

## **FORT BEND COUNTY**

Permits for the Construction of Driveways & Culverts on County Easements and Right of Ways in Fort Bend County

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### **SECTION 12 - PAVEMENT GEOMETRIC DESIGN GUIDELINES**

The guidelines presented in this document include the most often requested information regarding geometric design of subdivision streets. Designated major thoroughfares(\*), express streets(\*) within subdivisions, and existing access streets, shall be considered for special design features and may require higher design criteria than shown herein. Also, design features not shown in these guidelines should be considered special design features.

It is advisable to consult with the appropriate agencies and review the following publications to determine adequate thoroughfare requirements and special design features.

- Recommended Guidelines for Subdivision Streets, Institute of Transportation Engineers, 1984.
- Guidelines for Urban Major Streets Design, Institute of Transportation Engineers, 1984.
- A policy on Geometric Design of Highways and Streets, AASHTO, 1984.
- Texas Manual on Uniform Traffic Control Devices, (TMUTCD) State Department of Highways and Public Transportation, 1980.

#### **SOURCE:**

**CITY OF HOUSTON AND HARRIS COUNTY,  
"GEOMETRIC DESIGN GUIDELINES FOR SUBDIVISION STREETS"**

**AND**

**FORT BEND COUNTY,  
"THOROUGHFARE DEVELOPMENT PLAN UPDATE 1984"**

(\*)Designated Roadway appearing on the Major Thoroughfare and Freeway Plan, Houston City Planning Commission, and Houston Express Street Plan, Department of Traffic and Transportation.

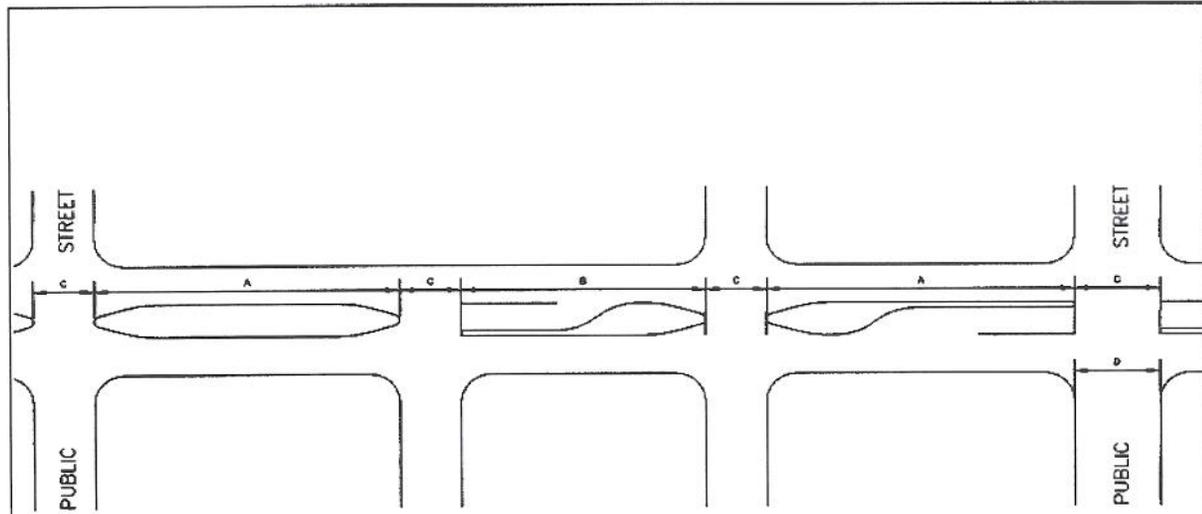
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**SECTION 12 - PAVEMENT GEOMETRIC DESIGN DETAILS**

**Drawing: FBC-074**

**Typical Length of Median and Median Opening**



TYPICAL LENGTH OF MEDIAN OPENING "C" = 50'-0" OR D + 10'-0" WHICHEVER IS GREATER

MINIMUM ACCEPTABLE MEDIAN LENGTH FOR TYPE OF STREET

IF PLANNED DIVIDED STREET IS:	PURPOSE OF MEDIAN INTERRUPTION			
	MAJOR STREET / THOROUGHFARE (A)	COLLECTOR STREET (A)	LOCAL STREET (A)	PRIVATE STREET OR DRIVEWAY (B)
MAJOR STREET / THOROUGHFARE	350'-0"	300'-0"	300'-0"	300'-0"
COLLECTOR STREET	300'-0"	250'-0"	250'-0"	250'-0"
LOCAL STREET	250'-0"	250'-0"	250'-0"	200'-0"

TYPICAL LENGTH OF MEDIAN AND MEDIAN OPENING

APPROVED BY:  
LOUIS HOOD  
DATE DRAWN: 2-15-00  
REVISED:

DRAWN BY:  
L. BRDECKA  
DRAWING NO.:  
FBC-074

FORT BEND COUNTY ENGINEERING DEPARTMENT

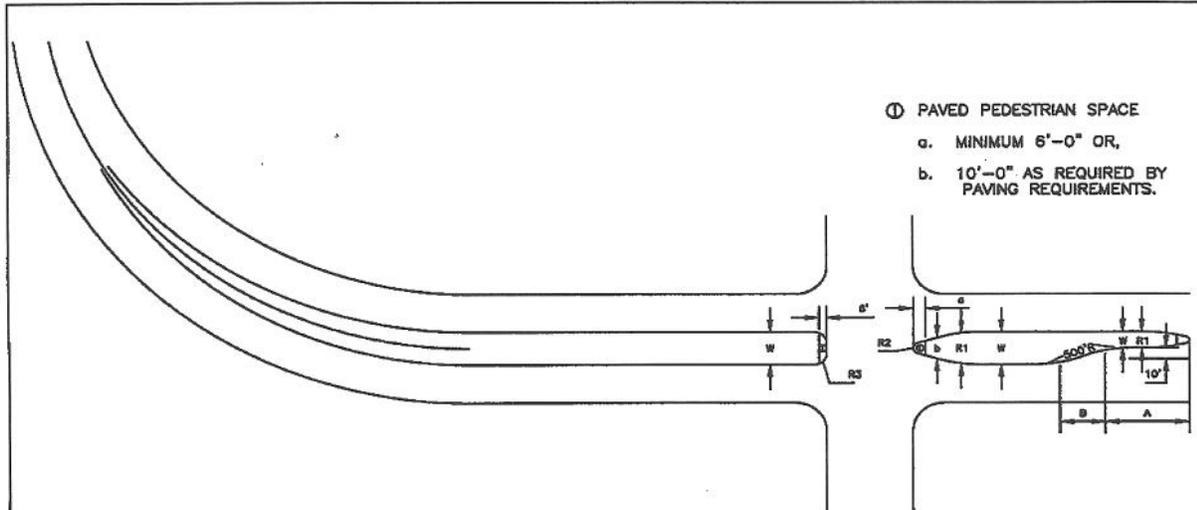
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**SECTION 12 - PAVEMENT GEOMETRIC DESIGN DETAILS**

**Drawing: FBC-075**

**Median Nose and Left Turn Bay Design**



**LEFT TURN BAY DIMENSIONS**

W	R <sub>1</sub>	R <sub>2</sub>	R <sub>3</sub>
≤8'	NONE	$\frac{W}{2}$	NA
>8'≤38'	90'	$\frac{W}{5}$	NA
>38'	NONE	NONE	15'

NA = NOT APPLICABLE

A = 150'-0" MINIMUM AT INTERSECTION OF TWO MAJOR STREETS.  
= 100'-0" MINIMUM AT ALL OTHER INTERSECTIONS.

B = 100'-0" MINIMUM ON STRAIGHT ROADWAY.

B<sub>1</sub> = TAPER LENGTH MAY BE SHORTER IF IT IS ON A HORIZONTAL CURVE TO THE LEFT.

B<sub>2</sub> = TAPER LENGTH MAY BE LONGER IF CURVE IS TO THE RIGHT.

<p>MEDIAN NOSE AND LEFT TURN BAY DESIGN</p>	APPROVED BY:	DRAWN BY:
	LOUIS HOOD	L. BRDECKA
	DATE DRAWN: 2-15-00	DRAWING NO.:
	REVISED:	FBC-075
<p>FORT BEND COUNTY ENGINEERING DEPARTMENT</p>		

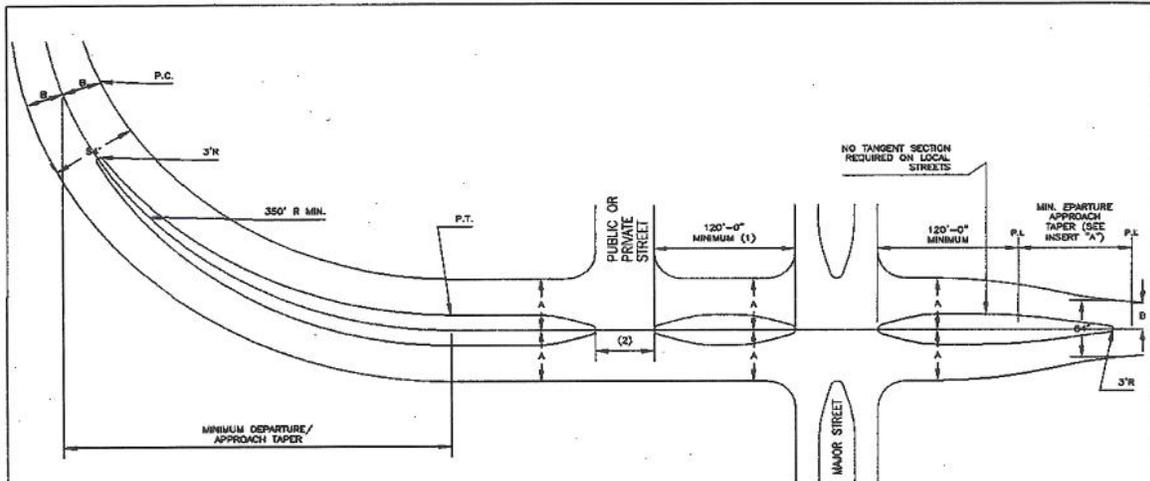
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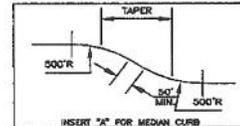
## SECTION 12 - PAVEMENT GEOMETRIC DESIGN DETAILS

Drawing: FBC-076

Roadway Tapers for Subdivision Streets



- (1). MINIMUM 250'-0" FOR RESTRICTED AND UNRESTRICTED RESERVES AND LOCATIONS WHERE A LEFT TURN LANE MAY BE REQUIRED.
- (2). MEDIAN OPENING MAY NOT BE ALLOWED IF MEDIAN IS LESS THAN 250'-0" IN LENGTH.



NOTE:

a. APPROACH AND DEPARTURE TAPER REQUIREMENT:

$$L = \frac{WS}{60} \quad \text{WHERE } L = \text{LENGTH IN FEET}$$

$$S = \text{SPEED IN M.P.H.}$$

$$W = \text{LATERAL OFFSET IN FEET}$$

FOR  $S < 40$   
 $S = 30$  M.P.H. MINIMUM DESIGN SPEED FOR SUBDIVISION STREETS  
 $W = A-B$

b. 350'-0" MINIMUM CENTERLINE RADIUS FOR HORIZONTAL CURVE WITH APPROACH OR DEPARTURE TAPERS

c. APPROACH AND DEPARTURE TAPER REQUIREMENT:

$$S \geq 45$$

$$L \geq SW$$

ROADWAY CROSS SECTION (FEET)		TAPER $L = \frac{WS}{60}$ (FEET)
A+A	B+B	
80	60	150
80	40	300
80	27	400
70	40	225
70	27	325
60	40	150
60	27	250
40	27	100

ROADWAY TAPERS FOR SUBDIVISION STREETS	APPROVED BY:	DRAWN BY:
	LOUIS HOOD	L. BRDECKA
	DATE DRAWN: 2-15-00	DRAWING NO.:
	REVISED:	FBC-076
FORT BEND COUNTY ENGINEERING DEPARTMENT		