

## ITEM 4A-- RESTORATION

### R.1 WORK INCLUDED:

- A. Under this item the Contractor shall provide all the labor, materials, and equipment necessary to restore the site/roof to its original condition. All man-made and natural features in the construction site disturbed or removed for the proper completion of the work shall be reset or replaced. All manmade or natural features damaged or destroyed shall be repaired or restored to a condition equal to or better than that existing at the start of the work, with materials equal to or better than the original ones.
- B. Physical features damaged outside the limits of the work, as determined by the Engineer, shall be repaired as described in the "General Conditions."
- C. Restoration of utility lines of private companies or municipalities is covered under the General Conditions and is not included as part of this item.

### R.2 PROCEDURE:

- A. After the new work in an area has been completed, tested and accepted, or when ordered by the Engineer, the restoration of all the man-made and natural features disturbed shall proceed.
- B. These features are of the general types outlined below but not necessarily limited to these specific items, as this specification item covers all required restoration work within general categories:
  - 1. TREES, shrubbery and bushes.
  - 2. GARDENS (Rock gardens, flowers annual, perennials, etc.) with all soils and mulches.
  - 3. GROUND COVERS (Pachysandra, myrtle, phlox, ivy, etc.) with all soils and mulches.
  - 4. LAWNS (Fescues, bluegrasses, perennial ryes, zoysia, etc.) with all topsoils or sod. See paragraph "Grass Areas" below.
  - 5. WALLS and wall footings (stone, masonry, brick, dry bound etc.)
  - 6. GUIDE RAILING & FENCES (Chain link, picket, board, barbed wire, "W" Beam, Box Beam). This shall include such new work as footings, posts, guys or braces as may be required to secure the work.
  - 7. SIDEWALKS, PATHWAYS, PATIOS (Concrete, flagstone, crushed stone, precast slab, brick, gravel, slate, terrazzo, tile).

8. CURBS and curb footings (Concrete, asphalt, granite, stone brick, metal, etc.)
9. DRIVEWAYS (Concrete, slab, gravel, crushed stone and asphalt).
10. PRIVATE UNDERGROUND UTILITIES (Footings drains, roof leader drain, dry wells, private electric cables, sprinkler system, swimming pool appurtenances, septic fields, etc.)
11. FRONT OR REAR YARD MAN-MADE FEATURES (Mail boxes, sign posts, lamp posts, dog houses, bird baths, pigeon coops, storage sheds, fireplaces, barbecue pits, trash burning pits, playing courts, religious crèches, awnings, gates, wells, etc.) can best be handled if they are carefully removed and replaced after the construction. Those disturbed, damaged, or destroyed shall be reset, repaired, or replaced.

C. Equivalent Items

1. All features damaged or destroyed shall be repaired or restored with features equal to or better than the original ones. The Contractor shall make all reasonable attempts to satisfy the owner of the features but the Owner shall be the judge as to the reasonableness of equivalency of repaired and restored features.
2. In cases where it is impossible to replace an item with an equivalent item (large trees, exotic plants) the Contractor may substitute other similar item whose total value shall equal that of the destroyed one. This shall be done to the satisfaction of the owner of the item. In such cases the Contractor shall secure a written release from the homeowner stating that he is accepting a substitute for the destroyed item and that he releases the Contractor and the Owner from further claims for said item. The Superintendent of Public Works shall be the judge of the value of the destroyed and the value of the restored items and the reasonableness of the substitution.

D. Grass Areas

1. Immediately after backfilling, grass areas shall be temporarily restored using fast germinating annual or perennial rye grass seed. The patched area shall be watered as necessary to insure proper germination.
2. All disturbed grass areas shall be permanently replaced during the planting seasons from April 7th to May 15th and from August 25th to October 1st as follows:
  - (a) Harrow the ground.
  - (b) Remove weeds and other undesirable growth.
  - (c) Furnish and place a minimum of four (4) inches of screened topsoil obtained from a local nursery.

- (d) Rake and grade topsoil to match adjoining area; the Engineer is to approve the grading before fertilizing and seeding.
  - (e) Furnish and place 15 lb. of fertilizer containing by percentage of weight: Kentucky Bluegrass 50%, Red Top 5%, Pennlawn Fescues 25%, Creeping Red Fescues 20%, to every 1,000 square feet of area. If this specific mixture is unavailable, the Contractor shall request permission to utilize a specific comparable mixture.
  - (f) The Contractor shall water the newly planted grass until the grass reaches a stand of four (4) inches.
  - (g) The Contractor shall be responsible for restored grass areas until final acceptance by the Owner. He shall regrade, reseed, refertilize, etc., any grass that has failed to maintain a dense stand or any area that has lost its grade due to settlement of the trench. The finished restored area shall be free of weeds and shall have the same density of grass as the adjoining areas.
  - (h) In lawn areas that contain Zoysia grasses the Contractor shall replace the area with the same.
3. In lieu of the above method of placing topsoil and seeding, the Contractor may substitute sodding, at his own option and at no extra cost to the Owner.

E. Protection of Trees

1. The Contractor is advised that the construction has been located to avoid tree clusters and individual mature trees. In constructing the contract work, the Contractor shall coordinate construction activities in the vicinity of street trees with the Owner. The trunks are to be protected with heavy wooden fences. All trees in the vicinity of construction activity are to be secured in a manner acceptable to the Engineer to prevent toppling. The Contractor shall avoid cutting more than one-third ( $1/3$ ) of a tree root system, as measured by the perimeter of the canopy. The Contractor shall avoid cutting roots greater than one inch in diameter. Under low canopy trees the Contractor shall modify the vertical extension of the construction equipment boom to avoid injury to the low tree branches. Construction equipment movement in the vicinity of trees shall be kept to a minimum to avoid compaction of the soil around the trunks of trees. During backfill operations the Contractor shall avoid excessive tamping of earth around the roots and trunks, and shall apply an approved mulch to the roots during the operation.

F. Maintenance

1. All work done as part of this item shall be maintained for a period of one year after the completion of the project by this contract and secured by the maintenance bond.

2. Trenches that have settled shall be refilled to the proper grade. If this refilling operation disturbs the previous restoration of lawns etc., the lawns, etc., shall again be restored to their original condition under this item and at no additional cost to the Owner.
3. Items replaced replanted or restored shall be protected to insure their proper establishment. This protection may take any form required such as guying, wrapping, covering, barricades, shoring, etc.

G.     Regrading Surfaces to Finished Grade

1. In some instances, grading by machines will not be considered as properly or satisfactorily graded to the required finished grades. In these instances, hand grading such as raking rolling, trimming, etc. will be ordered by the Engineer to complete the work satisfactorily.

H.     Release

1. The Owner will require the Contractor to obtain a written release from any or all private property owners and/or public agencies as to satisfactory restoration of easement or permit areas, or written acceptance of other considerations or substitutions in lieu of such satisfactory restoration. Final payment may be withheld pending receipt of such releases.

R.3     MEASUREMENT AND PAYMENT

No measurement for payment under this item shall be made, as this item includes all work or materials that may be required to restore the site. Payment for this work is deemed included in all items of this contract and no separate payment will be made therefore.

\* \* \*