



GUIDELINES FOR CONDUIT INSTALLATION

1. General

These specifications provide for the construction of underground electric power distribution facilities.

All construction work shall be done in a thorough and workmanlike manner in accordance with the conduit design layout, plans, construction drawings and/or other specifications provided.

All design and construction shall comply with the provisions of the current edition of the National Electrical Safety Code, except where local regulation or other regulations are more stringent. In which those regulations shall govern.

2. Design Review and Changes

The Contractor shall review the conduit design layout prior to the start of construction and propose any desired changes or clarifications needed.

No changes will be made to the design or facility placement without prior approval by CHELCO.

3. Trenching Requirements

All trenching depths specified are minimums as measured from the final grade to the top surface of the conduit. The routing plans and trench specifications shall be as shown on the conduit design layout.

Where trenches are intended for more than one conduit, particular care must be taken to prevent soil falling into the trench during the laying of the first ducts, thereby reducing the depth of the last installed ducts.

All trenches shall follow straight lines between staked points to the greatest extent possible.

4. Conduit Requirements

The electric power distribution conduit of the size designated on the conduit design layout shall consist of a minimum of schedule 40 PVC electrical grade, gray in color.

If continuous (bore) duct is used it must be SDR-13.5 Red.

All exposed ends of the duct(s) shall be plugged to prevent the entrance of foreign matter and moisture into the conduit and 2,500 psi mule tape must be installed.

There shall be a minimum of twelve inches of fill between electrical conduit(s) and other cable T.V. or telecommunications line(s). There shall be a minimum of sixty inches of fill between electrical conduits and any natural gas supply line(s).

When design indicates a turn in duct routing, which requires a manufactured sweep(s) to accomplish the turn, a sweep with a minimum length of 3 feet shall be used where three-inch conduit is being used, and a sweep with a minimum length of 4 feet shall be used where four-inch conduit is being used.

5. Minimum Depth Requirements

Conduit for the purpose of installing cable for primary and secondary voltage shall be installed no less than 48 inches below final grade.

Conduit can be bundled in a joint use trench application as long as 48 inches of cover remains from the top of the conduit bundle.

6. Minimum Equipment Clearances

Consideration shall be given to maintain required clearances from building, fire hydrants etc. when turning up conduit at equipment locations. Below are some common equipment clearances required.

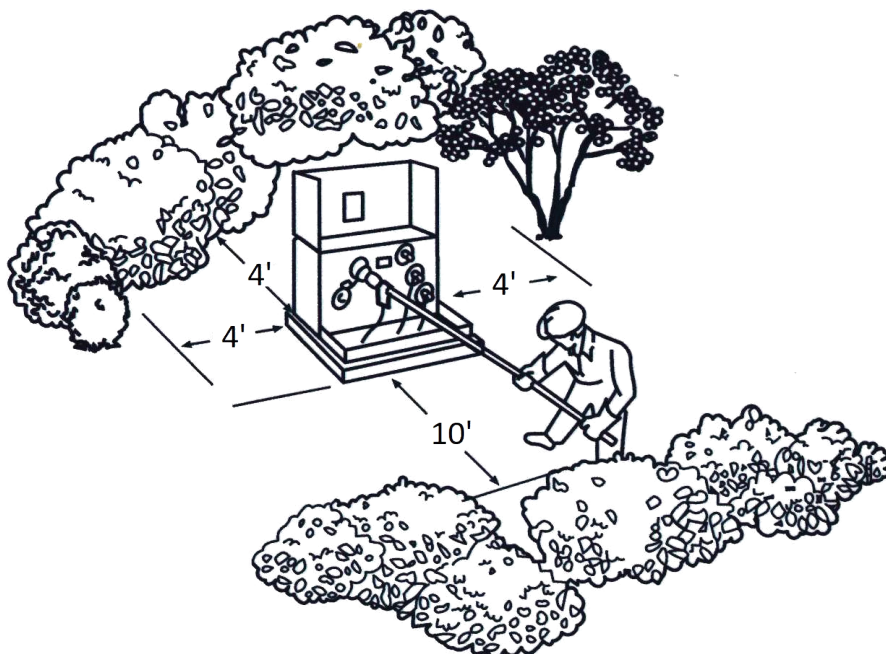
Pad Mounted equipment (oil filled) from buildings and structures 10 (ft)

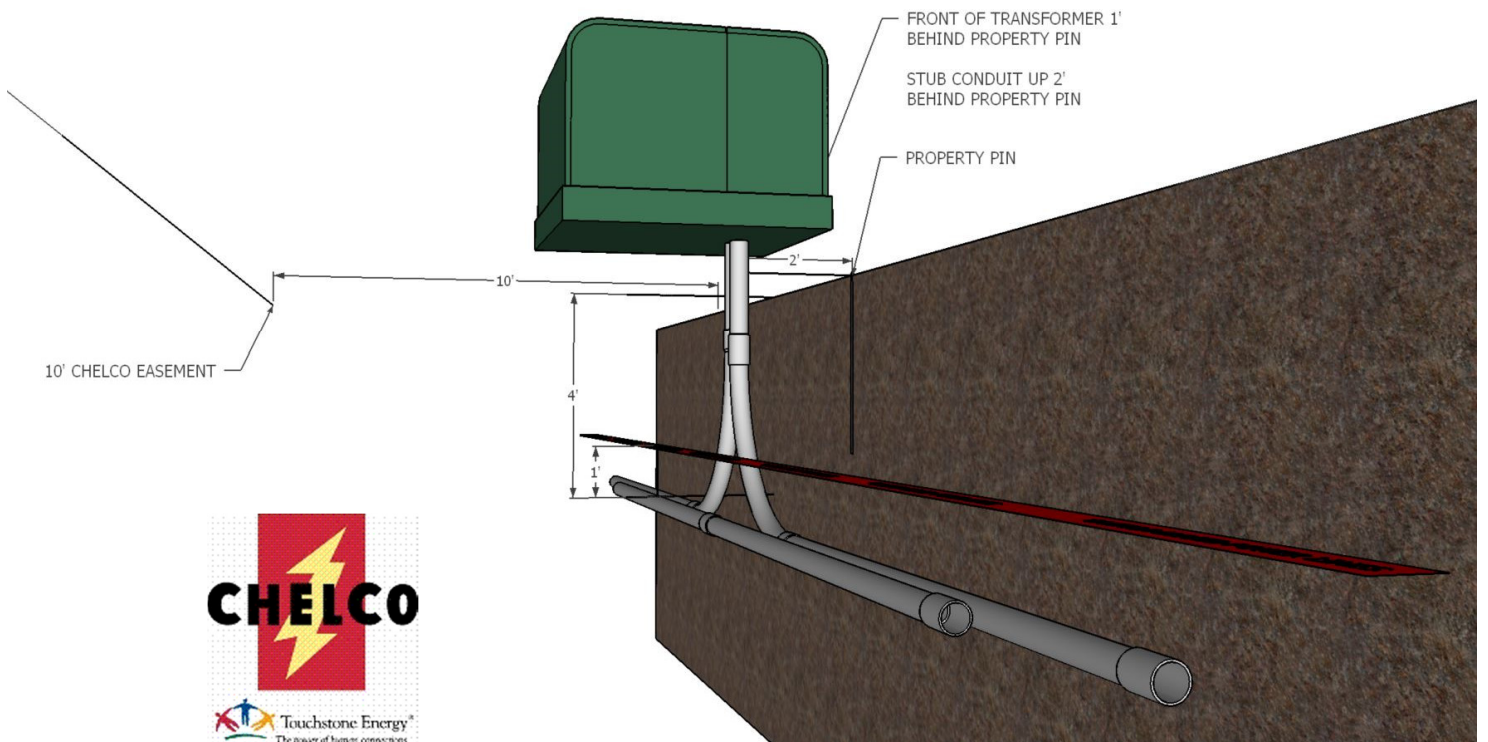
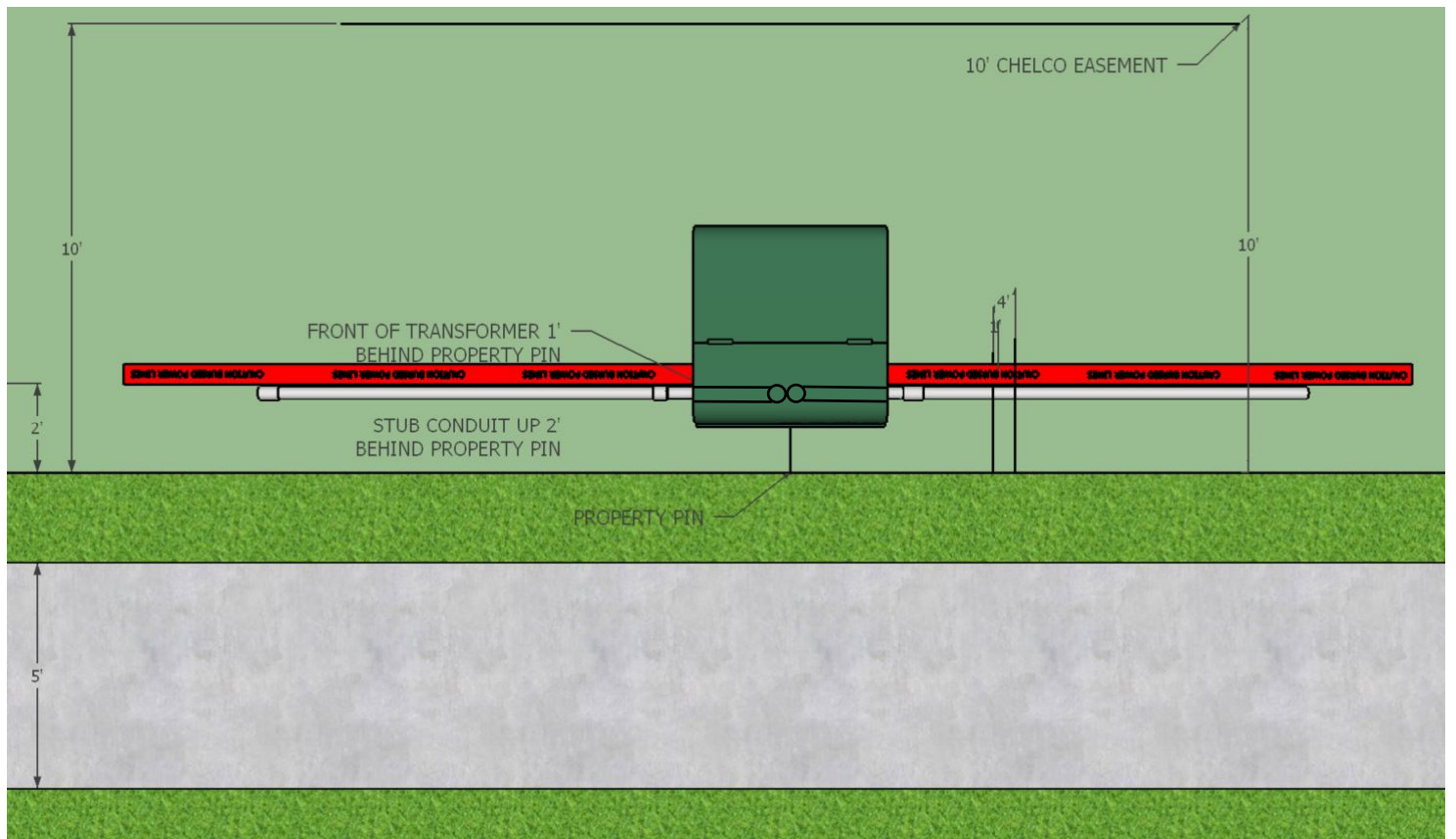
Pad Mounted equipment from fire hydrants 4 (ft)

Underground primary and secondary from swimming pools 5 (ft)

Clearance from any landscaping on back and sides 4 (ft)

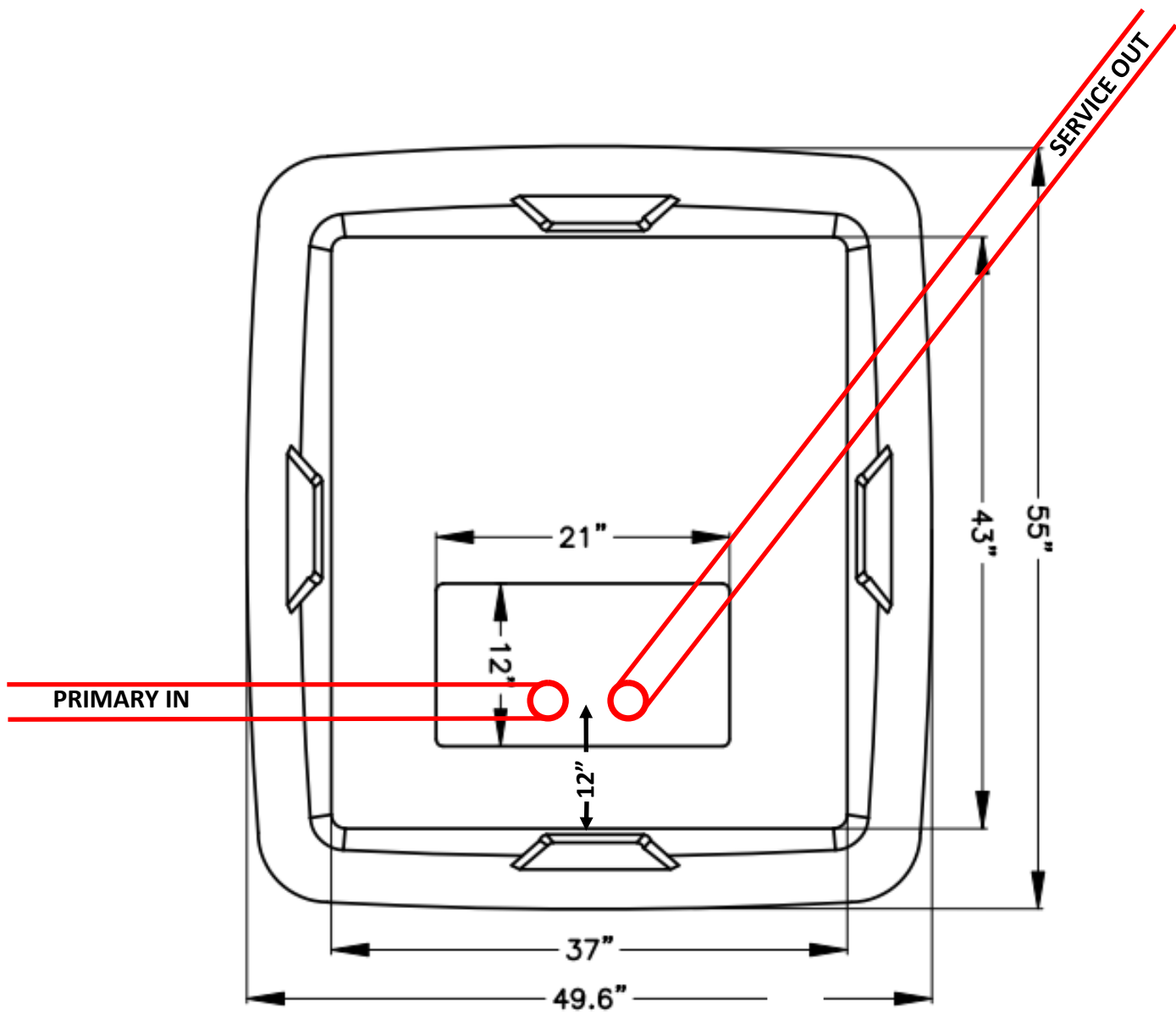
Clearance from any landscaping on front(door) side 10 (ft)





Conduit Installation Guide
Single Phase Transformer

- Minimum 48" cover over top of conduit
- 1' backfill and install cation tape
- Install 2500 lbs. mule tape in all conduit
- Use long sweep 90's

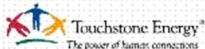
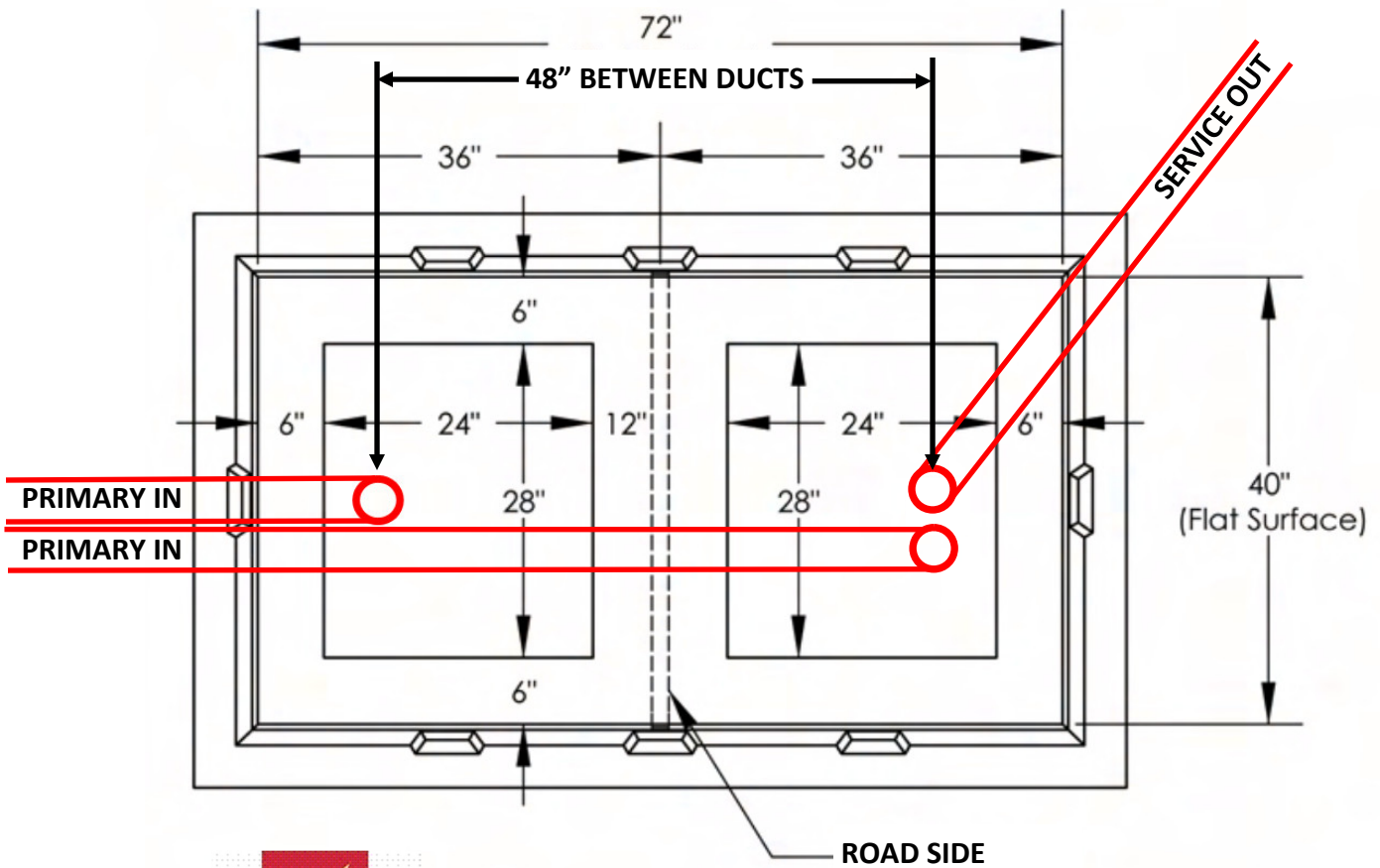
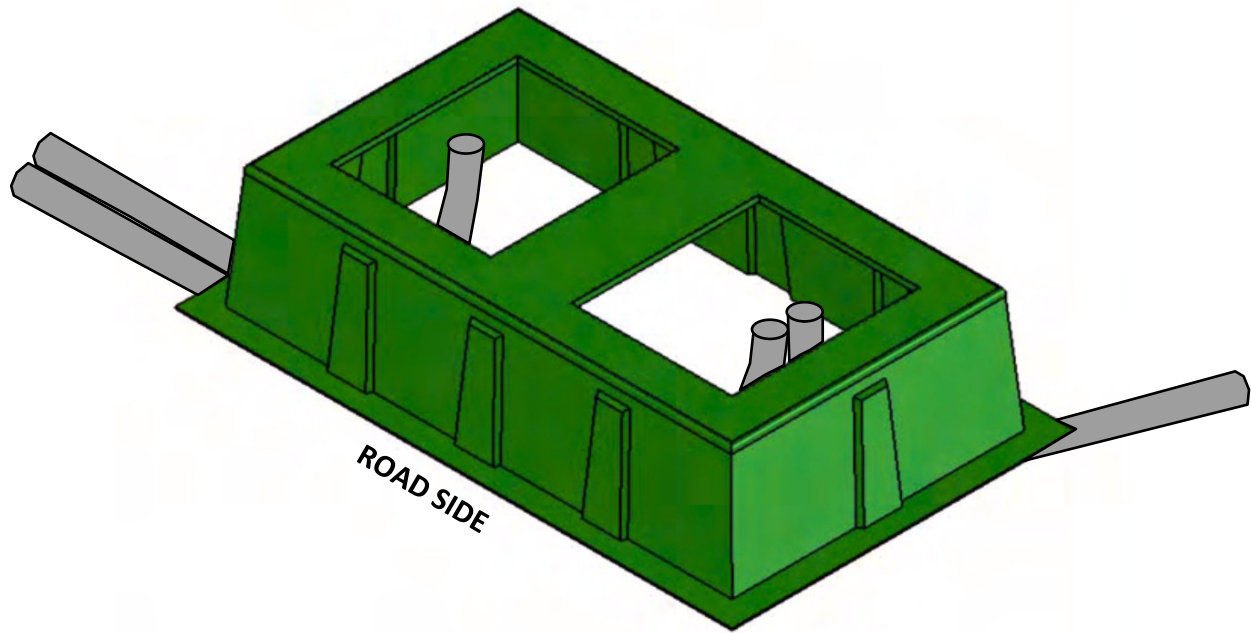


ROAD/FRONT SIDE



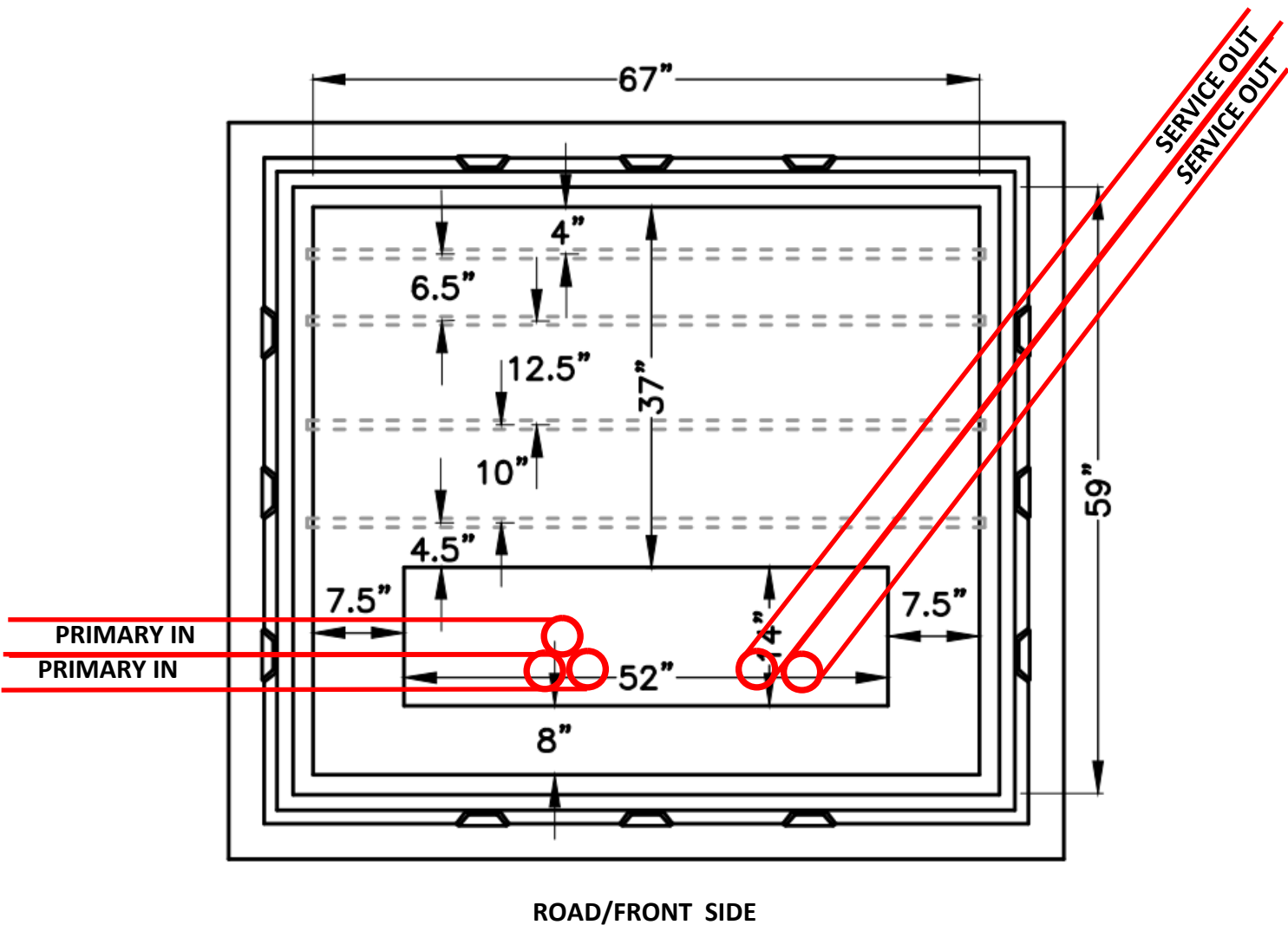
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Single Phase Transformer

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Conduit Installation Guide
Open Delta Transformers

- Minimum 48" cover over top of conduit
- 1' backfill and install cation tape
- Install 2500 lbs. mule tape in all conduit
- Use long sweep 90's



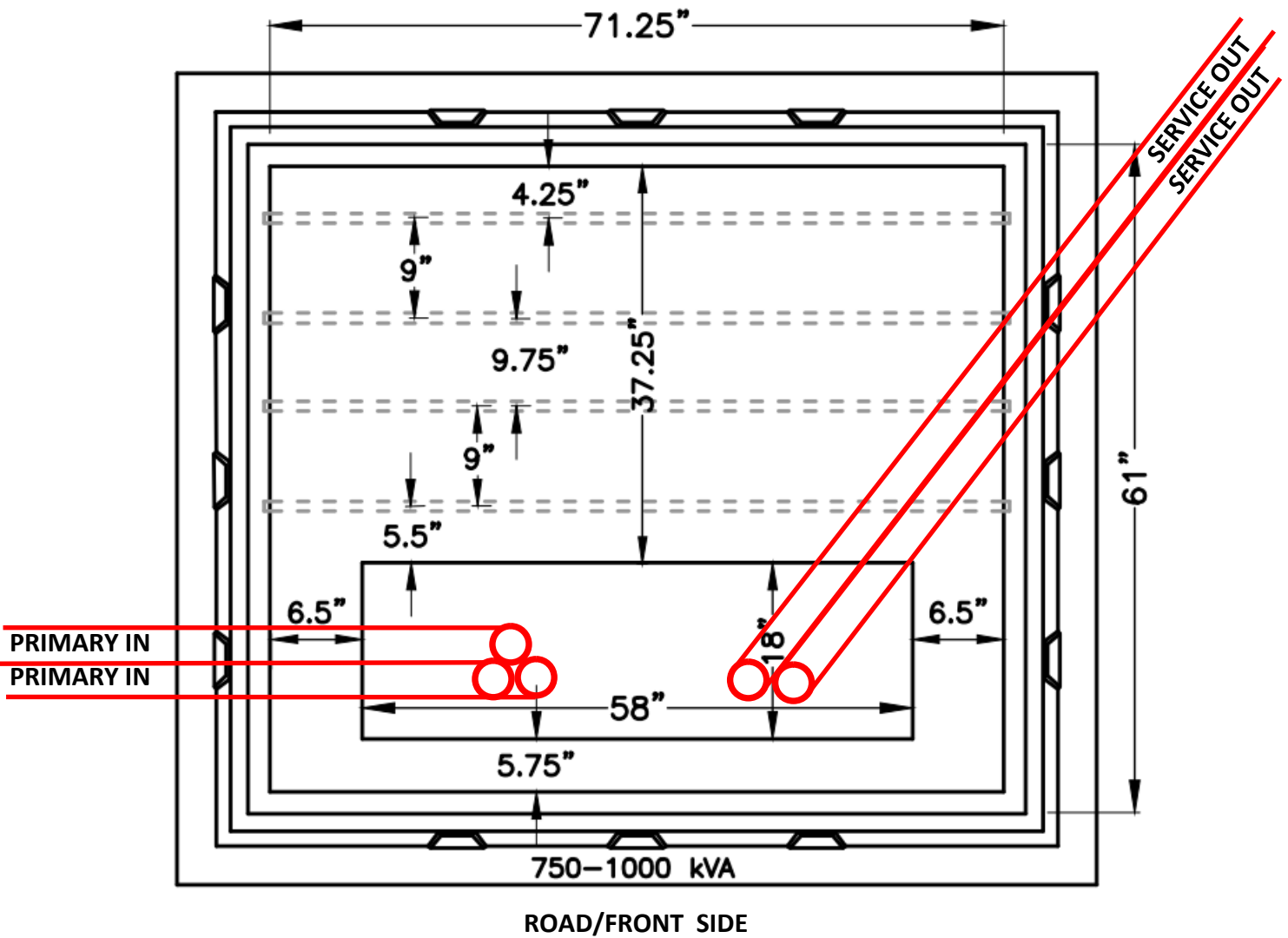
ROAD/FRONT SIDE



Conduit Installation Guide

Three Phase Transformer up to 500 KVA

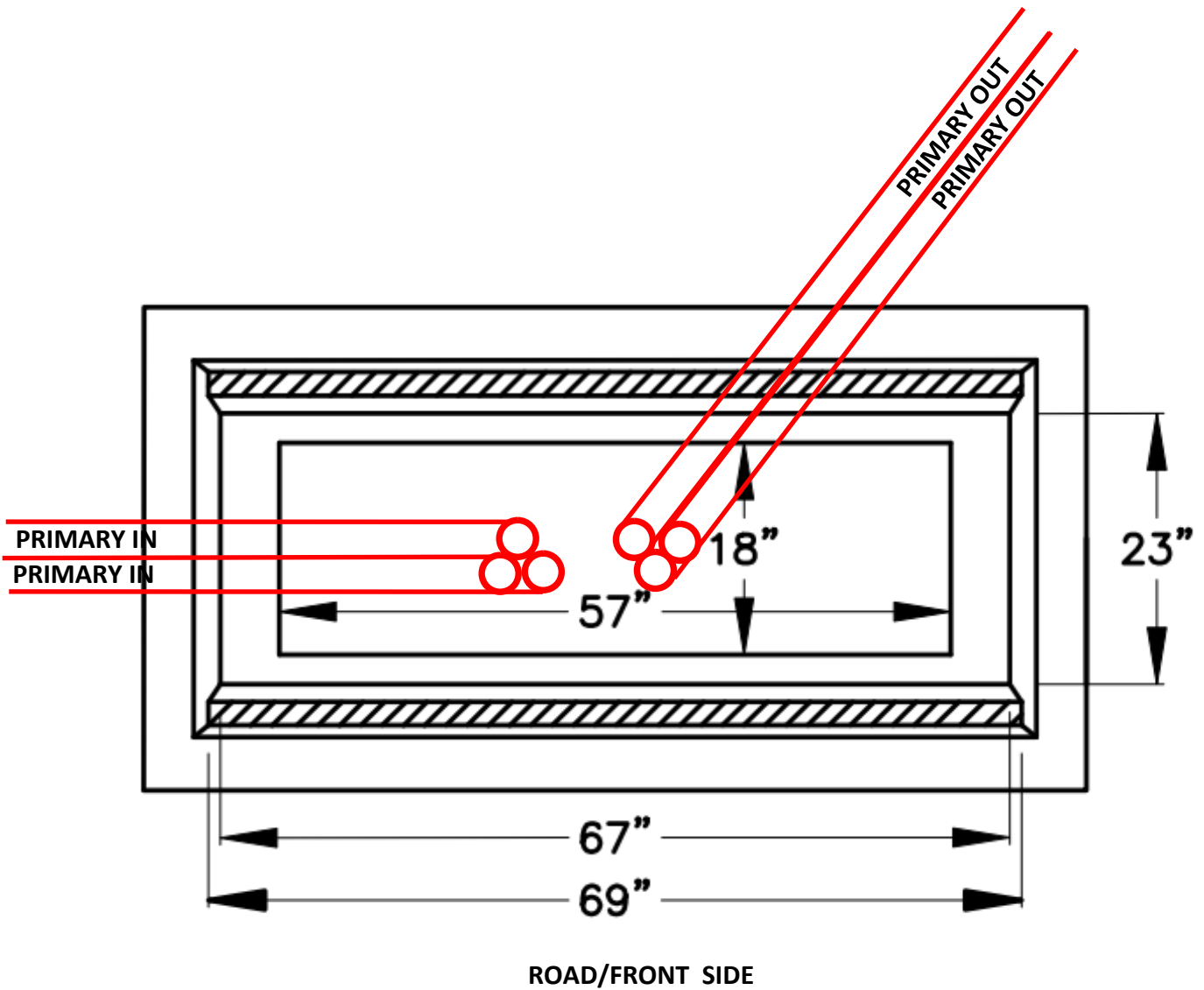
- Minimum 48" cover over top of conduit
- 1' backfill and install cation tape
- Install 2500 lbs. mule tape in all conduit
- Use long sweep 90's



Conduit Installation Guide

Three Phase Transformer 750-1000 KVA

- Minimum 48" cover over top of conduit
- 1' backfill and install cation tape
- Install 2500 lbs. mule tape in all conduit
- Use long sweep 90's



Conduit Installation Guide

Three Phase Junction Cabinet UM33

- Minimum 48" cover over top of conduit
- 1' backfill and install cation tape
- Install 2500 lbs. mule tape in all conduit
- Use long sweep 90's