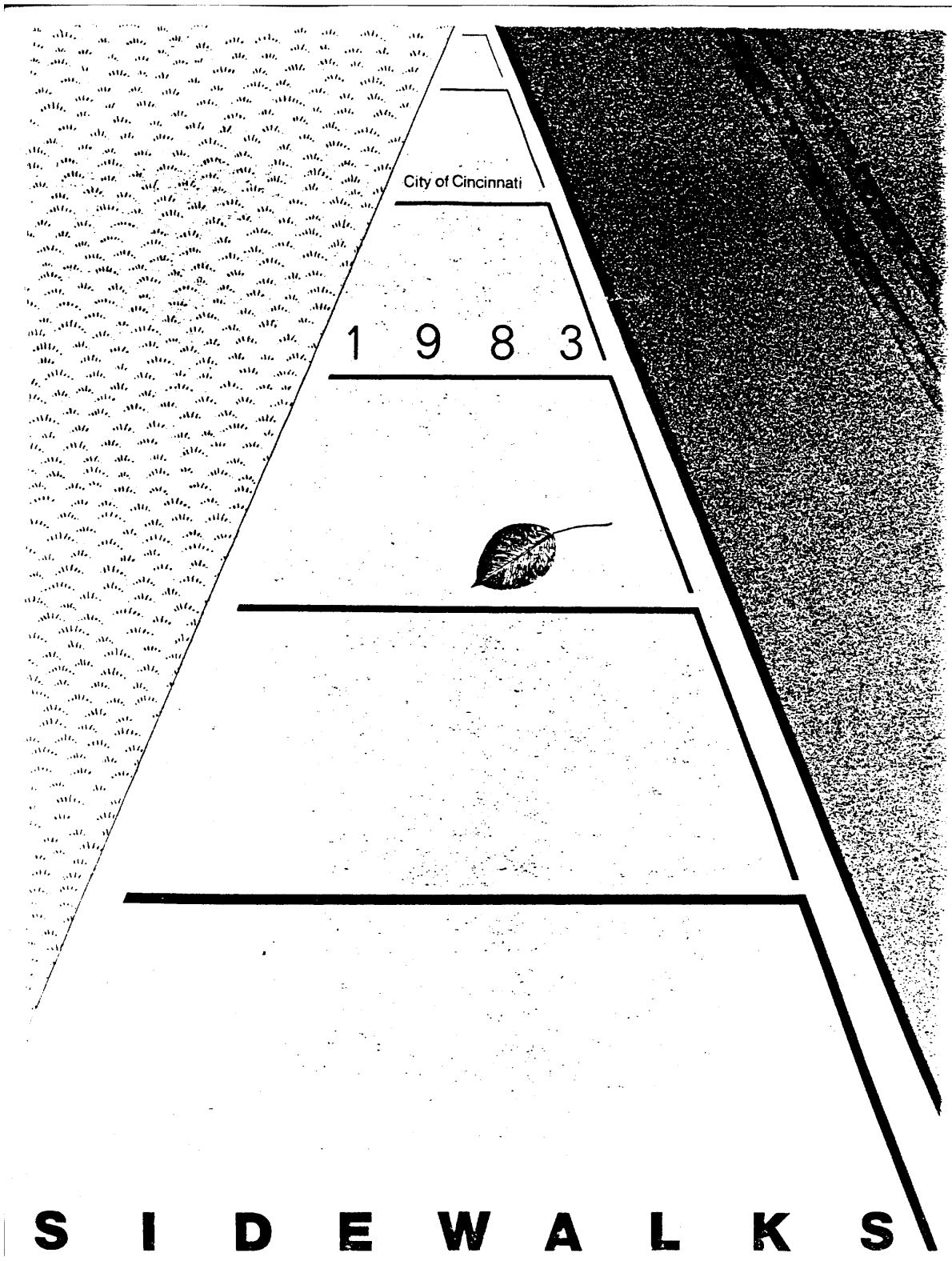
City of Cincinnati
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SIDEWALKS

CITY OF CINCINNATI

DEPARTMENT OF PUBLIC WORKS

DIVISION OF ENGINEERING

TECHNICAL SUPPORT SECTION

Specifications, Rules and Regulations Governing the Construction, Repair or Reconstruction of Sidewalks, Driveways, Curbs and Gutters in Streets, Alleys and Public Ways of the City of Cincinnati.

Cincinnati Municipal Code

Section 721-89

Cincinnati, Ohio

1983

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GENERAL PROVISIONS

This chapter of the Right-of-Way Management Manual has been prepared for the benefit of the Licensed Cement Contractors to act as a guide in constructing concrete sidewalk and driveways or other materials identified herein. It shall be understood that this chapter is not intended to replace the provisions of the current specifications of the State of Ohio and the City of Cincinnati Supplement thereto and in case of conflict the current specifications of the State of Ohio and the City of Cincinnati Supplement shall govern. Sidewalks and driveways in the street right-of-way must be constructed or reconstructed of concrete. No other material is permitted except as identified herein.

Definitions

THE CITY. The City is the City of Cincinnati, acting through its City Manager or his properly authorized agents; such agents acting severally within the scope of the particular duties entrusted to them.

THE DEPARTMENT. The Department is the Department of Public Works of the City of Cincinnati.

CITY MANAGER. The City Manager is the City Manager of the City of Cincinnati acting in his official capacity on behalf of the City of Cincinnati.

DIRECTOR. The Director is the Director of Public Works of the City of Cincinnati.

ENGINEER. The Engineer is the City Engineer of the City of Cincinnati or his duly authorized agent.

INSPECTOR. The Inspector is the authorized representative of the Engineer assigned to make a detailed inspection of any and all portions of the Work, or materials thereof.

CONTRACTOR. The Contractor is any person, firm, partnership, or corporation licensed as a cement contractor by the City of Cincinnati undertaking the construction of sidewalk and/or driveways operating under appropriate permits, acting directly or through a duly authorized representative.

SUPERINTENDENT. The Superintendent is the executive representative of the Contractor, present on the Work at all times during its progress authorized to receive and fulfill instructions from the Engineer or authorized agent and capable of superintending the Work efficiently.

Terms

Wherever, in the specifications or upon the plans, the words 'directed', 'required', 'permitted', 'ordered', 'designated', 'prescribed', or words of like import are used, it shall be understood that the directions, requirements, permission, order designation, or prescription of the City Manager is intended, and similarly the words 'acceptable', 'satisfactory', or words of like import, shall mean approved by, or acceptable or satisfactory to, the City Manager unless otherwise expressly stated.

Wherever the words 'section' or 'item' are used, it is understood that reference is being made to the current specifications of the State of Ohio and the City of Cincinnati Supplement thereto and in case of conflict the current specifications of the State of Ohio and the City of Cincinati Supplement thereto shall govern.

DECISIONS - All work conducted under these specifications, rules and regulations shall be done to the satisfaction of the City Engineer, who shall in all cases determine the quality, acceptability and fitness of the several kinds of work and materials which are to be used.

ORDERS TO CONTRACTOR - The Contractor must have on the Work at all times a foreman, superintendent, or other competent representative to whom orders and instructions may be given. Such orders shall have the same force and effect as if given directly to the Contractor.

INCOMPETENT WORKMEN - Incompetent, careless, or disorderly workmen or foremen will not be permitted on the Work, and any such shall immediately be discharged by the Contractor upon complaint by the Engineer.

LINES AND GRADES - All work done must be in accordance with the lines and grades as directed or staked out by the Engineer. The Contractor must notify the Engineer forty-eight (48) hours in advance of needing his services for laying out the Work. The Contractor shall be responsible for the protection of all stakes until permission is given for their removal.

CONDUCT OF WORK - Contractors must consult the Technical Support Section (352-3463), before constructing driveway entrances on streets which have no curb and gutter; also before doing any work which involves change of grade, or which deviates from standard practice. Contractors must obtain permits before doing any excavating, or other work, in the sidewalk space. When a walk or driveway is to be repaired, reconstructed or constructed, all gas and water stop-boxes must be adjusted to the proper grade flush with the new work.

ADJUSTMENT OF WATER STOP-BOXES - The Contractor will call the Cincinnati Water Works, 352-4653, at least 48 hours before pouring

the concrete. The Contractor will be advised as to whether or not the Cincinnati Water Works can have a crew on the job before he pours the concrete.

If the Cincinnati Water Works cannot provide a crew before the concrete is poured, the Contractor will block off a 2' X 2' square around the water stop-box and provide redlights until the Cincinnati Water Works crew takes over. This crew will adjust or replace the stop-box and concrete the 2' X 2' unpaved area.

ADJUSTMENTS OF GAS STOP-BOXES - The Contractor will call the Cincinnati Gas & Electric Company, 632-2201, at least 48 hours before pouring the concrete.

PROTECTION OF ELECTRICAL CONDUITS AND CABLES - The Contractor agrees to protect the cable and conduit and notify the Cincinnati Gas & Electric Company, 351-1216, at least 48 hours before pouring the concrete. The Contractor is held liable for any damages which may occur due to negligence on his part.

INSPECTION - No material of any kind may be used until it has been inspected, tested, and accepted by the Engineer. The Contractor must furnish all labor necessary in handling such material for inspection. All materials rejected must be immediately hauled away from the vicinity of The Work. The inspection and supervision by the City is intended to aid the Contractor in supplying only such material and in doing such work as is in accordance with the plan, profiles and specifications, but such inspection shall not operate to release him from any of his contract obligations. Materials or workmanship found at any time to be defective shall be immediately remedied by the Contractor regardless of previous inspection. If the Contractor fails to comply promptly with these requirements, the City Manager may revoke the license of the Contractor.

DEFECTIVE WORK (GUARANTEE) - The Contractor shall be required to keep all work done by him in good condition and repair for a term of one (1) year from date of inspection by the City Inspector, and any portion of The Work that becomes defective through settlement, by cracking, breaking of surface, or in any other manner, shall be removed and replaced with new work, by the Contractor, at his own expense.

CLEANING UP - As fast as the sidewalk is laid, all rubbish and surplus material which may accumulate during the progress of the Work shall be removed from the roadway, sidewalk and intersecting streets by the Contractor, and such completed portion of the Work left clean and in good condition.

NO ESTOPPEL - The City shall not be precluded or estopped by any return or certificate made or given by it, from showing at any time, either before or after the final completion and acceptance of the Work and payment therefor pursuant to any such return or certificate, the true and correct amount and character of the work done and materials furnished by the Contractor or any other person under the Contract or from showing at any time that any such return or certificate is untrue and incorrect or improperly made in any particular, or that the Work and materials or any part thereof do not in fact conform to the Plans and Specifications; and the City shall not be precluded or estopped, notwithstanding any such return or certificate and payment in accordance therewith, from demanding and recovering from the Contractor such damages as it may sustain by reason of his failure to comply with the Plans, Specifications and Contract.

RESPONSIBILITY FOR WORK - During the progress of the Work, the Contractor shall assume the risk of, and be responsible for, any and all damages to The Work, or to persons or property caused by or in any way resulting from the Work.

Instructions To Contractors

Licenses and Permits

Licenses will be issued to only those contractors of known competence and reliability to the satisfaction of the City Engineer.

Permits can only be issued to licensed cement contractors. If the Contractor is unable to obtain the permit personally, it shall be necessary that he furnish whomever he sends for a permit with a signed letter, authorizing the City to issue a permit to such a person.

Free permits must be applied for by the property owner, lessee or tenant. They cannot be requested by, or issued to a Contractor. Free permits cannot be issued for areas greater than 65 sq. ft. and only for repair of existing sidewalk. Free permits are not issued for repairs within driveway. If the property owner, lessee or tenant, desires the Contractor to handle the obtaining of a free permit, said property owner, lessee or tenant shall supply the Contractor with an application in writing before such permit will be issued. In no case will a free permit be issued until the application has been inspected and approved by a Sidewalk Inspector.

Permits must be secured before the work is started.

Inspection

The Contractor must call 352-3365, for inspection the day before he pours the concrete. The Contractor or his foreman must be on the job when the inspector arrives. If no one is on the job when the inspector arrives, it will be considered that no call was made for inspection. If because of inclement weather or for some other reason it will not be possible to have a man on the job, the Contractor is required to call and cancel his request for inspection before 9:00 A.M. Before the inspector will permit the concrete to be poured, all forms must be set, the trench for the sidewalk or driveway excavated to the required depth and the sub-grade properly prepared.

Contractor Performance Guidelines

1. Acceptable Performance - work opened, inspected, closed and approved within five working days.

2. Marginal Performance - work opened, inspected, closed and approved between six and ten working days.

3. Unacceptable Performance - work opened, but not inspected, closed and approved for a period longer than ten working days.

4. The time periods outlined in Items 1,2 and 3 above are reduced by 50% when the work is open in areas of high pedestrian traffic.

5. After five working days in a high pedestrian traffic area or ten working days in a residential area any excavated holes left open can be closed by responsible city representatives and the cost of said work shall be charged to the contractor.

Miscellaneous

MAINTAINING PEDESTRIAN TRAFFIC - Except in the case of a reinforced concrete slab over a sub-space, either the front or rear half of the sidewalk shall be removed and that portion of the sidewalk relaid. After this section has been cured and open to traffic, the remainder of the sidewalk will be removed and relaid. This is for the purpose of maintaining pedestrian traffic and at the same time not interfering with vehicular traffic by using a part of the roadway for a temporary walk. In the case of a full width reinforced concrete slab sidewalk, the Contractor will contact the Police in the district in which he is working and take what safety precautions they consider necessary.

STREET FURNITURE - The Contractor will be expected to replace all signs a minimum of 18" and a maximum of 24" from the face of the curb and parking meter stanchions or posts which he may remove incident to his work. All signs of parking meters and parking meter stanchions are to be replaced by the Contractor in the same location from which they were removed. Before removing parking

meters and parking meter stanchions, the Contractor will call the Meter Shop (352-3702) and notify the parking meter section. A representative of this Section will remove the coin heads and leave the stanchions. In cases where City forces take away both the coin heads and the stanchions the City will have the entire responsibility of replacing the parking meters and the stanchions.

COMMERCIAL DRIVEWAYS -Application for commercial driveway permits must be accompanied by a sketch plat in triplicate showing size and location of driveways, sidewalk conditions, location of poles, hydrants, inlets, and other structures near the proposed driveway. Applications for such permits must be filed with the Technical Support Section not less than five (5) days in advance of the issuance of permits, in order that the site may be inspected.

FALSE JOINTS - Sidewalks are primarily blocked off with a jointer to provide a weakened cross section so that any cracks which develop in the concrete will normally occur in the joints and will not be noticeable. It is, therefore, imperative that the joints be of sufficient depth. When blocking a sidewalk the jointer shall leave a clean groove at least one half of an inch deep and no more than one quarter of an inch wide at the top.

ABANDONED FEATURES - Where a permit is issued for the construction of a driveway or the repair of a driveway or sidewalk, it shall be necessary for the Contractor to replace all defective sidewalk abutting the property for which permit is issued. Abandoned driveways, areaways, and other abandoned conveniences in the sidewalk shall be removed and the sidewalk restored whether indicated on the permit or not. Curb shall be restored by the Contractor in the case of an abandoned driveway. Whenever it is necessary to restore granite curb at an abandoned driveway, such restoration shall be made only by the City Forces unless permission is otherwise granted by the City Engineer. Where the City Forces restore granite curb, a sufficient deposit to cover the estimated cost of such work will be required.

DRIVEWAY APRONS ABUTTING ROLLED CURB - It is not considered necessary to cut rolling curb.

APPROVED MATERIALS - No materials other than concrete will be allowed to be placed between the curb and existing walk or between the street property line and existing walk in cases where sod areas are to be paved.

LINE AND GRADE - Contractors are particularly cautioned not to change the grade or slope of sidewalk or driveway entrances without first obtaining permission to do so from the Engineering Technical Support Section. In obtaining a permit, the Contractor assumes entire responsibility that the Work will be done according to these specifications. He cannot pass this responsibility on to the owner of the property or anyone else.

CONSTRUCTION SPECIFICATIONS

Grading

Where the surface of the ground will be higher than the finished grade of the walk, the Contractor shall do the necessary excavation to meet the finished grade of the sidewalks. Such grading shall include the necessary slopes.

If the original surface of the ground is below the subgrade of the walks, the Contractor shall make an embankment on which to place the walk; such embankment shall be placed in four (4) inch layers, each layer thoroughly rolled or tamped; the width shall be directed by the Engineer. After the walk is laid the areas on each side shall be filled and finish graded as directed by the Engineer.

Work Near Street Trees

In situations where the base of a tree has grown over the top of sidewalk that is to be removed, the concrete shall be removed from beneath the tree without disturbing the tree. New concrete shall be placed within the void, expansion paper placed and the walk brought to finished grade. In no case should the wood be trimmed back without the written permission of the Urban Forest Manager.

Work that is being done within 15 feet of a City tree (any tree within public right-of-way) requires a permit for such work that is issued by the Urban Forest Manager. If after removal of sidewalk blocks a tree root is located under the walk area and if that root is 4 1/2" in diameter or greater the Urban Forest Manager must be called to inspect the root. The Urban Forest Manager will decide if the root may or may not be cut. The Urban Forest Manager will give the contractor a written copy of the decision which must be presented to the Public Works Inspector at the job site before pouring concrete. Failure to comply with the above procedure will result in the contractor assuming liability for the affected tree as the law directs. The Urban Forest Manager may be reached at 352-4084 from 8:00 A.M. to 5:00 P.M., Monday through Friday.

PORTLAND CEMENT CONCRETE WALKS

This item shall cover the construction of portland cement concrete walks and portland cement concrete handicap ramps as shown on the Plans or as directed by the Engineer. The walks shall be 5 inches thick and of one course construction, being laid directly on the prepared subgrade. They shall be composed of Class "C" concrete.

Construction

Excavation for the walk shall be made to a depth of five (5) inches below the proposed finished grade, and to a width of three (3) inches more on each side than the width of the proposed walk. All tree roots exposed by excavation shall be cut off at least

three (3) inches outside the lines of the new walk and three (3) inches below the subgrade, provided such approval has been received from the Urban Forest Manager as identified under "Work Near Street Trees" above. After having been evenly fine graded, the subgrade shall be thoroughly compacted with a 5 ton roller. Where the use of a roller is impracticable, the subgrade shall be compacted by heavy tamping. If springs are encountered, drains shall be laid as directed by the Engineer.

Forms may be either steel or sound two (2) inch plank and shall be straight, true and clean. The forms shall be set true to line and grade and firmly staked down. Where curved walks are required, thin strips or forms that will produce a smooth, regular curve shall be used. The alignment, elevation and slope of all walks shall be subject to special directions from the Engineer. Full-width walk at its junction with the curb shall usually be 1/4 inch above the curbing. Also, the slope of full width walk shall be 5/16 inch per foot up from the curb to the building line. Any variation from these details will be shown on the Plans or as directed by the Engineer.

Concrete for portland cement concrete walks shall be of plastic consistency and shall be placed on the prepared subgrade in one operation. It shall be struck off and truly straightened, then neatly hand floated until all coarse aggregate is entirely covered. Before the concrete sets, the surface of the walk shall be cut into blocks with a jointer, and the edges tooled until they are firm and smooth. The blocks shall be cut to straight lines generally rectangular, measuring usually not less than two (2) or more than five (5) feet on the side. The design of the blocking shall be subject to special direction of the Engineer. After the walk has been blocked out, the concrete shall be carefully floated to a smooth and uniform surface. The margin of each block shall then be tooled with the edger or jointer to a smooth, dense finish. These final edger or jointer marks shall not be floated out. See suggested sizes for blocking sidewalks on Pages 26, 27 and 28.

Around street and stop sign posts, the walk shall be blocked out in one (1) foot squares. Around utility poles, the walk shall be blocked out in two (2) foot squares.

Expansion joints shall be provided at such intervals, not exceeding thirty (30) feet, as the Engineer may direct. Joints shall be made of preformed material, 1/2 inch thick and five (5) inches wide, meeting the requirements of Item 451.

The same type of joint shall be constructed at all joints between the new walk and the curb, between the new walk and all new entrance walks and driveways and between the curb and all new entrance walks. Also the same kind of material 1/4 inch thick and five (5) inches wide shall be installed around all poles, fire hydrants, cellar holes, inlets, etc. Where cement walks are laid along steel faced curbs, expansion joints shall be installed in conformity with the joints in the curbs. The breaking or

displacement of curbs or the buckling of walks due to lack of proper expansion joints shall be made good by the Contractor at his own expense.

It is understood that all work must connect with the adjoining work in a reasonable manner, to the satisfaction of the Engineer.

Portland cement concrete walks shall be cured in strict accordance with the provisions of Sec. 451.10 which are so follows:

Curing

Immediately after the finishing operations have been completed and after the free water has disappeared, all exposed surface of the concrete shall be sealed by spraying thereon a uniform application of curing membrane in such a manner as to provide a continuous uniform film without marring the surface of the concrete. The material shall be applied with an approved self-propelled mechanical sprayer. Wind protection to the spray fog shall be provided by an adequate shield. A minimum of one gallon of material shall be used for each 150 square feet of surface treated. Curing material shall be thoroughly agitated immediately prior to use.

On small or irregular areas which are inaccessible to the mechanical spray machine, the curing material may be applied by a hand spray.

As soon as the forms have been removed, any honeycomb areas shall be immediately corrected and the edges of the pavement coated with the curing material. Any areas of pavement film that may have been damaged during the sawing shall be resprayed during this operation.

Concrete placed after October 31 and prior to April 1 shall be cured by use of resin base curing compounds, or burlap mats, waterproof paper, polyethylene sheeting or waterproofing curing blankets. Curing shall be applied as soon after the finishing operations as possible without marring the surface of the concrete. The entire surface of the top and sides of the newly placed concrete shall be covered and maintained covered for seven days, unless specimen beams have attained a modules of repture of 600 psi.

The Contractor shall be responsible for protecting the concrete from freezing until beams attain a strength of 600 psi.

The above requirements for curing are minimum requirements only. Any concrete showing injury or damage due to inadequate curing shall be repaired or replaced by the Contractor at no additional cost.

Concreting in Cold Weather

When the temperature is below 40 degree F., or predicted to go below 36 degree F. in the next 24 hours, or predicted to go below 32 degree F. in the next 72 hours, no concrete pavement shall be poured without the express permission of the Engineer. Permission so granted shall be for the day and location in question only and must again be requested on subsequent days when the temperatures are as above. When such permission is granted, the following requirements must be met:

A notarized letter of release from property owner of responsibility for concrete durability.

No concrete shall be poured until adequate covering material is on the site and a sufficient number of workmen are present to expedite the finishing and covering to keep both as close behind spread as is practicable.

All forms shall be cleaned of all frost. In no case shall concrete be poured on frozen ground or subgrade on which there is frost.

Finishing Up

The Contractor shall, after removing the strips used in screening the walk, fill the spaces left by the removal with fine earth well compacted. When there is a lawn space between curb and walk, this shall also be neatly dressed to conform to grade of walk and curb. The earth shall also be well banked against the property line side of the walk.

REINFORCED CONCRETE WALKS

Reinforced concrete walks shall be constructed according to plans approved by the City Engineer. Such walks shall be designed to carry a live load of 250 lbs. per square foot or an 8000 lb. concentrated load, whichever produces the greatest stress. Concrete shall be proportioned, mixed and laid as specified for one course walks. Such walks shall not be cut into blocks.

TEMPORARY SIDEWALKS

Where, due to unusual conditions, it is impractical to lay a one course concrete walk as herein specified, the City Engineer may, at his discretion, permit a rough concrete or bituminous concrete walk to be constructed.

ROUGH CONCRETE WALKS

This walk shall consist of a layer of Class "C" concrete three and one-half (3 1/2) inches in depth. The walk shall be laid to conform as nearly as possible to the longitudinal profile of the

ground, but the cross slope shall be as specified for finished walks. Rough side forms shall be used to retain the concrete. No fine finish will be required, but the walk shall be well tamped and screened to correct depth and with all coarse aggregate well buried. To prevent excessive cracking and to allow close conformity with longitudinal profile of the ground, the walks shall be divided by 1/4" thick plates or boards into separate blocks five (5) feet in length; the plates or boards to be subsequently removed.

The rough concrete walks shall be cured in strict compliance with Sec. 451.10.

BITUMINOUS CONCRETE WALKS

Excavation, preparation of the subgrade and setting of the forms shall conform to the requirements of Item 608 except that the forms shall be six (6) inches high. The cinder base shall be uniformly four (4) inches in thickness and well compacted by rolling or by heavy tamping. The wearing surface shall be composed of bituminous concrete meeting the requirements of Item 404. It shall be two (2) inches in thickness after compaction and shall be rolled to a smooth, dense and even surface. All rolling shall be done with a hand roller about three (3) feet wide and weighing at least 300 pounds.

CONCRETE DRIVEWAYS

This item shall cover the construction of portland cement concrete driveways wherever ordered by the Engineer. The concrete for driveways shall be Class "C". The driveways shall be seven (7) inches thick and of the length and width ordered by the Engineer. The driveways shall be constructed in strict accordance with the Standard Drawings on file in the Engineer's office which show the details of construction along the various types of curbs.

Construction

Excavation shall be made and the subgrade shall be evenly fine graded and solidly compacted with a 5-ton roller. Where the use of a roller is impractical, the subgrade shall be compacted by heavy tamping. Forms may be of either steel or sound two (2) inch plank, and they shall be straight, true and clean. The forms shall be set true to line and grade firmly staked down and well braced. Concrete shall be placed in accordance with the requirements of 451.06 and shall be given an even and uniform float finish. Preformed expansion joint filler one-half (1/2) inch thick shall be placed on both sides between the driveway and walk and the driveway and the curb. If the driveway is over 30 feet long, the joint filler along the curb shall be one (1) inch thick.

Concrete driveways shall be cut into blocks, the same as a walk and shall be cured in strict accordance with the provisions of Sec. 451.10.

DRIVEWAY CONSTRUCTION ON UNIMPROVED STREETS WITH OR WITHOUT DRAINAGE DITCHES

Driveways must be shaped to conform to existing drainage ditches and/or drainage piping be installed as required. Drainage piping installed under driveways must be 12 (twelve) inch corrugated pipe constructed of non-rusting material. Any construction of or modifications to drainage systems must be per approval of the Engineer in accordance with Municipal Code 721-63 and 721-65.

BITUMINOUS CONCRETE DRIVEWAYS

The driveway shall be constructed in three courses and shall have a total depth of ten (10) inches. The first and second courses shall each have a depth of four (4) inches after compaction, and shall be composed of broken stone or concrete, old macadam or brick bats free from dirt and debris.

Construction

Excavation shall be made and the subgrade shall be evenly, fine graded and solidly compacted with 5-ton roller. Where the use of a roller is impractical, the subgrade shall be compacted by heavy tamping. Forms ten (10) inches high shall be set true to line and grade and firmly staked down. They shall be well supported with earth placed against the back of the forms. The material for the base shall be spread in two layers of uniform thickness and rolled to solid compaction. As the rolling progresses, each course shall be choked with limestone screenings or fine loamy sand. The completed base shall be solidly compacted and shall have a smooth and even surface. The bituminous concrete top shall be two (2) inches in thickness after compaction and shall be constructed in strict accordance with the provisions of Item 404.

CURB INTEGRAL WITH WALK

This curb shall consist of at least a nine (9) inch by eleven (11) inch lug under the outer edge of the walk and shall conform exactly to the detail shown on drawing Accession No 5585 or as specified by the Engineer. The curb shall be composed of Class "C" concrete. The outer side of the walk and lug curb shall be finished to a depth of six (6) inches below the walk surface.

Curing shall be done in strict compliance with the provisions of Sec. 451.10.

STANDARD FOR DECORATIVE BRICK PAVER SIDEWALK IN THE CORE OF THE CENTRAL BUSINESS DISTRICT

CONCEPT

Image

The purpose of developing and implementing a decorative brick paving system within the core of the CBD of Cincinnati is:

- to separate the image of the core of the CBD from the rest of the City.

- to unify blocks within the core that contain buildings of varying architectural styles.

- to maintain pedestrian safety on public sidewalks.

- to provide a sense of visual continuity to pedestrians.

- to minimize clutter by collecting and organizing a wide variety of elements located on the sidewalk.

- to contribute to the development of the Downtown.

PATTERN

Subdivision of Space

The decorative brick paving sidewalk pattern is composed of two primary areas: the collector strip, and the field.

The Collector Strip

The collector strip is an area at the curb side of the sidewalk between the vehicular and the pedestrian traffic. It is developed to create a unified location for existing street furniture and to provide a location for the future addition of street furniture.

The normal width of the collector strip shall be four (4) feet measured from the back of the existing curb. The maximum width of the collector strip shall be one-third (1/3) the distance between the curb and the building line, or, in the case of recessed arcades, the right-of-way line. The minimum width shall be three (3) feet.

Collector strips stop at the tangent point of the radius of the intersection or street corner.

Collector strips shall be a contrasting color to the field panels and should be the same material as the field grid lines. In some situations, collector strips may be the same color as the field panel provided they are separated by the contrasting color of the field grid lines.

The collector strips shall contain light poles, trees, parking meters, utility manholes, valve covers, grilles, pull boxes, fire hydrants, newspaper racks, street sign poles, etc.

Collector strips shall accommodate mid-block cross walks by providing a clear zone or path (free of street furniture) to the other side of the street.

The Field

The field is the area between the collector strip and the building line or the right of way line. This is the main area of pedestrian traffic.

The field shall be subdivided with field grid lines. Field grid lines perpendicular to the street may vary in size from 16" to 24" wide. Perpendicular field grid lines shall extend unbroken from the collector strips to modulating architectural elements of the building facade, i.e., pilasters, columns, etc. Field grid lines running parallel to the street may vary in size from 8" to 12" wide.

Field grid lines shall be the same material as the collector strip unless the collector strip is the same material and color as the field panel. In these cases, the field grid lines shall be a contrasting color and shall isolate the field panel and collector strip. (see Plan Accession # 22509 and Plan Accession #22510 - CBD Brick Paving Pattern types 1 and 2 respectively).

The field panels defined between grid lines can be of varied lengths measured parallel to the street. These field panels must be a dark brick paver material.

The field panel and the collector strip should primarily consist of 8" X 8" pavers. The patterns of each element (panel and collector) should acknowledge adjacent contrasting materials, colors or elements, (tree grates, surrounds, field grid lines, concrete curbs, building facades or property lines), by reducing the size of the paver as the adjacent element is approached.

In certain locations limited variations to the standard paving pattern may be permitted. These variations may only occur within the confines of the field panel, provided the pattern or the material variation is subtle in nature and does not promote:

-an illusion of depth.
-a curvilinear circular or fan like pattern.

-an irregular distorted perspective.
-a contrasting chromatic variation.

Value judgements as to the appropriateness of variations in the field patterns are to be made on a case by case basis and approved by the Public Works Department and the City's Principal Architect/Urban Designer.

Acceptable patterns of the decorative brick paver sidewalk design may be seen in Plan Accession # 22509 and Plan Accession #22510 - CBD Brick Paving Pattern types 1 and 2 respectively, contained within this section.

Upper Level Concourse (Skywalk)

The paving materials used in the upper level concourse or skywalk will duplicate those used at grade. This duplication is intended only for those concourses which are exterior. Interior concourses will utilize flooring materials compatible with the building's interior design. Carpet is the preferred interior flooring material but if paving materials are used they should relate to the exterior materials used at grade.

MATERIALS

Basic Material

The basic material for the field panel paving within the CBD is brick, the color is mulberry, the face is wirecut and the thicknesses shall range from 2 1/4" - 2 1/2" to be used on corners to 1 1/4" - 1 1/2" for use in general sidewalk areas. The product is manufactured by Whitacre-Greer, Waynesburg, Ohio 44688. Detailed specifications on the brick itself may be obtained from the City's Office of Architecture and Facility Management, Dept. of Public Works. The mulberry brick paver material must be used as the primary material in the field. Three sizes are permitted within the field pattern: 3-5/8" X 3-5/8"; 3-5/8" x 7-5/8"; and 7-5/8" x 7-5/8".

Secondary Material (Field Grid Lines and Collector Strips)

Brick, granite, stone or pre-cast concrete of a contrasting color shall be used as field grid lines and may be used as collector strip materials.

Number of Variables Within the System

Two(2) colors of brick, one of which is mulberry are desirable. One color of brick, one of which is mulberry, and one contrasting color of stone, granite or precast concrete is permitted. All colors must be compatible with the mulberry color range.

APPLICATIONS

All applications of the decorative brick paving material shall be constructed utilizing a double slab construction. The bottom slab shall be structural, the top slab shall contain the decorative pavement. There shall be a bond break and/or a waterproof membrane between the two slabs.

The structural slab shall be three and one half (3 1/2) inches to five (5) inches below the proposed finish grade of the decorative brick pavement.

Brick

Brick pavers of 2-1/4" to 2-1/2" thickness shall be used on the corners, intersections, driveways, or areas where truck traffic is expected. Brick pavers of 1-1/4" to 1-1/2" in thickness shall be used in areas where pedestrian traffic is expected.

Mortar

Mortar shall be natural in color. Tinted mortars are not permitted.

Caulking and Expansion Joints

Caulking and expansion joint material shall either be the color of the brick paver or the mortar joint. Standard black or gray materials are not compatible with the decorative brick paving system.

Handicapped Ramps

Handicapped ramps should be constructed of brick pavers. They are not considered as part of the collector strip. The design of handicapped ramps is defined by the City of Cincinnati Division of Engineering Drawing Acc. No. 22333.

Driveway Construction

Standard drive construction within the decorative brick paver sidewalk system shall be concrete for the driveway apron and 2-1/4" - 2-1/2" brick pavers in the sidewalk area. Special driveway aprons of brick pavers may be constructed provided the pattern acknowledges the driveway and that pavers of 2-1/4" - 2-1/2" in thickness are used.

Laying the Brick Paver

Pavers set in the collector strip or field should be laid perpendicular to the curb except at corners/intersections where the bricks shall follow the radius of the corner and generally maintain a 90 degree relationship to the curb, unless an exception is granted by the Public Works Department and the City's Principal Architect/Urban Designer.

HEATING SYSTEM INSTALLATIONS IN PUBLIC SIDEWALKS AND DRIVEWAYS FOR SNOW MELTING

General

No installation of radiant heating pipes, or electric heating cables in or under any public sidewalk or driveways space may be made except by written permit of the City Engineer. The application for such permit shall be accompanied by a plan showing the location of the sidewalk or driveway where the installation is proposed, the location, size and grades of all piping or cables, and location of proposed expansion joints in sidewalk and piping cables. Attention is called to to the fact that issuance of a permit does not estop the City or any legally franchised utility companies from making any necessary cuts in the sidewalk or driveway for installation, repair or removal of any public utilities, sewers, water mains, house connections or service branches, or render the City or utility companies liable for any damage to such piping or cable installations by reason of said cuts.

The City assumes no responsibility for the adequacy of the design of the piping or cable installation as a heating unit or snow melting system. The applicant should protect himself in this respect by consulting a competent heating engineer.

Suggestions for Design of System

It is suggested that the system be designed to melt snow at a minimum rate of one inch per hour. Because of the susceptibility to corrosion of pipes, it is suggested that full consideration be given to the use of corrosion resistant piping. The use of intermittent steam is not recommended as a heating medium. Experience shows that the temperature of the condensate falls rapidly to the freezing point when such a system is started in cold weather. If a hot water system is used, consideration should be given to the use of an anti-freeze admixture with the water, and provision made for the positive drainage of the system when not in operation.

Location of Pipes

Radiant heating pipes or cables may be installed within four (4) inches (clear) of the top of an unreinforced concrete sidewalk or driveway and one inch (clear) above the bottom. Parallel runs of pipe or cable shall not be spaced closer than 24 inches apart, center to center, in order to permit easy access to utilities located under the sidewalk or driveway. In order to ensure that all the heating pipes are surrounded by concrete it will be necessary to support the pipes on small concrete blocks or steel rod supporting saddles or chairs. No pipe or cable shall be installed closer than three(3) feet to the curb line. No pipe or cable shall be located closer than two (2) feet to a fire hydrant.

Thickness of Sidewalk or Driveway Slab

The minimum thickness of a concrete sidewalk shall be five (5) inches, and of a concrete driveway seven (7) inches. This minimum thickness shall be increased in order to provide a minimum thickness of four (4) inches (clear) over the top of any pipes or cables and a minimum of one inch (clear) below the bottom of any pipes or cables imbedded in the walk or driveway.

Expansion Joints

The sidewalk or driveway shall be provided with 1/2 inch wide expansion joints longitudinally and transversely as required in the current specifications of the State of Ohio and the City of Cincinnati Supplement thereto and in case of conflict the current specifications of the State of Ohio and the City of Cincinnati Supplement thereto shall govern. Positive provision, acceptable to the City Engineer, shall be made to permit expansion and contraction of the pipe or cables at the expansion joints in the slab.

Reinforced Concrete Sidewalks or Driveway

In reinforced concrete sidewalks or driveways over the sub-sidewalk space the pipes or cables may be encased in the reinforced concrete slab or suspended beneath it. If encased in the slab the same provisions shall apply as to minimum depth off covering over and under the pipe or cable and proper provisions for expansion as specified above for reinforced slabs.

Radiant Heating Markers

A small brass plate shall be installed in the surface of the sidewalk at each end of the sidewalk where radiant heating pipes or cables have been installed. These brass plates or markers shall be marked "Radiant Heating" and have an arrow pointing to the sidewalk area having radiant heating pipes or cables.

General Specifications to Apply

Except as expressly modified herein, all the provisions of the current specifications of the State of Ohio and the City of Cincinnati Supplement thereto and in case of conflict the current specifications of the State of Ohio and the City of Cincinnati Supplement thereto shall govern.

CRITERIA FOR CONDEMNING SIDEWALKS

1. Any block having a crack or cracks in it more than 5/8" wide.

2. Adjoining blocks or portions thereof whose edges differ vertically by more than 5/8".

3. Blocks that have holes in them 5/8" or more in diameter or are cracked and broken so that pieces are missing or loose.

4. Blocks having depressions, reverse cross-slope (sloping away from the street) or below curb grade so as to impound mud or water.

5. Blocks having a cross-slope in excess of 3/4" vertical per one foot horizontal.

6. Blocks that cause an abrupt change in the longitudinal grade of the sidewalk.

7. Blocks that are ravelled; i.e., the surface has spalled leaving it very rough with the coarse aggregate protruding.

8. Cellar doors and coal hole covers that are not flush with the sidewalk, or have a smooth surface, or projecting hinges, or are structurally unsafe and which project more than 15" into the public right-of-way. The exceptions to this rule are:

   a. All non-conforming coal hole covers must be replaced when located in a narrow full-width sidewalk.

   b. Neither cellar door or coal hole covers, provided they are structurally sound, need be replaced if protected by steps projecting into the sidewalk.

9. Cellar gratings that have opening measuring more than 5/8", or project above the sidewalk, or are structurally unsafe and which project more than 15" into the public right of way. The exceptions to this rule are:

   a. All non-conforming cellar gratings must be replaced when located in a narrow full-width sidewalk.

   b. Cellar gratings need not be replaced if protected by steps projecting into the sidewalk provided they are structurally sound.

10. Any natural stone slabs, steel plates (other than approved covers over cellar openings), or prismatic lights used as sidewalk over a sub-grade.

11. Defective columns or beams supporting a sidewalk slab over a sub-grade.

12. Sidewalk material placed without prior approval through the granting of a revokable minor street privilege.

13. Sod area between the sidewalk and street that protrudes above the sidewalk and impounds water or causes it to drain along the sidewalk, in such cases the condition should be corrected by lowering the sod. In cases where the sod area on either

side of the sidewalk is below the grade of the sidewalk, a fill should be made and the area either sodded or seeded.

14. Stumps, stones, private sign posts or any other unauthorized obstruction in the sidewalk space.

15. Trees, bushes or shrubs that overhang the sidewalk. Tree limbs should be trimmed to at least eight feet above the sidewalk after obtaining permit from the Urban Forest Manager. Bushes or shrubs should be trimmed so as not to overhang the sidewalk even after a rain.

16. Water stop-boxes, gas stop-boxes, etc., that are not to proper grade.

CRITERIA FOR CONDEMNING DRIVEWAYS

1. Any driveway having a crack or cracks in it more than 5/8" wide.

2. Driveways that differ vertically by more than 5/8" either above or below the sidewalk.

3. Driveways that are cracked or broken or have holes larger than 5/8" in diameter.

4. Driveway entrances within the street right-of-way constructed of materials other than concrete on an improved street, (a street with curbs), that have been placed without prior approval through the granting of a revokable minor street privilege.

5. Driveway entrances within the street right-of-way constructed of materials other than concrete or bituminous concrete on an unimproved street, (streets not having curbs), that have been placed without prior approval through the granting of a revokable minor street privilege.

6. Step-down driveways; i.e., having vertical curbs so that the construction is similar to an improved alley intersection.

7. Driveways that are dipped across the sidewalk so as to create an abrupt change of grade. This condition normally exists where the driveway at street edge of the sidewalk has been held several inches below the grade of the sidewalk and the transition from the driveway to sidewalk grade is accomplished in a very short distance.

8. Abandoned driveways. Curb to be restored only if sidewalk abuts curb or if abandoned or unimproved driveway is being used illegally.

DRIVEWAY REGULATIONS

Driveways Across Sidewalks

The construction, reconstruction and repair of driveways across sidewalks shall be subject to C.M.C. 721-131 to 721-145 inclusive.

Permit and Supervision

A permanent driveway across a sidewalk shall not be constructed, reconstructed, or repaired until a permit is obtained from the Technical Support Section.

Construction

The construction or reconstruction of a driveway from the paved roadway to the private property shall be not less than seven (7) inch concrete slab of Class "C" mix. All commercial driveways shall be adequate to carry the load to which they are subjected, but no driveway shall be less than seven (7) inches thick of a Class "C" mix. Detailed plans, in triplicate, of the proposed construction or reconstruction, may be required showing lot lines, street curb lines, street inlets, or public utility structures which may be affected by, or which are immediately adjacent to the proposed driveway, and such other information as may be necessary, all of which shall be subject to the approval of the City Engineer.

Width

Driveway entrances shall have a width of not less than 15 feet nor more than 35 feet measured at the curb line. No driveway entrance shall be constructed as step down driveways, i.e., having vertical curbs. Multiple driveway entrances will be permitted where necessary and with the approval of the City Engineer, but not to exceed a width of 35 feet measured at the curb line for each multiple driveway entrance, provided, however, that such multiple driveway entrances shall be separated by pedestrian safety islands; said safety islands to be in whole units of car parking spaces, as follows: 28 feet, 48 feet, 68 feet, or any additional number of 20 foot spaces. In no case can more than 60% of the property frontage be used for driveway purposes.

Depth

Driveways across sidewalks shall have a depth on the abutting private property adequate to permit a vehicle to completely clear the sidewalk right-of-way so that no part of the vehicle shall remain on or project over such right-of-way. Where such driveway enters a building, the garage provisions of the Building Code will apply. Where such driveway enters a parking lot, provisions must be made for cars to turn around and head out.

Barriers at Street Property Line

Where driveways serve other than residence property, driving thereover in the sidewalk area shall be confined to a width measured at the property line not greater than the width at the curb line, by the construction of suitable curbs or barriers; said curbs or barriers to be constructed of concrete, wooden timbers or other suitable materials, permanently and firmly set or anchored in the ground. Said curb or barrier shall extend at least seven (7) inches above the surface of the ground or paved area. In cases where the private property is used for parking vehicles in a position other than parallel to the street property line, these curbs or barriers shall be located or constructed as to prevent any part of the parked vehicles from extending over the sidewalk area. The location, specifications and termini shall be subject to the approval of the City Engineer.

Layout

Driveway near street intersections where the angle between the street lines is 40 degrees or less, shall be constructed so that the end of the curb cut nearest the intersection is not closer than 2 feet from a point at right angles to the street line at the point of streets line intersection, and where the angle between the streets is 80 degrees or more , shall not be closer than 4 feet. For angles between 40 degrees and 80 degrees the distance shall vary proportionately. The 4 foot distance shall be maintained for angles up to 100 degrees, and for angles of 140 degrees or more shall not be less than 14 feet. For angles between 100 degrees and 140 degrees, the distance shall vary proportionately.

Where residential driveways are serving interior lots, the curb cut shall not extend beyond a line drawn at right angles to the street line at the corner of the lot.

Where driveways, other than residential driveways, are serving interior lots, the curb cut shall not extend beyond a line drawn at right angles to the s street line at the corner of the lot, and the line of the driveway shall be not closer than 3 feet to said line drawn at right angles to the street line at the corner of the lot at a point 3 feet back of the curb line. From this point to the property line the driveway will not be less than 3 feet from the line drawn at right angles to the street line at the corner or the lot. Driveways may be constructed at an angle not less than 60 degrees with the curb line.

No driveway entrance shall interfere with municipal facilities such as streetlighting pole, traffic signal standards, signs, catch basins, hydrants, crosswalks, bus-loading platforms, bus stops, utility poles, fire alarm supports, underground pipes or ducts or other necessary street structures. Arrangements will have to be made with the proper authority for the adjustment or relocation of the facility affected before a driveway permit will be issued. In no case will it be permissible for a curb cut to be located

closer than 3 feet to any pole, inlet, etc.; i.e., no part of the pole, inlet, etc., shall project within the space between the curb cut and a line drawn at right angles to t the curb 3 feet from the curb cut as measured along the curb.

Filling stations, industrial or business buildings requiring direct entrances for two or more lanes of traffic shall have their driveway layouts approved by the City Engineer before receiving their building permits.

Where the owner of any premises, existing or proposed building or structure, contemplates constructing or reconstructing a driveway at the same time as constructing or making alterations to a building or structure, or any other time, he shall have the driveway layout approved by the City Engineer before constructing the driveway before a building permit is issued.

Grade

Residential Driveway: Where the property to be served by the proposed construction or reconstruction of a driveway abuts on a street on which the curb is of the vertical face type and the walkway is located with its outside edge not less than 3 feet from the curb line, the driveway shall ramp from the grade at the edge of the walkway to a grade not less than 1 inch above the gutter grade. Across the walkway and for at least one foot farther towards the street property line, the grade of the driveway shall coincide with the cross grade of the walkway, except that on major or secondary thoroughfares the grade of the walk shall be maintained to the property line. On improved streets where there are no walkways, the standard walkway grade shall be carried to the street property line. On streets having no curbs or walkways, the traveled roadway shall be considered the established grade and the slope of the driveway from the roadway to the street property line shall rise at the rate of 1/2 inch per foot.

Where the outside edge of the walkway is less than 3 feet from the curb line, the grade of the driveway shall attain the sidewalk grade in not to exceed that distance (3 feet). In special cases of narrow walkways laid contiguous to the back of the curb, the length of the ramp to gutter shall be decreased to permit not less than a 3 foot walking space. In case of full width sidewalks, the cross grade of the walkway shall be maintained to the street property line.

Non-residential Driveway: The above provisions for residential driveways shall apply except that in all cases the cross grade of the walkway shall be maintained to the street property line.

Modifications

If, at any time it is found that the driveway provisions set forth in the preceding sections are impracticable for a particular case, the City Engineer shall be authorized to modify the strict

application of the same, so as, on the one hand, to provide for the safety and convenience of the public, and on the other hand, to avoid undue hardship on the owner, in harmony with the purpose of said sections.

Where an owner is dissatisfied with the modifications authorized by the City Engineer, he may appeal to the City Manager, whose decision shall be final.

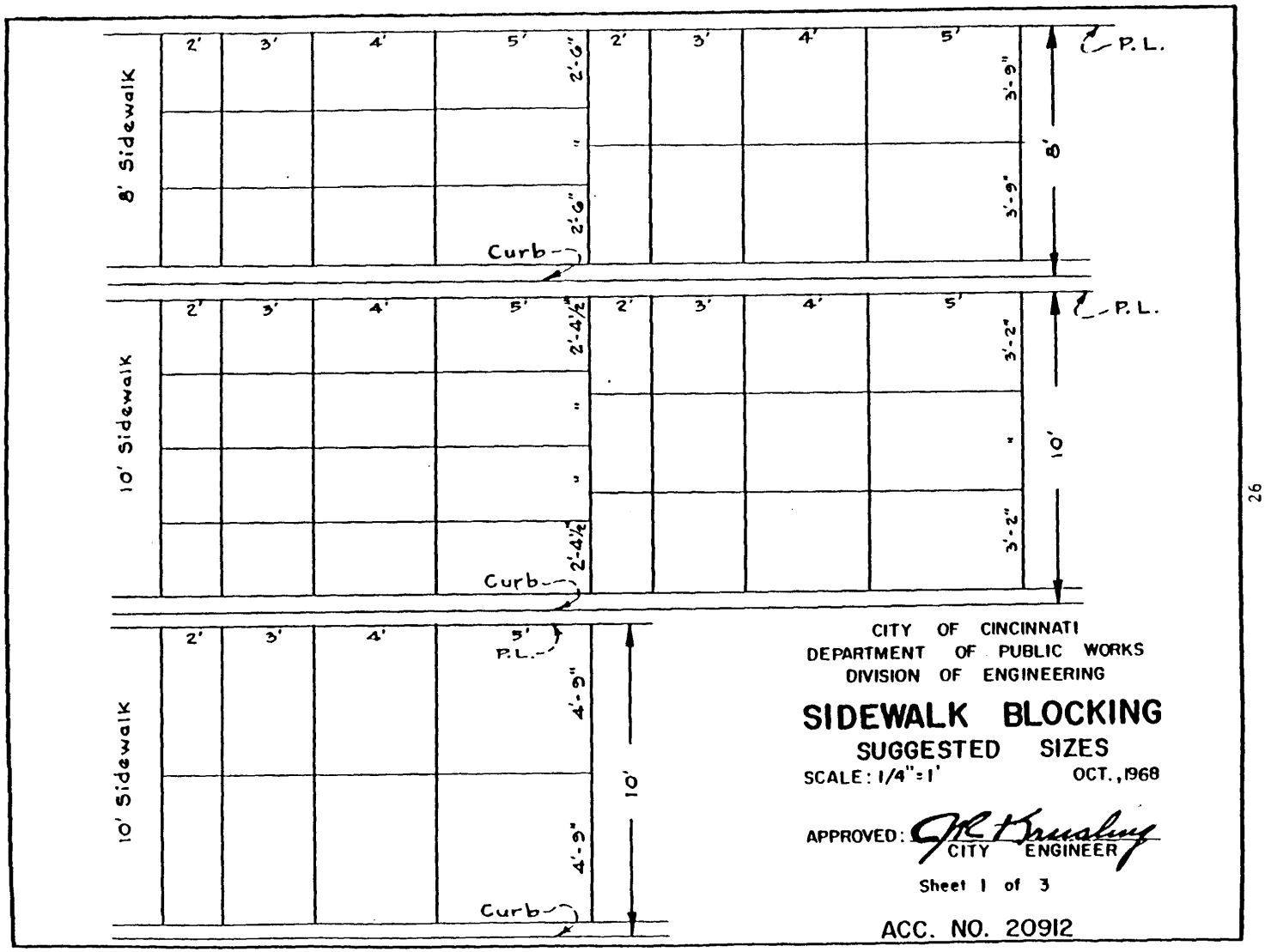
MINIMUM CLEARANCES IN SIDEWALK SPACE

Gratings In Sidewalks (New Installations)

No grating shall encumber a sidewalk to the extent that less than four feet of continuous ungrated walkway is provided through the area. If the ungrated area is adjacent to the curb there must be a minimum of six feet of continuous ungrated walkway provided.

Gratings In Sidewalk (General)

No grating shall pass a 1/2 inch square device or have any circular openings measuring greater than 5/8 inch.



CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

SIDEWALK BLOCKING

SUGGESTED SIZES

SCALE: 1/4" = 1' OCT., 1968

APPROVED: J. R. Brusling
CITY ENGINEER

Sheet 1 of 3

ACC. NO. 20912

20-21-1

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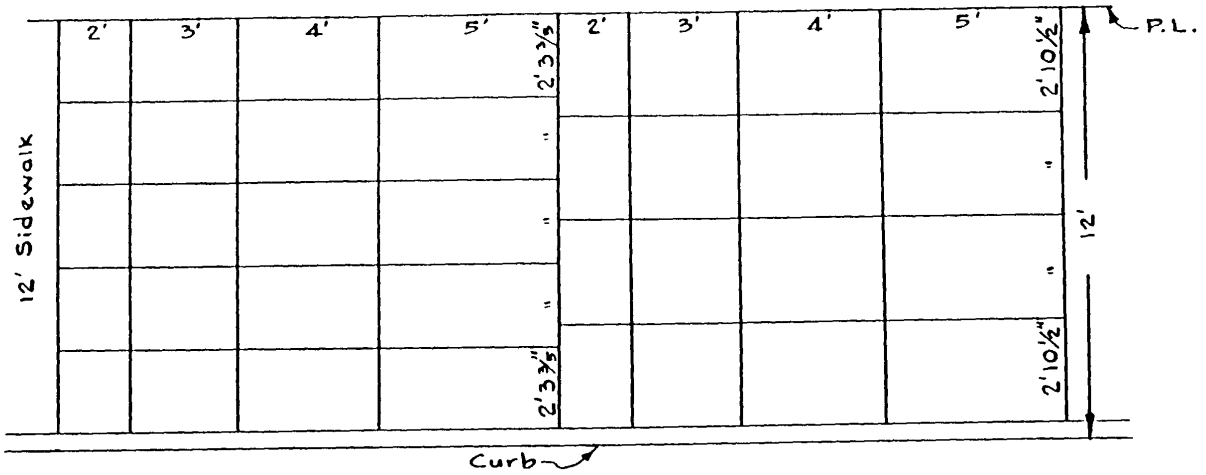

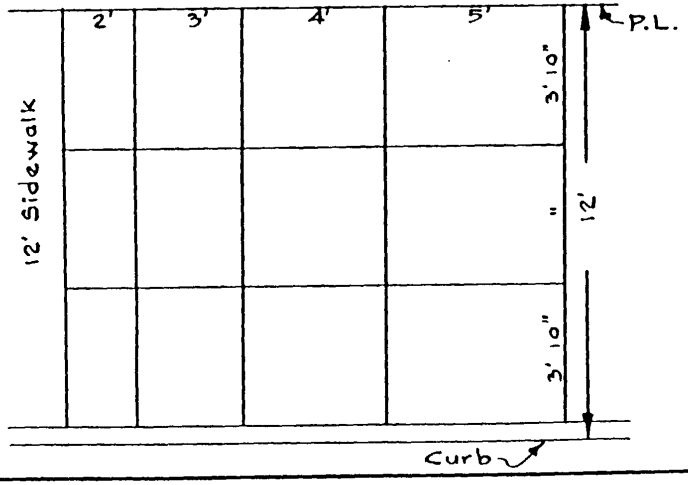

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SIDEWALK BLOCKING

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APPROVED: J. K. Brualdy
CITY ENGINEER

Sheet 2 of 3

ACC. NO. 20912

20-21-1

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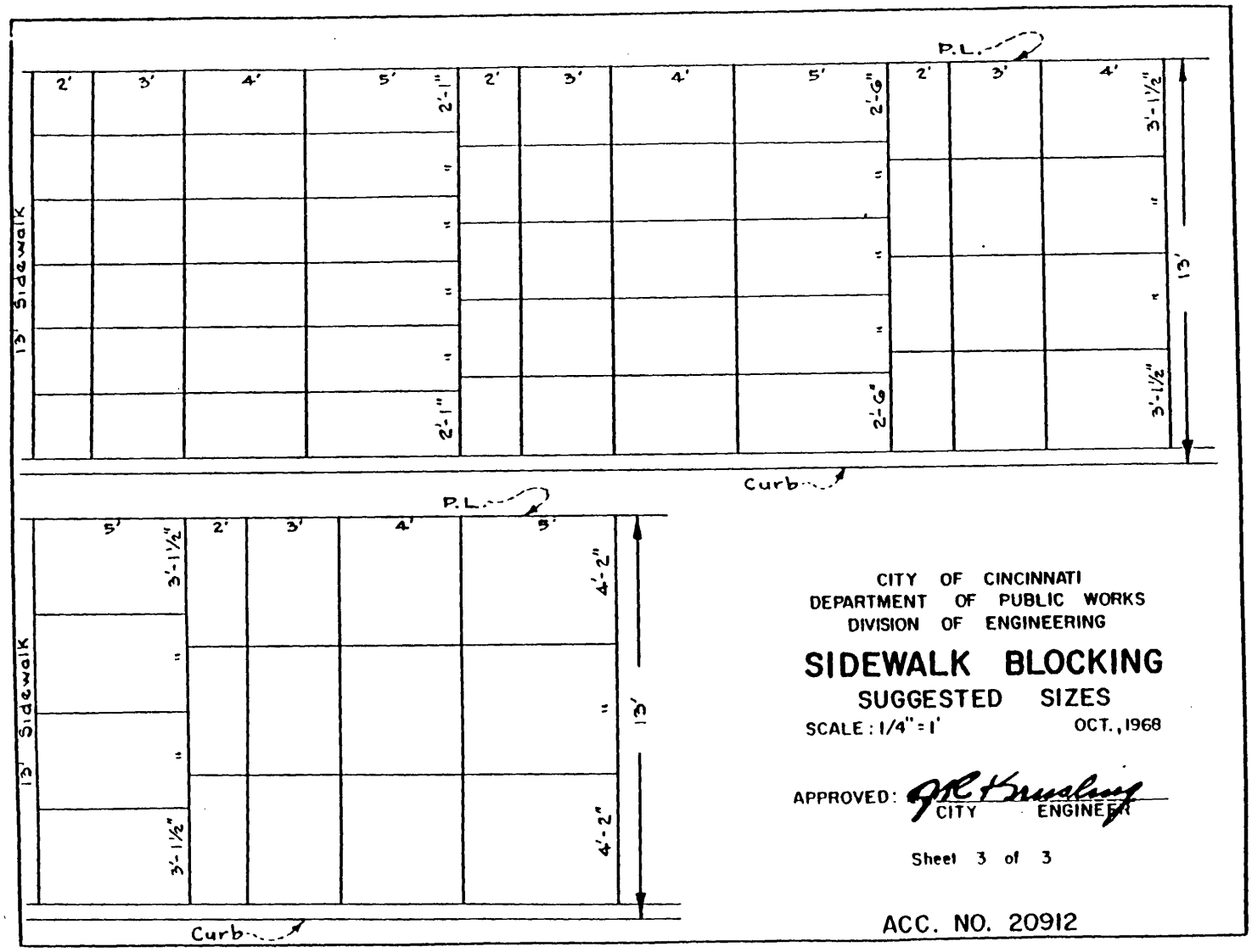

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SIDEWALK BLOCKING

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APPROVED: J. R. Kreuling
CITY ENGINEER

Sheet 3 of 3

ACC. NO. 20912

20-21-1

I have read and approved the foregoing specifications, rules and regulations as required by Section 721-89 of the Cincinnati Municipal Code.

George Rowe
Director of Public Works

11-14-83
Date