

## SECTION 01200

### RIGHT-OF-WAY DAMAGE REPAIRS

#### PART 1 - GENERAL

##### 1.01 SCOPE

This specification covers the work within the street right-of-way (property line) for the repair of that area which is disturbed during the construction or repair of utility services, lines, conduits, sewers, etc. The Contractor shall provide all necessary labor, materials and equipment to complete the work as hereinafter specified or as directed by the Engineer.

#### PART 2 - MATERIALS AND METHODS

##### 2.01 GENERAL

- A. Gravel Backfill - shall be as specified in Section 300 "Bases and Subbases" and as per Item 304.14 – Subbase Course, Type 4 of the New York State Department of Transportation Standard Specifications.
- B. Grading and Seeding - all disturbed lawn areas shall be replaced as per Section 02500 GRADING AND SEEDING of the City Specification.
- C. Workmanship - all work shall be done in a neat, efficient and professional manner and performed by competent workmen experienced in the trade.
- D. Line and Grade - the original line and grade for the street must be maintained. Parabolic crowns must be recreated to the satisfaction of the Engineer. If there is some question as to grade, the Contractor must consult with the Engineer before the repair is made.

##### 2.02 LIMITS OF STREET REPAIR

- A. The Contractor will make a surface repair the size of the hole backfilled plus twelve (12) inches on all sides. If any adjacent pavement has settled or shows signs of undermining, the twelve (12) inch measurement will begin where the settled (damaged) pavement has stopped. The Engineer will determine the final surface repair size.
- B. The Contractor shall make every attempt to minimize the number of sides to a street repair. On any one side, the 12 inch repair limit shall be measured from the outer-most point of damaged or missing pavement and extend in a straight line in either direction until it is intersected by another limit line. Any repair shall not have more than six (6) sides without prior approval from the Engineer.

- C. All pavement material within the specified repair limits shall be removed and replaced as per the type of street surface unless otherwise directed by the Engineer.

#### 2.03 PROGRESSION OF REPAIRS

- A. In the event a curb and street repair exist in the same location, the curb work shall be completed before the street is repaired, unless approved by the Engineer. A concrete curb shall be allowed to cure at least 24 hours before adjacent work can be performed. If the curb repair is scheduled by a different Contractor than the street repair, the street repair Contractor will be notified by the Engineer when he may start his repair work. He shall than have the street repair completed by the time set forth in his contract.
- B. Concrete Base - after the Contractor pours a concrete base , he shall wait at least 24 hours before installing the next layer of the repair. The repair shall not be subject to loads for a minimum of 72 hours after the concrete base was poured.

#### 2.04 ASPHALT STREET REPAIR

- A. Concrete Base - The concrete base shall be a six (6) bag mix with a minimum compressive strength of 3500 psi and poured with not more than a four (4) inch slump. Extra 4000 psi concrete intended for sidewalk and/or curb repair, may be used for the concrete base. The concrete shall be poured on a compacted subbase and the excavation shall be free of standing water. The top of the concrete base will always be below the original street surface material, e.g., below the bottom of the brick sand cushion if street is originally brick or below blacktop if street was originally blacktop. The base will be a minimum of seven (7) inches below the surface for asphalt treatment of roads. The final decision shall be made by the Engineer.
- B. Concrete Surface - shall be as specified in Section 500, "Portland Cement Concrete," of New York State Department of Transportation Standard Specifications and as per item 502.RPCF "PPC Pavement Unreinforced", Cement Concrete Pavement Unreinforced, Class C., for Materials and Methods for Construction.
- C. Tack Coat - shall be equal to the New York State Department of Transportation Standard Specifications, 702-90 from Table 702-9 for Asphalt Emulsion Tack Coat. The tack coat will be sprayed or brushed on all edges and surfaces on which the asphalt concrete abuts the existing pavement. Contact surface between asphalt and concrete shall be painted with tack coat.
- D. Hot Mix Asphalt- shall be as specified in Section 400, "Hot Mix Asphalt," of the New York State Department of Transportation Standard Specifications and as per Item 403.138902, "Asphalt Concrete Type 3 Binder Course for Base," and Item 403.198202, "Hot Mix Asphalt, Type 7 Top Course," for Materials and Methods for Construction. Asphalt binder shall be placed in maximum three (3) inch lifts.
- E. Asphalt Crack Filler - shall be placed hot and will meet the New York State Department of Transportation Standard Specifications for asphalt filler meeting Specification #702-

0700 from Table 702-2 "Miscellaneous Asphalt Cements."

## 2.05 BRICK STREET REPAIR

- A. Concrete Base - The concrete base shall be a six (6) bag mix with a minimum compressive strength of 3500 psi and poured with not more than a four (4) inch slump. Extra 4000 psi concrete intended for sidewalk and/or curb repair, may be used for the concrete base. The concrete shall be poured on a stable subbase and the excavation shall be free of standing water. The top of the concrete base will always be below the original street surface material, e.g., below the bottom of the brick sand cushion if street is originally brick; below blacktop if street was originally blacktop. The base will be a minimum of six (6) inches below the surface for asphalt treatment of roads. The final decision shall be made by the Engineer.
- B. Street Brick - shall be equal in type and size to existing street brick. Brick may be acquired from the Jamestown Department of Public Works, free of charge, and obtained from their stock-pile. Brick must be cleaned and free from scale, etc., before they are laid. The brick will be laid on a cement and sand cushion. The spacing should be a maximum of 1/4 inch between brick and/or laid to the existing pattern with joints filled with approved joint filler.
- C. Cement and Sand Cushion - the mixture for the one (1) inch sand and cement cushion shall be a 5 sand to 1 Portland Cement ration MIXED THOROUGHLY. As a general rule, five (5) pounds of cement shall be used for each square yard of cushion placed (at a one (1) inch thickness). The setting bed shall be installed dry and no more than four (4) hours prior to installing the brick. This mixture is also to be used to fill the spacing between the bricks. The mixture shall be poured to the full depth of the brick (5 inches) and shall leave no voids or depressions between the bricks. Use vibratory plate tamper on bricks and fill cracks again. Repeat process until all voids are completely filled.
- D. Pattern for Bricklaying - shall be the same as line and grade as the surrounding brick with proper spacing. Brick joints will follow existing and bricks will be interlocked to match existing, or as directed by the Engineer.

## 2.06 CONCRETE REPAIR

- A. Sidewalk and Curbing - all sizes of sidewalk and/or curbing, disturbed, cracked or destroyed, regardless of its existing condition, shall be removed and replaced as per Section 2400 of the City Specifications for Sidewalk and Curbing.
- B. Repair Limits - if a sidewalk or curb is cut or damaged by the Contractor, the entire section(s) effected by the cut or damage shall be replaced. The limit of a curb repair shall be an even-spaced, existent joint in either direction of the damaged section(s). The limit of a sidewalk or apron repair shall be an existing joint or seam adjacent to the damaged section(s).

## 2.07 BORINGS, ≤4" DIAMETER

- A. Borings taken through brick or asphalt pavement shall be backfilled with sand up to a depth of five (5) inches below the existing top surface. The remaining five inches of the boring shall be filled with an approved asphalt cement filler up to and level with the top surface.
- B. Borings taken through concrete pavement, sidewalk or driveway apron will be subject to either of the following minimum requirements, as determined by the Engineer:
  - 1. Backfill the boring with sand to the bottom of the concrete slab. Place a high-strength epoxy mortar, as approved by the Engineer, in the remaining portion of the boring. The thickness of the grout shall be greater or equal to the thickness of the existing concrete.
  - 2. The entire section block affected or damaged by the boring shall be removed and replaced in kind, as per these specifications. Exceptions may be approved by the Engineer (ex: saw cut smaller area).
- C. No borings will be allowed through gutter sections.

## 2.08 MANHOLE FRAME REPLACEMENT

- A. The replacement or modification of any manhole frame, including handholes and pull boxes, shall be in accordance with Section 02260 of these specifications.
- B. Street Manholes - the repair area for a manhole frame replacement in any pavement shall be, as a minimum, the square of three (3) times the diameter of the manhole frame. The street repair shall match the existing street pavement and thickness, unless otherwise directed from the Engineer. The cost of the street repair shall be the responsibility of the manhole owner. Payment will include the surface area of the manhole frame and cover.
- C. Terrace Manholes - the repair limits for manholes located in a sidewalk or apron which have been modified shall be the replacement of the entire section or block affected by the work. The cost of the terrace repair shall be the responsibility of the manhole owner.

## PART 3 - EXECUTION

### 3.01 STREET REPAIR

- A. Related Sections: Section 02200-Excavation & Backfill and Section 02330-Asphalt Pavement.
- B. Asphalt Pavement repair shall include:
  - 1. Gravel compacted to 95% standard proctor density, and compacted in 12" lifts utilizing mechanical compaction equipment.
  - 2. Concrete base - 6 inch minimum thickness (optional-as directed by the Engineer).

3. Existing edges shall be coated with an approved asphalt tack coat.
  4. Asphalt binder course - varies 5 1/2 inch minimum thickness but not less than existing blacktop minus 1 1/2 inches for top course.
  5. Asphalt top course - 1 1/2 inch minimum thickness.
  6. Joints shall be sealed with approved asphalt crack filler.
- C. Asphalt Overlay repair (over original brick street) shall include:
1. Gravel compacted to 95% standard proctor density, and compacted in 12" lifts utilizing mechanical compaction equipment.
  2. Concrete base - 6 inch minimum thickness.
  3. Existing edges shall be coated with an approved asphalt tack coat.
  4. Asphalt binder course - varies in thickness and shall be the total distance between bottom of sand cushion to top of existing asphalt overlay, less 1 1/2 inch minimum for top course.
  5. Asphalt top course - 1 1/2 inch minimum thickness.
  6. Joints shall be sealed with an approved asphalt crack filler.
- D. Surface Treated Street/Driveway repair (with Engineers approval) shall include:
1. Gravel compacted to 95% standard proctor density, and compacted in 12" lifts utilizing mechanical compaction equipment.
  2. Existing edges shall be coated with an approved asphalt tack coat.
  3. Asphalt binder course - 2 1/2 inch minimum thickness.
  4. Asphalt top course - 1 inch minimum thickness.
  5. Joints shall be sealed with approved asphalt crack filler.
- E. Concrete Pavement repair shall include:
1. Gravel compacted to 95% standard proctor density, and compacted in 12" lifts utilizing mechanical compaction equipment.
  2. Concrete surface course - existing thickness plus two (2) inch minimum, no less than eight (8) inches.

F. Brick Pavement repair shall include:

1. Gravel compacted to 95% standard proctor density, and compacted in 12" lifts utilizing mechanical compaction equipment.
2. Concrete base - six (6) inch minimum thickness.
3. Cement sand cushion - three-quarter (3/4) inch, plus or minus one-quarter (1/4) inch thickness. Cushion mix 1:5 (one part cement to five parts sand).
4. Street brick - from City stockpile or equal.
5. Cement sand mix – fill gaps between bricks to the full depth of bricks.

G. Brick Relay repair shall include:

1. Removal of existing bricks.
2. Create level surface using shim course (as needed).
3. Cement sand cushion - three-quarter (3/4) inch, plus or minus one-quarter (1/4) inch thickness. Cushion mix 1:5 (one part cement to five parts sand).
4. Replace street brick.
5. Cement sand mix – fill gaps between bricks to the full depth of bricks

H. Manhole Frame Replacement/Modification repair shall include:

1. Removal of material surrounding manhole.
2. Replace street pavement with asphalt, concrete or brick as described above in Part B, Part E or Part F, respectively.

3.02 CONCRETE REPAIR

A. Related Sections: Section 02400-Concrete Sidewalk & Curbing and Section 02500-Grading & Seeding.

B. Concrete Sidewalk repair shall include:

1. Gravel to within four (4) inches of slab bottom compacted to 95% standard proctor density, and compacted in 12" lifts utilizing mechanical compaction equipment.
2. Washed stone four (4) inch minimum.
3. Concrete sidewalk - four (4) to six (6) inch thickness depending on location.

4. Backfill and rough grade.

C. Concrete Apron repair shall include:

1. Gravel to within four (4) inches of slab bottom compacted to 95% standard proctor density, and compacted in 12" lifts utilizing mechanical compaction equipment.
2. Washed stone four (4) inch minimum.
3. Concrete surface six (6) inch minimum - same as for six (6) inch concrete sidewalk.
4. Concrete aprons are not to be poured monolithic with curb. They are to be separated by a full depth 1/4 inch expansion joint as specified.
5. Backfill and rough grade.

D. Concrete Curb and Gutter repair shall include:

1. Gravel to within four (4) inches of curb bottom compacted to 95% standard proctor density, and compacted in 12" lifts utilizing mechanical compaction equipment.
2. Washed stone four (4) inch minimum.
3. Replace underdrain if needed.
4. Concrete curb and gutter - section to be same as existing.
5. Concrete curb and gutter are not to be poured monolithic with aprons, sidewalk, etc. They are to be separated by a full depth 1/4 inch expansion joint as specified.
6. Backfill and rough grade.

### 3.03 LANDSCAPING

A. Related Section: Section 02500-Grading & Seeding.

B. Terrace Areas

1. Trench Backfill - Gravel shall be brought up to within three (3) inches of finished surfaces for all trenches within one foot of sidewalk, curbs or pavement and compacted.
2. Topsoil, Grade and Seed - Three (3) inches topsoil and as specified per Section 2500 of the City's Specifications.