



## Landscape Services

## Safety Standard Operating Procedure

(Revised 1/2023)

### Bike loop Installation

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This Standard Operating Procedure covers installing bike loops on campus grounds. As with any equipment or tools, the most basic premise for safe operation is reading and adhering to the manufacturer's instructions and warnings. This SSOP is not a substitute for the owner's manual produced by the manufacturer.

**Schedule-** TBD upon needs of the campus and project scheduling.

**PPE Required-** Safety Glasses, ear plugs, long pants, closed toed shoes, high vis safety vest, barricades/ cones, warning signage.

**Safety Requirements-** Follow all Silica control guidelines, Setup barricades around work site with signage indicating area is closed off. Make sure to not block ADA access points. Water hoses and extension cords must be kept orderly to prevent a trip hazard.

**Safety Hazards:** Vehicle and pedestrian traffic, Underground and overhead Utilities, lifting, bending, overhead objects, dust, noise, sharp objects, blind spots, equipment malfunction, pinch points, hot or cold temperatures, and inclement weather.

**Tools/ materials-** Core drill with 6" diamond bit, Generator, 50amp extension cord, water hose (length depending on nearest connection), Large hammer drill with 5" auger bit, two 5 gallon buckets, torpedo level, concrete trowel, rebar packing rod. 1 bag ready mix per two loops

**Standard locations-** Standard signal loop racks, black in color are set in concrete adjacent to walkways selected by Landscape design.

**Layout-** layout design is performed onsite to determine how the racks are set.

1. First must measure width and length of the pad. The end rack should be at minimum 2' from edge of pad or building if concrete pad meets up with building. For bike length, need to allow 8'5" with bike rack centered at 4' 2 ½" off edge of pad or side of building depending on location.
2. Find center of width at each end of pad and make small mark with black marker. Then measure 8 ¾" each way from center line. This will give center line for center to center of each bike loop. (This is based on loops being 17 ½" center of post to center of post. Always measure the loops beforehand.)
3. Use chalk line and pull length wise to mark center lines of bike loop centers.
4. Measure and find center of pad length. That will be the first rack location.
5. Measure along each chalk line marking 3' center between each rack. Allowing the 2' minimum from each end. (More often than not, the pad will not be exact to come out with 2' on the ends.)
6. Use clear coat paint to spray over the markings for centers.

Installation- Follow operators manuals for equipment and use proper PPE.

1. Core drill setup-
  1. Two person lifting to prevent injury
  2. Set flat on base with drill standing vertical.
  3. To move from one location to another lean back on wheels. Do not slide base along concrete.
  4. Set drill with bit centered over mark for post.
  5. Set base of drill using adjuster screws so that it does not wobble around.
  6. Connect water and electric to where the cords and hose is away from the moving parts and not a tripping hazard.
  7. Keep water valve at the drill turned off until needed.
  8. Standing on the base behind the drill head. Keeping the adjuster pole between you and the rotating bit. Follow operator's manual.
  9. Adjust drill height to where it is just above concrete.
  10. Turn drill power on and set water to half valve open
  11. Slowly let the drill bit down to the concrete (do not try to force it. Let the weight of the drill head and bit do the cutting)
  12. When the cut is complete- you will see muddy colored water and the bit will start to spin freely.
  13. Shut the power off. Keep water running and raise the bit.
  14. Shut water off once the bit is raised above the concrete. Keeping the water on helps cool and clean the bit.
  15. Move drill in the same procedure is setup to each spot.
2. Setting bike racks-
  1. Remove concrete plug from hole
  2. Use large hammer drill with 5" auger and dig down 12" below top of concrete. (Look at pitch of concrete. One side may need to be deeper to get loops level)
  3. Top of loop should be 3' above top of concrete.
  4. Clean up soil from around hole. Start with a clean surface installing the loop.
  5. Set loop with post centered in the two holes.
  6. Use a level and check level in each direction.
  7. Mix ½ bag ready mix in a 5-gallon bucket. (Mix dry, not self-leveling.)
  8. Add mixture into holes and compact with small rebar rod. To about 1 inch below top of concrete.
  9. Make sure to check level throughout the process.
  10. Mix the remaining concrete in the bucket with more water to a smooth paste form.
  11. Use this mixture to fill in the remaining 1" and smooth to a professional finish.
  12. Wrap caution tape around racks to prevent use.
3. Cleanup-
  1. Remove manufacture stickers from racks
  2. Wash racks down to get rid of any debris on them.
  3. Wash entirety of concrete pad and runoff areas.
  4. Remove any and all debris from site. Dispose accordingly into trash dumpsters.
  5. Check racks for splash from washing and clean as needed.
  6. Check racks for needed touchup paint. Use Gloss black paint to cover any areas for scratches or chips.
4. Opening area-

1. Let concrete set one day
2. Check area and clean again if needed.
3. Inspect again for paint defects.
4. Remove barricades and caution tape.

Completion- Upon completion of installation make sure to put notes and charge time correctly to the correct work order. Notes need to specify the work performed.

Example: Core drilled and set 6 bike loops at Whitehurst. Cleaned area and opened for use.

1. Notify supervisor of completion.
2. Inspect all tools and turn in for repair if needed.
3. Put all tools away orderly in the proper locations if not repairs are needed.
4. Put all remaining supplies away in the correct locations.
5. Take completed photos and add to the work order as a related document.
6. Add a note to the work order of completion.