MONTCLAIR STATE UNIVERSITY
UNIVERSITY HALL COURTYARD LIGHTING UPGRADE

1 NORMAL AVENUE, MONTCLAIR, NJ 07043

MSU PROJECT NUMBER: 16C011.3

NOVEMBER, 2025

GENERAL PROJECT INFORMATION

OWNER: MONTCLAIR STATE UNIVERSITY

AUTHORITY HAVING JURISDICTION: MONTCLAIR, NJ

CODE REVIEW

BUILDING:	INTERNATIONAL BUILDING CODE / 2021 WITH NJ AMENDMENTS
ELECTRICAL:	NATIONAL ELECTRIC CODE (NFPA 70) / 2020
PLUMBING:	NATIONAL STANDARD PLUMBING CODE / 2021
MECHANICAL:	INTERNATIONAL MECHANICAL CODE (IMC 2021) / 2021
FIRE PROTECTION:	INTERNATIONAL FIRE CODE / 2015
FUEL GAS:	INTERNATIONAL FUEL GAS CODE / 2021
REHABILITATION:	NJ UCC, N.J.A.C. 5:23-6, SUBCHAPTER 6
BARRIER FREE:	NJIBC 2015 CHAPTER 11 AND NIJBC 2018 CHAPTER 11 AND NJAC 5:23-7, ICC/ANSI A117.1-2017
ENERGY:	ASHRAE 90.1-2019

DRAWING INDEX

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7	E-401	SCHEDULES
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9	E-601	SINGLE LINE DIAGRAM

A/E FIRM

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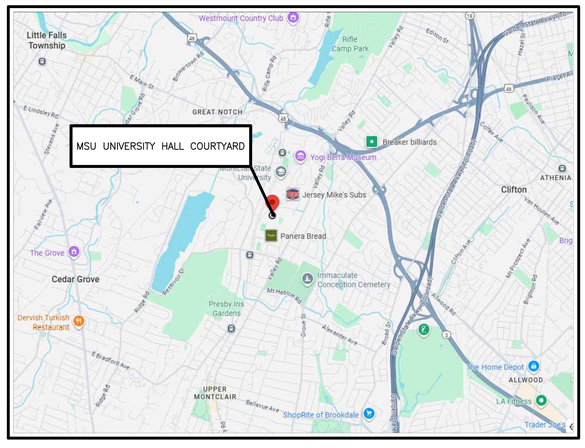
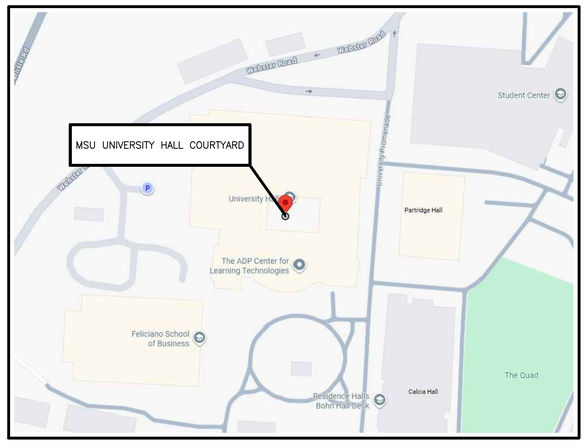
CRANE PROJECT NUMBER: 6780-2501



NORTH

VICINITY MAP



NORTH

LOCALITY MAP

NO.	BY	CK	DATE	REVISION

DESIGNED DGL
DRAWN SG
CHECKED DGL
SCALE AS SHOWN
DATE 10/20/2025

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Registered Architect NJ Lic. No. 21AI01997600
Date:

MSU COURTYARD LIGHTING
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GENERAL
TITLE

PROJECT NO.
6780-2501

DRAWING NO.
T-001
DWG 1 OF 9

GENERAL ARCHITECTURAL NOTES

1. ALL WORK PERFORMED SHALL BE IN COMPLIANCE WITH ALL APPLICABLE CODES AND REQUIREMENTS OF FEDERAL, STATE AND LOCAL GOVERNING AGENCIES HAVING JURISDICTION.

2. THE OWNER RESERVES THE RIGHT TO DESIGNATE THE ORDER IN WHICH THE CONTRACTOR SHALL PROCEED WITH ANY AND ALL PORTIONS OF THE WORK. WORK SHALL BE COORDINATED SO AS NOT TO INTERFERE WITH THE BUILDING OCCUPANTS AND ACTIVITIES. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SCHEDULE SHOWING HOW THE WORK WILL PROCEED DURING THE CONSTRUCTION PERIOD. THE CONSTRUCTION SCHEDULE SHALL INCLUDE ANY WORK REQUIRED TO BE PHASED. THIS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE OWNER AND THE OWNER'S REPRESENTATIVE.

3. THE CONTRACTOR AND THEIR TRADE SUBCONTRACTORS SHALL BE RESPONSIBLE FOR VISITING THE SITE AND FAMILIARIZING THEMSELVES WITH ALL EXISTING CONDITIONS PRIOR TO SUBMITTING THEIR BID.

4. THE CONTRACTOR SHALL COORDINATE ALL STAGING AREAS WITH THE OWNER'S REPRESENTATIVE PRIOR TO STARTING WORK.

5. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL WORK UNDER THIS CONTRACT TO ENSURE THE QUALITY AND TIMELY COMPLETION OF THE WORK / PROJECT. THE CONTRACTOR SHALL COORDINATE ALL AREAS OF WORK WITH OTHER TRADES INVOLVED WITH THE PROJECT.

6. GENERAL CONTRACTOR WILL OBTAIN ALL PERMITS AND ARRANGE FOR PAYMENT OF PERMIT AND FILING FEES WITH OWNER.

7. THE CONTRACTOR SHALL PROPERLY PROTECT AND MAKE SAFE ADJACENT PROPERTY/STRUCTURE AS REQUIRED BY JOB CONDITIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ISOLATE ALL WORK AREAS AND CLEARLY DEFINE PATHS OF ACCESS TO THE WORK FOR THE WORKMEN IN ORDER TO INSURE MINIMIZATION OF DUST INFILTRATION TO OTHER AREAS OF THE BUILDING AND TO PREVENT DAMAGE TO FLOORS, WALLS AND CEILINGS OF PUBLIC AND/OR FREIGHT ACCESS AREAS. IF SUCH DAMAGE SHOULD OCCUR, CONTRACTOR SHALL CORRECT THE DAMAGE IMMEDIATELY AT THEIR OWN COST.

8. THE CONTRACTOR SHALL PROVIDE NOT LESS THAN ONE ORDINARY HAZARD FIRE EXTINGUISHER AT EACH STAIRWAY OR OTHER MEANS OF EGRESS ON ALL FLOOR LEVELS WHERE COMBUSTIBLE MATERIALS HAVE ACCUMULATED.

9. ALL PRECAUTIONS SHALL BE TAKEN TO PREVENT DIRT, NOISE, WATER AND DUST FROM ENTERING OTHER PARTS OF THE BUILDING DURING THE PROGRESS OF THE WORK.

10. EACH TRADE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE WORK SITE FREE FROM DEBRIS AND ACCUMULATED REFUSE, EACH TRADE SUBCONTRACTOR SHALL HAVE SOLE RESPONSIBILITY FOR PROTECTING ALL AREAS FROM ENTRY BY UNAUTHORIZED PARTIES. SITE WILL BE LEFT BROOM CLEAN AT THE END OF EACH WORK DAY.

11. THE CONTRACTOR SHALL MAINTAIN FREE AND UNOBSTRUCTED ACCESS FROM WORK AREA AND ADJACENT SPACES TO THE OUTSIDE OF THE BUILDING AT ALL TIMES. IF THE PATHS OF EGRESS CANNOT BE MAINTAINED DURING CONSTRUCTION, THEN THE CONTRACTOR SHALL PROVIDE ALTERNATE MEANS OF EGRESS INCLUDING ERECTING BARRICADES, TEMPORARY SIGNS, ALTERNATE PATHS OF TRAVEL, ETC. IN ORDER TO MAINTAIN A SAFE WORK ENVIRONMENT FOR THE BUILDING OCCUPANTS AND VISITORS.

12. THE CONTRACTOR SHALL PROVIDE PROTECTION AT SIDEWALKS AND CURBS AROUND THE PREMISES SO THAT SAME MAY BE SAFELY USED BY THE PUBLIC AT ALL TIMES AND AS REQUIRED BY CODE AND ALL AGENCIES HAVING JURISDICTION.

13. THE CONTRACTOR SHALL PROVIDE BARRICADES AROUND WORK AREAS AS REQUIRED TO PREVENT BUILDING EMPLOYEES AND OTHER UNAUTHORIZED PERSONS FROM ENTERING THEREIN.

14. THE CONTRACTOR SHALL PROVIDE GUARDS, RAILS, BARRICADES, FENCES, SIDEWALK SHEDS, CATCH PLATFORMS, DECKING, NIGHT LIGHTING, AS REQUIRED BY CODE AND ALL AGENCIES HAVING JURISDICTION, AND AS REQUIRED TO PROVIDE ADEQUATE PROTECTION.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING ALL WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, DISTORTIONS, AND OFF ALIGNMENTS ACCORDING TO CODE AND STANDARDS OF GOOD CONSTRUCTION PRACTICE.

16. DRAWINGS SHALL NOT BE SCALED. USE DIMENSIONS ONLY. ALL DIMENSIONS AND CONDITIONS SHOWN AND ASSUMED ON THE DRAWINGS MUST BE VERIFIED AT THE SITE BY THE CONTRACTOR BEFORE ORDERING ANY MATERIAL OR START OF ANY WORK. WHERE DISCREPANCIES OCCUR AND/OR WHERE THERE ARE CONFLICTS OR OMISSIONS IN THE DRAWINGS, SPECIFICATIONS AND APPLICATIONS, CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY AND REFRAIN FROM STARTING AND COMPLETING SUCH WORK, OR DEPENDENT WORK, UNTIL DIRECTED BY THE OWNER'S REPRESENTATIVE TO PROCEED. NO CHANGE IN DRAWINGS OR SPECIFICATIONS IS PERMISSIBLE WITHOUT THE WRITTEN CONSENT OF THE OWNER'S REPRESENTATIVE. U.O.N. ALL DIMENSIONS ARE GIVEN TO THE FINISHED FACE OF THE STUD PARTITION OR MASONRY WALL. CLEAR AND MINIMUM DIMENSIONS ARE GIVEN TO FACE OF WALL OR FLOOR FINISHES.

17. DETAILS NOT SHOWN OR SPECIFIED HERE, BUT NECESSARY FOR PROPER AND ACCEPTABLE CONSTRUCTION, INSTALLATION OR OPERATION FOR ANY PART OF THE WORK SHALL BE INCLUDED IN THE WORK THE SAME AS IF HEREIN SPECIFIED OR INDICATED.

18. SUBCONTRACTORS ARE RESPONSIBLE FOR OBTAINING FROM THE GENERAL CONTRACTOR ALL DRAWINGS AND SPECIFICATIONS PERTINENT TO THEIR SCOPE OF WORK TO PROPERLY BID AND CONSTRUCT THIS PROJECT.

19. SUBCONTRACTORS ARE RESPONSIBLE FOR REVIEWING ALL DRAWINGS FOR THIS PROJECT. A COMPLETE LIST OF DRAWINGS CAN BE FOUND IN THE INDEX OF SHEET T-001.

20. THE INFORMATION SHOWN ON THE CONTRACT DRAWINGS IS BASED ON LIMITED EXISTING CONDITION BUILDING DRAWINGS, LIMITED FIELD SURVEY AND LIMITED VISUAL OBSERVATION. EACH TRADE SUBCONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING STRUCTURE/BUILDING INFORMATION IN FIELD PRIOR TO START OF THE CONTRACT WORK.

21. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

22. IF ANY HAZARDOUS MATERIALS ARE ENCOUNTERED, THE CONTRACTOR SHALL STOP WORK AND SHALL NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY.

23. THE CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING REQUIRED TO COMPLETE THE WORK OR TO MAKE ITS PARTS FIT TOGETHER PROPERLY WITHOUT COMPROMISING THE QUALITY OF THE WORK. MATERIALS USED FOR PATCHING & REPAIRING SHALL MATCH EXISTING MATERIALS, UNLESS NOTED OTHERWISE.

24. ALL EXISTING AND NEWLY CONSTRUCTED SURFACES SHALL BE PROTECTED FROM DEMOLITION/CONSTRUCTION ACTIVITIES. WHERE EXISTING FINISHES ARE CUT OR ALTERED, THEY SHALL BE MODIFIED IN SUCH A MANNER THAT AFTER ASSEMBLY THEY PROVIDE A COMPLETE CONTINUOUS FINISHED CONDITION.

25. IN GENERAL, NEW MATERIALS USED FOR REPAIR CONDITIONS SHALL MATCH SIMILAR ITEMS IN QUALITY, DETAIL, PROFILE AND FINISH AS THOSE ALREADY BUILT INTO THE WORK, UNLESS OTHERWISE NOTED.

26. THE CONTRACTOR SHALL LAY OUT THEIR OWN WORK AND SHALL COORDINATE WITH AND VERIFY ALL DIMENSIONS REQUIRED BY OTHER TRADE SUBCONTRACTORS.

27. ALL WORK SHALL BE INSTALLED SO THAT ALL PARTS REQUIRED ARE READILY ACCESSIBLE FOR INSPECTION, OPERATION, MAINTENANCE AND REPAIR.

28. THE WORDS "PROVIDE" OR "PROVIDE NEW" SHALL MEAN TO SUPPLY AND INSTALL NEW ITEM(S) AND/OR SYSTEM(S) AS INDICATED.

29. THE TERM "FINISH FLOOR" SHALL MEAN THE NORMAL FINISHED SURFACE OF THE FLOOR LEVEL.

30. THE CONTRACTOR SHALL PATCH AND REPAIR ALL SURFACES DUE TO, BUT NOT LIMITED TO, THE DEMOLITION. ALL PENETRATIONS SHALL BE SEALED, CAPPED AND LEVELED SMOOTH TO MATCH ADJACENT MATERIALS, UNLESS OTHERWISE NOTED.

31. WHERE MANUFACTURER'S NAMES AND PRODUCT NUMBERS ARE INDICATED ON THE DRAWINGS IT SHALL BE CONSTRUED TO MEAN THE ESTABLISHING OF QUALITY AND PERFORMANCE STANDARDS OF SUCH ITEMS. ALL PRODUCT SUBSTITUTIONS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE WITH A DEDUCT CHANGE ORDER FOR APPROVAL.

GENERAL ARCHITECTURAL NOTES (CONT'D)

32. ALL PLUMBING, ELECTRICAL AND OTHER TRADE CONTRACT WORK REQUIRING THE USE OF LICENSED PERSONNEL SHALL BE PERFORMED BY LICENSED CONTRACTORS.

33. THE CONTRACTOR SHALL PROVIDE SLEEVES AND FIRE SEALANT AROUND ALL NEW, THROUGH WALL PENETRATIONS IN FIRE RATED WALLS. SEE MECHANICAL, ELECTRICAL, FIRE PROTECTION AND PLUMBING DRAWINGS. SEAL ALL PENETRATIONS THROUGH FIRE RATED WALLS WITH UL APPROVED FIRE RATED SYSTEMS.

34. IN THE EVENT OF CONFLICTS OR INCONSISTENCIES WITHIN OR BETWEEN PARTS OF THE CONTRACT DOCUMENTS, OR BETWEEN THE CONTRACT DOCUMENTS AND APPLICABLE STANDARDS, CODES AND ORDINANCES, THE CONTRACTOR SHALL (1) PROVIDE THE BETTER QUALITY OR GREATER QUANTITY OF WORK, OR (2) COMPLY WITH THE MORE STRINGENT REQUIREMENT OR PROVIDE THE MORE EXPENSIVE METHOD, MATERIAL OR FINISH SYSTEM; EITHER OR BOTH IN ACCORDANCE WITH THE ARCHITECT'S INTERPRETATION.

35. CONTRACTOR SHALL FIELD EXAMINE ALL EXISTING BUILDING UTILITIES, WHICH ARE SHOWN ON DRAWINGS TO BE REUSED, SUCH AS PIPING, DUCTWORK, FLUE PIPES, ELECTRICAL CONNECTIONS, ETC. FOR CODE COMPLIANCE. CONTRACTOR SHALL REPAIR, REPLACE, OR PROVIDE NEW COMPONENTS AT ANY DAMAGED OR MISSING CODE REQUIRED COMPONENTS, INCLUDING BUT NOT LIMITED TO PIPE/DUCT SUPPORTS, FIRE DAMPERS, PIPING/DUCTWORK INSULATION, ETC. CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.

36. IF THE CONTRACTOR VIOLATES OR IS NON-COMPLIANT WITH ANY CODES, LAWS, ORDINANCES OR REGULATIONS IN PERFORMING THE WORK, THEN THE CONTRACTOR SHALL, AT THEIR OWN EXPENSE, BEAR ALL PENALTIES AND COSTS AND SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND EI ASSOCIATES AGAINST ANY CLAIMS, DEMANDS, SUITS, DAMAGES, COSTS AND EXPENSES THAT MAY RESULT FROM SUCH VIOLATIONS.

37. CRANE ASSOCIATES SHALL NOT BE RESPONSIBLE FOR AND SHALL NOT HAVE CONTROL OR CHARGE OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. CRANE ASSOCIATES SHALL NOT BE RESPONSIBLE FOR CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THESE DESIGN DOCUMENTS OR FOR THE CONTRACTOR'S FAILURE TO PROVIDE SERVICES IN A PROFESSIONAL MANNER IN ACCORDANCE WITH STANDARDS OF GOOD PRACTICE. CRANE ASSOCIATES SHALL NOT BE RESPONSIBLE FOR OR HAVE CHARGE OVER THE ACTS AND/OR OMISSIONS OF THE CONTRACTORS, SUBCONTRACTORS OR ANY OF THEIR AGENTS OR EMPLOYEES OR ANY PERSON PERFORMING THE WORK.

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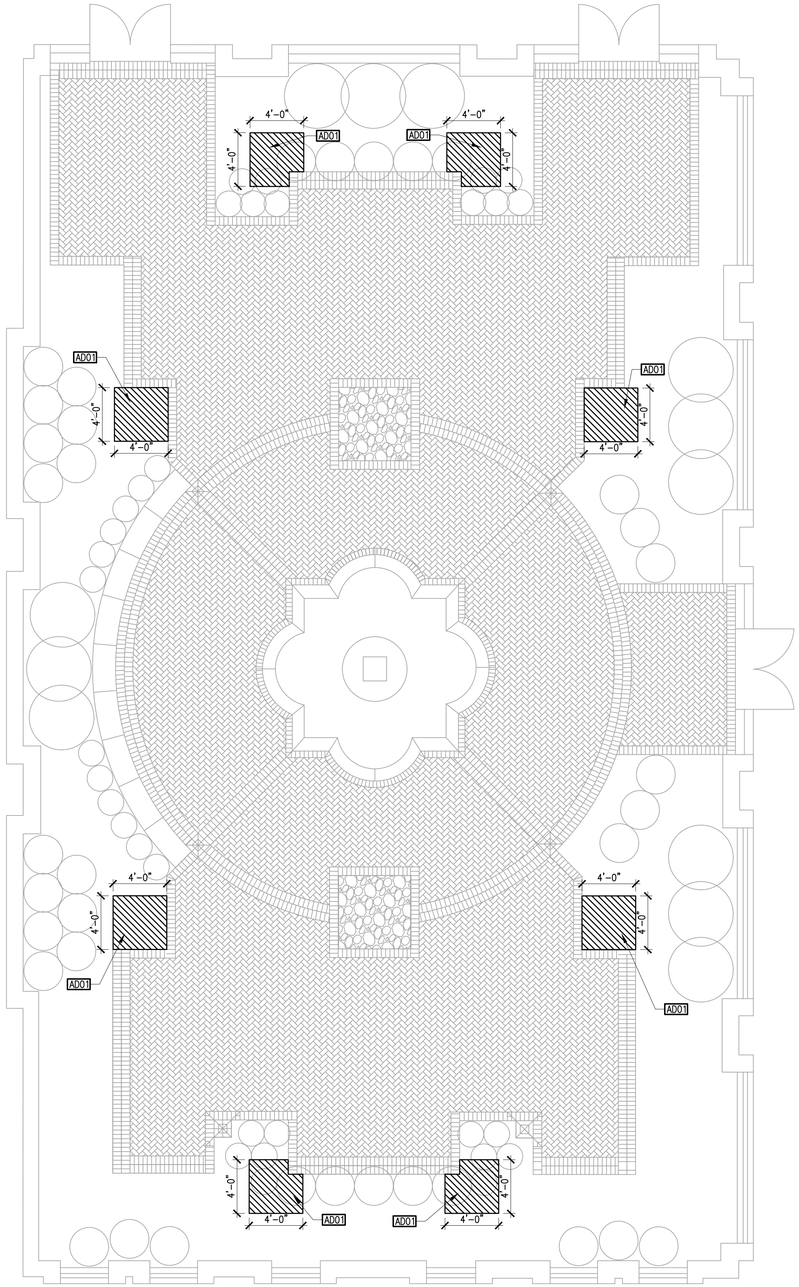
GENERAL
GENEARL NOTES, LEGENDS, AND ABBREVIATIONS

PROJECT NO.
6780-2501

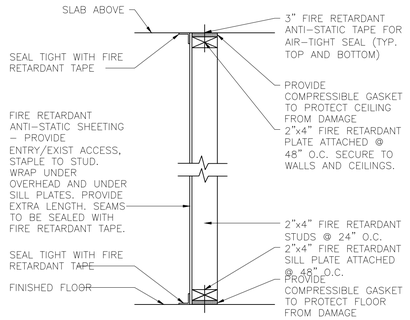
DRAWING NO.
G-001
DWG 2 OF 9



1 UNIVERSITY HALL COURTYARD DEMOLITION FLOOR PLAN

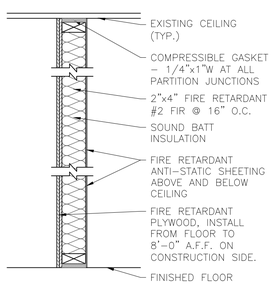
Scale: 3/16" = 1'-0"

4 0 4 8



2 DUST PROTECTION DETAIL

Scale: 1-1/2" = 1'-0"



3 DUST/SOUND PROTECTION DETAIL

Scale: 1-1/2" = 1'-0"

GENERAL NOTES

A. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE PROJECT MANAGER AND THE OWNER'S CONSTRUCTION REP.

B. ALL MATERIALS, INSTALLATION, AND WORKMANSHIP SHALL COMPLY WITH ALL APPLICABLE STATE AND CITY CODES AND ORDINANCES, INDUSTRY STANDARDS, UTILITY COMPANY REGULATIONS AND ALL REQUIREMENTS OF LOCAL AND FEDERAL AUTHORITIES HAVING JURISDICTION.

C. CONTRACTORS SHALL BE RESPONSIBLE FOR ADHERING TO ALL MONTCLAIR STATE UNIVERSITY REQUIREMENTS AND GUIDELINES GOVERNING WORK PERFORMED IN OCCUPIED SPACES. ALL ISSUES SHALL BE COORDINATED WITH THE PROJECT MANAGERS PRIOR TO CONSTRUCTION.

D. IF HAZARDOUS MATERIALS ARE IN ANY WAY SUSPECTED INCLUDING BUT NOT LIMITED TO ASBESTOS OR POLLUTANTS, CONTRACTOR SHALL INFORM THE PROJECT MANAGER IMMEDIATELY AND SUSPEND WORK ON THAT AREA OF CONSTRUCTION.

E. CONTRACTOR SHALL COORDINATE STORAGE OF BUILDING MATERIALS AND THE REMOVAL AND CLEAN-UP OF ALL DEBRIS CAUSED BY WORK DURING CONSTRUCTION. CLEAN ALL AREAS TO "AS-IS" CONDITION AT THE END OF EACH WORK DAY.

F. CONTRACTORS ARE TO CONFINE CONSTRUCTION TRAFFIC AND DEBRIS REMOVAL TO THE CONSTRUCTION AREA AS MUCH AS POSSIBLE TO MINIMIZE DUST MIGRATION. ERECT DUST PARTITIONS WHERE DEMOLITION AND/OR NEW CONSTRUCTION ABUTS EXISTING FINISHED SPACES.

G. CONTRACTOR SHALL COORDINATE ALL DEMOLITION WORK AND NEW CONSTRUCTION WORK WITH THE PROJECT MANAGER AND BUILDING MANAGEMENT TO MINIMIZE BUSINESS DISRUPTIONS WHILE NEW CONSTRUCTION IS IN PROGRESS.

H. SEE ELECTRICAL DRAWINGS, ETC., FOR ADDITIONAL WORK TO BE COORDINATED WITH THIS DRAWING AND THE REQUIREMENTS SPECIFIED HEREIN.

I. CONTRACTOR SHALL PATCH ALL WALL, CEILING, AND FLOOR SURFACES, AS WELL AS ANY OTHER MATERIALS TO REMAIN THAT ARE DAMAGED OR AFFECTED BY DEMOLITION OR NEW CONSTRUCTION. ALL PATCHING OF EXISTING CONSTRUCTION SHALL MATCH EXISTING MATERIALS AND FINISHES, UNLESS NOTED OTHERWISE.

K. CONTRACTORS SHALL FIELD VERIFY ALL SITE CONDITIONS PRIOR TO SUBMITTING THEIR BID.

L. PLANTINGS, EXTERIOR FURNITURE, AND PAVER BRICKS EXISTING TO REMAIN. PROTECT DURING CONSTRUCTION.

ARCHITECTURAL DEMOLITION KEYED NOTES

AD01 VEGETATION AND SOIL TO BE REMOVED DOWN TO EXISTING STRUCTURAL DECK AT EACH POST LOCATION. COORDINATE WITH ELECTRICAL SCOPE FOR CONDUIT ROUTING. STOCKPILE SOIL DURING CONSTRUCTION OUTSIDE OF AREA OF WORK.

DUST PROTECTION NOTES

A. COORDINATE ALL WORK WITH OTHER TRADES.

B. ALL DUST PROTECTION TO BE CONSTRUCTED WITH FIRE RETARDANT #2 FIR.

C. ALL DUST PROTECTION FRAMING MEMBERS TO BE FIELD MEASURED, AND SAW CUT IN TEMPORARY STAGING AREA OUTSIDE AND AWAY FROM BUILDING ENTRY AND SWITCHING EQUIPMENT.

D. BRUSH CLEAN ALL MATERIALS AFTER BEING CUT, AND WIPE CLEAN EACH FRAMING MEMBER FREE OF ALL LOOSE PARTICLES PRIOR TO BRINGING INTO THE BUILDING FOR ERECTION.

E. PROVIDE DUST PROTECTION AT ALL LOCATIONS OF DEMOLITION AND ALL NEW OR MODIFICATION WORK. COORDINATE SCOPE AND LOCATION WITH OTHER TRADES AND VERIFY IN FIELD ACTUAL CONDITIONS.

F. CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND INSTALLING DUST AND EQUIPMENT PARTITIONS TO PROTECT IN SERVICE EQUIPMENT WITHIN THE AREA OF WORK TO PREVENT DUST/DEBRIS MIGRATION REQUIREMENTS. PROTECTION SHALL NOT INTERFERE WITH OWNERS' INGRESS AND EGRESS OR EQUIPMENT OPERATION AND MAINTENANCE.

G. PROVIDE CONTINUOUS DUST PROTECTION BARRIER WITH FIRE RETARDANT ANTI-STATIC FILM SHEETING. SHEETING TO COMPLY WITH NFPA 701. TAPE ALL SEAMS AS RECOMMENDED BY MANUFACTURER.

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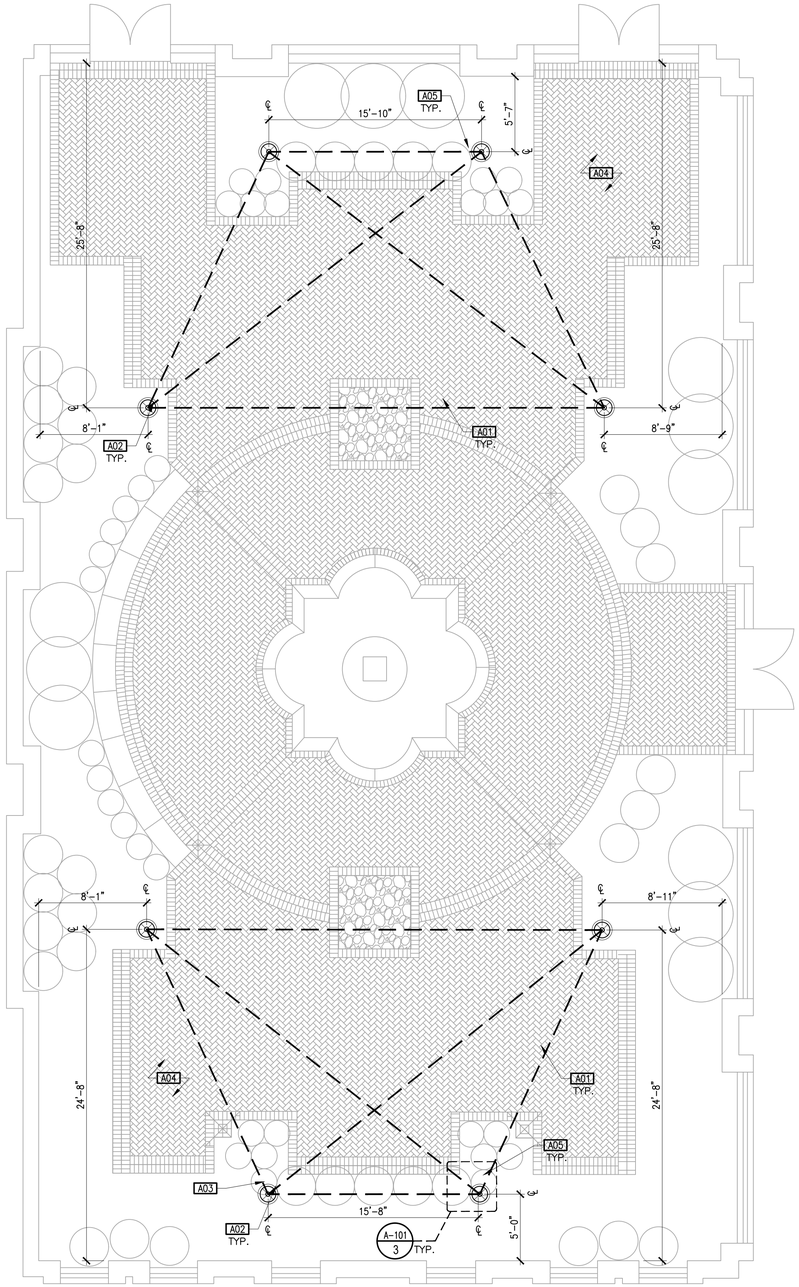
DEMOLITION
DEMOLITION FLOOR PLAN

PROJECT NO.
6780-2501

DRAWING NO.
D-101
DWG 3 OF 9



1 UNIVERSITY HALL COURTYARD NEW WORK FLOOR PLAN

Scale: 3/16" = 1'-0"

GENERAL NOTES

A. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE PROJECT MANAGER AND THE OWNER'S CONSTRUCTION REP.

B. ALL MATERIALS, INSTALLATION, AND WORKMANSHIP SHALL COMPLY WITH ALL APPLICABLE STATE AND CITY CODES AND ORDINANCES, INDUSTRY STANDARDS, UTILITY COMPANY REGULATIONS AND ALL REQUIREMENTS OF LOCAL AND FEDERAL AUTHORITIES HAVING JURISDICTION.

C. CONTRACTORS SHALL BE RESPONSIBLE FOR ADHERING TO ALL MONTCLAIR STATE UNIVERSITY REQUIREMENTS AND GUIDELINES GOVERNING WORK PERFORMED IN OCCUPIED SPACES. ALL ISSUES SHALL BE COORDINATED WITH THE PROJECT MANAGERS PRIOR TO CONSTRUCTION.

D. IF HAZARDOUS MATERIALS ARE IN ANY WAY SUSPECTED INCLUDING BUT NOT LIMITED TO ASBESTOS OR POLLUTANTS, CONTRACTOR SHALL INFORM THE PROJECT MANAGER IMMEDIATELY AND SUSPEND WORK ON THAT AREA OF CONSTRUCTION.

E. CONTRACTOR SHALL COORDINATE STORAGE OF BUILDING MATERIALS AND THE REMOVAL AND CLEAN-UP OF ALL DEBRIS CAUSED BY WORK DURING CONSTRUCTION. CLEAN ALL AREAS TO "AS-IS" CONDITION AT THE END OF EACH WORK DAY.

F. CONTRACTORS ARE TO CONFINE CONSTRUCTION TRAFFIC AND DEBRIS REMOVAL TO THE CONSTRUCTION AREA AS MUCH AS POSSIBLE TO MINIMIZE DUST MIGRATION. ERECT DUST PARTITIONS WHERE DEMOLITION AND/OR NEW CONSTRUCTION ABUTS EXISTING FINISHED SPACES.

G. CONTRACTOR SHALL COORDINATE ALL DEMOLITION WORK AND NEW CONSTRUCTION WORK WITH THE PROJECT MANAGER AND BUILDING MANAGEMENT TO MINIMIZE BUSINESS DISRUPTIONS WHILE NEW CONSTRUCTION IS IN PROGRESS.

H. SEE ELECTRICAL DRAWINGS, ETC., FOR ADDITIONAL WORK TO BE COORDINATED WITH THIS DRAWING AND THE REQUIREMENTS SPECIFIED HEREIN.

I. CONTRACTOR SHALL PATCH ALL WALL, CEILING, AND FLOOR SURFACES, AS WELL AS ANY OTHER MATERIALS TO REMAIN THAT ARE DAMAGED OR AFFECTED BY DEMOLITION OR NEW CONSTRUCTION. ALL PATCHING OF EXISTING CONSTRUCTION SHALL MATCH EXISTING MATERIALS AND FINISHES, UNLESS NOTED OTHERWISE.

K. CONTRACTORS SHALL FIELD VERIFY ALL SITE CONDITIONS PRIOR TO SUBMITTING THEIR BID.

L. PLANTINGS, EXTERIOR FURNITURE, AND PAVER BRICKS EXISTING TO REMAIN. PROTECT DURING CONSTRUCTION.

ARCHITECTURAL NEW WORK KEYED NOTES

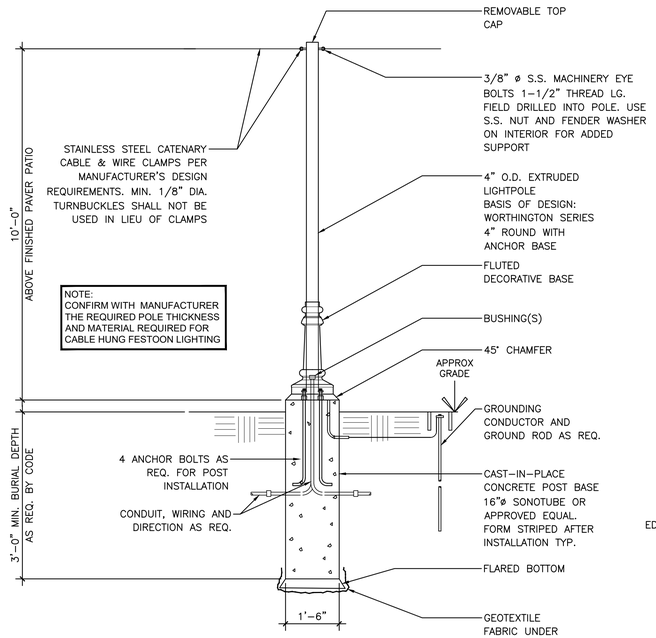
A01 NEW FESTOON LIGHTING. REFER TO SHEET E-101 FOR MORE INFORMATION.

A02 NEW WOOD POST. SEE DETAILS 2 AND 3, THIS SHEET.

A03 NEW CASTSTONE SURROUND. SEE DETAIL 3, THIS SHEET.

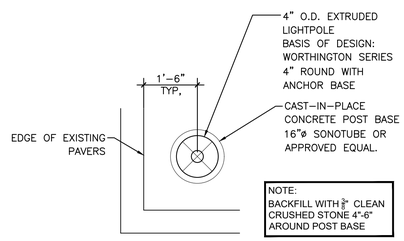
A04 EXISTING PAVER BRICK TO REMAIN. REPAIR AND REPLACE WHERE REQUIRED.

A05 ELECTRICAL CONDUIT. CONFIRM LOCATION WITH ELECTRICAL DRAWINGS.



1 POST DETAIL WITH CONNECTION

Scale: 1/2" = 1'-0"



3 POST BASE DETAIL

Scale: 1/2" = 1'-0"

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Registered Architect: NJ Lic. No. 21AI01949600

Edward Cooper Klein, AIA

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ARCHITECTURAL
NEW WORK FLOOR PLAN

PROJECT NO.
6780-2501

DRAWING NO.
A-101
DWG 4 OF 9

GENERAL ELECT. LEGEND

SYMBOL	DESCRIPTION
^{X}	20A 120/277V SWITCH HUBBELL 1221, MOUNT 3'-4" AFF X DENOTES THE SWITCHING CIRCUIT
$^{X}_{2}$	20A 120/277V TWO POLE SWITCH HUBBELL 1222, MOUNT 3'-4" AFF X DENOTES THE SWITCHING CIRCUIT
$^{X}_{3}$	20A 120/277V THREE WAY SWITCH HUBBELL 1223, MOUNT 3'-4" AFF X DENOTES THE SWITCHING CIRCUIT
$^{X}_{4}$	20A 120/277V FOUR WAY SWITCH HUBBELL 1224, MOUNT 3'-4" AFF X DENOTES THE SWITCHING CIRCUIT
$^{X}_{M}$	FRACTIONAL HP MOTOR SWITCH - SNAP SWITCH X DENOTES THE SWITCHING CIRCUIT
$^{X}_{OS}$	120/277V WALL MOUNTED OCCUPANCY SENSOR BY LEVITON ODS10-ID-DECORA WALL SWITCH WITH PIR X DENOTES THE SWITCHING CIRCUIT
	20A 125V DUPLEX GROUNDING OUTLET HUBBELL 5362-I, SEE MTG SPECIFICATIONS
	20A 125V DUPLEX GROUND FAULT OUTLET HUBBELL GF5362-R, MOUNT 3'-6" AFF
$_{WP}$	20A 125V DUPLEX GROUNDING OUTLET HUBBELL 5362-I, SEE MTG. SPECIFICATIONS WP DENOTES WEATHERPROOF GFI WITH "WHILE IN USE" COVERS.
$_{C}$	CLOCK OUTLET GROUNDING HUBBELL 5361-I, MOUNT 7'-0" AFF
	WELDING OUTLET
(W)	WEATHER PROTECTED CONSTRUCTION NEMA 4
(C)	CORROSION RESISTANT CONSTRUCTION NEMA 4X
	NON-FUSED DISCONNECT SWITCH RATING AS SHOWN, SEE SPECIFICATIONS
	FUSED DISCONNECT SWITCH RATING AS SHOWN, SEE SPECIFICATIONS
	COMBINATION DISCONNECT SWITCH AND STARTER
VFD	VARIABLE FREQUENCY DRIVE DISCONNECT
VFD	VARIABLE FREQUENCY DRIVE
	FULL VOLTAGE NON-REVERSING MOTOR STARTER
	CONDUIT
	CONDUIT UP
	CONDUIT DOWN
$_{X}$	SQUIRREL CAGE MOTOR X DENOTES HORSEPOWER RATING
	POWER PANEL 208V OR 480V PANEL
ATS	AUTOMATIC TRANSFER SWITCH
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
XX XX	HOMERUN ARROW INDICATES HOMERUN TO POWER PANEL, DISTRIBUTION PANEL, OR MCC 'XX' DENOTES DESIGNATED PANEL
LM	LOUVER OR DAMPER MOTOR OPERATOR BY HVAC CONTRACTOR, WIRED BY ELECT. CONTRACTOR
M	UTILITY METER
M	MANUAL MOTOR STARTER, SEE SPECS FOR TYPE & WIRING DIAGRAM FOR CONTROLS
J	JUNCTION BOX SIZED PER THE NEC
J HT	JUNCTION BOX FOR HEAT TRACING: COOLING TOWER PIPING
T	STEP DOWN TRANSFORMER
	TYPE A EXTERIOR LIGHT FIXTURE MTD TO COOLING TOWER, SEE SPEC 265600-2.2A FOR DESCRIPTION, CATALOG NO., & MANUFACTURER.
PC	PHOTO CELL TORK No 2000-7, RATED FOR 120/277V, MOUNT ABOVE ROOF
OR	P-1 DOCK TRUCK LED LIGHT. IMPACT RESISTANT.
IR	INFRARED SENSOR FOR DOCK DOOR
	ELECTRICAL UTILITY POLE
OH OH	ELECTRICAL UTILITY OVERHEAD CABLE
E E	UNDERGROUND ELECTRICAL
	TEST WELL
	GROUND TRIAD WITH TEST WELL

GENERAL LEGEND

TYPE	DESCRIPTION
M03	LETTER INDICATES DISCIPLINE (MECHANICAL, ELECTRICAL, ETC) DRAWING KEY NOTE DESIGNATION WITH LETTER 'D' ADDED INDICATES DEMOLITION
1 D-02	DETAIL NUMBER DETAIL SHEET NUMBER DETAIL IS ON
	DEMOLITION WORK
	EXISTING WORK
	NEW WORK
	MATCH LINE

LIGHTING LEGEND

SYMBOL	DESCRIPTION
	1'X4' PENDANT MOUNTED LIGHTING FIXTURE
$_{XP}$	WALL MOUNTED LIGHTING FIXTURE XP - FOR EXPLOSION TYPE WP - WEATHERPROOF
$_{XP}$	PENDANT MOUNTED LIGHTING FIXTURE XP - FOR EXPLOSION TYPE WP - WEATHERPROOF
	EXIT LIGHT WALL MTD. ARROW LEFT (SGL. FACE)
	EXIT LIGHT WALL MTD. ARROW RIGHT (SGL. FACE)
	EXIT LIGHT PENDANT MTD. ARROW LEFT (SGL. FACE)
	EXIT LIGHT PENDANT MTD. ARROW RIGHT (SGL. FACE)
	EXIT LIGHT PENDANT MTD. (DOUBLE FACE)
	EXIT LIGHT WALL MTD. (SGL. FACE)
	EXIT LIGHT (OPTIONAL SYMBOL)
	EMERGENCY LIGHT W/BATTERY PACK (SGL. LAMP)
$_{XP}$	EMERGENCY 2-HEAD LIGHT UNIT XP - FOR EXPLOSION TYPE (WITH EMERGENCY BATTERY PACK)
	EXTERIOR POLE MOUNTED LIGHT
	EXTERIOR POLE MOUNTED LIGHT DUAL FIXTURES
	SITE FIXTURE
J	LIGHTING JUNCTION BOX
	LIGHTING JUNCTION BOX

ABBREVIATIONS

A

A, AMP	AMPERE(S)
AC	ALTERNATING CURRENT
A/E	ARCHITECT/ENGINEER
AF	AMPERE FRAME
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFU	AMPERE FUSE
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
AS	AMMETER SWITCH
AM	AMMETER
ANN	ANNUNCIATOR
AT	AMMETER TRIP (CIRCUIT BREAKER)
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
A/V	AUDIO VISUAL
AWG	AMERICAN WIRE GAUGE

B

B	BOILER
BAS	BUILDING AUTOMATION SYSTEM
BFC	BELOW FINISHED CEILING
BKR	BREAKER
BLDG	BUILDING
BP	BYPASS
BSC	BIOLOGICAL SAFETY CABINET

C

C	CONDUCTOR
C, CDT	CONDUIT
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT	CIRCUIT
CLG	CEILING
CO	CONDUIT ONLY
COAX	COAXIAL CABLE
COL	COLUMN
COMM	COMMUNICATIONS
COMP	COMPRESSOR
CONT	CONTROL
COR	CONTRACTING OFFICER REPRESENTATIVE
CP	CONTROL PANEL
CPT	CONTROL PANEL TRANSFORMER
CPU	CENTRAL PROCESSING UNIT
CR	CARD READER
CRT	CATHODE RAY TUBE MONITOR
CS	CONTROL SWITCH
CT	CURRENT TRANSFORMER
CU	COPPER
CUH	CABINET UNIT HEATER

D

D	DEPTH
DC	DIRECT CURRENT
DDC	DIRECT DIGITAL CONTROL
DED.	DEDICATED
DEMO	DEMOLITION
DIA	DIAMETER
DISC	DISCONNECT
DIST	DISTRIBUTION
DN	DOWN
DWG	DRAWING

E

(E)	EXISTING TO REMAIN
E, ELEC	ELECTRIC
EC	ELECTRICAL CONTRACTOR, EMPTY CONDUIT
EF	EXHAUST FAN
EL, ELEV	ELEVATION
EM	EMERGENCY
EMT	ELECTRICAL METAL TUBING
EO	ELECTRICALLY OPERATED
EOL	END OF LINE DEVICE
EPO	EMERGENCY POWER OFF
EQ	EQUAL
EQUIP	EQUIPMENT
ER	EXISTING TO BE RELOCATED
ETR	EXISTING TO REMAIN
EUH	ELECTRIC UNIT HEATER
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING

F

F	FLUSH
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FCC	FIRE COMMAND CENTER
FCU	FAN COIL UNIT
FDDI	FIBER DISTRIBUTED DATA INTERFACE
FDR	FEEDER
FH	FUME HOOD
FIN FL	FINISHED FLOOR
FIP	FIELD INTERFACE PANEL
FIXT	FIXTURE
FLA	FULL LOAD AMPERES
FL, FLR	FLOOR
FLUOR	FLUORESCENT
FO	FIBER OPTIC
FPB	FAN POWERED BOX
FU	FUSE
FUT	FUTURE
FVR	FULL VOLTAGE REVERSIBLE
FVNR	FULL VOLTAGE NON-REVERSIBLE

G

G, GRD	GROUND
GF	GROUND FAULT
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GPS	GENERATOR PARALLELING SWITCHGEAR
GRC	GALVANIZED RIGID STEEL CONDUIT
GRND	GROUNDING
GUH	GAS UNIT HEATER

H

HH	HAND HOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC SWITCH
HP	HORSEPOWER
HT	HEIGHT
HWP	HOT WATER PUMP
HV	HIGH VOLTAGE
HZ	HERTZ

I

I/INST	INSTANTANEOUS
ICM	INTERCOM MASTER
ICR	INTERCOM REMOTE
IDS	INTRUSION DETECTION SYSTEM
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
INSTR	INSTRUMENT

J

J, J/B	JUNCTION BOX

K

K	KEY LOCK (KEY INTERLOCK SCHEME)
KA	KILOAMPERE(S)
KCM	THOUSAND CIRCULAR MILS
KEF	KITCHEN EXHAUST FAN
KW	KILOWATT(S)
KWH	KILOWATT HOUR
KV	KILOVOLT(S)
KVA	KILOVOLT-AMPERE(S)
KVAR	KVA REACTIVE

L

L	LOCKING TYPE/LOAD
LA	LIGHTNING SURGE ARRESTOR
LAB	LABORATORY
LAN	LOCAL AREA NETWORK
LOG	LOOKOUT GALLERY
LP	LIGHTING PANEL
LT	LONG TIME
LTG	LIGHTING
LTS	LIGHTS

M

M	METER(S)
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCCB	MOLDED CASE CIRCUIT BREAKER
MDF	MAIN DISTRIBUTION FRAME
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MI	MINERAL-INSULATED
MIC	MEDIA INTERFACE CONNECTOR
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MM	MILLIMETER(S)
MM2	MILLIMETER(S) SQUARED
MP	MAIN PANEL
MPS	MANUAL PULL STATION
MS	MOTOR STARTER
MTD	MOUNT/MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE

N

(N)	NEW
N	NEUTRAL
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NO.	NUMBER
NORM	NORMAL
NTS	NOT TO SCALE

O

OC	ON CENTER
OCB	OIL CIRCUIT BREAKER
OL	OVERLOAD
OS	OCCUPANCY SENSOR

P

P	POLE
PA	PUBLIC ADDRESS SYSTEM
PB	PUSH BUTTON/PULL BOX
PBX	PRIVATE BRANCH EXCHANGE
PC	PHOTOCELL
PDU	POWER DISTRIBUTION UNIT
PF	POWER FACTOR
PFCC	POWER FACTOR CORRECTION CAPACITOR
PH, ϕ	PHASE
PNL	PANEL
PP	POWER PANEL
PR	PAIR
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PTZ	PAN TILT ZOOM
PVC	POLYVINYLCHLORIDE
PWR	POWER

Q

QTY	QUANTITY

R

(R)	REMOVE
REC, RECPT	RECEPTACLE
REPO	REMOTE EMERGENCY POWER SHUTOFF
REQ, REQD	REQUIRED
RF	RETURN FAN
RIK	REPLACE IN KIND
RIM	READER INTERFACE MODULE
RM	ROOM
RO	REVERSE OSMOSIS
RP	RECEPTACLE PANEL
RVAT	REDUCED VOLTAGE TRANSFORMER
RTU	REMOTE TERMINAL UNIT
RUPS	ROTARY UNINTERRUPTIBLE POWER SUPPLY

S

SCA	SHORT CIRCUIT AMPERE(S)
SD	SMOKE DETECTOR
SDD	SMOKE DUCT DETECTOR
SEC	SECONDARY
SF	SUPPLY FAN
SPD	SURGE PROTECTIVE DEVICE
SPEC	SPECIFICATION
SPKR	SPEAKER
SS	STAINLESS STEEL/SOLID STATE
ST	SHUNT TRIP/SHORT TIME
STD	STANDARD
STP	SHIELDED TWISTED PAIR
STS	STATIC TRANSFER SWITCH
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYS	SYSTEM

T

T, TRANSF	TRANSFORMER
TB, T/B	TERMINAL BOX
TEL	TELEPHONE
TEMP	TEMPERATURE
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL

U

UC	UNDER COUNTER
UG	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITER'S LABORATORY
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR

V

V	VOLT(S)
VA	VOLT-AMPERE(S)
VAV	VARIABLE AIR VOLUME BOX
VFD	VARIABLE FREQUENCY DRIVE
VM	VOLTMETER
VS	VOLTMETER SWITCH

W

W/	WITH
WP	WEATHERPROOF
WT	WATERTIGHT

X

XFMR	TRANSFORMER
XP	EXPLOSION-PROOF

Y

Z

ZI	ZONE INTERLOCKING

NOTE:
NOT ALL SYMBOLS AND ABBREVIATIONS APPEAR ON THESE DOCUMENTS

NO.	BY	CK	DATE	REVISION

DESIGNED EQ
DRAWN CK
CHECKED EQ
SCALE AS SHOWN
DATE 10/20/2025

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ELECTRICAL
LEGEND AND ABBREVIATIONS

PROJECT NO.
6780-2501

DRAWING NO.
E-001
DWG 5 OF 9

GENERAL REQUIREMENTS

E.1 THE WORK TO BE DONE UNDER THIS PROJECT INCLUDES PROVIDING ALL EQUIPMENT, MATERIALS, LABOR AND SERVICES, AND PERFORMING ALL OPERATIONS FOR COMPLETE AND OPERATING SYSTEMS. ANY WORK NOT SPECIFICALLY COVERED BUT NECESSARY TO COMPLETE THIS INSTALLATION, SHALL BE PROVIDED. ALL EQUIPMENT AND WIRING TO BE NEW AND PROVIDED UNDER THIS CONTRACT UNLESS OTHERWISE NOTED.

E.2 ENTIRE INSTALLATION, INCLUDING MATERIALS, EQUIPMENT AND WORKMANSHIP, SHALL CONFORM TO THE 2008 EDITION OF THE NATIONAL ELECTRIC CODE (NFPA 70 AND NECA-1) AS WELL AS ALL APPLICABLE LAWS AND REGULATIONS AND REGULATORY BODIES HAVING JURISDICTION OVER THIS WORK:

E.3 THE TERM "FURNISH" SHALL MEAN TO OBTAIN AND SUPPLY TO THE JOB SITE. THE TERM "INSTALL" SHALL MEAN TO FIX IN POSITION AND CONNECT FOR USE. THE TERM "PROVIDE" SHALL MEAN TO FURNISH AND INSTALL. THE TERM "CONTRACTOR" SHALL MEAN ELECTRICAL CONTRACTOR.

E.4 ONLY WRITTEN CHANGES AND/OR MODIFICATIONS APPROVED BY THE ARCHITECT, CONSULTING ENGINEER OR OWNER'S REPRESENTATIVE WILL BE RECOGNIZED.

E.5 ALL NEW ELECTRICAL MATERIAL AND EQUIPMENT SHALL BE LISTED BY UNDERWRITERS' LABORATORIES, INC. (UL) AND BEAR THE UL LABEL.

E.6 PROVIDE ALL SCAFFOLDING, LADDERS, RIGGING, HOISTING, ETC., FOR THIS WORK.

E.7 PROVIDE TECHNICAL MANUALS, PER SPECIFICATIONS, AND GIVE INSTRUCTIONS TO USER FOR ALL EQUIPMENT AND SYSTEMS PROVIDED UNDER THIS CONTRACT AFTER ALL ARE CLEANED AND OPERATING.

E.8 THE DRAWINGS ARE DIAGRAMMATIC AND ALL SPECIALTIES AND APPURTENANCES ARE NOT SHOWN, BUT SHALL BE PROVIDED AS REQUIRED.

E.9 CONTRACTOR SHALL FIELD VERIFY DIMENSIONS OF FINISHED CONSTRUCTION PRIOR TO FABRICATION AND INSTALLATION OF FIXTURES AND EQUIPMENT.

E.10 THE WORK SHALL INCLUDE ALL PANELS, DEVICES, FEEDERS AND BRANCH CIRCUIT WIRING AS REQUIRED FOR THE DISTRIBUTION SYSTEM INDICATED AND CALLED FOR ON THE DRAWINGS, REQUIRED BY SPECIFICATIONS AND AS NECESSARY FOR COMPLETE FUNCTIONAL SYSTEMS PRESENTED AND INTENDED.

E.11 CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR, TOOLS, EQUIPMENT, CONSUMABLES AND SERVICES REQUIRED FOR OBTAINING, DELIVERY, INSTALLATION, CONNECTION, DISCONNECTION, REMOVAL, RELOCATION, REPAIR, REPLACEMENT, TESTING AND COMMISSIONING OF ALL EQUIPMENT AND DEVICES INCLUDED IN OR NECESSARY FOR THE WORK, AS APPLICABLE.

E.12 ELECTRICAL WORK SHALL INCLUDE ALL REQUIRED CUTTING, PATCHING AND THE FULL RESTORATION OF WALL AND FLOOR STRUCTURE AND SURFACES.

E.13 EXACT ROUTING OF CONDUITS SHALL BE DETERMINED IN THE FIELD.

E.14 CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL CONDITIONS AND SYSTEMS THAT EFFECT HIS BIDDING AND WORK, AND SHALL PROVIDE VALUE FOR SAME IN HIS BID.

E.15 UPON COMPLETION OF THE ELECTRICAL WORK, CONTRACTOR SHALL TEST THE COMPLETE ELECTRICAL SYSTEM FOR SHORTS, GROUNDS, AND PROPER OPERATION, IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.

E.16 UPON COMPLETION OF WORK, THE CONTRACTOR SHALL CLEAN AND ADJUST ALL EQUIPMENT AND LIGHTING AND TEST SYSTEMS TO THE SATISFACTION OF OWNER AND ENGINEER. RESULTS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

E.17 ALL WORK SHALL BE PERFORMED BY THOSE SKILLED IN THEIR PARTICULAR TRADE IN A NEAT AND WORKMANLIKE MANNER.

E.18 ELECTRICAL WORK SHALL BE DONE AT SUCH A TIME, AND IN SUCH MANNER, AS WILL LEAST INTERFERE WITH THE MAINTENANCE AND OPERATION OF THE SITE'S AND/OR BUILDING'S ACTIVITIES. PROVISIONS SHALL BE MADE TO PERMIT THE USE OF ALL EXISTING ELECTRICAL SYSTEMS AT ALL TIMES. PROVIDE TEMPORARY FACILITIES TO SECURE THESE CONDITIONS AND REMOVE SUCH TEMPORARY FACILITIES WHEN NO LONGER REQUIRED.

E.19 SHUTDOWN WORK SHALL BE SCHEDULED AT SUCH TIME AND IN SUCH MANNER AS DIRECTED BY THE OWNER AND ENGINEER. PROVIDE A MINIMUM ONE WEEK NOTICE.

E.20 WHERE ALLOWABLE SHUTDOWN PERIODS CANNOT BE OF DURATION TO ACCOMMODATE ALL OF THE REQUIRED WORK, THE CONTRACTOR SHALL PERFORM THE WORK IN A SERIES OF PREPLANNED STAGES DURING ALLOWABLE SHUTDOWN PERIODS. PROVIDE TEMPORARY FACILITIES TO ALLOW RE-ENERGIZING OF SERVICES BETWEEN WORKING STAGES.

PROJECT COORDINATION

PC.1 VERIFY FIELD CONDITIONS AT THE SITE AND NOTIFY THE OWNER OF ANY DISCREPANCIES, PRIOR TO COMMENCING WITH THE WORK.

PROTECTION OF WORK

PW.1 EFFECTIVELY PROTECT ALL MATERIALS AND EQUIPMENT FROM ENVIRONMENTAL AND PHYSICAL DAMAGE UNTIL FINAL ACCEPTANCE. CLOSE AND PROTECT ALL OPENINGS DURING CONSTRUCTION. PROVIDE NEW MATERIALS AND EQUIPMENT TO REPLACE ITEMS DAMAGED.

RACEWAYS

RW.1 ALL EXPOSED CONDUIT IN WET AND DAMP AREAS SHALL BE STEEL RMC (RIGID METAL CONDUIT). EXPOSED AND DRY AREAS SHALL BE EMT (ELECTRICAL METALLIC TUBING). UNDERGROUND POWER CONDUIT SHALL BE CONCRETE ENCASED RNC (RIGID NONMETALLIC CONDUIT). CONCRETE SHALL BE REINFORCED WITH #4 REBAR IN CORNERS AND ON 1' SPACING TOP AND BOTTOM.

RW.2 CONDUIT SHALL BE RUN AT RIGHT ANGLES AND PARALLEL TO BUILDING LINES, SHALL BE NEATLY RACKED, AND SECURELY FASTENED. JUNCTION BOXES SHALL BE PROVIDED WHERE REQUIRED TO FACILITATE INSTALLATION OF WIRES.

RW.3 ALL CONDUIT AND ELECTRICAL EQUIPMENT SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN AN APPROVED MANNER.

RW.4 ARRANGEMENT OF CONDUIT AND EQUIPMENT SHALL BE AS REQUIRED TO AVOID INTERFERENCES.

RW.5 FOR CONDUITS CROSSING EXPANSION JOINTS, PROVIDE EXPANSION FITTINGS FOR SIZE 1-1/4", AND LARGER. PROVIDE SECTIONS OF FLEXIBLE CONDUIT WITH GROUNDING JUMPERS FOR SIZES 1" AND SMALLER.

RW.6 UNDERGROUND AND UNDER SLAB CONDUITS SHALL BE MINIMUM 1".

RW.7 INSTALL DETECTABLE UNDERGROUND TAPES FOR THE PROTECTION, LOCATION, AND IDENTIFICATION OF UNDERGROUND CONDUIT INSTALLATIONS.

RW.8 CONDUITS WITHOUT DESIGNATED SIZE SHALL BE 3/4".

A. RACEWAYS:
1. EMT: ANSI C80.3, ZINC-COATED STEEL, WITH SETSCREW OR COMPRESSION FITTINGS.
2. ENT: NEMA TC 13, COMPLYING WITH UL 1653.
3. FMC: ZINC-COATED STEEL.
4. IMC: ANSI C80.6, ZINC-COATED STEEL, WITH THREADED FITTINGS.
5. LFMC: ZINC-COATED, FLEXIBLE STEEL WITH SUNLIGHT-RESISTANT AND MINERAL-OIL-RESISTANT PLASTIC JACKET.
6. RNC: NEMA TC 2, TYPE EPC-40-PVC, WITH NEMA TC3 FITTINGS.
7. RMC: GALVANIZED RIGID STEEL. MANUFACTURED IN ACCORDANCE WITH ANSI C80.1HOT-DIP GALVANIZED INSIDE AND OUT TO PROVIDE GALVANIC CORROSION PROTECTION. ALSO, TOP COATED WITH A COMPATIBLE ORGANIC LAYER TO PROTECT AGAINST WHITE RUST.
8. RACEWAY FITTINGS: SPECIFICALLY DESIGNED FOR RACEWAY TYPE USED IN PROJECT.

B. WIREWAYS: SHEET METAL SIZED AND SHAPED, WITH SCREW COVERS.

BOXES AND ENCLOSURES

BE.1 ELECTRICAL BOXES AND ENCLOSURES SHALL BE CAST METAL, EXCEPT AS NOTED.

BE.2 MOUNTING HEIGHTS OF EQUIPMENT AND DEVICES SHALL BE AS INDICATED ON THE DRAWINGS. WHERE MOUNTING HEIGHTS ARE NOT GIVEN ON THE DRAWINGS, UTILIZE THE FOLLOWING MOUNTING HEIGHTS (ALL DIMENSIONS TO CENTERLINE OF BOX):

A. RECEPTACLES (WALL MOUNTED) – 24" A.F.F.
B. RECEPTACLES (EXTERIOR) – 24" ABOVE FINISHED GRADE
C. LIGHTING SWITCHES AND CONTROLS – 48" A.F.F.
D. PANELBOARDS AND CABINETS – 78" TO TOP OF ENCLOSURE

BE.3 WHERE MULTIPLE SWITCHES AND RECEPTACLES ARE INDICATED AT THE SAME LOCATION, THEY SHALL BE MOUNTED BEHIND A COMMON FACEPLATE.

BE.4 PROVIDE WHILE IN USE METALLIC COVERS FOR ALL OUTDOOR AND ALL GROUND FAULT CIRCUIT INTERRUPTER (GFCI) RECEPTACLES.

BE.5 NEMA RATINGS:
PROVIDE NEMA 4X BOXES AND ENCLOSURES IN WET AND CORROSIVE AREAS. PROVIDE NEMA 3R FOR OUTDOOR AND WET AREAS
PROVIDE NEMA 7 FOR ALL CLASS 1, DIV. 1 & DIV. 2, EXCEPT PULL BOXES FOR DIV. 2.

BE.6 FIBERGLASS HANDHOLES AND BOXES: MOLDED OF FIBERGLASS-REINFORCED POLYESTER RESIN, WITH FRAME AND COVERS OF FIBERGLASS.

STANDARD: COMPLY WITH SCTE 77.

A. CONFIGURATION: DESIGNED FOR FLUSH BURIAL WITH CLOSED BOTTOM UNLESS OTHERWISE INDICATED.
B. COVER: WEATHERPROOF, SECURED BY TAMPER-RESISTANT LOCKING DEVICES AND HAVING STRUCTURAL LOAD RATING CONSISTENT WITH ENCLOSURE AND HANDHOLE LOCATION.
C. COVER FINISH: NONSKID FINISH SHALL HAVE A MINIMUM COEFFICIENT OF FRICTION OF 0.50. COVER LEGEND: MOLDED LETTERING, "ELECTRIC."
D. CONDUIT ENTRANCE PROVISIONS: CONDUIT-TERMINATING FITTINGS SHALL MATE WITH ENTERING DUCTS FOR SECURE, FIXED INSTALLATION IN ENCLOSURE WALL.
E. HANDHOLES 12 INCHES WIDE BY 24 INCHES LONG (300 MM WIDE BY 600 MM LONG) AND LARGER: HAVE INSERTS FOR CABLE RACKS AND PULLING-IN IRONS INSTALLED BEFORE CONCRETE IS POURED.

IDENTIFICATION

ID.1 TAPE MARKERS FOR WIRE: VINYL OR VINYL-CLOTH, SELF-ADHESIVE, WRAPAROUND TYPE WITH CIRCUIT IDENTIFICATION LEGEND MACHINE PRINTED BY THERMAL TRANSFER OR EQUIVALENT PROCESS.

ID.2 RACEWAY IDENTIFICATION MATERIALS: SELF-ADHESIVE, COLOR-CODING VINYL TAPE; FLEXIBLE, PREPRINTED, SELF-ADHESIVE VINYL. INDICATING L-L AND L-N VOLTAGES.

ID.3 SELF-ADHESIVE WARNING LABELS: FACTORY PRINTED, MULTICOLOR, PRESSURE-SENSITIVE ADHESIVE LABELS, CONFIGURED FOR DISPLAY ON FRONT COVER, DOOR, OR OTHER ACCESS TO EQUIPMENT UNLESS OTHERWISE INDICATED.

ID.4 EQUIPMENT IDENTIFICATION LABELS: ENGRAVED, LAMINATED ACRYLIC OR MELAMINE LABEL; PUNCHED OR DRILLED FOR SCREW MOUNTING. WHITE LETTERS ON A DARK-GRAY BACKGROUND; RED LETTERS FOR EMERGENCY SYSTEMS.

ID.5 EQUIPMENT TO BE LABELED:

IDENTIFICATION LABELING OF SOME ITEMS LISTED BELOW MAY BE REQUIRED BY INDIVIDUAL SECTIONS OR BY NFPA 70.

A. PANELBOARDS, ELECTRICAL CABINETS, AND ENCLOSURES.
B. ELECTRICAL SWITCHGEAR AND SWITCHBOARDS.
C. TRANSFORMERS.
D. MOTOR-CONTROL CENTERS.
E. DISCONNECT SWITCHES.
F. ENCLOSED CIRCUIT BREAKERS.
G. MOTOR STARTERS.
H. PUSH-BUTTON STATIONS.
I. POWER TRANSFER EQUIPMENT.
J. CONTACTORS.

GROUNDING

GR.1 PROVIDE A COMPLETE EQUIPMENT GROUND SYSTEM FOR THE ELECTRICAL SYSTEM AS REQUIRED BY ARTICLE 250, OF THE NEC, AND AS SPECIFIED HEREIN.

GR.2 PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN ALL RACEWAYS AND WIREWAYS, SIZED PER NFPA 70.

GR.3 GROUNDING MATERIALS

A. CONDUCTORS: SOLID FOR NO. 8 AWG AND SMALLER, AND STRANDED FOR NO. 6 AWG AND LARGER UNLESS OTHERWISE INDICATED.

1. INSULATED CONDUCTORS: COPPER WIRE OR CABLE INSULATED FOR 600 V UNLESS OTHERWISE REQUIRED BY APPLICABLE CODE OR AUTHORITIES HAVING JURISDICTION.
2. BARE, SOLID-COPPER CONDUCTORS: COMPLY WITH ASTM B 3.
3. BARE, STRANDED-COPPER CONDUCTORS: COMPLY WITH ASTM B 8.

B. GROUND RODS: COPPER-CLAD STEEL, SECTIONAL TYPE; 3/4 BY 96 INCHES (16 BY 2400 MM) IN DIAMETER.

C. BOLTED CONNECTORS FOR CONDUCTORS AND PIPES: COPPER OR COPPER ALLOY, BOLTED PRESSURE-TYPE, WITH AT LEAST TWO BOLTS WITH CLAMP-TYPE PIPE CONNECTORS SIZED FOR PIPE.

D. WELDED CONNECTORS: EXOTHERMIC-WELDING KITS OF TYPES RECOMMENDED BY KIT MANUFACTURER FOR MATERIALS BEING JOINED AND INSTALLATION CONDITIONS.

GR.4 GROUNDING UNDERGROUND DISTRIBUTION SYSTEM COMPONENTS

A. COMPLY WITH IEEE C2 GROUNDING REQUIREMENTS.

B. GROUNDING MANHOLES AND HANDHOLES: INSTALL A DRIVEN GROUND ROD THROUGH MANHOLE OR HANDHOLE FLOOR, CLOSE TO WALL, AND SET ROD DEPTH SO 4 INCHES (100 MM) WILL EXTEND ABOVE FINISHED FLOOR. IF NECESSARY, INSTALL GROUND ROD BEFORE MANHOLE IS PLACED AND PROVIDE NO. 1/0 AWG BARE, TINNED-COPPER CONDUCTOR FROM GROUND ROD INTO MANHOLE THROUGH A WATERPROOF SLEEVE IN MANHOLE WALL. PROTECT GROUND RODS PASSING THROUGH CONCRETE FLOOR WITH A DOUBLE WRAPPING OF PRESSURE-SENSITIVE INSULATING TAPE OR HEAT-SHRUNK INSULATING SLEEVE FROM 2 INCHES (50 MM) ABOVE TO 6 INCHES (150 MM) BELOW CONCRETE. SEAL FLOOR OPENING WITH WATERPROOF, NON-SHRINK GROUT.

GR.5 INSTALLATION

A. GROUNDING CONDUCTORS: ROUTE ALONG SHORTEST AND STRAIGHTEST PATHS POSSIBLE UNLESS OTHERWISE INDICATED OR REQUIRED BY CODE. AVOID OBSTRUCTING ACCESS OR PLACING CONDUCTORS WHERE THEY MAY BE SUBJECTED TO STRAIN, IMPACT, OR DAMAGE.

B. GROUND RODS: DRIVE RODS UNTIL TOPS ARE 2 INCHES (50 MM) BELOW FINISHED FLOOR OR FINAL GRADE UNLESS OTHERWISE INDICATED.

1. INTERCONNECT GROUND RODS WITH GROUNDING ELECTRODE CONDUCTOR BELOW GRADE AND AS OTHERWISE INDICATED. MAKE CONNECTIONS WITHOUT EXPOSING STEEL OR DAMAGING COATING IF ANY.

C. GROUNDING AND BONDING FOR PIPING

1. METAL WATER SERVICE PIPE: INSTALL INSULATED COPPER GROUNDING CONDUCTORS, IN CONDUIT, FROM BUILDING'S MAIN SERVICE EQUIPMENT, OR GROUNDING BUS, TO MAIN METAL WATER SERVICE ENTRANCES TO BUILDING. CONNECT GROUNDING CONDUCTORS TO MAIN METAL WATER SERVICE PIPES; USE A BOLTED CLAMP CONNECTOR OR BOLT A LUG-TYPE CONNECTOR TO A PIPE FLANGE BY USING ONE OF THE LUG BOLTS OF THE FLANGE. WHERE A DIELECTRIC MAIN WATER FITTING IS INSTALLED, CONNECT GROUNDING CONDUCTOR ON STREET SIDE OF FITTING. BOND METAL GROUNDING CONDUCTOR CONDUIT OR SLEEVE TO CONDUCTOR AT EACH END.

2. WATER METER PIPING: USE BRAIDED-TYPE BONDING JUMPERS TO ELECTRICALLY BYPASS WATER METERS. CONNECT TO PIPE WITH A BOLTED CONNECTOR.

3. BOND EACH ABOVEGROUND PORTION OF GAS PIPING SYSTEM DOWNSTREAM FROM EQUIPMENT SHUTOFF VALVE.

WIRING

W.1 POWER AND LIGHTING – TYPE THHN-2 IN CONDUIT OR TYPE MC CABLE IN DRY INTERIOR SPACES.

W.2 WHERE EQUIPMENT, LIGHTING FIXTURES AND WIRING DEVICES ARE SHOWN WITH CIRCUIT NUMBERS ONLY, THE MINIMUM BRANCH CIRCUITING REQUIREMENTS SHALL BE AS FOLLOWS:

A. LIGHTING FIXTURES – (2)#12 & #12 GND.
B. RECEPTACLES – (2)#12 & #12 GND.
C. 20A, 277 OR 120V CIRCUITS – (2)#12 & #12 GND
D. HOMERUNS TO PANEL BOARDS SHALL CONTAIN NO MORE THAN THREE CIRCUITS.

W.3 WIRE SIZES SHALL BE INCREASED TO COMPENSATE FOR VOLTAGE DROP. INCREASE WIRE SIZE TO COMPENSATE FOR VOLTAGE DROP FOR 20 AMP CIRCUITS AS FOLLOWS:

A. 120V/1ø CIRCUITS LONGER THAN 80' SHALL UTILIZE MIN. #10 AWG.
B. 208V/3ø CIRCUITS LONGER THAN 110' SHALL UTILIZE MIN. #10 AWG.
C. 277V/1ø CIRCUITS LONGER THAN 130' SHALL UTILIZE MIN. #10 AWG.
D. 480V/3ø CIRCUITS LONGER THAN 260' SHALL UTILIZE MIN. #10 AWG.

W.4 ALL CONDUCTORS IN CONDUIT SHALL BE STRANDED EXCEPT 120V RECEPTACLE WIRING.

WIRING DEVICES

WD.1 STRAIGHT-BLADE RECEPTACLES

A. CONVENIENCE RECEPTACLES, 125 V, 20 A: COMPLY WITH NEMA WD 1, NEMA WD 6 CONFIGURATION 5-20R, UL 498, AND FS W-C-596.

TOGGLE SWITCHES

A. COMPLY WITH NEMA WD 1, UL 20, AND FS W-S-896.
SWITCHES, 120/277 V, 20 A.

CONDUIT SUPPORTS AND HANGERS

SH.1 MOUNTING, ANCHORING, AND ATTACHMENT COMPONENTS:

A. POWDER-ACTUATED FASTENERS: THREADED-STEEL STUD.

B. MECHANICAL-EXPANSION ANCHORS: INSERT-WEDGE-TYPE, STAINLESS STEEL, FOR USE IN HARDENED PORTLAND CEMENT CONCRETE.

C. CONCRETE INSERTS: STEEL OR MALLEABLE-IRON, SLOTTED-SUPPORT SYSTEM UNITS SIMILAR TO MSS TYPE 18; COMPLYING WITH MFMA-3 OR MSS SP-58.

D. CLAMPS FOR ATTACHMENT TO STEEL STRUCTURAL ELEMENTS: MSS SP-58, TYPE SUITABLE FOR ATTACHED STRUCTURAL ELEMENT.

E. THROUGH BOLTS: STRUCTURAL TYPE, HEX HEAD, HIGH STRENGTH; COMPLYING WITH ASTM A 325.

F. TOGGLE BOLTS: ALL-STEEL SPRINGHEAD TYPE.

G. HANGER RODS: THREADED STEEL.

SH.2 SUPPORT, ANCHORAGE, AND ATTACHMENT COMPONENTS

STEEL SLOTTED SUPPORT SYSTEMS: COMPLY WITH MFMA-4, FACTORY FABRICATED COMPONENTS FOR FIELD ASSEMBLY.

MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:

1. ALLIED TUBE & CONDUIT.
2. COOPER B-LINE, INC.; A DIVISION OF COOPER INDUSTRIES.
3. ERICO INTERNATIONAL CORPORATION.
4. GS METALS CORP.
5. THOMAS & BETTS CORPORATION.
6. UNISTRUT; TYCO INTERNATIONAL, LTD.

A. METALLIC COATINGS: HOT-DIP GALVANIZED AFTER FABRICATION AND APPLIED ACCORDING TO MFMA-4.

B. STAINLESS STEEL: TYPE 316 IN ACCORDANCE WITH ASTM A240.

C. NONMETALLIC COATINGS: MANUFACTURER'S STANDARD PVC, POLYURETHANE, OR POLYESTER COATING APPLIED ACCORDING TO MFMA-4.

D. CHANNEL DIMENSIONS: SELECTED FOR APPLICABLE LOAD CRITERIA.

ELECTRICAL EQUIPMENT REQUIREMENTS

EE.1 ELECTRICAL PANELS, ELECTRICAL SERVICE MAIN SWITCHES/CIRCUIT BREAKERS, AND CONTROL CABINETS SHALL BE MOUNTED A MAXIMUM OF 6'7" TO MID POINT OF HANDLE.

EE.2 ANY EQUIPMENT FED WITH SERVICE ENTRANCE CONDUCTORS SHALL BE RATED FOR A SERVICE ENTRANCE.

EE.3 THE AIC RATING OF THE EQUIPMENT COINCIDE WITH THE EQUIPMENT UPSTREAM, U.O.N.

EE.4 COLOR CODING:
A. COLOR-CODING FOR PHASE AND VOLTAGE LEVEL IDENTIFICATION, 600 V AND LESS: UNGROUNDED SERVICE, FEEDER, AND BRANCH-CIRCUIT CONDUCTORS.

1. COLORS FOR 208/120-V CIRCUITS:
a. PHASE A: BLACK.
b. PHASE B: RED.
c. PHASE C: BLUE.

2. COLORS FOR 480/277-V CIRCUITS:
a. PHASE A: BROWN.
b. PHASE B: ORANGE.
c. PHASE C: YELLOW.

B. FIELD-APPLIED, COLOR-CODING CONDUCTOR TAPE: APPLY IN HALF-LAPPED TURNS FOR A MINIMUM DISTANCE OF 6 INCHES (150 MM) FROM TERMINAL POINTS.

FIRE STOPPING

FS.1 APPLY FIRESTOPPING TO ELECTRICAL PENETRATIONS OF FIRE-RATED FLOOR AND WALL ASSEMBLIES TO RESTORE ORIGINAL FIRE-RESISTANCE RATING OF ASSEMBLY.

A. INSTALL FORMING MATERIALS AND OTHER ACCESSORIES OF TYPES REQUIRED TO SUPPORT FILL MATERIALS DURING THEIR APPLICATION AND IN THE POSITION NEEDED TO PRODUCE CROSS-SECTIONAL SHAPES AND DEPTHS REQUIRED TO ACHIEVE FIRE RATINGS INDICATED.

1. AFTER INSTALLING FILL MATERIALS AND ALLOWING THEM TO FULLY CURE, REMOVE COMBUSTIBLE FORMING MATERIALS AND OTHER ACCESSORIES NOT INDICATED AS PERMANENT COMPONENTS OF FIRESTOPPING.

B. INSTALL FILL MATERIALS FOR FIRESTOPPING BY PROVEN TECHNIQUES TO PRODUCE THE FOLLOWING RESULTS:

1. FILL VOIDS AND CAVITIES FORMED BY OPENINGS, FORMING MATERIALS, ACCESSORIES, AND PENETRATING ITEMS AS REQUIRED TO ACHIEVE FIRE-RESISTANCE RATINGS INDICATED.

2. APPLY MATERIALS SO THEY CONTACT AND ADHERE TO SUBSTRATES FORMED BY OPENINGS AND PENETRATING ITEMS.

3. FOR FILL MATERIALS THAT WILL REMAIN EXPOSED AFTER COMPLETING THE WORK, FINISH TO PRODUCE SMOOTH, UNIFORM SURFACES THAT ARE FLUSH WITH ADJOINING FINISHES.

MOUNTING HEIGHTS

MH.1 UNLESS OTHERWISE INDICATED, OUTLET BOXES IN WALLS SHALL BE LOCATED WITH CENTERLINE AT THE FOLLOWING ELEVATIONS ABOVE THE FINISHED FLOOR (AFF) LINE. VERIFY ALL HEIGHTS WITH THE GENERAL CONSTRUCTION CONTRACTOR PRIOR TO ACTUAL LAYOUT OF WORK.

A.	SWITCH OUTLETS	4'-0" AFF
B.	BRACKET OUTLETS (STAIRS)	7'-0" AFF
C.	BRACKET OUTLETS (OTHER)	6'-6" AFF
D.	RECEPTACLE OUTLETS (UON)	1'-6" AFF
E.	RECEPTACLE OUTLETS, MECHANICAL ROOMS	3'-0" AFF
F.	RECEPTACLE OUTLETS MOUNTED, ABOVE CASEWORK/CABINETS	0'-8" ABOVE COUNTERTOP
G.	CLOCK OUTLETS	1'-0" BELOW CEILING
H.	MOTOR STARTERS AND SAFETY SWITCHES	4'-6" AFF
I.	PANELBOARDS (TOP)	6'-6" AFF
J.	DATA/TELEPHONE	1'-6" AFF
K.	TELEPHONE	4'-0" AFF

MOUNTING HEIGHT NOTE: THE ABOVE MOUNTING HEIGHTS SHALL BE ADHERED TO UNLESS OTHERWISE NOTED ON PLANS OR SPECIFICATIONS.

LIGHTING CONTROLS

LC.1 24-HOUR MECHANICAL TIME SWITCH SHALL BE INTERMATIC MODEL T101PCD82 OR APPROVED EQUAL. 120VAC, 60 HZ, SPST, INDOOR/OUTDOOR TYPE 3R PLASTIC WITH SEE THROUGH DOOR ENCLOSURE, COLOR GRAY, WITH 1 HOUR INTERVALS.

CODES

C.1 THE ENTIRE INSTALLATION, INCLUDING MATERIALS, EQUIPMENT AND WORKMANSHIP, SHALL CONFORM TO APPLICABLE LAWS AND REGULATIONS AND REGULATORY BODIES HAVING JURISDICTION OVER THIS WORK.

C.2 NATIONAL ELECTRICAL CODE: NEC 2017

C.3 NFPA 72, NATIONAL FIRE ALARM CODE

C.4 INTERNATIONAL BUILDING CODE 2018, NEW JERSEY EDITION

C.5 INTERNATIONAL MECHANICAL CODE 2018.

SCOPE OF WORK

1. CONTRACTOR SHALL VERIFY EXISTING LIGHTING CIRCUITS, PLUG TYPES AND FIXTURE LOCATIONS.
2. CONTRACTOR SHALL VERIFY LIGHTING PANEL LOAD DIRECTORIES.
3. PROVIDE NEW RACEWAYS AND WIRING AS INDICATED. REPLACE DAMAGED OR MISSING RACEWAYS AND CIRCUITS AS REQUIRED FOR A COMPLETE SYSTEM.
4. ALL CIRCUIT WIRING SHALL BE NEW AND WIRED TO CIRCUITS INDICATED ON PLANS.
5. PROVIDE NEW CIRCUIT BREAKERS AND UPDATE PANEL SCHEDULES.
6. PROVIDE NEW LIGHTING FIXTURES AS INDICATED ON DRAWINGS.
7. COORDINATE WITH OWNER TO CONFIGURE LIGHTING CONTROLS AND SEQUENCE.
8. TEST ALL FINISHED WORK INCLUDING CIRCUITING, CONTROLS, CIRCUIT BREAKERS AND LIGHT FIXTURES.
9. PROVIDE LIGHTING CONTROL SYSTEM (LIGHT TIMERS AND DIMMER SWITCHES) FOR EXTERIOR LIGHTS PER SPECIFICATIONS ON DRAWING E-002.
10. SEE KEYED NOTES FOR ADDITIONAL INFORMATION.

NO.	BY	CK	DATE	REVISION

DESIGNED EQ
DRAWN CK
CHECKED EQ
SCALE AS SHOWN
DATE 10/20/2025

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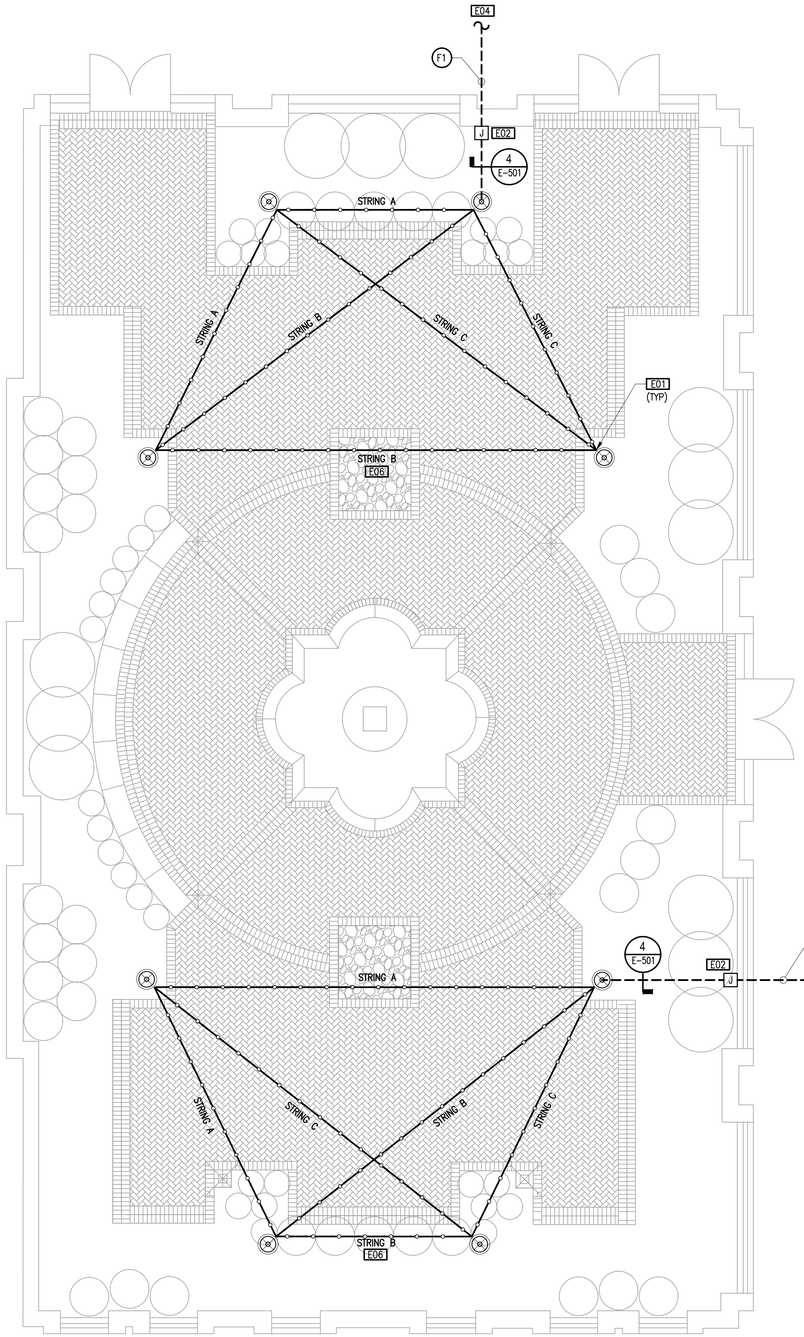
ELECTRICAL
GENERAL NOTES

PROJECT NO.
6780-2501

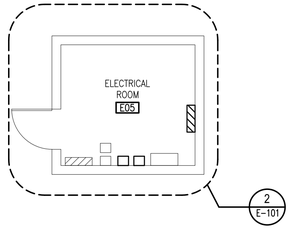
DRAWING NO.
E-002
DWG 6 OF 9



1 UNIVERSITY HALL COURTYARD ELECTRICAL FLOOR PLAN

Scale: 3/16" = 1'-0"

4 0 4 8



GENERAL NOTES

1. FOR GENERAL NOTES, ABBREVIATIONS AND SPECIFICATION SEE E0.01
2. PAINT CONDUIT TO MATCH POST.
3. CIRCUITS SHOWN DIAGRAMATICALLY. COORDINATE WITH A/E
4. EXTERIOR CONDUIT SHALL BE RIGID STEEL. INTERIOR CONDUIT SHALL BE EMT.

ELECTRICAL KEYED NOTES

E01 1. OVERHEAD CONDUCTORS FOR FESTOON LIGHTING SHALL NOT BE SMALLER THAN 12 AWG UNLESS THE CONDUCTORS ARE SUPPORTED BY MESSENGER WIRES.
2. THE CONDUCTORS SHALL BE SUPPORTED BY MESSENGER WIRE IN ALL SPANS.
3. THE MESSENGER WIRE SHALL BE SUPPORTED BY STRAIN INSULATORS.
4. CONDUCTS OR MESSENGER WIRES SHALL NOT BE ATTACHED TO ANY FIRE ESCAPE, DOWNSPOUT, OR PLUMBING EQUIPMENT.

E02 PROVIDE WEATHER PROOF NEMA 3R JUNCTION BOX.

E03 CONTRACTOR SHALL VERIFY PANEL IN FIELD.

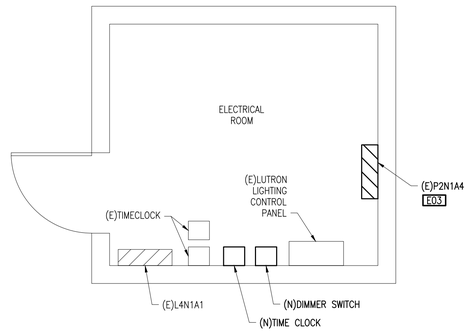
E04 WIRE CIRCUITS TO PANEL P2N1A4 IN ELECTRICAL ROOM AS INDICATED.

E05 APPROXIMATE LOCATION OF ELECTRICAL ROOM. SEE ENLARGED PLAN.

E06 FESTOON LIGHTING DISTANCE IS LIMITED TO 100' BY MANUFACTURER. PROVIDE MULTIPLE STRING LIGHTS AS REQUIRED.

FEEDER SCHEDULE

F1 2#12 AND 1#12 GROUND IN 1" CONDUIT



2 ELECTRICAL ROOM ENLARGED PLAN

Scale: 3/8" = 1'-0"

2 1 0 2 4

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ELECTRICAL
NEW WORK FLOOR PLAN

PROJECT NO.
6780-2501

DRAWING NO.
E-101
DWG 7 OF 9

(E)PANEL P2N1A4 208/120V 3ø 4W, 250A MLO & GROUND BUS

CIRC. NO.	RATING (A)	DESCRIPTION	CONNECTED LOAD (KVA) A	B	C	CONNECTED LOAD (KVA) A	B	C	DESCRIPTION	RATING (A)	CIRC. NO.	
1	20A 1P	RECEPTS-CLASS	0.8			0.8			POWER FOR SC	20A 1P	2	
3	20A 1P	RECEPTS-CLASS		0.8			0.8		POWER FOR SC	20A 1P	4	
5	20A 1P	RECEPTS-CLASS			0.8			0.8	RECEPTS-CLASS	20A 1P	6	
7	20A 1P	RECEPTS-CLASS	0.8			0.8			RECEPTS-CLASS	20A 1P	8	
9	20A 1P	RECEPTS-CLASS		0.8			0.8		PROJECTOR	20A 1P	10	
11	20A 1P	RECEPTS-CLASS			0.8			0.8	PROJECTOR SCREEN	20A 1P	12	
13	20A 1P	RECEPTS-CLASS	0.8								14	
15											16	
17											18	
19											20	
21											22	
23											24	
25											26	
27											28	
29											30	
31											32	
33											34	
35	20A 1P	TF-1			0.6						36	
37	20A 1P	RCPT - ELEC. RM	0.6								38	
39	20A 1P	RCPT - ELEV. PIT		0.6			0.6		COURTYARD STRING LIGHTS	20A 1P	40	E01
41	20A 1P	RCPT - ELEV. PIT			0.6			1	LOBBY LIGHTING	20A 1P	42	
10,00AIC RATING		PHASE SUB TOTAL:	3	2.2	2.8	1.6	2.2	2.6				
		SUB TOTAL:	8			6.4						
		TOTAL:	14.4									

ELECTRICAL KEYED NOTES

E01 PROVIDE NEW CIRCUIT BREAKER, BREAKER SHALL MATCH EXISTING AIC RATING. CONNECT TO NEW COURTYARD STRING LIGHTS AS INDICATED. CONTRACTOR TO VERIFY. NOTIFY A/E OF ANY DISCREPANCIES.

LIGHTING FIXTURE SCHEDULE

SIMPLE	MANUFACTURER	CATALOG NO.	DESCRIPTION	LAMP	WATTAGE	MOUNTING HEIGHT	NOTES
—○——○—	CALI	ML2999-CB-3.0K-GSFL-DM-WETPA-BK	STRING LIGHTS	LED	3W	10'	LINEAR FT PER DRAWINGS

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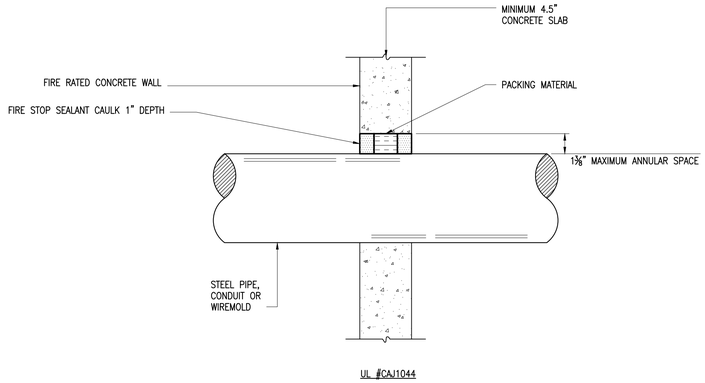
ELECTRICAL SCHEDULES

PROJECT NO. 6780-2501

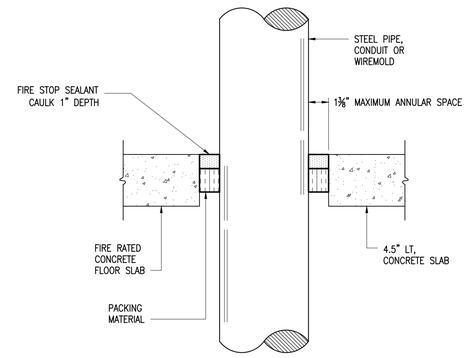
DRAWING NO. E-401
DWG 8 OF 9



UL #CAJ1044

1 E-501 **PENETRATION THROUGH CONCRETE WALL**

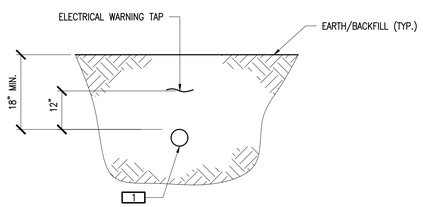
Scale: N.T.S.



UL #CAJ1017

2 E-501 **PENETRATION THROUGH CONCRETE FLOOR**

Scale: N.T.S.

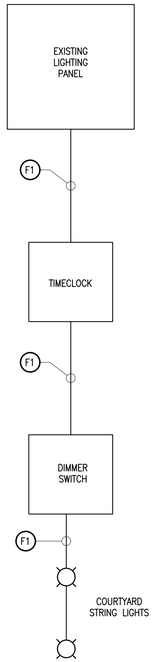


4 E501 **DIRECT BURIED SECONDARY DETAIL**

Scale: NONE

NOTES:

1 1" PVC CONDUIT, POWER, ACTIVE



3 E-501 **COURTYARD STRING LIGHTS RISER DIAGRAM**

Scale: N.T.S.

GENERAL NOTES

1. FOR GENERAL NOTES, ABBREVIATIONS AND SPECIFICATION SEE E0.01
2. EXTERIOR CONDUIT ABOVE GRADE SHALL BE RIGID STEEL. UNDERGROUND CONDUIT SHALL BE PVC. INTERIOR CONDUIT SHALL BE EMT.

FEEDER SCHEDULE

F1 2#12 AND #12 GROUND IN 1" CONDUIT

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ELECTRICAL DETAILS

PROJECT NO. 6780-2501

DRAWING NO. E-501

DWG 9 OF 9