

Chapter 4.00

DRIVEWAY DESIGN STANDARDS

The Department of Public Works and Utilities is assigned responsibility for administration of these design standards.

Section 1. GENERAL

This standard shall apply to all residential and commercial driveways located within the City and commercial driveways located outside the City Limits but within the zoning jurisdiction of the City.

Construction of any driveway shall require and be subject to the conditions of a driveway permit issued through the Department of Building and Safety (residential) or the Department of Public Works and Utilities (commercial). Requirements for permit applications are covered herein.

Section 2. POLICIES

2.1 General

It is the policy of the City of Lincoln to promote the maximum safe and efficient travel of persons on the public right-of-way and to preserve the maximum capacity of the roadway to accommodate such travel.

The issuance, denial, modification and revocation of driveway approach permits and the ordering of the removal, reconstruction, relocation, or alteration of any driveway approach may be used to implement this policy.

Driveway approaches shall be designed so that under the specific conditions for the property:

1. Reasonable access from the roadway is afforded.
2. Horizontal separation from other approaches and roadway intersections is the maximum attainable.
3. The area and number of points where conflicts between vehicles using the approach, through vehicles using the roadway and pedestrians using the sidewalks is kept to a minimum.
4. Speed differential between vehicles using the approach and vehicles on the roadway is kept as low as possible.

5. The driver entering or leaving the approach has the maximum unobstructed view of other vehicles using the roadway.
6. The maximum safety and efficiency of the right and left turning vehicles using the approach is afforded.
7. The frequency at which vehicles must stop or substantially reduce speed on the roadway because of actions of vehicles entering or leaving the driveway approach is kept to a minimum.
8. The maximum safety, efficiency and capacity of the roadway is promoted.

2.2 Costs of Construction

The Owner of the property served by the driveway approach shall pay all costs for constructing the driveway approach; required additional turn lanes; pavement widening; median construction or reconstruction; alteration of manholes, storm sewer inlets, water valves or fire hydrants; relocation of power poles or light poles; and alteration of any other public utilities affected by the construction of the driveway approach.

2.3 Number of Driveway Approaches

Guidelines for the number of driveway approaches to be permitted are as follows:

1. For single and two-family dwelling units, only one driveway approach per dwelling will be permitted unless the application meets the requirements for a circular driveway as set forth in *Figure D-1*. One additional driveway approach for a property may be granted on a non-major street when a site drawing and written request indicating the justification for such additional drive is submitted and such request is approved by the Director of Public Works and Utilities or designated representative.
2. Only one two-way commercial driveway approach or one pair of one-way commercial driveway approaches should be permitted to a property having less than 400 feet (121.9 m) of frontage and taking access from a major street.
3. Commercial driveway access to a major street from adjoining properties having a total frontage of less than 200 feet (61.0 m) should be consolidated where possible. Jointly used driveways are encouraged along major streets to obtain maximum spacing of driveway approaches. These joint use driveways should provide at least a 50 feet (15.2 m) deep access easement between the property owners.
4. For property located on a corner, commercial driveway access should be limited to one driveway approach. If the property is located at the intersection of a major street and a local or collector street, the driveway approach should be located on the local or collector street to reduce potential conflicts. If desirable horizontal

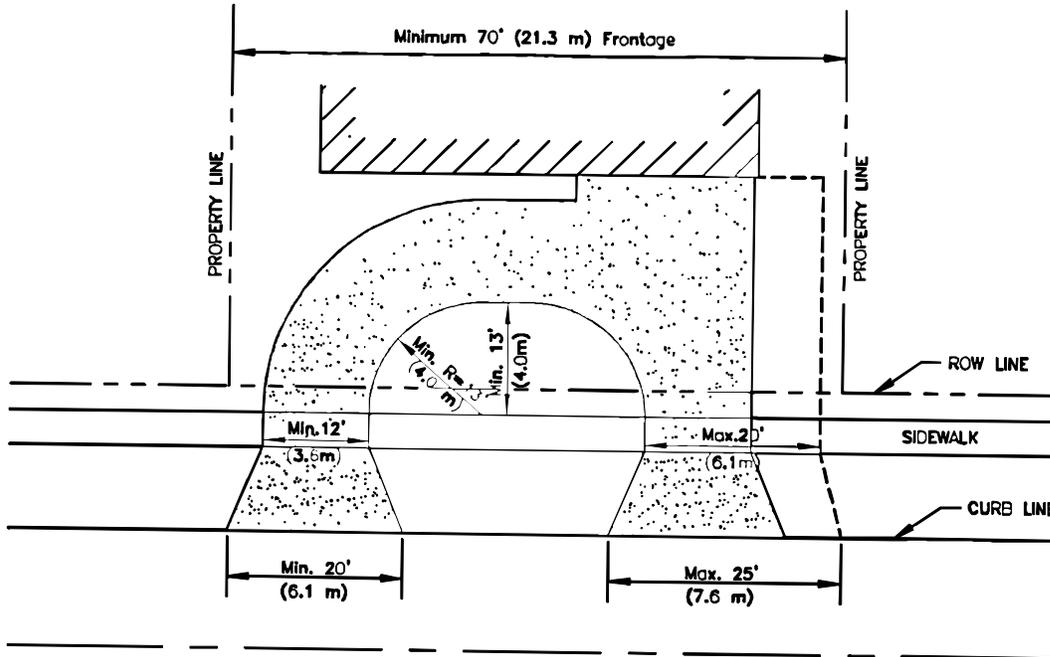
separation of the driveway approach from the intersection and other approaches is attainable, and the land use warrants additional access, an access to both streets may be permitted.

Section 3. DESIGN

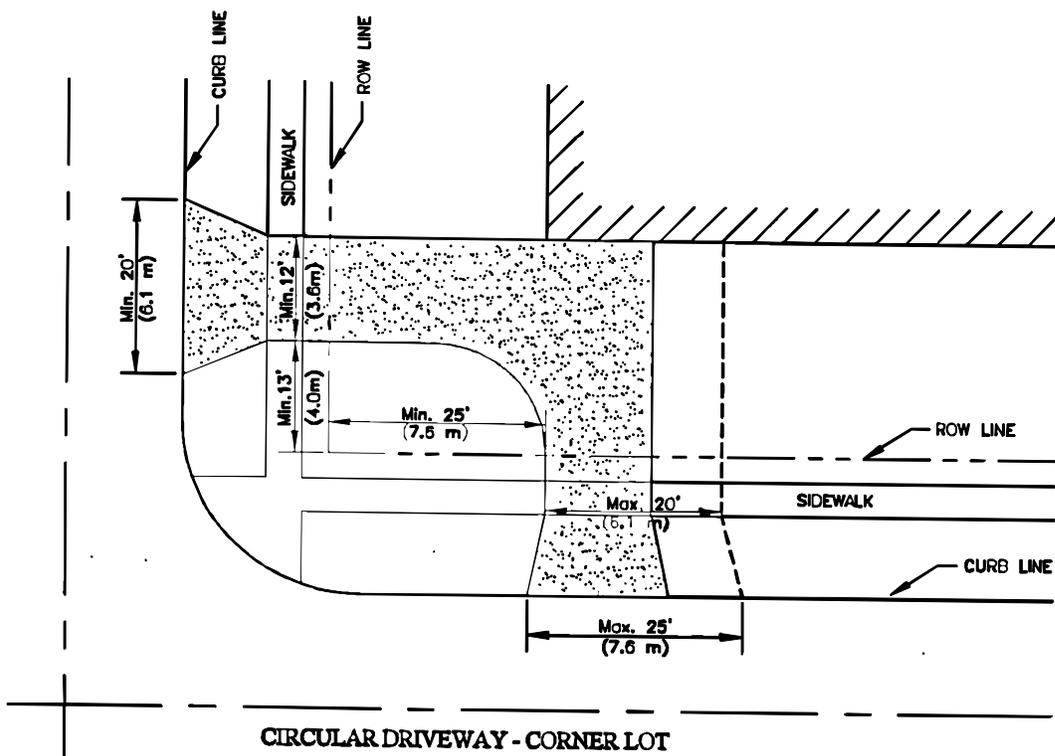
3.1 General

Driveways used for commercial or industrial purposes, except those leading to loading docks or vehicle access doors, shall be designed such that vehicles can leave and enter the roadway in a forward motion.

Driveways to residential properties which have more than three garage units or parking stalls shall be designed such that vehicles can leave and enter the roadway in a forward motion.



CIRCULAR DRIVEWAY



CIRCULAR DRIVEWAY - CORNER LOT

NOTE: THE MAXIMUM TOTAL WIDTH OF THE TWO CURB-CUTS FOR A CIRCULAR DRIVE APPROACH SHALL BE 45' (13.7 m)

CIRCULAR DRIVEWAYS
for One and Two-Family
Dwelling Units

FIGURE D-1

3.2 Location

Driveways shall be located to provide maximum separation from other drive approaches and roadway intersections to minimize impeding vehicle traffic on the roadway. Minimum and standard dimensions for driveway approach separation, clearances from roadway intersections and offsets at T-intersections or median openings are shown on *Figure D-2*. The minimum values shown in this figure are the smallest dimensions which shall be permitted. The standard values shall be used to the extent possible within the property frontage. None of the driveway approach, including the driveway return radius, will be permitted to extend beyond the side property boundary extended without written permission from that adjacent property owner.

3.3 Sight Distance

Unobstructed sight distances as set forth in *Figures SD-3 and SD-4 of APPENDIX A*, shall be provided at all driveway approaches for vehicular and pedestrian traffic safety. Fences, walls signs or other obstructions shall not be placed in the public street and shall not be placed in the sight triangles as set forth in *Figures, SD-3 and SD-4* except that chain-link fences free from shrubbery and vines may be placed on private property within the sight triangles.

3.4 Driveway Approach Geometry

Driveway throat widths, return radii or tapers, and angles are shown in *Figure D-2* for the various land uses and street classifications. Typical driveway approach details are shown in *Figure D-3*.

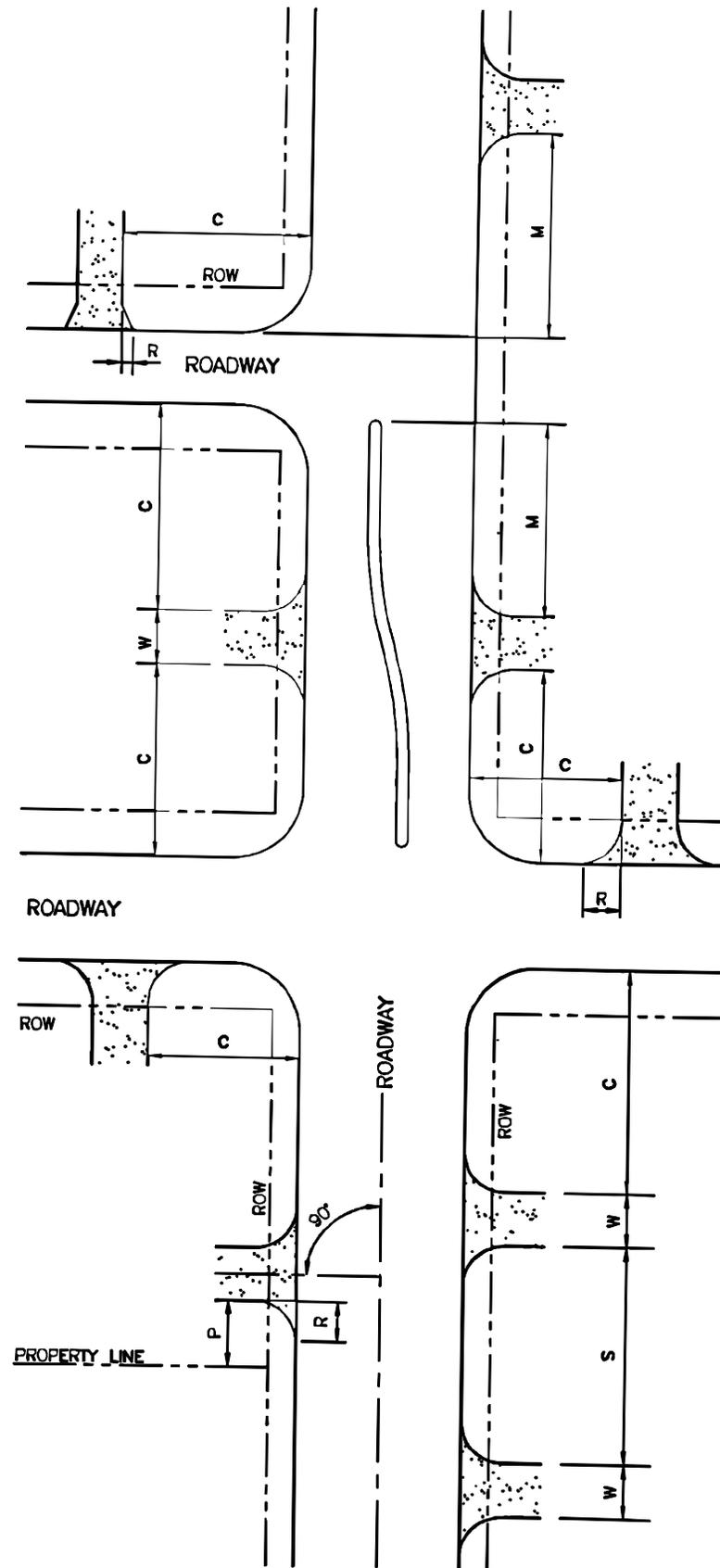
3.5 Driveway Approach Grades

The driveway approach surface shall meet the sidewalk at sidewalk grade. The sidewalk grade shall be established by the Public Works and Utilities Department. Normal sidewalk cross-slope through the driveway approach shall be 2%. Where the walk abuts the curb, the cross-slope shall not exceed 8%.

The owner or the owner's representative shall notify the Public Works and Utilities Department and request grade stakes for the driveway approach and inspection of the work before concrete is poured. The Public Works and Utilities Department shall be notified at least two working days in advance to give time to schedule any inspections. Work done without prior inspection shall be removed if the completed construction is not in accordance with terms of the permit.

3.6 Driveway Approach Cross-Section and Construction

Driveway approaches on paved roadways shall be surfaced with concrete from the roadway edge to the property line. The minimum thickness of driveway approaches for single or two-family dwellings is 5 inches (125 mm) from the roadway edge back 20 feet (6.1 m) or to the property line, whichever is less, with any remaining portion within the public right-of-way being a minimum of four inches (100 mm) thick.



DRIVEWAY SPACING & CLEARANCES

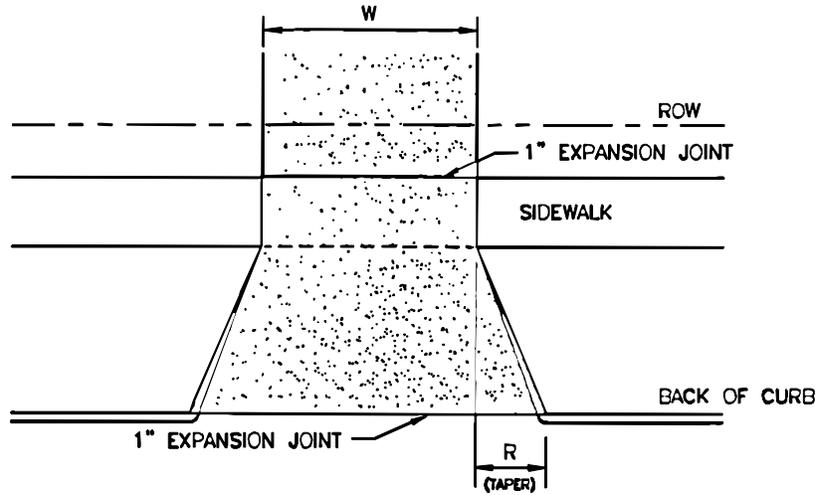
ELEMENT	ROADWAY CLASSIFICATION		
	MAJOR STREET	STANDARD	LOCAL/COLLECTOR
Driveway Separation - S Commercial Single or Two-Family	MINIMUM	STANDARD	MINIMUM
	30' (9.1m) 5' (1.5m)	200' (61m) 200' (61m)	20' (6.1m) 5' (1.5m)
Intersection Clearance - C Major-Major Major-Local/Collector Local/Collector-Local/Collector	MINIMUM	STANDARD	MINIMUM
	55' (16.8m) 55' (16.8m)	200' (61m) 200' (61m)	- 55' (16.8m) 42' (12.8m)
	75' (22.9m)	75' (22.9m)	-
T-Intersection or Median Opening Offset - M	R	30' (9.1m)	R
Property Line Offset - P			10' (3.0m)

DRIVEWAY DIMENSIONS

	THROAT WIDTH - W		RETURN RADIUS - R	
	TWO-WAY	ONE-WAY	MAJOR ST.	LOCAL/COLL.
Single or Two-Family	10' to 20' (3.0m-6.1m)	-	2.5' to 5' (0.8m-1.5m)	2.5' to 5' (0.8m-1.5m)
Multiple Dwelling Less than 20 Stalls 20 or more Stalls	20' to 25' (6.1m-7.6m)	15' to 20' (4.6m-6.1m)	15' (4.6m)	5' (1.5m)
	25'	15' to 20' (4.6m-6.1m)	15' to 20' (4.6m-6.1m)	15' (4.6m)
Commercial Less than 150 veh/hr 150 veh/hr or more Truck Access	25' to 30' (7.6m-9.1m)	15' to 20' (4.6m-6.1m)	15' to 20' (4.6m-6.1m)	15' (4.6m)
	44' to 48'	20' to 22' (6.1m-6.7m)	25' (7.6m)	20' to 25' (6.1m-7.6m)
	30' to 35' (9.1m-10.7m)	20' to 25' (6.1m-7.6m)	25' (7.6m)	20' to 25' (6.1m-7.6m)

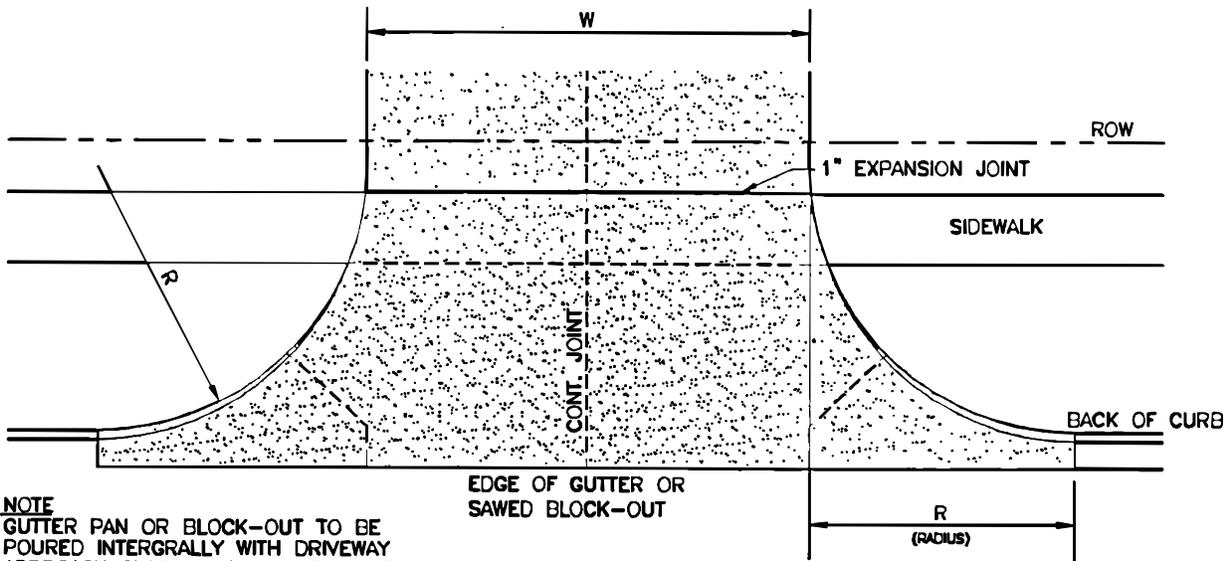
* Straight Taper
 ** Includes Raised Median Min. 4' (1.2m) Wide to Min.
 50' Back of ROW

FIGURE D-2



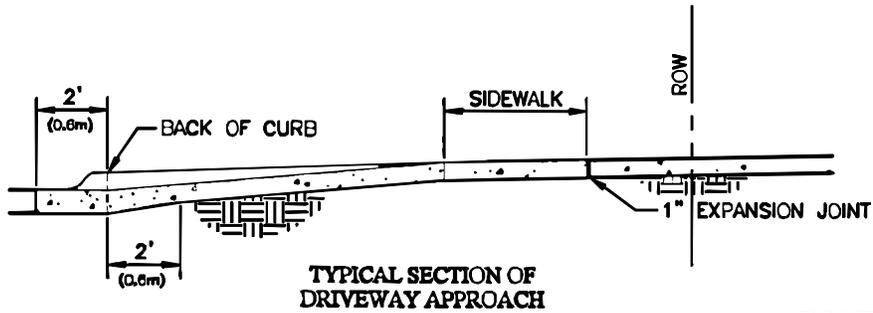
NOTE:
FOR DIMENSIONS
"W" AND "R" SEE
FIGURE D-2

**PLAN OF
RESIDENTIAL DRIVEWAY APPROACH**



NOTE
GUTTER PAN OR BLOCK-OUT TO BE
POURED INTERGRALLY WITH DRIVEWAY
APPROACH SLAB - MINIMUM THICKNESS,
= ROADWAY PAVEMENT THICKNESS TO 2'
(0.6 m) BACK OF CURB.

**PLAN OF
COMMERCIAL DRIVEWAY APPROACH**



**TYPICAL SECTION OF
DRIVEWAY APPROACH**

DRIVEWAY DETAILS

FIGURE D-3

The minimum thickness of commercial driveway approaches is 6 inches (155 mm) from the roadway edge to the property line. The Public Works and Utilities Department may require a greater thickness for commercial driveways depending on the geometry of the approaches, anticipated traffic volumes and number of trucks using the driveway.

Driveway approaches on unpaved roadways shall be surfaced with crushed rock from the roadway to the property line. At such time that the roadway is paved, the driveways shall be surfaced with concrete from the roadway edge to the property line in accordance with these standards.

Along roadways improved with a rural-type cross-section and parallel ditch, a drainage culvert shall be installed under the driveway approach. The length, size, grade and location of the culvert shall be determined by the Public Works and Utilities Department. The culvert is to be purchased by the property owner and installed by the City.

Driveway approaches shall be constructed in conformance with *City of Lincoln Standard Specifications for Municipal Construction*.

3.7 Internal Circulation

In order to protect through traffic movement on the roadway, driveways shall project into the property a sufficient distance to provide for the normal turning radius of the types of vehicles to be accommodated. Driveway approach approval will be withheld if parking lots do not conform to the *Parking Lot Design Standards* and do not provide adequate circulation and waiting vehicle storage for drive-in facilities on the property. On-property waiting vehicle storage requirements for the various types of drive-thru facilities are shown in *Table VS-1*:

**Table VS-1
Waiting Vehicle Storage Requirements**

Type of Use	Min. Waiting Vehicle Storage
Financial Institution - Electronic Teller	2 vehicles per lane*
Financial Institution - Personal Teller	4 vehicles per window or kiosk*
Car Wash - Self Service	4 vehicles per bay at entrance* 1 vehicle per bay at exit
Car Wash - Automatic/Conveyor	300 ft. (91.4 m) per bay at entrance* 2 vehicles per bay at exit
Drive-Thru Restaurant	5 vehicles per window*
Drive-Thru Coffee Shop -Driver Side Service -Passenger Side Service	4 vehicles per lane* 2 vehicles per lane*
Drive-Thru Pharmacy	2 vehicles per lane*
Service Stations - Service Islands - Service Bay - Quick Lube/Oil Change - "Starting Gate Design" (4 or more pump islands side by side 18 ft. (5.5 m) apart)	2 vehicles per pump lane* 1 vehicle per bay* 2 vehicles per bay* 1 vehicle per lane*
Gated Parking Lot Entrance	1 vehicle per gate
Garage Unit or Overhead Door (major streets only)	1 vehicle per door

* Storage requirements are in addition to vehicle being served.

Required vehicle storage shall not block driveways or required parking stalls and shall not be located in side, front or rear yards where parking stalls are prohibited. Each vehicle storage unit shall be 22 ft. (6.7 m) long.

3.8 Additional Turning Lane Requirements

Additional turning lanes, widening or other special treatments to the roadway may be required if the Public Works and Utilities Department determines that the projected driveway and roadway traffic volumes warrant such additional construction. Specific details of the required construction shall be determined by the Public Works and Utilities Department.

Section 4. ADDITIONAL REQUIREMENTS

4.1 State Highways and Federal Aid System

Construction of driveways on State Highways and Streets covered by Federal Aid agreements within the City of Lincoln must be reviewed and approved by the Nebraska Department of Roads.

The streets covered by such agreements are shown on a map on file in the Public Works and Utilities Department. The Public Works and Utilities Department will forward a copy of the site plan to the Permits and Right-of-Way Division of the Nebraska Department of Roads for their review prior to approval by the City.

Applications for driveways on State Highways outside of the Lincoln City Limits shall be made directly to the Nebraska Department of Roads.

4.2 Driveways Outside Lincoln City Limits

Applications for construction of residential or farm driveways on County maintained roads outside of the Lincoln City Limits but within the zoning jurisdiction of the City shall be approved by the Lancaster County Engineer.

Applications for construction of commercial driveways outside of the Lincoln City Limits but within the zoning jurisdiction of the City shall be approved by the Public Works and Utilities Department and the Lancaster County Engineer.

4.3 Tree Removal Permits

Prior to approval of any driveway approach permit which may require removal, relocation or trimming of any tree located within the public street, the applicant shall obtain permission for such tree work from the City Parks and Recreation Department.

Section 5. MEDIAN OPENINGS

5.1 General

Requirements and procedures for obtaining access to an existing or proposed median opening on public streets in the City of Lincoln are as follows:

1. A written application outlining the request for a median opening or access to a new or proposed median opening shall be submitted to the Public Works and Utilities Department along with (3) three copies of a 1"= 20' (or 1:250 metric) scale drawing of the proposed median opening or access showing in detail the adjacent property including buildings, parking stalls and driveways. Traffic data and documentation shall also be submitted which addresses the following:

a. Justification

- (1) Develop the volume of traffic that will be generated by the development(s) served by the median opening and how that traffic will be distributed to this and to other points of access.
- (2) Identify which traffic movements are affected and develop the volumes of those movements.
- (3) Identify available alternate accesses and circulation routes.
- (4) Establish the volume/capacity impacts with and without the break(s). Impacts at other break locations and at affected nearby intersections must also be considered.

b. Location/Geometry

- (1) Based on the projected volumes, how much left turn storage is required?
- (2) Can left turn storage be constructed both directions from break without affecting left turn storage for other nearby intersection(s)?
- (3) Is break location likely to require signalization in future? If so how will signalization affect the capacity of the roadway, turn storage requirements, detector placement, etc.?
- (4) If the break location is not signalized, are there adequate gaps in the roadway traffic to allow crossing and turning movements?
- (5) Does the proposed median break meet the sight distance requirements set forth in Appendix A?

c. Compatibility with Other Land Uses

- (1) Is the proposed break compatible with current and proposed land uses on the opposite side of the street?
- (2) Are all adjacent owners in agreement on location of the median break, internal circulation routes and other points of access?

2. The design of the median opening and associated driveways shall follow the design guidelines shown in *Figure D-2* and *Table LT-1*.
3. Construction in streets covered by Federal Aid agreements must also be approved by the Nebraska Department of Roads and Federal Highway Administration. The Public Works and Utilities Department will coordinate the reviews with the Nebraska Department of Roads.

4. If the proposed driveway will permit exiting traffic to turn left, the property owners on both sides of the street abutting the proposed median opening shall dedicate a minimum 50' (15.2 m) deep by 60' (18.3 m) wide right-of-way stub prior to approval of the median opening.
5. The property owners shall submit a development plan showing their intent to dedicate public access easements across their property to directly adjoining lots not having direct access to a median opening. The location and alignment of the easements shall provide reasonable vehicular access during the existence of the median opening and be approved by the Public Works and Utilities Department. All public access easements shall be drafted by the applicant and approved by the City Attorney.
6. After the concept and design of the proposed median opening has been approved by the City, Nebraska Department of Roads and Federal Highway Administration as required, an Executive Order authorizing construction of the median opening will be prepared by the Public Works and Utilities Department and forwarded to the Mayor for review and approval.
7. All costs related to the design and construction of the median opening and associated driveways shall be the responsibility of the applicant.
8. Median openings will be considered only in roadway sections where adequate left-turn storage can be provided without adversely affecting storage for existing median openings or future median openings to other public streets.
9. The above policies do not apply to the State or Federal Highway System. Those roads are under the direct jurisdiction of the Nebraska Department of Roads.

5.2 Design

Details of median opening geometric requirements are shown in *Figure D-4*. The length of the required left turn storage lane is determined by the following formula and *Table LT-1*:

$$M = (\text{DHV})(I) \div 3600$$

Where:

M = Average Number of Vehicles per Interval

DHV = Design Hour Volume of Left Turning Vehicles

I = Interval = 90 seconds with signal = 60 seconds without
signal

Example

Given: DHV = 486 Left Turning Vehicles With Signal

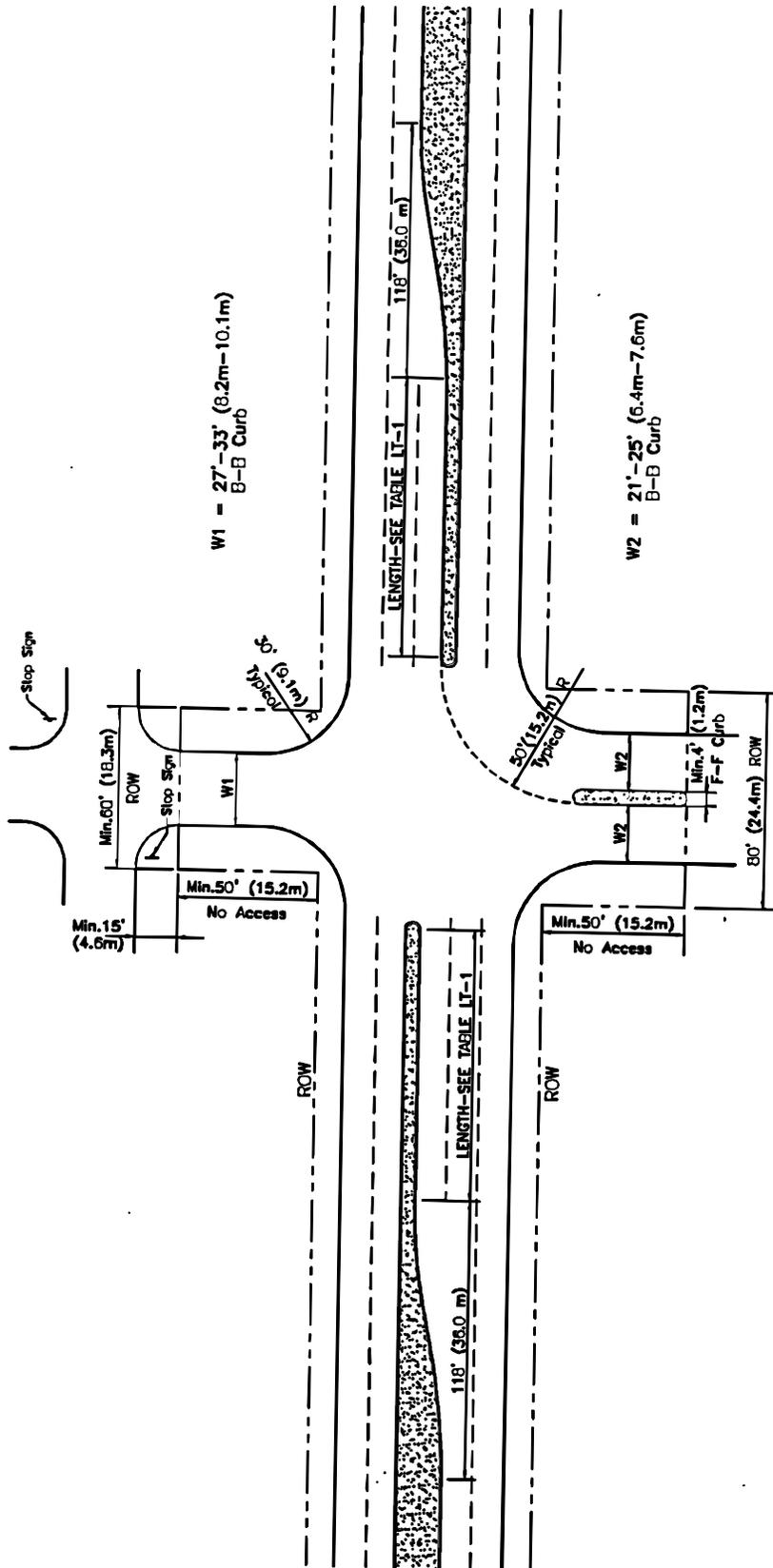
$$M = (486)(90) \div 3600 = 12.2 = \text{Average Number of Vehicles per Interval}$$

from *Table LT-1*: The 95% Probability Maximum Number of Vehicles
Turning Left During the Same Interval = 19

Thus: Length of Turn Lane Storage = $(19)(25') = 475' = (19)(7.62 \text{ m}) = 144.8 \text{ m}$

Table LT-1
Left Turn Lane Length

Average Number of Vehicles per Interval M	95% Probability Maximum Number of Vehicles During Same Interval	Length of Left Turn Lane
0.1 to 0.3	2	150' (45.7 m) min.
0.4 to 0.8	3	150' (45.7 m) min.
0.9 to 1.3	4	150' (45.7 m) min.
1.4 to 1.9	5	150' (45.7 m) min.
2.0 to 2.6	6	150' (45.7 m)
2.7 to 3.3	7	175' (53.3 m)
3.4 to 4.0	8	200' (60.1 m)
4.1 to 4.7	9	225' (68.6 m)
4.8 to 5.4	10	250' (76.2 m)
5.5 to 6.2	11	275' (83.8 m)
6.3 to 7.0	12	300' (91.4 m)
7.1 to 7.8	13	325' (99.1 m)
7.9 to 8.6	14	350' (106.7 m)
8.7 to 9.4	15	375' (114.3 m)
9.5 to 10.2	16	400' (121.9 m)
10.3 to 11.0	17	425' (129.5 m)
11.1 to 11.8	18	450' (137.2 m)
11.9 to 12.6	19	475' (144.8 m)
12.7 to 13.4	20	500' (152.4 m)
13.5 to 14.2	21	525' (160.0 m)
14.3 to 15.0	22	550' (167.6 m)



STANDARD ACCESS TO MEDIAN OPENING ON MAJOR STREET

FIGURE D-4

Section 6. GENERAL INSTRUCTIONS FOR DRIVEWAY PERMIT APPLICATION

6.1 General

Application for driveway permits are made to the City of Lincoln Building and Safety Department.

The application shall include the address and legal description of the property served by the proposed driveway approach, the property owner's name, length of proposed curb cuts, the name, signature and telephone number the representative of the property owner authorized to make decisions concerning the driveway approach binding on the property owner.

6.2 Application for Driveways Serving Single Family and Two-Family Dwellings

Application for driveway permits for single and two-family dwelling units may be approved by the Building and Safety Department when it is determined that the site plan drawn on the application is in conformance with these standards and the regulations of the City. Only one such driveway may be approved for each dwelling unit unless the application meets the requirements for circular drives as illustrated in *Figure D-1*. One additional driveway for a single buildable lot may be approved on non-major streets when a written request and drawing as set forth herein is submitted indicating the justification for such additional drive and when the same is approved by the Director of Public Works.

6.3 Application for Driveways in Conjunction With Building Activity

Application for driveways in conjunction with building activities shall be filed at the time of application for the associated building permit. The issuance of the driveway permit and payment of fees however, need not coincide with the issuance of the building permit.

6.4 Multi-Family, Commercial and Industrial Uses

Applications for driveway permits for all driveways, other than single or two-family dwellings, shall include three (3) copies of a site plan which shows the following items:

1. Scale drawing (1" = 20') or (1:250 metric) with north arrow indicated.
2. Property lines and setback lines of property served, with dimensions.
3. Building and structure lines (note overhead or drive-in door locations).
4. Parking lot layout, with dimensions of aisles and stalls.
5. Parking lot barriers.
6. Adjacent roadways and sidewalks.
7. The proposed driveways, with dimensions.
8. Location of physical features of the property (i.e. trees, poles, inlets, manholes, valves, utilities, existing drives or curb cut locations, and service connections, within the public right-of-way).
9. Proposed traffic volume and vehicle type using the driveways.

The *Commercial Driveway Application Checklist* included hereafter (a clear photocopy is permissible) shall accompany the application to facilitate review by the Public Works and Utilities Department.

COMMERCIAL DRIVEWAY APPLICATION CHECKLIST

1. This property is legally described as Lot _____ , Block _____ ,
_____ Subdivision,
Section _____ , Township _____ North , Range _____ East, City of Lincoln, Nebraska
2. The commonly known street address: _____
3. Name and/or Use of property: _____
4. Driveway dimensions: (reference: *Figure D-2 Driveway Design and Location Standards*).
 - a. Distance from property line to centerline of driveway _____
 - b. Distance from closest side street curb to near edge of driveway _____
(minimum 55')
 - c. Throat width of driveway approach (W) _____
 - d. Radii dimensions (R) _____
 - e. Total curb cut dimension (W + R + R) _____
 - f. Is an agreement needed with adjacent property owners for radii extensions beyond
property lines? ____yes ____no
5. Parking lot dimensions: (reference: *Figure PL-1 Parking Lot Design Standards*)
 - a. Angle of Parking _____
 - b. Stall Width _____
 - c. Stall Depth _____
 - d. Aisle widths _____
6. Special Considerations:
 - a. Vehicle waiting storage requirements are: _____ (reference: *Table VS-1
Driveway Design and Location Standards*).
 - b. Sight distances: Speed _____ mph Required sight distance _____ feet
(reference: *Figure SD-4 Appendix A*).