

APPENDIX A
Design Criteria Table

West Dowling Road Phase I – Old Seward Highway to C Street

ELEMENT	CRITERIA	SOURCE/COMMENTS
Functional Classification	Minor Arterial	DOT&PF
Number of Lanes/Roadways	4	DOT&PF
Terrain	Rolling	AASHTO 2001 (page 235)
Design Year	2030	Design Designations (DOT&PF)
Existing Year AADT (2007) Old Seward Hwy. to Potter Dr.	9,257	Design Designations (DOT&PF)
Construction Year AADT (2010) Old Seward Hwy. to Potter Dr.	15,000	Design Designations (DOT&PF)
Mid-Life Year AADT (2020) Old Seward Hwy. to C St.	19,015	Design Designations (DOT&PF)
Design Year AADT (2030) Old Seward Hwy. to C St.	24,104	Design Designations (DOT&PF)
Design Hourly Volume (DHV) /Directional Split	10.5% of AADT/50/50	Design Designations (DOT&PF)
Trucks (%T)	8.0%	Design Designations (DOT&PF)
30-Year Design ESAL (2040) Old Seward Hwy. to C St.	TBD	DOT&PF
Pavement Design Year	TBD	DOT&PF
Design Vehicle	WB-50	AASHTO
Posted Speed (existing)	35 mph- 45 mph	
Posted Speed (proposed)	45 mph	DOT&PF
Design Speed	45 mph	AASHTO 2001 (page 67)
Stopping Sight Distance	360 feet	HPM, AASHTO 2001 (page 449)
Passing Sight Distance	1,625 feet	HPM, AASHTO 2001 (page 449)
Maximum Grade	6.0%	HPM, AASHTO 2001 (page 450)
Minimum Grade	0.5%	
Maximum Rate of Super-elevation	6%	HPM, AASHTO 2001 (page 141)
Minimum Radius of Curvature (e = 4)	730 feet	HPM, AASHTO 2001 (page 145)
(e = 6)	660 feet	
Minimum Length of Curvature ($L_{c\ min} = 15V$)	675 feet	HPM, AASHTO 2001 (page 233-234)
Desirable Radius of Curvature (normal crown)	6,000 feet	AASHTO 2001 (page 157)
Minimum K-Value for Vertical Curves (crest/sag)	61/79	AASHTO 2001 (page 274 and 280)
Minimum Taper Ratio	15:1	AASHTO 2001 (page 719)
Minimum Left-Turn Lane Storage Length	25 feet per vehicle based on DHV (100' minimum)	HPM (page 1150-2)
Minimum Shoulder Width Old Seward Hwy. to C St.	Urban Section/2 feet	AASHTO 2001 (page 318)
Minimum Lane Width Old Seward Hwy. to C St.	12 feet	HPM, AASHTO 2001 (page 315)
Surfacing, Lanes	AC Pavement	DOT&PF
Side Slope Ratios (min)	4:1 or flatter (fills) 3:1 or flatter (cut)	HPM, AASHTO 2001 (page 331)
Clear Zone	24 feet (fill) 14 feet (cut)	HPM (page 1130-6)
Median Treatment Old Seward Hwy. to C St.	Median/Left turn lane	AASHTO 2001 (page 480-481)
Curb and Gutter Old Seward Hwy. to C St.	Barrier	DOT&PF

ELEMENT	CRITERIA	SOURCE/COMMENTS
Access Control Old Seward Hwy. to C St.	No	DOT&PF
Curb Return Radii -Arterial intersecting an arterial	40 feet	HPM
Pedestrian/Bicycle Provisions - Sidewalk Width - Multi-use Trail - Maximum Cross Slope - Minimum Vertical Clearance - Minimum Curb Ramp Landing Width	5.0 feet min. 8.0 feet min. 2% 8.0 feet 5.0 feet	ADAAG
Roadway Cross Slope	2% typical, 1.5% minimum	HPM (page 1130-13), AASHTO 2001 (page 450)
Roadway Vertical Clearance	16.5 feet	HPM (page 1130-5)
Driveways - Minimum Return Radii - Minimum Spacing - Minimum Corner Distance - Minimum Sight Distance - Maximum Landing Slope	20 feet 75 feet 60 to 70 feet 360 feet +/- 2%	HPM (page 1190-9, 1190-10, 1190-11, 1190-14)

Designer/Consultant: DOWL HKM

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