

SECTION 02 41 13
SELECTIVE SITE DEMOLITION

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. This section covers the furnishing of all labor, materials, tools, equipment and performances of all work and services necessary or incidental to the removal of pavement and miscellaneous structures as indicated on the drawings or as specified herein.

B. Related Sections:

1. Section 31 23 00 – Excavation and Fill.

1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment

1. Measurement and compensation for the following items shall be paid according to the UNIT PRICE bid for removing pavement and miscellaneous structures shall include all costs of labor, materials, equipment and ultimate disposal required to complete the work, as specified.
2. Measurement will be based upon the units as listed below for items removed, abandoned, or salvaged complete as specified. No measurement will be made of any removals that are not required. The actual quantity removed multiplied by the appropriate Bid Unit Price will be compensation in full for all Work and costs of the following Bid Items:
 - a. Remove Curb and Gutter: Per lineal foot. Sawing shall be incidental.
 - b. Remove Concrete Valley Gutter: Per square foot without regard to thickness. Sawing shall be incidental.
 - c. Remove Concrete Walk or Driveway: Per square foot without regard to thickness. Includes pedestrian curb ramps. Sawing shall be incidental.
 - d. Remove Concrete Driveway: Per square yard without regard to thickness. Sawing shall be incidental.
 - e. Remove Bituminous Walk or Driveway: Per square yard without regard to thickness. Sawing shall be incidental.
 - f. Remove Bituminous Pavement: Per square yard without regard to thickness. Bituminous pavement removal includes all areas of bituminous street pavement as identified in the plans. Bituminous pavement removed for patching will be measured per the square yard of bituminous pavement actually removed.
 - g. Remove Casting: Per each.
 - h. Remove Manhole or Catch Basin: Per each. Casting shall be incidental where specified.
 - i. Remove Retaining Wall: Per square foot, measured from the existing grade to the top of the wall.
 - j. Sawing Concrete Pavement: Per lineal foot.
 - k. Sawing Bituminous Pavement: Per lineal foot. Saw cutting bituminous pavement for purposes of utility adjustments shall be incidental. Saw cutting and removal of excess bituminous pavement for patching shall be incidental.
 - l. Mill Bituminous Surface: Per square yard and depth as specified.
 - m. Crack Repair Special: Per lineal foot.
 - n. Salvage Casting: Per each. Delivery and or necessary storage shall be incidental.
 - o. Salvage Hydrant and Gate Valve: Per each. Delivery and or necessary storage shall be incidental.

- p. Salvage and Reinstall Hydrant and Gate Valve: Per each.
 - q. Abandon Pipe: Per lineal foot of size as specified.
 - r. Abandon Manhole/Structure: Per each as specified.
3. Measurement and payment for reclamation (12" depth) shall be paid per SQUARE YARD (SY) and shall include all work associated with reclaiming the existing street surface to a depth of 12" or depth identified on the plans.
- B. The furnishing and installing of specific items and/or the performance of work under certain circumstances shall not be individually paid. The costs shall be included in the unit price bid for the associated removal and excavation items. Such items of work include but are not limited
- 1. Saw cutting - bituminous and/or concrete curb & gutter. All subcutting must be full depth and be completed prior to construction of the concrete or bituminous match points.
 - 2. Removing storing and reinstalling mailboxes, street signs, fences (including invisible dog fences) or similar structures which must be moved to construct the project.
 - 3. Off-site disposal of excess excavated material and debris.
 - 4. Removal and off-site disposal of bituminous or concrete pavement, unless designated for salvaging.
 - 5. Removing, salvaging and storing, or disposing of manhole and catch basin castings.
 - 6. Loading, hauling, stockpiling and placing as directed (i.e., leveling) designated salvage items to a location directed by the Owner.
 - 7. Fees and permits for the disposal of materials.
 - 8. Removal and disposal of existing sanitary sewer pipe, storm sewer pipe, watermain, and service pipes.
 - 9. Bulkheading the ends of existing pipes designated by the Engineer to be abandoned in place.
 - 10. Protection from damage of structures or other surface improvements that are not to be removed, and subsequent repair and/or replacement if damaged by Contractor operations.

1.03 REFERENCES

- A. Minnesota Department of Transportation "Standard Specifications for Construction" 2020 Edition (MnDOT Spec.).
 - 1. 2104 – Removing Pavement and Miscellaneous Structures.
 - 2. 2232 – Mill Pavement Surface.
 - 3. 2211 – Installation of Milled Materials

PART 2 PRODUCTS

2.01 FILL FOR ABANDONED PIPE

- A. Granular material with 100% passing the 3/8" sieve and no more than 20% passing the #200 sieve or approved equal.

2.02 FILL FOR ABANDONED MANHOLE/STRUCTURE

- A. Granular material as specified by MnDOT 3149

PART 3 EXECUTION

3.01 GENERAL

- A. Remove existing bituminous, curb and gutter, walks, drives, steps and other specified items where shown on the plans and/or required for the construction of the project.

- B. Dispose of all concrete and bituminous removal items, rubbish and debris outside of the construction zone. It shall be the Contractor's responsibility to secure all required permits and pay all fees associated with the disposal of the material and to secure the disposal site.
- C. Remove existing mailboxes, street signs and similar structures that must be removed to construct the project. Restore these facilities to the original location or a location designated by the Owner, when work has progressed past the location of the structure. The Contractor shall reinstall or replace those structures which are damaged or lost during the course of construction with new materials or components.
- D. The Contractor shall take full responsibility to protect structures or other surface improvements from damage that are not to be removed. If damage to these facilities occurs due to the construction of the project, the Contractor shall replace or repair them.
- E. The Owner will designate which existing hydrants, valves and boxes, manhole castings and other items removed as part of the construction, are to be salvaged. All other items shall be disposed by the Contractor.
- F. In general, all existing watermain, sanitary sewer and storm sewer pipe being replaced by new improvements shall be considered as debris and removed during the construction process. In certain instances, existing pipes may be abandoned in place, with the approval of the Engineer.
- G. Where existing pipes are to be abandoned in place, the exposed pipe ends shall be bulkheaded shut with a watertight non-shrink concrete grout at a thickness of not less than one pipe diameter.
- H. Fill holes resulting from removals consistent with Section 31 23 00.
- I. The Contractor shall establish and maintain access to all properties after removals have occurred. This shall include placing temporary ramps as required.
 - 1. Ramps shall be constructed to the satisfaction of the Engineer.
 - 2. Ramps may need to be reestablished as construction progresses.
 - 3. Additional granular material may be required due to weather conditions.
 - 4. All costs associated with this item shall be considered incidental to the contract.

3.02 PROTECTION

- A. Take all necessary precautions to adequately protect personnel and public and private property in the areas of Work. All Site fencing shall be in place prior to the start of any removal work.
- B. All street signs, traffic control signs, guy wires, mailboxes, posts, wood fence, etc. which may interfere with construction shall be removed, stored safely, and replaced.
- C. Approved barriers or warning signs shall be provided as necessary.
- D. Provide and maintain temporary protection of existing structures designated to remain where removal work is being done, connections made, materials handled, or equipment moved.
- E. Do not close or obstruct walkways or roadways. Do not store or place materials in passageways or other means of egress. Conduct operations with minimum traffic interference.
- F. Take reasonable precautions to limit damage to existing turf.

- G. Holes or depressions created by removals shall not be left open for more than 1 day. Any hole within 10 feet of sidewalks shall be filled, suitably marked, or covered immediately.
- H. Avoid disturbance to any material beyond the limits required for new construction.

3.03 REMOVE CONCRETE CURB AND GUTTER OR VALLEY GUTTER

- A. Work includes curb and gutter and valley gutter.
- B. Saw cut at removal limits.
- C. Concrete Curb and Concrete Curb and Gutter or Valley Gutter: Do not disturb any material beyond the limits required to form for new construction (assumed 12 inches maximum from the back of new work and 6 inches beyond the edge of new driveways).

3.04 REMOVE CONCRETE

- A. All concrete indicated for removal shall be removed and disposed of off-site by the Contractor.
- B. Any temporary storage of the removed concrete on-site shall be done by stockpiling the material in one location.
- C. The stockpiled material shall be located in approved locations or as directed by the Engineer.
- D. The sawing, removal, hauling, and disposal shall be included in the removal price.

3.05 REMOVE BITUMINOUS WALK OR DRIVEWAY

- A. Saw cut at removal limits.
- B. Minimize disruption to adjacent turf and landscaping.

3.06 REMOVE BITUMINOUS PAVEMENT

- A. Remove in accordance with MnDOT Spec. 2104.3C.2, except as modified below:
 - 1. Saw cut bituminous pavement at the removal limits prior to that removal, unless otherwise approved by the Engineer. Depth of existing bituminous is incidental.

3.07 REMOVE MANHOLE OR CATCH BASIN

- A. Contractor shall properly dispose of structure removed off site. No disposal within the right of way will be permitted.

3.08 REMOVE GATE VALVE BOX

- A. Removal shall include entire gate valve box. All excavation, backfilling and materials necessary for the work shall be incidental to the bid item.
- B. Contractor shall properly dispose of removed gate valve box off site. No disposal within the right of way will be permitted.

3.09 REMOVE RETAINING WALL

- A. Contractor shall properly dispose of removed retaining wall off site. No disposal within the right of way will be permitted.

3.10 ABANDON EXISTING PIPE

- A. Disconnect each end of segment of existing pipe to be abandoned from system.
- B. Completely fill abandoned pipe ensuring no air cavities remain.
- C. Ensure each end of the abandoned pipe is sealed water tight.
- D. Backfill abandoned pipe as necessary.

3.11 ABANDON EXISTING MANHOLE/STRUCTURE

- A. Remove structure to elevation of 4 feet below finished grade or as directed by Engineer.
- B. Bulkhead pipe openings.
- C. Backfill with specified material and compact.

3.12 SAWING PAVEMENT

- A. All pavements, curb & gutter, sidewalks, and other such structures shall be sawcut full depth at the construction limits.
 - 1. The Contractor shall be responsible for protection of the ends of the limits until the materials are replaced.
 - 2. Any damage beyond the construction limits shall be the responsibility of the Contractor.
 - 3. The damaged end shall be sawcut again and any additional removals shall be replaced at the Contractor's expense.
 - 4. All sawcuts shall be incidental to the project unless there is a specific bid item.

3.13 PAVEMENT MILLING

- A. The furnishing and installing of specific items and/or the performance of work under certain circumstances shall not be individually paid. The costs shall be included in the unit price bid for the milling items, as indicated. Such items of work include but are not limited to:
 - 1. The loading, hauling, stockpiling and removal of milled materials include in the price bid for pavement milling.
 - 2. Interference of underground structures and utilities, include in the price bid for pavement milling.
 - 3. The removal and restoration, or protection of existing utilities that are shown on the plans and for which there is no bid item for removing and restoring, or working around the utility.
 - 4. Protecting existing improvements and surfaces from damage include in the price bid for pavement milling.
 - 5. Protecting the inverts of utility pipes from the accumulation of debris and soil, the removal of blockages which threatens to damage property, and/or the cleaning of both the newly constructed lines and the existing lines of all debris and soil which accumulated during the construction, include in the unit price bid for pavement milling.
 - 6. Milling headers when matching into existing perpendicular pavement roadways or surfaces, include in the price bid for pavement milling.
 - 7. Milling around manhole and catch basin castings and valve boxes, include in the price bid for pavement milling.

8. All millings intended for reuse in the select granular section shall have 100% passing a 2" sieve.

3.14 CRACK REPAIR SPECIAL

- A. The contractor shall furnish of all labor, materials, tools, equipment and performance of all work and services necessary or incidental to crack repair.
- B. Execution
 1. Upon completion of the milling operation, the Engineer will mark all remaining cracks wider than $\frac{3}{4}$ ", multiple closely spaced cracks, where the adjacent remaining pavement has significant structural deficiencies.
 2. The Contractors shall perform additional milling of full depth pavement removal along pavement failure locations a minimum of 6 inches in width to a maximum of 24" for the length of the crack repaired.
- C. Payment
 1. Included in the price bid for Crack Repair Special shall include pavement removal, shaping of the underlying aggregate material, tack coating of the pavement edges, and installing new bituminous pavement with SP 9.5 wearing course bituminous mixture to match the existing pavement section.
 2. Payment for Crack Repair Special shall be per the Lineal Foot – LF of crack repair completed in place and shall include all labor, equipment and material costs, including bituminous mixture, associated with repairing the cracks.

3.15 BITUMINOUS RECLAMATION

- A. The contractor shall furnish of all labor, materials, tools, equipment and performance of all work and services necessary or incidental to reclaiming the specified streets as shown on the plan to a depth of 12 inches.
- B. Execution
 1. Upon completion of the reclamation process, 100% of the reclaimed material must pass through a 1 $\frac{1}{2}$ " sieve
 2. Immediately upon completion of reclamation the bituminous material should be graded to create a level-driving surface
 3. Particles of reclaimed material in excess of 1 $\frac{1}{2}$ " shall be removed from the street surfaces immediately after reclaiming process is completed.
 4. Prior to any new bituminous being placed the reclaimed streets shall be reshaped and re-compacted.
 5. Reshaping will consist of removing excess material from the surface, removing any oversized particles, shaping and compacting the street slope to the typical section shown on the plans.
 6. If it is deemed necessary by the Engineer, blue topping of the street's centerline may be required.
 - a. Blue topping shall be provided by the Contractor and will be done a minimum of every 50' along the street's centerline.
 7. Any material not used in the construction subgrade sections shall be loaded and delivered to the City Street Maintenance Facility.
 8. The Contractor will be responsible for loading, hauling and stockpiling material at the Maintenance Facility.
 9. Stockpiled material shall be pushed up into a uniform pile.

10. The Contractor will also be responsible for removing any chunks of reclaimed material in excess of 1 1/2" along with any large areas that are not reclaimed such as around manholes, radius and gate valves.
 11. Large chunks of bituminous or concrete removed from the project shall be hauled to an approved landfill or recycling facility.
 12. Prior to the placement of the bituminous, the subgrade must be test rolled and approved by the Engineer or his approved representative.
- C. The furnishing and installing of specific items and/or the performance of work under certain circumstances shall not be individually paid. The costs shall be included in the unit price bid for the associated reclamation item. Such items of work include:
- a. Removing, salvaging and stockpiling excess reclaim material as necessary to bring the subgrade material to final grade. All excess material not used for stabilizing in subgrade excavation areas should be hauled to the City Street Maintenance Facility and become property of the Owner.
 - b. Upon completion of hauling the excess reclaim material to the City Street Maintenance Facility, Heavy Duty silt fence shall be installed around the perimeter of the stockpile, and is incidental to the price bid for bituminous pavement reclamation.

3.16 REMOVE SANITARY SEWER AND SERVICE

- A. Neatly saw perpendicular edge on existing pipe at termination of removal.
- B. Work shall be scheduled with Engineer to ensure a minimum of 48 hours notice of service disruptions.

3.17 REMOVE WATER MAIN AND WATER SERVICE

- A. Neatly saw perpendicular edge on existing pipe at termination of removal.
- B. Work shall be scheduled with Engineer to ensure a minimum of 48 hours notice of service disruptions.

3.18 REMOVE CURB STOP AND BOX

- A. Carefully disconnect water service avoiding damage to service.
- B. Work shall be scheduled with Engineer to ensure a minimum of 48 hours notice of service disruptions.

3.19 SALVAGE/REMOVE CASTING

- A. Castings shall be removed and salvaged to the City of Northfield as directed by the Engineer.
- B. Salvaged castings shall be transported by the Contractor to the City Street Maintenance Facility. All other shall be disposed of by the Contractor at the Contractor's expense.

3.20 SALVAGE HYDRANT AND GATE VALVE

- A. Carefully salvage hydrant, gate valve and box avoiding damage.
- B. Clean debris from hydrant prior to delivery.

3.21 SALVAGE AND REINSTALL HYDRANT AND GATE VALVE

- A. Carefully salvage hydrant, gate valve and box avoiding damage.
- B. Reinstall per Section 33 10 00.

3.22 REMOVE STORM SEWER

- A. Neatly saw perpendicular edge on existing pipe at termination of removal.

3.23 SALVAGE AND REINSTALL MAILBOXES

- A. The Contractor, at the Contractor's expense, shall replace and restore mailboxes disturbed by the work. Mailboxes shall be replaced in accordance with U.S. Post Office standards.

3.24 SIGN PANELS

- A. All street signs or other items that require removal shall be carefully removed by the Contractor and transported to the City Street Maintenance Facility for storage during construction.
- B. The Contractor shall provide temporary stop signs and other signs as necessary, including proper anchorage.
- C. Any signs damaged by the Contractor shall be repaired, cleaned or replaced at the Contractor's expense. This work shall be incidental to the contract.

3.25 FIELD QUALITY CONTROL

- A. Salvaged items to be reinstalled shall be of the same shape, dimension, location, and quality of the original item prior to construction.
- B. Items damaged during removal or salvaging operations shall be replaced with new material of equal type and quality of the damaged item when it was new.

3.26 DISPOSING OF MATERIAL

- A. Dispose of all materials outside of the Site at disposal location selected by Contractor in compliance with state and local regulations. Burying of material and debris is not allowed within the Site.

END OF SECTION

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