



AERIAL MAP



CONCEPTUAL RENDERING

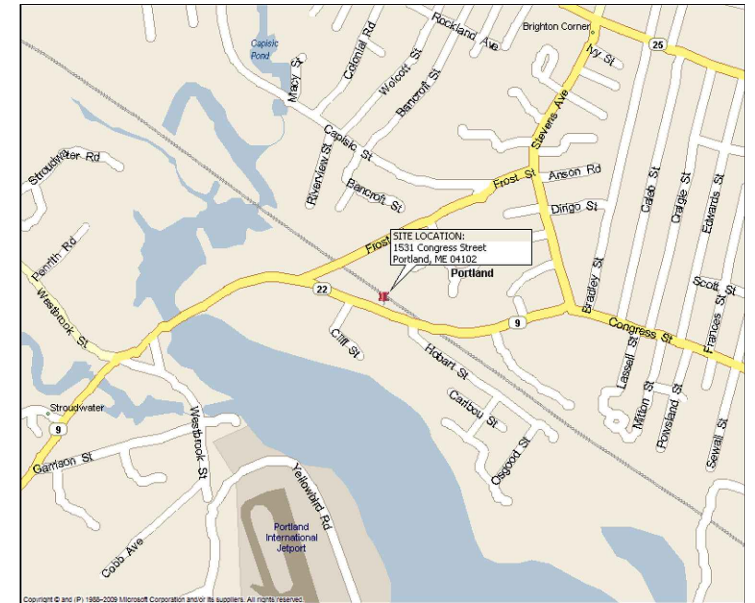
verizon

PORTLAND ME HEAD END

VERIZON SITE LOCATION CODE: 320632
 MARKET: 100152

1531 CONGRESS STREET
 PORTLAND, ME 04102

100% SUBMISSION
 DATE 01/11/19



VICINITY MAP

PLANNING DEPARTMENT
 389 CONGRESS STREET
 4TH FLOOR
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ENGINEERING FIRM
 DEWBERRY ENGINEERS INC.
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 CONTACT: BENJAMIN REVETTE

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VERIZON NETWORK COMPLIANCE
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 CONTACT: NICK SAPIA

ELECTRIC COMPANY
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 AUGUSTA, ME 04336
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GENERAL DRAWINGS

- G001 GENERAL NOTES
- G002 GENERAL NOTES

CIVIL DRAWINGS

- C001 CIVIL GENERAL NOTES
- C100 EXISTING SITE PLAN
- C101 PROPOSED SITE PLAN
- C400 DETAILED SITE PLAN
- C401 GRADING PLAN
- C501 CIVIL DETAILS

ARCHITECTURAL DRAWINGS

- A001 GENERAL NOTES & LEGEND
- A100 PROPOSED ROOM PLAN
- A101 PROPOSED CABLE TRAY PLAN
- A200 ELEVATIONS
- A301 SHELTER SECTIONS
- A302 FIRESTOP DETAILS
- A303 CONSTRUCTION DETAILS

STRUCTURAL DRAWINGS

- S001 STRUCTURAL NOTES
- S100 FOUNDATION PLAN & SECTION
- S200 CMU WALL ELEVATIONS
- S301 ROOF PLAN & SECTION
- S501 SHELTER DETAILS - I
- S502 SHELTER DETAILS - II

LANDSCAPE DRAWINGS

- L100 LANDSCAPE PLAN

STORMWATER DRAWINGS

- SW001 STORMWATER NOTES
- SW100 STORMWATER PLAN
- SW500 STORMWATER DETAILS

MECHANICAL DRAWINGS

- M001 MECHANICAL NOTES
- M100 MECHANICAL PLAN
- M500 HVAC DETAILS
- M503 MECHANICAL SCHEDULES

BUILDING AUTOMATION SYSTEM

- BA001 BUILDING AUTOMATION GENERAL NOTES
- BA501 BUILDING AUTOMATION NOC ALARM

ELECTRICAL DRAWINGS

- E001 ELECTRICAL GENERAL NOTES
- E002 ELECTRICAL & GROUNDING NOTES
- E100 UTILITY PLAN & SCHEMATIC
- E101 ELECTRICAL PLAN
- E102 LIGHTING PLAN
- E103 GROUNDING PLAN & DETAILS
- E501 GROUNDING DETAILS
- E700 ELECTRICAL ONE LINE DIAGRAM

PROJECT GENERAL NOTES:

1. THE FOLLOWING GENERAL NOTES ARE INTENDED TO SUMMARIZE REQUIREMENTS OF THE PROJECT.
2. **DRAWINGS & SPECIFICATIONS:**
 - A. THE DRAWINGS, SPECIFICATIONS, REFERENCED STANDARDS, OWNER WIRELESS STANDARDS, OTHER RFP ATTACHMENTS AND THE TERMS AND CONDITIONS ARE COMPLIMENTARY OF ONE ANOTHER. IN THE EVENT OF CONFLICT BETWEEN THE DRAWINGS, SPECIFICATIONS, REFERENCED STANDARDS, OWNER WIRELESS STANDARDS, OTHER RFP ATTACHMENTS OR TERMS AND CONDITIONS, THE ARCHITECT/ENGINEER SHALL BE CONTACTED FOR FORMAL INTERPRETATION OF THE REQUIREMENT. THE CONTRACTOR SHALL BE DEEMED TO HAVE PROVIDED THE MOST DETAILED AND EXPENSIVE INTERPRETATION OF THE REQUIREMENT. ANY WORK INSTALLED IN CONFLICT WITH THE ARCHITECT/ENGINEER INTERPRETATION SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE AND AT NO EXPENSE TO OWNER.
 - B. THE INTENT OF THE DRAWINGS IS TO SHOW GENERAL SCOPE AND INTENT OF THE WORK. METHODS AND MATERIALS NOT EXPLICIT BUT IMPLIED ARE INTENDED TO BE BUILDER DESIGNED, FURNISHED AND INSTALLED.
3. **COORDINATION:**
 - A. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THE WORK. THE PROJECT GENERAL NOTES PERTAIN TO ALL DIVISIONS OF THE WORK.
 - B. CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND SCHEDULING WORK BETWEEN ALL TRADES AND BETWEEN CONSTRUCTION ACTIVITIES AND THE OCCUPANTS OF THE BUILDING SUCH THAT WORK IS COMPLETED IN A TIMELY MANNER.
 - C. CONTRACTOR SHALL SUBMIT COORDINATION DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF WORK. EACH DIVISION SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL RELATED DIVISIONS WHOSE WORK INTERFERES WITH THEIR OWN.
 - D. CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF ALL OPENINGS FOR EQUIPMENT WITH APPROVED SHOP DRAWINGS BEFORE PROCEEDING WITH WORK.
 - E. CONTRACTOR SHALL VERIFY SIZES AND LOCATIONS OF ALL EQUIPMENT PADS AND BASES. CONTRACTOR SHALL VERIFY POWER, WATER AND DRAIN INSTALLATION W/EQUIPMENT MANUFACTURERS BEFORE PROCEEDING WITH THE WORK. PATCH AND REPAIR AFFECTED EXISTING EQUIPMENT/SURFACES AS REQUIRED.
 - F. WHERE INSTALLATION AND/OR CONNECTION OF EQUIPMENT IS NOT SPECIFIED BUT SUCH CONNECTION AND/OR INSTALLATION IS REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR SUCH CONNECTION AND/OR INSTALLATION. THIS WORK SHALL INCLUDE ALL UTILITY HOOK-UPS.
4. ASSIGNMENT OF WORK - SEE PROJECT SCOPE AND RFP.
5. **ABBREVIATIONS:** THROUGHOUT THE PLANS ARE ABBREVIATIONS WHICH ARE OF COMMON USE. THE LIST OF ABBREVIATIONS PROVIDED IS NOT INTENDED TO BE COMPLETE OR REPRESENTATIVE OF ALL CONDITIONS OR MATERIALS ACTUALLY USED ON THE PROJECT. THE ARCHITECT WILL DEFINE THE INTENT OF ANY IN QUESTION.
6. **CODES:** ALL WORK SHALL BE PERFORMED IN FULL COMPLIANCE WITH ALL APPLICABLE LOCAL AND NATIONAL CODES, STANDARDS AND ALL APPLICABLE AMENDMENTS. IN CASE OF ANY CONFLICT WHEREIN THE METHODS OR STANDARDS OF INSTALLATION OR THE MATERIALS SPECIFIED DO NOT EQUAL OR EXCEED THE REQUIREMENTS OF THE LAWS OR ORDINANCES, THE LAWS AND ORDINANCES WILL GOVERN. NOTIFY ARCHITECT OF ALL CONFLICTS PRIOR TO COMMENCING ANY WORK. WHERE REQUIRED BY THE AHJ, THE CONTRACTOR SHALL ISSUE PUBLIC NOTICES.
7. **PROVIDE ALL REQUIRED PERMITS:**
 - A. CONTRACTOR IS RESPONSIBLE TO PAY FOR AND OBTAIN PERMITS AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK.
 - B. ALL POSSIBLE RIGHT OF WAY WORK TO BE PER CITY DEPARTMENT OF ENGINEERING STANDARDS.
 - C. WORKING HOURS FOR THE USE OF LOUD EQUIPMENT SHALL BE LIMITED TO TIMES ESTABLISHED BY THE LOCAL JURISDICTION. THIS EQUIPMENT SHALL INCLUDE BUT IS NOT LIMITED TO GENERATORS, COMPRESSORS, GRADERS, DRILLS, COMPACTORS, RADIOS, AND OTHER SIMILAR EQUIPMENT.
8. QUALITY OF MATERIALS AS SPECIFIED SHALL BE CONSIDERED MINIMUM AND ANY CHANGE SHALL BE OF DEMONSTRATED BETTER QUALITY UNLESS SPECIFICALLY RELEASED BY OWNER AND APPROVED BY THE BUILDING DEPARTMENT. MATERIALS NOT SPECIFIED SHALL BE OF A HIGH QUALITY INTENDED FOR COMMERCIAL USE. PROVIDE ADEQUATE HEAT AND SHELTER ACCORDING TO MANUFACTURERS STANDARDS AND MATERIAL PRIOR TO, DURING EXECUTION OF THE WORK, AND UNTIL OWNER ACCEPTANCE, TO MAINTAIN DIMENSIONAL STABILITY AND MATERIAL QUALITY. STORED MATERIALS NOT INSTALLED SHALL BE OF A MOISTURE CONTENT THAT WILL NOT ALTER GENERAL APPEARANCE OR INTEGRITY OF ASSEMBLY WHEN MOISTURE CONTENT DECREASES TO SERVICEABLE LEVELS. MATERIALS ARE TO BE INSTALLED IN A PROFESSIONAL MANNER TO THE HIGHEST INDUSTRY STANDARDS.
9. **BUILDING AND EQUIPMENT:**
 - A. MAINTAIN AREAS FREE OF DEBRIS ACCUMULATION. KEEP WORK AREAS NEAT AND ORDERLY AS MUCH AS REASONABLY POSSIBLE.
 - B. CONTRACTOR TO REMOVE ALL MATERIALS NOT RELATED TO THE FINISHED PRODUCT FROM THE SITE. DO NOT BURY ON SITE.
10. CONTRACTOR IS RESPONSIBLE FOR ALL ERECTION, BRACING AND SHORING OF EQUIPMENT OR MATERIALS UNTIL SUCH TIME IT IS PERMANENTLY SUPPORTED OR IS READY FOR REMOVAL DURING CONSTRUCTION.
11. TOP OF CONCRETE DATUM ELEVATION IS 0'-0". ALL OTHER SLAB HEIGHTS AND RAISED FLOORS ARE SHOWN RELATIVE TO THIS DATUM.
12. **CONTRACTOR OPTIONS:** WHERE ONLY ONE MANUFACTURER'S EQUIPMENT OR ITEM IS LISTED OR SPECIFIED, OR THE EQUIPMENT OR ITEM IS LISTED AS THE BASIS OF DESIGN PRODUCT, BUT NO OTHER MANUFACTURERS ARE LISTED AS ACCEPTABLE, THEIR PRODUCTS SHALL BE TREATED AS A SUBSTITUTION AND SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED IN SPECIFICATION SECTION INCLUDED.
13. **SUBSTITUTION REQUESTS:** ALL SUBSTITUTION REQUESTS MUST BE SUBMITTED TO THE A&E OF RECORD FOR REVIEW AND APPROVAL.
14. **SAFETY:** THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY. THE CONTRACTOR SHALL TAKE ALL STEPS NECESSARY TO ENSURE THE SAFETY OF ALL PERSONNEL BY ADEQUATELY PROTECTING THEM FROM CONSTRUCTION HAZARDS AND ACTIVITIES THROUGHOUT THE COURSE OF THIS WORK. ALL WORK AREAS SHALL BE PROPERLY MARKED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE BARRIERS, BARRICADES, SIGNAGE AND PROPERLY SECURE ALL WORK AREAS. COMMON AREAS, PUBLIC WAYS, AND/OR OTHER AREAS ACCESSIBLE TO NON-CONSTRUCTION PERSONNEL SHALL BE FREE OF HAZARDOUS CONDITIONS RESULTING FROM THIS PROJECT AT ALL TIMES. ANY UNSAFE CONDITION OBSERVED SHALL BE REPORTED IMMEDIATELY TO THE OWNER REPRESENTATIVE.

PROJECT GENERAL NOTES CONTINUED:

15. **EMERGENCIES, EVACUATION PROCEDURES, & JOB SITE ACCIDENTS:** IN THE EVENT OF A FACILITY EMERGENCY, THE CONTRACTOR SHALL ADHERE AND ASSIST IN THE COORDINATION OF THE FOLLOWING EMERGENCY PROCEDURES:
 - A. ASSURE PERSONNEL SAFETY
 - B. ACCOUNT FOR ALL ON-SITE CONSTRUCTION PERSONNEL AND VISITORS.
 - C. EVACUATE OR RECOVER
 - D. SUMMON ASSISTANCE
UPON RESTORATION OF ORDER, THE CONTRACTOR'S ON-SITE SUPERINTENDENT SHALL PROVIDE A WRITTEN REPORT

DETAILING THE CAUSE OF, AND RECOVERY FROM, THE INCIDENT.

16. **SITE SECURITY:** AS REQUIRED FOR MANNED FACILITIES A VISITOR'S BADGE SHALL BE WORN BY ALL PERSONNEL AT ALL TIMES WHILE ON OWNER PROPERTY, WITHOUT EXCEPTION. ALL FORCES SHALL SIGN IN & OUT OF EACH DAY WITH THE OWNER REPRESENTATIVE TO RECEIVE THE BADGE. AT THE DISCRETION OF THE OWNER REPRESENTATIVE, THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE DAILY SIGN-IN/OUT OF THE CONTRACTOR FORCES. A VALID DRIVER'S LICENSE OR STATE ID SHALL BE PRESENTED EVERY DAY IN ORDER TO OBTAIN THE BADGE. THE LISTING SHALL INCLUDE THE NAME AND BADGE NUMBER OF ALL PERSONNEL AND BE PROVIDED TO THE OWNER REPRESENTATIVE ON THE FOLLOWING DAY AND SHALL CLEARLY INDICATE THE COMPANY NAME, INDIVIDUAL'S NAME AND BADGE NUMBER OF ALL PERSONNEL ON THE SITE. FAILURE TO COMPLY WITH THESE REQUIREMENTS MAY RESULT IN PERSONNEL BEING ESCORTED OFF THE SITE.
17. **UNDERGROUND UTILITIES:** UNDERGROUND UTILITY LOCATE SERVICES SHALL BE REQUESTED AND COMPLETED BEFORE DISTURBANCE OF ANY EXISTING GRADE OR ON-GRADE CONSTRUCTION, SLAB DEMOLITION, OR OTHER ACTIVITIES THAT MAY IMPACT BURIED UTILITIES. THE CONTRACTOR SHALL CONFIRM THAT UTILITY LOCATE SERVICES HAVE BEEN COMPLETED BEFORE EXISTING GRADE IS EXCAVATED OR EXISTING FLOORING IS DEMOLISHED, DRILLED, OR CUT, REGARDLESS OF THE LOCATION ON THE PROPERTY. SOME UTILITIES MAY NOT BE PUBLICLY OWNED AND MAINTAINED, THEREFORE IT WILL BE NECESSARY FOR THE CONTRACTOR TO LOCATE IN ADVANCE OF ANY EXCAVATIONS. CONTRACTOR SHALL HAVE SUBSURFACE UTILITY INVESTIGATION PERFORMED IN ADVANCE OF ANY EXCAVATIONS IN AREAS POSSIBLY CONTAINING FIBER OR OTHER TELCO SERVICES ENTRANCES AND AREAS NOT COVERED BY THE PUBLIC UTILITY LOCATING SERVICE. GROUND PENETRATING RADAR IS THE PREFERRED SUBSURFACE UTILITY LOCATING METHOD TO BE USED. RESULTS OF THIS SUBSURFACE EXPLORATION SHALL BE SUBMITTED TO OWNER AND THE A/E FOR REVIEW AND APPROVAL PRIOR TO ANY EXCAVATIONS. HAND EXCAVATION SHALL BE PERFORMED IN THE AREAS WITHIN 10 FEET HORIZONTALLY IN ANY DIRECTION FROM POSSIBLE TELCO ENTRANCE UNDERGROUND UTILITIES. HAND EXCHANGE SHALL ALSO BE PERFORMED ELSEWHERE AS DIRECTED BY THE A/E AND/OR OWNER.
18. **HAZARDOUS MATERIALS- CALL VZW ENVIRONMENTAL COMPLIANCE HOTLINE (800)-386-9639** IF THE CONTRACTOR UNCOVERS OR ENCOUNTERS ANY MATERIAL THAT IS BELIEVED TO BE HAZARDOUS IN NATURE (ASBESTOS, LEAD PAINT, SPILLED CHEMICALS, OR OTHERWISE), THE CONTRACTOR SHALL NOTIFY OWNER IMMEDIATELY AND SHALL NOT ABATE, REMOVE, SAMPLE, DISTURB, OR OTHERWISE HANDLE THE MATERIAL WITHOUT WRITTEN AUTHORIZATION FROM OWNER. THE UNCONTROLLED RELEASE OF ANY SUCH SUBSTANCE SHALL ALSO BE REPORTED TO THE LOCAL FIRE DEPARTMENT BY THE CONTRACTOR. DISPOSAL OF ANY SUCH MATERIAL SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS, AND DOCUMENTATION OF DISPOSAL SHALL BE PROVIDED BY THE CONTRACTOR TO THE OWNER REPRESENTATIVE.
19. **ASBESTOS- CONTAINING MATERIALS (ACM)** THE CONTRACTOR SHALL NOT USE ANY MATERIAL THAT CONTAINS ASBESTOS (ACM) FOR ANY APPLICATION ON THIS PROJECT.
20. **SITE SURVEY AND FIELD-ENCOUNTERED OBSTACLES** NEITHER THE A/E NOR OWNER ARE GUARANTEEING THE ACCURACY OF THE INFORMATION DEPICTED IN THESE DOCUMENTS. THERE ARE NO IMPLIED WARRANTIES ASSOCIATED WITH THESE DOCUMENTS. CONTRACTOR SHALL FIELD VERIFY CONDITIONS PRIOR TO BIDDING THE WORK. ALL DRAWINGS ARE DIAGRAMMATIC AND MAY NOT SHOW ALL DETAILS REQUIRED TO CLEAR FIELD-ENCOUNTERED OBSTRUCTIONS. WHERE MINOR DEVIATIONS IN SYSTEMS ARE REQUIRED DURING CONSTRUCTION THE CONTRACTOR SHALL MAKE SUCH ACCOMMODATIONS AT NO ADDITIONAL COST TO OWNER. THE CONTRACTOR SHALL ADVISE THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO THE BID AND PRIOR TO PERFORMING THE WORK.
21. **SCALE OF DRAWINGS** MEASUREMENTS AND/OR LOCATIONS SHALL NOT BE SCALED FROM THE CONSTRUCTION DRAWINGS. CONTRACTORS SHALL USE POSTED DIMENSIONS ONLY, CONTRACTOR SHALL OBTAIN CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING IF ANY DIMENSION(S) ARE IN QUESTION.
22. **PROJECT RECORD DRAWINGS** PROJECT RECORD DRAWINGS SHALL BE UPDATED ON A DAILY BASIS IN ACCORDANCE WITH THE DIVISION SPECIFICATIONS.
23. **WORK HOURS** REGULAR WORK HOURS ARE FROM 7:00 AM TO 5:00 PM. THIS MAY BE ADJUSTED TO ACCOMMODATE IRREGULAR CIRCUMSTANCES BUT REQUIRES THE APPROVAL OF OWNER. MAINTENANCE-WINDOW WORK HOURS ARE 12:00 AM TO 5:00 AM, LOCAL TIME. THE CONTRACTOR SHALL DETERMINE ANY WORK-HOUR RESTRICTIONS AFFECTING THE SCOPE OF WORK AND ALL COSTS SHALL BE INCLUDED IN THE BID.
24. **QUALITY OF WORK** CONTRACTOR SHALL PERFORM ALL WORK AND INSTALL ALL COMPONENTS IN A PROFESSIONAL AND WORKMANLIKE MANNER. ALL FINISH WORK SHALL BE TRUE, LEVEL, AND PLUMB. ALL JOINTS SHALL BE TIGHT AND CLEAN.
25. **WARRANTY** CONTRACTOR SHALL PROVIDE DETAILS OF ITS WARRANTY POLICIES AND PROCEDURES INCLUDING, BUT NOT LIMITED TO A CLEAR STATEMENT OF THE DURATION AND CONDITIONS OF WARRANTIES OF SUPPLIER'S SUPPLIERS. CONTRACTOR TO PROVIDE A ONE-YEAR FITNESS AND SUITABILITY WARRANTY FOR ALL WORK, THE PERIOD TO BEGIN WITH FINAL ACCEPTANCE BY THE OWNER REPRESENTATIVE.
26. **DRILLING AND CUTTING- FIRE PROTECTION SYSTEM AND DUST/WATER CONTROL** OWNER SHALL BE NOTIFIED BEFORE BEGINNING ANY DRILLING OR CUTTING OF CONCRETE, GYPSUM BOARD, OR OTHER DUST-PRODUCING MATERIALS. ALL EQUIPMENT IN AFFECTED AREAS SHALL BE PROTECTED TO THE SATISFACTION OF THAT OWNER REPRESENTATIVE. PRIOR TO ANY DUST-PRODUCING WORK, THE CONTRACTOR SHALL DISARM THE FIRE-DETECTION SYSTEM(S) AND COVER ALL SMOKE DETECTORS WITHIN FIFTY (50) FEET OF THE WORK AREA AND ENSURE THAT THE SYSTEM IS RETURNED TO NORMAL OPERATION AT THE END OF EACH WORK DAY. ALL GAS SUPPRESSION DUMPED AS A RESULT OF THE CONTRACTOR NOT FOLLOWING THIS REQUIREMENT WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ALL SUCH WORK LOCATIONS SHALL BE APPROVED IN ADVANCE BY OWNER. WHEN DRILLING OR CUTTING IS REQUIRED IN AN AREA WITH TELECOMMUNICATIONS EQUIPMENT INSTALLED, A HEPA VACUUM CLEANER SHALL BE EMPLOYED TO CONTAIN DUST AND PARTICULATE MATTER DURING THE OPERATION. ALL AREAS ABOVE THE CEILING SHALL BE VACUUMED CLEAN AFTER THE WORK IS COMPLETE. ALL VACUUM CLEANERS SHALL BE APPROVED FOR USE BY THE OWNER REPRESENTATIVE. WHEN WET CORING, ALL PRECAUTIONS SHALL BE TAKEN TO CONFINE WATER TO WORK AREA.

PROJECT GENERAL NOTES CONTINUED:

27. **FLOORING/FLOOR** ALL CUTTING AND DRILLING OF ACCESS FLOOR SHALL OCCUR IN AREAS DESIGNATED BY THE OWNER REPRESENTATIVE. FOR WORK REQUIRING THE REMOVAL OF FLOOR TILES, THE CONTRACTOR SHALL PROVIDE CONE BARRIERS AROUND ALL FLOOR OPENINGS FOR THE DURATION OF THESE ACTIVITIES. ADDITIONAL HAZARD LIGHTING SHALL ALSO BE PROVIDED, IF NECESSARY, THAT SUFFICIENTLY ILLUMINATES THE AREA AT ALL TIMES. THESE BARRIERS AND LIGHTING SHALL BE LEFT IN PLACE UNTIL THE PENETRATIONS ARE CLOSED FLUSH. REMOVAL OF FLOOR TILES AGAINST A WALL OR DOOR JAMB SHALL NOT BE DONE WITHOUT THE PERMISSION OF THE OWNER REPRESENTATIVE. UPON COMPLETION OF THE PROJECT, ALL FLOOR AREAS SHALL BE COMPLETELY CLEANED TO THE SATISFACTION OF THE OWNER REPRESENTATIVE. ALL METAL SHAVINGS SHALL BE COMPLETELY REMOVED FROM THE TILE AND ALL SHARP OR ROUGH EDGES FILLED SMOOTH. CUT/DRILLED FLOOR TILES SHALL HAVE THEIR EXPOSED CONCRETE AND METAL EDGES SEALED WITH TWO COATS OF CLEAR SPRAY SEALANT PRIOR TO RE-INSTALLATION TO PREVENT FUTURE "CONCRETE DUSTING" AND CORROSION. SPRAY SEALANT SHALL BE APPLIED IN THE DESIGNATED AREAS. ALL RAISED FLOOR CUTS MUST BE LINED WITH THE APPROPRIATE GROMMET OR PLASTIC TRIM TO ENSURE THAT NO ROUGH EDGES ARE EXPOSED.
28. **OWNER-FURNISHED EQUIPMENT** MAJOR EQUIPMENT IDENTIFIED IN THE CONSTRUCTION DRAWINGS FOR THIS PROJECT WILL BE FURNISHED BY OWNER

FOR STORAGE AND INSTALLATION BY THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER REPRESENTATIVE INDICATING ALL REQUIRED OWNER-FURNISHED EQUIPMENT AND DELIVERY DATE REQUIRED TO CONFORM WITH THE CRITICAL PATH SCHEDULE. OWNER WILL CONTACT THEIR VENDORS AND RESPOND TO THE CONTRACTOR LIST. OWNER-FURNISHED EQUIPMENT WILL BE DELIVERED TO THE FACILITY, UNLESS OTHER ARRANGEMENTS HAVE BEEN MADE. THE CONTRACTOR, IN COORDINATION WITH THE OWNER REPRESENTATIVE, SHALL INSPECT EACH PIECE OF EQUIPMENT. OWNER WILL NOT BE PROVIDING STORAGE SPACE WITHIN THE FACILITY FOR USE BY THE CONTRACTOR UNLESS PRIOR ARRANGEMENTS ARE MADE AND APPROVED IN WRITING.

MATERIALS AND EQUIPMENT

ALL MATERIALS AND EQUIPMENT USED IN THIS INSTALLATION SHALL BE NEW, UNLESS OTHERWISE AUTHORIZED BY THE OWNER REPRESENTATIVE, AND HAVE THE APPROPRIATE UL LISTING AND FACTORY MUTUAL (FM) APPROVAL. ALL MATERIALS SHALL COMPLY WITH ALL APPLICABLE LOCAL AND NATIONAL CODES, STANDARDS, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

29. SAFETY AND DATA SHEETS (SDS DOCUMENTATION)

THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN ALL MSDS AND RELATED INFORMATION FOR ALL MATERIAL AND EQUIPMENT DELIVERED AND/OR STORED AT THE SITE. THE MSDS SHALL IDENTIFY THE LOCATION OF THE PRODUCT WITHIN THE FACILITY AND SHALL BE MADE AVAILABLE FOR REVIEW BY ANY PARTY FOR THE DURATION OF THE PROJECT. WALL-MOUNTED MSDS HOLDERS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. THE MSDS AND RELATED INFORMATION, INCLUDING ROOM NUMBER LOCATIONS, SHALL BE INCLUDED IN THE PROJECT MANUALS TO BE DELIVERED BEFORE FINAL APPLICATION FOR PAYMENT.

30. FIELD OFFICE

OWNER WILL NOT BE PROVIDING SPACE WITHIN THE FACILITY FOR A FIELD OFFICE OR A JOB-SITE TRAILER.

31. DELIVERIES

OWNER WILL NOT RECEIVE ANY TYPE OF DELIVERY ON THE CONTRACTOR'S BEHALF UNLESS PRIOR ARRANGEMENTS ARE MADE WITH OWNER. THE CONTRACTOR SHALL BE PRESENT TO RECEIVE PROJECT DELIVERIES. THE CONTRACTOR SHALL NOTIFY THE SITE RECEIVING AGENT AT LEAST ONE (1) DAY IN ADVANCE TO SCHEDULE ACTIVITIES ON THE LOADING DOCK. OWNER DELIVERIES TAKE PRIORITY AT ALL OWNER LOADING DOCKS. ALL SHIPPING COSTS ARE THE RESPONSIBILITY OF THE CONTRACTOR, WITH THE EXCEPTION OF OWNER-FURNISHED EQUIPMENT.

32. STORAGE AND STAGING

OWNER WILL NOT BE PROVIDING SPACE WITHIN THIS FACILITY FOR USE BY THE CONTRACTOR AS STORAGE AND/OR STAGING UNLESS PRIOR ARRANGEMENTS ARE MADE AND APPROVED IN WRITING. THIS WRITTEN APPROVAL SHALL INCLUDE A CLEAR DESCRIPTION IDENTIFYING THE LIMITS OF THE AREA(S) ALLOWED. THE CONTRACTOR SHALL SECURE WRITTEN APPROVAL IN ADVANCE FOR NECESSARY STORAGE OUTSIDE THE OWNER LEASEHOLD OR OWNED PREMISES FROM THE OWNER OF THE PROPERTY IN QUESTION. THE CONTRACTOR SHALL BE COVERED WITH UL LISTED FIRE RETARDANT TARPULINS DURING NON-WORKING PERIODS.

33. CLEANLINESS

WORK AREAS ARE TO BE KEPT CLEAN AT ALL TIMES.

34. TRASH AND REFUSE DISPOSAL

THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL PROJECT-RELATED TRASH, WASTE, AND/OR GARBAGE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE A DUMPSTER FOR THE DURATION OF THE PROJECT IF REQUIRED. COORDINATE WITH VERIZON FOR THE DUMPSTER LOCATION. THE DUMPSTER SHALL BE EMPTIED AT SUITABLE INTERVALS TO PRESERVE THE APPEARANCE OF THE SITE. COMBUSTIBLE DEBRIS SHOULD BE REMOVED ON A DAILY BASIS. THE USE OF VERIZON DUMPSTERS OWNED BY OTHERS FOR DISPOSAL OF CONSTRUCTION DEBRIS IS PROHIBITED. THE CONTRACTOR SHALL REPAIR ANY SURFACE DAMAGE AS A RESULT OF THE DELIVERY. EXCHANGE, DROPPING AND/OR REMOVAL OF THE CONTRACTOR'S DUMPSTER. REMOVAL AND DISPOSAL OF TRASH, WASTE AND/OR GARBAGE SHALL BE EXECUTED IN A LAWFUL MANNER.

35. SALVAGE ITEMS

THE FOLLOWING ITEMS SHALL BE SALVAGED BY THE CONTRACTOR AND TURNED OVER TO VERIZON:

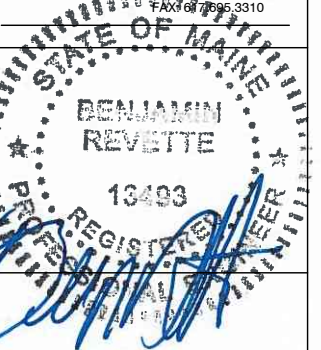
- A. ANY ITEMS AS FIELD DIRECTED BY OWNER.



THIS DRAWING WAS PREPARED SOLELY FOR THE USE OF VERIZON WIRELESS AND MUST ONLY BE USED BY VERIZON WIRELESS EMPLOYEES, CONTRACTORS, AND VENDORS WHILE PERFORMING THE WORK SHOWN ON THIS DRAWING. ANY OTHER USE OF THIS DRAWING IS FORBIDDEN.



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LOCATION CODE: 320632
1531 CONGRESS STREET
PORTLAND, ME 04102

NO.	DESCRIPTION	DATE
1	FOR SUBMITTAL	10/18/18
2	FOR SUBMITTAL	11/20/18
3	100% SUBMISSION	11/30/18
4	EOS REVISIONS	01/11/19

NETWORK COMPLIANCE SUBMITTALS	DATE
100% SUBMISSION	DATE
RE-SUBMISSION (IF REQUIRED)	DATE

PROJECT #: 50002925	ISSUED FOR REVIEW
CAD DWG FILE #: 50080012	
DESIGNED BY: MFT	
DRAWN BY: SK	
CHECKED BY: BBR	
COPYRIGHT: 2017	

GENERAL NOTES

G001

VERIZON STANDARDS

THE STANDARDS BELOW ARE PROVIDED UPON REQUEST. ANY PUBLIC CODES LISTED ARE NOT PROVIDED AS THEY ARE READILY AVAILABLE. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THESE STANDARDS.

CELL GENERAL

Table with 3 columns: Standard ID, Description, Date. Includes NADV1220, NC-EOS-ST-09-0001, NSTD1500, NSTD2020, NSTD2030, NSTD305, OTHR135101.

CELL - MECHANICAL

Table with 3 columns: Standard ID, Description, Date. Includes NSTD1000, NDIR700C, OTHR238113, OTHR238114, OTHR238115, OTHR238116.

CELL - AC POWER, DC POWER, & GROUNDING

Table with 3 columns: Standard ID, Description, Date. Includes NSTD1517.

CELL - TOWER INSPECTIONS

Table with 3 columns: Standard ID, Description, Date. Includes NSTD444, OTHR444.

MSC - GENERAL CONSTRUCTION & PLANNING STANDARDS

Table with 3 columns: Standard ID, Description, Date. Includes NSTD388, NSTD389.

MECHANICAL DESIGN STANDARDS

Table with 3 columns: Standard ID, Description, Date. Includes NSTD385, NSDT398, NSTD391, NSTD410.

NETWORK EQUIPMENT AND INSTALLATION STANDARDS

Table with 3 columns: Standard ID, Description, Date. Includes NSTD119, NADV1505.

FIRE PROTECTION STANDARDS

Table with 3 columns: Standard ID, Description, Date. Includes NSTD169.

COMMISSIONING STANDARDS

Table with 3 columns: Standard ID, Description, Date. Includes NSTD169, NSTD401.

AC POWER STANDARDS

Table with 3 columns: Standard ID, Description, Date. Includes NSTD516, NSTD517, NSTD518, OTHR361.

NETWORK SECURITY STANDARDS

Table with 3 columns: Standard ID, Description, Date. Includes NSTD397, NSTD400.

NETWORK SECURITY STANDARDS

Table with 3 columns: Standard ID, Description, Date. Includes NSTD30, OTHR30A, OTHR30B, OTHR10569, NSTD33, NSTD34, NSTD35, NSTD36, NSTD40, NSTD41, NSTD42, NSTD47, NSTD325, NDIR54, NDIR542, NSTD399.

VERIZON STANDARDS CONTINUED

PROJECT MANAGEMENT - MISCELLANEOUS DOCS/ APPROVALS

Table with 3 columns: Standard ID, Description, Date. Includes OTHR42164, NRPC901, OTHR901, OTHR903B, OTHR903C.

AGREEMENT TEMPLATES

Table with 3 columns: Standard ID, Description, Date. Includes NSTD387.

BIDDING, CONSTRUCTION & PROJECT APPROVALS

- 1. MUST BE USED ON ALL MSC DESIGN PROJECTS AFTER 02/03/2006
2. SHOULD ONLY BE REFERENCED FOR NETWORK EQUIPMENT CENTERS
3. SHOULD ONLY BE DISTRIBUTED TO FIRMS CONDUCTING THIS SCOPE OF WORK

Table with 3 columns: Standard ID, Description, Date. Includes NFPA 101, NFPA 101A, NFPA 1018, NFPA 110, NFPA 203, NFPA 214, NFPA 220, NFPA 221, NFPA 230, NFPA 241, NFPA 262, NFPA 329, NFPA 551, NFPA 730, NFPA 731, NFPA 780, NFPA 900, NFPA 1600, NFPA 1620, NFPA 2001, NFPA 5000, ASCE 7-02, ACI 318-03, UL STDS, ASTM STDS, ADA GUIDELINES, ASHRAE 90.1, ASHRAE 62.1, ASHRAE 111, ASHRAE 127, ASHRAE 135, ASHRAE GUIDELINE 0, ASHRAE GUIDELINE 1, ASHRAE GUIDELINE 4, ASHRAE GUIDELINE 13, ASHRAE, SMACNA.

RESPONSIBILITY MATRIX

Table with 5 columns: TASK, FURNISH (SUPPLY & DELIVERY), PROVIDE (FURNISH & INSTALL), INSTALL (ASSEMBLE & ERECT), COORDINATE. Includes BUILDING & SITE CONSTRUCTION, SEISMIC RESTRAINT SYSTEM, GROUNDING AND LIGHTNING PROTECTION SYSTEMS, FIBER INSTALLATION, BUILDING PERMIT FEES, ADDITIONAL PERMIT FEES, CONSTRUCTION MANGER (OWNER'S REP.), FIRE DETECTION AND SUPPRESSION SYSTEMS (SPRINKLER, SPECIAL HAZARDS AND DET.), SECURITY - GENERAL SITE, FIREWATCH - UNOCCUPIED SPACES WHEN EXISTING DETECTION SYSTEM IS OFFLINE, RACKS FOR SECURITY AND AV EQUIPMENT, BUILDING AUTOMATION, EMERGENCY LIGHTING, TASK LIGHTING, GENERATOR, INTEGRATED LOAD CENTER (ILC) (ATS, MAIN DISTRIBUTION SWITCHBOARDS, CKT. BREAKER), HVAC UNITS, PORTABLE GENERATOR TAP BOX, PORTABLE GENERATOR, DC POWER PLANT, BATTERY RACKS & CONTAINMENT, EMERGENCY EYE WASH STATION, FIBER CONDUIT & VAULTS, FIBER TRAY, CABLING, WATER, SEWER, STORM, A/C ELECTRIC, ENVIRONMENTAL DUE DILIGENCE, GEOTECHNICAL INVESTIGATION, REPORT & SOIL BORINGS, GENERATOR FUEL - FULL TANK AT TURNOVER, CONTRACTOR EQUIPMENT TESTING/COMMISSIONING (HVAC, ELECTRICAL, ETC.), REMOVAL OF FOUNDATION, CESS POOL & BACKFILL MATERIALS & IMPLEMENTATION OF OF GEOTECHNICAL RECOMENDATIONS, REMOVAL OF NATURAL GAS & WATER LINE (IF APPLICABLE)FROM PROPERTY. COORDINATE WITH UTILITY COMPANY.

- NOTES:
1. FURNISH: PURCHASE AND SHIP ITEM TO SITE.
2. PROVIDE: PURCHASE, SHIP AND INSTALL ITEM.
3. INSTALL: INSTALL FURNISHED ITEM.

EQUIPMENT PRE-PURCHASE SCHEDULE

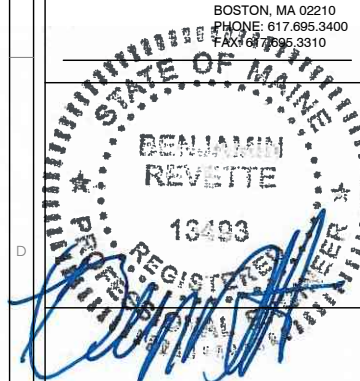
Table with 5 columns: EQUIPMENT, SUPPLIER, CONTRACTOR (INSTALLATION RESPONSIBILITY), SUPPLIER CONTACT, APPROXIMATE LEAD TIME. Includes TWO (2) 8-TON HVAC UNITS, GE INFINITI M 48VDC POWER PLANT WITH FOUR (4) DISTRIBUTION PANELS, 11-75A RECTIFIERS AND 4-48 TO 24VDC CONVERTERS, (2) BATTERY STRINGS, ILC POWER PANEL/ATS (P/N AA400G-3PH-3S-J300L) (400A, 120/208V 3Ø, 4W), INTERSECT CAM-LOK GENERATOR CONNECTOR ICGC-3P-400A (400A, 120/208V 3Ø, 4W) WITH CAM LOCK QUICK CONNECT IN LOCKABLE NEMA 3R ENCLOSURE, RTU - SITEBOSS - SITE MONITORING, GENERATOR - GENERAC - SD100, ADVANCED REMOTE DOOR LOCKING.



THIS DRAWING WAS PREPARED SOLELY FOR THE USE OF VERIZON WIRELESS AND MUST ONLY BE USED BY VERIZON WIRELESS EMPLOYEES, CONTRACTORS, AND VENDORS WHILE PERFORMING THE WORK SHOWN ON THIS DRAWING. ANY OTHER USE OF THIS DRAWING IS FORBIDDEN.



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verizon
PORTLAND ME HEAD END
LOCATION CODE: 320632
1531 CONGRESS STREET
PORTLAND, ME 04102

Table with 3 columns: NO., DESCRIPTION, DATE. Includes 1 FOR SUBMITTAL (10/18/18), 2 FOR SUBMITTAL (11/20/18), 3 100% SUBMISSION (11/30/18), 4 EOS REVISIONS (01/11/19).

Table with 2 columns: NETWORK COMPLIANCE SUBMITTALS, DATE; 100% SUBMISSION, DATE; RE-SUBMISSION (IF REQUIRED), DATE.

PROJECT #: 5002925
CAD DWG FILE #: 50080012
DESIGNED BY: MFT
DRAWN BY: SK
CHECKED BY: BBR
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GENERAL NOTES

G002

- LOCUS PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING ROAD
- xxx--- EXISTING CONTOUR
- +++++ EXISTING TRAIN TRACKS
- ~~~~~ EXISTING TREELINE
- OHW--- OHW --- EXISTING OVERHEAD WIRE
- UTILITY POLE
- PROPOSED EROSION CONTROL
- x 00.0' SPOT GRADE

1 CIVIL LINETYPES & SYMBOLS
N/A

- GAS--- GAS LINE
- X--- GAS VALVE
- G--- GAS METER
- UNDERGROUND ELECTRIC LINE
- OHW--- OVERHEAD ELECTRIC LINE
- UG--- UNDERGROUND CONDUIT
- F--- FIBER/TELECOM CONDUIT

2 CIVIL LINETYPES
N/A

GENERAL NOTES:

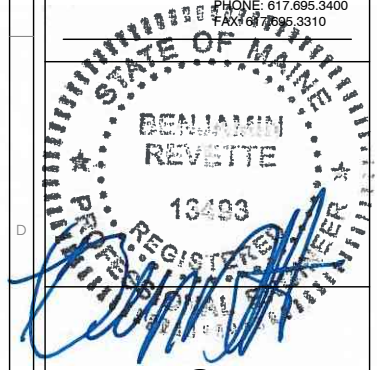
1. THE GENERAL CONTRACTOR MUST VERIFY ALL DIMENSIONS, CONDITIONS AND ELEVATIONS BEFORE STARTING WORK. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH ACCEPTED CONSTRUCTION PRACTICES.
2. IT IS THE INTENTION OF THESE DRAWINGS TO SHOW THE COMPLETED INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING SHORING, TIES, FORM WORK, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL ORDINANCES, TO SAFELY EXECUTE ALL WORK AND SHALL BE RESPONSIBLE FOR SAME. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES.
3. THE CONTRACTOR SHALL USE ADEQUATE NUMBER OF SKILLED WORKMAN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHOD NEEDED FOR PROPER PERFORMANCE OF THE WORK.
4. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR FURTHER AGREES TO INDEMNIFY AND HOLD DESIGN ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT.
5. SITE GROUNDING SHALL COMPLY WITH VERIZON WIRELESS GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH VERIZON WIRELESS GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN
6. ALL WORK SHALL COMPLY WITH OSHA AND STATE SAFETY REQUIREMENTS. PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, EXISTING CONSTRUCTION AND UTILITIES SHALL BE ESTABLISHED PRIOR TO FOUNDATION INSTALLATION. IF TEMPORARY LIGHTING AND MARKING IS REQUIRED BY THE FEDERAL AVIATION ADMINISTRATION (FAA), IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE NECESSARY LIGHTS AND NOTIFY THE PROPER AUTHORITIES IN THE EVENT OF A PROBLEM.
7. ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL CODES AND ORDINANCES. THE MOST STRINGENT CODE WILL APPLY IN THE CASE OF DISCREPANCIES OR DIFFERENCES IN THE CODE REQUIREMENTS.
8. ANY DAMAGE TO ADJACENT PROPERTIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
9. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AMPLE NOTICE TO THE BUILDING INSPECTION DEPARTMENT TO SCHEDULE THE REQUIRED INSPECTIONS. A MINIMUM OF 24 HOURS ON NOTICE SHALL BE GIVEN AND THE BUILDING INSPECTION DEPARTMENTS HAVE REQUESTED THAT GROUPS OF TWO OR THREE SITES BE SCHEDULED AT ONE TIME IF POSSIBLE.
10. CONSTRUCTION MANAGER WILL CONFIRM FAA APPROVAL OF TOWER LOCATION BY ISSUING TOWER RELEASE FORM. NO TOWER SHALL BE CONSTRUCTED UNTIL THE TOWER RELEASE FORM IS ISSUED TO THE CONTRACTOR.
11. THE COMPLETE BID PACKAGE INCLUDES THESE CONSTRUCTION DRAWINGS ALONG WITH THE FINAL RF DESIGN AND TOWER STRUCTURAL ANALYSIS. CONTRACTOR IS RESPONSIBLE FOR REVIEW OF TOTAL BID PACKAGE PRIOR TO BID SUBMITTAL.
12. CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES WITHIN CONSTRUCTION LIMITS PRIOR TO CONSTRUCTION.
13. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE ON THE SITE AT ALL TIMES. SILT AND EROSION CONTROL SHALL BE MAINTAINED ON THE DOWNSTREAM SIDE IF THE SITE AT ALL TIMES. ANY DAMAGE TO ADJACENT PROPERTIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
14. CLEARING OF TREES AND VEGETATION ON THE SITE SHOULD BE HELD TO A MINIMUM. ONLY THE TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED. ANY DAMAGE TO PROPERTY OUTSIDE THE LEASE PROPERTY SHALL BE REPAIRED BY THE CONTRACTOR.
15. ALL SUITABLE BORROW MATERIAL FOR BACK FILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATIONS APPROVED BY GOVERNING AGENCIES PRIOR TO DISPOSAL.
16. SEEDING AND MULCHING OF THE SITE SHALL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE SITE DEVELOPMENT. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING AN ADEQUATE COVER OF VEGETATION OVER THE SITE FOR A ONE YEAR PERIOD.
17. PERMITS: OBTAIN AND PAY FOR REQUIRED PERMITS, LICENSES, FEES, INSPECTIONS, ETC.
18. RECORD DRAWINGS: MAINTAIN A RECORD OF ALL CHANGES, SUBSTITUTIONS BETWEEN WORK AS SPECIFIED AND INSTALLED. RECORD CHANGES ON A CLEAN SET OF CONTRACT DRAWINGS WHICH SHALL BE TURNED OVER TO THE CONSTRUCTION MANAGER UPON COMPLETION OF THE PROJECT.
19. THE CONTRACTOR SHALL VISIT THE SITE BEFORE BIDDING ON THE WORK CONTAINED IN THIS DESIGN PACKAGE.
20. ALL EQUIPMENT AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH VERIZON WIRELESS.

EXCAVATION & GRADING NOTES:

1. ALL CUT AND FILL SLOPES SHALL BE 3:1 MAXIMUM.
2. ALL EXCAVATIONS ON WHICH CONCRETE IS TO BE PLACED SHALL BE SUBSTANTIALLY HORIZONTAL ON UNDISTURBED AND UNFROZEN SOIL AND BE FREE FROM LOOSE MATERIAL AND EXCESS GROUND WATER. DEWATERING FOR EXCESS GROUND WATER SHALL BE PROVIDED IF REQUIRED.
3. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC MATERIAL. IF SOUND SOIL IS NOT REACHED AT THE DESIGNATED EXCAVATION DEPTH. THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND WITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION BE FILLED WITH CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION.
4. ANY EXCAVATION OVER THE REQUIRED DEPTH SHALL BE FILLED WITH EITHER MECHANICALLY COMPACTED GRANULAR MATERIAL OF CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. STONE, IF USED, SHALL NOT BE USED AS COMPILING CONCRETE THICKNESS.
5. AFTER COMPLETION OF THE FOUNDATION AND OTHER CONSTRUCTION BELOW GRADE AND BEFORE BACK FILLING, ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH.
6. BACK FILL SHALL BE:
 - APPROVED MATERIALS CONSISTING OF EARTH, LOAM, SANDY CLAY, SAND, GRAVEL, OR SOFT SHALE;
 - FREE FROM CLODS OR STONES OVER 2 1/2" MAXIMUM DIMENSIONS;
 - IN LAYERS AND COMPACTED.
7. SITE FILL MATERIAL AND FOUNDATION BACK FILL SHALL BE PLACED IN LAYERS, MAXIMUM 6" DEEP BEFORE COMPACTION. EACH LAYER SHALL BE SPRINKLED IF REQUIRED AND COMPACTED BY HAND OPERATED OR MACHINE TAMPERS TO 95% OF MAXIMUM DENSITY, AT THE OPTIMUM MOISTURE CONTENT 2% AS DETERMINED BY ASTM DESIGNATION D-698, UNLESS OTHERWISE APPROVED. SUCH BACK FILL SHALL NOT BE PLACED BEFORE 3 DAYS AFTER PLACEMENT OF CONCRETE.
8. THE FOUNDATION AREA SHALL BE GRADED TO PROVIDE WATER RUNOFF AND PREVENT WATER FROM STANDING, THE FINAL GRADE SHALL SLOPE AWAY IN ALL DIRECTIONS FROM THE FOUNDATION AND SHALL THEN BE COVERED WITH 4" DEEP COMPACTED STONE OR GRAVEL.
9. CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL CITY, COUNTY AND STATE CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE SUCH MEASURES AS SILT FENCES, STRAW BALE SEDIMENT BARRIERS AND CHECK DAMS.
10. FILL PREPARATION: REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PLACING FILLS. PLOW STRIP OR BREAK UP SLOPED SURFACES STEEPER THAT 1 VERTICAL TO 4 HORIZONTAL SO FILL MATERIAL WILL BOND WITH EXISTING SURFACE. WHEN SUBGRADE OR EXISTING GROUND SURFACE TO RECEIVE FILL HAS A DENSITY LESS THAN THAT REQUIRED FOR FILL, BREAK UP GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE-CONDITION OR AERATE SOIL AND RECOMPACT TO REQUIRED DENSITY.
11. REPLACE THE EXISTING WEARING SURFACE ON AREAS, WHICH HAVE BEEN DAMAGED OR REMOVED DURING CONSTRUCTION OPERATIONS. SURFACE SHALL BE REPLACE TO MATCH EXISTING ADJACENT SURFACING AND SHALL BE OF THE SAME THICKNESS. NEW SURFACE SHALL BE FREE FROM CORRUGATIONS AND WAVES. EXISTING SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED IF INJURIOUS AMOUNTS OF EARTH, ORGANIC MATERIAL, OF OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE, FURNISH ALL ADDITIONAL RESURFACING MATERIAL AS REQUIRED. BEFORE SURFACING IS REPLACED, SUBGRADE SHALL BE THOROUGHLY COMPACTED. DEPRESSIONS IN THE SUBGRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. SURFACING SHALL NOT BE USED FOR FILLING DEPRESSIONS IN THE SUBGRADE.
12. PROTECT EXISTING SURFACING AND SUBGRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING OR OTHER SUITABLE MATERIALS DESIGNED TO SPREAD EQUIPMENT LOADS WILL OPERATE. REPAIR DAMAGE TO EXISTING GRAVEL SURFACING OR SUBGRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTOR'S OPERATIONS. DAMAGED GRAVEL SURFACING SHALL BE RESTORED TO MATCH THE ADJACENT UNDAMAGED GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS.
13. DAMAGE TO EXISTING STRUCTURES AND UTILITIES RESULTING FROM CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED / REPLACED TO OWNER'S SATISFACTION AT CONTRACTOR'S EXPENSE.
14. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH PROPERTY OWNER SO AS TO AVOID INTERRUPTIONS TO PROPERTY OWNER'S OPERATIONS.
15. ENSURE POSITIVE DRAINAGE DURING AND AFTER COMPLETION OF CONSTRUCTION.
16. RIPRAP SHALL BE CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY AND FREE OF ANY DETRIMENTAL QUANTITY OF SORT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI OR OTHER DELETERIOUS SUBSTANCE.

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PORTLAND ME HEAD END
LOCATION CODE: 320632
1531 CONGRESS STREET
PORTLAND, ME 04102

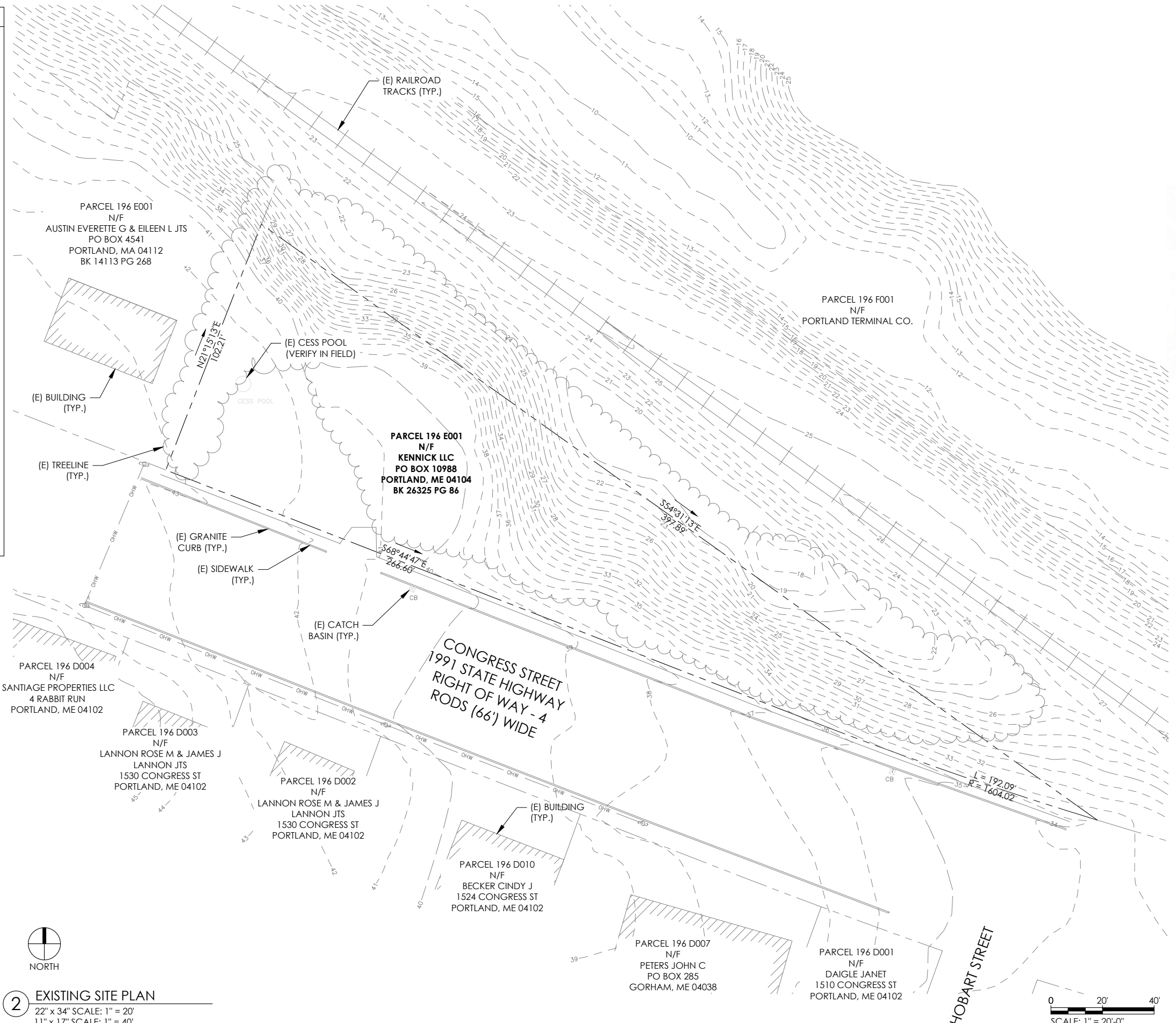
NO.	DESCRIPTION	DATE
1	FOR SUBMITTAL	10/18/18
2	FOR SUBMITTAL	11/20/18
3	100% SUBMISSION	11/30/18
4	EOS REVISIONS	01/11/19
NETWORK COMPLIANCE SUBMITTALS		DATE
100% SUBMISSION		DATE
RE-SUBMISSION (IF REQUIRED)		DATE

PROJECT #: 50002925
CAD DWG FILE #: 50000012
DESIGNED BY: MFT
DRAWN BY: SK
CHECKED BY: BBR
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GENERAL NOTES

1. FIELD SURVEY DATE: AUGUST 26, 2016
2. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988.
3. HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983 (NAD83) ME WEST STATE PLANE
4. CENTER OF PROPOSED BUILDING:
LAT 43° 39' 33.04" N
LON 70° 18' 12.57" W
GROUND EL= 41'
5. OWNER: KENNICK LLC
P.O. BOX 10988
PORTLAND ME 04104
6. SITE NAME: PORTLAND ME HEAD END
7. SITE NUMBER: N/A
8. SITE ADDRESS: 1531 CONGRESS ST.
PORTLAND, ME 04102
9. ABUTTERS INFORMATION TAKEN FROM TOWN TAX DATA
10. JURISDICTION: CITY OF PORTLAND, ME
11. TAX ID: PARCEL 196 E001
12. DEED REFERENCE: BOOK 26325 PG 86
13. PLAT REFERENCE: 2008 BH2M SURVEY
14. GRID NORTH BASED ON GPS
15. ELEVATIONS AND COORDINATES FROM GPS LOCATIONS.
16. ALL UNDERGROUND UTILITY INFORMATION PRESENTED HEREON WAS DETERMINED FROM SURFACE EVIDENCE AND PLANS OF RECORD. ALL UNDERGROUND UTILITIES SHOULD BE LOCATED IN THE FIELD PRIOR TO COMMENCEMENT OF ALL SITE WORK. CALL DIGSAFE 1(800) 322-4844 A MINIMUM OF 72 HOURS PRIOR TO PLANNED ACTIVITY.
17. ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY MAPS, THE PROPOSED TOWER ON THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS ZONE X, NOT WITHIN THE 100 YEAR FLOOD BOUNDARY. COMMUNITY PANEL NO. 2300510013B, DATED 7/17/1986
18. PROPERTY LINE INFORMATION IS COMPILED FROM DEEDS AND PLANS OF RECORD AND IS NOT THE RESULT OF A FULL BOUNDARY SURVEY.
19. BEARING SYSTEM OF THIS PLAN IS BASED ON GRID NORTH.

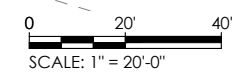


- LOCUS PROPERTY LINE
- EXISTING PROPERTY LINE
- EXISTING ROAD
- - - - - EXISTING CONTOUR
- - - - - EXISTING TRAIN TRACKS
- ~ ~ ~ ~ ~ EXISTING TREELINE
- O H W - O H W - EXISTING OVERHEAD WIRE
- ⊙ EXISTING UTILITY POLE



1 CIVIL LINETYPES & SYMBOLS
N/A

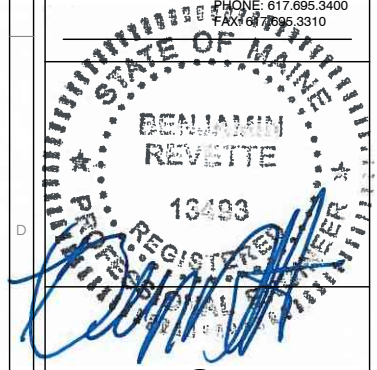
2 EXISTING SITE PLAN
22" x 34" SCALE: 1" = 20'
11" x 17" SCALE: 1" = 40'



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verizon
PORTLAND ME HEAD END
LOCATION CODE: 320632
1531 CONGRESS STREET
PORTLAND, ME 04102

NO.	DESCRIPTION	DATE
1	FOR SUBMITTAL	10/18/18
2	FOR SUBMITTAL	11/20/18
3	100% SUBMISSION	11/30/18
4	EOS REVISIONS	01/11/19

NETWORK COMPLIANCE SUBMITTALS	DATE
100% SUBMISSION	DATE
RE-SUBMISSION (IF REQUIRED)	DATE

PROJECT #: S0002925
CAD DWG FILE #: S0000012
DESIGNED BY: MFT
DRAWN BY: SK
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EXISTING SITE PLAN

C100

GENERAL NOTES

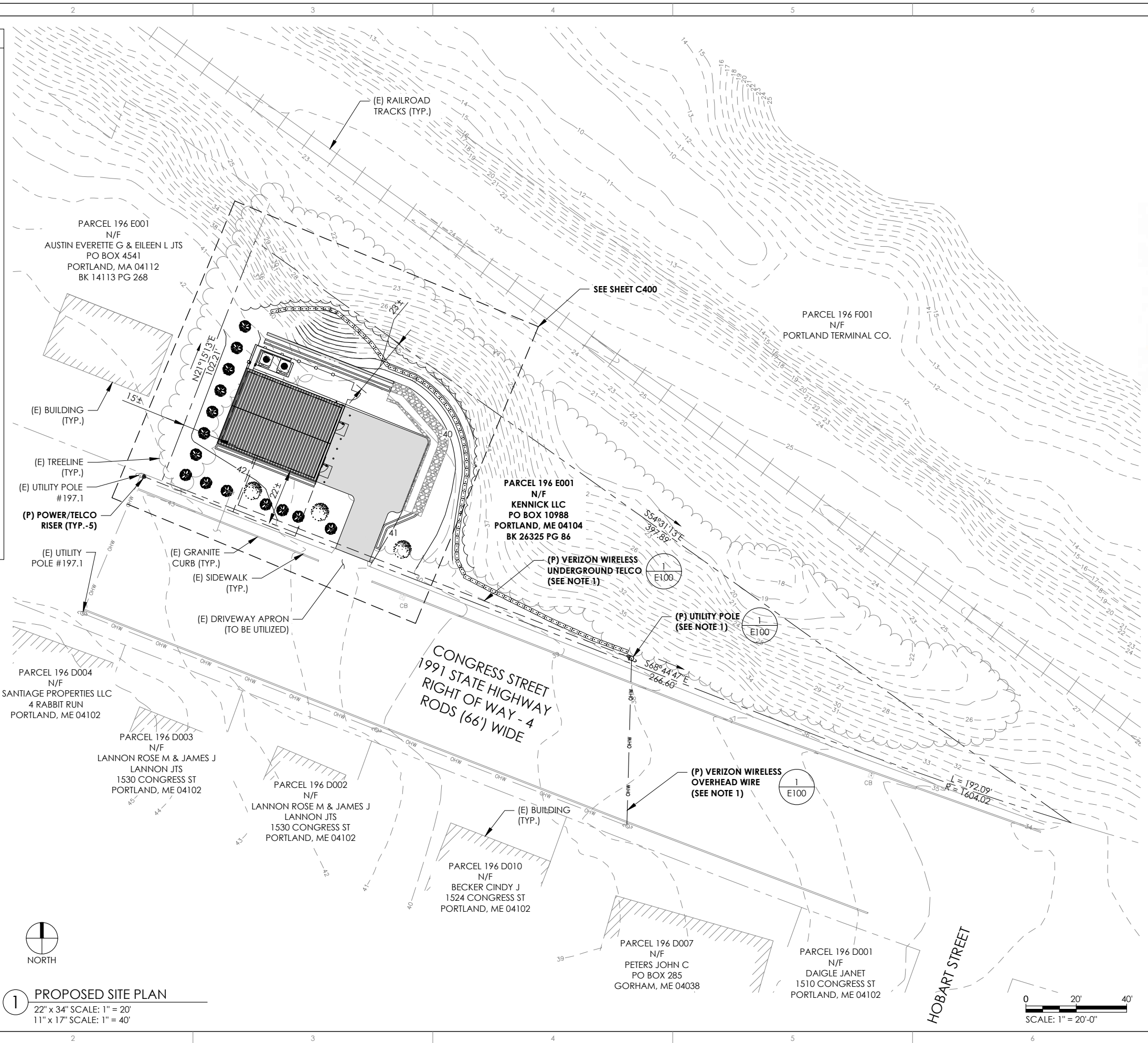
- FIELD SURVEY DATE: AUGUST 26, 2016
- VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988.
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LAT 43° 39' 33.04" N
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P.O. BOX 10988
PORTLAND ME 04104
- SITE NAME: PORTLAND ME HEAD END
- SITE NUMBER: N/A
- SITE ADDRESS: 1531 CONGRESS ST.
PORTLAND, ME 04102
- ABUTTERS INFORMATION TAKEN FROM TOWN TAX DATA
- JURISDICTION: CITY OF PORTLAND, ME
- TAX ID: PARCEL 196 E001
- DEED REFERENCE: BOOK 26325 PG 86
- PLAT REFERENCE: 2008 BH2M SURVEY
- GRID NORTH BASED ON GPS
- ELEVATIONS AND COORDINATES FROM GPS LOCATIONS.
- ALL UNDERGROUND UTILITY INFORMATION PRESENTED HEREON WAS DETERMINED FROM SURFACE EVIDENCE AND PLANS OF RECORD. ALL UNDERGROUND UTILITIES SHOULD BE LOCATED IN THE FIELD PRIOR TO COMMENCEMENT OF ALL SITE WORK. CALL DIGSAFE 1(800) 322-4844 A MINIMUM OF 72 HOURS PRIOR TO PLANNED ACTIVITY.
- ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY MAPS, THE PROPOSED TOWER ON THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS ZONE X. NOT WITHIN THE 100 YEAR FLOOD BOUNDARY. COMMUNITY PANEL NO. 2300510013B, DATED 7/17/1986
- PROPERTY LINE INFORMATION IS COMPILED FROM DEEDS AND PLANS OF RECORD AND IS NOT THE RESULT OF A FULL BOUNDARY SURVEY.
- BEARING SYSTEM OF THIS PLAN IS BASED ON GRID NORTH.

ZONING INFORMATION

DISTRICT:	REQUIRED:	PROPOSED:
R5 - RESIDENTIAL		
MIN. AREA:	6,000 S.F.	20,301 S.F.
MAX HEIGHT:	35'	20'-2"
MIN. FRONTAGE:	50'	N/C
MIN. DEPTH:	N/A	N/A
MIN. FRONT YARD DEPTH:	20'	22'
MIN. SIDE YARD DEPTH: (1 STORY STRUCTURE)	8'	15'
MIN. REAR YARD DEPTH:	20'	23'
MAX LOT COVERAGE:	40%	14.56%
N/A- NOT APPLICABLE, N/C - NO CHANGE		

NOTES:

- UTILITY SERVICE & ROUTING TO BE COORDINATED WITH UTILITY COMPANIES.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES WITHIN CONSTRUCTION LIMITS PRIOR TO CONSTRUCTION.
- ALL WORK WITHIN THE CITY OF PORTLAND RIGHT-OF-WAY SHALL BE COMPLETED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS.
- CONTRACTOR TO BE COGNIZANT OF NEIGHBORING PROPERTIES AND MINIMIZE NOISE AND DISTURBANCES TO THE EXTENT POSSIBLE. ANY DAMAGE TO ADJACENT PROPERTIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- SEE GEOTECHNICAL REPORT AND NOTES ON SOO1 FOR SITE GROUND PREPARATION INFORMATION.
- EXISTING BUILDING FOUNDATION, CESS POOL, AND UNDERGROUND UTILITIES. SEE RESPONSIBILITY MATRIX ON G002.



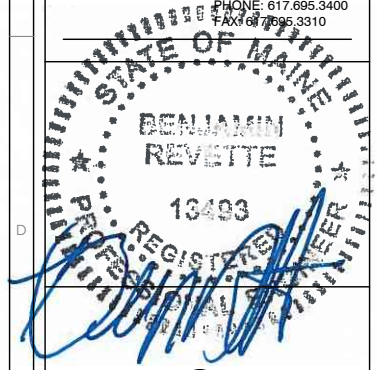
1 PROPOSED SITE PLAN
22" x 34" SCALE: 1" = 20'
11" x 17" SCALE: 1" = 40'



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LOCATION CODE: 320632
1531 CONGRESS STREET
PORTLAND, ME 04102

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2	FOR SUBMITTAL	11/20/18
3	100% SUBMISSION	11/30/18
4	EOS REVISIONS	01/11/19

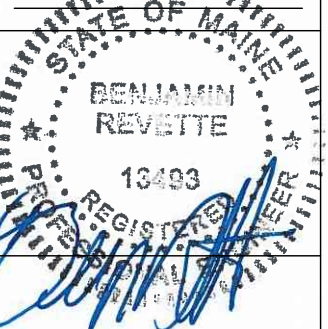
NETWORK COMPLIANCE SUBMITTALS	DATE
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RE-SUBMISSION (IF REQUIRED)	DATE

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PROPOSED SITE PLAN

C101



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NETWORK COMPLIANCE SUBMITTALS		DATE
100% SUBMISSION		DATE
RE-SUBMISSION (IF REQUIRED)		DATE

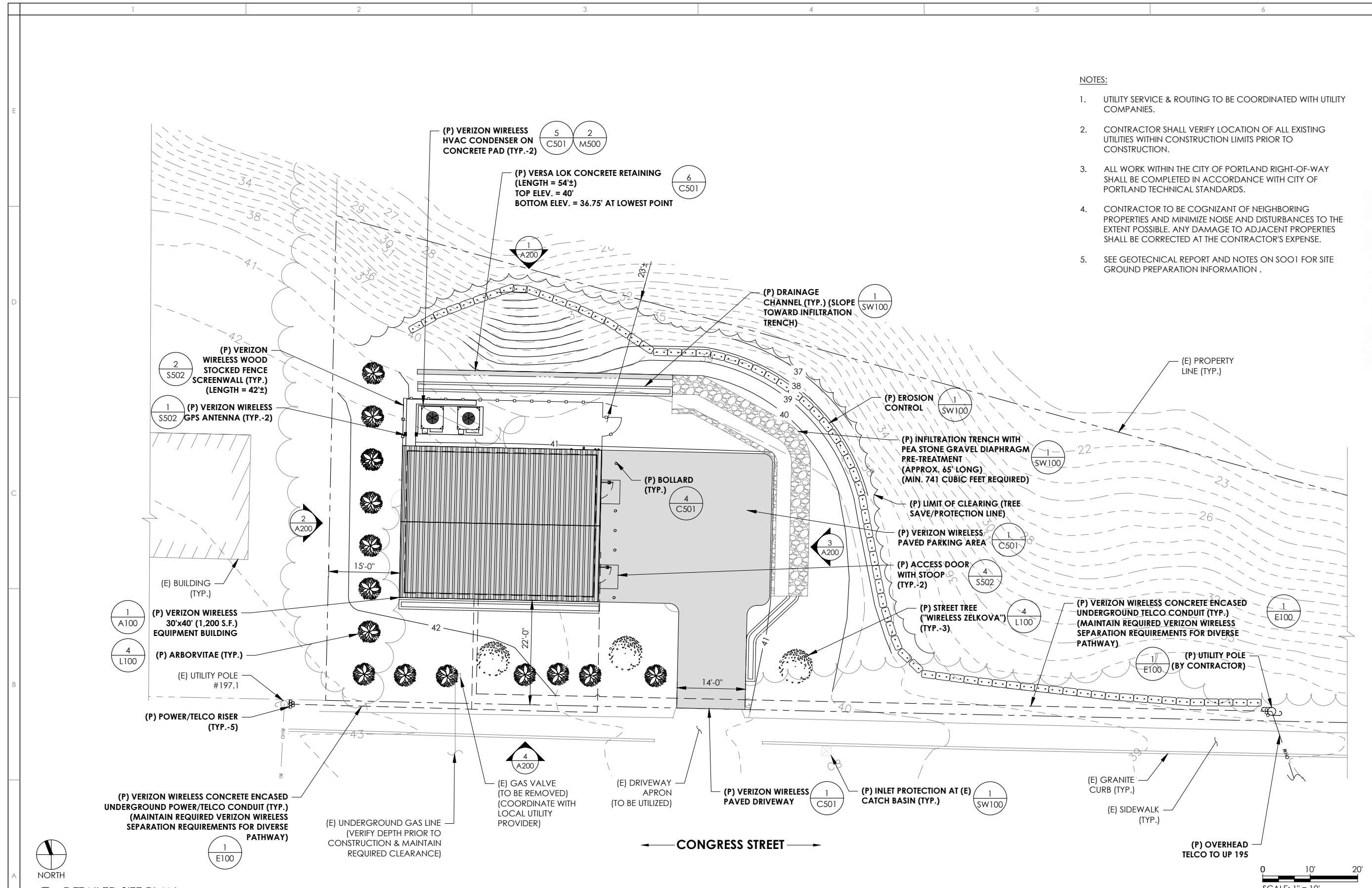
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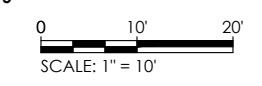
DETAILED SITE PLAN

C400

- NOTES:**
- UTILITY SERVICE & ROUTING TO BE COORDINATED WITH UTILITY COMPANIES.
 - CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES WITHIN CONSTRUCTION LIMITS PRIOR TO CONSTRUCTION.
 - ALL WORK WITHIN THE CITY OF PORTLAND RIGHT-OF-WAY SHALL BE COMPLETED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS.
 - CONTRACTOR TO BE COGNIZANT OF NEIGHBORING PROPERTIES AND MINIMIZE NOISE AND DISTURBANCES TO THE EXTENT POSSIBLE. ANY DAMAGE TO ADJACENT PROPERTIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
 - SEE GEOTECHNICAL REPORT AND NOTES ON SOO1 FOR SITE GROUND PREPARATION INFORMATION.



1 DETAILED SITE PLAN
22' x 34" SCALE: 1" = 10'
11" x 17" SCALE: 1" = 20'





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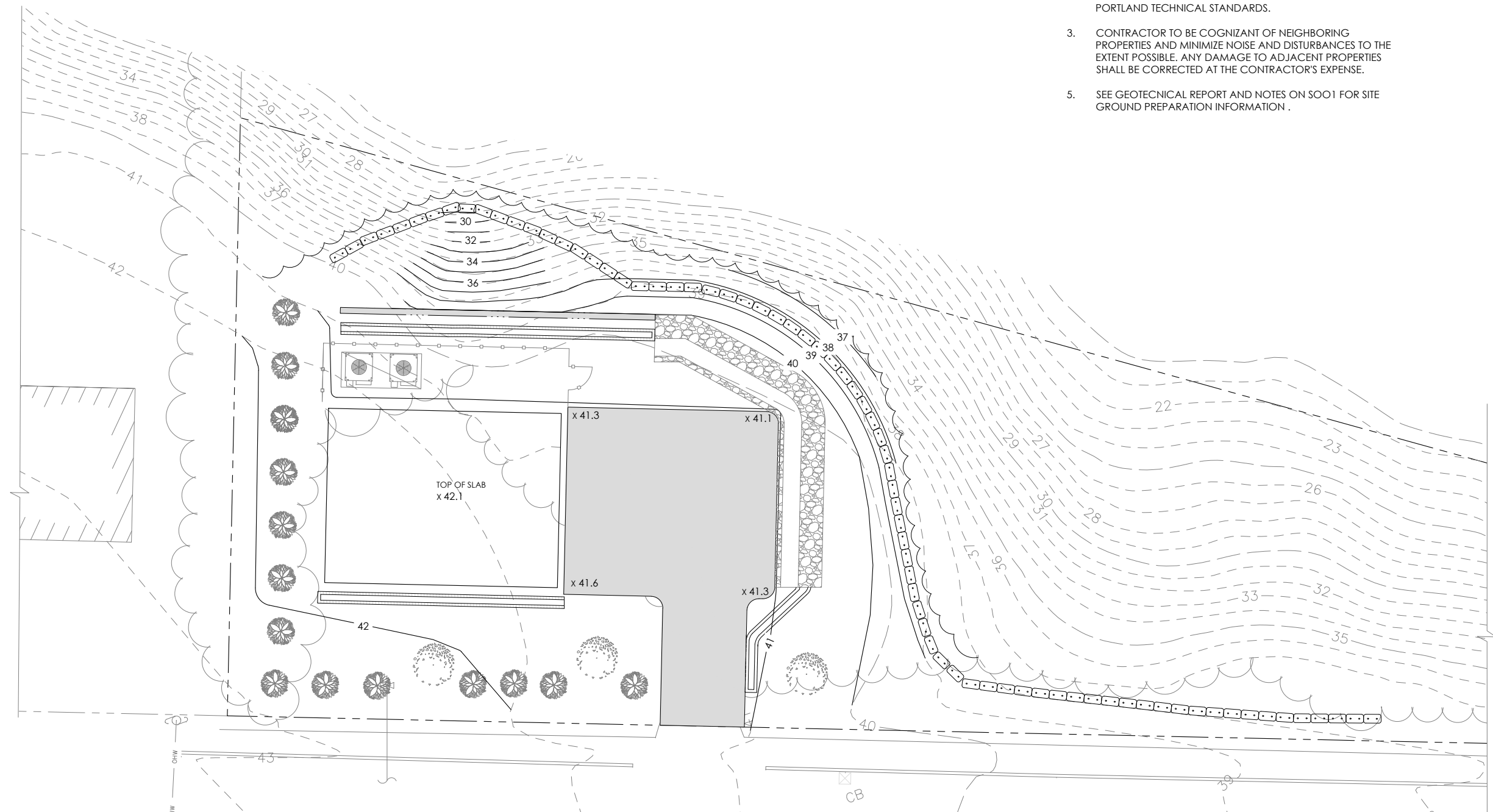
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NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES WITHIN CONSTRUCTION LIMITS PRIOR TO START OF EARTH WORK.
2. ALL WORK WITHIN THE CITY OF PORTLAND RIGHT-OF-WAY SHALL BE COMPLETED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS.
3. CONTRACTOR TO BE COGNIZANT OF NEIGHBORING PROPERTIES AND MINIMIZE NOISE AND DISTURBANCES TO THE EXTENT POSSIBLE. ANY DAMAGE TO ADJACENT PROPERTIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
5. SEE GEOTECHNICAL REPORT AND NOTES ON SOO1 FOR SITE GROUND PREPARATION INFORMATION .



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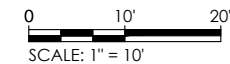
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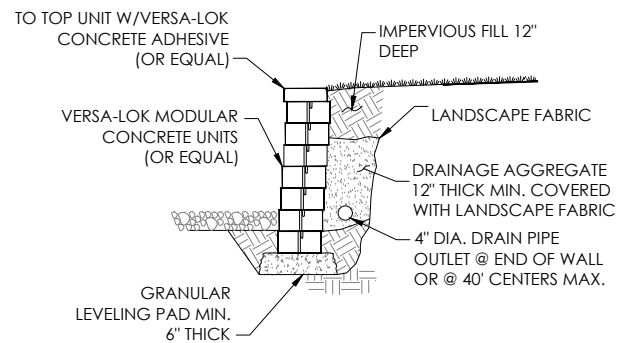
GRADING PLAN

C401



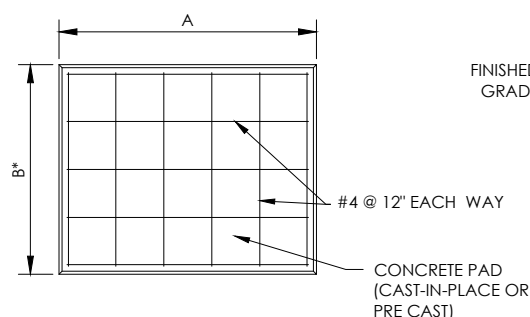
1 GRADING PLAN
22" x 34" SCALE: 1" = 10'
11" x 17" SCALE: 1" = 20'





NOTE:

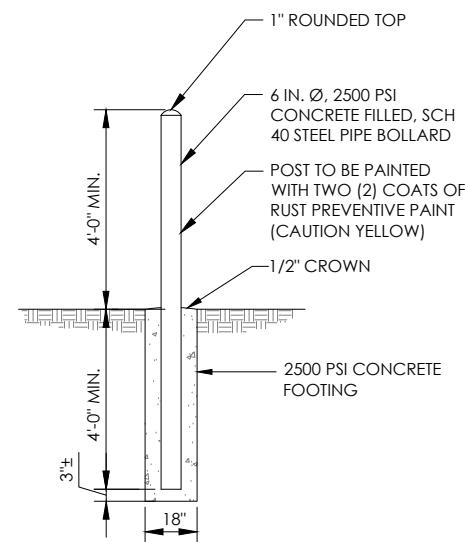
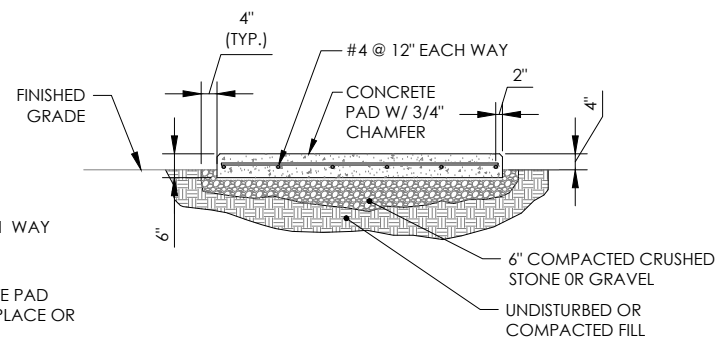
1. RETAINING WALL SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES. ELEVATIONS AND HEIGHTS SHALL BE AS PER GRADING PROPOSED ON DETAILED SITE PLAN.
2. PROVIDE SHOP DRAWINGS FOR FINAL RETAINING WALL DESIGN.



NOTES:

1. USE GALVANIZED HILTI EXPANSION ANCHORS OR, APPROVED EQUAL, FOR EQUIPMENT ANCHORAGE.
2. VERIFY THE SIZE OF THE CONDENSER UNITS WITH CORRESPONDING SUPPLIER PRIOR TO PAD PREPARATION.
3. FOR SIZE AND LOCATION OF ANCHORS AND OTHER REQUIREMENTS, SEE EQUIPMENT VENDOR DRAWINGS.

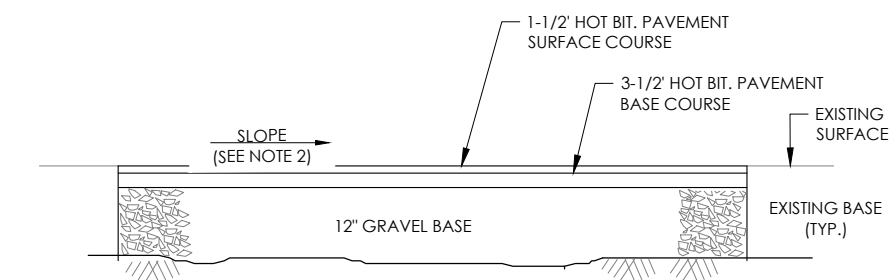
CONDENSERS		
A	B	F (THICKNESS)
14	6'	6"



6 RETAINING WALL
N.T.S.

5 OUTDOOR PAD FOR MINOR EQUIPMENT
N.T.S.

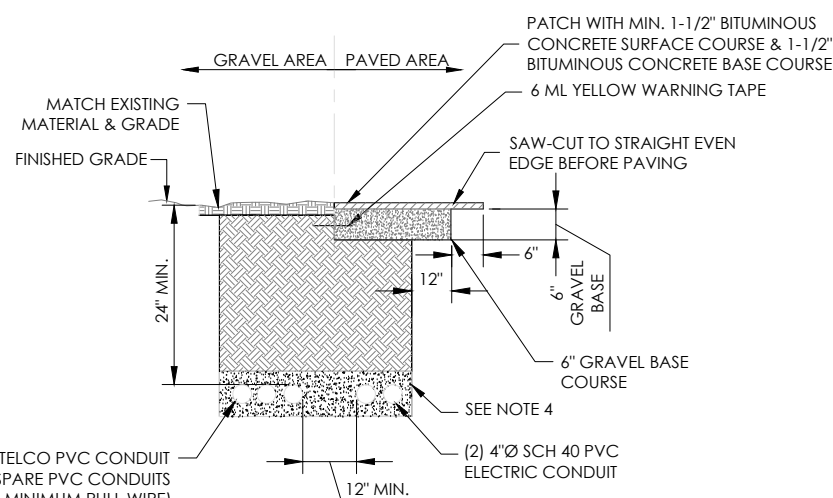
4 BOLLARD
N.T.S.



NOTE:

1. THE EXISTING DRIVEWAY APRON IS TO BE USED FOR THIS ACCESS TO THE NEW DRIVEWAY. THE NEW PAVED DRIVEWAY/PARKING AREA SHALL BE COMPLETED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS.
2. SEE SHEET SW-1 FOR SLOPE DIRECTION.

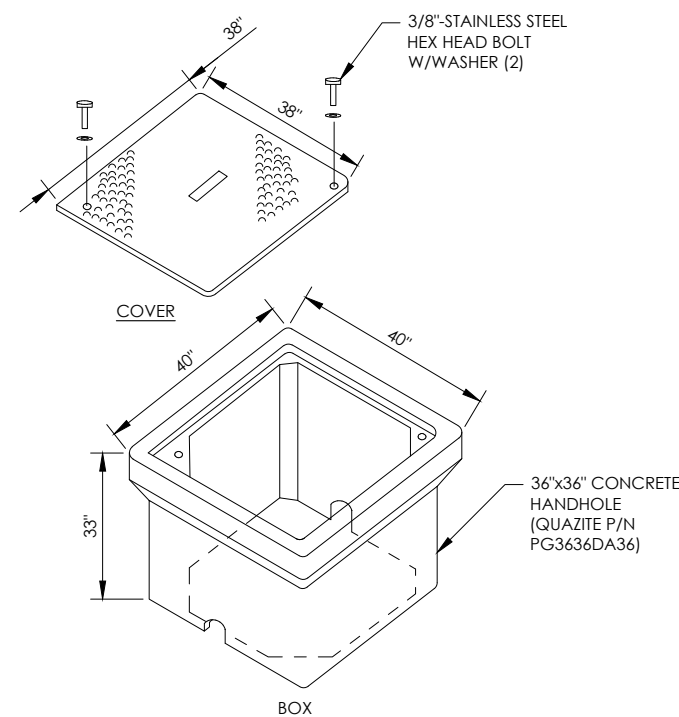
1 PAVEMENT DETAIL
N.T.S.



NOTES:

1. IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL.
2. IF REQUIRED PROVIDE CLEAN, COMPACTIBLE MATERIAL. COMPACT IN 8" LIFTS. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING.
3. IF CURRENT AS-BUILT DRAWINGS ARE NOT AVAILABLE CONTRACTOR SHALL HAND DIG U/G TRENCHING.
4. CONCRETE ENCASE CONDUIT ALL CONDUITS.
5. VERIFY QUANTITY AND SIZE OF PROPOSED CONDUITS WITH VERIZON CM PRIOR TO CONSTRUCTION.
6. MAINTAIN REQUIRED VERIZON WIRELESS SEPARATION REQUIREMENTS FOR DIVERSE PATHWAY.

2 JOINT SERVICE TRENCH BURIED CONDUIT (ELECTRIC/TELEPHONE)
N.T.S.



NOTES:

1. INSTALL CONCRETE HANDHOLE BY SITE CONDITIONS & PER THE NEC.
2. PROVIDE SEPARATE HAND HOLES FOR POWER & TELCO.
3. ALL HANDHOLES IN ACCESS ROAD SHALL BE RATED FOR VEHICULAR TRAVEL.

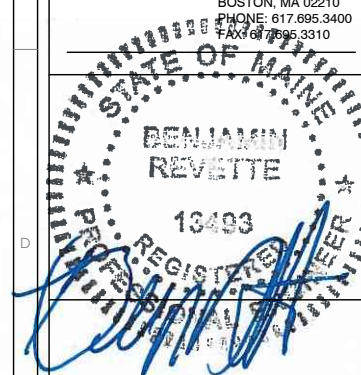
3 HANDHOLE DETAIL
N.T.S.



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CIVIL DETAILS

C501

ARCHITECTURAL GENERAL NOTES:

1. COORDINATION:
 - A. EACH DIVISION SHALL COMPLY WITH THE G001 PROJECT GENERAL NOTES AS IF CONTAINED HEREIN.
 - B. SUBMIT COORDINATION DRAWINGS TO THE CONTRACTOR FOR REVIEW AND APPROVAL, PRIOR TO COMMENCEMENT OF WORK. EACH DIVISION IS RESPONSIBLE FOR THE COORDINATION OF ALL RELATED DIVISIONS WHOSE WORK INTERFACES WITH THEIR OWN.
2. DO NOT SCALE DRAWINGS: THE CONTRACTORS SHALL USE DIMENSIONS SHOWN ON THE DRAWINGS AND ACTUAL FIELD MEASUREMENT. NOTIFY THE AE PROJECT MANAGER IF ANY DISCREPANCIES ARE FOUND PRIOR TO PROCEEDING WITH WORK.
3. DIMENSIONS:
 - A. THOROUGHLY REVIEW ALL PLANS AND SPECIFICATIONS. VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE STARTING WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
 - B. EXTERIOR DIMENSIONS ARE TO FACE OF EXTERIOR WALLS.
 - C. DIMENSIONS ON PLANS ARE TO FINISH FACE OR CENTERLINE OF COLUMNS UNLESS NOTED OTHERWISE.
 - D. DIMENSIONS TO DOOR OPENINGS ARE TO R.O. IN MASONRY & CONCRETE AND TO JAMB OPENING IN STUDWALLS. VERIFY DOOR SIZE W/ SCHEDULE.
4. EXITS: ALL EXIT DOORS SHALL BE ABLE TO BE OPENED FROM THE INSIDE WITHOUT USE OF KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. ALL EXIT SIGNS SHALL HAVE LETTERS SIX (6) INCHES HIGH MINIMUM, AND SHALL CONFORM WITH APPLICABLE CODES. REFER TO FLOOR PLANS FOR EXIT SIGN LOCATIONS. COORDINATE POWER W/ DIVISION 26.
5. LOUVERS AND WINDOWS: INSTALL PER MANUFACTURES PRINTED INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS. WHERE DETAILED, PROVIDE ALL ADDITIONAL MATERIALS SHOWN OR NOTED. VERIFY ALL OPENING SIZES, BOTH NEW AND EXISTING PRIOR TO ORDERING. PROVIDE SPACE FOR FLASHING AS DETAILED. PROVIDE GALVANIC ISOLATION BETWEEN DISSIMILAR MATERIALS.
6. FINISHES:
 - A. PAINT ALL PAINTABLE ITEMS ATTACHED TO WALLS, CEILING, OR COLUMNS EXCEPT DUCTWORK AND FLEXIBLE AND/OR MOVABLE PARTS. CONCEAL ALL PIPE AND CONDUIT WHERE WALL FURRING IS PROVIDED. PRIME ALL MATERIALS WITH MATERIAL COMPATIBLE WITH SUBSTRATE. SEE FINISH SCHEDULE AND FINISH NOTES.
 - B. OFFSET STUDS WHERE REQUIRED, SO THE FINISH WALL SURFACES WILL BE FLUSH.
 - C. PROVIDE GALVANIC ISOLATION BETWEEN DISSIMILAR METALS.
 - D. CEILING SUSPENSION SYSTEMS SHALL BE STABILIZED AGAINST LATERAL MOVEMENT IN ACCORDANCE WITH THE REQUIREMENTS OF THE IBC, GOVERNING EDITION, SEE S500.
 - E. CEILING HEIGHTS ARE FROM CONCRETE FLOOR SLAB TO GRID AT ACOUSTICAL TILE CEILING, OR FINISH O HARD CEILING.
 - F. ALL INTERIOR WOOD BLOCKING SHALL BE FIRE TREATED.
7. WEATHERPROOFING:
 - A. ALL EXTERIOR WALL OPENINGS, FLASHING, COUNTERFLASHING AND EXPANSION JOINTS SHALL BE CONSTRUCTED IN SUCH A MANNER AS TO MAKE IT WEATHERPROOF.
 - B. THE JUNCTION OF THE ROOF AND VERTICAL SURFACES SHALL BE FLASHED AND COUNTERFLASHED IN A MANNER TO MAKE THEM WEATHERPROOF.
 - C. PROVIDE FOR ALL TEMPORARY WEATHERPROOFING DURING THE COURSE OF WORK TO ASSURE PROTECTION AND FULL OPERATION OF THE EXISTING FACILITY.
8. BUILDING AND EQUIPMENT:
 - A. MAINTAIN AREAS FREE OF DEBRIS ACCUMULATION. KEEP WORK AREAS NEAT AND ORDERLY AS MUCH AS REASONABLY POSSIBLE. MEANS OF EGRESS AREAS MAINTAINED FREE AND CLEAR AT ALL TIMES.
 - B. CONTRACTOR TO REMOVE ALL MATERIALS NOT RELATED TO THE FINISHED PRODUCT FROM THE SITE. DO NOT BURY ON SITE.
9. BLOCKING: PROVIDE SOLID BLOCKING FOR ALL WALL MOUNTED FIXTURES, DEVICES & EQUIPMENT. COORD. W/ ALL DIVISIONS OF THE SPECIFICATIONS TO VERIFY LOCATION REQUIRED.
10. FIRESTOPPING: TO BE PROVIDED BY SINGLE CONTRACTOR FOR ALL TRADES USING A SINGLE MANUFACTURER'S PRODUCTS (3M OR HILTI).
11. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND DETERMINE THE EXACT EXTENT OF WORK, COORDINATION, DEMOLITION, TEMPORARY CONSTRUCTION, TEMPORARY FACILITIES, UTILITIES, ETC. NECESSARY TO COMPLETE THIS PROJECT AS INDICATED IN THE CONTRACT DOCUMENTS.
12. CONTRACTOR SHALL PROVIDE SEISMIC BRACING, AND SUPPORT ALL EQUIPMENT AND MATERIALS PROVIDED.
13. ALL RECESSED PANELS MOUNTED IN FIRE RATED WALLS SHALL BE OF FIRE RATED CONSTRUCTION TO MATCH RATING OF WALL. (i.e. TRAP PRIMERS, F.E. CABINETS, etc.)

- NORTH ARROW
- BUILDING SECTION 1 SHEET A300
- WALL SECTION 2 SHEET A300
- EXTERIOR ELEVATION 3 SHEET A300
- INTERIOR ELEVATION 4 SHEET A300
- FIRE EXTINGUISHER

- KEY NOTE NUMBER
- WALL TYPE
- STRUCTURAL COLUMN GRID LINES AND INDICATOR
- DATUM OR WORKING POINT

5 ARCHITECTURAL SYMBOLS
N/A

- EXISTING SANITARY
- EXISTING WOOD FENCE
- EXISTING UTILITY OVERHEAD
- EXISTING WATER LINE
- EXISTING CHAIN LINK FENCE
- PROPERTY LINE
- SITE SETBACKS
- ITEM TO BE DEMOLISHED

4 LINE TYPES
N/A

- FIRE LANE
- OPEN SPACE
- ICE BRIDGE
- CONCRETE
- ASPHALT
- GRATING
- LANDSCAPING
- ROCK SURFACING

3 MATERIALS
N/A

- EXISTING WALL
- WALL TO BE REMOVED
- CONCRETE WALL
- METAL WALL
- CMU WALL
- BRICK WALL

2 WALL LEGEND
N/A

- EXIT LIGHT
- SURFACE MOUNT 1x4 FIXTURE
- WALL MOUNTED FIXTURE

1 LIGHTING LEGEND
N/A



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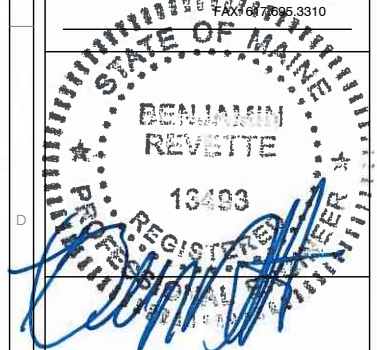
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GENERAL NOTES & LEGEND

A001



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PROPOSED ROOM PLAN

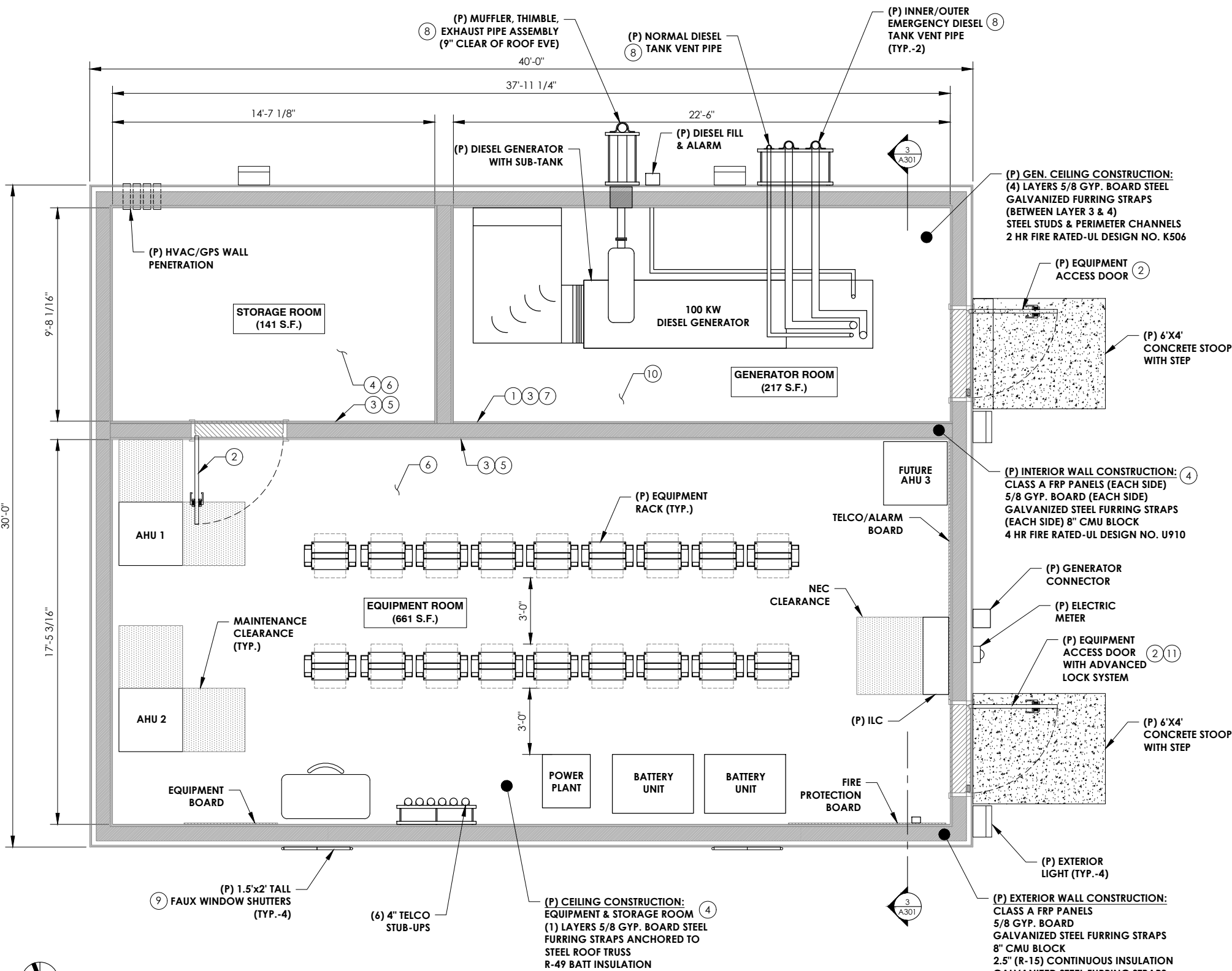
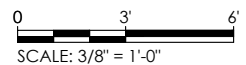
A100

KEY NOTES:

- SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED D FIRE CODE APPROVED MATERIALS.
- THE DOOR SHALL BE A STEEL CRAFT STEEL UNIT, MODEL L18, OR APPROVED EQUAL, 4'X7'. DOORS SHALL BE INSULATED AND WEATHER-STRIPPED, WITH ALUMINUM THRESHOLD. DOOR SHALL HAVE STANLEY 4 1/2"X4 1/2" BALL BEARING HINGES (PART #FBB179), AND UNICAN 1000 LOCKSET OR APPROVED EQUAL. THE DOOR SHALL BE SET IN A 16 GAUGE STEEL FRAME. BOTH THE DOOR AND FRAME SHALL BE FACTORY PAINTED AND SHALL HAVE A FIRE RATING OF 1 HOUR, MINIMUM. COORDINATE HARDWARE AND LOCK SET WITH VERIZON WIRELESS. PROVIDE PNEUMATIC DOOR CLOSING DEVICES AND WEATHER STRIPPING FOR ALL DOORS.
- WALLS SHALL HAVE A LEVEL 3 DRYWALL FINISH WITH CLASS A WHITE FRP PANELS MEETING ASTM-5319. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
- CEILINGS SHALL HAVE A LEVEL 4 DRYWALL FINISH. PRIME DRYWALL WITH ONE COAT OF WHITE LATEX PRIMER. FINISH WITH TWO COATS OF INTERIOR FLAT LATEX PAINT. PAINT SHALL BE BY SHERWIN WILLIAMS, BENJAMIN MOORE OR EQUAL.
- PROVIDE FS SS-W-40, TYPE II, 4" HIGH ROPPE VINYL COVE BASE, COLOR BLACK.
- FLOOR SHALL BE VINYL FLOORING, ASTM F1066 12"X12"X1/8" THICK, ARMSTRONG IMPERIAL TEXTURE TILE #51836.
- GENERATOR TO BE MOUNTED WITHIN A RAISED OVERFLOW CURB. FLOOR, CURB AND RESERVOIR TO HAVE COLOR GREY SANI-TRED WATERPROOF FLOOR COATING SYSTEM OR EQUAL.
- COORDINATE GENERATOR EXHAUST & VENTING REQUIREMENTS WITH MANUFACTURER. VENTS TO BE A MINIMUM OF 12'-0" AGL. EXHAUST SHALL BE 3'-0" ABOVE UPPER EAVE HEIGHT. PROVIDE MOUNTING HARDWARE AS REQUIRED.
- CONTRACTOR TO PROVIDE AND INSTALL BLACK HINGED ALUMINUM SHUTTERS HUNG IN THE CLOSED POSITION.
- GENERATOR ROOM TO HAVE CONTINUOUS FIRST COURSE OF CMU, INCLUDING AT DOOR OPENING TO CREATE DIESEL OVERFLOW CURB. FLOOR AND FIRST COURSE OF CMU BLOCK TO HAVE COLOR GREY SANI-TRED, 3 PART WATERPROOF FLOOR COATING SYSTEM.
- EXTERIOR DOORS TO BE FITTED WITH ADVANCED LOCKING SYSTEM CONSISTING OF:
 - YALE PUSH BAR ON INTERIOR DOOR SIDE.
 - YALE 691F ELECTRIFIED LEVER TRIM ON EXTERIOR SIDE.
 - ACU (ACCESS CONTROL UNIT). CONTROL WIRING IS THEM RUN TO BOTH ACCESS DOORS.

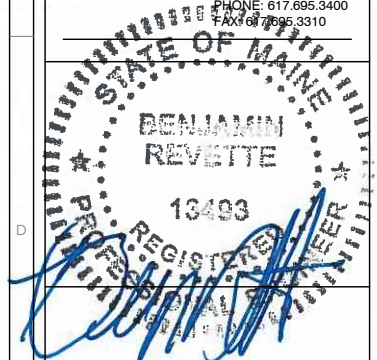
NOTE:

- SEE A301 FOR ADDITIONAL ARCHITECTURAL DETAILS.
- SEE E101 FOR ELECTRICAL PLAN.



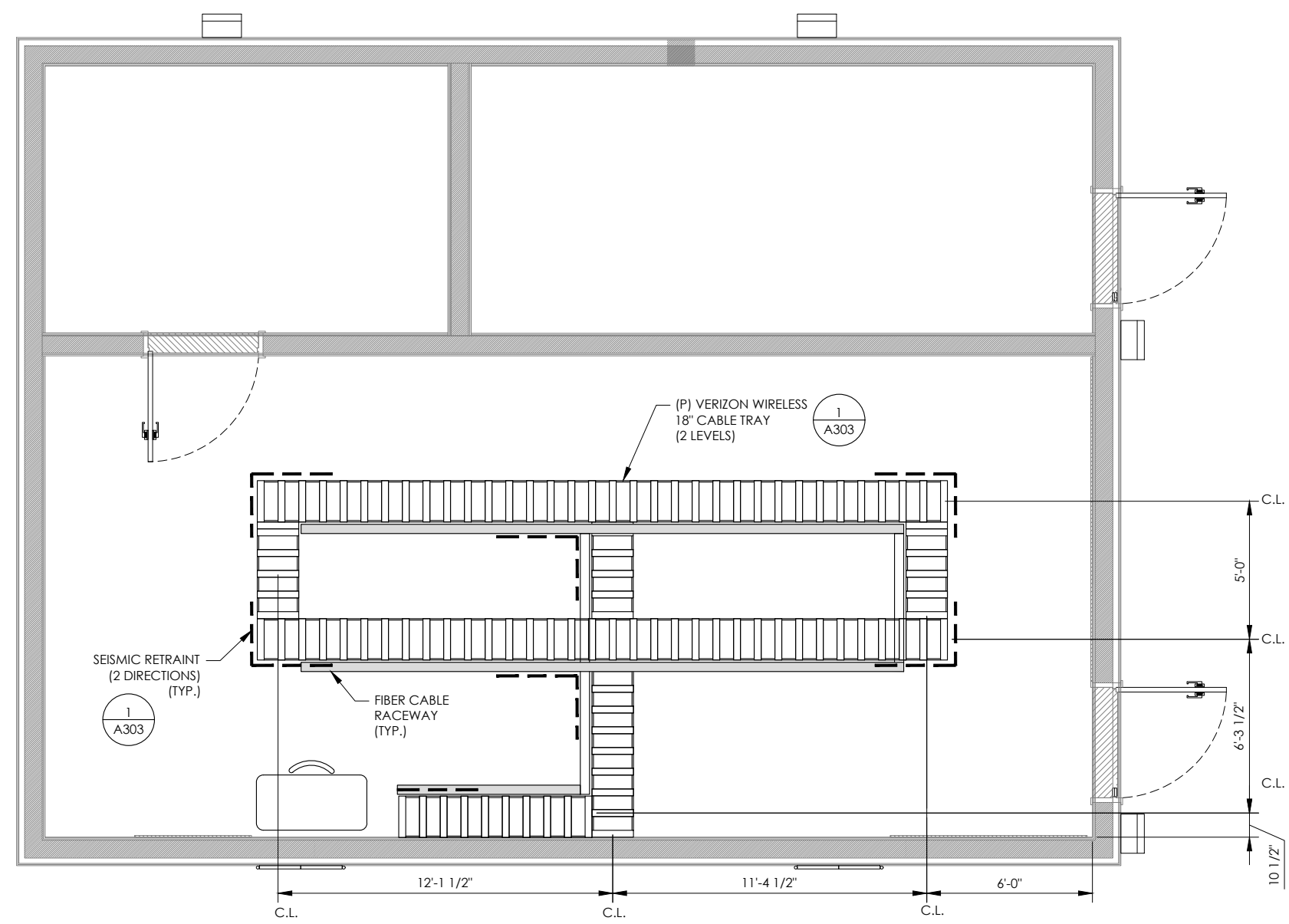
1 PROPOSED ROOM PLAN
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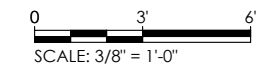


NOTE:

1. FIELD VERIFY CABLE TRAY LAYOUT WITH FINAL EQUIPMENT CONFIGURATION.
2. COORDINATE LAYOUT WITH LIGHTING INSTALLERS.
3. C.L. = CENTERLINE



1 REFLECTED CEILING CABLE TRAY PLAN
22" x 34" SCALE: 3/8" = 1'-0"
11" x 17" SCALE: 3/16" = 1'-0"



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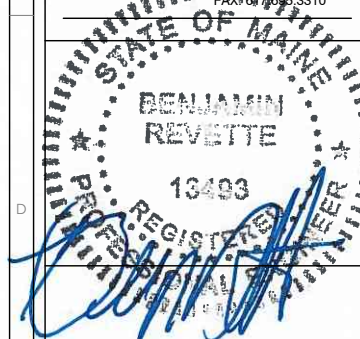
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PROPOSED CABLE TRAY PLAN

A102



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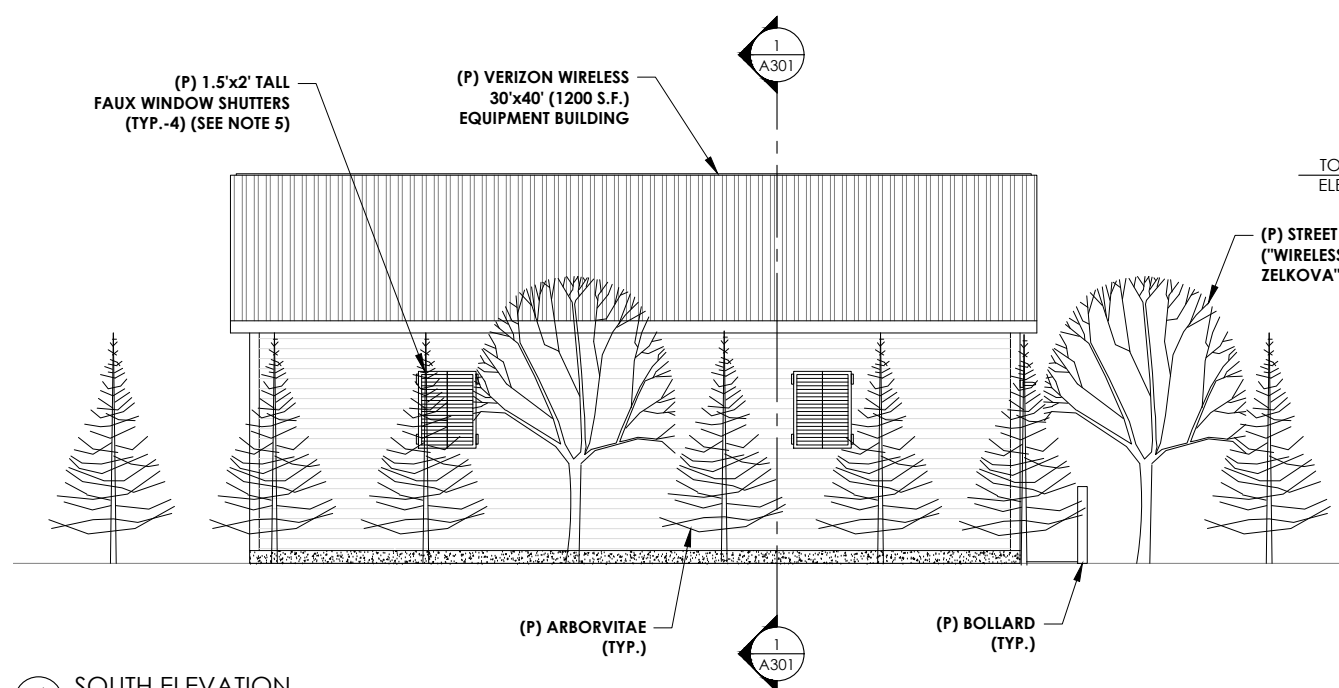
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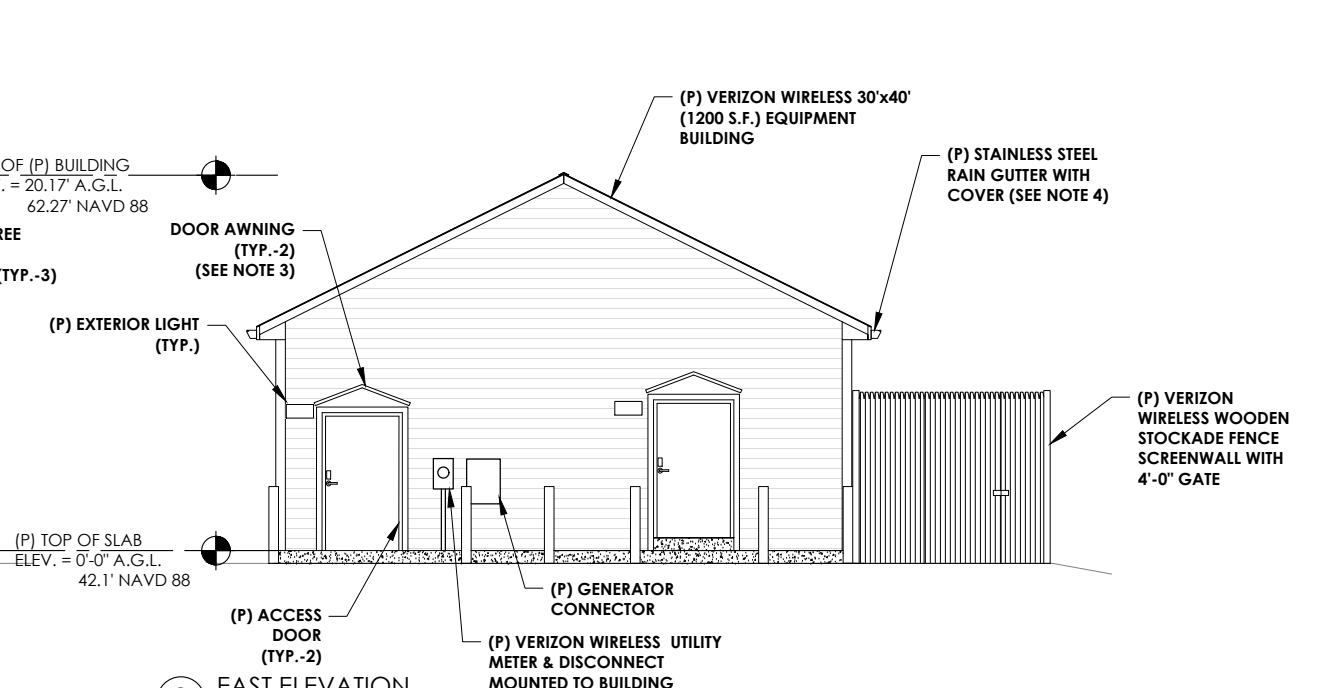
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ELEVATIONS

A200



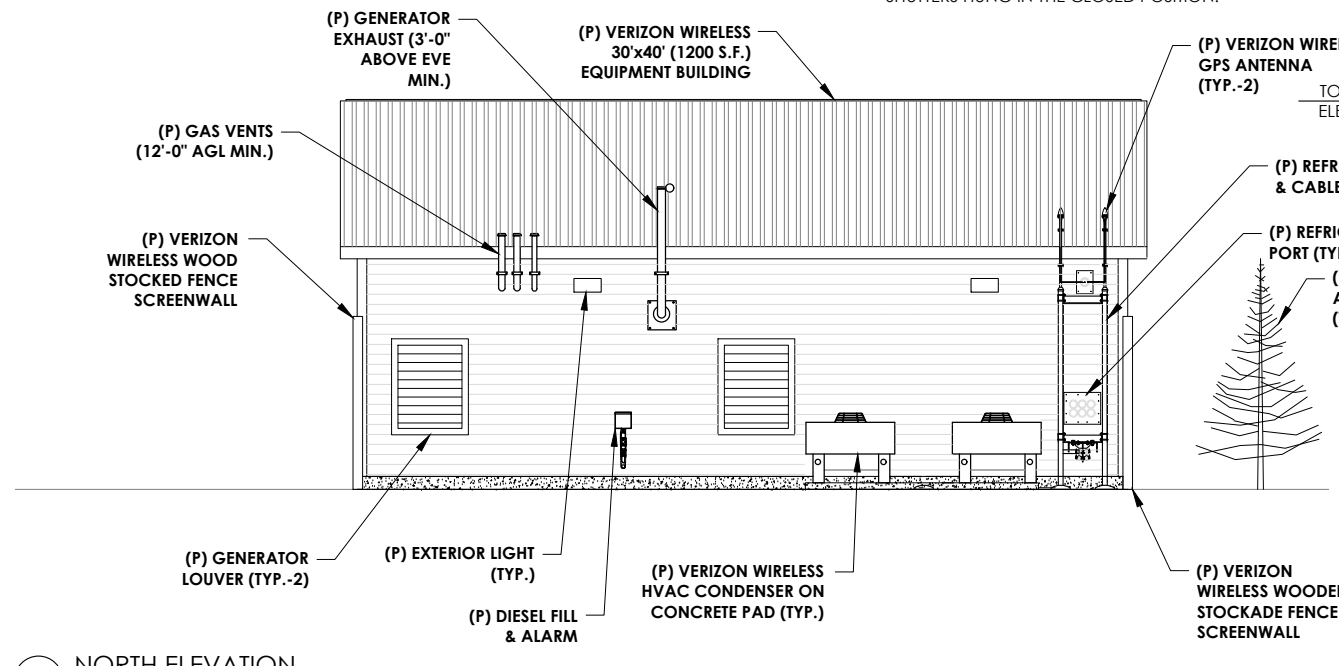
4 SOUTH ELEVATION
22' x 34" SCALE: 1" = 5'
11" x 17" SCALE: 1" = 10'



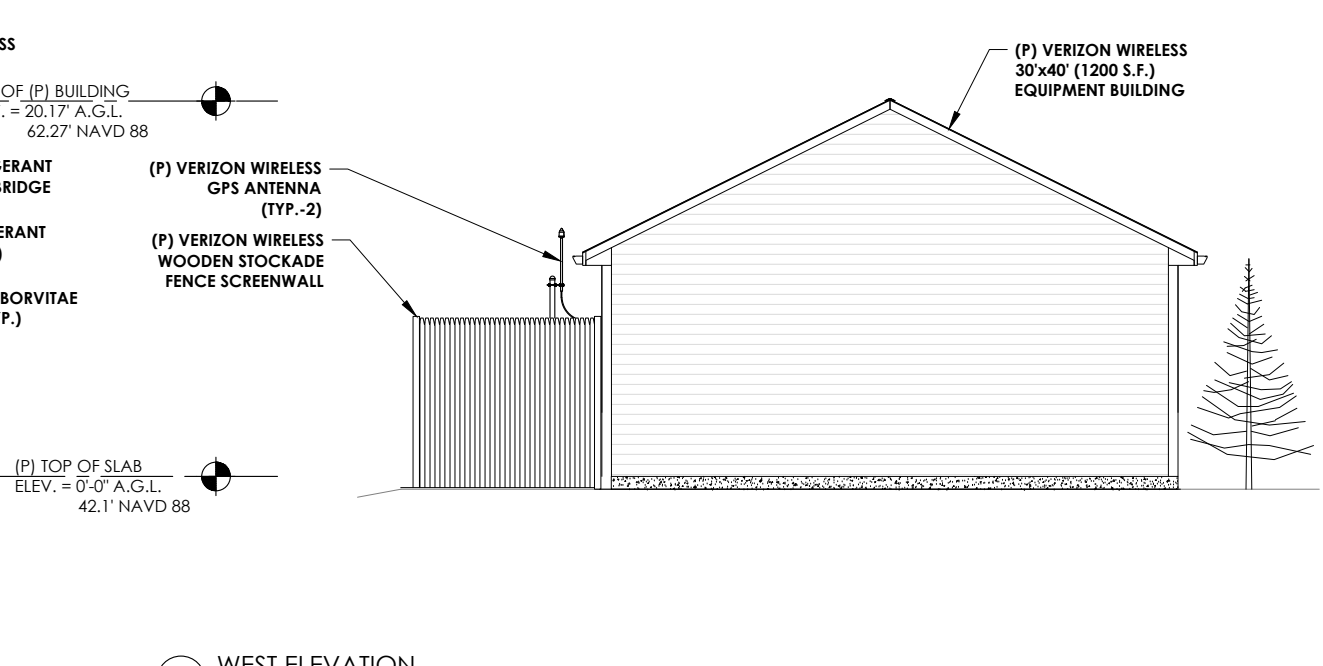
3 EAST ELEVATION
22' x 34" SCALE: 1" = 5'
11" x 17" SCALE: 1" = 10'

NOTE:

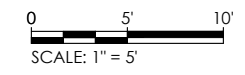
- GROUND ELEVATIONS VARY & ARE SHOWN AS APPROXIMATE. SEE GRADING PLAN FOR FINISH GRADE INFORMATION.
- SEE 301 & A303 FOR EXTERIOR FINISHES.
- CONTRACTOR TO PROVIDE AND INSTALL A DOOR CANOPY. METALLIC PRODUCTS 10 GAUGE GALVANIZED SINGLE DOOR ICE SHIELD OR APPROVED EQUAL.
- CONTRACTOR TO PROVIDE AND INSTALL A 22 GAUGE GALVANIZED STEEL GUTTER WITH 20 GAUGE STEEL PERFORATED CONTINUOUS SCREEN AND DOWN SPOUTS AT EACH CORNER. PITCH RUN OFF AWAY FROM BUILDING.
- CONTRACTOR TO PROVIDE AND INSTALL BLACK HINGED ALUMINUM SHUTTERS HUNG IN THE CLOSED POSITION.

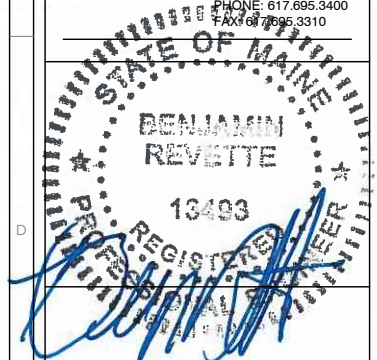


1 NORTH ELEVATION
22' x 34" SCALE: 1" = 5'
11" x 17" SCALE: 1" = 10'



2 WEST ELEVATION
22' x 34" SCALE: 1" = 5'
11" x 17" SCALE: 1" = 10'





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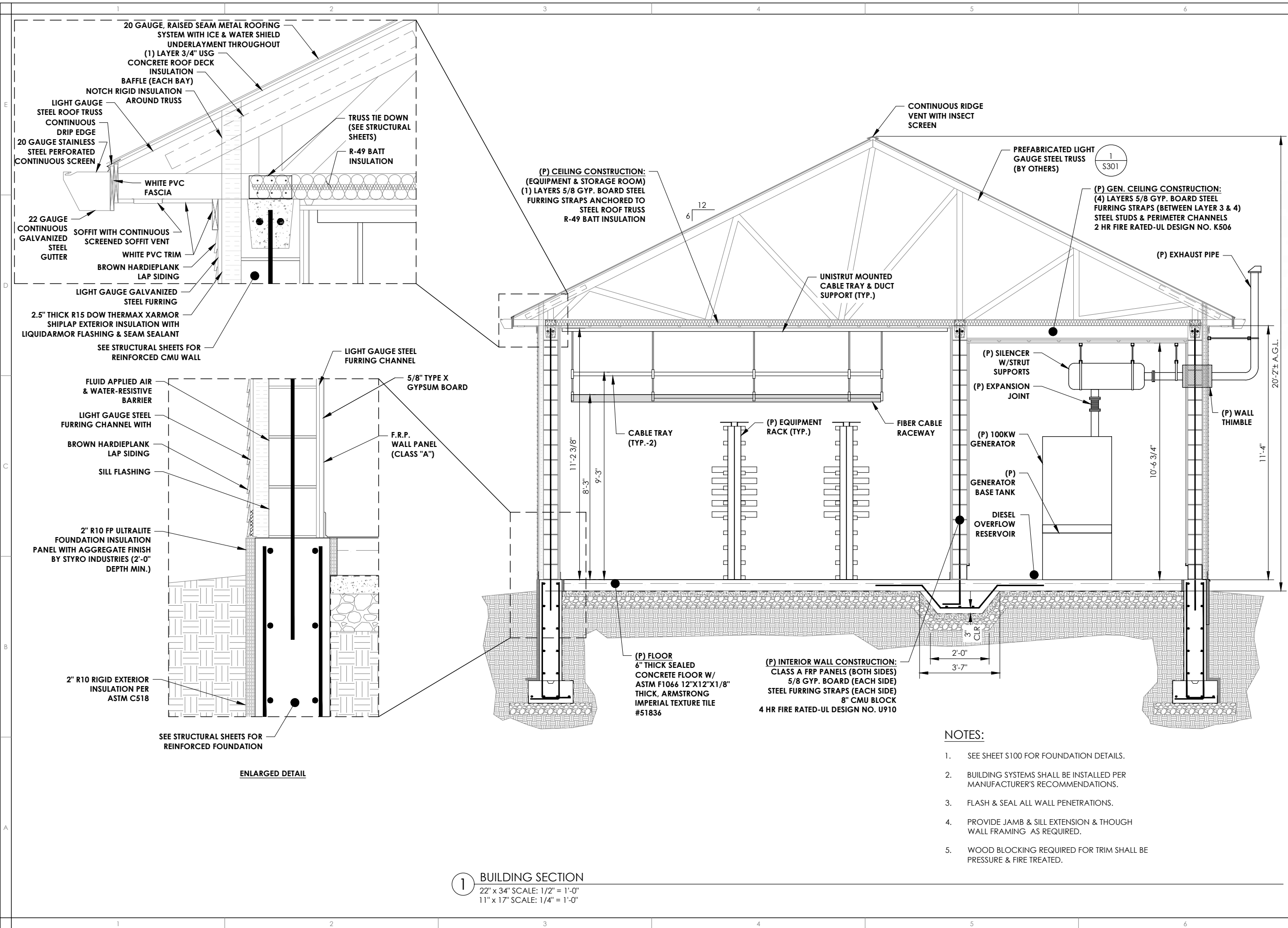
NETWORK COMPLIANCE SUBMITTALS	DATE
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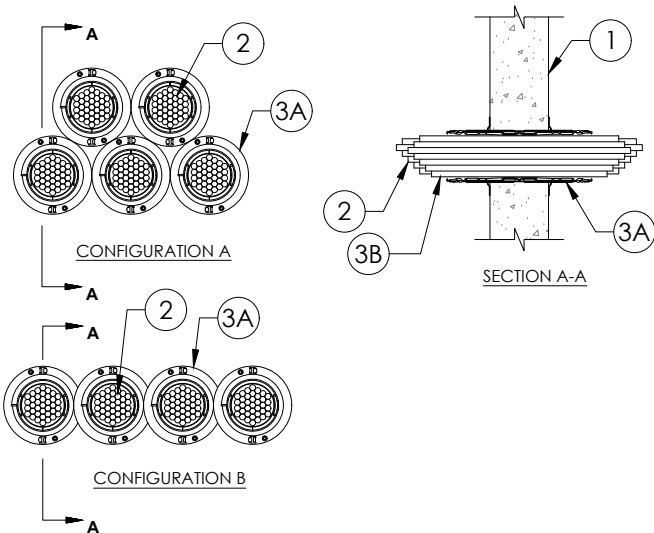
SHELTER SECTIONS

A301



- NOTES:**
- SEE SHEET S100 FOR FOUNDATION DETAILS.
 - BUILDING SYSTEMS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
 - FLASH & SEAL ALL WALL PENETRATIONS.
 - PROVIDE JAMB & SILL EXTENSION & THOUGH WALL FRAMING AS REQUIRED.
 - WOOD BLOCKING REQUIRED FOR TRIM SHALL BE PRESSURE & FIRE TREATED.

1 BUILDING SECTION
22" x 34" SCALE: 1/2" = 1'-0"
11" x 17" SCALE: 1/4" = 1'-0"



- WALL ASSEMBLY — MINIMUM 5 IN. (127 MM) THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF OR 1600-2400 KG/M3) CONCRETE WALL. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAXIMUM FIVE INDIVIDUAL OPENINGS MAY BE PROVIDED (SEE ITEM 3A). DIAM OF OPENING FOR EACH FIRESTOP DEVICE SHALL NOT EXCEED 4-1/2 IN. (114 MM) AND SHALL BE SIZED TO THE OD OF THE FIRESTOP DEVICE. SEE CONCRETE BLOCKS (CAZT) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
- CABLES — THE AGGREGATE CROSS-SECTIONAL AREA OF CABLES IN FIRESTOP DEVICES TO BE MIN. 0 PERCENT (BLANK) TO MAX. 100 PERCENT VISUAL FILL. CABLES TO BE TIGHTLY BUNDLED WITHIN THE DEVICE AND RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. ANY COMBINATION OF THE FOLLOWING TYPES AND SIZES OF CABLES MAY BE USED:
 - MAX. 100 PAIR NO. 24 AWG (OR SMALLER) COPPER CONDUCTOR TELECOMMUNICATION CABLE WITH POLYVINYL CHLORIDE (PVC) JACKETING AND INSULATION.
 - MAX. 7/C NO. 12 AWG COPPER CONDUCTOR CONTROL CABLE WITH PVC OR XLPE JACKET AND INSULATION.
 - MAX. 4/0 AWG TYPE RHH GROUND CABLE.
 - MAX. 4 PR NO. 22 AWG CAT 5 OR CAT 6 COMPUTER CABLES.
 - MAX. RG 6/U COAXIAL CABLE WITH FLUORINATED ETHYLENE INSULATION AND JACKETING.
 - FIBER OPTIC CABLE WITH POLYVINYL CHLORIDE (PVC) OR POLYETHYLENE (PE) JACKET AND INSULATION HAVING A MAX. DIAM OF 1/2 IN. (13 MM).
 - MAX. 20/C NO. 22 AWG SHIELDED PRINTER CABLE WITH PVC JACKET.
 - THROUGH-PENETRATING PRODUCT* - TWO COPPER CONDUCTORS NO. 18 AWG (OR SMALLER) POWER OR NON POWER LIMITED FIRE ALARM CABLE WITH OR WITHOUT A JACKET UNDER A METAL ARMOR. AFC CABLE SYSTEMS INC
 - MAX. 1/4 IN. (6 MM) DIAMETER S-VIDEO CABLE CONSISTING OF 2 MAX. 24 AWG 75 OHM COAX OR TWISTED PAIR CABLE WITH PE INSULATION AND PVC JACKET.
 - MAX. 3/C NO 12 AWG MC CABLE.
 - THROUGH PENETRATING PRODUCT* — ANY CABLES, ARMORED CABLE+ OR METAL CLAD CABLE+ CURRENTLY CLASSIFIED UNDER THE THROUGH PENETRATING PRODUCT CATEGORY. SEE THROUGH PENETRATING PRODUCT (XHLY) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS. FOR OPENING WITH CABLES, THE T, FT AND FTH RATINGS ARE 1/2 HR. FOR BLANK OPENING (NO CABLES), THE T, FT AND FTH RATINGS ARE 1-1/2 HR.
- RATINGS VARY DEPENDING ON WHETHER THE GASKETING MATERIAL (SEE ITEM 3) OR THE SEALANT (ITEM 4) IS USED. SEE TABLE BELOW FOR L RATINGS.

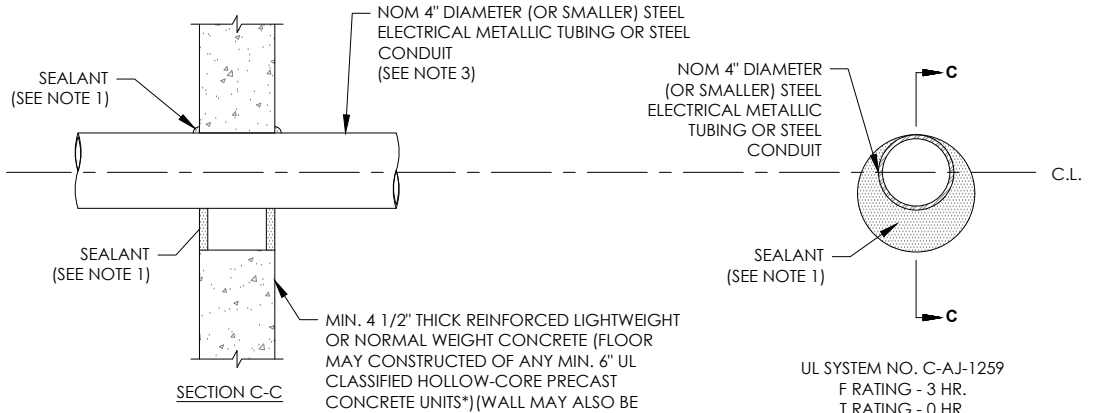
MAX. CABLE FILL	CABLE TYPE	L RATING, CFM PER DEVICE			
		AMBIENT		400°F	
		SEALANT	GASKET	SEALANT	GASKET
0%	—	Less than 1	Less than 1	Less than 1	Less than 1
100%	Item 2D only	Less than 1	Less than 1	Less than 1	Less than 1
100%	Any cables (Item 2) in any combination	1.2	1.2	1.3	1.6

- FIRESTOP SYSTEM — THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
 - FIRESTOP DEVICE* — MAXIMUM FIVE FIRESTOP DEVICES GROUPED IN TWO ROW CONFIGURATION AS DEPICTED. THE INDIVIDUAL OPENINGS IN THE WALL FOR EACH DEVICE ARE SPACED MIN. 2-7/16 IN. (62 MM) APART SUCH THAT THE DEVICE FLANGES OF ADJACENT DEVICES ARE NO CLOSER THAN POINT CONTACT. FIRESTOP DEVICE CONSISTS OF A CORRUGATED STEEL TUBE WITH AN INNER PLASTIC HOUSING, INTUMESCENT MATERIAL RINGS, TWISTED INNER FABRIC SMOKE SEAL, FLANGES AND GASKETING MATERIAL (NOT SHOWN). FIRESTOP DEVICE TO BE INSTALLED IN ACCORDANCE WITH THE ACCOMPANYING INSTALLATION INSTRUCTIONS. AS AN OPTION, THE INNER FABRIC SEAL WITHIN EACH DEVICE MAY REMAIN OPEN EXCEPT THAT, FOR ALL BLANK DEVICES (NO CABLES), THE INNER FABRIC SEAL SHALL BE TWISTED TO COMPLETELY CLOSE THE DEVICE. IN ADDITION, TO ATTAIN THE L RATING, THE INNER FABRIC SEAL MUST ALSO BE TWISTED TO COMPLETELY CLOSE THE OPENING WITHIN EACH DEVICE. DEVICE SLID INTO WALL SUCH THAT ENDS PROJECT AN EQUAL DISTANCE FROM THE APPROXIMATE CENTERLINE OF THE WALL ASSEMBLY. DEVICE PROVIDED WITH FLANGES THAT ARE SPUN CLOCKWISE ONTO DEVICE THREADS, OVER GASKETING MATERIAL BUTTING TIGHTLY TO BOTH SIDES OF WALL. THE ANNULAR SPACE BETWEEN EACH DEVICE AND THE PERIPHERY OF THE OPENING SHALL BE NOM. 0 IN. (POINT CONTACT). DEVICE FLANGES ARE TO BE SECURED TO WALL WITH MIN. TWO 1-1/4 IN. (32 MM) LONG MASONRY SCREWS OR ANCHORS. AS AN ALTERNATE TO GASKET MATERIAL, SEALANT (ITEM 3B) MAY BE USED.
 - HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 653 2" SPEED SLEEVE AND CP 653 4" SPEED SLEEVE
 - FIRESTOP DEVICE* — SAME AS ITEM A ABOVE EXCEPT MAXIMUM FOUR FIRESTOP DEVICES GROUPED IN ONE ROW AS DEPICTED. THE INDIVIDUAL OPENINGS IN THE WALL FOR EACH DEVICE ARE SPACED MIN. 1-7/16 IN. (36.5 MM) APART. DEVICE FLANGES MAY OVERLAP ONE ANOTHER. AS AN OPTION, THE INNER FABRIC SEAL MAY REMAIN OPEN EXCEPT THAT, TO ATTAIN THE L RATING, THE INNER FABRIC SEAL SHALL BE TWISTED TO COMPLETELY CLOSE OFF THE OPENING WITHIN EACH DEVICE.
 - HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 653 2" SPEED SLEEVE AND CP 653 4" SPEED SLEEVE
- FILL, VOID OR CAVITY MATERIAL* — AS AN ALTERNATE TO GASKET MATERIAL (SEE ITEM 3A), MIN. 1/4 IN. (6 MM) BEAD OF FILL MATERIAL APPLIED AROUND PERIPHERY OF EACH DEVICE TO WALL INTERFACE ON BOTH SIDES OF WALL PRIOR TO INSTALLING DEVICE FLANGES.
 - HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 OR FS-ONE SEALANT OR FS-ONE MAX. INTUMESCENT SEALANT.

* INDICATES SUCH PRODUCTS SHALL BEAR THE UL OR CUL CERTIFICATION MARK FOR JURISDICTIONS EMPLOYING THE UL OR CUL CERTIFICATION (SUCH AS CANADA), RESPECTIVELY.

1 COAX CABLE PENETRATIONS
NOT TO SCALE

2 CONCRETE WALL PIPE PENETRATION
NOT TO SCALE



NOTES:

- FILL, VOID OR CAVITY MATERIAL* - SEALANT - MIN. 1/2" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF FLOOR OR WALL. AT THE POINT CONTACT LOCATION BETWEEN PENETRATING ITEM AND CONCRETE, A MIN. 1/4" THICK BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE CONCRETE/ PENETRATING ITEM INTERFACE ON BOTH SIDES OF FLOOR OR WALL.
- FORMING MATERIAL - (OPTIONAL, NOT SHOWN) - MINERAL WOOL BATT PACKING MATERIAL OR POLYURETHANE BACKER ROD FRICTION FITTED INTO OPENING AND RECESSED FROM FLOOR OR WALL SURFACES AS REQUIRED TO ACCOMMODATE THICKNESS OF FILL MATERIAL.
- ONE CONDUIT TO BE INSTALLED EITHER CONCENTRICALLY OR ECCENTRICALLY WITHIN THE FIRESTOP SYSTEM. THE ANNULAR SPACE BETWEEN THE CONDUIT AND THE PERIPHERY OF THE OPENING SHALL BE A MIN. OF 0" (POINT OF CONTACT) TO A MAX. OF 3". CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.

* BEARING THE UL CLASSIFICATION MARK.

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13493
REGISTERED PROFESSIONAL ENGINEER

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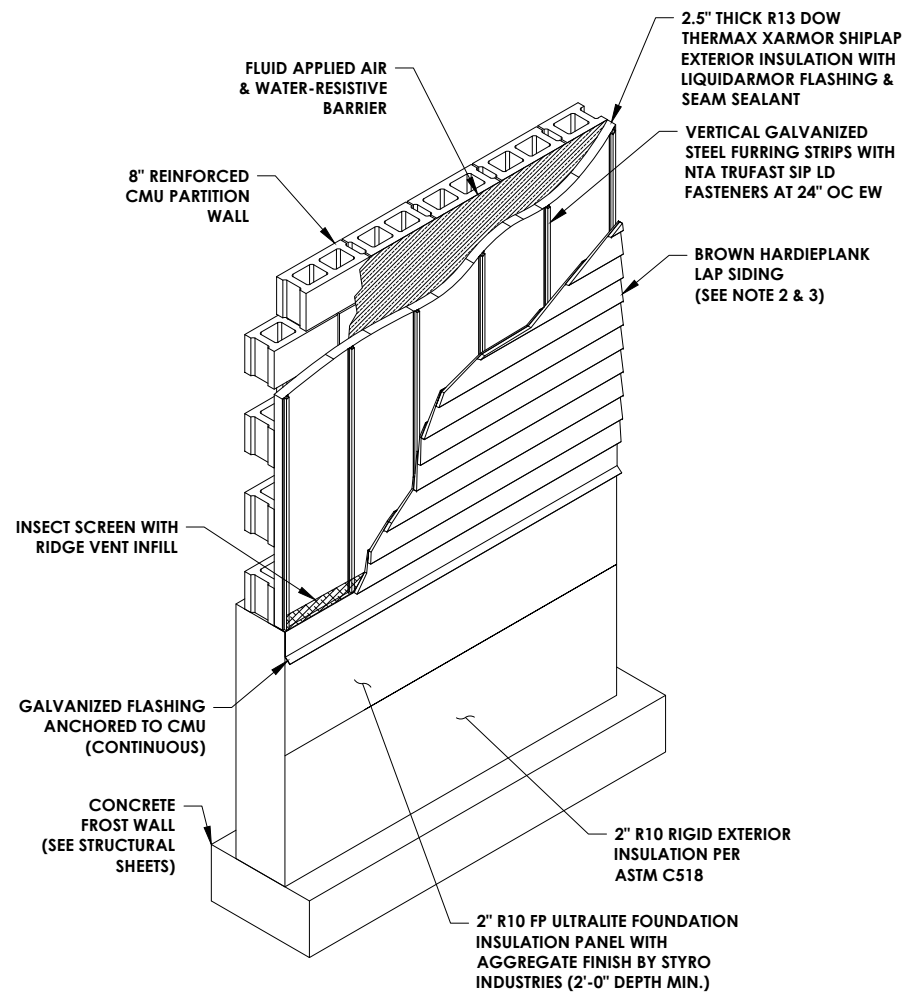
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FIRESTOP DETAILS
A302



NOTES:

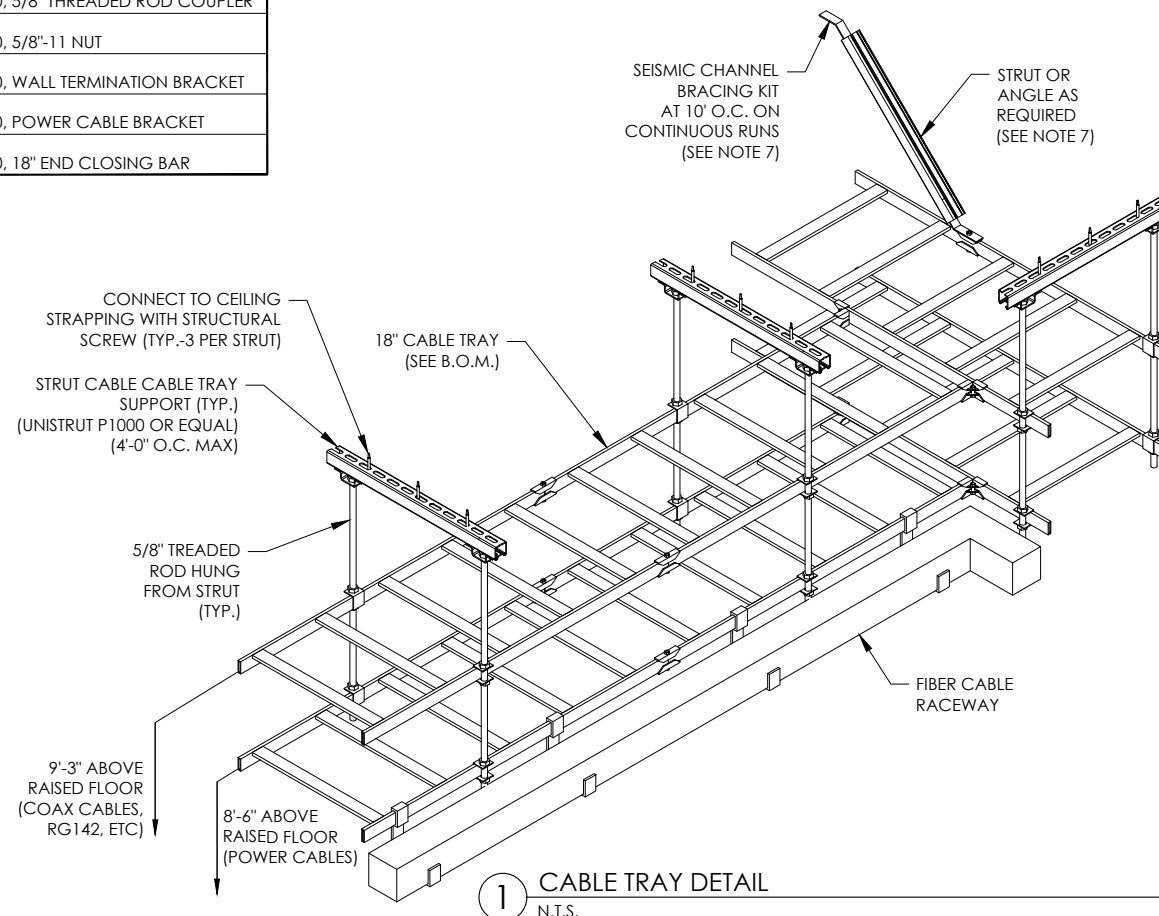
1. ALL EXTERIOR WALL CORNERS & TRIM TO BE 4" WHITE PVC WITH HIDDEN SCREW FASTENERS.
2. C.M. TO APPROVE SIDING TYPE AND COLOR.
3. SEE HARDIEPLANK MANUFACTURER INSTALLATION REQUIREMENTS FOR ADDITIONAL INFORMATION & SPECIFICATIONS.

2 EXTERIOR WALL ISOMETRIC
N.T.S.

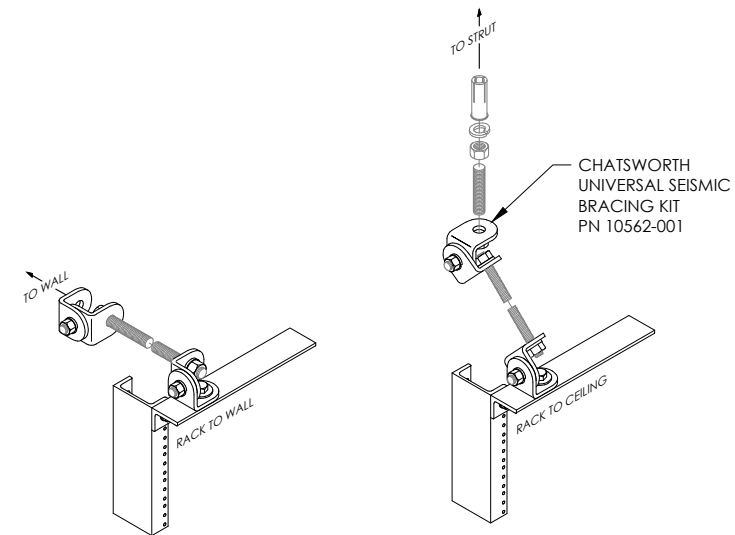
18" CABLE TRAY PARTS-BOM	
NEWTON INSTRUMENT #0020032330, 18-INCH CABLE TRAY	
NEWTON INSTRUMENT #0021170000, CABLE TRAY FINISH CAP	
NEWTON INSTRUMENT #0020110010, SPLICE CLAMP	
NEWTON INSTRUMENT #0020130010, CORNER CLAMP	
NEWTON INSTRUMENT #0020660030, CEILING HANGER BRACKET	
NEWTON INSTRUMENT #0020460010, CABLE RACK HANGER	
NEWTON INSTRUMENT #2023935110, 5/8"X10' TREADED ROD	
NEWTON INSTRUMENT #2111990400, 5/8" THREADED ROD END CAP	
NEWTON INSTRUMENT #0030530310, 5/8" THREADED ROD COUPLER	
NEWTON INSTRUMENT #0030140810, 5/8"-11 NUT	
NEWTON INSTRUMENT #0020830230, WALL TERMINATION BRACKET	
NEWTON INSTRUMENT #2126590030, POWER CABLE BRACKET	
NEWTON INSTRUMENT #0020850830, 18" END CLOSING BAR	

CABLE TRAY NOTES:

1. COORDINATE FINAL TRAY CONFIGURATIONS WITH VERIZON CM PRIOR TO CONSTRUCTION.
2. NOT ALL REQUIRED PARTS ARE SPECIFIED. FIELD VERIFY CABLE TRAY REQUIREMENTS AND COORDINATE WITH MANUFACTURER.
3. GROUND ALL TRAYS SECTIONS.
4. PROVIDE SEISMIC BRACING FOR CABLE TRAY. CONNECT BRACING TO CEILING STRUCTURAL MEMBERS.
5. DETAIL IS SCHEMATIC. STRUT & CABLE TRAY ORIENTATION VARY.
6. FINISH SPECIFIED IS 30=TELEPHONE EQUIPMENT GRAY. VERIFY FINAL FINISH WITH CM.
7. INSTALL UNISTRUT IN 10' SECTIONS ALONG CEILING TRUSS FOR CABLE TRAY & SEISMIC BRACING ATTACHMENT.



3 UNIVERSAL SEISMIC BRACING KIT
N.T.S.



NOTES:

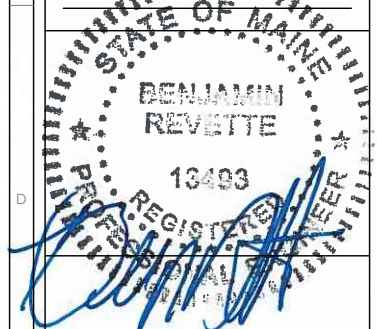
1. PROVIDE MOUNTING HARDWARE AS REQUIRED BY FIELD CONDITIONS.
2. ONE BRACE REQUIRED FOR EACH RF TRAY RACK.
3. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
4. INSTALL UNISTRUT IN 10' SECTIONS ALONG CEILING TRUSS FOR CABLE TRAY & SEISMIC BRACING ATTACHMENT.



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CONSTRUCTION DETAILS

A303

CONCRETE AND REINFORCING STEEL NOTES:

1. DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE CODES INCLUDING: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"; AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
2. MIX DESIGN SHALL BE APPROVED BY OWNER'S REPRESENTATIVE AND SUBMITTED TO ENGINEER PRIOR TO PLACING CONCRETE.
3. CONCRETE SHALL BE NORMAL WEIGHT, 6% AIR ENTRAINED (+/- 1.5%) WITH A MAXIMUM 4" SLUMP AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI UNLESS OTHERWISE NOTED.
4. THE FOLLOWING MATERIALS SHALL BE USED:
 PORTLAND CEMENT: ASTM C-150, TYPE 1 OR 2
 REINFORCEMENT: ASTM A-185, PLAIN STEEL WELDED WIRE FABRIC
 REINFORCEMENT BARS: ASTM A615, GRADE 60, DEFORMED
 NORMAL WEIGHT AGGREGATE: ASTM C-33
 WATER: DRINKABLE
 ADMIXTURES: NON-CHLORIDE CONTAINING
5. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS (UNLESS OTHERWISE NOTED):
 a. CONCRETE CAST AGAINST EARTH: 3"
 b. ALL OTHER CONCRETE: 2"
6. A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH ACI 301 SECTION 4.2.4, UNLESS NOTED OTHERWISE.
7. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE.
8. ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN ACI 301.
9. DO NOT WELD OR TACK WELD REINFORCING STEEL.
10. ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
11. REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
12. DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
13. DO NOT ALLOW CONCRETE OR SUBBASE TO FREEZE DURING CONCRETE CURING AND SETTING PERIOD, OR FOR A MINIMUM OF 3 DAYS AFTER PLACEMENT.
14. FOR COLD-WEATHER AND HOT-WEATHER CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS, MINIMUM.
15. CONCRETE SHALL BE RUBBED TO A ROUGH GROUT FINISH. PADS SHALL BE SEALED BY STEEL TROWEL.
16. UNLESS OTHERWISE NOTED:
 a. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTMA615, GRADE 60.
 b. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
17. SPLICING OF REINFORCEMENT IS PERMITTED ONLY AT LOCATIONS SHOWN IN THE CONTRACT DRAWINGS OR AS ACCEPTED BY THE ENGINEER. UNLESS OTHERWISE SHOWN OR NOTED REINFORCING STEEL SHALL BE SPLICED TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN ACCORDANCE WITH ACI 318.
18. REINFORCING BAR DEVELOPMENT LENGTHS, AS COMPUTED IN ACCORDANCE WITH ACI 318, FORM THE BASIS FOR BAR EMBEDMENT LENGTHS AND BAR SPLICED LENGTHS SHOWN IN THE DRAWINGS. APPLY APPROPRIATE MODIFICATION FACTORS FOR TOP STEEL, BAR SPACING, COVER AND THE LIKE.
19. DETAILING OF REINFORCING STEEL SHALL CONFORM TO "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
20. ALL SLAB CONSTRUCTION SHALL BE CAST MONOLITHICALLY WITHOUT HORIZONTAL CONSTRUCTION JOINTS, UNLESS SHOWN IN THE CONTRACT DRAWINGS.
21. LOCATION OF ALL CONSTRUCTION JOINTS ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, CONFORMANCE WITH ACI 318, AND ACCEPTANCE OF THE ENGINEER. DRAWINGS SHOWING LOCATION OF DETAILS OF THE PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED WITH REINFORCING STEEL PLACEMENT DRAWINGS
22. SPLICES OF WWF, AT ALL SPLICED EDGES, SHALL BE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS 2 INCHES, NOR LESS THAN 8".
23. BAR SUPPORTS SHALL BE ALL GALVANIZED METAL WITH PLASTIC TIPS.
24. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE TO PREVENT DISPLACEMENT BY CONSTRUCTION TRAFFIC OR CONCRETE. TIE WIRE SHALL BE 16 GAUGE CONFORMING TO ASTM A82.
25. SLAB ON GROUND
 a. COMPACT STRUCTURAL FILL TO 95% DENSITY AND THEN PLACE 6" GRAVEL BENEATH SLAB.
 b. PROVIDE VAPOR BARRIER BENEATH SLAB ON GROUND.

GEOTECHNICAL NOTES:

1. A BORING & GEOTECHNICAL ENGINEERING REPORT WAS CONTRACTED BY VERIZON WIRELESS AND PERFORMED BY TERRACON. IT IS TITLED "VERIZON WIRELESS EQUIPMENT BUILDING PORTLAND, ME" DATED SEPTEMBER 11, 2018.
2. THE CONTRACTOR IS TO BE PROVIDED A COPY OF THE REPORT PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF ALL OF THE REPORTS RECOMMENDATIONS AND THE CONTRACTOR SHALL COORDINATE ALL EARTH WORK WITH THE ENGINEER OF RECORD.
4. SITE PREPARATION: PRIOR TO PLACING FILL, EXISTING VEGETATION AND FILL SHOULD BE REMOVED IN THE PROPOSED BUILDING AREA. ORGANIC MATERIAL, ONLY, NEED TO BE REMOVED IN THE PARKING/DRIVEWAY AREAS. THE SUBGRADE SHOULD BE PROOFROLLED WITH AN ADEQUATELY LOADED VEHICLE SUCH AS A FULLY-LOADED TANDEM-AXLE DUMP TRUCK. THE PROOFROLLING SHOULD BE PERFORMED UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER OF RECORD.
5. EXISTING FILL: BORINGS ENCOUNTERED EXISTING FILL TO DEPTHS RANGING FROM ABOUT 2 TO 6 FEET. FILL MAY BE LOCALLY DEEPER IN THE FORMER RESIDENCE AREA IF A BASEMENT HAD BEEN CONSTRUCTED. THE FILL IS LOOSE AND CONTAIN SOME ORGANIC MATTER. SUPPORT OF PAVEMENTS ON OR ABOVE EXISTING FILL SOILS IS DISCUSSED IN THIS REPORT. HOWEVER, EVEN WITH THE RECOMMENDED CONSTRUCTION PROCEDURES, THERE IS AN INHERENT RISK FOR THE OWNER THAT COMPRESSIBLE FILL OR UNSUITABLE MATERIAL WITHIN OR BURIED BY THE FILL WILL NOT BE DISCOVERED. THIS RISK OF UNFORESEEN CONDITIONS CANNOT BE ELIMINATED WITHOUT COMPLETELY REMOVING THE EXISTING FILL, BUT CAN BE REDUCED BY FOLLOWING THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT.
6. SEE PAGE 7.8.9 OF GEOTECHNICAL REPORT FOR SUITABLE FILL TYPE.
7. CONSTRUCTION TRAFFIC: CONSTRUCTION TRAFFIC OVER THE COMPLETED SUBGRADES SHOULD BE AVOIDED. THE SITE SHOULD ALSO BE GRADED TO PREVENT PONDING OF SURFACE WATER ON THE PREPARED SUBGRADES OR IN EXCAVATIONS. WATER COLLECTING OVER OR ADJACENT TO CONSTRUCTION AREAS SHOULD BE REMOVED. IF THE SUBGRADE FREEZES, DESICCATES, SATURATES, OR IS DISTURBED, THE AFFECTED MATERIAL SHOULD BE REMOVED, OR THE MATERIALS SHOULD BE SCARIFIED, MOISTURE CONDITIONED, AND RECOMPACTED PRIOR TO FLOOR SLAB CONSTRUCTION. AS A MINIMUM, EXCAVATIONS SHOULD BE PERFORMED IN ACCORDANCE WITH OSHA 29 CFR, PART 1926, SUBPART P, "EXCAVATIONS" AND ITS APPENDICES, AND IN ACCORDANCE WITH ANY APPLICABLE LOCAL, AND/OR STATE REGULATIONS.
8. THE EARTHWORK EFFORTS SHOULD BE MONITORED UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER. MONITORING SHOULD INCLUDE DOCUMENTATION OF ADEQUATE REMOVAL OF VEGETATION AND TOPSOIL, PROOFROLLING, AND MITIGATION OF AREAS DELINEATED BY THE PROOFROLL TO REQUIRE MITIGATION. EACH LIFT OF COMPACTED FILL SHOULD BE TESTED, EVALUATED, AND REWORKED AS NECESSARY UNTIL APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF ADDITIONAL LIFTS. EACH LIFT OF FILL SHOULD BE TESTED FOR DENSITY AND WATER CONTENT AT A FREQUENCY OF AT LEAST ONE TEST FOR EVERY LIFT OF COMPACTED FILL IN THE BUILDING AND PAVEMENT AREAS.
9. MAXIMUM NET ALLOWABLE BEARING PRESSURE SHALL NOT EXCEED 2000 PSF.
10. THE FOOTING EXCAVATIONS SHOULD BE EVALUATED UNDER THE DIRECTION OF THE GEOTECHNICAL ENGINEER. THE BASE OF ALL FOUNDATION EXCAVATIONS SHOULD BE FREE OF WATER AND LOOSE SOIL, PRIOR TO PLACING CONCRETE. CONCRETE SHOULD BE PLACED SOON AFTER EXCAVATING TO REDUCE BEARING SOIL DISTURBANCE. CARE SHOULD BE TAKEN TO PREVENT WETTING OR DRYING OF THE BEARING MATERIALS DURING CONSTRUCTION. EXCESSIVELY WET OR DRY MATERIAL OR ANY LOOSE/DISTURBED MATERIAL IN THE BOTTOM OF THE FOOTING EXCAVATIONS SHOULD BE REMOVED/RECONDITIONED BEFORE FOUNDATION CONCRETE IS PLACED.

MASONRY NOTES:

1. WORK FOR THE HOLLOW CONCRETE MASONRY CONSTRUCTION SHALL CONFORM TO THE NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA) "SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF LOAD-BEARING CONCRETE MASONRY" AND ACI-ASCE "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES."
2. ALL CMU WALLS ARE DESIGNED BASED ON FULL TIME INSPECTION DURING CONSTRUCTION.
3. ALL CMU SHALL BE BRACED DURING CONSTRUCTION FOR CODE LATERAL DESIGN LOADS UNTIL PERMANENT RESTRAINTS HAVE BEEN INSTALLED.
4. CMU SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI BASED ON THE NET AREA.
5. MORTAR SHALL BE TYPE M OR S CONFORMING TO ASTM C270, AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 1800 TO 2500.
6. GROUT SHALL CONFORM TO ASTM C476 AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI.
7. REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60, EXCEPT BARS TO BE WELDED SHALL CONFORM TO ASTM A706.
8. WIRE FOR JOINT REINFORCING SHALL CONFORM TO ASTM A82, YIELD POINT = 70 ksi (MIN.).
9. GROUT SHALL BE PLACED USING LOW OR HIGH LIFT GROUTING PROCEDURES CONFORMING TO NCMA. TERMINATE GROUT POUR 1 1/2" BELOW TOP COURSE OF PLACEMENT.
10. HIGH LIFT GROUTING SHALL BE PLACED IN 4'-0" LIFTS AND Puddled OR VIBRATED IMMEDIATELY FOLLOWING PLACEMENT. ALLOW SUFFICIENT TIME FOR SETTLEMENT AND ABSORPTION OF EXCESS WATER INTO THE MASONRY. THE FULL HEIGHT IN EACH SECTION OF THE WALL SHALL BE POURED IN ONE DAY.
11. CORES AND BOND BEAMS WITH REINFORCING SHALL BE FILLED SOLIDLY WITH GROUT. FILLING SUCH CORES AND BOND BEAMS WITH MORTAR IS STRICTLY PROHIBITED. IN ADDITION, CARE SHALL BE EXERCISED IN KEEPING CORES FREE FROM MORTAR DROPPING.
12. MINIMUM REINFORCING FOR 12" AND 8" REINFORCED CMU WALLS SHALL CONFORM TO THE FOLLOWING:
 A. NO. 9 GAGE TRUSS TYPE GALV JOINT REINFORCING AT 16" O.C. AS MANUFACTURED BY DUR-O-WALL.

STRUCTURAL DESIGN CRITERIA:

DESIGN LOADS:ROOF	
STEEL TRUSS FRAMING - SELF WT.	= 5 PSF
METAL + CONC. ROOF	= 10 PSF
PLYWOOD	= 2 PSF
MISCELLANEOUS	= 3 PSF
TOTAL ROOF LOAD	= 20 PSF

BOTTOM CHORD 5/8"	
GYPSTUM BOARD	= 3 PSF
INSULATION	= 3 PSF
CEILING	= 15 PSF
BOTTOM CHORD DEAD LOAD	= 21 PSF
TOTAL LOAD	= 45 PSF

MAINE UNIFORM BUILDING CODE AMENDMENTS TO IBC 2015

WIND LOADS:
 RISK CATEGORY II
 VULT = 118 MPH (ULTIMATE WIND SPEED)
 EXPOSURE C

ASCE 7-10

ROOF SNOW LOADS:
 PG = 50PSF (PORTLAND, ME) (GROUND SNOW LOAD)
 EXPOSURE FACTOR, CE = 1
 IMPORTANCE FACTOR, IS = 1
 THERMAL FACTOR, CT = 1.1
 SLOPE FACTOR, CS = 0.8 (ROOF SLOPE 6:12)
 ROOF SNOW LOAD, PF = 0.7CE*CT*IS*PG = 31 PSF
 BALANCED ROOF SNOW LOAD = 31 PSF
 UNBALANCED ROOF SNOW LOAD = 50 PSF

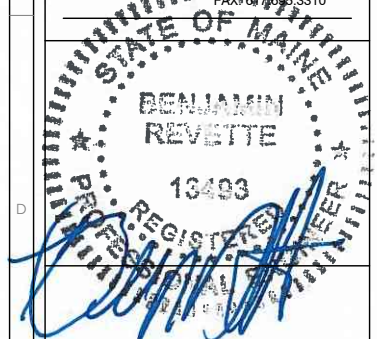
SEISMIC LOADS:
 DESIGNED PER EQUIVALENT LATER FORCE PROCEDURE IN ASCE 7-10
 DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETER, SDS = 0.26
 (SITE CLASS D; STIFF SOIL)



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 LOCATION CODE: 320632

1531 CONGRESS STREET
 PORTLAND, ME 04102

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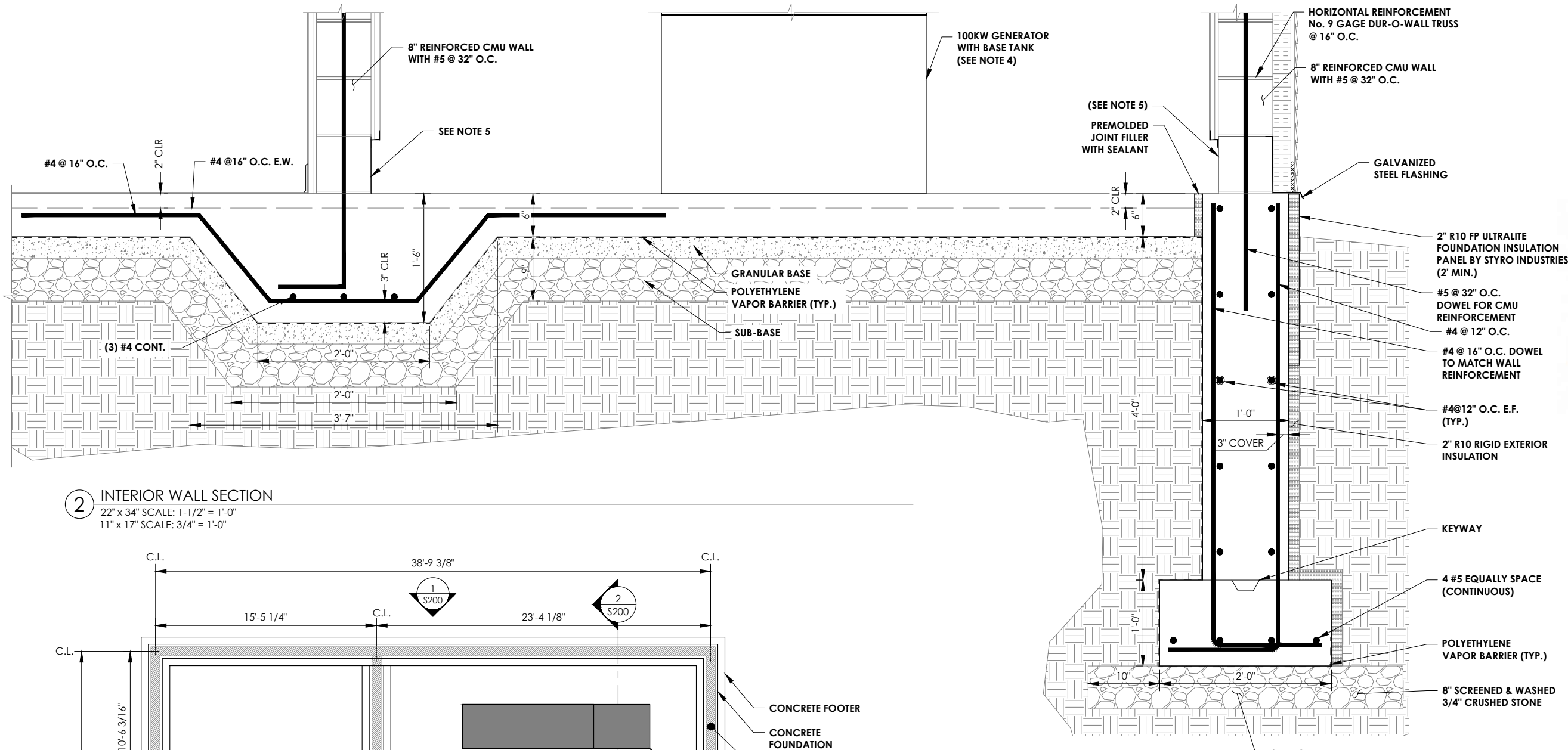
NETWORK COMPLIANCE SUBMITTALS	DATE
100% SUBMISSION	DATE
RE-SUBMISSION (IF REQUIRED)	DATE

PROJECT #: S002925
 CAD DWG FILE #: S0080012
 DESIGNED BY: MFT
 DRAWN BY: SK
 CHECKED BY: BSR
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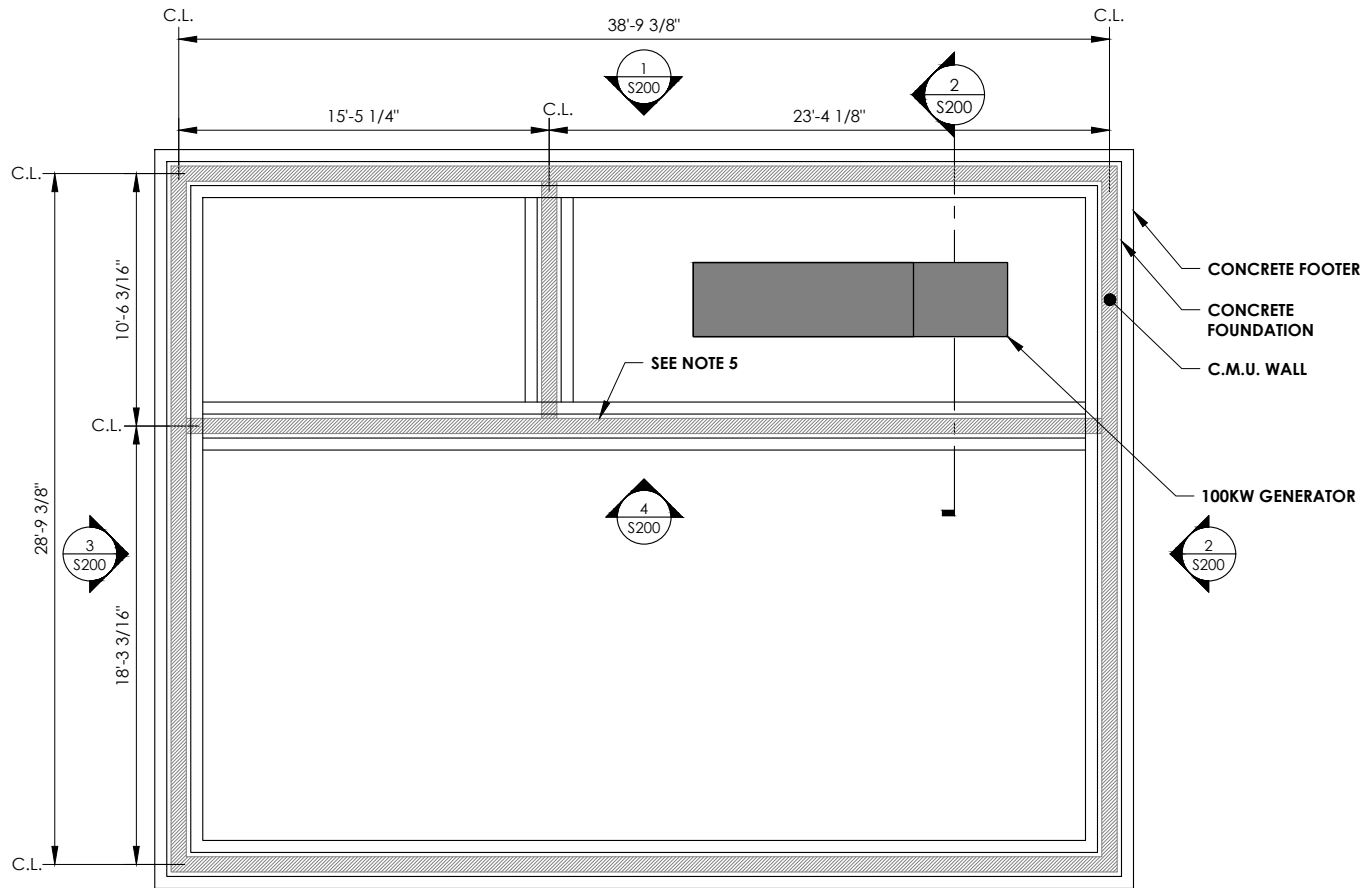
ISSUED FOR REVIEW

STRUCTURAL NOTES

S001



2 INTERIOR WALL SECTION
 22" x 34" SCALE: 1-1/2" = 1'-0"
 11" x 17" SCALE: 3/4" = 1'-0"

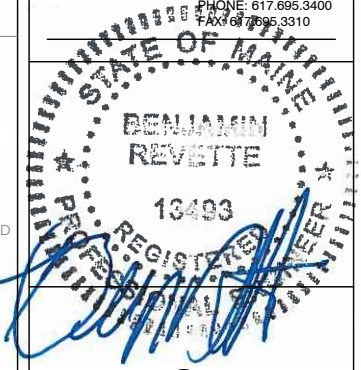


1 FOUNDATION PLAN
 22" x 34" SCALE: 1/4" = 1'-0"
 11" x 17" SCALE: 1/8" = 1'-0"

- NOTES:**
- SEE GEOTECHNICAL REPORT AND NOTES ON SOO1 FOR SITE GROUND PREPARATION INFORMATION.
 - SEE ARCHITECTURAL SHEETS FOR INTERIOR AND EXTERIOR FINISHES.
 - C.L. = CENTERLINE
 - PROVIDE CONCRETE ANCHOR BOLTS AND SECURE TANK PER MANUFACTURER RECOMMENDATIONS.
 - GENERATOR ROOM TO HAVE CONTINUOUS FIRST COURSE OF CMU, INCLUDING AT DOOR OPENING TO CREATE DIESEL OVERFLOW CURB. FLOOR AND FIRST COURSE OF CMU BLOCK TO HAVE COLOR GREY SANI-TRED WATERPROOF FLOOR COATING SYSTEM.

verizon
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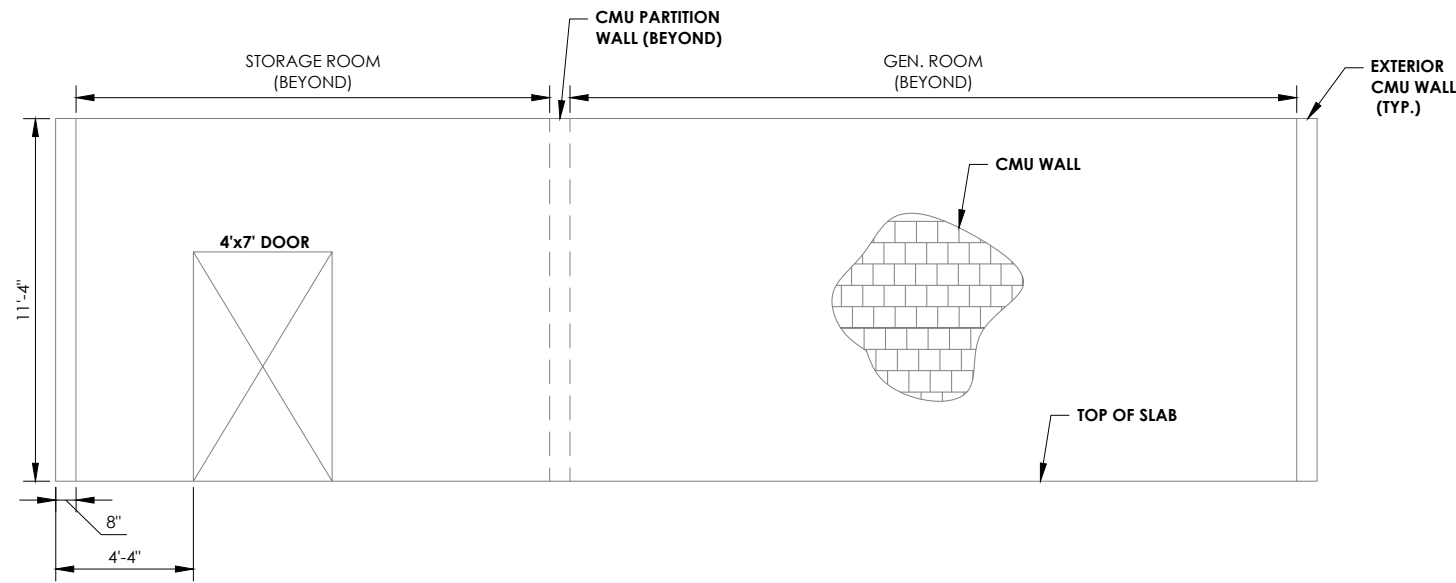
NETWORK COMPLIANCE SUBMITTALS	DATE
100% SUBMISSION	DATE
RE-SUBMISSION (IF REQUIRED)	DATE

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 CAD DWG FILE #: S0000012
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FOUNDATION PLAN & SECTION

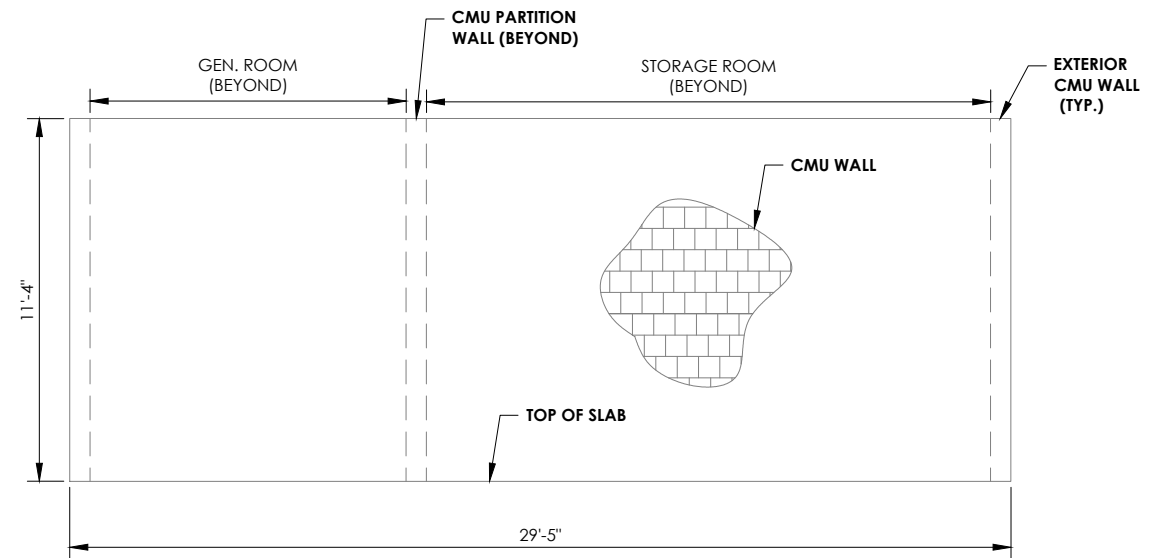
S100



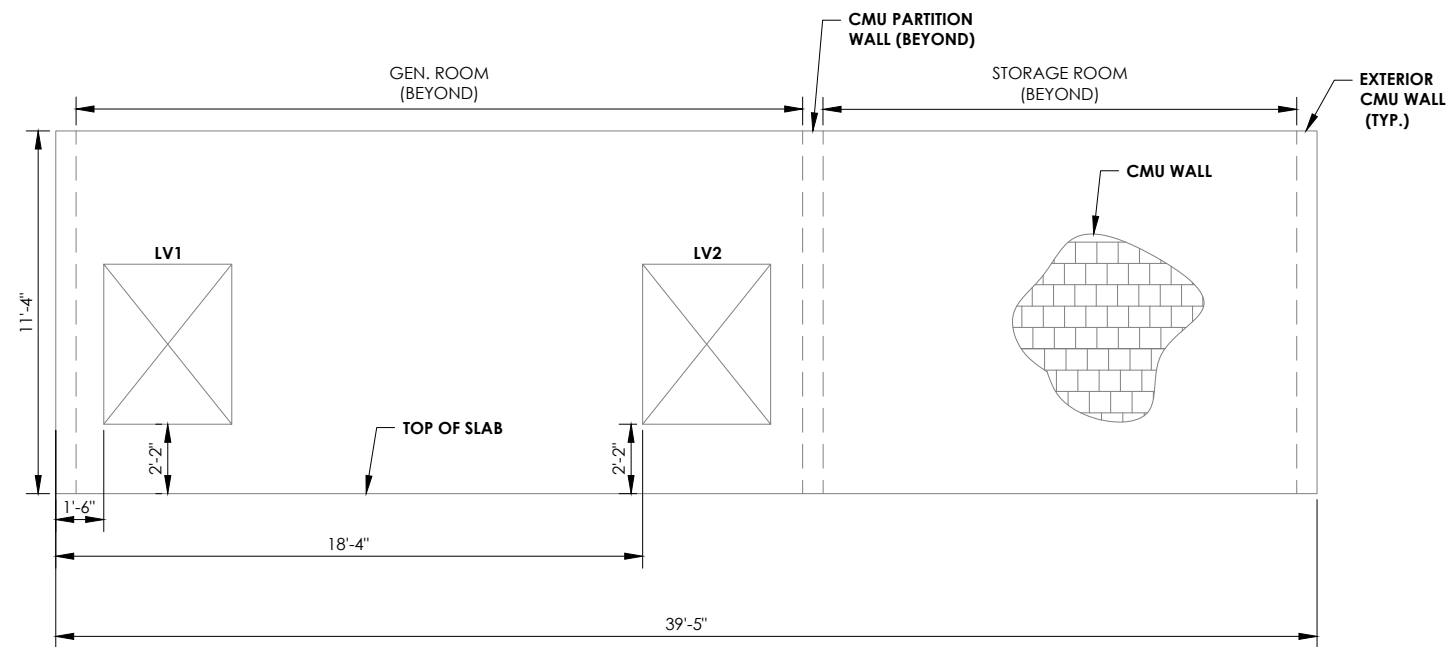
4 INTERIOR ELEVATION
 22' x 34" SCALE: 1" = 3'
 11" x 17" SCALE: 1" = 6'

NOTES:

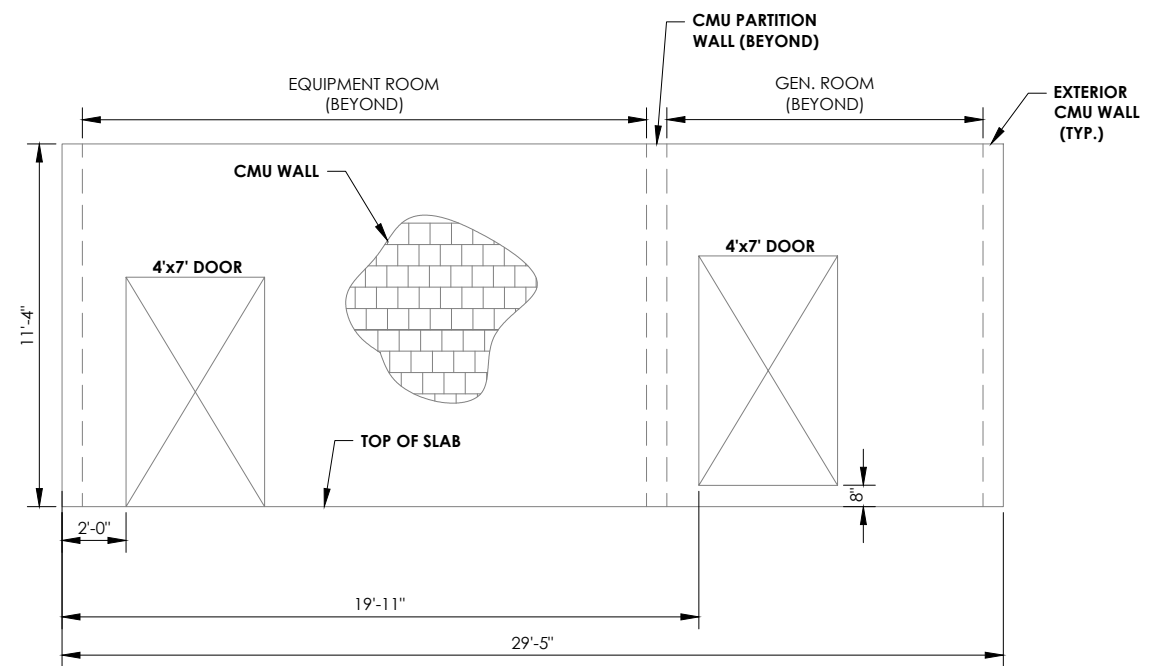
1. NOT ALL PENETRATIONS SHOWN. CORE, FLASH & SEAL CONDUIT & OTHER MINOR PENETRATIONS AS REQUIRED.
2. NOMINAL OPENINGS SHOWN FOR DOOR & LOUVER PENETRATIONS. VERIFY FINAL DIMENSIONS WITH MANUFACTURER PRIOR TO CONSTRUCTION.
3. OPENINGS DO NOT CONSIDER THROUGH WALL DUCTS, FRAMING OR BLOCKING REQUIRED TO FLASH & SEAL PENETRATIONS & PROPERLY INSTALL INSULATION & SIDING. COORDINATE FINAL OPENING DIMENSIONS WITH SIDING, MECHANICAL, & ELECTRICAL TRADES.
4. SEE MASONRY OPENING DETAILS ON S501.



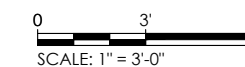
3 WEST ELEVATION
 22' x 34" SCALE: 1" = 3'
 11" x 17" SCALE: 1" = 6'



1 NORTH ELEVATION
 22' x 34" SCALE: 1" = 3'
 11" x 17" SCALE: 1" = 6'



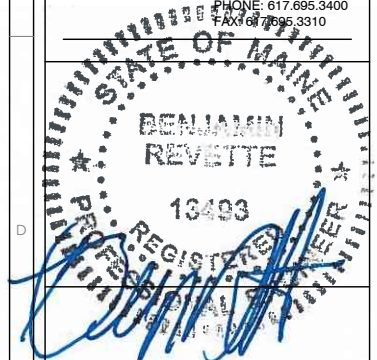
2 EAST ELEVATION
 22' x 34" SCALE: 1" = 3'
 11" x 17" SCALE: 1" = 6'



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CMU WALL ELEVATIONS

S200

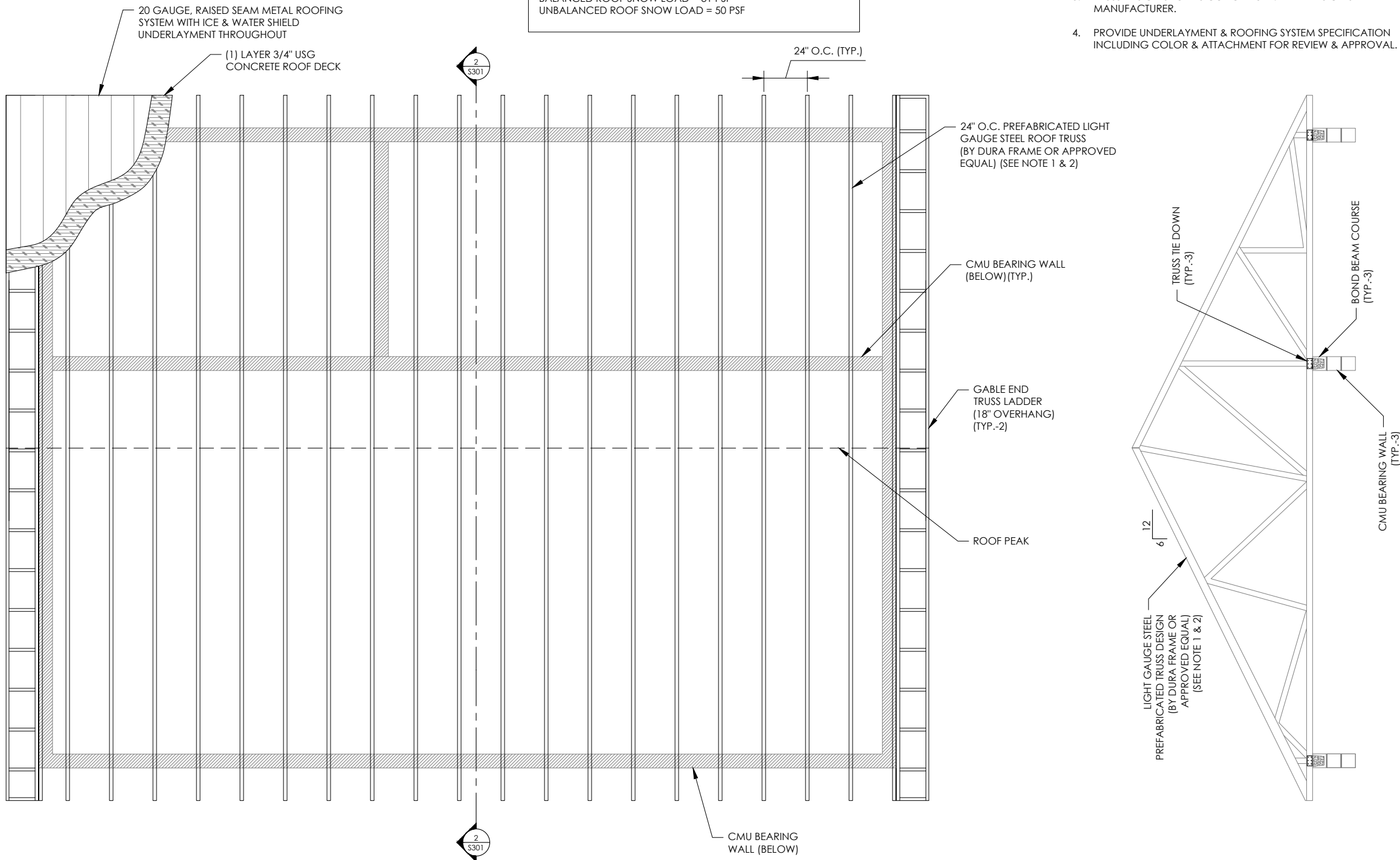
PREFABRICATED TRUSS DESIGN CRITERIA

GABLE ROOF WITH 6:12 SLOPE
 RISK CATEGORY II
 VULT = 118 MPH (ULTIMATE WIND SPEED)
 EXPOSURE C
 PG = 50 PSF (GROUND SNOW FOR PORTLAND, ME)
 SDS = 0.26 (SITE CLASS D; STIFF SOIL)

ROOF DEAD LOAD = 26 PSF
 BOTTOM CHORD DEAD LOAD = 15 PSF
 BALANCED ROOF SNOW LOAD = 31 PSF
 UNBALANCED ROOF SNOW LOAD = 50 PSF

NOTES:

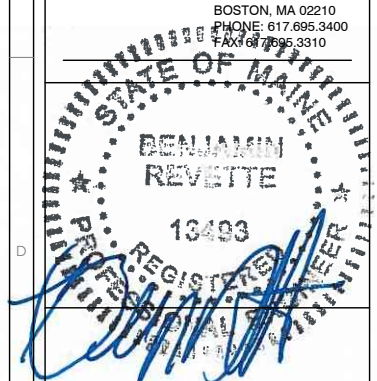
1. PREFABRICATED TRUSS DESIGN BY DURAFRAME OR APPROVED EQUAL. PROJECT NUMBER 18274E01 (877) 423-7889 SALES@DURAFRAMESOLUTIONS.COM
2. CONTRACTOR SHALL VERIFY FINAL DIMENSIONS & LOADING WITH MANUFACTURER AND SUPPLY DEWBERRY & VERIZON WIRELESS WITH TRUSS DESIGN DRAWINGS PRIOR TO INSTALLATION FOR REVIEW & APPROVAL.
3. TRUSS DESIGN SHOW IS CONCEPTUAL. FINAL DESIGN SHALL BE BY MANUFACTURER.
4. PROVIDE UNDERLAYMENT & ROOFING SYSTEM SPECIFICATION INCLUDING COLOR & ATTACHMENT FOR REVIEW & APPROVAL.



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PROJECT #: S0002925
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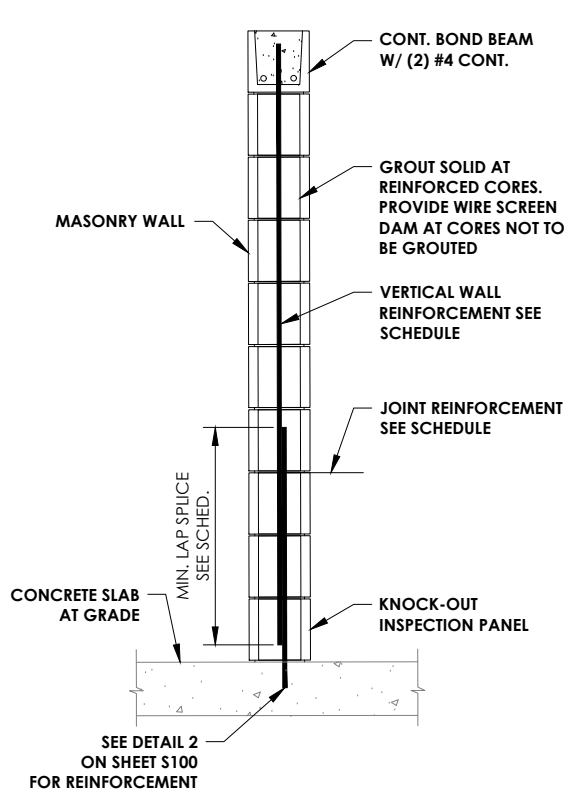
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ROOF PLAN & SECTION

S301

1 ROOF PLAN
 22" x 34" SCALE: 3/8" = 1'-0"
 11" x 17" SCALE: 3/16" = 1'-0"

2 ROOF TRUSS SECTION
 22" x 34" SCALE: 3/8" = 1'-0"
 11" x 17" SCALE: 3/16" = 1'-0"

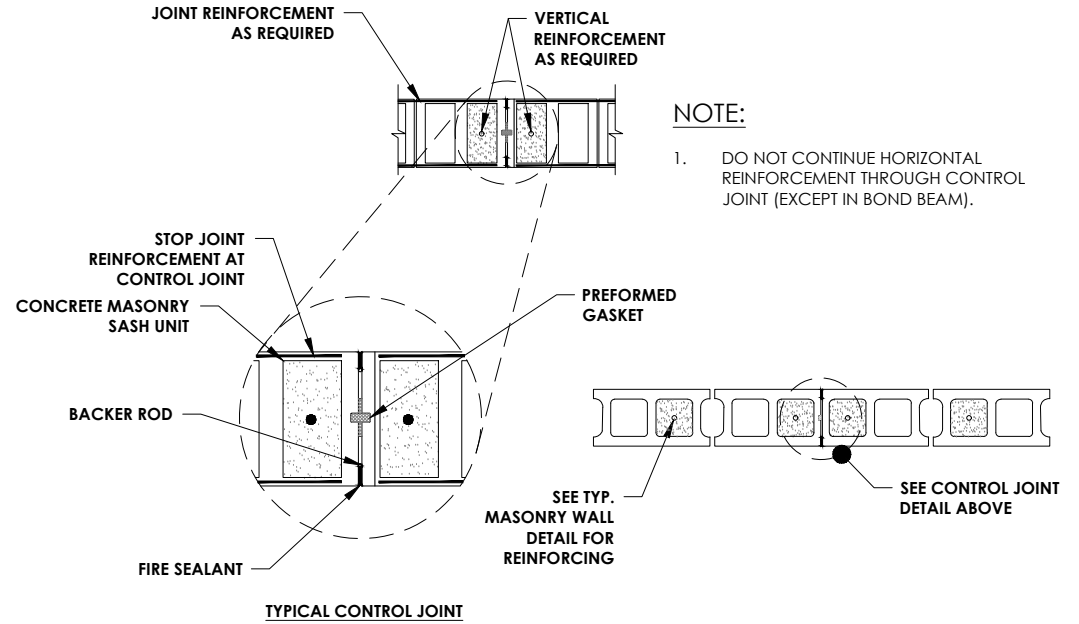


- NOTES:**
- GROUT CORES FULL HEIGHT WITH A HIGH SLUMP GROUT. WHEN GROUT REACHES THE CONSISTENCY OF STIFF MORTAR VIBRATE TO A DEPTH OF AT LEAST 1/2 THE POUR HEIGHT. ALL GROUTING OPERATIONS REQUIRE FULL TIME INSPECTION BY A QUALIFIED TESTING AGENCY.
 - PROVIDE CONTROL JOINT AT MID SPAN OF EACH WALL.

1 TYPICAL MASONRY DETAIL
N.T.S.

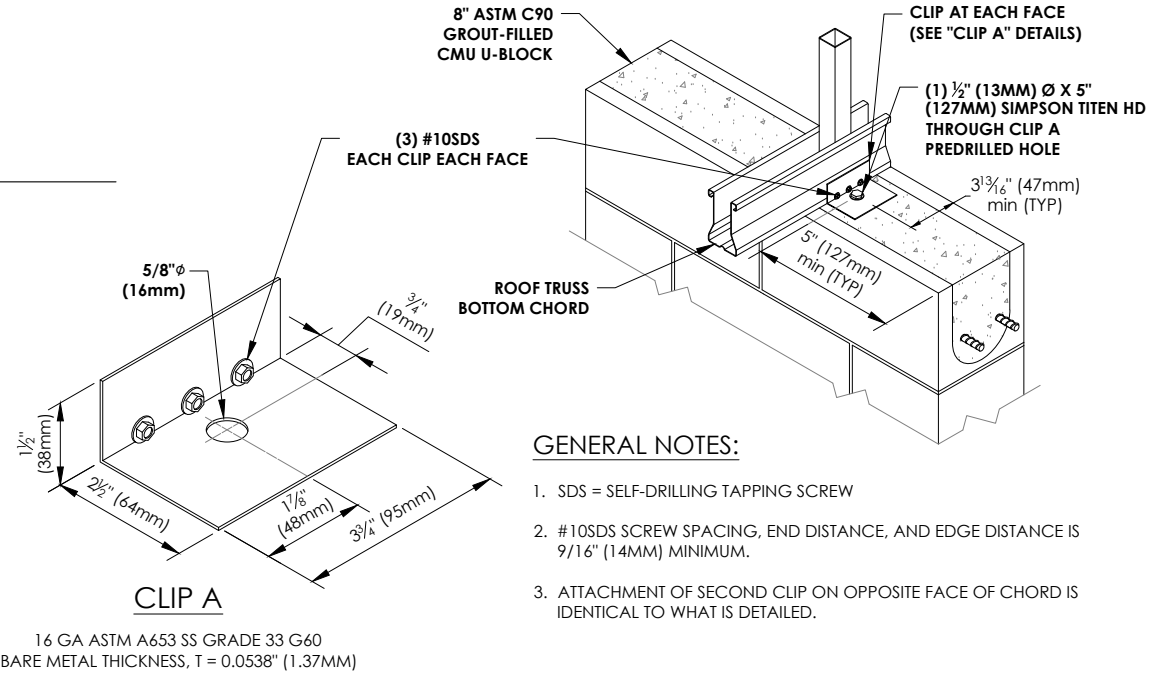
MINIMUM WALL REINFORCEMENT SCHEDULE				
WALL THICKNESS	MIN. VERT. REINF. (NOTE 1)	MIN. LAP SPLICE	MIN. JOIN REINF.	MAX. WALL HEIGHT
8"	#4 @ 48	2'-0"	NOTE 1	SEE PLAN

- NOTES:**
- PROVIDE TRUSS TYPE JOINT REINF. W/ 3/16" LONGITUDINAL WIRE @ 16" O.C. (EVERY OTHER COURSE).
 - PROVIDE ADDITIONAL BAR EACH SIDE OF ALL OPENINGS. EXTEND 36" BEYOND.
 - PROVIDE STEEL LINTELS OVER DOORWAYS AND OPENINGS. PROVIDE LINTEL SUBMITTAL SHEETS FOR REVIEW AND APPROVAL.



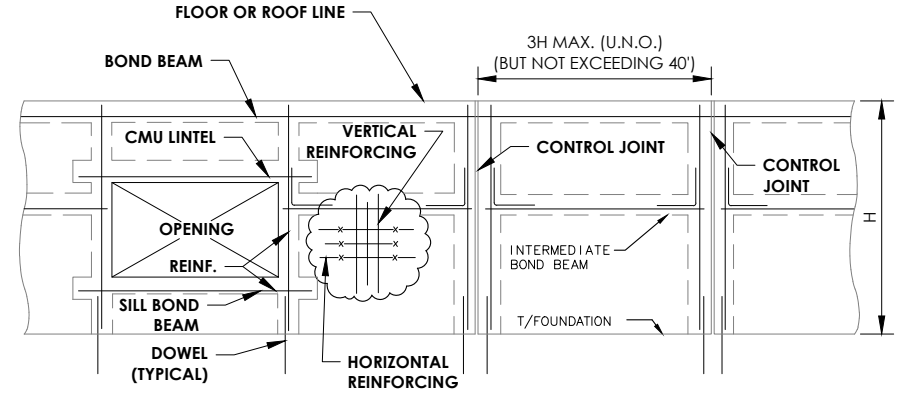
- NOTE:**
- DO NOT CONTINUE HORIZONTAL REINFORCEMENT THROUGH CONTROL JOINT (EXCEPT IN BOND BEAM).

2 MASONRY WALL INTERSECTION DETAIL
N.T.S.

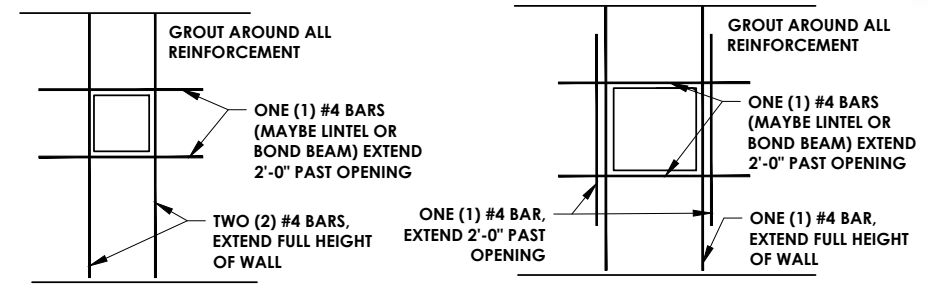


- GENERAL NOTES:**
- SDS = SELF-DRILLING TAPPING SCREW
 - #10SDS SCREW SPACING, END DISTANCE, AND EDGE DISTANCE IS 9/16" (14MM) MINIMUM.
 - ATTACHMENT OF SECOND CLIP ON OPPOSITE FACE OF CHORD IS IDENTICAL TO WHAT IS DETAILED.

3 TRUSS TIE DOWN DETAILS
N.T.S.



4 TYPICAL CMU WALL ELEVATION
N.T.S.



- ANY OPENING OVER 100 SQ. IN. AND LESS THAN 2 FEET IN ANY DIRECTION
- EXTERIOR WALL AND STRUCTURAL PARTITION OPENINGS WHICH EXCEED 2 FEET BUT NOT OVER 4 FEET IN ANY DIRECTION
- EXTERIOR WALL AND STRUCTURAL PARTITION OPENINGS WHICH EXCEED 4 FEET BUT NOT OVER 4 FEET IN ANY DIRECTION

5 MASONRY OPENING DETAILS
N.T.S.

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RE-SUBMISSION (IF REQUIRED)	DATE

PROJECT #: 50002925
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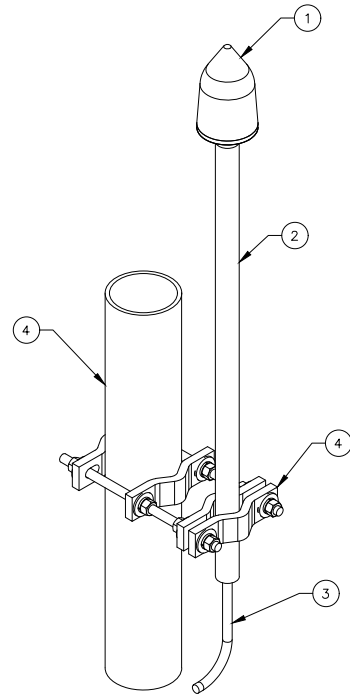
SHELTER DETAILS - I

S501

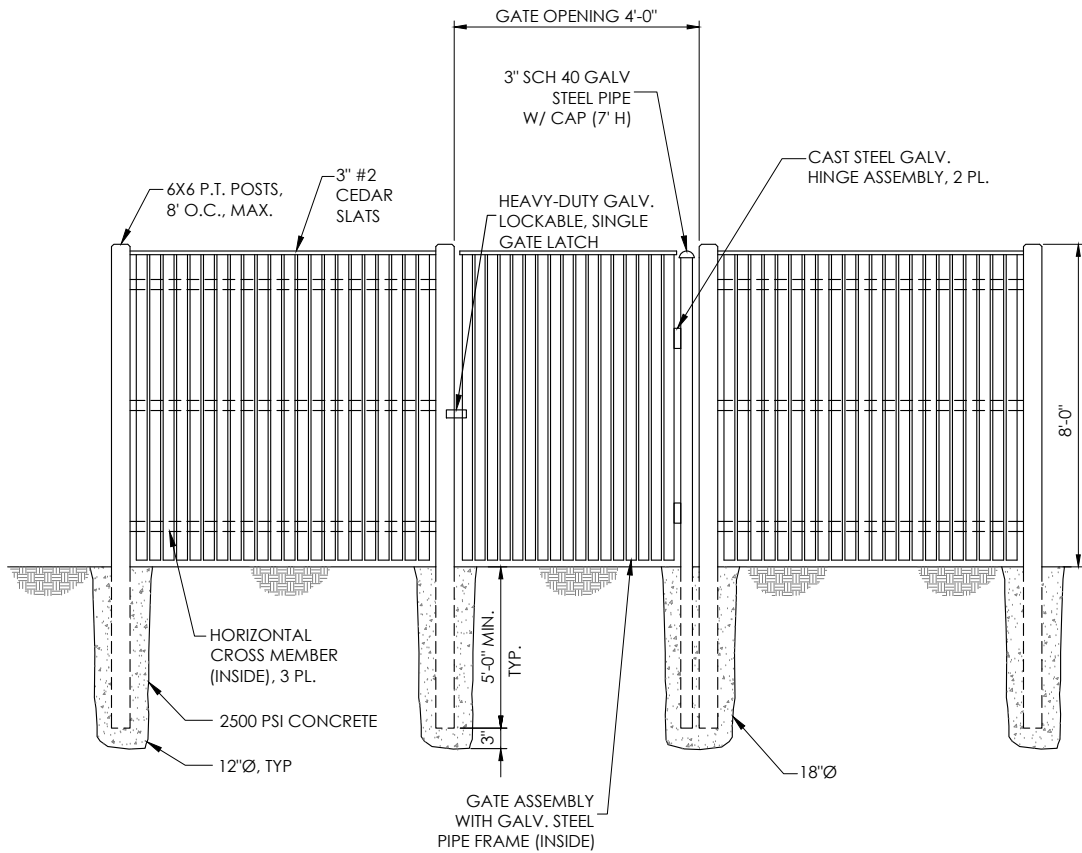
B.O.M.	
①	GPS ANTENNA
②	GALVANIZED MOUNTING PIPE (TYP.)
③	COAXIAL CABLE
④	PIPE TO PIPE TRANSFER KIT
⑤	ICE BRIDGE POST

NOTES:

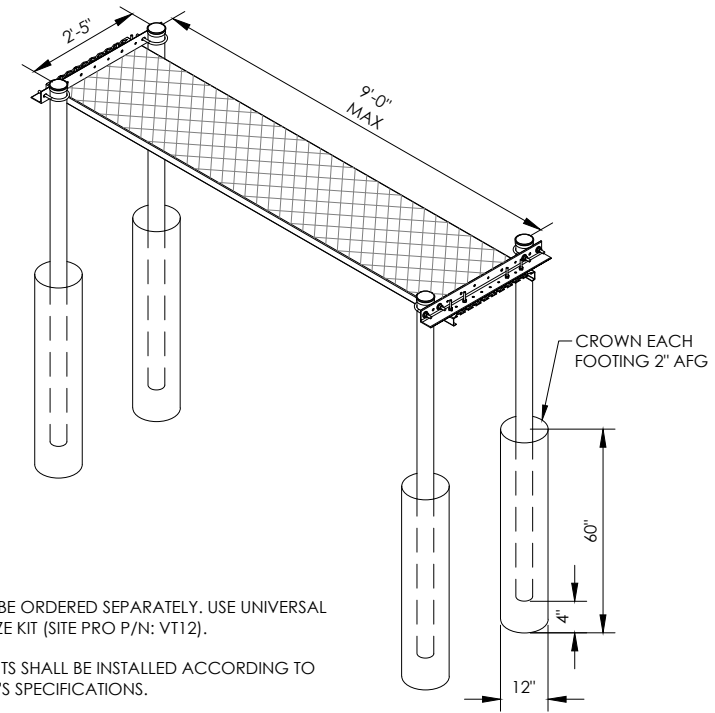
1. FINAL MOUNT LOCATION TO BE VERIFIED WITH VERIZON WIRELESS CM.
2. INSTALL GPS, COAX & MOUNT PER MANUFACTURERS RECOMMENDATIONS.
3. TIE MOUNT & COAX GROUND KIT INTO GROUNDING SYSTEM.
4. WEATHER SEAL CONNECTORS PER VERIZON WIRELESS STANDARDS.



① SHELTER MOUNTED GPS DETAIL
N.T.S.



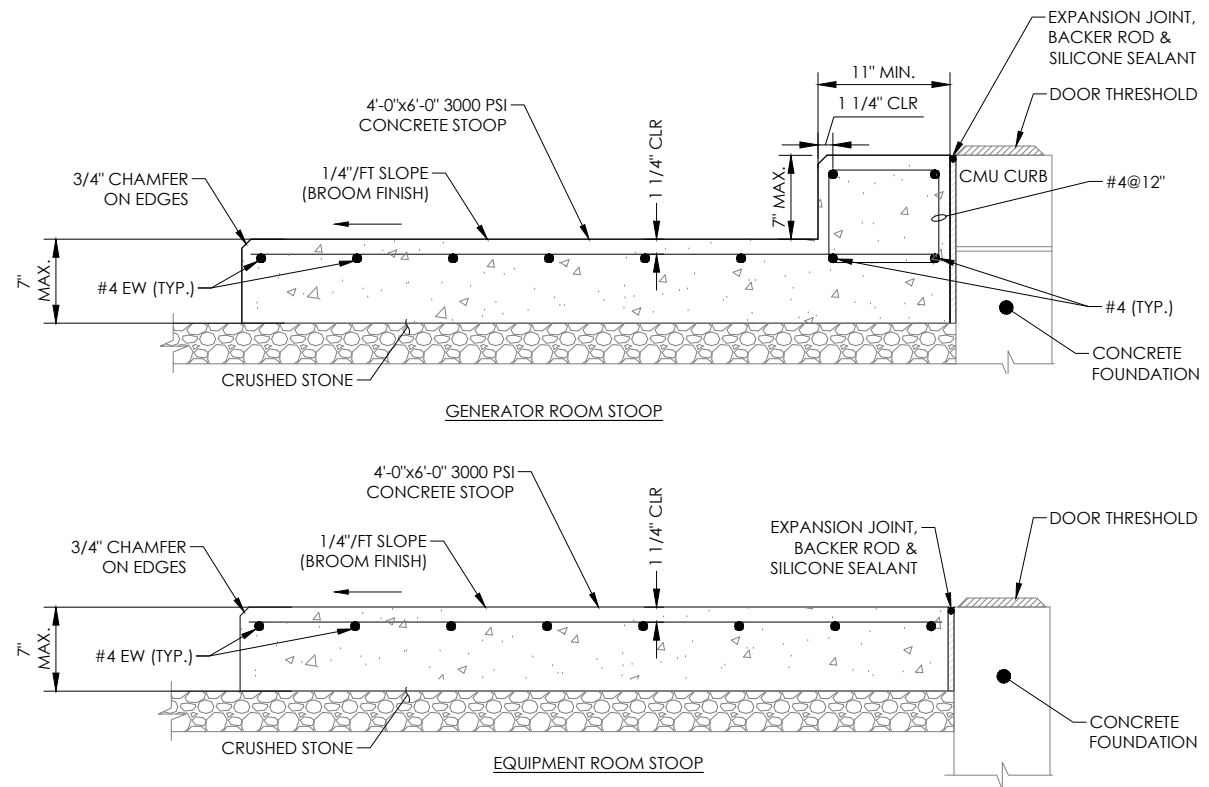
② STOCKADE FENCE
N.T.S.



ICE BRIDGE NOTES:

1. SUPPORTS MUST BE ORDERED SEPARATELY. USE UNIVERSAL VERTICAL TRAPEZE KIT (SITE PRO P/N: VT12).
2. ALL COMPONENTS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
3. CONTRACTOR SHALL DETERMINE REQUIRED QUANTITY OF ALL ICE BRIDGE COMPONENTS.
4. SNAP-IN HANGERS, SPLICE KITS, HINGE KITS, EXTENSION KITS, STIFFENERS, AND OTHER MISCELLANEOUS HARDWARE SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED.

③ 4-POST ICE BRIDGE (SITE PRO P/N: 1B24D)
N.T.S.



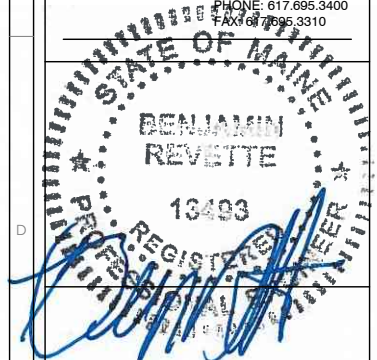
④ CONCRETE STOOP
N.T.S.



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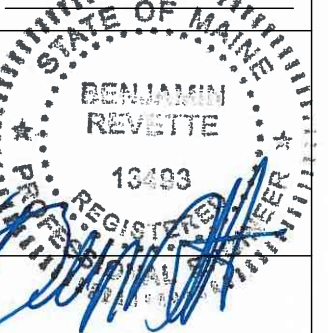
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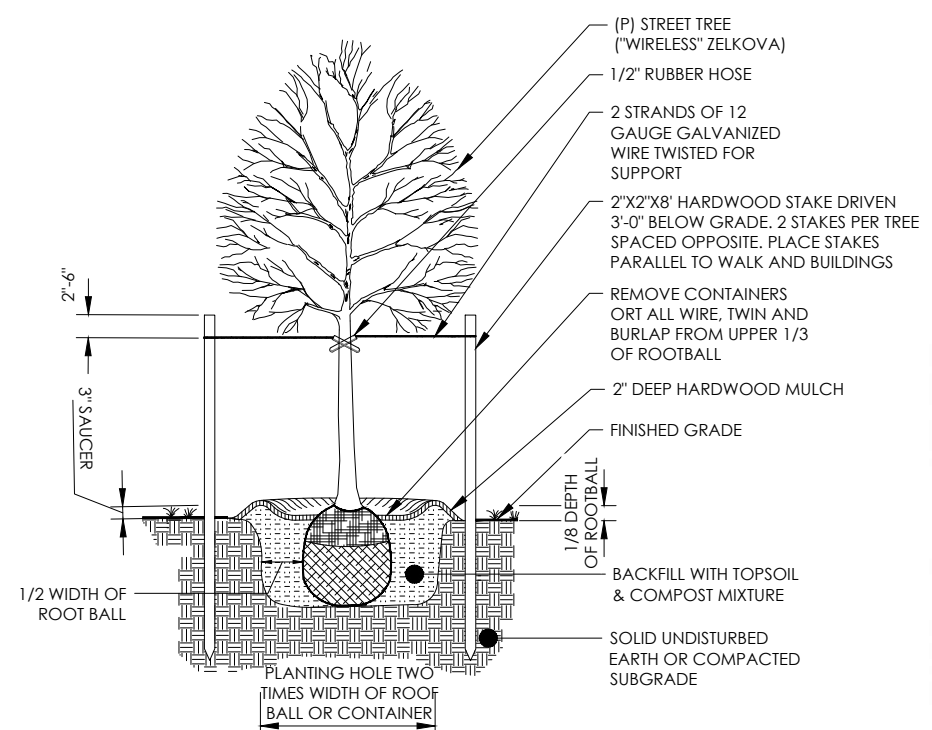
SHELTER DETAILS - II

S502



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3	100% SUBMISSION	11/30/18
4	EOS REVISIONS	01/11/19

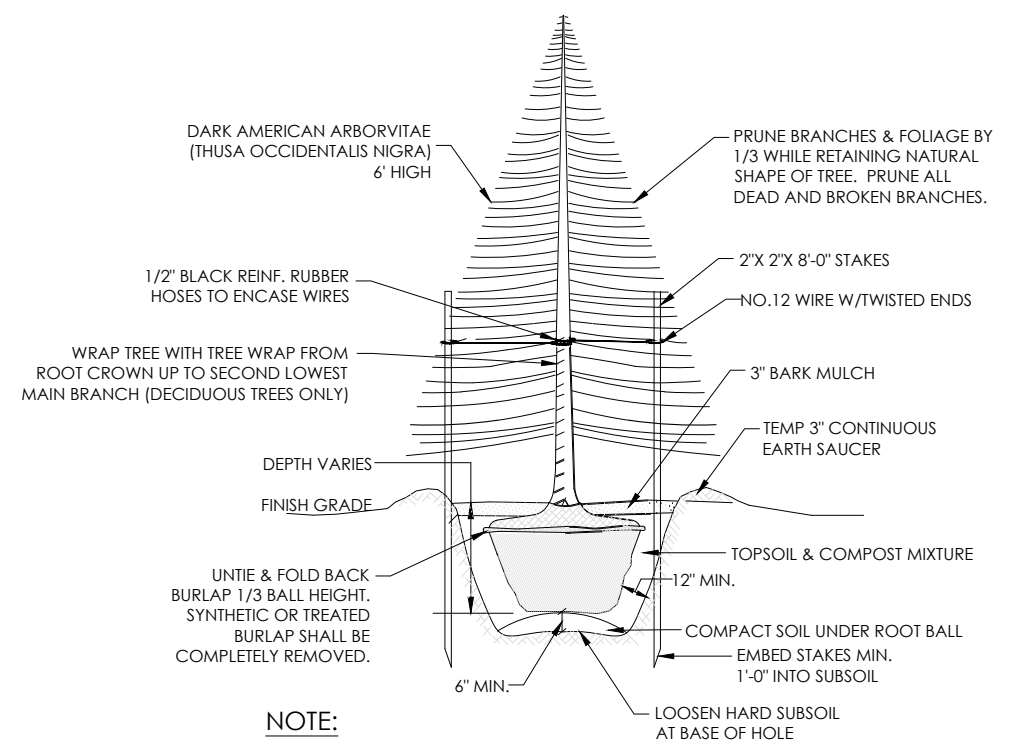
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CAD DWG FILE #: 50000112	
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DRAWN BY: SK	
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NOTES:

1. DETAILS APPLIES TO B&B OR CONTAINER PLANTING.
2. WHEN PLANTING ON A SLOPE, ENSURE LANDSCAPING IS INSTALLED VERTICAL AND PLUM.
3. MULCH SAUCER HEIGHT SHALL BE LEVEL AND UNIFORM AROUND CIRCUMFERENCE OF PLANT BASE.
4. STAKES AND WIRE SHALL ONLY BE UTILIZED AS NEEDED.

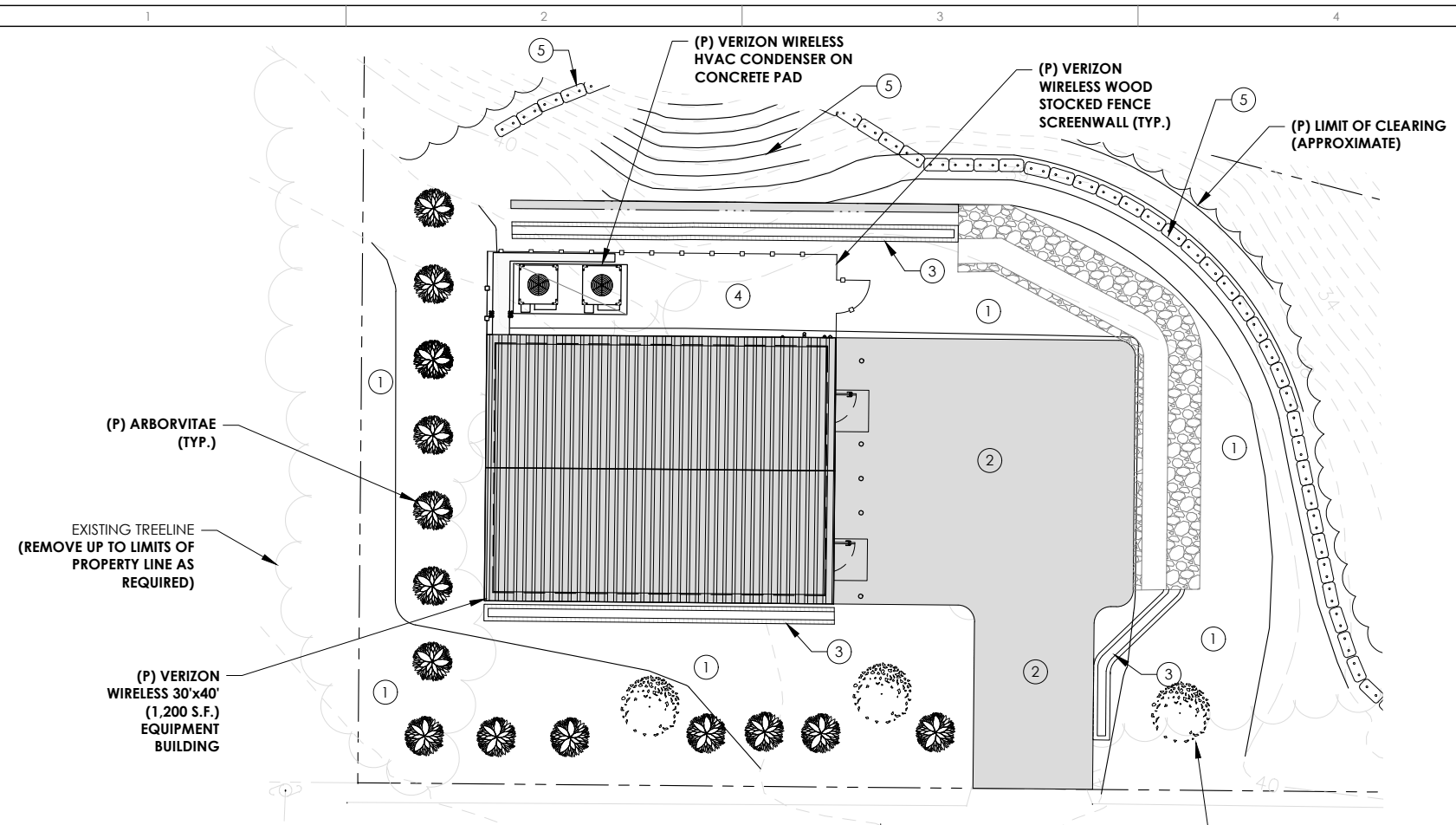
3 TREE PLANTING DETAIL
N.T.S.



NOTE:

1. LANDSCAPE TREES SHOWN SHALL BE ARBORVITAE & SHALL BE A MINIMUM OF 6'-0" IN HEIGHT WHEN PLANTED.

1 TREE PLANTING DETAIL
N.T.S.



CONGRESS STREET

LEGEND

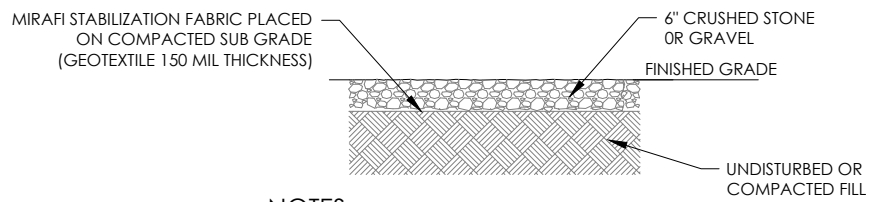
- 1 EROSION CONTROL MULCH MIXTURE (SEE SHEET SW001 FOR SPECIFICATIONS)
- 2 PAVED PARKING AREA
1-1/2" HOT BITUMINOUS CONCRETE SURFACE COURSE
1-1/2" HOT BITUMINOUS CONCRETE BASE COURSE
12" COMPACTED GRAVEL BASE COURSE
- 3 RIP-RAP LINED SWALE (6" DIAMETER)
- 4 4" COMPACTED GRAVEL YARD (350 S.F. ±) (SEE DETAIL 2, THIS SHEET)
- 5 RIP-RAP EROSION CONTROL (6" DIAMETER) (TO TREE LINE)

NOTE:

1. SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.

4 LANDSCAPE PLAN

22" x 34" SCALE: 1" = 10'-0"
11" x 17" SCALE: 1" = 20'-0"



NOTES:

1. BEARING STRATA MEDIUM TO DENSE INSET GRANULAR MATERIAL OR COMPACTED GRAVEL FILL. 95% COMPACTION.
2. FILL SHALL CONSIST OF CLEAN SOIL. NO DELETERIOUS MATERIALS OR ORGANICS TO BE USED.

2 GRAVEL YARD DETAIL
N.T.S.



4

2

1

EROSION AND SEDIMENT CONTROL PLAN:

DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED:

- ALL EROSION CONTROL SHALL BE INSTALLED AND IMPLEMENTED ACCORDING TO THE MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES MANUAL (OCTOBER 2016 VERSION).
- INSTALLATION OF SILTATION FENCES AND OTHER EROSION CONTROL MEASURES SHALL BE COMPLETED PRIOR TO THE START OF SITE WORK IN ANY GIVEN AREA.
- SILTATION FENCES AND OTHER EROSION CONTROL MEASURES SHALL BE KEPT CLEAN DURING CONSTRUCTION AND REMOVED WHEN ALL SLOPES HAVE A VEGETATIVE COVER OF GREATER THAN 85%. EROSION CONTROL MEASURES SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER RAINFALL.
- EXISTING VEGETATION IS TO REMAIN UNDISTURBED WHEREVER POSSIBLE.
- INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION CONTROL MEASURES, MATERIALS STORAGE AREAS THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE. INSPECT THESE AREAS AT LEAST ONCE A WEEK AS WELL AS BEFORE AND WITHIN 24 HOURS AFTER A STORM EVENT (RAINFALL), AND PRIOR TO COMPLETING PERMANENT STABILIZATION MEASURES. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT THE INSPECTIONS.
- IF BEST MANAGEMENT PRACTICES (BMPs) NEED TO BE REPAIRED, THE REPAIR WORK SHOULD BE INITIATED UPON DISCOVERY OF THE PROBLEM BUT NO LATER THAN THE END OF THE NEXT WORKDAY. IF ADDITIONAL BMPs OR SIGNIFICANT REPAIR OF BMPs ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (RAINFALL). ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.
- KEEP A LOG (REPORT) SUMMARIZING THE INSPECTIONS AND ANY CORRECTIVE ACTION TAKEN. THE LOG MUST INCLUDE THE NAME(S) AND QUALIFICATIONS OF THE PERSON MAKING THE INSPECTIONS, THE DATE(S) OF THE INSPECTIONS, AND MAJOR OBSERVATIONS ABOUT THE OPERATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS, MATERIALS STORAGE AREAS, AND VEHICLES ACCESS POINTS TO THE PARCEL. MAJOR OBSERVATIONS MUST INCLUDE BMPs THAT NEED MAINTENANCE, BMPs THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, AND LOCATION(S) WHERE ADDITIONAL BMPs ARE NEEDED. FOR EACH BMP REQUIRING MAINTENANCE, BMP NEEDING REPLACEMENT, AND LOCATION NEEDING ADDITIONAL BMPs, NOTE IN THE LOG THE CORRECTIVE ACTION TAKEN AND WHEN IT WAS TAKEN.
- THE LOG MUST BE MADE ACCESSIBLE TO DEPARTMENT STAFF AND A COPY MUST BE PROVIDED UPON REQUEST. THE PERMITTEE SHALL RETAIN A COPY OF THE LOG FOR A PERIOD OF AT LEAST THREE YEARS FROM THE COMPLETION OF PERMANENT STABILIZATION.
- MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.
- EXCAVATION DE-WATERING SHALL BE COMPLETED IN ACCORDANCE TO MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES MANUAL AND MAINE CHAPTER 500 STANDARDS.

INFILTRATION REQUIREMENTS:

- SNOW REMOVED FROM ANY ON-SITE OR OFF-SITE AREAS MAY NOT BE STORED OVER AN INFILTRATION AREA.
- OBSERVATION WELLS TO DETERMINE THE SYSTEM'S PERFORMANCE AND ACCESS POINTS TO ALLOW FOR THE REMOVAL OF ACCUMULATED SEDIMENT MUST BE INCLUDED IN THE DESIGN OF SUBSURFACE FLUID DISTRIBUTION SYSTEMS. DRY WELLS AND INFILTRATION BASINS MUST HAVE STAFF GAUGES, MARKED RODS, OR SIMILAR INSTRUMENTATION TO MEASURE THE ACCUMULATION OF SEDIMENT AND DETERMINE HOW QUICKLY THE SYSTEM DRAINS AFTER A STORM.
- THE BOTTOM OF THE INFILTRATION SYSTEM, INCLUDING ANY STONE LAYER OR OTHER MATERIAL BELOW THE DEPTH OF ANY MANUFACTURED COMPONENTS OF THE SYSTEM, MUST BE AT LEAST THREE FEET ABOVE THE ELEVATION OF THE SEASONAL HIGH WATER TABLE.
- SEDIMENT MUST BE REMOVED FROM THE SYSTEM TO PREVENT DETERIORATION OF SYSTEM PERFORMANCE. THE SYSTEM MUST BE REHABILITATED OR REPLACED IF ITS PERFORMANCE IS DEGRADED TO THE POINT THAT APPLICABLE STORMWATER STANDARDS ARE NOT MET.

MULCHING REQUIREMENTS:

- REQUIRE MULCHING PER WEATHER PREDICTION, SOIL ERODIBILITY, SEASON, EXTENT OF DISTURBANCE, ETC. WITHIN 7 DAYS IN SENSITIVE AREAS (WITHIN 100 FEET OF A NATURAL RESOURCE) OR WITHIN 14 TO 30 DAYS IN OTHER AREAS.
- MULCH SHOULD BE USED WITH TREES, SHRUBS, VINES AND FOR ALL GROUND COVER PLANTINGS.
- ANCHOR HAY MULCH WITH STAPLED MESH NETTING OR BY STRETCHING TWINE IN A CRISSCROSS PATTERN BETWEEN PEGS (4-6 PEGS PER SQUARE YARD, 2-3 INCH DEEP). DRIVE THE PEGS FLUSH WITH SOIL WHERE MOWING IS PLANNED.
- A TEMPORARY ROAD OR AN UNFINISHED ROAD (WITHOUT ITS FINAL DRIVING SURFACE OF GRAVEL) MAY REQUIRE MULCHING PRIOR TO A RAIN EVENT.

EROSION CONTROL MULCH MIX SPECIFICATIONS:

- THE RECOMMENDED THICKNESS FOR EROSION CONTROL MIX IS 4 INCH PLUS AN ADDITIONAL 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET IF THE SLOPE IS STEEPER THAN 3:1.
- EROSION CONTROL MIX SHOULD CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX SHOULD BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH SUCH AS FLY ASH OR YARD SCRAPING. LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX. THE MIX COMPOSITION SHOULD MEET THE FOLLOWING STANDARDS:
- THE ORGANIC MATTER CONTENT SHOULD BE BETWEEN 80% AND 100%, DRY WEIGHT BASIS.
- PARTICLE SIZE BY WEIGHT SHOULD BE 100% PASSING A 6" SCREEN AND 70% TO 85% PASSING A 0.75" SCREEN.
- THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
- SOLUBLE SALTS CONTENT SHALL BE < 4.0 MMHOS/CM.
- THE PH SHOULD BE BETWEEN 5.0 AND 8.0.
- EROSION CONTROL MIX 2 INCHES FOR SLOPES FLATTER THAN 3:1 OR 4 INCHES FOR SLOPES GREATER THAN 3:1
- THE MIX MUST CONTAIN SOME SOIL.

EROSION CONTROL MULCH MIX SPECIFICATIONS:

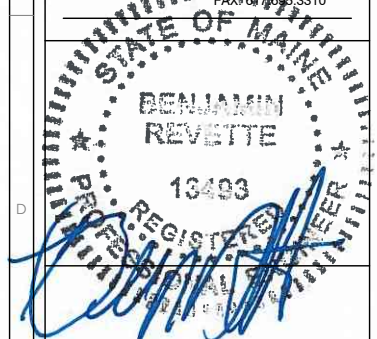
- THE RECOMMENDED THICKNESS FOR EROSION CONTROL MIX IS 4 INCH PLUS AN ADDITIONAL 1/2 INCH PER 20 FEET OF SLOPE UP TO 100 FEET IF THE SLOPE IS STEEPER THAN 3:1.
- EROSION CONTROL MIX SHOULD CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX SHOULD BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH SUCH AS FLY ASH OR YARD SCRAPING. LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX. THE MIX COMPOSITION SHOULD MEET THE FOLLOWING STANDARDS:
- THE ORGANIC MATTER CONTENT SHOULD BE BETWEEN 80% AND 100%, DRY WEIGHT BASIS.
- PARTICLE SIZE BY WEIGHT SHOULD BE 100% PASSING A 6" SCREEN AND 70% TO 85% PASSING A 0.75" SCREEN.
- THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
- SOLUBLE SALTS CONTENT SHALL BE < 4.0 MMHOS/CM.
- THE PH SHOULD BE BETWEEN 5.0 AND 8.0.
- EROSION CONTROL MIX 2 INCHES FOR SLOPES FLATTER THAN 3:1 OR 4 INCHES FOR SLOPES GREATER THAN 3:1
- THE MIX MUST CONTAIN SOME SOIL.
- THE MIX MUST BE WELL-GRADED WITH AN ORGANIC COMPONENT THAT IS BETWEEN 50 AND 100% OF DRY WEIGHT, AND THAT IS COMPOSED OF FIBROUS AND ELONGATED FRAGMENTS. THE MINERAL PORTION OF THE MIX SHOULD BE NATURALLY INCLUDED IN THE PRODUCT WITH NO LARGER ROCKS (>4") OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS). IN STUMP GRINDING, THE MINERAL SOIL ORIGINATES FROM THE ROOT BALL AND SHOULD NOT BE REMOVED BEFORE GRINDING. THE MIX SHOULD BE FREE OF REFUSE, MATERIAL TOXIC TO PLANT GROWTH OR UNSUITABLE MATERIAL (BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS).
- EROSION CONTROL MIX CAN BE USED ON FROZEN GROUND, FORESTED AREAS, ON CUT AND FILL SLOPES, AND ON ROADSIDE EMBANKMENTS.
- APPLY A THICKNESS OF 2 INCHES ON 3:1 SLOPES OR LESS AND ADD AN ADDITIONAL 1/2 INCH PER 20 FEET OF SLOPE OR UP TO 4 INCHES FOR A 100 FOOT SLOPE.
- ON SLOPES GREATER THAN 3:1, 4 INCHES OR MORE OF MATERIAL IS RECOMMENDED; AND IF SLOPES ARE GREATER THAN 60 FEET LONG, 5 INCHES ARE NEEDED.
- EROSION CONTROL MIX IS NOT RECOMMENDED FOR SLOPES STEEPER THAN 1:1.
- THE MIX MUST BE DISTRIBUTED EVENLY WITH A HYDRAULIC BUCKET, PNEUMATIC BLOWER, OR BY HAND.
- OTHER REINFORCEMENT BMPs (I.E. RIPRAP) SHOULD BE USED ON SLOPES WITH GROUNDWATER SEEPAGE, WITHIN DRAINAGE CHANNELS AND THEIR OUTLETS, OR IN GULLIES.



THIS DRAWING WAS PREPARED SOLELY FOR THE USE OF VERIZON WIRELESS AND MUST ONLY BE USED BY VERIZON WIRELESS EMPLOYEES, CONTRACTORS, AND VENDORS WHILE PERFORMING THE WORK SHOWN ON THIS DRAWING. ANY OTHER USE OF THIS DRAWING IS FORBIDDEN.



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280 SUMMER STREET
10TH FLOOR
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FAX: 617.695.3310



verizon
PORTLAND ME HEAD END
LOCATION CODE: 320632
1531 CONGRESS STREET
PORTLAND, ME 04102

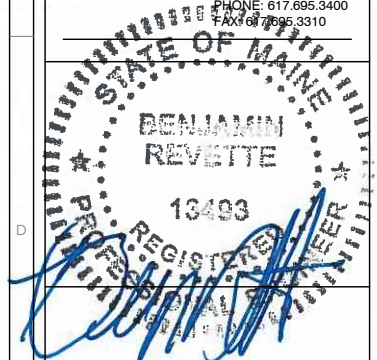
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4	EOS REVISIONS	01/11/19
NETWORK COMPLIANCE SUBMITTALS		DATE
100% SUBMISSION		DATE
RE-SUBMISSION (IF REQUIRED)		DATE

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STORMWATER NOTES

SW001



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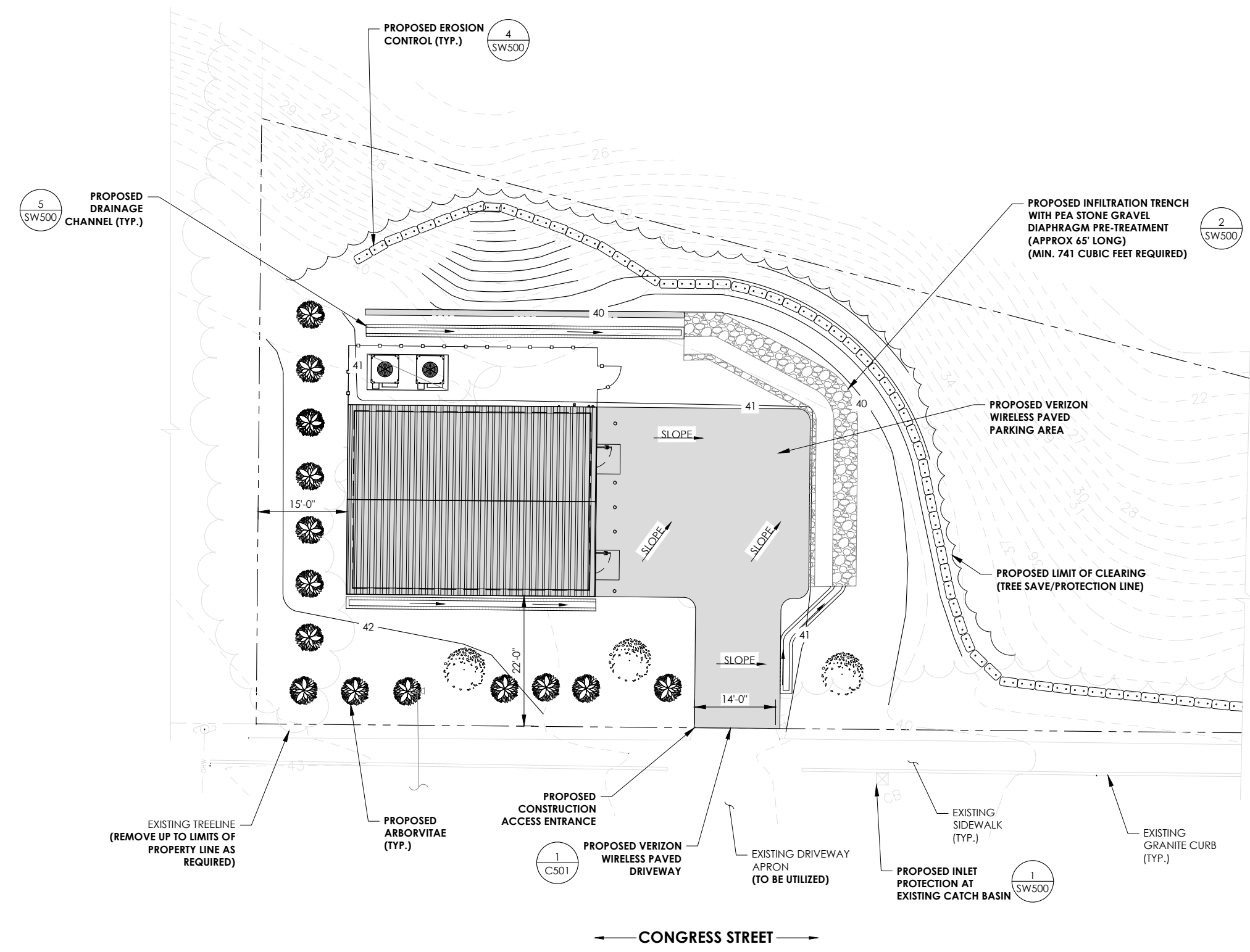
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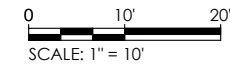
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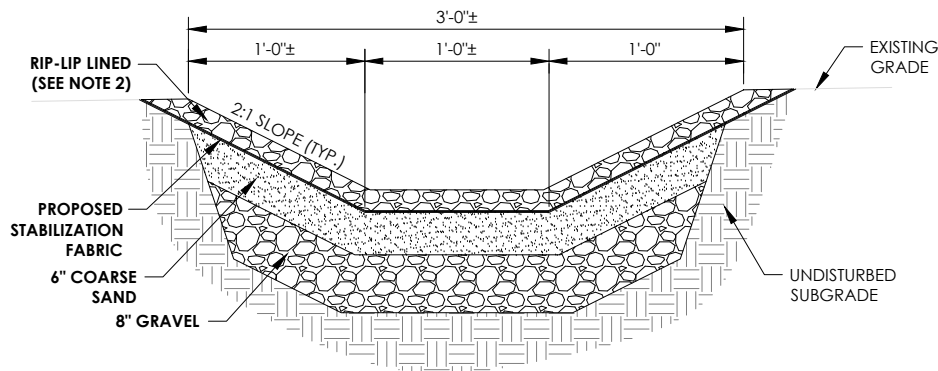
STORMWATER PLAN

SW100

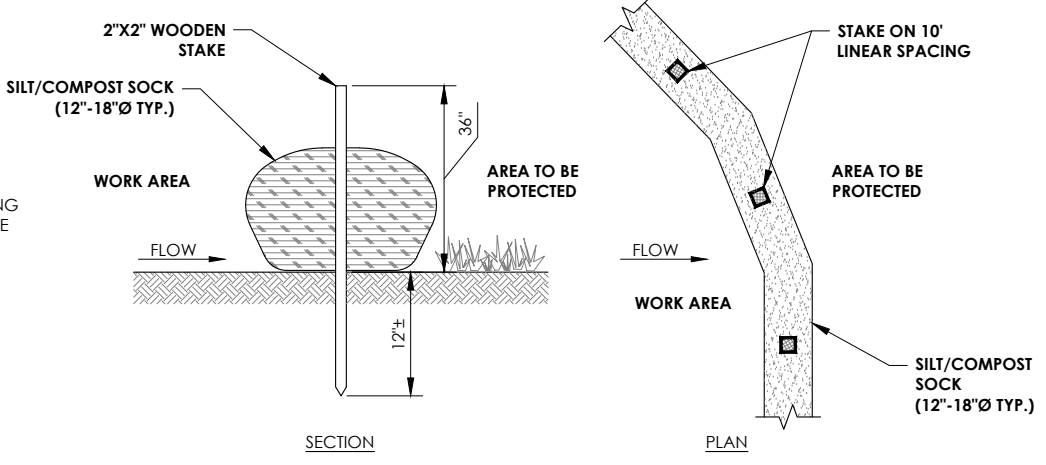


1 STORMWATER MANAGEMENT PLAN
22" x 34" SCALE: 1" = 10'-0"
11" x 17" SCALE: 1" = 20'-0"

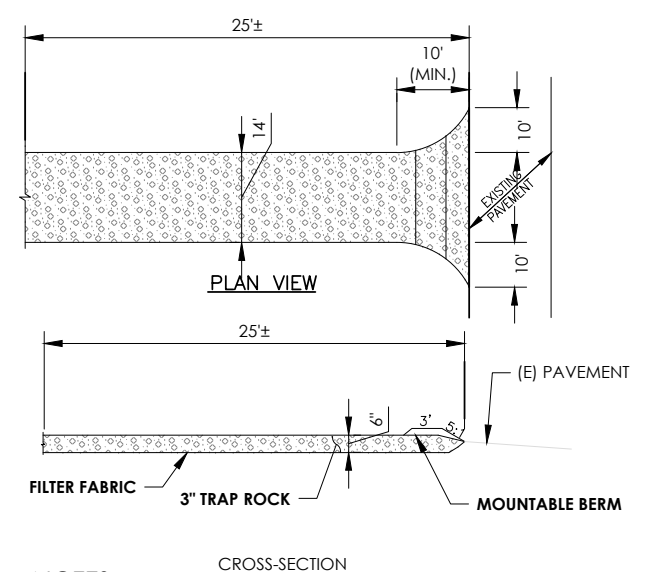




- NOTE:**
1. SEE SITE SW100 FOR LOCATION OF PROPOSED GRASSED CHANNEL.
 2. LINE SWALE WITH RIP-RAP 6" MIN. DIA.



- FILTER SOCK NOTES:**
1. NO TRENCHING IS REQUIRED. TIE A KNOT IN ONE END OF THE MESH SOCK, FILL THE SOCK WITH COMPOSTED MATERIAL (USING A PNEUMATIC BLOWER) AND KNOT THE OPPOSITE END ONCE THE DESIRED LENGTH IS ACHIEVED.
 2. COMPOST FILTER SOCKS SHOULD BE INSPECTED REGULARLY, AS WELL AS AFTER EACH RAINFALL EVENT, TO ENSURE THEY ARE INTACT AND THE AREA BEHIND THE SOCK IS NOT FILLED WITH SEDIMENT. ONCE SEDIMENT REACHES ONE HALF THE HEIGHT OF THE SOCK, REMOVE SEDIMENT BY HAND AND DISPOSE OF PROPERLY.
 3. REFER TO MANUFACTURER'S SPECIFICATIONS FOR PROPER INSTALLATION AND MAINTENANCE METHODS.

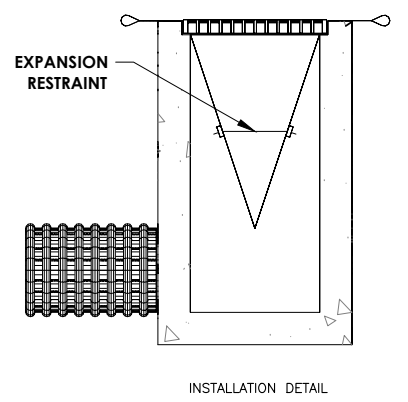
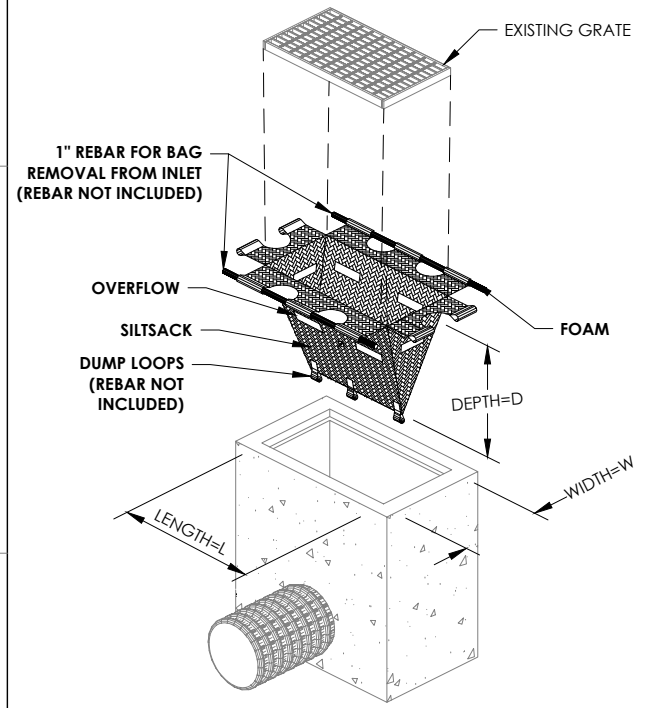


- NOTES:**
1. ENTRANCE WIDTH SHALL BE A TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
 2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.

5 DRAINAGE CHANNEL
N.T.S.

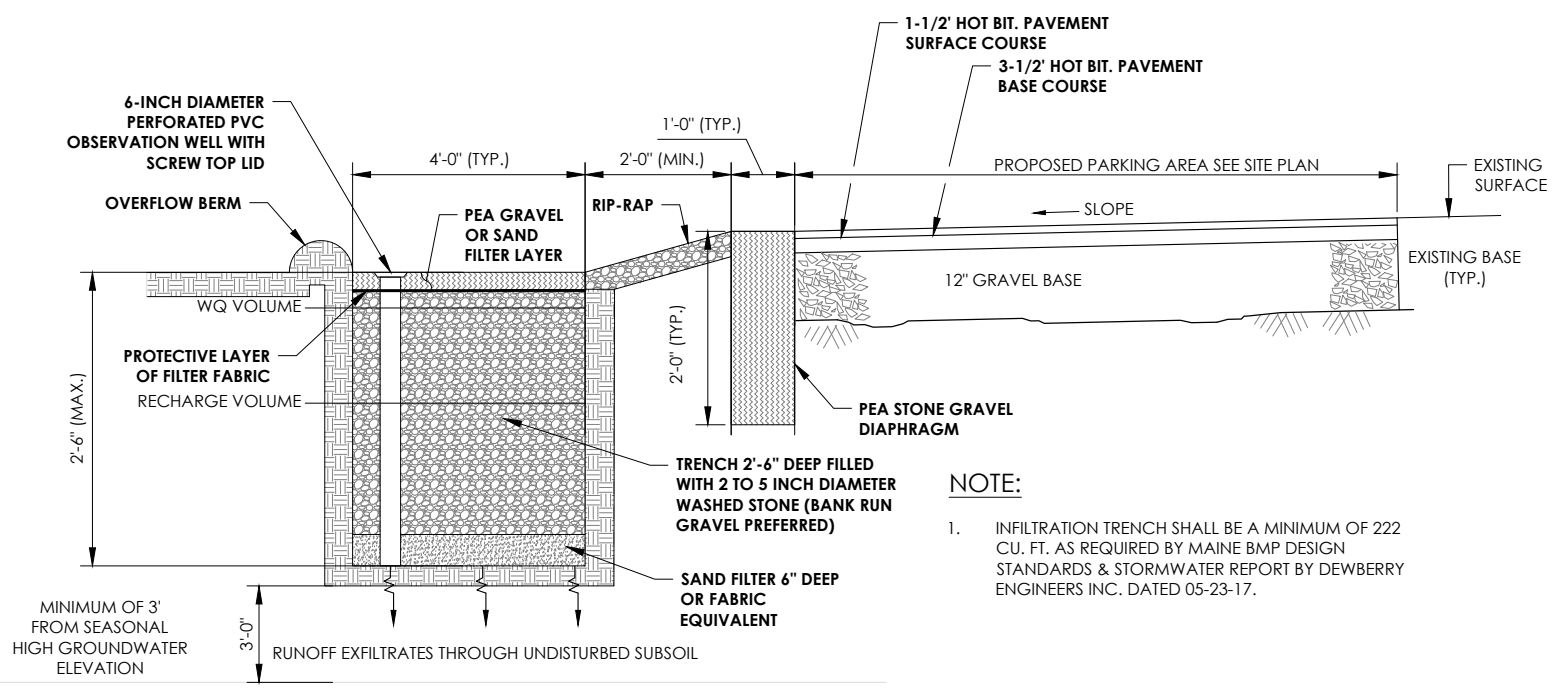
4 SEDIMENTATION FILTER SOCK DETAIL
N.T.S.

3 STABILIZED CONSTRUCTION ACCESS
N.T.S.



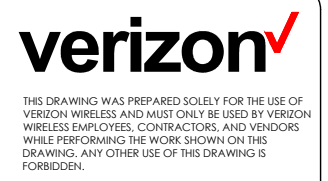
- NOTE:**
- THIS TEMPORARY PROTECTION FOR EXISTING CATCH BASIN INLETS TO BE REMOVED BY CONTRACTOR AFTER COMPLETION OF WORK.

1 CATCH BASIN INLET PROTECTION DETAIL
N.T.S.



- NOTE:**
1. INFILTRATION TRENCH SHALL BE A MINIMUM OF 222 CU. FT. AS REQUIRED BY MAINE BMP DESIGN STANDARDS & STORMWATER REPORT BY DEWBERRY ENGINEERS INC. DATED 05-23-17.

2 CROSS SECTION WITH INFILTRATION TRENCH
N.T.S.



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280 SUMMER STREET
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PHONE: 617.695.3400
FAX: 617.695.3310



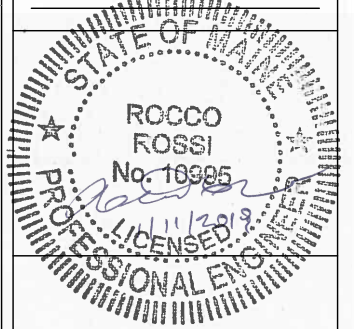
verizon
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LOCATION CODE: 320632
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PORTLAND, ME 04102

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STORMWATER DETAILS
SW500

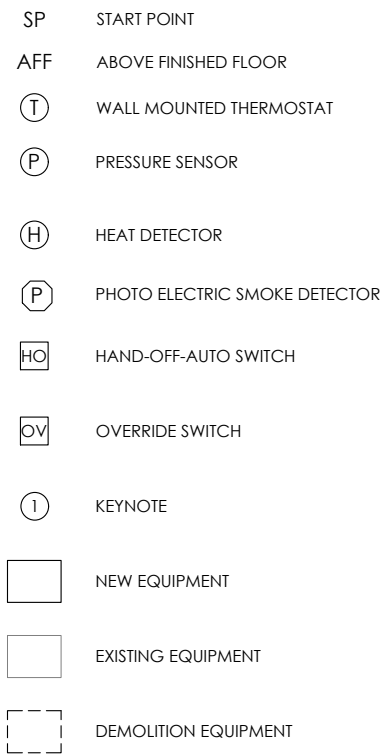
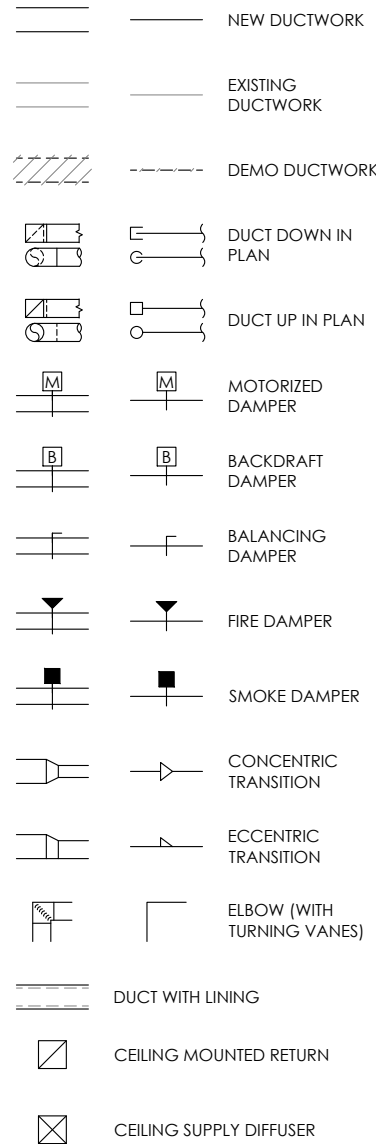


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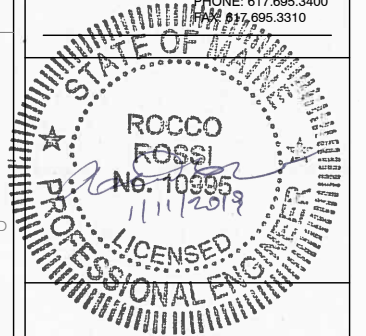
MECHANICAL GENERAL NOTES:

1. **COORDINATION:**
 - A. EACH DIVISION SHALL COMPLY WITH THE G001 PROJECT GENERAL NOTES AS IF CONTAINED HEREIN.
 - B. CONTRACTOR SHALL SUBMIT COORDINATION DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR ASSEMBLY AND COORDINATION OF WORK WITHIN ALL DIVISIONS AND TRADES INTO A SINGLE PACKAGE.
2. **DO NOT SCALE DRAWINGS:**
THE CONTRACTORS SHALL USE DIMENSIONS SHOWN ON THE DRAWINGS AND ACTUAL FIELD MEASUREMENT. NOTIFY THE AE PROJECT MANAGER IF ANY DISCREPANCIES ARE FOUND PRIOR TO PROCEEDING WITH WORK.
3. ALL ROOM THERMOSTATS, HUMIDISTATS, SENSORS, ETC., SHALL BE MOUNTED 5'-0" AFF (UNLESS OTHERWISE NOTED) AND CLEAR OF ANY BLOCKAGE OR DAMAGE FROM DOORS.
4. ALL DUCTWORK CONNECTIONS TO AIR HANDLING UNITS, EXHAUST FANS, AND GENERATORS SHALL BE FLEXIBLE CONNECTIONS, IN ACCORDANCE WITH ASHRAE, IMC, ETC.
5. ALL MOTORIZED DAMPERS SHALL BE LOW LEAKAGE AIRFOIL AMCA CLASS 1 A DAMPERS.
6. ALL DUCTWORK SHALL BE SEALED IN ACCORDANCE WITH ASHRAE, IMC, ETC.
7. DDC CONTRACTOR TO PROVIDE AND INSTALL CONTROL WIRING AND CONDUIT PER ELECTRICAL FOR ALL VAV CONTROLLERS, UNIT CONTROLLERS VFD'S, MOTORIZED DAMPERS AND FIRE/SMOKE DAMPERS.
8. COORDINATE APPROPRIATE CORRESPONDING DAMPER SIZE WITH DUCT SIZE, SEE SPECIFICATIONS.
9. CONDENSATE AND HUMIDIFIER PIPING ABOVE SENSITIVE EQUIPMENT OR RUNNING THROUGH EQUIPMENT SPACES SHALL BE IN CONTAINMENT PIPING.
10. ALL CONDENSATE PIPING SHALL SLOPE 1/8" PER 1'-0".
11. PROVIDE SECONDARY DRAIN PAN AND PIPING UNDER FAN COIL UNITS.
12. VERIFY ALL DIMENSIONS & CONDITIONS IN THE FIELD. NOTIFY AE PROJECT MANAGER OF ANY DISCREPANCIES. DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL OFFSETS, BENDS, ELBOWS, ETC., WHICH MAY BE REQUIRED FOR PROPER INSTALLATION OF WORK. PROVIDE ADDITIONAL BENDS AND/OR OFFSETS AS REQUIRED TO COMPLETE WORK AT NO ADDITIONAL COST.
13. COORDINATION OF WORK WITH OTHER TRADES EMPLOYED IN THE PROJECT IS MANDATORY. CAREFULLY EXAMINE THE SPACE AVAILABLE TO DETERMINE FINAL ROUTING AND ELEVATIONS OF SERVICES. SHOULD REARRANGEMENT OR RE-ROUTING OF LINES OR PIPING BE NECESSARY, PROVIDE FOR APPROVAL THE SIMPLEST LAYOUT POSSIBLE FOR THAT PARTICULAR PORTION OF THE WORK.
14. THE EXISTENCE OF ANY PIPING, DUCTS OR OTHER SERVICE FACILITIES ARE SHOWN IN A GENERAL WAY ONLY. THE CONTRACTOR SHALL VISIT THE SITE AND MAKE EXACT DETERMINATION OF THE EXISTENCE OF ANY SUCH FACILITIES PRIOR TO THE SUBMISSION OF HIS BID.
15. ALL TELECOMMUNICATIONS EQUIPMENT TO REMAIN ON-LINE AND FUNCTIONING AT ALL TIMES. CONTRACTOR TO PROTECT & MAINTAIN POWER TO ALL EQUIPMENT SCHEDULED TO REMAIN FOR THE DURATION OF CONSTRUCTION.
16. SCHEDULE ALL WORK OVER, NEAR OR AFFECTING NETWORK EQUIPMENT WITH VZW ON-SITE WORK FORCE PERSONNEL. COMPLETE "METHODS OF PROCEDURE" FOR WORK AS DIRECTED BY VZW IN ACCORDANCE WITH VZW STANDARDS.
17. CONTRACTOR TO REMOVE ALL MATERIALS NOT RELATED TO THE FINISHED PRODUCT FROM THE SITE. (DO NOT BURY ON SITE).
18. MAINTAIN AREAS FREE OF DEBRIS ACCUMULATION. KEEP WORK AREAS NEAT AND ORDERLY IN AS MUCH AS REASONABLY POSSIBLE.
19. CONTRACTOR IS RESPONSIBLE FOR ALL ERECTION, BRACING & SHORING OF EXISTING AND NEW EQUIPMENT OR MATERIALS UNTIL SUCH TIME IT IS PERMANENTLY SUPPORTED OR IS READY FOR REMOVAL DURING CONSTRUCTION, WHETHER SCHEDULED FOR DEMOLITION OR REUSE.
20. PROVIDE EQUIPMENT PROTECTION ABOVE ALL NETWORK EQUIPMENT AS REQUIRED. ALL PROTECTION SHALL BE COORDINATED WITH VZW PERSONNEL TO ENSURE THAT THE PROTECTION WILL NOT BLOCK ACCESS TO EQUIPMENT OR CAUSE OVER HEATING. PROVIDE TEMPORARY COOLING AS REQUIRED. CONTRACTOR TO SUBMIT DESIGN OF ALL TEMPORARY DUST BARRIERS TO ARCHITECT FOR APPROVAL PRIOR TO CONSTRUCTION.
21. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND DETERMINE THE EXACT EXTENT OF WORK, COORDINATION, DEMOLITION, TEMPORARY CONSTRUCTION, TEMPORARY FACILITIES, UTILITIES, ETC. NECESSARY TO COMPLETE THIS PROJECT AS INDICATED IN THE CONTRACT DOCUMENTS.
22. LINED DUCT PROHIBITED IN EQUIPMENT AREAS.



1 DUCTWORK SYMBOLS
N/A

2 MECHANICAL LEGEND
N/A



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MECHANICAL PLAN

M100

NOTES:

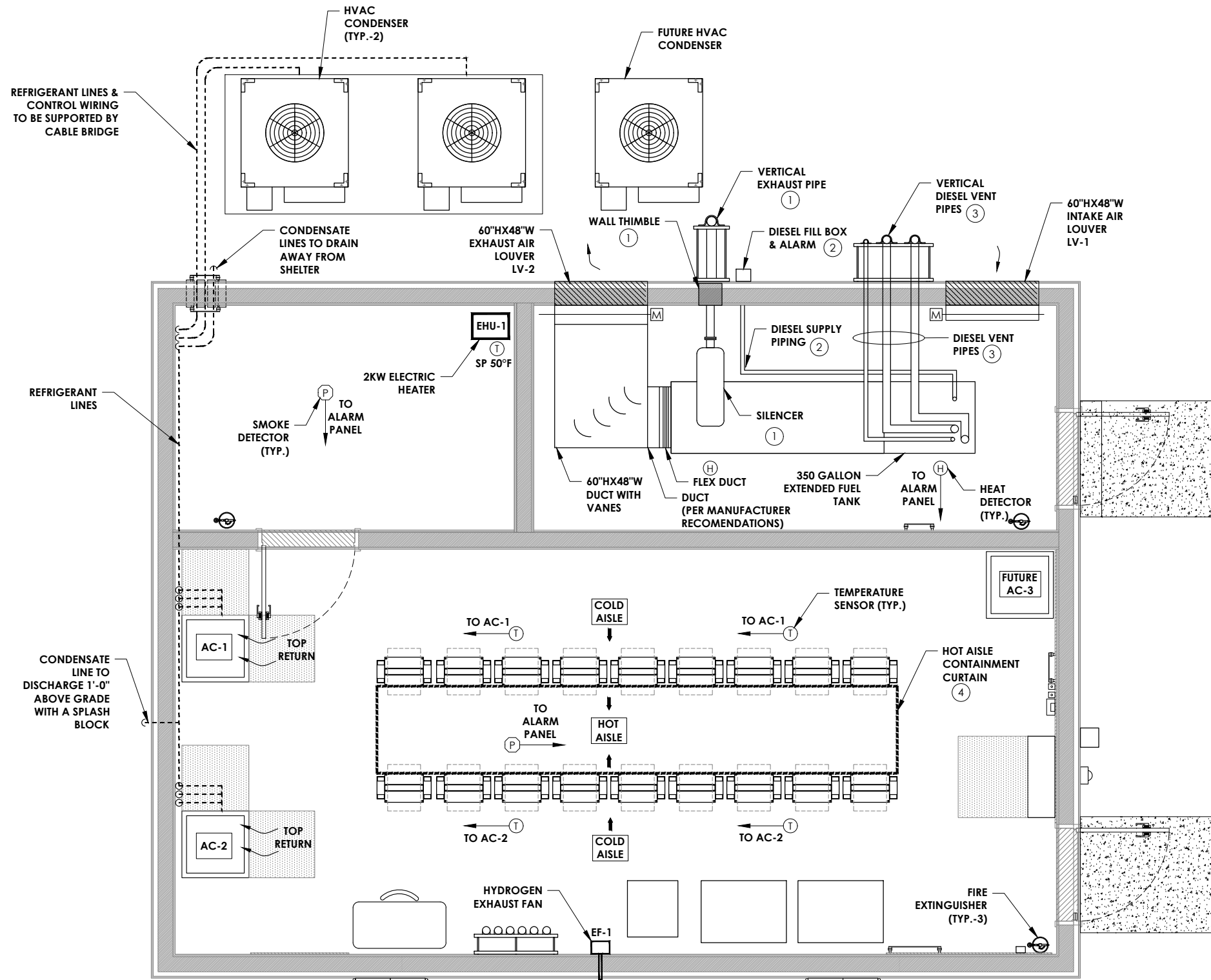
- COORDINATE UNITS PER VERIZON STANDARDS AND MAINTAIN MANUFACTURER CLEARANCE REQUIRED AIR HANDLING UNIT.
- SEE MECHANICAL SCHEDULE ON M503.
- VERIFY GENERATOR AND TANK MODEL NUMBER PRIOR TO PURCHASE OF ACCESSORY MATERIALS. INSTALL PER MANUFACTURERS RECOMMENDATIONS.

KEY NOTES:

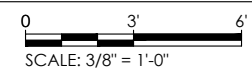
- CONTRACTOR TO PROVIDE SUPPORT STRUT AND HANGERS, EXHAUST PIPE, VERTICAL FLEX CONNECTOR, SILENCER, WALL THIMBLE & RAIN CAP. INTERIOR PIPING AND SILENCER SHALL BE INSULATED WITH (2) LAYERS OF THERMO-12 GOLD CALCIUM SILICATE PIPE INSULATION. EXTERIOR PIPING SHALL BE SUPPORTED WITH WALL MOUNT STRUT AND HAVE A 9" CLEARANCE FROM ROOF EVE. EXHAUST SHALL EXTEND VERTICALLY 3' ABOVE THE ROOF EDGE.
- CONTRACTOR TO PROVIDE 2" DIESEL FUEL LINE, 5 GALLON DIESEL FUEL FILL BOX WITH ALARM AND OVERFILL PREVENTION VALVE BY REFERRED UTILITIES OR EQUAL. DO NOT BLOCK ACCESS TO GENERATOR. INTERCONNECT ALARM.
- CONTRACTOR TO PROVIDE (2) 4" VENT PIPES & (1) 2" VENT PIPE WITH VENT CAPS. ROUTE VERTICALLY TO THE CEILING AND EXTEND THROUGH EXTERIOR WALL. PROVIDE CEILING SUPPORT STRUT & OFFSET SUPPORT STRUT HARDWARE AND EXTEND VENTS 12' AGL.
- COORDINATE HOT AISLE CONTAINMENT CURTAIN SPECIFICATIONS WITH VERIZON CM. INSTALL PER MANUFACTURER RECOMMENDATIONS.

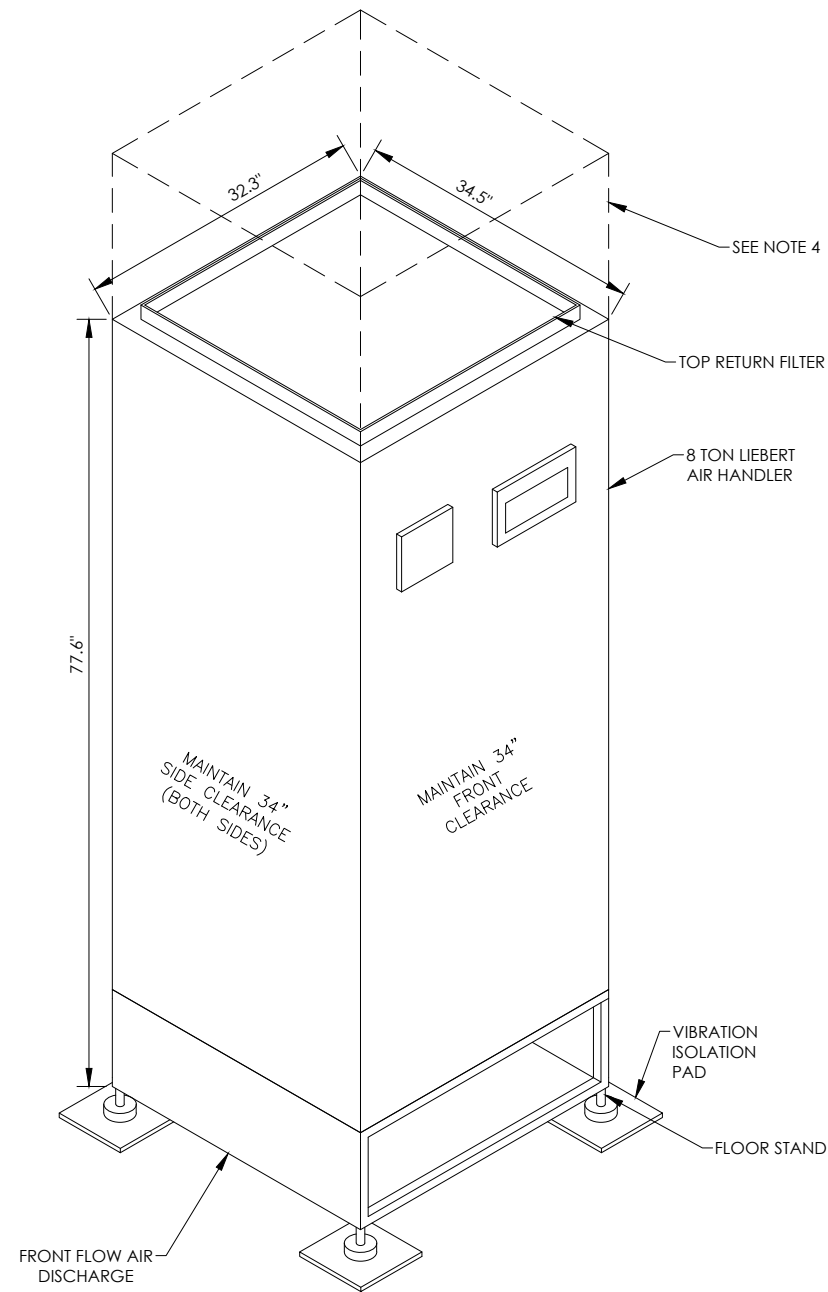
PIPING SPECIFICATIONS:

- REFRIGERANT PIPING TO BE COPPER TUBING TYPE L, HARD DRAWN CLEANED, DEHYDRATED AND CAPPED FOR REFRIGERANT SERVICE. FITTINGS TO BE WROUGHT COPPER WITH BRAZED JOINTS.
- DIESEL FUEL PIPING TO BE SCHEDULE 40, A106, GR. A STEEL WITH SOCKET WELDED FITTINGS.
- DIESEL FUEL TANK VENT PIPING TO BE STANDARD WEIGHT ZINC-COATED STEEL WITH ZINC-COATED MALLEABLE IRON FITTINGS.
- CONDENSATE PIPING TO BE TYPE L COPPER 3/4" MINIMUM.
- REFRIGERANT PIPING TO BE INSULATE WITH 1-1/2" THICK ELASTOMERIC INSULATION WITH ALL SERVICE JACKET. OUTDOOR INSULATION TO BE PROTECTED BY A FACTORY-FABRICATED 0.016 ALUMINUM METAL JACKETING SYSTEM; JACKETING SHALL BE MADE WITH A CONTINUOUS MODIFIED Z-LOCK ON THE LONGITUDINAL SEAM. BUTT STRAPS, 2-INCHES WIDE, OF THE SAME MATERIAL, SHALL BE INSTALLED OVER ADJOINING SECTIONS AND SECURED WITH A PREFORMED STRAP CONTAINING A PERMANENT PLASTIC WEATHERPROOF SEALING COMPOUND.
- CONDENSATE PIPING TO BE INSULATED WITH 1" THICK ELASTOMERIC INSULATION WITH VAPOR BARRIER JACKET.



2 MECHANICAL FLOOR PLAN
22" x 34" SCALE: 3/8" = 1'-0"
11" x 17" SCALE: 3/16" = 1'-0"





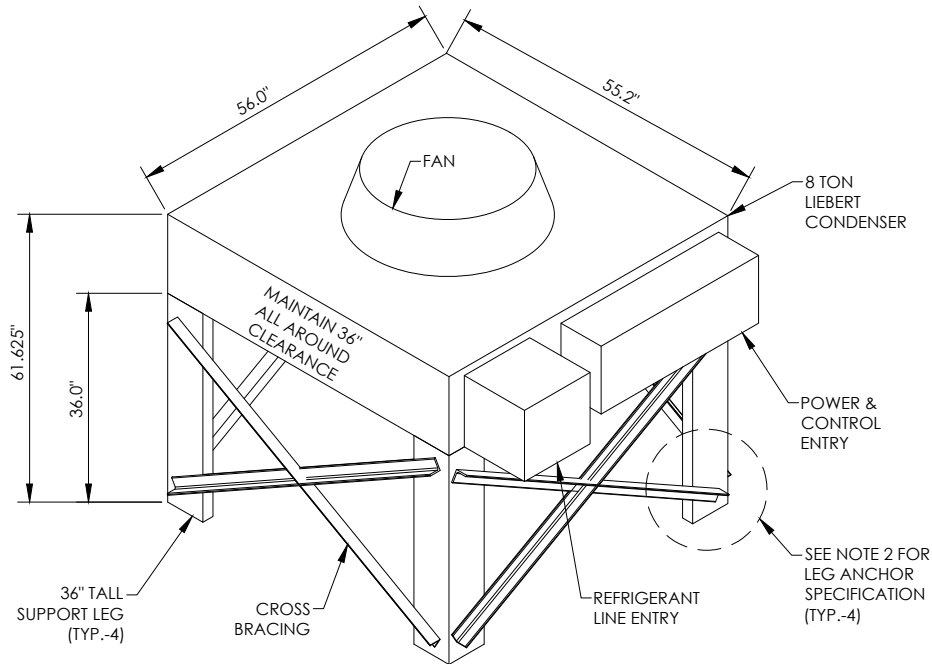
NOTE:

1. PROVIDE EQUIPMENT SPECIFICATIONS FOR REVIEW & APPROVAL.
2. SEE EQUIPMENT SCHEDULE ON M503.
3. PROVIDE LEAK DETECTION WIRE AND TIE INTO ALARM SYSTEM.
4. PROVIDE 24" TALL RETURN PLENUM EXTENSIONS.

1 AIR HANDLER DETAIL
NOT TO SCALE

HVAC SEQUENCE OF OPERATION:

1. UNITS WILL BE CONNECTED VIA A CAT5 CABLE AND SET UP FOR TEAMWORK OPERATION.
2. BOTH UNITS OPERATE AT PART LOAD.
3. FAN OPERATION IS CONTROLLED BASED ON TEMPERATURE READINGS FROM THE REMOTE 2T RACK TEMPERATURE SENSORS.
4. COMPRESSOR OPERATION IS CONTROLLED BASED ON RETURN/SUPPLY AIR TEMPERATURE."



CONDENSER NOTES:

1. PROVIDE VIBRATION DAMPENING PADS UNDER CONDENSER SUPPORT LEGS.
2. MOUNT CONDENSERS TO PAD WITH HILTI KB3 EXPANSION ANCHOR. SIZE PER MANUFACTURES RECOMMENDATIONS.
3. FOR CONDENSER LOCATION SEE SITE PLAN.
4. SEE EQUIPMENT SCHEDULE ON M503.

2 CONDENSER DETAIL
NOT TO SCALE

HVAC NOTES:

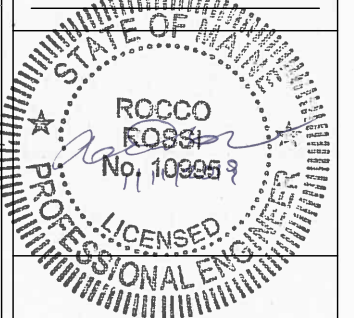
1. PROVIDE A LEAK DETECTION, CONDENSATE PAN, PUMP, POWER & ALARM FOR EACH AIR HANDLER & ROUTE CONDENSATE PUMP LINE TO EXTERIOR. COORDINATE ROUTE & LOCATION WITH VERIZON CM.
2. PROVIDE VIBRATION DAMPENING PADS UNDER EACH AIR HANDLER & CONDENSER.
3. VERIFY ALL POWER & REFRIGERANT ROUTING WITH VERIZON CM PRIOR TO CONSTRUCTION & PURCHASE OF MATERIALS.
4. INSTALL ALL EQUIPMENT PER MANUFACTURES RECOMMENDATIONS & PER APPLICABLE CODE REQUIREMENTS.
5. FIRE STOP ALL INTERIOR WALL PENETRATIONS. OBTAIN ANY PERMITS & SUPPLY A FIRE WATCH AS NEEDED FOR ANY WELDING OR OPEN FLAME REQUIRED FOR SYSTEM INSTALLATION.
6. THE A/C UNITS SHALL BE INTERCONNECTED & COORDINATED. CONFIRM SYSTEM CONFIGURATION & CYCLE AT TIME OF INSTALLATION WITH VERIZON CM. SET LEAD/LAG CYCLE SCHEDULE FOR OPERATION OF ALL A/C UNITS IN ORDER TO MAINTAIN UNITS PEAK OPERATIONAL CONDITION UNTIL EQUIPMENT SPACE IS FULLY LOADED.
7. CONTRACTOR SHALL INSTALL THERMOSTATS, SMOKE DETECTORS & ASSOCIATED CONTROL DEVICES REQUIRED TO OPERATE & MAINTAIN REQUIRED VERIZON ROOM TEMPERATURE. PROVIDE WALL MOUNTED VNSA-B NETWORK SWITCH FOR COMMUNICATION & LEAD LAG CONTROL.
8. INSTALL ALL LIEBERT EQUIPMENT PER MANUFACTURER'S SPECIFICATIONS.
9. SYSTEM IS TO BE TESTED & BALANCED PER LIEBERT RECOMMENDATIONS.
10. INSTALL PIPING & VALVES PER PER MANUFACTURERS RECOMMENDATIONS & LATEST EDITION OF MA STATE BUILDING CODE.
11. EACH UNIT WILL REQUIRE (2) 1-1/8" DIAMETER COPPER HOT GAS LINES & (2) 7/8" DIAMETER COPPER LIQUID LINES. FIELD VERIFY CONDUIT LENGTH & CONFIRM LINE SIZE WITH MANUFACTURER PRIOR TO CONSTRUCTION.
12. PROVIDE 5-YEAR WARRANTY FOR SYSTEM COMPRESSORS.
13. INSTALL SMOKE DETECTION IN RAISED FLOOR FOR AIR FLOW TERMINATION UPON SMOKE DETECTION.
14. THE AIR HANDLER UNITS TO BE PROVIDED WITH A FACTORY INSTALLED MICROPROCESSOR-BASED LIEBERT ICOM CONTROLLER WITH 9" COLOR TOUCH SCREEN DISPLAY COMPLETED WITH SENSORS, ALARMS, AND A LIEBERT VNSA NETWORK SWITCH.
15. EACH AIR HANDLER UNIT SHALL BE PROVIDED WITH FACTORY-SET PRECISE MONITORING AND CONTROL OF THE ENTERING AND LEAVING AIR TEMPERATURE.
16. EACH AIR HANDLER UNIT SHALL BE PROVIDED WITH FACTORY INSTALLED TEMPERATURE SENSORS, HUMIDITY SENSORS, SMOKE DETECTORS, AND MERV 8 FILTERS.
17. EACH AIR HANDLER UNIT SHALL BE PROVIDED WITH AN R-410A DIGITAL SCROLL COMPRESSOR.
18. CRAC UNIT SHALL HAVE QUICK START FEATURE, UNIT (1-YEAR) & COMPRESSOR (5-YEAR) WARRANTY.

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LOCATION CODE: 320632
1531 CONGRESS STREET
PORTLAND, ME 04102

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HVAC DETAILS

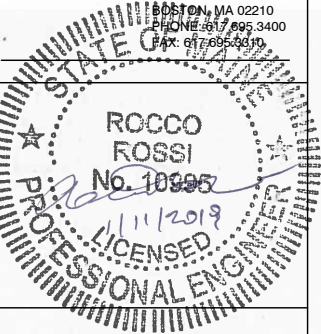
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MECHANICAL SCHEDULES

M503

DX COMPUTER ROOM AIR CONDITIONING UNITS

MARK	TYPE	FAN AIR FLOW CFM	EXTER NAL APD IN. WG.	DX COOLING COIL					SUCT. TEMP. °F	REFRIGERAN T Type	LADB °F	LAWB °F	FILTER MERV	COMPRESSOR			EVAPORATOR FAN MOTOR			UNIT POWER			REMARKS		
				MIN. SENS. MBTUH	MIN. TOTAL BTUH	EAT		POWER KW						PHASE	CAPACITY CONTROL	POWER KW	PHASE	SPEED CONTROL	PHASE	VOLT	FLA	WSA		ODP	
						DB °F	WB °F																		
AC-1	VERTICAL DOWNFLOW	4300	0.5	90.9	104	79	62.7	47	R410A	56.7	53.9	8	DIGITAL	8.81	3	VARIABLE	2.07	3	ECM	3	208	40.6	48.5	70	LIEBERT PX029HA
AC-2	VERTICAL DOWNFLOW	4300	0.5	90.9	104	79	62.7	47	R410A	56.7	53.9	8	DIGITAL	8.81	3	VARIABLE	2.07	3	ECM	3	208	40.6	48.5	70	LIEBERT PX029HA

- NOTES: 1. UNITS TO BE PROVIDED WITH INTERNAL DRAIN TRAP.
2. UNITS TO BE PROVIDED WITH FRONT AIR DISCHARGE GRILL AND 6" STAND.
3. UNITS TO BE PROVIDED WITH CONDENSATE PUMP AND POWER OUTLET.

AIR COOLED CONDENSERS

MARK	LOCATION	SERVICE	FAN CFM	TYPE	Heat REJECTION MBH	REFRIGERANT	MAX. SUCTION °F	OA TEMP °F	LOW AMBIENT °F	CONDENSER FAN MOTOR					REMARKS	
										# FANS	FLA	PHASE	VOLT	WSA		ODP
CU-1	GRADE	AC-1	10,929	VERTICAL	139	410a	43.6	95	-20	1	5.7	3	208	7.1	15	LIEBERT MCL055E1
CU-2	GRADE	AC-2	10,929	VERTICAL	139	410a	43.6	95	-20	1	5.7	3	208	7.1	15	LIEBERT MCL055E1

NOTE: UNITS TO BE PROVIDED WITH LOW AMBIENT TEMPERATURE CONTROL DOWN TO -20 DEGREES F

ELECTRIC UNIT HEATERS

MARK	LOCATION	SERVICE	CFM	MOTOR WATTS	FAN RPM	HEATE R BTUH	HEATER KW	ELECTRICAL				REMARKS
								VOLT	PH	HZ	MCA	
EHU-1	WALL	STG. RM	270	6	1350	8553	2.5	208	1	60	15	QMARK MWU5004

1. HEATER TO BE PROVIDED WITH DISCONNECT AND SELF CONTAINED THERMOSTAT
2. HEATER TO BE MOUNTED AT 6 FEET HEGHT MINIMUM
3. SET POINT 50 °F.

EXHAUST FAN

MARK	LOCATION	SERVICE	CFM	STATIC PRESSURE (N.WG.)	MOTOR HP	FAN RPM	SONES	ELECTRICAL				REMARKS
								VOLT	PH	HZ	MOTOR ENCL.	
EF-1	IN LINE	EQUIPMENT ROOM	25	0.2	1/10	1725	2.9	120	1	60	ODP	GREENHECK SQ-60-VG

1. FAN TO BE PROVIDED WITH CURRENT RELAY FOR REMOTE ALARM TO INDICATE FAN FAILURE
2. FAN TO RUN CONTINUOUSLY
3. PROVIDE PVC EXHAUST PIPE THROUGH WALL WITH 90 DEGREE ELBOW. INSTALL AN LD SERIES MIDGET LOUVER.

LOUVER SCHEDULE

TAG	MANUFACTURER	MODEL	SERVICE	MATERIAL	WIDTH x HEIGHT	REMARKS
LV-1, 2	GREENHECK	ESD-603	GEN-RH	ALUMINUM	48 X 60	1, 2, 3, 4
NOTES:						
1. LOUVER SELECTION IS BASED ON GREENHECK. EQUIVALENT MANUFACTURERS: AS SPECIFIED. SEE ARCH. DRAWINGS FOR EXACT LOCATIONS.						
2. EXTRUDED ALUMINUM DRAINABLE STATIONARY LOUVER WITH MINIMUM OF 6" DEEP. PROVIDE ALUMINUM BIRDSCREEN IN THE REMOVABLE FRAME.						
3. LOUVER TO BE RATED FOR HIGH WIND LOADING.						
4. PROVIDE CHANNEL FRAME.						

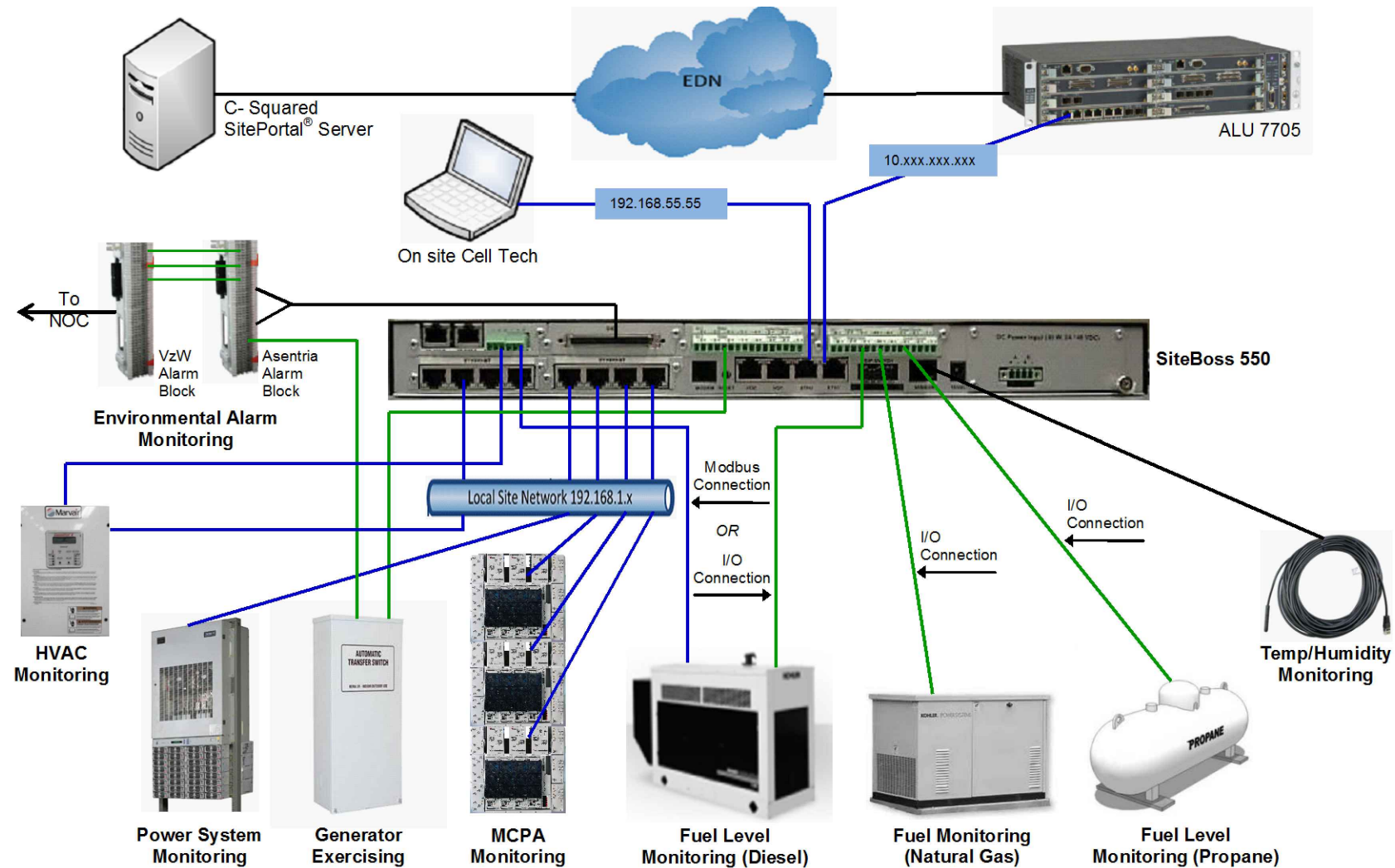
1 MECHANICAL SCHEDULES
NOT TO SCALE

BUILDING AUTOMATION GENERAL NOTES:

- THESE NOTES SHALL COMPLEMENT THE DIVISION 1 SPECIFICATIONS. THE DIVISION 1 SPECIFICATIONS SHALL TAKE PRIORITY OVER THESE NOTES WHEN NECESSARY.
- DIVISION 25 IS COMPOSED OF BOTH THESE DRAWINGS AND THE ASSOCIATED DIVISION 25 CONTROL M SPECIFICATIONS. BOTH DRAWINGS AND SPECIFICATIONS ARE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS. SPECIFICATIONS AND DRAWINGS ARE COMPLEMENTARY, AND AS SUCH, ITEMS CALLED FOR IN ONE SHALL BE CONSTRUED AS REQUIRED BY BOTH DRAWINGS AND SPECIFICATIONS. THE GENERAL CONDITIONS (DIV 01) ARE ALSO INCLUDED IN THESE CONTRACT DOCUMENTS. REFER TO G SHEETS FOR ADDITIONAL REQUIREMENTS.
- THE CONTRACT DRAWINGS INDICATE APPROXIMATE LOCATIONS OF EQUIPMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE ACTUAL COMPONENT LOCATIONS BASED UPON THE INTENT OF THE DESIGN. SPECIFICATIONS, AND DRAWINGS. MODIFICATION OF PANEL LOCATIONS SHALL BE APPROVED BY ARCHITECT AND COORDINATED WITH ELECTRICAL TRADES.
- THE CONTRACT DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL COMPONENT, MATERIALS, EXACT CABLE ROUTINE, CONDUIT, AND OTHER CONSIDERATIONS THAT MAY BE REQUIRED FOR PROPER SYSTEM OPERATION.
- ALL MATERIAL AND EQUIPMENT USED IN THIS INSTALLATION SHALL BE NEW, AND SHALL HAVE THE APPROPRIATE UL LISTING AND FACTORY MUTUAL (FM) APPROVAL. ALL MATERIALS SHALL COMPLY WITH ALL APPLICABLE LOCAL AND NATIONAL CODES, STANDARDS, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- CONTRACTOR SHALL PERFORM ALL WORK AND INSTALL ALL COMPONENTS IN A PROFESSIONAL AND WORKMANLIKE MANNER. ALL FINISH WORK TO BE TRUE, LEVEL, AND PLUMB. ALL JOINTS TO BE TIGHT AND CLEAN.
- ALL WORK SHALL BE PERFORMED IN FULL COMPLIANCE WITH ALL APPLICABLE LOCAL AND NATIONAL CODES, STANDARDS AND ALL APPLICABLE AMENDMENTS. WHERE REQUIRED BY THE AUTHORITY HAVING JURISDICTION, THE CONTRACTOR SHALL ISSUE PUBLIC NOTICES.
- ALL EIA-485 MS/TP SEGMENTS SHALL BE DOUBLY TERMINATED BUS TOPOLOGY. PROVIDE CONDUIT AS REQUIRED IN DIVISION 25 SPECIFICATIONS AND WIRE ROUTES TO ACCOMMODATE.
- DEVICES SHALL BE INTERCONNECTED AS SHOWN ON THE NETWORK ARCHITECTURE DIAGRAM.
- 22 AWG BELDEN 3106A OR EQUIVALENT BE UTILIZED FOR ALL MSTP/BACNET NETWORK WIRING. CAT5E OR CAT6 SHALL BE USED FOR BACNET IP.
- ALL CONTROL M LOCAL OPERATING NETWORK WIRING INCLUDING BUT NOT LIMITED TO MS/TP AND MODBUS NETWORK CABLE SHALL INCLUDE ONE DESIGNATED SPARE CABLE TO BE PULLED ALONG SIDE THE PRIMARY CABLE.
- USE 18 GAUGE, STRANDED, SHIELDED, TWISTED PAIR WIRE FOR ALL TWO CONDUCTOR SENSOR WIRING.
- SPlicing OF COMMUNICATION CABLE BETWEEN DEVICES IS NOT ALLOWED.
- ALL INTELLIGENT CONTROLLERS RESIDING ON THE BACNET NETWORK SHALL BE BTL COMPLIANT FOR COMPLETE INTEROPERABILITY.
- INSTALL THE QU OF EIA-485 MS/TP / ETHERNET JACKS AS INDICATED ON THE FLOOR PLAN AND ARCHITECTURE DIAGRAM. EXACT PLACEMENT MAY VARY FROM WHAT IS SHOWN. NETWORK JACKS SHOULD BE LOCATED TO ALLOW EASY ACCESS TO FIELD BUS FOR TROUBLESHOOTING OF DIGITAL CONTROLLERS. INSTALL JACKS WITHIN DCP, NCP OR OTHER ENCLOSURE. THERMOSTATS WITH INTEGRAL MS JACKS MAY BE USED HOWEVER MAY NOT USE THE MS BUS FOR TRANSMISSION OF TEMPERATURE/HUMIDITY DATA TO ASSOCIATED EQUIPMENT (VAV BOX, AHU, ETC).
- INSTALL NETWORK TERMINATORS WITHIN CONTROL PANELS OF ADJACENT END OF LINE CONTROLLERS.
- CONTROL PANELS SHALL HAVE SUFFICIENT QUANTITY OF CONTROLLERS, CONTROL POINTS, AND NETWORK VARIABLE RESOURCE COUNT TO SUPPORT BOTH THE PHYSICAL AND NETWORK I/O REQUIREMENTS OF EACH DEVICE DESIGNATED FOR THAT PANEL
- STAND ALONE OPERATION IS REQUIRED FOR ALL EQUIPMENT. SEQUENCE OF OPERATION MUST NOT BE DEPENDENT ON LOCAL OPERATING NETWORK COMMUNICATIONS EXCLUDING OUTSIDE AIR CONDITIONS VARIABLES REQUIRED FOR USE BY MULTIPLE CONTROLLERS. EACH PIECE OF MECHANICAL EQUIPMENT MUST BE CONTROLLED BY A SINGLE BACNET CONTROLLER. REMOTE I/O MODULES SHALL NOT BE ALLOWED FOR CONTROL POINTS OR POINTS WHICH ARE REQUIRED TO ACHIEVE THE SEQUENCE OF OPERATION WITHOUT THE USE OF A BAC NET ROUTER AND SEPARATE SUB NET.
- CONTROL PANELS SHOWN ON DRAWING ARE SCHEMATIC ONLY AND ARE NOT TO SCALE. CONTROLS CONTRACTOR SHALL PROVIDE PANELS AS NECESSARY TO HOUSE THE REQUIRED CONTROL EQUIPMENT. CONTRACTOR SHALL COORDINATE EXACT PLACEMENT OF PANELS WITH SURROUNDING EQUIPMENT.
- CONTROLS CONTRACTOR SHALL VERIFY NODE COUNT PER NETWORK AND CONFORM TO THE ARCHITECTURE GUIDELINES SPECIFIED BY THE MANUFACTURER OF THE NETWORK CONTROLLER AND BY ANSI / ASHRAE BACNET STANDARDS 135.
- INSTALL THE CENTER OF ALL CONTROL PANELS AT 60" TYPICAL ELEVATION WHEN FEASIBLE.
- GROUND ALL SHIELDS AT ONE END ONLY TO AVOID GROUND LOOPS. TERMINATE GROUND CONDUCTORS FIRST. TERMINATE AT EQUIPMENT WHEN FEASIBLE.
- INDICATED ROUTING OF EIA-485 MS/TP NETWORK WIRING IS SCHEMATIC IN ROUTING ONLY. ACTUAL ROUTING OF WIRING SHALL BE DETERMINED IN THE FIELD BY CONTROLS CONTRACTOR. RESTORE ALL DISRUPTED SURFACES BACK TO ORIGINAL FINISHED CONDITIONS. THE CONTRACTOR SHALL PROVIDE LABOR AND MATERIAL FOR ALL DRYWALL, FLOOR, CONCRETE, CARPET, PAINT AND SIMILAR "FINISH" SURFACES AFFECTED BY THE SCOPE OF THIS PROJECT.
- FIELD VERIFY ALL THERMOSTAT LOCATIONS FOR FIELD CONFLICTS INCLUDING UNFORESEEN WALL SPACE RESTRICTIONS, WIRING RESTRICTIONS, AND THERMAL INTERFERENCE FROM EQUIPMENT AND OR SUNLIGHT. NOTIFY OWNER OF ALL CONFLICTS PRIOR TO INSTALLATION.
- THE TERMS CONTRACTOR, SI CONTRACTOR, AND CONTROLS CONTRACTOR SHALL BE CONSTRUED ON THE SAME CONTRACTOR FOR THE SCOPE DEFINED IN THE BAS DRAWINGS AND DIVISION 25 SPECIFICATIONS.

BUILDING AUTOMATION GENERAL NOTES CONT.:

- ALL BAS CONTROL DEVICES INCLUDING NETWORK CONTROLLERS, DIGITAL CONTROL PANELS, 24V POWER SUPPLIES, AND WORKSTATIONS SHOWN ON BA500 TO BE ON THE CRITICAL COMMUNICATION BUS SHALL BE ON CRITICAL/INVERTER POWER CIRCUITS.
- ALL WIRING SHALL BE IN 3/4" EMT REGARDLESS OF LOCATION.
- ALL CONTROLLERS AND RELATED CONTROL EQUIPMENT USED TO CONTROL DAMPERS, FANS, AND AHUS DURING SMOKE CONTROL SEQUENCES SHALL BE UL 864/UUKL LISTED FOR SMOKE CONTROL UL 555 DAMPERS SHALL BE PURCHASED WITH APPROVED UL LISTED ACTUATORS.
- ALL DAMPER ACTUATORS SHALL BE BELIMO.
- CRITICAL POINTS AND ALARMS SHALL BE WIRED NORMALLY CLOSED SO THAT A LOSS OF POWER WILL INDICATE AN ALARM CONDITION OR RELEASE TO NORMAL OPERATION.
- CONTRACTOR SHALL COORDINATE EQUIPMENT PURCHASES WITH THE POINT LISTS IN THESE DOCUMENTS. CONTRACTOR SHALL BE REQUIRED TO ADD HARDWARE AND LOGIC TO MEET THE POINTS IN THESE DOCUMENTS.
- ALL NEW CONDUIT AND WIRING SHALL NOT BE RAN OVER TECHNICAL SPACES. UTILIZE HALLWAYS AND NON-TECHNICAL SPACES FOR ROUTING OF ALL NEW CONDUIT AND WIRE PATHS.
- THE DIVISION 25 CONTRACTOR SHALL PROVIDE CONTROL RELAYS, AND MAKE 120V POWER CONNECTIONS TO COMBINATION FIRE/SMOKE DAMPERS PROVIDED BY OTHERS. POWER WIRING HOME RUNS AND DISCONNECTS FOR DAMPERS ARE PROVIDED BY DIVISION 26. THE CONTROL OF THE COMBINATION FIRE/SMOKE DAMPERS IS BY THE B.A.S.
- THE BAS CONTRACTOR SHALL BE REQUIRED TO PROVIDE 120V POWER TO ALL FIELD DEVICES (ACTUATORS, SENSORS, ETC.) WHICH REQUIRE SUCH POWER.
- THE BAS CONTRACTOR IS 100% RESPONSIBLE FOR PROVIDING OR COORDINATING WITH PURCHASING TRADE THE SUPPLY OF NETWORK OR RELAY INTERFACE CARDS, GATEWAYS, MICROPROCESSORS, ETC. TO ACCOMPLISH THE CONTROL AND MONITORING INTENT OF THOSE DRAWINGS.



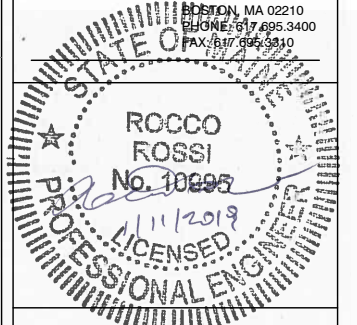
1 HUB DESIGN EXAMPLE
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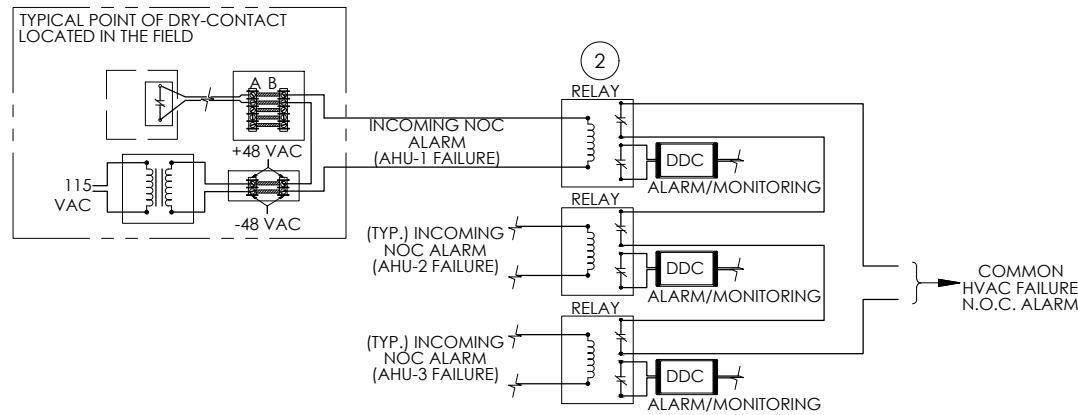
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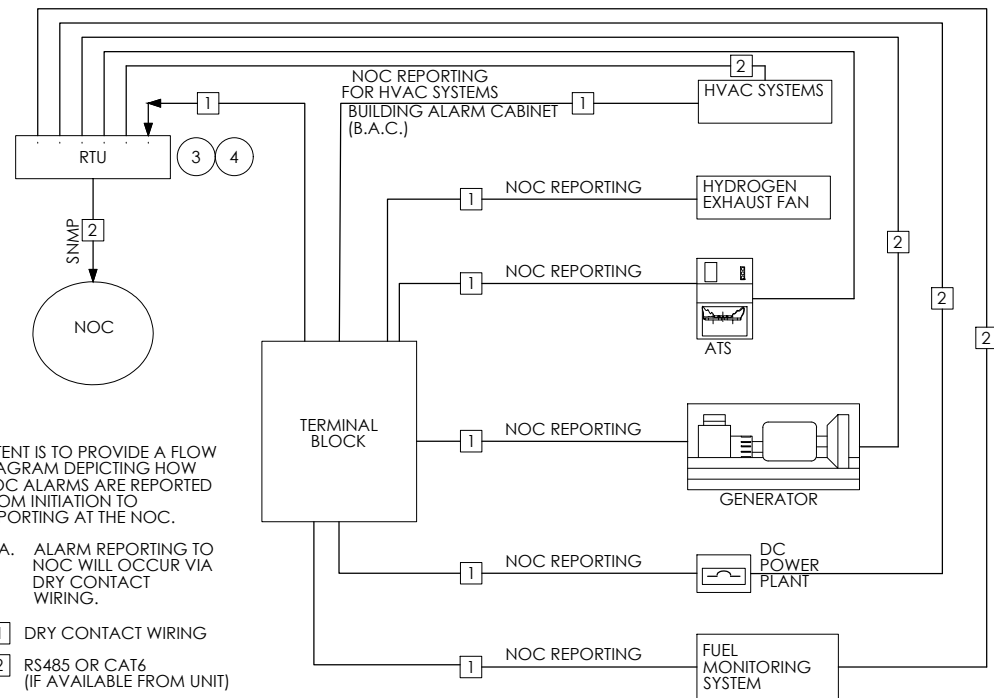
BUILDING AUTOMATION GENERAL NOTES

BA001



2 TYPICAL NOC ALARM CONSOLIDATION DIAGRAM
NOT TO SCALE

SYSTEM	ALARM DESCRIPTION	SEVERITY AT NOC		SUPPLEMENTARY NOTES
		MAJOR	CRITICAL	
ROOM SENSORS	HIGH TEMPERATURE (SET TO 89° F)	X		COMMON ALARM TRIGGERED BY ANY SENSOR
	LOW TEMPERATURE (SET TO 45° F)	X		
LIEBERT AC UNITS	UNIT FAILURE		X	PROVIDE SINGLE UNIT FAILURE ALARM
	HIGH PRESSURE LOCKOUT	X		
	LOW PRESSURE LOCKOUT	X		
HYDROGEN EXHAUST FAN	FREEZE CONDITIONS	X		
	UNIT FAILURE	X		
FIRE PROTECTION & FIRE SUPPRESSION	1ST ALARM ANY SPACE		X	
	2ND ALARM ANY SPACE		X	
	FIRE ALARM SYSTEM TROUBLE		X	
GENERATOR	LOW BATTERY VOLTAGE		X	PROVIDE COMMON GENERATOR FAILURE ALARM
	CRANK FAIL		X	
	GENERATOR NOT IN AUTO MODE	X		
	LOW FUEL LEVEL	X		
	GENERATOR OUTPUT BREAKER OPEN		X	
	GENERATOR FAILURE		X	
	GENERATOR E-STOP		X	
	GENERATOR RUNNING	X		
	ATS NOT IN AUTO MODE	X		
	INTEGRATED LOAD CENTER	NORMAL SOURCE NOT AVAILABLE		
ATS ON EMERGENCY POWER SOURCE		X		
NORMAL SOURCE SURGE PROTECTION FAILURE		X		
EMERGENCY SOURCE SURGE PROTECTION FAILURE		X		
DC POWER PLANT	BATTERY VOLTAGE BELOW LV-2 THRESHOLD		X	
	BATTERY VOLTAGE BELOW LV-1 THRESHOLD		X	
	BATTERY VOLTAGE EXCEEDS A THRESHOLD		X	
	BYPASS NOT AVAILABLE	X		
	INVERTER FAILURE		X	
	ONE RECTIFIER NOT SUPPLYING DC POWER	X		
	MULTIPLE RECTIFIERS NOT SUPPLYING DC POWER		X	



INTENT IS TO PROVIDE A FLOW DIAGRAM DEPICTING HOW NOC ALARMS ARE REPORTED FROM INITIATION TO REPORTING AT THE NOC.

A. ALARM REPORTING TO NOC WILL OCCUR VIA DRY CONTACT WIRING.

- 1 DRY CONTACT WIRING
- 2 RS485 OR CAT6 (IF AVAILABLE FROM UNIT)

1 TYPICAL NOC REPORTING FLOW DIAGRAM DRY CONTACT WIRING
NOT TO SCALE

KEY NOTES:

- 1 INTENT OF RELAY: WIRE RELAY INTERFACE SUCH THAT WHEN MONITORED EQUIPMENT IS NOT IN ALARM THE FOLLOWING CONDITIONS WILL RESULT: THE RELAY COIL SHALL BE ENERGIZED AND THE OUTPUT TO THE SNMP GATEWAY SHALL BE OPEN. IN THE EVENT OF AN ALARM, A CUT FIELD WIRE, OR LOSS OF 24V POWER TO THE COIL, THE RELAY COIL SHALL DE-ENERGIZED TO INDICATE AN ALARM TO THE SNMP GATEWAY. WHEN MONITORED EQUIPMENT IS NOT IN ALARM, CUSTOMER SHALL BE ABLE TO SHORT THE PINS AT THE SWITCH EQUIPMENT TO SIMULATE A TEST ALARM THROUGH THEIR SUPERVISION EQUIPMENT.
- 2 CONTRACTOR TO PROVIDE RELAY LOGIC AS REQUIRED TO PRODUCE THE COMMON ALARMS LISTED IN THE HARDWARE POINTS LIST. FOR EXAMPLE: CONTRACTOR SHALL PROVIDE RELAY LOGIC TO INDICATE A CRAC COMMON FAILURE UPON LOSS OF CONTROL OF THE UNITS FANS, VALVES, DAMPERS, OR SAFETIES, OR TO PRODUCE ONE COMMON HVAC FAILURE ALARM WHEN ANY UNIT FAILS.
- 3 SNMP GATEWAY DEVICE SHALL TRANSMIT SNMP TRAPS TO VERIZON'S NOC WHEN A COMMON ALARM IS INDICATED. TO BE CONFIGURED AND TESTED BY CONTRACTOR.
- 4 REMOTE MONITORING USED AS BASIS OF DESIGN. SUBSTITUTIONS MUST BE APPROVED BY OWNER.

GENERAL NOTES:

1. NOC ALARMS SHALL BE TRANSMITTED BY EQUIPMENT TYPE ACCORDING TO THE SUMMARY ON THIS SHEET. THE NUMBER OF ALARMS TRANSMITTED TO THE NOC SHALL BE MINIMIZED WHERE POSSIBLE WHILE ENSURING THAT ALL CRITICAL ALARMS ARE COMMUNICATED PROPERLY.
2. NOC ALARMS SHALL BE TRANSMITTED ACCORDING TO THE ALARM SEVERITY SPECIFIED. REFER TO VZW STANDARDS NSTD398 AND NDIR49 FOR MORE INFORMATION.
3. REFER TO NSTD3298 FOR SPECIFIC INFORMATION REGARDING FORMATTING OF SNMP TRAPS TO NNOC.
4. "HEART BEAT" COMMUNICATIONS MUST BE MAINTAINED BETWEEN THE NOC AND THE REMOTE MONITORING ALARM SITE MANAGEMENT SYSTEM. COORDINATE WITH VZW.



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BUILDING AUTOMATION NOC ALARM

BA501

ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELCORDIA.
5. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
6. EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA.
7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).
8. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90°C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90°C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90°C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
13. ALL POWER AND POWER GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRENUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
15. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
16. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
18. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
19. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
20. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE.
21. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
22. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
23. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
24. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
25. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
26. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
27. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.

GENERAL ELECTRICAL NOTES:

1. COORDINATION:
 - A. EACH DIVISION SHALL COMPLY WITH THE G001 PROJECT GENERAL NOTES AS IF CONTAINED HEREIN.
 - B. CONTRACTOR SHALL SUBMIT COORDINATION DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR IS RESPONSIBLE FOR ASSEMBLY AND COORDINATION OF WORK WITHIN ALL DIVISIONS AND TRADES INTO A SINGLE PACKAGE.
2. DO NOT SCALE DRAWINGS. THE CONTRACTORS SHALL USE DIMENSIONS SHOWN ON THE DRAWINGS AND ACTUAL FIELD MEASUREMENT. NOTIFY THE AE PROJECT MANAGER IF ANY DISCREPANCIES ARE FOUND PRIOR TO PROCEEDING WITH WORK.
3. FIRESTOPPING SHALL BE PROVIDED PER G AND A SHEET REQUIREMENTS.
4. ALL CONDUIT, CABLE, PIPING, AND OTHER MECHANICAL / ELECTRICAL SYSTEMS NOT ASSOCIATED WITH SPECIFIC CRITICAL EQUIPMENT SPACES (E.G. SWITCHROOM, ADJUNCT, TELCO, CONTROL ROOM, RECTIFIER, BATTERY, ETC.) SHALL BE ROUTED AROUND SUCH SPACES IN CORRIDORS OR UNDERSLAB AND NOT THROUGH THESE SPACES.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND DETERMINE THE EXACT EXTENT OF WORK, COORDINATION, DEMOLITION, TEMPORARY CONSTRUCTION, TEMPORARY FACILITIES, UTILITIES, ETC. NECESSARY TO COMPLETE THIS PROJECT AS INDICATED IN THE CONTRACT DOCUMENTS.
6. ALL CONDUIT SHALL BE INSTALLED CONCEALED IN FINISHED AREA UNLESS NOTED OTHERWISE.
7. DO NOT ROUTE CONDUIT WITHIN STRUCTURAL OR TOPPING SLABS OF FLOORS UNLESS SPECIFICALLY NOTED OTHERWISE AND APPROVED BY STRUCTURAL ENGINEER.
8. PAINT EXPOSED CONDUIT TO MATCH EXISTING WITHIN THE SURROUNDING AREA.
9. COORDINATE INSTALLATION OF WALL AND FLOOR DEVICES WITH ARCHITECTURAL ELEVATIONS AND FURNITURE PLANS AND/OR SPECIALTY EQUIPMENT SHOP DRAWINGS PRIOR TO ROUGH IN.
10. COORDINATE INSTALLATION OF ELECTRICAL DEVICES SERVING MECHANICAL EQUIPMENT WITH MECHANICAL WORK PRIOR TO ROUGH IN.
11. DISCONNECT LOCATIONS ARE SHOWN DIAGRAMMATICALLY ONLY AND SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS WITHIN LINE OF SITE TO EQUIPMENT THEY SERVE. MOUNT AT 6' -3" MAX. HEIGHT TO TOP OF ENCLOSURE.
12. ALL FLOOR MOUNTED EQUIPMENT SHALL BE MOUNTED ON A 4" HOUSE KEEPING PAD UNLESS NOTED OTHERWISE.
13. PROVIDE FUSES PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.
14. SEE MECHANICAL EQUIPMENT SCHEDULE FOR CIRCUIT AND OVERCURRENT SIZES.
15. PROVIDE A GREEN INSULATED GROUNDING CONDUCTOR FOR ALL CIRCUITS.
16. PROVIDE EQUIPMENT PROTECTION ABOVE ALL NETWORK EQUIPMENT (INCLUDING BUT NOT LIMITED TO CABLING, BUS, CABLE TRAY, EQUIPMENT BAYS, RECTIFIERS, BATTERIES, INVERTERS, DISTRIBUTION PANELS, ETC.) WHEN WORKING ABOVE EQUIPMENT. ALL PROTECTION SHALL BE COORDINATED WITH THE VERIZON SWITCH MANAGER TO ENSURE THAT THE PROTECTION WILL NOT BLOCK ACCESS TO EQUIPMENT OR CAUSE OVERHEATING. PROVIDE TEMPORARY COOLING AS REQUIRED.
17. PROVIDE ALL POWER CONNECTIONS FOR FIRE SMOKE DAMPERS INCLUDING CONNECTIONS BETWEEN FSD CONTROL RELAYS AND FSD'S.
18. EACH EXTERIOR AC POWER, CONTROL, ALARM, COMMUNICATION, AND CCTV CIRCUITS MUST HAVE A SURGE SUPPRESSOR INSTALLED PER VERIZON STANDARDS.
19. PROVIDE 2-HOLE LUGS CAPABLE OF ACCEPTING MULTIPLE CRIMPS FOR ALL POWER AND GROUNDING CONNECTIONS TO A BUS OR WHERE FEASIBLE. USE MANUFACTURER'S COMPRESSION TOOL WITH PROPER DIE FOR EACH CONNECTOR. MANUFACTURER'S EMBOSSED CODING SYSTEM IS REQUIRED. A UNIVERSAL OR DIE-LESS TYPE CRIMPING TOOL SHALL NOT BE USED. PROVIDE LUGS WITH INSPECTION HOLE FOR ALL INTERIOR INSTALLATIONS. PROVIDE CLOSED LUGS (NO INSPECTION HOLE) FOR EXTERIOR OR UNDERGROUND CONNECTIONS.
20. ALL RECESSED PANELS MOUNTED IN FIRE RATED WALLS SHALL BE OF FIRE RATED CONSTRUCTION TO MATCH RATING OF WALL. (I.E. TRAP PRIMERS, F.E. CABINETS, ETC.)

HEAVY LINework (NEW WORK)

DC LIGHTING CIRCUIT CONDUIT

EXISTING (TO REMAIN)

CONDUIT

UNDERGROUND CONDUIT

FIBER/TELECOM CONDUIT

CABLE TRAY

CONDUIT UP

CONDUIT DOWN

FUSED DISCONNECT SWITCH

DISCONNECT SWITCH

EQUIPMENT CONNECTION

RECEPTACLE OUTLET:
NUMBER INDICATES CIRCUIT GROUPING, LETTER INDICATES:
AC - ABOVE COUNTER
C - CLOCK HANGER
G - WITH GROUND FAULT PROTECTION
INV - INVERTER FED
WP - WEATHERPROOF

CEILING MOUNTED DUPLEX RECEPTACLE, 125V, 20A

FLUSH MOUNTED PANELBOARD

SURFACE MOUNTED PANELBOARD

FIRE ALARM CONTROL PANEL

TRANSIENT VOLTAGE SURGE SUPPRESSOR

SEPARATELY MOUNTED CIRCUIT BREAKER

TRANSFORMER

SURFACE METAL RACEWAY

2'x4' RECESSED LIGHT FIXTURE

2'x2' RECESSED LIGHT FIXTURE

2'x4' SURFACE MOUNTED

1'x4' SURFACE MOUNTED

EXIT LIGHT

WALL MOUNTED FIXTURE

SURFACE MOUNT 1x4 FIXTURE

WALL MOUNTED FIXTURE

1 LIGHTING LEGEND
N/A

TRANSFORMER

DISCONNECT SWITCH
3-POLE UNLESS NOTED OTHERWISE - OVERCURRENT PROTECTION AS REQUIRED BY EQUIPMENT MANUFACTURER OR AS NOTED

CIRCUIT BREAKER
NUMBER INDICATES TRIP SETTING AND NUMBER OF POLES:
C1 - INDICATES CURRENT LIMITING
ST - INDICATES SHUNT TRIP
GFI - INDICATES GROUND FAULT PROTECTION

GENERATOR

AUTOMATIC TRANSFER SWITCH (ATS)

2 ONE-LINE SYMBOLS
N/A

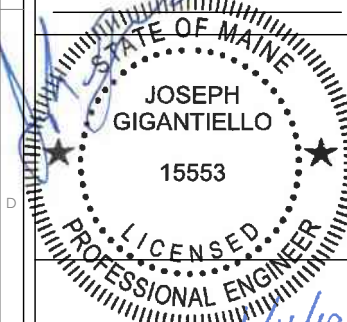
1 ELECTRICAL SYMBOLS
N/A

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ELECTRICAL GENERAL NOTES

E001

GROUNDING NOTES:

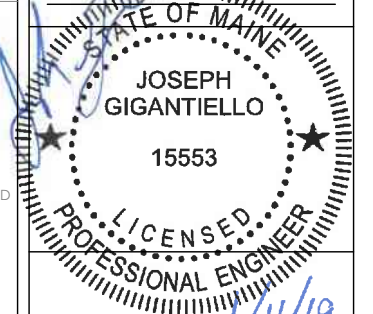
1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS. TESTING SHALL BE IN ACCORDANCE WITH SPECIFICATION 24782-000-3PS-EG00-00001. USE OF OTHER METHODS MUST BE PRE-APPROVED BY CONTRACTOR IN WRITING.
3. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS. WHEN ADDING ELECTRODES, CONTRACTOR SHALL MAINTAIN A MINIMUM DISTANCE BETWEEN THE ADDED ELECTRODE AND ANY OTHER EXISTING ELECTRODE EQUAL TO THE BURIED LENGTH OF THE ROD. IDEALLY, CONTRACTOR SHALL STRIVE TO KEEP THE SEPARATION DISTANCE EQUAL TO TWICE THE BURIED LENGTH OF THE RODS.
4. THE SUBCONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
5. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE AND UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
6. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK-TO-BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
8. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
9. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED. IN ALL CASES, BENDS SHALL BE MADE WITH A MINIMUM BEND RADIUS OF 8 INCHES.
10. EACH INTERIOR BTS CABINET FRAME/PLINTH SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH #6 AWG STRANDED, GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES. EACH OUTDOOR CABINET FRAME/PLINTH SHALL BE DIRECTLY CONNECTED TO THE BURIED GROUND RING WITH #2 AWG SOLID TIN-PLATED COPPER WIRE.
11. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING, SHALL BE #2 AWG SOLID TIN-PLATED COPPER UNLESS OTHERWISE INDICATED.
12. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE. CONNECTIONS TO ABOVE GRADE EXTERIOR UNITS SHALL BE MADE WITH EXOTHERMIC WELDS WHERE PRACTICAL OR WITH 2 HOLE MECHANICAL TYPE BRASS CONNECTORS WITH STAINLESS STEEL HARDWARE, INCLUDING SET SCREWS. HIGH PRESSURE CRIMP CONNECTORS MAY ONLY BE USED WITH WRITTEN PERMISSION FROM VERIZON MARKET REPRESENTATIVE.
13. EXOTHERMIC WELDS SHALL BE PERMITTED ON TOWERS ONLY WITH THE EXPRESS APPROVAL OF THE TOWER MANUFACTURER OR THE CONTRACTORS STRUCTURAL ENGINEER.
14. ALL WIRE TO WIRE GROUND CONNECTIONS TO THE INTERIOR GROUND RING SHALL BE FORMED USING HIGH PRESS CRIMPS OR SPLIT BOLT CONNECTORS WHERE INDICATED IN THE DETAILS.
15. ON ROOFTOP SITES WHERE EXOTHERMIC WELDS ARE A FIRE HAZARD COPPER COMPRESSION CAP CONNECTORS MAY BE USED FOR WIRE TO WIRE CONNECTORS. 2 HOLE MECHANICAL TYPE BRASS CONNECTORS WITH STAINLESS STEEL HARDWARE, INCLUDING SET SCREWS SHALL BE USED FOR CONNECTION TO ALL ROOFTOP BTS EQUIPMENT AND STRUCTURAL STEEL.
16. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR USING TWO HOLED MECHANICAL TYPE BRASS CONNECTORS AND STAINLESS STEEL HARDWARE.
17. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
18. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
19. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
20. BOND ALL METALLIC OBJECTS WITHIN 6 FT OF THE BURIED GROUND RING WITH #2 SOLID AWG TIN-PLATED COPPER GROUND CONDUCTOR.
21. GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., NON-METALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT WITH LISTED BONDING FITTINGS.



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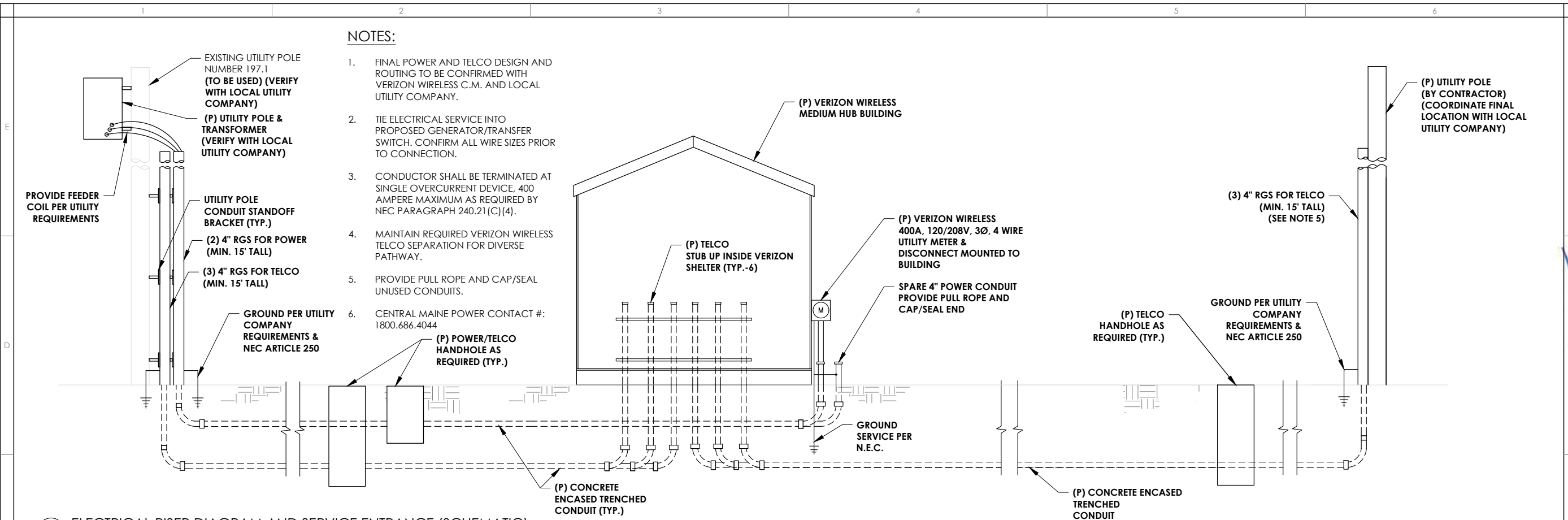
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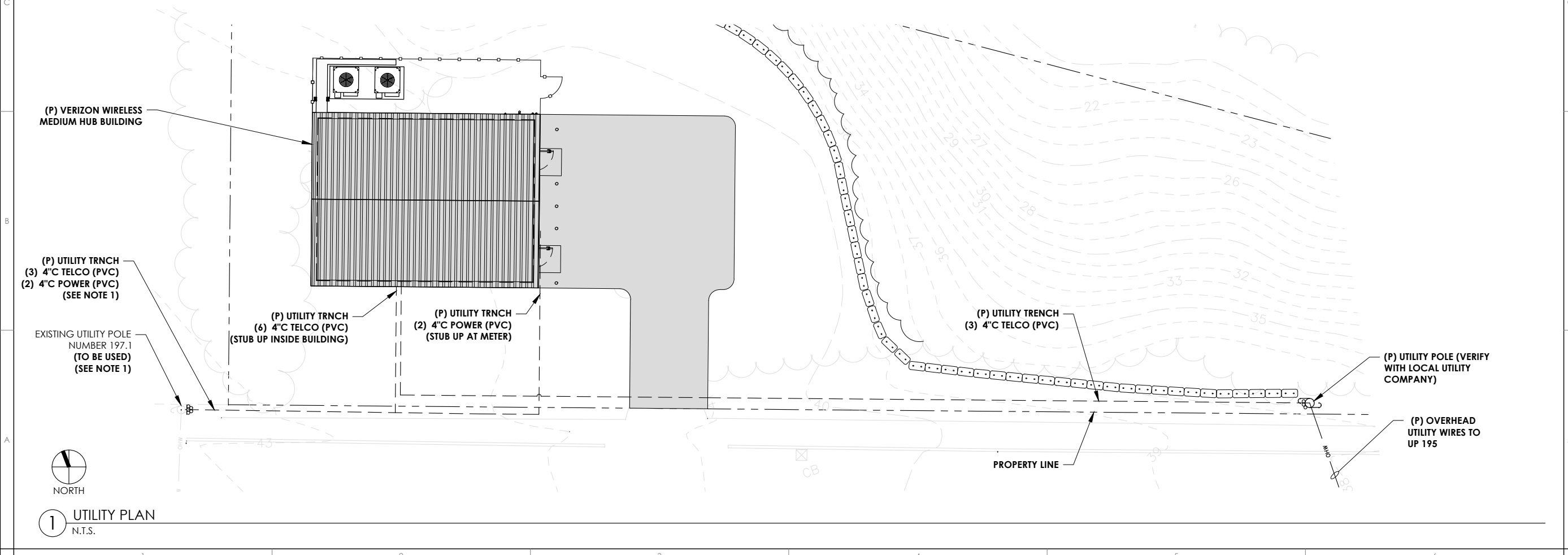
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**ELECTRICAL &
GROUNDING NOTES**

E002



2 ELECTRICAL RISER DIAGRAM AND SERVICE ENTRANCE (SCHEMATIC)
N.T.S.



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2	FOR SUBMITTAL	11/20/18
3	100% SUBMISSION	11/30/18
4	EOS REVISIONS	01/11/19

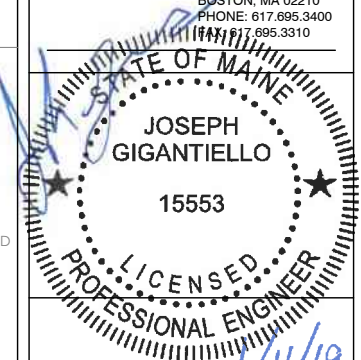
NETWORK COMPLIANCE SUBMITTALS	DATE
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RE-SUBMISSION (IF REQUIRED)	DATE

PROJECT #: 50002925
CAD DWG FILE #: 50000012
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verizon
PORTLAND ME HEAD END
LOCATION CODE: 320632
1531 CONGRESS STREET
PORTLAND, ME 04102

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ELECTRICAL PLAN

E101

ELECTRICAL LEGEND

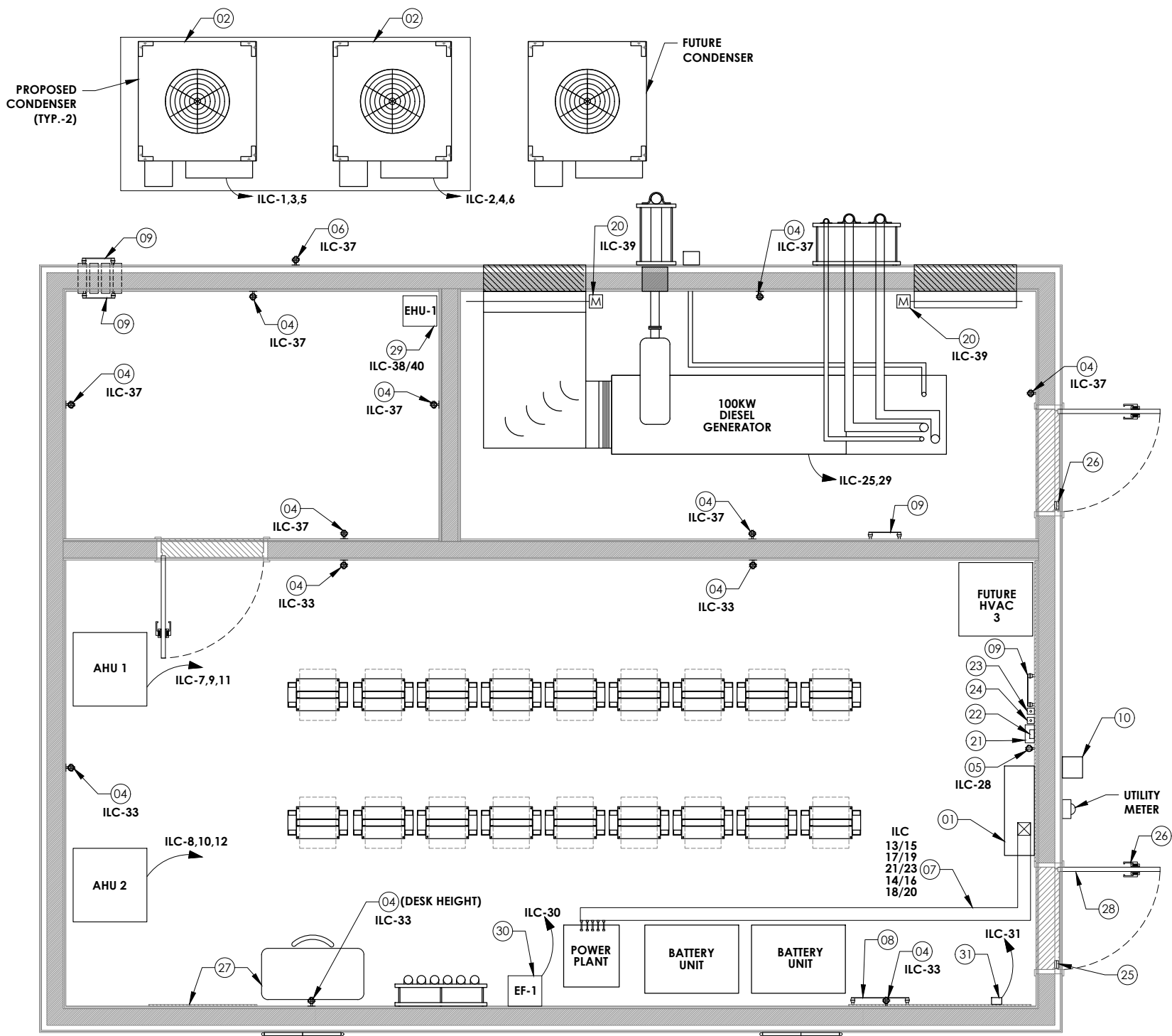
	HOMERUN TO PANEL ILC-CIRCUIT 3
	REFER TO BILL OF MATERIALS.
ILC-1	POWER PANEL ILC-CIRCUIT 1 REFER TO SHEET E-2 FOR SCHEDULE.

BILL OF MATERIALS (ELECTRICAL)

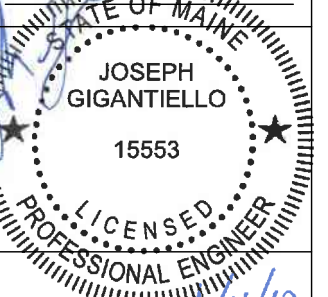
01	ILC POWER PANEL/ATS (P/N AA400G-3PH-3S-J300L) (400A, 120/208V 3Ø, 4W)
02	HVAC DISCONNECT (INTEGRATED IN AIR HANDLER UNIT)
03	UTILITY METER & DISCONNECT (COORDINATE WITH LOCAL UTILITY)
04	DOUBLE DUPLEX RECEPTACLES, 20A, 125V - (2) HUBBELL P/N 5362W W/ NP82W PLATE
05	DUPLEX RECEPTACLE, 20A, 125V, TWISTLOCK - HUBBELL P/N 2310 W/ NP720W PLATE
06	QUAD RECEPTACLES, 20 AMP - TWO (2) HUBBELL P/N 5362W W/ 2 GANG WATERPROOF COVER - HUBBELL P/N RQ57750
07	6"x6" WIREWAY TERMINATED WITH 10' LONG, 1" LFMC DROPS WITH 45° CONNECTORS FOR POWER PLANT FEEDER CIRCUITS (VERIFY QUANTITY OF DROPS WITH VZW CM & INSTALL BREAKERS AS REQUIRED)
08	MBG 1/4"x4"x24" SOLID COPPER GROUND BAR, 26 PAIRS 1/4" PREDRILLED LUG HOLES & 26 PAIRS 7/16" UNIVERSAL LUG HOLES WITH MOUNTING HARDWARE. WIRELESS SOLUTIONS HLG-0424-IS_TESSCO SKU 431411
09	GROUND BAR, 2"x14"x1/4" SOLID COPPER GROUND BAR, 15 PAIRS OF 7/16" UNIVERSAL LUG HOLES WITH MOUNTING HARDWARE. WIRELESS SOLUTIONS HLG-0214-IS_TESSCO SKU 410529
10	INTERSECT CAM-LOK GENERATOR CONNECTOR ICGC-3P-400A (400A, 120/208V 3Ø, 4W) WITH CAM LOCK QUICK CONNECT IN LOCKABLE NEMA 3R ENCLOSURE.

BILL OF MATERIALS (ALARM_TELCO_GENERAL)

20	MOTORIZED DAMPERS
21	TELCO ALARM BOX 16"x12"x16" NEMA 1
22	ALARM BLOCK, 66 TERMINAL
23	HIGH TEMPERATURE ALARM, DAYTON 1UHH2
24	LOW TEMPERATURE ALARM, DAYTON 1UHH2
25	MAGNETIC DOOR ALARM CONTACTS
26	McMASTER-CARR PULL HANDLE KASON, CAST, 382 & MASTERLOCK LOCK SET (VERIFY TYPE WITH VERIZON)
27	PROVIDE EYE WASH KIT (GRAINGER #51062), FIRST AID KIT, FLOOR MAT, 6' FIBER GLASS STEP LADDER, HEAVY DUTY DUST PAN, BROOM, GARBAGE CAN & TABLE IN VERIZON HEAD END SPACE. MOUNT EQUIPMENT TO 3/4" FIRE RESISTANT PAINTED PLYWOOD BACKBOARD. COORDINATE LOCATION WITH VERIZON CM.
28	4'X7' TALL STEEL DOOR WITH PNEUMATIC CLOSER. DOOR SHALL BE WEATHER/AIR SEALED.
29	ELECTRIC HEATER
30	EXHAUST FAN WITH ALARM
31	LOCK SYSTEM ACU (ACCESS CONTROL UNIT)



1 ELECTRICAL PLAN
22" x 34" SCALE: 3/8" = 1'-0"
11" x 17" SCALE: 3/16" = 1'-0"

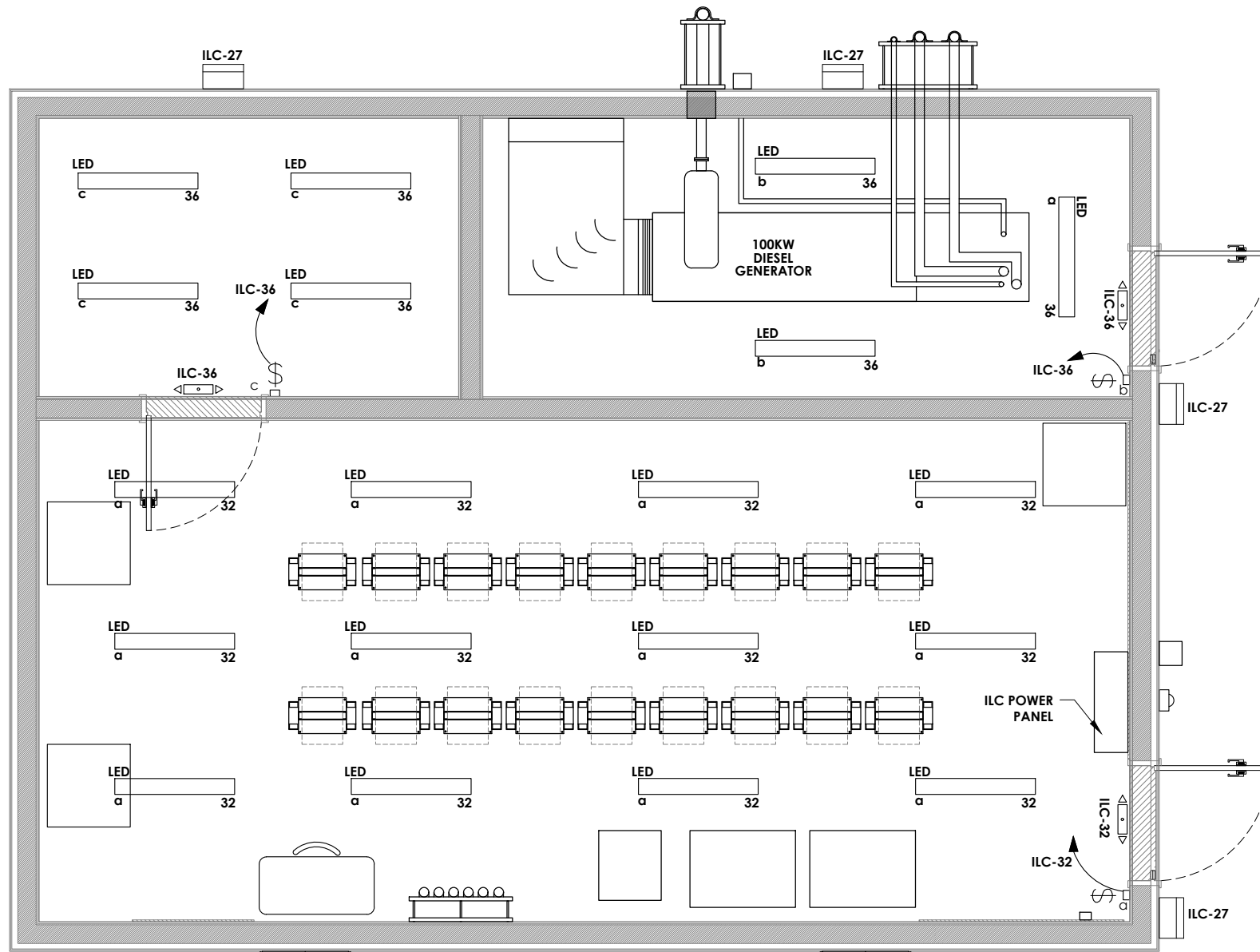


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LIGHTING PLAN

E102



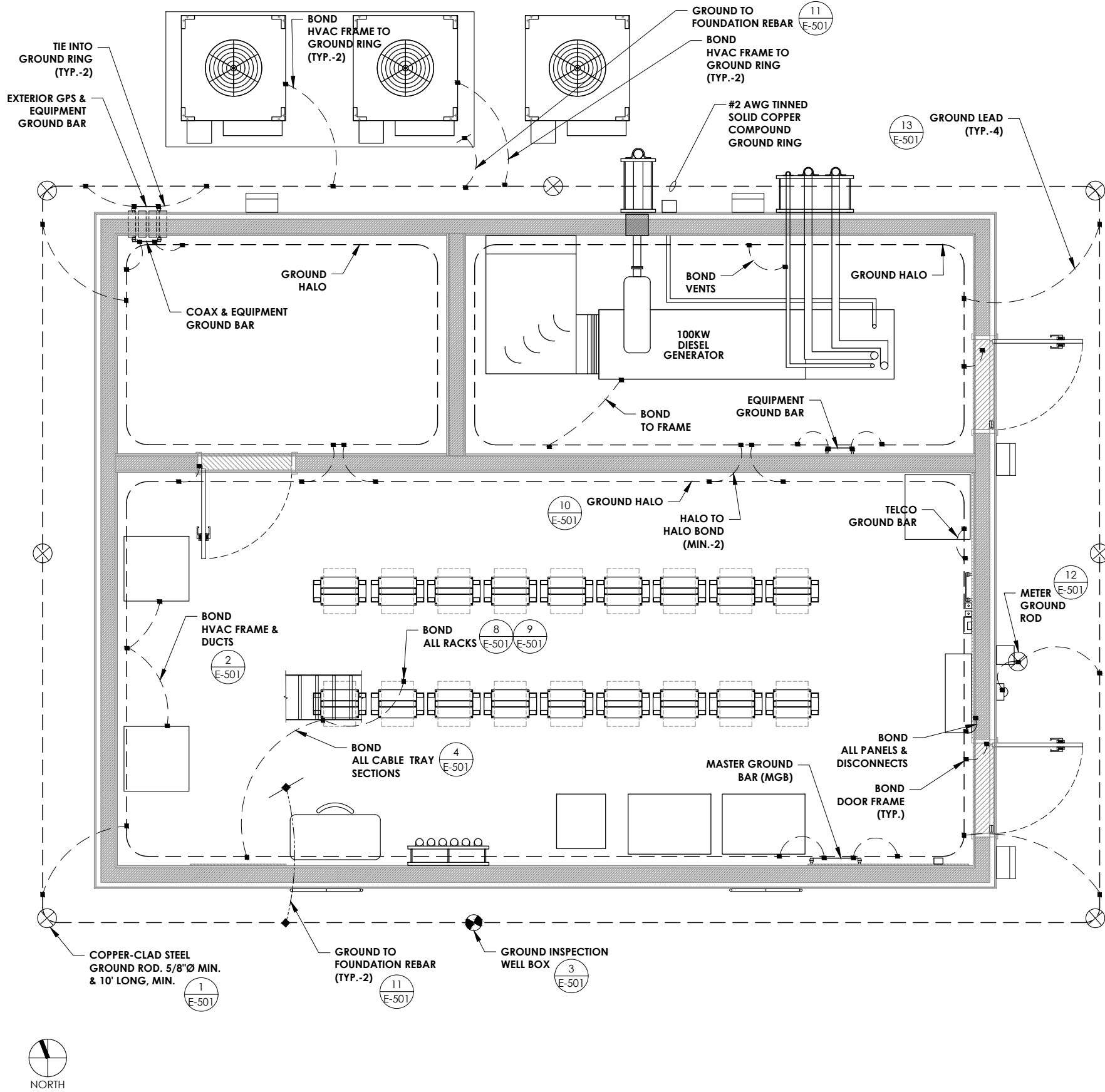
1 LIGHTING PLAN
22" x 34" SCALE: 3/8" = 1'-0"
11" x 17" SCALE: 3/16" = 1'-0"

LIGHTING LEGEND

- LED**
7"W X 48"L COOPER LED LIGHTING WITH BATTERY BACK UP
PN: 4VT2-LD4-6-DR-UNV-EL-L835-CD1-WL-U
"LED" - FIXTURE TYPE
"a" SWITCH CONTROL ID
"32" CIRCUIT NUMBER
- ILC-32**
EMERGENCY LIGHT/EXIT SIGN, LITHONIA PN: LHQMSW3R
ARROW INDICATES EGRESS PATH
"ILC-32" SOURCE PANEL ILC CIRCUIT 32
- ILC-33**
HOMERUN TO PANEL ILC-CIRCUIT 33
2-#12&1-#12G-1/2"C
- 20 AMP HUBBELL SINGLE POLE SWITCH**
PN: 1221 W/ PN: P1N WALL PLATE
"a" SWITCH ID
- ILC-27**
EXTERIOR LITHONIA LIGHTING
P/N: WST-LED-P2-40K-VF-120-BBW-PE-DD BXD
"ILC-27" SOURCE PANEL ILC CIRCUIT 27

NOTES:

- COORDINATE LIGHTING LAYOUT WITH VERIZON C.M., CABLE TRAY INSTALLERS PRIOR TO CONSTRUCTION.
- ALL LIGHTS TO BE CEILING MOUNTED PER MANUFACTURERS RECOMMENDATIONS. PROVIDE VT-2 CHAIN SET IF HUNG LIGHTING IS REQUIRED.
- DO NOT BLOCK FM-200 HEADS.

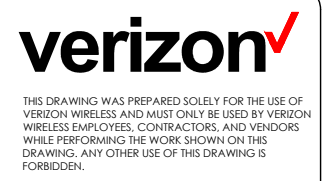


KEY NOTES:

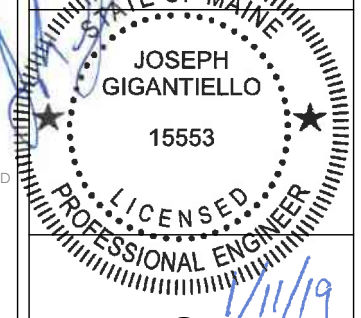
- ① LOCATION OF BURIED GROUND RING, GROUNDING LEADS FROM BUILDING EXTERIOR AND CONNECTIONS TO AND FROM EQUIPMENT ARE SHOWN FOR REFERENCE ONLY. ACTUAL LEAD LOCATIONS ARE TO BE FIELD VERIFIED AS NEEDED.
- ② PROPOSED #2 AWG STRANDED GREEN INSULATED COPPER WIRE FROM LEAD/LAG CONTROLLER TO THE PROPOSED GROUND SYSTEM. GROUND EQUIPMENT PER MANUFACTURER'S SPECIFICATIONS.
- ③ PROPOSED #2 AWG STRANDED GREEN INSULATED COPPER WIRE FROM PROPOSED EQUIPMENT RACK TO THE PROPOSED GROUNDING SYSTEM. TYPICAL FOR ALL EQUIPMENT RACKS. GROUND PER MANUFACTURER'S SPECIFICATIONS.
- ④ PROPOSED #2 AWG STRANDED GREEN INSULATED COPPER WIRE FROM WALL PACK HVAC UNITS TO THE EXISTING BURIED GROUND RING PER MANUFACTURER'S SPECIFICATIONS.
- ⑤ PROPOSED #2 AWG SBTC GROUND WIRE FROM THE DC POWER PLANT EQUIPMENT TO THE GROUNDING SYSTEM PER MANUFACTURER'S SPECIFICATIONS.
- ⑥ PROPOSED #2 AWG STRANDED GREEN INSULATED COPPER WIRE FROM PROPOSED BATTERY RACK TO GROUNDING SYSTEM PER MANUFACTURER'S SPECIFICATIONS.
- ⑦ PROPOSED #6 AWG STRANDED GREEN INSULATED COPPER WIRE FROM 9712 ENODE B TO EXISTING GROUNDING SYSTEM PER MANUFACTURER'S SPECIFICATIONS.
- ⑧ PROPOSED #6 AWG STRANDED GREEN INSULATED COPPER WIRE FROM FIF RACK TO EXISTING GROUNDING SYSTEM PER MANUFACTURER'S SPECIFICATIONS.
- ⑨ PROPOSED #6 AWG STRANDED GREEN INSULATED COPPER WIRE FROM 9412 LTE ENODE B CABINET TO EXISTING GROUNDING SYSTEM PER MANUFACTURER'S SPECIFICATIONS.
- ⑩ PROPOSED #6 AWG STRANDED GREEN INSULATED COPPER WIRE FROM 850 4.0B CABINET TO EXISTING GROUNDING SYSTEM PER MANUFACTURER'S SPECIFICATIONS.
- ⑪ GROUND TOP AND BOTTOM LOUVERS WITH #6 AWG STRANDED GREEN INSULATED TO COPPER WIRE.
- ⑫ PROPOSED #6 AWG STRANDED GREEN INSULATED COPPER WIRE TO CABLE TRAYS PER MANUFACTURE SPECIFICATIONS.

NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE AND UNDERSTAND THE EXTENT OF THE GROUNDING WORK AS INDICATED BY THE CONTACT DOCUMENTS.
2. FIELD LOCATE UNDERGROUND PUBLIC AND OWNER UTILITIES OF ALL TRADES AND GROUNDING PRIOR TO ANY EXCAVATION. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OR REWORK OF ANY DAMAGED UTILITIES AND GROUNDING SYSTEMS.
3. ALL CONDUIT AND GROUNDING CONDUCTORS SHALL BE A MINIMUM OF 36" BELOW GRADE UNLESS OTHERWISE NOTED.
4. CONNECT TO ALL METALLIC OBJECTS WITHIN 6' OF EXTERIOR BURIED GROUND RING WITH #2 AWG SBTC GROUND WIRE.
5. CONNECT ALL MECHANICAL EQUIPMENT BASES AND PIPING SUPPORTS TO BURIED GROUND RING WITH #2 SBTC GROUND WIRE.
6. ALL GROUNDING CONDUCTORS SHALL BE SUPPORTED BY NONMETALLIC SUPPORTS.
7. GROUNDING LEADS FROM BUILDING EXTERIOR, AND CONNECTIONS TO RING ARE SHOWN FOR REFERENCE ONLY. COORDINATE WITH ALL OTHER DIVISION TO ENSURE THAT ALL METALLIC OBJECTS ON BUILDING, AND BUILDING EXTERIOR RECEIVE GROUND CONNECTION. COORDINATE WITH ALL OTHER TRADES.
8. PROVIDE LABELS ON ALL GROUNDING CONDUCTORS IN INSPECTION BOXES INDICATING LEAD NUMBER AND TERMINATION LOCATION AT OPPOSITE END.
9. BOND ALL EXTERIOR METALLIC OBJECTS THAT ARE ATTACHED TO THE BUILDING TO THE EXTERIOR RING VIA A #2 SBTC.
9. BOND ALL EXTERIOR METALLIC OBJECTS ON THE SITE TO THE EXTERIOR RING VIA A #2 SBTC.
10. ALL BURIED CONNECTIONS SHALL BE MADE WITH #2 SBTC.
11. CONTRACTOR SHALL BOND ALL METALLIC DUCTS, LOUVERS, DOOR FRAMES, EQUIPMENT FRAMES, CONDUITS, EQUIPMENT, ETC.



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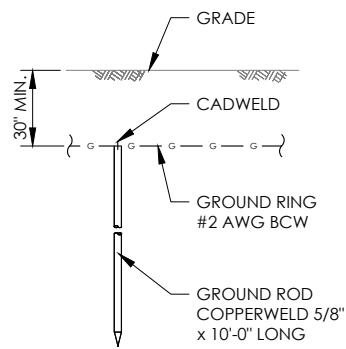
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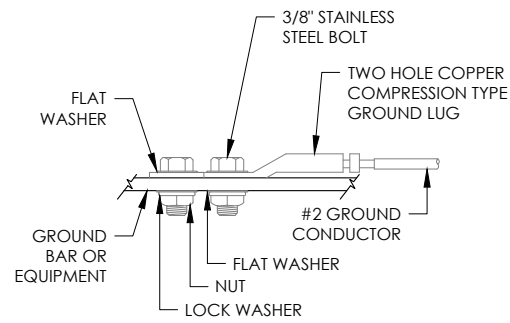
GROUNDING PLAN & DETAILS

E103

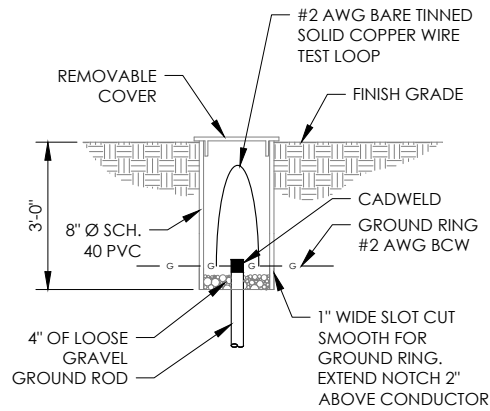
① **GROUNDING PLAN**
 22" x 34" SCALE: 1/2" = 1'-0"
 11" x 17" SCALE: 1/4" = 1'-0"



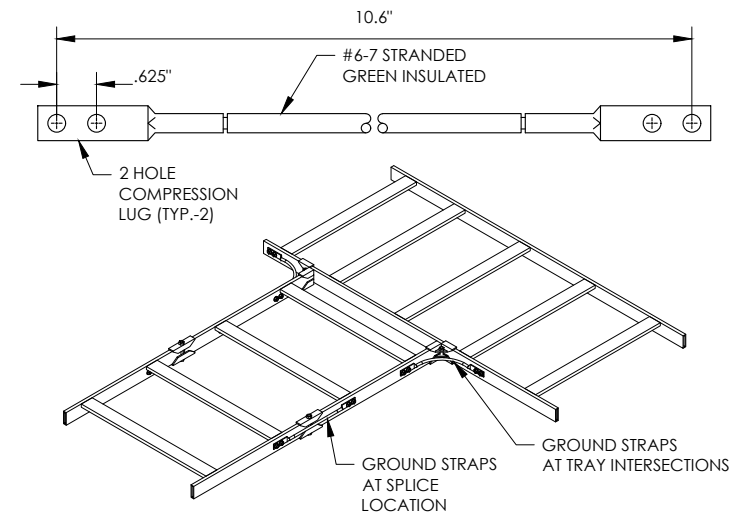
1 GROUND ROD DETAIL
NOT TO SCALE



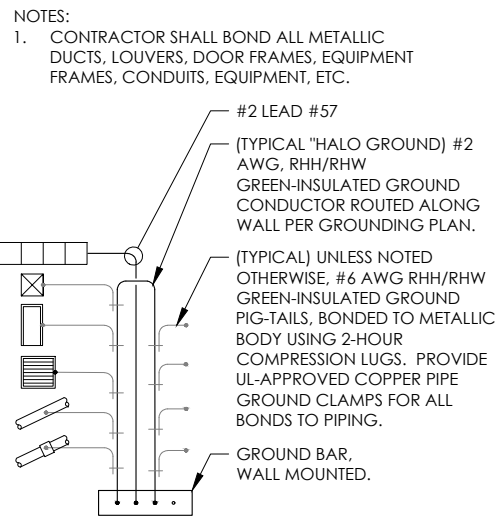
2 GROUND CONNECTION
NOT TO SCALE



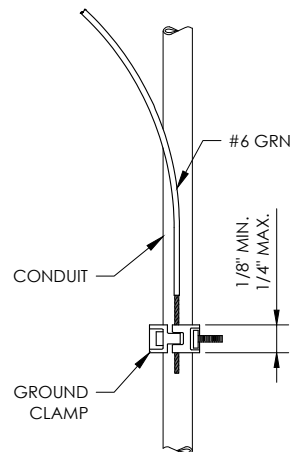
3 GROUND ROD INSPECTION WELL
NOT TO SCALE



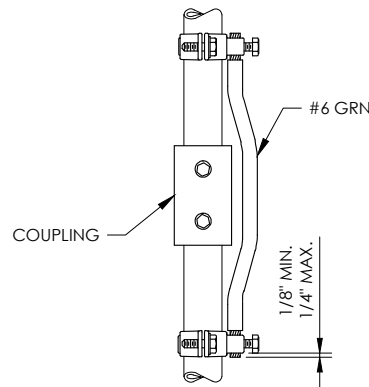
4 CABLE TRAY BONDING STRAP
N.T.S.



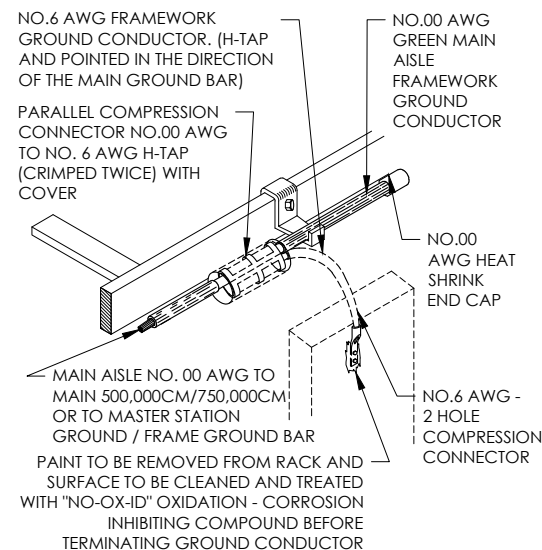
5 SCHEMATIC HALO GROUND DETAIL
NOT TO SCALE



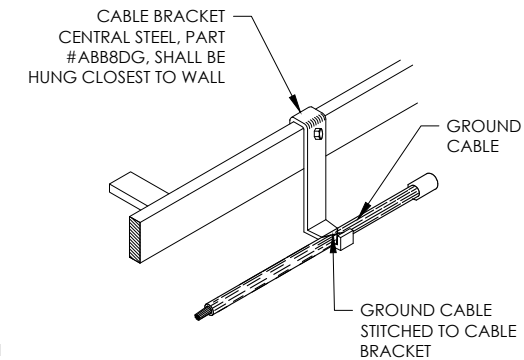
6 CONDUIT BOND DETAIL
NOT TO SCALE



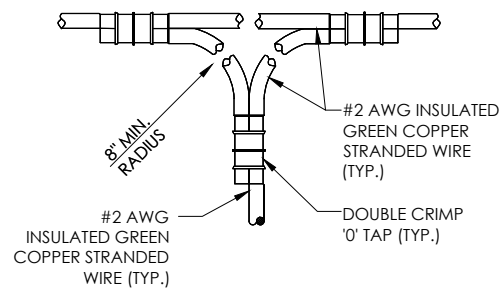
7 CONDUIT BOND DETAIL
NOT TO SCALE



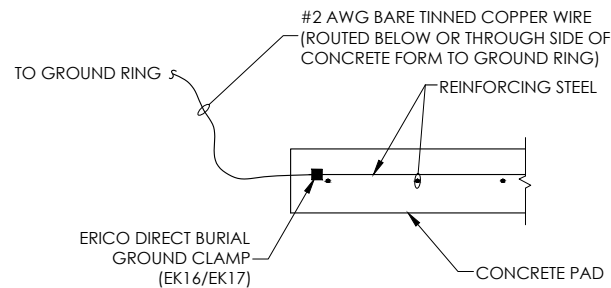
8 TYPICAL FRAME GROUND DETAIL
NOT TO SCALE



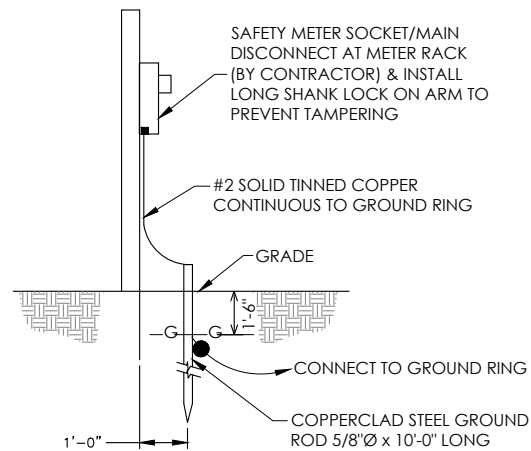
9 TYPICAL CABLE RACKET
NOT TO SCALE



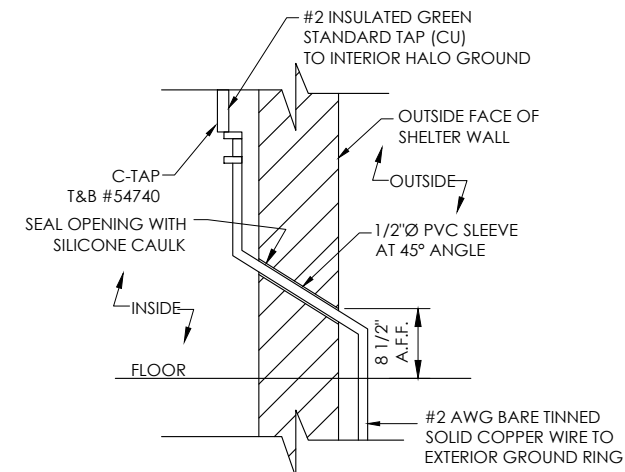
10 GROUND HALO DETAIL
N.T.S.



11 REBAR GROUNDING DETAIL
N.T.S.



12 METER SOCKET GROUNDING
N.T.S.



13 WALL GROUND PENETRATION
N.T.S.

NOTES:
1. CONTRACTOR SHALL BOND ALL METALLIC DUCTS, LOUVERS, DOOR FRAMES, EQUIPMENT FRAMES, CONDUITS, EQUIPMENT, ETC.

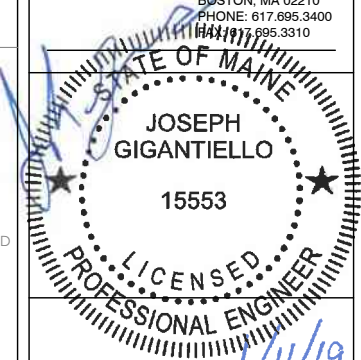
NOTES:
1. CONTRACTOR SHALL INSTALL CABLE BRACKETS EVERY 18\"/>

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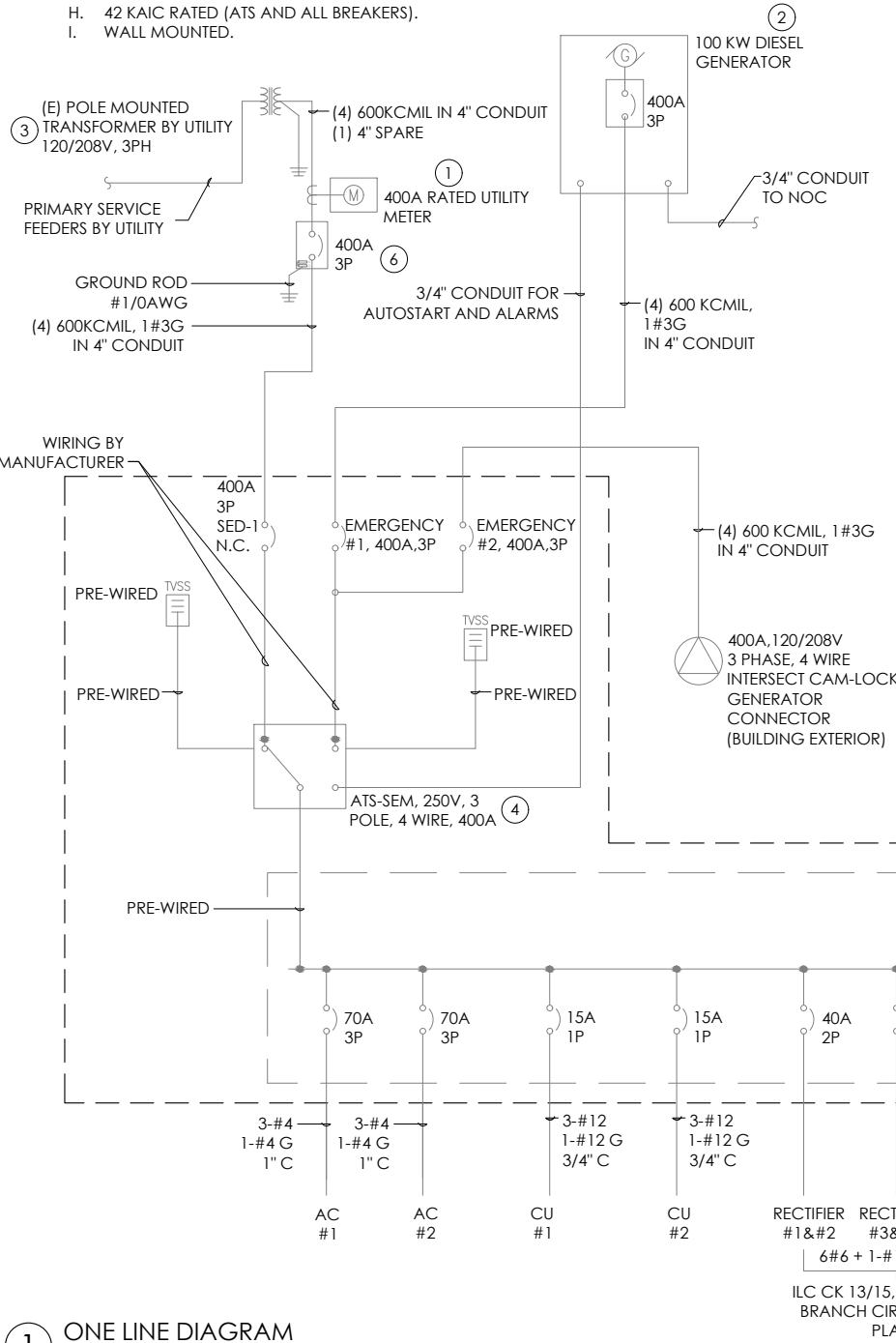
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GROUNDING DETAILS

E501

KEY NOTES:

- ① COORDINATE METER BOX AND METER LOCATION WITH EXISTING UTILITY.
- ② 100 KW DIESEL GENERATOR WITH 350 GALLON TANK. VERIFY MANUFACTURER AND DIMENSIONS WITH VERIZON WIRELESS PRIOR TO CONSTRUCTION.
- ③ COORDINATE WITH LOCAL UTILITY FOR TRANSFORMER UPGRADE AS REQUIRED.
- ④ INTEGRATED LOAD CENTER (ILC) IS PREPURCHASED BY VERIZON WIRELESS FOR INSTALLATION, START UP AND TESTING UNDER THIS PROJECT.
- ⑤ RECTIFIERS (PROPOSED & FUTURE) ARE 75 AMP, MODEL #NE075AC48ATEZ, PEOPLESOFT #109163473.
- ⑥ 400A DISCONNECT SHALL BE A SEPARATELY ENCLOSED SERVICE ENTRANCE RATED CIRCUIT BREAKER. PROVIDE NEUTRAL TO GROUND BOND FOR INCOMING SERVICE.
- ⑦ A. VERIZON FURNISHED INTEGRATED LOAD CENTER (SEE PRE-PURCHASE SCHEDULE)
 B. 120/280V, 3P, 4W, 400A, 42 POLE MAIN DISTRIBUTION PANELBOARD.
 C. 400A, 3P UTILITY SOURCE BREAKER
 D. TWO MECHANICALLY INTERLOCKED 400A, 3P STANDBY SOURCE BREAKERS (PERMANENT GEN & CAM-LOCK).
 E. NORMAL SOURCE UTILITY INPUT VOLTAGE SENSING RELAY.
 F. NORMAL AND STANDBY SOURCE TVSS UNITS.
 G. NEMA 1 ENCLOSURE.
 H. 42 KAIC RATED (ATS AND ALL BREAKERS).
 I. WALL MOUNTED.



PANEL NAME		LOCATION:		VOLTAGE: 120 / 208V 3 Ø							MOUNTING SURFACE			
ILC PANEL		SHELTER		MAIN C/B: 400 AMPS							AVAIL. FAULT CURRENT:			
				BUS RATING: 400 AMPS							SHORT CIRCUIT RATING: 42 KAIC			
AMPS	POLES	TYPE	CIRCUIT DESCRIPTION	KVA	CKT	A	B	C	CKT	KVA	CIRCUIT DESCRIPTION	TYPE	POLES	AMPS
70		AC	HVAC #1	4.10	1	8.20	0.00	0.00	2	4.10	HVAC #2	AC		70
70	3	AC		4.10	3	0.00	8.20	0.00	4	4.10		AC	3	70
70		AC		4.10	5	0.00	0.00	8.20	6	4.10		AC		70
15		AC	AHU #1	0.72	7	1.44	0.00	0.00	8	0.72	AHU #2	AC		15
15	3	AC		0.72	9	0.00	1.44	0.00	10	0.72		AC	3	15
15		AC		0.72	11	0.00	0.00	1.44	12	0.72		AC		15
40		R	RECTIFIER #1 & #2	2.00	13	4.00	0.00	0.00	14	2.00	RECTIFIER #3 & #4	R	2	40
40	2	R		2.00	15	0.00	4.00	0.00	16	2.00		R		40
40		R	RECTIFIER #5 & #6	2.00	17	0.00	0.00	4.00	18	2.00	RECTIFIER #7 & #8	R	2	40
40	2	R		2.00	19	4.00	0.00	0.00	20	2.00		R		40
40		R	RECTIFIER #9 & #10	2.00	21	0.00	2.00	0.00	22	2.00	FUTURE RECTIFIERS	R	2	40
40	2	R		2.00	23	0.00	0.00	2.00	24	2.00		R		40
20	1	R	BATT. CHARGER	0.60	25	1.32	0.00	0.00	26	0.72	HVAC CONTROLLER	R	1	20
15	1	L	EXTERIOR LIGHTS	0.80	27	0.00	1.16	0.00	28	0.36	TELCO TWIST LOCK RECEPTACLE	R	1	20
20	1	R	GEN. HEATER	1.00	29	0.00	0.00	2.18	30	0.69	EXHAUST FAN	R	1	20
15	1	R	ACU (ACCESS CONTROL UNIT)	0.60	31	1.47	0.00	0.00	32	0.87	HEAD END RM LIGHTS	R	1	20
20	1	R	EQUIPMENT ROOM RECEPTACLE	1.08	33	0.00	1.08	0.00	34	0.00	SPARE	R	1	20
20	1	R	SPARE	0.00	35	0.00	0.00	0.49	36	0.49	GEN. RM STORAGE RM LIGHTS	R	1	20
20	1	R	GEN./STORAGE RECEPTACLE	1.44	37	2.69	0.00	0.00	38	1.25	STORAGE ROOM HEATER	R	2	20
15	1	R	DAMPERS	0.72	39	0.00	1.97	0.00	40	1.25		R		20
20	1	R	SPARE	0.00	41	0.00	0.00	0.00	42	0.00	SPARE	R	1	20
PHASE TOTAL						23.12	19.85	18.31		KVA				
											TOTAL CONNECTED LOAD	61.28	KVA	
						0	0	0			TOTAL DEMAND LOAD	49.12	KVA	

② LOAD ANALYSIS (400A ILC)
N/A

SHEET NOTES:

1. IT IS CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE & DETERMINE THE EXACT EXTENT OF WORK, COORDINATION, DEMOLITION, TEMPORARY FACILITIES, UTILITIES, ETC. NECESSARY TO COMPLETE THE PROJECT AS INDICATED ON THE CONTRACT DOCUMENTS.
2. VERIFY LOCATION IN THE FIELD OF ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATING. COORDINATE WITH PUBLIC UTILITIES AS NECESSARY TO COMPLETE REQUIRED WORK AS INDICATED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR/REPLACEMENT OF ALL DAMAGED UTILITIES AT THE EXPENSE OF THE CONTRACTOR.
3. PROVIDE SEPARATE INSULATED GROUNDING CONDUCTOR IN ALL FEEDER & BC.
4. PROVIDE 2-HOLE LUGS CAPABLE OF ACCEPTING MULTIPLE CRIMPS FOR ALL POWER & GROUNDING CONNECTIONS TO A BUS OR WHERE FEASIBLE. USE MANUFACTURER'S COMPRESSION TOOL WITH PROPER DIE FOR EACH CONNECTOR. MANUFACTURER'S EMBOSSED CODING SYSTEM IS REQUIRED. A UNIVERSAL OR DIE-LESS TYPE CRIMPING TOOL SHALL NOT BE USED. PROVIDE LUGS WITH INSPECTOR HOLE FOR ALL INTERIOR INSTALLATIONS. PROVIDE CLOSED LUGS (NO INSPECTION HOLE) FOR EXTERIOR OR UNDERGROUND CONNECTIONS.
5. FEEDER CIRCUITS, GROUND LEADS, & DEDICATED EQUIPMENT CIRCUITS SHALL NOT BE SPLICED.
6. VERIFY LASHING REQUIREMENTS FOR SERVICE ENTRANCE & MAIN DISTRIBUTION EQUIPMENT WITH MANUFACTURER. INSTALL LASHING PER MANUFACTURER'S REQUIREMENTS.

COMPRESSION LUG NOTES:

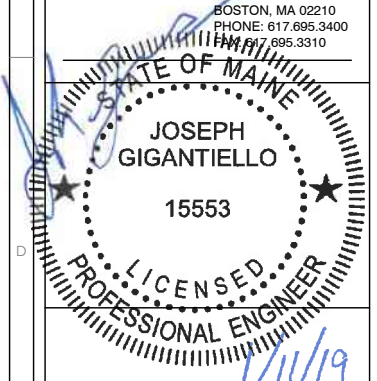
REFER TO SPECIFICATION SECTION 260519 & NSTD516 REGARDING REQUIREMENTS FOR A SAMPLE COMPRESSION LUG SUBMITTAL ON ALL PROJECTS. FAILURE TO PROVIDE CORRECT LUGS & SUBMIT A SAMPLE COMPRESSION LUG TO VZW PRIOR TO INSTALLATION OF ANY LUGS MAY RESULT IN REJECTION OF THE INSTALLATION & REPLACEMENT OF ALL LUGS & ASSOCIATED CABLE, WHERE REQUIRED, AT NO COST TO VZW.



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NO.	DESCRIPTION	DATE
1	FOR SUBMITTAL	10/18/18
2	FOR SUBMITTAL	11/20/18
3	100% SUBMISSION	11/30/18
4	EOS REVISIONS	01/11/19

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 CAD DWG FILE #: 50000012
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 DRAWN BY: SK
 CHECKED BY: BBR
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ISSUED FOR REVIEW

ELECTRICAL ONE LINE DIAGRAM

E700

① ONE LINE DIAGRAM
N/A