# CITY OF SHEBOYGAN DEPARTMENT OF PUBLIC WORKS

# Technical Standards Right of Way Excavation

#### **Technical Standards**

Any person or utility having first obtained a street opening permit shall be fully responsible for restoring streets and their appurtenances (e.g. granite curb, under-drain, filter fabric, sewer and drainage structures, etc.) in complete compliance with the City's Technical Standards, which reference the <u>State of Wisconsin Department of Transportation</u>, Standard Specifications for Highway and Structure Construction; the <u>Standard Specifications for Sewer & Water Construction in Wisconsin</u> and the <u>Wisconsin Construction Site Best Management Practice Handbook</u>. [All persons and utilities are encouraged to obtain a current copy of said standards from the Department of Public Works/Engineering office located at 2026 New Jersey Avenue.]

#### **Excavation Requirement**

All work must be conducted in strict accordance with the latest regulations of OSHA for excavations.

- a. All excavations shall be performed in accordance with the City of Sheboygan Department of Public Works specifications or in a manner as prescribed by the Director of Public Works & Engineering for circumstances not covered by the specifications.
- b. All material excavated from trenches and piled adjacent to the trench or in any street shall be removed from the site as soon as practical and by the completion of the project. The city shall have the authority to require that the Permittee haul the excavated material offsite immediately upon removal of said material if the stockpiled material poses a potential hazard to vehicular and or pedestrian traffic.
- c. All excavations must be protected from erosion and meet the standards as prescribed in the <u>Wisconsin Construction Site Best Management</u>
  Handbook.
- d. Breaking Pavements

- 1. The Permittee shall make every effort to keep the amount of pavement damage to a minimum. Pavement shall be cut in a rectangular shape to ensure a proper repair. Any pavement damage created by Permittee's excavation shall be repaired by the Permittee.
- 2. All excavations within paved street surfaces shall be saw cut to full depth of existing pavement in a neat straight line.
- 3. Heavy-duty pavement breakers may be prohibited by the City when the use endangers existing substructures or other property.
- 4. Removal limits must be normal or parallel to the trench line. No irregular shapes will typically be allowed.
- 5. Pavement edges shall be trimmed to a vertical face and neatly aligned with the centerline of the trench.
- 6. Unstable pavement shall be removed over cave-outs and over-breaks; and the sub-grade shall be treated as the main trench.
- e. The Permittee shall not be required to repair pavement damage outside of the requirements of the "Restoration of Streets" section, existing prior to the excavation unless his or her cut results in small floating sections that may be unstable, in which case, the Permittee shall remove the unstable portion and the area shall be treated as part of the excavation.
- f. When two or more street openings are made under the same permit in sequence six (6) feet or less (edge to edge) between each adjacent opening, the Permittee shall neatly cut and remove the area of pavement between these adjacent openings and shall repair the entire area as one trench.
- g. Where additional excavations are made for the same client or utility which are six (6) feet or less (edge to edge) or previous excavations still under a guarantee period, the Permittee shall neatly cut and remove the area of pavement between these adjacent openings and shall repair the area between openings and the most recent opening as one trench.
- h. At the time of permit application the applicant will be required to pay an assessment for all Brick Pavers/paving blocks, cobblestones, or bricks expected to be removed as a result of excavations within the right of way unless these materials are required to be replaced or are delivered in good condition to the City's Recycling Center.

# **Backfill Requirements**

- a. All work must be conducted in strict accordance with the latest regulations of OSHA for excavations.
- b. All work must be protected from freezing.
- c. Temporary or permanent sheeting must be used to support the sidewalls where necessary to prevent undermining of the pavement and/or maintenance of traffic and or safety of personnel.
- d. Whenever water is found standing in the excavation area, the water shall be removed by pump or other means before backfilling operations can commerce. Dewatering must conform to the standards as prescribed in the Wisconsin Construction Site Best Management Practice Handbook.
- e. Backfilling of excavations shall be performed by the Permittee as soon as practicable so that the least possible subsequent settling will occur.
- f. Aggregate Slurry Backfill is required in all excavations for lateral repairs, manhole repairs, utility spot repairs, and utility valves and curb stops. During night-time emergency repairs when the Contractor is not able to leave the excavation exposed overnight due to weather conditions, the contractor may use granular backfill.
- g. All excavated material shall be removed from the job site and disposed of, as the Permittee's responsibility, in such a manner that will minimize interference with pedestrian and vehicular traffic. No material shall be left within the right-of-way once the repair and/or installation is complete.
- h. Pavement structure sub-base:
  - 1. The pavement structure sub-base shall be backfilled with Dense Graded base, shall be spread and compacted to no less than 95% of the maximum dry density of the material, to the depth required by the City's Technical Standards and related references.
    - i. The maximum dry density of the material to be used as pavement sub-base shall be filed at the time of application to obtain the permit. The City reserves the right to verify maximum density and field density at any time.

- 2. In lieu of Dense Graded base, aggregate slurry backfill used as required trench backfill may be utilized as the pavement structure sub-base.
- i. The requirements of this section are intended to maximize compaction and therefore minimize settling.

#### **Restoration of Streets**

- a. Concrete pavement streets less than thirty (30) years old will require full panel replacement.
- b. Concrete pavement streets older than thirty (30) years old can be restored by partial panel replacement except that when the remaining area is less than six (6) feet, the additional are to the nearest joint shall be included in the repair.
- c. If excavation (or pavement damage) occurs at or within twenty-four (24) inches of the edge of pavement, the Permittee shall be responsible for repair to the edge of pavement.
- d. Where two (2) or more street openings are made under the same permit in sequence six (6) feet or less (edge to edge) between each adjacent opening, the Permittee shall be responsible for repairing the entire area between openings measured from the first opening through the last opening.
- e. Where additional excavations made for the same client or utility are within six (6) feet or less (edge to edge) of previous excavations still subject to a guarantee, the Permittee shall be responsible for repairing the area between openings.
- f. Upon the completion of proper backfilling, the Permittee must notify the Department, allowing four (4) hours for the Department to arrive for inspection. All paving must first be approved by the Department as to depth and materials.
- g. Should the circumstances of the trench backfilling require City personnel to be on-site after 4:00 PM, or on holidays, the Permittee shall be required to make special arrangements with the Department in advance of such scheduled work.
  - 1. Notification of the anticipated timing of all paving activity must be acknowledged by the Department; any notification delivered by

- facsimile machine or email must be preceded or followed up by a telephone conversation to assure its proper and timely receipt.
- 2. Permittee shall endeavor to make notification by 9:00 AM of each workday that paving is anticipated. In the event of schedule changes or emergencies, the Permittee is required to provide a minimum of one-hour notification to assure inspection availability.
- 3. If a City Inspector is not able to be on-site within 30 minutes of the acknowledged anticipated start time of paving activity, the Permittee shall be allowed to commence paving in accordance with this Section.
- 4. Placement of any materials within or upon any subgrade without prior approval from the City Inspector shall be removed by the Contractor at the request of the Inspector.
- h. Hot-mixed asphalt paving of trenches greater than one hundred (100') in length shall be paver applied unless otherwise authorized by the Department.
- The Permittee shall be responsible for the proper placement and maintenance of the temporary pavement and shall keep pavement level with the surface of the surrounding existing pavement and in proper repair and condition.

# j. Structures:

- 1. Wherever existing structures, such as manhole frames, surface inlets, catch basins, water valve boxes, etc. are not to the correct elevation, the Permittee shall adjust such structures to the new grade and remove / replace all adjusting rings and casting.
- 2. The use of cast iron manhole adjusting rings (Paver Rings) is not permitted unless authorized by the City Engineer.
- 3. Low profile castings may be required to bring structures to grade.
- 4. The Permittee shall furnish all castings for the project.
- 5. Manhole castings damaged or broken by the Permittee during construction will be replaced with a new casting at no cost to the City.
- 6. When in the opinion of the City Inspector, a sewer manhole casting is in such a condition that it should be replaced and the Permittee has not damaged or broken the casting during the construction, then the Permittee is required to remove the old casting and replace it with a new casting which will be provided by the City.
- 7. The maximum amount of manhole adjusting rings shall be 6".

- k. Sidewalks and Pedestrian Ramps
  - If during the construction or repair it is necessary to remove a sidewalk corner, State Statutes require a new sidewalk pedestrian ramp to be constructed in compliance of ADA (American Disabilities Act) requirements.
  - 2. All pedestrian ramps will need to be constructed in compliance of WisDot Standard Specification Section 602.
  - 3. 4' x 2' Detectable Warning Plates are required per Section Misc. Detail Sheets.
- I. Any work that requires excavation within the "Drip Line" of a City tree that is located within the City Right of Way, must receive approval from the City Forester @ 920-459-3440 prior to cutting roots, trimming branches, stump removal and or tree removal.
  - 1. All approved work will be the responsibility of the Permittee.
  - 2. The Contractor will excavate and remove buried roots found existing below the surface of the pavement or sidewalk beginning from the bottom of the sidewalk grade extending 12" below grade. This excavated area shall be filled with granular material and compacted.
  - 3. Stumps shall be removed to a depth of eighteen (18") inches below the bottom of the subgrade elevation.
- m. Any street markings or traffic loops disturbed by the Permittee shall be promptly replaced and or repaired by the Permittee. Permittee is required to contact the City Electrical Department @ 459-3440 prior to replacement and or repair of any traffic loop damaged or disturbed during the construction.
- n. It shall be the responsibility of the Permittee to perform the necessary restoration beyond the limits of the pavement, which shall include but not be limited to restoration of lawns, esplanades, shrubs, gardens, curbing, sidewalks, under-drains, separations, fabrics, fences, walls, etc. Upon completion of the permanent repairs outside the limits of the pavement, the Permittee shall notify the City Inspector in writing that the permanent repairs or replacement has been completed, setting forth the date of completion. The Permittee shall, and has the duty and responsibility to, maintain the replacement area outside of the pavement for a period of twelve (12) months after completion.
- o. Permanent Pavement Restoration:

- i. Permanent restoration of streets shall be made by a qualified Contractor prior to the expiration date of the permit.
- ii. Permanent restorations shall be warranted for a period of eighteen (18) month from the documented completion of the restoration.

# **Material Specification**

# a. Aggregate

- All aggregates shall conform to the State of Wisconsin Department of Transportation (WisDot) Standard Specifications Section 301.
- ii. Pavement Structure Base material shall be 1 ¼" gradation, conforming to the State of Wisconsin Department of Transportation (WisDot) Standard Specification Section 305.
- iii. Pavement Structure Sub-Base material shall be ¾" gradation, conforming to the State of Wisconsin Department of Transportation (WisDot) Standard Specification Section 350.
- iv. Aggregate Slurry Backfill shall consist of Aggregate slurry backfill consisting of No. 1 and No. 2 course aggregate Class "C" concrete mix with the cement deleted. The material shall be mixed with water to inundate the aggregate sufficient to provide and approximate 3" slump. The mixes are designed to have a flow able fill characteristic.

#### b. Concrete Pavements

- i. All concrete shall conform to the State of Wisconsin Department of Transportation (WisDot) Standard Specifications Section 501.
- ii. Concrete pavement placed as part of repair or restoration of the Right of Way shall consist of Air-entrained concrete containing 6.0 % (+ or – 1%) with a minimum compressive strength of not less than 3500 psi when cylinders are prepared, cured and tested in accordance with ASTM Specifications.
- iii. The use of any additives to the concrete, other than an approved air-entraining admixture, shall not be allowed without written consent of the City Engineer.
- iv. Concrete pavements with integral curb and gutter and placed with a slip form type paver shall be Grade "A".
- v. Concrete pavements not placed with a slip form type paver shall be Grade "C" mix.

#### c. Asphaltic Pavements

- All asphaltic pavements shall conform to the State of Wisconsin Department of Transportation (WisDot) Standard Specifications Section 460, Hot Mix Asphalt Pavements and Section 450, 455, General Requirements for Asphaltic Pavements and Asphaltic Materials.
- ii. Modified Winter Patching Material: See Sec. 110.267.

#### d. Aggregate Slurry

i. Aggregate slurry backfill shall conform to the requirements specified in WSWS 8.43.8 or as directed by the City Engineer.

### e. Joint Sealing

i. All pavement joints shall be filled with Hot-Poured elastic joint sealer conforming to ASTM D3405.

#### f. Steel Reinforcement

- Steel Reinforcement shall be installed per WisDot Standard Specification Section 505 Steel Reinforcement and per City of Sheboygan Standard Detail Drawings.
- g. Concrete Paver Brick shall conform to the various subsections of the specifications listed below;
  - i. Concrete Paver Brick shall conform to the requirements of the WisDot Standard Specifications Section 519.
  - ii. Bricks shall meet the existing size and shape of bricks currently being disturbed. Bricks shall be manufactured by Bend Industries or an approved equal.
  - iii. Sand Cement Base for Brick: A layer of sand-cement base course material one (1") inch in thickness shall be spread upon the properly prepared bituminous base course. The course shall be thoroughly compacted and present a hard smooth surface parallel to the proposed finish slope and grade. The ratio shall be six (6) parts of washed mortar sand to one (1) part portland cement.
- h. Mortar shall conform to WisDot Standard Specification Section 518 Mortar Rubble Masonry and Dry Rubble Masonry.
- Underdrains shall conform to WisDot Standard Specification Section 612.
- j. Filter Fabric for underdrain shall meet the specification for Geotextile Fabric in the WisDot Standard Specification Section 612.2.8.

- k. Topsoil shall conform to WisDot Standard Specification Section 625
   Topsoil and Salvage Topsoil. Topsoil shall have finished depth of four
   (4) inches (minimum).
- I. Mulch with tackifier added shall be placed on slopes exceeding one to three.
- m. Seeding shall be WisDot Seed Mixture No. 40 without the white clover and shall conform to the requirements of WisDot Standard Specification 630. Permittee's shall be required to continually seed areas of topsoil and seed until a satisfactory growth of grass is established.

# **Winter Excavations**

- a. If work is conducted in the winter season (November 1 April 15), the following specifications shall apply:
  - 1. The temporary pavement repair shall be hot-mixed asphalt as specified unless hot-mix material is documented to not be available within a seventy-five (75) mile radius of the city. As an alternate the Permittee may use:
    - (i) Modified Winter Patching Material (cold patch) placed in one lift of three inches compacted thickness. This material must then be removed and replaced with hot mix asphalt by June 15<sup>th</sup> as defined in "Methods of Construction." The applicable guarantee period will begin when the hot-mixed asphalt repair or finished concrete pavement is completed.
    - (ii) Temporary Concrete Patch to be placed at a thickness of 4". This material must then be removed and replaced with hot mix asphalt by June 15<sup>th</sup> as defined in "Methods of Construction." The applicable guarantee period will begin when the hot-mixed asphalt repair or finished concrete pavement is completed.
  - In all cases of Modified Winter Patching Material (cold patch or concrete) use, the Permittee shall take all reasonable measures to maintain a "drivable" and safe

surface for motorist and pedestrians as determined by the Department.

- 3. If the trench area is saturated, the following backfill method shall apply:
  - (i) Filter fabric meeting "Material Specification" subsection h., shall be placed to form a lining for the crushed stone backfill to be wrapped in, leaving extra material to completely cover the stone when placed.
  - (ii) Crushed stone meeting the <u>Standard</u>
    <u>Specifications for Sewer and Water Construction</u>
    <u>in Wisconsin</u>, must be placed to the height of saturation and completely wrapped in filter fabric.
  - (iii) Backfill requirements shall be dependent on vertical trench area absent of saturation. A minimum of twenty-four inches (24") of crushed gravel Gradation No. 2 shall be spread in layers not exceeding eight inches (12") in loose depth and compacted to no less than 95% of the maximum dry density of the material, up to the base of temporary pavement. Should a vertical zone exist between the saturation zone and the sub base zone, the backfill methods outlined in Section III "Backfill Requirements" (F) may be utilized within this zone.

# **Special Conditions**

#### A. Geo-fabric Material

- If an excavation cuts through an area that has been constructed with geo-fabrics, the following restoration procedures shall be strictly adhered to:
  - (iv) Use a fabric replacement piece that has similar properties as that of the cut fabric. The most important property is that of the .095 Sieve Test or that property of the fabric, which has an opening, mesh size which allows 5% of glass beads to pass through when sieved (ASTM D4751-87).

- (v) Overcut the trench walls by a minimum of 4" in the area of the fabric replacement being careful not to disturb the existing 4" width of fabric exposed. Place a minimum of a 4" overlap of new fabric. Do allow soil migration in this seam area. Increase the seam width if the subgrade is very soft. If soft sub-grade and if the trench lies directly beneath a wheel path, increase the seam width to 12".
- (vi) Sew or staple the seams in accordance with manufacturer's recommendation. If sewn, use colored thread, do not sew near the edge, double sew at 10-15 stitches per inch, and use thread material that closely matches fabric properties. If stapled or pinned, pin on 2 foot (0.6m) centers; use 6"x1" wide staples which can be applied by foot activated guns.
- (vii) Caution must be exercised when placing and compacting the first twelve-(12) inches of material so as not to puncture the fabric.

#### Underdrain

- If an excavation cuts through an existing underdrain system, it shall be repaired by the Permittee in accordance with the city's Technical Standards and related references.
- 2. The Director shall have the right to require a Permittee to install underdrain within any major excavation zone if conditions warrant.

#### Methods of Construction

## A. Workmanship

- The Permittee is required to furnish all materials and will be
  responsible for the job in an orderly, timely, quality controlled
  manner, and will be required to utilize quality workmanship and
  construction techniques conducted in accordance with industry
  standards for the successful completion of the utility work,
  backfilling, appurtenant restorations, and temporary pavement
  repair.
- 2. The Permittee shall keep a competent foreman and sufficient competent employees to carry on the work with all proper speed and in accordance with the requirements of law and other public authorities and to reasonable satisfaction of the Director.
- 3. The Permittee shall conduct the work in such a manner as not to unreasonably interfere with other work being done by the City, by contract or otherwise. If deemed necessary by the Director, the work done under these specifications shall conform to the progress of said other work. The Permittee shall cooperate with the contractors or employees who may be doing work for the City, and with public service corporations affected by the work in arranging for storage places, temporary support for structures, repairs, etc.
- 4. All temporary repairs must be maintained by the Permittee until the end of the guarantee period or until permanent repair has been made, whichever first occurs.

#### B. Length of Trench Opening

- 1. The maximum length of open trench in an excavation permissible at any time shall be two hundred (200') feet, and no greater length shall be opened for pavement removal excavation, construction, backfilling, repairing or any other operation without the express written permission of the City.
- C. Placement of Aggregate Slurry Backfill The Aggregate Slurry backfill shall be placed by mechanical means and so placed that all voids are completely filled. If a curb stop is present when using slurry backfill, the curb stop shall be separated from these materials to allow for future adjustments.

- D. Placement of Backfill Material When placing aggregate backfill, the backfill material shall be spread and compacted in layers not exceeding twelve (12") in loose depth.
- E. Placement of Crushed Gravel Gradation No. 1
  - 1. The aggregate pavement structure sub-base shall be spread and compacted in layers not exceeding twelve (10") inches in loose depth. The crushed aggregate shall be compacted to not less than 95% of the maximum dry density of the material.
  - 2. The maximum dry density of the material to be used as sub-base along with the corresponding moisture contents, in accordance with <u>WDOT Standard Specifications</u>, must be filed at the time of application to obtain the permit. Single source documentation will be acceptable for multiple permits in a season, provided that every stockpile utilized is accounted for.

# F. Temporary Asphalt Pavement

- All temporary pavements shall be installed according to these specifications, which include a three (3) inch (minimum) thickness of Type AC hot-mixed asphalt placed in two or more, 1-1/2" compacted lifts. All materials, placement, compaction and workmanship shall be in accordance with the applicable provisions of the <u>WDOT Standard Specifications</u> for this material section 401 and 407.
- 2. Each 1 1/2" layer of hot-mixed asphalt is to be compacted separately meeting the requirement of minimum compaction of standard laboratory maximum theoretical density for the specific material as required in the WDOT Standard Specifications.
- 3. Mechanical compactors will be permitted for repairs less than 10 square yards; repairs exceeding 10 square yards shall be rolled with an appropriately sized, power driven steel-wheeled roller to obtain specification density.
- 4. Hot-mixed asphalt materials shall be laid upon an approved clean, dry, compacted surface, spread and struck off to the established grade and elevation giving regard to the loss in depth between loose and compacted mixtures. Immediately after the bituminous

- mixture has been spread, struck off, and surface irregularities adjusted, it shall be thoroughly and uniformly compacted.
- 5. The placing temperature of the hot-mixed asphalt mixture shall be between 325°F and 255°F. All compaction rolling shall be completed before the mixture cools below 185°F.

#### G. Permanent Pavement Restoration

- 1. All materials, placement, compaction and workmanship shall be in accordance with the applicable provisions of the <u>WDOT Standard Specifications</u> for this material.
- 2. Temporary paving material shall be saw cut and neatly removed, or milled, as needed to comply with all provisions of this subsection.
- Pavement structure base and sub-base should be checked for compliance with 95% compaction requirement, if the Permittee elects or is required to remove the entire temporary paving material. If compaction is found to be less than 95%, trench must be re-compacted to meet specifications before paving will be allowed.
- 4. The permanent pavement materials and depths shall conform with the specifications found in the City's Technical Standards and related references, which vary for different street classifications, or match the existing depths, whichever is greater. The requirement to match existing depths shall be waived if the Permittee is able to show good cause, including demonstrated performance.
- 5. Each 1-1/2" layer of hot-mixed asphalt is to be compacted separately meeting the requirement of 92% minimum compaction of standard laboratory maximum theoretical density for the specific material.
- 6. Mechanical compactors will be permitted for repairs less than 10 square yards; repairs exceeding 10 square yards shall be rolled with an appropriately sized power driven steel-wheeled roller to obtain specification density.
- 7. Hot-mixed asphalt materials shall be laid upon an approved clean, dry compacted surface, spread and struck off to the established grade and elevation giving regard to the loss in depth between loose

and compacted mixtures. Immediately after the bituminous mixture has been spread, struck off, and surface irregularities adjusted, it shall be thoroughly and uniformly compacted.

8. The placing temperature of the hot-mixed asphalt mixture shall be between 325° F. and 255° F. All compaction rolling shall be completed before the mixture cools below 185° F.

#### H. "Tack" Coating

1. All vertical surfaces of the existing hot-mixed asphalt pavement shall be tack coated with an approved asphalt emulsion by thoroughly swabbing or brushing the vertical edges to fully cover with the liquid material prior to pavement installation.

# I. "Top" Joint Sealing

1. All top surface joints between the pavement repair and the existing pavement are to be sealed with an asphaltic emulsion by filling the crack just below the surface of the pavement.

## J. Depth of Substructures

- 1. No person or utility shall, without written permission from the city, install any substructure, except manholes, valve casings, culverts, and catch basins at a vertical distance less than:
  - (i) Twenty-four (24) inches below the established flow line of the nearest gutter. If the flow line is not established, than the depth shall be at a minimum of twenty-four (24) inches below the surface of the nearest outermost edge of the traveled portion of the street.
  - (ii) The minimum depth of any substructure shall be twenty-four (24) inches below the established gutter grade when the substructure parallels the street
  - (iii) The minimum depth of any substructure shall be twenty-four (24) inches below the established sidewalk or curb when such substructure is at a right angle to the street.
  - (iv) The minimum depth of any substructure on any other public place shall be twenty-four (24) inches

- below the surface; provided, however, that the city may permit a lesser depth in special cases.
- (v) Nothing in this section shall impose a duty upon the Permittee to maintain the specifications as required herein upon subsequent changes of grade in the surface unless the grade in the substructure interferes with the maintenance of or travel on a public street.
- (vi) Refer to City's Technical and Design Standards and Guidelines for typical cross-section and depth requirements for substructures in city streets.

#### **Guarantee Period**

- A. All street excavation repairs shall be guaranteed to conform to the requirements of Article IV of Chapter 110 of the Sheboygan Municipal Code for a minimum of eighteen (18) months.
- B. All street excavation repair guarantee periods shall begin upon the approved placement of hot-mixed asphalt in accordance with these Technical Standards.
- C. Guarantee periods shall end if the street is rehabilitated by the City before the expiration of the guarantee period.
- D. Maintenance of restored items other than pavement and trench material (such as driveways, esplanade, and sidewalks) shall be the responsibility of the Permittee for a period of twelve (12) months from approved completion of work.
- E. See Chapter 110 of the Sheboygan City Code for enforcement details.

#### Definition of Guaranteed Pavement Repair Cond.

- A. Pavement repairs guaranteed by each Permittee shall meet all of the following conditions in order to remain in conformance with these Technical Standards and Chapter 110 of the City Code of Ordinances.
  - 1. The entire area shall be free from delamination of the approved surface material.
  - 2. No distortion of one-half inch (1/2) or greater shall exist over more than five percent (5%) of the total surface area of the repair.

- 3. No cracks over one-quarter inch (1/4) or greater shall exist in the surface or edges or the repair totaling more than five percent (5%) of the repair perimeter.
- 4. The hot-mixed asphalt within the trench shall not be completely flushed and bleeding.
- B. Non-conformance with any of the above conditions shall constitute a breach of guarantee and subject the Permittee to remedial actions as provided in Section 110 of the Sheboygan City Code.
- C. Severe (over one inch (1")) distortion conditions shall be considered Tort liability and street defect conditions and shall necessitate that full repairs be completed within twenty-four (24) hours of notification by the City as provided in Section 110 of the Sheboygan City Code.

# Pavement Management Maintenance Program

The city is initiating a pavement management maintenance program at the Dept. of Public Works. Work/cost/history documentation of work completed on streets will be initiated and a better system to maintain and track excavation repairs and pavement condition performance will be created; as well as the necessary foundation for the documentation of the city roadway distress conditions for estimating service life performances.