PLAINFIELD BOARD OF EDUCATION

TCU RELOCATION & REFURBISHMENT AT HUBBARD MIDDLE SCHOOL

661 WEST EIGHTH STREET,
PLAINFIELD UNION COUNTY, NJ 07060
STATE PROJECT #4160-060-

General Notes:

1. ALL WORK SHALL CONFORM TO THE INTERNATIONAL BUILDING CODE-2018 NEW JERSEY EDITION AND ALL OTHER APPLICABLE CODES, ORDINANCES, ETC. FOR NEW JERSEY STATE AND THE LOCAL AUTHORITY HAVING JURISDICTION.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE AND FAMILIARIZING HIMSELF WITH THE EXISTING CONDITIONS AND SCOPE OF THE WORK PRIOR TO SUBMITTING BIDS AND COMMENCING WORK.

3. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL SAFE WORKING CONDITIONS AND SHALL OBSERVE ALL SAFETY REQUIREMENTS ESTABLISHED BY JURISDICTIONAL AGENCIES AND THE OWNER. WHERE CONFLICTS EXIST, THE MORE STRINGENT REQUIREMENT SHALL APPLY. CARE SHALL BE EXERCISED TO AVOID ENDANGERING PERSONNEL OR STRUCTURES.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION METHODS, PROCEDURES AND JOB SITE CONDITIONS INCLUDING SAFETY. CONSTRUCTION SHALL BE PERFORMED IN SUCH A MANNER TO PROTECT WORKMEN, OCCUPANTS AND THE PUBLIC FROM INJURY AND ADJOINING PROPERTY SHALL BE PROTECTED FROM DAMAGE BY USE OF SCAFFOLDING, UNDERPINNING OR OTHER APPROVED METHOD. THE CONTRACTOR SHALL REPAIR ANY AND ALL DAMAGE CAUSED DURING OR RESULTING FROM HIS OPERATIONS IN KIND TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.

5. THE CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A CLEAN, DEBRIS FREE CONDITION. THE DUST RESULTING FROM REMOVALS SHALL BE CONTROLLED SO AS TO PREVENT ITS SPREAD TO OCCUPIED PORTIONS OF THE BUILDING AND TO AVOID CREATION OF A NUISANCE IN THE SURROUNDING AREA.

6. CONTRACTOR SHALL SECURE ALL REQUIRED PERMITS, APPROVALS, ETC. PRIOR TO COMMENCING WORK AND SHALL SECURE CERTIFICATE OF OCCUPANCY UPON COMPLETION OF WORK.

7. CONTRACTOR SHALL BE RESPONSIBLE TO DISPOSE OF ALL DEMOLISHED MATERIAL OFF SITE IN AN APPROVED MANNER. THE OWNER SHALL BE CONSULTED PRIOR TO DISPOSAL OF ANY SALVAGED OR EXCESS MATERIALS AT THE COMPLETION OF THE PROJECT.

8. UPON COMPLETION OF WORK, ALL EXCESS MATERIAL, DEBRIS, ETC. SHALL BE REMOVED AND THE WORK AREA SHALL BE LEFT CLEAN TO THE OWNER'S SATISFACTION.

9. ALL WORK SHALL BE SCHEDULED IN COMPLIANCE WITH THE OWNER'S REQUIREMENTS FOR THE USE OF THE EXISTING FACILITY.

10. CONTRACTOR SHALL FURNISH ALL EQUIPMENT THAT MAY BE REQUIRED TO PERFORM THE WORK INDICATED IN A SAFE AND ORDERLY MANNER.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RELOCATION AND TEMPORARY SUPPORT OF ANY UTILITIES ENCOUNTERED DURING THE COURSE OF HIS WORK AND TO ENSURE THE OWNER'S FACILITY TO BE OPERATIONAL.

12. THE CONTRACTOR SHALL REVIEW DRAWINGS AND FIELD VERIFY ALL DIMENSIONS, CONDITIONS AND ELEVATIONS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES AND ADDRESS ALL QUESTIONS TO ARCHITECT PRIOR TO COMMENCING WORK.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING, PATCHING, FILLING AND CLEANING UPON COMPLETION OF WORK.

14. THE CONTRACTOR SHALL NOT SCALE DRAWINGS FOR DIMENSIONS. ALL WRITTEN OR DIMENSIONED INFORMATION TAKES PRECEDENCE OVER THE DRAWING.

15. THE CONTRACTOR SHALL SUBMIT, WHERE REQUIRED, SHOP DRAWINGS TO THE ARCHITECT FOR APPROVAL PRIOR TO THE START OF FABRICATION OF THOSE ITEMS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

16. THE CONTRACTOR SHALL PROVIDE THE OWNER AND ARCHITECT WITH CERTIFICATES OF INSURANCE PRIOR TO STARTING THE WORK.

17. THE CONTRACTOR SHALL SHALL BE RESPONSIBLE FOR SHORING AND BRACING OF EXISTING STRUCTURES AS NEEDED TO COMPLETE THE NEW WORK.

18. ALL MANUFACTURER'S MATERIALS, COMPONENTS, FASTENERS, ASSEMBLIES, ETC. SHALL BE HANDLED AND INSTALLED IN ACCORDANCE TO WITH MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS. WHERE BRAND NAMES AND MANUFACTURED PRODUCTS ARE CALLED FOR, APPROVED EQUALS WHICH MEET APPLICABLE STANDARDS AND SPECIFICATIONS MAY BE SUBSTITUTED WITH WRITTEN PERMISSION OF THE ARCHITECT AND THE OWNER. WHENEVER BRAND NAMES OR SPECIFIC PRODUCT SYSTEMS ARE INDICATED IT SHALL BE CLEARLY UNDERSTOOD THAT SUCH IDENTIFICATION IS FOR THE PURPOSE OF ILLUSTRATING THE TYPE OF PRODUCT AND DEGREE OF QUALITY DESIRED. SUCH IDENTIFICATION IN NO WAY PRECLUDES THE CONTRACTOR FROM USING PRODUCTS OF OTHER MANUFACTURERS WHICH CAN BE SHOWN IN ADVANCE TO BE OF LIKE AND OF EQUAL QUALITY.

19. ALL CHANGES SHALL BE REQUESTED IN WRITING AND MAY ONLY BE APPROVED IN WRITING BY THE ARCHITECT AND THE OWNER PRIOR TO ANY CHANGES BEING MADE.

20. THE ARCHITECT HAS THE RIGHT TO REJECT ANY PORTION OF WORK THAT IS POORLY INSTALLED, DOES NOT MEET INDUSTRY STANDARD, UNAUTHORIZED, OR WORK DONE CONTRARY TO THE THE INTENT OF THE CONTRACT DOCUMENTS. SUCH WORK SHALL BE REPLACED, REPAIRED OR REMOVED AT THE CONTRACTOR'S EXPENSE.

21. THE CONTRACTOR SHALL GUARANTEE ALL HIS WORK AND THE WORK OF HIS SUBCONTRACTORS FOR A PERIOD ONE YEAR AFTER RECEIVING FINAL ACCEPTANCE AND DO ALL REPAIR WORK AND REPLACEMENT AS NECESSARY DURING THAT PERIOD AT THE CONTRACTOR'S EXPENSE.

22. IN NO EVENT SHALL STRUCTURAL MEMBERS BE CUT OR DRILLED WITHOUT THE WRITTEN APPROVAL OF A LICENSED STRUCTURAL ENGINEER.

23. THE CONTRACTOR SHALL PROVIDE SAFE AND SANITARY CONDITIONS WHERE DEMOLITION AND WRECKING OPERATIONS ARE BEING CARRIED ON. WORK SHALL BE EXECUTED IN SUCH A MANNER THAT HAZARD FROM FIRE, POSSIBILITY OF INJURY, DANGER TO HEALTH AND CONDITIONS WHICH MAY CONSTITUTE A PUBLIC NUISANCE SHALL BE MINIMIZED.

Location Map

NOT TO SCALE

Aerial View

NOT TO SCALE

Applicable Codes:

1. JURISDICTION: STATE OF NEW JERSEY

2. APPLICABLE CODES:
   - A. INTERNATIONAL BUILDING CODE/ 2018 NEW JERSEY EDITION
   - B. ASHRAE 90.1-2016
   - C. INTERNATIONAL MECHANICAL CODE/ 2018
   - D. INTERNATIONAL FUEL GAS CODE/ 2018
   - E. NATIONAL ELECTRIC CODE/ 2017
   - F. NATIONAL STANDARD PLUMBING CODE/ 2018
   - G. NEW JERSEY DEPARTMENT OF EDUCATION/ EDUCATIONAL FACILITIES N.J.A.C. 6A:-26
   - H. N.J.A.C. 5:23-6 REHABILITATION SUB CODE
   - I. N.J.A.C. 5:23-7 BARRIER FREE SUBCODE AND ICC-ANSI A117.1-2009
   - J. NEW JERSEY UNIFORM CONSTRUCTION CODE TITLE 6, CHAPTER 23, SUBCHAPTERS 1-12

3. USE GROUP/ OCCUPANCY: IBC/ 2018 NEW JERSEY EDITION, SECTION 305.1: E-EDUCATIONAL

Drawing Index

NJ Certificate of Authorization
Eng'r. Nos. 24GA27937500
Arch. Nos. 21AC00012400
Date 06/24/22
Checked IV
Drawn RSS

MATTHEW T. WOLFE, A.I.A.
License No. NJ21A01963400
Title REGISTERED ARCHITECT

Revisions:

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445 Godwin Ave Ste 9, Midland Park, NJ 07432 | t. 201-447-6400 | f. 201-447-1233

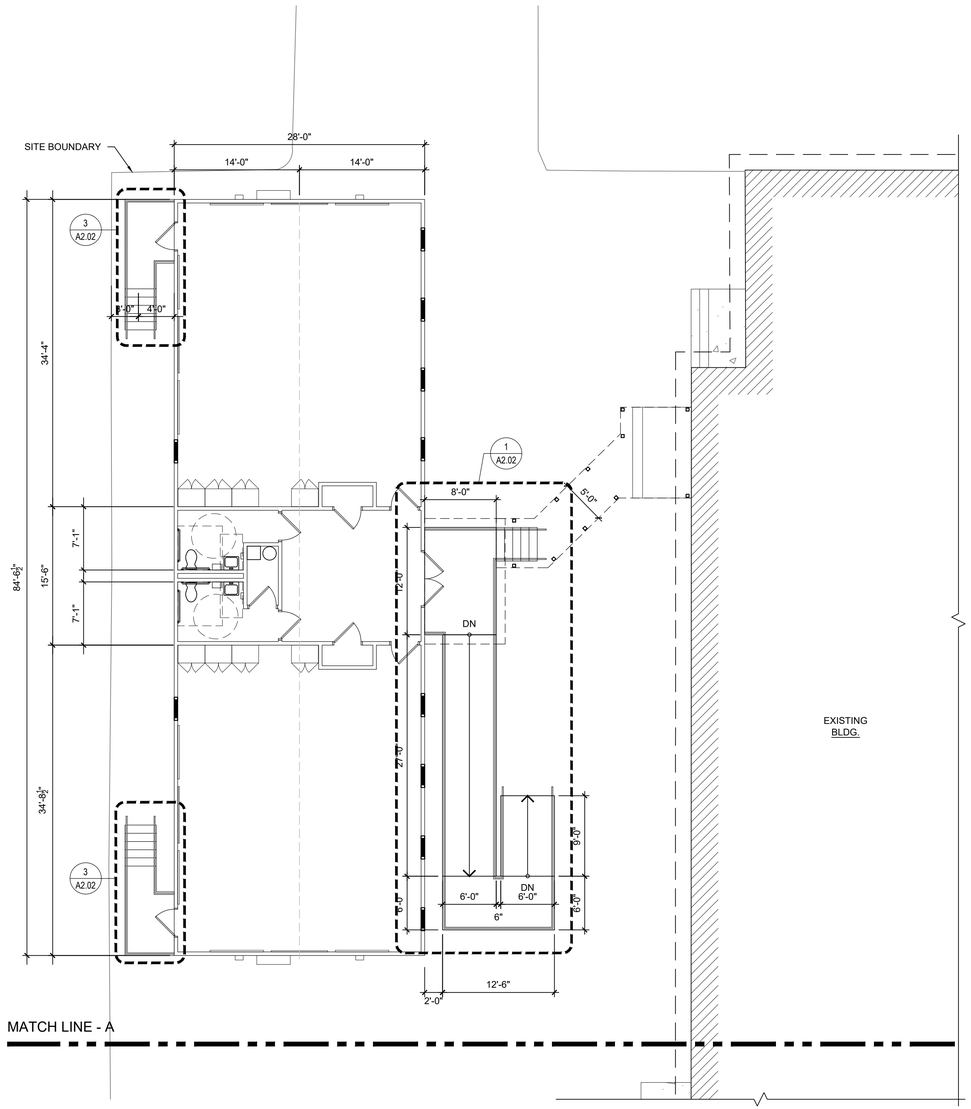
State Project#: 4160-060

COVER SHEET
TCU RELOCATION & REFURBISHMENT AT HUBBARD MIDDLE SCHOOL
661 W. 8th. STREET, PLAINFIELD NEW JERSEY 07060

Job No. 2.20174.81

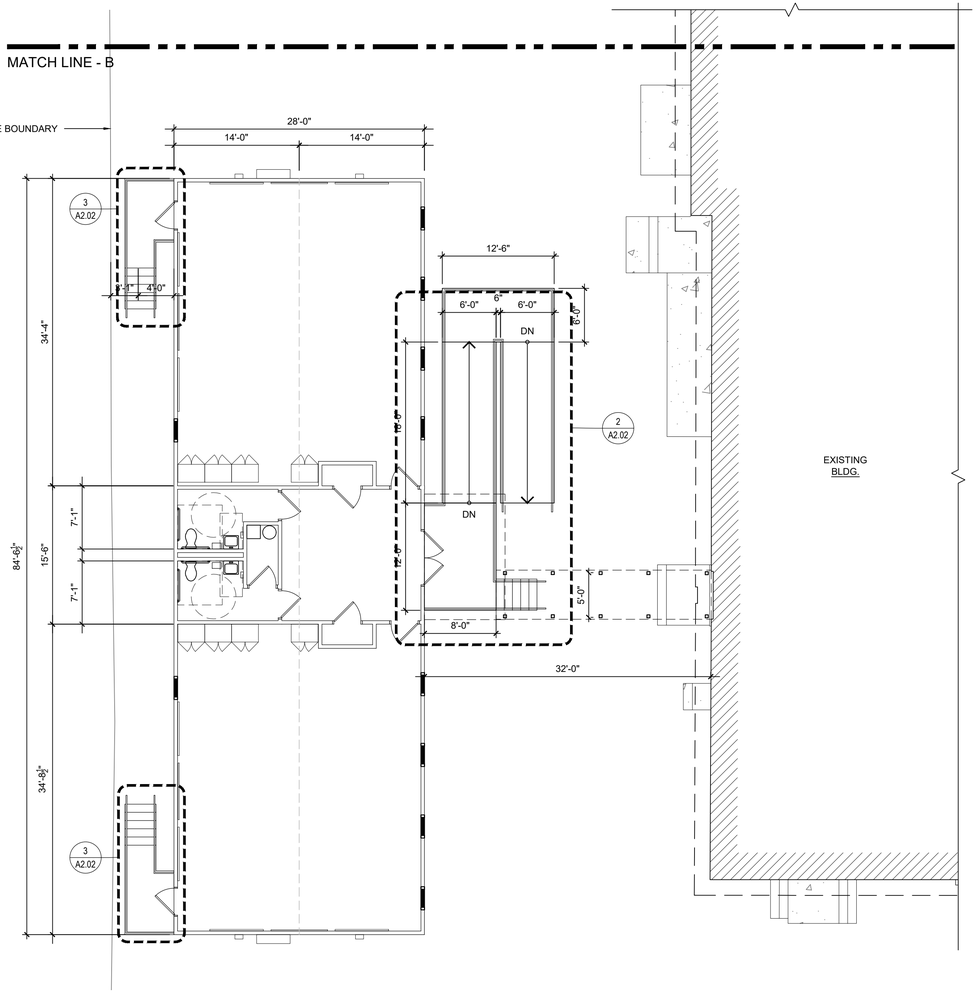
File No. 20174801001

T0.01



1 PROPOSED TCU #1 FLOOR PLAN - MATCHLINE 'A'

1/8" = 1'-0"

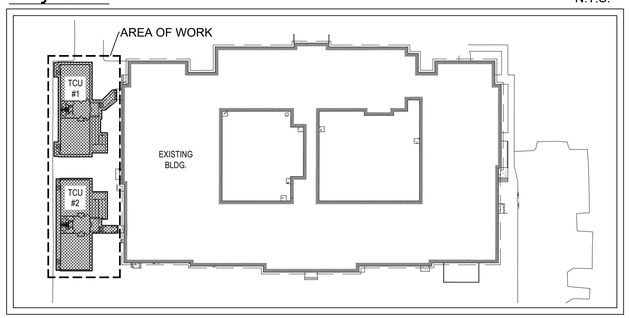


2 PROPOSED TCU #2 FLOOR PLAN - MATCHLINE 'B'

1/8" = 1'-0"

Key Plan

N.T.S.



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Drawn	RSS

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Revisions:

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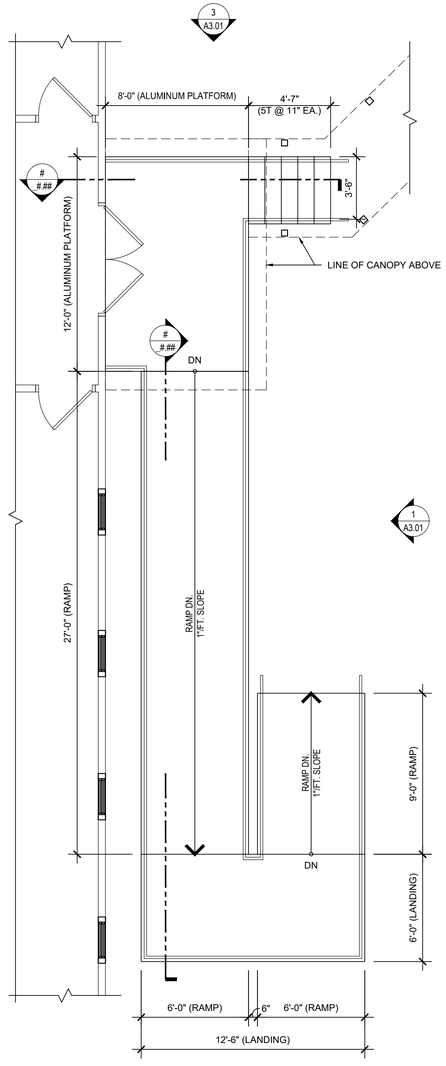
PROPOSED TCU #1 & #2 FLOOR PLANS

TCU RELOCATION & REFURBISHMENT AT
HUBBARD MIDDLE SCHOOL
661 W 8th. STREET, PLAINFIELD,
NEW JERSEY 07060

Job No. 2.20174.81

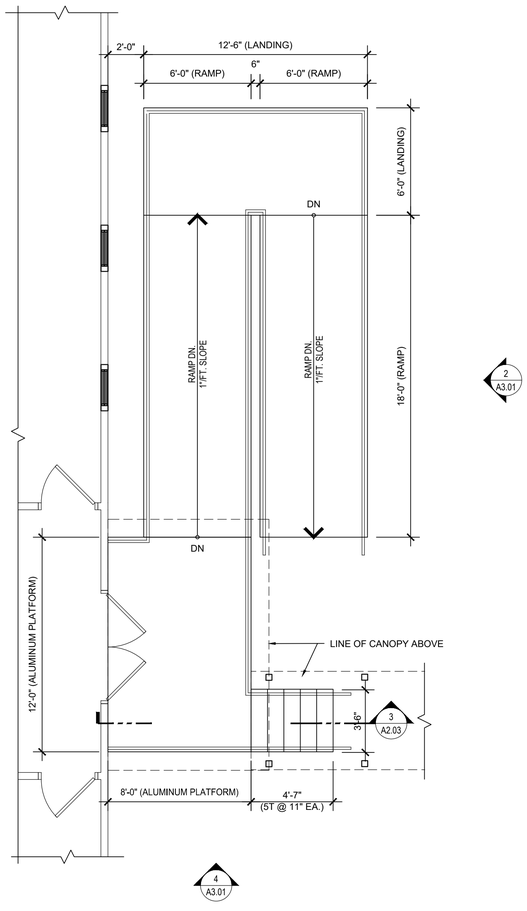
File No. 2017481A201

A2.01



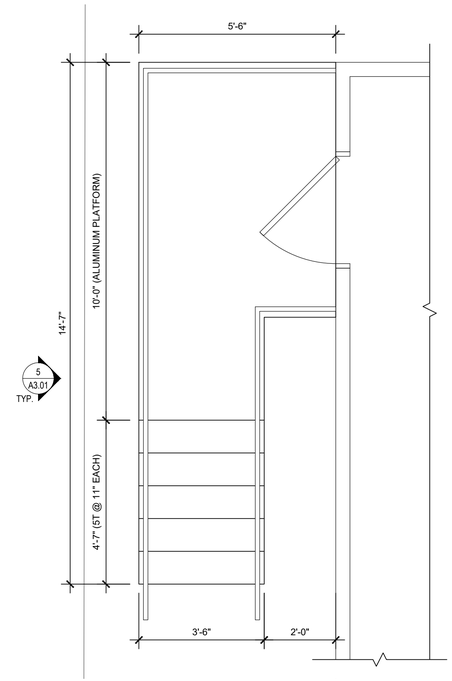
1 ENLARGED TCU #1 DECK & RAMP PLAN - PROPOSED

1/4" = 1'-0"



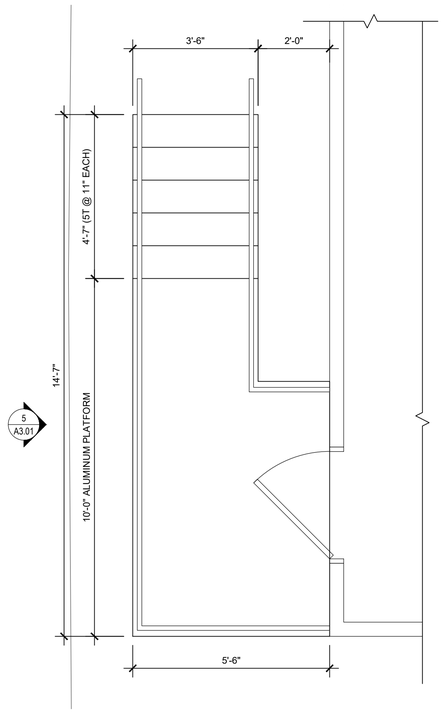
2 ENLARGED TCU #2 DECK & RAMP PLAN - PROPOSED

1/4" = 1'-0"



3 ENLARGED TCU STAIR PLAN AT REAR - PROPOSED

1/2" = 1'-0"

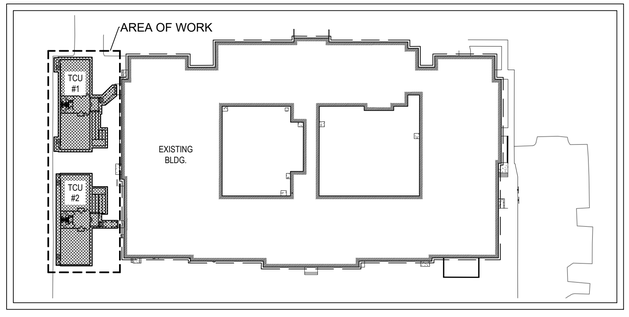


4 ENLARGED TCU STAIR PLAN AT REAR - PROPOSED

1/2" = 1'-0"

Key Plan

N.T.S.



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Checked	IV
Drawn	RSS

MATTHEW T. WOLFE, R.A.
Title REGISTERED ARCHITECT
License No. NJ21AI109634OO

Revisions:

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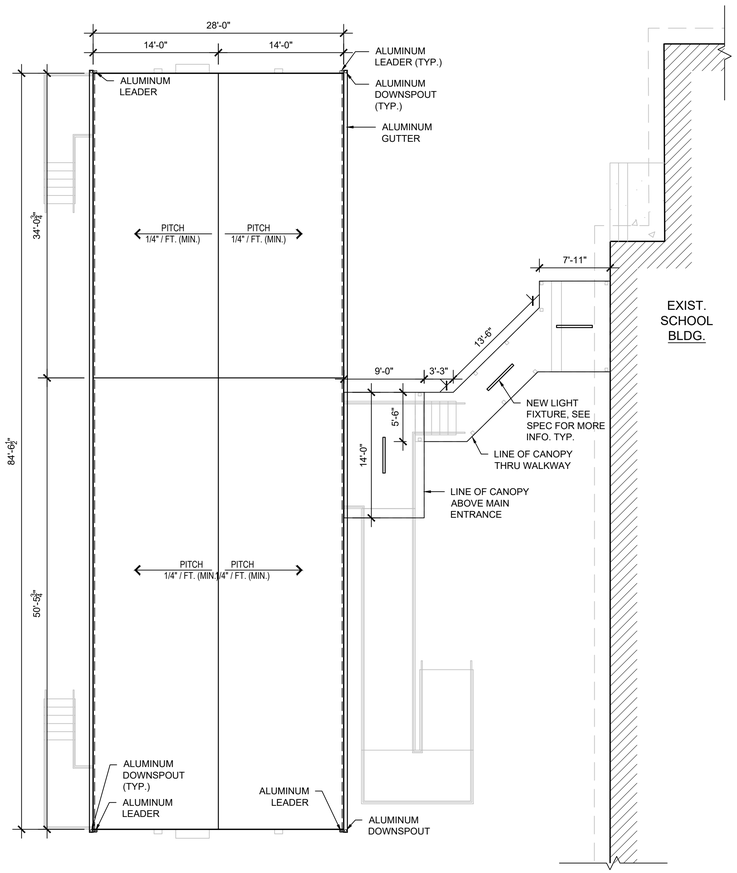
ENLARGED DECK & RAMP PLANS

TCU RELOCATION & REFURBISHMENT AT
HUBBARD MIDDLE SCHOOL
661 W 8th. STREET, PLAINFIELD,
NEW JERSEY 07060

Job No. 2.20174.81

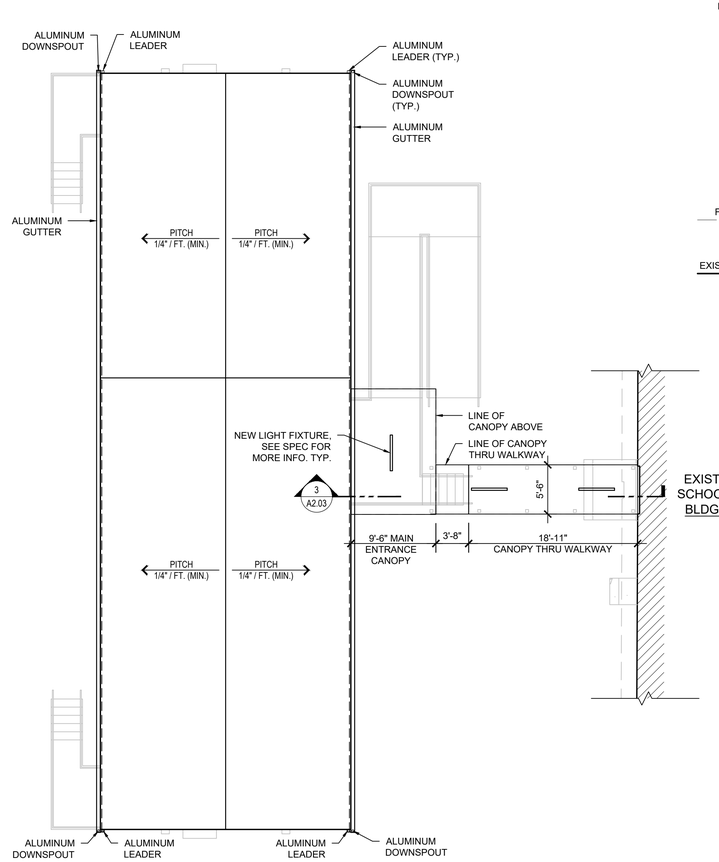
File No. 2017481A202

A2.02



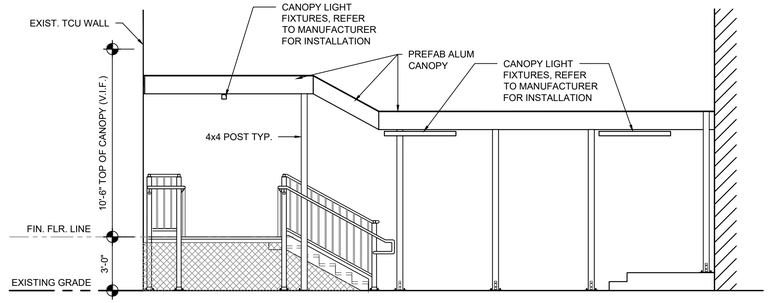
1 TCU #1 ROOF PLAN

1/8" = 1'-0"



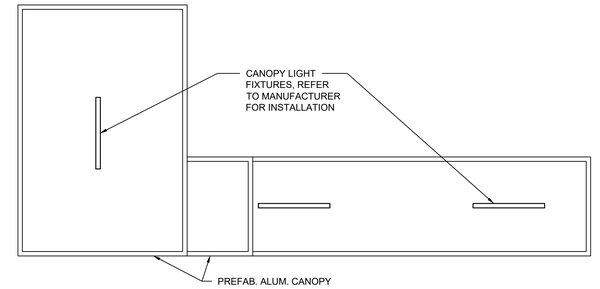
2 TCU #2 ROOF PLAN

1/8" = 1'-0"



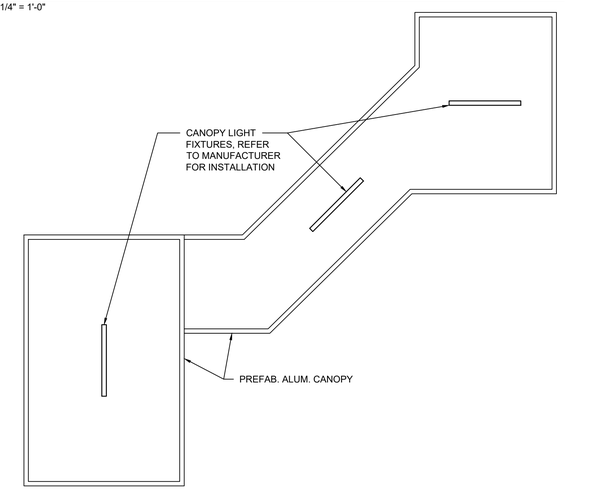
3 SECTION THRU CANOPY

1/4" = 1'-0"



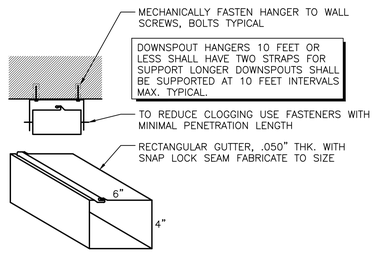
7 TCU #2 CANOPY LIGHTING LAYOUT

1/4" = 1'-0"



8 TCU #1 CANOPY LIGHTING LAYOUT

1/4" = 1'-0"



4 DOWNSPOUT HANGER DETAIL

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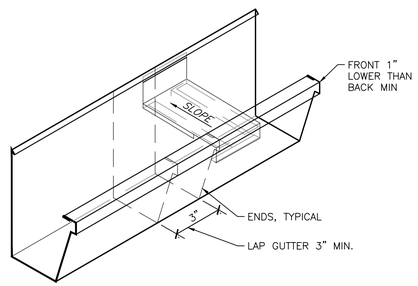

5 GUTTER EXPANSION JOINT DETAIL

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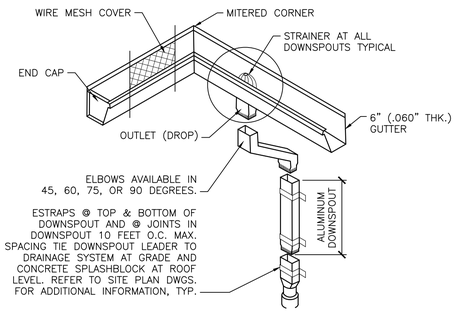
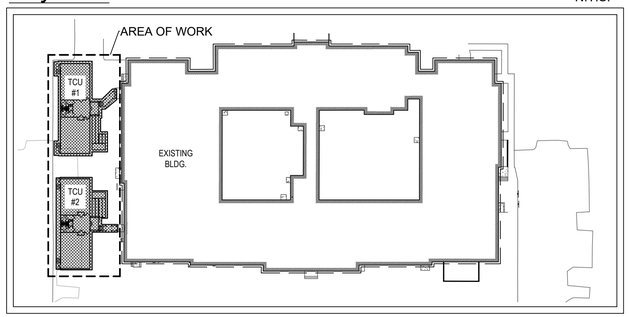


6 GUTTER DOWNSPOUT ASSEMBLY

N.T.S.

Key Plan

N.T.S.



NJ Certificate of Authorization

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Drawn	RSS

MATTHEW T. WOLFE, R.A.
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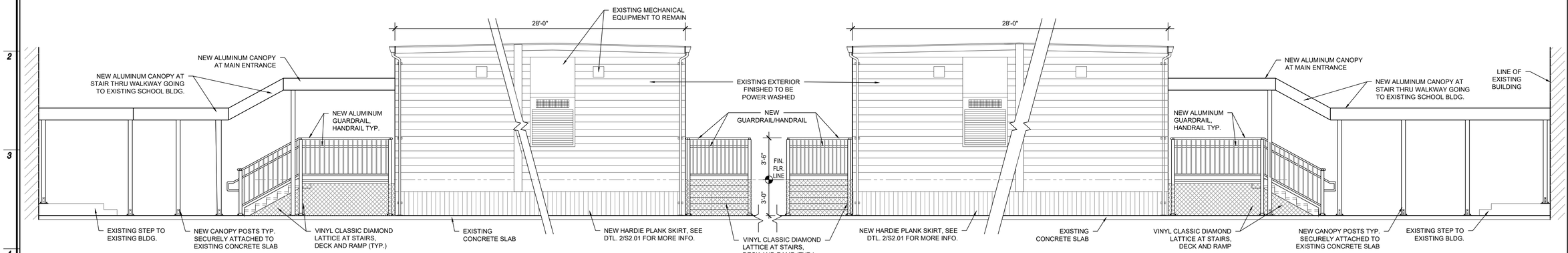
ROOF PLAN

TCU RELOCATION & REFURBISHMENT AT HUBBARD MIDDLE SCHOOL
661 W 8th. STREET, PLAINFIELD, NEW JERSEY 07060

Job No. 2.20174.81

File No. 2017481A203

A2.03

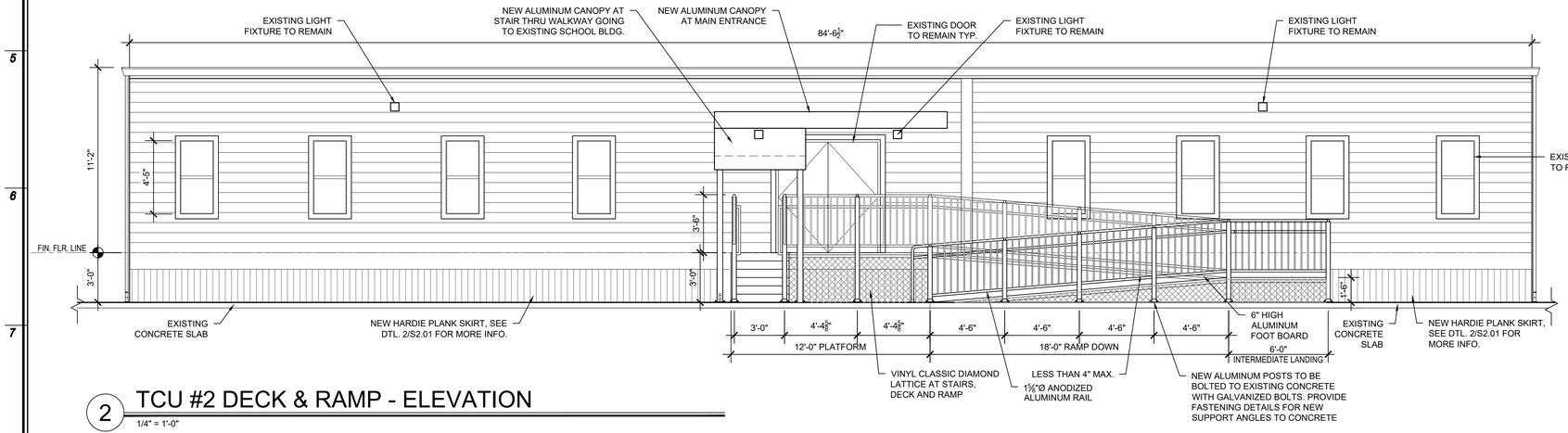


3 TCU #1 - NORTH ELEVATION

1/4" = 1'-0"

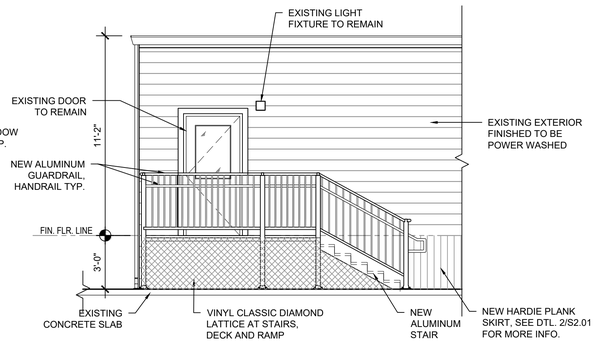
4 TCU #2 - SOUTH ELEVATION

1/4" = 1'-0"



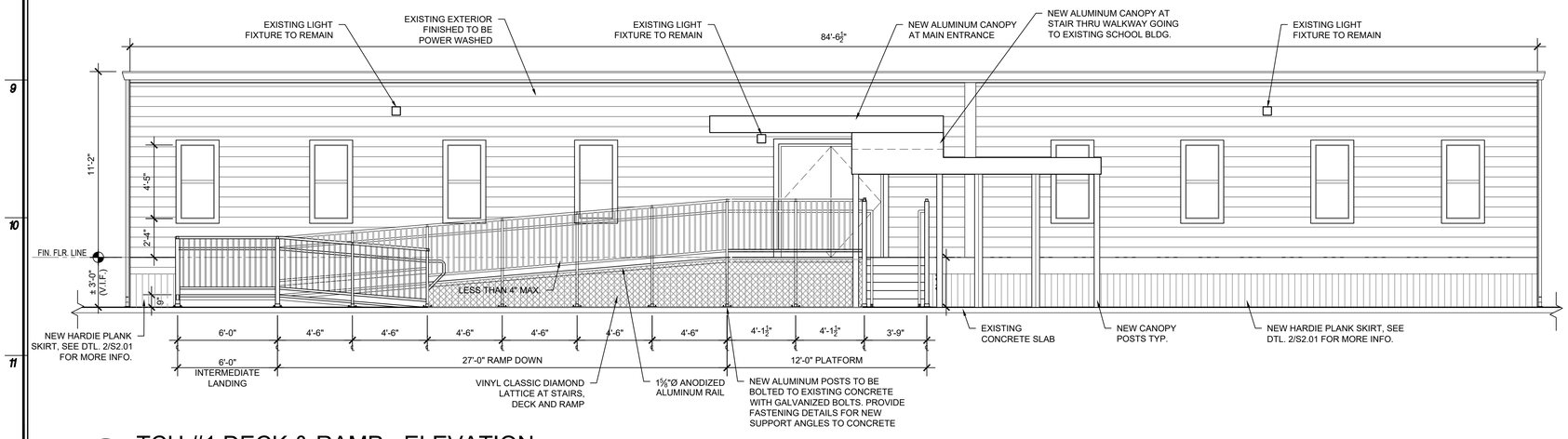
2 TCU #2 DECK & RAMP - ELEVATION

1/4" = 1'-0"



5 TYPICAL TCU STAIR AT REAR

1/4" = 1'-0"

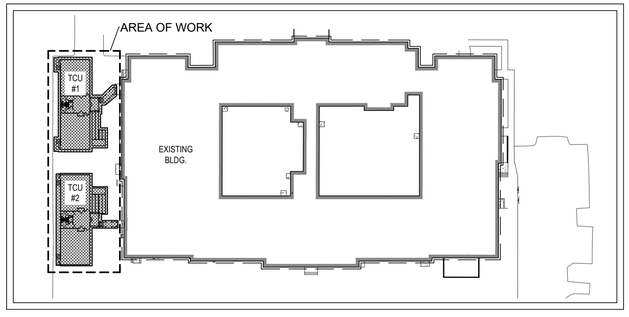


1 TCU #1 DECK & RAMP - ELEVATION

1/4" = 1'-0"

Key Plan

N.T.S.



NJ Certificate of Authorization	
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MATTHEW T. WOLFE, R.A.
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Revisions:

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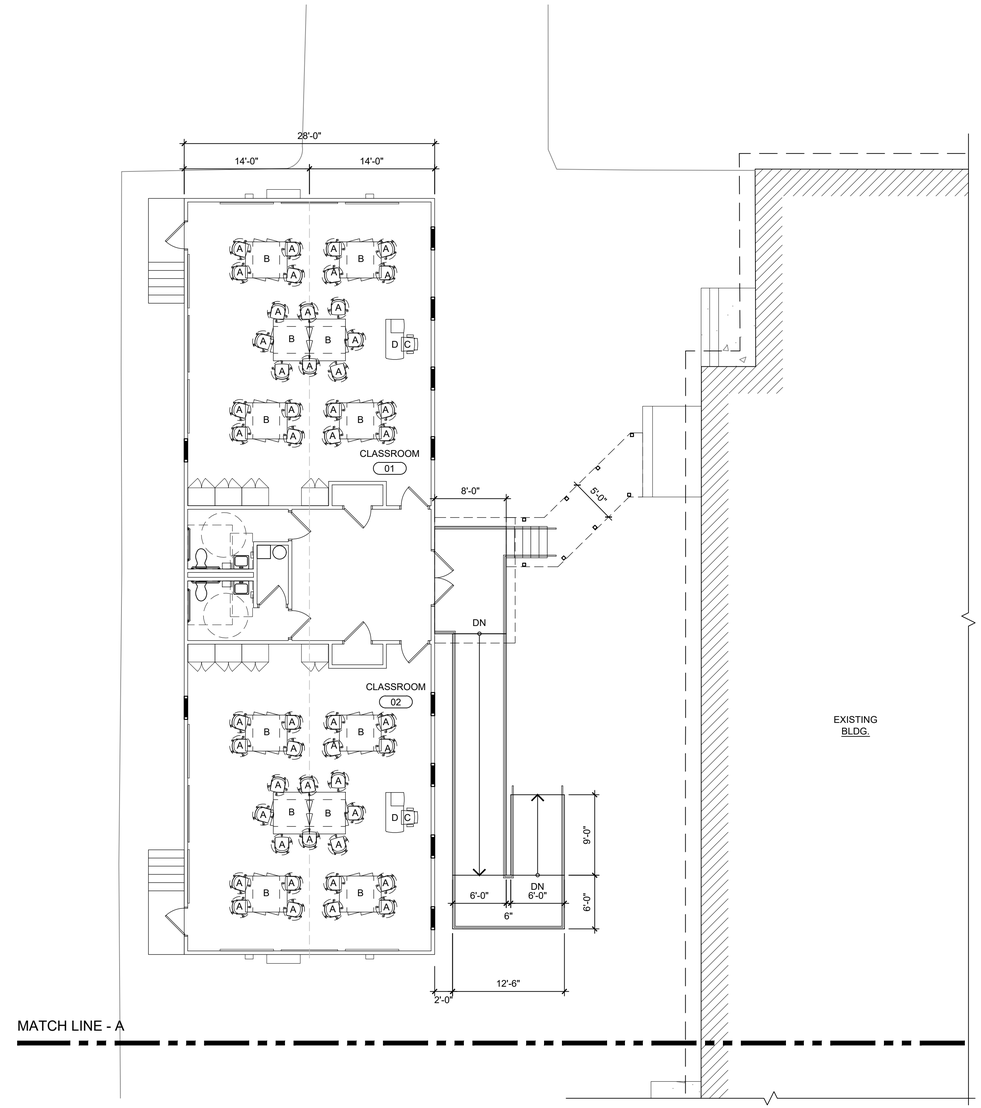
TCU DECK, STAIRS AND RAMP ELEVATIONS

TCU RELOCATION & REFURBISHMENT AT HUBBARD MIDDLE SCHOOL
661 W 8th. STREET, PLAINFIELD, NEW JERSEY 07060

Job No. 2.20174.81

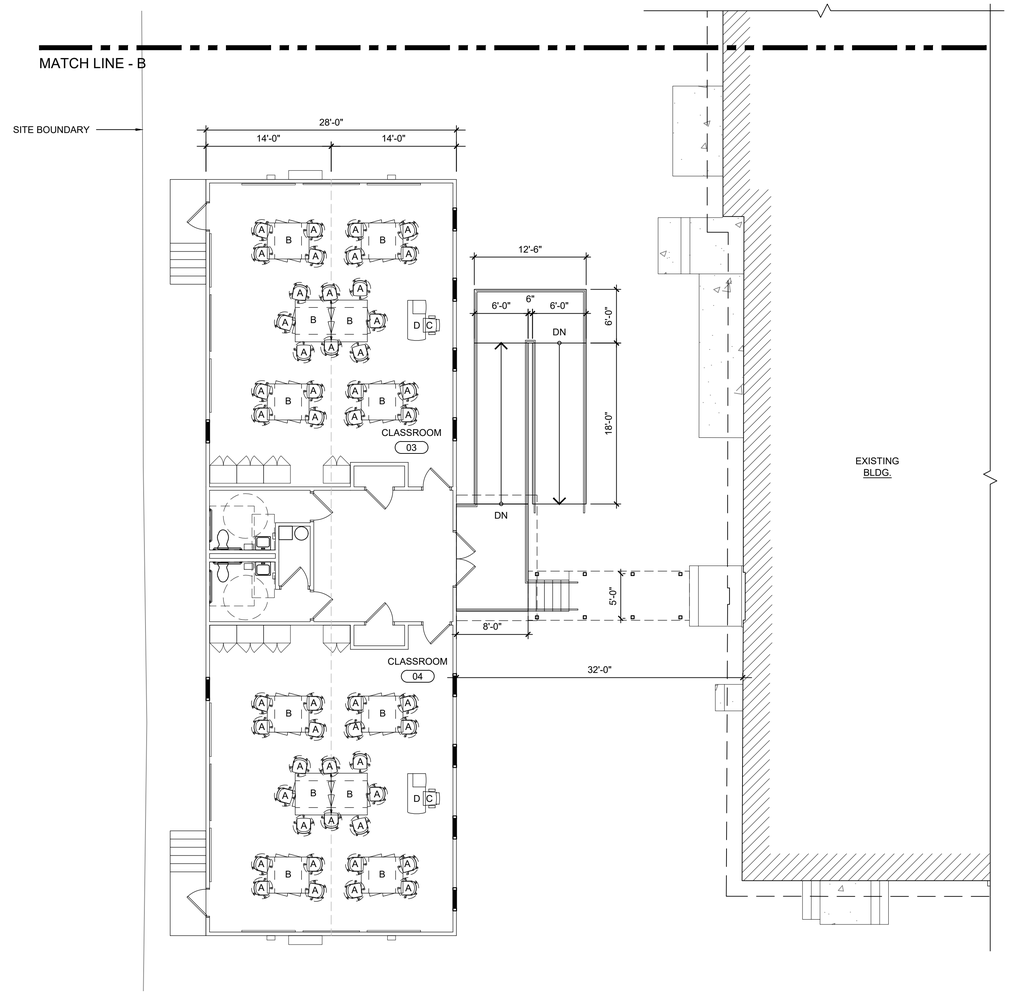
File No. 2017481A301

A3.01



1 PROPOSED TCU #1 FURNITURE PLAN - MATCHLINE 'A'

1/8" = 1'-0"



2 PROPOSED TCU #2 FURNITURE PLAN - MATCHLINE 'B'

1/8" = 1'-0"

CLASSROOMS 01, 02, 03 & 04

GROSS AREA:
#01 @ 906 SF
#02 @ 917 SF
#03 @ 906 SF
#04 @ 917 SF

OCCUPANCY: 24 STUDENTS / 1 TEACHER
25 X 20 SF / OCCUPANT = 500.0 SF

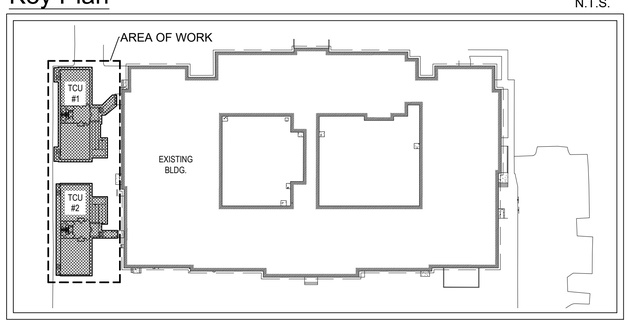
FURNITURE EQUIPMENT:

ITEM	SIZE (DXW)	QUANTITY	SF/UNIT	TOTAL SF
A. STUDENT CHAIR/STOOL	2.4 DIA.	24	2.40	57.60
B. STUDENT DESK	4.60 X 4.00	6	18.40	110.40
C. TEACHER CHAIR	2.00 X 2.00	1	4.00	4.00
D. TEACHER DESK	4.50 X 2.00	1	9.00	9.00
				TOTAL = 181 SF

TOTAL AREA REQUIRED: 681 SF
#01 = 906 SF > 681.0 SF
#02 = 917 SF > 681.0 SF
#03 = 906 SF > 681.0 SF
#04 = 917 SF > 681.0 SF

Key Plan

N.T.S.



NJ Certificate of Authorization

Eng'r. Nos.	24GA27937500
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MATTHEW T. WOLFE, R.A.
Title REGISTERED ARCHITECT
License No. NJ21AI10963400

Revisions:

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PROPOSED FURNITURE PLAN
TCU RELOCATION & REFURBISHMENT AT
HUBBARD MIDDLE SCHOOL
661 W 8th. STREET, PLAINFIELD,
NEW JERSEY 07060

Job No. 2.20174.81
File No. 2017481A901

A9.01

NORTH

TAX MAP

SCALE: 1"=150'

CITY OF PLAINFIELD
UNION COUNTY, NEW JERSEY

SHEETS 114 & 115

NORTH

PROPOSED SITE PLAN

SCALE: 1"=30'

GENERAL NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR THE REQUIREMENTS OUTLINED IN THE CONTRACT DOCUMENTS. THE WORK SHALL COMPLY WITH THE RULES AND REGULATIONS OF ALL GOVERNMENTAL AGENCIES INCLUDING, BUT NOT LIMITED TO, IBC CODE, STATE UNIFORM CONSTRUCTION CODE, MUNICIPAL CODES AND ORDINANCES, AND FEDERAL, STATE AND LOCAL ENVIRONMENTAL REGULATIONS. CODE REQUIREMENTS SHALL BE CONSIDERED PART OF THESE CONSTRUCTION DOCUMENTS. WHERE CONFLICTS EXIST, THE MORE STRINGENT REQUIREMENT SHALL TAKE PRECEDENCE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE AND FAMILIARIZING HIMSELF WITHE THE EXISTING CONDITIONS PRIOR TO BIDDING.
3. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS AND SHALL OBSERVE ALL SAFETY REQUIREMENTS ESTABLISHED BY JURISDICTIONAL AGENCIES AND THE OWNER. WHERE CONFLICTS EXIST, THE MORE STRINGENT REQUIREMENT SHALL APPLY. CARE SHALL BE EXERCISED TO AVOID ENDANGERING PERSONNEL OR STRUCTURES. THESE REQUIREMENTS WILL APPLY CONTINUOUSLY 24 HOURS PER DAY UNTIL FINAL ACCEPTANCE OF THE WORK BY THE OWNER.
4. FURNISH ALL EQUIPMENT THAT MAY BE REQUIRED TO PERFORM THE WORK INDICATED IN A SAFE, ORDERLY, AND FIRST CLASS PROFESSIONAL MANNER BY EXPERIENCES WORKMEN SKILLED IN THEIR TRADE.
5. ALL DIMENSIONS ARE MEASURED TO THE ROUGH UNLESS OTHERWISE NOTED. ELEVATIONS AND DIMENSIONS SHOWN ARE FOR GENERAL REFERENCE ONLY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, CONDITIONS, AND ELEVATIONS IN THE FIELD PRIOR TO THE USE OF SUCH INFORMATION IN BIDDING OR CONSTRUCTION. THE CONTRACTOR SHALL TAKE ALL FIELD MEASUREMENTS NECESSARY TO ASSURE PROPER FIT OF FINISHED WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THEIR ACCURACY. DRAWINGS ARE NOT TO SCALE, NOTIFY THE ENGINEER IMMEDIATELY OF ANY DIMENSIONAL DISCREPANCIES.
6. THE CONTRACTOR SHALL REPAIR IN KIND, ANY AND ALL DAMAGE CAUSED DURING OR RESULTING FROM HIS OPERATION. SEPARATE PAYMENT WILL NOT BE MADE FOR THIS WORK BUT THE COST WILL BE INCLUDED IN THE VARIOUS PAY ITEMS IN THE PROPOSAL.
7. ALL WORK SHALL BE SCHEDULED IN COMPLIANCE WITH THE OWNER'S REQUIREMENTS FOR THE USE OF THE EXISTING FACILITY.
8. THE SITE SHALL BE KEPT CLEAN AT ALL TIMES. UPON COMPLETION OF WORK, ALL EXCESS MATERIAL, DEBRIS, ETC. SHALL BE REMOVED AND THE WORK AREA SHALL BE LEFT CLEAN TO THE OWNER'S SATISFACTION.
9. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH ANY AND ALL PERMITS ASSOCIATED WITH THIS WORK. THE CONTRACTOR SHALL COORDINATE AND ASSIST THE ENGINEER AND AUTHORIZING AGENCIES IN PERFORMING INSPECTIONS AS REQUIRED.
10. BITUMINOUS CONCRETE (WHERE APPLICABLE) SHALL MEET NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RELOCATION AND TEMPORARY SUPPORT OF ANY UTILITIES ENCOUNTERED.
12. THE UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE TAKEN FROM THE BEST AVAILABLE INFORMATION. ACTUAL LOCATIONS OF ALL ABOVE- AND UNDERGROUND UTILITIES, WHETHER PUBLIC OR PRIVATE, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. WITH THE COOPERATION OF THE PUBLIC UTILITY COMPANIES AND/OR A UTILITY LOCATING SERVICE, ALL UTILITIES, SERVICES, ETC. WITHIN TWENTY (20) FEET OF THE PROPOSED LIMITS OF CONSTRUCTION SHALL BE LOCATED AND MARKED OUT PRIOR TO CONSTRUCTION.
13. THE ENGINEER'S OBSERVATION OF THE CONTRACTOR'S PERFORMANCE OF THE WORK IS TO BE SOLELY IN BEHALF OF THE OWNER AND NOT IN BEHALF OF THE CONTRACTOR. THE ENGINEER'S OBSERVATIONS ARE NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES.
14. THE ENGINEER WILL BE, IN THE FIRST INSTANCE, THE INTERPRETER OF THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE ENGINEER WILL ALSO HAVE THE AUTHORITY TO REJECT WORK WHICH DOES NOT CONFORM TO THE CONTRACT DOCUMENTS.
15. THE ENGINEER WILL MAKE PERIODIC VISITS TO THE SITE TO FAMILIARIZE HIMSELF GENERALLY WITH THE PROGRESS AND QUALITY OF THE WORK AND TO DETERMINE, IN GENERAL, IF THE WORK IS PROCEEDING IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. ON THE BASIS OF HIS ON-SITE OBSERVATIONS AS AN ENGINEER, HE WILL KEEP THE OWNER INFORMED OF THE PROGRESS OF THE WORK AND WILL ENDEAVOR TO GUARD THE OWNER AGAINST DEFECTS AND DEFICIENCIES IN THE WORK OF THE CONTRACTOR. THE ENGINEER WILL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, SAFETY PRECAUTIONS, NOR FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
16. BACKFILL SHALL BE COMPACTED TO 95% DENSITY (MODIFIED PROCTOR, PER ASTM D 1557), UNLESS OTHERWISE NOTED.
17. BEFORE WORK IS STARTED, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL A LIST OF MATERIALS, WITH TRADE NAMES, PROPOSED TO BE FURNISHED AND SHOP DRAWINGS AS REQUESTED BY THE ENGINEER. SUBMITTALS SHALL BE REPRESENTATIVE OF THE MATERIALS TO BE USED BY THE CONTRACTOR IN COMPLETING HIS WORK.
18. AS-BUILT DRAWINGS (4 COPIES) SHALL BE FURNISHED BY THE CONTRACTOR UPON COMPLETION OF THE INSTALLATION OF WORK TO THE ENGINEER FOR APPROVAL. THESE DRAWINGS SHALL SHOW THE EXACT LOCATIONS AND INVERTS OF ALL ITEMS INSTALLED AND/OR ALTERED BY THE CONTRACTOR.
19. CONTRACTOR SHALL PROVIDE GUARANTEES FOR ALL LABOR AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF COMPLETION AND FINAL ACCEPTANCE OF HIS WORK BY THE OWNER, WHICH SHALL INCLUDE AN AGREEMENT TO REPAIR AND MAKE GOOD AT HIS OWN EXPENSE ANY AND ALL DEFECTS WHICH MAY APPEAR IN HIS WORK OR MATERIALS.
20. CONTRACTOR SHALL PROVIDE ALL EXCAVATION AND BACKFILL FOR THE DEMOLITION AND CONSTRUCTION AS SHOWN ON THE DRAWINGS. INCLUDED IN THIS ITEM WILL BE THE EXCAVATION AND REMOVAL OF ALL MATERIALS, INCLUDING STRUCTURES ABOVE AND BELOW THE GROUND, EARTH, ROCK, TOPSOIL, BITUMINOUS PAVEMENT, CONCRETE, BOGGY WASTE, RUBBISH, ASHES, CINDERS, OR ORGANIC MATERIAL SUCH AS PEATY OR HUMUS MATERIAL.
21. BACKFILL SHALL CONSIST OF A SUITABLE SELECTED AND APPROVED EARTH GENERALLY FROM STORAGE OF APPROVED EXCAVATED SOIL FREE FROM REJECTED ORGANIC MATTER, BOGGY, PEATY HUMUS OR OTHER UNSUITABLE MATERIAL SUCH AS SILT, RUBBISH, WASTE, ASHES, OR CINDERS. BACKFILL SHALL BE FREE OF LARGE BOULDERS MORE THAN SIX (6") INCHES IN THE LARGEST DIMENSION. NO FROZEN MATERIAL SHALL BE USED. IF SUFFICIENT SUITABLE MATERIAL FOR BACKFILL IS NOT AVAILABLE FROM THE EXCAVATED MATERIAL AS DETERMINED BY THE ENGINEER, THE CONTRACTOR SHALL PROCURE ELSEWHERE A SUFFICIENT QUANTITY OF SUITABLE SELECT FILL MATERIAL AND SHALL FURNISH AS NEEDED AS PART OF THE BASE CONTRACT. BACKFILL SHALL BE PLACED AND COMPACTED WITH A VIBRATORY PLATE TAMPER IN MAXIMUM EIGHT (8") INCH LIFTS
22. CONTRACTOR TO REMOVE & RESET ALL SIGNS IN PROJECT AREA.
23. SIGNS AND STRIPING AS PER MUTCD STANDARDS.
24. QUANTITIES SHOWN ARE FOR REFERENCE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR QUANTITY TAKEOFF.
25. ALL TREES AND SHRUBS WITHIN AREAS OF PROPOSED GRADING ARE TO BE REMOVED UNLESS OTHERWISE NOTED ON THE PLAN. COORDINATE WITH ENGINEER PRIOR TO REMOVAL OF THE VEGETATION.
26. LEGEND LINE TYPES AND SYMBOLS ARE FOR VISUAL DESIGN AND ILLUSTRATIVE PURPOSE ONLY. THEY ARE NOT TO BE SCALED FOR CONSTRUCTION PURPOSES.
27. THE CONTRACTOR SHALL BE RESPONSIBLE TO LAWFULLY DISPOSE OF ALL ITEMS INDICATED TO BE REMOVED OR DEMOLISHED.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

LEGEND

TRAVERSE		UNKNOWN MANHOLE		WATER VALVE	
MONUMENT		ELECTRIC MANHOLE		WATER METER	
IRON PIPE		SANITARY MANHOLE		FIRE HYDRANT	
BOOK	BK	CLEAN OUT		WATER SHUT OFF	
PAGE	PG	TELEPHONE MANHOLE		MONITORING WELL	
RIGHT OF WAY	R.O.W.	STORM MANHOLE		IRRIGATION CONTROL VALVE	
SIGN		CATCH BASIN		GAS VALVE	
FLAGPOLE		FLARED END SECTION		GAS METER	
MAILBOX		LIGHT POLE		UTILITY POLE	
DUMPSTER		WALL-MOUNTED LIGHT		GUY WIRE	
HANDICAP SYMBOL		BOLLARD		ELECTRIC METER	
		TREE			

PROPERTY LINE (PQ)		WATER LINE	W
PROPERTY LINE		GAS LINE	G
SETBACK LINE		ELECTRIC LINE	E
WETLANDS BOUNDARY		TELEPHONE LINE	T T T
STREAM OR BROOK		OVERHEAD WIRES	OH WIRES
TREE LINE		SANITARY SEWER	SAN
CHAIN LINK FENCE	X X	STORM SEWER	ST ST ST
WOOD FENCE	O O	GUIDE RAIL	

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1 (800) 272-1000
Jersey Underground Facility Protection Act.
N.J.S.A 48:2-73 thru N.J.S.A 48:2-91 &
N.J.A.C. 14:2.1 thru N.J.A.C. 14:2-6.4

SURVEY REFERENCES

1. EXISTING CONDITIONS REFERENCES A SURVEY PREPARED BY LAN ASSOCIATES, INC., MIDLAND PARK, NEW JERSEY. TITLED: "BOUNDARY AND PARTIAL TOPOGRAPHIC SURVEY", SIGNED BY MATTHEW M. WEBB, PLS LIC. NO 24GS04330200 AND DATED APRIL 27, 2022.
2. AERIAL IMAGERY TAKEN FROM OGIS NEW JERSEY.

NJ Certificate of Authorization	
Eng'r. Nos.	24GA27937500
Arch. Nos.	21AC00012400
Date	06/21/22
Checked	EB
Drawn	BG

ERIK E. POE, P.E.
License No. NJ 24GE04269100
The PROFESSIONAL ENGINEER
DRAFT

Revisions:

LAN ASSOCIATES
Engineering, Planning, Architecture, Surveying Inc.
445 Godwin Ave Ste 9, Midland Park, NJ 07432 | t. 201-447-6400 | f. 201-447-1233

PROPOSED SITE PLAN
TAX MAP BLOCK 506 - LOT 4
ALSO KNOWN AS 661 WEST 8TH STREET
PLAINFIELD BOARD OF EDUCATION
CITY OF PLAINFIELD, UNION COUNTY, NJ

Job No. 2.20174.81
File No. 2017481C1

C.101

Electrical General Notes

Project Information:
1. Unless specifically noted otherwise, it shall be understood that when the words "Owner" or "Client" are used in these drawings they are interchangeable an all refer to the Passaic Board of Education.
2. Wherever in the documents the word "utility" is stated, PSE&G is implied.
3. Unless specifically noted otherwise, it shall be understood that when the words "Architect", "Engineer", or "A/E" are used in these drawings they are interchangeable an all refer to LAN Associates, Engineering, Planning, Architecture Surveying ("LAN").
4. Where any device or part of equipment is referred to in these drawings in the singular number (e.g., "the switch", "the receptacle"), this reference shall be deemed to apply to as many such devices as are required to complete the installation as shown on the drawings.

Code & Standards Compliance:
1. Code compliance is mandatory. Nothing in these Drawings and Specifications permits work not conforming to these codes. Where work is shown to exceed minimum code requirements, comply with drawings and specifications. When differences in utility specifications or standards, governmental ordinances or codes occur, the more stringent requirements shall govern the installation.
2. The electric installation shall be in accordance with the currently enforced edition of the National Electrical Code (NEC), National Electrical Safety Code (NESC), American Electricians' Handbook, International Building Code (IBC), Americans with Disabilities Act (ADA), NFPA 55 & 99 and NEC Standard of installation. Wherever in the documents the word "code" is stated, the more stringent of the above referenced codes is implied.
3. All contractor supplied materials/equipment shall be new and UL Listed or approved by another Nationally Recognized Testing Laboratory (NRTL).
4. The contractor shall pay for and obtain all permits and inspections required by the building and safety codes and ordinances, and the rules and regulations of any legal body having jurisdiction. Permit and inspections shall be include in the base bid and shall not be cause for an extra.
5. Contractor shall confirm to all safety rules and other regulations, etc. pertaining to construction work on the client's premises. Contractor shall be responsible to ensure that all rules and regulations have been met and coordinate this work with responsible client's personnel.
6. All electrical equipment and raceways permanently attached to structures, including supporting structures and attachments to non-building structures, shall be anchored for seismic loading to resist a horizontal force action in any direction. Contractor shall provide seismic restraints for all conduits larger than 2½" trade diameter. Provide sway braces for conduit and equipment suspended from the overhead. Provide anchor bolts for floor and wall mounted equipment. The installation shall meet the requirements of International Building Code (IBC) Sections 1614 and 1621 as they apply to electrical equipment for Earthquake Loads.

General Procedures:
1. All equipment shall be as indicated or as approved by the Engineer/Architect.
2. The cost incurred by the acceptance of substitutions shall be borne by the contractor. Proof for the equality of the substitutions shall be by the contractor and differences shall be enumerated with the submittal.
3. Electrical components including, but not limited to conductor size, overcurrent protection device and disconnect switches are based on the power requirements of the equipment shown on the contract documents. All costs (including additional design fees if required) associated with changes to these power requirements shall be the responsibility of the contractor making the change.
4. Obtain shop drawings and wiring diagrams for the proper installation of related electrical work.
5. Contractor shall be responsible for the removal of debris generated by his work and workers at the end of each working day and for general good housekeeping by his workers. Contractor shall provide required refuse containers.

Site Conditions/Drawing Coordination:
1. These drawings and specifications illustrate the work to be performed. The Engineer is not responsible for the means, methods, techniques, sequences, and procedures used to do the work, or the safety aspects of constructions, and nothing on these drawings expressed or implied changes this condition. Prior to bidding and/or starting work the contractor shall visit the project site to determine the conditions under which the work is to be performed and shall be responsible for knowing how they affect the work. Schedule site visit with client's representatives. Additionally, the contractor shall field verify all site dimensions and room layouts. Submission of a bid to perform this work is an acknowledgement of these responsibilities, and that they have been fully considered in planning of the work, and the bid price. No claims or extra charges due to these conditions will be forthcoming.
2. The client will occupy the site and existing building during the entire construction period. Cooperate with the client during construction operations to avoid any conflicts. Perform the work so as not to interfere with the client's operations. Schedule all power outages with client's approval for overtime on Sundays and Holidays at no additional cost to the client.
3. Existing project conditions indicated are based on field observations; existing design/construction documents and existing record documents and are intended to indicate the scope of the work affected by this project.
4. Drawings shall not be scaled. Drawings indicate the general arrangement of systems and requirements of the work. Although size and location of equipment is drawn to scale wherever possible, contractor shall make use of all data in all of the contract documents and verify information at the project site.
5. The contractor shall make his own takeoff on all quantities. It shall be his responsibility, at his cost, to include all equipment and material in order to comply with the intent of the drawings.
6. The circuit numbers are for identification only. The contractor shall be responsible for correctly phasing the circuits in panels.
7. Existing Circuit Designations:
   a. All reference to existing circuit designations is based on previous project documentation. The contractor shall consult the engineer in the event that actual conditions do not coincide with the indicated re-distribution or other use of existing circuits as herein indicated.
   b. The total connected load for any general purpose (protected at 20A) branch circuit which is re-distributed as a part of this project shall not exceed 1.3A.
   c. Any deviation, as may be directed by the engineer, from the indicated circuit structure specified in this drawing set will require both verification by the contractor that the total connected load on the associated supply conductors is within the above specified limit and documentation in the project record (as-built) drawings.
8. Assign multi-pole circuits by the panelboard location number as follows, unless otherwise shown on the drawings. Note: switchboards populated with only multi-pole circuit breakers may have a single number assigned to each breaker position, which shall be used as the circuit number.
   a. 2-pole circuit: use the first panelboard number
   b. 3-pole circuit: use the middle panelboard number
9. The electrical installation shown is represented diagrammatically and indicates the general arrangement of systems and work. The locations and arrangements of equipment, devices, switchboards, panelboards, partitions, openings, etc. are designed to show preferred configurations to suit known conditions but are approximate and are subject to modifications caused by structural conditions and other existing or proposed equipment. The locations are subject to such modifications as may be found necessary or desirable at the time of installation in order to accommodate field conditions and coordination requirements. Contractor shall follow the intent of the drawings in "laying out" the work and coordinate the work with other trades to verify spacing conditions. Contractor shall determine roughing locations required to effect such coordination. The contractor shall coordinate all work and shall make such changes without extra charge.
10. The contract drawings depict the approximate location of all required equipment and if shown, the diagrammatic arrangement of piping, raceways, conduits, feeders, cables, etc, herein after referred to as "conduit." Conduit runs, if shown, have been depicted with the intention of most clearly indicating the proposed routing. Actual runs may differ if kept within the requirements and provisions of these specifications, and providing that that all modifications have been shown in the shop drawings. Contractor responsible to determine conduit runs and "clear" piping, ductwork, access doors, and other obstructions as applicable. Contractor shall coordinate conduit with work of other trades and alter where necessary to avoid interference. Submit for approval, prior to scaled installation drawings showing the location of all new equipment/devices to be installed and indicating circuitry. Shop drawings shall include all wiring, pull boxes, junction boxes, fittings, wiring devices and dimensioned clearances from the structure and equipment. Coordinate shop drawings with other trades prior to submission.
11. Before the relevant work proceeds, the Contractor shall prepare and submit five (5) copies of shop drawings depicting the proposed conduit routing diagram and equipment layout. Specifically detailed shall be a layout of the switchboard and related equipment in each electric room or electric closet. All equipment layouts shall be drawn to scale and dimensioned. Shop drawings shall be a minimum of 1/8" = 1'-0" and preferably 1/4"=1'-0", dimensioned, showing construction, sizes, weights, arrangements, operating clearances, performance characteristics and the necessary coordinating trades involved. Shop drawings will not be accepted unless a complete list of deviations from architect's/engineer's proposed plans is included. Exact location of all equipment will be determined in the field and the contractor must secure exact dimensional data before the layout of any work.
12. Routing for feeders, instrumentation and control circuits is not necessarily shown on the plan drawings. If indicated on the floor plans, they express the intent of routing. Final location and routing shall be suited for the construction of the building and established by the contractor based on the installation conditions and shall be verified in the field. All feeder information, conduit types and installation requirements shall be in accordance with the specifications, electrical riser diagram and appropriate panel schedules.
13. Any cutting, patching, or finish repair work required for the installation is the responsibility of the contractor.
14. Where mounting heights are not detailed or dimensioned, install electrical services and overhead equipment to provide maximum headroom possible. Connect equipment for ease of disconnecting with minimum interference with other installations.
15. Provide temporary power and lighting as required during the entire duration of demolition and construction utilizing the existing electrical system as a source. The Contractor shall remove all temporary power and lighting upon the completion of the project.
16. Where conflicts exist, provide in the bid proposal the more costly alternative.

Installation:
1. Grounding shall be installed in accordance with the NEC in accordance with electrode, grounding and bonding requirements for service, equipment and enclosures. Install an insulated equipment ground conductor in each raceway or conduit. Size equipment ground conductor in accordance with NEC Table 250.122. Bond raceways and the frames and enclosures of motors, breakers, switches, and other electrical equipment to the building grounding system. Precaution shall be taken to ensure adequate ground continuity along the conduit or raceway.
2. Provide a separate neutral conductor for each circuit. Install neutral conductors and ground conductors into all switch boxes. Multiple circuits shall not share a common neutral. Neutral shall be sized as large as the phase conductors. Neutral conductors shall not be reduced in size.
3. Arrange connections for single phase circuits to achieve three phase load balance within 20% of the average phase load current. Ungrounded conductors using a common neutral must originate from different phases.
4. The contractor is responsible for maintaining proper phase rotation with all existing three (3) phase electric loads.
5. Phase rotation check: on multi-phase equipment, perform a phase rotation check prior to energizing the equipment. Use Knopp K-3 or equivalent device with red or "A" lead connected to phase A, white or "B" lead connected to phase B, and blue or "C" lead connected to phase C. Note the phase rotation and annotate test documentation with device used, manner connected, rotation observed, date of test, and name of craftsman. Do not energize equipment unless observed rotation matches the requirements of the equipment
6. Contractor shall supply all labor, power cables, conduit boxes, fittings, wiring materials, hardware, supports, and miscellaneous items for a complete electrical installation and connection of the electrical work required, except that the provision for owner supplied equipment shall be only be completed to the point indicated elsewhere on the drawings.
7. All cables, not within conduit (ex., MC type, fire alarm, PA), routed within the ceiling cavity must be secured using Bridle rings, J-hooks, or other appropriate means. The cable must not lay on dropped ceiling panels, be fastened to existing electrical conduits, steam pipes, sprinkler pipes, insulated pipes, or be routed in such a fashion as to obstruct access hatches, doors, utility access panels, mechanical service work areas or fittings and shall not be routed through fire doors, ventilating shafts, or grates.
   a. Unless otherwise provided, MC cables shall be secured at intervals not exceeding 6'. Cables containing four or fewer conductors sized no larger than 10 AWG shall be secured within 12" of every box, cabinet, fitting, or other cable termination.
   b. Type MC cable shall be permitted to be unsupported where the cable: (a) Is fished between access points through concealed spaces in finished buildings or structures and supporting is impractical; or (b) Is not more than 6' in length from the last point of cable support to the point of connection to luminaires or other electrical equipment and the cable and point of connection are within an accessible ceiling. Type MC cable fittings shall be permitted as a means of cable support.
8. All cable trays and electrical conduits shall be independently supported and braced independently of the ceiling.
9. All new wiring is to be run concealed wherever possible. All conductors shall be in a surface mounted metallic raceway in public spaces or metallic conduit in utility locations when not routed concealed in the ceiling/wall cavities. Any locations that do not have accessible or dropped ceilings will require the use of surface mounted metallic raceways. Provide pull-boxes (size per code) and locate in conduit runs as required. No exposed cable may be installed.
10. All openings and penetrations shall be sealed upon completion of the electrical installation to prevent the spread of smoke and fire through openings. Seal around conduit and raceway penetrations through interior walls and floor separating areas to restore original fire rating; use a UL classified fire sealant. Seal penetrations through roof and exterior walls to make waterproof. Request inspection of fire seals by electrical inspector from authority having jurisdiction before and after placement of fire seal materials. All openings shall be coordinated with the other trades to limit interference and obstruction.
11. Limit the use of electrical metallic tubing (EMT) to where it will not be subject to physical damage or corrosion. Use intermediate metal conduit (IMC) or rigid galvanized steel conduit (RGS) where raceways are embedded in concrete or exposed to physical damage. Use minimum 3/4" conduit except as follows: 1/2" conduit may be used for 20 amp general light and power circuits and for control circuits; 3/8" flexible metal conduit may be used to connect light fixtures in suspended ceilings. Use liquid tight flexible metal conduit for flexible connection to equipment in mechanical rooms or outdoors.
12. Where raceways contain insulated conductors 4 AWG and larger that enter an enclosure, the conductors must be protected from abrasion during and after installation by a fitting that provides a smooth, rounded insulating surface, such as an insulating bushing as per NEC 300.4(G).
13. Install outdoor equipment to be weatherproof (NEMA 3R).
14. All penetrations through exterior walls shall be sealed watertight. Provide seals for conduit and raceways as manufactured by OZ/Gendy type CMSI or approved equal.
15. Underground conduits shall be pitched to drain away for them building in manholes.

Wire Information:
1. All wiring shall be copper conductor, 600 volts in EMT raceway with approved fittings unless otherwise indicated. Feeder and branch circuit wiring shall be minimum #12 AWG unless otherwise indicated. Feeder and branch circuit wiring larger than #10 AWG shall be stranded conductor: #10 AWG and smaller, shall be solid conductor. Control wiring shall be #18 AWG THWN. Type of insulation as follows unless noted otherwise:
   a. THHN/THWN insulation for #4 AWG and smaller
   b. THW or THHN/THWN insulation for #2 AWG and larger
   c. THW used for all panel feeder and service conductors
   d. XHHW-2 insulation type shall be used where conductors are installed in conduits exposed to the weather.
2. Use the following conductor color codes:

	208Y/120V
Phase A	Black
Phase B	Red
Phase C	Blue
Neutral	White
Equip. Ground	Green

Circuit Breakers:
1. Provide circuit breakers with UL listed interrupting rating (RMS symmetrical amperes) greater than the available fault current shown on the electrical one-line diagram. "Series rated" equipment shall not be accepted.
2. Install UL Listed circuit breaker padlocking devices for service and maintenance personnel on all over current protection devices at the main building panel (MDP or equivalent). The device must have provisions for placement of a lock on it to secure the device in the off position. The lock-out device must be part of the disconnect assembly and must remain in place after the padlock is removed, whether it is a fused disconnect switch, a single circuit breaker, or a circuit breaker in a panelboard. A device that is attached to the circuit breaker handle by a set screw is not an acceptable means to serve as a safe method of locking the device in the off position.
3. All circuit breakers shall be molded case thermal magnetic and rated for available short circuit current.
4. Circuit breakers used as switches shall be UL listed for switching duty and marked "SWD" per NEC 240-83(D).

Labeling:
1. All switchboards, panelboards, industrial control panels and motor control centers that are in other than dwelling occupancies and are likely to require examination, adjustment, servicing or maintenance while energized shall be field marked to warn qualified persons of potential electric arc flash hazards. The marking shall be located so as to be clearly visible to qualified persons before examination, adjustment, servicing or maintenance or the equipment. Marking shall be self adhesive, commercial label conforming to NEC 110.16 and ANSI Z535.4. Arc Flash Label shall be Brady (bradyid.com) catalog No. 102308 or equal.
2. Provide identification tags for all new wiring and install at each end and in all intermediate pull/junction boxes, cabinets, housings, etc. Indicate on tags, legibly minimum ¼" high letters, the points of origin and termination of each conduit and conduit run. Label all receptacles and switch covers with panelboard and circuit number. For interior equipment, use Brother P-touch 3 label maker with TC-10 label cartridge or equal. For exterior equipment, use aluminum dymo half-inch tape label with embossed lettering. Abbreviate lettering to provide necessary information with minimum label size (i.e., Panelboard PP1, Circuit 23 should read PP1-23).
3. Label all switchgear, panelboards, and separately-mounted equipment with feeder source and circuit number. For interior equipment, provide white Micarta plate with quarter-inch block lettering. For exterior equipment, provide anodized aluminum plate with quarter-inch embossed block lettering. Attach to equipment using contact cement in a clear space on the upper portion of the equipment cover approximately 66" AFF. Abbreviate lettering or adjust letter size to provide necessary information with minimum label size, (i.e., 120/208V PANEL PNL 1 FROM MDP CKT 3 or P-1 20 HP PUMP FROM PP1 CKT 3).
4. All panels shall have typed, completed directories indicating equipment served and room number (as indicated on the final building signage) of equipment location, or spare, or space. Identify the purpose of individual circuit breakers, safety switches and motor starters by means of nameplates as indicated. Update directories as panels are altered. Circuit changes shall be reflected on "as-built" drawings.
5. All circuits and circuit modifications must be legibly identified as to their clear, evident, and specific purpose. The identification must include sufficient detail to allow each circuit to be distinguished from all others, and the identification must be on a circuit directory located on the face or inside of the door of a panelboard. Circuit directories containing multiple entries with only "lights" or "outlets" do not provide the sufficient detail required by the NEC.

Inspections/Warranty:
1. No work shall be concealed until after inspection and approval by proper authorities. If work is concealed without inspection and approval, the Contractor shall be responsible for all work required to both open and restore the concealed areas in addition to any required modifications.
2. The contractor shall make a final inspection of all electrical equipment to ensure that there are no loose electrical connections or electrical circuits subject to electrical break down due to the presence of foreign material. This shall include inspection of all connections made under this contract.
3. The contractor shall deliver certificates of electrical and other inspections or copies thereof, to the client at the completion of the project with copies to the Engineer/architect.
4. The contractor shall guarantee all work in writing to the client against any and all defects in material and workmanship for a period of one year, or as indicated in the specification, from date of acceptance and perform all corrective work at no cost to the client.

NJ Certificate of Authorization

Eng'r. Nos.	24GA27937500
Arch. Nos.	21AC00012400
Date	6/21/22
Checked	JC
Drawn	MP

MATTHEW T. WOLFE, R.A.
The REGISTERED ARCHITECT License No. NJ21AI10963400

Revisions:

LAN ASSOCIATES
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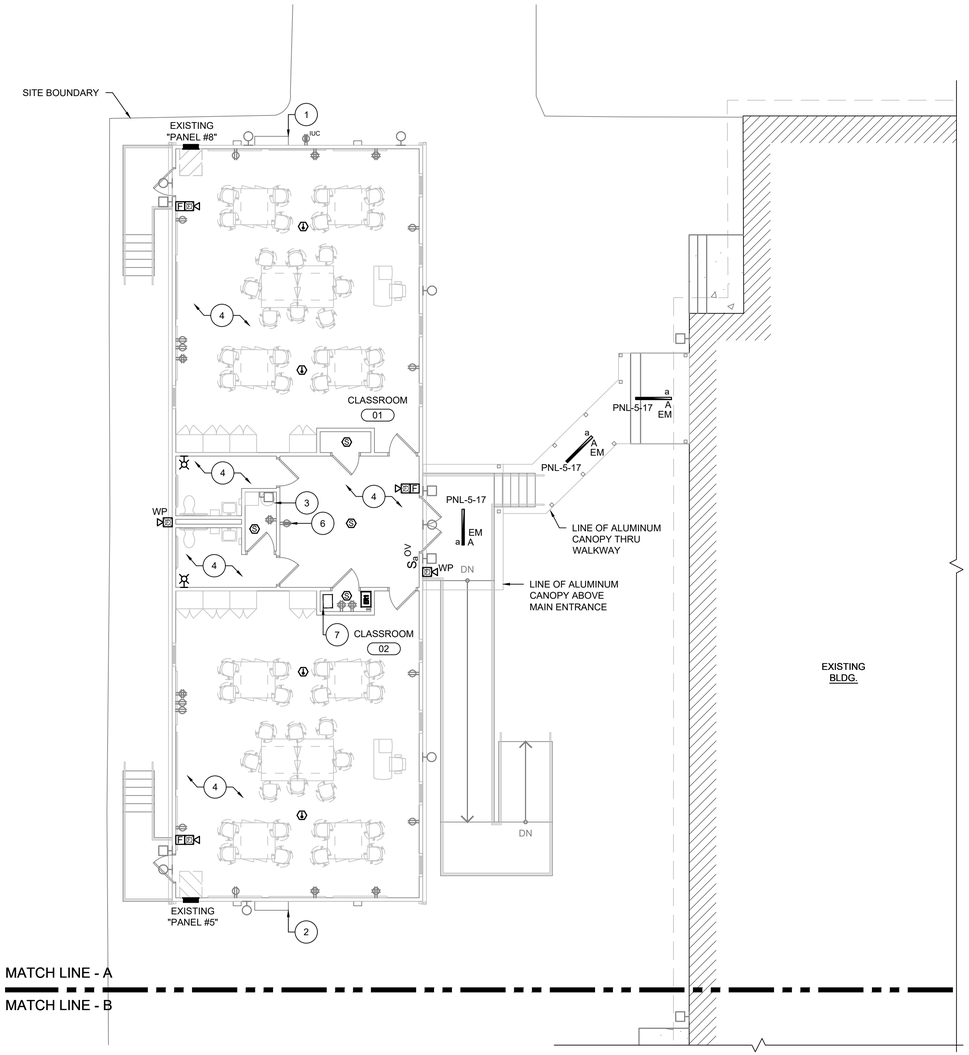
ELECTRICAL GENERAL NOTES
TCU RELOCATION & REFURBISHMENT AT HUBBARD MIDDLE SCHOOL
661 W 8TH STREET, PLAINFIELD NEW JERSEY 07060

Job No. 2.20174.81
File No. 2017481E0.01

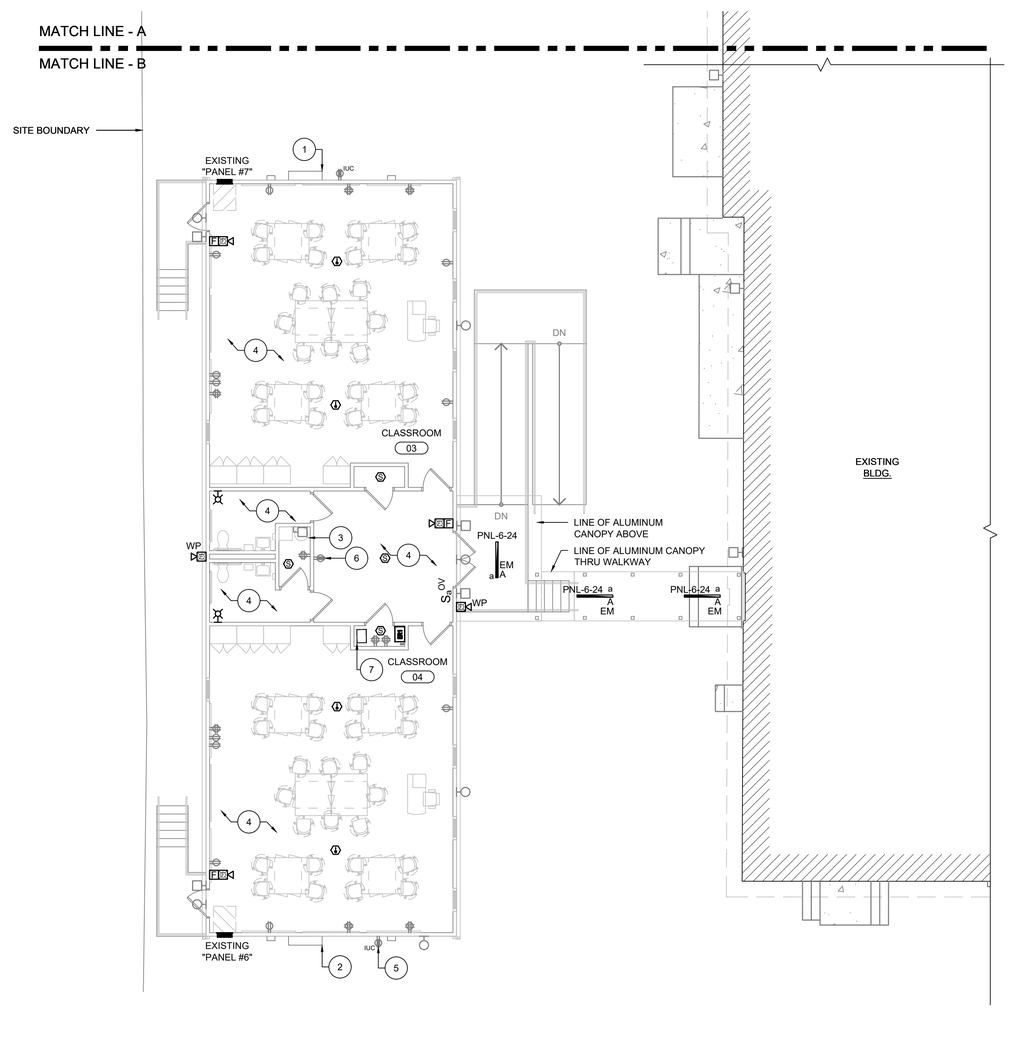
E0.01



1 PROPOSED TCU #1 ELECTRICAL PLAN - MATCHLINE 'A'

1/8" = 1'-0"

NORTH



2 PROPOSED TCU #2 ELECTRICAL PLAN - MATCHLINE 'B'

1/8" = 1'-0"

NORTH

ELECTRICAL GENERAL NOTES

1. VERIFY TEMPORARY CLASSROOM UNIT (TCU) LOCATION IN FIELD TO CONFIRM ELECTRICAL PANELBOARD CONNECTIONS.
2. ALL OPEN SPLICE BOXES OR JUNCTION BOXES TO BE IDENTIFIED AND CIRCUIT SAFED-OFF. INSTALL BLANK COVER TO ALL OPEN BOXES.
3. ALL WORK REQUIRED FOR FIRE ALARM, DATA, SECURITY, AND TELECOMMUNICATION SYSTEMS SHALL BE BY OWNER.
4. COORDINATE ALL FIRE ALARM REQUIRED WORK WITH FIRE ALARM VENDOR. PROVIDE RE-CERTIFICATION OF FIRE ALARM CONTROL PANEL (FACP) IF REQUIRED. PROVIDE FIRE WATCH FOR ANY TIME THE FACP IS NOT OPERATIONAL.
5. COORDINATE CLASSROOM USE FOR MIDDLE SCHOOL EDUCATION WITH OWNER. NEC ARTICLE 406.12 REQUIRES TAMPER RESISTANT RECEPTACLES TO BE INSTALLED IN CLASSROOMS FOR PRESCHOOL AND ELEMENTARY EDUCATION.
6. ALL NEW DESIGNATED EMERGENCY LIGHTING FIXTURES TO BE PROVIDED AN UNSWITCHED BRANCH CIRCUIT VIA INVERTER AS MANUFACTURED BY ISOLITE, MODEL# E3-300-LC-V1-1S. SEE MANUFACTURERER'S WIRING DIAGRAM TO INTEGRATE PHOTOCELL OPERATION WITH INVERTER OUTPUT BREAKER.
7. ALL POWER PACKS AND EMERGENCY SHUNT RELAYS TO BE LOCATED IN ACCESSIBLE AREA OR CEILING FOR MAINTENANCE CHECKS AND SERVICING. LOCATION SHOWN ON PLANS FOR DIAGRAMMATIC PURPOSES ONLY.

Proposed Electrical Key Notes

(#) SYMBOL INDICATES PROPOSED KEY NOTE

1. EXISTING SINGLE-CIRCUIT HVAC UNIT TO REMAIN. VERIFY CIRCUIT IN FIELD.
2. EXISTING DUAL-CIRCUIT HVAC UNIT TO REMAIN. VERIFY CIRCUIT IN FIELD.
3. EXISTING HOT WATER HEATER AND DISCONNECT SWITCH TO REMAIN. VERIFY CIRCUIT IN FIELD.
4. ALL EXISTING RECEPTACLES AND LIGHTING TO INCLUDE EXIT AND EMERGENCY LIGHTING TO REMAIN. VERIFY CIRCUITS IN FIELD.
5. VERIFY WIRING OF ALL EXTERIOR RECEPTACLES IS IN GOOD CONDITION. REPLACE EXTERIOR RECEPTACLE WITH NEW GFCI RECEPTACLE AND WEATHERPROOF IN-USE COVER WHEN FOUND TO BE MISSING.
6. EXISTING GFCI RECEPTACLE SERVING EXISTING WATER FOUNTAIN TO REMAIN.
7. PROPOSED LOCATION OF NEW EMERGENCY LIGHTING INVERTER TO SERVE NEW EMERGENCY LIGHTING FIXTURES. PROVIDE 4-INCHES OF CLEARANCE ON THE SIDES AND THE TOP FOR PROPER AIR CIRCULATION.
8. 2-HOUR MAXIMUM OVERRIDE SWITCH FOR NEW TYPE 'A' LIGHT FIXTURES.

Electrical Legend

SYMBOL	DESCRIPTION
	EXISTING DUPLEX RECEPTACLE - EXISTING WALL MOUNTED RECEPTACLE TO REMAIN.
	EXISTING DOUBLE DUPLEX RECEPTACLE - EXISTING WALL MOUNTED RECEPTACLES TO REMAIN.
	EXISTING GFCI PROTECTED DUPLEX RECEPTACLE - EXISTING GFCI RECEPTACLE TO REMAIN.
	EXISTING DISCONNECT SWITCH- EXISTING DISCONNECT TO REMAIN.
	EXISTING 120/208V FLUSH MOUNTED PANELBOARD - EXISTING PANELBOARDS TO REMAIN. SEE PANEL SCHEDULES ON SHEET E6.01.
S_a^{OV}	**OVERRIDE LIGHT SWITCH -** NEW 20A, 120V COMMERCIAL GRADE OVERRIDE LIGHT SWITCH. LOWER CASE 'a' DENOTES CONTROLLED LIGHT FIXTURE DESIGNATION IN AREA.
ER1	**EMERGENCY SHUNT RELAY -** EMERGENCY RELAY TO BYPASS CONTROLLED NORMAL POWER TO EMERGENCY INVERTER POWER. USE MODEL #ELCU-200 AS MANUFACTURERED BY WATTSTOPPER
	EXISTING WALL MOUNTED LUMINAIRE - EXISTING WALL MOUNTED EGRESS LIGHTING TO REMAIN.
	EXISTING WALL MOUNTED FLOOD LIGHT - EXISTING FLOOD LIGHT TO REMAIN.

PNL-5-# = PANEL DESIGNATION - CIRCUIT #

DEVICE ABBREVIATIONS & DESIGNATIONS

ABBR.	DEFINITION
IUC	**IN USE COVER -** RECEPTACLE WITH WEATHERPROOF IN-USE-COVER.

LUMINAIRE SCHEDULE

SYMBOL/TYPE	MANUF.	MODEL	DESCRIPTION	VOLTAGE	WATT
A	DAY-BRITE CFI BY SIGNIFY	FSX-4-40L-835-UNV-DIM-IP65 WIRE GUARD: FSXWG4	4' LINEAR CANOPY LUMINAIRE	120-277V	32W

LUMINAIRE SCHEDULE NOTES:

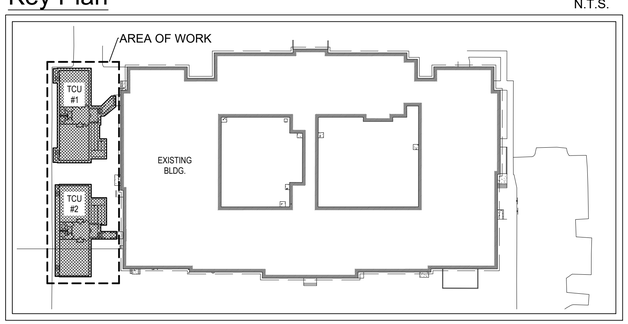
1. PROVIDE PHOTOCELL DEVICE FOR AUTOMATIC ON AND AUTOMATIC OFF FOR NEW TYPE 'A' LIGHT FIXTURE.
2. HALF-SOLID PATTERN INDICATES AN EMERGENCY LIGHT. SEE 'EM' TAG TO CONFIRM. ALL EMERGENCY LIGHTING CIRCUITS TO BE HAVE IDENTIFICATION PER NEC ARTICLE 700.10(A) AND RAN IN SEPARATE CONDUIT OR RACEWAYS PER NEC ARTICLE 700.10(B) AS REQUIRED.

Fire Alarm Device Legend

SYMBOL	DESCRIPTION
	AUDIO/VISUAL DEVICE
	VISUAL DEVICE
F	**MANUAL PULL STATION -** WHEN INSTALLED SURFACE MOUNTED, MOUNT PULL STATION ON MANUFACTURER'S SURFACE MOUNT RED BACKBOX.
S	**SMOKE DETECTOR -** PHOTOELECTRIC UNLESS NOTED OTHERWISE
H	**HEAT DETECTOR**

Key Plan

N.T.S.



NJ Certificate of Authorization	
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Arch. Nos.	21AC00012400
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MATTHEW T. WOLFE, R.A.
Title REGISTERED ARCHITECT
License No. NJ21AI109634OO

Revisions:

LAN ASSOCIATES
Engineering, Planning, Architecture, Surveying Inc.
445 Godwin Ave Ste 9, Midland Park, NJ 07432 | t. 201-447-6400 | f. 201-447-1233

PROPOSED TCU ELECTRICAL PLANS

TCU RELOCATION & REFURBISHMENT AT HUBBARD MIDDLE SCHOOL
661 W 8TH STREET, PLAINFIELD
NEW JERSEY 07060

Job No. 2.20174.81

File No. 2017481E2.01

E2.01

EXISTING PANEL NAME: PANEL #8	TOP/BOTTOM: -	PHASE: 3PH - 4W	COPPER BUS FULLY RATED NEUTRAL BAR & FULL EQUIPMENT GROUND
VOLTAGE: 120/208V	PANEL BOARD AND BREAKER	MAIN C.B.: 100-3P	
MAIN RATING: 100A	KAIC RATING: 22K	MOUNTING: FLUSH	

	CKT NO.	LOAD DESCRIPTION	WATTS A	WATTS B	WATTS C	BRKR AMPS	# OF POLES	# OF POLES	BRKR AMPS	WATTS A	WATTS B	WATTS C	LOAD DESCRIPTION	CKT NO.	
	1		5092					20	1	-			LIGHTS EXIT REAR	2	(E)
(E)	3	SINGLE-CIRCUIT HVAC UNIT		5092		60	3	20	1		-		LIGHTS EMG LIGHTS	4	(E)
	5				5092			20	1			-	RECEPTACLES	6	(E)
(E)	7	RECEPTACLES	-			20	1	20	1	-			RECEPTACLES EMG LIGHTS	8	(E)
(E)	9	RECEPTACLES		-		20	1	20	1		-		RECEPTACLES	10	(E)
(E)	11	RECEPTACLES			-	20	1	20	1			-	RECEPTACLES	12	(E)
(E)	13	SPARE	-			25	2	20	1	-			SPACE	14	
	15			-				20	1		-		SPACE	16	
	17	SPACE			-	-	1	20	1			-	SPACE	18	
	TOTALS		5,092	5,092	5,092					###	#####	#####		TOTALS	
	PHASE TOTALS WATTS				A: 5,092		B: 5,092		C: 5,092						
	TOTAL CONNECTED KW					15.3									
	TOTAL CONNECTED AMPS					42.4									

1 EXISTING TCU #1 ELECTRICAL PANEL #8 SCHEDULE - CLASSROOM 01

EXISTING PANEL NAME: PANEL #5	TOP/BOTTOM: -	PHASE: 3PH - 4W	COPPER BUS FULLY RATED NEUTRAL BAR & FULL EQUIPMENT GROUND
VOLTAGE: 120/208V	PANEL BOARD AND BREAKER	MAIN C.B.: -	
MAIN RATING: 250A	KAIC RATING: 22K	MOUNTING: FLUSH	

	CKT NO.	LOAD DESCRIPTION	WATTS A	WATTS B	WATTS C	BRKR AMPS	# OF POLES	# OF POLES	BRKR AMPS	WATTS A	WATTS B	WATTS C	LOAD DESCRIPTION	CKT NO.	
	1		3267					1	20	-			LIGHTS EXIT REAR	2	(E)
(E)	3	DUAL-CIRCUIT HVAC UNIT - CIRCUIT #1		3267		40	3	1	20		-		LIGHTS EXIT FRONT	4	(E)
	5				3267			1	20			-	RECEPTACLES	6	(E)
(E)	7	RECEPTACLES EMG LIGHTS	-			20	1	1	20	-			RECEPTACLES	8	(E)
(E)	9	RECEPTACLES		-		20	1	1	20		-		RECEPTACLES	10	(E)
(E)	11	RECEPTACLES			-	20	1	1	20			-	RECEPTACLES	12	(E)
(E)	13	RECEPTACLES	-			20	1	1	20	-			RECEPTACLES	14	(E)
(E)	15	RECEPTACLES		-		20	1	1	20		-		RECEPTACLES	16	(E)
(N)	17	EXTERIOR CANOPY EM LIGHTS			96	20	1	1	20			1500	WATER HEATER	18	(E)
(N)	19	EMERGENCY INVERTER	96			20	1			2690				20	
	21	SPACE		-		-	1	3	30		2690		DUAL-CIRCUIT HVAC UNIT - CIRCUIT #2	22	(E)
	23	SPACE			-	-	1					2690		24	
	25	SPACE	-			-	1	1	-	-			SPACE	26	
	27	SPACE		-		-	1	1	-		-		SPACE	28	
	29	SPACE			-	-	1	1	-			-	SPACE	30	
	31	SPACE	-			-	1	1	-	-			SPACE	32	
	33	SPACE		-		-	1	1	-		-		SPACE	34	
	35	SPACE			-	-	1	1	-			-	SPACE	36	
	37	SPACE	-			-	1	1	-	-			SPACE	38	
	39	SPACE		-		-	1	1	-		-		SPACE	40	
	41	SPACE			-	-	1	1	-			-	SPACE	42	
	TOTALS		3,363	3,267	3,363					2,690	2,690	4,190		TOTALS	
	PHASE TOTALS WATTS				A: 6,053		B: 5,957		C: 7,553						
	TOTAL CONNECTED KW					19.6									
	TOTAL CONNECTED AMPS					54.3									

EMERGENCY LIGHTING LOAD SUMMARY

INVERTER MODEL: E3-300-LC-V1-1S, MANF.: ISOLITE, SINGLE-POLE, 120V INPUT
MAXIMUM "SWITCHED" CIRCUIT BREAKERS USED: 1

"SWITCHED" CIRCUIT EM-1 - NORMAL POWER FEED THROUGH VIA PHOTOCELL

TOTAL WATTAGE = 96 WATTS

ESTIMATED FULL LOAD: 96W/120V = 0.8 AMPS

2 EXISTING TCU #1 ELECTRICAL PANEL #5 SCHEDULE - CLASSROOM 02

EXISTING PANEL NAME: PANEL #7	TOP/BOTTOM: -	PHASE: 3PH - 4W	COPPER BUS FULLY RATED NEUTRAL BAR & FULL EQUIPMENT GROUND
VOLTAGE: 120/208V	PANEL BOARD AND BREAKER	MAIN C.B.: 100-3P	
MAIN RATING: 100A	KAIC RATING: 22K	MOUNTING: FLUSH	

	CKT NO.	LOAD DESCRIPTION	WATTS A	WATTS B	WATTS C	BRKR AMPS	# OF POLES	# OF POLES	BRKR AMPS	WATTS A	WATTS B	WATTS C	LOAD DESCRIPTION	CKT NO.	
	1		5092					20	1	-			LIGHTS EXIT REAR	2	(E)
(E)	3	SINGLE-CIRCUIT HVAC UNIT		5092		60	3	20	1		-		LIGHTS EMG LIGHTS	4	(E)
	5				5092			20	1			-	RECEPTACLES	6	(E)
(E)	7	RECEPTACLES	-			20	1	20	1	-			RECEPTACLES	8	(E)
(E)	9	RECEPTACLES		-		20	1	20	1		-		RECEPTACLES	10	(E)
(E)	11	RECEPTACLES			-	20	1	20	1			-	RECEPTACLES	12	(E)
(E)	13	SPARE	-			25	2	20	1	-			SPACE	14	
	15			-				20	1		-		SPACE	16	
	17	SPACE			-	-	1	20	1			-	SPACE	18	
	TOTALS		5,092	5,092	5,092					###	#####	#####		TOTALS	
	PHASE TOTALS WATTS				A: 5,092		B: 5,092		C: 5,092						
	TOTAL CONNECTED KW					15.3									
	TOTAL CONNECTED AMPS					42.4									

3 EXISTING TCU #2 ELECTRICAL PANEL #7 SCHEDULE - CLASSROOM 03

EXISTING PANEL NAME: PANEL #6	TOP/BOTTOM: -	PHASE: 3PH - 4W	COPPER BUS FULLY RATED NEUTRAL BAR & FULL EQUIPMENT GROUND
VOLTAGE: 120/208V	PANEL BOARD AND BREAKER	MAIN C.B.: -	
MAIN RATING: 250A	KAIC RATING: 22K	MOUNTING: FLUSH	

	CKT NO.	LOAD DESCRIPTION	WATTS A	WATTS B	WATTS C	BRKR AMPS	# OF POLES	# OF POLES	BRKR AMPS	WATTS A	WATTS B	WATTS C	LOAD DESCRIPTION	CKT NO.	
	1		3267					3	30	2690				2	
(E)	3	DUAL-CIRCUIT HVAC UNIT - CIRCUIT #1		3267		40	3				2690		DUAL-CIRCUIT HVAC UNIT - CIRCUIT #2	4	(E)
	5				3267							2690		6	
(E)	7	RECEPTACLES	-			20	1	1	20	-			LIGHTS EXIT BACK	8	(E)
(E)	9	RECEPTACLES		-		20	1	1	20		-		LIGHTS EXIT FRONT	10	(E)
(E)	11	WATER HEATER			1500	20	1	1	20			-	RECEPTACLES	12	(E)
(E)	13	RECEPTACLES	-			20	1	1	20	-			RECEPTACLES	14	(E)
(E)	15	RECEPTACLES EMG LIGHTS		-		20	1	1	20		-		RECEPTACLES	16	(E)
(E)	17	RECEPTACLES			-	20	1	1	20			-	RECEPTACLES	18	(E)
(E)	19	RECEPTACLES	-			20	1	1	20	-			RECEPTACLES	20	(E)
(E)	21	RECEPTACLES		-		20	1	1	20		-		RECEPTACLES	22	(E)
	23	SPACE			-	-	1	1	20			96	EXTERIOR CANOPY EM LIGHTS	24	(N)
	25	SPACE	-			-	1	1	20	96			EMERGENCY INVERTER	26	(N)
	27	SPACE		-		-	1	1	-		-		SPACE	28	
	29	SPACE			-	-	1	1	-			-	SPACE	30	
	31	SPACE	-			-	1	1	-	-			SPACE	32	
	33	SPACE		-		-	1	1	-		-		SPACE	34	
	35	SPACE			-	-	1	1	-			-	SPACE	36	
	37	SPACE	-			-	1	1	-	-			SPACE	38	
	39	SPACE		-		-	1	1	-		-		SPACE	40	
	41	SPACE			-	-	1	1	-			-	SPACE	42	
	TOTALS		3,267	3,267	4,767					2,786	2,690	2,786		TOTALS	
	PHASE TOTALS WATTS				A: 6,053		B: 5,957		C: 7,553						
	TOTAL CONNECTED KW					19.6									
	TOTAL CONNECTED AMPS					54.3									

EMERGENCY LIGHTING LOAD SUMMARY

INVERTER MODEL: E3-300-LC-V1-1S, MANF.: ISOLITE, SINGLE-POLE, 120V INPUT
MAXIMUM "SWITCHED" CIRCUIT BREAKERS USED: 1

"SWITCHED" CIRCUIT EM-1 - NORMAL POWER FEED THROUGH VIA PHOTOCELL

TOTAL WATTAGE = 96 WATTS

ESTIMATED FULL LOAD: 96W/120V = 0.8 AMPS

4 EXISTING TCU #2 ELECTRICAL PANEL #6 SCHEDULE - CLASSROOM 04

ELECTRICAL PANEL GENERAL NOTES:

1. ALL LOADS ARE ESTIMATED. CONTRACTOR SHALL VERIFY LOADS IN FIELD PRIOR TO ROUGH-IN.
2. ALL WIRING SHALL BE COPPER WIRE AWG SIZES AS FOLLOWS:

   CONNECT ALL 20A-1P CIRCUITS VIA 3/4" C - 2#12 & 1#12 G.

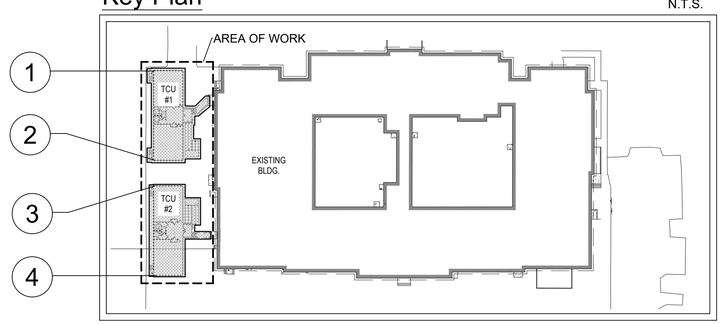
   CONNECT ALL 25A-1P & 30A-1P CIRCUITS VIA 3/4"C - 2#10 & 1#10G.

   ALL BRANCH CIRCUITS OVER 100' SHALL BE INCREASED ONE SIZE UP TO ACCOMMODATE FOR VOLTAGE DROP
3. "(E)" DENOTES AN EXISTING CIRCUIT AND CIRCUIT BREAKER TO REMAIN.

   "(N)" DENOTES A NEW CIRCUIT AND CIRCUIT BREAKER TO MATCH THE EXISTING FAULT CURRENT AND MANUFACTURER.

Key Plan

N.T.S.



NJ Certificate of Authorization

Eng'r. Nos.	24GA27937500
Arch. Nos.	21AC00012400
Date	6/21/22
Checked	JC
Drawn	MP

MATTHEW T. WOLFE, R.A. — License No. NJ21AI10963400 — Title REGISTERED ARCHITECT

Revisions:

LAN ASSOCIATES
Engineering, Planning, Architecture, Surveying Inc.
445 Godwin Ave Ste 9, Midland Park, NJ 07432 | t. 201-447-6400 | f. 201-447-1233

ELECTRICAL PANEL SCHEDULES

TCU RELOCATION & REFURBISHMENT AT HUBBARD MIDDLE SCHOOL
661 W 8TH STREET, PLAINFIELD
NEW JERSEY 07060

Job No. 2.20174.81

File No. 2017481E6.01

E6.01

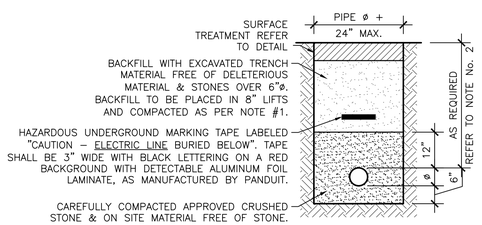
1 PROPOSED ELECTRICAL SITE PLAN

1" = 30'-0"

NORTH

Proposed Electrical Key Notes	# SYMBOL INDICATES PROPOSED KEY NOTE

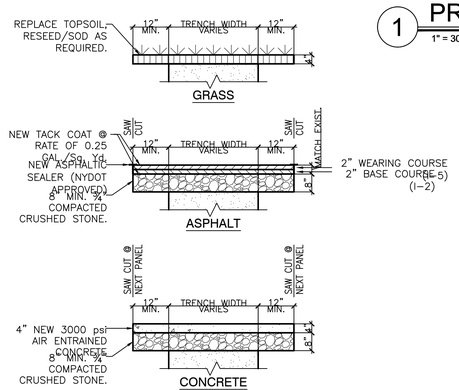
1. EXISTING UTILITY POLE WITH DAWN TO DUSK LIGHTING.
2. UNDERGROUND SECONDARY FEEDER CONDUCTORS FROM UTILITY TRANSFORMER. PROVIDE 4#3/0 & 1#6 CU GND IN 2-1/2" SCHEDULE 80 PVC.
3. NEMA 3R 400A RATED JUNCTION BOX, CT CABINET, AND UTILITY METER, AND MAIN DISCONNECT. COORDINATE WITH UTILITY COMPANY FOR FINAL LOCATION AND REQUIREMENTS.
4. NEMA 3R 400A RATED JUNCTION BOX TO FEED THROUGH TO TCU#1 MAIN ELECTRICAL PANELS 'PNL #5' AND 'PNL #8'.



NOTES:
1. ALL FILL TO BE COMPACTED TO 95% MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557.
2. 600V AND LESS CONDUCTORS SHALL BE NOT LESS THAN 24"
3. PROVIDE UNDERGROUND, H–20 RATED, UL LISTED, CODE SIZED PULL BOXES AS REQUIRED TO FACILITATE PULL.

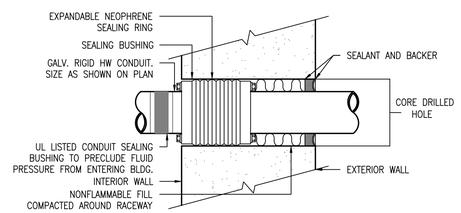
A TRENCHING DETAIL 1

N.T.S.



B TRENCHING SURFACE TREATMENT

N.T.S.



C THRU-WALL CONDUIT SEAL

N.T.S.

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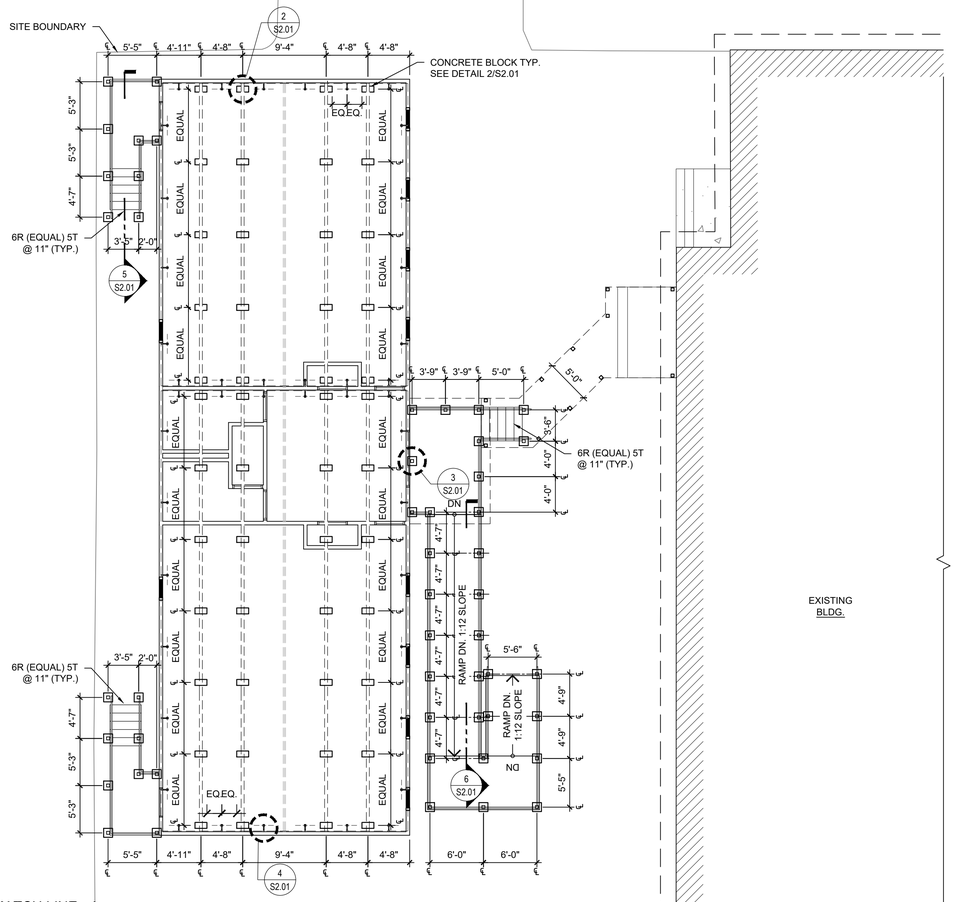
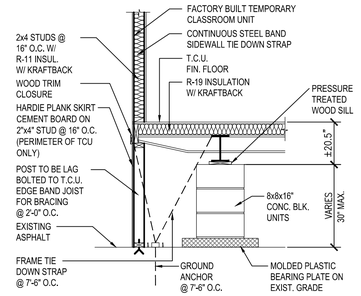


1 PROPOSED TCU #1 LOCATION PLAN - MATCHLINE 'A'

1/8" = 1'-0"

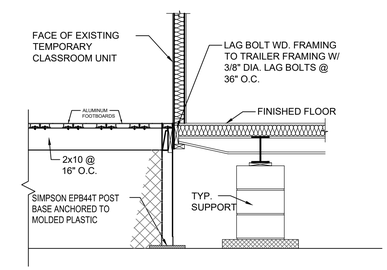
NOTE:
AS PER MANUFACTURER:

CMU DRY STACK NOT TO EXCEED 30"
ANY CMU STACK OVER 30" MORTAR REQUIRED.
CMU STACKS OVER 5 BLOCK COURSES WILL REQUIRE A FOOTING



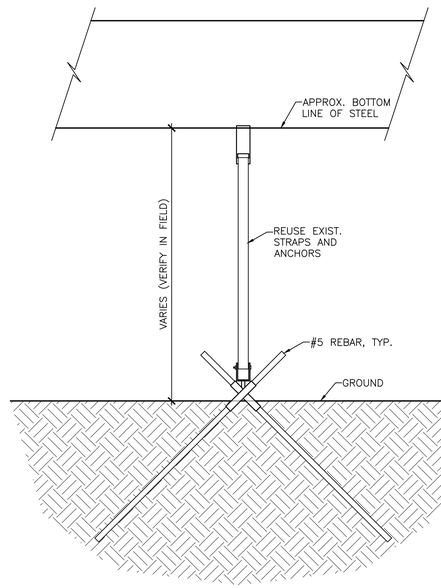
2 TYPICAL SKIRT DETAIL

1/2" = 1'-0"



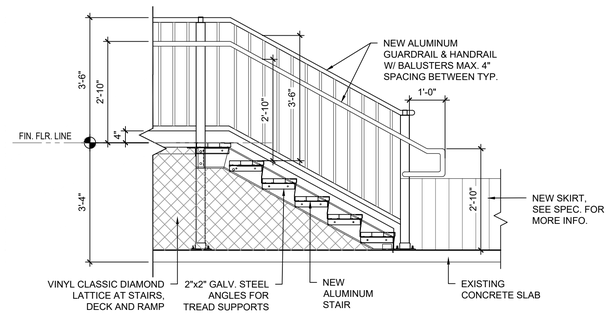
3 TYPICAL DECK ATTACHMENT DETAIL

1/2" = 1'-0"



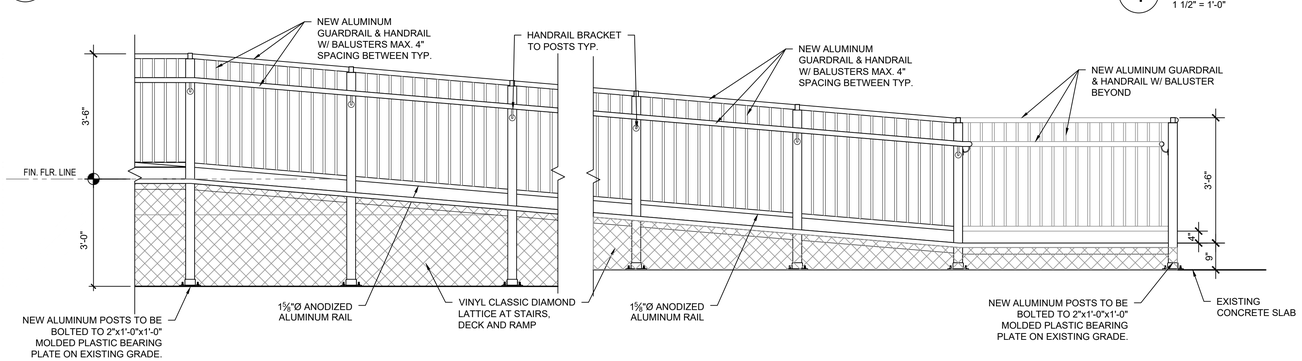
4 TIE-DOWN DETAIL

1 1/2" = 1'-0"



5 SECTION THRU STAIR

1/2" = 1'-0"

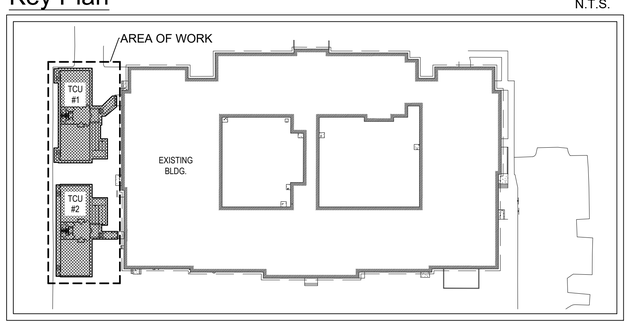


6 SECTION THRU RAMP

1/2" = 1'-0"

Key Plan

N.T.S.



NJ Certificate of Authorization	
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Drawn	RSS

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Revisions:

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FOUNDATION PLAN AND DETAILS
TCU RELOCATION & REFURBISHMENT AT HUBBARD MIDDLE SCHOOL
661 W 8th. STREET, PLAINFIELD, NEW JERSEY 07060

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