

MATANUSKA-SUSITNA BOROUGH

350 E Dahlia Ave., Palmer, Alaska 99645

CHAIRPERSON

Joshua Cross

MSB STAFF

Kim Sollien



BOARD MEMBERS

Scott Adams

Jennifer Busch

Cindy Bettine

Dan Elliott

Antonio Weese

Emily Dodge

Transportation Advisory Board Special Meeting

AGENDA

Lower Level Conference Room

REGULAR MEETING

9:00 AM

February 24th, 2020

- I. CALL TO ORDER; ROLL CALL
- II. APPROVAL OF AGENDA
- III. PLEDGE OF ALLEGIANCE
- IV. AUDIENCE INTRODUCTION/PARTICIPATION
- V. ITEMS OF BUSINESS
 - a. Driveway Permit Ordinance Review 9:00am-9:30am
 - b. (MSB) Subdivision Construction Manual Comments Work Session 9:30am -11:00am
 - i. Draft Resolution supporting the SCM
- VI. Capital Improvements Plan 2020 Nominations 11:00am-12:00pm
- VII. MEMBER COMMENTS
- VIII. NEXT MEETING – April 24th, 2020
- IX. ADJOURNMENT

MATANUSKA-SUSITNA BOROUGH

350 E Dahlia Ave., Palmer, Alaska 99645

CHAIRPERSON

Joshua Cross

MSB STAFF

Kim Sollien



BOARD MEMBERS

Jennifer Busch

Cindy Bettine

Emily Dodge

Dan Elliott

Antonio Weese

Transportation Advisory Board

Minutes

REGULAR MEETING

9A.M.

January 24th, 2020

I. CALL TO ORDER; ROLL CALL

Meeting called to order by Chair Josh Cross at 9:10am. Present Jennifer Busch, Cindy Bettine, Dan Elliott, Scott Adams, Antonio Weese.

Guests: Eileen Probasco, Jamie Taylor, Alex Strawn, and Mike Shields

II. APPROVAL OF AGENDA

Motion by Cindy Bettine, as amended moving the SCM discussion to the first staff report; seconded by Dan Elliott. *Motion passed unopposed*

III. APPROVAL OF MINUTES

a. December 19th, 2019

IV. AUDIENCE INTRODUCTION/PARTICIPATION

Mike Shields, from the RSA board

V. STAFF/AGENCY REPORTS & PRESENTATIONS

a. Eileen Probasco (MSB) Subdivision Construction Manual Update

Eileen Probasco and Jamie Taylor presented a draft resolution to support the Draft SCM.

Eileen also presented a draft schedule of the SCM review, approval and adoption. TAB members discussed the SCM development process. Scott Adams and Cindy Bettine provided comments for discussion (summarized below).

Eileen and Jamie responded to questions.

Motion-Cindy Bettine motioned to further discuss the SCM, and to summarize the boards list of concerns, questions, and edits, and to draft a new resolution of support for the SCM with the inclusion of the TAB amendments; Jen Busch seconded

Motion passed unopposed

Motion- Cindy Bettine motioned, to move the driveway permit discussion the next meeting; Dan Elliott seconded

Motion passed unopposed

Motion- Dan Elliott motioned to hold a special meeting March 21st, amended to March 24th, to discuss the SCM; seconded by Antonio Weese

Motion as amended passed unopposed

SCM comments by TAB Members

Scott Adams Comments

1. A04.1(b) - recommend making it clear who is responsible for calculating the ADT. Section 15 discusses how to calculate the ADT. Suggest revising the first sentence in A15 to read, "The applicant shall use the following formula to determine..." and moving the entire A15 section ahead of A04.
2. A05 - first sentence abruptly ends.
3. Table A-1 footnote 2 - suggest adding the word "minimum" at the beginning of the sentence before ROW.
4. Table A-1 - Suggest having two rows for shoulder width. One for paved shoulders, one for gravel shoulders. Include 2 foot gravel shoulders for Residential classification. For the Sub-collector and Collector classification, suggest 2 foot paved followed by 2 foot gravel shoulders.
5. A13 - Recommend adding the MUTCD as governing reference that shall be followed.
6. C02.5(c) - The DOT&PF successfully builds roads where they limit the horizontal layers of uncompacted material to 8" Why are we increasing that to 24"? We are setting up the taxpayers to pay the bill for repairing these roads that will settle and require increased maintenance after they are constructed and before the design life is reached. Recommend following the DOT&PF requirement of 8" horizontal layers.
7. C02.5(e) - the 90% and 95% compaction requirements are too low and are not what is typically done in an engineered road design. Suggest changing these to 95% and 98%, respectively, of the Modified Proctor.

8. C02.5(f) - 2 inches of asphalt over 2 inches of base course seems thin for a collector. This section is more for a driveway. I would expect to see something in the range of 3.5 - 4 inches of HMA over 4 inches of base course. Suggest revisiting this so that the taxpayers are not paying to rehab roads prior to the end of their design life.

9. Figure C-1 - same as #8 above. The typical structural section for the roadway will be driven by existing geotechnical conditions which will vary at each road location. Suggest requiring a geotechnical investigation with recommendation for each site.

Cindy Bettini's Comments

1. The goal of the SCM is to promote a safer transportation system but it would appear they have left out accommodations for non-motorized
2. Can we ask for roads to be designed offset from the center line so we would have room to offer at least one 4ft shoulder on one side
3. The SCM seems to have a residential focus. What about commercial development, don't we also need standards for them that are different than residential?
4. Design deviation paragraph needs to be firmer.
5. Is there a way to offer a benefit an incentive to a developer who is willing to put in a pedestrian pathway?

FYI) Title 43.20.281 of the MSB code allows a developer to have smaller lot size if they are dedicating public opens space. Maybe language for non-motorized pathways can be included in that clause.

b. Kim Sollien (MSB): Assembly Meeting update Jan 7th, 2020

- i. MOU between MSB and DOT - This MOU was signed by the Assembly at the February 4th meeting
- ii. Ordinance for the MPO and Earmark Funding - These MOA's and the funding appropriations were adopted by the Assembly at the February 4th meeting. Staff will ask the MSB Law Department to draft a memo about forming an MPO and we will invite them to give a presentation at the April meeting.

Capital Improvements Discussion (CIP)

Motion- by Cindy Bettine, to discuss the CIP at the next meeting on Feb 24th; seconded by Antonio Weese

Motion passed unopposed

Staff will provide the CIP nominations and the resolution from 2018 submitted by TAB for review at the meeting on the 24th.

VI. New Board Member Discussion
Laquita Chmielowski and Murph O'Brian were suggested as potential board members to fill the vacant board seat.

VII. Calendar of 2020 Meetings
February 24th Special Meeting
April 24th, 2020
August 28th, 2020
October 30th, 2020

VIII. ADJOURNMENT @ 12pm

Joshua Cross, Chair

Date

ATTEST:

Kim Sollien, Planning Services Manager

Date

CODE ORDINANCE

Sponsored by:
Introduced:
Public Hearing:
Action:

**MATANUSKA-SUSITNA BOROUGH
ORDINANCE SERIAL NO. 20-___**

AN ORDINANCE OF THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY ADOPTING MSB 11.12 DRIVEWAYS STANDARDS IN ORDER TO ENSURE DRIVEWAYS WITHIN BOROUGH RIGHT-OF-WAYS MINIMIZE NEGATIVE IMPACT TO DRAINAGE, MAINTENANCE, AND SAFETY OF THE TRAVELING PUBLIC.

BE IT ENACTED:

Section 1. Classification. This ordinance is of a general and permanent nature and shall become a part of the Borough Code.

Section 2. Adoption of section. MSB 11.12 is hereby adopted to read as follows:

11.12.010 INTENT

11.12.020 DEFINITIONS

11.12.030 APPLICABILITY

11.12.040 APPLICATION PROCEDURES

11.12.050 GENERAL STANDARDS

11.12.060 LOW VOLUME DRIVEWAY STANDARDS

11.12.070 HIGH VOLUME DRIVEWAY STANDARDS

11.12.080 TRAFFIC IMPACT ANALYSIS

11.12.090 TRAFFIC IMPACT MITIGATION

11.12.100 WAIVER OF STANDARDS

11.12.110 NONCONFORMING DRIVEWAYS

11.12.120 VIOLATIONS, ENFORCEMENTS, AND PENALTIES

11.12.010 INTENT

(A) This chapter is intended to establish a permit process and standards for driveways within Borough right-of-ways. Minimum standards are provided for proper placement and design of driveways in order to ensure drainage, maintenance, movement and safety of the traveling public.

(B) All driveways are considered encroachments under MSB 11.10 and are subject to the requirements therein.

(C) Issuance of a permit under this chapter grants the permittee no right, title, or interest within Borough right-of-ways. The Borough reserves the right to deny, modify, or revoke any permit issued under this chapter.

11.12.020 DEFINITIONS

(A) For the purpose of this chapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

"Combination truck" means a vehicle falling under classes 8 through 13 of the Federal Highway Administration vehicle classification definitions.

"Corner clearance" means the distance between an intersection and driveway, not including tapers or curve returns.

"Curb cut" means a ramp built into the curb of a sidewalk or pathway to allow the driveway to ramp down from the curb height to the pavement surface.

"Curve return" means the curve located at the end of a driveway connecting the driveway edge to the roadway edge.

"Design year" means the year that is 10 years after the opening date of a development.

"Driveway" means a type of encroachment, as defined by MSB 11.10.010(A), that provides access to Borough right-of-ways or easements.

"Driveway width" means the distance across the driveway at the furthest point of curvature from the roadway, typically within the right-of-way, measured at right angles to the centerline of the driveway surface.

"Edge clearance" means the distance measured from the property corner to near edge of the driveway surface at the property boundary or outside edge of the right-of-way line, not including tapers or curve returns.

"Functional area" means the physical area of an

intersection and the area extending both upstream and downstream which includes perception-reaction distance, maneuver distance, and storage length.

"Lot" means the least fractional part of subdivided lands having limited fixed boundaries and having an assigned number, or other name through which it may be identified.

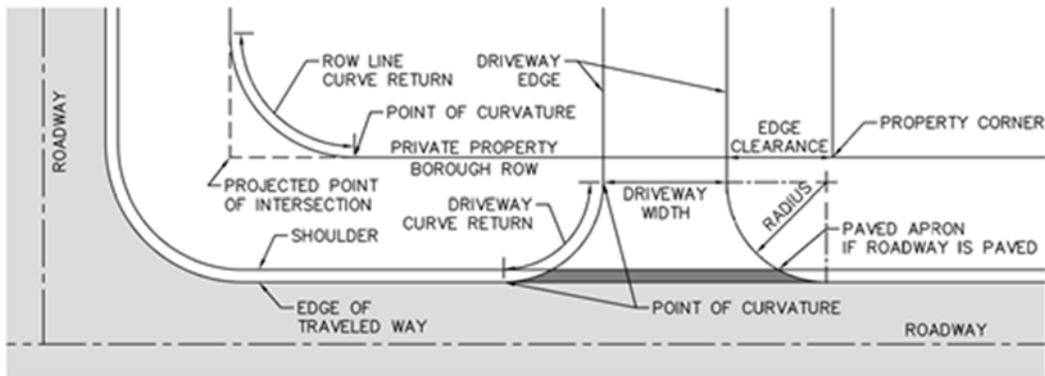
"Parcel" means a lot or contiguous group of lots in single ownership or under single control, usually considered a unit for purposes of development.

"Passenger vehicle" means a vehicle falling under classes 1 through 3 of the Federal Highway Administration vehicle classification definitions.

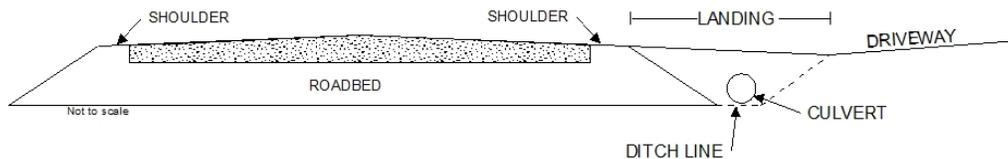
"Single-unit truck" means a vehicle falling under classes 4 through 7 of the Federal Highway Administration vehicle classification definitions.

(B) The following diagrams are a visual representation of terms used within this chapter:

(1) Plan view of a driveway:



(2) Profile view of a driveway:



(C) In instances where a word is not included in this section nor in the applicable section, reference will be made first to MSB 17.125, followed by the most recent publication of "The Illustrated Book of Development Definitions" then to "The Zoning Dictionary" by Lehman and Associates, then to "Webster's New Universal, Unabridged Dictionary."

11.12.030 APPLICABILITY

(A) The following require a driveway permit from the Borough:

- (1) Existing, unpermitted driveways;
- (2) Construction of new driveways;
- (3) Physical modifications to existing

driveways; or

(4) Change in land use requiring a different standard from that which the driveway permit was issued.

(B) A permit is not required for driveways constructed or reconstructed by Borough or state projects.

(1) Any physical modification thereafter requires a permit under this chapter.

11.12.040 APPLICATION PROCEDURES

(A) An application for a driveway permit may be initiated by a property owner or the owners' authorized agent. An application for a driveway permit shall be filed on a form provided by the Borough.

(1) The application for a driveway permit shall be accompanied by an appropriate filing fee as established by the assembly, payable to the Borough.

(2) The application shall include the following:

- (a) street being accessed;
- (b) driveway dimensions;
- (c) pathway or sidewalk dimensions;
- (d) culvert type, diameter, and length;
- (e) expected completion date;

(f) driveway surface type;

(g) estimated peak hour and average daily traffic generated by the use;

(i) Residential developments can assume a trip generation rate of 1 peak hour trip per dwelling unit,

(ii) Other developments shall use the most recent edition of the Institute of Transportation Engineers Trip Generation Manual, and

(iii) At the discretion of the Borough, local trip generation rates determined by a qualified professional may be used as a substitute for the Institute of Transportation Engineers Trip Generation Manual;

(h) driveway sight triangles for driveways that access a parcel containing uses which generate more than 10 vehicles per hour (VPH) during the peak hour;

(i) driveway plan and profile prepared and stamped by a professional civil engineer or other qualified professional registered in the state of Alaska under AS 08.48, if required by this chapter;

(i) The driveway plan and profile

shall contain sufficient information to demonstrate that all the applicable standards of this chapter are met; and

(i) traffic impact analysis prepared and stamped by a professional civil engineer registered in the state of Alaska, if required by MSB 11.12.080.

(B) Following review of the application, the Borough will grant approval to construct or deny the proposed driveway based on whether or not it meets the standards of this chapter.

(C) Upon approval to construct, the applicant may construct the driveway as approved, and shall notify the Borough upon completion.

(D) The Borough will issue final approval of the driveway if the Borough finds that it meets the requirements of this chapter.

11.12.050 GENERAL STANDARDS

(A) The standards within this subsection apply to all driveways regardless of land use.

(1) Driveways shall not cause adverse drainage onto the roadway.

(2) The landowner shall be responsible for maintenance of the driveway, including but not limited

to culvert cleaning and thawing to ensure proper drainage.

(a) Snow removed from the driveway shall not:

(i) be placed in, or pushed across the roadway;

(ii) obstruct traffic signage or address numbers;

(iii) obstruct sight triangles; or

(iv) be placed in the right-of-way in a manner that interferes with drainage or normal maintenance activities.

(3) The driveway landing shall have a negative 2 percent slope away from the road to the extent feasible.

(a) Where a negative slope away from the roadway is not feasible due to topographical constraints, the driveway shall be constructed in a manner that prevents water from flowing onto the roadway.

(4) Length of the driveway landing, as measured from the outside edge of the road shoulder, shall be a minimum of 10 feet.

(a) For uses that regularly utilize larger vehicles, up to 30 feet may be required to allow larger vehicles to come to a complete stop before entering the roadway.

(5) The first 10 feet of the driveway landing shall be installed perpendicular to the roadway to the extent feasible. A driveway may intersect the roadway at an angle up to 60 degrees, upon approval by the Borough, if required by physical constraints.

(6) Any fill or cut slopes created within the right-of-way that are greater than 2:1 are not allowed unless designed by a professional civil engineer or other qualified professional registered in the state of Alaska under AS 08.48.

(7) A minimum 16-gauge thickness, 12-inch diameter, corrugated metal pipe culvert shall be installed with at least one foot of culvert visible at the toe of the foreslopes on each side of the driveway or with sloped end sections flush with the foreslopes.

(a) If it is determined that a 12-inch culvert is likely insufficient to accommodate drainage, the Borough may require a larger culvert and may also require an engineering analysis to determine the size of

the culvert needed to adequately handle flow from events that have a 10% chance of occurring in any given year.

(b) If the driveway crosses a stream reach which harbors fish, as determined by the Alaska Department of Fish and Game, then the culvert shall be installed in accordance with the fish passage culvert section of the MSB subdivision construction manual.

(c) Culverts shall be sloped to match the ditch gradient at a minimum of 0.5 percent in the direction of flow.

(d) Culverts shall be placed in the ditch line or set back up to 4 feet from the ditch line where practical.

(e) The Borough may waive the requirement for a culvert if the Borough determines one is not needed to accommodate drainage.

(8) Driveways shall be installed and maintained in accordance with the following table unless there are topographical or other physical constraints outside of the applicant's control:

Standard Driveway Sight Distance (feet)									
	Largest type of vehicle frequently accessing roadway	Speed limit (mph)							
		20	25	30	35	40	45	50	55
Left Sight triangle	Passenger vehicle	225	280	335	390	445	500	555	610
	Single-unit truck	280	350	420	490	560	630	700	770
	Combination truck	340	425	510	595	680	765	850	930
Right Sight Triangle	Passenger vehicle	195	240	290	335	385	430	480	530
	Single-unit truck	250	315	375	440	500	565	625	690
	Combination truck	310	390	465	545	620	695	775	850

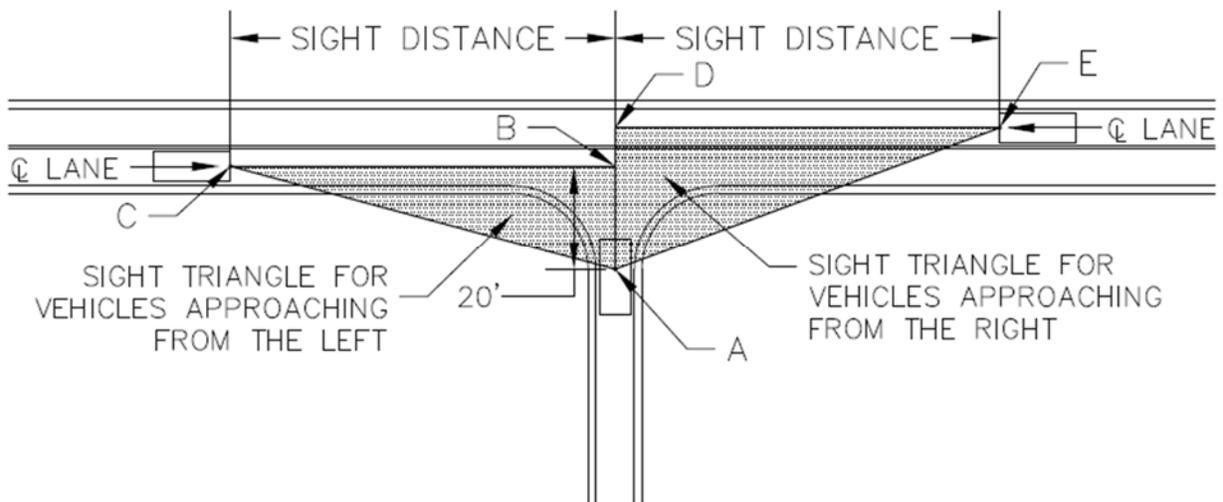
(a) The standard sight distances listed above are for vehicles turning onto a two-lane undivided street. For other conditions, the minimum sight distance should be calculated using the most current version of AASHTO's: A Policy on Geometric Design of Highways and Streets.

(b) Minimum sight distance in the following table shall only be used when standard sight distance cannot be obtained because of topographical or other physical constraints outside of the applicant's control:

Minimum Sight Distance (feet)								
Average grade of sight distance triangle	Speed limit (mph)							
	20	25	30	35	40	45	50	55
-10%	130	180	235	295	365	440	525	610
-9%	130	175	230	290	355	430	510	595
-8%	125	170	225	285	350	420	495	580
-7%	125	170	220	280	340	410	485	570
-6%	120	165	215	275	335	400	475	555
-5%	120	165	215	270	330	395	465	545
-4%	120	160	210	265	325	385	455	530
-3%	120	160	205	260	315	380	450	520
-2%	115	160	205	255	310	375	440	510
-1%	115	155	200	250	305	370	435	505
0%	115	155	200	250	305	360	425	495
1%	115	155	195	245	300	355	420	485
2%	110	150	195	240	295	350	415	480
3%	110	150	190	240	290	345	405	470
4%	110	150	190	235	285	340	400	465
5%	110	145	190	235	285	340	395	460
6%	110	145	185	230	280	335	390	450
7%	110	145	185	230	275	330	385	445
8%	105	145	185	225	275	325	380	440
9%	105	140	180	225	270	320	375	435
10%	105	140	180	220	270	320	370	430

(c) If minimum sight distance in the previous table cannot be obtained because of topographical or other physical constraints outside of the applicant's control, alternate mitigation such as hidden driveway or advisory speed signs shall be installed in accordance with the latest version of the Alaska Traffic Manual.

(d) The entire area of the sight triangles shown in the following figure shall be designed to provide an unobstructed view from point A at 3.5 feet above the roadway to all points 3.5 feet above the roadway along the lane centerlines from point B to point C and point D to point E:



(9) The cost of redesign and construction of public infrastructure and utilities impacted by the driveway installation shall be the responsibility of the permittee.

(10) The minimum corner clearance for a driveway to a corner lot shall be 60 feet from the projected point of intersection or property corner, as measured from the driveway edge.

(a) In no case shall a driveway be located within the curve return of a constructed roadway

or right-of-way.

(11) Edge clearance shall be equal to or greater than the radius of the driveway curve return.

(a) Edge clearance is measured from the property corner to near edge of the driveway surface at the right-of-way line.

(12) For the purpose of this chapter, classification of roadways shall be determined by the Public Works Director and shall be based on current constructed roadway standard, current functional classification of the road, and the intended functional classification in accordance with the Long Range Transportation Plan and the Official Streets and Highways Plan.

(13) Curb cuts shall be installed in accordance with the State of Alaska Standard Plans.

(14) All pedestrian walkway crossings shall conform to Americans with Disabilities Act standards for Transportation (2006 US DOT) and the Alaska Traffic Manual.

11.12.060 LOW VOLUME DRIVEWAY STANDARDS

(A) This section applies to driveways that access a parcel containing uses which generate less than or

equal to 10 vehicles during the peak hour.

(1) Driveway Dimensions.

(a) Driveway width shall be a minimum of 10 feet and a maximum of 25 feet.

(b) The radius of the driveway curve return shall be a minimum of 6 feet and a maximum of 20 feet.

(c) Driveways with dimensions that fall outside the standards of this paragraph shall be designed by a professional civil engineer or other qualified professional registered in the state of Alaska under AS 08.48 and shall be designed to ensure:

(i) the driveway is the minimum width necessary to accommodate the proposed use;

(ii) snow storage equal to or greater than the driveway width at the edge of the roadway is available within the right-of-way in the direction of anticipated snow removal fronting the property to the extent feasible.

(iii) vehicles do not encroach into the opposing lane on collector or higher classification roads; and

(iv) the driveway meets all other

standards within this chapter.

(2) Driveways to corner lots or lots that border two or more roadways shall gain access from the street of lowest classification when streets of multiple classifications bound a lot.

(3) Driveways fronting on paved roadway surfaces shall have a minimum 2-foot paved apron the entire width of the portion of the driveway that intersects the roadway.

(4) Minimum distance between driveways on the same side of the street shall be in accordance with the following table:

Roadway Classification	Distance
Arterial roadways	75 feet
Collector roadways	50 feet
Local roadways	35 feet

(a) driveway spacing shall be measured parallel to the centerline of the roadway between the intersection of the inside edges of two adjacent driveways and the right-of-way line.

(i) driveway spacing on cul-de-sacs or other turnarounds shall be measured along the edge of

the right-of-way.

(b) adjacent driveway curve returns shall not overlap.

11.12.070 HIGH VOLUME DRIVEWAY STANDARDS

(A) This subsection applies to driveways that access a parcel containing uses which generate more than 10 vehicles per hour (VPH) during the peak hour.

(1) Driveways under this subsection shall be designed by a professional civil engineer or other qualified professional registered in the state of Alaska under AS 08.48.

(2) Minimum 18-inch diameter culverts with sloped end sections are recommended.

(3) Driveway dimensions.

(a) Driveway width shall be a minimum of 24 feet wide.

(b) The radius of the driveway curve return shall be a minimum of 20 feet.

(i) Driveway curve returns may be less than 20 feet in certain circumstances such as angled or one-way driveways. However, the edge clearance shall be a minimum of 20 feet.

(4) Driveways to corner lots or lots that

border two or more roadways may be required to gain access from the street of lower classification when streets of multiple classifications bound a lot.

(a) Access to arterials is discouraged when other options are available.

(5) Driveways fronting on paved roadway surfaces shall have a paved apron to the furthest point of curvature from the roadway.

(6) Signage and striping, if used, shall conform to the latest version of the Alaska Department of Transportation and Public Facilities (ADOT&PF) Alaska Traffic Manual and shall be maintained by the landowner.

(7) Separation from intersections and between high volume driveways shall be in accordance with the following table:

Minimum separation from intersections and between driveways (feet)										
Classification of road being accessed	Posted speed limit or 85 th percentile speed of road being accessed (mph)	Total trip generation of subject parcel (vph)								
		10-99			100-249			250+		
		Total trip generation of subject parcel, nearby parcel, or classification of cross street			Total trip generation of subject parcel, nearby parcel, or classification of cross street			Total trip generation of subject parcel, nearby parcel, or classification of cross street		
		10-99 vph or local road	100-249 vph or collector	250+ vph or arterial	10-99 vph or local road	100-249 vph or collector	250+ vph or arterial	10-99 vph or local road	100-249 vph or collector	250+ vph or arterial
Local	≤30	35	70	150	70	150	150	150	150	300
Collector	≤30	70	150	300	150	150	300	300	300	300
	>30	70	150	300	150	300	300	300	300	300
Arterial	≤40	150	300	300	300	300	600	300	600	600
	>40	150	300	600	300	600	600	600	600	600

(a) Minimum separation from intersections and between driveways applies to the same side and opposite sides of the street.

(i) Driveways that are not able to meet separation distance from other existing driveways or intersections due to design or physical constraints may be located closer as recommended by the engineer and approved by the Borough.

(b) Separation from intersections and between high volume driveways is measured along the right-of-way line from the driveway edge to the nearest edge of traveled way or driveway edge.

(c) Driveway access within the functional

area of an intersection should be avoided when possible.

(d) Driveways on opposite sides of the street shall:

(i) be aligned directly across from each other to the extent feasible with a lane offset no greater than six feet; or

(ii) meet the separation distances established by the table within MSB 11.12.070(A)(7).

(e) If the requirements of subparagraph d are not feasible, a lesser separation distance may be considered if the opposing driveways do not have overlapping left turns.

(f) Separation distances do not apply to driveways on opposite sides of streets that have a non-traversable median.

(g) Lesser separation distances may be considered for one-way driveways, for right in/right out driveways, if a TIA demonstrates capacity needs, or if other mitigating factors are provided.

(h) Developments which produce greater than 100 vehicles per hour may access the first 600 feet of a local road but may only be approved upon consideration of traffic on residential properties.

(B) This subsection applies to driveways that access a parcel containing uses which generate more than 50 vph during the peak hour.

(1) STOP signs are required.

(2) Painted STOP bars are required when accessing a paved roadway where there is a non-motorized facility.

(3) Pathways and sidewalks shall be relocated in front of STOP bars in accordance with ADOT&PF Central Region details.

(4) Turn lanes may be required if warranted by State or National guidelines.

11.12.080 TRAFFIC IMPACT ANALYSIS

(A) Driveways that access a parcel containing uses that generate traffic in excess of 100 vehicle trips during any hour of the day require a traffic impact analysis which examines critical movement level of service (LOS) at the driveway and nearby roads and intersections.

(1) The Borough may require a traffic impact analysis for uses that generate less than 100 vehicle trips per hour upon determination that the traffic generated will detract from the safety of the roadway.

(a) in determining whether the access will detract from safety of the roadway the borough shall consider factors such as:

- (i) sight distance
- (ii) accident history
- (iii) bus stops
- (iv) road width
- (v) functional area

(b) a determination that the access will detract from safety of the roadway shall be issued in writing by the borough.

(2) The traffic impact analysis and driveway design shall be prepared by a professional civil engineer registered in the State of Alaska under AS 08.48.

(3) Level of service and operational analysis for a traffic impact analysis prepared under this section must be performed in accordance with the latest version of the Transportation Research Board's Highway Capacity Manual. The minimum acceptable LOS at intersections and on road segments both on the development's opening date and in the design year is:

- (a) LOS C, if the LOS on the date of

application is LOS C or better; or

(b) LOS D, if the LOS on the date of application is LOS D or poorer; however, if the LOS is poorer than LOS D, a lower minimum LOS is acceptable if the operation of the highway does not deteriorate more than 10 percent in terms of delay time or other appropriate measures of effectiveness from the LOS before the development's opening date.

(4) A traffic impact analysis prepared under this section must address:

(a) intersections on roadways where traffic on any approach is expected to increase, as a result of the proposed development, by at least five percent of the approach's capacity;

(b) segments of roadways between intersections where total traffic is expected to increase, as a result of the proposed development, by at least five percent of the segments' capacity;

(c) roadways and intersections where the safety of the facilities will deteriorate as a result of the traffic generated by the development;

(d) each driveway that will allow egress from or ingress to a roadway for the proposed

development;

(e) parking and circulation routes within the proposed development, to the extent necessary to ensure that traffic does not back up onto a roadway; and

(f) pedestrian and bicycle facilities that are part of the roadway to which a permit applicant seeks access.

(5) A traffic impact analysis prepared under this section must consider:

(a) projected traffic at the development's anticipated opening date, excluding the traffic generated by the development; and

(b) projected traffic at the development's anticipated opening date, including the traffic generated by the development.

(6) A traffic impact analysis prepared under this section for a development expected to generate 250 or more vehicle trips during the peak traffic hour of the adjacent roadway must, in addition to the projected traffic volumes before and after the completion of the proposed development, consider:

(a) the projected traffic in the design year for the proposed development, excluding traffic

generated by the development; and

(b) the projected traffic for the design year for the proposed development including the traffic generated by the development.

11.12.090 TRAFFIC IMPACT MITIGATION

(A) A traffic impact mitigation plan shall be submitted in association with the traffic impact analysis required under MSB 11.12.080.

(B) The traffic impact mitigation plan shall identify improvements, to be made by the permittee, to a highway or intersection in order to maintain an acceptable LOS if a roadway or intersection has an:

(1) acceptable LOS, under MSB 11.12.080(A)(3), without traffic generated by the development; and

(2) unacceptable LOS, under MSB 11.12.080(A)(3), with traffic generated by the development:

(a) at the opening date of the development; or

(b) in the design year of the development, for a development expected to generate 250 or more vehicle trips during the peak hour of the adjacent roadway on the opening date of the development.

(C) A traffic impact mitigation plan shall be submitted if a roadway has an unacceptable LOS under MSB 11.12.080(A)(3) without traffic generated by the development, either at the opening date of the development or in the design year of the development.

(1) The permittee shall make improvements to the roadway so the operation of the roadway does not deteriorate more than 10 percent in terms of delay time or other appropriate measures of effectiveness with the addition of the traffic generated by the development at the opening date of the development or in the design year.

(D) A traffic impact mitigation plan prepared under this section must identify all of the following:

(1) Locations where road improvements are necessary to mitigate traffic impacts, including locations where the LOS is less than acceptable under MSB 11.12.080(A)(3):

(a) due to the development at either the opening date or the design year; or

(b) at either the opening date or the design year without the development and improvements are necessary to prevent the LOS from deteriorating further.

(2) Road improvement alternatives that will achieve an acceptable LOS or minimize degradation of service below an already unacceptable LOS:

(a) on the opening date of the development; and

(b) in the design year of the development, for a development expected to generate 250 or more vehicle trips during the peak hour of the adjacent roadway on the opening date of the development.

(3) Bicycle or pedestrian access improvements necessary to accommodate bicycle and pedestrian traffic as negotiated between the Borough and the applicant.

(4) Improvements needed for internal circulation and parking plans.

(E) The Borough will review and comment upon a traffic impact mitigation plan prepared under this section and submitted for a proposed development. The Borough will, in its discretion, request clarification or further analysis of the impacts that it considers necessary to adequately consider the risks presented to the traveling public by the proposed development. If alternative means are proposed by an applicant for mitigation of the traffic impacts of a proposed

development, the Borough will select the alternative that provides the greatest public benefit, at the least private cost, and that meets the appropriate LOS on an impacted roadway. If the Borough accepts a means of mitigation, the mitigation must be completed by the permittee as part of a permit issued under this title.

(F) The traffic impact mitigation plan shall ensure:

(1) internal circulation and parking layout provides sufficient queuing distance within the development between the roadway and potential internal block points so that no traffic backs up onto the roadway; and

(2) impacts to pedestrian and bicycle traffic are mitigated.

(G) The Borough will, in its discretion, relax the requirements for mitigation under this section, if it finds in writing that the:

(1) roadway and intersection only marginally achieve an acceptable LOS under MSB 11.12.080(A)(3) without the traffic generated by the development and would likely fall below an acceptable LOS within five years;

(2) traffic generated by the development results in an unacceptable LOS under MSB 11.12.080(A)(3); and

(3) cost of mitigating the impacts is disproportionate to the cost of the development.

11.12.100 WAIVER OF STANDARDS

(A) The Borough may waive specific standards of this chapter based on physical constraints associated with the property and adjacent roadway, or mitigating factors associated with a traffic impact mitigation plan.

11.12.110 NONCONFORMING DRIVEWAYS

(A) Driveways which were permitted by the Borough prior to the date of adoption of this ordinance, but which do not otherwise meet standards of this chapter, are allowed to remain in the location that they were permitted except for when a permit is required under MSB 11.12.030(A)(4).

(B) Existing driveways which were given approval to construct, but which were not given final approval by the Borough as of the date of adoption of this chapter, are allowed to remain and may be approved under the standards that were in place at the time approval to

construct was given. In cases where the standards in place at the time approval to construct was given are in conflict with this chapter, the lesser standards apply.

11.12.120 VIOLATIONS, ENFORCEMENT, AND PENALTIES

(A) Except as otherwise specified in this chapter, violations of this chapter are infractions.

(B) Remedies, enforcement actions, and penalties shall be consistent with the terms and provisions of MSB 1.45.

(C) Failure to correct a violation of any permit condition is a violation of Borough code.

Section 3. Effective date. This ordinance shall take effect January 1, 2021.

ADOPTED by the Matanuska-Susitna Borough Assembly this - day of -, 2020.

VERN HALTER, Borough Mayor

ATTEST:

LONNIE R. McKECHNIE, CMC, Borough Clerk

(SEAL)

DRAFT

LOCAL ROAD SERVICE AREA ADVISORY BOARD

RESOLUTION 20-01

A RESOLUTION BY THE MATANUSKA-SUSITNA BOROUGH LOCAL ROAD SERVICE AREA ADVISORY BOARD TO THE BOROUGH PLANNING DIRECTOR REGARDING APPROVAL OF THE DRAFT SUBDIVISION CONSTRUCTION MANUAL CONDITIONED ON AMENDMENT

WHEREAS: The current Draft update of the Subdivision Construction Manual (SCM) is a long-overdue improvement and generally acceptable, this Board has serious concerns with portions of Section CO2.5, Embankment Construction, as follow:

WHEREAS: A significant problem with many roads, both old and new, throughout the Borough is weak and/or unstable subgrades; and

WHEREAS: The normally acceptable (and DOT standard) maximum uncompacted subgrade lift depth is 12 inches, with a compacted density of 95%; and

WHEREAS: The allowance of an unspecified quantity of subgrade particles of 6-inch diameter (ie., "cobble") or more (eg., 10-inch-plus diameter "boulders"), coupled with the 20-inch compacted lift depth proposed, raises experience-bought questions about the at-depth accuracy of density tests, even with nuclear densimeters; and

WHEREAS: Normal design of subgrade traffic load dispersal sections (eg., the top 6 inches of this section) requires that maximum particle diameter be no more than 50% of the section depth to prevent traffic-induced migration of the largest particles to the road surface; and

WHEREAS: The normal practice nation-wide is to include watering of the fill layer both prior to and during compaction to ensure retention and distribution of the material fines (sand, silt, clay) as "binder" among the gravel particles, but there is no mention of watering in this draft; Now Therefore

BE IT RESOLVED: That the LRSAAB can approve the draft SCM provided that Sections CO2.5 (c) and (e) are Amended as follows:

CO2.5(c) "Place material meeting, or verify in-situ material meets, the requirements for Subbase specified in subsection CO7 to a minimum compacted depth of 20 inches with the upper 6 inches having no material with a diameter larger than ~~6~~ 4 inches. Place embankment in horizontal layers not to exceed ~~24~~ 12 inches (uncompacted) for the full width of the embankment and compact as specified before the next lift is placed. Compaction shall start at the outer edges of the road prism and proceed inward to roadway centerline."

CO2.5(e) Between sentences 2 and 3 insert: "Provide a watering plan to be followed during compaction for prior approval by DPW."

APPROVED BY (Majority) (Unanimous) VOTE ON _____

Stephen Edwards , chair _____

Mike Shields, secretary _____

Dan Elliott comments

After hearing from both TAB and LRSAAB members, I suggest a revision of CO2.5 (c) embankment construction in the January 23, 2020 SCM final draft pgs. 20 / 21 concerning the placement depth of materials in a lift up to 24 inches. This version was created during the last couple meetings.

The original version was still in the Jan. 13 draft at 8 inches which more closely follows DOT practices.

Scott Adams Comments

1. A04.1(b) - recommend making it clear who is responsible for calculating the ADT. Section 15 discusses how to calculate the ADT. Suggest revising the first sentence in A15 to read, "The applicant shall use the following formula to determine..." and moving the entire A15 section ahead of A04.

2. A05 - first sentence abruptly ends.

3. Table A-1 footnote 2 - suggest adding the word "minimum" at the beginning of the sentence before ROW.

4. Table A-1 - Suggest having two rows for shoulder width. One for paved shoulders, one for gravel shoulders. Include 2 foot gravel shoulders for Residential classification. For the Sub-collector and Collector classification, suggest 2 foot paved followed by 2 foot gravel shoulders.

5. A13 - Recommend adding the MUTCD as governing reference that shall be followed.

6. C02.5(c) - The DOT&PF successfully builds roads where they limit the horizontal layers of uncompacted material to 8" Why are we increasing that to 24"? We are setting up the taxpayers to pay the bill for repairing these roads that will settle and require increased maintenance after they are constructed and before the design life is reached. Recommend following the DOT&PF requirement of 8" horizontal layers.

7. C02.5(e) - the 90% and 95% compaction requirements are too low and are not what is typically done in an engineered road design. Suggest changing these to 95% and 98%, respectively, of the Modified Proctor.

8. C02.5(f) - 2 inches of asphalt over 2 inches of base course seems thin for a collector. This section is more for a driveway. I would expect to see something in the range of 3.5 - 4 inches of HMA over 4 inches of base course. Suggest revisiting this so that the taxpayers are not paying to rehab roads prior to the end of their design life.

9. Figure C-1 - same as #8 above. The typical structural section for the roadway will be driven by

existing geotechnical conditions which will vary at each road location. Suggest requiring a geotechnical investigation with recommendation for each site.

Cindy Bettini's Comments

1. The goal of the SCM is to promote a safer transportation system but it would appear they have left out accommodations for non-motorized
2. Can we ask for roads to be designed offset from the center line so we would have room to offer at least one 4ft shoulder on one side
3. The SCM seems to have a residential focus. What about commercial development, don't we also need standards for them that are different than residential?
4. Design deviation paragraph needs to be firmer.
5. Is there a way to offer a benefit an incentive to a developer who is willing to put in a pedestrian pathway?

FYI) Title 43.20.281 of the MSB code allows a developer to have smaller lot size if they are dedicating public opens space. Maybe language for non-motorized pathways can be included in that clause.

MATANUSKA-SUSITNA BOROUGH
TRANSPORTATION ADVISORY BOARD RESOLUTION NO. TAB 20-02

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH TRANSPORTATION ADVISORY BOARD SUPPORTING AN ORDINANCE AMENDING MSB 43.05.015 (B) 3 TO ADOPT THE 2020 SUBDIVISION CONSTRUCTION MANUAL

WHEREAS, the Assembly adopted Resolution 17-003 requesting an update of the 1991 subdivision construction manual; and

WHEREAS, the MSB planning department, capital projects department and public works department worked together and created a "first revision" public review draft document and distributed it for public review and comment; and

WHEREAS, as a result of the first revision draft, an informal working group was formed, consisting of subject matter experts including MSB staff, RSA and TAB representatives, utilities, engineers, surveyors, road builders and developers; and

WHEREAS, the working group met 26 times between July 2018 and January 2020 and created a second revision draft document, for further review and submittal to the appropriate boards; and

WHEREAS, the working group adopted their resolution 20-01 recommending approval of the 2020 Subdivision Construction Manual, and that the Assembly consider a variety of other actions concerning land use, subdivisions, transportation issues and road funding at a future date.

WHEREAS, the Transportation Advisory Board as reviewed and discussed the Subdivision Construction Manual and is suggesting the following recommended changes to the Subdivision Construction Manual prior to its approval by the Planning Commission and the Assembly:

- 1)
- 2)
- 3)
- 4)

NOW, THEREFORE, BE IT RESOLVED, that the Matanuska-Susitna Borough Transportation Advisory Board hereby recommends adoption of an ordinance amending MSB 43.05.015(B)3 to adopt the 2020 Subdivision Construction Manual with our suggested amendments.

BE IT FURTHER RESOLVED, that the board supports the additional recommendations of the subdivision construction manual working group as outlined in their resolution.

ADOPTED by the Matanuska-Susitna Borough Transportation Advisory Board this ____ day of _____, 2020.

JOSHUA CROSS, Chair

ATTEST

KIM SOLLIEN, PLANNING SERVICE
MANAGER/CLERK

DRAFT

**MATANUSKA-SUSITNA BOROUGH
TRANSPORTATION ADVISORY
RESOLUTION SERIAL NO. TA2018-04**

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH TRANSPORTATION ADVISORY BOARD RECOMMENDING PRIORITY PROJECTS FOR THE NATIONAL HIGHWAY SYSTEM, TRANSPORTATION PLANNING, ALASKA HIGHWAY SYSTEM, COMMUNITY TRANSPORTATION, BRIDGES AND TRANSIT IN THE BOROUGH CAPITAL IMPROVEMENT PROGRAM FOR FISCAL YEARS 2020 - 2025.

WHEREAS, the Transportation Advisory Board ("TAB") reviewed the projects nominated for inclusion in the FY 2020 - 2025 Capital Improvement Program; and

WHEREAS, the TAB recognizes the importance of long range planning for development in the Matanuska-Susitna Borough ("Borough"); and

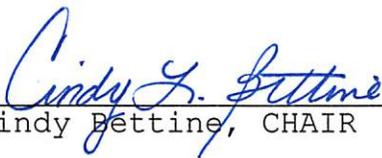
WHEREAS, the projects nominated in the National Highway System, Transportation Planning, Alaska Highway System, Community Transportation Program, Bridges and Transit sections address transportation requirements of the Borough to meet the needs of a growing populace and business community; and

WHEREAS, staff reviewed the projects against the evaluation criteria established for all nominations to the Capital Improvement Program to create a prioritized list; and

WHEREAS, the TAB reviewed the prioritized list of nominations for inclusion in the Capital Improvement Program.

NOW, THEREFORE, BE IT RESOLVED that the Matanuska-Susitna Borough Transportation Advisory Board respectfully recommends the prioritized list of transportation-related projects as identified in Attachment A for inclusion in the FY 2020 - 2025 Capital Improvement Program.

ADOPTED by the Matanuska-Susitna Borough Transportation Advisory Board on this 27 day of September, 2018.


Cindy Bettine, CHAIR

ATTEST:


Ben Coleman, Transportation Planner
Staff Support

MATANUSKA-SUSITNA BOROUGH
TRANSPORTATION ADVISORY BOARD
RESOLUTION TA2018-04

ATTACHMENT A
PRIORITIZED LIST

2020 - 2025 Capital Improvement Program

Alaska Highway System

1. Parks Highway MP 127 to MP 148 (Milepost 163 - Milepost 183) (CIP #330)
2. Point MacKenzie Road Upgrade: KGB to Burma (CIP #33)
3. Big Lake Airport access solution (CIP #346)
4. Big Lake Intersection Improvements (CIP #23)
5. Parks Highway Mile Point 147-157 (Milepost 183-192) (CIP #331)

Bridges

1. Parks Highway Bridge Replacement Montana Creek, Sheep Creek and Goose Creek Bridges (CIP #334)
2. Bridge 1936: Bradley Road at Trapper Creek (CIP #132)
3. Bridge 1209: Lewis Loop at Fish Creek (CIP #129)
4. Parks Highway Mile Point 147 - 157 (Milepost 183-192) (CIP #331)

Community Transportation Program

1. Seward Meridian Extension - Phase II (Palmer-Wasilla Highway to Seldon) (CIP #51)
2. Bogard/Engstrom Intersection Improvement (Replaces old 282) (CIP #300)
3. Seldon Road Upgrade from Wasilla-Fishhook to Lucille Street (CIP #263)
4. Tex-Al Drive Upgrade and Extension to Palmer-Fishhook Road (CIP #257)
5. Knik River Road: Three Fish Passage Culverts (CIP #31)
6. Smith Road Reconstruction and Pedestrian Pathway (CIP #61)
7. Trunk Road Connector/Katherine Drive (CIP #284)
8. Fern Street Upgrade and Pathway: KGB to Fairview Loop (CIP #280)
9. Hemmer North Extension to Bogard East Extension (CIP #327)
10. Hermon Road Reconstruction and Extension: Parks Highway to Palmer-Wasilla Highway (CIP #321)

National Highway System

1. Knik-Goose Bay Road: 4-Lane Reconstruction - MP .03-6.8 Centaur to Vine (CIP #54)
2. Parks Highway Wasilla Alternative Corridor - Advance ROW Acquisition (CIP #8)
3. Parks Highway: Lucus Road to Big Lake Improvements - MP 43.5-52.3 (CIP #55)
4. Glenn Highway Rehabilitation: Kings River Bridge to Cascade - MP 66.5-92 (CIP #14)
5. Glenn Highway Rehabilitation: King River to Cascade - MP 66.5-92 (CIP #12)
6. Glenn Highway - Moose Creek Canyon Reconstruction - MP 53-56 (CIP #13)

Transportation Planning Projects

1. Mat-Su Arterial Roads and Bridge Improvements (State Roads) (CIP #20)
2. Parks Highway: Willow Bypass Study (CIP #9)
3. Inter-Governmental Comprehensive Inter-Modal Transportation Plan (CIP #156)
4. Big Lake Community Council Impact Assessment: Port to Parks Route, Phase II Implementation (CIP #160)
5. Port to Parks Highway at Houston (CIP #253)

Transit Projects

1. Fleet Refresh Program (CIP #347)
2. Regional Transit Dispatch & Scheduling Center (CIP #274)
3. Wasilla Transit Center Commuter Rail Dock and Staging Facility Upgrade (CIP #256)
4. Replacement Share-A-Ride Vans for Mat-Su (CIP #311)
5. Regional Transit Maintenance Center (CIP #273)
6. Meadow Lakes Community Transit Stops (CIP #124)