

RESTORATION SPECIFICATIONS FOR EXCAVATION IN THE RIGHT-OF-WAY PERMITS ENGINEERING DIVISION 920-322-3470

NOTE: Erosion and sediment control measures shall be in place prior to disturbance, and shall be removed when paved areas are restored and vegetative cover has been well-established over at least 80% of the disturbed area. Failure to place and maintain erosion and sediment control measures may result in the permit being rescinded.

A COPY OF THE EXCAVATION IN THE RIGHT OF PERMIT SHALL BE ON THE JOB SITE AT ALL TIMES THAT CONSTRUCTION IS UNDERWAY.

Street

- ✚ Contact City Engineering at (920) 322-3470 at least two working days prior to excavation to determine the limits of pavement removal/restoration.
- ✚ Notify County Dispatch at (920) 906-5555 before closing any road or lane.
- ✚ Proper traffic control, barricading and flagmen shall be in use at all times in accordance with the Manual on Uniform Traffic Control Devices.
- ✚ Pavement restoration shall be in accordance with the City's "Specifications for Pavement Patching," latest edition.
- ✚ Contact City Engineering for patch inspection prior to replacing pavement. A minimum of 4-hours' notice is required.
- ✚ Utility trenches to be backfilled to the top of the subgrade with limestone screenings or crushed aggregate backfill. Backfill to be placed in the trench in uniform layers and compacted in maximum one-foot layers.
- ✚ Utility construction shall maintain at least six foot of horizontal clearance from all City utilities.
- ✚ Notify all neighboring properties of access limitations and construction inconvenience.

Terrace

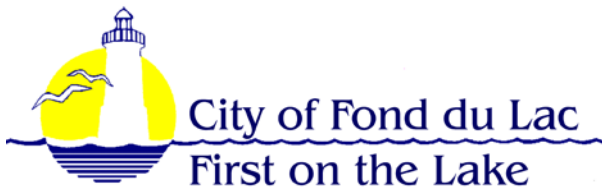
- ✚ Restore disturbed areas with topsoil, seed, fertilizer, and mulch or erosion matting.
- ✚ Topsoil shall be shredded, placed a minimum of 4" thick and conforming to the slopes and elevations existing before disturbance of the terrace.
- ✚ Contractor shall water the restoration area one time after seeding.

Sidewalks

- ✚ Sidewalk and curb ramps removed during construction shall be sawcut and carefully removed to ensure integrity of surrounding concrete.
- ✚ Sidewalk and curb ramps disturbed by construction shall be temporarily restored at the end of the construction day to prevent hazards to pedestrians.
- ✚ "Sidewalk Closed" signs shall be used during construction until the location has been secured, restored, or replaced.
- ✚ A sidewalk permit shall be obtained from City Engineering prior to restoration of disturbed walks. All standards of the sidewalk permit and appurtenant details shall be followed.
- ✚ Curb ramps disturbed by construction shall be replaced in accordance with current standards, including placing unpainted metal Detectable Warning Plates as manufactured by Neenah Foundry near the base of the ramp.
- ✚ Contact City Engineering for walk/ramp prior to placing concrete. A minimum of 4-hours' notice is required.

Roadside Ditches

- ✚ Restore disturbed areas with topsoil, seed, fertilizer, and erosion matting for the entire area of ditch disturbed by construction.
- ✚ Topsoil shall be shredded, placed a minimum of 4" thick and conforming to the slopes and elevations existing before disturbance of the ditch.



SPECIFICATIONS FOR PAVEMENT PATCHING
CITY OF FOND DU LAC
ENGINEERING DIVISION
920-322-3470

1) General

- a. The City shall approve the selection of the Contractor to place the various types of patches listed below.
- b. The City Engineering Division shall be notified and an inspection made prior to and during patching.
- c. All pavement opening edges shall be sawed prior to replacement.
- d. All pavement openings shall be replaced a minimum of one foot wider on all sides to the same thickness as the original pavement.
- e. Trench shall be backfilled with slurry to sub-grade elevation.
- f. Temporary pavement patching shall be constructed with a slurry mix containing 2 bags of cement per cubic yard, and shall be finished in a manner that provides a smooth ride and joint with adjacent pavement. Permanent pavement shall be placed as soon as possible.

2) Concrete Pavements

- a. The pavement patch shall be for the entire lane width and a minimum of ten (10) feet in length of such lane.
- b. Dowel and ties bars shall be placed into adjacent undisturbed pavement and/or gutter and extending into the patch area per City Engineering detail drawings.
- c. No pavement areas less than four (4) feet wide shall be left next to the gutter flange or construction joints.
- d. The replacement concrete shall be either regular strength or high-early strength as determined by the City Engineer to the same thickness and type as originally specified.
- e. The sides of existing concrete and sub-grade shall be wet down before the new concrete is placed.
- f. When the new concrete is poured, it shall be puddles to eliminate voids in the patch.
- g. The concrete patches shall be barricaded and allowed to cure for a minimum of 4 to 7 days before opening to traffic or as determined by the City Engineer.
- h. The concrete patches shall be cured by the "Impervious Coating Method" as specified by the Wisconsin Department of Transportation. Any concrete poured after October 1st shall also be treated with two treatments of boiled linseed oil. The specifications for this method are on file with the City Engineer or his representative.

3) Bituminous Pavements

- a. The final surface patch shall be for the entire lane width and a minimum of ten (10) feet in length or as directed by the City Engineer or his representative.
- b. In multiple layer pavements, the pavement opening or hold shall be placed a minimum of one (1) foot wider on all sides with the bottom layer and each succeeding layer shall be a minimum of one (1) foot wider with the final surface course being a minimum of ten (10) feet in length and the entire lane width.

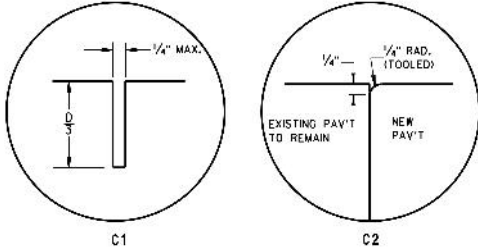
4) Bituminous Recapped Pavements

- a. The patch shall be of the same material and thickness as the original pavement and it shall be a minimum of ten (10) feet in length and the entire width or as directed by the City Engineer or his representative.
- b. No base pavement area less than four (4) feet wide shall be left next to the gutter flange.
- c. The bituminous patch shall be replaced with the same material in accordance with the original recapping specifications.

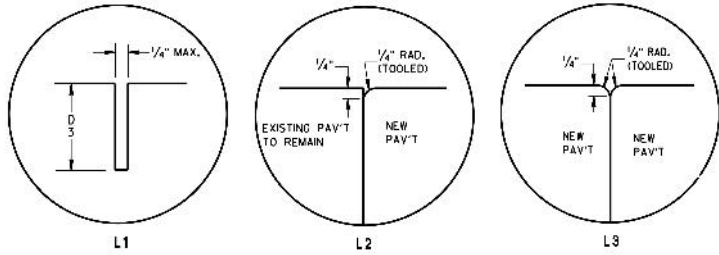
13C9 sheet b: Concrete Pavement Repair and Replacement

TIE BAR TABLE

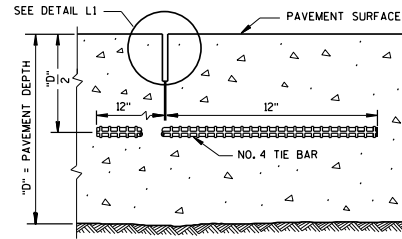
PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH 24' OR 26'	≥ 30'
6, 6 1/2"	3" ± 1/2"	48"	42"
7, 7 1/2"	3 1/4" ± 1"	45"	36"
8, 8 1/2"	3 3/4" ± 1"	39"	30"
9, 9 1/2"	4 1/4" ± 1"	33"	27"
10, 10 1/2"	4 3/4" ± 1"	30"	24"
11, 11 1/2"	5 1/4" ± 1"	27"	21"
12"	5 3/4" ± 1"	24"	21"



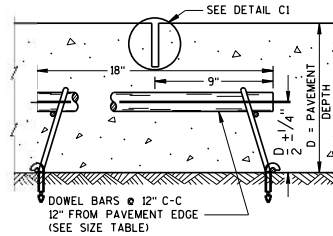
TRANSVERSE JOINTS



LONGITUDINAL JOINTS



SECTION C-C SAWED LONGITUDINAL JOINT



SECTION F-F CONTRACTION JOINT

GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

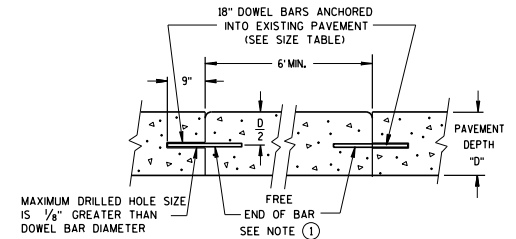
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

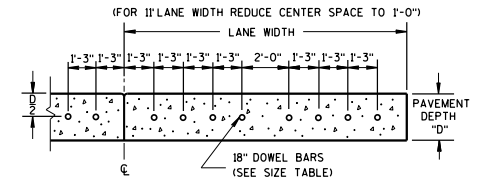
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

① APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



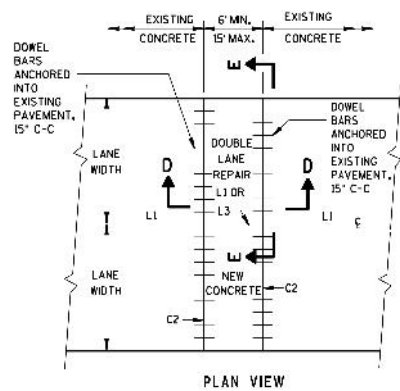
SECTION D-D



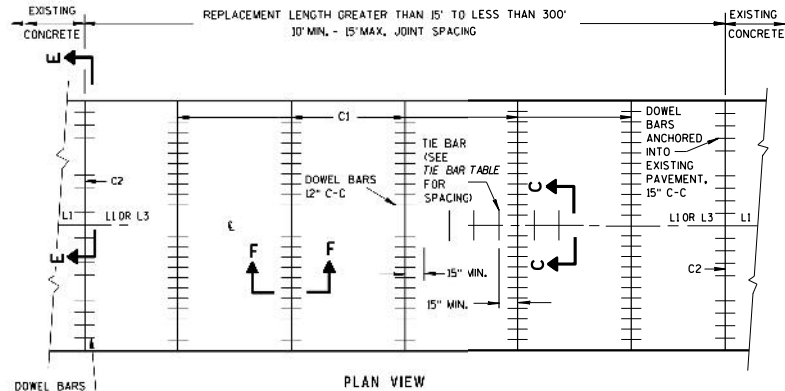
SECTION E-E DRILLED DOWEL BAR CONSTRUCTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6, 6 1/2"	NONE	12"
7, 7 1/2"	1"	14"
8, 8 1/2"	1 1/4"	15"
9, 9 1/2"	1 1/4"	15"
10" & ABOVE	1 1/2"	15"



PLAN VIEW MULTI-LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

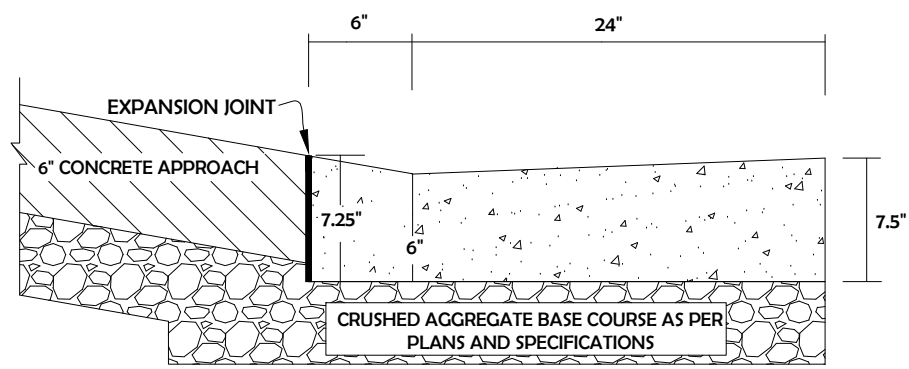
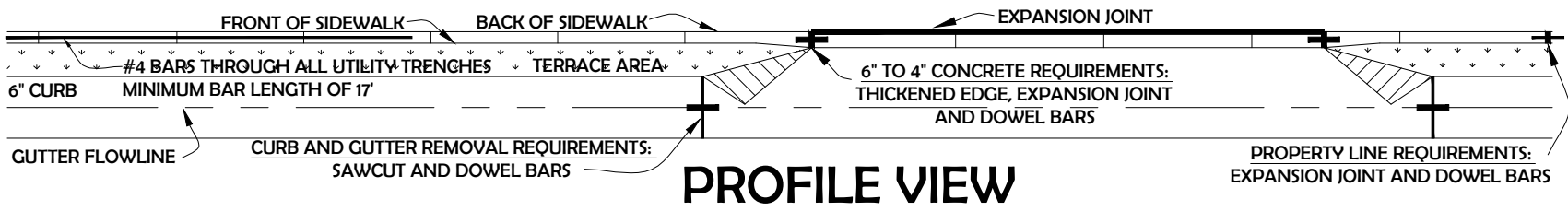
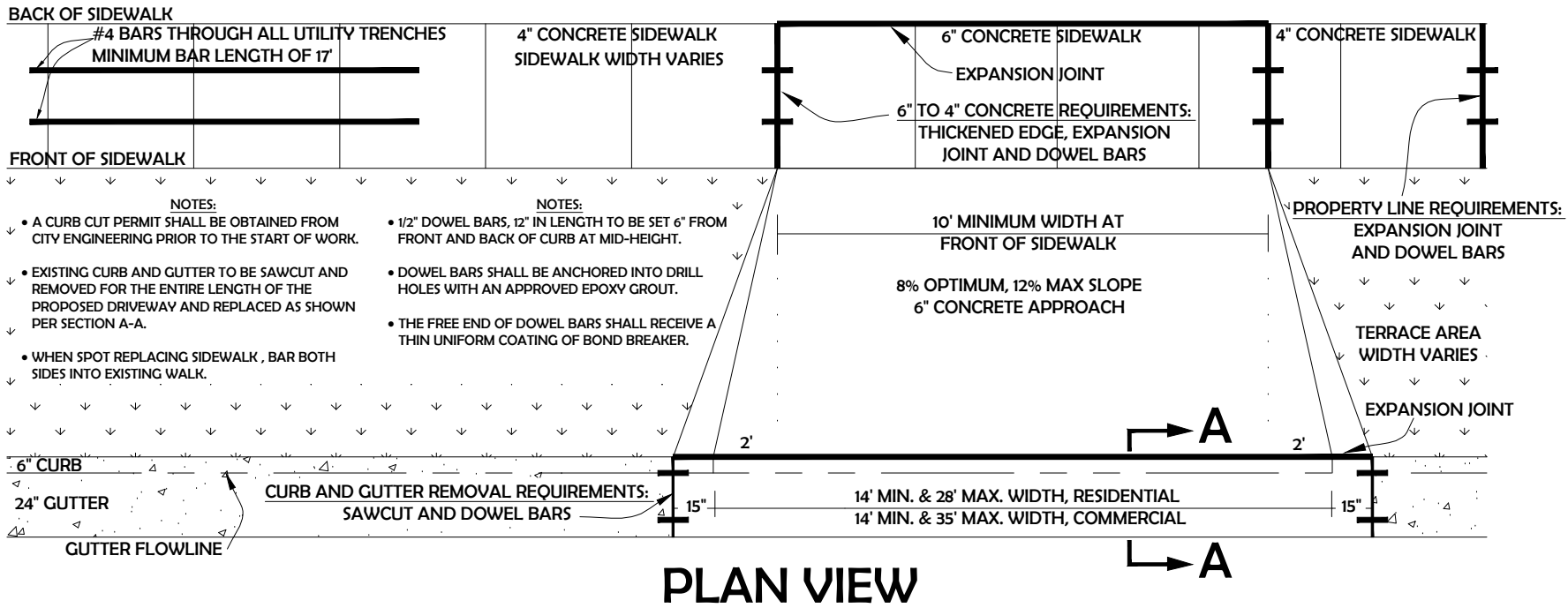
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



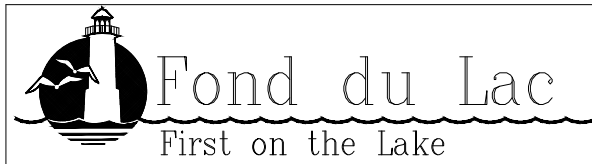
SIDEWALK CONSTRUCTION INFORMATION
CITY OF FOND DU LAC
ENGINEERING DIVISION

A Sidewalk Permit must be obtained from the City of Fond du Lac prior to any sidewalk work beginning. Contact the Engineering Division for inspection of sidewalk forms prior to pouring concrete at 920-322-3470.

1. **Sidewalk Width** – Widths shall match existing sidewalks on adjacent sidewalk panels. If sidewalk widths vary by $\frac{1}{2}$ foot or more, please call Engineering before setting forms.
2. **Sub-Base Preparation** – The subgrade shall be formed by excavating or filling to the required elevation to a point 3 or 5 inches below the bottom of the 4 or 6 inch concrete. The width of the subgrade shall be 6 inches beyond each side of the sidewalk.
3. **Granular Base Course** – A minimum of 3 inches of $\frac{3}{4}$ " minus limestone or road gravel base course is required under all 4" concrete, and 5 inches of granular base course under all 6" concrete. No clear stone.
4. **Forms** – Forms shall be of wood, plastic, or metal and shall be straight and of sufficient strength to resist springing, tipping, or other displacement during the process of depositing and consolidating the concrete.
5. **Expansion Joint** – All expansion joints shall be constructed using $\frac{1}{2}$ inch RELEX Rubber Expansion Joint. Equivalent products must be approved by the Engineer prior to installation.
6. **Joints** – The edges of the sidewalk along forms, joints, or metal slab divisions shall be rounded with an edge of $\frac{1}{4}$ inch radius.
7. **NEW IN 2014 Reinforcing Rods & Sidewalk Tie Bars** – No. 4 Reinforcing Rods shall be installed in all new concrete over utility trenches. Two – 1 foot long, No. 4 sidewalk tie bars, shall be drilled and installed into all adjacent panels or other locations as directed by Engineering. Where expansion joint material is used the Contractor shall use No. 4 smooth bars, greased. Tie bars can be Deformed or Epoxy-Coated.
8. **Finishing, Curing, & Protection** – Concrete shall be finished smooth and lightly broomed. All newly placed concrete shall be cured by the Impervious Coating Method. After finishing operations, the concrete surface shall be sealed by spraying on it a uniform coating of curing material, in such a manner as to provide a continuous water-impermeable film on the entire concrete surface.
9. **Backfilling** – The disturbed areas along the sides of the walk shall be backfilled with satisfactory topsoil and thoroughly compacted.
10. **Barricading** - Sufficient lighting and barricades shall be provided to protect the public. Barricades shall remain in place until the new concrete is cured and all adjacent holes have been backfilled.
11. **Stamp Required** – The Contractor shall stamp his name and the year of construction on each single square or at the end of multiple square pours.



TYPICAL DRIVE APPROACH: UNPAVED TERRACE



DEPARTMENT OF PUBLIC WORKS
ENGINEERING AND TRAFFIC DIVISION
CITY OF FOND DU LAC, WISCONSIN