MATANUSKA-SUSITNA BOROUGH
PLANNING COMMISSION AGENDA

Edna DeVries, Mayor

PLANNING COMMISSION
Doug Glenn, District 1
Richard Allen, District 2
Patricia Chesbro, District 3, Vice-Chair
Mike Rubeo, District 4
Bill Kendig, District 5
Stafford Glashan, District 6, Chair
Curt Scoggin, District 7

Michael Brown, Borough Manager

PLANNING & LAND USE DEPARTMENT
Alex Strawn, Planning & Land Use Director
Kim Sollien, Planning Services Manager
Jason Ortiz, Development Services Manager
Fred Wagner, Platting Officer
Karol Riese, Planning Clerk

Assembly Chambers of the
Dorothy Swanda Jones Building
350 E. Dahlia Avenue, Palmer

May 16, 2022
REGULAR MEETING
6:00 p.m.

Ways to participate in the meeting:

IN PERSON: Should you wish to testify in person, please adhere to a 6-foot distance between yourself and others.

IN WRITING: You can submit written comments to the Planning Commission Clerk at msb.planning.commission@matsugov.us.

TELEPHONIC TESTIMONY:
(We are having intermittent technical difficulties with our software; if you would like to submit comments, please submit comments to the email address above by the Friday before the meeting.)

- Dial 1-855-290-3803; you will hear "joining conference" when you are admitted to the meeting.
- You will be automatically muted and able to listen to the meeting.
- When the Chair announces audience participation or a public hearing you would like to speak to, press *3; you will hear, "Your hand has been raised." (There may be a delay, please be patient with the system.)
- When it is your turn to testify, you will hear, "Your line has been unmuted."
- State your name for the record, spell your last name, and provide your testimony.

Ways to observe the meeting:
FACEBOOK LIVE at www.facebook.com/MatSuBorough

- Questions or comments will **not** be answered; please call the number above if you have a comment or concern.

I. CALL TO ORDER, ROLL CALL, AND DETERMINATION OF QUORUM

II. APPROVAL OF AGENDA

III. PLEDGE OF ALLEGIANCE

IV. CONSENT AGENDA

A. MINUTES Regular Meeting Minutes: 05/02/2022

B. INTRODUCTION FOR PUBLIC HEARING: QUASI-JUDICIAL MATTERS

C. INTRODUCTION FOR PUBLIC HEARING: LEGISLATIVE MATTERS

Resolution 22-13 2022 Official Streets and Highways Plan Update, Public Hearing: June 6, 2022, (Staff: Adam Bradway).

Resolution 22-18 MSB Subdivision Construction Manual Update, Public Hearing: June 6, 2022, (Staff: Alex Strawn).

V. COMMITTEE REPORTS

VI. AGENCY/STAFF REPORTS

A. MSB Planning and Land Uses Viewer (Staff: Adam Bradway).

VII. LAND USE CLASSIFICATIONS

Resolution 22-17 A resolution of the Matanuska-Susitna Borough Planning Commission recommending Assembly approval of the reclassification of a borough-owned parcel, Tax ID #20N04W08A001, (Staff: Emerson Krueger, Natural Resource Manager).

VIII. AUDIENCE PARTICIPATION (*three minutes per person, for items not scheduled for public hearing*)

IX. PUBLIC HEARING: QUASI-JUDICIAL MATTERS ***(Commission members may not receive or engage in ex-parte contact with the applicant, other parties interested in the application, or members of the public concerning the application or issues presented in the application)***.

Resolution 22-08 A conditional use permit in accordance with MSB 17.60 – Conditional Uses for a marijuana cultivation facility located at 3097 South Sylvan Lane, Tax ID #6315B01L011 & 6315B01L012 (Lot 11A); within Township 17 North, Range 2 West, Section 22, Seward Meridian, (Applicant Ryan McKay and Jana Weltzin for AK Legacy Genetics; Staff: Peggy Horton).

Resolution 22-11 A conditional use permit in accordance with MSB 17.70 – Regulation of Alcoholic Beverage Uses for the operation of a convenience market with gas pumps and alcoholic beverage package store called Valley Country Store #4, located at 3068 South Trunk Road, Tax ID #8150000L001B; within Township 17 North, Range 1 East, Section 16, Seward Meridian, (Applicant: Matt Gittlein for KG Enterprises, LLC; Staff: Peggy Horton).

Resolution 22-10 A conditional use permit in accordance with MSB 17.61 – Core Area for the operation of a convenience market with gas pumps and alcoholic beverage package store called Valley Country Store #4, located at 3068 South Trunk Road, Tax ID #8150000L001B; within Township 17 North, Range 1 East, Section 16, Seward Meridian, (Applicant: Matt Gittlein for KG Enterprises, LLC; Staff: Peggy Horton).

X. PUBLIC HEARING: LEGISLATIVE MATTERS

XI. CORRESPONDENCE & INFORMATION

XII. UNFINISHED BUSINESS

XIII. NEW BUSINESS

XIV. COMMISSION BUSINESS:

A. Upcoming Planning Commission Agenda Items

XV. DIRECTOR AND COMMISSIONER COMMENTS

XVI. ADJOURNMENT (*Mandatory Midnight*)

Disabled persons needing reasonable accommodation in order to participate at a Planning Commission Meeting should contact the Borough ADA Coordinator at 861-8432 at least one week in advance of the meeting.

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MINUTES

May 2, 2022

MINUTES

MATANUSKA-SUSITNA BOROUGH **REGULAR MEETING**
PLANNING COMMISSION MINUTES **May 2, 2022**

The regular meeting of the Matanuska-Susitna Borough Planning Commission was held on May 2, 2022, at the Matanuska-Susitna Borough Assembly Chambers, 350 E. Dahlia Avenue, Palmer, Alaska. The meeting was called to order at 6:00 p.m. by Chair Stafford Glashan.

I. CALL TO ORDER, ROLL CALL, AND DETERMINATION OF QUORUM

Planning Commission members present and establishing a quorum:
Mr. Doug Glenn, Assembly District #1
Mr. Richard Allen, Assembly District #2
Ms. Patricia Chesbro, Assembly District #3, Vice-Chair
Mr. Michael Rubeo, Assembly District #4
Mr. Bill Kendig, Assembly District #5
Mr. Stafford Glashan, Assembly District #6, Chair
Mr. Curt Scoggin, Assembly District #7

Planning Commission members absent and excused were:

Staff in attendance:
Mr. Mark Whisenhunt, Planner II
Ms. Karol Riese, Planning Depart. Administrative Specialist/Planning Commission Clerk

*Indicates that the individual attended telephonically due to COVID safety protocols.

II. APPROVAL OF AGENDA

Chair Glashaninquired if there were any changes to the agenda.

GENERAL CONSENT: The agenda was approved without objection.

III. PLEDGE OF ALLEGIANCE

The pledge of allegiance was led by Mark Whisenhunt.

IV. CONSENT AGENDA

A. Minutes Regular Meeting Minutes: April 18, 2022

B. INTRODUCTION FOR PUBLIC HEARING: QUASI-JUDICIAL MATTERS

Resolution 22-08 A conditional use permit in accordance with MSB 17.60 – Conditional Use Permit for a marijuana cultivation facility located at 3097 South Sylvan Lane, Tax ID #6315B01L011 & 6315B01L012 (Lot 11A); within Township 17 North, Range 2 West, Section 22, Seward Meridian, Public Hearing: May 16, 2022 (Applicant Ryan McKay and Jana Weltzin for AK Legacy Genetics; Staff: Peggy Horton).

Resolution 22-10 A conditional use permit in accordance with MSB 17.61 – Core Area for the operation of a convenience market with gas pumps and alcoholic beverage package store called Valley Country Store #4, located at 3068 South Trunk Road, Tax ID #8150000L001B; within Township 17 North, Range 1 East, Section 16, Seward Meridian, Public Hearing: May 16, 2022 (Applicant: Matt Gittlein for KG Enterprises, LLC; Staff: Peggy Horton).

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C. INTRODUCTION FOR PUBLIC HEARING: LEGISLATIVE MATTERS
(There was no Introduction: Legislative Matters.)

GENERAL CONSENT: The consent agenda was approved without objection.

V. COMMITTEE REPORTS
(There were no committee reports.)

VI. AGENCY/STAFF REPORTS
(There were no Agency/Staff Reports.)

VII. LAND USE CLASSIFICATIONS
(There were no land use classifications.)

VIII. AUDIENCE PARTICIPATION (Three minutes per person.)
(There were no persons to be heard.)

IX. PUBLIC HEARING: QUASI-JUDICIAL MATTERS
(There was no Public Hearing: Quasi-Judicial Matters..)

X. PUBLIC HEARING LEGISLATIVE MATTERS
(There was no Public Hearing: Legislative Matters.)

XI. CORRESPONDENCE AND INFORMATION
(There was no correspondence and information.)

XII. UNFINISHED BUSINESS
(There was no unfinished business.)

XIII. NEW BUSINESS - *(There was no new business.)*

XIV. COMMISSION BUSINESS

A. Upcoming Planning Commission Agenda Items (*Staff: Mark Whisenhunt*)
Mr. Whisenhunt reminded of Quasi-Judicial matters.

(Commission Business was presented, and no comments were noted.)

XV. DIRECTOR AND COMMISSIONER COMMENTS

There were no comments.

XVI. ADJOURNMENT

The regular meeting adjourned at 6:07 p.m.

STAFFORD GLASHAN, Planning Commission Chair

ATTEST:

KAROL RIESE, Planning Commission Clerk

Minutes approved: _____

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INTRODUCTION FOR PUBLIC HEARING

LEGISLATIVE

Resolution No. PC 22-13

2022 Official Streets and Highways Plan Update

(Pages 11-138)

INTRODUCTION FOR PUBLIC HEARING

MATANUSKA-SUSITNA BOROUGH
Planning and Land Use Department
Planning Division
350 East Dahlia Avenue • Palmer, AK 99645
Phone (907) 861-7833
www.matsugov.us

PLANNING DIVISION STAFF REPORT

DATE: May 4, 2022

SUBJECT: 2022 Official Streets and Highways Plan Update

RESOLUTION NO.: Planning Commission Resolution 22-13

REVIEWED BY: Alex Strawn, Planning & Land Use Director A.S. acting
Kim Sollien, Planning Services Manager K.S.

STAFF: Adam Bradway, Planner II

SUMMARY STATEMENT

The Matanuska-Susitna Borough (MSB) Official Streets and Highways Plan (OSHP) is a map that identifies future road corridors and road upgrades necessary to safely and efficiently accommodate our growing population and its transportation needs. The OSHP is a map-based component of the MSB Long Range Transportation Plan (LRTP) focused on preserving future road corridors. The OSHP is one of the Borough's most used transportation planning tools and was last updated in 2007.

Since 2007 the population of the Borough has grown dramatically, and it is projected to continue to grow at a similar pace in the future. Many roads have been built to accommodate this growth and many more roads will be needed in the coming years. Population growth also puts pressure on important future road corridors. As land is subdivided and developed, it is key that land is also reserved for road corridors to ensure that we can develop an effective road network going forward. Due to these factors, MSB staff identified the need for a comprehensive update of the OSHP, which will take into account existing conditions and plan for future infrastructure needs.

Funding for the OSHP update was provided through a 2020 Memorandum Of Agreement (MOU) between the MSB and the Alaska Department of Transportation & Public Facilities (AKDOT&PF), which included federal earmark funds dedicated to the project. This funding was used to hire a contractor to assist the Borough with the update. In coordination with staff and a technical steering committee, the contractor analyzed existing and future development and its impacts on our road network, looked at population growth assumptions, and examined how development-constrained lands might limit corridor development. This data was used to draft the

OSHP map with the appropriate infrastructure recommendations. The consultant and staff also developed a final methodology report to highlight the data used to justify the corridor recommendations.

MSB Planning Staff is handling public outreach and education for the project. Staff developed a robust project webpage, an interactive map-based public comment tool, and have offered presentations to numerous MSB advisory boards. All comments submitted by the public, the cities, agency partners, and MSB Departments have been reviewed and addressed by staff. A comments summary will be presented at the public hearings for the Planning Commission and Assembly.

THE PLAN

The OSHP assesses growth in the Borough and identifies key elements of the region's transportation system that will be needed to serve its growing communities. Some of the road corridors identified in the OSHP will be needed sooner, while others might not be needed for a very long time. Population growth will guide the need for infrastructure. The value of having the OSHP is that it allows us to plan for these connections now, limiting traffic congestion, safety issues, and more expensive road projects in the future. Once adopted by the Assembly, the OSHP is placed in MSB code in Title 15. Having the OSHP codified ensures that all future platting actions are reviewed against the OSHP to ensure that the corridors are identified and preserved.

Goals of the OSHP:

- Promote safe & efficient travel
- Reduce traffic congestion
- Lower road project costs
- Improve quality of life

OSHP Deliverables:

The OSHP update produced three main deliverables. The OSHP thoughtfully outlined better connectivity options for our higher class road network, assigned a functional classes to our corridors, and identified primary intersections.These deliverables can be viewed by looking at the attached OSHP maps.

Connectivity Recommendations

- These recommendations (indicated as dotted lines on the OSHP) are the road connections that will be needed, as the Borough builds out, to effectively accommodate population growth and increased traffic. The OSHP looks at all roads in the Borough but focuses on collector level roads, because these are the roads most often built by the Borough, because there is a need for more of these roads, and because they are essential for a complete road network.

Functional Classification Recommendations

- The OSHP assigns functional classifications (indicated by color on the OSHP) to help with road design and engineering. Functional classifications are used to explain the "type" of road and are used for designing and upgrading roads to ensure that they are efficiently meeting the traffic demand and that they function the way they are intended to.

- Functional classifications can be complex, but local examples can be helpful for reference.

Classification	Approximate Speed	Example
Interstate	55-65 MPH	Parks Highway
Major Arterial	55 MPH	Trunk Road
Minor Arterial	35-45 MPH	Seldon Road
Major Collector	35-45 MPH	Hollywood Road
Minor Collector	30-35 MPH	Smith Road
Local Road	15-35 MPH	Most subdivision roads

Primary Intersection Recommendations

- This deliverable is a study that assigned ideal intersection locations for roads classified as arterial or interstate. These roads function at their best when the number of intersections is limited.. Intersection location and spacing is an important part of planning for an efficient road system, and these interesections are often key commercial centers and economic generators.

Note: Some large infrastructure projects (ex. Knik Arm Bridge) were left off of the map; once these projects have more concrete funding sources and alignments, the OSHP will need to be updated to include them.

How is the OSHP used?

The OSHP is a tool used to help guide development so that it does not interfere with future road projects. Currently, this tool is most commonly used during the platting process to reserve space for future road connections. The Borough's Subdivision Construction Manual ensures that new subdivisions do not conflict with the OSHP. The platting process and Borough driveway standards also help to ensure that new roads are built at appropriate intersection locations.

Developing the OSHP is a Planning function of the Borough's larger road development process. Platting ensures the OSHP corridor is preserved and the Public Works Department uses the OSHP to identify new road projects and upgrades. Roads identified in the OSHP are often pulled out and included in prioritized funding lists like the Road Improvement Projects list, or the Long Range Transportation Plan projects list.

Note: The OSHP is designed to be a living document and will need to be updated periodically as the Borough's population grows, subdivisions and commercial developments are created, and when roads are built.

Legislation

The attached draft code ordinance, MSB 22-063, will be submitted to the Assembly as part of the adoption pocess. This legislation is included for your information. The ordinance repeals an outdated code chapter associated with the OSHP and inserts the OSHP into MSB 15.23.030(B) along with most other Borough Plans. The repealed code required that an official paper map be kept in the Planning Director's office; with modern record keeping technology, this is no longer

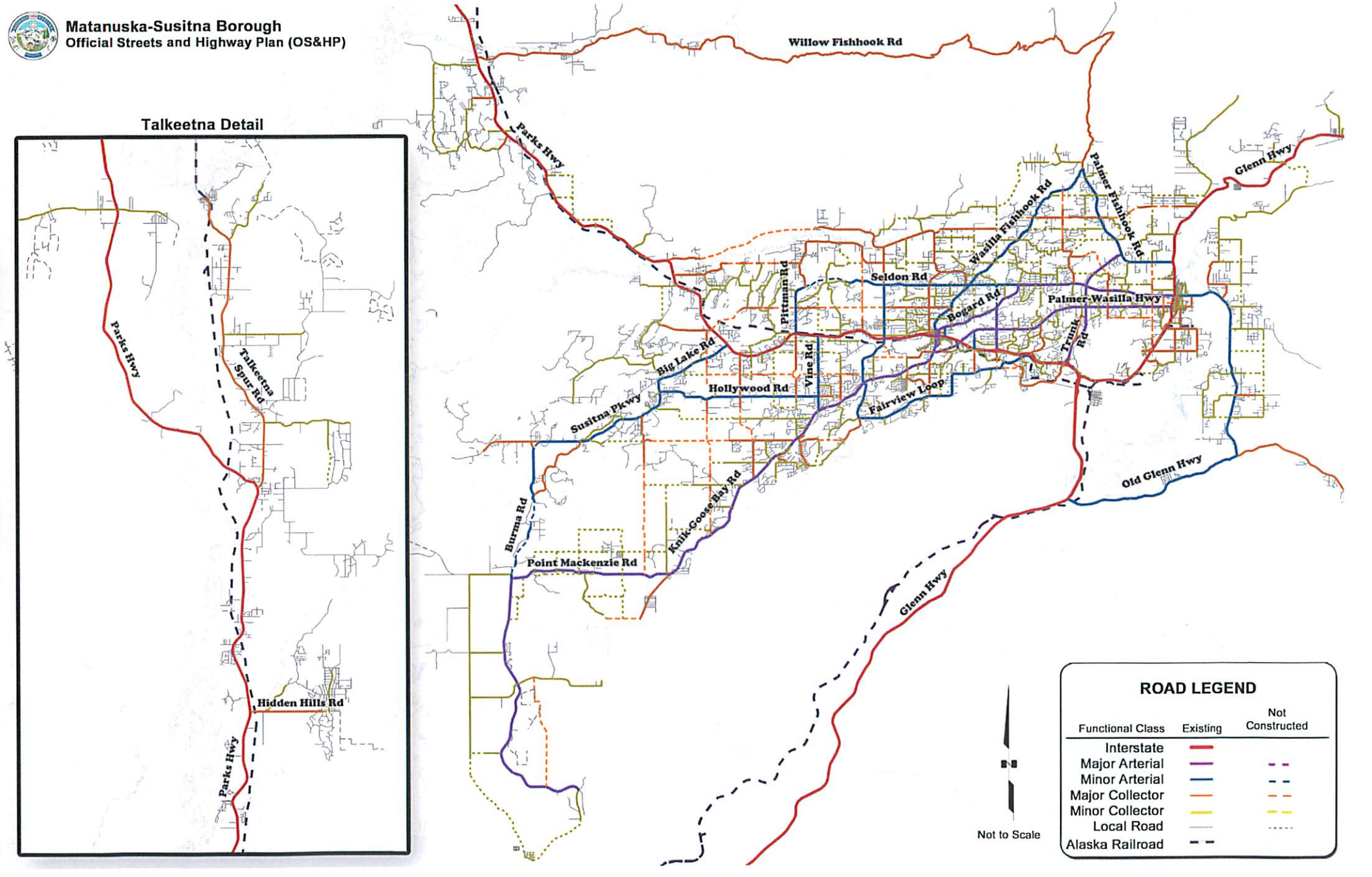
prudent. This change is meant to clean up outdated code and adopt the OSHP into an appropriate MSB Code location.

Staff Recommendations

The Matanuska-Susitna Borough Official Streets and Highways Plan is a valuable transportation planning tool used to ensure the development of a safe and efficient road network.

Staff respectfully recommends the adoption of Planning Commission Resolution 22-13, recommending the adoption of the Matanuska-Susitna Borough 2022 Official Streets and Highways Plan Update.

Matanuska-Susitna Borough
Official Streets and Highway Plan (OS&HP)



Official Streets and Highways Plan (OSHP) - Update

Frequently Asked Questions

What is the OSHP?

- A map that identifies future road corridors and road upgrades necessary to safely and efficiently accommodate our growing population and its transportation needs. The OSHP was last updated in 2007.

How is the OSHP used?

- Once adopted by the Assembly, the OSHP update is placed in MSB code in Title 15. All future platting actions are reviewed against the OSHP to ensure the corridors identified on the map are preserved.
- The OSHP is also used by Matanuska-Susitna Borough Public Works to identify new road projects and upgrades.

The Official Streets and Highways Plan vs the Long Range Transportation Plan?

- The OSHP is a map-based component of the Borough's Long Range Transportation Plan (LRTP).

OSHP	LRTP
• Focused on roads	• All modes of transportation (roads, rail, transit, bike, pedestrian, etc.)
• Looks at all collector and arterial roads that will be needed when development occurs	• Looks at collector and arterial roads needed until 2035 & that there will likely be funding for
• Does not prioritize roads	• Prioritizes which roads should be built next
• Developed specific road connection needs	• Developed general goals and strategies
• Map-based	• Document based

What are functional (road) classifications?

- Classifications are a way to explain what type of road is being talked about. The three broad categories are Local Road (lower speed, less traffic, e.g subdivision roads), Collector (medium speed, medium traffic, e.g Smith Road), and Arterial (higher speed, more traffic, e.g Trunk Road).
- The OSHP looks at all collector and arterial roads, but focuses on collector level roads, as these are the roads most often built by the Borough.

Why do functional classifications matter?

- Functional classifications are the link between planning and road design. They help turn a line on the map into an engineered road. They communicate how wide a road should be, how fast the speed limit should be, how many access points a road should have, and many other characteristics.

Are all of the roads on this map owned and maintained by the Borough?

- No, many of the roads identified in the OSHP are owned or maintained by Alaska Department of Transportation & Public Facilities (AKDOT&PF), the City of Wasilla, and the City of Palmer. We incorporated plans and comments from those entities in our process.

What data was used to create the OSHP?

- The project team utilized Geographic Information systems (GIS) to review population and employment trends, current land use, current roads and infrastructure, community planning documents, and physical constraints (water, steep hills, etc.).
- The project team also used computer modeling to project where and when population growth will happen, and the number of vehicles that will be driving every day based on those population projections.

Where did the not constructed (NC) roads come from?

- All the data listed above was used to determine where population will grow. From that we determined where new roads will be needed to accommodate that growth.
- The project team also went road by road with our technical steering committee to make sure that all of the proposed roads are realistic.

When are all these roads being built?

- It all depends on population growth, need, and funding. Some of these road connections will happen soon, others might not happen for a very long time, but if we don't plan for them now we will end up with traffic problems, and more expensive roads in the future.
- When an area of the Borough starts growing rapidly, the OSHP roads in that area will take priority over the roads in areas that aren't growing as rapidly.

How will I know when a road is getting built near me?

- The OSHP is just the first step. Typically before one of these roads are built they will end up on a priority list (Capital Projects List, Road Improvement Projects List, Long Range Transportation Plan), and need to be funded; those steps involve public meetings, and possibly ballot questions for bond initiatives.
- Remember that the Borough is not the only one that builds roads. Other government agencies and private developers also build roads.
- Roads take a long time to build, which is good for making sure that the public is notified and involved.

I need a road now! How do I get a road prioritized and built?

- Get involved in the planning and prioritization processes. Speak to your local RSA, Assembly members, and Borough staff to tell us what you need. A great place to start would be submitting a comment on the OSHP, in writing or at the OSHP webpage.
- If you don't see the road you are looking for on the OSHP, let us know that too.

What does it mean if an OSHP road is through my property?

- The Matanuska-Susitna Borough may build this road at some point. If and when depends on population growth, Assembly approval, and funding. The alignments on the OSHP are close but not final, until the road is designed by engineers, the exact alignment is unknown.
- It does mean that if you subdivide your land you will need to make sure that your subdivision does not conflict with the OSHP. And depending on the classification of the OSHP road, you may need to ensure that access to the road is appropriate.
- Get in contact with us to learn more.

How can I submit comments?

- Submit comments on the project page (https://oshp-msb.hub.arcgis.com/) Using the map comment tool you can show us the exact location you want to talk about.
- Submit written comments to:

  The Permit Center

  350 E. Dahlia Ave., Palmer, AK 99645

MATANUSKA-SUSITNA BOROUGH
Planning and Land Use Department
Planning Division
350 East Dahlia Avenue • Palmer, AK 99645
Phone (907) 861-7833
www.matsugov.us

Official Streets and Highways Plan 2022 Update
Public Involvement Summary

Plan Update Timeline

- **January 2020:** Memorandum of Understanding between MSB and AKDOT&PF signed, dedicating federal earmark funds to the OSHP update.
- **August 2020:** Kinney Engineering hired as a consultant, work plan established, and technical steering committee organized.
- **October 2020:** Kick off presentation at joint Planning Commission/Assembly meeting to inform policy makers of OSHP update.
- **November 2020:** Existing Conditions Report completed. Review of existing GIS data, current infrastructure, development, and existing long range community and transportation plans. Reviewed by steering committee.
- **December 2020:** Growth Study analysis completed. This study forecasted how much the population of the MSB will grow in the future and where that growth will happen. The Growth Study analysis was used to understand where traffic will occur in the future, how many trips will be generated from proposed population growth and development and to plan for future infrastructure needs. Reviewed by steering committee.
- **Spring and Summer 2021**: Draft OSHP map highlighting infrastructure recommendations was completed. The steering committee performed a detailed review of the document, at multiple meetings going through recommendations road by road to ensure accuracy, feasibility, and need.
- **June 2021:** AKDOT&PF submitted significant comments. Planning staff and the consultant team reviewed each comment and determined if they would be included.
- **July 2021:** Contract and project timeline extension was necessary to make the modifications to many maps based on ADOT&PF recommendations.
- **Fall and Winter 2021:** Incorporation of comments and drafting of OSHP Technical Report, Implementation Plan, and Summary Document.
- **February 2022:** Final deliverables submitted to technical steering committee.
- **Spring 2022:** The OSHP was released for public review and comment and Planning Staff began Public Outreach and Public Meetings

Public Outreach and Public Meetings

Technical Steering Committee who oversaw the project included staff from the City of Palmer, City of Wasilla, AKDOT&PF, MSB School District, and MSB staff.

Public meetings to date include presentations to Local Road Service Area Advisory Board, Transportation Advisory Board, and MSB Platting Board.

Project Website including educational materials, documents, maps, and interactive public comment tool was developed and social media was used to help the public access the interactive website.

The Public Comment Period ran for six weeks from February 16th 2022- March 31 2022.
-We received 31 individual comments from the public.
-The project website had over 1700 interactions.

- Staff emailed responses to all commenters who included contact information. Letters were mailed to individual if no email was provided.
- All comments are included in this packet with staff response and recommendation. General comment themes are summarized below.
    - The majority of comments received were general opposition to new road connections for fear of increased traffic impact. These comments often assume OSHP roads will be constructed in the near future.
        - Response: The OSHP is a planning document, while some of these connections are not needed at this time, staff suggests that they remain in the document to help ensure that options are available if they are needed in the future as population grows. We can absolutely understand residents wanting to maintain the character of their community. The community may not want new connections now, but they will likely be needed in the future. A future connection identified on this plan does not mean that it will be funded or built any time soon. However, if these roads are removed from the OSHP other routes may be designed in the future that will likely have more impact on the community. Planning early will minimize conflicts and issues should a road be needed in the future.
    - Some comments suggested new road connections, proposed alternatives, or deletion of unbuildable connections.
        - Response: These suggestions were closely looked at and incorporated if appropriate. AKDOT&PF submitted significant comments of this nature.
    - Some comments asked about needed improvements to specific roads.
        - Response: These comments have been included if they were not already. Comments about current road projects have been directed to city or Borough Public Works.

All Written Comments			
Project	Comment	Response	Change to the OSHP Recommended?
Nelson Rd-Fairview Loop	Suggestion of an alternative Nelson Road connection: The proposed alternative provided by Bill Tucker is an update to a proposal he submitted in 2009. This proposal was provided for consideration for the 2021 OSHP update. The alignment includes an extension of Nelson Road North to the Parks Highway frontage road, with a grade-separated crossing of the railroad. The proposal also includes an upgrade to Fairview Loop, with another grade-separated crossing and a three-leg roundabout to tie into the new Nelson Road extension. DOT also submitted significant comments related to this area. More detailed comments and responses are included separately in this packet.	During the technical review of the draft OSHP Planning asked Public Works to provide a cost estimate of this proposal. The Borough estimated the cost of this proposal at $21 million. This alignment was not selected due to substantial cost and impact and because there are other more cost effective options. Planning staff and the Consultant proposed corridors on the OSHP that when implemented will address the access, connectivity and safety issues in the Nelson Road at a higher return on investment. This area was also studied in depth during a 2009 reconnaissance study. That study returned the two options included in the OSHP as the most beneficial.	No. More detailed comments and responses are included separately in this packet.
General	AKDOT&PF submitted significant comments related to their roads and facilities borough wide. ADOT comments were generally focused on plans for projects that they have identified in the STIP. ADOT also made significant comments along intersections connecting to the Parks Highway corridor.	Planning reviewed each comment and many were incorporated into the OSHP. Comments are included in this packet.	Yes, changes were made administratively
Boyd Rd-Norman Ave	At the November 16, 2021 Assembly meeting, as a response to public notification about the development of the Boyd to Norman connection by the RSA, community members attended the meeting asking for the Assembly to not build this connection. The Community cited an increased traffic, crime, cost as the main reasons to not construct this road. Community members testified that they don't want secondary access. RSA 23 does not support the project. The community prefers Falk-Jensen connection as it avoids heavily populated streets.	It is the opinion of Planning staff that all of the alignments shown in the draft 2021 OSHP for this area should be retained to preserve right of way and maintain the corridors for future road construction. Preserving the corridor now is less impactful and more cost effective than acquiring it in the future. The Boyd-Norman connection is the lowest cost, lowest impact connection in the neighborhood and would improve emergency response. This connection has been planned for over 40 years. Planning recommends Boyd to Norman remain on the OSHP.	Connection was removed at the request of the Borough Manager
Bear St - Heart Lake Loop	Extend Bear St along the section line up to Heart Lake Loop to provide a secondary route for the Wolf Lake community to Bogard. Would be a good candidate	The project team had already included this connection and the intersection has been marked as a primary intersection.	No
W Youngtree Dr	Hello, how do I found out if W.Youngtree Dr. is getting paved? We are on a the Wasilla city boundary line and connects to Day Rd which is paved. It is a really short distance on Youngtree, Greentree and Wintergreen that is not paved.	The road in question is projected to remain a local road. Upgrade would likely be handled by the RSA.	No

Hermann Ave & Soapstone Subdivision	Soapstone Subdivision: Additional access to this neighborhood is not needed. It will NOT improve our quality of life, nor promote safe & efficient travel. Please contact the residents PRIOR to adding this to your final to do list.	We can absolutely understand wanting to maintain the character of your community. Our goal with the OSHP is to create a long-range plan that anticipates growth, not necessarily an urgent to-do list. In that sense, the community may not want new connections now, but they will likely be needed in the future. A future connection identified on this plan does not mean that it will be funded or built any time soon. However, if these roads are removed from the OSHP other routes may be designed in the future that may have more impact on the community. Planning early will minimize conflicts and issues should a road be needed in the future.	No
Fairview Loop	I think you need to relook at FVL as a minor artery. It's a raceway and speeds approach 55-65 MPH on stretches. Soft or non existent shoulders and heavy banks make it dangerous. Straighten and finish your projects on FVL for once. We have been waiting	Fairview Lp is a DOT road and an example of a road that needs policies and upgrades to help it function as it is intended. Classifying the road as an Arterial will encourage some of those changes. The proposed collector roads in the region will also help relieve pressure from the road.	No
Intersection of Fairview Loop & Hayfield Rd	The inter door FVL & Hayfield Rd is dangerous. There should be a 4-way stop, roundabout, or something to slow/stop the traffic there. Especially dangerous is trying to turn left from FVL into Hayfield. Please consider this. Thanks.	We agree with your concerns. The OSHP addresses them by identifying the intersection and road as needing upgrades. This intersection has been labeled as primary, which means it is important and needs to be prioritized.	No
Jensen to Falk to Soapstone	Please do not punch this road through, there many houses along Jensen and 35-45 mph is too fast. Also it will create more traffic for a small area.	This alignment is the lowest impact route in the area, if this road is removed from the OSHP another route may be designed in the future that may have more impact on the community. This road may not be wanted or needed now, but it likely will at some point in the future. Planning early will minimize conflicts and issues should the road be built.	No

Jensen	This road is currently not even cleared. There is no need for this road as the neighborhood is large parcels and while a few lots may be subdivided there will not be a large concentration of homes built here and this will add traffic to a neighborhood	This alignment is the lowest impact route in the area, if this road is removed from the OSHP another route may be designed in the future that may have more impact on the community. We can absolutely understand wanting to maintain the character of your community. Our goal with the OSHP is to create a long-range plan that anticipates growth, not necessarily an urgent to-do list. In that sense, the community may not want new connections now, but they will likely be needed in the future. A future connection identified on this plan does not mean that it will be funded or built any time soon. Planning early will minimize conflicts and issues should a road be needed in the future.	No
Soapstone extension	Do NOT want ANY extension of Soapstone road. Most people bought on Soapstone BECAUSE OF its limited access. And any extension of Soapstone will take an acre of my land that I am currently raising cows on. Food security?	We can absolutely understand wanting to maintain the character of your community. Our goal with the OSHP is to create a long-range plan that anticipates growth, not necessarily an urgent to-do list. In that sense, the community may not want new connections now, but they will likely be needed in the future. A future connection identified on this plan does not mean that it will be funded or built any time soon. However, if these roads are removed from the OSHP other routes may be designed in the future that may have more impact on the community. Planning early will minimize conflicts and issues should a road be needed in the future. Also, the connections identified are not final alignments, when/if the road is built we will have a better idea of the exact route.	No

Soapstone	All of the roads you want to build in the soapstone area. I strongly oppose!!! You are ruining the reason people live here. No one wants there. Please take our opposition seriously. We live on Norman.	We can absolutely understand wanting to maintain the character of your community. Our goal with the OSHP is to create a long-range plan that anticipates growth, not necessarily an urgent to-do list. In that sense, the community may not want new connections now, but they will likely be needed in the future. A future connection identified on this plan does not mean that it will be funded or built any time soon. However, if these roads are removed from the OSHP other routes may be designed in the future that may have more impact on the community. Planning early will minimize conflicts and issues should a road be needed in the future.	No
Soapstone rd, Jensen, Buffalo mine rd	I oppose these road extensions. They would bring traffic into a quiet neighborhood changing it for the negative. There are already other ways to access these roads that are sufficient	We can absolutely understand wanting to maintain the character of your community. Our goal with the OSHP is to create a long-range plan that anticipates growth, not necessarily an urgent to-do list. In that sense, the community may not want new connections now, but they will likely be needed in the future. A future connection identified on this plan does not mean that it will be funded or built any time soon. However, if these roads are removed from the OSHP other routes may be designed in the future that may have more impact on the community. Planning early will minimize conflicts and issues should a road be needed in the future.	No
Evergreen between Soapstone and Norman	This is actually a trail that our neighborhood children use on a daily basis. Please do not make this a road. We do not want or need this proposed road in our neighborhood. We do not want to become a thoroughfare for traffic.	We can absolutely understand wanting to maintain the character of your community. Our goal with the OSHP is to create a long-range plan that anticipates growth, not necessarily an urgent to-do list. In that sense, the community may not want new connections now, but they will likely be needed in the future. A future connection identified on this plan does not mean that it will be funded or built any time soon. However, if these roads are removed from the OSHP other routes may be designed in the future that may have more impact on the community. Planning early will minimize conflicts and issues should a road be needed in the future.	No

Soapstone Neighborhood second access point	Due to growth, a second access point in the Soapstone area is essential. Hermann to Buffalo Mine extension is a huge waste of money. I'm open to an option that isn't a main thoroughfare that brings more commuter traffic but is also fiscally responsible.	MSB Planning agrees, a connection between the Soapstone neighborhood and Buffalo Mine is not the most cost effective secondary access location. This connection was added to replace the more cost effective Boyd-Norman connection which was removed due to public opposition. This connection was a suggestion from AKDOT&PF If this connection is removed, the Boy-d Norman connection should be added back.	No
Norman Ave	Please do not connect Norman/Hermann ave with buffalo mine or any other roads. The terrain is rugged, it is a waste of money, nobody needs or wants these roads. I do not support a new road with higher speeds. People already speed with it at 25.	MSB Planning agrees, a connection between the Soapstone neighborhood and Buffalo Mine is not the most cost effective secondary access location. This connection was added to replace the more cost effective Boyd-Norman connection which was removed due to public comment. The community may not want new connections now, but they will likely be needed in the future. A future connection identified on this plan does not mean that it will be funded or built any time soon. If these roads are removed from the OSHP other routes may be designed in the future that may have more impact on the community. Planning early will minimize conflicts and issues should road be needed in the future. This is not a to-do list, it is a long range plan.	No
Soapstone	I listed the main road because it appears there are several plans for this neighborhood. The members of this neighborhood very clearly stated at a recent meeting that we are absolutely against these plans and were told that we were heard loud and clear.	We can absolutely understand wanting to maintain the character of your community. Our goal with the OSHP is to create a long-range plan that anticipates growth, not necessarily an urgent to-do list. In that sense, the community may not want new connections now, but they will likely be needed in the future. A future connection identified on this plan does not mean that it will be funded or built any time soon. However, if these roads are removed from the OSHP other routes may be designed in the future that may have more impact on the community. Planning early will minimize conflicts and issues should a road be needed in the future.	No

E Jensen	Is the plan to connect E Jensen to E Koenen rd. And if so when?	Yes, the timeline will depend on population growth, need, Assembly approval, and funding. A future connection identified on this plan does not mean that it will be funded or built any time soon. Planning early will minimize conflicts and issues should road be needed in the future. This is not a to-do list, it is a long range plan.	No
Soapstone/buffalo mine	This extension has no purpose and will upset more people than it will help. There is very little traffic that leaves the soapstone area to head north on the Glenn. Residents from both soapstone and buffalo mine don't want more traffic. That is why we live here	MSB Planning agrees, a connection between the Soapstone neighborhood and Buffalo Mine is not the most cost effective secondary access location. A secondary access will be needed at some point for emergency preparedness. This connection was added to replace the more cost effective Boyd-Norman connection which was removed due to public opposition. This connection was a suggestion from AKDOT&PF If this connection is removed, the Boy-d Norman connection should be added back.	No
Soapstone rd	I am opposed to any and all development associated with any connector roads linking langes Norman holiday subdivision and sabbatis hills development to any outside or existing roads There is strong opposition across the neighborhood.	We can absolutely understand wanting to maintain the character of your community. Our goal with the OSHP is to create a long-range plan that anticipates growth, not necessarily an urgent to-do list. In that sense, the community may not want new connections now, but they will likely be needed in the future. A future connection identified on this plan does not mean that it will be funded or built any time soon. However, if these roads are removed from the OSHP other routes may be designed in the future that may have more impact on the community. Planning early will minimize conflicts and issues should a road be needed in the future.	No
Norman	Waste of tax payers money Where new Evergreen crosses Norman and up to Hermann has been tried before and was way to steep of a grade Hermann just opens up the backside of land that already backs up to state land makes no sense Taxes already to high	This connection may not be built any time soon, but it is meant to plan for an effective collector road network so that higher speed traffic is kept off of local roads and flows into and out of the neighborhood safely and efficiently. These connections are not final alignments, and may look different when/if they are built.	No

Evergreen to farm loop connection, Jensen road extension, Hermann road extension.	There is no need to connect these two neighborhoods in this manner. These roads do not need extended at this time, the neighborhood will be massively effected in a negative way if these proposed roads are built.	We can absolutely understand wanting to maintain the character of your community. Our goal with the OSHP is to create a long-range plan that anticipates growth, not necessarily an urgent to-do list. In that sense, the community may not want new connections now, but they will likely be needed in the future. A future connection identified on this plan does not mean that it will be funded or built any time soon. However, if these roads are removed from the OSHP other routes may be designed in the future that may have more impact on the community. Planning early will minimize conflicts and issues should a road be needed in the future.	No
Are Fishhook #16 - Tex-Al Dr. and Falk Rd. connection to Jensen	It would be a waste of money to build Jensen Rd when you could connect to Soapstone via a ROW already reserved to make the connection Soapstone. I live at 12400 Soapstone - my home is 6 inches from the Jensen ROW.	At this level, this alignment was determined to be the lowest impact route in the area. These are not final alignments, if this road is prioritized and funded in the future these two routes will likely be looked at in much more detail. Right now, Jensen has ROW platted for a future road and has far fewer driveways.	No
Soapstone Herman	Absolutely not a good plan in many respects. To tie in Herman would be way too steep for a road. They tried that many years back and left me, a property owner nothing but an eyesore. And to what purpose why should we honor the past mistakes ?	This connection may not be built any time soon, but it is meant to plan for an effective collector road network so that higher speed traffic is kept off of local roads and flows into and out of the neighborhood safely and efficiently. These connections are not final alignments, and may look different when/if they are built.	No
Soapstone Road area	It is troubling the Borough doesn't respect this communities wishes for this area. We spoke up loud & clearly against any new road improvements in our area when this was brought up recently. The Hermann one especially is a TOTAL WASTE of tax-payers money.	We can absolutely understand wanting to maintain the character of your community. Our goal with the OSHP is to create a long-range plan that anticipates growth, not necessarily an urgent to-do list. In that sense, the community may not want new connections now, but they will likely be needed in the future. A future connection identified on this plan does not mean that it will be funded or built any time soon. However, if these roads are removed from the OSHP other routes may be designed in the future that may have more impact on the community. Planning early will minimize conflicts and issues should a road be needed in the future.	No

Soapstone Area	It is also sad that you only give people 255 characters to type their message. Why is this done this way, what is the problem with expanding the amount of space available so people have enough room to truly express their points and concerns?	The amount of characters was limited by the mapping software used. You are always welcome to submit longer written comments to the Borough as well.	No
Duchess and Trunk	Original plans for the new Trunk Rd had SB left turn access to Duchess from S. Trunk. Didn't happen. Need left turn access into the neighborhood w/o going all the way down to the roundabout. Use College Rd intersection if necessary.	Left turn access at this intersection is unlikely because Trunk Road is a high speed road. These arterial roads have limited access for safety and to allow traffic to flow. Planning agrees that a frontage road connection to College Dr is neceassary.	Yes, an extension of the frontage road to college drive was added in response to this comment.
W. Misty Lake Rd	The existing road is not built to specifications and is not maintained by the Borough. Can this road be built along the existing section line adjacent to W. Misty Lake Rd? We are planning to build on the portion of the property you are bisecting!	The connections on the OSHP are not final alignments, they are for planning purposes and will likely change some when/if the road moves to design stage. When this road is built will depend on, population growth, need, Assembly approval, and funding. This road will likely not be built anytime soon. The corridor bisects your property because we were attempting to avoid the wetlands present within the section line easement.	Yes, this corridor was moved to the section line in response to this comment. A final alignment will be detrmined when/if the road is built.
Whispering woods Dr.	This road has become a major cut through for people avoiding the parks highway from Seward meridian. They cut through to the sonic plaza, or just cut through. Speeds are high and traffic is non stop. A block at Herman road would be great. Thanks.	The connections and upgrades planned for this area, specifically the Hermon Rd upgrade and extension to the Palmer-Wasilla Hwy, will relieve cut through traffic and improve the intersection. This project is funded and will be managed by AKDOT, it is scheduled for construction around 2023. Once this project is built, traffic will have more efficient options and will not need to cut through Whispering Woods.	No
Herman road and Parks Highway	Oh My Gosh. This intersection needs help. The shops at sun mountain draw more traffic than in the past and the intersection is super congested and unsafe (with the frontage road at the parks). People cut through on Whispering Woods to avoid it. Help!	The connections and upgrades planned for this area, specifically the Hermon Rd upgrade and extension to the Palmer-Wasilla Hwy, will relieve cut through traffic and improve the intersection. This project is funded and will be managed by AKDOT, it is scheduled for construction around 2023. Once this project is built, traffic will have more efficient options and will not need to cut through Whispering Woods.	No
Settlers Bay Costal Park	The proposed connection of S Settlers Bay Dr, and the connection between S Settlers Bay Dr and S Hayfield Road are not constructible due to the Borough's recent conservation easement which restricts development.	These connections were an oversight and will not be able to be built. They will be removed administratively.	Yes, removed administratively.

Matanuska-Susitna Borough
Permit Center

SEP 14 2021

Received

Proposed Fairview Loop Road Improvements

The Fairview Loop extends from the George Parks Highway to the Knik Goose Bay Road. Once a meandering farm road approximately 10.5 miles in length, spanning seven miles as the crow flies, the Fairview has evolved into the only east-west collector south of the Parks Highway, which it parallels but to which it rarely provides north-south connectivity. The Fairview Loop as farm road often followed the needs of the various individuals in the area, constrained by topography and without the benefit of planning. This has resulted in a number of service and safety shortcomings for the Fairview in its developing role as a rural collector.

The Alaska Department of Transportation (ADOT) first paved the Fairview forty years ago. Since that time, the Department has periodically been tasked with correcting these shortcomings. One area containing serious currently unaddressed safety and service issues is the easterly 1.5 miles of the Fairview, from where it begins at the Parks Highway frontage road through where it intersects Abby Boulevard, Old Matanuska Road, the Alaska Railroad and Linlu Lane.

SERVICE AND SAFETY ISSUES ON THE EAST 1.5 MILES OF THE FAIRVIEW LOOP:

The most obvious problem on this stretch of the Fairview comes at its conjunction with the Old Mat road intersection (mile post 0.9 to 1.0) and the Alaska Railroad crossing (mile post 1.0). The Old Mat intersection is actually three intersections in one, each of which creates grade, visibility angle and traffic control issues for the other two. Further, the westerly, most problematic portion of the intersection, is only approximately sixty feet from the unsafe 45 degree angle on-grade crossing of the Fairview over Alaska Railroad, creating potential for vehicles to be backed up from the Old Mat onto the tracks.

Another problem area, which also includes an on-grade railroad crossing, is Abby Boulevard. Originally designed to provide on-grade access over the railroad tracks to Garden Terrace Estates, a small residential development, this road was marginally adequate to serve the seventy Garden Terrace homes. Subsequently a major development to the south, the Ranch Subdivision, was proposed, with plans to use Abby Boulevard to provide westerly ingress-egress for its anticipated

thousand-plus homes. The MSB Platting Board rejected this plan, requiring the developer to find alternative westerly collector road ingress-egress, which he has thus far been unable to do. None the less, MSB administration at the time allowed a work-around through a portion of the original Ranch proposal, renamed and resubmitted as Creekside, which has resulted in funneling westerly Ranch traffic through Garden Terrace Estates, generating the problems anticipated by the Platting Board. To compound these problems, the administration at the time also chose to locate the proposed South Palmer elementary school within the Ranch subdivision, without consideration of the safety issues resultant from sending school busses over on-grade railroad crossings, or the further increased traffic from parents bringing children to school. The Ranch developer has provided an appropriate collector road system, Nelson Road, for his project, the east end of which the ADOT, at MSB request, extended to the Parks Highway and Truck Road by building a bridge over the railroad. Unfortunately, the west end of Nelson Road currently ends in a gravel pit south of the railroad, and is therefore unusable.

We understand from ADOT Traffic Safety that another area of concern should be that area of the Fairview extending south of the railroad past the Linlu Lane intersection. The Fairview at the Linlu intersection makes an abrupt ninety degree turn with a turning radius of approximately 200 feet and a gradient in excess of eight percent, neither of which are appropriate for a rural collector road. To make matters worse, in this area the Fairview follows a steep bank on its east side, leading to downhill rollovers and apparently one or more deaths. Incidentally, Fairview in this area apparently does not have a formal right-of-way, ADOT being able to claim only the area between its ditch lines.

FAIRVIEW PARKS INVESTORS (FPI) INVOLVEMENT IN THE PLANNING PROCESS

In 2007, the MSB administration acknowledged that the elementary school, on which they had already begun construction, did not have the appropriate grade separated access over the railroad for school busses from outside the Ranch Subdivision. The Fairview Parks Investors (FPI), an investment partnership, was then contacted by MSB through its Public Works Department, and requested to evaluate access potential of our real estate. The obvious solution was to extend the west dead end of Nelson Road, the Ranch collector road, north to the

railroad right-of-way along an alignment identified by the owner of that property, then over the railroad and Fairview Loop on a bridge, continuing north to the Parks Highway frontage road, a total distance of 1700 feet, thereby mitigating the Fairview/Abby Road problem and eliminating the issue of school access.. This was rejected because it did not also access the Fairview Loop. The Nelson Road extension was then combined with a concept MSB Public Works in 1985 had found desirable, which realigned the Fairview while eliminating the existing Old Mat/Fairview intersection and the 45* railroad crossing.

The concepts FPI provided were subsequently rejected in favor of extending the east end of the Nelson collector road to the Parks Highway and the Trunk Road, including the realignment of two existing frontage roads and construction of two roundabouts as well as a bridge.

In 2018, FPI was again contacted, by MSB Manager John Moosey, requesting FPI again consider the Fairview realignment and west Nelson Road extension plan, to which FPI agreed. Further contact with ADOT planners, at MSB request, indicated that MSB inclusion of these concepts in the MSB Official Streets and Highways Plan would provide appropriate direction to ADOT.

Recent planning documents have emphasized the value of thinking ahead to the future road needs of the community and reserving where possible corridors appropriate to those needs. This appears to be one of those opportunities. While FPI as an investment entity cannot commit to a major development project, it can respond to an expression of community need, though only so long as it remains in title. FPI has asked MSB and ADOT in return only for assistance in realigning its properties to match the potential road corridors, and the return of real estate taken during a previous ADOT project, but no longer needed for the original purpose, a noncash transaction.

Today, public funds do not appear to be available to address the problems noted above. None the less, both affected community councils, Gateway and Knik-Fairview, have passed resolutions in support (see attached), and MSB and ADOT do have the ability, by protecting the routes identified, to protect future public ability to cure the problems afflicting this part of the Fairview Loop, for which no alternative fixes have thus far been identified, at no dollar cost for the dirt.

William Tucker

From: Vanhove, Todd E (DOT) <todd.vanhove@alaska.gov>
Sent: Tuesday, September 7, 2021 1:10 PM
To: 'William Tucker'
Subject: RE: Fairview Loop improvements

Bill,

I have no information to contradict anything in your letter. I believe it to be accurate as far as the information I currently have.

Todd VanHove
Chief of Planning
Anchorage Field Office
907-269-0518

From: William Tucker <wm.tucker@gci.net>
Sent: Wednesday, August 25, 2021 4:27 PM
To: Vanhove, Todd E (DOT) <todd.vanhove@alaska.gov>
Subject: Fairview Loop improvements

Todd,
Attached is a brief summary of our fourteen year journey with MSB regarding our end of the Fairview Loop. Kim Solien at MSB is managing a committee reviewing the MSB OS&HP and has asked that I provide a synopsis of the situation. I would appreciate your advising me if I have incorrectly represented the situation.
Thank you for your time.
Bill Tucker
Fairview Parks Investors

Gateway Community Council
Board Resolution 2018-01

A RESOLUTION IN SUPPORT OF PRIORITIZING EFFORTS TO RESOLVE TRAFFIC CONGESTION ON S. ABBY BOULEVARD AND NELSON ROAD IN THE RANCH SUBDIVISION AREA THAT IS WITHIN THE GATEWAY COMMUNITY COUNCIL BOUNDARIES

Whereas, the Gateway Community Council (GCC) recognizes that congestion on S. Abby Boulevard and Nelson Road is a long-standing problem, dating back several years to the construction of Machetanz Elementary, the development of the Ranch subdivision and other nearby subdivisions; and

Whereas, the GCC recognizes that more than 4,000 cars a day have been recorded traveling S. Abby Boulevard and that the extension of S. Trunk Road extension has alleviated a portion - about one quarter of that traffic - but the road is still congested and unsafe; and

Whereas, S. Abby Boulevard was constructed as a subdivision road with limited right-of-way, narrow travel lanes, no shoulders, minimal ditching and was not designed to carry the traffic volume of a collector road; and

Whereas, the constriction of traffic on S. Abby Boulevard at the intersection of Fairview Loop causes additional congestion further south on Nelson Road; and

Whereas, traffic coming to and from Machetanz school regularly backs up onto Nelson Road; and

Whereas, this issue has been looked at extensively by the Mat-Su Borough in a 2009 Mat-Su Borough Reconnaissance Report that looked at the C2 option of extending Nelson Road to Fairview Loop, and also by William Tucker (Parks Highway Investors) who submitted a more extensive proposal that included realigning Fairview Loop; and

Whereas, the traffic is a safety hazard, causes extensive time delays for residents, school buses and emergency responders , and the issue has not been resolved despite several years of review by borough staff and administration since it was identified; and

Whereas, the Mat-Su Borough has included this issue in both its Long Range Transportation Plan (LRTP) and Capital Improvement Plan (CIP); and

Whereas the 2009 borough reconnaissance report was limited in scope to solving the Abby Boulevard/Nelson congestion problem and did not include area wide traffic problems; and

Whereas, Goal 1 of the Core Area Comprehensive plan is to "foster a pattern of land development that protects the appealing features of the Core Area…"; and,

Whereas, Policy 1-B of the Core Area Comprehensive Plan is to "promote an orderly land use pattern suited to the demand for attractive settings in which to live, work, shop, learn, play and carry on other daily activities, and,

Now therefore be it resolved that the GCC encourages the Mat-Su Borough Assembly at its upcoming July 31 meeting to include funding in the 2018 proposed bond package that will provide a solution to this S. Abby Boulevard and Nelson Road congestion issue; and

Now therefore be it further resolved that the borough examine and determine solutions to traffic safety and congestions issues in the broader Fairview Loop area from Seward Meridian Parkway east to Trunk Road.

Approved by unanimous consent of the GCC Board on this date

_____

July 10, 2018

_____

Stephanie Nowers, President
Gateway Community Council

KNIK-FAIRVIEW COMMUNITY COUNCIL RESOLUTION

A RESOLUTION TO SUPPORT THE CONSTRUCTION OF THE NELSON ROAD-ALT FOR ACCESS TO THE MACHETANZ ELEMENTARY SCHOOL.

WHEREAS, a western collector/arterial access to the Machetanz Elementary School is necessary for safety and to reduce excess traffic in the currently used route to the west and north through narrow, residential streets; and

WHEREAS, a route has been proposed utilizing Nelson Road in the Northwest corner of The Ranch Subdivision, extending then through Valley Block and Concrete property (via the proposed Sweeping Vista Subdivision), than North over Fairview Loop Road to an intersection with E. Fireweed Road that is most appropriate; and

WHEREAS, the proposed route also eliminates the current dangerous intersection of Old Matanuska Road, the Alaska Rail Road and Fairview Loop Road.

NOW, THEREFORE BE IT RESOLVED that the Knik-Fairview Community Council recommends that the NELSON ROAD-ALT, as shown on the attached Exhibit "A", be included in the Borough Long Range Transportation Plan; and

ADDITONALLY, BE IT RESOLVED that the Matanuska-Susitna Borough, at this time, accept all Easements and Rights-of-Way that Property Owners lying under the proposed route will donate to the Borough at no cost over drafting and surveying; and

ADDITIONALLY, BE IT RESOLVED that the Matanuska-Susitna Borough include the project in the next Road Bonding package or utilize funds granted to the Borough from the State of Alaska, which every occurs first.

APPROVED by the Knik-Fairview Community Council at a General Membership meeting held May 2, 2018.

Bill Kendig
Board President

Teri Johnson
Board Secretary

MATANUSKA-SUSITNA BOROUGH
Planning and Land Use Department
Planning Division
350 East Dahlia Avenue • Palmer, AK 99645
Phone (907) 861-7833
www.matsugov.us

MEMORANDUM

DATE: October 14, 2021

TO: Mike Brown, Borough Manager

TROUGH: Kim Sollien, Planning Services Manager

FROM: Adam Bradway, Planner

SUBJECT: Official Streets and Highways Plan – Nelson Road Alternatives Summary

Background

The Matanuska-Susitna Borough (MSB) is updating its Official Streets and Highways Plan (OSHP), a map-based component of the MSB Long Range Transportation Plan (LRTP). When the LRTP was last updated in 2017 the MSB Assembly chose to fiscally constrain the plan, and eliminated many megaprojects which were previously included. This change reflected the reality of limited funding, the Borough's intention to limit its planning scope to those projects that fit within a reasonable revenue forecast, and the necessity to prioritize projects that offer the best benefit-to-cost ratio. While the OSHP is not necessarily fiscally constrained as it does not estimate costs for all projects, it seeks to reflect the values of the LRTP by prioritizing realistic projects given limited Borough resources.

The OSHP is meant to geographically represent existing facility improvements and new roadway connections. The OSHP is specifically meant to guide MSB investments, and while it considers the road network as a whole, it focuses on MSB facilities. In most cases, the OSHP does not directly plan for the needs of AKDOT&PF or local subdivision roads.

The OSHP relies heavily on the short and mid-term projects identified in the LRTP, but also uses technical analysis of travel, demographics, and development. The OSHP update process involved evaluating every road in the Borough, with some areas requiring in-depth analysis to determine solutions that would best serve the community.

The area (Attachment A) south of the Parks Highway, west of the Glenn Highway, and east of Fairview Loop has seen and continues to see, significant development. Over the years, the access issues in this area have been well documented, and the MSB has studied the area on multiple occasions. One significant study was the *2009 Trunk Road Extension South Reconnaissance Report (recon report)*, which led to the Nelson Road extension east to meet Trunk Road, and alleviated the largest access issues for the area.

The recon report also considered many alternatives to extend access west to Fairview Loop. While current traffic volumes do not currently necessitate improving the western connectivity in this area, the LRTP and OSHP identified it as a future needed connection.

Because of the complex existing conditions in the area, and the many possible road alignments, the area was studied in-depth.

This memo is intended to summarize the different alignment alternatives for the study area and give justification for the two alignments chosen for inclusion in the 2021 Official Streets and Highways Plan update. This memo also highlights those routes that were not chosen for the update and gives reasoning.

[Note: The 2009 recon report was an essential consideration in this evaluation, as it studied many of the alternatives in detail. Many of the attachments were taken directly from the 2009 report though costs have been updated. The 2009 report contains significantly more detail about the alternatives it considered and should be referenced if such detail is required.]

Alignment Alternatives (2021 OSHP update)

Nelson Road East (Attachment B)

- This alternative extends Nelson Road, builds an improved at-grade crossing at the current Valley Block and Concrete crossing, and closes the existing at-grade crossing at Abby Rd.

Nelson Road Extension (Attachment C)

- This alternative extends Nelson Road west to Fairview-Loop near Linlu Lane; this would cross the future ARRC realignment.

Seward Meridian Section Line (Attachment D)

- This alternative begins at Nelson Road near Wasilla Creek. It follows a section line west, until it reaches another section line, in alignment with Seward Meridian Road, which it follows north to Fairview Loop.

Nelson Road Extension North (Attachment E)

Note: Conceptual level cost estimate included with Attachment E

- This alternative provided by Bill Tucker is an updated to a proposal submitted in 2009. This proposal was provided for consideration for the 2021 OSHP update. The alignment includes an extension of Nelson Road North to the Parks Highway frontage road, with a grade-separated cussing of the railroad. The proposal also includes an upgrade to Fairview Loop, with another grade-separated crossing and a three-leg roundabout to tie into the new Nelson Road extension.

Selected Alternatives (2021 OSHP Update)

Nelson Road East (Attachment B) - Selected

This alternative was selected as it provides the significant benefit at a lower cost, provides an adequate western access solution for Nelson Road, and has been identified multiple times as the preferred alternative for this issue. This alternative has also been moved forward through the Sweeping Vista Master Plan (Attachment F), showing that the subject property owner plans for this alignment to be chosen.

- Lowest Cost alternative
- Improved at-grade crossing is an adequate solution for current traffic volumes
    - ARRC plans to move railroad alignment, eliminating railroad conflict in the future
    - Grade-separated crossing over railroad would be cost prohibitive
- Only alternative identified in the LRTP
- Alternative has propositioned by the local landowner and has been approved by the MSB
- Lowest impact to environment and local property owners

- Platting Board approved. Sweeping Vista Master Plan (Attachment F)

Nelson Road Extension (Attachment C) – Selected

This alternative was selected as a higher cost, but higher function alternative to Nelson Road East. This alternative provides the most direct connection to Fairview Loop and would allow Nelson Road to accommodate larger traffic volumes than the Nelson Road East alternative. This alternative impacts property owners and the area in a significant way than Nelson Road East, and this alternative likely won't be built until traffic volumes are significant enough to warrant it.

- Second lowest cost alternative
- No impact to existing ARRC track, though coordination would be needed related to future railroad alignment
- Provides direct connection to Fairview Loop
- Alignment could accommodate a higher classification roadway and with an extension of Seward Meridian Parkway, would create a high volume route to the Parks Hwy
- AK DOT&PF supported

Seward Meridian Section Line (Attachment D) – Not Selected

This alternative was not selected due to substantial cost and impact. This alternative does provide the potential for a higher classification roadway. It also avoids some established subdivisions. The cost of this project is problematic, and is out of the range of a typical MSB collector road project. Selected alternatives offer similar solutions with lower impact.

- Avoids ARRC
- Follows existing section lines
- Alignment could accommodate a higher classification roadway and, with an extension of Seward Meridian Parkway, would create a high volume route to the Parks Highway
- $25,400,000 cost estimate is outside of typical MSB road project cost. Due to MSB road powers would need to be paid for with area-wide funds. Note: No projects over $8 million on 2021 infrastructure bond proposal
- More road miles than selected alternatives and associated local and environmental impacts would be greater

Nelson Road Extension North (Attachment E) –Not Selected

This alignment was not selected due to substantial cost and impact. This alternative improves east-west connection of Nelson Road and north-south connection in the Fairview Loop area, but the cost of the project is out of the range of a typical MSB collector project. While grade-separated crossings are ideal, they are unwarranted at current traffic levels and come at a significant cost and impact.

There were other projects selected for the OSHP that address the issues raised in this proposal at a higher return on investment. A significant portion of this proposal focuses on improving the North-South connection of Fairview Loop (DOT owned) to improve access to the Parks Highway. The OSHP proposes an extension of Seward-Meridian Parkway to create a similar connection, with a more direct route to the existing Parks Highway interchange. The Seward-Meridian connection makes improvements to the east side of Fairview Loop likely unnecessary.

- Grade-separated crossings avoid direct conflict with ARRC
- Improves access by extending Nelson road to Fairview Loop, and by improving Fairview Loop

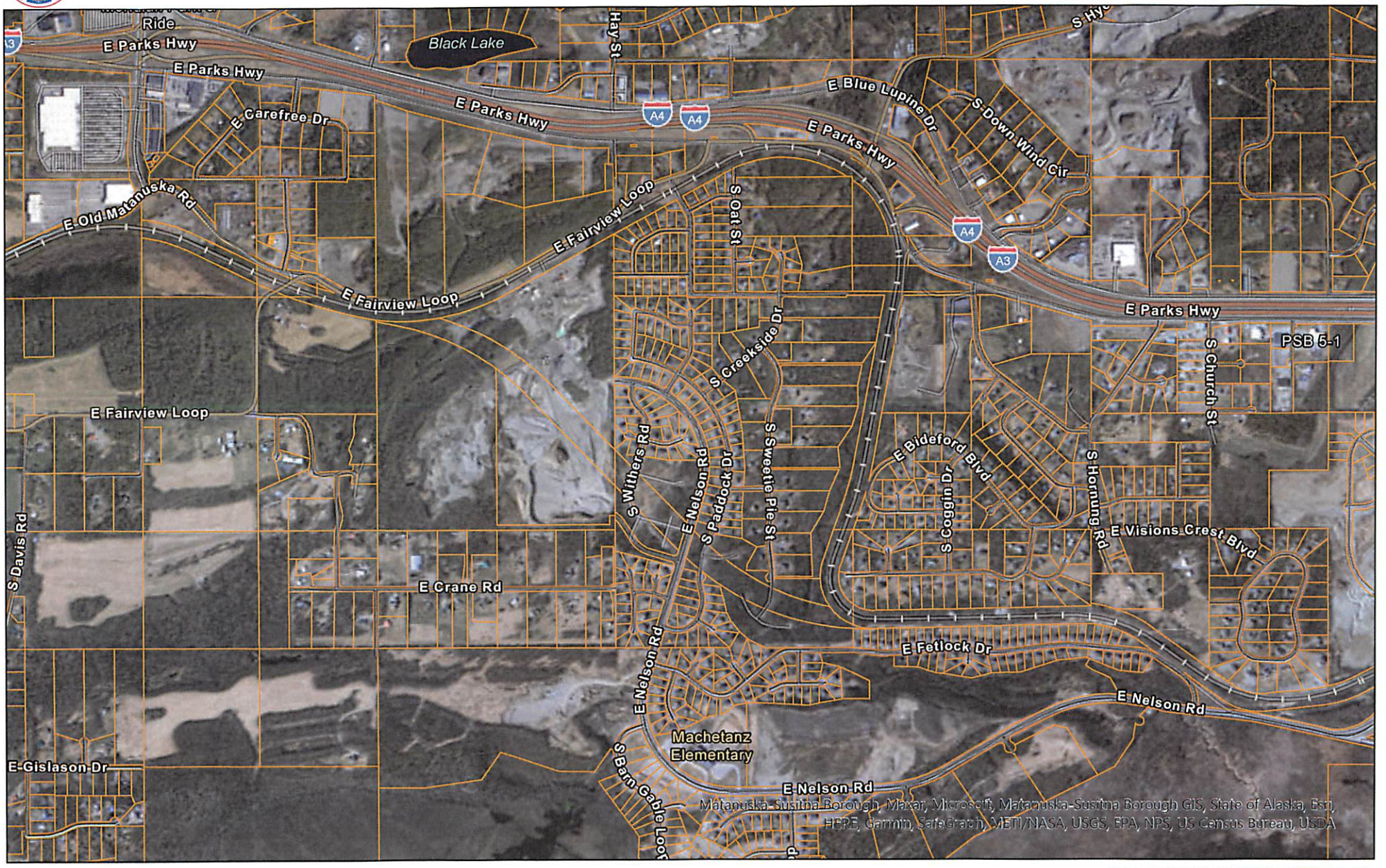
- A grade-separated crossing for Nelson Road is prohibitively expensive. Such expense is unwarranted given the current traffic volume. Also, when ARRC realigns the railroad a grade-separated crossing is unnecessary
- $21,031,000 cost estimate is outside of typical MSB road project cost. Due to MSB road powers would need to be paid for with area-wide funds. Note: No projects over $8 million on 2021 infrastructure bond proposal
- Identified need for improvement to Fairview Loop N-S connection addressed by proposed Seward Meridian Parkway project
- Selected alternatives provide similar benefits at lower costs

Alternatives Summary Table

Factor	Description of measure	Alternatives			
		Nelson Road East	Nelson Road Extension	Seward Meridian Section Line	Fairview Loop Realignment
Total Length	Total length of alternative in miles.	1.0 Mile	1.3 Miles	2.6 Miles	2.5
Estemated Cost to Construct	Total cost of alternative in 2022 dollars (millions)	$3,500,000.00	$7,600,000.00	$25,400,000.00	$21,031,000.00
Avoids Alaska Railroad	Description of impact to Alaska Railroad	Would close Abby Rd at-grade crossing, and upgrade Valley Block and Concrete crossing	No, however crosses RR at planned crossing	Yes	No, adds two new grade-seperated crossings of existing railroad and crosses RR ROW at planned crossing
Wetlands Impacts	Yes, if wetlands corssed. No, if wetlands not crossed.	No	Yes	Yes	Yes
Property Owner Impacts	Acreage of right of way required.	7 acres	23 acres	25 acres	unknown
LRTP	Yes, if included in MSB LRTP. No if not included in MSB LRTP	Yes	No	No	No

Study Area

Attachment A



N
W E
S

Date: 10/14/2021

Infrastructure Roads MSB
Cadastral_Parcels

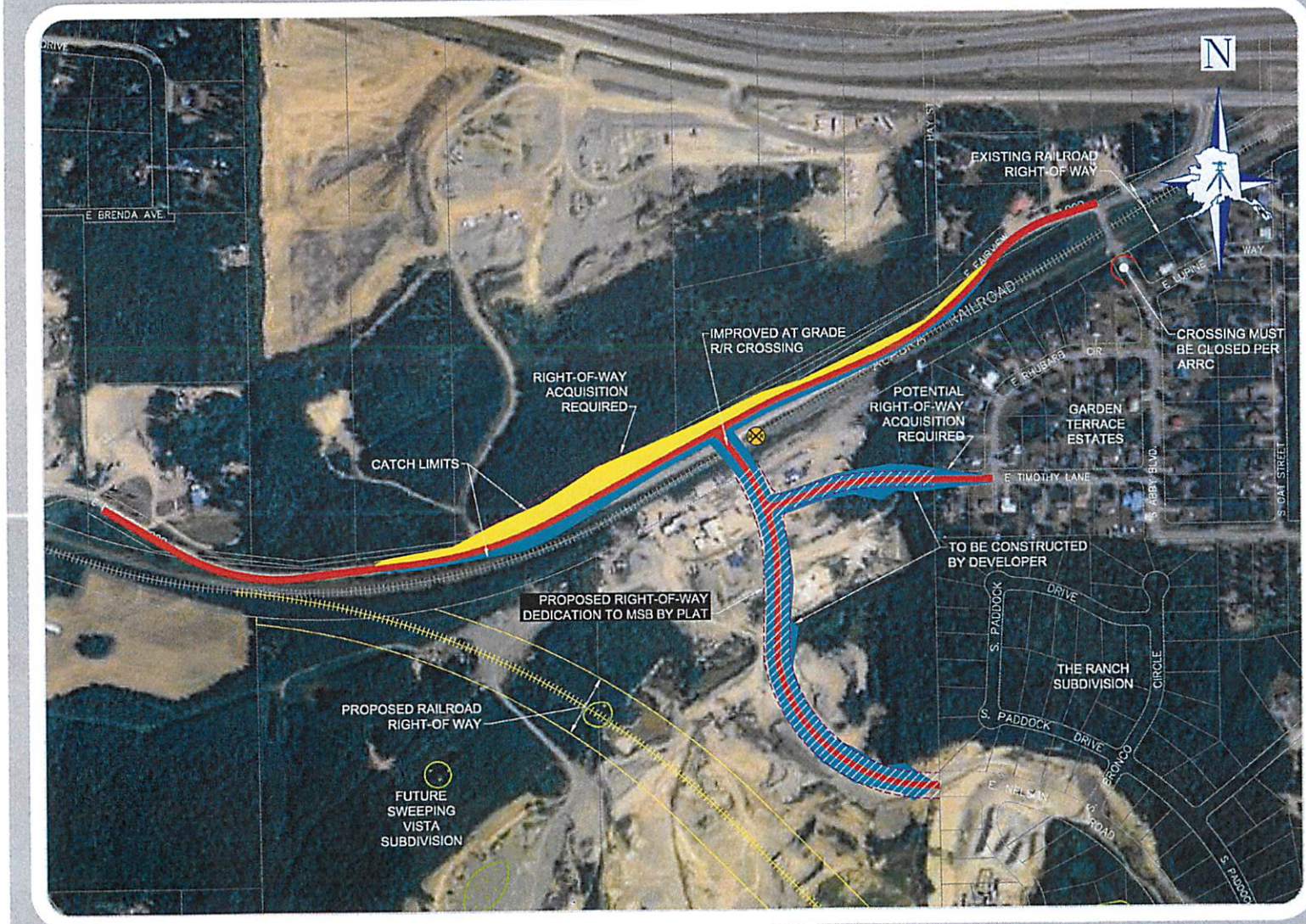
This map is solely for informational purposes only. The Borough makes no express or implied warranties with respect to the character, function, or capabilities of the map or the suitability of the map for any particular purpose beyond those originally intended by the Borough. For information regarding the full disclaimer and policies related to acceptable uses of this map, please contact the Matanuska-Susitna Borough GIS Division at 907-861-7858

0 0.15 0.3 0.6
mi

Trunk Road Extension South
Reconnaissance Report

Attachment B

Nelson Road East
~~Figure C-2~~



Legend

- PROPOSED ROAD
- PROPOSED CUT
- PROPOSED FILL
- PROPOSED ROW
- TO BE CONSTRUCTED BY DEVELOPER
- POTENTIAL WETLANDS

Comparison Table Info

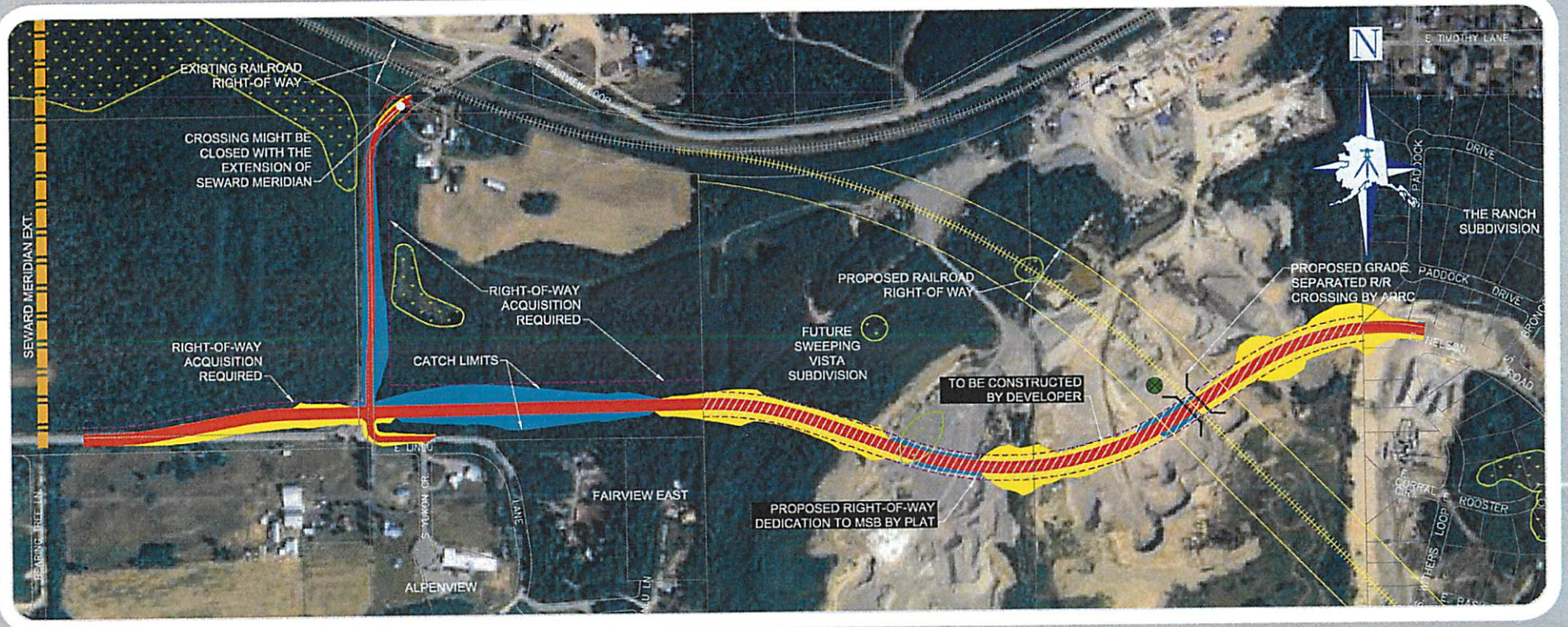
- TOTAL LENGTH: 1.0 MILES
- ESTIMATED COST: ~~$3.7 MILLION~~
  - » ~~$2.0 (MSB)~~
  - » ~~$0.7 (DEVELOPER)~~ $3.5 Million
- AVOIDS ARRC: NO, REQUIRES CLOSURE OF ABBY BOULEVARD CROSSING PER ARRC
- AVOIDS WETLANDS: YES
- RIGHT-OF-WAY ACQUISITION: YES
  - » 7 ACRES

LOUNSBURY & ASSOCIATES Surveyors Engineers Planners

~~Trunk Road Extension South~~
Reconnaissance Report

Attachment C

Nelson Road Extension
~~Figure C-4~~



Legend

- PROPOSED ROAD
- PROPOSED CUT
- PROPOSED FILL
- PROPOSED ROW
- TO BE CONSTRUCTED BY DEVELOPER
- POTENTIAL WETLANDS

Comparison Table Info

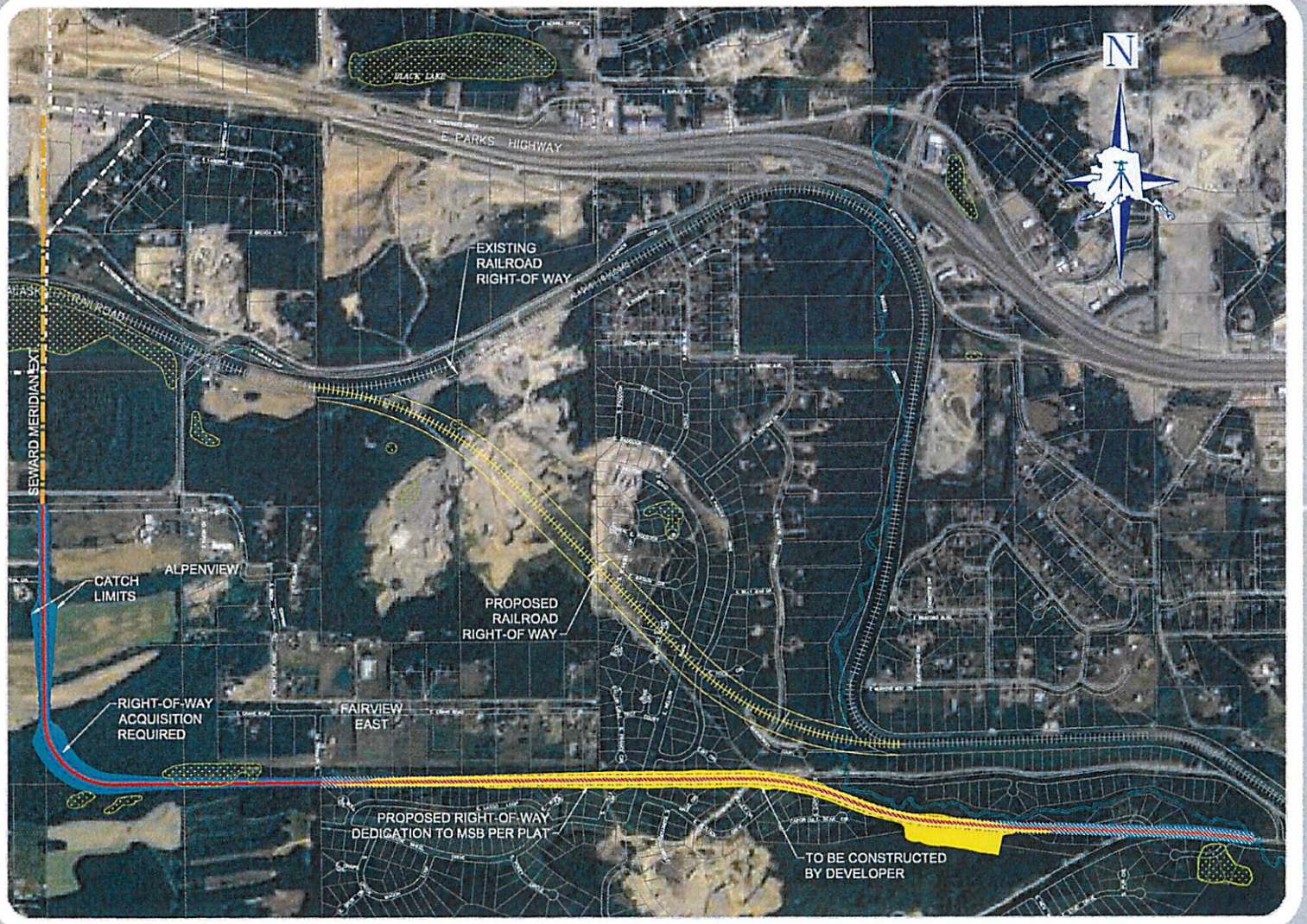
- TOTAL LENGTH: 1.3 MILES
- ESTIMATED COST: ~~$5.9 MILLION~~
  - » ~~$4.5 (MSB)~~
  - » ~~$1.4 (DEVELOPER)~~ $7.6 Million
- AVOIDS ARRC: NO, REQUIRES FUTURE GRADE SEPARATED R/R CROSSING BY ARRC
- AVOIDS WETLANDS: NO
- RIGHT-OF-WAY ACQUISITION: YES
  - » 23 ACRES

LOUNSBURY & ASSOCIATES
Surveyors · Engineers · Planners

Trunk Road Extension South
Reconnaissance Report

Attachment D

Seward Meridian (Section Line)
Figure C-6



Legend

- PROPOSED ROAD
- PROPOSED CUT
- PROPOSED FILL
- PROPOSED ROW
- TO BE CONSTRUCTED BY DEVELOPER
- POTENTIAL WETLANDS

Comparison Table Info

- TOTAL LENGTH: 2.6 MILES
- ESTIMATED COST: ~~$19.6 MILLION~~
  - » ~~$12.0 (MSB)~~
  - » ~~$ 7.6 (DEVELOPER)~~ $25.4 Million
- AVOIDS ARRC: YES
- AVOIDS WETLANDS: NO
- RIGHT-OF-WAY ACQUISITION: YES
  - » 25 ACRES

LOUNSBURY & ASSOCIATES
Surveyors Engineers Planners

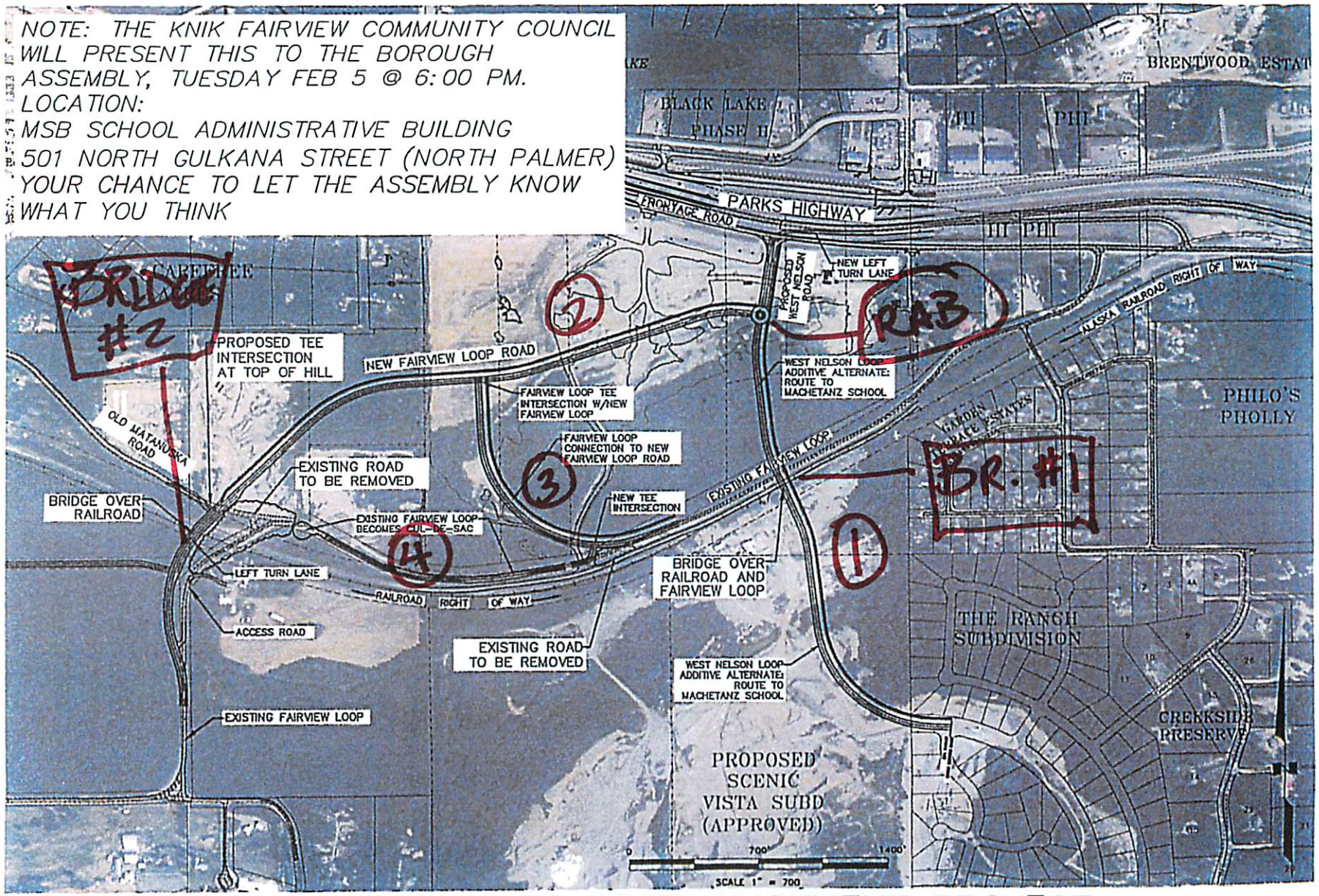
May 16, 2022 Planning Commission Packet

(#) -ROADS

NELSON RD. EXT. NORTH

10/11/21

NOTE: THE KNIK FAIRVIEW COMMUNITY COUNCIL WILL PRESENT THIS TO THE BOROUGH ASSEMBLY, TUESDAY FEB 5 @ 6:00 PM.
LOCATION:
MSB SCHOOL ADMINISTRATIVE BUILDING
501 NORTH GULKANA STREET (NORTH PALMER)
YOUR CHANCE TO LET THE ASSEMBLY KNOW WHAT YOU THINK



NEW FAIRVIEW LOOP ROAD ALIGNMENT PROJECT
WITH WEST NELSON LOOP OPTION TO MACHETANZ SCHOOL

VERIFY SCALE

Attachment D

$21 Million

May 16, 2022 Planning Commission Packet
Page 47 of 764

NELSON ROAD EXTENSION NORTH

Nelson Road Extension North to Parks Highway Frontage Road and realignment of Fairview Loop and other road connections.

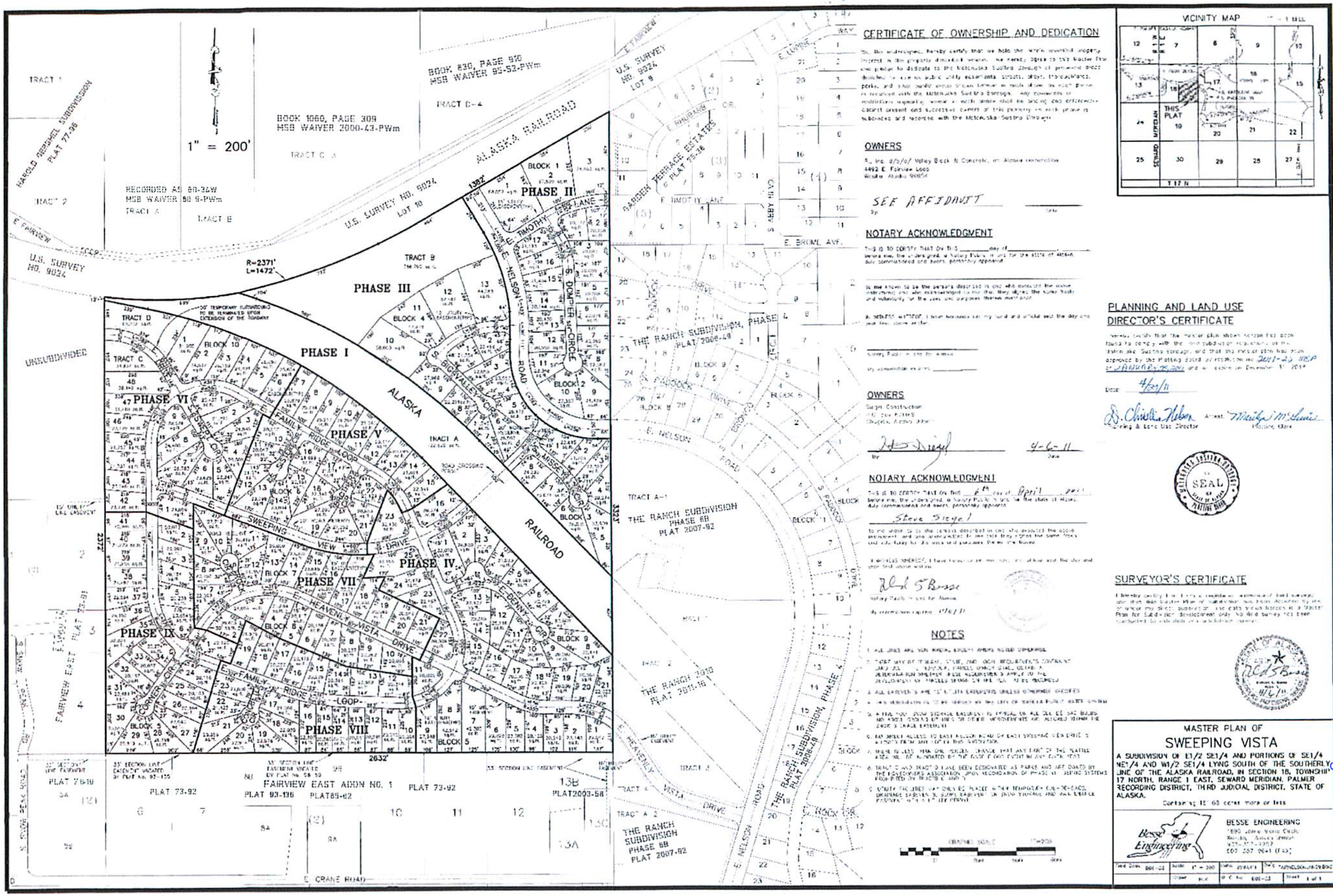
Conceptual Level Cost Estimate

Roadway Class: Various Major/Minor Collectors				Depth Aggregate:	0.333 ft
Date:	10/13/2021	Paved Width:	42 LF	Depth Exca./Fill:	2 ft
By:	Mike Campfield, P.E.	ROW:	100 LF	Depth Asphalt:	0.1667 ft
Assumptions:	2 x 12-foot lanes, 4-foot shoulders, 10-foot seperated pathway. Moderate grades with steep fill slopes and deep fills at bridge approaches. Roadway illumination assumed for roundabout and at roadway intersections.				
	Based on assumptions, the estimated cost of the roadway construction is $1.5M/mile in				1,500,000

Construction Costs

Segment	Length (mi)		Cost
Road #1	0.61		$ 915,000
Road #2	0.85		$ 1,275,000
Road #3	0.55		$ 825,000
Road #4 (no path)	0.55		$ 650,000
Roundabout	4 -leg single lane		$ 1,000,000
Bridge #1	over ARRC and road		$ 5,000,000
Bridge #2	over ARRC		$ 2,500,000
CONSTRUCTION SUB TOTAL			$ 12,165,000
Non-constrution Costs			
Right-of-Way	acquisition from 12 parcels		$ 3,000,000
Utility Coordination	unknown impacts		$ 1,000,000
Engineering Design Services		20%	$ 2,433,000
Construction Management		15%	$ 1,824,750
Project Administration		5%	$ 608,250
GRAND TOTAL			**$ 21,031,000**

Attachment F



Adam Bradway

From: Thomas, Scott E (DOT) <scott.thomas@alaska.gov>
Sent: Wednesday, May 4, 2022 9:51 AM
To: Adam Bradway
Cc: Kemplen, Allen (DOT); Post, David E (DOT); 'Kate Dueber'
Subject: RR Xing Policy and maximizing Interchange access/use at or near Nelson Rd/Fairview Loop road

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Adam,

As I look at the nearly final OSHP, good work linking major routes to Trunk Road Interchange and Seward Meridian Interchange from the South! More on goals this serves below.

With regards to the Nelson Road Extension shown terminating at Fairview Loop Road poses RR Xing problems that make it less feasible. I am ccing ARRC, who with DOTPF jointly follows RR Xing Policy.
I recommend 5 minor adjustments to the OSHP to clear up RR Xing and Interchange access outcomes. These recommendations maximize options for the Abby Blvd neighborhoods caught in the middle of a disconnected area.

1) I recommend the OSHP extend Nelson Rd to Fireweed Rd as an orange dashed line on the map. (per the legend = "not constructed" yet..)
Like Linlu lane – it does cross private properties. Unlike Linlu Lane – Nelson to Fairview falls under DOTPF/ARRC "Joint Policy" 1988.
I would prioritize Linlu Lane as the best way to meet regional goals for higher class roads on page 5 as noted below.
I would rank Nelson options second below Linlu Lane as a way to improve local and collector access, under the same recommendations for Page 5 as noted below.

2) I recommend Abby Blvd and Old Mat Rd be shown as red X's to clearly show they will most likely have to be removed if a Nelson Road connection were to be built in the OSHP.
This may require adding a new legend symbol for removals.
The new dash across the railroad cannot appear without one or more removals nearby due to close proximity. (a 2 mile rule in Policy citations below)

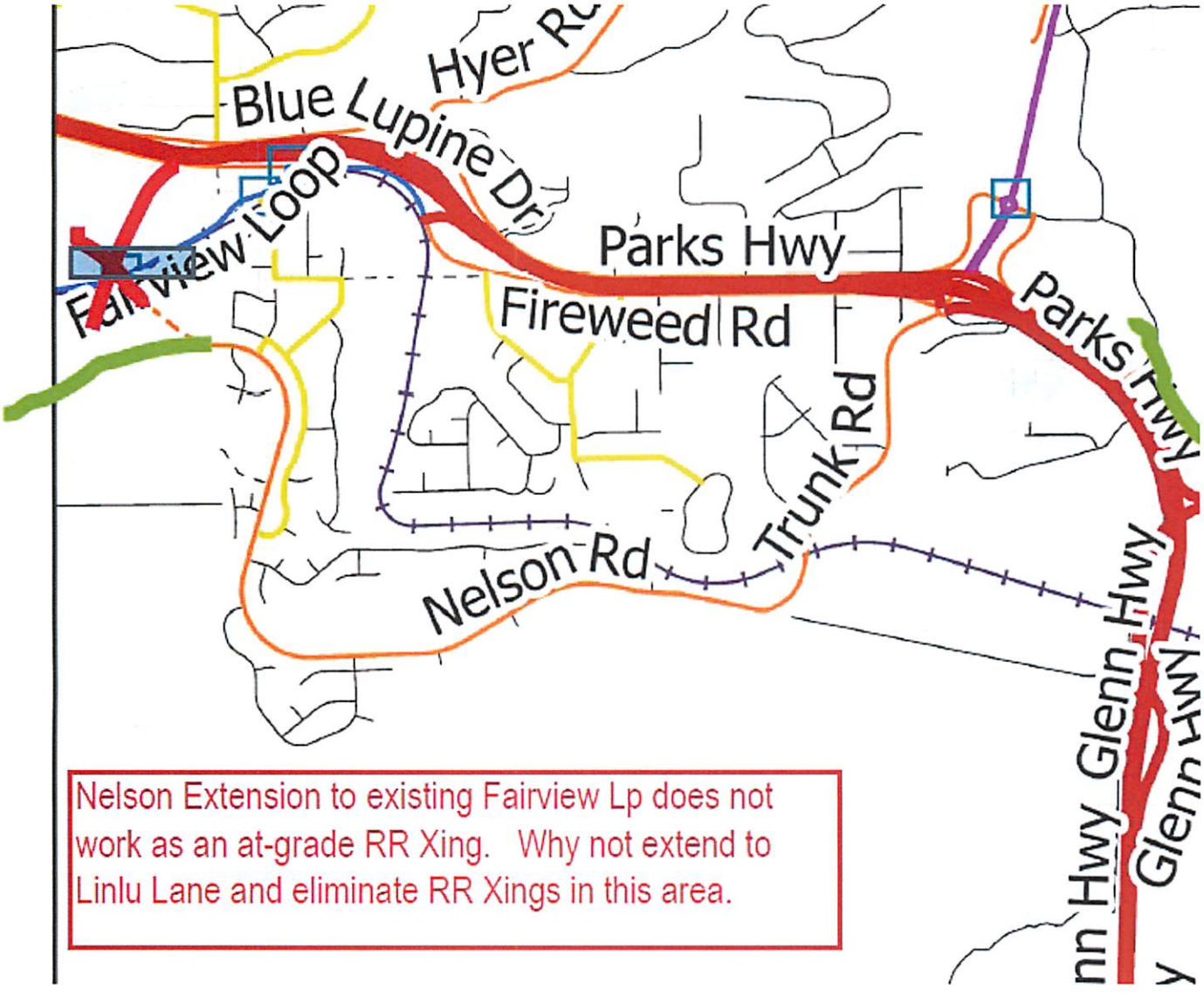
3) I recommend adding railroad crossings as a top intersection safety constraint, really a critical path item,, same as other major intersections, by adding to the bullets on the top of page 5 in the summary report (in red):
- Safer railroad crossings through proper spacing and grade separation over time with growth (like the 2nd bullet, but RR Xing intersections)

4) And modify bullet 4 (in red):
- The possible closure of left-turn access on and off arterial roads and interstates for safety (this is DOTPF Policy *when approaching 20,000 vehicles per day*.)

5) And modify the last bullet 6 (in red) that getting to interchanges, etc. is very important and efficient to both our agencies:

Parallel routes to better distribute intraregional trips traveling east and west from one side of the Valley to the other or to get to interchanges on the Parks and Glenn Highways. The purpose is to serve the most residents with access to traffic signals, roundabouts, and interchanges.

Here's the original review comment clipped:



Background for the 5 requested changes:

An extended line is recommended because it give the MSB and DOTPF three options, while a termini at Fairview Loop Road only offers the first to options. Here's the background for recommended edits above:

1) No-build – One option is to not show a new Fairview Loop connection. Abby Blvd and Old Mat Road RR Xings remain open until they are too congested or blocked by staging trains. At that point they are at risk of closure. With Seward Meridian grade separated connection to Fairview Loop. These two RR Xigns are likely to be closed in 20 years. No language required in the report. However, I would show red X's on the crossings to show this is a likely outcome with population and road growth.
   PROBLEM: Abby Blvd retains the bulk of the traffic unless it is to be closed as a railroad crossing. Then the No-Build option works with closure of at-grade RR Xings. ARRC train staging as siding will eventually block Fairview Loop connections..

By not showing the line, Collector traffic would be focused to Arterials at Seward Meridian and Trunk, and their two Interchanges at the Parks. Serving the most people by getting them to those primary interchanges is DOTPF's top goal recommended for Page 5 clarifications (above). The other basis for this option is our 1988 Joint Policy with the Alaska Railroad which states in Section 4.2.1 Planning: *"Local jurisdictions, state and federal agencies, and private enterprise should incorporate planning process (a) aimed at minimizing the need for at-grade crossings and traffic at existing crossings; and (b) which will evaluate the effect on a crossing by changes in zoning, approval of new subdivisions, and other elements of the planning process."* In other words, minimize at-grade crossings due to increasing crash risk with each one. It goes further to state *"New at-grade crossings are discouraged and no new crossings will be permitted without concurrence of the appropriate diagnostic team."*

2) At-grade Nelson Road. Showing the line as is. And Closing Abby Bld and Old Mat Road Xings to comply with 1988 Joint Policy.
PROBLEMS: Existing Fairview Loop Road ROW not expandable. School Bus queuing and clear storage requires shifting Fairview Loop Road north. Potential signalization and signal preemption means 3 lane widening of Fairview Loop Road. ROW and Utilties costs, waterline could double this to a $10-15 Million dollar intersection project. ARRC train staging as siding will eventually block Fairview Loop connections..
Per Jt Policy - 4.5 New Crossings – *"New at-grade crossings should not be allowed if there is another crossing within two miles of the proposed new location."* Because this is a new crossing in the vicinity of two existing crossings – it is really and existing crossing replacement of Abby Blvd and/or Old Mat Road. Under JT Policy, DOTPF and ARRC requires the increased crash risk for the new crossingl to be offset by eliminating one or more crossings. That is not always possible and depends a lot on out of direction travel (> 2 miles). Abby Blvd and/or Old May Rd would have to close to meet this policy.

3) Grade separation and extension to Fireweed Rd. And closing Abby Blvd and Old Mat Road RR Xings.
PROBLEMS: Cost of a bridge and ROW to the north. No ROW to preserve.
Fits the OSHP goals of a road network that guides future land use, increases road connectivity and promotes travel more so than the existing Fairview Loop Road constrained by ARRC ROW. Road costs may be similar to S Trunk Extension. Prevents ARRC blockages of at-grade crossings into roads to the south.

Any one of all these options can be chosen by MSB for the OSHP. I recommend Option 3 as it is possible to phase construct and it allows all 3 options to be possible. All 3 options show it is feasible to close-grade RR Xings with future improvements. This would require at least 1 more grade separations at Seward Meridian Parkway or Nelson Rd indirectly to Hyer Rd. S Trunk Rd is already completed. . Two grade separated routes are shown in the OSHP, so at-grade closures are a likely outcome.

Scott Thomas, P.E., CR Traffic-Safety Engineer
Alaska DOT&PF, Central Region Traffic, Safety, and Utilities Section
4111 Aviation Ave, Anchorage, AK 99519
Phone: 907.269.0639 | email: scott.thomas@alaska.gov

"Keep Alaska Moving through service and infrastructure."
"Toward Zero Deaths: Everyone Counts on Alaska's Roadways"

HOUSTON

5 primary intersections not shown but mapped and approved in the Parks ADP

- 3 are not primary intersections
- Essential MSB parcels off of Hawk Lane may be critical to rail spur and Parks Hwy bypass feasibility in Houston. Recommend putting a shade on those parcels for transportation set asides prior to other uses.
- There are essential SLE's in the NW corner of this map that parallel and cross the Parks Hwy to large tracts.

Big Lake

- MSB lands on Hollywood Road are essential to solving sharp curves and pioneer alignments in two areas. Recommend showing these lands as "essential to transportation planning" and careful planning of ROW widths and setbacks to Hollywood Road.

WASILLA

- Fairview Lp Rd at Linlu lane is a primary intersection to existing lands with greater feasibility to serve Nelson Rd area than other options shown.
- 4 intersections shown are not primary – meaning not likely to serve LT's or signals in the long term.
- A Leota/Endeavor connection appears underway with developer planning at KGB/Endeavor
- DOTPF concurs with SM extension South in past correspondence RE Nelson Rd area and Fariview Loop Road/Abby Blvd concerns. This fits the goal fo maximizing Collector and Arterial access to interchanges for the most residents and businesses possible.

KNIK-GOOSE BAY

- 3 primary intersections have been mapped by DOTPF for signal spacing to match long term growth of large parcels and frontage roads.
- 3 existing intersections are not primary. They are likely to be rerouted to long term primary intersections.
- A Settler's Bay - Hayfield Rd connection is recommended. Much housing is still going in with lower ermergency access and limited access to turn bays and signals out on KGB.

FISHHOOK

- The first primary intersection would be ½ mile west of the Glenn Hwy with greater N-S connectivity than the site shown. DOTPF selects future signal locations and major intersections on state routes.
- Is Trunk Rd Extension supported by LRTP modeling - in lieu of Glenn Hwy expansion in Palmer? Does it offer local governments their goals towards a Boulevard in Palmer through AADT reduction? This would qualify as a future goal review as stated in the Implementation Plan, that is not yet ready for the OSHP or LRTP modeling. If the MSB and City of Palmer desire the Interstate route relocated out of Palmer, then now is the time to plan for it - otherwise it will remain due to lack of options in 30 years.

PALMER

- Fairview Lp Rd at Linlu lane is a primary intersection to existing lands with greater feasibility to serve Nelson Rd area than other options shown. RR Xing as shown is not feasible w/o also realigning Fairview Loop Road away from ARRC for school bus storage and may not be approvable for safety without engineering study. DOTPF/ARRC joint policy requires and engineering study look at reducing RR Xing conflicts – which Linlu Lane connection does.
- Shennum/Shoreline and Hay St to the south are a large neighborhood split dependent on PW Hwy for most access. Long term, eventual Hay St crossover should be considered to maximize connectivity to the Fairview/Nelson area, schools and other services. Would be same as McCarrey St in Anchorage for example.
- MatSu Regional Hospital requires a 2nd point of access for emergency response. Look at the potential to extend Glenn 34-42 frontage at Matanuska Lake to Woodworth Loop.
- "4 Corners" CIRI and 3Bears are at risk of enough congestion to lead to stop and go traffic backing into adjacent signals in the long term. The area is served by poor signal spacing in proximity to new Trunk Road. Examine Ray Lane or a new intersection and internal perimeter route west of these facilities that can remain signalized with less congestion. A gateway to 1 million square feet of retail at the Old Trunk Road intersection will fail the PW Hwy in the long term. A relocated signal is best planned in the OSHP and LRTP as a larger system. This cannot be easily resolved within the limitations of individual TIA's for individual parcels.
- Show Midtown/Golden Hills, Colleen Street as planned.
- Old Glenn access to Burkholder Lake and hundreds of acres is needed via Section Line. There's enough traffic to support a middle connector rather than divert all traffic to the curves at Back Acres Rd or Maud Rd. If traffic is concentrated without new connectors – then signals are more likely to be warranted. With more roads, signals can be avoided for a longer time.
- PW Hwy N/S disconnect needs solutions. An E-W Collector S of the Hwy can serve more access to signals - including schools, sports centers etc. Rather than building more signals and more congestion on the main highway. This also improves emergency circulation and school bus routing - less need for bus stops on the main hwy.
- A Mat R Xing is more of a goal than a known route, just like Interstate bypasses. Crossing the braided river is best at a canyon or unbraided area. The Glenn is too wide and steep for an ideal at-grade intersection at 58 mile Road, but may work as a grade separation in the very long term.

KNIK RIVER

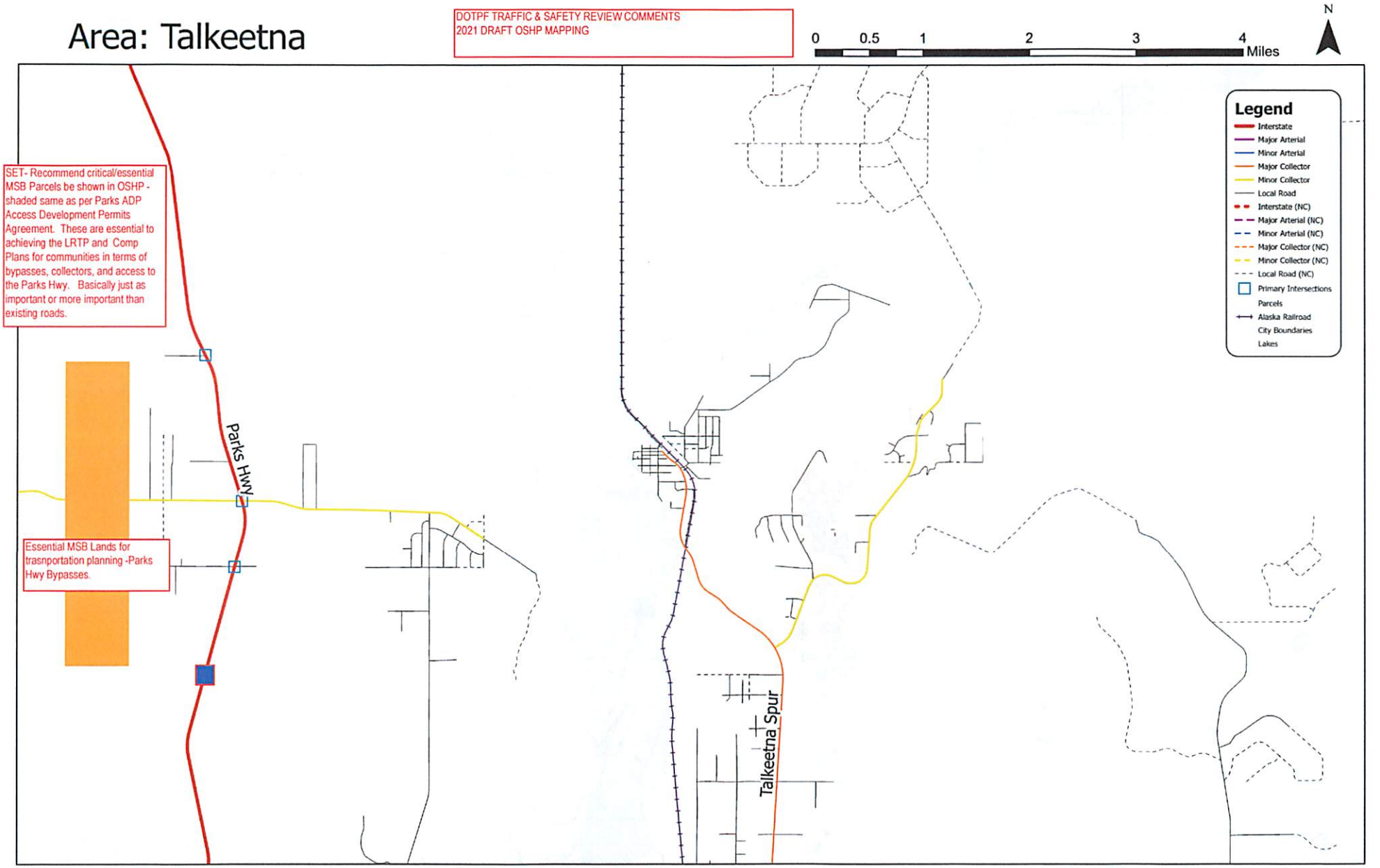
- It appears River Road is better positioned for an intersection and visibility on the N end rather than the south end of the loop.

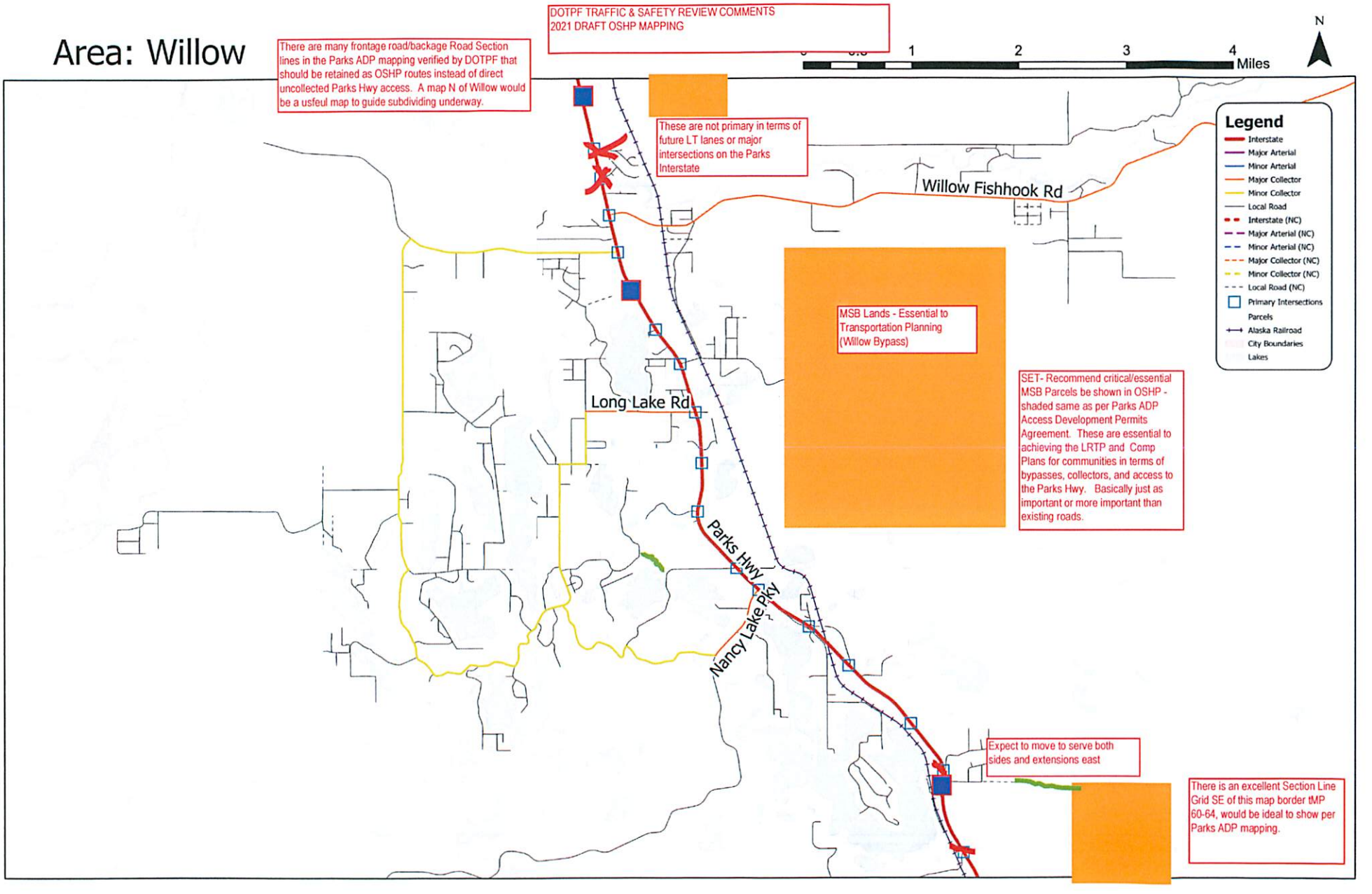
OTHER

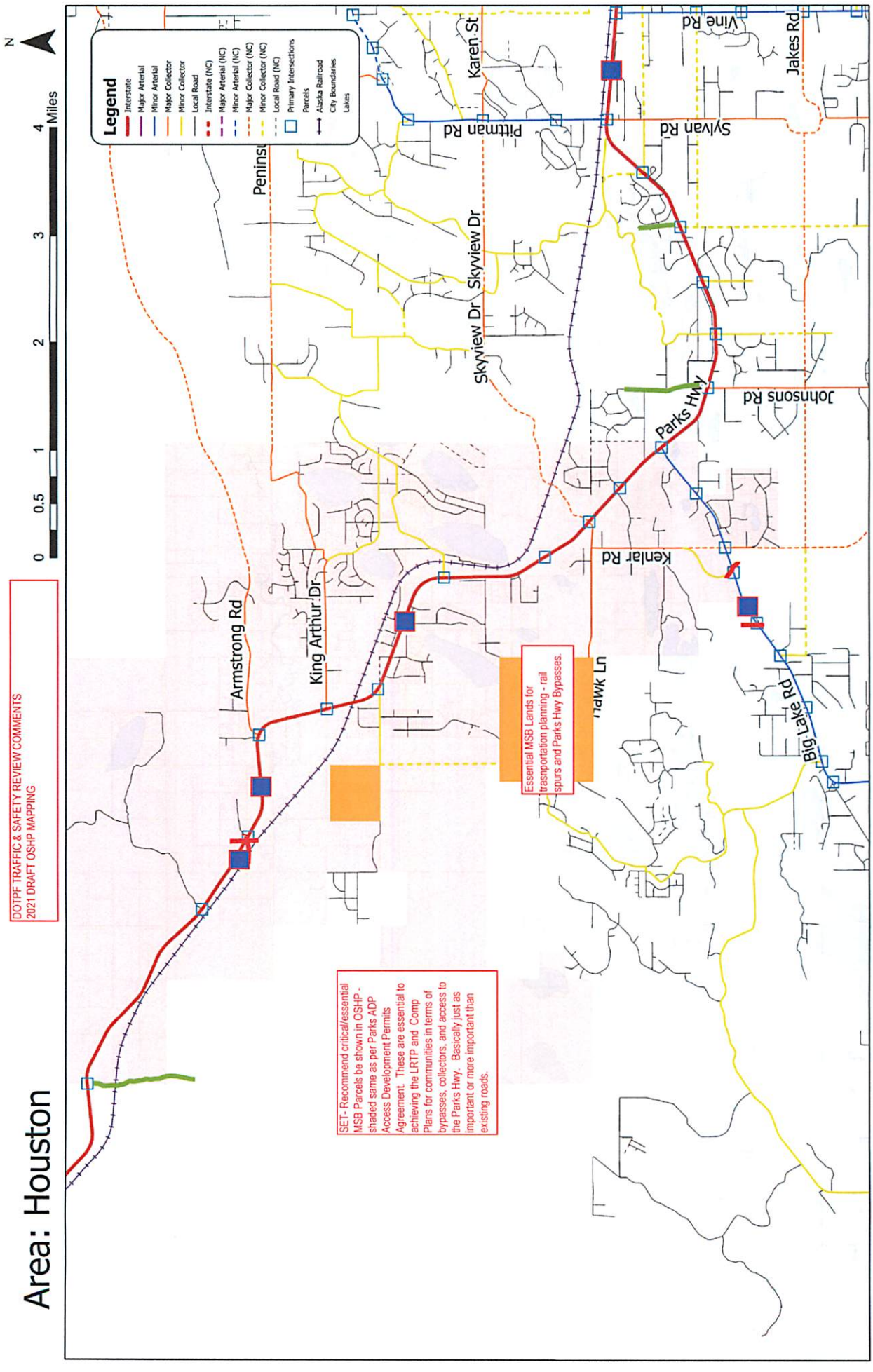
- Other apparent OSHP collectors/connectors were mapped in the DOTPF "Over the Shoulder" review of the OSHP in February 2, 2021 mapping, attached.
    -

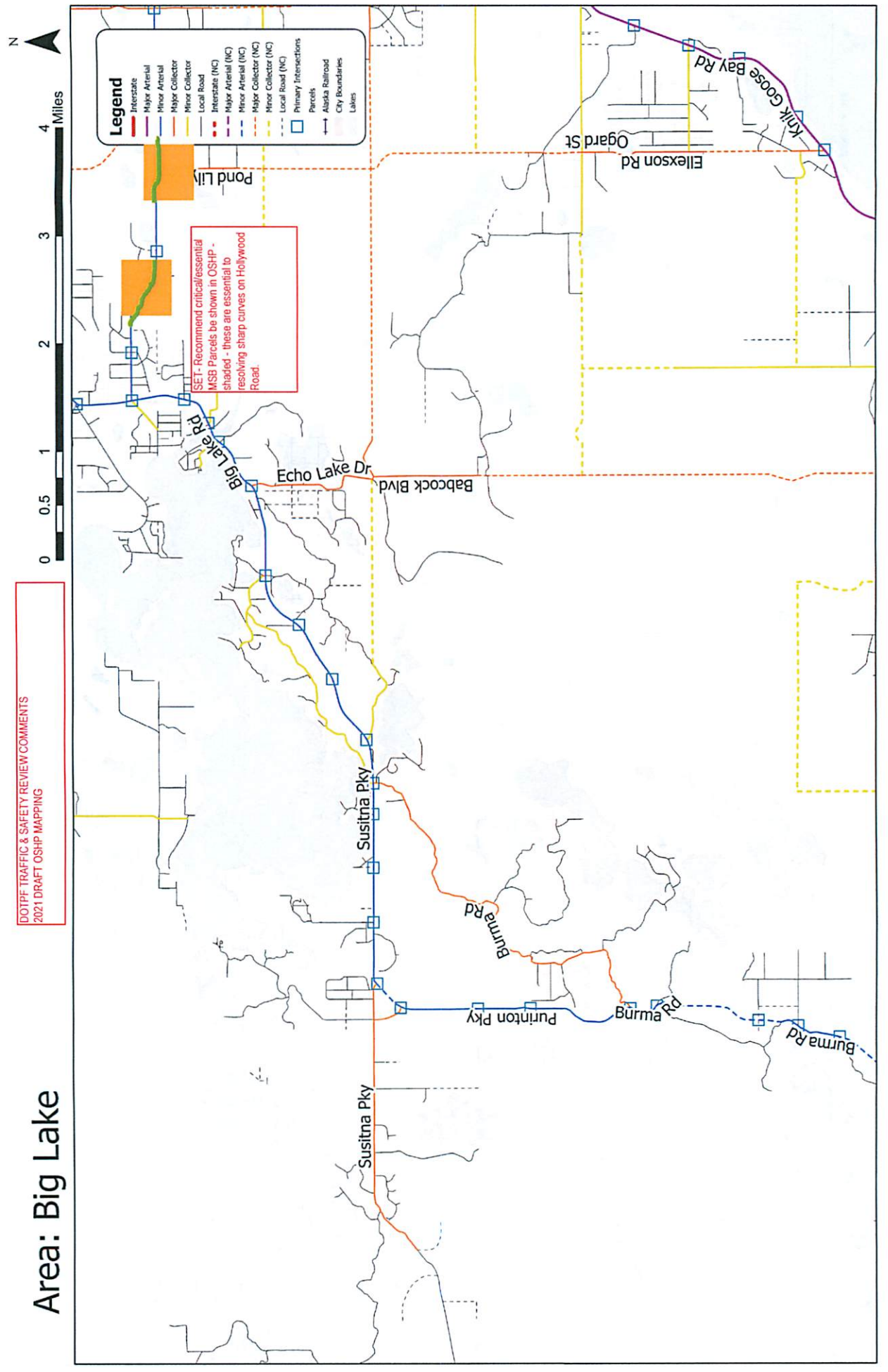
Area: Talkeetna

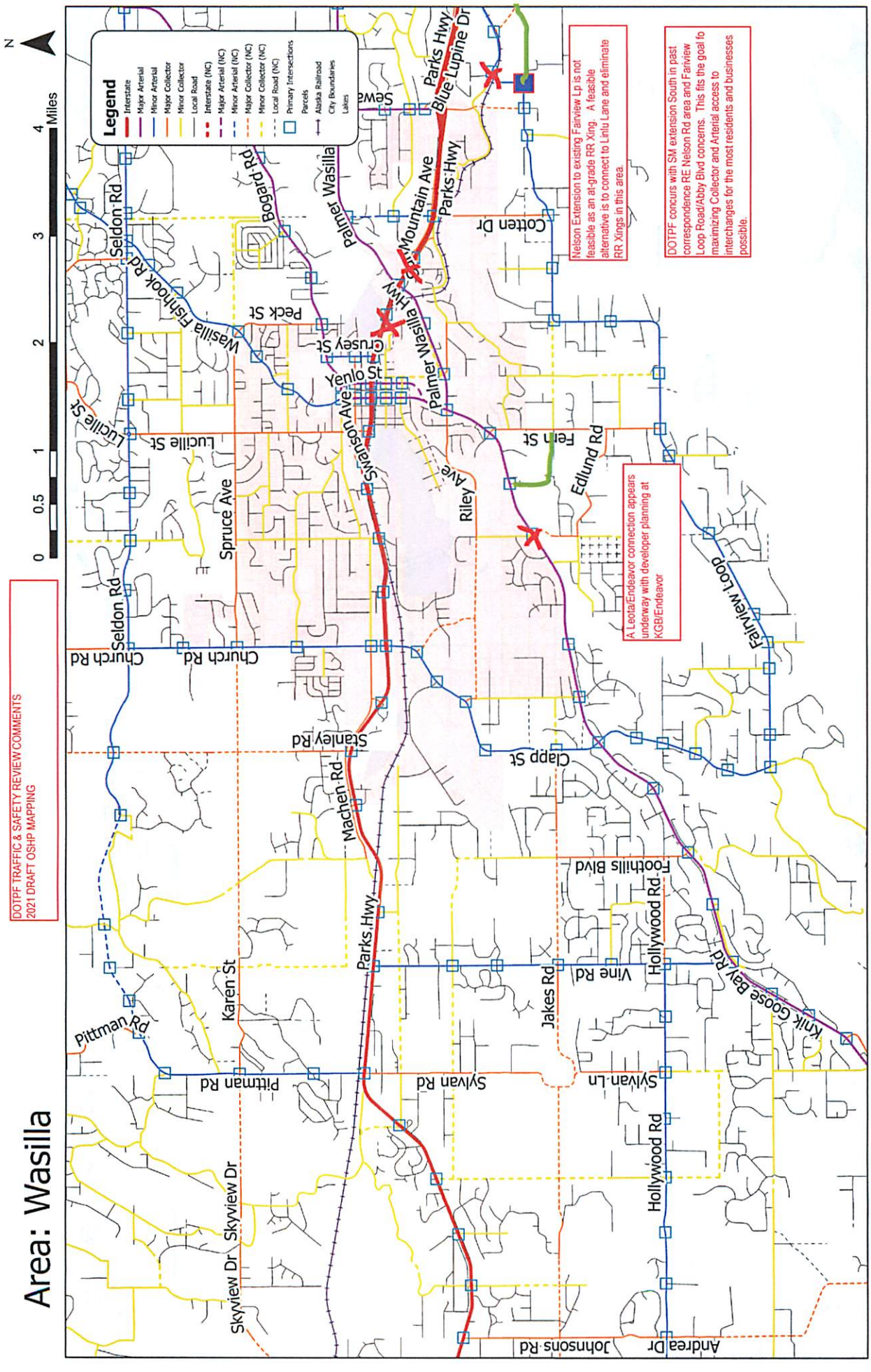
DOTPF TRAFFIC & SAFETY REVIEW COMMENTS
2021 DRAFT OSHP MAPPING

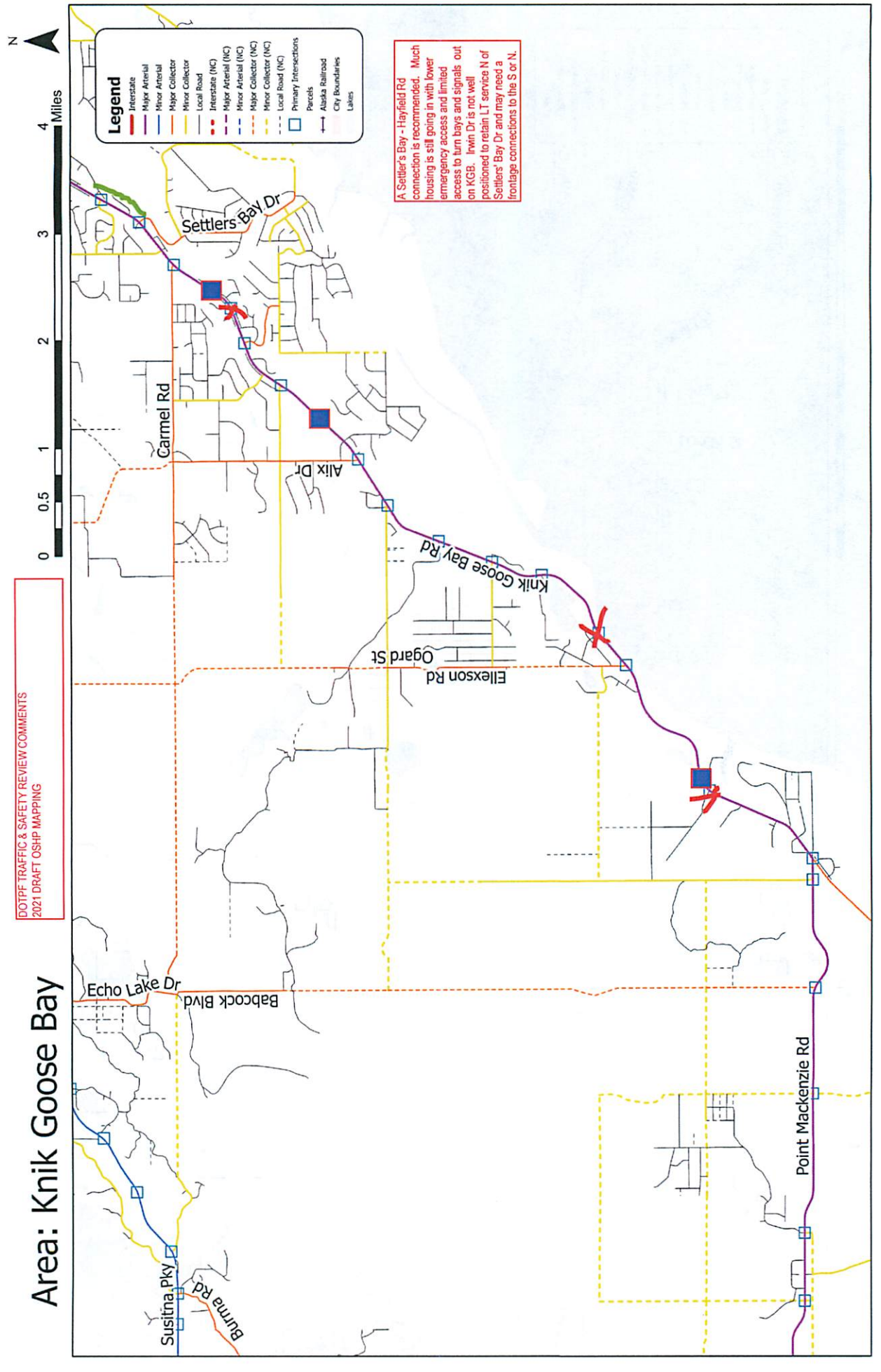



Area: Willow
DOTPF TRAFFIC & SAFETY REVIEW COMMENTS
2021 DRAFT OSHP MAPPING
There are many frontage road/backage Road Section lines in the Parks ADP mapping verified by DOTPF that should be retained as OSHP routes instead of direct uncollected Parks Hwy access. A map N of Willow would be a usfeul map to guide subdividing underway.
These are not primary in terms of future LT lanes or major intersections on the Parks Interstate
MSB Lands - Essential to Transportation Planning (Willow Bypass)
SET- Recommend critical/essential MSB Parcels be shown in OSHP - shaded same as per Parks ADP Access Development Permits Agreement. These are essential to achieving the LRTP and Comp Plans for communities in terms of bypasses, collectors, and access to the Parks Hwy. Basically just as important or more important than existing roads.
Expect to move to serve both sides and extensions east
There is an excellent Section Line Grid SE of this map border tMP 60-64, would be ideal to show per Parks ADP mapping.
Willow Fishhook Rd
Long Lake Rd
Parks Hwy
Nancy Lake Pky
N
0 1 2 3 4 Miles
Legend
Interstate
Major Arterial
Minor Arterial
Major Collector
Minor Collector
Local Road
Interstate (NC)
Major Arterial (NC)
Minor Arterial (NC)
Major Collector (NC)
Minor Collector (NC)
Local Road (NC)
Primary Intersections
Parcels
Alaska Railroad
City Boundaries
Lakes


Area: Houston
N
0
0.5
1
2
3
4
Miles
Legend
Interstate
Major Arterial
Minor Arterial
Major Collector
Minor Collector
Local Road
Interstate (NC)
Major Arterial (NC)
Minor Arterial (NC)
Major Collector (NC)
Minor Collector (NC)
Local Road (NC)
Primary Intersections
Parcels
Alaska Railroad
City Boundaries
Lakes
DOTPF TRAFFIC & SAFETY REVIEW COMMENTS
2021 DRAFT OSHP MAPPING
SET- Recommend critical/essential MSB Parcels be shown in OSHP - shaded same as per Parks ADP Access Development Permits Agreement. These are essential to achieving the LRTP and Comp Plans for communities in terms of bypasses, collectors, and access to the Parks Hwy. Basically just as important or more important than existing roads.
Essential MSB Lands for trasnportation planning - rail spurs and Parks Hwy Bypasses.
Armstrong Rd
King Arthur Dr
Skyview Dr
Skyview Dr
Pittman Rd
Karen St
Sylvan Rd
Vine Rd
Jakes Rd
Johnsons Rd
Parks Hwy
Kenlar Rd
Big Lake Rd

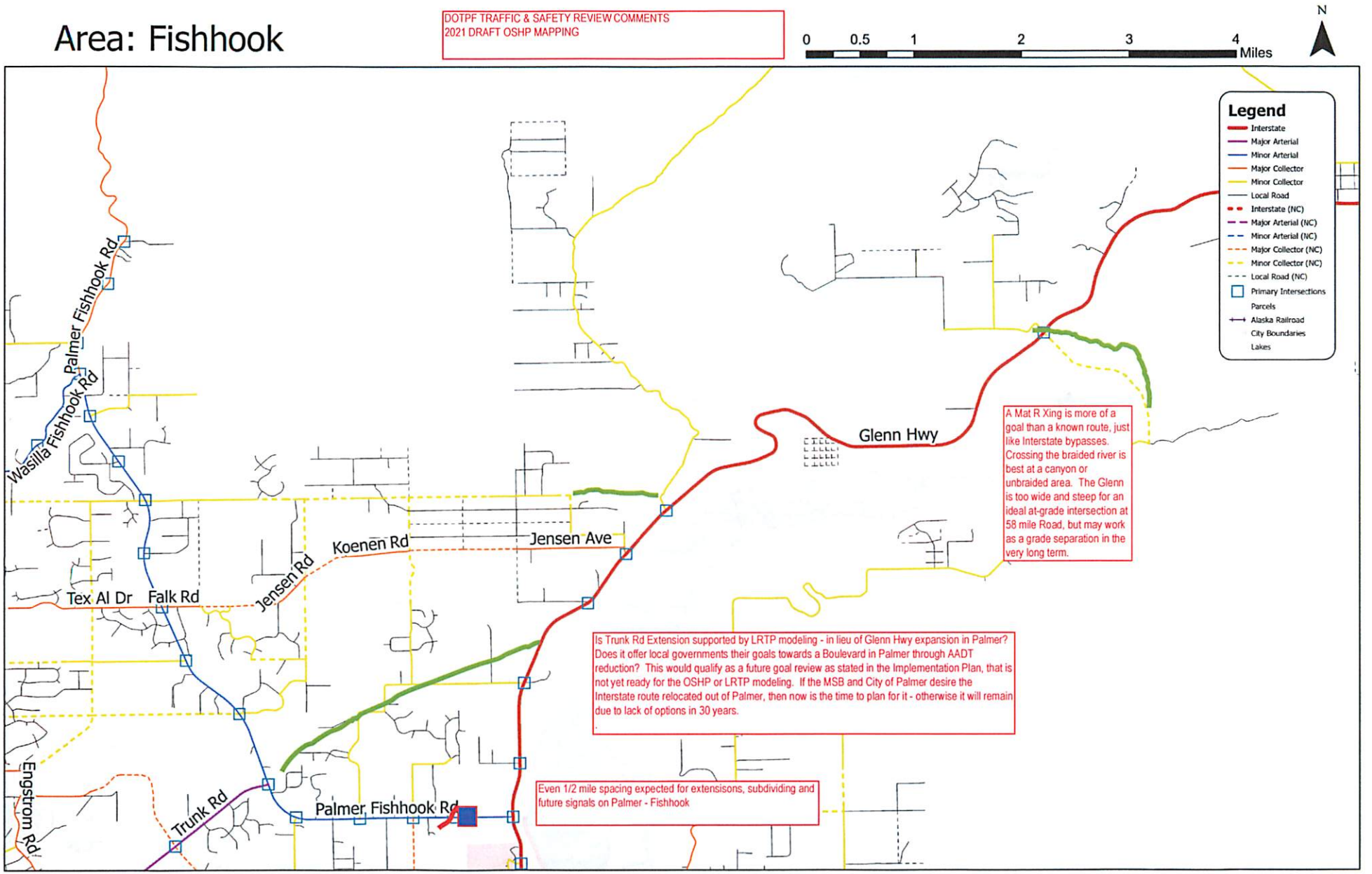

Area: Big Lake
DOTPF TRAFFIC & SAFETY REVIEW COMMENTS
2021 DRAFT OSHP MAPPING
SET - Recommend critical/essential MSB Parcels be shown in OSHP - shaded - these are essential to resolving sharp curves on Hollywood Road.
Legend
Interstate
Major Arterial
Minor Arterial
Major Collector
Minor Collector
Local Road
Interstate (NC)
Major Arterial (NC)
Minor Arterial (NC)
Major Collector (NC)
Minor Collector (NC)
Local Road (NC)
Primary Intersections
Parcels
Alaska Railroad
City Boundaries
Lakes
N
0
0.5
1
2
3
4
Miles
Pond Lily
Big Lake Rd
Echo Lake Dr
Babcock Blvd
Susitna Pky
Burma Rd
Purinton Pky
Burma Rd
Susitna Pky
Burma Rd
Ogard St
Ellexson Rd
Knik Goose Bay Rd


Area: Wasilla
DOTPF TRAFFIC & SAFETY REVIEW COMMENTS
2021 DRAFT OSHP MAPPING
N
0 0.5 1 2 3 4 Miles
Legend
Interstate
Major Arterial
Minor Arterial
Major Collector
Minor Collector
Local Road
Interstate (NC)
Major Arterial (NC)
Minor Arterial (NC)
Major Collector (NC)
Minor Collector (NC)
Local Road (NC)
Primary Intersections
Parcels
Alaska Railroad
City Boundaries
Lakes
Nelson Extension to existing Fairview Lp is not feasible as an at-grade RR Xing. A feasible alternative is to connect to Linlu Lane and eliminate RR Xings in this area.
DOTPF concurs with SM extension South in past correspondence RE Nelson Rd area and Fairview Loop Road/Abby Blvd concerns. This fits the goal fo maximizing Collector and Arterial access to interchanges for the most residents and businesses possible.
A Leota/Endeavor connection appears underway with developer planning at KGB/Endeavor
Parks Hwy
Blue Lupine Dr
Mountain Ave
Cotten Dr
Palmer Wasilla Hwy
Bogard Rd
Seldon Rd
Wasilla Fishhook Rd
Peck St
Gruesy St
Yenlo St
Swanson Ave
Lucille St
Spruce Ave
Church Rd
Stanley Rd
Machen Rd
Riley Ave
Fern St
Edlund Rd
Clapp St
Fairview Loop
Foothills Blvd
Hollywood Rd
Vine Rd
Jakes Rd
Karen St
Pittman Rd
Sylvan Rd
Sylvan Ln
Skyview Dr
Andrea Dr
Johnsons Rd
Knik Goose Bay Rd


Area: Knik Goose Bay
DOTPF TRAFFIC & SAFETY REVIEW COMMENTS
2021 DRAFT OSHP MAPPING
N
0 0.5 1 2 3 4 Miles
Legend
Interstate
Major Arterial
Minor Arterial
Major Collector
Minor Collector
Local Road
Interstate (NC)
Major Arterial (NC)
Minor Arterial (NC)
Major Collector (NC)
Minor Collector (NC)
Local Road (NC)
Primary Intersections
Parcels
Alaska Railroad
City Boundaries
Lakes
A Settler's Bay - Hayfield Rd connection is recommended. Much housing is still going in with lower emergency access and limited access to turn bays and signals out on KGB. Irwin Dr is not well positioned to retain LT service N of Settlers' Bay Dr and may need a frontage connections to the S or N.
Settlers Bay Dr
Carmel Rd
Alix Dr
Knik Goose Bay Rd
Ogard St
Ellexson Rd
Echo Lake Dr
Babcock Blvd
Susitna Pky
Burma Rd
Point Mackenzie Rd

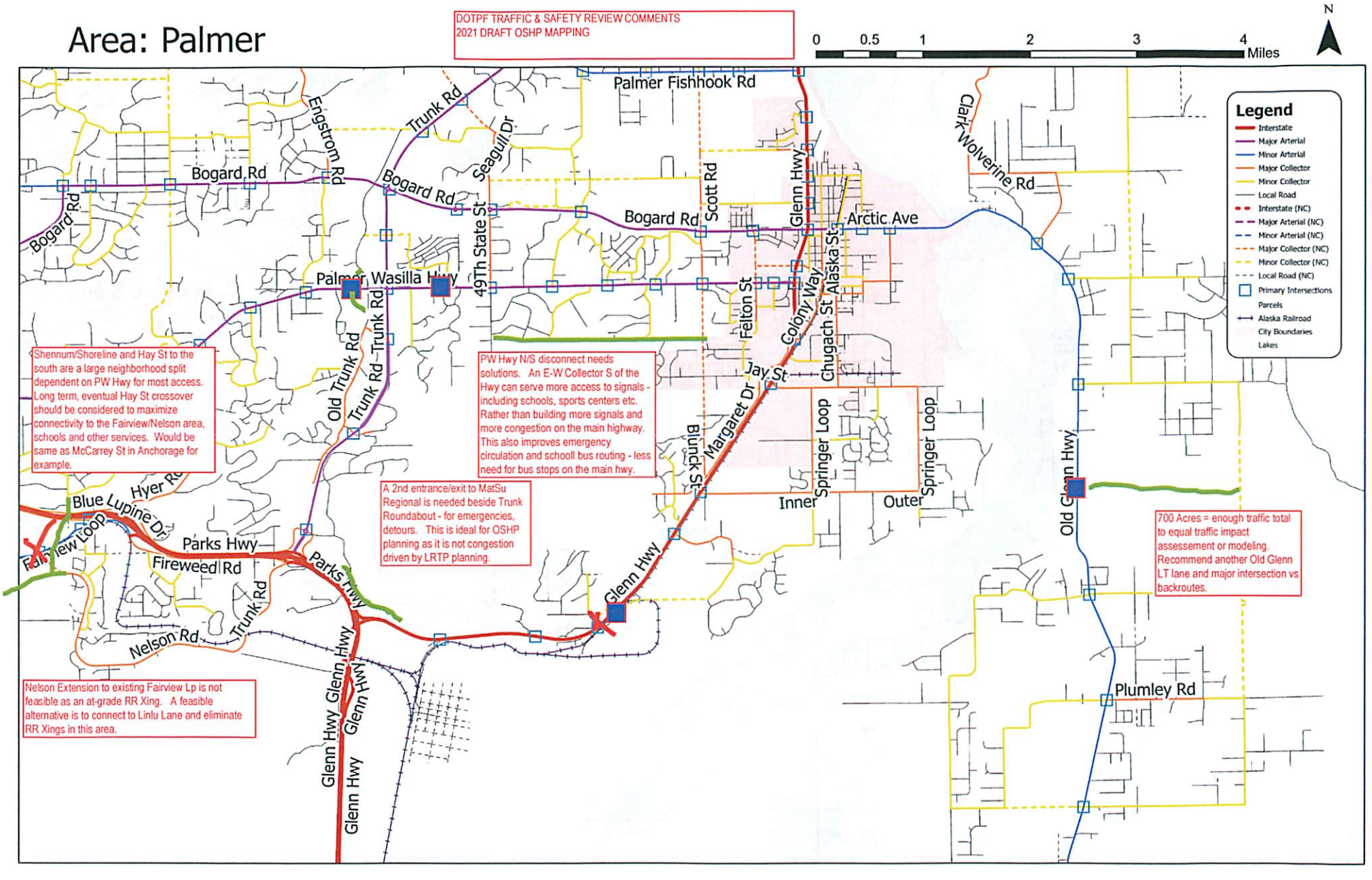
Area: Fishhook

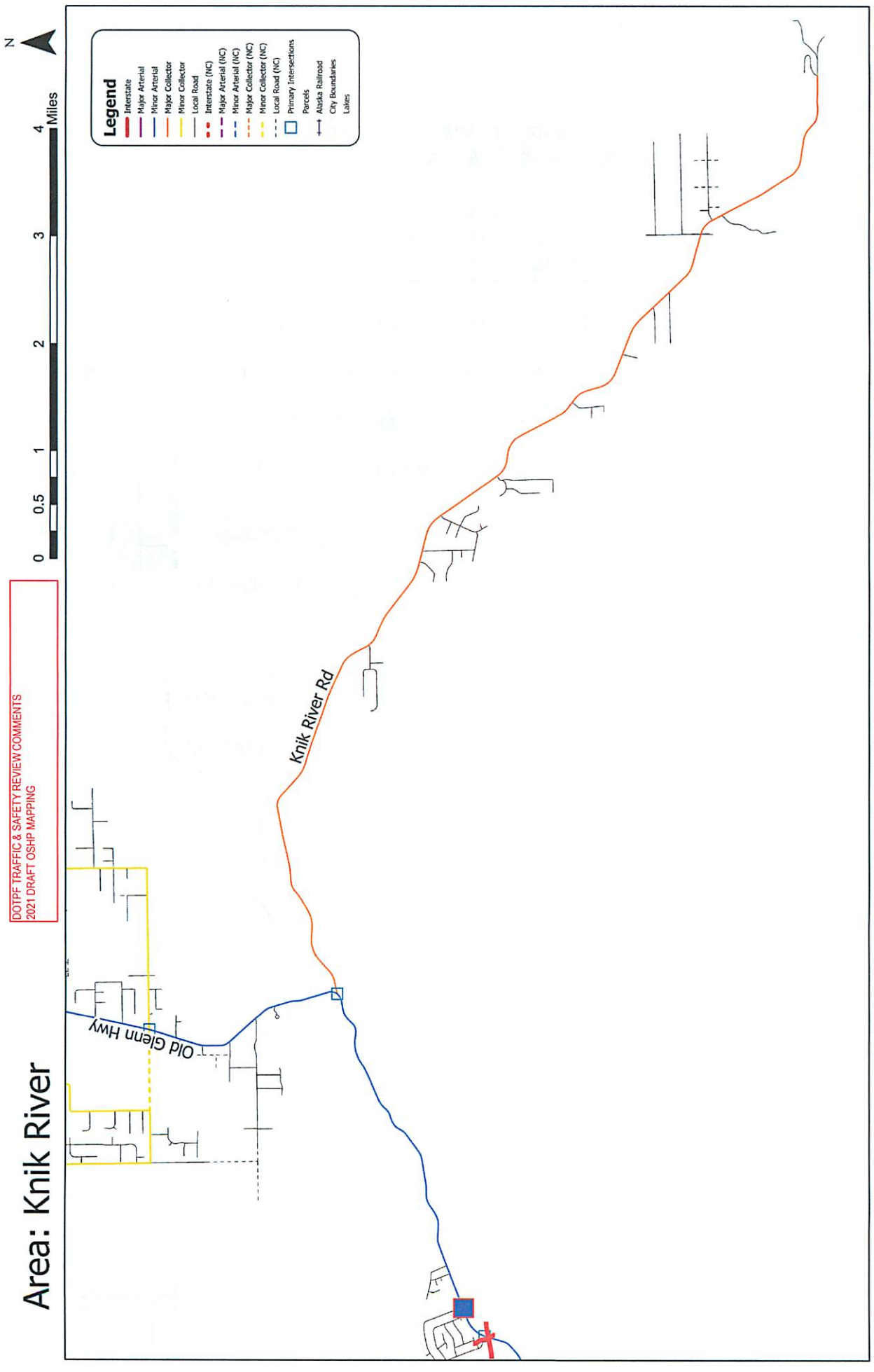
DOTPF TRAFFIC & SAFETY REVIEW COMMENTS
2021 DRAFT OSHP MAPPING



Area: Palmer

DOTPF TRAFFIC & SAFETY REVIEW COMMENTS
2021 DRAFT OSHP MAPPING




Area: Knik River
DOTPF TRAFFIC & SAFETY REVIEW COMMENTS
2021 DRAFT OSHP MAPPING
N
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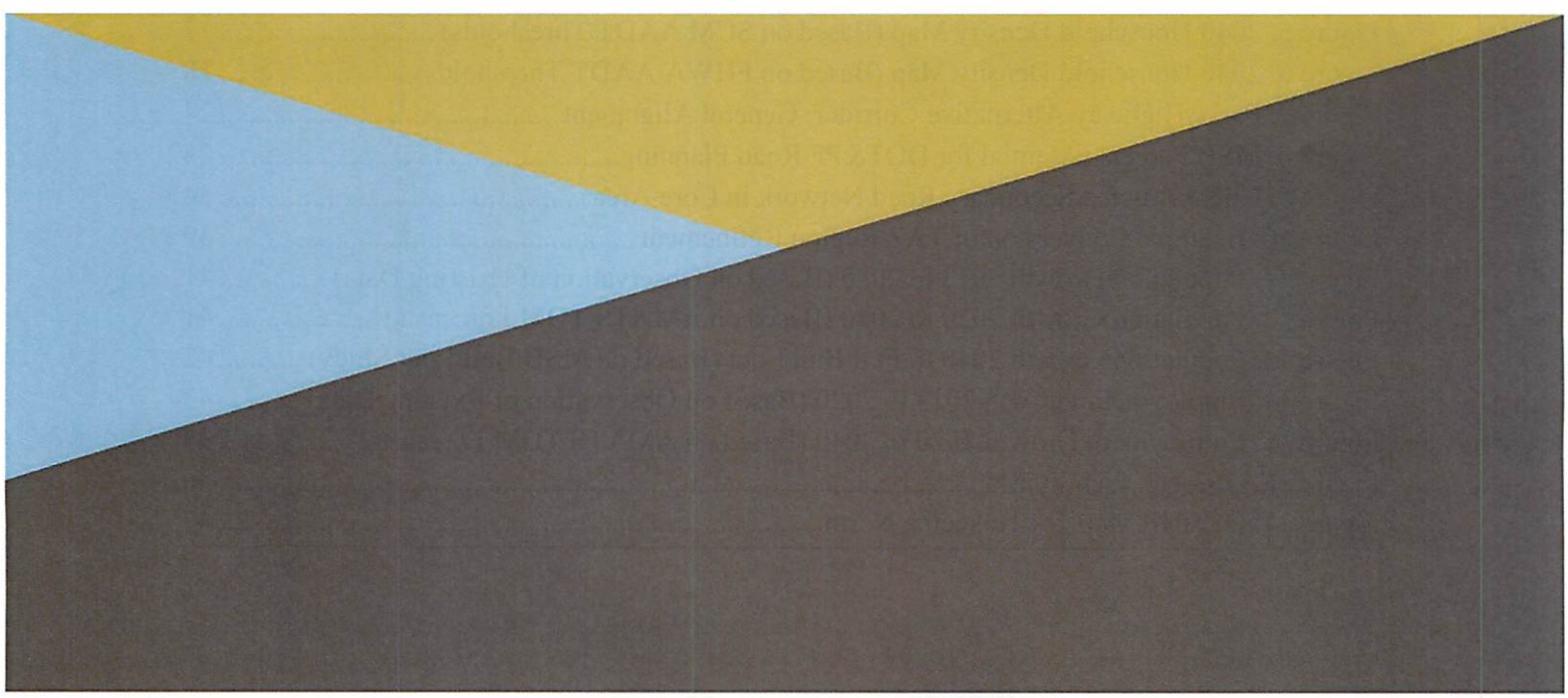
1
2
3
4
Miles
Legend
Interstate
Major Arterial
Minor Arterial
Major Collector
Minor Collector
Local Road
Interstate (NC)
Major Arterial (NC)
Minor Arterial (NC)
Major Collector (NC)
Minor Collector (NC)
Local Road (NC)
Primary Intersections
Parcels
Alaska Railroad
City Boundaries
Lakes
Knik River Rd
Old Glenn Hwy

Matanuska Susitna Borough
Official Streets and Highway Plan

Technical Report
and
Implementation Plan

May 2022



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Abbreviations

AADT	Average Annual Daily Traffic
AMATS	Anchorage Metropolitan Area Transportation Solutions
ATV	All-Terrain Vehicle
CIP	Capital Improvement Project
DOT&PF	Alaska Department of Transportation and Public Facilities
DOWLD	Alaska Department of Labor and Workforce Development
FC	Functional Classification
FHWA	Federal Highway Administration
GIS	Geographic Information System
ISER	Institute of Social and Economic Research
LRTP	Long-Range Transportation Plan
MSB	Matanuska-Susitna Borough
MUTCD	Manual on Uniform Traffic Control Devices
OS&HP	Official Streets and Highway Plan
RIP	Road Improvement Project
ROW	Right-of-Way
SCM	Subdivision Construction Manual (2020)
STIP	Statewide Transportation Improvement Program
TAZ	Traffic Analysis Zone
TDM	Travel Demand Model
TRB	Transportation Research Board

1 Introduction

The Value of an Efficient Road Network

Roads are an important public resource. They are the conduits through which all commerce, recreation, and industry happen, and they are the foundation on which a community thrives. The design of the road network directly defines the limits to which a community can provide services and allow for growth while continuing to provide a community that people want to live in. If housing and commercial development outpace road network development without properly considering future needs, the community will quickly become constrained by the road network and community development will stop. Often, road infrastructure needs will only become apparent after they are affecting the community and solutions will become reactionary with options limited by the surrounding development. The Official Streets and Highway Plan (OS&HP) is a planning tool for the Matanuska-Susitna Borough (MSB) that helps decision makers reserve future road corridors and identify possible road network improvements so that when the need arises, reasonable options are still available.

The Nature of Road Development

Roads take a very long time to develop compared to other community development projects. Therefore, it is common in quickly growing areas for adequate road infrastructure to lag behind in the order of development, with housing and commercial development happening first and the necessary road development to support that growth happening later. This is the case for the Mat-Su Borough, where population growth since the 80s has been upwards of 6% a year. These are growth rates usually seen in dense urban areas[1] with multimodal transportation programs and road powers, etc. Much of this growth in the Mat-Su Borough has been allowed to occur in such a way that road network issues have recently become glaringly apparent, and the road solutions with the lowest impact and cost are no longer available due to adjacent development.

Growth and Roads

Population growth is expected to continue in the Mat-Su Borough through at least 2045 at the same 6% rate, assuming employment opportunities, housing, and services are made available. As population and traffic volumes grow, road congestion and safety issues on the existing road network will become exponentially worse if improvements are not made. It is essential that the MSB seriously consider action steps to prioritize road development that meets community demand. Routes identified in the OS&HP may have impacts

OS&HP Goals

- Link Planning to Engineering Design and Construction
- Provide a Plan for the Development of an Appropriate Road Network
- Guide Future Land Use
- Preserve Safe & Efficient Travel
- Promote Economic Development
- Produce Lower Cost Projects
- Extend Project Design Lives
- Improve Quality of Life

[1] Pew Research Group Report: What Unites and Divides Urban, Suburban and Rural Communities; May 22, 2018

and involve compromises and careful planning, but if they are not reserved, other far less beneficial projects will be needed at a higher cost. The goal of the OS&HP is not to hinder or control housing and commercial development, but to increase the capacity of the MSB to respond to community infrastructure needs due to population growth.

A detailed discussion of the growth analysis used to develop the OS&HP is included in Appendix A on page 38.

An Overview of the OS&HP

The OS&HP is a map-based transportation infrastructure plan developed by the MSB Planning Division, with support from Kinney Engineering and a steering committee consisting of members of MSB Public Works, MSB Platting, MSB GIS (Geographic Information System), the City of Palmer, and the City of Wasilla, as well as the input and coordination of the Alaska Department of Transportation (DOT&PF). The Plan was developed with a robust effort of modeling, analysis, and planning-level engineering with group workshops to select and include the most favorable road alignments and intersection locations in the Plan.

The primary component of the Plan is a map, included in Appendix B on page 45. The map shows the existing road network, possible future road alignments, and primary intersection locations. Each road segment is identified by a functional classification, which is a planning-level method of indicating the design parameters of the road. Functional classifications are tied to design manuals where the classification is translated into such design aspects as ROW width requirements or design speeds.

What is Functional Classification?

Functional Classification is a method of identifying the primary use of a road segment in the overall network. This communicates the context of the road between agencies, designers, and the public, and decides the design parameters of the road.

The road network displayed in the OS&HP represents the various routes and classifications needed to provide safe and efficient travel for existing and anticipated development. Since the timing and location of growth and development are dynamic, the road network presented in the OS&HP is not tied to a set horizon year, but serves as a guide to plan for growth and future travel demand. The purpose of the OS&HP is to highlight where roads are needed and to guide development and the subdivision of lands so the corridors are available for future road projects. The Platting Division implements the OS&HP. During the platting process, every subdivision development is assessed for compatibility with the OS&HP. If there is a conflict with the design, MSB Staff will work with the applicant to find a solution that allows for the proposed development and also preserves the OS&HP corridor.

Importance of the OS&HP

The road network outlined in the OS&HP emphasizes the following components:

- **Connectivity**. The Alaska road network has historically been very reliant on the interstate highway system and this has led many communities, including the MSB, to develop without proper connectivity in their secondary road network. The road network is very reliant on the interstate highway system. A majority of trips, regardless of their distance or purpose, are routed onto the highway at some point in their travel. This leads to major congestion along the interstate through the urban core. The OS&HP is designed to provide tools to recover that missing connectivity, leading to higher mobility and efficiency of travel.
- **Safety.** The role of functional classifications in a road network is to identify drivers' expectations at different places in the network. Mixing drivers with a wide range of expectations can greatly decrease safety. For instance, drivers on neighborhood roads expect a high number of turning vehicles, low speeds, and pedestrians on the road and shoulders. However, a deficient road network may push high mobility traffic onto the neighborhood road, causing "cut-through traffic." The mixing of drivers with different needs on the same road creates an obvious safety issue. Simply installing speed bumps and traffic calming may reduce the safety impacts, but it does not address the greater cause, which is a road network that is failing to provide all users with appropriate roads to serve their needs. The OS&HP shows a road network that, if fully built, would provide optimal routes for all users using the space currently available.
- **Cost-effectiveness**. A primary goal of the OS&HP is to reduce the financial and societal costs of road projects in the future. A study of the future community growth showed locations where issues will exist in the network if reasonable expectations about growth occur. Therefore, solutions to these issues will someday become urgent to the community, and decision-makers will need to have answers available to meet these needs. The most favorable solution in each case is included on the OS&HP map. If the MSB does not preserve these routes, then secondary, less favorable options will need to be explored. This will result in a slower road development process resulting in higher-cost solutions that provide less improvement to the road network.

The OS&HP is a part of the MSB process for designing and constructing road infrastructure. Decision makers will use the OS&HP to choose road projects for further study and design and the construction of infrastructure. The OS&HP works in tandem with the MSB Long-Range Transportation Plan (LRTP), the MSB Subdivision Construction Manual (SCM 2020), and other road-related policies and plans.

2 The Planning Process and the Role of the OS&HP

The OS&HP in the MSB Planning Process

The recommendation of a planned road network in the OS&HP is the first step in road infrastructure development. The connections shown are based on current development data and existing socioeconomic projections for the MSB. The exact corridor alignments and road network layout may change as projects are studied in more detail. The 2022 iteration of the OS&HP is now designed to be a "living document," which will be updated by MSB Planning Division as growth and development forecasts change.

Figure 1, below, presents the general planning and road design process in the MSB. Studies and road plans will generally follow a form of this process on their way to construction.

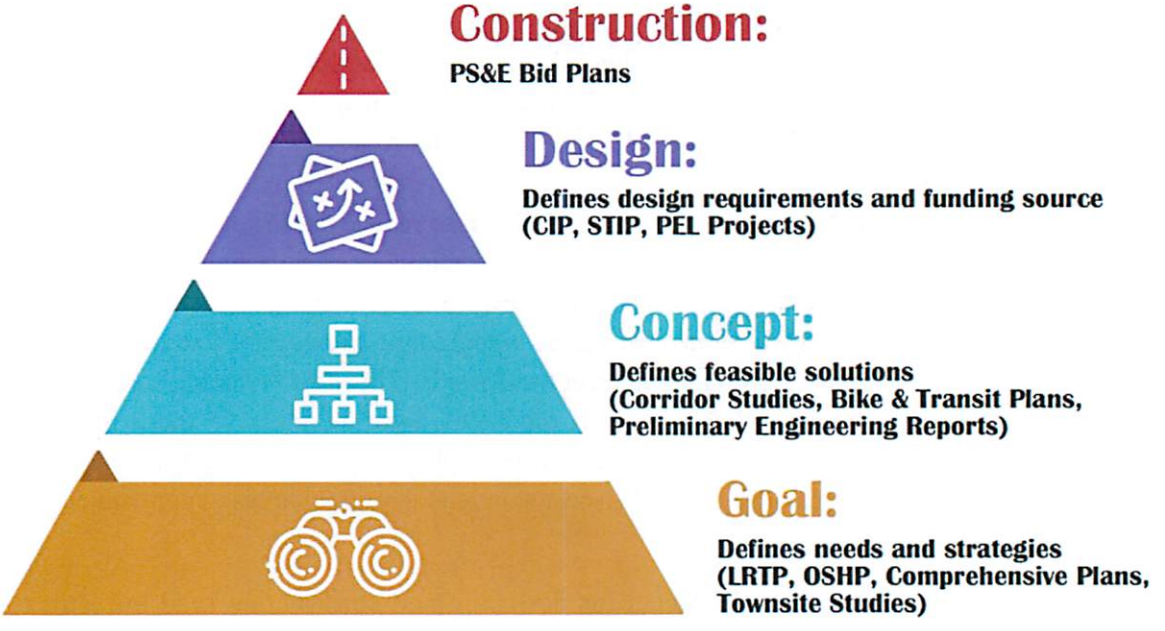

Figure 1. Road Development Pyramid

Goal Planning

At the foundational level of the pyramid are studies that identify infrastructure needs in the community and present solutions in the form of goals and strategies. For example, the community comprehensive plans identify needs in a community for road connections or transit services and explore possible solutions for further study. The LRTP is a key element at this stage of planning as it brings together a broad view of community transportation needs and prioritizes those needs using basic feasibility measurements with a constrained budget and defined horizon year.

Concept Planning

The second level of road planning involves studies that take broad-level goal-based strategies and transition them to more feasible engineering solutions. There are often many possible ways to

fulfill a single identified need in the community. Studies at this level typically determine the optimal solution through more detailed traffic engineering analysis, cost-benefit techniques, and public involvement.

Design Planning
On the "Design" level are projects which have an established alignment and design concept that has been vetted by feasibility analysis and environmental processes. They have more involved engineering design requirements, and their scope and layout are well defined. Another key element at this stage is establishing a funding source.

Construction and the Nature of Project Development
The final step of project development is the construction of the road. This step takes the feasible solutions and turns them into shovel-ready projects that may go out to bid for construction.

Depending on the size and scope of the project, a road may not pass through every step of this process before going to final design and construction, and no step of the process, including final design, guarantees the construction of a road project. This is to say, a road shown on the OS&HP maps is not a committed road but rather an indication of a possible future need. The alignment proposed in the OS&HP is likely to be the least impactful and most cost-effective solution for that future need. However, further discussion and study will take place before a road is built.

The Relationship between the OS&HP and the LRTP
The OS&HP is a long-term planning document that is an extension of the LRTP, and a part of the LRTP's implementation strategy. The LRTP is a fiscally constrained study that looks at all modes and transportation needs in the MSB and develops a plan with a set horizon year and limited budget forecast. The most recent MSB LRTP studied a horizon year of 2035 and recommended Short-term, Mid-term, and Long-term projects. The OS&HP includes the recommendations of the LRTP but also looks beyond 2035 to an undefined horizon year to predict, on a planning level, additional projects that may be included in future LRTPs and future Statewide Transportation Improvement Programs (STIP). The OS&HP's role in road planning is to forecast the connectivity and road function needs of the Borough and to reserve these corridors for future projects. The OS&HP helps fulfill Federal Highway Administration (FHWA) requirements for a planning process that leads to a STIP.

The OS&HP bridges the gap between the "Goal" level and the "Concept" level of road development, and it works in tandem with the LRTP as the basis for future road projects. Table 1, on page 9, compares the differences between the scope and purpose of the LRTP and the OS&HP.

Table 1. Key Goals and Purposes of LRTP vs OS&HP

LRTP	OS&HP
• Broad Transportation Focus • Performance-Based through 2035 • Developed Goals and Strategies • Recommended Fiscally Constrained Improvements • Models High-Volume Road Congestion in a Model that Primarily Provides Higher Function Road Solutions	• Road Network Access and Connectivity Focus • Protects Options for Projects Beyond 2035 • Part of the LRTP's Implementation Strategy • Not Fiscally Constrained • Defines Functional Classes and Patterns Network Design with Planning-Level Road Alignments • Designs Secondary Road Network Needed to Support Arterial-Level LRTP Solutions

3 Key Elements of the OS&HP

The OS&HP is a map designed in GIS software and updated by the MSB Planning Department. A current version of the map is included as figures in Appendix B of this report. The OS&HP highlights three main features.

1. Existing and Possible Future Road Alignments
2. Functional Classification of Road Segments
3. Primary Intersections along Arterial Road Corridors

3.1 Existing and Possible Future Road Alignments

Existing road alignments are based on MSB GIS data. The MSB GIS data used includes land features, land ownership, land development, road characteristics, public facilities, parcels, structures, and (Right-of-way) ROW. The main source of data was the MSB GIS Department's online data portal. Data was downloaded in September of 2020.

Important Data Referenced in the Study:

MSB GIS Data
2007 OS&HP (readopted in 2017
2020 DOT&PF Functional Classes
2020 Capital Improvement Project (CIP) list
2017 Long Range Transportation Plan (LRTP)
2020 Subdivision Construction Manual (SCM)
2015 MSB Build-Out Study
Community Council Area Comprehensive Plans
Alaska Moose Crash Location Database

Future road alignments were determined based on SCM and FHWA guidance design criteria regarding road networks. Road connections included in previous plans were considered first, and then additions were made using an iterative process of considerations, agency input, and steering committee workshop discussions.

The study also referenced the following Assembly Adopted plans:

- Area Comprehensive Plans currently available on the MSB website
- Alsop Townsite Plan, 2013
- Southwest MSB 2060 Futures Project, 2014
- Fish Creek Townsite Study
- Current design plans
  - Parks Highway, Lucus to Big Lake expansion project
  - Knik-Goose Bay Road expansion project
  - Seldon Road Extension to Pittman Road.

The Importance of Connectivity

One of the primary goals of the OS&HP was to provide better connectivity within the secondary road network. Connectivity provides intraregional access between different major destinations in

the community. Figure 2, below, shows an example of connectivity in a street network, comparing a typical cul-de-sac subdivision design to a street design with more connectivity.

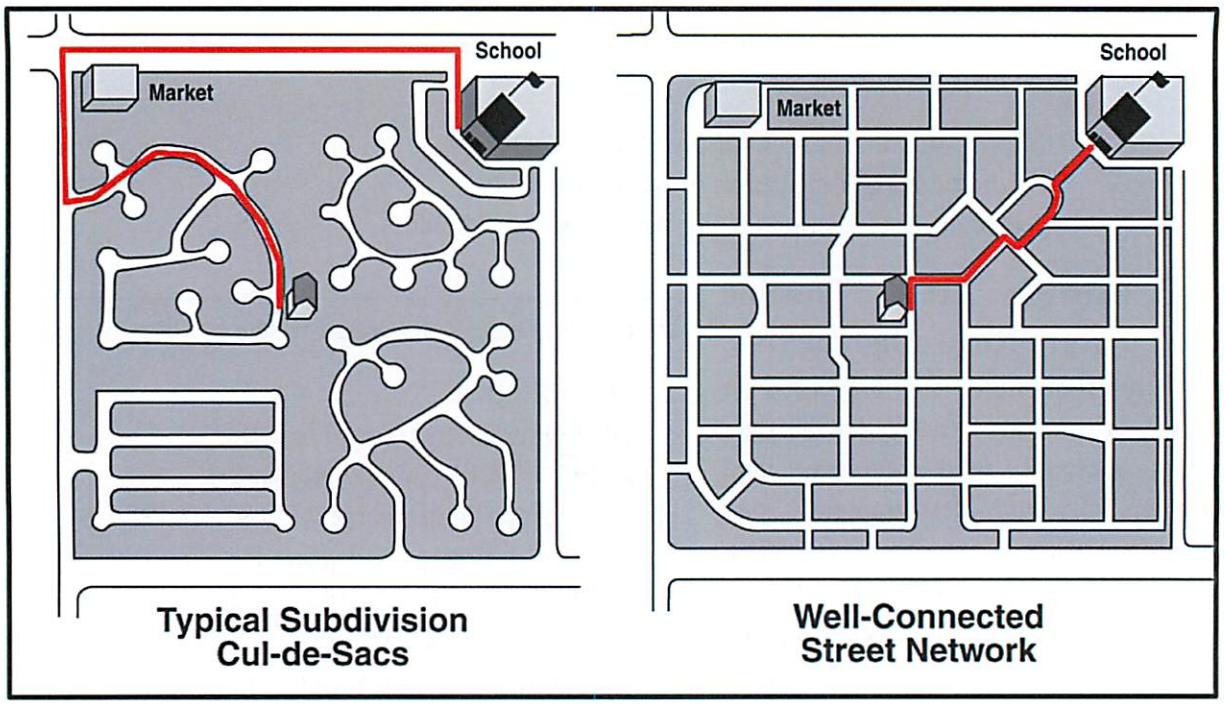

Figure 2. Example of Street Network Connectivity

Notice that trips between the subdivision and the school in the cul-de-sac design are forced onto the major road network. In the more connected street network example, however, the same trip has several possible routes to choose from, some of which can avoid the major road network entirely. Poor connectivity in the road network has a rippling effect throughout the community as it exasperates issues at overloaded intersections, increases safety risks due to more frequent turning on high mobility roads, and increases cumulative travel miles. The lost time to road users in the community can become extremely high. Note that the road network shown in Figure 2 is not entirely ideal and is merely shown as an example. It is unclear from the cartoon what the trip generation rates of the properties are and how these volumes would be distributed in the secondary road network. A well connected network for the MSB will need an appropriate design that better controls the routing of internal traffic since high volume through traffic on a residential street is not favorable.

Because of a disconnect between Platting and Land Use, the MSB has not effectively connected the secondary road network. Numerous subdivisions and commercial generators have been constructed in the past 20 years, resulting in secondary road network that forces all trips generated in the subdivision to take longer routes that must use the arterial road, regardless of their destination. One example of this disconnected development style is the Fishhook Triangle, the region contained within Palmer and Wasilla Fishhook Road, Bogard Road, and the north end of Trunk Road. Figure 3 , below, shows the road network in this region.

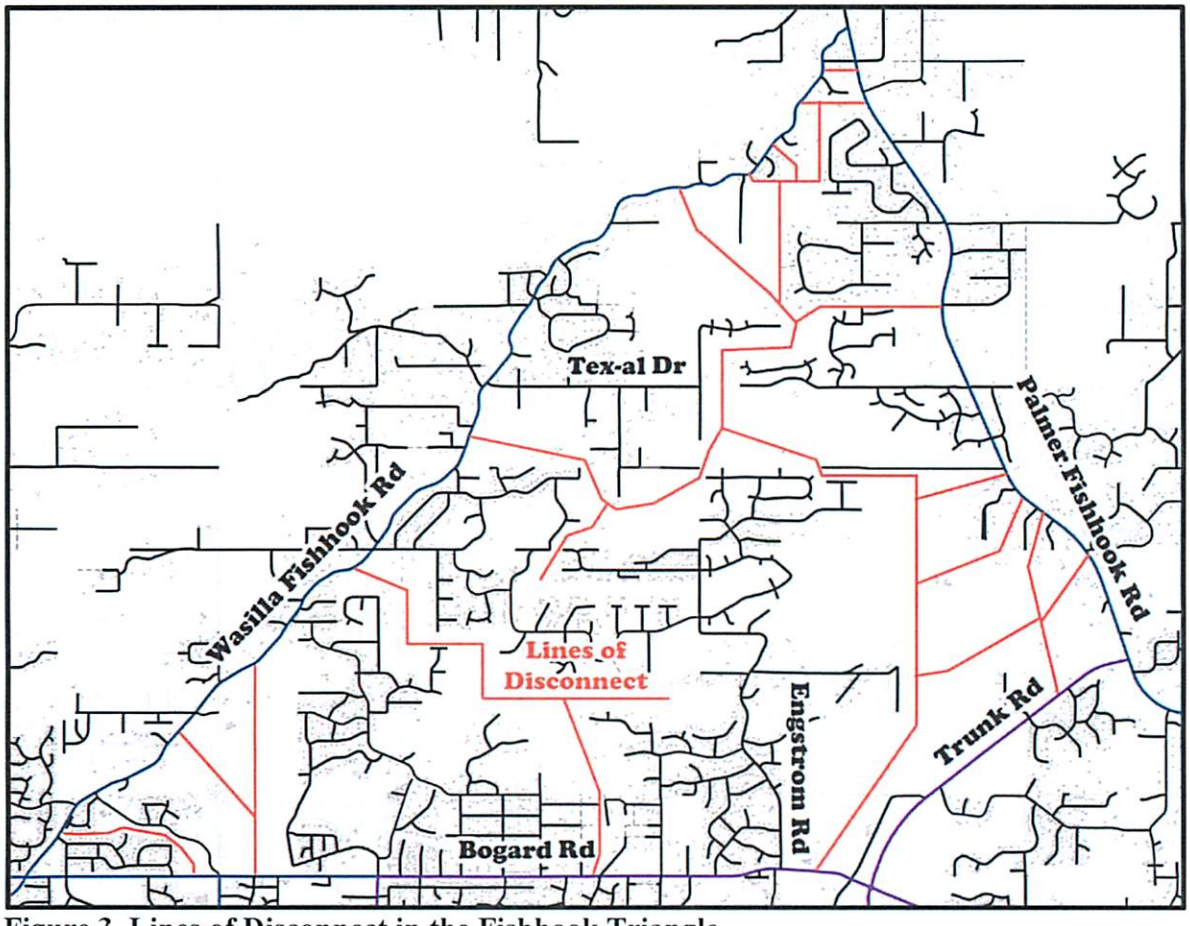

Figure 3. Lines of Disconnect in the Fishhook Triangle

Note the red lines are the lines of disconnect that roads do not cross. Any trip generated within these regions must be routed to the arterial road network, even if they are making a local trip. This prematurely overloads the arterial road network and creates a cascade of issues throughout the area. Notice Engstrom Road. The traffic congestion and safety issues at the intersection of Engstrom Rd and Bogard Rd are a prime example of internal connectivity creating problems in a different part of the road network. Connectivity in the secondary road network within the Fishhook triangle was a concern as far back as the 2007 OS&HP. Solutions for connectivity in this region were included in the 2007 OS&HP; however, they were not built and issues have continued to compound. The current OS&HP is proposing road connections that would solve some of the network issues like those identified in Figure 3. To develop a more efficient road network, it is vital that corridors shown on the OS&HP are protected.

Appropriate connectivity provides mobility, which greatly benefits the community by decreasing travel times, increasing route options, and allowing for more direct travel between regions of the MSB. This, in turn, increases economic viability, opens up new areas for development, increases public safety, creates smaller intersections with less frequent need for traffic signals, diversifies the negative aspects of roads, increases the available pedestrian routes, moves bicyclists off of

major roadways, reduces the peak hour congestion on high mobility roads, and provides alternative routes to accommodate road closures or emergency service access.

3.2 Functional Classifications

A second core feature of the OS&HP is the functional classification of the road segments in the network. Functional classes is a road planning tool that helps define the road's design needs by identifying the expectations of the drivers on the road segment. The OS&HP establishes the functional classification of the road, new and existing, which is key to linking design criteria to functional needs. The MSB OS&HP applies a functional classification system recommended by FHWA and is consistent with existing MSB policy and design guidance and that of the DOT&PF.

The FHWA functional classification system used in the MSB OS&HP identifies roads in the following categories:

- Interstate Highway
- Major/Minor Arterial Roads
- Major/Minor Collector Roads
- Local Roads

Each of these classes fulfills a specific role in the road network.

Note that roads are identified for their future use, and not necessarily their current design. Many existing roads will need to be upgraded to adapt to the OS&HP network.

What are Access and Mobility?

Access is the ability for a road to provide access safely and efficiently to and from destinations adjacent to a roadway. High access roads would likely be designed to allow frequent turns through conflicting vehicle paths.

Mobility is the ability for a road to allow travel safely and efficiently through an area at a relatively high rate of speed with limited disturbance due to conflicting traffic or road capacity constraints.

Functional Classifications: Access vs Mobility

The basic principle of functional classification is to identify the expectation of drivers at different points along a trip, so that the road section can be designed in a way that best suits that need. For example, when pulling in or out of a driveway, drivers may expect relatively low traffic volumes traveling at lower speeds so that they can safely and comfortably access the road network; however, later in that trip, the same driver may expect to travel at a much higher more consistent rates of speed, with greater separation between themselves and other high-speed traffic, without the conflict of turning vehicles. Functional classification assists in the design of roads that meet the driver's dominant expectation on the road and provides a well-connected network that will help separate drivers with different expectations onto different road segments, increasing the efficiency and safety of all roads.

In general, there are two functions of a road: Access and Mobility. These road functions are each crucial to the operation of the road network; however, the two functions often are in opposition to one another. Access degrades the mobility function of a roadway as the unpredictable movement

of turning traffic and the acceleration/deceleration of cars tend to slow the progress of through traffic. For this reason, roads should be planned into the network in such a way that they can provide the needed function when and where it is required.

Figure 4, below, shows the relationship between access and mobility as it pertains to the functional classifications.

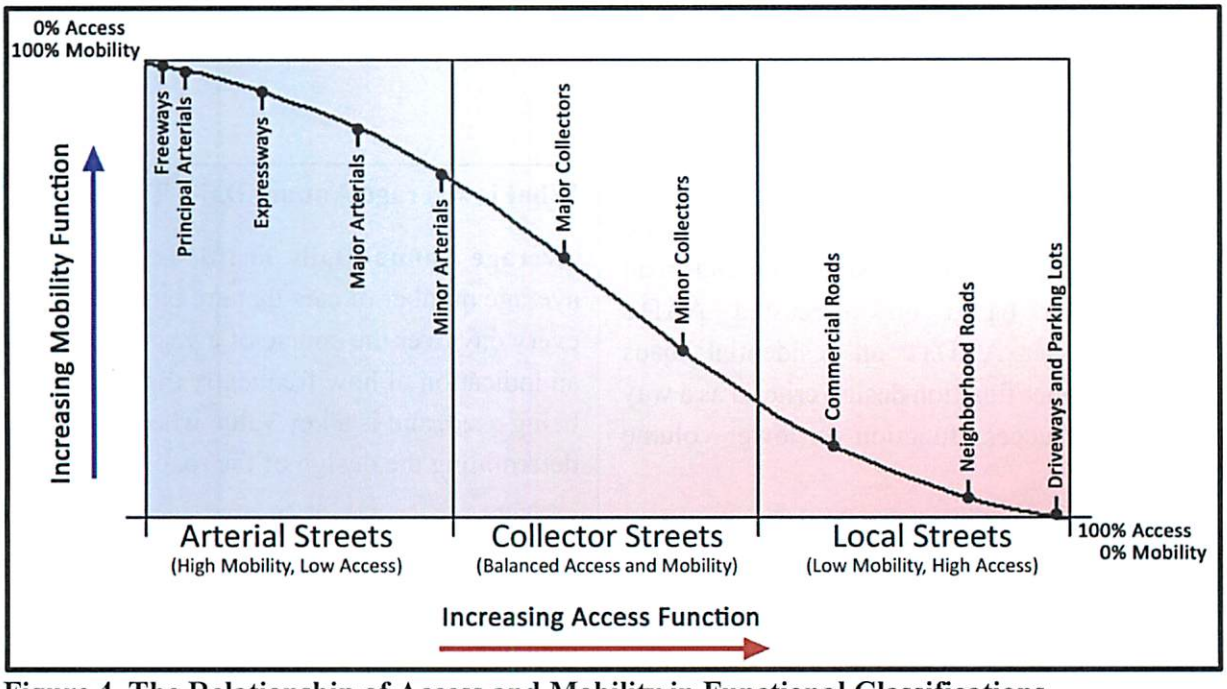

Figure 4. The Relationship of Access and Mobility in Functional Classifications

Of particular interest to the OS&HP are the Collector Streets which serve as transition routes between local roads (as described in the SCM) and arterials. The design and location of these routes are of special importance since they are the routes where the driver expectations will be especially mixed, meaning they will require special study, planning, and design. Also, these are the routes that are more likely to be Borough-owned and maintained.

Functional Classifications: Assignment Goals

Functional classifications definitions are crucial to the road network. Road links that are inadequately designed will not properly serve the necessary role in the community. The collector roads in the MSB OS&HP are assigned based on **three main goals:**

1. **Access** – Design for access to existing and future residential developments
2. **Connectivity** – Produce connectivity in the proposed road network
3. **Diversity** – Create a network with an appropriately balanced assignment of road functions

Goal #1 – Access

The first goal was to provide proper access to existing and planned residential areas following the SCM Average Annual Daily Traffic (AADT) guidance. The SCM recommends road classification based on forecasted AADT levels. Higher AADTs on residential roads result in higher function design criteria as a way to preserve access function on lower volume roads.

Goal #2 - Connectivity

The second goal was to provide connectivity in the network. This goal is independent of projected volumes and provides for such things as secondary access to isolated communities and higher mobility roads between sub communities.

Goal #3 – Functional Class Diversity

The third goal was to ensure that the planned road network provides an appropriate amount of each functional class. This was used as a metric to measure how well the network was being planned and distributed.

What is Average Annual Daily Traffic?

Average Annual Daily Traffic is the average number of cars that are on a road every day over the course of a year. This is an indication of how frequently the road is being used, and is a key value when determining the design of the road.

However, many other factors play a part in the design of a road and AADT is not always the most reliable. For example a road may have an AADT of 1,000 vehicles per day, and a very high percentage of those vehicles may be heavy trucks. A different road may have the same 1,000 AADT, but with very directional commuter trips of single-person vehicles passing one way in the morning and the opposite in the evening. These examples would both have the same AADT, but require very different designs.

Functional Classifications: Access

The goal of providing "Access" in the network reflects the need for people to have adequate roads in front of houses and businesses where access-related maneuvers take place. Some access-related maneuvers are turning, walking, backing up, and often making distracted decisions. These maneuvers are high risk, and therefore, are safest when performed on low-volume, low-speed roads.

The SCM provides guidance for the design of roads that serve residential areas, and part of the SCM is an AADT limit requirement that encourages subdivisions to be designed with low-volume roads. If a subdivision is forecast to produce volumes higher than the specific AADT limit, the SCM requires a higher speed design. The SCM AADT limits were used in the OS&HP study to determine where collector roads should be considered based on future growth projected in the Growth Study (see Appendix A on page 38).

Table 2. Functional Class AADT Limits (per SCM)

SCM Classification	OS&HP Classification	AADT Limit	Approximate Upper Limit of Households
Residential Street	Local Road	< 400	~ 50
Residential Sub-Collector	Local Road	400 – 1,000	~ 150
Residential Collector	Minor Collector	1,000 – 3,000	~ 300
Major Collector	Major Collector	> 3,000	Undefined

Table 2, above, shows the AADT limits for the various classifications specified in the SCM, the equivalent OS&HP functional class, and the approximate upper limit of households in a region that would suggest higher function designs may be required.

As shown in the table, based on trip generation rates in the SCM, a minor collector road would be needed for any development with more than 150 households, and a major collector would be needed for a development serving more than 300 households.

These volume limits were compared to the forecasted population growth to identify areas where the traffic volumes generated in a region would warrant a collector road. Figure 5, below, shows the regions that the study indicated would likely generate traffic volumes higher than the SCM AADT limits. Consideration was given to how drivers get to high mobility roadways since several regions in combination may also generate traffic volumes that are over the volume limits.

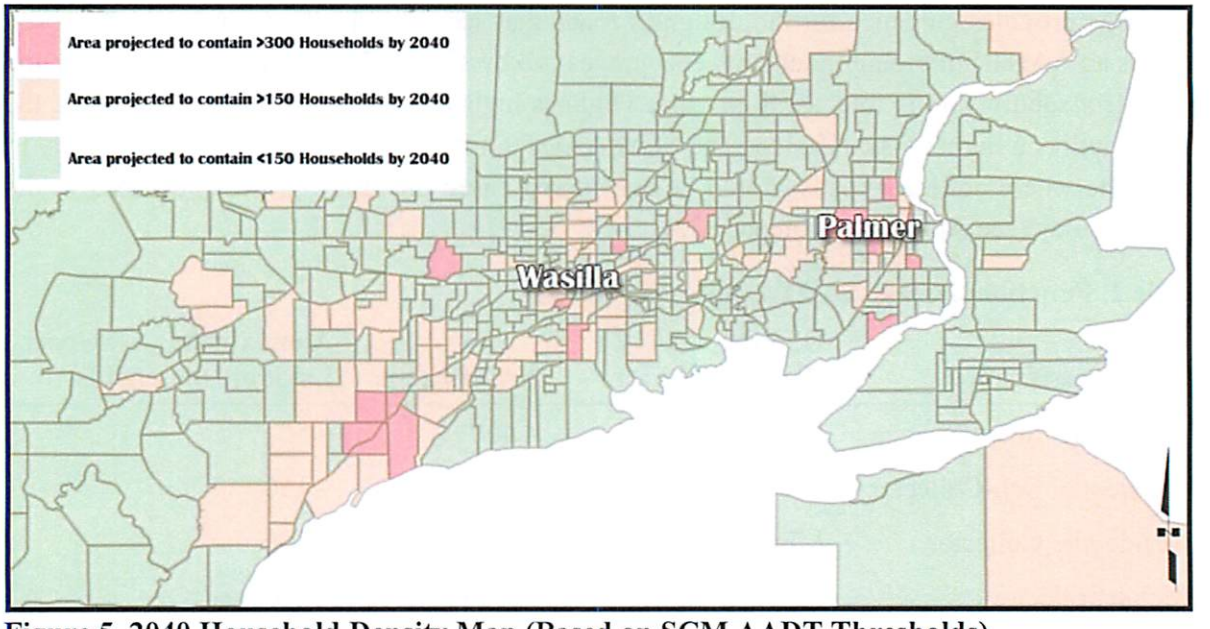

Figure 5. 2040 Household Density Map (Based on SCM AADT Thresholds)

Notice that relatively few regions are projected to warrant a major collector road (red) or even a minor collector road (orange) based on the SCM AADT limits which have been adopted into the MSB code.

The FHWA provides guidance on functional classifications in their 2013 publication "Highway Functional Classification Concepts Criteria and Procedures." This guidance provides suggested AADT limits for collector roads. Table 3, below, presents the AADT limits that are suggested by the FHWA as compared to what is currently required by the Borough's SCM.

Table 3. Functional Class AADT Limit Comparison SCM vs FHWA

Functional Classification	SCM Minimum AADT Limit	FHWA Recommended AADT Range	
		Rural	Urban
Local Road	0 – 1,000	0 – 400	0 – 700
Minor Collector	1,000 – 3,000	150 – 1,100	1,100 – 6,300
Major Collector	> 3,000	300 – 2,600	1,100 – 6,300

Note that the SCM AADT limits are much higher than the FHWA AADT limits on rural roads. This means that subdivisions in the MSB built according to the SCM guidelines are likely being under-designed compared to national standards.

Table 3 includes the FHWA AADT limits for rural and urban roads. MSB SCM AADT limits are more similar to the urban limits. The MSB does not qualify as an urban area, outside the dense commercial confines of the Core Area. An urban area is allowed to have higher volume collector

roads because urban density tends to slow traffic and increase their expectation for delays with transit systems and high numbers of pedestrians. Without these natural traffic calming elements, a network of under-designed roads will be less safe, less efficient, and less supportive of growth. This is the trend that is currently being seen in the MSB as vital links in the road network are being built for too low of a functional class. Then, when issues arise because of the inappropriate design, there are no low-cost, low-impact solutions to repair the network.

Figure 6, below, shows what the household growth study would look like using FHWA guidance to determine the AADT values.

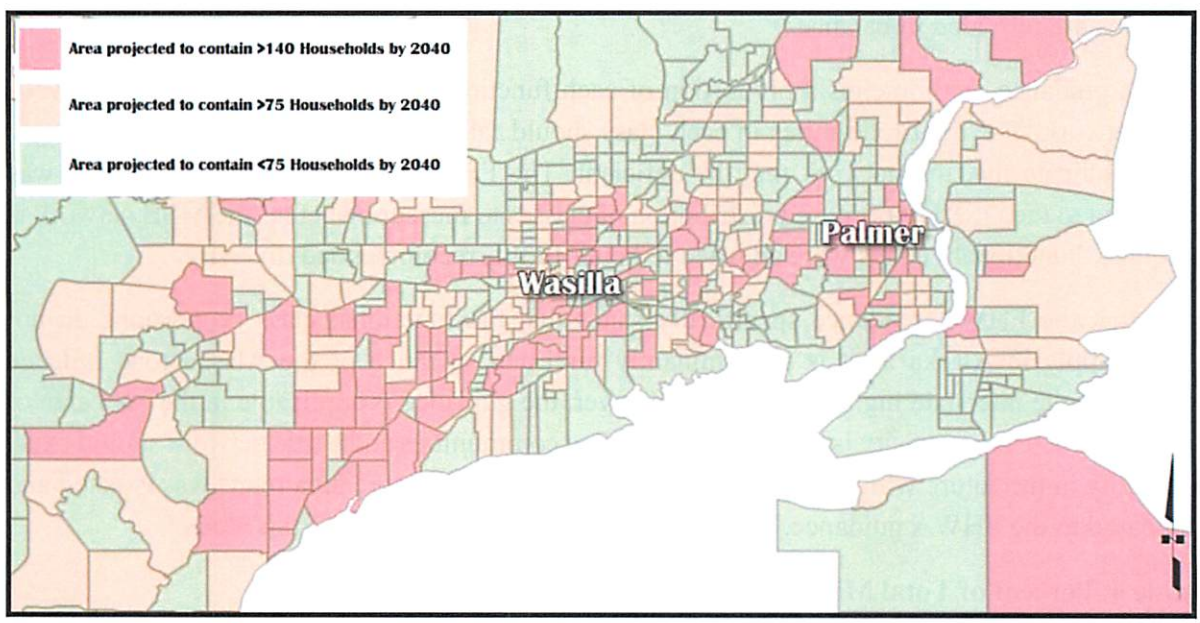

Figure 6. 2040 Household Density Map (Based on FHWA AADT Thresholds)

Application of the FHWA limits would clearly result in more residential collector roads.

The SCM AADT limits were used to identify collector roads in the OS&HP since those are the limits that are currently adopted into MSB code and will be the standards applied when new developments are constructed. But, it is highly recommended that the SCM volume limits be re-evaluated as discussed in the implementation plan in section 4 on page 27.

Functional Classifications: Connectivity

In addition to the "Access" goal, which is purely AADT based, functional classifications were also assigned based on "Connectivity" which does not depend on AADTs. Connectivity was discussed earlier in Section 2 as it pertains to links in the road network. However, connectivity also is important to consider when assigning functional classes. Suppose the network is well connected, but all the roads are designed as local roads. In that case, the network will actually operate worse than a network without connectivity because the local road connectivity will promote cut-through travel. To prevent this, proper connectivity must exist in the collector network to allow drivers to get through an area more efficiently and at a higher rate of speed on a road that is appropriately

designed for this behavior. In short, connectivity must exist in the local road network, and if it is designed into the local road network, it absolutely must also exist in the collector road network as well.

The OS&HP, therefore, assigns functional classes to new and existing roads in the proposed network in such a way that properly connects sub-communities with major and minor collector road corridors, which are intended to move high mobility traffic from local roads.

Functional Classifications: Functional Class Diversity

One final goal of the functional classification assignment is to produce a network in which all functions are provided in balance.

FHWA guidance recommends a proportion of each functional class that should exist in a well-built network. The total road miles in each class should fall within a certain range, otherwise, it would indicate that the network may be deficient. The FHWA recommended distribution was compared to the OS&HP proposed distribution of classes to measure whether the MSB network is adequate. Functional classes were adjusted to better fit this recommended diversity.

Note that the FHWA guidance specifically states that the functional class proportions do not always apply in Alaska as it is predominantly rural and so much of the Alaska road mileage consists of the interstate highway system. However, the guidance *is* applicable in the core area of the MSB where road density is typical to other urban communities and a true network should exist, especially in the future with moderate build-out. A region of the core area roads was isolated and compared to the FHWA guidance. Table 4, below, presents the results of this study.

Table 4. Percent of Total Mileage in Functional Class System

Classification	FHWA Guidance	2022 OS&HP	2022 OS&HP (with +30% more Local Roads)
Interstate	1 – 3%	4%	4%
Major Arterial	2 – 6%	4%	4%
Minor Arterial	2 – 6%	4%	4%
Major Collector	8 – 19%	10%	7%
Minor Collector	3 – 15%	20%	13%
Local Road	62 – 74%	58%	68%

The proposed OS&HP road network closely matches the FHWA guidance. The numbers show a high average number of arterial road miles, which is to be expected in such a large region as the core of the MSB. In terms of collector roads, the percentages show an overabundance of minor collectors and a relatively low number of major collector roads. This is a result of the SCM AADT

limits making it difficult to justify major collectors based on volumes. The major collector roads included in the Plan are recommended based on the connectivity of sub-communities and not access. The percentage of local roads in the planned network is lower than recommended. This is because unplatted local roads are not included in the OS&HP. Therefore, they are not showing up in the total road miles. The table includes a column showing what the approximate distribution would be with 300 more local road miles (30% increase in local roads than the current network) to approximate the actual distribution after the network has been constructed. Notice that after this adjustment is made the percentage of major collectors in the network is 7% which is below the 8% recommended by FHWA guidelines. It is, therefore, most important for the MSB to preserve and construct the major collector road network.

3.3 Primary Intersections

The third key element of the OS&HP is the Primary Intersection locations. The Primary Intersection Study analyzed all roads classified in the OS&HP as a Minor Arterial or higher mobility functional class. The term "Primary Intersections" is used in the OS&HP to describe locations where future side street connections should be prioritized for consolidation of access and the potential access control options in the future.

As traffic volumes grow in the community, designers often seek to preserve the mobility function of arterial roads by limiting access to side streets and driveways via medians or approach road closures, or by installing traffic control devices such as traffic lights or roundabouts. For example, the recent upgrades of the Parks Highway (from Lucus to Big Lake), and Knik-Goose Bay Road (from Centaur to Vine) designed depressed medians that prevent left turns in and out of side streets. This led to the inclusion of frontage roads and secondary connections to move access to the most desirable locations.

The purpose of the Primary Intersections Study is to apply the access control principles used in the previous arterial road studies to other arterial roads, well in advance of them being possibly upgraded to include access control. This will assist decision-makers to design access to the arterials at intersection locations that are most desirable to the arterial road network. This tool is expected to be used when new connections to arterials are designed either for residential side streets or borough collector roads. Consideration should be given to consolidating roads at these primary intersection locations and aligning access on either side of the arterial to avoid offset intersections.

Example: The Engstrom Road and Bogard Road intersection mentioned previously is an example of an intersection location where a primary intersection designation could have saved the community from issues. There are obvious problems at this intersection that could have been avoided if it had been planned as a primary intersection. The offset alignment of Engstrom Road and Green Forest

What are "Primary Intersections"?

The term "Primary Intersections" was coined by the 2022 OS&HP as a way to identify preferred intersections locations along arterial roads where future road connections should be prioritized.

Drive creates major turning conflicts and makes upgrades costly and difficult. The inconsistent design function of Engstrom as a major collector, and Green Forest as a local road, weakens the road network and promotes cut-through traffic on Green Forest Drive since there is an obvious demand for connectivity that is not being provided. The approach grades and sight distances are not favorable for the amount of uncontrolled activity the intersection experiences during peak hours. This has created a major bottleneck that has degraded the public's trust in the Borough's ability to protect and design the road network as a resource. The primary intersections shown in the OS&HP all have the potential to create similar problems as those at Engstrom Road if their importance in the network is disregarded or if the road network connections are not preserved.

The locations of the primary intersection points were determined based on a planning level analysis of the corridors. The analysis considered existing intersection locations, adjacent topography, current and projected land development, property ownership, planned road corridors, and intersection spacing.

One parameter of the primary intersection study was a desire to keep major intersections properly spaced. The DOT&PF recommendations are for major intersections to be no closer than ¼ mile apart. This guidance is similar to Manual on Uniform Traffic Control Devices (MUTCD), which warrants 6 concerning coordinated signal systems. The goal of this guidance is to provide satisfactory signal progression through a signal network along a controlled-access highway.

Signal spacing of less than ¼-mile is not desirable because of progression considerations. A spacing of ½-mile is preferred because there would be less need for interconnection or offset timing. The Transportation Research Board (TRB) Access Management Manual indicates that signal spacing of less than ¼-mile will result in progression speeds of less than 15 mph, and that signal spacing of ¼-mile can maintain progression speeds up to 30 mph (depending upon cycle length).

Signal spacing of ½-mile will allow for progression speeds of around 40 to 60 mph for typical cycle lengths on an arterial corridor with low volume side street approaches. Half-mile spacing is the DOT&PF's goal for at-grade access and signal spacing on a Major Arterial.

This study was conducted with cooperation from MSB staff and reviewed by the DOT&PF. The locations agree with all DOT&PF access management studies on DOT&PF corridors. However, it should be noted that the primary intersection locations included in this study represent the planning level preference for where major intersections may be desired in the future. A primary intersection in the OS&HP does not guarantee access in future designs.

The primary intersection locations are shown on the OS&HP maps starting on page 45.

3.4 Other Plans and Considerations

Key Question for OS&HP Updates

- Are growth forecasts still applicable?
- Does the plan still provide appropriate access and connectivity?
- Is any part of the plan no longer feasible or are options limited?
- Are there any regulatory changes that need to be updated?

The OS&HP includes all roads and corridors that are required to create a road network that will support a reasonable expectation of future growth in the Borough. This growth has been studied and forecasted using the best possible data currently available, and recommendations have been made with the agreement of a multi-departmental steering committee. However, changes to growth projections or development patterns could, in turn, change the infrastructure needs targeted in this OS&HP. For this reason, the 2022 OS&HP is designed to be a "Living Document". This means that the OS&HP is expected to be updated on a regular basis, ideally on a 3-to-5-year cycle. The GIS files used to create the Functional Class Maps and the Primary Intersection locations are being collected by the MSB to include in the Borough GIS databases. These databases can be adjusted as situations arise, such as arterial and interstate road statuses change, or development that progresses differently from forecasts.

Future Projects

The OS&HP is focused on designing a road network where every piece works in concert with the adjacent roads. Major changes to the arterial network or other major community developments will have a ripple effect throughout the Plan. For this reason, several major projects are not included in the OS&HP because of the uncertainty of their alignment, design, or construction and the impact they would have on the OS&HP in the short term.

Some of these projects are the following:

- Parks Highway Alternative Corridor
- Knik-Arm Bridge
- West Susitna Parkway
- Willow Bypass
- Big Lake Bypass
- Houston Bypass
- Natural Gas Project on Ayrshire

These projects are currently being studied, and alignments and designs are being determined. They would have an extreme impact on the road network. Due to the uncertainty of both their construction schedule and their exact locations, they are not currently included in the OS&HP. As soon as a settled alignment is available, and/or funding and schedule are secured, the OS&HP should be updated to prepare for these projects.

For example, the Parks Highway Alternative Corridor (PHAC), is currently being studied as part of a Planning and Environment Linkage Study (PEL). The nature of a PEL is that it will include a broad array of alignment, design, and intersection options. The beginning and endpoints of the PHAC may change as a result of the PEL as well as the crossing locations and designs. For instance, the location and treatment of the Knik-Goose Bay Road crossing are still undetermined.

Figure 7 shows the area that is most likely to be impacted by the new bypass road.

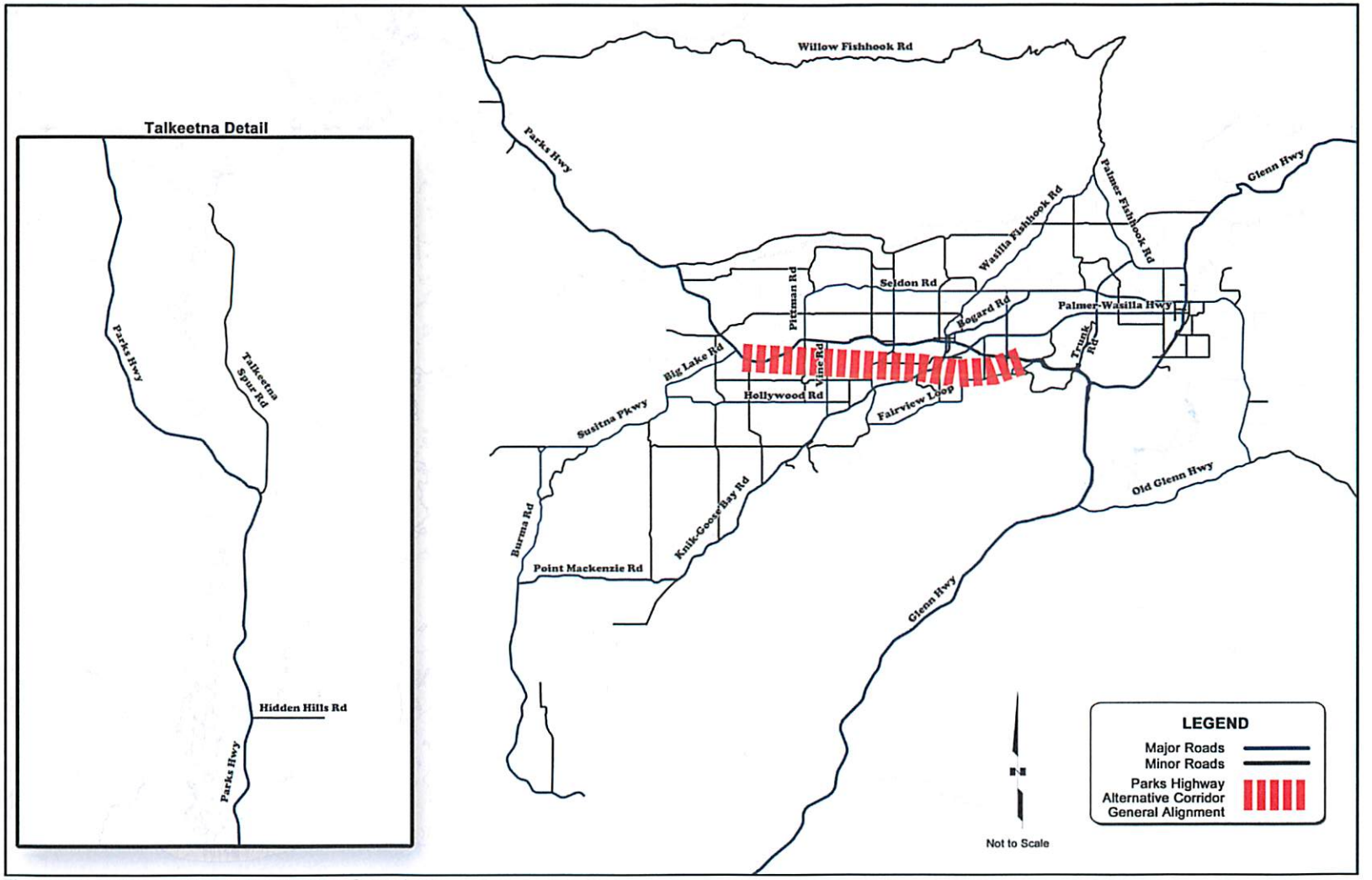

Figure 7. Parks Highway Alternative Corridor, General Alignment

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The PHAC would be classified as an interstate highway and would need supporting arterial road connections and secondary collector roads designed in harmony with the high mobility design. Therefore, once the highway alignment is determined, the OS&HP will need to be updated respectively.

Several other DOT&PF bypass and realignment projects would possibly require the use of MSB property adjacent to the Parks Highway. This is a special case where these alignments are still not determined, but the use of these MSB properties should be carefully considered and the DOT&PF should be consulted if the development of this land is pursued by the MSB.

The MSB parcels in question are shown in Figure 8.

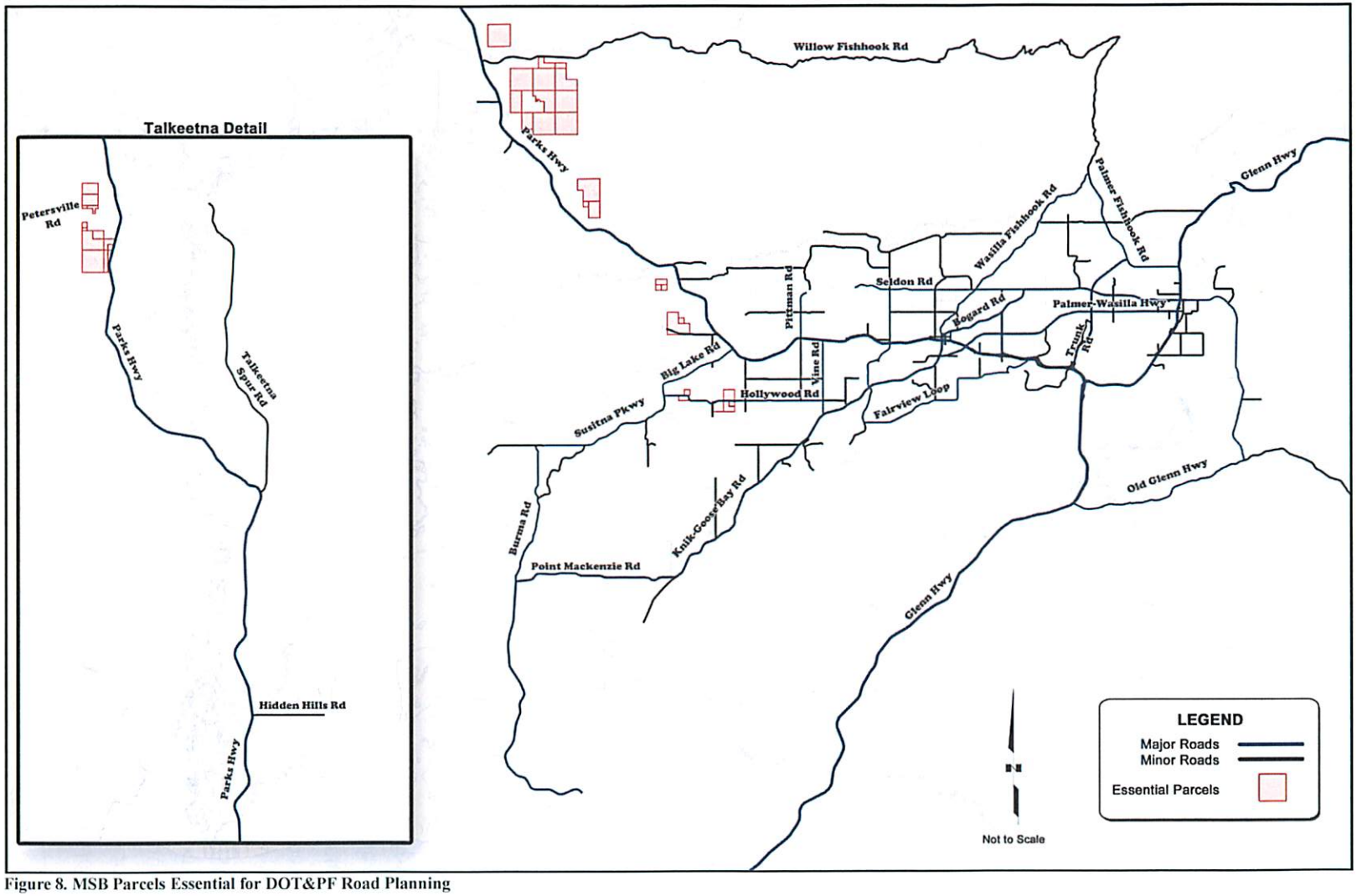

Figure 8. MSB Parcels Essential for DOT&PF Road Planning

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4 Implementation Plan

Once the OS&HP is adopted into Borough Code, it guides Platting actions and works to preserve road network connections and corridors and helps prioritizes Public Works improvement projects. If implemented fully, the OS&HP will assist with managing traffic growth and travel demands, help to minimize traffic congestion, reduce safety issues, and limit high-cost maintenance issues in the future. Implementation of the OS&HP map is step one, but there are other actions the MSB can take to further enhance the development of a safe and efficient road network.

4.1 Implementation Plan Overview

The following section outlines some of the additional tools and policies that would further enhance the OS&HP:

Adopt OS&HP

- Pursue acceptance of the OS&HP plan by public and decision making bodies and advisory groups: RSA Board, TAB, Assembly, Planning Commission, DOT&PF, Cities of Palmer and Wasilla, and MSB Departments
- Adopt the OS&HP into Borough Code

Apply Plan using Current Tools

- Educate and train MSB staff on the role and purpose of the OS&HP
- Agree on responsibilities as outlined in Table 5 on page 29
- Include projects in Road Improvement Program (RIP) list
- Include new OS&HP roads in the LRTP update
- Incorporate OS&HP functional classifications into MSB GIS layering
- Publish OS&HP GIS Maps of roads, functional classes, and primary intersections

Adapt Policy to Provide New Tools

- Develop policy stating that OS&HP routes and recommendations be incorporated into all aspects of planning, design, project development, and construction within the MSB
- Revise the SCM to better align with the OS&HP and FHWA AADT thresholds
- Adopt ROW standards for each functional classification for use in plat reviews, setback requirements, and road network development
- Draft or revise MSB code to require all streets to conform to the OS&HP
- Require Developers to identify the intended use of the property to better plan for trip generation
- Require developments to document how traffic will impact the surrounding road network
- Require developments with impacts that result in a change of functional class to the immediately adjacent road network as outlined in the OS&HP, change of intersection location, and/or change in OS&HP present a plan for bringing impacted road to the applicable functional classification

- Develop policy and plans for access management
- Develop a timeline or triggers for implementing zoning and/or adopting road powers

Update Planning Documents to Conform to OS&HP

- Review and update supporting plans on a regular schedule:
  - LRTP
  - Area Comprehensive Plans
  - Bike and Pedestrian Plans
  - Transit Plans
  - Hub Community Plans

Develop Design Criteria to Define Functional Classifications

- Develop and adopt a Design Criteria Manual (DCM), which includes standard criteria for the design and construction of each functional class of roads in the OS&HP
- Survey existing road designs and compare them with standards in DCM
- Determine locations where road upgrades are needed to conform to standards
- Prioritize projects to upgrade existing roads to meet the OS&HP recommendations

Conduct Further Studies and Projects to Reinforce the OS&HP

- Updated population build-out study
- Employment growth study
- Corridor management studies
- Commercial and industrial hub studies
- Potential funding source identification

Update OS&HP to Keep Current with New Trends and Policies

- Review and update the OSHP every 3 to 5 years
- Develop policies and processes to guide how revisions and updates are incorporated into the OS&HP
- Keep OS&HP GIS maps up to date and published online

4.2 Adoption Process

The first step of implementation is the adoption of the OS&HP into the Borough code.

The Plan was developed by a steering committee of MSB department heads and decision-makers, as well as members of DOT&PF Planning, and the City of Palmer and Wasilla Planning. The Plan was then presented to the Road Service Area (RSA) Board, Transportation Advisory Board (TAB), MSB Platting Board, Planning Commission, and the MSB Assembly, along with a public hearing and comment period. Documents and maps were online and available for comment throughout this period.

4.3 Decision-maker Responsibilities

Through the planning process, key responsibilities for MSB departments, agency partners and the public were outlined to better clarify how the OS&H is intended to be used. Table 5, below, summarizes the responsibilities.

Table 5. User and Agency Responsibilities

User or Agency	Responsibility
MSB Planning	• Own and maintain the OS&HP • Maintain the connection between LRTP and OS&HP by regularly revisiting OS&HP and updating with the newest developments and road changes • Assist in preserving ROW and maintaining access control • Coordinate among various plans • Advance and prioritize OS&HP projects for inclusion in the RIP and Capital Projects lists • Identify potential funding sources • Follow and manage the implementation process • Execute conceptual level planning studies • Coordinate agency and department cooperation • Recommend code changes that allow the OS&HP to function effectively • Develop access management plans for key areas • Preserve land highlighted by DOT&PF as "Essential for DOT&PF Road Planning" (see Figure 8 on page 26)
MSB Platting	• Preserve ROW and/or the future corridors during Platting actions • Encourage subdivision roads to connect at Primary Intersections locations • Ensure subdivision roads are built to appropriate standards • Notify MSB Planning if any changes make features of the OS&HP less favorable • Educate the public about the OS&HP purpose and function
MSB Public Works	• Manage and maintain Borough ROWs • Ensure design conformance to functional classifications • Manage, upgrade, and build process for MSB projects • Create a Memorandum of Understanding (MOU) with DOT&PF to adhere to plans
MSB GIS	• Maintain current OS&HP database • Assist planning in OS&HP map updates

MSB Assembly	• Help secure funding for road studies, designs, and construction projects shown in OS&HP • Approve updates to the OS&HP with consideration of OS&HP's goal-oriented scope • Fund road projects • Approve code changes to assist with implementation
DOT&PF	• Coordinate new road planning studies and projects with MSB to maintain functional classifications and primary intersections in MSB OS&HP • Nominate projects to the STIP that are consistent with the OS&HP
Developers	• Produce designs that fulfill both development and OS&HP community goals
Designers	• Design road sections to the assigned functional classes in the OS&HP or design in a way that does not preclude future upgrades
Advisory Boards	• Advise Borough on issues related to OS&HP
Cities	• Create or Update City OS&HPs to incorporate Borough plan • Notify MSB planning when the City plan conflicts with MSB OS&HP

4.4 Preservation of Right-of-Way

One of the main purposes of the OS&HP is the preservation of ROW for future road corridors. To preserve ROW, decision-makers in the MSB are expected to use the OS&HP maps as a reference when directing road projects. Road projects pursued for construction, including DOT&PF arterial roads, secondary MSB roads, and private roads platted through the MSB, should agree with the OS&HP plan, or trigger an update of the OS&HP if no feasible agreement can be made.

Roads designed as part of residential developments are required to apply standards specified by the *MSB Subdivision Construction Manual 2020*. The SCM says the following regarding its connection to the OS&HP:

> "Subdivisions shall be designed in a manner that does not conflict with the Long-Range Transportation Plan or the Official Streets and Highways Plan. Subdivisions containing future road corridors identified in the LRTP or OS&HP are encouraged to include the future road corridor as part of the road layout of the subdivision."

To not conflict with the OS&HP, a subdivision must be built such that roads and connections shown in the OS&HP are either built along with the subdivision or built in the future with allowable ROW width for the future alignment. This ROW width would be clear of all features that would prevent the construction of a road that fulfills the desired

function of the road in the OS&HP. The SCM provides minimum ROW widths per road functional class which can be expected to be reserved for this purpose as shown in Table 6, below.

Table 6. Minimum ROW Width per Functional Class (From SCM)

	Local Road	Minor Collector	Major Collector	Minor Arterial	Major Arterial	Interstate
Minimum Right-of-Way Width	60'	60'	80'	100'	100'	200'

Note that the ROW widths shown in the SCM are defined as the "minimum" requirements. In many cases, the design needs of the road will greatly increase the amount of ROW needed. Requiring developers to identify land use would help Platting ensure enough ROW is being reserved.

Care should be taken in preserving ROW in areas with:

- Significant vertical topography since the design may require wide cut and fill slope limits that will need to be within the limits of the ROW.
- Roads that are part of a future pathway may need additional ROW to accommodate the path with proper separation.
- Roads adjacent to commercial properties or roads that have many side streets will require additional ROW for turn lanes or median treatments, especially at intersections with major collectors or arterial roads where roundabouts or traffic signals may be required.

For reference, Table 7 on page 322 includes a list of the design features that might change the ROW requirements for each functional classification.

Note that the OS&HP is not a design manual. The actual features included in a road's design should be selected based on the context of the roadway, engineering judgment, and the applicable design standards if available. The features shown below are simply a general idea of what roads of various classifications typically include.

Table 7. Expected Design Features per Functional Class

Classification	Local Road	Minor Collector	Major Collector	Minor Arterial	Major Arterial	Interstate
ROW	60 feet	60 feet	**80 feet**	**100 feet**	100 feet	**200 feet**
Design Speed	25 – 30 mph	**35 mph**	**35-45 mph**	**35-45 mph**	**55 mph**	**55-70 mph (As defined by DOT&PF)**
Road Surface	Possibly unpaved, 2-lanes, 10-foot lanes	Possibly unpaved, 2-lanes, 10-foot lanes	**Paved,** 2 lanes, **12-foot lanes**	2-4 lanes, 12-foot lanes	2-4 lanes, 12-foot lanes	4-6 lanes, 12-foot lanes
Access	Encouraged (Residential and Commercial)	Encouraged (Residential and Commercial)	**Restricted,** **Commercial access with possible traffic lights**	Restricted, Commercial access with traffic lights, **Frontage and backage roads**	Restricted, Commercial access with traffic lights, Frontage and backage roads	**Driveway access strongly discouraged,** **Access directed to specific intersections or ramps**
Intersection Treatments	Stop control, No traffic signals expected	Stop control, No traffic signals expected	Stop Control, **Traffic signals or roundabouts at arterial or major collector crossings**	Traffic lights and roundabouts	**Traffic signals with dual left-turn lanes,** **Double-lane roundabouts,** **Separated grade interchanges**	**Signalized intersections very probable,** **Separated grade interchanges,** **Roundabouts very unlikely**
Median Treatments	No turn lanes, No medians except for traffic calming	**Turn lanes at intersections with higher function roads,** No medians except for traffic calming	Turn lanes, No medians, **No traffic calming,** **Center-two-way-left-turn lanes**	**Turn lanes for left turns off Arterial,** No medians, Center-two-way-left-turn lanes	**Divided medians**	Divided medians, **Disconnected alignments per direction of travel**
Shoulder Treatments	2' gravel shoulder	2' gravel shoulder	4' paved shoulders Sidewalks, **Pedestrians discouraged from using the roadway but possible bikes and bike lanes**	**4-8 foot paved shoulders,** Bike Lanes No pedestrians in roadway	4-8 foot shoulders, Bike lanes No pedestrians in roadway	**12-foot paved,** **Bikes on the shoulder** No pedestrians in roadway
Pedestrian Treatments	Urban sidewalks, Expectation for pedestrians in the roadway	Possible urban sidewalks expectation for pedestrians in the roadway	**Separated pathways likely** **Possible Crosswalks at planned locations**	Separated pathways likely, crosswalks likely	Separated pathways likely, crosswalks	Separated pathways likely, **possible separated grade pedestrian crossings**
Other Expectations	Possible Speed bumps, Transit stops, Mailbox pullouts, Cul-de-sacs, Mini-roundabouts	**No Cul-de-sacs** Possible speed bumps, Transit stops, Mailbox pullouts, Mini-roundabouts	**On-street features such as mailbox pullouts are discouraged**	**Mobility design, but without passing lanes or interchange features**	**Possible freeway design,** **Possible passing lanes or slow vehicle turnouts,** **Designed for heavy vehicle use**	Possible freeway design with passing lanes and slow vehicle turnouts, Designed for heavy vehicle use

NOTE: **Bold** text indicates features that are different from lower mobility function roads (Moving from left to right).

4.5 Design Criteria Manual

The MSB does not currently have a Design Criteria Manual for roads. The absence of a DCM means there are no standards for road design based on functional classes other than the minimal requirements of the SCM. Having a DCM would define the design goals for the functional classes assigned in the OS&HP and the DCM would define ROW standards.

Design manuals used for roads within the MSB

- MSB SCM, for Residential Streets
- DOT&PF Highway Preconstruction Manual
- Municipality of Anchorage Design Criteria Manual, as guidance, particularly for urban streets
- City of Palmer Development Standards, 1985
- Geometric Design of Highways and Streets (Also known as "The Green Book"), published by the American Association of State Highway and Transportation Officials
- Highway Capacity Manual, published by the TRB

Once an MSB DCM is available, a survey should be conducted to compare the existing design of roads to determine what functional class they are actually built to. This study should then reference back to the OS&HP to identify routes that need to be upgraded. Evaluation of available ROW can be made to determine the cost and impacts of upgrades. This data should be used to prioritize road upgrade projects.

4.6 Miles of Unconstructed Road

If ROW is being preserved for road projects, then funding for the design and construction of those roads must be prioritized.

Table 8, below, shows the total number of unconstructed road miles in the 2022 OS&HP road network. A total of 164 miles of road are required to fully construct the OS&HP. The OS&HP does not have a horizon year and the planned road segments are therefore assumed to be built as they are needed and as funding is available. The number of planned road miles suggests an approximate rate of one mile of collector road constructed for every two miles of local road constructed in the Borough.

Table 8. Total Mileage of Unconstructed Roadway in Secondary Road Network

Functional Classification	Unconstructed Road Miles in 2022 OS&HP
Major Collector	59
Minor Collector	105
Total	164

Figure 9, on page 34, shows the location of the unconstructed road miles within the Core Area of the MSB.

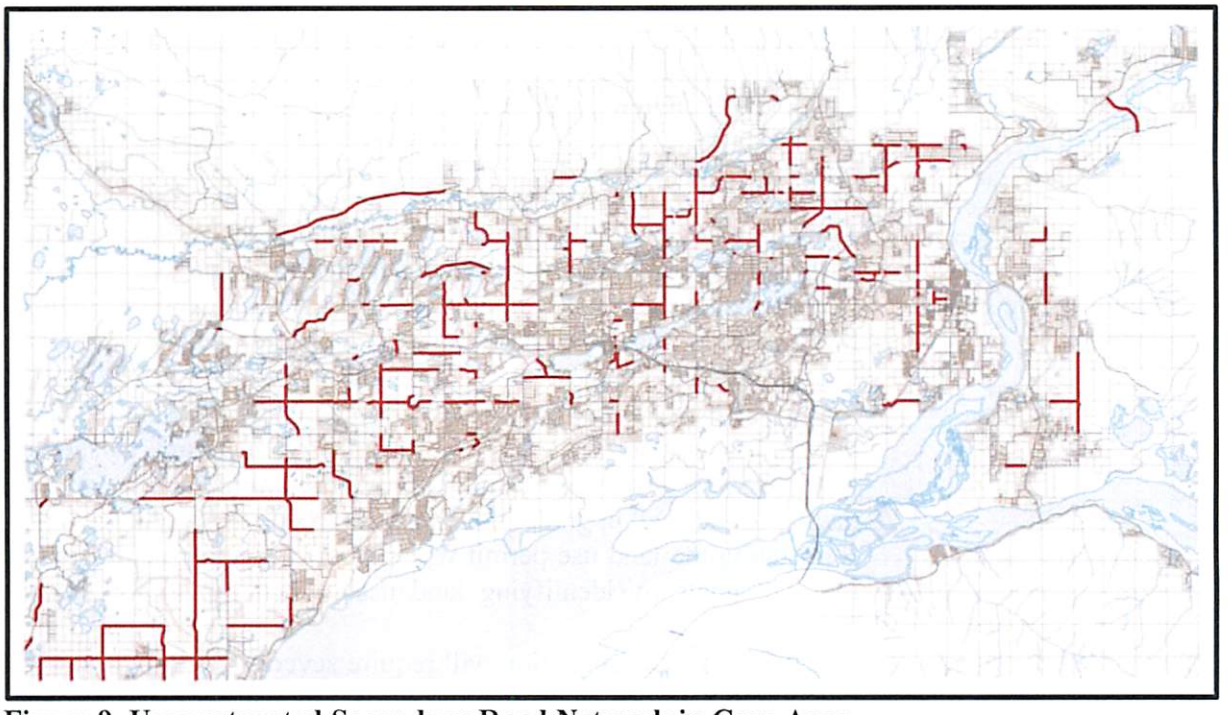

Figure 9. Unconstructed Secondary Road Network in Core Area

Note that future studies, such as a possible update of the LRTP, or arterial road corridor plans, would be needed to prioritize projects for promotion to design.

Once these projects have final alignments, and funding sources and are moving into detailed design, the OS&HP will be updated to include them and make the needed changes to the surrounding secondary road network to fully integrate them into the system.

Note this section does not include existing roads that will require upgrades to higher mobility function design standards.

4.7 Additional Studies

Throughout the process of the OS&HP development, numerous studies or projects were discussed which would either be informed by the OS&HP or would be triggered by its publication. Table 9, on page 35, includes a summary of some of the projects and studies that would require some level of integration with the OS&HP once adopted or would be recommended as follow up studies:

Table 9. Studies Impacted by the OS&HP

Study	*Description of Possible Impacts*
Agency Interaction	The OS&HP for the MSB designs a secondary road network that is meant to support the residential road network and the arterial road network. To bridge this gap properly, communication between agencies will be crucial to make sure that the OS&HP plan keeps up with any changes in the networks it is designed to bridge.
Comprehensive Plan Updates	Comprehensive plans for smaller communities, as well as for the MSB as a whole, will need to be updated to include the road connections and intersection locations shown in the OS&HP.
Corridor Studies	A DOT&PF study of arterial road corridors in the MSB should study how improvements to the MSB secondary road network, as shown in the OS&HP, will enhance or improve the arterial roads without having to focus all upgrades on the arterial roads themselves.
Reinstate the Land Use Permit	Reinstating the land use permit will support the implementation of OS&HP goals by identifying land use to better plan for traffic generated.
Future Metropolitan Planning Organization (MPO) policy	The future MPO designation will require several federally required planning policies to be used in the MSB. Once the MPO is formed the MSB will work with the MPO to ensure the OS&HP is a tool that both organizations can use.
LRTP Update	The existing LRTP has a horizon year of 2035 and was created in 2017. The LRTP considered arterial level congestion and suggested arterial level solutions. As a result of the DOT&PF corridor studies and the OS&HP, an update to the LRTP could extend the horizon year and include MSB projects that may support the arterial road network with less impact and cost.
MSB GIS Cartegraph Databases	The MSB uses an asset management system known as Cartegraph, a GIS-based system that includes data about each road segment. Currently, this data includes functional classification data that will need to be updated to reflect the OS&HP assigned designations.
Bike and Pedestrian Plan	A Bike and Pedestrian Plan for the MSB should consider the functional class designation of roads and the location of future road connections so that pathways can best utilize the relationship between roads and pathways.
Potential Funding Source Identification	The OS&HP should be referenced when seeking funding for future projects. Having an OS&HP may open up new opportunities for grants or bond packages. The designation of roads is often linked to federal funding sources.
Project Prioritization	Studies will need to be made to identify which roads in the OS&HP need to be upgraded based on OS&HP functional class designations, and what the estimated cost would be to design and build new road connections. The benefits of the road connections should be measured and estimated so that projects can be prioritized on a basis of a comparison of benefit vs cost to optimize road funds in the MSB.

Transit Plan	A transit plan in the MSB should consider how the OS&HP plans for traffic to circulate within the MSB based on the road connections and functional class designations.
Moose Crossing Study	Moose-related crashes are a significant issue in the MSB and the interaction between moose and cars will likely increase as the MSB population continues to grow, traffic volumes rise, and intraregional travel speeds are increased. A study of high moose crash areas may be needed to address moose hotspots in the MSB with possible road design features, such as fencing or animal crossings.
Revisit of SCM Chapter B	The Subdivision Construction Manual was revised in 2020 and adopted in January of 2021. Chapter B of the SCM discusses general design standards for major road corridors, including the minimum ROW width requirements for each functional class and the frontage road conditions and setback requirements. This section of the SCM would need to be updated as the MSB becomes an MPO and adopts more detailed design policies and manuals.
Rail Crossing Study	The OS&HP includes several planned roads that would require crossings of the Alaska Railroad. Additionally, there are several crossings of the rail extension south of Houston that are currently not being used by the borough road network. A study of these existing and future rail crossings should be conducted to properly preserve and utilize rail crossings as a resource and determine the feasibility of new connections early on in the road planning process.
Road Use Study (Residential, Commercial, Industrial)	In support of the OS&HP and a future MSB Design Criteria Manual, a study should be conducted which identifies the road use of the various segments in the OS&HP. Currently, the OS&HP classifies roads by their functional class which is focused on the relationship between access and mobility; however, the use of the road as, for example, a residential, commercial, or industrial street may change the design criteria that would be applied for roads.

4.8 OS&HP Update Process

The 2022 OS&HP is designed to exist within the MSB as a "Living Document," which will need to be updated periodically based on a planned schedule and updated methodology defined by MSB planning.

It is recommended that the OS&HP be updated every 3 to 5 years, or as major developments or changes trigger changes in the network. The OS&HP alignments, functional classes, and primary intersection locations are all subject to adjustments.

However, it is highly recommended that policies be codified, which establish thresholds for when changes can be made. It is also recommended to determine who, at a minimum, should be involved; establish timelines for comments; and determine when changes are appropriate (for example, sufficient community comment/support, alternative planning, changes to comprehensive plans,

major road corridor changes, scheduled updates, etc.). These recommendations are to prevent cases where changes are made unilaterally without proper cause.

Appendix A Growth Study

A major part of the OS&HP study was a growth forecast for the MSB. The growth study created GIS maps of the MSB showing areas where population and employment development has recently happened, where it is predicted to occur in the next 20 years, and where it is projected to occur by full build-out. The goal of the study was to create a vision of growth, with approximate traffic volume projections so that the infrastructure can be planned in advance of land development.

Demographic Projections

Population projections from the Alaska Department of Labor and Workforce Development (DOLWD) and projections from the Institute of Social and Economic Research (ISER) agree on an approximate growth rate of around 5.8% annually within the MSB through 2045.

In this study, the population growth for the region was distributed to various sub-regions in a GIS mapping environment. These GIS regions are known as Traffic Analysis Zones (TAZs) and are used by the AMATS Travel Demand Model (TDM) to predict traffic volumes. The TAZs for the AMATS TDM were used as a basis for this study. The AMATS TDM TAZs were subdivided into smaller regions to better isolate the traffic volumes on neighborhood streets where small differences in volumes can determine the difference between various functional classifications.

What is a Traffic Analysis Zone (TAZ)?

A Traffic Analysis Zone is a region used in travel demand modeling. The regions are defined by GIS polygons. The Mat-Su Borough is divided into TAZs of various shapes and sizes. Within the GIS databases for the TAZs is information about the region, such as population rates, average income levels, and employment numbers in different industries.

Figure 10, on page 39, shows an example of the TAZ region divisions.

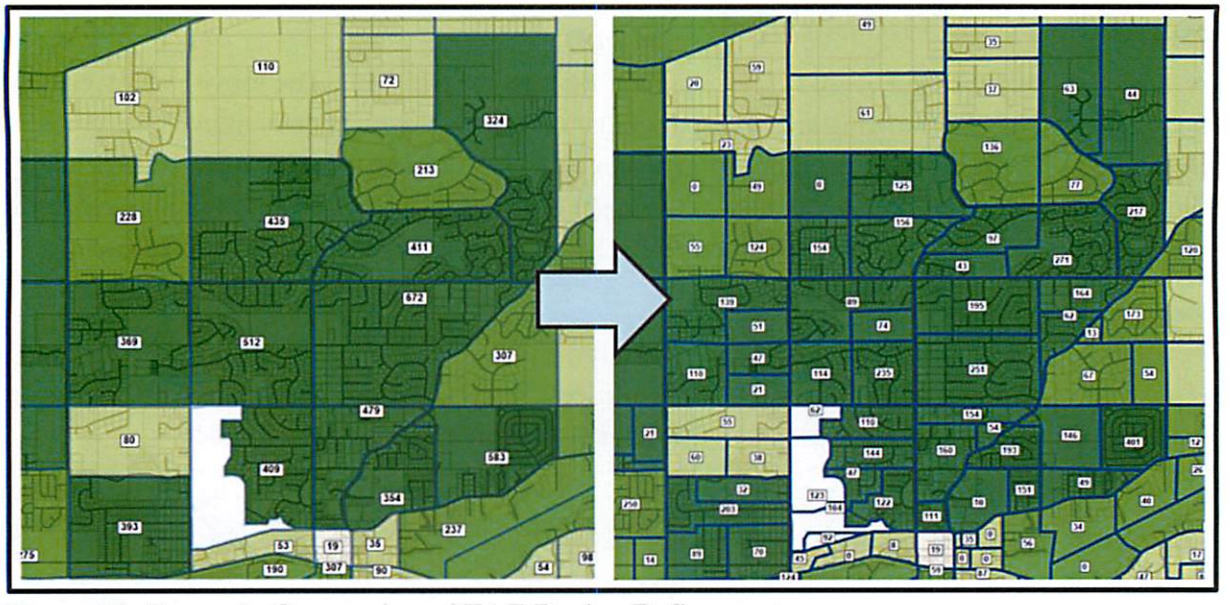

Figure 10. Example Conversion of TAZ Region Refinement

The growth study uses the new TAZ regions as containers for estimating the location of existing and future population and employment. Future growth is located based on projections from the AMATS Travel Demand Model (TDM) and the MSB Build-out Study. Both of these studies distributed data into larger TAZ regions. This growth study further divided the data among the smaller regions based on the availability of developable land. "Developable land" is land with favorable topography, wetlands designations, water and septic suitability, access availability, land ownership, lake setbacks, and many other considerations determined from available GIS mapping data.

AMATS Travel Demand Model (TDM)

The AMATS TDM is a traffic forecasting model produced by AMATS, with the cooperation of DOT&PF. The model covers an area from Talkeetna to Girdwood. The basis for the model is a 2013 household and employment GIS layer that divides the model area into zones known as Traffic Analysis Zones (TAZs). Each TAZ contains values identifying how many households and employees live and work in the region in 2013 and 2040. The model generates vehicle trips using these values and distributes them onto the roadway to forecasts traffic volumes and capacity problems.

MSB Build-out Study

The MSB Build-out Study was produced between 2011 and 2015. The goal of the study was to forecast the maximum possible density in the MSB at an undetermined future year beyond 100 years from now (based on moderate growth trend calculations). The Build-out Study assumes extreme redevelopment and heavy densification. It also imagines new urban areas in the vicinity of Settler's Bay, Meadow Lakes, Point MacKenzie, and Willow.

Note that, given the very long-term horizon of the Build-out Study data, the OS&HP never uses the outcomes of the Build-out Study as the sole justification for a road functional class upgrade or a new road connection. The build-out data was used as a reference to support decisions made based on other collected data.

Also note, that the MSB Build-out Study does not include employment projections, therefore, the OS&HP growth study only predicted employment development through 2040 using the AMATS TDM forecasts.

Growth Study Conclusions

The results of the population analysis for the Growth Study are shown in Figure 11 through Figure 13, starting on page 41, and the employment analysis results are shown in Figure 14 and Figure 15, starting on page 43. These figures are intensity maps, where the regions with the brightest color intensity indicate regions with the highest relative growth between the years.

The population study showed that available land for development is quickly disappearing, especially in the core area of the MSB. **To keep up with the projected population demand, growth will continue to move west, into Meadow Lakes, Houston, Settlers Bay, Point MacKenzie, and also up into Willow and Talkeetna.** Growth in these areas will be further encouraged by the road expansion projects along the Parks Highway and Knik-Goose Bay Road, which makes land in these directions closer to the borough core area, by travel time.

Additionally, to achieve the growth rates projected by the DOLWD and ISER, the core area will need to start increasing the density of both residential and commercial developments, which implies an increase in utilities and services, such as municipal water and sewer. This makes preparing for future road upgrades even more critical. Additionally, the increasing density within the core area will likely bring a culture change, with a population that is more urban-minded and open to transit and walking paths. Around 2040, when developable land becomes more limited, growth in the core area can be expected to slow.

Figure 11. Population Growth 2013 to 2020 (Based on Observation of Existing Data)

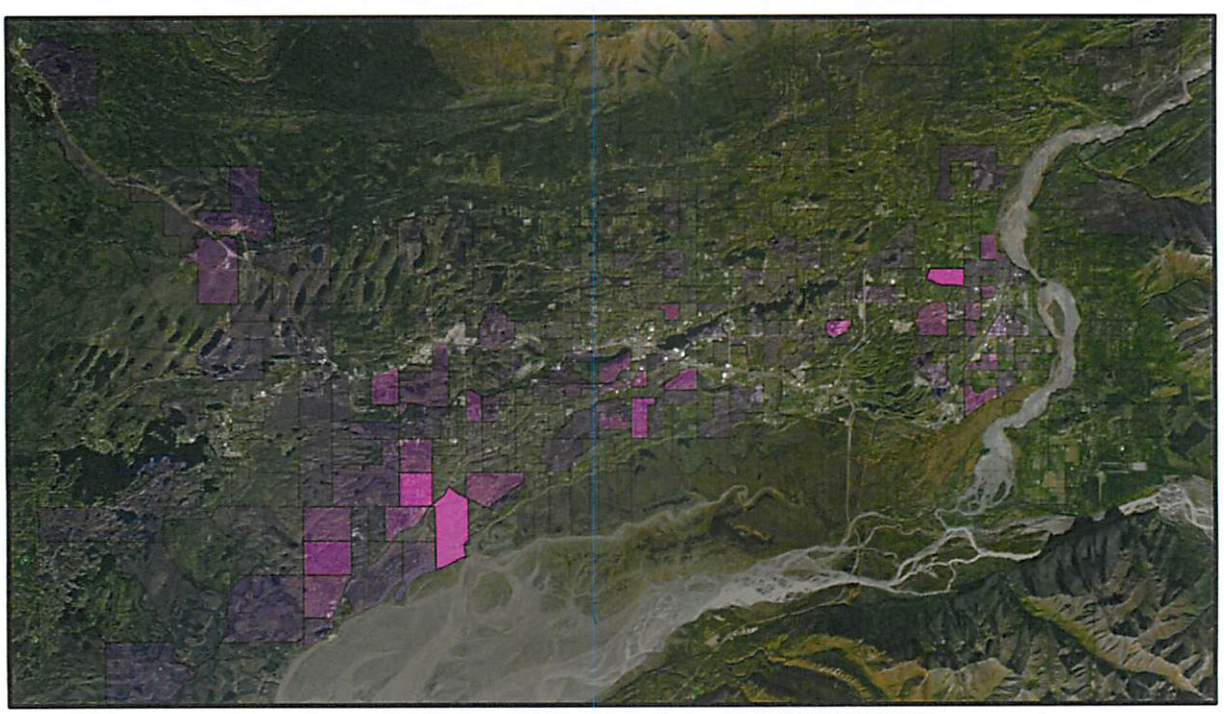

Figure 12. Population Growth 2020 to 2040 (Based on AMATS TDM Forecasts)

Figure 13. Population Growth 2040 to Full Build-out (Based on MSB Build-out Study)

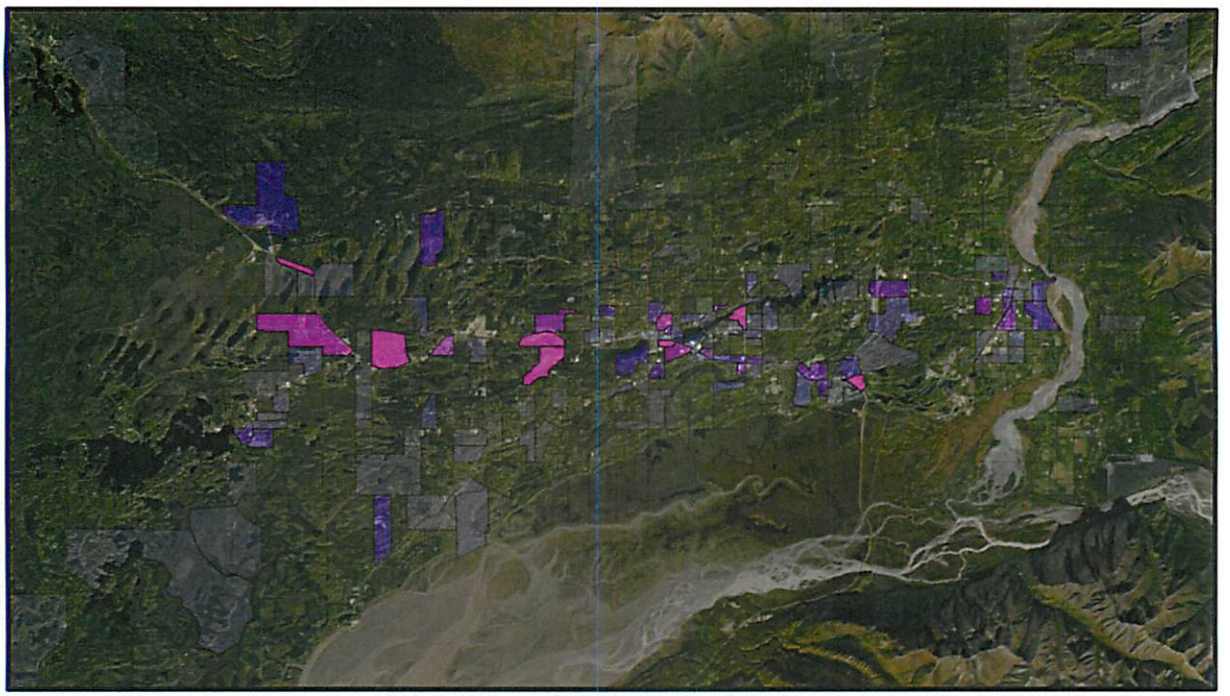

Figure 14. Employment Growth 2013 to 2020 (Based on Observation of Existing Data)

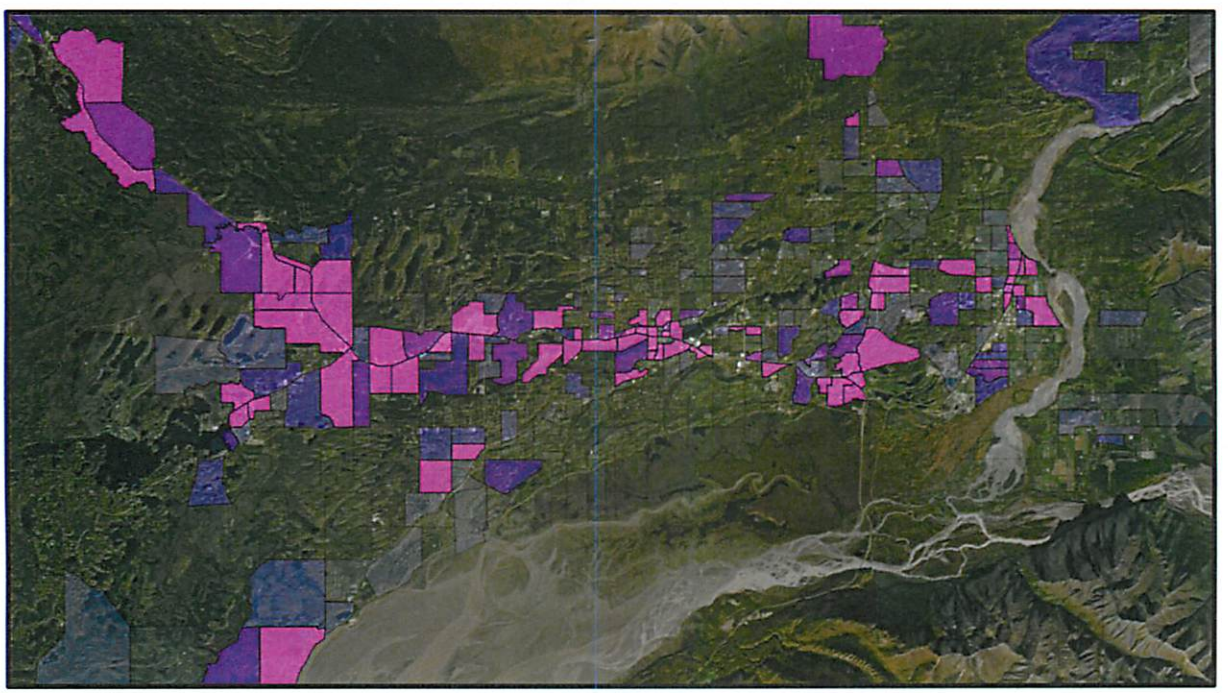

Figure 15. Employment Growth 2020 to 2040 (Based on AMATS TDM Forecasts)

Notice in the previous figures that population growth from 2013 to 2020 was able to stay primarily in the urban core. The study from 2020 to 2040 shows higher population growth to the southwest towards Point MacKenzie and in the area of Big Lake. This is due in part to the urban core reaching capacity, with all of the easily developed land having already been used. Also, major road projects

like the Parks Hwy upgrade from Lucus to Big Lake, and the Knik-Goose Bay Road upgrade to Settlers Bay, will effectively make regions serviced by these roads closer to the urban core, based on shorter travel times and reduced traffic congestion. This will increase the desirability of these areas for housing development. Note that this also points out the key relationship between suitable road networks and economic development.

Appendix B OS&HP Maps

The following maps present the 2022 Official Streets and Highway Plan for the Matanuska-Susitna Borough including planned roads, road functional classifications, and primary intersection points.

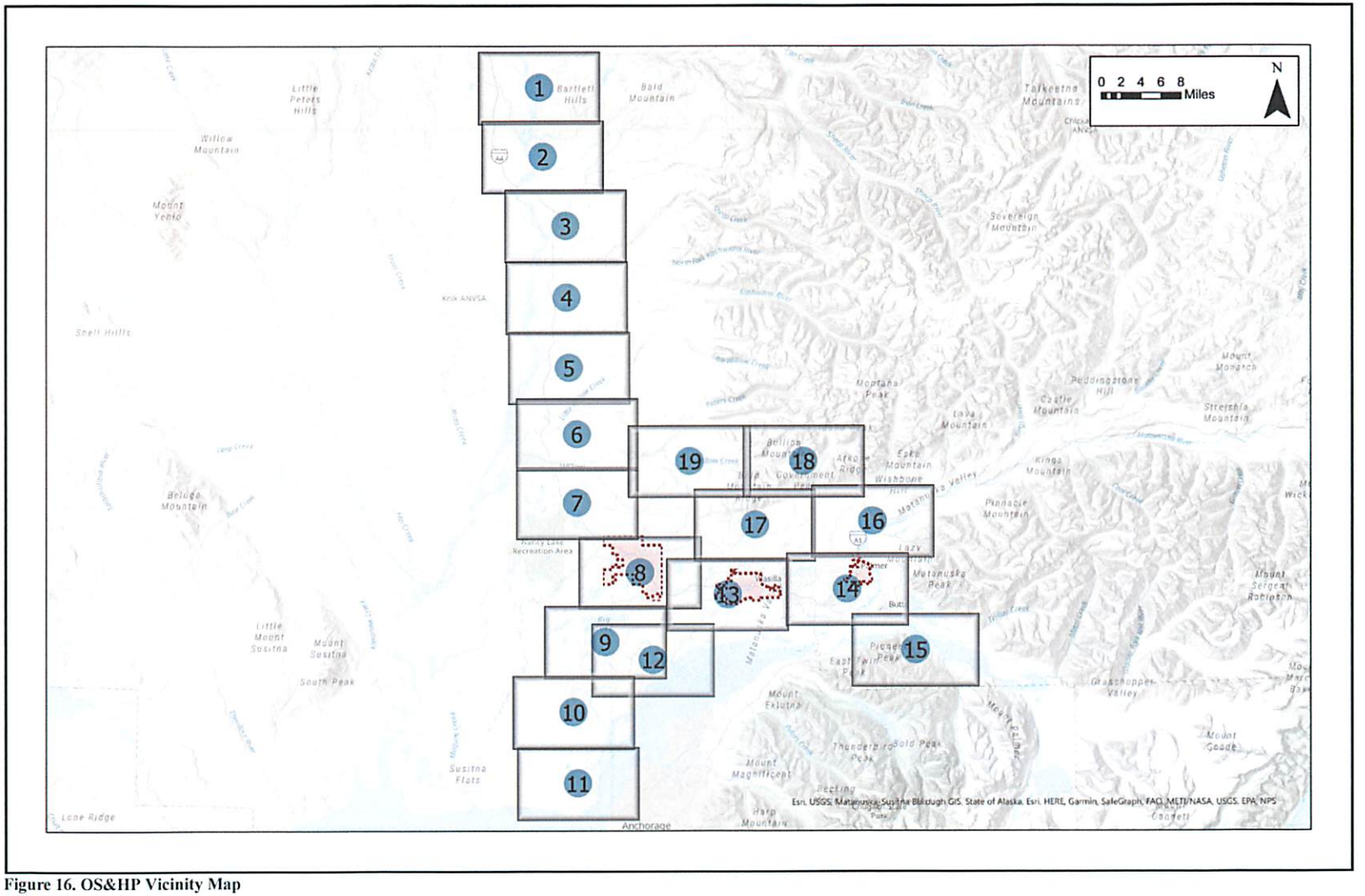

Figure 16. OS&HP Vicinity Map

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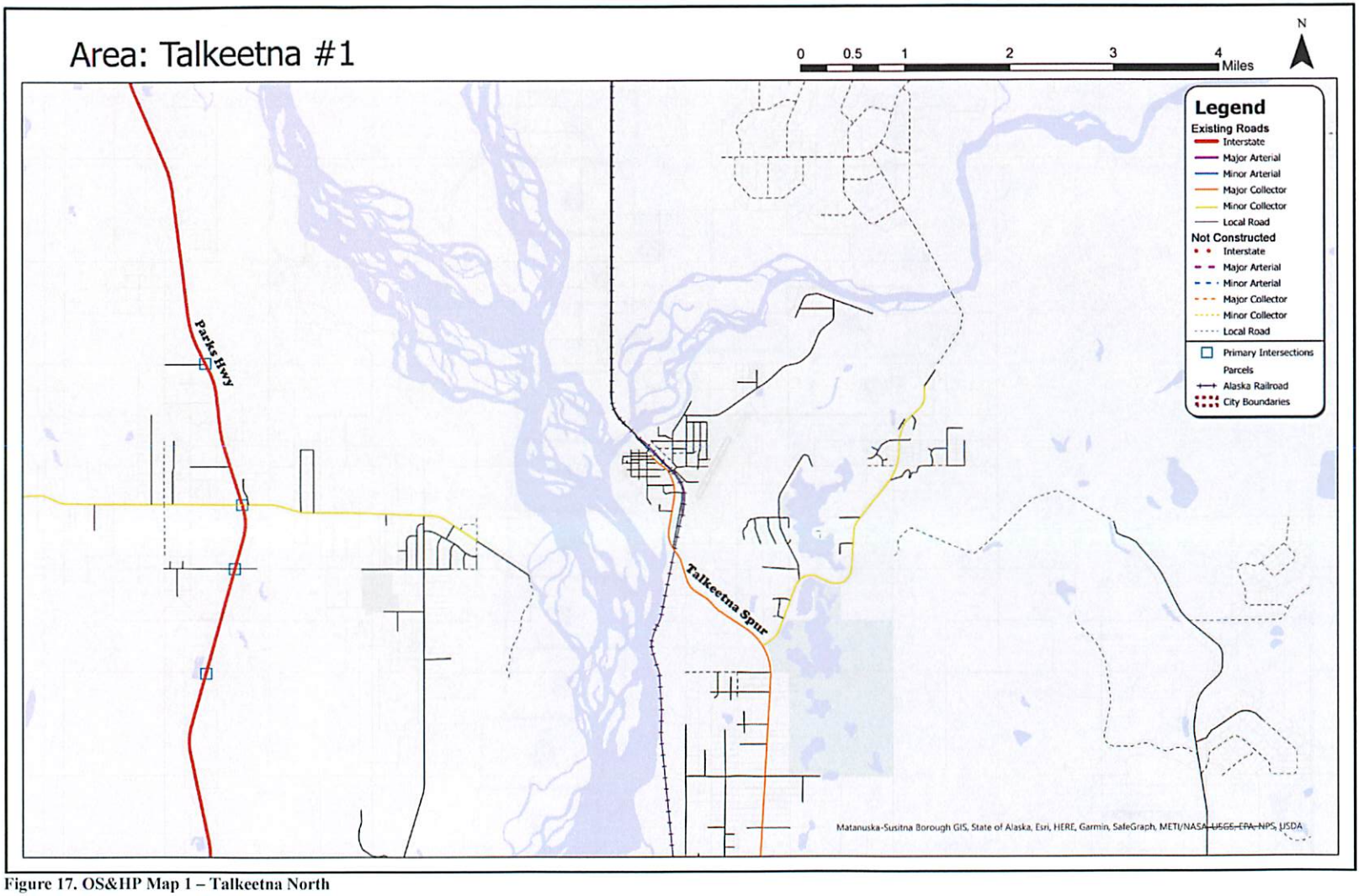

Figure 17. OS&HP Map 1 – Talkeetna North

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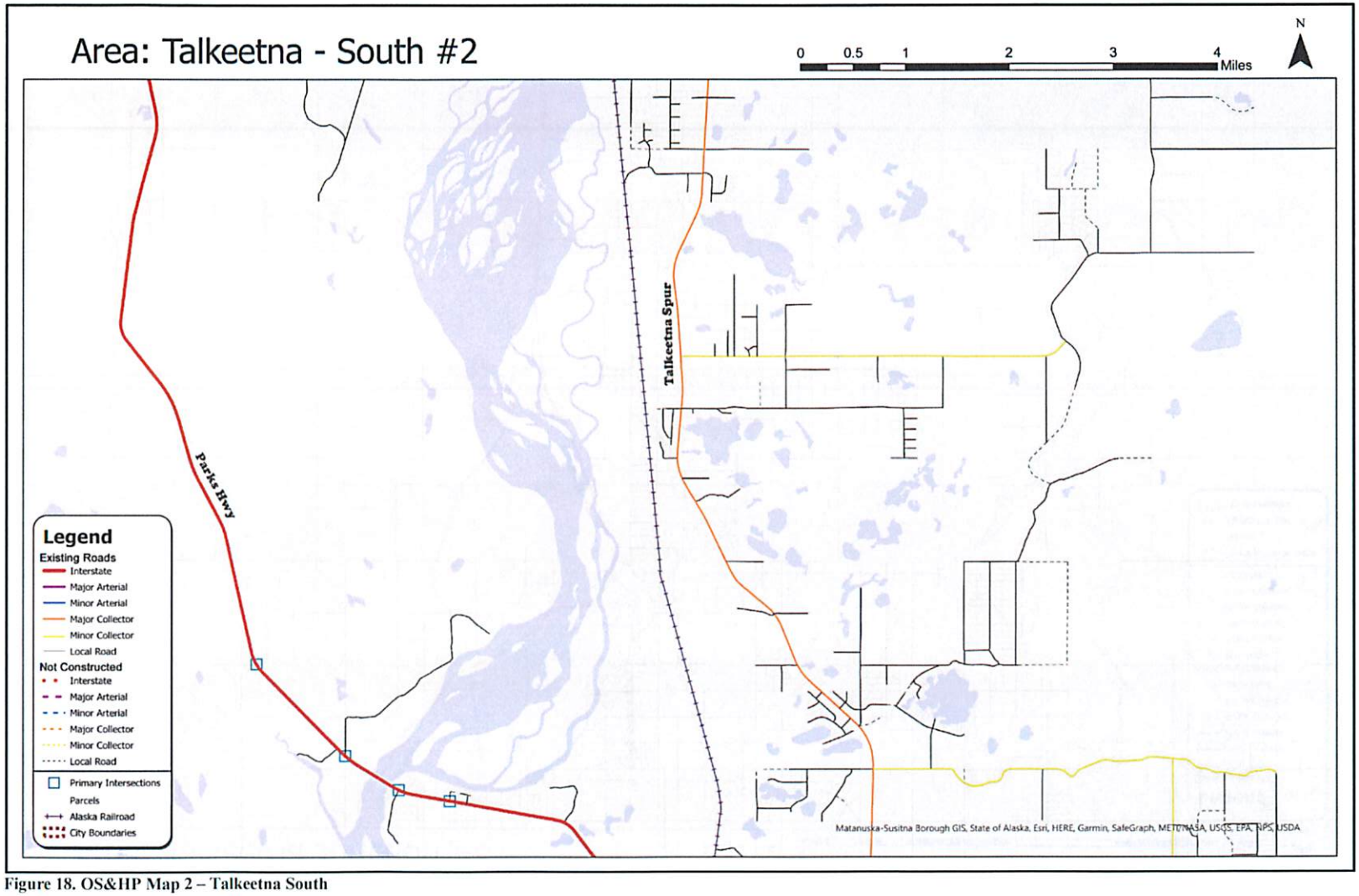

Figure 18. OS&HP Map 2 – Talkeetna South

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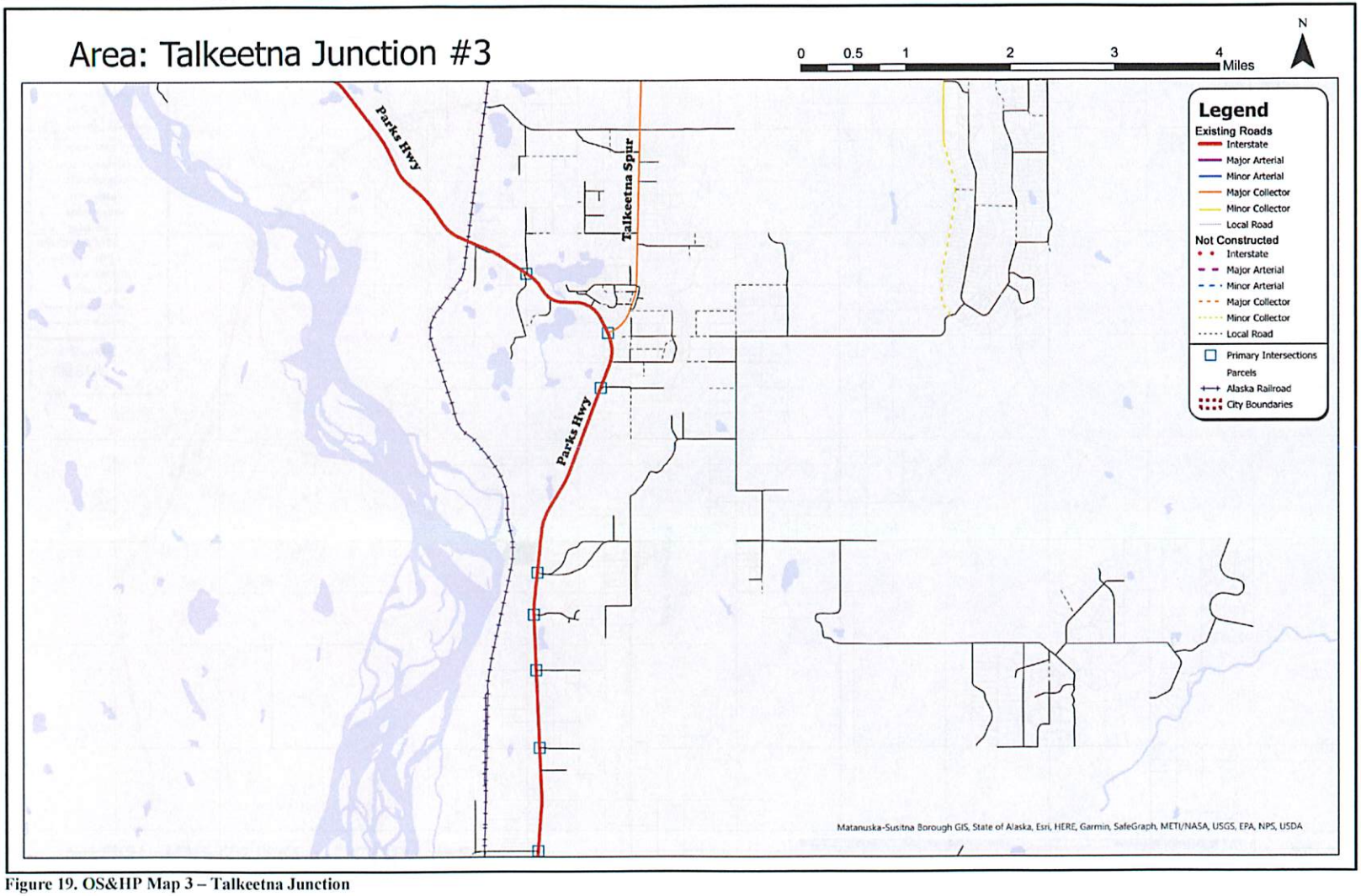

Figure 19. OS&HP Map 3 – Talkeetna Junction

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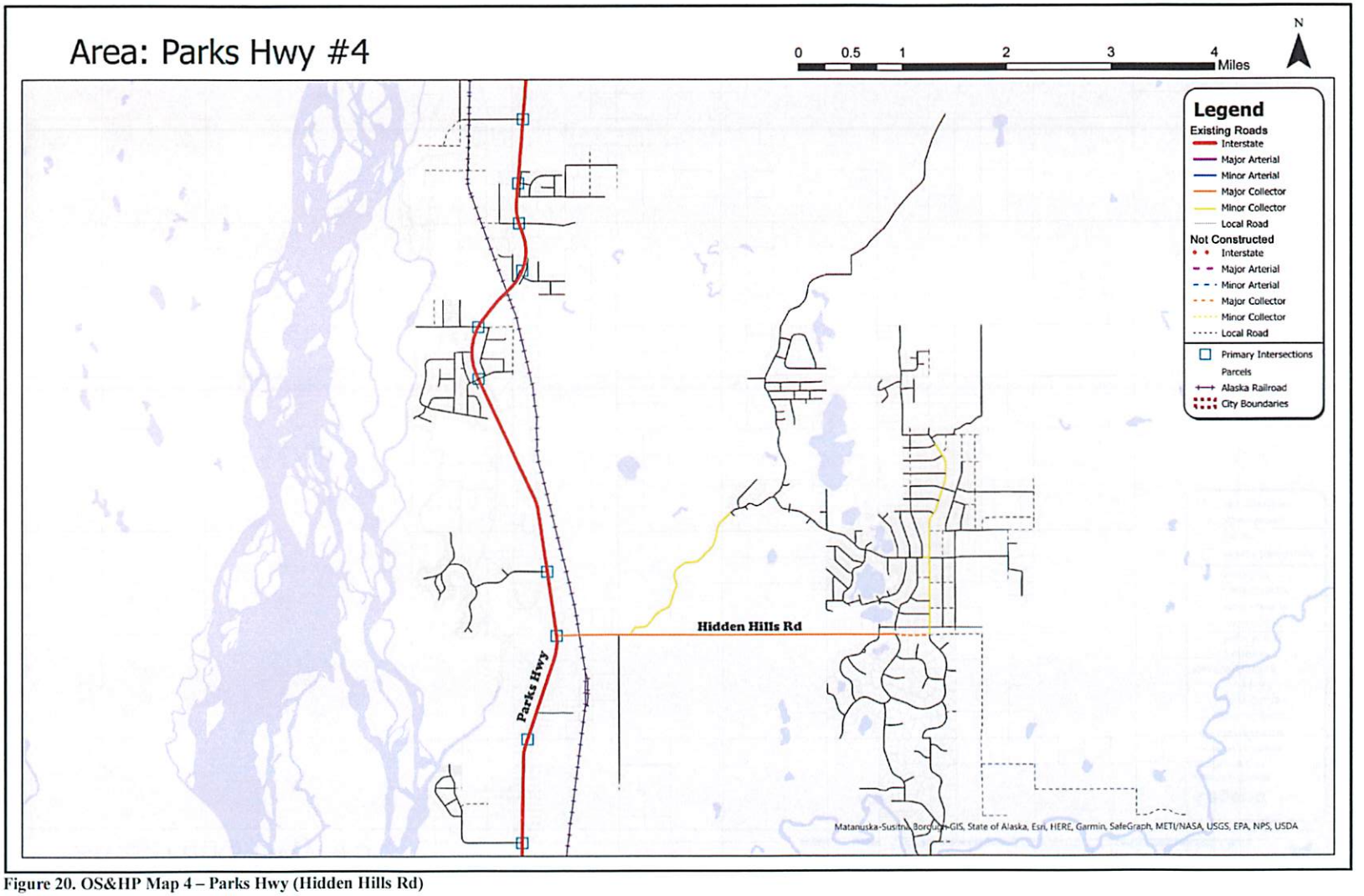

Figure 20. OS&HP Map 4 – Parks Hwy (Hidden Hills Rd)

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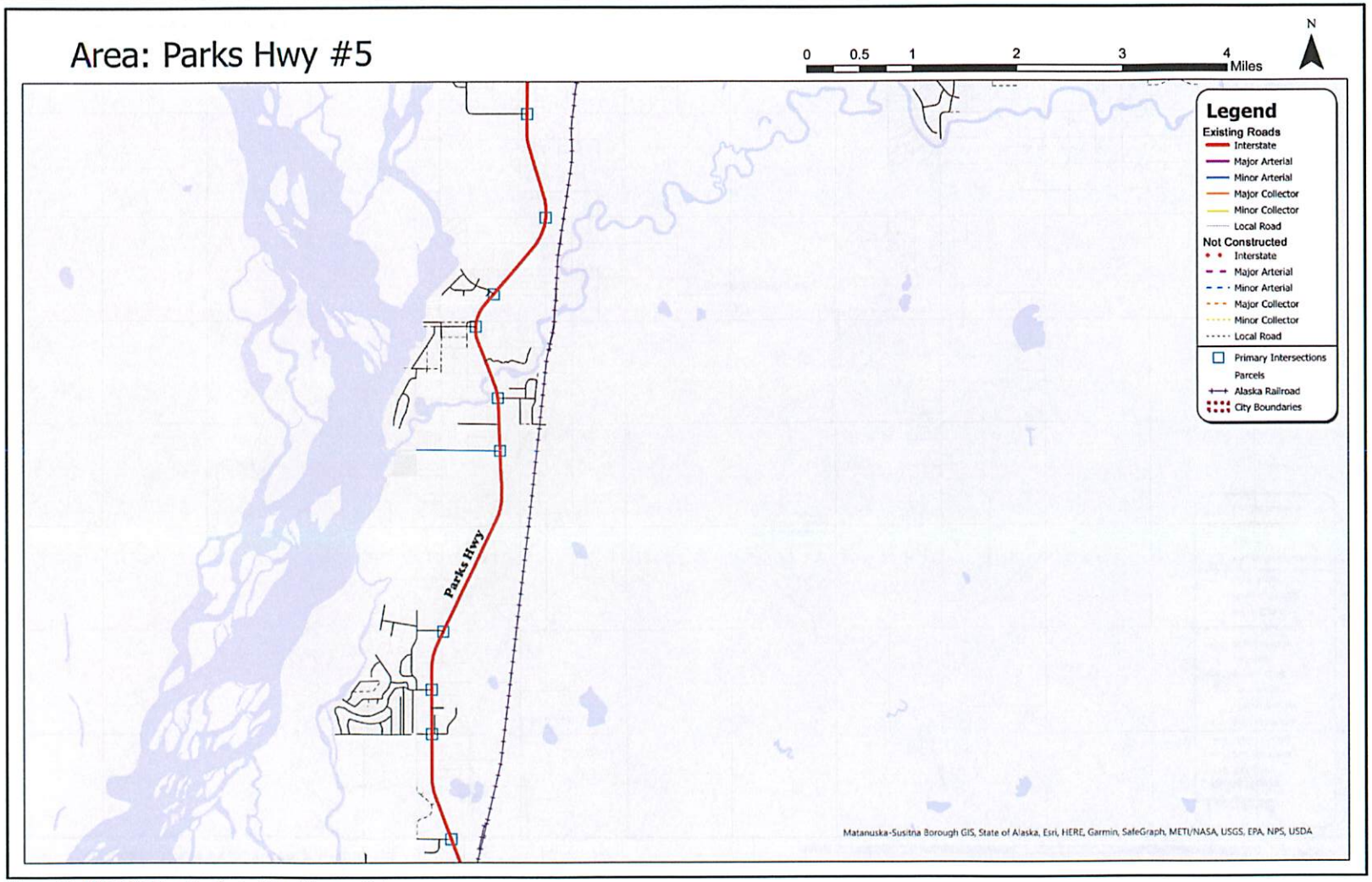

Figure 21. OS&HP Map 5 – Parks Hwy (Yancey Dr)

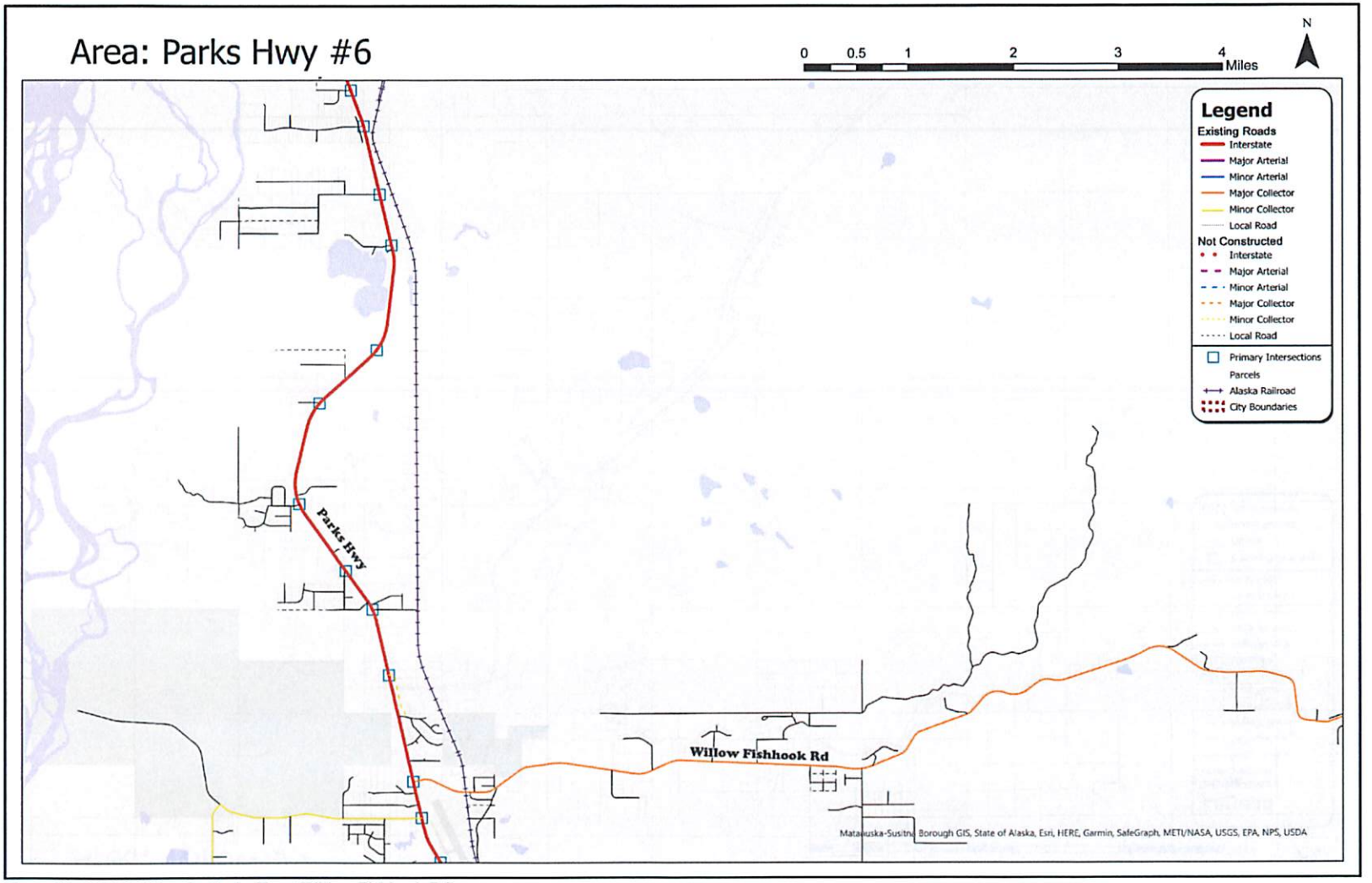

Figure 22. OS&HP Map 6 – Parks Hwy (Willow Fishhook Rd)

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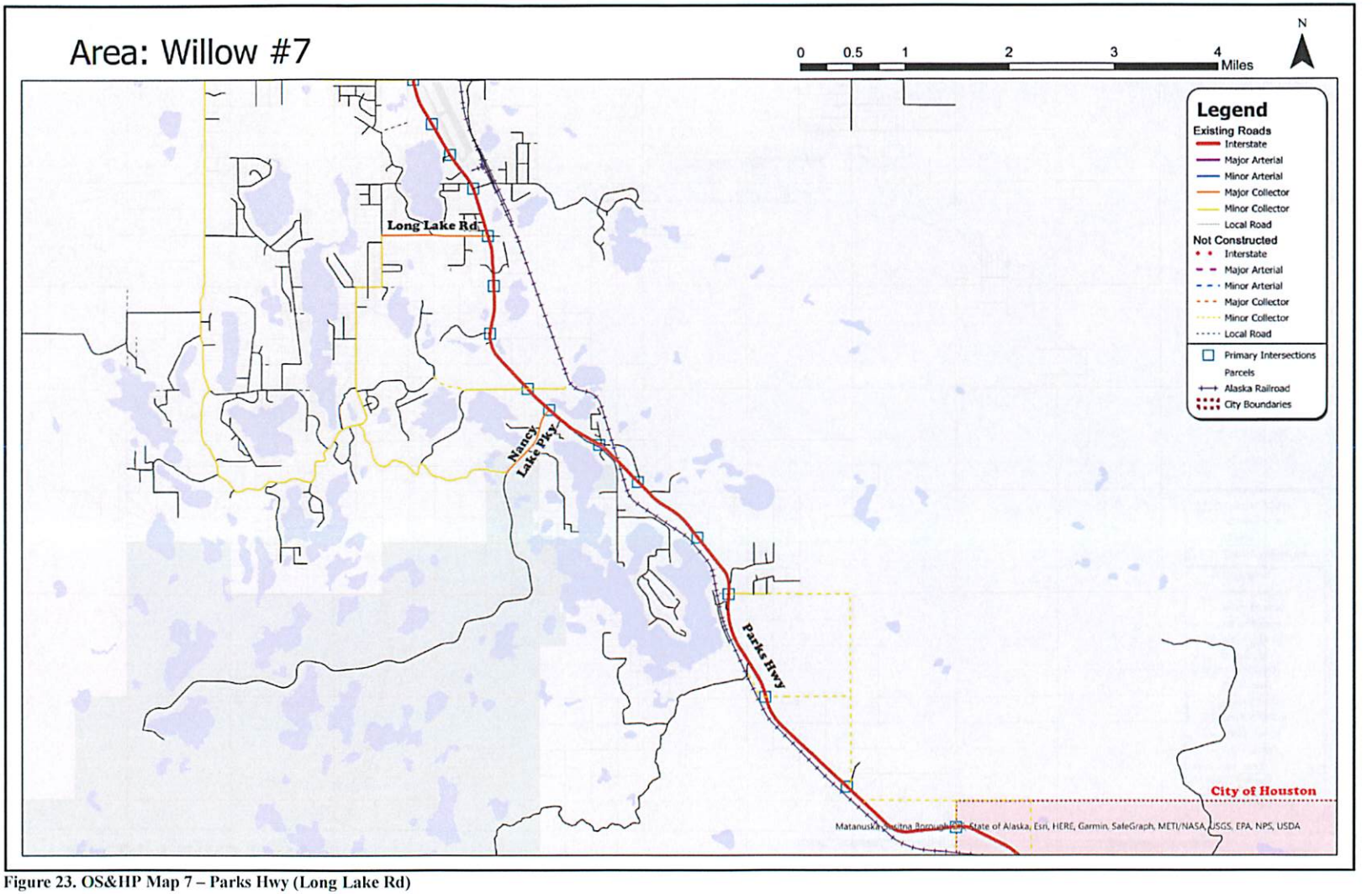

Figure 23. OS&HP Map 7 – Parks Hwy (Long Lake Rd)

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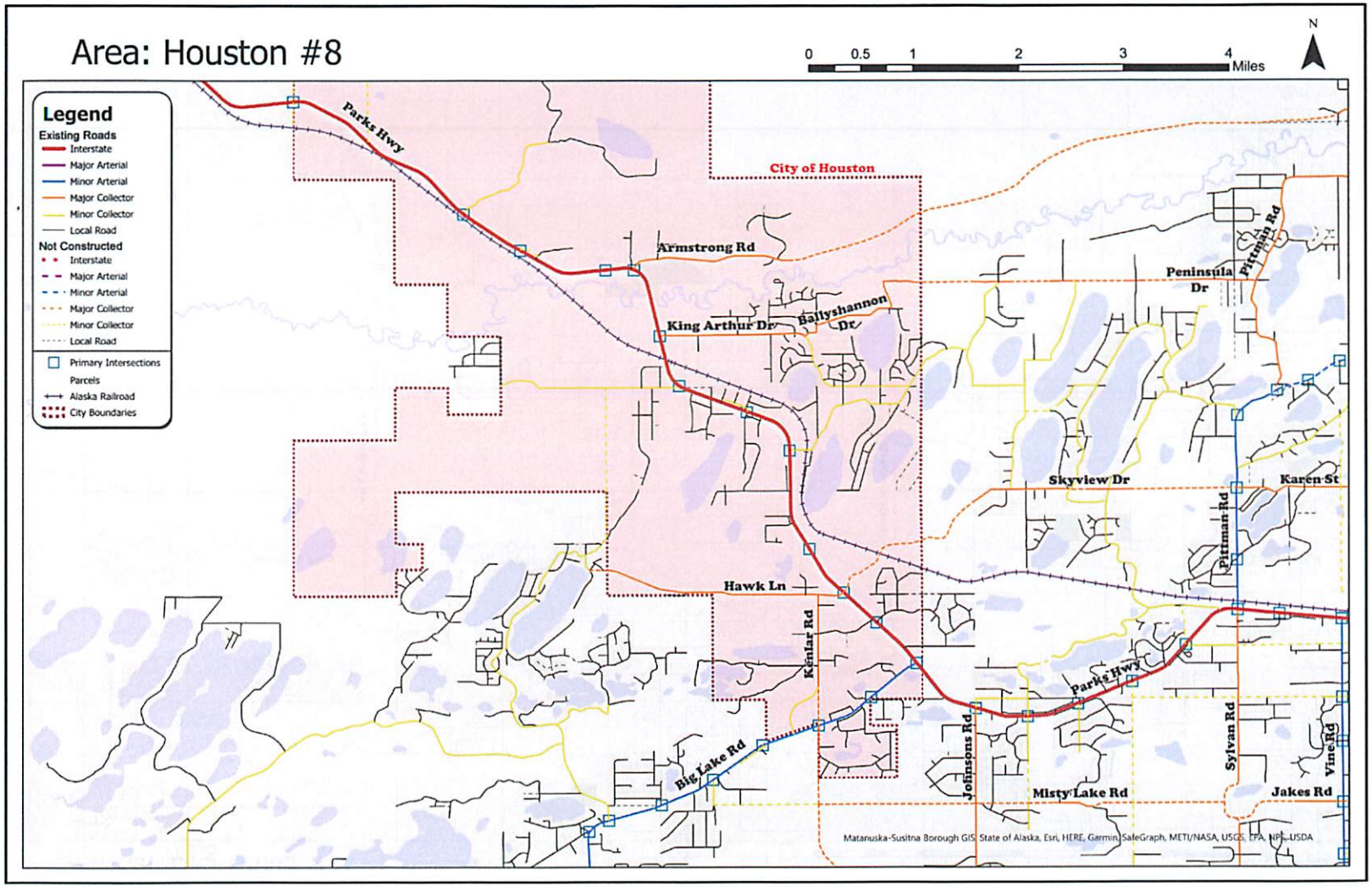

Figure 24. OS&HP Map 8 – Houston

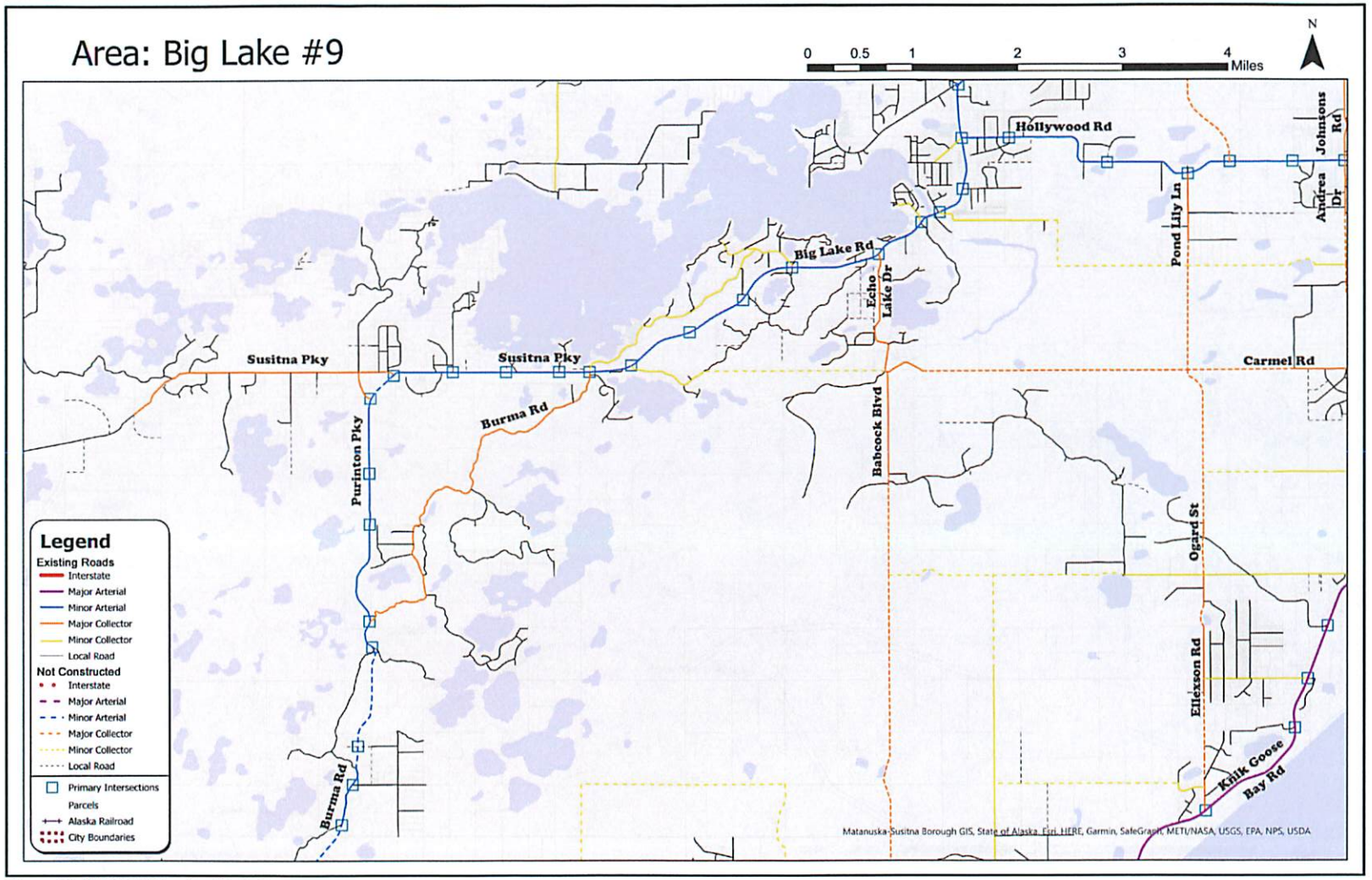

Figure 25. OS&HP Map 9 – Big Lake

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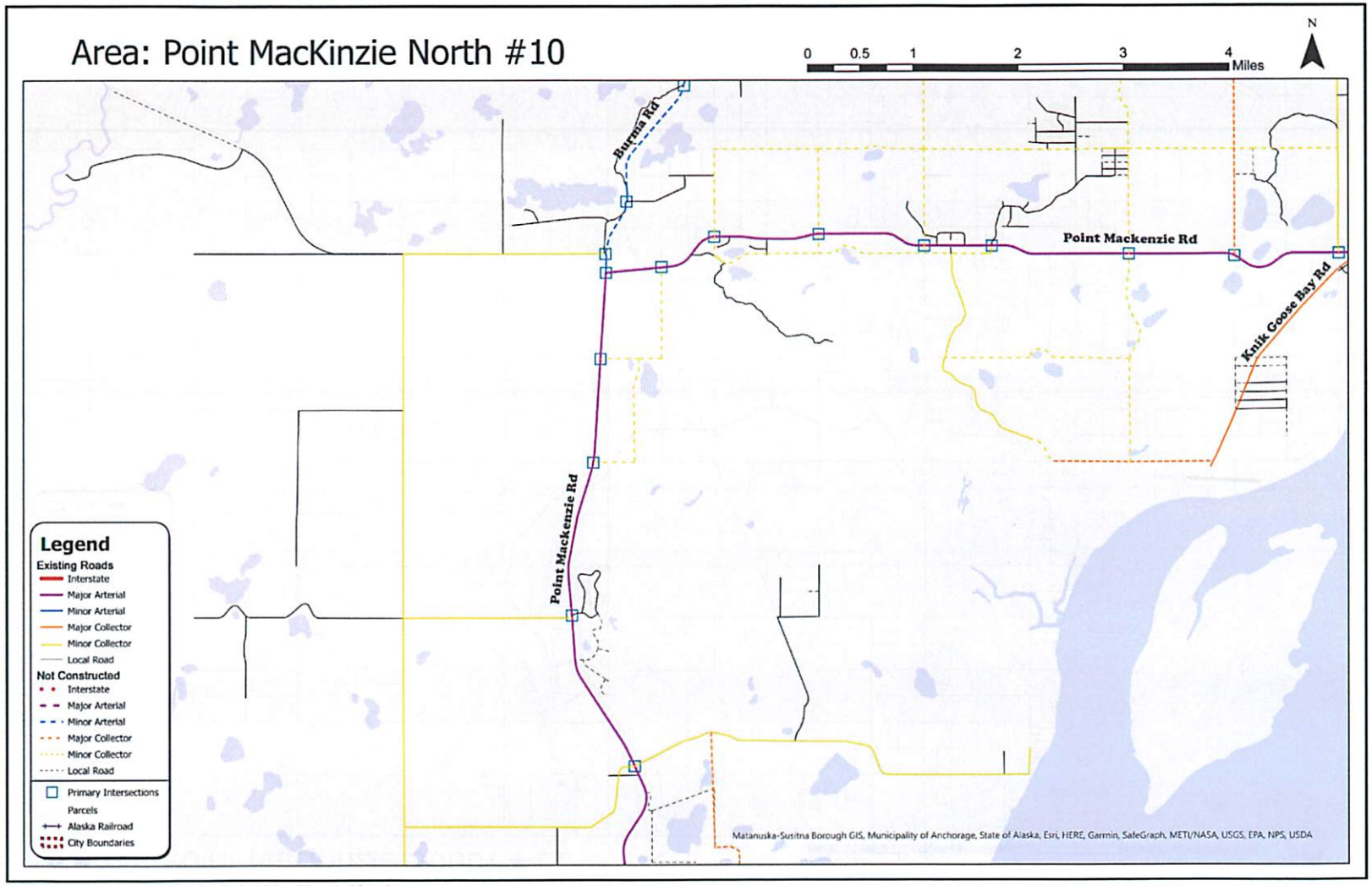

Figure 26. OS&HP Map 10 – Point MacKenzie North

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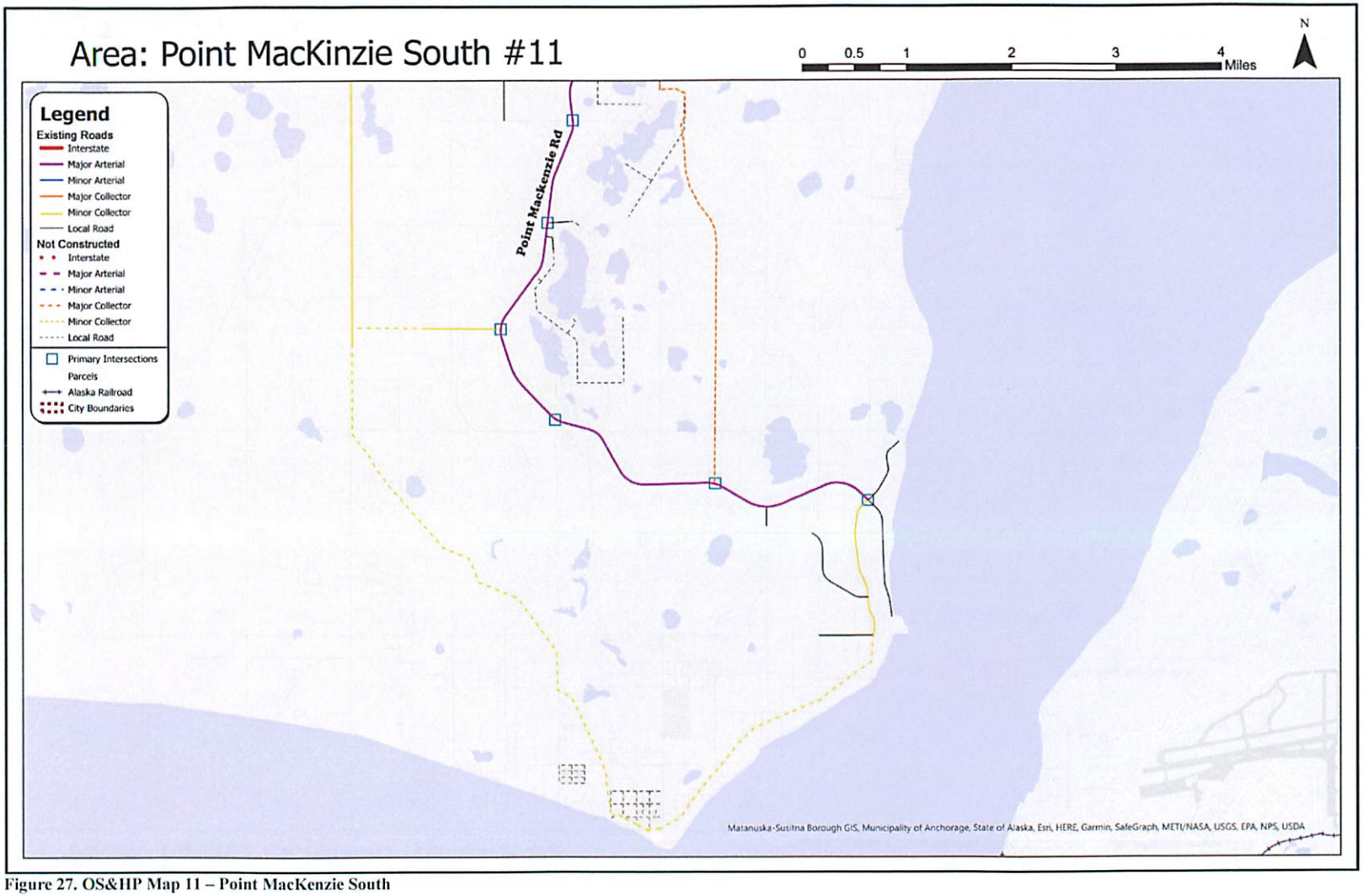

Figure 27. OS&HP Map 11 – Point MacKenzie South

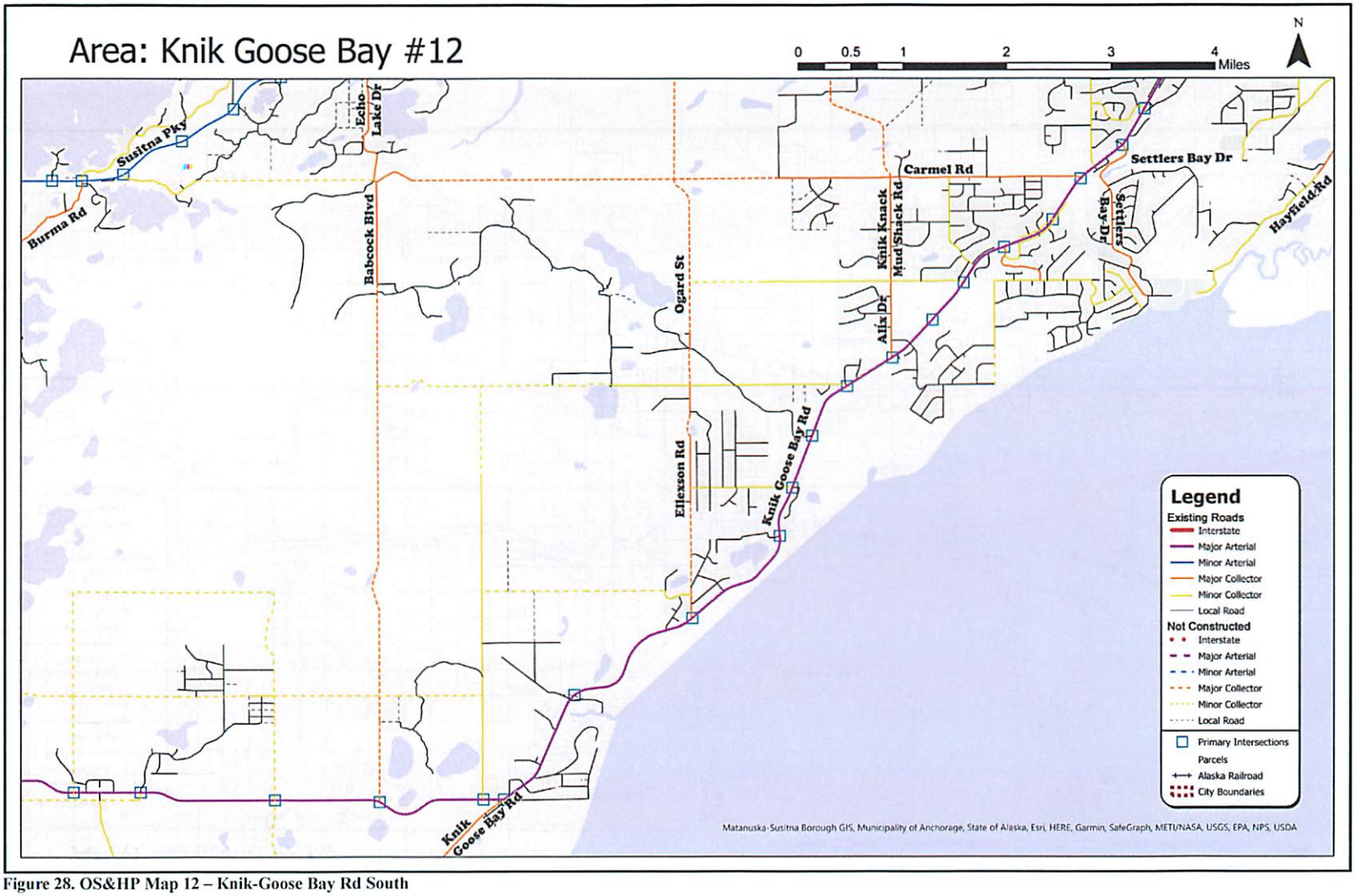

Figure 28. OS&HP Map 12 – Knik-Goose Bay Rd South

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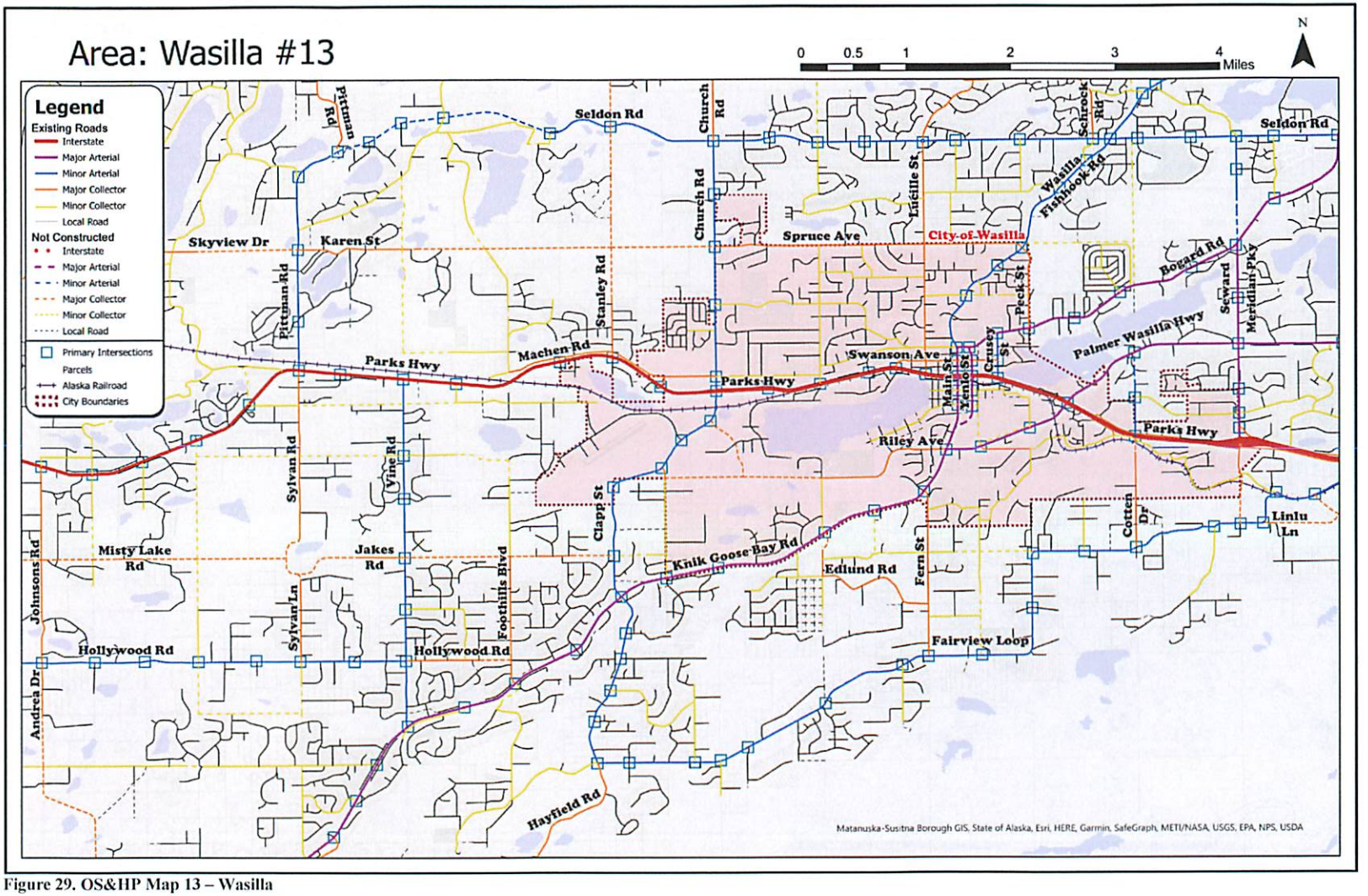

Figure 29. OS&HP Map 13 – Wasilla

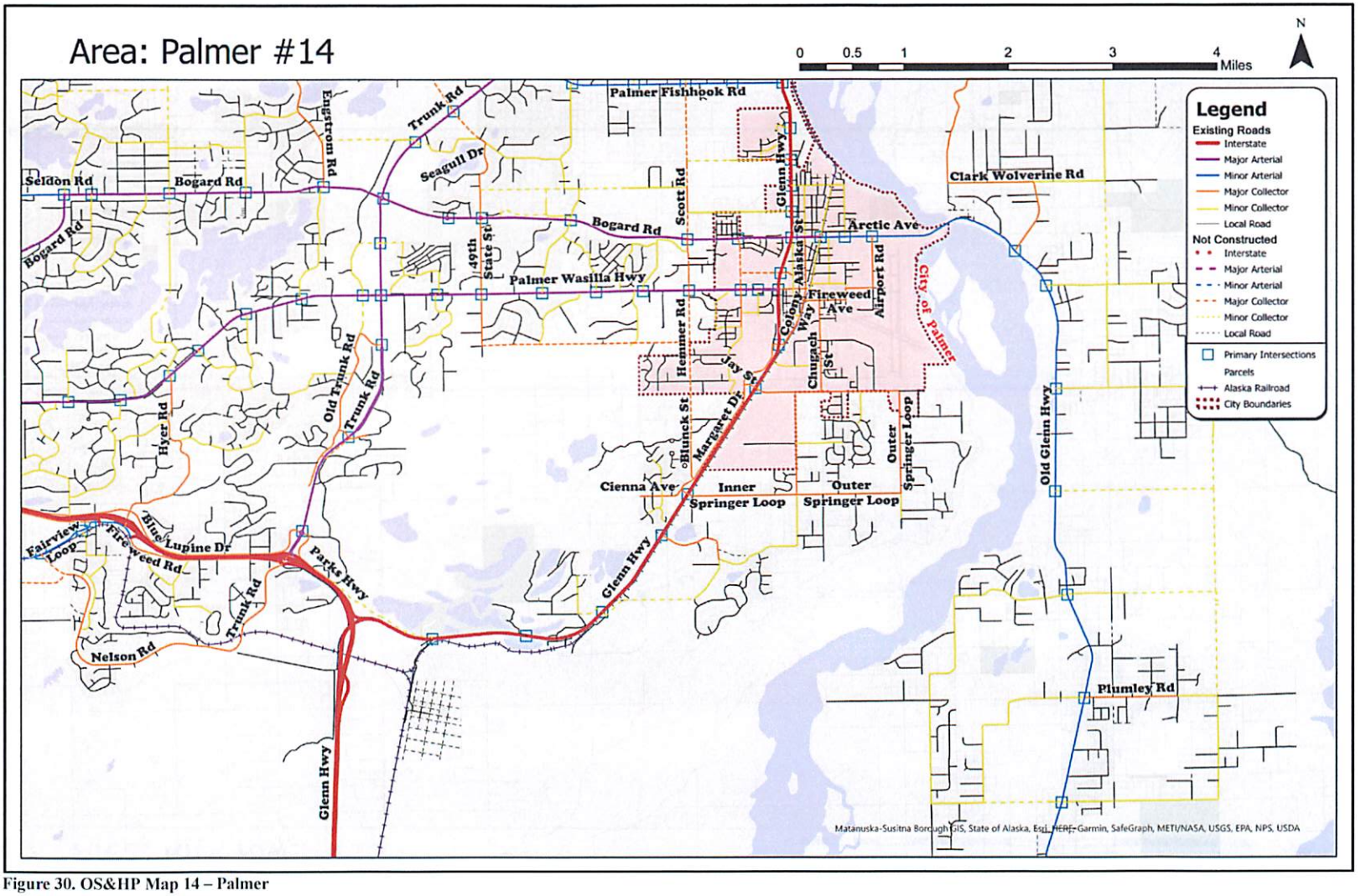

Figure 30. OS&HP Map 14 – Palmer

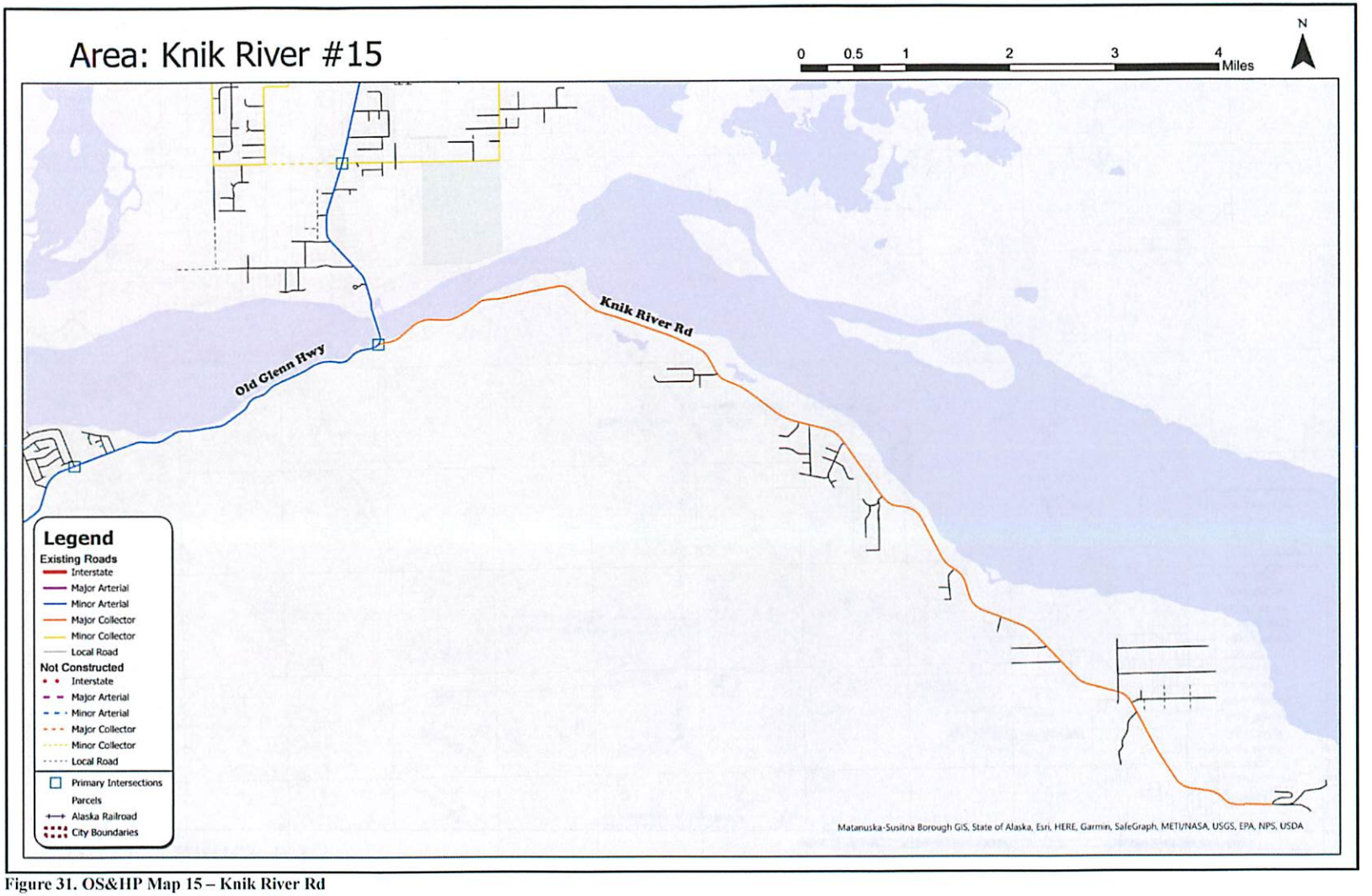

Figure 31. OS&HP Map 15 – Knik River Rd

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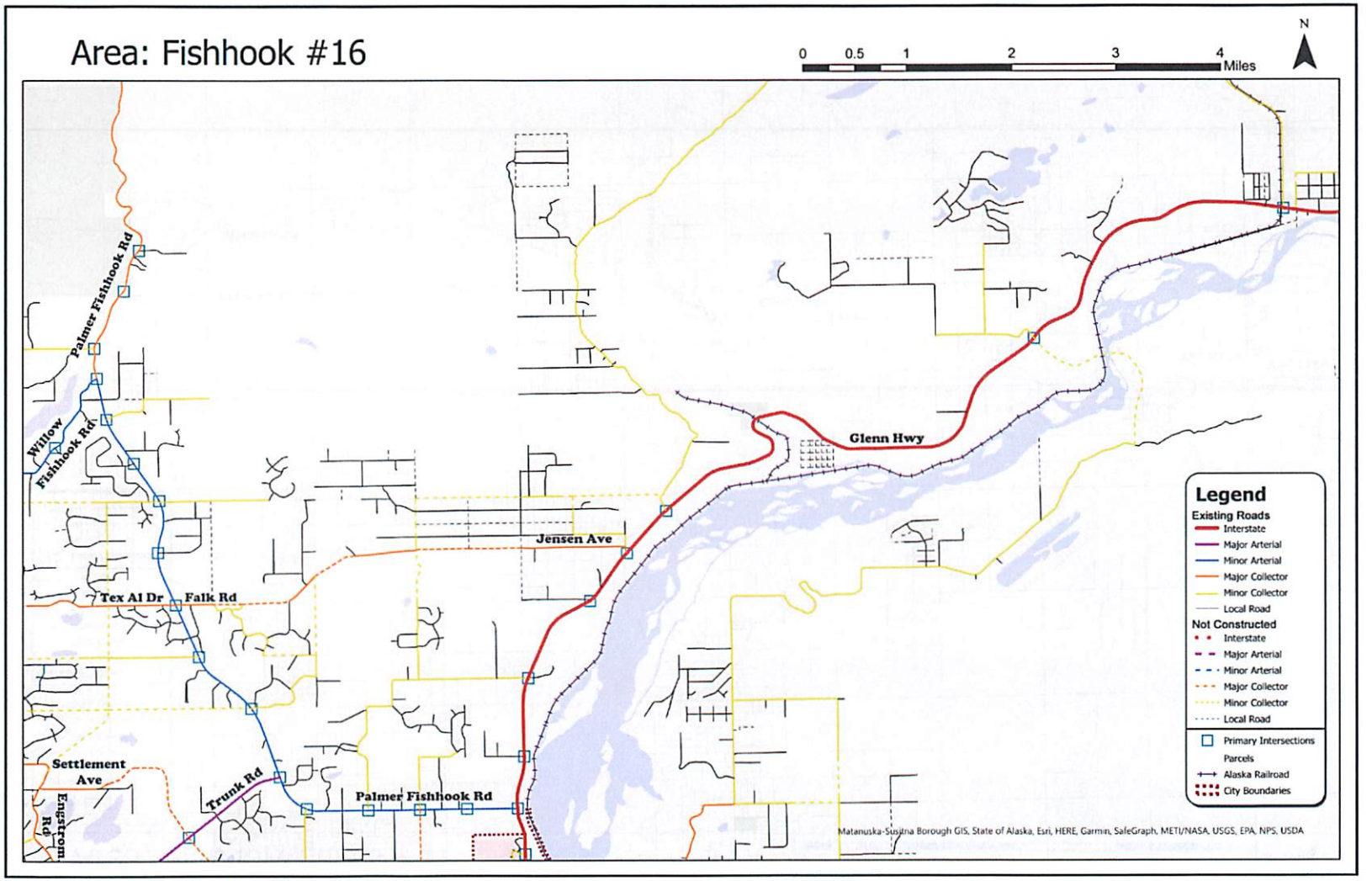

Figure 32. OS&HP Map 16 – Palmer Fishhook Rd

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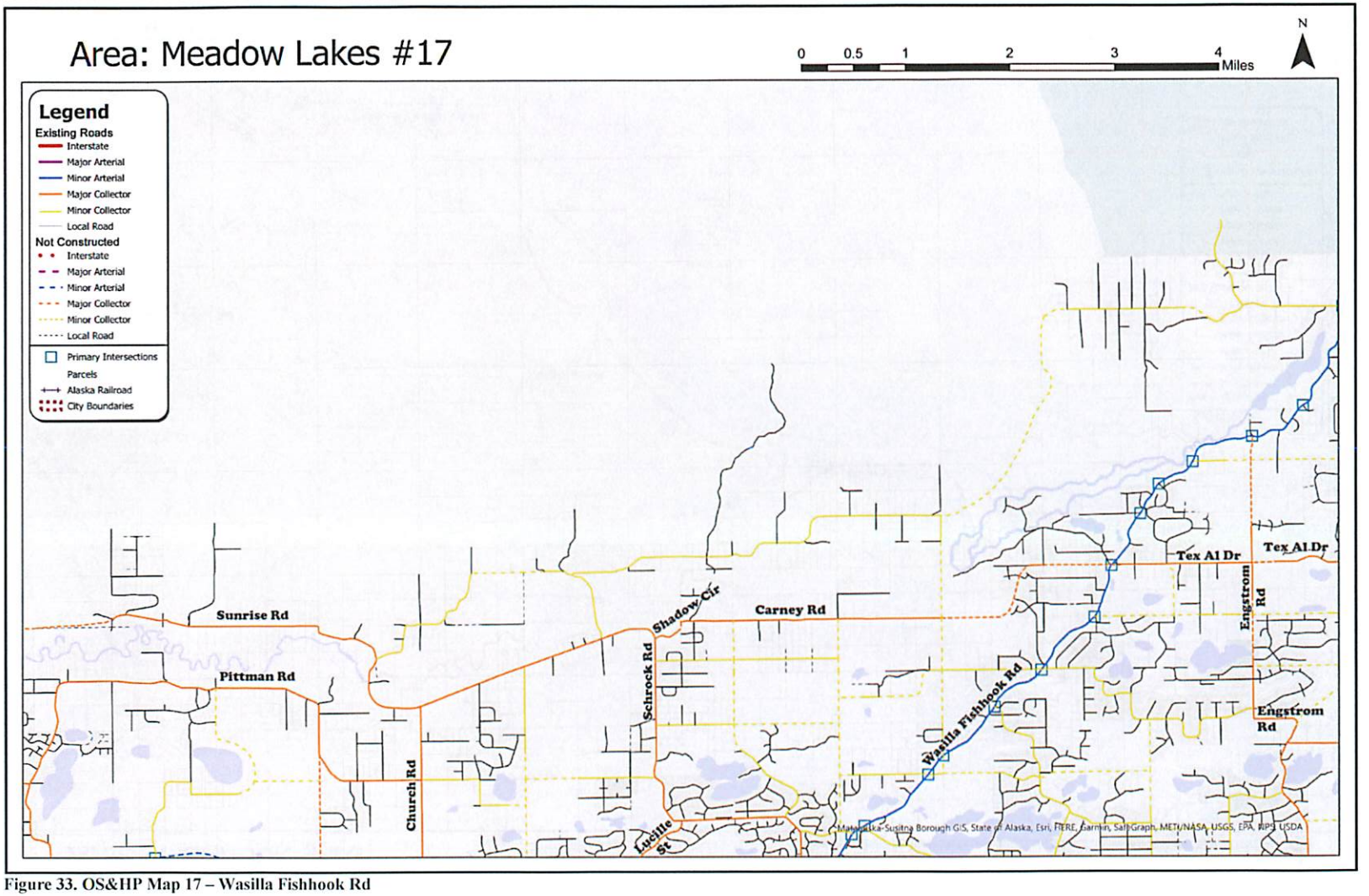

Figure 33. OS&HP Map 17 – Wasilla Fishhook Rd

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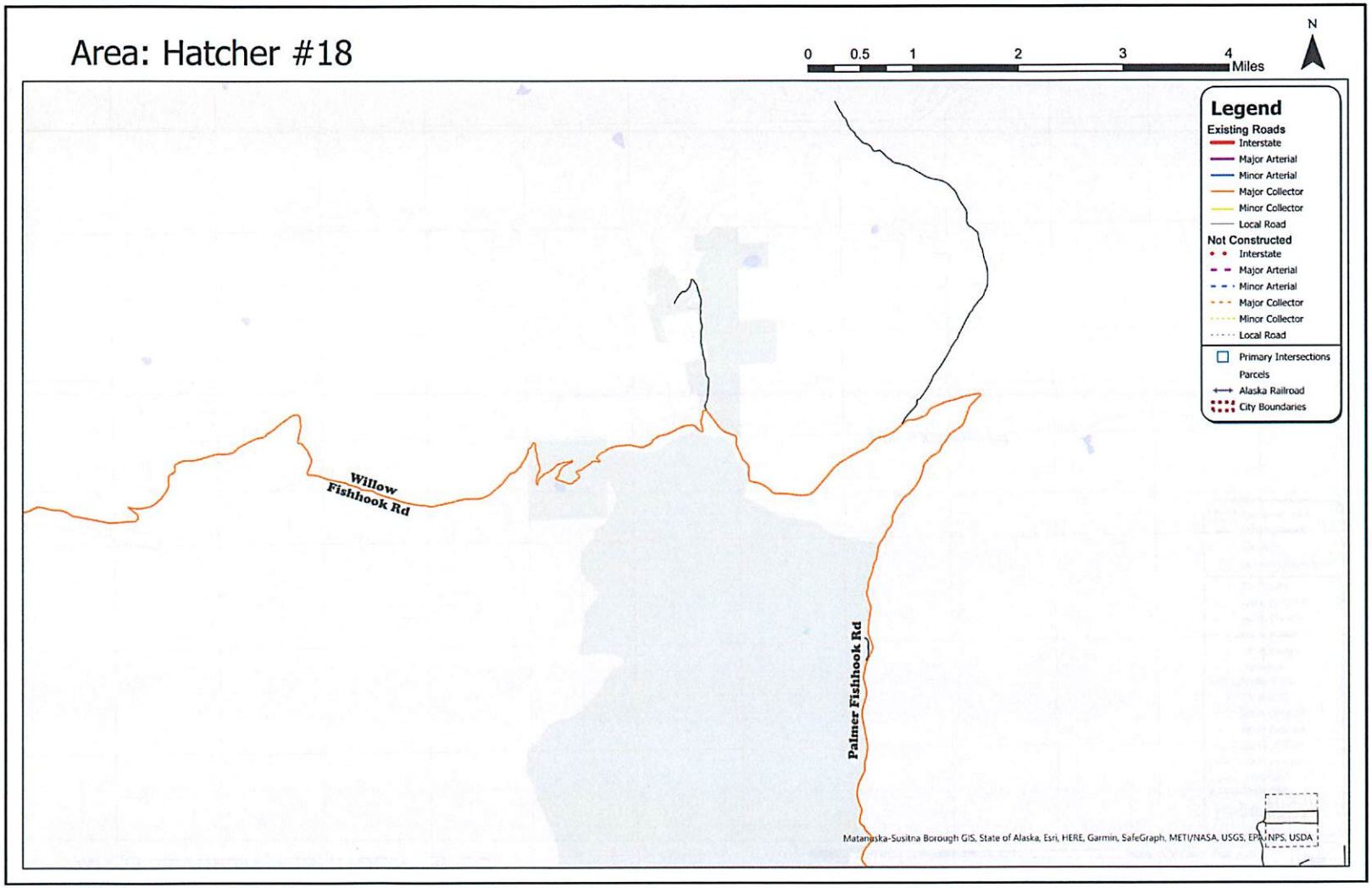

Figure 34. OS&HP Map 18 – Hatcher Pass

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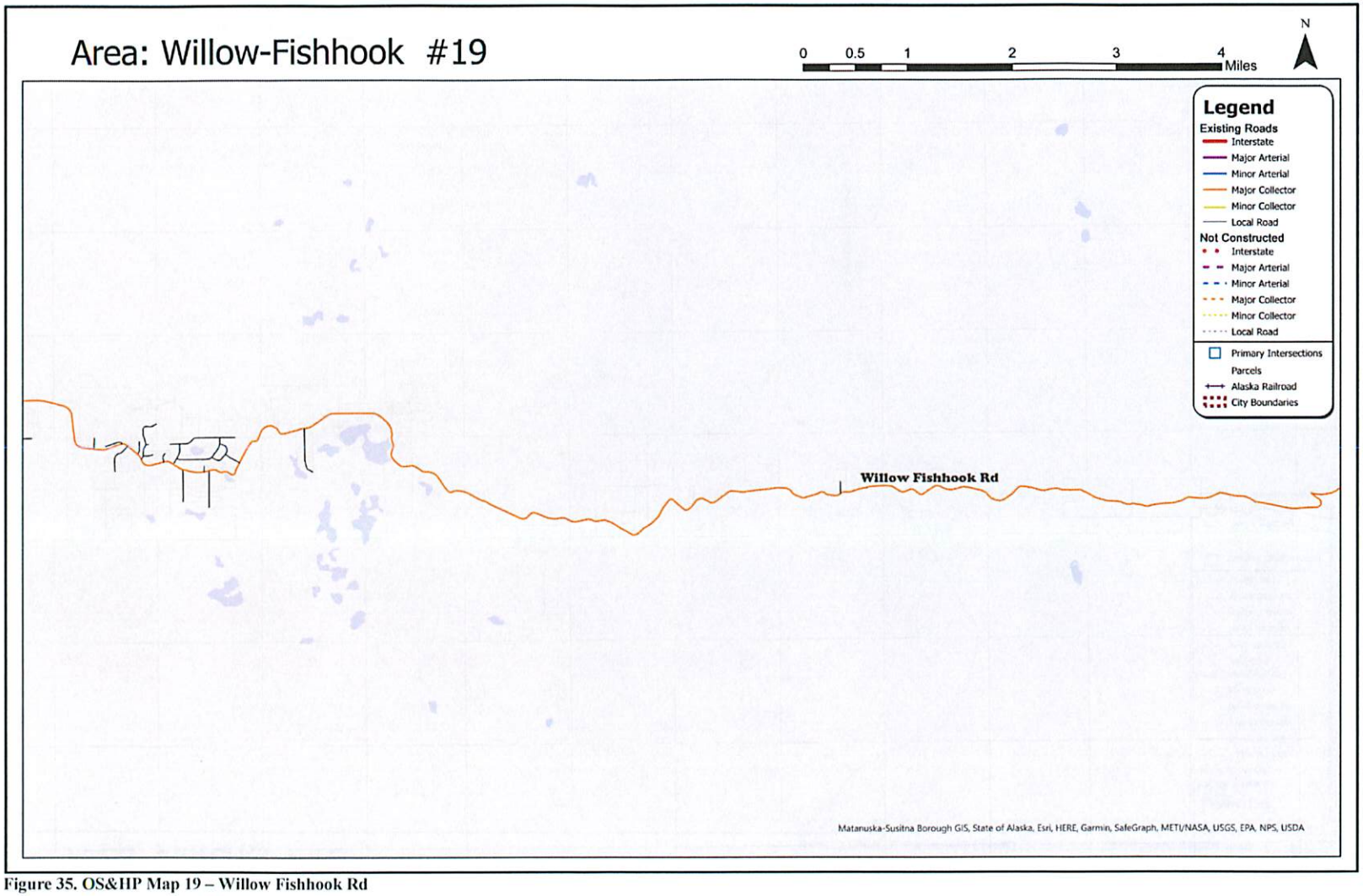

Figure 35. OS&HP Map 19 – Willow Fishhook Rd

MATANUSKA-SUSITNA BOROUGH
PLATTING BOARD RESOLUTION No. 2022-25

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH PLATTING BOARD RECOMMENDING ADOPTION OF THE Matanuska-Susitna Borough 2022 OFFICIAL STREETS AND HIGHWAYS PLAN UPDATE.

WHEREAS, the Official Streets and Highways Plan (OSHP) is a transportation planning tool that identifies future road corridors and road upgrades necessary to accommodate the Borough's growing population and its transportation needs; and

WHEREAS, the OSHP is a part of the Borough's Long Range Transportation Plan, is map-based, and focuses on road infrastructure needs; and

WHEREAS, the OSHP provides a thoughtful, proactive, and comprehensive basis for planning, platting, and transportation infrastructure investment decisions; and

WHEREAS, the Borough's Subdivision Construction Manual states that, "Subdivisions shall be designed in a manner that does not conflict with the Long Range Transportation Plan or the Official Streets and Highways Plan"; and

WHEREAS, the OSHP will help the Platting Board preserve future road corridors; reducing right-of-way costs by minimizing building conflicts and addressing road network deficiencies before they happen; and

WHEREAS, subdivisions depend on a functioning road network for access; and

WHEREAS, the OSHP will support subdivision and development by planning and preserving space for a robust collector road network; and

WHEREAS, implementation of the OSHP will enhance road safety, reduce congestion, reduce negative impacts on neighborhoods, and lower transportation costs.

NOW, THEREFORE, BE IT RESOLVED, that the Matanuska-Susitna Borough Platting Board does hereby hereby recommends adoption of the 2022 Matanuska-Susitna Borough Official Streets and Highways Plan Update.

ADOPTED by the Matanuska-Ssitna Borough Platting Board this _____ day of _____, 2022.

_____
Wilfred Fernandez,
Platting Board Chair

ATTEST:

_____
SLOAN VON GUNTEN,
Platting Board Clerk

(SEAL)

MATANUSKA-SUSITNA BOROUGH
TRANSPORTATION ADVISORY BOARD
RESOLUTION SERIAL NO. TAB 22-01

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH TRANSPORTATION ADVISORY BOARD IN SUPPORT OF THE MATANUSKA-SUSITNA BOROUGH 2022 OFFICIAL STREETS AND HIGHWAYS PLAN UPDATE.

WHEREAS, the Matanuska-Susitna Borough Transportation Advisory Board advises the Assembly on transportation-related issues; and

WHEREAS, the Official Streets and Highways Plan (OSHP) is a transportation planning tool that identifies future road corridors and road upgrades necessary to accommodate the Borough's growing population and its transportation needs; and

WHEREAS, the OSHP is a part of the Borough's Long Range Transportation Plan, is map-based, and focuses on road infrastructure needs; and

WHEREAS, the OSHP provides a thoughtful, proactive, and comprehensive basis for planning, platting, and transportation infrastructure investment decisions; and

WHEREAS, the OSHP will help preserve future road corridors; reducing right-of-way costs by minimizing building conflicts and addressing road network deficiencies before they happen; and

WHEREAS, implementation of the OSHP will enhance road safety, reduce congestion, reduce negative impacts on neighborhoods, and lower transportation costs; and

WHERE AS, future road corridors and upgrades to existing roads should be planned early in order to ensure a safe and efficient road network.

NOW, THEREFORE, BE IT RESOLVED, that the Matanuska-Susitna Borough Transportation Advisory Board hereby recommends adoption of the 2022 Matanuska-Susitna Borough Official Streets and Highways Plan Update.

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

_____
Joshua Cross, Chair

ATTEST:

_____
Kim Sollien, Planning Services Manager
Staff Support

LOCAL ROAD SERVICE AREA ADVISORY BOARD

RESOLUTION ___

A RESOLUTION BY THE MATANUSKA-SUSITNA BOROUGH LOCAL ROAD SERVICE AREA ADVISORY BOARD (LRSAAB) IN SUPPORT OF THE MATANUSKA-SUSITNA BOROUGH 2022 OFFICIAL STREETS AND HIGHWAYS PLAN UPDATE

WHEREAS: the Local Road Service Area Advisory Board advises the Assembly on local road policy within the Matanuska-Susitna Borough; and

WHEREAS: the Official Streets and Highways Plan (OSHP) is a transportation planning tool that identifies future road corridors and road upgrades necessary to accommodate the Borough's growing population and its transportation needs; and

WHEREAS: the OSHP is a part of the Borough's Long Range Transportation Plan, is map-based, and focuses on road infrastructure needs; and

WHEREAS: the OSHP provides a thoughtful, proactive, and comprehensive basis for planning, platting, and transportation infrastructure investment decisions; and

WHEREAS: the OSHP will help preserve future road corridors; reducing right-of-way costs by minimizing building conflicts and addressing road network deficiencies before they happen; and

WHEREAS: implementation of the OSHP will enhance road safety, reduce congestion, reduce negative impacts on neighborhoods, and lower transportation costs; and
WHEREAS: future road corridors and upgrades to existing roads should be planned early in order to ensure a safe and efficient road network.

NOW, THEREFORE, BE IT RESOLVED: The Local Road Service Area Advisory Board hereby recommends the adoption of the 2022 Matanuska-Susitna Borough Official Streets and Highways Plan Update.

Adopted by unanimous vote on _____

Stephen Edwards_____ Board Chair

Mike Shields _____ Board Secretary

CODE ORDINANCE

Sponsored by:
Introduced:
Public Hearing:
Action:

MATANUSKA-SUSITNA BOROUGH
ORDINANCE SERIAL NO. 22-063

AN ORDINANCE OF THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY REPEALING MSB 15.30 OFFICIAL STREETS AND HIGHWAYS PLAN MAP, ELIMINATING AN UNUSED DEFINITION WITHIN MSB 17.55, ADDING THE OFFICIAL STREETS AND HIGHWAYS PLAN TO MSB 15.24 ASSEMBLY; ZONING FUNCTIONS, AND ADOPTING THE 2022 OFFICIAL STREETS AND HIGHWAYS PLAN UPDATE.

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. Repeal of chapter. MSB 15.30 OFFICIAL STREETS AND HIGHWAYS PLAN MAP is hereby repealed in its entirety.

Section 3. Amendment of Subsection. MSB 17.55.004(A) is hereby amended as follows:

[• "OFFICIAL STREETS AND HIGHWAY PLAN" MEANS A MAP AND ATTENDANT DOCUMENT DEPICTING THE PROPOSED SYSTEM OF FREEWAY, ARTERIAL, AND COLLECTOR STREETS IN THE BOROUGH, AS ADOPTED BY THE PLANNING COMMISSION AND BY THE ASSEMBLY, AND WHICH IS ON FILE IN THE PLANNING DEPARTMENT OFFICE, TOGETHER WITH ALL AMENDMENTS THERETO SUBSEQUENTLY ADOPTED.]

Section 4. Amendment of Subsection. MSB 15.24.030(B) is hereby amended as follows:

(46) Official Streets and Highways Plan, adopted 2022.

Section 5. Effective date. This ordinance shall take effect upon adoption.

ADOPTED by the Matanuska-Susitna Borough Assembly this - day of -, 2022.

EDNA DeVRIES, Borough Mayor

ATTEST:

LONNIE R. McKECHNIE, CMC, Borough Clerk

(SEAL)

By: Adam Bradway
Introduced: April 4, 2022
Public Hearing: April, 18 2022
Action:

MATANUSKA-SUSITNA BOROUGH
PLANNING COMMISSION RESOLUTION NO. PC 22-13

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH PLANNING COMMISSION RECOMMENDING ADOPTION OF THE MATANUSKA-SUSITNA BOROUGH 2022 OFFICIAL STREETS AND HIGHWAYS PLAN UPDATE.

WHEREAS, the Official Streets and Highways Plan (OSHP) is a transportation planning tool that identifies future road corridors and road upgrades necessary to accommodate the Borough's growing population and its transportation needs; and

WHEREAS, the OSHP is a part of the Borough's Long Range Transportation Plan, is map-based, and focuses on road infrastructure needs; and

WHEREAS, the OSHP will provide a thoughtful, proactive, and comprehensive basis for planning, platting, and transportation decisions; and

WHEREAS, the OSHP will help the Borough preserve future road corridors, reducing right-of-way costs and addressing road network deficiencies before they happen; and

WHEREAS, the OSHP will enhance safety, reduce congestion, reduce negative impacts on neighborhoods, and lower transportation costs;

WHERE AS, future road corridors and upgrades to existing roads should be planned early in order to ensure a safe and efficient road network.

NOW, THEREFORE, BE IT RESOLVED, that the Matanuska-Susitna Borough Planning Commission hereby recommends adoption of the 2022 Matanuska-Susitna Borough Official Streets and Highways Plan Update.

ADOPTED by the Matanuska-Susitna Borough Planning Commission this -- day of --, 2022.

_____
Stafford Glashan, Chair

ATTEST

_____
KAROL RIESE, Planning Clerk

(SEAL)

YES:

NO:

INTRODUCTION FOR LEGISLATIVE PUBLIC HEARING

RESOLUTION 22-18
MSB Subdivision Construction Manual Update

(Pages 139-274)

INTRODUCTION FOR LEGISLATIVE PUBLIC HEARING

Matanuska-Susitna Borough
Public Works Department

2022
Subdivision Construction Manual

(Roads, Drainage, and Utilities)

Adopted June 21, 2022

Effective June 21, 2022

CLEAN COPY

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Acronyms & Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
ADFG	Alaska Department of Fish and Game
ADT	Average Daily Traffic
ADOT&PF	Alaska Department of Transportation and Public Facilities
ATM	Alaska Test Method
cfs	cubic feet per second
CMP	Corrugated metal pipe
DPW	Department of Public Works of the Matanuska-Susitna Borough
FHWA	Federal Highway Administration
ft	feet
h:v	horizontal to vertical
IDF	Intensity-Duration-Frequency
IFC	International Fire Code
in	inches
ITE	Institute of Transportation Engineers
LEW	Low Erosivity Waiver
LRTP	Long Range Transportation Plan
mph	miles per hour
MSB	Matanuska-Susitna Borough
N/A	not applicable
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NTP	notice to proceed
OHWM	ordinary high water mark
OSHP	Official Streets and Highways Plan
PUE	public use easement
ROW	right-of-way
SCS	Soil Conservation Service
VPD	vehicles per day

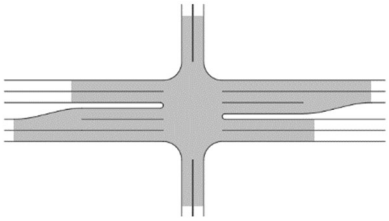
Definitions

Access Point	The location along a road at which a driveway or road intersects.
Arterial	A road that provides a high level of mobility within the transportation network. Arterials have managed access with a minimal number of intersections or interchanges.
Average Daily Traffic	The total number of vehicle trips during a given time period (in whole days greater than one day and less than one year) divided by the number of days in that time period.
Backslope	On a roadway section in a cut, the portion of the roadside that slopes up from the roadside ditch and away from the roadway to the top of the cut, see Figure A-3.
Catchment Area	The total area contributing stormwater runoff to a particular point, site, or structure.
Collector	A road that links local roads with arterials and performs some duties of each. Collectors have managed access with a moderate number of intersections and driveways.
Curve Return	The curve located at the corner of an intersection, connecting the roadway edge of one road to the roadway edge of an intersecting road or driveway.
Detention	The temporary storage of runoff, for later controlled release.
Drainage Pattern	The configuration of a drainage system including manmade and natural features within a catchment area.
Driveway	A vehicular access way between a road and a parking area within a lot or property.
Embankment	Earthen material that is placed and compacted for the purpose of raising the grade of a roadway.
Engineer	An individual who is registered as a Professional Civil Engineer in the State of Alaska.

Feasible Reasonable and capable of being done or carried out.

Foreslope On a roadway section, the portion of the roadside that slopes down and away from the roadway, see Figure A-3.

Functional Area The physical area of an intersection and the area extending both upstream and downstream which includes perception reaction distance, maneuver distance, and storage length.



Intersection The general area where two or more roads join or cross.

Local Road A road that provides access to abutting property, rather than to serve through traffic. Local roads are not access controlled and can have frequent intersections and driveways.

Lot Frontage A property line that abuts the right-of-way that provides access to the lot.

Ordinary High Water Mark The elevation marking the highest water level which has been maintained for a sufficient time to leave evidence upon the landscape. Generally, it is the point where the natural vegetation changes from predominately aquatic to upland species.

Positive Drainage Clear, unobstructed flow of water away from structures and roadways without localized ponding.

Public Use Easement Provides the rights for ingress, egress, roadways, right-of-way, public utilities, and slopes for cuts and fills. The rights are to the public in general, and public utilities governed by permits required under federal, state, and local laws and regulations. May also be known as a public access easement or right-of-way.

Regulated Stream Any watercourse along which the flood hazard areas have been mapped and approved by the Federal Emergency Management Agency; any stream which harbors fish, as determined by the Alaska Department of Fish and Game; or any stream designated as regulated by MSB.

Retention The prevention of runoff. Stormwater, which is retained, remains indefinitely, with the exception of the volume lost to evaporation, plant uptake, or infiltration.

Right-of-way	A strip of land reserved, used, or to be used for a street, alley, walkway, airport, railroad, or other public or private purpose.
Road	A general term denoting a public thoroughfare used, or intended to be used, for passage or travel.
Road Prism	The foundation that supports the roadway; see Figure A-3.
Roadway	The portion of a road that includes driving lanes and shoulders, see Figure A-3.
Segment	A portion of road between two significant intersections or an intersection and its terminus.
Shoulder	The portion of a roadway contiguous to any traveled way for lateral support of surface courses, see Figure A-3.
Street	A general term usually denoting an urban or suburban road.
Stub	A right-of-way or road segment that is planned to be extended, typically short in length, which terminates at the boundary of a subdivision or masterplan phase.
T-intersection	A three leg intersection in the form of a “T”.
Through Street	A road given preferential right of way; roads which intersect a through street are controlled, such as with a stop sign or yield sign.
Water Body	A permanent or temporary area of standing or flowing water. Water depth is such that water, and not air, is the principal medium in which organisms live. Water bodies include, but are not limited to: lakes, ponds, streams, rivers, sloughs, and all salt water bodies.

Introduction

This manual is intended to accomplish the following goals:

(1) To establish standards for the design and construction of transportation networks throughout the Matanuska-Susitna Borough.
(2) To provide information and guidelines for the design, construction, and upgrade of roads, drainage facilities, and utilities within rights-of-way.
(3) To develop and maintain a safer and more efficient transportation system.
(4) To minimize operation & maintenance efforts.

Section A. Street Design

A01 General

These provisions establish appropriate standards for the design of roads. The purpose of these provisions is to:

(1) promote the safety and convenience of motorized and non-motorized traffic;
(2) promote the safety of neighborhood residents;
(3) minimize the long term costs for maintenance and repair;
(4) protect the residential qualities of neighborhoods by limiting traffic volume, speed, noise, and air pollution;
(5) encourage the efficient use of land; and
(6) minimize the cost of road construction and thereby restrain the rise in housing costs.

A02 Applicability

These standards apply to the design and construction of all subdivision improvements within the Matanuska-Susitna Borough (MSB), with the exception of those streets within cities that exercise road powers by ordinance.

A03 Street Classifications

Roads within the MSB fall within one of the following functional classifications, in accordance with the Long Range Transportation Plan (LRTP): Interstate, Principal Arterial, Minor Arterial, Major Collector, Minor Collector, and Local Road. Functional classification of a road is based on its function, design, and current potential use. The applicant may request review of the functional classification of existing roads abutting or affecting the design of a subdivision or land development during the preapplication process.

This section provides design guidance for roads falling under local road and minor collector functional classifications.

A03.1 Residential Street

Residential streets are local roads intended to carry the least amount of traffic at the lowest speed. The Residential street will provide the safest and most desirable environment for a residential neighborhood. Developments should be designed so that all, or the maximum number possible, of the homes will front on this class of street.

A03.2 Residential Subcollector Street

Residential Subcollector streets are local roads that carry more traffic than Residential streets.

A03.3 Residential Collector Street

Residential Collector streets are the highest order of residential streets and are a type of minor collector. In large residential developments, this class of street may be necessary to carry traffic from

one neighborhood to another or from the neighborhood to other areas in the community. Residential Collector streets should provide the fewest direct accesses as possible.

A03.4 Mountain Access Road

Mountain Access Roads may be used in areas where the average cross slope exceeds 15 percent or to traverse terrain features in excess of 25 percent. Maintenance of Mountain Access Roads will be at the discretion of Department of Public Works (DPW). School bus access should be considered as school bus routes require all grades less than 10 percent. Mountain Access Road standards allow for steeper grades and switchbacks, but should otherwise be designed to Residential, Residential Subcollector, or Residential Collector standard as required by this section.

A03.5 Pioneer Road

Pioneer Roads may only be used where allowed by MSB or other applicable code. This classification establishes minimum requirements for roads providing physical access, but should otherwise be designed to Residential, Residential Subcollector, or Residential Collector standard as required by this section. No MSB maintenance will be provided for Pioneer Roads. Pioneer roads may be constructed offset from the centerline of the right-of-way (ROW) to facilitate future expansion of the road.

A03.6 Alleys

Alleys are permitted provided legal and physical access conforms to MSB or other applicable code. No MSB maintenance will be provided for Alleys.

A03.7 Other Street Types

The above classifications may be further typed as one of the following streets. These other street types should be designed to Residential, Residential Subcollector, or Residential Collector standard as required by this section.

(a) Frontage Street – streets parallel and adjacent to a major road corridor which provides access to abutting properties and separation from through traffic. See Section B for additional design standards.
(b) Backage Street – streets that provide access to lots located between the Backage Street and a major road corridor. See Section B for additional design standards.
(c) Connector Street – the portion of a street that connects a frontage or backage street to a major road corridor. See Section B for additional design standards.
(d) Divided Street – streets may be divided for the purpose of accommodating environmental features or avoiding excessive grading. In such a case, the design standards shall be applied to the appropriate street classification and a single lane width with a shoulder on each side.

A04 Access Criteria

A04.1 Residential Street

(a) A Residential street provides access to abutting properties.

(b) The anticipated average daily traffic (ADT) volume on Residential streets shall not exceed 400. A loop street shall be designed such that the anticipated ADT at each terminus of the loop street does not exceed 400, see Figure A-1.

(c) Residential streets may intersect or take access from an equal or higher classification street. Both ends of a loop Residential street are encouraged to intersect the same collecting street and be designed to discourage through traffic.

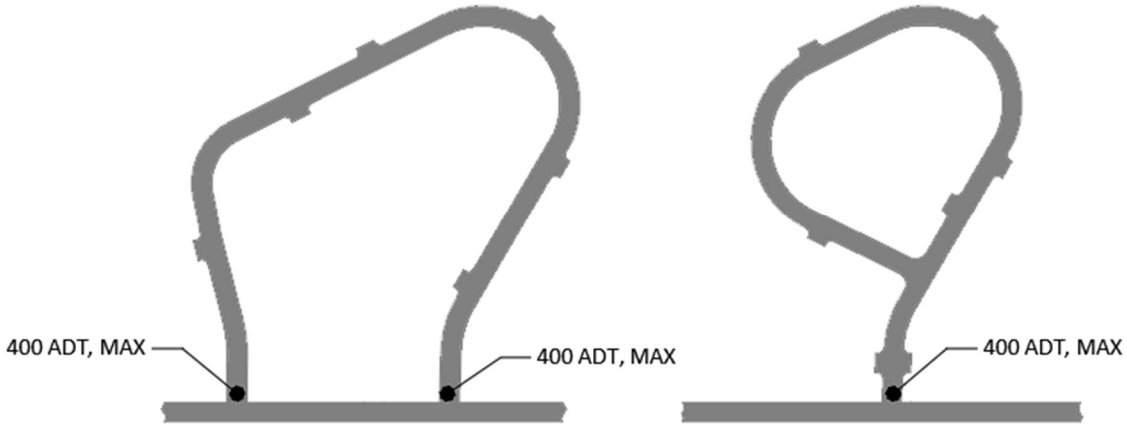


Figure A-1: Loop Residential Streets

A04.2 Residential Subcollector Street

(a) A Residential Subcollector street provides access to abutting properties and may also move traffic from Residential streets that intersect it. Residential Subcollector streets are required when the ADT anticipated on the street will exceed the limits for Residential.

(b) The anticipated ADT on Residential Subcollector streets shall not exceed 1000. A loop street shall be designed such that the anticipated ADT at each terminus of the loop street does not exceed 1000, see Figure A-2.

(c) Residential Subcollector streets shall be designed to exclude all external through traffic that has neither origin nor destination on the Residential Subcollector or its tributary Residential streets. Adjacent parcels may acquire access if proven landlocked by legal or terrain features or if such Residential Subcollector access can be demonstrated to be beneficial to the public.

(d) Residential Subcollector streets shall take access from a street of equal or higher classification.

(e) Traffic calming elements should be considered for the design of Residential Subcollectors, such as avoiding long, straight segments and reducing the length of roadway from farthest lot to a collector.

(f) Residential Subcollector streets shall be provided with two continuous moving lanes within which no parking is permitted.

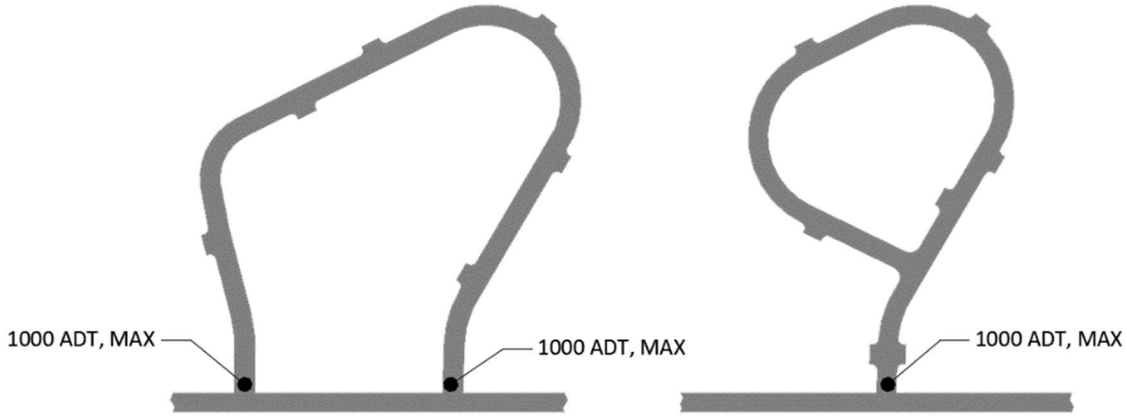


Figure A-2: Loop Residential Subcollector Streets

A04.3 Residential Collector Street

(a) A Residential Collector street carries residential neighborhood traffic, but restricts or limits direct residential access. Residential Collector streets are required when the ADT anticipated on the street will exceed the limits for Residential Subcollectors.

(b) Residential Collector streets should be designed to have as few residential lots directly fronting them as possible. When efficient subdivision design or physical constraints make this not possible, the average access point spacing shall be a minimum of 250 feet. Average access point spacing is calculated per segment and is equal to the segment length divided by the number of potential access points on both sides of the street. Undeveloped lots with only access to Residential Collector streets are counted as having at least one access point. When the average access point spacing on a segment of an existing Residential Collector street is less than 250 feet, the average access point spacing shall not decrease due to the subdivision.

(c) Space shall be provided on these lots for turnaround so that vehicles will not have to back out onto Residential Collector streets.

(d) Proposed access points on Residential Collector streets shall be shown on the preliminary plat.

(e) Residential Collector streets shall be laid out to encourage connectivity within the transportation network.

(f) If the anticipated ADT will exceed 3000, the street shall be classified at a higher level than Residential Collector by DPW.

(g) Every Residential Collector shall be provided with no fewer than two access intersections to streets of equal or higher classification. If it is shown by the applicant that two accesses are not feasible, Residential Collector streets shall be provided with access to one street of equal or higher classification and be designed to accommodate a future second connection to a street of equal or higher classification, or otherwise be approved by DPW.

(h) All Residential Collector streets shall be provided with two continuous moving lanes within which no parking shall be permitted.

A04.4 Access through Existing Streets

The anticipated ADT on existing Residential streets used to access a proposed subdivision may exceed 400, but shall not exceed 800, if:

(a) alternate road corridors are not available or feasible;
(b) horizontal geometry or access density prohibits upgrade to a higher standard road; and
(c) the traffic impacts are mitigated.

A04.5 Traffic Impact Mitigation for Access through Existing Streets

Traffic impact mitigation on existing residential streets can include but is not limited to:

(a) Traffic control devices (signage, striping) on segments where potential ADT exceeds 440;
(b) LED street lighting, speed feedback signs, widened shoulders, inside corner widening for offtracking, or all-way stop intersections on segments where potential ADT exceeds 600.

A04.6 Commercial Uses on Residential and Residential Subcollector Streets

Exceptions to the ADT limits on Residential and Residential Subcollector streets, as set forth in A04.1 and A04.2, respectively, may be allowed for commercial uses that access the first 600 feet of such streets that intersect a Collector standard road or higher classification, as measured from the intersection point. The affected portion of the street and intersection shall be constructed to a higher standard as needed to accommodate the anticipated commercial traffic.

A05 Design Criteria

The design criteria for Residential, Residential Subcollector, and Residential Collector streets and Mountain Access and Pioneer roads are set forth in Table A-1. Any unspecified design criteria shall meet or exceed the design criteria for the roadway design speed in the latest edition of *A Policy on Geometric Design of Highways and Streets* (AASHTO).

Table A-1: Design Criteria

	Unit	Residential	Residential Subcollector	Residential Collector	Mountain Access[1]	Pioneer[1]
Average Daily Traffic	VPD	≤400	401 – 1000	1001 – 3000	–	–
Typical Section						
ROW Width[2]	ft	60	60	60	60	60
Lane Width	ft	10	10	11	10	10
Standard Gravel Shoulder Width	ft	2	2	2	0[3]	0[3]
Shared Paved Shoulder Width[4]	ft	4	4	6	–	–
Roadway Width	ft	24	24	26	20[3]	20
Foreslope[5]	h:v	3:1	3:1	4:1	2:1	3:1
Backslope[6]	h:v	2:1	2:1	2:1	2:1[7]	2:1
Crown, gravel	%	3	3	3	3	3
Crown, pavement	%	2	2	2	2	–
Engineering Criteria						
Design Speed	mph	25	30	35	–	–
Posted Speed	mph	20	25	30	–	–
Stopping Sight Distance	ft	155	200	250	–	–
Horizontal Alignment						
Minimum Centerline Radius	ft	225	350	550	–[8]	–
with DPW Approval	ft	190	275	400	–	–
Minimum Tangent Between Curves	ft	100	100	100	100	100
Maximum superelevation	%	N/A	N/A	4	N/A	N/A

[1] Where a value is not given, Mountain Access and Pioneer Roads shall meet the criteria of the anticipated street classification.
[2] Minimum ROW required for new dedications; width of existing ROW may vary.
[3] Where grades exceed 7 percent, the shoulder width shall be 2 feet for a total roadway width of 24 feet.
[4] An optional paved shoulder may be provided on one or both sides of paved streets for non-motorized shared use.
[5] Slope for the first 7.5 feet from the shoulder; may be steepened to 2:1 thereafter. Install guardrail when required by the latest edition of the *Roadside Design Guide* (AASHTO).
[6] 2:1 Back slopes may be steepened to 1.5:1 if cuts exceed 5 feet and appropriate slope stabilization, as determined by the design engineer, is used. Retaining walls may be used to replace or augment backslopes.
[7] Or backslope recommended by the design engineer based on actual conditions.
[8] Switch backs are allowed provided cul-de-sac criteria is met or turning radius is 40 feet with a 2% grade.

	Unit	Residential	Residential Subcollector	Residential Collector	Mountain Access[1]	Pioneer[1]
Vertical Alignment						
Maximum Centerline Grade	%	10	10	10	15[9]	10
Minimum Rate of Vertical Curvature[10]; Crest		12	19	29	–	–
Minimum Rate of Vertical Curvature [10]; Sag		26	37	49	–	–
Minimum Flow Line Grades	%	0.5	0.5	0.5	1.0	0.5
Intersections						
Minimum ROW Corner Radius	ft	30	30	30	30	30
Minimum Curve Return Radius[11]	ft	20	25	30	–	–
Maximum Grade on through street within 50 feet of intersection	%	7	7	4	9	7

A06 Typical Section

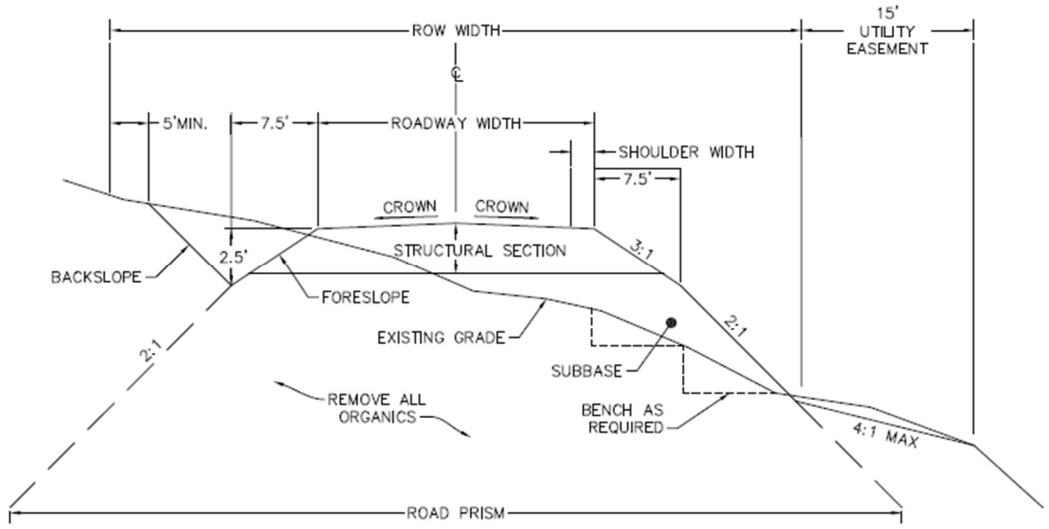


Figure A-3: Typical Section

[9] Up to 15% grade with no more than 200 linear feet of over 10% grade with a minimum of 100 linear feet of less than 10% grade for runout between steeper sections. Maximum grade in a horizontal curve is 10%.
[10] Rate of vertical curvature (K) is the length of curve (L) in feet per percent algebraic difference in intersecting grades (A); K = L / A
[11] 40-foot minimum curve return radius at intersections with higher order streets.

A07 Turnarounds

Streets with only one inlet shall terminate with a constructed turnaround, unless otherwise provided by A08.2.

A07.1 Cul-de-sac Turnarounds

(a) A cul-de-sac turnaround with a drivable surface diameter (shoulder to shoulder) of 85 feet centered in a ROW diameter of 120 feet shall be provided at the terminus of Residential and Residential Subcollector streets.

(b) Cul-de-sac turnarounds shall meet the configuration and dimensions shown in Figure A-4.

(c) The grade throughout the surface of a cul-de-sac, as depicted in the shaded portion of Figure A-4, shall not exceed 4 percent.

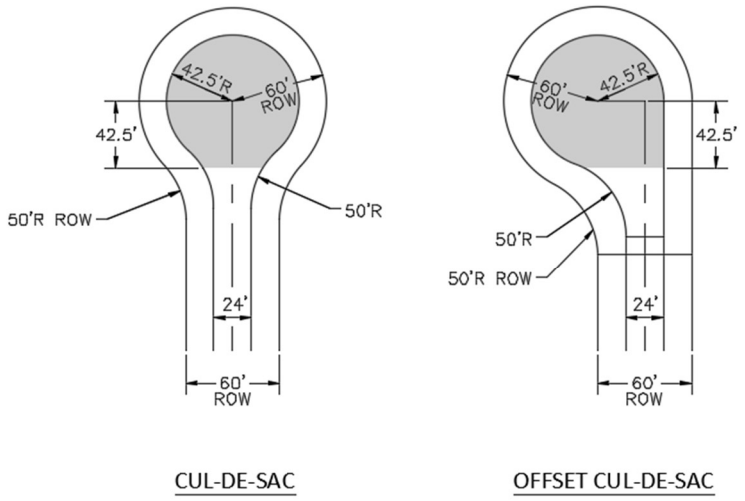


Figure A-4: Cul-de-sac Options

A07.2 Alternate Turnarounds

(a) DPW may permit a street to terminate with an alternative turnaround that meets fire code when such a design is required by extreme environmental or topographical conditions, unusual or irregularly shaped tract boundaries, or when the location of the turnaround is intended to become an intersection.

(b) Alternate turnarounds shall meet the configuration and dimensions shown in Figure A-5.

(c) The grade throughout the turnaround surface, as depicted in the shaded portion of Figure A-5, shall not exceed 4 percent.

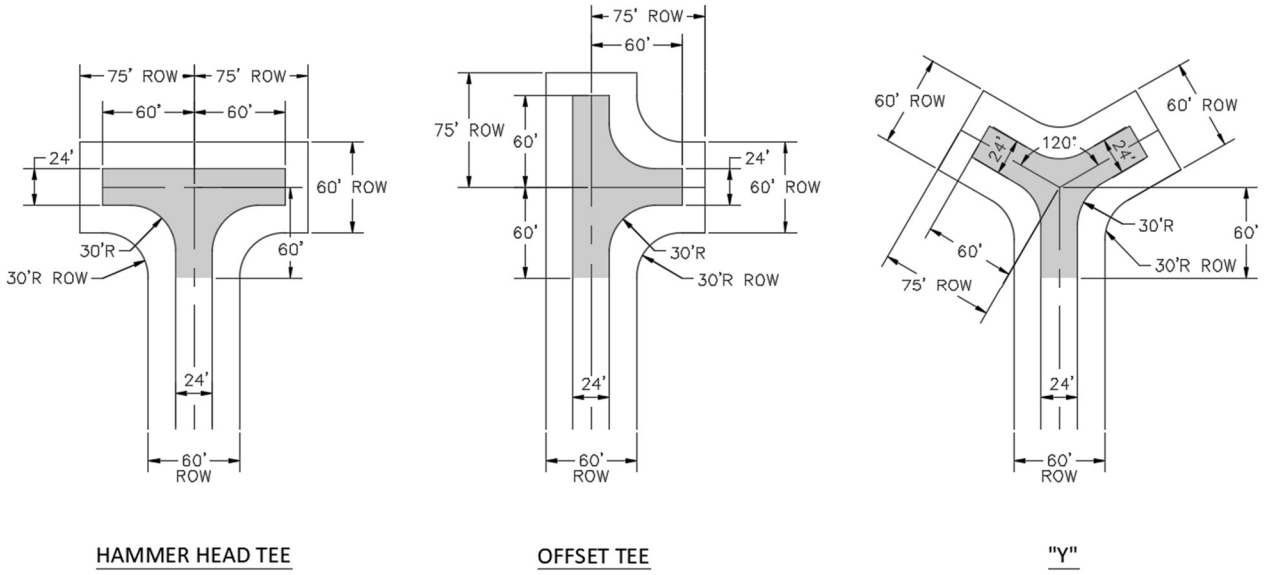


Figure A-5: Alternate Turnarounds

A08 Stub Streets

A08.1 Stub Street Construction

No construction is required if physical access is provided to all lots by adjoining streets as required by MSB or other applicable code.

A08.2 Temporary Turnarounds

Stub streets requiring construction that exceed 200 feet in length (measured from the intersection point to the end of required construction) will meet the requirements ofA07.1 or A07.2. A temporary easement will be provided for the turnaround, which will automatically terminate upon extension of the street and physical removal of the turnaround. The centerline grade on stub streets without turnarounds shall not exceed 4%.

A09 Intersections

A09.1 Intersection Sight Distance

(a) Whenever a proposed street intersects an existing or proposed street of higher order, the street of lower order shall be made a stop controlled street, unless alternate intersection control is used as allowed by this subsection.

(b) Stop controlled streets shall be designed to provide intersection sight distance as specified in this subsection, Table A-2, and Figure A-6.

(c) The entire area of the intersection sight triangles shown in Figure A-6 shall be designed to provide a clear 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.

(d) Sight distances less than the recommended shall only be used when there are topographical or other physical constraints outside of the applicant's control.

(e) The minimum sight distances listed in Table A-2 are for a passenger car to turn onto a two-lane undivided street and minor road approach grades of 3 percent or less. For other conditions, the minimum sight distance should be calculated by the applicant's engineer according to *A Policy on Geometric Design of Highways and Streets* (AASHTO).

(f) Sight distances less than the minimum, where no other options exist, will require alternate intersection control or warning signs as determined by the applicant's engineer and approved by DPW.

(g) Intersection sight triangles shall be located in their entirety within ROW or a sight distance maintenance easement.

(h) Yield controlled intersections shall conform to sight distance requirements according to *A Policy on Geometric Design of Highways and Streets* (AASHTO).

(i) Intersections with state or other municipal ROW are subject to their respective requirements and review.

Table A-2: Recommended and Minimum Intersection Sight Distance

Design Speed or Posted Speed Limit (whichever is greater)	S_d Recommended	S_d Minimum
MPH	ft	ft
25	370	280
30	450	335
35	580	390
40	750	445
45	950	500
50	1180	555
55	1450	610
60	1750	665
65	2100	720

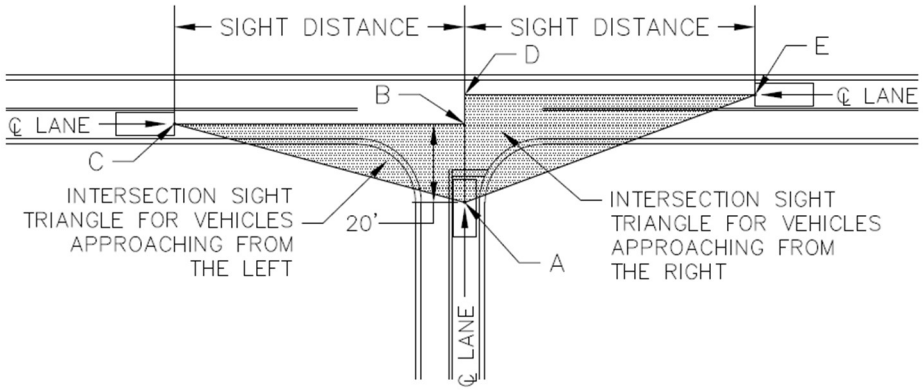


Figure A-6: Intersection Sight Distance

A09.2 Intersection Spacing

(a) Minimum centerline to centerline distance between intersections on the same side or opposing sides of the through street shall be:
  (1) 155 feet on Residential streets;
  (2) 200 feet on Residential Subcollector streets;
  (3) 300 feet on Residential Collectors and Minor Collectors; or
  (4) 650 feet on higher order streets where other access standards do not exist.

(b) If the above spacing along the through street cannot be met, intersections shall be aligned directly across from each other. Intersections on opposing sides of the through street may be offset up to 30 feet, with a preference for a left-right offset, as shown in Figure A-7.

(c) Where pre-existing conditions do not allow for the above spacing and no other legal access exists, alternate spacing or offset most closely meeting (a) or (b) above may be allowed.

(d) Additional intersections should be avoided within the functional area of major intersections with turning bays and approach tapers. Exceptions require DPW approval based upon constraints and no other feasible alternatives.

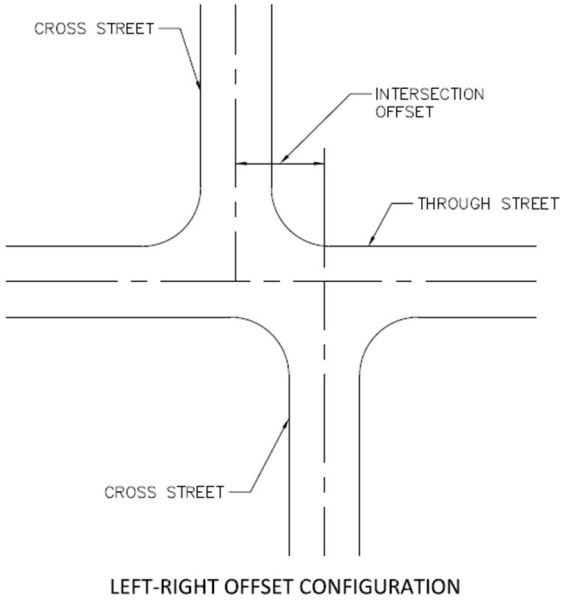


Figure A-7: Intersection Offset

A09.3 Minimum Intersection Angle

Streets should intersect with a straight segment at an angle as close to 90° as possible, but no less than 70°, for a minimum of 75 feet from the intersection point, as shown in Figure A-8.

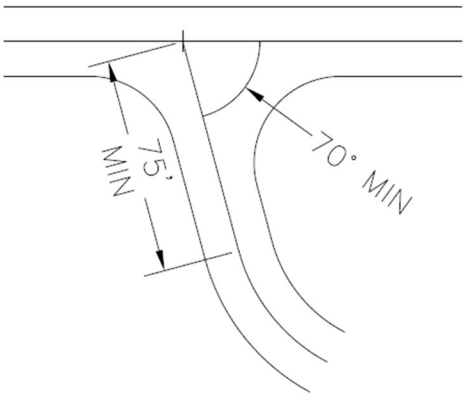


Figure A-8: Intersection Angle

A09.4 Landing

Controlled streets shall be provided with a typical 30-foot landing, conforming to Figure A-9, at its approach to a through street. The landing shall be sloped to match the crown of the through street. Vertical curves shall not be located in the landing to the extent feasible. Where a negative slope away from the through street is not feasible due to topographical constraints, the road shall be constructed in a manner that prevents water from flowing onto the through street.

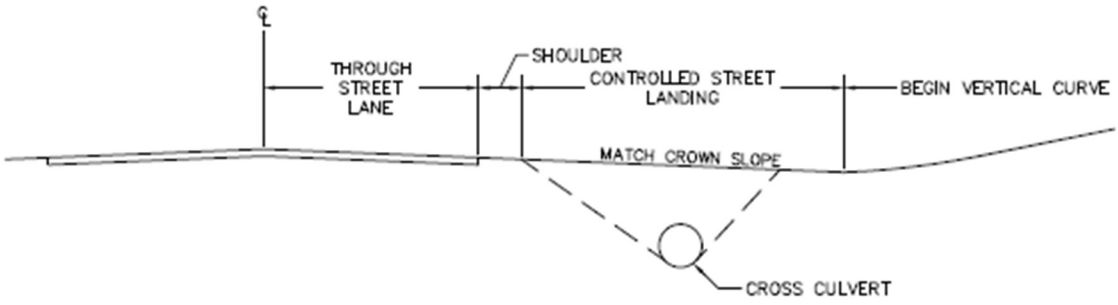


Figure A-9: Controlled Street Landing Profile

A09.5 Paved Apron

A proposed street which intersects an existing paved street shall be provided with a paved apron 40 feet from the edge of the existing pavement.

A10 Driveways

Driveways are not usually required to be constructed within the ROW at time of road construction. However, if an applicant chooses to construct driveways, driveway permits are required. The applicant may permit all driveways with one application. A driveway permit application can be obtained from the MSB Permit Center. Driveways onto state or other municipal ROW are subject to their respective requirements and review.

A11 Trailhead

Trailhead parking lot layout shall conform to applicable local, state, and federal requirements.

A12 Bicycle and Pedestrian Paths

Bicycle and pedestrian paths constructed within public ROW shall conform to the current edition of *Guide for the Development of Bicycle Facilities* (AASHTO), and any other applicable local, state, and federal requirements.

A13 Signage

Signs shall be provided and installed by the applicant in conformance with the latest edition of the *Alaska Traffic Manual* (ADOT&PF) and the *Alaska Sign Design Specifications* (ADOT&PF) prior to plat recordation.

(a) Each street within a subdivision shall be identified and signed at its point of egress and ingress. Cul-de-sac streets will be signed and identified at their point of ingress
(b) Intersection control signs shall be provided at designated intersections within the confines of the subdivision and at the intersection with the access road, if applicable.
(c) Intersection control signs shall be located such that they are visible to approaching traffic and near corresponding stop or yield bars.
(d) Speed limit signs shall be provided at entrances to the subdivision, where the speed limit changes, and at a minimum of one-mile intervals throughout the subdivision.
(e) If a constructed stub street provides access to two or fewer lots and has no turnarounds a sign indicating a dead-end street shall be posted.
(f) If a dedicated stub street is not constructed, no signs are required.
(g) Install signs according to the criteria in Figure A-10, Figure A-11, and Figure A-12.
(h) Signs within state or other municipal ROW are subject to their respective requirements and review.

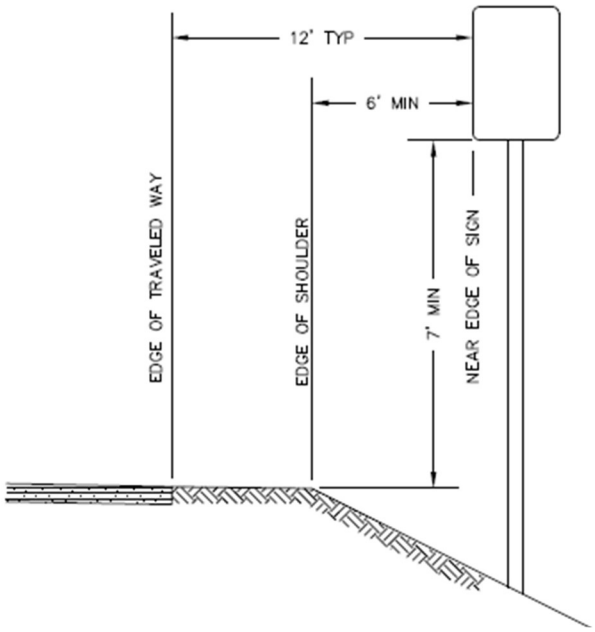


Figure A-10: Sign Placement

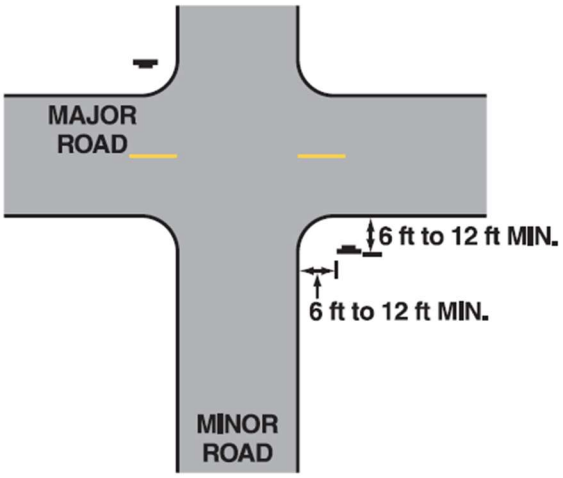
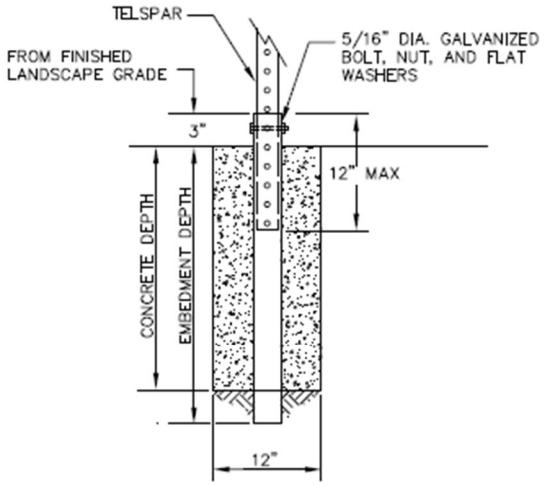


Figure A-11: Stop Sign Location



PERFORATED STEEL TUBES (P.S.T.) (12ga. – .105" Wall Thickness)			
SIGN SURFACE AREA SQ. FT.	POST SIZE	EMBEDMENT DEPTH	CONCRETE DEPTH
7' OR LESS	2" X 2"	27"	24"
GREATER THAN 7'	2 ½" X 2 ½ "	33"	30"

Figure A-12: Concrete Foundation for Sign Post

A14 Railroad Crossings

All access requiring a crossing of the Alaska Railroad shall be subject to the *Alaska Policy on Railroad/Highway Crossings* (Alaska Railroad).

A15 Average Daily Traffic

(a) The following formula shall be used to determine the required classification of streets:
ADT = Number of lots x 10 for single-family residential use.

(b) See Section G for other land uses.

(c) For subdivisions of five or more lots, submit potential ADT calculations for the following locations with the preliminary plat:

(1) at each intersection within the subdivision,

(2) at each intersection en route to an existing Residential Collector street or higher classification, and

(3) at an existing Residential Collector street or higher classification.

A16 Design Deviations

Design deviations will be considered to address extenuating circumstances including but not limited to: existing substandard ROW, environmental conditions, or existing utilities or other structures. Design deviation requests shall be in writing and contain supporting information, justification, and suggested solutions. Design deviations may be allowed by DPW only for matters that do not fall under the jurisdiction of a Board or Commission. In no circumstances will a roadway width less than 20 feet or foreslopes steeper than 2:1 be allowed. Residential Collector streets shall be no less than 24 feet wide.

Section B. Major Road Corridors

B01 General

Major road corridors include major collectors, arterials, and interstates. This section provides references to and guidelines for the design and construction of major road corridors within the MSB.

B02 Right-of-way and Surface Widths

Table B-1: ROW and Surface Widths

Classification	Minimum ROW Width (ft)	Standard Lane Width (ft)	Number of Lanes	Shoulder Width (ft)
Major Collector	80	12	2 – 3	4
Arterial	100	12	3 – 4	4 – 8
Interstate	200	12	4 – 6	12

B03 Frontage, Backage, and Connector Street Standards

Subdivisions adjacent to planned or existing major road corridors shall plan for future frontage or backage streets when any of the following conditions apply, unless it is shown by the applicant to be not necessary or feasible for future development and public safety with no written objection from the road authority.

(a) Subdivisions accessing roads that are classified by ADOT&PF as Interstates.
(b) Subdivisions accessing roads that are or are projected to grow above 20,000 vehicles per day (VPD).
(c) Subdivisions accessing roads that are or are projected to have four or more lanes or median control per the LRTP or Official Streets and Highways Plan (OSHP).
(d) Subdivisions that require a second access route.
(e) To gain access to an existing or planned signal.
(f) Where access to a minor arterial or collector as a connector road is feasible.
(g) When there are existing or platted frontage or backage routes adjacent to the property.

B03.1 Separation Distances

Minimum ROW to ROW separation distance between major corridors and frontage or backage streets shall be:

(a) 0 feet for locations with no connector street to the major road corridor;
(b) 100 feet for locations with a connector street to the major road corridor that lie between section lines and planned or existing intersections with other major road corridors;
(c) 300 feet for locations where the connector street to the major road corridor is on a section line or planned or existing major road corridor.

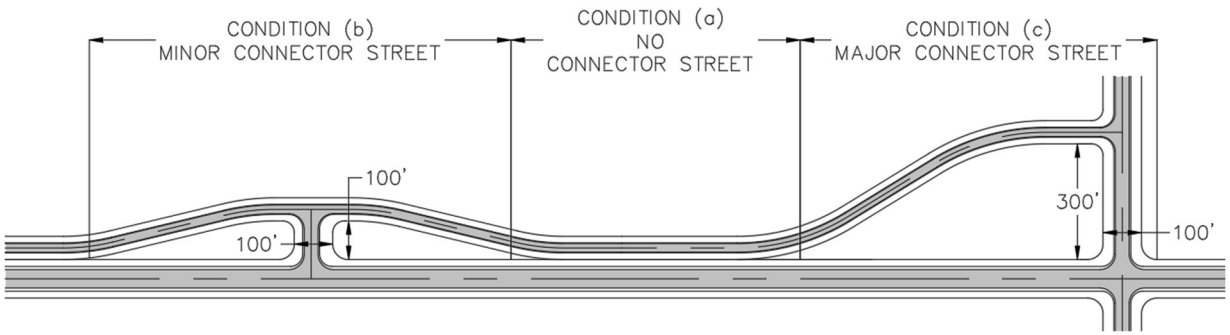


Figure B-1: Frontage Street Configurations

B03.2 Design Standards

(a) Frontage streets
  (1) Minimum centerline radii may be reduced near intersections with through connector streets.

(b) Connector streets
  (1) 100-foot ROW width desirable.
  (2) Minimum 40-foot radius curve returns at the major road corridor.
  (3) Minimum 4-foot wide shoulders for 100 feet from the edge of roadway of the major road corridor.
  (4) Minimal direct access.

B03.3 Dedication and Setbacks

Dedicate ROW or additional building setbacks to allow for the frontage, backage, and connector street standards in this manual. The applicant shall submit design information sufficient to demonstrate that frontage, backage, and connector street dedications or building setbacks are in a practical location where road construction is feasible in accordance with this manual. The applicant shall be required to submit plan, profile, and cross-sections for the sections of road where existing grades along the proposed route exceed 10 percent, existing cross slopes exceed 15 percent, or if existing utilities or other physical features appear to create impediments to a road design meeting standards of this manual. Road plan and profile shall extend at least 300 linear feet on either side of the subject sections or to intersecting or adjacent ROW within 500 linear feet.

B04 Access Standards

(a) The average access point spacing on major road corridors, where other access standards do not exist, shall not exceed the minimums listed in Table B-2, based on the posted speed limit. Average access point spacing is calculated per segment and is equal to the segment length divided by the number of access points on both sides of the street. Undeveloped lots with only access to the major road corridor are counted as having at least one access point.

(b) When the average access point spacing on a segment of an existing major road corridor is less than the minimum listed in Table B-2, the average access point spacing shall not decrease due to the subdivision.

Table B-2: Average Access Point Spacing

Posted Speed Limit (mph)	Minimum Average Access Point Spacing (feet)
30	250
35	300
40	360
45	425
50	495
55	570

B05 Future Corridors

Subdivisions shall be designed in a manner that does not conflict with the LRTP or the OSHP. Subdivisions containing future road corridors identified in the LRTP or OSHP are encouraged to include the future road corridor as part of the road layout of the subdivision.

Building setbacks prohibiting the location of any permanent structure within the future corridor may be voluntarily designated on the final plat. The area within the future road corridor shall be excluded from usable septic area calculations. The area within the future road corridor and building setbacks shall be excluded from usable building calculations.

B06 References

The following publications shall be used for design and construction standards of these classes of streets that are not otherwise established herein:

(a) *A Policy on Geometric Design of Highways and Streets*, AASHTO (current edition).
(b) *Standard Specifications for Highway Construction*, ADOT&PF (current edition);
(c) *Standard Modifications to the ADOT&PF Standard Specifications for Highway Construction*, MSB (latest revision)
(d) *Alaska Highway Preconstruction Manual*, ADOT&PF (latest revision)

Section C. Construction Requirements

C01 General

This section establishes minimum construction requirements. Prior to any ground disturbing activities, call the Alaska Dig Line for utility locates in accordance with AS 42.30.400.

C02 Road Construction

C02.1 Clearing

Cut and dispose of all trees, down timber, stumps, brush, bushes, and debris. Cut trees and brush to a height of not more than 6 inches above the surrounding ground. Clear the ROW, slope easements, and sight distance triangles. Where ROW exceeds 60 feet, clear a minimum of 60 feet. Clear utility easements, if used, for utilities constructed with the development.

C02.2 Grubbing

Remove and dispose of all stumps, roots, moss, grass, turf, debris, or other deleterious material within the fill and cut catch limits of the road plus 5 feet on each side, within the ROW, and cleared utility easements for underground utilities.

C02.3 Disposal

Dispose of clearing and grubbing debris in an area designated by the applicant outside of all ROW, platted utility easements, and platted private road corridors. Organic debris 3 inches in diameter by 8 inches long, or smaller, may be left in place, outside of the road prism.

C02.4 Slit Trenches

Slit trenches are not allowed in the ROW. Utility easements may be used as a borrow source above a 2:1 extension of the road prism, as shown in Figure A-3. Topsoil or other organic non-deleterious material may be disposed within the utility easement. Compact the disposal area with heavy equipment and grade the surface with positive drainage no steeper than 4:1 and no lower than the ditch line. Submit an as-built drawing showing the horizontal locations of borrow extraction along the road corridor with the Final Report.

C02.5 Embankment Construction

(a) Construct the road with the required structural section, see Figure C-1, and dimensions, see Table A-1 and Figure A-3, as determined by its classification.

(b) Prepare the subgrade. Remove all organics from the area below the road prism and dispose in locations where embankment is not proposed. Bench existing slopes that are steeper than 4:1, measured at a right angle to the roadway, where roadway embankment is to be placed.

(c) Place material meeting, or verify in-situ material meets, the requirements for Subbase specified in subsection C07 to a minimum depth of 20 inches with the upper 6 inches having no material with

a diameter larger than 6 inches. Place embankment in horizontal layers, as directed by the engineer, for the full width of the embankment and compact as specified before the next lift is placed.

(d) Place 4 inches of Surface Course meeting the requirements specified in subsection C07. Finish with a 3 percent crown, and compact as specified.

(e) For Residential and Residential Subcollector standard roads, compact all embankment to not less than 90 percent of the maximum dry density at the optimum moisture content and the top 24 inches to not less than 95 percent of the maximum dry density at the optimum moisture content. For Residential Collector standard roads, compact all embankment to not less than 95 percent of the maximum dry density at the optimum moisture content.

(f) Optimum moisture and maximum dry density will be determined by Alaska Test Method (ATM) 207 and ATM 212 or alternative methods approved by DPW.

(g) In-place density shall be determined by ATM 213 or alternative method approved by DPW. Compaction tests on the Subbase layer shall be taken at representative locations along the roadways as follows:

(1) a minimum of three;

(2) at least one per segment;

(3) one additional test per 1000 linear feet, or portion thereof, when the combined length of roadway exceeds 1000 linear feet;

(4) at least one out of every three within three feet of the shoulder, and the remainder in the center of a driving lane.

(h) For paved roadways, substitute Surface Course with a minimum of 2 inches of Base Course and 2 inches of HMA Type II, Class B, for Residential and Residential Subcollector streets, and a minimum of 3 inches of Base Course and 3 inches of HMA Type II, Class B, for Residential Collector Streets. Pavement shall meet MSB Special Provision Section 401 Hot Mix Asphalt Pavement. The width of the pavement shall be equal to two lane widths plus the shared paved shoulder width, if used, and finished with a 2 percent crown. Pavement edges shall be backed with additional Base Course graded and compacted flush with the pavement surface and tapered to the edge of the roadway. The pavement shall be washed or swept immediately following shouldering work.

(i) Remove all loose material exceeding 6 inches in diameter from the ditches and foreslopes. Where slopes are 3:1 or steeper and longer than 10 feet measured along the slope face, trackwalk perpendicular to the slope, or the equivalent, to form 1-inch wide grooves parallel to the road no more than 12 inches apart.

(j) Permanently stabilize backslopes 3:1 or steeper. Stabilization can be part of a subdivision agreement. Stabilization may be allowed to establish during the warranty period.

C02.6 Unsuitable Subgrades

When structurally unsuitable material such as peat, saturated material, or permafrost are present within the ROW, provide an appropriate structural design for approval by DPW, according to Section F, prior to construction. Place embankment to a depth that will produce a stable road surface with a final grade 18 inches above the surrounding ground.

C03 Roads Outside of a Road Service Area

Roads outside of a Road Service Area are not subject to the requirement for Surface Course.

C04 Pioneer Road Construction Requirements

Pioneer roads, whether proposed or existing, shall meet the requirements of Figure C-1, Table A-1, and Figure A-3. Place material meeting, or verify in-situ material meets, the requirements for Subbase specified in subsection C07 to a minimum depth of 12 inches. Additional road embankment may be required to provide a stable road surface. Surface Course is not required. Pioneer roads may be constructed offset from the centerline of the ROW to facilitate future expansion of the road. Cross drainage culverts, minimum 18 inch diameter, will be installed where determined necessary and 24 inch ditches will be provided for drainage.

C05 Winter Construction

Winter construction may be allowed. DPW will not accept any roads until all ground has thawed and any settlement areas corrected.

C06 Alternate Methods and Materials

Use of alternate materials and road construction methods that will more appropriately fit the conditions of the specific road locations, following general engineering practices, may be proposed by the applicant or their engineer in writing. Final acceptance of such plans must be approved by DPW.

C07 Materials

C07.1 Subbase

(a) Is aggregate containing no muck, frozen material, roots, sod, or other deleterious matter;
(b) has a plasticity index not greater than 6 as tested by ATM 204 and ATM 205; and
(c) meets the requirements of Table C-2, as determined by ATM 304.

C07.2 Base Course

(a) Crushed stone or crushed gravel, consisting of sound, rough, durable pebbles or rock fragments of uniform quality;
(b) free from clay balls, vegetable matter, or other deleterious matters;
(c) meets the requirements of Table C-1; and
(d) meets the requirements of Table C-2, as determined by ATM 304.

C07.3 Surface Course

(a) Is a screened or crushed gravel, consisting of sound, rough, durable pebbles or rock fragments of uniform quality;
(b) free from clay balls, vegetable matter, or other deleterious matters; and
(c) meets the requirements of Table C-2, as determined by ATM 304.

Table C-1: Aggregate Quality Properties for Base Course

Property	Test Method	Base Course
L.A. Wear, %	AASHTO T 96	50, max
Degradation Value	ATM 313	45, min
Fracture, %	ATM 305	70, min
Plastic Index	ATM 205	6, max
Sodium Sulfate Loss, %	AASHTO T 104	9, max (5 cycles)

Table C-2: Aggregate Gradations

Sieve Designation	Subbase	Base Course	Surface Course
1 1/2 inch			100
1 inch		100	
3/4 inch		70 to 100	70 to 100
3/8 inch		50 to 80	50 to 85
No. 4	20 to 60	35 to 65	35 to 75
No. 8		20 to 50	20 to 60
No. 50		6 to 30	15 to 30
No. 200	0 to 10	0 to 6	7 to 13

(Percent Passing By Weight)

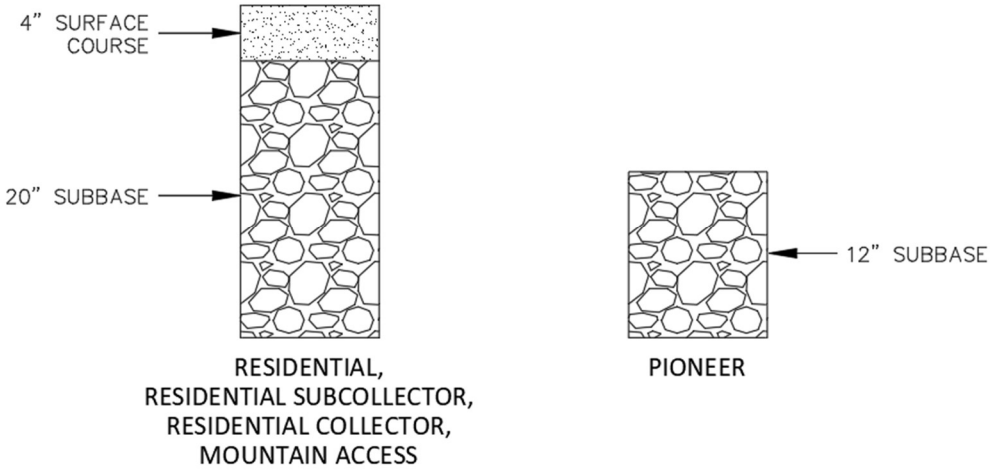


Figure C-1: Structural Sections for Gravel Roads

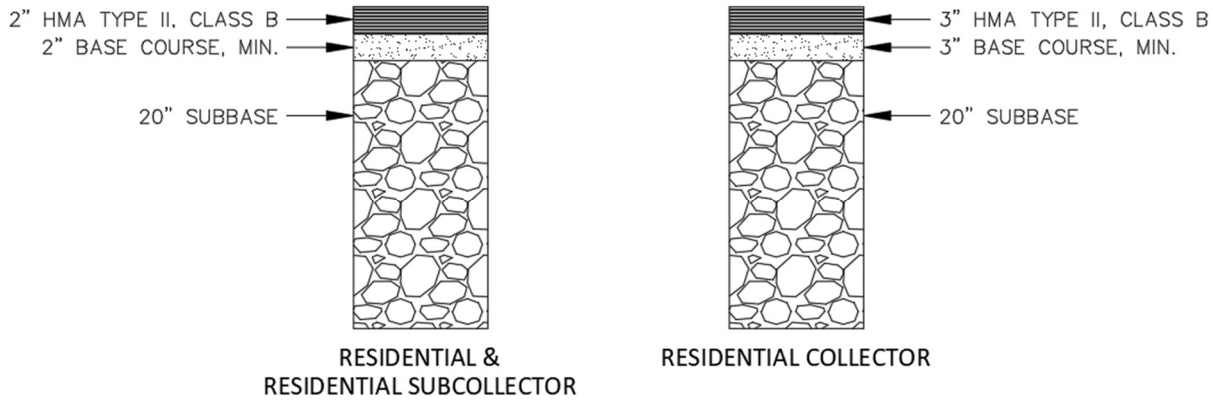


Figure C-2: Structural Sections for Paved Roads

Section D. Drainage

D01 General

The purpose of this section is to ensure that stormwater management is provided with land development activities. Responsible stormwater management is the treatment, retention, detention, infiltration, and conveyance of stormwater and other surface waters without adversely impacting adjoining, nearby, or downstream properties and receiving waters.

D02 Requirements

A preliminary drainage plan is required when road construction or disturbing land to create useable area for a subdivision is proposed. A drainage report is required for projects that include road construction, disturb 10,000 square feet of land or more, fill in wetlands, disturb land within 100 feet of the ordinary high water mark (OHWM) of a water body, disturb land within a mapped flood hazard area, or change the location, direction, quantity, or type of runoff leaving a site. See subsection D06 for specific requirements regarding fish passage culverts. It is the applicant's responsibility to comply with all other applicable federal, state, and local codes and regulations.

D02.1 Preliminary Drainage Plan

Submit a preliminary drainage plan, prepared by an engineer or other qualified professional registered in the State of Alaska, with the preliminary plat or ROW construction permit application. The preliminary drainage plan shall show the project site at a legible scale plottable on 11" by 17" paper or larger and depict the following:

(a) Existing and proposed property lines, plottable easements disclosed in the title report, the OHWM of water bodies with 100-foot upland offset, and existing mapped flood hazard areas.
(b) Existing topography with horizontal and vertical accuracy meeting US National Map Accuracy standards, with 5-foot contour intervals if the ground slope is less than 10 percent and 10-foot contour intervals if the ground slope is greater than 10 percent.
(c) Existing features that convey or retain drainage, including but not limited to: water bodies, wetlands, natural valleys, swales, ditches, check dams, culverts, and pipe systems.
(d) Proposed drainage pattern and features, both constructed and natural, on site. Identify conveyance types, flow directions, and any drainage changes that may affect adjacent property.
(e) Proposed stream crossings and anticipated culvert sizes. Identify fish-bearing streams.

D02.2 Drainage Report

Submit a drainage report, prepared by an engineer or other qualified professional registered in the State of Alaska, as part of the construction plan submittal in subsection F01.2. The drainage report shall include the following:

(a) The drainage plan as specified in D02.1 (may be shown on two plans for clarity), updated to include:

(1) Pre-development and post-development catchment area boundaries determined using 2-foot contour intervals; and
(2) Locations of peak flow, peak velocity, and where runoff leaves the project site.

(b) Description of methods, assumptions, and data sources used or made, including but not limited to:
(1) Rainfall data from the NOAA-14 Precipitation Frequency Data Server.
(2) Assumed post-development land cover conditions.
(3) Method used to determine runoff quantities, time of concentration, peak flows, etc.

(c) Catchment area maps used or created to evaluate down-gradient conditions.

(d) Identify design elements, with supporting runoff calculations, necessary to show compliance with the drainage design criteria set forth in D03.

(e) Fish passage culvert plans, if applicable.

D03 Drainage Design Criteria

(a) Design a drainage system for the project site to meet the criteria listed in Table D-1.

(b) Retain natural drainage patterns to the extent possible.

(c) Changes to drainage patterns must not adversely affect adjacent property or ROW.

(d) Base the size and capacity of the drainage system on runoff volumes and flow rates assuming full development of the subdivision and a 10 percent increase to runoff from the catchment area.

(e) Drainage easements are required where the ROW is not sufficient to accommodate drainage needs. See subsection E01.2.

(f) Where drainage easements overlap utility easements:
(1) Above ground drainage facilities, such as retention and detention basins, may be located in new utility easements only in a manner that will not interfere with utilities. See subsection H02.
(2) Above ground drainage facilities located within existing utility easements require a letter of non-objection from affected utilities.
(3) Culverts crossing utility easements require a letter of non-objection from affected utilities.
(4) Underground drainage facilities such as infiltration trenches and vertical inlets shall not be located in utility easements.

(g) Drainage to state or other municipal ROW are subject to their respective requirements and review.

Table D-1: Drainage Sizing and Analysis Criteria

Design Requirement	Purpose	Criteria
Conveyance	Size conveyances to pass design peak flows.	Drainage ditches: 10-year, 24-hour Non-regulated streams: 10-year, 24-hour Regulated streams: 100-year, 24-hour
Wetlands	Retain function of original wetlands	Preserve the pre-development function of wetlands. For jurisdictional wetland areas, comply with United States Army Corps of Engineers wetlands development retention requirements.
Water Quality	Treat first flush pollutant loading	Treat runoff generated by 0.50 inch of rainfall in a 24-hour period.
Erosion and Sedimentation Control	Ensure channel stability for all project conveyances	Control flows in conveyance channels so that transport of particles sized D50 and greater will not occur for the post-development peak flow.
Extended Detention	Protect streams and channels from damage from smaller, more frequent storm flows	Provide 12 to 24 hours of detention for the post-development project runoff in excess of pre-development runoff volume for the 1-year, 24-hour storm.
Flood Hazard	Control peak flow to minimize downstream impacts	Option 1 Maintain the post-development project runoff peak flows from the 10-year, 24-hour storm to less than or equal to pre-development runoff peak flow at all project discharge points. Option 2 Maintain the post-development project runoff peak flows to less than 1.10 times pre-development runoff peak flow at all project discharge points. Evaluate downstream until the project site area is less than 10% of the total upstream basin area and mitigate adverse impacts.
Flood Bypass	Prevent an increased risk of flood damage from large storm events.	Compute post-development peak flow and delineate an unobstructed, overland flow path for runoff to overtop or bypass project conveyance routes for the post-development 100-year, 24-hour storm.

D04 Drainage Ditches

Stabilize ditches with gravel, turf, or rock riprap. See Table D-2 and Table D-3 for most common conditions and acceptable ditch lining materials. Evaluate channel stability for compliance with the Erosion and Sedimentation Control design requirement in Table D-1 for other conditions.

Normal ditch depth shall be 30 inches and according to the typical section shown in subsection A06. The design peak flow required by Conveyance Design in Table D-1 shall be conveyed within ditches with a minimum freeboard of 12 inches.

The ditch depth may be reduced at local high points of the ditch, provided the flow line offset is maintained and with DPW concurrence. Alternate ditch design along Residential and Residential Subcollector streets may be considered, if evidence is provided that the following conditions exist:

(a) Ditches are a minimum of 18" deep;
(b) The design peak flow required by Table D-1 is demonstrated to be conveyed within ditches with a minimum freeboard of 12 inches;
(c) Adequate drainage routes are provided and constructed within the ROW or designated drainage easements;
(d) Flow lines are established at least 8 feet from the edge of roadway.
(e) Ditches are deepened to provide cross drainage through 24" corrugated metal culverts (18" with DPW approval).
(f) Cross sectional area of ditch is at least 15 square feet.

Table D-2: Ditch Stabilization

Flow	Ditch Slope (ft/ft)										
(cfs)	0.005	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10
2.0	A	A	A	A	A	A	A	A	A	A	A
4.0	A	A	A	A	A	A	A	A	B	B	B
6.0	A	A	A	A	A	A	B	B	B	B	B
8.0	A	A	A	A	A	B	B	B	B	B	B
10.0	A	A	A	A	B	B	B	B	B	B	C
20.0	A	A	A	B	B	B	C	C	C	C	C
30.0	A	A	A	B	B	C	C	C	D	D	D
40.0	A	A	B	B	C	C	C	D	D	D	E
50.0	A	A	B	B	C	C	D	D	D	E	E
60.0	A	A	B	C	C	D	D	D	E	E	E
70.0	A	A	B	C	C	D	D	E	E	E	E
80.0	A	B	C	C	C	D	E	E	E	E	E
90.0	A	B	C	C	D	D	E	E	E	E	F
100.0	A	B	C	C	D	D	E	E	E	F	F

Table D-3: Ditch Lining Materials

Type	Material	D50 (in)	Dmax (in)	Dmin (in)	Thickness (in)
A	Native Grass, Turf, or Gravel with < 6% fines				
B	Riprap or Bone Rock	3.0	4.5	1.5	6.0
C	Riprap or Bone Rock	6.0	9.0	3.0	12.0
D	Riprap or Bone Rock	9.0	13.5	4.5	18.0
E	Riprap or Bone Rock	12.0	18.0	6.0	24.0

D05 Culverts

D05.1 General Culvert Design Criteria

The following criteria apply to all cross road culverts for runoff or seasonal drainage:

(a) The minimum culvert slope is 0.5 percent.
(b) Culverts longer than 100 feet require appropriate maintenance access and DPW approval
(c) Cross road culverts shall have a minimum diameter of 18 inches.
(d) Culverts shall be sized to convey the design peak flow required by Table D-1, based on the larger of the two computed sizes using inlet control and outlet control.
(e) Culverts shall be corrugated metal pipe (CMP) and minimum:
    (1) 16 gauge galvanized steel on Residential and Residential Subcollector streets;
    (2) 12 gauge galvanized steel on Residential Collector and Minor Collector streets; or
    (3) 16 gauge aluminum or aluminized if needed due to soil or water conditions.
(f) Design and install energy dissipation rock aprons at culvert outlets in accordance with Hydraulic Engineering Circular No. 14 (FHWA).
(g) Install culverts in accordance with the manufacturer's recommendations for the anticipated traffic loads.

D05.2 Stream Crossing Culvert Criteria

The following criteria apply to all stream crossing culverts:

(a) Prior to preliminary plat submittal, contact the Alaska Department of Fish and Game (ADFG), Division of Habitat to determine if a stream reach harbors fish. If so, stream crossing culverts shall be designed, constructed, and maintained according to D06.
(b) Stream crossing culverts shall be placed as close to the pre-existing channel alignment as possible. Avoid placing culverts at pools and stream bends.
(c) Road alignment shall be as close to perpendicular to the stream channel as possible.
(d) Culvert slope shall be within 25 percent of the natural stream slope. For example, if the natural stream slope is 1.0 percent, the minimum design slope of the culvert would be 0.75 percent and the maximum design slope would be 1.25 percent.
(e) Culvert outlet and inlet protection shall be used as necessary to reduce the risk of scour and perching.

(f) Stream crossings shall be composed of a single pipe or arch for the main stream channel.
(g) Overflow culverts may be used but should be placed at a higher elevation so that flows up to the OHWM pass through the primary culvert.
(h) Stream crossings shall maintain the connectivity of wetlands adjacent to stream channels and shall accommodate sheet flow within such wetlands.
(i) Stream crossing culverts shall not interfere with the functioning of floodplains and shall be designed to convey the design peak flow required by Table D-1. If the stream crossing culvert is not designed to accommodate the 100-year flow, a route must be established to safely convey flows exceeding the design peak flow without causing damage to property, endangering human life or public health, or causing significant environmental damage.
(j) In cases of crossings within high entrenchment ratio environments, the ratio of the flood prone width to the OHWM width is greater than 2.2, floodplain overflow culverts may be beneficial to floodplain connectivity and can be used to pass the design flow. Minimum width requirements for the primary culvert still apply.
(k) Stream crossing culverts shall have a minimum diameter of three feet.
(l) Stream crossing culvert pipes and arches shall be metal.
(m) Culverts longer than 100 feet require appropriate maintenance access and DPW approval
(n) Install culverts in accordance with the manufacturer's recommendations for the anticipated traffic loads.

D06 Fish Passage Culverts

These criteria provide general design guidance for road crossings of fish-bearing streams to maintain the full hydrologic functioning of the water body they are crossing. Site-specific conditions, such as multi-thread channels, may require alternate design approaches.

D06.1 Pre-design Conference

Schedule a fish passage pre-design conference with DPW prior to permit submittals. The pre-design conference is to:
(a) determine required permits;
(b) coordinate interagency requirements;
(c) determine any site-specific design requirements; and
(d) establish a plan review process.

D06.2 Stream Simulation Method

Stream simulation methodologies shall be used for the design of all fish-bearing stream crossings. The stream simulation method uses reference data from a representative section, or reference reach, of the specific water body crossed. This method attempts to replicate the natural stream channel conditions found upstream and downstream of the crossing. Sediment transport, flood and debris conveyance, and fish passage are designed to function as they do in the natural channel.

Reference Reach

(a) Select a reference reach on the water body being crossed that is outside any anthropogenic influence, such as an existing culvert. In most cases of new crossings, the reference reach can be at the crossing location.

(b) The length of the reference reach should be a minimum of 20 times the reference bankfull width and no less than 200 feet.

(c) If there is not a suitable reference reach on the water body being crossed, a reference reach may be chosen from another water body with similar geomorphic and hydrologic characteristics. The reference reach characteristics should meet the following criteria in comparison to the water body being crossed:
   (1) The reference reach bankfull width should be at least one half and no more than two times that of the water body being crossed;
   (2) The reference reach bankfull discharge should be at least one half and no more than one and one half times the bankfull discharge of the water body being crossed; and
   (3) The stream order of the reference reach should be within one stream order of the water body being crossed.

(d) For a reference reach from another water body, the geomorphic characteristics of the crossing shall be scaled using ratios of the bankfull conditions.

(e) The reference reach bankfull dimensions should be determined in the field by surveying a detailed cross section at the upper 1/3 of a representative riffle.

(f) Reference data shall include, at a minimum:
   (1) channel width at the OHWM,
   (2) bankfull width,
   (3) bankfull cross-sectional area,
   (4) bankfull slope based on the longitudinal profile,
   (5) substrate, and
   (6) potential for floating debris.

Culvert Size, Slope, and Substrate

In addition to D05.2, the following criteria apply to fish passage culverts:

(a) Under normal flow conditions, the channel within or under the fish passage culvert shall not differ from the reference reach condition in regards to the channel width at the OHWM, cross-sectional area, slope, substrate, and ability to pass floating debris.

(b) The width of fish passage culverts shall not be less than the greater of 1.2 times the channel width at the OHWM and 1.0 times the bankfull width.

(c) Fish passage culverts shall have a minimum diameter of five feet.

(d) The use of smooth wall culverts is prohibited.

(e) The use of trash racks or debris interceptors is prohibited

(f) Round culvert pipes shall have a minimum invert burial depth of 40 percent of the culvert diameter into the substrate. Arch or box culverts shall have a minimum invert burial depth of 20

percent of the culvert's rise into the substrate, unless scour analysis shows less fill is acceptable. The minimum invert burial depth is 1 foot.

(g) The gradation of the substrate material within a fish passage culvert shall be designed to be a dense, well-graded mixture with adequate fines to ensure that the majority of the stream flows on the surface and the minimum water depth is maintained.

(h) Substrate material within or under the fish passage culvert shall remain dynamically stable at all flood discharges up to and including a 50-year flood. Dynamic stability means that substrate material mobilized at higher flows will be replaced by bed material from the natural channel upstream of the crossing. For crossings without an adequate upstream sediment supply, the substrate material within the crossing shall be designed to resist the predicted critical shear forces up to the 100-year flood. For culverts with a slope of 6 percent or greater, substrate retention sills may be required to allow the bed load to continuously recruit within the culvert.

(i) Substrate material within or under the fish passage culvert shall incorporate a low flow channel. The low flow channel should mimic the reference reach where possible. If the low flow channel dimensions are not discernable from the reference reach, the low flow channel should have a cross sectional area of 15 to 30 percent of the bankfull cross sectional area and a minimum depth of 4 inches for juvenile fish and 12 inches for adult fish. The low flow channel should be defined by rock features that will resist critical shear forces up to the 100-year flood.

(j) Constructed streambanks are recommended inside fish passage culverts to protect the culvert from abrasion, provide resting areas for fish, and provide for small mammal crossing. If streambanks are constructed through a crossing, the streambanks shall be constructed of rock substrate designed to be stable at the 100-year flood. The streambank width should be a minimum of 1.5 times the maximum sieve size of the streambed material (D100). The crossing width shall be increased to allow for the channel width plus the streambanks.

(k) If substrate retention sills are used, they shall have a maximum weir height of one half of the culvert invert burial depth. Substrate retention sills shall be spaced so that the maximum drop between weirs is 4 inches. The use of sills without substrate is not allowed.

(l) Other state and federal requirements may apply.

D06.3 Hydraulic Method

Hydraulically designed culverts are discouraged for fish-bearing stream crossings, though may be approved by DPW and ADFG in circumstances where stream simulation is not practical. In addition to D05.2, the following criteria apply to hydraulically designed culverts:

(a) The hydraulic method uses the swimming capability and migration timing of target design species and sizes of fish to create favorable hydraulic conditions throughout the culvert crossing. Information and design software for this methodology is available from ADFG, Division of Sport Fisheries (Fishpass) and the US Forest Service (FishXing).

(b) The design fish shall be a 55-milimeter (2.16-inch) juvenile coho salmon for anadromous streams and a 55-milimeter (2.16-inch) Dolly Varden char for non-anadromous streams. These criteria may change based on ongoing research by federal and state agencies.

(c) Fish passage high flow design discharge will not exceed the 5 percent annual exceedance flow or 0.4 times the 2-year peak flow, whichever is lower and has the most supporting hydrologic data.
(d) Fish passage low-flow design discharge shall ensure a minimum 6-inch water depth or natural low flow and depth within the reach the crossing occurs. In cases where local conditions preclude natural low flow characteristics, backwatering or in-culvert structures should be considered.
(e) In cases where flared end sections with aprons are necessary and fish passage is required, water depths and velocities that satisfy fish passage criteria must be demonstrated across the apron in addition to within the culvert.
(f) Fish passage criteria for culverts crossing tidally-influenced streams must be satisfied 90 percent of the time. Tidally-influenced streams may sometimes be impassable due to insufficient depth at low flow and low tide. If the tidal area immediately downstream of a culvert is impassable for fish at low tide, the exceedance criterion shall apply only to the time during which fish can swim to the culvert.
(g) Other state and federal requirements may apply.

D07 Soil Infiltration Facilities

Soil infiltration may be used to reduce stormwater flow and volume with the following criteria:

(a) Soil infiltration facilities within Borough ROW or drainage easements should be designed such that they are not considered Class V injection wells. See Appendix A for the EPA's memorandum addressing the subject in June 2008.
    (1) Private drainage facilities that are considered Class V injection wells require conformance with EPA regulations.

D08 Rainfall Data

D08.1 Rainfall Distribution

Intensity-Duration-Frequency (IDF) and 24-hour rainfall data are furnished by NOAA Atlas 14 Point Precipitation Frequency Estimates. Use SCS Type-I Rainfall Distribution and 24-hour rainfall depth to compute runoff.

D08.2 Runoff Transformation

Use the Rational Method for estimating peak flows in drainage basins less than 200 acres and with times of concentration less than 20 minutes for design of conveyances. Use NRCS (SCS) Unit Hydrograph Method for estimating runoff volumes and peak flows for other conditions and applications. Other methods more appropriate for site conditions may be utilized upon DPW approval.

Section E. Easements

E01 General

E01.1 Common Access Easements

When a shared driveway is required for two or more lots, a common access easement shall be granted for the exclusive use of the subject lots, unless otherwise accommodated. The common access easement shall be sized to reasonably accommodate separation of the shared driveway to the individual lots.

E01.2 Drainage Easements

Drainage easements are required where the ROW is not sufficient to accommodate drainage needs. Drainage easements can overlap with other platted easements and shall begin or terminate at the ROW. Drainage easements shall be a minimum width of 20 feet, and a minimum average length of 20 feet outside of any overlapping easements or of sufficient size and area shown to facilitate construction and maintenance.

E01.3 Slope Easements

Slope easements are required to contain all cut and fill slopes steeper than 2.5:1 that extend outside of the ROW, plus at least 5 feet outside the cut or fill catches.

E01.4 Sight Distance Maintenance Easements

Sight distance maintenance easements are required where intersection sight triangles extend outside of the ROW.

E01.5 Snow Storage Easements

Snow storage easements are required where the ROW is not sufficient to accommodate anticipated snow removal needs. Snow storage easements shall be located where the storage of snow would not impede sight distance.

E01.6 Utility Easements

Unless lots are otherwise served by alternate utility easements or agreements, at least one 15-foot utility easement adjacent to the ROW is required to allow for utility installation and maintenance. Additional utility easements may be required as deemed reasonably necessary by utility companies to serve the subdivision or protect existing facilities. The applicant is responsible for satisfying any conflicts that may occur in the request for easements from any utility company during the platting process.

Platted utility easements are to be clear of wells, septic systems, structures, or encroachments, as defined by MSB or other applicable code; unless the applicant has obtained an encroachment permit from the MSB and a "Non-Objection to Easement Encroachment” from each utility.

Utility easements are to be fully useable for utility installation where installation equipment can safely work. Whenever possible, utility easements should not be placed in swamps, steep slopes, or other unusable areas.

Section F. Development Implementation

F01 General

This section describes the procedure that is to be followed before constructing any improvements required for recording a subdivision plat. The applicant's engineer shall be the primary point of contact throughout this process.

It is the applicant's responsibility to determine, acquire, and follow permits required by other agencies. Approval from MSB does not supersede other agencies' permit requirements.

F01.1 Preliminary Plat Submittal

The preliminary plat submittal is to be accompanied by:

(a) ADT calculations per A15;
(b) Preliminary drainage plan per D02.1;
(c) Road plan and profile for sections of road where proposed grades exceed 6 percent where cuts and fills exceed 5 feet in height measured from the centerline, or where slope easements will be required, and cross sections at the maximum cut and fill sections. Road plan and profile shall include the vertical curves or grade breaks on either side of the subject sections;
(d) Road plan, profile, and cross-sections if required by B03.3; and
(e) Intersection sight distance evaluation, if requested, according to A09.1.

F01.2 Construction Plans

Submit construction plans to DPW at least seven calendar days before the preconstruction conference. All plan drawing submittals shall be at a scale of 1 inch = 50 feet or more detailed, plottable on 11" by 17" paper. Construction plans shall include the following:

(a) Drainage Report, according to D02.2;
(b) Plan & Profile of proposed roads (if required by F01.1);
    (1) Existing topography with horizontal and vertical accuracy meeting US National Map Accuracy standards, two-foot contour intervals within the proposed road corridors.
(c) Asbuilt survey of visible improvements and above ground utilities within and adjacent to the subdivision;
(d) Copy of agency accepted permit applications required for the improvements prior to construction, including but not limited to ADOT&PF Approach Road Permit, DNR Section Line Easement authorization, MSB Flood Hazard Development permit, and USACE wetland fill permit; and
(e) Plans for any proposed improvements within the ROW that are outside of the scope of this manual (e.g. retaining walls or guard rail) or do not conform to the standards set forth herein, conforming to ADOT&PF design criteria and standards.

F01.3 Preconstruction Conference

The preconstruction conference is for the purpose of reviewing and approving the Subdivision Construction Plan for the required improvements. The engineer may request scheduling of a preconstruction conference with DPW after the preliminary plat has been approved by the Platting Board, the Platting Board Action Letter has been received, and the construction plans have been submitted. Scheduling of preconstruction conference requests may be delayed during the month of October. The applicant, or designated representative, and the engineer must attend the preconstruction conference. In addition to the construction plans, the following items will be provided at or prior to the preconstruction conference:

(a) Cost estimate of required improvements for the determination of the inspection fee according to the most recently adopted Schedule of Rates and Fees;
(b) Proof of compliance with the Alaska Pollutant Discharge Elimination System Program;
    (1) Acceptable proof includes a Notice of Intent (NOI), a Low Erosivity Waiver (LEW), or a determination by a qualified person that neither is needed.
(c) Rough plan and time line for construction;
(d) Copy of any issued permits required for the improvements prior to construction;
(e) Off-site material source and quantities; and
(f) On-site clearing, grubbing, and topsoil disposal plan, location map.

The Subdivision Construction Plan must be signed by the applicant, or designated representative, and the engineer. Upon acceptance of the Subdivision Construction Plan by DPW and payment of the inspection fee, the Platting Division will issue a Notice to Proceed (NTP).

Some construction plans or permit approvals may take longer to develop or obtain, such as fish passage culvert plans and associated permits. Those finalized plans and issued permits may be submitted later but must be received and reviewed by DPW before construction begins within the respective areas.

F01.4 Interim Inspections

The applicant's engineer shall supervise all phases of construction. Notify DPW of changes to the Subdivision Construction Plan, such as adding or deleting a cross culvert, changes in culvert size, adding or deleting a drainage facility, grade changes of more than 1 percent or that would result in grades of over 6 percent or cuts or fills of over 5 feet in height measured from the centerline, or changes to foreslopes or backslopes. The changes should be approved by DPW prior to completion of construction. Periodic interim inspections may be conducted by DPW. Interim inspections may be requested by the engineer.

F01.5 Subdivision Agreements

If a developer wishes to enter into a Subdivision Agreement and the requirements of MSB 43.55.010(A) are met, the engineer shall submit a request to DPW no later than October 15th for an Interim Inspection. The Interim Inspection shall be attended by the engineer and DPW, and a list of remaining improvements and work items will be developed. The engineer shall then submit a request for a

Subdivision Agreement containing the scope of work, quantity estimates, and cost estimate in accordance with MSB 43.55 to Platting and for approval by DPW. DPW will only approve the request for a Subdivision Agreement if all of the minimum required improvements have been inspected by October 31st or before winter conditions prohibit inspection, whichever comes first.

F01.6 Pre-Final Inspection

When the engineer has determined that construction of the improvements will be substantially complete according to the Subdivision Construction Plan, the engineer will request a Pre-Final Inspection. The Pre-Final Inspection request must be received by September 30th and shall include a description of work yet to be completed. The Pre-Final Inspection will be scheduled to occur within 14 calendar days of the request and shall be attended by the engineer and DPW. A punch list will be developed, if any work items remain, at the Pre-Final Inspection.

F01.7 Final Inspection

When construction of the improvements and punch list items are complete according to the Subdivision Construction Plan, the engineer will request a Final Inspection of the improvements. The Final Inspection request must be received by October 15th. Final Inspections will cease October 31st, or when winter conditions prohibit inspection, whichever comes first. The Final Inspection will be scheduled to occur within 14 calendar days of the request and shall be attended by the engineer and DPW.

F01.8 Final Report

Upon DPW approval of the Final Inspection, the engineer shall submit a written Final Report to the Platting Division. The Final Report shall include:

(a) Stamped and signed narrative describing at a minimum:
  (1) road construction process and equipment used,
  (2) material source and disposal areas,
  (3) road embankment and subbase used,
  (4) road topping or pavement used,
  (5) compactive effort,
  (6) road dimensions and shaping (length, roadway width, material thicknesses, pavement width, crown, cul-de-sac or t-turnaround dimensions and slope, foreslope, backslope, maximum centerline grade, etc.) for each road constructed,
  (7) drainage, ditch depth, location of drainage easements, and
  (8) road standard certification (Pioneer Road, Residential Street, etc.) for each road constructed;
(b) Stamped and signed final drainage plan, (minimum 11”x17”);
(c) As-built drawing showing the horizontal locations of borrow extraction along the road corridor;
(d) Documentation verifying Surface Course thickness such as photos and descriptions of test pits, scale tickets, asbuilt surveys, or alternative methods approved by DPW;
(e) Compaction test reports;
(f) Gradation tests, if required; and

(g) Photos of each stage of construction.

DPW will review the report and provide comments, if necessary, within 14 calendar days.

F01.9 Construction Acceptance

Upon approval of the Final Report, DPW will issue a Certificate of Construction Acceptance.

F01.10 Warranty

All improvements are to be guaranteed until October 31st of the calendar year following DPW approval of the Final Inspection. Roads within a Road Service Area may be accepted for maintenance at the end of the warranty. Pioneer Roads are not eligible for maintenance. Maintenance of Mountain Access Roads is at the discretion of DPW.

During the warranty period, the applicant is responsible for any road maintenance including, but not limited to: snow removal, maintaining a smooth road surface and crown, maintaining stabilized foreslopes and backslopes, and maintaining positive drainage. If any deficiencies arise during the warranty, DPW will issue a punch list to the applicant by September 1st to allow time for completion of repairs. The applicant must notify DPW of completion of repairs by October 15th for the roads to be eligible for maintenance on November 1st.

The warranty period for improvements following completion of a subdivision agreement may be lessened to one calendar year. The applicant shall request a punch list from DPW no more than one month before the end of the one-year warranty.

If the subdivision plat has not recorded by April 30th or if warranty repairs are not completed by October 15th, the warranty will be extended an additional year and the warranty process will be repeated.

Maintenance may be denied and the Certificate of Construction Acceptance revoked if deficiencies are not corrected to the satisfaction of DPW. A notice may be recorded indicating to the public that the MSB is not responsible for road upkeep and maintenance until such a time that the deficiencies are corrected.

Section G. Commercial and Industrial Subdivisions

G01 General

Commercial and Industrial subdivisions shall be designed using trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual, and to meet the standards of AASHTO, International Fire Code (IFC), and any other applicable standards or code.

Section H. Utilities

H01 General

These standards apply to the design and construction of utility facilities within the MSB. All utility installation within existing or proposed ROW or utility easements must comply with the provisions of MSB or other applicable code, or as otherwise approved by the permitting authority.

H02 Utility Location Guidelines

H02.1 Underground Utility Facilities:

(a) The location of utility facilities placed within the ROW shall be coordinated with the permitting authority.
(b) Backslopes or foreslopes which extend into a utility easement should not exceed 4:1. These limits are necessary for construction equipment for utility installation.
(c) Utility facilities paralleling the road shall not be located within 10 feet of the roadway, unless otherwise approved by the permitting authority.
(d) Underground road crossings shall be buried a minimum of 48 inches below finished grade. Backfill shall be compacted according to the requirements of Section C, or as otherwise approved by the permitting authority.
(e) Conduit road crossings, if used, shall be installed in accordance with each utility company's standards and applicable code.
(f) Standard burial depth of longitudinal utilities is 36 inches below grade. The applicant should delineate areas, such as where driveways and drainage easements are planned, where deeper burial may be needed.

H02.2 Above Ground Utility Facilities:

(a) Above ground pedestals, poles, and utility facilities shall not be located within 10 feet of the roadway, unless an alternate design meets clear zone requirements.
(b) Above ground pedestals, poles, and utility facilities shall not be located such that they substantially block intersection or driveway sight triangles.
(c) Unless otherwise authorized by the permitting authority, above ground pedestals, poles, and utility facilities shall not be located within the ROW nearer than 40 feet from the point of intersection of the extension of the property lines at any existing or proposed intersection on Residential Collector streets or higher classification.
(d) Above ground pedestals, poles, and utility facilities shall not be located within a common access easement or drainage easement, within 20 feet of a common access point, or within 10 feet of a roadway cross culvert.
(e) Permanent 5-foot high snow marker poles, grey with white retroreflective sheeting or yellow, shall be installed on all pedestals and vaults.
(f) All guy wires installed within the ROW or utility easements adjacent to, or near to a roadway shall have a minimum 8-foot long yellow delineator installed above the anchor.

(g) Pedestals located within the ROW shall be located within the outer 1 foot of the ROW.

H02.3 Separation of Utilities:

(a) Recommend 5-foot horizontal separation between power poles and buried utilities.
(b) Recommend minimum 1-foot physical separation between all underground utilities.
(c) Separation of storm, sewer, and water utilities shall meet the requirements of the Alaska Department of Environmental Conservation.

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Appendix A

Environmental Protection Agency Memorandum - Class V Injection Wells

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 13 2008

OFFICE OF
WATER

MEMORANDUM

SUBJECT: Clarification on which stormwater infiltration practices/technologies have the potential to be regulated as "Class V" wells by the Underground Injection Control Program

TO: Water Division Directors, Regions 1-10

FROM: Linda Boornazian, Director
Water Permits Division (MC 4203M)

Steve Heare, Director
Drinking Water Protection Division (MC 4606M)

Over the past several years stormwater infiltration has become an increasingly effective tool in the management of stormwater runoff. Although primary stormwater management responsibilities within EPA fall under the Clean Water Act (CWA), the infiltration of stormwater is, in some cases, regulated under the Safe Drinking Water Act (SDWA) with the goal of protecting underground sources of drinking water (USDWs). Surface and ground water protection requires effective integration between the overlapping programs. This memorandum is a step forward in that effort and is meant to provide clarification on stormwater implementation and green infrastructure, in particular under the CWA, which is consistent with the requirements of the SDWA's Underground Injection Control (UIC) Program.

In April 2007, EPA entered into a collaborative partnership with four national groups (the Association of State and Interstate Water Pollution Control Administrators, the Low Impact Development Center, the National Association of Clean Water Agencies, and the Natural Resources Defense Council) to promote green infrastructure as a cost-effective, sustainable, and environmentally friendly approach to stormwater management. The primary goals of this collaborative effort are to reduce runoff volumes and sewer overflow events through the use of green infrastructure wet weather management practices.

Within the context of this collaborative partnership, green infrastructure includes a suite of management practices that use soils and vegetation for infiltration, treatment, and evapotranspiration of stormwater. Rain gardens, vegetated swales, riparian buffers and porous pavements are all common examples of green infrastructure techniques that capture and treat stormwater runoff close to its source. Green infrastructure management practices typically do not include commercially manufactured or proprietary infiltration

devices or other infiltration practices such as simple drywells, which do not provide for pre-treatment prior to infiltration.

The partnership is promoting green infrastructure as an effective approach to stormwater management because these practices are associated with a number of environmental benefits. In addition to reducing and delaying runoff volumes, green infrastructure approaches can also reduce pollutant levels in stormwater, enhance ground water recharge, protect surface water from stormwater runoff, increase carbon sequestration, mitigate urban heat islands, and increase wildlife habitat.

Given the multiple benefits that green infrastructure can provide, EPA and its partners have increased efforts to incorporate green infrastructure techniques into stormwater management strategies nationwide. In recent years, public support for these practices has gradually increased. For more information on green infrastructure, please visit www.epa.gov/npdes/greeninfrastructure.

There are cases where stormwater infiltration practices are regulated as Class V wells under the UIC program, and State and local stormwater managers report that some developers are hesitant to incorporate green infrastructure practices because they fear regulatory approvals will slow the process and increase costs. EPA believes those fears are unfounded and notes that most green infrastructure practices do not meet the Class V well definition and can be installed without regulatory oversight by the UIC Program. However, EPA remains committed to the protection of USDWs and emphasizes the need for UIC program compliance (per 40 CFR 144).

To provide clarification on which stormwater infiltration techniques meet EPA's UIC Class V well definition, EPA's Office of Water has developed the attached "Class V Well Identification Guide." State or Regional stormwater and nonpoint source control programs, developers, and other interested parties are requested to contact the State or Regional UIC Program Director with primary authority for the UIC Class V program when considering the use of practices that have been identified, or potentially identified, as Class V wells. UIC program managers should consider the proximity to sensitive ground water areas when looking at the suitability of stormwater infiltration practices. Depending on local conditions, infiltration without pretreatment may not be appropriate in areas where ground waters are a source of drinking water or other areas identified by federal, state, or local governments as sensitive ground water areas, such as aquifers overlain with thin, porous soils.

Please share this memo and the attached guide with your State and Regional stormwater, nonpoint source control, UIC and other ground water managers, as well as with appropriate green infrastructure contacts. These programs are encouraged to coordinate on stormwater management efforts when sensitive ground water issues arise.

Attachment

Underground Injection Control (UIC) Program Class V Well Identification Guide

This reference guide can be used to determine which stormwater infiltration practices/technologies have the potential to be regulated as "Class V" wells. Class V wells are wells that are not included in Classes I through IV. Typically, Class V wells are shallow wells used to place a variety of fluids directly below the land surface. By definition, a well is "any bored, drilled, driven shaft, or dug hole that is deeper than its widest surface dimension, or an improved sinkhole, or a subsurface fluid distribution system" and an "injection well" is a "well" into which "fluids" are being injected (40 CFR §144.3). Federal regulations (40 CFR §144.83) require all owners/operators of Class V wells to submit information to the appropriate regulatory authorities including the following:

1. Facility name and location
2. Name and address of legal contact
3. Ownership of property
4. Nature and type of injection well(s)
5. Operating status of injection well(s)

For more information on Class V well requirements, please visit http://www.epa.gov/safewater/uic/class5/comply_minrequirements.html. For more information on green infrastructure, please visit http://www.epa.gov/npdes/greeninfrastructure.

The stormwater infiltration practices/technologies in rows A through I below are generally not considered to be wells as defined in 40 CFR §144.3 because typically they are not subsurface fluid distribution systems or holes deeper than their widest surface dimensions. If these practices/technologies are designed in an atypical manner to include subsurface fluid distribution systems and/or holes deeper than their widest surface dimensions, then they may be subject to the Class V UIC regulations. The stormwater infiltration practices/technologies in rows J through K however, depending upon their design and construction probably would be subject to UIC regulations.

	Infiltration Practice/Technology	Description	Is this Practice/Technology Generally Considered a Class V Well?
A	Rain Gardens & Bioretention Areas	Rain gardens and bioretention areas are landscaping features adapted to provide on-site infiltration and treatment of stormwater runoff using soils and vegetation. They are commonly located within small pockets of residential land where surface runoff is directed into shallow, landscaped depressions; or in landscaped areas around buildings; or, in more urbanized settings, to parking lot islands and green street applications.	No.
B	Vegetated Swales	Swales (e.g., grassed channels, dry swales, wet swales, or bioswales) are vegetated, open-channel management practices designed specifically to treat and attenuate stormwater runoff. As stormwater runoff flows along these channels, vegetation slows the water to allow sedimentation, filtering through a subsoil matrix, and/or infiltration into the underlying soils.	No.
C	Pocket Wetlands & Stormwater Wetlands	Pocket/Stormwater wetlands are structural practices similar to wet ponds that incorporate wetland plants into the design. As stormwater runoff flows through the wetland, pollutant removal is achieved through settling and biological uptake. Several design variations of the stormwater wetland exist, each design differing in the relative amounts of shallow and deep water, and dry storage above the wetland.	No.
D	Vegetated Landscaping	Self-Explanatory.	No.
E	Vegetated Buffers	Vegetated buffers are areas of natural or established vegetation maintained to protect the water quality of neighboring areas. Buffer zones slow stormwater runoff, provide an area where runoff can infiltrate the soil, contribute to ground water recharge, and filter sediment. Slowing runoff also helps to prevent soil and stream bank erosion.	No

	Infiltration Practice/Technology	Description	Is this Practice/Technology Generally Considered a Class V Well?
F	Tree Boxes & Planter Boxes	Tree boxes and planter boxes are generally found in the right-of-ways alongside city streets. These areas provide permeable areas where stormwater can infiltrate. The sizes of these boxes can vary considerably.	No.
G	Permeable Pavement	Permeable pavement is a porous or pervious pavement surface, often built with an underlying stone reservoir that temporarily stores surface runoff before it infiltrates into the subsoil. Permeable pavement is an environmentally preferable alternative to traditional pavement that allows stormwater to infiltrate into the subsoil. There are various types of permeable surfaces, including permeable asphalt, permeable concrete and even grass or permeable pavers.	No.
H	Reforestation	Reforestation can be used throughout a community to reestablish forested cover on a cleared site, establish a forested buffer to filter pollutants and reduce flood hazards along stream corridors, provide shade and improve aesthetics in neighborhoods or parks, and improve the appearance and pedestrian comfort along roadsides and in parking lots.	No.
I	Downspout Disconnection	A practice where downspouts are redirected from sewer inlets to permeable surfaces where runoff can infiltrate.	In certain circumstances, for example, when downspout runoff is directed towards vegetated/pervious areas or is captured in cisterns or rain-barrels for reuse, these practices generally would not be considered Class V wells.
J	Infiltration Trenches	An infiltration trench is a rock-filled trench designed to receive and infiltrate stormwater runoff. Runoff may or may not pass through one or more pretreatment measures, such as a swale, prior to entering the trench. Within the trench, runoff is stored in the void space between the stones and gradually infiltrates into the soil matrix. There are a number of different design variations.	In certain circumstances, for example, if an infiltration trench is “deeper than its widest surface dimension,” or includes an assemblage of perforated pipes, drain tiles, or other similar mechanisms intended to distribute fluids below the surface of the ground, it would probably be considered a Class V injection well.

	Infiltration Practice/Technology	Description	Is this Practice/Technology Generally Considered a Class V Well?
K	Commercially Manufactured Stormwater Infiltration Devices	Includes a variety of pre-cast or pre-built proprietary subsurface detention vaults, chambers or other devices designed to capture and infiltrate stormwater runoff.	These devices are generally considered Class V wells since their designs often meet the Class V definition of subsurface fluid distribution system.
L	Drywells, Seepage Pits, Improved Sinkholes.	Includes any bored, drilled, driven, or dug shaft or naturally occurring hole where stormwater is infiltrated.	These devices are generally considered Class V wells if stormwater is directed to any bored, drilled, driven shaft, or dug hole that is deeper than its widest surface dimension, or has a subsurface fluid distribution system.

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Matanuska-Susitna Borough
Public Works Department

2022
Subdivision Construction Manual

(Roads, Drainage, and Utilities)

Adopted ~~August 18, 2020~~June 21, 2022

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Acronyms & Abbreviations

AASHTO	American Association of State Highway and Transportation Officials
ADFG	Alaska Department of Fish and Game
ADT	Average Daily Traffic
ADOT&PF	Alaska Department of Transportation and Public Facilities
ATM	Alaska Test Method
cfs	cubic feet per second
CMP	Corrugated metal pipe
DPW	Department of Public Works of the Matanuska-Susitna Borough
FHWA	Federal Highway Administration
ft	feet
h:v	horizontal to vertical
IDF	Intensity-Duration-Frequency
IFC	International Fire Code
in	inches
ITE	Institute of Transportation Engineers
LEW	Low Erosivity Waiver
LRTP	Long Range Transportation Plan
mph	miles per hour
MSB	Matanuska-Susitna Borough
N/A	not applicable
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NTP	notice to proceed
OHWM	ordinary high water mark
OSHP	Official Streets and Highways Plan
PUE	public use easement
ROW	right-of-way
SCS	Soil Conservation Service
VPD	vehicles per day

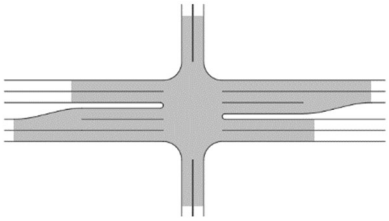
Definitions

Access Point	The location along a road at which a driveway or road intersects.
Arterial	A road that provides a high level of mobility within the transportation network. Arterials have managed access with a minimal number of intersections or interchanges.
Average Daily Traffic	The total number of vehicle trips during a given time period (in whole days greater than one day and less than one year) divided by the number of days in that time period.
Backslope	On a roadway section in a cut, the portion of the roadside that slopes up from the roadside ditch and away from the roadway to the top of the cut, see Figure A-3.
Catchment Area	The total area contributing stormwater runoff to a particular point, site, or structure.
Collector	A road that links local roads with arterials and performs some duties of each. Collectors have managed access with a moderate number of intersections and driveways.
Curve Return	The curve located at the corner of an intersection, connecting the roadway edge of one road to the roadway edge of an intersecting road or driveway.
Detention	The temporary storage of runoff, for later controlled release.
Drainage Pattern	The configuration of a drainage system including manmade and natural features within a catchment area.
Driveway	A vehicular access way between a road and a parking area within a lot or property.
Embankment	Earthen material that is placed and compacted for the purpose of raising the grade of a roadway.
Engineer	An individual who is registered as a Professional Civil Engineer in the State of Alaska.

Feasible Reasonable and capable of being done or carried out.

Foreslope On a roadway section, the portion of the roadside that slopes down and away from the roadway, see Figure A-3.

Functional Area The physical area of an intersection and the area extending both upstream and downstream which includes perception reaction distance, maneuver distance, and storage length.



Intersection The general area where two or more roads join or cross.

Local Road A road that provides access to abutting property, rather than to serve through traffic. Local roads are not access controlled and can have frequent intersections and driveways.

Lot Frontage A property line that abuts the right-of-way that provides access to the lot.

Ordinary High Water Mark The elevation marking the highest water level which has been maintained for a sufficient time to leave evidence upon the landscape. Generally, it is the point where the natural vegetation changes from predominately aquatic to upland species.

Positive Drainage Clear, unobstructed flow of water away from structures and roadways without localized ponding.

Public Use Easement Provides the rights for ingress, egress, roadways, right-of-way, public utilities, and slopes for cuts and fills. The rights are to the public in general, and public utilities governed by permits required under federal, state, and local laws and regulations. May also be known as a public access easement or right-of-way.

Regulated Stream Any watercourse along which the flood hazard areas have been mapped and approved by the Federal Emergency Management Agency; any stream which harbors fish, as determined by the Alaska Department of Fish and Game; or any stream designated as regulated by MSB.

Retention The prevention of runoff. Stormwater, which is retained, remains indefinitely, with the exception of the volume lost to evaporation, plant uptake, or infiltration.

Right-of-way A strip of land reserved, used, or to be used for a street, alley, walkway, airport, railroad, or other public or private purpose.

Road A general term denoting a public thoroughfare used, or intended to be used, for passage or travel.

Road Prism The foundation that supports the roadway; see Figure A-3.

Roadway The portion of a road that includes driving lanes and shoulders, see Figure A-3.

Segment A portion of road between two significant intersections or an intersection and its terminus.

Shoulder The portion of a roadway contiguous to any traveled way for lateral support of surface courses, see Figure A-3.

Street A general term usually denoting an urban or suburban road.

Stub ~~Road~~ A right-of-way or road segment~~,~~ that is planned to be extended, typically short in length, which terminates at the boundary of a subdivision or masterplan phase.~~or site plan, the purpose of which is to ultimately connect to abutting property when it is developed.~~

T-intersection A three leg intersection in the form of a "T".

Through Street A road given preferential right of way; roads which intersect a through street are controlled, such as with a stop sign or yield sign.

Water Body A permanent or temporary area of standing or flowing water. Water depth is such that water, and not air, is the principal medium in which organisms live. Water bodies include, but are not limited to: lakes, ponds, streams, rivers, sloughs, and all salt water bodies.

Introduction

This manual is intended to accomplish the following goals:

(1) To establish standards for the design and construction of transportation networks throughout the Matanuska-Susitna Borough.
(2) To provide information and guidelines for the design, construction, and upgrade of roads, drainage facilities, and utilities within rights-of-way.
(3) To develop and maintain a safer and more efficient transportation system.
(4) To minimize operation & maintenance efforts.

Section A. Street Design

A01 General

These provisions establish appropriate standards for the design of roads. The purpose of these provisions is to:

(1) promote the safety and convenience of motorized and non-motorized traffic;
(2) promote the safety of neighborhood residents;
(3) minimize the long term costs for maintenance and repair;
(4) protect the residential qualities of neighborhoods by limiting traffic volume, speed, noise, and air pollution;
(5) encourage the efficient use of land; and
(6) minimize the cost of road construction and thereby restrain the rise in housing costs.

A02 Applicability

These standards apply to the design and construction of all subdivision improvements within the Matanuska-Susitna Borough (MSB), with the exception of those streets within cities that exercise road powers by ordinance.

A03 Street Classifications

Roads within the MSB fall within one of the following functional classifications, in accordance with the Long Range Transportation Plan (LRTP): Interstate, Principal Arterial, Minor Arterial, Major Collector, Minor Collector, and Local Road. Functional classification of a road is based on its function, design, and current potential use. The applicant may request review of the functional classification of existing roads abutting or affecting the design of a subdivision or land development during the preapplication process.

This section provides design guidance for roads falling under local road and minor collector functional classifications.

A03.1 Residential Street

Residential streets are local roads intended to carry the least amount of traffic at the lowest speed. The Residential street will provide the safest and most desirable environment for a residential neighborhood. Developments should be designed so that all, or the maximum number possible, of the homes will front on this class of street.

A03.2 Residential Subcollector Street

Residential Subcollector streets are local roads that carry more traffic than Residential streets.

A03.3 Residential Collector Street

Residential Collector streets are the highest order of residential streets and are a type of minor collector. In large residential developments, this class of street may be necessary to carry traffic from

one neighborhood to another or from the neighborhood to other areas in the community. Residential Collector streets should provide the fewest direct accesses as possible.

A03.4 Mountain Access Road

Mountain Access Roads may be used in areas where the average cross slope exceeds 15 percent or to traverse terrain features in excess of 25 percent. Maintenance of Mountain Access Roads will be at the discretion of Department of Public Works (DPW). School bus access should be considered as school bus routes require all grades less than 10 percent. Mountain Access Road standards allow for steeper grades and switchbacks, but should otherwise be designed to Residential, Residential Subcollector, or Residential Collector standard as required by this section.

A03.5 Pioneer Road

Pioneer Roads may only be used where allowed by MSB or other applicable code. This classification establishes minimum requirements for roads providing physical access, but should otherwise be designed to Residential, Residential Subcollector, or Residential Collector standard as required by this section. No MSB maintenance will be provided for Pioneer Roads. Pioneer roads may be constructed offset from the centerline of the right-of-way (ROW) to facilitate future expansion of the road.

A03.6 Alleys

Alleys are permitted provided legal and physical access conforms to MSB or other applicable code. No MSB maintenance will be provided for Alleys.

A03.7 Other Street Types

The above classifications may be further typed as one of the following streets. These other street types should be designed to Residential, Residential Subcollector, or Residential Collector standard as required by this section.

(a) Frontage Street – streets parallel and adjacent to a major road corridor which provides access to abutting properties and separation from through traffic. See Section B for additional design standards.

(b) Backage Street – streets that provide access to lots located between the Backage Street and a major road corridor. See Section B for additional design standards.

(c) Connector Street – the portion of a street that connects a frontage or backage street to a major road corridor. See Section B for additional design standards.

(d) Divided Street – streets may be divided for the purpose of accommodating environmental features or avoiding excessive grading. In such a case, the design standards shall be applied to the appropriate street classification and a single lane width with a shoulder on each side.

A04 Access Criteria

A04.1 Residential Street

(a) A Residential street provides access to abutting properties.

(b) The anticipated average daily traffic (ADT) volume on Residential streets shall not exceed 400. A loop street shall be designed such that the anticipated ADT at each terminus of the loop street does not exceed 400, see Figure A-1~~Figure A-1~~.

(c) Residential streets may intersect or take access from an equal or higher classification street. Both ends of a loop Residential street are encouraged to intersect the same collecting street and be designed to discourage through traffic.

~~(d) Residential streets with only one inlet/outlet shall provide access to no more than 20 lots and not exceed 1000 feet in length (measured from the intersection point to the center point of the turnaround).~~

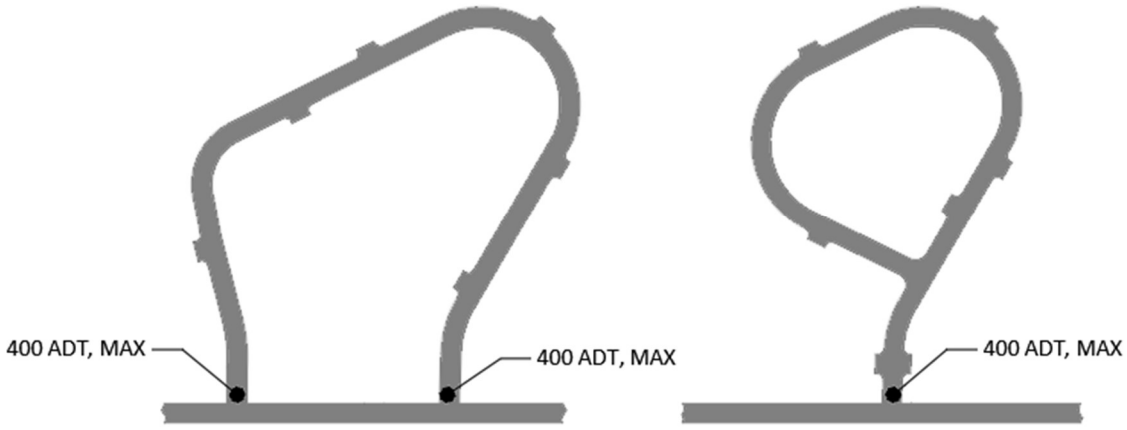


Figure A-1: Loop Residential Streets

A04.2 Residential Subcollector Street

(a) A Residential Subcollector street provides access to abutting properties and may also move traffic from Residential streets that intersect it. Residential Subcollector streets are required when the ADT anticipated on the street will exceed the limits for Residential ~~or when a street with only one inlet/outlet provides access to more than 20 lots or exceeds 1000 feet in length~~.

(b) The anticipated ADT on Residential Subcollector streets shall not exceed 1000. A loop street shall be designed such that the anticipated ADT at each terminus of the loop street does not exceed 1000, see Figure A-2.

(c) Residential Subcollector streets shall be designed to exclude all external through traffic that has neither origin nor destination on the Residential Subcollector or its tributary Residential streets. Adjacent parcels may acquire access if proven landlocked by legal or terrain features or if such Residential Subcollector access can be demonstrated to be beneficial to the public.

(d) Residential Subcollector streets shall take access from a street of equal or higher classification.

(e) Traffic calming elements should be considered for the design of Residential Subcollectors, such as avoiding long, straight segments and reducing the length of roadway from farthest lot to a collector.

(f) Residential Subcollector streets shall be provided with two continuous moving lanes within which no parking is permitted.

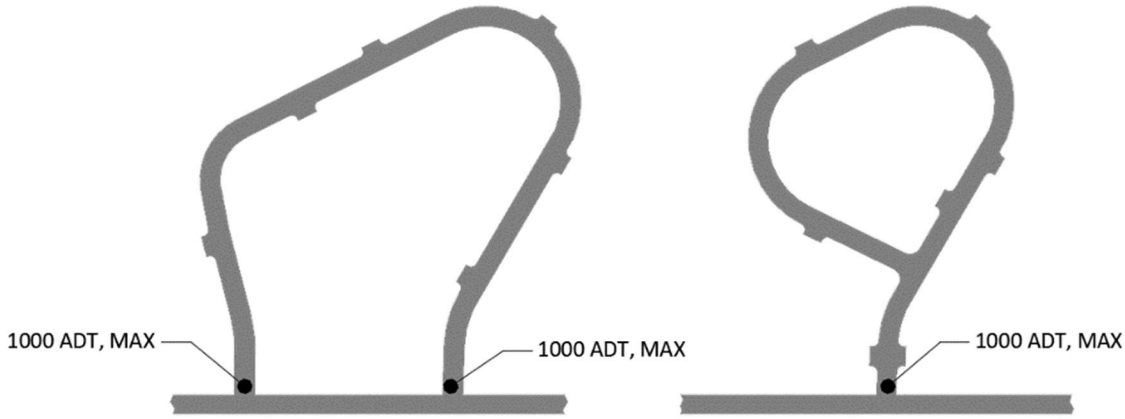


Figure A-2: Loop Residential Subcollector Streets

A04.3 Residential Collector Street

(a) A Residential Collector street carries residential neighborhood traffic, but restricts or limits direct residential access. Residential Collector streets are required when the ADT anticipated on the street will exceed the limits for Residential Subcollectors.

(b) Residential Collector streets should be designed to have as few residential lots directly fronting them as possible. When efficient subdivision design or physical constraints make this not possible, the average access point spacing shall be a minimum of 250 feet. Average access point spacing is calculated per segment and is equal to the segment length divided by the number of potential access points on both sides of the street. Undeveloped lots with only access to Residential Collector streets are counted as having at least one access point. When the average access point spacing on a segment of an existing Residential Collector street is less than 250 feet, the average access point spacing shall not decrease due to the subdivision.

(c) Space shall be provided on these lots for turnaround so that vehicles will not have to back out onto Residential Collector streets.

(d) Proposed access points on Residential Collector streets shall be shown on the preliminary plat.

(e) Residential Collector streets shall be laid out to encourage connectivity within the transportation network.

(f) If the anticipated ADT will exceed 3000, the street shall be classified at a higher level than Residential Collector by DPW.

(g) Every Residential Collector shall be provided with no fewer than two access intersections to streets of equal or higher classification. If it is shown by the applicant that two accesses are not feasible, Residential Collector streets shall be provided with access to one street of equal or higher

classification and be designed to accommodate a future second connection to a street of equal or higher classification, or otherwise be approved by DPW.

(h) All Residential Collector streets shall be provided with two continuous moving lanes within which no parking shall be permitted.

A04.4 Access through Existing Streets

The anticipated ADT on existing Residential streets used to access a proposed subdivision may exceed 400, but shall not exceed 800, if:

(a) alternate road corridors are not available or feasible;
(b) horizontal geometry or access density prohibits upgrade to a higher standard road; and
(c) the traffic impacts are mitigated.

A04.5 Traffic Impact Mitigation for Access through Existing Streets

Traffic impact mitigation on existing residential streets can include but is not limited to:

(a) Traffic control devices (signage, striping) on segments where potential ADT exceeds 440;
(b) LED street lighting, speed feedback signs, widened shoulders, inside corner widening for offtracking, or all-way stop intersections on segments where potential ADT exceeds 600.

A04.6 Commercial Uses on Residential and Residential Subcollector Streets

Exceptions to the ADT limits on Residential and Residential Subcollector streets, as set forth in A04.1 and A04.2, respectively, may be allowed for commercial uses that access the first 600 feet of such streets that intersect a Collector standard road or higher classification, as measured from the intersection point. The affected portion of the street and intersection shall be constructed to a higher standard as needed to accommodate the anticipated commercial traffic.

A05 Design Criteria

The design criteria for Residential, Residential Subcollector, and Residential Collector streets and Mountain Access and Pioneer roads are set forth in Table A-1~~Table A-1~~. Any unspecified design criteria shall meet or exceed the design criteria for the roadway design speed in the latest edition of *A Policy on Geometric Design of Highways and Streets* (AASHTO).

Table A-1: Design Criteria

	Unit	Residential	Residential Subcollector	Residential Collector	Mountain Access[1]	Pioneer[1]
Average Daily Traffic	VPD	≤400	401 – 1000	1001 – 3000	–	–
Typical Section						
ROW Width[2]	ft	60	60	60	60	60
Lane Width	ft	10	10	11	10	10
Standard Gravel Shoulder Width	ft	2	2	2	0[3]	0[3]
Shared Paved Shoulder Width[4]	ft	4	4	6	–	–
Roadway Width	ft	24	24	26	20[3]	20
Foreslope[5]	h:v	3:1	3:1	4:1	2:1	3:1
Backslope[6]	h:v	2:1	2:1	2:1	2:1[7]	2:1
Crown, gravel	%	3	3	3	3	3
Crown, pavement	%	2	2	2	2	–
Engineering Criteria						
Design Speed	mph	25	30	35	–	–
Posted Speed	mph	20	25	30	–	–
Stopping Sight Distance	ft	155	200	250	–	–
Horizontal Alignment						
Minimum Centerline Radius	ft	225	350	550	–[8]	–
with DPW Approval	ft	190	275	400	–	–
Minimum Tangent Between Curves	ft	100	100	100	100	100
Maximum superelevation	%	N/A	N/A	4	N/A	N/A

[1] Where a value is not given, Mountain Access and Pioneer Roads shall meet the criteria of the anticipated street classification.
[2] Minimum ROW required for new dedications; width of existing ROW may vary.
[3] Where grades exceed 7 percent, the shoulder width shall be 2 feet for a total roadway width of 24 feet.
[4] An optional paved shoulder may be provided on one or both sides of paved streets for non-motorized shared use.
[5] Slope for the first 7.5 feet from the shoulder; may be steepened to 2:1 thereafter. Install guardrail when required by the latest edition of the *Roadside Design Guide* (AASHTO).
[6] 2:1 Back slopes may be steepened to 1.5:1 if cuts exceed 5 feet and appropriate slope stabilization, as determined by the design engineer, is used. Retaining walls may be used to replace or augment backslopes.
[7] Or backslope recommended by the design engineer based on actual conditions.
[8] Switch backs are allowed provided cul-de-sac criteria is met or turning radius is 40 feet with a 2% grade.

	Unit	Residential	Residential Subcollector	Residential Collector	Mountain Access[1]	Pioneer[1]
Vertical Alignment						
Maximum Centerline Grade	%	10	10	10	15[9]	10
Minimum Rate of Vertical Curvature[10]; Crest		12	19	29	–	–
Minimum Rate of Vertical Curvature [10]; Sag		26	37	49	–	–
Minimum Flow Line Grades	%	0.5	0.5	0.5	1.0	0.5
Intersections						
Minimum ROW Corner Radius	ft	30	30	30	30	30
Minimum Curve Return Radius[11]	ft	20	25	30	–	–
Maximum Grade on through street within 50 feet of intersection	%	7	7	4	9	7

A06 Typical Section

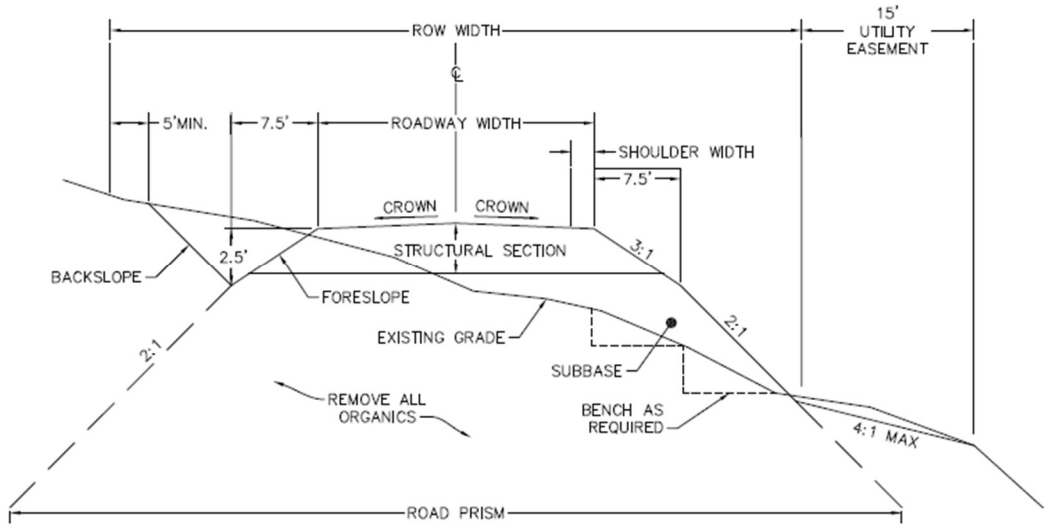


Figure A-3: Typical Section

[9] Up to 15% grade with no more than 200 linear feet of over 10% grade with a minimum of 100 linear feet of less than 10% grade for runout between steeper sections. Maximum grade in a horizontal curve is 10%.
[10] Rate of vertical curvature (K) is the length of curve (L) in feet per percent algebraic difference in intersecting grades (A); K = L / A
[11] 40-foot minimum curve return radius at intersections with higher order streets.

A07 Turnarounds

Streets with only one inlet ~~that exceed 200 feet in length (measured from the intersection point to the end of required construction)~~ shall terminate with a constructed turnaround, unless otherwise provided by A08.2.

A07.1 Cul-de-sac Turnarounds

(a) A cul-de-sac turnaround with a drivable surface diameter (shoulder to shoulder) of 85 feet centered in a ROW diameter of 120 feet shall be provided at the terminus of Residential and Residential Subcollector streets.

(b) Cul-de-sac turnarounds shall meet the configuration and dimensions shown in Figure A-4.

(c) The grade throughout the surface of a cul-de-sac, as depicted in the shaded portion of Figure A-4, shall not exceed 4 percent.

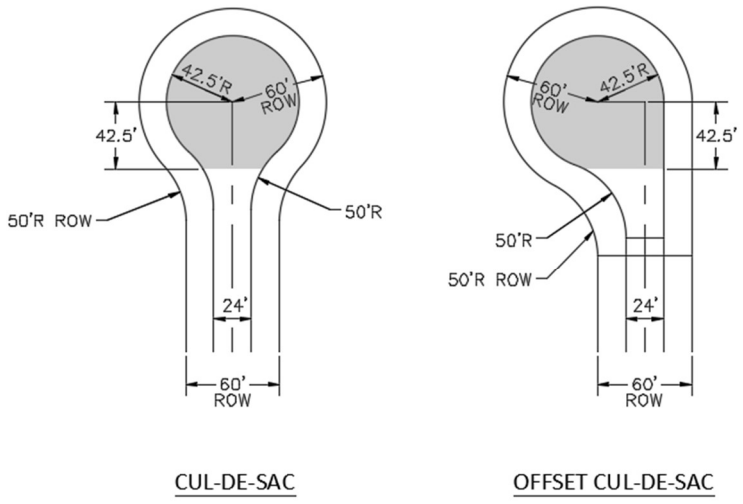


Figure A-4: Cul-de-sac Options

A07.2 Alternate Turnarounds

(a) DPW may permit a street to terminate with an alternative turnaround that meets fire code when such a design is required by extreme environmental or topographical conditions, unusual or irregularly shaped tract boundaries, or when the location of the turnaround is intended to become an intersection.

(b) Alternate turnarounds shall meet the configuration and dimensions shown in Figure A-5.

(c) The grade throughout the turnaround surface, as depicted in the shaded portion of Figure A-5, shall not exceed 4 percent.

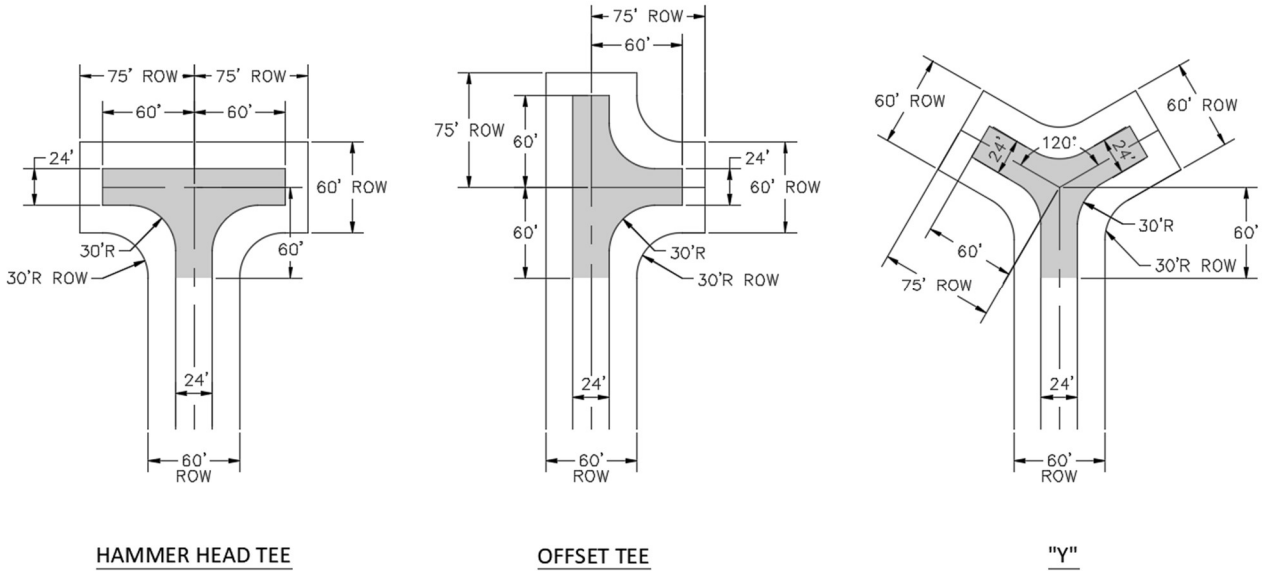


Figure A-5: Alternate Turnarounds

A08 Stub Streets

A08.1 Stub Street Construction

No construction is required if physical access is provided to all lots by adjoining streets as required by MSB or other applicable code.

A08.2 Temporary Turnarounds

~~All s~~Stub streets requiring construction that exceed 200 feet in length (measured from the intersection point to the end of required construction) will meet the requirements of ~~A07~~A07.1 or A07.2. A temporary easement will be provided for the turnaround, which will automatically terminate upon extension of the street and physical removal of the turnaround. The centerline grade on stub streets without turnarounds shall not exceed 4%.

A09 Intersections

A09.1 Intersection Sight Distance

(a) Whenever a proposed street intersects an existing or proposed street of higher order, the street of lower order shall be made a stop controlled street, unless alternate intersection control is used as allowed by this subsection.

(b) Stop controlled streets shall be designed to provide intersection sight distance as specified in this subsection, Table A-2~~Table A-2~~, and Figure A-6~~Figure A-6~~.

(c) The entire area of the intersection sight triangles shown in Figure A-6~~Figure A-6~~ shall be designed to provide a clear 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.

(d) Sight distances less than the recommended shall only be used when there are topographical or other physical constraints outside of the applicant's control.

(e) The minimum sight distances listed in Table A-2~~Table A-2~~ are for a passenger car to turn onto a two-lane undivided street and minor road approach grades of 3 percent or less. For other conditions, the minimum sight distance should be calculated by the applicant's engineer according to *A Policy on Geometric Design of Highways and Streets* (AASHTO).

(f) Sight distances less than the minimum, where no other options exist, will require alternate intersection control or warning signs as determined by the applicant's engineer and approved by DPW.

(g) Intersection sight triangles shall be located in their entirety within ROW or a sight distance maintenance easement.

(h) Yield controlled intersections shall conform to sight distance requirements according to *A Policy on Geometric Design of Highways and Streets* (AASHTO).

(i) Intersections with state or other municipal ROW are subject to their respective requirements and review.

Table A-2: Recommended and Minimum Intersection Sight Distance

Design Speed or Posted Speed Limit (whichever is greater)	S_d Recommended	S_d Minimum
MPH	ft	ft
25	370	280
30	450	335
35	580	390
40	750	445
45	950	500
50	1180	555
55	1450	610
60	1750	665
65	2100	720

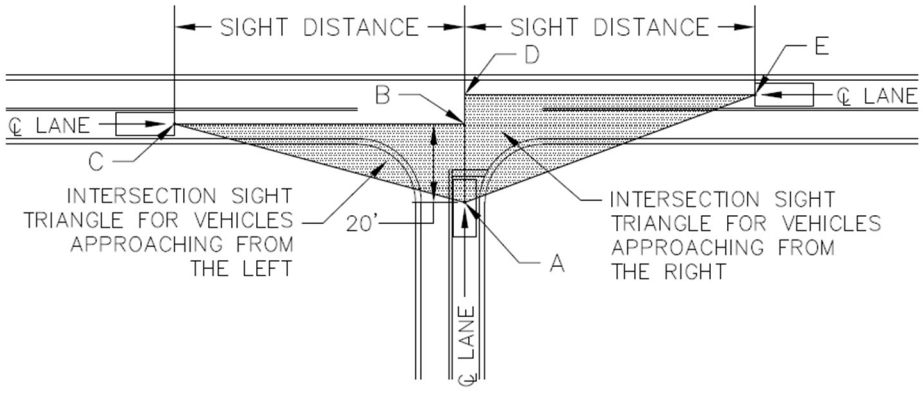


Figure A-6: Intersection Sight Distance

A09.2 Intersection Spacing

(a) Minimum centerline to centerline distance between intersections on the same side or opposing sides of the through street shall be:
  (1) 155 feet on Residential streets;
  (2) 200 feet on Residential Subcollector streets;
  (3) 300 feet on Residential Collectors and Minor Collectors; or
  (4) 650 feet on higher order streets where other access standards do not exist.

(b) If the above spacing along the through street cannot be met, intersections shall be aligned directly across from each other. Intersections on opposing sides of the through street may be offset up to 30 feet, with a preference for a left-right offset, as shown in Figure A-7.

(c) Where pre-existing conditions do not allow for the above spacing and no other legal access exists, alternate spacing or offset most closely meeting (a) or (b) above may be allowed.

(d) Additional intersections should be avoided within the functional area of major intersections with turning bays and approach tapers. Exceptions require DPW approval based upon constraints and no other feasible alternatives.

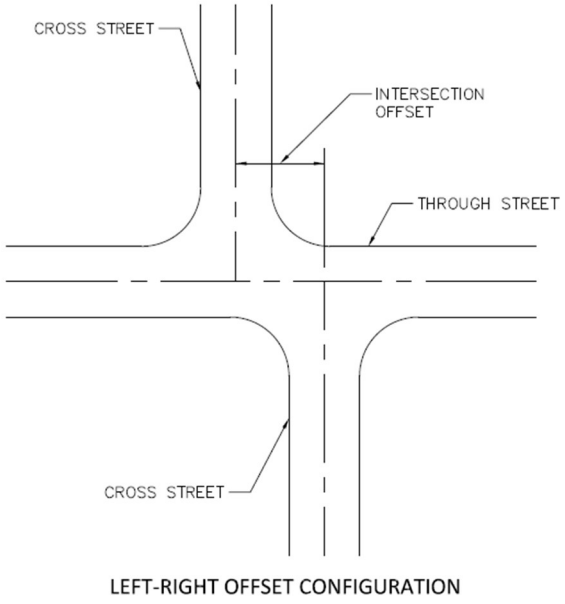


Figure A-7: Intersection Offset

A09.3 Minimum Intersection Angle

Streets should intersect with a straight segment at an angle as close to 90° as possible, but no less than 70°, for a minimum of 75 feet from the intersection point, as shown in Figure A-8.

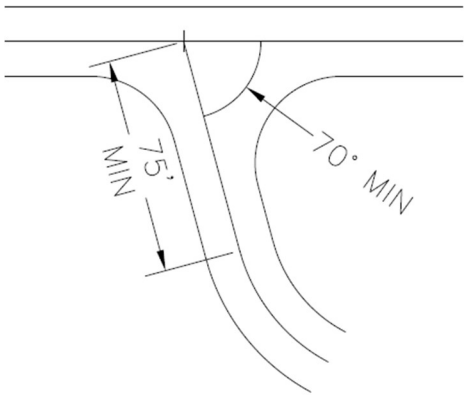


Figure A-8: Intersection Angle

A09.4 Landing

Controlled streets shall be provided with a typical 30-foot landing, conforming to Figure A-9, at its approach to a through street. The landing shall be sloped to match the crown of the through street. Vertical curves shall not be located in the landing to the extent feasible. Where a negative slope away from the through street is not feasible due to topographical constraints, the road shall be constructed in a manner that prevents water from flowing onto the through street.

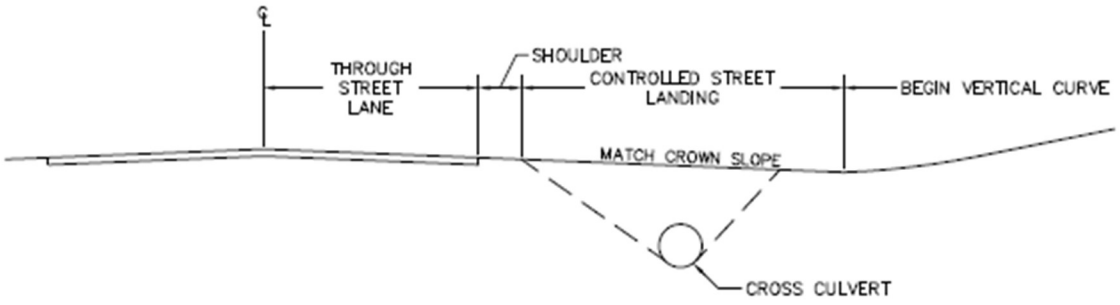


Figure A-9: Controlled Street Landing Profile

A09.5 Paved Apron

A proposed street which intersects an existing paved street shall be provided with a paved apron 40 feet from the edge of the existing pavement.

~~A proposed street which intersects an existing paved street shall be provided with a paved apron from the edge of the existing pavement to the end of the curve return plus 10 feet.~~

A10 Driveways

Driveways are not usually required to be constructed within the ROW at time of road construction. However, if an applicant chooses to construct driveways, driveway permits are required. The applicant may permit all driveways with one application. A driveway permit application can be obtained from the

MSB Permit Center. Driveways onto state or other municipal ROW are subject to their respective requirements and review.

A11 Trailhead

Trailhead parking lot layout shall conform to applicable local, state, and federal requirements.

A12 Bicycle and Pedestrian Paths

Bicycle and pedestrian paths constructed within public ROW shall conform to the current edition of *Guide for the Development of Bicycle Facilities* (AASHTO), and any other applicable local, state, and federal requirements.

A13 Signage

Signs shall be provided and installed by the applicant in conformance with the latest edition of the *Alaska Traffic Manual* (ADOT&PF) and the *Alaska Sign Design Specifications* (ADOT&PF) prior to plat recordation.

(a) Each street within a subdivision shall be identified and signed at its point of egress and ingress. Cul-de-sac streets will be signed and identified at their point of ingress
(b) Intersection control signs shall be provided at designated intersections within the confines of the subdivision and at the intersection with the access road, if applicable.
(c) Intersection control signs shall be located such that they are visible to approaching traffic and near corresponding stop or yield bars.
(d) Speed limit signs shall be provided at entrances to the subdivision, where the speed limit changes, and at a minimum of one-mile intervals throughout the subdivision.
(e) If a constructed stub street provides access to two or fewer lots and has no turnarounds a sign indicating a dead-end street shall be posted.
(f) If a dedicated stub street is not constructed, no signs are required.
(g) Install signs according to the criteria in Figure A-10, Figure A-11, and Figure A-12.
(h) Signs within state or other municipal ROW are subject to their respective requirements and review.

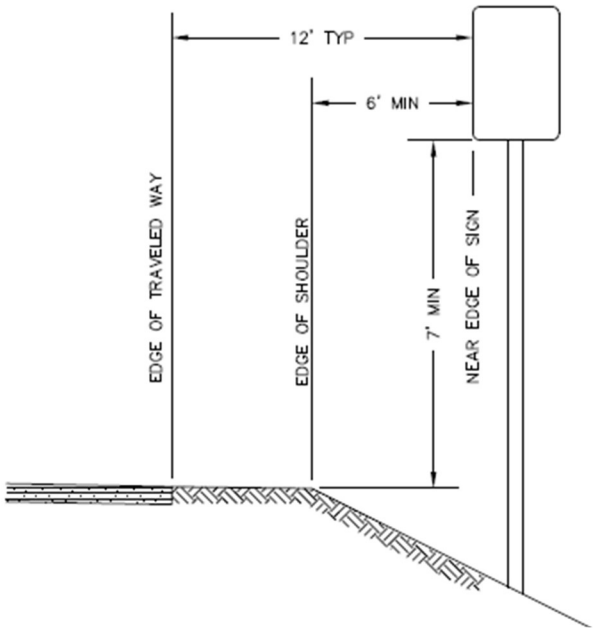


Figure A-10: Sign Placement

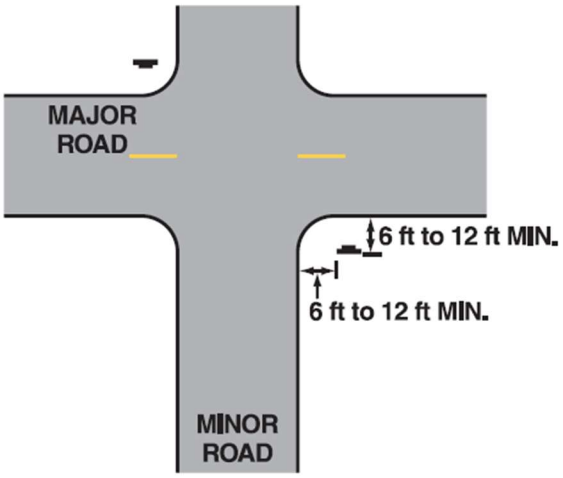
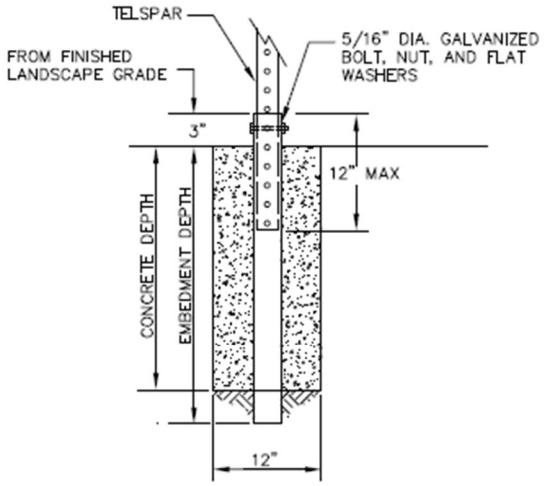


Figure A-11: Stop Sign Location



PERFORATED STEEL TUBES (P.S.T.) (12ga. – .105" Wall Thickness)			
SIGN SURFACE AREA SQ. FT.	POST SIZE	EMBEDMENT DEPTH	CONCRETE DEPTH
7' OR LESS	2" X 2"	27"	24"
GREATER THAN 7'	2 ½" X 2 ½ "	33"	30"

Figure A-12: Concrete Foundation for Sign Post

A14 Railroad Crossings

All access requiring a crossing of the Alaska Railroad shall be subject to the *Alaska Policy on Railroad/Highway Crossings* (Alaska Railroad).

A15 Average Daily Traffic

(a) The following formula shall be used to determine the required classification of streets:
ADT = Number of lots x 10 for single-family residential use.

(b) See Section G for other land uses.

(c) For subdivisions of five or more lots, submit potential ADT calculations for the following locations with the preliminary plat:

(1) at each intersection within the subdivision,

(2) at each intersection en route to an existing Residential Collector street or higher classification, and

(3) at an existing Residential Collector street or higher classification.

A16 Design Deviations

Design deviations will be considered to address extenuating circumstances including but not limited to: existing substandard ROW, environmental conditions, or existing utilities or other structures. Design deviation requests shall be in writing and contain supporting information, justification, and suggested solutions. Design deviations may be allowed by DPW only for matters that do not fall under the jurisdiction of a Board or Commission. In no circumstances will a roadway width less than 20 feet or foreslopes steeper than 2:1 be allowed. Residential Collector streets shall be no less than 24 feet wide.

Section B. Major Road Corridors

B01 General

Major road corridors include major collectors, arterials, and interstates. This section provides references to and guidelines for the design and construction of major road corridors within the MSB.

B02 Right-of-way and Surface Widths

Table B-1: ROW and Surface Widths

Classification	Minimum ROW Width (ft)	Standard Lane Width (ft)	Number of Lanes	Shoulder Width (ft)
Major Collector	80	12	2 – 3	4
Arterial	100	12	3 – 4	4 – 8
Interstate	200	12	4 – 6	12

B03 Frontage, Backage, and Connector Street Standards

Subdivisions adjacent to planned or existing major road corridors shall plan for future frontage or backage streets when any of the following conditions apply, unless it is shown by the applicant to be not necessary or feasible for future development and public safety with ~~non-objection~~ no written objection from the road authority.

(a) Subdivisions accessing roads that are classified by ADOT&PF as Interstates.
(b) Subdivisions accessing roads that are or are projected to grow above 20,000 vehicles per day (VPD).
(c) Subdivisions accessing roads that are or are projected to have four or more lanes or median control per the LRTP or Official Streets and Highways Plan (OSHP).
(d) Subdivisions that require a second access route.
(e) To gain access to an existing or planned signal.
(f) Where access to a minor arterial or collector as a connector road is feasible.
(g) When there are existing or platted frontage or backage routes adjacent to the property.

B03.1 Separation Distances

Minimum ROW to ROW separation distance between major corridors and frontage or backage streets shall be:

(a) 0 feet for locations with no connector street to the major road corridor;
(b) 100 feet for locations with a connector street to the major road corridor that lie between section lines and planned or existing intersections with other major road corridors;
(c) 300 feet for locations where the connector street to the major road corridor is on a section line or planned or existing major road corridor.

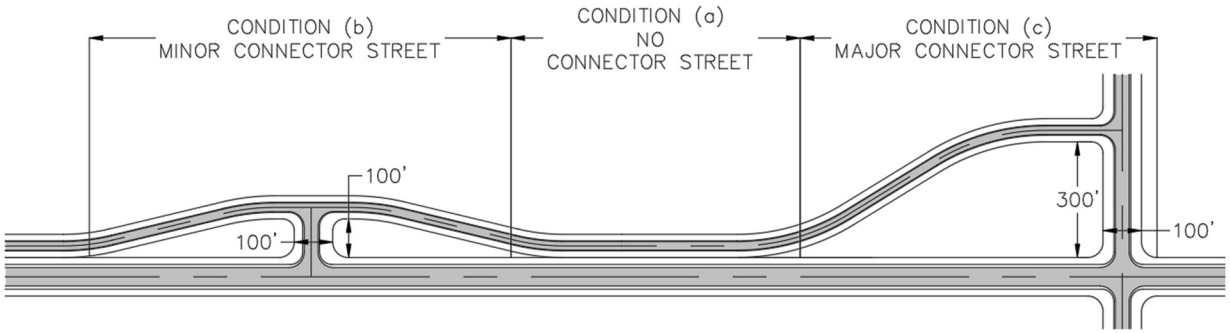


Figure B-1: Frontage Street Configurations

B03.2 Design Standards

(a) Frontage streets
  (1) Minimum centerline radii may be reduced near intersections with through connector streets.

(b) Connector streets
  (1) 100-foot ROW width desirable.
  (2) Minimum 40-foot radius curve returns at the major road corridor.
  (3) Minimum 4-foot wide shoulders for 100 feet from the edge of roadway of the major road corridor.
  (4) Minimal direct access.

B03.3 Dedication and Setbacks

Dedicate ROW or additional building setbacks to allow for the frontage, backage, and connector street standards in this manual. The applicant shall submit design information sufficient to demonstrate ~~prove~~ that frontage, backage, and connector street dedications or building setbacks are in a practical location where road construction is feasible in accordance with this manual. The applicant shall be required to submit plan, profile, and cross-sections for the sections of road where~~if~~ existing grades along the proposed route exceed 10 percent, existing cross slopes exceed 15 percent, or if existing utilities or other physical features appear to create impediments to a road design meeting standards of this manual. Road plan and profile shall extend at least 300 linear feet on either side of the subject sections or to intersecting or adjacent ROW within 500 linear feet.

B04 Access Standards

(a) The average access point spacing on major road corridors, where other access standards do not exist, shall not exceed the minimums listed in Table B-2~~Table B-1~~, based on the posted speed limit. Average access point spacing is calculated per segment and is equal to the segment length divided by the number of access points on both sides of the street. Undeveloped lots with only access to the major road corridor are counted as having at least one access point.

(b) When the average access point spacing on a segment of an existing major road corridor is less than the minimum listed in Table B-2~~Table B-1~~, the average access point spacing shall not decrease due to the subdivision.

Table B-2~~B-1~~: Average Access Point Spacing

Posted Speed Limit (mph)	Minimum Average Access Point Spacing (feet)
30	250
35	300
40	360
45	425
50	495
55	570

B05 Future Corridors

Subdivisions shall be designed in a manner that does not conflict with the ~~Long Range Transportation Plan~~LRTP or the ~~Official Streets and Highways Plan~~OSHP. Subdivisions containing future road corridors identified in the LRTP or OSHP are encouraged to include the future road corridor as part of the road layout of the subdivision.

Building setbacks prohibiting the location of any permanent structure within the future corridor may be voluntarily designated on the final plat. The area within the future road corridor shall be excluded from usable septic area calculations. The area within the future road corridor and building setbacks shall be excluded from usable building calculations.

B06 References

The following publications shall be used for design and construction standards of these classes of streets that are not otherwise established herein:

(a) *A Policy on Geometric Design of Highways and Streets*, AASHTO (current edition).
(b) *Standard Specifications for Highway Construction*, ADOT&PF (current edition);
(c) *Standard Modifications to the ADOT&PF Standard Specifications for Highway Construction*, MSB (latest revision)
(d) *Alaska Highway Preconstruction Manual*, ADOT&PF (latest revision)

Section C. Construction Requirements

C01 General

This section establishes minimum construction requirements. Prior to any ground disturbing activities, call the Alaska Dig Line for utility locates in accordance with AS 42.30.400.

C02 Road Construction

C02.1 Clearing

Cut and dispose of all trees, down timber, stumps, brush, bushes, and debris. Cut trees and brush to a height of not more than 6 inches above the surrounding ground. Clear the ROW, slope easements, and sight distance triangles. Where ROW exceeds 60 feet, clear a minimum of 60 feet. Clear utility easements, if used, for utilities constructed with the development.

C02.2 Grubbing

Remove and dispose of all stumps, roots, moss, grass, turf, debris, or other deleterious material within the fill and cut catch limits of the road plus 5 feet on each side, within the ROW, and cleared utility easements for underground utilities.

C02.3 Disposal

Dispose of clearing and grubbing debris in an area designated by the applicant outside of all ROW, platted utility easements, and platted private road corridors. Organic debris 3 inches in diameter by 8 inches long, or smaller, may be left in place, outside of the road prism.

C02.4 Slit Trenches

Slit trenches are not allowed in the ROW. Utility easements may be used as a borrow source above a 2:1 extension of the road prism, as shown in Figure A-3. Topsoil or other organic non-deleterious material may be disposed within the utility easement. Compact the disposal area with heavy equipment and grade the surface with positive drainage no steeper than 4:1 and no lower than the ditch line. Submit an as-built drawing showing the horizontal locations of borrow extraction along the road corridor with the Final Report.

C02.5 Embankment Construction

(a) Construct the road with the required structural section, see Figure C-1, and dimensions, see Table A-1~~Table A-1~~ and Figure A-3, as determined by its classification.

(b) Prepare the subgrade. Remove all organics from the area below the road prism and dispose in locations where embankment is not proposed. Bench existing slopes that are steeper than 4:1, measured at a right angle to the roadway, where roadway embankment is to be placed.

(c) Place material meeting, or verify in-situ material meets, the requirements for Subbase specified in subsection C07 to a minimum depth of 20 inches with the upper 6 inches having no material with

a diameter larger than 6 inches. Place embankment in horizontal layers, as directed by the engineer, for the full width of the embankment and compact as specified before the next lift is placed.

(d) Place 4 inches of Surface Course meeting the requirements specified in subsection C07. Finish with a 3 percent crown, and compact as specified.

(e) For Residential and Residential Subcollector standard roads, compact all embankment to not less than 90 percent of the maximum dry density at the optimum moisture content and the top 24 inches to not less than 95 percent of the maximum dry density at the optimum moisture content. For Residential Collector standard roads, compact all embankment to not less than 95 percent of the maximum dry density at the optimum moisture content.

(f) Optimum moisture and maximum dry density will be determined by Alaska Test Method (ATM) 207 and ATM 212 or alternative methods approved by DPW.

~~(e)~~(g) In-place density shall be determined by ATM 213 or alternative method approved by DPW. Compaction tests on the ~~subbase~~ Subbase layer shall be taken at representative locations along the roadways as follows:

(1) a minimum of three;

(2) at least one per segment;

(3) one additional test per 1000 linear feet, or portion thereof, when the combined length of roadway exceeds 1000 linear feet;

(4) at least one out of every three within three feet of the shoulder, and the remainder in the center of a driving lane.

~~(f)~~(h) For paved roadways, substitute Surface Course with a minimum of 2 inches of Base Course and 2 inches of HMA Type II, Class B, for Residential and Residential Subcollector streets, and a minimum of 3 inches of Base Course and 3 inches of HMA Type II, Class B, for Residential Collector Streets~~, in accordance with Appendix A~~. Pavement shall meet MSB Special Provision Section 401 Hot Mix Asphalt Pavement. The width of the pavement shall be equal to two lane widths plus the shared paved shoulder width, if used, and finished with a 2 percent crown. Pavement edges shall be backed with additional Base Course graded and compacted flush with the pavement surface and tapered to the edge of the roadway. The pavement shall be washed or swept immediately following shouldering work.

~~(g)~~(i) Remove all loose material exceeding 6 inches in diameter from the ditches and foreslopes. Where slopes are 3:1 or steeper and longer than 10 feet measured along the slope face, trackwalk perpendicular to the slope, or the equivalent, to form 1-inch wide grooves parallel to the road no more than 12 inches apart.

~~(h)~~(j) Permanently stabilize backslopes 3:1 or steeper. Stabilization can be part of a subdivision agreement. Stabilization may be allowed to establish during the warranty period.

C02.6 Unsuitable Subgrades

When structurally unsuitable material such as peat, saturated material, or permafrost are present within the ROW, provide an appropriate structural design for approval by DPW, according to Section F, prior to

construction. Place embankment to a depth that will produce a stable road surface with a final grade 18 inches above the surrounding ground.

C03 Roads Outside of a Road Service Area

Roads outside of a Road Service Area are not subject to the requirement for Surface Course.

C04 Pioneer Road Construction Requirements

Pioneer roads, whether proposed or existing, shall meet the requirements of Figure C-1, Table A-1~~Table A-1~~, and Figure A-3. Place material meeting, or verify in-situ material meets, the requirements for Subbase specified in subsection C07 to a minimum depth of 12 inches. Additional road embankment may be required to provide a stable road surface. Surface Course is not required. Pioneer roads may be constructed offset from the centerline of the ROW to facilitate future expansion of the road. Cross drainage culverts, minimum 18 inch diameter, will be installed where determined necessary and 24 inch ditches will be provided for drainage.

C05 Winter Construction

Winter construction may be allowed. DPW will not accept any roads until all ground has thawed and any settlement areas corrected.

C06 Alternate Methods and Materials

Use of alternate materials and road construction methods that will more appropriately fit the conditions of the specific road locations, following general engineering practices, may be proposed by the applicant or their engineer in writing. Final acceptance of such plans must be approved by DPW.

C07 Materials

C07.1 Subbase

(a) Is aggregate containing no muck, frozen material, roots, sod, or other deleterious matter;
(b) has a plasticity index not greater than 6 as tested by ~~Alaska Test Method (~~ATM~~)~~ 204 and ATM 205; and
(c) meets the requirements of Table C-2, as determined by ATM 304.

C07.2 Base Course

(a) Crushed stone or crushed gravel, consisting of sound, rough, durable pebbles or rock fragments of uniform quality;
(b) free from clay balls, vegetable matter, or other deleterious matters;
(c) meets the requirements of Table C-1; and
(d) meets the requirements of Table C-2, as determined by ATM 304.

C07.3 Surface Course

(a) Is a screened or crushed gravel, consisting of sound, rough, durable pebbles or rock fragments of uniform quality;
(b) free from clay balls, vegetable matter, or other deleterious matters; and
(c) meets the requirements of Table C-2, as determined by ATM 304.

Table C-1: Aggregate Quality Properties for Base Course

Property	Test Method	Base Course
L.A. Wear, %	AASHTO T 96	50, max
Degradation Value	ATM 313	45, min
Fracture, %	ATM 305	70, min
Plastic Index	ATM 205	6, max
Sodium Sulfate Loss, %	AASHTO T 104	9, max (5 cycles)

Table C-2: Aggregate Gradations

Sieve Designation	Subbase	Base Course	Surface Course
1 1/2 inch			100
1 inch		100	
3/4 inch		70 to 100	70 to 100
3/8 inch		50 to 80	50 to 85
No. 4	20 to 60	35 to 65	35 to 75
No. 8		20 to 50	20 to 60
No. 50		6 to 30	15 to 30
No. 200	0 to 10	0 to 6	7 to 13

(Percent Passing By Weight)

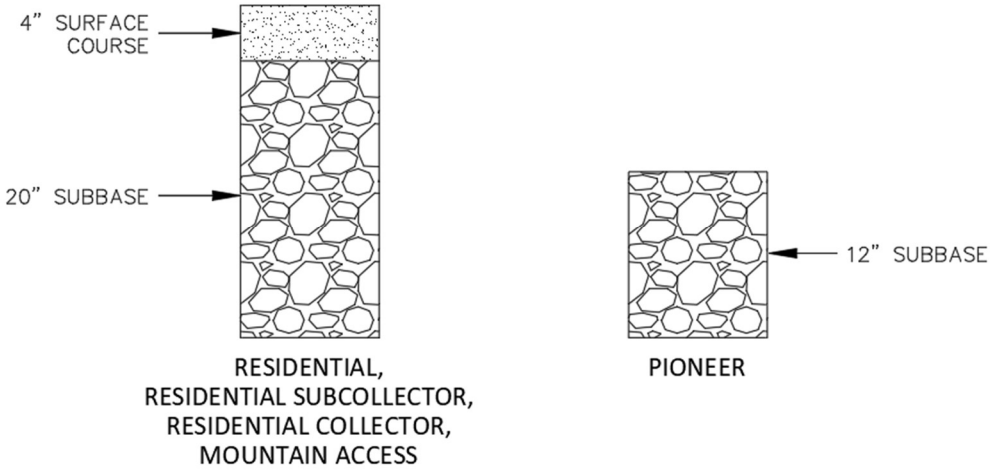


Figure C-1: Structural Sections for Gravel Roads

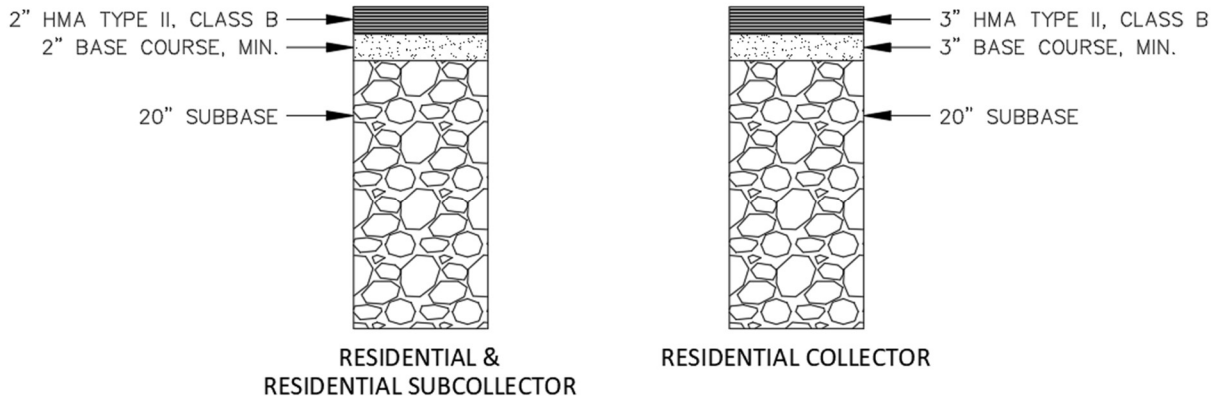


Figure C-2: Structural Sections for Paved Roads

Section D. Drainage

D01 General

The purpose of this section is to ensure that stormwater management is provided with land development activities. Responsible stormwater management is the treatment, retention, detention, infiltration, and conveyance of stormwater and other surface waters without adversely impacting adjoining, nearby, or downstream properties and receiving waters.

D02 Requirements

A preliminary drainage plan is required when road construction or disturbing land to create useable area for a subdivision is proposed. A drainage report is required for projects that include road construction, disturb 10,000 square feet of land or more, fill in wetlands, disturb land within 100 feet of the ordinary high water mark (OHWM) of a water body, disturb land within a mapped flood hazard area, or change the location, direction, quantity, or type of runoff leaving a site. See subsection D06 for specific requirements regarding fish passage culverts. It is the applicant's responsibility to comply with all other applicable federal, state, and local codes and regulations.

D02.1 Preliminary Drainage Plan

Submit a preliminary drainage plan, prepared by an engineer or other qualified professional registered in the State of Alaska, with the preliminary plat or ROW construction permit application. The preliminary drainage plan shall show the project site at a legible scale plottable on 11" by 17" paper or larger and depict the following:

(a) Existing and proposed property lines, plottable easements disclosed in the title report, the OHWM of water bodies with 100-foot upland offset, and existing mapped flood hazard areas.
(b) Existing topography with horizontal and vertical accuracy meeting US National Map Accuracy standards, with 5-foot contour intervals if the ground slope is less than 10 percent and 10-foot contour intervals if the ground slope is greater than 10 percent.
(c) Existing features that convey or retain drainage, including but not limited to: water bodies, wetlands, natural valleys, swales, ditches, check dams, culverts, and pipe systems.
(d) Proposed drainage pattern and features, both constructed and natural, on site. Identify conveyance types, flow directions, and any drainage changes that may affect adjacent property.
(e) Proposed stream crossings and anticipated culvert sizes. Identify fish-bearing streams.

D02.2 Drainage Report

Submit a drainage report, prepared by an engineer or other qualified professional registered in the State of Alaska, as part of the construction plan submittal in subsection F01.2. The drainage report shall include the following:

(a) The drainage plan as specified in D02.1 (may be shown on two plans for clarity), updated to include:

(1) Pre-development and post-development catchment area boundaries determined using 2-foot contour intervals; and

(2) Locations of peak flow, peak velocity, and where runoff leaves the project site.

(b) Description of methods, assumptions, and data sources used or made, including but not limited to:

(1) Rainfall data ~~used (~~from the NOAA-14~~'s~~ Precipitation Frequency Data Server ~~or the Palmer Airport IDF curves in Figure D-1, whichever is more appropriate for the local conditions)~~.

(2) Assumed post-development land cover conditions.

(3) Method used to determine runoff quantities, time of concentration, peak flows, etc.

(c) Catchment area maps used or created to evaluate down-gradient conditions.

(d) Identify design elements, with supporting runoff calculations, necessary to show compliance with the drainage design criteria set forth in D03.

(e) Fish passage culvert plans, if applicable.

D03 Drainage Design Criteria

(a) Design a drainage system for the project site to meet the criteria listed in Table D-1.

(b) Retain natural drainage patterns to the extent possible.

(c) Changes to drainage patterns must not adversely affect adjacent property or ROW.

(d) Base the size and capacity of the drainage system on runoff volumes and flow rates assuming full development of the subdivision and a 10 percent increase to runoff from the catchment area.

(e) ~~Utility easements may be crossed by drainage features, but cannot be used to retain or detain water.~~ Drainage easements are required where the ROW is not sufficient to accommodate drainage needs. See subsection E01.2.

(f) Where drainage easements overlap utility easements:

(1) Above ground drainage facilities, such as retention and detention basins, may be located in new utility easements only in a manner that will not interfere with utilities. See subsection H02.

(2) Above ground drainage facilities located within existing utility easements require a letter of non-objection from affected utilities.

(3) Culverts crossing utility easements require a letter of non-objection from affected utilities.

(4) Underground drainage facilities such as infiltration trenches and vertical inlets shall not be located in utility easements.

~~(e)~~(g) Drainage to state or other municipal ROW are subject to their respective requirements and review.

Table D-1: Drainage Sizing and Analysis Criteria

Design Requirement	Purpose	Criteria
Conveyance ~~Design~~	Size conveyances to pass design peak flows.	Drainage ditches: 10-year, 24-hour Non-regulated streams: 10-year, 24-hour Regulated streams: 100-year, 24-hour
Wetlands ~~Retention~~	Retain function of original wetlands	~~In areas where wetlands are disturbed, drainage must be designed to p~~Preserve the pre-development function of ~~the remaining~~ wetlands. For jurisdictional wetland areas, comply with United States Army Corps of Engineers wetlands development retention requirements.
Water Quality ~~Protection~~	Treat first flush pollutant loading ~~Ensure channel stability for all project conveyances~~	Treat runoff generated by 0.50 inch of rainfall in a 24-hour period.~~Treat the initial 0.25 inch of post-developed runoff for each storm event.~~ ~~Control flows in conveyance channels so that transport of particles sized D50 and greater will not occur for the post-development 10-year, 24-hour storm.~~
Erosion and Sedimentation Control	Ensure channel stability for all project conveyances	Control flows in conveyance channels so that transport of particles sized D50 and greater will not occur for the post-development peak flow.
Extended Detention	Protect streams and channels from damage from smaller, more frequent storm flows	Provide 12 to 24 hours of detention for the post-development project runoff in excess of pre-development runoff volume for the 1-year, 24-hour storm.
Flood Hazard ~~Protection~~	Control ~~project~~ peak flow to minimize downstream impacts	Option 1 Maintain the post-development project runoff peak flows from the 10-year, 24-hour storm to less than ~~1.10 times~~ or equal to pre-development runoff peak flow at all project discharge points. Option 2 Maintain the post-development project runoff peak flows to less than 1.10 times pre-development runoff peak flow at all project discharge points. Evaluate downstream until the project site area is less than 10% of the total upstream basin area and mitigate adverse impacts. ~~If post-development discharge is greater than pre-development discharge, evaluate down-gradient conditions for and mitigate adverse impacts for a~~

		~~distance of 1 mile downstream from the project as measured along the flow path or to the receiving water body, whichever is less,~~
~~Project~~ Flood Bypass	Prevent an increased risk of flood damage from large storm events.	Compute post-development peak flow and delineate~~Design or identify~~ an unobstructed, overland flow path for runoff to overtop or bypass project conveyance routes for the post-development 100-year, 24-hour storm.

D04 Drainage Ditches

Stabilize ditches with gravel, turf, or rock riprap. See Table D-2 and Table D-3 for most common conditions and acceptable ditch lining materials. Evaluate channel stability for compliance with the Erosion and Sedimentation Control design requirement in Table D-1 for other conditions.

Normal ditch depth shall be 30 inches and according to the typical section shown in subsection A06. The design peak flow required by Conveyance Design in Table D-1 shall be conveyed within ditches with a minimum freeboard of 12 inches.

The ditch depth may be reduced at local high points of the ditch, provided the flow line offset is maintained and with DPW concurrence. Alternate ditch design along Residential and Residential Subcollector streets may be considered, if evidence is provided that the following conditions exist:

(a) Ditches are a minimum of 18" deep;
(b) The design peak flow required by Table D-1 is demonstrated to be conveyed within ditches with a minimum freeboard of 12 inches;
(c) Adequate drainage routes are provided and constructed within the ROW or designated drainage easements;
(d) Flow lines are established at least 8 feet from the edge of roadway.
(e) Ditches are deepened to provide cross drainage through 24" corrugated metal culverts (18" with DPW approval).
(f) Cross sectional area of ditch is at least 15 square feet.

Table D-2: Ditch Stabilization

Flow (cfs)	Ditch Slope (ft/ft)										
	0.005	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10
2.0	A	A	A	A	A	A	A	A	A	A	A
4.0	A	A	A	A	A	A	A	A	B	B	B
6.0	A	A	A	A	A	A	B	B	B	B	B
8.0	A	A	A	A	A	B	B	B	B	B	B
10.0	A	A	A	A	B	B	B	B	B	B	C
20.0	A	A	A	B	B	B	C	C	C	C	C
30.0	A	A	A	B	B	C	C	C	D	D	D
40.0	A	A	B	B	C	C	C	D	D	D	E
50.0	A	A	B	B	C	C	D	D	D	E	E
60.0	A	A	B	C	C	D	D	D	E	E	E
70.0	A	A	B	C	C	D	D	E	E	E	E
80.0	A	B	C	C	C	D	E	E	E	E	E
90.0	A	B	C	C	D	D	E	E	E	E	F
100.0	A	B	C	C	D	D	E	E	E	F	F

Table D-3: Ditch Lining Materials

Type	Material	D50 (in)	Dmax (in)	Dmin (in)	Thickness (in)
A	Native Grass, Turf, or Gravel with < 6% fines				
B	Riprap or Bone Rock	3.0	4.5	1.5	6.0
C	Riprap or Bone Rock	6.0	9.0	3.0	12.0
D	Riprap or Bone Rock	9.0	13.5	4.5	18.0
E	Riprap or Bone Rock	12.0	18.0	6.0	24.0

D05 Culverts

D05.1 General Culvert Design Criteria

The following criteria apply to all cross road culverts for runoff or seasonal drainage:

(a) The minimum culvert slope is 0.5 percent.
(b) Culverts longer than 100 feet require appropriate maintenance access and DPW approval
(c) Cross road culverts shall have a minimum diameter of 18 inches.
(d) Culverts shall be sized to convey the design peak flow required by Table D-1, based on the larger of the two computed sizes using inlet control and outlet control.
(e) Culverts shall be corrugated metal pipe (CMP) and minimum:
    (1) 16 gauge galvanized steel on Residential and Residential Subcollector streets;
    (2) 12 gauge galvanized steel on Residential Collector and Minor Collector streets; or
    (3) 16 gauge aluminum or aluminized if needed due to soil or water conditions.
(f) Design and install energy dissipation rock aprons at culvert outlets in accordance with Hydraulic Engineering Circular No. 14 (FHWA).
~~(e)~~(g) Install culverts in accordance with the manufacturer's recommendations for the anticipated traffic loads.

D05.2 Stream Crossing Culvert Criteria

The following criteria apply to all stream crossing culverts:

(a) Prior to preliminary plat submittal, contact the Alaska Department of Fish and Game (ADFG), Division of Habitat to determine if a stream reach harbors fish. If so, stream crossing culverts shall be designed, constructed, and maintained according to D06.
(b) Stream crossing culverts shall be placed as close to the pre-existing channel alignment as possible. Avoid placing culverts at pools and stream bends.
(c) Road alignment shall be as close to perpendicular to the stream channel as possible.
(d) Culvert slope shall be within 25 percent of the natural stream slope. For example, if the natural stream slope is 1.0 percent, the minimum design slope of the culvert would be 0.75 percent and the maximum design slope would be 1.25 percent.
(e) Culvert outlet and inlet protection shall be used as necessary to reduce the risk of scour and perching.

(f) Stream crossings shall be composed of a single pipe or arch for the main stream channel.
(g) Overflow culverts may be used but should be placed at a higher elevation so that flows up to the OHWM pass through the primary culvert.
(h) Stream crossings shall maintain the connectivity of wetlands adjacent to stream channels and shall accommodate sheet flow within such wetlands.
(i) Stream crossing culverts shall not interfere with the functioning of floodplains and shall be designed to convey the design peak flow required by Table D-1. If the stream crossing culvert is not designed to accommodate the 100-year flow, a route must be established to safely convey flows exceeding the design peak flow without causing damage to property, endangering human life or public health, or causing significant environmental damage.
(j) In cases of crossings within high entrenchment ratio environments, the ratio of the flood prone width to the OHWM width is greater than 2.2, floodplain overflow culverts may be beneficial to floodplain connectivity and can be used to pass the design flow. Minimum width requirements for the primary culvert still apply.
(k) Stream crossing culverts shall have a minimum diameter of three feet.
(l) Stream crossing culvert pipes and arches shall be metal.
(m) Culverts longer than 100 feet require appropriate maintenance access and DPW approval
(n) Install culverts in accordance with the manufacturer's recommendations for the anticipated traffic loads.

D06 Fish Passage Culverts

These criteria provide general design guidance for road crossings of fish-bearing streams to maintain the full hydrologic functioning of the water body they are crossing. Site-specific conditions, such as multi-thread channels, may require alternate design approaches.

D06.1 Pre-design Conference

Schedule a fish passage pre-design conference with DPW prior to permit submittals. The pre-design conference is to:
(a) determine required permits;
(b) coordinate interagency requirements;
(c) determine any site-specific design requirements; and
(d) establish a plan review process.

D06.2 Stream Simulation Method

Stream simulation methodologies shall be used for the design of all fish-bearing stream crossings. The stream simulation method uses reference data from a representative section, or reference reach, of the specific water body crossed. This method attempts to replicate the natural stream channel conditions found upstream and downstream of the crossing. Sediment transport, flood and debris conveyance, and fish passage are designed to function as they do in the natural channel.

Reference Reach

(a) Select a reference reach on the water body being crossed that is outside any anthropogenic influence, such as an existing culvert. In most cases of new crossings, the reference reach can be at the crossing location.

(b) The length of the reference reach should be a minimum of 20 times the reference bankfull width and no less than 200 feet.

(c) If there is not a suitable reference reach on the water body being crossed, a reference reach may be chosen from another water body with similar geomorphic and hydrologic characteristics. The reference reach characteristics should meet the following criteria in comparison to the water body being crossed:
   (1) The reference reach bankfull width should be at least one half and no more than two times that of the water body being crossed;
   (2) The reference reach bankfull discharge should be at least one half and no more than one and one half times the bankfull discharge of the water body being crossed; and
   (3) The stream order of the reference reach should be within one stream order of the water body being crossed.

(d) For a reference reach from another water body, the geomorphic characteristics of the crossing shall be scaled using ratios of the bankfull conditions.

(e) The reference reach bankfull dimensions should be determined in the field by surveying a detailed cross section at the upper 1/3 of a representative riffle.

(f) Reference data shall include, at a minimum:
   (1) channel width at the OHWM,
   (2) bankfull width,
   (3) bankfull cross-sectional area,
   (4) bankfull slope based on the longitudinal profile,
   (5) substrate, and
   (6) potential for floating debris.

Culvert Size, Slope, and Substrate

In addition to D05.2, the following criteria apply to fish passage culverts:

(a) Under normal flow conditions, the channel within or under the fish passage culvert shall not differ from the reference reach condition in regards to the channel width at the OHWM, cross-sectional area, slope, substrate, and ability to pass floating debris.

(b) The width of fish passage culverts shall not be less than the greater of 1.2 times the channel width at the OHWM and 1.0 times the bankfull width.

(c) Fish passage culverts shall have a minimum diameter of five feet.

(d) The use of smooth wall culverts is prohibited.

(e) The use of trash racks or debris interceptors is prohibited

(f) Round culvert pipes shall have a minimum invert burial depth of 40 percent of the culvert diameter into the substrate. Arch or box culverts shall have a minimum invert burial depth of 20

percent of the culvert's rise into the substrate, unless scour analysis shows less fill is acceptable. The minimum invert burial depth is 1 foot.

(g) The gradation of the substrate material within a fish passage culvert shall be designed to be a dense, well-graded mixture with adequate fines to ensure that the majority of the stream flows on the surface and the minimum water depth is maintained.

(h) Substrate material within or under the fish passage culvert shall remain dynamically stable at all flood discharges up to and including a 50-year flood. Dynamic stability means that substrate material mobilized at higher flows will be replaced by bed material from the natural channel upstream of the crossing. For crossings without an adequate upstream sediment supply, the substrate material within the crossing shall be designed to resist the predicted critical shear forces up to the 100-year flood. For culverts with a slope of 6 percent or greater, substrate retention sills may be required to allow the bed load to continuously recruit within the culvert.

(i) Substrate material within or under the fish passage culvert shall incorporate a low flow channel. The low flow channel should mimic the reference reach where possible. If the low flow channel dimensions are not discernable from the reference reach, the low flow channel should have a cross sectional area of 15 to 30 percent of the bankfull cross sectional area and a minimum depth of 4 inches for juvenile fish and 12 inches for adult fish. The low flow channel should be defined by rock features that will resist critical shear forces up to the 100-year flood.

(j) Constructed streambanks are recommended inside fish passage culverts to protect the culvert from abrasion, provide resting areas for fish, and provide for small mammal crossing. If streambanks are constructed through a crossing, the streambanks shall be constructed of rock substrate designed to be stable at the 100-year flood. The streambank width should be a minimum of 1.5 times the maximum sieve size of the streambed material (D100). The crossing width shall be increased to allow for the channel width plus the streambanks.

(k) If substrate retention sills are used, they shall have a maximum weir height of one half of the culvert invert burial depth. Substrate retention sills shall be spaced so that the maximum drop between weirs is 4 inches. The use of sills without substrate is not allowed.

(l) Other state and federal requirements may apply.

D06.3 Hydraulic Method

Hydraulically designed culverts are discouraged for fish-bearing stream crossings, though may be approved by DPW and ADFG in circumstances where stream simulation is not practical. In addition to D05.2, the following criteria apply to hydraulically designed culverts:

(a) The hydraulic method uses the swimming capability and migration timing of target design species and sizes of fish to create favorable hydraulic conditions throughout the culvert crossing. Information and design software for this methodology is available from ADFG, Division of Sport Fisheries (Fishpass) and the US Forest Service (FishXing).

(b) The design fish shall be a 55-milimeter (2.16-inch) juvenile coho salmon for anadromous streams and a 55-milimeter (2.16-inch) Dolly Varden char for non-anadromous streams. These criteria may change based on ongoing research by federal and state agencies.

(c) Fish passage high flow design discharge will not exceed the 5 percent annual exceedance flow or 0.4 times the 2-year peak flow, whichever is lower and has the most supporting hydrologic data.

(d) Fish passage low-flow design discharge shall ensure a minimum 6-inch water depth or natural low flow and depth within the reach the crossing occurs. In cases where local conditions preclude natural low flow characteristics, backwatering or in-culvert structures should be considered.

(e) In cases where flared end sections with aprons are necessary and fish passage is required, water depths and velocities that satisfy fish passage criteria must be demonstrated across the apron in addition to within the culvert.

(f) Fish passage criteria for culverts crossing tidally-influenced streams must be satisfied 90 percent of the time. Tidally-influenced streams may sometimes be impassable due to insufficient depth at low flow and low tide. If the tidal area immediately downstream of a culvert is impassable for fish at low tide, the exceedance criterion shall apply only to the time during which fish can swim to the culvert.

(g) Other state and federal requirements may apply.

D07 Soil Infiltration Facilities

Soil infiltration may be used to reduce stormwater flow and volume with the following criteria:

(a) Soil infiltration facilities within Borough ROW or drainage easements should be designed such that they are not considered Class V injection wells. See Appendix A for the EPA's memorandum addressing the subject in June 2008.

(1) Private drainage facilities that are considered Class V injection wells require conformance with EPA regulations.

~~D07~~D08 Rainfall Data

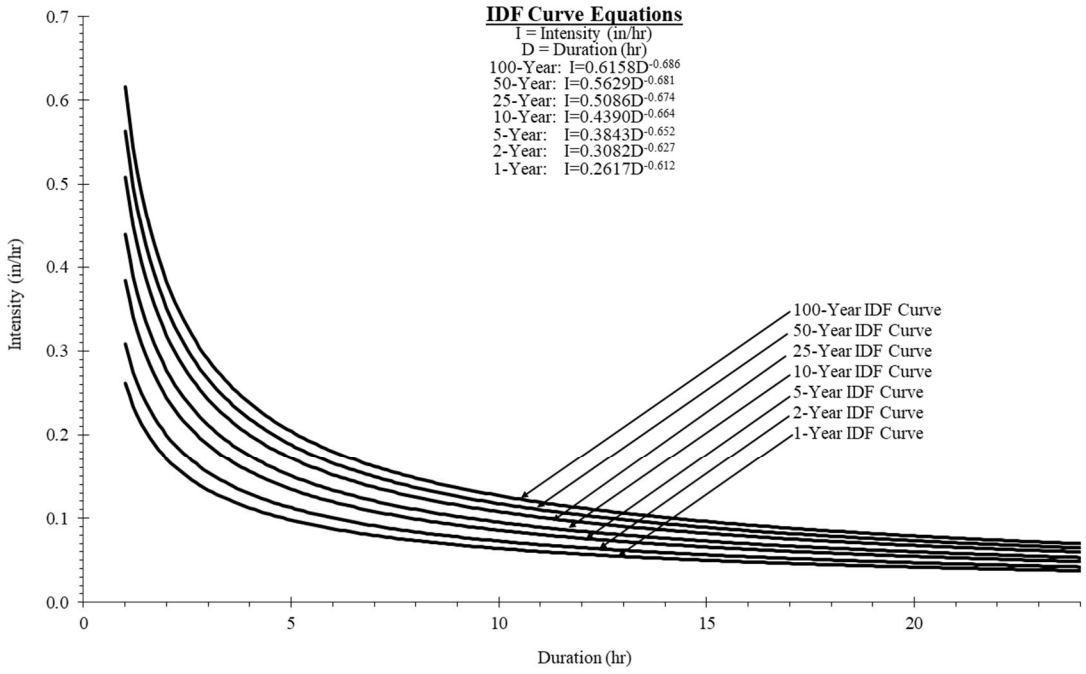
~~D07.1~~D08.1 Rainfall Distribution

Intensity-Duration-Frequency (IDF) and 24-hour rainfall data are furnished by NOAA Atlas 14 Point Precipitation Frequency Estimates. Use SCS Type-I Rainfall Distribution and 24-hour rainfall depth to compute runoff.

D08.2 Runoff Transformation

Use the Rational Method for estimating peak flows in drainage basins less than 200 acres and with times of concentration less than 20 minutes for design of conveyances. Use NRCS (SCS) Unit Hydrograph Method for estimating runoff volumes and peak flows for other conditions and applications. Other methods more appropriate for site conditions may be utilized upon DPW approval.

~~The following IDF curves and hyetograph, derived from data measured at the Palmer airport, may be used for runoff calculations.~~



~~**Figure D-1: Intensity-Duration-Frequency Relationships for the Matanuska-Susitna Borough**~~
~~*Source: Palmer Municipal Airport, 1999 to 2008, Stantec – 2009*~~

Table D-2: Recurrence Interval Hyetographs (in/hr) for the Matanuska-Susitna Borough

Time (hr)	1 Year	2 Year	5 Year	10 Year	25 Year	50 Year	100 Year
1	0.01	0.02	0.02	0.02	0.02	0.02	0.02
2	0.02	0.02	0.02	0.02	0.02	0.02	0.02
3	0.02	0.02	0.02	0.02	0.02	0.02	0.03
4	0.02	0.02	0.02	0.02	0.02	0.03	0.03
5	0.02	0.02	0.02	0.02	0.03	0.03	0.03
6	0.02	0.02	0.02	0.03	0.03	0.03	0.03
7	0.02	0.02	0.03	0.03	0.03	0.03	0.04
8	0.03	0.03	0.03	0.03	0.04	0.04	0.04
9	0.03	0.03	0.04	0.04	0.04	0.05	0.05
10	0.04	0.04	0.04	0.05	0.05	0.06	0.06
11	0.05	0.05	0.06	0.06	0.07	0.08	0.08
12	0.06	0.07	0.07	0.08	0.09	0.10	0.10
13	0.26	0.31	0.38	0.44	0.51	0.56	0.62
14	0.08	0.09	0.10	0.12	0.13	0.14	0.15
15	0.04	0.04	0.05	0.05	0.06	0.06	0.07
16	0.03	0.04	0.04	0.04	0.05	0.05	0.05
17	0.03	0.03	0.03	0.04	0.04	0.04	0.04
18	0.02	0.03	0.03	0.03	0.03	0.04	0.04
19	0.02	0.02	0.03	0.03	0.03	0.03	0.03
20	0.02	0.02	0.02	0.02	0.03	0.03	0.03
21	0.02	0.02	0.02	0.02	0.03	0.03	0.03
22	0.02	0.02	0.02	0.02	0.02	0.02	0.03
23	0.02	0.02	0.02	0.02	0.02	0.02	0.02
24	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Total	0.90	1.01	1.16	1.28	1.43	1.55	1.67

Note: Total values of rainfall calculated by adding un-rounded average rainfall intensities for each time step.
Source: Palmer Municipal Airport, 1999 to 2008, Stantec – 2009

Section E. Easements

E01 General

E01.1 Common Access Easements

When a shared driveway is required for two or more lots, a common access easement shall be ~~dedicated~~ granted for the exclusive use of the subject lots, unless otherwise accommodated. ~~The MSB is the permitting authority within common access easements.~~ The common access easement shall be sized to reasonably accommodate separation of the shared driveway to the individual lots.

E01.2 Drainage Easements

Drainage easements are required where the ROW is not sufficient to accommodate drainage needs. Drainage easements can overlap with other platted easements and shall begin or terminate at the ROW. Drainage easements shall be a minimum width of 20 feet, and a minimum average length of 20 feet outside of any overlapping easements or of sufficient size and area shown to facilitate construction and maintenance.

E01.3 Slope Easements

Slope easements are required to contain all cut and fill slopes steeper than 2.5:1 that extend outside of the ROW, plus at least 5 feet outside the cut or fill catches.

E01.4 Sight Distance Maintenance Easements

Sight distance maintenance easements are required where intersection sight triangles extend outside of the ROW.

E01.5 Snow Storage Easements

Snow storage easements are required where the ROW is not sufficient to accommodate anticipated snow removal needs. Snow storage easements shall be located where the storage of snow would not impede sight distance.

E01.6 Utility Easements

Unless lots are otherwise served by alternate utility easements or agreements, at least one 15-foot utility easement adjacent to the ROW is required to allow for utility installation and maintenance. Additional utility easements may be required as deemed reasonably necessary by utility companies to serve the subdivision or protect existing facilities. The applicant is responsible for satisfying any conflicts that may occur in the request for easements from any utility company during the platting process.

Platted utility easements are to be clear of wells, septic systems, structures, or encroachments, as defined by MSB or other applicable code; unless the applicant has obtained an encroachment permit from the MSB and a "Non-Objection to Easement Encroachment" from each utility.

Utility easements are to be fully useable for utility installation where installation equipment can safely work. Whenever possible, utility easements should not be placed in swamps, steep slopes, or other unusable areas.

Section F. Development Implementation

F01 General

This section describes the procedure that is to be followed before constructing any improvements required for recording a subdivision plat. The applicant's engineer shall be the primary point of contact throughout this process.

It is the applicant's responsibility to determine, acquire, and follow permits required by other agencies. Approval from MSB does not supersede other agencies' permit requirements.

F01.1 Preliminary Plat Submittal

The preliminary plat submittal is to be accompanied by:

(a) ADT calculations per A15;
(b) Preliminary drainage plan per D02.1;
(c) Road plan and profile for sections of road where proposed grades exceed 6 percent where cuts and fills exceed 5 feet in height measured from the centerline, or where slope easements will be required, and cross sections at the maximum cut and fill sections. Road plan and profile shall include the vertical curves or grade breaks on either side of the subject sections;
(d) Road plan, profile, and cross-sections if required by B03.3; and
(e) Intersection sight distance evaluation, if requested, according to A09.1.

F01.2 Construction Plans

Submit construction plans to DPW at least seven calendar days before the preconstruction conference. All plan drawing submittals shall be at a scale of 1 inch = 50 feet or more detailed, plottable on 11" by 17" paper. Construction plans shall include the following:

(a) Drainage Report, according to D02.2;
(b) Plan & Profile of proposed roads (if required by F01.1);
    (1) Existing topography with horizontal and vertical accuracy meeting US National Map Accuracy standards, two-foot contour intervals within the proposed road corridors.
(c) Asbuilt survey of visible improvements and above ground utilities within and adjacent to the subdivision;
(d) Copy of agency accepted permit applications required for the improvements prior to construction, including but not limited to ADOT&PF Approach Road Permit, DNR Section Line Easement authorization, MSB Flood Hazard Development permit, and USACE wetland fill permit; and
(e) Plans for any proposed improvements within the ROW that are outside of the scope of this manual (e.g. retaining walls or guard rail) or do not conform to the standards set forth herein, conforming to ADOT&PF design criteria and standards.

F01.3 Preconstruction Conference

The preconstruction conference is for the purpose of reviewing and approving the Subdivision Construction Plan for the required improvements. The engineer may request scheduling of a preconstruction conference with DPW after the preliminary plat has been approved by the Platting Board, the ~~Notification of Action (NOA)~~Platting Board Action Letter has been received, and the construction plans have been submitted. Scheduling of preconstruction conference requests may be delayed during the month of October. The applicant, or designated representative, and the engineer must attend the preconstruction conference. In addition to the construction plans, the following items will be provided at or prior to the preconstruction conference:

(a) Cost estimate of required improvements for the determination of the inspection fee according to the most recently adopted Schedule of Rates and Fees;
(b) Proof of compliance with the Alaska Pollutant Discharge Elimination System Program;
    (1) Acceptable proof includes a Notice of Intent (NOI), a Low Erosivity Waiver (LEW), or a determination by a qualified person that neither is needed.
(c) Rough plan and time line for construction;
(d) Copy of any issued permits required for the improvements prior to construction;
(e) Off-site material source and quantities; and
(f) On-site clearing, grubbing, and topsoil disposal plan, location map.

The Subdivision Construction Plan must be signed by the applicant, or designated representative, and the engineer. Upon acceptance of the Subdivision Construction Plan by DPW and payment of the inspection fee, the Platting Division will issue a Notice to Proceed (NTP). ~~See Appendix B for an example of the Subdivision Construction Plan.~~

Some construction plans or permit approvals may take longer to develop or obtain, such as fish passage culvert plans and associated permits. Those finalized plans and issued permits may be submitted later but must be received and reviewed by DPW before construction begins within the respective areas.

F01.4 Interim Inspections

The applicant's engineer shall supervise all phases of construction. Notify DPW of changes to the Subdivision Construction Plan, such as adding or deleting a cross culvert, changes in culvert size, adding or deleting a drainage facility, grade changes of more than 1 percent or that would result in grades of over 6 percent or cuts or fills of over 5 feet in height measured from the centerline, or changes to foreslopes or backslopes. The changes should be approved by DPW prior to completion of construction. Periodic interim inspections may be conducted by DPW. Interim inspections may be requested by the engineer.

F01.5 Subdivision Agreements

If a developer wishes to enter into a Subdivision Agreement and the requirements of MSB 43.55.010(A) are met, the engineer shall submit a request to DPW no later than October 15th for an Interim Inspection. The Interim Inspection shall be attended by the engineer and DPW, and a list of remaining

improvements and work items will be developed. The engineer shall then submit a request for a Subdivision Agreement containing the scope of work, quantity estimates, and cost estimate in accordance with MSB 43.55 to Platting and for approval by DPW. DPW will only approve the request for a Subdivision Agreement if all of the minimum required improvements have been inspected by October 31st or before winter conditions prohibit inspection, whichever comes first.

~~F01.5~~F01.6 Pre-Final Inspection

When the engineer has determined that construction of the improvements will be substantially complete according to the Subdivision Construction Plan, the engineer will request a Pre-Final Inspection. The Pre-Final Inspection request must be received by September 30th and shall include a description of work yet to be completed. The Pre-Final Inspection will be scheduled to occur within 14 calendar days of the request and shall be attended by the engineer and DPW. A punch list will be developed, if any work items remain, at the Pre-Final Inspection.

~~F01.6~~F01.7 Final Inspection

When construction of the improvements and punch list items are complete according to the Subdivision Construction Plan, the engineer will request a Final Inspection of the improvements. The Final Inspection request must be received by October 15th. Final Inspections will cease October 31st, or when winter conditions prohibit inspection, whichever comes first. The Final Inspection will be scheduled to occur within 14 calendar days of the request and shall be attended by the engineer and DPW.

~~F01.7~~F01.8 Final Report

Upon DPW approval of the Final Inspection, the engineer shall submit a written Final Report to the Platting Division. The Final Report shall include:

(a) Stamped and signed narrative describing at a minimum:
  (1) road construction process and equipment used,
  (2) material source and disposal areas,
  (3) road embankment and subbase used,
  (4) road topping or pavement used,
  (5) compactive effort,
  (6) road dimensions and shaping (length, roadway width, material thicknesses, pavement width, crown, cul-de-sac or t-turnaround dimensions and slope, foreslope, backslope, maximum centerline grade, etc.) for each road constructed,
  (7) drainage, ditch depth, location of drainage easements, and
  (8) road standard certification (Pioneer Road, Residential Street, etc.) for each road constructed;

(b) Stamped and signed final drainage plan, (minimum 11”x17”);

(c) As-built drawing showing the horizontal locations of borrow extraction along the road corridor;

~~(c)~~(d) Documentation verifying Surface Course thickness such as photos and descriptions of test pits, scale tickets, asbuilt surveys, or alternative methods approved by DPW;

~~(d)~~(e) Compaction test reports;

~~(e)~~(f) Gradation tests, if required; and
~~(f)~~(g) Photos of each stage of construction.

DPW will review the report and provide comments, if necessary, within 14 calendar days.

~~F01.8~~F01.9 Construction Acceptance

Upon approval of the Final Report, DPW will issue a Certificate of Construction Acceptance.

~~F01.9~~F01.10 Warranty

All improvements are to be guaranteed until October 31st of the calendar year following ~~issuance of the Certificate of Construction Acceptance~~DPW approval of the Final Inspection. Roads within a Road Service Area may be accepted for maintenance at the end of the warranty. Pioneer Roads are not eligible for maintenance. Maintenance of Mountain Access Roads is at the discretion of DPW.

During the warranty period, the applicant is responsible for any road maintenance including, but not limited to: snow removal, maintaining a smooth road surface and crown, maintaining stabilized foreslopes and backslopes, and maintaining positive drainage. If any deficiencies arise during the warranty, DPW will issue a punch list to the applicant by September 1st to allow time for completion of repairs. The applicant must notify DPW of completion of repairs by October 15th for the roads to be eligible for maintenance on November 1st.

The warranty period for improvements following completion of a subdivision agreement may be lessened to one calendar year. The applicant shall request a punch list from DPW no more than one month before the end of the one-year warranty.

If the subdivision plat has not recorded ~~within 6 months of the date of the Certificate of Construction Acceptance~~by April 30th or if warranty repairs are not completed by October 15th, the warranty will be extended an additional year and the warranty process will be repeated.

Maintenance may be denied and the Certificate of Construction Acceptance revoked if deficiencies are not corrected to the satisfaction of DPW. A notice may be recorded indicating to the public that the MSB is not responsible for road upkeep and maintenance until such a time that the deficiencies are corrected.

Section G. Commercial and Industrial Subdivisions

G01 General

Commercial and Industrial subdivisions shall be designed using trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual, and to meet the standards of AASHTO, International Fire Code (IFC), and any other applicable standards or code.

Section H. Utilities

H01 General

These standards apply to the design and construction of utility facilities within the MSB. All utility installation within existing or proposed ROW or utility easements must comply with the provisions of MSB or other applicable code, or as otherwise approved by the permitting authority.

H02 Utility Location Guidelines

H02.1 Underground Utility Facilities:

(a) The location of utility facilities placed within the ROW shall be coordinated with the permitting authority.
(b) Backslopes or foreslopes which extend into a utility easement should not exceed 4:1. These limits are necessary for construction equipment for utility installation.
(c) Utility facilities paralleling the road shall not be located within 10 feet of the roadway, unless otherwise approved by the permitting authority.
(d) Underground road crossings shall be buried a minimum of 48 inches below finished grade. Backfill shall be compacted according to the requirements of Section C, or as otherwise approved by the permitting authority.
(e) Conduit road crossings, if used, shall be installed in accordance with each utility company's standards and applicable code.
(f) Standard burial depth of longitudinal utilities is 36 inches below grade. The applicant should delineate areas, such as where driveways and drainage easements are planned, where deeper burial may be needed.

H02.2 Above Ground Utility Facilities:

(a) Above ground pedestals, poles, and utility facilities shall not be located within 10 feet of the roadway, unless an alternate design meets clear zone requirements.
(b) Above ground pedestals, poles, and utility facilities shall not be located such that they substantially block intersection or driveway sight triangles.
(c) Unless otherwise authorized by the permitting authority, above ground pedestals, poles, and utility facilities shall not be located within the ROW nearer than 40 feet from the point of intersection of the extension of the property lines at any existing or proposed intersection on Residential Collector streets or higher classification.
(d) Above ground pedestals, poles, and utility facilities shall not be located within a common access easement or drainage easement, within 20 feet of a common access point, or within 10 feet of a roadway cross culvert.
(e) Permanent 5-foot high snow marker poles, grey with white retroreflective sheeting or yellow, shall be installed on all pedestals and vaults.
(f) All guy wires installed within the ROW or utility easements adjacent to, or near to a roadway shall have a minimum 8-foot long yellow delineator installed above the anchor.

(g) Pedestals located within the ROW shall be located within the outer 1 foot of the ROW.

H02.3 Separation of Utilities:

(a) Recommend 5-foot horizontal separation between power poles and buried utilities.
(b) Recommend minimum 1-foot physical separation between all underground utilities.
(c) Separation of storm, sewer, and water utilities shall meet the requirements of the Alaska Department of Environmental Conservation.

References

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U.S. Department of Transportation Federal Highway Administration. (2012). *Manual of Uniform Traffic Control Devices for Streets and Highways* (2009 ed. with 2012 revisions). Washington, DC.

Appendix A

Environmental Protection Agency Memorandum - Class V Injection Wells

~~MSB Special Provision to the ADOT&PF Standard Specifications for Highway Construction~~

~~Appendix B~~

~~Subdivision Construction Plan~~

LAND USE CLASSIFICATION

Resolution PC 22-17

Reclassification of Borough-Owned Parcel Tax ID#20N04W08A001

(Pages 275-288)

LAND USE CLASSIFICATION

MATANUSKA-SUSITNA BOROUGH
Community Development Department
350 East Dahlia Avenue • Palmer, AK 99645
Phone (907) 861-7869 • Fax (907) 861-8635
E-mail: lmb@matsugov.us

MEMORANDUM

DATE: May 4, 2022

TO: Matanuska-Susitna Borough Planning Commission

THRU: Eric Phillips, Community Development Manager EP

FROM: Emerson Krueger, Natural Resource Manager EK

FOR: Reclassification, Agenda of May 16, 2022

REQUEST:
The Land and Resource Management Division seeks MSB Planning Commission review and approval of a resolution recommending Assembly adoption of an ordinance reclassifying Borough-owned parcel Tax ID 20N04W08A001 as "resource management", "general purpose", and "watershed" for purpose of earth material extraction, timber salvage, and wetlands.

SUMMARY:
Ordinance Serial No. 06-189 classified the subject parcel "watershed" lands based on the presence of a stream and adjacent wetlands. Recent geotechnical investigation determined there are substantial reserves of clean construction materials on approximately 51-acres of uplands on the 540-acre parcel. Further consideration of the topography and soils indicates that sufficient stream and wetland buffers can be set aside to allow for material extraction while protecting adjacent water quality. The proposed reclassification will allow for timber sales, gravel extraction, and future land use and development on the uplands while retaining 489-acres as "watershed" lands to protect water quality.

SUMMARY OF PUBLIC COMMENTS:

Public notice was posted on the borough webpage and in the Frontiersman as well as mailed to all property owners within 600 feet of the subject parcel.

Zero (0) written public comments were received.

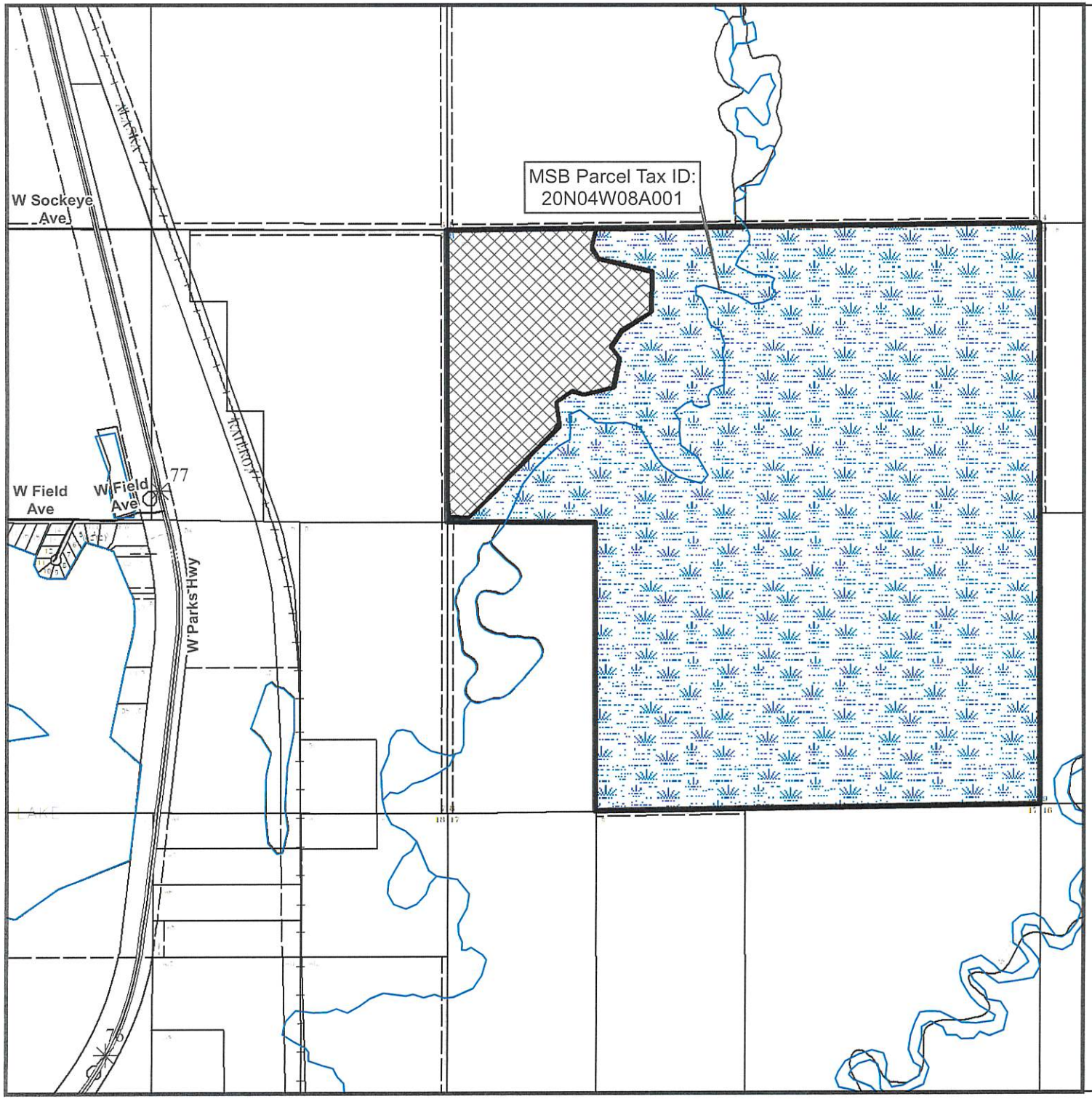
DISCUSSION:
There is an existing material extraction site abutting the northern boundary of the subject parcel. This operation includes a rail siding and rail car loader. Material from the operation is transported to the Anchorage market for construction material. This represents the most lucrative, consistent market for construction materials in the Borough. Proximity and topography on the subject parcel to the existing rail loading facility indicate the earth materials could be conveyed to a stockpile

serving the rail loader. Interest has been expressed from the material industry on accessing material on this property.

The proposed mining plan for the parcel would be to flatten the 51-acres of the parcel shown to contain the high quality construction materials, and maintain a floor of excavation at least 10-feet above the water table. All overburden would be retained and spread over the site as part of reclamation. Leveraging the value of the earth materials to prepare this parcel for future land use and development is a rare opportunity in this area of the Borough.

RECOMMENDATION:
Community Development respectfully recommends that the Planning Commission adopt a resolution of support recommending Assembly adoption of proposed land classification.

Attachments:
Vicinity Map (1 pp)
Best Interest Finding (3 pp)
Public Comments (0 pp)
Draft Assembly Ordinance (2 pp)
Planning Commission Resolution Serial No. 2022-17 (2 pp)



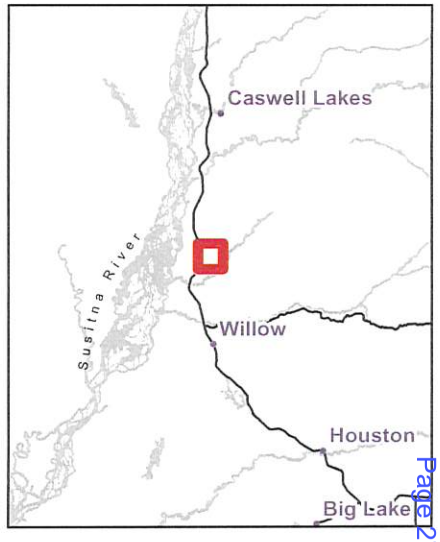
Matanuska-Susitna Borough
Land and Resource Management Division

MSB LRMD
MSB007876
Reclassification
Milepost 77 Parks Hwy

- Stream
- Resource Management, General Purpose
- Watershed

TRS
20N 04W Sec. 8

MSB Parcel Tax ID:
20N04W08A001



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Date: May 2022
Sources: MSB GIS, MSB LRMD, AK DOT
Projection: NAD 83 AK ST PLN Z4
Location: MSB
Author: MSB LRMD

BEST INTEREST FINDING
For the
Classification of Borough-owned Land

I. Summary of Proposed Action

MSB Land & Resource Management Division proposes to reclassify a Borough-owned tract of land in the Kashwitna area of north Willow as Resource Management, General Purpose, and Watershed lands to allow for development of a portion of the uplands through material extraction, while preserving the wetland areas to protect water quality. The 540-acre parcel, tax ID 20N04W08A001, includes the North ½, Southeast ¼, and the East ½ Southwest ¼ of Section 8, Township 20 North, Range 4 West, S.M. Alaska. Approximately 72-acres in the northwest ¼ of the property is proposed to be developed through material extraction to prepare it for future land uses. Reclassifying the 51-acres in the Northwest ¼ for resource management and general purpose will facilitate the change in use. Retaining the Watershed classification on the remaining 489-acres will perpetuate the water quality protection enacted by the 2006 classification. A vicinity map is included to assist with location of the parcel and the proposed classification.

II. Property Site Factors

A. Location: The subject parcel is located east of Kashwitna Lake, at milepost 77 Parks Highway.

B. Legal: N1/2, SE1/4, E1/2 SW1/4, located within Section 8, Township 20 North, Range 4 West, Seward Meridian, Alaska, containing approximately 540 acres more or less.

C. Land Status: Acquired by patent 5012, Book 211, Page 55, April 22, 1980, Palmer Recording District. The patent does not contain restrictions that would prevent the Borough from using the subject parcel for the proposed uses.

D. Restrictions: Reservations and exceptions in the U.S. patent and the State of Alaska patent, including reservation of certain oil, gas, and mineral rights.

1. MSB Land Classification – Watershed Lands, Ordinance 06-189
2. Title Restrictions – State of Alaska reserved all oil, gas, and mineral rights.
3. Covenants – none.
4. Zoning – none.
5. Easements & Other Reservations – A 50-foot wide section line easement lies within the northern 50-feet of the parcel. An additional 50-foot wide public use easement lies adjacent to the streams shown on the official township survey plat for Township 20 North, Range 4 West, Seward Meridian.

6. Adopted Plans – Willow Comprehensive Plan. There is no specific language in the plan about the future use of this parcel.

E. Current Land Use: None, property is vacant.

F. Surrounding Land Use: Property is adjacent to an existing material site, a mixed residential / industrial lot, and undeveloped land.

G. Existing Infrastructure: Legal access to the property is via an unnamed street near Mile 77.4 Parks Highway, within a section line easement, at an existing railroad crossing. This access is permitted via the ADOT Parks Highway Access Development Permit.

H. Soils & Terrain: The USDA (United States Department of Agriculture) identified several types of soil within the subject parcel. The predominate soil type of the portion proposed for reclassification is the Nancy silt loam with undulating slopes.

I. Resources: There is no specific data on resources for this parcel. Preliminary geotechnical data suggest there is approximately 1.7 million cubic yards of clean gravel in the northwest one quarter, excluding the required wetland buffers.

J. Assessment: The 2022 certified tax assessed value for the 540-acre parcel, Tax ID 20N04W08A001, is $145,800.00.

III. Public, Board and Commission Comments & Recommendations

In accordance with Title 23 and the Land Management Policy and Procedure Manual, 30-day public notice was initiated and sent to landowners within 600 feet of the property, Willow Area Community Organization, RSA, MSB Assembly members, and the MSB Fire Department. Additionally, notices were published in the Frontiersman and provided on the Borough website.

No public comments were received in response to the Public Notice.

IV. MSB Department Review

Borough inter-departmental review was completed with no objections received.

V. Analysis & Discussion

This 540-acre parcel was classified Watershed Lands in 2006 by Ordinance Serial No. 06-189 based on the presence of a stream and wetlands. A geotechnical investigation in 2021 collected samples from three test pits within the northwest one quarter of the subject parcel. The samples yielded high quality sand and gravel suitable for construction. The geotechnical report estimated there are approximately three million cubic yards of material in this area on the parcel.

LRMD proposes to reclassify 51-acres within the northwest one quarter of the subject parcel for Resource Management and General Purpose. The remaining 489-acres would remain classified for Watershed. If approved, LRMD will develop an application for an earth material extraction conditional use permit. The activity will be developed in accordance with Borough Code and provide adequate stream and wetland buffers to minimize any potential negative effects on the

surrounding water quality. Leveraging the value of the earth materials in the developable portion of the parcel to prepare for future use and development is a rare opportunity.

VI. Administrative Recommendation

The Community Development Department, Land & Resource Management Division respectfully requests Planning Commission recommendation for Assembly approval of the reclassification of 51-acres in the northwest one quarter of parcel Tax ID 20N04W08A001 to Resource Management and General Purpose, being in the Northwest ¼ of Section 8, Township 20 North, Range 4 West, S.M., Alaska.

NONCODE ORDINANCE

Sponsored By:
Introduced:
Public Hearing:
Adopted:

MATANUSKA-SUSITNA BOROUGH
ORDINANCE SERIAL NO. 22-0

AN ORDINANCE OF THE MATANUSKA-SUSITNA BOROUGH ASSEMBLY APPROVING LAND CLASSIFICATION OF ONE BOROUGH-OWNED PARCEL FOR THE PURPOSE OF IDENTIFYING AND GUIDING FUTURE USE AND DEVELOPMENT OF SAID PARCEL (MSB007876).

WHEREAS, the intent and rational is contained within Information Memorandum No. 22- and the Best Interest Finding attached thereto; and

WHEREAS, Borough-owned land shall be classified in accordance with Title 23 and such classifications shall be used as a tool to identify and guide future development of such land; and

WHEREAS, land classification cannot be changed without Matanuska-Susitna Borough Planning Commission review and Assembly approval.

BE IT ENACTED:

Section 1. Classification. This Ordinance is a non-code ordinance.

Section 2. Authorization. Matanuska-Susitna Borough Assembly approval of the following parcel land classification:

Tax Parcel 20N04W08A001 as Resource Management, General Purpose, and Watershed for future development of a material site, future land use, and water quality protection;

Section 3. Effective Date. This ordinance shall take effect upon adoption.

ADOPTED by the Matanuska-Susitna Borough Assembly this __ day of _____, 2022.

_____
Edna DeVries, Borough Mayor

ATTEST:

_____
LONNIE R. McKECHNIE, CMC, Borough Clerk

(SEAL)

DRAFT

By:
Introduced:
Public Hearing:
Action:

MATANUSKA-SUSITNA BOROUGH
PLANNING COMMISSION RESOLUTION NO. 22-17

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH PLANNING COMMISSION RECOMMENDING ASSEMBLY APPROVAL OF LAND CLASSIFICATIONS FOR ONE BOROUGH-OWNED PARCEL FOR THE PURPOSE OF IDENTIFYING AND GUIDING FUTURE USE AND DEVELOPMENT OF SAID PARCEL (MSB007876).

WHEREAS, one Borough-owned parcel is proposed for land classification for the purpose of leveraging the value of earth materials to prepare the parcel for future use and development while protecting water quality; and

WHEREAS, the attached Best Interest Finding provides information specific to the parcel to include the proposed purpose and land classification, map, inter-departmental review and public comments; and

WHEREAS, Borough inter-departmental review was conducted, along with 30-day public notice in accordance with Title 23 and Land and Resource Management Policy and Procedures adopted by the Matanuska-Susitna Borough Assembly; and

WHEREAS, no funding has been identified or appropriated for development of this parcel at this time; and

WHEREAS, through land classification, the parcel is identified for specific future purpose which cannot be changed without Assembly approval.

NOW, THEREFORE, BE IT RESOLVED, that the Matanuska-Susitna Borough Planning Commission hereby recommends Assembly approval of land classification as follows:

Parcel 20N04W08A001, "Resource Management", "General Purpose" and "Watershed" for purpose of future earth material extraction, timber salvage sale, personal use firewood harvest, and wetlands

ADOPTED by the Matanuska-Susitna Borough Planning Commission this -- day of --, 2022.

Stafford Glashan, Chair

ATTEST

KAROL RIESE, Planning Clerk

(SEAL)

YES:

NO:

PUBLIC HEARING QUASI-JUDICIAL

Resolution No. PC 22-08

Ryan McKay and Jana Weltzin
for AK Legacy Genetics

(Pages 289-430)

PUBLIC HEARING

MATANUSKA-SUSITNA BOROUGH
Planning and Land Use Department
Development Services Division
350 East Dahlia Avenue • Palmer, AK 99645
Phone (907) 861-7822
www.matsugov.us

DEVELOPMENT SERVICES DIVISION STAFF REPORT

Date:	May 4, 2022
File Number:	M10233
Applicant:	Ryan McKay and Jana Weltzin on behalf of AK Legacy Genetics
Property Owner:	KR&W Management, LLC
Request:	Planning Commission Resolution 22-08 Conditional Use Permit for the operation of a marijuana cultivation facility in accordance with MSB Chapter 17.60 – Conditional Uses
Location:	3097 S. Sylvan Lane, Tax ID# 6315B01L011 & L012; within Township 17 North, Range 2 West, Section 22, Seward Meridian
Reviewed By:	Jason Ortiz, Development Services Manager
Staff:	Peggy Horton, Planner II PH
Staff Recommendation:	Approval with conditions

EXECUTIVE SUMMARY

A conditional use permit application has been submitted for the operation of a marijuana cultivation facility. The proposed use is wholly contained in a structure that is approximately 1,650 square feet in size, with approximately 1,100 square feet under cultivation.

MSB 17.60.030 requires a conditional use permit for the operation of marijuana cultivation facilities. Unless this type of use is maintained under and in accordance with a lawfully issued permit, a marijuana cultivation facility is declared to be a public nuisance. Operation of such a land use without a permit is prohibited.

HISTORY

Tierra Verde Subdivision was created in 1972. In 1975, the owner of Block 1, Lot 11 and 12, Robert Cook, built a residence on the property and eventually a large garage. The two lots were bought and sold together several times through the years, Lot 11 remaining residential and Lot 12 remaining vacant. In February of this year, Lots 11 and 12 were combined through a platting action, resulting in one larger 2.84 acre lot.

LAND USE

Existing Land Use
The property consists of mostly forested and wooded area. According to the application material, the residence on the property is not part of the cultivation facility. The applicant is refurbishing the existing garage for the proposed use, both inside and out. The applicant framed in the two garage doors on the west side and the two windows on the south side. The applicant stated the entire structure will receive a green metal panels on all sides to blend in with the trees and natural landscaping.

The property's topography is such that the foundation of the structure lays approximately four feet below South Sylvan Lane and 12 feet below West Cielo Court. The applicant received Borough approved driveway permits for both access points onto South Sylvan Lane.

Surrounding Land Uses
The subject parcel lies at the southeast corner of the South Sylvan Lane and West Cielo Court intersection. The subdivisions to the west of South Sylvan Lane are fully built out with residential uses. Lots to the north, east, and south of the proposed use are developed with residential uses with a few vacant parcels mixed in. Surrounding parcels range in size from one to five acres. The closest residential structure, not within this property, is located approximately 270 feet west of the proposed use. The closest commercial use is approximately 1,500 feet to the south.

REVIEW OF APPLICABLE CRITERIA AND FINDINGS

MSB 17.03 – Public Notification
On March 7, 2022, staff mailed 36 notices to all property owners within a 600-foot radius of the subject property and to the Knik-Fairview Community Council. Staff later realized not all the owners within Tierra Verde Subdivision were noticed in the first mailing as is required in MSB 17.03. A second mailing of 61 notices was sent out on March 24, 2022 to all required property owners. The Frontiersman published a public notice pertaining to the application in the March 4, 2022 issue. Staff posted a public notice with the application material on the Borough website on February 28, 2022. The application, public notice, and request for comments were emailed to outside agencies and all members of the Knik-Fairview Community Council on February 28, 2022. Staff received no comments from the community council. Ten members of the public responded to the public noticing. Their concerns in general are:

- Odor from the facility
- Potential loss of property value
- Increase in traffic
- Location near school bus stop

- The use being within a residential area
- Potential criminal activity associated with the use
- Pollutants from water run-off

Section 17.60.100 General Standards

(A) A conditional use may be approved only if it meets with the requirements of this section in addition to any other standards required by this chapter:

(B) In granting a conditional use permit, the planning commission must make the following findings:

(1) the conditional use will preserve or not detract from the value, character, and integrity of the surrounding area;

Findings of Fact:

1. The proposed use is wholly contained within a 1,650 square foot facility.
2. According to the application material, the applicant is refurbishing a garage structure, originally built in 1975, for the proposed use.
3. The applicant stated the entire structure will receive a green metal panels on all sides to blend in with the trees and natural landscaping.
4. The applicant received Borough approved driveway permits for both access points onto South Sylvan Lane.
5. Surrounding parcels range in size from one to five acres.
6. The subdivisions to the west of South Sylvan Lane are fully built out with residential uses. Lots to the north, east, and south of the proposed use are developed with residential uses with a few vacant parcels mixed in.
7. According to the application material, the proposed use is set back approximately 141 feet from the West Cielo Court right-of-way to the north, 117 feet from the South Sylvan Lane right-of-way to the west, 122 feet from the south lot line, and 224 feet from the east lot line.
8. The subject parcel is mostly forested and a buffer of trees separates the proposed facility from South Sylvan Lane.
9. According to the application material, the facility will not be open to the public.
10. According to the application material, the proposed use has policies and procedures in place to prevent loitering.
11. According to the application material, the use will require between two and five employees, and for short periods, up to seven.
12. There are no industrial equipment or processes that generate noise or dust associated with the proposed use.
13. According to the application material, there is no advertising signage for the facility.
14. According to the application material, all exterior lighting will be directed downward and shielded to mitigate any unwanted light pollution.
15. According to the security plan, a combination of cameras, motion detectors, alarms, and lighting will be used to secure the site and monitor all activities at the facility.

Conclusion of Law: Based on the above findings, the proposed use will not detract from the value, character, and integrity of the surrounding area (MSB 17.60.100(B)(1)).

(2) that granting the conditional use permit will not be harmful to the public health, safety, convenience, and welfare;

Findings of Fact:

1. The closest school, Goose Bay Elementary, is approximately 3,000 feet away from the proposed use.
2. According to the application material, the facility will not be open to the public.
3. Consumption of marijuana is prohibited at the site.
4. Persons under the age of 21 are prohibited from entering the facility.
5. According to the application material, the proposed use has policies and procedures in place to prevent loitering.
6. According to the application material, the applicant provided a security plan, which includes education of employees on all security measures.
7. According to the security plan, a combination of cameras, motion detectors, alarms, and lighting will be used to secure the site and monitor all activities at the facility.
8. The applicant received Borough approved driveway permits for both access points onto South Sylvan Lane.
9. According to the application material, after proper notification to the State of Alaska Alcohol & Marijuana Control Office, all marijuana products deemed unusable will be mixed with compostable waste, stored within locked containers inside the facility, and eventually taken to the landfill.
10. The Central Mat-Su Deputy Fire Marshal has issued Plan Review Certificate #2022-061, approving the renovation and remodeling of the garage for the proposed use.
11. The commercial structure is in full compliance with the applicable State of Alaska fire code.

Conclusion of Law: Based on the above findings, the proposed use will not be harmful to the public health, safety, convenience, and welfare (MSB 17.60.100(B)(2)).

(3) that sufficient setback, lot area, buffers, or other safeguards are being provided to meet the conditions listed in subsections (B)(1) through (3) of this section; and

Findings of Fact:

1. The subject parcel is approximately 2.84 acres in size.
2. According to the application material, the proposed use is set back approximately 141 feet from the West Cielo Court right-of-way to the north, 117 feet from the South Sylvan Lane right-of-way to the west, 122 feet from the south lot line, and 224 feet from the east lot line.

3. The closest residential structure, not within this property, is located approximately 270 feet west of the proposed use.
4. The closest school, Goose Bay Elementary, is approximately 3,000 feet away from the proposed use.
5. The subject parcel is mostly forested and a buffer of trees separates the proposed facility from South Sylvan Lane.
6. According to the application material, the facility will not be open to the public.
7. According to the application material, the proposed use has policies and procedures in place to prevent loitering.
8. According to the application material, the applicant provided a security plan, which includes education of employees on all security measures.
9. According to the security plan, a combination of cameras, motion detectors, alarms, and lighting will be used to secure the site and monitor all activities at the facility.
10. According to the application material, all exterior lighting will be directed downward and shielded to mitigate any unwanted light pollution.

Conclusion of Law: Based on the above findings, the applicant provided sufficient setbacks, lot area, buffers, or other safeguards to meet the conditions in this section (MSB 17.60.100(B)(3)).

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(4) the conditional use fulfills all other requirements of this chapter pertaining to the conditional use in this section.

Finding of Fact:

1. The applicant provided all of the required site plans and operational information for the proposed use.

Conclusion of Law: The application material meets all the requirements of this chapter (MSB 17.60.100(B)(4)).

Section 17.60.150 General Standards for Marijuana Related Facilities

(A) In addition to the standards set forth by MSB 17.60.100, the planning commission shall weigh factors which contribute or detract from the development of a safe, convenient, and attractive community, including, but not limited to:

(1) any potential negative effect upon other properties in the area due to such factors as noise and odor.

Findings of Fact:

1. The proposed use is wholly contained within a 1,650 square foot facility.
2. The subject parcel is approximately 2.48 acres in size.
3. Consumption of marijuana is prohibited at the site.
4. There are no industrial equipment or processes that generate noise or dust associated with the proposed use.

5. The subject parcel is mostly forested and a buffer of trees separates the proposed facility from South Sylvan Lane.
6. According to the application material, the proposed use has policies and procedures in place to prevent loitering.
7. According to the application material, the use will require between two and five employees, and for short periods, up to seven.
8. According to the application material, marijuana product will be packaged in sealed, air-tight containers and air sanitizers will be used when transporting marijuana to and from the premises.
9. According to the application material, the proposed use is set back approximately 141 feet from the West Cielo Court right-of-way to the north, 117 feet from the South Sylvan Lane right-of-way to the west, 122 feet from the south lot line, and 224 feet from the east lot line.
10. According to the application material, the air filtration system will be outfitted with multiple charcoal filters to filter air for odor particles.
11. According to the application material, the applicant will maintain the charcoal filters and exhaust fans according to the manufacturer's specifications.

Conclusion of Law: Based on the above findings, the proposed use will not negatively affect other properties due to factors such as noise and odor (MSB 17.60.150(A)(1)).

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(2) the effectiveness of measures to reduce negative effects upon adjacent properties by:

(a) increased property line and right-of-way buffers;
(b) planted berms and landscaping;
(c) site and building design features which contribute to the character of the surrounding area.

Findings of Fact:

1. The subject parcel is approximately 2.48 acres in size.
2. Surrounding parcels range in size from one to five acres.
3. The subdivisions to the west of South Sylvan Lane are fully built out with residential uses. Lots to the north, east, and south of the proposed use are developed with residential uses with a few vacant parcels mixed in.
4. The closest residential structure, not within this property, is located approximately 270 feet west of the proposed use.
5. According to the application material, the applicant is refurbishing a garage structure, originally built in 1975, for the proposed use.
6. The applicant stated the entire structure will receive a green metal panels on all sides to blend in with the trees and natural landscaping.
7. The structure's foundation lies approximately four feet below South Sylvan Lane and 12 feet below West Cielo Court.

8. According to the application material, the proposed use is set back approximately 141 feet from the West Cielo Court right-of-way to the north, 117 feet from the South Sylvan Lane right-of-way to the west, 122 feet from the south lot line, and 224 feet from the east lot line.
9. The subject parcel is mostly forested and a buffer of trees separates the proposed facility from South Sylvan Lane.
10. According to the application material, all exterior lighting will be directed downward and shielded to mitigate any unwanted light pollution.
11. According to the application material, there is no advertising signage for the facility.
12. The Central Mat-Su Deputy Fire Marshal has issued Plan Review Certificate #2022-061, approving the renovation and remodeling of the garage for the proposed use.
13. The commercial structure is in full compliance with the applicable State of Alaska fire code.

Conclusion of Law: Based on the above findings, measures are in place to reduce negative affects upon adjacent properties (MSB 17.60.150(A)(2)(a-c)).

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(3) whether the use is compatible with the character of the surrounding area.

Findings of Fact:

1. The proposed use is wholly contained within a 1,650 square foot facility.
2. Surrounding parcels range in size from one to five acres.
3. The subdivisions to the west of South Sylvan Lane are fully built out with residential uses. Lots to the north, east, and south of the proposed use are developed with residential uses with a few vacant parcels mixed in.
4. According to the application material, the facility will not be open to the public.
5. According to the application material, there is no advertising signage for the facility.
6. According to the application material, the proposed use has policies and procedures in place to prevent loitering.
7. The applicant stated the entire structure will receive a green metal panels on all sides to blend in with the trees and natural landscaping.
8. There are no industrial equipment or processes that generate noise or dust associated with the proposed use.
9. Consumption of marijuana is prohibited at the site.
10. The subject parcel is mostly forested and a buffer of trees separates the proposed facility from South Sylvan Lane.
11. According to the application material, the applicant provided a security plan, which includes education of employees on all security measures.

Conclusion of Law: Based on the above findings, the proposed use is compatible with the character of the surrounding area (MSB 17.60.150(A)(3)).

(B) At the time of their establishment, marijuana related conditional uses shall meet the following requirements and not be located within:

(1) One thousand feet of school grounds;

(C) Separation distances referenced in subsection (B) of this section are measured in a direct line between the closest point of the facility within which the marijuana facility is located, and the closest point on the lot or parcel of land upon which any of the above itemized uses are located.

Finding of Fact:

1. The closest school, Goose Bay Elementary, is approximately 3,000 feet away from the proposed use.

Conclusion of Law: Based on the above finding, the proposed use is more than 1,000 feet away from any school grounds (MSB 17.60.150(B)(1)).

(D) Prior to final approval of the permit the applicant shall provide written documentation demonstrating that:

(1) all applicable licenses have been obtained as required by 3 AAC 306.005.

Findings of Fact:

1. AK Legacy Genetics, LLC received delegated approval from the State Marijuana Control Board for marijuana cultivation license #28628, in accordance with 3 AAC 306.005.
2. The applicant provided written documentation showing delegated approval from the State Marijuana Control Board for marijuana cultivation license #28628.

Conclusion of Law: Based on the above findings, the applicant obtained and provided documentation for all applicable licenses pertaining to 3 AAC 306.005 (MSB 17.60.150(D)(1)).

---

(2) from the fire marshal having jurisdiction, that the proposed conditional use is in full compliance with applicable fire code, including but not limited to AS 18.70.010 through 18.70.160, Fire Protection, and 13 AAC 50.025 through 50.080, Fire Code.

Findings of Fact:

1. The Central Mat-Su Deputy Fire Marshal has issued Plan Review Certificate #2022-061, approving the renovation and remodeling of the garage for the proposed use.
2. The commercial structure is in full compliance with the applicable State of Alaska fire code.

Conclusion of Law: Based on the above findings, the applicant provided documentation showing the proposed use is in full compliance with all applicable fire code (MSB 17.60.150(D)(2)).

Section 17.60.160 Standards for Marijuana Cultivation Facilities

(A) Wastewater and waste material disposal plan. A wastewater and waste material disposal plan shall be submitted which demonstrates that wastewater and waste material associated with

the cultivation facility is disposed of in compliance with the Alaska State Department of Environmental Conservation.

Findings of Fact:

1. According to the application material, after proper notification to the State of Alaska Alcohol & Marijuana Control Office, all marijuana products deemed unusable will be mixed with compostable waste, stored within locked containers inside the facility, and eventually taken to the landfill.
2. According to the application material, the facility will be hand watering and using a timer-operated system to deliver water to the plants. Excess water will drain into evaporation trays and naturally evaporate. In-floor heat and dehumidifiers will aid in excess water evaporation.

Conclusion of Law: Based on the above findings, the wastewater and waste material disposal plan demonstrates compliance with the Alaska State Department of Environmental Conservation (MSB 17.60.160(A)).

(B) Odor mitigation and ventilation plan. The applicant shall provide an odor mitigation plan detailing the effective mitigation of any odors of the proposed uses. Such plan shall demonstrate that the design for the purification of air prevents odors from materially impacting adjoining properties.

Findings of Fact:

1. The proposed use is wholly contained within a 1,650 square foot facility.
2. According to the application material, the proposed use is set back approximately 141 feet from the West Cielo Court right-of-way to the north, 117 feet from the South Sylvan Lane right-of-way to the west, 122 feet from the south lot line, and 224 feet from the east lot line.
3. Consumption of marijuana is prohibited at the site.
4. According to the application material, the air filtration system will be outfitted with multiple charcoal filters to filter air for odor particles.
5. According to the application material, the applicant will maintain the charcoal filters and exhaust fans according to the manufacturer's specifications.
6. According to the application material, marijuana product will be packaged in sealed, air-tight containers and air sanitizers will be used when transporting marijuana to and from the premises.

Conclusion of Law: Based on the above findings, the odor mitigation plan demonstrates mitigation measures will prevent odors from materially impacting adjoining properties (MSB 17.60.160(B)).

(C) Hazardous chemicals. Storage and disposal of fertilizers, pesticides, herbicides, and any other hazardous chemicals associated with the cultivation of marijuana shall comply with all local, state, and federal laws.

Findings of Fact:

1. According to the application material, the applicant will ensure that only Environmental Protection Agency approved insecticide and fungicide are used in the facility.
2. According to the application material, the facility will have designated shelving areas for storage of herbicides, fungicides, insecticides, fertilizers, cleaning products, and other chemicals.
3. According to the application material, the applicant will use and dispose of all chemicals, fertilizers, herbicides, fungicides, insecticides, cleaning chemicals, etc., in accordance with their respective manufacturers' recommendations, and comply with all local, state, and federal laws.

Conclusion of Law: Based on the above findings, storage and disposal of fertilizers, pesticides, herbicides, and any other hazardous chemicals will comply with all local, state, and federal laws (MSB 17.60.160(C)).

(D) Security. The applicant shall provide a security plan. The plan shall include, but not be limited to, education for employees on security measures.

Findings of Fact:

1. According to the application material, the applicant provided a security plan, which includes education of employees on all security measures.
2. According to the security plan, a combination of cameras, motion detectors, alarms, and lighting will be used to secure the site and monitor all activities at the facility.

Conclusion of Law: Based on the above findings, the applicant provided a security plan, which includes education for employees on security measures (MSB 17.60.160(D)).

(E) Marijuana cultivation facilities shall be set back 50 feet from public rights-of-way, and 100 feet from side or rear lot lines.

Finding of Fact:

1. According to the application material, the proposed use is set back approximately 141 feet from the West Cielo Court right-of-way to the north, 117 feet from the South Sylvan Lane right-of-way to the west, 122 feet from the south lot line, and 224 feet from the east lot line.

Conclusion of Law: Based on the above finding, the proposed use meets the setback requirements for marijuana cultivation facilities (MSB 17.60.160(E)).

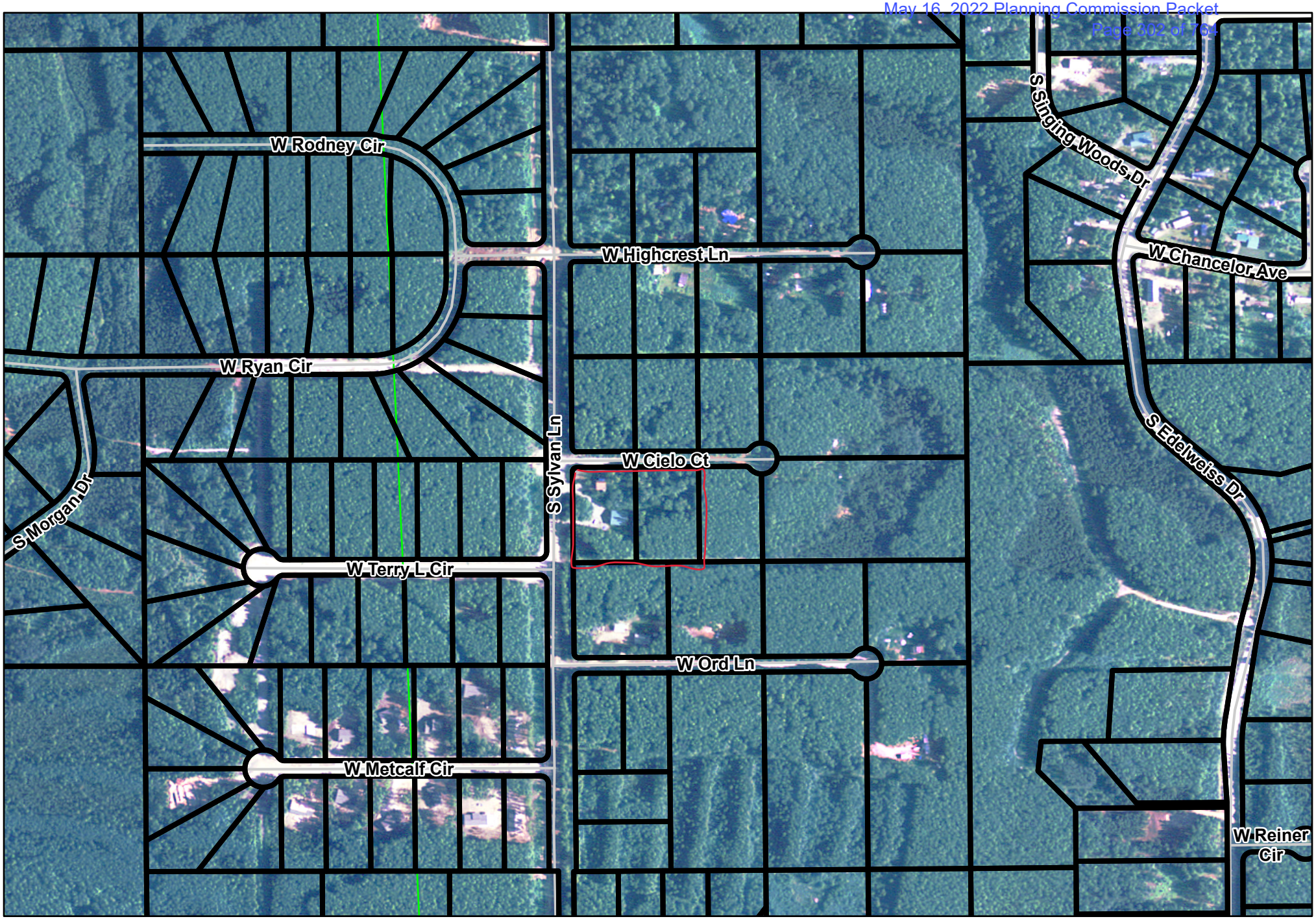
STAFF RECOMMENDATIONS

Staff recommends approval of the conditional use permit to operate a marijuana cultivation facility, at 3097 South Sylvan Lane, Tax ID #6315B01L011 & L012. The proposed use meets all

of the standards in MSB 17.60.100, 17.60.150, and 17.60.160. Staff recommends approval of this permit with the following conditions:

1. The operation shall comply with all applicable state and local regulations.
2. All aspects of the operation shall comply with the description detailed in the application material and with the conditions of this permit. An amendment to the Conditional Use Permit shall be required prior to any expansion of the conditional use.
3. Borough staff shall be permitted to enter premises subject to this permit to monitor compliance with permit requirements. Such access will at minimum, be allowed on demand when activity is occurring, and/or with prior verbal or written notice, and/or at other times as necessary to monitor compliance. Denial of access to Borough staff shall be a violation of this Conditional Use Permit.

If the Planning Commission chooses to deny this permit, findings for denial must be prepared by the Commission.



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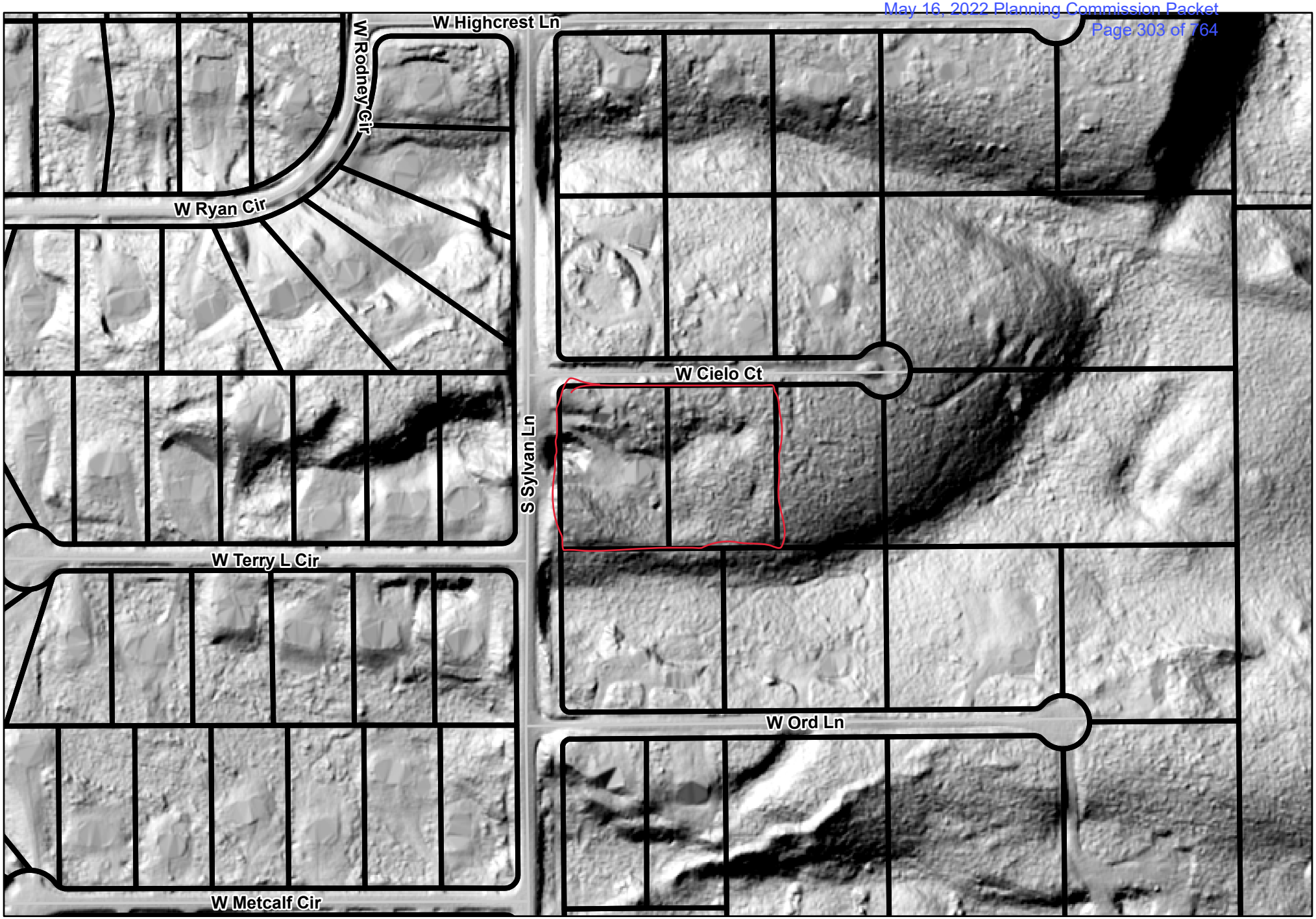
MSB Development Services Division: 3/1/2022

2004-2005 Imagery
Tax ID #6315B01L011 & L012

N W E S

0 250 500 Feet



Bare Earth Map
Tax ID #6315B01L011 & L012

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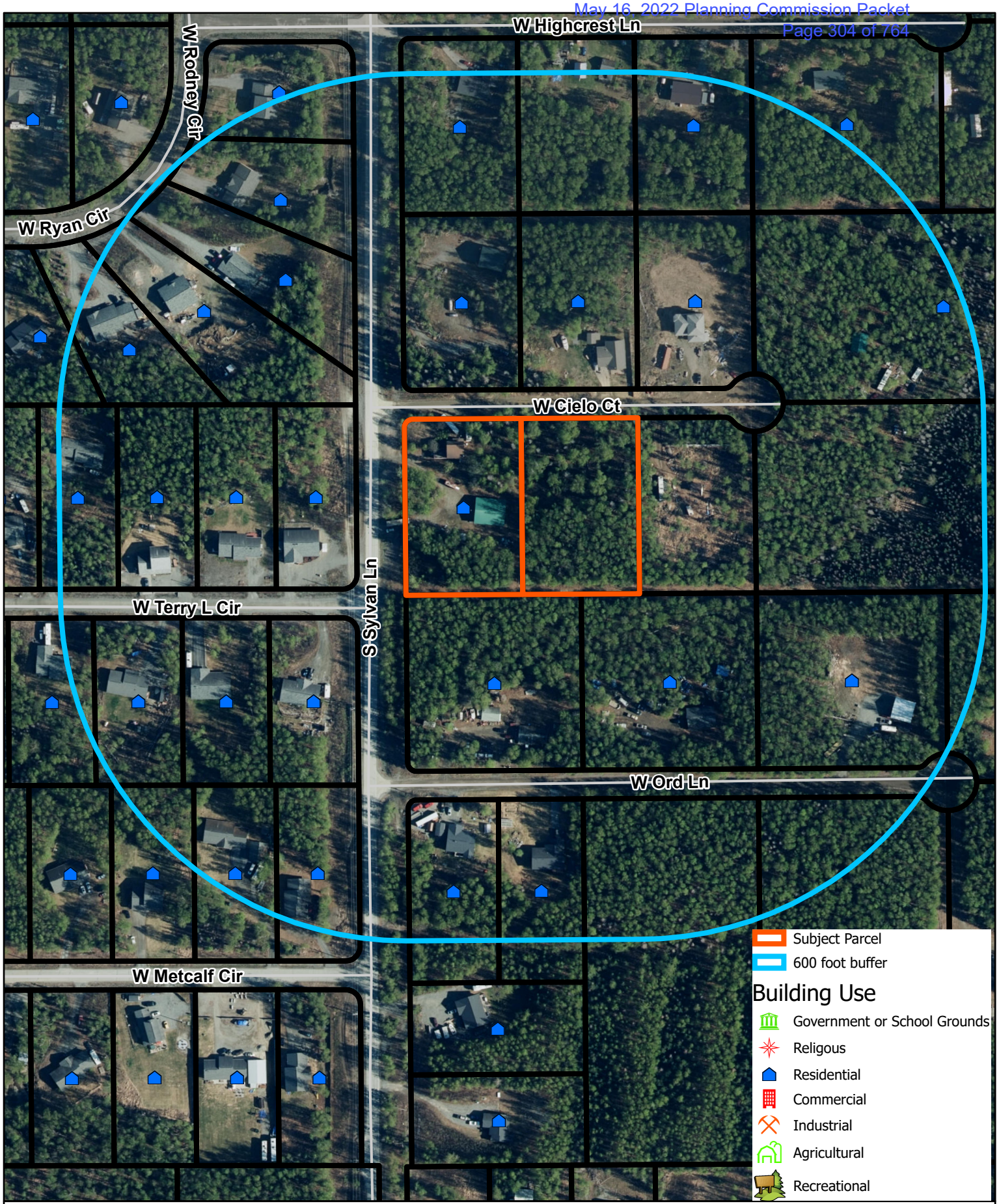
MSB Development Services Division: 3/1/2022



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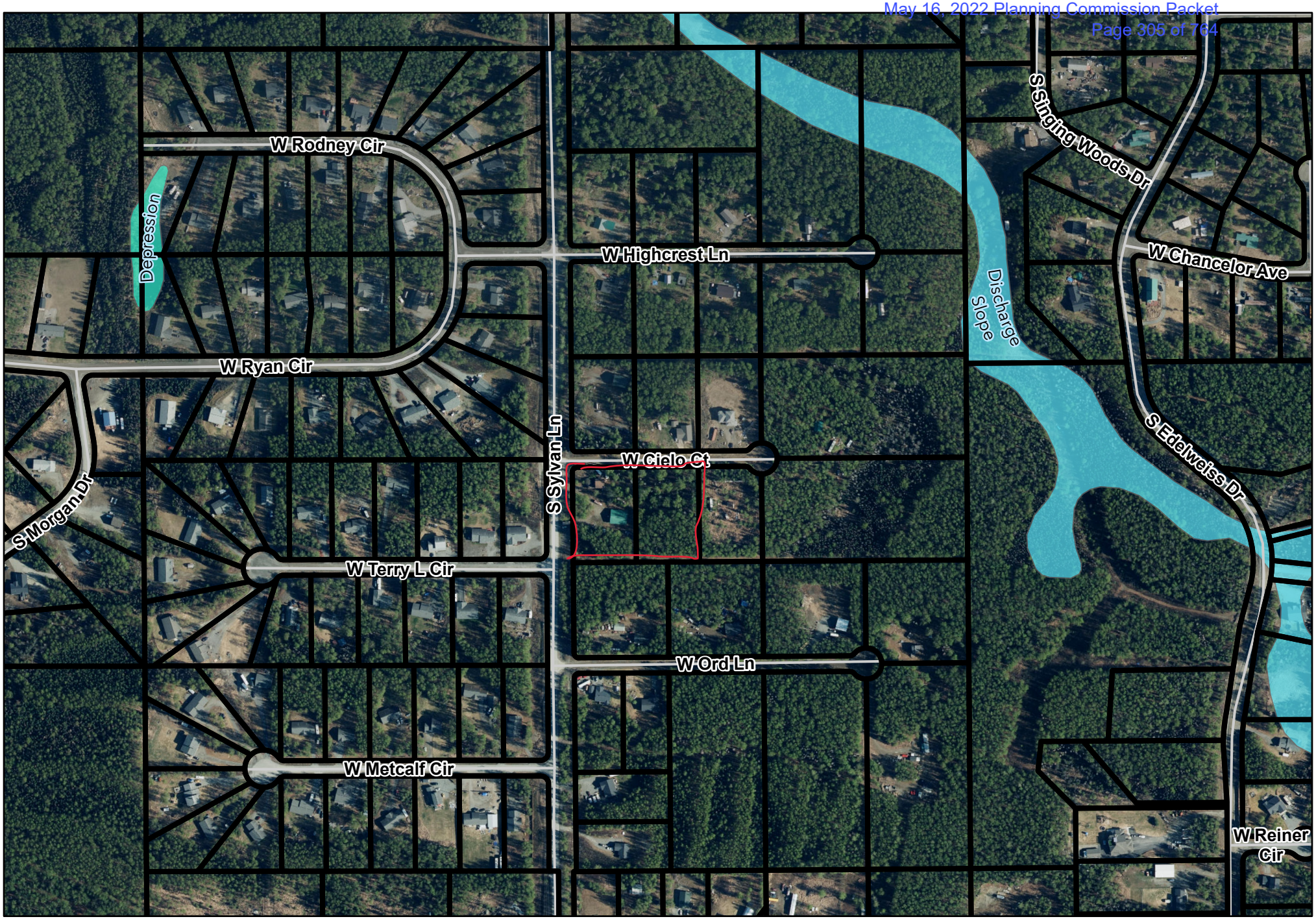
Land Use Map for 6315B01L011 & L012

0 150 300 Feet

N

MSB Development Services Division: 4/12/2022



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Wetland Map
Tax ID #6315B01L011 & L012

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W E
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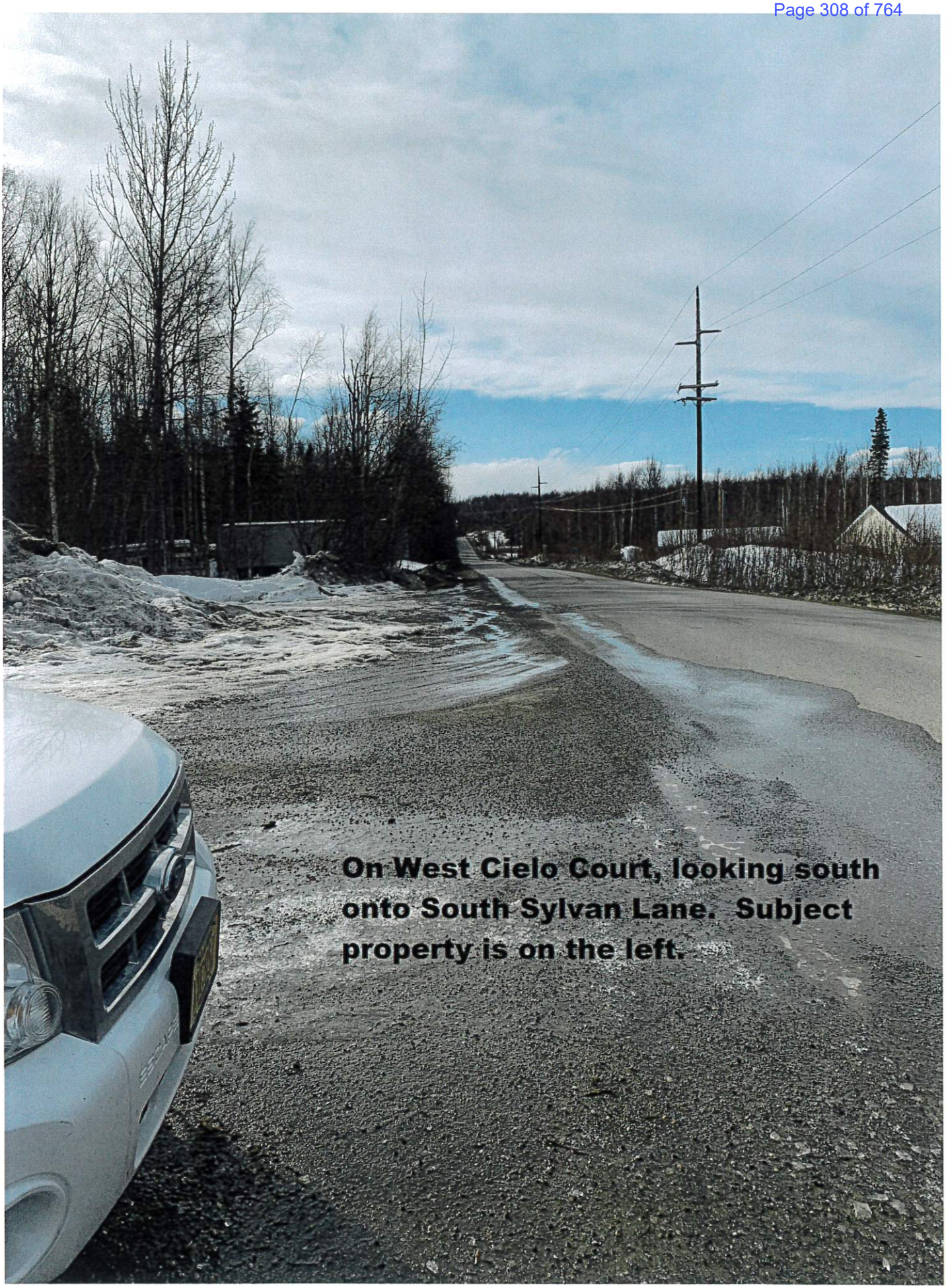
0 250 500 Feet

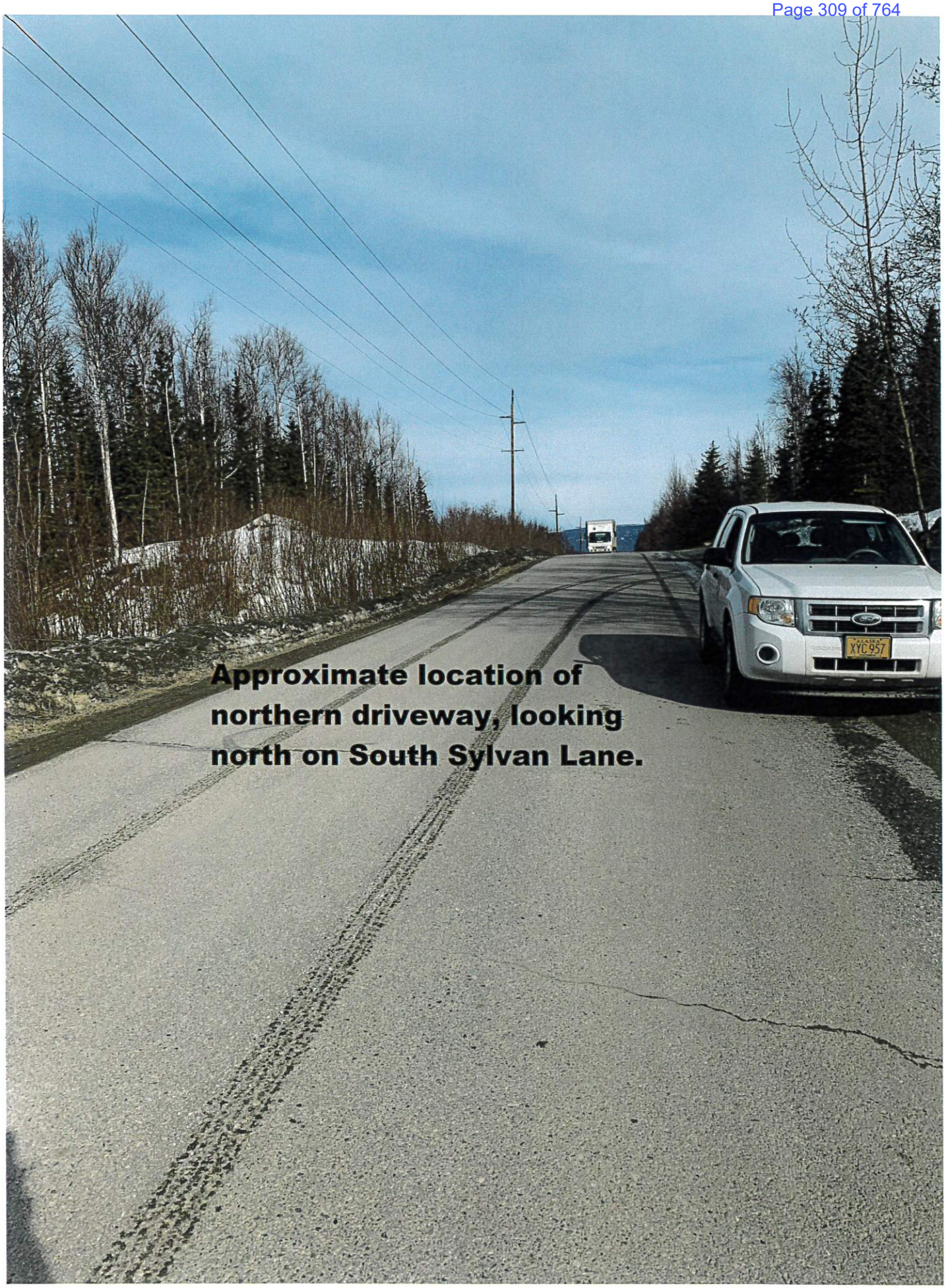
MSB Development Services Division: 3/1/2022

Photographs taken

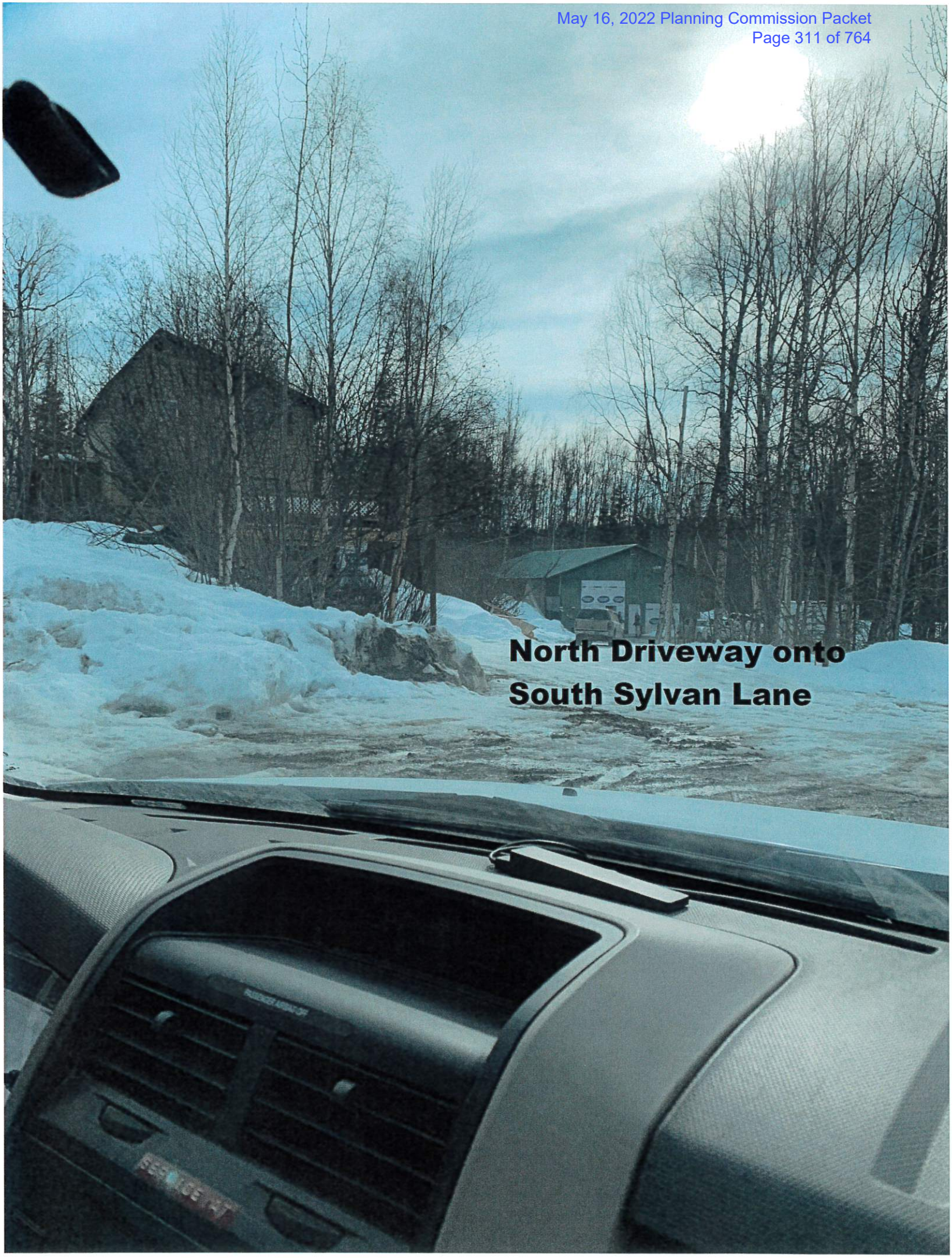
during the April 1, 2022 site visit

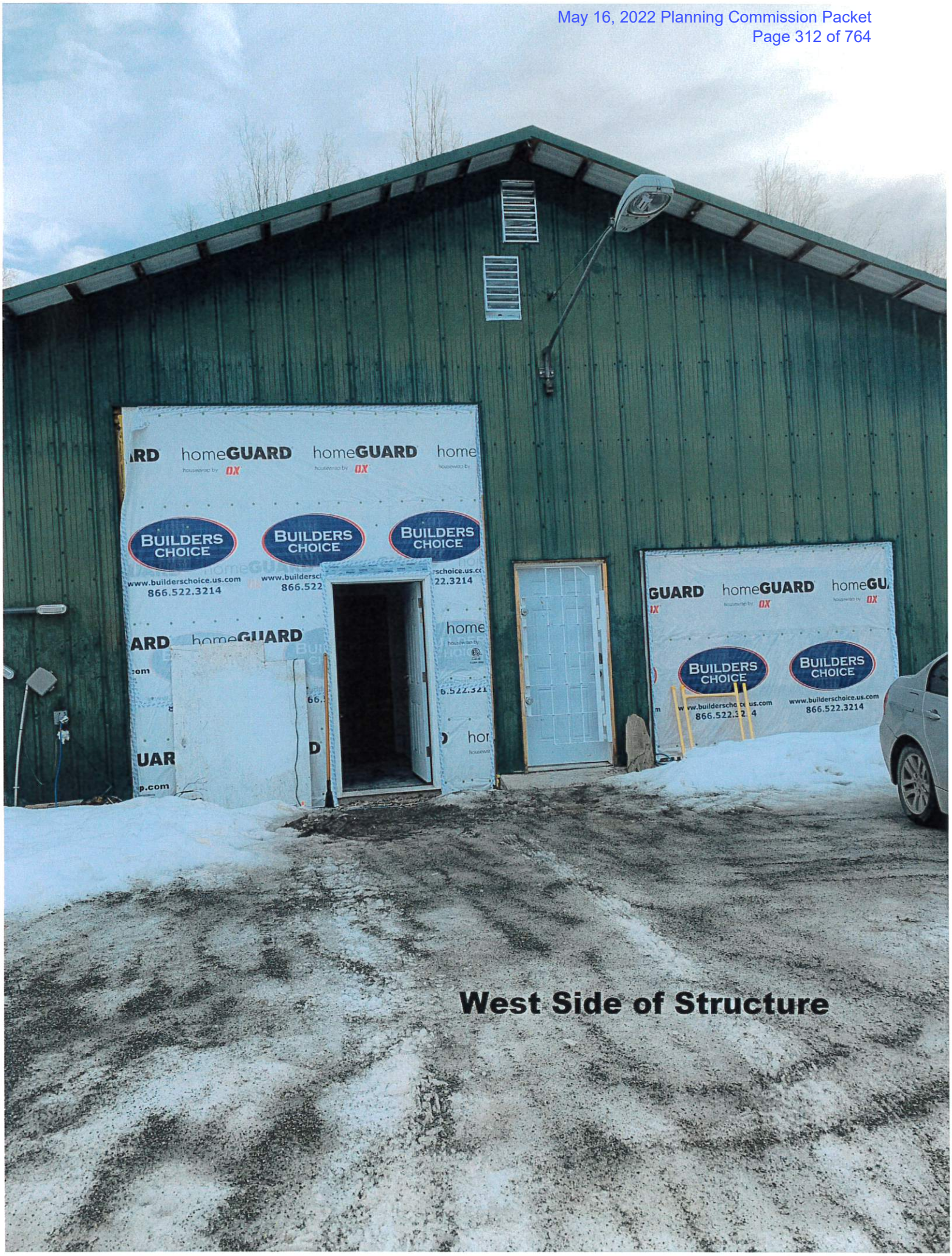
On West Cielo Court looking south onto subject lot. Green roof of structure showing.


On West Cielo Court, looking south onto South Sylvan Lane. Subject property is on the left.


Approximate location of
northern driveway, looking
north on South Sylvan Lane.

South Sylvan Ln
On W. Terry L Cir lookin
northeast towards the
subject property

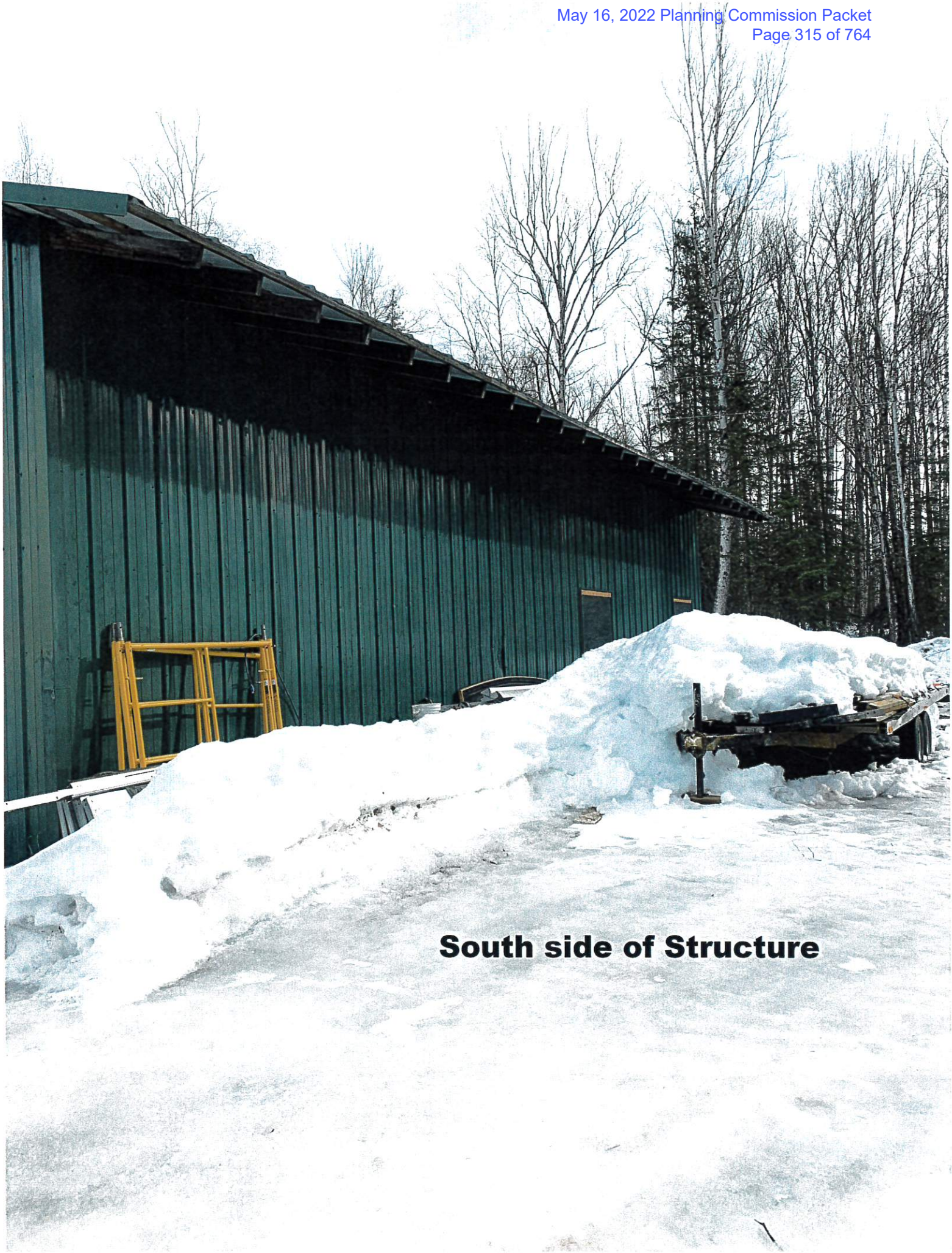

North Driveway onto
South Sylvan Lane

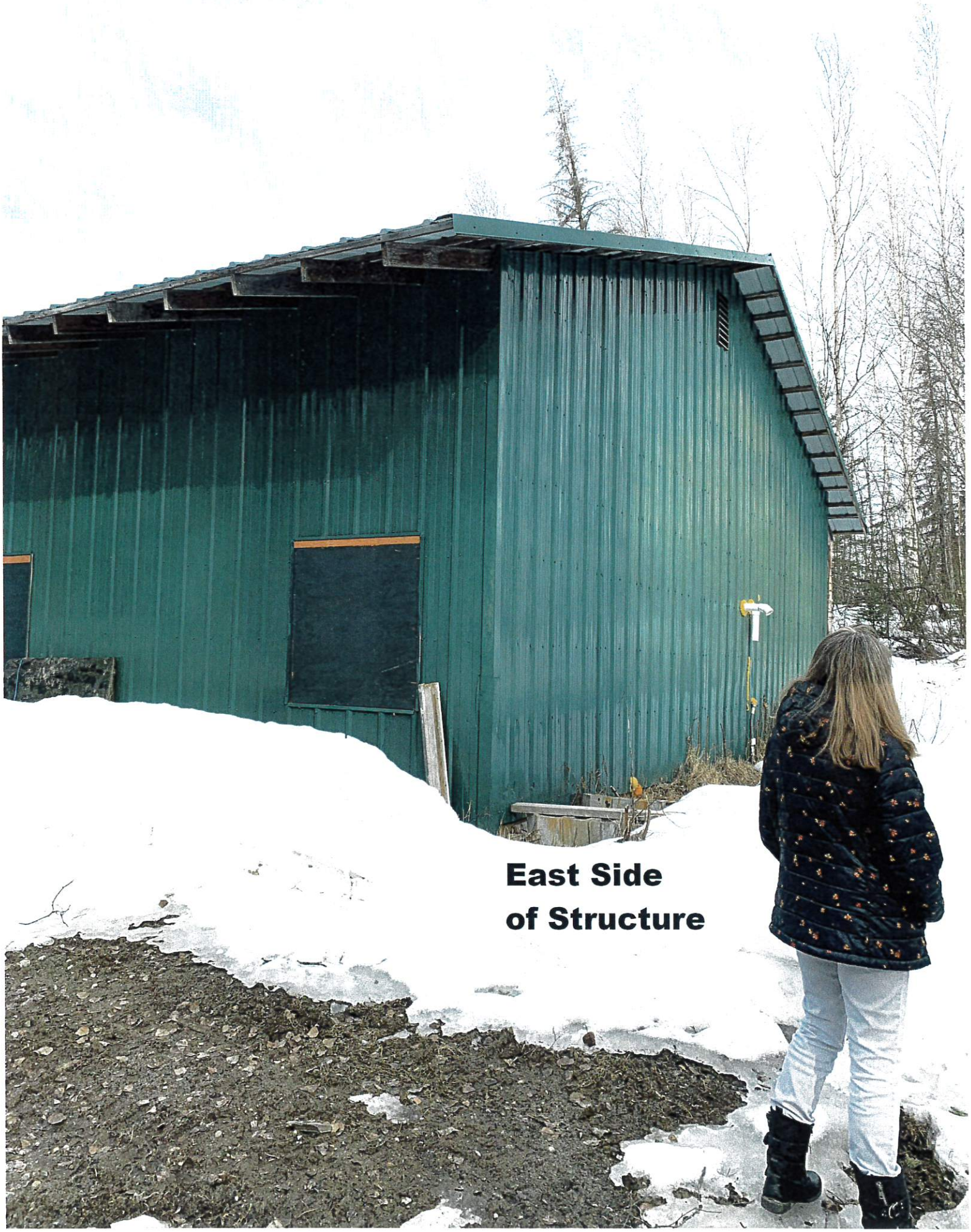


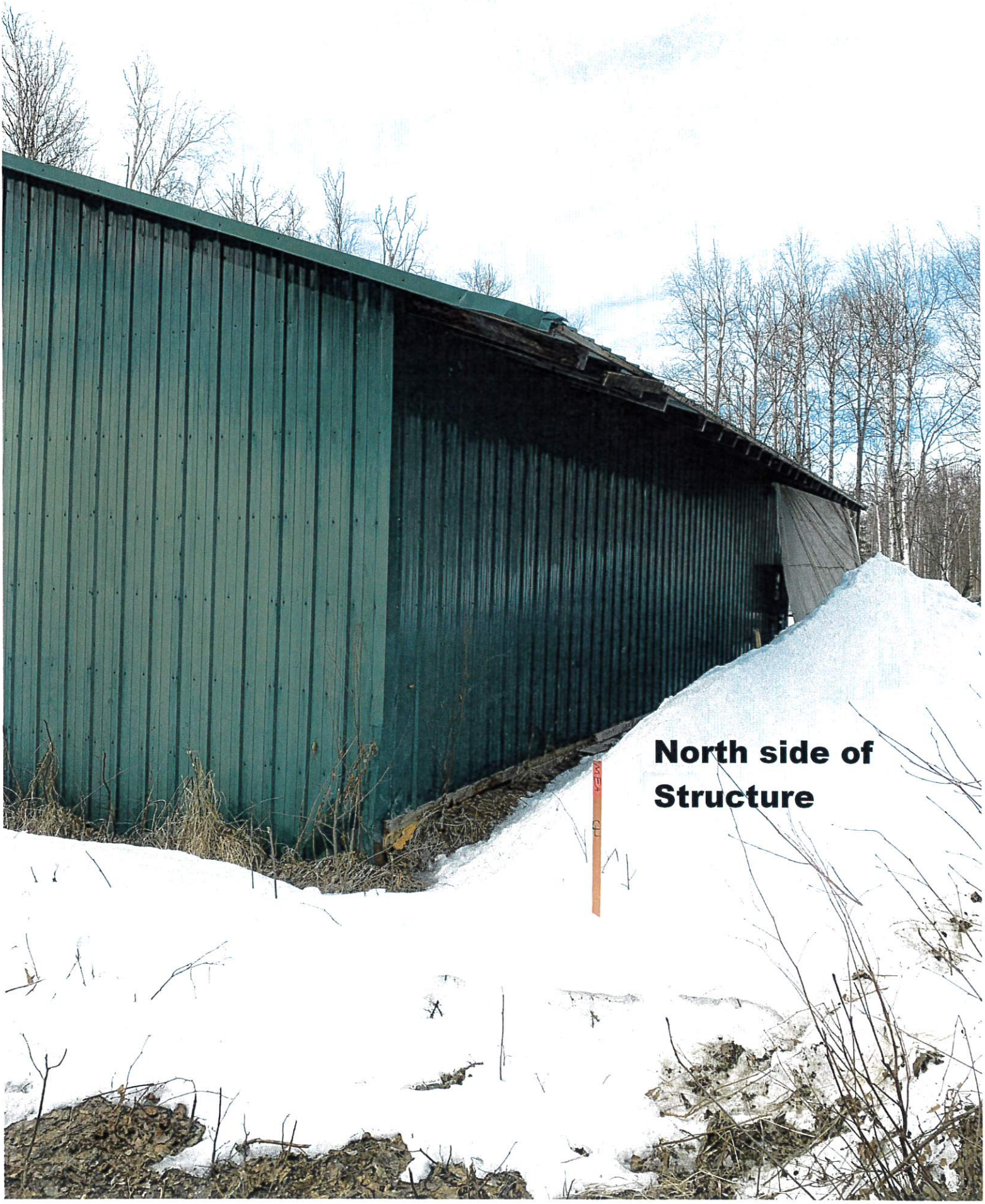
West Side of Structure

homeGUARD
BUILDERS CHOICE
www.builderschoice.us.com
866.522.3214
3220
ALASKA
WASTE
376-2158

During the site visit, the applicant stipulated that green metal panels will cover all sides of the building


South side of Structure


East Side
of Structure


North side of
Structure

From: Peggy Horton
To: "Allen Kemplen AICP-CTP - DOT&PF (allen.kemplen@alaska.gov)"; "Melanie Nichols (Melanie.nichols@alaska.gov)"; "Kyler Hylton (kyler.hylton@alaska.gov)"; "James Walker (james.walker2@alaska.gov)"; "oran.woolley@alaska.gov"; "mearow@matanuska.com"; "row@enstarnaturalgas.com"; "row@mtasolutions.com"; "GCI ROW (ospdesign@gci.com)"; Fire Code; Jill Irsik; Eric Phillips; "regpagemaster@usace.army.mil"; Terry Dolan; Jamie Taylor; Brad Sworts; Elaine Flagg; Charlyn Spannagel; Alex Strawn; Planning; Fred Wagner; Permit Center; Jason Ortiz; Theresa Taranto; Andy Dean; John Aschenbrenner; "mokietew@gmail.com"; "tundraquest@mtaonline.net"; "nicolerealty19@gmail.com"; "billydoc56@hotmail.com"; "cci1@wwdb.org"; "pcook@alaskan.com"; "gina@ritaccos.com"; "uprise@mtaonline.net"; "davemtp@mtaonline.net"; "dglsaviatn@aol.com"
Subject: RE: Request for Review and Comments: AK Legacy Genetics Marijuana Cultivation Facility
Date: Monday, February 28, 2022 2:05:14 PM

Here's the link for the application material. Sorry, I missed adding to the email.

https://matsugov.us/publicnotice/public-hearing-notice-for-conditional-use-permit-application-for-marijuana-cultivation-facility

Peggy

From: Peggy Horton
Sent: Monday, February 28, 2022 1:56 PM
To: Allen Kemplen AICP-CTP - DOT&PF (allen.kemplen@alaska.gov) <allen.kemplen@alaska.gov>; Melanie Nichols (Melanie.nichols@alaska.gov) <Melanie.nichols@alaska.gov>; Kyler Hylton (kyler.hylton@alaska.gov) <kyler.hylton@alaska.gov>; James Walker (james.walker2@alaska.gov) <james.walker2@alaska.gov>; 'oran.woolley@alaska.gov' <oran.woolley@alaska.gov>; mearow@matanuska.com; 'row@enstarnaturalgas.com' <row@enstarnaturalgas.com>; 'row@mtasolutions.com' <row@mtasolutions.com>; GCI ROW (ospdesign@gci.com) <ospdesign@gci.com>; Fire Code <Fire.Code@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; regpagemaster@usace.army.mil; Terry Dolan <Terry.Dolan@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Jason Ortiz <Jason.Ortiz@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; 'mokietew@gmail.com' <mokietew@gmail.com>; 'tundraquest@mtaonline.net' <tundraquest@mtaonline.net>; 'nicolerealty19@gmail.com' <nicolerealty19@gmail.com>; 'billydoc56@hotmail.com' <billydoc56@hotmail.com>; 'cci1@wwdb.org' <cci1@wwdb.org>; 'pcook@alaskan.com' <pcook@alaskan.com>; 'gina@ritaccos.com' <gina@ritaccos.com>; 'uprise@mtaonline.net' <uprise@mtaonline.net>; davemtp@mtaonline.net; 'dglsaviatn@aol.com' <dglsaviatn@aol.com>
Subject: Request for Review and Comments: AK Legacy Genetics Marijuana Cultivation Facility

Good Morning,

Ryan McKay and Jana Weltzin for AK Legacy Genetics submitted an application for a conditional use permit under MSB 17.60 – Conditional Uses, for a marijuana cultivation facility.

Location: 3097 South Sylvan Lane, Tax ID #6315B01L011 & L012 (Recently combined into new Lot 11A); within Township 17 North, Range 2 West, Section 22.

The Planning Commission will conduct a public hearing on this request on May 16, 2022.

Application materials may be viewed online at www.matsugov.us by clicking on "All Public Notices & Announcements." A direct link to the application material is here:

Comments are due on or before April 13, 2022 and will be included in the Planning Commission packet for the Commissioner's review and information. Please be advised that comments received from the public after that date will not be included in the staff report to the Planning Commission. Thank you for your review.

Peggy Horton
Matanuska-Susitna Borough
Development Services Division
Planner II
907-861-7862

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Growing with the Valley since 1947.

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Wasilla, AK 99654

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(907) 352-2277 fax

AFFIDAVIT OF PUBLICATION

UNITED STATES OF AMERICA, STATE OF ALASKA, THIRD DIVISION

BEFORE ME, THE UNDERSIGNED, A NOTARY PUBLIC, THIS DAY

PERSONALLY APPEARED BEFORE **BENJAMIN BORG** WHO, BEING

FIRST DULY SWORN, ACCORDING TO LAW, SAYS THAT HE IS THE

LEGAL AD CLERK OF THE **FRONTIERSMAN**

PUBLISHED AT WASILLA AND CIRCULATED THROUGH OUT MATANUSKA

SUSITNA BOROUGH, IN SAID DIVISION THREE AND STATE OF ALASKA

AND THAT THE ADVERTISEMENT, OF WHICH THE ANNEXED IS A TRUE

COPY, WAS PUBLISHED ON THE FOLLOWING DAYS:

03/04/2022

AND THAT THE RATE CHARGED THEREIN IS NOT IN EXCESS OF

THE RATE CHARGED PRIVATE INDIVIDUALS.

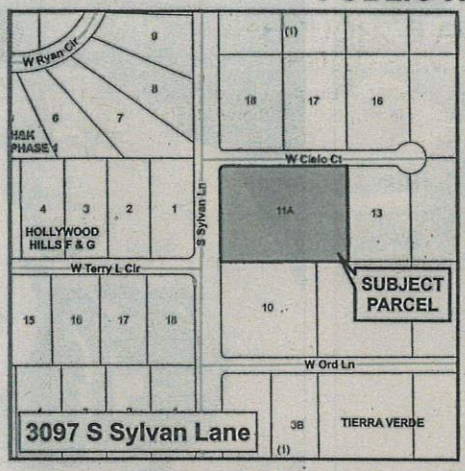
SUBSCRIBED AND SWORN TO BEFORE ME
THIS 4th DAY OF March, 2022.

Nancy E Downs
NOTARY PUBLIC FOR STATE OF ALASKA

NOTARY PUBLIC
NANCY E DOWNS
STATE OF ALASKA
MY COMMISSION EXPIRES AUG. 25, 2023

MAT-SU BOROUGH/PAGE
3.4
ACCOUNT NUMBER 405249

PUBLIC HEARINGS



MSB 17.60 – Conditional Uses. Jana Weltzin and Ryan McKay, on behalf of AK Legacy Genetics, filed an application for a conditional use permit under MSB 17.60 – Conditional Uses, for the operation of a marijuana cultivation facility located at 3097 South Sylvan Lane, Tax ID# 6315B01L011 & L012; within Township 17 North, Range 2 West, Section 22, Seward Meridian.

The Matanuska-Susitna Borough Planning Commission will conduct a public hearing concerning the application on ***Monday, May 16, 2022,*** at 6:00 p.m. in the Borough Assembly Chambers located at 350 E. Dahlia Avenue in Palmer. This may be the only presentation of this item before the Planning Commission and you are invited to attend. Planning Commission members may not receive or engage in ex-parte contact with the applicant, other interested parties in the application, or members of the public concerning the application or issues presented in the application.

Application materials may be viewed online at www.matsugov.us by clicking on "All Public Notices & Announcements." For additional information, you may contact Peggy Horton, Planner II, by phone: 907-861-7862. Provide written comments by e-mail to peggy.horton@matsugov.us, or by mail to MSB Development Services Division, 350 E. Dahlia Avenue, Palmer, AK 99645.

The public may provide verbal testimony in person at the meeting or telephonically by calling 1-855-290-3803. In order to be eligible to file an appeal from a decision of the Planning Commission, a person must be designated an "interested party". See MSB 15.39.010 for the definition of "interested party". The procedures governing appeals to the Board of Adjustment and Appeals are contained in MSB 15.39.010-250, which is available on the Borough home page: www.matsugov.us, in the Borough Clerk's office, and at various libraries within the borough.

Comments are due on or before ***April 13, 2022,*** and will be included in the Planning Commission packet. Please be advised that comments received from the public after that date will not be included in the staff report, but will be provided to the Commission at the meeting.

Publish Date: March 4, 2022

0322-10

https://www.matsugov.us/publicnotice/public-hearing-notice-for-conditional-use-permit-application-for-marijuana-cultivation-facility

Government Services Economy Property & Maps Lifestyle About

MATANUSKA-SUSITNA BOROUGH

Public Notice > Public Hearing Notice for Conditional Use Permit Application for Marijuana Cultivation Facility

Notice Type Public Notice

Effective Date
Feb 28, 2022

Tax IDs
6315B01L012

Documents
AK Legacy Genetics Application
Vicinity Map

Jana Weltzin and Ryan McKay, on behalf of AK Legacy Genetics, filed an application for a conditional use permit under MSB 17.60 – Conditional Uses, for the operation of a standard marijuana cultivation facility located at 3097 South Sylvan Lane, Tax ID# 6315B01L011 & L012; within Township 17 North, Range 2 West, Section 22, Seward Meridian.

Public Hearing: The Planning Commission will conduct a public hearing concerning the application for the conditional use permit on Monday, ***May 16, 2022***, at 6:00 p.m. in the Borough Assembly Chambers located at 350 E. Dahlia Avenue in Palmer. This may be the only presentation of this item before the Planning Commission and you are invited to attend. Planning Commission members may not receive or engage in ex-parte contact with the applicant, other interested parties in the application, or members of the public concerning the application or issues presented in the application.

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Written comments are due on or before ***April 13, 2022,*** and will be included in the Planning Commission packet for the Commissioner's review and information. Please be advised that comments received from the public after that date will not be included in the staff report, but will be provided to the Commission at the meeting.

From: Peggy Horton
To: Theresa Taranto
Subject: Mailing: AK Legacy Genetics
Date: Monday, February 28, 2022 10:50:10 AM
Attachments: Vicinity Map.pdf
Public Notice Mailing.pdf

Good Morning,
Please prepare and have these mailed to owners of property within 600 feet and within the Tierra Verde subdivision by Monday March 7, 2022. Please also mail to the Knik-Fairview Community Council.
Knik-Fairview Community Council
PO Box 877291
Wasilla AK 99687
Thank you,

Peggy Horton
Matanuska-Susitna Borough
Development Services Division
Planner II
907-861-7862

UNITED STATES POSTAL SERVICE®

Certificate of Bulk Mailing — Domestic

Fee for Certificate

Up to 1,000 pieces (1 certificate for total number)

For each additional 1,000 pieces, or fraction thereof

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Postage: Mailers must affix meter, PC Postage®, or (uncanceled) postage stamps here in payment of total fee due.

USPS MAR – 7 2022 PALMER AK 995

US POSTAGE PITNEY BOWES
ZIP 99645 $ 009.35⁰
02 4W
0000368428 MAR 07 2022

Acceptance employee must cancel postage affixed (by round-date) at the time of mailing

If payment of total fee due is being paid by Permit Imprint, include the *PostalOne!*® Transaction Number here: _____

Number of Identical Weight Pieces	Class of Mail	Postage for Each Mailpiece Paid	Number of Pieces to the Pound
36	1st	☐ Verified	45

Total Number of Pounds	Total Postage Paid for Mailpieces	Fee Paid
11.7 oz	19.08	9.35

Mailed For	Mailed By
Peggy H Dev. Srvs	Dana

Postmaster's Certification

It is hereby certified that the number of mailpieces presented and the associated postage and fee were verified. This certificate does not provide evidence that a piece was mailed to a particular address.

(Postmaster or Designee)

PS Form **3606-D,** January 2016 PSN 7530-17-000-5548

See Reverse for Instructions

55950B01L006 1
BARNETT NATHAN J & LINDSAY M
7330 W RYAN CIR
WASILLA AK 99623

55676000L001 2
BLEDSOE PHILLIP W & MANDY
7221 W TERRY L CIR
WASILLA AK 99623

55950B01L010 3
CALHOUN HUNTER J
BRONSERT ALYCIA L
PO BOX 871138
WASILLA AK 99687-1138

56315B01L014 4
CAREY CLINT
7005 W CIELO CT
WASILLA AK 99623-0876

55950B01L008 5
CARVER STEVEN MICHAEL & KELLY RAE
19365 ALMA AVE
CHUGIAK AK 99567

56315B01L018 6
COCROFT STEVEN GLEN
11100 BULWARK CIR
ANCHORAGE AK 99515-2742

55676000L004 7
COHEN BENJAMIN C & BURGANNDY E
7319 W TERRY L CIR
WASILLA AK 99623

56315B01L007 8
CUMMINGS THOS V
6855 W ORD LN
WASILLA AK 99654-9711

56315B01L013 9
DICK LAWRENCE E JR
PO BOX 520021
BIG LAKE AK 99652-0021

55950B01L007 10
GERBER JEFFERY J
7310 W RYAN CIR
WASILLA AK 99623

55676000L015 11
HALL AARON L
PO BOX 875299
WASILLA AK 99687-5299

55493000L002 12
HANNAH KIRK A & TARA R
7295 W METCALF CIR
WASILLA, AK 99654

55676000L003 13
HATHAWAY LANCE AARON JR
7285 W TERRY L CIR
WASILLA AK 99623

56315B01L005 14
HAYES NYUNG CHA
MAULTSBY CASEL H & MARY E
511 E 45TH AVE
ANCHORAGE AK 99503

56315B01L008 15
HOLBROOK MICHAEL & BELINDA
6901 W ORD LN
WASILLA AK 99623-0787

55676000L016 16
KNAGIN SHANE R & KARISSA
7290 W TERRY L CIR
WASILLA AK 99623-0919

56315B01L012 17
KR&W MANAGEMENT LLC
2174 E RED FOX DR
WASILLA AK 99654

56315B01L019 18
LEE DALE W
#186
7362 W PARKS HWY
WASILLA AK 99623

56315B01L021 19
MARQUEZ JAKE & DAWN
STE B PMB 717
2521 E MOUNTAIN VILLAGE DR
WASILLA AK 99654-7377

55493000L003 20
MARTIN PATRICK S & NICOLE M
7325 W METCALF CIR
WASILLA AK 99623-0832

55676000L018 21
MINSCH PAMELA P
159
189 E NELSON AVE
WASILLA, AK 99654

56315B01L009 22
MONROE DIANA L
7001 W ORD LN
WASILLA AK 99623-0765

55676000L017 23
NORFLEET MICHAEL ELLIOTT
PO BOX 871088
WASILLA AK 99687

56315B01L022 24
OXFORD SCOT A
BENNETT LEEONA J
PO BOX 873585
WASILLA, AK 99687-3585

55493000L001 25
REIMERS JERRY P
7265 W METCALF CIR
WASILLA AK 99623-0842

55950B01L009 26
RICHARDS IRENE E EST
% WILLIAM CHILDS
PO BOX 879756
WASILLA AK 99687

56315B01L016 27
ROEHL CHARLES A JR
PO BOX 879314
WASILLA AK 99687

56315B01L010 28
SCHMIDT CHRIS C
CUSHMAN-BAECHLER ALICE J
7101 W ORD LN
WASILLA AK 99623

55545B01L003A 29
SCHMIDT JEFF B & TWILA B
7064 W ORD LN
WASILLA AK 99623

56315B01L006 30
SCHRADER LOUIS
6850 W ORD LN
WASILLA AK 99654-0787

Matanuska-Susitna Borough
Development Services Division
350 E. Dahlia Avenue
Palmer, Alaska 99645

tara0609
36
3/2/2022 11:39:33 AM

The Matanuska-Susitna Borough Planning Commission will consider the following:

An application under MSB 17.60 – Conditional Uses. Jana Weltzin and Ryan McKay, on behalf of AK Legacy Genetics, filed an application for a conditional use permit under MSB 17.60 – Conditional Uses, for the operation of a marijuana cultivation facility located at 3097 South Sylvan Lane, Tax ID# 6315B01L011 & L012 (Lot 11A); within Township 17 North, Range 2 West, Section 22, Seward Meridian.

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Name: _____ ***Mailing Address:*** _____

Location/Legal Description of your property: _____

Comments: _____

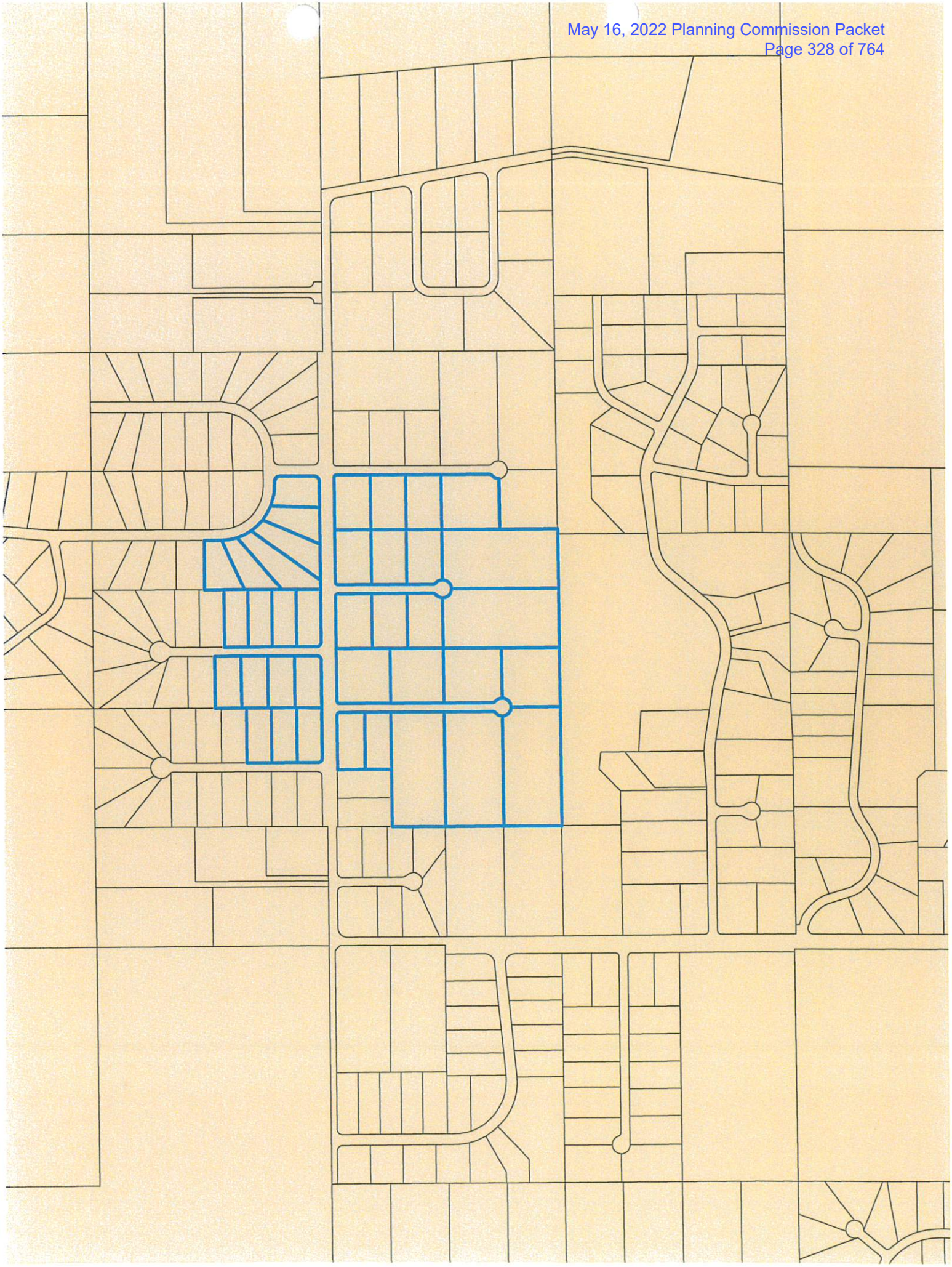
_____

_____

_____

_____

Note: Vicinity Map Located on Reverse Side



Peggy Horton

From: Peggy Horton
Sent: Thursday, March 24, 2022 11:59 AM
To: 'algunlimited1@gmail.com'; jana@jdwcounsel.com; Brenda Butler
Subject: AK Legacy Genetics Public Noticing

Good Morning,

While working on this application, I noticed our public notice mailed out on March 7, 2022 did not include all the necessary mailing addresses that was required by our code MSB 17.03, Public Noticing. I've notified our Admin Assistant to perform another mailing to include all properties within Tierra Verde Subdivision, and those within 600 feet of the subject property, as is required. You will not be charged for this second mailing.

Because the public hearing is on May 16th, this gives those additional owners sufficient time to respond to the noticing.

Regards,

Peggy Horton
Matanuska-Susitna Borough
Development Services Division
Planner II
907-861-7862

UNITED STATES POSTAL SERVICE®

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641	1st	☐ Verified	.45

Total Number of Pounds	Total Postage Paid for Mailpieces	Fee Paid
11b3.7oz	32.33	9.35

Mailed For	Mailed By
Dev. Services	I Fodge

Postmaster's Certification

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Leslie Dyleng
(Postmaster or Designee)

Postage: Mailers must affix meter, PC Postage®, or (uncanceled) postage stamps here in payment of total fee due.

US POSTAGE PITNEY BOWES
ZIP 99645 $ 009.35⁰
02 4W
0000368428 MAR 24 2022

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PALMER AK 99645
MAR 24 2022
USPS

PS Form **3606-D,** January 2016 PSN 7530-17-000-5548

See Reverse for Instructions

55950B01L006 1
BARNETT NATHAN J & LINDSAY M
7330 W RYAN CIR
WASILLA AK 99623

56315B04L004 2
BENN DANIEL G
PO BOX 25124
ESTER, AK 99725-0124

56315B04L002 3
BLAKESLEY KAI & AMI
12323 BLACK CANNON RD
RIVERTON UT 84096

55676000L001 4
BLEDSOE PHILLIP W & MANDY
7221 W TERRY L CIR
WASILLA AK 99623

56315B02L002 5
BOTT EDWARD TROY
% VICTORIA C BOTT
PO BOX 874234
WASILLA AK 99687-4234

56315B02L007 6
BUCHANAN JENNA ROSE
2801 S SYLVAN LN
WASILLA AK 99623-0376

55950B01L010 7
CALHOUN HUNTER J
BRONSERT ALYCIA L
PO BOX 871138
WASILLA AK 99687-1138

56315B01L014 8
CAREY CLINT
7005 W CIELO CT
WASILLA AK 99623-0876

55950B01L008 9
CARVER STEVEN MICHAEL & KELLY RAE
19365 ALMA AVE
CHUGIAK AK 99567

56315B02L012 10
CHRISTIANSON WYATT & LALEYA L
2640 S TERRACE LOOP
WASILLA AK 99623

56315B02L010 11
CLEMENSON GUNDAR H & K
4061 BULL MOOSE DR
WASILLA, AK 99654

56315B01L008 12
CLIFFORD WALTER E
2665 E ODSATHER CIR
WASILLA AK 99654

56315B01L018 13
COCROFT STEVEN GLEN
11100 BULWARK CIR
ANCHORAGE AK 99515-2742

55676000L004 14
COHEN BENJAMIN C & BURGANNDY E
7319 W TERRY L CIR
WASILLA AK 99623

56315B01L007 15
CUMMINGS THOS V
6855 W ORD LN
WASILLA AK 99654-9711

56315B01L013 16
DICK LAWRENCE E JR
PO BOX 520021
BIG LAKE AK 99652-0021

56315B04L006 17
FEE ROBT P
6901 W HIGHLAND DR
WASILLA, AK 99654

56315B03L001 18
FOCHT JASON
8384 W MISTY LAKE RD
WASILLA AK 99623

56315B02L004 19
FRAZIER SEAN
7051 W HIGHCREST LN
WASILLA AK 99654-0210

56315B04L003 20
GARDNER JOSEPH C
PO BOX 877529
WASILLA AK 99687-7529

55950B01L007 21
GERBER JEFFERY J
7310 W RYAN CIR
WASILLA AK 99623

56315B01L002 22
GOINS JAMES WAYNE
426 N CHUGACH ST
PALMER AK 99645-6218

56315B02L003 23
GRISWOLD DONALD P & S K
% SEAN FRAZIER
7051 W HIGHCREST LN
WASILLA AK 99654-0210

55676000L015 24
HALL AARON L
PO BOX 875299
WASILLA AK 99687-5299

55493000L002 25
HANNAH KIRK A & TARA R
7295 W METCALF CIR
WASILLA, AK 99654

55676000L003 26
HATHAWAY LANCE AARON JR
7285 W TERRY L CIR
WASILLA AK 99623

56315B01L004 27
HAYES MYUNG CHA
511 E 45TH AVE
ANCHORAGE, AK 99503

56315B01L005 28
HAYES NYUNG CHA
MAULTSBY CASEL H & MARY E
511 E 45TH AVE
ANCHORAGE AK 99503

56315B02L008 29
JOHNSON JEANNIE E
JOHNSON SIDNEY L REV TR
14220 SUNVIEW DR
ANCHORAGE AK 99515

55676000L016 30
KNAGIN SHANE R & KARISSA
7290 W TERRY L CIR
WASILLA AK 99623-0919

56315B02L013 61
WILLIAMS STEPHANIE
2660 S TERRACE LOOP
WASILLA AK 99623

tara0609
61
3/24/2022 8:35:09 AM

Matanuska-Susitna Borough
Development Services Division
350 E. Dahlia Avenue
Palmer, Alaska 99645

tara0609
61
3/24/2022 8:35:09 AM

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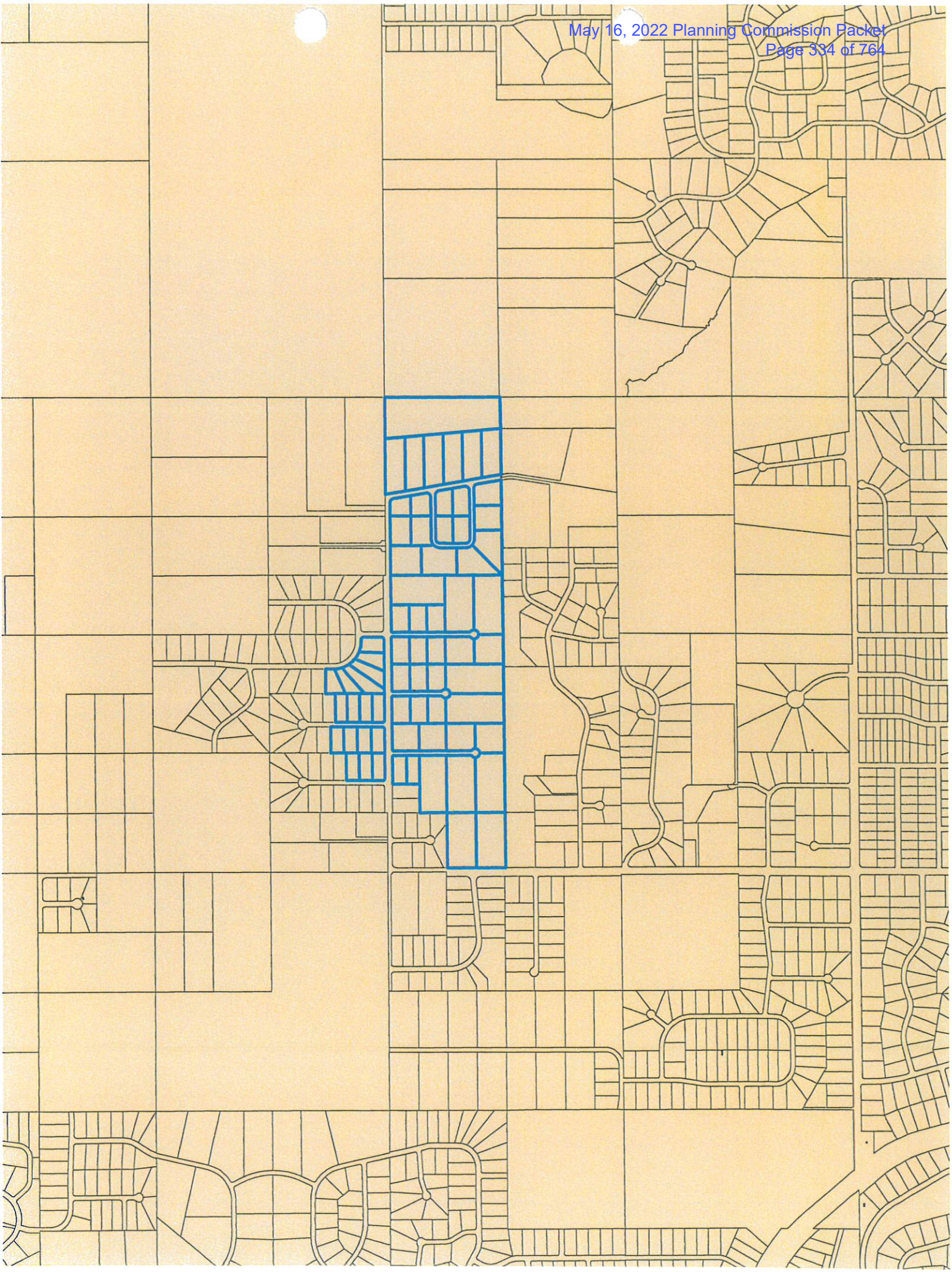
*Name:*_____ *Mailing Address:*_____

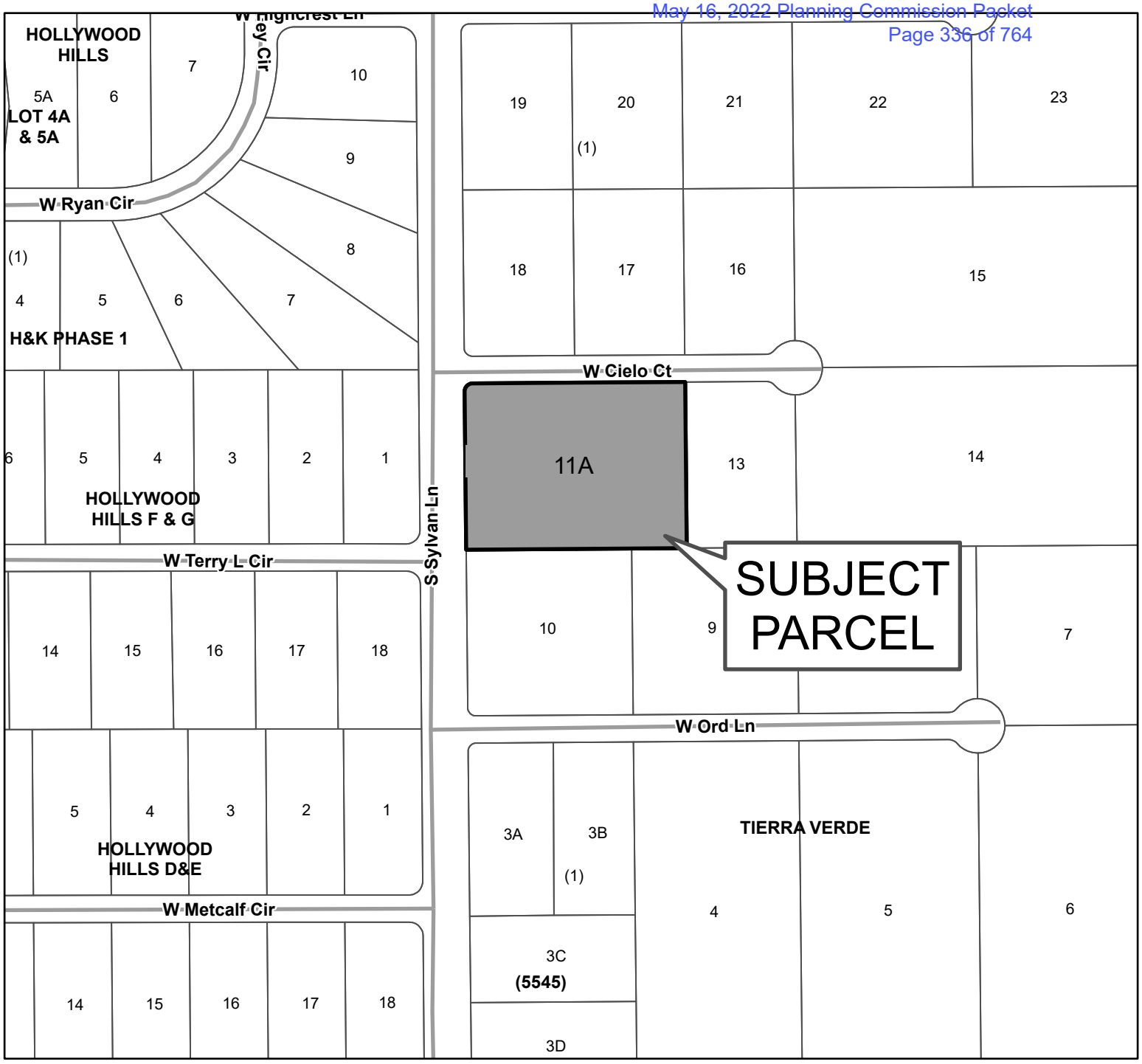
*Location/Legal Description of your property:*_____

*Comments:*_____

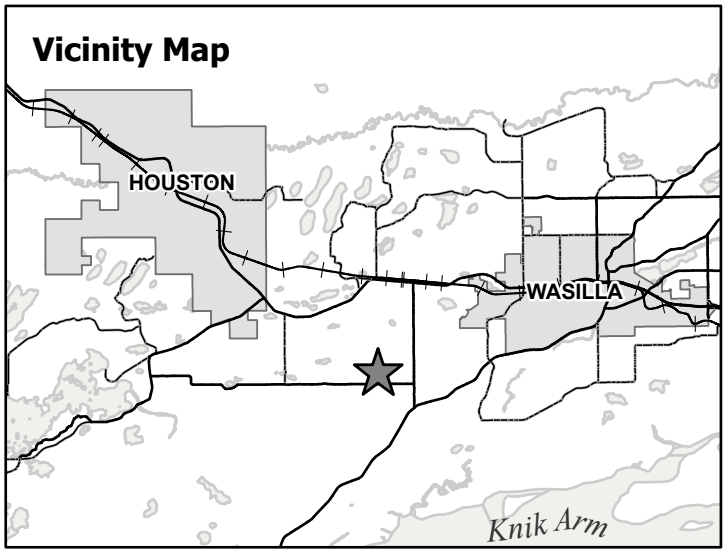
Note: Vicinity Map Located on Reverse Side



VICINITY MAP



3097 S Sylvan Lane



N

This map is solely for informational purposes only. The Borough makes no express or implied warranties with respect to the character, function, or capabilities of the map or the suitability of the map for any particular purpose beyond those originally intended by the Borough. For information regarding the full disclaimer and policies related to acceptable uses of this map, please contact the Matanuska-Susitna Borough GIS Division at 907-861-7858.

MSB Information Technology/GIS
February 22, 2022

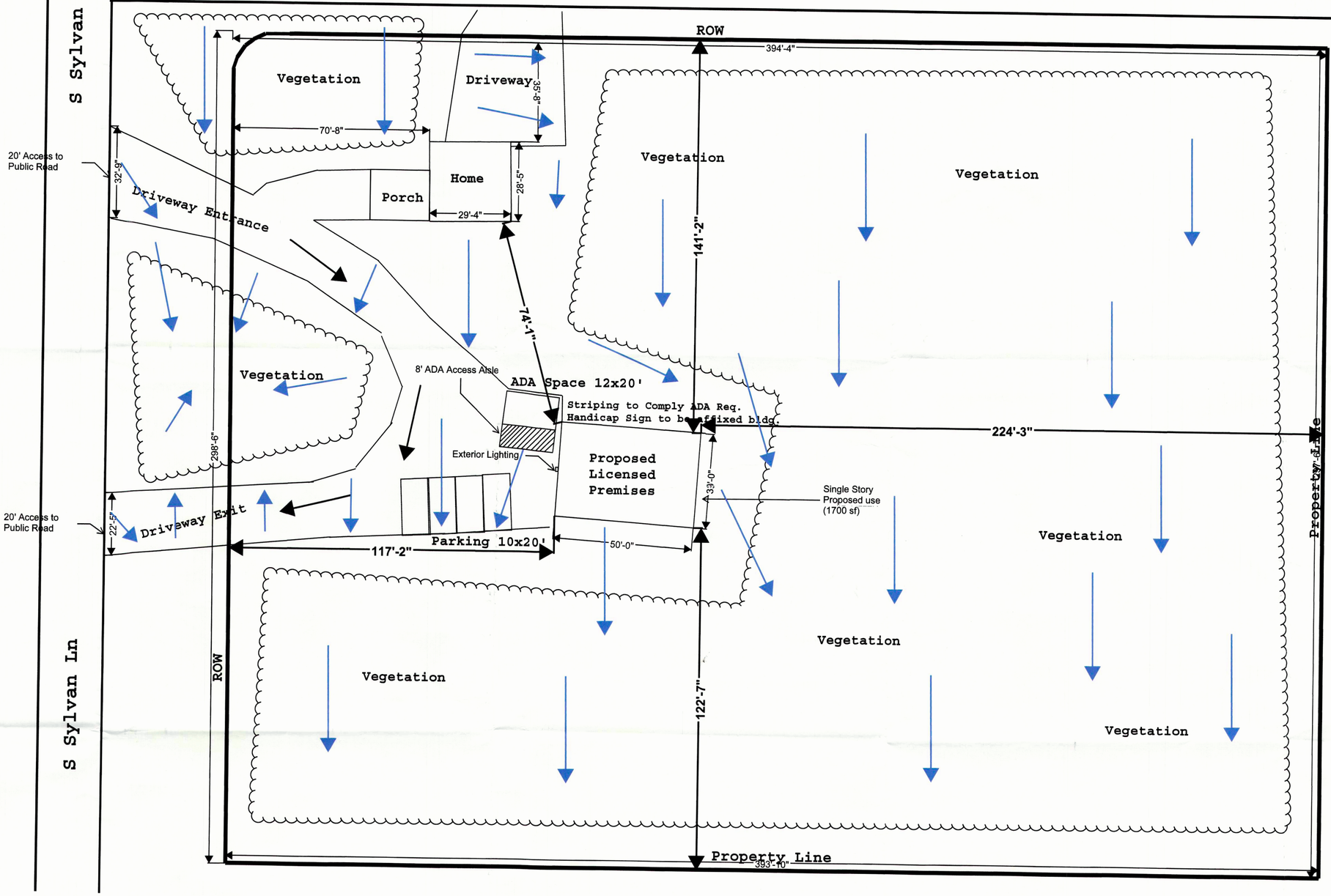
0 1,000 Feet

SITE PLAN

IF THIS DIMENSION DOES NOT MEASURE ONE INCH (1") EXACTLY, THIS DRAWING HAS BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES

1" ACTUAL

Blue Arrows indicate direction of water flow, property is on a sloping hill generally drawing North to South



C01 Site Plan

1" = 20'

NOTE: USE HALF SCALE INDICATED SCALE FOR 11x17 DRAWINGS

TRUE NORTH

PLAN NORTH

RECEIVED
FEB 16 2022
Mat-Su Borough Development Services

100% FOR CONSTRUCTION

CONSULTANT:

PROJECT NO: 01
DATE: 01/31/2021
DRAWN BY: Kyler Dias, CE, EIT
CHECKED BY: NA

REVISION	DESCRIPTION	DATE

C01

1/31/2021 12:20 PM

This map is solely for informational purposes only. The Borough makes no express or implied warranties with respect to the character, function, or capabilities of the map or the suitability of the map for any particular purpose beyond those originally intended by the Borough. For information regarding the full disclaimer and policies related to acceptable uses of this map, please contact the Matanuska-Susitna Borough GIS Division at 907-861-7858

Site Plan Overlay for 1011B01T001-2

0 50 100 Feet

MSB Development Services Division: 3/1/2022

APPLICATION MATERIAL

DocuSign Envelope ID: 0B218AAC-992E-4058-A... 30E42A19521C

RECEIVED
DEC 23 2021
Mat-Su Borough
Development Services

MATANUSKA-SUSITNA BOROUGH

Planning and Land Use Department
Development Services Division

350 East Dahlia Avenue • Palmer, AK 99645
Phone (907) 861-7822 • Fax (907) 861-8158
Email: permitcenter@matsugov.us

PAID 1000.00 CK#3536 and CK# 3548 500.00 12/29/21 Pd in full

CONDITIONAL USE PERMIT FOR MARIJUANA RELATED FACILITIES – MSB 17.60

Carefully read instructions and applicable borough code. Fill out forms completely. Attach information as needed. Incomplete applications will not be processed.

Application fee must be attached:

_____ $1,500 for Marijuana Retail Facility
x $1,500 for Marijuana Cultivation Facility

Prior to the public hearing, the applicant must also pay the mailing and advertising fees associated with the application. Applicants will be provided with a statement of advertising and mailing charges. Payment must be made prior to the application presentation before the Borough Planning Commission.

Required Attachments for a Marijuana Cultivation Facility:

_____ Wastewater and Waste Material Disposal Plan – 17.60.160 (A)
_____ Odor Mitigation and Ventilation Plan – 17.60.160 (B)
_____ Hazardous Chemicals Information – 17.60.160 (C)
_____ Security plan – 17.60.160 (D)

Required Attachments for Both Retail and Cultivation Facilities:

_____ Documentation demonstrating full compliance with applicable fire code – 17.60.150 (D) (2)

Subject Property: Township: S17, Range: N02, Section: W22, Meridian: _____
MSB Tax ID# 6315B01L011+12 8234B01L011A new Tax ID #
SUBDIVISION: TIERRA VERDE BLOCK(S): 1, LOT(S): 11+12
STREET ADDRESS: 3097 S Sylvan Lane, Wasilla, Alaska 99623
FACILITY / BUSINESS NAME: AK Legacy Genetics

Ownership: A written authorization by the owner must be attached for an agent or contact person, if the owner is using one for the application. Is authorization attached? ☐ **Yes** ☐ **No** ☐ **N/A**

Name of Property Owner

KR&W Management, LLC
Mailing: 2174 E Red Fox Drive
Wasilla, Alaska 99654
Phone: Hm_____ Fax_____
Wk_____ Cell 360-292-3280
E-mail algunlimited1@gmail.com

Name of Agent / Contact for application

Ryan McKay (Attorney Jana Weltzin)
Mailing: 2174 E Red Fox Drive
Wasilla, Alaska 99654
Phone: Hm_____ Fax_____
Wk_____ Cell 360-292-3280
E-mail algunlimited1@gmail.com

Site Plan – Attach a detailed, to scale, site plan clearly showing the following information:	**Attached**
Proposed and existing structure(s) on the site. Indicate which structure(s) will be used for the proposed use. Dimensions and locations of all existing and proposed structures on the site in relationship to all property lines.	Yes
Signage – Existing and Proposed.	Yes
Location and dimensions for all access points to and from the site to public rights-of-way or public access easements.	Yes
Buffering – Fences, vegetation, topography, berms, and any landscaping	Yes
Drainage	Yes
Vehicular and pedestrian circulation patterns.	Yes
Exterior site lighting.	Yes
Location and dimensions of parking areas to be provided	Yes
Scale and north arrow using standard engineering intervals such as 1" = 30', 1" = 50' or similar as required by project size.	Yes

Map – Attach a detailed, to scale, vicinity map clearly showing the following information:	**Attached**
Identify all existing land uses within 1,000 feet.	Yes
Scale and north arrow using standard engineering intervals such as 1" = 30', 1" = 50' or similar as required by project size.	Yes

In order to grant a conditional use permit under MSB 17.60, the Planning Commission must find that each of the following requirements have been met. Explain the following in detail:	**Attached**
Is the conditional use compatible with and will it preserve or not materially detract from the value, character and integrity of the surrounding area?	Yes
Will the granting of the conditional use permit be harmful to the public health, safety, convenience and welfare?	No
Are sufficient setbacks, lot area, buffers and other safeguards being provided?	Yes
Does the conditional use fulfill all other requirements of MSB Chapter 17.60 pertaining to the conditional use in this section?	Yes
Describe measures taken to prevent any potential negative effect upon other properties in the area due to such factors as noise and odor.	Please review narrative
Describe measures taken to reduce negative effects upon adjacent properties by: • Increased property line and right-of-way buffers • Planted berms and landscaping • Site and building design features which contribute to the character of the surrounding area	Please review narrative
Describe how this use is compatible with the character of the surrounding area.	Please review narrative
Current status of State License application process – 17.60.150 (D) (1)	Approved with delegation

17.60.170 Standards for Marijuana Retail Facilities:	Attached
Describe how the subject parcel is appropriate for the proposed conditional use. Include information detailing: • The proximity of the proposed use to existing businesses; • The proximity of parcels developed with residential uses; • Whether the roads associated with the proposed use have been, or will be, appropriate for commercial use; and • Proposed hours of operations.	Please review narrative
Provide information showing minimum parking standards have been met as required by MSB 17.60.170 (B) and (C).	Yes

Floor Plan for Marijuana Retail Facilities – Attach a detailed, to scale, floor plan clearly showing the following information:	Attached
Dimensions of all structures.	Yes
Interior floor plans (specific location of the use or uses to be made of the development).	Yes
Net floor area square footage calculations.	Yes

OWNER'S STATEMENT: I am owner of the following property:

MSB Tax account #(s) 6315B01L011 and, I hereby apply for approval of a conditional use permit to operate a marijuana related facility on the property as described in this application.

I understand all activity must be conducted in compliance with all applicable standards of MSB 17.60 and with all other applicable borough and state.

I understand that other rules such as local, state and federal regulations, covenants, plat notes, and deed restrictions may be applicable and other permits or authorization may be required. I understand that the borough may also impose conditions and safeguards designed to protect the public's health, safety and welfare and ensure the compatibility of the use with other adjacent uses.

I understand that it is my responsibility to identify and comply with all applicable rules and conditions, covenants, plat notes, and deed restrictions, including changes that may occur in such requirements.

I grant permission for borough staff members to enter onto the property as needed to process this application and monitor compliance. Such access will at a minimum, be allowed when the activity is occurring and, with prior notice, and at other times necessary to monitor compliance.

The information submitted in this application is accurate and complete to the best of my knowledge.

DocuSigned by:
6788F5859E58479...

Signature: Property Owner | Ryan McKay Printed Name | 12/23/2021 Date

DocuSigned by:
6788F5859E58479...

Signature: Agent | Ryan McKay Printed Name | 12/23/2021 Date

RECEIVED
FEB 16 2022
Mat-Su Borough
Development Services

MAT-SU BOROUGH CONDITIONAL LAND USE PERMIT NARRATIVE FOR STANDARD MARIJUANA CULTIVATION FACILITY

AK LEGACY GENETICS, LLC, dba AK Legacy Genetics – a locally-owned and operated business

Submitted: _____, 2021
Hearing Date: _____, 2022
Prepared by:

JDW COUNSEL
ALIGNED FOR EXCELLENCE

JDW, LLC
Jana D. Weltzin, Esq.
901 Photo Avenue, Second Floor
Anchorage, AK 99503
jana@jdwcounsel.com
630-913-1113
907-231-3750

On behalf of:
AK LEGACY GENETICS

Introduction:

We are pleased to introduce Ryan McKay, Riley P. Walther, and Kyler J. Dias. Ryan, Riley, and Kyler are the sole members of AK Legacy Genetics, LLC.

Ryan Mckay is a lifelong Alaskan who grew up in the city of Palmer. After graduating from Colony High School Ryan joined the Navy and completed a tour before moving to Arizona where he first embraced his entrepreneurial spirit creating a successful pool service and repair company. Ryan used the proceeds from the sale of his pool service to jump into Arizona's emerging Medical Cannabis Market. After a successful position as a bud tender where Ryan learned valuable knowledge about the cannabis industry, he decided to take the knowledge he had gained in the cannabis industry to one of the first legal recreational markets in Washington State. Ryan not only increased his knowledge on how to run a successful retail dispensary he also gained valuable horticultural knowledge. When an opportunity presented itself after the legalization of recreational marijuana in Alaska, Ryan moved back to his hometown of Palmer and founded Matanuska Cannabis Company with a small group of cannabis enthusiasts. Now he is launching into this new venture for a cultivation facility in the Mat Su Valley, and is very excited to expand his business interests in the Mat Su Valley, the best place to work and to call home.

Kyler Dias is a lifelong Alaskan who grew up in the city of Palmer. After graduating from Colony High School, he attended the University of Alaska Anchorage where he obtained a degree in Civil Engineering. Upon graduation Kyler learned his passion was to build things not just design. So, upon graduation he joined a successful general contractor and is currently a Project Manager in the construction industry. Having gained valuable business skills throughout his career, Kyler decided that he wanted to apply these skills but for his own company.

Riley Walther is a lifelong Alaskan who grew up in Anchorage. Riley, a true Alaskan pioneer, is an active gold and precious metal miner as well as the owner of the Alaska Treasure Chest, which sells Alaskan artifacts and minerals. During the summer, Riley also is an avid apiarist, producing and selling local Alaskan Honey. Riley is an active outdoorsman who loves Alaska and spends as much time outdoors as possible. Riley is looking forward to entering the legal cannabis market with his knowledgeable business partners and brings his own pioneering experience and business knowledge to the venture.

This Conditional Use Permit ("CUP") application for a Standard Marijuana Cultivation Facility is requesting consideration and approval from this Honorable Planning Commission. AK Legacy Genetics' cultivation application has been approved by the Alaska Alcohol & Marijuana Control Office ("AMCO") as of October 27, 2021.

Required attachments for a marijuana cultivation facility conditional use permit narrative:

<u>Wastewater and Waste Material Disposal Plan – 17.60.160(A)</u>

AK Legacy Genetics' highest priorities are to make sure that marijuana consumers receive the highest quality products and to be respectable, law-abiding licensees and business owners. As part

of that responsibility, AK Legacy Genetics has created a Disposal Plan to safely dispose of all marijuana and marijuana products that do not pass the industry's quality standards for any reason or for plant material that is categorized as waste. The Disposal Plan is designed to keep marijuana waste safe, secure, and compliant with all state and local laws, regulations, and ordinances. Safe disposal of marijuana in a secure and environmentally conscientious manner is crucial for AK Legacy Genetics to operate compliantly. AMCO Enforcement will be notified of any marijuana waste at least three (3) days before the waste is rendered unusable and disposed through a form prescribed by the Marijuana Control Board ("MCB"). Before disposal, marijuana waste must be rendered unusable. This process involves grinding and mixing the marijuana waste with equal parts compostable and non-compostable solid wastes until the resulting mixture is at least fifty percent (50%) non-marijuana waste. The resulting marijuana waste mixture will be quarantined away from any other marijuana/marijuana products inside locked containers in a secured location inside the facility and tracked in Metrc. The waste will then be delivered by an AK Legacy Genetics employee, licensee, or manager to the local landfill/transfer site. A marijuana waste log (tracking the waste type, date rendered unusable, and disposal date at the waste station) will be maintained by an AK Legacy Genetics licensee, manager, or designated employee.

The cultivation facility expects very little wastewater to be generated from the marijuana production as the facility will be hand watering plants and using a timer-operated pump system that will deliver water through small hoses to closely monitor overwatering plants. Excess water will drain into evaporation trays and naturally evaporate. Additionally, AK Legacy Genetics will be running in-floor heat and dehumidifiers which will aid in excess water evaporation.

Odor Mitigation and Ventilation Plan – 17.60.160(B)

AK Legacy Genetics will rigorously adhere to a "no odor" policy to avoid odor being detected by the public from outside the property lines of the licensed premises, as described in 3 AAC 306.420(a)(2)(F) and 3 AAC 306.430(c)(2).

Odor Prevention

The cultivation facility will reduce odor via climate control, air filtration, ventilation, and exhaust. All marijuana plants will be grown in individual grow rooms that share common air. There will be an air filtration system outfitted with multiple charcoal filters and commercial fans throughout the facility that will filter air for odor particles. The circulation and air filtration systems will regulate heat buildup, remove exhaust odor, and counterbalance heat emission (designed in conjunction with the lighting system). Exhaust fans throughout the cultivation will eradicate heat and excess oxygen. All exhaust fans and charcoal filters will be handled per the manufacturer's recommendations. All charcoal filters will be consistently checked and replaced for maximized operation. Employees will also perform weekly "smell checks." These checks will require an employee to patrol all edges of the property lines to see if they can smell marijuana from these locations. If marijuana scent is detected at the property line edge(s), AK Legacy Genetics will

immediately replace the charcoal filters and implement additional odor mitigation methods (if necessary).

AK Legacy Genetics is located on a 2.84 acre property, so the licensees do not anticipate detecting odor outside the parcel property lines. Regardless, if odor is discovered over the property lines and a community member takes issue with it, the licensees will remedy the odor concern through additional smell control precautions, climate control, air filtration, ventilation, and exhaust.

Odor Management/Self-Inspection

AK Legacy Genetics staff will perform routine smell checks to identify and reduce odors before it affects the surrounding neighborhood. Each smell check conducted will be logged at the facility, using the following indicators when describing smell test results: No Odor, Slight Odor, Moderate Odor, or Strong Odor and wind direction, date and time.

If an odor mitigation method is used but proved to be unsuccessful, another method will be utilized. Furthermore, outside experts may be contacted to help improve odor control techniques.

Hazardous Chemicals Information – 17.60.160(C)

AK Legacy Genetics will ensure that any insecticide and fungicide used will be EPA-approved. For general sanitation, the cultivation facility will use gentle cleaning chemicals as Simple Green, beach and water diluted solution in accordance with DEC guidelines, and simple household cleaning products for table and countertop cleaning. All herbicides, fungicides, insecticides, fertilizers will be stored on metal racks in the nutrients room. Cleaning products and other chemicals will be stored in the office area. All chemicals, fertilizers, herbicides, fungicides, insecticides, cleaning chemicals etc., will be used and disposed of in accordance with their respective manufacturer's recommendations, and comply with all local, state, and federal laws. Small containers of cultivation chemicals will be in the cultivation facility during use and then stored in the nutrients area.

Security Plan – 17.60.160(D)

AK Legacy Genetics has ensured that the cultivation facility meets and exceeds the set back requirements outlined in MSB 17.60.160(E). The cultivation facility is set back over 50 feet from public rights -of-way, and over 100 feet from side and rear lot lines.

The cultivation has a thorough security plan to fully monitor the facility. The entire premises will be designated as a restricted access area. Trimmed and packaged marijuana will be securely stored. Business records will be securely kept and managed in the dedicated six (6) months along with 40 days of video recordings will be stored in the business record/recording equipment storage area, located in the Office.

There will be a security system continuously active to make sure no unauthorized entry occurs without notice. The facility will have signs stating, "Restricted Access Area – Visitors Must Be Escorted" prominently posted on the outside of the cultivation. Visitors must be escorted by either a licensee, manager, or designated employee for the whole duration of the visit.

All restricted access area doors (including the facility entrance) will have commercial grade locks and will be under nonstop video surveillance. The exterior door will always be locked from the outside but will remain accessible from inside the building for safety/emergency exit reasons. Door sensors will also be installed on all doors that will trigger the security alarm system if an attempted breach occurs. Upon being triggered, an audible alarm will go off and an electronic alert will be sent to the licensees' cell phones.

Outdoor lighting with commercial LEDs will be affixed at angles and inaccessible heights that deter vandalism and are clear of obstructions. Lighting will cover the facility's exterior door. Exterior lighting will be mounted in a manner that security cameras can cleanly capture anyone within twenty feet (20') of any entrance to the licensed premises or anyone working inside the facility. Outdoor lighting will be positioned downward to avoid light pollution onto other surrounding properties. A licensee or designated employee will habitually inspect lighting fixtures and the alarm system to ensure optimum functionality.

Video surveillance cameras will record all areas where marijuana is grown, cured, processed, packaged, stored, or destroyed. The licensees will always have access to the live security footage via their cell phones so they can keep watch on the facility remotely at any time.

All staff must clearly display their employee photo ID badges on their persons while on the premises. During working hours, all staff must either have their marijuana handler permits on-hand or filed on-site. Any visitors to the facility must sign into the visitor log and clearly display their visitor badge on their persons during the whole duration of the visit. These measures will help easily identify individuals who are authorized to be on the licensed premises. A licensee or designated employee will regularly patrol the premises and surrounding area to make sure no unauthorized person(s) are loitering, hiding out, or scouting the cultivation facility. As AK Legacy Genetics has a hard "No Loitering" policy, anyone found loitering on or around the premises will be requested to vacate immediately or else law enforcement will be contacted to help enforce this policy.

All employees of AK Legacy Genetics will go through a thorough training process upon being hired. Training topics will include (but not be limited to) internal policies; local, state, and federal rules, regulations, and laws; theft, diversion, and inversion recognition and prevention; cultivation techniques; licensed facility buyer procedures; facility cleanliness and hygiene; and safety/security procedures.

Additional Narrative Regarding Site Plan & Map Documents

AK Legacy Genetics will not have any signs posted with their business name or logo at the facility. In addition to signs stating that video surveillance is in progress, that no one under 21 years old is allowed on the premises, and that the entire area is a restricted access area, other signs may be added around the perimeter and at the entrance of the premises stating, "No Trespassing." AK Legacy Genetics purchased two parcels of land and The location of the cultivation is secluded in the woods off of Sylvan Lane and W. Cielo Court where there is little to no pedestrian foot traffic.

Since the facility will have about 5 employees at any given time and there is a clearing around the facility for ample parking to facilitate all vehicles as indicated on the site plan.

Required explanations for a marijuana cultivation facility conditional use permit narrative:

Is the conditional use compatible with and will it preserve or not materially detract from the value, character and integrity of the surrounding area?

The proposed use is compatible with the lots of the surrounding area. The entire licensed area, including office and business record & recording equipment storage, will be 1,650 square feet, with approximatly 1,100 square feet of that space used for cultivation. The proposed use fits into the harmony of the surrounding uses both in size and design. The facility is located on a large 2.84 acre lot between W. Cielo Court and W Ord Lane, with Sylvan Lane as the facility access road. The nearest neighbors are across Sylvan Lane. As the facility's parcels have undergone a lot consolidation plat to increase the acreage of the property, there is a noticeable distance between AK Legacy Genetics and any other neighboring buildings. Therefore, the proposed use will not detract from the character, value, and integrity of the surrounding area. The facility will not produce any noise pollution and has an odor control method in place.

Steps have been taken to reduce the potential negative effects of the proposed use upon adjacent properties. The facility design utilizes natural landscape screening, larger than required setbacks, as the lot is secluded and surrounded by a wooded area.

The proposed use will meet all compatible uses allowed on adjacent properties and will improve the overall neighborhood as the premises will not emit odor, will not produce excess dust, will have not produce noise pollution, and will have parking & loading on the licensed premises to cut down traffic congestion on the street, thus fitting in with adjacent property uses. As detailed in the attached site plan, there will be ample space for parking on the premises and will have appropriate accessibility spaces under the Americans with Disabilities Act.

Odor control will be crucial in operating compliantly under AMCO regulations. Commercial-grade activated charcoal filters will be used throughout the cultivation to filter all air before it is vented outside. These charcoal filters will be regularly checked and replaced to ensure no odor is escaping the facility. AK Legacy Genetics staff will routinely do "smell checks" around the property's perimeter to make sure no odor is present.

The facility will be equipped with a 24-hour monitoring alarm system, exterior lighting, and video surveillance. All entrances are secured by commercial locking mechanisms and video surveillance to capture individuals within twenty (20) feet. Inside the licensed premises, video surveillance will cover all areas of the facility 24/7 (which is stored for a minimum of 40 days) to monitor and identify all activity. The entire licensed premises will be a restricted access area, with signs posted prominently around the premises stating, "Restricted Access Area: Visitors Must Be Escorted" and "Video Surveillance in Progress."

In the event a non-employee/agent of the company needs to enter the licensed premises, the company visitor policy will be adhered to. A visitor will need to show their valid photo identification and obtain a visitor badge to always clearly display while visiting. All visitors must be pre-approved by management. AMCO agents, law enforcement Borough staff are not considered visitors and will not be held to the AK Legacy Genetics visitor policies. Additionally, Borough staff shall be permitted to enter the premises subject to this permit to monitor compliance with permit requirements. Such access will at minimum, be allowed on demand when activity is occurring, and/or with prior verbal or written notice, and/or at other times as necessary to monitor compliance. AK Legacy Genetics will not deny entry to Borough staff. Other than previously mentioned, there should be no unscheduled and unexpected visitors. AK Legacy Genetics staff must accompany visitors throughout the entire visit, with no more than five visitors to one staff member. To maintain the security of the facility and all marijuana products, access to the facility will be monitored and always restricted. Access will only be granted to employees and licensees, AMCO agents, law enforcement and the limited exception of scheduled pre-approved visitors.

Will the granting of the conditional use permit be harmful to the public health, safety, convenience and welfare?

No – AK Legacy Genetics has a detailed security system and plan, diversion/inversion/theft control policies, and a loitering check plan.

The facility is a commercial cultivation that will only allow access to those who are at least 21 years of age or older and have been approved ahead of time by management for a facility visit.

The following points listed are AK Legacy Genetics' procedures and policies to ensure the prevention of any negative impact on the public health, safety, convenience, and welfare:

✓ AK Legacy Genetics will not be using any toxic or prohibited fertilizers or pesticides on their crops, which furthers public safety. The facility does not intend to use any pesticides in the facility however, if AK Legacy Genetics experiences a need for pesticides, they will utilize pesticides, approved for use on cannabis found on the DEC website at any given time.

✓ There will be no undue burden on the electrical utilities as AK Legacy Genetics will have ample electrical service.

✓ The facility will be equipped with a 24-hour monitoring alarm system, exterior lighting, and video surveillance. All entrances are secured by commercial locking mechanisms and video surveillance to capture individuals within 20 feet. Inside the licensed premises, video surveillance will cover all areas of the facility (with the exception of the bathroom) continuously (which is stored for a minimum of 40 days) to monitor and identify all activity. All visitors must be pre-approved by management (except AMCO agents and law enforcement). To maintain the security of the facility and all marijuana products, access to the facility will be monitored and restricted at all times. Access will only be granted to employees and licensees, AMCO agents, law enforcement and the limited exception of scheduled pre-approved visitors. Distinct and apparent cameras will

be placed throughout and around the facility to encourage people to not attempt unauthorized access.

✓ On-site video surveillance will continuously monitor all areas of the premises. Employees will perform mandatory inventory counts each week, check counts against Metrc records, and document the reports as official business records. AK Legacy Genetics will not tolerate any theft, inversion, and diversion, and all employees will complete mandatory training in recognizing such activity. AK Legacy Genetics management team understands that diversion can happen in two ways - inversion and diversion - and is equally profitable diverting product out of the legal system as it is diverting product from the illegal system into the legal market. In the event that an employee is caught stealing marijuana ***or*** infusing the facility with non-regulated black-market product, AK Legacy Genetics will notify local law enforcement immediately, comply with all directives, and provide all necessary information and records for the investigation. Ownership will take the necessary steps to ensure that illegal conduct by an employee does not compromise the facility's license and legitimate business operations. Once a theft is reported, ownership will update the product records in the tracking system, as needed, to maintain an accurate and comprehensive accounting for all marijuana products and inventory. Ownership will comply with all inquiries and investigations lodged by AMCO as a result. Documentation related to marijuana theft will be maintained as a business record for five (5) years and made available to AMCO upon request. Video recordings will be stored for forty (40) days. Cameras will provide a full view of the grow areas, entryway, safes, storage, and product packaging areas. Security monitors and video recording equipment will be securely located onsite.

✓ Qualified candidates will be hired on a probationary period during which time they will receive training and evaluation specific to their position. Training will include internal policies and procedures; state statutes and regulations; diversion, theft, and inversion prevention; cultivation techniques; sanitation and hygiene; legalities of recreational cannabis at state and federal levels; Metrc use; and safety protocols. Training will take place throughout the year when topics arise that need further explanation or refreshing. As proper safety and security procedures are of the utmost importance to AK Legacy Genetics, the most up-to-date reading materials will always be available to employees. Prior to beginning work, employees will be expected to understand: (1) Alaska laws, regulations, and codes governing the marijuana industry and marijuana establishments; (2) all of the permitting requirements to act as a marijuana handler (including obtaining a Marijuana Handler card from a state-approved course provider prior to commencing employment) and to work in a marijuana establishment; (3) AK Legacy Genetics standards, operational protocol, and best practices with regard to marijuana cultivation; (4) general safety procedures and security protocol; (5) how to think defensively if threatening situations occur; (6) in-depth information about particular strains and their features; (7) in-depth information on the requirements of each room, task, and system; and (8) the general federal, state, and local employment regulations by which AK Legacy Genetics is governed. To ensure full coverage for each position, all employees will be cross-trained on the requirements of each job.

✓ AK Legacy Genetics will have "No Loitering" signs clearly posted around the licensed premises. If an employee suspects that a person is loitering, they will be given a verbal warning to leave the premises or else law enforcement will be notified. Trained employees will maintain regular periodic checks around the property to deter any unauthorized entrance or loitering around the facility. The exterior lighting system will keep the premises well-lit during closed hours and provide extra lighting for all surveillance recordings. Exterior lighting will be shielded and downward directional to mitigate any unwanted light pollution. The alarm system will monitor for intrusions with motion detectors on all access points, including the entrance to the licensed facility, office, and secured storage during closed hours. Live security footage will also be accessible to licensees and management via their cellular phones, so they may keep an eye on the facility even when they are away. Any attempted or actual intrusion will prompt an automatic, electronic alert to the security company who will then contact local law enforcement and ownership. All alarm systems and devices will be tested every six (6) months.

For additional protections to ensure the prevention of any negative impact on the public health, safety, convenience, and welfare, please see the odor control and security plan sections discussed *supra*.

Are there sufficient setbacks, lot area, buffers and other safeguards being provided?

As described previously, AK Legacy Genetics is located within a 2.84-acre parcel. This application and the layout of AK Legacy Genetics meets the required setbacks, buffers, and lot area. The entire cultivation operation is enclosed in a commercial-grade building.

There will be plenty of onsite parking developed on the site for this use.

The facility has incorporated all measures to reduce the negative effects of the surrounding properties, including but not limited to natural landscaping screening and large setbacks.

The facility will not produce any noise pollution and has an odor control method in place. A robust security plan and the "no loitering" policy will be implemented and thoroughly communicated to all employees. Additional safeguards include the following:

✓ The lighting fixtures will be positioned at an inaccessible height with sturdy housings to deter vandalism and common obstructions. The bulbs will be extremely bright to maximize visibility and deter crime. The exterior lighting will be checked daily by the manager on duty or licensee to ensure that each light in the system is operational, and that each mount is positioned for optimum recording clarity and to deter unauthorized presence on the premises.

✓ A third-party security company will install the alarm system and to continuously monitor the electronic notifications in the event the alarm is triggered. The security company will periodically visit to check and maintain the equipment.

Does the conditional use fulfill all other requirements of MSB Chapter 17.60 pertaining to the conditional use of this section?

Yes – The conditional use fulfills other requirements of MSB 17.60 (Conditional Uses). Documentation and explanation of this is found throughout the CUP application.

Describe measures being taken to prevent potential negative effect upon other properties in the area due to such factors as noise and odor.

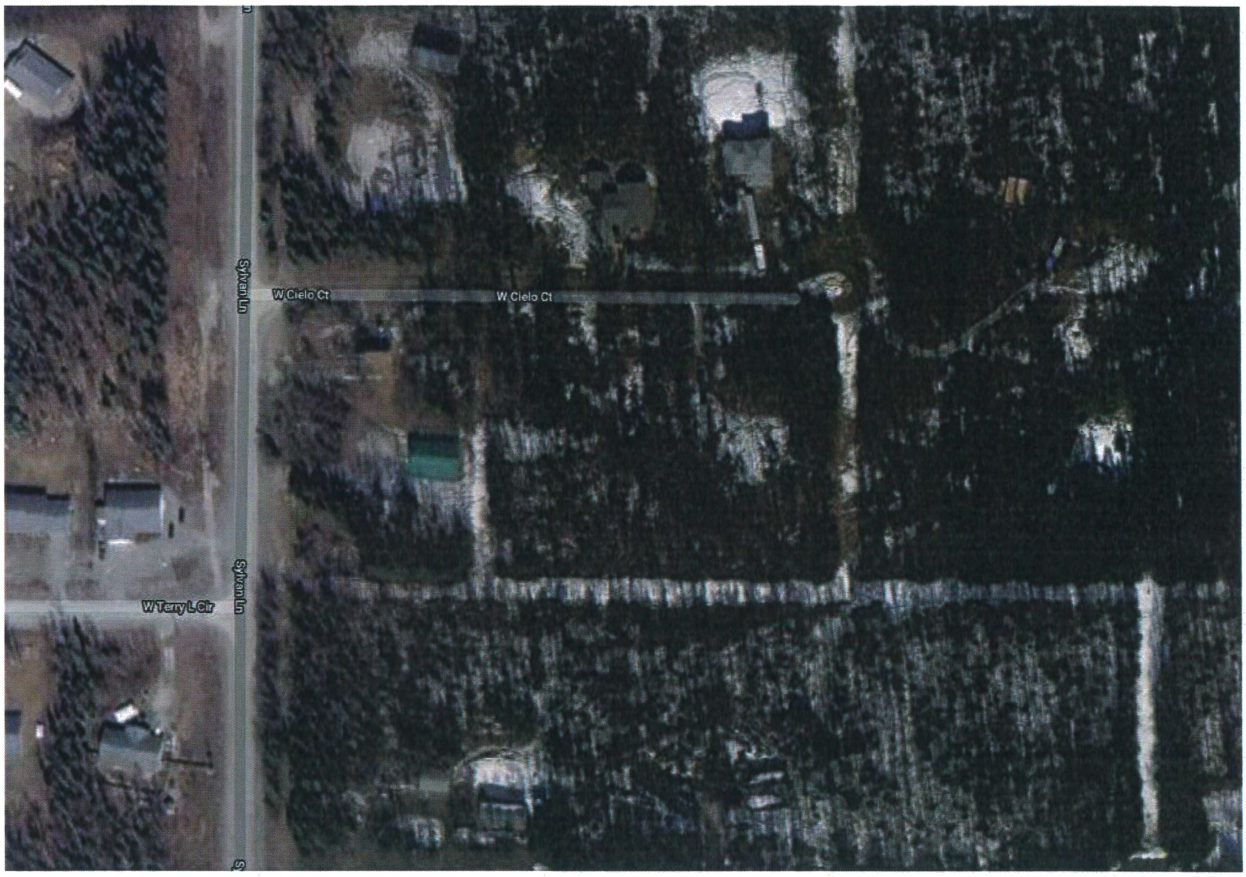
The proposed use will produce very little noise. AK Legacy Genetics does not anticipate any noise to come from the facility, and if any noise is to be produced it will be comparable to surrounding land uses. The roads that serve the facility and surrounding uses do not appear to be used currently to their maximum capacity, therefore, any increase in traffic flow on the roads serving the area will be sufficient to serve the area with this new proposed cultivation use. All activity will happen during normal daytime business hours.

Ownership will abide by a strict "no odor" policy per MSB 17.60.150(A)(1) that will ensure no odor is detectible by the public from outside the facilities as required by 3 AAC 306.420(a)(2)(F) and 3 AAC 306.430(c)(2). Out of an abundance of caution, odor control methods will be utilized and will consist of several methods meant to eliminate odors. Commercial-grade activated charcoal filters will be used throughout the cultivation to filter all air before it is vented outside. These charcoal filters will be regularly checked and replaced to ensure no odor is escaping the facility. AK Legacy Genetics staff will routinely do "smell checks" around the property's perimeter to make sure no odor is present. Marijuana product will be packaged in sealed, air-tight containers. Air sanitizers will be used when transporting marijuana to/from the premises.

For additional information, please see the odor control and noise mitigation sections discussed previously in this narrative.

Describe how use is compatible with the character of the surrounding area.

The facility is compatible with the character of the surrounding area as it exists close to the back of a wooded parcel of land. AK Legacy Genetics' placement of the proposed facility was chosen specifically to ensure that its use would not affect neighboring lots. The secluded character of the surrounding parcels and their uses are a good fit for a cultivation facility.



Current status of State License Application Process.

The Application is approved with delegation by the Marijuana Control Board.

Misc. Items and Information.

Please see attached parking layout diagram.

Proposed hours of operation for the cultivation shall be 8 am until 8 pm.

Number of employees onsite will be between 2 to 5, depending on employee shifts, season, and other needs of the cultivation. During harvests it is likely there will be shifts of trimmers that may, at times, increase employees onsite above 5 to 6-7.

Thank you for your thoughtful consideration of this conditional land use application.

RECEIVED
FEB 16 2022
Mat-Su Borough
Development Services

THE STATE of ALASKA
GOVERNOR MICHAEL J. DUNLEAVY

Department of Commerce, Community, and Economic Development

ALCOHOL & MARIJUANA CONTROL OFFICE

550 West Seventh Avenue, Suite 1600
Anchorage, AK 99501
Main: 907.269.0350

January 27, 2022

AK Legacy Genetics, LLC
DBA: AK Legacy Genetics
Via: algunlimited1@gmail.com

Re: AK Legacy Genetics #28628

Dear AK Legacy Genetics, LLC:

At the October 26 - 28, 2021 meeting of the Marijuana Control Board in Anchorage, Alaska, the board voted to approve your new standard marijuana cultivation facility application with delegation to the director. Delegation means that the board has authorized me to issue the license once all outstanding approvals are received.

Attached are post-approval instructions and the pre-inspection checklist, which provide information on your next steps. Please note that the pre-inspection checklist is informational. You will be provided with an individualized checklist at the appropriate time.

Please contact marijuana.licensing@alaska.gov with any questions.

Sincerely,

Carrie Craig
Records and Licensing Supervisor

For
Glen Klinkhart, Director

cc: License File
Matanuska – Susitna Borough

Matanuska-Susitna Borough
Permit Center
FEB 25 2022
Received

MATANUSKA-SUSITNA BOROUGH
Planning and Land Use Department
Development Services Division

350 East Dahlia Avenue, Palmer, Alaska 99645
(907) 861-7822 Fax (907) 861-8158
E-mail: PermitCenter@matsugov.us

Driveway Permit Application

Permit Fee $200 ($150 Refundable if completed within 3 years) **PERMIT NO:** 28455

Property Owner (Name):			**Applicant/Agent (Name):**		
Ryan McKay					
Mailing Address:			**Mailing Address:**		
2174 Red Fox Drive					
City:	**State:**	**Zip:**	**City:**	**State:**	**Zip:**
Wasilla	AK	99654			
Phone:			**Phone:**		
360-292-3280					
Email *(optional)*:			**E-mail *(optional)*:**		
algunlimited1@gmail.com					
Site Address:			**Driveway Location Will Be Marked With:**		
3097 S Sylvan Lane			Existing		
Property Tax ID #:			**Expected Completion Date:**	**Driveway Surface Type:**	
6315B01L011				Gravel	
Applying for Access Onto:			**Distances:**		
S Sylvan Lane			Left:	Width:	Right:
Only Corrugated Metal Pipe Culvert is Allowed			**Path or sidewalk dimension (if applicable):**		
Culvert Length:	Diameter:				

Intended Use:

☐ Single Family ☐ Mutli-Family # of units _____

☒ Commercial - Type: MARIJUANA CULTIVATION Est. "peak hours" trips per day: _____

IF ACCESS IS ONTO A PAVED ROAD, APRON LENGTH TO BE 2 FEET MINIMUM

The Permittee certifies that he/she is the owner, lessee, or authorized agent of the property, that the conditions, restrictions and regulations of the borough will be complied with and that he/she will maintain the driveway in accordance with the provisions and standards attached to this permit, and any applicable code. I hereby certify that the information submitted on this application is complete and accurate to the best of my knowledge and that I am the applicant or agent of the same as stated in the attached documentation. By signing this permit I acknowledge and agree to accept the Driveway Standards and Provisions attached to this permit.

PERMITTEE: _____ DATE: 2/25/22
Signature of Permitee

PERMIT GRANTED BY: _____ DATE: _____
Borough Representative

Peggy Horton

From: Michelle Olsen
Sent: Thursday, April 14, 2022 3:21 PM
To: algunlimited1@gmail.com
Cc: Peggy Horton
Subject: Driveway Approval

DRIVEWAY PERMIT

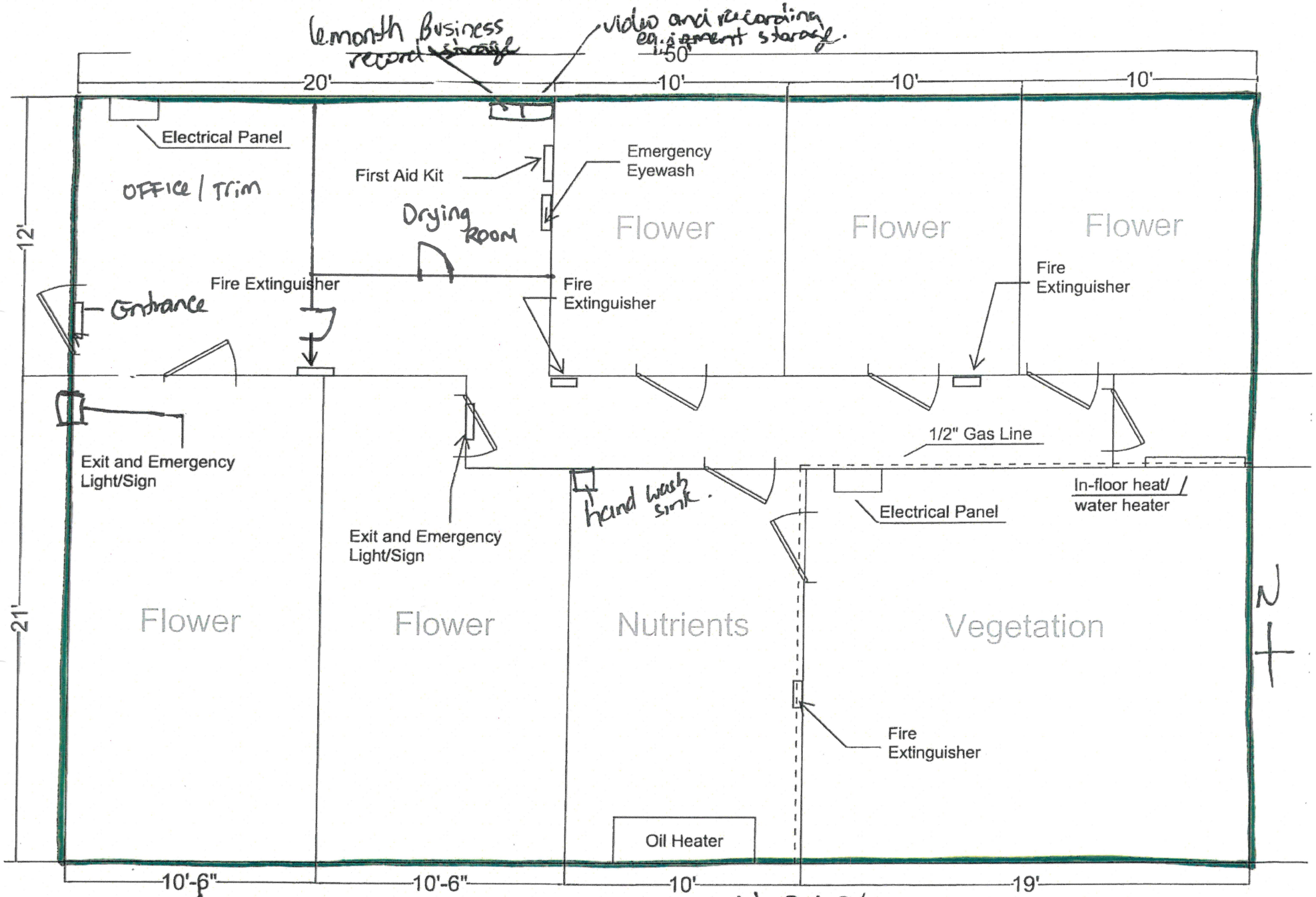
PERMIT # D28455
TAX PARCEL ID # 6315B01L011

The Matanuska-Susitna Borough has performed the Final Inspection of the existing driveway. The driveway has been adequately constructed to Borough standards and to the conditions outlined by the initial driveway inspector. **Your Approved Driveway Permit Number is listed above.**

Please keep this letter.

Any changes in land use or modifications of the driveway may require additional permitting. If you have any questions or concerns about your driveway or this permit, you may contact the Permit Center at 907-861-7822.

Sincerely,
Michelle Olsen, CFM
Permit Technician



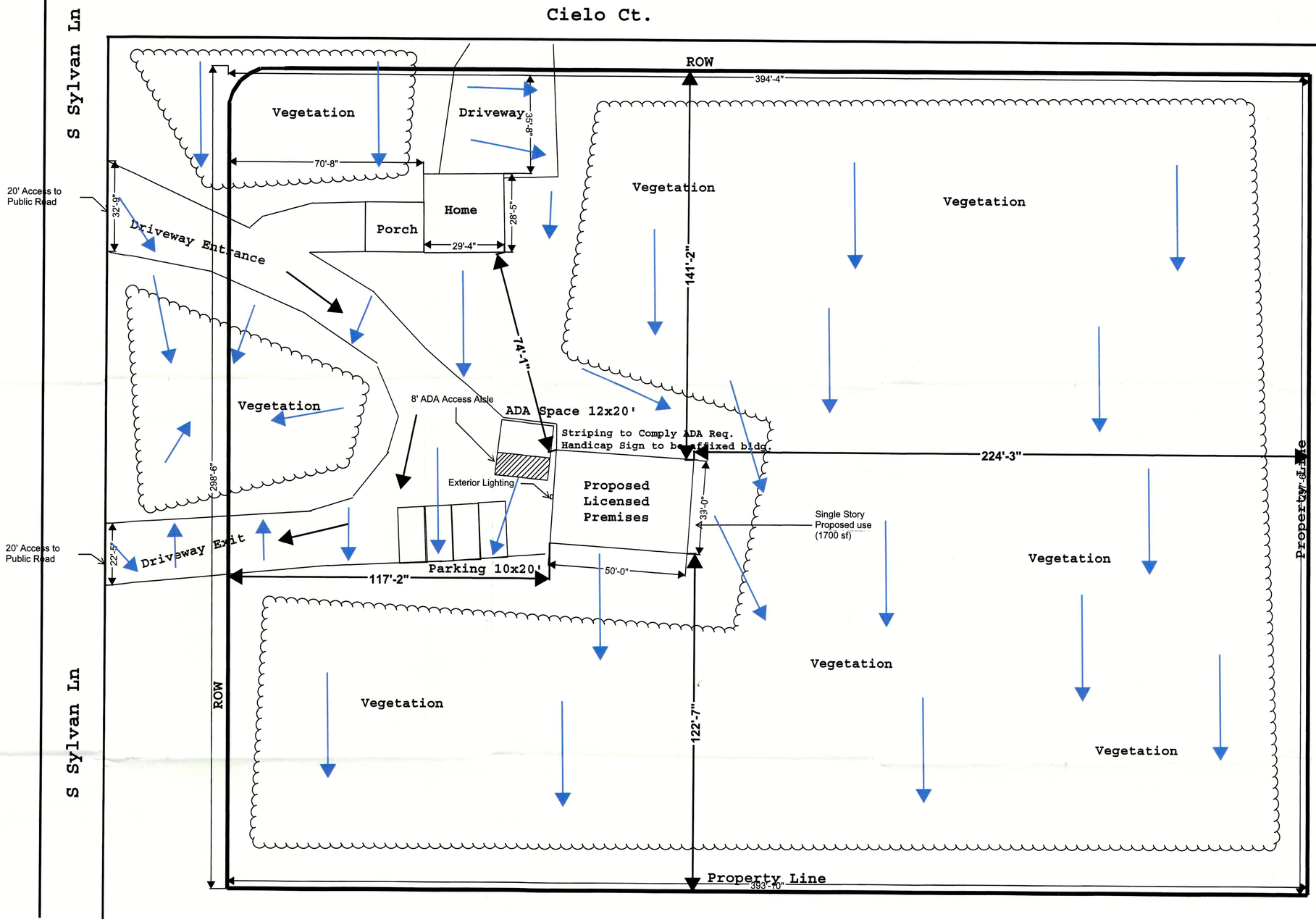
D- proposed licensed premises/ Right to possession/ Restricted Access Area AK Legacy Genetics # 28628 Diagrams 1, 2 & 5

Basic Floorplan

1" ACTUAL

IF THIS DIMENSION DOES NOT MEASURE ONE INCH (1") EXACTLY, THIS DRAWING HAS BEEN ENLARGED OR REDUCED, AFFECTING ALL LABELED SCALES

Blue Arrows indicate direction of water flow, property is on a sloping hill generally drawing North to South



C01 Site Plan

1" = 20'

NOTE: USE HALF SCALE INDICATED SCALE FOR 11x17 DRAWINGS

TRUE NORTH

PLAN NORTH

100% FOR CONSTRUCTION

CONSULTANT:

PROJECT NO: 01
DATE: 01/31/2021
DRAWN BY: Kyler Dias, CE, EIT
CHECKED BY: NA

REVISION	DESCRIPTION	DATE

RECEIVED
FEB 16 2022
Mat-Su Borough
Development Services

C01

1/31/2021 12:20 PM

Owner Permission Letter for Use and Occupancy of Premises

Matanuska-Susitna Borough
Planning and Land Use Department
Development Services Division
350 East Dahlia Avenue
Palmer, Alaska 99645

Re: AK Legacy Genetics, LLC DBA AK Legacy Genetics - 3097 S Sylvan Lane, Wasilla, Alaska 99623.

Dear Planning Office,

We, Kyler J. Dias, Riley P. Walther and Ryan M. McKay, Members of KR&W Management, LLC, hereby grant permission for AK Legacy Genetics, LLC dba AK Legacy Genetics to lease and use our property located at 3097 S. Sylvan Lane, Wasilla, Alaska 99623 as a standard marijuana cultivation facility. We are aware that AK Legacy Genetics will be commercially growing and selling marijuana on this property once the cultivation facility is inspected and approved by AMCO.

We, Kyler J. Dias, Riley P. Walther and Ryan M. McKay, As Members of AK Legacy Genetics, LLC., authorize Jana Weltzin and her firm of JDW, LLC to take all necessary actions to apply for and obtain one (1) conditional use permits for the operation of a standard marijuana cultivation facility of the property owned by KR&W Management, LLC located at TIERRA VERDE BLOCK 1 LOT 11, Commonly known as, 3097 S. Sylvan Lane, Wasilla, Alaska 99623.

If you have any questions regarding this correspondence, please feel free to contact me.

Sincerely,

Kyler J. Dias DocuSigned by: Kyler J. Dias 4564133FB8814BF...

KR&W Management, LLC

Riley P. Walther

KR&W Management, LLC

Ryan M. McKay

KR&W Management, LLC

Kyler J. Dias DocuSigned by: Kyler J. Dias 4564133FB8814BF...

AK Legacy Genetics, LLC

Riley P. Walther

AK Legacy Genetics, LLC

Ryan McKay

AK Legacy Genetics, LLC

MSB • Department of Emergency Services • Central Mat-Su Fire Department

Fire & Life Safety Division

Physical: Station 51 – 1911 S Terrace Court, Palmer
Mailing: 101 W Swanson Avenue • Wasilla, AK 99654
Office (907) 861-8030 • Fax (907) 861-8157 • E-mail: FireCode@matsugov.us

November 19, 2021

Ryan McKay
Alaska Legacy Genetics, LLC
7150 W Cielo St
Wasilla AK 99654
Office: (907) 357-2548
kyler@x907.com

SUBJECT:	Alaska Legacy Genetics
FIRE SERVICE AREA:	Central Mat-Su FSA
PLAN REVIEW:	2022-061
TYPE OF CONSTRUCTION:	VB
OCCUPANCY TYPE:	F-1

2012 INTERNATIONAL BUILDING AND FIRE CODE

Ryan:

Plans for the subject facility have been reviewed by this office for conformity with the State Fire Safety Regulations and are hereby approved as submitted. Enclosed is a certificate of approval that must be posted on the premises until completion of the above facility. Any changes to the approved plans must be submitted to this office for review and approval. **You are prohibited to occupy this building until construction is completed for which plans have been examined and approved.** After completion of the construction, you must schedule a certificate of occupancy inspection prior to opening.

It must be understood that the inclusion of and compliance with State Fire Safety Regulations does not preclude the necessity of compliance with the requirements of local codes and ordinances. Also understand that approval of submitted plans is not approval of omissions or oversights by this office or noncompliance with any applicable regulations. The plans have not been reviewed for compliance with the Federal Americans with Disabilities Act or structural requirements.

If we can be of further assistance in this matter, please contact us at the address above.

Sincerely,

Josh Henson

Joshua P. Henson
Deputy Fire Marshal

Fire and Life Safety Division

Central Mat-Su Fire Service Area No. 130 - District 1
Department of Emergency Services, Matanuska-Susitna Borough

Plan Review #2022-061

Alaska Legacy Genetics

New Construction/Renovation Approval

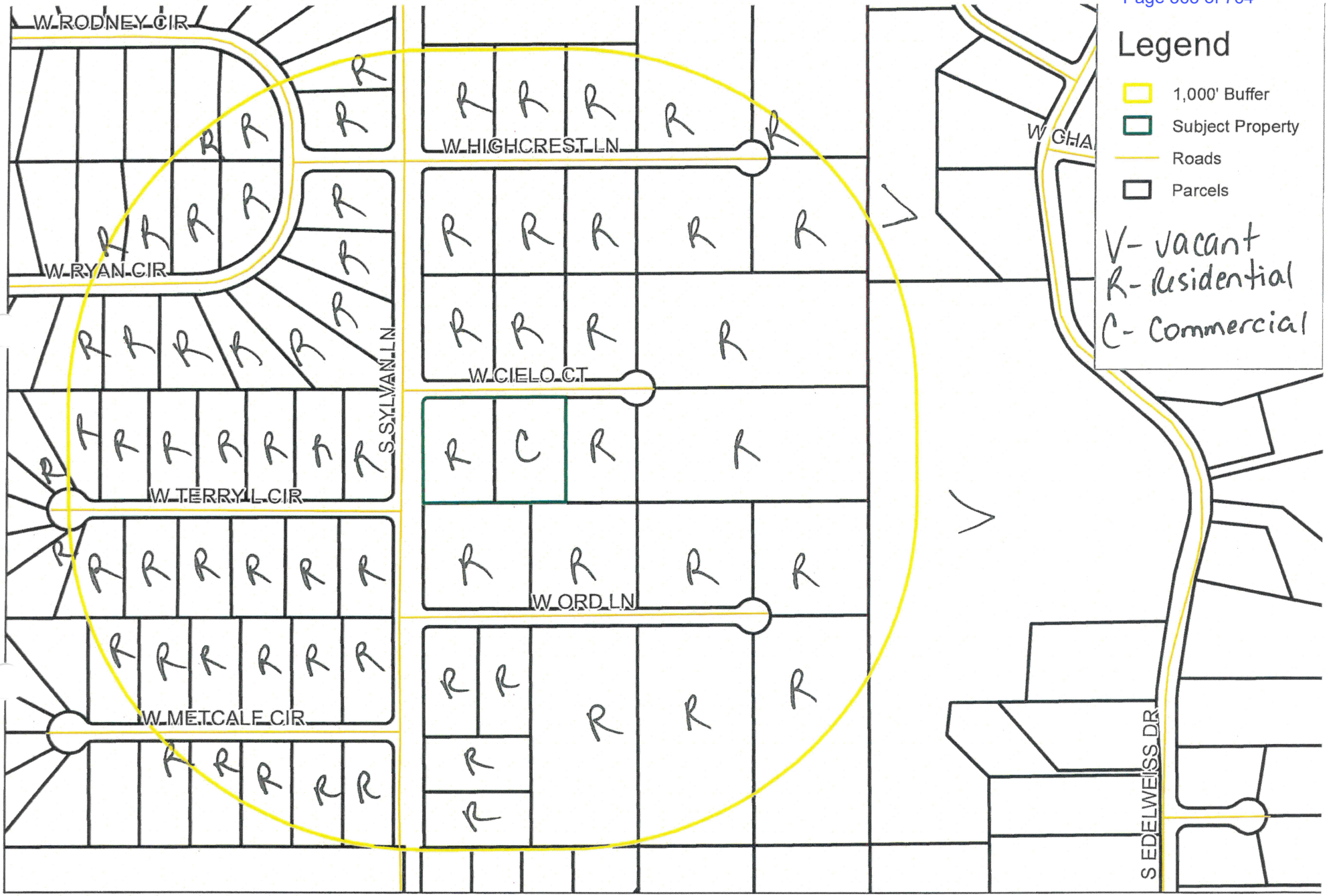
This is to certify that the plans for this building were reviewed by CMSFD's Fire & Life Safety Division on 11/19/2021, for conformance with AS 18.70.010–100; 13 AAC 50.027. This certificate becomes invalid 180 days after the work on the site is commenced within 180 days after issuance, or if the work authorized is suspended or abandoned for a period of 180 days after the time work is commenced. An extension may be requested at the above mentioned address.

This certificate shall be posted in a conspicuous place on the premises listed above and shall remain posted until construction is completed. **Notice:** *Any changes or modifications to the approved plans must be resubmitted for review by the Central Mat-Su Fire Department*

Josh Henson

Authority: AS 18.70.080, 13 AAC 50.075 & MSB RS 06-054

by Joshua P. Henson, Deputy Fire Marshal



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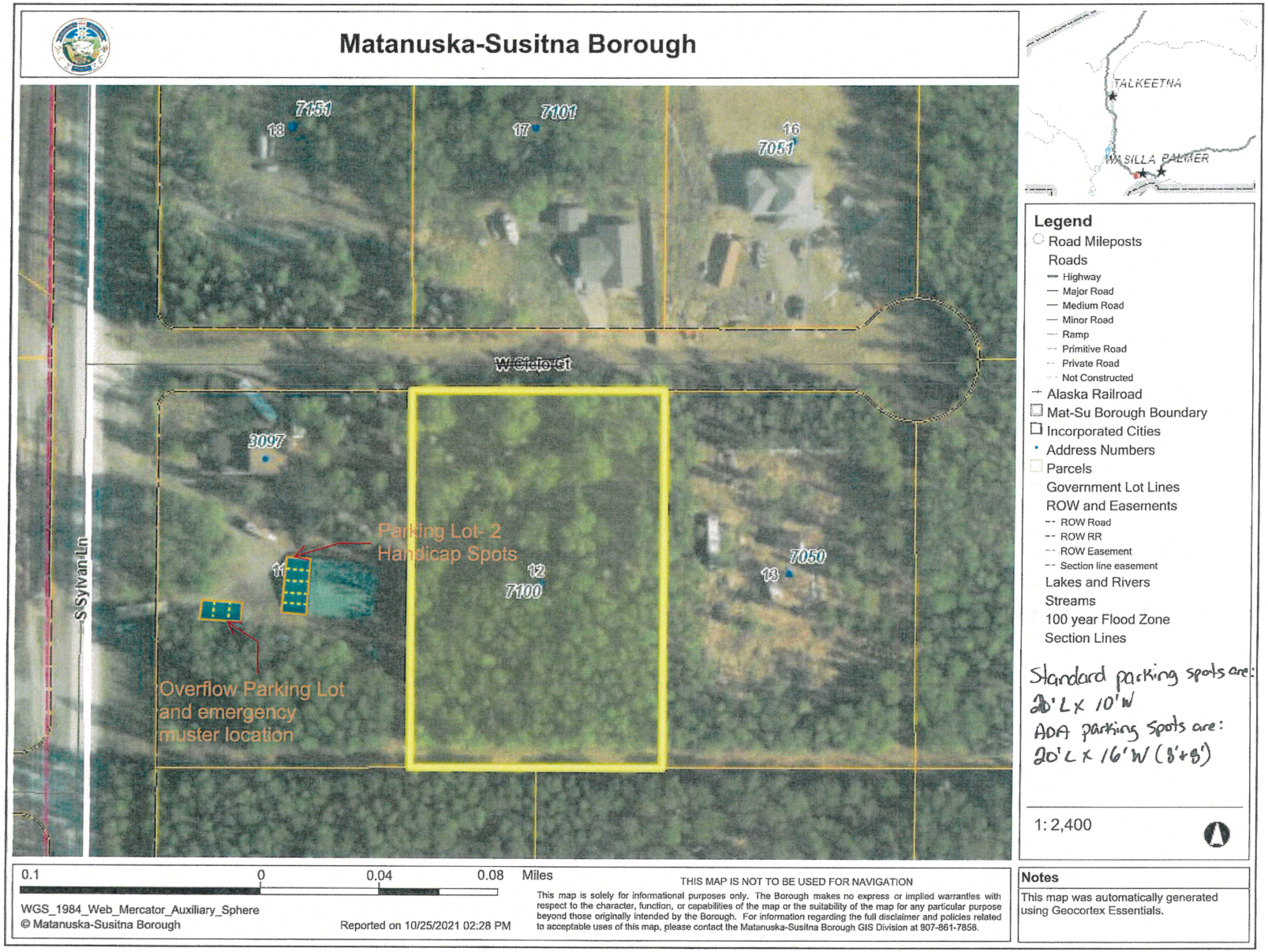
Date: 5/12/2021

1 inch = 350 feet

0 350 700 Feet

N


Matanuska-Susitna Borough
7151
18
7101
17
16
7051
W Cielo St
3097
S Sylvan Ln
Parking Lot- 2
Handicap Spots
11
12
7100
7050
13
Overflow Parking Lot
and emergency
muster location
TALKEETNA
WASILLA PALMER
Legend
Road Mileposts
Roads
Highway
Major Road
Medium Road
Minor Road
Ramp
Primitive Road
Private Road
Not Constructed
Alaska Railroad
Mat-Su Borough Boundary
Incorporated Cities
Address Numbers
Parcels
Government Lot Lines
ROW and Easements
ROW Road
ROW RR
ROW Easement
Section line easement
Lakes and Rivers
Streams
100 year Flood Zone
Section Lines
Standard parking spots are:
20'L x 10'W
ADA parking spots are:
20'L x 16'W (8'+8')
1:2,400
0.1
0
0.04
0.08
Miles
WGS_1984_Web_Mercator_Auxiliary_Sphere
© Matanuska-Susitna Borough
Reported on 10/25/2021 02:28 PM
THIS MAP IS NOT TO BE USED FOR NAVIGATION
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Notes
This map was automatically generated using Geocortex Essentials.

Alcohol and Marijuana Control Office
550 W 7th Avenue, Suite 1600
Anchorage, AK 99501
marijuana.licensing@alaska.gov
https://www.commerce.alaska.gov/web/amco
Phone: 907.269.0350

Alaska Marijuana Control Board

Form MJ-01: Marijuana Establishment Operating Plan

What is this form?

An operating plan is required for all marijuana establishment license applications. Applicants should review **Title 17.38** of **Alaska Statutes** and **Chapter 306** of the **Alaska Administrative Code.** This form will be used to document how an applicant intends to meet the requirements of those statutes and regulations. If your business has a formal operating plan, you may include a copy of that operating plan with your application, but all fields of this form must still be completed per 3 AAC 306.020(c).

What must be covered in an operating plan?

Applicants must identify how the proposed premises will comply with applicable statutes and regulations regarding the following:

- Control plan for persons under the age of 21
- Security
- Business records
- Inventory tracking of all marijuana and marijuana product on the premises
- Employee qualification and training
- Health and safety standards
- Transportation and delivery of marijuana and marijuana products
- Signage and advertising

Applicants must also complete the corresponding operating plan supplemental forms (**Form MJ-03, Form MJ-04, Form MJ-05,** or **Form MJ-06)** to meet the additional operating plan requirements for each license type.

Section 1 – Establishment & Contact Information

Enter information for the business seeking to be licensed, as identified on the license application.

Licensee:	AK Legacy Genetics, LLC	**MJ License #:**	28628		
License Type:	Standard Marijuana Cultivation Facility				
Doing Business As:	AK Legacy Genetics				
Premises Address:	3097 S Sylvan Lane				
City:	Wasilla	**State:**	Alaska	**ZIP:**	99623

Mailing Address:	2174 E. Red Fox Drive				
City:	Wasilla	**State:**	Alaska	**ZIP:**	99654

Designated Licensee:	Ryan McKay		
Main Phone:	360-292-3280	**Cell Phone:**	360-292-3280
Email:	algunlimited1@gmail.com		

Alaska Marijuana Control Board

Form MJ-01: Marijuana Establishment Operating Plan

Section 2 – Control Plan for Persons Under the Age of 21

2.1. Describe how the marijuana establishment will prevent persons under the age of 21 from gaining access to any portion of the licensed premises and marijuana items:

The entire facility will be a restricted access area and all entrances will be designated as a restricted access area and not open to the public. Signs will be posted stating, "Restricted Access Area" "Visitors Must be Escorted" as well as signs stating, "No one under 21 years of age allowed". AK Legacy Genetics will also have signs on the exterior of the facility stating "Video Surveillance in Progress". Video Surveillance cameras will be visible throughout the facility as well as around the exterior perimeter of the building to continuously monitor the premises and to deter any unauthorized individuals from attempting to access the premises.

Section 3 – Security

Restricted Access Areas (3 AAC 306.710):

3.1. Describe how you will prevent unescorted members of the public from entering restricted access areas:

AK Legacy Genetics will have ample signage indicating that the cultivation facility is a restricted access area. Surveillance cameras will be installed to monitor all areas of the facility inside and outside. All outer doors will remain locked at all times from outside the facility but, easily opened from inside the facility in case of an emergency. All employees will be required to visibly wear an AK Legacy Genetics ID badge and all visitors in the facility will be required to visibly wear visitor badges for the entirety of their time on the licensed premises.

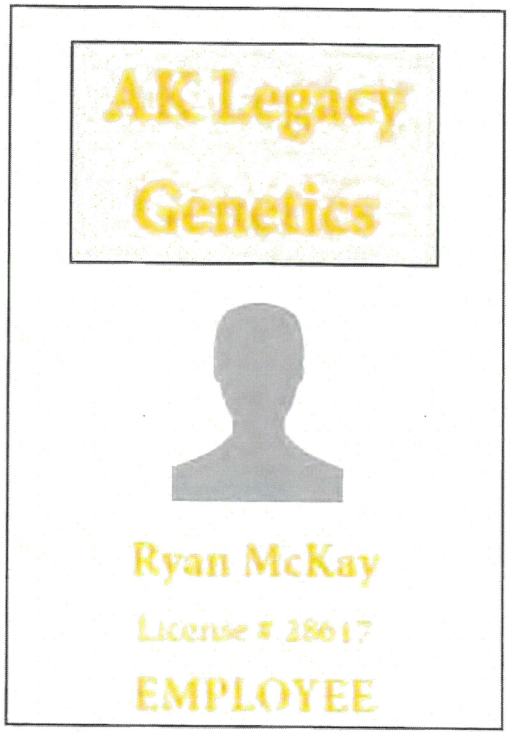
3.2. Describe your recordkeeping and processes for admitting visitors into and escorting them through restricted access areas:

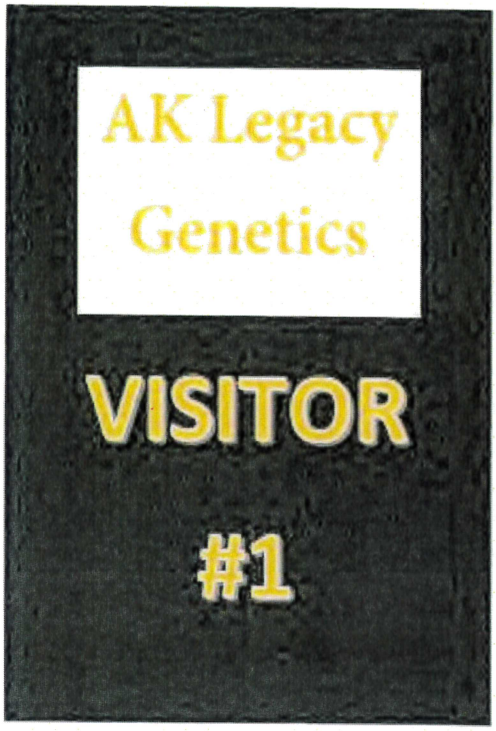
Visitors to the facility, with exception to AMCO, AMCO enforcement and local law enforcement, must be pre-approved and pre-scheduled by one of the licensees or an designated employee or access to the facility will not be granted. once a visitor has been properly approved and scheduled, they will be directed to enter through the designated entrance to the facility where they will be met by either a licensee or designated employee. The visitor will be asked to produce a valid form of government issued photo identification proving that they are at least twenty-one (21) years of age and confirming their identity. The visitor will then sign into the visitor log recording their full name, date, time in and out of the facility and the purpose of their visit (if necessary). The visitor will be given a visitor badge to be clearly displayed on their persons for the entire tour or visit in the facility. All visitors will be supervised at all times by a licensee or designated employee never exceeding 5 visitors per supervising licensee/designated employee. When the visit is complete, all visitors must return their visitor badge(s), sign out of the visitor log book and exit the premises. All visitor logs will be maintained on the premises and stored as an official business record. All visitor logs will be made readily available to AMCO and AMCO enforcement upon request.

Alaska Marijuana Control Board

Form MJ-01: Marijuana Establishment Operating Plan

3.3. Provide samples of licensee-produced identification badges that will be displayed by each licensee, employee, or agent while on the premises, and of visitor identification badges that will be worn by all visitors while in restricted access areas:





Security Alarm Systems and Lock Standards (3 AAC 306.715):

3.4. Exterior lighting is required to facilitate surveillance. Describe how the exterior lighting will meet this requirement:

AK Legacy Genetics will utilize bright outdoor lighting to deter nuisance activity and enhance the quality of video surveillance. Commercial LED exterior lighting will be placed and angled to illuminate the entire perimeter of the building, while minimizing light pollution nuisances. The light fixtures will keep the premises and any signs well lit, and allow the exterior surveillance cameras to record individuals up to twenty feet (20ft.) from all entry points to the building. The lighting fixtures will be installed at an inaccessible height with sturdy housings to deter vandalism and prevent obstructions. A Licensee or designated employee will frequently walk the perimeter and check the surveillance camera feed to ensure that all lights are operational, and in the optimum positions to enhance the clarity of video recordings.

Alaska Marijuana Control Board

Form MJ-01: Marijuana Establishment Operating Plan

3.5. An alarm system is required for all license types that must be activated on all exterior doors and windows when the licensed premises is closed for business. Describe the security alarm system for the proposed premises, explain how it will meet all regulatory requirements, and outline your policies and procedures regarding the actions to be taken by a licensee, employee, or agent when the alarm system alerts of an unauthorized breach:

AK Legacy Genetics will be contracting with a third-party alarm company to install a regulatory compliant system, maintain the equipment, periodically test the devices and continuously monitor the facility at the corresponding monitoring center. The alarm system will be designed to monitor for both intrusions and sensing unauthorized movement within the facility during nonoperational hours via motion sensors. Motion sensors will be installed on each entrance door and glass break sensors on every facility window (if applicable). If an alarm is triggered, an automatic electronic alert will be sent to the monitoring center and all three of the licensee's cell phones. An audible alarm will sound, if an event like this occurs to assist in deterring potential intruders. It will be standard operating procedure to arm the alarm when the last licensee or employee leaves the facility at the close of business day and disarm the alarm at the beginning of the following business day. In the event of an unauthorized breach of the facility, the licensees or a designated employee will ask all persons inside the facility to exit quickly and safely, take a headcount of ensuring all employees and any visitors that may have been on the premises are all safe and accounted for. The licensees or designated employee will await instruction from law enforcement and comply with all directives. Once law enforcement deems the situation safe, employees an the licensees will return to the facility, sign visitors out of the visitor log book, retrieve their visitor badges and begin an inspection of the facility to ensure there is no missing product, equipment, cash,etc. by performing an extensive inventory count of the entire facility. All requested documentation by law enforcement, AMCO or AMCO enforcement as a result of the breach will be promptly provided. In any event, an unauthorized breach regardless of theft or lack their of, will be reported to AMCO electronically within 24 hours.

3.6. Describe your policies and procedures for preventing diversion of marijuana or marijuana product, including by employees:

AK Legacy Genetics Licensees and/or employees will perform frequent inventory counts which will be reconciled in Metrc to maintain accuracy of all marijuana, in all stages, in the facility at any given time. All marijuana from clones to trimmed and packaged product will be under 24/7 video surveillance in the restricted access facility. Surveillance cameras will have complete coverage of all areas where marijuana is present. Employees will be monitored via supervising staff member(s) and by the licensees frequently checking the video surveillance footage. AK Legacy Genetics has a zero tolerance policy for theft, inversion or diversion. If an employee is caught stealing, bringing marijuana from an outside source into the facility or removing marijuana from the facility without a Metrc generated manifest, they will be reprimanded immediately and local law enforcement will be notified. AMCO will be notified as well in the event of theft, inversion or diversion by an employee, electronically, within 24 hours.

3.7. Describe your policies and procedures for preventing loitering:

AK Legacy Genetics will utilize policies that discourage loitering. The exterior will be well lit and equipped with 24-hour video surveillance and "No Loitering" signs. Licensees & employees will actively monitor the premises by randomly walking outside the facility as well as monitoring the video surveillance system. If someone is found to be loitering they will be escorted from the property. If necessary, law enforcement will be contacted to enforce this policy. Vendors who make pick ups, deliveries, or repairs will be escorted and only allowed to be on site to complete their business. Employees will only be permitted to receive visitors with the authorization of a licensee.

You must be able to certify the statement below. Read the following and then sign your initials in the box to the right: Initials

3.8. I certify that if any additional security devices are used, such as a motion detector, pressure switch, and duress, panic, or hold-up alarm, to enhance security of the licensed premises, I will have written policies and procedures describing their use.

Alaska Marijuana Control Board

Form MJ-01: Marijuana Establishment Operating Plan

Video Surveillance (3 AAC 306.720):

You must be able to certify each statement below. Read the following and then sign your initials in the corresponding box: Initials

3.9. The video surveillance and camera recording system for the licensed premises covers each restricted access area, and both the interior and exterior of each entrance to the facility.

3.10. Each video surveillance recording: is preserved for a minimum of 40 days, in a format that can be easily accessed for viewing (consistent with the Alcohol & Marijuana Control Office's approved format list); clearly and accurately displays the time and date; and is archived in a format that does not permit alteration of the recorded image.

3.11. The surveillance room or area is clearly defined on the Form MJ-02: Premises Diagram that is submitted with this application.

3.12. Surveillance recording equipment and video surveillance records are housed in a designated, locked, and secure area or in a lock box, cabinet, closet or other secure area where access is limited to the licensee(s), an authorized employee, and law enforcement personnel (including an agent of the Marijuana Control Board).

3.13. Describe how the video cameras will be placed to produce a clear view adequate to identify any individual inside the licensed premises, or within 20 feet of each entrance to the licensed premises:

AK Legacy Genetics will maintain a video security surveillance system that meets all requirements. Multiple cameras will be used to record the interiors and exteriors of the premises. Cameras will be installed at an inaccessible height and carefully angled to prevent any blockages from fixtures, posts, display cases, vegetation or other equipment. Security cameras, with the help of bright lighting, will capture the best possible facial image of anyone present inside the building or within 20 feet of a facility egress or ingress. The security system will be installed with a failure notification system that will provide an audible & visual notification of any system failures. In the case of a power outage, all recording equipment will run on emergency power, via a battery backup system, for at least one (1) hour to ensure continued operation. A Licensee or employee will regularly check the cameras and surveillance equipment to ensure that all cameras are in good working order, and that all areas of the facility are covered by video surveillance.

3.14. Describe the locked and secure area where video surveillance recording equipment and original copies of surveillance records will be housed and stored, and how you will ensure the area is accessible only to authorized personnel, law enforcement, or an agent of the Marijuana Control Board. If you will be using an offsite monitoring service and offsite storage of video surveillance records, your response must include how the offsite facility will meet these security requirements:

Surveillance and business records will be stored on-site in a locked cabinet in the secured office area for at least six months. Records may be stored off-site if they are older than six months. The facility will keep hard copies of all business records for a minimum of five years. AK Legacy Genetics may scan all hard copies of business records into a facility cloud base server as a back up. The security system shall be password protected to prevent any data tampering. Recorded data will be stored as an official business record for a minimum of forty (40) days. All surveillance footage will be accessible for upload to a separate hard drive, in case it is needed in any criminal, civil, or administrative investigations. All recordings will be date and time stamped, and archived in a format that prevents alteration of the recording. In accordance with standard data retention policies, a Licensee will manage facility records in a consistent & searchable manner. Only the Licensees or a designated employee will have access to the business records. All records will be stored separately from any currency or marijuana products.

Alaska Marijuana Control Board

Form MJ-01: Marijuana Establishment Operating Plan

Section 4 – Business Records

Review the requirements under 3 AAC 306.755. All licensed marijuana establishments must maintain, in a format that is readily understood by a reasonably prudent business person, certain business records.

4.1. I certify that the following business records will be maintained and kept on the licensed premises: Initials

a. **all books and records necessary to fully account for each business transaction conducted under my license for the current year and three preceding calendar years** *(records for the last six months must be maintained on the licensed premises; older records may be archived on or off-premises)*; [Initials]

b. **a current employee list setting out the full name and marijuana handler permit number of each licensee, employee, and agent who works at the marijuana establishment;** [Initials]

c. **the business contact information for vendors that maintain video surveillance systems and security alarm systems for the licensed premises;** [Initials]

d. **records related to advertising and marketing;** [Initials]

e. **a current diagram of the licensed premises, including each restricted access area;** [Initials]

f. **a log recording the name, and date and time of entry of each visitor permitted into a restricted access area;** [Initials]

g. **all records normally retained for tax purposes;** [Initials]

h. **accurate and comprehensive inventory tracking records that account for all marijuana inventory activity from seed or immature plant stage until the retail marijuana or retail marijuana product is sold to a consumer, to another marijuana establishment, or destroyed;** [Initials]

i. **transportation records for marijuana and marijuana product, as required by 3 AAC 306.750(f); and** [Initials]

j. **registration and inspection reports of scales registered under the Weights and Measures Act, as required by 3 AAC 306.745.** [Initials]

4.2. A marijuana establishment is required to exercise due diligence in preserving and maintaining all required records. Describe how you will prevent records and data, including electronically maintained records, from being lost or destroyed:

All business records such as; operational and regulatory documents, recordings, surveillance, financial books, inventory, employment records, logs, manifests, and communications will be stored on-site in the office area. Facility records will be managed by AK Legacy Genetics to ensure that all business records are stored in a consistent and search-able manner to maintain compliance with standard retention policies. Business records will be stored in the restricted facility, separate from any and all marijuana products and currency. Only the licensees will have access to the secured storage and business records until such time that AK Legacy Genetics decides to appoint a facility manager. All business records and surveillance video will be stored on site for a minimum of 6 months and will be made readily available to AMCO enforcement and local law enforcement upon request.

Alaska Marijuana Control Board

Form MJ-01: Marijuana Establishment Operating Plan

Section 5 – Inventory Tracking of All Marijuana and Marijuana Product

Review the requirements under 3 AAC 306.730. All licensed marijuana establishments must use a marijuana inventory tracking system capable of sharing information with Metrc to ensure all marijuana cultivated and sold in the state, and each marijuana product processed and sold in the state, is identified and tracked from the time the marijuana is propagated from seed or cutting, through transfer to another licensed marijuana establishment, or use in manufacturing a marijuana product, to a completed sale of marijuana or marijuana product, or disposal of the harvest batch of marijuana or production lot of marijuana product.

You must be able to certify each statement below. Read the following and then sign your initials in the corresponding box: Initials

5.1. My marijuana establishment will be using Metrc, and if any other tracking software is used, it will be capable of sharing information with Metrc.

5.2. All marijuana delivered to a marijuana establishment will be weighed on a scale registered in compliance with 3 AAC 306.745.

5.3. My marijuana establishment will use registered scales in compliance with AS 45.75.080 (Weights and Measures Act), as required by 3 AAC 306.745.

Section 6 – Employee Qualification and Training

Review the requirements under 3 AAC 306.700. All licensees, and every employee or agent of the marijuana establishment who sells, cultivates, manufactures, tests, or transports marijuana or a marijuana product, or who checks the identification of a consumer or visitor, must obtain a marijuana handler permit from the board before being licensed or beginning employment at a marijuana establishment.

You must be able to certify each statement below. Read the following and then sign your initials in the corresponding box: Initials

6.1. All licensees, and each employee or agent of the marijuana establishment who sells, cultivates, manufactures, tests, or transports marijuana or marijuana product, or who checks the identification of a consumer or visitor, shall obtain a marijuana handler permit from the board before being licensed or beginning employment at the marijuana establishment.

6.2. Each licensee, employee, or agent who is required to have a marijuana handler permit shall keep that person's marijuana handler permit card in that person's immediate possession (or a valid copy on file on the licensed premises) when on the licensed premises.

6.3. Each licensee, employee, or agent who is required to have a marijuana handler permit shall ensure that that person's marijuana handler permit card is valid and has not expired.

6.4. Describe any in-house training that will be provided to employees and agents (apart from a marijuana handler course):

In addition to the state required marijuana handler training, the facility will implement and execute a training program for every employee, regardless of the employee's prior level of cannabis knowledge. The program will commence on the employee's start date, and must be completed before the employee can work in the facility. Key topics of the training program will include types of cannabis, cannabinoids and their properties, licensed facility buyer procedures, facility cleanliness and hygiene, federal and state laws, and AMCO rules and regulations. Refresher training will be conducted as required when the regulations change or a/the licensee(s) feel that it is needed.

Alaska Marijuana Control Board

Form MJ-01: Marijuana Establishment Operating Plan

Section 7 – Health and Safety Standards

Review the requirements under 3 AAC 306.735.

You must be able to certify each statement below. Read the following and then sign your initials in the corresponding box:	Initials
7.1. I understand that a marijuana establishment is subject to inspection by the local fire department, building inspector, or code enforcement officer to confirm that health or safety concerns are not present.	
7.2. I have policies regarding health and safety standards (including: ensuring a person with an illness or infection does not come into contact with marijuana or marijuana product; good hygienic practices; cleaning and maintenance of equipment and the premises; pest deterrence; chemical storage; sanitation principles; and proper handling of marijuana and marijuana product) and will take all reasonable measures and precautions to ensure that they are met or exceeded.	
7.3. I have policies to ensure that any marijuana or marijuana product that has been stored beyond its usable life, or was stored improperly, is not salvaged and returned to the marketplace.	
7.4. I have policies to ensure that in the event information about the age or storage conditions of marijuana or marijuana product is unreliable, the marijuana or marijuana product will be handled in accordance with 3 AAC 306.735(d).	

Answer "Yes" or "No" to each of the following questions:	Yes	No
7.5. Adequate and readily accessible toilet facilities that are maintained and in good repair and sanitary condition are clearly indicated on my Form MJ-02: Premises Diagram.	☑	☐
7.6. Convenient handwashing facilities with running water at a suitable temperature are clearly indicated on my Form MJ-02: Premises Diagram.	☑	☐

7.7. If you answered "No" to either 7.5 or 7.6 above, describe how toilet and/or handwashing facilities are made accessible, as required by 3 AAC 306.735(b)(2):

Section 8 – Transportation and Delivery of Marijuana and Marijuana Products

Review the requirements under 3 AAC 306.750.

8.1. Describe how marijuana or marijuana product will be prepared, packaged, and secured for shipment. Include a description of the type of locked, safe, and secure storage compartments to be used in vehicles transporting marijuana or marijuana product:

A Metrc generated transport manifest will accompany all marijuana in transit. The facility will send a copy of the manifest with the products, and file an additional copy on the premises as a business record. The manifest will document the strain name, type of product, batch number, weight, name of the transporter and handler's ID, time of departure and expected delivery, and the make, model and license plate of the transporting vehicle. The transport vehicle will travel directly between destinations without making any unnecessary stops. Marijuana will be sealed in not more than ten pound containers inside a locked storage compartment within the vehicle or truck bed for wholesale transactions & up to one ounce containers for re-sale by retailers without re-packaging. At no time during transit will marijuana be visible outside the vehicle. The shipping container will have a label stating that a licensed testing facility has tested each batch in the shipment, and list: (1) the date of final testing; (2) the cannabinoid potency profile, expressed as a range of percentages that extends from the lowest percentage to highest percentage of concentration for each cannabinoid listed from every test conducted on that strain of marijuana from AK Legacy Genetics within the last three months; (3) a statement listing the results of microbial testing; and, (4) a statement... (Cont. on pg. 11)

Alaska Marijuana Control Board

Form MJ-01: Marijuana Establishment Operating Plan

You must be able to certify each statement below. Read the following and then sign your initials in the corresponding box: Initials

8.2. The marijuana establishment from which a shipment of marijuana or marijuana product originates will ensure that any individual transporting marijuana shall have a marijuana handler permit required under 3 AAC 306.700. [initials]

8.3. The marijuana establishment that originates the transport of any marijuana or marijuana product will use the marijuana inventory tracking system to record the type, amount, and weight of marijuana or marijuana product being transported, the name of the transporter, the time of departure and expected delivery, and the make, model, and license plate number of the transporting vehicle. [initials]

8.4. The marijuana establishment that originates the transport of any marijuana or marijuana product will ensure that a complete printed transport manifest on a form prescribed by the board must be kept with the marijuana or marijuana product at all times during transport. [initials]

8.5. During transport, any marijuana or marijuana product will be in a sealed package or container in a locked, safe, and secure storage compartment in the vehicle transporting the marijuana or marijuana product, and the sealed package will not be opened during transport. [initials]

8.6. Any vehicle transporting marijuana or marijuana product will travel directly from the shipping marijuana establishment to the receiving marijuana establishment, and will not make any unnecessary stops in between except to deliver or pick up marijuana or marijuana product at any other licensed marijuana establishment. [initials]

8.7. When the marijuana establishment receives marijuana or marijuana product from another licensed marijuana establishment, the recipient of the shipment will use the marijuana inventory tracking system to report the type, amount, and weight of marijuana or marijuana product received. [initials]

8.8. The marijuana establishment will refuse to accept any shipment of marijuana or marijuana product that is not accompanied by the transport manifest. [initials]

Section 9 – Signage and Advertising

Review the requirements under 3 AAC 306.770.

9.1. Describe any signs that you intend to post on your establishment, including quantity, dimensions, graphics, and location on your establishment (photos or drawings may be attached):

AK Legacy Genetics does not intend to have any signs with the business name on the exterior of the licensed premises.

Alaska Marijuana Control Board

Form MJ-01: Marijuana Establishment Operating Plan

9.2. Describe any advertising you intend to distribute for your establishment. Include medium types and business logos (photos or drawings may be attached):

AK Legacy Genetics may utilize any of the following advertising mediums:

- Radio Ads
- Magazines
- Social Media Platforms
- Newspaper Ads
- Industry Platforms such as; LeafLinks
- Sponsorship of Sporting Events
- AK Legacy Genetics' Company Website

AK Legacy Genetics has not yet completed a logo. Once completed, a copy will be sent to AMCO.

All Advertisements will contain the AMCO required warning labels verbatim.

STATE OF ALASKA
NOTARY PUBLIC
Mercedes Curran
My Commission Expires Dec 20, 2023

I declare under penalty of unsworn falsification that this form, including all accompanying schedules and statements, is true, correct, and complete.

STATE OF ALASKA
NOTARY PUBLIC
Mercedes Curran
My Commission Expires Dec 20, 20

Signature of licensee

Ryan McKay

Printed name of licensee

Notary Public in and for the State of Alaska

My commission expires: 12/20/2023

Subscribed and sworn to before me this 5th day of March, 2021.

Alaska Marijuana Control Board

Form MJ-01: Marijuana Establishment Operating Plan

(Additional Space as Needed):

8.1 Continued: ...listing the contaminants for which the marijuana was tested, including molds, mildew, filth, herbicides, pesticides, fungicides, and harmful chemicals. Any packaging done at the facility will be performed in an area specifically set aside for packaging and monitored with continuous surveillance. Packaging will be uniform with labels secure and prominently displayed. In compliance with the Alaska Weights and Measures Act, the facility will use certified scales and maintain registration and inspection reports at the facility. After agents package marijuana, it will be placed in sanitized, air-tight containers, labeled with all compliant labeling information, and given a Metrc barcode. Plastic packaging will be heat-sealed without an easy-open tab, dimple, corner, or flap. Packaged marijuana will be stored in a secured area until ready for transport. All packaging will be inspected, accepted or rejected, and recorded in the log. Either a Licensee or a manager will check all final packages to ensure that they will secure marijuana from contamination and not impart toxic or deleterious substances. Labels will include: (1) AK Legacy Genetics' name and license number; (2) the date the marijuana was harvested; (3) the harvest batch number assigned to the marijuana; (4) the date the marijuana was packaged; (5) the net weight and the quantity of usable marijuana packaged in a standard of measure compatible with the inventory tracking system; (6) a complete list of all pesticides, fungicides, and herbicides used in the cultivation of the marijuana. AK Legacy Genetics may contract with a third-party transport company and will ensure all transporters and handlers follow all regulations and have valid AMCO marijuana handler permits at all points of their employment.

Alcohol and Marijuana Control Office
550 W 7th Avenue, Suite 1600
Anchorage, AK 99501
marijuana.licensing@alaska.gov
https://www.commerce.alaska.gov/web/amco
Phone: 907.269.0350

Alaska Marijuana Control Board

Operating Plan Supplemental
Form MJ-04: Marijuana Cultivation Facility

What is this form?

This operating plan supplemental form is required for all applicants seeking a marijuana cultivation facility license and must accompany **Form MJ-01: Marijuana Establishment Operating Plan**, per 3 AAC 306.020(b)(11). Applicants should review **Chapter 306: Article 4** of the **Alaska Administrative Code.** This form will be used to document how an applicant intends to meet the requirements of the statutes and regulations.

If your business has a formal operating plan, you may include a copy of that operating plan with your application, but all fields of this form must still be completed per 3 AAC 306.020 and 3 AAC 306.420(2).

What additional information is required for cultivation facilities?

Applicants must identify how the proposed establishment will comply with applicable regulations regarding the following:

- Prohibitions
- Cultivation plan
- Waste disposal
- Odor control
- Testing procedure and protocols
- Packaging and labeling

This form must be completed and submitted to AMCO's main office before any new or transfer application for a standard marijuana cultivation facility or limited marijuana cultivation facility license will be considered complete.

Section 1 – Establishment Information

Enter information for the business seeking to be licensed, as identified on the license application.

Licensee:	AK Legacy Genetics, LLC	**MJ License #:**	28628		
License Type:	Standard Marijuana Cultivation Facility				
Doing Business As:	AK Legacy Genetics				
Premises Address:	3097 S Sylvan Lane				
City:	Wasilla	**State:**	Alaska	**ZIP:**	99623

Alaska Marijuana Control Board

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

Section 2 – Overview of Operations

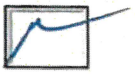
2.1. Provide an overview of your proposed facility's operations. Include information regarding the flow of marijuana from seed or clone to harvest and transfer from your premises:

All marijuana cultivated at AK Legacy Genetics will be tracked via Metrc from cutting or seed to final sale or destruction. When the eight-inch height has been reached, plants will be tagged and assigned a Metrc tracking number. When flowering stage has completed, it will be harvested and processed, then transferred to the drying area. After drying, the marijuana will be placed in tamper-evident, sealed and locked containers and placed in a secured area of the transport vehicle. Marijuana will be sealed in not more than ten pound (10lb) containers inside a locked storage compartment within the vehicle for wholesale transactions and up to one ounce containers for re-sale by retailers without re-packaging. A Metrc transport manifest will accompany all marijuana transfers. All testing batches will be of one single strain and will be assigned a Metrc harvest batch number. Random sample(s) will be collected from each batch and sent to a licensed testing facility. When test results compliant with 3 AAC 306.645 have been completed and received, the marijuana will be ready for wholesale. Packaging labels will include: (1) the facility's name and license number; (2) the harvest date and batch number; (3) the packaging date; (4) the net weight and quantity of usable marijuana (packaged in a standard of measure compatible with the inventory tracking system); (5) a complete list of all pesticides, fungicides, and herbicides used in the cultivation of the marijuana. If any marijuana is destroyed for any reason, it will be rendered unusable and disposed of in accordance with current AMCO policies. Throughout all these stages, all applicable local, state, and AMCO regulations will be followed, including those for labeling and tracking of inventory.

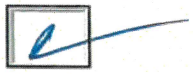
Section 3 – Prohibitions

Review the requirements under 3 AAC 306.405 and 3 AAC 306.410.

3.1. I certify that the marijuana cultivation facility will not: Initials

a. **sell, distribute, or transfer any marijuana or marijuana product to a consumer, with or without compensation;** 

b. **allow any person, including a licensee, employee, or agent, to consume marijuana or marijuana product on the licensed premises or within 20 feet of the exterior of any building or outdoor cultivation facility; or**

c. **treat or otherwise adulterate marijuana with any organic or nonorganic chemical or compound to alter the color, appearance, weight, or odor of the marijuana.** 

Section 4 – Cultivation Plan

Review the requirements under 3 AAC 306.420 and 3 AAC 306.430.

4.1. Describe the size of the space(s) the marijuana cultivation facility intends to be under cultivation, including dimensions and overall square footage. Provide your calculations below:

Flower Room 1: 9' x 13' = 117 sqft
Flower Room 2: 9' x 13' = 117 sqft
Flower Room 3: 9' x 13' = 117 sqft
Flower Room 4: 9' x 13' = 117 sqft
Flower Room 5: 9' x 13' = 117 sqft
Veg and Clone Room: 17' x 19' = 323 sqft

Total Area under Cultivation= 908 square feet.

Alaska Marijuana Control Board

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

You must be able to certify the statement below. Read the following and then sign your initials in the box to the right: Initials

4.2. The proposed area(s) for cultivation are clearly identified on the Form MJ-02: Premises Diagram that is submitted with this application. ☑

Answer "Yes" or "No" to the following question: Yes No

4.3. Will the marijuana cultivation facility include outdoor production? ☐ ☑

If "Yes", describe the outdoor structure(s) or the expanse of open or clear ground and how it is fully-enclosed by a physical barrier:

4.4. Describe the method(s) used to ensure that any marijuana at the marijuana cultivation facility, whether indoors or outdoors, cannot be observed by the public from outside the facility:

Compliance & discretion is AK Legacy Genetics' highest priorities. In accordance with 3 AAC 306.430, passersby will not be able to view marijuana at any time from the right of way. All movement or transport of marijuana will be discrete. The interior of the cultivation area cannot be observed by the public at any time, even when an exterior door is open. All processing, curing, packaging and labeling activities will be done inside the facility, away from public view. All marijuana will be discretely moved and transported, with all packaging and labeling completed before being moved to the transport vehicle.

4.5. Describe the marijuana cultivation facility's growing medium(s) to be used:

The facility may use one or a combination of the following: peat, cocoa, perlite, Alaska hummus, soil, bio char, compost, earthworm castings, rockwool, hydroton rock, water, Pro-Mix Hp, Pro-Mix Bx, Aurora, Ocean Forest by Fox Farm, Ancient Forest 1/2CF, Arctic Grow Prill Lime 50LB, Azomite 44LB Bag, Biodynamic Compost 1CF Bag, Char Coir Cloud Cloir Coco-Perlite Mix 50/50 1.75CF, Char Coir Coco 50L 1.75CF Bag, Char Coir Coco Cube, Char Coir Coco Slab, Clay Balls 10L Bag, Cocogro Bale 5KG Botanicare, Fox Farm Salamander Potting Soil 1.5CF, Gold Label Coco 50L, Growstone Drainage Layer 1.5CF, Growstones GS-1 9L, Happy Frog Potting Soil, (continued on Pg 7...)

4.6. Provide the complete product name and EPA registration # (if applicable) for each of the cultivation facility's pesticide and pest control product to be used. All proposed products must be on DEC's list of approved pesticides in the state of Alaska:

AK Legacy Genetics does not intend to use any pesticides at this time. However, if the need arises, AK Legacy Genetics may use any pesticide or pest control products listed on the DEC's website as approved for use on Alaskan cannabis.

4.7. Describe all other fertilizers, chemicals, gases, and delivery systems, including carbon dioxide management, to be used at the marijuana cultivation facility:

The facility may use one or a combination of the following: Advanced Nutrients, General Hydroponics, Botanicare, Canna, Emerald Harvest, Flora series, Cal Mag, Floralicious plus, Flora Micro, Flora Grow, Flora Bloom, Kool Bloom, Ph up, Ph down, Floraflex (V1, V2, B1, B2, Full Tilt, Veg Foliar, Bloom Foliar), Veg Bloom (Veg+Bloom, Shine), Mendocino Flowering Cal Mag, Clonex (Clone Solution, Rooting Gel), Mammoth P microbes, Sea Green, True Blooms, Rootamentary, Paleobloom, Terp Gerp, Sea Green Hydro, B52-Fertilizer Booster, Big Bud, Big Bud Coco, Big Bud Powder, Cultured Solutions UC Roots, Bud Blood Powder, Bud Candy, Bud Ignitor, CarboLoad Liquid, Flawless Finish, Organic Iguana Juice Bloom, Organic Iguana Juice Grow, Jungle Juice Grow Micro Bloom, (continued on Pg 7...)

Alaska Marijuana Control Board

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

4.8. Describe the marijuana cultivation facility's irrigation and waste water systems to be used:

The irrigation system to be used in the cultivation facility is designed to minimize waste water. Any excess run-off from plants will be collected and reused or allowed to evaporate. Plants will be watered by means of hand watering and via a timer-operated pump system which will deliver water to the plants through small hoses.

Section 5 – Waste Disposal

Review the requirements under 3 AAC 306.740.

You must be able to certify the statement below. Read the following and then sign your initials in the box to the right: Initials

5.1. The marijuana cultivation facility shall give the board at least three days written notice required under 3 AAC 306.740(c) before making marijuana waste unusable and disposing of it.

5.2. Describe how you will store, manage, and dispose of any solid or liquid marijuana waste, including wastewater generated during marijuana cultivation, in compliance with any applicable laws. Include details about the material(s) you will mix with ground marijuana waste and the processes that you will use to make the marijuana waste unusable for any purpose for which it was grown:

All marijuana waste will be made unusable by mixing it at least 50/50 with compostable materials such as soil and vegetable waste and will then be composted and used on the property for landscaping and gardening soil. If marijuana waste cannot be composted, it will be mixed at least 50/50 with non-compostable material such as; paper waste, cardboard waste, plastic waste, or oil, and disposed of at an approved landfill.

Marijuana will be disposed of if it:
(1) is identified as contaminated, infected or is otherwise rejected for quality or fails to meet quality testing;
(2) is waste from marijuana flowers, plant material and trimmings;
(3) is runoff water from cultivation and processing;
(4) is material or containers in contact with marijuana that risk contamination;
(5) is deemed as waste by the Marijuana Control Board or its Director.

Marijuana waste will be stored away from all other marijuana in a locked container and will be rendered unusable prior to leaving the facility for disposal. A Percent Waste Report Form will be sent to AMCO not later than three days prior to rendering waste unusable and will be recorded in Metrc.

AK Legacy Genetics will maintain a log on the status of all marijuana waste, which will track:
(1) type;
(2) date of disposal;
(3) reason for disposal;
(4) date rendered unusable, and;
(5) final destination.
The waste disposal log will be securely stored as a business record, available to AMCO upon request.

The facility anticipates producing very little liquid marijuana waste. As much water as possible will be recycled back into the plants, and any additional excess will be allowed to evaporate. Any waste water that must be disposed of will be mixed with sewage when it enters the municipal sewage lines.

Alaska Marijuana Control Board

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

Section 6 – Odor Control

Review the requirements under 3 AAC 306.430.

Answer "Yes" or "No" to the following question:	Yes	No
6.1. Have you received an exemption from your local government for the odor control requirement set forth in 3 AAC 306.430(c)(2)?	☐	☑

If "Yes", you must be able to certify the statement below. Read the following and then sign your initials in the box:	Initials
I am attaching to this form documentation of my odor control exemption from the local government.	

If "No" to question 6.1., describe the odor control method(s) to be used and how the marijuana cultivation facility will ensure that any marijuana at the facility does not emit an odor that is detectable by the public from outside the facility:

AK Legacy Genetics' facility will use an in-building air ventilation system outfitted with charcoal filters to remove particulates and odors from the air. The system will be regularly maintained with the filters being cleaned or replaced as necessary. AK Legacy Genetics' agents will regularly conduct 'smell tests' around the perimeter of the property to ensure that the ventilation system is sufficient. If smell is detected, additional filters will be installed or replaced, or fans will be used to direct smell away from the public. The Smell Test Log will be maintained as a business record.

Section 7 – Testing Procedure and Protocols

Review the requirements under 3 AAC 306.455 and 3 AAC 306.465.

You must be able to certify each statement below. Read the following and then sign your initials in the corresponding box:	Initials
7.1. I understand and agree that the board or director will, from time to time, require the marijuana cultivation facility to provide samples of the growing medium, soil amendments, fertilizers, crop production aids, pesticides, or water for random compliance checks.	
7.2. I will ensure that any individual responsible for collecting random, homogenous samples for required laboratory testing under 3 AAC 306.455 will prepare the necessary accompanying signed statement, provide the signed statement to the marijuana testing facility, and maintain a copy as a business record under 3 AAC 306.755.	

7.3. Describe the testing procedures and protocols the marijuana cultivation facility will follow:

Marijuana will be grouped into batches when harvested. The marijuana facility will provide sample(s) of each harvest batch of marijuana produced at the facility to a marijuana testing facility. No marijuana from that batch will be sold or transported until all passing laboratory testing results, under 3 AAC 306.645 have been completed and received. AK Legacy Genetics will collect random, homogeneous sample(s) for testing by segregating harvested marijuana into batches of individual strains of bud and flower, not exceeding ten (10) pounds, and then selecting random sample(s) from each batch in the amounts required, which will then be tested by a licensed marijuana testing facility. AK Legacy Genetics will designate an individual responsible for collecting each sample, who will (A) prepare a signed statement showing that each sample has been randomly selected for testing; (B) provide the signed statement to the marijuana testing facility; and (C) maintain a copy as a business record, to be stored in accordance with 3 AAC 306.750.
The entire batch from which sample(s) were taken will be segregated and properly stored until passing and compliant results are received from the testing facility. The facility will maintain all testing results as a secured business record.
AK Legacy Genetics will provide a sample of any growing mediums, soil amendments, fertilizer, crop production aids, pesticides, or water requested for testing by AMCO or law enforcement. AK Legacy Genetics shall bear all costs associated with such testing.
All samples will be transported by a person with a valid AMCO marijuana handler permit. All marijuana will be transported in compliance with all state, local, and AMCO regulations.

Alaska Marijuana Control Board

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

Section 8 – Packaging and Labeling

Review the requirements under 3 AAC 306.470 and 3 AAC 306.475.

Answer "Yes" or "No" to the following question:	Yes	No
8.1. Will the marijuana cultivation facility be packaging marijuana for a retail marijuana store to sell to a consumer without repackaging?	☑	☐

If "Yes", describe how the marijuana cultivation facility will ensure that the marijuana sold will meet the packaging requirements in 3 AAC 306.470, and provide a sample label that the facility will use to meet the labeling requirements set forth in 3 AAC 306.475:

All marijuana packaged for sale to a marijuana retail store (that does not require further handling by the retail store) will meet all regulation packaging requirements. In order to do so, the facility will ensure that no direct-to-consumer sale package exceeds more than one ounce of marijuana & have space for the marijuana retail store to put its retail license name, logo and license number. If the direct-to-consumer sale packages are not in opaque & child-resistant containers, the retail facility will be warned that they must ensure that all marijuana products are in opaque & child resistant packaging before leaving the retail store. Any packaging at the facility will be done in an area specifically set aside for packaging & monitored with 24-hour video surveillance. Packaging will be uniform with labels secure & prominently displayed. The facility will use certified scales, in compliance with the Alaska Weights and Measures Act, & will maintain registration and inspection reports at the facility. Packaged marijuana will be placed in sanitized, air-tight containers, labeled with all compliant labeling information, and given a bar code for the inventory tracking system... (Cont. on pg. 7)

Answer "Yes" or "No" to the following question:	Yes	No
8.2. Will the marijuana cultivation facility be packaging marijuana in wholesale packages?	☑	☐

If "Yes", describe how the marijuana cultivation facility will ensure that the marijuana sold will meet the packaging requirements in 3 AAC 306.470, and provide a sample label that the facility will use to meet the labeling requirements set forth in 3 AAC 306.475:

Marijuana sold to other licensed marijuana facilities will be packaged in compliance with 3 AAC 306.740 and 3 AAC 306.475. Marijuana packaged for wholesale will not exceed ten (10lbs) pounds and will include the AK Legacy Genetics' name and license number, harvest batch number, strain information, net weight of the marijuana, the name and license number of the testing facility, cannabinoid potency profile, and the results of microbial, contaminant and solvent testing. In writing, AK Legacy Genetics will disclose all soil amendments, fertilizers, pesticides, herbicides and fungicides used in the marijuana cultivation and preparation. Contaminants tested and disclosed will include mold, mildew, filth, herbicides, pesticides, fungicides, and harmful chemicals. Any packaging done at the facility will be in the specified packaging area and will be monitored by constant video surveillance. Packaged marijuana will be securely stored until transport. Packaging will be uniform, compliant with all regulations, and will have securely attached and prominently displayed labels. The sealed, tamper-evident shipping containers will have, for all batches, a label showing: (1)... (Cont. on pg. 7)

I certify that as a marijuana cultivation facility, I will submit monthly reports to the Department of Revenue and pay the excise tax required under AS 43.61.010 and AS 43.61.020 on all marijuana sold or provided as a sample to a marijuana establishment, as required under 3 AAC 306.480.

I declare under penalty of unsworn falsification that this form, including all accompanying schedules and statements, is true, correct, and complete.

Signature of licensee

Ryan McKay

Printed name of licensee

STATE OF ALASKA
NOTARY PUBLIC
Mercedes Curran
My Commission Expires Dec 20, 2023

Notary Public in and for the State of Alaska

My commission expires: 12/20/2023

Subscribed and sworn to before me this 5th day of March, 2021.

Alaska Marijuana Control Board

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

(Additional Space as Needed):

Section 4.5 Continued: ...HP Pro Mix 3.8CF, HPCC Pro Mix 3.8CF, Hydrocorn Ziploc, Hydroton 50L, Jiffy Peat Pellets, Light Warrior 1CF Bag, Mother Earth Bio Char 1CF, Mother Earth Charged Coco 1.5CF, Mother Earth Coco 50L, Mother Earth Coco/Peat 1.5CF, Mother Earth Coco-Perlite 70/30 Mix 1.5CF, Mother Earth Groundswell 1.5CF, Mother Earth Perlite #4 Chunky, Mother Earth Perlite Coarse 4CF, Perlite Coarse 2CF Bag Aurora Innivations, Pro Mix Bx Mycorrhizae, Roots Organic 707 3CF Bag, Roots Original 0.75CF Bag, Royal Gold Tupur Coco 2CF, SOS Aurora Phlora Soil Mix, and Vermiculite 20QT as its growing mediums.

Section 4.7 Continued: ...Kushie Kush, Nirvana, Overdrive, pH-Perfect Bloom, pH-Perfect Micro, pH-Perfect Grow, pH-Perfect Sensei Grow Part A&B, pH-Perfect Sensi Part A&B, pH-Perfect Connoisseur Bloom Part A&B, pH-Perfect Connoisseur Grow Part A&B, pH-Perfect Connoisseur Coco Bloom A&B, pH-Perfect Connoisseur Coco Grow A&B, pH-Perfect Sensi Coco Grow Part A&B, Piranha Beneficial Fungi, Revive, Rhino Skin, Tarantula, FloraPro, FloraNova, FloraDuo, Maxi Series, Coco Tek, Bio Thrive, Armor Si, CaliMAGic, Diamond Nectar, FloraBlend, Floralicious, FloraNectar, KoolBloom, RapidStart, Ripen, BioBud, BioRoot, BioMarine, BioWeed, CaMag Plus, Exile, Defung, Prevasyn, AzaMax, pH Buffers, Nourish-L, Photosynthesis Plus, Foliar Spray & Root Dip, Vegetable & Fruit Yield Enhancer, Organic Photosynthesis Plus, Veg Plus Bloom RO/Soft, Veg Plus Bloom Dirty, Veg Plus Bloom HD, Tap/Hard, Dos A, Dos B, Shine, Plus Life, Stackswell, Push, Pennington Plant Starter, Fox Farm Happy Frog All Purpose Fertilizer, Fox Farm Cha Ching Soluble Fertilizer, Fox Farm Open Sesame, Fox Farm Beastie Bloomz, Down To Earth All Purpose Mix, Down To Earth Bio Live, Down To Earth Bio-Fish, Down To Earth Blood Meal, Down To Earth Bone Meal, Down To Earth Crab Meal, Down To Earth Feather Meal, Down To Earth Fish Meal, Down To Earth Fish Meal Powder, Down To Earth Granular Humic Acid, Down To Earth Green Sand, Down To Earth High Nitrogen Bat Guano, Down To Earth Langbeinte, Down To Earth Neem Seed Meal, 710, Black Power Cloner 45 Botanicare, Clone Shipper, EZ Clone 128 Low Prop White, EZ Clone 64 Low Pro Black, GH Rapid Start Gel, Green EZ Clone Collars, Hormex 16OZ, Jiffy Pellet 25PK, Life 32OZ Cloning Solutions, Oasis Root Cubes, Olivia's 4OZ Gel, Root Riot 100PK, Super Sprouter Aqua Clone 24 Site, Xtreme Gardening Mykos WP 12OZ, Jacks Nutrients 5-50-18

We will also use a CO2 enhancement system that is in buckets/bags that are hung from the ceiling just above the plants. The gas is used to provide the plants with carbon and oxygen. All other chemicals used at AK Legacy Genetics will be gentle cleaning chemicals used for general sanitation.

Section 8.1 Continued: ...Plastic packaging will be heat-sealed without an easy-open tab, dimple, corner, or flap. Packaged marijuana will be stored in a secured area until ready for transport. All packaging will be inspected, accepted or rejected, and recorded in the log, and a Licensee or designated employee will check all final packages to ensure that they will secure marijuana from contamination and not impart toxic or deleterious substances. Labels will include: AK Legacy Genetics name and license number; a space for the retail logo/ name/license number; the five required warnings found in 3 AAC 306.475(a)(1-5); the harvest date; the date of packaging; the harvest batch number; the net weight and the quantity of usable marijuana packaged (in a standard of measure compatible with the inventory tracking system); a complete list of all (if any) pesticides, fungicides and herbicides used in the cultivation of the marijuana.

Section 8.2 Continued: ...the testing facility's name and license number; (2) date of final testing; (3) cannabinoid potency profile, expressed as a range of percentages that extends from the lowest percentage to highest percentage of concentration for each cannabinoid listed from every test conducted on that strain of marijuana from AK Legacy Genetics within the last three months; (4) results of microbial testing; and (5) contaminants for which the marijuana was tested, including molds, mildew, filth, herbicides, pesticides, fungicides, and harmful chemicals.

Alaska Marijuana Control Board

Form MJ-04: Marijuana Cultivation Facility Operating Plan Supplemental

(Additional Space as Needed):

Front of Package

window to view product

Strain Name

Indica-Dominant

Net Weight: 3.5 g (0.124 oz.)

PLACE HOLDER FOR RETAILER TO PUT RETAILER STICKER LABEL

Back of Package

Cultivator: AK Legacy Genetics
License # 28628
HB#: northstarvalley252018
Strain: North Star OG

METRC #: 36887500003645l115AB
Testing Lab: ABC Lab License #:
Testing Date: 02/05/2018
Fungicides: None Herbicides: None Pesticides: None
Cannabinoid Profile:
Total THC: XXXX% Total CBD: XXXX% THC: XXXX%
CBD: XXXX% THC-A: XXXX% CBD-A: XXXX%
CBN: XXXX%

Alaska Safety Warning: Marijuana has intoxicating effects and may be habit forming and addictive. Marijuana impairs concentration, coordination and judgment. Do not operate a vehicle or machinery under its influence. There are health risks associated with consumption of marijuana. For use only by adults twenty-one and older. Keep out of the reach of children. Marijuana should not be used by women who are pregnant or breast feeding.

*or similar format and content

Front of Package

window to view product

Strain Name

Indica-Dominant

Net Weight: 3.5 g (0.124 oz.)

PLACE HOLDER FOR RETAILER TO PUT RETAILER STICKER LABEL

Back of Package

Cultivator: AK Legacy Genetics
License # 28628
HB#: northstarvalley252018
Strain: North Star OG

METRC #: 36887500003645l115AB
Testing Lab: ABC Lab License #:
Testing Date: 02/05/2018
Fungicides: None Herbicides: None Pesticides: None
Cannabinoid Profile:
Total THC: XXXX% Total CBD: XXXX% THC: XXXX%
CBD: XXXX% THC-A: XXXX% CBD-A: XXXX%
CBN: XXXX%

Alaska Safety Warning: Marijuana has intoxicating effects and may be habit forming and addictive. Marijuana impairs concentration, coordination and judgment. Do not operate a vehicle or machinery under its influence. There are health risks associated with consumption of marijuana. For use only by adults twenty-one and older. Keep out of the reach of children. Marijuana should not be used by women who are pregnant or breast feeding.

*or similar format and content

COMMENTS

Agency Comments

ENSTAR Natural Gas Company
A DIVISION OF SEMCO ENERGY
Engineering Department, Right of Way Section
401 E. International Airport Road
P. O. Box 190288
Anchorage, Alaska 99519-0288
(907) 277-5551
FAX (907) 334-7798

March 1, 2022

Matanuska-Susitna Borough, Planning Division
350 East Dahlia Avenue
Palmer, AK 99645-6488

To whom it may concern:

ENSTAR Natural Gas Company has reviewed the following conditional use permit request and has no comments or recommendations.

- **AK Legacy Genetics- Marijuana Cultivation Facility (MSB Case # 17.60)**

If you have any questions, please feel free to contact me at 334-7944 or by email at james.christopher@enstarnaturalgas.com.

Sincerely,

James Christopher

James Christopher
Right of Way & Compliance Technician
ENSTAR Natural Gas Company

From: Theresa Taranto
To: Peggy Horton
Subject: RE: Request for Review and Comments: AK Legacy Genetics Marijuana Cultivation Facility
Date: Tuesday, March 1, 2022 1:06:50 PM

FIRM 8045, X Zone
No other comments.
Thank you,

Theresa Taranto
Mat-Su Borough
Development Services
Administrative Specialist
350 E Dahlia Ave.
Palmer, Alaska 99645
907-861-8574
www.matsugov.us

From: Peggy Horton
Sent: Monday, February 28, 2022 1:56 PM
To: Allen Kemplen AICP-CTP - DOT&PF (allen.kemplen@alaska.gov) ; Melanie Nichols (Melanie.nichols@alaska.gov) ; Kyler Hylton (kyler.hylton@alaska.gov) ; James Walker (james.walker2@alaska.gov) ; 'oran.woolley@alaska.gov' ; mearow@matanuska.com; 'row@enstarnaturalgas.com' ; 'row@mtasolutions.com' ; GCI ROW (ospdesign@gci.com) ; Fire Code ; Jill Irsik ; Eric Phillips ; regpagemaster@usace.army.mil; Terry Dolan ; Jamie Taylor ; Brad Sworts ; Elaine Flagg ; Charlyn Spannagel ; Alex Strawn ; Planning ; Fred Wagner ; Permit Center ; Jason Ortiz ; Theresa Taranto ; Andy Dean ; John Aschenbrenner ; 'mokietew@gmail.com' ; 'tundraquest@mtaonline.net' ; 'nicolerealty19@gmail.com' ; 'billydoc56@hotmail.com' ; 'cci1@wwdb.org' ; 'pcook@alaskan.com' ; 'gina@ritaccos.com' ; 'uprise@mtaonline.net' ; davemtp@mtaonline.net; 'dglsaviatn@aol.com'
Subject: Request for Review and Comments: AK Legacy Genetics Marijuana Cultivation Facility

Good Morning,
Ryan McKay and Jana Weltzin for AK Legacy Genetics submitted an application for a conditional use permit under MSB 17.60 – Conditional Uses, for a marijuana cultivation facility.
Location: 3097 South Sylvan Lane, Tax ID #6315B01L011 & L012 (Recently combined into new Lot 11A); within Township 17 North, Range 2 West, Section 22.
The Planning Commission will conduct a public hearing on this request on May 16, 2022.
Application materials may be viewed online at www.matsugov.us by clicking on “All Public Notices & Announcements.” A direct link to the application material is here:
Comments are due on or before April 13, 2022 and will be included in the Planning Commission packet for the Commissioner’s review and information. Please be advised that comments received from the public after that date will not be included in the staff report to the Planning Commission. Thank you for your review.

Peggy Horton
Matanuska-Susitna Borough
Development Services Division
Planner II
907-861-7862

From: Michelle Olsen
To: Peggy Horton
Subject: AK Legacy Genetics Driveway - 6315B01L011
Date: Tuesday, February 8, 2022 2:50:17 PM

Hi Peggy,

The existing driveway is fine for a cultivation facility. No modification is necessary.

Respectfully,

Michelle Olsen, CFM
Permit Technician
Matanuska-Susitna Borough
907-861-7822

Public Comments

From: Mandy Bledsoe
To: Peggy Horton
Subject: Application for Marijuana Cultivation Facility #tax ID 6315B01Lo11&Lo12
Date: Sunday, March 27, 2022 12:35:44 PM

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Good morning,

We received a letter from the planning committee for the above proposed establishment.

We own 7221 W Terry L Circle (parcel 1 on the map) directly across the street.

We'd like our comments to be included in the Planning Commission packet:

Our biggest concern is our property value. These are our concerns:

- We would be able to see the facility, thus devaluing our property
- That there would be increased traffic along Sylvan
- That there would be odors from the facility
- That there would be business sign postings visible on Sylvan
- That sales of marijuana are taking place on the property
- Adding a marijuana business potentially increases the crime rates in our area

We bought a house in a *residential* neighborhood. We would never have bought it if we thought a marijuana center was setting up shop across the road. Children play here and there is a great community feel to the Hollywood Hills subdivision. There are plenty of other land parcels for sale that are not in developed neighborhood areas. Overall we oppose the proposed site.

Thank you for your consideration.

Phillip and Mandy Bledsoe
7221 W Terry L Circle
Wasilla AK 99623

From: Mandy Bledsoe
To: Peggy Horton
Subject: Application for Marijuana Cultivation Facility #tax ID 6315B01Lo11&Lo12
Date: Monday, March 28, 2022 3:46:25 PM

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Please add the following comments to my email yesterday.

Following up from my email yesterday, today we were able to see plans. I am disappointed to see that an entrance and exit driveway onto Sylvan has already been approved. That means, even with landscaping, the facility will be seen from my property, through the driveway exit and entrance openings. This will devalue my property.

Also I did not read about signage. If it is on Sylvan then we will see it.

Nobody wants to live on a road where a marijuana facility is. Who is going to want to buy my house if it is facing a marijuana cultivation site? All properties surrounding the facility are residential.

I do not think concerns about water run-off pollutants have been adequately addressed in the application. We have well water, any run-off will leech into the soil. “Minimal” run-off is not a good enough response for the health of our family.

The applicants note that at the moment there is minimal traffic on Sylvan and this is correct and it’s one of the reasons we moved here has it has trails and is safe for pets and children. School bus stops are located on Sylvan. Increased traffic means increased noise, increased pollution and increased accidents.

This is not the right place.

Mandy and Phillip Bledsoe
7221 W Terry L Circle
Wasilla
AK 99623

Sent from my iPhone

From: Peggy Horton
To: "Jarrett Carson"
Subject: RE: Notice for Comment
Date: Tuesday, March 29, 2022 9:16:37 AM

Good Morning,

In answer to your questions,

1. Yes, notices are sent to the addresses on file at the borough to the owners of property within the Tierra Verde Subdivision, and to owners of property within 600 feet of the subject property per MSB 17.03.020(A).

2. The meeting is a public hearing, for all members of the public, per MSB 4.05.090(A). Any member of the public may comment, no matter if they live near the subject property or far. As noted in the public notice, the application material and notice is posted on the borough website at www.matsugov.us, look for Public Notices & Announcements on that page. All public comments are welcome and will be addressed in our report to the Planning Commission or given to the commission as a handout at the meeting, if the comments are received after April 13th. Persons are welcome to attend the public hearing in person, or by phone at 1-855-290-3803. Planning Commission hearings are also streamed live on Facebook, but comments sent through that media are not provided to the Planning Commission.

3. As written in the public notice mailed out or on the website, "Provide written comments by e-mail to peggy.horton@matsugov.us, or by mail to MSB Development Services Division, 350 E. Dahlia Avenue, Palmer, AK 99645."

Regards,

Peggy Horton
Matanuska-Susitna Borough
Development Services Division
Planner II
907-861-7862

From: Jarrett Carson <jarrettc@zofinancial.com>
Sent: Monday, March 28, 2022 1:44 PM
To: Peggy Horton <Peggy.Horton@matsugov.us>
Subject: Notice for Comment

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Ms. Horton,

I have several neighbors that have informed our local community that they received a notice for public comment about a marijuana cultivation request in our neighborhood. However, there are many of us who have not received any notice for comment. I live on the first street into a

neighborhood that does not have an additional exits and therefore I feel this would have an impact on my property, my family, and would like to voice my concerns.

The public hearing s set for Monday, May 16, 2022 and is for 3097 S Sylvan Lane for AK Legacy Genetics.

My questions to you are:

1. Is there a process where notifications are sent to only specific houses within a specific distance from this site?
2. Do other members of this immediate community have any recourse to adding comments?
3. If I am able to provide a response, what is the formal channel to do this?

Thank you for any assistance you can provide in this matter.

Jarrett Carson, MBA, NCCO
Service Manager, Zo Financial LLC
(907) 230-4000 jarrettc@zofinancial.com
3035 E Palmer-Wasilla Hwy, Ste 601, Wasilla, AK 99654
www.zofinancial.com

Matanuska-Susitna Borough
Development Services Division
350 E. Dahlia Avenue
Palmer, Alaska 99645

Matanuska-Susitna Borough
Development Services

APR 05 2022

Received

56315B02L010 11
CLEMENSON GUNDAR H & K
4061 BULL MOOSE DR
WASILLA, AK 99654

The Matanuska-Susitna Borough Planning Commission will consider the following:

An application under MSB 17.60 – Conditional Uses. Jana Weltzin and Ryan McKay, on behalf of AK Legacy Genetics, filed an application for a conditional use permit under MSB 17.60 – Conditional Uses, for the operation of a marijuana cultivation facility located at 3097 South Sylvan Lane, Tax ID# 6315B01L011 & L012 (Lot 11A); within Township 17 North, Range 2 West, Section 22, Seward Meridian.

The Matanuska-Susitna Borough Planning Commission will conduct a public hearing concerning the application on ***Monday, May 16, 2022, at 6:00 p.m.*** in the Borough Assembly Chambers located at 350 E. Dahlia Avenue in Palmer. This may be the only presentation of this item before the Planning Commission and you are invited to attend. Planning Commission members may not receive or engage in ex-parte contact with the applicant, other interested parties in the application, or members of the public concerning the application or issues presented in the application.

Application materials may be viewed online at www.matsugov.us by clicking on "All Public Notices & Announcements." For additional information, you may contact Peggy Horton, Planner II, by phone: 907-861-7862. Provide written comments by e-mail to peggy.horton@matsugov.us, or by mail to MSB Development Services Division, 350 E. Dahlia Avenue, Palmer, AK 99645.

The public may provide verbal testimony in person at the meeting or telephonically by calling 1-855-290-3803. In order to be eligible to file an appeal from a decision of the Planning Commission, a person must be designated an "interested party". See MSB 15.39.010 for the definition of "interested party". The procedures governing appeals to the Board of Adjustment and Appeals are contained in MSB 15.39.010-250, which is available on the Borough home page: www.matsugov.us, in the Borough Clerk's office, and at various libraries within the borough.

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Name: CLEMENSON, G + K ***Mailing Address:*** 4061 N. BULL MOOSE DR. WASILLA 99654

Location/Legal Description of your property: TIERRA VERDE BLOCK 2 LOT 10

Comments: WE OBJECT TO THE GRANTING OF THIS CONDITIONAL USE PERMIT. ALLOWING A MARIJUANA CULTIVATION FACILITY IN A RESIDENTIAL NEIGHBORHOOD UNDERMINES THE EFFORTS OF THE PROPERTY OWNERS TO CREATE A FAMILY-FRIENDLY COMMUNITY AND DISCOURAGES NEW HOME BUYERS, THEREBY DEVALUATING ALL PROPERTIES IN THE ENTIRE NEIGHBORHOOD.

Note: Vicinity Map Located on Reverse Side

Matanuska-Susitna Borough
Development Services Division
350 E. Dahlia Avenue
Palmer, Alaska 99645

Matanuska-Susitna Borough
Development Services

APR 08 2022

Received

56315B01L007 8
CUMMINGS THOS V
6855 W ORD LN
WASILLA AK 99654-9711

The Matanuska-Susitna Borough Planning Commission will consider the following:

An application under MSB 17.60 – Conditional Uses. Jana Weltzin and Ryan McKay, on behalf of AK Legacy Genetics, filed an application for a conditional use permit under MSB 17.60 – Conditional Uses, for the operation of a marijuana cultivation facility located at 3097 South Sylvan Lane, Tax ID# 6315B01L011 & L012 (Lot 11A); within Township 17 North, Range 2 West, Section 22, Seward Meridian.

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Name: Thomas V Cummings ***Mailing Address:*** 6855 W. Ord Lane Was 99623

Location/Legal Description of your property: Lot 18 Blk 7 Tierra Verde Subdivision

Comments: Not in favor of this application. This is a growing neighborhood with many families with children.
Without predicting the future, we don't need this upcoming "Attraction" in our back yard/neighborhood.

Note: Vicinity Map Located on Reverse Side

Thomas V Cummings

Peggy Horton

From: Karri Donahue <karridonahue@mtaonline.net>
Sent: Saturday, April 9, 2022 8:51 PM
To: Peggy Horton
Cc: marijuana@alaska.gov
Subject: AK Legacy Genetics, filed application for a conditional use permit

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

Hello Peggy,
I'm writing today with concern about the planned AK Legacy Genetics, filed application for a conditional use permit under MSB 17.60 – Conditional Uses, for the operation of a standard marijuana cultivation facility located at 3097 South Sylvan Lane, Tax ID# 6315B01L011 & L012; within Township 17 North, Range 2 West, Section 22, Seward Meridian.

Let me start by saying S Sylvan Ln has been our home since 2006. From the time we moved in, we have dealt with constant drug related crime on our road.
A call to the local Wasilla police department and Alaska State Troopers can verify the call logs to S. Sylvan Ln. Recently, our street was closed down due to criminal shooting from vehicles.

As a neighborhood, we have banded together to establish a watch group for criminal activity, which has been quite successful with our vigilance. We know who belongs in our neighborhood and who doesn't. Adding a marijuana cultivation facility would hinder our group efforts in watching for possible criminal activity.

In January 2018, a stray bullet came through our front living room window, narrowly missing my son's face while sitting on the couch. You can't imagine the trauma we have dealt with from this.
I have personally chased off 3 convicted felons from my property within the last 4 years. One crashed through my fence with her SUV in 2020.
I'm concerned that a marijuana grow, may bring unwanted attention and possibly an influx of criminal activity to our neighborhood.

That area is a school bus drop off for our children in the neighborhood.
Not to mention, there's not been enough adequate data as to how this may affect our home values in the future.

Jana Weilter herself, stated in an interview with AND from 2017, and I quote " if it's a tightly resident neighborhood… it might not be the smartest idea in the world to put a grow there."
(The link to the article below)
https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fwww.adn.com%2falaska-marijuana%2f2017%2f09%2f04%2facross-alaska-commercial-marijuana-grows-sprout-near-neighborhoods%2f&c=E,1,eNsc9Sapx_XYFN4KQAYXCUcG5MA931EqJF2nz7tHk4JzReduaFyD5mUlT6oXQah6fuFp7qkquF5JV1AOVtfvYCt47PiNJf2dLa8ueQ4rScq8Glqa3cMofk08UA,,&typo=1

I agree with Jana, a marijuana grow operation does not belong in our neighborhood.

Thank you for your time,
Sincerely
Karri Donahue
907-982-1050

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Alaska Marijuana News

Commercial marijuana grows sprout near Alaska neighborhoods

By Zaz Hollander
Updated: September 6, 2017
Published: September 4, 2017

Cultivator Sean Dunn waters cannabis plants that will soon be harvested at the Great Northern Cannabis facility in Anchorage. (Marc Lester / Alaska Dispatch News)

WASILLA — Some Alaskans are getting a close-up look — or smell — at the state's marijuana trade as industrial-sized grows begin popping up by their homes.

Pot farms in Anchorage, Willow and Fairbanks have received state warnings after complaints of odiferous air pollution that can violate state safeguards created to control the pungent aroma of flowering cannabis buds.

Alaskans voted in 2014 to legalize recreational marijuana use for adults. Retail stores began opening last year. So did commercial cultivation operations.

[Alaska's first commercial cannabis harvest begins]

As of late August, there were more than 70 commercial pot cultivators operating from Ketchikan to Fairbanks, about 50 of them larger grows covering at least 500 square feet.

Alaska's marijuana laws for cultivation include requirements for security systems, safety lighting and odor control to corral the skunky smell emitted by oils in flowering marijuana plants. State law says a marijuana cultivation facility must ensure it "does not emit an odor that is detectable by the public from outside" except as allowed by local conditional-use permits.

That's easy for many growers on big properties away from homes. But already, at least three more centrally located big grows have run into trouble with the neighbors.

Fairbanks

Sitting on his lawn and eating barbecue is ruined by a smell like "having my head up a skunk's butt," Two Rivers resident Ole Christianson told the Fairbanks North Star Borough Assembly during a hearing Aug. 24 about whether to renew the license of a large grow operation near Chena Hot Springs Road.

Another resident said the odor from the four greenhouses operated by a company called Elevated Innovations gave her family sore throats and painful headaches. The resident, Jacqueline Bock, said she wondered what chemicals are in the airborne odors.

"So, yeah, this is a big issue," Bock said. "I feel that even if one person is affected like I'm getting affected, it shouldn't be allowed."

Karen Bloom, Fairbanks president of the Alaska Marijuana Industry Association, said some members of the Assembly are "critical of this industry and doing everything they can to undermine it," in apparent reference to the two Assembly sponsors of the renewal opposition proposal.

"There can be odor," Bloom said. "Getting sick over a plant's odor — I honestly have never heard of such a thing."

The Assembly declined to oppose the license renewal.

But the state's Alcohol and Marijuana Control Office issued an advisory to Elevated Innovations, according to Director Erika McConnell. The local enforcer smelled marijuana, McConnell said.

The advisory is an informal warning that doesn't warrant action from the state officials like a violation notice does, she said.

Elevated Innovations owner Cristopher Konopka told the Assembly he only learned of a problem when the state enforcement officer contacted him. Supporters said the inspector ultimately found the grow in compliance.

Konopka did not return calls for more information.

Anchorage

Two South Anchorage companies received state violation notices after the marijuana office got "multiple odor complaints" from neighbors, McConnell said.

Those companies, both located on Cinnabar Loop not far from homes on Lake Otis Parkway, are Danish Gardens and Great Northern Cannabis.

Cannabis plants grow at the Great Northern Cannabis facility in Anchorage on Thursday. (Marc Lester / Alaska Dispatch News)

Danish Gardens is one of the largest growers in the state at 20,000 square feet — roughly the size of half a football field.

The company resolved the odor issue by boosting the number of carbon filters in its ventilation system, said owner Dane Wyrick. He blamed part of the problem on a city requirement that he increase air passing through the structure, originally designed with a closed-loop system.

Wyrick said it's not fair that growers fall under such strict standards when aviation, beer brewing and coffee roasting emit strong odors across a wide area.

"It's in our best interest not to alert the world to everything we're doing but how far do we go?" he said. "Things smell."

Meanwhile, Great Northern CEO Steve Brashear said his company didn't realize engineers had installed a mix of filters in the nearly $500,000 ventilation and climate control system that's supposed to neutralize odors at the 5,000-square-foot growing facility.

Jordan Huss of Great Northern Cannabis says air conditioning units include carbon filtration and recycle 95 percent of the air inside the 5,000-square-foot facility in Anchorage. (Marc Lester / Alaska Dispatch News)

Great Northern made sure the system operates on more effective carbon filters, Brashear said. The company also vents through the roof rather than out the sides of the facility.

It takes a significant investment to become a successful commercial marijuana entrepreneur, he said. "In order to be a successful business in this industry, you have to take the regulatory compliance seriously. We do."

Willow

Another grow operation that's attracting unwanted attention is outdoors, where it's harder to filter smells.

Residents in one Willow neighborhood say The Farm, a large outdoor growing operation next to the Parks Highway at Mile 64, emits such a strong odor that they're sometimes driven indoors during chores and other outdoor activities.

Several residents filed complaints about the operation with the Alaska Marijuana Control Board. None wanted to be quoted, but in their emailed complaints to the state, provided as public records, they said the odor from the plants was strong enough to make eyes and noses burn.

Matanuska-Susitna Borough
Development Services Division
350 E. Dahlia Avenue
Palmer, Alaska 99645

Matanuska-Susitna Borough
Development Services
APR 06 2022
Received

56315B04L003 20
GARDNER JOSEPH C
PO BOX 877529
WASILLA AK 99687-7529

The Matanuska-Susitna Borough Planning Commission will consider the following:

An application under MSB 17.60 – Conditional Uses. Jana Weltzin and Ryan McKay, on behalf of AK Legacy Genetics, filed an application for a conditional use permit under MSB 17.60 – Conditional Uses, for the operation of a marijuana cultivation facility located at 3097 South Sylvan Lane, Tax ID# 6315B01L011 & L012 (Lot 11A); within Township 17 North, Range 2 West, Section 22, Seward Meridian.

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Name: Joe Gardner ***Mailing Address:*** PO Box 877529 / Wasilla / 99687

Location/Legal Description of your property:

Comments: This a residential neighborhood. No operation of this sort should take place where people live. Certainly there is enough land in AK to support this business in a non-residential area. Strongly opposed!

Note: Vicinity Map Located on Reverse Side

Matanuska-Susitna Borough
Development Services Division
350 E. Dahlia Avenue
Palmer, Alaska 99645

Matanuska-Susitna Borough
Development Services
APR 06 2022
Received

56315B04L003 20
GARDNER JOSEPH C
PO BOX 877529
WASILLA AK 99687-7529

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Location/Legal Description of your property:

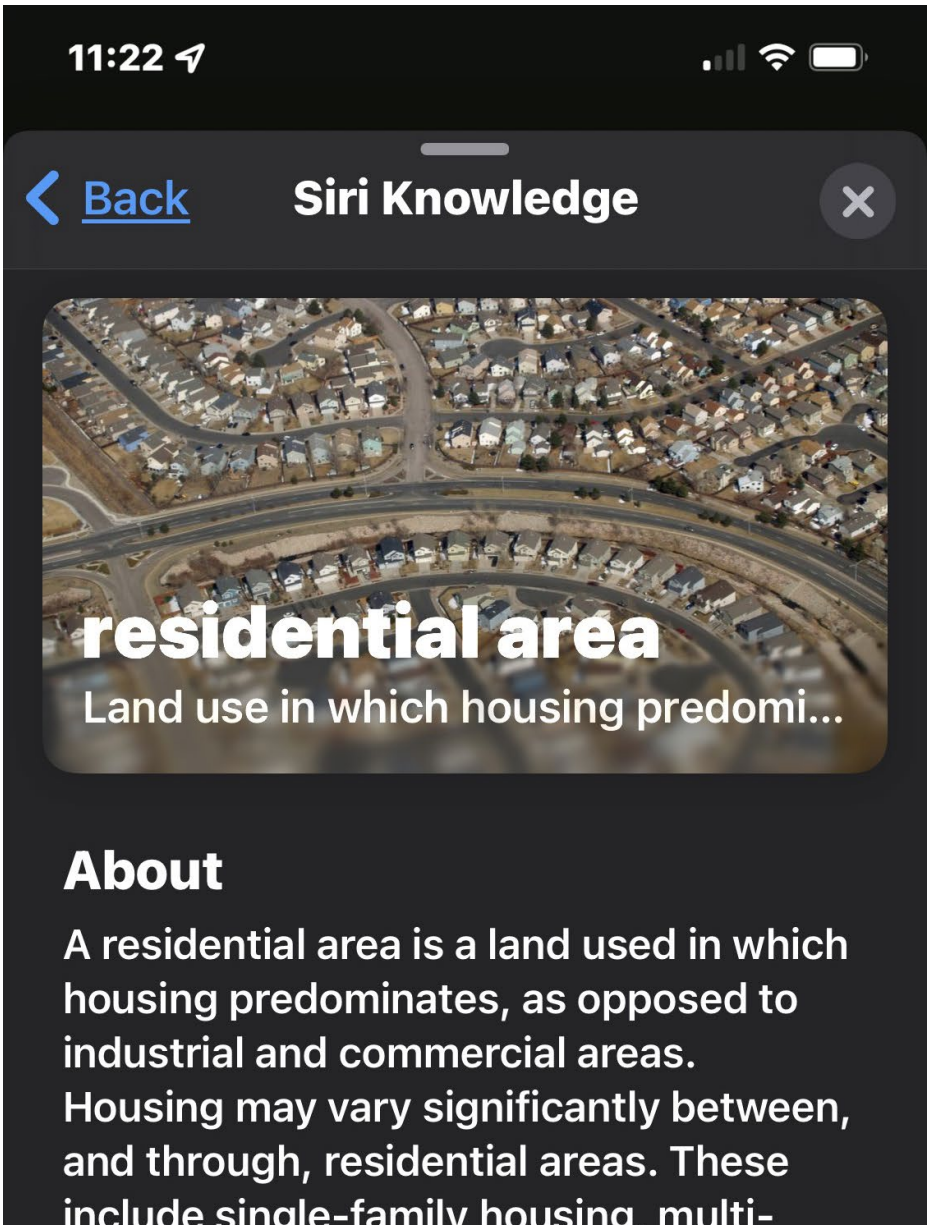
Comments: This a residential neighborhood. No operation of this sort should take place where people live. Certainly there is enough land in AK to support this business in a non-residential area. Strongly opposed!

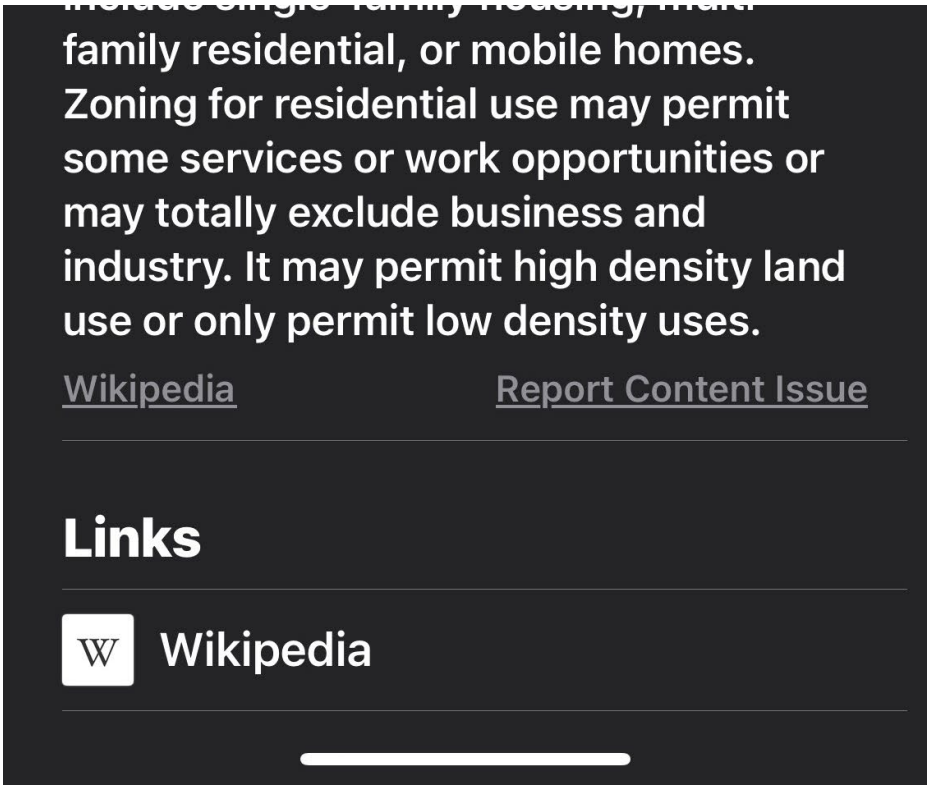
Note: Vicinity Map Located on Reverse Side

From: Tara Hannah
To: Peggy Horton
Subject: Fwd: 3097 S Sylvan Lane
Date: Sunday, March 20, 2022 4:38:42 PM

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]

We received notice of a conditional use permit for this location to do cultivation of marijuana. This is a residential area not a commercial area and this does not belong in our housing area. We have several young families in this area and I have grandchildren.
Please consider our concerns and do NOT grant this permit. We don't want this in our housing area. We bought our home here with intent to be away from commercial areas. See definition of RESIDENTIAL area.





housing.
--
Thank you,
Tara Hannah
--
Thank you,
Tara Hannah

Matanuska-Susitna Borough
Development Services Division
350 E. Dahlia Avenue
Palmer, Alaska 99645

Matanuska-Susitna Borough
Development Services
MAR 29 2022
Received

55676000L016 30
KNAGIN SHANE R & KARISSA
7290 W TERRY L CIR
WASILLA AK 99623-0919

The Matanuska-Susitna Borough Planning Commission will consider the following:

An application under MSB 17.60 – Conditional Uses. Jana Weltzin and Ryan McKay, on behalf of AK Legacy Genetics, filed an application for a conditional use permit under MSB 17.60 – Conditional Uses, for the operation of a marijuana cultivation facility located at 3097 South Sylvan Lane, Tax ID# 6315B01L011 & L012 (Lot 11A); within Township 17 North, Range 2 West, Section 22, Seward Meridian.

The Matanuska-Susitna Borough Planning Commission will conduct a public hearing concerning the application on ***Monday, May 16, 2022, at 6:00 p.m.*** in the Borough Assembly Chambers located at 350 E. Dahlia Avenue in Palmer. This may be the only presentation of this item before the Planning Commission and you are invited to attend. Planning Commission members may not receive or engage in ex-parte contact with the applicant, other interested parties in the application, or members of the public concerning the application or issues presented in the application.

Application materials may be viewed online at www.matsugov.us by clicking on "All Public Notices & Announcements." For additional information, you may contact Peggy Horton, Planner II, by phone: 907-861-7862. Provide written comments by e-mail to peggy.horton@matsugov.us, or by mail to MSB Development Services Division, 350 E. Dahlia Avenue, Palmer, AK 99645.

The public may provide verbal testimony in person at the meeting or telephonically by calling 1-855-290-3803. In order to be eligible to file an appeal from a decision of the Planning Commission, a person must be designated an "interested party". See MSB 15.39.010 for the definition of "interested party". The procedures governing appeals to the Board of Adjustment and Appeals are contained in MSB 15.39.010-250, which is available on the Borough home page: www.matsugov.us, in the Borough Clerk's office, and at various libraries within the borough.

Comments are due on or before ***April 13, 2022***, and will be included in the Planning Commission packet. Please be advised that comments received from the public after that date will not be included in the staff report, but will be provided to the Commission at the meeting.

Name: Shane Knagin ***Mailing Address:*** 7290 W. Terry L. Circle

Location/Legal Description of your property: Lot 16, W. Terry L. circle

Comments: Absolutely not! Why would we want to smell a dead skunk in our subdivision? What will future homebuyers think about smelling this in our subdivision? If this was located at the end of the road, with no properties near by, it would be a different story. By Allowing this, you are putting the future value of real estate in this area at risk. Do our children need to be near this while waiting for a school bus in the morning? I would think the honest answer to all is NO.

Note: Vicinity Map Located on Reverse Side

Matanuska-Susitna Borough
Development Services Division
350 E. Dahlia Avenue
Palmer, Alaska 99645

Matanuska-Susitna Borough
Development Services

APR 13 2022

Received

55676000L002 54
STARK MICHAEL L & CHERLA P
7257 W TERRY L CIR
WASILLA AK 99623

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Name: Michael Stark ***Mailing Address:*** 7257 W Terry L. Cir

Location/Legal Description of your property: Corner of Sylvan & Terry L. Cir.

Comments: I believe it is inappropriate to authorize this permit in a residential neighborhood. This should be a safe place for kids and families to live, play, and exercise. Authorizing marijuana cultivation in our neighborhood would be a drastic mistake.

Note: Vicinity Map Located on Reverse Side

Matanuska-Susitna Borough
Development Services Division
350 E. Dahlia Avenue
Palmer, Alaska 99645

Matanuska-Susitna Borough
Development Services
MAR 31 2022
Received

55493000L001 45
REIMERS JERRY P
7265 W METCALF CIR
WASILLA AK 99623-0842

The Matanuska-Susitna Borough Planning Commission will consider the following:

An application under MSB 17.60 – Conditional Uses. Jana Weltzin and Ryan McKay, on behalf of AK Legacy Genetics, filed an application for a conditional use permit under MSB 17.60 – Conditional Uses, for the operation of a marijuana cultivation facility located at 3097 South Sylvan Lane, Tax ID# 6315B01L011 & L012 (Lot 11A); within Township 17 North, Range 2 West, Section 22, Seward Meridian.

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Name: Jerry P Reimers ***Mailing Address:*** 7265 W Metcalf cir, Wasilla, AK 99623

Location/Legal Description of your property: Hollywood Hills D&E, Lot 1

Comments: I've got very severe allergies. I can't stand the smell of pot. Filters don't stop all odors. There is too much criminal activity here already. We don't need increased traffic and criminal activity associated with dope.

Note: Vicinity Map Located on Reverse Side

Peggy Horton

From: Lisa Day <lisaday1986@gmail.com>
Sent: Thursday, April 28, 2022 5:57 PM
To: Peggy Horton; John.Espindola@alaska.gov; mayor@cityofwasilla.gov; Senator.Mike.Shower@akleg.gov; Senator.Shelly.Hughes@akleg.gov; Senator.David.Wilson@akleg.gov; AYLA.BROWN@matsuk12.us; john.gardner@matsuk12.us; marijuana.licensing@alaska.gov
Subject: Conditional Use Permit Marijuana Related Facility - AK Legacy Genetics, Wasilla, AK
Attachments: Conditional Use Permit Sylvan Road.pdf; Tierra Verrde CCRs.pdf

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]

To whom it may concern,
Please see below and the attached for my arguments against having a marijuana related facility located at 3097 South Sylvan Lane Wasilla, AK 99623

April 28, 2022

Peggy Horton, peggy.horton@matsugov.us

Jana Weltzin and Ryan McKay, on behalf of AK Legacy Genetics, filed an application for a conditional use permit under MSB 17.60 – Conditional Uses, for the operation of a standard marijuana cultivation facility located at 3097 South Sylvan Lane, Tax ID# 6315B01L011 & L012; within Township 17 North, Range 2 West, Section 22, Seward Meridian.

Written comments were due on or before April 13, 2022, in order to be included in the Planning Commission packet for the Commissioner's review and information. Please be advised that most of the "interest parties" or residential property owners were NOT informed in a timely manner to meet this deadline, due to the 600 ft requirement which is
inadequate for facilities of this nature. I understand that my
written comments will not be included in the staff report, but will be provided to the Commission at the meeting.

Please note, a rigorous discussion on our neighborhood Facebook page reflects a significant portion if not ALL of the residents in this area are AGAINST approval of a Conditional Use Permit for Marijuana Related Facility as reference above. In addition, a Marijuana Cultivation facility clearly violates the Protective Covenants and Restrictions for the Tierra Verde Subdivision specifically section 2:
No lot shall be used except for recreational/residential purposes and; section 10: No activity which is noxious or offensive shall be permitted nor shall anything be done thereon which is noxious or offensive shall be permitted nor shall anything be done thereon which may be unsightly, or become an annoyance or nuisance to the neighborhood.

In reviewing the application for the conditional use permit it should be noted that the proposed use as defined in MSB 17.60.170 must be compatible with allowed uses on adjacent properties. Please see attached protective covenants note, a Marijuana Cultivation Facility is NOT compatible within a residential area with a few vacant lots that is less than a mile from two elementary schools (Goose Bay Elementary and Knik Elementary). There is a school bus stop within 300 feet of this facility which is significantly less than 1000 feet. The MSB statute which currently is set at 1000 feet violates public trust.

Please note the narrative in the application contains subjective opinions of the applicant that the facility is compatible with the lots of the surrounding area; will not produce any noise pollution and has an odor control method in place. Approving a facility with little guarantee that these subjective opinions will be adhered to is irresponsible when there is plenty of vacant commercial property available that is better suited for a Marijuana Cultivation Facility.

The Mission Statement for the Alcohol and Marijuana Control Office ``Enforce alcohol and marijuana commerce laws and provide clear, consistent standards for licensure to protect the public from harm."
In Alaska Statutes there are many references to restricting access to a person 21 years of age or older. How is allowing a cultivation facility to be located less than a mile from two elementary schools, with a school bus stop located approximately 300 feet from the facility driveway, meet this mission statement and Alaska Statutes?
The Alaska Statutes for marijuana facilities should be revised to exclude residential areas and must be at least 5,230 feet from schools. Rules regarding public notice should also be expanded as 600 feet is too narrow of a requirement for these types of facilities.

Marijuana cultivation facilities should be located exclusively in commercial areas for the following reasons:

1) Marijuana cultivation facilities produce significant waste
which must be disposed of carefully. Where and how will the waste be stored before it is transported to the landfill?

2) As noted in the application marijuana cultivation facilities
must prevent the growth of harmful mold, which requires use of hazardous chemicals, fungicides, herbicides, solvents and other hazardous chemicals. A subjective statement by the applicant that they will meet Department of Environmental Conservation requirement does not provide adequate assurances that neighborhood groundwater will not be contaminated.

3) State of Alaska – Alaska Department of Health and Social
Services indicates that crime near marijuana facilities increases.
Unfortunately, there is not enough Alaska data to have a percentage attached to the increase in criminal activity.

4) What are the guarantees that the conditional use permit for a
marijuana cultivation facility won't be expanded to include other uses such as on site "Sales?"

5) The planning commission shall weigh factors which contribute or
detract from the development of a safe, convenient, and attractive community, including, but not limited to: any potential negative effect upon other properties in the area due to such factors as noise and odor. Research on https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fRelator.com&c=E,1,BuPm7i_smLfuiMdRsLkx2XPP5nFmMIaABUCUkFbWkaK4DgKI1paV4jRfogbjHr1ibeHbRSf3PyBDnsTE_4roymZGDCE9AIEJLHTjTI9mQLMy6AAnJew0gosMgI0,&typo=1 reflects property values near cultivation facilities are decreased by 8.4%. If my property value will be negatively impacted by 8.4% due to the commission's decision to approve this conditional use permit, I am entitled to compensation for the decreased value of my property in the estimated amount of $38,220. The 8.4% decrease in property value would be applied to all residential property in the area for an estimated reduction in property values of $1,260,000. This would be a serious impact to the City of Wasilla tax base.

Based on these compelling concerns, which have been provided to everyone listed below. I implore the commission to NOT approve the conditional use permit for a Marijuana Cultivation Facility at 3097 S. Sylvan Lane in Wasilla, Alaska.

Sincerely,

Lisa and Michael Day

907-355-6667

cc: Governor Mike Dunleavy

John Espindola, Special Assistant to the Governor, John.Espindola@alaska.govmayor@https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fcityofwasilla.gov&c=E,1,ENds121qX-ZGoxCU83iPggkkg3u0tQ-3qVRH6fQrP0mbGjTbZeA27AumpFxChl_cp1VtzixDuA5VsqIAwfwnuvSlewOHPkpb0Az36t1YsasB&typo=1

Glenda D. Ledford, Mayor City of Wasilla,

Mike Shower, Senator.Mike.Shower@akleg.gov

Shelly Hughes, Senator.Shelly.Hughes@akleg.gov

David Wilson, Senator.David.Wilson@akleg.gov

Alya Brown, Principal Goose Bay Elementary, AYLA.BROWN@MATSUK12.US

John Gardner, Principal Knik Elementary, john.gardner@matsuk12.us

Nicholas Miller, Chair AMCO, marijuana.licensing@alaska.gov

Bruce Schulte, Vice Chair AMCO, marijuana.licensing@alaska.gov

Christopher Jaime, Member, AMCO, marijuana.licensing@alaska.gov

Eliza Muse, Member, AMCO, marijuana.licensing@alaska.gov

Ely Cyrus, Member, AMCO, marijuana.licensing@alaska.gov

Attachments: Tierra Verrde CCRs.pdf

MSB 17.60.150

MSB 17.60.160

17.60.150 GENERAL STANDARDS FOR MARIJUANA RELATED FACILITIES.

(A) In addition to the standards set forth by MSB 17.60.100, the planning commission shall weigh factors which contribute or detract from the development of a safe, convenient, and attractive community, including, but not limited to:

(1) any potential negative effect upon other properties in the area due to such factors as noise and odor.

(2) the effectiveness of measures to reduce negative effects upon adjacent properties by:

(a) increased property line and right-of-way buffers;

(b) planted berms and landscaping;

(c) site and building design features which contribute to the character of the surrounding area.

(3) whether the use is compatible with the character of the surrounding area.

(B) At the time of their establishment, marijuana related conditional uses shall meet the following requirements and not be located within:

(1) one thousand feet of school grounds;

(C) Separation distances referenced in subsection (B) of this section are measured in a direct line between the closest point of the facility within which the marijuana facility is located, and the closest point on the lot or parcel of land upon which any of the above itemized uses are located.

(D) Prior to final approval of the permit the applicant shall provide written documentation demonstrating that:

(1) all applicable licenses have been obtained as required by 3 AAC 306.005.

(2) from the fire marshal having jurisdiction, that the proposed conditional use is in full compliance with applicable fire code, including but not limited to AS 18.70.010 through 18.70.160, Fire Protection, and 13 AAC 50.025 through 50.080, Fire Code.

(Ord. 16-136, § 4, 2017; Ord. 16-003(SUB), § 4 (part), 2016)

17.60.160 STANDARDS FOR MARIJUANA CULTIVATION FACILITIES.

(A) Wastewater and waste material disposal plan. A wastewater and waste material disposal plan shall be submitted which demonstrates that wastewater and waste material associated with the cultivation facility is disposed of in compliance with the Alaska State Department of Environmental Conservation.

(B) Odor mitigation and ventilation plan. The applicant shall provide an odor mitigation plan detailing the effective mitigation of any odors of the proposed uses. Such plan shall demonstrate that the design for the purification of air prevents odors from materially impacting adjoining properties.

(C) Hazardous chemicals. Storage and disposal of fertilizers, pesticides, herbicides, and any other hazardous chemicals associated with the cultivation of marijuana shall comply with all local, state, and federal laws.

(D) Security. The applicant shall provide a security plan. The plan shall include, but not be limited to, education for employees on security measures.

(E) Marijuana cultivation facilities shall be set back 50 feet from public rights-of-way, and 100 feet from side or rear lot lines.

April 27, 2022

Peggy Horton, peggy.horton@matsugov.us

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facilities are decreased by 8.4%. If my property value will be negatively impacted by 8.4% due to the commission's decision to approve this conditional use permit, I am entitled to compensation for the decreased value of my property in the estimated amount of $38,220. The 8.4% decrease in property value would be applied to all residential property in the area for an estimated reduction in property values of $1,260,000. This would be a serious impact to the City of Wasilla tax base.

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907-355-6667

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Mike Shower, Senator.Mike.Shower@akleg.gov
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MSB 17.60.150

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(D) *Security.* The applicant shall provide a security plan. The plan shall include, but not be limited to, education for employees on security measures.

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PROTECTIVE COVENANTS AND RESTRICTIONS FOR THE TIERRA VERDE SUBDIVISION

PREAMBLE

T&V Developemnt, Inc. does hereby establish and file for record the following declaration, reservations, protective covenants, limitations, conditions, and restrictions regarding the use and/or improvement of the property located in the Tierra Verde Subdivision and located in the North 1/2, the North 1/2 of the South 1/2, the North 1/2 of South 1/4 of the South 1/2 and the East 1/2 of the South 1/2 of South 1/2 of the South 1/2; all being in the West 1/2 of the West 1/2 of Section 22, Township 17 North., Range 2 West ., Seward Meridian; the plat of which is recorded in the Office of the Recorder for the Palmer Recording District, as plat # 72-57, Serial # 72-3841 of the said records, which said plat makes reference to these covenants.

COVENANTS

1. No buildings or attachments shall be located on any lot nearer to the shoreline of Lucile Creek than sixty (60) feet. No buildings and attachments shall be located on any lot nearer than forty (40) feet to all roads. No buildings or attachments shall be located on any lot nearer than fifteen (15) feet to the rear lot line or any interior lot line.

2. No lot shall be used except for recreational/residential purposes. All lots may be further subdivided only in accordance with Matanuska-Susitna Borough regulations.

3. No trailers less than eight (8) feet wide by forty (40) feet in length may be used on the lots. No leanto may be longer or wider than the trailer and the leanto and trailer are to be completely finished on the outside and skirted.

4. No structure of a temporary character; trailer, basement, tent, shack, garage, barn, quonset hut, or other outbuilding shall be used on any lot as a permanent residence. Any such structure may be used as a temporary residence for no more than six (6) months.

5. No building may remain in an unfinished state for more than one and one half (11/2) years. All outbuildings, storage buildings or privies, shall be of the same desirable quality and workmanship as any recreational/ residential dwelling.

6. To maintain the setting and aesthetic value of the Tierra Verde Subdivision, no standing timber shall be cut except that which is necessary and reasonable for clearing for dwelling or other buildings or that which is necessary and reasonable to remove hazardous and dangerous timber or for the clearing of access roadways on any lot.

7. Easements for installation and maintenance of utilities are reserved as shown on the recorded plat.

8. No individual sewage disposal system or privie shall be permitted on any lot unless such system or privie is designed, located and constructed in accordance with the requirements, standards, and recommendations of the Commissioner of Health and Welfare. Approval of such system as installed shall be obtained from such authority.

Continued on page 2

9. No lot shall be used or matinained as a dumping ground for rubbish Trash, garbage, or other waste shall not be kept except in sanitary containers. All other waste shall not be kept except in sanitary containers. All other equipment for the storage or disposal of such materials shall be kept in a clean and sanitary condition. No lot shall be used for storage of vehicles, trailers, campers, or surplus property unless properly garaged.

10. No activity which is noxious or offensive shall be permitted nor shall anything be done thereon which is noxious or offensive shall be permitted nor shall anything be done thereon which may be unsightly, or become an annoyance or nuisance to the neighborhood.

11. No animals, livestock, or poultry of any kind shall be raised, bred or kept on any lot except dogs, cats, or other household pets, rpovided that they are not kept, bred, or maintained for any commercial purposes.

12. No oil or mineral rights are acquired with the land.

GENERAL PROVISIONS

1. These covenants and general provisions are to run with the land and shall be binding on all parties and all persons claiming under them unless an instrument signed by the owners of a majority of lots of record has been recorded, agreeing to change said covenants and/or general provisions in whole or part.

2. Enforcement shall be by proceedings at law or in equity against any person or persons violating or attempting to violate any covenant either to restrain violation or to recover damabes and such actions may be brought by the owner or owners of record of any lot in the subdivision.

3. Invalidation of any one of these covenants by judgement or court order shall in no wise affect any of the other provisions which shall remain in full force and effect.

Recorded August 15, 1972

PLANNING COMMISSION RESOLUTION

By: Peggy Horton
Introduced: May 2, 2022
Public Hearing: May 16, 2022
Action:

MATANUSKA-SUSITNA BOROUGH
PLANNING COMMISSION RESOLUTION NO. 22-08

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH PLANNING COMMISSION APPROVING A CONDITIONAL USE PERMIT TO OPERATE A MARIJUANA CULTIVATION FACILITY AT 3097 SOUTH SYLVAN LANE, TAX ID# 6315B01L011 & L012; WITHIN TOWNSHIP 17 NORTH, RANGE 2 WEST, SECTION 22, SEWARD MERIDIAN.

WHEREAS, Ryan McKay and Jana Weltzin on behalf of AK Legacy Genetics, submitted a conditional use permit application to operate a marijuana cultivation facility at 3097 South Sylvan Lane, Tax ID# 6315B01L011 & L012; within Township 17 North, Range 2 West, Section 22, Seward Meridian; and

WHEREAS, MSB 17.60.030 requires a conditional use permit for the operation of marijuana cultivation facilities; and

WHEREAS, unless this type of use is maintained under and in accordance with a lawfully issued permit, a marijuana cultivation facility is declared to be a public nuisance. Operation of such a land use without a permit is prohibited; and

WHEREAS, the proposed use is wholly contained within a 1,650 square foot facility; and

WHEREAS, according to the application material, the applicant is refurbishing a garage structure, originally built in 1975, for the proposed use; and

WHEREAS, the applicant stated the entire structure will receive a green metal panels on all sides to blend in with the trees and natural landscaping; and

WHEREAS, the applicant received Borough approved driveway permits for both access points onto South Sylvan Lane; and

WHEREAS, Surrounding parcels range in size from one to five acres; and

WHEREAS, the subdivisions to the west of South Sylvan Lane are fully built out with residential uses. Lots to the north, east, and south of the proposed use are developed with residential uses with a few vacant parcels mixed in; and

WHEREAS, according to the application material, the proposed use is set back approximately 141 feet from the West Cielo Court right-of-way to the north, 117 feet from the South Sylvan Lane right-of-way to the west, 122 feet from the south lot line, and 224 feet from the east lot line; and

WHEREAS, the subject parcel is mostly forested and a buffer of trees separates the proposed facility from South Sylvan Lane; and

WHEREAS, according to the application material, the facility will not be open to the public; and

WHEREAS, according to the application material, the proposed use has policies and procedures in place to prevent loitering; and

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WHEREAS, according to the application material, the use will require between two and five employees, and for short periods, up to seven; and

WHEREAS, there are no industrial equipment or processes that generate noise or dust associated with the proposed use; and

WHEREAS, according to the application material, there is no advertising signage for the facility; and

WHEREAS, according to the application material, all exterior lighting will be directed downward and shielded to mitigate any unwanted light pollution; and

WHEREAS, according to the security plan, a combination of cameras, motion detectors, alarms, and lighting will be used to secure the site and monitor all activities at the facility; and

WHEREAS, the closest school, Goose Bay Elementary, is approximately 3,000 feet away from the proposed use; and

WHEREAS, Consumption of marijuana is prohibited at the site; and

WHEREAS, persons under the age of 21 are prohibited from entering the facility; and

WHEREAS, according to the application material, the applicant provided a security plan, which includes education of employees on all security measures; and

WHEREAS, according to the application material, after proper notification to the State of Alaska Alcohol & Marijuana Control

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Office, all marijuana products deemed unusable will be mixed with compostable waste, stored within locked containers inside the facility, and eventually taken to the landfill; and

WHEREAS, the Central Mat-Su Deputy Fire Marshal has issued Plan Review Certificate #2022-061, approving the renovation and remodeling of the garage for the proposed use; and

WHEREAS, the commercial structure is in full compliance with the applicable State of Alaska fire code; and

WHEREAS, the subject parcel is approximately 2.84 acres in size; and

WHEREAS, the closest residential structure, not within this property, is located approximately 270 feet west of the proposed use; and

WHEREAS, the applicant provided all of the required site plans and operational information for the proposed use; and

WHEREAS, according to the application material, marijuana product will be packaged in sealed, air-tight containers and air sanitizers will be used when transporting marijuana to and from the premises; and

WHEREAS, according to the application material, the air filtration system will be outfitted with multiple charcoal filters to filter air for odor particles; and

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WHEREAS, according to the application material, the applicant will maintain the charcoal filters and exhaust fans according to the manufacturer's specifications; and

WHEREAS, The structure's foundation lies approximately four feet below South Sylvan Lane and 12 feet below West Cielo Court; and

WHEREAS, AK Legacy Genetics, LLC received delegated approval from the State Marijuana Control Board for marijuana cultivation license #28628, in accordance with 3 AAC 306.005; and

WHEREAS, the applicant provided written documentation showing delegated approval from the State Marijuana Control Board for marijuana cultivation license #28628; and

WHEREAS, according to the application material, the applicant will ensure that only Environmental Protection Agency approved insecticide and fungicide are used in the facility; and

WHEREAS, according to the application material, the facility will have designated shelving areas for storage of herbicides, fungicides, insecticides, fertilizers, cleaning products, and other chemicals; and

WHEREAS, according to the application material, the applicant will use and dispose of all chemicals, fertilizers, herbicides, fungicides, insecticides, cleaning chemicals, etc., in accordance with their respective manufacturers' recommendations, and comply with all local, state, and federal laws; and

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WHEREAS, the Planning Commission has reviewed this application with respect to applicable standards set forth in MSB 17.60.100, 17.60.150 and 17.60.160; and

WHEREAS, the Planning Commission conducted a public hearing on May 16, 2022 on this matter.

NOW, THEREFORE, BE IT RESOLVED, that the Matanuska-Susitna Borough Planning Commission hereby adopts the aforementioned findings of fact and makes the following conclusions of law supporting approval of Planning Commission Resolution 22-08:

1. The proposed use, with conditions, will preserve and not detract from the value, character and integrity of the surrounding area (MSB 17.60.100(B)(1)).
2. The proposed use will not be harmful to the public health, safety, convenience and welfare (MSB 17.60.100(B)(2)).
3. Sufficient setbacks, lot area, buffers or other safeguards are being provided (MSB 17.60.100(B)(3)).
4. The applicant has met all of the requirements of this chapter (MSB 17.60.100(B)(4)).
5. The proposed use will not negatively affect other properties due to factors such as noise and odor (MSB 17.60.150(A)(1)).
6. Measures are in place to reduce negative affects upon adjacent properties (MSB 17.60.150(A)(2)(a-c)).

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7. The proposed use is compatible with the character of the surrounding area (MSB 17.60.150(A)(3)).
8. The proposed use is more than 1,000 feet away from any school grounds (MSB 17.60.150(B)(1)).
9. The applicant has provided documentation demonstrating all applicable licenses pertaining to 3 AAC 306.005 have been obtained (MSB 17.60.150(D)(1)).
10. The applicant must still provide documentation demonstrating the proposed use is in full compliance with all applicable fire code (MSB 17.60.150(D)(2)).
11. The wastewater and waste material disposal plan demonstrates compliance with the Alaska State Department of Environmental Conservation (MSB 17.60.160(A)).
12. The odor mitigation plan demonstrates mitigation measures will prevent odors from materially impacting adjoining properties (MSB 17.60.160(B)).
13. Storage of nutrients, natural pesticides, and cleaners will comply with all local, state, and federal laws (MSB 17.60.160(C)).
14. A security plan which includes education for employees on security measures has been provided (MSB 17.60.160(D)).
15. The proposed use meets the minimum setback requirements for marijuana cultivation facilities (MSB 17.60.160(E)).

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BE IT FURTHER RESOLVED, that the Planning Commission finds this application does meet the standards of MSB 17.60 and does hereby approve the conditional use permit for the operation of a marijuana cultivation facility, with the following conditions:

1. The operation shall comply with all applicable state and local regulations.
2. All aspects of the operation shall comply with the description detailed in the application material and with the conditions of this permit. An amendment to the Conditional Use Permit shall be required prior to any expansion of the conditional use.
3. Borough staff shall be permitted to enter premises subject to this permit to monitor compliance with permit requirements. Such access will at minimum, be allowed on demand when activity is occurring, and/or with prior verbal or written notice, and/or at other times as necessary to monitor compliance. Denial of access to Borough staff shall be a violation of this Conditional Use Permit.

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ADOPTED by the Matanuska-Susitna Borough Planning Commission this ___ day of _____, 2022.

STAFFORD GLASHAN, Chair

ATTEST

KAROL RIESE, Planning Clerk

(SEAL)

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YES:

NO:

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PUBLIC HEARING QUASI-JUDICIAL

Resolution No. PC 22-11

Matt Gittlein for KG Enterprises, LLC

(Pages 431-594)

PUBLIC HEARING

MATANUSKA-SUSITNA BOROUGH
Planning and Land Use Department
Development Services Division
350 East Dahlia Avenue • Palmer, AK 99645
Phone (907) 861-7822
www.matsugov.us

DEVELOPMENT SERVICES DIVISION STAFF REPORT

Date:	May 4, 2022
File Number:	A10125
Applicant:	Matt Gittlein of KG Enterprises, LLC
Property Owner:	KG Enterprises, LLC
Request:	Planning Commission Resolution 22-11 Request for Conditional Use Permit to operate an alcoholic beverage package store within a convenience market with gas pumps in accordance with MSB Chapter 17.70 – Regulation of Alcoholic Beverage Uses
Location:	3068 South Trunk Road, Tax ID# 8150000L001B; within Township 17 North, Range 1 East, Section 16, Seward Meridian
Size of Property:	3.01 acres
Reviewed By:	Jason Ortiz, Development Services Manager JO
Staff:	Peggy Horton, Planner II PH
Staff Recommendation:	Approval with conditions

EXECUTIVE SUMMARY

Matt Gittlein submitted a Conditional Use Permit application to operate an alcoholic beverage package store within a convenience market with gas pumps. The applicant is proposing a 4,467 square foot building, with the alcoholic beverage package store occupying approximately 1,167 square feet. The remainder of the building will be occupied by convenience market. This project will produce traffic levels that warrant a Core Area Conditional Use Permit, which will be discussed in a separate staff report related to Planning Commission Resolution 22-10.

MSB 17.70.020 requires a conditional use permit for the operation of an alcoholic beverage package store. Unless this type of use is maintained under and in accordance with a lawfully issued permit, an alcoholic beverage package store is declared to be a public nuisance. Operation of such a land use without a permit is prohibited.

LAND USE

Historic Use:
The subject property was used as farmland according to Borough 1985 aerial photos. In 1997, a racetrack was constructed on land immediately north and the subject area was used as parking for the racetrack. The racetrack ceased operation sometime around 2011. Since that time the owner used the property for truck and trailer parking. The South Trunk Road extension was constructed in 2017 to address increased development and growth south of the Parks Highway as well as traffic congestion. The two driveways onto the property were built as part of that road construction project. In 2021, the property was replatted into Lot 1A and 1B, Happy Valley Subdivision. The subject property for the proposed use is Lot 1B, consisting of 3.01 acres.

Existing Land Use:
The applicant constructed the store building and gas pumps as proposed in the application. The Borough did not object when the applicant requested permission to have a soft opening, using only four of the eight gas pumps for credit card use only. According to the application material, this "soft opening" use does not generate traffic in excess of 100 vehicles during the morning or afternoon peak hour or more than 750 vehicles per day and therefore does not require a permit.

Surrounding Land Uses:
The subject property is located on the west side of South Trunk Road, approximately 1,600 feet southwest of the south roundabout for East Parks Highway and South Trunk Road. Land uses to the east include a private airstrip, residential, and vacant land on large parcels ranging from 10 to 51 acres. South and further west of the subject lot is a partially developed 160-lot residential use master plan development, with a community water system serving mostly one-half-acre lots. The adjacent lot to the north and west is a 12-acre parcel, largely cleared of vegetation that includes residential and commercial uses. Further to the north are residential and commercial use lots ranging in size from 0.8 to seven acres.

REVIEW OF APPLICABLE CRITERIA AND FINDINGS

MSB 17.03 – Public Notification
Borough staff mailed a total of 19 notices on March 16, 2022, to all property owners within the Happy Valley Subdivision and within 600 feet of the subject lot. The Frontiersman published the public hearing notice in the April 6, 2022 issue. Staff posted the application material on the Borough's website and emailed the public notice, application material, and a request for comments to outside agencies and the Gateway Community Council on March 10, 2022. Staff did not receive any comments from the community council or the public.

Section 17.70.100 Standards

(A) A conditional use may be approved only if it meets the general requirements of this section in addition to any other standards required by this chapter:

(1) Findings. In granting a conditional use permit the planning commission must make the following findings:

(a) The conditional use is compatible with and will preserve or not materially detract from the value, character and integrity of the surrounding area.

Findings of Fact:

1. Land uses to the east include a private airstrip, residential, and vacant land on large parcels ranging from 10 to 51 acres. South and further west of the subject lot is a partially developed 160-lot residential master plan development, with a community water system serving mostly one-half-acre lots. The adjacent lot to the north and west is a 12-acre parcel, largely cleared of vegetation that includes a residence and commercial uses. Further to the north are residential and commercial lots ranging in size from 0.8 to seven acres.
2. The proposed use will access South Trunk Road.
3. South Trunk Road is classified as a minor arterial, which is capable of accommodating traffic generated by several commercial retail businesses.
4. There is a mixture of industrial, residential, and commercial uses with frontage on South Trunk Road.
5. According to the application material, the building is approximately 4,467 square feet in size, with the alcoholic beverage package store occupying approximately 1,167 square feet. The remainder of the building will be occupied by convenience market with gas pumps.
6. According to the application material, the proposed hours of operation for the package store are 8:00 a.m. to 12:00 a.m., daily.
7. The applicant provided an exterior lighting design plan with downward directed and shielded fixtures to mitigate light spillage onto nearby properties.
8. The applicant constructed a six-foot tall chain-link fence with privacy slats along the south property boundary, and plans for landscaping with trees along the south and east sides of the property.
9. The one-story market is flat-roofed with lowered shed roof overhangs on three sides, covered in red lap siding on the upper portion, and buff colored T1-11 below.

Conclusions of Law: Based on the above findings, and with conditions, the proposed use is compatible with and will preserve or not materially detract from the value, character and integrity of the surrounding area (MSB 17.70.100(A)(1)(a)).

(b) That granting the conditional use permit will not be harmful to the public health, safety, convenience and welfare.

Findings of Fact:

1. The proposed use will access South Trunk Road.

2. South Trunk Road is classified as a minor arterial, which is capable of accommodating traffic generated by several commercial retail businesses.
3. The applicant is actively working with the Permit Center and Public Works Engineer to finalize the driveway permits.
4. According to the application material, the building is approximately 4,467 square feet in size, with the alcoholic beverage package store occupying approximately 1,167 square feet. The remainder of the building will be occupied by convenience market with gas pumps.
5. The nearest school (Machetanz Elementary) is approximately 8,700 feet southwest of the site. State regulations preclude package store licenses within 200 feet of a school.
6. The Borough has no record of complaints filed under MSB 8.40 Liquor License Referrals, against any of the other Valley Country Store operations.
7. The Alcohol and Marijuana Control Office (AMCO) has not suspended or revoked any alcohol licenses in the last 12 months relating to KG Enterprises, LLC.
8. The applicant provided a Traffic Impact Analysis for the proposed use.
9. The Traffic Impact Analysis indicates the proposed use will generate more than 100 vehicles during morning and afternoon peak hours.
10. The Traffic Impact Analysis indicates the proposed use will generate less than 250 vehicles during morning and afternoon peak hours.
11. The Traffic Impact Analysis makes the following findings/recommendations: 1) Approaches shall be permitted and constructed in accordance with MSB guidelines; 2) Because the posted speed limit is below 50 MPH and furthermore that peak hour site traffic volumes are less than 100 vehicles at both approaches, speed-change lanes are not required; 3) Because driveway sight distances exceed minimum distances, no sight distance obstruction mitigation is required.
12. According to the application material, the applicant will provide a retention basin constructed between the gas pumps and the eastern property line to capture any potential contaminated runoff leaving the site.
13. The applicant submitted Matanuska-Susitna Borough Deputy Fire Marshal approved plan reviews for the store (#2022-007), fuel tank or dispensing system (#2022-008), the fuel canopy (#2022-009), and the propane tank or dispensing system (#2022-012), to ensure the development is in compliance with the applicable fire code.

Discussion: Staff recommends a condition which requires the applicant to provide documentation showing the proposed septic system has been designed in accordance with the Alaska Department of Environmental Conservation (ADEC) regulations applicable to this development. Staff also recommends a condition which requires the applicant to obtain approved driveway permits for both driveways onto the site.

Conclusions of Law: Based on the above findings, and with conditions, the proposed use will not be harmful to the public health, safety, convenience, and welfare (MSB 17.70.100(A)(1)(b)).

(c) That sufficient setbacks, lot area, buffers or other safeguards are being provided to meet the conditions listed in subsections (A) and (B) of this section.

Findings of Fact:

1. The subject parcel is approximately 3.01 acres in size.
2. According to the application material, the structure is approximately 147.5 feet from the South Trunk Road right-of-way, 294 feet from the south property line, 40 feet from the west property line, and 98.3 feet from the north property line.
3. The closest residential structure is approximately 350 feet south of the proposed use.
4. According to the application material, the proposed alcoholic beverage package store will be located within the convenience market.
5. According to the application material, the proposed store design includes separate cashier counters for the alcoholic beverage package store and convenience market.
6. The nearest school (Machetanz Elementary) is approximately 8,700 feet southwest of the site. State regulations preclude package store licenses within 200 feet of a school.
7. The proposed use will access South Trunk Road.
8. South Trunk Road is classified as a minor arterial, which is capable of accommodating traffic generated by several commercial retail businesses.
9. The applicant is actively working with the Permit Center and Public Works Engineer to finalize the driveway permits.
10. The applicant provided a Traffic Impact Analysis for the proposed use.
11. The Traffic Impact Analysis indicates the proposed use will generate more than 100 vehicles during morning and afternoon peak hours.
12. The Traffic Impact Analysis indicates the proposed use will generate less than 250 vehicles during morning and afternoon peak hours.
13. The Traffic Impact Analysis makes the following findings/recommendations: 1) Approaches shall be permitted and constructed in accordance with MSB guidelines; 2) Because the posted speed limit is below 50 MPH and furthermore that peak hour site traffic volumes are less than 100 vehicles at both approaches, speed-change lanes are not required; 3) Because driveway sight distances exceed minimum distances, no sight distance obstruction mitigation is required.
14. According to the application material, the applicant will provide a retention basin constructed between the gas pumps and the eastern property line to capture any potential contaminated runoff leaving the site.
15. The applicant submitted Matanuska-Susitna Borough Deputy Fire Marshal approved plan reviews for the store (#2022-007), fuel tank or dispensing system (#2022-008), the fuel canopy (#2022-009), and the propane tank or dispensing system (#2022-012), to ensure the development is in compliance with the applicable fire code.

Discussion: Staff recommends a condition which requires the applicant to provide documentation showing the proposed septic system has been designed in accordance with the

Alaska Department of Environmental Conservation (ADEC) regulations applicable to this development. Staff also recommends a condition which requires the applicant to obtain approved driveway permits for both driveways onto the site.

Conclusions of Law: Based on the above findings, and with conditions, sufficient setbacks, lot area, buffers or other safeguards are being provided (MSB 17.70.100(A)(1)(c)).

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(2) General Standards. In considering whether the general standards are satisfied, the planning commission may weight factors contributing or detracting from the development of a safe, convenient and attractive community, including, but not limited to:

(a) Any potential negative effect upon other properties in the area due to such factors as dust, noise, obtrusive advertising and glare.

Findings of Fact:

1. According to the application material, the structure is approximately 147.5 feet from the South Trunk Road right-of-way, 294 feet from the south property line, 40 feet from the west property line, and 98.3 feet from the north property line.
2. The applicant has paved the area around the convenience market and fuel station, which will control the dust.
3. The applicant provided an exterior lighting design plan with downward directed and shielded fixtures to mitigate light spillage onto nearby properties.
4. The lighting design includes exterior lights mounted under the overhangs of the store, downward-directed lights in the fuel canopy, and 25-foot tall pole lights focusing on the driveways and various ancillary uses of the site.
5. According to the application material, signs will be limited to a 36-foot tall lighted sign near the northern driveway, on the fuel canopy, and on the building itself.
6. The closest residential structure is approximately 350 feet south of the proposed use.
7. The applicant is not proposing any outdoor amplified sound activities.
8. The operation must comply with the maximum permissible sound level limits allowed, per the requirements of MSB 8.52 – Noise, Amplified Sound and Vibration.

Conclusions of Law: Based on the above findings, there will not be any negative effects upon the properties in the area due to such factors as dust, noise, obtrusive advertising and glare (MSB 17.70.100(A)(2)(a)).

(b) Any potential negative effect on the safe, efficient flow of traffic on any highway arterial, collector or street from which access to and from the establishment is obtained.

Findings of Fact:

1. The proposed use will access South Trunk Road.
2. The applicant is actively working with the Permit Center and Public Works Engineer to finalize the driveway permits.

3. South Trunk Road is classified as a minor arterial, which is capable of accommodating traffic generated by several commercial retail businesses.
4. The South Trunk Road extension was constructed in 2017 to address increased development and growth south of the Parks Highway as well as traffic congestion.
5. The applicant provided a Traffic Impact Analysis for the proposed use.
6. The project engineer determined the north and south driveway intersections with South Trunk Road have a Level of Service of A.
7. The Traffic Impact Analysis indicates the proposed use will generate more than 100 vehicles during morning and afternoon peak hours.
8. The Traffic Impact Analysis indicates the proposed use will generate less than 250 vehicles during morning and afternoon peak hours.
9. The Traffic Impact Analysis makes the following findings/recommendations: 1) Approaches shall be permitted and constructed in accordance with MSB guidelines; 2) Because the posted speed limit is below 50 MPH and furthermore that peak hour site traffic volumes are less than 100 vehicles at both approaches, speed-change lanes are not required; 3) Because driveway sight distances exceed minimum distances, no sight distance obstruction mitigation is required.

Discussion: Staff recommends a condition which requires the applicant to obtain approved driveway permits for both driveways onto the site. The applicant has applied for a Core Area Conditional Use Permit concurrently with this Conditional Use Permit application.

Conclusions of Law: Based on the above findings, and with conditions, the proposed use will not negatively affect the safe, efficient flow of traffic on any highway, arterial, collector or street from which access to and from the establishment is obtained (MSB 17.70.100(A)(2)(b)).

(c) The effectiveness of any measures to reduce any negative effect upon adjacent and nearby properties by property line buffers and arterial buffers, planted berms, landscaping, reduction or elimination of obtrusive or garish signing or other features, lowered building elevation, clustering with other commercial establishments and use of frontage roads to reduce the number of entries and exists onto highways, arterials and collectors, and where the surrounding area is predominantly residential in character, site and building design features that contribute to the residential character of the development.

Findings of Fact:

1. The subject parcel is approximately 3.01 acres in size.
2. According to the application material, the structure is approximately 147.5 feet from the South Trunk Road right-of-way, 294 feet from the south property line, 40 feet from the west property line, and 98.3 feet from the north property line.
3. The applicant constructed a six-foot tall chain-link fence with privacy slats along the south property boundary, and plans for landscaping with trees along the south and east sides of the property.

4. According to the application material, signs will be limited to a 36-foot tall lighted sign near the northern driveway, on the fuel canopy, and on the building itself.
5. The applicant provided an exterior lighting design plan with downward directed and shielded fixtures to mitigate light spillage onto nearby properties.
6. The lighting design includes exterior lights mounted under the overhangs of the store, downward-directed lights in the fuel canopy, and 25-foot tall pole lights focusing on the driveways and various ancillary uses of the site.
7. The one-story market is flat-roofed with lowered shed roof overhangs on three sides, covered in red lap siding on the upper portion, and buff colored T1-11 below.
8. There is a mixture of industrial, residential, and commercial uses with frontage on south Trunk Road.
9. Land uses to the east include a private airstrip, residential, and vacant land on large parcels ranging from 10 to 51 acres. South and further west of the subject lot is a partially developed 160-lot residential master plan development, with a community water system serving mostly one-half-acre lots. The adjacent lot to the north and west is a 12-acre parcel, largely cleared of vegetation that includes a residence and commercial uses. Further to the north are residential and commercial lots ranging in size from 0.8 to seven acres.
10. The proposed use will access South Trunk Road.
11. South Trunk Road is classified as a minor arterial, which is capable of accommodating traffic generated by several commercial retail businesses.
12. The applicant is actively working with the Permit Center and Public Works Engineer to finalize the driveway permits.

Conclusions of Law: Based on the above findings, measures will be in place to reduce any negative effect upon adjacent and nearby properties (MSB 17.70.100(A)(2)(c)).

(d) Whether there are adequate parking facilities to accommodate a reasonably expected increased demand for parking created by issuing the permit.

Finding of Fact:

1. According to the site plan, the project will provide 20 customer parking spaces.
2. According to the site plan, the applicant will provide two customer parking spaces designated for persons with disabilities.
3. There will be approximately one parking space for every 200 square feet of building floor area.

Conclusion of Law: Based on the above findings, and with conditions, adequate parking will be provided (MSB 17.70.100(A)(2)(d)).

(e) Whether access to the premises will create an unreasonable traffic hazard.

Findings of Fact:

1. The proposed use will access South Trunk Road.
2. The applicant is actively working with the Permit Center and Public Works Engineer to finalize the driveway permits.
3. South Trunk Road is classified as a minor arterial, which is capable of accommodating traffic generated by several commercial retail businesses.
4. The South Trunk Road extension was constructed in 2017 to address increased development and growth south of the Parks Highway as well as traffic congestion.
5. The applicant provided a Traffic Impact Analysis for the proposed use.
6. The project engineer determined the north and south driveway intersections with South Trunk Road have a Level of Service of A.
7. The Traffic Impact Analysis indicates the proposed use will generate more than 100 vehicles during morning and afternoon peak hours.
8. The Traffic Impact Analysis indicates the proposed use will generate less than 250 vehicles during morning and afternoon peak hours.
9. The Traffic Impact Analysis makes the following findings/recommendations: 1) Approaches shall be permitted and constructed in accordance with MSB guidelines; 2) Because the posted speed limit is below 50 MPH and furthermore that peak hour site traffic volumes are less than 100 vehicles at both approaches, speed-change lanes are not required; 3) Because driveway sight distances exceed minimum distances, no sight distance obstruction mitigation is required.

Discussion: Staff recommends a condition which requires the applicant to obtain approved driveway permits for both driveways onto the site. The applicant has applied for a Core Area Conditional Use Permit concurrently with this Conditional Use Permit application.

Conclusion of Law: Based on the above findings, and with conditions, access to the premises will not create an unreasonable traffic hazard (MSB 17.70.100(A)(2)(e)).

(f) Whether a reasonably expected increase in traffic will overtax existing road systems.

Findings of Fact:

1. The proposed use will access South Trunk Road.
2. The applicant is actively working with the Permit Center and Public Works Engineer to finalize the driveway permits.
3. South Trunk Road is classified as a minor arterial, which is capable of accommodating traffic generated by several commercial retail businesses.
4. The South Trunk Road extension was constructed in 2017 to address increased development and growth south of the Parks Highway as well as traffic congestion.

5. The Matanuska-Susitna Borough Long Range Transportation Plan, was adopted in 2017 and lists Trunk Road at a Level of Service (LOS) of "C or better".
6. The project engineer determined the north and south driveway intersections with South Trunk Road have a Level of Service of A.
7. The applicant provided a Traffic Impact Analysis for the proposed use.
8. The Traffic Impact Analysis indicates the proposed use will generate more than 100 vehicles during morning and afternoon peak hours.
9. The Traffic Impact Analysis indicates the proposed use will generate less than 250 vehicles during morning and afternoon peak hours.
10. The Traffic Impact Analysis makes the following findings/recommendations: 1) Approaches shall be permitted and constructed in accordance with MSB guidelines; 2) Because the posted speed limit is below 50 MPH and furthermore that peak hour site traffic volumes are less than 100 vehicles at both approaches, speed-change lanes are not required; 3) Because driveway sight distances exceed minimum distances, no sight distance obstruction mitigation is required.

Discussion: Staff recommends a condition which requires the applicant to obtain approved driveway permits for both driveways onto the site. The applicant has applied for a Core Area Conditional Use Permit concurrently with this Conditional Use Permit application.

Conclusion of Law: Based on the above findings, and with conditions, traffic will not overtax existing road systems (MSB 17.70.100(A)(2)(f)).

(g) Whether the use is incompatible with the character of the surrounding neighborhood.

Findings of Fact:

1. The subject parcel is approximately 3.01 acres in size.
2. Land uses to the east include a private airstrip, residential, and vacant land on large parcels ranging from 10 to 51 acres. South and further west of the subject lot is a partially developed 160-lot residential master plan development, with a community water system serving mostly one-half-acre lots. The adjacent lot to the north and west is a 12-acre parcel, largely cleared of vegetation that includes a residence and commercial uses. Further to the north are residential and commercial lots ranging in size from 0.8 to seven acres.
3. There is a mixture of industrial, residential, and commercial uses with frontage on South Trunk Road.
4. The one-story market is flat-roofed with lowered shed roof overhangs on three sides, covered in red lap siding on the upper portion, and buff colored T1-11 below.
5. According to the application material, the building is approximately 4,467 square feet in size, with the alcoholic beverage package store occupying approximately 1,167 square feet. The remainder of the building will be occupied by convenience market with gas pumps.

6. The applicant constructed a six-foot tall chain-link fence with privacy slats along the south property boundary, and plans for landscaping with trees along the south and east sides of the property.
7. The applicant provided an exterior lighting design plan with downward directed and shielded fixtures to mitigate light spillage onto nearby properties.
8. The closest residential structure is approximately 350 feet south of the proposed use.
9. The applicant is not proposing any outdoor amplified sound activities.
10. The proposed use will access South Trunk Road.
11. South Trunk Road is classified as a minor arterial, which is capable of accommodating traffic generated by several commercial retail businesses.
12. According to the application material, the proposed hours of operation for the package store are 8:00 a.m. to 12:00 a.m., daily.

Conclusion of Law: Based on the above findings, and with conditions, the proposed use is compatible with the character of the surrounding area (MSB 17.70.100(A)(2)(g)).

(3) The commission shall deny the application if it does not meet the application standards.

17.70.110 Special Standards for Liquor Uses.

(A) In addition to the general standards, a commercial use shall only be approved if it meets the requirements of this section.

(B) An application shall be denied if the planning commission finds, based on the evidence presented, that one or more of the following are applicable.

(1) There is, or the use would tend to result in, a high crime rate or a high incidence of alcohol-related accidents in the area.

Findings of Fact:

1. There is no information available to determine where individuals involved in an alcohol-related accident obtained alcoholic beverage(s).
2. A package store does not serve liquor on the premises.
3. Consumption on site is prohibited.
4. According to the application material, if a customer is seen consuming alcohol on the premises, they will be asked to leave, and if necessary, State Troopers may be called.
5. Persons under the age of 21 are prohibited from purchasing alcoholic beverages.
6. Alaska Statute 04.16.030 specifically prohibits the sale of alcoholic beverages to drunken persons.

Conclusion of Law: Based on the above findings, and with conditions, the proposed use will not increase the crime rate in the area or increase alcohol-related accidents (MSB 17.70.110(B)(1)).

(2) The applicant or a person with an interest in the application has had an interest in a liquor license which was suspended or revoked in the 12 month preceding the application.

Finding of Fact:

1. The Alcoholic & Marijuana Control Office has no record of violations by KG Enterprises, LLC.

Conclusion of Law: Based on the above finding, the applicant has not had a liquor license suspended or revoked in the 12 months preceding the application (MSB 17.70.110(B)(2)).

(3) The applicant or person with an interest in the application demonstrated that the person is untrustworthy or unfit to conduct the operation of a licensed business, or is a potential source of harm to the public.

Finding of Fact:

1. Staff has no information indicating the applicant, KG Enterprises, LLC (dba Valley Country Store) is untrustworthy or unfit to conduct business in the Borough or that the applicant is a potential source of harm to the public.

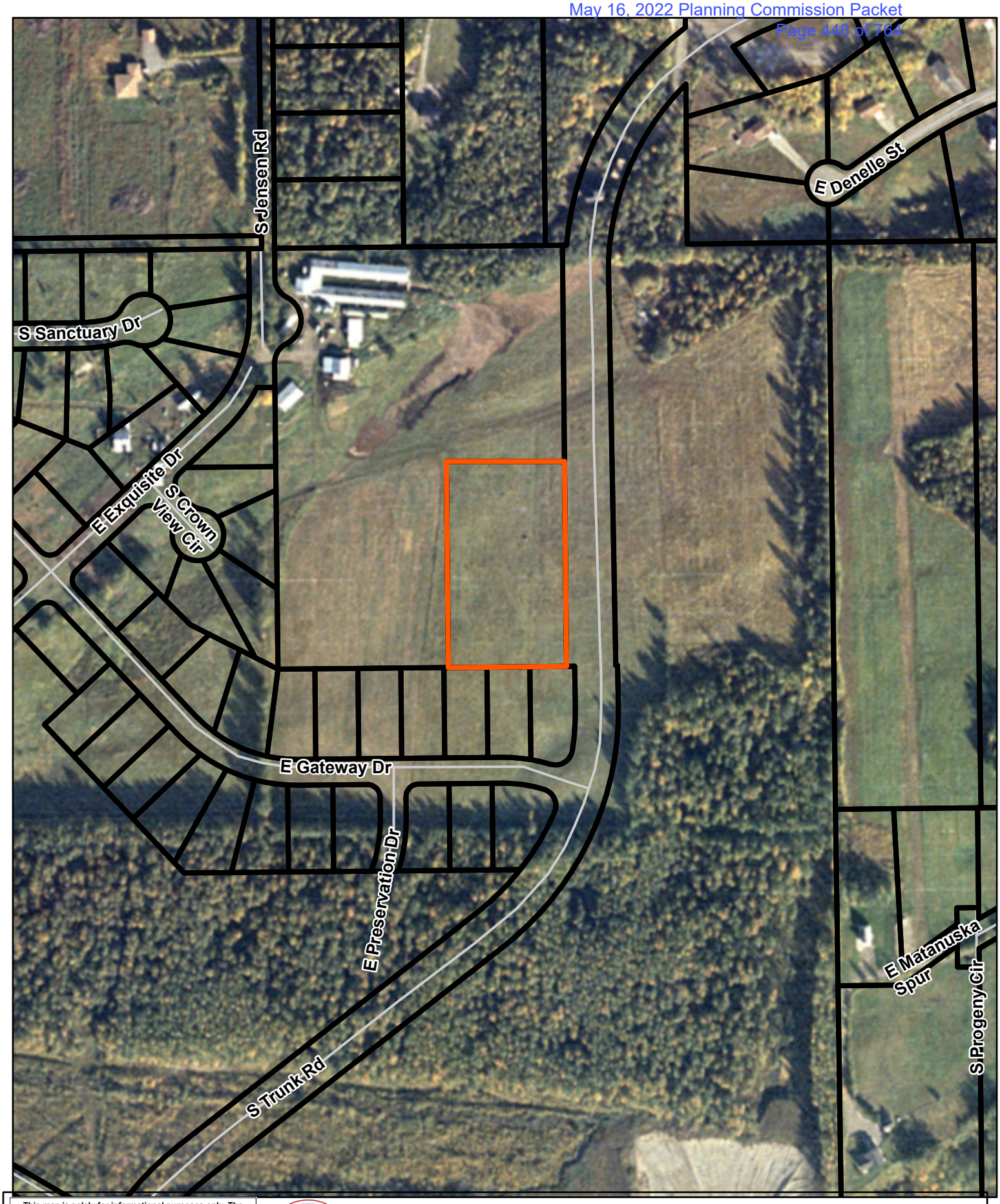
Conclusion of Law: Based on the above finding, the applicant is trustworthy or fit to conduct business in the Borough and the applicant is not a potential source of harm to the public (MSB 17.70.110(B)(3)).

STAFF RECOMMENDATIONS

Staff recommends approval of the Conditional Use Permit to operate an alcoholic beverage package store within a convenience market with gas pumps at 3068 South Trunk Road (Tax ID# 8150000L001B). The proposed use meets all the standards of MSB 17.70.100 and 17.70.110. Staff also recommends the following conditions:

1. The operation shall comply with all other applicable federal, state, and local regulations.
2. All aspects of the operation shall comply with the description detailed in the application material and with the conditions of this permit. An amendment to the Conditional Use Permit shall be required prior to any expansion of the conditional use.
3. Prior to operation, obtain approved driveway permits for both driveways onto the site.
4. The operation shall comply with the maximum permissible sound level limits allowed, per the requirements of MSB 17.61.080 – Noise Standards and MSB 8.52 – Noise, Amplified Sound and Vibration.
5. Prior to operating, a copy of the approval issued by ADEC for the on-site septic system shall be provided to the MSB Development Services Division.
6. Provide a copy of the approved State of Alaska package store license #1241, within 30 days of its issuance.

If the Planning Commission chooses to deny this permit, findings for denial must be prepared by the Commission.



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1985 Aerial for 8150000L001B

0 200 400 Feet

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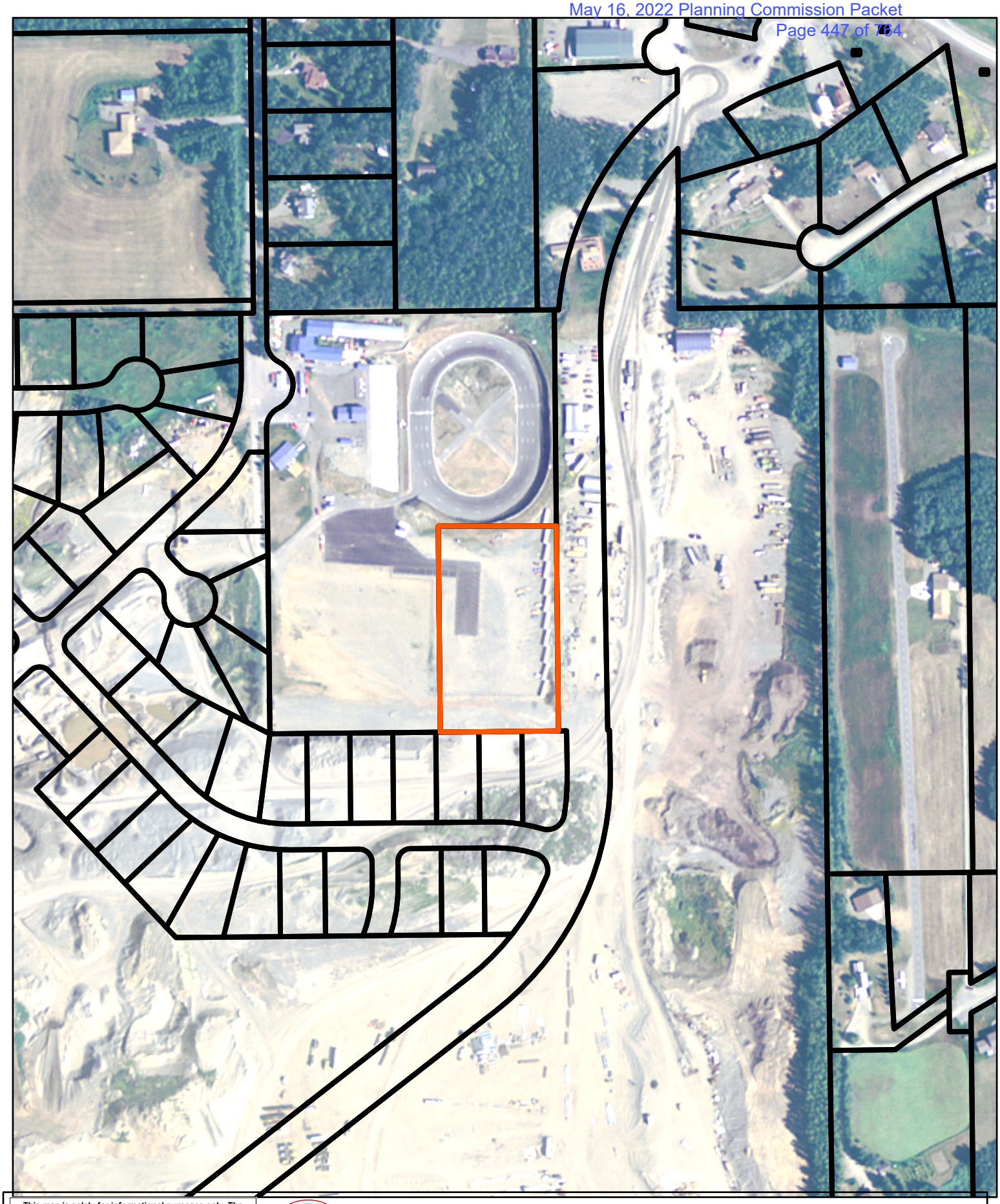
MSB Development Services Division: 4/19/2022



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MSB Development Services Division: 4/19/2022

2004 Aerial for 8150000L001B

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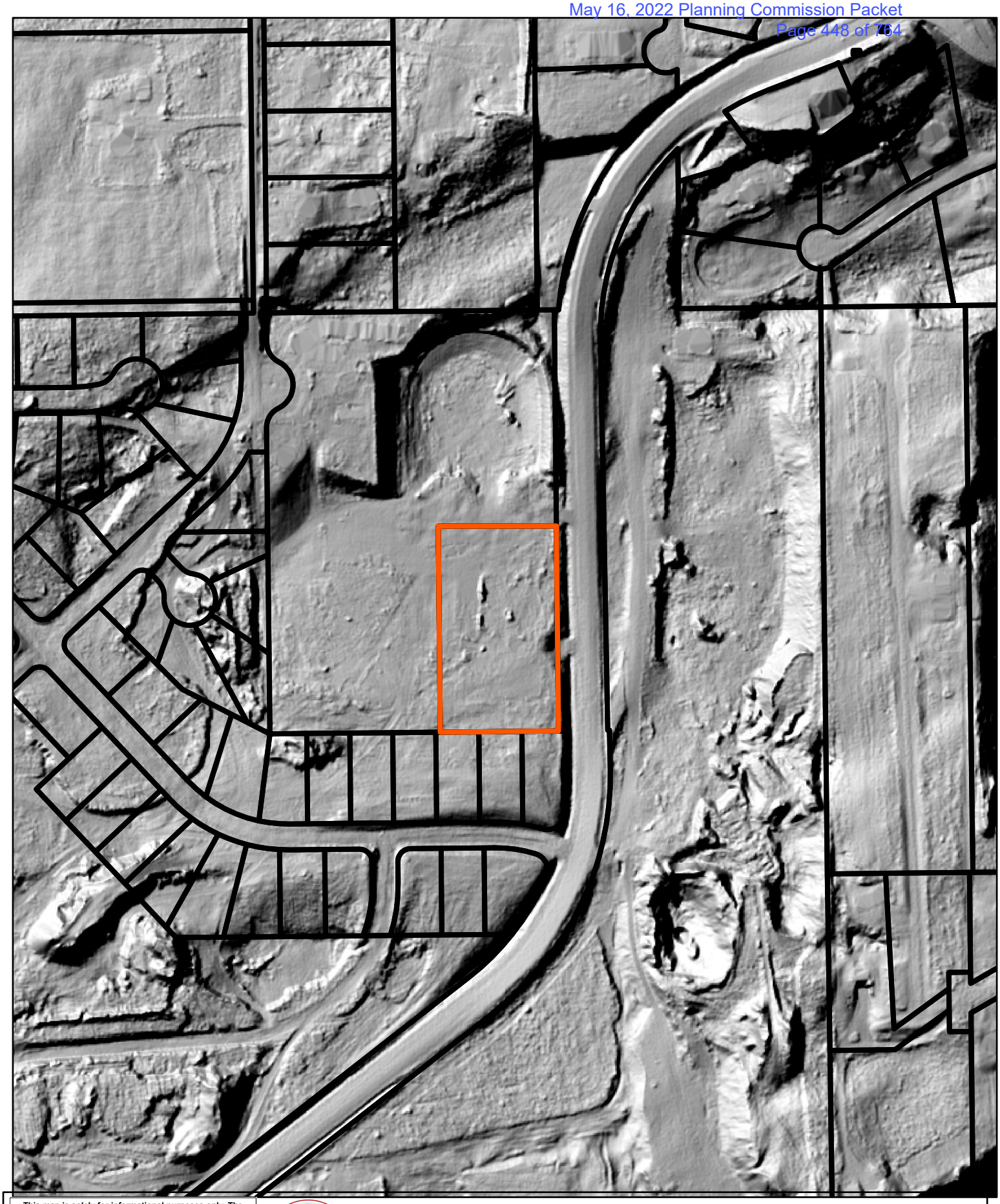

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2019 Hillshade for 8150000L001B

0 200 400 Feet

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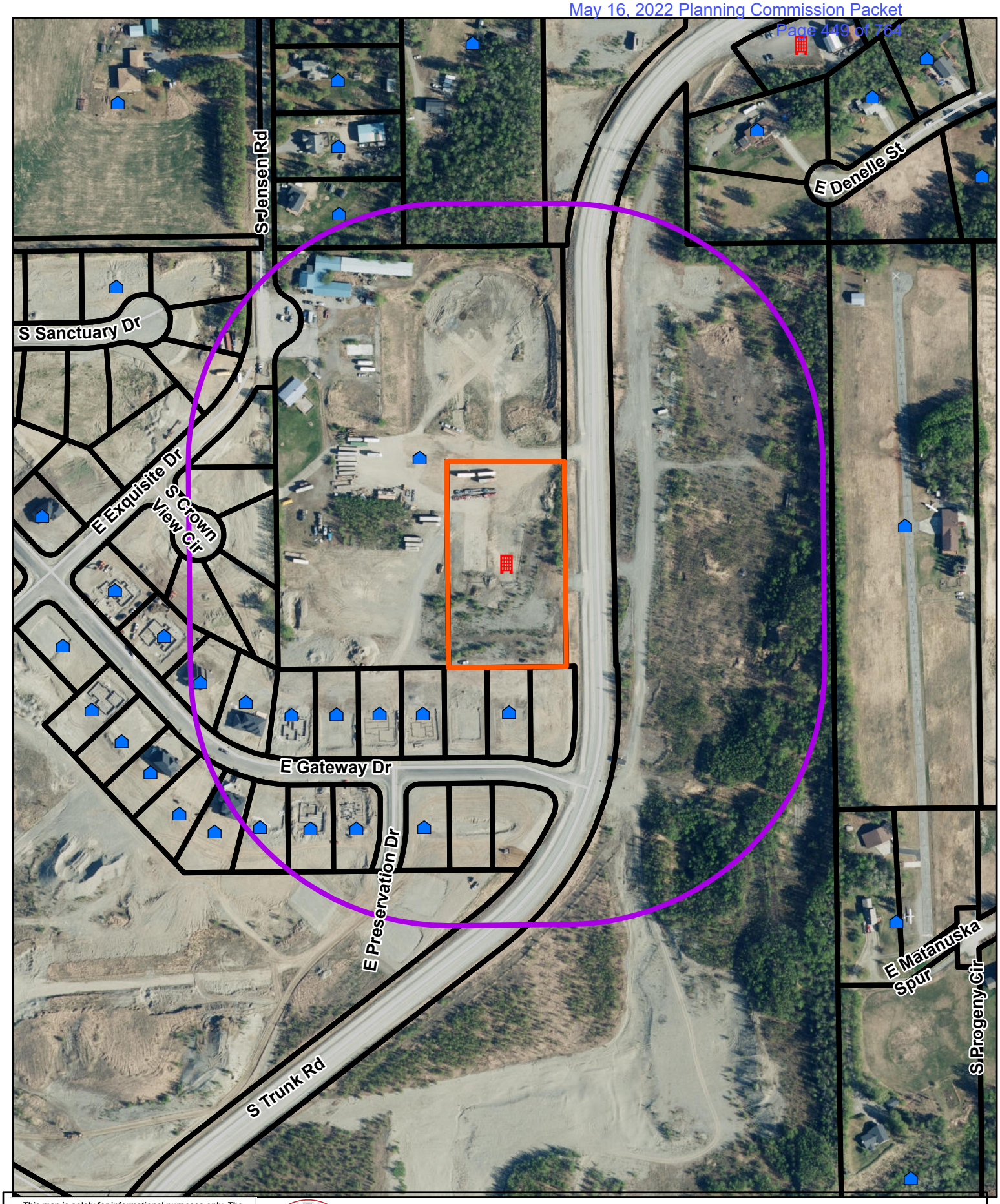
MSB Development Services Division: 4/19/2022



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Land Use Map for 8150000L001B

0 200 400 Feet

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MSB Development Services Division: 4/19/2022

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Site Plan Overlay for 8150000L001B

0 50 100 Feet

MSB Development Services Division: 4/20/2022

Peggy Horton

From: Peggy Horton
Sent: Thursday, March 10, 2022 9:58 AM
To: Allen Kemplen AICP-CTP - DOT&PF (allen.kemplen@alaska.gov); Melanie Nichols (Melanie.nichols@alaska.gov); Kyler Hylton (kyler.hylton@alaska.gov); George C Horton (george.horton@alaska.gov); James Walker (james.walker2@alaska.gov); 'oran.woolley@alaska.gov'; mearow@matanuska.com; 'row@enstarnaturalgas.com'; 'row@mtasolutions.com'; GCI ROW (ospdesign@gci.com); Fire Code; Jill Irsik; Eric Phillips; regpagemaster@usace.army.mil; Terry Dolan; Jamie Taylor; Brad Sworts; Elaine Flagg; Charlyn Spannagel; Alex Strawn; Planning; Fred Wagner; Permit Center; Jason Ortiz; Theresa Taranto; Andy Dean; John Aschenbrenner; Dolores McKee; 'gatewaycommunitycouncil@gmail.com'; 'kcelliot@alaska.edu'; 'opt.tim.us.breeden@gmail.com'; 'antiquetuck@gmail.com'; 'lisah_ak@hotmail.com'; 'markmobley@ymail.com'; davemtp@mtaonline.net; 'lszipszky@palmerpolice.com'; 'susansteele550@gmail.com'; 'blushingmoose@yahoo.com'
Subject: Request for Review and Comments: Valley Country Store #4 Core Area CUP and Package Store CUP

Good Morning,

APPLICANT: Matt Gittlein, for KG Enterprises, LLC

LOCATION: Tax ID #8125000L001B; within Township 17 North, Range 1 East, Section 16, Seward Meridian RSA: 9

A conditional use permit application under MSB 17.61, Core Area, ***and*** a conditional use permit application under MSB 17.70, Regulation of Alcoholic Beverage Uses, for the operation of a convenience market with gas pumps and alcoholic beverage package store at 3068 South Trunk Road. The Planning Commission will conduct a public hearing on these two requests on ***May 16, 2022***.

Application materials may be viewed online at www.matsugov.us by clicking on 'All Public Notices & Announcements'. A direct link to the application material is here: Matanuska-Susitna Borough - Public Hearing Notice for Conditional Use Permits for a Convenience Market with gas pumps and alcohol package store (matsugov.us)

Comments are due on or before April 15, 2022 and will be included in the Planning Commission packet for the Commissioner's review and information. Please be advised that comments received from the public after that date will not be included in the staff report to the Planning Commission. Thank you for your review.

Regards,

Peggy Horton
Matanuska-Susitna Borough
Development Services Division
Planner II
907-861-7862

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Total Number of Pounds	Total Postage Paid for Mailpieces	Fee Paid
6.302	10.07	9.35

Mailed For	Mailed By
Dev Services	Nikki

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Lisa Delong
(Postmaster or Designee)

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0000368428 MAR 16 2022

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affixed (by round-date) at the time o

If payment of total fee due is being paid by Permit Imprint, include the *PostalOne!*® Transaction Number here: _____

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MAR 16 2022
USPS

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See Reverse for Instructions

58049B07L003 1
ALASKA CUSTOM HOMEBUILDERS LLC
1735 S CREEKSIDE CIR
WASILLA AK 99654-8293

58049B06L002 2
AMADOR SALINAS PORFIRIO A
20826 TRAILHEAD AVE
EAGLE RIVER AK 99577

58172B06L017 3
ARCTIC DEVCO INC
PO BOX 3489
PALMER, AK 99645-3489

58049B06L009 4
BARTELLI ALAN T & BRENDA J
6829 E GATEWAY DR
PALMER AK 99645-1890

58049B05L001 5
BENTON THADDEUS C & JAMIE A
6613 FAIRWEATHER DR
ANCHORAGE AK 99518

56083000T002 6
CROSS COUNTRY CHURCH
PO BOX 874376
WASILLA AK 99687

58049B05L007 7
DAVIDS INVESTMENTS LLC
PO BOX 877021
WASILLA AK 99687

58049B06L007 8
DROBENKO INVESTMENTS LLC
3437 S BARN GABLE LOOP
WASILLA AK 99654-0020

58049B05L009 9
ELISHA CUSTOM HOMES LLC
PMB 259
189 E NELSON AVE
WASILLA AK 99654-6462

58150000L001B 10
KG ENTERPRISE
4891 E STONEY HOLLOW DR
WASILLA AK 99654

58049B06L011 11
LEONSON DESIGN LLC
1660 W PATRICIA AVE
WASILLA AK 99654

58150000L001A 12
LONG INVESTMENTS LLC
220 W GERONDALE CIR
WASILLA AK 99654

58049B06L008 13
NAY NASRUK & ELIA
PO BOX 876
KOTZEBUE AK 99752-0876

58049B06L004 14
ROYAL CASTLE MASONRY LLC
4400 E PAMELA DR
WASILLA AK 99654

52617000L00A5 15
SHUPE LANNY R & KIMBERLY M
2091 S JENSEN RD
PALMER AK 99645

58049B05L004 16
SINGLETON WILLIAM R & BROOKE L
PO BOX 875782
WASILLA AK 99687-5782

52539B01L009 17
STOCKER JOSEPH D & STOCKER DOUGLAS W
STOCKER ANASTASIA M
% DOUGLAS W STOCKER
PO BOX 877005
WASILLA AK 99687-7005

58049B05L006 18
WICKHAM TRACY L & EMILY M
STE B PMB 906
2521 E MOUNTAIN VILLAGE DR
WASILLA AK 99654

tara0609
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3/15/2022 10:21:33 AM

Gateway Community Council 19
PO Box 578
Palmer, AK 99645

Matanuska-Susitna Borough
Development Services Division
350 E. Dahlia Avenue
Palmer, Alaska 99645

tara0609
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3/15/2022 10:21:33 AM

The Matanuska-Susitna Borough Planning Commission will consider the following:

Matt Gittlein, of KG Enterprises, LLC, filed a conditional use permit application under MSB 17.61, Core Area, and a conditional use permit application under MSB 17.70, Regulation of Alcoholic Beverage Uses, for the operation of a convenience market with gas pumps and alcoholic beverage package store at 3068 South Trunk Road, Tax ID #8150000L001B; within Township 17 North, Range 1 East, Section 16, Seward Meridian.

The Matanuska-Susitna Borough Planning Commission will conduct a public hearing concerning the applications on ***Monday, May 16, 2022, at 6:00 p.m.*** in the Borough Assembly Chambers located at 350 E. Dahlia Avenue in Palmer. This may be the only presentation of these items before the Planning Commission and you are invited to attend. Planning Commission members may not receive or engage in ex-parte contact with the applicant, other interested parties in the applications, or members of the public concerning the applications or issues presented in the applications.

Application material may be viewed online at www.matsugov.us by clicking on "All Public Notices & Announcements." For additional information, you may contact Peggy Horton, Planner II, by phone: 907-861-7862. Provide written comments by e-mail to peggy.horton@matsugov.us, or by mail to MSB Development Services Division, 350 E. Dahlia Avenue, Palmer, AK 99645.

The public may provide verbal testimony in person at the meeting or telephonically by calling 1-855-290-3803. In order to be eligible to file an appeal from a decision of the Planning Commission, a person must be designated an "interested party". See MSB 15.39.010 for the definition of "interested party". The procedures governing appeals to the Board of Adjustment and Appeals are contained in MSB 15.39.010-250, which is available on the Borough home page: www.matsugov.us, in the Borough Clerk's office, and at various libraries within the borough.

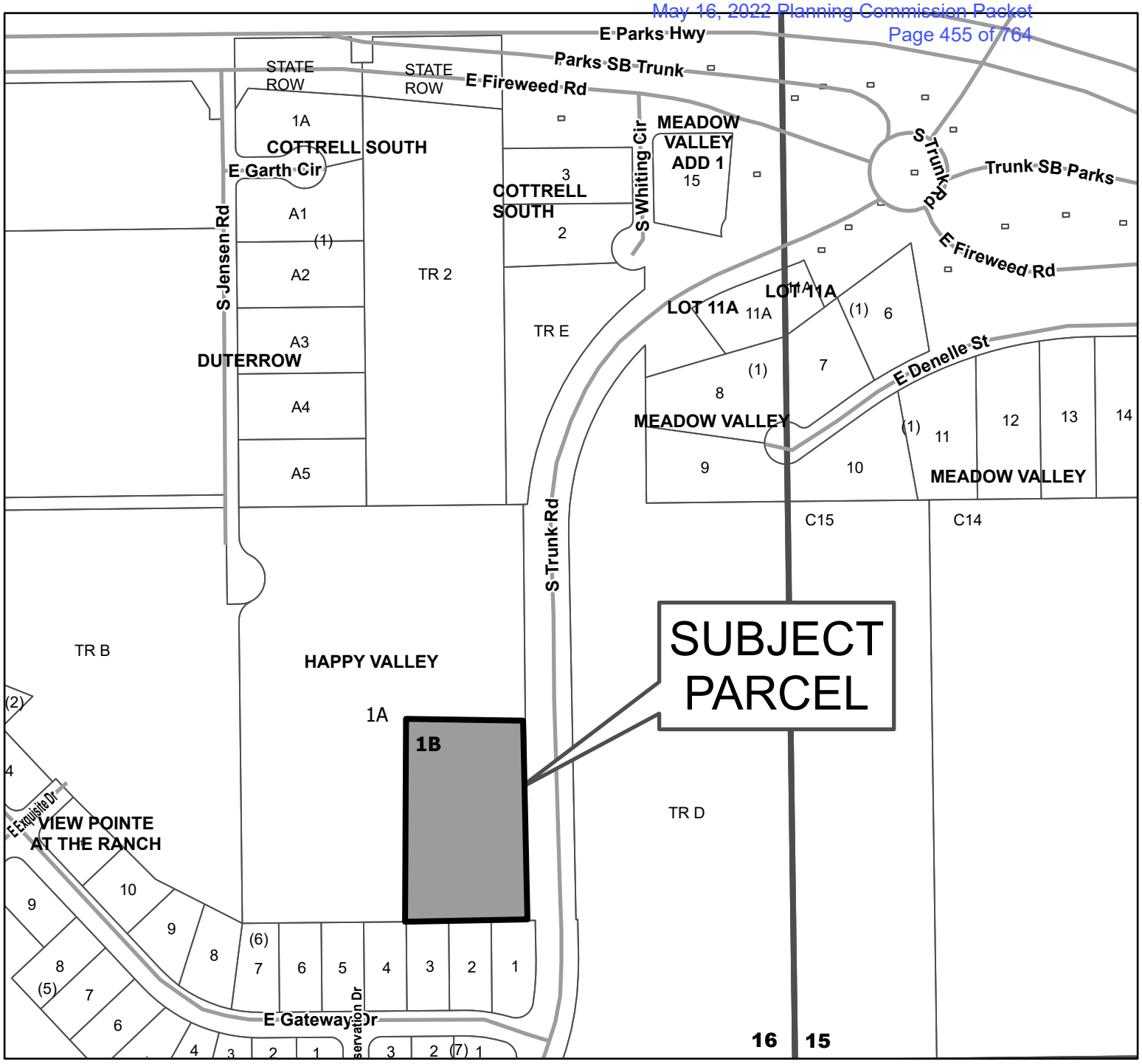
Comments are due on or before ***April 15, 2022***, and will be included in the Planning Commission packet. Please be advised that comments received from the public after that date will not be included in the staff report, but will be provided to the Commission at the meeting.

Name:_____ ***Mailing Address:***_____

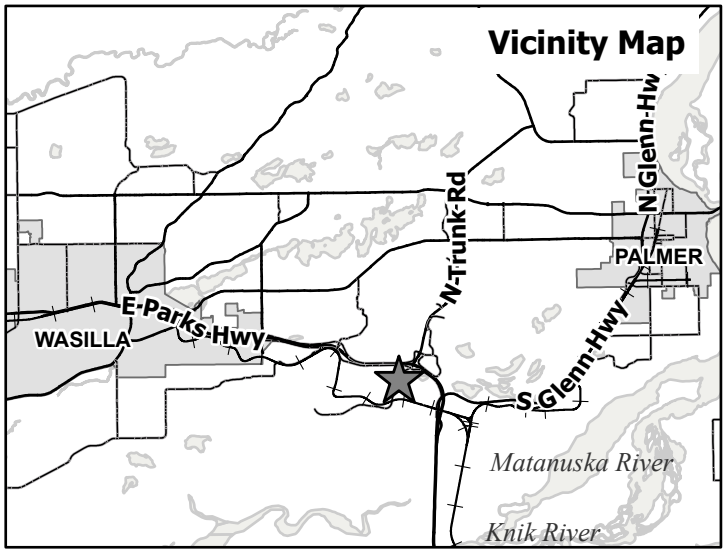
Location/Legal Description of your property:_____

Comments:_____

Note: Vicinity Map Located on Reverse Side



8150000L001B



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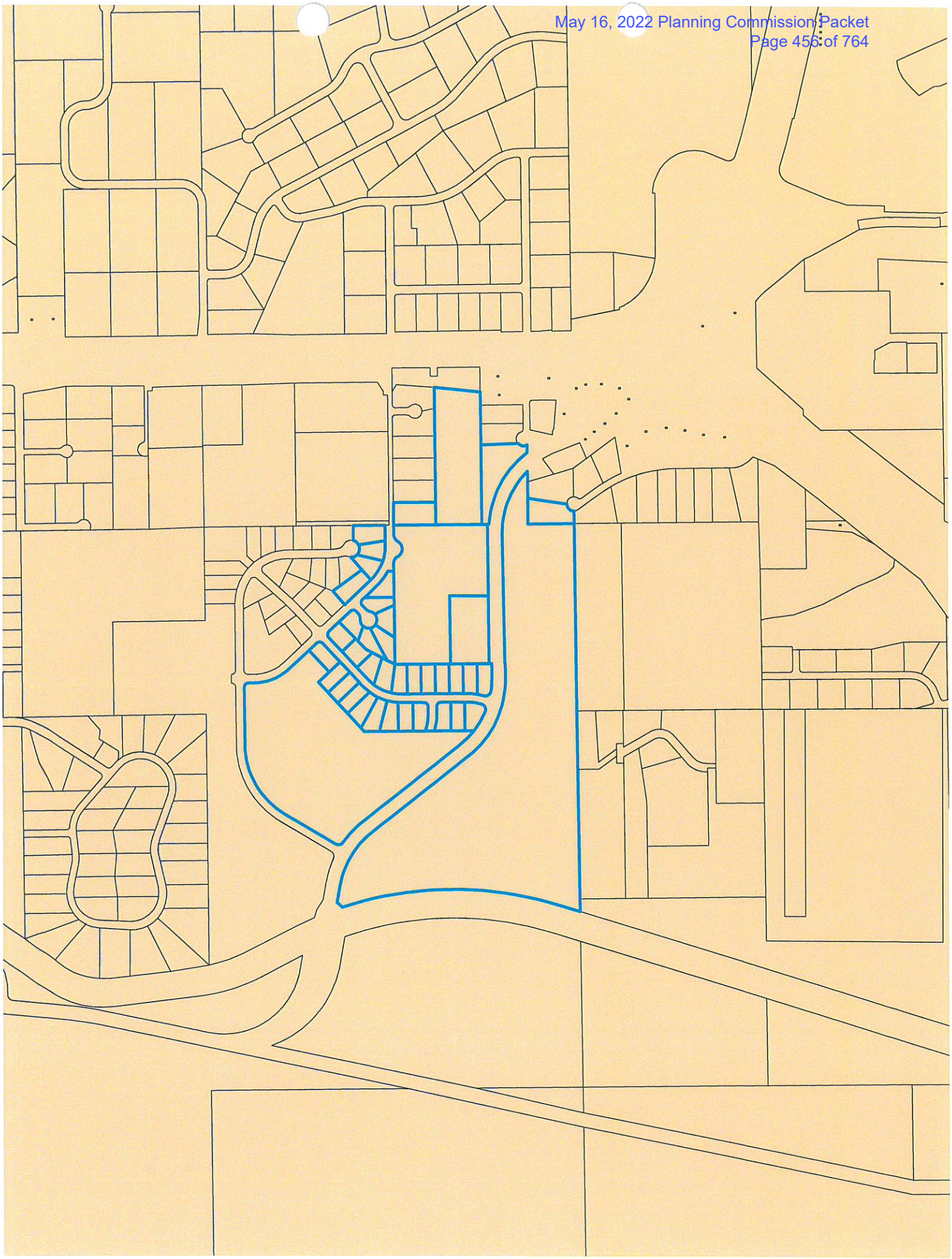
MSB Information Technology/GIS
August 17, 2021

0 1,000 Feet



PUBLIC HEARING

Matt Gittlein, of KG Enterprises, LLC, filed a conditional use permit application under MSB 17.61, Core Area, and a conditional use permit application under MSB 17.70, Regulation of Alcoholic Beverage Uses, for the operation of a convenience market with gas pumps and alcoholic beverage package store at 3068 South Trunk Road, Tax ID #8150000L001B; within Township 17 North, Range 1 East, Section 16, Seward Meridian.

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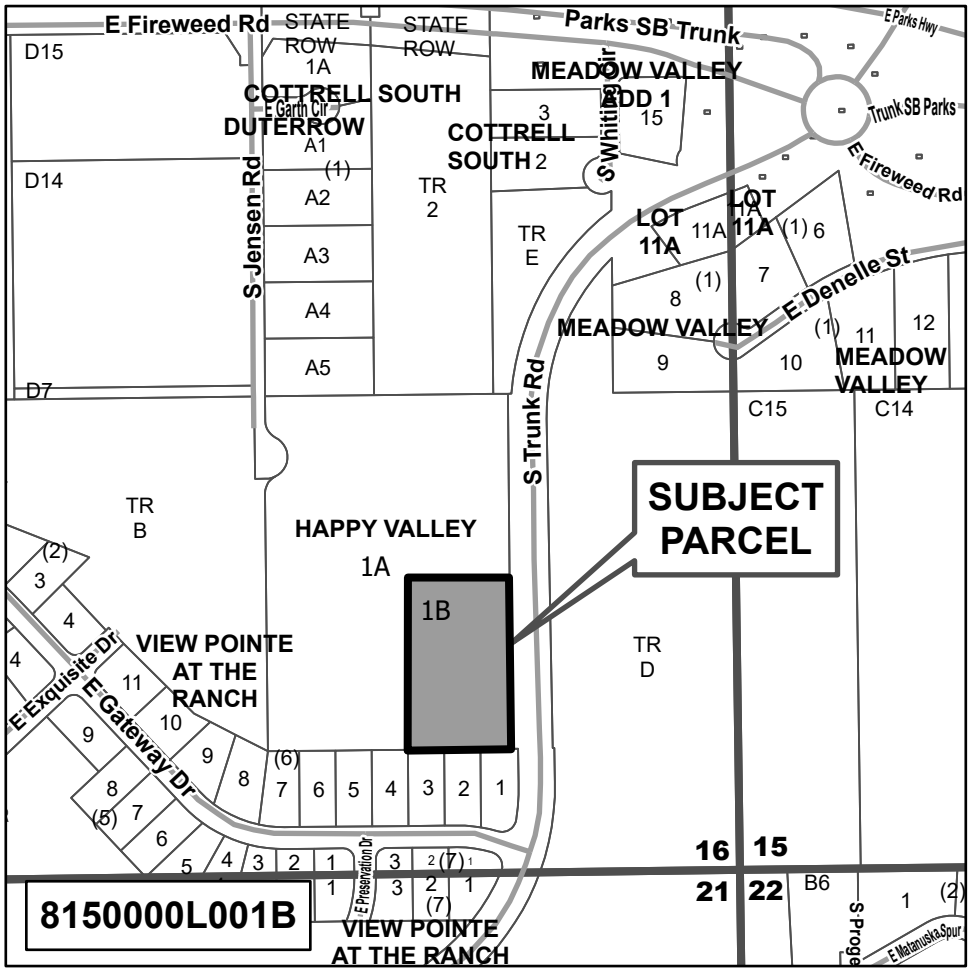
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Peggy Horton

From: Ben Borg <ben.borg@frontiersman.com>
Sent: Wednesday, March 2, 2022 11:18 AM
To: Peggy Horton
Cc: Melissa Iverson; Debra Wetherhorn; Jill Irsik
Subject: Re: 3.4 MSB Page 2

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Thank you, Peggy!

On Wed, Mar 2, 2022 at 11:17 AM Peggy Horton <Peggy.Horton@matsugov.us> wrote:

> The public hearing notice looks good to me, thanks Ben.
>
> Peggy Horton
>
> Matanuska-Susitna Borough
>
> Development Services Division
>
> Planner II
>
> 907-861-7862

From: Ben Borg <ben.borg@frontiersman.com>
Sent: Wednesday, March 2, 2022 10:27 AM
To: Melissa Iverson <Melissa.Iverson@matsugov.us>; Debra Wetherhorn <Debra.Wetherhorn@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Peggy Horton <Peggy.Horton@matsugov.us>
Subject: 3.4 MSB Page 2

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]

Attached is a proof of the second page. If you did not find your ad on page 1, it should be here.

--

Ben Borg
907-987-2059 cell (call or text)

907-352-2270 office

--
Ben Borg
907-987-2059 cell (call or text)

Public Hearing Notice for Conditional Use Permits for a Convenience Market with gas pumps and alcohol package store

Matt Gittlein of KG Enterprises, LLC, filed a conditional use permit application under MSB 17.61, Core Area, and a conditional use permit application under MSB 17.70, Regulation of Alcoholic Beverage Uses, for the operation of a convenience market with gas pumps and alcoholic beverage package store at 3068 South Trunk Road, Tax ID #8150000L001B; within Township 17 North, Range 1 East, Section 16, Seward Meridian.

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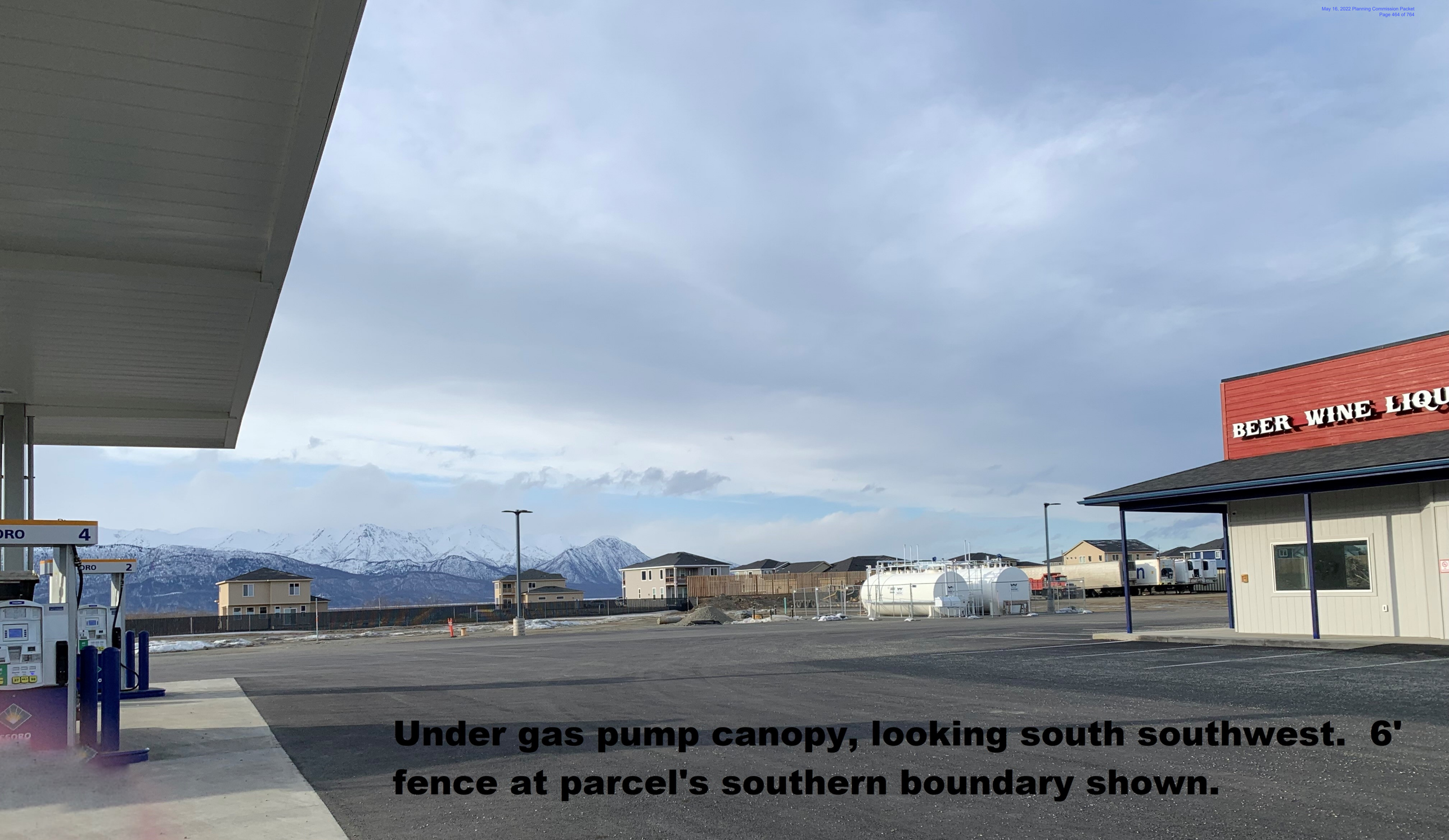
MSB Web Public Notice

Photographs taken

during the April 1, 2022 site visit

800 feet North of Valley Country Store #4
looking west

800 feet North of Valley Country Store #4, looking southeast



Under gas pump canopy, looking south southwest. 6' fence at parcel's southern boundary shown.

On asphalt, looking north onto Lot 1A. South Trunk Road on right.

At northeast corner of store, looking northwest

Looking north northeast at sign, lighting, and South Trunk Road

On south side of store, looking at 6' fence
on south property line

Package Store Interior

Package Store Interior

Convenience Store Interior

Package store interior

At west end of southern driveway, looking east

On southern driveway, looking north

At southern driveway, looking northwest

At southern driveway, looking west

At east end of southern driveway, looking southeast

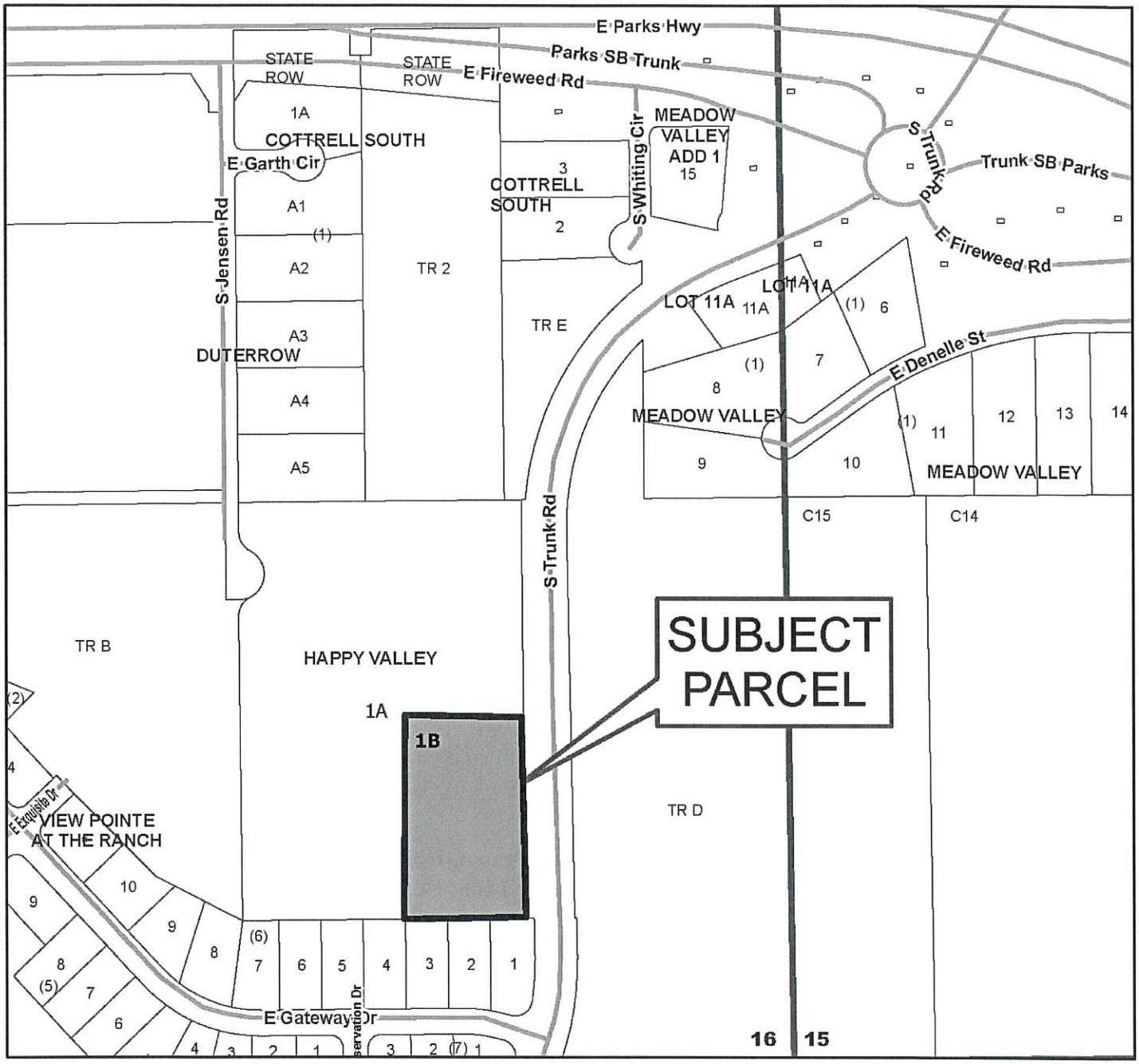
At southern driveway, looking north

At southern driveway, looking south

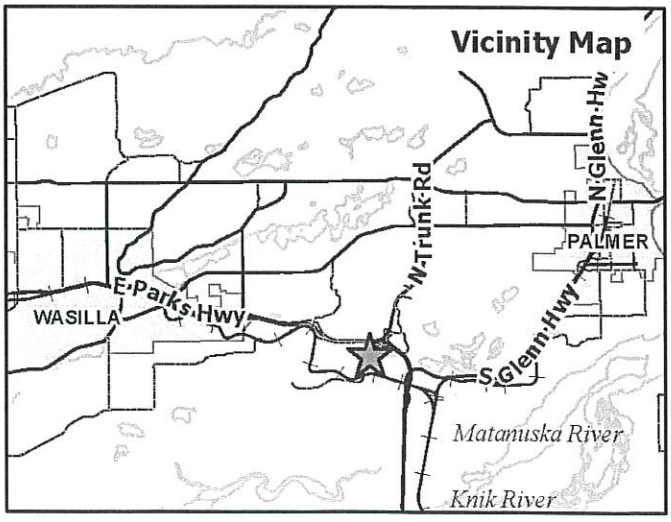
At East Gateway Drive, looking north at privacy fence and Gas Station Sign

Looking south along South Trunk Road frontage

VICINITY MAP



8150000L001B



N

This map is solely for informational purposes only. The Borough makes no express or implied warranties with respect to the character, function, or capabilities of the map or the suitability of the map for any particular purpose beyond those originally intended by the Borough. For information regarding the full disclaimer and policies related to acceptable uses of this map, please contact the Matanuska-Susitna Borough GIS Division at 907-861-7858.

MSB Information Technology/GIS
August 17, 2021

0 1,000 Feet

SITE PLAN

479.11'
S0° 00' 00.00"E
292.9'
186.3'
PROPERTY LINE
35.2'
ABSORPTION FIELD FOR FUTURE USE
74.3'
ABSORPTION FIELD
N90° 00' 00.00"W
274.50'
36" SWINGING GATE
SEPTIC TANK
5.0'
25.0'
32.0'
6' HIGH CHAINLINK FENCE
ONE 12,000 AND ONE 8,000 GAL FUEL TANK F&I 20LB ABC FIRE EXTINGUISHER WITHIN FUEL TANK AREA
SS
12' ROLLING GATE
37.0'
87.7'
40.0'
80.0'
4467 SF CONVENIENCE AND LIQUOR STORE
57.0'
ASPHALT PAVING
4,000 GALLON HOLDING TANK
RV DUMP STATION SEE DETAIL.
4.0'
CONCRETE PARKING BUMPER (TYP)
294.0'
WATER SPIGOT REFER TO MECHANICAL
R200' WELL RADIUS
GRAVEL SURFACE
6' HIGH SCREENING FENCE SEE DETAIL.
12.0'
20.0'
10.0'
COFFEE SHOP
R100.0' WELL RADIUS
R5.0'
10.0'
20.0'
6.0'
10.0' TYP
98.3'
717.7'
70.0'
264.5'
HIGH FLOW DIESEL
126.0'
24.0'
FOUR PRODUCT FUEL PUMPS F&I 20LB ABC FIRE EXTINGUISHER AT EACH FUELING ISLAND
65.5'
1,000 GALLON PROPANE TANK F&I 20LB ABC FIRE EXTINGUISHER REFER TO MECHANICAL
27.9'
25.0'
MONUMENT SIGN
N89° 29' 05.56"W
274.51'
PROPERTY LINE
N0° 00' 00.00"E
476.64'
ROW
10.0'
R20.0'
WATER SPIGOT
24.0'
24.0'
EXISTING DRIVEWAY
EXISTING DRIVEWAY
301.9'
S. TRUNK RD

N

0 20 40 Feet

NOTES:

MAINTAIN A 50' BUFFER FREE OF BRUSH, DEBRIS, AND OTHER COMBUSTIBLE MATERIALS AROUND PROPANE AND FUEL STORAGE AREAS.

RECEIVED
FEB 09 2022
Mat-Su Borough
Development Services

The Boutet Company, Inc.
601 E. 57th Place #102
Anchorage, AK. 99518
Ph. 907-522-6776
License No. AECC957
CONSULTANT

STATE OF ALASKA
40TH
TIMOTHY J. ALLEY
CE 14368
05/10/21
REGISTERED PROFESSIONAL ENGINEER
SEAL

VALLEY COUNTRY STORE 4
WASILLA, ALASKA

CIVIL SITE & UTILITY IMPROVEMENTS

VALLEY COUNTRY STORE 4

HORZ SCALE: 1"=40'
VERT SCALE: N/A
DATE: 05/10/2021
SHEET C7

DATE/TIME 5/10/2021 | LAYOUT | DESIGNED HJH | CHECKED TJA | DRAFTED HJH

FILE W:\WASILLAFILES\GITTLEINS\VALLEY COUNTRY STORE 4\TBC ACAD\XREF\VCS-4 TITLE BLOCK.DWG

APPLICATION MATERIAL

MATANUSKA-SUSITNA BOROUGH

Planning and Land Use Department
Development Services Division
350 East Dahlia Avenue • Palmer, AK 99645
Phone (907) 861-7822 • Fax (907) 861-8158
Email: permitcenter@matsugov.us

Matanuska-Susitna Borough
Development Services
AUG 10 2021

APPLICATION FOR A CONDITIONAL USE PERMIT
REGULATION OF ALCOHOLIC BEVERAGE USES – MSB 17.70

Received

Carefully read instructions and applicable borough code. Fill out forms completely. Attach information as needed. Incomplete applications will not be processed.

Application fee must be attached:
___ ~~$1,000 for Liquor Beverage Dispensary~~
X $1,000 for **Liquor Package Store**
1500 pd

PAID CK#3367

*Prior to the public hearing, the applicant must also pay the mailing and advertising fees associated with the application. Applicants will be provided with a statement of advertising and mailing charges. Payment must be made **prior** to the application presentation before the Borough Planning Commission.*

Subject Property Township: 17N, Range: 01E, Section: 16, Meridian ____
MSB Tax Account # 8150000L001B
SUBDIVISION: Happy Valley BLOCK(S): ____, LOT(S): 1B
STREET ADDRESS: 3068 S Trunk Rd Palmer, AK 99645
BUSINESS NAME Valley Country Store #4

Ownership A *written authorization by the owner must be attached for an agent or contact person, if the owner is using one for the application.* Is authorization attached? o **Yes** o **No** o **N/A**

Name of Property Owner
KG Enterprises, LLC
Address: 4891 E Stoney Hollow Dr.
Wasilla, AK 99654
Phne: Hm ____ Fax 376-3192
Wk 376-7886 Cell 841-5666
E-mail mattgittlein59@hotmail.com

Name of Agent/ Contact for application
Matt Gittlein
Address: 4891 E Stoney Hollow Dr.
Wasilla, AK 99654
Phne: Hm ____ Fax 376-3192
Wk 376-7886 Cell 841-5666
E-mail mattgittlein59@hotmail.com

In order to grant a conditional use permit under MSB 17.70, the Planning Commission must find that each of the following requirements have been met. Explain the following in detail:	**Attached**
1. Is the conditional use compatible with and will it preserve or not materially detract from the value, character and integrity of the surrounding area?	yes
2. Will the granting of the conditional use permit be harmful to the public health, safety, convenience and welfare?	NO

3. Are sufficient setbacks, lot area, buffers and other safeguards being provided?	yes
4. Is there any potential negative effect upon other properties in the area due to such factors as dust, noise, obtrusive advertising and glare?	No
5. Is there any potential negative effect on the safe, efficient flow of traffic on any highway, arterial, collector or street from which access to and from the establishment is obtained?	No
6. What measures are being proposed to reduce any negative effect upon adjacent and nearby properties by property line buffers and arterial buffers, planted berms, landscaping, reduction or elimination of obtrusive or garish signing or other features, lowered building elevation, clustering with other commercial establishments and use of frontage roads to reduce the number of entries and exits onto highways, arterials and collectors and where the surrounding area is predominantly residential in character, site and building design features that contribute to the residential character of the development?	* See attached
7. Are there adequate parking facilities to accommodate a reasonably expected increased demand for parking created by issuing the permit?	yes
8. Will access to the premises create an unreasonable traffic hazard?	No
9. Will a reasonably expected increase in traffic overtax the existing road system?	NO
10. Is the use compatible with the character of the surrounding neighborhood?	yes
11. Is there or would the use tend to result in, a high crime rate or a high incidence of alcohol-related accidents in the area?	NO
12. Does the applicant or a person with an interest in the application have an interest in a liquor license which was suspended or revoked in the 12 months preceding the application?	NO
13. Has the applicant or person with an interest in the application demonstrated that the person is untrustworthy or unfit to conduct the operation of a licensed business, or is a potential source of harm to the public?	No

Supplemental Information – Explain in Detail	**Attached**
1. Maximum occupancy capacity of facility as determined by Fire Marshall	92
2. Number of employees proposed to work on largest work shift.	5
3. Number of regular parking spaced provided.	18
4. Number of handicapped parking spaces provided.	2
5. Is the use a sole occupant in a building or a tenant in a building?	Tenant
6. Total square footage of space in building occupied by this use.	1167
7. Hours of operation.	8AM - midnight
8. Noise mitigation measures	N/A

SITE PLAN – Attach a detailed, to scale, site plan clearly showing the following information:	**Attached**
1. Proposed and existing structure(s) on the site. Indicate which structure(s) will be used for the liquor use. Draw lot dimensions and indicate setback distance of structure(s) from the lot lines, rights-of-way, and waterbodies.	✓
2. Dimensions of all structures	✓
3. Interior floor plans (specific location of the use or uses to be made of the development)	
4. Signage – Existing and Proposed	✓
5. Location and dimensions for all access points to and from the site to public rights-of-way or public access easements.	✓
6. Proposed contouring	✓
7. Vegetation and any landscaping	✓
8. Buffering – Fences, trees, topography, or berms	✓
9. Drainage	✓
10. Vehicular and pedestrian circulation patterns	✓
11. Exterior site lighting	✓
12. Distance(s) to the nearest intersection in all directions from proposed permit site along roads adjacent to the site.	✓
13. Location and dimensions of parking areas to be provided	✓
14. Boundary protection	✓
15. Scale and north arrow.	✓

OWNER'S STATEMENT: I am owner of the following property:

MSB Tax parcel ID #(s) 8150000L001B and, I hereby apply for approval an alcoholic beverage use conditional use permit on that property as described in this application.

I understand all activity must be conducted in compliance with all applicable standards of MSB 17.70 and with all other applicable borough, state or federal laws.

I understand that other rules such as local, state and federal regulations, covenants, plat notes, and deed restrictions may be applicable and other permits or authorization may be required. I understand that the borough may also impose conditions and safeguards designed to protect the public's health, safety and welfare and ensure the compatibility of the use with other adjacent uses.

I understand that it is my responsibility to identify and comply with all applicable rules and conditions, covenants, plat notes, and deed restrictions, including changes that may occur in such requirements.

I understand that this permit and zoning status may transfer to subsequent owners of this land and that it is my responsibility to disclose the requirements of this status to the buyer when I sell the land.

I understand that changes from the approved conditional use permit may require further authorization by the Borough Planning Commission. I understand that failure to provide applicable documentation of compliance with approved requirements, or violation of such requirements will nullify legal status, and may result in penalties.

I grant permission for borough staff members to enter onto the property as needed to process this application and monitor compliance. Such access will at a minimum, be allowed when the activity is occurring and, with prior notice, at other times necessary to monitor compliance.

The information submitted in this application is accurate and complete to the best of my knowledge.

[signature]	Matt Gittlein	8-9-2021
Signature: Property Owner	Printed Name	Date
[signature]	Matt Gittlein	8-9-2021
Signature: Agent	Printed Name	Date

CUP Application
Valley Country Store # 4
Palmer, AK 99645

Explanation of requirements:

1. Yes, the use is compatible with the surrounding area. The area is mixed with light commercial and residential uses. Our stores are small neighborhood style store that fit in well to serve the local neighborhoods and communities. Our stores are clean, well lit, and operate according to all applicable laws. We feel that our stores not only preserve the value and integrity of the area also increase and enhance it.

2. No the granting of the permit will not be harmful to the public safety and welfare. Our stores have a good track record of not having safety or public health issues. We feel that granting the permit will be beneficial to the public convenience, safety and welfare.

3. Yes. The lot is 3 acres and the use will only use approximately 2 acres. The store will be set back sufficiently from Trunk Road to the east and have proper landscaping to buffer the use. The residential area to the south will be buffered with the 1 acre vacant lot as well as a privacy fence and a landscaping buffer along the property line. To the north and west there is sufficient setbacks and lot area from the vacant existing lot.

4. No. There is no potential for any negative effects. Our parking lots will be paved to minimize any effect of dust. We are not a bar so we don't play any loud music and our visible liquor advertising is kept to a minimum and will not display anything offensive.

5. No. The driveways are in place and have adequate lines of site in all directions. The use will predominantly be used by existing local traffic so there won't be a large increase in traffic created by the use.

6. Yes, we are taking measures to reduce negative effects on nearby properties. They are:
    - The building will be set as far as possible from the roadway (approx. 200')
    - The building will be set back as far as possible from the residential area to the south (approx. 225')
    - We will have a landscaping buffer with split rail fence and grass, and small trees between the site and the roadway.
    - We will construct a 6' tall privacy fence along the property line to the south with the neighboring residential area.
    - Our liquor advertising is kept to a minimum. Some signage in the windows of the liquor store, 2 signs on the building and one sign on the fuel price sign.
    - The building is single level and has an aesthetically pleasing design similar to our other Valley Country Store buildings.

7. Yes the facility will have adequate parking spaces. There are 18 regular and 2 handicap parking spaces provided, all of which will be available to liquor store customers.

8. No. The property has 2 entrance/exit points. There are adequate lines of site in all directions for entering and exiting the roadway.

9. No. The development will be predominately used by used by local residents (i.e. existing traffic counts). The road is designed sufficiently to handle the small increase in traffic that the use will generate.

10. Yes. Our stores are small 'neighborhood' style convenience stores that exist to serve the local residential communities. We have great relationships with all the communities that we have stores in.

11. No. There is no evidence supporting that the addition of neighborhood type package liquor stores increase alcohol related crimes in the immediate area.

12. No.

13. No.

Supplemental Information:

1. 92
2. The most employees working in the store at any time would be 5.
3. There are 18 regular parking spaces provided.
4. There are 2 handicap parking spaces provided.
5. The liquor store will be a tenant in the building.
6. The liquor store will occupy 1167 square feet in the building.
7. The liquor store hours will be 8:00 AM – 12:00 Midnight, 7 days a week.
8. Space buffers and significant setback will provide adequate noise mitigation to the surrounding area.

DG SIGNS & LIGHTING

FAX 907.746.5197
CALL 907.746.5196
INFO@DGSIGNSAK.COM
WWW.DGSIGNSAK.COM

DESIGN GRAPHICS, LLC
1970 S. WHITING CIR
PALMER, ALASKA 99654

ction will not begin until approval is signed and sent back marked APPROVED. Please verify all wording, spelling, art and sizes are correct before approving.

APPROVAL REQUIRED!

APPROVED AS-IS ☐ CHANGES REQUIRED ☐

SIGNATURE DATE

oncepts previewed by the client are for client review and comment purposes only. Until final design balance is received by DG Signs, all logos, artwork, concepts and designs e copyright and exclusive property of DG Signs. DG Signs reserves the right to utilize and/or reproduce any image, logo, or illustration created by DG Signs in advertising, : or traditional reproduction, with the addition of any copyright and/or trademark notice that may be requested by the owner of the work. The client is granted unlimited and ed use of the design upon full payment of all fees. DG Signs retains the rights to concepts, comprehensives and artwork involved in the design process prior to the final artwork, anted the right to display these designs in promotional and advertising and marketing materials unless exclusion is explicitly requested in writing by the client.

Memorandum

THE BOUTET COMPANY, INC.

1508 E. Bogard Rd. #7
Wasilla, AK 99654

Tel: (907) 522-6776
Fax: (907) 522-6779
e-mail: hhill@tbcak.com

Date: **November 2, 2021**

To: Peggy Horton
Planner II
Matanuska-Susitna Borough

From: Hans Hill
Project Manager
The Boutet Company, Inc

Subject: Valley Country Store 4
Driveway Spacing

Introduction

This memo was prepared in support of Conditional Use Permit application submitted to Matanuska-Susitna Borough (MSB) for a proposed development that would be located at 3068 South Trunk Road (STR), near Wasilla, Alaska.

Project Description and Location

KG Enterprises, LLC (KGE) proposes to construct a convenience store with gas pumps in adjacent to the west Right-of-Way (ROW) line for STR, approximately 1,500 feet south of its interchange with East Parks Highway (EPH). More specifically, the project would be located within Lot 1B, Happy Valley Subdivision.

Access Drives

KG Enterprises, LLC (KGE) proposes to utilize the existing driveways adjacent to the property. The Sothern access drive is located on property and the northern access drive is located north of the subject property. Use of northern drive by the applicant will be secured through a recorded access agreement.

STR is classified as an arterial roadway. Due to the projected trip generation from the proposed improvements, the MSB Code requires a driveway separation distance of 600'.

Minimum High Volume Driveway Spacing (Feet) (MSB 11.12.070.A.8)

Classification of road being accessed	Posted speed limit or 85th percentile speed of road being accessed (mph)	Total vehicle trip generation of subject parcel (vph)								
		11 – 100			101 – 250			> 250		
		Total vehicle trip generation of subject parcel, nearby parcel, or classification of cross street			Total vehicle trip generation of subject parcel, nearby parcel, or classification of cross street			Total vehicle trip generation of subject parcel, nearby parcel, or classification of cross street		
		11 – 100 vph or local road	101 – 250 vph or collector	> 250 vph or arterial	11 – 100 vph or local road	101 – 250 vph or collector	> 250 vph or arterial	11 – 100 vph or local road	101 – 250 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

However, as the attached documentation demonstrates, the existing driveways were designed and installed during the 2018 STR bond project with the intention of facilitating commercial applications, specifically a gas station. Additionally, these driveways are already permitted through the MSB.

Conclusions

It is the opinion of this office, that the use of these approaches by the applicant for this specific application aligns with the MSB's engineers original design and as such, the current driveway spacing requirement is not applicable for this scenario.

Hans Hill

From: Bob Walden <robert.walden@matsugov.us>
Sent: Wednesday, April 5, 2017 8:12 AM
To: Tim Alley
Subject: FW: Trunk road appraches
Attachments: Lot 1 Happy Valley Driveway Exhibit.PDF

FYI here are those approaches for the gas station...

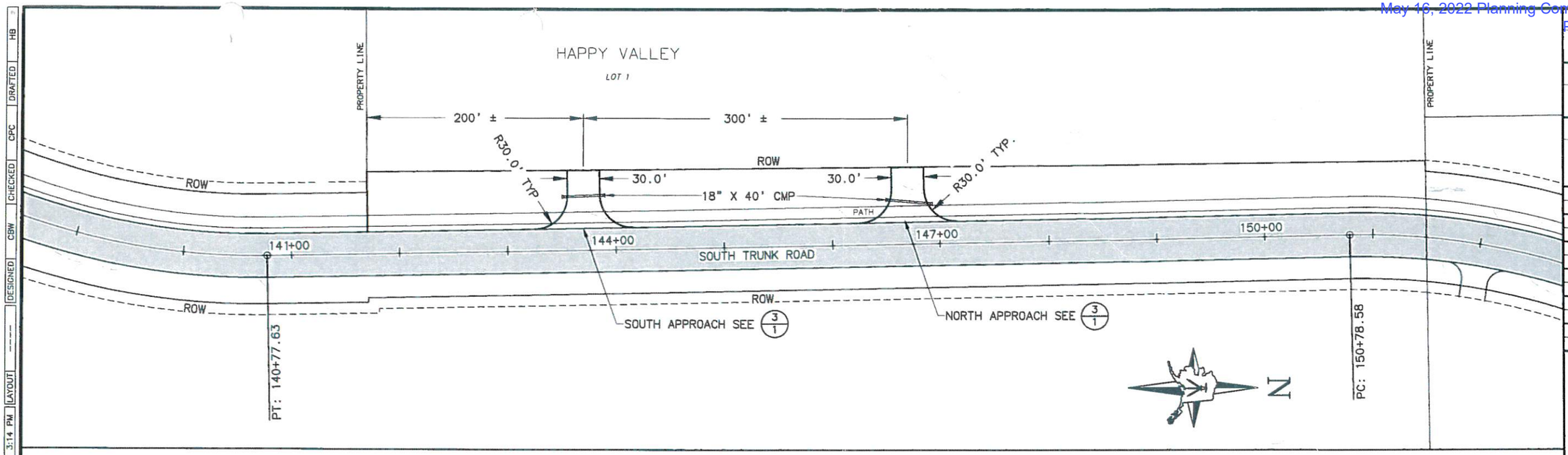
Bob Walden, PE

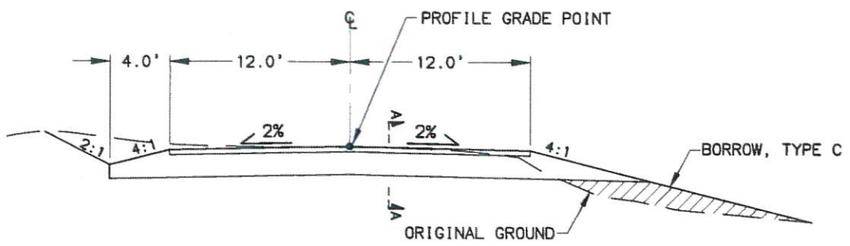
From: Peter Curtis [mailto:p.curtis@lounsburyinc.com]
Sent: Wednesday, April 05, 2017 8:11 AM
To: Bob Walden
Subject: RE: Trunk road appraches

From: Bob Walden [mailto:robert.walden@matsugov.us]
Sent: Wednesday, April 05, 2017 7:49 AM
To: Peter Curtis
Subject: Trunk road appraches

Could you send me where you designed those two approaches for the permit for the gas station. I cannot seem to find it.

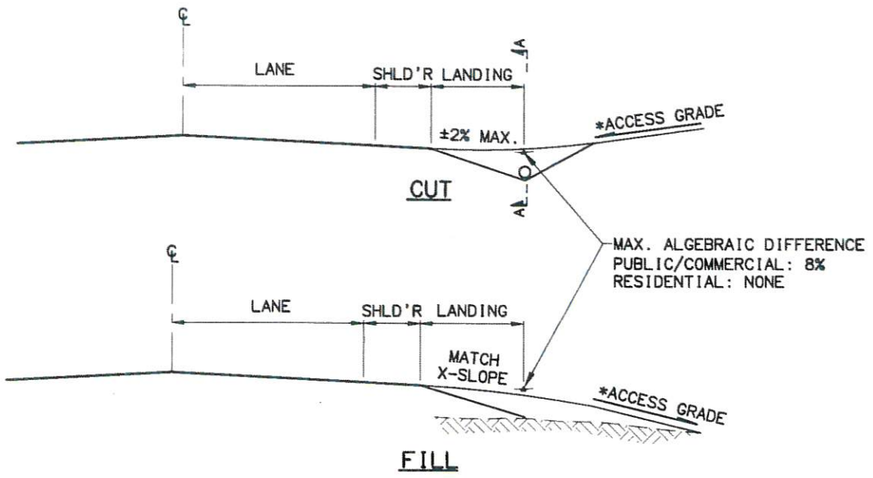
Sincerely,
BOB WALDEN, PE
Matanuska Susitna Borough
Capital Projects Pre-design and Engineering Division
Civil Engineer / Project Manager
Cell # 907-354-3469
Office # 907-861-7726





1/1 UNPAVED APPROACH (DRIVEWAY)

SCALE: N.T.S.

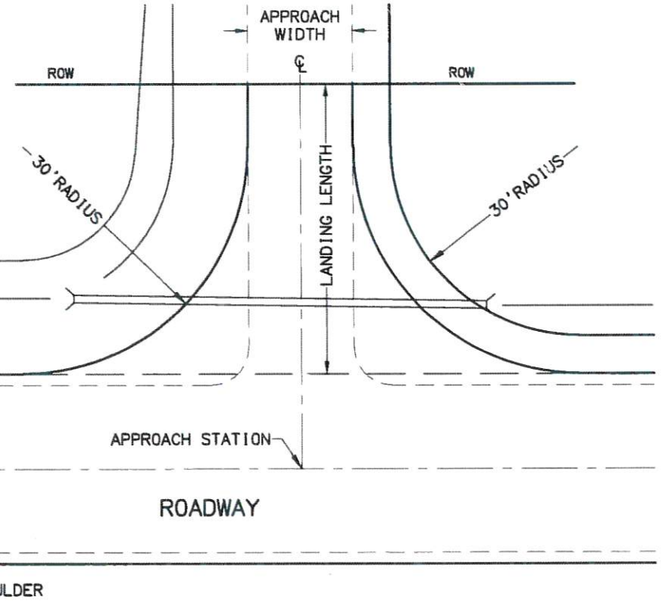


2/1 APPROACH PROFILES

SCALE: N.T.S.

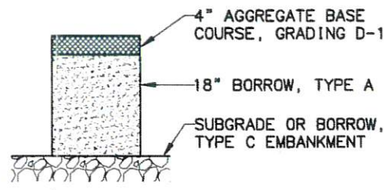
LANDING TABLE

TYPE	LENGTH
PUBLIC/COMMERCIAL	30



3/1 APPROACH PLAN

SCALE: N.T.S.



4/1 SECTION A-A

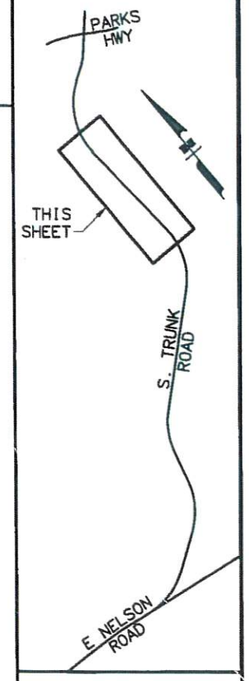
SCALE: N.T.S.

STATE OF ALASKA
49TH
CHARLES P. CURTIS
No. CE-9751
2/14/2017
REGISTERED PROFESSIONAL ENGINEER

SHEET NO.	TOTAL SHEETS
1	1
STATE	YEAR
ALASKA	2017

PROJECT DESIGNATION

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



BEFORE YOU DIG CALL FOR FREE UNDERGROUND LOCATION

Locate Call Center of Alaska Statewide 800-478-3121 will notify subscribed utilities only. Other utilities need to be contacted individually

LOUNSBURY & ASSOCIATES, INC.
3050 COTTLE LOOP
WASILLA, ALASKA 99654
(907)357-9132
CERT. OF AUTH. NO. AECC391

LOT 1 HAPPY VALLEY DRIVEWAY PERMIT

DATE/TIME 2/14/2017 3:14 PM | LAYOUT ---- | DESIGNED CBW | CHECKED CPC | DRAFTED HB

FILE P:\2017\17-012 HAPPY VALLEY\ENG\DWGS\F1-DRIVEWAY APPLICATION_17-012.DWG

MATANUSKA-SUSITNA BOROUGH
Planning and Land Use Department
Development Services Division
350 East Dahlia Avenue • Palmer, AK 99645
Phone (907) 861-7822 • Fax (907) 861-8158
www.matsugov.us

November 16, 2021

Matt Gittlein
4891 E. Stoney Hollow Dr.
Wasilla AK 99654

SUBJECT: Conditional Use Permit Application – Request for Required Information
LOCATION: 3068 S. Trunk Road – Tax ID #8150000L001B & L001A

Dear Mr. Gittlein,

Borough staff has reviewed the application material and the site plan(s) submitted on August 10, 2021, for an Alcoholic Beverage Package Store Conditional Use Permit and on November 3, 2021 for a Core Area Conditional Use Permit on the above referenced property.

It has been determined that the following information needs to be provided and/or clarified in order to process this request:

1. Written authorization by the owner of both properties involved in the development must be attached. Include authorization, signature, and contact information from the owner of Lot 1A, Happy Valley Subdivision.

2. Please address consumption of alcohol on the property and actions to be taken, should it occur.

3. The scale of the Civil Site & Utility Improvements drawings dated 5/10/21 are incorrect in the title blocks. These include plans for the Package Store CUP: (1) general site plan; (2) pedestrian and vehicle traffic and exterior lighting plan; and (3) grassy area and drainage plan. For the Core Area CUP, these include: (1) the grading and drainage plan and (2) the general site plan.

4. Lot dimensions are required on the site plan. Include all properties involved in the development.

5. Location and dimensions for all access points to and from the site are required on the site plan. Provide the dimension of the distance between the two driveways.

6. Provide length dimension of parking spaces on the site plan.

7. Provide dimensions from all proposed structures to nearest property lines as required by MSB 17.61.050.

8. Fencing. Provide detail for the 6' high screening fence noted on the site plan and noted in the narrative. Split rail fence described in the narrative Item 9 is not shown on the site plan.

9. Provide horizontal view of the convenience store and any other structures showing all sides and proposed signage, with readable text.

10. Please describe the monument sign noted on the site plan.

11. Please provide more details about lighting on the structure and around the property, such as: height and type. Will it be downward directed and shielded to minimize light spillage on adjacent properties? Will the signs on the ground and on the building be lighted?

12. The narrative states you have secured Fire Marshal approval; please provide written documentation of that approval. Please forward all information/approvals you receive from the Fire Marshal to our office.

13. Is the entirety of Lot 1B paved? Provide information concerning the limits of paving, landscaping, and construction on the properties involved.

14. Is there a runoff catchment plan to prevent potential oil and gas spills from penetrating the ground or reaching other properties?

15. Grading and Drainage Plan. Drainage plan for package store differs greatly from the drainage plan provided for the Core Area Permit. The Grading and Drainage Plan provided for the Core Area Permit is not signed. On the Grading and Drainage Plan, indicate, in the legend, all abbreviations, acronyms, and shading used.

16. On page 7 of the TIA, bottom figure. Is the 3rd column from the right's heading supposed to be NBLT?

17. On page 4 of the TIA, top paragraph. Perhaps the "South Bogard route" is mentioned inaccurately?

18. The coffee shop, although mentioned on page 2 of the TIA, in the narrative, and in the site plan, traffic generated from its use was not included in the traffic analysis as far as staff can tell. Provide rational for not including the coffee shop in the TIA traffic generation rates.

19. Now that we know traffic will exceed 100 vehicles during the morning or afternoon peak hour, the attached Traffic Impact Worksheet needs to be filled out per MSB 17.61.050(D).

20. Items requested by Jamie Taylor, Civil Engineer in the Public Works Department concerning the TIA:
    a. Page 14, what year was the ADT for STR collected?

b. Page 19 Other Planned Developments – wouldn't View Pointe at the Ranch be considered a planned development? They have about 100 more lots they will be creating. Does the 2% growth account for those?
c. Show turn lane warrant analysis. They are required at 50 vph.
d. What are the LOS at the roundabout and on STR itself between the roundabout and Fetlock? I don't know off hand what the capacities are of the segment and approaches to know if the traffic will be increased enough to require analysis, but regardless that should be addressed in the TIA.

Once an application has been determined to be complete, staff will begin the public notice process. Should you have any questions or require additional information, please feel free to contact me at the above mailing address, phone: 861-7862 or email: peggy.horton@matsugov.us. Thank you for your time and consideration on this matter.

Respectfully,

Peggy Horton

Peggy Horton
Planner II
Matanuska-Susitna Borough

cc:
The Boutet Company via email

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FEB 02 2022
Mat-Su Borough
Development Services

Valley Country Store # 4
3068 S Trunk Road
Supplemental Information for CUP

December 13, 2021

1. Written authorization from owner of Lot 1A Happy Valley
    - See Attachment from William Long
2. This is a package liquor store not a bar. No alcohol consumption is allowed on the property. If a customer is seen consuming alcohol they will be confronted about it and asked to leave the premise, and if necessary trespassed from all of our locations and the State Troopers may be called. If an employee is caught consuming alcohol on the premise they will be fired and if necessary a trooper report made.
3. See attached and diagrams from The Boutet Co.
4. See updated site plan.
5. See updated site plan.
6. See updated site plan.
7. See updated site plan.
8. Screening fence is 6' tall chain-link with slat master brand privacy slats. Please redact all mention of split rail fence from comments; due to weather restrictions we won't be able to install this until next summer.
9. See attached photos.
    - Building:
        i. Height –17'
        ii. Width – 80'
        iii. Length – 57'
    - Fuel Canopy
        i. Height – 19'
        ii. Width – 24'
        iii. Length – 126'
10. Monument sign – Lighted 'Tesoro' gas sign with LED prices for unleaded and diesel on each side. 36' Tall. See attached photo.
11. See attached diagram from electrical engineer regarding light displacement.
    - See type of lighting on the electrical plans. Height of light poles – 25'.
    - The forward facing signs on the front of the building are LED lighted.
12. Fire Marshal approvals attached.
13. See updated site plan for limits of paving.
14. All areas where there is fuel are paved or concrete to prevent any spillage to penetrate the soil. Tanks and piping are all double walled to prevent any leakage or spillage. All employees are

trained on spill prevention and cleanup per DEC standards. Proper spill cleanup kits are on site and all employees are properly trained in using them.

15. See attached updated drainage plan.
16. See updated TIA
17. See memo from TBC
18. See memo from TBC
19. See attached worksheet
20. See responses in memo from TBC

I William LONG authorize Valley country stores to full access on both driveways coming off of trunk Road with no end date or expiration and to apply for conditional use permits for the gas station on lot 1b with one driveway on lot 1a.

William Long

907-750-9025

Billylong1214@msn.com

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MSB • Department of Emergency Services • Central Mat-Su Fire Department

Fire & Life Safety Division

Physical: Station 51 – 1911 S Terrace Court, Palmer
Mailing: 101 W Swanson Avenue • Wasilla, AK 99654
Office (907) 861-8030 • Fax (907) 861-8157 • E-mail: FireCode@matsugov.us

August 6, 2021

Matt Gittlein
KG Enterprises, LLC
4891 E. Stoney Hollow Dr.
Wasilla AK 99654

SUBJECT:	Valley Country Store #4
FIRE SERVICE AREA:	Central Mat-Su FSA
PLAN REVIEW:	2022-007
TYPE OF CONSTRUCTION:	VB
OCCUPANCY TYPE:	M

2012 INTERNATIONAL BUILDING AND FIRE CODE

Dear Matt Gittlein:

Plans for the subject facility have been reviewed by this office for conformity with the State Fire Safety Regulations and are hereby approved as submitted. Enclosed is a certificate of approval that must be posted on the premises until completion of the above facility. Any changes to the approved plans must be submitted to this office for review and approval. **You are prohibited to occupy this building until construction is completed for which plans have been examined and approved.** After completion of the construction, you must schedule a certificate of occupancy inspection prior to opening.

It must be understood that the inclusion of and compliance with State Fire Safety Regulations does not preclude the necessity of compliance with the requirements of local codes and ordinances. Also understand that approval of submitted plans is not approval of omissions or oversights by this office or noncompliance with any applicable regulations. The plans have not been reviewed for compliance with the Federal Americans with Disabilities Act or structural requirements.

If we can be of further assistance in this matter, please contact us at the address above.

Sincerely,

Jeffrey L. Anderson
Deputy Fire Marshal

Fire and Life Safety Division

Central Mat-Su Fire Service Area No. 130 - District 1
Department of Emergency Services, Matanuska-Susitna Borough

Plan Review #2022-007
Valley Country Store #4
New Construction/Addition Approval

This is to certify that the plans for this building were reviewed by CMSFD's Fire & Life Safety Division on 8/6/2021, for conformance with AS 18.70.010–100; 13 AAC 50.027. This certificate becomes invalid 180 days after the work on the site is commenced within 180 days after issuance, or if the work authorized is suspended or abandoned for a period of 180 days after the time work is commenced. An extension may be requested at the above mentioned address.

This certificate shall be posted in a conspicuous place on the premises listed above and shall remain posted until construction is completed. **Notice:** *Any changes or modifications to the approved plans must be resubmitted for review by the Central Mat-Su Fire Department.*

Authority: AS 18.70.080, 13 AAC 50.075 & MSB RS 06-054

by Jeffrey L. Anderson, Deputy Fire Marshal

MSB • Department of Emergency Services • Central Mat-Su Fire Department
Fire & Life Safety Division
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September 7, 2021

Matt Gitlein
KG Enterprises, LLC
4891 E. Stoney Hollow Dr.
Wasilla AK 99654

SUBJECT:	Valley Country Store #4
FIRE SERVICE AREA:	Central Mat-Su FSA
PLAN REVIEW:	2022-008

2012 INTERNATIONAL BUILDING AND FIRE CODE

Dear Matt Gitlein:

Plans for the fuel tank or dispensing system installation have been reviewed by this office for conformity with the State Fire Safety Regulations and are hereby approved as submitted for the FUEL TANK OR DISPENSING SYSTEM ONLY. Enclosed is a certificate of approval that must be posted on the premises until the system has been installed and certified operational. Approved plans must be picked up at Station 51, prior to installation. Any changes to the approved plans must be submitted to this office for review and approval. **Upon completion of the fuel tank or dispensing system installation, a final inspection must be completed with a Fire Code Official or his designee in attendance.**

A set of approved plans must be maintained onsite until final inspection is complete.

It must be understood that the inclusion of and compliance with State Fire Safety Regulations does not preclude the necessity of compliance with the requirements of local codes and ordinances. Also understand that approval of submitted plans is not approval of omissions or oversights by this office or noncompliance with any applicable regulations. The plans have not been reviewed for compliance with the Federal Americans with Disabilities Act or structural requirements.

If we can be of further assistance in this matter, please contact us at the address above.

Sincerely,

Jeffrey L. Anderson
Deputy Fire Marshal

Fire and Life Safety Division

Central Mat-Su Fire Service Area No. 130 - District 1
Department of Emergency Services, Matanuska-Susitna Borough

Plan Review #2022-008

Click or tap here to enter Tenant/Building.

Fuel Tank or Dispensing System Approval

This is to certify that the plans for this building were reviewed by CMSFD's Fire & Life Safety Division on 9/7/2021,
for conformance with AS 18.70.010–100; 13 AAC 50.027. This certificate becomes invalid 180 days after the work on the site is commenced within 180 days after issuance, or if the work authorized is suspended or abandoned for a period of 180 days after the time work is commenced. An extension may be requested at the above mentioned address.

This certificate shall be posted in a conspicuous place on the premises listed above and shall remain posted until construction is completed. **Notice:** *Any changes or modifications to the approved plans must be resubmitted for review by the Central Mat-Su Fire Department.*

Authority: AS 18.70.080, 13 AAC 50.075 & MSB RS 06-054

By: Jeffrey L. Anderson, Deputy Fire Marshal

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July 26, 2021

Matt Gittlein
KG Enterprises, LLC
4891 E. Stoney Hollow Dr.
Wasilla AK 99654

SUBJECT:	Fuel Canopy/ Valley Country Store #4
FIRE SERVICE AREA:	Central Mat-Su FSA
PLAN REVIEW:	2022-009
TYPE OF CONSTRUCTION:	IIB
OCCUPANCY TYPE:	N/A

2012 INTERNATIONAL BUILDING AND FIRE CODE

Dear Matt Gittlein:

Plans for the subject facility have been reviewed by this office for conformity with the State Fire Safety Regulations and are hereby approved as submitted. Enclosed is a certificate of approval that must be posted on the premises until completion of the above facility. Any changes to the approved plans must be submitted to this office for review and approval. **You are prohibited to occupy this building until construction is completed for which plans have been examined and approved.**

It must be understood that the inclusion of and compliance with State Fire Safety Regulations does not preclude the necessity of compliance with the requirements of local codes and ordinances. Also understand that approval of submitted plans is not approval of omissions or oversights by this office or noncompliance with any applicable regulations. The plans have not been reviewed for compliance with the Federal Americans with Disabilities Act or structural requirements.

If we can be of further assistance in this matter, please contact us at the address above.

Sincerely,

Jeffrey L. Anderson
Deputy Fire Marshal

Fire and Life Safety Division

Central Mat-Su Fire Service Area No. 130 - District 1
Department of Emergency Services, Matanuska-Susitna Borough

Plan Review #2022-009
Fuel Canopy/ VCS #4
New Construction/Addition Approval

This is to certify that the plans for this building were reviewed by CMSFD's Fire & Life Safety Division on 7/26/2021, for conformance with AS 18.70.010–100; 13 AAC 50.027. This certificate becomes invalid 180 days after the work on the site is commenced within 180 days after issuance, or if the work authorized is suspended or abandoned for a period of 180 days after the time work is commenced. An extension may be requested at the above mentioned address.

This certificate shall be posted in a conspicuous place on the premises listed above and shall remain posted until construction is completed. **Notice:** *Any changes or modifications to the approved plans must be resubmitted for review by the Central Mat-Su Fire Department.*

Authority: AS 18.70.080, 13 AAC 50.075 & MSB RS 06-054

by Jeffrey L. Anderson, Deputy Fire Marshal

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August 12, 2021

Matt Gittlein
KG Enterprises
4891 E. Stoney Hollow Dr.
Wasilla AK 99654

SUBJECT:	Valley Country Store #4-Propane dispenser
FIRE SERVICE AREA:	Central Mat-Su FSA
PLAN REVIEW:	2022-012

2012 INTERNATIONAL BUILDING AND FIRE CODE

Dear Matt Gitlein:

Plans for the fuel tank or dispensing system installation have been reviewed by this office for conformity with the State Fire Safety Regulations and are hereby approved as submitted for the FUEL TANK OR DISPENSING SYSTEM ONLY. Enclosed is a certificate of approval that must be posted on the premises until the system has been installed and certified operational. Approved plans must be picked up at Station 51, prior to installation. Any changes to the approved plans must be submitted to this office for review and approval. **Upon completion of the fuel tank or dispensing system installation, a final inspection must be completed with a Fire Code Official or his designee in attendance.**

A set of approved plans must be maintained onsite until final inspection is complete.

It must be understood that the inclusion of and compliance with State Fire Safety Regulations does not preclude the necessity of compliance with the requirements of local codes and ordinances. Also understand that approval of submitted plans is not approval of omissions or oversights by this office or noncompliance with any applicable regulations. The plans have not been reviewed for compliance with the Federal Americans with Disabilities Act or structural requirements.

If we can be of further assistance in this matter, please contact us at the address above.

Sincerely,

Jeffrey L. Anderson
Deputy Fire Marshal

Fire and Life Safety Division

Central Mat-Su Fire Service Area No. 130 - District 1
Department of Emergency Services, Matanuska-Susitna Borough

Plan Review #2022-012

Valley Country Store #4-Propane

Fuel Tank or Dispensing System Approval

This is to certify that the plans for this building were reviewed by CMSFD's Fire & Life Safety Division on Click or tap to enter a date.,
for conformance with AS 18.70.010–100; 13 AAC 50.027. This certificate becomes invalid 180 days after the work on the site is commenced within 180 days after issuance, or if the work authorized is suspended or abandoned for a period of 180 days after the time work is commenced. An extension may be requested at the above mentioned address.

This certificate shall be posted in a conspicuous place on the premises listed above and shall remain posted until construction is completed. **Notice:** *Any changes or modifications to the approved plans must be resubmitted for review by the Central Mat-Su Fire Department.*

Authority: AS 18.70.080, 13 AAC 50.075 & MSB RS 06-054

By: Jeffrey L. Anderson, Deputy Fire Marshal

D-Series Size 1
LED Area Luminaire

Catalog Number

Notes

Type

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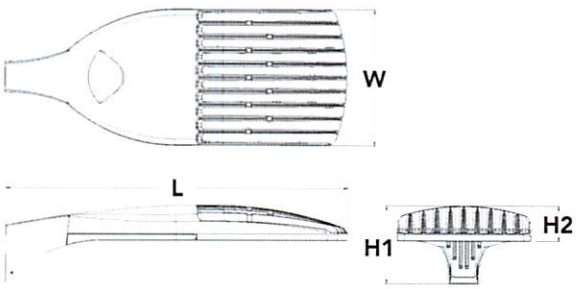
Mat-Su Borough
Development Services

Specifications

EPA:	1.01 ft² (0.09 m²)
Length:	33" (83.8 cm)
Width:	13" (33.0 cm)
Height H1:	7-1/2" (19.0 cm)
Height H2:	3-1/2"
Weight (max):	27 lbs (12.2 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series

DSX1 LED

LEDs

Forward optics

P1 P4[3] P7[3]
P2 P5[3] P8
P3 P6[3] P9[3]

Rotated optics

P10[2] P12[2]
P11[2] P13[1,2]

Color temperature

30K	3000 K
40K	4000 K
50K	5000 K

Distribution

T1S	Type I short (Automotive)
T2S	Type II short
T2M	Type II medium
T3S	Type III short
T3M	Type III medium
T4M	Type IV medium
TFTM	Forward throw medium
T5VS	Type V very short[3]
T5S	Type V short[3]
T5M	Type V medium[3]
T5W	Type V wide[3]
BLC	Backlight control[4]
LCCO	Left corner cutoff[4]
RCCO	Right corner cutoff[4]

Voltage

MVOLT[5]
XVOLT (277V-480V)[6,7,8]
120[9]
208[9]
240[9]
277[9]
347[9]
480[9]

Mounting

Shipped included

SPA	Square pole mounting
RPA	Round pole mounting[10]
WBA	Wall bracket[3]
SPUMBA	Square pole universal mounting adaptor[11]
RPUMBA	Round pole universal mounting adaptor[9]

Shipped separately

KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish)[12]

Control options

Shipped installed

NLTAIR2	nLight AIR generation 2 enabled[13]
PIRHN	Network, high/low motion/ambient sensor[14]
PER	NEMA twist-lock receptacle only (controls ordered separate)[15]
PER5	Five-pin receptacle only (controls ordered separate)[15,16]
PER7	Seven-pin receptacle only (controls ordered separate)[15,16]
DMG	0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[17]
DS	Dual switching[18,19,20]
PIR	High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[20,21]
PIRH	High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[20,21]
PIR1FC3V	High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[20,21]
PIRH1FC3V	Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[20,21]
FAO	Field adjustable output[20,21]

Other options

Shipped installed

HS	House-side shield[23]
SF	Single fuse (120, 277, 347V)[9]
DF	Double fuse (208, 240, 480V)[9]
L90	Left rotated optics[2]
R90	Right rotated optics[2]
HA	50°C ambient operations[3]

Shipped separately

BS	Bird spikes[24]
EGS	External glare shield

Finish (required)

DDBXD	Dark bronze
DBLXD	Black
DNAXD	Natural aluminum
DWHXD	White
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white

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Ordering Information

Accessories

Ordered and shipped separately.

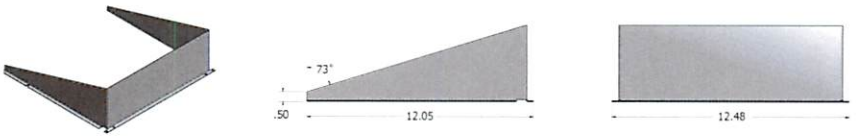
DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [25]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [25]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [25]
DSHORT SBK U	Shorting cap [25]
DSX1HS 30C U	House-side shield for P1, P2, P3, P4 and P5 [23]
DSX1HS 40C U	House-side shield for P6 and P7 [23]
DSX1HS 60C U	House-side shield for P8, P9, P10, P11 and P12 [23]
PUMBA DDBXD U*	Square and round pole universal mounting bracket (specify finish) [26]
KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish) [12]
DSX1EGS (FINISH) U	External glare shield

For more control options, visit DTL and ROAM online.

NOTES
1 HA not available with P4, P5, P6, P7, P9 and P13.
2 P10, P11, P12 or P13 and rotated optics (L90, R90) only available together.
3 Any Type 5 distribution with photocell, is not available with WBA.
4 Not available with HS.
5 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
6 XVOLT only suitable for use with P3, P5, P6, P7, P9 and P13.
7 XVOLT works with any voltage between 277V and 480V.
8 XVOLT not available with fusing (SF or DF) and not available with PIR, PIRH, PIR1FC3V, PIRH1FC3V.
9 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V. XVOLT not available with fusing (SF or DF.
10 Suitable for mounting to round poles between 3.5" and 12" diameter.
11 Universal mounting brackets intended for retrofit on existing, pre-drilled poles only. 1.5 G vibration load rating per ANCI C136.31. Only usable when pole's drill pattern is NOT Lithonia template #8
12 Must order fixture with SPA option. Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" diameter mast arm (not included).
13 Must be ordered with PIRHN. Sensor cover available only in dark bronze, black, white and natural aluminum colors.
14 Must be ordered with NLTAIR2. For more information on nLight Air 2 visit this link.
15 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting cap included.
16 If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Node with integral dimming.
17 DMG not available with PIRHN, PER5, PER7, PIR, PIRH, PIR1FC3V or PIRH1FC3V, FAO.
18 Provides 50/50fixture operation via (2) independent drivers. Not available with PER, PER5, PER7, PIR or PIRH. Not available P1, P2, P3, P4 or P5.
19 Requires (2) separately switched circuits with isolated neutrol.
20 Reference Controls Option Default settings table on page 4.
21 Reference Motion Sensor table on page 4 to see functionality.
22 Not available with other dimming controls options.
23 Not available with BLC, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
24 Must be ordered with fixture for factory pre-drilling.
25 Requires luminaire to be specified with PER, PER5 or PER7 option. See Control Option Table on page 4.
26 For retrofit use only. Only usable when pole's drill pattern is NOT Lithonia template #8.

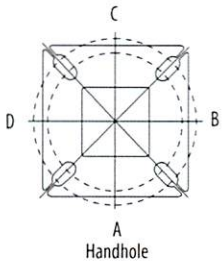
Options

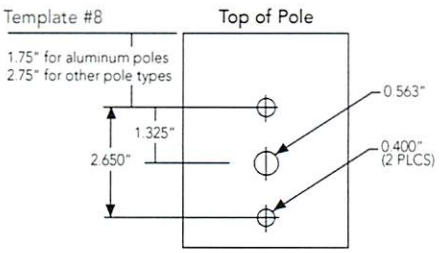
EGS - External Glare Shield



Drilling

HANDHOLE ORIENTATION





Tenon Mounting Slipfitter

Tenon O.D.	Mounting	Single Unit	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
2-3/8"	RPA	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 390	AS3-5 320	AS3-5 490
2-7/8"	RPA	AST25-190	AST25-280	AST25-290	AST25-390	AST25-320	AST25-490
4"	RPA	AST35-190	AST35-280	AST35-290	AST35-390	AST35-320	AST35-490

Mounting Option	Drilling Template	Single	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
Head Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
Drill Nomenclature	#8	DM19AS	DM28AS	DM29AS	DM39AS	DM32AS	DM49AS

DSX1 Area Luminaire - EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Single DM19	2 @ 180 DM28	2 @ 90 DM29	3 @ 90 DM39	3 @ 120 DM32	4 @ 90 DM49
Mounting Type						
DSX1 LED	1.013	2.025	1.945	3.038	2.850	3.749

	Drilling Template	Minimum Acceptable Outside Pole Dimension					
SPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
RPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
SPUMBA	#5	2-7/8"	3"	4"	4"	3.5"	4"
RPUMBA	#5	2-7/8"	3.5"	5"	5"	3.5"	5"

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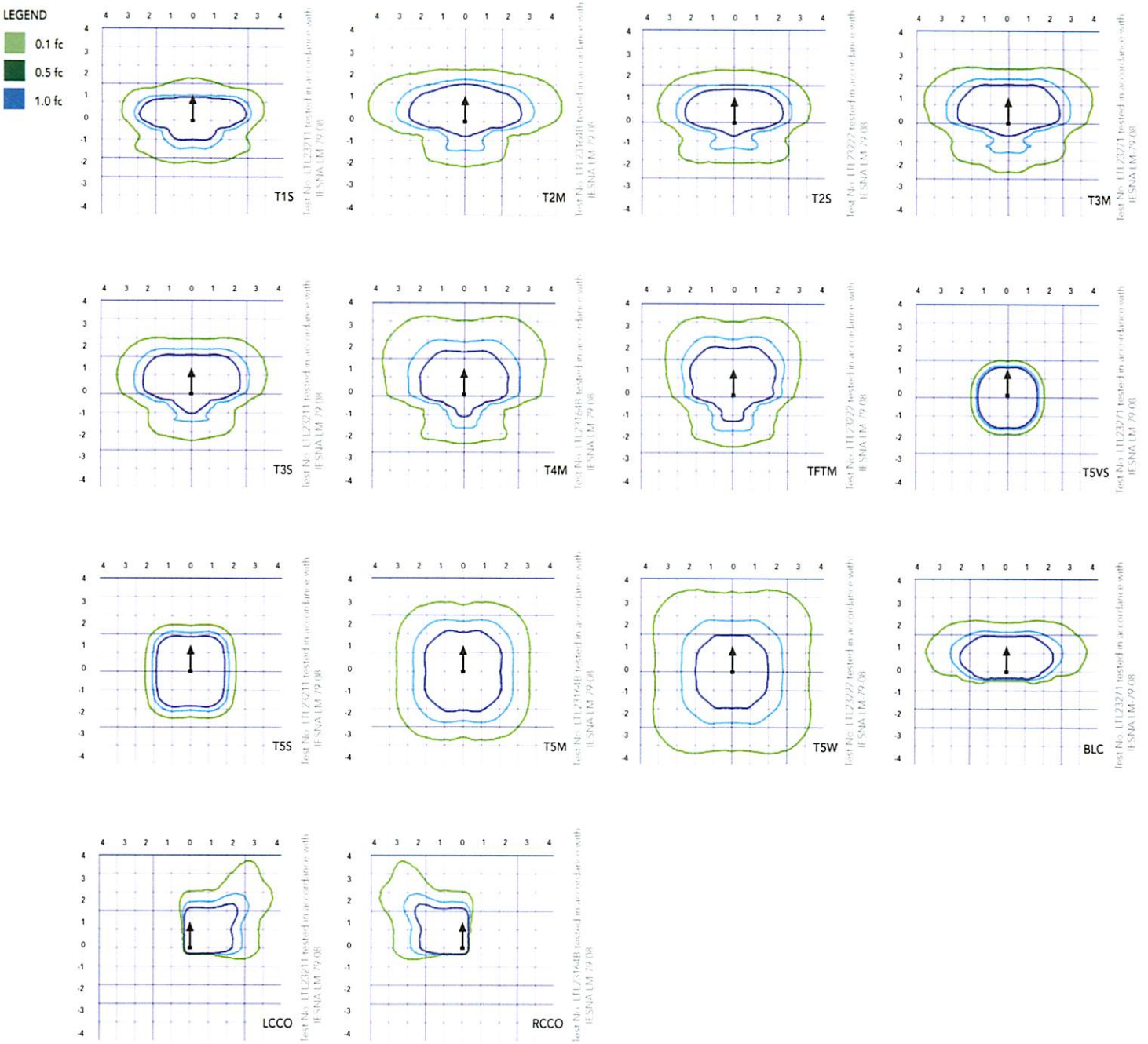
Photometric Diagrams

To [illegible]plete photometric reports or download .ies files for this product, v[illegible] Lithonia Lighting's D[illegible].

Isofootcandle plots for the DSX1 LED 60C 1000 40K. Distances are in units of mounting height (25').



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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	50°F	1.02
20°C	68°F	1.01
25°C	**77°F**	**1.00**
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	Lumen Maintenance Factor
0	1.00
25,000	0.96
50,000	0.92
100,000	0.85

Motion Sensor Default Settings						
Option	Dimmed State	High Level (when triggered)	Phototcell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min
*for use when motion sensor is used as dusk to dawn control.						

Electrical Load

	Performance Package	LED Count	Drive Current	Wattage	Current (A) 120	208	240	277	347	480
Forward Optics (Non-Rotated)	P1	30	530	54	0.45	0.26	0.23	0.19	0.10	0.12
	P2	30	700	70	0.59	0.34	0.30	0.25	0.20	0.16
	P3	30	1050	102	0.86	0.50	0.44	0.38	0.30	0.22
	P4	30	1250	125	1.06	0.60	0.52	0.46	0.37	0.27
	P5	30	1400	138	1.16	0.67	0.58	0.51	0.40	0.29
	P6	40	1250	163	1.36	0.78	0.68	0.59	0.47	0.34
	P7	40	1400	183	1.53	0.88	0.76	0.66	0.53	0.38
	P8	60	1050	207	1.74	0.98	0.87	0.76	0.64	0.49
	P9	60	1250	241	2.01	1.16	1.01	0.89	0.70	0.51
Rotated Optics (Requires L90 or R90)	P10	60	530	106	0.90	0.52	0.47	0.43	0.33	0.27
	P11	60	700	137	1.15	0.67	0.60	0.53	0.42	0.32
	P12	60	1050	207	1.74	0.99	0.87	0.76	0.60	0.46
	P13	60	1250	231	1.93	1.12	0.97	0.86	0.67	0.49

Controls Options				
Nomenclature	Description	Functionality	Primary control device	Notes
FAO	Field adjustable output device installed inside the luminaire; wired to the driver dimming leads.	Allows the luminaire to be manually dimmed, effectively trimming the light output.	FAO device	Cannot be used with other controls options that need the 0-10V leads
DS	Drivers wired independently for 50/50 luminaire operation	The luminaire is wired to two separate circuits, allowing for 50/50 operation.	Independently wired drivers	Requires two separately switched circuits. Consider nLight AIR as a more cost effective alternative.
PER5 or PER7	Twist-lock photocell recepticle	Compatible with standard twist-lock photocells for dusk to dawn operation, or advanced control nodes that provide 0-10V dimming signals.	Twist-lock photocells such as DLL Elite or advanced control nodes such as ROAM.	Pins 4 & 5 to dimming leads on driver, Pins 6 & 7 are capped inside luminaire
PIR or PIRH	Motion sensors with integral photocell. PIR for 8-15' mounting; PIRH for 15-30' mounting	Luminaires dim when no occupancy is detected.	Acuity Controls SBGR	Also available with PIRH1FC3V when the sensor photocell is used for dusk-to-dawn operation.
NLTAIR2 PIRHN	nLight AIR enabled luminaire for motion sensing, photocell and wireless communication.	Motion and ambient light sensing with group response. Scheduled dimming with motion sensor over-ride when wirelessly connected to the nLight Eclypse.	nLight Air rSDGR	nLight AIR sensors can be programmed and commissioned from the ground using the CIAIRity Pro app.

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Performance Data

Lumen Output

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Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
30	530	P1	54W	T1S	6,457	2	0	2	120	6,956	2	0	2	129	7,044	2	0	2	130
				T2S	6,450	2	0	2	119	6,949	2	0	2	129	7,037	2	0	2	130
				T2M	6,483	1	0	1	120	6,984	2	0	2	129	7,073	2	0	2	131
				T3S	6,279	2	0	2	116	6,764	2	0	2	125	6,850	2	0	2	127
				T3M	6,468	1	0	2	120	6,967	1	0	2	129	7,056	1	0	2	131
				T4M	6,327	1	0	2	117	6,816	1	0	2	126	6,902	1	0	2	128
				TFTM	6,464	1	0	2	120	6,963	1	0	2	129	7,051	1	0	2	131
				T5VS	6,722	2	0	0	124	7,242	3	0	0	134	7,334	3	0	0	136
				T5S	6,728	2	0	1	125	7,248	2	0	1	134	7,340	2	0	1	136
				T5M	6,711	3	0	1	124	7,229	3	0	1	134	7,321	3	0	2	136
				T5W	6,667	3	0	2	123	7,182	3	0	2	133	7,273	3	0	2	135
				BLC	5,299	1	0	1	98	5,709	1	0	2	106	5,781	1	0	2	107
				LCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80
				RCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80
30	700	P2	70W	T1S	8,249	2	0	2	118	8,886	2	0	2	127	8,999	2	0	2	129
				T2S	8,240	2	0	2	118	8,877	2	0	2	127	8,989	2	0	2	128
				T2M	8,283	2	0	2	118	8,923	2	0	2	127	9,036	2	0	2	129
				T3S	8,021	2	0	2	115	8,641	2	0	2	123	8,751	2	0	2	125
				T3M	8,263	2	0	2	118	8,901	2	0	2	127	9,014	2	0	2	129
				T4M	8,083	2	0	2	115	8,708	2	0	2	124	8,818	2	0	2	126
				TFTM	8,257	2	0	2	118	8,896	2	0	2	127	9,008	2	0	2	129
				T5VS	8,588	3	0	0	123	9,252	3	0	0	132	9,369	3	0	0	134
				T5S	8,595	3	0	1	123	9,259	3	0	1	132	9,376	3	0	1	134
				T5M	8,573	3	0	2	122	9,236	3	0	2	132	9,353	3	0	2	134
				T5W	8,517	3	0	2	122	9,175	4	0	2	131	9,291	4	0	2	133
				BLC	6,770	1	0	2	97	7,293	1	0	2	104	7,386	1	0	2	106
				LCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79
				RCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79
30	1050	P3	102W	T1S	11,661	2	0	2	114	12,562	3	0	3	123	12,721	3	0	3	125
				T2S	11,648	2	0	2	114	12,548	3	0	3	123	12,707	3	0	3	125
				T2M	11,708	2	0	2	115	12,613	2	0	2	124	12,773	2	0	2	125
				T3S	11,339	2	0	2	111	12,215	3	0	3	120	12,370	3	0	3	121
				T3M	11,680	2	0	2	115	12,582	2	0	2	123	12,742	2	0	2	125
				T4M	11,426	2	0	3	112	12,309	2	0	3	121	12,465	2	0	3	122
				TFTM	11,673	2	0	2	114	12,575	2	0	3	123	12,734	2	0	3	125
				T5VS	12,140	3	0	1	119	13,078	3	0	1	128	13,244	3	0	1	130
				T5S	12,150	3	0	1	119	13,089	3	0	1	128	13,254	3	0	1	130
				T5M	12,119	4	0	2	119	13,056	4	0	2	128	13,221	4	0	2	130
				T5W	12,040	4	0	3	118	12,970	4	0	3	127	13,134	4	0	3	129
				BLC	9,570	1	0	2	94	10,310	1	0	2	101	10,440	1	0	2	102
				LCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76
				RCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76
30	1250	P4	125W	T1S	13,435	3	0	3	107	14,473	3	0	3	116	14,657	3	0	3	117
				T2S	13,421	3	0	3	107	14,458	3	0	3	116	14,641	3	0	3	117
				T2M	13,490	2	0	2	108	14,532	3	0	3	116	14,716	3	0	3	118
				T3S	13,064	3	0	3	105	14,074	3	0	3	113	14,252	3	0	3	114
				T3M	13,457	2	0	2	108	14,497	2	0	2	116	14,681	2	0	2	117
				T4M	13,165	2	0	3	105	14,182	2	0	3	113	14,362	2	0	3	115
				TFTM	13,449	2	0	3	108	14,488	2	0	3	116	14,672	2	0	3	117
				T5VS	13,987	4	0	1	112	15,068	4	0	1	121	15,259	4	0	1	122
				T5S	13,999	3	0	1	112	15,080	3	0	1	121	15,271	3	0	1	122
				T5M	13,963	4	0	2	112	15,042	4	0	2	120	15,233	4	0	2	122
				T5W	13,872	4	0	3	111	14,944	4	0	3	120	15,133	4	0	3	121
				BLC	11,027	1	0	2	88	11,879	1	0	2	95	12,029	1	0	2	96
				LCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72
				RCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72
30	1400	P5	138W	T1S	14,679	3	0	3	106	15,814	3	0	3	115	16,014	3	0	3	116
				T2S	14,664	3	0	3	106	15,797	3	0	3	114	15,997	3	0	3	116
				T2M	14,739	3	0	3	107	15,878	3	0	3	115	16,079	3	0	3	117
				T3S	14,274	3	0	3	103	15,377	3	0	3	111	15,572	3	0	3	113
				T3M	14,704	2	0	3	107	15,840	3	0	3	115	16,040	3	0	3	116
				T4M	14,384	2	0	3	104	15,496	3	0	3	112	15,692	3	0	3	114
				TFTM	14,695	2	0	3	106	15,830	3	0	3	115	16,030	3	0	3	116
				T5VS	15,283	4	0	1	111	16,464	4	0	1	119	16,672	4	0	1	121
				T5S	15,295	3	0	1	111	16,477	4	0	1	119	16,686	4	0	1	121
				T5M	15,257	4	0	2	111	16,435	4	0	2	119	16,644	4	0	2	121
				T5W	15,157	4	0	3	110	16,328	4	0	3	118	16,534	4	0	3	120
				BLC	12,048	1	0	2	87	12,979	1	0	2	94	13,143	1	0	2	95
				LCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71
				RCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71

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Performance Data

Lumen Output

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Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
40	1250	P6	163W	T1S	17,654	3	0	3	108	19,018	3	0	3	117	19,259	3	0	3	118
				T2S	17,635	3	0	3	108	18,998	3	0	3	117	19,238	3	0	3	118
				T2M	17,726	3	0	3	109	19,096	3	0	3	117	19,337	3	0	3	119
				T3S	17,167	3	0	3	105	18,493	3	0	3	113	18,727	3	0	3	115
				T3M	17,683	3	0	3	108	19,049	3	0	3	117	19,290	3	0	3	118
				T4M	17,299	3	0	3	106	18,635	3	0	4	114	18,871	3	0	4	116
				TFTM	17,672	3	0	3	108	19,038	3	0	4	117	19,279	3	0	4	118
				T5VS	18,379	4	0	1	113	19,800	4	0	1	121	20,050	4	0	1	123
				T5S	18,394	4	0	2	113	19,816	4	0	2	122	20,066	4	0	2	123
				T5M	18,348	4	0	2	113	19,766	4	0	2	121	20,016	4	0	2	123
				T5W	18,228	5	0	3	112	19,636	5	0	3	120	19,885	5	0	3	122
				BLC	14,489	2	0	2	89	15,609	2	0	3	96	15,806	2	0	3	97
				LCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72
				RCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72
40	1400	P7	183W	T1S	19,227	3	0	3	105	20,712	3	0	3	113	20,975	3	0	3	115
				T2S	19,206	3	0	3	105	20,690	3	0	3	113	20,952	3	0	3	114
				T2M	19,305	3	0	3	105	20,797	3	0	3	114	21,060	3	0	3	115
				T3S	18,696	3	0	3	102	20,141	3	0	3	110	20,396	3	0	4	111
				T3M	19,258	3	0	3	105	20,746	3	0	3	113	21,009	3	0	3	115
				T4M	18,840	3	0	4	103	20,296	3	0	4	111	20,553	3	0	4	112
				TFTM	19,246	3	0	4	105	20,734	3	0	4	113	20,996	3	0	4	115
				T5VS	20,017	4	0	1	109	21,564	4	0	1	118	21,837	4	0	1	119
				T5S	20,033	4	0	2	109	21,581	4	0	2	118	21,854	4	0	2	119
				T5M	19,983	4	0	2	109	21,527	5	0	3	118	21,799	5	0	3	119
				T5W	19,852	5	0	3	108	21,386	5	0	3	117	21,656	5	0	3	118
				BLC	15,780	2	0	3	86	16,999	2	0	3	93	17,214	2	0	3	94
				LCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70
				RCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70
60	1050	P8	207W	T1S	22,490	3	0	3	109	24,228	3	0	3	117	24,535	3	0	3	119
				T2S	22,466	3	0	4	109	24,202	3	0	4	117	24,509	3	0	4	118
				T2M	22,582	3	0	3	109	24,327	3	0	3	118	24,635	3	0	3	119
				T3S	21,870	3	0	4	106	23,560	3	0	4	114	23,858	3	0	4	115
				T3M	22,527	3	0	4	109	24,268	3	0	4	117	24,575	3	0	4	119
				T4M	22,038	3	0	4	106	23,741	3	0	4	115	24,041	3	0	4	116
				TFTM	22,513	3	0	4	109	24,253	3	0	4	117	24,560	3	0	4	119
				T5VS	23,415	5	0	1	113	25,224	5	0	1	122	25,543	5	0	1	123
				T5S	23,434	4	0	2	113	25,244	4	0	2	122	25,564	4	0	2	123
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123
				T5W	23,221	5	0	4	112	25,016	5	0	4	121	25,332	5	0	4	122
				BLC	18,458	2	0	3	89	19,885	2	0	3	96	20,136	2	0	3	97
				LCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
				RCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
60	1250	P9	241W	T1S	25,575	3	0	3	106	27,551	3	0	3	114	27,900	3	0	3	116
				T2S	25,548	3	0	4	106	27,522	3	0	4	114	27,871	3	0	4	116
				T2M	25,680	3	0	3	107	27,664	3	0	3	115	28,014	3	0	3	116
				T3S	24,870	3	0	4	103	26,791	3	0	4	111	27,130	3	0	4	113
				T3M	25,617	3	0	4	106	27,597	3	0	4	115	27,946	3	0	4	116
				T4M	25,061	3	0	4	104	26,997	3	0	4	112	27,339	3	0	4	113
				TFTM	25,602	3	0	4	106	27,580	3	0	4	114	27,929	3	0	4	116
				T5VS	26,626	5	0	1	110	28,684	5	0	1	119	29,047	5	0	1	121
				T5S	26,648	4	0	2	111	28,707	5	0	2	119	29,070	5	0	2	121
				T5M	26,581	5	0	3	110	28,635	5	0	3	119	28,997	5	0	3	120
				T5W	26,406	5	0	4	110	28,447	5	0	4	118	28,807	5	0	4	120
				BLC	20,990	2	0	3	87	22,612	2	0	3	94	22,898	2	0	3	95
				LCCO	15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71
				RCCO	15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71

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Performance Data

Lumen Output

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Rotated Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
60	530	**P10**	106W	T1S	13,042	3	0	3	123	14,050	3	0	3	133	14,228	3	0	3	134
				T2S	12,967	4	0	4	122	13,969	4	0	4	132	14,146	4	0	4	133
				T2M	13,201	3	0	3	125	14,221	3	0	3	134	14,401	3	0	3	136
				T3S	12,766	4	0	4	120	13,752	4	0	4	130	13,926	4	0	4	131
				T3M	13,193	4	0	4	124	14,213	4	0	4	134	14,393	4	0	4	136
				T4M	12,944	4	0	4	122	13,945	4	0	4	132	14,121	4	0	4	133
				TFTM	13,279	4	0	4	125	14,305	4	0	4	135	14,486	4	0	4	137
				T5VS	13,372	3	0	1	126	14,405	4	0	1	136	14,588	4	0	1	138
				T5S	13,260	3	0	1	125	14,284	3	0	1	135	14,465	3	0	1	136
				T5M	13,256	4	0	2	125	14,281	4	0	2	135	14,462	4	0	2	136
				T5W	13,137	4	0	3	124	14,153	4	0	3	134	14,332	4	0	3	135
				BLC	10,906	3	0	3	103	11,749	3	0	3	111	11,898	3	0	3	112
				LCCO	7,789	1	0	3	73	8,391	1	0	3	79	8,497	1	0	3	80
				RCCO	7,779	4	0	4	73	8,380	4	0	4	79	8,486	4	0	4	80
60	700	**P11**	137W	T1S	16,556	3	0	3	121	17,835	3	0	3	130	18,061	4	0	4	132
				T2S	16,461	4	0	4	120	17,733	4	0	4	129	17,957	4	0	4	131
				T2M	16,758	4	0	4	122	18,053	4	0	4	132	18,281	4	0	4	133
				T3S	16,205	4	0	4	118	17,457	4	0	4	127	17,678	4	0	4	129
				T3M	16,748	4	0	4	122	18,042	4	0	4	132	18,271	4	0	4	133
				T4M	16,432	4	0	4	120	17,702	4	0	4	129	17,926	4	0	4	131
				TFTM	16,857	4	0	4	123	18,159	4	0	4	133	18,389	4	0	4	134
				T5VS	16,975	4	0	1	124	18,287	4	0	1	133	18,518	4	0	1	135
				T5S	16,832	4	0	1	123	18,133	4	0	2	132	18,362	4	0	2	134
				T5M	16,828	4	0	2	123	18,128	4	0	2	132	18,358	4	0	2	134
				T5W	16,677	4	0	3	122	17,966	5	0	3	131	18,193	5	0	3	133
				BLC	13,845	3	0	3	101	14,915	3	0	3	109	15,103	3	0	3	110
				LCCO	9,888	1	0	3	72	10,652	2	0	3	78	10,787	2	0	3	79
				RCCO	9,875	4	0	4	72	10,638	4	0	4	78	10,773	4	0	4	79
60	1050	**P12**	207W	T1S	22,996	4	0	4	111	24,773	4	0	4	120	25,087	4	0	4	121
				T2S	22,864	4	0	4	110	24,631	5	0	5	119	24,943	5	0	5	120
				T2M	23,277	4	0	4	112	25,075	4	0	4	121	25,393	4	0	4	123
				T3S	22,509	4	0	4	109	24,248	5	0	5	117	24,555	5	0	5	119
				T3M	23,263	4	0	4	112	25,061	4	0	4	121	25,378	4	0	4	123
				T4M	22,824	5	0	5	110	24,588	5	0	5	119	24,899	5	0	5	120
				TFTM	23,414	5	0	5	113	25,223	5	0	5	122	25,543	5	0	5	123
				T5VS	23,579	5	0	1	114	25,401	5	0	1	123	25,722	5	0	1	124
				T5S	23,380	4	0	2	113	25,187	4	0	2	122	25,506	4	0	2	123
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123
				T5W	23,165	5	0	4	112	24,955	5	0	4	121	25,271	5	0	4	122
				BLC	19,231	4	0	4	93	20,717	4	0	4	100	20,979	4	0	4	101
				LCCO	13,734	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
				RCCO	13,716	4	0	4	66	14,776	4	0	4	71	14,963	4	0	4	72
60	1250	**P13**	231W	T1S	25,400	4	0	4	110	27,363	4	0	4	118	27,709	4	0	4	120
				T2S	25,254	5	0	5	109	27,205	5	0	5	118	27,550	5	0	5	119
				T2M	25,710	4	0	4	111	27,696	4	0	4	120	28,047	4	0	4	121
				T3S	24,862	5	0	5	108	26,783	5	0	5	116	27,122	5	0	5	117
				T3M	25,695	5	0	5	111	27,680	5	0	5	120	28,031	5	0	5	121
				T4M	25,210	5	0	5	109	27,158	5	0	5	118	27,502	5	0	5	119
				TFTM	25,861	5	0	5	112	27,860	5	0	5	121	28,212	5	0	5	122
				T5VS	26,043	5	0	1	113	28,056	5	0	1	121	28,411	5	0	1	123
				T5S	25,824	4	0	2	112	27,819	5	0	2	120	28,172	5	0	2	122
				T5M	25,818	5	0	3	112	27,813	5	0	3	120	28,165	5	0	3	122
				T5W	25,586	5	0	4	111	27,563	5	0	4	119	27,912	5	0	4	121
				BLC	21,241	4	0	4	92	22,882	4	0	4	99	23,172	4	0	4	100
				LCCO	15,170	2	0	4	66	16,342	2	0	4	71	16,549	2	0	4	72
				RCCO	15,150	5	0	5	66	16,321	5	0	5	71	16,527	5	0	5	72

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FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION
Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (1.01 ft^2) for optimized pole wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 3000 K, 4000 K and 5000 K (70 CRI) configurations. The D-Series Size 1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L85/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS
The DSX1 LED area luminaire has a number of control options. DSX Size 1, comes standard with 0-10V dimming drivers. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. Integrated motion sensors with on-board photocells feature field-adjustable programing and are suitable for mounting heights up to 30 feet.

nLIGHT AIR CONTROLS
The DSX1 LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing and photocontrol functionality and is suitable for mounting heights up to 40 feet. Once commissioned using a smartphone and the easy-to-use CLAIRITY app, nLight AIR equipped luminaries can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclypse. Additional information about nLight Air can be found here.

INSTALLATION
Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 1 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 1 utilizes the AERIS™ series pole drilling pattern (template #8). NEMA photocontrol receptacle are also available.

LISTINGS
UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40°C minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

WARRANTY
5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

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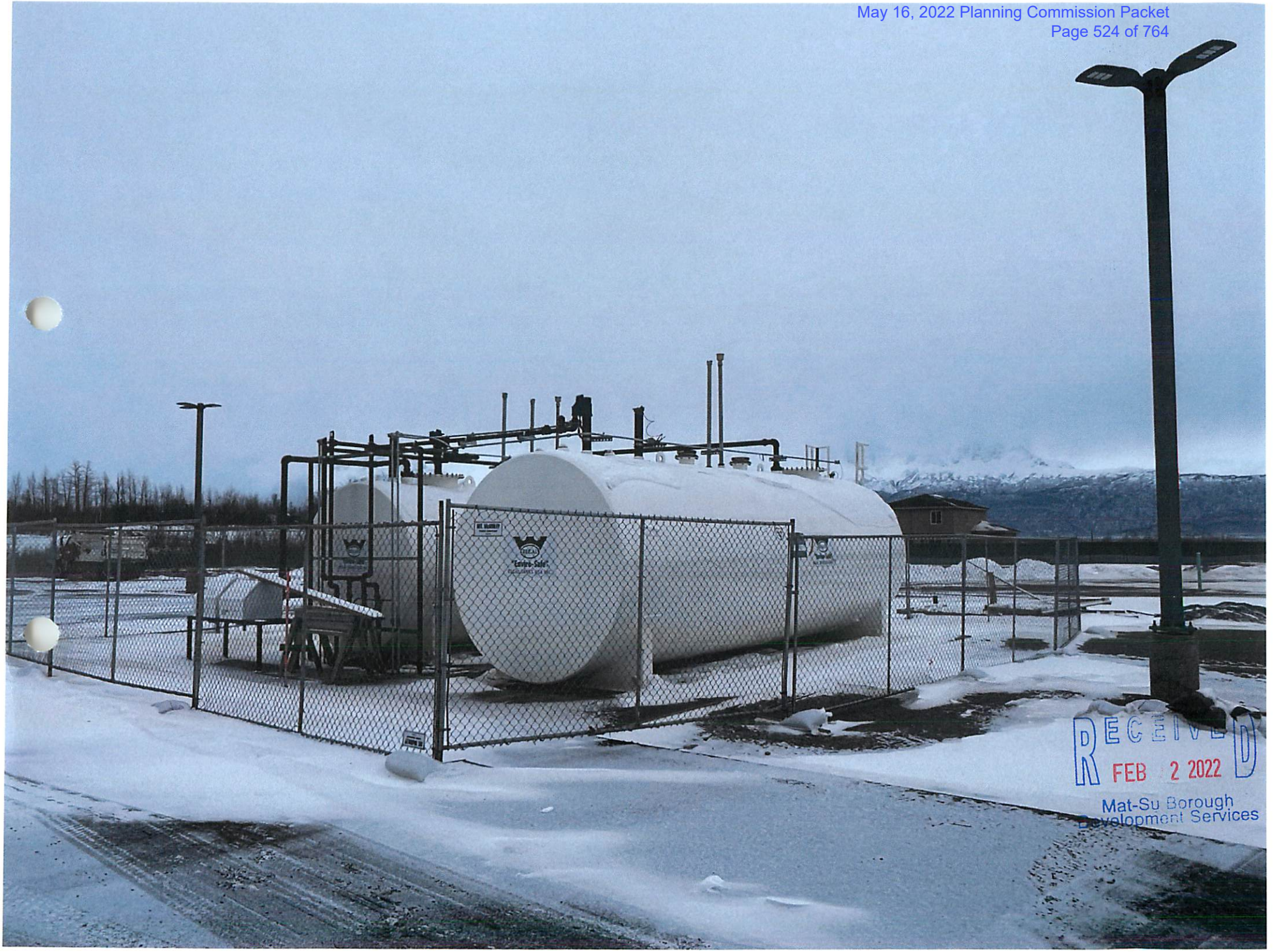

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Peggy Horton

From: Matt Gittlein <mattgittlein59@hotmail.com>
Sent: Thursday, February 3, 2022 10:05 AM
To: Peggy Horton; Tim Alley
Subject: Re: Scanned image from 2-2 submittal for VCS #4

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Peggy,

That has to do with site lighting. It shows where and how much candle foot power each exterior light produces. Let me know if you want further clarification and I can have my electrical engineer respond.

Matt Gittlein
Valley Country Store & Fuel
907-841-5666

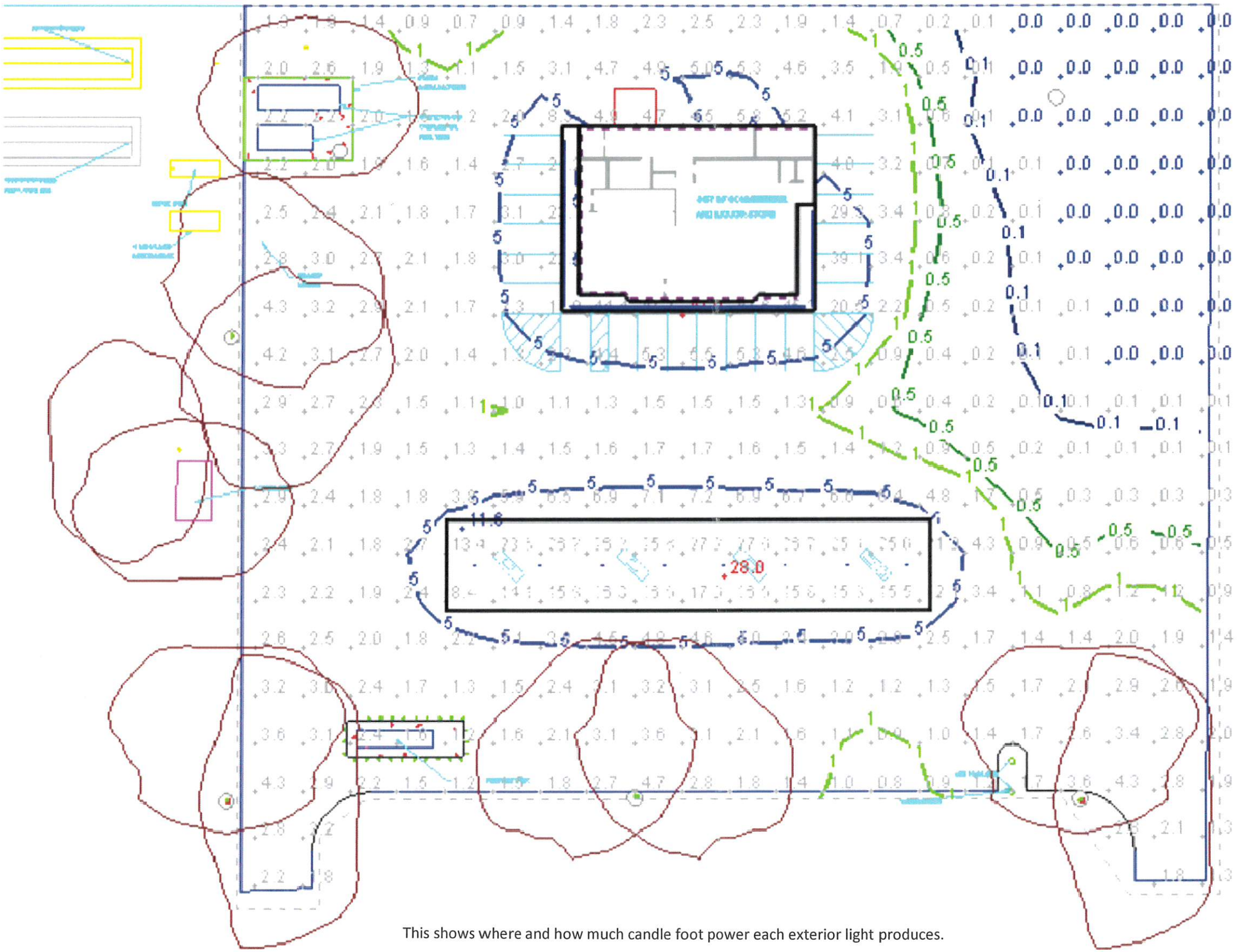
From: Peggy Horton <Peggy.Horton@matsugov.us>
Sent: Thursday, February 3, 2022 9:58 AM
To: Tim Alley <talley@tbcak.com>; Matt Gittlein <mattgittlein59@hotmail.com>
Subject: Scanned image from 2-2 submittal for VCS #4

Good Morning,

Matt, you dropped this off with the rest of the submittal docs for VCS #4 yesterday. Can anyone tell me what this is and why it's applicable?

Thanks,

Peggy Horton
Matanuska-Susitna Borough
Development Services Division
Planner II
907-861-7862



This shows where and how much candle foot power each exterior light produces.

Current View

VISUAL

VALLEY COUNTRY STORE #4

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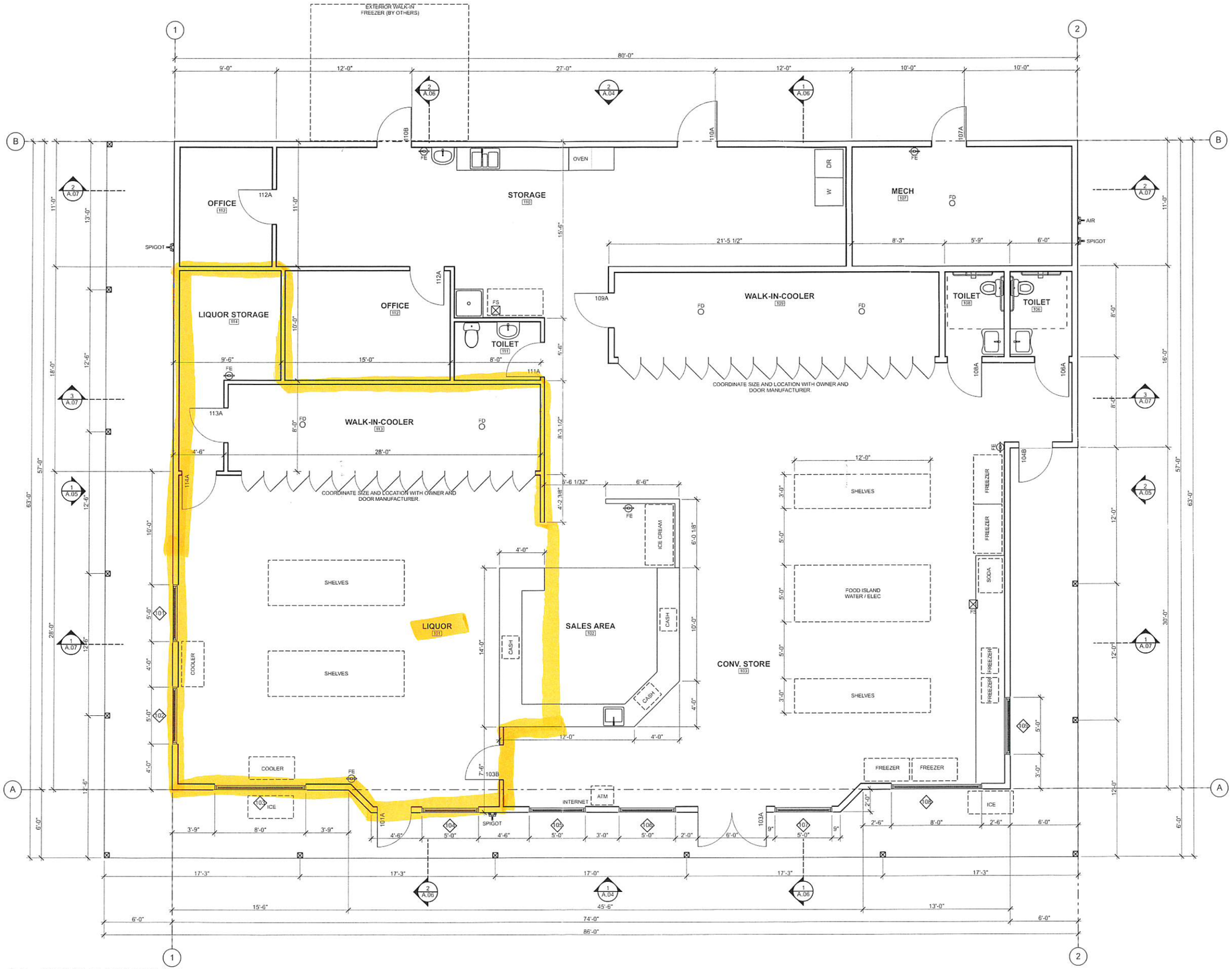
Mat-Su Borough
Development Services

Designer
B. Riggan
Date
12/17/2021
Scale
Not to Scale
Drawing No.

Summary



1 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

189 E. NELSON AVE. PMB140
WASILLA, ALASKA 99654
PHONE: 907.376.5755
FAX: 907.376.5765
Email: Brian@McMillenDesigns.com
www.McMillenDesigns.com

McMILLEN DESIGNS
COMMERCIAL & RESIDENTIAL ARCHITECTURE

STATE OF ALASKA 49TH BRIAN MELVIN MCMILLEN 12114 REGISTERED ARCHITECT

VALLEY COUNTRY STORE #4
PALMER, ALASKA

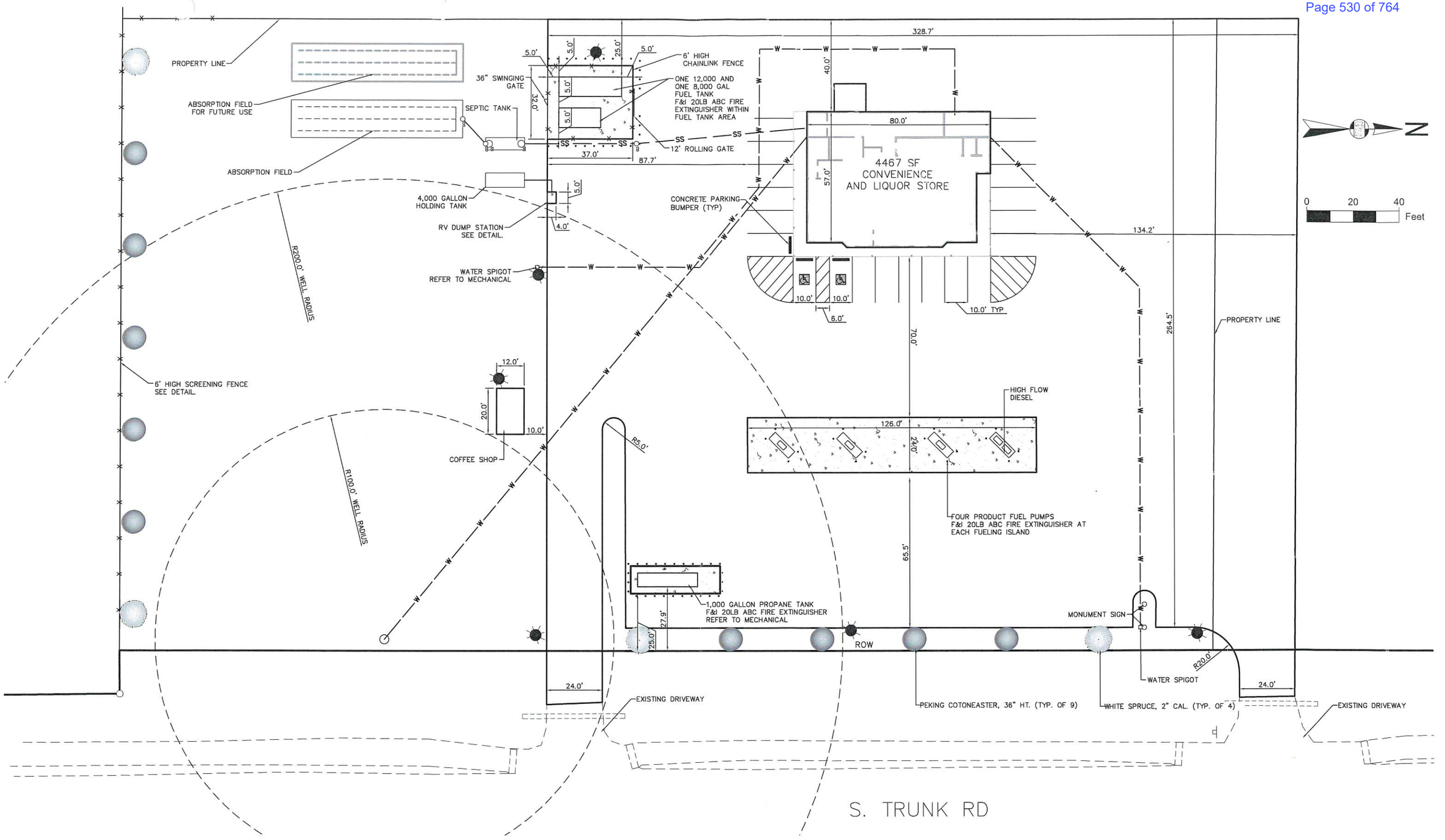
BY	REVISIONS	DATE

DATE:	12/14/20
SCALE:	AS NOTED
JOB #:	#
DRAWN:	
CHECKED:	

A.02
Plotted On: 12/14/20

FIRST FLOOR PLAN

I:\Users\brianmcmillen\Documents\Projects\2020\Valley Country Store 2\Valley Country Store 4.pln



NOTES:

MAINTAIN A 50' BUFFER FREE OF BRUSH, DEBRIS, AND OTHER COMBUSTIBLE MATERIALS AROUND PROPANE AND FUEL STORAGE AREAS.

The Boutet Company, Inc.
601 E. 57th Place #102
Anchorage, AK. 99518
Ph. 907-522-6776
License No. AECC957

CONSULTANT

STATE OF ALASKA 49TH TIMOTHY J. ALLEY CE 14368 05/10/21 REGISTERED PROFESSIONAL ENGINEER

SEAL

VALLEY COUNTRY STORE 4
WASILLA, ALASKA

CIVIL SITE & UTILITY IMPROVEMENTS

VALLEY COUNTRY STORE 4

HORZ SCALE: 1"=30'
VERT SCALE: N/A
DATE: 05/10/2021
SHEET C7

FILE W:\WASILLAFILES\GITTLEINS\VALLEY COUNTRY STORE 4\TBC ACAD\VCS-4 SITE-PLAN.DWG
DATE/TIME 5/10/2021
LAYOUT
DESIGNED HJH
CHECKED TJA
DRAFTED HJH

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TRAFFIC IMPACT ANALYSIS (TIA) THRESHOLD WORKSHEET

Complete this form as an aid to determine if your project requires a Traffic Impact Analysis, as per Borough Code 17.61.

Project Name: Valley Country Store #4
Location: 3068 South Trunk Road / Happy Valley Lot 1B / MSB Tax # 8150000L001B
Applicant: Matt Gittlein ☑ **Owner** or ☐ **Agent**
Address: 4891 E. Stoney Hollow Dr., Wasilla AK 99654
Phone: 907-841-5666

Box A (Original TIA) *NON-RESIDENTIAL DEVELOPMENT*

Anticipated Land Use	Project Size 4,467SF / 8 Gas Pumps			Peak Hour?	Daily Trip Rate	Peak Hour Trips	Trip Rate Source
	Acres	GFA	Other*				
Conv. Mkt w/ Gas 853		845.60	542.60	3:15-4:15PM	3,974/4,341	239/153	ITE Gen., 9th Ed.

*Specify: Per Fueling Positions at Pumps

Box B (Updated TIA) Complete only if property already has a TIA on file.

Peak Hour Trips Projected In Current TIA	Peak Hour Trips (from Box A or B) Projected in *Updated* Development Plan	Increase in Peak Hour Trips (If over 100 additional trips, a new TIA is required)

Box C (Information regarding the person/agency who prepared the TIA)

Prepared by:	Date:
Comments:	

For Official Use only.

A Traffic Impact Analysis is required. The applicant preparing the study should meet with Borough staff
__X__ to discuss the scope and requirements of the study before beginning the study.
A Traffic Impact Analysis is **not required**. The traffic generated by the proposed development does not
_____ exceed the threshold requirements.
_____ The Traffic Impact Analysis has been waived for the following reason(s):_____

Reviewed by:_____ Date:_____

NOTE: GFA = Gross Floor Area (building size).
ITE = Institute of Transportation Engineers, *Trip Generation*, 6th Edition, 525 School Street SW, Ste. 410 Washington, DC 20024-2729; (202)554-8050

PEAK HOUR TRIP RATES FOR COMMON LAND USES

Land Use	Peak Hour	Peak Hour Trip Rate	Daily Trip Rates	% Entering % Exiting	ITE Code
Automobile Care Center	PM/SAT	4.01 per 1,000 Sq. Ft.	15.86	51/49	840
Automobile Parts Sales	PM	6.44 per 1,000 Sq. Ft.	61.91	51/49	843
Automobile Sales (New)	SAT	2.97 per 1,000 Sq. Ft.	21.03	51/49	841
Drive-Through Bank	PM	51.23 per 1,000 Sq. Ft.	265.21	50/50	912
Business Park	AM	1.43 per 1,000 Sq. Ft.	12.76	84/16	770
Car Wash, Self Service	SAT	20.60 per Wash Stall	n/a	50/50	847
Clinic	PM	1.31 per Employee	7.75	50/50	630
Convenience Store (open 15-16 hours)	PM	36.22 per 1,000 Sq. Ft.	n/a	49/51	852
Convenience Store (open 24 hours)	AM	65.39 per 1,000 Sq. Ft.	737.99	50/50	851
Day Care Center	PM	13.94 per 1,000 Sq. Ft.	79.26	47/53	565
Convenience Store with Gas Pumps	PM	65.27 per 1,000 Sq. Ft.	845.60	50/50	853
Discount Store	SAT	7.66 per 1,000 Sq. Ft.	72.03	51/49	815
Drinking Place	PM	15.49 per 1,000 Sq. Ft.	n/a	68/32	836
Golf Course	SAT	0.64 per Acre	5.82	52/48	430
Hospital	SUN	1.75 per 1,000 Sq. Ft.	9.91	33/67	610
Hotel	SAT	0.72 per Room	8.19	56/44	310
Industrial Park	PM	0.92 per 1,000 Sq. Ft.	6.96	21/79	130
Industrial, Heavy	PM	0.68 per 1,000 Sq. Ft.	1.50	n/a	120
Industrial, Light	PM	1.08 per 1,000 Sq. Ft.	6.97	14/86	110
Manufacturing	AM	0.78 per 1,000 Sq. Ft.	3.82	68/32	140
Manufactured Home Park	PM	0.58 per Occupied Unit	4.81	26/74	240
Motel	PM	0.58 per Room	5.63	54/46	320
Movie Theater with Matinee	SAT	89.81 per Screen	529.47	58/42	444
Office Building, General	AM	1.56 per 1,000 Sq. Ft	11.01	88/12	710
Office Building, Medical-Dental	PM	4.36 per 1,000 Sq. Ft.	36.13	40/60	720
Office Building, Single Tenant	AM	1.78 per 1,000 Sq. Ft.	11.57	89/11	715
Office Park	AM	1.74 per 1,000 Sq. Ft.	11.42	89/11	750
Pharmacy, without Drive-Through	PM	8.62 per 1,000 Sq. Ft.	90.06	49/51	880
Quick Lubrication Vehicle Shop	PM	5.19 per Bay	n/a	55/45	837
Recreational Community Center	AM	2.68 per 1,000 Sq. Ft.	n/a	53/47	495
Single Family (PUD)	PM	0.72 per Unit	7.50	64/36	270
Single Family	PM	1.02 per Unit	9.57	64/36	210
Restaurant, Fast-Food (with Drive-Through)	SUN	72.74 per 1,000 Sq. Ft.	542.72	48/52	834
Restaurant, Fast Food (w/o Drive-Through)	AM	63.50 per 1,000 Sq. Ft.	716	52/48	833
Restaurant, High Turnover	SAT	20.00 per 1,000 Sq. Ft.	158.37	63/37	832
Restaurant, Quality	SAT	10.82 per 1,000 Sq. Ft.	94.36	59/41	831
School, Elementary	AM	0.30 per Student	1.02	5//42	520
School, High	AM	0.46 per Student	1.79	70/30	530
School, Middle/Junior High	AM	0.46 per Student	1.45	57/43	522
Service Station, with Convenience Market (w/Car Wash)	PM	13.77 per Fueling Position	152.84	50/50	846
Service Station, with Convenience Market (w/o Car Wash)	PM	13.57 per Fueling Position	162.78	50/50	845
Shopping Center	SAT	4.97 per 1,000 Sq. Ft.	49.97	51/49	820
Specialty Retail Center	AM	6.41 per 1,000 Sq. Ft.	40.67	48/52	814
Supermarket	SUN	18.93 per 1,000 Sq. Ft.	166.44	n/a	850
Video Rental	PM	13.60 per 1,000 Sq. Ft.	n/a	46/54	896
Warehousing, General	PM	0.61 per 1,000 Sq. Ft	4.96	8/92	150
Warehousing, Mini	SAT	0.40 per 1,000 Sq. Ft.	2.33	n/a	151

Peggy Horton

From: Tim Alley <talley@tbcak.com>
Sent: Thursday, April 28, 2022 10:23 AM
To: Jamie Taylor
Cc: Peggy Horton; Michelle Olsen; Brad Sworts; Andy Dean
Subject: RE: Valley Country Store/Trunk Road
Attachments: Valley Country Store 4 TIA ver 3.pdf

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]
Good Morning,

The revised TIA is attached with comment responses below.

Please let me know if you have any questions or would like to discuss further.

Thank you,
Tim

TIA comments:

Page 2 Required sight distance listed does not account for a design vehicle other than a passenger vehicle. I assume the design vehicle is a tank truck, for which AASHTO requires 695/765 feet of sight distance. (Perhaps fuel trucks could be restricted to exiting from the north driveway only.) Filling of the fuel tanks will happen 2-3 times a week and will not be a substantial contributor to the traffic. Per AASHTO Chapter 9.5.3, Case B-1: "In applying Table 9-5, it can usually be assumed that the minor-road vehicle is a passenger car. However, where substantial volumes of heavy vehicles enter the major road, such as from a ramp terminal, the use of tabulated values for single-unit or combination trucks should be considered." That said, it is probable that fuel trucks will be traveling from the north to the site so they will most likely utilize the northern driveway anyway.

Page 4 That AADT count is from 2019. There is 2020 data, but I recommend still using the 2019 data because the 2020 data is likely skewed due to COVID shut downs. Correct, the 2019 traffic count was reported. Page 4 has been updated.

Page 6 Add discussion of accident history. Traffic accident history added to page 4

Page 7 The projected traffic discussion should include ALL uses within the properties using the driveways and the assumptions used in determining the peak hour traffic volume. Discussion for the coffee shop use is provided on page 7. The liquor store is included in the ITE Vehicle Trip Generation for Convenience Market with Gas Pumps, 853. This is a conservative value as it is expected that amount of trips to the liquor store will be less than a convenience market due the age restriction and operating hours of the liquor store.

Pages 7-9 The PM base traffic flow is 229 (2021)/286 (2032), which is more than the ITETG estimate of 158 for pass-by traffic. I agree that the pass-by traffic estimate is probably high, though. What percentage of new trips come from and return to the north and what percentage come from and return to the south? I would guess a higher percentage of new trips will come from the north/Parks Highway which doesn't seem to be reflected in the turning movement estimates and also will skew the existing 55/45 peak hour traffic flow split. See page 11 comment response below. The percentage of pass by traffic is assumed to be 33% of the total traffic generated (240 vph) or 80 vph pass by. The pass by traffic is assumed to use

the 55%NB/45%SB (TIA incorrectly stated 45%NB /55%SB) peak hour split based on the existing traffic counts. The 80 vph pass by is subtracted from the 286 vph projected resulting in the remaining 90/116vph base traffic shown in the figure on page 10. It is difficult if not impossible to estimate what the split for new trips will be between driveways. While the parks highway is a very high volume road the station is not visible from it many vehicles will continue to the station off Hyer which is visible from the highway. The result is that the current development to the south could provide more new trips since this is the closest convenience store/gas station.

Page 10 Other Planned Developments: 89 lots have been created in the View Pointe at the Ranch subdivision since late 2020, which has potentially increased the traffic on S Trunk more than 2% per year for the last two years. The traffic count for 2020 is less than 2019. We are contributing that to covid shutdowns however, a larger number of people are working from home as result of covid. It is impossible to account for that until further information is gathered. The traffic growth of 2% is the average of 10 years. Furthermore, the current peak hour was determined to be 3:15 PM to 4:15 PM coinciding with the end of day for Machetanz Elementary. The new lots are south of the gas station so it is expected that the majority of traffic will contribute to STR south of the gas station.

Also, while 89 lots may have been created they have not all be developed. It does not account for total build out of the subdivision or economic slow down that is imminent considering current inflation. It should also be noted that the development of these lots generates trips from the construction workers which will cease once development is completed.

Page 10 LOS is listed for the driveway intersections, but not the road segments themselves. 11.12.080(A)(5)(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. Discuss whether this criteria will be met and include LOS analysis if so. MSB Code 11.12.080(A)(5)(b) is in regards to what the traffic impact analysis must address. It does not require a LOS analysis for the road segments. This is a very uncommon thing to require due to the amount of variables involved. It is rarely required by AKDOT or other municipalities typically only for very high volume roads/freeways.

Page 11 The TIA previously stated 67% of the 239 trips generated by the site would be new trips (160). If more than 60% of these new trips come from and return to the north, ADOT/PF's threshold of 100 new trips is met. It should be noted that the ITE trip Generation manual is highly conservative and does not take into account location of the development, local population density or variations in the peak hour. For this site in particular the peak hour is based on the traffic generated by Machetanz Elementary as the peak traffic count was between 3:15 and 4:15 PM. The new trips regenerated will most likely coincide with peak traffic times on nearby high volume roads (e.g. 5:00PM-6:00 PM) rush hour traffic. We are being additionally conservative by adding the new trips to the current peak hour. Also, Valley Country Store 3 current utilizes a total of 24,000 gallons fuel storage between regular, premium, diesel and heating fuels. The tanks are filled every 2-3 days. Assuming an average of 15 gallons per car and the tanks are completely emptied, this location would see a total of 1,600 vehicles per 2-3 days or 500-800 vpd much lower than the ITE estimate of 4341

Utilizing a 60% north driveway and 40% south driveway split applied to the new trips will not result in over 100 vph in any movement onto or off of Trunk Road. Currently, we have estimated 80 vph (33% of 239 vph) for pass by and 160 vph (66% of 240) new trips. The 80 vph is spilt 50/50 between the two driveways for a total of 40 vph per hour. Movements into and out of the site are slit 55% north bound and 45% southbound based on the peak hour traffic count. For the north driveway, there would be 22 vph turn left (NB) onto trunk and 18 vph turning right into the site. Adding the 60/40 split for new trips the norther driveway would see an additional 140 vph split 50/50 in and out. For a total of 92 vph turning NB onto trunk from the northern driveway and 88 turning south into the northern driveway.

Neither movement is over 100 vph and does not account for traffic that still may pass the north driveway and utilize the south or turn into the north and utilize the south for exit.

The Alaska Highway Preconstruction Manual Chapter 11 section 1190.5(11) states: "On high-speed (50 mph or over) or high-volume arterial roadways, speed change lanes may be required for the acceleration or deceleration of vehicles entering or leaving the public roadway from or to a higher-volume traffic generation (greater than or equal to 100 vehicles per hour) or attracting development." A Valley Country Store was recently constructed at the corner of Trunk Road and Palmer Fishhook Road. This store is slightly larger size (similar trip generation) and utilizes two driveways. It also created greater than 100 trips but less than 250 trips and classified as a "Medium Generator". Also, both Trunk Road and Palmer Fishhook Road are both two lane roads with a much higher AADT and are both posted at 55 mph. No speed change or turn lanes were required by AKDOT.

With these considerations in mind, the current TIA is sufficiently conservative in the traffic estimate provided and accel./decel. And turn lanes are not warranted.

Page 12 The second recommendation is not clear. Show if turn lanes are warranted per the two publications listed in 11.12.070(B)(4)&(5). Turn lane warrant analysis has been added to the TIA. No turn lanes are warranted.

TBC, Inc. Project Management & Development - Engineering - Surveying - Landscape Architecture

Tim Alley, P.E.
Principal/Vice President

talley@TBCak.com

visit us at www.TBCak.com

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Fax: 907.357.6750

From: Jamie Taylor <Jamie.Taylor@matsugov.us>
Sent: Friday, April 22, 2022 2:31 PM
To: Tim Alley <talley@tbcak.com>
Cc: Peggy Horton <Peggy.Horton@matsugov.us>; Michelle Olsen <Michelle.Olsen@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>
Subject: Valley Country Store/Trunk Road

Hi Tim –

Here is the written summary of my comments that we discussed a few weeks ago.

Driveway permit comments:

1. The landing slope, length, curve return radii, and cut/fill slopes are not specified in the permit application. The construction plans submitted for the original driveway permits shows standard plan & profile design information with a range of allowable landing slopes, but since these driveways are existing the actual dimensions and slopes should be given.
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3. What is the culvert gauge and slope? End sections are required per 11.12.070(A)(2).
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5. Submit plan showing driveway sight triangles. The design vehicle will determine the minimum sight distance.
6. Submit a plan & profile showing asbuilt conditions with information in comment #1. Also show stop signs and painted stop bars.
7. Provide turn lane warrants per 11.12.070(B)(4)&(5)

TIA comments:

Page 2	Required sight distance listed does not account for a design vehicle other than a passenger vehicle. I assume the design vehicle is a tank truck, for which AASHTO requires 695/765 feet of sight distance. (Perhaps fuel trucks could be restricted to exiting from the north driveway only.)
Page 4	That AADT count is from 2019. There is 2020 data, but I recommend still using the 2019 data because the 2020 data is likely skewed due to COVID shut downs.
Page 6	Add discussion of accident history.
Page 7	The projected traffic discussion should include ALL uses within the properties using the driveways and the assumptions used in determining the peak hour traffic volume.
Pages 7-9	The PM base traffic flow is 229 (2021)/286 (2032), which is more than the ITETG estimate of 158 for pass-by traffic. I agree that the pass-by traffic estimate is probably high, though. What percentage of new trips come from and return to the north and what percentage come from and return to the south? I would guess a higher percentage of new trips will come from the north/Parks Highway which doesn't seem to be reflected in the turning movement estimates and also will skew the existing 55/45 peak hour traffic flow split.
Page 10	Other Planned Developments: 89 lots have been created in the View Pointe at the Ranch subdivision since late 2020, which has potentially increased the traffic on S Trunk more than 2% per year for the last two years.
Page 10	LOS is listed for the driveway intersections, but not the road segments themselves. 11.12.080(A)(5)(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. Discuss whether this criteria will be met and include LOS analysis if so.
Page 11	The TIA previously stated 67% of the 239 trips generated by the site would be new trips (160). If more than 60% of these new trips come from and return to the north, ADOT/PF's threshold of 100 new trips is met.
Page 12	The second recommendation is not clear. Show if turn lanes are warranted per the two publications listed in 11.12.070(B)(4)&(5).

CUP comments:

A. More information is needed about the detention pond – what storm event it is sized for, contours or spot elevations showing how deep it is, how the impervious areas are graded to the detention basin, where overflow will go, and how overflow will be treated (for example with a grass filter strip). One of the grading and drainage plans submitted has contours but they do not seem to reflect what is currently constructed (it shows the north driveway slopes to Trunk Road at 10%, but it is actually relatively flat).
B. Traffic flow diagram does not show traffic flow to the coffee kiosk, this is important in regards to vehicle and pedestrian conflicts.

Let me know if you have any questions.

Jamie Taylor, PE (she/her)
Civil Engineer
Matanuska-Susitna Borough
Department of Public Works
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jamie.taylor@matsugov.us
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Memorandum

THE BOUTET COMPANY, INC.

601 E. 57th Place, Suite 102
Anchorage, Alaska 99518

Tel: (907) 227-8560
Fax: (907) 522-6779
e-mail: jboutet@tbcak.com

RECEIVED
APR 28 2022
Mat-Su Borough
Development Services

Date: **April 27, 2022**

To: Tim Alley, PE
Project Manager

From: Jacques Boutet, PE
Project Engineer

Subject: Valley Country Store
STR
Traffic Impact Analysis

Introduction

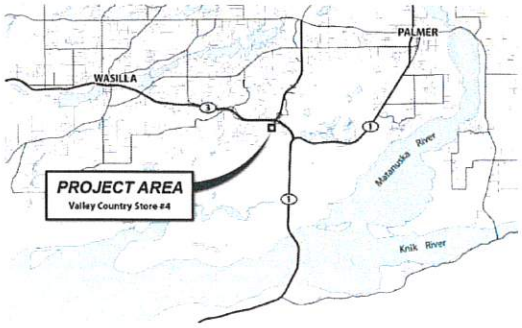
This Traffic Impact Analysis (TIA) was prepared in support of Conditional Use Permit application submitted to Matanuska-Susitna Borough (MSB) for a proposed development that would be located at 3068 South Trunk Road (STR), near Wasilla, Alaska.

DEVELOPMENT INFORMATION

Development Description

KG Enterprises, LLC (KGE) proposes to construct a convenience store with gas pumps in adjacent to the west Right-of-Way (ROW) line for STR, approximately 1,500 feet south of its interchange with East Parks Highway (EPH). More specifically, the project would be located within Lot 1B, Happy Valley Subdivision.

The figure below presents a location map for the project area.



Land Use Intensity

The proposed convenience store includes a 4,467 square foot structure and eight (8) fueling stations. A 600-square foot drive-through coffee kiosk and an RV dump station would also be located on the site.

These improvements would be constructed within a 75,000-square foot (approximate) paved apron that would also accommodate traffic circulation, parking, loading and fuel storage. It is noted that paved area covers only 60% of the 3-acre property and that the undeveloped area has no planned improvements.

The following figure presents an overall site plan for the proposed development.

Proposed Zoning Changes/Variances

The project area is currently unzoned, hence no changes or variances are required or proposed.

Construction Year

Site development inclusive of construction of the store and gas pumps will be completed in 2022.

Access and Sight Distance

The site will be access via two (2) driveways along STR constructed by MSB during its reconstruction of STR in 2018.

The northern driveway is located off-property, within Lot 1A, immediately north of the project site. Perpetual use of this driveway for the project will be secured by a recorded access agreement.

The southern driveway is located at the southeast corner of the project's paved apron, approximately 300 feet (centerline-to-centerline) south of the northern driveway.

Sight distances were measured by field observations. It is noted that STR has a posted speed limit of 45 miles per hour (mph) which requires a minimum intersection sight distance of 500 feet (per AASHTO) for left turn movements (430 feet required for right turns). The results of the sight distance measurements are presented in the table below:

Driveway	*Facing Direction*	*Measured Sight Distance*	*Required Sight Distance*	*Status*
North	North	1,160 feet	500 feet	Adequate
	South	810 feet		Adequate
South	North	1,100 feet		Adequate
	South	510 feet		Adequate

PROJECT AREA BACKGROUND

Surrounding Land Zoning

Properties surrounding the project area are unzoned.

Surrounding Land Uses, Adjacent Development and Current Site Land Use

The table below summarizes current land uses for properties surrounding the project.

Direction of Surrounding Property From Project	***Current Land Use***
Project site (Lot 1B)	Heavy equipment laydown/temporary storage yard
North and West (Lot 1A)	Heavy equipment laydown/temporary storage yard
East	Trunk Road ROW and gravel pit (east of Trunk Road)
South	Residential subdivision

Current Traffic Improvements Already Funded, Programmed or Planned

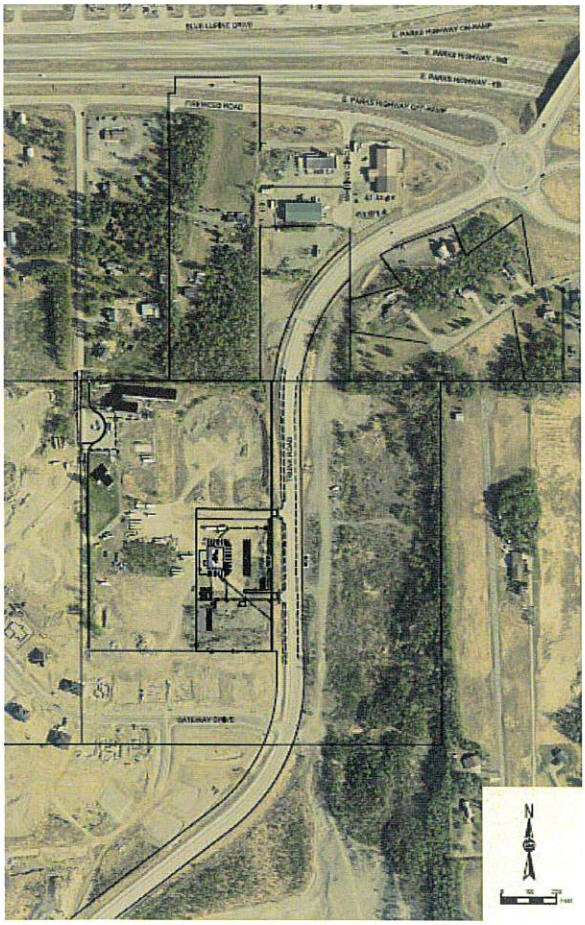
STR, which front's the site's east boundary and provides its two access points was upgraded to rural arterial standards in 2018 through an MSB-sponsored road project.

Gateway Drive, which serves the residential subdivision on the project site's south boundary was recently constructed, as part of that subdivision's build-out.

DATA REQUIREMENTS

Study Area Street Network

The graphic below presents the street network that is peripheral to the project area.



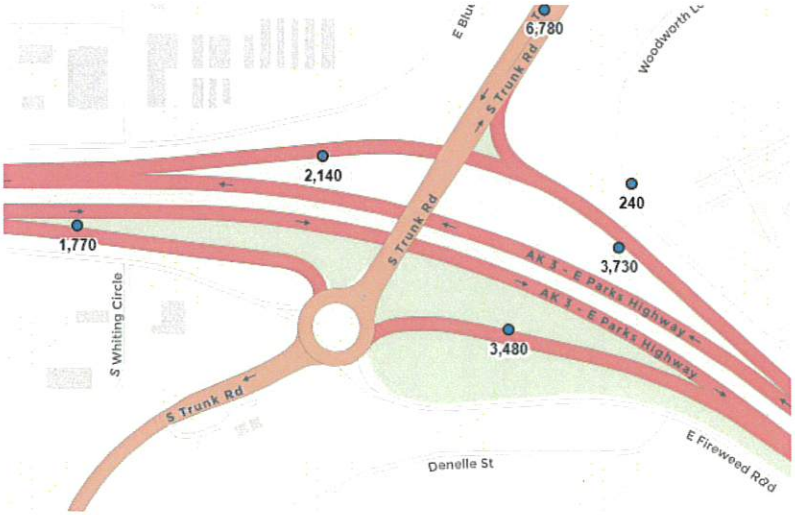
The key roadway that would convey traffic to and from the project site is STR, which is contiguous to the project's east boundary. Also of interest is EPH, which intersects STR approximately 1,600 feet north of the project area. EPH connects MSB with southcentral and interior Alaska. It is noted that the south roundabout for the EPH/STR interchange is located 1,600 feet north of the project site. Moreover, the extremely low volumes anticipated to be generated by the project are expected to have negligible impact on operations on EPH. Consequently, for purposes of this TIA, EPH was not considered a "key roadway".

Traffic Volumes for Key Roadway

The table below summarizes Annual Average Daily Traffic (AADT) on STR, the key roadway, as presented in "Matanuska-Susitna Borough Traffic Count Data 2019" published by MSB GIS Division.

Roadway	*Count Location*	*AADT (vehicles/day)*	*Data Source*
STR	1,360 ft south of EPH	1,351	MSB Traffic

Other AADT's (from data acquired by ADOT/PF) are presented in the graphic below:



STR Traffic Accident History

Accident history on STR has been provided by MSB. No recorded accidents have occurred south of the STR and Fireweed Roundabout since STR south was opened.

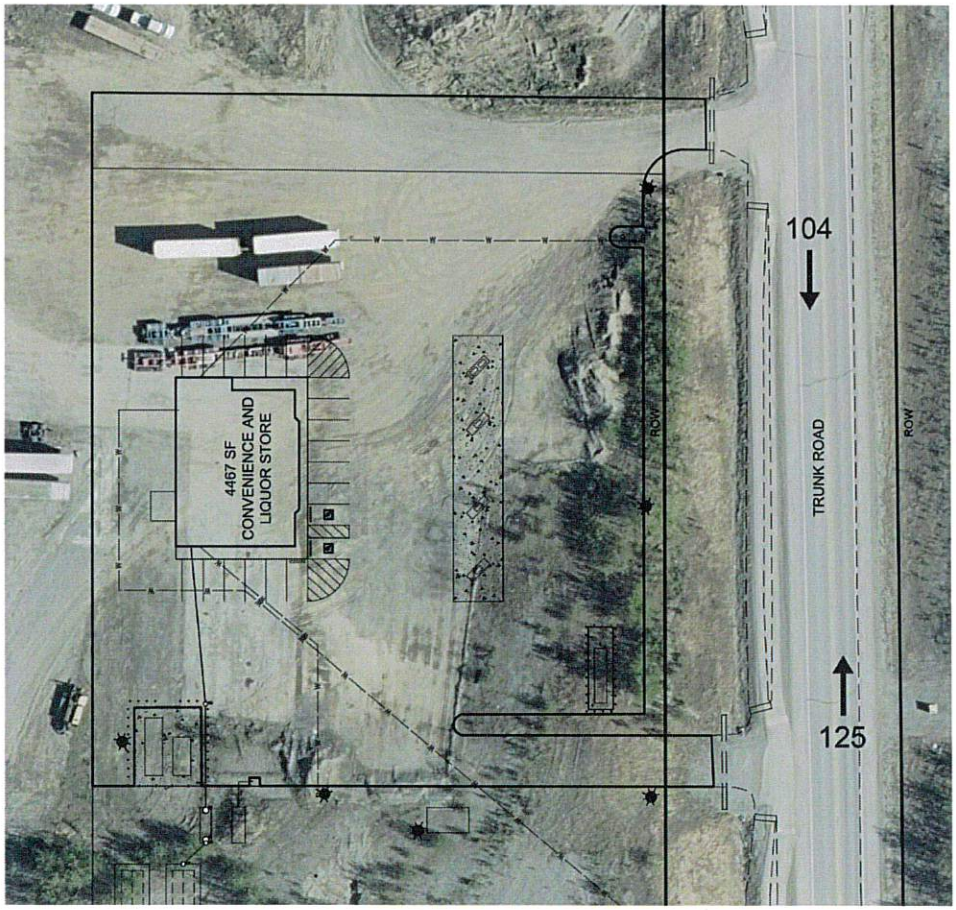
Field Traffic Counts for Key Roadway

The table below presents the results of peak hour counts acquired on STR at the project site's proposed north driveway.

AM Counts					PM Counts			
Friday, October 15, 2021					Thursday, October 14, 2021			
Time	**SB**	**NB**	**Total**		**Time**	**SB**	**NB**	**Total**
6:00-6:15	0	3	3		3:00-3:15	30	13	43
6:15-6:30	1	15	16		3:15-3:30	39	16	55
6:30-6:45	3	17	20		3:30-3:45	35	8	43
6:45-7:00	9	13	22		3:45-4:00	18	68	86
7:00-7:15	7	17	24		4:00-4:15	12	33	45
7:15-7:30	5	13	18		4:15-4:30	29	16	45
7:30-7:45	5	13	18		4:30-4:45	28	22	50
7:45-8:00	7	24	31		4:45-5:00	28	19	47
8:00-8:15	10	20	30		5:00-5:15	23	18	41
8:15-8:30	14	14	28		5:15-5:30	28	12	40
8:30-8:45	9	9	18		5:30-5:45	31	14	45
8:45-9:00	9	8	17		5:45-6:00	19	12	31
9:00-9:15	19	11	30		6:00-6:15	22	14	36
9:15-9:30	27	14	41		6:15-6:30	19	9	28
9:30-9:45	32	42	74					
Peak Totals	**87**	**75**	**162**		**Peak Totals**	**104**	**125**	**229**
Directional Distribution	54%	46%				45%	55%	

It is noted that both observed peak hour flows do not correlate with typical peak hours, and are likely associated with the commencement and dismissal for Machentanz Elementary School, located on E. Nelson Road, approximately two miles away. That said, using the STR AADT of 1351, the AM and PM Peak Hours equate to 12% and 17%, respectively, of the route's AADT.

The figure below presents STR's peak hour traffic flows at the project



BASE (SOUTH TRUNK ROAD) TRAFFIC
PM PEAK HOUR

STR Geometry

STR is a two-lane strip-paved roadway with widened, paved shoulders with a paved, 10-foot wide multi-use pathway along the west side (contiguous with project area). The posted speed limit is 45 miles per hour (MPH).

Sidewalks, Bike Lanes and Other Non-Motorized Traffic Facilities

Within the project study area, STR has a separated 10-foot paved multi-use pathway along its west side.

Transit Operations and Facilities

There are no transit facilities on STR within the project study area. Other than pupil transportation, there is currently no public transportation operating on STR.

TRAFFIC FORECASTING

Projected Site Traffic

Per Institute of Transportation Engineers, Trip Generation, 9th Edition (ITETG), the project is classified as a "Convenience Market with Gasoline Pumps", Retail Code #853. Traffic studies have identified two parameters for estimating site traffic at convenience markets with gasoline pumps: square-feet of building area and number of fueling positions. The table below summarizes ITETG's traffic generation rates for these parameters.

Description/ITE Code	*Units*	*ITE Vehicle Trip Generation Rates* (peak hours are for peak hour of adjacent street traffic unless highlighted)							
		Weekday	AM	PM	Pass-By	AM In	AM Out	PM In	PM Out
Convenience. Mkt w/ Gas Pumps 853	*MSF*	845.60	40.92	50.92	66%	50%	50%	50%	50%
Convenience. Mkt w/ Gas Pumps 853	*Fuel Position*	542.60	16.57	19.07	66%	50%	50%	50%	50%

The table below presents estimated peak hour traffic for the project based on the ITETG parameters:

Parameter	*Weekday ADT*	*AM Peak*	*PM Peak*	*PM Pass By*	*PM Inbound*	*PM Outbound*
Bldg size	3974	192	**239**	158	120	120
Gas Pump	4341	133	**153**	101	76	76

Because the peak hour traffic volumes associated with building size were greater, these volumes were carried forward in this analysis.

The project also includes a 600 SF drive-through coffee kiosk. ITETG established a land-use category for "Coffee/Donut Shop with Drive-Through Window and No Indoor Seating" (LU 938). The PM Peak Hour Trip Generation factor is 83.33 trips/1000 SF. Moreover, ITETG data indicates that 89% of the trips to these facilities are "pass-by" trips that are included in Base Traffic. The trip generation calculation for the drive-through coffee kiosk is as follows:

Description/ITE Code	*Units*	*ITE Vehicle Trip Generation Rates* (peak hours are for peak hour of adjacent street traffic unless highlighted)							
		PM	Pass-By	PM In	PM Out				
Coffee/Donut Shop with Drive-Through Window and No Indoor Seating 938	*MSF*	83.33	89%	5	5				
Proposed Drive-Through Coffee Kiosk		50	89%	3	3				

The neighboring property, Happy Valley Tract 1A, will share the northern driveway with this development. This property is utilized as a "truck stop" for truck drivers to time out when they have reached their maximum driving time. Based on field observation it is estimated that the site generates approximately 20 trips per day but are typically outside of the peak hours.

As is discussed below, it is noted that applying the ITETG estimate for "pass-by" traffic, site traffic would EXCEED the base traffic flow. Consequently, it was assumed that the actual "pass-by" traffic diverting into and out of the site will be a much smaller percentage and that the site will attract a higher proportion of new trips onto STR.

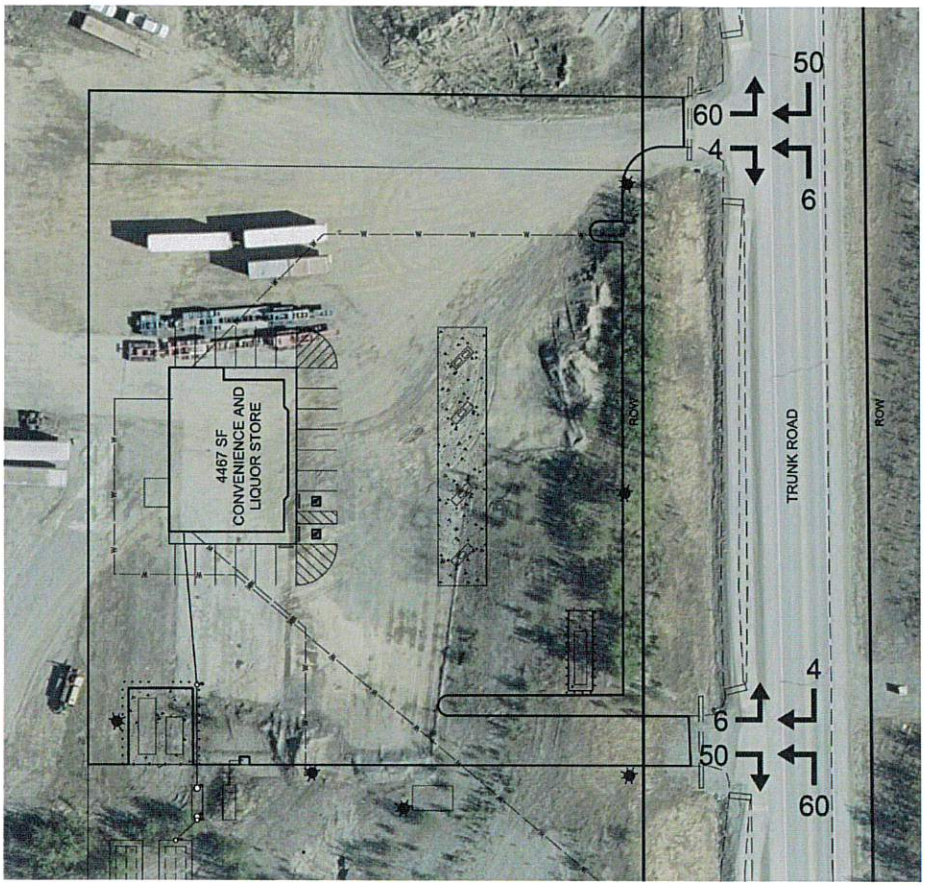
Because very conservative values for "new trips" associated with the gas station/convenience store were used in this analysis, the 6 "unique" trips associated with the drive-through coffee kiosk were assumed to be included in the high values assigned "new trips".

Projected Trip Distribution

As discussed, the project proposes two driveways to accommodate site traffic, both along STR. Because peak hour traffic flows on STR are split 45/55 (SB/NB), movements in and out of the site were allocated with the same proportions. It was also assumed that SB traffic would turn into the northern driveway and exit via the southern driveway. NB traffic was assumed to turn in and out via the southern driveway and northern driveway, respectively. A small proportion of the site traffic was assigned to the other possible turns in and out of the site. The table below presents the directional splits for site traffic.

	NB Traffic		***SB Traffic***	
	NBLT In	*EBLT Out*	*SBRT In*	*EBRT Out*
North Driveway	6	60	50	4
South Driveway	60	6	4	50

The figure below presents the estimated peak hour turning movements for site-oriented traffic entering and exiting from STR.



VCS #4 SITE TRAFFIC
PM PEAK HOUR

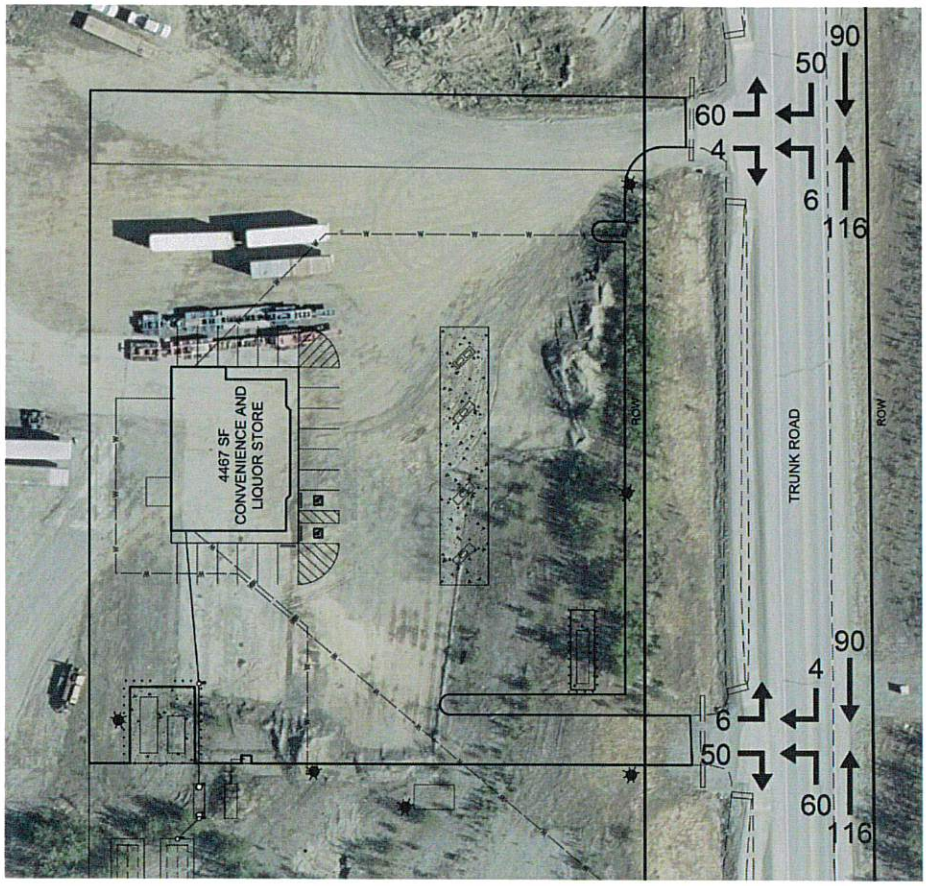
Projected Traffic On STR

With this VCS proposed to open in 2022, a 10-year planning horizon establishes 2032 as the "design year" for traffic forecasting. Moreover, assuming two percent (2%) annual growth for traffic on STR, the following base traffic flows are estimated:

Direction on STR	*2021 Peak Hour*	*2032 Peak Hour*
NB	125	156
SB	104	130
Totals	**229**	**286**

It is noted that applying the ITETG estimate for "pass-by" traffic, site traffic would EXCEED the base traffic flow. Consequently, it was assumed that the actual "pass-by" traffic diverting into and out of the site will be a much smaller percentage and that the site will attract a higher proportion of new trips onto STR. For this TIA, it was assumed that thirty-three percent (33%) of site traffic will be "pass-by" traffic and the remaining 67% will be new trips on STR.

Using this modified estimate of "pass-by" traffic, the figure below presents the estimated peak hour movements for base plus site traffic at the two proposed driveways.



VCS #4 SITE TRAFFIC AND BASE TRAFFIC
PM PEAK HOUR

Other Planned Developments

As of the time this TIA was prepared there are no ongoing or planned developments peripheral to the project site that would directly access STR.

TRAFFIC FORECASTING

Intersection Capacity Utilization (Levels of Service) at Project Driveways

Traffic movements at both intersections were analyzed using Synchro Studio trafficware applications. The table below presents the results of these analyses.

Intersection	*Intersection Capacity Utilization*	*Level of Service*
North Driveway/STR	26%	A
South Driveway/STR	30%	A

Left and Right Turn Lane Warrant

For left turn lane warrant analysis the *Highway Research Record 211: Volume Warrants for Left-Turn Storage Lanes at Unsignalized Grade Intersections* was used per MSB Code 11.12.070(B)(5). Figure 13 in Highway Research Record 211 Depicts the left turn storage lands on two-lane highways for 50 mph travel speeds and 40% left turn movements. The Table below summarizes the analysis.

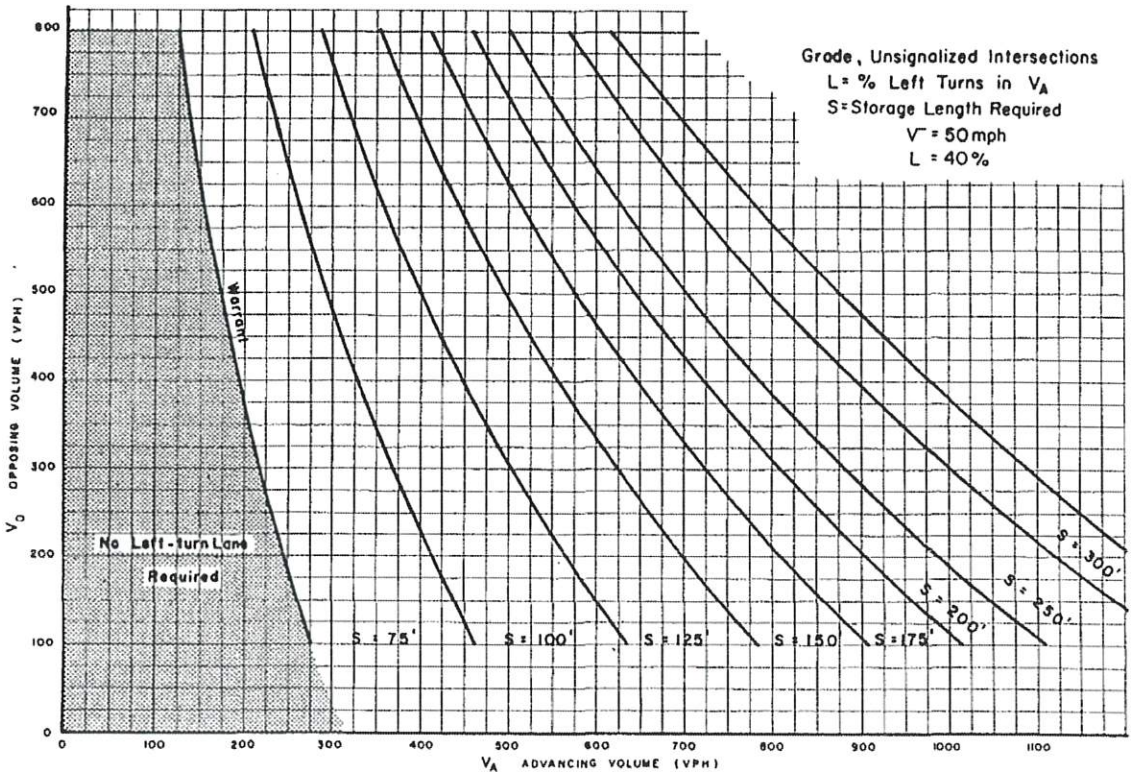
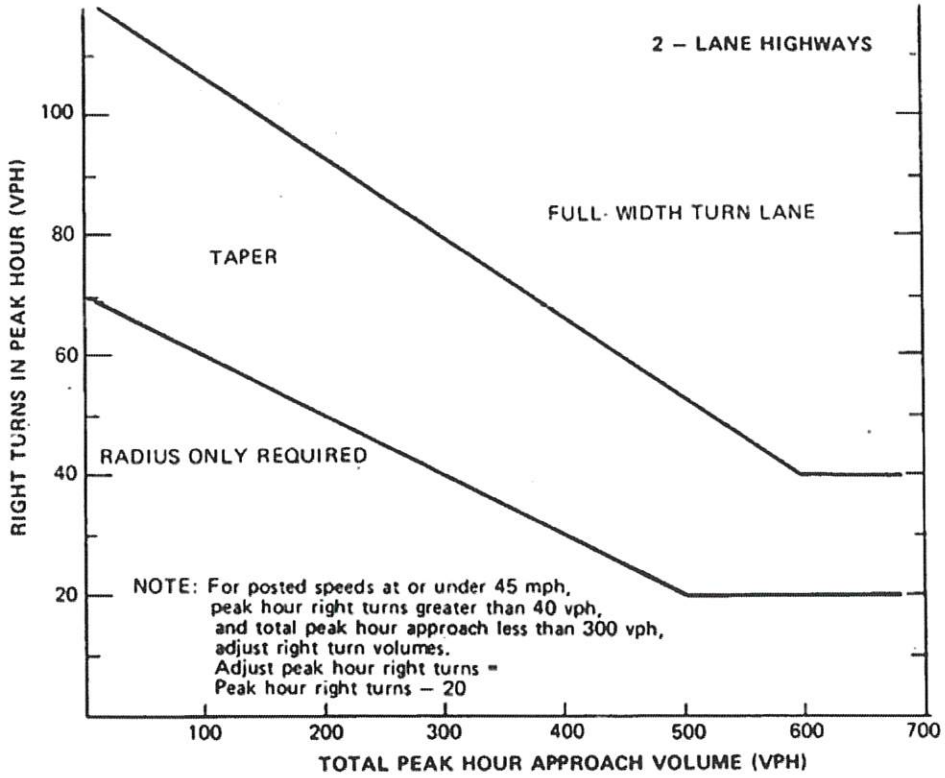


Figure 13. Warrant for left-turn storage lanes on two-lane highways.

Intersection	*Opposing Traffic Volume (V_o)*	*Advancing Traffic Volume (V_a)*	*Left Turn Lane Warrant*
North Driveway/STR	140	122	None
South Driveway/STR	94	176	None

The *National Cooperative Research Program Report 279* Figure 4-23 was used for analyzing the warrant for right turn lanes as required by MSB Code 11.12.070(B)(4). The maximum right turn lane traffic volume will be realized at the northern approach into the site. The analysis above yields a southbound right turn movement into the site at 50 vph and the total volume at the driveway is 120 vph. With STR traveling speed posted at 45 mph the right turn movement is to be adjusted per Figure 4-23 where the Adjusted Peak Hour Right Turn equals the Peak Hour Right Turns minus 20. This results in a Adjusted Right Turn of 30 vph requiring only a radius return at the approach.



Parks Highway/STR Roundabout

The Parks Highway/STR roundabout is a State highway facility administered by ADOT/PF. ADOT/PF policy requires analysis of potential impacts to its facilities for projects generating 100 or greater net "new" trips per hour. Because the project does not meet this threshold, capacity of analysis of the roundabout was not performed.

However, "NCHRP 672 – The Roundabout Guide" provides the following guidance on roundabout capacities:

Exhibit 1-9
Roundabout Category Comparison

Design characteristics of the three roundabout categories.

Design Element	Mini-Roundabout	Single-Lane Roundabout	Multilane Roundabout
Desirable maximum entry design speed	15 to 20 mph (25 to 30 km/h)	20 to 25 mph (30 to 40 km/h)	25 to 30 mph (40 to 50 km/h)
Maximum number of entering lanes per approach	1	1	2+
Typical inscribed circle diameter	45 to 90 ft (13 to 27 m)	90 to 180 ft (27 to 55 m)	150 to 300 ft (46 to 91 m)
Central island treatment	Fully traversable	Raised (may have traversable apron)	Raised (may have traversable apron)
Typical daily service volumes on 4-leg roundabout below which may be expected to operate without requiring a detailed capacity analysis (veh/day)*	Up to approximately 15,000	Up to approximately 25,000	Up to approximately 45,000 for two-lane roundabout

*Operational analysis needed to verify upper limit for specific applications or for roundabouts with more than two lanes or four legs.

As the AADT graphic on page 4 of this narrative indicates, current volumes on the Parks Highway/STR roundabout are significantly BELOW its theoretical capacity of 25,000 trips per day. Consequently, it is our opinion that the project will not yield any measurable change in operational capacity within this TIA's planning horizon.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

1. The proposed project would be located along South Trunk Road. Posted speed limit on this roadway is 45 MPH.
2. The site traffic is proposed to be served by two driveways, located near the northeast and southeast corners of the development. Provision of two driveways will divide site traffic at approximately a 50-50 split.
3. Proposed project would be classified as a "Medium Generator", because peak traffic volumes at each driveway are greater than 100 trips, but less than 250 trips.
4. Driveway sight distances for all movements for both driveways were determined to exceed minimum standards required by AASHTO.
5. Levels of Service on STR are expected to remain at grade "A" during the TIA's planning horizon.
6. No measurable impacts to traffic capacity on the Parks Highway/STR roundabout are expected.

Recommendations

1. Approaches shall be permitted and constructed in accordance with MSB guidelines.

2. Because the posted speed limit is below 50 MPH and furthermore that peak hour site traffic volumes are less than 100 vehicles at both approaches, speed-change lanes are not required.
3. Because driveway sight distances exceed minimum distances, no sight distance obstruction mitigation is required.

Peggy Horton

From: Tim Alley <talley@tbcak.com>
Sent: Thursday, April 28, 2022 2:39 PM
To: Jamie Taylor
Cc: Peggy Horton; Michelle Olsen; Brad Sworts; Andy Dean
Subject: RE: Valley Country Store/Trunk Road
Attachments: Valley Country Store 4 Driveway Comment Memo.pdf; Valley Country Store 4 Stormwater Analysis Memo.pdf; VCS-4 Site traffic flow.pdf; VCS-4 DRIVEWAY P&P.pdf

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]
Good Afternoon,

Please see the attached documents and remaining comment responses below. Please feel free to contact me with any questions.

Thank you,
Tim

Driveway permit comments:

1. The landing slope, length, curve return radii, and cut/fill slopes are not specified in the permit application. The construction plans submitted for the original driveway permits shows standard plan & profile design information with a range of allowable landing slopes, but since these driveways are existing the actual dimensions and slopes should be given. This information has been added to the driveway drawings shown. Existing north driveway has 40' radii to the edge of traveled way and southern driveway has 30' radii to existing travelled way as measured by design survey. Cut slopes were designed to be 2:1 max but were measured at 4:1 in the field.
2. 11.12.070(A)(8)(f) allows for reduced spacing for a variety of reasons when recommended by the engineer and approved by the Borough. The TBC memo dated 11/2/2021 regarding driveway spacing does not identify any of the reasons listed in 11.12.070(A)(8)(f) as the basis for recommendation of approval for reduced spacing. See attached Driveway Permit memo.
3. What is the culvert gauge and slope? End sections are required per 11.12.070(A)(2). Though these were constructed by the borough the owner will add end sections to the culverts. Slope and gage as measured have been added on the attached driveway P&P
4. What is the design vehicle? Passenger vehicle was used as the design vehicle as it is the primary vehicle to utilize the store. A substantial amount of truck traffic is not anticipated though the northern driveway, in particular, provides more than enough site distance for trucks.
5. Submit plan showing driveway sight triangles. The design vehicle will determine the minimum sight distance. See attached site triangle drawing
6. Submit a plan & profile showing asbuilt conditions with information in comment #1. Also show stop signs and painted stop bars. See attached. Stop signs and bars will be added to the site.
7. Provide turn lane warrants per 11.12.070(B)(4)&(5) See revised TIA sent on 4/28/2022

CUP comments:

A. More information is needed about the detention pond – what storm event it is sized for, contours or spot elevations showing how deep it is, how the impervious areas are graded to the detention basin, where overflow will go, and how overflow will be treated (for example with a grass filter strip). One of the grading and drainage plans submitted has contours but they do not seem to reflect what is currently constructed (it shows the north driveway slopes to Trunk Road at 10%, but it is actually relatively flat). See attached Drainage Memo

B. Traffic flow diagram does not show traffic flow to the coffee kiosk, this is important in regards to vehicle and pedestrian conflicts. See attached traffic flow diagram. It should be added that travel speeds onsite will be low and judgement will be exercised by drivers to avoid collisions.

TBC, Inc. Project Management & Development - Engineering - Surveying - Landscape Architecture

Tim Alley, P.E.
Principal/Vice President

talley@TBCak.com

visit us at www.TBCak.com

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1508 E. Bogard Rd., Unit 7
Wasilla, Alaska 99654

Direct: 907.357.6760
Mobile: 907.830.2821
Main: 907.357.6770
Fax: 907.357.6750

From: Jamie Taylor <Jamie.Taylor@matsugov.us>
Sent: Friday, April 22, 2022 2:31 PM
To: Tim Alley <talley@tbcak.com>
Cc: Peggy Horton <Peggy.Horton@matsugov.us>; Michelle Olsen <Michelle.Olsen@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>
Subject: Valley Country Store/Trunk Road

Hi Tim –

Here is the written summary of my comments that we discussed a few weeks ago.

Driveway permit comments:

1. The landing slope, length, curve return radii, and cut/fill slopes are not specified in the permit application. The construction plans submitted for the original driveway permits shows standard plan & profile design information with a range of allowable landing slopes, but since these driveways are existing the actual dimensions and slopes should be given.
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7. Provide turn lane warrants per 11.12.070(B)(4)&(5)

TIA comments:

Page 2 Required sight distance listed does not account for a design vehicle other than a passenger vehicle. I assume the design vehicle is a tank truck, for which AASHTO requires 695/765 feet of sight distance. (Perhaps fuel trucks could be restricted to exiting from the north driveway only.)

Page 4 That AADT count is from 2019. There is 2020 data, but I recommend still using the 2019 data because the 2020 data is likely skewed due to COVID shut downs.

Page 6 Add discussion of accident history.

Page 7 The projected traffic discussion should include ALL uses within the properties using the driveways and the assumptions used in determining the peak hour traffic volume.

Pages 7-9 The PM base traffic flow is 229 (2021)/286 (2032), which is more than the ITETG estimate of 158 for pass-by traffic. I agree that the pass-by traffic estimate is probably high, though. What percentage of

new trips come from and return to the north and what percentage come from and return to the south? I would guess a higher percentage of new trips will come from the north/Parks Highway which doesn't seem to be reflected in the turning movement estimates and also will skew the existing 55/45 peak hour traffic flow split.

Page 10 Other Planned Developments: 89 lots have been created in the View Pointe at the Ranch subdivision since late 2020, which has potentially increased the traffic on S Trunk more than 2% per year for the last two years.

Page 10 LOS is listed for the driveway intersections, but not the road segments themselves. 11.12.080(A)(5)(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. Discuss whether this criteria will be met and include LOS analysis if so.

Page 11 The TIA previously stated 67% of the 239 trips generated by the site would be new trips (160). If more than 60% of these new trips come from and return to the north, ADOT/PF's threshold of 100 new trips is met.

Page 12 The second recommendation is not clear. Show if turn lanes are warranted per the two publications listed in 11.12.070(B)(4)&(5).

CUP comments:

A. More information is needed about the detention pond – what storm event it is sized for, contours or spot elevations showing how deep it is, how the impervious areas are graded to the detention basin, where overflow will go, and how overflow will be treated (for example with a grass filter strip). One of the grading and drainage plans submitted has contours but they do not seem to reflect what is currently constructed (it shows the north driveway slopes to Trunk Road at 10%, but it is actually relatively flat).
B. Traffic flow diagram does not show traffic flow to the coffee kiosk, this is important in regards to vehicle and pedestrian conflicts.

Let me know if you have any questions.

Jamie Taylor, PE (she/her)
Civil Engineer
Matanuska-Susitna Borough
Department of Public Works
t: 907-861-7765 c: 907-355-9810
jamie.taylor@matsugov.us
http://www.matsugov.us/

High Volume Driveway Permit Review

updated April 22, 2022
Jamie Taylor

Submittal Item	Associated code	Standard	
11.12.040(A)(2)			
(a) Street being accessed			S Trunk Road
Functional classification			Minor Arterial
Posted speed limit			45 mph
Surface type			Asphalt
(b) Driveway dimensions			
Landing slope	11.12.050(A)(3)	-2%	Not specified
Landing length	11.12.050(A)(4)	10 – 30 feet	Not specified
Landing angle	11.12.050(A)(5)	>= 60 degrees	Looks close to 90 degrees
Fill or cut slope grades	11.12.050(A)(6)	2:1 max or designed by engineer	Contours shown, but grades not specified
Corner clearance	11.12.050(A)(11)	>= 60 feet	N/A
Edge clearance	11.12.050(A)(12)	>= 20 feet, or curve return radius if larger	S d/w: >> 20 feet N d/w: N/A because shared d/w
Width	11.12.070(A)(3)(a)&(b)	24 – 35 feet	24 feet
Curve return radii	11.12.070(A)(3)(c)&(d)	>= 20 feet	Not specified
Driveway spacing	11.12.070(A)(8)	300 feet 600 feet 300 feet	Gateway Drive to S d/w: 444 feet S d/w to N d/w: 283 feet N d/w to 2533 S Trunk: 500 feet
(c) Pathway or sidewalk dimensions			11 feet wide
Curb cuts	11.12.050(A)(14)		N/A
ADA requirements	11.12.050(A)(15)		Detectable warning tiles look intact
Relocate in front of stop bar	11.12.070(B)(3)		Done
(d) Culvert			
Type	11.12.050(A)(7)	CMP, 16 gauge	Not specified
Diameter	11.12.050(A)(7) 11.12.070(A)(2)	 18 inch	 36 inch
Stream crossing?	11.12.050(A)(7)(b)		N/A
Length	11.12.050(A)(8)(a)		S d/w: 45 feet N d/w: 40 feet
Slope	11.12.050(A)(8)(b)	>=0.5%	Not specified

Set back	11.12.050(A)(8)(c)	0 – 6 feet from ditch line	0 feet
End sections	11.12.070(A)(2)		Not specified
(e) Expected completion date			Existing
(f) Driveway surface type			Asphalt
Paved apron?	11.12.070(A)(6)	>=20 feet	OK
(g) Proposed land use			Gas station, convenience store & coffee kiosk
(h) Estimated traffic			
Peak hour			239*
Average daily			3974-4341
Trip generation rate used	11.12.040(A)(2)(h)(i)-(iii)		ITE trip generation rates identified in TIA*
11.12.040(A)(3) >10 vph			
(a) Design vehicle	11.12.020		Not specified
(b) Driveway sight triangles	11.12.050(A)(9)	varies	Not provided
(c) Driveway plan & profile	11.12.070(A)(1)		Not provided
Stop sign & stop bar	11.12.070(B)(3)	Required for driveways that access parcels that generate more than 50 vehicle trips in the peak hour	Not specified
11.12.040(A)(4) >50 vph			
Turn lane warrants	11.12.070(B)(4)&(5)		Not provided
11.12.040(A)(5) >100 vph			
Traffic Impact Analysis	11.12.080		Submitted (comments in email)
Traffic Impact Mitigation	11.12.090		Likely not applicable

Memorandum

THE BOUTET COMPANY, INC.

1508 E. Bogard Rd. #7
Wasilla, AK 99654

Tel: (907) 357-6760
Fax: (907) 357-6750
e-mail: talley@tbcak.com

RECEIVED
APR 28 2022
Mat-Su Borough
Development Services

Date: **April 28, 2022**

To: Peggy Horton
Planner II
Matanuska-Susitna Borough

From: Tim Alley, PE
Principal/Vice President
The Boutet Company, Inc

Subject: Valley Country Store 4
Driveway Permitting

Introduction

This memo was prepared in support of Conditional Use Permit application and driveway permit applications, in addition to the November 2, 2021 Driveway Spacing Memorandum submitted to Matanuska-Susitna Borough (MSB) for a proposed gas station and convenience store development that will be located at 3068 South Trunk Road (STR), near Palmer, Alaska.

Project Description and Location

KG Enterprises, LLC (KGE) proposes to construct a convenience store with gas pumps in adjacent to the west Right-of-Way (ROW) line for STR, approximately 1,500 feet south of its interchange with East Parks Highway (EPH); more specifically, the project would be located within Lot 1B, Happy Valley Subdivision.

Access Drives

KG Enterprises, LLC (KGE) proposes to utilize the existing driveways adjacent to the property. The Sothern access drive is located on property and the northern access drive is located north of the subject property. Use of northern drive by the applicant has been secured through a recorded access agreement.

The two access driveways have been constructed and an access easement for the north driveway has been recorded. The as-built conditions of the driveways are shown on the attached driveway plan and profile sheets. The driveway landings, pathway connections, culverts and pavement were not altered from the “as-constructed”

condition from MSB's 2018 STR Extension South project. The current driveway locations were determined, approved and constructed under a MSB project as part of negotiations for a ROW acquisition and at that time were intended for use as a gas station or other commercial use as discussed in the November 2nd, 2021 memo.

STR is classified as an arterial roadway. It appears the road classification is due to the posted speed limit and the low volume of traffic does not appear to be considered in the determination. Several other area roads with higher speed limits and traffic volumes are classified as collectors including the portion of Trunk/Nelson Road south of the railroad crossing (Similar 2019 AADT, 45 mph), the portion of Trunk Road north of the Palmer Wasilla Highway (7,820 AADT, 55 mph) and Fairview Loop (2,140 AADT, 45 mph) to name a few.

Due to the projected trip generation from the proposed improvements, the MSB Code requires a driveway separation distance of 600' as required by the table below.

Minimum High Volume Driveway Spacing (Feet) (MSB 11.12.070.A.8)

Classification of road being accessed	Posted speed limit or 85th percentile speed of road being accessed (mph)	Total vehicle trip generation of subject parcel (vph)								
		11 – 100			101 – 250			> 250		
		Total vehicle trip generation of subject parcel, nearby parcel, or classification of cross street			Total vehicle trip generation of subject parcel, nearby parcel, or classification of cross street			Total vehicle trip generation of subject parcel, nearby parcel, or classification of cross street		
		11 – 100 vph or local road	101 – 250 vph or collector	> 250 vph or arterial	11 – 100 vph or local road	101 – 250 vph or collector	> 250 vph or arterial	11 – 100 vph or local road	101 – 250 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

However, per MSB Code 11.12.070(A)(8)(f) a reduction in driveway spacing may be reduced. The proposed reduction in driveway spacing meets the following provisions within this code section:

(vi) driveways where a traffic impact analyses demonstrations capacity needs:

A TIA has been prepared for this project. The calculated total of peak hour trips generated from the development is 239 vph. The TIA utilized both approaches in the analysis and provided a level of service (LOS) rating of A at both driveway intersections and is dependent of two accesses to the site.

(viii) driveways that are not able to meet separation distance from other existing driveways or intersections due to physical constraints:

The onsite topography drops in elevation north of the site while STR is gaining elevation. Moving the northern driveway further north would exacerbate the grade difference between the site and STR. Since the local truck traffic, though minimal, primarily utilizes the northern driveway an uphill driveway grade would require additional time for these trucks to enter STR. Further, Viewpoint @ the Ranch Tract E has an existing driveway approximately 722' to the north. Movement of the northern driveway to the north would reduce the separation between the driveways. If the 600' requirement were to be met the result would be 422' spacing between the driveways.

The southern driveway is already located in a substantial cut and is located 444' from Gateway Drive to the south and due to a horizontal curve and existing slope in the STR alignment the site distance available (510') for this driveway is already near the minimum of 500'. Relocating this driveway to the south would reduce the available site distance.

Also, it should be noted that it is anticipated that the majority of southbound traffic will turn into the northern and exit the southern driveways (vice versa for northbound traffic) but this cannot be said for the adjacent driveways and may result in additional conflict between traffic if the separation between these driveways and neighboring intersections is reduced.

Conclusions

1. While the driveway separation required is 600' for a vehicle trip generation on a minor arterial road, STR is similar in characteristics of several collector roads (requiring 300' separation) within the Borough and this should be considered while reviewing this application.

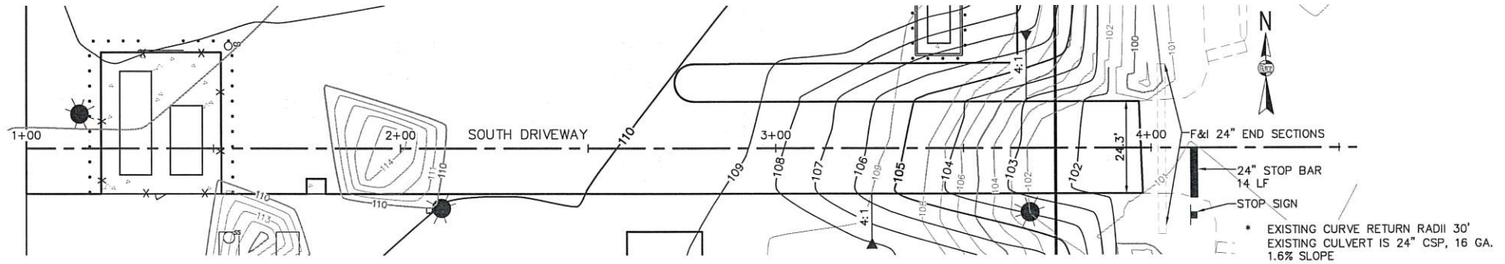
2. The construction of two driveways to access the site is supported by the LOS A at the intersections determined by the TIA and may be reduced if only a single driveway is utilized.

3. Topographic and physical constraints from adjacent intersections over which this project has no control over, is maximized by the reduction in driveway spacing.

4. The current driveways meet the site distance requirements of 500' for a passenger vehicle which is the primary vehicle utilizing the intersections.

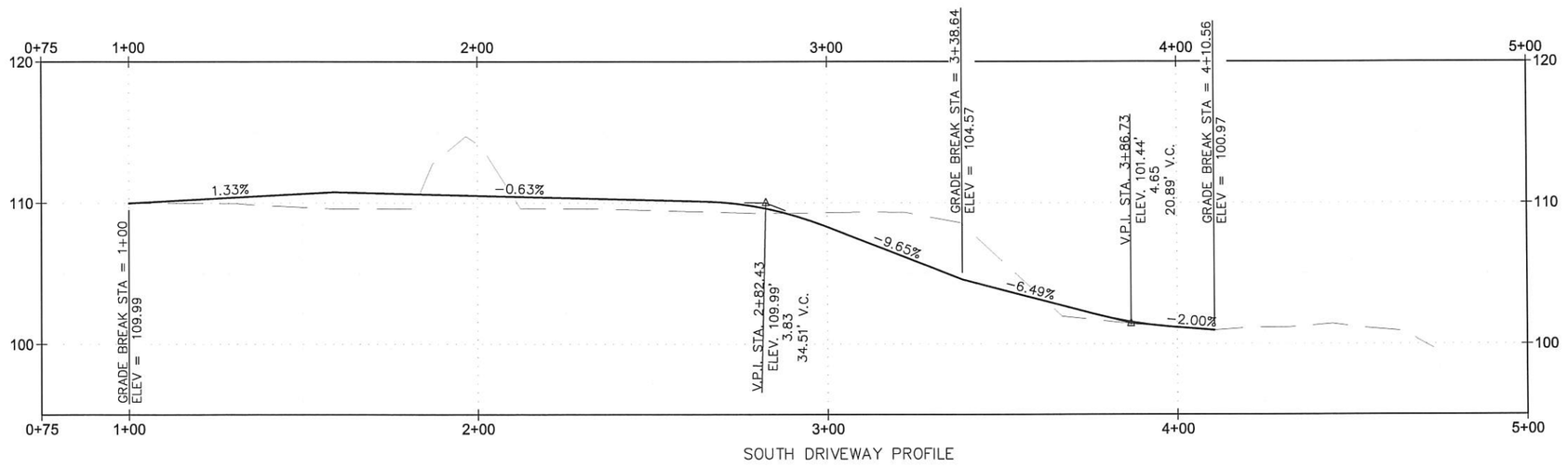
5. Since these driveways were designed and constructed as part of a Borough project with a similar intended use as part of a ROW negotiation, it should fall to the Borough to correct any substandard issues with the driveways.

6. The driveways did not physically alter the driveways constructed under the STR project except as required for development of the site. As such, should fall under the appropriate requirements of MSB Code 11.12.110(A) and 11.12.030(B).

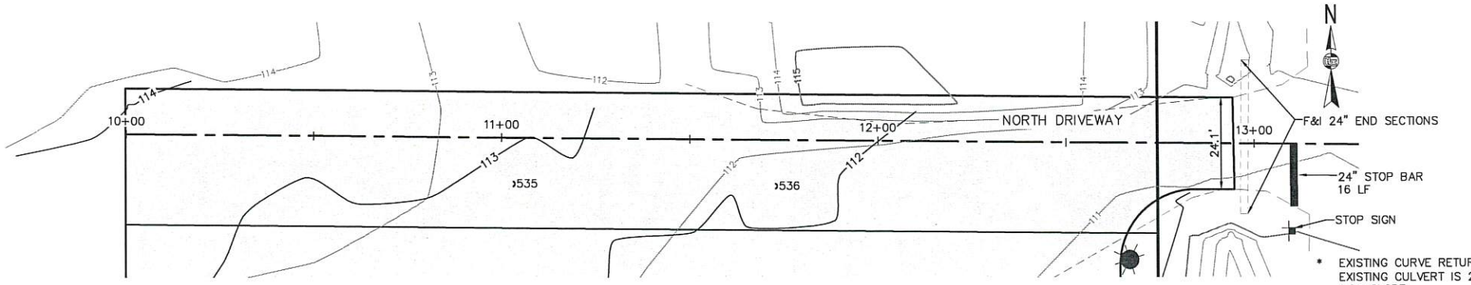


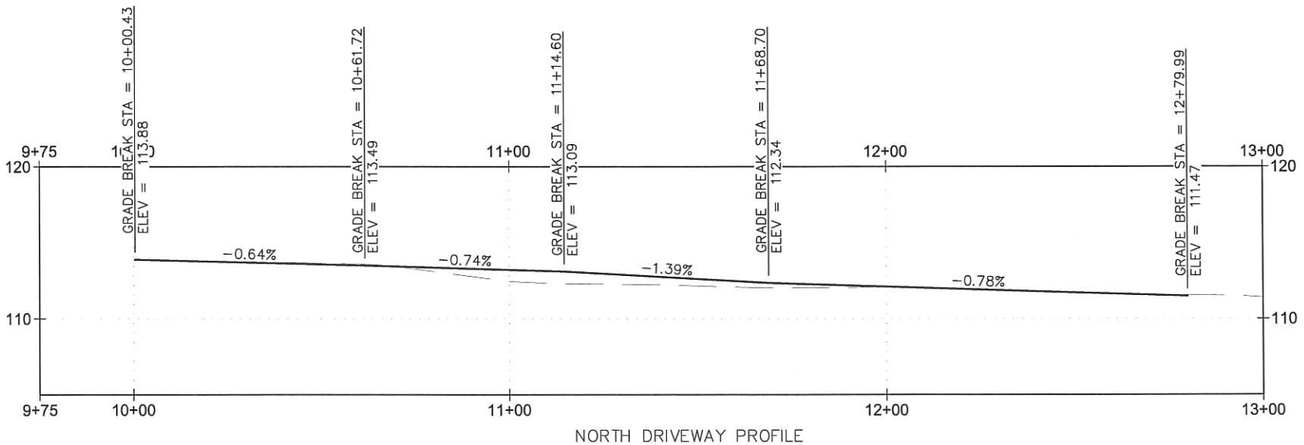
LEGEND:

- 322 — EXISTING MAJOR CONTOUR AND LABEL
- 322 — EXISTING MINOR CONTOUR AND LABEL
- 322 — PROPOSED MAJOR CONTOUR AND LABEL
- 322 — PROPOSED MINOR CONTOUR AND LABEL



SOUTH DRIVEWAY PROFILE





NORTH DRIVEWAY PROFILE

RECEIVED
APR 28 2022
Mat-Su Borough
Development Services

0 20 40 Feet

The Boutet Company, Inc.
601 E. 57th Place #102
Anchorage, AK. 99518
Ph. 907-522-6776
License No. AECC957
CONSULTANT

STATE OF ALASKA
49TH
TIMOTHY J. ALLEY
CE 14368
04/28/22
REGISTERED PROFESSIONAL ENGINEER
SEAL

VALLEY COUNTRY STORE 4
WASILLA, ALASKA

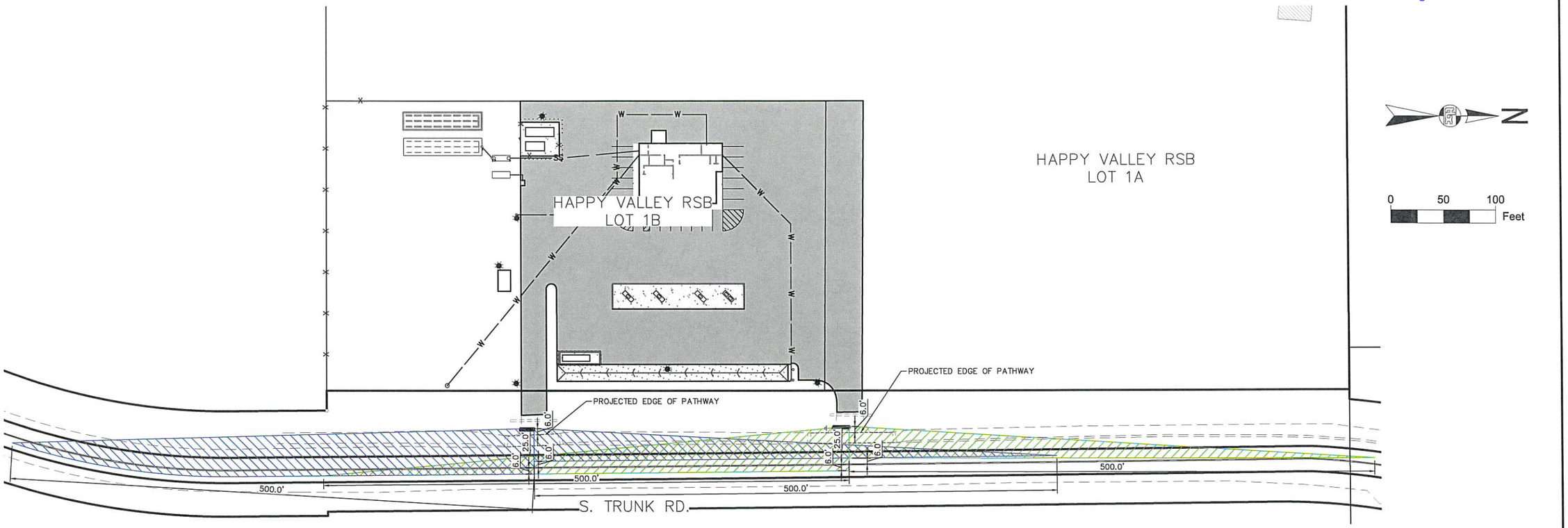
CIVIL SITE & UTILITY IMPROVEMENTS

DRIVEWAY PLAN AND PROFILES

HORZ SCALE: 1"=20'
VERT SCALE: N/A
DATE: 04/28/2022
SHEET DW1

DATE/TIME 5/10/2021 LAYOUT DESIGNED HJH CHECKED TJA DRAFTED HJH

FILE W:\WASILLAFILES\GITTLEINS\VALLEY COUNTRY STORE 4\TBC ACAD\VCS-4 GRADING - DW PERMIT.DWG



INTERSECTION SITE DISTANCE (ISD) NOTES:

1. DESIGN VEHICLE IS PASSENGER CAR BASED ON PRIMARY VEHICLE TO USE INTERSECTIONS.
2. TIME GAP = 7.5 SEC.
3. DECISION POINT IS AT THE STOP BAR 6' FROM EDGE OF PATHWAY, 25' FROM EDGE OF TRAVELED WAY. THIS ASSUMES THAT THE VEHICLES WILL NOT OCCUPY THE PATHWAY WHEN DECIDING TO TURN AND ONLY IMPACTS THE REQUIRED CLEAR ZONE.
4. POSTED SPEED IS 45 MPH
5. AASHTO CHAPTER 9.5.3 CASE B1: 500 FT (LEFT TURN FROM STOP)
6. AASHTO CHAPTER 9.5.3 CASE B2: 430 FT (RIGHT TURN FROM STOP)
7. CASE B1 WAS UTILIZED FOR THE SITE TRIANGLES SHOWN AS THE WORSE CASE (FURTHEST DISTANCE) REQUIRED FOR SITE DISTANCE.

SOUTH DRIVEWAY SITE TRIANGLES

NORTH DRIVEWAY SITE TRIANGLES

RECEIVED
APR 28 2022
Mat-Su Borough
Development Services

The Boutet Company, Inc.
601 E. 57th Place #102
Anchorage, AK. 99518
Ph. 907-522-6776
License No. AECC957

CONSULTANT

STATE OF ALASKA
TIMOTHY J. ALLEY
CE 14368
04/28/22
REGISTERED PROFESSIONAL ENGINEER

SEAL

VALLEY COUNTRY STORE 4
WASILLA, ALASKA

CIVIL SITE & UTILITY IMPROVEMENTS

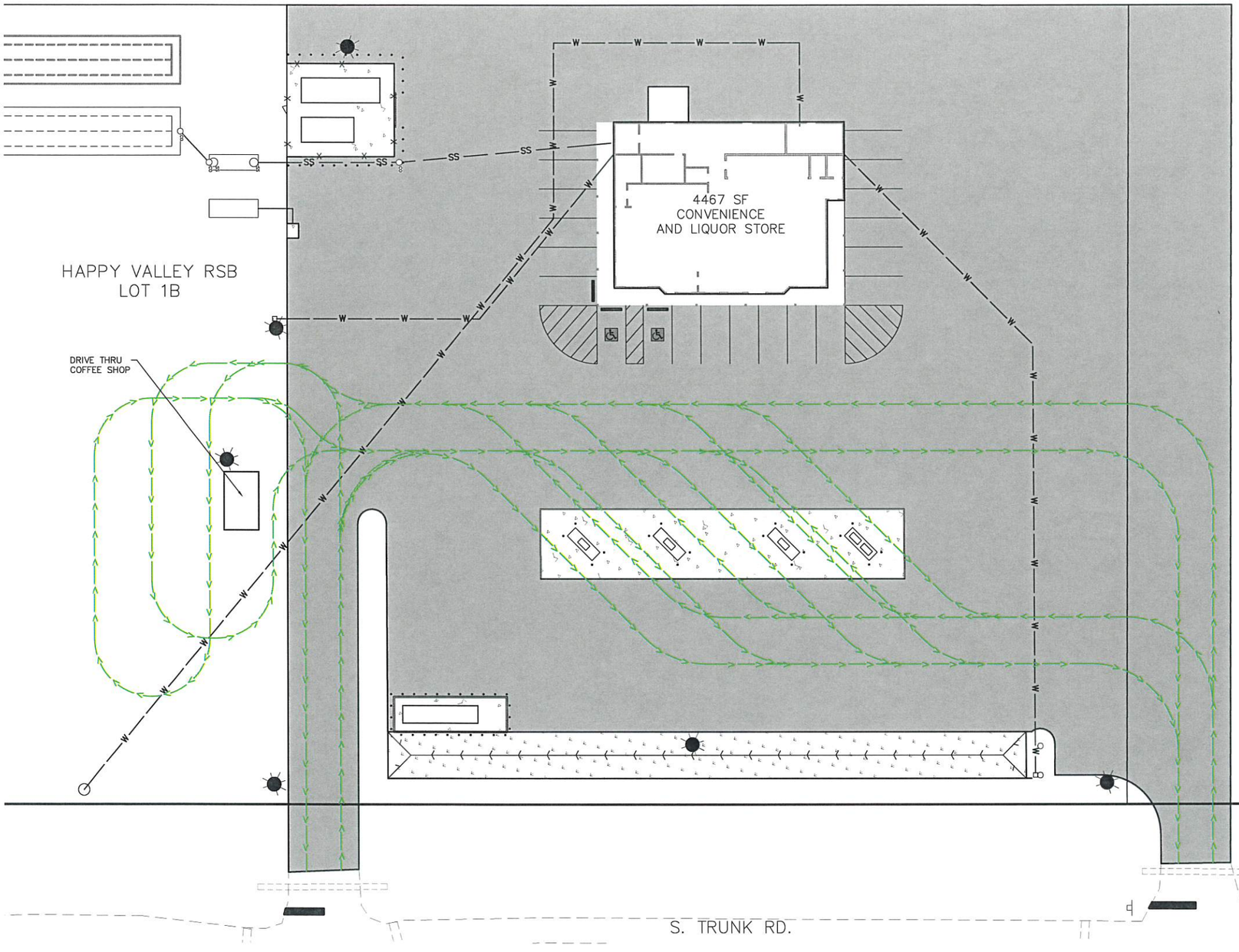
VALLEY COUNTRY STORE 4
SITE DISTANCE TRIANGLES

HORZ SCALE: 1"=100'
VERT SCALE: N/A
DATE: 04/28/2022

SHEET

DATE/TIME 5/10/2021 | LAYOUT | DESIGNED HJH | CHECKED TJA | DRAFTED HJH

FILE W:\WASILLAFILES\GITTLEINS\VALLEY COUNTRY STORE 4\TBC ACAD\VCS-4 SITE TRIANGLES.DWG



N

0 20 40 Feet

* ANTICIPATED PATH OF TRAVEL DOES NOT INCLUDE DRIVERS' SUBJECT DECISIONS TO NAVIGATE THE LOT. TRAVEL SPEEDS WILL BE LOW PROVIDING DRIVERS WITH AMPLE DECISION TIME AND DRIVERS' DECISIONS WILL GOVERN THE PATH TRAVELED.

FINAL LOCATION/ORIENTATION OF COFFEE SHOP HAS NOT BEEN SET AND MAY BE CHANGED TO IMPROVE ACCESS TO THE DRIVE THRUS.

RECEIVED
APR 28 2022
Mat-Su Borough
Development Services

The Boutel Company, Inc.
601 E. 57th Place #102
Anchorage, AK. 99518
Ph. 907-522-6776
License No. AECC957

CONSULTANT | SEAL

VALLEY COUNTRY STORE 4
WASILLA, ALASKA

CIVIL SITE & UTILITY IMPROVEMENTS

VALLEY COUNTRY STORE 4
ANTICIPATED TRAFFIC FLOW

HORZ SCALE: 1"=40'
VERT SCALE: N/A
DATE: 04/28/2022
SHEET

DATE/TIME 5/10/2021 | LAYOUT | DESIGNED HJH | CHECKED TJA | DRAFTED HJH

FILE W:\WASILLA\FILES\OTTLEIMS\VALLEY COUNTRY STORE 4\TBC ACAD\VCS-4 SITE TRIANGLES.DWG

Memorandum

THE BOUTET COMPANY, INC.

1508 E. Bogard Rd. #7
Wasilla, AK 99654

Tel: (907) 522-6776
Fax: (907) 522-6779
e-mail: talley@tbcak.com

Date: **May 4, 2022**

To: Peggy Horton
Planner II
Matanuska-Susitna Borough

From: Tim Alley, PE
Project Manager
The Boutet Company, Inc

Subject: Valley Country Store 4
Stormwater Runoff Analysis

Introduction

This Stormwater Runoff Analysis was prepared in support of the stormwater treatment methods constructed for the proposed development located at 3068 S. Trunk Road, Palmer, Alaska.

Project Description and Location

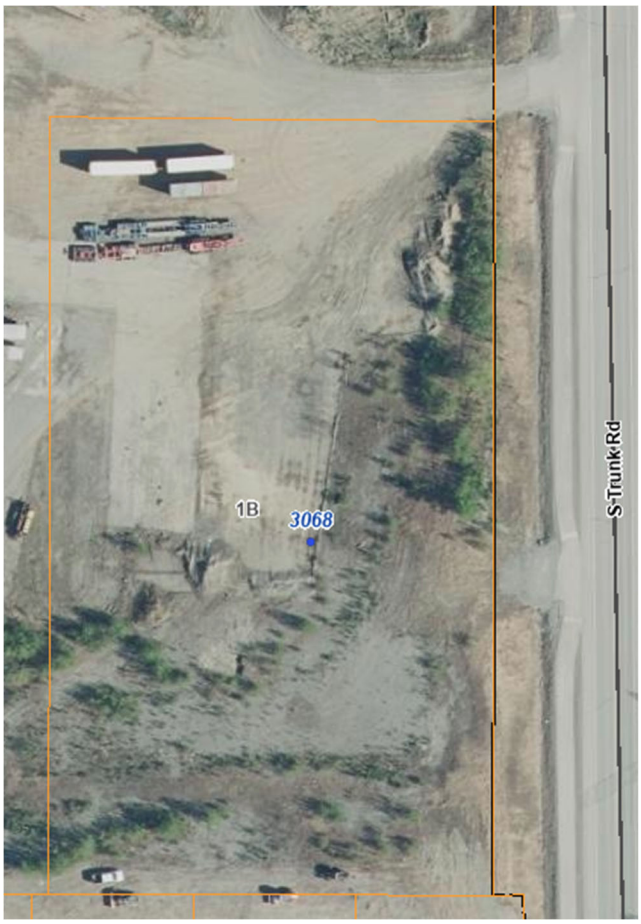
KG Enterprises, LLC (KGE) proposes to construct a convenience store with gas pumps at 3068 South Trunk Road (STR) approximately 1,500 feet south of the roundabout intersection with East Fireweed Road in Palmer, Alaska; more specifically, the project would be located Happy Valley Subdivision Lot 1B.

KGE is constructing a convenience store consisting of a 4,467 square foot structure and four (4) fuel pumps (eight (8) fueling positions). These improvements would be constructed within a 75,000 square foot paved apron that would also accommodate traffic circulation, parking, loading and fuel storage. Attached is an overall site plan for the proposed development.

Pre-development Site Conditions

As indicated the aerial image below (acquired in 2021), the site has been cleared and was utilized for truck and trailer parking prior to development. Existing vegetation was sparce, consisting of grasses and small growth trees primarily cottonwood and birch.

The topography is relatively flat. Natural drainage is from northwest to southeast toward the STR.



The project location is subject to a 2-year, 24-hour storm event of 1.26 inches and a 10-year, 24-hour storm event is 1.83 inches of precipitation. This information was gathered from closest weather station and reported on the National Oceanic and Aeronautic Administration's (NOAA) website.

Post Development Conditions

The Development is a convenience store consisting of a 4,467 square foot structure and four (4) fuel pumps with covered fueling positions. These improvements would be constructed within a 75,000 square foot paved apron that would also accommodate traffic circulation, parking, loading and fuel storage.

To most effectively treat stormwater runoff the development is divided into five drainage areas. The majority of runoff from the north and east portion of the site will drain to a retention basin to the greatest extent possible. With the rest of the drainage draining to the south and west from the building. This drainage will percolate into the existing gravel surfaces outside of the pavement footprint. The retention basin will also capture any protentional spills from the fueling area to prevent contaminated runoff leaving the site. See attached Drainage Area Exhibit. The retention basin cross-section will be 16' wide

with +/- 4:1 slopes for a maximum depth of 2 feet and average depth of 1 foot and if over topped will drain at the southern end into ROW.

Area ID	Area (Ac)	2yr/24hr event (in)	10yr/24hr event (in)	Flow Rate 5 min intensity (CFS)	Daily Discharge (CF)	
				2yr/24hr	2yr/24hr	10yr/24hr
1	1.08	1.26	1.83	0.81	4,954	7,195

Retention ID	Area (SF)	Depth (Ft)	Volume (CF)
1	3,538	1(Avg)	3,538
Percolation Rate	Area	CFS(perc)	CF per hour
1in/hr	3,538	0.98	295

The site was designed to separate standard pavement and roof runoff from being contaminated by any incidental spills in the fueling and fuel storage tank areas. Stormwater runoff from area 1 sheet flows to a dedicated retention basin constructed along the east side of the pavement area. The retention areas were maximized to collect as much of the stormwater via overland sheet flow rather than concentrating the drainage prior to entering the retention areas. While the retention area cannot fully contain the 2yr/24hr rain event, applying the percolation rate of the soils stormwater will percolate into the pond faster than the maximum 5-minute intensity of the 2yr/24hr storm event. The 5-minute intensity of the 10yr/24 hr event was not analyzed. The existing soils are low density silty gravels (GM). A percolation rate of 1 in/hour was estimated as the worst-case scenario based on visual observation of the soils which is expected with high density silty gravels.

Conclusions

1. The development has been constructed using industry standard for stormwater retention and treatment.
2. The retention basin will percolate stormwater higher than the peak intensity of the 2yr/24hr storm.
3. The basin can retain/treat the 10yr/24hr storm provided the intensity does not exceed the percolation rate of the soils.
4. The retention basin exceeds the criteria for stormwater treatment as required by the Municipality of Anchorage Stormwater Manual.

COMMENTS

Agency Comments

Peggy Horton

From: Matt Gittlein <mattgittlein59@hotmail.com>
Sent: Monday, March 7, 2022 10:09 AM
To: Peggy Horton
Subject: Re: VCS #4 soft opening

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Thank you for the response Peggy. That all sounds correct on the soft opening for how we plan to operate. That probably won't take place until next week sometime.

Is it possible, to start the public notice process in the meantime so we can get a date set for the hearing? Possibly with a condition written into it that the driveway issue will be solved before we can operate?

Matt Gittlein
Valley Country Store & Fuel
907-841-5666
Sent from my iPhone

On Mar 7, 2022, at 11:32 AM, Peggy Horton <Peggy.Horton@matsugov.us> wrote:

Good Morning,

Jamie is not available until next week, but I discussed it with several people and went back over Jamie's prior emails. We will be having a discussion in-house next week on the driveway separation issue for the driveway permit application. Here is your written decision that we will not protest your soft opening.

We understand from your request that the soft opening will be for credit card only sales at 4 of the 8 fueling positions, keeping the remaining 4 blocked and pumps turned off. The convenience store will also remain closed at this time.

Regards,

Peggy Horton
Matanuska-Susitna Borough
Development Services Division
Planner II
907-861-7862

From: Jamie Taylor <Jamie.Taylor@matsugov.us>
Sent: Monday, February 14, 2022 7:25 PM
To: Peggy Horton <Peggy.Horton@matsugov.us>
Subject: RE: Valley Country Store #4 on S. Trunk Traffic Impact Analysis

Their current driveway permits say they are for a gas station, so I think they are covered there. As we previously discussed, they will need to update the driveway permits for the full opening because the traffic counts will be over 100 vph which requires different standards.

Looking at 17.61.020, this jumps out at me: (4) Any use that generates contaminated water runoff or other discharges that are likely to violate state water quality standards or negatively impact groundwater or surface water quality beyond adjacent property lines. The grading plan shows runoff from the fueling area draining directly into the Trunk Road ditch without any interception or treatment. This ditch ultimately outfalls to an anadromous stream in the hay flats, which I assume are USACE jurisdictional wetlands. It seems to me, operation of any number of fuel pumps in this situation will have the potential to generate contaminated water runoff. They need to submit a design that provides treatment of runoff from the proposed improvements before it leaves the property.

What do you think?

Jamie Taylor, PE
Civil Engineer
Matanuska-Susitna Borough
Department of Public Works
t: 907-861-7765 c: 907-355-9810
jamie.taylor@matsugov.us
http://www.matsugov.us/

From: Peggy Horton <Peggy.Horton@matsugov.us>
Sent: Thursday, February 10, 2022 3:59 PM
To: Jamie Taylor <Jamie.Taylor@matsugov.us>
Subject: Valley Country Store #4 on S. Trunk Traffic Impact Analysis

Hi Jamie,

I've got a request from the owners of Valley Country Store #4 to do a soft opening with only 4 of the 8 fueling positions open and keeping the rest of the pumps turned off and the store closed. My question is, do the number's they're stating in the attached Soft Opening Request letter make it feasible to have a soft opening? I don't think Development Services is opposed to allowing a soft opening, although we haven't talked about it together.

The owners have applied for a conditional use permit for the alcohol package store and a core area permit, but I haven't scheduled a PC meeting yet. They dropped off a big packet of info late last week and included in it is the traffic impact analysis for the whole thing. I've included the graphic info in this email also.

Could I possibly get an answer from you next week?

Thanks,
Peggy Horton
Matanuska-Susitna Borough
Development Services Division

Peggy Horton

From: Theresa Taranto
Sent: Wednesday, March 16, 2022 3:40 PM
To: Peggy Horton
Subject: RE: Request for Review and Comments: Valley Country Store #4 Core Area CUP and Package Store CUP

FIRM 8120, X Zone
Core Area

No other comments.
Thank you,

Theresa Taranto
Mat-Su Borough
Development Services
Administrative Specialist

350 E Dahlia Ave.
Palmer, Alaska 99645
907-861-8574
www.matsugov.us

From: Peggy Horton <Peggy.Horton@matsugov.us>
Sent: Thursday, March 10, 2022 9:58 AM
To: Allen Kemplen AICP-CTP - DOT&PF (allen.kemplen@alaska.gov) <allen.kemplen@alaska.gov>; Melanie Nichols (Melanie.nichols@alaska.gov) <Melanie.nichols@alaska.gov>; Kyler Hylton (kyler.hylton@alaska.gov) <kyler.hylton@alaska.gov>; George C Horton (george.horton@alaska.gov) <george.horton@alaska.gov>; James Walker (james.walker2@alaska.gov) <james.walker2@alaska.gov>; 'oran.woolley@alaska.gov' <oran.woolley@alaska.gov>; mearow@matanuska.com; 'row@enstarnaturalgas.com' <row@enstarnaturalgas.com>; 'row@mtasolutions.com' <row@mtasolutions.com>; GCI ROW (ospdesign@gci.com) <ospdesign@gci.com>; Fire Code <Fire.Code@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; regpagemaster@usace.army.mil; Terry Dolan <Terry.Dolan@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Jason Ortiz <Jason.Ortiz@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; Dolores McKee <Dee.McKee@matsugov.us>; 'gatewaycommunitycouncil@gmail.com' <gatewaycommunitycouncil@gmail.com>; 'kcelliot@alaska.edu' <kcelliot@alaska.edu>; 'opt.tim.us.breeden@gmail.com' <opt.tim.us.breeden@gmail.com>; 'antiquetuck@gmail.com' <antiquetuck@gmail.com>; 'lisah_ak@hotmail.com' <lisah_ak@hotmail.com>; 'markmobley@ymail.com' <markmobley@ymail.com>; davemtp@mtaonline.net; 'lszipszky@palmerpolice.com' <lszipszky@palmerpolice.com>; 'susansteele550@gmail.com' <susansteele550@gmail.com>; 'blushingmoose@yahoo.com' <blushingmoose@yahoo.com>
Subject: Request for Review and Comments: Valley Country Store #4 Core Area CUP and Package Store CUP

Good Morning,

APPLICANT: Matt Gittlein, for KG Enterprises, LLC

ENSTAR Natural Gas Company
A DIVISION OF SEMCO ENERGY
Engineering Department, Right of Way Section
401 E. International Airport Road
P. O. Box 190288
Anchorage, Alaska 99519-0288
(907) 277-5551
FAX (907) 334-7798

March 10, 2022

Matanuska-Susitna Borough, Planning Division
350 East Dahlia Avenue
Palmer, AK 99645-6488

To whom it may concern:

ENSTAR Natural Gas Company has reviewed the following conditional use permit applications and has no comments or recommendations.

- **Valley Country Store**
  (MSB Case # 17.61)
- **Alcoholic Beverage Uses**
  (MSB Case # 17.70)

If you have any questions, please feel free to contact me at 334-7944 or by email at james.christopher@enstarnaturalgas.com.

Sincerely,

James Christopher

James Christopher
Right of Way & Compliance Technician
ENSTAR Natural Gas Company

Peggy Horton

From: Jamie Taylor
Sent: Thursday, April 21, 2022 5:42 PM
To: Peggy Horton
Subject: RE: Valley Country Store #4
Attachments: TH001022.JPG

Hi Peggy –

1. Yes (I'm not sure why they are calling it a Limited Traffic Impact Analysis, maybe that's DOT's nomenclature?)
2. Yes
3. 1. Yes, they should be, but the existing driveways don't meet all of the normal standards (driveway spacing for one) for the proposed use without written recommendations from the engineer (I asked for additional explanation and reasoning in the memo they wrote about driveway spacing).
   2. Speed change lanes (turn lanes) are not required because they aren't warranted by the two publications listed in the driveway code (I asked for that to be updated in the TIA).
   3. Depending on the design vehicle, driveway sight distances are possibly less than minimum. They need to identify the design vehicle and possibly restrict access for certain types of vehicles to certain driveways.
4. I need more information about the detention pond – what storm event it was sized for, contours or spot elevations showing how deep it is, how the impervious areas are graded to the detention basin, where overflow will go, and how overflow will be treated (for example with a grass filter strip). One of the grading and drainage plans submitted has contours but they do not seem to reflect what is currently constructed (it shows the north driveway slopes to Trunk Road at 10%, but it is actually relatively flat, see attached photo). Runoff from this site could absolutely reach the hayflats without infiltrating as the ditches along Trunk Road and the RR all drain that way (average slope of 1.7%) with very minimal, if any, flat areas. Even if runoff from the site didn't reach the hayflats, why should the borough accept polluted water into the ROW?

5. I haven't heard or received anything since I spoke with Tim Alley and conveyed all the comments and requests for more information listed above plus others.

Let me know if you need anything else.

Jamie

From: Peggy Horton <Peggy.Horton@matsugov.us>
Sent: Thursday, April 21, 2022 3:54 PM
To: Jamie Taylor <Jamie.Taylor@matsugov.us>
Subject: Valley Country Store #4

Hi Jamie, I'm writing the 2 staff reports for this project (core area permit and package store permit) and I've come up with some questions for you. The staff reports are due very soon, hoping you can make time for this.

1. Is this a true statement: The Limited Traffic Impact Analysis indicates the proposed use will generate more than 100 vehicles during morning and afternoon peak hours.

2. Is this a true statement? The Limited Traffic Impact Analysis indicates the proposed use will generate less than 250 vehicles during morning and afternoon peak hours.

3. The TIA made these three recommendations: Do you agree with all of them? The Limited Traffic Impact Analysis makes the following findings/recommendations: 1) Approaches shall be permitted and constructed in accordance with MSB guidelines; 2) Because the posted speed limit is below 50 MPH and furthermore that peak hour site traffic volumes are less than 1000 vehicles at both approaches, speed-change lanes are not required; 3) Because driveway sight distances exceed minimum distances, no sight distance obstruction mitigation is required.

4. Is the detention pond they proposed on the March 3rd drainage plan enough? It seems to me that the detention basin would be adequate for this project since the project is far enough away from the hayflats, that any stormwater would have time to percolate into the ground. The concrete fueling pad is considered non-porous, so stormwater will flow into the detention basin. The driveways are asphalt and all that stormwater will flow into the Trunk Road ROW.

5. Michelle says she hasn't seen any movement on the driveway permit requirements since requesting additional engineering information from TBC in March. Have you received anything?

Peggy Horton
Matanuska-Susitna Borough
Development Services Division
Planner II
907-861-7862

Thu, Apr 07, 2022, 12:42:59 AKDT
.558342° / -149.272996° (±26.3ft)
(±10.4ft)
84
ing: 059° N59E 1049mils True (±17°)
de: -004%
e: -005%

Peggy Horton

From: Matt Gittlein <mattgittlein59@hotmail.com>
Sent: Friday, April 22, 2022 10:37 AM
To: Peggy Horton
Cc: Tim Alley; Hans Hill
Subject: Re: VCS #4 questions

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Peggy,

1. The convenience store and gas pumps **will be open 24 hours**. That was not asked anywhere in the Core Area application that I saw. We ran into this same issue the last time we did this. If this is information that is required for the Core Area application, I would suggest they add that question to the application in the future.

2. Staff will be using the parking area as well as parking in the rear of the building, or parking in the vacant lot to the south.

Hopefully Tim will be able to get you some answers on the driveway issues and other questions early next week.

Matt Gittlein
Valley Country Store & Fuel
907-841-5666

From: Peggy Horton <Peggy.Horton@matsugov.us>
Sent: Friday, April 22, 2022 9:44 AM
To: 'Matt Gittlein' <mattgittlein59@hotmail.com>
Cc: 'Tim Alley' <talley@tbcak.com>
Subject: VCS #4 questions

Good Morning,

I'm writing the staff report and have a couple questions.
1. What are the proposed hours of operation for the convenience market? Same as the package store?
2. In the application, you stated that all the parking spaces will be available for the liquor store customers. Are the employees going to park elsewhere?

Note: Jamie Taylor hasn't heard from Tim Alley after contacting him about our collective questions in March. The permit center has not received the information for the driveway permits either. Time is swiftly ticking away. The staff report for the public hearing is due within a week.

Thank you,

Peggy Horton
Matanuska-Susitna Borough

Development Services Division
Planner II
907-861-7862

Peggy Horton

From: Jamie Taylor
Sent: Friday, April 22, 2022 2:31 PM
To: Tim Alley
Cc: Peggy Horton; Michelle Olsen; Brad Sworts; Andy Dean
Subject: Valley Country Store/Trunk Road
Attachments: D28450 Driveway Review 2022.04.22 update.pdf

Hi Tim –

Here is the written summary of my comments that we discussed a few weeks ago.

Driveway permit comments:

1. The landing slope, length, curve return radii, and cut/fill slopes are not specified in the permit application. The construction plans submitted for the original driveway permits shows standard plan & profile design information with a range of allowable landing slopes, but since these driveways are existing the actual dimensions and slopes should be given.
2. 11.12.070(A)(8)(f) allows for reduced spacing for a variety of reasons when recommended by the engineer and approved by the Borough. The TBC memo dated 11/2/2021 regarding driveway spacing does not identify any of the reasons listed in 11.12.070(A)(8)(f) as the basis for recommendation of approval for reduced spacing.
3. What is the culvert gauge and slope? End sections are required per 11.12.070(A)(2).
4. What is the design vehicle?
5. Submit plan showing driveway sight triangles. The design vehicle will determine the minimum sight distance.
6. Submit a plan & profile showing asbuilt conditions with information in comment #1. Also show stop signs and painted stop bars.
7. Provide turn lane warrants per 11.12.070(B)(4)&(5)

TIA comments:

Page 2	Required sight distance listed does not account for a design vehicle other than a passenger vehicle. I assume the design vehicle is a tank truck, for which AASHTO requires 695/765 feet of sight distance. (Perhaps fuel trucks could be restricted to exiting from the north driveway only.)
Page 4	That AADT count is from 2019. There is 2020 data, but I recommend still using the 2019 data because the 2020 data is likely skewed due to COVID shut downs.
Page 6	Add discussion of accident history.
Page 7	The projected traffic discussion should include ALL uses within the properties using the driveways and the assumptions used in determining the peak hour traffic volume.
Pages 7-9	The PM base traffic flow is 229 (2021)/286 (2032), which is more than the ITETG estimate of 158 for pass-by traffic. I agree that the pass-by traffic estimate is probably high, though. What percentage of new trips come from and return to the north and what percentage come from and return to the south? I would guess a higher percentage of new trips will come from the north/Parks Highway which doesn't seem to be reflected in the turning movement estimates and also will skew the existing 55/45 peak hour traffic flow split.
Page 10	Other Planned Developments: 89 lots have been created in the View Pointe at the Ranch subdivision since late 2020, which has potentially increased the traffic on S Trunk more than 2% per year for the last two years.
Page 10	LOS is listed for the driveway intersections, but not the road segments themselves. 11.12.080(A)(5)(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. Discuss whether this criteria will be met and include LOS analysis if so.

Page 11 The TIA previously stated 67% of the 239 trips generated by the site would be new trips (160). If more than 60% of these new trips come from and return to the north, ADOT/PF's threshold of 100 new trips is met.

Page 12 The second recommendation is not clear. Show if turn lanes are warranted per the two publications listed in 11.12.070(B)(4)&(5).

CUP comments:

A. More information is needed about the detention pond – what storm event it is sized for, contours or spot elevations showing how deep it is, how the impervious areas are graded to the detention basin, where overflow will go, and how overflow will be treated (for example with a grass filter strip). One of the grading and drainage plans submitted has contours but they do not seem to reflect what is currently constructed (it shows the north driveway slopes to Trunk Road at 10%, but it is actually relatively flat).
B. Traffic flow diagram does not show traffic flow to the coffee kiosk, this is important in regards to vehicle and pedestrian conflicts.

Let me know if you have any questions.

Jamie Taylor, PE (she/her)
Civil Engineer
Matanuska-Susitna Borough
Department of Public Works
t: 907-861-7765 c: 907-355-9810
jamie.taylor@matsugov.us
http://www.matsugov.us/

Peggy Horton

From: Matt Gittlein <mattgittlein59@hotmail.com>
Sent: Monday, March 7, 2022 10:09 AM
To: Peggy Horton
Subject: Re: VCS #4 soft opening

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Thank you for the response Peggy. That all sounds correct on the soft opening for how we plan to operate. That probably won't take place until next week sometime.

Is it possible, to start the public notice process in the meantime so we can get a date set for the hearing? Possibly with a condition written into it that the driveway issue will be solved before we can operate?

Matt Gittlein
Valley Country Store & Fuel
907-841-5666
Sent from my iPhone

On Mar 7, 2022, at 11:32 AM, Peggy Horton <Peggy.Horton@matsugov.us> wrote:

Good Morning,

Jamie is not available until next week, but I discussed it with several people and went back over Jamie's prior emails. We will be having a discussion in-house next week on the driveway separation issue for the driveway permit application. Here is your written decision that we will not protest your soft opening.

We understand from your request that the soft opening will be for credit card only sales at 4 of the 8 fueling positions, keeping the remaining 4 blocked and pumps turned off. The convenience store will also remain closed at this time.

Regards,

Peggy Horton
Matanuska-Susitna Borough
Development Services Division
Planner II
907-861-7862

From: Jamie Taylor <Jamie.Taylor@matsugov.us>
Sent: Monday, February 14, 2022 7:25 PM
To: Peggy Horton <Peggy.Horton@matsugov.us>
Subject: RE: Valley Country Store #4 on S. Trunk Traffic Impact Analysis

Their current driveway permits say they are for a gas station, so I think they are covered there. As we previously discussed, they will need to update the driveway permits for the full opening because the traffic counts will be over 100 vph which requires different standards.

Looking at 17.61.020, this jumps out at me: (4) Any use that generates contaminated water runoff or other discharges that are likely to violate state water quality standards or negatively impact groundwater or surface water quality beyond adjacent property lines. The grading plan shows runoff from the fueling area draining directly into the Trunk Road ditch without any interception or treatment. This ditch ultimately outfalls to an anadromous stream in the hay flats, which I assume are USACE jurisdictional wetlands. It seems to me, operation of any number of fuel pumps in this situation will have the potential to generate contaminated water runoff. They need to submit a design that provides treatment of runoff from the proposed improvements before it leaves the property.

What do you think?

Jamie Taylor, PE
Civil Engineer
Matanuska-Susitna Borough
Department of Public Works
t: 907-861-7765 c: 907-355-9810
jamie.taylor@matsugov.us
http://www.matsugov.us/

From: Peggy Horton <Peggy.Horton@matsugov.us>
Sent: Thursday, February 10, 2022 3:59 PM
To: Jamie Taylor <Jamie.Taylor@matsugov.us>
Subject: Valley Country Store #4 on S. Trunk Traffic Impact Analysis

Hi Jamie,

I've got a request from the owners of Valley Country Store #4 to do a soft opening with only 4 of the 8 fueling positions open and keeping the rest of the pumps turned off and the store closed. My question is, do the number's they're stating in the attached Soft Opening Request letter make it feasible to have a soft opening? I don't think Development Services is opposed to allowing a soft opening, although we haven't talked about it together.

The owners have applied for a conditional use permit for the alcohol package store and a core area permit, but I haven't scheduled a PC meeting yet. They dropped off a big packet of info late last week and included in it is the traffic impact analysis for the whole thing. I've included the graphic info in this email also.

Could I possibly get an answer from you next week?

Thanks,
Peggy Horton
Matanuska-Susitna Borough
Development Services Division

No public comments were received for this planning action

PLANNING COMMISSION RESOLUTION

By: Peggy Horton
Introduced: May 2, 2022
Public Hearing: May 16, 2022
Action:

MATANUSKA-SUSITNA BOROUGH
PLANNING COMMISSION RESOLUTION NO. 22-11

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH PLANNING COMMISSION APPROVING A CONDITIONAL USE PERMIT TO OPERATE AN ALCOHOLIC BEVERAGE PACKAGE STORE WITHIN A CONVENIENCE MARKET AT 3068 SOUTH TRUNK ROAD, TAX ID# 8150000L001B; LOCATED WITHIN TOWNSHIP 17 NORTH, RANGE 1 EAST, SECTION 16; SEWARD MERIDIAN.

WHEREAS, Matt Gittlein of KG Enterprises, LLC, submitted a conditional use permit application to operate an alcoholic beverage package store within a convenience market at 3068 South Trunk Road, Tax ID# 8150000L001B; within Township 17 North, Range 1 East, Section 16, Seward Meridian; and

WHEREAS, land uses to the east include a private airstrip, residential, and vacant land on large parcels ranging from 10 to 51 acres. South and further west of the subject lot is a partially developed 160-lot residential master plan development, with a community water system serving mostly one-half-acre lots. The adjacent lot to the north and west is a 12-acre parcel, largely cleared of vegetation that includes a residence and commercial uses. Further to the north are residential and commercial lots ranging in size from 0.8 to seven acres; and

WHEREAS, the proposed use will access South Trunk Road; and

DRAFT

WHEREAS, South Trunk Road is classified as a minor arterial, which is capable of accommodating traffic generated by several commercial retail businesses; and

WHEREAS, there is a mixture of industrial, residential, and commercial uses with frontage on South Trunk Road; and

WHEREAS, according to the application material, the building is approximately 4,467 square feet in size, with the alcoholic beverage package store occupying approximately 1,167 square feet. The remainder of the building will be occupied by convenience market with gas pumps; and

WHEREAS, according to the application material, the proposed hours of operation for the package store are 8:00 a.m. to 12:00 a.m., daily; and

WHEREAS, the applicant provided an exterior lighting design plan with downward directed and shielded fixtures to mitigate light spillage onto nearby properties; and

WHEREAS, the applicant constructed a six-foot tall chain-link fence with privacy slats along the south property boundary, and plans for landscaping with trees along the south and east sides of the property; and

WHEREAS, the one-story market is flat-roofed with lowered shed roof overhangs on three sides, covered in red lap siding on the upper portion, and buff colored T1-11 below; and

DRAFT

WHEREAS, the applicant is actively working with the Permit Center and Public Works Engineer to finalize the driveway permits; and

WHEREAS, the nearest school (Machetanz Elementary) is approximately 8,700 feet southwest of the site. State regulations preclude package store licenses within 200 feet of a school; and

WHEREAS, the Borough has no record of complaints filed under MSB 8.40 Liquor License Referrals, against any of the other Valley Country Store operations; and

WHEREAS, the Alcohol and Marijuana Control Office (AMCO) has not suspended or revoked any alcohol licenses in the last 12 months relating to KG Enterprises, LLC; and

WHEREAS, the applicant provided a Traffic Impact Analysis for the proposed use; and

WHEREAS, the Traffic Impact Analysis indicates the proposed use will generate more than 100 vehicles during morning and afternoon peak hours; and

WHEREAS, the Traffic Impact Analysis indicates the proposed use will generate less than 250 vehicles during morning and afternoon peak hours; and

WHEREAS, the Traffic Impact Analysis makes the following findings/recommendations: 1) Approaches shall be permitted and constructed in accordance with MSB guidelines; 2) Because the posted speed limit is below 50 MPH and furthermore that peak hour

site traffic volumes are less than 100 vehicles at both approaches, speed-change lanes are not required; 3) Because driveway sight distances exceed minimum distances, no sight distance obstruction mitigation is required; and

WHEREAS, according to the application material, the applicant will provide a retention basin constructed between the gas pumps and the eastern property line to capture any potential contaminated runoff leaving the site; and

WHEREAS, the applicant submitted Matanuska-Susitna Borough Deputy Fire Marshal approved plan reviews for the store (#2022-007), fuel tank or dispensing system (#2022-008), the fuel canopy (#2022-009), and the propane tank or dispensing system (#2022-012), to ensure the development is in compliance with the applicable fire code; and

WHEREAS, the subject parcel is approximately 3.01 acres in size; and

WHEREAS, according to the application material, the structure is approximately 147.5 feet from the South Trunk Road right-of-way, 294 feet from the south property line, 40 feet from the west property line, and 98.3 feet from the north property line; and

WHEREAS, the closest residential structure is approximately 350 feet south of the proposed use; and

DRAFT

WHEREAS, according to the application material, the proposed alcoholic beverage package store will be located within the convenience market; and

WHEREAS, according to the application material, the proposed store design includes separate cashier counters for the alcoholic beverage package store and convenience market; and

WHEREAS, the applicant has paved the area around the convenience market and fuel station, which will control the dust; and

WHEREAS, the lighting design includes exterior lights mounted under the overhangs of the store, downward-directed lights in the fuel canopy, and 25-foot tall pole lights focusing on the driveways and various ancillary uses of the site; and

WHEREAS, according to the application material, signs will be limited to a 36-foot tall lighted sign near the northern driveway, on the fuel canopy, and on the building itself; and

WHEREAS, the applicant is not proposing any outdoor amplified sound activities; and

WHEREAS, the operation must comply with the maximum permissible sound level limits allowed, per the requirements of MSB 8.52 – Noise, Amplified Sound and Vibration; and

WHEREAS, the South Trunk Road extension was constructed in 2017 to address increased development and growth south of the Parks Highway as well as traffic congestion; and

WHEREAS, the project engineer determined the north and south driveway intersections with South Trunk Road have a Level of Service of A; and

WHEREAS, according to the site plan, the project will provide 20 customer parking spaces; and

WHEREAS, according to the site plan, the applicant will provide two customer parking spaces designated for persons with disabilities; and

WHEREAS, there will be approximately one parking space for every 200 square feet of building floor area; and

WHEREAS, the Matanuska-Susitna Borough Long Range Transportation Plan, was adopted in 2017 and lists Trunk Road at a Level of Service (LOS) of "C or better"; and

WHEREAS, there is no information available to determine where individuals involved in an alcohol-related accident obtained alcoholic beverage(s); and

WHEREAS, a package store does not serve liquor on the premises; and

WHEREAS, consumption on site is prohibited; and

WHEREAS, according to the application material, if a customer is seen consuming alcohol on the premises, they will be asked to leave, and if necessary, State Troopers may be called; and

WHEREAS, persons under the age of 21 are prohibited from purchasing alcoholic beverages; and

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WHEREAS, Alaska Statute 04.16.030 specifically prohibits the sale of alcoholic beverages to drunken persons; and

WHEREAS, the Alcoholic & Marijuana Control Office has no record of violations by KG Enterprises, LLC; and

WHEREAS, staff has no information indicating the applicant, KG Enterprises, LLC (dba Valley Country Store) is untrustworthy or unfit to conduct business in the Borough or that the applicant is a potential source of harm to the public; and

WHEREAS, the Planning Commission has reviewed this application with respect to applicable standards set forth in MSB 17.61; and

WHEREAS, the Planning Commission conducted a public hearing on May 16, 2022 on this matter.

NOW, THEREFORE, BE IT RESOLVED, that the Matanuska-Susitna Borough Planning Commission hereby adopts the aforementioned findings of fact and makes the following conclusions of law supporting approval of Planning Commission Resolution 22-11:

1. The proposed use is compatible with and will preserve or not materially detract from the value, character and integrity of the surrounding area (MSB 17.70.100(A)(1)(a)).
2. The proposed use will not be harmful to the public health, safety, convenience, and welfare (MSB 17.70.100(A)(1)(b)).

3. Sufficient setbacks, lot area, buffers or other safeguards are being provided (MSB 17.70.100(A)(1)(c)).
4. There will not be any negative effects upon the properties in the area due to such factors as dust, noise, obtrusive advertising and glare (MSB 17.70.100(A)(2)(a)).
5. The proposed use will not negatively affect the safe, efficient flow of traffic on any highway, arterial, collector or street from which access to and from the establishment is obtained (MSB 17.70.100(A)(2)(b)).
6. Measures will be in place to reduce any negative effect upon adjacent and nearby properties (MSB 17.70.100(A)(2)(c)).
7. Adequate parking will be provided (MSB 17.70.100(A)(2)(d)).
8. Access to the premises will not create an unreasonable traffic hazard (MSB 17.70.100(A)(2)(e)).
9. Traffic will not overtax existing road systems (MSB 17.70.100(A)(2)(f)).
10. The proposed use is compatible with the character of the surrounding area (MSB 17.70.100(A)(2)(g)).
11. The proposed use will not increase the crime rate in the area or increase alcohol-related accidents (MSB 17.70.110(B)(1)).

DRAFT

12. The applicant has not had a liquor license suspended or revoked in the 12 months preceding the application (MSB 17.70.110(B)(2)).

13. The applicant is trustworthy or fit to conduct business in the Borough and the applicant is not a potential source of harm to the public (MSB 17.70.110(B)(3)).

BE IT FURTHER RESOLVED, the Planning Commission finds this application does meet the standards of MSB 17.70 and does hereby approve the Conditional Use Permit to operate an alcoholic beverage package store within a convenience market with gas pumps, with the following conditions:

1. The operation shall comply with all other applicable federal, state, and local regulations.

2. All aspects of the operation shall comply with the description detailed in the application material and with the conditions of this permit. An amendment to the Conditional Use Permit shall be required prior to any expansion of the conditional use.

3. Prior to operation, obtain approved driveway permits for both driveways onto the site.

4. The operation shall comply with the maximum permissible sound level limits allowed, per the requirements of MSB 17.61.080 – Noise Standards and MSB 8.52 – Noise, Amplified Sound and Vibration.

DRAFT

5. Prior to operating, a copy of the approval issued by ADEC for the on-site septic system shall be provided to the MSB Development Services Division.

6. Provide a copy of the approved State of Alaska package store license #1241, within 30 days of its issuance.

ADOPTED by the Matanuska-Susitna Borough Planning Commission this ___ day of _____, 2022.

_____
STAFFORD GLASHAN, Chair

ATTEST

_____
KAROL RIESE, Planning Clerk

(SEAL)

DRAFT

YES:

NO:

PUBLIC HEARING QUASI-JUDICIAL

Resolution No. PC 22-10

Matt Gittlein for KG Enterprises, LLC

(Pages 595-760)

PUBLIC HEARING

MATANUSKA-SUSITNA BOROUGH
Planning and Land Use Department
Development Services Division
350 East Dahlia Avenue • Palmer, AK 99645
Phone (907) 861-7822
www.matsugov.us

DEVELOPMENT SERVICES DIVISION STAFF REPORT

Date:	May 4, 2022
File Number:	176120220002
Applicant:	Matt Gittlein of KG Enterprises, LLC
Property Owner:	KG Enterprises, LLC
Request:	Planning Commission Resolution 22-10 Request for a Core Area Conditional Use Permit to operate a convenience market with gas pumps and an alcoholic beverage package store in accordance with MSB Chapter 17.61 – Core Area
Location:	3068 South Trunk Road, Tax ID# 815000L001B; within Township 17 North, Range 1 East, Section 16, Seward Meridian
Size of Property:	3.01 acres
Reviewed By:	Jason Ortiz, Development Services Manager
Staff:	Peggy Horton, Planner II PH
Staff Recommendation:	Approval with conditions

EXECUTIVE SUMMARY

Matt Gittlein submitted a Core Area Conditional Use Permit application to operate a convenience market with gas pumps and an alcoholic beverage package store. The applicant is proposing a 4,467 square foot building, with the alcoholic beverage package store occupying approximately 1,167 square feet. The remainder of the building will be occupied by convenience market with gas pumps. The proposed use will generate traffic greater than 100 vehicles during the peak hour which warrants a Core Area Conditional Use Permit.

MSB 17.61.090 requires a conditional use permit for new commercial or industrial uses within the core area that generate traffic in excess of 100 vehicles during the morning or afternoon peak hour or more than 750 vehicles per day. Operation of such a land use within the core area without a permit is prohibited.

LAND USE

Historic Use:
The subject property was used as farmland according to Borough 1985 aerial photos. In 1997, a racetrack was constructed on land immediately north and the subject area was used as parking for the racetrack. The racetrack ceased operation sometime around 2011. Since that time the owner used the property for truck and trailer parking. The South Trunk Road extension was constructed in 2017 to address increased development and growth south of the Parks Highway as well as traffic congestion. The two driveways onto the property were built as part of that road construction project. In 2021, the property was replatted into Lot 1A and 1B, Happy Valley Subdivision. The subject property for the proposed use is Lot 1B, consisting of 3.01 acres.

Existing Land Use:
The applicant constructed the store building and gas pumps as proposed in the application. The Borough did not object when the applicant requested permission to have a soft opening, using only four of the eight gas pumps for credit card use only. According to the application material, this "soft opening" use does not generate traffic in excess of 100 vehicles during the morning or afternoon peak hour or more than 750 vehicles per day and therefore does not require a permit.

Surrounding Land Uses:
The subject property is located on the west side of South Trunk Road, approximately 1,600 feet southwest of the south roundabout for East Parks Highway and South Trunk Road. Land uses to the east include a private airstrip, residential, and vacant land on large parcels ranging from 10 to 51 acres. South and further west of the subject lot is a partially developed 160-lot residential use master plan development, with a community water system serving mostly one-half-acre lots. The adjacent lot to the north and west is a 12-acre parcel, largely cleared of vegetation that includes residential and commercial uses. Further to the north are residential and commercial use lots ranging in size from 0.8 to seven acres.

REVIEW OF APPLICABLE CRITERIA AND FINDINGS

MSB 17.03 – Public Notification
Borough staff mailed a total of 19 notices on March 16, 2022, to all property owners within the Happy Valley Subdivision and within 600 feet of the subject lot. The Frontiersman published the public hearing notice in the April 6, 2022 issue. Staff posted the application material on the Borough's website and emailed the public notice, application material, and a request for comments to outside agencies and the Gateway Community Council on March 10, 2022. Staff did not receive any comments from the community council or the public.

Section 17.61.070 General Standards

(A) A conditional use may be approved only if it meets the requirements of this section in addition to any other standards required by this chapter.

(B) In granting a conditional use permit, the commission must make the following findings:

(1) the conditional use will preserve and not detract from the value, character and integrity of the surrounding area;

Findings of Fact:

1. Land uses to the east include a private airstrip, residential, and vacant land on large parcels ranging from 10 to 51 acres. South and further west of the subject lot is a partially developed 160-lot residential master plan development, with a community water system serving mostly one-half-acre lots. The adjacent lot to the north and west is a 12-acre parcel, largely cleared of vegetation that includes a residence and commercial uses. Further to the north are residential and commercial lots ranging in size from 0.8 to seven acres.
2. The proposed use will access South Trunk Road.
3. South Trunk Road is classified as a minor arterial, which is capable of accommodating traffic generated by several commercial retail businesses.
4. There is a mixture of industrial, residential, and commercial uses with frontage on south Trunk Road.
5. According to the application material, the building is approximately 4,467 square feet in size, with the alcoholic beverage package store occupying approximately 1,167 square feet. The remainder of the building will be occupied by convenience market with gas pumps.
6. According to the application material, the convenience market and gas pumps will be open 24 hours a day.
7. The applicant provided an exterior lighting design plan with downward directed and shielded fixtures to mitigate light spillage onto nearby properties.
8. The applicant constructed a six-foot tall chain-link fence with privacy slats along the south property boundary, and plans for landscaping with trees along the south and east sides of the property.
9. The one-story market is flat-roofed with lowered shed roof overhangs on three sides, covered in red lap siding on the upper portion, and buff colored T1-11 below.

Conclusions of Law: Based on the above findings, the proposed use will preserve and not detract from the value, character and integrity of the surrounding area (MSB 17.61.070(B)(1)).

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(2) that granting the conditional use permit will not be harmful to the health, safety, convenience or general welfare of the public; and

Findings of Fact:

1. The proposed use will access South Trunk Road.
2. South Trunk Road is classified as a minor arterial, which is capable of accommodating traffic generated by several commercial retail businesses.

3. The applicant is actively working with the Permit Center and Public Works Engineer to finalize the driveway permits.
4. According to the application material, the building is approximately 4,467 square feet in size, with the alcoholic beverage package store occupying approximately 1,167 square feet. The remainder of the building will be occupied by convenience market with gas pumps.
5. The nearest school (Machetanz Elementary) is approximately 8,700 feet southwest of the site. State regulations preclude package store licenses within 200 feet of a school.
6. The Borough has no record of complaints filed under MSB 8.40 Liquor License Referrals, against any of the other Valley Country Store operations.
7. The Alcohol and Marijuana Control Office (AMCO) has not suspended or revoked any alcohol licenses in the last 12 months relating to KG Enterprises, LLC.
8. The applicant provided a Traffic Impact Analysis for the proposed use.
9. The Traffic Impact Analysis indicates the proposed use will generate more than 100 vehicles during morning and afternoon peak hours.
10. The Traffic Impact Analysis indicates the proposed use will generate less than 250 vehicles during morning and afternoon peak hours.
11. The Traffic Impact Analysis makes the following findings/recommendations: 1) Approaches shall be permitted and constructed in accordance with MSB guidelines; 2) Because the posted speed limit is below 50 MPH and furthermore that peak hour site traffic volumes are less than 100 vehicles at both approaches, speed-change lanes are not required; 3) Because driveway sight distances exceed minimum distances, no sight distance obstruction mitigation is required.
12. According to the application material, the applicant will provide a retention basin constructed between the gas pumps and the eastern property line to capture any potential contaminated runoff leaving the site.
13. The applicant submitted Matanuska-Susitna Borough Deputy Fire Marshal approved plan reviews for the store (#2022-007), fuel tank or dispensing system (#2022-008), the fuel canopy (#2022-009), and the propane tank or dispensing system (#2022-012), to indicate the development is in compliance with the applicable fire code.

Discussion: Staff recommends a condition which requires the applicant to provide documentation showing the proposed septic system has been designed in accordance with the Alaska Department of Environmental Conservation (ADEC) regulations applicable to this development. Staff also recommends a condition which requires the applicant to obtain approved driveway permits for both driveways onto the site.

Conclusions of Law: Based on the above findings, and with conditions, the proposed use will not be harmful to the public health, safety, convenience, and welfare (MSB 17.61.070(B)(2)).

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(3) that sufficient setback, lot area, buffers, or other safeguards are being provided to meet the conditions listed in subsections (B) (1) and (2) of this section.

Findings of Fact:

1. The subject parcel is approximately 3.01 acres in size.
2. According to the application material, the structure is approximately 147.5 feet from the South Trunk Road right-of-way, 294 feet from the south property line, 40 feet from the west property line, and 98.3 feet from the north property line.
3. According to the application material, the gas pump canopy is approximately 77.5 feet from the South Trunk Road right-of-way.
4. The closest residential structure is approximately 350 feet south of the proposed use.
5. According to the application material, the proposed alcoholic beverage package store will be located within the convenience market.
6. According to the application material, the proposed store design includes separate cashier counters for the alcoholic beverage package store and convenience market.
7. The nearest school (Machetanz Elementary) is approximately 8,700 feet southwest of the site. State regulations preclude package store licenses within 200 feet of a school.
8. The proposed use will access South Trunk Road.
9. South Trunk Road is classified as a minor arterial, which is capable of accommodating traffic generated by several commercial retail businesses.
10. The applicant is actively working with the Permit Center and Public Works Engineer to finalize the driveway permits.
11. The applicant provided a Traffic Impact Analysis for the proposed use.
12. The Traffic Impact Analysis indicates the proposed use will generate more than 100 vehicles during morning and afternoon peak hours.
13. The Traffic Impact Analysis indicates the proposed use will generate less than 250 vehicles during morning and afternoon peak hours.
14. The Traffic Impact Analysis makes the following findings/recommendations: 1) Approaches shall be permitted and constructed in accordance with MSB guidelines; 2) Because the posted speed limit is below 50 MPH and furthermore that peak hour site traffic volumes are less than 100 vehicles at both approaches, speed-change lanes are not required; 3) Because driveway sight distances exceed minimum distances, no sight distance obstruction mitigation is required.
15. According to the application material, the applicant will provide a retention basin constructed between the gas pumps and the eastern property line to capture any potential contaminated runoff leaving the site.
16. The applicant submitted Matanuska-Susitna Borough Deputy Fire Marshal approved plan reviews for the store (#2022-007), fuel tank or dispensing system (#2022-008), the fuel canopy (#2022-009), and the propane tank or dispensing system (#2022-012), to ensure the development is in compliance with the applicable fire code.

Discussion: Staff recommends a condition which requires the applicant to provide documentation showing the proposed septic system has been designed in accordance with the Alaska Department of Environmental Conservation (ADEC) regulations applicable to this

development. Staff also recommends a condition which requires the applicant to obtain approved driveway permits for both driveways onto the site.

Conclusions of Law: Based on the above findings, and with conditions, sufficient setbacks, lot area, buffers or other safeguards are being provided (MSB 17.61.070(B)(3)).

Section 17.61.080 Noise Standards

(A) Except as provided in subsection (B) below, no person shall operate or cause to be operated on private property a new commercial or industrial use creating sound in such a manner as to create a sound level that exceeds the limits set forth for the adjacent land use category in Table 1 when measured at or within the property line of the receiving land use without first obtaining a conditional use permit. The use of the adjacent parcel shall be determined at the time of conditional use permit application. If there are mixed uses on adjacent parcels the most restrictive sound category shall apply.

Table 1: Maximum Permissible A-weighted Sound levels

Land Use of Sound Source	***Land Use of Adjacent Property***				
	Residential			*Commercial*	*Industrial*
	Day	*Night*			
	Monday through Friday 7 a.m. to 10 p.m. or 9 a.m. to 10 p.m. on weekends	*Monday through Friday 10 p.m. to 7 a.m.*	*Weekend 10 p.m. to 9 a.m.*		
Commercial	*60dB (A)*	*50dB (A)*	*50dB (A)*	*70dB (A)*	*75dB (A)*
Industrial	*60dB (A)*	*50dB (A)*	*50dB (A)*	*70dB (A)*	*80dB (A)*

(B) For any sound which is of short duration, between the hours of 7 a.m. and 7 p.m. the levels established in Table 1 may be increased by:

(1) Five (5) dB(A) for a total of fifteen minutes in any one hour, or
(2) Ten (10) dB(A) for a total of five minutes in any hour, or
(3) Fifteen (15) dB(A) for a total of one and one half minutes in any one hour period.

Findings of Fact:

1. According to the application material, the structure is approximately 147.5 feet from the South Trunk Road right-of-way, 294 feet from the south property line, 40 feet from the west property line, and 98.3 feet from the north property line.
2. According to the application material, the gas pump canopy is approximately 77.5 feet from the South Trunk Road right-of-way.
3. The closest residential structure is approximately 350 feet south of the proposed use.
4. The applicant is not proposing any outdoor amplified sound activities.

5. The operation must comply with the maximum permissible sound level limits allowed, per the requirements of MSB 8.52 – Noise, Amplified Sound and Vibration.

Conclusions of Law: Based on the above findings, the proposed use will operate in accordance with the noise standards (MSB 17.61.080).

Section 17.61.090 Traffic Standards

(A) No new commercial or industrial use that generates traffic in excess of 100 vehicles during the morning or afternoon peak hour or more than 750 vehicles per day may operate in the core area without first obtaining a conditional use permit unless roadway improvements are funded, scheduled for construction, and expected to mitigate any impacts associated with the proposed project and the existing level of service along the roadway is not expected to drop below Level of Service "D" due to the proposed project.

(B) The minimum acceptable LOS at intersections and on road segments both on the development's opening date and ten years from the opening date for land uses generating 250 or more vehicle trips during the peak traffic hour of an adjacent highway, is:

(1) LOS C, if the existing LOS on the date of the application is C or better; or

(2) LOS D, if the existing 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 ten percent in terms of delay time or other appropriate measure of effectiveness from the LOS before the development's opening date.

Findings of Fact:

1. The proposed use will access South Trunk Road.
2. The applicant is actively working with the Permit Center and Public Works Engineer to finalize the driveway permits.
3. The Matanuska-Susitna Borough Long Range Transportation Plan, was adopted in 2017 and lists Trunk Road at a Level of Service (LOS) of "C or better".
4. The project engineer determined the north and south driveway intersections with South Trunk Road have a Level of Service of A.
5. South Trunk Road is classified as a minor arterial, which is capable of accommodating traffic generated by several commercial retail businesses.
6. The South Trunk Road extension was constructed in 2017 to address increased development and growth south of the Parks Highway as well as traffic congestion.
7. The applicant provided a Traffic Impact Analysis for the proposed use.
8. The Traffic Impact Analysis indicates the proposed use will generate more than 100 vehicles during morning and afternoon peak hours.
9. The Traffic Impact Analysis indicates the proposed use will generate less than 250 vehicles during morning and afternoon peak hours.
10. The Traffic Impact Analysis makes the following findings/recommendations: 1) Approaches shall be permitted and constructed in accordance with MSB guidelines; 2) Because the posted speed limit is below 50 MPH and furthermore that peak hour site traffic

volumes are less than 100 vehicles at both approaches, speed-change lanes are not required; 3) Because driveway sight distances exceed minimum distances, no sight distance obstruction mitigation is required.

Discussion: Staff recommends a condition which requires the applicant to obtain approved driveway permits for both driveways onto the site.

Conclusions of Law: Based on the above findings, and with conditions, the proposed use will not negatively affect the safe, efficient flow of traffic on any highway, arterial, collector or street from which access to and from the establishment is obtained and the adjacent road segment and intersection are at an acceptable level of service (MSB 17.61.090(A) & (B)).

(C) Commercial and industrial uses requiring a conditional use permit must provide sufficient off-street parking to prevent use of public rights-of-way for parking;

Finding of Fact:

1. According to the site plan, the project will provide 20 customer parking spaces.
2. According to the site plan, the applicant will provide two customer parking spaces designated for persons with disabilities.
3. There will be approximately one parking space for every 200 square feet of building floor area.

Conclusion of Law: Based on the above findings, adequate parking will be provided (MSB 17.61.090(C)).

Section 17.61.110 Action on Permit Applications

(A) A conditional use permit must be reviewed and acted upon by the commission following a public hearing. Notice of the public hearing shall be as provided under MSB 17.03, Public Notification.

(B) After a public hearing, and upon review of staff's analysis and recommendations, the commission shall consider:

(1) whether the proposed use, even with mitigation, would be incompatible with and adversely affect surrounding residential neighborhoods;

Findings of Fact:

1. There is a mixture of industrial, residential, and commercial uses with frontage on south Trunk Road.
2. Land uses to the east include a private airstrip, residential, and vacant land on large parcels ranging from 10 to 51 acres. South and further west of the subject lot is a partially developed 160-lot residential master plan development, with a community water system serving mostly one-half-acre lots. The adjacent lot to the north and west is a 12-acre parcel, largely cleared of vegetation that includes a residence and commercial uses. Further to the north are residential and commercial lots ranging in size from 0.8 to seven acres.

3. According to the application material, the building is approximately 4,467 square feet in size, with the alcoholic beverage package store occupying approximately 1,167 square feet. The remainder of the building will be occupied by convenience market with gas pumps.
4. The applicant provided an exterior lighting design plan with downward directed and shielded fixtures to mitigate light spillage onto nearby properties.
5. The closest residential structure is approximately 350 feet south of the proposed use.
6. The applicant is not proposing any outdoor amplified sound activities.
7. According to the application material, the convenience market and gas pumps will be open 24 hours a day.
8. The applicant constructed a six-foot tall chain-link fence with privacy slats along the south property boundary, and plans for landscaping with trees along the south and east sides of the property.
9. According to the application material, the applicant will provide a retention basin constructed between the gas pumps and the eastern property line to capture any potential contaminated runoff leaving the site.
10. The one-story market is flat-roofed with lowered shed roof overhangs on three sides, covered in red lap siding on the upper portion, and buff colored T1-11 below.
11. The proposed use will access South Trunk Road.
12. The applicant is actively working with the Permit Center and Public Works Engineer to finalize the driveway permits.
13. South Trunk Road is classified as a minor arterial, which is capable of accommodating traffic generated by several commercial retail businesses.
14. The applicant provided a Traffic Impact Analysis for the proposed use.
15. The Traffic Impact Analysis indicates the proposed use will generate more than 100 vehicles during morning and afternoon peak hours.
16. The Traffic Impact Analysis indicates the proposed use will generate less than 250 vehicles during morning and afternoon peak hours.
17. The Traffic Impact Analysis makes the following findings/recommendations: 1) Approaches shall be permitted and constructed in accordance with MSB guidelines; 2) Because the posted speed limit is below 50 MPH and furthermore that peak hour site traffic volumes are less than 100 vehicles at both approaches, speed-change lanes are not required; 3) Because driveway sight distances exceed minimum distances, no sight distance obstruction mitigation is required.
18. The applicant submitted Matanuska-Susitna Borough Deputy Fire Marshal approved plan reviews for the store (#2022-007), fuel tank or dispensing system (#2022-008), the fuel canopy (#2022-009), and the propane tank or dispensing system (#2022-012), to ensure the development is in compliance with the applicable fire code.

Discussion: Staff recommends a condition which requires the applicant to obtain approved driveway permits for both driveways onto the site.

Conclusion of Law: Based on the above findings, and with conditions, the proposed use is compatible with and will not adversely affect the surrounding residential uses (MSB 17.61.110(B)(1)).

(2) whether the proposed use would adversely affect property values of surrounding areas;

Findings of Fact:

1. There is a mixture of industrial, residential, and commercial uses with frontage on south Trunk Road.
2. Land uses to the east include a private airstrip, residential, and vacant land on large parcels ranging from 10 to 51 acres. South and further west of the subject lot is a partially developed 160-lot residential master plan development, with a community water system serving mostly one-half-acre lots. The adjacent lot to the north and west is a 12-acre parcel, largely cleared of vegetation that includes a residence and commercial uses. Further to the north are residential and commercial lots ranging in size from 0.8 to seven acres.
3. The proposed use will access South Trunk Road.
4. South Trunk Road is classified as a minor arterial, which is capable of accommodating traffic generated by several commercial retail businesses.
5. According to the application material, the building is approximately 4,467 square feet in size, with the alcoholic beverage package store occupying approximately 1,167 square feet. The remainder of the building will be occupied by convenience market with gas pumps.
6. The applicant provided an exterior lighting design plan with downward directed and shielded fixtures to mitigate light spillage onto nearby properties.
7. The closest residential structure is approximately 350 feet south of the proposed use.
8. The applicant is not proposing any outdoor amplified sound activities.
9. According to the application material, the convenience market and gas pumps will be open 24 hours a day.
10. The applicant constructed a six-foot tall chain-link fence with privacy slats along the south property boundary, and plans for landscaping with trees along the south and east sides of the property.
11. The one-story market is flat-roofed with lowered shed roof overhangs on three sides, covered in red lap siding on the upper portion, and buff colored T1-11 below.
12. The applicant is actively working with the Permit Center and Public Works Engineer to finalize the driveway permits.
13. The applicant provided a Traffic Impact Analysis for the proposed use.
14. The Traffic Impact Analysis indicates the proposed use will generate more than 100 vehicles during morning and afternoon peak hours.

15. The Traffic Impact Analysis indicates the proposed use will generate less than 250 vehicles during morning and afternoon peak hours.
16. The Traffic Impact Analysis makes the following findings/recommendations: 1) Approaches shall be permitted and constructed in accordance with MSB guidelines; 2) Because the posted speed limit is below 50 MPH and furthermore that peak hour site traffic volumes are less than 100 vehicles at both approaches, speed-change lanes are not required; 3) Because driveway sight distances exceed minimum distances, no sight distance obstruction mitigation is required.
17. According to the application material, the applicant will provide a retention basin constructed between the gas pumps and the eastern property line to capture any potential contaminated runoff leaving the site.
18. The applicant submitted Matanuska-Susitna Borough Deputy Fire Marshal approved plan reviews for the store (#2022-007), fuel tank or dispensing system (#2022-008), the fuel canopy (#2022-009), and the propane tank or dispensing system (#2022-012), to ensure the development is in compliance with the applicable fire code.

Discussion: Staff recommends a condition which requires the applicant to obtain approved driveway permits for both driveways onto the site.

Conclusion of Law: Based on the above findings, and with conditions, the proposed use will not adversely affect property values of surrounding areas (MSB 17.61.110(B)(2)).

(3) whether the proposed use would create unreasonable noise levels beyond the property lines of the proposed location;

Findings of Fact:

1. According to the application material, the structure is approximately 147.5 feet from the South Trunk Road right-of-way, 294 feet from the south property line, 40 feet from the west property line, and 98.3 feet from the north property line.
2. According to the application material, the gas pump canopy is approximately 77.5 feet from the South Trunk Road right-of-way.
3. The closest residential structure is approximately 350 feet south of the proposed use.
4. The applicant is not proposing any outdoor amplified sound activities.
5. The operation must comply with the maximum permissible sound level limits allowed, per the requirements of MSB 8.52 – Noise, Amplified Sound and Vibration.

Conclusion of Law: Based on the above findings, the proposed use will not create unreasonable noise levels beyond the property of the proposed location (MSB 17.61.110(B)(3)).

(4) based upon a completed traffic impact analysis, whether the proposed use would adversely affect the safe and efficient flow of traffic on any highway, arterial, collector, or street from which access to and from the business occurs;

Finding of Fact:

1. The proposed use will access South Trunk Road.
2. South Trunk Road is classified as a minor arterial, which is capable of accommodating traffic generated by several commercial retail businesses.
3. The South Trunk Road extension was constructed in 2017 to address increased development and growth south of the Parks Highway as well as traffic congestion.
4. The applicant is actively working with the Permit Center and Public Works Engineer to finalize the driveway permits.
5. The project engineer determined the north and south driveway intersections with South Trunk Road have a Level of Service of A.
6. The applicant provided a Traffic Impact Analysis for the proposed use.
7. The Traffic Impact Analysis indicates the proposed use will generate more than 100 vehicles during morning and afternoon peak hours.
8. The Traffic Impact Analysis indicates the proposed use will generate less than 250 vehicles during morning and afternoon peak hours.
9. The Traffic Impact Analysis makes the following findings/recommendations: 1) Approaches shall be permitted and constructed in accordance with MSB guidelines; 2) Because the posted speed limit is below 50 MPH and furthermore that peak hour site traffic volumes are less than 100 vehicles at both approaches, speed-change lanes are not required; 3) Because driveway sight distances exceed minimum distances, no sight distance obstruction mitigation is required.

Discussion: Staff recommends a condition which requires the applicant to obtain approved driveway permits for both driveways onto the site.

Conclusion of Law: Based on the above findings, and with conditions, the proposed use will not adversely affect the safe and efficient flow of traffic on any highway, arterial, collector, or street from which access to and from the business occurs (MSB 17.61.110(B)(4)).

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(5) whether there are adequate off-street parking facilities to accommodate a reasonably expected increased demand for parking generated by the business;

Finding of Fact:

1. According to the site plan, the project will provide 20 customer parking spaces.
2. According to the site plan, the applicant will provide two customer parking spaces designated for persons with disabilities.
3. There will be approximately one parking space for every 200 square feet of building floor area.

Conclusion of Law: Based on the above findings, the proposed use will provide adequate off-street parking (MSB 17.61.110(B)(5)).

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(6) the effectiveness of any measures proposed by the applicant or any other person to reduce any negative effect upon adjacent properties by property line buffers and roadway buffers, berms, landscaping, clustering with other similar uses, and where surrounding area is predominantly residential in character, whether the site and building design features contribute to the residential character of surrounding development; and

Findings of Fact:

1. The subject parcel is approximately 3.01 acres in size.
2. Land uses to the east include a private airstrip, residential, and vacant land on large parcels ranging from 10 to 51 acres. South and further west of the subject lot is a partially developed 160-lot residential master plan development, with a community water system serving mostly one-half-acre lots. The adjacent lot to the north and west is a 12-acre parcel, largely cleared of vegetation that includes a residence and commercial uses. Further to the north are residential and commercial lots ranging in size from 0.8 to seven acres.
3. There is a mixture of industrial, residential, and commercial uses with frontage on south Trunk Road.
4. The one-story market is flat-roofed with lowered shed roof overhangs on three sides, covered in red lap siding on the upper portion, and buff colored T1-11 below.
5. According to the application material, the structure is approximately 147.5 feet from the South Trunk Road right-of-way, 294 feet from the south property line, 40 feet from the west property line, and 98.3 feet from the north property line.
6. The applicant constructed a six-foot tall chain-link fence with privacy slats along the south property boundary, and plans for landscaping with trees along the south and east sides of the property.
7. According to the application material, signs will be limited to a 36-foot tall lighted sign near the northern driveway, on the fuel canopy, and on the building itself.
8. The applicant provided an exterior lighting design plan with downward directed and shielded fixtures to mitigate light spillage onto nearby properties.
9. The lighting design includes exterior lights mounted under the overhangs of the store, downward-directed lights in the fuel canopy, and 25-foot tall pole lights focusing on the driveways and various ancillary uses of the site.

Conclusions of Law: Based on the above findings, measures will be in place to reduce any negative effect upon adjacent properties (MSB 17.61.110(B)(6)).

(7) whether the proposed site plans and plan of operations, together with any amendments thereto, are consistent with the purposes of this chapter.

Findings of Fact:

1. All of the required site plans and operational information have been provided by the applicant.

2. The applicant is actively working with the Permit Center and Public Works Engineer to finalize the driveway permits.

Discussion: Staff recommends a condition which requires the applicant to obtain approved driveway permits for both driveways onto the site.

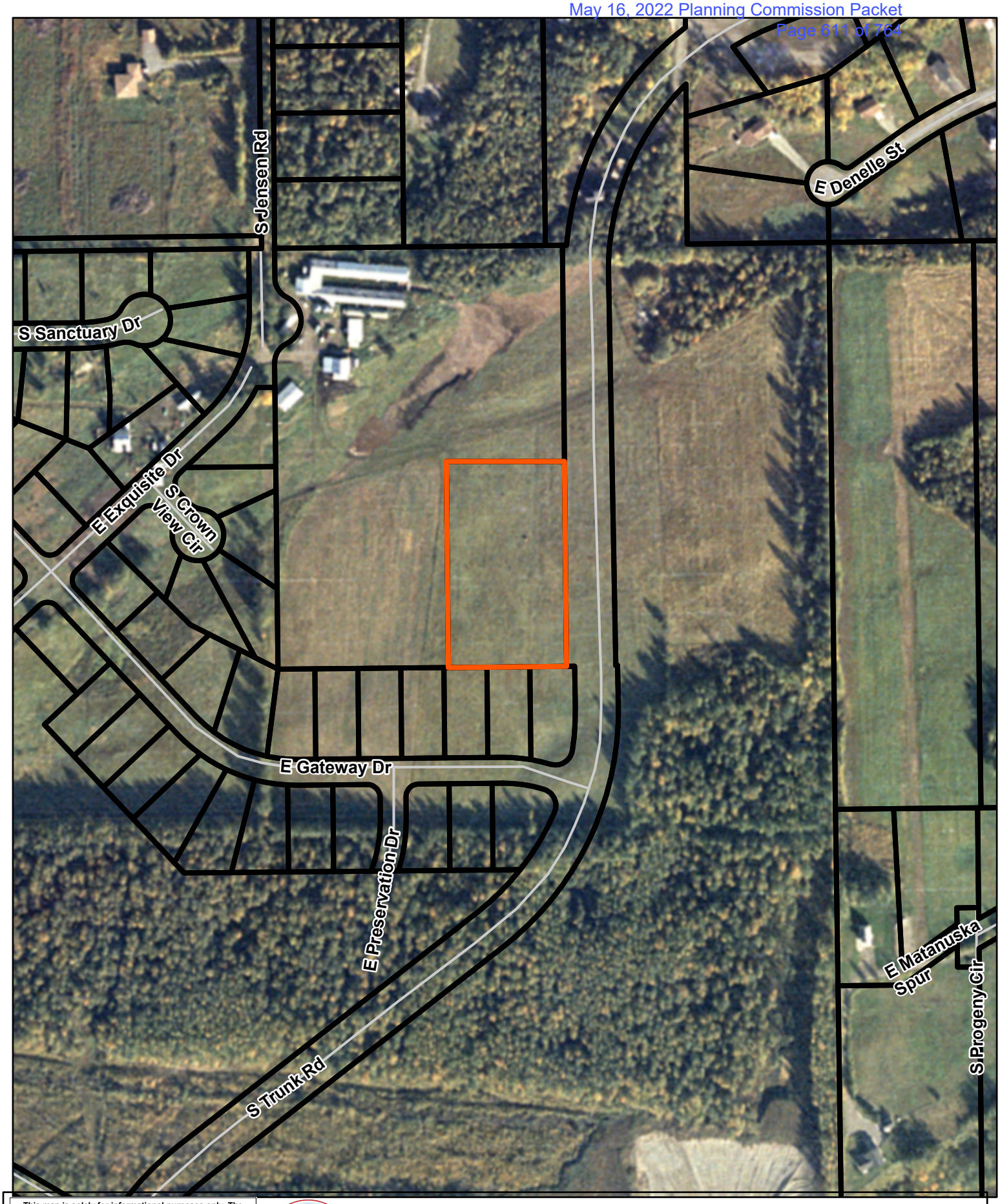
Conclusions of Law: The application material, with conditions, has met all of the purposes of this chapter (MSB 17.61.110(B)(7)).

STAFF RECOMMENDATIONS

Staff recommends approval of the Core Area Conditional Use Permit to operate a convenience market with gas pumps and an alcoholic beverage package store at 3068 South Trunk Road (Tax ID# 8150000L001B). The proposed use meets all applicable standards of MSB 17.61. Staff also recommends the following conditions:

1. The operation shall comply with all other applicable federal, state, and local regulations.
2. All aspects of the operation shall comply with the description detailed in the application material and with the conditions of this permit. An amendment to the Conditional Use Permit shall be required prior to any expansion of the conditional use.
3. The operation shall comply with the maximum permissible sound level limits allowed, per the requirements of MSB 17.61.080 – Noise Standards and MSB 8.52 – Noise, Amplified Sound and Vibration.
4. Prior to operation, obtain approved driveway permits for both driveway onto the site.
5. Prior to operating, a copy of the approval issued by ADEC for the on-site septic system shall be provided to the MSB Development Services Division.
6. Provide a copy of the approved State of Alaska package store license #1241, within 30 days of its issuance.

If the Planning Commission chooses to deny this permit, findings for denial must be prepared by the Commission.



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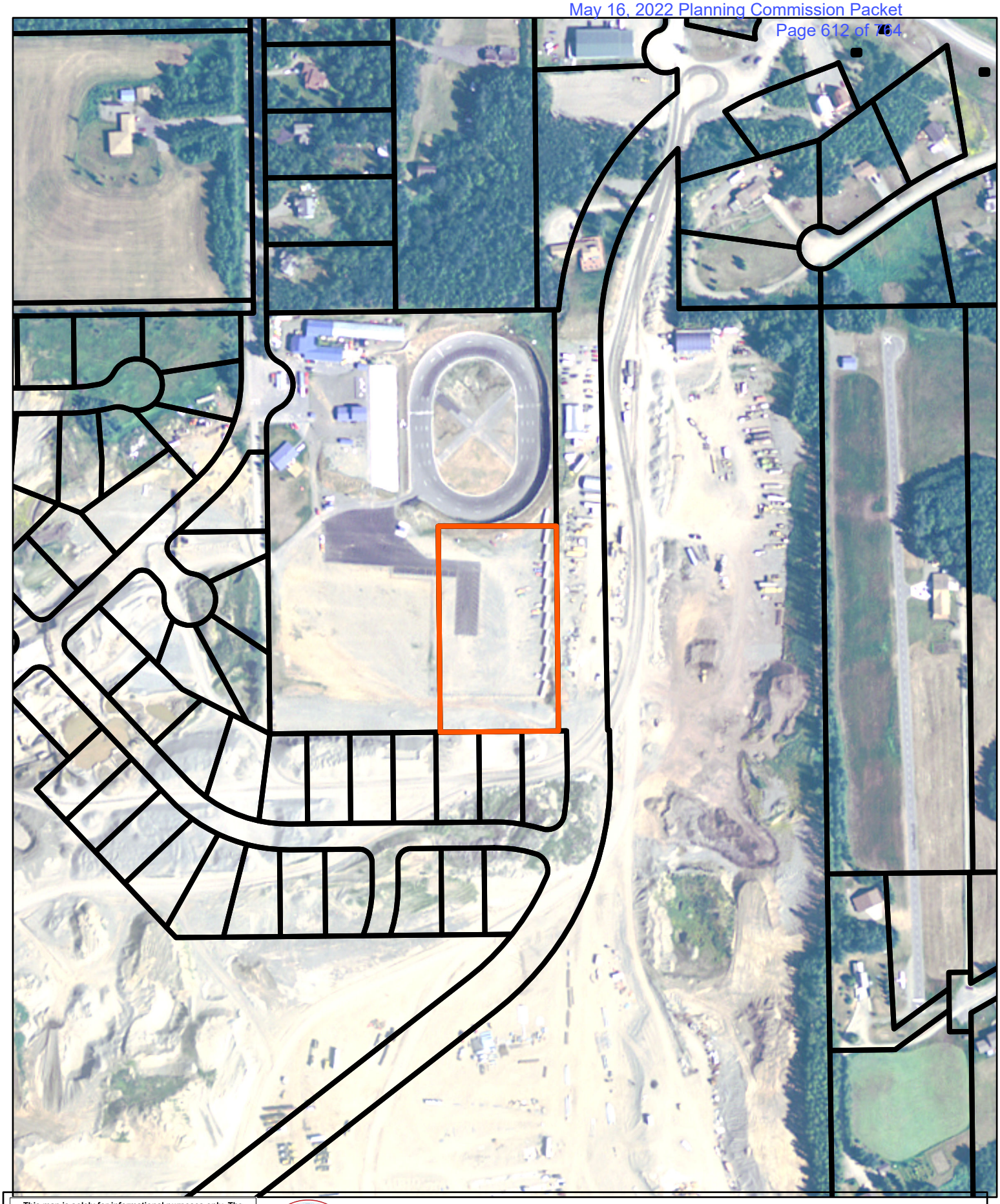
1985 Aerial for 8150000L001B

0 200 400 Feet

N

MSB Development Services Division: 4/19/2022



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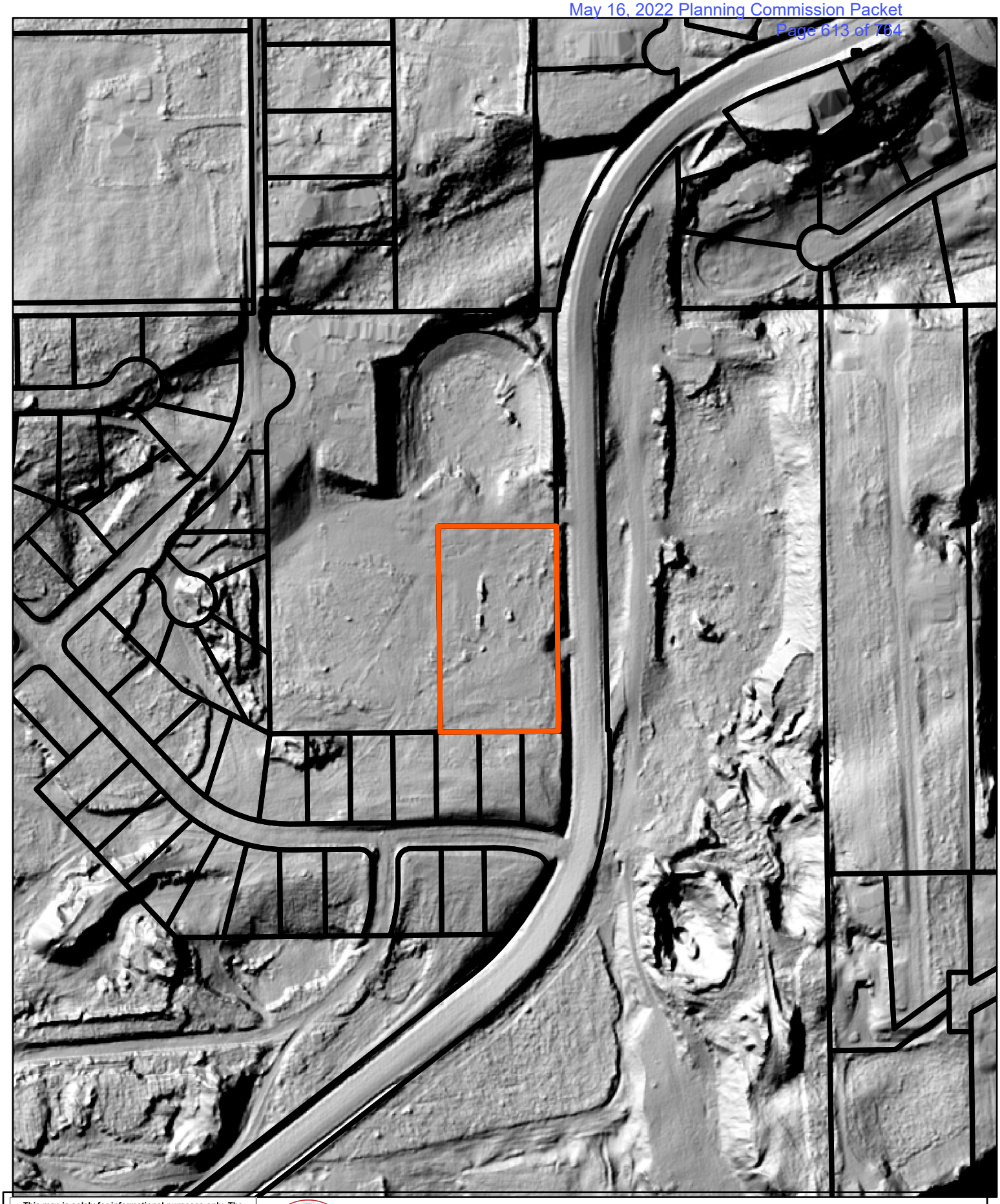
2004 Aerial for 8150000L001B

0 200 400 Feet

N

MSB Development Services Division: 4/19/2022



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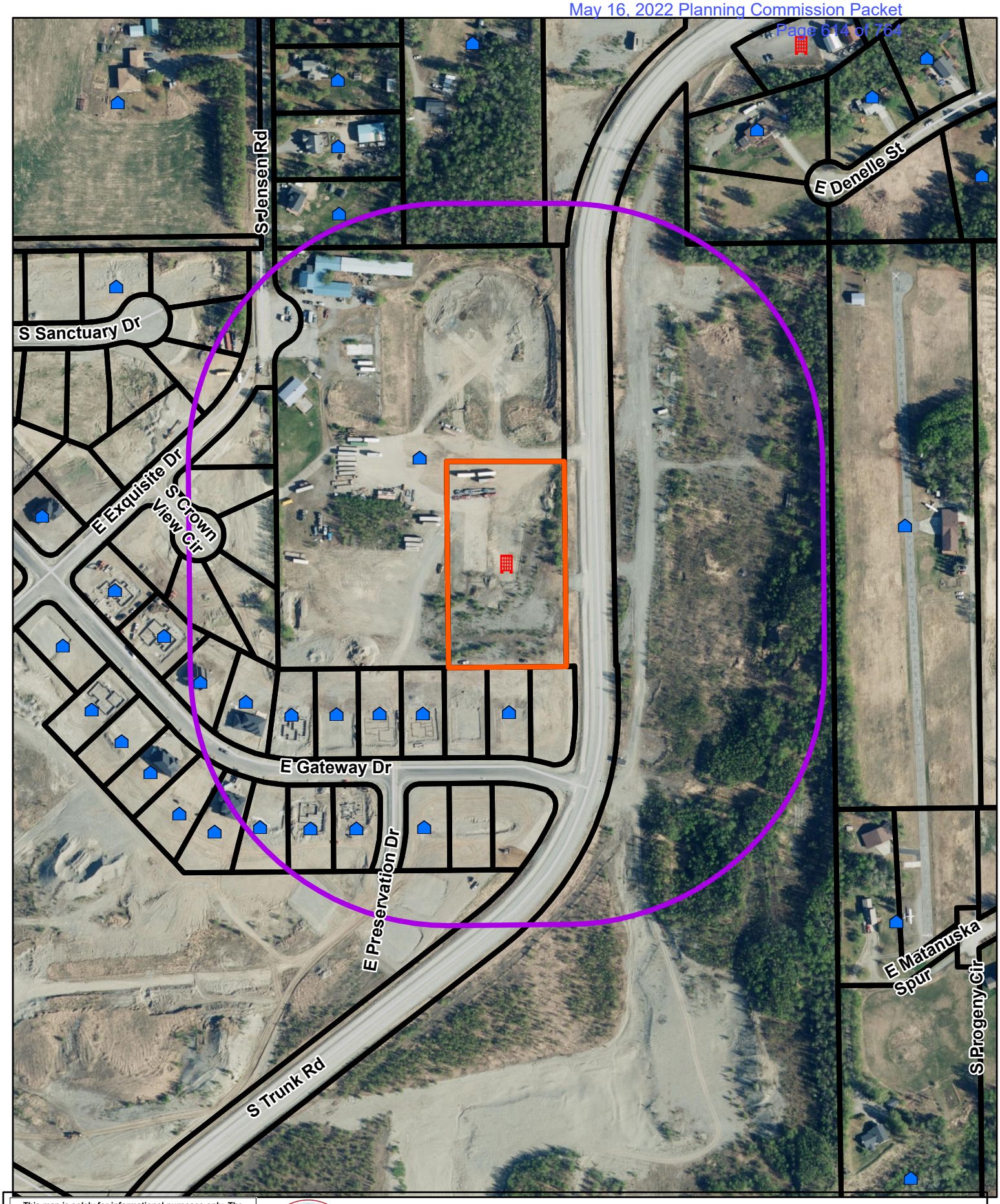
2019 Hillshade for 8150000L001B

0 200 400 Feet

N

MSB Development Services Division: 4/19/2022



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Land Use Map for 8150000L001B

0 200 400 Feet

N

MSB Development Services Division: 4/19/2022

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Site Plan Overlay for 8150000L001B

0 50 100 Feet

MSB Development Services Division: 4/20/2022

Peggy Horton

From: Peggy Horton
Sent: Thursday, March 10, 2022 9:58 AM
To: Allen Kemplen AICP-CTP - DOT&PF (allen.kemplen@alaska.gov); Melanie Nichols (Melanie.nichols@alaska.gov); Kyler Hylton (kyler.hylton@alaska.gov); George C Horton (george.horton@alaska.gov); James Walker (james.walker2@alaska.gov); 'oran.woolley@alaska.gov'; mearow@matanuska.com; 'row@enstarnaturalgas.com'; 'row@mtasolutions.com'; GCI ROW (ospdesign@gci.com); Fire Code; Jill Irsik; Eric Phillips; regpagemaster@usace.army.mil; Terry Dolan; Jamie Taylor; Brad Sworts; Elaine Flagg; Charlyn Spannagel; Alex Strawn; Planning; Fred Wagner; Permit Center; Jason Ortiz; Theresa Taranto; Andy Dean; John Aschenbrenner; Dolores McKee; 'gatewaycommunitycouncil@gmail.com'; 'kcelliot@alaska.edu'; 'opt.tim.us.breeden@gmail.com'; 'antiquetuck@gmail.com'; 'lisah_ak@hotmail.com'; 'markmobley@ymail.com'; davemtp@mtaonline.net; 'lszipszky@palmerpolice.com'; 'susansteele550@gmail.com'; 'blushingmoose@yahoo.com'
Subject: Request for Review and Comments: Valley Country Store #4 Core Area CUP and Package Store CUP

Good Morning,

APPLICANT: Matt Gittlein, for KG Enterprises, LLC

LOCATION: Tax ID #8125000L001B; within Township 17 North, Range 1 East, Section 16, Seward Meridian RSA: 9

A conditional use permit application under MSB 17.61, Core Area, ***and*** a conditional use permit application under MSB 17.70, Regulation of Alcoholic Beverage Uses, for the operation of a convenience market with gas pumps and alcoholic beverage package store at 3068 South Trunk Road. The Planning Commission will conduct a public hearing on these two requests on ***May 16, 2022***.

Application materials may be viewed online at www.matsugov.us by clicking on 'All Public Notices & Announcements'. A direct link to the application material is here: Matanuska-Susitna Borough - Public Hearing Notice for Conditional Use Permits for a Convenience Market with gas pumps and alcohol package store (matsugov.us)

Comments are due on or before April 15, 2022 and will be included in the Planning Commission packet for the Commissioner's review and information. Please be advised that comments received from the public after that date will not be included in the staff report to the Planning Commission. Thank you for your review.

Regards,

Peggy Horton
Matanuska-Susitna Borough
Development Services Division
Planner II
907-861-7862

UNITED STATES POSTAL SERVICE®

Certificate of Bulk Mailing — Domestic

Fee for Certificate

Up to 1,000 pieces (1 certificate for total number)

For each additional 1,000 pieces, or fraction thereof

Duplicate Copy ☐

Use Current Price List (Notice 123)

Number of Identical Weight Pieces	Class of Mail	Postage for Each Mailpiece Paid	Number of Pieces to the Pound
19	1st	☐ Verified	45

Total Number of Pounds	Total Postage Paid for Mailpieces	Fee Paid
6.302	10.07	9.35

Mailed For	Mailed By
Dev Services	Nikki

Postmaster's Certification

It is hereby certified that the number of mailpieces presented and the associated postage and fee were verified. This certificate does not provide evidence that a piece was mailed to a particular address.

Lisa Delong
(Postmaster or Designee)

Postage: Mailers must affix meter, PC Postage®, or (uncanceled) postage stamps here in payment of total fee due.

US POSTAGE™ PITNEY BOWES
ZIP 99645 $ 009.35⁰
02 4W
0000368428 MAR 16 2022

Acceptance employee must cancel
affixed (by round-date) at the time o

If payment of total fee due is being paid by Permit Imprint, include the *PostalOne!*® Transaction Number here: _____

PALMER AK 99645
MAR 16 2022
USPS

PS Form **3606-D,** January 2016 PSN 7530-17-000-5548

See Reverse for Instructions

58049B07L003 1
ALASKA CUSTOM HOMEBUILDERS LLC
1735 S CREEKSIDE CIR
WASILLA AK 99654-8293

58049B06L002 2
AMADOR SALINAS PORFIRIO A
20826 TRAILHEAD AVE
EAGLE RIVER AK 99577

58172B06L017 3
ARCTIC DEVCO INC
PO BOX 3489
PALMER, AK 99645-3489

58049B06L009 4
BARTELLI ALAN T & BRENDA J
6829 E GATEWAY DR
PALMER AK 99645-1890

58049B05L001 5
BENTON THADDEUS C & JAMIE A
6613 FAIRWEATHER DR
ANCHORAGE AK 99518

56083000T002 6
CROSS COUNTRY CHURCH
PO BOX 874376
WASILLA AK 99687

58049B05L007 7
DAVIDS INVESTMENTS LLC
PO BOX 877021
WASILLA AK 99687

58049B06L007 8
DROBENKO INVESTMENTS LLC
3437 S BARN GABLE LOOP
WASILLA AK 99654-0020

58049B05L009 9
ELISHA CUSTOM HOMES LLC
PMB 259
189 E NELSON AVE
WASILLA AK 99654-6462

58150000L001B 10
KG ENTERPRISE
4891 E STONEY HOLLOW DR
WASILLA AK 99654

58049B06L011 11
LEONSON DESIGN LLC
1660 W PATRICIA AVE
WASILLA AK 99654

58150000L001A 12
LONG INVESTMENTS LLC
220 W GERONDALE CIR
WASILLA AK 99654

58049B06L008 13
NAY NASRUK & ELIA
PO BOX 876
KOTZEBUE AK 99752-0876

58049B06L004 14
ROYAL CASTLE MASONRY LLC
4400 E PAMELA DR
WASILLA AK 99654

52617000L00A5 15
SHUPE LANNY R & KIMBERLY M
2091 S JENSEN RD
PALMER AK 99645

58049B05L004 16
SINGLETON WILLIAM R & BROOKE L
PO BOX 875782
WASILLA AK 99687-5782

52539B01L009 17
STOCKER JOSEPH D & STOCKER DOUGLAS W
STOCKER ANASTASIA M
% DOUGLAS W STOCKER
PO BOX 877005
WASILLA AK 99687-7005

58049B05L006 18
WICKHAM TRACY L & EMILY M
STE B PMB 906
2521 E MOUNTAIN VILLAGE DR
WASILLA AK 99654

tara0609
~~18~~ 19
3/15/2022 10:21:33 AM

Gateway Community Council 19
PO Box 578
Palmer, AK 99645

Matanuska-Susitna Borough
Development Services Division
350 E. Dahlia Avenue
Palmer, Alaska 99645

tara0609
~~18~~ 19
3/15/2022 10:21:33 AM

The Matanuska-Susitna Borough Planning Commission will consider the following:

Matt Gittlein, of KG Enterprises, LLC, filed a conditional use permit application under MSB 17.61, Core Area, and a conditional use permit application under MSB 17.70, Regulation of Alcoholic Beverage Uses, for the operation of a convenience market with gas pumps and alcoholic beverage package store at 3068 South Trunk Road, Tax ID #8150000L001B; within Township 17 North, Range 1 East, Section 16, Seward Meridian.

The Matanuska-Susitna Borough Planning Commission will conduct a public hearing concerning the applications on ***Monday, May 16, 2022, at 6:00 p.m.*** in the Borough Assembly Chambers located at 350 E. Dahlia Avenue in Palmer. This may be the only presentation of these items before the Planning Commission and you are invited to attend. Planning Commission members may not receive or engage in ex-parte contact with the applicant, other interested parties in the applications, or members of the public concerning the applications or issues presented in the applications.

Application material may be viewed online at www.matsugov.us by clicking on "All Public Notices & Announcements." For additional information, you may contact Peggy Horton, Planner II, by phone: 907-861-7862. Provide written comments by e-mail to peggy.horton@matsugov.us, or by mail to MSB Development Services Division, 350 E. Dahlia Avenue, Palmer, AK 99645.

The public may provide verbal testimony in person at the meeting or telephonically by calling 1-855-290-3803. In order to be eligible to file an appeal from a decision of the Planning Commission, a person must be designated an "interested party". See MSB 15.39.010 for the definition of "interested party". The procedures governing appeals to the Board of Adjustment and Appeals are contained in MSB 15.39.010-250, which is available on the Borough home page: www.matsugov.us, in the Borough Clerk's office, and at various libraries within the borough.

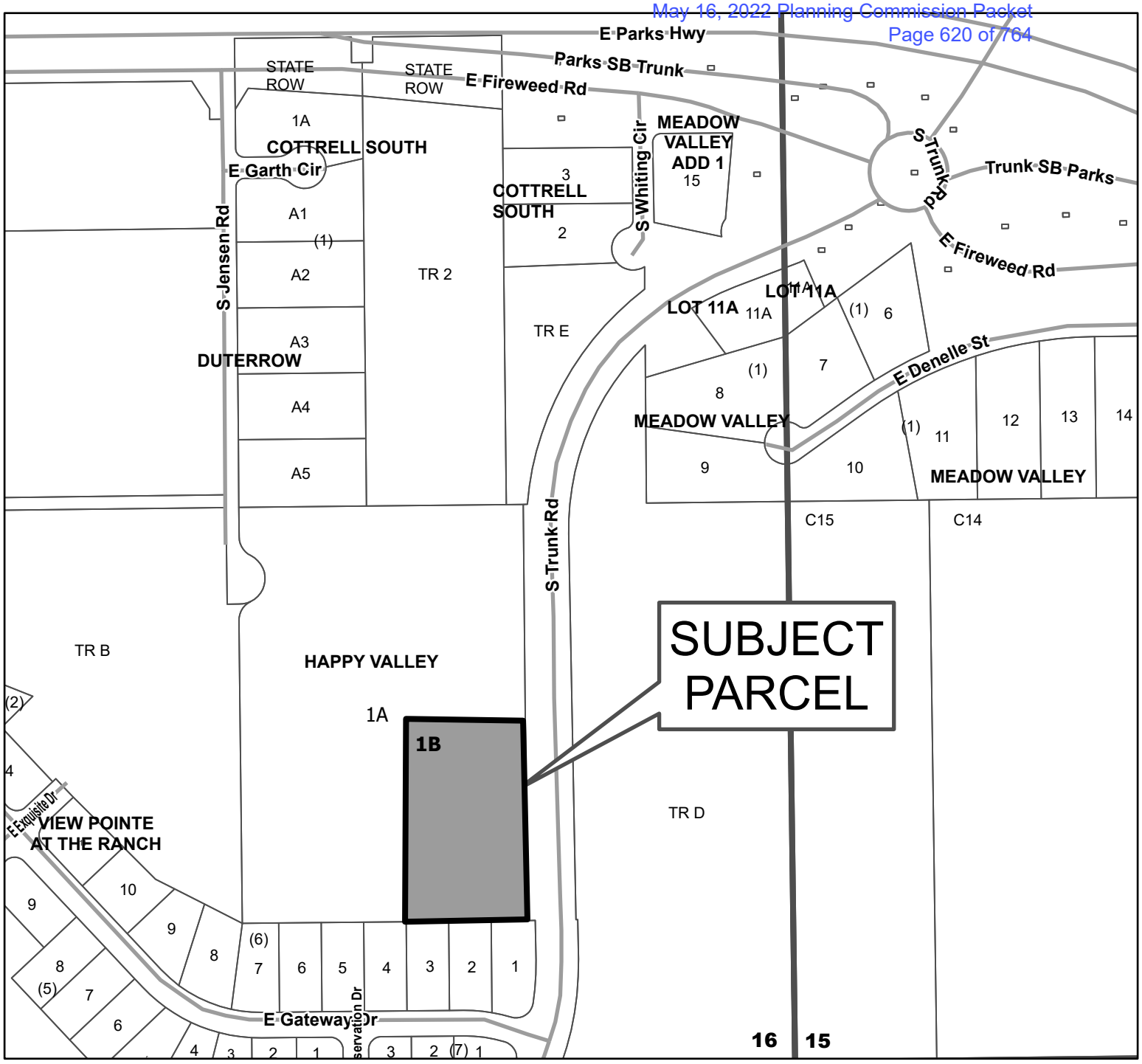
Comments are due on or before ***April 15, 2022***, and will be included in the Planning Commission packet. Please be advised that comments received from the public after that date will not be included in the staff report, but will be provided to the Commission at the meeting.

Name:_____ ***Mailing Address:***_____

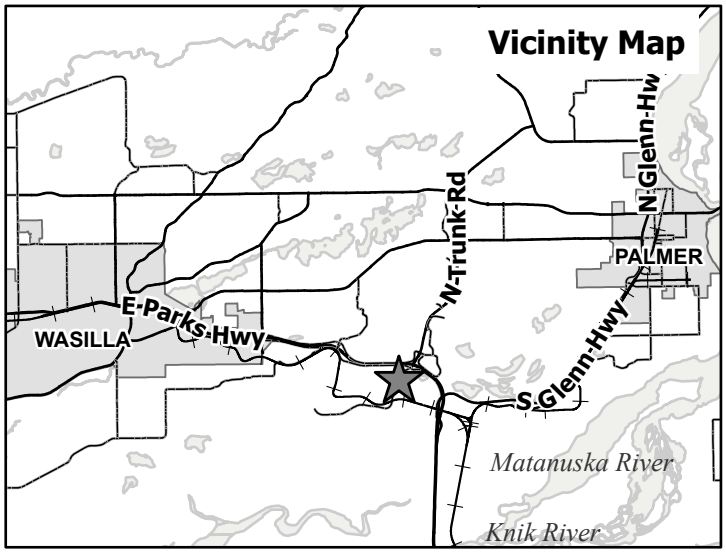
Location/Legal Description of your property:_____

Comments:_____

Note: Vicinity Map Located on Reverse Side



8150000L001B



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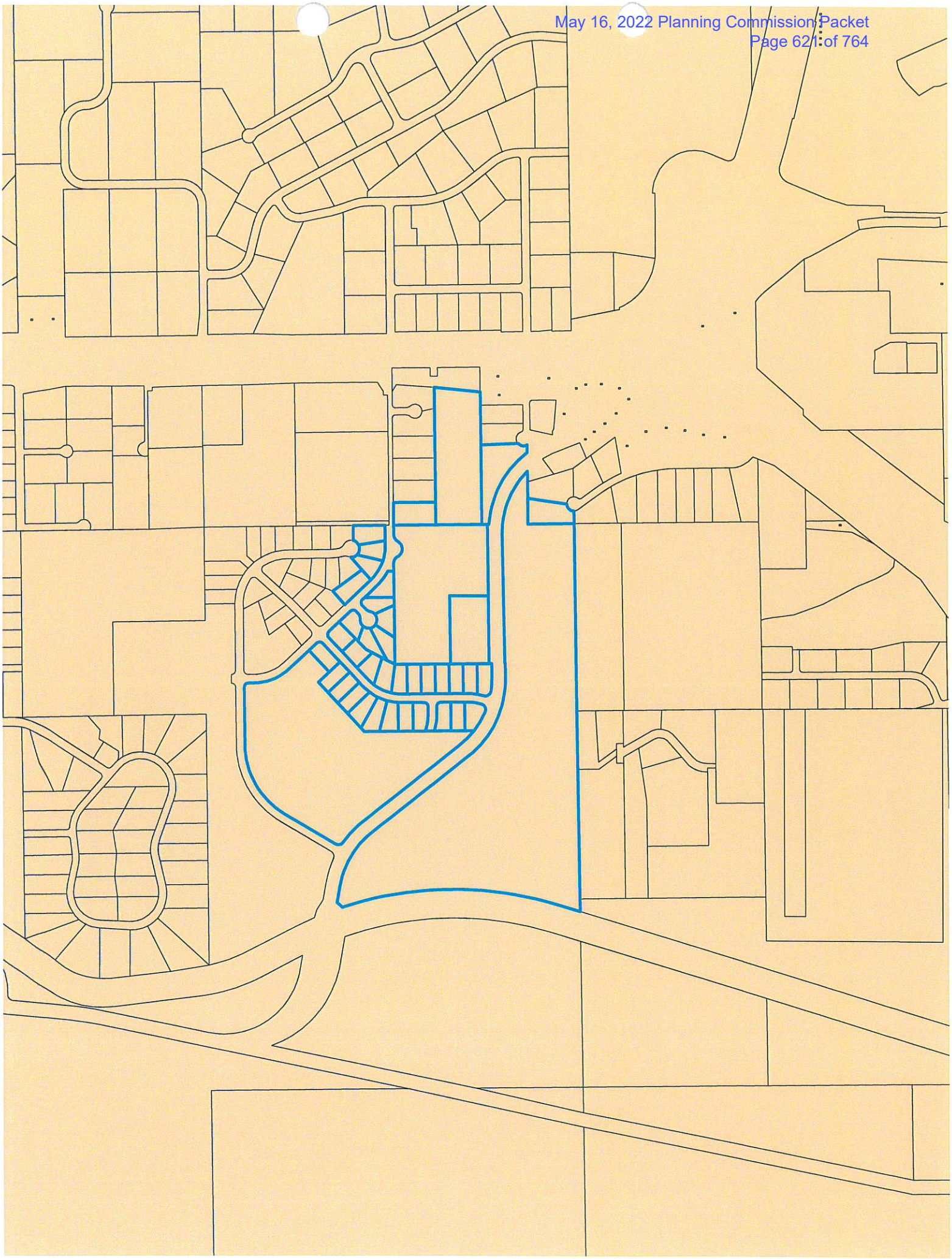
MSB Information Technology/GIS
August 17, 2021

0 1,000 Feet



PUBLIC HEARING

Matt Gittlein, of KG Enterprises, LLC, filed a conditional use permit application under MSB 17.61, Core Area, and a conditional use permit application under MSB 17.70, Regulation of Alcoholic Beverage Uses, for the operation of a convenience market with gas pumps and alcoholic beverage package store at 3068 South Trunk Road, Tax ID #8150000L001B; within Township 17 North, Range 1 East, Section 16, Seward Meridian.

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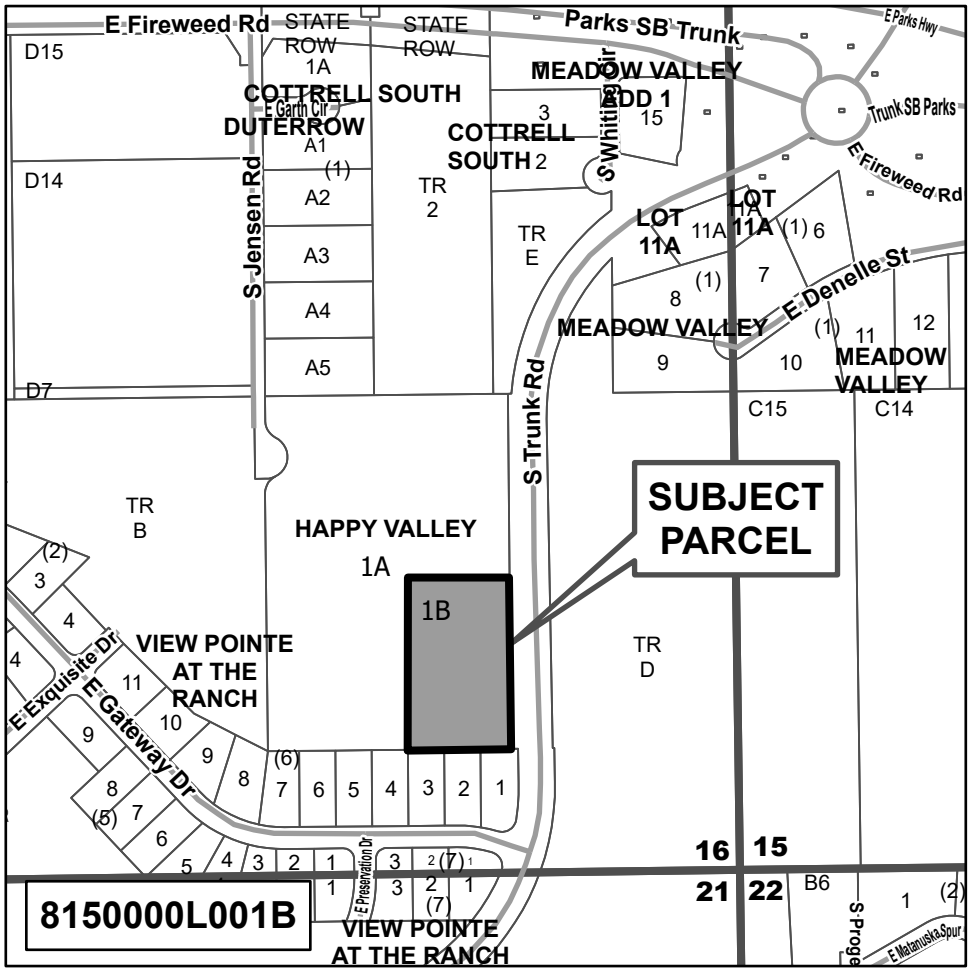
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STATE ROW
STATE ROW
Parks SB Trunk
E Parks Hwy
Trunk SB Parks
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COTTRELL SOUTH DUTERROW
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Peggy Horton

From: Ben Borg <ben.borg@frontiersman.com>
Sent: Wednesday, March 2, 2022 11:18 AM
To: Peggy Horton
Cc: Melissa Iverson; Debra Wetherhorn; Jill Irsik
Subject: Re: 3.4 MSB Page 2

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Thank you, Peggy!

On Wed, Mar 2, 2022 at 11:17 AM Peggy Horton <Peggy.Horton@matsugov.us> wrote:

> The public hearing notice looks good to me, thanks Ben.
>
> Peggy Horton
>
> Matanuska-Susitna Borough
>
> Development Services Division
>
> Planner II
>
> 907-861-7862

From: Ben Borg <ben.borg@frontiersman.com>
Sent: Wednesday, March 2, 2022 10:27 AM
To: Melissa Iverson <Melissa.Iverson@matsugov.us>; Debra Wetherhorn <Debra.Wetherhorn@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Peggy Horton <Peggy.Horton@matsugov.us>
Subject: 3.4 MSB Page 2

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]

Attached is a proof of the second page. If you did not find your ad on page 1, it should be here.

--

Ben Borg
907-987-2059 cell (call or text)

907-352-2270 office

--
Ben Borg
907-987-2059 cell (call or text)

Public Hearing Notice for Conditional Use Permits for a Convenience Market with gas pumps and alcohol package store

Matt Gittlein of KG Enterprises, LLC, filed a conditional use permit application under MSB 17.61, Core Area, and a conditional use permit application under MSB 17.70, Regulation of Alcoholic Beverage Uses, for the operation of a convenience market with gas pumps and alcoholic beverage package store at 3068 South Trunk Road, Tax ID #8150000L001B; within Township 17 North, Range 1 East, Section 16, Seward Meridian.

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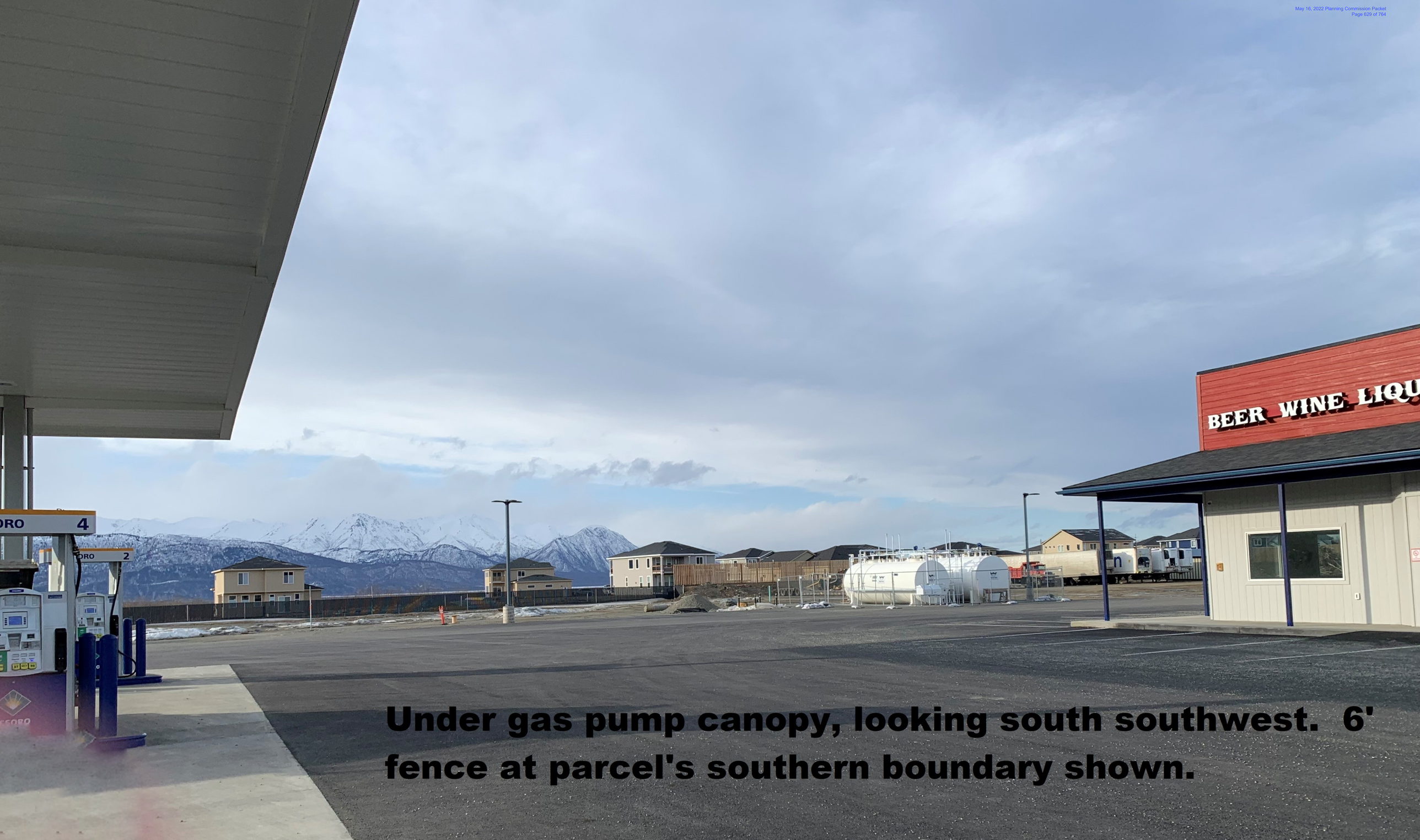
MSB Web Public Notice

Photographs taken

during the April 1, 2022 site visit

800 feet North of Valley Country Store #4
looking west

800 feet North of Valley Country Store #4, looking southeast



Under gas pump canopy, looking south southwest. 6' fence at parcel's southern boundary shown.

On asphalt, looking north onto Lot 1A. South Trunk Road on right.

At northeast corner of store, looking northwest

Looking north northeast at sign, lighting, and South Trunk Road

On south side of store, looking at 6' fence on south property line

Package Store Interior

Package Store Interior

Convenience Store Interior

Package store interior

At west end of southern driveway, looking east

On southern driveway, looking north

At southern driveway, looking northwest

At southern driveway, looking west

At east end of southern driveway, looking southeast

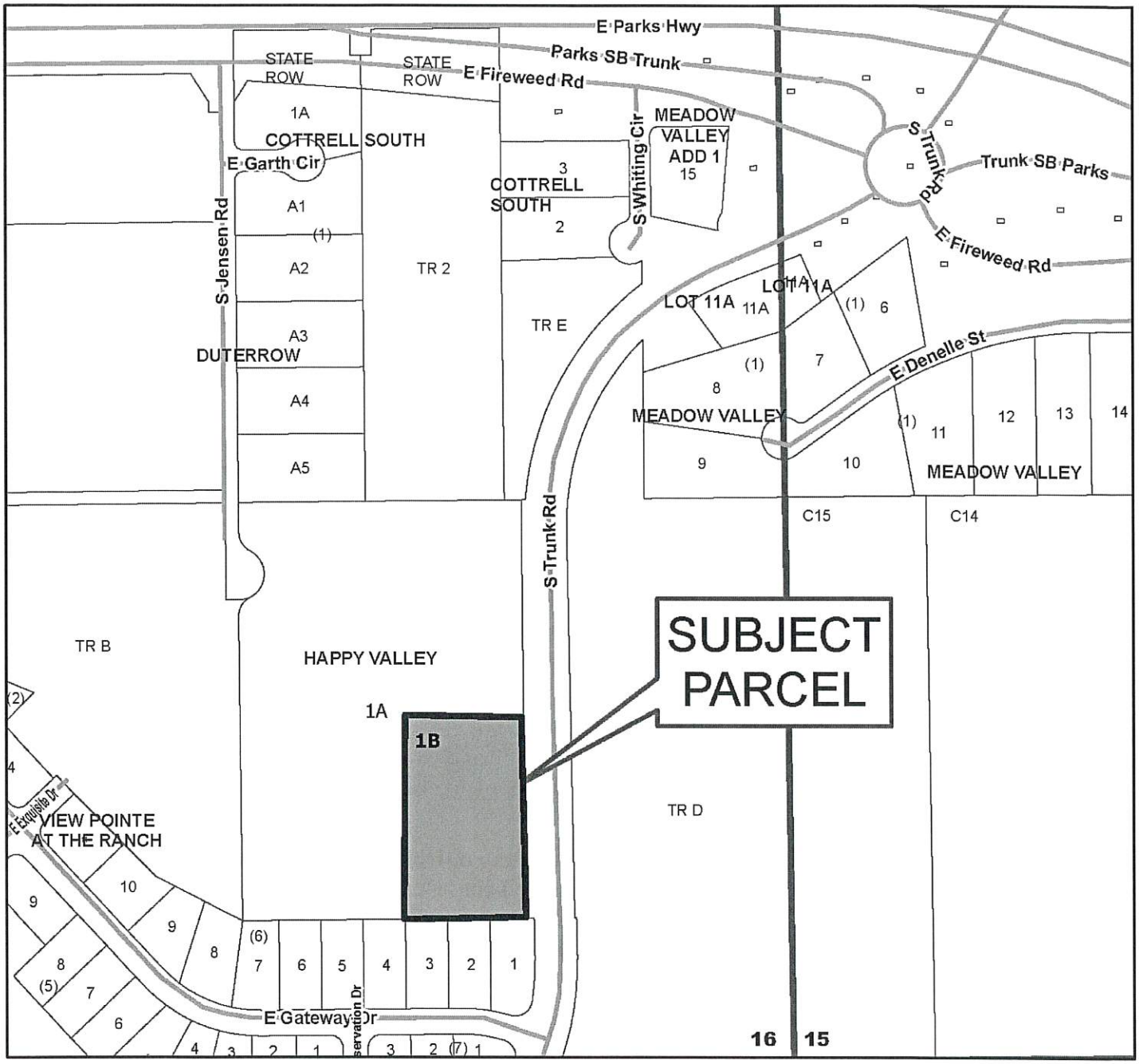
At southern driveway, looking north

At southern driveway, looking south

At East Gateway Drive, looking north at privacy fence and Gas Station Sign

Looking south along South Trunk Road frontage

VICINITY MAP



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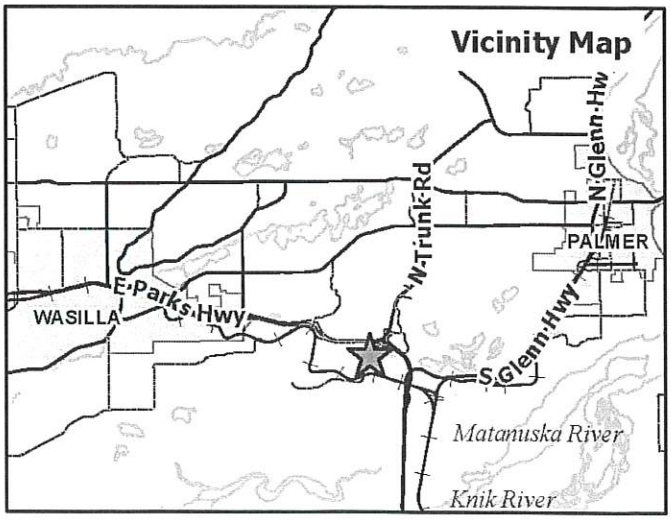

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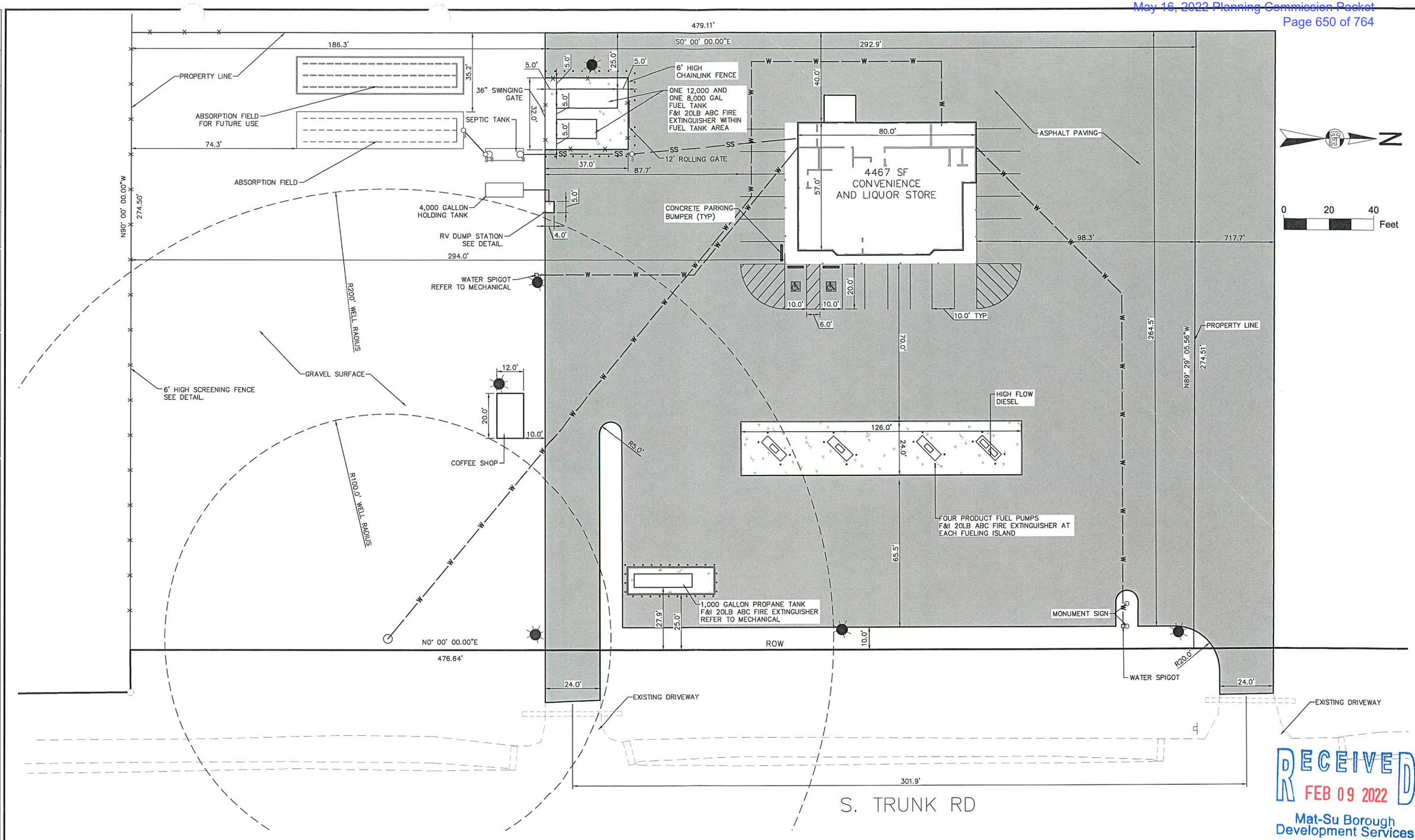
MSB Information Technology/GIS
August 17, 2021

0 1,000 Feet

SITE PLAN



NOTES:

MAINTAIN A 50' BUFFER FREE OF BRUSH, DEBRIS, AND OTHER COMBUSTIBLE MATERIALS AROUND PROPANE AND FUEL STORAGE AREAS.

RECEIVED
FEB 09 2022
Mat-Su Borough
Development Services

The Boutet Company, Inc.
601 E. 57th Place #102
Anchorage, AK. 99518
Ph. 907-522-6776
License No. AECC957
CONSULTANT

SEAL
STATE OF ALASKA
40TH
TIMOTHY J. ALLEY
CE 14368
05/10/21
REGISTERED PROFESSIONAL ENGINEER

VALLEY COUNTRY STORE 4
WASILLA, ALASKA

CIVIL SITE & UTILITY IMPROVEMENTS

VALLEY COUNTRY STORE 4

HORZ SCALE: 1"=40'
VERT SCALE: N/A
DATE: 05/10/2021
SHEET C7

DRAFTED: HJH
CHECKED: TJA
DESIGNED: HJH
LAYOUT: 5/10/2021
DATE/TIME:
FILE: W:\WASILLAFILES\GITTLEINS\VALLEY COUNTRY STORE 4\TBC ACAD\XREF\VCS-4 TITLE BLOCK.DWG

APPLICATION MATERIAL

Matanuska-Susitna Borough
Permit Center
NOV 03 2021
Received
PAID
Ck# 33813

MATANUSKA-SUSITNA BOROUGH

Planning and Land Use Department
Development Services Division
350 East Dahlia Avenue • Palmer, AK 99645
Phone (907) 861-7822 • Fax (907) 861-8158
Email: permitcenter@matsugov.us

APPLICATION FOR A CORE AREA CONDITIONAL USE PERMIT – MSB 17.61

Carefully read instructions and applicable borough code. Fill out forms completely. Attach information as needed. Incomplete applications will not be processed.

Application fee must be attached:
_____ **$1,500** for **Core Area Conditional Use Permit**

*Prior to the public hearing, the applicant must also pay the mailing and advertising fees associated with the application. Applicants will be provided with a statement of advertising and mailing charges. Payment must be made **prior** to the application presentation before the Borough Planning Commission.*

Subject Property Township: _____, Range: _____, Section: _____, Meridian____
MSB Tax Account # 8150000L001B 4928000L001
SUBDIVISION: Happy Valley BLOCK(S): _____, LOT(S): 1B
STREET ADDRESS: 3068 S Trunk Rd Palmer, AK 99645
(US Survey, Aliquot Part, Lat. /Long. etc) _____

Ownership A *written authorization by the owner must be attached for an agent or contact person, if the owner is using one for the application.* Is authorization attached? o **Yes** o **No** o **N/A**

Name of Property Owner
KG Enterprises, LLC
Address: 4891 E Stoney Hollow Dr.
Wasilla AK 99654
Phne: Hm _____ Fax _____
Wk _____ Cell 841-5666
E-mail mattgittlein59@hotmail.com

Name of Agent/ Contact for application
Matt Gittlein
Address: 4891 E Stoney Hollow Dr.
Wasilla, AK 99654
Phne: Hm _____ Fax _____
Wk _____ Cell 841-5666
E-mail Mattgittlein59@hotmail.com

Required Application Information	Attached
1. Written detailed description of the proposed project	✓
2. Copy of the local covenants	✓
3. Copies of any current report on hazardous substances or hazardous waste prepared for submittal to state or federal agencies, and expected types and quantities of combustible fiber to be stored or combustible dust to be produced	✓

Nonconforming Uses and Structures	Yes	No	Attached
1. Is this an expansion of a pre-existing legal nonconforming use or structure?		X	
2. If yes, has the nonconforming use been discontinued for more than 12 consecutive months since January 1, 2003?		N/A	
3. Describe the proposed expansion/increase of the pre-existing legal nonconforming use.		N/A	
4. To establish pre-existing legal nonconforming rights for a use, complete this form (including attachments). Also include a copy of the 2003 Business Licenses for the use and evidence of the continued existence of the use at this site since January 1, 2003?		N/A	

SITE PLAN – Attach a detailed site plan, drawn to scale, showing the following information:	Attached
1. Setback distances of structure(s) from the lot lines, rights-of-way, and waterbodies.	
2. Adjacent streets, pubic easements and rights-of-way	
3. Existing and proposed buildings and structures (including tanks and chemical processing equipment)	
4. Access points	
5. Buffering – Visual and Sound	
6. Vehicular and pedestrian circulation patterns	
7. Location and dimensions of parking areas to be provided, including individual parking spaces	
8. Loading areas	
9. Storage and processing areas	
10. Lighting	
11. Topography	
12. Drainage management plan	
13. Sources of noise	
14. Fences	
15. Berms	
16. Landscaping	
17. Signage	
18. Scale and North Arrow	

DIMENSIONAL DRAWING(S) – Attach a dimensional drawing of the horizontal views of the structure(s), drawn to scale, showing the following information: ***(*If more than one structure is proposed, attach requested information about each.)***	**Attached**
1. Dimensions of all structures	✓
2. Appearance	✓
3. Modifications	✓
4. Identification of use areas with locations and dimensions	✓
5. Delineate areas of expansion or change in use	✓
6. Other details sufficient to adjudicate the application	✓
7. Scale and North Arrow	✓

NOISE	**Yes**	**No**	**Attached**
1. Will the use generate noise beyond the project site lot lines exceeding Maximum Permissible sound levels shown in the Table below?		X	
2. Are **any** of the sounds exceeding permissible levels generated by source(s) that are exempt from regulations under MSB 17.61.080(C)? *If yes, attach a detailed description of source and levels and days and times of day the levels will be exceeded by* ***exempt*** *generators.*		X	
3. Are **all** of the sounds exceeding permissible levels generated by source(s) that are exempt from regulations under MSB 17.61.080(C)? *If no, attach a detailed description of source and levels and days and times of day the levels will be exceeded by* ***regulated*** *generators.*		X	

Maximum Permissible A-weighted Sound levels (MSB 17.61.080)

Land Use of Sound Source	Land Use of Adjacent Property				
	Residential			Commercial	Industrial
	Day	Night			
	Monday through Friday 7 a.m. to 10 p.m. or 9 a.m. to 10 p.m. on weekends	Monday through Friday 10 p.m. to 7 a.m.	Weekend 10 p.m. to 9 a.m.		
Commercial	60dB(A)	50dB(A)	50dB(A)	70dB(A)	75dB(A)
Industrial	60dB(A)	50dB(A)	50dB(A)	70dB(A)	80dB(A)

TRAFFIC GENERATION	Yes	No	Attached
1. Is the Traffic Impact Worksheet attached?	X		
2. Will the use generate traffic in excess of 100 vehicles during the morning or afternoon peak hour? *If yes, attach a detailed description of the type of vehicles and schedule.*			TIA ATTACHED
3. Will the use generate a total of more than 750 vehicles per day (12 a.m. to 12 p.m.)? *If yes, attach a detailed description of the type of vehicles and schedule.*			
4. If the trip generation rates estimated on the Traffic Impact Worksheet exceed the volumes described in MSB 17.61.020(A)(2) a Traffic Impact Analysis (TIA) and management plan for traffic, parking, and loading, demonstrating compliance with MSB 17.61.090 must be attached with the application.			

HAZARDOUS MATERIAL	Yes	No	Attached
1. Will the use process, manufacture, or store hazardous substances over threshold established by federal or state community right-of-know laws and regulations (40 CFR 370; AS 29.35.500)?		X	
2. Will the use at any time generate combustible dust in sufficient quantity to produce an explosion or combustion hazard?		X	
3. Will the use store or handle combustible fiber in quantities greater than 100 cubic feet (2.8 m^3)?		X	
4. Will the use generate or manage more than 2,200 pounds of hazardous waste per month as defined by federal regulations (40 CFR 261, 262)? *If yes, attach a detailed description of the type, quantity, schedule, and use of the hazardous material demonstrating compliance with MSB 17.61.090.*		X	
5. Are **any** of the Hazardous Materials exceeding the regulated thresholds originating from use(s) that are exempt from regulations under MSB 17.61.100(B) and (C)? *If yes, attach a detailed description of the type, quantity, schedule, and use of the hazardous material, and the specific code that authorizes the exemption(s).*		X	
6. Are **all** of the Hazardous Materials exceeding the regulated thresholds originating from use(s) that are exempt from regulations under MSB 17.61.100(B) and (C)?			N/A

DRAINAGE AND RUNOFF	Yes	No	Attached
Will the use generate contaminated water runoff or other discharges that are likely to violate state water quality standards or negatively impact groundwater or surface water quality beyond adjacent property lines? *If yes, attach a detailed description of type, quantity, source, and management plan to prevent violation of state water quality standards and negative impact to groundwater and surface water quality.*		X	

In order to grant a conditional use permit under MSB 17.61, the Planning Commission must find that each of the following requirements has been met. Explain the following:	Attached
1. Will the conditional use preserve and not detract from the value, character and integrity of the surrounding area?	✓
2. Will the granting of the conditional use permit be harmful to the health, safety, convenience or general welfare of the public?	✓
3. Are sufficient setbacks, lot area, buffers, or other safeguards being provided?	✓
4. Will the proposed use, even with mitigation, be incompatible with and adversely affect surrounding residential neighborhoods?	✓
5. Will the proposed use adversely affect property values of surrounding areas?	✓
6. Will the proposed use create unreasonable noise levels beyond the property lines of the proposed location?	✓
7. Will the proposed use adversely affect the safe and efficient flow of traffic on any highway, arterial, collector, or street from which access to and from the business occurs?	✓
8. Are there adequate off-street parking facilities to accommodate a reasonably expected increased demand for parking generated by the business?	✓
9. What measures are being proposed to reduce any negative effect upon adjacent properties by property line buffers and roadway buffers, berms, landscaping, clustering with other similar uses, and where the surrounding area is predominantly residential in character, whether the site and building design features contribute to the residential character of the surrounding development?	✓
10. Are the proposed site plans and plan of operations consistent with the purposes of MSB Chapter 17.61?	Yes

OWNER'S STATEMENT: I am owner of the following property:

MSB Tax parcel ID #(s) 8150000 L00 1B and, I hereby apply for approval a Core Area conditional use permit on that property as described in this application.

I understand all activity must be conducted in compliance with all applicable standards of MSB 17.61 and with all other applicable borough, state or federal laws.

I understand that other rules such as local, state and federal regulations, covenants, plat notes, and deed restrictions may be applicable and other permits or authorization may be required. I understand that the borough may also impose conditions and safeguards designed to protect the public's health, safety and welfare and ensure the compatibility of the use with other adjacent uses.

I understand that it is my responsibility to identify and comply with all applicable rules and conditions, covenants, plat notes, and deed restrictions, including changes that may occur in such requirements.

I understand that this permit and zoning status may transfer to subsequent owners of this land and that it is my responsibility to disclose the requirements of this status to the buyer when I sell the land.

I understand that changes from the approved conditional use permit may require further authorization by the Borough Planning Commission. I understand that failure to provide applicable documentation of compliance with approved requirements, or violation of such requirements will nullify legal status, and may result in penalties.

I grant permission for borough staff members to enter onto the property as needed to process this application and monitor compliance. Such access will at a minimum, be allowed when the activity is occurring and, with prior notice, at other times necessary to monitor compliance.

The information submitted in this application is accurate and complete to the best of my knowledge.

	Matt Gittlein	8-19-2021
Signature: Property Owner	Printed Name	Date
	Matt Gittlein	8-19-2021
Signature: Agent	Printed Name	Date

Valley Country Store # 4

1. Project Description

The Valley Country Store # 4 project is located on a three acre lot at 3068 S Trunk Road in Palmer, Alaska. Access is directly off Trunk Rd. The project consists of a 4467 square foot building that will house a convenience store and a package liquor store. There will be 2 above ground fuel tanks supplying gasoline and diesel. There will be 4 – four product gas pumps and one high flow diesel pump for larger vehicles. The site will also feature a stand-alone drive through coffee shop, a 1000 gallon propane tank & dispenser, and an RV dump station.

2. Local covenants

There are no local covenants for this location.

3. Hazardous Reports

There are no reports of any hazardous substances for the property.

Additional Information

1. Yes, the use is compatible with the surrounding area. The area is mixed with light commercial, industrial, retail, and residential uses. Our stores are small neighborhood style store that fit in well to serve the local neighborhoods and communities. Our stores are clean, well lit, and operate according to all applicable laws. We feel that our stores not only preserve the value and integrity of the area also increase and enhance it.

2. No the granting of the permit will not be harmful to the public safety and welfare. Our stores have a good track record of not having safety or public health issues. We feel that granting the permit will be beneficial to the public convenience, safety and welfare.

3. Yes. The lot is 3 acres and the use will only use approximately 2 acres. The store will be set back sufficiently from Trunk Road to the east and have proper landscaping to buffer the use. The residential area to the south will be buffered with the 1 acre vacant lot as well as a privacy fence and a landscaping buffer along the property line. To the north and west there is sufficient setbacks and lot area from the vacant existing lot.

4. No. The use will be compatible with the surrounding residential neighborhoods. Our stores are designed to be used primarily by the local residents. There should be no adverse effects on the neighborhoods. In the recent events such as earthquakes and COVID it's been apparent how important essential business' like gas stations and convenience stores are to have in local neighborhoods.

5. No. In my experience there will be no negative effects on property values in the area because of the use.

6. No. The use should not generate any noise that goes beyond the property lines.

7. No. The driveways are in place and have adequate lines of site in all directions. The use will predominantly be used by existing local traffic so there won't be a large increase in traffic created by the use.

8. Yes the facility will have adequate parking spaces. There are 18 regular and 2 handicap parking spaces provided, all of which will be available to liquor store customers.

9. Yes, we are taking measures to reduce negative effects on nearby properties. They are:
    - The building will be set as far as possible from the roadway (approx. 200')
    - The building will be set back as far as possible from the residential area to the south (approx. 225')
    - We will have a landscaping buffer with split rail fence and grass, and small trees between the site and the roadway.
    - We will construct a 6' tall privacy fence along the property line to the south with the neighboring residential area.
    - Minimal signage on site. Signage will be directed towards the roadway and not the neighboring properties.
    - The building is single level and has an aesthetically pleasing design similar to our other Valley Country Store buildings.

10. Yes.

Memorandum

THE BOUTET COMPANY, INC.

1508 E. Bogard Rd. #7
Wasilla, AK 99654

Tel: (907) 522-6776
Fax: (907) 522-6779
e-mail: hhill@tbcak.com

Date: **November 2, 2021**

To: Peggy Horton
Planner II
Matanuska-Susitna Borough

From: Hans Hill
Project Manager
The Boutet Company, Inc

Subject: Valley Country Store 4
Driveway Spacing

Introduction

This memo was prepared in support of Conditional Use Permit application submitted to Matanuska-Susitna Borough (MSB) for a proposed development that would be located at 3068 South Trunk Road (STR), near Wasilla, Alaska.

Project Description and Location

KG Enterprises, LLC (KGE) proposes to construct a convenience store with gas pumps in adjacent to the west Right-of-Way (ROW) line for STR, approximately 1,500 feet south of its interchange with East Parks Highway (EPH). More specifically, the project would be located within Lot 1B, Happy Valley Subdivision.

Access Drives

KG Enterprises, LLC (KGE) proposes to utilize the existing driveways adjacent to the property. The Sothern access drive is located on property and the northern access drive is located north of the subject property. Use of northern drive by the applicant will be secured through a recorded access agreement.

STR is classified as an arterial roadway. Due to the projected trip generation from the proposed improvements, the MSB Code requires a driveway separation distance of 600'.

Minimum High Volume Driveway Spacing (Feet) (MSB 11.12.070.A.8)

Classification of road being accessed	Posted speed limit or 85th percentile speed of road being accessed (mph)	Total vehicle trip generation of subject parcel (vph)								
		11 – 100			101 – 250			> 250		
		Total vehicle trip generation of subject parcel, nearby parcel, or classification of cross street			Total vehicle trip generation of subject parcel, nearby parcel, or classification of cross street			Total vehicle trip generation of subject parcel, nearby parcel, or classification of cross street		
		11 – 100 vph or local road	101 – 250 vph or collector	> 250 vph or arterial	11 – 100 vph or local road	101 – 250 vph or collector	> 250 vph or arterial	11 – 100 vph or local road	101 – 250 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

However, as the attached documentation demonstrates, the existing driveways were designed and installed during the 2018 STR bond project with the intention of facilitating commercial applications, specifically a gas station. Additionally, these driveways are already permitted through the MSB.

Conclusions

It is the opinion of this office, that the use of these approaches by the applicant for this specific application aligns with the MSB's engineers original design and as such, the current driveway spacing requirement is not applicable for this scenario.

Hans Hill

From: Bob Walden <robert.walden@matsugov.us>
Sent: Wednesday, April 5, 2017 8:12 AM
To: Tim Alley
Subject: FW: Trunk road appraches
Attachments: Lot 1 Happy Valley Driveway Exhibit.PDF

FYI here are those approaches for the gas station...

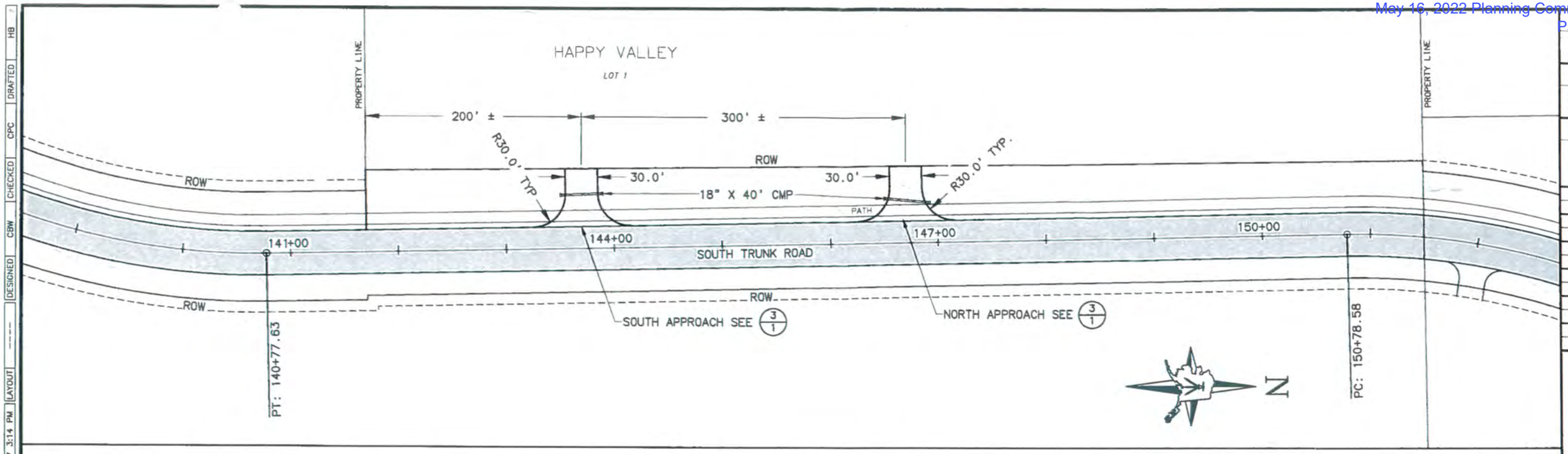
Bob Walden, PE

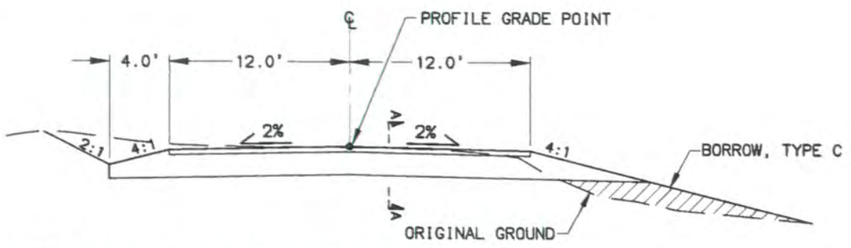
From: Peter Curtis [mailto:p.curtis@lounsburyinc.com]
Sent: Wednesday, April 05, 2017 8:11 AM
To: Bob Walden
Subject: RE: Trunk road appraches

From: Bob Walden [mailto:robert.walden@matsugov.us]
Sent: Wednesday, April 05, 2017 7:49 AM
To: Peter Curtis
Subject: Trunk road appraches

Could you send me where you designed those two approaches for the permit for the gas station. I cannot seem to find it.

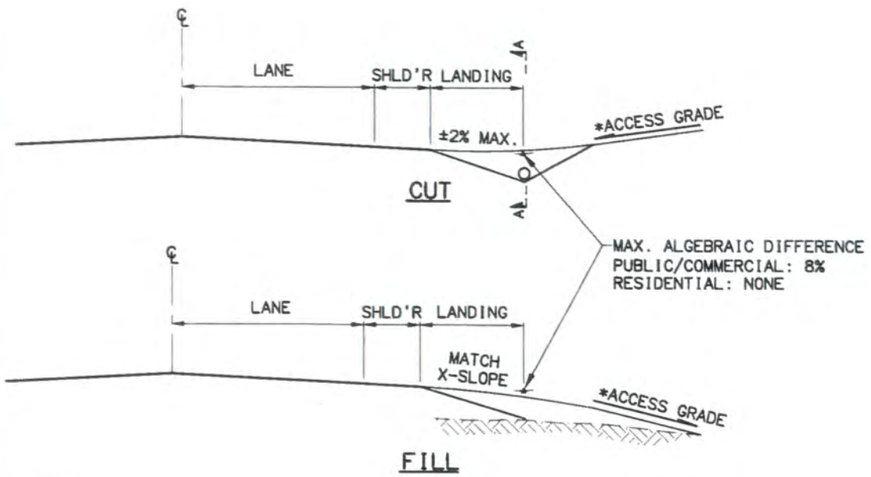
Sincerely,
BOB WALDEN, PE
Matanuska Susitna Borough
Capital Projects Pre-design and Engineering Division
Civil Engineer / Project Manager
Cell # 907-354-3469
Office # 907-861-7726





1/1 UNPAVED APPROACH (DRIVEWAY)

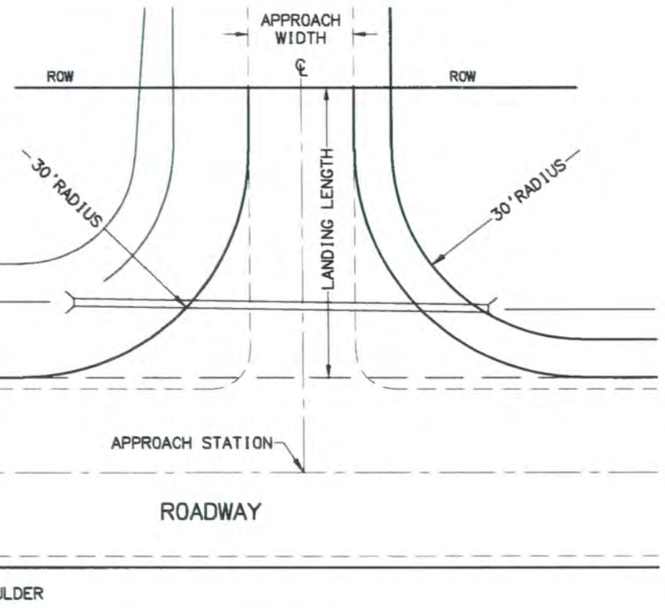
SCALE: N.T.S.



2/1 APPROACH PROFILES

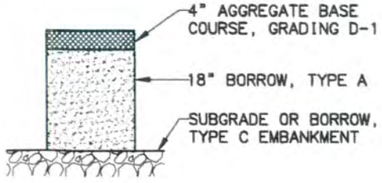
SCALE: N.T.S.

LANDING TABLE	
TYPE	LENGTH
PUBLIC/COMMERCIAL	30



3/1 APPROACH PLAN

SCALE: N.T.S.



4/1 SECTION A-A

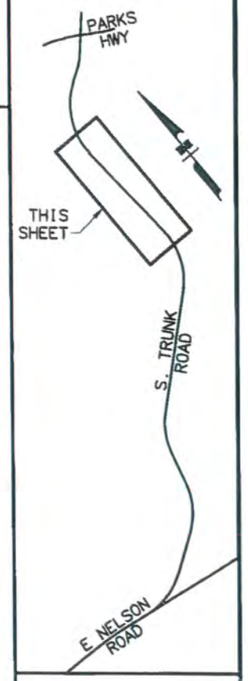
SCALE: N.T.S.

STATE OF ALASKA
49TH
CHARLES P. CURTIS
No. CE-9751
2/14/2017
REGISTERED PROFESSIONAL ENGINEER

SHEET	TOTAL SHEETS
1	1
STATE	YEAR
ALASKA	2017

PROJECT DESIGNATION

NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	



BEFORE YOU DIG
CALL FOR FREE
UNDERGROUND
LOCATION

Locate Call Center of Alaska
Statewide 800-478-3121
will notify subscribed utilities only. Other utilities need to be contacted individually

LOUNSBURY & ASSOCIATES, INC.
3050 COTTLE LOOP
WASILLA, ALASKA 99654
(907)357-9132
CERT. OF AUTH. NO. AECC381

LOT 1 HAPPY VALLEY
DRIVEWAY PERMIT

DATE/TIME 2/14/2017 3:14 PM | LAYOUT ---- | DESIGNED CBW | CHECKED CPC | DRAFTED HB

FILE P:\2017\17-012 HAPPY VALLEY\ENG\DWGS\F1-DRIVEWAY APPLICATION_17-012.DWG

MATANUSKA-SUSITNA BOROUGH
Planning and Land Use Department
Development Services Division
350 East Dahlia Avenue • Palmer, AK 99645
Phone (907) 861-7822 • Fax (907) 861-8158
www.matsugov.us

November 16, 2021

Matt Gittlein
4891 E. Stoney Hollow Dr.
Wasilla AK 99654

SUBJECT: Conditional Use Permit Application – Request for Required Information
LOCATION: 3068 S. Trunk Road – Tax ID #8150000L001B & L001A

Dear Mr. Gittlein,

Borough staff has reviewed the application material and the site plan(s) submitted on August 10, 2021, for an Alcoholic Beverage Package Store Conditional Use Permit and on November 3, 2021 for a Core Area Conditional Use Permit on the above referenced property.

It has been determined that the following information needs to be provided and/or clarified in order to process this request:

1. Written authorization by the owner of both properties involved in the development must be attached. Include authorization, signature, and contact information from the owner of Lot 1A, Happy Valley Subdivision.

2. Please address consumption of alcohol on the property and actions to be taken, should it occur.

3. The scale of the Civil Site & Utility Improvements drawings dated 5/10/21 are incorrect in the title blocks. These include plans for the Package Store CUP: (1) general site plan; (2) pedestrian and vehicle traffic and exterior lighting plan; and (3) grassy area and drainage plan. For the Core Area CUP, these include: (1) the grading and drainage plan and (2) the general site plan.

4. Lot dimensions are required on the site plan. Include all properties involved in the development.

5. Location and dimensions for all access points to and from the site are required on the site plan. Provide the dimension of the distance between the two driveways.

6. Provide length dimension of parking spaces on the site plan.

7. Provide dimensions from all proposed structures to nearest property lines as required by MSB 17.61.050.

8. Fencing. Provide detail for the 6' high screening fence noted on the site plan and noted in the narrative. Split rail fence described in the narrative Item 9 is not shown on the site plan.

9. Provide horizontal view of the convenience store and any other structures showing all sides and proposed signage, with readable text.

10. Please describe the monument sign noted on the site plan.

11. Please provide more details about lighting on the structure and around the property, such as: height and type. Will it be downward directed and shielded to minimize light spillage on adjacent properties? Will the signs on the ground and on the building be lighted?

12. The narrative states you have secured Fire Marshal approval; please provide written documentation of that approval. Please forward all information/approvals you receive from the Fire Marshal to our office.

13. Is the entirety of Lot 1B paved? Provide information concerning the limits of paving, landscaping, and construction on the properties involved.

14. Is there a runoff catchment plan to prevent potential oil and gas spills from penetrating the ground or reaching other properties?

15. Grading and Drainage Plan. Drainage plan for package store differs greatly from the drainage plan provided for the Core Area Permit. The Grading and Drainage Plan provided for the Core Area Permit is not signed. On the Grading and Drainage Plan, indicate, in the legend, all abbreviations, acronyms, and shading used.

16. On page 7 of the TIA, bottom figure. Is the 3rd column from the right's heading supposed to be NBLT?

17. On page 4 of the TIA, top paragraph. Perhaps the "South Bogard route" is mentioned inaccurately?

18. The coffee shop, although mentioned on page 2 of the TIA, in the narrative, and in the site plan, traffic generated from its use was not included in the traffic analysis as far as staff can tell. Provide rational for not including the coffee shop in the TIA traffic generation rates.

19. Now that we know traffic will exceed 100 vehicles during the morning or afternoon peak hour, the attached Traffic Impact Worksheet needs to be filled out per MSB 17.61.050(D).

20. Items requested by Jamie Taylor, Civil Engineer in the Public Works Department concerning the TIA:
    a. Page 14, what year was the ADT for STR collected?

b. Page 19 Other Planned Developments – wouldn't View Pointe at the Ranch be considered a planned development? They have about 100 more lots they will be creating. Does the 2% growth account for those?
c. Show turn lane warrant analysis. They are required at 50 vph.
d. What are the LOS at the roundabout and on STR itself between the roundabout and Fetlock? I don't know off hand what the capacities are of the segment and approaches to know if the traffic will be increased enough to require analysis, but regardless that should be addressed in the TIA.

Once an application has been determined to be complete, staff will begin the public notice process. Should you have any questions or require additional information, please feel free to contact me at the above mailing address, phone: 861-7862 or email: peggy.horton@matsugov.us. Thank you for your time and consideration on this matter.

Respectfully,

Peggy Horton

Peggy Horton
Planner II
Matanuska-Susitna Borough

cc:
The Boutet Company via email

RECEIVED
FEB 02 2022
Mat-Su Borough
Development Services

Valley Country Store # 4
3068 S Trunk Road
Supplemental Information for CUP

December 13, 2021

1. Written authorization from owner of Lot 1A Happy Valley
    - See Attachment from William Long
2. This is a package liquor store not a bar. No alcohol consumption is allowed on the property. If a customer is seen consuming alcohol they will be confronted about it and asked to leave the premise, and if necessary trespassed from all of our locations and the State Troopers may be called. If an employee is caught consuming alcohol on the premise they will be fired and if necessary a trooper report made.
3. See attached and diagrams from The Boutet Co.
4. See updated site plan.
5. See updated site plan.
6. See updated site plan.
7. See updated site plan.
8. Screening fence is 6' tall chain-link with slat master brand privacy slats. Please redact all mention of split rail fence from comments; due to weather restrictions we won't be able to install this until next summer.
9. See attached photos.
    - Building:
        i. Height –17'
        ii. Width – 80'
        iii. Length – 57'
    - Fuel Canopy
        i. Height – 19'
        ii. Width – 24'
        iii. Length – 126'
10. Monument sign – Lighted 'Tesoro' gas sign with LED prices for unleaded and diesel on each side. 36' Tall. See attached photo.
11. See attached diagram from electrical engineer regarding light displacement.
    - See type of lighting on the electrical plans. Height of light poles – 25'.
    - The forward facing signs on the front of the building are LED lighted.
12. Fire Marshal approvals attached.
13. See updated site plan for limits of paving.
14. All areas where there is fuel are paved or concrete to prevent any spillage to penetrate the soil. Tanks and piping are all double walled to prevent any leakage or spillage. All employees are

trained on spill prevention and cleanup per DEC standards. Proper spill cleanup kits are on site and all employees are properly trained in using them.

15. See attached updated drainage plan.
16. See updated TIA
17. See memo from TBC
18. See memo from TBC
19. See attached worksheet
20. See responses in memo from TBC

I William LONG authorize Valley country stores to full access on both driveways coming off of trunk Road with no end date or expiration and to apply for conditional use permits for the gas station on lot 1b with one driveway on lot 1a.

William Long

907-750-9025

Billylong1214@msn.com

RECEIVED
FEB 02 2022
Mat-Su Borough
Development Services

RECEIVED
FEB 02 2022
Mat-Su Borough
Development Services

MSB • Department of Emergency Services • Central Mat-Su Fire Department

Fire & Life Safety Division

Physical: Station 51 – 1911 S Terrace Court, Palmer
Mailing: 101 W Swanson Avenue • Wasilla, AK 99654
Office (907) 861-8030 • Fax (907) 861-8157 • E-mail: FireCode@matsugov.us

August 6, 2021

Matt Gittlein
KG Enterprises, LLC
4891 E. Stoney Hollow Dr.
Wasilla AK 99654

SUBJECT:	Valley Country Store #4
FIRE SERVICE AREA:	Central Mat-Su FSA
PLAN REVIEW:	2022-007
TYPE OF CONSTRUCTION:	VB
OCCUPANCY TYPE:	M

2012 INTERNATIONAL BUILDING AND FIRE CODE

Dear Matt Gittlein:

Plans for the subject facility have been reviewed by this office for conformity with the State Fire Safety Regulations and are hereby approved as submitted. Enclosed is a certificate of approval that must be posted on the premises until completion of the above facility. Any changes to the approved plans must be submitted to this office for review and approval. **You are prohibited to occupy this building until construction is completed for which plans have been examined and approved.** After completion of the construction, you must schedule a certificate of occupancy inspection prior to opening.

It must be understood that the inclusion of and compliance with State Fire Safety Regulations does not preclude the necessity of compliance with the requirements of local codes and ordinances. Also understand that approval of submitted plans is not approval of omissions or oversights by this office or noncompliance with any applicable regulations. The plans have not been reviewed for compliance with the Federal Americans with Disabilities Act or structural requirements.

If we can be of further assistance in this matter, please contact us at the address above.

Sincerely,

Jeffrey L. Anderson
Deputy Fire Marshal

Fire and Life Safety Division

Central Mat-Su Fire Service Area No. 130 - District 1
Department of Emergency Services, Matanuska-Susitna Borough

Plan Review #2022-007

Valley Country Store #4

New Construction/Addition Approval

This is to certify that the plans for this building were reviewed by CMSFD's Fire & Life Safety Division on 8/6/2021, for conformance with AS 18.70.010–100; 13 AAC 50.027. This certificate becomes invalid 180 days after the work on the site is commenced within 180 days after issuance, or if the work authorized is suspended or abandoned for a period of 180 days after the time work is commenced. An extension may be requested at the above mentioned address.

This certificate shall be posted in a conspicuous place on the premises listed above and shall remain posted until construction is completed. **Notice:** *Any changes or modifications to the approved plans must be resubmitted for review by the Central Mat-Su Fire Department.*

Authority: AS 18.70.080, 13 AAC 50.075 & MSB RS 06-054

by Jeffrey L. Anderson, Deputy Fire Marshal

MSB • Department of Emergency Services • Central Mat-Su Fire Department
Fire & Life Safety Division
Physical: Station 51 – 1911 S Terrace Court, Palmer
Mailing: 101 W Swanson Avenue • Wasilla, AK 99654
Office (907) 861-8030 • Fax (907) 861-8157 • E-mail: FireCode@matsugov.us

September 7, 2021

Matt Gitlein
KG Enterprises, LLC
4891 E. Stoney Hollow Dr.
Wasilla AK 99654

SUBJECT:	Valley Country Store #4
FIRE SERVICE AREA:	Central Mat-Su FSA
PLAN REVIEW:	2022-008

2012 INTERNATIONAL BUILDING AND FIRE CODE

Dear Matt Gitlein:

Plans for the fuel tank or dispensing system installation have been reviewed by this office for conformity with the State Fire Safety Regulations and are hereby approved as submitted for the FUEL TANK OR DISPENSING SYSTEM ONLY. Enclosed is a certificate of approval that must be posted on the premises until the system has been installed and certified operational. Approved plans must be picked up at Station 51, prior to installation. Any changes to the approved plans must be submitted to this office for review and approval. **Upon completion of the fuel tank or dispensing system installation, a final inspection must be completed with a Fire Code Official or his designee in attendance.**

A set of approved plans must be maintained onsite until final inspection is complete.

It must be understood that the inclusion of and compliance with State Fire Safety Regulations does not preclude the necessity of compliance with the requirements of local codes and ordinances. Also understand that approval of submitted plans is not approval of omissions or oversights by this office or noncompliance with any applicable regulations. The plans have not been reviewed for compliance with the Federal Americans with Disabilities Act or structural requirements.

If we can be of further assistance in this matter, please contact us at the address above.

Sincerely,

Jeffrey L. Anderson
Deputy Fire Marshal

Fire and Life Safety Division

Central Mat-Su Fire Service Area No. 130 - District 1
Department of Emergency Services, Matanuska-Susitna Borough

Plan Review #2022-008

Click or tap here to enter Tenant/Building.

Fuel Tank or Dispensing System Approval

This is to certify that the plans for this building were reviewed by CMSFD's Fire & Life Safety Division on 9/7/2021,
for conformance with AS 18.70.010–100; 13 AAC 50.027. This certificate becomes invalid 180 days after the work on the site is commenced within 180 days after issuance, or if the work authorized is suspended or abandoned for a period of 180 days after the time work is commenced. An extension may be requested at the above mentioned address.

This certificate shall be posted in a conspicuous place on the premises listed above and shall remain posted until construction is completed. **Notice:** *Any changes or modifications to the approved plans must be resubmitted for review by the Central Mat-Su Fire Department.*

Authority: AS 18.70.080, 13 AAC 50.075 & MSB RS 06-054

By: Jeffrey L. Anderson, Deputy Fire Marshal

RECEIVED
FEB 02 2022
Mat-Su Borough
Development Services

MSB • Department of Emergency Services • Central Mat-Su Fire Department

Fire & Life Safety Division

Physical: Station 51 – 1911 S Terrace Court, Palmer
Mailing: 101 W Swanson Avenue • Wasilla, AK 99654
Office (907) 861-8030 • Fax (907) 861-8157 • E-mail: FireCode@matsugov.us

July 26, 2021

Matt Gittlein
KG Enterprises, LLC
4891 E. Stoney Hollow Dr.
Wasilla AK 99654

SUBJECT:	Fuel Canopy/ Valley Country Store #4
FIRE SERVICE AREA:	Central Mat-Su FSA
PLAN REVIEW:	2022-009
TYPE OF CONSTRUCTION:	IIB
OCCUPANCY TYPE:	N/A

2012 INTERNATIONAL BUILDING AND FIRE CODE

Dear Matt Gittlein:

Plans for the subject facility have been reviewed by this office for conformity with the State Fire Safety Regulations and are hereby approved as submitted. Enclosed is a certificate of approval that must be posted on the premises until completion of the above facility. Any changes to the approved plans must be submitted to this office for review and approval. **You are prohibited to occupy this building until construction is completed for which plans have been examined and approved.**

It must be understood that the inclusion of and compliance with State Fire Safety Regulations does not preclude the necessity of compliance with the requirements of local codes and ordinances. Also understand that approval of submitted plans is not approval of omissions or oversights by this office or noncompliance with any applicable regulations. The plans have not been reviewed for compliance with the Federal Americans with Disabilities Act or structural requirements.

If we can be of further assistance in this matter, please contact us at the address above.

Sincerely,

Jeffrey L. Anderson
Deputy Fire Marshal

Fire and Life Safety Division

Central Mat-Su Fire Service Area No. 130 - District 1
Department of Emergency Services, Matanuska-Susitna Borough

Plan Review #2022-009
Fuel Canopy/ VCS #4
New Construction/Addition Approval

This is to certify that the plans for this building were reviewed by CMSFD's Fire & Life Safety Division on 7/26/2021, for conformance with AS 18.70.010–100; 13 AAC 50.027. This certificate becomes invalid 180 days after the work on the site is commenced within 180 days after issuance, or if the work authorized is suspended or abandoned for a period of 180 days after the time work is commenced. An extension may be requested at the above mentioned address.

This certificate shall be posted in a conspicuous place on the premises listed above and shall remain posted until construction is completed. **Notice:** *Any changes or modifications to the approved plans must be resubmitted for review by the Central Mat-Su Fire Department.*

Authority: AS 18.70.080, 13 AAC 50.075 & MSB RS 06-054

by Jeffrey L. Anderson, Deputy Fire Marshal

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Development Services

MSB • Department of Emergency Services • Central Mat-Su Fire Department

Fire & Life Safety Division

Physical: Station 51 – 1911 S Terrace Court, Palmer
Mailing: 101 W Swanson Avenue • Wasilla, AK 99654
Office (907) 861-8030 • Fax (907) 861-8157 • E-mail: FireCode@matsugov.us

August 12, 2021

Matt Gittlein
KG Enterprises
4891 E. Stoney Hollow Dr.
Wasilla AK 99654

SUBJECT:	Valley Country Store #4-Propane dispenser
FIRE SERVICE AREA:	Central Mat-Su FSA
PLAN REVIEW:	2022-012

2012 INTERNATIONAL BUILDING AND FIRE CODE

Dear Matt Gitlein:

Plans for the fuel tank or dispensing system installation have been reviewed by this office for conformity with the State Fire Safety Regulations and are hereby approved as submitted for the FUEL TANK OR DISPENSING SYSTEM ONLY. Enclosed is a certificate of approval that must be posted on the premises until the system has been installed and certified operational. Approved plans must be picked up at Station 51, prior to installation. Any changes to the approved plans must be submitted to this office for review and approval. **Upon completion of the fuel tank or dispensing system installation, a final inspection must be completed with a Fire Code Official or his designee in attendance.**

A set of approved plans must be maintained onsite until final inspection is complete.

It must be understood that the inclusion of and compliance with State Fire Safety Regulations does not preclude the necessity of compliance with the requirements of local codes and ordinances. Also understand that approval of submitted plans is not approval of omissions or oversights by this office or noncompliance with any applicable regulations. The plans have not been reviewed for compliance with the Federal Americans with Disabilities Act or structural requirements.

If we can be of further assistance in this matter, please contact us at the address above.

Sincerely,

Jeffrey L. Anderson
Deputy Fire Marshal

Fire and Life Safety Division

Central Mat-Su Fire Service Area No. 130 - District 1
Department of Emergency Services, Matanuska-Susitna Borough

Plan Review #2022-012

Valley Country Store #4-Propane

Fuel Tank or Dispensing System Approval

This is to certify that the plans for this building were reviewed by CMSFD's Fire & Life Safety Division on Click or tap to enter a date.,
for conformance with AS 18.70.010–100; 13 AAC 50.027. This certificate becomes invalid 180 days after the work on the site is commenced within 180 days after issuance, or if the work authorized is suspended or abandoned for a period of 180 days after the time work is commenced. An extension may be requested at the above mentioned address.

This certificate shall be posted in a conspicuous place on the premises listed above and shall remain posted until construction is completed. **Notice:** *Any changes or modifications to the approved plans must be resubmitted for review by the Central Mat-Su Fire Department.*

Authority: AS 18.70.080, 13 AAC 50.075 & MSB RS 06-054

By: Jeffrey L. Anderson, Deputy Fire Marshal

D-Series Size 1
LED Area Luminaire

Catalog Number

Notes

Type

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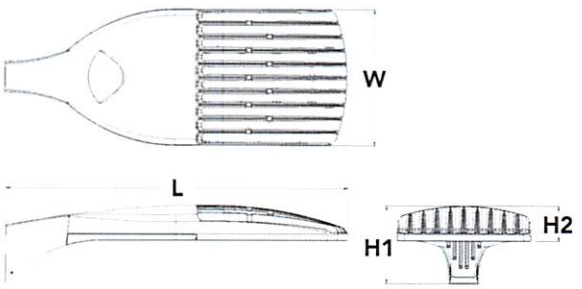
Mat-Su Borough
Development Services

Specifications

EPA:	1.01 ft² (0.09 m²)
Length:	33" (83.8 cm)
Width:	13" (33.0 cm)
Height H1:	7-1/2" (19.0 cm)
Height H2:	3-1/2"
Weight (max):	27 lbs (12.2 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX1 LED	**Forward optics** P1 P4[3] P7[3] P2 P5[3] P8 P3 P6[3] P9[3] **Rotated optics** P10[2] P12[2] P11[2] P13[1,2]	30K 3000 K 40K 4000 K 50K 5000 K	T1S Type I short (Automotive) T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5VS Type V very short[3] T5S Type V short[3] T5M Type V medium[3] T5W Type V wide[3] BLC Backlight control[4] LCCO Left corner cutoff[4] RCCO Right corner cutoff[4]	MVOLT[5] XVOLT (277V-480V)[6,7,8] 120[9] 208[9] 240[9] 277[9] 347[9] 480[9]	**Shipped included** SPA Square pole mounting RPA Round pole mounting[10] WBA Wall bracket[3] SPUMBA Square pole universal mounting adaptor[11] RPUMBA Round pole universal mounting adaptor[9] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[12]

Control options		Other options	Finish *(required)*
Shipped installed NLTAIR2 nLight AIR generation 2 enabled[13] PIRHN Network, high/low motion/ambient sensor[14] PER NEMA twist-lock receptacle only (controls ordered separate)[15] PER5 Five-pin receptacle only (controls ordered separate)[15,16] PER7 Seven-pin receptacle only (controls ordered separate)[15,16] DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[17] DS Dual switching[18,19,20]	PIR High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[20,21] PIRH High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[20,21] PIR1FC3V High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[20,21] PIRH1FC3V Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[20,21] FAO Field adjustable output[20,21]	**Shipped installed** HS House-side shield[23] SF Single fuse (120, 277, 347V)[9] DF Double fuse (208, 240, 480V)[9] L90 Left rotated optics[2] R90 Right rotated optics[2] HA 50°C ambient operations[3] **Shipped separately** BS Bird spikes[24] EGS External glare shield	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

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Ordering Information

Accessories

Ordered and shipped separately.

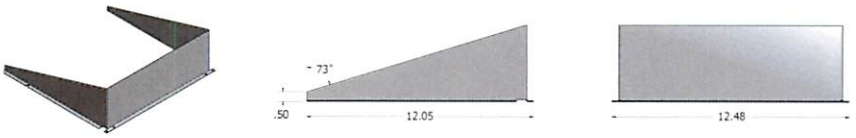
DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [25]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [25]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [25]
DSHORT SBK U	Shorting cap [25]
DSX1HS 30C U	House-side shield for P1, P2, P3, P4 and P5 [23]
DSX1HS 40C U	House-side shield for P6 and P7 [23]
DSX1HS 60C U	House-side shield for P8, P9, P10, P11 and P12 [23]
PUMBA DDBXD U*	Square and round pole universal mounting bracket (specify finish) [26]
KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish) [12]
DSX1EGS (FINISH) U	External glare shield

For more control options, visit DTL and ROAM online.

NOTES
1 HA not available with P4, P5, P6, P7, P9 and P13.
2 P10, P11, P12 or P13 and rotated optics (L90, R90) only available together.
3 Any Type 5 distribution with photocell, is not available with WBA.
4 Not available with HS.
5 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
6 XVOLT only suitable for use with P3, P5, P6, P7, P9 and P13.
7 XVOLT works with any voltage between 277V and 480V.
8 XVOLT not available with fusing (SF or DF) and not available with PIR, PIRH, PIR1FC3V, PIRH1FC3V.
9 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V. XVOLT not available with fusing (SF or DF.
10 Suitable for mounting to round poles between 3.5" and 12" diameter.
11 Universal mounting brackets intended for retrofit on existing, pre-drilled poles only. 1.5 G vibration load rating per ANCI C136.31. Only usable when pole's drill pattern is NOT Lithonia template #8
12 Must order fixture with SPA option. Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" diameter mast arm (not included).
13 Must be ordered with PIRHN. Sensor cover available only in dark bronze, black, white and natural aluminum colors.
14 Must be ordered with NLTAIR2. For more information on nLight Air 2 visit this link.
15 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting cap included.
16 If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Node with integral dimming.
17 DMG not available with PIRHN, PER5, PER7, PIR, PIRH, PIR1FC3V or PIRH1FC3V, FAO.
18 Provides 50/50fixture operation via (2) independent drivers. Not available with PER, PER5, PER7, PIR or PIRH. Not available P1, P2, P3, P4 or P5.
19 Requires (2) separately switched circuits with isolated neutrol.
20 Reference Controls Option Default settings table on page 4.
21 Reference Motion Sensor table on page 4 to see functionality.
22 Not available with other dimming controls options.
23 Not available with BLC, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
24 Must be ordered with fixture for factory pre-drilling.
25 Requires luminaire to be specified with PER, PER5 or PER7 option. See Control Option Table on page 4.
26 For retrofit use only. Only usable when pole's drill pattern is NOT Lithonia template #8.

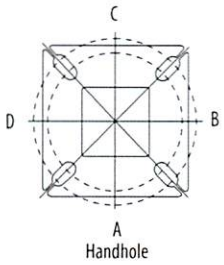
Options

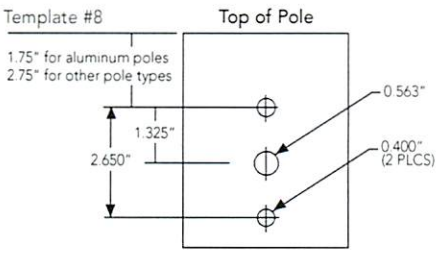
EGS - External Glare Shield



Drilling

HANDHOLE ORIENTATION





Tenon Mounting Slipfitter

Tenon O.D.	Mounting	Single Unit	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
2-3/8"	RPA	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 390	AS3-5 320	AS3-5 490
2-7/8"	RPA	AST25-190	AST25-280	AST25-290	AST25-390	AST25-320	AST25-490
4"	RPA	AST35-190	AST35-280	AST35-290	AST35-390	AST35-320	AST35-490

Mounting Option	Drilling Template	Single	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
Head Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
Drill Nomenclature	#8	DM19AS	DM28AS	DM29AS	DM39AS	DM32AS	DM49AS

DSX1 Area Luminaire - EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Single DM19	2 @ 180 DM28	2 @ 90 DM29	3 @ 90 DM39	3 @ 120 DM32	4 @ 90 DM49
Mounting Type						
DSX1 LED	1.013	2.025	1.945	3.038	2.850	3.749

	Drilling Template	Minimum Acceptable Outside Pole Dimension					
SPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
RPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
SPUMBA	#5	2-7/8"	3"	4"	4"	3.5"	4"
RPUMBA	#5	2-7/8"	3.5"	5"	5"	3.5"	5"

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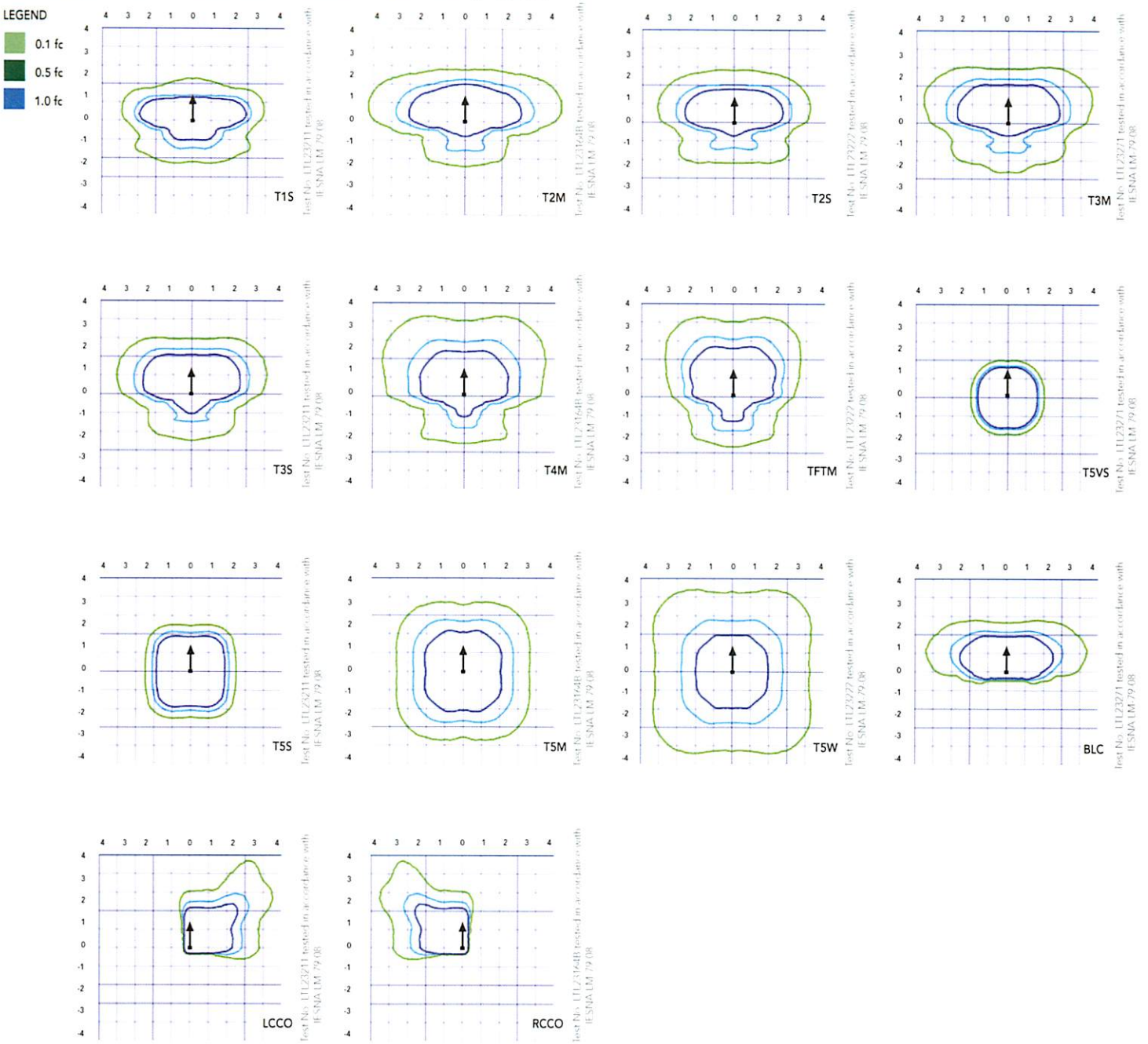
Photometric Diagrams

To [illegible]mplete photometric reports or download .ies files for this product, v[illegible] Lithonia Lighting's [illegible].

Isofootcandle plots for the DSX1 LED 60C 1000 40K. Distances are in units of mounting height (25').



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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	50°F	1.02
20°C	68°F	1.01
25°C	**77°F**	**1.00**
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	Lumen Maintenance Factor
0	1.00
25,000	0.96
50,000	0.92
100,000	0.85

Motion Sensor Default Settings						
Option	Dimmed State	High Level (when triggered)	Phototcell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min
*for use when motion sensor is used as dusk to dawn control.						

Electrical Load

	Performance Package	LED Count	Drive Current	Wattage	Current (A) 120	208	240	277	347	480
Forward Optics (Non-Rotated)	P1	30	530	54	0.45	0.26	0.23	0.19	0.10	0.12
	P2	30	700	70	0.59	0.34	0.30	0.25	0.20	0.16
	P3	30	1050	102	0.86	0.50	0.44	0.38	0.30	0.22
	P4	30	1250	125	1.06	0.60	0.52	0.46	0.37	0.27
	P5	30	1400	138	1.16	0.67	0.58	0.51	0.40	0.29
	P6	40	1250	163	1.36	0.78	0.68	0.59	0.47	0.34
	P7	40	1400	183	1.53	0.88	0.76	0.66	0.53	0.38
	P8	60	1050	207	1.74	0.98	0.87	0.76	0.64	0.49
	P9	60	1250	241	2.01	1.16	1.01	0.89	0.70	0.51
Rotated Optics (Requires L90 or R90)	P10	60	530	106	0.90	0.52	0.47	0.43	0.33	0.27
	P11	60	700	137	1.15	0.67	0.60	0.53	0.42	0.32
	P12	60	1050	207	1.74	0.99	0.87	0.76	0.60	0.46
	P13	60	1250	231	1.93	1.12	0.97	0.86	0.67	0.49

Controls Options				
Nomenclature	Description	Functionality	Primary control device	Notes
FAO	Field adjustable output device installed inside the luminaire; wired to the driver dimming leads.	Allows the luminaire to be manually dimmed, effectively trimming the light output.	FAO device	Cannot be used with other controls options that need the 0-10V leads
DS	Drivers wired independently for 50/50 luminaire operation	The luminaire is wired to two separate circuits, allowing for 50/50 operation.	Independently wired drivers	Requires two separately switched circuits. Consider nLight AIR as a more cost effective alternative.
PER5 or PER7	Twist-lock photocell recepticle	Compatible with standard twist-lock photocells for dusk to dawn operation, or advanced control nodes that provide 0-10V dimming signals.	Twist-lock photocells such as DLL Elite or advanced control nodes such as ROAM.	Pins 4 & 5 to dimming leads on driver, Pins 6 & 7 are capped inside luminaire
PIR or PIRH	Motion sensors with integral photocell. PIR for 8-15' mounting; PIRH for 15-30' mounting	Luminaires dim when no occupancy is detected.	Acuity Controls SBGR	Also available with PIRH1FC3V when the sensor photocell is used for dusk-to-dawn operation.
NLTAIR2 PIRHN	nLight AIR enabled luminaire for motion sensing, photocell and wireless communication.	Motion and ambient light sensing with group response. Scheduled dimming with motion sensor over-ride when wirelessly connected to the nLight Eclypse.	nLight Air rSDGR	nLight AIR sensors can be programmed and commissioned from the ground using the CIAIRity Pro app.

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts Contact factory for performance data on any configurations not shown here.

Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
30	530	P1	54W	T1S	6,457	2	0	2	120	6,956	2	0	2	129	7,044	2	0	2	130
				T2S	6,450	2	0	2	119	6,949	2	0	2	129	7,037	2	0	2	130
				T2M	6,483	1	0	1	120	6,984	2	0	2	129	7,073	2	0	2	131
				T3S	6,279	2	0	2	116	6,764	2	0	2	125	6,850	2	0	2	127
				T3M	6,468	1	0	2	120	6,967	1	0	2	129	7,056	1	0	2	131
				T4M	6,327	1	0	2	117	6,816	1	0	2	126	6,902	1	0	2	128
				TFTM	6,464	1	0	2	120	6,963	1	0	2	129	7,051	1	0	2	131
				T5VS	6,722	2	0	0	124	7,242	3	0	0	134	7,334	3	0	0	136
				T5S	6,728	2	0	1	125	7,248	2	0	1	134	7,340	2	0	1	136
				T5M	6,711	3	0	1	124	7,229	3	0	1	134	7,321	3	0	2	136
				T5W	6,667	3	0	2	123	7,182	3	0	2	133	7,273	3	0	2	135
				BLC	5,299	1	0	1	98	5,709	1	0	2	106	5,781	1	0	2	107
				LCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80
				RCCO	3,943	1	0	2	73	4,248	1	0	2	79	4,302	1	0	2	80
30	700	P2	70W	T1S	8,249	2	0	2	118	8,886	2	0	2	127	8,999	2	0	2	129
				T2S	8,240	2	0	2	118	8,877	2	0	2	127	8,989	2	0	2	128
				T2M	8,283	2	0	2	118	8,923	2	0	2	127	9,036	2	0	2	129
				T3S	8,021	2	0	2	115	8,641	2	0	2	123	8,751	2	0	2	125
				T3M	8,263	2	0	2	118	8,901	2	0	2	127	9,014	2	0	2	129
				T4M	8,083	2	0	2	115	8,708	2	0	2	124	8,818	2	0	2	126
				TFTM	8,257	2	0	2	118	8,896	2	0	2	127	9,008	2	0	2	129
				T5VS	8,588	3	0	0	123	9,252	3	0	0	132	9,369	3	0	0	134
				T5S	8,595	3	0	1	123	9,259	3	0	1	132	9,376	3	0	1	134
				T5M	8,573	3	0	2	122	9,236	3	0	2	132	9,353	3	0	2	134
				T5W	8,517	3	0	2	122	9,175	4	0	2	131	9,291	4	0	2	133
				BLC	6,770	1	0	2	97	7,293	1	0	2	104	7,386	1	0	2	106
				LCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79
				RCCO	5,038	1	0	2	72	5,427	1	0	2	78	5,496	1	0	2	79
30	1050	P3	102W	T1S	11,661	2	0	2	114	12,562	3	0	3	123	12,721	3	0	3	125
				T2S	11,648	2	0	2	114	12,548	3	0	3	123	12,707	3	0	3	125
				T2M	11,708	2	0	2	115	12,613	2	0	2	124	12,773	2	0	2	125
				T3S	11,339	2	0	2	111	12,215	3	0	3	120	12,370	3	0	3	121
				T3M	11,680	2	0	2	115	12,582	2	0	2	123	12,742	2	0	2	125
				T4M	11,426	2	0	3	112	12,309	2	0	3	121	12,465	2	0	3	122
				TFTM	11,673	2	0	2	114	12,575	2	0	3	123	12,734	2	0	3	125
				T5VS	12,140	3	0	1	119	13,078	3	0	1	128	13,244	3	0	1	130
				T5S	12,150	3	0	1	119	13,089	3	0	1	128	13,254	3	0	1	130
				T5M	12,119	4	0	2	119	13,056	4	0	2	128	13,221	4	0	2	130
				T5W	12,040	4	0	3	118	12,970	4	0	3	127	13,134	4	0	3	129
				BLC	9,570	1	0	2	94	10,310	1	0	2	101	10,440	1	0	2	102
				LCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76
				RCCO	7,121	1	0	3	70	7,671	1	0	3	75	7,768	1	0	3	76
30	1250	P4	125W	T1S	13,435	3	0	3	107	14,473	3	0	3	116	14,657	3	0	3	117
				T2S	13,421	3	0	3	107	14,458	3	0	3	116	14,641	3	0	3	117
				T2M	13,490	2	0	2	108	14,532	3	0	3	116	14,716	3	0	3	118
				T3S	13,064	3	0	3	105	14,074	3	0	3	113	14,252	3	0	3	114
				T3M	13,457	2	0	2	108	14,497	2	0	2	116	14,681	2	0	2	117
				T4M	13,165	2	0	3	105	14,182	2	0	3	113	14,362	2	0	3	115
				TFTM	13,449	2	0	3	108	14,488	2	0	3	116	14,672	2	0	3	117
				T5VS	13,987	4	0	1	112	15,068	4	0	1	121	15,259	4	0	1	122
				T5S	13,999	3	0	1	112	15,080	3	0	1	121	15,271	3	0	1	122
				T5M	13,963	4	0	2	112	15,042	4	0	2	120	15,233	4	0	2	122
				T5W	13,872	4	0	3	111	14,944	4	0	3	120	15,133	4	0	3	121
				BLC	11,027	1	0	2	88	11,879	1	0	2	95	12,029	1	0	2	96
				LCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72
				RCCO	8,205	1	0	3	66	8,839	1	0	3	71	8,951	1	0	3	72
30	1400	P5	138W	T1S	14,679	3	0	3	106	15,814	3	0	3	115	16,014	3	0	3	116
				T2S	14,664	3	0	3	106	15,797	3	0	3	114	15,997	3	0	3	116
				T2M	14,739	3	0	3	107	15,878	3	0	3	115	16,079	3	0	3	117
				T3S	14,274	3	0	3	103	15,377	3	0	3	111	15,572	3	0	3	113
				T3M	14,704	2	0	3	107	15,840	3	0	3	115	16,040	3	0	3	116
				T4M	14,384	2	0	3	104	15,496	3	0	3	112	15,692	3	0	3	114
				TFTM	14,695	2	0	3	106	15,830	3	0	3	115	16,030	3	0	3	116
				T5VS	15,283	4	0	1	111	16,464	4	0	1	119	16,672	4	0	1	121
				T5S	15,295	3	0	1	111	16,477	4	0	1	119	16,686	4	0	1	121
				T5M	15,257	4	0	2	111	16,435	4	0	2	119	16,644	4	0	2	121
				T5W	15,157	4	0	3	110	16,328	4	0	3	118	16,534	4	0	3	120
				BLC	12,048	1	0	2	87	12,979	1	0	2	94	13,143	1	0	2	95
				LCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71
				RCCO	8,965	1	0	3	65	9,657	1	0	3	70	9,780	1	0	3	71

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
40	1250	P6	163W	T1S	17,654	3	0	3	108	19,018	3	0	3	117	19,259	3	0	3	118
				T2S	17,635	3	0	3	108	18,998	3	0	3	117	19,238	3	0	3	118
				T2M	17,726	3	0	3	109	19,096	3	0	3	117	19,337	3	0	3	119
				T3S	17,167	3	0	3	105	18,493	3	0	3	113	18,727	3	0	3	115
				T3M	17,683	3	0	3	108	19,049	3	0	3	117	19,290	3	0	3	118
				T4M	17,299	3	0	3	106	18,635	3	0	4	114	18,871	3	0	4	116
				TFTM	17,672	3	0	3	108	19,038	3	0	4	117	19,279	3	0	4	118
				T5VS	18,379	4	0	1	113	19,800	4	0	1	121	20,050	4	0	1	123
				T5S	18,394	4	0	2	113	19,816	4	0	2	122	20,066	4	0	2	123
				T5M	18,348	4	0	2	113	19,766	4	0	2	121	20,016	4	0	2	123
				T5W	18,228	5	0	3	112	19,636	5	0	3	120	19,885	5	0	3	122
				BLC	14,489	2	0	2	89	15,609	2	0	3	96	15,806	2	0	3	97
				LCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72
				RCCO	10,781	1	0	3	66	11,614	1	0	3	71	11,761	2	0	3	72
40	1400	P7	183W	T1S	19,227	3	0	3	105	20,712	3	0	3	113	20,975	3	0	3	115
				T2S	19,206	3	0	3	105	20,690	3	0	3	113	20,952	3	0	3	114
				T2M	19,305	3	0	3	105	20,797	3	0	3	114	21,060	3	0	3	115
				T3S	18,696	3	0	3	102	20,141	3	0	3	110	20,396	3	0	4	111
				T3M	19,258	3	0	3	105	20,746	3	0	3	113	21,009	3	0	3	115
				T4M	18,840	3	0	4	103	20,296	3	0	4	111	20,553	3	0	4	112
				TFTM	19,246	3	0	4	105	20,734	3	0	4	113	20,996	3	0	4	115
				T5VS	20,017	4	0	1	109	21,564	4	0	1	118	21,837	4	0	1	119
				T5S	20,033	4	0	2	109	21,581	4	0	2	118	21,854	4	0	2	119
				T5M	19,983	4	0	2	109	21,527	5	0	3	118	21,799	5	0	3	119
				T5W	19,852	5	0	3	108	21,386	5	0	3	117	21,656	5	0	3	118
				BLC	15,780	2	0	3	86	16,999	2	0	3	93	17,214	2	0	3	94
				LCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70
				RCCO	11,742	2	0	3	64	12,649	2	0	3	69	12,809	2	0	3	70
60	1050	P8	207W	T1S	22,490	3	0	3	109	24,228	3	0	3	117	24,535	3	0	3	119
				T2S	22,466	3	0	4	109	24,202	3	0	4	117	24,509	3	0	4	118
				T2M	22,582	3	0	3	109	24,327	3	0	3	118	24,635	3	0	3	119
				T3S	21,870	3	0	4	106	23,560	3	0	4	114	23,858	3	0	4	115
				T3M	22,527	3	0	4	109	24,268	3	0	4	117	24,575	3	0	4	119
				T4M	22,038	3	0	4	106	23,741	3	0	4	115	24,041	3	0	4	116
				TFTM	22,513	3	0	4	109	24,253	3	0	4	117	24,560	3	0	4	119
				T5VS	23,415	5	0	1	113	25,224	5	0	1	122	25,543	5	0	1	123
				T5S	23,434	4	0	2	113	25,244	4	0	2	122	25,564	4	0	2	123
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123
				T5W	23,221	5	0	4	112	25,016	5	0	4	121	25,332	5	0	4	122
				BLC	18,458	2	0	3	89	19,885	2	0	3	96	20,136	2	0	3	97
				LCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
				RCCO	13,735	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
60	1250	P9	241W	T1S	25,575	3	0	3	106	27,551	3	0	3	114	27,900	3	0	3	116
				T2S	25,548	3	0	4	106	27,522	3	0	4	114	27,871	3	0	4	116
				T2M	25,680	3	0	3	107	27,664	3	0	3	115	28,014	3	0	3	116
				T3S	24,870	3	0	4	103	26,791	3	0	4	111	27,130	3	0	4	113
				T3M	25,617	3	0	4	106	27,597	3	0	4	115	27,946	3	0	4	116
				T4M	25,061	3	0	4	104	26,997	3	0	4	112	27,339	3	0	4	113
				TFTM	25,602	3	0	4	106	27,580	3	0	4	114	27,929	3	0	4	116
				T5VS	26,626	5	0	1	110	28,684	5	0	1	119	29,047	5	0	1	121
				T5S	26,648	4	0	2	111	28,707	5	0	2	119	29,070	5	0	2	121
				T5M	26,581	5	0	3	110	28,635	5	0	3	119	28,997	5	0	3	120
				T5W	26,406	5	0	4	110	28,447	5	0	4	118	28,807	5	0	4	120
				BLC	20,990	2	0	3	87	22,612	2	0	3	94	22,898	2	0	3	95
				LCCO	15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71
				RCCO	15,619	2	0	4	65	16,825	2	0	4	70	17,038	2	0	4	71

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Rotated Optics

LED Count	Drive Current	Power Package	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
60	530	**P10**	106W	T1S	13,042	3	0	3	123	14,050	3	0	3	133	14,228	3	0	3	134
				T2S	12,967	4	0	4	122	13,969	4	0	4	132	14,146	4	0	4	133
				T2M	13,201	3	0	3	125	14,221	3	0	3	134	14,401	3	0	3	136
				T3S	12,766	4	0	4	120	13,752	4	0	4	130	13,926	4	0	4	131
				T3M	13,193	4	0	4	124	14,213	4	0	4	134	14,393	4	0	4	136
				T4M	12,944	4	0	4	122	13,945	4	0	4	132	14,121	4	0	4	133
				TFTM	13,279	4	0	4	125	14,305	4	0	4	135	14,486	4	0	4	137
				T5VS	13,372	3	0	1	126	14,405	4	0	1	136	14,588	4	0	1	138
				T5S	13,260	3	0	1	125	14,284	3	0	1	135	14,465	3	0	1	136
				T5M	13,256	4	0	2	125	14,281	4	0	2	135	14,462	4	0	2	136
				T5W	13,137	4	0	3	124	14,153	4	0	3	134	14,332	4	0	3	135
				BLC	10,906	3	0	3	103	11,749	3	0	3	111	11,898	3	0	3	112
				LCCO	7,789	1	0	3	73	8,391	1	0	3	79	8,497	1	0	3	80
				RCCO	7,779	4	0	4	73	8,380	4	0	4	79	8,486	4	0	4	80
60	700	**P11**	137W	T1S	16,556	3	0	3	121	17,835	3	0	3	130	18,061	4	0	4	132
				T2S	16,461	4	0	4	120	17,733	4	0	4	129	17,957	4	0	4	131
				T2M	16,758	4	0	4	122	18,053	4	0	4	132	18,281	4	0	4	133
				T3S	16,205	4	0	4	118	17,457	4	0	4	127	17,678	4	0	4	129
				T3M	16,748	4	0	4	122	18,042	4	0	4	132	18,271	4	0	4	133
				T4M	16,432	4	0	4	120	17,702	4	0	4	129	17,926	4	0	4	131
				TFTM	16,857	4	0	4	123	18,159	4	0	4	133	18,389	4	0	4	134
				T5VS	16,975	4	0	1	124	18,287	4	0	1	133	18,518	4	0	1	135
				T5S	16,832	4	0	1	123	18,133	4	0	2	132	18,362	4	0	2	134
				T5M	16,828	4	0	2	123	18,128	4	0	2	132	18,358	4	0	2	134
				T5W	16,677	4	0	3	122	17,966	5	0	3	131	18,193	5	0	3	133
				BLC	13,845	3	0	3	101	14,915	3	0	3	109	15,103	3	0	3	110
				LCCO	9,888	1	0	3	72	10,652	2	0	3	78	10,787	2	0	3	79
				RCCO	9,875	4	0	4	72	10,638	4	0	4	78	10,773	4	0	4	79
60	1050	**P12**	207W	T1S	22,996	4	0	4	111	24,773	4	0	4	120	25,087	4	0	4	121
				T2S	22,864	4	0	4	110	24,631	5	0	5	119	24,943	5	0	5	120
				T2M	23,277	4	0	4	112	25,075	4	0	4	121	25,393	4	0	4	123
				T3S	22,509	4	0	4	109	24,248	5	0	5	117	24,555	5	0	5	119
				T3M	23,263	4	0	4	112	25,061	4	0	4	121	25,378	4	0	4	123
				T4M	22,824	5	0	5	110	24,588	5	0	5	119	24,899	5	0	5	120
				TFTM	23,414	5	0	5	113	25,223	5	0	5	122	25,543	5	0	5	123
				T5VS	23,579	5	0	1	114	25,401	5	0	1	123	25,722	5	0	1	124
				T5S	23,380	4	0	2	113	25,187	4	0	2	122	25,506	4	0	2	123
				T5M	23,374	5	0	3	113	25,181	5	0	3	122	25,499	5	0	3	123
				T5W	23,165	5	0	4	112	24,955	5	0	4	121	25,271	5	0	4	122
				BLC	19,231	4	0	4	93	20,717	4	0	4	100	20,979	4	0	4	101
				LCCO	13,734	2	0	3	66	14,796	2	0	4	71	14,983	2	0	4	72
				RCCO	13,716	4	0	4	66	14,776	4	0	4	71	14,963	4	0	4	72
60	1250	**P13**	231W	T1S	25,400	4	0	4	110	27,363	4	0	4	118	27,709	4	0	4	120
				T2S	25,254	5	0	5	109	27,205	5	0	5	118	27,550	5	0	5	119
				T2M	25,710	4	0	4	111	27,696	4	0	4	120	28,047	4	0	4	121
				T3S	24,862	5	0	5	108	26,783	5	0	5	116	27,122	5	0	5	117
				T3M	25,695	5	0	5	111	27,680	5	0	5	120	28,031	5	0	5	121
				T4M	25,210	5	0	5	109	27,158	5	0	5	118	27,502	5	0	5	119
				TFTM	25,861	5	0	5	112	27,860	5	0	5	121	28,212	5	0	5	122
				T5VS	26,043	5	0	1	113	28,056	5	0	1	121	28,411	5	0	1	123
				T5S	25,824	4	0	2	112	27,819	5	0	2	120	28,172	5	0	2	122
				T5M	25,818	5	0	3	112	27,813	5	0	3	120	28,165	5	0	3	122
				T5W	25,586	5	0	4	111	27,563	5	0	4	119	27,912	5	0	4	121
				BLC	21,241	4	0	4	92	22,882	4	0	4	99	23,172	4	0	4	100
				LCCO	15,170	2	0	4	66	16,342	2	0	4	71	16,549	2	0	4	72
				RCCO	15,150	5	0	5	66	16,321	5	0	5	71	16,527	5	0	5	72

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FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION
Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (1.01 ft^2) for optimized pole wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS
Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 3000 K, 4000 K and 5000 K (70 CRI) configurations. The D-Series Size 1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L85/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS
The DSX1 LED area luminaire has a number of control options. DSX Size 1, comes standard with 0-10V dimming drivers. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. Integrated motion sensors with on-board photocells feature field-adjustable programing and are suitable for mounting heights up to 30 feet.

nLIGHT AIR CONTROLS
The DSX1 LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing and photocontrol functionality and is suitable for mounting heights up to 40 feet. Once commissioned using a smartphone and the easy-to-use CLAIRITY app, nLight AIR equipped luminaries can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclypse. Additional information about nLight Air can be found here.

INSTALLATION
Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 1 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 1 utilizes the AERIS™ series pole drilling pattern (template #8). NEMA photocontrol receptacle are also available.

LISTINGS
UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40°C minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

WARRANTY
5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

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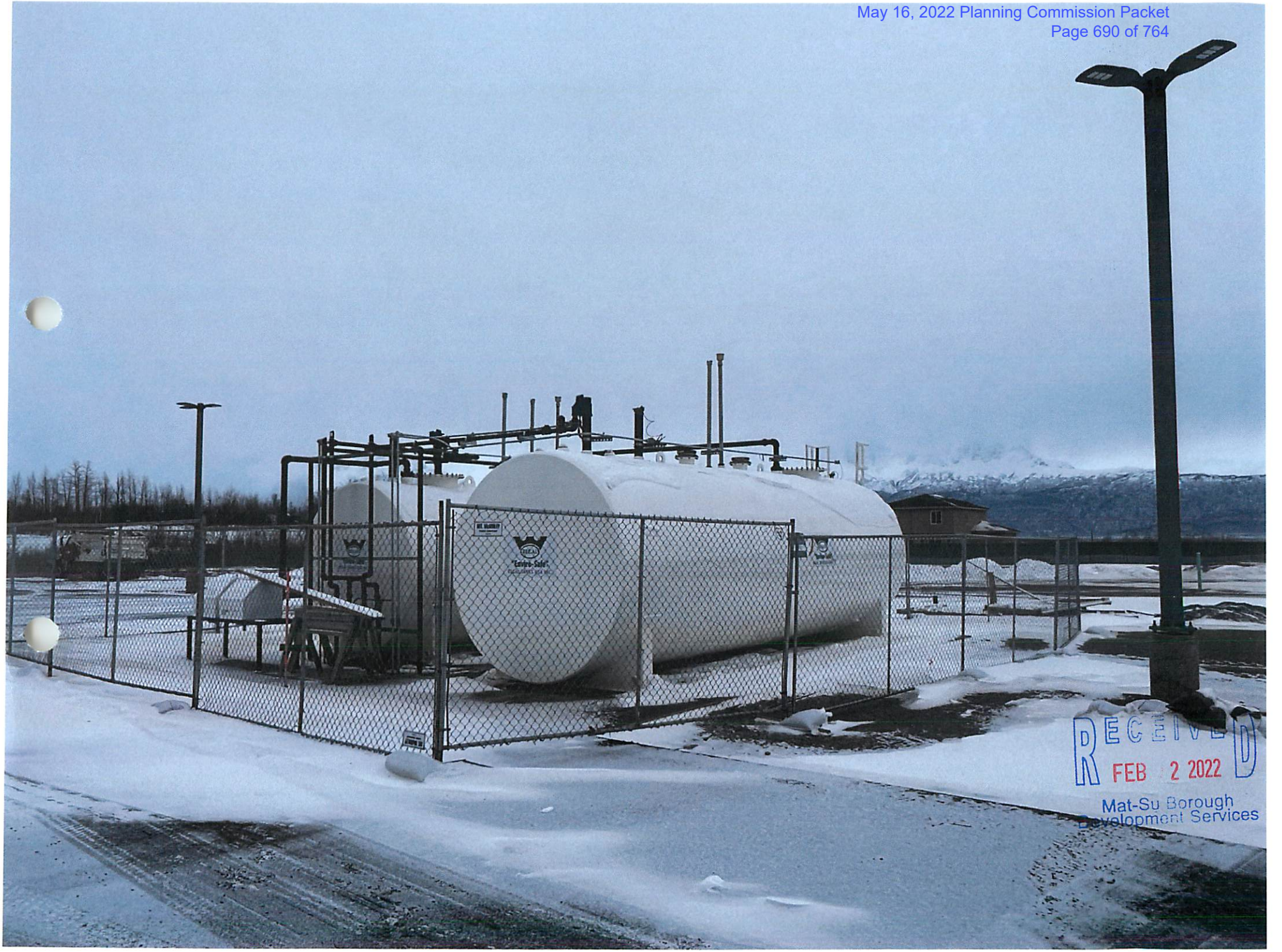

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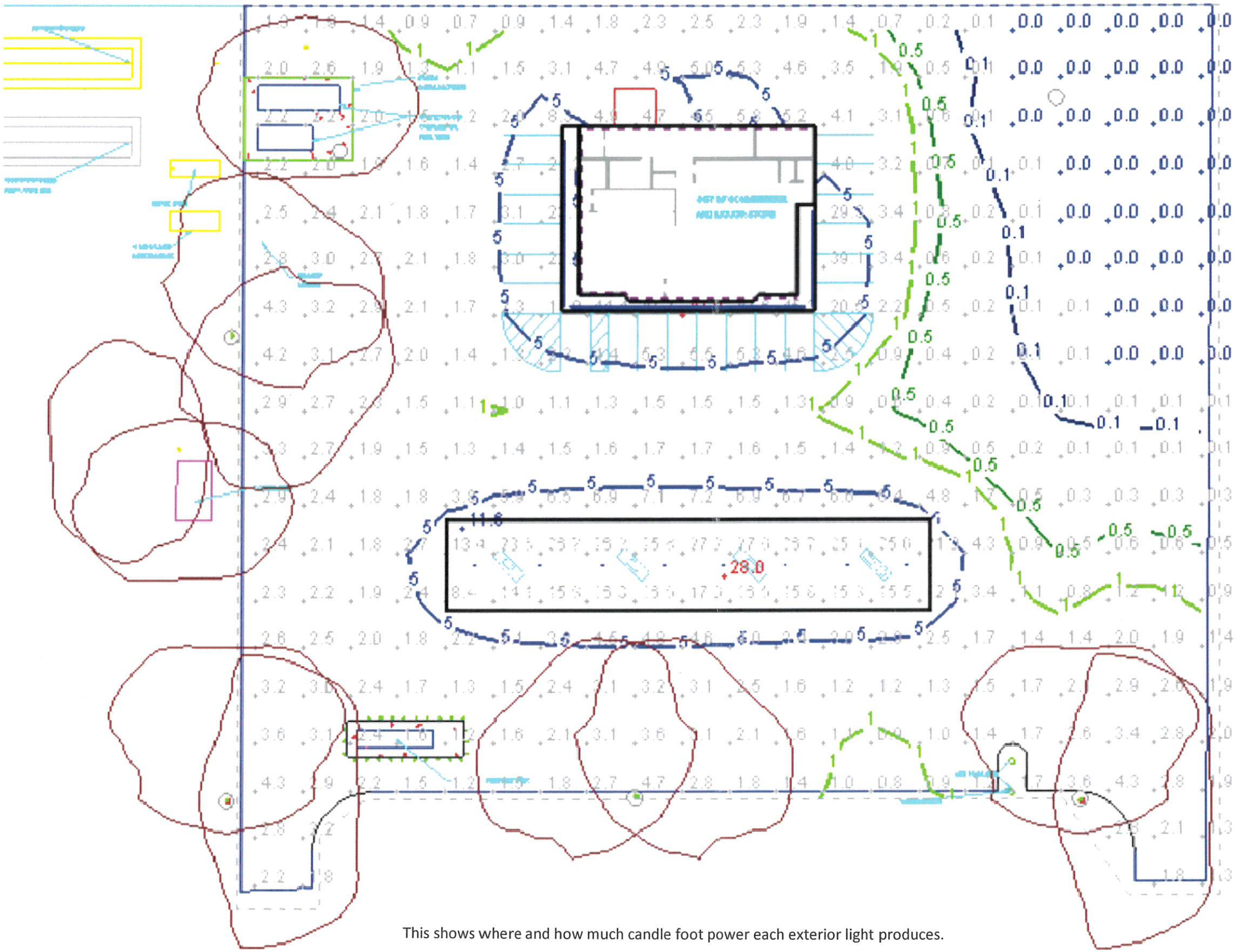

This shows where and how much candle foot power each exterior light produces.

Current View

VISUAL

VALLEY COUNTRY STORE #4

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Designer
B. Riggan
Date
12/17/2021
Scale
Not to Scale
Drawing No.

Summary

Peggy Horton

From: Matt Gittlein <mattgittlein59@hotmail.com>
Sent: Thursday, February 3, 2022 10:05 AM
To: Peggy Horton; Tim Alley
Subject: Re: Scanned image from 2-2 submittal for VCS #4

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Peggy,

That has to do with site lighting. It shows where and how much candle foot power each exterior light produces. Let me know if you want further clarification and I can have my electrical engineer respond.

Matt Gittlein
Valley Country Store & Fuel
907-841-5666

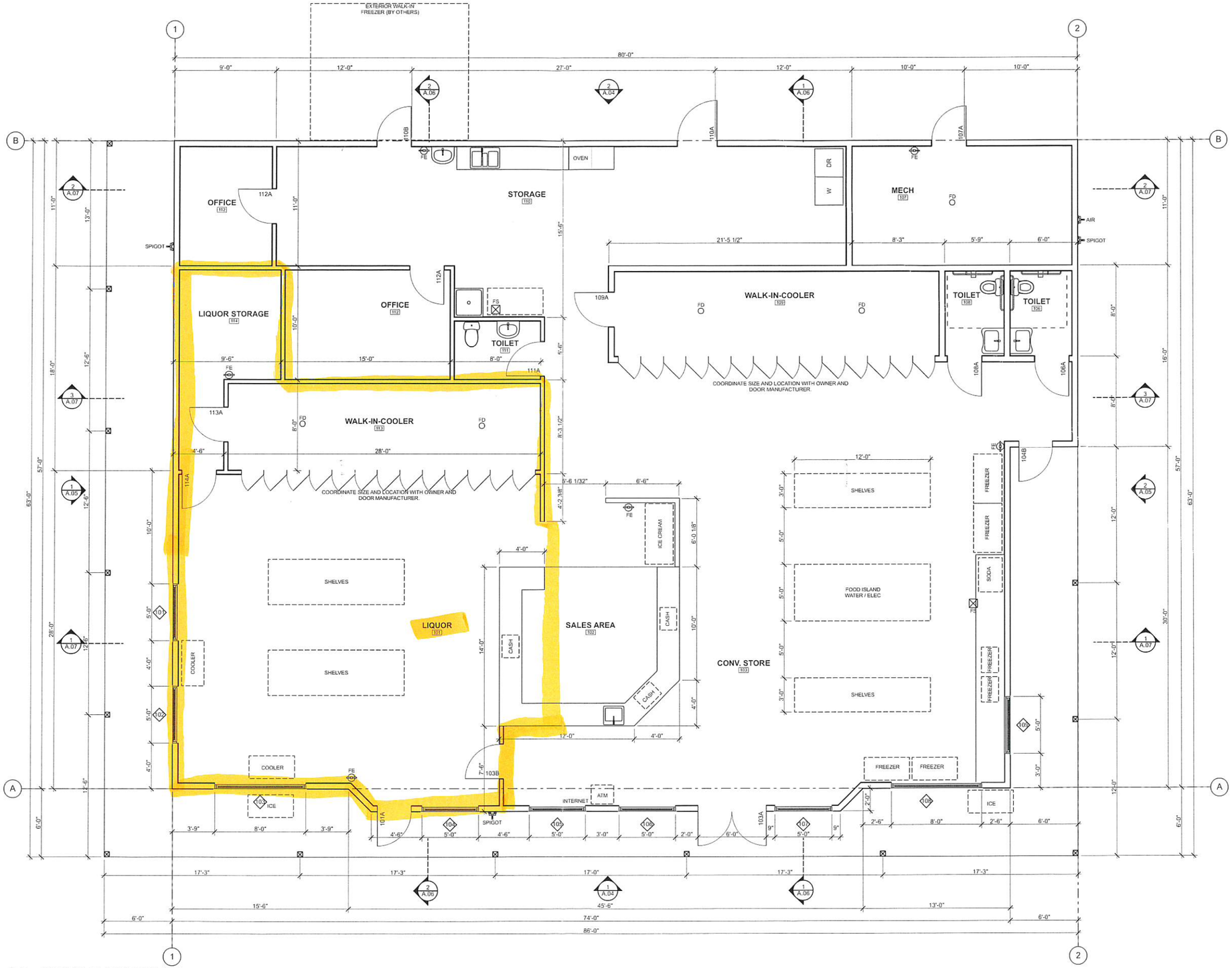
From: Peggy Horton <Peggy.Horton@matsugov.us>
Sent: Thursday, February 3, 2022 9:58 AM
To: Tim Alley <talley@tbcak.com>; Matt Gittlein <mattgittlein59@hotmail.com>
Subject: Scanned image from 2-2 submittal for VCS #4

Good Morning,

Matt, you dropped this off with the rest of the submittal docs for VCS #4 yesterday. Can anyone tell me what this is and why it's applicable?

Thanks,

Peggy Horton
Matanuska-Susitna Borough
Development Services Division
Planner II
907-861-7862



1 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

189 E. NELSON AVE. PMB140
WASILLA, ALASKA 99654
PHONE: 907.376.5755
FAX: 907.376.5765
Email: Brian@McMillenDesigns.com
www.McMillenDesigns.com

McMILLEN DESIGNS
COMMERCIAL & RESIDENTIAL ARCHITECTURE

STATE OF ALASKA 49TH BRIAN MELVIN MCMILLEN 12142 REGISTERED ARCHITECT

VALLEY COUNTRY STORE #4
PALMER, ALASKA

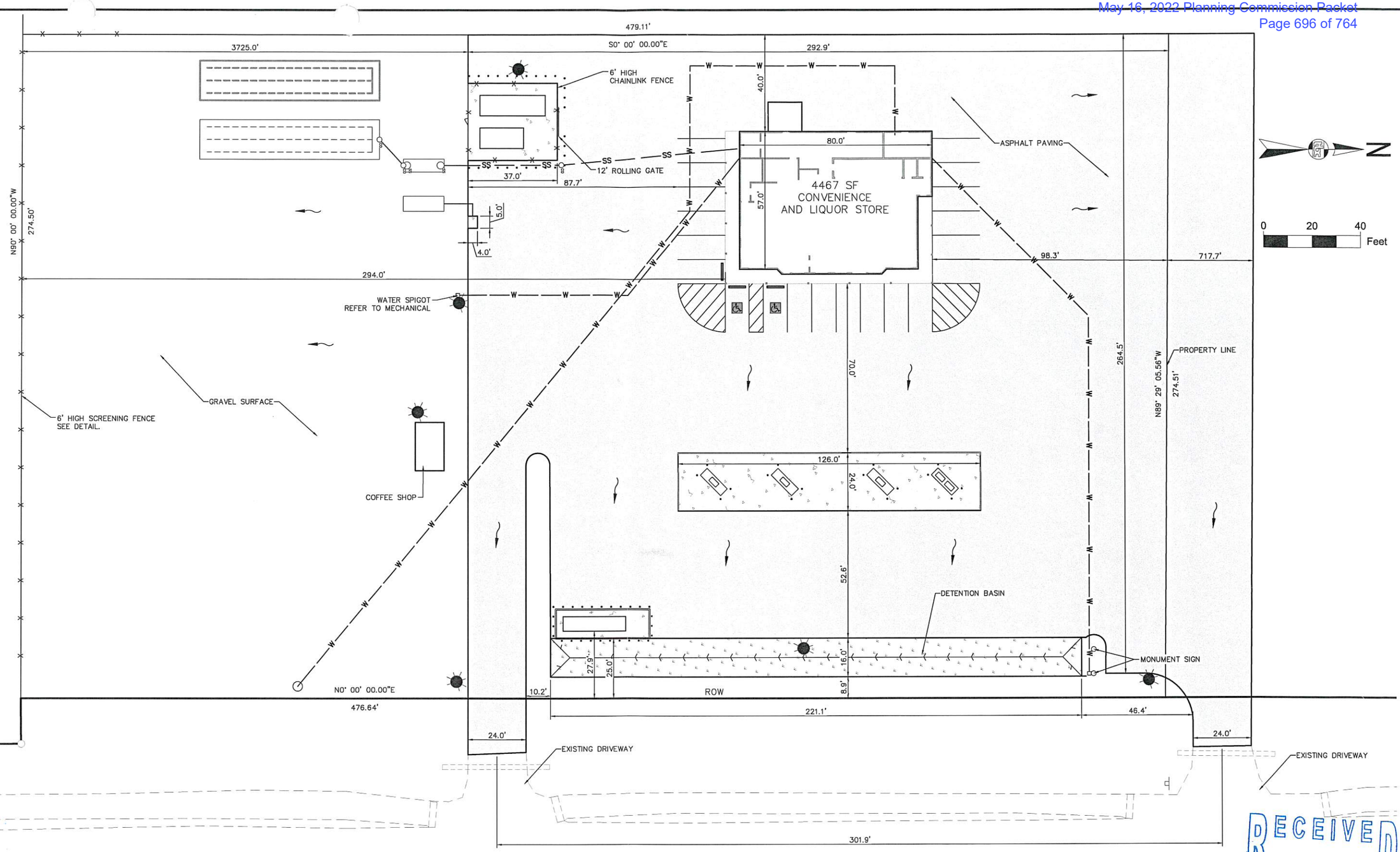
BY	REVISIONS	DATE

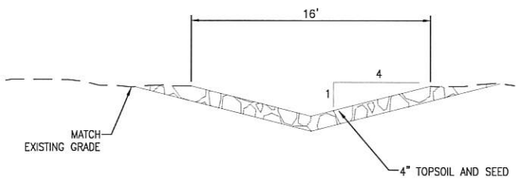
DATE:	12/14/20
SCALE:	AS NOTED
JOB #:	#
DRAWN:	
CHECKED:	

A.02
Plotted On: 12/14/20

FIRST FLOOR PLAN

I:\Users\brianmcmillen\Documents\Projects\2020\Valley Country Store 2\Valley Country Store 4.pln





DETENTION BASIN

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The Boutet Company, Inc.
601 E. 57th Place #102
Anchorage, AK. 99518
Ph. 907-522-6776
License No. AECC957

CONSULTANT

STATE OF ALASKA
TIMOTHY J. ALLEY
CE 14368
05/02/22
REGISTERED PROFESSIONAL ENGINEER

SEAL

VALLEY COUNTRY STORE 4
WASILLA, ALASKA

CIVIL SITE & UTILITY IMPROVEMENTS

VALLEY COUNTRY STORE 4
DRAINAGE PLAN

HORZ SCALE: 1"=40'
VERT SCALE: N/A
DATE: 05/02/2022

SHEET C7

DATE/TIME | 5/10/2021 | LAYOUT | DESIGNED | HJH | CHECKED | TJA | DRAFTED | HJH

FILE | W:\WASILLA\FILES\GITTLEINS\VALLEY COUNTRY STORE 4\TBC ACAD\VCS-4 DRAINAGE PLAN.DWG

PROPERTY LINE
ABSORPTION FIELD FOR FUTURE USE
ABSORPTION FIELD
SEPTIC TANK
36" SWINGING GATE
6' HIGH CHAINLINK FENCE
ONE 12,000 AND ONE 8,000 GAL FUEL TANK F&I 20LB ABC FIRE EXTINGUISHER WITHIN FUEL TANK AREA
12' ROLLING GATE
4,000 GALLON HOLDING TANK
RV DUMP STATION SEE DETAIL.
WATER SPIGOT REFER TO MECHANICAL
R200.0' WELL RADIUS
6' HIGH SCREENING FENCE SEE DETAIL.
R100.0' WELL RADIUS
COFFEE SHOP
CONCRETE PARKING BUMPER (TYP)
4467 SF CONVENIENCE AND LIQUOR STORE
HIGH FLOW DIESEL
FOUR PRODUCT FUEL PUMPS F&I 20LB ABC FIRE EXTINGUISHER AT EACH FUELING ISLAND
1,000 GALLON PROPANE TANK F&I 20LB ABC FIRE EXTINGUISHER REFER TO MECHANICAL
MONUMENT SIGN
WATER SPIGOT
ROW
PROPERTY LINE
EXISTING DRIVEWAY
PEKING COTONEASTER, 36" HT. (TYP. OF 9)
WHITE SPRUCE, 2" CAL. (TYP. OF 4)
EXISTING DRIVEWAY
S. TRUNK RD

N

0 20 40 Feet

NOTES:

MAINTAIN A 50' BUFFER FREE OF BRUSH, DEBRIS, AND OTHER COMBUSTIBLE MATERIALS AROUND PROPANE AND FUEL STORAGE AREAS.

The Boutet Company, Inc.
601 E. 57th Place #102
Anchorage, AK. 99518
Ph. 907-522-6776
License No. AECC957
CONSULTANT

SEAL

TIMOTHY J. ALLEY
CE 14368
05/10/21

VALLEY COUNTRY STORE 4
WASILLA, ALASKA

CIVIL SITE & UTILITY IMPROVEMENTS

VALLEY COUNTRY STORE 4

HORZ SCALE: 1"=30'
VERT SCALE: N/A
DATE: 05/10/2021
SHEET C7

DATE/TIME | 5/10/2021 | LAYOUT | DESIGNED HJH | CHECKED TJA | DRAFTED HJH
FILE W:\WASILLAFILES\GITTLEINS\VALLEY COUNTRY STORE 4\TBC ACAD\VCS-4 SITE-PLAN.DWG

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Mat-Su Borough
Development Services

TRAFFIC IMPACT ANALYSIS (TIA) THRESHOLD WORKSHEET

Complete this form as an aid to determine if your project requires a Traffic Impact Analysis, as per Borough Code 17.61.

Project Name: Valley Country Store #4
Location: 3068 South Trunk Road / Happy Valley Lot 1B / MSB Tax # 8150000L001B
Applicant: Matt Gittlein ☑ **Owner** or ☐ **Agent**
Address: 4891 E. Stoney Hollow Dr., Wasilla AK 99654
Phone: 907-841-5666

Box A (Original TIA) *NON-RESIDENTIAL DEVELOPMENT*

Anticipated Land Use	Project Size 4,467SF / 8 Gas Pumps			Peak Hour?	Daily Trip Rate	Peak Hour Trips	Trip Rate Source
	Acres	GFA	Other*				
Conv. Mkt w/ Gas 853		845.60	542.60	3:15-4:15PM	3,974/4,341	239/153	ITE Gen., 9th Ed.

*Specify: Per Fueling Positions at Pumps

Box B (Updated TIA) Complete only if property already has a TIA on file.

Peak Hour Trips Projected In Current TIA	Peak Hour Trips (from Box A or B) Projected in *Updated* Development Plan	Increase in Peak Hour Trips (If over 100 additional trips, a new TIA is required)

Box C (Information regarding the person/agency who prepared the TIA)

Prepared by:	Date:
Comments:	

For Official Use only.

A Traffic Impact Analysis is required. The applicant preparing the study should meet with Borough staff
__X__ to discuss the scope and requirements of the study before beginning the study.
A Traffic Impact Analysis is **not required**. The traffic generated by the proposed development does not
_____ exceed the threshold requirements.
_____ The Traffic Impact Analysis has been waived for the following reason(s):_____

Reviewed by:_____ Date:_____

NOTE: GFA = Gross Floor Area (building size).
ITE = Institute of Transportation Engineers, *Trip Generation*, 6th Edition, 525 School Street SW, Ste. 410 Washington, DC 20024-2729; (202)554-8050

PEAK HOUR TRIP RATES FOR COMMON LAND USES

Land Use	Peak Hour	Peak Hour Trip Rate	Daily Trip Rates	% Entering % Exiting	ITE Code
Automobile Care Center	PM/SAT	4.01 per 1,000 Sq. Ft.	15.86	51/49	840
Automobile Parts Sales	PM	6.44 per 1,000 Sq. Ft.	61.91	51/49	843
Automobile Sales (New)	SAT	2.97 per 1,000 Sq. Ft.	21.03	51/49	841
Drive-Through Bank	PM	51.23 per 1,000 Sq. Ft.	265.21	50/50	912
Business Park	AM	1.43 per 1,000 Sq. Ft.	12.76	84/16	770
Car Wash, Self Service	SAT	20.60 per Wash Stall	n/a	50/50	847
Clinic	PM	1.31 per Employee	7.75	50/50	630
Convenience Store (open 15-16 hours)	PM	36.22 per 1,000 Sq. Ft.	n/a	49/51	852
Convenience Store (open 24 hours)	AM	65.39 per 1,000 Sq. Ft.	737.99	50/50	851
Day Care Center	PM	13.94 per 1,000 Sq. Ft.	79.26	47/53	565
Convenience Store with Gas Pumps	PM	65.27 per 1,000 Sq. Ft.	845.60	50/50	853
Discount Store	SAT	7.66 per 1,000 Sq. Ft.	72.03	51/49	815
Drinking Place	PM	15.49 per 1,000 Sq. Ft.	n/a	68/32	836
Golf Course	SAT	0.64 per Acre	5.82	52/48	430
Hospital	SUN	1.75 per 1,000 Sq. Ft.	9.91	33/67	610
Hotel	SAT	0.72 per Room	8.19	56/44	310
Industrial Park	PM	0.92 per 1,000 Sq. Ft.	6.96	21/79	130
Industrial, Heavy	PM	0.68 per 1,000 Sq. Ft.	1.50	n/a	120
Industrial, Light	PM	1.08 per 1,000 Sq. Ft.	6.97	14/86	110
Manufacturing	AM	0.78 per 1,000 Sq. Ft.	3.82	68/32	140
Manufactured Home Park	PM	0.58 per Occupied Unit	4.81	26/74	240
Motel	PM	0.58 per Room	5.63	54/46	320
Movie Theater with Matinee	SAT	89.81 per Screen	529.47	58/42	444
Office Building, General	AM	1.56 per 1,000 Sq. Ft	11.01	88/12	710
Office Building, Medical-Dental	PM	4.36 per 1,000 Sq. Ft.	36.13	40/60	720
Office Building, Single Tenant	AM	1.78 per 1,000 Sq. Ft.	11.57	89/11	715
Office Park	AM	1.74 per 1,000 Sq. Ft.	11.42	89/11	750
Pharmacy, without Drive-Through	PM	8.62 per 1,000 Sq. Ft.	90.06	49/51	880
Quick Lubrication Vehicle Shop	PM	5.19 per Bay	n/a	55/45	837
Recreational Community Center	AM	2.68 per 1,000 Sq. Ft.	n/a	53/47	495
Single Family (PUD)	PM	0.72 per Unit	7.50	64/36	270
Single Family	PM	1.02 per Unit	9.57	64/36	210
Restaurant, Fast-Food (with Drive-Through)	SUN	72.74 per 1,000 Sq. Ft.	542.72	48/52	834
Restaurant, Fast Food (w/o Drive-Through)	AM	63.50 per 1,000 Sq. Ft.	716	52/48	833
Restaurant, High Turnover	SAT	20.00 per 1,000 Sq. Ft.	158.37	63/37	832
Restaurant, Quality	SAT	10.82 per 1,000 Sq. Ft.	94.36	59/41	831
School, Elementary	AM	0.30 per Student	1.02	5//42	520
School, High	AM	0.46 per Student	1.79	70/30	530
School, Middle/Junior High	AM	0.46 per Student	1.45	57/43	522
Service Station, with Convenience Market (w/Car Wash)	PM	13.77 per Fueling Position	152.84	50/50	846
Service Station, with Convenience Market (w/o Car Wash)	PM	13.57 per Fueling Position	162.78	50/50	845
Shopping Center	SAT	4.97 per 1,000 Sq. Ft.	49.97	51/49	820
Specialty Retail Center	AM	6.41 per 1,000 Sq. Ft.	40.67	48/52	814
Supermarket	SUN	18.93 per 1,000 Sq. Ft.	166.44	n/a	850
Video Rental	PM	13.60 per 1,000 Sq. Ft.	n/a	46/54	896
Warehousing, General	PM	0.61 per 1,000 Sq. Ft	4.96	8/92	150
Warehousing, Mini	SAT	0.40 per 1,000 Sq. Ft.	2.33	n/a	151

Peggy Horton

From: Tim Alley <talley@tbcak.com>
Sent: Thursday, April 28, 2022 10:23 AM
To: Jamie Taylor
Cc: Peggy Horton; Michelle Olsen; Brad Sworts; Andy Dean
Subject: RE: Valley Country Store/Trunk Road
Attachments: Valley Country Store 4 TIA ver 3.pdf

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]
Good Morning,

The revised TIA is attached with comment responses below.

Please let me know if you have any questions or would like to discuss further.

Thank you,
Tim

TIA comments:

Page 2 Required sight distance listed does not account for a design vehicle other than a passenger vehicle. I assume the design vehicle is a tank truck, for which AASHTO requires 695/765 feet of sight distance. (Perhaps fuel trucks could be restricted to exiting from the north driveway only.) Filling of the fuel tanks will happen 2-3 times a week and will not be a substantial contributor to the traffic. Per AASHTO Chapter 9.5.3, Case B-1: "In applying Table 9-5, it can usually be assumed that the minor-road vehicle is a passenger car. However, where substantial volumes of heavy vehicles enter the major road, such as from a ramp terminal, the use of tabulated values for single-unit or combination trucks should be considered." That said, it is probable that fuel trucks will be traveling from the north to the site so they will most likely utilize the northern driveway anyway.

Page 4 That AADT count is from 2019. There is 2020 data, but I recommend still using the 2019 data because the 2020 data is likely skewed due to COVID shut downs. Correct, the 2019 traffic count was reported. Page 4 has been updated.

Page 6 Add discussion of accident history. Traffic accident history added to page 4

Page 7 The projected traffic discussion should include ALL uses within the properties using the driveways and the assumptions used in determining the peak hour traffic volume. Discussion for the coffee shop use is provided on page 7. The liquor store is included in the ITE Vehicle Trip Generation for Convenience Market with Gas Pumps, 853. This is a conservative value as it is expected that amount of trips to the liquor store will be less than a convenience market due the age restriction and operating hours of the liquor store.

Pages 7-9 The PM base traffic flow is 229 (2021)/286 (2032), which is more than the ITETG estimate of 158 for pass-by traffic. I agree that the pass-by traffic estimate is probably high, though. What percentage of new trips come from and return to the north and what percentage come from and return to the south? I would guess a higher percentage of new trips will come from the north/Parks Highway which doesn't seem to be reflected in the turning movement estimates and also will skew the existing 55/45 peak hour traffic flow split. See page 11 comment response below. The percentage of pass by traffic is assumed to be 33% of the total traffic generated (240 vph) or 80 vph pass by. The pass by traffic is assumed to use

the 55%NB/45%SB (TIA incorrectly stated 45%NB /55%SB) peak hour split based on the existing traffic counts. The 80 vph pass by is subtracted from the 286 vph projected resulting in the remaining 90/116vph base traffic shown in the figure on page 10. It is difficult if not impossible to estimate what the split for new trips will be between driveways. While the parks highway is a very high volume road the station is not visible from it many vehicles will continue to the station off Hyer which is visible from the highway. The result is that the current development to the south could provide more new trips since this is the closest convenience store/gas station.

Page 10

Other Planned Developments: 89 lots have been created in the View Pointe at the Ranch subdivision since late 2020, which has potentially increased the traffic on S Trunk more than 2% per year for the last two years. The traffic count for 2020 is less than 2019. We are contributing that to covid shutdowns however, a larger number of people are working from home as result of covid. It is impossible to account for that until further information is gathered. The traffic growth of 2% is the average of 10 years. Furthermore, the current peak hour was determined to be 3:15 PM to 4:15 PM coinciding with the end of day for Machetanz Elementary. The new lots are south of the gas station so it is expected that the majority of traffic will contribute to STR south of the gas station.

Also, while 89 lots may have been created they have not all be developed. It does not account for total build out of the subdivision or economic slow down that is imminent considering current inflation. It should also be noted that the development of these lots generates trips from the construction workers which will cease once development is completed.

Page 10

LOS is listed for the driveway intersections, but not the road segments themselves. 11.12.080(A)(5)(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. Discuss whether this criteria will be met and include LOS analysis if so. MSB Code 11.12.080(A)(5)(b) is in regards to what the traffic impact analysis must address. It does not require a LOS analysis for the road segments. This is a very uncommon thing to require due to the amount of variables involved. It is rarely required by AKDOT or other municipalities typically only for very high volume roads/freeways.

Page 11

The TIA previously stated 67% of the 239 trips generated by the site would be new trips (160). If more than 60% of these new trips come from and return to the north, ADOT/PF's threshold of 100 new trips is met. It should be noted that the ITE trip Generation manual is highly conservative and does not take into account location of the development, local population density or variations in the peak hour. For this site in particular the peak hour is based on the traffic generated by Machetanz Elementary as the peak traffic count was between 3:15 and 4:15 PM. The new trips regenerated will most likely coincide with peak traffic times on nearby high volume roads (e.g. 5:00PM-6:00 PM) rush hour traffic. We are being additionally conservative by adding the new trips to the current peak hour. Also, Valley Country Store 3 current utilizes a total of 24,000 gallons fuel storage between regular, premium, diesel and heating fuels. The tanks are filled every 2-3 days. Assuming an average of 15 gallons per car and the tanks are completely emptied, this location would see a total of 1,600 vehicles per 2-3 days or 500-800 vpd much lower than the ITE estimate of 4341

Utilizing a 60% north driveway and 40% south driveway split applied to the new trips will not result in over 100 vph in any movement onto or off of Trunk Road. Currently, we have estimated 80 vph (33% of 239 vph) for pass by and 160 vph (66% of 240) new trips. The 80 vph is spilt 50/50 between the two driveways for a total of 40 vph per hour. Movements into and out of the site are slit 55% north bound and 45% southbound based on the peak hour traffic count. For the north driveway, there would be 22 vph turn left (NB) onto trunk and 18 vph turning right into the site. Adding the 60/40 split for new trips the norther driveway would see an additional 140 vph split 50/50 in and out. For a total of 92 vph turning NB onto trunk from the northern driveway and 88 turning south into the northern driveway.

Neither movement is over 100 vph and does not account for traffic that still may pass the north driveway and utilize the south or turn into the north and utilize the south for exit.

The Alaska Highway Preconstruction Manual Chapter 11 section 1190.5(11) states: "On high-speed (50 mph or over) or high-volume arterial roadways, speed change lanes may be required for the acceleration or deceleration of vehicles entering or leaving the public roadway from or to a higher-volume traffic generation (greater than or equal to 100 vehicles per hour) or attracting development." A Valley Country Store was recently constructed at the corner of Trunk Road and Palmer Fishhook Road. This store is slightly larger size (similar trip generation) and utilizes two driveways. It also created greater than 100 trips but less than 250 trips and classified as a "Medium Generator". Also, both Trunk Road and Palmer Fishhook Road are both two lane roads with a much higher AADT and are both posted at 55 mph. No speed change or turn lanes were required by AKDOT.

With these considerations in mind, the current TIA is sufficiently conservative in the traffic estimate provided and accel./decel. And turn lanes are not warranted.

Page 12 The second recommendation is not clear. Show if turn lanes are warranted per the two publications listed in 11.12.070(B)(4)&(5). Turn lane warrant analysis has been added to the TIA. No turn lanes are warranted.

TBC, Inc. Project Management & Development - Engineering - Surveying - Landscape Architecture

Tim Alley, P.E.
Principal/Vice President

talley@TBCak.com

visit us at www.TBCak.com

The Boutet Company, Inc.
1508 E. Bogard Rd., Unit 7
Wasilla, Alaska 99654

Direct: 907.357.6760
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Main: 907.357.6770
Fax: 907.357.6750

From: Jamie Taylor <Jamie.Taylor@matsugov.us>
Sent: Friday, April 22, 2022 2:31 PM
To: Tim Alley <talley@tbcak.com>
Cc: Peggy Horton <Peggy.Horton@matsugov.us>; Michelle Olsen <Michelle.Olsen@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>
Subject: Valley Country Store/Trunk Road

Hi Tim –

Here is the written summary of my comments that we discussed a few weeks ago.

Driveway permit comments:

1. The landing slope, length, curve return radii, and cut/fill slopes are not specified in the permit application. The construction plans submitted for the original driveway permits shows standard plan & profile design information with a range of allowable landing slopes, but since these driveways are existing the actual dimensions and slopes should be given.
2. 11.12.070(A)(8)(f) allows for reduced spacing for a variety of reasons when recommended by the engineer and approved by the Borough. The TBC memo dated 11/2/2021 regarding driveway spacing does not identify any of the reasons listed in 11.12.070(A)(8)(f) as the basis for recommendation of approval for reduced spacing.
3. What is the culvert gauge and slope? End sections are required per 11.12.070(A)(2).
4. What is the design vehicle?

5. Submit plan showing driveway sight triangles. The design vehicle will determine the minimum sight distance.
6. Submit a plan & profile showing asbuilt conditions with information in comment #1. Also show stop signs and painted stop bars.
7. Provide turn lane warrants per 11.12.070(B)(4)&(5)

TIA comments:

Page 2	Required sight distance listed does not account for a design vehicle other than a passenger vehicle. I assume the design vehicle is a tank truck, for which AASHTO requires 695/765 feet of sight distance. (Perhaps fuel trucks could be restricted to exiting from the north driveway only.)
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Page 6	Add discussion of accident history.
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Page 10	Other Planned Developments: 89 lots have been created in the View Pointe at the Ranch subdivision since late 2020, which has potentially increased the traffic on S Trunk more than 2% per year for the last two years.
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Page 12	The second recommendation is not clear. Show if turn lanes are warranted per the two publications listed in 11.12.070(B)(4)&(5).

CUP comments:

A. More information is needed about the detention pond – what storm event it is sized for, contours or spot elevations showing how deep it is, how the impervious areas are graded to the detention basin, where overflow will go, and how overflow will be treated (for example with a grass filter strip). One of the grading and drainage plans submitted has contours but they do not seem to reflect what is currently constructed (it shows the north driveway slopes to Trunk Road at 10%, but it is actually relatively flat).
B. Traffic flow diagram does not show traffic flow to the coffee kiosk, this is important in regards to vehicle and pedestrian conflicts.

Let me know if you have any questions.

Jamie Taylor, PE (she/her)
Civil Engineer
Matanuska-Susitna Borough
Department of Public Works
t: 907-861-7765 c: 907-355-9810
jamie.taylor@matsugov.us
http://www.matsugov.us/

Memorandum

THE BOUTET COMPANY, INC.

601 E. 57th Place, Suite 102
Anchorage, Alaska 99518

Tel: (907) 227-8560
Fax: (907) 522-6779
e-mail: jboutet@tbcak.com

RECEIVED
APR 28 2022
Mat-Su Borough
Development Services

Date: **April 27, 2022**

To: Tim Alley, PE
Project Manager

From: Jacques Boutet, PE
Project Engineer

Subject: Valley Country Store
STR
Traffic Impact Analysis

Introduction

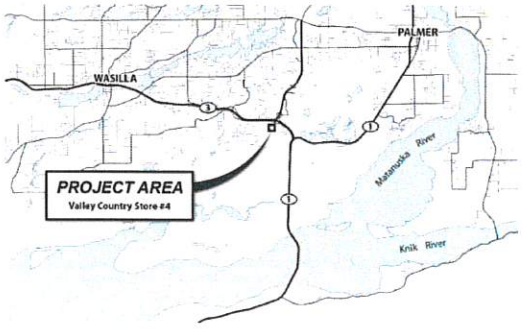
This Traffic Impact Analysis (TIA) was prepared in support of Conditional Use Permit application submitted to Matanuska-Susitna Borough (MSB) for a proposed development that would be located at 3068 South Trunk Road (STR), near Wasilla, Alaska.

DEVELOPMENT INFORMATION

Development Description

KG Enterprises, LLC (KGE) proposes to construct a convenience store with gas pumps in adjacent to the west Right-of-Way (ROW) line for STR, approximately 1,500 feet south of its interchange with East Parks Highway (EPH). More specifically, the project would be located within Lot 1B, Happy Valley Subdivision.

The figure below presents a location map for the project area.



Land Use Intensity

The proposed convenience store includes a 4,467 square foot structure and eight (8) fueling stations. A 600-square foot drive-through coffee kiosk and an RV dump station would also be located on the site.

These improvements would be constructed within a 75,000-square foot (approximate) paved apron that would also accommodate traffic circulation, parking, loading and fuel storage. It is noted that paved area covers only 60% of the 3-acre property and that the undeveloped area has no planned improvements.

The following figure presents an overall site plan for the proposed development.

Proposed Zoning Changes/Variances

The project area is currently unzoned, hence no changes or variances are required or proposed.

Construction Year

Site development inclusive of construction of the store and gas pumps will be completed in 2022.

Access and Sight Distance

The site will be access via two (2) driveways along STR constructed by MSB during its reconstruction of STR in 2018.

The northern driveway is located off-property, within Lot 1A, immediately north of the project site. Perpetual use of this driveway for the project will be secured by a recorded access agreement.

The southern driveway is located at the southeast corner of the project's paved apron, approximately 300 feet (centerline-to-centerline) south of the northern driveway.

Sight distances were measured by field observations. It is noted that STR has a posted speed limit of 45 miles per hour (mph) which requires a minimum intersection sight distance of 500 feet (per AASHTO) for left turn movements (430 feet required for right turns). The results of the sight distance measurements are presented in the table below:

Driveway	*Facing Direction*	*Measured Sight Distance*	*Required Sight Distance*	*Status*
North	North	1,160 feet	500 feet	Adequate
	South	810 feet		Adequate
South	North	1,100 feet		Adequate
	South	510 feet		Adequate

PROJECT AREA BACKGROUND

Surrounding Land Zoning

Properties surrounding the project area are unzoned.

Surrounding Land Uses, Adjacent Development and Current Site Land Use

The table below summarizes current land uses for properties surrounding the project.

Direction of Surrounding Property From Project	***Current Land Use***
Project site (Lot 1B)	Heavy equipment laydown/temporary storage yard
North and West (Lot 1A)	Heavy equipment laydown/temporary storage yard
East	Trunk Road ROW and gravel pit (east of Trunk Road)
South	Residential subdivision

Current Traffic Improvements Already Funded, Programmed or Planned

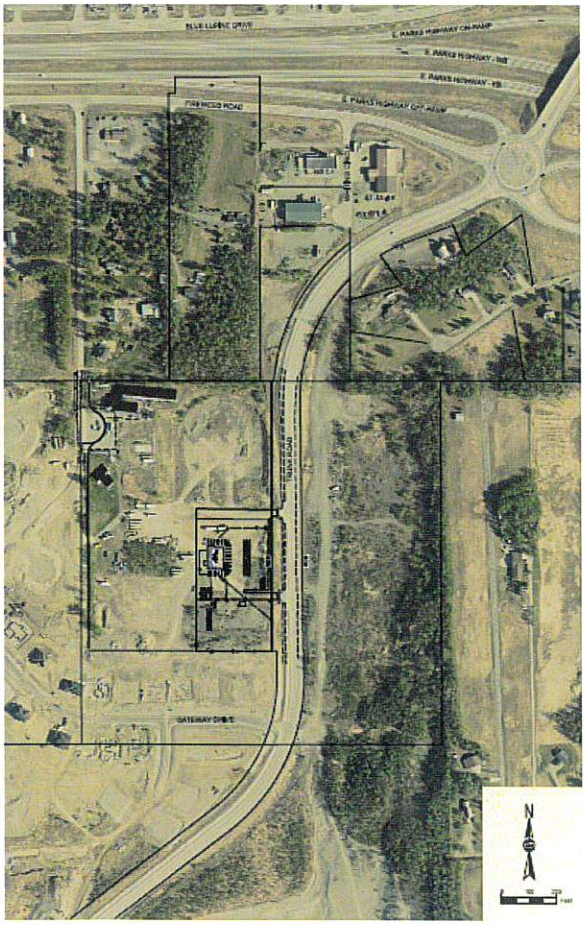
STR, which front's the site's east boundary and provides its two access points was upgraded to rural arterial standards in 2018 through an MSB-sponsored road project.

Gateway Drive, which serves the residential subdivision on the project site's south boundary was recently constructed, as part of that subdivision's build-out.

DATA REQUIREMENTS

Study Area Street Network

The graphic below presents the street network that is peripheral to the project area.



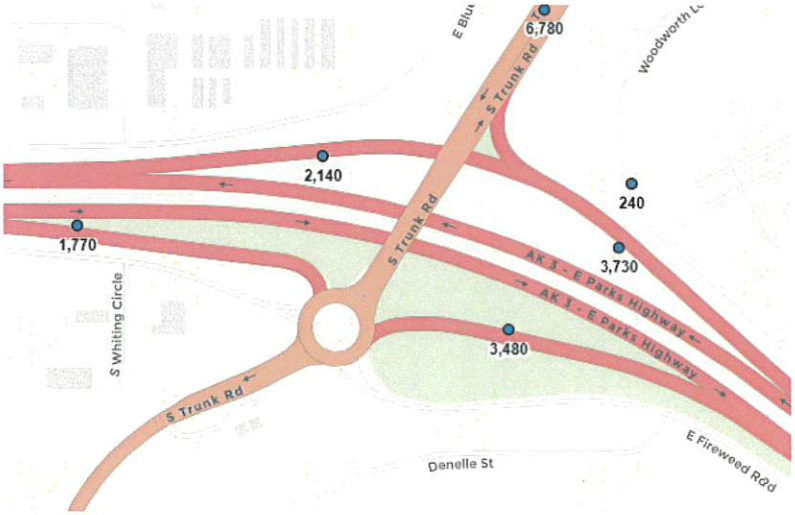
The key roadway that would convey traffic to and from the project site is STR, which is contiguous to the project's east boundary. Also of interest is EPH, which intersects STR approximately 1,600 feet north of the project area. EPH connects MSB with southcentral and interior Alaska. It is noted that the south roundabout for the EPH/STR interchange is located 1,600 feet north of the project site. Moreover, the extremely low volumes anticipated to be generated by the project are expected to have negligible impact on operations on EPH. Consequently, for purposes of this TIA, EPH was not considered a "key roadway".

Traffic Volumes for Key Roadway

The table below summarizes Annual Average Daily Traffic (AADT) on STR, the key roadway, as presented in "Matanuska-Susitna Borough Traffic Count Data 2019" published by MSB GIS Division.

Roadway	*Count Location*	*AADT (vehicles/day)*	*Data Source*
STR	1,360 ft south of EPH	1,351	MSB Traffic

Other AADT's (from data acquired by ADOT/PF) are presented in the graphic below:



STR Traffic Accident History

Accident history on STR has been provided by MSB. No recorded accidents have occurred south of the STR and Fireweed Roundabout since STR south was opened.

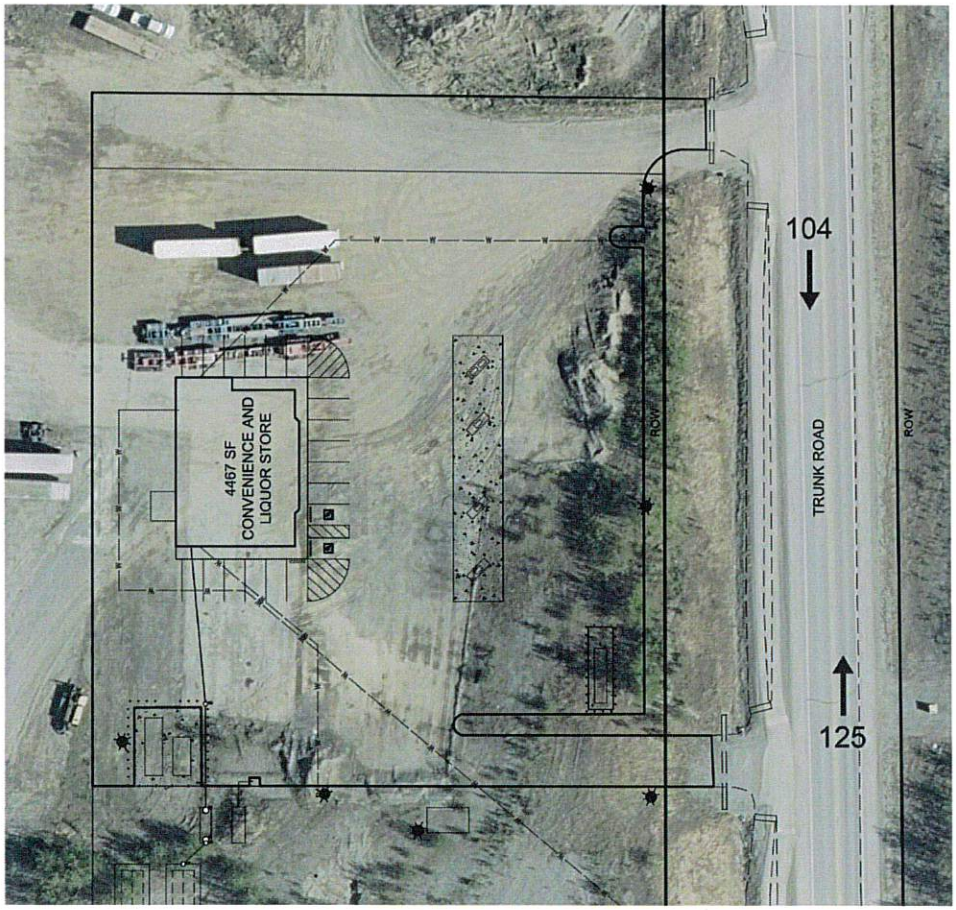
Field Traffic Counts for Key Roadway

The table below presents the results of peak hour counts acquired on STR at the project site's proposed north driveway.

AM Counts					PM Counts			
Friday, October 15, 2021					Thursday, October 14, 2021			
Time	**SB**	**NB**	**Total**		**Time**	**SB**	**NB**	**Total**
6:00-6:15	0	3	3		3:00-3:15	30	13	43
6:15-6:30	1	15	16		3:15-3:30	39	16	55
6:30-6:45	3	17	20		3:30-3:45	35	8	43
6:45-7:00	9	13	22		3:45-4:00	18	68	86
7:00-7:15	7	17	24		4:00-4:15	12	33	45
7:15-7:30	5	13	18		4:15-4:30	29	16	45
7:30-7:45	5	13	18		4:30-4:45	28	22	50
7:45-8:00	7	24	31		4:45-5:00	28	19	47
8:00-8:15	10	20	30		5:00-5:15	23	18	41
8:15-8:30	14	14	28		5:15-5:30	28	12	40
8:30-8:45	9	9	18		5:30-5:45	31	14	45
8:45-9:00	9	8	17		5:45-6:00	19	12	31
9:00-9:15	19	11	30		6:00-6:15	22	14	36
9:15-9:30	27	14	41		6:15-6:30	19	9	28
9:30-9:45	32	42	74					
Peak Totals	**87**	**75**	**162**		**Peak Totals**	**104**	**125**	**229**
Directional Distribution	54%	46%				45%	55%	

It is noted that both observed peak hour flows do not correlate with typical peak hours, and are likely associated with the commencement and dismissal for Machentanz Elementary School, located on E. Nelson Road, approximately two miles away. That said, using the STR AADT of 1351, the AM and PM Peak Hours equate to 12% and 17%, respectively, of the route's AADT.

The figure below presents STR's peak hour traffic flows at the project



BASE (SOUTH TRUNK ROAD) TRAFFIC
PM PEAK HOUR

STR Geometry

STR is a two-lane strip-paved roadway with widened, paved shoulders with a paved, 10-foot wide multi-use pathway along the west side (contiguous with project area). The posted speed limit is 45 miles per hour (MPH).

Sidewalks, Bike Lanes and Other Non-Motorized Traffic Facilities

Within the project study area, STR has a separated 10-foot paved multi-use pathway along its west side.

Transit Operations and Facilities

There are no transit facilities on STR within the project study area. Other than pupil transportation, there is currently no public transportation operating on STR.

TRAFFIC FORECASTING

Projected Site Traffic

Per Institute of Transportation Engineers, Trip Generation, 9th Edition (ITETG), the project is classified as a "Convenience Market with Gasoline Pumps", Retail Code #853. Traffic studies have identified two parameters for estimating site traffic at convenience markets with gasoline pumps: square-feet of building area and number of fueling positions. The table below summarizes ITETG's traffic generation rates for these parameters.

Description/ITE Code	*Units*	*ITE Vehicle Trip Generation Rates* (peak hours are for peak hour of adjacent street traffic unless highlighted)							
		Weekday	AM	PM	Pass-By	AM In	AM Out	PM In	PM Out
Convenience. Mkt w/ Gas Pumps 853	*MSF*	845.60	40.92	50.92	66%	50%	50%	50%	50%
Convenience. Mkt w/ Gas Pumps 853	*Fuel Position*	542.60	16.57	19.07	66%	50%	50%	50%	50%

The table below presents estimated peak hour traffic for the project based on the ITETG parameters:

Parameter	*Weekday ADT*	*AM Peak*	*PM Peak*	*PM Pass By*	*PM Inbound*	*PM Outbound*
Bldg size	3974	192	**239**	158	120	120
Gas Pump	4341	133	**153**	101	76	76

Because the peak hour traffic volumes associated with building size were greater, these volumes were carried forward in this analysis.

The project also includes a 600 SF drive-through coffee kiosk. ITETG established a land-use category for "Coffee/Donut Shop with Drive-Through Window and No Indoor Seating" (LU 938). The PM Peak Hour Trip Generation factor is 83.33 trips/1000 SF. Moreover, ITETG data indicates that 89% of the trips to these facilities are "pass-by" trips that are included in Base Traffic. The trip generation calculation for the drive-through coffee kiosk is as follows:

Description/ITE Code	*Units*	*ITE Vehicle Trip Generation Rates* (peak hours are for peak hour of adjacent street traffic unless highlighted)							
		PM	Pass-By	PM In	PM Out				
Coffee/Donut Shop with Drive-Through Window and No Indoor Seating 938	*MSF*	83.33	89%	5	5				
Proposed Drive-Through Coffee Kiosk		50	89%	3	3				

The neighboring property, Happy Valley Tract 1A, will share the northern driveway with this development. This property is utilized as a "truck stop" for truck drivers to time out when they have reached their maximum driving time. Based on field observation it is estimated that the site generates approximately 20 trips per day but are typically outside of the peak hours.

As is discussed below, it is noted that applying the ITETG estimate for "pass-by" traffic, site traffic would EXCEED the base traffic flow. Consequently, it was assumed that the actual "pass-by" traffic diverting into and out of the site will be a much smaller percentage and that the site will attract a higher proportion of new trips onto STR.

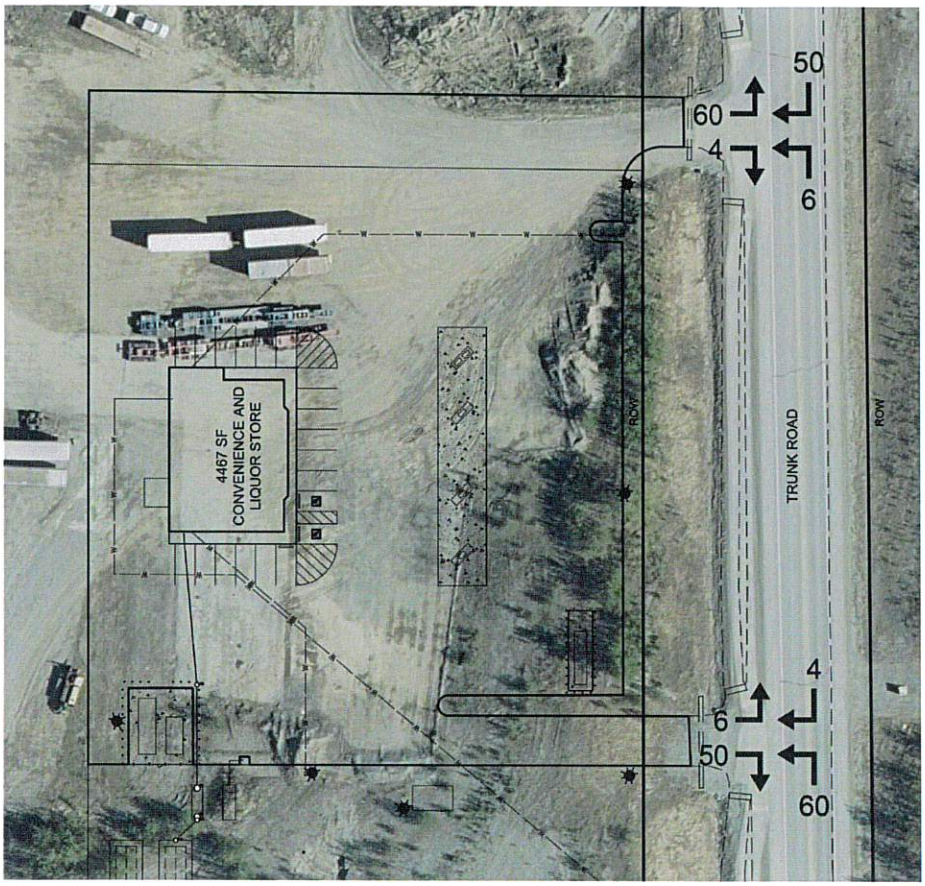
Because very conservative values for "new trips" associated with the gas station/convenience store were used in this analysis, the 6 "unique" trips associated with the drive-through coffee kiosk were assumed to be included in the high values assigned "new trips".

Projected Trip Distribution

As discussed, the project proposes two driveways to accommodate site traffic, both along STR. Because peak hour traffic flows on STR are split 45/55 (SB/NB), movements in and out of the site were allocated with the same proportions. It was also assumed that SB traffic would turn into the northern driveway and exit via the southern driveway. NB traffic was assumed to turn in and out via the southern driveway and northern driveway, respectively. A small proportion of the site traffic was assigned to the other possible turns in and out of the site. The table below presents the directional splits for site traffic.

	NB Traffic		***SB Traffic***	
	NBLT In	*EBLT Out*	*SBRT In*	*EBRT Out*
North Driveway	6	60	50	4
South Driveway	60	6	4	50

The figure below presents the estimated peak hour turning movements for site-oriented traffic entering and exiting from STR.



VCS #4 SITE TRAFFIC
PM PEAK HOUR

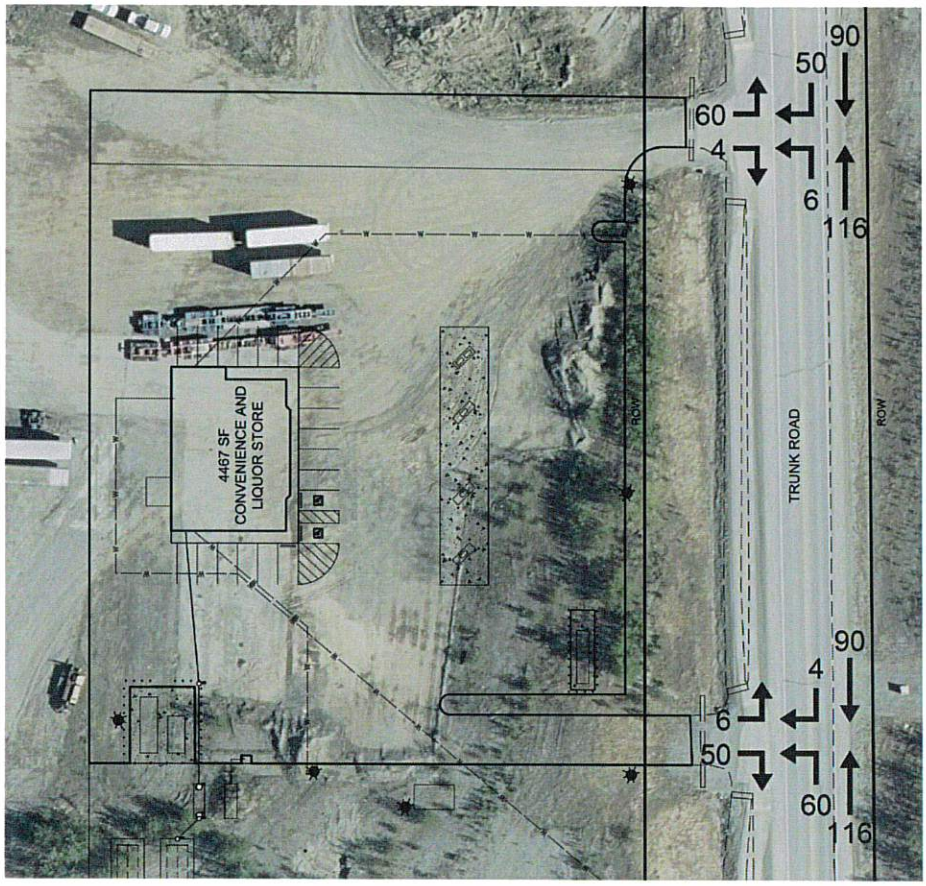
Projected Traffic On STR

With this VCS proposed to open in 2022, a 10-year planning horizon establishes 2032 as the "design year" for traffic forecasting. Moreover, assuming two percent (2%) annual growth for traffic on STR, the following base traffic flows are estimated:

Direction on STR	*2021 Peak Hour*	*2032 Peak Hour*
NB	125	156
SB	104	130
Totals	**229**	**286**

It is noted that applying the ITETG estimate for "pass-by" traffic, site traffic would EXCEED the base traffic flow. Consequently, it was assumed that the actual "pass-by" traffic diverting into and out of the site will be a much smaller percentage and that the site will attract a higher proportion of new trips onto STR. For this TIA, it was assumed that thirty-three percent (33%) of site traffic will be "pass-by" traffic and the remaining 67% will be new trips on STR.

Using this modified estimate of "pass-by" traffic, the figure below presents the estimated peak hour movements for base plus site traffic at the two proposed driveways.



VCS #4 SITE TRAFFIC AND BASE TRAFFIC
PM PEAK HOUR

Other Planned Developments

As of the time this TIA was prepared there are no ongoing or planned developments peripheral to the project site that would directly access STR.

TRAFFIC FORECASTING

Intersection Capacity Utilization (Levels of Service) at Project Driveways

Traffic movements at both intersections were analyzed using Synchro Studio trafficware applications. The table below presents the results of these analyses.

Intersection	*Intersection Capacity Utilization*	*Level of Service*
North Driveway/STR	26%	A
South Driveway/STR	30%	A

Left and Right Turn Lane Warrant

For left turn lane warrant analysis the *Highway Research Record 211: Volume Warrants for Left-Turn Storage Lanes at Unsignalized Grade Intersections* was used per MSB Code 11.12.070(B)(5). Figure 13 in Highway Research Record 211 Depicts the left turn storage lands on two-lane highways for 50 mph travel speeds and 40% left turn movements. The Table below summarizes the analysis.

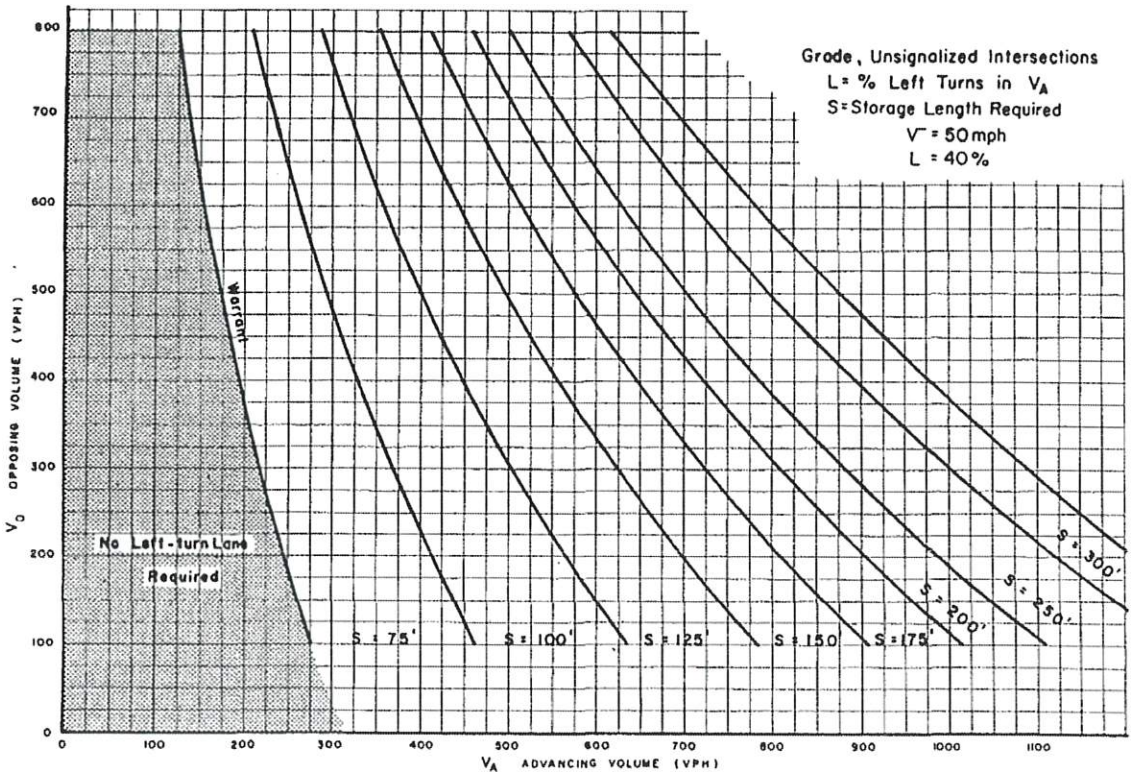
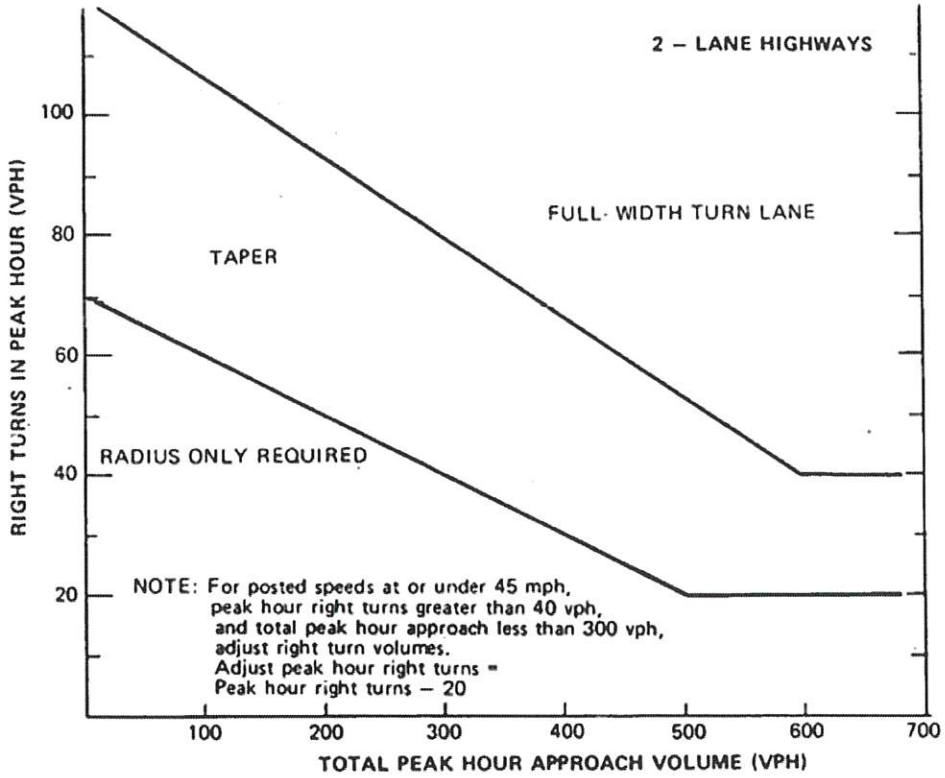


Figure 13. Warrant for left-turn storage lanes on two-lane highways.

Intersection	*Opposing Traffic Volume (V_o)*	*Advancing Traffic Volume (V_a)*	*Left Turn Lane Warrant*
North Driveway/STR	140	122	None
South Driveway/STR	94	176	None

The *National Cooperative Research Program Report 279* Figure 4-23 was used for analyzing the warrant for right turn lanes as required by MSB Code 11.12.070(B)(4). The maximum right turn lane traffic volume will be realized at the northern approach into the site. The analysis above yields a southbound right turn movement into the site at 50 vph and the total volume at the driveway is 120 vph. With STR traveling speed posted at 45 mph the right turn movement is to be adjusted per Figure 4-23 where the Adjusted Peak Hour Right Turn equals the Peak Hour Right Turns minus 20. This results in a Adjusted Right Turn of 30 vph requiring only a radius return at the approach.



Parks Highway/STR Roundabout

The Parks Highway/STR roundabout is a State highway facility administered by ADOT/PF. ADOT/PF policy requires analysis of potential impacts to its facilities for projects generating 100 or greater net "new" trips per hour. Because the project does not meet this threshold, capacity of analysis of the roundabout was not performed.

However, "NCHRP 672 – The Roundabout Guide" provides the following guidance on roundabout capacities:

Exhibit 1-9
Roundabout Category Comparison

Design characteristics of the three roundabout categories.

Design Element	Mini-Roundabout	Single-Lane Roundabout	Multilane Roundabout
Desirable maximum entry design speed	15 to 20 mph (25 to 30 km/h)	20 to 25 mph (30 to 40 km/h)	25 to 30 mph (40 to 50 km/h)
Maximum number of entering lanes per approach	1	1	2+
Typical inscribed circle diameter	45 to 90 ft (13 to 27 m)	90 to 180 ft (27 to 55 m)	150 to 300 ft (46 to 91 m)
Central island treatment	Fully traversable	Raised (may have traversable apron)	Raised (may have traversable apron)
Typical daily service volumes on 4-leg roundabout below which may be expected to operate without requiring a detailed capacity analysis (veh/day)*	Up to approximately 15,000	Up to approximately 25,000	Up to approximately 45,000 for two-lane roundabout

*Operational analysis needed to verify upper limit for specific applications or for roundabouts with more than two lanes or four legs.

As the AADT graphic on page 4 of this narrative indicates, current volumes on the Parks Highway/STR roundabout are significantly BELOW its theoretical capacity of 25,000 trips per day. Consequently, it is our opinion that the project will not yield any measurable change in operational capacity within this TIA's planning horizon.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

1. The proposed project would be located along South Trunk Road. Posted speed limit on this roadway is 45 MPH.
2. The site traffic is proposed to be served by two driveways, located near the northeast and southeast corners of the development. Provision of two driveways will divide site traffic at approximately a 50-50 split.
3. Proposed project would be classified as a "Medium Generator", because peak traffic volumes at each driveway are greater than 100 trips, but less than 250 trips.
4. Driveway sight distances for all movements for both driveways were determined to exceed minimum standards required by AASHTO.
5. Levels of Service on STR are expected to remain at grade "A" during the TIA's planning horizon.
6. No measurable impacts to traffic capacity on the Parks Highway/STR roundabout are expected.

Recommendations

1. Approaches shall be permitted and constructed in accordance with MSB guidelines.

2. Because the posted speed limit is below 50 MPH and furthermore that peak hour site traffic volumes are less than 100 vehicles at both approaches, speed-change lanes are not required.
3. Because driveway sight distances exceed minimum distances, no sight distance obstruction mitigation is required.

Peggy Horton

From: Tim Alley <talley@tbcak.com>
Sent: Thursday, April 28, 2022 2:39 PM
To: Jamie Taylor
Cc: Peggy Horton; Michelle Olsen; Brad Sworts; Andy Dean
Subject: RE: Valley Country Store/Trunk Road
Attachments: Valley Country Store 4 Driveway Comment Memo.pdf; Valley Country Store 4 Stormwater Analysis Memo.pdf; VCS-4 Site traffic flow.pdf; VCS-4 DRIVEWAY P&P.pdf

[EXTERNAL EMAIL - CAUTION: Do not open unexpected attachments or links.]
Good Afternoon,

Please see the attached documents and remaining comment responses below. Please feel free to contact me with any questions.

Thank you,
Tim

Driveway permit comments:

1. The landing slope, length, curve return radii, and cut/fill slopes are not specified in the permit application. The construction plans submitted for the original driveway permits shows standard plan & profile design information with a range of allowable landing slopes, but since these driveways are existing the actual dimensions and slopes should be given. This information has been added to the driveway drawings shown. Existing north driveway has 40' radii to the edge of traveled way and southern driveway has 30' radii to existing travelled way as measured by design survey. Cut slopes were designed to be 2:1 max but were measured at 4:1 in the field.
2. 11.12.070(A)(8)(f) allows for reduced spacing for a variety of reasons when recommended by the engineer and approved by the Borough. The TBC memo dated 11/2/2021 regarding driveway spacing does not identify any of the reasons listed in 11.12.070(A)(8)(f) as the basis for recommendation of approval for reduced spacing. See attached Driveway Permit memo.
3. What is the culvert gauge and slope? End sections are required per 11.12.070(A)(2). Though these were constructed by the borough the owner will add end sections to the culverts. Slope and gage as measured have been added on the attached driveway P&P
4. What is the design vehicle? Passenger vehicle was used as the design vehicle as it is the primary vehicle to utilize the store. A substantial amount of truck traffic is not anticipated though the northern driveway, in particular, provides more than enough site distance for trucks.
5. Submit plan showing driveway sight triangles. The design vehicle will determine the minimum sight distance. See attached site triangle drawing
6. Submit a plan & profile showing asbuilt conditions with information in comment #1. Also show stop signs and painted stop bars. See attached. Stop signs and bars will be added to the site.
7. Provide turn lane warrants per 11.12.070(B)(4)&(5) See revised TIA sent on 4/28/2022

CUP comments:

A. More information is needed about the detention pond – what storm event it is sized for, contours or spot elevations showing how deep it is, how the impervious areas are graded to the detention basin, where overflow will go, and how overflow will be treated (for example with a grass filter strip). One of the grading and drainage plans submitted has contours but they do not seem to reflect what is currently constructed (it shows the north driveway slopes to Trunk Road at 10%, but it is actually relatively flat). See attached Drainage Memo

B. Traffic flow diagram does not show traffic flow to the coffee kiosk, this is important in regards to vehicle and pedestrian conflicts. See attached traffic flow diagram. It should be added that travel speeds onsite will be low and judgement will be exercised by drivers to avoid collisions.

TBC, Inc. Project Management & Development - Engineering - Surveying - Landscape Architecture

Tim Alley, P.E.
Principal/Vice President

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Main: 907.357.6770
Fax: 907.357.6750

From: Jamie Taylor <Jamie.Taylor@matsugov.us>
Sent: Friday, April 22, 2022 2:31 PM
To: Tim Alley <talley@tbcak.com>
Cc: Peggy Horton <Peggy.Horton@matsugov.us>; Michelle Olsen <Michelle.Olsen@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>
Subject: Valley Country Store/Trunk Road

Hi Tim –

Here is the written summary of my comments that we discussed a few weeks ago.

Driveway permit comments:

1. The landing slope, length, curve return radii, and cut/fill slopes are not specified in the permit application. The construction plans submitted for the original driveway permits shows standard plan & profile design information with a range of allowable landing slopes, but since these driveways are existing the actual dimensions and slopes should be given.
2. 11.12.070(A)(8)(f) allows for reduced spacing for a variety of reasons when recommended by the engineer and approved by the Borough. The TBC memo dated 11/2/2021 regarding driveway spacing does not identify any of the reasons listed in 11.12.070(A)(8)(f) as the basis for recommendation of approval for reduced spacing.
3. What is the culvert gauge and slope? End sections are required per 11.12.070(A)(2).
4. What is the design vehicle?
5. Submit plan showing driveway sight triangles. The design vehicle will determine the minimum sight distance.
6. Submit a plan & profile showing asbuilt conditions with information in comment #1. Also show stop signs and painted stop bars.
7. Provide turn lane warrants per 11.12.070(B)(4)&(5)

TIA comments:

Page 2 Required sight distance listed does not account for a design vehicle other than a passenger vehicle. I assume the design vehicle is a tank truck, for which AASHTO requires 695/765 feet of sight distance. (Perhaps fuel trucks could be restricted to exiting from the north driveway only.)

Page 4 That AADT count is from 2019. There is 2020 data, but I recommend still using the 2019 data because the 2020 data is likely skewed due to COVID shut downs.

Page 6 Add discussion of accident history.

Page 7 The projected traffic discussion should include ALL uses within the properties using the driveways and the assumptions used in determining the peak hour traffic volume.

Pages 7-9 The PM base traffic flow is 229 (2021)/286 (2032), which is more than the ITETG estimate of 158 for pass-by traffic. I agree that the pass-by traffic estimate is probably high, though. What percentage of

new trips come from and return to the north and what percentage come from and return to the south? I would guess a higher percentage of new trips will come from the north/Parks Highway which doesn't seem to be reflected in the turning movement estimates and also will skew the existing 55/45 peak hour traffic flow split.

Page 10 Other Planned Developments: 89 lots have been created in the View Pointe at the Ranch subdivision since late 2020, which has potentially increased the traffic on S Trunk more than 2% per year for the last two years.

Page 10 LOS is listed for the driveway intersections, but not the road segments themselves. 11.12.080(A)(5)(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. Discuss whether this criteria will be met and include LOS analysis if so.

Page 11 The TIA previously stated 67% of the 239 trips generated by the site would be new trips (160). If more than 60% of these new trips come from and return to the north, ADOT/PF's threshold of 100 new trips is met.

Page 12 The second recommendation is not clear. Show if turn lanes are warranted per the two publications listed in 11.12.070(B)(4)&(5).

CUP comments:

A. More information is needed about the detention pond – what storm event it is sized for, contours or spot elevations showing how deep it is, how the impervious areas are graded to the detention basin, where overflow will go, and how overflow will be treated (for example with a grass filter strip). One of the grading and drainage plans submitted has contours but they do not seem to reflect what is currently constructed (it shows the north driveway slopes to Trunk Road at 10%, but it is actually relatively flat).
B. Traffic flow diagram does not show traffic flow to the coffee kiosk, this is important in regards to vehicle and pedestrian conflicts.

Let me know if you have any questions.

Jamie Taylor, PE (she/her)
Civil Engineer
Matanuska-Susitna Borough
Department of Public Works
t: 907-861-7765 c: 907-355-9810
jamie.taylor@matsugov.us
http://www.matsugov.us/

High Volume Driveway Permit Review

updated April 22, 2022
Jamie Taylor

Submittal Item	Associated code	Standard	
11.12.040(A)(2)			
(a) Street being accessed			S Trunk Road
Functional classification			Minor Arterial
Posted speed limit			45 mph
Surface type			Asphalt
(b) Driveway dimensions			
Landing slope	11.12.050(A)(3)	-2%	Not specified
Landing length	11.12.050(A)(4)	10 – 30 feet	Not specified
Landing angle	11.12.050(A)(5)	>= 60 degrees	Looks close to 90 degrees
Fill or cut slope grades	11.12.050(A)(6)	2:1 max or designed by engineer	Contours shown, but grades not specified
Corner clearance	11.12.050(A)(11)	>= 60 feet	N/A
Edge clearance	11.12.050(A)(12)	>= 20 feet, or curve return radius if larger	S d/w: >> 20 feet N d/w: N/A because shared d/w
Width	11.12.070(A)(3)(a)&(b)	24 – 35 feet	24 feet
Curve return radii	11.12.070(A)(3)(c)&(d)	>= 20 feet	Not specified
Driveway spacing	11.12.070(A)(8)	300 feet 600 feet 300 feet	Gateway Drive to S d/w: 444 feet S d/w to N d/w: 283 feet N d/w to 2533 S Trunk: 500 feet
(c) Pathway or sidewalk dimensions			11 feet wide
Curb cuts	11.12.050(A)(14)		N/A
ADA requirements	11.12.050(A)(15)		Detectable warning tiles look intact
Relocate in front of stop bar	11.12.070(B)(3)		Done
(d) Culvert			
Type	11.12.050(A)(7)	CMP, 16 gauge	Not specified
Diameter	11.12.050(A)(7) 11.12.070(A)(2)	 18 inch	 36 inch
Stream crossing?	11.12.050(A)(7)(b)		N/A
Length	11.12.050(A)(8)(a)		S d/w: 45 feet N d/w: 40 feet
Slope	11.12.050(A)(8)(b)	>=0.5%	Not specified

Set back	11.12.050(A)(8)(c)	0 – 6 feet from ditch line	0 feet
End sections	11.12.070(A)(2)		Not specified
(e) Expected completion date			Existing
(f) Driveway surface type			Asphalt
Paved apron?	11.12.070(A)(6)	>=20 feet	OK
(g) Proposed land use			Gas station, convenience store & coffee kiosk
(h) Estimated traffic			
Peak hour			239*
Average daily			3974-4341
Trip generation rate used	11.12.040(A)(2)(h)(i)-(iii)		ITE trip generation rates identified in TIA*
11.12.040(A)(3) >10 vph			
(a) Design vehicle	11.12.020		Not specified
(b) Driveway sight triangles	11.12.050(A)(9)	varies	Not provided
(c) Driveway plan & profile	11.12.070(A)(1)		Not provided
Stop sign & stop bar	11.12.070(B)(3)	Required for driveways that access parcels that generate more than 50 vehicle trips in the peak hour	Not specified
11.12.040(A)(4) >50 vph			
Turn lane warrants	11.12.070(B)(4)&(5)		Not provided
11.12.040(A)(5) >100 vph			
Traffic Impact Analysis	11.12.080		Submitted (comments in email)
Traffic Impact Mitigation	11.12.090		Likely not applicable

Memorandum

THE BOUTET COMPANY, INC.

1508 E. Bogard Rd. #7
Wasilla, AK 99654

Tel: (907) 357-6760
Fax: (907) 357-6750
e-mail: talley@tbcak.com

RECEIVED
APR 28 2022
Mat-Su Borough
Development Services

Date: **April 28, 2022**

To: Peggy Horton
Planner II
Matanuska-Susitna Borough

From: Tim Alley, PE
Principal/Vice President
The Boutet Company, Inc

Subject: Valley Country Store 4
Driveway Permitting

Introduction

This memo was prepared in support of Conditional Use Permit application and driveway permit applications, in addition to the November 2, 2021 Driveway Spacing Memorandum submitted to Matanuska-Susitna Borough (MSB) for a proposed gas station and convenience store development that will be located at 3068 South Trunk Road (STR), near Palmer, Alaska.

Project Description and Location

KG Enterprises, LLC (KGE) proposes to construct a convenience store with gas pumps in adjacent to the west Right-of-Way (ROW) line for STR, approximately 1,500 feet south of its interchange with East Parks Highway (EPH); more specifically, the project would be located within Lot 1B, Happy Valley Subdivision.

Access Drives

KG Enterprises, LLC (KGE) proposes to utilize the existing driveways adjacent to the property. The Sothern access drive is located on property and the northern access drive is located north of the subject property. Use of northern drive by the applicant has been secured through a recorded access agreement.

The two access driveways have been constructed and an access easement for the north driveway has been recorded. The as-built conditions of the driveways are shown on the attached driveway plan and profile sheets. The driveway landings, pathway connections, culverts and pavement were not altered from the “as-constructed”

condition from MSB's 2018 STR Extension South project. The current driveway locations were determined, approved and constructed under a MSB project as part of negotiations for a ROW acquisition and at that time were intended for use as a gas station or other commercial use as discussed in the November 2nd, 2021 memo.

STR is classified as an arterial roadway. It appears the road classification is due to the posted speed limit and the low volume of traffic does not appear to be considered in the determination. Several other area roads with higher speed limits and traffic volumes are classified as collectors including the portion of Trunk/Nelson Road south of the railroad crossing (Similar 2019 AADT, 45 mph), the portion of Trunk Road north of the Palmer Wasilla Highway (7,820 AADT, 55 mph) and Fairview Loop (2,140 AADT, 45 mph) to name a few.

Due to the projected trip generation from the proposed improvements, the MSB Code requires a driveway separation distance of 600' as required by the table below.

Minimum High Volume Driveway Spacing (Feet) (MSB 11.12.070.A.8)

Classification of road being accessed	Posted speed limit or 85th percentile speed of road being accessed (mph)	Total vehicle trip generation of subject parcel (vph)								
		11 – 100			101 – 250			> 250		
		Total vehicle trip generation of subject parcel, nearby parcel, or classification of cross street			Total vehicle trip generation of subject parcel, nearby parcel, or classification of cross street			Total vehicle trip generation of subject parcel, nearby parcel, or classification of cross street		
		11 – 100 vph or local road	101 – 250 vph or collector	> 250 vph or arterial	11 – 100 vph or local road	101 – 250 vph or collector	> 250 vph or arterial	11 – 100 vph or local road	101 – 250 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

However, per MSB Code 11.12.070(A)(8)(f) a reduction in driveway spacing may be reduced. The proposed reduction in driveway spacing meets the following provisions within this code section:

(vi) driveways where a traffic impact analyses demonstrations capacity needs:

A TIA has been prepared for this project. The calculated total of peak hour trips generated from the development is 239 vph. The TIA utilized both approaches in the analysis and provided a level of service (LOS) rating of A at both driveway intersections and is dependent of two accesses to the site.

(viii) driveways that are not able to meet separation distance from other existing driveways or intersections due to physical constraints:

The onsite topography drops in elevation north of the site while STR is gaining elevation. Moving the northern driveway further north would exacerbate the grade difference between the site and STR. Since the local truck traffic, though minimal, primarily utilizes the northern driveway an uphill driveway grade would require additional time for these trucks to enter STR. Further, Viewpoint @ the Ranch Tract E has an existing driveway approximately 722' to the north. Movement of the northern driveway to the north would reduce the separation between the driveways. If the 600' requirement were to be met the result would be 422' spacing between the driveways.

The southern driveway is already located in a substantial cut and is located 444' from Gateway Drive to the south and due to a horizontal curve and existing slope in the STR alignment the site distance available (510') for this driveway is already near the minimum of 500'. Relocating this driveway to the south would reduce the available site distance.

Also, it should be noted that it is anticipated that the majority of southbound traffic will turn into the northern and exit the southern driveways (vice versa for northbound traffic) but this cannot be said for the adjacent driveways and may result in additional conflict between traffic if the separation between these driveways and neighboring intersections is reduced.

Conclusions

1. While the driveway separation required is 600' for a vehicle trip generation on a minor arterial road, STR is similar in characteristics of several collector roads (requiring 300' separation) within the Borough and this should be considered while reviewing this application.

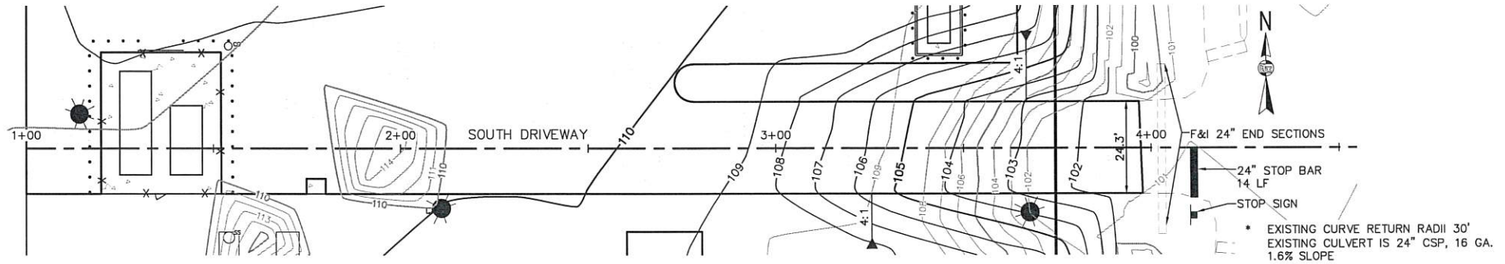
2. The construction of two driveways to access the site is supported by the LOS A at the intersections determined by the TIA and may be reduced if only a single driveway is utilized.

3. Topographic and physical constraints from adjacent intersections over which this project has no control over, is maximized by the reduction in driveway spacing.

4. The current driveways meet the site distance requirements of 500' for a passenger vehicle which is the primary vehicle utilizing the intersections.

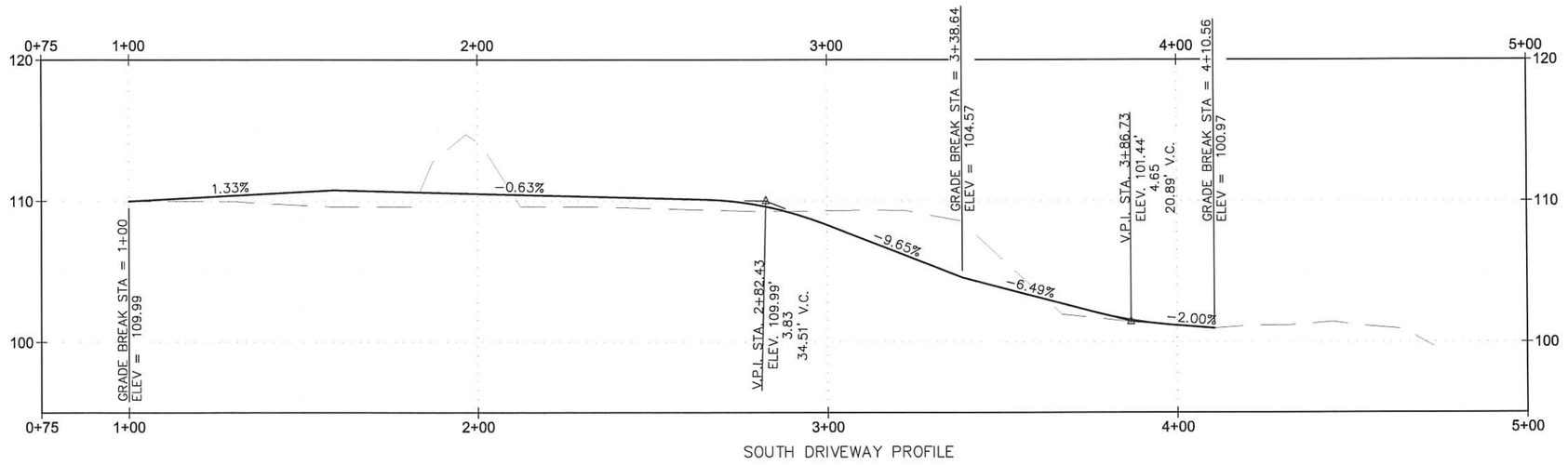
5. Since these driveways were designed and constructed as part of a Borough project with a similar intended use as part of a ROW negotiation, it should fall to the Borough to correct any substandard issues with the driveways.

6. The driveways did not physically alter the driveways constructed under the STR project except as required for development of the site. As such, should fall under the appropriate requirements of MSB Code 11.12.110(A) and 11.12.030(B).

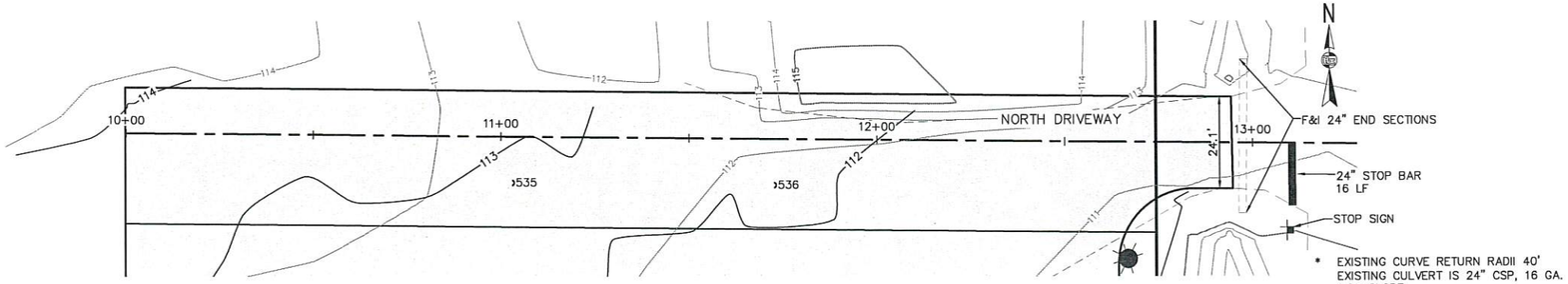


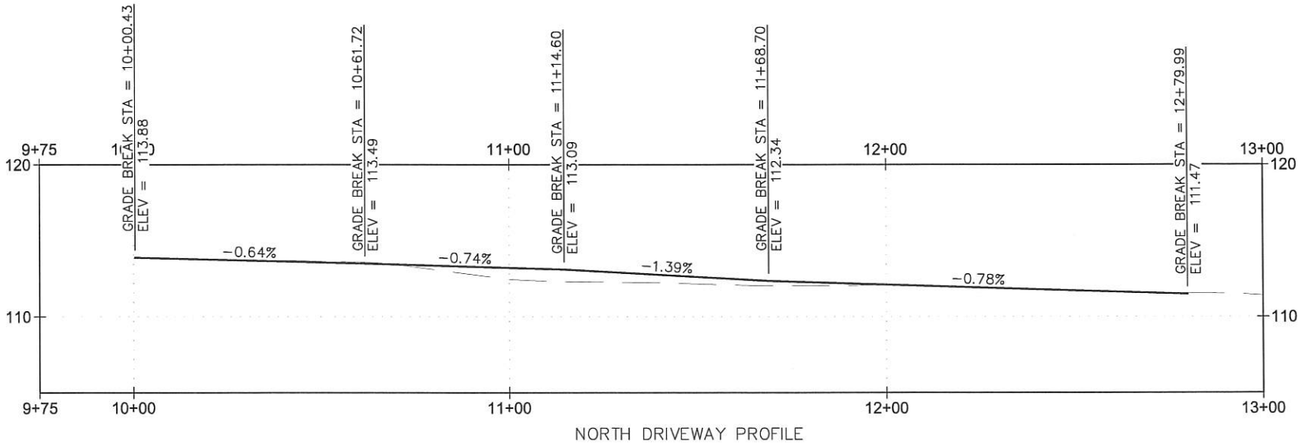
LEGEND:

- 322 — EXISTING MAJOR CONTOUR AND LABEL
- 322 — EXISTING MINOR CONTOUR AND LABEL
- 322 — PROPOSED MAJOR CONTOUR AND LABEL
- 322 — PROPOSED MINOR CONTOUR AND LABEL



SOUTH DRIVEWAY PROFILE





NORTH DRIVEWAY PROFILE

RECEIVED
APR 28 2022
Mat-Su Borough
Development Services

0 20 40 Feet

The Boutet Company, Inc.
601 E. 57th Place #102
Anchorage, AK. 99518
Ph. 907-522-6776
License No. AECC957
CONSULTANT

STATE OF ALASKA
49TH
TIMOTHY J. ALLEY
CE 14368
04/28/22
REGISTERED PROFESSIONAL ENGINEER
SEAL

VALLEY COUNTRY STORE 4
WASILLA, ALASKA

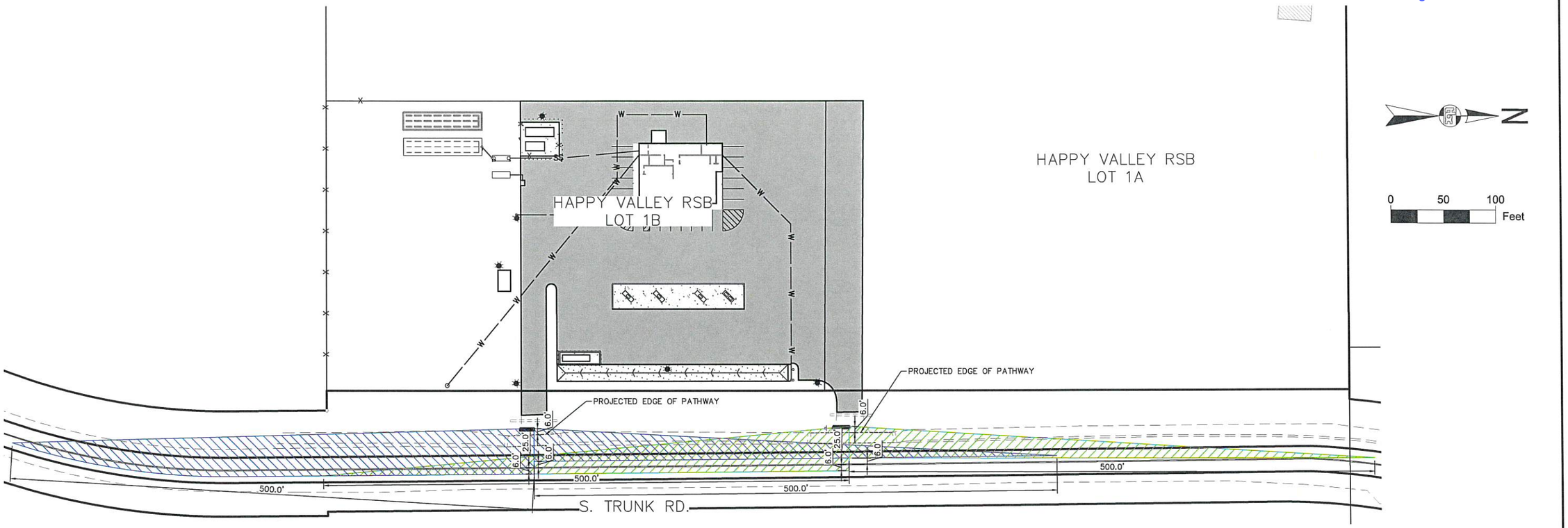
CIVIL SITE & UTILITY IMPROVEMENTS

DRIVEWAY PLAN AND PROFILES

HORZ SCALE: 1"=20'
VERT SCALE: N/A
DATE: 04/28/2022
SHEET DW1

DATE/TIME | LAYOUT | 5/10/2021 | DESIGNED | HJH | CHECKED | TJA | DRAFTED | HJH

FILE W:\WASILLAFILES\GITTLEINS\VALLEY COUNTRY STORE 4\TBC ACAD\VCS-4 GRADING - DW PERMIT.DWG



INTERSECTION SITE DISTANCE (ISD) NOTES:

1. DESIGN VEHICLE IS PASSENGER CAR BASED ON PRIMARY VEHICLE TO USE INTERSECTIONS.
2. TIME GAP = 7.5 SEC.
3. DECISION POINT IS AT THE STOP BAR 6' FROM EDGE OF PATHWAY, 25' FROM EDGE OF TRAVELED WAY. THIS ASSUMES THAT THE VEHICLES WILL NOT OCCUPY THE PATHWAY WHEN DECIDING TO TURN AND ONLY IMPACTS THE REQUIRED CLEAR ZONE.
4. POSTED SPEED IS 45 MPH
5. AASHTO CHAPTER 9.5.3 CASE B1: 500 FT (LEFT TURN FROM STOP)
6. AASHTO CHAPTER 9.5.3 CASE B2: 430 FT (RIGHT TURN FROM STOP)
7. CASE B1 WAS UTILIZED FOR THE SITE TRIANGLES SHOWN AS THE WORSE CASE (FURTHEST DISTANCE) REQUIRED FOR SITE DISTANCE.

SOUTH DRIVEWAY SITE TRIANGLES

NORTH DRIVEWAY SITE TRIANGLES

RECEIVED
APR 28 2022
Mat-Su Borough
Development Services

The Boutet Company, Inc.
601 E. 57th Place #102
Anchorage, AK. 99518
Ph. 907-522-6776
License No. AECC957

CONSULTANT

STATE OF ALASKA
AQTH
TIMOTHY J. ALLEY
CE 14368
04/28/22
REGISTERED PROFESSIONAL ENGINEER

SEAL

VALLEY COUNTRY STORE 4
WASILLA, ALASKA

CIVIL SITE & UTILITY IMPROVEMENTS

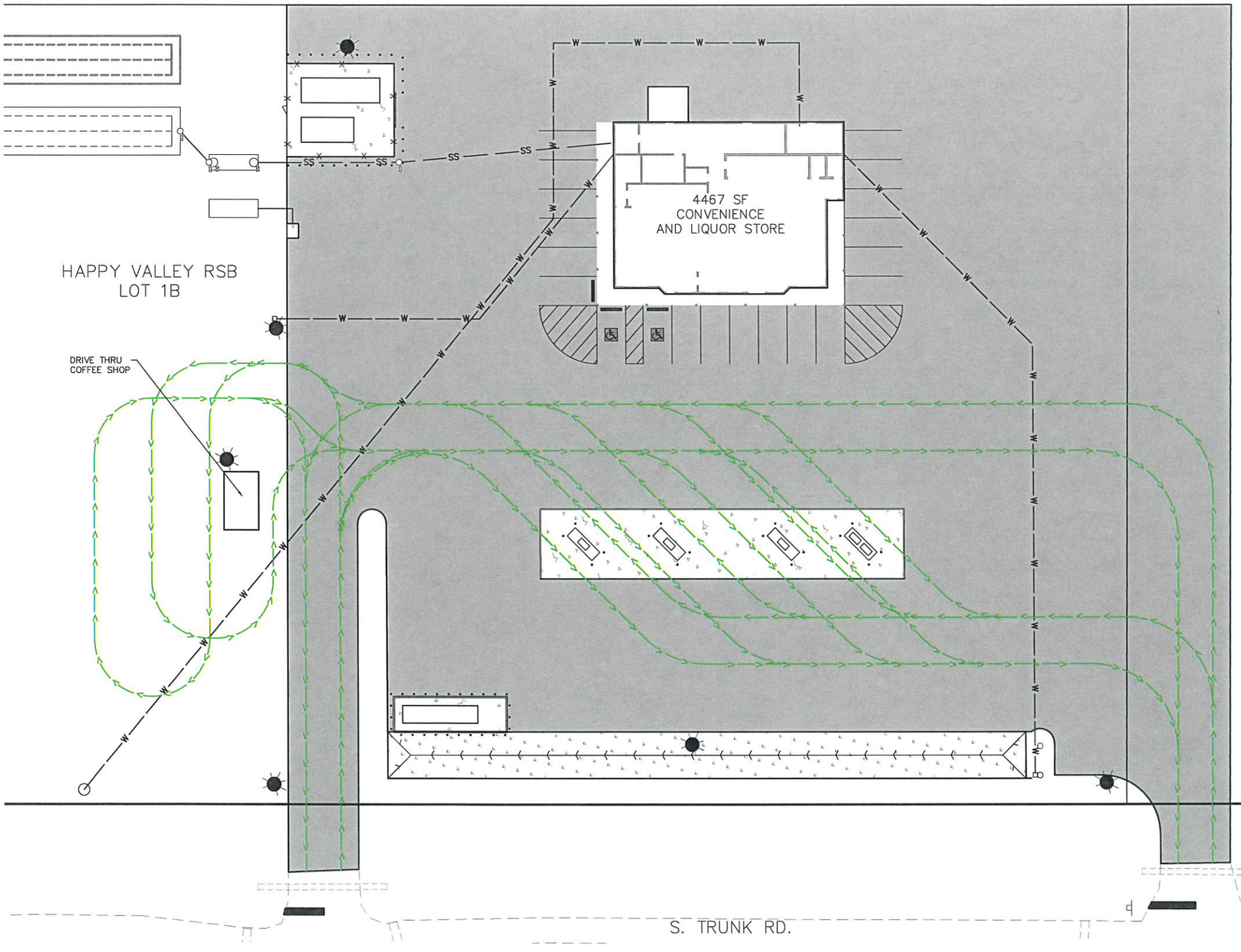
VALLEY COUNTRY STORE 4
SITE DISTANCE TRIANGLES

HORZ SCALE: 1"=100'
VERT SCALE: N/A
DATE: 04/28/2022

SHEET

DATE/TIME 5/10/2021 | LAYOUT | DESIGNED HJH | CHECKED TJA | DRAFTED HJH

FILE W:\WASILLAFILES\GITTLEINS\VALLEY COUNTRY STORE 4\TBC ACAD\VCS-4 SITE TRIANGLES.DWG



N

0 20 40 Feet

* ANTICIPATED PATH OF TRAVEL DOES NOT INCLUDE DRIVERS' SUBJECT DECISIONS TO NAVIGATE THE LOT. TRAVEL SPEEDS WILL BE LOW PROVIDING DRIVERS WITH AMPLE DECISION TIME AND DRIVERS' DECISIONS WILL GOVERN THE PATH TRAVELED.

FINAL LOCATION/ORIENTATION OF COFFEE SHOP HAS NOT BEEN SET AND MAY BE CHANGED TO IMPROVE ACCESS TO THE DRIVE THRUS.

RECEIVED
APR 28 2022
Mat-Su Borough
Development Services

The Boutel Company, Inc.
601 E. 57th Place #102
Anchorage, AK. 99518
Ph. 907-522-6776
License No. AECC957

CONSULTANT | SEAL

VALLEY COUNTRY STORE 4
WASILLA, ALASKA

CIVIL SITE & UTILITY IMPROVEMENTS

VALLEY COUNTRY STORE 4
ANTICIPATED TRAFFIC FLOW

HORZ SCALE: 1"=40'
VERT SCALE: N/A
DATE: 04/28/2022
SHEET

DATE/TIME 5/10/2021 | LAYOUT | DESIGNED HJH | CHECKED TJA | DRAFTED HJH

FILE W:\WASILLAFILES\JITTLEINS\VALLEY COUNTRY STORE 4\TBC ACAD\VCS-4 SITE TRIANGLES.DWG

Memorandum

THE BOUTET COMPANY, INC.

1508 E. Bogard Rd. #7
Wasilla, AK 99654

Tel: (907) 522-6776
Fax: (907) 522-6779
e-mail: talley@tbcak.com

Date: **May 4, 2022**

To: Peggy Horton
Planner II
Matanuska-Susitna Borough

From: Tim Alley, PE
Project Manager
The Boutet Company, Inc

Subject: Valley Country Store 4
Stormwater Runoff Analysis

Introduction

This Stormwater Runoff Analysis was prepared in support of the stormwater treatment methods constructed for the proposed development located at 3068 S. Trunk Road, Palmer, Alaska.

Project Description and Location

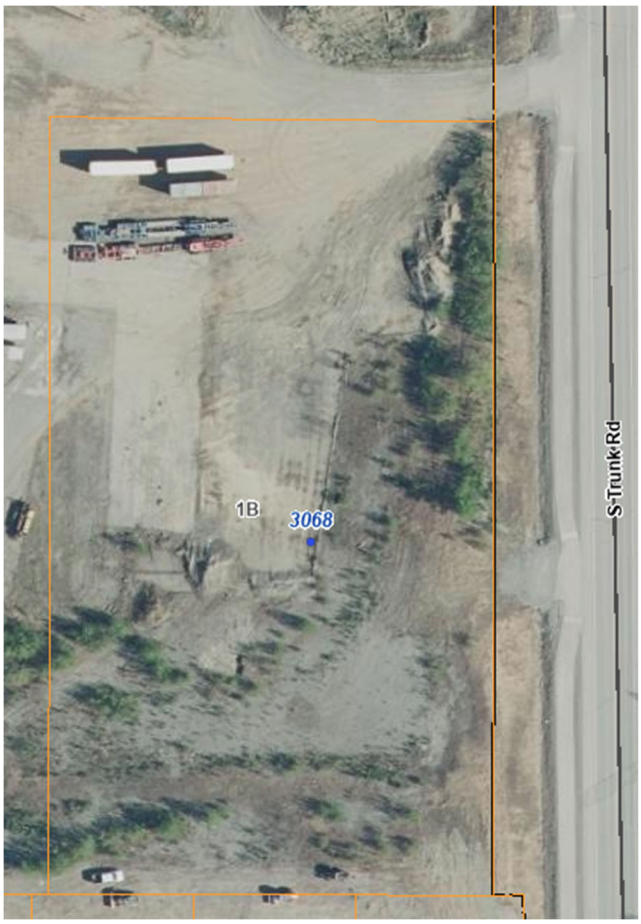
KG Enterprises, LLC (KGE) proposes to construct a convenience store with gas pumps at 3068 South Trunk Road (STR) approximately 1,500 feet south of the roundabout intersection with East Fireweed Road in Palmer, Alaska; more specifically, the project would be located Happy Valley Subdivision Lot 1B.

KGE is constructing a convenience store consisting of a 4,467 square foot structure and four (4) fuel pumps (eight (8) fueling positions). These improvements would be constructed within a 75,000 square foot paved apron that would also accommodate traffic circulation, parking, loading and fuel storage. Attached is an overall site plan for the proposed development.

Pre-development Site Conditions

As indicated the aerial image below (acquired in 2021), the site has been cleared and was utilized for truck and trailer parking prior to development. Existing vegetation was sparce, consisting of grasses and small growth trees primarily cottonwood and birch.

The topography is relatively flat. Natural drainage is from northwest to southeast toward the STR.



The project location is subject to a 2-year, 24-hour storm event of 1.26 inches and a 10-year, 24-hour storm event is 1.83 inches of precipitation. This information was gathered from closest weather station and reported on the National Oceanic and Aeronautic Administration's (NOAA) website.

Post Development Conditions

The Development is a convenience store consisting of a 4,467 square foot structure and four (4) fuel pumps with covered fueling positions. These improvements would be constructed within a 75,000 square foot paved apron that would also accommodate traffic circulation, parking, loading and fuel storage.

To most effectively treat stormwater runoff the development is divided into five drainage areas. The majority of runoff from the north and east portion of the site will drain to a retention basin to the greatest extent possible. With the rest of the drainage draining to the south and west from the building. This drainage will percolate into the existing gravel surfaces outside of the pavement footprint. The retention basin will also capture any protentional spills from the fueling area to prevent contaminated runoff leaving the site. See attached Drainage Area Exhibit. The retention basin cross-section will be 16' wide

with +/- 4:1 slopes for a maximum depth of 2 feet and average depth of 1 foot and if over topped will drain at the southern end into ROW.

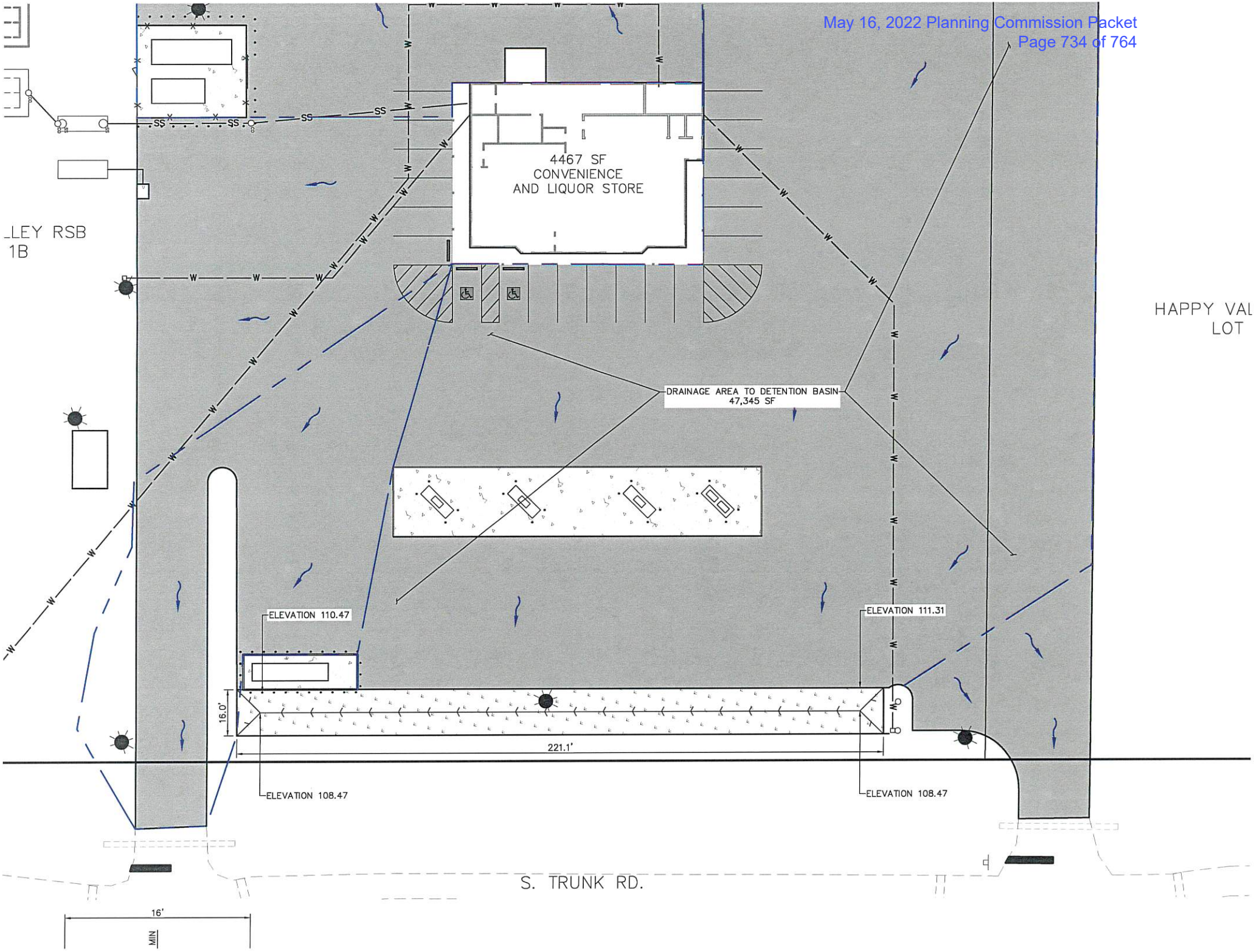
Area ID	Area (Ac)	2yr/24hr event (in)	10yr/24hr event (in)	Flow Rate 5 min intensity (CFS)	Daily Discharge (CF)	
				2yr/24hr	2yr/24hr	10yr/24hr
1	1.08	1.26	1.83	0.81	4,954	7,195

Retention ID	Area (SF)	Depth (Ft)	Volume (CF)
1	3,538	1(Avg)	3,538
Percolation Rate	Area	CFS(perc)	CF per hour
1in/hr	3,538	0.98	295

The site was designed to separate standard pavement and roof runoff from being contaminated by any incidental spills in the fueling and fuel storage tank areas. Stormwater runoff from area 1 sheet flows to a dedicated retention basin constructed along the east side of the pavement area. The retention areas were maximized to collect as much of the stormwater via overland sheet flow rather than concentrating the drainage prior to entering the retention areas. While the retention area cannot fully contain the 2yr/24hr rain event, applying the percolation rate of the soils stormwater will percolate into the pond faster than the maximum 5-minute intensity of the 2yr/24hr storm event. The 5-minute intensity of the 10yr/24 hr event was not analyzed. The existing soils are low density silty gravels (GM). A percolation rate of 1 in/hour was estimated as the worst-case scenario based on visual observation of the soils which is expected with high density silty gravels.

Conclusions

1. The development has been constructed using industry standard for stormwater retention and treatment.
2. The retention basin will percolate stormwater higher than the peak intensity of the 2yr/24hr storm.
3. The basin can retain/treat the 10yr/24hr storm provided the intensity does not exceed the percolation rate of the soils.
4. The retention basin exceeds the criteria for stormwater treatment as required by the Municipality of Anchorage Stormwater Manual.


4467 SF
CONVENIENCE
AND LIQUOR STORE
LLEY RSB
1B
HAPPY VAL
LOT
DRAINAGE AREA TO DETENTION BASIN
47,345 SF
ELEVATION 110.47
ELEVATION 111.31
16.0'
221.1'
ELEVATION 108.47
ELEVATION 108.47
S. TRUNK RD.
16'
MIN

COMMENTS

Agency Comments

Peggy Horton

From: Matt Gittlein <mattgittlein59@hotmail.com>
Sent: Monday, March 7, 2022 10:09 AM
To: Peggy Horton
Subject: Re: VCS #4 soft opening

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Thank you for the response Peggy. That all sounds correct on the soft opening for how we plan to operate. That probably won't take place until next week sometime.

Is it possible, to start the public notice process in the meantime so we can get a date set for the hearing? Possibly with a condition written into it that the driveway issue will be solved before we can operate?

Matt Gittlein
Valley Country Store & Fuel
907-841-5666
Sent from my iPhone

On Mar 7, 2022, at 11:32 AM, Peggy Horton <Peggy.Horton@matsugov.us> wrote:

Good Morning,

Jamie is not available until next week, but I discussed it with several people and went back over Jamie's prior emails. We will be having a discussion in-house next week on the driveway separation issue for the driveway permit application. Here is your written decision that we will not protest your soft opening.

We understand from your request that the soft opening will be for credit card only sales at 4 of the 8 fueling positions, keeping the remaining 4 blocked and pumps turned off. The convenience store will also remain closed at this time.

Regards,

Peggy Horton
Matanuska-Susitna Borough
Development Services Division
Planner II
907-861-7862

From: Jamie Taylor <Jamie.Taylor@matsugov.us>
Sent: Monday, February 14, 2022 7:25 PM
To: Peggy Horton <Peggy.Horton@matsugov.us>
Subject: RE: Valley Country Store #4 on S. Trunk Traffic Impact Analysis

Their current driveway permits say they are for a gas station, so I think they are covered there. As we previously discussed, they will need to update the driveway permits for the full opening because the traffic counts will be over 100 vph which requires different standards.

Looking at 17.61.020, this jumps out at me: (4) Any use that generates contaminated water runoff or other discharges that are likely to violate state water quality standards or negatively impact groundwater or surface water quality beyond adjacent property lines. The grading plan shows runoff from the fueling area draining directly into the Trunk Road ditch without any interception or treatment. This ditch ultimately outfalls to an anadromous stream in the hay flats, which I assume are USACE jurisdictional wetlands. It seems to me, operation of any number of fuel pumps in this situation will have the potential to generate contaminated water runoff. They need to submit a design that provides treatment of runoff from the proposed improvements before it leaves the property.

What do you think?

Jamie Taylor, PE
Civil Engineer
Matanuska-Susitna Borough
Department of Public Works
t: 907-861-7765 c: 907-355-9810
jamie.taylor@matsugov.us
http://www.matsugov.us/

From: Peggy Horton <Peggy.Horton@matsugov.us>
Sent: Thursday, February 10, 2022 3:59 PM
To: Jamie Taylor <Jamie.Taylor@matsugov.us>
Subject: Valley Country Store #4 on S. Trunk Traffic Impact Analysis

Hi Jamie,

I've got a request from the owners of Valley Country Store #4 to do a soft opening with only 4 of the 8 fueling positions open and keeping the rest of the pumps turned off and the store closed. My question is, do the number's they're stating in the attached Soft Opening Request letter make it feasible to have a soft opening? I don't think Development Services is opposed to allowing a soft opening, although we haven't talked about it together.

The owners have applied for a conditional use permit for the alcohol package store and a core area permit, but I haven't scheduled a PC meeting yet. They dropped off a big packet of info late last week and included in it is the traffic impact analysis for the whole thing. I've included the graphic info in this email also.

Could I possibly get an answer from you next week?

Thanks,
Peggy Horton
Matanuska-Susitna Borough
Development Services Division

Peggy Horton

From: Theresa Taranto
Sent: Wednesday, March 16, 2022 3:40 PM
To: Peggy Horton
Subject: RE: Request for Review and Comments: Valley Country Store #4 Core Area CUP and Package Store CUP

FIRM 8120, X Zone
Core Area

No other comments.
Thank you,

Theresa Taranto
Mat-Su Borough
Development Services
Administrative Specialist

350 E Dahlia Ave.
Palmer, Alaska 99645
907-861-8574
www.matsugov.us

From: Peggy Horton <Peggy.Horton@matsugov.us>
Sent: Thursday, March 10, 2022 9:58 AM
To: Allen Kemplen AICP-CTP - DOT&PF (allen.kemplen@alaska.gov) <allen.kemplen@alaska.gov>; Melanie Nichols (Melanie.nichols@alaska.gov) <Melanie.nichols@alaska.gov>; Kyler Hylton (kyler.hylton@alaska.gov) <kyler.hylton@alaska.gov>; George C Horton (george.horton@alaska.gov) <george.horton@alaska.gov>; James Walker (james.walker2@alaska.gov) <james.walker2@alaska.gov>; 'oran.woolley@alaska.gov' <oran.woolley@alaska.gov>; mearow@matanuska.com; 'row@enstarnaturalgas.com' <row@enstarnaturalgas.com>; 'row@mtasolutions.com' <row@mtasolutions.com>; GCI ROW (ospdesign@gci.com) <ospdesign@gci.com>; Fire Code <Fire.Code@matsugov.us>; Jill Irsik <Jill.Irsik@matsugov.us>; Eric Phillips <Eric.Phillips@matsugov.us>; regpagemaster@usace.army.mil; Terry Dolan <Terry.Dolan@matsugov.us>; Jamie Taylor <Jamie.Taylor@matsugov.us>; Brad Sworts <Brad.Sworts@matsugov.us>; Elaine Flagg <Elaine.Flagg@matsugov.us>; Charlyn Spannagel <Charlyn.Spannagel@matsugov.us>; Alex Strawn <Alex.Strawn@matsugov.us>; Planning <MSB.Planning@matsugov.us>; Fred Wagner <Frederic.Wagner@matsugov.us>; Permit Center <Permit.Center@matsugov.us>; Jason Ortiz <Jason.Ortiz@matsugov.us>; Theresa Taranto <Theresa.Taranto@matsugov.us>; Andy Dean <Andy.Dean@matsugov.us>; John Aschenbrenner <John.Aschenbrenner@matsugov.us>; Dolores McKee <Dee.McKee@matsugov.us>; 'gatewaycommunitycouncil@gmail.com' <gatewaycommunitycouncil@gmail.com>; 'kcelliot@alaska.edu' <kcelliot@alaska.edu>; 'opt.tim.us.breeden@gmail.com' <opt.tim.us.breeden@gmail.com>; 'antiquetuck@gmail.com' <antiquetuck@gmail.com>; 'lisah_ak@hotmail.com' <lisah_ak@hotmail.com>; 'markmobley@ymail.com' <markmobley@ymail.com>; davemtp@mtaonline.net; 'lszipszky@palmerpolice.com' <lszipszky@palmerpolice.com>; 'susansteele550@gmail.com' <susansteele550@gmail.com>; 'blushingmoose@yahoo.com' <blushingmoose@yahoo.com>
Subject: Request for Review and Comments: Valley Country Store #4 Core Area CUP and Package Store CUP

Good Morning,

APPLICANT: Matt Gittlein, for KG Enterprises, LLC

ENSTAR Natural Gas Company
A DIVISION OF SEMCO ENERGY
Engineering Department, Right of Way Section
401 E. International Airport Road
P. O. Box 190288
Anchorage, Alaska 99519-0288
(907) 277-5551
FAX (907) 334-7798

March 10, 2022

Matanuska-Susitna Borough, Planning Division
350 East Dahlia Avenue
Palmer, AK 99645-6488

To whom it may concern:

ENSTAR Natural Gas Company has reviewed the following conditional use permit applications and has no comments or recommendations.

- **Valley Country Store**
  (MSB Case # 17.61)
- **Alcoholic Beverage Uses**
  (MSB Case # 17.70)

If you have any questions, please feel free to contact me at 334-7944 or by email at james.christopher@enstarnaturalgas.com.

Sincerely,

James Christopher

James Christopher
Right of Way & Compliance Technician
ENSTAR Natural Gas Company

Peggy Horton

From: Jamie Taylor
Sent: Thursday, April 21, 2022 5:42 PM
To: Peggy Horton
Subject: RE: Valley Country Store #4
Attachments: TH001022.JPG

Hi Peggy –

1. Yes (I'm not sure why they are calling it a Limited Traffic Impact Analysis, maybe that's DOT's nomenclature?)
2. Yes
3. 1. Yes, they should be, but the existing driveways don't meet all of the normal standards (driveway spacing for one) for the proposed use without written recommendations from the engineer (I asked for additional explanation and reasoning in the memo they wrote about driveway spacing).
   2. Speed change lanes (turn lanes) are not required because they aren't warranted by the two publications listed in the driveway code (I asked for that to be updated in the TIA).
   3. Depending on the design vehicle, driveway sight distances are possibly less than minimum. They need to identify the design vehicle and possibly restrict access for certain types of vehicles to certain driveways.
4. I need more information about the detention pond – what storm event it was sized for, contours or spot elevations showing how deep it is, how the impervious areas are graded to the detention basin, where overflow will go, and how overflow will be treated (for example with a grass filter strip). One of the grading and drainage plans submitted has contours but they do not seem to reflect what is currently constructed (it shows the north driveway slopes to Trunk Road at 10%, but it is actually relatively flat, see attached photo). Runoff from this site could absolutely reach the hayflats without infiltrating as the ditches along Trunk Road and the RR all drain that way (average slope of 1.7%) with very minimal, if any, flat areas. Even if runoff from the site didn't reach the hayflats, why should the borough accept polluted water into the ROW?

5. I haven't heard or received anything since I spoke with Tim Alley and conveyed all the comments and requests for more information listed above plus others.

Let me know if you need anything else.

Jamie

From: Peggy Horton <Peggy.Horton@matsugov.us>
Sent: Thursday, April 21, 2022 3:54 PM
To: Jamie Taylor <Jamie.Taylor@matsugov.us>
Subject: Valley Country Store #4

Hi Jamie, I'm writing the 2 staff reports for this project (core area permit and package store permit) and I've come up with some questions for you. The staff reports are due very soon, hoping you can make time for this.

1. Is this a true statement: The Limited Traffic Impact Analysis indicates the proposed use will generate more than 100 vehicles during morning and afternoon peak hours.

2. Is this a true statement? The Limited Traffic Impact Analysis indicates the proposed use will generate less than 250 vehicles during morning and afternoon peak hours.

3. The TIA made these three recommendations: Do you agree with all of them? The Limited Traffic Impact Analysis makes the following findings/recommendations: 1) Approaches shall be permitted and constructed in accordance with MSB guidelines; 2) Because the posted speed limit is below 50 MPH and furthermore that peak hour site traffic volumes are less than 1000 vehicles at both approaches, speed-change lanes are not required; 3) Because driveway sight distances exceed minimum distances, no sight distance obstruction mitigation is required.

4. Is the detention pond they proposed on the March 3rd drainage plan enough? It seems to me that the detention basin would be adequate for this project since the project is far enough away from the hayflats, that any stormwater would have time to percolate into the ground. The concrete fueling pad is considered non-porous, so stormwater will flow into the detention basin. The driveways are asphalt and all that stormwater will flow into the Trunk Road ROW.

5. Michelle says she hasn't seen any movement on the driveway permit requirements since requesting additional engineering information from TBC in March. Have you received anything?

Peggy Horton
Matanuska-Susitna Borough
Development Services Division
Planner II
907-861-7862

Thu, Apr 07, 2022, 12:42:59 AKDT
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e: -005%

Peggy Horton

From: Matt Gittlein <mattgittlein59@hotmail.com>
Sent: Friday, April 22, 2022 10:37 AM
To: Peggy Horton
Cc: Tim Alley; Hans Hill
Subject: Re: VCS #4 questions

[**EXTERNAL EMAIL** - CAUTION: Do not open unexpected attachments or links.]
Peggy,

1. The convenience store and gas pumps **will be open 24 hours**. That was not asked anywhere in the Core Area application that I saw. We ran into this same issue the last time we did this. If this is information that is required for the Core Area application, I would suggest they add that question to the application in the future.

2. Staff will be using the parking area as well as parking in the rear of the building, or parking in the vacant lot to the south.

Hopefully Tim will be able to get you some answers on the driveway issues and other questions early next week.

Matt Gittlein
Valley Country Store & Fuel
907-841-5666

From: Peggy Horton <Peggy.Horton@matsugov.us>
Sent: Friday, April 22, 2022 9:44 AM
To: 'Matt Gittlein' <mattgittlein59@hotmail.com>
Cc: 'Tim Alley' <talley@tbcak.com>
Subject: VCS #4 questions

Good Morning,

I'm writing the staff report and have a couple questions.
1. What are the proposed hours of operation for the convenience market? Same as the package store?
2. In the application, you stated that all the parking spaces will be available for the liquor store customers. Are the employees going to park elsewhere?

Note: Jamie Taylor hasn't heard from Tim Alley after contacting him about our collective questions in March. The permit center has not received the information for the driveway permits either. Time is swiftly ticking away. The staff report for the public hearing is due within a week.

Thank you,

Peggy Horton
Matanuska-Susitna Borough

Development Services Division
Planner II
907-861-7862

Peggy Horton

From: Jamie Taylor
Sent: Friday, April 22, 2022 2:31 PM
To: Tim Alley
Cc: Peggy Horton; Michelle Olsen; Brad Sworts; Andy Dean
Subject: Valley Country Store/Trunk Road
Attachments: D28450 Driveway Review 2022.04.22 update.pdf

Hi Tim –

Here is the written summary of my comments that we discussed a few weeks ago.

Driveway permit comments:

1. The landing slope, length, curve return radii, and cut/fill slopes are not specified in the permit application. The construction plans submitted for the original driveway permits shows standard plan & profile design information with a range of allowable landing slopes, but since these driveways are existing the actual dimensions and slopes should be given.
2. 11.12.070(A)(8)(f) allows for reduced spacing for a variety of reasons when recommended by the engineer and approved by the Borough. The TBC memo dated 11/2/2021 regarding driveway spacing does not identify any of the reasons listed in 11.12.070(A)(8)(f) as the basis for recommendation of approval for reduced spacing.
3. What is the culvert gauge and slope? End sections are required per 11.12.070(A)(2).
4. What is the design vehicle?
5. Submit plan showing driveway sight triangles. The design vehicle will determine the minimum sight distance.
6. Submit a plan & profile showing asbuilt conditions with information in comment #1. Also show stop signs and painted stop bars.
7. Provide turn lane warrants per 11.12.070(B)(4)&(5)

TIA comments:

Page 2	Required sight distance listed does not account for a design vehicle other than a passenger vehicle. I assume the design vehicle is a tank truck, for which AASHTO requires 695/765 feet of sight distance. (Perhaps fuel trucks could be restricted to exiting from the north driveway only.)
Page 4	That AADT count is from 2019. There is 2020 data, but I recommend still using the 2019 data because the 2020 data is likely skewed due to COVID shut downs.
Page 6	Add discussion of accident history.
Page 7	The projected traffic discussion should include ALL uses within the properties using the driveways and the assumptions used in determining the peak hour traffic volume.
Pages 7-9	The PM base traffic flow is 229 (2021)/286 (2032), which is more than the ITETG estimate of 158 for pass-by traffic. I agree that the pass-by traffic estimate is probably high, though. What percentage of new trips come from and return to the north and what percentage come from and return to the south? I would guess a higher percentage of new trips will come from the north/Parks Highway which doesn't seem to be reflected in the turning movement estimates and also will skew the existing 55/45 peak hour traffic flow split.
Page 10	Other Planned Developments: 89 lots have been created in the View Pointe at the Ranch subdivision since late 2020, which has potentially increased the traffic on S Trunk more than 2% per year for the last two years.
Page 10	LOS is listed for the driveway intersections, but not the road segments themselves. 11.12.080(A)(5)(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. Discuss whether this criteria will be met and include LOS analysis if so.

Page 11 The TIA previously stated 67% of the 239 trips generated by the site would be new trips (160). If more than 60% of these new trips come from and return to the north, ADOT/PF's threshold of 100 new trips is met.

Page 12 The second recommendation is not clear. Show if turn lanes are warranted per the two publications listed in 11.12.070(B)(4)&(5).

CUP comments:

A. More information is needed about the detention pond – what storm event it is sized for, contours or spot elevations showing how deep it is, how the impervious areas are graded to the detention basin, where overflow will go, and how overflow will be treated (for example with a grass filter strip). One of the grading and drainage plans submitted has contours but they do not seem to reflect what is currently constructed (it shows the north driveway slopes to Trunk Road at 10%, but it is actually relatively flat).
B. Traffic flow diagram does not show traffic flow to the coffee kiosk, this is important in regards to vehicle and pedestrian conflicts.

Let me know if you have any questions.

Jamie Taylor, PE (she/her)
Civil Engineer
Matanuska-Susitna Borough
Department of Public Works
t: 907-861-7765 c: 907-355-9810
jamie.taylor@matsugov.us
http://www.matsugov.us/

No public comments were received for this planning action

PLANNING COMMISSION RESOLUTION

By: Peggy Horton
Introduced: May 2, 2022
Public Hearing: May 16, 2022
Action:

MATANUSKA-SUSITNA BOROUGH
PLANNING COMMISSION RESOLUTION NO. 22-10

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH PLANNING COMMISSION APPROVING A CONDITIONAL USE PERMIT TO OPERATE A CONVENIENCE MARKET WITH GAS PUMPS AND AN ALCOHOLIC BEVERAGE PACKAGE STORE WITHIN THE CORE AREA, AT 3068 SOUTH TRUNK ROAD, TAX ID# 8150000L001B; LOCATED WITHIN TOWNSHIP 17 NORTH, RANGE 1 EAST, SECTION 16, SEWARD MERIDIAN.

WHEREAS, Matt Gittlein of KG Enterprises, LLC, submitted an application for a Core Area Conditional Use Permit to operate a convenience market with gas pumps and an alcoholic beverage package store at 3068 South Trunk Road, Tax ID# 8150000L001B; within Township 17 North, Range 1 East, Section 16, Seward Meridian; and

WHEREAS, land uses to the east include a private airstrip, residential, and vacant land on large parcels ranging from 10 to 51 acres. South and further west of the subject lot is a partially developed 160-lot residential master plan development, with a community water system serving mostly one-half-acre lots. The adjacent lot to the north and west is a 12-acre parcel, largely cleared of vegetation that includes a residence and commercial uses. Further to the north are residential and commercial lots ranging in size from 0.8 to seven acres; and

WHEREAS, the proposed use will access South Trunk Road; and

WHEREAS, South Trunk Road is classified as a minor arterial, which is capable of accommodating traffic generated by several commercial retail businesses; and

WHEREAS, there is a mixture of industrial, residential, and commercial uses with frontage on South Trunk Road; and

WHEREAS, according to the application material, the building is approximately 4,467 square feet in size, with the alcoholic beverage package store occupying approximately 1,167 square feet. The remainder of the building will be occupied by convenience market with gas pumps; and

WHEREAS, according to the application material, the convenience market and gas pumps will be open 24 hours a day; and

WHEREAS, the applicant provided an exterior lighting design plan with downward directed and shielded fixtures to mitigate light spillage onto nearby properties; and

WHEREAS, the applicant constructed a six-foot tall chain-link fence with privacy slats along the south property boundary, and plans for landscaping with trees along the south and east sides of the property; and

WHEREAS, the applicant is actively working with the Permit Center and Public Works Engineer to finalize the driveway permits; and

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WHEREAS, the nearest school (Machetanz Elementary) is approximately 8,700 feet southwest of the site. State regulations preclude package store licenses within 200 feet of a school; and

WHEREAS, the Borough has no record of complaints filed under MSB 8.40 Liquor License Referrals, against any of the other Valley Country Store operations; and

WHEREAS, the Alcohol and Marijuana Control Office (AMCO) has not suspended or revoked any alcohol licenses in the last 12 months relating to KG Enterprises, LLC; and

WHEREAS, the applicant provided a Traffic Impact Analysis for the proposed use; and

WHEREAS, the Traffic Impact Analysis indicates the proposed use will generate more than 100 vehicles during morning and afternoon peak hours; and

WHEREAS, the Traffic Impact Analysis indicates the proposed use will generate less than 250 vehicles during morning and afternoon peak hours; and

WHEREAS, the Traffic Impact Analysis makes the following findings/recommendations: 1) Approaches shall be permitted and constructed in accordance with MSB guidelines; 2) Because the posted speed limit is below 50 MPH and furthermore that peak hour site traffic volumes are less than 100 vehicles at both approaches, speed-change lanes are not required; 3) Because driveway sight

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distances exceed minimum distances, no sight distance obstruction mitigation is required; and

WHEREAS, according to the application material, the applicant will provide a retention basin constructed between the gas pumps and the eastern property line to capture any potential contaminated runoff leaving the site; and

WHEREAS, the applicant submitted Matanuska-Susitna Borough Deputy Fire Marshal approved plan reviews for the store (#2022-007), fuel tank or dispensing system (#2022-008), the fuel canopy (#2022-009), and the propane tank or dispensing system (#2022-012), to ensure the development is in compliance with the applicable fire code; and

WHEREAS, the subject parcel is approximately 3.01 acres in size; and

WHEREAS, according to the application material, the structure is approximately 147.5 feet from the South Trunk Road right-of-way, 294 feet from the south property line, 40 feet from the west property line, and 98.3 feet from the north property line; and

WHEREAS, the closest residential structure is approximately 350 feet south of the proposed use; and

WHEREAS, according to the application material, the proposed alcoholic beverage package store will be located within the convenience market; and

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WHEREAS, according to the application material, the proposed store design includes separate cashier counters for the alcoholic beverage package store and convenience market; and

WHEREAS, the applicant has paved the area around the convenience market and fuel station, which will control the dust; and

WHEREAS, the lighting design includes exterior lights mounted under the overhangs of the store, downward-directed lights in the fuel canopy, and 25-foot tall pole lights focusing on the driveways and various ancillary uses of the site; and

WHEREAS, according to the application material, signs will be limited to a 36-foot tall lighted sign near the northern driveway, on the fuel canopy, and on the building itself; and

WHEREAS, the applicant is not proposing any outdoor amplified sound activities; and

WHEREAS, the operation must comply with the maximum permissible sound level limits allowed, per the requirements of MSB 8.52 – Noise, Amplified Sound and Vibration; and

WHEREAS, the South Trunk Road extension was constructed in 2017 to address increased development and growth south of the Parks Highway as well as traffic congestion; and

WHEREAS, the project engineer determined the north and south driveway intersections with South Trunk Road have a Level of Service of A; and

WHEREAS, according to the site plan, the project will provide 20 customer parking spaces; and

WHEREAS, according to the site plan, the applicant will provide two customer parking spaces designated for persons with disabilities; and

WHEREAS, there will be approximately one parking space for every 200 square feet of building floor area; and

WHEREAS, the Matanuska-Susitna Borough Long Range Transportation Plan, was adopted in 2017 and lists Trunk Road at a Level of Service (LOS) of "C or better"; and

WHEREAS, according to the application material, the gas pump canopy is approximately 77.5 feet from the South Trunk Road right-of-way; and

WHEREAS, all of the required site plans and operational information have been provided by the applicant.

WHEREAS, the Planning Commission has reviewed this application with respect to applicable standards set forth in MSB 17.61; and

WHEREAS, the Planning Commission conducted a public hearing on May 16, 2022 on this matter.

NOW, THEREFORE, BE IT RESOLVED, that the Matanuska-Susitna Borough Planning Commission hereby adopts the aforementioned findings of fact and makes the following conclusions of law supporting approval of Planning Commission Resolution 22-10:

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1. The proposed use will preserve or not materially detract from the value, character and integrity of the surrounding area (MSB 17.61.070(B)(1)).
2. The proposed use will not be harmful to the public health, safety, convenience, and welfare (MSB 17.61.070(B)(2)).
3. Sufficient setbacks, lot area, buffers or other safeguards are being provided (MSB 17.61.070(B)(3)).
4. The proposed use will operate in accordance with the noise standards (MSB 17.61.080).
5. The proposed use will not negatively affect the safe, efficient flow of traffic on any highway, arterial, collector or street from which access to and from the establishment is obtained (MSB 17.61.090(A)).
6. The adjacent road segment and intersection are at an acceptable level of service (MSB 17.61.090(B)).
7. Adequate parking will be provided (MSB 17.61.090(C)).
8. The proposed use is compatible with and will not adversely affect the surrounding residential uses (MSB 17.61.110(B)(1)).
9. The proposed use will not adversely affect property values of surrounding areas (MSB 17.61.110(B)(2)).

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10. The proposed use will not create unreasonable noise levels beyond the property of the proposed location (MSB 17.61.110(B)(3)).
11. The proposed use will not adversely affect the safe and efficient flow of traffic on any highway, arterial, collector, or street from which access to and from the business occurs (MSB 17.61.110(B)(4)).
12. The proposed use will provide adequate off-street parking (MSB 17.61.110(B)(5)).
13. Measures will be in place reduce any negative effect upon adjacent properties (MSB 17.61.110(B)(6)).
14. The application material has met all of the purposes of this chapter (MSB 17.61.110(B)(7)).

BE IT FURTHER RESOLVED, the Planning Commission finds this application does meet the standards of MSB 17.61 and does hereby approve the Core Area Conditional Use Permit to operate a convenience market with gas pumps and an alcoholic beverage package store, with the following conditions:

1. The operation shall comply with all other applicable federal, state, and local regulations.
2. All aspects of the operation shall comply with the description detailed in the application material and with the conditions of this permit. An amendment to the

Conditional Use Permit shall be required prior to any expansion of the conditional use.

3. The operation shall comply with the maximum permissible sound level limits allowed, per the requirements of MSB 17.61.080 – Noise Standards and MSB 8.52 – Noise, Amplified Sound and Vibration.

4. Prior to operation, obtain approved driveway permits for both driveway onto the site.

5. Prior to operating, a copy of the approval issued by ADEC for the on-site septic system shall be provided to the MSB Development Services Division.

6. Provide a copy of the approved State of Alaska package store license #1241, within 30 days of its issuance.

ADOPTED by the Matanuska-Susitna Borough Planning Commission this ___ day of _____, 2022.

_____
STAFFORD GLASHAN, Chair

ATTEST

_____
KAROL RIESE, Planning Clerk

(SEAL)

YES:

NO:

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COMMISSION BUSINESS

COMMISSION BUSINESS

MATANUSKA-SUSITNA BOROUGH
Planning and Land Use Department
350 East Dahlia Avenue • Palmer, AK 99645
Phone (907) 861-7822
www.matsugov.us

MEMORANDUM

DATE: May 5, 2022

TO: Planning Commissioners

FROM: Kim Sollien, Acting Planning and Land Use Director K.S.

SUBJECT: Tentative Future PC Items

Upcoming PC Actions

Quasi-Judicial

- Frontier Plaza Subdivision – Earth Material Extraction, 18N10E31A004 (Staff: Mark Whisenhunt)
- Talkeetna Connection – Marijuana Retail Facility, 24N04W29D002 (Staff: Peggy Horton)
- Dime Bag – Marijuana Retail Facility, 6298B01L002 (Staff: Peggy Horton)
- Premier Homes – Earth Material Extraction, 17N02W34D003 (Staff: Peggy Horton)
- Green Jar – Hatcher Pass – Marijuana Retail Facility, 4316B01L0064 (Staff: Jason Ortiz)
- Green Go, LLC – Marijuana Cultivation Facility, 17N01W11A020 (Staff: Mark Whisenhunt)
- Floaters – Alcoholic Beverage Dispensary Expansion, 1783B02L003 (Staff: Mark Whisenhunt)
- QAP – Church-Seldon, Earth Material Extraction, 18N01W31A015 (Staff: Peggy Horton)
- Denali Farms – Marijuana Cultivation Facility, 4136B03L004 (Staff: Peggy Horton)
- MSB East Kashwitna – Earth Materials Extraction, 20N04W07A001 (Staff: Mark Whisenhunt)
- Purely Alaskan – Residential Special Land Use District CUP, 19N04W29A012 (Staff: Mark Whisenhunt)
- Checkmate Harvest Company – Marijuana Cultivation Facility, 18N01W15D005 (Staff: Mark Whisenhunt)

Legislative

- Historic Preservation Plan (HPP) (Staff: Adam Bradway)
- Municipal Separate Storm Sewer System (MS4) (Staff: Rick Antonio)
- Bike and Pedestrian Plan (Staff: Kelsey Anderson)
- MSB Borough-Wide Comprehensive Plan (Staff: Kim Sollien)
- Marijuana Code Update (Staff: Alex Strawn)
- Glacier View Comprehensive Plan Update (Staff: Leda Borys)
- Coordinated Human Services Transportation Plan (Staff: Leda Borys)
- Subdivision Construction Manual Update (Staff: Alex Strawn)
- Aviation Overlay District Repeal (Staff: Kelsey Anderson)
- Beverly Lake Lake Management Plan (Staff: Kelsey Anderson)
- MPO Formation (Staff: Kim Sollien)
- Corridor Studies (Staff: Kim Sollien/Adam Bradway)