSROOM ADDITION
POWER PLAN

SHEET NO.:

E111



CLASSROOM ADDITION POWER PLAN

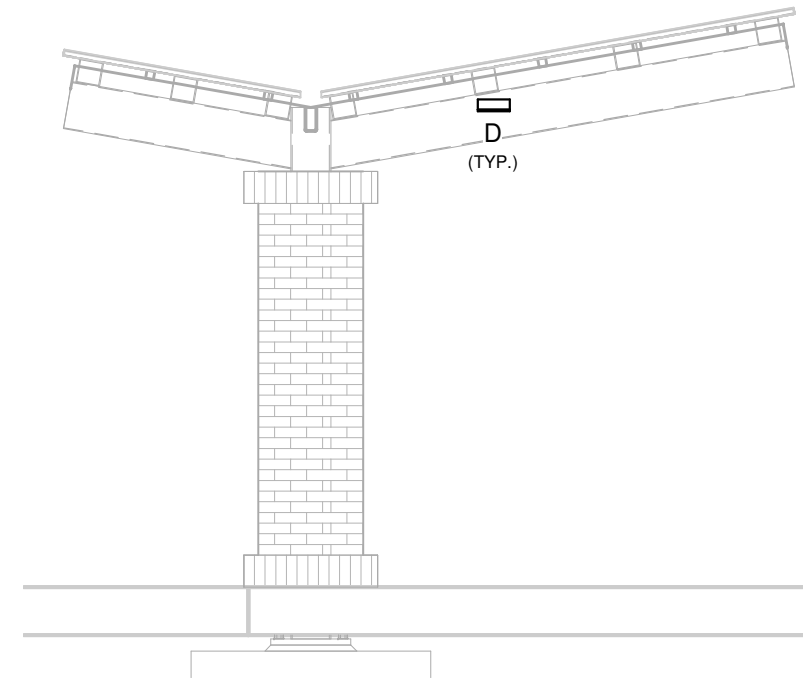
SCALE: 1/8" = 1'-0"

1

LIGHTING FIXTURE SCHEDULE

TYPE	LAMP TYPE	VOLTAGE	WATTS	LUMENS	COLOR TEMP (K)	CRI	MOUNTING	HEIGHT	MANUFACTURER	FINISH	MODEL	COMMENTS
A	LED	120V	56	4363	3500	>80	RECESSED	CEILING	LITHONIA	N/A	CPANL 2X4 AL06 SWW7 M2	DIMMABLE 2X4 FLAT PANEL TROFFER, LOW OUTPUT.
AE	LED	120V	56	4363	3500	>80	RECESSED	CEILING	LITHONIA	N/A	CPANL 2X4 AL06 SWW7 M2 ILBLP CP10 HE SD A	DIMMABLE 2X4 FLAT PANEL TROFFER, LOW OUTPUT, W/BATTERY BACKUP
B	LED	120V	56	5354	3500	>80	RECESSED	CEILING	LITHONIA	N/A	CPANL 2X4 AL06 SWW7 M2	DIMMABLE 2X4 FLAT PANEL TROFFER, MEDIUM OUTPUT.
BE	LED	120V	56	5354	3500	>80	RECESSED	CEILING	LITHONIA	N/A	CPANL 2X4 AL06 SWW7 M2 ILBLP CP10 HE SD A	DIMMABLE 2X4 FLAT PANEL TROFFER, MEDIUM OUTPUT, W/BATTERY BACKUP
C15	LED	120V	18	1514	3500	>80	RECESSED	CEILING	LITHONIA	N/A	LDN6 35/15 L06AR LSS MVOLT GZ10	DIMMABLE 6" DOWNLIGHT
C25	LED	120V	29	2504	3500	>80	RECESSED	CEILING	LITHONIA	N/A	LDN6 35/25 L06AR LSS MVOLT GZ10	DIMMABLE 6" DOWNLIGHT
C25E	LED	120V	29	2504	3500	>80	RECESSED	CEILING	LITHONIA	N/A	LDN6 35/25 L06AR LSS MVOLT EZ10 EL	DIMMABLE 6" DOWNLIGHT W/BATTERY BACKUP
D	LED	120V	50	4938	4000	>80	SURFACE	N/A	KEMALL	N/A	MLRS8 48 F MB CP 1 45L40K DCC 1 DV WL	WET LOCATION IMPACT RESISTANT LED STRIP LIGHT
X	LED	120V	1	N/A	N/A	N/A	UNIVERSAL	N/A	LITHONIA	WHITE	EXRG EL M6	SINGLE FACE EXIT SIGN W/BATTERY BACK-UP

NOTES:
 1. FURNISH AND INSTALL LAMPS FOR ALL FIXTURES.
 2. THE FINISH OF ALL FIXTURES SHALL BE VERIFIED AND APPROVED BY THE ARCHITECT.
 3. VERIFY ALL CEILING TYPES BEFORE STARTING ANY WORK. COORDINATE WITH ARCHITECT'S REFLECTED CEILING PLAN FOR CEILING TYPES AND FIXTURE LOCATIONS.
 4. PROVIDE ALL NECESSARY MOUNTING HARDWARE AND ACCESSORIES FOR A COMPLETE INSTALLATION OF ALL LIGHTING FIXTURES.
 5. PROVIDE ALL NECESSARY EQUIPMENT FOR LOW VOLTAGE LIGHTING AND CONTROLS, SUCH ITEMS WOULD INCLUDE TRANSFORMERS, POWER PACKS, AND CABLING.
 6. ALL FIXTURES IN KITCHEN OR FOOD PREP AREAS SHALL BE LENSED OR HAVE SHATTER PROOF LAMPS.
 7. ALTERNATE FIXTURES MUST BE APPROVED BY ELECTRICAL ENGINEER. ALTERNATE FIXTURES MUST MATCH GENERAL DESIGN, LUMEN OUTPUT, COLOR TEMPERATURE, LIGHT DISTRIBUTION, AND FINISH.
 8. PROVIDE BRIDGING STRUT AS NECESSARY.
 9. SUPPORT FIXTURES PER DETAIL 3 ON SHEET E501 AS REQUIRED.



ENTRY CANOPY LIGHTING SECTION

SCALE: 1/4" = 1'-0"

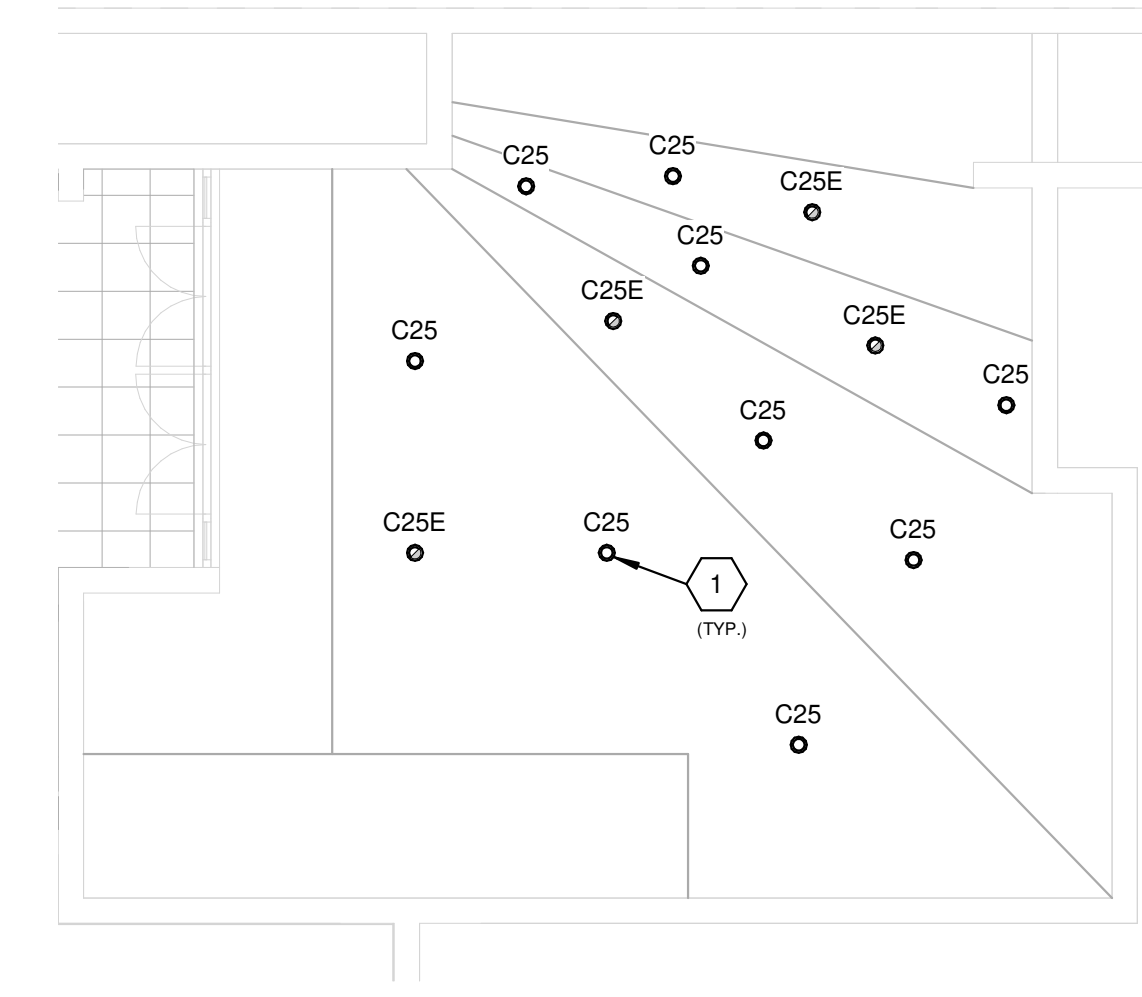
2

GENERAL SHEET NOTES

1. SEE SHEET E001 FOR ELECTRICAL LEGEND AND GENERAL NOTES.

KEYED SHEET NOTES

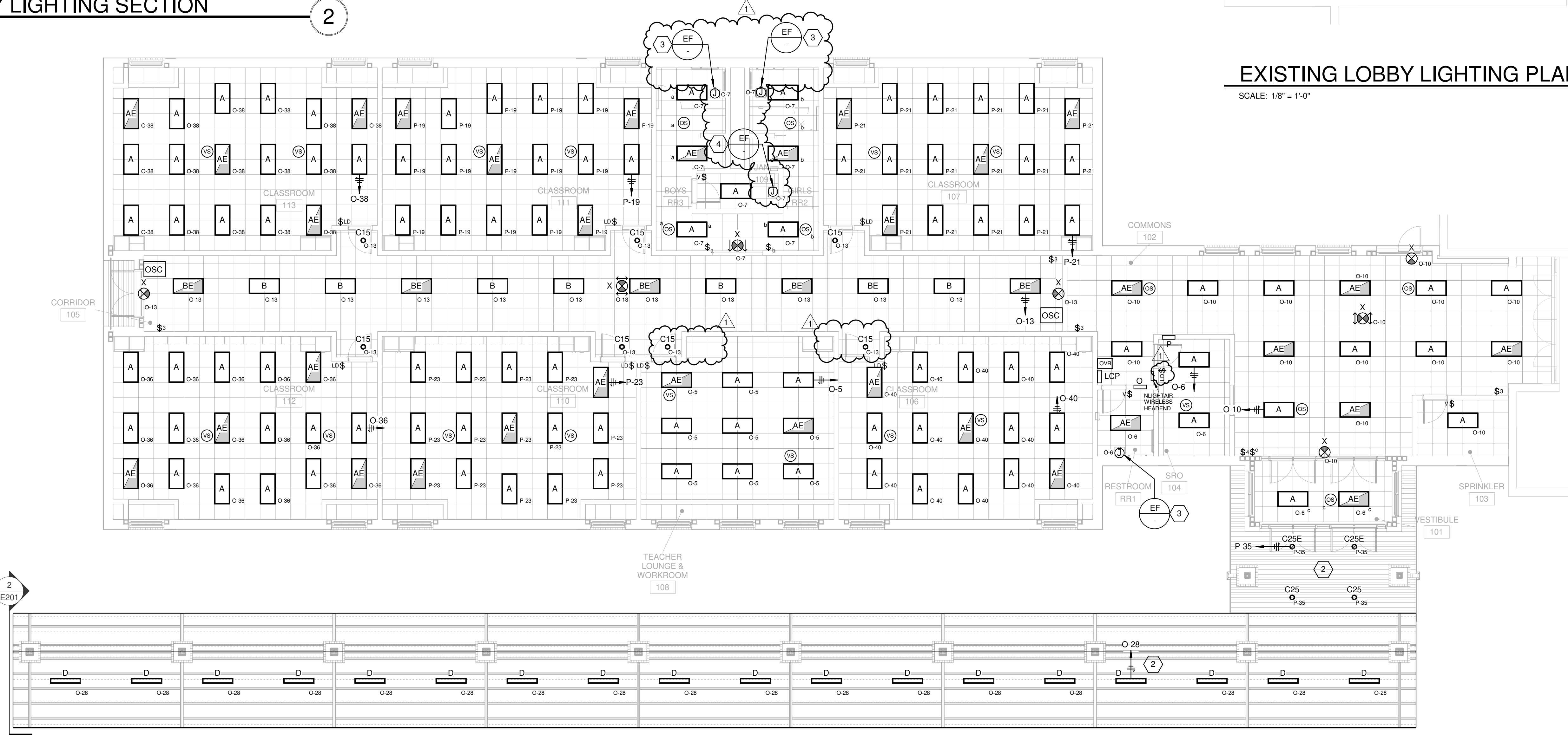
1. REPLACE EXISTING FIXTURE WITH NEW FIXTURE TYPE SHOWN. LOCATION AND QUANTITY SHOWN ARE APPROXIMATE TO BE FIELD VERIFIED BY CONTRACTOR DURING BIDDING PHASE. REUSE EXISTING WIRE AND CONDUIT.
2. SEE DETAIL 2 ON SHEET E501 FOR LIGHTING CONTROL INFORMATION.
3. PROVIDE JUNCTION BOX ABOVE CEILING FOR EXHAUST FAN CONNECTION. CONNECT TO 120V LIGHTING CIRCUIT AND SWITCH WITH LIGHTS IN SAME ROOM.
4. PROVIDE JUNCTION BOX ABOVE CEILING FOR EXHAUST FAN CONNECTION. CONNECT TO 120V UNSWITCHED LIGHTING CIRCUIT IN SAME ROOM VIA SEPARATE SWITCH ROOM.



EXISTING LOBBY LIGHTING PLAN

SCALE: 1/8" = 1'-0"

3



CLASSROOM ADDITION LIGHTING PLAN

SCALE: 1/8" = 1'-0"

1

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ELECTRICAL ENGINEER:

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PROJECT INFORMATION

PROJECT:

AN ADDITION &
 RENOVATION TO:
 NORRIS MIDDLE
 SCHOOL

PROJECT ADDRESS:

5 NORRIS SQUARE,
 NORRIS, TN 37828

PROJECT NO.: 210042-04

ACTIVE DESIGN PHASE

- FOR REVIEW ONLY
- FOR PERMITTING ONLY
- SCHEMATIC DESIGN
- DESIGN DEVELOPMENT
- CONSTRUCTION BIDDING
- CONSTRUCTION DOCUMENTS
- AS-BUILT RECORD SET

REVISION INFORMATION

NO.	DATE	DESCRIPTION
1	02/22/2022	Addendum #1

KEY PLAN

SHEET INFORMATION

SHEET ISSUED: 02/04/2022
 DESIGNED BY: WAH
 DRAWN BY: WAH
 REVIEWED BY: SMN
 SHEET TITLE:

LIGHTING PLANS

SHEET NO.:

E201

GENERAL SHEET NOTES

1. SEE SHEET E001 FOR ELECTRICAL LEGEND AND GENERAL NOTES.

KEYED SHEET NOTES

1. PROVIDE QUANTITY OF TAMPER AND FLOW SWITCHES AS REQUIRED.
2. THIS DEVICE TO BE HORN/STROBE IN LIEU OF SPEAKER/STROBE.
3. DATA RACK FURNISHED AND INSTALLED BY OWNER.
4. EXTEND (2) 1" CONDUITS AND WIRING FROM FLOORBOX UNDERGROUND TO NEAREST FULL-HEIGHT WALL, UP IN WALL AND STUBBED OUT TO ABOVE ACCESSIBLE CEILING WITH BUSHING.
5. 2" C WITH PULLSTRING FROM NEW DATA RACK TO EXISTING DATA RACK IN ROOM BEHIND LIBRARY. SEE KEYED NOTE 3 ON SHEET E101 FOR INTERCONNECTION LOCATION.
6. FURNISH AND INSTALL 1-1/4" C AND ASSOCIATED WIRING FROM NEW FACP TO EXISTING FACP. PROVIDE NECESSARY COMPONENTS AND PROGRAMMING FOR BOTH SYSTEMS TO MONITOR TROUBLES AND ALARMS ON BOTH PANELS SO THAT BOTH PANELS GO INTO ALARM IF EITHER PANEL GOES INTO ALARM. SEE DETAIL 1/E101 FOR EXISTING FACP LOCATION.
7. EXTEND 1-1/4" C WITH PULLSTRING FROM ABOVE ACCESSIBLE CEILING TO EXISTING PHONE TBB LOCATION FOR PHONE CABLING. CABLING BY OTHERS. SEE DETAIL 1/E101 FOR EXISTING PHONE TBB LOCATION.
8. EXTEND 1-1/4" C WITH PULLSTRING FROM ABOVE ACCESSIBLE CEILING TO EXISTING PA HEADEND LOCATION FOR NEW PA SPEAKERS. CABLING BY OTHERS. SEE DETAIL 1/E101 FOR PA HEADEND LOCATION.
9. PROVIDE CONDUIT PROVISIONS FOR INTERLOCK OF ACCESS CONTROL AND MOTORIZED DOORS. OUTSIDE OF NORMAL HOURS, THE EXTERIOR PUSH BUTTON SHOULD ONLY OPERATE DOOR IF ACCESS IS GRANTED VIA THE CARD READER AND THE BUTTON IS PUSHED.
10. FURNISH AND INSTALL MIC AND REMOTE ANNUNCIATOR PANEL FOR NEW FACP NEXT TO EXISTING FACP LOCATION IN MAIN OFFICE RECEPTION. SEE SHEET E101 FOR EXISTING FACP LOCATION.

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PROJECT INFORMATION

PROJECT:

AN ADDITION & RENOVATION TO: NORRIS MIDDLE SCHOOL

PROJECT ADDRESS:

5 NORRIS SQUARE,
NORRIS, TN 37828

PROJECT NO.: 210042-04

ACTIVE DESIGN PHASE

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REVISION INFORMATION

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1	02/22/2022	Addendum #1

KEY PLAN

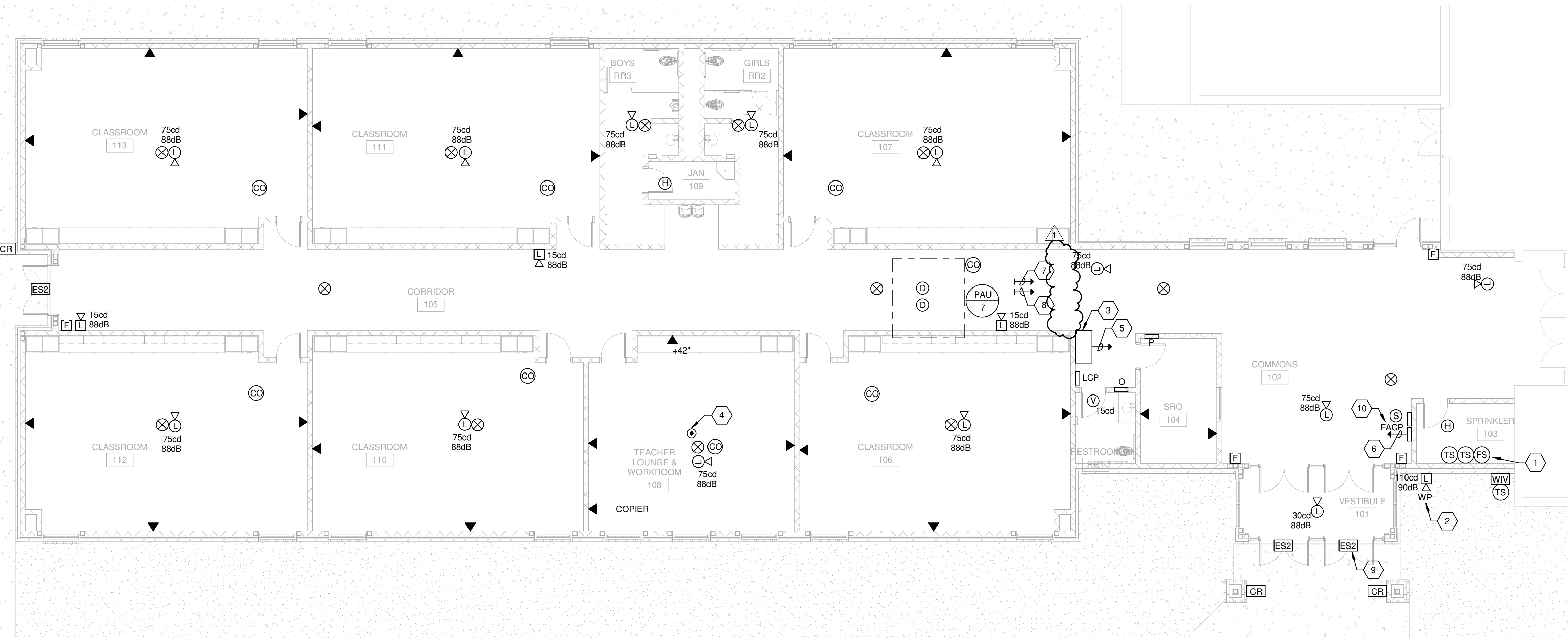
SHEET INFORMATION

SHEET ISSUED: 02/04/2022
DESIGNED BY: WAH
DRAWN BY: WAH
REVIEWED BY: SMN
SHEET TITLE:

CLASSROOM ADDITION
FIRE ALARM AND
COMMUNICATIONS
PLAN

SHEET NO.:

E311



CLASSROOM ADDITION FIRE ALARM AND COMMUNICATIONS PLAN

SCALE: 1/8" = 1'-0"

1

P:\Arch\Projects\2022\1101042_Archives\County School Board\210042-04_Classroom Addition for Norris Middle School\08_Electrical\210042-04_Elec_rxd1.rvt
 2/22/2022 9:40:12 AM

Branch Panel: O

Location: RESTROOM RR1
Supply From:
Mounting: RECESSED
Enclosure: TYPE 1

Volts: 120/208 3P
Phases: 3
Wires: 4

A.I.C. Rating: 35,000
Mains Type: BREAKER
Mains Rating: 200 A
MCB Rating: 200 A

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT	
1	R - COPIER 108	20 A	1	1500...	720 VA			1	20 A R - BATHROOMS RR1,RR2,RR3	2	
3	R - WORKROOM 108 FLOOR	20 A	1		360 VA 900 VA			1	20 A R - COMMONS 102	4	
5	L - WORKROOM 108	20 A	1			495 VA 285 VA		1	20 A L - VEST.101, ENTRY CANOPY, SRO 104, RR1	6	
7	L - RR2, RR3, JANITOR 109	20 A	1	420 VA 540 VA				1	20 A R - CLASSROOM 106	8	
9	R - EXTERIOR WEST	20 A	1		900 VA 785 VA			1	20 A L - COMMONS 102, SPRINKLER 103	10	
11	R - CLASSROOM 107	20 A	1			540 VA 675 VA		1	20 A E - RECIRC. PUMP	12	
13	L - CORRIDOR 105	20 A	1	897 VA 180 VA				1	20 A R - WATER FOUNTAIN -GFI	14	
15	R - CORRIDOR 105 & SPRINKLER 103	20 A	1		900 VA 1500...			1	20 A R - CHR.G. 2 - CLASSROOM 113	16	
17	R - JANITOR 109, SRO 104, VEST. 101	20 A	1			720 VA 1500...		1	20 A R - CHR.G. 2 - CLASSROOM 111	18	
19	R - CHR.G. 2 - CLASSROOM 110	20 A	1	1500...	1500...			1	20 A R - CHR.G. 2 - CLASSROOM 112	20	
21	R - CHR.G. 2 - CLASSROOM 106	20 A	1		1500...	1500...		1	20 A R - CHR.G. 1 - CLASSROOM 113	22	
23	R - CHR.G. 2 - CLASSROOM 107	20 A	1			1500...	1500...	1	20 A R - CHR.G. 1 - CLASSROOM 111	24	
25	R - CHR.G. 1 - CLASSROOM 110	20 A	1	1500...	1500...			1	20 A R - CHR.G. 1 - CLASSROOM 112	26	
27	R - CHR.G. 1 - CLASSROOM 106	20 A	1		1500...	720 VA		1	20 A L - DROP-OFF CANOPY	28	
29	R - CHR.G. 1 - CLASSROOM 107	20 A	1			1500...	1080...	1	20 A R - EXTERIOR EAST	30	
31	R - CLASSROOM 113	20 A	1	540 VA 540 VA				1	20 A R - WORKROOM 108	32	
33	R - CLASSROOM 111	20 A	1		540 VA 540 VA			1	20 A R - CLASSROOM 110	34	
35	R - CLASSROOM 112	20 A	1			540 VA 935 VA		1	20 A L - CLASSROOM 112	36	
37	SPARE	20 A	1	0 VA 935 VA				1	20 A L - CLASSROOM 113	38	
39	SPARE	20 A	1		0 VA 825 VA			1	20 A L - CLASSROOM 106	40	
41	SPARE	20 A	1				0 VA 3000...	3	45 A H - PAU-7	42	
43	L - WALL PACKS	20 A	1	360 VA 3000...						44	
45	L - WALL PACKS	20 A	1		250 VA 3000...					46	
47	E - MOTORIZED DOORS	20 A	1			1800...	701 VA	2	20 A L - SITE LIGHTING	48	
49	TVSS - NOTE 1	30 A	3	0 VA 701 VA						50	
51	--	--	--		0 VA 226 VA			2	20 A L - SITE LIGHTING	52	
53	--	--	--			0 VA 226 VA				54	
				Total Load:	16333 VA	15946 VA	16997 VA				
				Total Amps:	137 A	133 A	142 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
H - HVAC	9000 VA	100.00%	9000 VA	
L - LIGHTING	6257 VA	100.00%	6257 VA	Total Conn. Load: 49276 VA
R - RECEPTACLE	27540 VA	68.16%	18770 VA	Total Est. Demand: 39502 VA
E - EQUIPMENT	2515 VA	75.00%	1886 VA	Total Conn. Current: 137 A
A - APPLIANCE	1500 VA	75.00%	1125 VA	Total Est. Demand Current: 110 A

NOTES: 1) FURNISH AND INSTALL TVSS EXTERNAL TO PANEL, RATINGS PER SPECIFICATIONS.

Branch Panel: P

Location: COMMONS 102
Supply From:
Mounting: RECESSED
Enclosure: TYPE 1

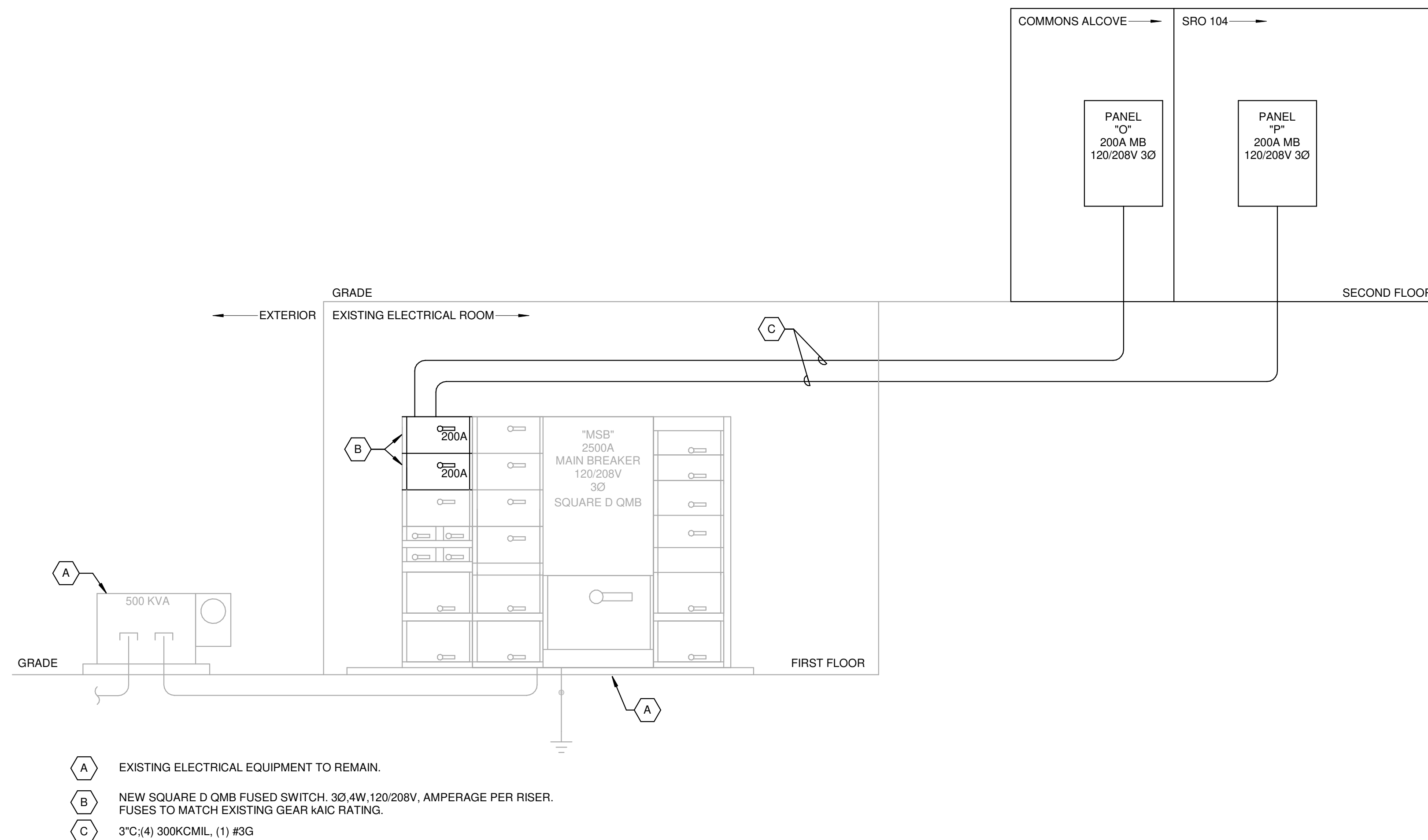
Volts: 120/208 3P
Phases: 3
Wires: 4

A.I.C. Rating: 35,000
Mains Type: BREAKER
Mains Rating: 200 A
MCB Rating: 200 A

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT	
1	H - PAU-1	30 A	3	2307...	2307...			3	30 A H - PAU-2	2	
3	--	--	--		2307...	2307...		--	--	4	
5	--	--	--			2307...	2307...	--	--	6	
7	H - PAU-3	30 A	3	2307...	2307...			3	30 A H - PAU-4	8	
9	--	--	--		2307...	2307...		--	--	10	
11	--	--	--			2307...	2307...	--	--	12	
13	H - PAU-5	30 A	3	2307...	2307...			3	30 A H - PAU-6	14	
15	--	--	--		2307...	2307...		--	--	16	
17	--	--	--			2307...	2307...	--	--	18	
19	L - CLASSROOM 111	20 A	1	935 VA 1625...				2	30 A H - PAU-8	20	
21	L - CLASSROOM 107	20 A	1		935 VA 1625...			--	--	22	
23	L - CLASSROOM 110	20 A	1			825 VA 720 VA		1	20 A R - ROOFTOP	24	
25	R - CLASSROOM 112	20 A	1	540 VA 360 VA				1	20 A R - ROOFTOP	26	
27	R - WORKROOM 108	20 A	1		540 VA 540 VA			1	20 A R - CLASSROOM 110	28	
29	R - CLASSROOM 113	20 A	1			540 VA 540 VA		1	20 A R - CLASSROOM 106	30	
31	R - CLASSROOM 107	20 A	1	540 VA 540 VA				1	20 A R - CLASSROOM 111	32	
33	R - DATA RACK	20 A	1		720 VA 500 VA			1	20 A E - FACP - NOTE 2	34	
35	L - ENTRY CANOPY AND VESTIBULE 101	20 A	1			120 VA 2250...		2	30 A H - WH-1	36	
37	TVSS - NOTE 1	30 A	3	0 VA 2250...				--	--	38	
39	--	--	--		0 VA 0 VA			1	20 A SPARE	40	
41	--	--	--			0 VA 0 VA		1	20 A SPARE	42	
				Total Load:	20630 VA	18700 VA	18835 VA				
				Total Amps:	172 A	156 A	157 A				

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals
H - HVAC	44770 VA	100.00%	44770 VA	
L - LIGHTING	2815 VA	100.00%	2815 VA	Total Conn. Load: 58165 VA
R - RECEPTACLE	5580 VA	100.00%	5580 VA	Total Est. Demand: 56915 VA
E - EQUIPMENT	5000 VA	75.00%	3750 VA	Total Conn. Current: 161 A
				Total Est. Demand Current: 158 A

NOTES: 1) FURNISH AND INSTALL TVSS EXTERNAL TO PANEL, RATINGS PER SPECIFICATIONS. 2) CIRCUIT SHALL BE RED, PROVIDED WITH LOCK-ON DEVICE AND LABELED AS "FIRE ALARM CIRCUIT".



RISER DIAGRAM

SCALE: N.T.S.

1

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PROJECT NO.: 210042-04

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1	02/22/2022	Addendum #1

KEY PLAN

SHEET INFORMATION

SHEET ISSUED: 02/04/2022
DESIGNED BY: WAH
DRAWN BY: WAH
REVIEWED BY: SMN
SHEET TITLE:

RISER DIAGRAM AND
PANELBOARD
SCHEDULES

SHEET NO.:

E401