

Manufacturing Drive and South Bluff Boulevard Design Criteria

Manufacturing Drive (US 30 to South 19 th Street)		
Design Criteria	Value	Source
General		
Functional Classification	Minor Arterial	Iowa DOT
Design Speed / Posted	45 mph / 45 mph	City
Manufacturing Drive AADT	2,470 to 10,100	Iowa DOT
Intersection Curb Return Radii	30 ft	SUDAS
Driveway Type	Type A or B w/ Flares	SUDAS
Typical Section		
Travel Lane Width	12 ft	SUDAS
Travel Lane Slope	2%	SUDAS
Center Lane Width (TWLTL) – Raised Median	14 ft	SUDAS
Center Lane Slope	2% (Crowned)	SUDAS
Curb & Gutter Width	3.0 ft	SUDAS
Min Roadway Width	31.0 ft	SUDAS
Clear Zone	16-28 ft	SUDAS
Object Setback	3 ft	SUDAS
Sidewalk Width	5 ft	
Sidewalk Material & Thickness	PCC, 4 in	SUDAS
Trail Width	10 ft	
Sidewalk/Trail Cross Slope	1.5%	PROWAG
Trail Material & Thickness	PCC, 5 in	City
Roadway Pavement Material & Thickness	PCC, 9 in	City
Sideroad Pavement Material & Thickness	PCC, 7 in	City
Subbase Type	Granular Subbase	
Subgrade Treatment		
Intersection Geometry		
Turn Lane Taper	15:1 (180 ft)	SUDAS
Min. Storage Distance	220 ft	SUDAS
Alignment		
Min. Horizontal Curve Radius	1,039 ft	SUDAS
Stopping Sight Distance	360 ft	SUDAS
Min. Vertical Curve Length	135 ft	SUDAS
Min. Rate of Vert. Curvature, Crest (K)	98	SUDAS
Min. Rate of Vert. Curvature, Sag (K)	79	SUDAS
Min. Gradient	0.6%	SUDAS
Max. Gradient	5.0%	SUDAS

Manufacturing Drive and South Bluff Boulevard Design Criteria

Manufacturing Drive and South Bluff Boulevard (South 19 th Street to North 5 th Street)		
Design Criteria	Value	Source
General		
Functional Classification	Minor Arterial	Iowa DOT
Design Speed / Posted: 19 th St. to 15 th St	35 mph / 30 mph	City
Design Speed / Posted: 15 th St to 14 th St.	35 mph / 25 mph	City
Design Speed / Posted: 14 th St. to 5 th St.	35 mph / 30 mph	City
Manufacturing Drive AADT	12,500	Iowa DOT
South Bluff Boulevard AADT	6,500 to 15,600	Iowa DOT
Intersection Curb Return Radii	30 ft	SUDAS
Driveway Type	Type A or B w/ Flares	SUDAS
Typical Section		
Travel Lane Width	11 ft	SUDAS
Travel Lane Slope	2%	SUDAS
Center Lane Width (TWLTL) – Raised Median	13 ft	SUDAS
Center Lane Slope	2% (Crowned)	SUDAS
Curb & Gutter Width	3.0 ft	SUDAS
Clear Zone	7-10 ft	SUDAS
Object Setback	3 ft	SUDAS
Sidewalk Width	5 ft	
Sidewalk Material & Thickness	PCC, 4 in	SUDAS
Trail Width	10 ft	
Sidewalk/Trail Cross Slope	1.5%	PROWAG
Trail Material & Thickness	PCC, 5 in	City
Roadway Pavement Material & Thickness	PCC, 9 in	City
Sideroad Pavement Material & Thickness	PCC, 7 in	City
Subbase Type	Granular Subbase	
Subgrade Treatment		
Intersection Geometry		
Turn Lane Taper	10:1 (120 ft)	SUDAS
Min. Storage Distance	150 ft	SUDAS
Alignment		
Min. Horizontal Curve Radius	510 ft	SUDAS
Stopping Sight Distance	250 ft	SUDAS
Min. Vertical Curve Length	105 ft	SUDAS
Min. Rate of Vert. Curvature, Crest (K)	47	SUDAS
Min. Rate of Vert. Curvature, Sag (K)	49	SUDAS
Min. Gradient	0.6%	SUDAS
Max. Gradient	5.0%	SUDAS