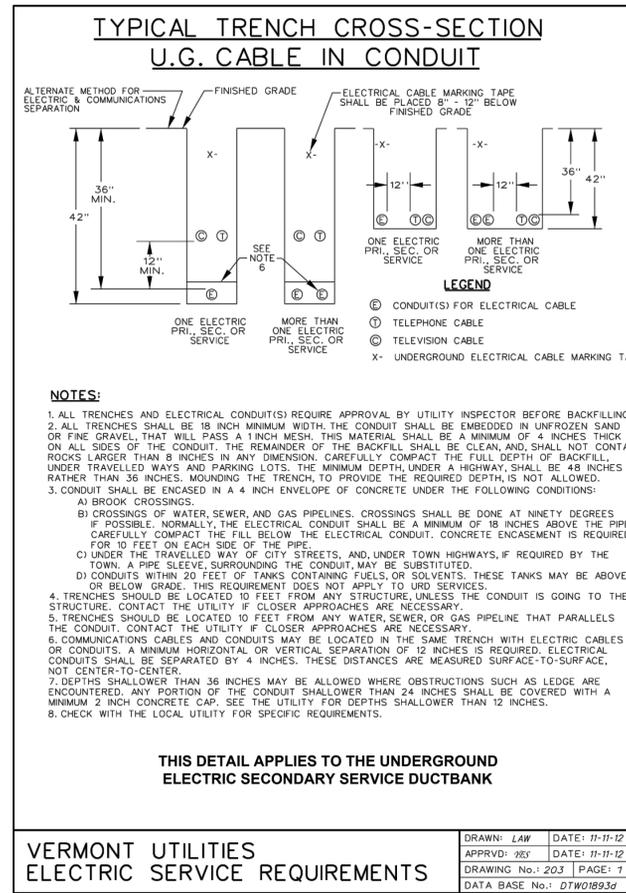


**ELECTRICAL ONE-LINE DIAGRAM**  
NTS



- GENERAL NOTES:**  
THESE GENERAL NOTES APPLY TO THIS ELECTRICAL SITE DRAWING.
- FOLLOW ALL APPLICABLE CODES AND USE GOOD ELECTRICAL CONSTRUCTION PRACTICES WHEN DETERMINING TYPES OF WIRING METHODS AND SIZING OF CONDUCTORS AND CONDUIT. INSTALL ALL POWER, CONTROL AND SIGNAL WIRING USING METHODS AS FOLLOWS:
    - UNDERGROUND: INDIVIDUAL CONDUCTORS INSTALLED IN SCHEDULE 40 PVC RIGID NON-METALLIC CONDUIT (RNC) FOR DIRECT BURIAL; TRANSITION TO GALVANIZED STEEL RIGID METAL CONDUIT (RMC) WHERE CONDUIT RISES TO BE EXPOSED ABOVE GRADE OR CONCRETE SLAB FROM A MINIMUM 24" BELOW TOP OF FINISHED GRADE OR SLAB.
    - BENEATH CONCRETE SLAB: UNLESS OTHERWISE NOTED, INDIVIDUAL CONDUCTORS INSTALLED IN SCHEDULE 40 PVC RIGID NON-METALLIC CONDUIT (RNC) FOR DIRECT BURIAL OR CONCRETE ENCASEMENT; PROVIDE GALVANIZED RIGID STEEL SLEEVE WHERE CONDUIT PENETRATES CONCRETE FOUNDATION, WALL OR SLAB.
    - EXPOSED, EXTERIOR WIRING: INDIVIDUAL CONDUCTORS IN GALVANIZED STEEL RIGID METALLIC CONDUIT (RMC).
    - CONTRACTOR SHALL CONSULT WITH ENGINEER REGARDING QUESTIONS REGARDING WIRING METHODS PRIOR TO ROUGH-IN OF WIRING.
  - THE ELECTRIC UTILITY SERVING THIS PROJECT IS THE GREEN MOUNTAIN POWER (GMP). THE GMP FIELD TECHNICIAN FOR THIS PROJECT IS KRISTINA CARTER (800-835-4672).
  - REFER TO THE VERMONT UTILITIES SERVICE REQUIREMENTS MANUAL, AVAILABLE ON THE INTERNET AT WWW.GREENMOUNTAINPOWER.COM FOR MATERIALS REQUIREMENTS, DIRECTION FORM THE ELECTRIC POWER UTILITY AND STANDARD INSTALLATION DETAILS. NOTE THAT THERE MAY BE GMP AMENDMENTS TO THE VERMONT UTILITIES SERVICE REQUIREMENTS THAT COULD APPLY TO WORK OF THIS PROJECT.
  - ELECTRIC SERVICE INSTALLATION RESPONSIBILITIES:**
    - THIS DESCRIPTION OF RESPONSIBILITIES IS TENTATIVE. FOR DESIGN PURPOSES, ACTUAL ASSIGNMENT OF RESPONSIBILITIES WILL BE BY THE CONSTRUCTION MANAGER. VERIFY RESPONSIBILITIES PRIOR TO BIDDING.
    - GMP RESPONSIBILITIES:
      - PROVIDE POLE TOP TRANSFORMERS TO SERVE THE BUILDING AT A RISER POLE ON THE SOUTH SIDE OF KILLINGTON ROAD.
      - PROVIDE INSTALLATION OF SECONDARY RISER WIRING ON POLE AND FINAL CONNECTION OF SECONDARY CONDUCTORS TO THE POLE TOP TRANSFORMERS.
      - PROVIDE CT METERING AT THE POLE FOR BUILDING AND FIRE PUMP SERVICES.
    - ELECTRICAL CONTRACTOR RESPONSIBILITIES:
      - COORDINATION BETWEEN GMP, THE SITE CONTRACTOR AND THEMSELVES.
      - COMPLETE SECONDARY WIRING FROM THE POLE MOUNTED TRANSFORMERS TO THE BUILDING SERVICE OVER-CURRENT PROTECTION.
      - ELECTRICAL CONTRACTOR SHALL BE PRESENT AND MONITOR THE BACK FILLING OF THE SECONDARY WIRING DUCTBANKS BY THE SITE CONTRACTOR.
    - SITE CONTRACTOR RESPONSIBILITIES:
      - TRENCHING AND BACKFILL FOR THE UNDERGROUND ELECTRICAL DUCTBANKS, AND SECONDARY CONCRETE ENCASEMENT OF SERVICE WIRING WHERE IT IS ROUTED BELOW ROADWAYS, DRIVEWAYS, PARKING AS PER GMP REQUIREMENTS.

- DRAWING NOTES:**  
THESE DRAWING NOTES APPLY TO THIS DRAWING, ONLY.
- PROVIDE (1) #2/0 7 STRAND BARE COPPER GROUNDING ELECTRODE CONDUCTOR IN 1" NON-METALLIC RIGID CONDUIT TO BUILDING STEEL. (NEC 250.52(2), 250.66)
  - PROVIDE (1) #6 7 STRAND BARE COPPER BONDING JUMPER IN 1/2" NON-METALLIC RIGID CONDUIT TO A 1/2" DIAMETER (OR GREATER) MINIMUM 20'-0" LONG CONCRETE ENCASED REINFORCING BAR IN A SLAB OR FOOTING THAT IS IN DIRECT CONTACT WITH THE EARTH. MINIMUM 2" CONCRETE ENCASEMENT. WHERE ADEQUATE REINFORCING ROD IS NOT AVAILABLE, PROVIDE 20' OF #4 COPPER CONDUCTOR INSTALLED IN THE CONCRETE, METALLICALLY TIED TO THE METALLIC REINFORCING RODS. (NEC 250.52(3), 250.66(B)).
  - PROVIDE (1) #6 7 STRAND BARE COPPER BONDING JUMPER IN 1/2" NON-METALLIC RIGID CONDUIT TO THREE(3) 3/4" X 10' GROUND RODS, SPACE 10' APART, MINIMUM, CREATING AN EQUILATERAL TRIANGLE. CADWELD ALL GROUND ROD CONNECTIONS. (NEC 250.52(5), 250.66(A))
  - PROVIDE (1) #8 7 STRAND BARE COPPER BONDING CONDUCTOR IN 1/2" NON-METALLIC RIGID CONDUIT TO THE GAS SERVICE FOR BONDING OF THE PIPING SYSTEM. COORDINATE LOCATION WHERE CONDUCTOR NEEDS TO TERMINATE WITH THE GAS SYSTEM INSTALLER WITH FINAL BONDING CONNECTION BY THE GAS SYSTEM INSTALLER.. (NEC 250.104(B), TABLE 250.122).
  - PROVIDE ENGRAVED LABELS:
    - LABEL MDP AND FIRE PUMP CONTROLLER SERVICE SWITCH 1 OF 2 AND 2 OF 2 AND IDENTIFY THE LOCATION OF EACH.
    - AVAILABLE FAULT CURRENT AND DATE (2017 NEC 110.2(A)).
    - CONDUCTOR COLOR IDENTIFICATION LEGEND
    - PHASE ROTATION
  - SHORT CIRCUIT CURRENT IS CALCULATED BASED UPON INFINITE AVAILABLE UTILITY SHORT CIRCUIT CURRENT. MOTOR CONTRIBUTIONS, ESTIMATED (3) 50KVA UTILITY TRANSFORMERS WITH 1.5% IMPEDANCE.
  - PROVIDE A SURGE PROTECTIVE DEVICE. CONNECT TO A 40A3P CIRCUIT BREAKER. WIRING SHALL BE (4#8; 1F10C) 3/4"C. LOCATE SURGE SUPPRESSION DEVICE ADJACENT TO THE PANEL. PROVIDE SQUARE D #TVS-IMA WITH COUNTER OR APPROVED EQUAL; 120/208V, 3 PHASE, 4 WIRE, 240KA PEAK SURGE CURRENT PER PHASE IN A NEMA 1 ENCLOSURE.

PROGRESS PRINTS  
NOT FOR  
CONSTRUCTION  
11/08/2018

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NO.	ISSUED FOR	DATE

TOWN OF KILLINGTON  
VERMONT  
KILLINGTON,  
VERMONT  
PUBLIC SAFETY FACILITY  
ELECTRICAL ONE LINE DIAGRAM

PROJ. NO.: 18070  
DRAWN: CPB  
DATE: 00/00/0000

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