

CONCRETE SIDEWALK & DRIVEWAY APPROACH SPECIFICATIONS

STANDARDS

Concrete sidewalks and driveway approaches shall be constructed in accordance with Sections 423 and 424 of the current edition of the Illinois Department of Transportation (IDOT) Standard Specifications for Road and Bridge Construction and the requirements contained herein.

GRADES

Unless otherwise authorized by the City of Sycamore, sidewalk and driveway approach grades shall conform to the following criteria:

- A. **New sidewalks:** Shall be constructed in a manner such that the slope from the back of the sidewalk (the edge farthest from the curb) through the grass parkway and to the top of the curb shall be a minimum of 2% (1/4" per foot) and a maximum of 4% (1/2" per foot). In newer subdivisions where the grass parkway is typically 10'-6" wide, the back of the sidewalk is typically 4"-6" higher than the top of the curb and the cross-slope of the sidewalk is 1" in 4'.

See the attached **Sidewalk & Parkway Slope Specifications for additional information.*

- B. The grade of a sidewalk shall be lowered where handicapped sidewalk ramps are required in order to comply with the maximum handicapped ramp slope of 1:12. If the proposed sidewalk layout does not meet one of the attached details, please contact the City of Sycamore for further assistance.
- C. **Existing sidewalks and driveway approaches:** When replacing existing sidewalks and driveway approaches, the grades shall typically match the existing grade of the adjoining ground, sidewalk and approach.
- D. The maximum slope of driveway approaches shall be 8%.

MATERIALS

Concrete sidewalks and driveway approaches shall be constructed with Class SI Concrete (minimum 6 bag mix) or other approved six bag mixes with an air content of between 5%-8%. The concrete strength shall not be less than 3,500 lbs. at fourteen days. The concrete shall have a slump of no more than 3".

SUBGRADE PREPARATION

Concrete sidewalks and driveway approaches shall be placed on a minimum of 4" of mechanically compacted CA-6 or CA-7 crushed limestone sub-base material. Sidewalks shall be constructed to a minimum thickness of 4" except where they pass through a driveway and approach, in which case the thickness shall be increased to a minimum of 6". Driveway approaches shall be constructed to a minimum thickness of 6". **Welded wire mesh is not required for sidewalks or driveway approaches.**

FORMS

Side forms shall be of lumber or steel secured in place by stakes or braces with the forms true to line and grade. The finished grade of the sidewalk shall be set to an elevation establishing a uniform slope between the sidewalk and the top of the curb of $\frac{1}{4}$ " per foot (2%) minimum to $\frac{1}{2}$ " per foot (4%) unless otherwise approved by the City. The cross-slope of the sidewalk shall be $\frac{1}{4}$ " per foot (2%) unless otherwise approved by the City.

TIE BARS / REBAR

Where concrete sidewalks or driveway approaches are constructed adjacent to existing curb and gutter or where a sidewalk adjoins an existing sidewalk, $\frac{1}{2}$ " deformed steel tie bars (rebar) 16" long shall be positioned 18" on center. The tie bars shall be drilled into the existing concrete a minimum of 3". **Tie bars are not required, nor are they permitted, where a sidewalk abuts a driveway approach or driveway.**

PLACING & FINISHING OF CONCRETE

The aggregate sub-base material shall be lightly moistened just before the concrete is placed. The concrete shall be placed in successive batches for the entire width of the slab, struck off and finished to a true and even surface with floats and trowels. The final troweling shall be done with a steel trowel and the finished surface shall be smooth and even. All edges of the concrete shall be edged with a $\frac{1}{4}$ " radius tool. The final finish shall be a light to medium broom finish with adjacent strokes lightly overlapping, producing a uniform and slightly roughened surface. The broom finish on sidewalks shall be perpendicular to the centerline of the sidewalk and the broom finish on driveway approaches shall be in the same direction as vehicular travel.

CONTRACTION JOINTS

Contraction joints in concrete sidewalks shall be provided every 5' unless otherwise approved by the City. Contraction joints in concrete driveway approaches shall not exceed 12' in any direction. The depth of saw-cut contraction joints for concrete sidewalks and driveway approaches shall be a minimum of 25% of the depth of the concrete and shall be tooled or saw-cut. For tooled contraction joints on 6" thick concrete driveway approaches, the tooled joints shall be deepened to 1 $\frac{1}{2}$ " by saw-cutting through the tooled joints within 24 hours of the placement of the concrete.

EXPANSION JOINTS

Transverse expansion joints consisting of $\frac{1}{2}$ " thick pre-formed joint filler shall be placed $\frac{1}{4}$ " below the surface of the concrete sidewalk at maximum intervals of 100'. Where a concrete driveway approach or driveway abuts an adjacent sidewalk, a $\frac{1}{2}$ " expansion joint shall be provided between the driveway approach and the sidewalk, as well as the driveway and the sidewalk. **An expansion joint is not required where the driveway approach abuts the depressed curb at the street, however tie bars shall be provided as described above.**

SIDEWALK RAMPS FOR THE HANDICAPPED

Where sidewalks are constructed or replaced at street intersections and other crosswalks adjacent to barrier, mountable or roll-type of curb, a sidewalk ramp for the handicapped shall be provided in accordance with the requirements of the Americans with Disability Act Accessibility Guidelines (ADAAG), the most recent ADA Standards for Accessible Design and the attached **IDOT Standards 424001-08, 424006-06, 424011-02, 424016-02, 424021-03, 424026-01 and 424031-01**, except that no expansion joint will be required between the depressed curb and the sidewalk. Minimum $\frac{1}{2}$ " deformed steel tie bars (rebar) are required where the sidewalk meets the curb. The tie bars shall be a minimum of 16" long, drilled a minimum of 3" into the curb and shall be positioned 18" on center.

The maximum slope of the handicapped sidewalk ramp shall be 1:12. Detectable warnings consisting of raised truncated domes shall be installed in all handicapped sidewalk ramps and shall be a minimum of 4' wide and 2' deep. Placement of the detectable warnings shall be in accordance with the attached IDOT Standards referenced above and the ADAAG Requirements. **The color of the detectable warning panels shall be a contrasting color of Brick Red.** The truncated dome warning panels shall be cast in place detectable warning panels of high impact polymer which is colorfast and UV stable, as manufactured by Tuftile ADA Tactile Products or of an equal product approved by the City Engineer. **Poured, colored concrete truncated domes shall not be permitted.**

**See the attached IDOT Standards for truncated dome installation requirements and City approved products.*

CURING & SEALING

All new concrete sidewalks and driveway approaches shall be cured and sealed by applying a curing and sealing compound at a rate of 1 gallon per 200 square feet of concrete surface. The curing and sealing compound shall conform to ASTM C-309 and shall be CS-309 Curing and Sealing Compound as manufactured by W.R. Meadows, Inc. or a product with equal characteristics as approved by the City Engineer.

BACKFILL

After the concrete has been cured, the edges along the sidewalk and driveway approach shall be backfilled with compacted topsoil and seeded or sodded.

TIME LIMITATIONS

All concrete sidewalk, driveway approach and driveway construction shall be completed between May 1st and October 31st, unless otherwise approved by the City.

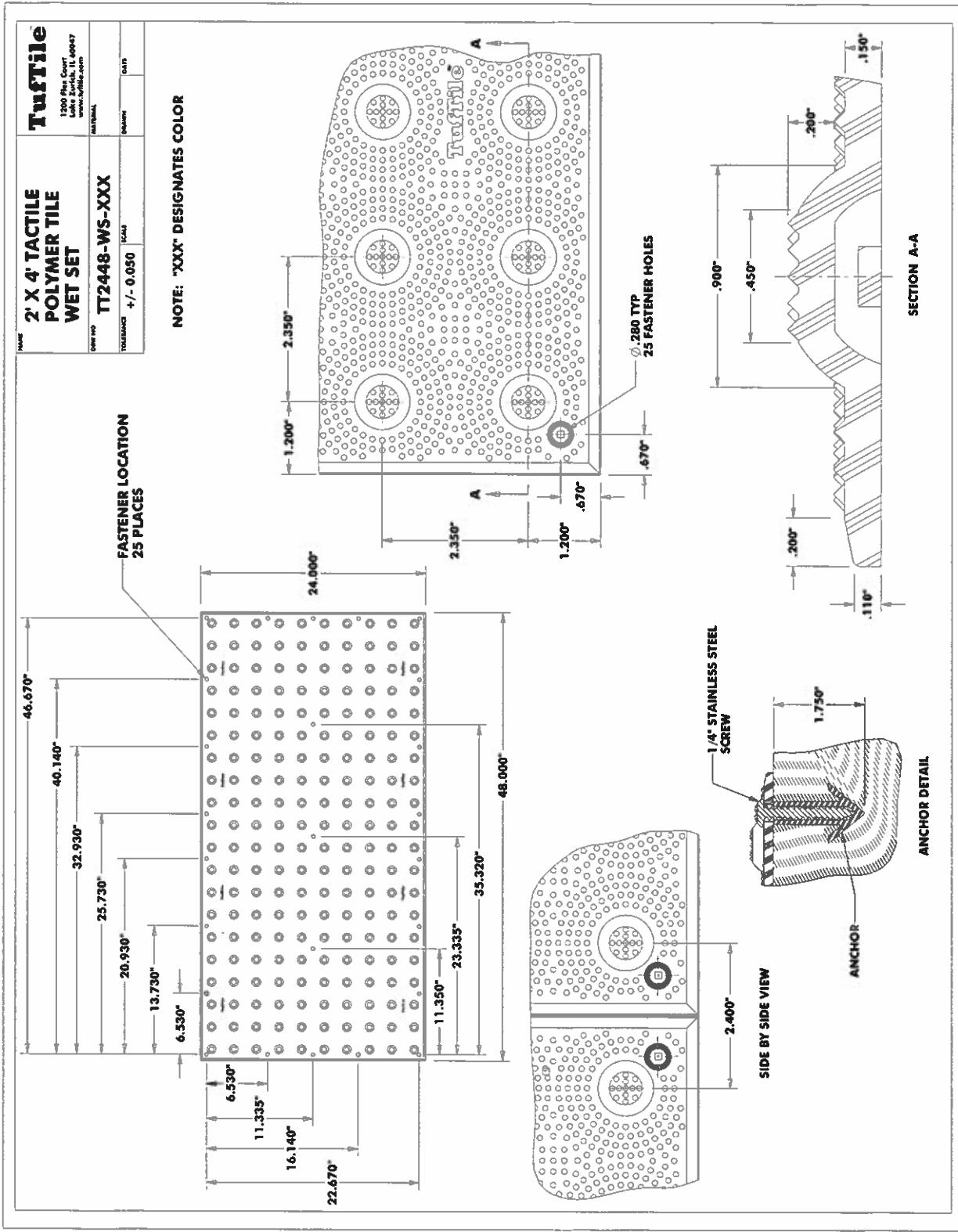
2' X 4' WET SET

(REPLACEABLE)

TACTILE TILE 2.350 DOME SPACING

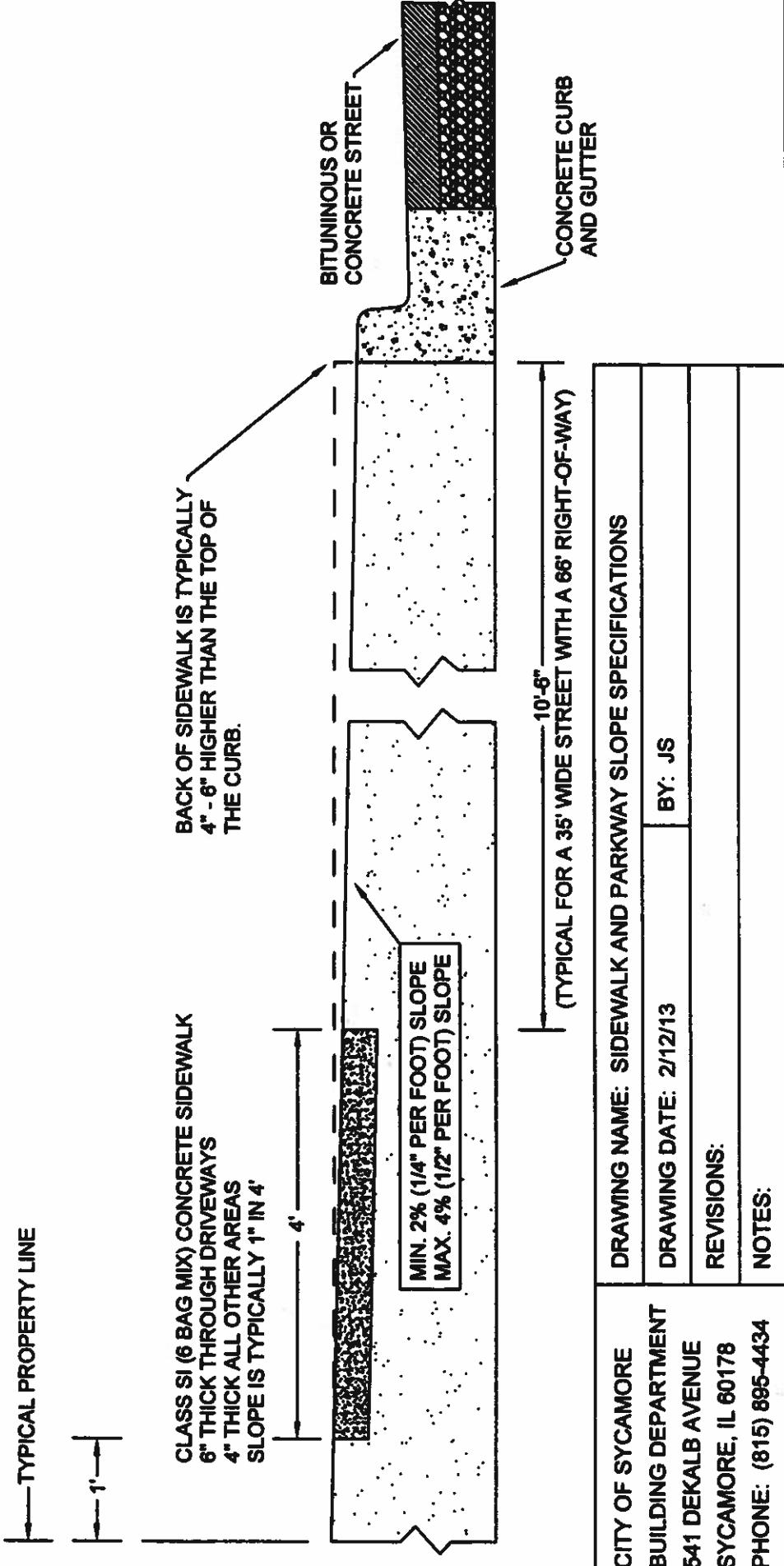
TEL 888-960-8897

FAX 847-550-8004 www.tufile.com



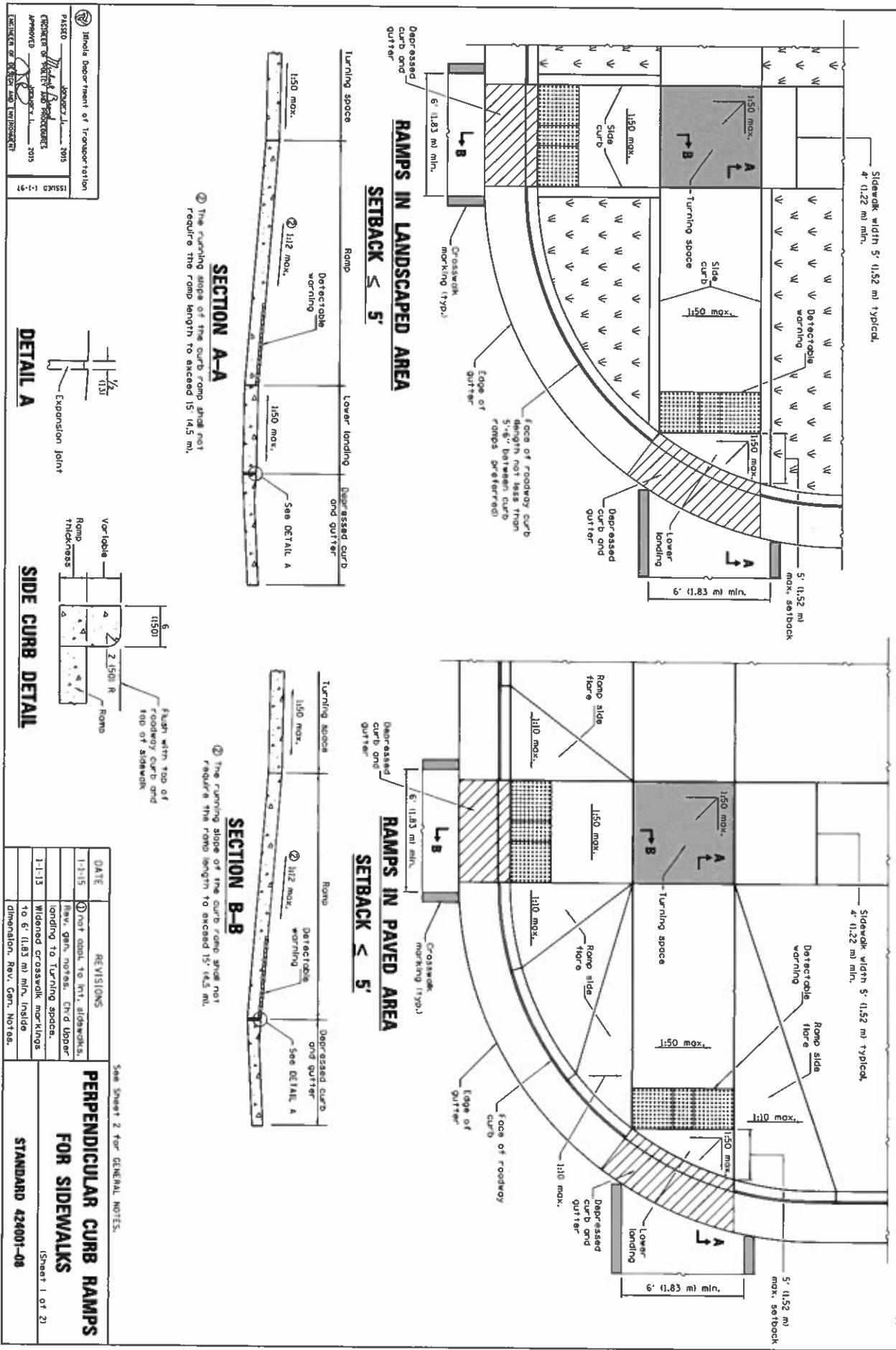
SIDEWALK & PARKWAY SLOPE SPECIFICATIONS

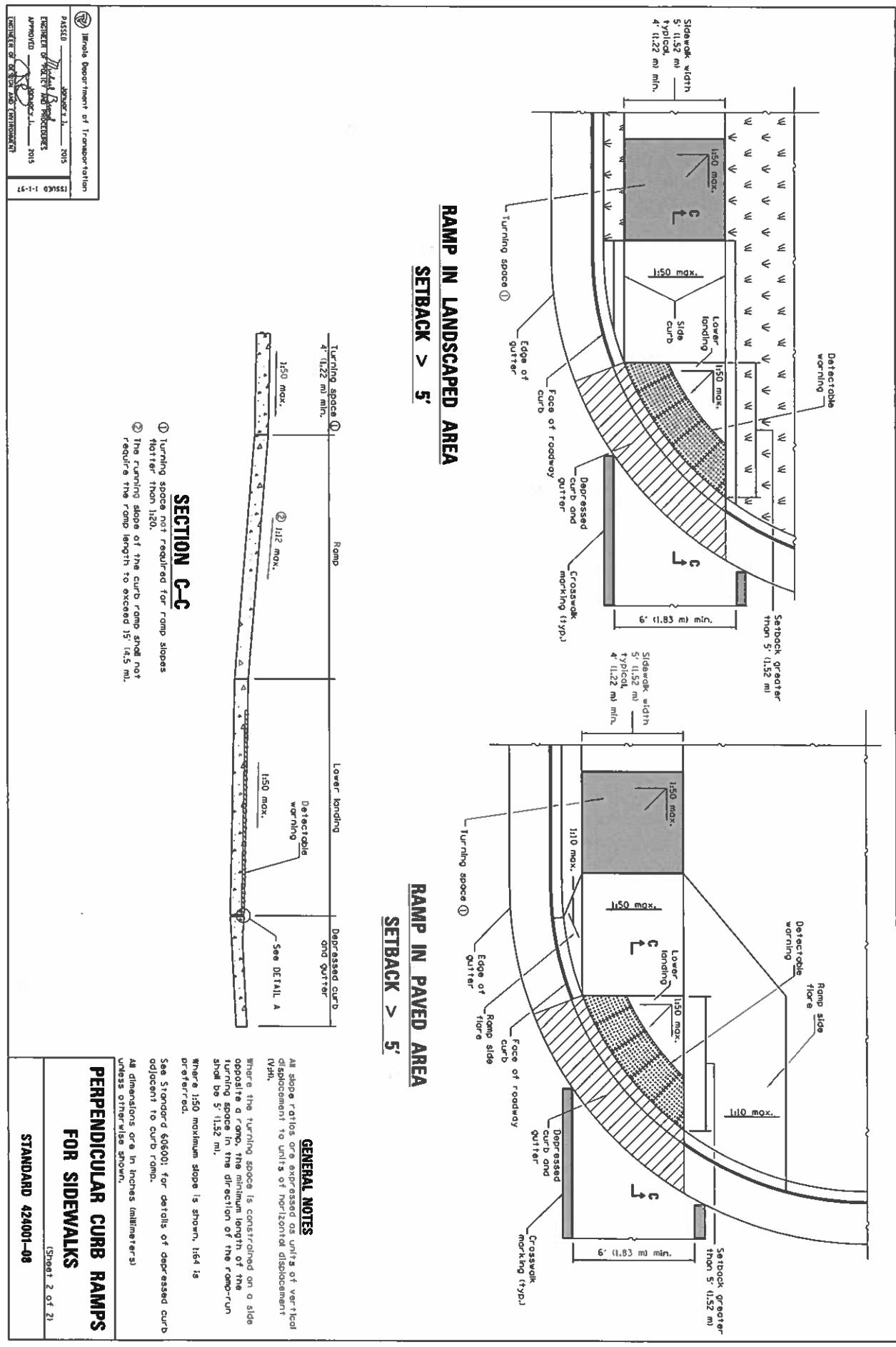
1. NEW SIDEWALKS: WHEN INSTALLING NEW SIDEWALKS, THE SLOPE FROM THE BACK OF THE SIDEWALK (EDGE FARTHEST FROM THE CURB) THROUGH THE GRASS PARKWAY AND TO THE TOP OF THE CURB SHALL BE A MINIMUM OF 2% ($1/4$ " PER FOOT) AND A MAXIMUM OF 4% ($1/2$ " PER FOOT). IN NEWER SUBDIVISIONS WHERE THE GRASS PARKWAY IS TYPICALLY 10'-6" WIDE, THE BACK OF THE SIDEWALK IS TYPICALLY 4"-6" HIGHER THAN THE TOP OF THE CURB AND THE CROSS-SLOPE OF THE SIDEWALK IS 1" IN 4".
2. THE GRADE OF A SIDEWALK SHALL BE LOWERED WHERE HANDICAPPED SIDEWALK RAMPS ARE REQUIRED IN ORDER TO COMPLY WITH THE MAXIMUM HANDICAPPED RAMP SLOPE OF 1:12.
3. ALL SIDEWALKS SHALL BE A MINIMUM OF 6" THICK WHERE THEY PASS THROUGH A DRIVEWAY AND AN APPROACH AND A MINIMUM OF 4" THICK AT ALL OTHER AREAS.
4. EXISTING SIDEWALKS & APPROACHES: WHEN REPLACING EXISTING SIDEWALKS AND APPROACHES, THE GRADES SHALL TYPICALLY MATCH THE EXISTING GRADE OF THE ADJOINING GROUND, SIDEWALK AND DRIVEWAY APPROACH.
5. THE MAXIMUM SLOPE OF DRIVEWAY APPROACHES SHALL BE 8%.



CITY OF SYCAMORE
BUILDING DEPARTMENT
541 DEKALB AVENUE
SYCAMORE, IL 60178
PHONE: (815) 895-4434

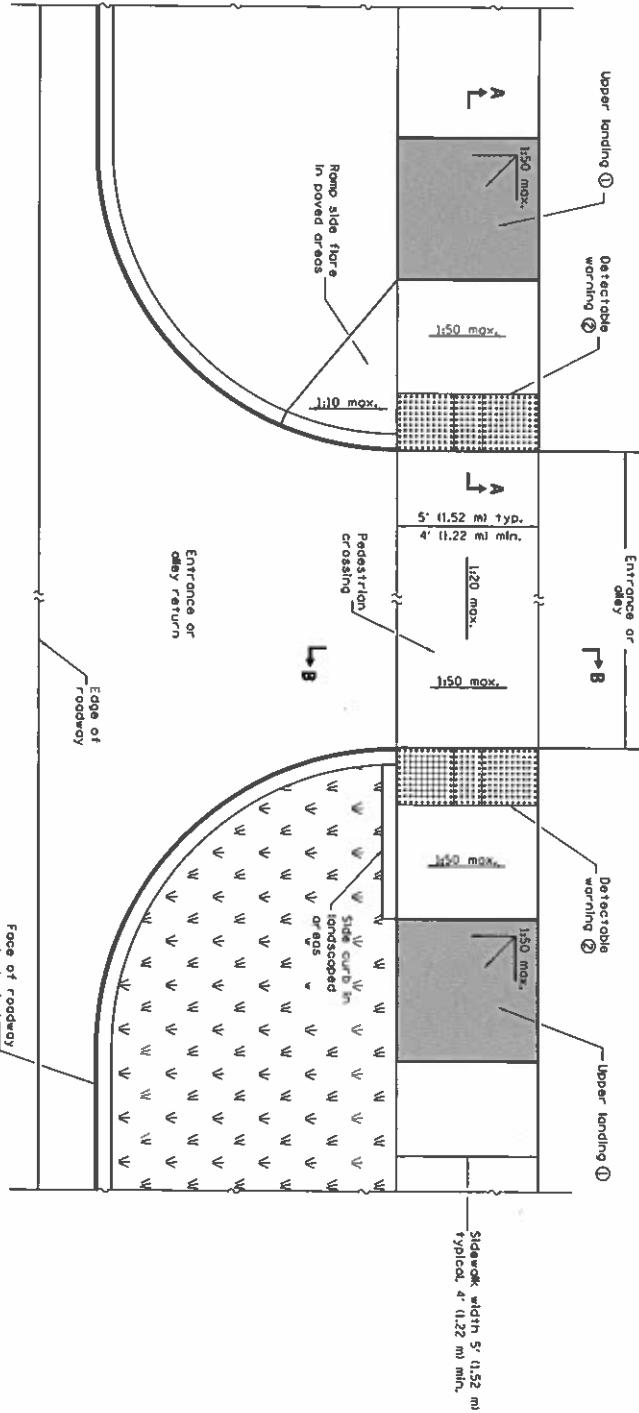
DRAWING NAME:	SIDEWALK AND PARKWAY SLOPE SPECIFICATIONS	
DRAWING DATE:	2/12/13	BY: JS
REVISIONS:		
NOTES:		



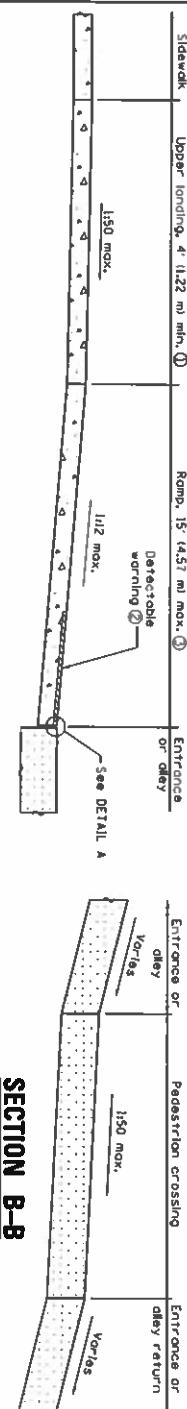


② Detectable warning shall only be installed at entrances/alleys with permanent traffic control devices (i.e., stop signs, signals).

③ Where possible, maintain the grade of the sidewalk across the entrance/alley to avoid the need for ramps and upper landings.

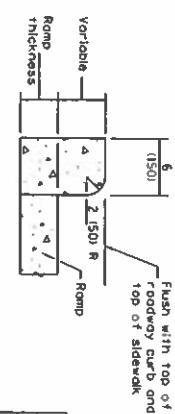


ENTRANCE / ALLEY PEDESTRIAN CROSSING



SECTION A-A

① Upper landing not required for ramp slopes flatter than 1:120.



GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H). Where 1:150 maximum slope is shown, 1:64 is preferred. All dimensions are in inches (millimeters) unless otherwise shown.

ENTRANCE / ALLEY PEDESTRIAN CROSSINGS

DATE	REVISIONS
1-1-13	Revised General Notes

DETAIL A

SIDE CURB DETAIL

	Illinois Department of Transportation
PASSED	January 1, 2013
ENGINEER OF POLICY AND PROCEDURES	
APPROVED	January 1, 2013
ENGINEER OF DESIGN AND ENGINEERING	

21-1-1	21-1-1
--------	--------

STANDARD 424026-01