

STANDARDS & SPECIFICATIONS
FOR THE CONSTRUCTION OF
SIDEWALKS



*ADOPTED BY:
THE CITY OF FINDLAY
ENGINEERING DEPARTMENT
EFFECTIVE APRIL 01, 2005*



Engineering Department

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Revised April 1, 2005

SIDEWALK STANDARDS AND SPECIFICATIONS

In order to facilitate administration, provide more efficient operations for the City of Findlay and to ensure a quality product for property owners, the following statements regard sidewalk construction and inspection services:

Sidewalk Contractor License	Section 1
Sidewalk Permits and Bonding	Section 2
Construction Stakes	Section 3
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Inspection	Section 5
Special Conditions	Section 6
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SECTION 1: SIDEWALK CONTRACTOR LICENSE

Section 907.11 of the Codified Ordinances of the City of Findlay requires that no person, except the owner of the property who is personally doing such work on the public right-of-way adjoining such property, shall construct or reconstruct any sidewalk without first obtaining a license to engage in such work. However, any owner doing any such work at such property must fully abide by and conform to all of the provisions of this policy except the requirement of procuring a license.

In order to obtain a license for sidewalk construction, contractors must provide the Findlay Engineering Department with a \$25 license fee and post a License and Permit Bond in the amount of \$5,000. This bond shall be issued to hold the City harmless from any injuries or accidents that might occur on the site where a contractor is working.

Licenses are valid January 1 through December 31 of each year. Any licenses issued throughout the course of the calendar year will expire on December 31. A renewal license will be issued annually to those in good standing (that is, not subject to license revocation or whose license revocation is pending) upon bond renewal and payment of a \$25 renewal fee. In addition, the license will be considered probationary until the contractor has satisfactorily constructed two sidewalks with a minimum length of fifty feet each. ("satisfactory construction" means that an inspector employed by the Findlay Engineering Department has approved the work.)

Contractors holding licenses shall be onsite during forming and pouring phases of sidewalk building. Failure to comply may result in work stoppage and/or license being returned to a probationary status.

Sidewalk contractor licenses shall be revoked for unsatisfactory performance, excessive complaints on performance or failure to comply with the requirements of the Findlay Engineering Department. Should a sidewalk contractor's license be revoked, the period of revocation shall be for no less than one calendar year from the date of revocation. If a contractor wishes to reinstate a revoked license after the required revocation period, the contractor must follow the same probationary procedure applied to new licensees. If a contractor's license is revoked a second time, the license shall be considered permanently revoked.

SECTION 2: SIDEWALK PERMITS AND BONDING

Pursuant to the Codified Ordinances of the City of Findlay, Section 907.03: **"a sidewalk permit must be obtained from the Findlay Engineering Department before work begins. A guarantee bond (in the form of cash or performance bond from an insurance company) of \$25 per linear foot is required for an individual lot" (Section 907.09).** The guaranty bond ensures that the work is completed and in accordance with the City's standards and specifications. For construction of a new sidewalk, a guaranty bond is required in all cases (including work done by the property owner). For repairs to or replacement of an existing walk, a guaranty bond is required only when someone other than the owner is doing the work. The bond described in this Section is separate from the License and Permit Bond described in Section 1 of these Standards and Specifications. A Blanket Sidewalk Bond (cash or performance) may also be established in larger amounts enabling a contractor to bond several projects under one bond.

Sidewalk bonds will be returned to the bondholder after all City requirements for sidewalks have been met, including all backfill and final grading and seeding in accordance with line and grade stakes. Where applicable, bonds will not be released until construction of the drive approach is satisfactorily completed and any re-staking fees are paid.

SECTION 3: CONSTRUCTION STAKES

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three working days before construction. If the City is unable to meet the owner/contractor's schedule, a privately employed Registered Professional surveyor may be employed and staking shall be performed at no cost to the City.

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involved shall be billed each time the walk requires any re-staking.

SECTION 4: SIDEWALK CONSTRUCTION PRACTICE

TOLERANCES LABELED ON THE STANDARD DETAIL DRAWINGS SHALL GOVERN ALL DIMENSIONS HEREIN DESCRIBED

General: Sidewalks shall be constructed through all driveways except those of existing concrete, asphalt, or similar hard surface pavement material, unless existing drive pavement is in poor condition.

Site Safety: The Contractor shall be responsible for providing all cones, barricades, etc. to secure the site once excavation has begun. The contractor shall also be responsible for maintaining a safe work zone until the job has been completed.

Site Security: The Contractor shall be responsible for securing the work area from the time the concrete is poured until it is substantially set. Graffiti/footprints, etc, that are set in the concrete and cannot be removed, may require that the affected slabs be removed and re-poured.

Obstructions: If there are obstructions in the walk, the contractor shall contact the utility company for adjustment/relocation prior to beginning construction. For adjustment/relocation of water meters, valve, etc., contact Findlay Water Distribution Department (419) 424-7192. For adjustment/relocation of sanitary or storm manholes or catch basins, contact Findlay Sewer Maintenance Department (419) 424-7179.

Compacted Aggregate Base: The aggregate base shall be composed of ODOT Item No. 411 Stabilized Crushed Aggregate, not less than 2 inches in depth and as wide as or wider than the walk. The aggregate base shall be compacted and brought to an even surface below the proposed surface of the finished sidewalk. If the compaction is deemed unsatisfactory by the inspector, then the use of a mechanical compactor may be necessary. Soft, spongy, or organic subgrade shall be removed and replaced with compacted aggregate. Wherever fill is necessary, the material used shall be compacted aggregate and shall be spread in lifts not to exceed 4 inches loose with each layer compacted. All surplus material from excavation for the sidewalk shall be removed no later than 24 hours after the sidewalk is installed or repaired. Placement of material onto adjacent property will not be permitted unless written consent is received from the owner, with a copy provided to the Findlay Engineering Department.

Forms: Substantial side forms shall be accurately placed to line and grade from the stakes set. Grade measurements are made from the top of each stake and line measurements are made from a nail placed in the top of each stake. Forms shall be set such that the finished walk is 4 feet wide and no less than 4 inches thick with a transverse slope of 3/16 inch per foot sloping toward the roadway. Where sidewalks are poured through residential driveways, concrete shall be no less than 6 inches thick. Steel sidewalk forms are desirable, but wood 2" X 4" forms (2" X 6" through driveways) may be used if they are kept 1/2 inch above the stone grade to produce a 4-inch thick finished sidewalk (six-inch thick through drives). Other types of forms that exhibit properties similar to steel and wood 2" X 4" forms may also be approved. If wooden forms are used, they shall not be warped or twisted and shall be secured to resist concrete pressure without springing and to provide line and grade within accepted tolerances. Forms shall not be removed until sufficient time has been allowed for the concrete to cure. Any valve boxes, manhole covers, meter boxes or similar fixed items must be adjusted to be flush with the surface of the finished sidewalk. Foam expansion board may be placed around structures to eliminate gaps and a tooled joint shall be placed centered on the structure. The cost of any utility relocation required for construction of the sidewalk in other than standard location shall be borne by the property owner.

Concrete Installation: Concrete placed between November 15 and April 15 shall meet the cold weather concreting requirements of ODOT Item 511.15. All concrete shall conform to ODOT Item No. 499, (ODOT Class C) or be a minimum of six bags of cement. The aggregate base shall be wetted immediately before placing the concrete. Approved expansion joint filler 1/2 inch thick and extending the full depth of the walk shall be placed between the walk and any fixed structure including, but not limited to existing concrete driveways, existing walks, existing curbing, valve boxes, meter boxes, manhole covers, telephone poles, fire hydrants, etc. Concrete shall be placed in one course to the full thickness and screeded to bring the top to a smooth, even surface. **Concrete must be of natural color. Decorative stamping or coloring (including walk through the driveway) will not be accepted.**

Finish, Curing, and Jointing: Sprinkling of dry cement on the surface to accelerate drying is prohibited. The surface shall have a **light broom finish**. The grain of the finish shall be perpendicular to the length of the sidewalk. To achieve a quality finish, use of fiber reinforcement is not approved. The walk shall be kept moist for not less than 48 hours after it has been poured. This may be accomplished in one of two ways: 1) The walk may be cured with a wet burlap and polyethylene sheeting; or 2) by using a manufactured curing compound. If a curing compound is used, it shall be a white-pigmented liquid (shall comply to ASTM C-309) applied at a uniform rate of no less than 1 gallon per 200 square feet. The curing compound shall be applied immediately after finish work is complete and the free water has evaporated from the surface. Refer to ODOT Construction and Materials Specifications 2002, Item No. 511.17, Method A and Method B.

The walk shall be built with contraction joints. Joints shall be evenly spaced approximately every 5 feet along the length of the walk and perpendicular to the axis. Additionally, the walk shall be jointed at logical locations, such as abrupt changes in direction, geometry, section, or at manhole covers, valve boxes, etc. Joints shall be **TOOLED** to a depth of not less than 1 inch.

Total joint depth shall be 1/4 the thickness of the slab. For walks greater than 4 inches thick, the tooled joint may be deepened by use of a saw. Deepening by saw shall be accomplished approximately 24 hours after the concrete has been placed.

SECTION 5: INSPECTION

After all stone is placed, compacted, and all forms are installed to correct alignment and grade, the contractor must contact the Findlay Engineering Department to schedule a form inspection. A final inspection of all sidewalks must be done after walks are poured and forms are removed, but **before construction stakes are disturbed**. Inspection requests must be submitted to the Findlay Engineering Department no less than one full working day in advance. If sidewalk(s) are poured without a form inspection and it is found that the sidewalk(s) do not meet City specifications, the City may require removal and/or correction at the contractor's expense. The City reserves the right, at its expense, to test core drill any sidewalk installation at random. Repair of the core test hole shall be the contractor's responsibility.

Final Grading: The Site shall be returned to as good as or better than original condition (including but not limited to removal of all debris and materials, and final grading and seeding) prior to final inspection and bond release.

SECTION 6: SPECIAL CONDITIONS

Curved Walks: Where curved walks are required, radius forms shall be constructed of plywood or Masonite material with thickness less than or equal to 1/4 inch. These forms shall be adequately supported to prevent bowing or buckling during concrete placement. Dimensional lumber forms shall not be used to construct walks with radii.

Trench Crossings: When walks must cross utility trenches, concrete may be reinforced with three equally-spaced reinforcement bars of standard bar size Number Three, Grade 40 or higher. Reinforcement bars must be placed longitudinally with the walk and be a minimum of 6 feet in length. In place of using reinforcement bars, wire fabric may also be used. Wire fabric shall be of minimum size 6 X 6, W4 X W4. Reinforcement shall be supported to maintain not less than 1-inch clearance above the finished stone grade. Contractor may also replace utility trench soil with compacted aggregate base material.

Driveways: Sidewalks shall be constructed 6 inches thick through residential driveways (applies in cases of new construction or where existing driveway is being replaced in conjunction with the sidewalk).

Drainage: In areas that drainage may be an issue, the contractor may place 4-inch pipe (SDR 35 or approved equal) for drainage. The pipe shall extend past the walk as necessary to facilitate drainage. Pipe placement must be done with prior approval from the Findlay Engineering Department.

Trees or Tree Roots Affecting New Walks: In the event of new sidewalk installation (no existing sidewalk), the City shall inspect the tree(s) affected by the proposed installation. Tree(s) will be removed only if identified as dead, diseased, dying or hazardous.

Trees or Tree Roots Affecting Existing Walks: In the event an existing sidewalk must be replaced, the City shall inspect the tree(s) affected by the proposed installation. Tree(s) will be removed only if identified as dead, diseased, dying or hazardous. Roots affecting the sidewalk installation should not be severed unless absolutely necessary. In the event that root removal is required to provide level sidewalk installation, the following specifications shall apply:

- For any tree less than fifteen inches in diameter and over six inches in diameter, roots less than two inches in diameter may safely be removed.
- For any tree over fifteen inches in diameter, roots less than three inches in diameter may safely be removed.
- Roots must be cut cleanly with sharpened tools.

Should an existing sidewalk need to accommodate a tree, ramping of the sidewalk *may* be allowed as long as it meets the applicable ADA requirements.

Striping for Sidewalk: In areas approved by the Engineering Department, (usually excessively wide driveways or commercial parking lots) the sidewalk location may be delineated with painted stripes according to these specifications.

1. The existing surface must be asphalt, concrete or other suitable hard surface in good condition.
2. The sidewalk location shall meet City of Findlay standards and be marked by the City Surveyor.
3. Stripes shall be straight, 4 inches in width and spaced 4 inches apart as indicated in the attached drawings.
4. Paint shall be white in color and manufactured for traffic marking purposes. The City of Findlay may suggest the type of paint to be used.

Repair Options: If required to repair a sidewalk, options other than replacement may be available. Mudjacking or grinding not more than 1 inch may be used in suitable areas with prior approval of the Findlay Engineering Department. Other options may be considered on a case-by-case basis.

SECTION 7: ACCEPTABLE MATERIALS

The following materials are acceptable by the City of Findlay for use in sidewalk construction:

A. Sidewalk Surface

1. Plain Portland Cement Concrete (ODOT Item No. 499 and Item No. 511). Bagged mixes that are available for retail sale **do not** qualify as acceptable material. Concrete must be of natural color. (See Section 4, Concrete Installation) Decorative stamping or coloring will not be accepted.

B. Expansion Joint Filler

1. Rubber Expansion Joint (ASTM D 1751 & D 1752)
2. Fiber Expansion Joint Filler (ASTM D 1751)
3. Polyethylene Closed-Cell Expansion Joint Filler (for use around small radii such as manholes, valve boxes, hydrants, etc.)

C. Curing Compounds

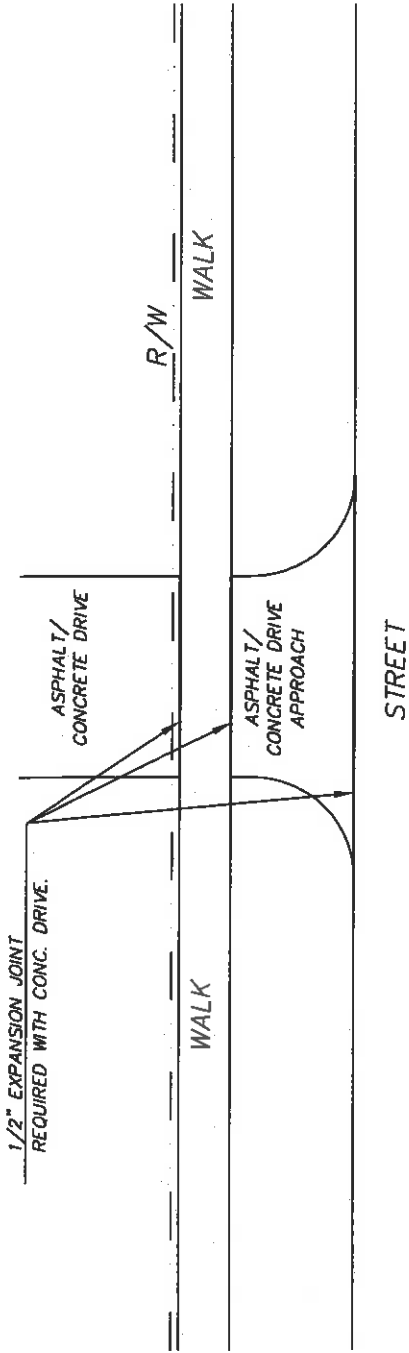
1. Curing compound conforming to ODOT Item No. 705.07

SECTION 8: STANDARD DRAWINGS

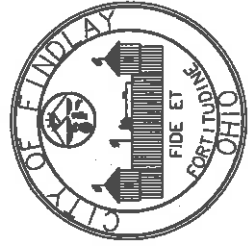
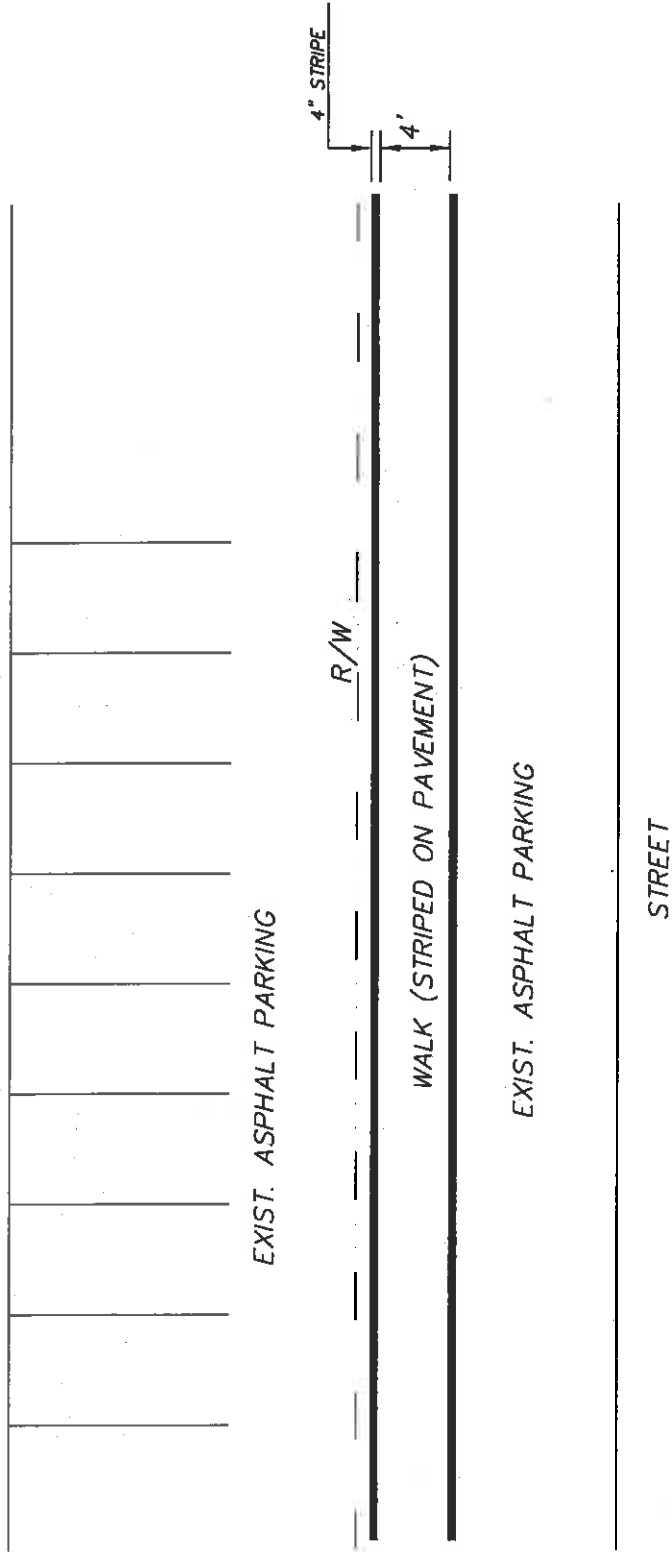
The following pages include City of Findlay Standard Drawings for Sidewalk Construction:

1. Accepted Methods of Driveway and Street Intersection with a Sidewalk – New Construction (Exhibit A)
2. Accepted Methods of Driveway and Street Intersection with a Sidewalk – Existing (Exhibit B)
3. Typical Walk Section-Standard Location (Exhibit C)
4. Sidewalk Staking Markings (Exhibit D)
5. Sidewalk Details (Exhibit E)

SIDEWALK/DRIVEWAY INTERSECTION FOR NEW CONSTRUCTION N.T.S.



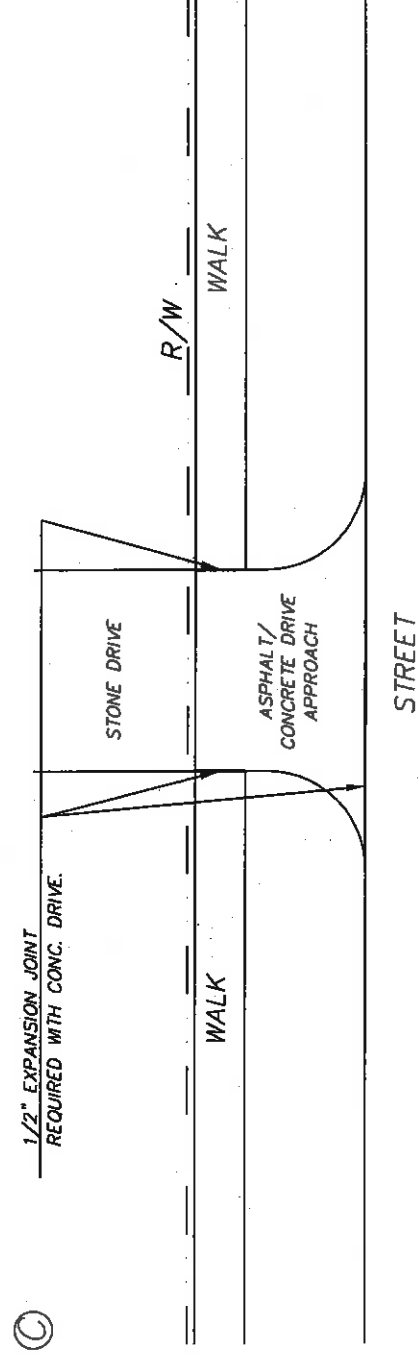
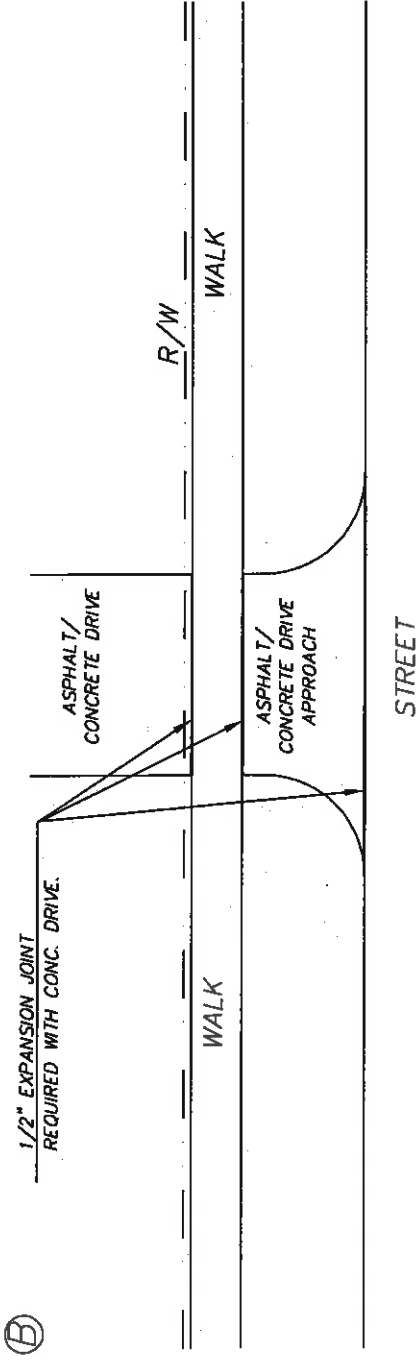
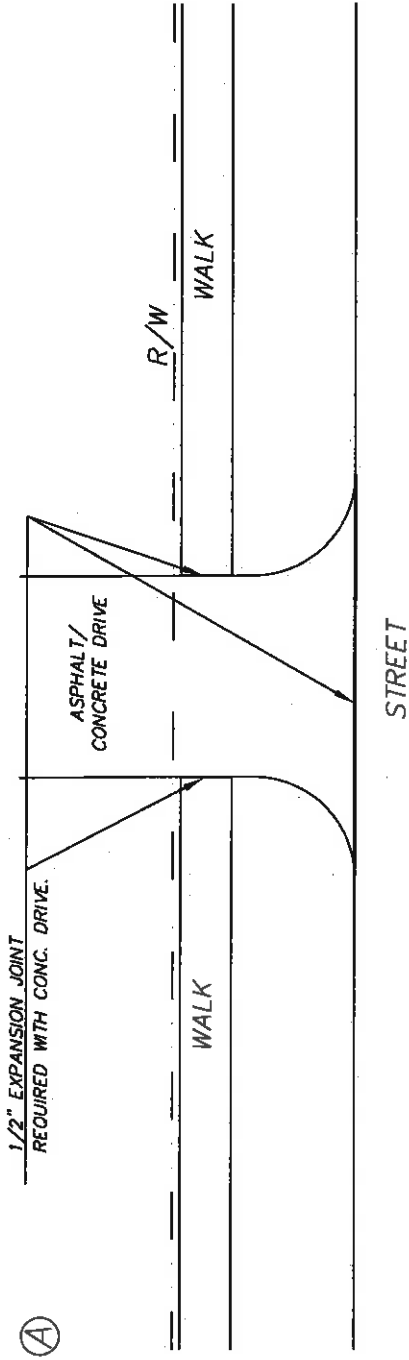
SIDEWALK STRIPING DETAIL FOR NEW CONDITIONS N.T.S.



Accepted Methods of Driveway and Street Intersection with a Sidewalk
 New Construction (Exhibit A)

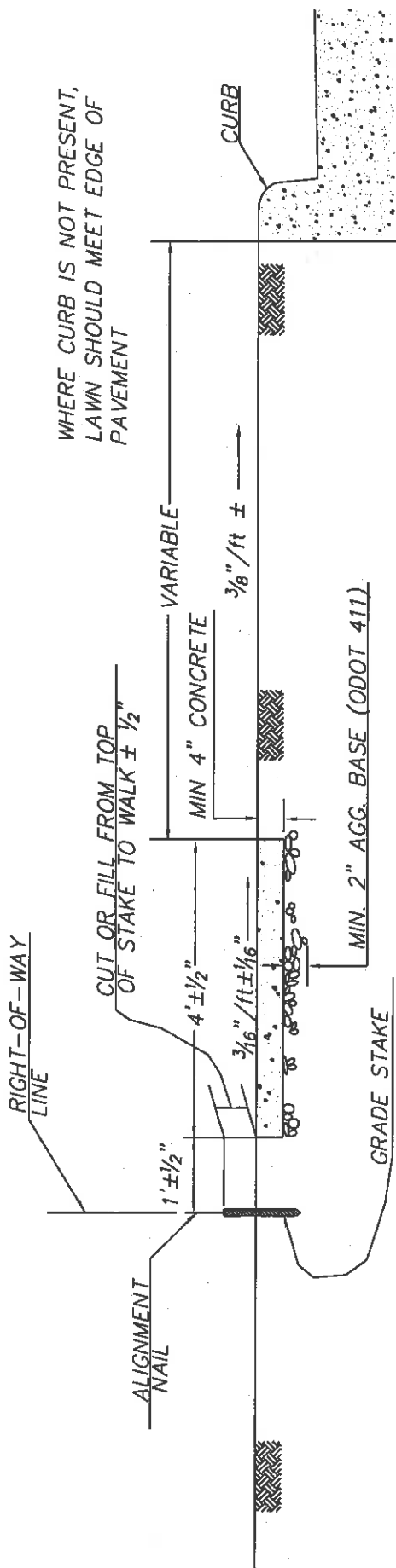
FEBRUARY 07, 2005

TYPICAL WALK/DRIVEWAY INTERSECTIONS FOR EXISTING CONDITIONS



Accepted Methods of
Driveway and Street
Intersection with a Sidewalk
Exist. Conditions (Exhibit B)





WHERE CURB IS NOT PRESENT, LAWN SHOULD MEET EDGE OF PAVEMENT

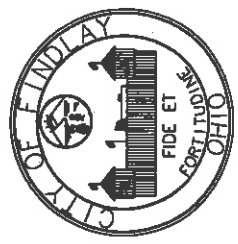
NOTES:

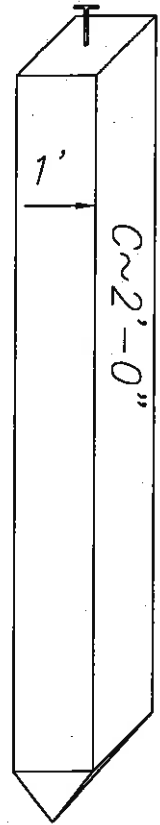
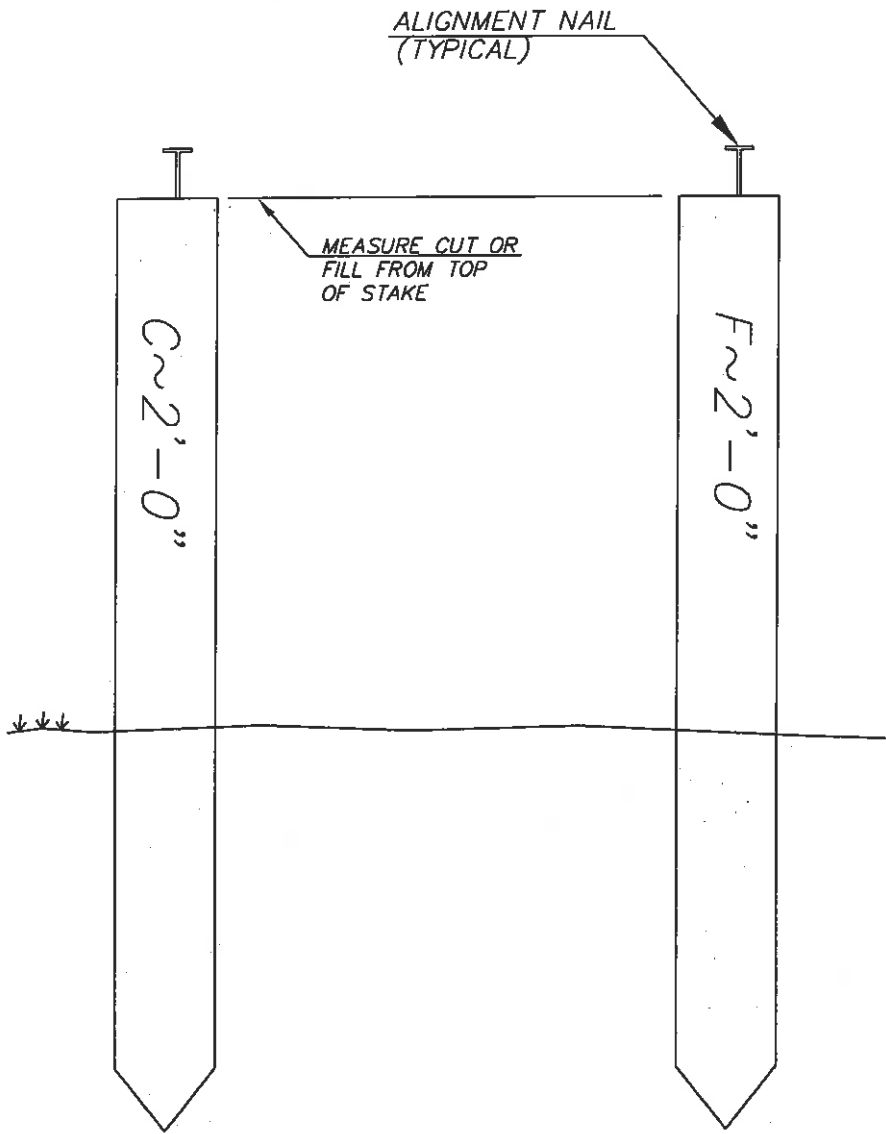
DUE TO CONDITIONS SUCH AS AN ABNORMAL DISTANCE BETWEEN THE CURB AND PROPERTY LINE OR UNUSUAL TERRAIN, THE SIDEWALK LOCATION MAY VARY, SUBJECT TO THE APPROVAL OF THE CITY ENGINEER. A MINIMUM DISTANCE OF 5'-0" FROM THE BACK OF THE CURB TO THE FACE OF WALK SHALL PREVAIL WHEN POSSIBLE. LOCATION OF SIDEWALKS NOT CONSTRUCTED IN "STANDARD LOCATION" SHALL BE AGREED UPON BY THE ADJACENT PROPERTY OWNERS AS UNIFORMITY MUST BE MAINTAINED. THE COST OF RELOCATION OF UTILITIES, MADE NECESSARY BY THE LOCATION OF SIDEWALKS IN OTHER THAN THE "STANDARD LOCATION", SHALL BE BORNE BY THE PROPERTY OWNERS.

NOTE: PROPERTY PINS SHALL BE LOCATED BY OWNER PRIOR TO STAKING.

TYPICAL WALK SECTION
 "STANDARD LOCATION" (Exhibit C)

MARCH 01, 2003





CONSTRUCT BACK OF WALK 1' FROM THE NAIL IN THE DIRECTION OF THE ARROW.

CUT 2'-0" FROM THE TOP OF THE STAKE (NOT THE ALIGNMENT NAIL) TO THE FINISHED GRADE OF THE WALK.

FILL 2'-0" FROM THE TOP OF THE STAKE (NOT THE ALIGNMENT NAIL) TO THE FINISHED GRADE OF THE WALK.

SIDEWALK STAKING MARKINGS

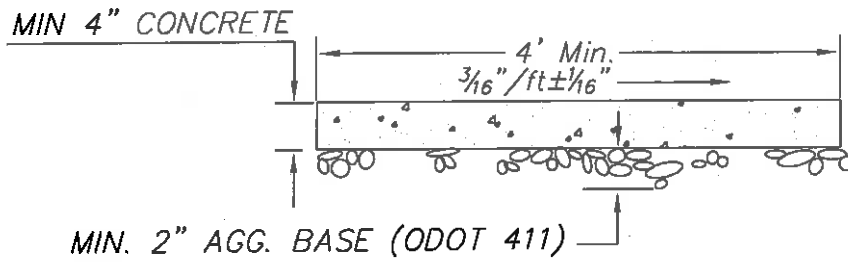
(Exhibit D)



MARCH 01, 2003

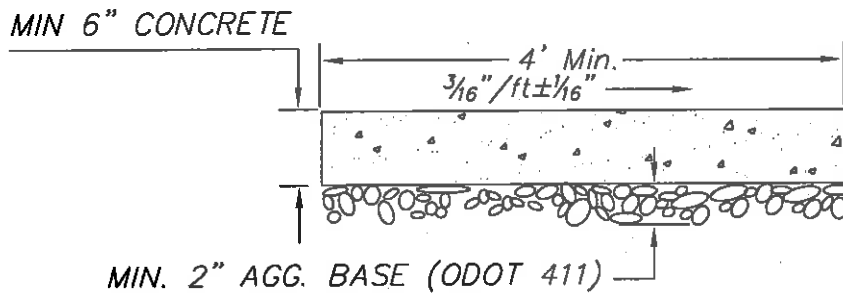


TYPICAL CONCRETE SIDEWALK



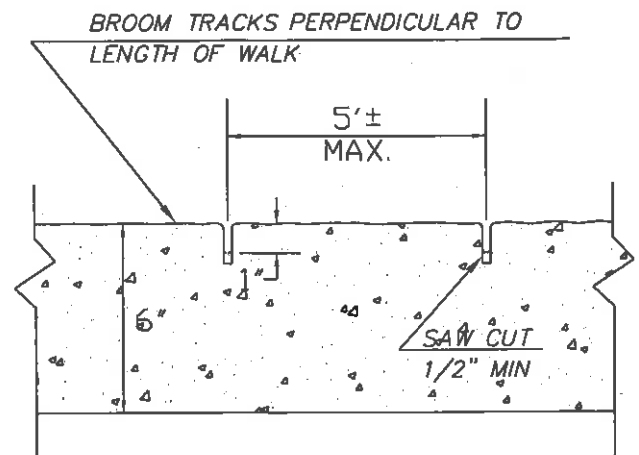
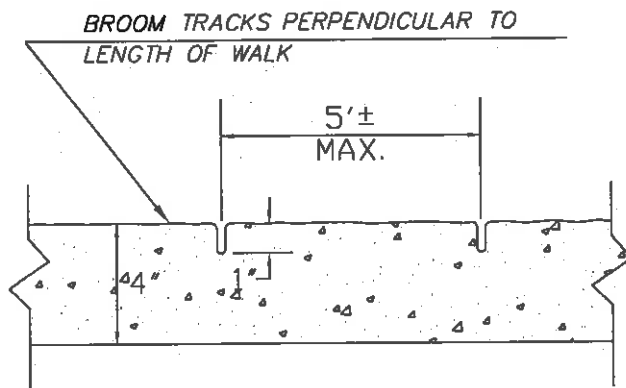
Sidewalk shall be constructed with a transverse slope of $3/16$ " per foot $\pm 1/16$ ".

CONCRETE WALK THRU DRIVES



Sidewalk shall be constructed with a transverse slope of $3/16$ " per foot $\pm 1/16$ ".

TRANSVERSE JOINTS



SIDEWALK DETAILS (Exhibit E)

MARCH 01, 2003