

Chemical Injection Specifications

1. The injection process should be observed on a full time basis by the geotechnical engineer of record.
2. All injection passes, should maintain at least 20 feet away from any existing building to minimize potential swell from the injection operations on the existing buildings. We also recommend that the geotechnical engineer be consulted for further evaluation on the impact of adjacent construction, where required.
3. The injection process should be performed after the subgrade has been established to the desired elevation and prior to placement of select fill, installation of underground utilities, and construction of adjacent pavements.
4. Condor SS chemical (permanent ion exchange solution) shall be used for the Chemical Injection Operation and should be added in accordance with the manufacturer's recommendations.
5. Hole patterns on the injection rods shall be orientated to uniformly disperse the fluid throughout the injected zone.
6. Injection pressures shall be between 50 and 200 pounds per square inch and shall be adjusted to disperse as large a volume of fluid as possible.
7. The injection rod shall be forced downward at no more than 12 inch intervals. The rods shall not be jettted or washed to achieve each penetration. The total depth of injection shall be 10 feet below slab subgrade or to impenetrable material. Impenetrable material is defined as the point where two injection rods cannot penetrate the material.
8. Injection spacing shall not exceed 3 feet on center in each direction. Injections shall extend at least 5 feet beyond the building perimeter. Subsequent injection shall be orthogonally offset 1.5 feet from the previous injection pass.
9. A minimum of 24-hours should elapse between water injection passes.
10. Post injection evaluation, following a 72 hour mellowing period (after the last injection pass) of the building pad shall include soil borings conducted at a minimum frequency of one boring per 5,000 square feet, or a minimum of two borings per building pad, whichever is more borings.
11. Continuous tube samples shall be obtained in the injected zone. Continuous moisture contents and hand penetrometer testing shall be conducted every 12 inches as well as swell testing every 2.5 feet of injection depth, but no less than three swell tests per boring.
13. Completion of the building pad shall proceed in a timely manner after injection and recompaction is complete to preserve the moisture content of the injected soils.