

APPENDIX O

Repair of Damaged and Adversely Affected Tile

The specific locations of drain tile within the Project Area have yet to be determined. As part of the construction effort, Cricket Valley will coordinate with affected landowners and, if necessary, the Dutchess County Soil and Water Conservation District to determine the locations of Tile in relation to Project facilities. If Tile is damaged during construction or operation of the Project, the Tile will be repaired in manner that restores the Tile's operating condition at the point of repair. If Tiles, within the Project's construction area defined limits, are adversely affected by the construction activities, Cricket Valley will take such actions as are necessary to restore the functioning of the Tile, including the relocation, reconfiguration, and replacement of the existing Tile. All existing drain tiles, either clay or PVC, shall be replaced with new PVC materials.

Within construction limits the damaged Tile will be repaired by Cricket Valley, using the following standards and policies:

1. Cricket Valley will endeavor to locate all tile lines within the ROW prior to construction in an area so Tile damage can be prevented or minimized. Cricket Valley will contact affected Landowners or Tenants for their knowledge of Tile locations prior to construction. Cricket Valley will accommodate all planned Tile, as part of the construction or operation of the Project. All identified Tile lines will be flagged prior to construction to alert construction crews to the possible need for Tile repairs. Tile that is damaged, cut, removed or otherwise discovered will be distinctly marked by placing a highly-visible flag at the edge of the construction ROW directly opposite such Tiles. This marker will not be removed until the Tile has been permanently repaired or replaced, if needed. In addition to the aforementioned marking, the exact location will be noted, either with a GPS coordinate or a measurement from a previously surveyed location (e.g. stationed survey stake).
2. If water is flowing through a damaged Tile, or if water subsequently flows through a damaged Tile, temporary repairs, coordinated with the affected landowner, will be promptly made and maintained in good condition until such time that permanent repairs can be made. If the Tile is dry and water is not flowing, temporary repairs are not required if permanent repair is made within 14 days of the time the damage occurred. If temporary repair of the Tile is not made, the upstream exposed Tile shall not be obstructed but shall nonetheless be screened or otherwise protected to prevent the entry of foreign materials and small animals into the Tile system, and the downstream Tile entrance shall be capped or filtered to prevent entry of mud or foreign material into the Tile if the water level rises in the trench. All temporary and permanent Tile repair will be conducted in coordination with the landowner and, to the extent practicable, in accordance with appropriate NYSDA Guidelines.

3. Cricket Valley will make reasonable efforts to complete permanent Tile repairs within 14 days after Final Clean-Up, taking into account weather and soil conditions. Tile repairs will be conducted in accordance with the following:
 - a. All damaged, broken, or cracked Tile shall be removed.
 - b. Only unobstructed Tile shall be used for replacement.
 - c. The Tile furnished for replacement purposes shall be of a quality, size and flow capacity at least equal to that of the Tile being replaced.
 - d. All drain tile and connections shall be M252 AASHTO stamped; no F405 may be used for drain tile application.
 - e. All drain lines will be installed in accordance with USDA – Natural Resources Conservation Service standards.
 - f. Drawings of such drain line locations will be provided to NYSDAM and the landowner during monitoring and follow-up remediation (if required). The attached drawings provide examples of drain tile repair details.
4. Tile shall be replaced so that its original gradient and alignment are restored, except where relocation or rerouting is required for angled crossings with other utilities. The replaced Tile shall be firmly supported to prevent loss of gradient or alignment due to soil settlement. The method used shall be sand filled sacks set on pipe or bottom of channel for support.
5. Before completing permanent Tile repairs, all Tile lines shall be examined either visually, by probing or by other appropriate means on both sides of the trench, within any work area, to check for Tile that might have been damaged by construction equipment. If Tile lines are found to be damaged, they will be repaired to operate similar to its existing conditions before construction began.
6. Prior to backfilling of the applicable trench area, each permanent Tile repair shall be inspected for compliance by Cricket Valley's Agricultural Specialist/Environmental Monitor. The Agricultural Specialist/Environmental Monitor will provide prompt notice to the county engineer if there is an issue with the County Drainage District Tile repair and will stop work if additional Tile repair measures are needed. The Agricultural Specialist/Environmental Monitor will provide written reports and documentation to the county engineer on all County Drainage District Tile crossings and repairs. The Monitor will provide written reports and documentation for private Tile crossings and repairs to the affected landowner, and the Town or County, where requested.

7. The backfill surrounding the permanently repaired Tile shall be completed in a timely fashion and in a manner that ensures that any further backfilling will not damage or misalign the repaired section of the Tile line. The backfill shall be inspected for compliance with all applicable specification and landowner requests by Cricket Valley's Agricultural Specialist/Environmental Monitor.
8. Where construction activity has altered the natural stratification of soil horizons and natural soil drainage patterns on adjacent agricultural lands, Cricket Valley will re-grade or install subsurface intercept drain lines.
9. As necessary, Cricket Valley's Agricultural Specialist/Environmental Monitor will implement measures to prevent surface seeps and seasonally prolonged saturation of disturbed areas along the ROW, adjacent areas and access ways.
10. After Project construction and permanent repair of affected Tile, for a period of 5 years, if it becomes apparent the Tile line in the area disturbed by construction is not functioning correctly resulting from the Project's construction or operation, Cricket Valley shall make further repairs as necessary to restore subsurface drainage. Cricket Valley will notify NYSDAM and work jointly with landowners to investigate potential Tile damage. If there is a dispute concerning Tile damage, Cricket Valley will employ a Tile specialist as needed to determine the cause of the malfunction. Cricket Valley agrees to reimburse landowners for expenses related to investigating damaged Tile if the damage is determined to be caused by the construction or operation of the Project.

Rock Removal

The following conditions with respect to rock removal will apply on Agricultural Land:

1. Rock excavated from the drain tile repair, or bore pits, or other excavations may be used to backfill the trench only to the top of the existing bedrock profile.