ADDENDUM DATE: March 26, 2024

PROJECT: Northwoods Park Middle School Gymnasium & Renovation

904 Sioux Dr.

Jacksonville, NC 28540

OWNER: Onslow County Schools

200 Broadhurst Rd Jacksonville, NC 28540

ARCHITECT: Smith Sinnett Architecture, P.A.

4600 Lake Boone Trail, Suite 205 Raleigh, North Carolina 27607

BIDS DUE: Thursday, April 11th, 2024 at 2:00 p.m.

Onslow County Schools Office

200 Broadhurst Rd. Jacksonville, NC 28540 Meeting Room # 4



<u>Please note, Project Documents, Addenda, and Contractors list are available at www.smithsinnett.com</u> <u>under the 'Documents' icon on the navigation bar.</u>

Among other items, this Addendum addresses the Pre-Bid Agenda notes and Sign In sheet of those that attended are attached.

This Addendum shall be included in the contract for the above-referenced project. All General, Supplementary and Special Conditions, etc., as originally specified or as modified below shall apply to these items.

General

- 1. All questions and Requests for Substitution shall be submitted to the Architect prior to April 4th, 2024.
- 2. Exhibit A Existing Drawings have been attached to this addendum.

Specifications

1. **Replace**: Section 04 20 00 - 5 – Unit Masonry

Section updated to provide correct information on brick size and bond pattern per architectural drawings.

2. **Replace:** Section 08 45 23 - 3 – Translucent Wall and Roof Assemblies

Section updated to provide correct Manufacturers 2.1. Kingspan has been deleted and replaced with Major

Industries.

Architectural – Drawings

1. **Revision:** Replace sheet A1-02 FLOOR PLAN – GYM ADDITION

Floor plan has been revised to show concrete bench beyond and extents of sidewalk around the gym

addition.

2. **Revision:** Remove example sheets EX1.0, EX1.1 and the Duke Energy Progress lighting plan from the bid set.

Attached:

Pre-Bid Conference Agenda (19th March, 2024)
Pre-Bid Sign In (19th March, 2024)
Section 04 20 00 - 5 – Unit Masonry
Section 08 45 23 - 3 – Translucent Wall and Roof Assemblies
Sheet A1-02 FLOOR PLAN – GYM ADDITION
Exhibit A – Existing Drawings



Owner: Onslow County Schools

200 Broadhurst Rd.

Jacksonville, North Carolina 27870

Location: 904 Sioux Dr, Jacksonville NC 28540

Architect: Smith Sinnett Architecture, P.A.

4600 Lake Boone Trail, Suite 205

Raleigh, NC 27607 Phone: (919) 781-8582 Fax: (919) 781-3979

Amber Christensen achristensen@smithsinnett.com

Christine Proctor <u>cproctor@smithsinnett.com</u> Ed Gordon <u>egordon@smithsinnett.com</u>

On behalf of the Owner and Smith Sinnett Architecture, we would like to thank you for your interest and attendance at this Pre-Bid Conference.

I Bid:

Bids will be received until 2:00 pm on Thursday April 11th, 2024 for a Single Prime Contract at:

Onslow County Schools Administration 200 Broadhurst Road Jacksonville, NC 28540

• Meeting Room #4

As this is a formal bid process, all bids will be opened publicly at 2:00 p.m. on the date listed above.

II Bid Day Documents: Refer to Specifications.

- 1. Proposal Form Signed, Sealed and Attested (or witnessed)
- 2. Bid Bond (5%) or Certified Check (5%)
- 3. Minority Business Guidelines (10% Goal)
- 4. Affidavit A or Affidavit B
- 5. E-Verify Affidavit Exhibit A
- 6. Bid envelope should be sealed with the following information listed on the outside of the envelope.
 - a. Bidder's Name and Address
 - b. North Carolina Contractor's License Number
 - c. Name of Project
- 7. If awarded the Contract, the Bidder must provide an executed Performance Bond and Payment Bond for 100% of the Contract by a company licensed in North Carolina. Certificates of Insurance meeting the requirements indicated in the Specifications will also be required.
- 8. Any bids that have qualifying notes or comments will be rejected.
- 9. For mailed bids, it is the contractor's responsibility to ensure the bid arrives prior to the bid opening time. Place the bid in a double envelope with "Sealed Bid Do Not Open" written on the envelope.



III Alternates / Allowances:

ALTERNATES:

- A. <u>Alternate No. 1; Paint Existing Exposed Steel:</u> State the amount to be added to the Base Bid for providing all labor and materials to prepare and paint all exterior exposed steel as shown and noted in the Contract Drawings per the plans and specifications.
- B. <u>Alternate No. 2; Owner Preferred Door Hardware Manufacturers:</u> State the amount to be added to the Base Bid for providing all labor and materials indicated and required to accomplish Work involved in providing the Owner Preferred Manufacturers Listed Below:

Door Locks: Manufacturer / Schlage
 Exit Devices: Manufacturer / Von Duprin
 Closers: Manufacturer / LCN

C. <u>Alternate No. 3; Owner Preferred Plumbing Manufacturer:</u> State the amount to be added to the Base Bid for providing all labor and materials indicated and required to accomplish Work involved in providing the Owner Preferred Manufacturers Listed Below:

1. Water Cooler with Bottle Filler: Manufacturer / Elkay

- D. <u>Alternate No. 4; Owner Preferred Mechanical Manufacturers:</u> State the amount to be added to the Base Bid for providing all labor and materials indicated and required to accomplish Work involved in providing the Owner Preferred Manufacturers Listed Below:
 - 1. HVAC Equipment for Chillers and Air Handlers: Manufacturer
 - a. Trane For the Existing Building Renovation portion of the project
 - b. Aaon For the new Gymnasium Building
 - 2. HVAC Controls: Manufacturer / Schneider <u>OR</u> Brady
- E. <u>Alternate No. 5; Owner Preferred Electrical Manufacturers:</u> State the amount to be added to the Base Bid for providing all labor and materials indicated and required to accomplish Work involved in providing the Owner Preferred Manufacturers Listed Below:

Fire Alarm System: Manufacturer / Notifier
 Electrical Equipment: Manufacturer / Square D
 Intercom Equipment: Manufacturer / Nyquist Paging

F. Alternate No. 6; Owner Preferred Termite Treatment Manufacturer: State the amount to be added to the Base Bid for providing all labor and materials indicated and required to accomplish Work involved in providing the Owner Preferred Manufacturers Listed Below:

1. Termiticide / Termidor SC

G. <u>Alternate No. 7; Owner Preferred Translucent Wall Manufacturer:</u> State the amount to be added to the Base Bid for providing all labor and materials indicated and required to accomplish Work involved in providing the Owner Preferred Manufacturers Listed Below:

1. Translucent Wall Assemblies / Kalwall

H. Note that for any and all Preferred Alternates, equal products are **ONLY** allowed in the Base Bid.



ALLOWANCES

(Refer to Division 01 Section 01 21 00 – Allowances for amounts to be included in bid) *** Follow the below numbering when filling out the proposal form.

- A. <u>Allowance No. UP/A-1</u>: Unsuitable soils removal and disposal <u>off-site</u>.
 - 1. Purpose: To adjust the contract sum in case a quantity different from that indicated in the allowance is required.
 - 2. Unit of measurement: cubic yard in place prior before removal.
 - 3. Include the following in the unit price:
 - a. Excavation, loading, transport and legal disposal of all materials.
 - b. All disposal fees.
 - c. Overhead and profit.
 - 4. Include all other related costs in the contract sum.
 - 5. Method of measurement: Quantities will be verified by a soils and materials engineer employed by the Owner.
 - 6. Quantity Allowance: Coordinate unit price with allowance adjustment requirements of Division 01 Section "Allowances."
 - 7. Allowance Quantity: 1,000-cy.
- B. <u>Allowance No. UP/A-2</u>: Replacement of removed rock or unsuitable soils removal with <u>off-site</u> suitable soil inplace.
 - 1. Purpose: To adjust the contract sum in case a quantity different from that indicated in the allowance is required.
 - 2. Unit of measurement: cubic vard of void to be filled.
 - 3. Include the following in the unit price:
 - a. Suitable soil materials from Contractor's off-site source.
 - b. Excavation, loading, transport, placement, moisture control and compaction of suitable soil into void remaining from removed rock or unsuitable soil.
 - c. Overhead and profit.
 - 4. Include all other related costs in the contract sum. Unit price shall not include the excavation of unsuitable soil or rock.
 - 5. Method of measurement: Quantities will be verified by a soils and materials engineer employed by the Owner
 - 6. Quantity Allowance: Coordinate unit price with allowance adjustment requirements of Division 01 Section "Allowances."
 - 7. Allowance Quantity: 500-cy.
- C. <u>Allowance No. UP/A-3</u>: Replacement of authorized excavation of unsuitable soils or rock with Aggregate Base Course (ABC) stone material.
 - Purpose: To adjust the contract sum in case a quantity different from that indicated in the allowance is required.
 - 2. Unit of measurement: cubic yard of void to be filled, compacted in place.
 - 3. Include the following in the unit price:
 - a. Certified ABC materials from Contractor's off-site source.
 - b. Excavation, loading, transport, placement, moisture control and compaction of materials into void remaining from removed rock or unsuitable soils.
 - c. Overhead and profit.
 - 4. Include all other related costs in the contract sum. Unit price shall not include the excavation of unsuitable soil or rock.
 - 5. Include costs related to removal of rock or unsuitable soil in other Unit Prices.
 - Method of measurement: Quantities will be verified by a soils and materials engineer employed by the Owner.
 - 7. Quantity Allowance: Coordinate unit price with allowance adjustment requirements of Division 01 Section "Allowances."
 - 8. Allowance Quantity: 250-cy.



- Allowance No. UP/A-4: Replacement of authorized excavation of unsuitable soils or rock with #57 Washed Stone material.
 - 1. Purpose: To adjust the contract sum in case a quantity different from that indicated in the allowance is required.
 - 2. Unit of measurement: cubic yard of void to be filled, compacted in place.
 - 3. Include the following in the unit price:
 - a. Certified #57 Washed Stone materials from Contractor's off-site source.
 - b. Excavation, loading, transport, placement, moisture control and compaction of materials into void remaining from removed rock or unsuitable soil.
 - c. Overhead and profit.
 - 4. Include all other related costs in the contract sum. Unit price shall not include the excavation of unsuitable soil or rock.
 - 5. Include costs related to removal of rock or unsuitable soil in other Unit Prices.
 - 6. Method of measurement: Quantities will be verified by a soils and materials engineer employed by the Owner based on volume of void to be filled.
 - 7. Quantity Allowance: Coordinate unit price with allowance adjustment requirements of Division 01 Section "Allowances."
 - 8. Allowance Quantity: 250-cy.
- E. Allowance No. UP/A-5: Woven Geo-Textile Fabric in place.
 - 1. Purpose: To adjust the contract sum in case a quantity different from that indicated in the allowance is required.
 - 2. Unit of measurement: square yard of ground surface covered. Overlap, waste or excess shall not be included in payment measurements.
 - 3. Include the following in the unit price:
 - a. Materials and transport to site.
 - b. Unloading, handling, and placement.
 - c. Overhead and profit.
 - 4. Include all other related costs in the contract sum.
 - 5. Method of measurement: Quantities will be verified by a soils and materials engineer employed by the Owner.
 - 6. Quantity Allowance: Coordinate unit price with allowance adjustment requirements of Division 01 Section "Allowances."
 - 7. Allowance Quantity: 260-sy.
- F. Allowance No. UP/A-6: Biaxial Geo-Grid in place.
 - 1. Purpose: To adjust the contract sum in case a quantity different from that indicated in the allowance is required.
 - 2. Unit of measurement: square yard of ground surface covered. Overlap, waste or excess shall not be included in payment measurements.
 - 3. Include the following in the unit price:
 - a. Materials and transport to site.
 - b. Unloading, handling, and placement.
 - c. Overhead and profit.
 - 4. Include all other related costs in the contract sum.
 - Method of measurement: Quantities will be verified by a soils and materials engineer employed by the Owner.
 - 6. Quantity Allowance: Coordinate unit price with allowance adjustment requirements of Division 01 Section "Allowances."
 - 7. Allowance Quantity: 260-sy.
- G. Allowance No. UP/A-7: Subsurface Drain.
 - 1. Purpose: To adjust the contract sum in case a quantity different from that indicated in the allowance is required.



- 2. Unit of measurement: linear foot of 24" wide x 36" deep backhoe excavated trenches filled with NCDOT No. 57 Stone encapsulated in non-woven geotextile fabric, Mirafi 140N, or approved equal. 4" perforated HDPE pipe installed near bottom of drain. Drain by gravity at a minimum slope of 0.25 percent.
- 3. Include the following in the unit price:
 - a. Materials and transport to site.
 - b. Unloading, handling, placement, and compaction.
 - c. Overhead and profit.
- 4. Include all other related costs in the contract sum.
- 5. Method of measurement: Quantities will be verified by a soils and materials engineer employed by the Owner.
- 6. Quantity Allowance: Coordinate unit price with allowance adjustment requirements of Division 01 Section "Allowances."
- 7. Allowance Quantity: 500-lf.

H. Allowance No. UP/A-8: Topical Moisture Mitigation System

- 1. Include sufficient moisture vapor mitigation system to be applied to the existing building's concrete slab as an Allowance in the Base Bid where moisture emissions exceed 5 lbs / 1000sf in 24 hours. Allowance shall be based on the unit price quoted in the Proposal.
- 2. Quantity: 8,000 sf.

I. Allowance No. A-9: Access Control – Security Cameras, Intrusion Detection, & Card Readers

1. Allow a lump sum for purchase and installation of Security Cameras, Intrusion Detection, and a complete Access Control System, as required by the Owner for connections between existing system and new addition and renovations, and as defined by and specified in contract documents. **Lump Sum: \$90,000.**

J. Allowance No. A-10: Structured Cabling

1. Allow a lump sum for purchase and installation of structured cabling, as defined by and specified in contract documents. **Lump Sum: \$60,000.**

K. Allowance No. A-11: Technology, Furnishings, & Gymnasium Sound System

1. Allow a lump sum for purchase and installation of network electronics and furnishings, including but not limited to switches, wireless access points, (6) mobile display carts with monitors, and complete gymnasium sound system as defined by and specified in contract documents. **Lump Sum: \$110,000.00.**

L. Allowance No. A-12: Appliances

1. Allow a lump sum for purchase and installation of appliances, as defined by and specified in contract documents. **Lump Sum: \$15,000.00.**

M. Allowance No. A-13: Signage

1. Allow a lump sum for purchase and/or construction of wayfinding, site signage, interior graphics, interior panel signage, fire extinguisher signage, and dimensional lettering, as defined by and specified in "Signage" section of Division 10. Signage material and applicable sales taxes will be paid for as part of this allowance. Note: Labor for Sign Installation shall be included in the Base Bid. **Lump Sum: \$10,000.00.**

N. Allowance No. A-14: Bi-directional Amplification (BDA)

- 1. Allow a lump sum for purchase and installation of a BDA system. Determination of the need of a BDA system will be determined via field testing which will occur near the end of construction.
- 2. Lump Sum: \$75,000.

O. Allowance No. A-14: Contingency

1. Contingency allowance shall be provided as follows and the price shall be adjusted based on the actual cost of subcontracts, materials, and labor, excluding overhead and profit. Allowances for overhead and



profit shall be provided within the contract price. If there is unused allowance at the conclusion of the project, the allowance plus 5% profit will be deducted from the contract.

2. Contingency: \$385,000.00

IV E-Procurement Vendors

E-Procurement rules WILL apply for Registered E-Procurement Vendors only. If the low bidder is an E-Procurement Vendor, the owner will not be responsible for any fees associated with the E-Procurement process incurred by the low bidder or any subcontractor. Refer to 009010 Special Conditions Article 8.

V Schedule:

Notice to Proceed:May 10th, 2024 - anticipatedSubstantial Completion Phase 1June 1st, 2025Substantial Completion Phase 2December 1st, 2025Final Completion:30 days after Substantial Completion

VI Liquidated Damages:

See Supplementary General Conditions: \$1,000.00 each calendar day in excess of the stated completion time.

VII Examination of Bid Documents:

All Bidders are expected to fully examine and familiarize themselves with the Drawings, Specifications and Existing Conditions. All Bidders should read the scopes of the bid package. Any questions or clarifications should be directed to the Architect. No allowances will be made after the bids are received for any oversight due to failure to examine the documents.

VIII Substitutions:

Substitutions or approvals of "Equals" will only be accepted if approved by the Architect in writing at least seven (7) days business prior to the receipt of bids: April 2nd, 2024.

IX Technical Questions:

Technical questions should be submitted to the Architects representative as soon as possible by phone or preferred email.

Amber Christensen achristensen@smithsinnett.com (919) 781-8582

X Construction Documents:

This is a formal bid and construction documents and specifications are available in PDF format upon ShareFile link request. All addenda as well as the plan holders list will also be posted to the Smith Sinnett Architecture website under the "Documents" tab. If you have any issues or cannot download any of the documents, please let us know and we will work to make sure you can get them.

XI Addenda:

Addenda will be the responsibility of the contractor and every effort will be made to emailed everyone on the Architect's plan holders list.

XII Plan Holders and Bidders List:

Plan Holders and Bidders List will be posted on our website. @ http://smithsinnett.com/documents/

XII Sexual Offender Registry Check Certification Form

Exhibit B – Required Prior to Award

All Contractor, Subcontractor, and other individuals must sign in at the school to verify no person is on the registry.



XIV Architect's brief description of the project:

Verbal description / discussion / walk the project site

SIGN IN SHEET

Northwoods Park Middle School Gymnasium & Renovations

Project #: 2022035 Date: 3/19/2024

smithsinnett ARCHITECTURE

NAME	ORGANIZATION	PHONE	EMAIL
MICHAEL EINS	Attantic Contracting Desi	su 910-934-3975	michael Qacd-nc. com
Bob Persun	Atlantic Contracting	910-459-0562	bob@acd-nc.com
Knte Daniels	Daniels & Oaglels	919.920. 5442	estimating Oclanda CC.
Juff Stain	JM Thompson	252-876-	Jstain & Jmthompson. com
Parky Sehultz	COOPER-TACIA	910-330-7304	ESTIMATING @ COOPER- TACIACOM
Zac Ivel	River Contractive	162-501-3201	to with a rive rock contracting.
Johnnie Thomas	OCS	910-330-1448	Johnnier thans Oorslaw. K. 12, h
Duster Oliver	OCS		dudy diver conslar. K12. ne.
	8		
	N.		
		Ę	~
		U.	E
1			
		8	*:
11			, a
Y	-		8
	,	4	1 5
		**	

SIGN IN SHEET

smith**sinnett**

ARCHITECTURE

Northwoods Park Middle School Gymnasium & Renovations Project #: 2022035 Date: 3/19/2024

NAME	ORGANIZATION	PHONE	EMAIL	
Veces Pine		010 1/1/2 = 24	Kburgess@	
KENNETH BURGESS	DH GRIPFIN SRELKING		- dhariffin, com	1
TONY AbboH	HGREYNOLDS CO	152-471-301	tablot a HCREINOLG.	ve
Bossy Harris	HAMLEST ASSOCIATES	336-567-5063	BOBO CHANGETTON. COM	
Mary Vaugheen	Promude lawn + kirtena	910-358-104	marplaghen or ceredy)	an
Donnie Autry	EAST CAROLINA Mechanical		dautry Decmechanical.	
Quinn Lancaster	Clancy 3 theys	910-876-4637	Quinn Lancaster eclancy theys.	con
Chris Whaley	Quadrant Construction	910-937-0003	Chriswhaley ageenc.com	
GARY FERGUSON			aferguson occmechanical.	br
Jasper Doevid			19 3	
Treat King	Group III Mit	252-577-5	33 + Duvidogroup 333 trentking of	na
*				54
			18	
	7	7	¥	
	Y			
	ş.			
	,			
		*		
6		0		
				1

SIGN IN SHEET

Project #: 2022035

Northwoods Park Middle School Gymnasium & Renovations

Date: 3/19/2024

smith**sinnett**

ARCHITECTURE

PHONE **ORGANIZATION EMAIL** NAME Josh tilley @ wonte: theo.com (910) 200 9824 Monteith Co Josh Tilley MOIVAF 9194549022 julite @ pavion. com JOHN WHITE FARRIOR & SONS, INC 252.753. 2005 TIMO FARRIORANDSONS. COM TIM KANDALL GIU)581-UYG DANIEL GRAYE ONSLING (CIRING 195 910-167-3515 TEAM Unstaction 910 320 8528 Sthompson Trainlinstrution it com TEDAVIS CONST. Co. 910-353-3112 bhorne etechnis construction.com Brudy Irane mitch, lofton@ Daslow, Kid. no. us OCS 910-459-8970 065 910-473-7030 aug. schmidheiser@onslow. Kla.nens ALLY SCHMIDHEISER 910-90 340-2489 | brendan gartner@onsrow K12.nc.us 085 Brendan Garner

2.3 CONCRETE MASONRY UNITS (CMUs)

- A. Shapes: Provide shapes indicated and as follows:
 - 1. Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.
 - 2. Provide square-edged units for outside corners, unless otherwise indicated.
- B. Concrete Masonry Units: **ASTM C 90 (latest edition)**.
 - 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 2000 psi net average of three units.
 - 2. Weight Classification: Units shall be lightweight blended with aggregates that comply with ASTM C331 and ASTM C33 with a total mix weight not more than 105 lbs./cuft. and not less than 90lbs/cuft.
 - 3. Size (Width): Manufactured to dimensions 3/8 inch less than nominal dimensions.
 - 4. Exposed Faces: Provide color and texture matching the range represented by Architect's sample.
 - 5. Aggregates: Do not use aggregates made from pumice, scoria, or tuff. All units will be free of organic impurities that will cause rusting, staining, or popouts and will not contain combustible material. The use of coal cinders, coal ash, bottom ash or other similar waste products are not permitted and shall not be allowed.
 - 6. CMU used in fire rated walls shall meet UL Design Assembly criteria.
 - 7. Basis for Design: Oldcastle APG Adams: Redline
 - 8. Approved Manufacturers:
 - a. Oldcastle APG Adams
 - b. Johnson Concrete
 - c. York Building Products
 - d. Martinsville Concrete Products
 - 9. Products offered for substitution shall be pre-approved prior to bidding in accordance with the conditions of the contract documents and shall be so indicated in an addendum prior to bid only. Any other approval shall not be valid.
- C. Concrete Building Brick: ASTM C 55.
 - 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of **3500 psi**.
 - 2. Weight Classification: Normal Weight
 - 3. Size (Actual Dimensions): 3-5/8 inches wide by 2-1/4 inches high by 7-5/8 inches long.

2.4 BRICK

- A. General: Provide shapes indicated and as follows:
 - 1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.
- B. Face Brick: ASTM C 216, Grade SW Type FBX.
 - 1. Size (Actual Dimensions): 3-5/8 inches wide by 2-1/4 inches high by 7-5/8 inches long.
 - 2. Bond Pattern: Unless otherwise indicated, lay exposed masonry in running bond.
 - 3. Basis for Design:
 - a. Type 1: Palmetto Brick- Flashed Wirecut
 - b. Type 2: Palmetto Brick- Whitestone
 - 4. Provide for one of the following:
 - a. Type 1:
 - 1) Palmetto Brick: Flashed Wirecut
 - 2) Palmetto Brick: Flashed Smooth
 - 3) Triangle Brick: Flashed Common
 - 4) Approved Equal
 - b. Type 2:
 - 1) Palmetto Brick: Whitestone
 - 2) Approved Equal

UNIT MASONRY 04 20 00 - 5

Jacksonville, NC

- C. Provide anchors and inserts to be placed in adjacent construction in proper sequence so as not to delay the Work.
- D. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.
- E. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
- F. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

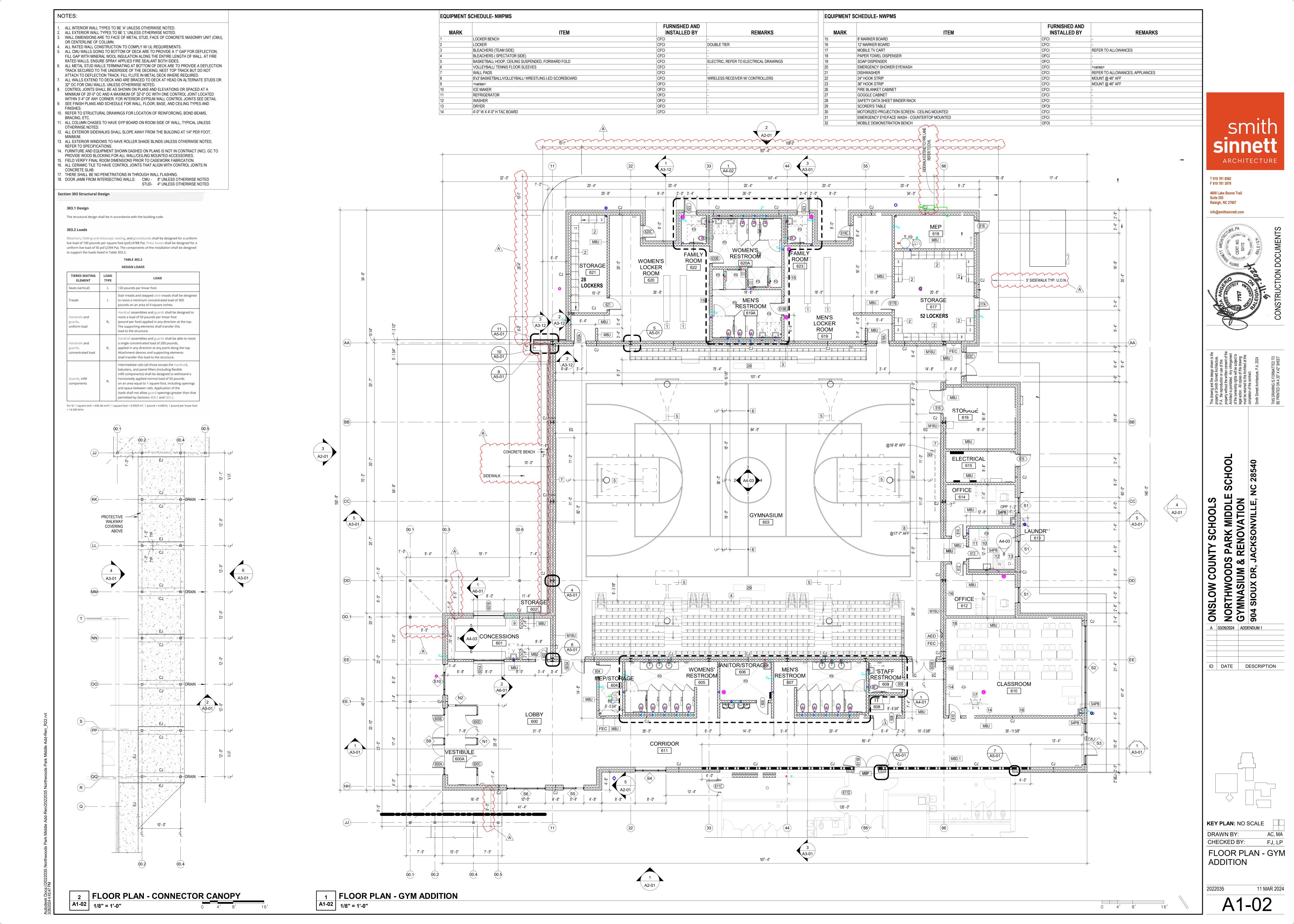
1.7 WARRANTY

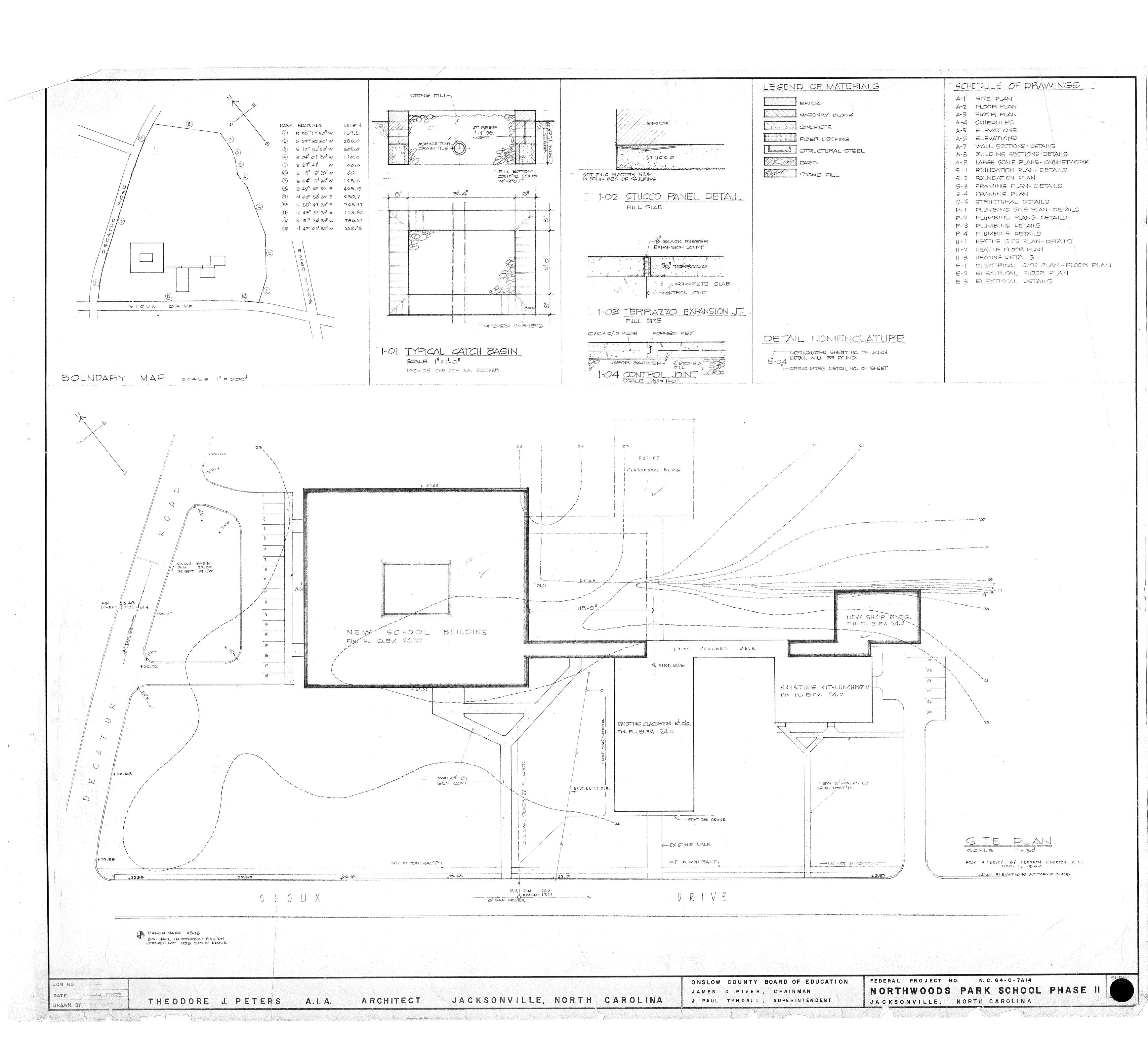
- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of units that fails in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Uncontrolled water leakage.
 - b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - c. Yellowing of acrylic glazing.
 - d. Breakage of polycarbonate glazing.
 - e. Deterioration of insulating-glass hermetic seal.
 - 2. Warranty Period: **Five** years from date of Final Acceptance.

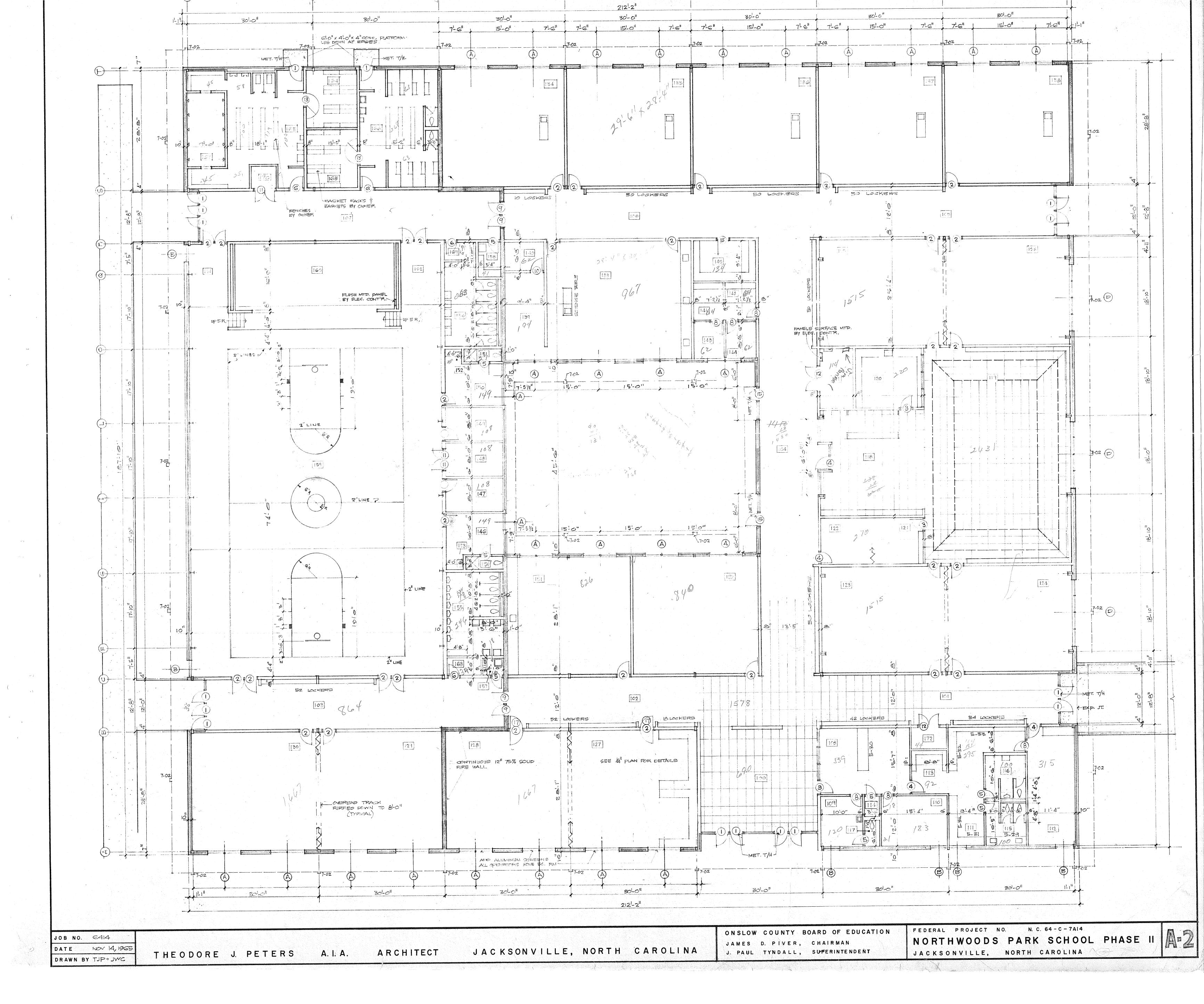
PART 2 - PRODUCTS

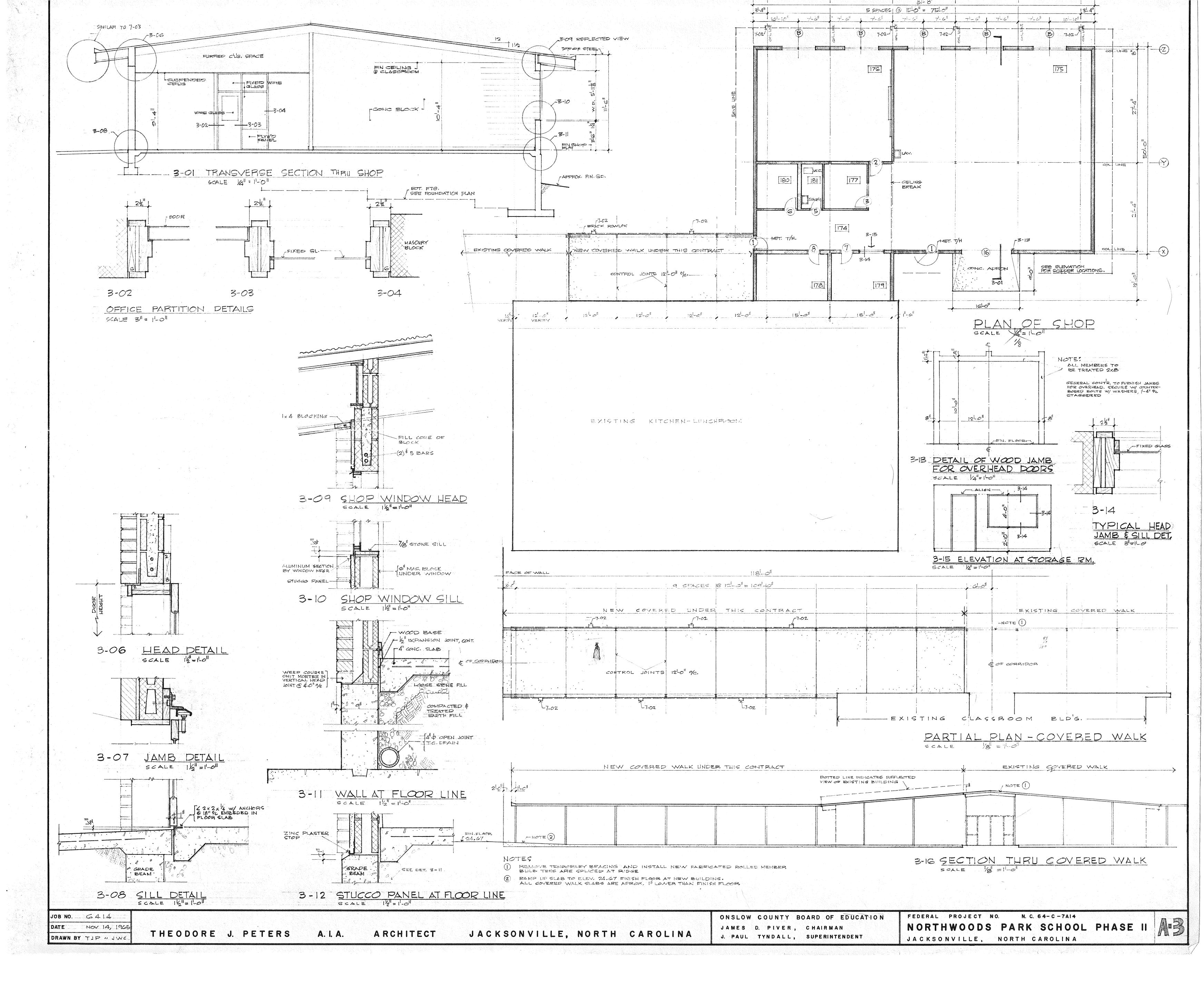
2.1 MANUFACTURERS

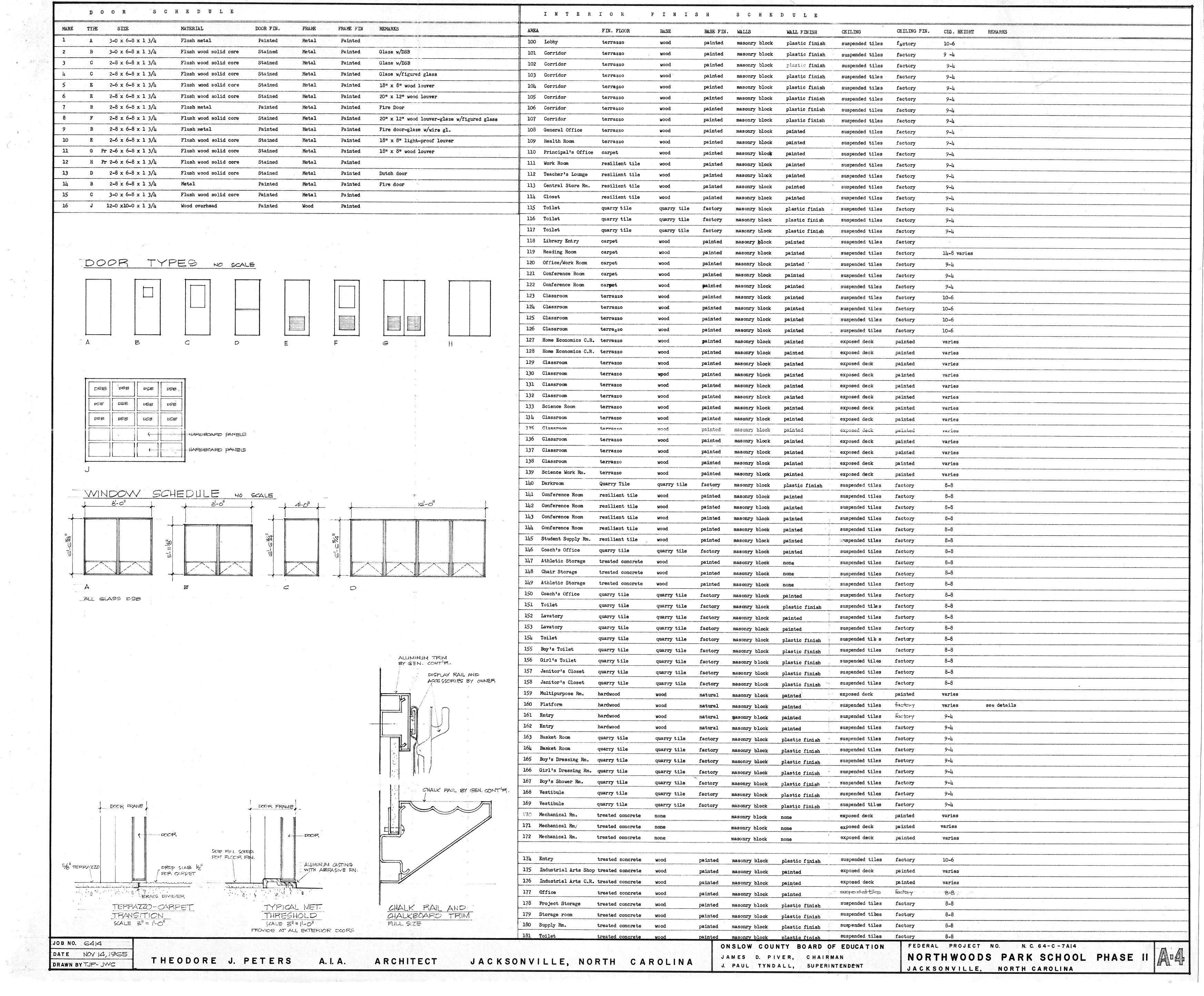
- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. American Skylites.
 - 2. APC Dayliter; C/S Group.
 - 3. Auburn Skylights; Major Industries, Inc.
 - 4. Bristolite Skylights.
 - 5. CPI International.
 - 6. Dur-Red Products.
 - 7. Exarc Skylights, Inc.
 - 8. Fiore Skylights, Inc.
 - 9. Fox Lite, Inc.; Skymaster Skylights.43
 - 10. GE Polymer Shapes; General Electric Company.
 - 11. Glazed Structures Inc.
 - 12. Hi Pro International, Inc.
 - 13. Kalwall Corporation.
 - 14. Lane-Aire Manufacturing Corp.
 - 15. Naturalite Skylight Systems; Vistawall Group (The).
 - 16. Plasteco, Inc.
 - 17. Plastic Engineering Company of Tulsa, Inc.
 - 18. Skyline Sky-Lites, LLC.
 - 19. Solar Industries, Inc.
 - 20. Sunglo Skylight Products.
 - 21. VELUX America.
 - 22. Wasco Products, Inc.
 - 23. Major Industries

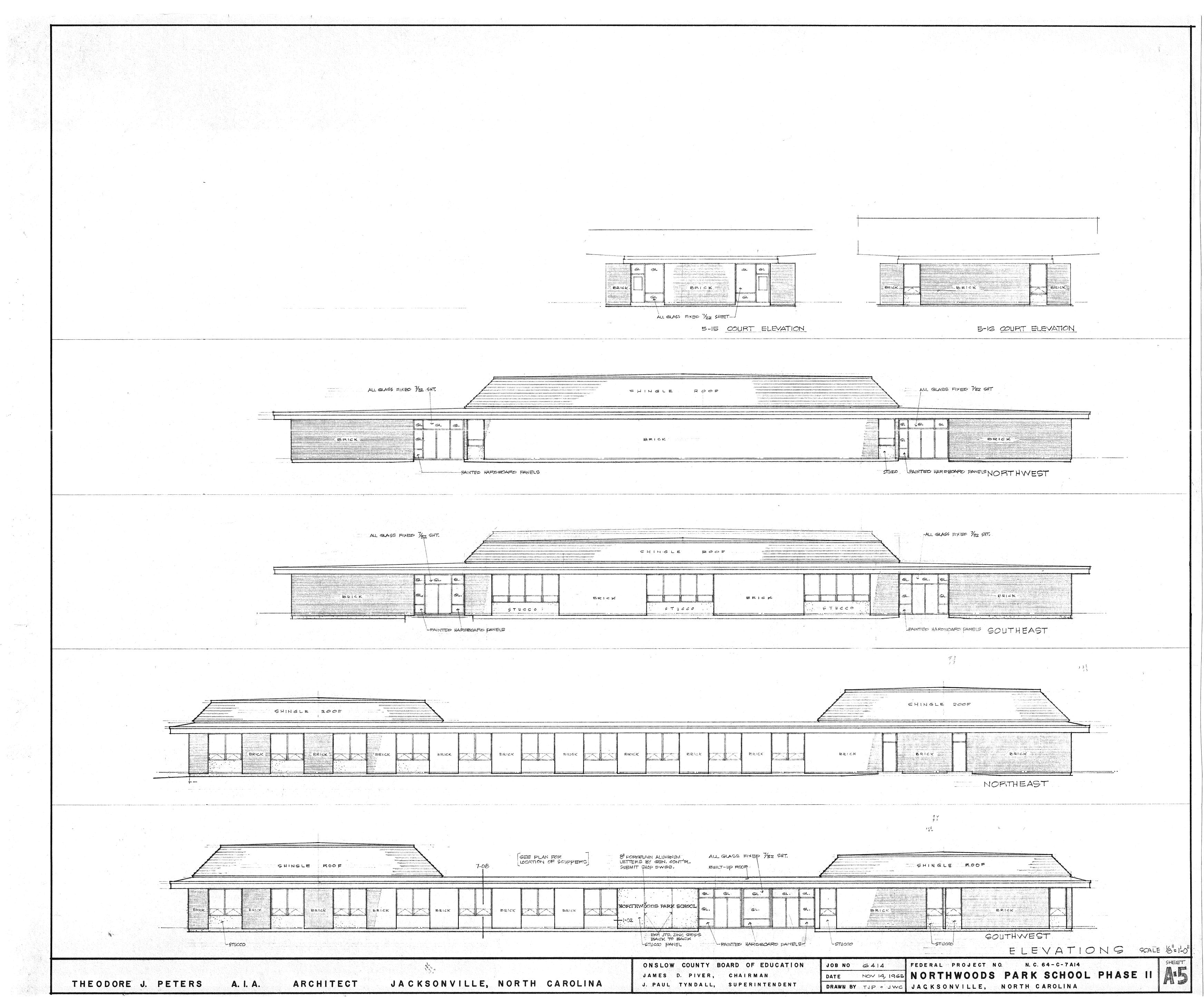


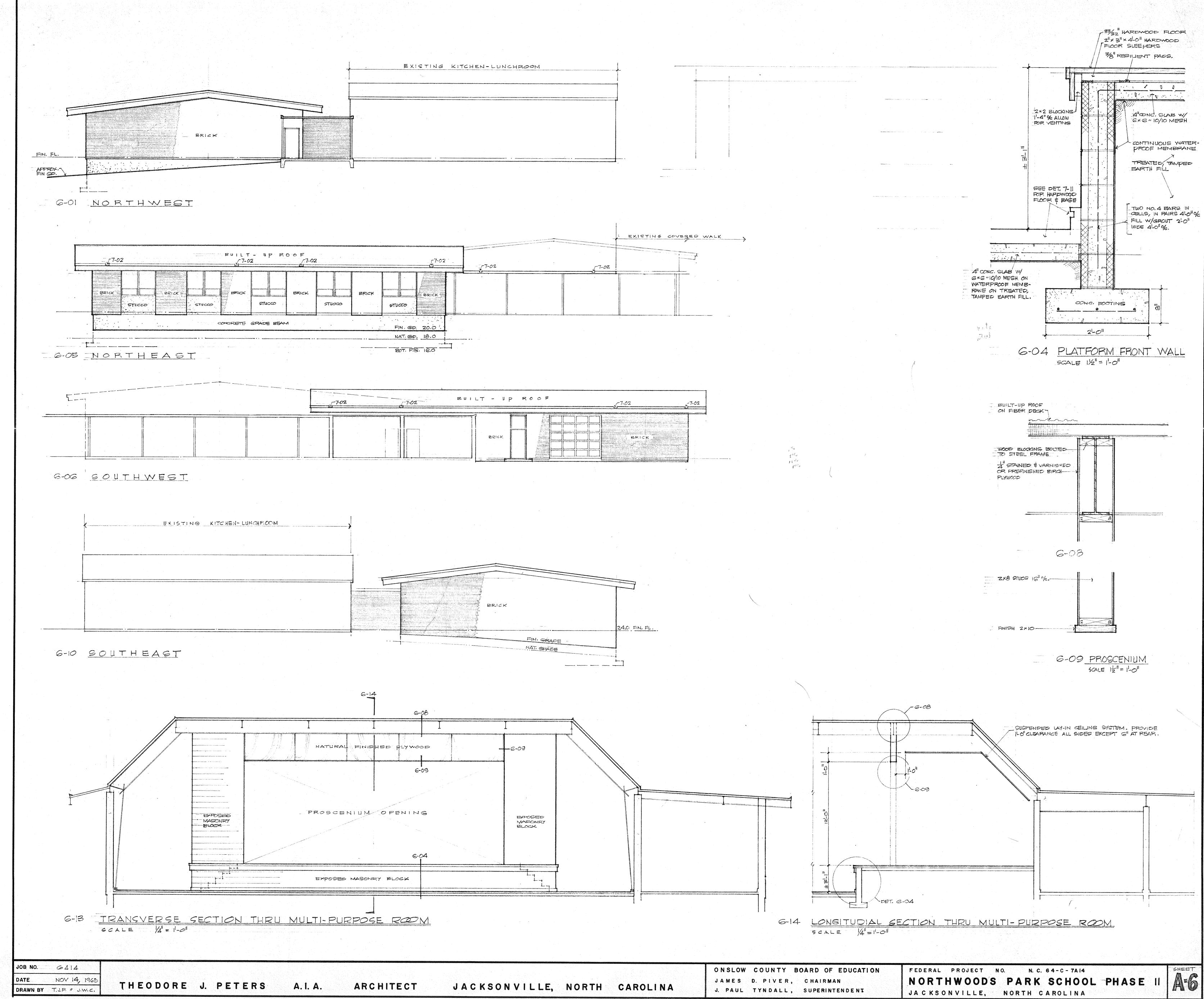


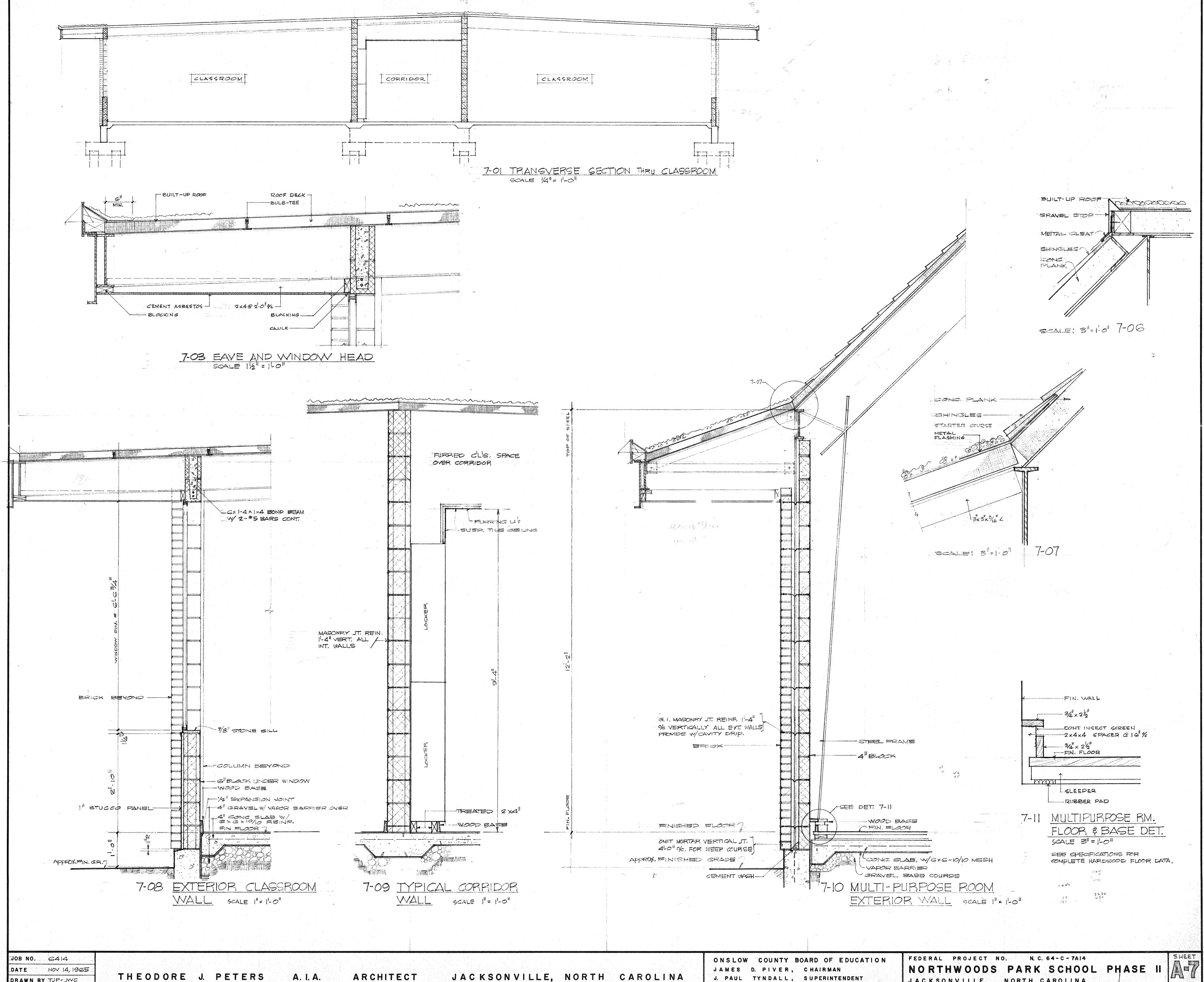










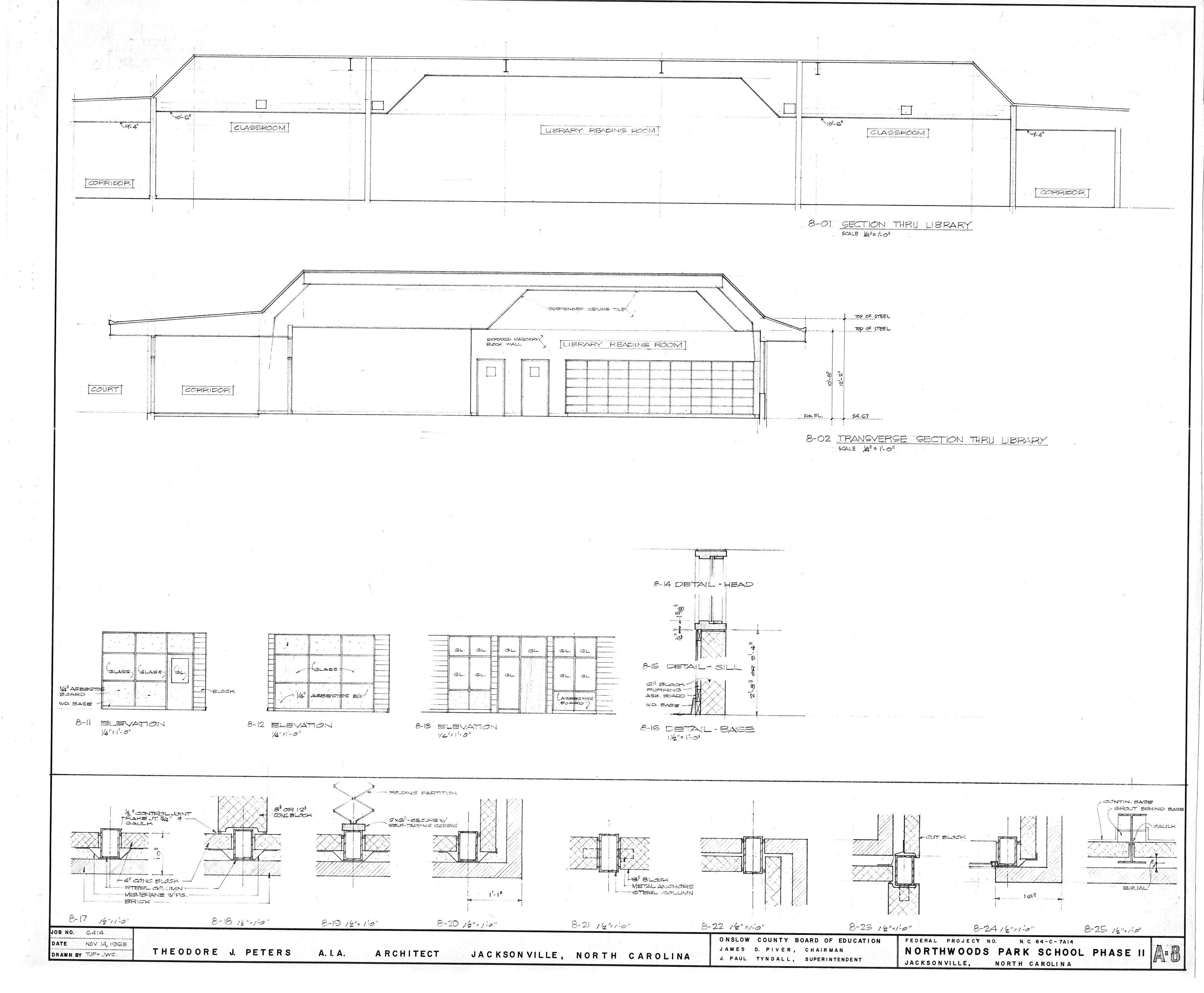


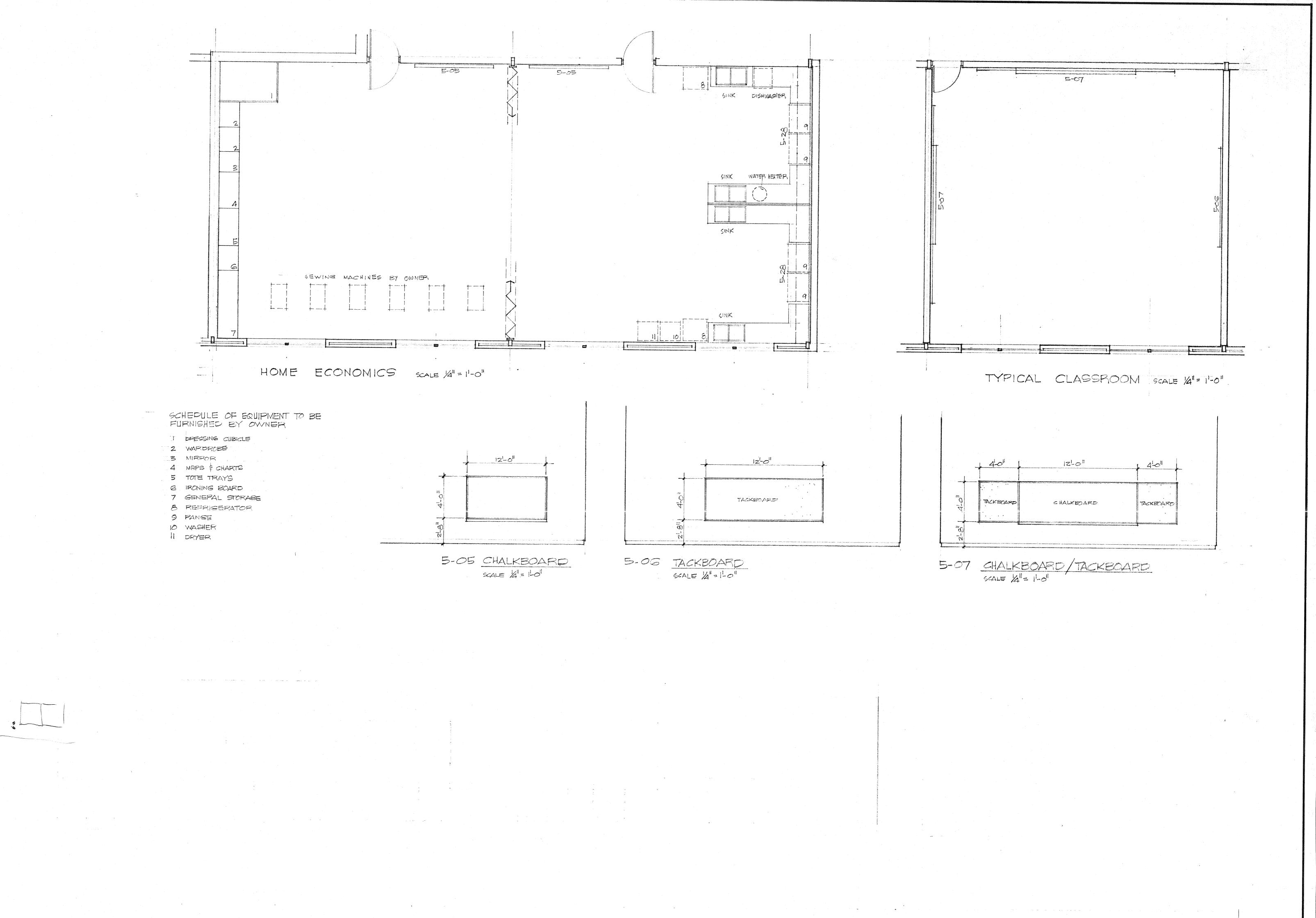
DRAWN BY TUP JWC

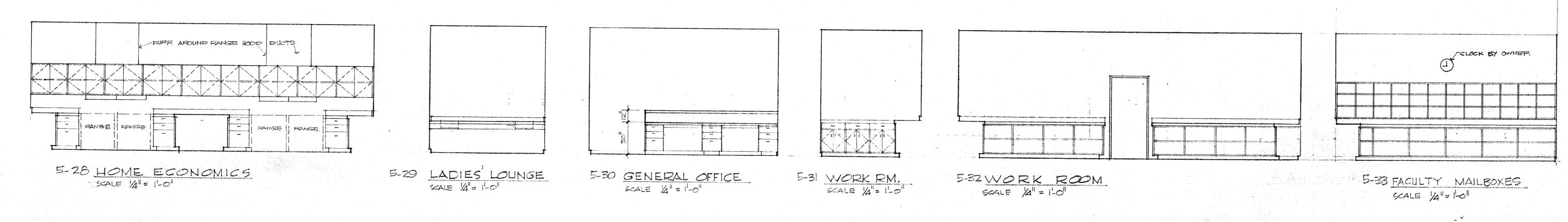
JACKSONVILLE, NORTH CAROLINA

J. PAUL TYNDALL, SUPERINTENDENT

JACKSONVILLE, NORTH CAROLINA







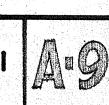
JOB NO 6414 DATE NOV 14, 1965 DRAWN BY TJP" JWC

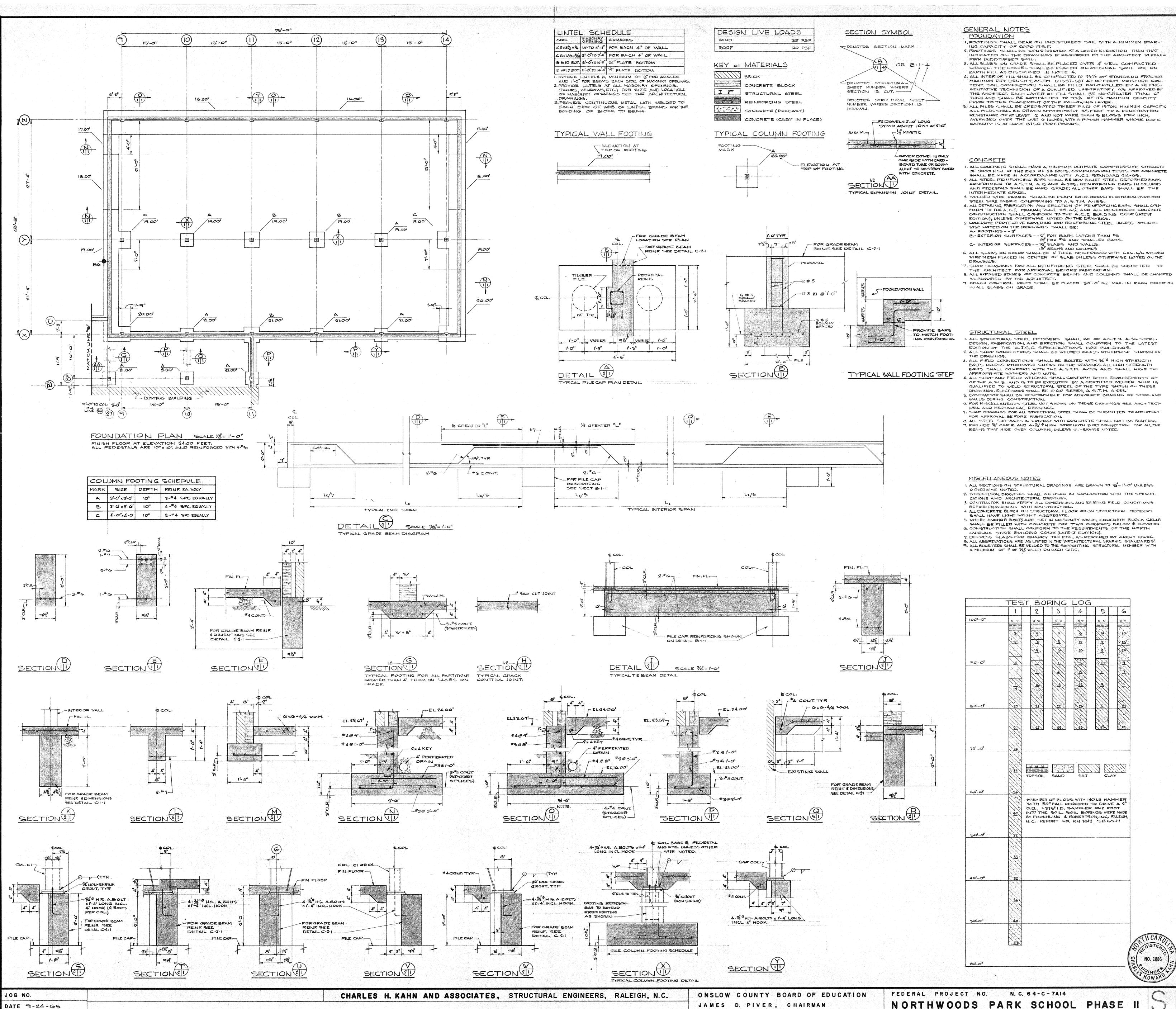
THEODORE J. PETERS A. I. A. ARCHITECT

JACKSONVILLE, NORTH CAROLINA

ONSLOW COUNTY BOARD OF EDUCATION JAMES D. PIVER, CHAIRMAN J. PAUL TYNDALL, SUPERINTENDENT

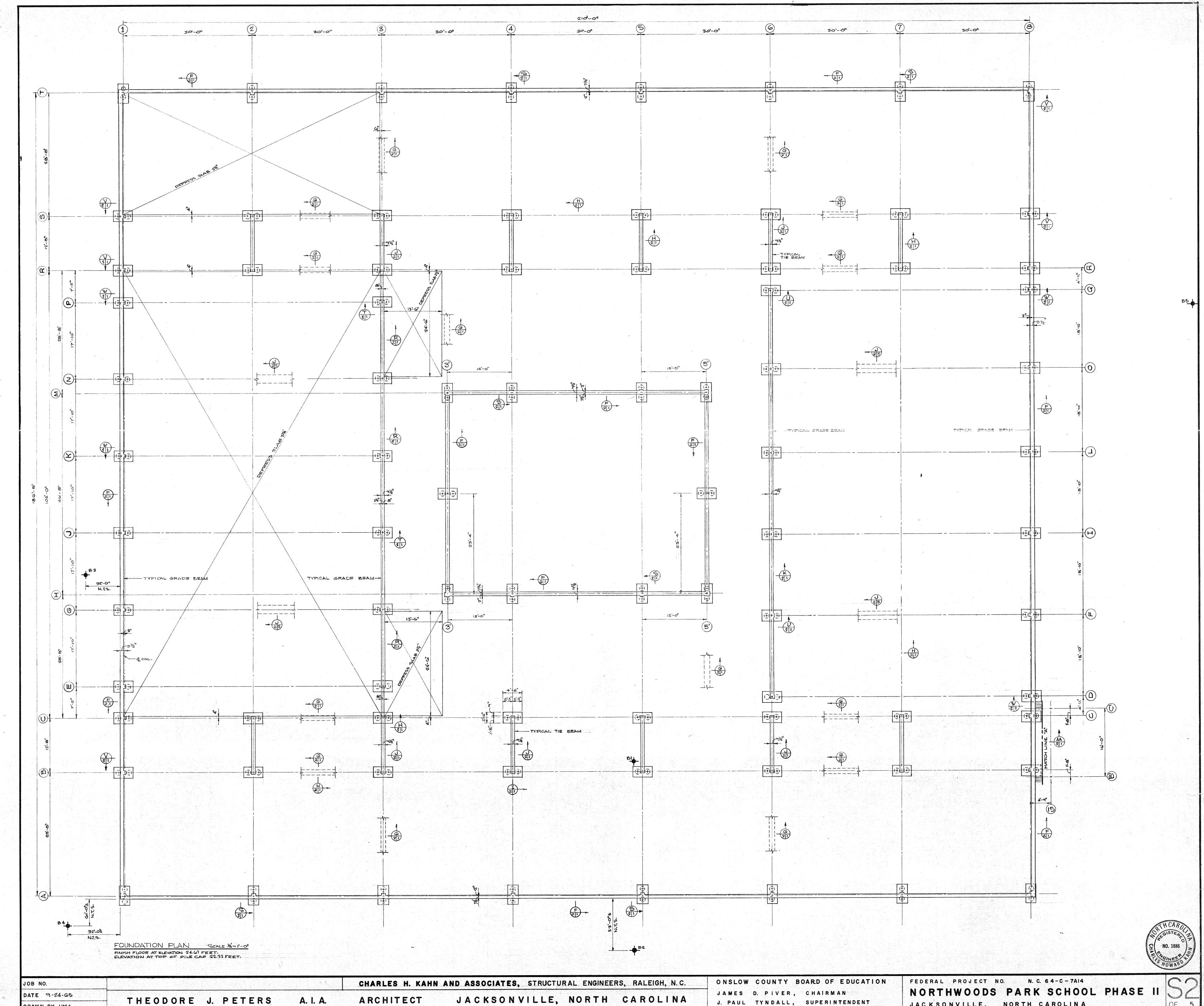
FEDERAL PROJECT NO. N. C. 64-C-7A14 NORTHWOODS PARK SCHOOL PHASE II JACKSONVILLE, NORTH CAROLINA





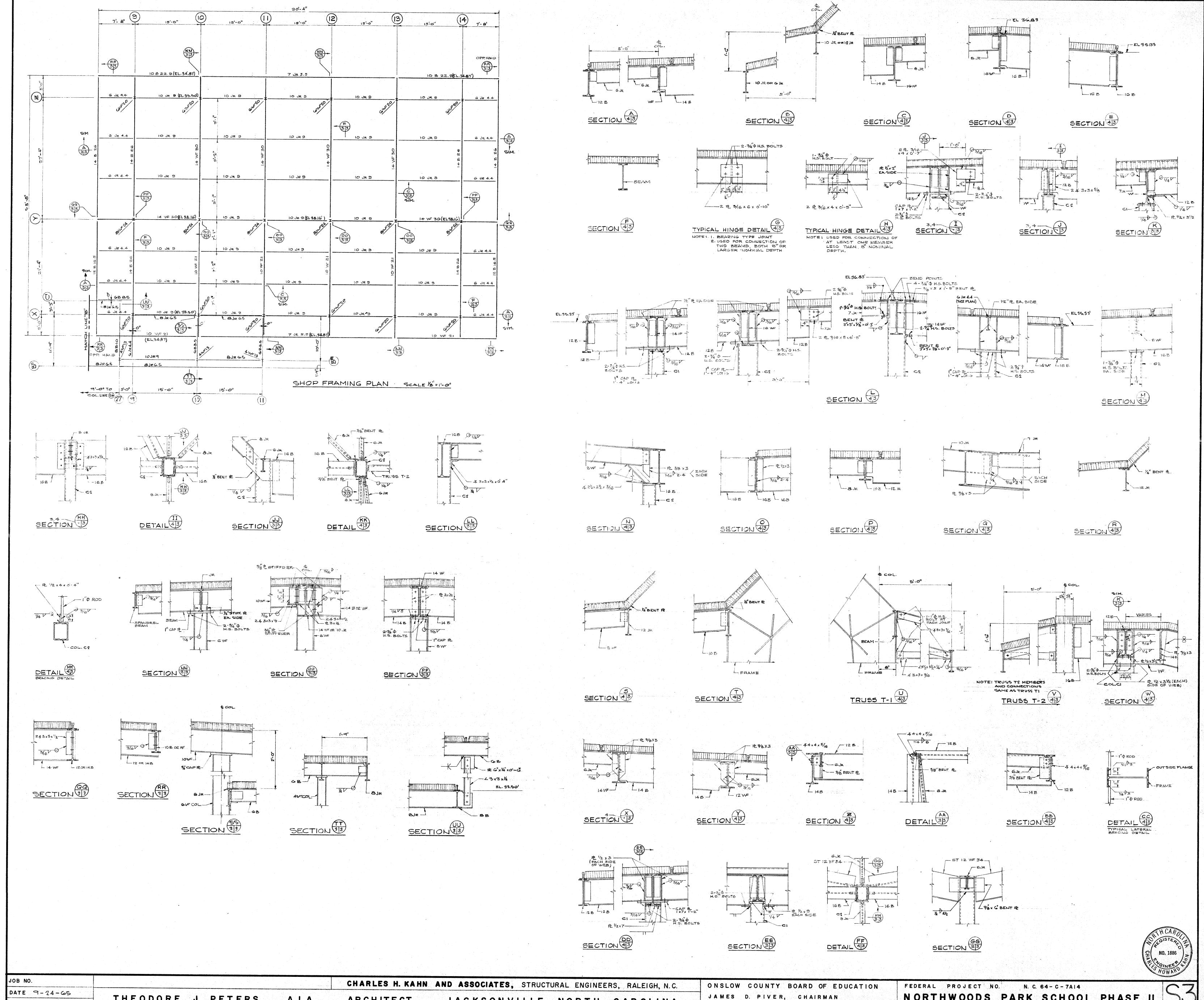
NORTHWOODS PARK SCHOOL PHASE II JACKSONVILLE, NORTH CAROLINA

DRAWN BY HMA



DRAWN BY HMA

JACKSONVILLE, NORTH CAROLINA



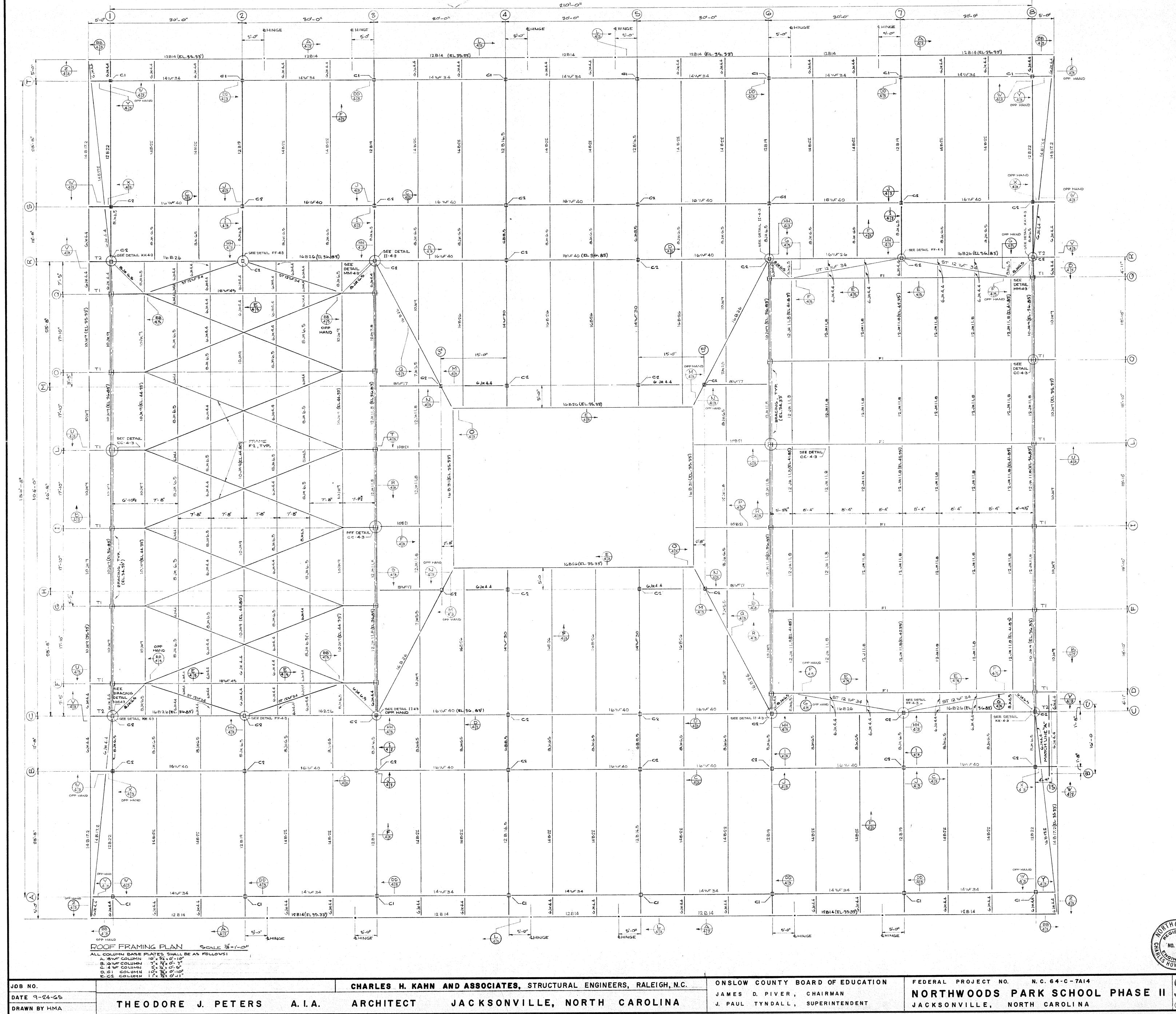
DRAWN BY HMA-R.B.K.

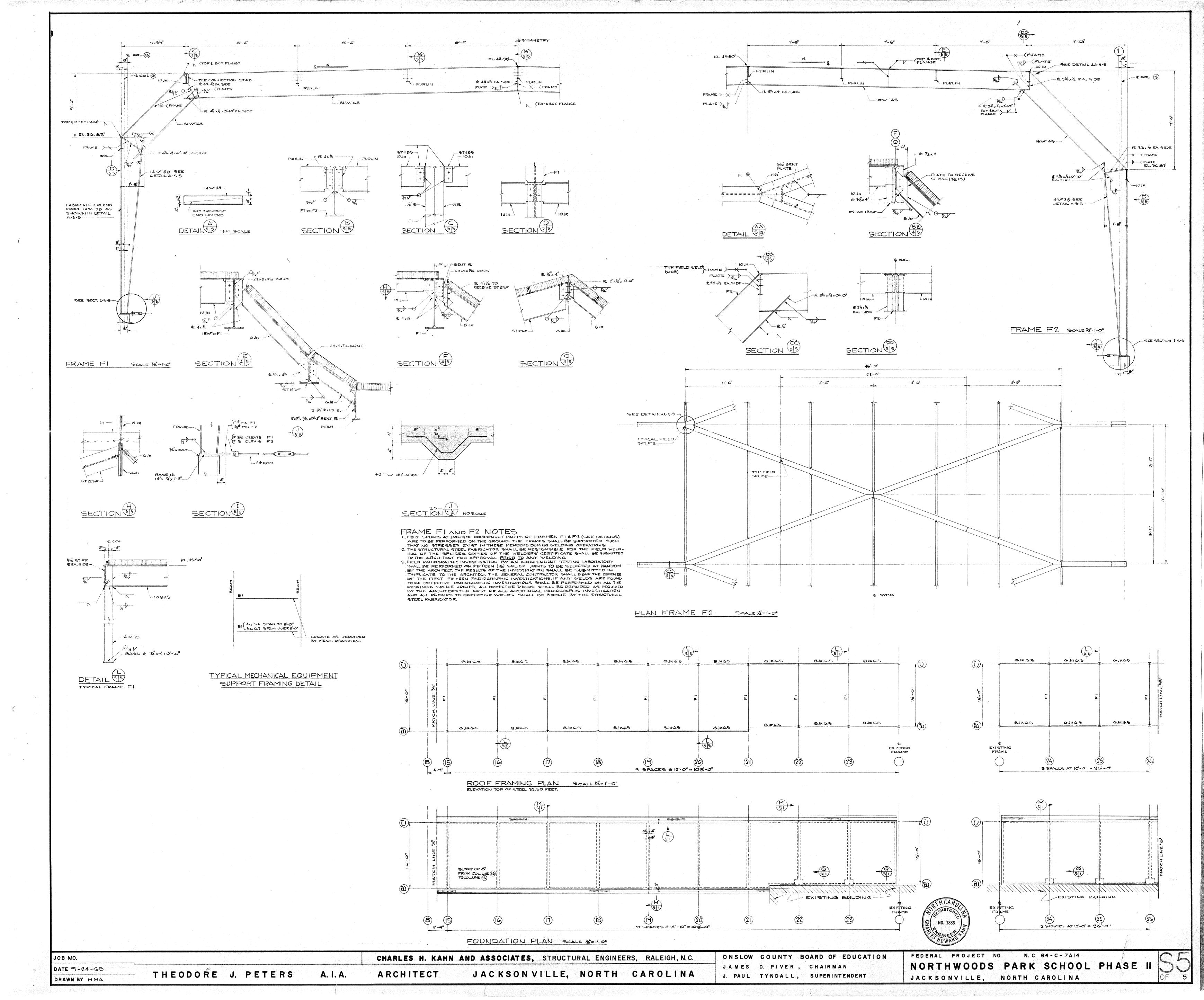
THEODORE J. PETERS

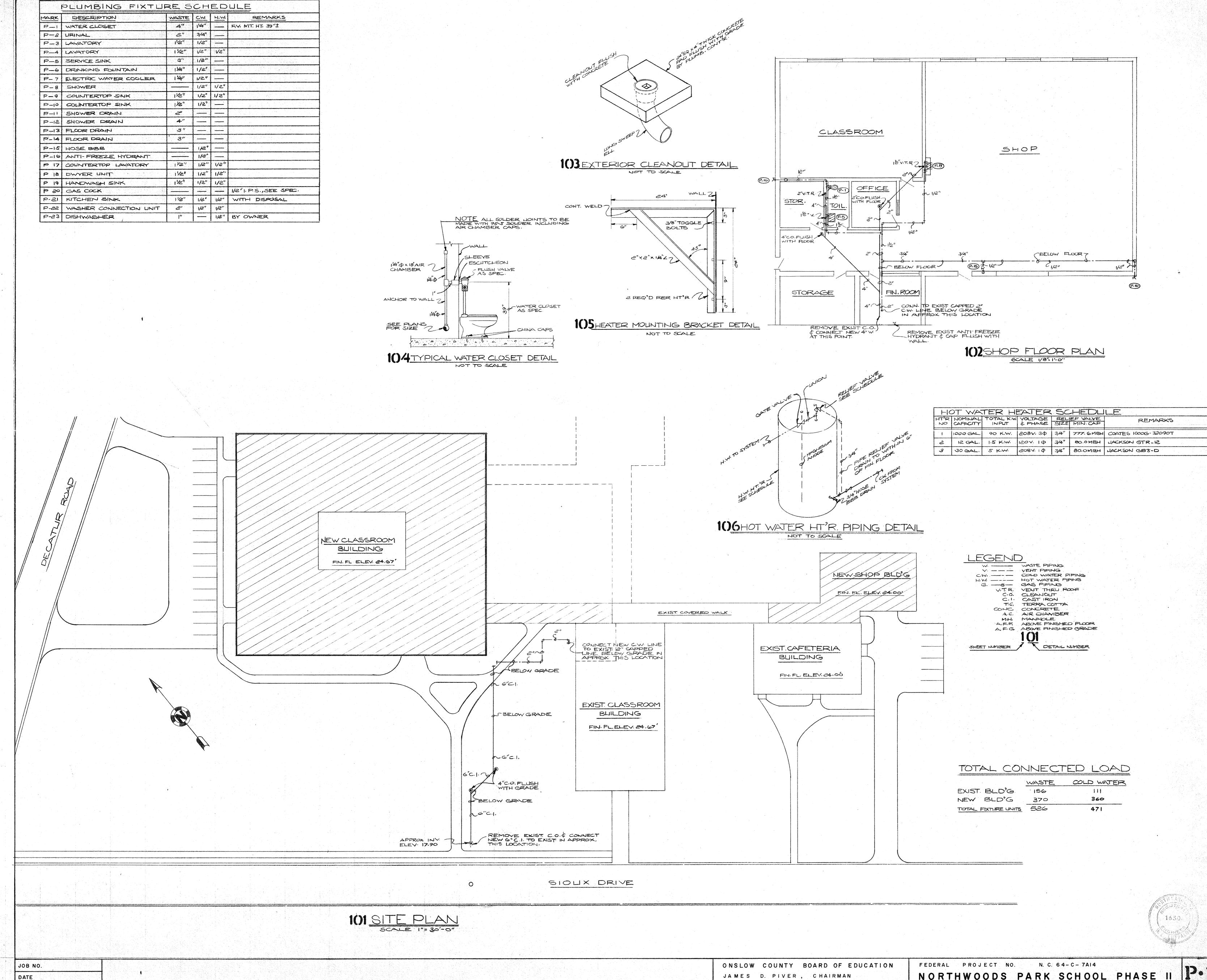
A. I. A. ARCHITECT

JACKSONVILLE, NORTH CAROLINA

JAMES D. PIVER, CHAIRMAN J. PAUL TYNDALL, SUPERINTENDENT NORTHWOODS PARK SCHOOL PHASE II JACKSONVILLE, NORTH CAROLINA







DRAWN BY

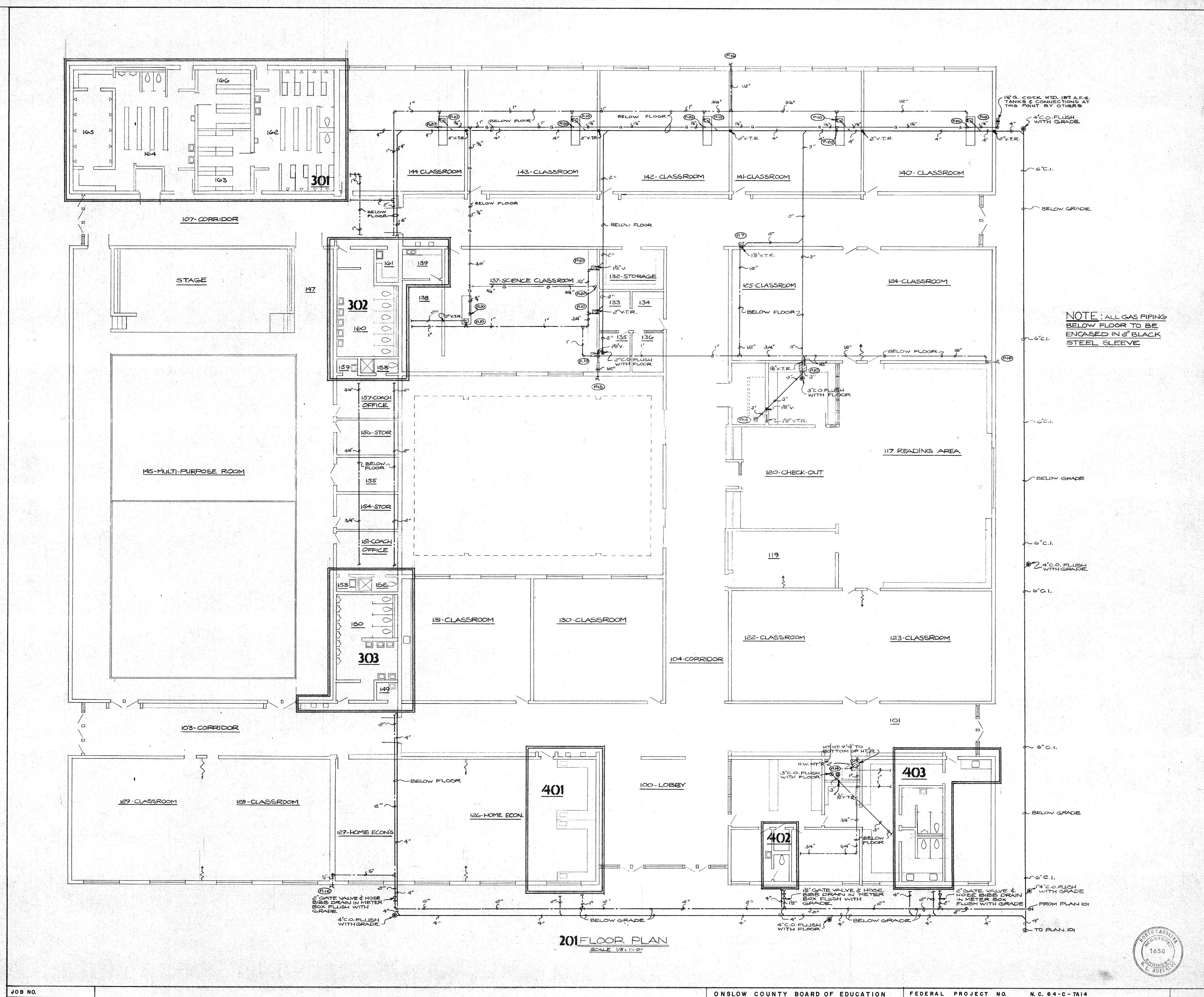
THEODORE J. PETERS

ARCHITECT A. I. A.

JACKSONVILLE, NORTH CAROLINA

J. PAUL TYNDALL, SUPERINTENDENT

NORTHWOODS PARK SCHOOL PHASE II JACKSONVILLE, NORTH CAROLINA



THEODORE J. PETERS

DATE

ERS A.I.A. ARCHITECT

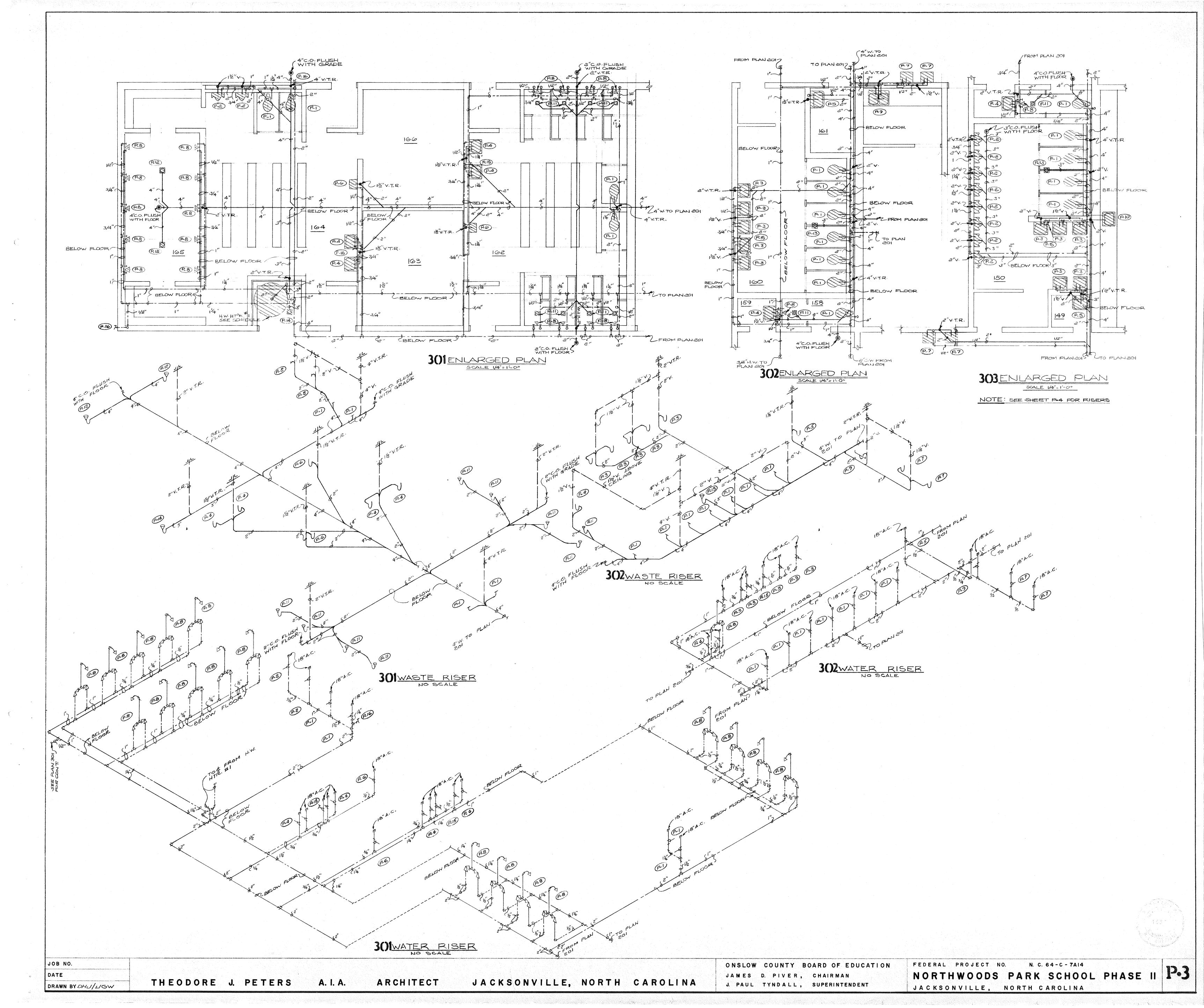
JACKSONVILLE. NORTH CAROLINA

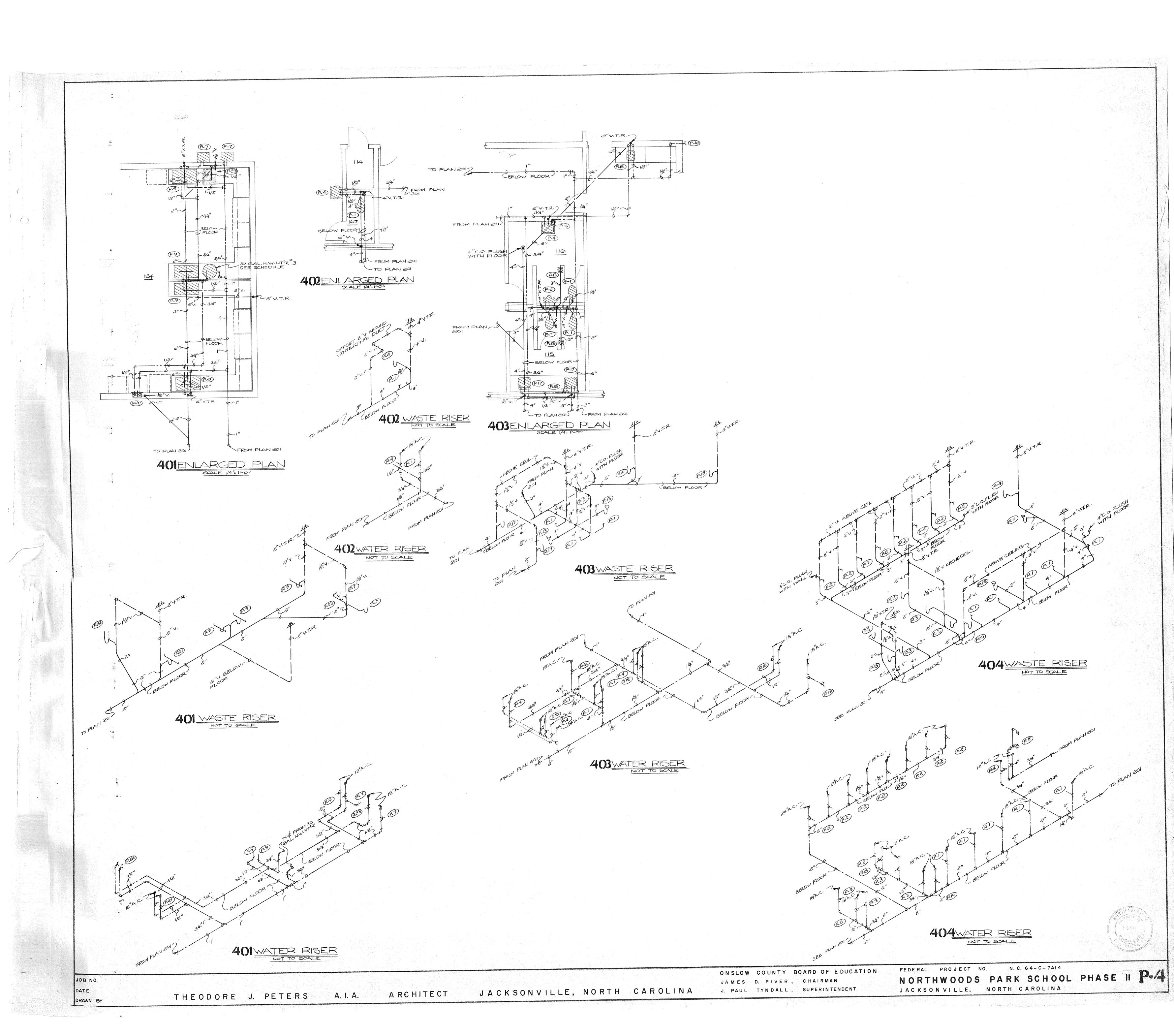
ONSLOW COUNTY BOARD OF EDUCATION

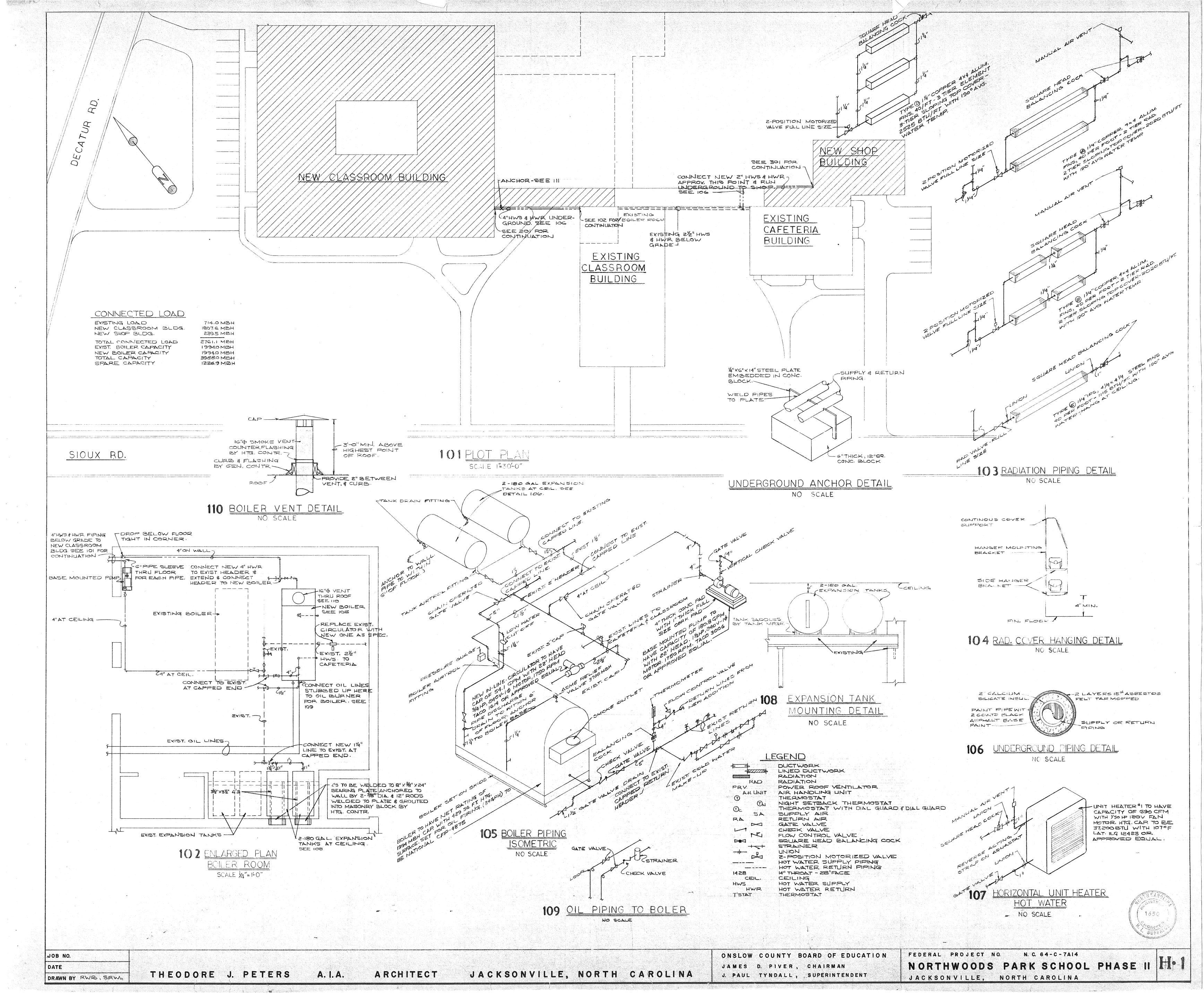
JAMES D. PIVER, CHAIRMAN

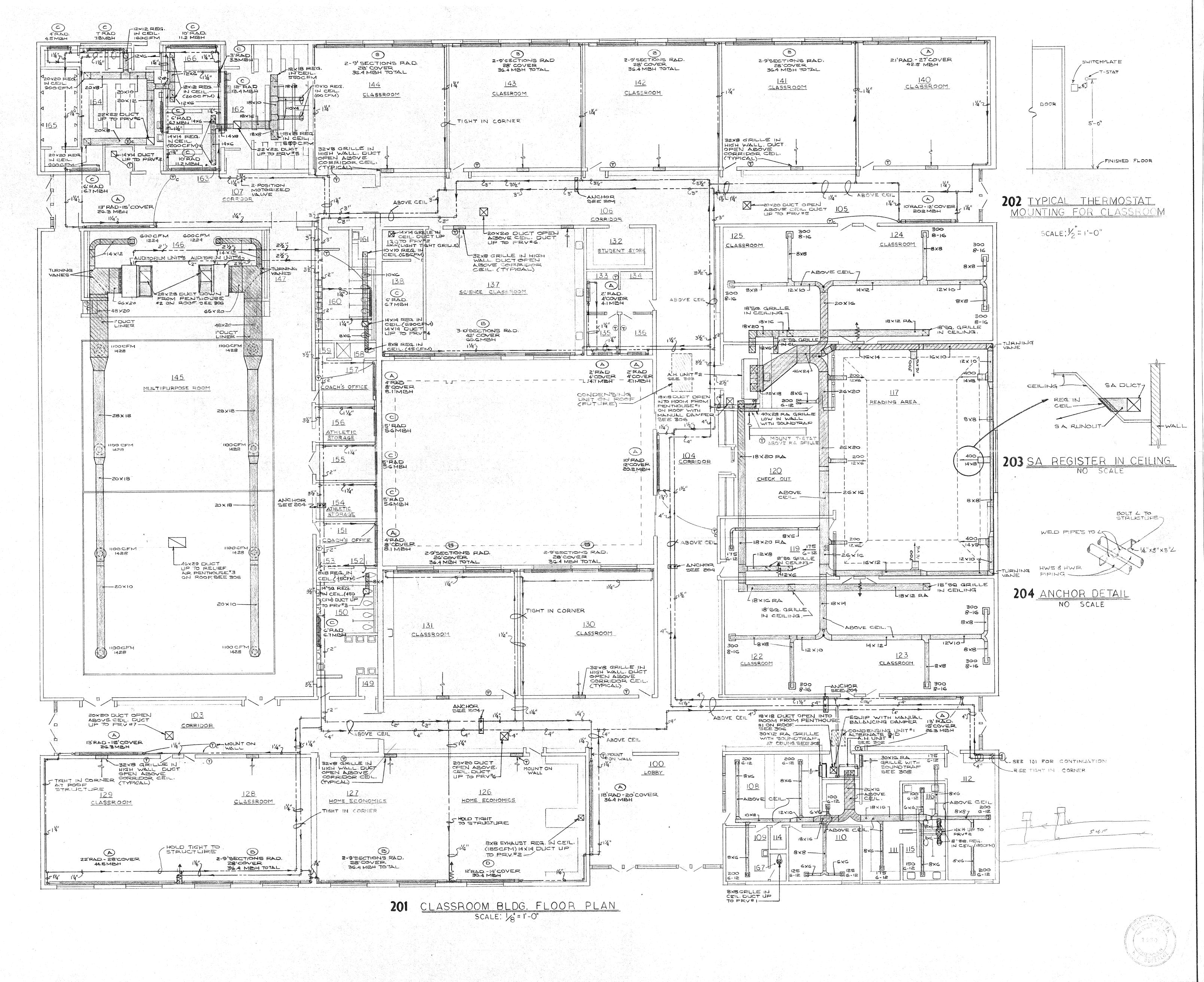
J. PAUL TYNDALL SUPERINTENDENT

NORTHWOODS PARK SCHOOL PHASE II 12.2









ONSLOW COUNTY BOARD OF EDUCATION

DATE

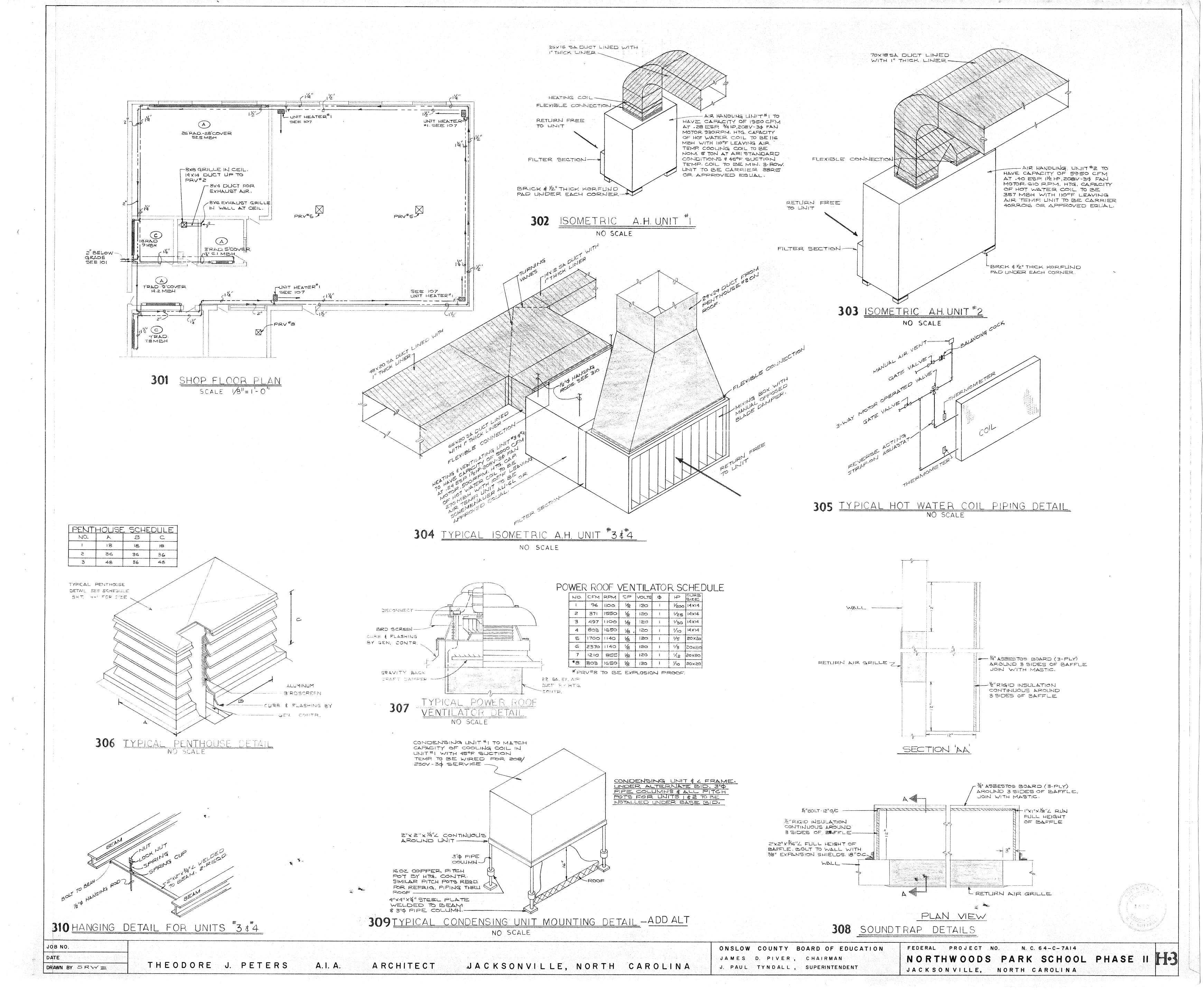
DRAWN BY SRV.,,

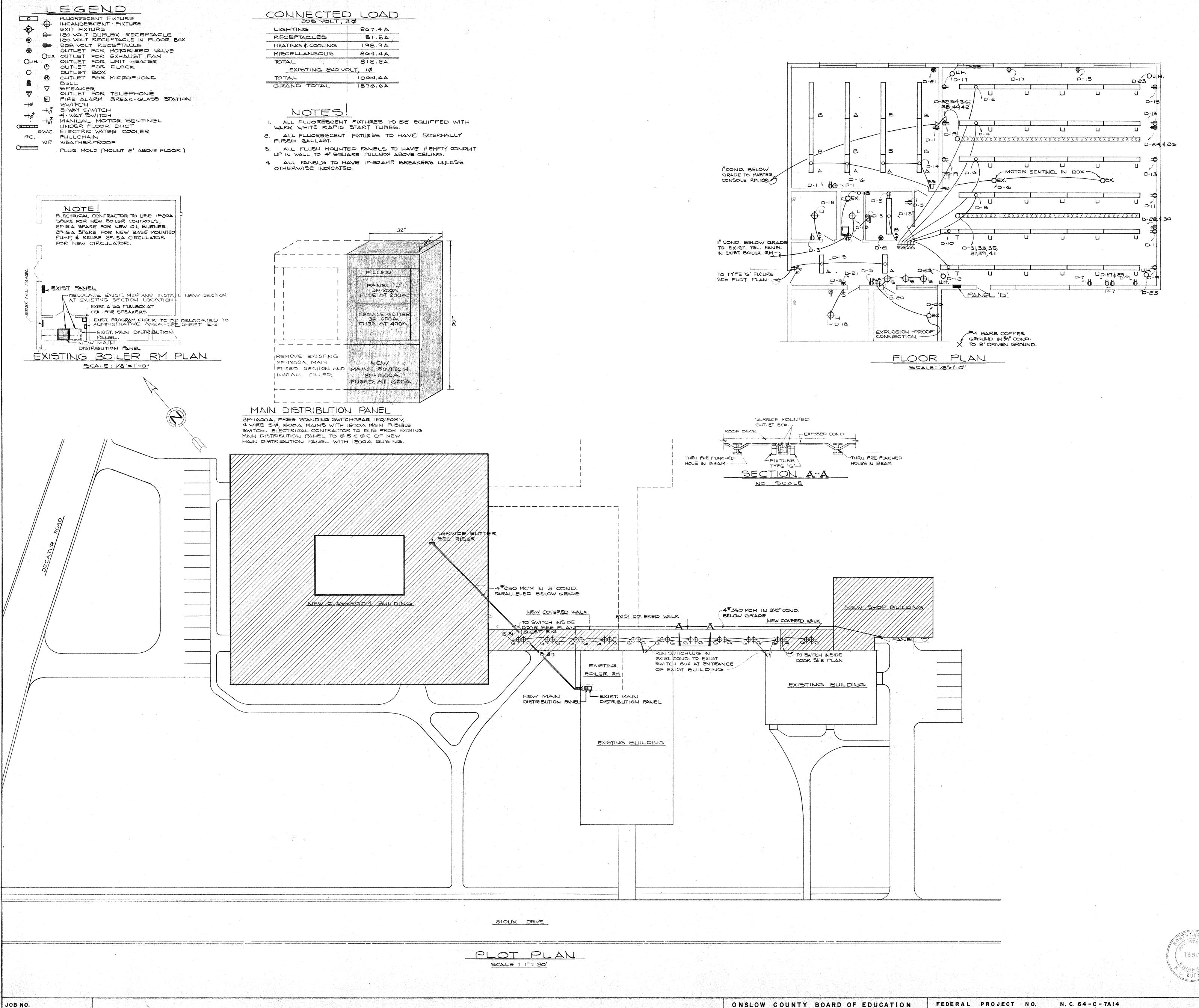
DRAWN BY SRV.,

DRAWN BY SRV.,,

DRAWN BY SRV.,

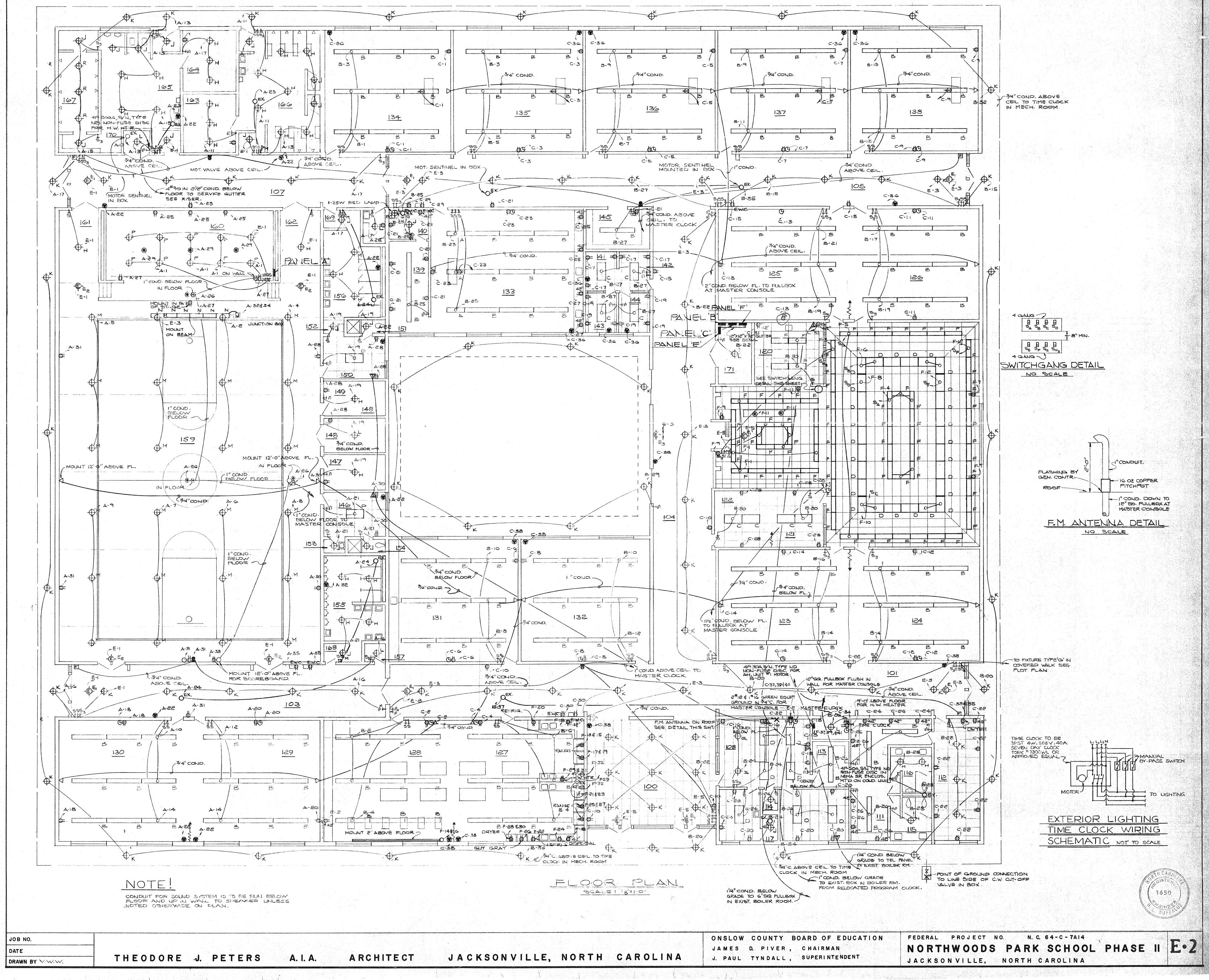
DRAWN BY SRV.

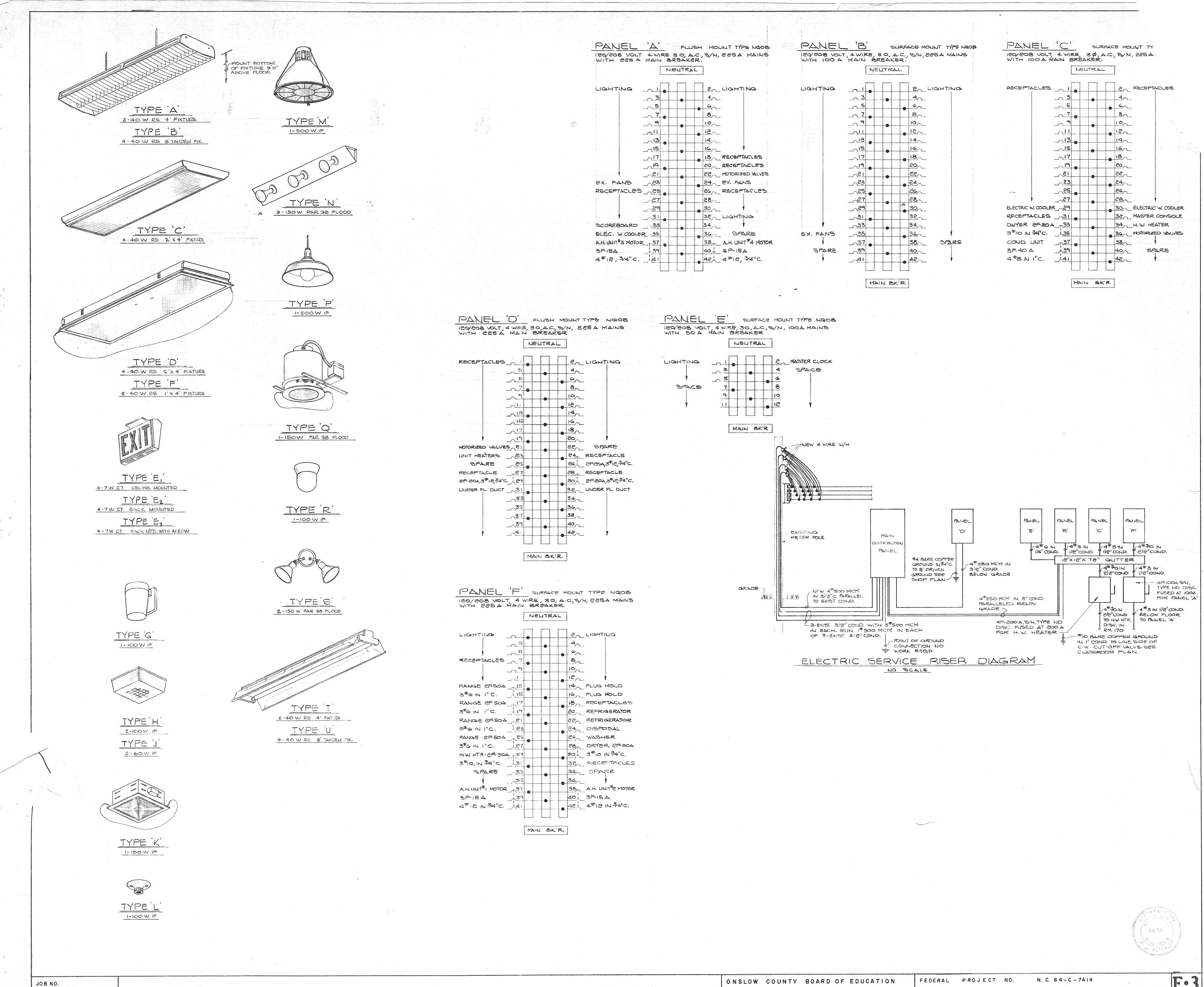




ONSLOW COUNTY BOARD OF EDUCATION FEDERAL PROJECT NO. N. C. 64-C-7A14 NORTHWOODS PARK SCHOOL PHASE II E 1 JAMES D. PIVER, CHAIRMAN ARCHITECT JACKSONVILLE, NORTH CAROLINA THEODORE J. PETERS A. I. A. J. PAUL TYNDALL, SUPERTENDENT JACKSONVILLE, NORTH CAROLINA DRAWN BY YIWIW

DATE

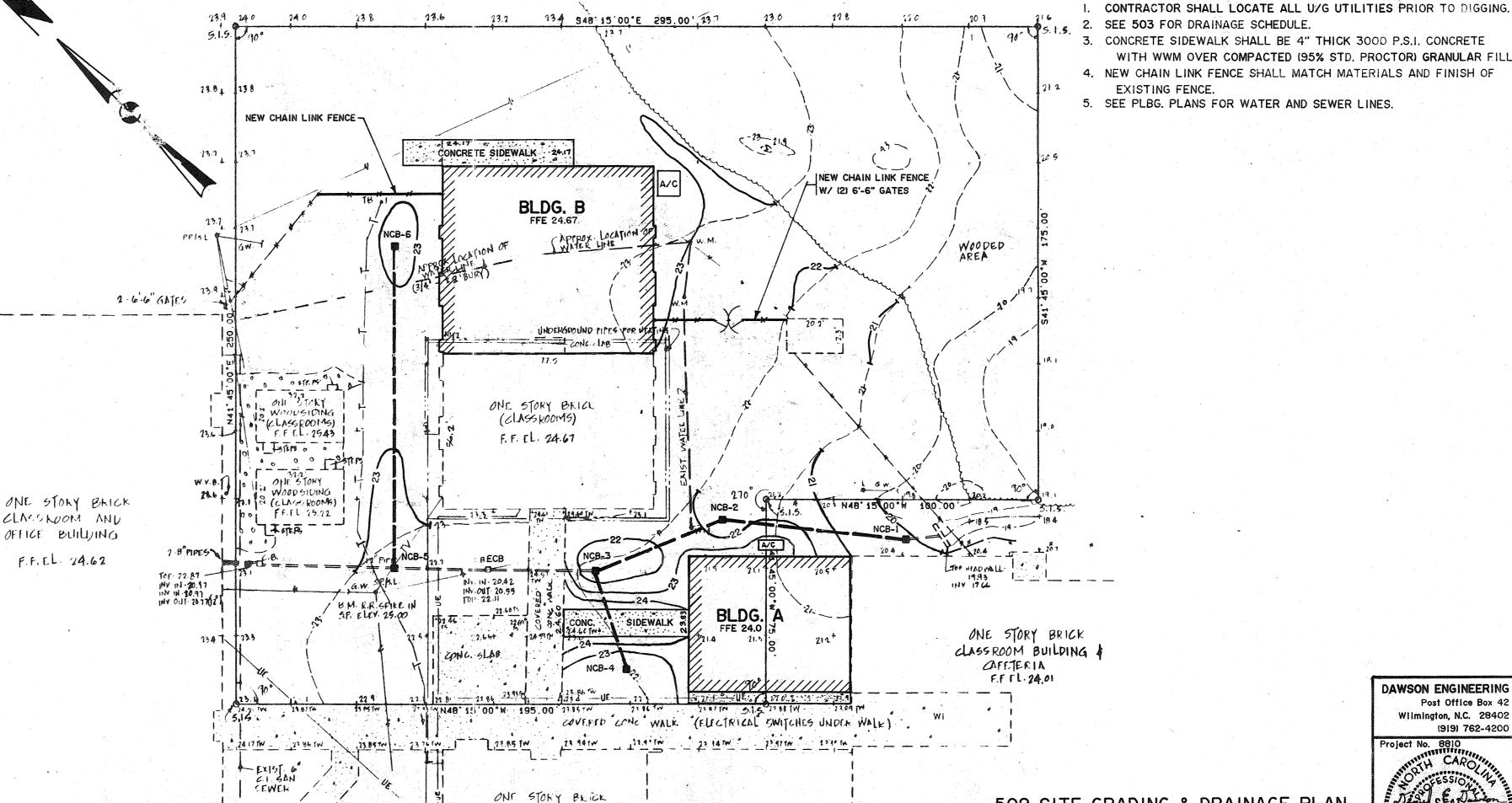




NORTHWOODS PARK SCHOOL PHASE II JAMES D. PIVER, CHAIRMAN JACKSONVILLE, NORTH CAROLINA THEODORE J. PETERS A. I. A. ARCHITECT J. PAUL TYNDALL, SUPERINTENDENT JACKSONVILLE, NORTH CAROLINA DRAWN BY REM , H.L.B.

DATE

. CONCRETE SIDEWALK SHALL BE 4" THICK 3000 P.S.I. CONCRETE WITH WWM OVER COMPACTED (95% STD. PROCTOR) GRANULAR FIL 4. NEW CHAIN LINK FENCE SHALL MATCH MATERIALS AND FINISH OF



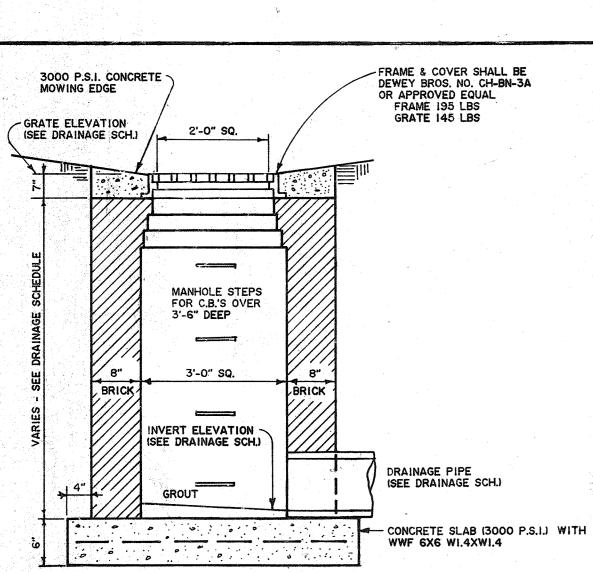
(CLASSKOOMS)

FFEL 23.97

1012 GRIVEL PRIVE | UNDERGODUND PIPES YOR I ____ OHL STORY ONE STORY BRICK " WOODSIDING (CLASS KOOMS) F.F. EL. 2543 F. F. EL. 24.67 el Talens o o 12.1 2 (CLASS ROOMS) 100 FF. EL 25.22 ONE STORY BRICK GLASSKOOM AND OFFICE BLILLYING 2 20.4 F.F. [.L. 24.62 LTOF HEADYALL. NV IN-20.42 INV OUT 20.99 TOP-22.11 BM. E.R. SPIKE IN SP. ELEV. 25.00 234 1 133 +21.4 CLASSROOM BUILDING & COVERED CONC. WALK (FLECTRICAL SWITCHES UNDER WALK) - EXIST 6" CEMER ONE STORY BLICK (CLASSKOOMS) F.F. EL 23.97 EXISTING TOPOGRAPHY & AS-BUILT DATA PROVIDED BY: ONSLOW COUNTY BOARD OF EDUCATION PREPARED BY: BARDEN LANIER AND ASSOCIATES 239 NEW BRIDGE STREET JACKSONVILLE, N.C. 28540 SERVING HYDRANTaNB & GUTTER (919) 455-3889 501 EXISTING TOPOGRAPHY & DEMOLITION PLAN PRESSURE 19 35-45 P.S 1 JOB NO. 884341 ACCORDING TO CITY JULY 20, 1988 F.B. 329, P.1-24 OF JACKSONVILLE I" = 30' SIOUX DRIVE SITE GRADING & DRAINAGE NOTES: CONTRACTOR SHALL LOCATE ALL U/G UTILITIES PRIOR TO DIGGING

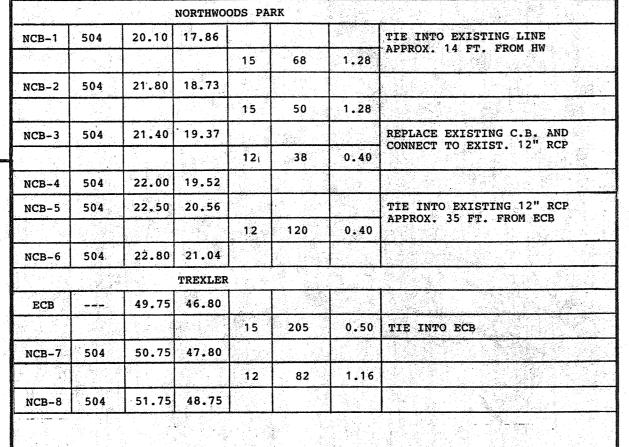
13.7 134 S48 15 00 E 295.00 237

23.8 1 23.8



504 CATCH BASIN

N.T.S.



DRAINAGE SCHEDULE

PIPE DATA

REMARKS

STRUCTURE DATA

STRUCT. DETAIL GRATE INVERT DIA. LENGTH SLOPE ID. NO. ELEV. ELEV. (IN) (FT) (%)

1. NCB = NEW CATCH BASIN. ECB = EXISTING CATCH BASIN. 2. PIPE LENGTHS INDICATED ARE APPROXIMATE. (BASED ON CENTER OF STRUCTURE TO CENTER OF STRUCTURE ESTIMATED DISTANCES) 3. DUE TO INSUFFICIENT PIPE COVER, CONTRACTOR SHALL PROTECT PIPES FROM CONSTRUCTION TRAFFIC AND LOADS. 4. STORM DRAINAGE PIPE SHALL BE CLASS III REINFORCED CONCRETE PIPE

CONFORMING TO LATEST REQUIREMENTS OF A.S.T.M. STANDARD C76. 5. PIPE BEDDING SHALL BE CLASS A, B OR C. 6. BACKFILL SHALL BE COMPACTED TO NOT LESS THAN 95 PERCENT A.S.T.M. STANDARD D698 (STANDARD PROCTOR). 7. PROTECT STORM DRAINAGE SYSTEM FROM SEDIMENT AND SILTATION WITH SILT FENCES, HAY BALES OR FILTER FABRIC UNTIL FINAL TURF IS ESTABLISHED CONTRACTOR SHALL PROVIDE WATER AND FLUSH ALL DRAINAGE PIPES AND

503 DRAINAGE SCHEDULE

STRUCTURES (NEW AND EXISTING) IF SEDIMENT OR SILT ENTERS THE DRAINAGE SYSTEM.

502 SITE GRADING & DRAINAGE PLAN

QH QH

S

MIDDL

0

S

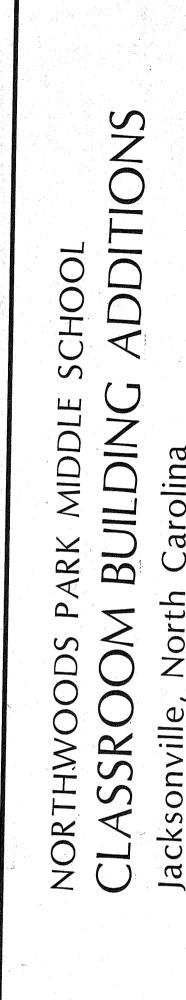
气

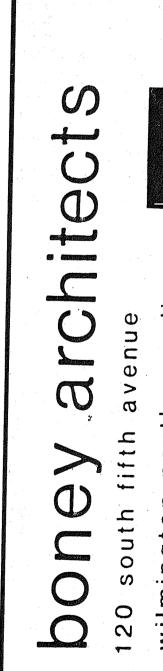
designed by CHARLES H. BONEY, AIA drawn by checked by

SEPT.19,1988 boney project no

A-5

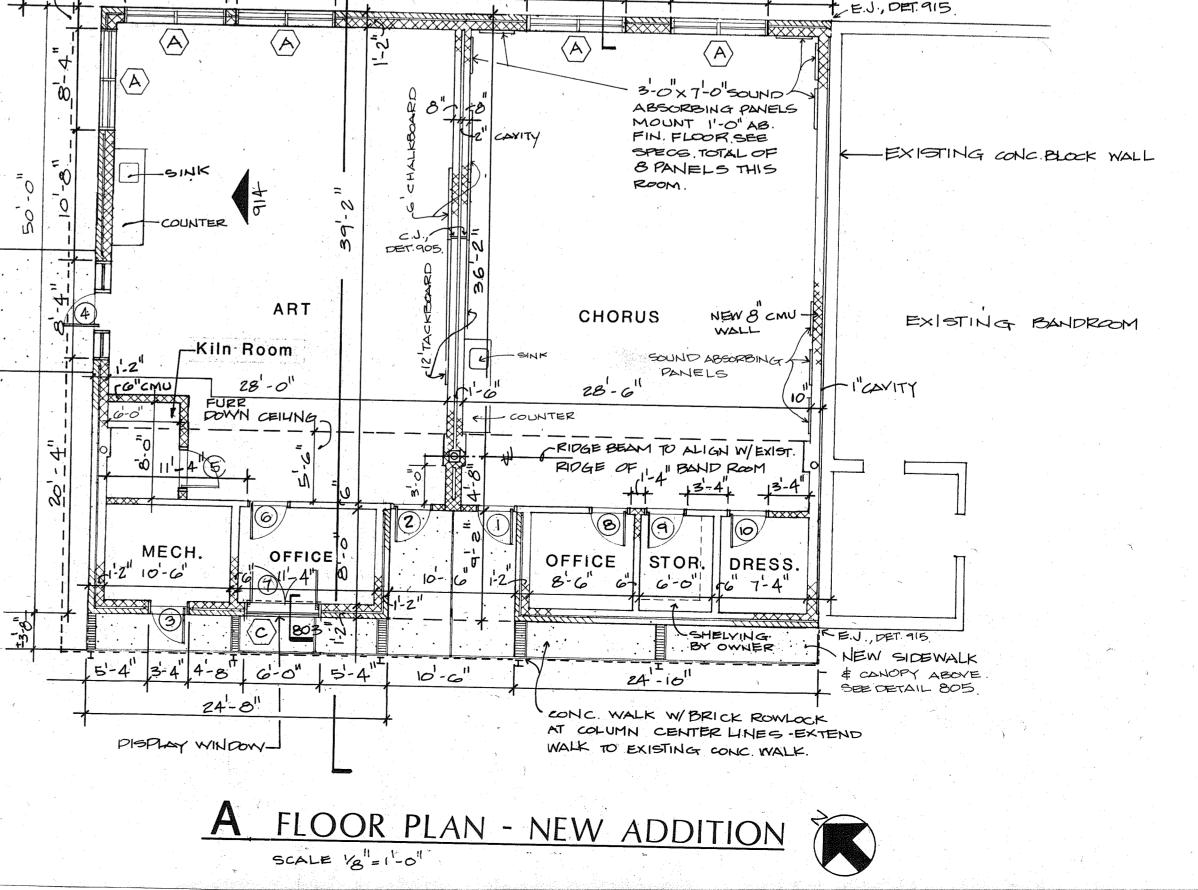
Northwoods





designed by CHARLES H. BONEY,AIA drawn by checked by date SEPT. 19,1988 boney project no

A-6
Northwoods



FINISH SCHEDULE-BLDG A.

FINISH SCHEDULE - BLDG. B.

WALLS

CONC.BLK.-PAINTED

CONC.BLK.-PAINTED

CONC.BLK.-PAINTED

CONC.BLK-PAINTED

CONG. BLK. - PAINTED

WALLS

C.T.

C.T.

C.T.

CONG. BLK - PNTD.

CONG. BLK - PNTD.

CONC.BLK-PNTD

CONC.BLK.-PNTD.

CONC. BLK - PNTD

CONC. BLK. - PNTD.

REMARKS

—TEMP INSUL. FIXED GLASS

DET. 109 DET. 109 SILL-SEE DET. 109

DET. 1003 DET. 1003

DET-803 DET-803

CONDENSER UNITS -4 492

BRICK

CONC. BLK. - PAINTED GYP. BD.

CEILING

SUSP ACOU.TILE

SUSP.ACOU. TILE

SUSP.ACOU. TILE

SUSP. ACOU. TILE

CEILING

SUSP. ACOU. TILE

SUSP, ACOU. TILE

SUSP. ACOU. TILE

SUSP. ACOU. TILE

-> EXISTING BUILDING

M.R. GYP. BD.

M.R. GYP. BD.

MR GYP BD

GYP. BD.

GYP. BD.

GYP BO

REMARKS

REMARKS

BASE

WOOD - PAINTED

WOOD-PAINTED

WOOD-PAINTED

WOOD-PAINTED

WOOD-PAINTED

BASE

WOOD - PNTO.

WOOD - PNTD.

TERRAZZO

SCHEDULE

WOOD - PNTD.

C.T.

WOOD - PAINTED

ROOM

ART

MECH.

OFFICE

STORAGE

DRESSING

ROOM

CLASSROOMS 1,23,4

GIRLS TOILET

TEACHERS TOILET

BOYS TOILET

CONCESSION

CONFERENCE

MECHANIGAL

CORRIDOR

12.0 LOVERHANG

VESTIBULE

STORAGE

CHORUS

FLOOR

V. C.T.

V. C.T.

CONC.

Y.C.T.

V.C.T

V.C.T.

FLOOR

V.C.T.

C.T.

CONC

V.C.T.

CONC.

CONC

WINDOW

8-4"x51-0"

4-0"×4-0"

8-4" 871 8-4"

CARPET

TERRAZZO

ELEV. MATERIAL

W-Z ALUMINUM

W-3 ALUMINUM

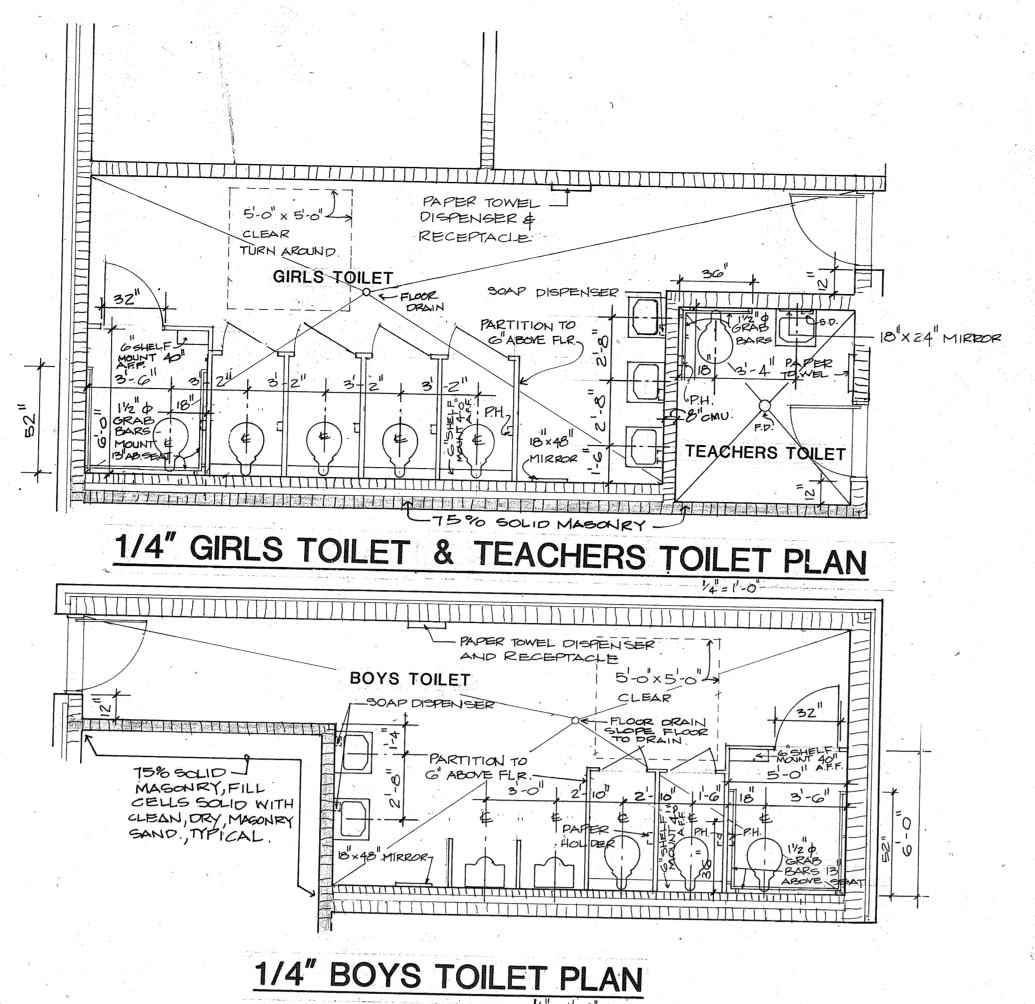
GLASS -

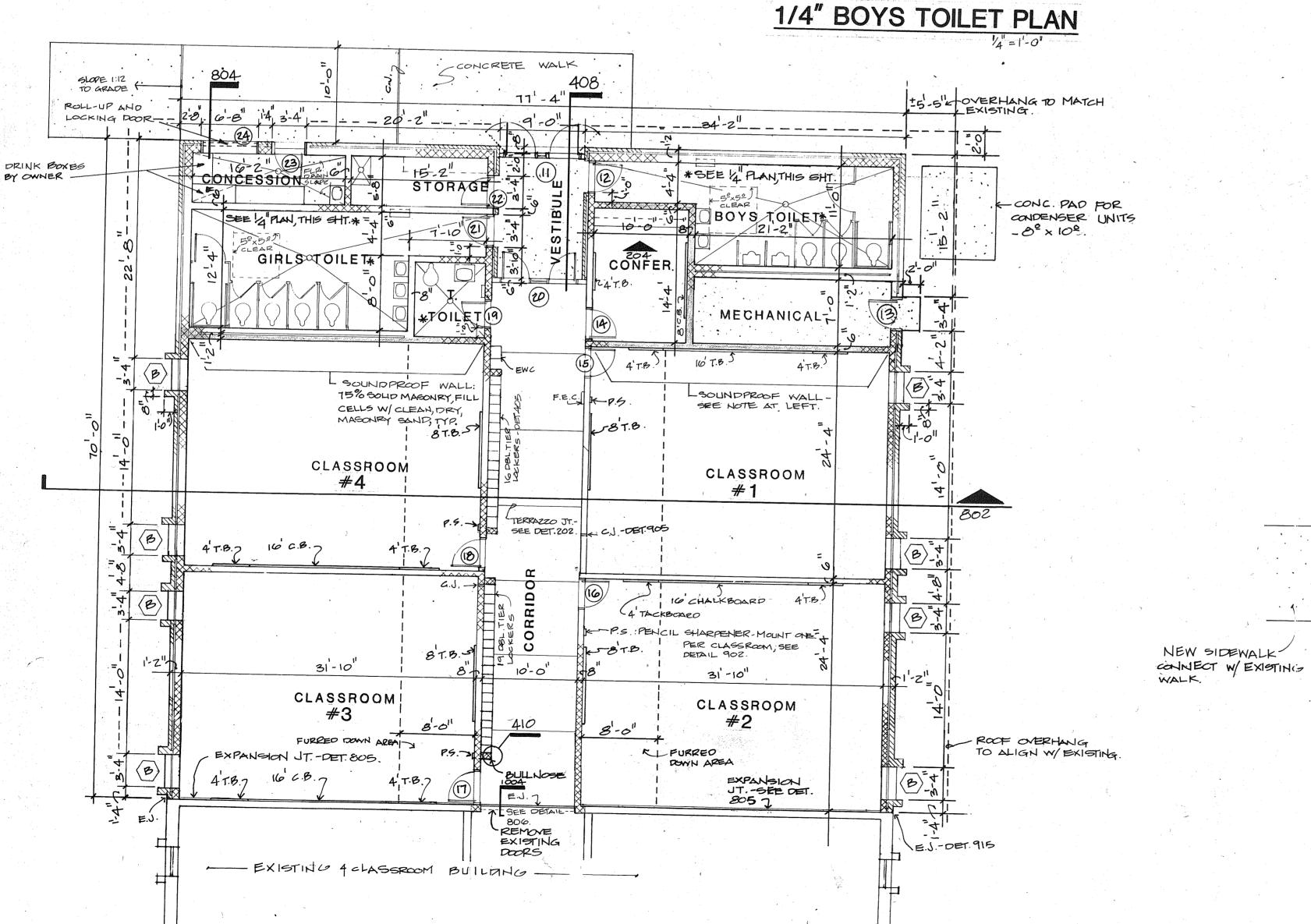
ALUMINUM

60-0"

15L4":...

CERAMIC TILE



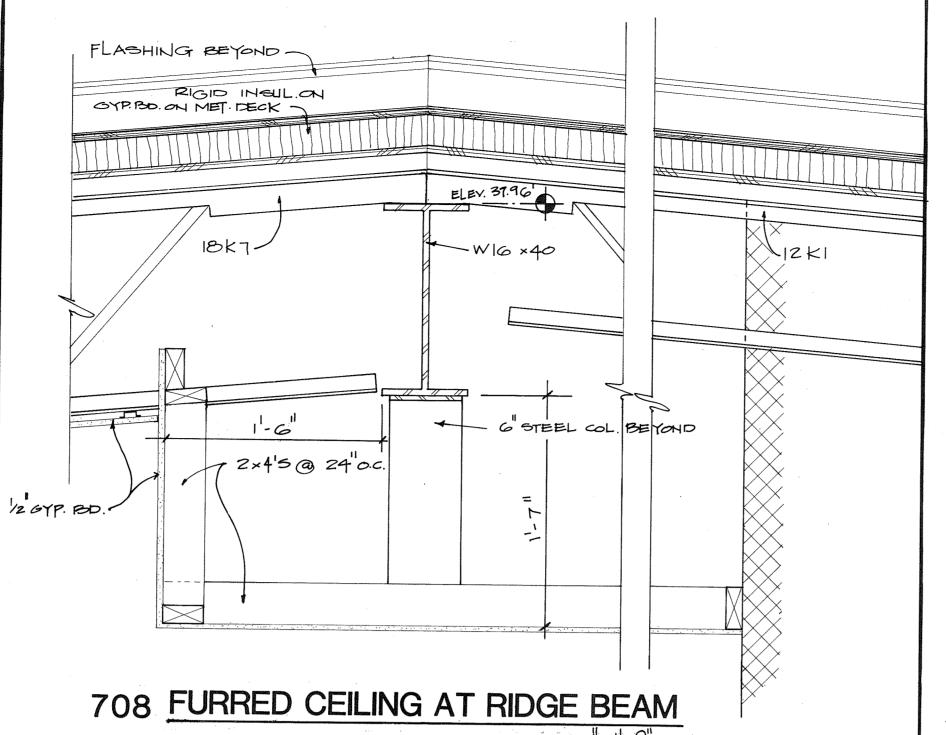


FLOOR PLAN - NEW ADDITION
SCALE 18"=1'-0"

4'8"×6'8"M.O. -CONCESSION STAND ROLL-UP DOOR SEE

DETAIL 804.

Northwoods



BRICK FIN WALL. W/ ROWLOCK CAP-

SEE SECTION 1003

GRADE BEAMS &

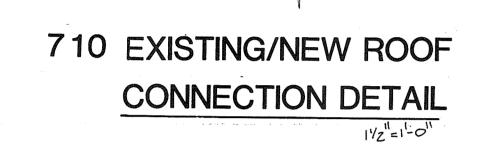
PILES-SEE STRUCT: DRWGS TI

BRICK -

PISPLAY CASE W/4 TEMP INSUL GLASS
SEE DETAIL 803.

SCALE 18"=11-0"

701 SOUTH - WEST ELEVATION



709 WINDOW SECTION-BUILDING A

3"=1"-0"

2x6 P.T. CURB, CUT TO MATCH NEW CURB

← EXISTING

CUT ROOF SYSTEM

- 2×4 BLOCKING, P.T.

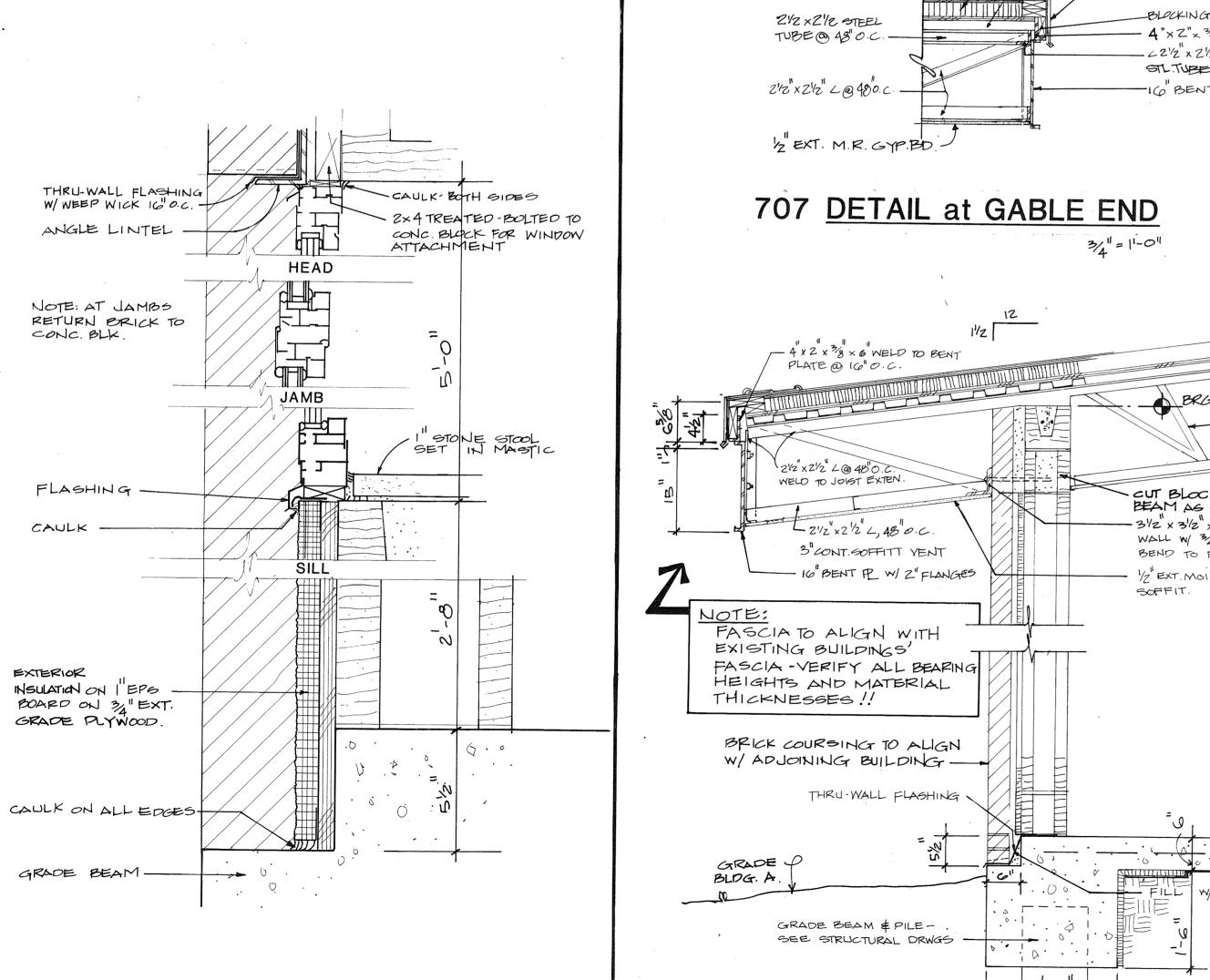
3/6" 3"-12"

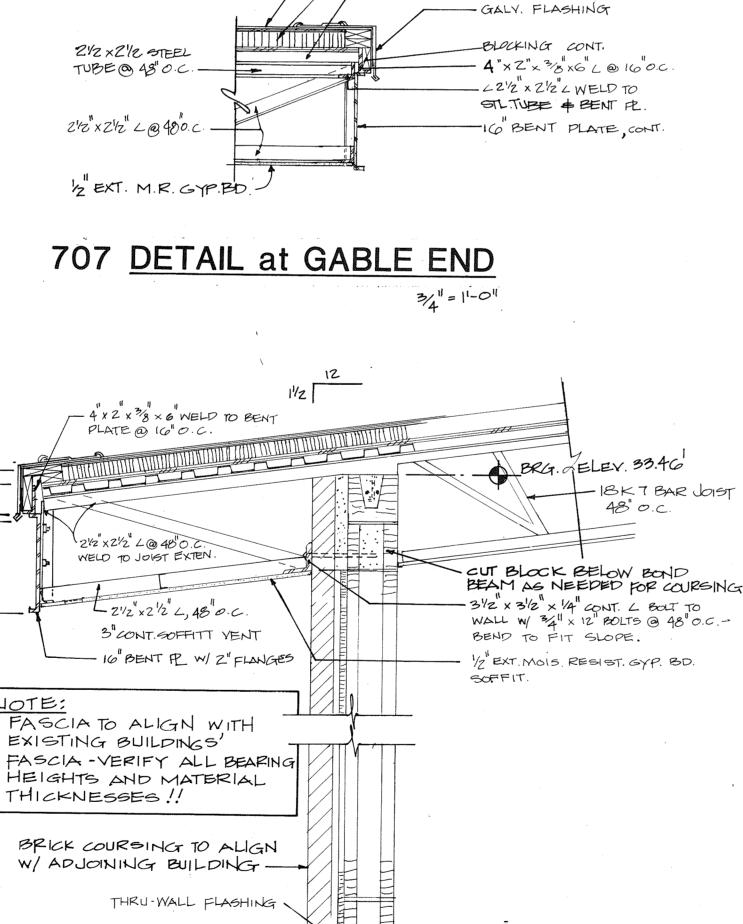
EPDM ROOF ON 1/2"HIGH DENSITY BD. 2×8 P.T. CURB

6 x3 2 x 5 11 CONTINUOUS -

6" COLUMN -

W16 × 40 -

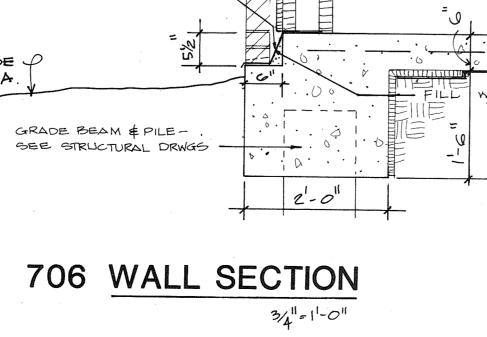


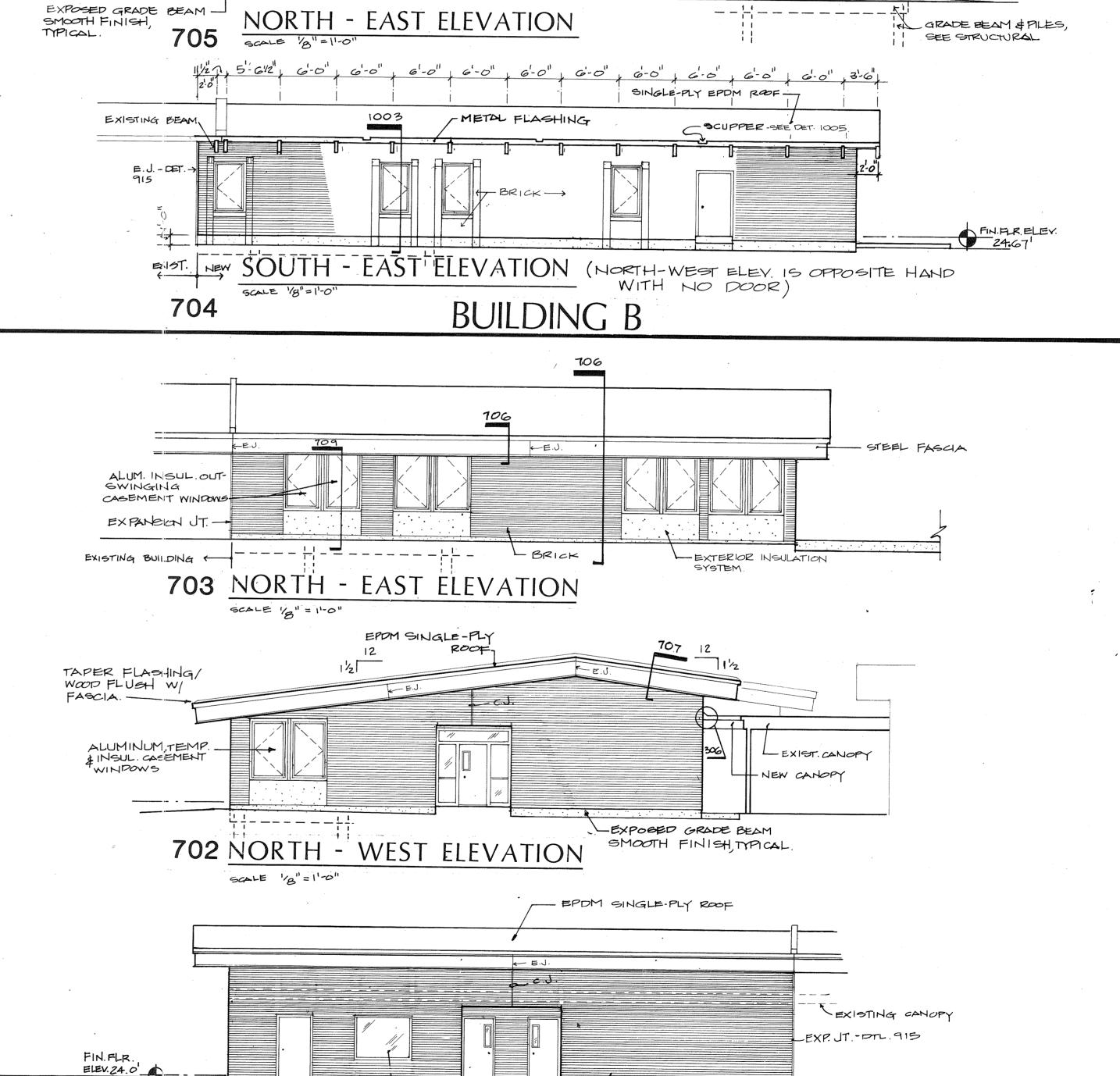


EPDM ROOF ON 1/2"BOARD.

- RIGID INSULATION

- MT. DECK





BUILDING A

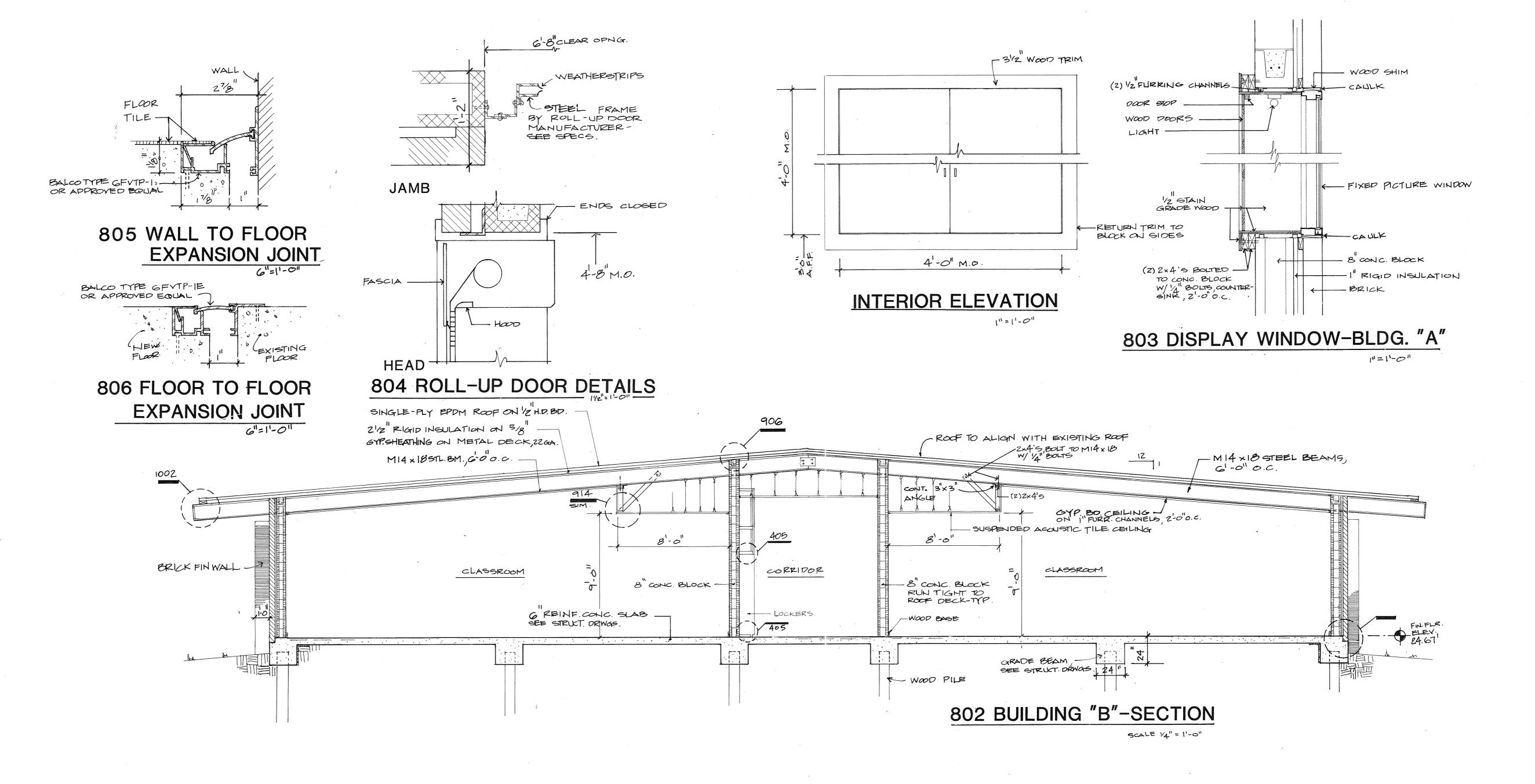
repom Roof

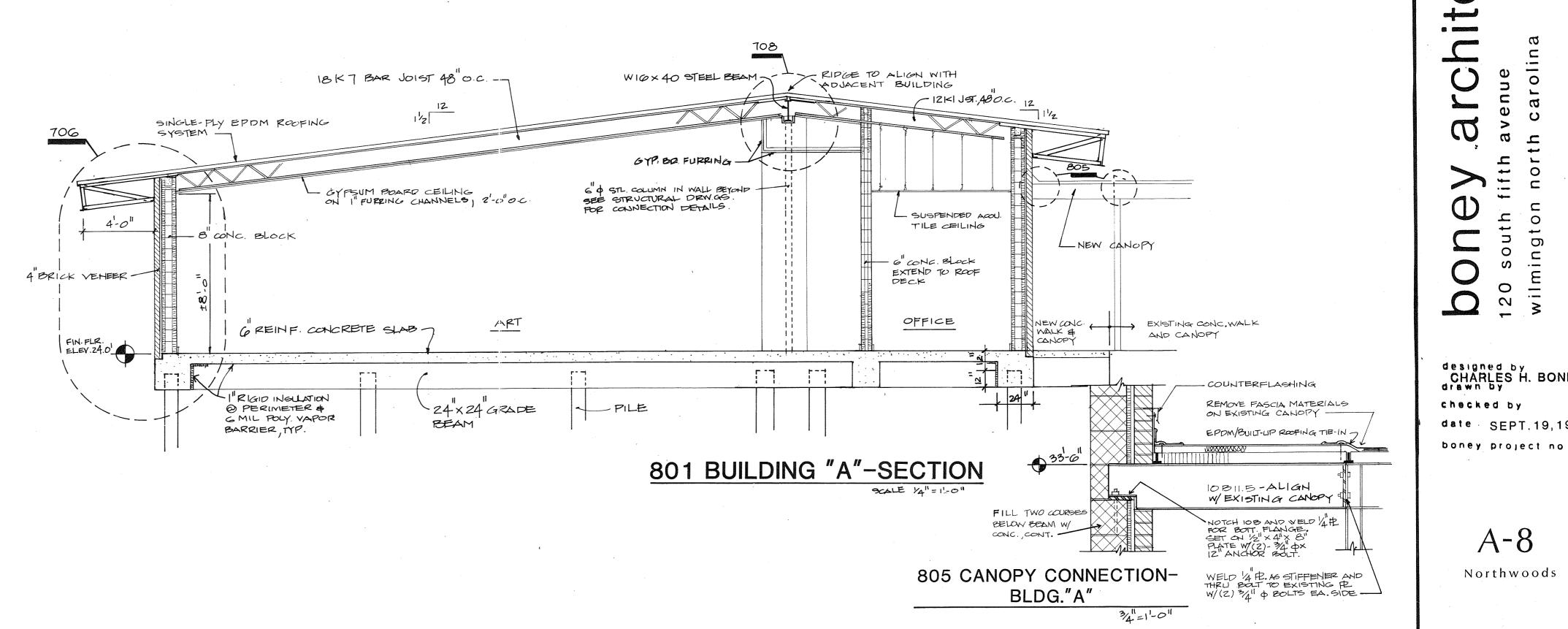
EXPOSED STEEL

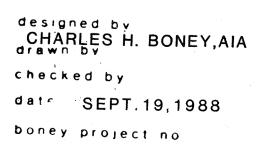
NEW BLOG. EXISTING BLOG

FASCIA

Northwoods



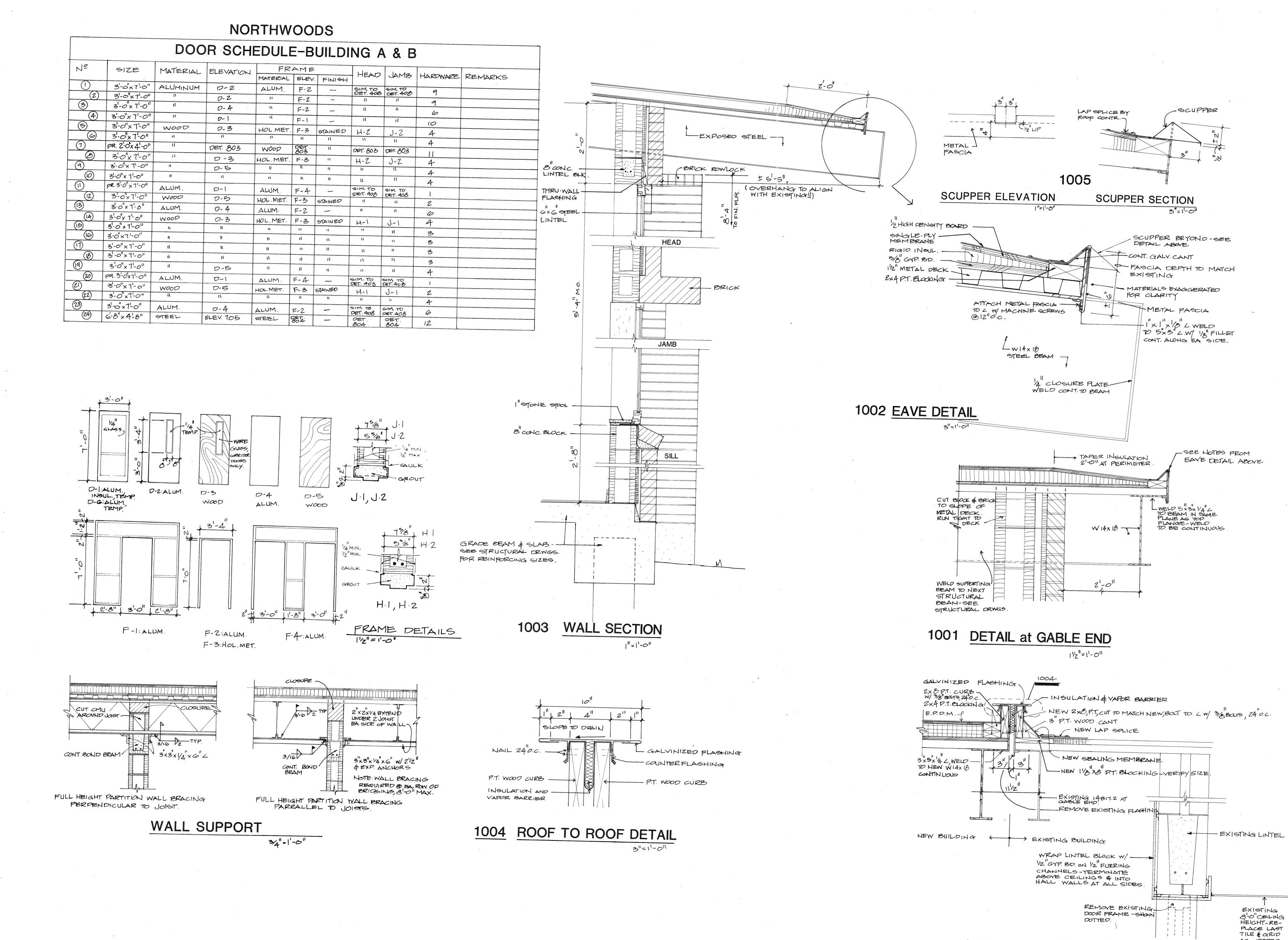


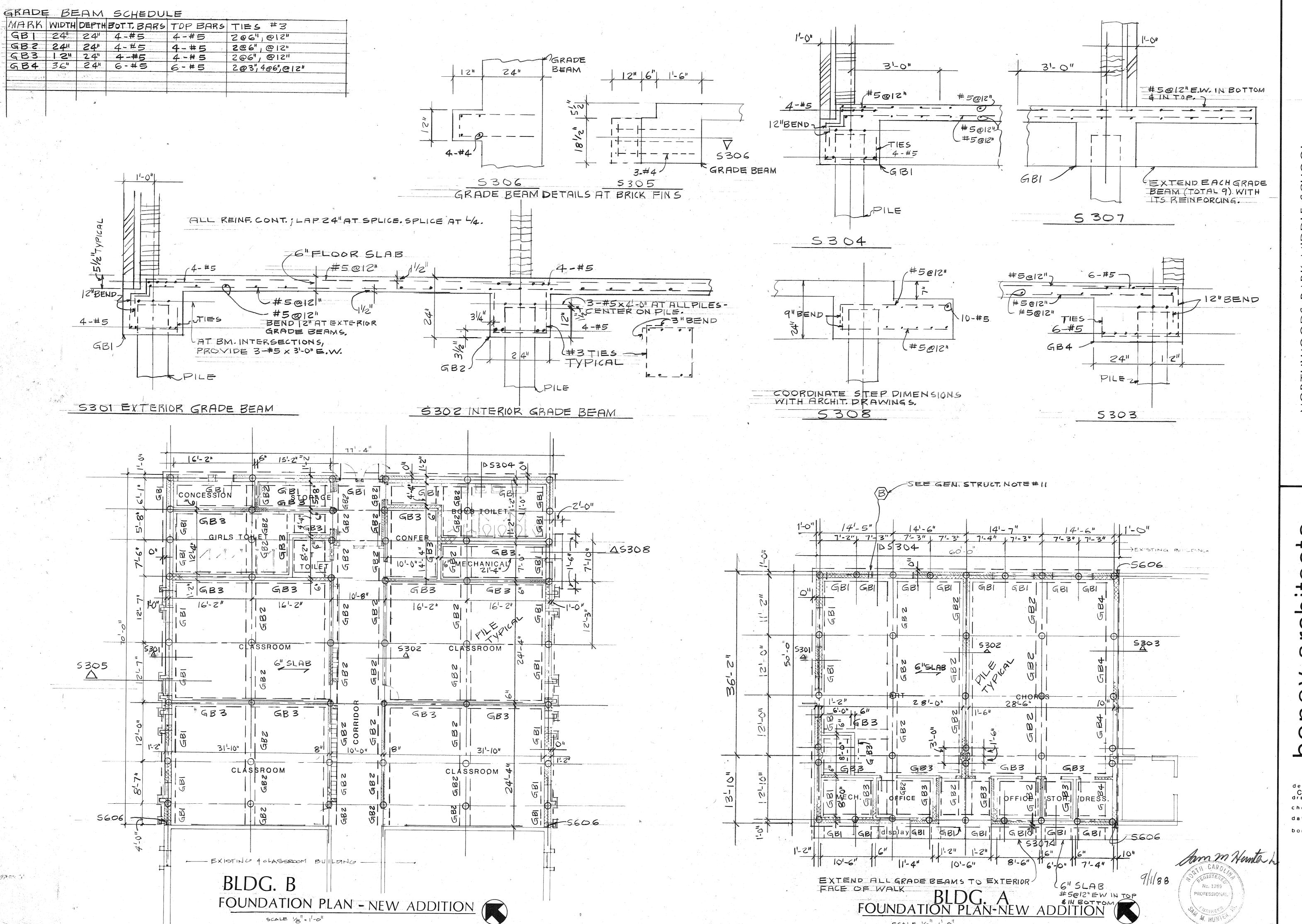


A-10
Northwoods

AS NEEDED

1004 ROOF CONNECTION





SCALE 18 = 1-0

ADDITION 2 MIDDL NORTHWOO

designed by CHARLES H. BONEY,AIA drawn by checked by date SEPT. 19, 1988. boney project no

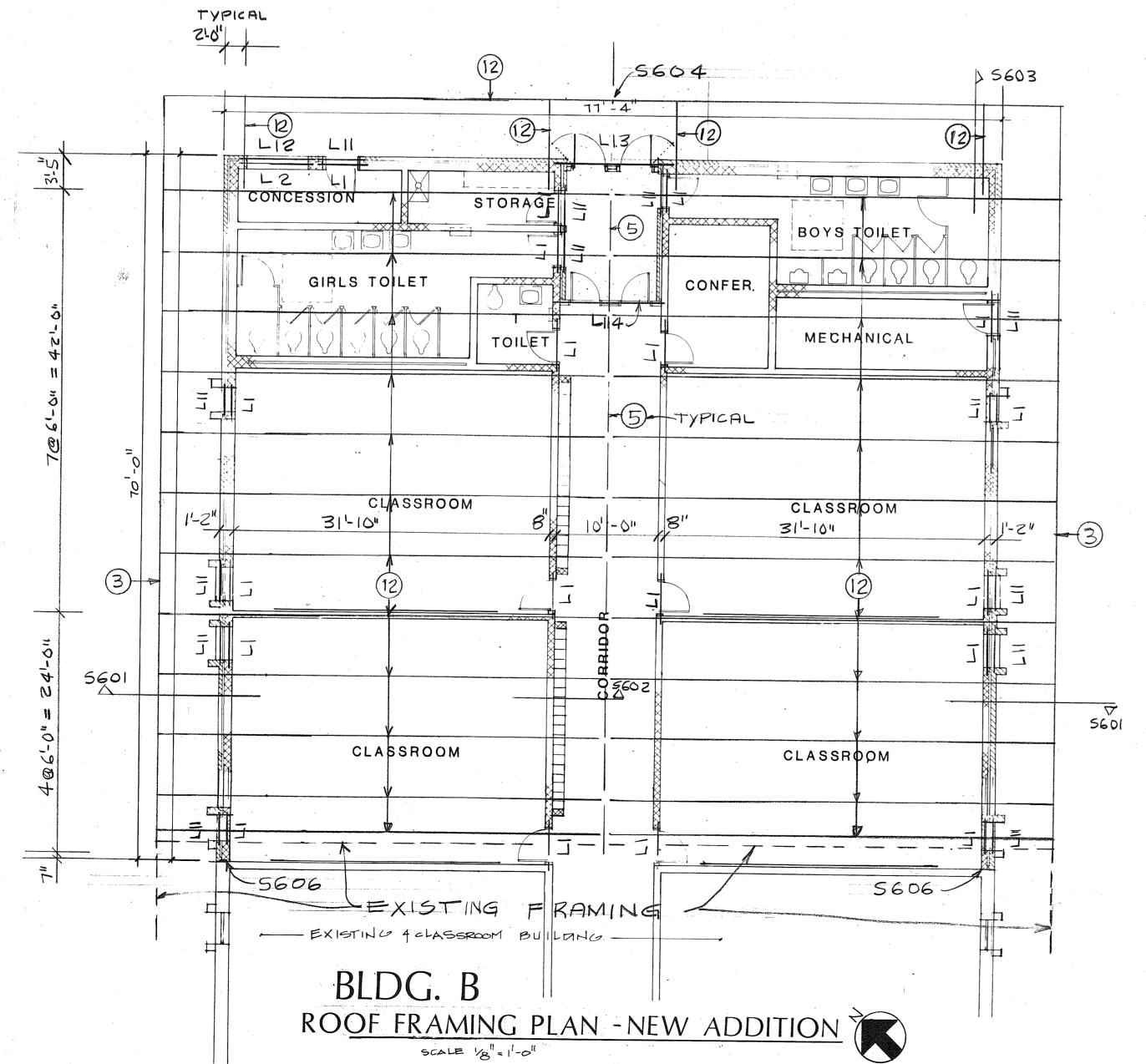
> **S-3** NORTHWOODS

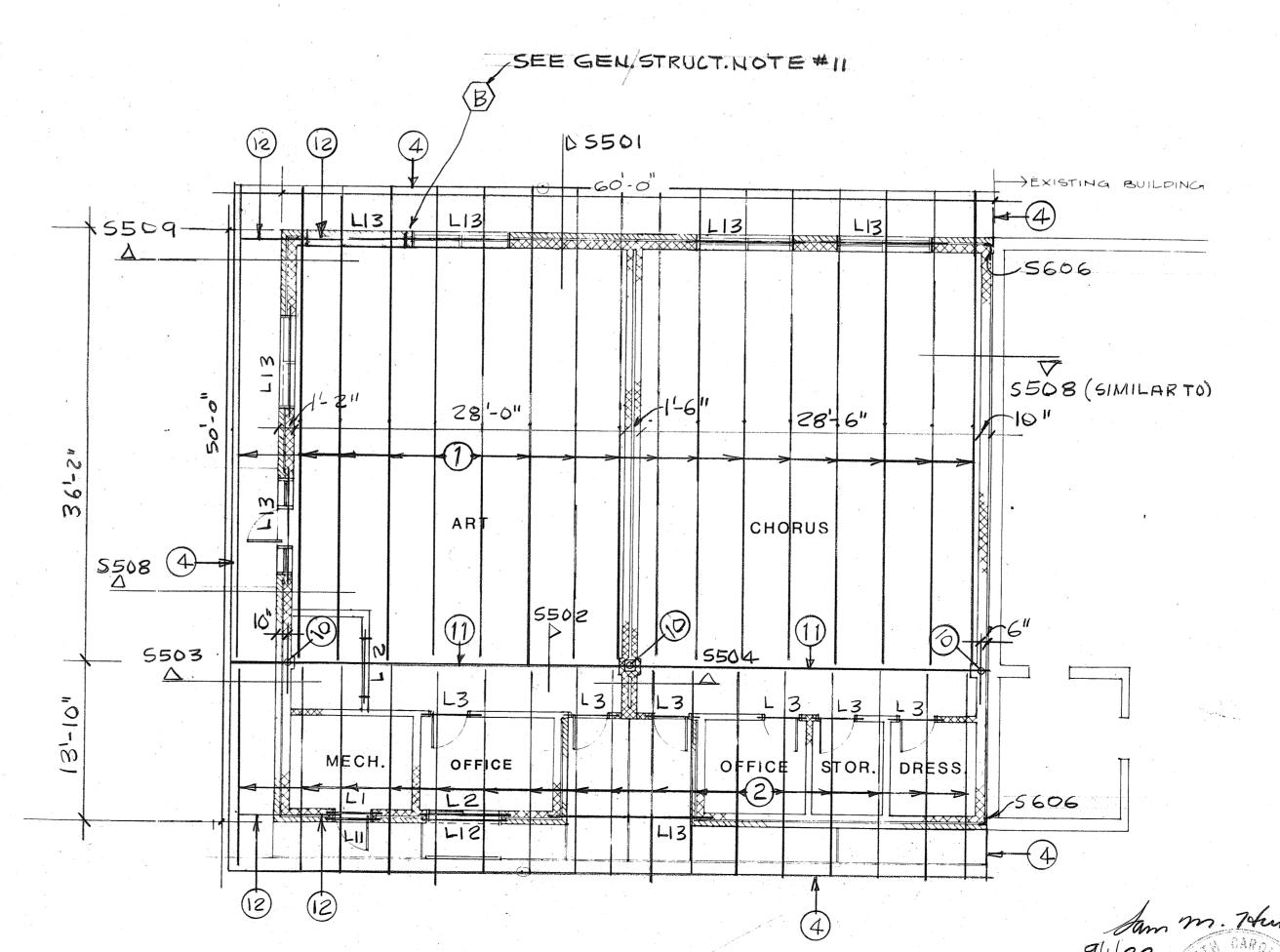
_[FRAM	ING SCHEDULE
	MARK	SIZE
		18K7@48"0.c.
	(2)	ISKI
	(3)	∠ 5x 3x ¹ /4
	\sim (4)	16"BENT R
-	5	66×8.2
	(6)	
	n (7)	
	(8)	
-[(9)	
	(10)	6"\$ STD.
-		W16 x 40
1	(2)	M14x18@6-0"0.C.
1	(14)	
-1	(15)	
THE PERSON NAMED IN COLUMN 1		

		*
 STEEL	LINTEL SCHEDUL	
MARK	SIZE	BEARING
LIL	46×6×5/16	811
L12	66×6×3/8	8"
L13	W8x24, L6x6x3/8	12"
L14	W8×18, P2	8"
		an the angular manifest was beginned to the control of the first of the control o
		and the second s
· ·		
o .	•	
		1

/ NICE)	71 (1)					
 CUNCK		3LOCK LIN					
MARK	DEPTH	BOTT, BARS	TOF' E	BARS	BEARING	REMARKS	
LI	811	2-#5			811	The second secon	The second secon
LZ	81	2-#6			8"		
L3	811	2-#4			8"		THE PROPERTY OF THE PROPERTY O
			management and a second control of the secon	All the Artist Control of the Contro	The second secon	Operation in more and resistant consistency in the state of the state	The state of the s
		gradien von de state fan de skriver in d De skriver in de skriver i				and the second s	CONTROL CONTRO
						The state of the s	(A) Care and Table garage and A symmetric and the second second second second second second second second second
						and the second s	Market Transcript Sins Kurt Specific Stabilities (Indian Specific Stabilities Specific Stabilities Specific Stabilities (Indian Specific Stabilities Specific Stabilities Specific Stabilities Specific Stabilities (Indian Specific Stabilities Specific Stabilities Specific Stabilities Specific Specific Stabilities (Indian Specific Stabilities Specific Stabilities Specific Stabilities Specific Specific Stabilities Specific Stabilities (Indian Specific Stabilities Specific Stabilities Specific Stabilities Specific S
					· ·		

EXACT LOCATION OF MIAXIB BEAMS SHALL BE IN ACCORDANCE WITH ARCHIT, DRAWINGS, INCLUDING SHT. A-7





BLDG. A

ROOF FRAMING PLAN - NEW ADDITION

SCALE 18 = 11-0"

Ann m. 74 unta 2

9 | 188

PROFESSIONAL

PROFESSIONAL

AND GARD

PROFESSIONAL

PROFESSIONAL

AND GARD

PROFESSIONAL

PROFESSIONAL

PROFESSIONAL

AND GARD

PROFESSIONAL

PROFESSION

date SEPT.19,1988 boney project no

checked by

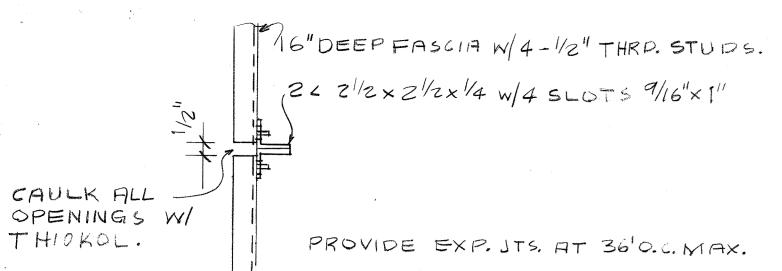
designed by CHARLES H. BONEY,AIA drawn by

S-4
NORTHWOODS

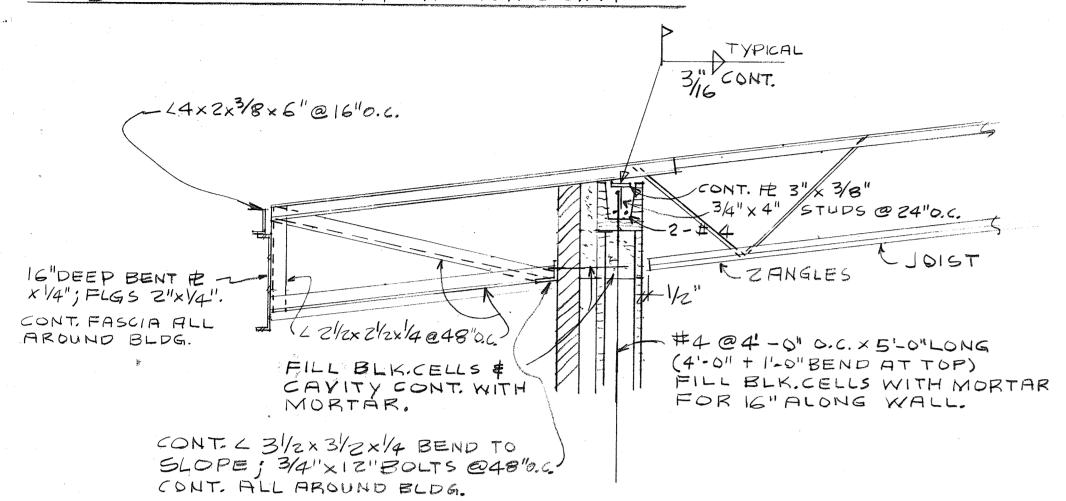
NORTHWOODS PARK

CLASSROOM BU

Lacksonville North Ca



S510 FASCIA EXPANSION JOINT

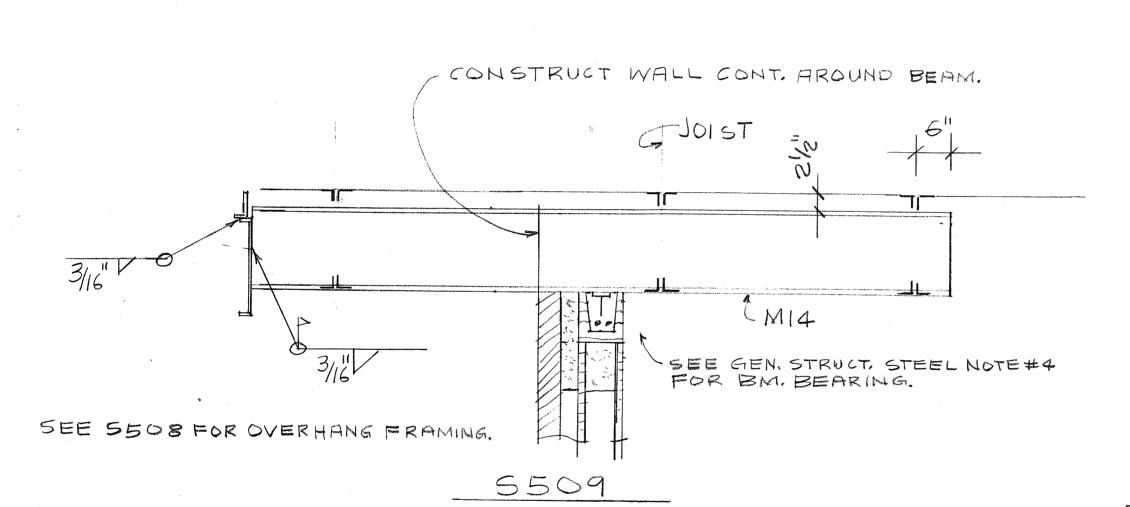


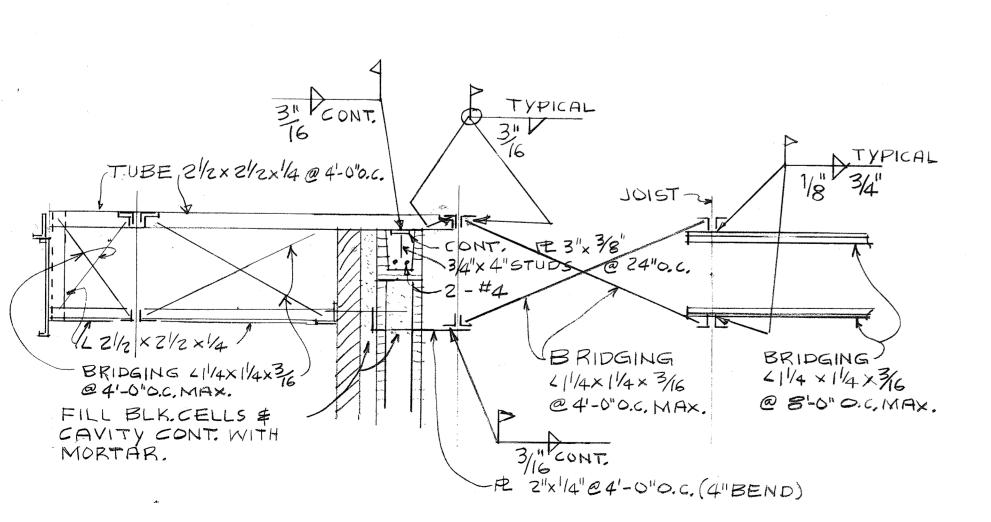
WELD ALL CONNECTIONS WITH 3/6" FILLET ALL AROUND.

TYPICAL OVERHANG FRAMING DETAILS-APPLY ALL AROUND BLDG.

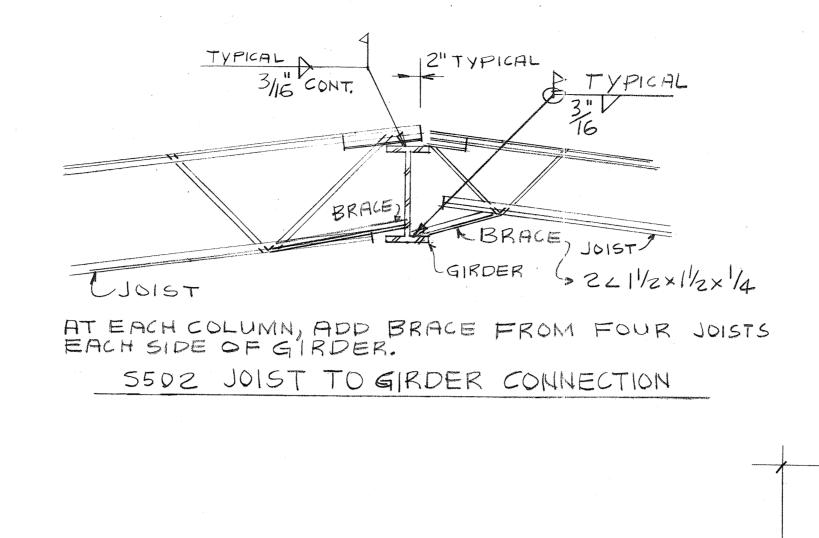
S501 JOIST BEARING-EXTERIOR WALL

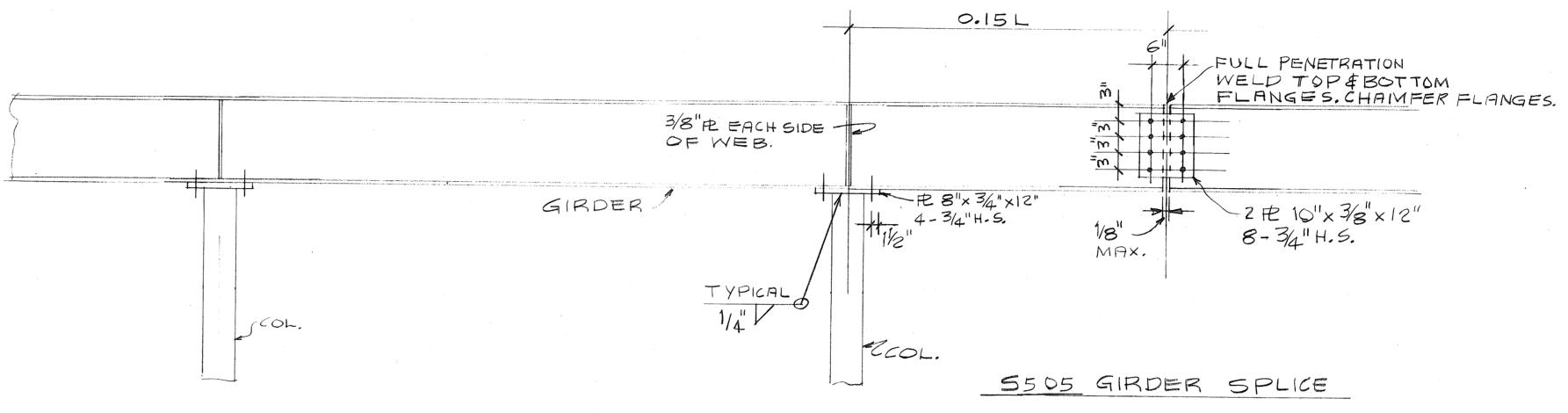
REFER TO ARCHIT DWGS. FOR COMPLETE DETAILS.





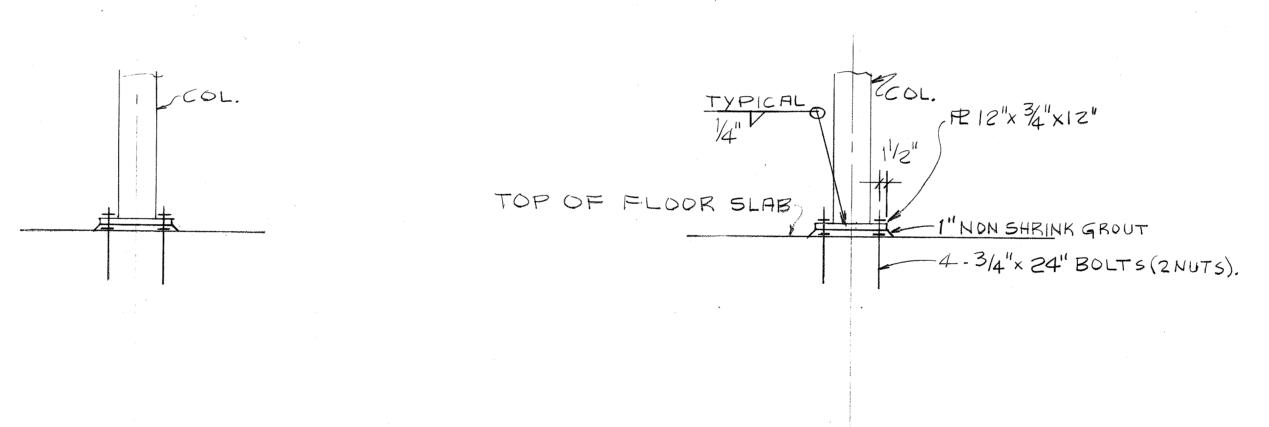






5503 GIRDER TO EXTERIOR COLUMN SEE 5504 FOR DETAILS.

5504 GIRDER TO INTERIOR COLUMN



SEE S507 FOR DETAILS.

5507 INTERIOR COL. BASE

CONSTRUCT WALL TO DECK.

(5 × 3x / 4 cont.

(6)

(6)

(7 × 3/4 × 1-0"

NON SHRINK GROUT

2-3/4 × 24" BOLTS

CONT. BOND BM. W/Z-#4.

S601 BEAM BEARING AT EXTERIOR WALL

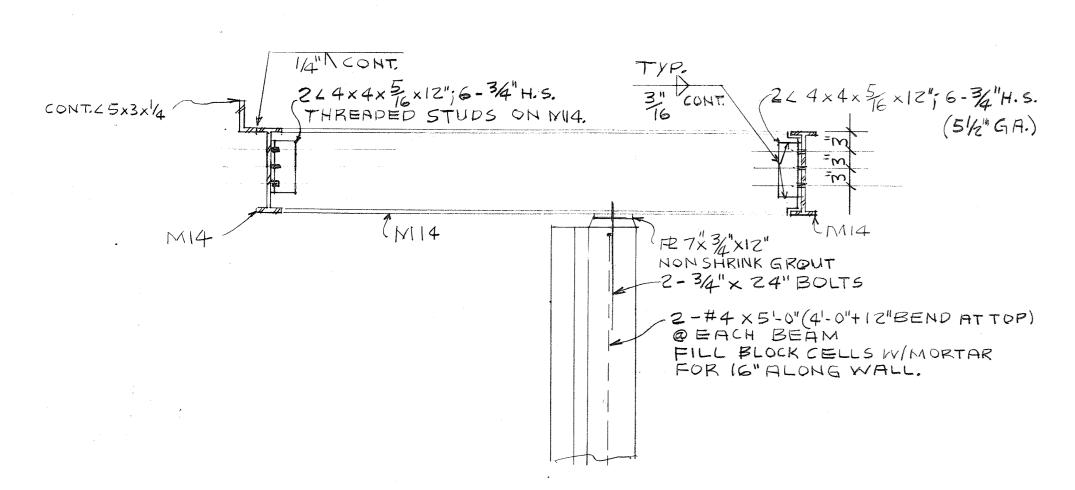
-2-#4×5'-0"(4'-0"+12"BEND ATTOP)

@ EACH BEAM.

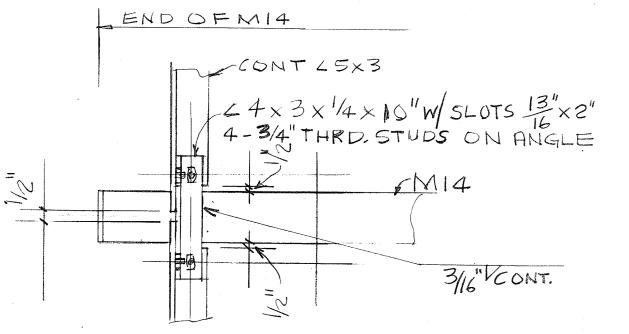
FILL BLOCK CELLS W/MORTAR

FOR 16" ALONG WALL.

497

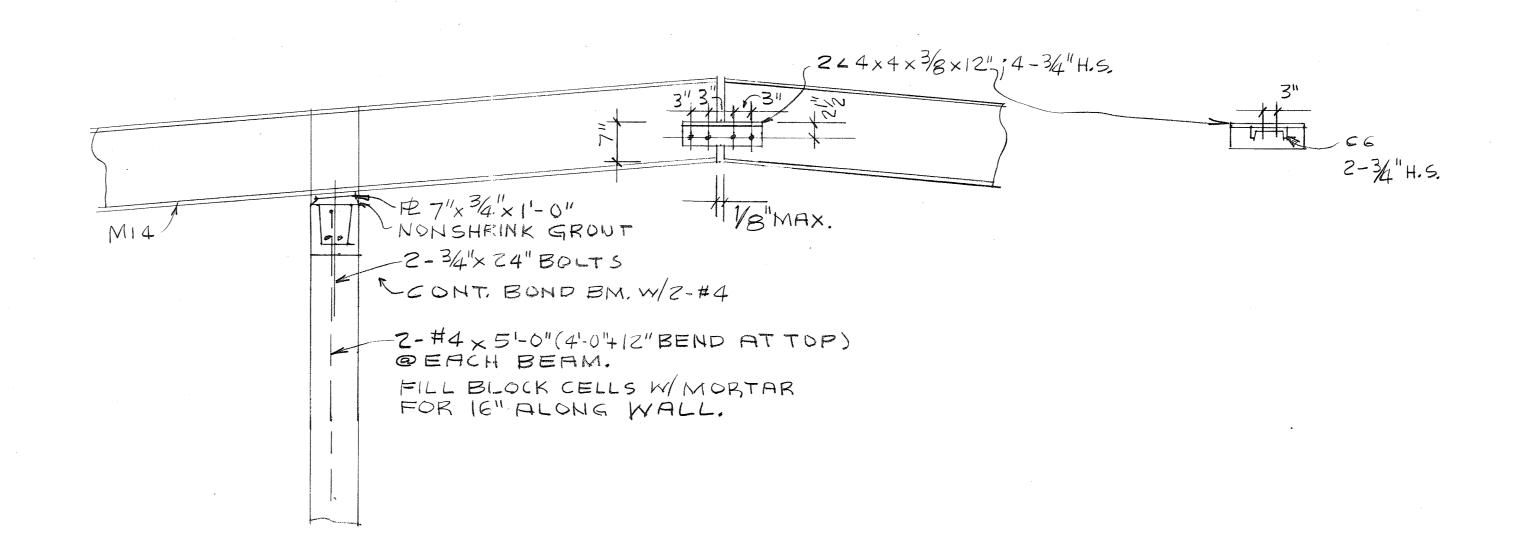


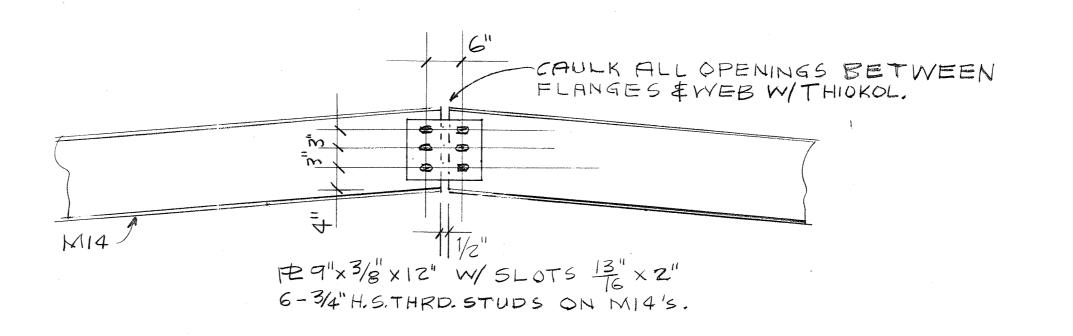
5603 BEAM DETAILS AT END WALL



CAULK ALL OPENINGS BETWEEN ANGLE LEGS W/ THIOKOL.

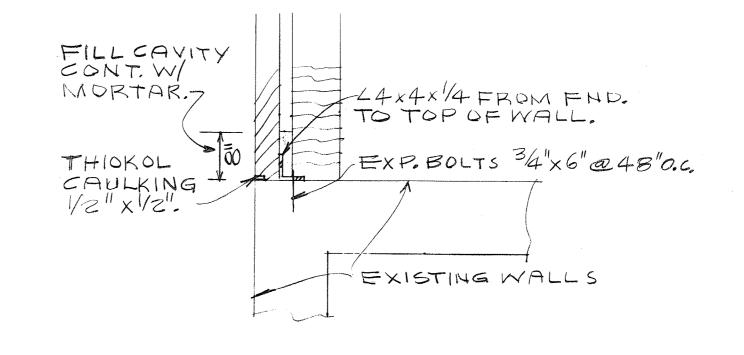
S605 FASCIA ANGLE EXPANSION JOINT PROVIDE EXP. JTS. AT 36'-0"O.C. MAX.





5604 FASCIA BEAM EXPANSION JOINT

SGOZ BEAM BEARING AT INTERIOR WALL



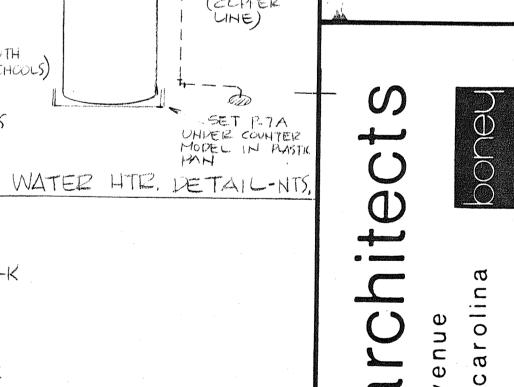
S606 CONNECTION NEW WALL TO EXIST. WALL

Am m Hunta In 1/1/88

S-6

Hom?





UHE)

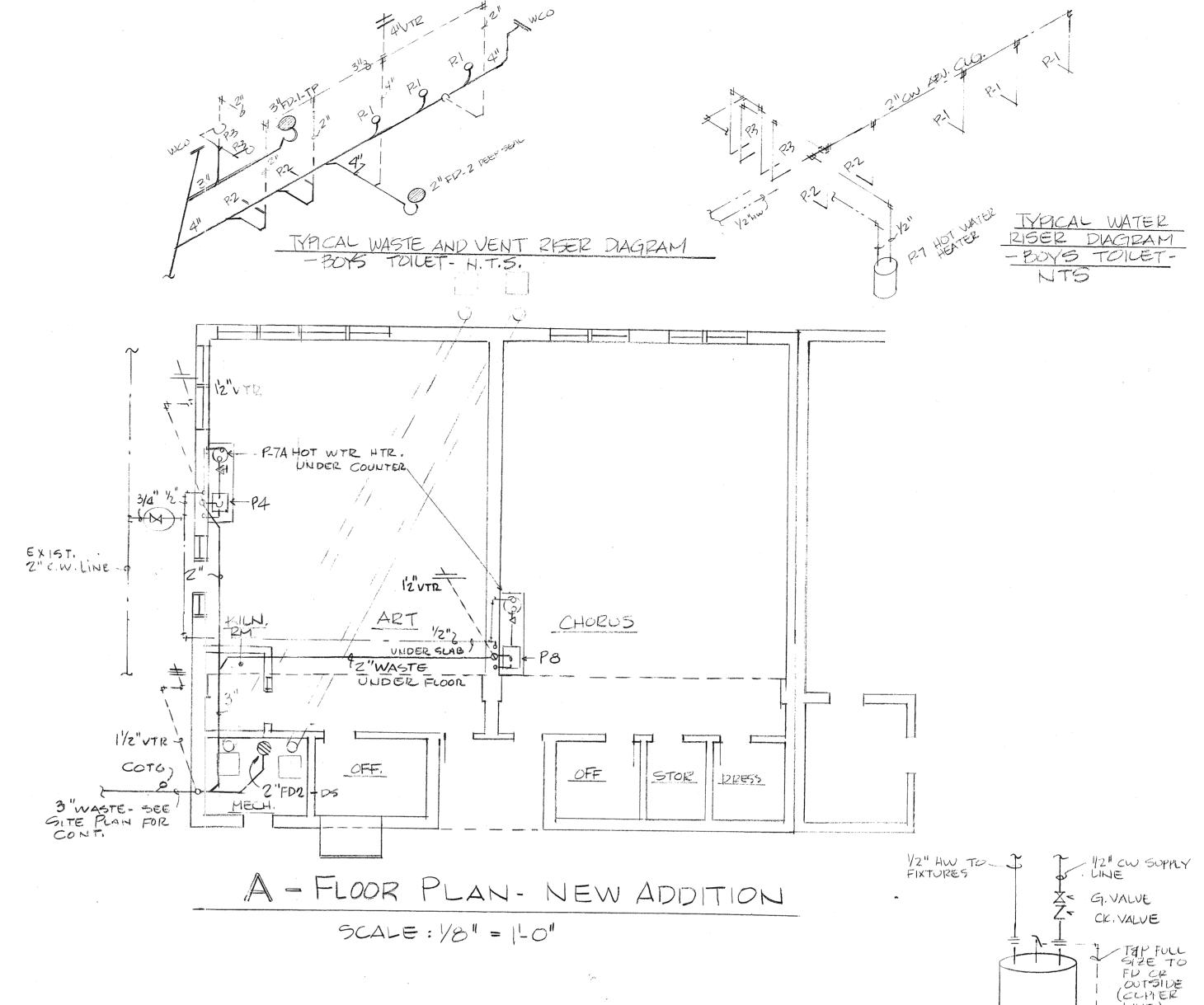
-

designed by CHARLES H. BONEY,AIA checked by date SEPT.19,1988

boney project no

P-2

Last bL



WATER HEATER DESCRIPTIONS SCHOOLS)

P-7- BOGAL - MEDIUM SIZE 2" FOAMGLASS INSULATION, DUAL ANCDE RODS, SAND HOG DUAL ELEMENTS, 2-4.5 KW NON-SMULTANEOUS, FOR 2054
STATE # TV-30-2KES

P.7A GGAL. MIDERET MODEL, FIBERCILASS INSCLATION, ANODE POD, 1650 WATT ELEM. WITH PLASTIC PAN., STATE # CV-G-15M5-K

PRIEF DESCRIPTION

WATER CLOSET, FLUSH VALVE

LAVATORY HOT + COLD

ELEC WATER WOLER

JANITOR FLOOR SINK

HOT WATER HEATER

URINAL

ART RM COLL

PLUMBING FIXTURE SCHEDULE

57x;9x71/2

HOT WATER HEATER 1/2" 1/2" TEP TO OUTSIDE

BAND RM SINK BIX 20X 12"D 1/2" 1/2" 1/2"

GEE SPECS ON TRAXLER SCHOOL SHT P-1

SYMBOL	DESCRIPTION	TOP	MANUFAC.	MODEL NO
FD-1	CAST IRON BODY, FLANGED, CLAMPING COLLAR, SEEPAGE OPHGS, ADJUST. TOP SIZE AS SHOWN ON PLANS	5"x5," SQUARE NKLELBROHZE	WAD	W-1100-9
FD-2	SAME AS FD-1 POT WITH EXTENDED PIM - CUTLET SIZE AS SHOWN ON FLANS.	5"\$ - NKKEL PROMZE	WA Deep	W-1100-9

BOYS

3"FD2-D5

CR.

CR.

RISE 2" WATER LINE

30GAL-

FLOOR PLAN NEW ADDITION

SCALE 1/8"=1-0"

CONNECT TO EXIST.
2"WATER LINEPROVIDE GATE VALVE
IN PLASTIC VALVE BOX

FUN UNDER FLOOR FROM NEARBY LAVATORY WITH WADE W-2400 TLAP PRIMER VALVE.

P6 P	
P3 The state of th	P3 P2 P2 P1
PI P	Z"C.W. AF CEILING
.85	LO JEE FLOOR PLAN AB

PART PLAN- WATER PIPING SCALE /8"=1-0"

TOTAL CONNECTED LOAD FIXTURE UNITS WASTE - 95 " COLD WATER - 115 MAX DEMAND TO GPM WATER

		Y-EXIST 2"C.W.	
COTG->84"	NEW CL.RM. ADDIN. "B"		
COTG -0 NEW 6"GAN	EXIST CR.RM PUDG		
EXISTING CIGAN. SO	EWER	EXIST 2"COLD WATER APPX 24" BELOW GRADE	
COTO NEW 3"	WASTE LINE DO W COTO	NEW ART/CHORDS ADDN.	
	EXIST C.R. PILDG.		
	FIN FL. 24.67	PART SITE PLA APPX. SCALE I": 50	2

TOILET

CK.

CR.

CONCESSION-

GIRLS -

COTG

SEE SITE PLAN

PLUMBING WILLIAM B. LELAND ENGINEER CHARLESTON, S.C. SEAL JOB NO: 1728-15 DATE: SEF -88 SHT NO: P- OF

1/211

1/2"

12" 12"

HW CW WASTE REMARKS

1/4"

14"P TRAP

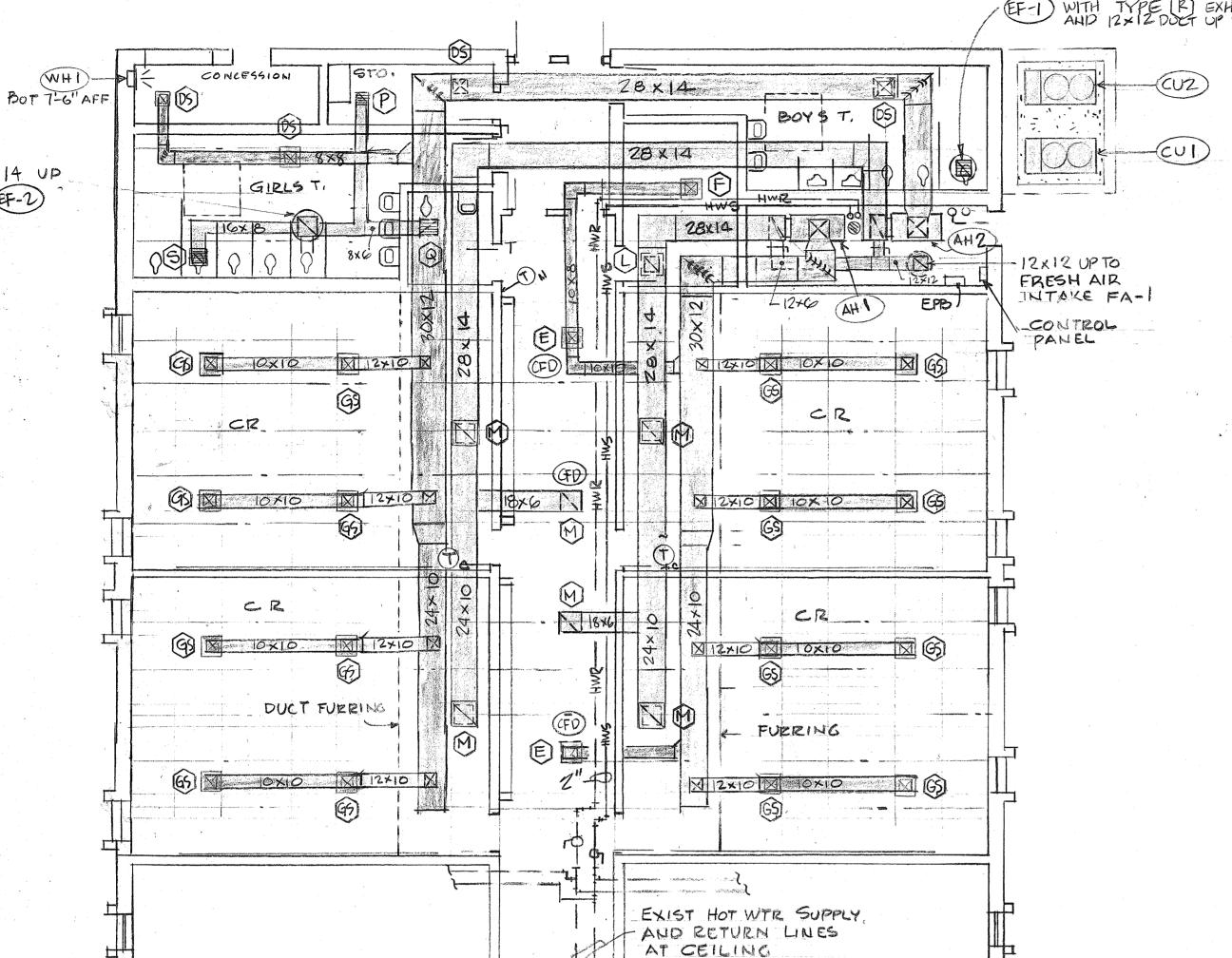
6 GAL-SEE DESCRIPTION

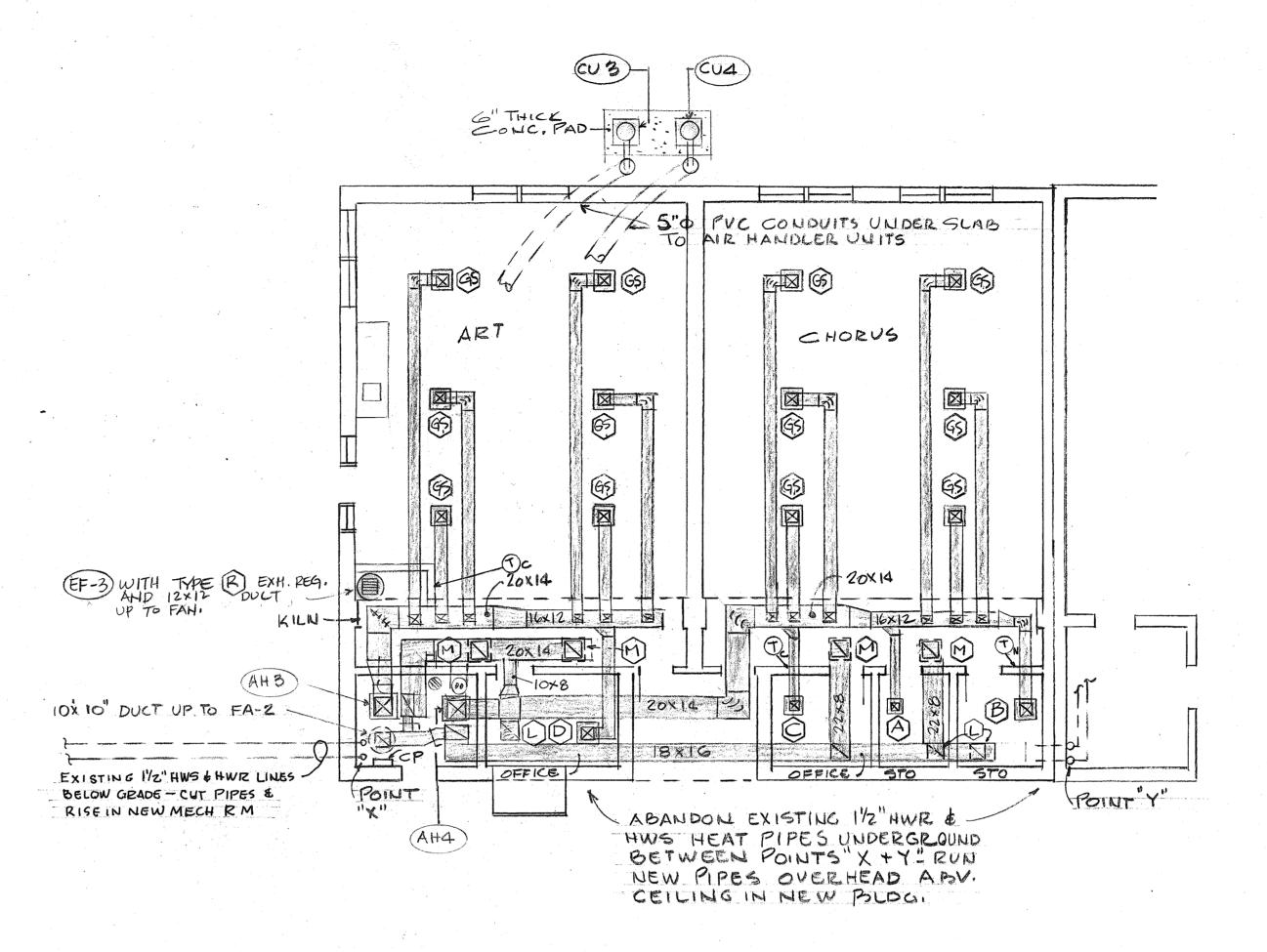
PLASTER TRAP

14 x 14 UP

TO (F-2)

WALL HEATER, HEAVY DUTY, 3000 WATTS AT 208V, 19, WITH BUILT-IN THERMOSTAT CONTROL VANDAL RESISTANT, MARKEL MODEL # 3420. WITH TYPE (R) EXH. REG. AND 12×12 DUCT UP TO FAMI





A FLOOR PLAN NEW ADDITION SCALE 18"=1-0"

(NORTHWOODS

8 5 7 7 8		INDO	OR	UN	See Landson						OUT	POO	R ()ui.	organismi is		
SYMBOL	CFM	EXT	Tax A	N MC	TOR	HEA	TING	COIL	PESIGN	SYMBOL	COOL	ELE	ECTR	ICAL	mesare daja ragida menjaman haram dagai y	DESIGN	REF.
	TOT	5P "H20	HP	ф	V	BTUH	Rows	GPM	UNIT		ARI	MCA	KW	ф	V	UNIT	LINE
AH-1 AH-2	3000 300	7" Po	1/2	30	208	955	2		GE TRANG BWEGOC	1 (1) 1	92.0	41.0	8.0	3	208	GE TRANE BTAOGOC - 300 M	13/8"
AH 3 AH 4	2000 200	0.6		14	208	67.0	2	4 3.0	RWE060C	CU3 CUA	60.0	25.2	6.67	3	208	TTA 060A -	1/8"

FLOOR PLAN NEW ADDITION

SCALE 18"=10"

NOTES		
HOT WATER COILS RATED	AT 70°F ENT AIR 180°F ENT	NATEE
FILTERS IN AHI, Z ARE	2-24×24×1 SEMI-PERM. IN	AH 3.4 1-1"x21/2"x 27" DITTO
REFRIGERANT LINE SIZE!	ARE FOR ESTIMATES ONLY - INSTA	ALL AS PER MERS RECOMMENDATIONS.

HOT WATER HEATING COIL - N.T.S. (BOTH SCHOOLS)

EX	HAUS	TF	AN SCI		DULE -	NORTH	I WOODS	S ONLY
SYMBOL	CFM	STATIC PRESS	ELECTRICAL	HP	MAXIMUM TIP SPEED	MANUFAL	MOPEL	REMARKS
(EFI)	590	1/8"	120-19-60	1/6	3581	GREEN HECK	A1-12B	LOW PROFILE FALL - MAX HT 13" ABV. CURB
EF-2	922	1/4"))	1/4	5419	-))	A-1-12A	DIT TO
(F-3)	898	.Ya"))	1/20	4869))	AI-IZB	PROVIDE SPEED CONTRUL SWI

NOTE: SEE SHEET M-1-TREXUER FOR ADDITIONAL SCHEDULES AND DETAILS.

DESIGN CONDITIONS HVAC LEGEND SEASON OUT DOOR INDOOR CAPACITY DESIGN INSTALLED DB WB RECTANGULAR SUPPLY, RETURN, OR EXHAUST DUCT - 24"WX 12"D (INSIDE DIMENSION) STREAMLINE DUCT TAKEOFF - 9+14-23T10+15- 25T WINTER 70 65 108+188=296 181+ 134=315 MBH - HWS- HOT WATER SUPPLY PIPING

3WAY TEMP CONTROL VALVE ONE PIPE SIZE SMALLER THAN PIPES TO COIL TYPICAL PIPING DETAIL FOR

SUPPLY DUCT SECTION PETURN DUCT SECTION SUPPLY DIFFUSER - TYPE (A) NOTED RETURN GRILLE - TYPE M NOTED EXHAUST REGISTER OR GRIWE - TYPE (S) NOTED VOLUME DAMPER SPLITTER DAMPER SQUARE CORNER WITH TURNING VANES COUTROL PANEL

-- HUR -- HOT WATER RETURN APHG GATE VALUES ____ BALL VALVE - D- BALANCING COCK STRAINER CHECK VALUE FLOW CONTROL VALUE THERMOSTAT CONTROL CENTER (HEAT & COOL) ON NIGHT LOW LIMIT T'STAT 8'-0" AFF. FRESH AIR INTAKE

HVAC SEAL 1031

T= TONS REF MBH = 1000 BTUHR

SPARE BOILER CAPY = 900 MBH I

WILLIAM B. LELAND ENGINEER CHARLESTON, S.C. JOB NO: 1728-13 DATE: 56P-88 SHT NO: M-1 OF3

M-4

designed by CHARLES H. BONEY,AIA

datr SEPT.19,1988

boney project no

0

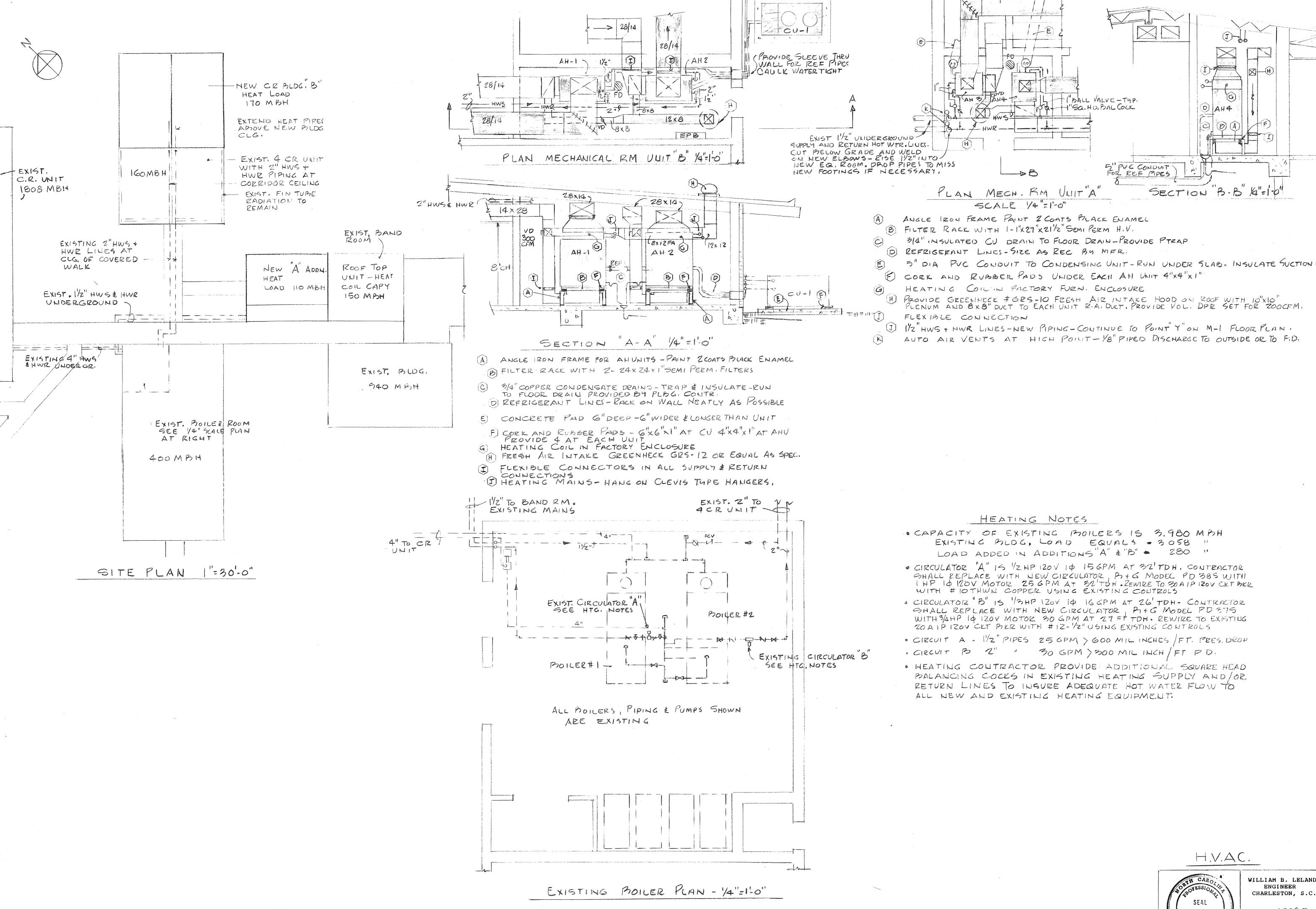
checked by

SCHO

MIDDLE

Q R

 ω



CHOOL 2 MIDDLE ARK THWOODS SR NOR

designed by CHARLES H. BONEY,AIA checked by date SEPT. 19, 1988

boney project no

WILLIAM B. LELAND CHARLESTON, S.C. JOB NO: 1728 B 1031 DATE: SEP 78 SHT NO: M 2 of 3

ENGINEER

M-5

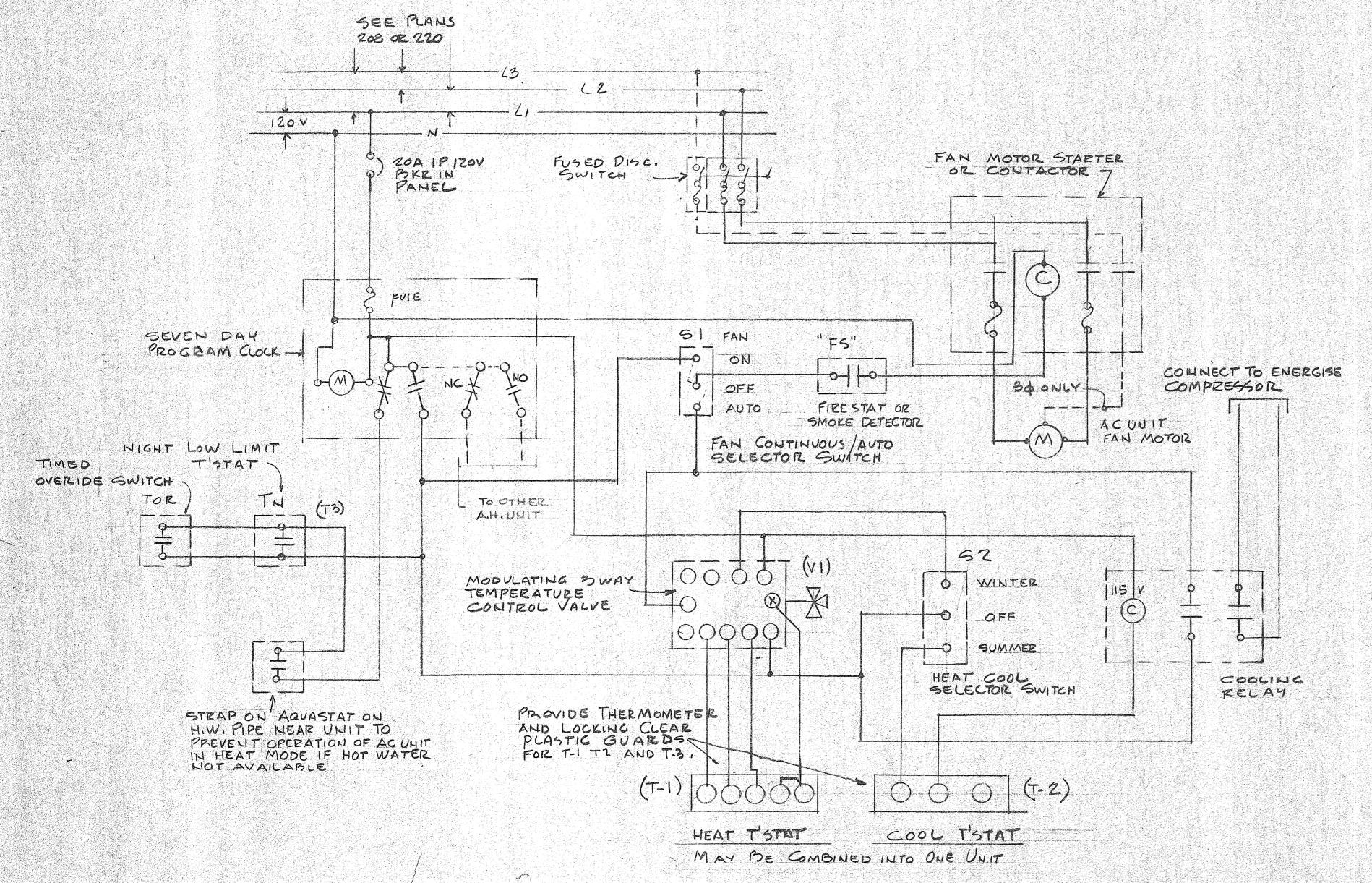
arolina

Jacksonville

M-6

TYPEWRITTEN OPERATING INSTRUCTIONS & DIRECTORY UNDER PLASTIC . ENGRAVED BAKELITE NAME PLATES TO SHOW ROOMS SERVED G HR TIMED OVER RIDE SWITCHES HEAT COOL SELECTOR SWITCHES DOOR PROGRAM CLOCK CONTROL -SUB PANEL CKT FUSE

CONTROL PANEL DETAIL ONE PANEL REQUIRED FOR EACH BLOG, ADDITION



TEMPERATURE AND PROGRAM CONTROL - TYPICAL WIRING DIAGRAM

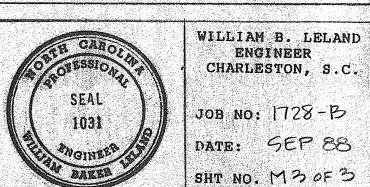
SEQUENCE OF OPERATION

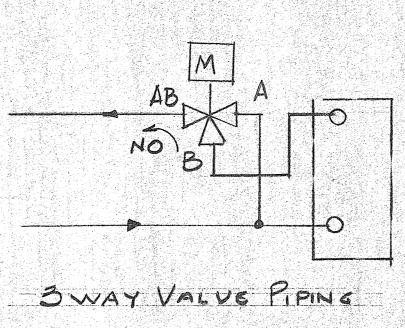
I. TIME CLOCK TO" : WITH FAN SW (SI) IN THE AUTO POSITION, SYSTEM SELECTOR SWITCH (SZ) IN SUMMER POSITION AND CLOCK CONTACTS IN DAY CYCLE:

- 2. ON A CALL FOR COOLING BY THERMOSTAT T-2, RELAY RZ IS ENERGIZED TO START CONDENSING UUIT AND AC UNIT FAN.
- 3. WITH GYSTEM SELECTOR SWITCH (SZ) IN WINTER POSITION AND STRAP ON AQUASTAT CONTACTS CLOSED TO PROVE HOT WATER IS AVAILABLE, FAN SWITCH (SI) IN AUTO POSITION, THERMOSTAT (TI) MODULATES 3WAY VALVE (VI) TO MAINTAIN DESIRED SPACE TEMPERATURE! AS SOON AS VALVE OPENS AUXILLIARY SWITCH ENERGIZES AC UNIT FAM.
- 4 FAN SWITCH SI IN ON POSITION OPERATES FAN CONTINUOUSLY DURING DAY CYCLE
- 5 WITH TIME CLOCK (TC) IN UNOCCUPIED HOUR POSITION, NIGHT LOW LIMIT THERMOSTAT (T3) WILL ACTIVATE HEATING SYSTEM PROVIDING HOT WATER IS AVAILABLE AT ACULITS 3 WAY VALVE. SET T-3 FOR 45°F OR AS DIRECTED.
- 6 GYSTEM CAN BE MANUALLY OPERATED BY INTERVAL TIMER (TOP) FOR A VARIABLE PERIOD UP TO GHOURS
- 7. FIRESTAT OR SMOKE DETECTOR IN RETURN AIR DUCT WILL SHUT DOWN FAN MOTOR IF UNUSUAL CONDITIONS EXIST.

NORTHWOODS PARK SCHOOL

H.V.A.C. TEMPERATURE CONTROLS





date SEPT.19,1988 boney project no

12

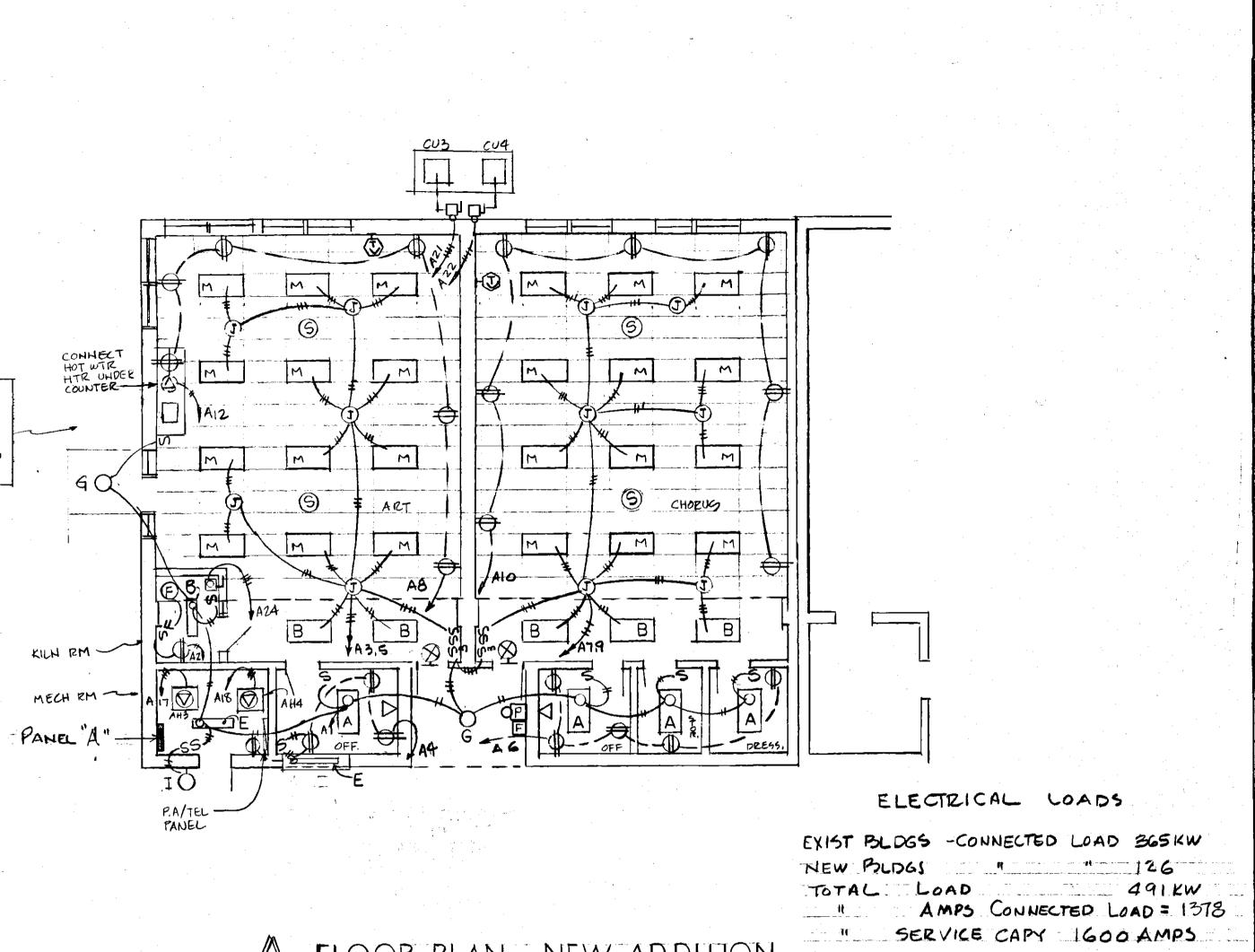
WILLIAM B. LELAND ENGINEER CHARLESTON, 8.C. JOB NO: 1728-15 DATE: SEP 88

ELECTRICAL

- E E

SHT NO: E-30F4

NORTHWOODS



A FLOOR PLAN NEW ADDITION SCALE 18"=1-0"

		Licutule Elytupe South	
TYPE	LAMP	LIGHTING FIXTURE SCHEDULE BRIEF DESCRIPTION	MFGR & CAT #
A	4-34 WATT CW RG	2'x 4' FLUOR, TROFFER FOR LAY-IN TILE CEILING, .125" ACRYLIC DIFFUSER, 41/2" MIN DEPTH	LITHOHIA 25PG - 440
В	4-34 WATT W RS	GAME AG TYPE "A" BUT FOR GYP BD CEILING	LITHONIA 25PF-440
C	2-34 WATT CW RS	SAME AS TYPE "B" BUT 1' x 4'	LITHONIA SPF - 240
0	4-34 WATT CW RS	8 FT SURFACE WRAPAROUND FLUOR, ACRYLLC DIFFUGER	LITHONIA 8725B240A
E	2-34 WATT CW RS	4 FT OPEN FLUOR, STRIP	LITHONIA CZ40
G	2-75 W	SURFACE INCANDESCENT SQUARE LIGHT, LEXAN	HARRIS MODEL 1200
H	_	HOT USED	
I	1-60 W	WALL BEACKET INCANDESCENT, VANPALPROOF LENS	HARRIG MODEL 300
K	2-34 WATT CW RG	SAME AS TYPE "A" BUT 1' x 4'	LITHONIA SPG240
	2-60W	WALL BRACKET INCANDESCENT, FOR TOILETS	LITHINIA GUTHAM WUP PC
Ž	4-34W CW RS	PENDANT MOUNT LOUVERED COMMERCIAL FLUOR, PLAGTIC SIDES, 4"L x 17"W x 51/4"H, MOUNT 9' AFF	LITHONIA WITH HL 440 P HANG
7	4-34W CWRS	SAME AS TYPE "M" BUT SURFACE MOUNTED ON LAY-	LITHONIA HL 440 P

EMERGENCY LIGHT W/ HEADS AS INDICATED LITHOLIA ELU-2P REMOTE HEAD LITHONIA ELA HOBOL P36, 6WATT

EXIT SIGN , BATTERY BACKUP, LITHONIA XSIREL

SEAL GEE TREXLER SCHOOL E-1 FOR THE ELECTRICAL LEGEND

PANEL "B" NOTE: ALL CIRCUITS ARE 20A, 1P, 120V CIRCUIT BREAKERS, #12 WIRE - 1/2" AND 3/4" CONDUITS, UNLESS OTHERWISE NOTED

ACOL

4#3-114"C

HOTE: WHERE 2 GWITCHEG ARE SHOWN IN CLASSROOMS, ART +

CHORUS, WIRE FOR 2 LEVELS OF LIGHT WITH 2 CENTER TUBES

ON OHE GWITCH & 2 OUTER TUBES OH OTHER SWITCH. RELOCATE 2 EXISTING DOUBLE FLOOD LIGHTS TO NEW EHD OF BLOG - RELAMP AHD PROVIDE HEW SWITCH IH COHCESSIONS -REMOVE EXIST EXIT REMOVE EXISTING CKT BKR AND AGGOCIATED LT & CAP OUTLET COHOUITS TO HOT HOUSE PROVIDE HEW 4" PROGRAM AHD PANEL BELL IN EXISTING BELL'S LOCATION FLOOR PLAN NEW ADDITION SCALE 18"=1-0" HEUTRAL BAR NEUTRAL BAR RCPT - CONCESSION 1.0 FAN & ECPT - KILN EM CORR, LIGHTS 1.0 LIGHTS 1.0 1.0 BATH LIGHTS RCPT & LIGHT 1.3 1,0 1,2 - CONF LIGHTS 1.0 - EWC, ETC . 8 1.2 1,3 UGHTS 1, 2 - CR CR LIGHTS " - CR 1.2 HOT WATER HTR **GPARE** 1.0 ." - CR . 8 1.0 11 - CR .6 1.0 TOILET FAHS (2) 1.0 1.5 AIR HANDLER (1 HP) AIR HANDLER (1 HP) 3#12-5/4"C (AH-4) 3#12-3/4"C (AH-3) 20A 17 1.0 RCPT -CR * 8 2.0 SPACE ONUT SPARE RCPT - CR SPARE 1.0 5 TON A/C OUTGIDE UNIT SPARE 5 TOH A/C OUTSIDE UNIT _____ (CU-5) 4#8-1"0 (CU-4) ELEC. HEATER (3KW) 3.0 4#8-1"0 SPARE 3#10-3/41 HOT WATER HEATER 3 H10-3/4"C 30A 29 AIR HANDLER #1 (12HP)2.1 KILN VIA FDS 14.0 PANEL "B" 4#10-3/4°C 150A 23 4#1/0 - 2"0 2084 RCPT-CONCESSION 30A 31 . 3 H10 - 3/4"C AIR HAHDLER #2 (1541)2,1 COHO. UNIT# | #2 5.0 SPARE 3P SPACE ONLY 16,0 4#10-3/4"C

EMERG, LIGHT HEAD

-CONCESSIONS

1.5

1,0

1.0

1.5

6.7

89.2

37.8

127,0 COHH. LD

90.0 DEMAND LD

NOTE: ALL CIRCUITS ARE 20A, 1P, 120V CIRCUIT BREAKERS, #12 WIRE - 1/2" AND

PAHEL "A"

3/4" CONDUITS, UNLESS OTHERWISE NOTED

350 AMP, 304W, 120/208V MAIH CKT BREAKETR

37.8

45.8

19.6

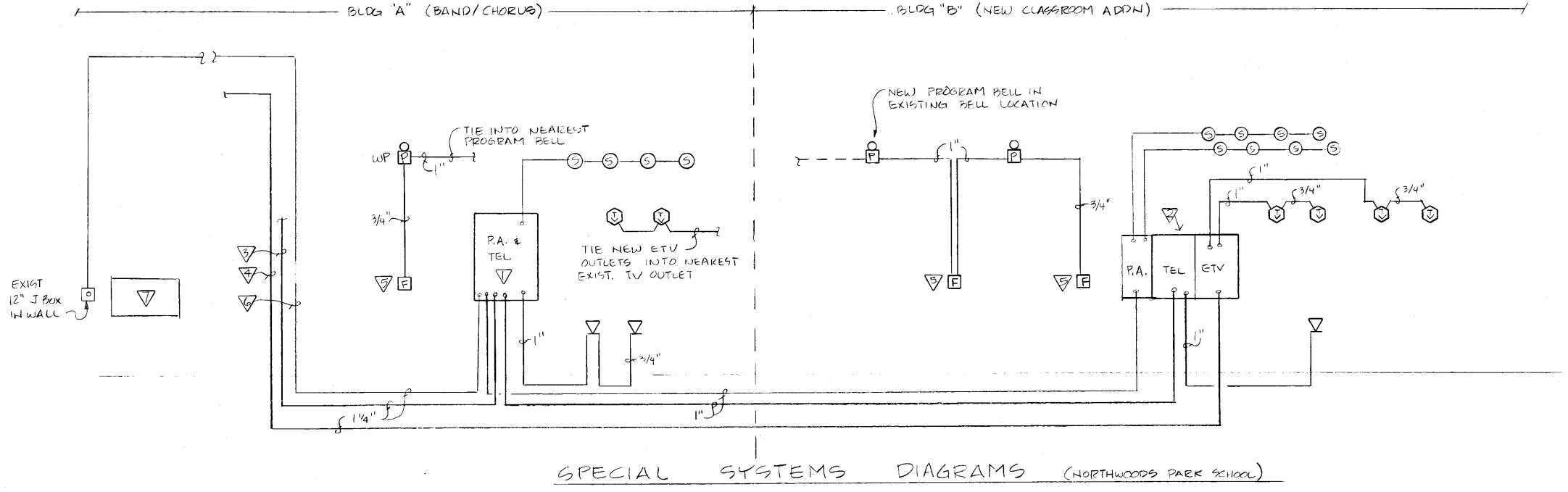
65.4 CONH LD

40,0 PEMAND LD

19,6

150 AMP, 304W, 120/208V

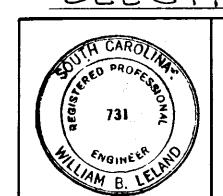
MAIN WAS OHLY



- NEW TEL/P.A. PANEL IN MECH RM BLOG "A", 2 x 4' x 3/4" PAINTED PLYWOOD PANEL BOLTED TO WALL.
- NEW TELEPHONE GERVICE FROM EXIGTING MAIN TELEPHONE SERVICE IN BOILER ROOM, RUH NEW 1/4" TO BLOG "A" AHD I" OH TO BLOG "B". RUH CCHDUIT CONCEALED OVERHEAD IN EXISTING BLIG AND UNDERGROUND TO NEW ADDITIONS,
- CURRENT FIRE ALARM SYSTEM UTILIZES THE PROGRAM BELLS FOR SIGNALLING. CONNECT NEW PULL STATIONS IN BLOG "A" & B" TO RING ALL BELLS IN SCHOOL WHEN ACTIVATED.
- NEW SOUND CONSOLE ALTERNATE BID: RECONNECT ALL EXISTING SPEAKERS TO FUNCTION AS BEFORE:
- W HEW COMBINATION P.A/TEL / ETV PANEL IN MECH RM BLDG "B", 41x81x3/4" PAINTED PLYWOOD PANEL BOLTED TO WALL.
- HEW ETV SERVICE FROM NEAREST MAIN BTV FANEL. CONCEAL CONDUIT OVERHEAD IN EXISTING BLOG & RUH UNDERSGROUND TO NEW ADDN.
- NEW PUBLIC ADDRESS SERVICE FROM NEW SOUND CONSULE IN OFFICE AREA. RUN NEW 14"C TO BLOG "A" AND I" ON TO BLOG "B", CONCEAL CONDUIT OVERHEAD IN EXISTING BLOG AND UNDERGROUND TO NEW ADDITIONS.

NOTE: IN BASE BID USE 5 SPARE KEYS & CONNECT AS DIRECTED.





WILLIAM B. LELAND ENGINEER CHARLESTON, S.C.

JOB NO: 1728-B DATE: SEP 88 SHT NO. E4 0= 4

2

ADDITIONS

BUILDING

CHOOL

S

MIDDLE

AR

THWOODS

NOR

designed by CHARLES H. BONEY, AIA checked by date SEPT.19,1988 boney project no

NORTHWOODS