

# Removal and Re-installation of TRUEGRID

*This sheet outlines the removal and re-installation of TRUEGRID for additions of underground utilities, conduit, or for property easement purposes.*

## **Removal of Existing TRUEGRID**

1. Examine area for best path of removal
2. TRUEGRID is best removed in whole piece sections (2ft x 2ft)
  - a. Avoid cutting if possible
  - b. If cutting is necessary, cut on wall joints or on "S" and "U" flex joints -- leaving whole rings (cylinders) intact.
3. Identify removal path and TRUEGRID pieces with utility mark-out paint
4. Use an industrial vacuum loader (gravel rated) to empty fill gravel inside of TRUEGRID sections
5. Save gravel fill for re-install
6. Find female connector joints on empty TRUEGRID
7. Pull up on TRUEGRID female connector side
8. Repeat on the adjacent female connector side – on empty adjacent TRUEGRID piece
9. Lift slightly (do not disturb the fill) on the adjacent "filled" TRUEGRID piece (piece not to be removed) and push down on male connector side of the piece to be removed. Un-connect.
10. Repeat step 9 on the adjacent side – This should be connected to an empty TRUEGRID piece and easy to disconnect.
11. Repeat Steps 6-10 for all pieces to be removed.
12. Set aside TRUEGRID pieces for re-installation.
13. Examine removed TRUEGRID pieces for damage. Replace damaged pieces with new ones if:
  - a. Vertical cracks are evident
  - b. Side walls are crushed beyond 10 degrees
  - c. Broken or cut pieces are smaller than three connected cylinders in any direction.
14. Keep existing SuperSpots, Reflectors, or Plates installed inside TRUEGRID pieces. Make note of the pattern.

## **Removal of Existing Sub-base**

1. Examine depth of sub-base
2. Depth will be determined by fabric layer below, by existing sub-soil, or by design detail/specification of initial install
3. Remove gravel sub-base with narrow front-end scoop, industrial vacuum, hand shovels or other careful means.
4. Save sub-base gravel for re-use. Fabric debris and some sub-soil may will be mixed with gravel. Remove debris and soil from gravel before re-using.

## **Install Utility**

1. Determine the depth of utility installation. Some utility lines will be installed below the depth of the removed sub-base and will require additional excavation

2. If necessary, excavate for additional utility depth with care – do not disturb adjacent sub-soils, fabric, sub-base, TRUEGRID or gravel fill.
  - a. Save the removed soil. Check for debris and clean/remove as necessary
3. Place utility, conduit, pipe or pour foundation/bases at this time
4. Install all utility components and connectors to manufacturers' specifications

#### **Re-Install Sub-Soils, Fabric and Sub-Base**

1. Re-install sub-soil and compact in 4-inch lifts using plate compactor. Install matching previous depth. Check with utility manufacturer's spec, for compaction allowance
2. Replace geotextile fabric or liner with new geotextile fabric or liner.
  - a. If no fabric/liner was present, we recommend install new product at this at this time for added protection
  - b. Avoid utility lines, piping and conduit when staking with U-pins.
3. Re-install gravel sub-base to match previous depth
  - a. Place, level, and compact in 4-inch lifts

#### **Re-Install TRUEGRID**

1. Align empty TRUEGRID pieces containing SuperSpots, Reflectors, and Plates to existing pattern, if present or as noted.
2. Align remaining empty TRUEGRID pieces male and female connectors to the existing pattern
3. Work in one direction, if possible
4. Re-connect all male and female connectors, where possible
  - a. Very slightly (do not disturb the fill) lift the adjacent gravel-filled TRUEGRID female connector side and slide the empty TRUEGRID piece's male connector under.
  - b. Lower the filled piece aligning the male and female connectors
  - c. Lower all empty piece male connector sides to the adjacent filled TRUEGRID pieces female connectors. Lower the sides
  - d. Repeat previous step for adjacent sides.
5. Adjust the position and re-Level TRUEGRID pieces where necessary with manual movements and hand tools

#### **Re-Install Fill Gravel**

1. Place fill gravel inside empty TRUEGRID portion
2. Smooth and level the gravel with rakes and brooms
3. Compact area with a compactor extending to the existing filled TRUEGRID areas at a minimum of two feet – compact one-grid unit beyond the re-installed pieces
4. Avoid compacting SuperSpots, Reflectors, and Plates
5. Refill or make minor adjustments to gravel fill position as need.