## NTP-70

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## HIGH VOLTAGE SWITCHROOM \& MULTI-TRANSFORMER NETWORK VAULT LIGHT and RECEPTACLE CIRCUITS

(For Sump Pump Installation and additional information, See NTP-60)
HIGH RISE WIRING DIAGAM


## SEATTLE CITY LIGHT

## CONSTRUCTION GUIDELINE

## HIGH VOLTAGE SWITCHROOM \& MULTI-TRANSFORMER NETWORK VAULT LIGHT and RECEPTACLE CIRCUITS

NOTES:

1. All the material listed for vault or a switchroom is designed for three watts per square foot floor lighting. Place lights so that all sides of the transformer can be seen. Place outlets at primary and secondary ends of transformers.
2. Material required
A. In a vault - use the column indicated by the number of transformers to be installed.
B. In a switchroom - use the column for a two-transformer vault.
3. All boxes for switches, receptacles and lampholders, shall have approximate locations as shown on the project drawings and shall be anchored to the concrete surface with two anchors (Item 11).
4. All switches (Item 7) shall be on the latch side of the door approximately 40 inches above the floor, unless otherwise noted. Use color code for \#12 wiring from Guideline NTP-60, page 3.
5. All conduit runs (both horizontal and vertical) shall be anchored to the wall or ceiling every 3 feet. If only one support is required, it shall be located approximately at the mid-point of the run.
6. The $3 / 4$ inch conduits shall terminate 6 inches or less from the entrance (or exit) ducts and from the autotransformer, if used.
7. The lengths of \#4 copper (Items $19,26, \& 27$ ) shown in the material list are for use within the vault or switchroom only. The total length required will be shown on the M.R. Pull in 250 kcmil copper system ground with 3 \#4 hot legs and 1 \#4 white neutral.
8. All lampholders shall be 7 to 8 feet from the floor unless noted otherwise on the vault/switchroom drawing.
9. Auto-transformers (Item 20) and 3-way switches (Item 8) for more than one entrance, are to be used only when shown on the vault/switchroom drawing.
10. Add one Item 14 and one Item 15 when auto-transformer is used.

## CONSTRUCTION GUIDELINE

# HIGH VOLTAGE SWITCHROOM \& MULTI-TRANSFORMER NETWORK VAULT LIGHT and RECEPTACLE CIRCUITS 

MATERIAL LIST, PER VAULT

|  | QTY PER NUMBER OF TRANSFORMERS |  |  |  | DESCRIPTION | $\begin{gathered} \text { STOCK } \\ \text { NO. } \end{gathered}$ | MAT'L STD. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ITEM | 1 | 2 | 3 | 4 |  |  |  |
| 1 | 60 ft . | 80 ft . | 140 ft . | 160 ft . | CONDUIT, 1/2" Schedule 40 PVC | 734525 | 7345.2 |
| 2 | 5 | 10 | 14 | 18 | BOX, OUTLET, Bakelite | 734569 | - |
| 3 | 2 | 4 | 6 | 8 | RECEPTACLE, Duplex with 4" cover plate | 733041 | 7330.0 |
| 4 | 3 | 6 | 8 | 10 | LAMPHOLDER, 4" Porcelain | 733115 | - |
| 5 | 1 | 1 | 1 | 1 | BOX, Switch, without cover | 734567 | - |
| 6 | 1 | 1 | 1 | 1 | Cover, Switch | 732317 | - |
| 7 | 1 | 1 | 1 | 1 | SWITCH, 1 pole, glow handle | 733376 | 7333.0 |
| 8 | 2 | 2 | 2 | 2 | SWITCH, 3-way, 15 A, glow handle (See Note 9) | 733379 | 7333.0 |
| 9 | 3 | 6 | 8 | 10 | LAMP, 200 W, 130V | 730629 | - |
| 10 | 12 | 16 | 28 | 32 | STRAP, 1/2" Pipe, one hole | 713442E | 7134.5 |
| 11 | 18 | 28 | 46 | 56 | ANCHOR, Nail Drive | 780010E | - |
| 12 | 9 | 18 | 24 | 30 | ADAPTER, Coupling, PVC Male, 1/2" | 734920 | 7345.2 |
| 13 | 6 | 6 | 6 | 6 | BOOT, Insulating, for fuse holder | 682360 | - |
| 14 | 3 | 3 | 3 | 3 | HOLDER, Fuse, 600 V , inline | 682346 | - |
| 15 | 3 | 3 | 3 | 3 | FUSE, Streetlight, $600 \mathrm{~V}, 20 \mathrm{~A}$ | 683158 | - |
| 16 | 40 ft . | 60 ft . | 95 ft . | 110 ft . | WIRE, \#12, Cu.,1/C, THWN, BLACK | 612220 | 6122.3 |
| 17 | 40 ft . | 60 ft . | 95 ft . | 110 ft . | WIRE, \#12, Cu.,1/C, THWN, WHITE | 612222 | 6122.3 |
| 18 | 25 ft . | 50 ft . | 75 ft . | 100 ft . | WIRE, \#12, Cu.,1/C, THWN, GREEN | 612226 | 6122.3 |
| 19 | - | - | - | - | WIRE, \#4, Cu.,1/C, THWN, BLACK (See Note 7) | 612298 | 6122.3 |
| 20 | 1 | 1 | 1 | 1 | TRANSFORMER, 3 kVA, Auto, Dry, Outdoor (See Note 9) | 391285 | - |
| 21 | 10 ft . | 10 ft . | 10 ft . | 10 ft . | CONDUIT, 3/4", Schedule 40 PVC | 734526 | 7345.2 |
| 22A | 2 | 4 | 6 | 8 | CONNECTOR, Twist Lock, YELLOW | 677180 | - |
| 22B | 5 | 8 | 12 | 16 | CONNECTOR, Twist Lock, BLUE | 677182 | - |
| 23 | 10 | 15 | 20 | 25 | CONNECTOR, Twist Lock, RED | 677181 | - |
| 24 | 1 | 1 | 1 | 1 | COVER, Outlet Box | 732214 | - |
| 25 | 1 | 1 | 1 | 1 | BUSHING, Insulated, 1/2" | 731591 | - |
| 26 | - | - | - | - | WIRE, \#4, Cu.,1/C, THWN, RED (See Note 7) | 612302 | 6122.3 |
| 27 | - | - | - | - | WIRE, \#4, Cu.,1/C, THWN, BLUE (See Note 7) | 612304 | 6122.3 |
| 28 | 1 | 1 | 1 | 1 | FUSE, $600 \mathrm{~V}, 40 \mathrm{~A}, 13 / 32$ " $\times 1-1 / 2^{\prime \prime}$ | 683162 | - |
| 29 | - | - | - | - | WIRE, \#4, Cu.,1/C, THWN, WHITE (See Note 7) | 612300 | 6122.3 |
| 30 | - | - | - | - | CABLE, \#2, Al., Triplex or Quadruplex | $\begin{aligned} & 600672 \\ & 600734 \end{aligned}$ | 6007.5 |

