



Town of Salem, New Hampshire

Purchasing Department
33 Geremonty Drive
Salem, New Hampshire 03079
(603) 890-2090 FAX (603) 890-2091

TOWN OF SALEM, NH

Sealed Bid #2016-004

**Pavement Patching & Repairs – Misc. Locations
Salem NH Municipal Services Department (DPW)**

Sealed Bids will be received for Pavement Patching & Repairs – Misc. Locations. For the Town of Salem NH Municipal Services Department FKA, DPW.

All Sealed bids should be delivered to Salem NH Town Hall, 33 Geremonty Drive, Salem, New Hampshire, 03079 ATTN: Christine Wholley, until April 5, 2016, prior to 11:00am EST.

To download a copy of Sealed Bid #2016-004, please visit our website at www.townofsalemnh.org go to purchasing and Current Bids/Proposals.

PAVEMENT PATCHING AND REPAIRS – MISC. LOCATIONS

All materials and Work shall conform to the Town of Salem Specifications and applicable sections of the State of New Hampshire Standard Specifications for Road and Bridge Construction, adopted August 2010 including revisions and shall be installed using approved methods. All materials, equipment and labor shall be furnished by the Contractor to complete the job as specified.

Construction supervision shall be under the general guidance of the Town of Salem Municipal Services Department. The Operations Manager shall approve any and all changes, modifications or alterations to the specifications.

TASK 1: REMOVE EXISTING PAVEMENT

As directed, where temporary or unsuitable pavement is present, remove and prep as described in this Task. If pavement has already been placed flush with the existing finish grade then the Contractor may be directed to remove and replace the pavement or mill the patch area according to Method one or Method two as described in the Street Excavation Requirements section (see Appendix A) of the Salem street opening permit.

Pavement preparation: If pavement is to be excavated per Item 203 (Method 1), or if directed, sawcut the trench as directed and in accordance with the Salem Trench Patch Detail. Provide a clean sawcut line a minimum of 1-foot beyond the limits for a trench patch. Greater dimensions adjacent to trenches may be required based field conditions. Sawcut limits for miscellaneous other patch locations shall be as directed. Sawcut shall be incidental to the work being completed and/or milled, trimmed edge as preferred equivalent.

Existing pavement to be milled per Item 417 (Method 2) shall be conducted according to the number of courses placed such that terracing (or stepping) between courses is created. Milling shall be equal in depth to the next course of pavement being placed. Each step shall be 1-foot beyond the previous. Reference attached Detail for additional information. Thoroughly clean all surfaces before applying tack coat and placing pavement.

TASK 2: PREPARATION OF SUBGRADE

All depressions shall be shimmed with Crushed Gravel (Item 403.111 machine method patch or Item 403.12 hand method) and compacted to meet the sub-grade elevation. As needed and directed replace gravel sections to correct gravel section deficiencies under Item 304.3. In general, gravels shall be placed according to existing line and grade. Scarify existing finish gravel surface prior to placing new gravels. All stones larger than 3-inches in diameter within the work area shall be removed from the gravel foundation. Compaction shall be performed by mechanical means with vibrator rollers or large walk-behind plate compactors. Small plate compactors shall not be

permitted. Gravels shall be compacted to at least 95% compaction. Reference attached detail for additional information. Unit cost of this item shall include all material in-place, compacted and graded.

TASK 3: HOT BITUMINOUS PAVEMENT PATCH

Upon acceptance of gravel base preparation, pavement patch (Item 403.12) shall be placed in 2 or 3 courses based on existing pavement thickness. In general, bituminous pavement shall be placed with existing line and grade and done so by machine (paver) for widths greater than four feet and lengths greater than 10 feet whereas less than that may be done by hand method. Minimum pavement thickness shall be 4" (2.5" of ¾" Binder and 1.5" of ½" Wearing) on local roads or 5.5" pavement section placed in 3 courses (2" of ¾" Base, 2" of ¾" Binder, 1.5" of ½" Wearing) on major roads or as directed by the Municipal Services Department. Bituminous tack coat shall be used between each course of pavement and on all joint faces. See attached detail for more information. All sweeping, cleaning and bituminous tack coat is subsidiary to the pavement item.

GENERAL CONDITIONS:

Contract Bid and Award: This bid shall be evaluated based on the unit prices and extended totals provided for the quantities per item indicated. Actual quantities will vary from those indicated. Bidders should anticipate multiple mobilizations on an as-needed basis for the length of the Contract Duration.

Street Opening Permit: The Contractor shall obtain a street opening permit from the Town of Salem Engineering Division and shall abide by all conditions set forth in the Street Excavation Requirements (see Appendix A) section except as herein modified.

Contractor Damage Liability: The Contractor shall be wholly liable for any damages caused by his work effort. Any and all repairs shall be complete prior to project acceptance.

All cleanup and repair work will be the responsibility of the Contractor, including removal of all excavated or damaged materials.

Police Details: Police details shall be scheduled and paid by the Municipal Services Department. The Contractor shall coordinate and confirm work schedule with the Municipal Services Department. Prior to start of Work the Contractor shall define, as part of the Traffic Maintenance intent, use of police details. Number of details requested, placement of details, and any special instructions as may be necessary shall all be defined in the Traffic Maintenance intent and shall be reviewed by the Municipal Services Department.

In accordance with the Salem Police Department protocol, the Contractor shall be responsible for cancelling police details if Work is canceled. Cancellation of police details not in accordance with Salem Police Department protocol will result in the Contractor being charged with that time without reimbursement by the Town.

Trench Patch
Page 2 of 5

Traffic Maintenance: Prior to the start of Work, the Contractor shall provide a Traffic Maintenance intent to be reviewed by the Salem Municipal Services Department. The Contractor shall supply all Traffic Maintenance in accordance to Item 619 and per the Salem street opening permit requirements. Safety measures including signage, barricades and warning lights shall be incidental to the Work completed unless Item 619 is included with the bid. Traffic control and safety measures shall be implemented prior to any construction and maintained in proper working order throughout the project. The Contractor shall submit a Traffic Maintenance intent to the Municipal Services Department for review prior to the start of Work and shall be required to have all items on-site and in-place before any activities can begin. Reference also the Street Excavation Requirements (see Appendix A) of the Salem street opening permit. All street sweeping, cleaning, necessary erosion controls and other such needed measures shall be considered part of, and incidental to, Traffic Maintenance.

Dig Safe: The Contractor is required to notify “Dig Safe” in accordance with local, State and Federal guidelines. All underground utilities shall be clearly marked and protected prior to any excavation.

Warranty: All work performed under this contract shall be guaranteed for a period of 1 year from the date of project acceptance and issuance of final payment. The Contractor shall be responsible for promptly repairing/replacing any area which is deemed unacceptable by the Town. The Contractor shall reimburse all damages or losses due to deficient materials or workmanship.

Contract Duration: The length of this contract is April 18, 2016 through November 30, 2018.

INSURANCE AND BONDING:

Prior to the award of this contract, the Contractor shall be required to provide a Permit and License Bond in the amount of \$5,000 which shall be in effect for the duration of the contract and warranty period.

Prior to award of this contract, the Contractor shall submit insurance certificates indicating coverage for all vehicles, public liability and property damage in the following amounts:

Comprehensive General Liability	\$ 1,000,000/\$ 3,000,000
Auto Liability: Property Damage	\$ 1,000,000/\$ 1,000,000
Personal Injury	\$ 1,000,000/\$ 3,000,000
Workmen’s Compensation	as required by the State of New Hampshire

PAYMENT:

Pavement Patching and Repairs will be paid for at the contract unit prices. Units shall be complete in-place inclusive of all materials, labor, equipment, cleanup, disposal, transport and complete compliance with all specifications and shall be inclusive of all other costs including but not limited

to mobilization, profit and overhead, insurance and bonding fees, fuel adjustments, design, permitting and other such costs.

1. Item 203 – Pavement Removal

Qty = 50 CY Unit Cost = \$_____/CY Total = \$_____

2. Item 304 – Gravel Shim and Replacement

Qty = 10 CY Unit Cost = \$_____/CY Total = \$_____

3. Item 403.11 Permanent Bituminous Patch - Machine Method

Qty = 100 TON Unit Cost = \$_____/TON Total = \$_____

4. Item 403.12 Permanent Bituminous Patch - Hand Method

Qty = 10 TON Unit Cost = \$_____/TON Total = \$_____

5. Item 417 – Milling Project limits

Qty = 150 SY Unit Cost = \$_____/SY Total = \$_____

ACKNOWLEDGEMENT OF SPECIFICATIONS

The undersigned certifies that he is completely familiar with the requirements of all applicable sections the State of New Hampshire Standard Specifications for Road and Bridge Construction as adopted in August 2010 including revisions and with all applicable Town of Salem requirements, details and supplemental specifications as they relate to this Work.

Date

Authorized Signature of Entity submitting bid

STATEMENT OF NON-COLLUSION

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

Date

Name of Entity submitting bid, whether individual partnership, corporation, joint venture or other business or legal entity.

Type of Entity

Address

Telephone

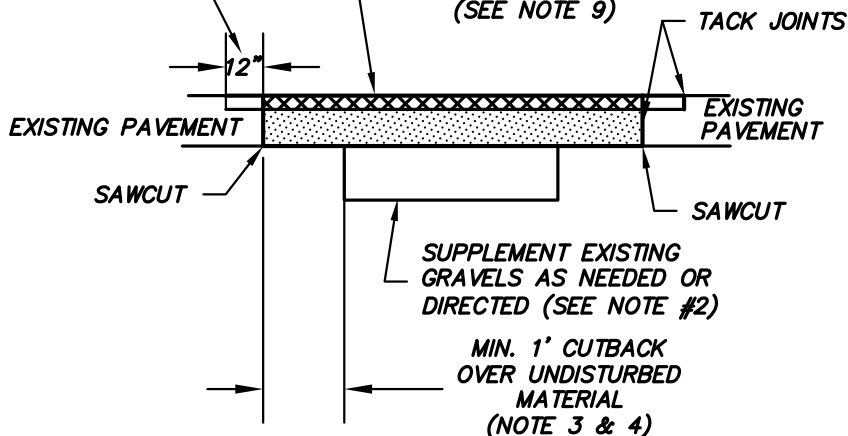
By _____
Authorized Signature of Entity submitting bid

Bidder's duly authorized position, office or title

Trench Patch
Page 5 of 5

MILL 1.5" DEEP BY 12"
WIDE FOR OVERLAY
WORK (SEE NOTE 8)
(SEE NOTE 9 FOR MORE
THAN 2 COURSES)

BIT. PAVEMENT, DEPTH EQUAL
TO EXISTING PAVEMENT WITH
MIN. 4" (SEE NOTE #2)
-1.5" OVERLAY
-2.5" BINDER
-ADDITIONAL COURSES
(SEE NOTE 9)



SECTION VIEW

NOTES:

1. EXACT TRENCH PATCH METHODS SHALL BE DETERMINED BY THE TOWN OF SALEM MUNICIPAL SERVICES DEPARTMENT BASED ON SITE SPECIFIC CONDITIONS.

2. CRUSHED GRAVEL SHALL CONFORM TO NHDOT ITEM 304.3 MATERIAL SPECIFICATION. PAVEMENT SHALL CONFORM TO NHDOT 401 - WEARING COURSE PAVEMENT SHALL MEET $\frac{1}{2}$ " MIX DESIGN. BINDER COURSE PAVEMENT SHALL MEET $\frac{3}{4}$ " MIX DESIGN.

3. TRENCH PATCHES: ONE FOOT MINIMUM OVERLAP ON UNDISTURBED MATERIAL SHALL BE SAWCUT IN A DIAMOND SHAPE PATTERN THAT WILL PERMIT ONLY ONE WHEEL OF A VEHICLE AT A TIME TO STRIKE THE PATCH AREA. ALL SAW CUTS FOR THE FINAL PATCH SHALL BE AS DIRECTED BY THE MUNICIPAL SERVICES DEPARTMENT.

4. GENERAL PATCH LIMITS SHALL BE AS DIRECTED BY THE SALEM MUNICIPAL SERVICES DEPARTMENT.

5. SHOULDERS, OTHER THAN PAVED, DISTURBED DURING CONSTRUCTION SHALL BE RESTORED BY EXCAVATING TO A DEPTH SUFFICIENT TO RECEIVE 6" CRUSHED GRAVEL WHICH SHALL BE GRADED AND COMPACTED ON A SLOPE OF 5% AWAY FROM THE PAVEMENT OR AS ORDERED BY THE TOWN. PAY AS ITEM 304.3. PAVED SHOULDER SHALL BE RECONSTRUCTED WITH IN-KIND GEOMETRY AND ACCORDING TO THE PAVEMENT SECTION DESCRIBED ON THIS TYPICAL.

6. OTHER ROADWAY SLOPES AND SHOULDERS DISTURBED SHALL BE RESTORED IN-KIND WITH APPROPRIATE SLOPE AND EROSION PROTECTION MEASURES OR INSTRUCTIONS ISSUED BY THE TOWN.

6A. ALL OTHER DISTURBED AREAS (CURB, SIDEWALK, GRASSED AREAS, WALLS, ETC.) SHALL BE RESTORED IN-KIND AND/OR AS DIRECTED BY THE TOWN ACCORDING TO ACCEPTED CONSTRUCTION PRACTICES.

7. WHERE THE PATCH CANNOT BE COMPLETED BY THE END OF THE WORK DAY PAVED FILLETS AND APPROPRIATE SIGNAGE SHALL BE PLACED OVER NIGHT.

8. MILL LIMITS SHALL BE EXTENDED FOR LARGER TRENCHES OR GENERAL PATCHES. SPECIFIC MILL LIMITS SHALL BE DETERMINED BY THE SALEM MUNICIPAL SERVICES DEPARTMENT AT THE TIME OF CONSTRUCTION.

9. WHERE MORE THAN 2 COURSES OF PAVEMENT ARE PRESENT EACH COURSE PLACED SHALL BE SET BACK 1-FOOT FROM THE LAST AND SHALL BE EQUAL IN DEPTH (OR 2" WHICHEVER IS GREATER) TO THE CORRESPONDING EXISTING COURSE BEING PLACED.

DATE: 2/16	JOB NO. —
DWG. D1	SCALE: N.T.S.

TOWN OF SALEM
ENGINEERING DIVISION
33 GEREMONTY DRIVE
SALEM, NH 03079

MUNICIPAL SERVICES DEPT
PERMENANT TRENCH
PATCH DETAIL

APPENDIX A - STREET EXCAVATION REQUIREMENTS

Street Opening Permit QA/QC

APPLICATION REQUIREMENTS

- Completed Application
- Required Bonding and Insurance on file with Town
- Proposed Traffic Control Plan
- Work Zone Photos with pre-marks
- Valid Dig Safe Number

MORATORIUM PERIODS FOR STREET OPENING

- Newly reconstructed roads, the moratorium period shall be five (5) years from such reconstruction.
- Newly milled and overlaid roads, the moratorium period shall be two (2) winters from such mill and overlay.

STANDARD PERMIT REQUIREMENTS/CONDITIONS

Once approved, the permit is valid for the time specified in the permit and must be renewed prior to the expiration date. The work shall proceed in a continuous manner with diligence and expedition, so as not to obstruct the public places or travel thereon more than is reasonably necessary.

A minimum of three (3) business days prior to the actual start of the work the following must occur:

- Notification to the Engineering Department of the actual start date and scheduling of inspections (shall include Water Department when water work is to be performed)
- Scheduling of Police Details with the Police Department
- Additional bonding in place if required

Upon completion of work and satisfactory restoration, as determined by the Engineering Department a warranty period shall start, the minimum period is one year and the maximum is three years and shall be determined by the Engineering Department, upon issuance of permit.

TRAFFIC CONTROL REQUIREMENTS

A Traffic Control Plan is required as part of the application for a Street Opening Permit. An approved Traffic Control plan will be required prior to the issuance of a Street Opening Permit. Applicants are encouraged to plan accordingly as the Engineering Department and the Police Department will require approximately three working days to review and comment on proposed Traffic Control Plans.

APPENDIX A - STREET EXCAVATION REQUIREMENTS

All work and traffic control shall be performed in accordance with the following provisions:

- “Manual On Uniform Traffic Control Devices” (MUTCD), U.S. Department of Transportation, Federal Highway Administration, current edition;
- “Standard Specifications for Road and Bridge Construction”, State of New Hampshire Department of Transportation, 1997 or latest revision, sections 615, 618 and 619;
- and as directed by the Town of Salem Police Department and /or Engineering Department.

Maintenance of traffic shall be achieved in accordance with a traffic control plan as approved by the Town, and shall involve the use of uniformed police officers and as directed by the Town of Salem Police Department, and the furnishing, erecting and maintaining of temporary construction signs, barricades, channeling devices, lights or other warning devices as needed to provide safe travel for the public.

The Salem Police Department, Engineering Department or their duly appointed agent, may require the Permittee to delay, suspend, or discontinue work until such time as acceptable traffic control is provided. **In the event that work is suspended or cancelled as the result of inadequate traffic control the contractor shall be responsible for payment of the minimum detail charge.**

A minimum one lane of traffic shall be maintained on all roads at all times. The minimum width for temporary traffic lanes shall be eleven (11) feet. **Access for emergency vehicles shall be maintained at all times.** Suitable access shall be provided to all properties and to all places of business at all times. Two-way traffic shall be restored/maintained when work is not in progress, at night, on weekends and on holidays (unless authorized by the Town).

When deemed necessary by the Town to facilitate construction, complete road closures will be considered only with the approval of the Town of Salem Engineering Department, Police Department, Fire Department, DPW and School District. Whenever a complete road closure is permitted every effort shall be made to provide access for local residents and businesses. Detour routes shall be planned and appropriately signed to the satisfaction of the Town.

When the work area encroaches upon sidewalks or crosswalks, protective barriers and signs, together with appropriate warning and guidance devices, shall be utilized so that the passageway for pedestrians is safe and well defined.

STANDARD CONSTRUCTION REQUIREMENTS

Pavement Cutting

All bituminous concrete or concrete pavements shall be cut before any excavation is started. The pavement shall be neatly and uniformly saw cut at each side of all trenches to ensure against unnecessary damage to pavement. An acceptable alternative to saw cutting is cold planning.

APPENDIX A - STREET EXCAVATION REQUIREMENTS

Excavation

Excavation shall be performed in a manner as to produce the minimum possible width of disturbance. Excavation and handling of materials shall be performed in a manner as to minimize the possibility of cave ins. Sheeting and shoring shall be used in accordance with OSHA requirements to prevent such undermining. Pavement projecting over undermined areas, shall be saw cut square and removed. No opening or excavation in any street shall extend beyond the center line of the street before the excavated side of the street is made passable to traffic. Where a trench crosses a street, steel plates capable of bridging the trench and supporting traffic may be used.

Backfill

Backfill material may consist of material excavated during the course of construction if dry, but excluding pieces of pavement, frozen material, organic matter, top soil, muck, peat, clay, rocks larger than six inches, or any other deleterious material that is deemed unacceptable by the Engineering Department. If considered unsuitable for backfill, excavated material shall be replaced with granular backfill as specified in the "Standard Specifications for Road and Bridge Construction", State of New Hampshire, Department of Public Works. (Sand-NHDOT 209.3 Gravel-NHDOT 209.4)

Excavated material shall be replaced or backfilled in layers or courses not to exceed twelve (12") inches in compacted thickness; and shall be compacted at or near optimum moisture content using pneumatic tampers, vibratory compactors or other approved means. Select materials immediately under the pavement (gravels and processed gravels or reclaimed asphalt) shall be replaced in kind or to a minimum depth of twelve (12) inches of gravel and four (4) inches of crushed gravel meeting NHDOT Standard Specifications for Road and Bridge Construction. (Gravel NHDOT 304.2, Crushed Gravel 304.3)

Compaction

All excavated materials shall be compacted to a minimum of 95% of the optimum density. (ASTM 1557 Method D) A compaction test performed by a certified material testing laboratory may be required. If required the compaction test must be performed prior to paving and the results submitted to the Engineering Department. If a trench exceeds 100 feet in length, compaction tests shall be required every 100 feet prior to paving.

Work Zone Maintenance

The roadway shall be periodically swept to keep materials from the travelled way. The roadway shall be cleaned of all foreign materials at the end of each working day.

APPENDIX A - STREET EXCAVATION REQUIREMENTS

Bituminous Trench Patch

A temporary patch shall be placed using one of the following methods.

- Temporary patch method one - Bituminous Concrete binder course will be brought to the surface grade at a minimum depth of two and a half (2 ½) inches. This temporary patch will be maintained as necessary by the contractor and allowed to remain in place for a minimum of 30 days but not more than 60 days. (The Stabilization Period) At the end of the stabilization period the temporary patch will be cut out and the trench trimmed with neat straight cuts and square corners a minimum distance of twelve (12) inches onto undisturbed material beyond the limits of the temporary patch area or of the observed settlement area, whichever is greater. The contractor will add or remove crushed gravel and compact, if necessary.
- Temporary patch method two - the gravels shall be brought to the appropriate grade and Bituminous Concrete binder course brought to the surface grade. This temporary patch will be maintained as necessary by the contractor and allowed to remain in place for a minimum of 30 days but not more than 60 days. (The Stabilization Period) At the end of the stabilization period the temporary patch will be milled to the depth of one and one (1 ½) half inches a minimum distance of twelve (12) inches onto undisturbed material beyond the limits of the temporary patch area or of the observed settlement area, whichever is greater.

Permanent Patch shall be installed as follows.

Temporary patch and existing pavement shall be removed in a manner that results in no damage to adjacent pavement and shall be replaced with an equal depth but not less than four (4) inches (2.5" binder course Type B and 1.5" wearing course Type F) of hot bituminous pavement conforming to the Standard Specifications for Road and Bridge Construction, State of New Hampshire, Section 401.

Limits of saw cuts or milling for final patching shall be approved by the Town of Salem Engineering Department prior to execution of final paving. The Town may require the limits of the area to increase due to any damage in the work area.

In the case of a transverse or diagonal trenching, the pavement shall be cut to provide a diamond shaped patch with at least two (2) foot minimum overlap of the final patch onto undisturbed material that will permit only one wheel of a vehicle at a time to strike the patch area.

An approved asphalt emulsion (tack coat) shall be applied to the face of all exposed joints of the existing pavement. Rolling shall be done with a self-propelled roller weighing not less than eight (8) tons to achieve ninety five percent compaction and shall continue until a firm, even surface true to the lines and grade is obtained.

APPENDIX A - STREET EXCAVATION REQUIREMENTS

In cases where multiple excavations are made in a street which would result in multiple patches, the Engineering Department at their discretion may require a continuous patch or overlay across the entire work zone.