# Agenda

## Planning Commission Regular Meeting

Wednesday, December 06, 2023 at 6:30 PM
Cowles Council Chambers In-Person & Via Zoom Webinar

**Homer City Hall**
491 E. Pioneer Avenue
Homer, Alaska 99603
www.cityofhomer-ak.gov

**Zoom Webinar ID: 979 8816 0903 Password: 976062**
https://cityofhomer.zoom.us
Dial: 346-248-7799 or 669-900-6833;
(Toll Free) 888-788-0099 or 877-853-5247

**CALL TO ORDER, 6:30 P.M.**

**AGENDA APPROVAL**

**PUBLIC COMMENTS ON ITEMS ALREADY ON THE AGENDA** The public may speak to the Commission regarding matters on the agenda that are not scheduled for public hearing or plat consideration. (3 minute time limit).

**RECONSIDERATION**

**CONSENT AGENDA** All items on the consent agenda are considered routine and non-controversial by the Planning Commission and are approved in one motion. There will be no separate discussion of these items unless requested by a Planning Commissioner, in which case the item will be moved to the regular agenda.

A. Unapproved Regular Meeting Minutes for November 1, 2023

**PRESENTATIONS / VISITORS**

**REPORTS**

A. Special Public Meeting Reports by Attending Commissioners
   1. Comprehensive Plan
   2. Transportation Plan

B. City Planner's Report
   Staff Report 23-059

**PUBLIC HEARINGS**

A. Staff Report 23-060, Request for Conditional Use Permit CUP 23-08 for a Planned Unit Development at 1563 Homer Spit Road, 1663 Homer Spit Road, and 1491 Bay Avenue.

B. Staff Report 23-061, Application Amending Zoning Map via Ordinance

C. Staff Report 23-062, Vacation of B Street Right of Way South of Bay Avenue

D. Staff Report 23-063, Request for Conditional Use Permit CUP 23-09, More than One Building at 1149 Virginia Lynn Way

E. Staff Report 23-064, Request for Conditional Use Permit CUP 23-10, More than one building at 1161 Virginia Lynn Way

F. Staff Report 23-065, Request for Conditional Use Permit CUP 23-11, More than one building at 1177 Virginia Lynn Way

**PLAT CONSIDERATION**

A. Staff Report 23-066, Bayview Subdivision Lighthouse Village Replat Preliminary Plat

**PENDING BUSINESS**

**NEW BUSINESS**

**INFORMATIONAL MATERIALS**

A. 2024 Commission Annual Calendar

B. City Manager's Report
CM Report for City Council Meeting on November 13, 2023
CM Report for City Council Meeting on November 27, 2023

C. Article from Planning Magazine Fall 2023 Issue:
To Plan for the Future, Imagine the the Future

D. City of Homer Monthly Newsletter
December 2023 Issue

**COMMENTS OF THE AUDIENCE** Members of the audience may address the Commission on any subject. (3 min limit)

**COMMENTS OF THE STAFF**

**COMMENTS OF THE MAYOR/COUNCIL** (If Present)

**COMMENTS OF THE COMMISSION**

**ADJOURNMENT**

Next Regular Meeting is **Wednesday**, **January 3, 2024**, at **6:30 p.m.** All meetings are scheduled to be held in the City Hall Cowles Council Chambers located at 491 E. Pioneer Avenue, Homer, Alaska and via Zoom Webinar. Meetings will adjourn promptly at 9:30 p.m. An extension is allowed by a vote of the Commission.

**CALL TO ORDER**

Session 23-17, a Regular Meeting of the Planning Commission was called to order by Chair Scott Smith at 6:30 p.m. on November 1, 2023 at the Cowles Council Chambers in City Hall, located at 491 E. Pioneer Avenue, Homer, Alaska, and via Zoom Webinar. A worksession was held at 5:30 p.m. On the agenda was a discussion on the development of a Strategic Plan document for the Commission.

**PRESENT:** COMMISSIONERS HIGHLAND, BARNWELL, SMITH, SCHNEIDER AND VENUTI

**ABSENT:** COMMISSIONERS STARK AND BARNWELL (EXCUSED)

**STAFF:** CITY PLANNER FOSTER, DEPUTY CITY CLERK PETTIT

**AGENDA APPROVAL**

Chair Smith requested a motion and second to approve the agenda.

SCHNEIDER/CONLEY MOVED TO APPROVE THE AGENDA.

There was no discussion.

VOTE: NON OBJECTION: UNANIMOUS CONSENT

Motion carried.

**PUBLIC COMMENTS ON ITEMS ALREADY ON THE AGENDA** The public may speak to the Commission regarding matters on the agenda that are not scheduled for public hearing or plat consideration. (3 minute time limit).

**RECONSIDERATION**

**CONSENT AGENDA** All items on the consent agenda are considered routine and non- controversial by the Planning Commission and are approved in one motion. If a separate discussion is desired on an item, a Commissioner may request that item be removed from the Consent Agenda and placed on the Regular Agenda under New Business. No Motion is necessary

A. Unapproved Regular Meeting Minutes of October 4, 2023

SCHNEIDER/VENUTI MOVED TO ADOPT THE CONSENT AGENDA AS PRESENTED.

There was no further discussion.

VOTE: NON OBJECTION: UNANIMOUS CONSENT

Motion carried.

**PRESENTATIONS / VISITORS**

**REPORTS**

A. Staff Report 23-058, City Planner's Report

City Planner Foster reviewed Memorandum PC 23-058 for the Commission. He spoke to the following items:

- Council failed Ordinance 23-21(S)(A), it is expected to come back to the Planning Commission regarding the Commission's comments regarding the ordinance within the Title 21 update.

- Council adopted Resolution 23-119, this resolution outlines the creation of a steering committee to aid in the guidance of developing the comprehensive plan and zoning code update. It is to be created by resolution which will outline the duties of the committee and should be presented and adopted at the November 27th Council meeting. There should be at least one Planning Commissioner seat on the Committee. This will be advertised for the membership of that committee.

- The City Planner will be working with the consultant to create and develop a public outreach plan. he noted that it is expected to have a lot of public outreach events.

- The Draft Transportation Plan will be presented at a worksession in January then a regular meeting.

- A possible Conditional Use Permit will be presented at the December 6th meeting.

- Commissioner Venuti explained that

City Planner Foster responded to questions from the Commissioners on the following:

- hiring status for vacancies within the Planning Department

- the lack of business items on the Planning Commission's agenda

- How he is fulfilling and addressing the requirements of the Planning Department, processing applications, permits, and etcetera.

- Scheduling worksessions to address the items that the Commission wants to address such as the Comprehensive Plan, Strategic Plan, and visioneering.

    - Chair Smith and Commissioner Conley will be meeting with Ms. Engebretsen to set a structure for the visioneering. This will be brought before the full commission at a future meeting. Due to Open Meetings Act they are limited in the number of Commissioners allowed to meet with Staff.

- The recommendations made by the Commission to City Council on Ordinance 23-21(S)(A) will be coming back to the Commission to rework and submit a new ordinance to city council regarding developers commitments to the city.

- It is strongly recommended that Councilmembers Erickson and Davis attend those meetings to participate in the discussions.

**PUBLIC HEARINGS**

**PLAT CONSIDERATION**

**PENDING BUSINESS**

**NEW BUSINESS**

A. 2024 Meeting Schedule

Chair Smith introduced the item and deferred to City Planner Foster.

City Planner Foster noted the memorandum from the City Clerk, he stated that he has based the Commission's meeting schedule off of the dates in the draft resolution. He further noted that this is the time that the Commission can make any changes to their meeting schedule.

City Planner Foster facilitated a brief discussion on the following:
- Commissioner Training during the Annual Planning Conference in February

SCHNEIDER/CONLEY MOVED TO ADOPT THE 2024 REGULAR MEETING SCHEDULE AS PRESENTED.

There was no discussion.

VOTE: NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

**INFORMATIONAL MATERIALS**

A. 2023 Commission Annual Calendar
B. City Manager's Report October 9, 2023 Council Meeting
C. City Manager's Report October 23, 2023 Council Meeting

Chair Smith noted the informational materials in the packet.

Commissioner Schneider volunteered to make the November 13, 2023 report to City Council.

**COMMENTS OF THE AUDIENCE**

**COMMENTS OF THE STAFF**

City Planner Foster and Deputy City Clerk Pettit had no comments.

**COMMENTS OF THE MAYOR/COUNCIL MEMBERS**

Mayor Castner reported on a Zoom meeting he attended with Public Works Director Keiser and Parks & Trails Planner Steffy discussing the proposed underpass for the pedestrian trail to connect to Diamond Creek. in which there is a lot of interest in doing, but that there are a lot of impediments to the project. Mayor Castner then addressed the proposed steering committee the City Planner mentioned, he wanted some stop and go things in the Agnew Beck agreement since it was a three year project and he believed that there were items within Title 21 that could not wait for three or five years and he believed that the process of writing code takes some time and some items may need to be addressed sooner rather than later. He then responded to Commissioner Highland's question of what happens to the existing Comp Plan, it remains the adopted plan until the new proposed plan is adopted. The recommendations in the existing Comp Plan are still waiting to be addressed at any time. He did not think that a lot of things would be changing. He believed that the sentiments of slow growth in Homer are the same today as they were 40 years ago, let alone 20 years and wanting to make sure that when all of a sudden they were not waiting for this new and improved comprehensive plan, which he opined would be an impediment to having a new and improved Homer.

Mayor Castner provided comment that he has seen some previous projects that Agnew Beck worked on, noting that they are a top notch group, they do not produce bad reports, well researched, have huge databases and probably have a database of everybody's code in Alaska sitting there so that they can compare and contrast code analysis for Homer. He commented further that the planning item that failed at Council failed because Council wants this Commission to pick it up and perfect it. The Borough has accepted the fact that the city would like to have a very restrictive planning requirement coming in at the front of the planning process, that commitments are made at the front of the planning process and not negotiated later on due to the public input is at the beginning of a project and where the Planning Commission gets involved. That way the promises made by the developers can be assured. Mr. Castner continued stating that the Public Works Director and City Planner have worked through the issues in order to reach balance on getting the commitments up front to the borough planner whom actually has the authority and agreed to allow the city to do that. He further commented that Council is expecting to see it back in short order from the Commission. Mr. Castner reported that he was working on incorporating an efficiency of communication element with City Council, a work plan having champions work with staff and commissions to get things to the table faster or with more information, earlier discussions at the Council level. He encouraged the Commissions to do the same, but working in teams of two otherwise you may incur an Open Meetings Act violation. Mr. Castner inferred that he has imposed the following rule upon Council that they would never vote on a resolution or ordinance before it come before the Council under new business, in a report so that they can consider it first and not be rushed into making a decision by passing the resolution or ordinance. He continued stating that Council picked six areas, short term or near term goals and we can see how the first six work out. Right now the champions are all working in the off time and getting things done which he believed was improvement rather than just going to City Council meeting to City Council meeting. Lastly, Mayor Castner spoke to the latest decision handed down by the Courts on a Griswold case, noting that he had the opportunity to take it back to the Supreme Court but that almost every word of the Superior Court Judge used came from prior Supreme Court decisions. He opined that Mr. Griswold would not have much luck in taking the recent one up, noting that Mr. Griswold's appeal was on that whole conditional use permits and handling density issue as a conditional use when there really had not been any demonstration, and there was public sentiment against it. Pretty much the court said was it doesn't matter what the Mayor stated. Mayor Castner reported that the courts cited him, the Council voted five to one on this issue and that was good enough for the Superior Court. Mayor Castner stated that you have this incredible privilege of being a legislative body and what you do legislatively is going to trump everything. So if there were minor changes along the way, or confusion along the way, or anything when it went before Council and the Council legislatively

passed it, that it is kind of final deal. So it is really true that you can't fight City Hall. It is getting more and more difficult to win an appeal like that on any kind of procedural grounds, but when City Council actually moves it through I just want to be really clear on and so if the Commission provides good findings, even if you do not like you findings, or change some of the findings what they do is a legislative mandate and that will be the law of the land. Ms. Castner continued stating there is some really strong language in the decision and I apologize I did not bring it with me because I would have liked to have read a couple of the paragraphs to the Commission.

**COMMENTS OF THE COMMISSION**

Commissioner Highland thanked the Mayor for his comments, they are always thoughtful and stated she will get that article she was referring to, to the Mayor as soon as possible. She was looking forward to continuing work here with the incredible jobs, solutions and guiding growth and expressed her thanks to the Commission.

Commissioner Venuti thanked everyone in attendance for serving tonight.

Commissioner Conley had no further comments.

Commissioner Schneider stated that it was an interesting meeting, it has been a fairly reactionary position that I have witnessed and thinking about planning and use and having visioneering sessions is something that I would look forward to.

Chair Smith expressed his appreciation for all the Commissioners in attendance and the Mayor for his service as he really appreciates having him attend the meetings. He provides clarification in so many ways to the Commission and considers him an empowering Mayor, which is one thing he really appreciates about him. He will look forward to reading those paragraphs in the court decision as well. If possible he would like to see the whole decision and was sure there were others on the Commission just as interested in reading the decision. Chair Smith continued by stating he is excited about the upcoming adventures that they will be having with the proactive side of planning and believes it is a good step forward. He then wished everyone Happy Holidays.

**ADJOURNMENT**

There being no further business Chair Smith adjourned the meeting at 7:15 p.m. The next Regular Meeting is on Wednesday, December 6, 2023 at 6:30 p.m. A Worksession will be conducted at 5:30 p.m. All meetings are scheduled to be held in the City Hall Cowles Council Chambers located at 491 E. Pioneer Avenue, Homer, Alaska and via Zoom Webinar. Meetings will adjourn promptly at 9:30 p.m. An extension is allowed by a vote of the Commission.

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RENEE KRAUSE, MMC, DEPUTY CITY CLERK II

Approved:_____

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# City of Homer

www.cityofhomer-ak.gov

**Staff Report Pl 23-059**

TO: Homer Planning Commission
FROM: Ryan Foster, AICP, City Planner
DATE: December 6, 2023
SUBJECT: City Planner's Report

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**11.13.23 City Council**

i. Ordinance 23-61, An Ordinance of the City Council of Homer, Alaska Amending Homer City Code Title 5 to add Chapter 5.48 Short Term Rentals. Aderhold/Davis. Recommended dates Introduction November 13, 2023, Refer to Planning Commission and Economic Development Commission, Public Hearing and Second Reading February 26, 2024. Memorandum CC-23-260 from City Manager as backup.

**11.27.23 City Council**

a. Resolution 23-129, A Resolution of the City Council of Homer, Alaska Creating a Steering Committee to Aid in the Development of a New Comprehensive Plan and Title 21 Zoning Code. City Manager/City Planner. Memorandum CC-23-269 from City Planner as backup.

ADOPTED as amended with discussion.

Amended membership to include two Council Members, 2 Commissioners, and one member of the public; and to strike goal three.

**Commission Calendar Items**

After the public review of the Draft Transportation Plan, the Planning Commission will have a work session to review and comment on the plan and then a public hearing to provide comments to the City Council, the approval authority for Comprehensive Plan documents.

**Meeting Schedule**

The next regular meeting date is Wednesday, January 3, 2024.

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**Staff Report 23-060**

TO: Homer Planning Commission
FROM: Ryan Foster, AICP, City Planner
DATE: December 6, 2023
SUBJECT: Conditional Use Permit (CUP) 23-08

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**Synopsis** The applicant requests a Conditional Use Permit (CUP) 23-08, per HCC 21.24.030 (f), Planned Unit Developments. The applicant proposes a planned unit development consisting of a hotel, employee housing, and triplex residential units at 1563 Homer Spit Road, 1663 Homer Spit Road, and 1491 Bay Avenue.

| | |
|---|---|
| Applicant: | Doyon, Limited<br>1 Doyon Place,<br>Fairbanks, AK 99701 |
| Location: | 1563 Homer Spit Road, 1663 Homer Spit Road, 1491 Bay Avenue |
| Legal Description: | T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0940051 BAYVIEW SUB NO 6 LOT 164-A<br><br>T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0940051 BAYVIEW SUB NO 6 LOT 164-B<br><br>T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0000839 BAY VIEW SUB LOT 163 |
| Parcel ID: | 18101034, 18101035, 17921015 |
| Size of Existing Lot: | 1.87 acres, 2.7 acres, 1.35 acres |
| Zoning Designation: | General Commercial 1 & Rural Residential |
| Existing Land Use: | Commercial & Vacant |
| Surrounding Land Use: | North: Peninsula Solid Waste shop, ministorage, rooming house<br>South: Mariner Lagoon<br>East: Homer Spit Road and airport properties<br>West: Residential |
| Comprehensive Plan: | Chapter 4, Goal 1, Objective A: Promote a pattern of growth characterized by a concentrated mixed-use center, and a surrounding ring of moderate-to-high density residential and mixed-use areas with lower densities in outlying areas. |
| Wetland Status: | The area south of the existing retaining wall is tidal marsh |
| Flood Plain Status: | Zone AE 20, Beluga Slough Flood Hazard Map. |
| BCWPD: | Not within the Bridge Creek Watershed Protection District |
| Utilities: | Public utilities, water and sewer, do service the site. |
| Public Notice: | Notice was sent to 28 property owners of 26 parcels as shown on the KPB tax assessor rolls. |

**ANALYSIS:** The applicant proposes a planned unit development consisting of a hotel, employee housing, and triplex residential units at 1563 Homer Spit Road, 1663 Homer Spit Road, and 1491 Bay Avenue. The conditional use permit for a planned unit development is only one component of this project to be considered by the Planning Commission. The December 6, 2023 Planning Commission Regular Meeting Agenda also has an application to rezone 1491 Bay Avenue and a Preliminary Plat with a ROW vacation have also been submitted and are integral components for the entire proposed project and are summarized below.

**Rezone Application:** This ordinance proposes a zoning map amendment to move the General Commercial 1 District Boundary west to encompass the subject lot at 1491 Bay Avenue. The applicant proposes a planned unit development consisting of a hotel, employee housing, and triplex residential units at 1563 Homer Spit Road, 1663 Homer Spit Road, and 1491 Bay Avenue. The rezoning is necessary to allow for a mixed use planned unit development (residential and commercial); the Rural Residential District only allows planned unit development with residential uses only.

**Bayview Subdivision Lighthouse Village Replat:** This plat accompanies the action of vacating the B Street Right of Way south of Bay Avenue, and reconfigures three smaller lots into two larger lots. This preliminary plat would be the mechanism by which the property boundaries would legally change.

**Right-of-Way Vacation:** This action would vacate B Street, south of Bay Avenue. Unlike other platting processes, the final approval of this vacation is decided by the Homer City Council.

**The criteria for granting a Conditional Use Permit is set forth in HCC 21.71.030, Review criteria, and establishes the following conditions:**

a. The applicable code authorizes each proposed use and structure by conditional use permit in that zoning district;

**Analysis:** The properties at 1563 Homer Spit Road and 1663 Homer Spit Road are zoned General Commercial 1.The following uses may be permitted in the General Commercial 1 District when authorized by conditional use permit issued in accordance with Chapter 21.71 HCC:

HCC 21.24.030 (f.) Planned Unit Developments.

The property at 1491 Bay Avenue is zoned Rural Residential. The following uses may be permitted in the General Commercial 1 District when authorized by conditional use permit issued in accordance with Chapter 21.71 HCC:

HCC 21.12.030 (a.) Planned Unit Development, limited to residential uses only

The proposed planned unit development uses consist of a hotel, employee housing, and triplex residential units. The proposed commercial structures (a portion of the hotel footprint is located

on 1491 Bay Avenue) and uses are not authorized for the Rural Residential District. An application has been submitted in conjunction with this Conditional Use Permit application, to rezone proposed 1491 Bay Avenue from Rural Residential (RR) Zoning District to General Commercial 1 (GC1).

**Finding 1:** The structures and uses are authorized by the applicable code for the General Commercial 1 District.

**Finding 2:** The residential structures and uses are authorized by the applicable code for the Rural Residential District. The commercial structures and uses are not authorized by the applicable code for the Rural Residential District, therefore, a rezone to General Commercial 1 is required.

**Condition 1:** The property at 1491 Bay Avenue must be rezoned to an authorized zoning district, General Commercial 1, to align with the proposed commercial uses.

**Condition 2:** The B Street Right-of-Way, south of Bay Avenue must be vacated. The final approval of this vacation is decided by the Homer City Council.

b. The proposed use(s) and structure(s) are compatible with the purpose of the zoning district in which the lot is located.

HCC 21.24.010 Purpose. The General Commercial 1 (GC1) District is primarily intended to provide sites for businesses that require direct motor vehicle access and may require larger land area, and to provide business locations in proximity to arterials and transportation centers. It is also intended to minimize congestion and adverse effects on adjacent residential districts and on the appearance of the community.

**Applicant:** Our proposed development for our Homer, Alaska, property encompasses two distinct sections. The first section is envisioned as a year-round hotel featuring dining facilities, convention space, and on-site employee housing, contributing to the city's tourism infrastructure and aligning with the comprehensive plan's goals. The second section is designated for a multi-building residential condo development, catering to the diverse housing needs of the community.

The plan is intricately designed to adhere to the principles outlined in the comprehensive plan, emphasizing the importance of increasing the housing supply, maintaining the quality of the natural environment, and supporting a mix of commercial and residential developments. Detailed site plans drawn on Architectural Site Plan sheet AS0.01 offer specific insights into the layout and design, ensuring that our final product aligns.

**Analysis:** Planned unit developments are permitted uses with a conditional use permit per HCC 21.24.030 Conditional uses and structures.

**Finding 3:** The proposed structures and uses are compatible with the purpose of the district.

c. The value of the adjoining property will not be negatively affected greater than that anticipated from other permitted or conditionally permitted uses in this district.

**Applicant:** The proposed development by Doyon, Limited in Homer, Alaska, holds great promise for enhancing property values in the area and contributing significantly to the local economy.

By offering sustainable development practices, including on-site employee housing, the project addresses the housing needs of its workforce and ensures a minimal environmental footprint. Incorporating on-site accommodation fosters a sense of community among employees, reducing commuting pressures and enhancing the overall quality of life. Moreover, the development's strategic location and thoughtful planning are poised to attract increased visitor traffic, bringing economic benefits to local businesses. As more visitors explore the area, the demand for local services and amenities is likely to rise, boosting the economy and elevating the overall property values in Homer. Doyon, Limited's commitment to sustainable practices and community engagement positions this development as a positive force for the region's economic growth and environmental responsibility. The highly visible location of the plot is expected to enhance the area's aesthetics, contributing to a visually appealing and harmonious neighborhood character.

**Analysis:** Many uses in the General Commercial 1 district have greater negative impacts than would be realized from a planned unit development consisting of a hotel, employee housing, and triplex residential units. Other permitted uses such as General business offices and professional offices; Heavy equipment and truck sales, rentals, service and repair; Lumberyards; or Retail businesses, would have a similar or greater negative impact on nearby property values.

**Finding 4:** A planned unit development consisting of a hotel, employee housing, and triplex residential units are not expected to negatively impact the adjoining properties greater than other permitted or conditional uses.

d. The proposal is compatible with existing uses of surrounding land.

**Applicant:** The proposed development by Doyon, Limited in Homer, Alaska, is carefully designed to be compatible with existing uses of the surrounding land. Through adherence to the planned unit development (PUD) regulations, the project aligns with the zoning district's provisions, ensuring that the mix of residential, commercial, and industrial elements integrates seamlessly into the existing landscape. The development plan considers the neighborhood's character, harmonizing scale, bulk, coverage, and density to preserve the desirable features of the surrounding area. By incorporating sustainable practices, on-site employee housing, and thoughtful design, the proposal aims to complement rather than disrupt the existing land uses, promoting a well-integrated and cohesive community. The proposal's compatibility with the surrounding land uses is a testament to Doyon, Limited's commitment to responsible development and respect for the existing local environment.

**Analysis:** Existing uses of the surrounding land are currently the Peninsula Solid Waste shop, ministorage, rooming house to the north, residential lots zoned Rural Residential to the west,

Homer Spit Road and airport properties to the east, and the Mariner Lagoon to the south. A planned unit development consisting of a hotel, employee housing, and triplex residential units are in character with the surrounding land uses.

**Finding 5:** The proposal is compatible with existing uses of surrounding land.

e. Public services and facilities are or will be, prior to occupancy, adequate to serve the proposed use and structure.

**Applicant:** (reference Overall Utility Plan Sheet U0.00)
An existing 6" waterline is currently stubbed into the southern portion of the property. The development will connect to this existing line and serve the condominiums for domestic water and the hotel for domestic and fire service. The employee housing facility will connect to the waterline located at B Street.

For sanitary sewer, the employee housing, hotel, and condominiums will propose a gravity pipe to a proposed lift station, which will be located on the southern lot. The lift station will pump to the northwest and connect to B Street's existing sanitary sewer line to the North.

**Analysis:** City sewer and water services are already provided to the property.

**Finding 6:** Water, sewer, and fire services are adequate to serve the proposed planned unit development.

f. Considering harmony in scale, bulk, coverage and density, generation of traffic, the nature and intensity of the proposed use, and other relevant effects, the proposal will not cause undue harmful effect upon desirable neighborhood character.

**Applicant:** (Reference Overall Site 3D Massing Views Sheet AS0.03)

The proposed development by Doyon, Limited in Homer, Alaska, is meticulously designed to integrate harmoniously with the existing neighborhood character, ensuring that scale, bulk, coverage, and density align with the area's desirable aesthetics. The development seeks to maintain the neighborhood's overall harmony and architectural coherence by adhering to the city's zoning regulations. Additionally, careful attention has been given to the potential impact on traffic generation. The project's strategic location and comprehensive planning consider the capacity of surrounding streets and roads, with measures in place to mitigate adverse effects. By implementing thoughtfully designed

traffic flow patterns and evaluating the needs of the local infrastructure, the development aims to minimize disruptions and contribute positively to the community's overall wellbeing. Doyon, Limited's commitment to balancing growth with neighborhood character preservation underscores its dedication to creating a development that seamlessly integrates into the fabric of Homer, ensuring a positive impact on aesthetics and traffic dynamics.

**Analysis:** The project corresponds to the purpose statement, as it provides residential and commercial development at a density allowable in code.

**Finding 7:** The Commission finds the proposal will not cause undue harmful effect upon desirable neighborhood character.

g. The proposal will not be unduly detrimental to the health, safety or welfare of the surrounding area or the city as a whole.

**Applicant:** The proposed development by Doyon, Limited in Homer, Alaska, is conscientiously crafted to prioritize the health, safety, and welfare of the surrounding area and the city. The project adheres strictly to the established zoning regulations and city ordinances, ensuring that all aspects align with the community's well-being. Robust safety measures, both during construction and in the final built environment, have been incorporated to mitigate any potential risks. Additionally, the project emphasizes sustainable practices and environmental considerations to safeguard the local ecosystem's health. By engaging in comprehensive planning, Doyon, Limited aims to contribute positively to the community's welfare, creating a development that enhances the quality of life in the surrounding area without compromising safety or the city's overall health.

**Analysis:** The proposal does not introduce a use or a scale that is not reasonably anticipated by the rules, regulations, and infrastructure developed to service such a proposal. The applicant has provided a letter from the Federal Aviation Administration (FAA) with a determination that the proposed planned unit development will not be a hazard to air navigation to the Homer Airport.

**Finding 8:** The proposal will not be unduly detrimental to the health, safety or welfare of the surrounding area and the city as a whole when all applicable standards are met as required by city code.

**Condition 3:** Contact the FAA before construction begins and confirm if they require a permit for construction cranes on the project.

h. The proposal does or will comply with the applicable regulations and conditions specified in this title for such use.

**Analysis:** The applicant is not requesting any exception to code. The project is able to comply with the applicable regulations and conditions when gaining a CUP for a planned unit development and subsequent zoning permit for construction.

**Finding 9:** The proposal will comply with applicable regulations and conditions specified in Title 21 when gaining the required permits.

i. The proposal is not contrary to the applicable land use goals and objectives of the Comprehensive Plan.

**Applicant:** Doyon, Limited's proposal for a year-round hotel and condos in Homer, Alaska, is intricately woven into the city's comprehensive plan, a strategic roadmap designed to guide Homer's growth while safeguarding its distinct character. Anchored within the Land Use chapter of the project, the development seamlessly aligns with the overarching vision of the city, particularly the outlined goals of increasing housing supply and diversity (Goal 1) and maintaining the pristine quality of Homer's natural environment (Goal 2).

The plan envisions Homer as a city that respects its environment, boasting a unique and vibrant atmosphere that is both wonderful to live in and inspiring to visit. The proposed project contributes to this vision by adhering to the plan's emphasis on encouraging high-quality buildings and fostering a mix of well-defined commercial districts (Goal 3 and Goal 4). By promoting compact, walkable community development and integrating green infrastructure elements, the story goes beyond a mere real estate venture; it becomes a harmonious addition to the cityscape, echoing the plan's call for a balanced blend of development and open space.

The Land Use chapter specifically advocates for zoning concepts that encourage a variety

of housing options, reflecting income and lifestyle diversity in Homer. Doyon, Limited's proposal aligns with this objective by presenting a mixed-use development that caters to diverse needs while respecting the natural landscape. The plan's proposed land use recommendations map, designed to clarify intended types of uses, resonates with the project's commitment to striking a balance between development density and preserving environmentally crucial areas.

Furthermore, the proposal dovetails with the plan's vision for an integrated system of green spaces, providing aesthetic and functional benefits to the community. By protecting corridors for trails, managing stormwater, preserving wildlife habitat, and maintaining viewsheds, the development becomes a housing solution and a contributor to the city's ecological well-being.

In essence, Doyon, Limited's development proposal mirrors the forward-thinking approach embedded in Homer's comprehensive plan, contributing to the city's economic vitality while ensuring that growth occurs in a manner that is both sustainable and in harmony with the community's values.

Incorporating a meticulously planned sidewalk within the proposed development is crucial in promoting secure pedestrian access to the Homer Spit trail. This thoughtful addition aligns seamlessly with the broader objectives of Homer's Non-Motorized Transportation and Trail Plan (2004), underscoring our commitment to community-driven initiatives prioritizing safety and accessibility. By facilitating a well-designed pedestrian crossing, our development contributes to the local infrastructure and aligns with the overarching vision of creating a more connected and walkable community. This intentional integration reflects our dedication to enhancing the overall living experience in Homer while promoting sustainable and pedestrian-friendly urban planning.

**Analysis:** The Comprehensive Plan states (Goal 1 Objective D Implementation Item 3): “Support planning and zoning regulations that promote land use strategies that include compact, mixed-use development, higher density development, and infill.” The proposed planned unit development

complies with the general land use pattern set out in the Comprehensive Plan and allows for greater mixed use opportunities.

Goals of the Land Use Chapter of the Homer Comprehensive Plan include increasing the diversity of housing, encouraging infill, and supporting housing choice by supporting a variety of dwelling options (Chapter 4, Objectives A & C). This proposal promotes housing choice at a density that is appropriate for its proposed use.

**Finding 10:** The proposal is not contrary to the applicable land use goals and objects of the Comprehensive Plan. The proposal aligns with Chapter 4, Goal 1, Objectives A and C, and D and no evidence has been found that it is contrary to the applicable land use goals and objects of the Comprehensive Plan.

j. The proposal will comply with the applicable provisions of the Community Design Manual (CDM).

**Analysis:** Chapter 3, Outdoor Lighting is applicable to the General Commercial 1 and Rural Residential Districts.

**Condition 4:** Outdoor lighting must be down lit per HCC 21.59.030 and the CDM.

**Finding 11:** Project will comply with the applicable provisions of the CDM.

**HCC 21.71.040(b).** b. In approving a conditional use, the Commission may impose such conditions on the use as may be deemed necessary to ensure the proposal does and will continue to satisfy the applicable review criteria. Such conditions may include, but are not limited to, one or more of the following:

**1. Special yards and spaces**: No specific conditions deemed necessary.
**2. Fences and walls:** No specific conditions deemed necessary.
**3. Surfacing of parking areas:** No specific conditions deemed necessary.
**4. Street and road dedications and improvements:** See Traffic Impact Analysis.
**5. Control of points of vehicular ingress and egress:** See Traffic Impact Analysis.
**6. Special provisions on signs:** No specific conditions deemed necessary.
**7. Landscaping:** No specific conditions deemed necessary.
**8. Maintenance of the grounds, building, or structures:** No specific conditions deemed necessary.
**9. Control of noise, vibration, odors or other similar nuisances**: No specific conditions deemed necessary.
**10. Limitation of time for certain activities:** No specific conditions deemed necessary.
**11. A time period within which the proposed use shall be developed: Condition 6:** Per HCC 21.52.070 Time Limit: After a PUD conditional use permit and development plan are approved by the Commission, construction of the planned unit development must begin within two years of the approval of the conditional use permit.
**12. A limit on total duration of use:** No specific conditions deemed necessary.
**13. More stringent dimensional requirements,** such as lot area or dimensions, setbacks, and building height limitations. Dimensional requirements may be made more lenient by conditional use permit only

when such relaxation is authorized by other provisions of the zoning code. Dimensional requirements may not be altered by conditional use permit when and to the extent other provisions of the zoning code expressly prohibit such alterations by conditional use permit.

**14. Other conditions necessary to protect the interests of the community and surrounding area, or to protect the health, safety, or welfare of persons residing or working in the vicinity of the subject lot:** No specific conditions deemed necessary.

**Planned Unit Development (PUD)**

**Statement of Purpose:**

Doyon, Limited is excited about constructing a hotel and condominiums in Homer, viewing it as a distinctive opportunity to elevate the city's hospitality sector. Our vision extends beyond mere construction; we aim to create a landmark that meets the highest standards of luxury and comfort and seamlessly integrates with the breathtaking natural beauty that defines the surrounding environment. This undertaking is more than a development project; it is a commitment to enhancing the overall allure of Homer, attracting tourism, and fostering economic vitality. By envisioning a facility that resonates with the city's unique charm and complements its scenic landscapes, we aspire to contribute to the hospitality sector and the holistic growth and prosperity of the community.

**Objective:**

Our primary objective is collaborating closely with the City of Homer and all relevant stakeholders to ensure a smooth and successful development process. We are committed to adhering to all local regulations, building codes, and community guidelines throughout the planning and execution phases of this project. Additionally, we aim to incorporate sustainable practices and innovative technologies to minimize the environmental impact of development and contribute positively to the community.

Doyon, Limited recognizes the importance of fostering strong relationships with the local community. We are eager to engage in open and transparent communication to address any concerns and ensure that the development aligns with the values and aspirations of the people of Homer.

We are confident that our expertise in the Alaskan tourism market will enable us to deliver a project that meets and exceeds the City of Homer's and its residents' expectations.

Thank you for considering our proposal. We look forward to collaborating closely with the City of Homer and contributing to this remarkable community's continued growth and prosperity.

**A specific plan of development, including a designation of land uses by the relative intensity and the land area intended for each land use:**

Please refer to the more detailed site-specific plans (Lighthouse Village Development Drawing Set G0.00-A3.02) submitted for the specific development plan, including the designation of land uses by the relative intensity and the land area intended for each service. These comprehensive documents provide an in-depth analysis and allocation of space for each project component. The submitted plans offer a clear and transparent overview of the proposed development, ensuring that all stakeholders and interested parties

have access to detailed information about the relative intensity and intended land use for each aspect of this innovative project.

**A program of development outlining the stages of future development and the phase for current approval:**

The development program for the project outlines a phased approach to ensure a systematic and well-coordinated construction process. The project is scheduled to commence during the 2024 construction season, signaling the initiation of site preparations, foundation work, and initial infrastructure development. This initial phase aims to set the groundwork for subsequent construction activities.

Throughout the following construction seasons, the development will progress through defined stages. These stages include constructing the multi-building residential condos on one section of the property and then a year-round hotel with dining and convention on the other and a supporting employee housing facility. These stages will be meticulously executed, considering environmental impact, community integration, and sustainable building practices.

The completion of the entire project is anticipated by 2026. This timeline allows for a comprehensive and quality-driven development process, ensuring each stage receives the necessary attention and adherence to approved plans. The phased approach aligns with the community's needs, allowing for a gradual integration of the new structures while minimizing disruptions to the existing neighborhood. The proposed timeline also provides a clear roadmap for regulatory authorities and the community to monitor and evaluate the development progress at each stage.

**The time schedule for construction and completion of all stages and all phases:**

The proposed construction schedule for the project entails a strategic and phased approach. The initial stage, slated for the 2024 construction season, primarily focuses on comprehensive site work for the entire project. This includes groundwork, infrastructure development, and the establishment of the foundational elements necessary for both the residential condo section and the year-round hotel with dining and convention space and a supporting employee housing facility.

Following the site preparations, the subsequent phase, scheduled for 2024, concentrates on constructing the residential condo development. This involves erecting multi-building structures, interior finishes, and landscaping to create a vibrant, integrated living space.

In the subsequent construction season of 2025, the project seamlessly transitions to developing the year-round hotel and convention space and a supporting employee housing facility. This phase encompasses the construction of the hotel building, dining facilities, convention spaces, employee housing facility, and the final touches to ensure a high-quality and inviting atmosphere.

The project's culmination is targeted for 2026, aligning with completing the residential condo, hotel, and employee housing sections. This scheduling allows for a systematic and efficient construction process, ensuring each phase receives attention to detail and adheres to the approved plans. Regular progress

updates will be provided to stakeholders, maintaining transparency and accountability throughout the construction and completion stages.

**A narrative description demonstrating the independence of each stage:**

The phased development emphasizes each stage's independence, ensuring a systematic and well-coordinated construction process.

The initial stage, set in the 2024 construction season, focuses on comprehensive site work. This includes groundwork, infrastructure development, and foundational establishment across the project area. The independence of this stage is crucial as it forms the basis for subsequent development, providing a solid platform for the residential condo, hotel, and employee housing sections.

Moving into 2024, the second stage of development unfolds independently with the construction of the residential condo development. This phase involves erecting multi-building structures, interior finishes, and landscaping. By separating this stage, we ensure dedicated attention to detail and the unique requirements of creating a cohesive and appealing residential living space.

In 2025, the third stage commences, concentrating on constructing the year-round hotel and convention space with supporting employee housing. This phase stands independently, allowing for the specific considerations and nuances associated with hotel infrastructure, dining facilities, and convention spaces to be meticulously addressed.

The independence of each stage is a deliberate strategy to streamline the construction process, enabling specialized focus and expertise at each juncture. This approach ensures that the residential and commercial components of the project are developed with precision and following the approved plans, contributing to the overall success and integrity of the development.

**The general location and size of the area involved and the nature of the land owner’s interest in the land to be developed:**

The proposed development encompasses a specific area in Homer, Alaska, spanning several lots identified as Bay View 163, 164A, and 164B. The total size of the development area is detailed in Architectural Site Plan AS0.01. The landowner's interest in these lots is fee simple ownership, providing the necessary authority to pursue and implement the planned development. This interest ensures the commitment to responsible and sustainable development practices, aligning with the community's broader goals and adhering to relevant regulatory guidelines. Our dedication to transparent communication and community engagement underscores our commitment to fostering a development that aligns with the character and needs of Homer.

**The density of land use to be allocated to parts of the area to be developed:**

The density of land use allocated to different parts of the area to be developed is outlined

in Architectural Site Plan AS0.01, providing a comprehensive overview of how the development will be distributed across the various lots and sections. This information includes specifics on the intensity and nature of land use in each designated part of the development area, ensuring clarity and adherence to established land use guidelines and regulations. Our commitment to responsible and transparent development extends to providing detailed insights into the density considerations, fostering a well-informed understanding of the project within the community and relevant authorities.

**The location, function, ownership and manner of maintenance of common open space for the management during construction; and management during each phase of development, the final management of the completed development:**

The development prioritizes the thoughtful management of shared open spaces throughout its construction and subsequent phases of development. Shared open spaces will be carefully designated during construction to facilitate efficient site work and infrastructure development while minimizing environmental impact. The location and function of these spaces are outlined in detail in Architectural Site Plan AS0.01, submitted for approval.

The development team will oversee ownership and maintenance responsibilities during construction. Temporary measures will be implemented to preserve the ecological integrity of shared open spaces during this phase, ensuring that construction activities do not compromise the natural surroundings.

As the development progresses through each phase, the management of shared open spaces will evolve to suit the project's changing needs. This includes landscaping and green infrastructure elements, contributing to the development's aesthetic appeal and ecological sustainability. These spaces will be accessible and well-maintained, fostering a sense of community and enhancing the quality of life for residents.

Upon completing the entire development by 2026, the final management of shared open spaces will transition to a designated entity or homeowner's association, as specified in the approved plans. This ensures the perpetual care and maintenance of these areas, promoting sustainable practices and contributing to the long-term well-being of the Homer community.

**The use, height, bulk and location of buildings and other structures:**

Architectural Site Plan AS0.01 provides detailed information regarding the use, height, bulk, and location of buildings and other structures. These plans offer a thorough analysis of the proposed development, outlining the specific characteristics of each building, including its designated use, height specifications, bulk considerations, and precise location within the development area. By presenting this information in detail, we aim to ensure transparency and alignment with established guidelines, facilitating a clear understanding of the project's architectural and structural aspects for the community and relevant regulatory bodies.

**The substance of covenants, grants of easements or other restrictions to be imposed upon the use of the land, buildings and structures, including proposed easements for public utilities and public access:**

The specific substance of covenants, grants of easements, or other restrictions to be imposed upon the use of the land, buildings, and structures has yet to be finalized.

Proposed easements for public utilities and public access are under consideration, and the team is exploring options that align with community needs and adhere to regulatory requirements. Detailed plans outlining these restrictions and easements will be presented in subsequent submissions as the project progresses through the approval process. This collaborative approach ensures that the final covenants and easements balance responsible development, public benefit, and the long-term sustainability of the development.

**In the case of plans that call for development over a period of years, a schedule showing the time within which application for final approval of all parts of the planned development is intended to be filed:**

We are developing a comprehensive schedule outlining the anticipated timeframe for filing applications at various planned development stages, including subsequent filings following the initial approval process. As the development progresses, we commit to providing a detailed and accurate schedule for each phase, specifying the timeline for final approval. This schedule will be collaboratively prepared with relevant authorities and adhere to regulatory processes, ensuring a transparent and well-coordinated approach to achieving development milestones. Your understanding and cooperation are highly valued as we work diligently to present a comprehensive plan that aligns seamlessly with community goals and regulatory requirements.

**A description of methods to be employed to assure maintenance of any common areas and facilities shall be submitted:**

We will implement a comprehensive strategy to ensure the proper maintenance of common areas and facilities within the planned development. This strategy includes establishing a dedicated maintenance team or contracting with reputable local service providers for routine upkeep. Regular inspections and assessments will be conducted to identify maintenance needs promptly. A sustainable landscaping plan will also be implemented to preserve common areas' aesthetic and ecological value. We will develop clear guidelines and protocols for maintenance, addressing landscaping, infrastructure, and shared amenities. Through in-house efforts and partnerships with local maintenance experts, we are committed to ensuring the long-term quality and functionality of common spaces within the development.

**A list of all permits required from local, State, and Federal agencies for the uses proposed in the PUD:**

- Site Plan
- As-built survey
- Building Elevation
- Lighting standards

- Wetlands Permit
- Grading/Fill Plan
- Storm Water Plan (SWP)
- Conditional Use Permit (CUP)
- Landscaping requirements
- Development Activity Plan (DAP)
- Building Permit from the State of Alaska Department of Public Safety
- State Fire Marshal Plan Review

**Analysis:** A planned unit development (PUD) is a device that allows a development to be planned and built as a unit, or as phased units, and permits flexibility and variation in many of the traditional controls related to density, land use, setback, open space and other design elements, and the timing and sequencing of the construction. A PUD may be applicable to either residential, commercial, noncommercial or industrial uses or a combination thereof. A benefit of the planned unit development is the provision of site plans, elevations, drawings, and illustrations to demonstrate the feasibility and functionality of a project far above what is required for a conventional conditional use permit.

**21.52.020 Uses allowed in PUDs.**

a. PUDs are allowed in a zoning district only when allowed by the code provisions specifically applicable to that district. A PUD may consist of residential, noncommercial, commercial or industrial uses or a combination thereof, subject to any limitations or exceptions provided in this title.

b. In every PUD and during every stage of development of the PUD, at least 60 percent of the uses in the PUD must be uses that are listed as permitted outright or conditionally within the zoning district in which it is located. To satisfy this standard, the PUD must satisfy all of the following tests:

1. The total of floor area plus exterior lot area occupied by uses listed as permitted outright or conditionally in the zoning district must be not less than 60 percent of the total of floor area plus exterior lot area occupied by all uses in the PUD; and

2. The tax assessed valuation of that portion of the structures in the PUD used for uses listed as permitted outright and conditionally in the zoning district must total not less than 60 percent of the total assessed valuation of all structures in the PUD.

**Finding 12:** These requirements are met. Hotels are a permitted use in GC1 and multiple family dwellings are a conditional use.

c. If topographical or other barriers do not provide adequate privacy for uses adjacent to the PUD, the Commission may impose conditions to provide adequate privacy, including without limitation one or both of following requirements:

1. Structures located on the perimeter of the planned development must be set back a distance sufficient to protect the privacy of adjacent uses;

2. Structures on the perimeter must be permanently screened by a fence, wall or planting or other measures sufficient to protect the privacy of adjacent uses.

**Finding 13:** Sight obscuring fencing and a landscaping buffer are illustrated on the site plan to ensure privacy and provide a buffer between a commercial use (hotel) and the neighboring residence.

d. Dimensional Requirements. Setbacks and distances between buildings within the development shall be at least equivalent to that required by the zoning district in which the PUD is located unless the applicant demonstrates that:

1. A better or more appropriate design can be achieved by not applying the provisions of the zoning district; and

2. Adherence to the dimensional requirements of the zoning district is not required in order to protect health, safety and welfare of the occupants of the development and the surrounding area.

**Finding 14:** The setback and distances between buildings are equivalent to that required by the GC1 district. The only flexibility above the dimensional requirements of 21.24.040 is the building height for GC1 where the maximum building height is 35 feet. A better and more appropriate building height is for a three story hotel, which, by their nature, is higher than 35 feet. The building height proposed in the planned unit development for the hotel is 45 feet, with smaller sections of the hotel at 54 feet and 66.5 feet for the rooftop bar. There are no health, safety, or welfare concerns with the proposed hotel building height. As noted earlier in the staff report, the applicant has provided a letter from the Federal Aviation Administration (FAA) with a determination that the proposed planned unit development will not be a hazard to air navigation to the Homer Airport.

**Condition 5:** The maximum building heights for the hotel are those depicted in the planned unit development plans submitted for the conditional use permit.

**TRAFFIC IMPACT ANALYSIS**

The DOT&PF threshold requirement for a Traffic Impact Analysis (TIA) is 100 trips per hour. This requirement is defined in 17 AAC 10.060. Driveways not part of highway construction:

*"(c) If a development is projected to generate more than 100 vehicle trips on a highway during any hour of the day, or the traffic generated is expected to detract from the safety of the highway, an applicant must perform a traffic impact analysis that meets the requirements of 17 AAC 10.070."*

On a traffic volume basis, the Alaska Administrative Code 17 AAC 10.060 does not require a TIA for this Lighthouse Village Development because the development peak hour trips are less than 100 trips. The City of Homer has no threshold peak hour volumes that trigger requirements for TIAs. The Homer City

Planner determined a TIA is required per Homer City Code 21.71.020 Application for Conditional Use Permit by this paragraph:

> *8. Any additional information the City Planner may require to determine whether the application satisfies the criteria for issuance of a permit.*

Doyon, Limited is proposing the Lighthouse Village Development project in Homer, Alaska. The development includes a 100-guestroom hotel with on-site employee housing, and five triplex condominium buildings (15 residential units). The development is expected to generate site traffic volumes of 88 trips per hour in 2026, the full-buildout year.

An analysis shows that the westbound FAA Road-Ocean Drive-Homer Spit Road intersection (one of two intersections in the study area) is impacted by the site traffic to the extent that level of service for the westbound approach will decline to D, thus subject to mitigation. Pedestrian crossing at the intersection without site traffic are subject to long delays and poor levels of service. Site traffic does not impact, or worsen, these crossing performance measures.

The other intersection in the study area, Kachemak Drive-Homer Spit Road intersection doesn't have impacts that require mitigation. There is an uncontrolled pedestrian crosswalk, of which crossing pedestrians were not impacted by additional site traffic. However, the crosswalk was evaluated to determine if additional electronic warning devices would be warranted, and it was found that it is not eligible.

**Finding 15:** A Traffic Impact Analysis was completed with recommendations resulting from the TIA analysis.

**Condition 6:** The following recommendations from the TIA analysis must be implemented before occupancy and operations can occur:

- No intersection control, channelization, or geometric capacity improvements are recommended. Instead, implement improvements to enhance active transportation modes and potentially reduce vehicle demand at intersections and roadways.

- Instead of the frontage road between the North and South Accesses driveways shown in Figure 4 on page 17, construct a pathway fronting the Lighthouse Village Development to connect the site to the crossing at Kachemak Drive-Homer Spit Road crosswalk. The pathway should meet DOT&PF standards and located for compatibility with future pedestrian improvement projects along Homer Spit Road.

- Construct a connection between the Lighthouse Village Development to Bay Avenue using the B Street right-of-way to allow walking and biking trips to use the lower volume, low speed Bay Avenue, for non-motorist trip segments.

- Install a marked median refuge, and a potential marked crosswalk on the Homer Spit Road approach to the Ocean Drive-Homer Spit Road-FAA Road intersection. The crosswalk would only

be installed if the crossing demand could be established as 20 vehicles per hour or more at this location. However, the median refuge could be implemented without the crosswalk. This is presented in the following Figure 23 on page 75.

- Consider implementing a rapid rectangular flashing beacon at the marked crosswalk at Kachemak Drive for the Homer Spit Road crossing.

- The North Access Driveway and South Access Driveway may be constructed with two lanes, one lane outbound and one lane inbound. Driveways must comply with the recommendations in the DOT&PF Highway Preconstruction Manual (Section 1190).

- In addition to the above, the following recommendations were explicitly requested by DOT&PF after review of the draft report.
    - Construct internal pedestrian connectivity between the hotel and the condominiums.
    - Revise the site plan to realign the South Access Driveway directly across from the Kachemak Drive approach to function as a four-leg intersection. Moreover, it is essential to align the South Access Driveway with Kachemak Drive to assure that required 35 mph driveway spacing distance between the North and South Access Driveways, cited as 260 feet in the DOT&PF Highway Preconstruction Manual Table 1190-3, is achieved (see addition discussion on separation below). Install stop sign control for the South Access Driveway.
    - Construct a rapid rectangular flashing beacon at the existing crosswalk across Homer Spit Road just south of Kachemak Drive.
    - Following the draft report, we evaluated driveway spacing. The DOT&PF Highway Preconstruction Manual Table 1190-3 requires driveway spacing to be 260 feet for roadway speeds of 35 mph. The distance in Table 1190-3 is measured between the edge of driveways as depicted in Figure 1190-2. With this requirement, it is essential to align the South Access Driveway with Kachemak Drive as well as realign/reposition the North Access Driveway to the north to achieve the full 260 feet of separation required in Table 1190-3. The North Access Driveway could be relocated about 20 to 25 feet to the north and still meet minimum driveway sight distance standards.

- The May 2012 Transfer of Responsibilities Agreement (TORA) between the City of Homer and DOT&PF for parking and pedestrian facilities near the project area apply to the improvements recommended in this TIA. Ownership and maintenance of the proposed pathway and pedestrians crossings will be finalized between the City of Homer, DOT&PF, and the developer prior to final permits being issued.

**PUBLIC WORKS COMMENTS:**

1. **Drainage.** The storm water management plan is acceptable. Their strategy is to direct storm water to on-site swales and rain gardens as well as an underground vault, before water is

discharged to the wetlands. This makes effective use of green infrastructure and protects water quality. They will need to maintain the catch basins
and vault.

**Recommendation:** Property owner should be required to submit a storm water facility maintenance and operations plan for review.

2. **Plans.**

a. Sheet C1.00 shows the eastern boundary of the 15' public utility easement, but not the western boundary.

- Recommendations:
  1. Show the western boundary of this easement.
  2. Include a copy of the public utility easement with the CUP package.

b. Sheet C1.00 does not show the existing wooden viewing platform that provides access for public viewing of wildlife in the adjacent wetland.

- Recommendation:
  1. Show this existing structure on the plan sheets.

c. Sheet C1.10 does not show that the existing wooden viewing platform exists or will be demolished/replaced.

- Recommendations:
  1. Show the existing wooden viewing platform and indicate that it will be demolished.

d. Sheets C2.00, U2.00 and AS0.01 do not show details of the culverts, swales, rain gardens or other green infrastructure features.

- Recommendation: Require Property Owner to provide design, construction & maintenance details for any drainage, especially green infrastructure, features for review and approval.

e. Sheet C4.00 does not show cross walks across the "Spit Road".

- Recommendation: Show cross walks, with Rapid Flashing Beacons, across the "Spit Road".

f. Sheet C4.00 does not show traffic signs or other permanent traffic control devices.

- Recommendation: Provide a permanent traffic control plan

g. Sheet G0.00 refers the "infamous Homer Spit".

- Recommendation: delete the word "infamous" as it has no pertinent context here and serves no useful purpose.

h. Sheet G0.00 refers to "adopted codes", which the City of Homer does not have.

- Recommendation: Architect should identify with specificity which codes apply.

i. Sheet G0.00 does not address adjacent wetlands or a buffer between developed areas and preserved areas.

- Recommendations:
  1. Require a buffer that separates land, on existing fill, which will be developed and land within the proposed ROW vacation and Lot 163 that will not be developed. Specify that this buffer shall remain undeveloped and preserved for conservation.

2. Specify that trees not directly within the development footprint should be preserved.

j. Sheet U0.00 shows minimum depths of bury that seem too shallow.
- Recommendation: Verify minimum depths of bury with Jean Arno.

k. Sheet U0.00 has a grease trap interceptor, for the commercial kitchen, which is a good thing.
- Recommendation: Property owner should provide details of construction & maintenance for this device.

**Condition 7:** Incorporate the recommendations provided in the Public Works Director comments in this staff report.

**Condition 8:** The applicant will need to submit their engineered water, sewer and storm drain design to Public Works for comment. After PW comments have been made and implemented, they will need to submit their engineered design to ADEC for approval.

**FIRE DEPARTMENT COMMENTS:** None

**PUBLIC COMMENTS:** Attached are five letters/emails regarding the Conditional Use Permit Application.

**STAFF COMMENTS/RECOMMENDATIONS:**
Planning Commission approve CUP 23-08, **Staff Report 23-060** with findings 1-15 and the following conditions.

**Condition 1:** The property at 1491 Bay Avenue must be rezoned to an authorized zoning district, General Commercial 1, to align with the proposed commercial uses.

**Condition 2:** The B Street Right-of-Way, south of Bay Avenue must be vacated. The final approval of this vacation is decided by the Homer City Council.

**Condition 3:** Contact the FAA before construction begins and confirm if they require a permit for construction cranes on the project.

**Condition 4:** Outdoor lighting must be down lit per HCC 21.59.030 and the CDM.

**Condition 5:** The maximum building heights for the hotel are those depicted in the planned unit development plans submitted for the conditional use permit.

**Condition 6:** The following recommendations from the TIA analysis must be implemented before occupancy and operations can occur:

- No intersection control, channelization, or geometric capacity improvements are recommended. Instead, implement improvements to enhance active transportation modes and potentially reduce vehicle demand at intersections and roadways.

- Instead of the frontage road between the North and South Accesses driveways shown in Figure 4 on page 17, construct a pathway fronting the Lighthouse Village Development to connect the site to the crossing at Kachemak Drive-Homer Spit Road crosswalk. The pathway should meet DOT&PF standards and located for compatibility with future pedestrian improvement projects along Homer Spit Road.

- Construct a connection between the Lighthouse Village Development to Bay Avenue using the B Street right-of-way to allow walking and biking trips to use the lower volume, low speed Bay Avenue, for non-motorist trip segments.

- Install a marked median refuge, and a potential marked crosswalk on the Homer Spit Road approach to the Ocean Drive-Homer Spit Road-FAA Road intersection. The crosswalk would only be installed if the crossing demand could be established as 20 vehicles per hour or more at this location. However, the median refuge could be implemented without the crosswalk. This is presented in the following Figure 23 on page 75.

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- The North Access Driveway and South Access Driveway may be constructed with two lanes, one lane outbound and one lane inbound. Driveways must comply with the recommendations in the DOT&PF Highway Preconstruction Manual (Section 1190).

- In addition to the above, the following recommendations were explicitly requested by DOT&PF after review of the draft report.
    - Construct internal pedestrian connectivity between the hotel and the condominiums.
    - Revise the site plan to realign the South Access Driveway directly across from the Kachemak Drive approach to function as a four-leg intersection. Moreover, it is essential to align the South Access Driveway with Kachemak Drive to assure that required 35 mph driveway spacing distance between the North and South Access Driveways, cited as 260 feet in the DOT&PF Highway Preconstruction Manual Table 1190-3, is achieved (see addition discussion on separation below). Install stop sign control for the South Access Driveway.
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**Condition 7:** Incorporate the recommendations provided in the Public Works Director comments in this staff report.

**Condition 8:** The applicant will need to submit their engineered water, sewer and storm drain design to Public Works for comment. After PW comments have been made and implemented, they will need to submit their engineered design to ADEC for approval.

**Condition 9:** Per HCC 21.52.070 Time Limit: After a PUD conditional use permit and development plan are approved by the Commission, construction of the planned unit development must begin within two years of the approval of the conditional use permit.

**Condition 10:** Any changes of use from those in the submitted planned unit development would require a new or revised conditional use permit.

**Attachments**
Application with FAA Letter of Determination Issued April 7, 2023
Development Plans
Traffic Impact Analysis
Preliminary Stormwater Plan
Compliance Review of Homer Comprehensive Plan
Public Notice
Aerial Map
Doyon Presentation Slides for 12.6.2023 Meeting
Public Comments received by 12.1.2023

DOYON
Limited

December 6, 2023

City of Homer, Planning Commission
491 East Pioneer Ave
Homer, Alaska 99603

Dear Commissioners:

Doyon, Limited is honored to present a visionary planned unit development in your picturesque corner of the Last Frontier.

With a rich heritage rooted in the Alaska Native culture, Doyon, Limited has a portfolio that includes tourism, showcasing Alaska's unique beauty and cultural richness. Leveraging our deep understanding of Alaska and its Athabascan people, Doyon, Limited has curated immersive and authentic experiences that allow visitors to connect with Alaska's natural wonders and indigenous traditions in the Denali area. Through strategic investments and partnerships, Doyon, Limited has contributed to the state's economic growth and has also played a pivotal role in promoting sustainable tourism practices, ensuring that the allure of Alaska remains pristine for generations to come. With a legacy of stewardship and a commitment to sharing Alaska's treasures, Doyon, Limited is a driving force in shaping the tourism landscape of Alaska.

Doyon, Limited's commitment to sustainable development aligns with the ethos of Homer, a community dedicated to preserving its natural beauty while embracing progress. Our planned unit development reflects a thoughtful approach to design, ensuring a harmonious coexistence between the built environment and the pristine wilderness that defines this region.

With an emphasis on environmental stewardship and cultural respect, our development seeks to enhance the fabric of the community. From residential spaces designed for modern living to recreational areas celebrating the great outdoors to employee housing to alleviate more housing pressure on the community, Doyon Limited is dedicated to a vision for Homer to create vibrant, inclusive, and sustainable experiences.

Doyon, Limited presents this extraordinary venture, where the spirit of the wilderness harmonizes with the comforts of contemporary living in a planned unit development that reflects the unique character of Homer.

Sincerely,

Aaron M. Schutt, President & CEO



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# City of Homer

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**Applicant**

Name: **Doyon, Limited** Phone No.: **907-375-4216** Address:

**1 Doyon Place, Fairbanks AK 99701** Email: **dunlapz@doyon.com** **Property Owner**

(if different than the applicant):

Name: _____ Phone No.: _____

Address: _____ Email: _____

**PROPERTY INFORMATION:**

Address: **See below** Lot Size: **See below** acres

KPB Tax ID **See below** Legal Description of Property: **See below**

*For staff use*:
Date: _____ Fee submittal: Amount _____
Received by: _____ Date application accepted as complete _____
Planning Commission Public Hearing Date: _____

## Conditional Use Permit Application Requirements:

1. Site Plan - drawn to a scale of not less than 1" = 20' which shows existing and proposed structures, clearing, fill, vegetation and drainage
2. Right of Way Access Plan
3. Parking Plan
4. A map showing neighboring lots and a narrative description of the existing uses of all neighboring lots. (Planning staff can provide a blank map.)
5. This completed application form
6. Payment of application fee (nonrefundable)
7. Any other information required by Code or staff to review your project

**Circle Your Zoning District**

| | RR | UR | RO | CBD | TCD | GBD | GC1 | GC2 | MC | MI | EEMU | BCWPD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Level 1 Site Plan | x | x | x | | | x | | | x | | | x |
| Level 1 ROW Access Plan | x | x | | | | | | | x | | | |
| Level 1 Site Development Standards | x | x | | | | | | | | | | |
| Level 1 Lighting | | | x | x | x | x | x | x | x | x | x | |
| Level 2 Site Plan | | | x | x | x | | x | x | | x | x | |
| Level 2 ROW Access Plan | | | x | x | x | | x | x | | x | x | |
| Level 2 Site Development Standards | | | x* | x | x | x | x | x | | | x | |
| Level 3 Site Development Standards | | | | | | | | | x | x | | |
| Level 3 ROW Access Plan | | | | | | x | | | | | | |
| DAP/SWP questionnaire | | | | | x | x | x | x | | | x | |

**Circle applicable additional permits. Planning staff can assist with these questions.**

Y/N Are you building or remodeling a commercial structure, or multifamily building with more than three (3) apartments? If yes, Fire Marshal Certification is required. Status: *Will be included in Zoning Permit applications.*

Y/N Will development trigger a Development Activity Plan? Application Status: *Will be included in Zoning Permit applications.*

Y/N Will development trigger a Storm Water Plan? Application Status: *Will be included in Zoning Permit applications.*

Y/N Does the site contain wetlands? If yes, Army Corps of Engineers Wetlands Permit is required. Application Status: *Will be included in Zoning Permit applications.*

Y/N Is development in a floodplain? If yes, a Flood Development Permit is required.

Y/N Does the project trigger a Community Design Manual review? If yes, complete the design review application form. The Community Design Manual is online at: https://www.cityofhomer-ak.gov/planning/community-design-manual

Y/N Do the project require a traffic impact analysis? *Completed*

Y/N Are there any nonconforming uses or structures on the property?

Y/N Have nonconforming uses or structures on the property been formally accepted by the Homer Advisory Planning Commission?

Y/N Does the site have a State or City driveway permit? Status: *Will be included in Zoning Permit application*

Y/N Does the site have active City water and sewer permits? Status: *Will be included in Zoning Permit applications*

**Conditional Use Permit Application Questions.** Use additional sheets if necessary.

1. Currently, how is the property used? Are there buildings on the property? How many square feet? Uses within the building(s)?

   See attached documentation

2. What is the proposed use of the property? How do you intend to develop the property? Attach additional sheet if needed. Provide as much information as possible.

   See attached documentation

**Conditional Use Permit Review Criteria Information.** Use additional sheets if necessary. Per HCC 21.71.030 Review Criteria, the applicant must produce evidence sufficient to enable meaningful review of the application. Unless exceptions or other criteria are stated elsewhere in the Code, the application will be reviewed under these criteria:

a. What code citation authorizes each proposed use and structure by conditional use permit?
See attached documentation.

b. Describe how the proposed uses(s) and structures(s) are compatible with the purpose of the zoning district.
See attached documentation.

c. How will your proposed project affect adjoining property values?
See attached documentation.

d. How is your proposal compatible with existing uses of the surrounding land?
See attached documentation.

e. Are/will public services adequate to serve the proposed uses and structures?
See attached documentation.

f. How will the development affect the harmony in scale, bulk, coverage and density upon the desirable neighborhood character, and will the generation of traffic and the capacity of surrounding streets and roads be negatively affected?
See attached documentation.

g. Will your proposal be detrimental to the health, safety or welfare of the surrounding area or the city as a whole?
See attached documentation.

h. How does your project relate to the goals of the Comprehensive Plan? Find the Comprehensive Plan on the City's website:
www.cityofhomer-ak.gov/planning/comprehensive-plan
See attached documentation.

i. The Planning Commission may require special improvements. Are any of the following a component of the development plan, or are there suggestions on special improvements you would be willing to make? **Circle each answer and provide clarification on additional pages if Yes is selected**.

1. Y/N Special yards and spaces
2. Y/N Fences, walls and screening
3. Y/N Surfacing of parking areas
4. Y/N Street and road dedications and improvements (or bonds)
5. Y/N Control of points of vehicular ingress and egress
6. Y/N Special provisions on signs
7. Y/N Landscaping
8. Y/N Maintenance of the grounds, buildings, or structures
9. Y/N Control of noise, vibration, odors, lighting, heat, glare, water and solid waste pollution, dangerous materials, material and equipment storage, or other similar nuisances
10. Y/N Time for certain activities
11. Y/N A time period within which the proposed use shall be developed
12. Y/N A limit on total duration of use
13. Y/N Special dimensional requirements such as lot area, setbacks, building height
14. Y/N Other conditions deemed necessary to protect the interest of the community

**Parking Questions.**

1. How many parking spaces are required for your development? 132
2. If more than 24 spaces are required see HCC 21.50.030(f)(1)(b)
3. How many spaces are shown on your parking plan? 132
4. Are you requesting any reductions? No *(reference AS0.01)*

I hereby certify that the above statements and other information submitted are true and accurate to the best of my knowledge, and that I, as applicant, have the following legal interest in the property:

***CIRCLE ONE:*** Owner of record Lessee Contract purchaser

Per HCC 21.71.020(a)(9), if the applicant is not the owner of the subject lot, the owner's signed authorization grants the applicant authority to:
(a) apply for the conditional use permit, and
(b) bind the owner to the terms of the conditional use permit, if granted.

Applicant signature: _____ Date: 11/15/23

Property Owner signature: _____ Date: 11/15/23

**Property Information:**

**Bay View 164-A**

PARCEL ID: 18101034

Legal:

T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0940051 BAYVIEW SUB NO 6 LOT 164-A

Acreage

1.87

Physical Addresses:

1563 HOMER SPIT RD

**Bay View 164-B**

PARCEL ID: 18101035

Legal:

T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0940051 BAYVIEW SUB NO 6 LOT 164-B

Physical Addresses:

1663 HOMER SPIT RD

Acreage

2.7

**Bay View 163**

PARCEL ID: 17921015

Legal:

T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0000839 BAY VIEW SUB LOT 163

Physical Addresses:

1491 BAY AVE

Acreage

1.35

**Currently, how is the property used? Are there buildings on the property? How many square feet? Uses within the building(s)?**

The Bay View development encompasses two currently vacant lots, specifically 164 A and B. As part of our commitment to sustainable practices and community engagement, existing structures on these lots are undergoing a meticulous relocation process and repurposing within the Homer community. Collin Excavation, a reputable local contractor, is entrusted with responsibly removing any structures that may not be suitable for repurposing, ensuring an environmentally conscious approach to development.

Simultaneously, the third lot contributing to the proposed development, Bay View 163, remains undeveloped, presenting a pristine canvas for our innovative project. This untouched parcel of land holds significant potential for thoughtful and sustainable development. By integrating green building practices, adhering to comprehensive land use guidelines, and promoting a harmonious coexistence with the natural surroundings, we aspire to create a development that meets the community's needs and elevates the local living experience. Our detailed site plans provide comprehensive insights into the strategic positioning of structures, landscaping, and amenities, ensuring a meticulous and site-specific approach to the development. Exact square footage specifications can be found on the *Architectural Site Plan sheet AS0.01*, offering transparency and clarity regarding the scale of our development. Through these initiatives, we aim to contribute positively to the character of Homer while fostering responsible growth and environmental stewardship.

**What is the proposed use of the property? How do you intend to develop the property?**

Our proposed development for our Homer, Alaska, property encompasses two distinct sections. The first section is envisioned as a year-round hotel featuring dining facilities, convention space, and on-site employee housing, contributing to the city's tourism infrastructure and aligning with the comprehensive plan's goals. The second section is designated for a multi-building residential condo development, catering to the diverse housing needs of the community.

The plan is intricately designed to adhere to the principles outlined in the comprehensive plan, emphasizing the importance of increasing the housing supply, maintaining the quality of the natural environment, and supporting a mix of commercial and residential developments. Detailed site plans drawn on *Architectural Site Plan sheet AS0.01* offer specific insights into the layout and design, ensuring that our final product aligns

seamlessly with the city's vision for a vibrant, sustainable, and aesthetically pleasing community.

**Conditional Use Permit Review Criteria Information:**

*What code citation authorizes each proposed use and structure by conditional use permit?*

Chapter 21.52 Planned Unit Developments.

*Describe how the proposed uses(s) and structures(s) are compatible with the purpose of the zoning district.*

The proposed development aligns with the purpose of the zoning district for planned unit developments (PUDs), which is to provide a framework for flexible and varied development while adhering to specific controls related to density, land use, setback, open space, and construction sequencing.

Here's how the proposed development aligns with specific sections of the regulations:

1. **Uses Allowed in PUDs (21.52.020):**
    - The proposed hotel and condo development is allowed in the zoning district per the code provisions.
    - The development includes a combination of residential and commercial uses, meeting the criteria for PUDs.

2. **Development Plan (21.52.030):**
    - The conditional use permit application and development plan will be submitted to the Commission for administrative review and recommendation.
    - The plan includes a comprehensive statement of purpose, a specific development plan, and a program of development outlining stages, time schedules, and various other details.

3. **Commission Review (21.52.040):**
    - The proposed development will undergo a thorough review by the Commission, ensuring compliance with conditional use permit standards, PUD provisions, and zoning district regulations.
    - The Commission's decision will be based on substantial evidence and considerations related to good design, efficient site use, and community standards.

4. **Residential PUDs (21.52.050) - if applicable:**
    - If the development includes residential components, it will comply with specific water and sewer utilities requirements, density limits, common open space, and privacy considerations.

5. **Commercial, Noncommercial, and Industrial PUDs (21.52.060) - if applicable:**
    - If the development contains commercial, noncommercial, or industrial uses, it will adhere to requirements such as direct access to arterial streets, unified architectural treatment, and compliance with dimensional requirements.

6. **Time Limit (21.52.070):**
    - The development plan will ensure that construction begins within the specified timeframe after the conditional use permit approval by the Commission.

In summary, the proposed hotel and condo development is designed to align with the purpose and regulations outlined in the city's zoning district for PUDs. We are confident that the detailed development plan will demonstrate how the project meets the requirements for a well-designed, community-friendly development.

*How will your proposed project affect adjoining property values?*

The proposed development by Doyon, Limited in Homer, Alaska, holds great promise for enhancing property values in the area and contributing significantly to the local economy.

By offering sustainable development practices, including on-site employee housing, the project addresses the housing needs of its workforce and ensures a minimal environmental footprint. Incorporating on-site accommodation fosters a sense of community among employees, reducing commuting pressures and enhancing the overall quality of life. Moreover, the development's strategic location and thoughtful planning are poised to attract increased visitor traffic, bringing economic benefits to local businesses. As more visitors explore the area, the demand for local services and amenities is likely to rise, boosting the economy and elevating the overall property values in Homer. Doyon, Limited's commitment to sustainable practices and community engagement positions this development as a positive force for the region's economic growth and environmental responsibility. The highly visible location of the plot is expected to enhance the area's aesthetics, contributing to a visually appealing and harmonious neighborhood character.

*How is your proposal compatible with existing uses of the surrounding land?*

The proposed development by Doyon, Limited in Homer, Alaska, is carefully designed to be compatible with existing uses of the surrounding land. Through adherence to the planned unit development (PUD) regulations, the project aligns with the zoning district's provisions, ensuring that the mix of residential, commercial, and industrial elements integrates seamlessly into the existing landscape. The development plan considers the neighborhood's character, harmonizing scale, bulk, coverage, and density to preserve the desirable features of the surrounding area. By incorporating sustainable practices, on-site

employee housing, and thoughtful design, the proposal aims to complement rather than disrupt the existing land uses, promoting a well-integrated and cohesive community. The proposal's compatibility with the surrounding land uses is a testament to Doyon, Limited's commitment to responsible development and respect for the existing local environment.

*Are/will public services adequate to serve the proposed uses and structures?*

**Lots / Site Summary**

The existing proximity of the proposed development contains three lots and a ROW for B Street to the North. The lots will be platted to show the vacation of the B Street ROW and propose a reduction of the three (3) total lots to two (2). The northern lot will contain the hotel, employee housing, and associated parking and utilities. The southern lot will include the proposed condominiums with an access route and utilities.

**Stormwater Summary** *(reference Stormwater Plan Sheet U2.00)*

At the existing B Street ROW, it has been identified that an existing natural drainage ditch currently collects stormwater runoff from both B Street and Bay Avenue to the north. The proposed development includes the vacation of B Street ROW and eliminates the existing natural drainage ditch. However, to maintain compliance with the City of Homer's land use process, the development will manage the stormwater to avoid adverse impacts on the surrounding slopes, neighborhoods, and roads. The development's solution includes capturing the existing stormwater runoff into an on-site swale, then piping the water below grade around the west side of the hotel and daylight into the southern wetlands. This system will integrate sediment control measures to prevent potential adverse effects of sediment gathering in the wetlands.

On the northern lot, the stormwater will be routed via sheet flow to proposed catch basins, then routed through below-grade piping to a detention structure with treatment filters for treatment. The detention structure will be on the proposed hotel's south side. After the stormwater passes through this structure, the stormwater will be released into the southern wetlands at the pre-development runoff rate through a flow control system. On the southern lot, the stormwater will sheet flow into a centrally located swale, providing treatment and storage for stormwater runoff.

**Utilities** *(reference Overall Utility Plan Sheet U0.00)*

An existing 6" waterline is currently stubbed into the southern portion of the property. The development will connect to this existing line and serve the condominiums for domestic water and the hotel for domestic and fire service. The employee housing facility will connect to the waterline located at B Street.

For sanitary sewer, the employee housing, hotel, and condominiums will propose a gravity pipe to a proposed lift station, which will be located on the southern lot. The lift

station will pump to the northwest and connect to B Street's existing sanitary sewer line to the North.

*How will the development affect the harmony in scale, bulk, coverage, and density upon the desirable neighborhood character, and will the generation of traffic and the capacity of surrounding streets and roads be negatively affected?*

*(Reference Overall Site 3D Massing Views Sheet AS0.03)*

The proposed development by Doyon, Limited in Homer, Alaska, is meticulously designed to integrate harmoniously with the existing neighborhood character, ensuring that scale, bulk, coverage, and density align with the area's desirable aesthetics. The development seeks to maintain the neighborhood's overall harmony and architectural coherence by adhering to the city's zoning regulations. Additionally, careful attention has been given to the potential impact on traffic generation. The project's strategic location and comprehensive planning consider the capacity of surrounding streets and roads, with measures in place to mitigate adverse effects. By implementing thoughtfully designed traffic flow patterns and evaluating the needs of the local infrastructure, the development aims to minimize disruptions and contribute positively to the community's overall well-being. Doyon, Limited's commitment to balancing growth with neighborhood character preservation underscores its dedication to creating a development that seamlessly integrates into the fabric of Homer, ensuring a positive impact on aesthetics and traffic dynamics.

*Will your proposal be detrimental to the health, safety, or welfare of the surrounding area or the city as a whole?*

The proposed development by Doyon, Limited in Homer, Alaska, is conscientiously crafted to prioritize the health, safety, and welfare of the surrounding area and the city. The project adheres strictly to the established zoning regulations and city ordinances, ensuring that all aspects align with the community's well-being. Robust safety measures, both during construction and in the final built environment, have been incorporated to mitigate any potential risks. Additionally, the project emphasizes sustainable practices and environmental considerations to safeguard the local ecosystem's health. By engaging in comprehensive planning, Doyon, Limited aims to contribute positively to the community's welfare, creating a development that enhances the quality of life in the surrounding area without compromising safety or the city's overall health.

*How does your project relate to the goals of the Comprehensive Plan? Find the Comprehensive Plan on the City's website: www.cityofhomerak.gov/planning/comprehensive-plan*

Doyon, Limited's proposal for a year-round hotel and condos in Homer, Alaska, is intricately woven into the city's comprehensive plan, a strategic roadmap designed to guide Homer's growth while safeguarding its distinct character. Anchored within the Land Use chapter of the project, the development seamlessly aligns with the overarching

vision of the city, particularly the outlined goals of increasing housing supply and diversity (Goal 1) and maintaining the pristine quality of Homer's natural environment (Goal 2).

The plan envisions Homer as a city that respects its environment, boasting a unique and vibrant atmosphere that is both wonderful to live in and inspiring to visit. The proposed project contributes to this vision by adhering to the plan's emphasis on encouraging high-quality buildings and fostering a mix of well-defined commercial districts (Goal 3 and Goal 4). By promoting compact, walkable community development and integrating green infrastructure elements, the story goes beyond a mere real estate venture; it becomes a harmonious addition to the cityscape, echoing the plan's call for a balanced blend of development and open space.

The Land Use chapter specifically advocates for zoning concepts that encourage a variety of housing options, reflecting income and lifestyle diversity in Homer. Doyon, Limited's proposal aligns with this objective by presenting a mixed-use development that caters to diverse needs while respecting the natural landscape. The plan's proposed land use recommendations map, designed to clarify intended types of uses, resonates with the project's commitment to striking a balance between development density and preserving environmentally crucial areas.

Furthermore, the proposal dovetails with the plan's vision for an integrated system of green spaces, providing aesthetic and functional benefits to the community. By protecting corridors for trails, managing stormwater, preserving wildlife habitat, and maintaining viewsheds, the development becomes a housing solution and a contributor to the city's ecological well-being.

In essence, Doyon, Limited's development proposal mirrors the forward-thinking approach embedded in Homer's comprehensive plan, contributing to the city's economic vitality while ensuring that growth occurs in a manner that is both sustainable and in harmony with the community's values.

Incorporating a meticulously planned sidewalk within the proposed development is crucial in promoting secure pedestrian access to the Homer Spit trail. This thoughtful addition aligns seamlessly with the broader objectives of Homer's Non-Motorized Transportation and Trail Plan (2004), underscoring our commitment to community-driven initiatives prioritizing safety and accessibility. By facilitating a well-designed pedestrian crossing, our development contributes to the local infrastructure and aligns with the overarching vision of creating a more connected and walkable community. This intentional integration reflects our dedication to enhancing the overall living experience in Homer while promoting sustainable and pedestrian-friendly urban planning.

**Planned Unit Development (PUD)**

**Statement of Purpose:**

Doyon, Limited is excited about constructing a hotel and condominiums in Homer, viewing it as a distinctive opportunity to elevate the city's hospitality sector. Our vision extends beyond mere construction; we aim to create a landmark that meets the highest standards of luxury and comfort and seamlessly integrates with the breathtaking natural beauty that defines the surrounding environment. This undertaking is more than a development project; it is a commitment to enhancing the overall allure of Homer, attracting tourism, and fostering economic vitality. By envisioning a facility that resonates with the city's unique charm and complements its scenic landscapes, we aspire to contribute to the hospitality sector and the holistic growth and prosperity of the community.

**Objective:**

Our primary objective is collaborating closely with the City of Homer and all relevant stakeholders to ensure a smooth and successful development process. We are committed to adhering to all local regulations, building codes, and community guidelines throughout the planning and execution phases of this project. Additionally, we aim to incorporate sustainable practices and innovative technologies to minimize the environmental impact of development and contribute positively to the community.

Doyon, Limited recognizes the importance of fostering strong relationships with the local community. We are eager to engage in open and transparent communication to address any concerns and ensure that the development aligns with the values and aspirations of the people of Homer.

We are confident that our expertise in the Alaskan tourism market will enable us to deliver a project that meets and exceeds the City of Homer's and its residents' expectations.

Thank you for considering our proposal. We look forward to collaborating closely with the City of Homer and contributing to this remarkable community's continued growth and prosperity.

**A specific plan of development, including a designation of land uses by the relative intensity and the land area intended for each land use:**

Please refer to the more detailed site-specific plans (*Lighthouse Village Development Drawing Set G0.00-A3.02*) submitted for the specific development plan, including the designation of land uses by the relative intensity and the land area intended for each service. These comprehensive documents provide an in-depth analysis and allocation of space for each project component. The submitted plans offer a clear and transparent overview of the proposed development, ensuring that all stakeholders and interested parties have access to detailed information about the relative intensity and intended land use for each aspect of this innovative project.

**A program of development outlining the stages of future development and the phase for current approval:**

The development program for the project outlines a phased approach to ensure a systematic and well-coordinated construction process. The project is scheduled to commence during the 2024 construction season, signaling the initiation of site preparations, foundation work, and initial infrastructure development. This initial phase aims to set the groundwork for subsequent construction activities.

Throughout the following construction seasons, the development will progress through defined stages. These stages include constructing the multi-building residential condos on one section of the property and then a year-round hotel with dining and convention on the other and a supporting employee housing facility. These stages will be meticulously executed, considering environmental impact, community integration, and sustainable building practices.

The completion of the entire project is anticipated by 2026. This timeline allows for a comprehensive and quality-driven development process, ensuring each stage receives the necessary attention and adherence to approved plans. The phased approach aligns with the community's needs, allowing for a gradual integration of the new structures while minimizing disruptions to the existing neighborhood. The proposed timeline also provides a clear roadmap for regulatory authorities and the community to monitor and evaluate the development progress at each stage.

**The time schedule for construction and completion of all stages and all phases:**

The proposed construction schedule for the project entails a strategic and phased approach. The initial stage, slated for the 2024 construction season, primarily focuses on comprehensive site work for the entire project. This includes groundwork, infrastructure development, and the establishment of the foundational elements necessary for both the residential condo section and the year-round hotel with dining and convention space and a supporting employee housing facility.

Following the site preparations, the subsequent phase, scheduled for 2024, concentrates on constructing the residential condo development. This involves erecting multi-building structures, interior finishes, and landscaping to create a vibrant, integrated living space.

In the subsequent construction season of 2025, the project seamlessly transitions to developing the year-round hotel and convention space and a supporting employee housing facility. This phase encompasses the construction of the hotel building, dining facilities, convention spaces, employee housing facility, and the final touches to ensure a high-quality and inviting atmosphere.

The project's culmination is targeted for 2026, aligning with completing the residential condo, hotel, and employee housing sections. This scheduling allows for a systematic and efficient construction process, ensuring each phase receives attention to detail and adheres to the approved plans. Regular progress updates will be provided to stakeholders, maintaining transparency and accountability throughout the construction and completion stages.

**A narrative description demonstrating the independence of each stage:**

The phased development emphasizes each stage's independence, ensuring a systematic and well-coordinated construction process.

The initial stage, set in the 2024 construction season, focuses on comprehensive site work. This includes groundwork, infrastructure development, and foundational establishment across the project area. The independence of this stage is crucial as it forms the basis for subsequent development, providing a solid platform for the residential condo, hotel, and employee housing sections.

Moving into 2024, the second stage of development unfolds independently with the construction of the residential condo development. This phase involves erecting multi-building structures, interior finishes, and landscaping. By separating this stage, we ensure dedicated attention to detail and the unique requirements of creating a cohesive and appealing residential living space.

In 2025, the third stage commences, concentrating on constructing the year-round hotel and convention space with supporting employee housing. This phase stands independently, allowing for the specific considerations and nuances associated with hotel infrastructure, dining facilities, and convention spaces to be meticulously addressed.

The independence of each stage is a deliberate strategy to streamline the construction process, enabling specialized focus and expertise at each juncture. This approach ensures that the residential and commercial components of the project are developed with precision and following the approved plans, contributing to the overall success and integrity of the development.

**The general location and size of the area involved and the nature of the land owner's interest in the land to be developed:**

The proposed development encompasses a specific area in Homer, Alaska, spanning several lots identified as Bay View 163, 164A, and 164B. The total size of the

development area is detailed in *Architectural Site Plan AS0.01*. The landowner's interest in these lots is fee simple ownership, providing the necessary authority to pursue and implement the planned development. This interest ensures the commitment to responsible and sustainable development practices, aligning with the community's broader goals and adhering to relevant regulatory guidelines. Our dedication to transparent communication and community engagement underscores our commitment to fostering a development that aligns with the character and needs of Homer.

**The density of land use to be allocated to parts of the area to be developed:**

The density of land use allocated to different parts of the area to be developed is outlined in *Architectural Site Plan AS0.01*, providing a comprehensive overview of how the development will be distributed across the various lots and sections. This information includes specifics on the intensity and nature of land use in each designated part of the development area, ensuring clarity and adherence to established land use guidelines and regulations. Our commitment to responsible and transparent development extends to providing detailed insights into the density considerations, fostering a well-informed understanding of the project within the community and relevant authorities.

**The location, function, ownership and manner of maintenance of common open space for the management during construction; and management during each phase of development, the final management of the completed development:**

The development prioritizes the thoughtful management of shared open spaces throughout its construction and subsequent phases of development. Shared open spaces will be carefully designated during construction to facilitate efficient site work and infrastructure development while minimizing environmental impact. The location and function of these spaces are outlined in detail in *Architectural Site Plan AS0.01,* submitted for approval.

The development team will oversee ownership and maintenance responsibilities during construction. Temporary measures will be implemented to preserve the ecological integrity of shared open spaces during this phase, ensuring that construction activities do not compromise the natural surroundings.

As the development progresses through each phase, the management of shared open spaces will evolve to suit the project's changing needs. This includes landscaping and green infrastructure elements, contributing to the development's aesthetic appeal and ecological sustainability. These spaces will be accessible and well-maintained, fostering a sense of community and enhancing the quality of life for residents.

Upon completing the entire development by 2026, the final management of shared open spaces will transition to a designated entity or homeowner's association, as specified in the approved plans. This ensures the perpetual care and maintenance of these areas, promoting sustainable practices and contributing to the long-term well-being of the Homer community.

**The use, height, bulk and location of buildings and other structures:**

*Architectural Site Plan AS0.01* provides detailed information regarding the use, height, bulk, and location of buildings and other structures. These plans offer a thorough analysis of the proposed development, outlining the specific characteristics of each building, including its designated use, height specifications, bulk considerations, and precise location within the development area. By presenting this information in detail, we aim to ensure transparency and alignment with established guidelines, facilitating a clear understanding of the project's architectural and structural aspects for the community and relevant regulatory bodies.

**The substance of covenants, grants of easements or other restrictions to be imposed upon the use of the land, buildings and structures, including proposed easements for public utilities and public access:**

The specific substance of covenants, grants of easements, or other restrictions to be imposed upon the use of the land, buildings, and structures has yet to be finalized.

Proposed easements for public utilities and public access are under consideration, and the team is exploring options that align with community needs and adhere to regulatory requirements. Detailed plans outlining these restrictions and easements will be presented in subsequent submissions as the project progresses through the approval process. This collaborative approach ensures that the final covenants and easements balance responsible development, public benefit, and the long-term sustainability of the development.

**In the case of plans that call for development over a period of years, a schedule showing the time within which application for final approval of all parts of the planned development is intended to be filed:**

We are developing a comprehensive schedule outlining the anticipated timeframe for filing applications at various planned development stages, including subsequent filings following the initial approval process. As the development progresses, we commit to providing a detailed and accurate schedule for each phase, specifying the timeline for final approval. This schedule will be collaboratively prepared with relevant authorities and adhere to regulatory processes, ensuring a transparent and well-coordinated approach to achieving development milestones. Your understanding and cooperation are highly valued as we work diligently to present a comprehensive plan that aligns seamlessly with community goals and regulatory requirements.

**A description of methods to be employed to assure maintenance of any common areas and facilities shall be submitted:**

We will implement a comprehensive strategy to ensure the proper maintenance of common areas and facilities within the planned development. This strategy includes establishing a dedicated maintenance team or contracting with reputable local service

providers for routine upkeep. Regular inspections and assessments will be conducted to identify maintenance needs promptly. A sustainable landscaping plan will also be implemented to preserve common areas' aesthetic and ecological value. We will develop clear guidelines and protocols for maintenance, addressing landscaping, infrastructure, and shared amenities. Through in-house efforts and partnerships with local maintenance experts, we are committed to ensuring the long-term quality and functionality of common spaces within the development.

**A list of all permits required from local, State, and Federal agencies for the uses proposed in the PUD:**

- Site Plan
- As-built survey
- Building Elevation
- Lighting standards
- Wetlands Permit
- Grading/Fill Plan
- Storm Water Plan (SWP)
- Conditional Use Permit (CUP)
- Landscaping requirements
- Development Activity Plan (DAP)
- Building Permit from the State of Alaska Department of Public Safety
- State Fire Marshal Plan Review

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2023-AAL-45-OE

Issued Date: 04/07/2023

Patrick Duke
Doyon, Limited
11500 Sukdu Way
Ste. 250
Anchorage, AK 99515

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

| | |
|---|---|
| Structure: | Commercial Use Building Midsite East |
| Location: | Homer, AK |
| Latitude: | 59-38-17.26N NAD 83 |
| Longitude: | 151-30-06.17W |
| Heights: | 52 feet site elevation (SE) |
| | 65 feet above ground level (AGL) |
| | 117 feet above mean sea level (AMSL) |

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 10/07/2024 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within

6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (816) 329-2526, or bill.kieffer@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2023-AAL-45-OE.

**Signature Control No: 574673413-580005698** ( DNE )
Bill Kieffer
Specialist

Attachment(s)
Map(s)

**Sectional Map for ASN 2023-AAL-45-OE**

# LIGHTHOUSE VILLAGE DEVELOPMENT

FOR

## DOYON, LIMITED
## 1563 & 1663 HOMER SPIT ROAD, HOMER, AK

## PROJECT LOCATION





## PROJECT INFORMATION

THE PROPOSED PROJECT IS LOCATED ON THREE ADJACENT PIECES OF PROPERTY LOCATED IN HOMER, AK. THE PARCELS ARE LOCATED AT THE NORTH END OF THE INFAMOUS 'HOMER SPIT' IN THE OCEAN DRIVE NEIGHBORHOOD ALONG HOMER SPIT ROAD. THE INTENDED USE FOR THE PROPERTY IS TO REMOVE THE EXISTING VARIETY OF STRUCTURES THAT CURRENTLY REMAIN ON SITE AND REDEVELOP THE PROPERTY TO PROVIDE A 100 ROOM HOTEL. THIS PROPERTY LOCATION PROVIDES POTENTIAL CLIENTELE A UNIQUE OPPORTUNITY FOR AN ICONIC DESTINATION LOCATION WITH VIEWS OF KACHEMAK BAY.

**PROPERTY ADDRESS:**

NORTH SITE:
1563 HOMER SPIT RD, HOMER, AK 99603
LOT 164-A, BAYVIEW SUBDIVISION #6 (1.873 ACRES)
PARCEL ID: 18101034
LEGAL DESCRIPTION: T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0940051 BAYVIEW SUB NO 6 LOT 164-A

SOUTH SITE:
1663 HOMER SPIT RD, HOMER, AK 99306
LOT 164-B BAYVIEW S/D #6 (2.699 ACRES)
PARCEL ID: 18101035
LEGAL DESCRIPTION: T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0940051 BAYVIEW SUB NO 6 LOT 164-B

## DRAWING INDEX



REVISIONS

| No. | Int. | Date | Description |
|---|---|---|---|
| | | | |


WOMER & ASSOCIATES
ARCHITECTURE ENGINEERING PLANNING
165 South Howard Street, Spokane , WA 99201
TEL: (509) 534-4884 FAX: (509) 534-4943 www.wwomer.com


## GENERAL / CONSTRUCTION NOTES

**GENERAL:**
1. THE CONTRACTOR SHALL BE GOVERNED BY ALL CONDITIONS AS INDICATED IN THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY IN THE AREA OF WORK IN ACCORDANCE WITH ALL APPLICABLE CODES.
3. EACH CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ADJACENT WORK AND IS RESPONSIBLE FOR THE REPAIR OF SAID DAMAGE AT HIS OWN EXPENSE.

**CODES:**
1. ALL WORK SHALL CONFORM TO THE CURRENT ADOPTED BUILDING CODES & ORDINANCES. IN CASE OF ANY CONFLICT WHERE THE METHODS OR STANDARDS OF INSTALLATION OF THE MATERIALS SPECIFIED DO NOT EQUAL OR EXCEED THE REQUIREMENTS OF THE LAWS OR ORDINANCES, THE LAWS OR ORDINANCES SHALL GOVERN. NOTIFY THE ARCHITECT OF ALL SUCH CONFLICTS.
2. REFER TO CODE ANALYSIS AND CODE COMPLIANCE PLANS FOR FIRE RATED ASSEMBLIES, EXITING & EGRESS.

**DIMENSIONS:**
1. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE BUT WITHOUT GUARANTEE OF ACCURACY. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS AND SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR CONDITIONS AFFECTING THE DESIGN PRIOR TO PROCEEDING WITH THE WORK AFFECTED.
2. DIMENSIONS ON THE PLANS ARE TYPICALLY TO THE FRAMING FACE OF PARTITIONS OR TO THE CENTER LINE OF COLUMNS UNLESS OTHERWISE NOTED.
3. DOORS AND CASED OPENINGS WITHOUT LOCATION DIMENSIONS ARE TO BE 4" FROM THE FACE OF THE ADJACENT PARTITION.
4. LOCATE WALLS THAT ARE NOT DIMENSIONED, FLUSH AND SQUARE WITH THE EXISTING STRUCTURE OR ON THE CENTERLINE OF A WINDOW MULLION OR COLUMN AS SHOWN.
5. DO NOT SCALE DRAWINGS. THE CONTRACTOR SHALL USE DIMENSIONS SHOWN ON THE DRAWINGS AND ACTUAL FIELD MEASUREMENTS. NOTIFY THE ARCHITECT IF ANY DISCREPANCIES ARE FOUND.
6. ABBREVIATIONS: THROUGHOUT THE DRAWINGS ARE ABBREVIATIONS WHICH ARE IN COMMON USE. THE LIST OF ABBREVIATIONS PROVIDED IS NOT INTENDED TO BE COMPLETE OR REPRESENTATIVE OF CONDITIONS OF MATERIALS ACTUALLY USED ON THE PROJECT.

**GENERAL CONSTRUCTION NOTES:**
1. THE CONTRACTOR SHALL INVESTIGATE AND VERIFY LOCATIONS OF STRUCTURAL, MECHANICAL AND ELECTRICAL ELEMENTS AND OTHER EXISTING CONDITIONS PRIOR TO DRILLING OR CUTTING OF SLABS OR STRUCTURAL MEMBERS. NOTIFY THE ARCHITECT OF ANY CONFLICTS PRIOR TO BEGINNING THE WORK.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL WALL BACKING & BLOCKING AS REQUIRED FOR ALL WALL & CEILING MOUNTED ITEMS. COORDINATE W/ ARCHITECT/TENANT LOCATIONS OF WALL MOUNTED ITEMS (INCLUDING ITEMS WHICH ARE N.I.C.) PRIOR TO COVERING.
3. ALL CONSTRUCTION SHALL BE STABILIZED AGAINST LATERAL MOVEMENT IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT ADOPTED EDITION OF THE I.B.C.
4. OFFSET STUDS WHERE REQUIRED SO THAT FINISH WALL SURFACES WILL BE FLUSH.
5. PROVIDE GALVANIC INSULATION BETWEEN MATERIALS WHICH NORMALLY REACT GALVANICALLY.

## ABBREVIATIONS

| | |
|---|---|
| & | AND |
| ∠ | ANGLE |
| @ | AT |
| ℄ | CENTER LINE |
| ∅ | DIAMETER or ROUND |
| A.B. | ANCHOR BOLT |
| A.F.F. | ABOVE FINISH FLOOR |
| ASPH. | ASPHALT |
| BD. | BOARD |
| BLDG. | BUILDING |
| BLKG. | BLOCKING |
| CB. | CATCH BASIN |
| CJ. | CONTROL JOINT |
| CLG. | CEILING |
| CLR | CLEAR |
| CMU. | CONCRETE MASONRY UNIT |
| DBL. | DOUBLE |
| DTL. | DETAIL |
| DIM. | DIMENSION |
| DR. | DOOR |
| DS. | DOWNSPOUT |
| DWG. | DRAWING |
| DF. | DRINKING FOUNTAIN |
| EA. | EACH |
| EJ | EXPANSION JOINT |
| ELEC. | ELECTRICAL |
| GLB | GLULAM BEAM |
| H.C. | HOLLOW CORE |
| HM. | HOLLOW METAL |
| HD. | HARDWARE |
| INSUL. | INSULATION |
| INT. | INTERIOR |
| JAN. | JANITOR |
| MAINT. | MAINTENANCE |
| MAX. | MAXIMUM |
| MB. | MACHINE BOLT |
| MECH. | MECHANICAL |
| MFR. | MANUFACTURER |
| MIN. | MINIMUM |
| MISC. | MISCELLANEOUS |
| MTL. | METAL |
| N | NEW |
| NIC | NOT IN CONTRACT |
| No. | NUMBER |
| NTS | NOT TO SCALE |
| O.C. | ON CENTER |
| O.F.C.I. | OWNER FURNISHED & CONTRACTOR INSTALLED |
| PARLL | PARALLEL |
| PLAM | PLASTIC LAMINATE |
| PL. | PLATE |
| PLYWD. | PLYWOOD |
| P.O.C. | POINT OF CONNECTION |
| ELEV. | ELEVATION |
| EQ | EQUAL |
| EQUIP. | EQUIPMENT |
| EX. | EXISTING |
| (E) | EXISTING |
| EXT. | EXTERIOR |
| FC | FOAM CORE |
| FD | FLOOR DRAIN |
| FE | FIRE EXTINGUISHER |
| FEC | FIRE EXT. CABINET |
| FF | FACTORY FINISH |
| FF | FINISH FLOOR |
| FH | FIRE HYDRANT |
| FIN. | FINISH |
| FLR. | FLOOR |
| FOUND. | FOUNDATION |
| FRM'G | FRAMING |
| FT. | FOOT or FEET |
| FURR. | FURRING |
| GA. | GAUGE |
| GALV. | GALVANIZED |
| GND. | GROUND |
| GR. | GRADE |
| GWB | GYPSUM WALL BOARD |
| HDWR. | HARDWARE |
| HOR. | HORIZONTAL |
| HT. | HEIGHT |
| PNT | PAINT |
| PTD | PAPER TOWEL DISPENSER |
| RR | RESTROOM |
| RM | ROOM |
| S.C. | SOLID CORE |
| SCHED. | SCHEDULE |
| S.D. | SOAP DISPENSER |
| SHT'G | SHEATHING |
| SIM | SIMILAR |
| SQ. | SQUARE |
| STD. | STANDARD |
| STOR. | STORAGE |
| STRUCT. | STRUCTURAL |
| SUSP. | SUSPENDED |
| SYM. | SYMMETRICAL |
| T.O. | TOP OF |
| T.O.P. | TOP OF PLATE |
| TYP. | TYPICAL |
| UNO | UNLESS NOTED OTHERWISE |
| VERT. | VERTICAL |
| WD. | WOOD |
| WDW. | WINDOW |
| W/O | WITHOUT |
| WP | WATER PROOF |
| WR | WATER RESISTANT |
| WSCT. | WAINSCOT |
| WT. | WEIGHT |

## SYMBOLS LEGEND

1 / A101 — 1 / A101 — **BUILDING SECTION** - W/ BUILDING SECTION REFERENCE NUMBER ABOVE AND SHT. NO. WHERE BUILDING SECTION IS LOCATED BELOW.

1 / A101 — **WALL SECTION** - W/ SECTION REFERENCE NUMBER ABOVE AND SHT. NO. WHERE SECTION IS LOCATED BELOW.

1 / A101 / 1 — **EXTERIOR ELEVATION** - W/ EXTERIOR ELEVATION REFERENCE NUMBER ABOVE AND SHT. NO. WHERE EXTERIOR ELEVATION IS LOCATED BELOW.

1 / A101 / 1 — **INTERIOR ELEVATION REF. SYMBOL** - W/ INTERIOR ELEVATION NUMBERS & SHT. NO. WHERE THEY ARE LOCATED.

1 / A101 — **DETAIL** - W/ DETAIL NUMBER @ TOP AND SHEET REFERENCE BELOW. SIM INDICATES SIMILAR.

101 — **ROOM IDENTIFICATION SYMBOL** - ROOM NAME ABOVE W/ ROOM NUMBER IDENTIFIER BELOW.

101 — **DOOR SYMBOL** - DOOR NUMBER REFERS TO DOOR SCHEDULE (NUMBER IS SAME AS ROOM NUMBER), LETTER (ONLY PRESENT IF MULTIPLE DOORS) CORRESPONDS TO QUANTITY OF DOORS SERVICING THE LARGER SPACE OR DEPARTMENT.

A — **WINDOW SYMBOL** - WINDOW LETTER REFERS TO WINDOW SCHEDULE OR GLAZING TYPE.

1 — **WALL TYPE** - WITH WALL OR PARTITION NUMBER.

1 — **SHEET KEYNOTE** - SPECIFIC TO EACH SHEET.

NAME / ELEVATION — **DATUM POINT** - FLOOR LEVEL ON SECTIONS, WORK, OR CONTROL POINT.

1 — **REVISION** - NUMBERED IN ORDER OF CURRENT REVISION. CLOUD AND IDENTIFIES ELEMENTS OR AREA THAT HAVE BEEN REVISED.

52

## PROJECT TEAM


**OWNER: DOYON, LIMITED**
POINT OF CONTACT: PATRICK DUKE, CFA
SENIOR VICE PRESIDENT AND CHIEF FINANCIAL OFFICER
DUKEP@DOYON.COM
O: 907-375-4204
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**PROJECT ARCHITECT:**
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SPOKANE, WA 99201

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O: 907.276.0521
670 FIREWEED LN, SUITE 200
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**FIRE PROTECTION ENGINEER:**
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**GEOTECHNICAL ENGINEER:**
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KYLE.BRENNAN@SHANWIL.COM
O: 907.433.3219
5430 FAIRBANKS STREET, SUITE 3
ANCHORAGE, ALASKA 99518

**SURVEYOR:**
**ABILITY SURVEYS**
BRANDON THIELKE
ABILITYSURVEYS21@GMAIL.COM
O: 907.235.4880
152 DEHEL AVE
HOMER, AK 99603


**CONCEPTUAL LEVEL DESIGN:**

**PLANNED UNIT DEVELOPMENT DRAWING SET**

**NOVEMBER 15, 2023**

LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK
COVER SHEET

Job No. 867-001
Date 11.15.2023

Designed LRE
Drawn LRE
Checked RJM

G0.00

EXISTING UTILITIES AND LOCATIONS SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR MUST RELY ON FIELD LOCATION INFORMATION PROVIDED BY THE RESPECTIVE UTILITIES.



811 Know what's below. Call before you dig.

north

30 0 30

SCALE: 1" = 30'

BAYVIEW ONE SIX FIVE (AMENDED)

LOT 165-B-1

LOT 165-B-2

EXISTING CHAINLINK FENCE

BAY AVE. 50' ROW

N70°46'49"E 277.90

RETAINING WALL

SEWER LIFT STATION

CONNX

UTILITY ENCLOSURE BLDG. NO EAVES QUANSET STYLE

12X20

BLDG. EAVES

BLDG. EAVES

PATIO

S29°50'54"E 92.85

50.00

S60°08'43"W

15' PUBLIC UTILITY EASEMENT PER HM 94-51

LOG FOUNDATION

FLAG POLE

N19°13'11"W 300.75

EXISTING CHAINLINK FENCE

LOT 164-A

AK DOT & PF ROW LEASE 21-006-1

S29°50'50"E 200.00

S60°08'36"W 20.00

HOMER SPIT ROAD

MAILBOX KIOSK ON CONC. PAD

SEWER CLEANOUT

9.5X17' SHED ON SKIDS

BUSINESS SIGN W/BURIED ELEC. CONDUIT

KIOSK WITH CONC. PAD

S70°46'46"W 263.11

FRAMED BLDG ON PILES

BOARDWALK

SEWER LIFT STATION

S29°50'50"E 155.76

KACHEMAK DR.

BIKEPATH

LOT 164-B

LIMITS OF GRAVELED PARKING

WOOD RAIL FENCE

CORP. OF ENGINEERS PERMIT LINE

EXISTING RETAING WALL

N19°13'11"W 453.61

RETAINING WALL AND LIMITS OF FILL ALSO UPPER LIMIT OF TIDAL FLOODING AND INUNDATION.

TIDAL INFLUENCED WETLANDS

STATE OF ALASKA (DNR)

LOT 162

LOT 163

BAYVIEW SUBDIVISION

B STREET 50' ROW

## SURVEYOR NOTES

HORIZONTAL DATUM IS RANDOM ASSUMED. VERTICAL DATUM IS BELIEVED TO BE NAVD88 BASED ON NGS STATION "HOMAIR" ELEVATION OF 70.52, BUT VERTICAL DATUM NEEDS TO BE VERIFIED.

## LEGEND

- GUY/ANCHOR
- POWER POLE
- TELEPHONE PEDESTAL
- LIGHT POLE
- ELECTRICAL CABINET
- SIGN
- SEWER MANHOLE
- SEWER VALVE
- SEWER CLEAN OUT
- WATER VALVE

SURVEY DATA PLAN
SCALE: 1" = 30'

| No. | Int. | Date | Description |
|---|---|---|---|
| | | | REVISIONS |

WOMER & ASSOCIATES
ARCHITECTURE • ENGINEERING • PLANNING
165 S. Howard St., Spokane, Washington 99201
TEL: (509) 534-4884 FAX: (509) 534-4943 www.wwomer.com

LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK
SURVEY DATA PLAN

Job No 867-001
Date 11/15/23
Designed CCE
Drawn CCE
Checked MPM

C1.00

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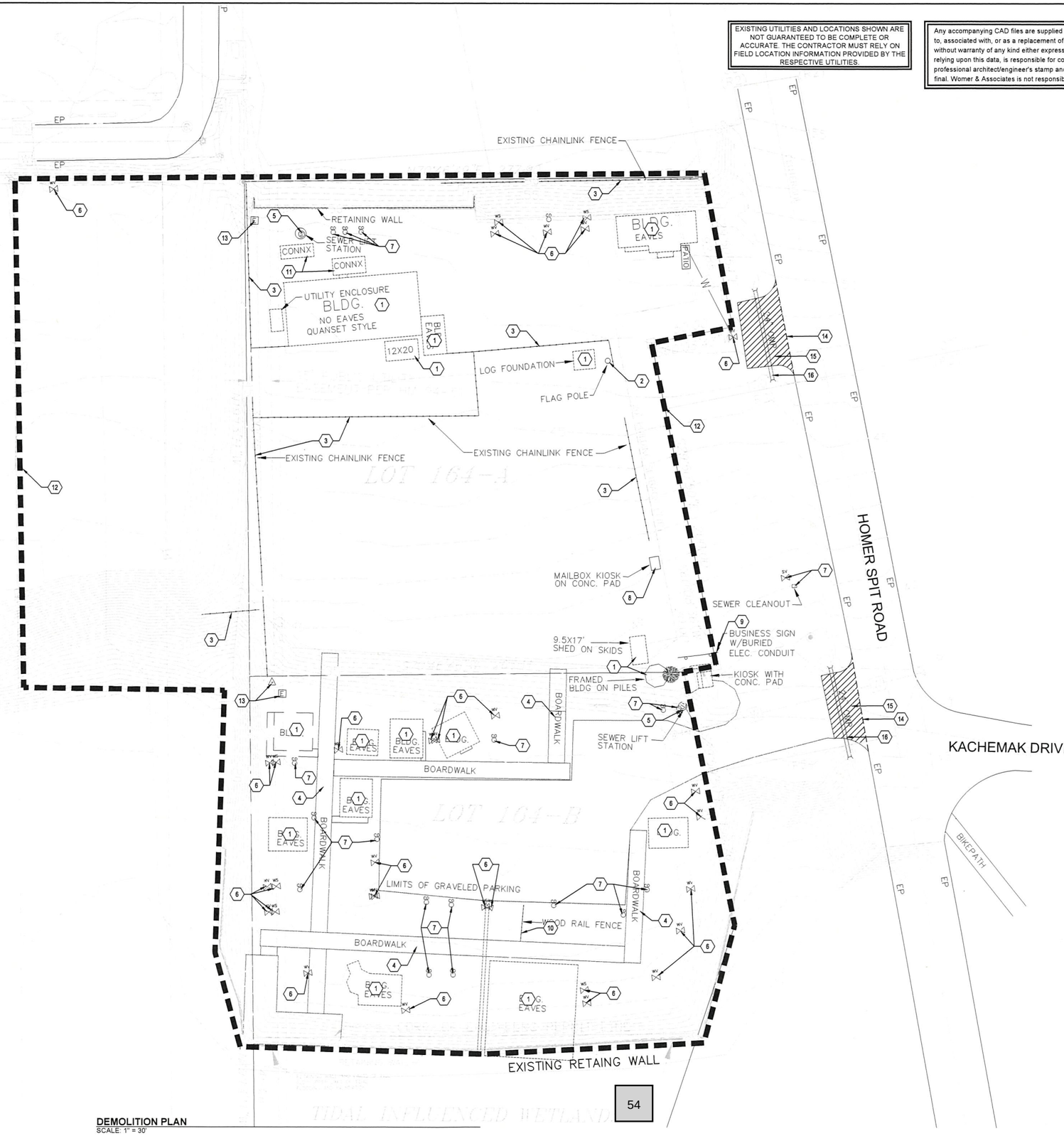
811 Know what's below. Call before you dig.




north

30 0 30

SCALE: 1" = 30'

## DEMOLITION SCHEDULE

1. REMOVE EXISTING BUILDING AND FOUNDATION
2. REMOVE EXISTING FLAG POLE
3. REMOVE EXISTING CHAINLINK FENCE
4. REMOVE EXISTING BOARDMWALK
5. REMOVE EXISTING SEWER LIFT STATION
6. REMOVE EXISTING WATER VALVE
7. REMOVE EXISTING SEWER CLEANOUT
8. REMOVE EXISTING MAILBOX KIOSK AND CONCRETE PAD
9. REMOVE EXISTING BUSINESS SIGN AND ELECTRICAL CONDUITS
10. REMOVE EXISTING WOOD FENCE
11. REMOVE EXISTING CONEX SHIPPING CONTAINER
12. REMOVE ALL TREES AND VEGETATION WITHIN PROJECT LIMITS
13. REMOVE EXISTING ELECTRICAL
14. SAWCUT EXISTING ASPHALT
15. REMOVE EXISTING ASPHALT
16. REMOVE EXISTING CULVERT

**DEMOLITION PLAN**
SCALE: 1" = 30'

54

REVISIONS

| No. | Int. | Date | Description |
|---|---|---|---|
| | | | |

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LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK
DEMOLITION PLAN

Job. No. 867-001
Date 11/15/23

Designed CCE
Drawn CCE
Checked MPM

C1.10

EXISTING UTILITIES AND LOCATIONS SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR MUST RELY ON FIELD LOCATION INFORMATION PROVIDED BY THE RESPECTIVE UTILITIES.



811 Know what's below. Call before you dig.

north

30 0 30

SCALE: 1" = 30'

EMPLOYEE HOUSING
MAIN FF = 47
SECOND LEVEL FF = 59

HOTEL FF = 46.5

CONDO
FF = 32

CONDO
FF = 30

CONDO
FF = 31

CONDO
FF = 29.5

CONDO
FF = 31

HOMER SPIT ROAD

KACHEMAK DRIVE

BIKEPATH

**CONSTRUCTION SCHEDULE**
PROVIDE

1. MATCH EXISTING GRADE
2. RETAINING WALL
3. SNOW REMOVAL AREA
4. DRAINAGE SWALE

GRADING PLAN
SCALE: 1" = 30'

55

REVISIONS

| No. | Int. | Date | Description |
|---|---|---|---|
| | | | |

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LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK
GRADING PLAN

Job No 867-001
Date 11/15/23
Designed CCE
Drawn CCE
Checked MPM

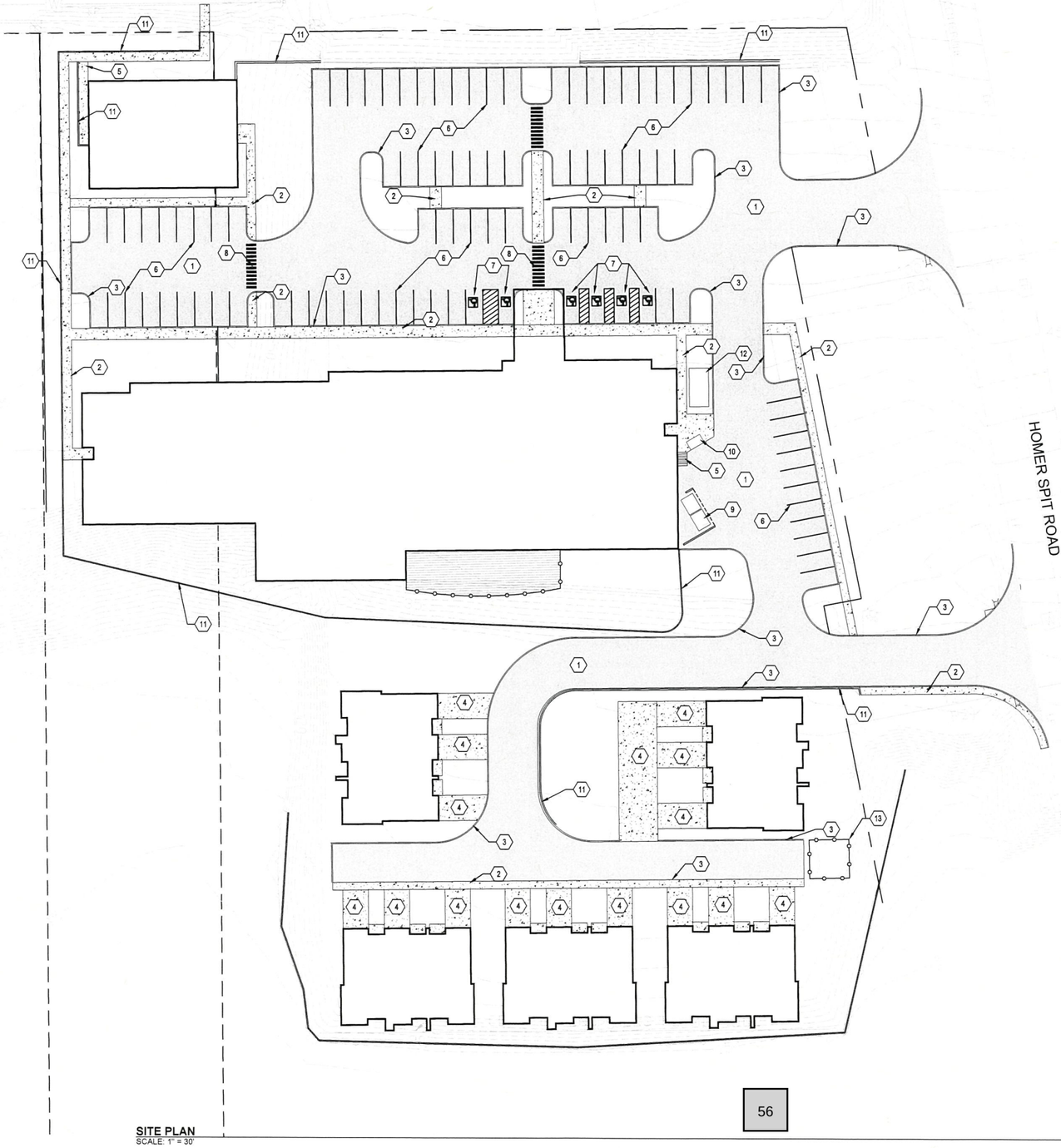
C2.00

WOMER CIVIL 2016.CTB
11/15/23 18:31 CADE EGBERT | P:\867 - Doyon\867-001 - Lighthouse Village Development Predesign\05 - Working Documents\02 - CivilSheets\C2.00 GRADING PLAN.dwg

EXISTING UTILITIES AND LOCATIONS SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR MUST RELY ON FIELD LOCATION INFORMATION PROVIDED BY THE RESPECTIVE UTILITIES.



811 Know what's below. Call before you dig.




north

30 0 30

SCALE: 1" = 30'

## CONSTRUCTION SCHEDULE
PROVIDE

1. HMA ASPHALT
2. CONCRETE SIDEWALK
3. CONCRETE CURB
4. CONCRETE DRIVEWAY
5. CONCRETE STAIRS
6. STANDARD PARKING STALL
7. ADA PARKING STALL
8. CROSSWALK MARKING
9. TRASH ENCLOSURE
10. CONCRETE LOADING DOCK
11. RETAINING WALL
12. GENERATOR
13. FENCE ENCLOSURE FOR LIFT STATION

SITE PLAN
SCALE: 1" = 30'

REVISIONS

| No. | Int. | Date | Description |
|---|---|---|---|
| | | | |

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LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK
SITE PLAN

Job No. 867-001
Date 11/15/23

Designed CCE
Drawn CCE
Checked MPM

C4.00

EXISTING UTILITIES AND LOCATIONS SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR MUST RELY ON FIELD LOCATION INFORMATION PROVIDED BY THE RESPECTIVE UTILITIES.



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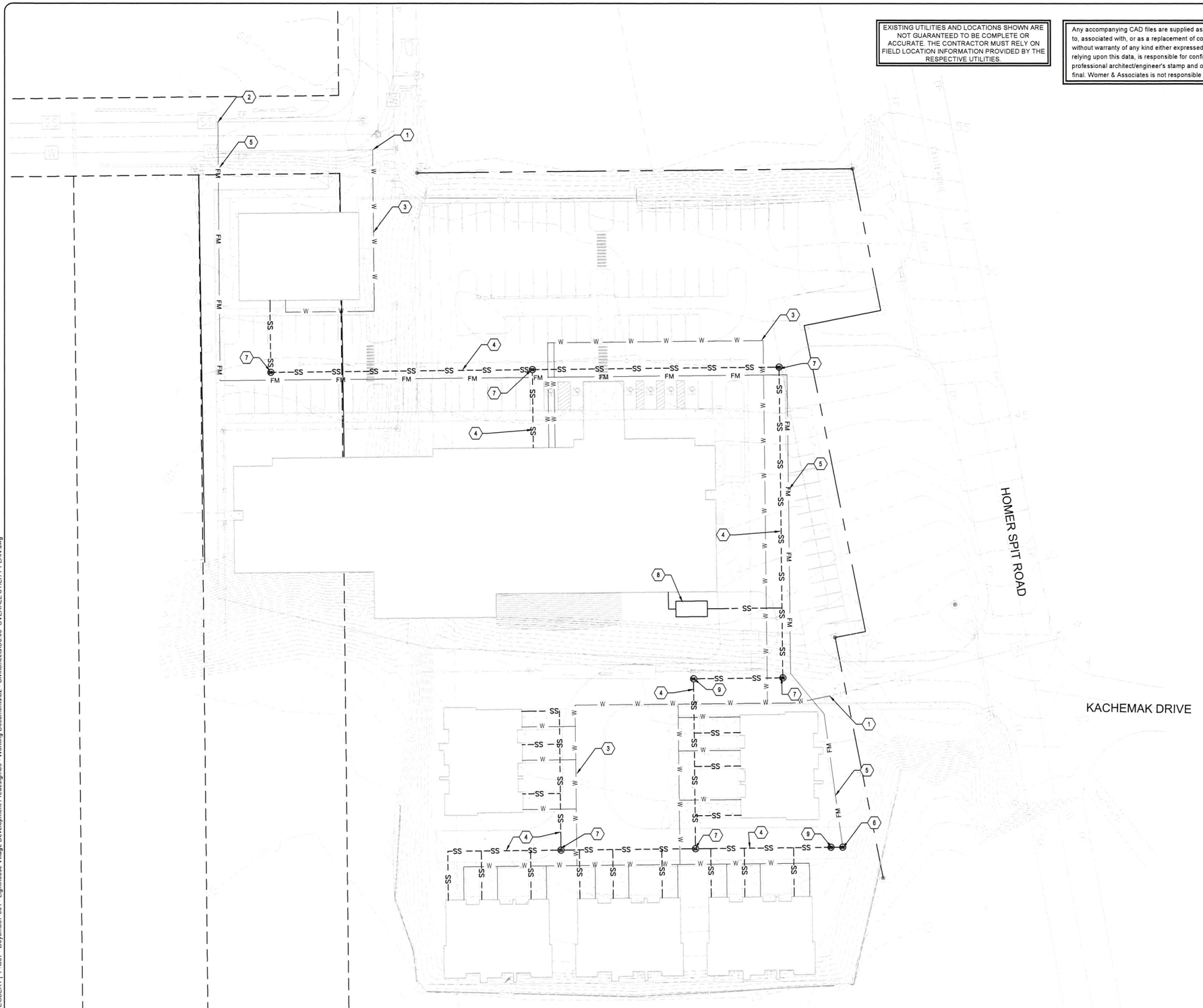
north

30 0 30

SCALE: 1" = 30'




## CONSTRUCTION SCHEDULE
PROVIDE

1. CONNECT TO EXISTING CITY OF HOMER WATER LINE
2. CONNECT TO EXISTING CITY OF HOME SANITARY SEWER
3. WATER LINE
4. SANITARY SEWER LINE
5. SANITARY SEWER FORCEMAIN LINE
6. SANITARY SEWER LIFT STATION
7. SANITARY SEWER MANHOLE
8. GREASE TRAP INTERCEPTOR
9. SANITARY SEWER DROP MANHOLE

## WATER & SEWER NOTES:

1. WATER LINES TO HAVE A MINIMUM HORIZONTAL SEPARATION OF 10 FEET & 18" VERTICAL SEPARATIONS FROM SANITARY SEWER LINE.
2. WATER LINES TO BE SLEEVED AT ALL CROSSINGS WHERE WATER LINE CROSSES BELOW SANITARY SEWER LINES.
3. WATER LINES TO HAVE A MINIMUM 4 FEET OF BURIAL DEPTH.
4. SANITARY SEWER LINES TO HAVE A MINIMUM 3 FEET OF BURIAL DEPTH.

**OVERALL UTILITY PLAN**
SCALE: 1" = 30'



REVISIONS

| No. | Init. | Date | Description |
|---|---|---|---|
| | | | |

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LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK
OVERALL UTILITY PLAN

Job No. 867-001
Date 11/15/23
Designed CCE
Drawn CCE
Checked MPM

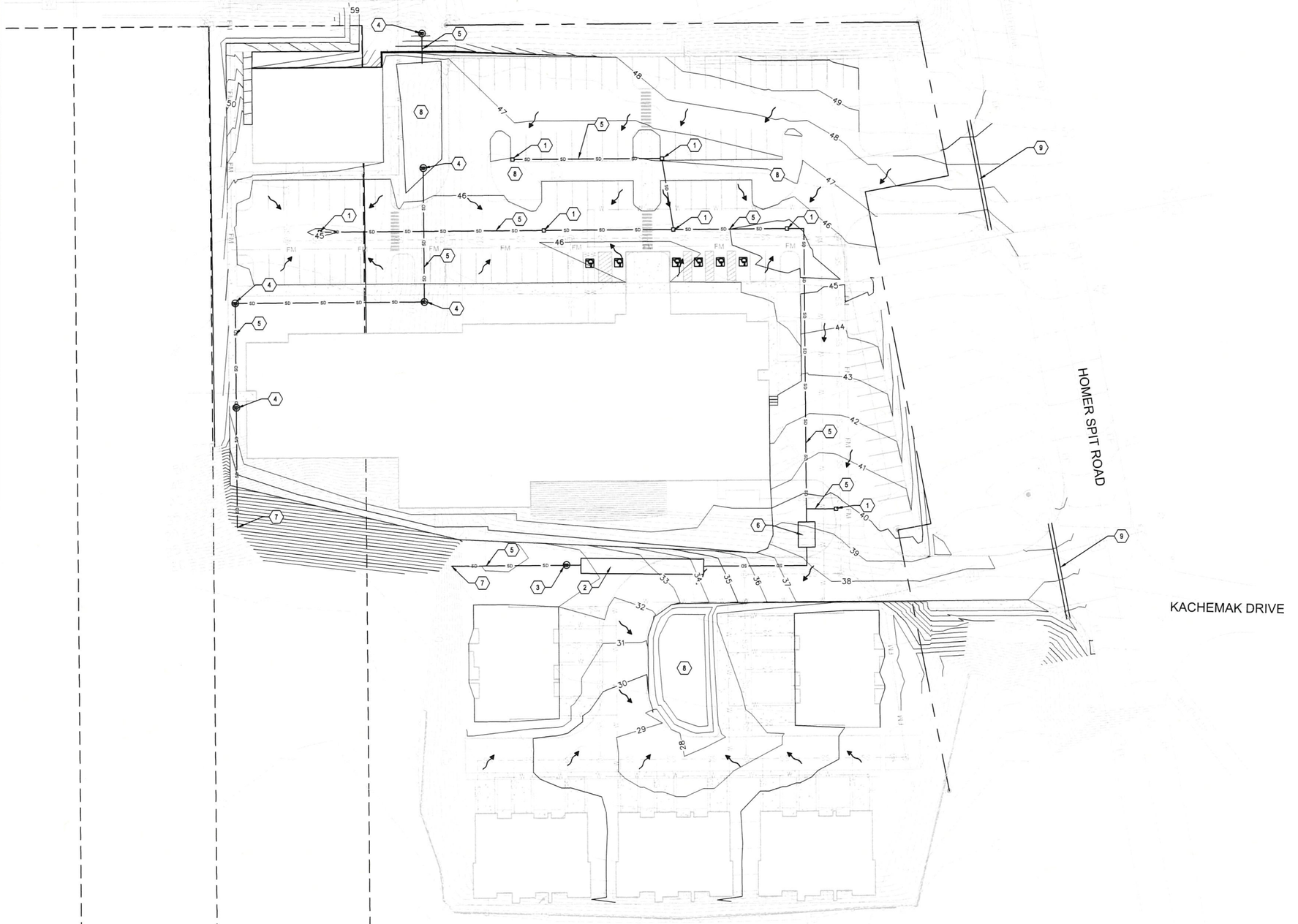
U0.00

WOMER CIVIL 2016.CTB
11/15/23 19:42 CADE EGBERT | P:\867 - Doyon\867-001 - Lighthouse Village Development Predesign\05 - Working Documents\02 - CivilSheets\U0.00_OVERALL UTILITY PLAN.dwg

EXISTING UTILITIES AND LOCATIONS SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR MUST RELY ON FIELD LOCATION INFORMATION PROVIDED BY THE RESPECTIVE UTILITIES.



811 Know what's below. Call before you dig.




## CONSTRUCTION SCHEDULE
PROVIDE

1. CATCH BASIN
2. 9 FT DIAMETER UNDERGROUND STORMWATER STORAGE FACILITY.
3. STORM SEWER MANHOLE W/ ORIFICE CONTROL
4. STORM SEWER MANHOLE
5. STORM SEWER PIPE
6. STORMWATER VAULT WITH TREATMENT FILTERS
7. DISCHARGE OUTLET TO WETLANDS
8. SWALE
9. 24" DIA. CMP CULVERT

## STORMWATER PLAN
SCALE: 1" = 30'



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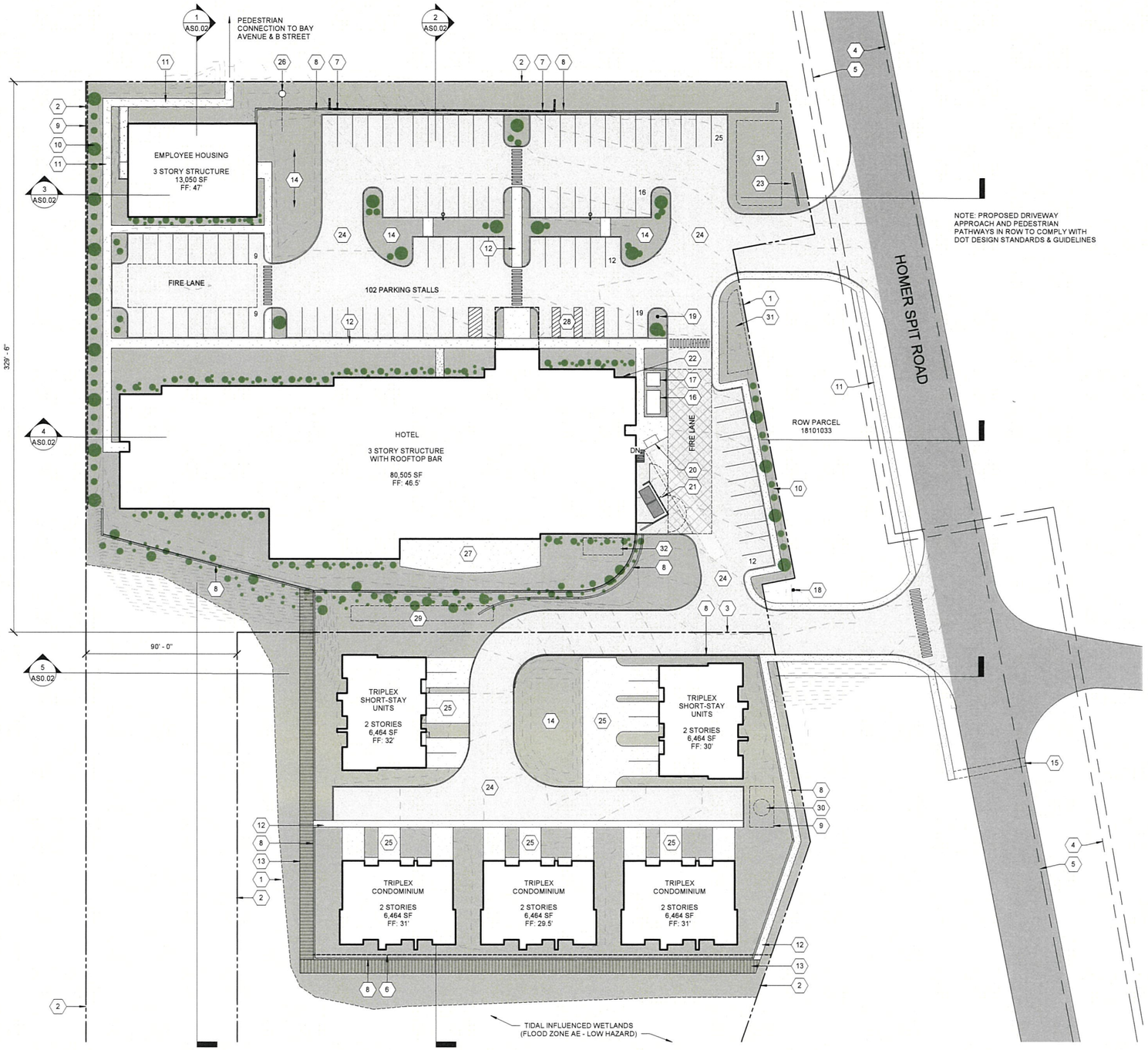
STORMWATER PLAN

Job No. 867-001
Date 11/15/23
Designed CCE
Drawn CCE
Checked MPM

U2.00




1 ARCHITECTURAL SITE PLAN
AS0.01 SCALE: 1/32" = 1'-0"

## GENERAL NOTES

**EXISTING LOTS TO BE DEVELOPED:**
LOT 163
LOT 164-A
LOT 164-B
VACATED B-STREET ROW

**TOTAL SITE AREA:**
6.95 ACRES

**PROPOSED BUILDABLE AREA TO BE DEVELOPED:**
186,437 SF / 4.28 ACRES

**PROPOSED STRUCTURE SQUARE FOOTAGE:**
EMPLOYEE HOUSING: 13,050 SF
HOTEL: 80,505 SF
TRIPLEX UNITS: (5) 6,464 SF
TOTAL SF OF DEVELOPMENT: 125,875 SF

**CITY OF HOMER ZONING CODE:**
ZONE: GENERAL COMMERCIAL 1 (GC1)
BUILDING SETBACKS: 20' FROM ROW / 5' FROM OTHER LOTS
LOCATED IN OVERLAY ZONE DISTRICT: NO
LOCATED IN WETLAND LOCATION: NO
LOCATED IN FLOOD ZONE: YES (AE, LOW HAZARD)
LANDSCAPING REQUIREMENTS INCLUDE RIGHT-OF-WAY LANDSCAPED BUFFER ZONES.

**PUBLIC UTILITIES**
PUBLIC WATER AND SEWER IS PROVIDED TO SITE (CITY OF HOMER PUBLIC WORKS)

POWER IS PROVIDED TO SITE. 3-PHASE UPGRADE WILL BE REQUIRED (HOMER ELECTRIC ASSOCIATION)

**PARKING REQUIREMENTS:**
NORTH LOT PARKING REQUIRED PER HCC 21.55.090:
HOTEL - ONE PER GUEST ROOM @ 85 ROOMS = 85 STALLS
DORMITORY - 1 PER TWO BEDS @ 40 BEDS = 20 STALLS

NORTH LOT PARKING PROVIDED: TOTAL 102 STALLS

SOUTH LOT PARKING REQUIRED PER HCC 21.55.090:
DWELLINGS: TWO PER DWELLING UNIT (A REQUIRED PARKING SPACE MAY BE IN A GARAGE OR CARPORT IF THE STRUCTURE IS AT LEAST 12' WIDE, 20' LONG AND 8' HIGH) = 30 STALLS

SOUTH LOT PARKING PROVIDED: TOTAL 30 STALLS

## KEYNOTES

1 APPROXIMATE LIMITS OF CONSTRUCTION
2 PROPERTY LINE
3 PROPOSED PROPERTY LINE
4 EXISTING PUBLIC SEWER LINE
5 EXISTING PUBLIC WATER LINE
6 ARMY CORPS OF ENGINEERS PERMIT LINE
7 EXISTING RETAINING WALL
8 RETAINING WALL
9 SIGHT OBSCURING FENCE
10 LANDSCAPE BUFFER
11 PEDESTRIAN PATHWAY
12 CONCRETE SIDEWALK
13 PEDESTRIAN BOARDWALK
14 SWALE, SEE STORMWATER PLAN
15 EXISTING PEDESTRIAN CROSSWALK
16 GENERATOR
17 PAD MOUNT TRANSFORMER
18 EXISTING FIRE HYDRANT
19 FIRE HYDRANT
20 LOADING DOCK
21 TRASH ENCLOSURE
22 FDC CONNECTION POINT
23 MONUMENT SIGN
24 ASPHALT SURFACE
25 CONCRETE DRIVE AISLE
26 STORM / SEWER MANHOLE
27 CONCRETE PATIO
28 ACCESSIBLE PARKING STALLS
29 BELOW-GRADE STORMWATER STORAGE STRUCTURE
30 SANITARY SEWER LIFT STATION
31 SNOW REMOVAL AREA
32 BELOW-GRADE GREASE INTERCEPTOR

| No. | Init. | Date | Description |
|---|---|---|---|
| | | | REVISIONS |

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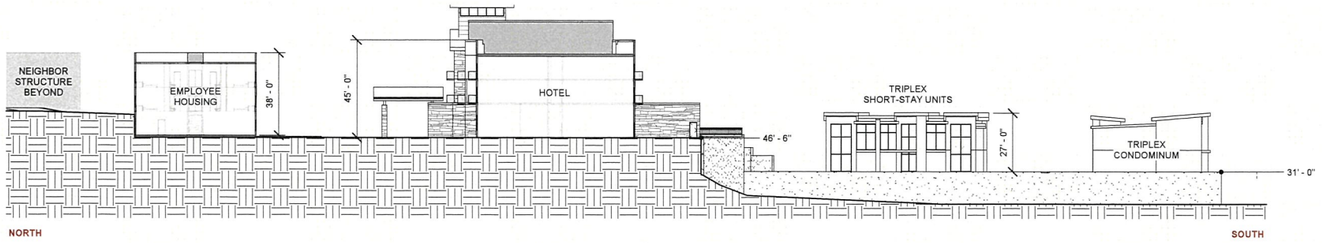
ARCHITECTURAL SITE PLAN

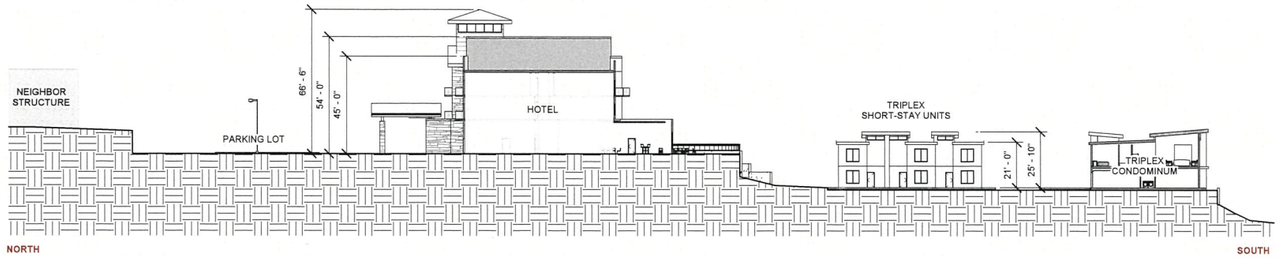
Job No. 867-001
Date 11.15.2023
Designed LRE
Drawn LRE
Checked LRE

AS0.01



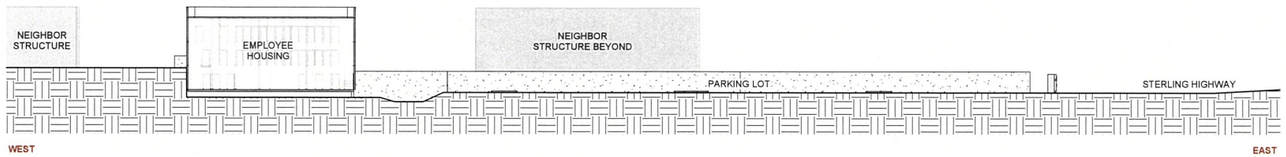

1 ‖ SITE SECTION 1

AS0.02 SCALE: 1/32" = 1'-0" REF:A2.01



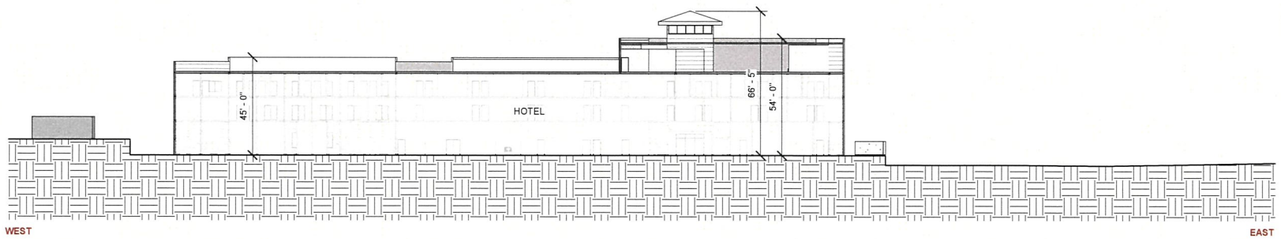

2 ‖ SITE SECTION 2

AS0.02 SCALE: 1/32" = 1'-0" REF:AS0.01



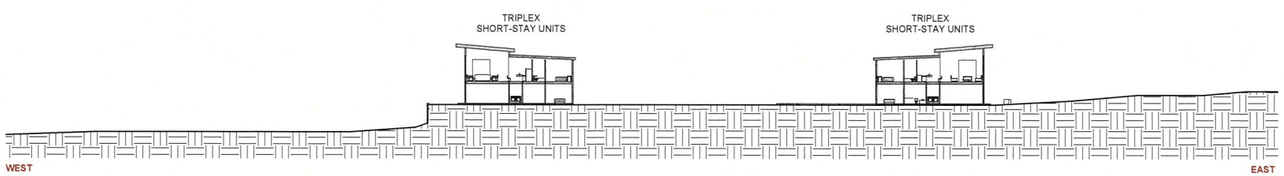

3 ‖ SITE SECTION 3

AS0.02 SCALE: 1/32" = 1'-0" REF:AS0.01




4 ‖ SITE SECTION 4

AS0.02 SCALE: 1/32" = 1'-0" REF:AS0.01




5 ‖ SITE SECTION 5

AS0.02 SCALE: 1/32" = 1'-0" REF:AS0.01



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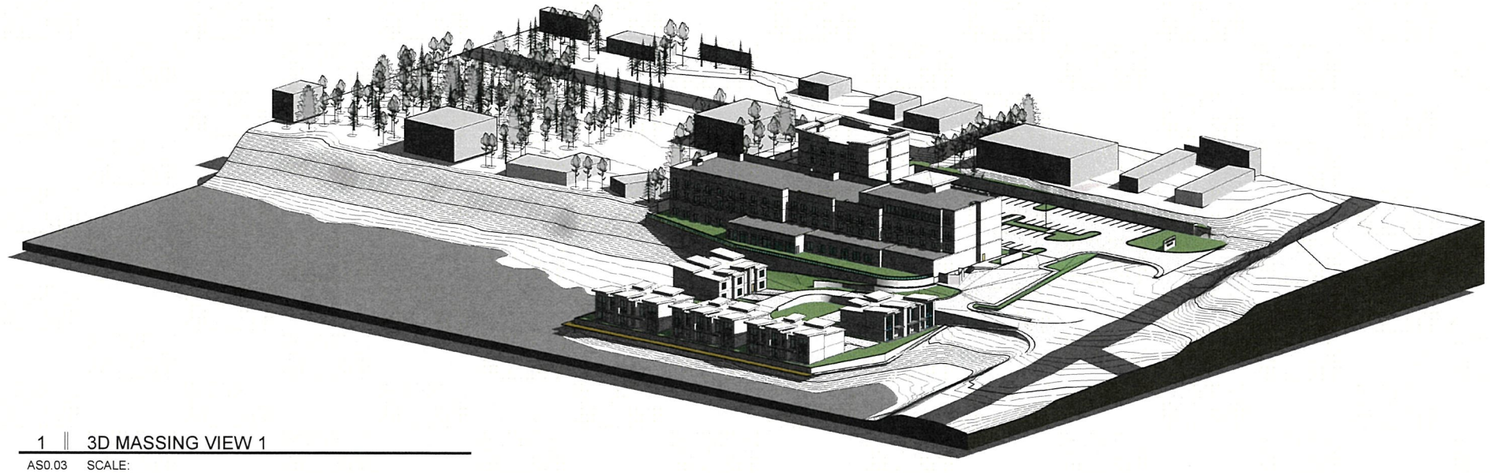
ARCHITECTURAL SITE SECTIONS

Job No.: 867-001
Date: 11.15.2023

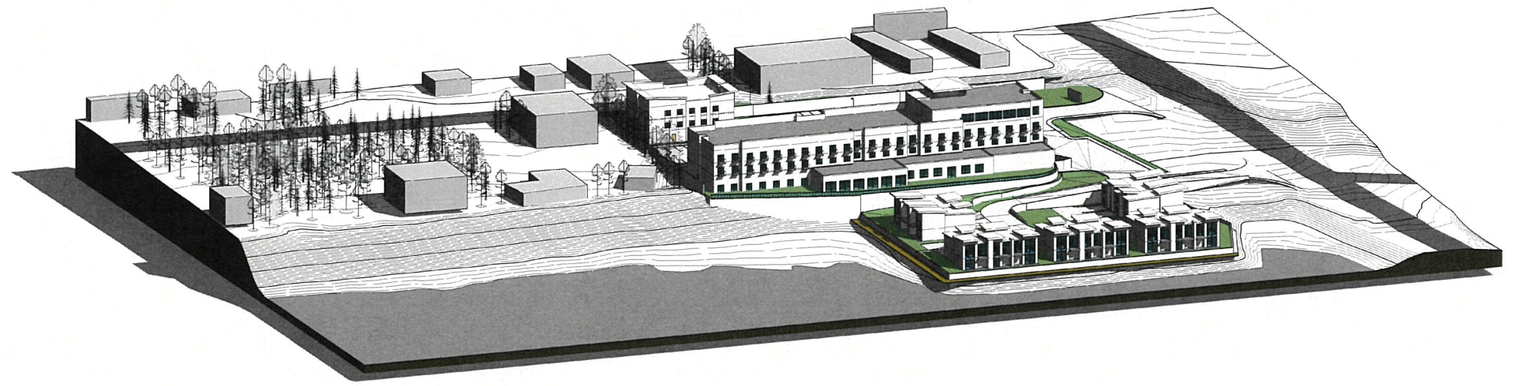
Designed LRE
Drawn LRE
Checked LRE

AS0.02



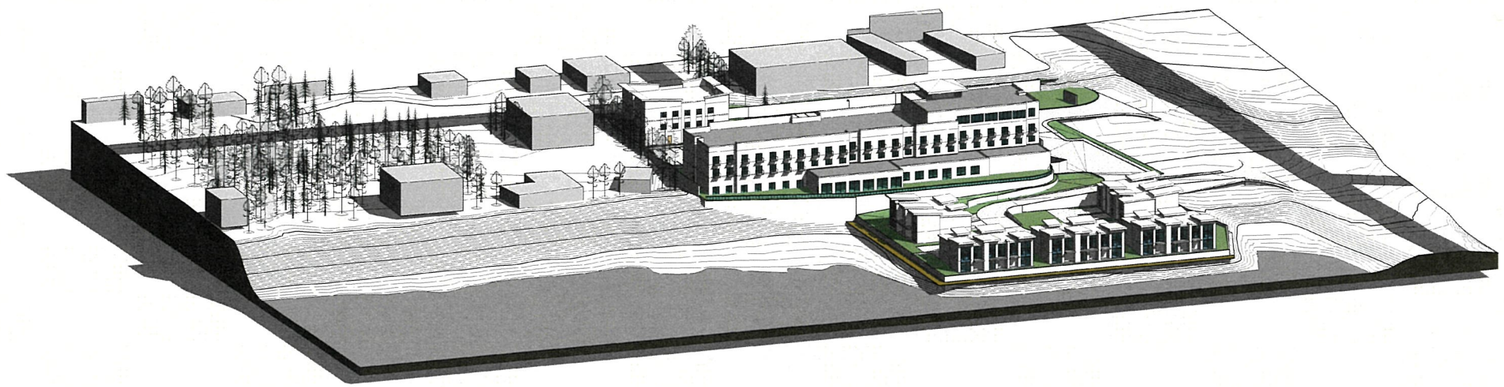
1 ‖ 3D MASSING VIEW 1

AS0.03 SCALE:



2 ‖ 3D MASSING VIEW 2

AS0.03 SCALE:



3 ‖ 3D MASSING VIEW 3

AS0.03 SCALE:



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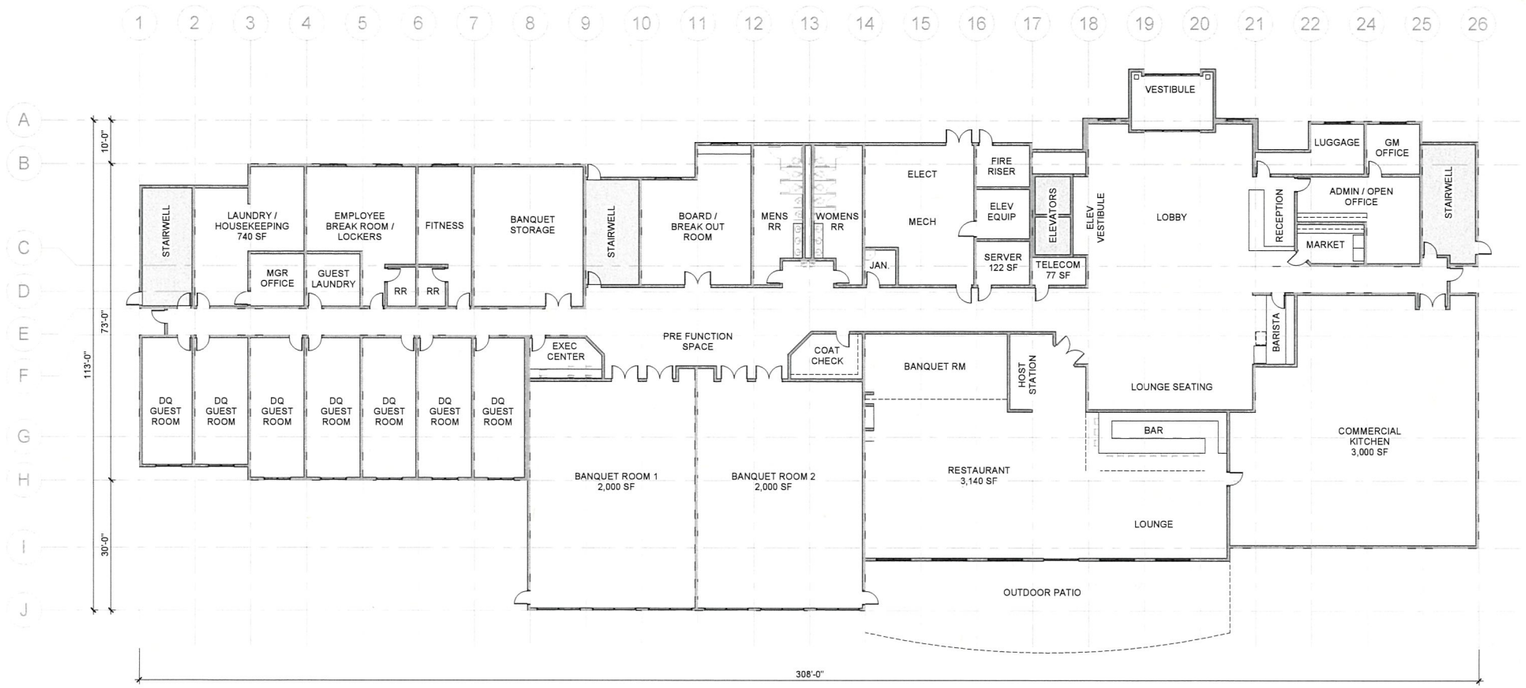
OVERALL SITE 3D MASSING VIEWS

Job No. 867-001
Date 11.15.2023

Designed LRE
Drawn LRE
Checked LRE

AS0.03




1 FIRST FLOOR

A1.01 SCALE: 1/16" = 1'-0" REF:A1.11


2 SECOND FLOOR

A1.01 SCALE: 1/16" = 1'-0" REF:A1.11

## BUILDING INFORMATION

**TOTAL BUILDING SF: 80,505 SF**

| | | |
|---|---|---|
| 28,422 SF | FIRST FLOOR | |
| | 3,000 SF | KITCHEN<br>WALK-IN COOLER/FREEZER<br>BEER/WINE WALK-IN COOLER |
| | 3,000 SF | RESTAURANT<br>150 SEATS |
| | 4,000 SF | BANQUET ROOMS<br>250-275 SEATS |
| 22,600 SF | SECOND FLOOR SF | |
| 22,600 SF | THIRD FLOOR SF | |
| 6,883 SF | FOURTH FLOOR SF | BAR: 10-14 SEATS<br>BAR SEATING: 60 SEATS |
| + 650 SF | EXTERIOR PATIO | OUTDOOR SEATING<br>40-60 SEATS |
| + 1,900 SF | PORTE COCHERE | |

**GUEST ROOMS**

FIRST FLOOR GUEST ROOM QUANTITIES: 7 ROOMS
0 KING ROOMS
7 DOUBLE QUEEN ROOMS
0 SUITES

SECOND FLOOR GUEST ROOM QUANTITIES: 39 ROOMS
7 KING ROOMS
29 DOUBLE QUEEN ROOMS
3 SUITES

THIRD FLOOR GUEST ROOM QUANTITIES: 39 ROOMS
8 KING ROOMS
28 DOUBLE QUEEN ROOMS
3 SUITES

TOTAL GUEST ROOM QUANTITY: 85 ROOMS
15 KING ROOMS
64 DOUBLE QUEEN ROOMS
6 SUITES

| No. | Init. | Date | Description |
|---|---|---|---|
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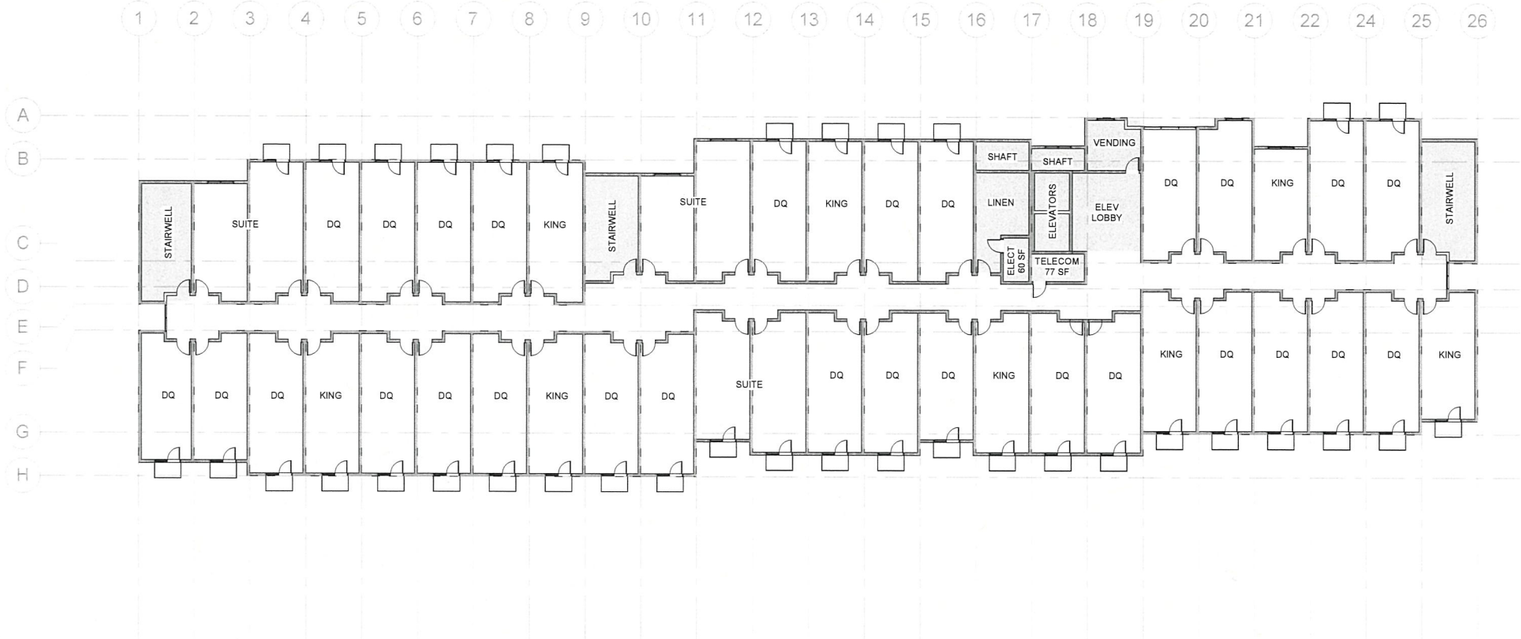
HOTEL - FIRST AND SECOND FLOOR PLANS

Job No.: 867-001
Date: 11.15.2023

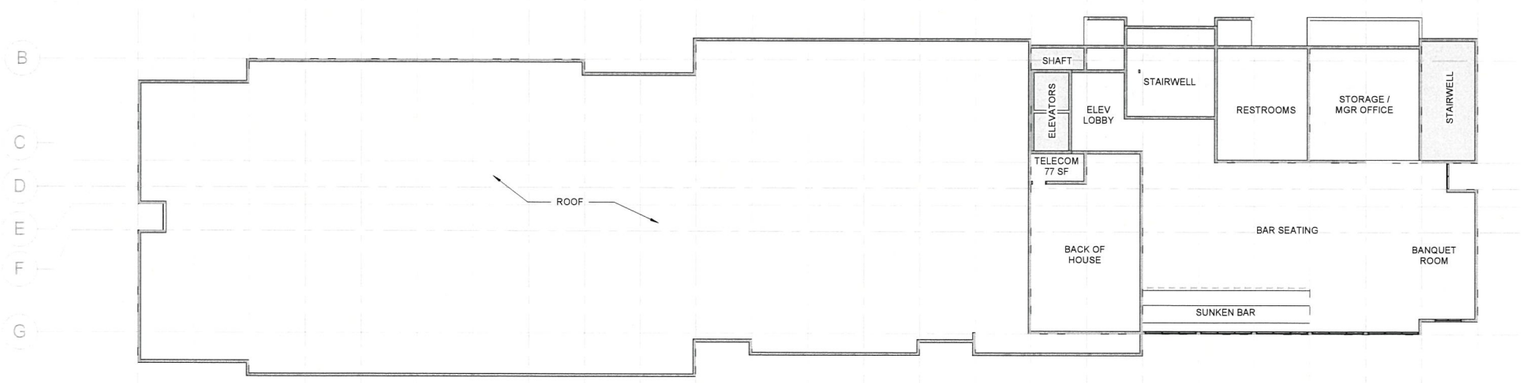
Designed LRE
Drawn LRE
Checked LRE

A1.01




1 THIRD FLOOR

A1.02 SCALE: 1/16" = 1'-0" REF:A1.11




2 FOURTH FLOOR

A1.02 SCALE: 1/16" = 1'-0" REF:A1.11



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HOTEL - THIRD AND FOURTH FLOOR PLANS

Job No. 867-001
Date 11.15.2023

Designed LRE
Drawn LRE
Checked LRE

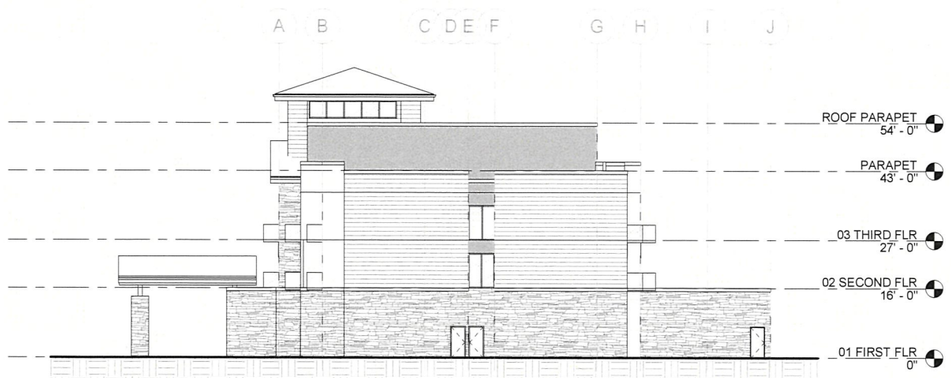
A1.02


1 ‖ NORTH ELEVATION

A1.11 SCALE: 1/16" = 1'-0"

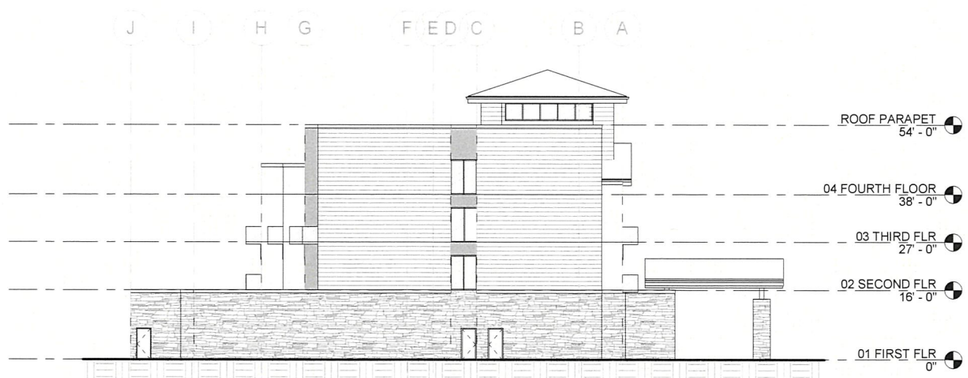

2 ‖ SOUTH ELEVATION

A1.11 SCALE: 1/16" = 1'-0"




3 ‖ WEST ELEVATION

A1.11 SCALE: 1/16" = 1'-0"




4 ‖ EAST ELEVATION

A1 CALE: 1/16" = 1'-0"

## GENERAL NOTES

1 EXTERIOR ELEVATIONS ARE SCHEMATIC FOR PREDESIGN LEVEL PURPOSES ONLY

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HOTEL - EXTERIOR ELEVATIONS

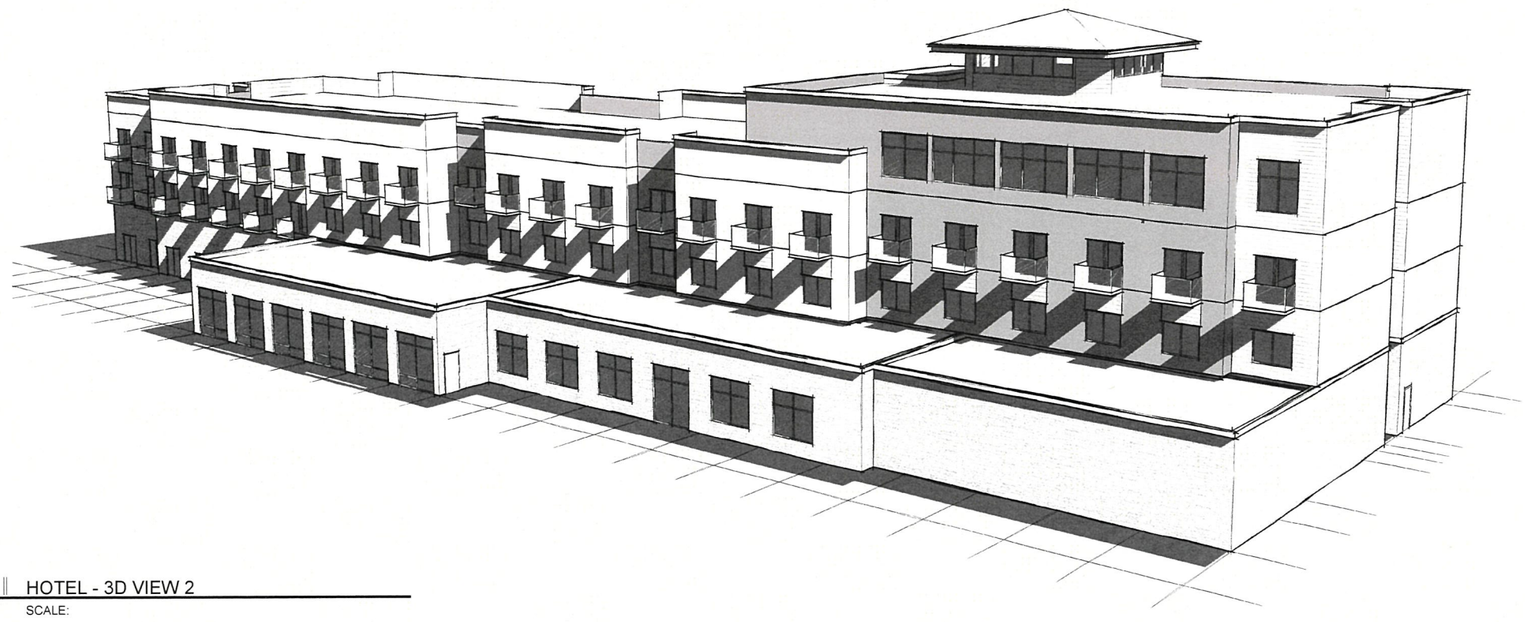
Job No: 867-001
Date: 11.15.2023

Designed Designer
Drawn Author
Checked Checker

A1.11


1 ‖ HOTEL - 3D VIEW 1

A1.21 SCALE:



2 ‖ HOTEL - 3D VIEW 2

A1.21 SCALE:



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HOTEL - 3D MASSING VIEWS

Job No 867-001
Date 11.15.2023

Designed LRE
Drawn LRE
Checked LRE

A1.21

## BUILDING INFORMATION

**TOTAL BUILDING SF: 13,050 SF**

| | |
|---|---|
| 4,350 SF | FIRST FLOOR |
| 4,350 SF | SECOND FLOOR |
| 4,350 SF | THIRD FLOOR |

**EMPLOYEE ROOMS**

**FIRST FLOOR ROOM QUANTITIES: 8 ROOMS**

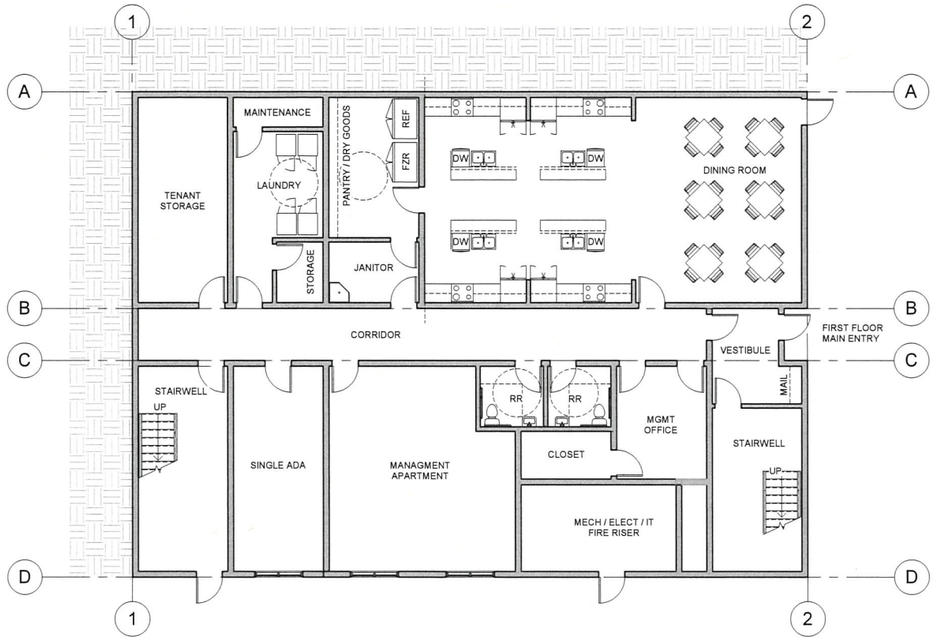
| | |
|---|---|
| 8 | SINGLE OCCUPANCY ROOMS |
| 0 | DOUBLE OCCUPANCY ROOMS |

**SECOND FLOOR ROOM QUANTITIES: 38 ROOMS**

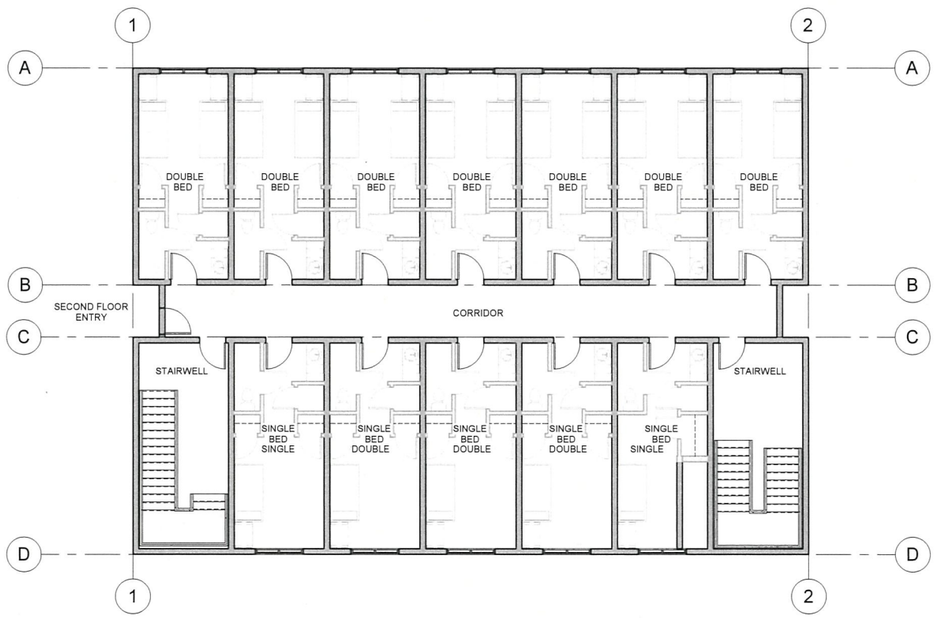
| | |
|---|---|
| 0 | SINGLE OCCUPANCY ROOMS |
| 17 | DOUBLE OCCUPANCY ROOMS |

**TOTAL ROOM QUANTITY: 25 ROOMS**

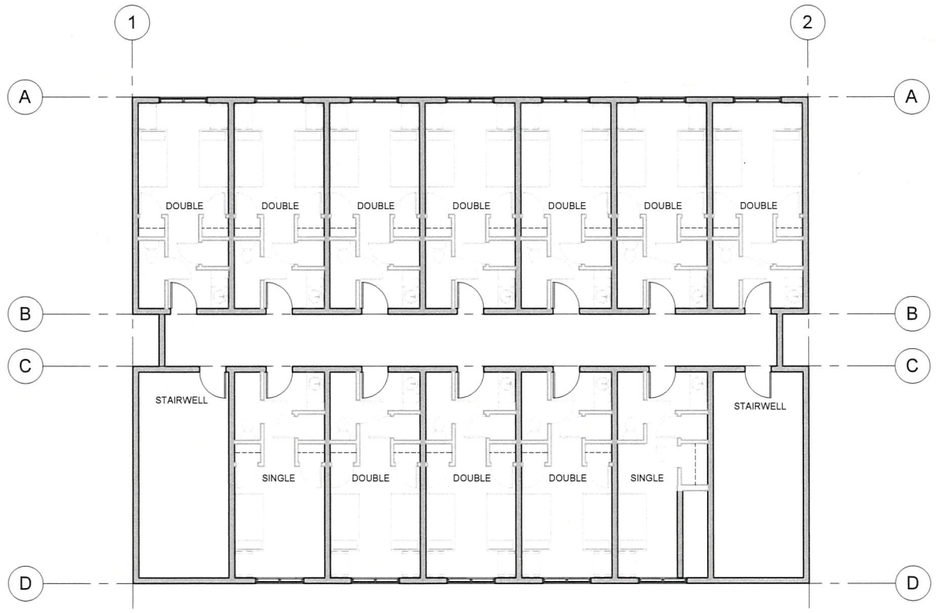
| | |
|---|---|
| 8 | SINGLE OCCUPANCY ROOMS |
| 17 | DOUBLE OCCUPANCY ROOMS |




1 FIRST FLOOR
A2.01 SCALE: 1/8" = 1'-0" REF:A2.11




2 SECOND FLOOR
A2.01 SCALE: 1/8" = 1'-0" REF:A2.11




3 THIRD FLOOR
A2.01 SCALE: 1/8" = 1'-0" REF:A2.11



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DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK

EMPLOYEE HOUSING - FLOOR PLANS

Job No: 876-001
Date: 11.15.2023

Designed LRE
Drawn LRE
Checked LRE

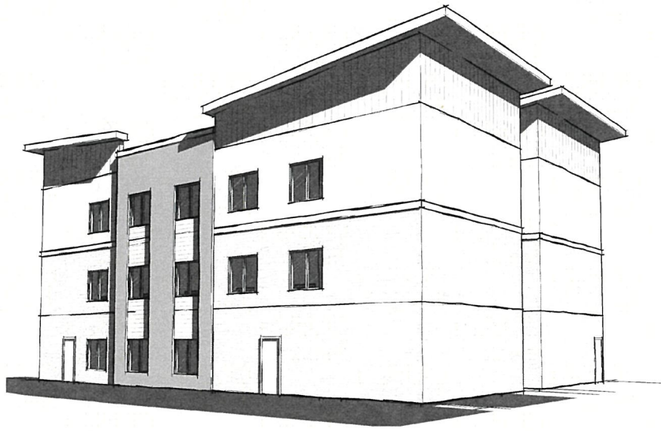
A2.01


1 NORTH ELEVATION

A2.11 SCALE: 1/8" = 1'-0"

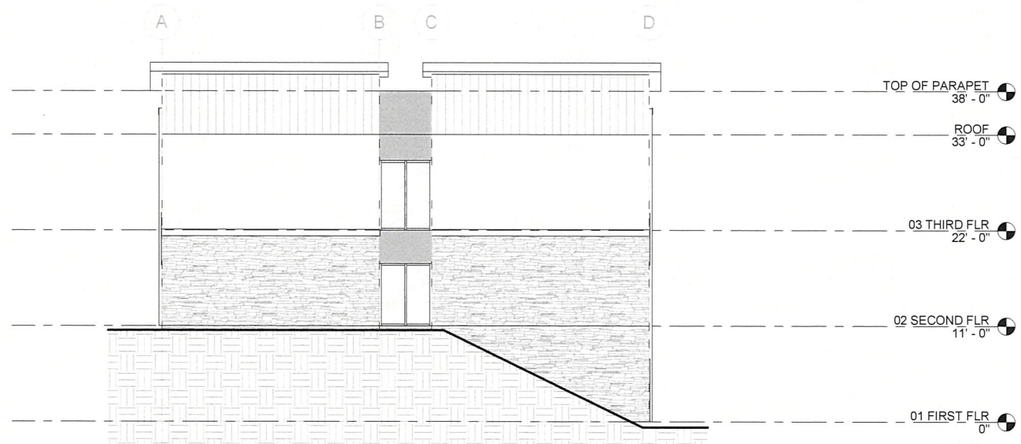

2 SOUTH ELEVATION

A2.11 SCALE: 1/8" = 1'-0"



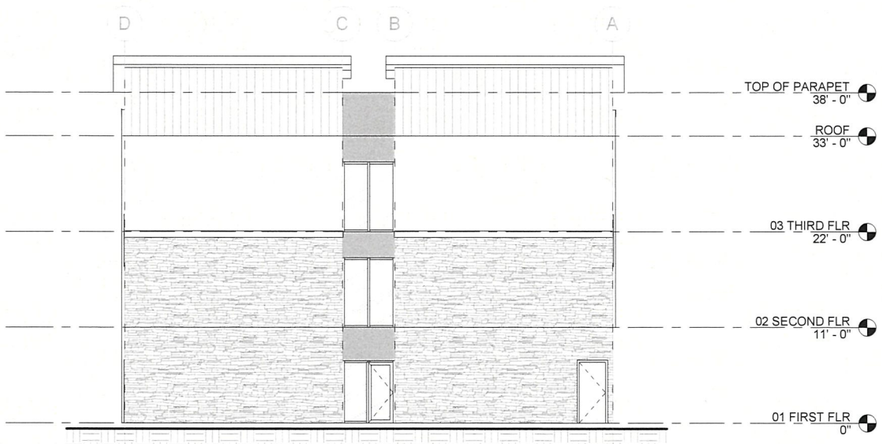
5 3D View 1

A2.11 SCALE:




3 WEST ELEVATION

A2.11 SCALE: 1/8" = 1'-0"




4 EAST ELEVATION

A2.11 SCALE: 1/8" = 1'-0"

## GENERAL NOTES

1 EXTERIOR ELEVATIONS ARE SCHEMATIC FOR PREDESIGN LEVEL PURPOSES ONLY

REVISIONS

| No. | Init. | Date | Description |
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DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK

EMPLOYEE HOUSING - EXTERIOR ELEVATIONS & 3D MASSING VIEWS

Job No 876-001
Date 11 15 2023

Designed LRE
Drawn LRE
Checked LRE

A2.11

## BUILDING INFORMATION

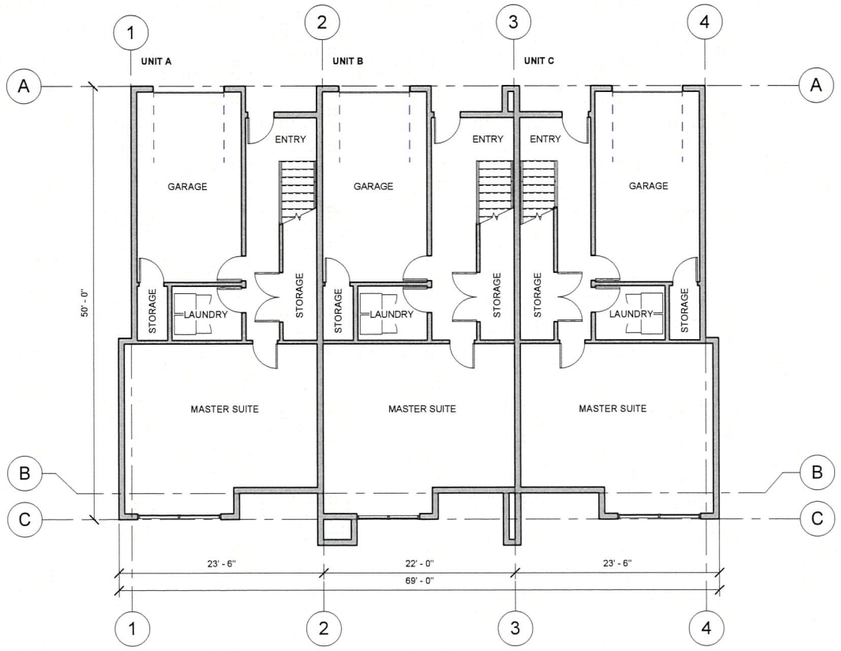
**TOTAL BUILDING SF: 6,464 SF**

3,232 SF FIRST FLOOR
3,232 SF SECOND FLOOR

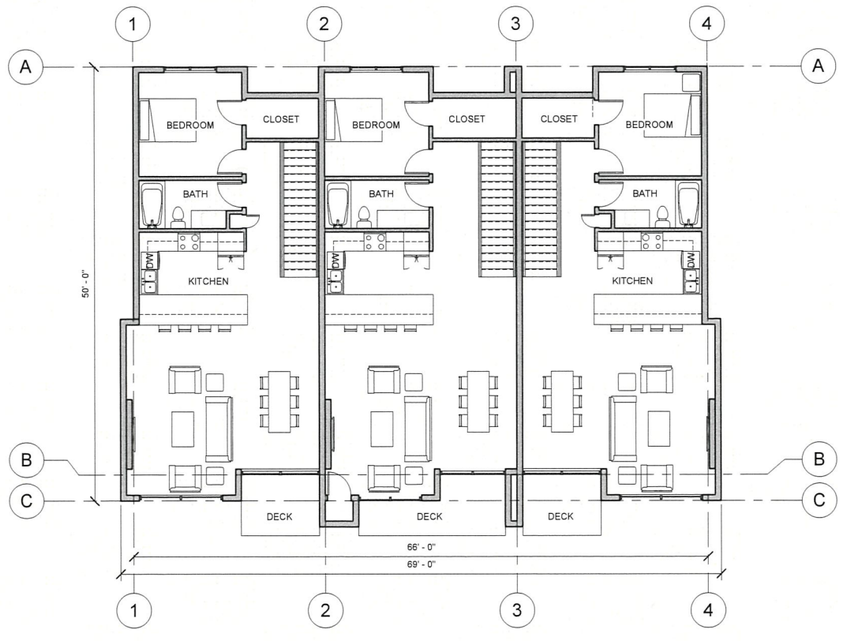
**UNIT A:** 2 STORIES \ 2,122 SF
2 BEDROOM
2 BATHROOM
SINGLE CAR GARAGE

**UNIT B:** 2 STORIES \ 2,196 SF
2 BEDROOM
2 BATHROOM
SINGLE CAR GARAGE

**UNIT C:** 2 STORIES \ 2,122 SF
2 BEDROOM
2 BATHROOM
SINGLE CAR GARAGE




1 FIRST FLOOR
A3.01 SCALE: 1/8" = 1'-0"

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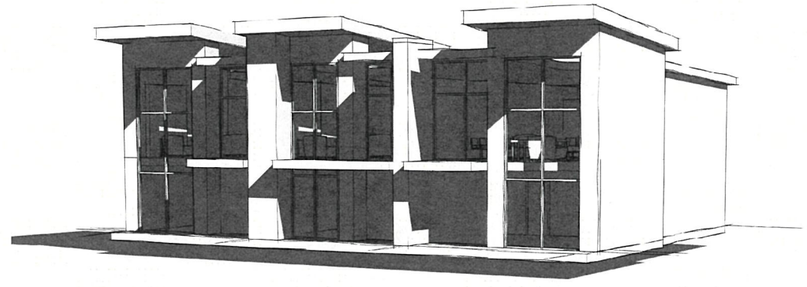
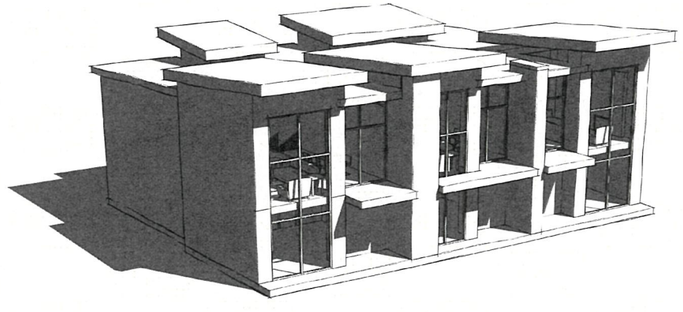


3 3D VIEW 1
A3.01 SCALE:



4 3D VIEW 2
A3.01 SCALE:



REVISIONS

| No. | Int. | Date | Description |
|---|---|---|---|
| | | | |

WOMER & ASSOCIATES
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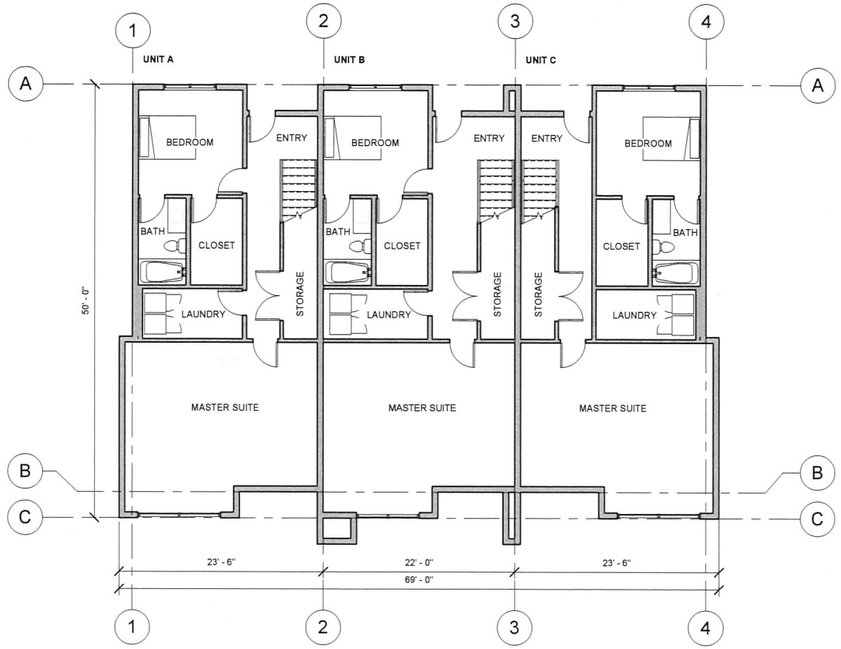
LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK

TRIPLEX CONDO - FLOOR PLANS AND 3D MASSING VIEWS

Job No.: 876-001
Date: 11.15.2023

Designed LRE
Drawn LRE
Checked LRE

A3.01

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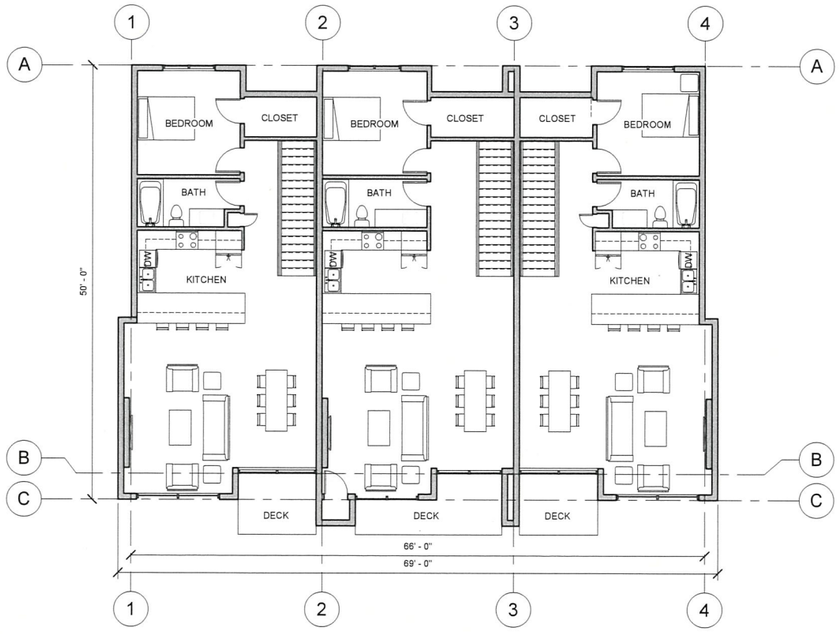


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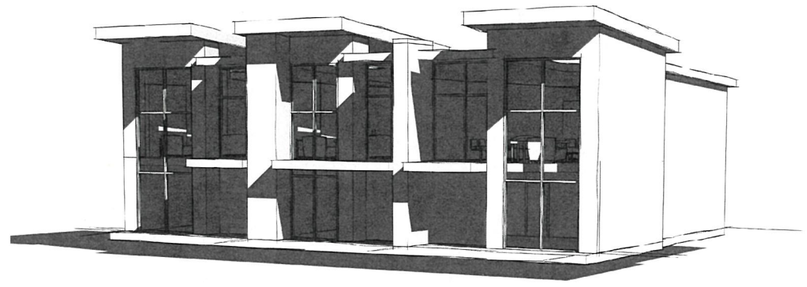

3 3D VIEW 1
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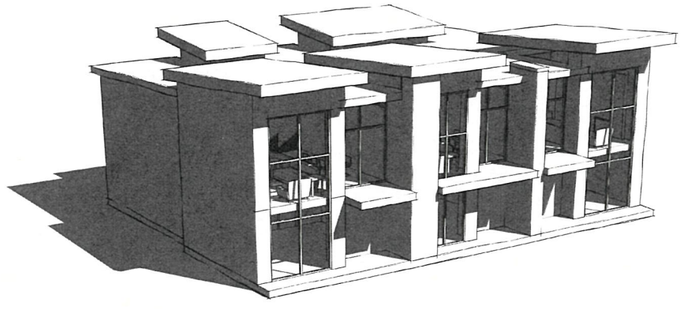

4 3D VIEW 2
A3.02 SCALE:

## BUILDING INFORMATION

**TOTAL BUILDING SF: 6,464 SF**

| | |
|---|---|
| 3,232 SF | FIRST FLOOR |
| 3,232 SF | SECOND FLOOR |
| **UNIT A:** | 2 STORIES \ 2,122 SF<br>3 BEDROOM<br>3 BATHROOM |
| **UNIT B:** | 2 STORIES \ 2,196 SF<br>3 BEDROOM<br>3 BATHROOM |
| **UNIT C:** | 2 STORIES \ 2,122 SF<br>3 BEDROOM<br>3 BATHROOM |

REVISIONS

| No. | Init. | Date | Description |
|---|---|---|---|
| | | | |

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LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK

TRIPLEX SHORT STAY UNITS - FLOOR PLANS AND 3D MASSING VIEWS

Job No. 876-001
Date 11.15.2023

Designed LRE
Drawn LRE
Checked LRE

A3.02

# LIGHTHOUSE VILLAGE DEVELOPMENT

## TRAFFIC IMPACT ANALYSIS

Final Report (November 18, 2023)

CITY OF HOMER
TERM CONTRACT FOR
ENGINEERING SERVICES

TASK ORDER #23-03
DOYON TRAFFIC IMPACT
ANALYSIS

KINNEY ENGINEERING, LLC

Randy Kinney, PE, PTOE
907.344.7575
randy.kinney@kinneyeng.com

STATE OF ALASKA
19TH
James R. Kinney
CE 8036
November 18, 2023
REGISTERED PROFESSIONAL ENGINEER

## Abbreviations

| | |
|---|---|
| **AAC** | Alaska Administrative Code |
| **AADT** | Average Annual Daily Traffic |
| **AASHTO** | American Association Of State Highway And Transportation Officials |
| **ATM** | Alaska Traffic Manual |
| **AM** | Morning |
| **CDS** | Coordinated Data System |
| **DNR** | Department Of Natural Resources |
| **DOT&PF** | Alaska Department Of Transportation And Public Facilities |
| **EB** | Westbound |
| **EBLT** | Eastbound Left-Turn |
| **EBRT** | Eastbound Right-Turn |
| **EBT** | Eastbound Through |
| **FAA** | Federal Aviation Administration |
| **GC1** | General Commercial 1 |
| **GDHS** | Geometric Design Of Highways And Streets |
| **GFA** | Gross Floor Area |
| **HCM** | Highway Capacity Manual |
| **HCS** | Highway Capacity Software |
| **HMTP** | Homer Master Transportation Plan |
| **ITE** | Institute Of Transportation Engineers |
| **KE** | Kinney Engineering, LLC |
| **LOS** | Level Of Service |
| **LU** | Land Use |
| **MEV** | Million Entering Vehicles |
| **MPH** | Miles Per Hour |
| **MUTCD** | Manual On Uniform Traffic Control Devices |
| **NB** | Northbound |
| **NBLT** | Northbound Left-Turn |
| **NBRT** | Northbound Right-Turn |
| **NBT** | Northbound Through |
| **PSD** | Pedestrian Sight Distance |
| **PHF** | Peak Hour Factor |
| **PM** | Afternoon Evening |
| **S, or SEC** | Seconds |
| **S/VEH** | Seconds Per Vehicle |
| **SB** | Southbound |
| **SBLT** | Southbound Left-Turn |
| **SBRT** | Southbound Right-Turn |
| **SBT** | Southbound Through |

| | |
|---|---|
| **SF** | Square Foot Or Feet |
| **SSD** | Stopping Sight Distance |
| **TIA** | Traffic Impact Analysis |
| **TWSC** | Two-Way-Stop-Control |
| **VEH** | Vehicle |
| **VEH/H, HOUR** | Vehicles Per Hour |
| **VEH/S, SEC** | Vehicles Per Second |
| **W&A** | Wormer & Associates |
| **WB** | Westbound |
| **WBLT** | Westbound Left-Turn |
| **WBRT** | Westbound Right-Turn |
| **WBT** | Westbound Through |

# Contents

## Figures

## Tables

# 1 Executive Summary of Recommendations

*This is the final report for the Lighthouse Village Development Traffic Impact Analysis. Agency comments of the draft report and responses are included under Attachment I. Conditional acceptance of this Traffic Impact Analysis Report is included under Attachment J.*

Doyon, Limited is proposing the Lighthouse Village Development project in Homer, Alaska. The development includes a 100-guestroom hotel with on-site employee housing, and five triplex condominium buildings (15 residential units). The development is expected to generate site traffic volumes of 88 trips per hour in 2026, the full-buildout year.

An analysis shows that the westbound FAA Road-Ocean Drive-Homer Spit Road intersection (one of two intersections in the study area) is impacted by the site traffic to the extent that level of service for the westbound approach will decline to D, thus subject to mitigation.

Pedestrian crossing at the intersection without site traffic are subject to long delays and poor levels of service. Site traffic does not impact, or worsen, these crossing performance measures.

The other intersection in the study area, Kachemak Drive-Homer Spit Road intersection doesn't have impacts that require mitigation. There is an uncontrolled pedestrian crosswalk, of which crossing pedestrians were not impacted by additional site traffic. However the crosswalk was evaluated to determine if additional electronic warning devices would be warranted, and it was found that it is not eligible.

Recommendations include the following:

The following are recommendations resulting from this TIA analysis.

- No intersection control, channelization, or geometric capacity improvements are recommended. Instead, implement improvements to enhance active transportation modes and potentially reduce vehicle demand at intersections and roadways.

- Instead of the frontage road between the North and South Accesses driveways shown in Figure 4 on page 17, construct a pathway fronting the Lighthouse Village Development to connect the site to the crossing at Kachemak Drive-Homer Spit Road crosswalk. The pathway should meet DOT&PF standards and located for compatibility with future pedestrian improvement projects along Homer Spit Road.

- Construct a connection between the Lighthouse Village Development to Bay Avenue using the B Street right-of-way to allow walking and biking trips to use the lower volume, low speed Bay Avenue, for non-motorist trip segments..

- Install a marked median refuge, and a potential marked crosswalk on the Homer Spit Road approach to the Ocean Drive-Homer Spit Road-FAA Road intersection. The crosswalk would only be installed if the crossing demand could be established as 20 vehicles per hour

or more at this location. However, the median refuge could be implemented without the crosswalk. This is presented in the following Figure 23 on page 75.

- Consider implementing a rapid rectangular flashing beacon at the marked crosswalk at Kachemak Drive for the Homer Spit Road crossing.

- The North Access Driveway and South Access Driveway may be constructed with two lanes, one lane outbound and one lane inbound. Driveways must comply with the recommendations in the DOT&PF Highway Preconstruction Manual (Section 1190).

- In addition to the above, the following recommendations were explicitly requested by DOT&PF after review of the draft report.

    - Construct internal pedestrian connectivity between the hotel and the condominiums.
    - Revise the site plan to realign the South Access Driveway directly across from the Kachemak Drive approach to function as a four-leg intersection. Moreover, it is essential to align the South Access Driveway with Kachemak Drive to assure that required 35 mph driveway spacing distance between the North and South Access Driveways, cited as 260 feet in the DOT&PF Highway Preconstruction Manual Table 1190-3, is achieved (see addition discussion on separation below). Install stop sign control for the South Access Driveway.
    - Construct a rapid rectangular flashing beacon at the existing crosswalk across Homer Spit Road just south of Kachemak Drive.

- Following the draft report, we evaluated driveway spacing. The DOT&PF Highway Preconstruction Manual Table 1190-3 requires driveway spacing to be 260 feet for roadway speeds of 35 mph. The distance in Table 1190-3 is measured between the edge of driveways as depicted in Figure 1190-2. With this requirement, it is essential to align the South Access Driveway with Kachemak Drive as well as realign/reposition the North Access Driveway to the north to achieve the full 260 feet of separation required in Table 1190-3. The North Access Driveway could be relocated about 20 to 25 feet to the north and still meet minimum driveway sight distance standards.

- The May 2012 Transfer of Responsibilities Agreement (TORA) between the City of Homer and DOT&PF for parking and pedestrian facilities near the project area apply to the improvements recommended in this TIA. Ownership and maintenance of the proposed pathway and pedestrians crossings will be finalized between the City of Homer, DOT&PF, and the developer prior to final permits being issued.

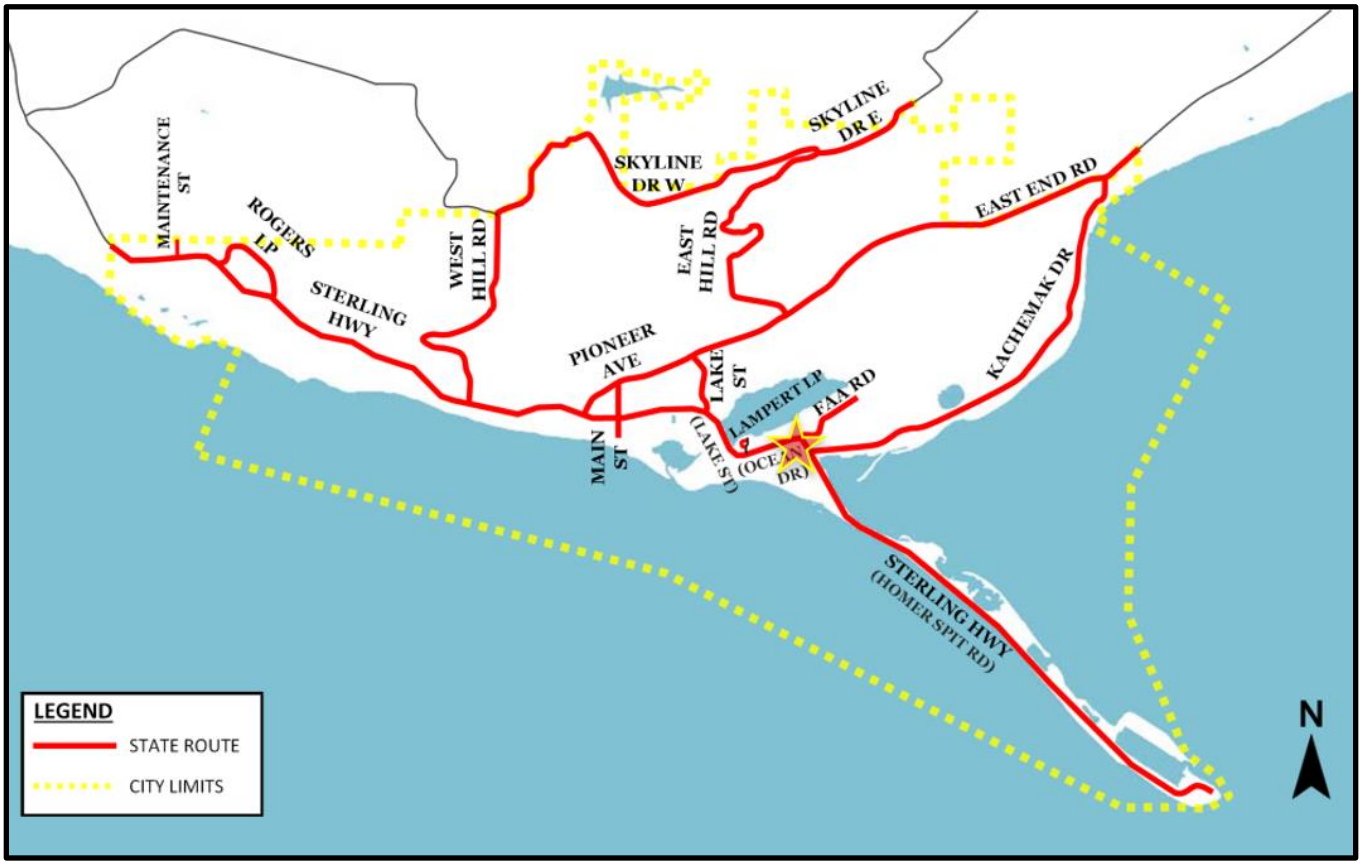
All recommendations will require DOT&PF and City of Homer approval.

# 2 Introduction

*This is the final report for the Lighthouse Village Development Traffic Impact Analysis. Agency comments of the draft report and responses are included under Attachment I. Conditional acceptance of this Traffic Impact Analysis Report is included under Attachment J.*

## 2.1 Proposed Development

Doyon, Limited is proposing the Lighthouse Village Development project in Homer, Alaska. The development includes a 100-guestroom hotel with on-site employee housing, and five triplex condominium buildings (15 residential units). The City of Homer is requiring a Traffic Impact Analysis (TIA). A State of Alaska Department of Transportation and Public Facilities (DOT&PF) driveway permit will be required for access to the State-owned Homer Spit Road and, DOT&PF have requested this TIA as well. As such, both DOT&PF and the City of Homer are overseeing agencies for the TIA.




*Source: Homer Master Transportation Plan, State Route Plan*

*Figure 1: Location Map for Homer and DOT&PF State Routes (★ indicates Lighthouse Village Development site)*


*Aerial Photo Source: Google Maps*.

*Figure 2: Vicinity Map (Proposed Site Circled)*

This Traffic Impact Analysis Report organized according to the subject matter requirements presented in DOT&PF's TIA checklist. In addition, the Homer City Code requirements for TIAs are addressed in a separate section.

## 2.2 Report Organization

DOT&PF has a comprehensive Traffic Impact Analysis Checklist found here: (https://dot.alaska.gov/stwddes/dcstraffic/tia/pop_tia_checklist.shtml). General Sections include the following:

| Section | Subject Area |
|---|---|
| 3 | Pre-Analysis Meeting |
| 4 | Development Information |
| 5 | Project Area Background |
| 6 | Data Requirements |
| 7 | Traffic Forecasting |
| 8 | Traffic Analysis |
| 9 | Homer City Code TIA Requirements (In addition to the TIA Checklist) |
| 10 | Summary of Impacts |
| 11 | Mitigation |

At the beginning of each section (except 9), we list the elements from TIA Checklist that will be addressed.

# 3 Pre-Analysis Meeting

*Under this section, the DOT&PF TIA Checklist requires the following items to be addressed:*

- *The design year (This is typically the buildout year or 10 years beyond the buildout year, depending on the development size and location)*
- *The study area*
- *Key intersections and key road segments to consider/evaluate in the TIA*
- *The projected area-wide traffic growth rate*
- *Level of Service (LOS) standards*
- *Other planned developments to consider*
- *Planned road improvements to consider*
- *Any other items of note regarding the TIA*

## 3.1 Meeting Participants and Process

DOT&PF requires a Pre-Analysis Meeting to address specific issues in their *TIA Requirement Checklist* (https://dot.alaska.gov/stwddes/dcstraffic/tia/pop_tia_checklist.shtml) prior to beginning analysis work. A pre-analysis meeting was held on August 30, 2023 in a video conference meeting. Participants in the meeting and subsequent discussions included:

- DOT&PF: Cynthia Ferguson and Orion LeCroy.
- Homer: Ryan Foster and Jan Keiser.
- Kinney Engineering, LLC (KE): Randy Kinney and Jeanne Bowie.

KE prepared the analysis required by DOT&PF's TIA checklist and submitted a technical memorandum summarizing the analysis.. Orion LeCroy and Jan Keiser provided emailed comments after the pre-analysis meeting. The TIA checklist, the Pre-Analysis technical memorandum document, and comments (LeCroy and Keiser) are included under Attachment A.

## 3.2 Meeting Results

The following discussion points, required by the TIA checklist, were discussed in the Pre-Analysis Meeting technical memorandum and in subsequent responses by Homer and DOT&PF.

- The design year - For this development, the peak trip generation will be less than 250 trips per hour (presented below in Section 7). Therefore, in accordance with DOT&PF (17 AAC 10.070. Traffic impact analysis.) and Homer (21.76.060 Required projections.) requirements, the analysis need only consider background base traffic and trip generated traffic that will occur during the full buildout opening year. The design year is 2026, the year of full buildout. (Note that this is discussed in detail with this TIA.)

- The study area and key intersections / key road segments to consider/evaluate in the TIA - Intersections to be analyzed include the FAA Road/Ocean Drive intersection and Kachemak Drive/Homer Spit Road intersection. Road segments will not be evaluated.

- The projected area-wide traffic growth rate – Base traffic will use a 1% per year growth rate (Homer Master Transportation Plan).

- Level of Service (LOS) standards - DOT&PF standards defined in 17 AAC 10.070 will be used for this analysis. These state:

  *"The minimum acceptable LOS at intersections and on road segments both on the development's opening date and in the design year is*
  *(1) LOS C, if the LOS on the date of application is LOS C or better; or*
  *(2) LOS D, if the LOS on the date of application is LOS D or poorer; however, if the LOS is poorer than LOS D, a lower minimum LOS is acceptable if the operation of the highway does not deteriorate more than 10 percent in terms of delay time or other appropriate measures of effectiveness from the LOS before the development's opening date."*

  Homer's Code states:

  ***21.76.040 Level of service minimums.***
  *The minimum acceptable LOS at intersections and on road segments both on the development's opening date and in the design year is:*

  *a. LOS C, if the LOS on the date of application is LOS C or better;*

  *b. LOS C, if the LOS on the date of application is LOS D;*

  *c. LOS D, if the LOS on the date of application is LOS E or poorer. [Ord. 08-29, 2008].*

- Other planned developments to consider – Port expansion and airport leasing expansion.

- Planned road improvements to consider -
  - Homer Bay Avenue, indefinite schedule.
  - Sterling Highway: MP 169 to 175 Pavement Preservation (CFHWY00857) – estimated construction is 2025 or beyond.
  - Kachemak Drive MP 0-3.5 Pavement Preservation (CFHWY00602) – estimated construction is 2025 or beyond.

- Any other items of note regarding the TIA – DOT&PF recommends a TIA considers non-motorized movements and safety. Homer and DOT&PF requested that the employee housing be included as a generating unit.

# 4 Development Information

*Under this section, the DOT&PF TIA Checklist requires the following items to be addressed:*

- *Development description*
- *Land use intensity including square footage, types of land use, employees, etc.*
- *Proposed zoning changes or zoning variances*
- *Construction year, opening year, projected year for full buildout*
- *Map of the development, including traffic circulation and parking area*
- *Sight distance evaluation from access points*
- *Alternatives to the proposed location*

## 4.1 Development Description and Land Use Intensity

The Lighthouse Village Development will be constructed on three parcels owned by Doyon Limited and Doyon Tourism.

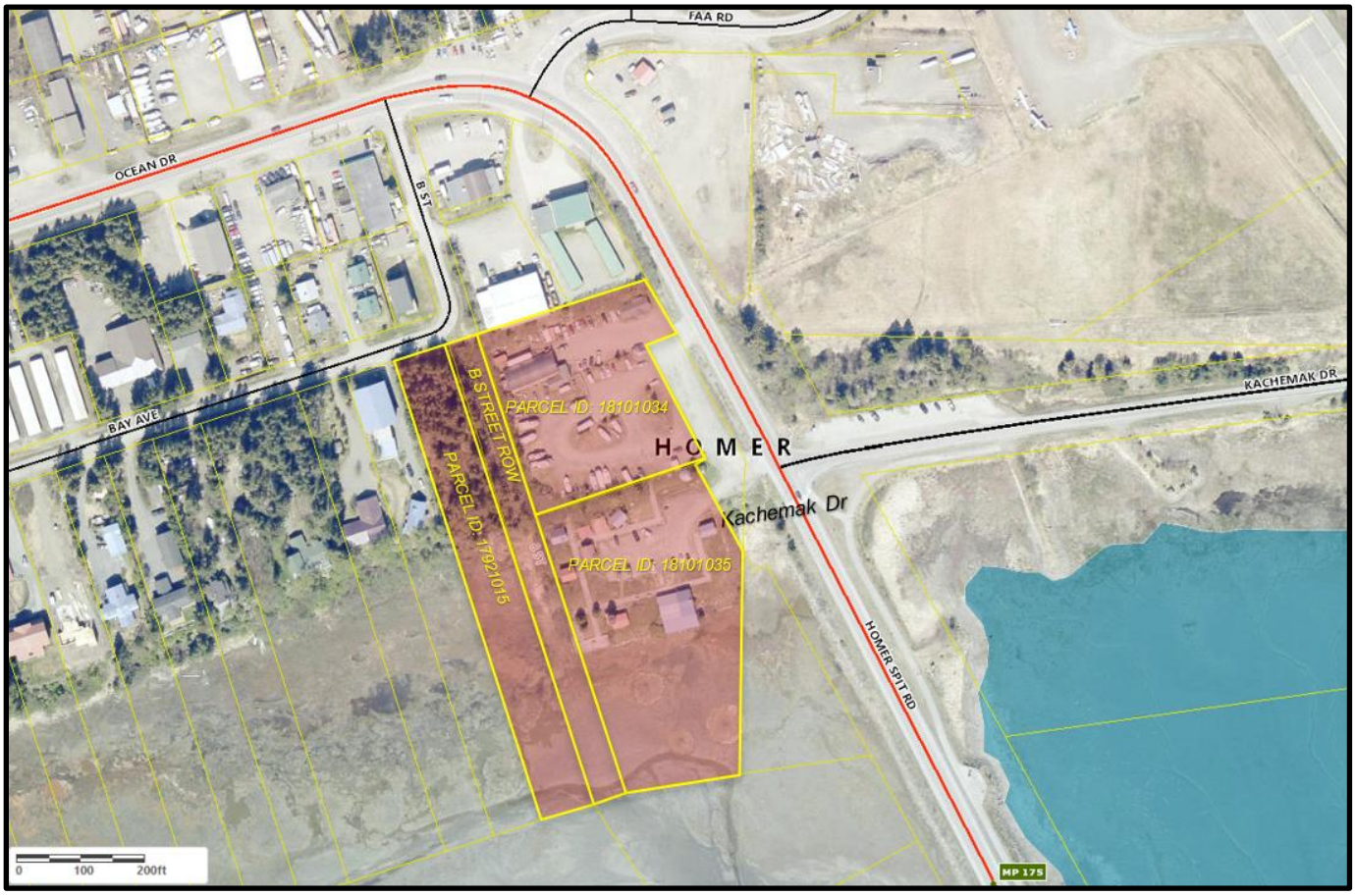
- **PARCEL ID: 18101034**: Legal Description- T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0940051 BAYVIEW SUB NO 6 LOT 164-A; Address- 1563 HOMER SPIT RD
- **PARCEL ID: 18101035**: Legal Description- T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0940051 BAYVIEW SUB NO 6 LOT 164-B; Address- 1663 HOMER SPIT RD
- **PARCEL ID: 17921015**: Legal Description- T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0000839 BAY VIEW SUB LOT 163; Address- 1491 BAY AVE

In addition, the Lighthouse Village Development uses B Street right-of-way that is to the east of and adjacent to Parcel 17921015. The vacation of B Street right-of-way is not addressed in this TIA, and is assumed to go forward as part of the development. These parcels are shown in the vicinity map, Figure 3 on page 15.

Womer & Associates (W&A) is preparing plans for the Lighthouse Village Development. The key trip generation attributes of the development are provided by W&A in their September 28, 2023 and October 9, 2023 emails and are listed below. Some facility attributes cited in an August 2023 development version are assumed to be part of the current plans and are included as well.

1. The hotel is a 3 story, 70,794 square feet (sf) of gross floor area (GFA) building, with 100 guest rooms. The number of employees are not known. The August 2023 plan had a public restaurant (94 seats), public bar (42 seats), convention space (250-persons) and meeting rooms.
2. The employee housing is a 3 story, 13,000 sf GFA, with 25 dormitory-style resident rooms (single and double occupancy) and common areas for dining, recreation and other functions. Note that the number of rooms were not provided in the above-mentioned emails, but since GFA has not changed, the employee housing rooms described in an August 22, 2023 email was assumed to still apply. The number of residents in the employee housing are not known, although original plans in August 2023 indicated the housing accommodates 40 persons.

3. The five triplex condominiums buildings will have a total of 15 residential units. These units will be sold as permanent or seasonal residences.




*Source: Kenai Peninsula Borough, https://gis.kpb.us/map/index.html?viewer=basic*

*Figure 3: Lighthouse Village Development Site, Parcels*

## 4.2 Zoning Changes or Variations

Section 5.1 Surrounding Land Zoning on page 21 for the discussion about land zoning. Parcel ID 17921015 is currently zoned Rural Residential and proposed by the applicant to be rezoned to General Commercial 1, aligning with the other two project parcels.

## 4.3 Construction Year, Opening Year, Full Buildout Year

According to W&A, construction will begin in 2024. The condominiums will be prioritized first, and are expected to be completed in 2024. The hotel and employee housing construction will follow the condominiums, and the entire Lighthouse Village Development is expected to be completed in 2026.

The construction year and opening year is 2024. The full buildout year is 2026.

## 4.4 Development Site Plan Map

The conceptual site plan, developed by W&A, is presented in Figure 4 on page 17. There are two accesses to the proposed Lighthouse Village Development, labeled North Access and South Access, that are in the same approximate location as the existing accesses to the parcels. This TIA recommends that the South Access Driveway be aligned with Kachemak Drive to correct the offset currently depicted.

The site plan shows a frontage road within the State of Alaska Homer Spit Road right-of-way between the North and South Accesses. Approval of the frontage road is pending by DOT&PF, but the analysis assumes it will not be approved because it will constrain future improvement to Homer Spit Road and Kachemak Drive intersection. Moreover, as described above, the triplex condominiums are to be sold as residential units, and therefore there is little need or likelihood of trips that will have origins and destinations combinations of the hotel and condominium. For example, a trip to the hotel is unlikely to continue to the condominiums and vice-versa. If not, then the frontage road is not necessary for internal site circulation. Because of the public attractions in the hotel, pedestrian connectivity between the hotel and the condominiums is desirable.

This analysis assumes that the North Access driveway will serve the hotel and employee housing, and the South Access driveway will serve the triplex condominiums.

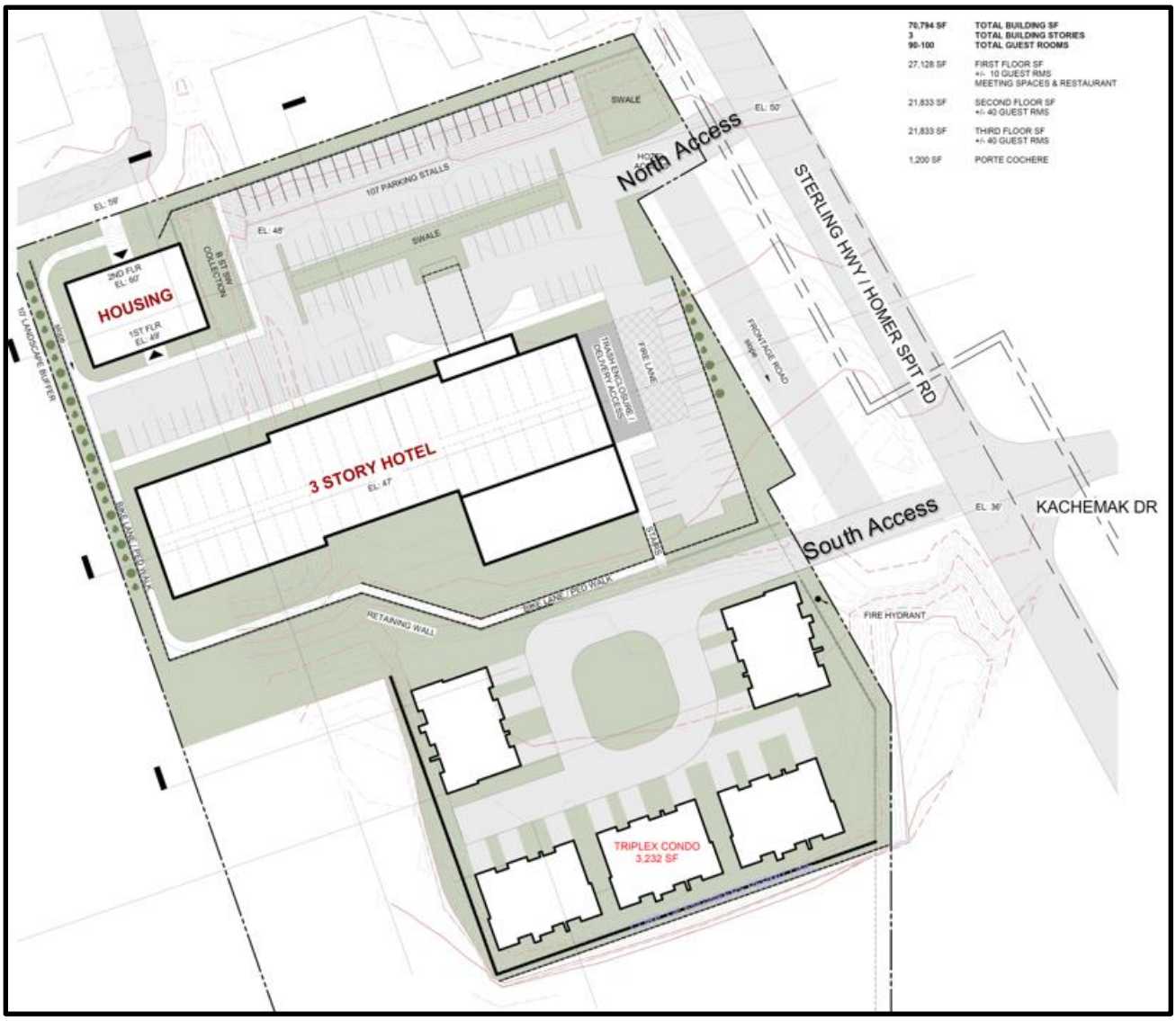


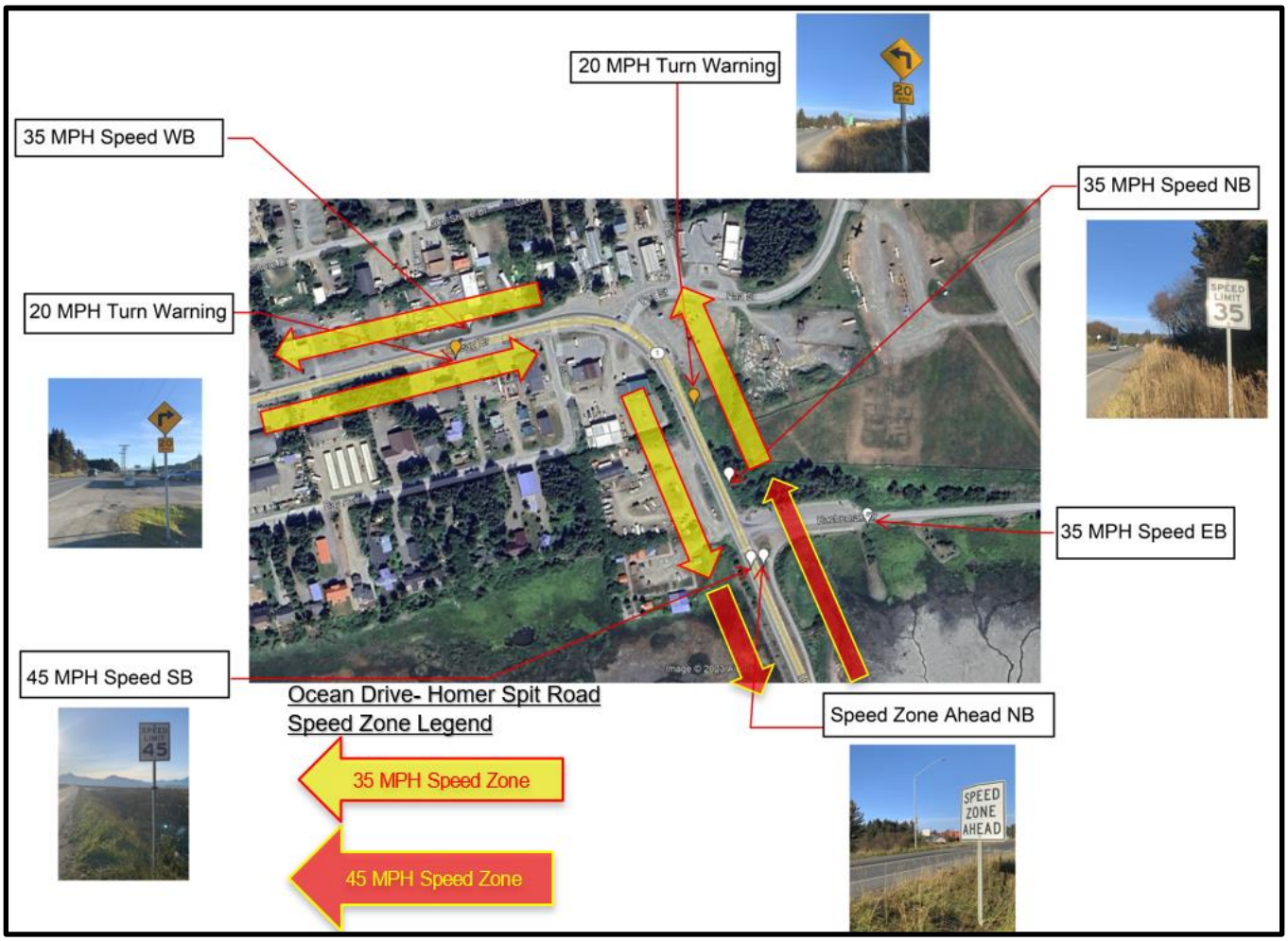

*Figure Source: Womer and Associates Plans*

*Figure 4: Conceptual Site Plan*

## 4.5 Sight Distance Evaluation from Access Points

### 4.5.1 Speeds

Figure 5 on page 18 present the regulatory and speed signing on the arterial and collector streets in the vicinity of the proposed Lighthouse Village Development. The posted speed on Homer Spit Road adjacent to the development is 35 miles per hour (mph) between the proposed North and South Accesses. The South Access is within a transition zone between 35 and 45 mph speed limits The northbound traffic is within the 45 mph zone and the southbound traffic is within the 35 mph zone. These posted speeds will be used for this TIA analysis (access point sight distance).




*Aerial Photo Source: Google Earth*

*Figure 5: Regulatory and Advisory Speed Signs*

### 4.5.2 Driveway Sight Distance for Development Access Points

The DOT&PF Highway Pre-Construction Manual Figure 1190-1 provides required driveway sight distance. Minimum driveway sight distance is stopping sight distance, enabling approaching vehicles the time and distance to fully stop for a driveway egress vehicle. The following figure provides key driveway sight distance parameters.

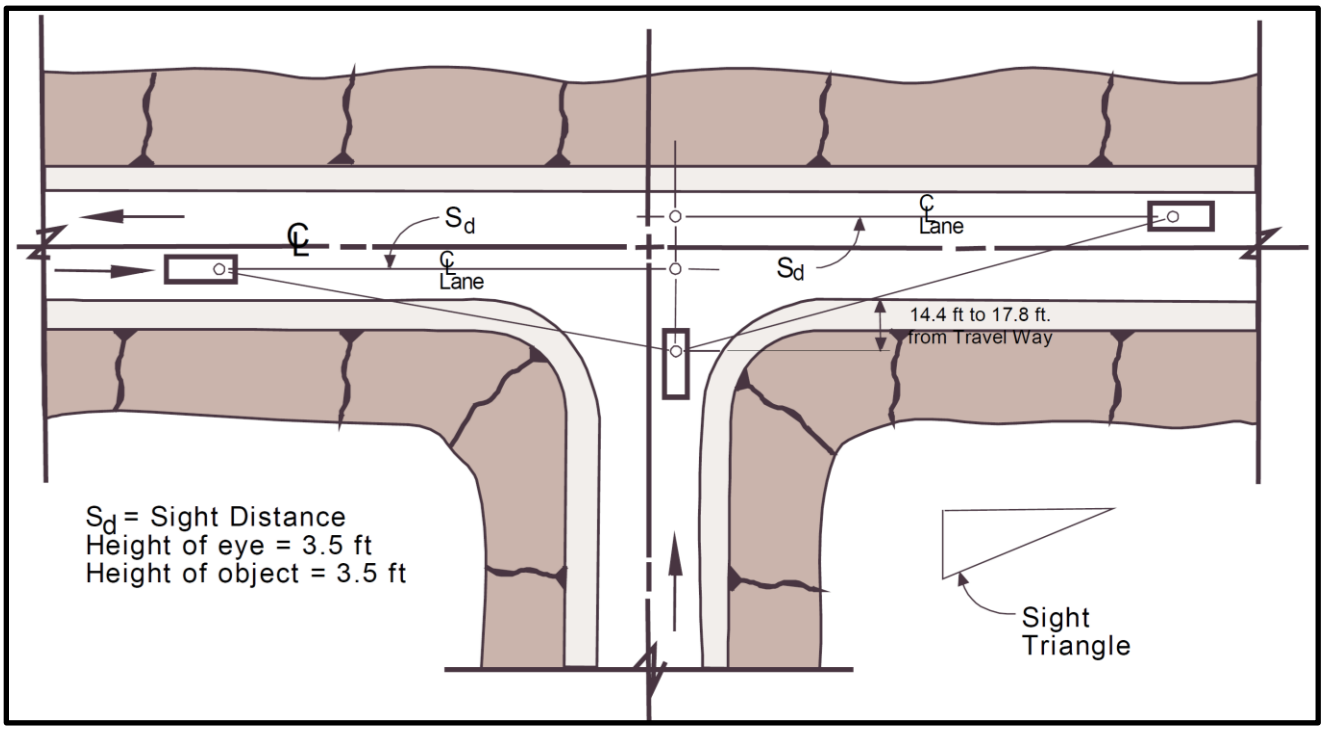



*Figure Source: DOT&PF Highway Pre-Construction Manual, Figure 1190-1*

*Figure 6: Driveway Sight Distance Parameters*

Stopping sight distance (SSD) is computed with this formula from the American Association of State Highways and Transportation Officials (AASHTO) A Policy on the Geometric Design of Highways and Streets (GDHS):

$$SSD = (1.47 \times t \times V) + \frac{V^2}{30\left(\frac{a}{g} \pm G\right)}$$

*Equation 1*

The variables in this SSD equation are as follows:

- *V* is design speed in mph
- *t* is a perception reaction time constant, 2.5 seconds.
- *a* is deceleration, 11.2 feet/second$^2$ to represent passenger car characteristics (AASHTO's 10$^{th}$ percentile value).
- *g* is gravity constant, 32.2 feet/second$^2$
- *G* is grade in ft/ft., "+" is climbing, - is descending or downgrade
    - May ignore G if: -0.03 ≤ G ≤ +0.03. Without G, the SSD equation is:

$$SSD = 1.47 \times V \times t + 1.075 \times V^2/a$$

*Equation 2*

For 35 mph, the minimum SSD and corresponding driveway sight distance is 250 feet for roadway grades between -3% and +3%. However, Homer Spit Road is on a 5% downgrade (measured

steepest segment) for the southbound direction, in which case the required sight distance is increased to 270 feet. Conversely, in the northbound direction, there is an upgrade of 5% and required sight distance could be reduced to 235 feet, but SSD is typically not reduced for adverse grades.

For 45 mph, the minimum SSD and corresponding driveway sight distance is 360 feet for roadway grades between -3% and +3%. However, with the 5% downgrade for the southbound direction, in which case the required sight distance is increased to 395 feet.

The planned North and South Accesses shown in Figure 4 on page 17 show the new driveways will be the same location as the existing driveways. Sight distance was measured from these existing driveway locations using the key parameters shown in Figure 6.

The North Access driveway's sight distance to the north is constrained by the 20 mph horizontal curve to the north linking Ocean Drive with Homer Spit Road. The North Access driveway is located within the posted speed zone of 35 mph, and 35 mph is used as the SSD analysis speed. The sight distance was field measured to be 305 feet, which is greater than the minimum length of 270 feet, adjusted for the 5% downgrade. The North Access driveway sight distance to the south is greater than 1,000 feet (not measured).

The South Access driveway's sight distance to the north is also constrained by the horizontal curve linking Ocean Drive with Homer Spit Road. This location is located in the transition zone between 35 and 45 mph posted speed. The sight distance to the north is measured to be 560 feet, greater that the minimum length of 270 feet for 35 mph and 395 feet for 45 mph. The South Access driveway sight distance to the south is greater than 1,000 feet (not measured).

Driveway sight distance for both North and South Accesses are satisfactory.

## 4.6 Driveway Spacing

The distance between the North Access Driveway as shown on the site plan Figure 4 on page 17, and the South Access Driveway that will be aligned with Kachemak Drive is estimated from Google Earth to be 260 feet centerline to centerline.

The DOT&PF Highway Preconstruction Manual Table 1190-3 requires driveway spacing to be 260 feet for roadway speeds of 35 mph. The distance in Table 1190-3 is measured between the edge of driveways as depicted in Figure 1190-2. With this requirement, it is essential to align the South Access Driveway with Kachemak Drive as well as realign/reposition the North Access Driveway to the north to achieve the full 260 feet of separation required in Table 1190-3. The North Access Driveway could be relocated about 20 to 25 feet to the north and still meet minimum driveway sight distance standards.

## 4.7 Alternatives to the Proposed Location

No alternative locations are considered in this TIA.

# 5 Project Area Background

*Under this section, the DOT&PF TIA Checklist requires the following items to be addressed:*

- *Surrounding land zoning*
- *Surrounding land uses and site land use*
- *Adjacent development*
- *Traffic improvements already funded, programmed, or planned*
- *Other planned developments*

## 5.1 Surrounding Land Zoning

The area zoning is presented in Figure 7 on page 22. The proposed Lighthouse Village Development is on land zoned General Commercial 1 (GC1). The Codes states:

> *"The General Commercial 1 (GC1) District is primarily intended to provide sites for businesses that require direct motor vehicle access and may require larger land area, and to provide business locations in proximity to arterials and transportation centers. It is also intended to minimize congestion and adverse effects on adjacent residential districts and on the appearance of the community."*

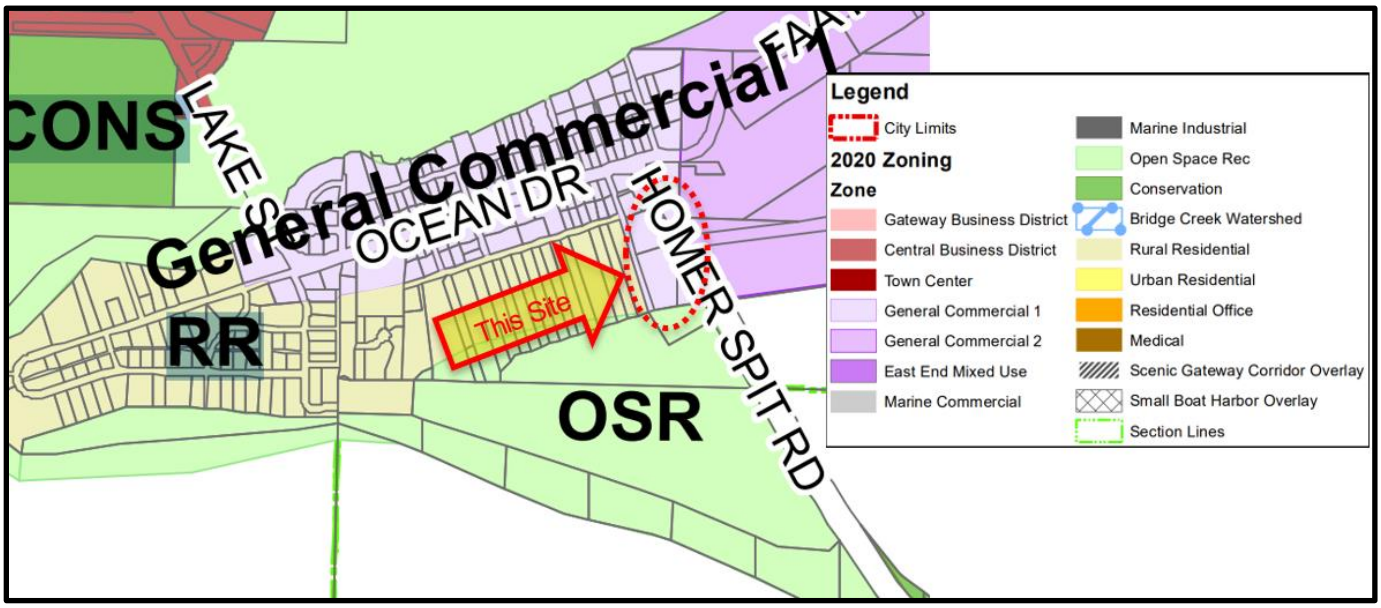
Homer City Code *Chapter 21.24 GC1 General Commercial 1 District* lists permitted uses under 21.24.020 Permitted uses and structures that include those that apply to this Lighthouse Village Development:

> c. Dwelling units located in buildings primarily devoted to business use: Likely to apply to the employee housing.
>
> k. Hotels and motels: Applies to the planned hotel.

Section 21.24.030 Conditional uses and structures allows these uses when authorized by a conditional use permit issued in accordance with *Chapter 21.71 Conditional Use Permit* of the Homer City Code:

> c. Multiple-family dwelling: Likely to apply to the Triplex condominiums.
>
> g. Townhouses: Likely to apply to the Triplex condominiums,

The proposed Lighthouse Village Development is consistent with GC1 zoning requirements. This TIA is based upon the premise that the developer will comply with Homer and a Conditional Use permit is secured. This TIA is also based on the premise that Parcel ID 17921015 is rezoned to General Commercial 1 from Rural Residential, aligning with the other two project parcels




*Source:*
*https://www.cityofhomer-ak.gov/sites/default/files/fileattachments/planning/page/7313/small_zonng_map_2020.pdf*
*Figure 7: Site and Area Zoning*

The surrounding zoning immediately to the north of the proposed Lighthouse Village Development site is also GC1. To the west the zoning is predominately Rural Residential. To the east, across Homer Spit Road, the zoning is East End Mixed Use. And, finally, to the south of the development, the land is zoned Open Space Recreation.

## 5.2 Surrounding Land Uses and Site Land Use / Adjacent Development

Figure 8 on page 24 depicts the land use in the immediate area of the Lighthouse Village Development (light red). Most of the land to the east and south of the proposed development site is owned by public State or City Agencies (Aviation, Department of Natural Resources (DNR), City of Homer), and will likely not be developed. The one exception is the triangular-shaped private commercial lot in the east quadrant of the FAA Road-Ocean Drive-Homer Spit Road Intersection. On the north side, the land is fully developed commercially and with private residents. The land on the west side is also fully developed with residential homes.

In summary, the potential for additional development in the immediate area which would conflict with the proposed Lighthouse Village Development traffic patterns and access is low.


*Source: Kenai Peninsula Borough, https://gis.kpb.us/map/index.html?viewer=express*

*Figure 8: Land Use and Lighthouse Village Development Map*

## 5.3 Traffic Improvements Already Funded, Programmed or Planned

### 5.3.1 Homer Intersections Planning Study (2005)

The study, found at https://www.cityofhomer-ak.gov/planning/homer-intersections-planning-study-akdot-2005, was completed by Kinney Engineering, Brooks and Associates, and USKH, Inc. The study included the Sterling Highway (Homer Spit Road) and Kachemak Drive intersection. Key points of that study with regard to the intersection included:

- There were 13 crashes in 10 years (1993 to 2002), yielding a crash rate higher than the comparative population, but lower than the critical rate, thus indicating no significant safety issues.

- The westbound approach was forecasted to have a level of service of F and >150 seconds/vehicle of control delay in the PM peak hour in the planning horizon year of 2021 (see Section 8.1.1 on page 48 for details on level of service and control delay). The results were based on traffic forecasts at that time (summer peak hours) and on the era's capacity analysis methods, which have since evolved.

- Signalization warrants (only Warrant 1 Condition B) were forecasted to be met by 2011 for summer peak hour conditions. Roundabout guidelines at the time indicated that the intersection would be a good candidate for a modern roundabout.

- Roundabouts, signalization with a 150-foot length SBLT lane, and all-way-stop control (rejected as feasible) were alternatives evaluated in the study. Roundabouts and signalization alternatives provided good operational performance measures for the planning study horizon of 2021.

- The intersection's recommendations included that no changes be implemented immediately, and that a reevaluation occur in 2010. The intersection operations was expected to be adequate until 2010, and then decline to undesirable levels in 2011.

### 5.3.2 Homer Master Transportation Plan (Draft 2023)

KE is preparing the Homer Master Transportation Plan (HMTP). In addition to establishing an area-wide traffic growth rate of 1% per year for the planning horizon, the HMTP has these observations and recommendations for the transportation network in the Lighthouse Village Development's vicinity.

- Homer Spit Road, Ocean Drive, and Kachemak Bay Drive are all along the Tsunami evacuation route. Any road improvements need to consider needs during an evacuation.

- Difficulty for pedestrians crossing the road is a concern frequently heard.

- Pedestrian connectivity through the area must be maintained.

- Providing bicycle parking is encouraged.

- Kachemak Bay Drive is a popular route for walking and biking, but there is not sufficient right-of-way to adequately separate vehicle and non-motorized traffic. The plan proposes a reconnaissance engineering study to identify possible improvements.

- Pedestrian and bicycle facilities should be constructed to facilitate winter maintenance.

The proposed Lighthouse Village Development is consistent with the HMTP. The development is expected to be a high pedestrian and bicycle mode generator for employees, hotel guests, and condominium residences. The development is expected to increase the number of non-motorized crossings of Homer Spit Rd to access the multiuse pathway along the east side of the spit, increasing conflict occurrences between vulnerable road users and motorists. As such, implementing the active transportation recommendations of the HMTP will benefit walkers and bicyclists traveling to and from the site.

### 5.3.3 City of Homer Pavement Restoration- Bay Avenue, B Street, and E Street

This project on Homer local streets to the north of the Lighthouse Village Development has been designed and is awaiting available funding. The project will restore pavement driving surfaces to good condition, provide drainage improvements, provide minor utility improvements, and new signing and pavement markings.

Bay Avenue parallels Ocean Drive and provides pedestrian/bike access to the Farmers Market. As a local street, with low volumes and speeds, bicycles and pedestrians may and do choose to use Bay Avenue as a shared roadway with vehicles instead of the Ocean Drive shoulders adjacent to higher speed and traffic volumes.

Early versions of the Lighthouse Village Development site plan showed a pedestrian pathway connection between the site and B Street/Bay Avenue, but current plans omit that connection.

The proposed development is consistent with and will not conflict with the improvements on Bay Avenue, B Street, and E Street.

### 5.3.4 State of Alaska DOT&PF Projects

DOT&PF cited two projects in the vicinity:

- Sterling Highway: MP 169 to 175 Pavement Preservation (CFHWY00857) – estimated construction is 2025 or beyond.

- Kachemak Drive MP 0-3.5 Pavement Preservation (CFHWY00602) – estimated construction is 2025 or beyond.

A review of the projects page on DOT&PF web site and the current draft Statewide Transportation Improvement Plan yielded no detail information for these projects. However, safety and pedestrian

improvements will benefit the Lighthouse Village Development's site traffic; and the development will not conflict with these projects.

## 5.4 Other Planned Developments

Comments on the Pre-Analysis meeting cited expansion/ improvements to the Homer Port and to the Airport leasing facilities. A review of Homer and State of Alaska plans and websites yielded no information on these future developments.

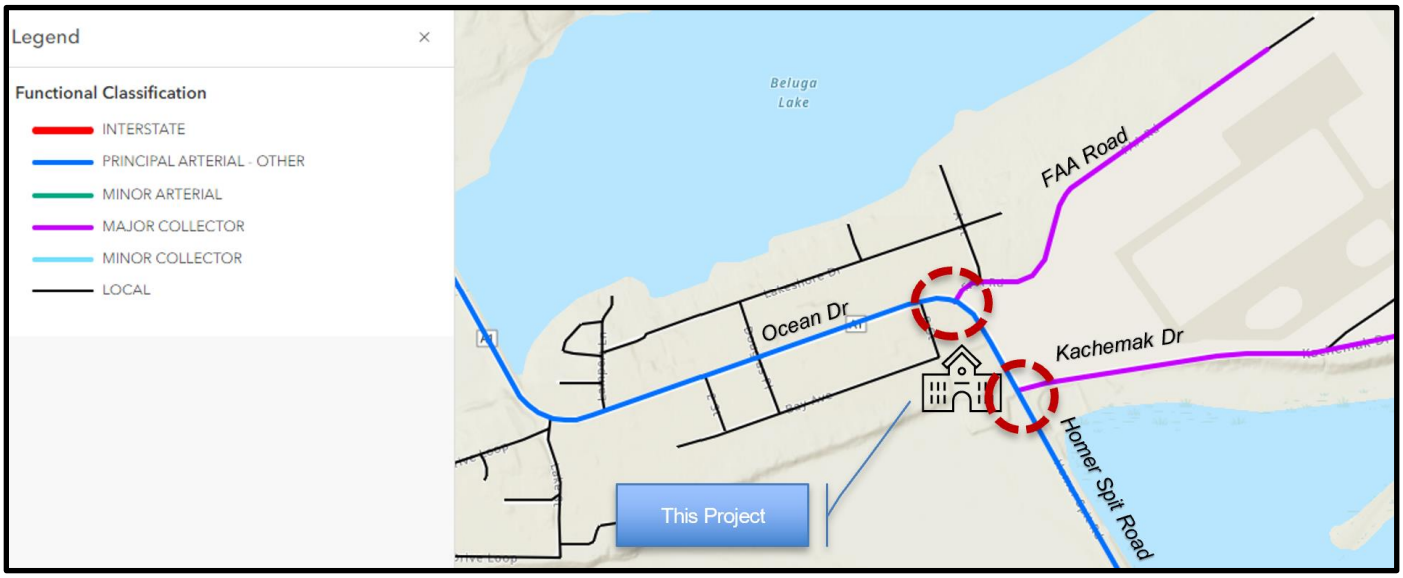
# 6 Data Requirements

*Under this section, the DOT&PF TIA Checklist requires the following items to be addressed:*

- *Map of the study area street network*
- *Peak hour intersection turning movement counts for all key intersections*
- *Daily volume counts for all streets and roadways in the study area*
- *Number of lanes on the streets in the study area*
- *Intersection geometry information for all key intersections*
- *Traffic signal phasing and timing information for all key intersections (not addressed)*
- *5 year crash history within the study area*
- *Sidewalks and other pedestrian facilities*
- *Bike lanes and other bicycle facilities*
- *Transit operation and facilities including pullouts, frequency of service and utilization (not addressed)*

## 6.1 Study Area Street Network Map

The near vicinity study area maps and street functional classification is shown in Figure 9 below.




*Source: https://akdot.maps.arcgis.com/apps/mapviewer/index.html?webmap=8d34059bbfed4fada20a4fdc2a138aca*

*Figure 9: Area Street Map and Functional Classification*

The Ocean Drive-Homer Spit Road connected roads are functionally classified as Principal Arterials as they are also on the Sterling Highway corridor (CDS Route 110000) extending from Seward Highway to the end of the Homer Spit. FAA Road and Kachemak Drive are functionally classified as Major Collectors. Other streets in the near vicinity are Local Streets (B Street, Bay Avenue), and are not connected to the proposed Lighthouse Village Development.

The FAA Road/Ocean Drive intersection and Kachemak Drive/Homer Spit Road intersection are in the immediate vicinity of the Lighthouse Village Development (circled). These intersections will be evaluated for operation impacts resulting from the proposed development.

## 6.2 Intersection Peak Hour Turning Movements

Capacity analysis studies evaluate operational quality during peak hours of operations, usually hours of significance 2 or more times daily. The base traffic peak represents traffic conditions without the Lighthouse Village Development site traffic, as referred to as a no-build condition. Site traffic is added to the base traffic to represent conditions occurring with site traffic, or the build condition. Operational impacts, then, are estimated by comparing build and no-build performance measures.

Peak hours to be evaluated in this TIA correspond to the trip generation peak hours estimated in for the Lighthouse Village Development and include:

- ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am*** – This hour typically is concurrent with the morning commuting peak hour.
- ***Weekday, AM Peak Hour of Generator*** – This hour depicts the peak traffic activity of the land use (LU) generator that will occur during the morning, typically business hours before noon. This analysis assumes that the AM peak hour of the generator will occur during the highest traffic period in the morning on adjacent roadways that occurs outside of the commuting period between 7 am and 9 am.
- ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm*** – This hour typically is concurrent with the evening commuting peak hour.
- ***Weekday, PM Peak Hour of Generator*** – This hour depicts the peak traffic activity of the LU generator that will occur during the afternoon, evening, or night periods. This analysis assumes that the PM peak hour of the generator will occur during the highest traffic period in the afternoon/evening on adjacent roadways that occurs outside of the commuting period between 4 pm and 6 pm.
- ***Saturday, Peak of Generator*** – This hour depicts the peak traffic activity of the LU generator that will occur during anytime on a Saturday during the morning, afternoon, evening, or night periods.
- ***Sunday, Peak of Generator*** (not evaluated)– This hour depicts the peak traffic activity of the LU generator that will occur during anytime on a Sunday during the morning, afternoon, evening, or night periods

Because Sunday's trip generation characteristics and summer base traffic is similar to Saturday (but less), we will not evaluate Sunday peak hours in this TIA.

Turning movement volumes were counted during September 2023 between hours of 7 and 9 am (to capture morning commuting peak), between 11 am and 1 pm, and between 4 and 6 pm (to capture evening commuting peak). These counts are summarized in Attachment G. The FAA Road-Ocean Drive-Homer Spit Road intersection count data was collected on Wednesday, September 13. The Kachemak Drive-Homer Spit Road count data was collected on Thursday,

September 14. These counts were the raw data in which the peak hour cases for base traffic above were formulated with the following post-processing steps.

- Homer has a marked seasonal fluctuation in monthly traffic volumes. At the continuous count station (CCS) on Homer Spit Road (Station 10300021,Sterling Highway MP 175), monthly average daily traffic (MADT) in September 2022 is about ½ of the MADT in July 2022, the peak summer month. This is exhibited in Figure 10 on page 32 under Section 6.4 below. Note that 2022 seasonal data is used as it is the most recent complete year Therefore, the first adjustment made to the September counts were increasing the observed volumes by a factor of 1.98 to convert the count to a July condition.

- Since intersections were counted on different days, volumes across the system were balanced so that there is a continuity of traffic between intersections (that is, volumes leaving a downstream intersection will approximately equal the volumes entering the upstream intersection).

- As shown in Table 9 on page 45, the Lighthouse Village Development's trip generation peaks occur outside of the commuting peak hours, typically 7 AM to 9 AM and 4 PM to 6 PM. To account for this, we applied a factor of July weekday hourly average traffic to factor the observed morning commute, noon, or evening commute counts to compute the base traffic occurring in the morning, evening or Saturday outside of commuting periods. For example, the CCS 10300021 on Homer Spit Road shows that the weekday July 2022 morning non-commuting peak occurs at 11 am with an average of 597 vehicles. The noon weekday average hourly count is 658. So applying a factor of 597/658, or 0.91, was applied to the post-processed noon counts that we observed in the observed September count.

- Finally, the established design year is 2026 (see Section 7.1.8 Design Year Requirements on page 46). As such, the observed volumes must be factored from 2023 to 2026 using the 1% per year growth rate (see Section 5.3.2 Homer Master Transportation Plan (Draft 2023) on page 25).

Attachment B presents the observed counts and design year peak traffic with the above-mentioned post-processing factors.

## 6.3 Intersection Pedestrian Counts

Pedestrians were counted during the September field counts at the FAA Road-Ocean Drive-Homer Spit Road intersection and at the Kachemak Drive-Homer Spit Road intersection. The following tables summarize the observed pedestrian intersection crossings.

*Table 1: Observed September 13, 2023 Pedestrian Crossings at FAA Road-Ocean Drive-Homer Spit Road Intersection*

| Time Period | Crossing Ocean Drive (North Leg) | Crossing Homer Spit Road (South Leg) | Crossing FAA Road (Stop Sign) | Non-Crossing Along Ocean Drive (South Side) and Homer Spit Road (West Side) |
|---|---|---|---|---|
| 7:00 AM to 9:00 AM | 0 | 0 | 0 | 0 |
| 11:00 AM to 1:00 PM | 0 | 0 | 1 | 3 |
| 4:00 PM to 6:00 PM | 0 | 1 | 2 | 6 |

*Table 2: Observed September 13, 2023 Pedestrian Crossings at Kachemak Drive-Homer Spit Road Intersection*

| Time Periods | Crossing Homer Spit Road (North Leg) | Crossing Homer Spit Road (South Leg) | Crossing Kachemak Drive (Stop Sign, Crosswalk Between Parking and Trail) | Non-Crossing Along Homer Spit Road (West Side) |
|---|---|---|---|---|
| 7:00 AM to 9:00 AM | 1 | 1 | 0 | 4 |
| 11:00 AM to 1:00 PM | 0 | 2 | 5 | 1 |
| 4:00 PM to 6:00 PM | 1 | 2 | 7 | 4 |

The observed crossings in September, shown above, are likely to be substantially less than pedestrian/bicycle activity in the summer. As such, these volumes are not used to forecast background peak hour demands.

## 6.4 Daily Volume Counts For All Streets And Roadways In The Study Area

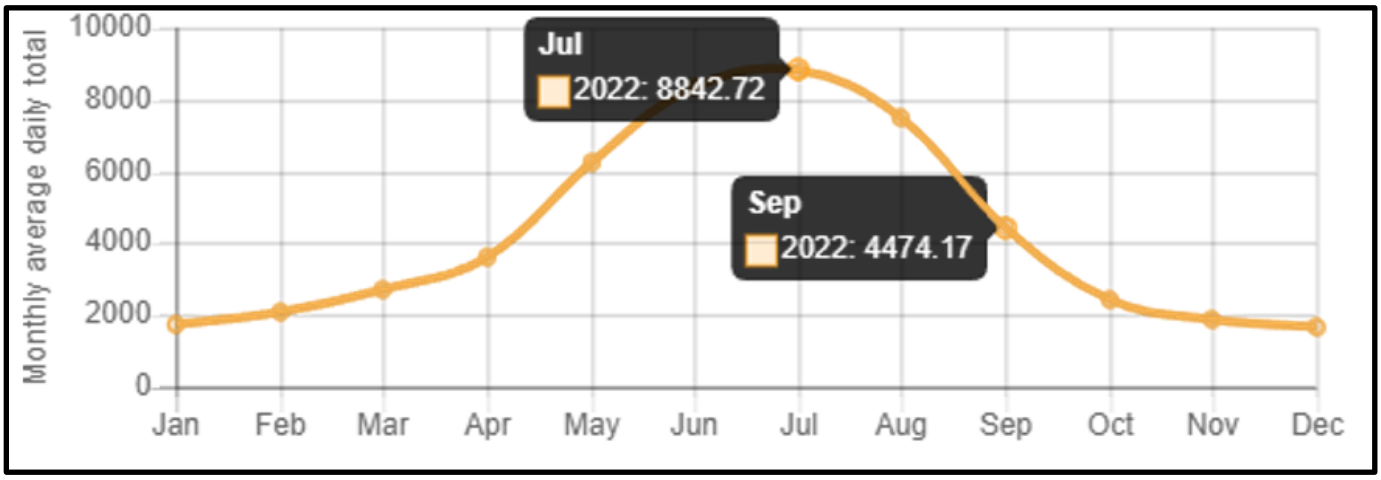
Average Annual Daily Traffic (AADT) and percent trucks (% T) for the vicinity arterial and collector streets are summarized in the following table.

*Table 3: Street Network AADT (2017-2022) and Percent Trucks (2020-2022)*

| Street | Station/Type | 2017 | 2018 | 2019 | 2020 | | 2021 | | 2022 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | AADT | AADT | AADT | AADT | % T | AADT | % T | AADT | % T |
| Ocean Dr - Btwn Douglas & FAA St | 51008000 / Short Term | 8,856 | 8,900 (estimated) | 8,962 | 7,860 | 8% | 9,000 | 8% | 8,480 | 8% |
| Homer Spit Road (Sterling Hwy MP 175) @ Homer Spit | 10300021 / Continuous | 4,281 | 4,299 | 4,296 | 3,770 | 5% | 4,510 | 5% | 4,290 | 6% |
| FAA St - Btwn Spit Rd/Ocean Dr and Airport Parking Lot | 54134000 / Short Term | 924 | 900 (estimated) | 903 | 780 | - | 830 | - | 840 | - |
| Kachemak Dr - Just east of Homer Spit Rd parking lot | 51251000 / Short Term | 1,537 | 1,500 (estimated) | 1,502 | 1,350 | - | 1,490 | - | 1,490 | - |

*Source: https://alaskatrafficdata.drakewell.com/publicmultinodemap.asp*

Homer traffic has seasonal variation, with highest-daily peak traffic volumes occurring in the summer (typically July). Intersection turning movements at the TIA studied intersections were collected in September, and as such, needed to be factored from observed September condition to the estimated peak July condition to adequately address peak traffic. This was accomplished by using the 2022 complete year MADT data at the Homer Spit Road continuous count station, shown in Figure 10 below.




*Source: https://alaskatrafficdata.drakewell.com/sitedashboard.asp?node=AKDOT_CCS&cosit=000010300021*

*Figure 10: 2022 MADT on Homer Spit Road at Continuous Count Station 1030002*

Counts in July are about 98% higher than September ((computed as 8843/4474 x 100)%-100%= 98%). Therefore, the monthly seasonal factor to convert September counts to the summer season peak is 1.98.

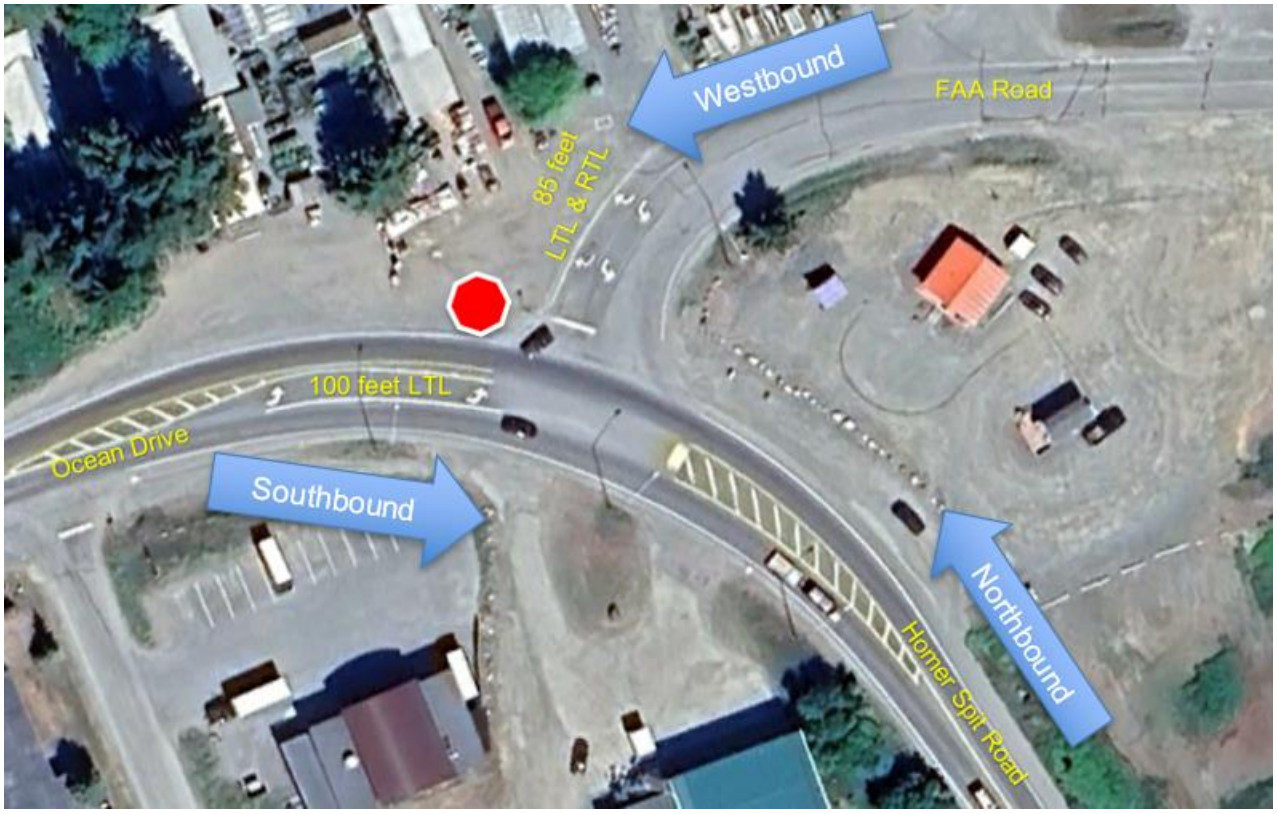
## 6.5 Street Lanes and Intersections Geometry

### 6.5.1 Street Lanes

All roadways in the TIA study area have two lanes and shoulders

### 6.5.2 Ocean Drive-Homer Spit Road-FAA Road Intersection

Figure 11 on page 33 depicts the intersection lane configuration. The intersection is configured as a “tee” intersection with auxiliary turn lane channelization. For purposes of this analysis, the FAA Road approach is designated westbound (WB), the Homer Spit Road approach is northbound (NB),and the Ocean Drive approach is designated as southbound (SB). The southbound left-turn lane (SBLT) on Ocean Drive is nominally 100 feet in length, which can store a 4-vehicle queue. The westbound left-turn land (WBLT) and westbound right-turn lane (WBRT) on the FAA Road approach are nominally 85 feet in length, storing 3 vehicles in each. FAA Road approach traffic is under stop sign control. There are no marked crosswalks at this intersection.




*Aerial Photo Source: Google Earth*

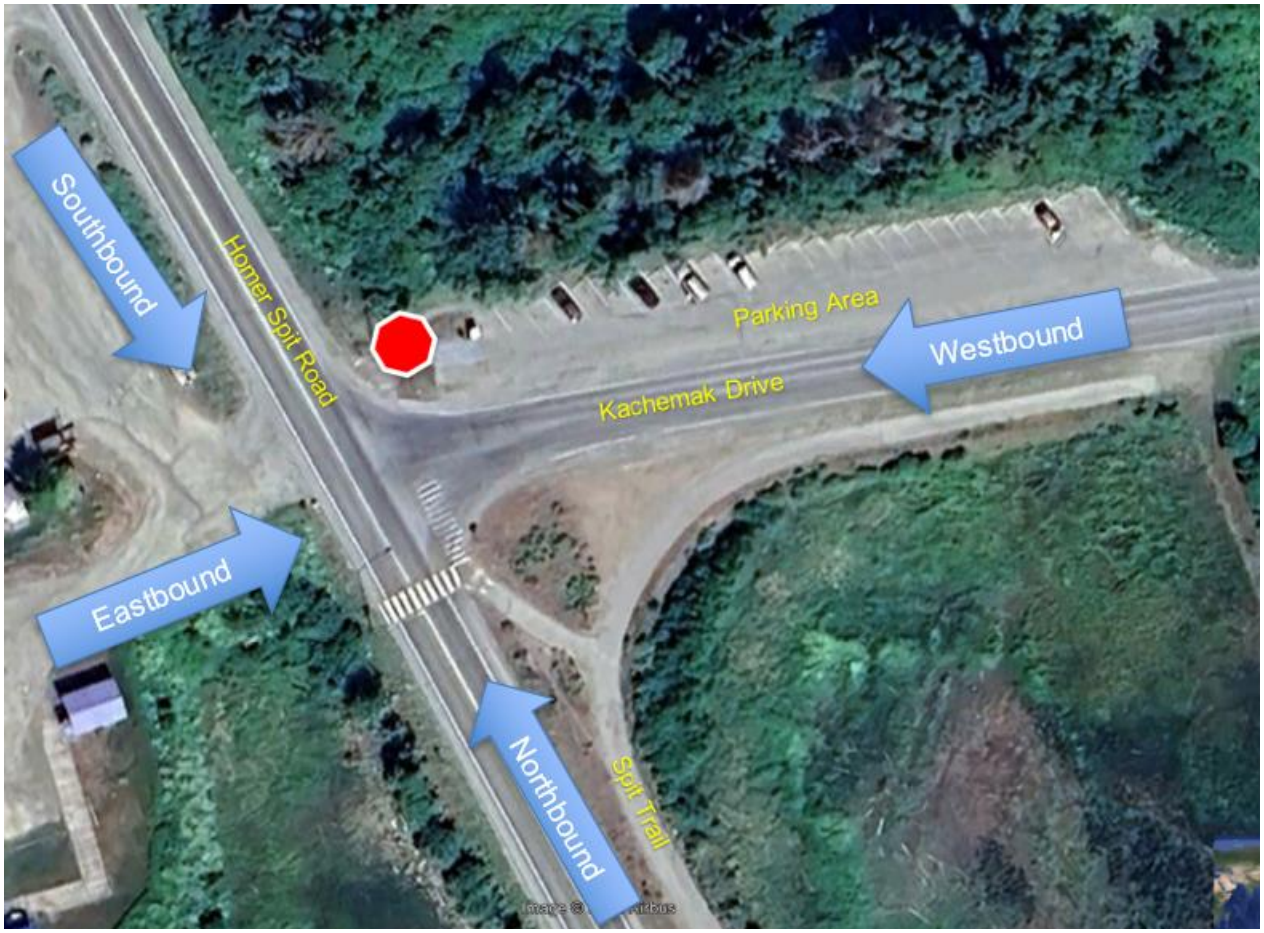
*Figure 11: Ocean Drive-Homer Spit Road-FAA Road Intersection*

### 6.5.3 Homer Spit Road- Kachemak Drive

Figure 12 on page 34 presents the intersection configuration. In its current condition, the intersection is effectively a 3-leg "Tee" intersection, with a low volume driveway opposite the minor approach. Kachemak Drive intersection approach, designated as westbound, is under stop sign control and Homer Spit Road, northbound and southbound approaches, is free flow. The future tri-plex condominium part of the Lighthouse Village Development will improve and reconfigure site access to align with the Kachemak Drive approach.

There are no channelized turn lanes. The SBLT from Homer Spit Road to Kachemak Drive turns from the through lane, and yields to northbound traffic. However, the Kachemak Drive approach is flared to allow two vehicles by a queue of through or left-turning vehicles.

There is a marked crosswalk with pedestrian crossing ahead warning signs (W11-2 and W11-2P) across the north approach.




*Aerial Photo Source: Google Earth*

*Figure 12: Homer Spit Road-Kachemak Drive Intersection*

## 6.6 5-Year Crash History Within The Study Area

Crash data between 2017 and 2021 was provided by DOT&PF. There were 8 reported crashes in the 5-year duration. The data is summarized in the following table.

*Table 4: 2017-2021 Crash Data for Study Area*

| Crash Number | DateTime | Number of Motorized Units | Crash Severity | First Harmful Event | Manner of Collision | Crash Type | Direction of Travel | Road Surface | Lighting |
|---|---|---|---|---|---|---|---|---|---|
| 201822299 | 6/24/2018 12:40:00 PM | 2 | No Apparent Injury | Motor Vehicle In-Transport | Front-To-Rear | Angle - Left Turning | Southbound | Dry | Daylight |
| 201857967 | 7/11/2018 11:09:00 AM | 1 | No Apparent Injury | Tree (Standing Only) | Not a Collision with a Motor Vehicle In- | Single Vehicle Run-Off-Road | Eastbound | Dry | Daylight |
| 201945257 | 1/16/2020 4:00:00 PM | 1 | No Apparent Injury | Ditch | Not a Collision with a Motor Vehicle In- | Single Vehicle Run-Off-Road | Eastbound | Snow | Daylight |
| 201970669 | 9/18/2020 2:00:00 PM | 1 | No Apparent Injury | Traffic Sign Support | Not a Collision with a Motor Vehicle In- | Single Vehicle Run-Off-Road | Westbound | Unknown | Daylight |
| 202100653* | 12/31/2021 12:00:00 AM | 1 | No Apparent Injury | Pedestrian | Not a Collision with a Motor Vehicle In-Transport | Pedestrian | Southbound | Snow | Dark - Not Lighted |
| 202100743 | 4/15/2021 12:20:00 PM | 2 | Suspected Minor Injury | Motor Vehicle In-Transport | Front-To-Rear | Rear End | Southbound | Dry | Daylight |
| 202100753 | 8/11/2021 12:00:00 AM | 1 | Suspected Minor Injury | Ground | Not a Collision with a Motor Vehicle In- | Motorcycle | Northbound | Dry | Dark - Lighted |
| 201969923 | 9/9/2020 5:00:00 PM | 2 | No Apparent Injury | Motor Vehicle In-Transport | Unknown | Undetermined | Unknown | Dry | Daylight |

Of the eight crashes provided, Crash Number 202100653 occurred about 2,100 feet south of Kachemak Drive, well outside of the study area. Also, Crash Number 201857967 occurred over 800 feet to the east of the Homer Spit Road-Kachemak Drive Intersection, again outside of the study area.

The remaining 6 crash locations within the study area, not including Crash Number 202100653 and Crash Number 201857967, are presented in the following figure.


*Aerial Photo Source: Google Earth*

*Figure 13: Study Area Crash Locations, 2017 to 2021*

Crash Number 201945257 was an eastbound, single vehicle run-off-road (ditch) occurring outside of the Homer Spit Road-Kachemak Drive Intersection functional area. Crash Number 201970669 was a westbound, single vehicle run-off-road (traffic sign), and occurred outside of the Ocean

Drive-Homer Spit Road-FAA Road Intersection functional area. Seemingly, neither of these crash types would be affected by the traffic generated by the Lighthouse Village Development.

Ocean Drive-Homer Spit Road-FAA Road Intersection and the Homer Spit Road-Kachemak Drive Intersection each had two crashes over the five year study period, a frequency of less than ½ crash per year. Crash rates for these intersections are presented in the table below. Average Entering AADT is estimated from Table 3 on page 31

*Table 5: Intersection Crash Rates*

| Intersection | Crashes 2017 to 2021 | Average Entering AADT 2017 to 2021 | 5-year Million Entering Vehicles (MEV) | Crashes / MEV | Populations (Comparative Intersection Type*) | Upper Critical Limit @ 95.00% Confidence | Above Average? | Above Critical? |
|---|---|---|---|---|---|---|---|---|
| Ocean-FAA-Homer Spit | 2 | 6,907 | 12.605 | 0.159 | 0.5 (tee stop sign control) | 0.867 | no | no |
| Homer Spit-Kachemak | 2 | 6,090 | 11.115 | 0.180 | 0.5 (tee stop sign control) | 0.894 | no | no |

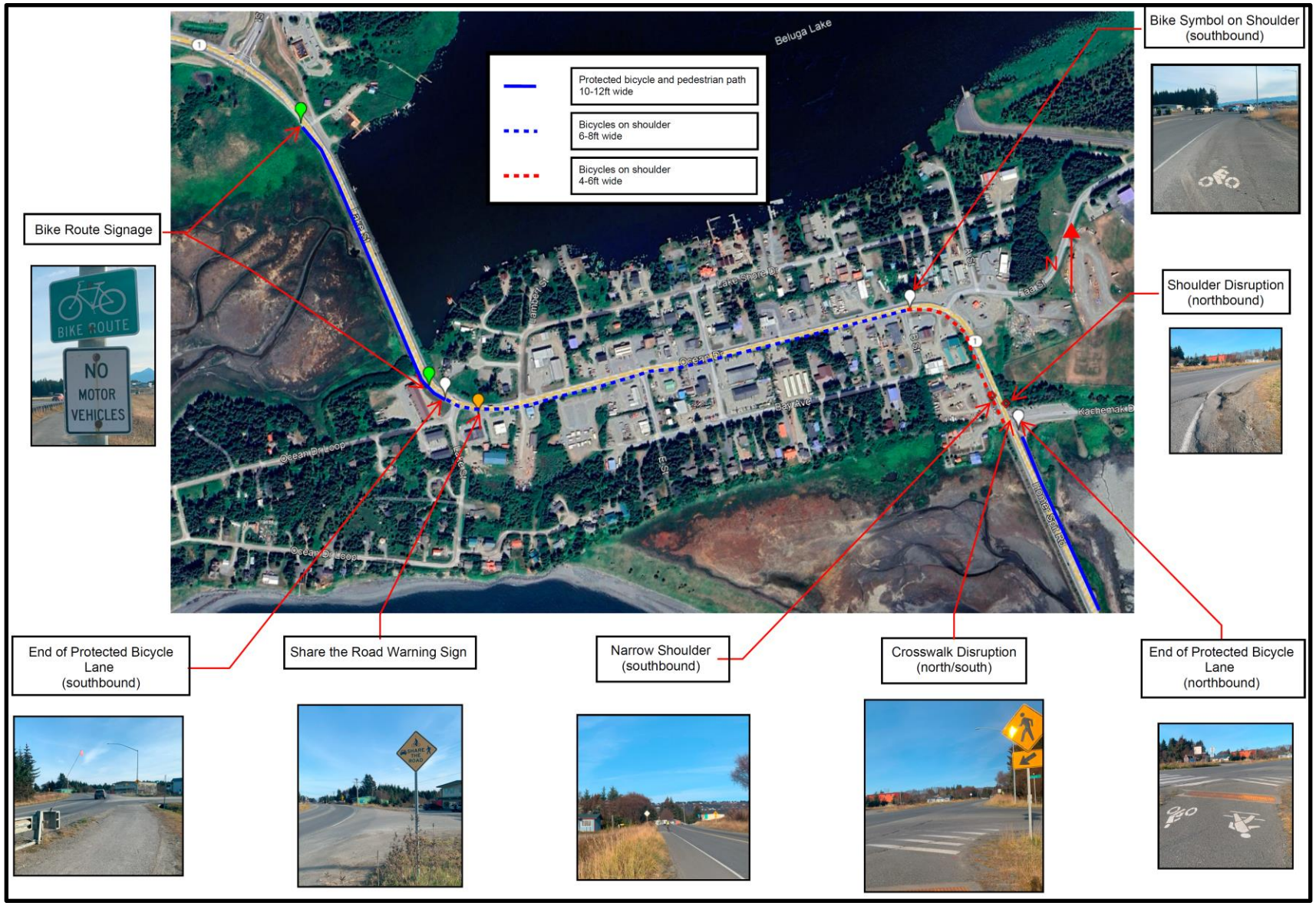
**From "Alaska DOT&PF Highway Safety Improvement Program, High Accident Location Screening Process, Formulas and Factors, for the FFY'18 HSIP" Published 2018 values are 0.52.*

The upper critical limit value is one in which, if exceeded, is an indicator that crashes are not strictly random and may have contributing factors. Generally, exceeding an upper critical limit may require corrective action. Neither intersection has a rate that is of concern.

## 6.7 Pedestrian and Bicycle Facilities

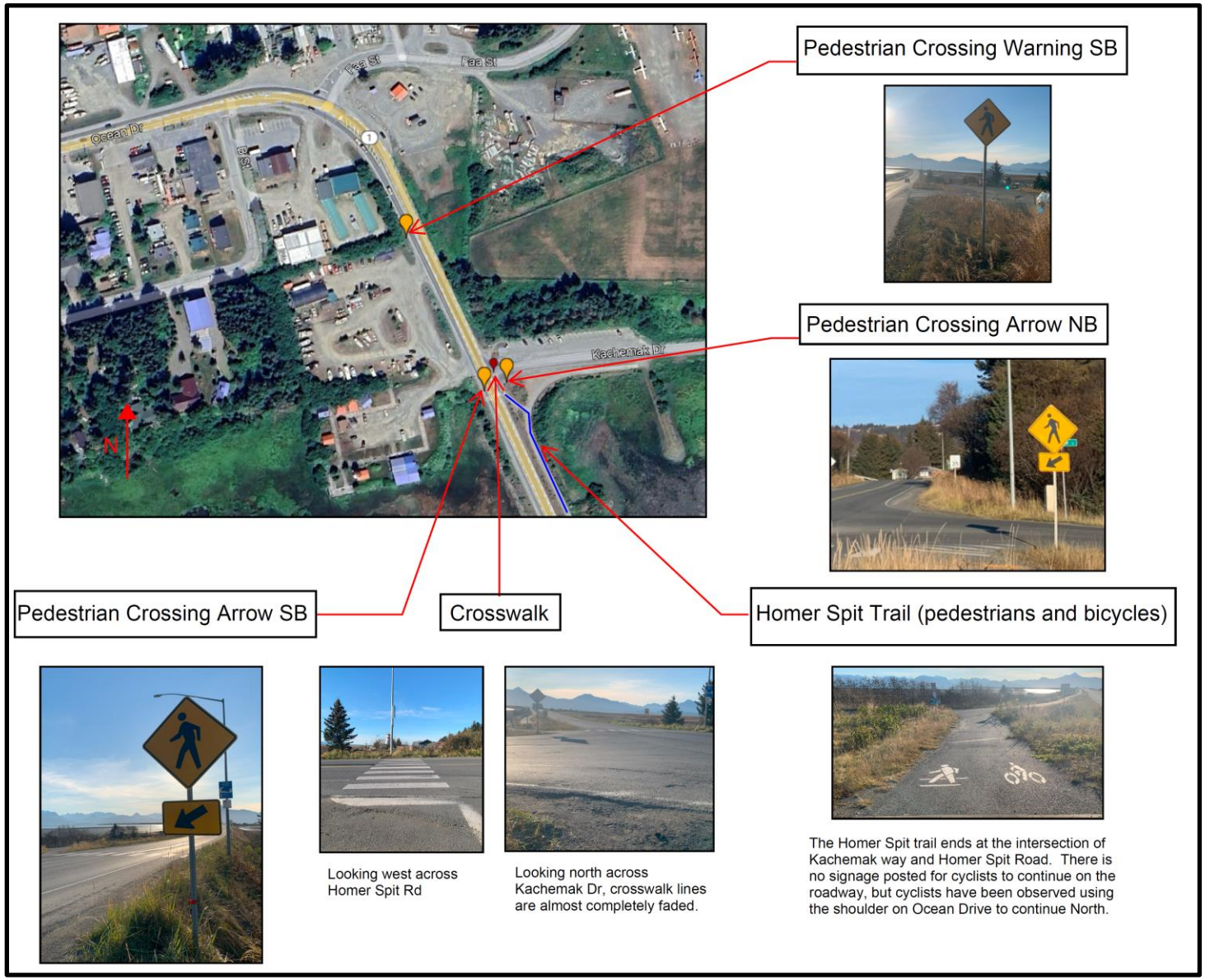
There are no sidewalks or pathways along Ocean Drive and along Homer Spit Road in the immediate frontage area of the proposed Lighthouse Village Development, although the Spit Trail begins at Kachemak Drive. Pedestrians use shoulders and bicycles either use shoulders or ride in the travel lanes on Ocean Drive and on Homer Spit Road between Lake Street Pathway Kachemak Drive.

Pedestrian and bicycle facilities are depicted in Figure 14 and Figure 15 below.




*Aerial Photo Source: Google Earth*

*Figure 14: Area Pedestrian and Bicycle Facilities*




*Aerial Photo Source: Google Earth*

*Figure 15: Pedestrian and Bicycle Facilities on Homer Spit Road*

# 7 Traffic Forecasting

*Under this section, the DOT&PF TIA Checklist requires the following items to be addressed:*

- *Projected traffic to be generated by the development (Use the ITE Trip Generation Manual, latest version).*
- *Projected trip distribution, turning movements, and rationale for determining same*
- *Projected total traffic for the design year (base traffic + site traffic) at all key area intersections and route segments within the study*
- *Trip generation from other planned developments*

## 7.1 Project Traffic-Trip Generation

### 7.1.1 Methodology

This trip generation analysis uses the methods and data of the Institute of Transportation (ITE) Trip Generation Manual (11th edition) and Trip Generation Handbook (3rd edition). ITE has developed a web application of the Trip Generation Manual, https://itetripgen.org/, which was used in this analysis. Trip generation is computed by the product of an independent variable average rate and the corresponding independent variable value; or by a regression function equation using the independent variable. The Trip Generation Handbook provides a methodology for selecting whether to use average rates, regression equations (if available), or develop local data in trip computations. When the Trip Generation Handbook guidelines recommend that local data be collected, the rate or equation is instead used for this TIA as collecting local data is not feasible in a smaller community with limited similar developments and with a limited budget.

This methodology is presented under Attachment D and is programmed by KE within an MS Excel spreadsheet.

ITE does not address the precise facility described by W&A's program in its land use data base for the combination of the hotel and employee housing. In such cases, the Lighthouse Village Development is modeled conservatively as individual land uses selected from the ITE land use categories and then the individual sub-generator trips combined to estimate the total trips that will be generated by the new facility.

### 7.1.2 Trip Generation Analysis Periods

Of interest to the Alaska DOT&PF and Homer is the peak hour trip totals during any one hour to determine:

- Need for a TIA (> 100 trips per hour)
- Analysis period/Design Year (>250 trips per hour requires a design year = full-buildout year + 10 years, otherwise design year is full buildout year).
- Traffic impact computations for intersections and segments conforming to State and Homer codes.

As previously discussed in Section 6.2 on page 29, ITE presents peak hour generation for many land use categories, and these will apply to this TIA:

- Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am
- Weekday, AM Peak Hour of Generator
- Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm
- Weekday, PM Peak Hour of Generator
- Saturday, Peak of Generator

### 7.1.3 Hotel Trip Generation

ITE has land use (LU) classifications for several hotel types including:

- ***LU 310 Hotel.*** ITE description: "*A hotel is a place of lodging that provides sleeping accommodations and supporting facilities such as a full-service restaurant, cocktail lounge, meeting rooms, banquet room, and convention facilities. A hotel typically provides a swimming pool or another recreational facility such as a fitness room*." The proposed development aligns with this description.

- ***LU 311 All Suites Hotel***: ITE description: *"An all-suites hotel is a place of lodging that provides sleeping accommodations, a small restaurant and lounge, and small amounts of meeting space. Each suite includes a sitting room and separate bedroom. An in-room kitchen is often provided."* The proposed development will have some suites, but is not an all-suite hotel. As such, the development does not align with this description and is not used.

- ***LU 312 Business Hotel***: ITE description: *"A business hotel is a place of lodging aimed toward the business traveler but also accommodates a growing number of recreational travelers. These hotels provide sleeping accommodations and other limited facilities, such as a breakfast buffet bar and afternoon beverage bar. Some provide a full-service restaurant geared toward hotel guests. Some provide a swimming pool; most provide fitness facilities. Limited space for meeting facilities may be provided. Each unit is a large single room."* The proposed development does not align entirely with this land use description, and LU-310 appears to fit better. That being the case, LU 312 will not be used.

- ***LU 320 Motel***: ITE description: *"A motel is a place of lodging that provides sleeping accommodations and provides little or no meeting space and few supporting facilities. Exterior corridors accessing rooms (immediately adjacent to a parking lot) is common for a motel."* The proposed development does not align with this description.

- ***LU 330 Resort Hotel.*** ITE description: *"A resort hotel is similar to a hotel (Land Use 310) in that it provides sleeping accommodations, full-service restaurants, cocktail lounges, retail shops, and guest services. The primary difference is that a resort hotel caters to the tourist and vacation industry, often providing a wide variety of recreational facilities/programs (e.g., golf courses, tennis courts, beach access, or other amenities) rather than convention and*

*meeting business."* The proposed development does not align entirely with this land use description, and LU-310 appears to fit better. That being the case, LU 330 will not be used.

**ITE LU 310 Hotel** is the category used for the hotel trip generation. The proposed hotel will include lodging, restaurant, bar, and convention facilities described in LU 310. The category description and data summary, excerpted from https://itetripgen.org/, is included under Attachment C. This analysis uses General Urban/Suburban setting data. LU 310 has three independent variables that may be applied to the analysis including Rooms, Occupied Rooms, and Employees. Rooms is the variable applied to this analysis, which for the proposed hotel has a value of 100. The outputs of the computations are vehicle trips. LU 310 Hotel trip generation is summarized for time periods in Table 6, below

*Table 6: LU 310 Hotel Trip Generation*

| Time Period (Method: Average Rate or Regression Equation, As Recommended by ITE Trip Generation Handbook | Independent Variable (IV) | IV Value (X) | Average Rate or Equation | Computed Trips | Entering Trips | Exiting Trips |
|---|---|---|---|---|---|---|
| Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am (Regression Equation) | Rooms | 100 | T = 0.50(X) - 7.45 | 43 | 24 | 19 |
| Weekday, AM Peak Hour of Generator (Regression Equation) | | | Ln(T) = 0.86 Ln(X) + 0.12 | 59 | 31 | 28 |
| Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm (Regression Equation) | | | T = 0.74(X) - 27.89 | 46 | 24 | 22 |
| Weekday, PM Peak Hour of Generator (Regression Equation) | | | Ln(T) = 0.95 Ln(X) - 0.27 | 61 | 35 | 26 |
| Saturday, Peak of Generator (Regression Equation) | | | T = 0.69(X) + 5.95 | 75 | 42 | 33 |

### 7.1.4 Employee Housing Trip Generation

The hotel trip generation rates presented in ITE are intended to include guest, employee, vendor, and other types of trips, thus making the employee housing trips inclusive in the hotel. DOT&PF and Homer stated after the Pre-Analysis meeting that the employee housing trip generation must be considered as external to the site and hotel, and treated as an additional and separate land use computations.

The employee housing is a seasonal dormitory type of facility with single and double occupancy rooms, each with its own bathroom (toilet, sink, shower) closet, storage, desks and beds. There is a common kitchen and dining area and a common laundry room. Employees that reside in this facility will walk to and from the hotel and will have no need to access the hotel site with a vehicle for work trips. In fact, most employees housed in the dormitory will not have access to automobile, and employee parking on site may be prohibited (per Doyon representatives. As such, most external trips to and from the site are expected to be by active transportation modes (walking, biking, ride share, etc.). Since there is no ITE land use that adequately describes this type of facility, estimation methods for vehicle trips must be logically formulated.

The following ITE land uses were considered for this part of the Lighthouse Village Development. As noted above, using these land uses will require modifications to better model this dormitory use.

- ***LU 220 Multi-Family Housing (Low-Rise).*** ITE description: *"Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels). Various configurations fit this description, including walkup apartment, mansion apartment, and stacked townhouse."* Of the three Multifamily Housing sub-categories; low-rise (1 to 3 stories), mid-rise (4 to 10 stories), high-rise (11 or more stories); this low-rise category is most applicable to the proposed employee housing 3-story building.
- ***LU 223 Affordable Housing***. ITE description: *"Affordable housing includes all multifamily housing that is rented at below market rate to households that include at least one employed member. Eligibility to live in affordable housing can be a function of limited household income and resident age."* This land use has insufficient studies (2) and will not provide data for analysis periods. LU 223 is not used for this analysis.
- ***LU 225 Off-Campus Student Apartment (Low-Rise).*** ITE Description: *"An off-campus student apartment (low-rise) complex houses college or university students in structures with two or three floors of living space. The apartments are typically rented by the bedroom and most contain a common area or shared living space (living room, kitchen, dining area). Each bedroom typically has a private bath. These apartments are sometimes called independent bedroom apartments. The dwelling unit typically ranges in size between a studio apartment and a five-bedroom apartment. It can be rented furnished or unfurnished. It is common for each apartment to have a washer and dryer. The property is typically located near or within walking distance of a college campus and provides student-related amenities such as free high-speed Internet, a study lounge, fitness center, sports court, and swimming pool. An off-campus student apartment complex typically provides security and 24-hour emergency maintenance."* Although this land use description fits the proposed employee housing, the range of bedrooms for LU 225 is 200 to 1,000 bedrooms, well over the 25 units in the employee housing.

A cursory review of other related ITE land uses reveals no other categories that will apply well to the employee housing. Of the ones listed above, **LU 220 Multi-Family Housing (Low-Rise)** is recommended. The category description and data summary, excerpted from https://itetripgen.org/, is included under Attachment C. This analysis uses General Urban/Suburban setting data. LU 220 has two independent variables that may be applied to the analysis including dwelling units and residents.

Dwelling units is the variable applied to this analysis. The number of dormitory rooms 25, effectively 25 bedrooms. Because most apartment dwelling have more than one bedroom, and because dormitory residents will have limited use of automobiles, we use 12 dwelling units (about two dormitory bedrooms per dwelling unit equivalent) as the surrogate value for this land use.

Also, the ITE Trip Generation Handbook methodology indicates that a regression equation should be applied to estimate vehicle trips. However, we use average rate for each case since the assumed 12 dwelling units are on the lower limits of the data set, and by inspection of Trip

Generation graphs in Attachment C, the average rate better fits observed data cluster for every time period case.

LU 220 Multi-Family trip generation is summarized for time periods in following table.

*Table 7: LU 220 Multi-Family Housing (Low-Rise), Employee Housing*

| Time Period (Method: Average Rate or Regression Equation, As Recommended by ITE Trip Generation Handbook Method, Attachment B) | Independent Variable (IV) | IV Value (X) | Average Rate or Equation | Computed Trips | Entering Trips | Exiting Trips |
|---|---|---|---|---|---|---|
| Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am (Regression Equation) | Dwellings | 12 | 0.4 | 5 | 1 | 4 |
| Weekday, AM Peak Hour of Generator (Regression Equation) | | | 0.47 | 5 | 1 | 4 |
| Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm (Regression Equation) | | | 0.51 | 6 | 4 | 2 |
| Weekday, PM Peak Hour of Generator (Regression Equation) | | | 0.57 | 7 | 4 | 3 |
| Saturday, Peak of Generator ("Collect Local Data", Average Rate Used) | | | 0.41 | 4 | 2 | 2 |

### 7.1.5 Triplex Condominium Trip Generation

Five buildings will have three single-family residential units each. The ITE land use that best applies to this part of the development is LU 215 Single-Family Attached Housing. The description for this land use is summarized below.

- ***LU 215 Single-Family Attached Housing***. ITE Description: *"Single-family attached housing includes any single-family housing unit that shares a wall with an adjoining dwelling unit, whether the walls are for living space, a vehicle garage, or storage space. The database for this land use includes duplexes (defined as a single structure with two distinct dwelling units, typically joined side-by-side and each with at least one outside entrance) and townhouses/rowhouses (defined as a single structure with three or more distinct dwelling units, joined side-by-side in a row and each with an outside entrance)"*

The category description and data summary for LU 215, excerpted from https://itetripgen.org/, is included under Attachment C. This analysis uses General Urban/Suburban setting data. LU 215 has two independent variables that may be applied to the analysis including dwelling units and residents. Dwelling is the variable applied to this analysis, which for the proposed building has a value of 15. The outputs of the computations are vehicle trips. LU 215 Single-Family Attached Housing trip generation is summarized for time periods in

*Table 8: LU 215 Single-Family Attached Housing , Triplex Condominiums*

| Time Period (Method: Average Rate or Regression Equation, As Recommended by ITE Trip Generation Handbook | Independent Variable (IV) | IV Value (X) | Average Rate or Equation | Computed Trips | Entering Trips | Exiting Trips |
|---|---|---|---|---|---|---|
| Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am (Regression Equation) | Dwellings | 15 | T = 0.52(X) - 5.7 | 3 | 1 | 2 |
| Weekday, AM Peak Hour of Generator (Regression Equation) | | | Ln(T) = 0.92 Ln(X) - 0.26 | 9 | 2 | 7 |
| Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm (Regression Equation) | | | T = 0.6(X) - 3.93 | 5 | 3 | 2 |
| Weekday, PM Peak Hour of Generator (Regression Equation) | | | Ln(T) = 0.88 Ln(X) + 0.06 | 11 | 7 | 4 |
| Saturday, Peak of Generator (Average Rate) | | | 0.57 | 9 | 4 | 5 |

### 7.1.6 Summary of Site Trips

Trip generation computations for all three land uses on the site, as well as the total site trips are presented in the following table.

*Table 9: Summary of Individual Generators and Site Total*

| Time Period | ITE LU 310 Hotel | | LU 220 Multi-Family Housing (Low-Rise) | | LU 215 Single-Family Attached Housing | | Site Trip Generation | | |
|---|---|---|---|---|---|---|---|---|---|
| | Hotel Entering Trips | Hotel Exiting Trips | Employee Housing Entering Trips | Employee Housing Exiting Trips | Triplex Entering Trips | Triplex Exiting Trips | Total Entering Trips | Total Exiting Trips | Total Trips |
| Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am | 24 | 19 | 1 | 4 | 1 | 2 | 26 | 25 | 51 |
| Weekday, AM Peak Hour of Generator | 31 | 28 | 1 | 4 | 2 | 7 | 34 | 39 | 73 |
| Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm | 24 | 22 | 4 | 2 | 3 | 2 | 31 | 26 | 57 |
| Weekday, PM Peak Hour of Generator | 35 | 26 | 4 | 3 | 7 | 4 | 46 | 33 | 79 |
| Saturday, Peak of Generator | 42 | 33 | 2 | 2 | 4 | 5 | 48 | 40 | 88 |

As the table shows, the highest peak hour volume is 88 trips during the Saturday peak hour of the generator.

### 7.1.7 Need for a TIA Analysis

The DOT&PF threshold requirement for a Traffic Impact Analysis is 100 trips per hour. This requirement is defined in 17 AAC 10.060. Driveways not part of highway construction.:

> *"(c) If a development is projected to generate more than 100 vehicle trips on a highway during any hour of the day, or the traffic generated is expected to detract from the safety of the highway, an applicant must perform a traffic impact analysis that meets the requirements of 17 AAC 10.070."*

On a traffic volume basis, the Alaska Administrative Code 17 AAC 10.060 does not require a TIA for this Lighthouse Village Development because the development peak hour trips are less than 100 trips.

The City of Homer has no threshold peak hour volumes that trigger requirements for TIAs. The Homer City Planner determined a TIA is required per Homer City Code 21.71.020 Application for Conditional Use Permit by this paragraph:

> *8. Any additional information the City Planner may require to determine whether the application satisfies the criteria for issuance of a permit.*

### 7.1.8 Design Year Requirements

Both City of Homer and DOT&PF use a peak hour threshold of 250 trips per hour to determine if the analysis should use a design year that will occur 10 years after the full buildout year. If so, then the street system base traffic, that is traffic that will occur 10 years from full buildout, will need to be estimated with an approved growth rate. The development trip generated traffic remains constant throughout the analysis period, and will be added to the street system base traffic. For this development, the peak trip generation (88) will be less than 250 trips per hour. Therefore, the analysis need only consider base traffic and trip generated traffic that will occur during the full build out year.

The opening year of this facility is expected to be 2024, and the full buildout is expected to be completed in 2026 (See discussion in Section 4.3 Construction Year, Opening Year, Full Buildout Year on page 15). This analysis uses 2026 as the design year.

## 7.2 Projected Trip Distribution, Turning Movements, And Rationale For Determining Same

Base traffic was developed for 2026 peak hour conditions, discussed under Section 6.4 Daily Volume Counts For All Streets And Roadways In The Study Area on page 31, and presented in Attachment B.

Site Traffic was distributed to external nodes of the system based proportionally to inbound and outbound traffic of the post-processed intersection counts. This methodology is in accordance with standard practice.

As previously discussed, all hotel and employee housing trips distributed to and from the site will use the North Access Driveway. Triplex Condominium trips distributed to and from the site will use the South Access Driveway (across from Kachemak Drive).

## 7.3 Projected Total Traffic for the Design Year

Reference Attachment E for the base background traffic, the site traffic, and final build condition intersection turning movements that apply to the Lighthouse Village Development peak hour cases in the design year, 2026.

# 8 Traffic Analysis

*Under this section, the DOT&PF TIA Checklist requires the following items to be addressed:*

- *Baseline LOS calculations for all Key Intersections and Key Road Segments (For LOS computations, use the TRB Special Report 209, Highway Capacity Manual, latest version)*
  - *No- Build Alternative— Without Development*
    - *Projected LOS calculations for all key intersections and key road segments for the opening date or the design year, as required*
    - *Vehicle queue lengths (95th percentile) and available storage*
    - *Pedestrian considerations, including applicable school walking routes*
    - *Bicycle considerations*
    - *Transit considerations (Not Considered)*
    - *Safety considerations for all Key Intersections and key road segments*
  - *Build Alternative— With Development*
    - *Projected LOS calculations for all key intersections and key road segments for the opening date or the design year, as required*
    - *Vehicle queue lengths (95th percentile) and available storage*
    - *Pedestrian considerations, including applicable school walking routes*
    - *Bicycle considerations*
    - *Transit considerations (Not Considered)*
    - *Safety considerations for all Key Intersections and key road segments*

## 8.1 Traffic Input Parameters

Highway Capacity Software 2022 (HCS), two-way-stop-control (TWSC) module, based on Highway Capacity Manual 2022 methods, was used to analyze the intersections of the TIA study area.

### 8.1.1 Vehicles

The following table summarizes the vehicle HCS input parameters used in the analysis.

*Table 10: Traffic Input Parameters*

| FAA Road - Ocean Drive - Homer Spit Road Intersection | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **WBLT** | **WBRT** | **NBT** | **NBRT** | **SBLT** | **SBT** | | |
| Peak Hour Factor | 0.95 | | | | | | | |
| Percent Heavy Vehicles | 5% | 5% | - | - | 8% | - | | |
| Pedestrians | 10 | | 10 | | 10 | | | |
| **Hotel Driveway – Homer Spit Road Intersection** | | | | | | | | |
| **Parameter** | **EBLT** | **EBRT** | **NBLT** | **NBT** | **SBT** | **SBRT** | | |
| Peak Hour Factor | 0.95 | | | | | | | |
| Percent Heavy Vehicles | 3% | 3% | 7% | - | - | - | | |
| Pedestrians | 10 | | 10 | | 10 | | | |
| **Kachemak Road – Homer Spit Road Intersection** | | | | | | | | |
| **Parameter** | **EBLT** | **EBT** | **EBRT** | **WBLT** | **WBT** | **WBRT** | **NBLT** | **SBLT** |
| Peak Hour Factor | 0.95 | | | | | | | |
| [1]Flared Street Approach Storage for Right Turns | - | | | 2 | | | - | - |
| Percent Heavy Vehicles | 3% | 3% | 3% | 5% | 5% | 5% | 6% | 7% |
| Pedestrians | 10 | | | 10 | | | 10 | 10 |

The peak hour factors (PHFs) observed during the September counts were in the 0.8 to 0.95 range. The September MADT volumes were at about ½ of July MADT volumes. As such, it is assumed that the significant increase in hourly volumes will tend to make 15-minute intervals more even, and a PHF of 0.95 is used for the capacity studies.

Truck% were derived from the September counts and from the Homer road traffic data found on https://alaskatrafficdata.drakewell.com/publicmultinodemap.asp on Ocean Drive and Homer Spit Road (Table 3 on page 31).

Vehicle performance measures include control delay in seconds per vehicle (s/veh) for individual movements and approaches; as well as movement and approach level of service (LOS). Control delay is used to provide the LOS performance measure as shown in the following table.

| Control Delay (s/veh) | LOS by Volume-to-Capacity Ratio $v/c \leq 1.0$ | $v/c > 1.0$ |
|---|---|---|
| 0–10 | A | F |
| >10–15 | B | F |
| >15–25 | C | F |
| >25–35 | D | F |
| >35–50 | E | F |
| >50 | F | F |

Note: The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole.

*Source: HCS TWSC Module User Guide*

*Figure 16: Level of Service for Control Delay Ranges*

Control delay includes delay while decelerating from desirable speed to stop, time stopped, and delay while accelerating from stop to desirable speed. Typically only minor street vehicles under stop sign or yield control, or left turning vehicle on the main street turning into the minor street experience measurable control delay. Main street through and right turning traffic are considered free-flow and experience little if any delay. The exception is when left-turns must turn from a lane also used by through vehicles. In those situations, the left-turning vehicle delays the following vehicles while waiting for suitable gaps to turn.

The 95$^{th}$ percentile queues (length that is not exceeded 95% of the time) are presented for delayed movements as well. This is of concern because queues that spill back behind an auxiliary turn may block adjacent uncontrolled movements to create operational and safety issues.

### 8.1.2 Pedestrians

Pedestrian mode level of service is dependent upon the probability of a non-delayed crossing, or pedestrian satisfaction. The volume of pedestrians is not a factor in the level of service; the method only considers the likelihood of any pedestrian being delayed. The level of service also has safety implications. Pedestrians that experience high delays may become impatient and take chances with insufficient and unsafe gaps in traffic. Although the Alaska Administrative Code 13 AAC 02.155(a) requires drivers to yield to pedestrians in a crosswalk, pedestrian crossing conspicuity should help improve driver yield compliance.

The following figure presents level of service rating based on probability ranges.

| LOS | Condition | Comments |
|---|---|---|
| A | $P_D < 0.05$ | Nearly all pedestrians would be satisfied |
| B | $0.05 \leq P_D < 0.15$ | At least 85% of pedestrians would be satisfied |
| C | $0.15 \leq P_D < 0.25$ | Fewer than one-quarter of pedestrians would be dissatisfied |
| D | $0.25 \leq P_D < 0.33$ | Fewer than one-third of pedestrians would be dissatisfied |
| E | $0.33 \leq P_D < 0.50$ | Fewer than one-half of pedestrians would be dissatisfied |
| F | $P_D \geq 0.50$ | The majority of pedestrians would be dissatisfied |

Note: $P_D$ = proportion of pedestrians giving a "dissatisfied" rating or worse.

*Source: HCS TWSC Module User Guide*

*Figure 17: Pedestrian Mode Street Crossings Level of Service for Probability Delayed Crossing, $P_D$*

The probability and level of service is computed within the HCS two-way-stop-control module. HCS outputs reports probability of non-delayed crossing for a pedestrian, or $P_{nd}$. $P_{nd}$ and $P_d$ are related as:

$$P_{nd} = 1 - P_d$$

*Equation 3*

## 8.2 Ocean Drive-FAA Road-Homer Spit Road Intersection

### 8.2.1 Ocean Drive-FAA Road-Homer Spit Road Intersection Vehicle Performance Measures No-Build and Build Conditions

The following tables summarize the no-build and build performance measures for the Ocean Drive-FAA Road-Homer Spit Road intersection westbound movements and southbound movements. Northbound approach (on Homer Spit Road) is not summarized since no movements experience control delay. Turning movements for no-build and build conditions are found in Attachment B and HCS intersection capacity analysis summary reports are in Attachment F.

*Table 11: Ocean Drive-FAA Road-Homer Spit Road Intersection (No-Build Condition Without Site Traffic) 2026 Design Year*

| **Approach** | **Westbound, FAA Road, Stop Sign Control** | | **Southbound, Ocean Drive** | |
|---|---|---|---|---|
| **Movement** | **WBLT** | **WBRT** | **SBLT** | **SBT** |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am.*** | | | | |
| 95% Queue Length, Q95 (veh) | 0.1 | 0.1 | 0.1 | - |
| Control Delay (s/veh) | 16.1 | 10.3 | 8.1 | 0.2 |
| Level of Service (LOS) | C | B | A | A |
| Approach Delay (s/veh) | 12.3 | | 0.9 | |
| Approach LOS | B | | A | |
| ***Weekday, AM Peak Hour of Generator*** | | | | |
| 95% Queue Length, Q95 (veh) | 0.6 | 0.5 | 0.3 | - |
| Control Delay (s/veh) | 26.9 | 12.8 | 9.0 | 0.5 |
| Level of Service (LOS) | D | B | A | A |
| Approach Delay (s/veh) | 17.2 | | 1.8 | |
| Approach LOS | C | | A | |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm.*** | | | | |
| 95% Queue Length, Q95 (veh) | 1.0 | 0.6 | 0.2 | - |
| Control Delay (s/veh) | 30.5 | 14.0 | 9.1 | 0.5 |
| Level of Service (LOS) | D | B | A | A |
| Approach Delay (s/veh) | 20.1 | | 1.6 | |
| Approach LOS | C | | A | |
| ***Weekday, PM Peak Hour of Generator*** | | | | |
| 95% Queue Length, Q95 (veh) | 1.1 | 0.6 | 0.2 | - |
| Control Delay (s/veh) | 31.9 | 14.2 | 9.2 | 0.5 |
| Level of Service (LOS) | D | B | A | A |
| Approach Delay (s/veh) | 20.8 | | 1.6 | |

| Approach | Westbound, FAA Road, Stop Sign Control | | Southbound, Ocean Drive | |
|---|---|---|---|---|
| **Movement** | **WBLT** | **WBRT** | **SBLT** | **SBT** |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am.*** | | | | |
| Approach LOS | C | | A | |
| ***Saturday, Peak of Generator*** | | | | |
| 95% Queue Length, Q95 (veh) | 1.4 | 0.7 | 0.3 | - |
| Control Delay (s/veh) | 37.9 | 15.0 | 9.4 | 0.6 |
| Level of Service (LOS) | E | B | A | A |
| Approach Delay (s/veh) | 23.4 | | 1.7 | |
| Approach LOS | C | | A | |

*Table 12: Ocean Drive-FAA Road-Homer Spit Road Intersection (Build Condition with Site Traffic) 2026 Design Year*

| Approach | Westbound, FAA Road, Stop Sign Control | | Southbound, Ocean Drive | |
|---|---|---|---|---|
| **Movement** | **WBLT** | **WBRT** | **SBLT** | **SBT** |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am.*** | | | | |
| 95% Queue Length, Q95 (veh) | 0.2 | 0.1 | 0.1 | - |
| Control Delay (s/veh) | 16.6 | 10.5 | 8.2 | 0.2 |
| Level of Service (LOS) | C | B | A | A |
| Approach Delay (s/veh) | 12.7 | | 0.9 | |
| Approach LOS | B | | A | |
| ***Weekday, AM Peak Hour of Generator*** | | | | |
| 95% Queue Length, Q95 (veh) | 0.7 | 0.5 | 0.3 | - |
| Control Delay (s/veh) | 28.7 | 13.1 | 9.1 | 0.6 |
| Level of Service (LOS) | D | B | A | A |
| Approach Delay (s/veh) | 18.2 | | 1.8 | |
| Approach LOS | C | | A | |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm.*** | | | | |
| 95% Queue Length, Q95 (veh) | 1.1 | 0.6 | 0.2 | - |
| Control Delay (s/veh) | 32.4 | 14.2 | 9.2 | 0.5 |
| Level of Service (LOS) | D | B | A | A |
| Approach Delay (s/veh) | 21.2 | | 1.6 | |
| Approach LOS | C | | A | |
| ***Weekday, PM Peak Hour of Generator*** | | | | |
| 95% Queue Length, Q95 (veh) | 1.3 | 0.7 | 0.2 | - |
| Control Delay (s/veh) | 35.0 | 14.4 | 9.3 | 0.5 |
| Level of Service (LOS) | E | B | A | A |
| Approach Delay (s/veh) | 22.6 | | 1.6 | |
| Approach LOS | C | | A | |
| ***Saturday, Peak of Generator*** | | | | |
| 95% Queue Length, Q95 (veh) | 1.6 | 0.8 | 0.3 | - |

| Approach | Westbound, FAA Road, Stop Sign Control | | Southbound, Ocean Drive | |
|---|---|---|---|---|
| Movement | WBLT | WBRT | SBLT | SBT |
| Control Delay (s/veh) | 42.0 | 15.3 | 9.5 | 0.6 |
| Level of Service (LOS) | E | C | A | A |
| Approach Delay (s/veh) | 25.5 | | 1.7 | |
| Approach LOS | D | | A | |

The following table presents the changes in the primary performance measures (delay and Level of Service.

*Table 13: Ocean Drive-FAA Road-Homer Spit Road Intersection Capacity Summary Change in Performance Measures with Additional Site Traffic 2026 Design Year*

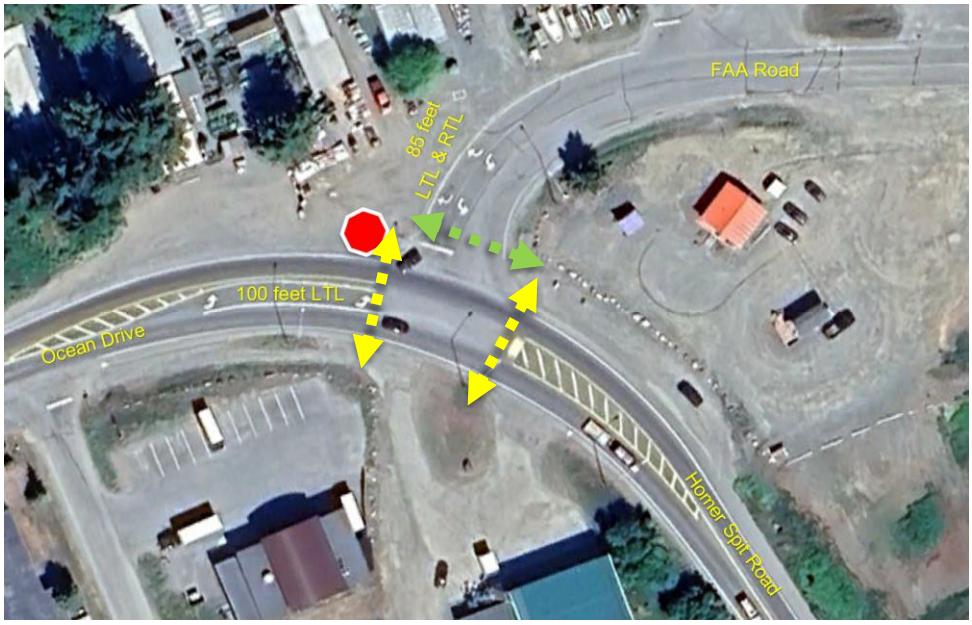
| Approach | Westbound, FAA Road, Stop Sign Control | | Southbound, Ocean Drive | |
|---|---|---|---|---|
| | Approach Delay | Approach LOS | Approach Delay | Approach LOS |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am.*** | | | | |
| No-Build | 12.3 | B | 0.9 | A |
| Build | 12.7 | B | 0.9 | A |
| Difference | 0.4 | None | 0 | None |
| ***Weekday, AM Peak Hour of Generator*** | | | | |
| No-Build | 17.2 | C | 1.8 | A |
| Build | 18.2 | C | 1.8 | A |
| Difference | 1 | None | 0 | None |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm.*** | | | | |
| No-Build | 20.1 | C | 1.6 | A |
| Build | 21.2 | C | 1.6 | A |
| Difference | 1.1 | None | 0 | None |
| ***Weekday, PM Peak Hour of Generator*** | | | | |
| No-Build | 20.8 | C | 1.6 | A |
| Build | 22.6 | C | 1.6 | A |
| Difference | 1.8 | None | 0 | None |
| ***Saturday, Peak of Generator*** | | | | |
| No-Build | 23.4 | C | 1.7 | A |
| Build | 25.5 | D | 1.7 | A |
| Difference | **2.1** | **C➔D** | 0 | None |

### 8.2.2 Ocean Drive-FAA Road-Homer Spit Road Intersection Queues

For all peak hour cases, SBLT 95$^{th}$ percentile queues are computed as less than 1 vehicle. The SBLT auxiliary lane length can accommodate 4 vehicles so SBLT queues will be contained in the lane. The WBRT and WBLT 95$^{th}$ percentile queues are 2 vehicles or less, and are accommodated by the auxiliary lanes that hold 3 cars in queue.

### 8.2.3 Ocean Drive-FAA Road-Homer Spit Road Intersection Pedestrian and Bicycle Performance Measures

Figure 18 below depicts the intersection lane configuration and main street unmarked crossings. Pedestrians do not have a marked crosswalk. Yellow dashed arrow lines show uncontrolled crossings where pedestrians must determine and use acceptable gaps in the mainline traffic flow. Crossing of westbound FAA Road are under stop sign control of vehicles who yield to crossing pedestrians, shown with green dashed arrow lines.




*Aerial Photo Source: Google Earth*

*Figure 18: Uncontrolled Pedestrian Ocean Drive-FAA Road-Homer Spit Road Intersection*

From personal experiences in trying to cross Homer Spit Road or Ocean Drive at this intersection, we have found it challenging to judge gaps, and find that the pedestrian sight distance is limited for crossing, especially on the inside of the curve. Furthermore, the crossing is long, about 50 feet across the Homer Spit Road approach, further lengthening pedestrian sigh distance requirements.

Pedestrian sight distance is computed with this formula (for single pedestrians or pedestrians walking abreast in a single row):

$$PSD = 1.47 \times S_V \times \left(\frac{L}{S_P} + t_S\right)$$

*Equation 4*

Where:

- $\boldsymbol{PSD}$ is pedestrian sight distance, feet
- $\boldsymbol{S_v}$ is the vehicle approach speed in mph
- $\boldsymbol{L}$ is the crossing length, feet

- $S_p$ is the pedestrian walking speed, in feet per second (usually 3.5 feet per second)
- $t_s$ is the startup time for pedestrians, perceiving, reacting and initiating the crossing (usually 2.5 seconds for PSD computations

If there is more than one row of pedestrian, then substitute critical gap for the $L/S_p$ term in Equation 4. The critical crossing gap, $t_G$, is computed as:

$$t_G = \left(\frac{L}{S_P} + t_S\right) + t_{S-R}(N-1)$$

*Equation 5*

Where:

- $t_G$ is critical gap in seconds
- $L$ is the crossing length, feet
- $S_p$ is the pedestrian walking speed, in feet per second (usually 3.5 feet per second)
- $t_S$ is the startup time for pedestrians, perceiving, reacting and initiating the crossing (usually 3 seconds for critical gap computations)
- $t_{S\text{-}R}$ is the startup time for pedestrians in following rows (usually 2 seconds)
- N is the number of pedestrian rows waiting to cross the street.

The computed PSD from the inside crossing point of Homer Spit Road approach is 860 feet using the crossing length of 50 feet and a single pedestrian. Looking south, a pedestrian sight line to an approaching northbound vehicle provides about 280 feet of estimated actual PSD sight distance (from Google Earth). Looking west, along Ocean Drive, the pedestrian has at a minimum 350 of estimated actual PSD (from Google Earth) for east bound traffic, with sight lines restricted by a row of parking.

Neither of the measured values meet the desirable PSD of 860 feet. However, SSD is 250 for the 35 mph speed zones. As such, approaching drivers will have time to adjust speeds or stop when pedestrians are in the unmarked cross walk.

The follow tables presents pedestrian crossing performance for each of the peak hour cases described above, for the no-build and build conditions. All pedestrian peak hour case evaluations are part of the HCS intersection reports found under Attachment F.

*Table 14: Ocean Drive-FAA Road-Homer Spit Road Intersection Pedestrian Level of Service, No-Build Without Site Traffic, 2026 Peak Hours*

| Approach | Homer Spit Approach Crossing (South Leg) | Ocean Drive Approach Crossing (North Leg) |
|---|---|---|
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am.*** | | |
| Conflicting Vehicular Flow (veh/h) | 711 | 732 |
| Average Delay (s) | 35.0 | 39.9 |
| Probability of Non-Delayed Crossing, $P_{nd}$ | 0.139 | 0.121 |
| Level of Service (LOS) | F | F |
| ***Weekday, AM Peak Hour of Generator*** | | |
| Conflicting Vehicular Flow (veh/h) | 985 | 1028 |
| Average Delay (s) | 37.3 | 55.2 |
| Probability of Non-Delayed Crossing, $P_{nd}$ | 0.096 | 0.067 |
| Level of Service (LOS) | F | F |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm.*** | | |
| Conflicting Vehicular Flow (veh/h) | 1045 | 1079 |
| Average Delay (s) | 37.2 | 57.2 |
| Probability of Non-Delayed Crossing, $P_{nd}$ | 0.091 | 0.062 |
| Level of Service (LOS) | F | F |
| ***Weekday, PM Peak Hour of Generator*** | | |
| Conflicting Vehicular Flow (veh/h) | 1066 | 1102 |
| Average Delay (s) | 37.2 | 58.0 |
| Probability of Non-Delayed Crossing, $P_{nd}$ | 0.089 | 0.059 |
| Level of Service (LOS) | F | F |
| ***Saturday, Peak of Generator*** | | |
| Conflicting Vehicular Flow (veh/h) | 1140 | 1178 |
| Average Delay (s) | 37.0 | 60.8 |
| Probability of Non-Delayed Crossing, $P_{nd}$ | 0.083 | 0.052 |
| Level of Service (LOS) | F | F |

*Table 15: Ocean Drive-FAA Road-Homer Spit Road Intersection Pedestrian Level of Service, Build With Site Traffic, 2026 Peak Hours*

| Approach | Homer Spit Approach Crossing (South Leg) | Ocean Drive Approach Crossing (North Leg) |
|---|---|---|
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am.*** | | |
| Conflicting Vehicular Flow (veh/h) | 747 | 756 |
| Average Delay (s) | 35.7 | 41.4 |
| Probability of Non-Delayed Crossing, $P_{nd}$ | 0.131 | 0.115 |
| Level of Service (LOS) | F | F |
| ***Weekday, AM Peak Hour of Generator*** | | |
| Conflicting Vehicular Flow (veh/h) | 1022 | 1061 |
| Average Delay (s) | 37.3 | 56.5 |
| Probability of Non-Delayed Crossing, $P_{nd}$ | 0.093 | 0.064 |

| Approach | Homer Spit Approach Crossing (South Leg) | Ocean Drive Approach Crossing (North Leg) |
|---|---|---|
| Level of Service (LOS) | F | F |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm.*** | | |
| Conflicting Vehicular Flow (veh/h) | 1072 | 1103 |
| Average Delay (s) | 37.2 | 58.1 |
| Probability of Non-Delayed Crossing, $P_{nd}$ | 0.088 | 0.059 |
| Level of Service (LOS) | F | F |
| ***Weekday, PM Peak Hour of Generator*** | | |
| Conflicting Vehicular Flow (veh/h) | 1102 | 1135 |
| Average Delay (s) | 37.1 | 59.3 |
| Probability of Non-Delayed Crossing, $P_{nd}$ | 0.086 | 0.056 |
| Level of Service (LOS) | F | F |
| ***Saturday, Peak of Generator*** | | |
| Conflicting Vehicular Flow (veh/h) | 1183 | 1218 |
| Average Delay (s) | 36.8 | 62.3 |
| Probability of Non-Delayed Crossing, $P_{nd}$ | 0.081 | 0.049 |
| Level of Service (LOS) | F | F |

As the tables above show, both of the no-build and build peak hours pedestrian crossings have long delays and low probability of non-delayed crossings. The impact of site traffic is not significant since the intersection has poor pedestrian crossing performance without site traffic.

### 8.2.4 Ocean Drive-FAA Road-Homer Spit Road Intersection Qualitative Traffic Safety Evaluation

Between 2017 and 2021, there were two crashes at this intersection. One involved a motorcycle that went down and the other involved two vehicles with unknown type or cause. By inspection, the crashes are not a substantive safety issue, which is further supported by the crash rate evaluation results in Table 5 on page 37.

The intersection is channelized to reduce conflicts between movements, and to provide capacity. The additional site traffic does not introduce new conflict patterns or crash types. The overall increase in delay is not to an extent that will encourage additional risk taking by the WBLT or WBRT under stop sign control. The additional Lighthouse Village Development vehicle traffic will not likely create a vehicle crash issue since none exists now.

However, pedestrian crossings of Ocean Drive and Homer Spit Road are subject to long delays and may cause impatient pedestrians to take risk with unacceptable gaps to cross. Desirable PSD is not satisfied for pedestrian crossing from the inside of the horizontal curve, although SSD is satisfied. Moreover, the Lighthouse Village Development's new hotel, employee housing, and condominiums will likely increase the pedestrian and bicycle traffic in the area. As discussed above, additional site vehicular traffic has no practical effect on the already-poor pedestrian operational quality. However, crossing improvements at this intersection should be considered as

an improvement in delay reduction and pedestrian crossing operational quality and to improve PSD for safety benefits. These are discussed as alternatives in Section 11.1.3.1.

## 8.3 Kachemak Drive-South Access Driveway-Homer Spit Road Intersection

### 8.3.1 Kachemak Drive-South Access Driveway-Homer Spit Road Intersection Vehicle Performance Measures No-Build and Build Conditions

The following tables summarize key no-build and build performance measures for the Kachemak Drive-South Access Driveway-Homer Spit Road Intersection. Full intersection reports are in Attachment F.

All approach movements; EB, WB, NB, and SB right- turns, left-turns, and through movements; are served from the single approach lane.

Under the no-build condition, only one peak hour (AM Peak Hour of Generator) had observed EB driveway volumes, 2 EBLTs from our September counts.

*Table 16: Kachemak Road-South Access Driveway-Homer Spit Road Intersection (No-Build Condition) 2026 Design Year*

| Approach | Eastbound, South Access Triplex, Stop Sign Control | Westbound, Kachemak Drive, Stop Sign Control | Northbound, Homer Spit Road | | | Southbound, Homer Spit Road | | |
|---|---|---|---|---|---|---|---|---|
| **Movement** | **All** | **All** | **NBLT** | **NBT** | **NBRT** | **SBLT** | **SBT** | **SBRT** |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am.*** | | | | | | | | |
| 95% Queue Length, Q95 (veh) | - | 1.0 | 0.0 | - | - | 0.4 | - | - |
| Control Delay (s/veh) | - | 11.4 | 7.8 | 0.0 | 0.0 | 8.2 | 1.2 | 1.2 |
| Level of Service (LOS) | - | B | A | A | A | A | A | A |
| Approach Delay (s/veh) | - | 11.4 | 0.0 | | | 4.0 | | |
| Approach LOS | - | B | A | | | A | | |
| ***Weekday, AM Peak Hour of Generator*** | | | | | | | | |
| 95% Queue Length, Q95 (veh) | 0.1 | 1.6 | 0.0 | - | - | 0.4 | - | - |
| Control Delay (s/veh) | 31.3 | 14.0 | 8.1 | 0.0 | 0.0 | 8.7 | 1.3 | 1.3 |
| Level of Service (LOS) | D | B | A | A | A | A | A | A |
| Approach Delay (s/veh) | 31.3 | 14.0 | 0.0 | | | 3.4 | | |
| Approach LOS | D | B | A | | | A | | |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm***. | | | | | | | | |
| 95% Queue Length, Q95 (veh) | - | 1.7 | 0.0 | - | - | 0.5 | - | - |
| Control Delay (s/veh) | - | 15.1 | 8.1 | 0.0 | 0.0 | 9.2 | 1.7 | 1.7 |
| Level of Service (LOS) | - | C | A | A | A | A | A | A |
| Approach Delay (s/veh) | - | 15.1 | 0.0 | | | 4.0 | | |
| Approach LOS | - | C | A | | | A | | |

| Approach | Eastbound, South Access Triplex, Stop Sign Control | Westbound, Kachemak Drive, Stop Sign Control | Northbound, Homer Spit Road | | | Southbound, Homer Spit Road | | |
|---|---|---|---|---|---|---|---|---|
| **Movement** | **All** | **All** | **NBLT** | **NBT** | **NBRT** | **SBLT** | **SBT** | **SBRT** |
| ***Weekday, PM Peak Hour of Generator*** | | | | | | | | |
| 95% Queue Length, Q95 (veh) | - | 1.9 | 0.0 | - | - | 0.5 | - | - |
| Control Delay (s/veh) | - | 15.8 | 8.1 | 0.0 | 0.0 | 9.2 | 1.8 | 1.8 |
| Level of Service (LOS) | - | C | A | A | A | A | A | A |
| Approach Delay (s/veh) | - | 15.8 | 0.0 | | | 4.1 | | |
| Approach LOS | - | C | A | | | A | | |
| ***Saturday, Peak of Generator*** | | | | | | | | |
| 95% Queue Length, Q95 (veh) | - | 2.4 | 0.0 | - | - | 0.6 | - | - |
| Control Delay (s/veh) | - | 18.4 | 8.2 | 0.0 | 0.0 | 9.5 | 2.0 | 2.0 |
| Level of Service (LOS) | - | C | A | A | A | A | A | A |
| Approach Delay (s/veh) | - | 18.4 | 0.0 | | | 4.3 | | |
| Approach LOS | - | C | A | | | A | | |

The following table presents performance measures of the intersection with site traffic, which is only traffic generated by the triplex condominiums. All approach movements; EB, WB, NB, and SB right- turns, left-turns, and through movements; are served from the single approach lane.

*Table 17: Kachemak Road-South Access Driveway-Homer Spit Road Intersection (Build Condition) 2026 Design Year*

| Approach | Eastbound, South Access Triplex, Stop Sign Control | Westbound, Kachemak Drive, Stop Sign Control | Northbound, Homer Spit Road | | | Southbound, Homer Spit Road | | |
|---|---|---|---|---|---|---|---|---|
| **Movement** | **All** | **All** | **NBLT** | **NBT** | **NBRT** | **SBLT** | **SBT** | **SBRT** |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am.*** | | | | | | | | |
| 95% Queue Length, Q95 (veh) | 0.0 | 1.1 | 0.0 | - | - | 0.4 | - | - |
| Control Delay (s/veh) | 15.9 | 11.6 | 7.8 | 0.0 | 0.0 | 8.2 | 1.2 | 1.2 |
| Level of Service (LOS) | C | B | A | A | A | A | A | A |
| Approach Delay (s/veh) | 15.9 | 11.6 | 0.0 | | | 4.0 | | |
| Approach LOS | C | B | A | | | A | | |
| ***Weekday, AM Peak Hour of Generator*** | | | | | | | | |
| 95% Queue Length, Q95 (veh) | 0.2 | 1.8 | 0.0 | - | - | 0.4 | - | - |
| Control Delay (s/veh) | 28.6 | 14.7 | 8.1 | 0.0 | 0.0 | 8.8 | 1.4 | 1.4 |
| Level of Service (LOS) | D | B | A | A | A | A | A | A |
| Approach Delay (s/veh) | 28.6 | 14.7 | 0.0 | | | 3.5 | | |
| Approach LOS | D | B | A | | | A | | |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm.*** | | | | | | | | |

| Approach | Eastbound, South Access Triplex, Stop Sign Control | Westbound, Kachemak Drive, Stop Sign Control | Northbound, Homer Spit Road | | | Southbound, Homer Spit Road | | |
|---|---|---|---|---|---|---|---|---|
| **Movement** | **All** | **All** | **NBLT** | **NBT** | **NBRT** | **SBLT** | **SBT** | **SBRT** |
| 95% Queue Length, Q95 (veh) | 0.0 | 1.9 | 0.0 | - | - | 0.6 | - | - |
| Control Delay (s/veh) | 25.6 | 15.9 | 8.1 | 0.0 | 0.0 | 9.2 | 1.8 | 1.8 |
| Level of Service (LOS) | D | C | A | A | A | A | A | A |
| Approach Delay (s/veh) | 25.6 | 15.9 | 0.0 | | | 4.1 | | |
| Approach LOS | D | C | A | | | A | | |
| ***Weekday, PM Peak Hour of Generator*** | | | | | | | | |
| 95% Queue Length, Q95 (veh) | 0.1 | 2.1 | 0.0 | - | - | 0.6 | - | - |
| Control Delay (s/veh) | 33.3 | 17.1 | 8.1 | 0.0 | 0.0 | 9.3 | 1.9 | 1.9 |
| Level of Service (LOS) | D | C | A | A | A | A | A | A |
| Approach Delay (s/veh) | 33.3 | 17.1 | 0.1 | | | 4.2 | | |
| Approach LOS | D | C | A | | | A | | |
| ***Saturday, Peak of Generator*** | | | | | | | | |
| 95% Queue Length, Q95 (veh) | 0.1 | 2.8 | 0.0 | - | - | 0.7 | - | - |
| Control Delay (s/veh) | 33.6 | 20.5 | 8.2 | 0.0 | 0.0 | 9.6 | 2.2 | 2.2 |
| Level of Service (LOS) | D | C | A | A | A | A | A | A |
| Approach Delay (s/veh) | 33.6 | 20.5 | 0.0 | | | 4.4 | | |
| Approach LOS | D | C | A | | | A | | |

The following table presents the changes in the primary performance measures (delay and Level of Service for the roadway approaches of the intersection. The eastbound approach, South Access for the triplex condominiums are not included since level of service impact requirements cited in 17 AAC 10.070 and Homer City Code 21.76.040 apply to roadways. Also, the eastbound volumes are low, in all peak hour cases turning movements on the approach are less than 10 vehicles per hour.

*Table 18: Kachemak Drive - Homer Spit Road Intersection Capacity Summary Change in Performance Measure with Additional Site Traffic 2026 Design Year*

| Approach | Westbound, Kachemak Drive, Stop Sign Control | | Northbound, Homer Spit Road | | Southbound, Homer Spit Road | |
|---|---|---|---|---|---|---|
| | **Approach Delay** | **Approach LOS** | **Approach Delay** | **Approach LOS** | **Approach Delay** | **Approach LOS** |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am.*** | | | | | | |
| No-Build | 11.4 | B | 0 | A | 4 | A |
| Build | 11.6 | B | 0 | A | 4 | A |
| Difference | 0.2 | None | 0 | None | 0 | None |
| ***Weekday, AM Peak Hour of Generator*** | | | | | | |
| No-Build | 14.1 | B | 0 | A | 3.4 | A |
| Build | 14.8 | B | 0 | A | 3.5 | A |
| Difference | 0.7 | None | 0 | None | 0.1 | None |

| Approach | Westbound, Kachemak Drive, Stop Sign Control | | Northbound, Homer Spit Road | | Southbound, Homer Spit Road | |
|---|---|---|---|---|---|---|
| | Approach Delay | Approach LOS | Approach Delay | Approach LOS | Approach Delay | Approach LOS |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm.*** | | | | | | |
| No-Build | 15.1 | C | 0 | A | 4 | A |
| Build | 15.9 | C | 0 | A | 4.1 | A |
| Difference | 0.8 | None | 0 | None | 0.1 | None |
| ***Weekday, PM Peak Hour of Generator*** | | | | | | |
| No-Build | 15.8 | C | 0 | A | 4.1 | A |
| Build | 17.1 | C | 0.1 | A | 4.2 | A |
| Difference | 1.3 | None | 0.1 | None | 0.1 | None |
| ***Saturday, Peak of Generator*** | | | | | | |
| No-Build | 18.4 | C | 0 | A | 4.3 | A |
| Build | 20.5 | C | 0 | A | 4.4 | A |
| Difference | 2.1 | None | 0 | None | 0.1 | None |

### 8.3.2 Kachemak Drive-South Access Driveway-Homer Spit Road Intersection Queues

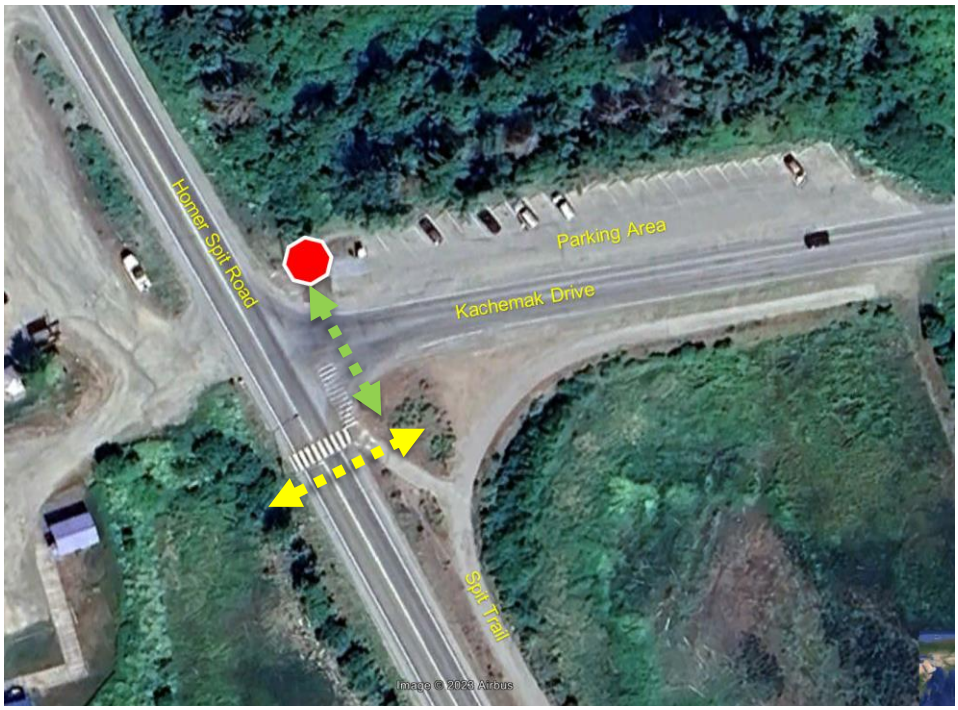
There are no auxiliary lanes for this intersection. The EB lane has a 95$^{th}$ percentile queues of 3 vehicles at most, which will not block access to the adjacent parking lot. The South Access eastbound driveway approach has length for 4 vehicles in a queue with spilling back into the parking area. All peak hour cases have an eastbound 95th percentile queue of 1 car or less.

### 8.3.3 Kachemak Drive-South Access Driveway-Homer Spit Road Intersection Pedestrian Performance Measures

Figure 12 on page 34 present the intersection configuration and main street crossings (yellow dashed lines show uncontrolled crossings). There is a marked crosswalk with pedestrian crossing ahead warning signs (W11-2 and W11-2P) across the south leg as shown. However, the pedestrian must select adequate gaps in the Homer Spit Road traffic flow. The marked crosswalk and advanced signing will result in some motorists yielding to crossing pedestrians (about 76% per HCS).

Since there is a marked crosswalk at the intersection, the north leg of the intersection is not evaluated. Note that crossings of Kachemak Drive are under stop sign control of vehicles, shown by the green dashed arrow lines, and are not evaluated since vehicles must yield to westbound Kachemak vehicles.

Looking south, the desirable PSD for the 28-foot crossing Homer Spit Road is computed to be about 700 feet (for 45 mph approach speeds). Available sight distance is >1,000 feet. Looking north, desirable PSD is computed to be about 620 feet, and available PSD is between 540 feet for 35 mph and 620 for 40 mph (transition between speed zones). SSD is met for the crosswalk.




*Aerial Photo Source: Google Earth*

*Figure 19: Pedestrian Crossings Homer Spit Road-Kachemak Drive Intersection*

The follow table presents pedestrian crossing performance for each of the peak hour cases described above, for the no-build and build conditions. All pedestrian peak hour case evaluations are part of the HCS intersection reports found under Attachment F.

*Table 19: Kachemak Drive - Homer Spit Road Intersection Pedestrian Level of Service, No-Build Without Site Traffic, 2026 Peak Hours*

| **Approach** | **Homer Spit Road Approach (South Leg, Crosswalk) No-Build** | **Homer Spit Road Approach (South Leg, Crosswalk) Build** |
|---|---|---|
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am.*** | | |
| Conflicting Vehicular Flow (veh/h) | 455 | 469 |
| Average Delay (s) | 3.0 | 3.0 |
| Probability of Non-Delayed Crossing, $P_{nd}$ | 0.643 | 0.643 |
| Level of Service (LOS) | D | D |
| ***Weekday, AM Peak Hour of Generator*** | | |
| Conflicting Vehicular Flow (veh/h) | 746 | 768 |
| Average Delay (s) | 3.2 | 3.2 |
| Probability of Non-Delayed Crossing, $P_{nd}$ | 0.639 | 0.639 |
| Level of Service (LOS) | D | D |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm.*** | | |
| Conflicting Vehicular Flow (veh/h) | 852 | 872 |
| Average Delay (s) | 3.2 | 3.2 |
| Probability of Non-Delayed Crossing, $P_{nd}$ | 0.636 | 0.636 |

| Approach | Homer Spit Road Approach (South Leg, Crosswalk) No-Build | Homer Spit Road Approach (South Leg, Crosswalk) Build |
|---|---|---|
| Level of Service (LOS) | D | D |
| ***Weekday, PM Peak Hour of Generator*** | | |
| Conflicting Vehicular Flow (veh/h) | 869 | 897 |
| Average Delay (s) | 3.2 | 3.2 |
| Probability of Non-Delayed Crossing, $P_{nd}$ | 0.636 | 0.635 |
| Level of Service (LOS) | D | D |
| ***Saturday, Peak of Generator*** | | |
| Conflicting Vehicular Flow (veh/h) | 929 | 957 |
| Average Delay (s) | 3.1 | 3.1 |
| Probability of Non-Delayed Crossing, $P_{nd}$ | 0.633 | 0.632 |
| Level of Service (LOS) | D | D |

As the table shows, the additional site traffic does not reduce pedestrian crossing performance measures.

### 8.3.4 Kachemak Drive - Homer Spit Road Intersection Qualitative Traffic Safety Evaluation

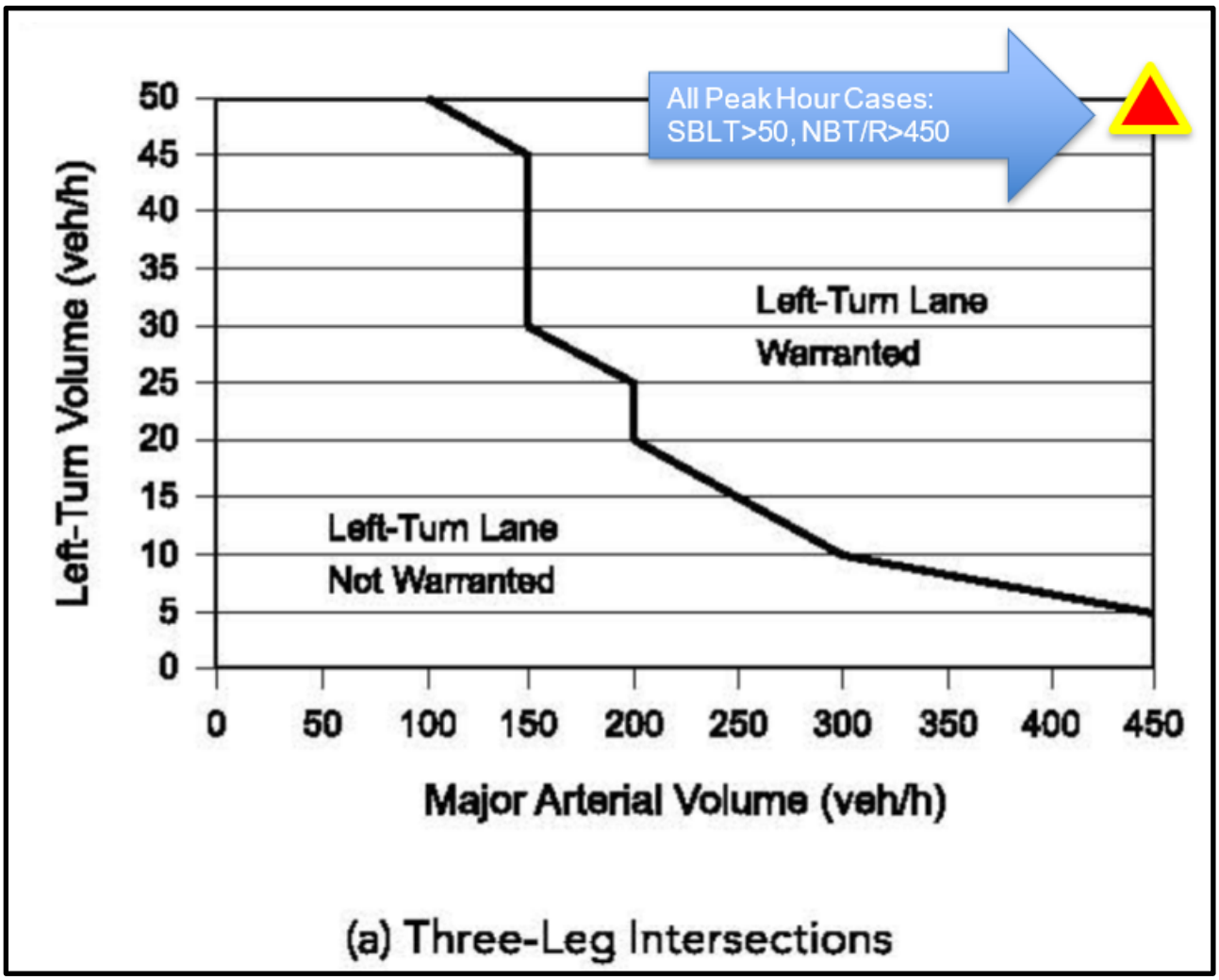
Between 2017 and 2021, there were two crashes at this intersection. Both involved southbound rear-end crashes, likely preceded by the lead vehicle turning from Homer Spit Road. By inspection, the crashes are not a substantive safety issue, which is further supported by the crash rate evaluation results in Table 5 on page 37.

As reported in Section 5.3.1 Homer Intersections Planning Study (2005) on page 25, this intersection was forecasted to be a candidate for signalization or roundabout control improvements between 2011 and 2021. Thea traffic growth for that study period was forecasted to be at growth rate of 2% per year. However, the actual growth rate for that period of time was much lower. For example, the AADT on Homer Spit Road is 2022 is essentially the same as it was in 2014.

Other longer-term improvements may include auxiliary lanes, especially main line left-turn lanes. AASHTO GDHS left-turn treatment guides from the 2011 and 2018 editions indicate that the intersection should have a SBLT lane on Homer Spit Road to Kachemak Drive (see Figure 20 on page 64). However, since there are no apparent capacity issues at the intersection with 2026 design year peak hour conditions, this improvement may be considered as part of the Kachemak Drive Reconnaissance study recommended in the Homer Master Transportation Plan.

The driveway will introduce additional inbound and outbound conflicts between site traffic and the Homer Spit Road and Kachemak Drive motorists and non-motorists traffic. However, the volume on the eastbound approach is low and the safety impacts of the new conflicts is likely insignificant.

As such additional safety issues are not expected at this intersection because of the development.




*Source: Figure 9-35, AASHTO 2018 GDHS*
*Figure 20: Left-Turn Lane Guidelines for SBLT on Homer Spit Road*

## 8.4 North Access Driveway-Homer Spit Road Driveway Intersection

### 8.4.1 North Access Driveway-Homer Spit Road Driveway Intersection Vehicle Performance Measures Build Condition

The North Access Driveway-Homer Spit Road intersection performance measures are summarized in the following table for the build condition. There is no driveway in place under a no-build condition.

This driveway intersection is configured with single land NB, SB, and EB approaches. The EB approach traffic will be under stop sign control. NBLT traffic turns from the through lane.

*Table 20: North Access Driveway-Homer Spit Road Driveway Intersection (Build Condition) 2026 Design Year*

| Approach | Eastbound, North Access Driveway, Stop Sign Control | Northbound, Homer Spit Road | |
|---|---|---|---|
| **Movement** | **All Movements** | **NBLT** | **NBT** |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am.*** | | | |
| 95% Queue Length, Q95 (veh) | 0.2 | 0 | |
| Control Delay (s/veh) | 13.3 | 8.3 | 0.1 |
| Level of Service (LOS) | B | A | A |
| Approach Delay (s/veh) | 13.3 | 0.4 | |
| Approach LOS | B | A | |
| ***Weekday, AM Peak Hour of Generator*** | | | |
| 95% Queue Length, Q95 (veh) | 0.3 | 0.1 | |
| Control Delay (s/veh) | 17.5 | 8.6 | 0.2 |
| Level of Service (LOS) | C | A | A |
| Approach Delay (s/veh) | 17.5 | 0.5 | |
| Approach LOS | C | A | |
| ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm.*** | | | |
| 95% Queue Length, Q95 (veh) | 0.3 | 0.0 | |
| Control Delay (s/veh) | 18.3 | 8.6 | 0.2 |
| Level of Service (LOS) | C | A | A |
| Approach Delay (s/veh) | 18.3 | 0.4 | |
| Approach LOS | C | A | |
| ***Weekday, PM Peak Hour of Generator*** | | | |
| 95% Queue Length, Q95 (veh) | 0.4 | 0.1 | |
| Control Delay (s/veh) | 19.6 | 8.7 | 0.3 |
| Level of Service (LOS) | C | A | A |
| Approach Delay (s/veh) | 19.6 | 0.6 | |
| Approach LOS | C | A | |
| ***Saturday, Peak of Generator*** | | | |
| 95% Queue Length, Q95 (veh) | 0.5 | 0.1 | |
| Control Delay (s/veh) | 21.1 | 8.8 | 0.3 |
| Level of Service (LOS) | C | A | A |
| Approach Delay (s/veh) | 21.1 | 0.6 | |
| Approach LOS | C | A | |

### 8.4.2 North Access Driveway-Homer Spit Road Driveway Intersection Queues

The North Access eastbound driveway approach has length for 3 vehicles in a queue with spilling back into the parking area. All peak hour cases have an eastbound 95th percentile queue of 1 car or less.

### 8.4.3 North Access Driveway-Homer Spit Road Driveway Intersection Pedestrian Performance Measures

Pedestrian crossings are not expected at the location and are not evaluated.

### 8.4.4 North Access Driveway-Homer Spit Road Driveway Intersection Qualitative Traffic Safety Evaluation

The driveway introduces new conflict points in the roadway segment. However, the driveway will be constructed to DOT&PF standards and will meet nominal safety standards (sight distance, geometrics, etc.). No additional safety issues are expected.

# 9 Homer City Code TIA requirements

Homer has TIA requirements, which for the most part are addressed by the DOT&PF TIA requirements. Homer requirements are listed below, with red text inserted to comment on the requirement.

The Homer City Code states:

> ***21.76.050 Traffic impact analysis – Required elements.***
> *A traffic impact analysis prepared under this chapter must include consideration of:*
>
> *a. Intersections on streets or alleys where traffic on any approach is expected to increase as a result of the proposed development by at least five percent of the approach's capacity;*
>
> The study area was established in the Pre-Analysis meeting. The study area includes the Ocean Drive-FAA Road-Homer Spit Road intersection and the Kachemak Drive-South Access Driveway-Homer Spit Road intersection.
>
> In addition, the following table summarizes the percent increase in 2026 base traffic with added site traffic for the study intersections.

*Table 21: Base and Site Volumes on Study Area Intersections*

| Peak Hour | FAA Road-Ocean Drive-Homer Spit Road | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Northbound Volumes | | | Southbound Volumes | | | Westbound Volumes | | |
| | Base | Site | % Increase | Base | Site | % Increase | Base | Site | % Increase |
| Weekday, AM Commute | 318 | 12 | 3.8% | 404 | 13 | 3.2% | 42 | 1 | 2.4% |
| AM Peak of Generator | 507 | 21 | 4.1% | 505 | 14 | 2.8% | 97 | 3 | 3.1% |
| Weekday, PM Commute | 567 | 14 | 2.5% | 487 | 11 | 2.3% | 127 | 3 | 2.4% |
| PM Peak of Generator | 578 | 18 | 3.1% | 497 | 16 | 3.2% | 129 | 5 | 3.9% |
| Saturday Peak of Generator | 618 | 20 | 3.2% | 532 | 21 | 3.9% | 138 | 3 | 2.2% |

| Peak Hour | Kachemak Drive-Homer Spit Road | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Northbound Volumes | | | Southbound Volumes | | | Westbound Volumes | | |
| | Base | Site | % Increase | Base | Site | % Increase | Base | Site | % Increase |
| Weekday, AM Commute | 204 | 6 | 2.9% | 394 | 13 | 3.3% | 191 | 6 | 3.1% |
| AM Peak of Generator | 397 | 11 | 2.8% | 475 | 16 | 3.4% | 214 | 6 | 2.8% |
| Weekday, PM Commute | 493 | 12 | 2.4% | 485 | 12 | 2.5% | 205 | 5 | 2.4% |
| PM Peak of Generator | 509 | 18 | 3.5% | 499 | 16 | 3.2% | 211 | 7 | 3.3% |
| Saturday Peak of Generator | 540 | 15 | 2.8% | 535 | 19 | 3.6% | 226 | 9 | 4.0% |

> All approaches for the study intersections are under the 5% threshold of the allowable additional site traffic increase. Since traffic disperses with further distances from the Lighthouse Village Development, we can deduce that the site will not increase traffic at any other intersections in the system above the 5% threshold.
>
> *b. Segments of streets or alleys 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;*

Segments are not evaluated in this TIA.

*c. Intersections on streets or alleys where the safety of facilities will deteriorate as a result of the traffic generated by the development;*

Safety analyses find no issues.

*d. Each driveway or approach road that will allow egress or ingress to a street for the proposed development;*

North and South Accesses are included in the analysis.

*e. Parking and circulation routes within the proposed development, to the extent necessary to ensure that traffic does not back up onto a street; and*

The North Access eastbound driveway approach has length for 3 vehicles in a queue with spilling back into the parking area. All peak hour cases have an eastbound 95$^{th}$ percentile queue of 1 car or less.

The South Access eastbound driveway approach has length for 4 vehicles in a queue with spilling back into the parking area. All peak hour cases have an eastbound 95$^{th}$ percentile queue of 1 car or less.

*f. Pedestrian and bicycle facilities that are a part of the street or alley to which a permit applicant seeks access. [Ord. 08-29, 2008].*

# 10 Summary

*Under this section, the DOT&PF TIA Checklist requires the following items to be addressed:*

- *Summary of Impacts*

## 10.1 FAA Road-Ocean Drive-Homer Spit Road Intersection

The critical LOS threshold for this analysis is level of service C, in which the control delay threshold between C and D is 25 seconds per vehicle. The FAA Road's westbound approach level of service for 2026 Saturday Peak Hour falls from a low "C" level of service (delay of 23.4 seconds per vehicle) to a high "D" level of service (delay of 25.5 seconds per vehicle). Both the DOT&PF (Alaska Administrative Code) and Homer City Code may require mitigation, to be discussed in the next section.

Uncontrolled pedestrian crossings of the Ocean Drive and Homer Spit Road are not significantly impacted by the Lighthouse Village Development's site traffic since the pedestrian performance measures of the no-build case are poor. The no-build and build analysis show that the crossings have long delays, high delay probability, and LOS F.

## 10.2 Kachemak Drive-Homer Spit Road

All peak hour build conditions have westbound approach LOS of C or better. As such intersection mitigation is not indicated because of added Lighthouse Village Development site traffic.

The crosswalk LOS is D, and delays for pedestrian are similar for both no-build (without site development traffic) and build (with site development traffic). Although mitigation is not required, the proposed Lighthouse Village Development will likely increase pedestrian crossing demand at the intersection and DOT&PF has requested that improvements to the crosswalk, specifically electronic devices, be considered.

# 11 Mitigation

*Under this section, the DOT&PF TIA Checklist requires the following items to be addressed:*

- *Mitigation measure alternatives to address capacity, delay, pedestrian, bicycle, transit and safety issues caused by or exacerbated by the development*
- *Proposed mitigation measures*
- *Proposed improvements to development parking and circulation routes*
- *Mitigation measure affects (include projected LOS calculations and / or crash reduction factors as applicable)*
- *Conclusion*

## 11.1 FAA Road-Ocean Drive-Homer Spit Road Intersection

The decline in level of service for the westbound approach traffic may be mitigated with a change of control type (convert a two-way stop control to signalization or a roundabout) or through demand management countermeasures. These are discussed below.

### 11.1.1 Traffic Signal

The Manual on Uniform Traffic Control Devices (MUTCD) provides warrants for traffic signal installations at intersections. MUTCD indicates that signals should not be installed without meeting at least one warrant. However, signalization has adverse consequences in that they are expensive to construct and maintain. Also, while reducing delay on minor approaches, traffic signals typically increase overall intersection delay for all movements. Finally, signals may increase certain types of crashes, typically rear-ends on previously uncontrolled, free-flow main streets.

The following table summarizes estimated hourly movements for this intersection used for warrant analysis. For this, we use the peak hour conditions intersection for the morning commuting peak hour (8-9 am), the morning peak of the generator (11-12 am), the afternoon peak of the generator (3-4 pm), and the evening commuting peak hour (4-5 pm). Crash experience warrants are not considered here and may be added upon reception of crash data from DOT&PF. Pedestrian volume warrants that are not considered here because it is highly unlikely pedestrian volumes (75 per hour) will be met in the future even with the proposed Lighthouse Village Development.

*Table 22: Signal Warrant Hourly Volumes (Green: Observed and Factored for 2026 Weekday Summer Peak Condition, Yellow: Interpolated between Observed Values)*

| Hour | WBLT | WBT | NBT | NBRT | SBLT | SBT |
|---|---|---|---|---|---|---|
| 8:00 AM | 15 | 27 | 301 | 29 | 37 | 380 |
| 9:00 AM | 21 | 41 | 364 | 33 | 50 | 401 |
| 10:00 AM | 27 | 54 | 427 | 36 | 63 | 422 |
| 11:00 AM | 33 | 67 | 489 | 39 | 76 | 443 |
| 12:00 PM | 39 | 71 | 508 | 37 | 73 | 445 |
| 1:00 PM | 44 | 75 | 527 | 35 | 69 | 447 |
| 2:00 PM | 49 | 78 | 547 | 33 | 66 | 449 |
| 3:00 PM | 53 | 81 | 565 | 31 | 62 | 451 |
| 4:00 PM | 50 | 80 | 550 | 31 | 61 | 437 |

HCS has a Warrants module which was used to estimate whether the intersection meets warrants based on the hourly volumes in the table above.

If the westbound right-turn movements are included in warrant computations, then the intersection would meet MUTCD Warrants:

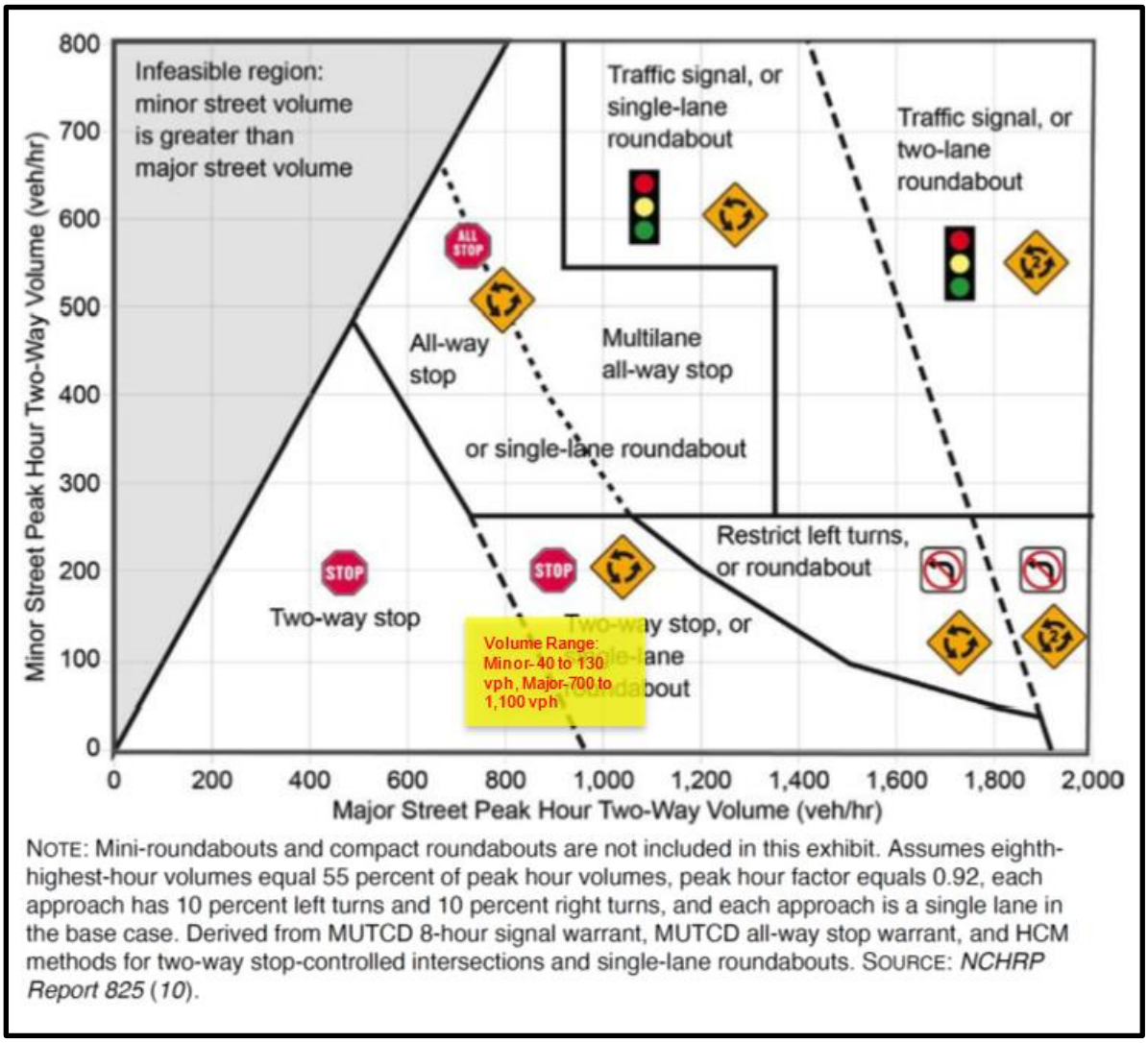
1. Warrant 1 Eight-Hour Vehicular Volume, Condition B. Interruption of Continuous Traffic.
2. Warrant 2 Four-Hour Vehicular Volume
3. Warrant 3 Peak Hour, Condition B.

However the MUTCD recommends that engineering judgment be applied to determine if the minor street right turn volumes should be included in the warrant evaluation. Since the right turn LOS is B and right-turning traffic has an WBRT exclusive lane, our judgement is that they should not be included in the warrant computation.

In conclusion, signalization is not warranted for this intersection and is not considered as a feasible mitigation alternative.

### 11.1.2 Roundabout

NCHRP Report 1043 *Guide for Roundabouts* provides guidelines to determine if a roundabout might be applied to the intersection. This is presented graphically in Figure 21 on page 72. The yellow highlighted box is an approximate range of minor (40 to 120 vehicles per hour) and major intersection volumes (700 to 1,100 vehicles per hour) at FAA Road-Ocean Drive-Homer Spit Road intersection.




NOTE: Mini-roundabouts and compact roundabouts are not included in this exhibit. Assumes eighth-highest-hour volumes equal 55 percent of peak hour volumes, peak hour factor equals 0.92, each approach has 10 percent left turns and 10 percent right turns, and each approach is a single lane in the base case. Derived from MUTCD 8-hour signal warrant, MUTCD all-way stop warrant, and HCM methods for two-way stop-controlled intersections and single-lane roundabouts. SOURCE: *NCHRP Report 825* (*10*).

*Figure 21: Intersection Control Guidelines from NCHRP Report 1043 Guide for Roundabouts Exhibit 8.7*

As the figure indicates, TWSC (existing) or roundabouts are feasible intersection control alternatives for this intersection volume range.

### 11.1.3 Demand Management Through Pedestrian Improvements

Converting vehicle trips to non-motorist trips will reduce vehicle demand at the intersection and reduce delay. As such, improving active transportation facilities to encourage people to change modes from automobiles to pedestrian and bike trips is a potential mitigation for the Ocean Drive-FAA Road-Homer Spit Road intersection performance.

Moreover, the proposed Lighthouse Village Development hotel guests, staff using employee housing, and the tri-plex condominium residents are expected to have a high proportion of users that will use non-motorized modes especially if the facilities are in place. To that end, the following

countermeasures will serve that latent active transportation demand as well as potentially improve operations at the Ocean Drive-FAA Road-Homer Spit Road intersection.

- Instead of the frontage road between the North and South Accesses driveways shown in Figure 4 on page 17, construct a pathway along the Lighthouse Village Development to connect the site to the crossing at Kachemak Drive-Homer Spit Road crosswalk. The pathway should meet DOT&PF standards and located to be compatible with future pedestrian improvement projects along Homer Spit Road.

- Construct a connection between the Lighthouse Village Development to Bay Avenue using the B Street right-of-way to allow walking and biking trips to use the lower volume, low speed Bay Avenue, for non-motorist trip segments.

- Install a marked median refuge, and a potential marked crosswalk on the Homer Spit Road approach to the intersection. This is discussed in more detail in the following subsection.

#### *11.1.3.1 Pedestrian Crosswalk and Pedestrian Median Refuge Homer Spit Road*

As configured, the tee intersection with the SBLT lane on the Ocean Drive approach has a striped median area opposite of the SBLT which can be converted to a pedestrian refuge. In fact, this is the only location on Ocean Drive and Homer Spit Road where there is existing pavement width that could accommodate a median refuge.

Median refuges break the crossing into two shorter distance stages, each with acceptable reduced gaps, The median allows the pedestrian to assess and cross gaps in one directional traffic stream at a time, and finally reduces required pedestrian sight distance. Because of the shorter crossing distances and gap requirement, PSD is reduced as well.

Since Homer Spit Road is a State owned roadway, the crosswalk markings, refuge median, and signage would have to satisfy DOT&PF requirements. The DOT&PF *Alaska Traffic Manual* Table 3B-101, shown in Figure 22 on page 74, indicates that there should be at least 20 crossing pedestrians per hour (or 15 elderly pedestrians or children pedestrians) for a crosswalk installation. If the pedestrian demand were to be met, and the proposed Lighthouse Village Development has the potential of increasing demand, then a crosswalk would be a recommended at the location according to Table 3B-101, given two or three lanes, AADT (<9000 AADT), and speeds of 35 mph (see figure below and red dashed circle). Even though observed September pedestrian volumes were low (see Table 1 on page 31) pedestrian crossing demand is likely to higher in summer months and further may increase with the Lighthouse Development for these reasons:

- The hotel employees living on site (40 or so) in the designated employee housing will have lower ownership or access of automobiles, and thus more likely be pedestrians and cyclists.
- There both origins (residential neighborhoods, businesses) and destinations (e.g., Homer Brewing Company) on the north side of Ocean Drive that can use low volume and low speed local streets to connect to the crossing at FAA Road.
- Furthermore, the hotel becomes a local origin for guests walking about Homer, and wanting to explore other areas. It becomes a localized walking destination for neighborhood

residents and workers north of Ocean Drive or on the airport side wishing to patronize the bar and restaurant, all of which would benefit from this crossing.

Highway Capacity Software estimates that the crosswalk and median refuge configuration would improve the pedestrian crossing level of service from F to C, with $P_{nd}$ of 0.484 and 2.4 seconds of average delay. Even if the crosswalk were not to be installed, a median refuge alone would improve the pedestrian crossing level of service from F to D, with $P_{nd}$ of 0.445 and 5.5 seconds of average delay.

In addition, PSD requirements will be reduced because of the shorter distances across one lane. PSD will be reduced from over 860 feet to 363 feet for a 16-foot crossing, which is greater than the 350 feet to the west currently restricted by parking. Looking south, though, the pedestrian position is in the median, and the available sight distance from the median to northbound traffic is over 500 feet, well above desirable PSD of 363 feet.

A conceptual crosswalk and median refuge configuration is presented in Figure 23 on page 75.

**Table 3B-101. Recommended Practice for Crosswalk Marking on Uncontrolled Approaches or at Midblock Locations**

| No of Lanes | Raised Median? | Vehicle ADT | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | <9,000 | | | | >9,000 to 12000 | | | | >12,000 to 15,000 | | | >15,000 | | |
| | | Speed Limit (MPH) | | | | | | | | | | | | | |
| | | <30 | 35 | 40 | >45 | <30 | 35 | 40 | >45 | <30 | 35 | >40 | <30 | 35 | >40 |
| 2 | No | C | C | M | N | C | C | M | N | C | C | N | C | M | N |
| 3 | No | C | C | M | N | C | M | M | N | M | M | N | M | N | N |
| >4 | Yes | C | C | M | N | C | M | N | N | M | M | N | N | N | N |
| >4 | No | C | M | N | N | M | M | N | N | N | N | N | N | N | N |

Source: FHWA-RD-01-075, Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations, 2002

C — Candidate sites for marked crosswalks. Before marking a crosswalk, the site should be studied to ensure it is suitable. The study may include a review of pedestrian volumes, available gaps, sight distance (see Note 1), vehicle mix, pedestrian mix, distance to adjacent crossings (see Note 2), etc. Crosswalks should not be installed at locations with fewer than 20 pedestrian crossings per peak hour (or 15 for elderly and/or child pedestrians).

M — Marginal candidate sites for marked crosswalks: Pedestrian accident risk may increase if crosswalks are marked. If pedestrian improvements are necessary, other options should be explored before marking crosswalks.

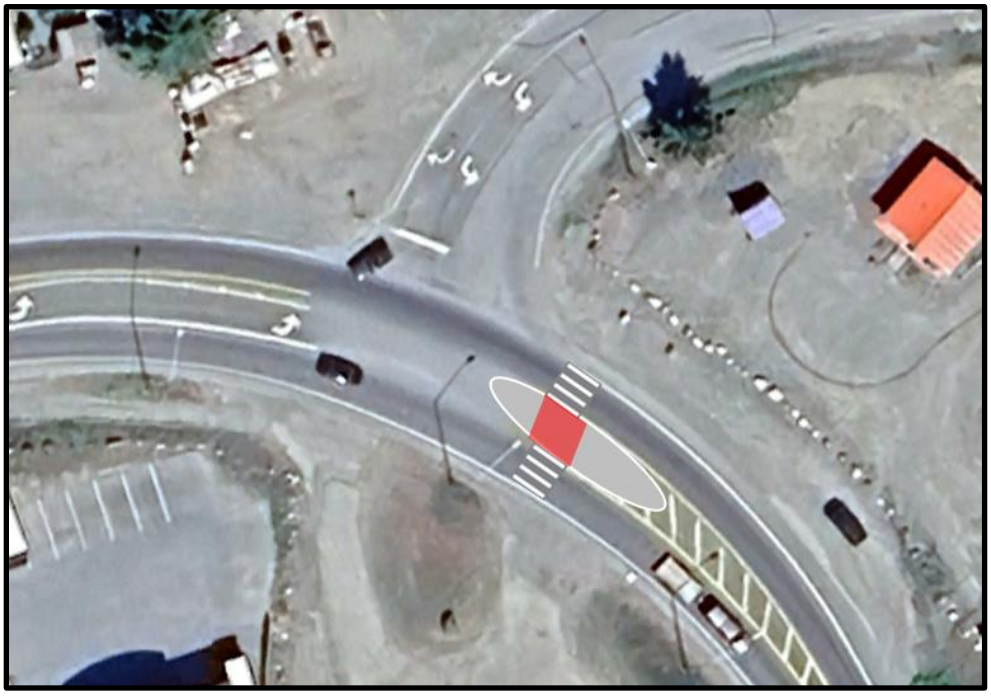
N — Crosswalks should not be installed at these locations.

Notes: 1. Marked crosswalks should not be installed on uncontrolled approaches or at midblock locations where visibility distance of pedestrians or the crosswalk would be less than the "Stopping Sight Distance for Design" given in the latest version of the AASHTO A Policy on Geometric Design of Highways and Streets. Desirably, crosswalks would only be installed where there is sufficient sight distance to allow pedestrians to cross the road without conflicting with vehicles continuing at the 85th-percentile speed, assuming the pedestrian starts walking at the moment the vehicle comes into sight. Pedestrian crossing time should be computed in accordance with the procedure for determining adequate gaps given in the Institute of Transportation Engineers Traffic Engineering Handbook (page 78 in the 4th Edition).

2. Crosswalks should not be installed on uncontrolled approaches or at midblock locations where they will encourage pedestrians to divert from nearby signalized or grade-separated pedestrian crossings.

*Source: Alaska Traffic Manual Table 3B-101*

*Figure 22: Guidance for Crosswalk Markings (Red Dashed Circle is FAA Road-Ocean Drive-Homer Spit Road Intersection Conditions)*



*Aerial Photo Source: Google Earth*

*Figure 23: Ocean Drive-Homer Spit Road-FAA Road Intersection Conceptual Crosswalk and Median Refuge (Schematic only, Requires Engineering Design)*

## 11.2 Kachemak Drive-Homer Spit Road Intersection

### 11.2.1 Intersection Vehicular Traffic Mitigation Improvements

This intersection performance measures with additional site traffic indicates that the roadway approach LOS does not fall below thresholds that require mitigation (LOS C or better, see Table 18 on page 60). No control, channelization, or geometric improvements are proposed.

### 11.2.2 Pedestrian Crosswalk Improvements

The pedestrian crosswalk has a LOS of D. Once the Lighthouse Village Development is completed, the hotel, employee housing and triplex condos are expected to create an increased demand for recreational and utility walking and biking trips. As such, an improvement at this crossing could include additional traffic control device treatments to reduce delay by increasing rates of motorists yielding to crossing pedestrians. Creating two-stage crossing with a median refuge is not considered because of the extent of widening and construction that would be required at the intersection to create a space for the refuge.

The existing crossing has a crosswalk marking, advanced and at crosswalk pedestrian warning signs, and overhead street lighting electroliers. The Alaska Traffic Manual provides procedural guide on the level of guidance for traffic control devices at uncontrolled crossings.

*Figure 24: Existing Conditions Kachemak Drive Crosswalk*

The likely next step for intersection improvement would be implantation of an electronic or regulatory device. Table 4A-101 of the Alaska Traffic Manual is used to evaluate potential improvements using these existing traffic conditions:

- Lanes: 2 lanes.

- Speeds: Deploying electronic warning or regulatory devices apply to speeds of 40 to 45 mph with approaching traffic. The crosswalk is within a transitional zone from 35 to 45 mph in both directions. Without a speed study to determine precise speeds, it could be inferred that speeds should be 40 mph on average.

- AADT: AADT ranges of 4,500 to 9,000 are required for electronic warning or regulatory devices. As shown in Table 3 on page 31, Homer Spit Road AADT in 2021 was above 4,500, but fell to 4,200 in 2022. Nevertheless, Summer MADT is in the 8,000 to 9,000 vehicles daily range. As such, we assume that future AADT will fall within the 4,500 to 9,000 range.

- Pedestrian Crossing Volumes: Since there is a crosswalk in place now, it is implied that the crossing volume is greater than 20 per hour.

Table 4A-101 from the Alaska Traffic Manual is shown below with outcomes using above data yield a conclusion that electronic warning devices are applicable for this location.

**Table 4A-101. Grouping of Traffic Control Device Alternatives Based on Conditions at Uncontrolled Crossing Locations**

| Recurring Hourly Pedestrian (PED) Crossing Volume | Vehicular Traffic Volume and Speed | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Vehicle AADT (vpd) | | | | | | | | | | | | | | | |
| | | | <= 4500 | >4500 to 9,000 | | | | > 9,000 to 12,000 | | | | >12,000 to 15,000 | | | >15,000 | | | |
| | | | Speed (MPH) | | | | | | | | | | | | | | | |
| | No. of Lanes | Raised Median or Refuge? | All | <=30 | 35 | 40 | >=45 | <=30 | 35 | 40 | >=45 | <=30 | 35 | 40 | <=30 | 35 | 40 | |
| < 20 /hr | Any | Any | NE See also 2C.01 and 3B.18 | | | | | | | | | | | | | | | |
| >=20 /hr | 2,3 | Yes | NE: See also 2C.01 and 3B.18 | NE | NE | EW | ER | NE | NE | EW | ER | NE | NE | ER | NE | EW | ER | |
| | 2 | No | | NE | NE | EW | ER | NE | NE | EW | ER | NE | NE | ER | NE | EW | ER | |
| | 3 | No | | NE | NE | EW | ER | NE | EW | EW | ER | EW | EW | ER | | ER | ER | |
| | >=4 | Yes | | NE | NE | EW | ER | NE | EW | ER | ER | EW | EW | ER | ER | ER | ER | |
| | >=4 | No | | NE | EW | ER | ER | EW | EW | ER | ER | ER | ER | ER | ER | ER | ER | |
| School Crossing | EW - See Part 7 for school routes, beacon systems, and Part 4 for Signal Warrants | | | | | | | | | | | | | | | | | |
| >= 20 /hr | ER - See Part 4 for Pedestrian Hybrid Beacon Guidelines and School Crossing Warrants (Engineering Study required) | | | | | | | | | | | | | | | | | |
| >=75 /hr | ER - See Part 4 for Traffic Control Signal Warrants (Engineering Study required) | | | | | | | | | | | | | | | | | |

**DEVICE GROUPING**

| | |
|---|---|
| **NE:** | Non-electrical devices (sight distance, signs, striping, medians, etc.) |
| **EW:** | Electrical warning devices (beacons, lighting, sign borders, in-pavement lights, etc.) |
| **ER:** | Electrical regulatory devices (hybrid beacons, signals) |

**Abbreviations**

| | |
|---|---|
| **vpd:** | vehicles per day (typically annual average daily traffic or ADT) |
| **AADT:** | Annual Average Daily Traffic (volume in vehicles per day) |
| **MPH:** | Miles per hour |
| **PED Crossing Volume:** | Frequent and recurring, e.g. average annual peak hourly volume or seasonal peak hourly volume over three months or more<br>Reduce PED volume to 15 / hr for NE, EW devices, or by by 50% for ER devices if elderly and/or child pedestrians recur frequently. |

*Source: Alaska Traffic Manual Table 4A-101*

*Figure 25: Guidance for Traffic Control Devices at Crossings*

The next step would be to use Table 4A-102 to determine electronic warning device type. Since the crosswalk has street illumination, the next treatment in priority would be an actuated rectangular rapid flashing beacon.

## Table 4A-102. Recommended Order of Selection for Traffic Control Devices or Strategies at Uncontrolled Crossing Locations

| | Priority of factors for consideration after Table 4A-101 | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | | | |
| DEVICE GROUPING | PED VOLUME | SAFETY HISTORY | SIGHT DISTANCE | GAPS | TRAFFIC CONTROL STRATEGIES FOR A CROSSING LOCATION | ORDER OF DEVICE SELECTION | OPTIONAL DEVICES |
| NE - Non-electrical[1] | > 20/hr and factors 2, 3, or 4 | < 75 %ile crash history | Above Minimum PSD | ≥ 1 per minute average or ≥ 1 per adjacent signal cycle | Devices not provided for sites with adequate gaps, good visibility, low pedestrian volume or low crash history | None | |
| | | > 75 %ile crash history, primarily crossing related | Below minimum PSD, Above minimum SSD | < 1 per 2 minutes average or < 1 per adjacent signal cycle | Locate or provide alternative crossing location (primarily to improve sight distance) | Increasing Command ↓ of Attention/Respect | |
| | | | | | Median refuge island or divided/split highway lanes (primarily to achieve gaps)[2] | | |
| | | | | | Standard retroreflective signs (primarily for warning or drawing attention) | | |
| | | | | | High visibility warning signs, markings, delineators, or post reflectors (primarily for warning or drawing attention) | | |
| | | | | | *Flag-carry* | | |
| | | | | | *Portable in-street signs*[3] | | ↓ |
| EW - Electrical Warning | >20/hr and factors 2, 3, or 4 OR > 75 /hr | > 95 %ile crash history, primarily crossing related | Below minimum PSD, Above minimum SSD with high visibility devices | < 1 per 2 minutes average or < 1/ adjacent signal cycle | Pedestrian street lighting electrolier(s) [4] | Increasing Command ↓ of Attention/Respect | |
| | | | | | Ped Activated Rectangular Rapid Flashing Beacons RRFB (when >=40 MPH; >2 lanes; or roundabout exits)[5] | | |
| | | | | | Overhead active alternating LED beacon w/ped detection[5] | | |
| | | | | | Continuous single roundel LED beacons above sign[6] | | |
| | | | | | Continuous single Overhead LED beacon | | |
| | | | | | *LED bollards for walkways (primarily used in transit areas)* | | |
| | | | | | *Continuous LED flashing borders in-sign* | | |
| | | | | | *Ped activated LED flashing borders in-sign* | | |
| | | | | | *Combined side mount and Overhead ped activated beacons* | | |
| | | | | | *In pavement crosswalk lights*[7] | | |
| | | | | | *Other electrical warning devices* | | ↓ |
| ER - Electrical Regulatory[8] | >= 20/hr | > 95 %ile crash history, primarily crossing related | Below minimum SSD | < 1 per 2 minutes average or < 1 per adjacent signal cycle | *Pedestrian Hybrid Beacon (Engineering Study required)* | Increasing Command ↓ of Attention/Respect | |
| | >= 75/hr | | | | *Signal, Midblock signal, or Half-signal (Engineering Study required)* | | |

**FOOTNOTES to Table 4A-102**

1. NE - nonelectrical project solutions are acceptable until an electrical project can be determined as needed
2. Median refuge may be used to convert undesirable gaps into adequate two stage gaps
3. Consider portable in-street signs primarily for special events and school control. These require active onsite oversight.
4. Provide overhead lighting at marked crosswalks when feasible to address nighttime ped crossing issues
5. Active flashing beacon systems are preferable to passive beacon systems
6. Flashing beacon systems may be used to mark zones not identifiable as a single crossing, or areas without overhead lighting
7. In pavement lights should only be considered in a low risk environment for damage, where there is extensive maintenance capability
8. Should be 1/4 mile or more from existing signals on arterial 2 way roadways, unless coordinated with existing signals

**DEVICE GROUPING**

- **NE:** Non-electrical devices. See Section 3B.18.
- **EW:** Electrical warning devices - use at unsignalized, midblock locations where conflict with signals is not a concern.
- **ER:** Electrical regulatory devices.
- **OPT:** Optional devices which are low priority enhancements due to frequent maintenance and resource limitations

**OTHER FACTORS/TERMS**

- **PED VOLUME:** Frequent and recurring, e.g. average annual peak hourly volume or seasonal peak hourly volume over three months or more. Reduce PED volume to 15 / hr for NE, EW devices, or by by 50% for ER devices if elderly and/or child pedestrians recur frequently
- **SAFETY HISTORY:** Analysis of ped-vehicle crash data related to crossing attempts, including experience at locations with similar characteristics
- **%ile:** Percentile grouping of locations based on analysis of statewide crossing-related ped-vehicle crash data
- **SIGHT DISTANCE:** Unobstructed road distance visible to a pedestrian or motorist providing time necessary to execute crossing or driving maneuvers
- **PSD:** Pedestrian Sight Distance (PSD) = (2.5 s + Crossing Distance/3.5 fps) x Posted Speed fps
- **SSD:** Motorist Stopping Sight Distance (SSD), See Tables 3-1 and 3-2, AASHTO Policy on Geometric Design of Highways and Streets
- **GAPS:** Spacing of vehicular traffic, such that pedestrians have an opportunity to execute a crossing
- **avg:** Average measurement per hour
- **LED:** Light Emitting Diode or alternative light source

*Source: Alaska Traffic Manual Table 4A-102*

*Figure 26: Recommended Order of Device Selection*

As shown in the table, outcome of the warning device selection is based on these four factors:

- Factor 1- >20 pedestrians per hour with factors 2, 3, or 4 satisfied; or >75 pedestrians per hour: Based on the existing crosswalk markings (implying at least 20 crossing pedestrians per Figure 22 on page 74) and the likelihood that the Lighthouse Village Development will generate significantly more non-motorized users, we assume the 20 pedestrians per hour is satisfied.

- Factor 2- >95$^{th}$ percentile crash history: This intersection has two crashes in 5 years (see Section 6.6 on page 34). This location and crash experience will not satisfy Factor 2.

- Factor 3- Available sight distance of 625 feet is just above desirable PSD of 616 feet (assuming 40 mph southbound traffic through the transition area). From access driveway sight distance discussion, the sight distance to the north from the South Access Driveway is around 560 fee and the crosswalk is about 65 feet further. Using this data and measuring from Google earth, we estimate that the maximum sight line between a southbound vehicle on Homer Spit Road and a pedestrian staging to cross Homer Spit Road at the cross walk will provide 625 feet of sight distance.

  As discussed in exceeding SSD for both 35 and 45 mph. Pedestrian sight distance is computed for a 28-foot crossing distance, a 2.5 second startup time (per Table 4A-102), 40 mph vehicle speeds (transition zone between 35 and 45 mph posted speeds) to be over 600 feet. If so, pedestrian sight distance to the north is not satisfied.

- Factor 4- Gaps are less than 1 gap per 2 minutes on average: The CCS 1030021 station shows the highest average hourly flow to be 729 vehicles per hour in July 2022. If we assume that gap distribution follows a negative exponential distribution (common practice), then the following computations apply.

| | | |
|---|---|---|
| Future Hourly Volume (2-way or 1-way) | 729 | vph |
| Crossing Width (L) | 28 | feet |
| Ped Walk Speed, $S_p$ for School Children | 3.5 | feet/second |
| Startup, $t_s$ for School Children | 3 | seconds |
| Critical Gaps, $t_G = ( L / S_p ) + t_s$ | 11.0 | seconds |

  A negative exponential distribution is used for random traffic flows, and is depicted in the following figure.

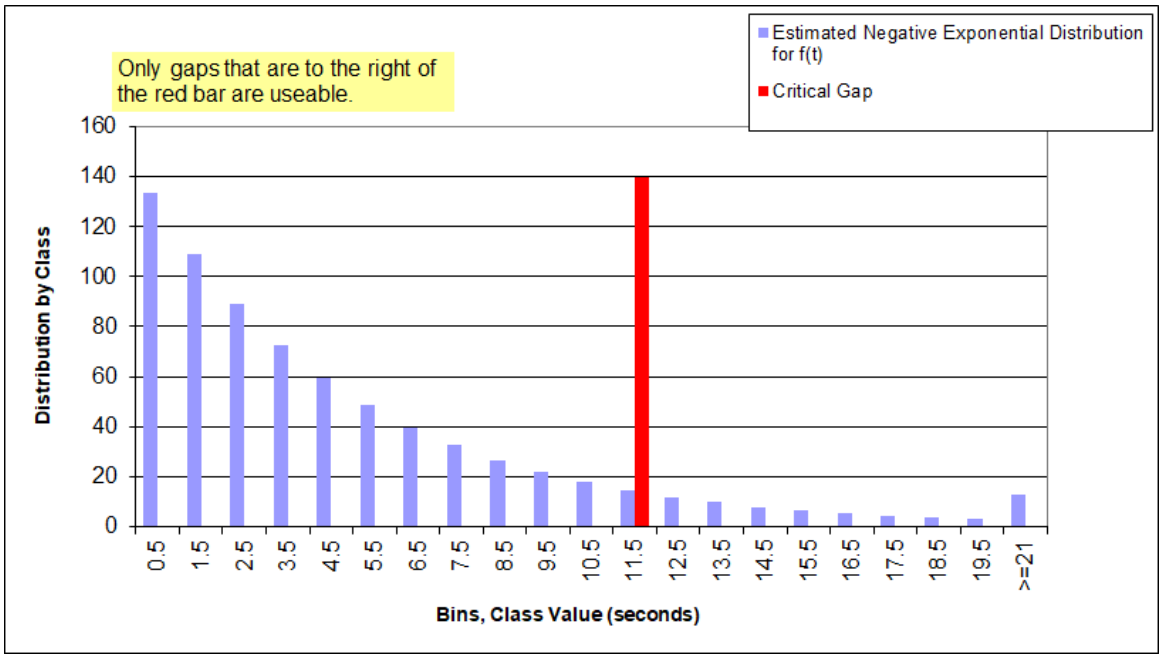



*Figure 27: Estimated Gaps at Kachemak Crossing*

The following table shows gap data conclusions based on the above distribution.

| Analysis Output | | Comments |
|---|---|---|
| Useable Gaps in one hour (>$t_G$) | 79 | There are 79 gaps with lengths greater than 11 seconds |
| In one hour, the sum of the gaps>$t_G$ (sec)==> | 1242 | |
| **Gaps per minute** | **1.88** | OK, Gaps per minute >=1 |
| **% Delay** | **66%** | |
| **Maximum % Delay for N=1 Rows of Peds** | **83%** | OK, % Delay is less than Maximum % Delay |

Based on these calculations, there are about 2.6 acceptable gaps every 2 minutes.

It appears that Factors 2, 3, and 4 are not fully satisfied, and thus any addition electronic warning (or regulatory) devices would not be recommended by the procedures in the ATM. However, the PSD provided, 625 feet from the crosswalk to the north, is only a few feet over the computed necessary sight distance of 616 feet. As such, a rapid rectangular flashing beacon is may be justified.

If the rapid rectangular flashing beacon were to be installed, the LOS would improve from D to B.

## 11.3 Conclusion and Recommendations

The following are recommendations resulting from this TIA analysis.

- No intersection control, channelization, or geometric capacity improvements are recommended. Instead, implement improvements to enhance active transportation modes and potentially reduce vehicle demand at intersections and roadways.

- Instead of the frontage road between the North and South Accesses driveways shown in Figure 4 on page 17, construct a pathway fronting the Lighthouse Village Development to connect the site to the crossing at Kachemak Drive-Homer Spit Road crosswalk. The pathway should meet DOT&PF standards and located to be compatible with future pedestrian improvement projects along Homer Spit Road.

- Construct a connection between the Lighthouse Village Development to Bay Avenue using the B Street right-of-way to allow walking and biking trips to use the lower volume, low speed Bay Avenue, for non-motorist trip segments.

- Install a pedestrian median refuge, and a potential marked crosswalk on the Homer Spit Road approach to the Ocean Drive-Homer Spit Road-FAA Road intersection. The crosswalk would only be installed if the crossing demand could be established as 20 vehicles per hour or more at this location. However, the median refuge could be implemented without the crosswalk. This is presented in the following Figure 23 on page 75.

- Consider implementing a rapid rectangular flashing beacon at the marked crosswalk at Kachemak Drive for the Homer Spit Road crossing.

- The North Access Driveway and South Access Driveway may be constructed with two lanes, one lane outbound and one lane inbound. Driveways must comply with the recommendations in the DOT&PF Highway Preconstruction Manual (Section 1190).

- In addition to the above, the following recommendations were explicitly requested by DOT&PF after review of the draft report.

    - Construct internal pedestrian connectivity between the hotel and the condominiums.
    - Revise the site plan to realign the South Access Driveway directly across from the Kachemak Drive approach to function as a four-leg intersection. Moreover, it is essential to align the South Access Driveway with Kachemak Drive to assure that required 35 mph driveway spacing distance between the North and South Access Driveways, cited as 260 feet in the DOT&PF Highway Preconstruction Manual Table 1190-3, is achieved (see addition discussion on separation below). Install stop sign control for the South Access Driveway.
    - Construct a rapid rectangular flashing beacon at the existing crosswalk across Homer Spit Road just south of Kachemak Drive.

- Following the draft report, we evaluated driveway spacing. The DOT&PF Highway Preconstruction Manual Table 1190-3 requires driveway spacing to be 260 feet for roadway speeds of 35 mph. The distance in Table 1190-3 is measured between the edge of driveways as depicted in Figure 1190-2. With this requirement, it is essential to align the South Access Driveway with Kachemak Drive as well as realign/reposition the North Access Driveway to the north to achieve the full 260 feet of separation required in Table 1190-3. The North Access Driveway could be relocated about 20 to 25 feet to the north and still meet minimum driveway sight distance standards.

- The May 2012 Transfer of Responsibilities Agreement (TORA) between the City of Homer and DOT&PF for parking and pedestrian facilities near the project area apply to the improvements recommended in this TIA. Ownership and maintenance of the proposed pathway and pedestrians crossings will be finalized between the City of Homer, DOT&PF, and the developer prior to final permits being issued.

# Attachment A: Pre-Analysis Meeting Documents

Follows this page.

# Traffic Impact Analysis Requirement Checklist

## Pre-analysis meeting

The developer and the registered engineer that will sign and seal the TIA must meet with the DOT&PF Regional Traffic & Safety engineer and Right-of-Way agent before beginning the TIA. At the meeting, the following will be determined:

- The design year (This is typically the buildout year or 10 years beyond the buildout year, depending on the development size and location)
- The study area
- Key intersections and key road segments to considere/evaluate in the TIA
- The projected area-wide traffic growth rate
- Level of Service (LOS) standards
- Other planned developments to consider
- Planned road improvements to consider
- Any other items of note regarding the TIA

## Traffic Impact Analysis. Include the following:

### Development Information

- ☐ Development description
- ☐ Land use intensity including square footage, types of land use, employees, etc.
- ☐ Proposed zoning changes or zoning variances
- ☐ Construction year, opening year, projected year for full buildout
- ☐ Map of the development, including traffic circulation and parking area
- ☐ Sight distance evaluation from access points
- ☐ Alternatives to the proposed location

### Project Area Background

- ☐ Surrounding land zoning
- ☐ Surrounding land uses and site land use
- ☐ Adjacent development
- ☐ Traffic improvements already funded, programmed, or planned
- ☐ Other planned developments

### Data Requirements

- ☐ Map of the study area street network
- ☐ Peak hour intersection turning movement counts for all key intersections

- ☐ Daily volume counts for all streets and roadways in the study area
- ☐ Number of lanes on the streets in the study area
- ☐ Intersection geometry information for all key intersections
- ☐ Traffic signal phasing and timing information for all key intersections
- ☐ 5 year crash history within the study area
- ☐ Sidewalks and other pedestrian facilities
- ☐ Bike lanes and other bicycle facilities
- ☐ Transit operation and facilities including pullouts, frequency of service and utilization

## Traffic Forecasting

- ☐ Projected traffic to be generated by the development (Use the ITE Trip Generation Manual, latest version)
- ☐ Projected trip distribution, turning movements, and rationale for determining same
- ☐ Projected total traffic for the design year (base traffic + site traffic) at all key intersections and route segments within the study area
- ☐ Trip generation from other planned developments

## Traffic Analysis

- ☐ Baseline LOS calculations for all key intersections and key road segments (For LOS computations, use the TRB Special Report 209, Highway Capacity Manual, latest version)

*No-Build Alternative – Without Development*

- ☐ Projected LOS calculations for all key intersections and key road segments for the opening date or the design year, as required
- ☐ Vehicle queue lengths ($95^{th}$ percentile) and available storage
- ☐ Pedestrian considerations, including applicable school walking routes
- ☐ Bicycle considerations
- ☐ Transit considerations
- ☐ Safety considerations for all key intersections and key road segments

*Build Alternative – With Development*

- ☐ Projected LOS calculations for all key intersections and key road segments for the opening date or the design year, as required
- ☐ Vehicle queue lengths ($95^{th}$ percentile) and available storage
- ☐ Pedestrian considerations, including applicable school walking routes

- ☐ Bicycle considerations
- ☐ Transit considerations
- ☐ Safety considerations for all key intersections and key road segments

## Summary

- ☐ Summary of impacts

## Mitigation

- ☐ Mitigation measure alternatives to address capacity, delay, pedestrian, bicycle, transit and safety issues caused by or exacerbated by the development
- ☐ Proposed mitigation measures
- ☐ Proposed improvements to development parking and circulation routes
- ☐ Mitigation measure affects (include projected LOS calculations and / or crash reduction factors as applicable)
- ☐ Conclusion

## Typical Reporting Requirements:

- Submit electronic data/files compatible with Microsoft Office products, latest release of Autodesk AutoCAD, Trafficware Synchro Studio 7, and MacTrans HCS+

KINNEY ENGINEERING, LLC

# MEMORANDUM

| | |
|---|---|
| **TO:** | City of Homer, Alaska State Department of Transportation and Public Facilities |
| **FROM:** | Randy Kinney, PE, PTOE, Kinney Engineering, LLC |
| **DATE:** | August 29, 2023 |
| **SUBJECT:** | Pre-Analysis Meeting Analysis |

Doyon, Limited is proposing the Lighthouse Village Development in Homer, Alaska. The development is a hotel with on-site employee housing. The Homer City Code indicates that a Traffic Impact Analysis (TIA) is required; however, it is not clear to us from a search of the code if there is a traffic threshold that will trigger a TIA.

A State of Alaska Department of Transportation and Public Facilities (DOT&PF) driveway permit will be required for access to the State-owned Homer Spit Road. If the development trip generation exceeds more than 100 trips per hour, the DOT&PF will require a TIA.

As such, both DOT&PF and the City of Homer are overseeing agencies for a Traffic Impact Analysis for this development. DOT&PF requires a Pre-Analysis Meeting to address specific issues and that is the subject matter for this memorandum.

## 1 Project Description

The development will be constructed on two parcels owned by Doyon Limited.

- **PARCEL ID: 18101034**: Legal Description- T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0940051 BAYVIEW SUB NO 6 LOT 164-A; Address- 1563 HOMER SPIT RD
- **PARCEL ID: 18101035**: Legal Description- T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0940051 BAYVIEW SUB NO 6 LOT 164-B; Address- 1663 HOMER SPIT RD

These parcels are shown in the vicinity map, Figure 1 on page 2.

Womer & Associates (W&A) is preparing plans for the development. The key points of the development are provided by W&A are listed below.

1. The hotel is a 4 story structure.
2. The hotel room count is 100 guestrooms.
3. The hotel Gross Floor Area (GFA) is 112,000 square feet (sf).
4. The employee housing is 25 rooms.
5. Employee housing GFA is 12,992 sf.

A conceptual site plan is presented in Figure 2 on page 2.


Source: [Geocortex Viewer for HTML5 (kpb.us) https://gis.kpb.us/map/index.html?viewer=basic](https://gis.kpb.us/map/index.html?viewer=basic)

*Figure 1: Vicinity Map and Hotel Development Site*


*Figure Source: Womer and Associates Plans*

*Figure 2: Conceptual Site Plan*

# 2 Pre-Analysis Meeting Requirements

These Pre-Analysis Meeting requirements are found on the webpage Alaska DOT&PF - Statewide Design & Engineering Services - D&CS - Traffic & Safety (HSIP) at this address: https://dot.alaska.gov/stwddes/dcstraffic/tia/pop_tia_checklist.shtml. These are summarized here:

> *"The developer and the registered engineer that will sign and seal the TIA must meet with the DOT&PF Regional Traffic & Safety engineer and Right-of-Way agent before beginning the TIA. At the meeting, the following will be determined:*
> - *The design year (This is typically the buildout year or 10 years beyond the buildout year, depending on the development size and location)*
> - *The study area*
> - *Key intersections and key road segments to consider/evaluate in the TIA*
> - *The projected area-wide traffic growth rate*
> - *Level of Service (LOS) standards*
> - *Other planned developments to consider*
> - *Planned road improvements to consider*
> - *Any other items of note regarding the TIA"*

# 3 Trip Generation

Although not specifically required in the list above, trip generation is required to determine if a TIA will be required (DOT&PF), and to determine a design year.

## 3.1 Methodology

This trip generation analysis uses the methods and data of the Institute of Transportation (ITE) Trip Generation Manual (11th edition) and Trip Generation Handbook (3rd edition). ITE has developed a web application of the Trip Generation Manual, at this address https://itetripgen.org/, which was used in this analysis. Trip generation is computed by the product of an independent variable average rate and the corresponding independent variable value; or by a regression function equation using the independent variable. Not all data has the regression choice, but when available the Trip Generation Handbook provides a methodology for selecting whether to use average rates or regression equations in trip computations. This methodology is presented under Attachment B and is programmed by KE within an MS Excel spreadsheet.

ITE does not address the precise facility described by W&A's program in its land use data base for the combination of the hotel and employee housing. In such cases, the development is modeled conservatively as individual land uses selected from the ITE land use categories and then the individual sub-generator trips combined to estimate the total trips that will be generated by the new facility.

### 3.1.1 Hotel Trip Generation

ITE has land use (LU) classifications for several hotel types including:

- ***LU 310-Hotel.*** ITE description: "*A hotel is a place of lodging that provides sleeping accommodations and supporting facilities such as a full-service restaurant, cocktail lounge, meeting rooms, banquet room, and convention facilities. A hotel typically provides a swimming pool or another recreational facility such as a fitness room*." The proposed development aligns with this description.

- ***LU 311-All Suites Hotel***: ITE description: *"An all suites hotel is a place of lodging that provides sleeping accommodations, a small restaurant and lounge, and small amounts of meeting space. Each*

*suite includes a sitting room and separate bedroom. An in-room kitchen is often provided."* The proposed development will have some suites, but is not an all suite hotel. As such, the development doe not align with this description and is not used.

- ***LU 312-Business Hotel***: ITE description: *"A business hotel is a place of lodging aimed toward the business traveler but also accommodates a growing number of recreational travelers. These hotels provide sleeping accommodations and other limited facilities, such as a breakfast buffet bar and afternoon beverage bar. Some provide a full-service restaurant geared toward hotel guests. Some provide a swimming pool; most provide fitness facilities. Limited space for meeting facilities may be provided. Each unit is a large single room."* The proposed development does not align entirely with this land use description, and LU-310 appears to fit better. That being the case, LU 312 will not be used.

- ***LU 320-Motel***: ITE description: *"A motel is a place of lodging that provides sleeping accommodations and provides little or no meeting space and few supporting facilities. Exterior corridors accessing rooms (immediately adjacent to a parking lot) is common for a motel."* The proposed development does not align with this description.

- ***LU 330-Resort Hotel.*** ITE description: *"A resort hotel is similar to a hotel (Land Use 310) in that it provides sleeping accommodations, full-service restaurants, cocktail lounges, retail shops, and guest services. The primary difference is that a resort hotel caters to the tourist and vacation industry, often providing a wide variety of recreational facilities/programs (e.g., golf courses, tennis courts, beach access, or other amenities) rather than convention and meeting business."* The proposed development does not align entirely with this land use description, and LU-310 appears to fit better. That being the case, LU 330 will not be used.

**ITE LU 310-Hotel** is the category used for the hotel trip generation. The category description and data summary, excerpted from https://itetripgen.org/, is included under Attachment A. This analysis uses General Urban/Suburban setting data. LU 310 has three independent variables that may be applied to the analysis including Rooms, Occupied Rooms, and Employees. Rooms is the variable applied to this analysis, which for the proposed hotel has a value of 100. The outputs of the computations are vehicle trips.

### 3.1.2 Employee Housing Trip Generation

The 25-unit employee housing is a seasonal dormitory facility with single and double occupancy rooms, each with its own bathroom (toilet, sink, shower) closet, storage, desks and beds. There is a common kitchen and dining area and a common laundry room. Employees that reside in this facility will walk to and from the hotel and will have no need to access the hotel site with a vehicle. There is no ITE land use that describes this this type of facility.

However, the hotel trip generation rates presented in ITE are intended to include guest, employee, vendor, and other types of trips. Providing employee housing on-site results in a reduction of employee vehicle trips for the hotel. Therefore, by applying the full hotel trip generation rates to this analysis without deduction for staff on-site walking trips is a conservative approach in which we may ignore any incidental vehicle trips generated by employee housing.

### 3.1.3 Trip Generation Analysis Periods

Of interest to the Alaska DOT&PF is the peak hour trip totals during any one hour as cited above in the Introduction. In fact, ITE presents peak hour generation of many land use categories for the following time cases:

- ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am*** – This hour typically is concurrent with the morning commuting peak hour.

- ***Weekday, AM Peak Hour of Generator*** – This hour depicts the peak traffic activity of the LU generator that will occur during the morning, typically business hours before noon.
- ***Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm*** – This hour typically is concurrent with the evening commuting peak hour.
- ***Weekday, PM Peak Hour of Generator*** – This hour depicts the peak traffic activity of the LU generator that will occur during the afternoon, evening, or night periods.
- ***Saturday, Peak of Generator*** – This hour depicts the peak traffic activity of the LU generator that will occur during anytime on a Saturday during the morning, afternoon, evening, or night periods.
- ***Sunday, Peak of Generator*** – This hour depicts the peak traffic activity of the LU generator that will occur during anytime on a Sunday during the morning, afternoon, evening, or night periods.

.

## 3.2 Analysis

Trip generation computations for the time cases are presented in the table below, as computed by the ITE app https://itetripgen.org/.

*Table 1: LU 310 Hotel Trip Generation for Peak Hours*

| **Time Period (Method: Average Rate or Regression Equation, As Recommended by ITE Trip Generation Handbook Method, Attachment B)** | **Independent Variable (IV)** | **IV Value (X)** | **Average Rate or Equation** | **Computed Trips** | **Entering Trips** | **Exiting Trips** |
|---|---|---|---|---|---|---|
| Weekday, Peak Hour of Adjacent Traffic, One Hour between 7 am and 9 am (Regression Equation) | Rooms | 100 | T = 0.50(X) - 7.45 | 43 | 24 | 19 |
| Weekday, AM Peak Hour of Generator (Regression Equation) | | | Ln(T) = 0.86 Ln(X) + 0.12 | 59 | 31 | 28 |
| Weekday, Peak Hour of Adjacent Traffic, One Hour between 4 pm and 6 pm (Regression Equation) | | | T = 0.74(X) - 27.89 | 46 | 24 | 22 |
| Weekday, PM Peak Hour of Generator (Regression Equation) | | | Ln(T) = 0.95 Ln(X) - 0.27 | 61 | 35 | 26 |
| **Saturday, Peak of Generator (Regression Equation)** | | | **T = 0.69(X) + 5.95** | **75** | **42** | **33** |
| Sunday, Peak of Generator (Average Rate) | | | 0.57 | 57 | 27 | 30 |

As the table shows, the highest peak hour volume occurs on a Saturday with 75 vehicle trips generated in one hour.

## 3.3 Need for a TIA Analysis

The DOT&PF threshold requirement for a Traffic Impact Analysis is 100 trips per hour. This requirement is defined in 17 AAC 10.060. Driveways not part of highway construction.:

> *"(c) If a development is projected to generate more than 100 vehicle trips on a highway during any hour of the day, or the traffic generated is expected to detract from the safety of the highway, an applicant must perform a traffic impact analysis that meets the requirements of 17 AAC 10.070."*

On a traffic volume basis, DOT&PF does not require a TIA for this development because the development peak hour trips are less than 100. However, it may be required for other issues.

The City of Homer has no threshold peak hour volumes that trigger requirements for TIAs.

## 3.4 Trip Generation Results Action/Decision

- Confirm Approve Trip Generation Results.
- The DOT&PF and COH should confirm that a TIA should be conducted.

# 4 Design Year

## 4.1 Design Year Requirements

Both City of Homer and DOT&PF use a peak hour threshold of 250 trips per hour to determine if the analysis needs to include a design year that will occur 10 years after the opening year. If so, then the street system background traffic, that is traffic that will occur 10 years from opening, will need to be estimated with an approved growth rate. The development trip generated traffic remains constant throughout the analysis period, and will be added to the street system background traffic. For this development, the peak trip generation (75) will be less than 250 trips per hour. Therefore, the analysis need only consider background traffic and trip generated traffic that will occur during the opening year.

## 4.2 Design Year Action/Decision

- The DOT&PF and COH to review and confirm that the analysis only consider opening year.
- If so, KE will work with DOYON and W&A to determine opening year.
- If so, KE will prepare forecasts for background traffic during opening year in the study area.

# 5 Study Area-Intersections, Streets, and Pedestrian/Bike Facilities

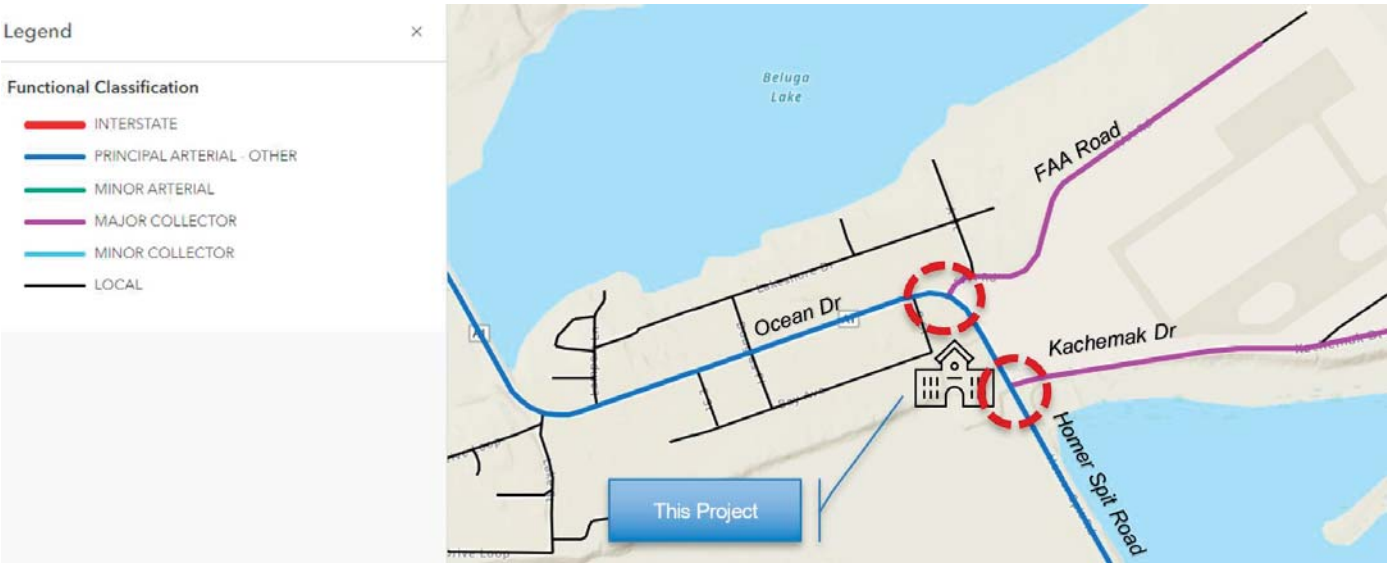
The Homer City Code states:

> ***21.76.050 Traffic impact analysis – Required elements.***
> *A traffic impact analysis prepared under this chapter must include consideration of:*
>
> *a. Intersections on streets or alleys where traffic on any approach is expected to increase as a result of the proposed development by at least five percent of the approach's capacity;*
>
> *b. Segments of streets or alleys between intersections where total traffic is expected to increase as a result of the proposed development by at least five percent of the segments' capacity;*
>
> *c. Intersections on streets or alleys where the safety of facilities will deteriorate as a result of the traffic generated by the development;*
>
> *d. Each driveway or approach road that will allow egress or ingress to a street for the proposed development;*
>
> *e. Parking and circulation routes within the proposed development, to the extent necessary to ensure that traffic does not back up onto a street; and*
>
> *f. Pedestrian and bicycle facilities that are a part of the street or alley to which a permit applicant seeks access. [Ord. 08-29, 2008].*

## 5.1 Intersections

Since this is an urbanized area, traffic flow regime will fall under interrupted flow. Intersections are the dominate factor in traffic operations.

The near vicinity study area roads functional classification is found at: Functional Classification (arcgis.com), https://akdot.maps.arcgis.com/apps/mapviewer/index.html?webmap=8d34059bbfed4fada20a4fdc2a138aca. This is shown in the following Figure 3 below.




*Source: https://akdot.maps.arcgis.com/apps/mapviewer/index.html?webmap=8d34059bbfed4fada20a4fdc2a138aca*

*Figure 3: Area Streets Functional Classification*

The Sterling Highway-Ocean Drive-Homer Spit Road connected roads are functionally classified as Principal Arterials. FAA Road and Kachemak Drive are functionally classified as Major Collectors. The FAA Road/Ocean Drive intersection and Kachemak Drive/Homer Spit Road intersection are in the immediate vicinity of the development and thus should be evaluated (circled).

There are no other major intersections to the south. The closest major intersection to the north is the Lake Street and Sterling Highway, about 1 mile from the proposed development. The estimated westbound approach hourly volume there is approximately 400 vehicles per hour. If all of the peak exiting traffic from the development (33 vehicles, see Table 1 on page 5) were to travel to the north through the intersection, then the Sterling/Lake westbound approach volume would increase 8%. However, traffic will distribute directionally to the south and east, as well as disperse along the corridor so that it is unlikely that the approaches at Sterling/Lake will exceed 5%.

We propose to only include the FAA Road/Ocean Drive intersection and Kachemak Drive/Homer Spit Road intersection in this TIA evaluation.

## 5.2 Segments

No roadway segments will be evaluated since intersections are the primary traffic operational control in interrupted flow regimes.

## 5.3 Pedestrians and Bicycles

Pedestrian and Bicycle safety will be evaluated at crossings resulting from the development.

## 5.4 Analysis Period

The peak hour of the generator occurs on a Saturday, and does not occur during the peak hours of the adjoining roadway network (morning and evening commuting times). We will superimpose the development's Saturday peak condition on evening commute background traffic condition, and use the development's peak morning condition on the morning commute background traffic condition.

## 5.5 Required Data for Study Area

KE will collect intersection turning movements for morning (7 am to 9 am) and evening (4 pm to 6 pm) peak hours. The counts will be adjusted for a seasonal summer peak hours using DOTPF CCS data, and the opening year using the traffic growth rate discussed below. Site trips from the development will be directionally distributed consistent with turning movements.

## 5.6 Study Area Action/Decision

- The DOT&PF and COH to review and confirm the proposed extents of analysis:
  - Intersections of Ocean Drive/FAA Road and Homer Spit Road
  - Pedestrian and Bicycle crossings
- The DOT&PF and COH to review and confirm analysis hour (summer peak) and site traffic distribution methods (current traffic patterns)

# 6 Project Area Growth Rate

## 6.1 Homer Transportation Plan

KE developed a 1% per year traffic growth rate for Homer.

## 6.2 Growth Rate Action/Decision

The DOT&PF and COH to review and confirm the proposed growth rate for analysis years.

# 7 Level of Service (LOS) standards

## 7.1 Code Requirements

The Homer City code states:

> ***21.76.040 Level of service minimums.***
> *The minimum acceptable LOS at intersections and on road segments both on the development's opening date and in the design year is:*
>
> *a. LOS C, if the LOS on the date of application is LOS C or better;*
>
> *b. LOS C, if the LOS on the date of application is LOS D;*
>
> *c. LOS D, if the LOS on the date of application is LOS E or poorer. [Ord. 08-29, 2008].*

The Alaska Administrative Code states:

> ***17 AAC 10.070. Traffic impact analysis.***
> *(b) Level of service (LOS) and operational analysis for a traffic impact analysis prepared under this section must be performed in accordance with the Transportation Research Board's publication Special*

*Report 209, Highway Capacity Manual (1997 Update). The minimum acceptable LOS at intersections and on road segments both on the development's opening date and in the design year is*

*(1) LOS C, if the LOS on the date of application is LOS C or better; or*

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

## 7.2 LOS Action/Decision

- Request that we adopt DOT&PF standards for this analysis. DOT&PF and COH to approve this.

# 8 Other Planned Developments To Consider

-
-
-

# 9 Planned Road Improvements To Consider

- Homer Master Transportation Plan
-
-
-

# 10 Any Other Items Of Note Regarding The TIA

- DOT&PF TIA Checklist is attached under Attachment C.
-
-
-

## Randy Kinney

**From:** Janette Keiser <JKeiser@ci.homer.ak.us>
**Sent:** Tuesday, September 5, 2023 6:14 PM
**To:** Randy Kinney; Ryan Foster; 'LeCroy, Orion (DOT)'; Ferguson, Cynthia L (DOT)
**Cc:** Jeanne M. Bowie
**Subject:** [EXT] RE: Pre-Analysis Meeting Report

Randy

1. **Re: Employee Housing trips**. I do not support the elimination of analyzing employee housing trip generation. First, I cannot rely on the developer's wishful intent that its employees use bikes and walk to the grocery store or Alice's, instead of using a car. Second, we need to be mindful about the record we are building, because it's all going to be subject to public disclosure at some point. In particular, we cannot avoid taking a step because we think it's not worth the effort, without a rational basis. Bottom line is that it is ok to do a basic level analysis and conclude that there is no need to go further, but we can't ignore it.
2. **Re: ROW vacation.** As I understand the City's rules on ROW vacation, the vacated ROW goes to the adjacent property owners – both of them. So, the Developer shouldn't depend on using the entire ROW it hopes will be vacated, for its development. Also, I understand the development will need a CUP, which means public hearings. I have to believe someone will be there strongly advocating for a natural buffer between the development and the adjacent property, which could limit the development's footprint. Further, Public Works is not going to support abandoning or vacating an active drainage channel.

Regards,
Jan

**Janette ("Jan") Keiser, PE**
**Director of Public Works**
**City of Homer**

**Office: 907-435-3141**
**Cell: 206-714-8955**

**From:** Randy Kinney <Randy.Kinney@kinneyeng.com>
**Sent:** Friday, September 1, 2023 11:49 AM
**To:** Janette Keiser <JKeiser@ci.homer.ak.us>; Ryan Foster <rfoster@ci.homer.ak.us>; 'LeCroy, Orion (DOT)' <orion.lecroy@alaska.gov>; Ferguson, Cynthia L (DOT) <cynthia.ferguson@alaska.gov>
**Cc:** Jeanne M. Bowie <Jeanne.Bowie@kinneyeng.com>
**Subject:** RE: Pre-Analysis Meeting Report



Hi Jan,
Thanks for the comments. I'm including Cynthia Ferguson and Orion LeCroy from DOTPF in this reply so that they can view your comments as well.

I have called Zach Dunlap at DOYON to address questions raised during the Pre-Analysis Meeting.

- On the question regarding employee housing trip generation, Zach stated that the employees residing there will be seasonal and from out of town. DOYON's intent is for them to use active transportation (walk, bike, shuttle

## Randy Kinney

**From:** LeCroy, Orion (DOT) <orion.lecroy@alaska.gov>
**Sent:** Friday, September 8, 2023 8:50 AM
**To:** Randy Kinney
**Cc:** Jeanne M. Bowie; Janette Keiser; Ryan Foster; Ferguson, Cynthia L (DOT)
**Subject:** [EXT] RE: Pre-Analysis Meeting Report

Hi Randy,

Please find our comments for the Lighting Village Development Pre-Analysis meeting memo from 8-30-23.

- Section 1 Paragraph 1: If required, update description of parcels to reflect proposed development. Figure 2 shows development of third parcel and B Street ROW, although we understand that this has not been finalized.
- Section 1 Item 4: Identify employee housing as a separate facility with rooms in addition to the hotel.
- Section 1 Figure 1: If required, update to include all parcels proposed for development.
- Section 3.1.1 Selected Land Use: We conditionally agree with LU 310-Hotel if :
    - The TIA confirms that staff housing is limited to onsite employees and additional trips will not be generated by occupants that may work elsewhere.
    - The TIA confirms that anticipated staff schedules or days off would not further contribute to the peak hour trips. If this can not be determined, we recommend inclusion of staff housing as an additional trip generator.
- Section 3.2: Non-motorized user trip generation and connectivity.
    - Homer Spit Road: Because the proposed development is tourism based and across Homer Spit Road from an existing shared use pathway extending down Homer Spit, the TIA should consider non-motorized trip generation at the site. We would anticipate additional ped-bike crossings at Kachemak Bay Drive intersection to walk/bike down the spit. The TIA should evaluate the existing crossing to determine if mitigation is needed based on the increased demand. The evaluation should consider ADA connectivity, sight distances, and gaps in traffic (construction year) to determine whether additional electrical warning or regulatory devices are warranted per ATM Table 4A-102.
    - B Street/Bay Ave: If proposed as part of the development or mitigation, the TIA should evaluate pedestrian crossing sight distance and ADA connectivity at the B Street/Bay Ave non-motorized connection.
- Section 3.4: DOT&PF recommends a TIA with consideration of non-motorized movements and safety.
- Section 4.2: We agree with opening year only, with traffic growth rate to match rate identified in Homer Transportation Plan (Section 6.1 outlines 1% per year growth).
- Section 5.1 Paragraph 4: Recommend a check or calibration with hourly flow rate data for Station ID: 51008000. Site Data>Volume>Hourly Direction. https://alaskatrafficdata.drakewell.com/publicmultinodemap.asp
- Section 5.5: May require a longer count duration to capture weekday am/pm peaks and weekend peaks. Count stations show high two-way volumes mid-day on Saturday and Sunday. Consider video counts that include existing non-motorized counts at crossing as baseline for potential increases.
- Section 9: Two DOT&PF projects in design:
    - Sterling Highway: MP 169 to 175 Pavement Preservation (CFHWY00857) – estimated construction 2025 or beyond.
    - Kachemak Drive MP 0-3.5 Pavement Preservation (CFHWY00602) – estimated construction 2025 or beyond.

Please let me know if you have any questions.

Thank you,
J. Orion LeCroy, PE
HSIP Engineer
Alaska DOT&PF, CR
4111 Aviation Ave.
Anchorage, AK 99502
Office (907) 269-0653
Personal Cell (907) 382-0134

**From:** Randy Kinney <Randy.Kinney@kinneyeng.com>
**Sent:** Tuesday, September 5, 2023 6:45 PM
**To:** Janette Keiser <JKeiser@ci.homer.ak.us>; Ryan Foster <rfoster@ci.homer.ak.us>; LeCroy, Orion (DOT) <orion.lecroy@alaska.gov>; Ferguson, Cynthia L (DOT) <cynthia.ferguson@alaska.gov>
**Cc:** Jeanne M. Bowie <Jeanne.Bowie@kinneyeng.com>
**Subject:** RE: Pre-Analysis Meeting Report



Ok Jan, message received on the employee housing.

DOYON owns both parcels flanking the ROW. However, hearing some of the other issues/requirements, I wonder should the ROW vacation be resolved before the TIA goes forward? My proposed approach was to assume the development shown in the site plan would be approved (with ROW vacation) for the TIA, which results in higher trips (more conservative from the City/DOT viewpoint). If it wasn't going forward, I would expect that the buildings shrink with the site, and perhaps the employee housing goes away.

I am available if you and Ryan would like to talk more about this.

**RANDY KINNEY, P.E., PTOE**

**KINNEY ENGINEERING, LLC**
randykinney@kinneyeng.com
3909 Arctic Boulevard, Ste 400, Anchorage, AK 99503
Phone 907.344.7575 Fax 907.349.7496
www.kinneyeng.com

**From:** Janette Keiser <JKeiser@ci.homer.ak.us>
**Sent:** Tuesday, September 5, 2023 6:14 PM
**To:** Randy Kinney <Randy.Kinney@kinneyeng.com>; Ryan Foster <rfoster@ci.homer.ak.us>; 'LeCroy, Orion (DOT)' <orion.lecroy@alaska.gov>; Ferguson, Cynthia L (DOT) <cynthia.ferguson@alaska.gov>
**Cc:** Jeanne M. Bowie <Jeanne.Bowie@kinneyeng.com>
**Subject:** [EXT] RE: Pre-Analysis Meeting Report

Randy

1. **Re: Employee Housing trips**. I do not support the elimination of analyzing employee housing trip generation. First, I cannot rely on the developer's wishful intent that its employees use bikes and walk to the grocery store or Alice's, instead of using a car. Second, we need to be mindful about the record we are building, because it's all going to be subject to public disclosure at some point. In particular, we cannot avoid taking a step because we think it's not worth the effort, without a rational basis. Bottom line is that it is ok to do a basic level analysis and conclude that there is no need to go further, but we can't ignore it.
2. **Re: ROW vacation.** As I understand the City's rules on ROW vacation, the vacated ROW goes to the adjacent property owners – both of them. So, the Developer shouldn't depend on using the entire ROW it hopes will be vacated, for its development. Also, I understand the development will need a CUP, which means public hearings. I have to believe someone will be there strongly advocating for a natural buffer between the

development and the adjacent property, which could limit the development's footprint. Further, Public Works is not going to support abandoning or vacating an active drainage channel.

Regards,
Jan

**Janette ("Jan") Keiser, PE**
**Director of Public Works**
**City of Homer**

**Office: 907-435-3141**
**Cell: 206-714-8955**

**From:** Randy Kinney <Randy.Kinney@kinneyeng.com>
**Sent:** Friday, September 1, 2023 11:49 AM
**To:** Janette Keiser <JKeiser@ci.homer.ak.us>; Ryan Foster <rfoster@ci.homer.ak.us>; 'LeCroy, Orion (DOT)' <orion.lecroy@alaska.gov>; Ferguson, Cynthia L (DOT) <cynthia.ferguson@alaska.gov>
**Cc:** Jeanne M. Bowie <Jeanne.Bowie@kinneyeng.com>
**Subject:** RE: Pre-Analysis Meeting Report



Hi Jan,
Thanks for the comments. I'm including Cynthia Ferguson and Orion LeCroy from DOTPF in this reply so that they can view your comments as well.

I have called Zach Dunlap at DOYON to address questions raised during the Pre-Analysis Meeting.

- On the question regarding employee housing trip generation, Zach stated that the employees residing there will be seasonal and from out of town. DOYON's intent is for them to use active transportation (walk, bike, shuttle bus/van?) for off-site trips. In fact, they are contemplating providing bicycles for employee use. There will be a manager apartment that will likely have a vehicle. So, with this information, please let me know if we can forego computing trip generation for employee housing. As we noted in the report and during our meeting, the employee housing dormitory doesn't fit well into an ITE land use, and we would likely have to adapt another residential LU for the computations. However, we believe that employee trips from the dormitory will not contribute to the peak hours that we are evaluating and therefore request that the employee housing not be included in the trip generation calculations.

- On the question of the development intrusion into the existing B Street ROW south of Bay Avenue and onto the third DOYON parcel west of the B Street ROW, DOYON intends to pursue an acquisition/transfer of the B Street ROW. We do not have details on how that will go forward. Zach is aware that the ROW is currently contains a drainage channel from Bay Avenue. Parking and the Employee Housing will be located on the abandoned or vacated ROW. For purposes of the Traffic Impact Analysis, the current development plan is based on the site plan and ROW transfer outcome, and represents the highest development level. As such, we intend to base the traffic analysis on that site plan and development, which from the traffic analysis perspective, presents the highest trip generation (worst) case.

- DOYON does not want to connect to Bay Avenue or B Street, except with the trail as shown on the site plan. I recommend that the TIA determines if the additional connection is needed for mitigation, but if not, it would not be pursued or evaluated..

Please consider the above recommendations and requests. Let us know if you all agree, or if we need to address these items in the TIA report.

**RANDY KINNEY, P.E., PTOE**

**KINNEY ENGINEERING, LLC**
randykinney@kinneyeng.com
3909 Arctic Boulevard, Ste 400, Anchorage, AK 99503
Phone 907.344.7575 Fax 907.349.7496
www.kinneyeng.com

**From:** Janette Keiser <JKeiser@ci.homer.ak.us>
**Sent:** Thursday, August 31, 2023 1:03 PM
**To:** Randy Kinney <Randy.Kinney@kinneyeng.com>; Ryan Foster <rfoster@ci.homer.ak.us>
**Cc:** Jeanne M. Bowie <Jeanne.Bowie@kinneyeng.com>
**Subject:** [EXT] RE: Pre-Analysis Meeting Report

Hello Randy and Ryan
I apologize for missing the meeting yesterday. One of the candidates for the PW Director position was here and I got caught up on an interview with him.

I have reviewed the Pre-Analysis Meeting Analysis and have the following comments:

1. **Page 4, Section 3.1.2 – Employee Housing Trip Generation.** While employees will not need vehicles to travel between the dormitory and the hotel, the employees will no doubt make personal trips from the dormitory to the grocery store, Alice's and other personal destinations. These trips would not be generated but for the hotel, and should be taken into account.
2. **Page 9, Section 9 – Planned Road Improvements to Consider.** This section should mention the Bay Avenue Pavement Restoration Project.

Thanks,
Jan

**Janette ("Jan") Keiser, PE**
**Director of Public Works**
**City of Homer**

**Office: 907-435-3141**
**Cell: 206-714-8955**

**From:** Randy Kinney <Randy.Kinney@kinneyeng.com>
**Sent:** Wednesday, August 30, 2023 11:48 AM
**To:** Ryan Foster <rfoster@ci.homer.ak.us>; Janette Keiser <JKeiser@ci.homer.ak.us>; Ferguson, Cynthia L (DOT) <cynthia.ferguson@alaska.gov>; 'LeCroy, Orion (DOT)' <orion.lecroy@alaska.gov>
**Cc:** Jeanne M. Bowie <Jeanne.Bowie@kinneyeng.com>
**Subject:** Pre-Analysis Meeting Report

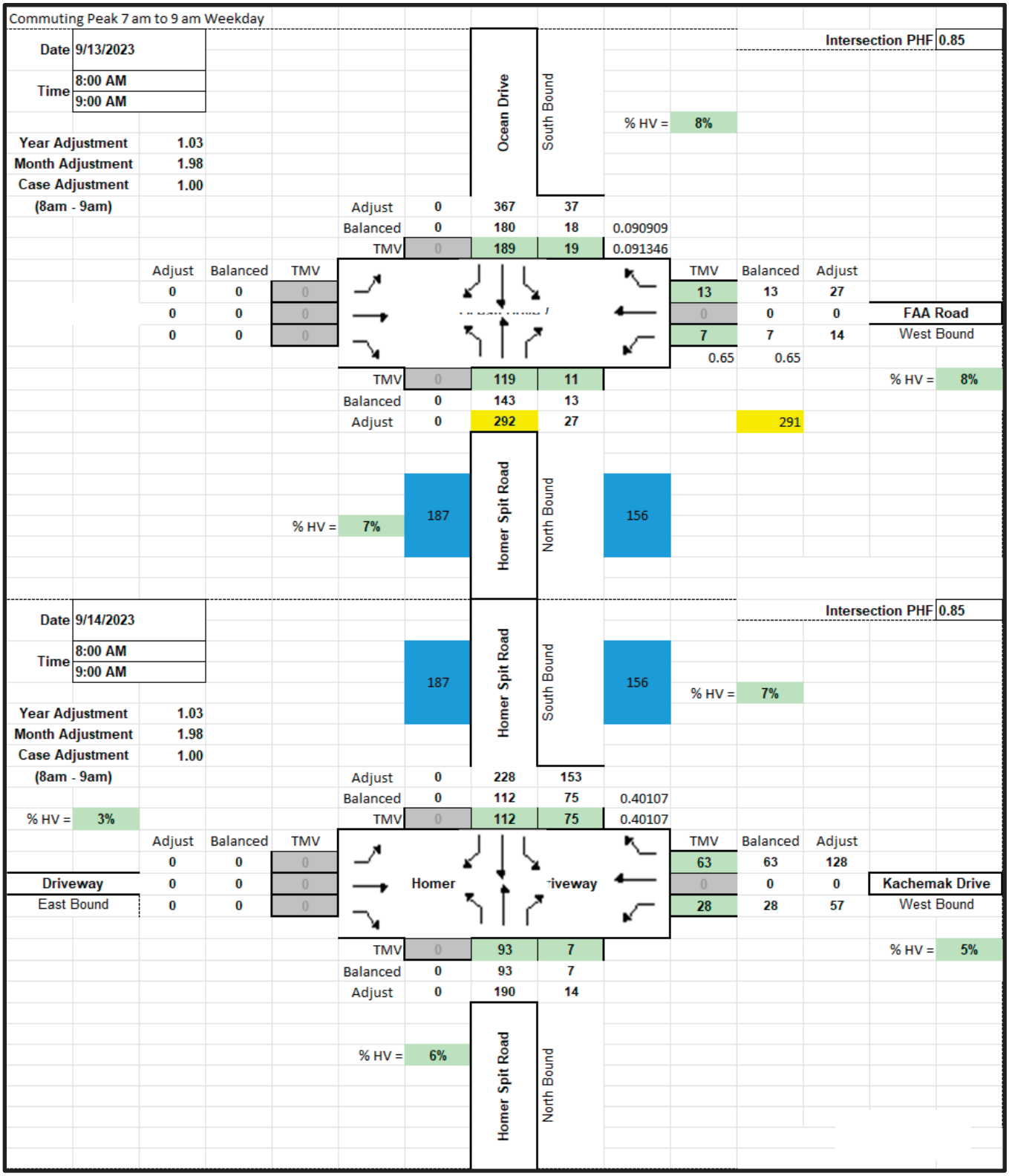
CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

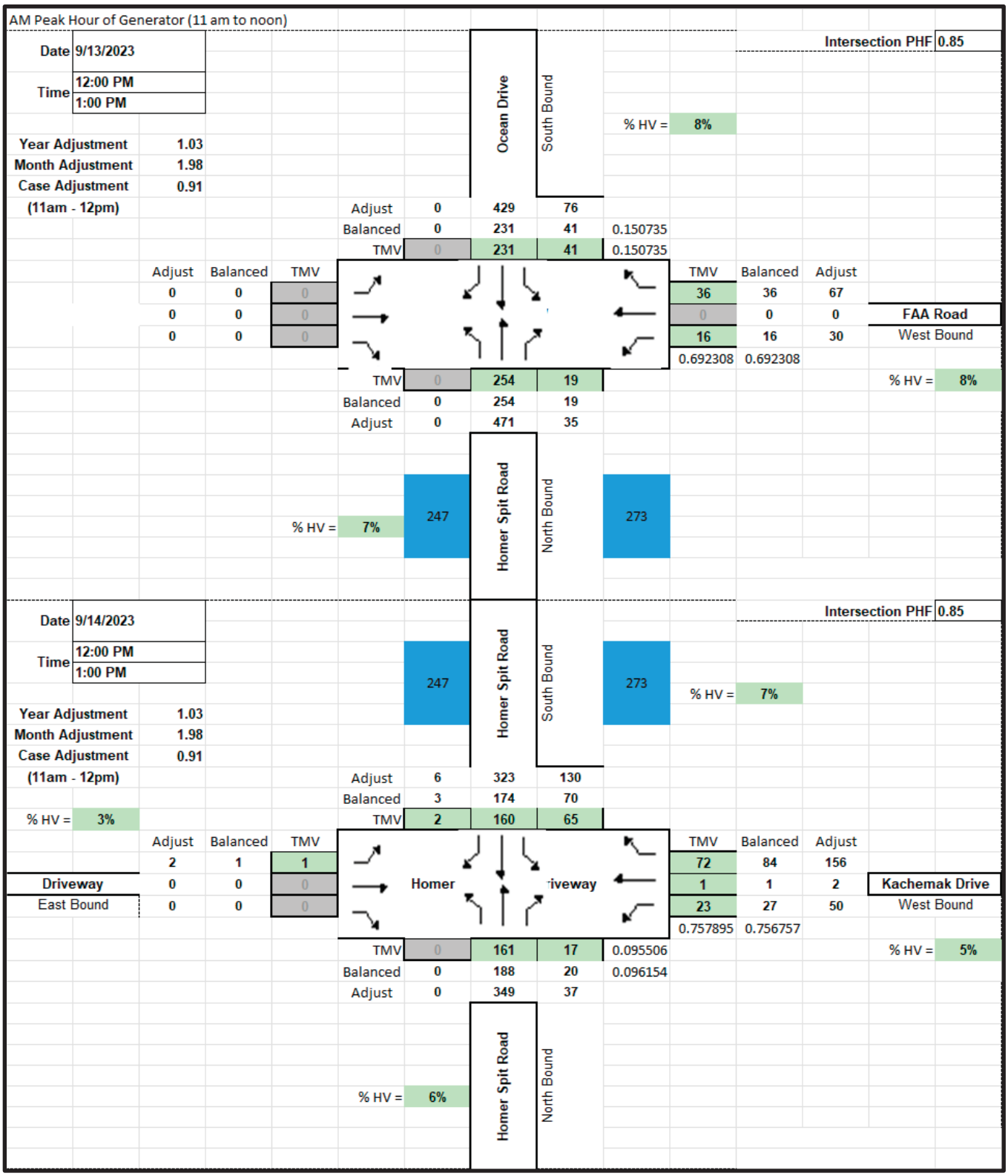
Is attached.  I apologize for the tardiness, but I can go through it with you at the meeting.

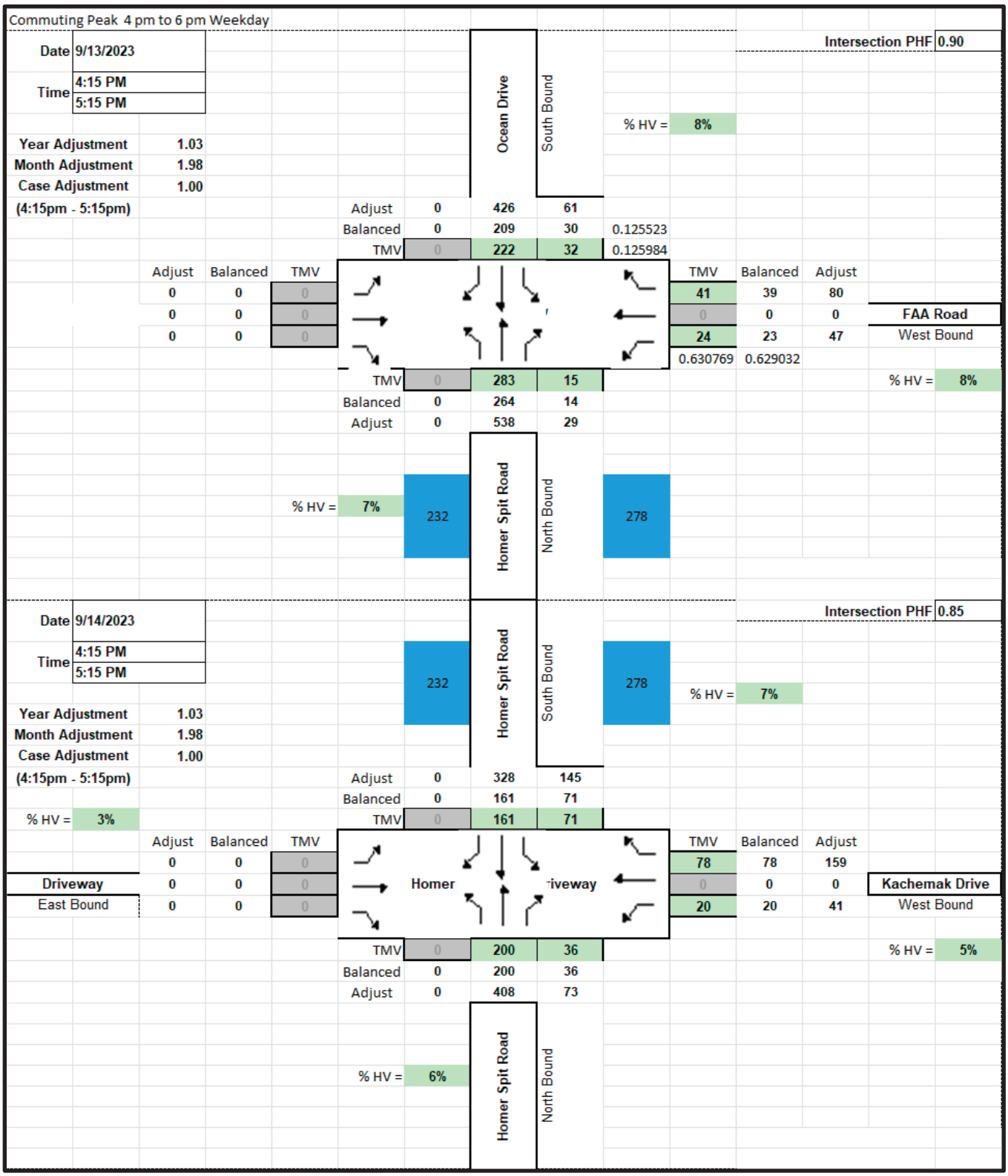
**RANDY KINNEY, P.E., PTOE**

**KINNEY ENGINEERING, LLC**
randykinney@kinneyeng.com
3909 Arctic Boulevard, Ste 400, Anchorage, AK 99503
Phone 907.344.7575  Fax 907.349.7496
www.kinneyeng.com

# Attachment B: Intersection Turning Movements for Base Traffic: September 2023 Counts Converted to Summer Peak 2026


Commuting Peak 7 am to 9 am Weekday
Date 9/13/2023
Time 8:00 AM
9:00 AM
Intersection PHF 0.85
Ocean Drive
South Bound
% HV = 8%
Year Adjustment 1.03
Month Adjustment 1.98
Case Adjustment 1.00
(8am - 9am)
Adjust 0 367 37
Balanced 0 180 18 0.090909
TMV 0 189 19 0.091346
Adjust Balanced TMV
0 0 0
0 0 0
0 0 0
TMV Balanced Adjust
13 13 27
0 0 0
7 7 14
0.65 0.65
FAA Road
West Bound
TMV 0 119 11
Balanced 0 143 13
Adjust 0 292 27
291
% HV = 8%
187
Homer Spit Road
North Bound
156
% HV = 7%
Date 9/14/2023
Time 8:00 AM
9:00 AM
Intersection PHF 0.85
187
Homer Spit Road
South Bound
156
% HV = 7%
Year Adjustment 1.03
Month Adjustment 1.98
Case Adjustment 1.00
(8am - 9am)
Adjust 0 228 153
Balanced 0 112 75 0.40107
% HV = 3%
TMV 0 112 75 0.40107
Adjust Balanced TMV
0 0 0
Driveway
East Bound
0 0 0
0 0 0
TMV Balanced Adjust
63 63 128
0 0 0
28 28 57
Kachemak Drive
West Bound
TMV 0 93 7
Balanced 0 93 7
Adjust 0 190 14
% HV = 6%
Homer Spit Road
North Bound
% HV = 5%


AM Peak Hour of Generator (11 am to noon)
Date 9/13/2023
Time 12:00 PM
1:00 PM
Year Adjustment 1.03
Month Adjustment 1.98
Case Adjustment 0.91
(11am - 12pm)
Intersection PHF 0.85
Ocean Drive
South Bound
% HV = 8%
Adjust 0 429 76
Balanced 0 231 41 0.150735
TMV 0 231 41 0.150735
Adjust Balanced TMV
0 0 0
0 0 0
0 0 0
TMV Balanced Adjust
36 36 67
0 0 0
16 16 30
0.692308 0.692308
FAA Road
West Bound
TMV 0 254 19
Balanced 0 254 19
Adjust 0 471 35
% HV = 8%
% HV = 7%
247
Homer Spit Road
North Bound
273
Date 9/14/2023
Time 12:00 PM
1:00 PM
Year Adjustment 1.03
Month Adjustment 1.98
Case Adjustment 0.91
(11am - 12pm)
Intersection PHF 0.85
247
Homer Spit Road
South Bound
273
% HV = 7%
Adjust 6 323 130
Balanced 3 174 70
% HV = 3%
TMV 2 160 65
Adjust Balanced TMV
2 1 1
Driveway
East Bound
0 0 0
0 0 0
Homer
iveway
TMV Balanced Adjust
72 84 156
1 1 2
23 27 50
0.757895 0.756757
Kachemak Drive
West Bound
TMV 0 161 17 0.095506
Balanced 0 188 20 0.096154
Adjust 0 349 37
% HV = 5%
% HV = 6%
Homer Spit Road
North Bound


Commuting Peak 4 pm to 6 pm Weekday
Date 9/13/2023
Time 4:15 PM
5:15 PM
Intersection PHF 0.90
Year Adjustment 1.03
Month Adjustment 1.98
Case Adjustment 1.00
(4:15pm - 5:15pm)
Ocean Drive
South Bound
% HV = 8%
Adjust 0 426 61
Balanced 0 209 30 0.125523
TMV 0 222 32 0.125984
Adjust Balanced TMV
0 0 0
0 0 0
0 0 0
TMV Balanced Adjust
41 39 80
0 0 0
24 23 47
0.630769 0.629032
FAA Road
West Bound
TMV 0 283 15
Balanced 0 264 14
Adjust 0 538 29
% HV = 8%
% HV = 7%
232
Homer Spit Road
North Bound
278
Date 9/14/2023
Time 4:15 PM
5:15 PM
Intersection PHF 0.85
232
Homer Spit Road
South Bound
278
% HV = 7%
Year Adjustment 1.03
Month Adjustment 1.98
Case Adjustment 1.00
(4:15pm - 5:15pm)
Adjust 0 328 145
Balanced 0 161 71
% HV = 3%
TMV 0 161 71
Adjust Balanced TMV
0 0 0
Driveway
East Bound
0 0 0
0 0 0
TMV Balanced Adjust
78 78 159
0 0 0
20 20 41
Kachemak Drive
West Bound
TMV 0 200 36
Balanced 0 200 36
Adjust 0 408 73
% HV = 5%
% HV = 6%
Homer Spit Road
North Bound

# Attachment C: ITE Trip Generation Manual Land Use Descriptions and Generation Data

## Hotel (Land Use Code 310: Lodging, Hotel)

Follows this page.

# Land Use: 310
# Hotel

## Description

A hotel is a place of lodging that provides sleeping accommodations and supporting facilities such as a full-service restaurant, cocktail lounge, meeting rooms, banquet room, and convention facilities. A hotel typically provides a swimming pool or another recreational facility such as a fitness room. All suites hotel (Land Use 311), business hotel (Land Use 312), motel (Land Use 320), and resort hotel (Land Use 330) are related uses.

## Additional Data

Twenty-five studies provided information on occupancy rates at the time the studies were conducted. The average occupancy rate for these studies was approximately 82 percent.

Some properties in this land use provide guest transportation services (e.g., airport shuttle, limousine service, golf course shuttle service) which may have an impact on the overall trip generation rates.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, District of Columbia, Florida, Georgia, Indiana, Minnesota, New York, Ontario (CAN), Pennsylvania, South Dakota, Texas, Vermont, Virginia, and Washington.

***For all lodging uses, it is important to collect data on occupied rooms as well as total rooms in order to accurately predict trip generation characteristics for the site.***

***Trip generation at a hotel may be related to the presence of supporting facilities such as convention facilities, restaurants, meeting/banquet space, and retail facilities. Future data submissions should specify the presence of these amenities. Reporting the level of activity at the supporting facilities such as full, empty, partially active, number of people attending a meeting/banquet during observation may also be useful in further analysis of this land use.***

## Source Numbers

170, 260, 262, 277, 280, 301, 306, 357, 422, 507, 577, 728, 867, 872, 925, 951, 1009, 1021, 1026, 1046

# Hotel
# (310)

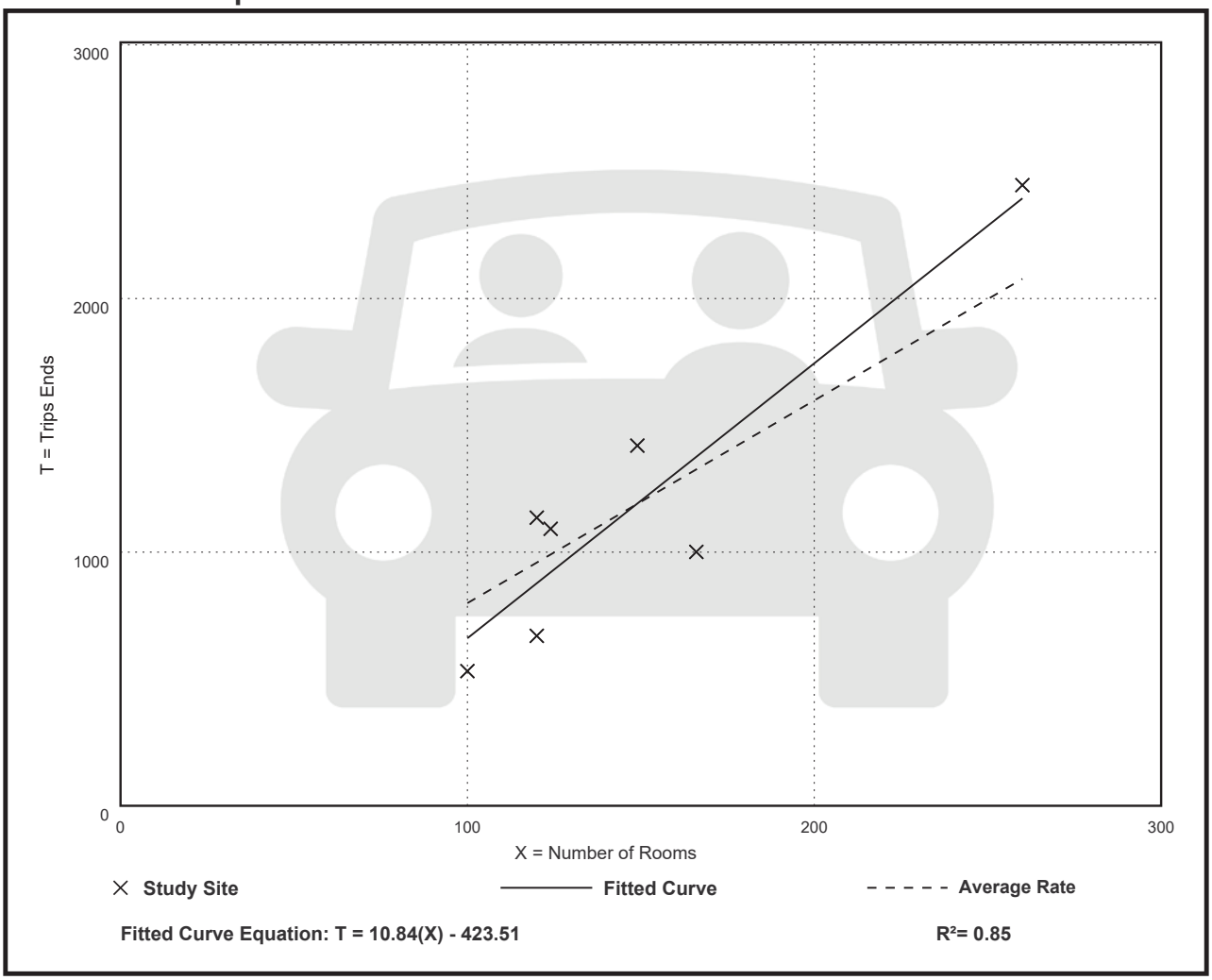
**Vehicle Trip Ends vs: Rooms**
**On a: Weekday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 7
Avg. Num. of Rooms: 148
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 7.99 | 5.31 - 9.53 | 1.92 |

## Data Plot and Equation




**Fitted Curve Equation: T = 10.84(X) - 423.51**

**$R^2$= 0.85**

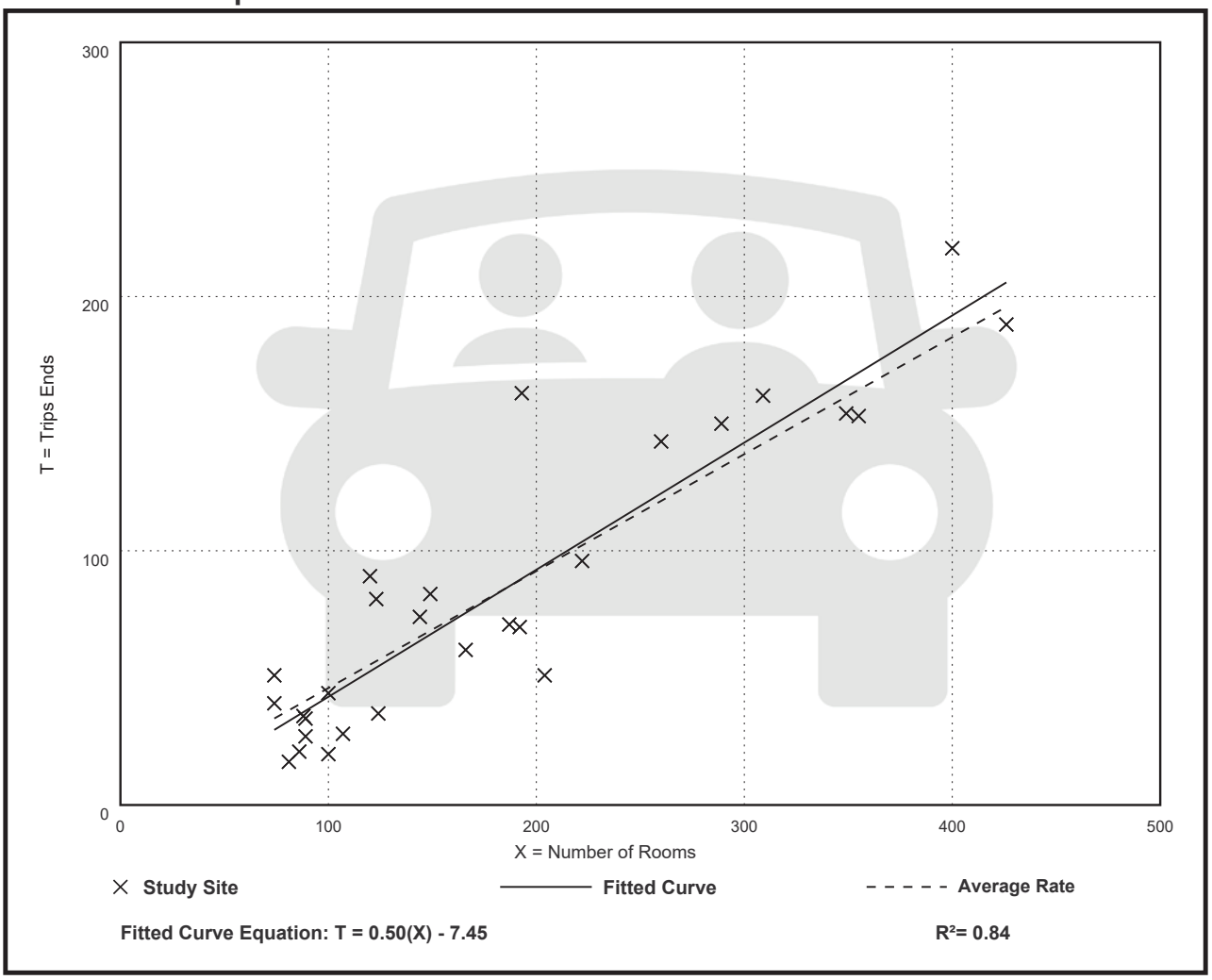
# Hotel
# (310)

**Vehicle Trip Ends vs: Rooms**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 7 and 9 a.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 28
Avg. Num. of Rooms: 182
Directional Distribution: 56% entering, 44% exiting

## Vehicle Trip Generation per Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.46 | 0.20 - 0.84 | 0.14 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.50(X) - 7.45**

**$R^2$= 0.84**

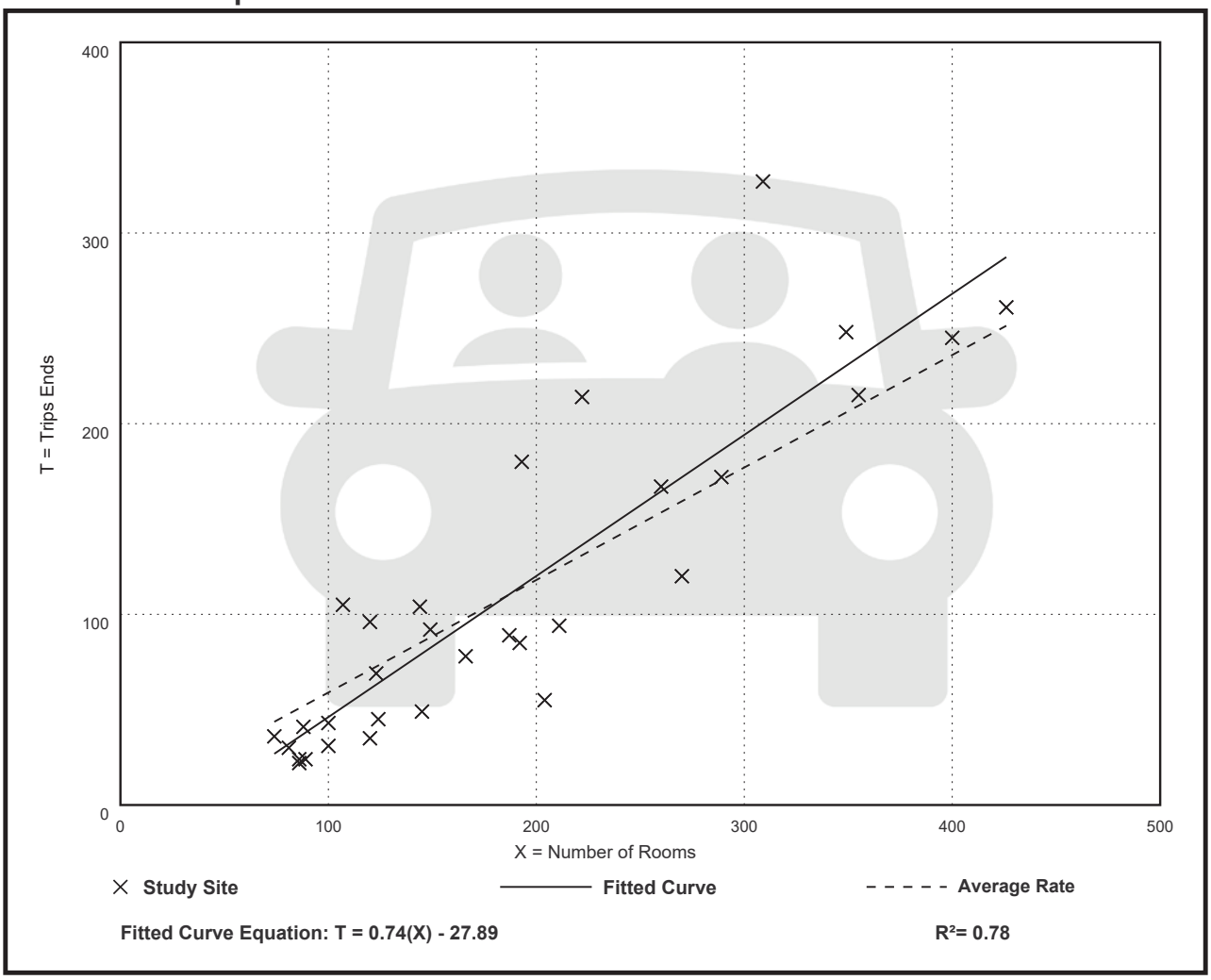
# Hotel
# (310)

**Vehicle Trip Ends vs: Rooms**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 4 and 6 p.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 31
Avg. Num. of Rooms: 186
Directional Distribution: 51% entering, 49% exiting

## Vehicle Trip Generation per Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.59 | 0.26 - 1.06 | 0.22 |

## Data Plot and Equation



# Hotel
# (310)

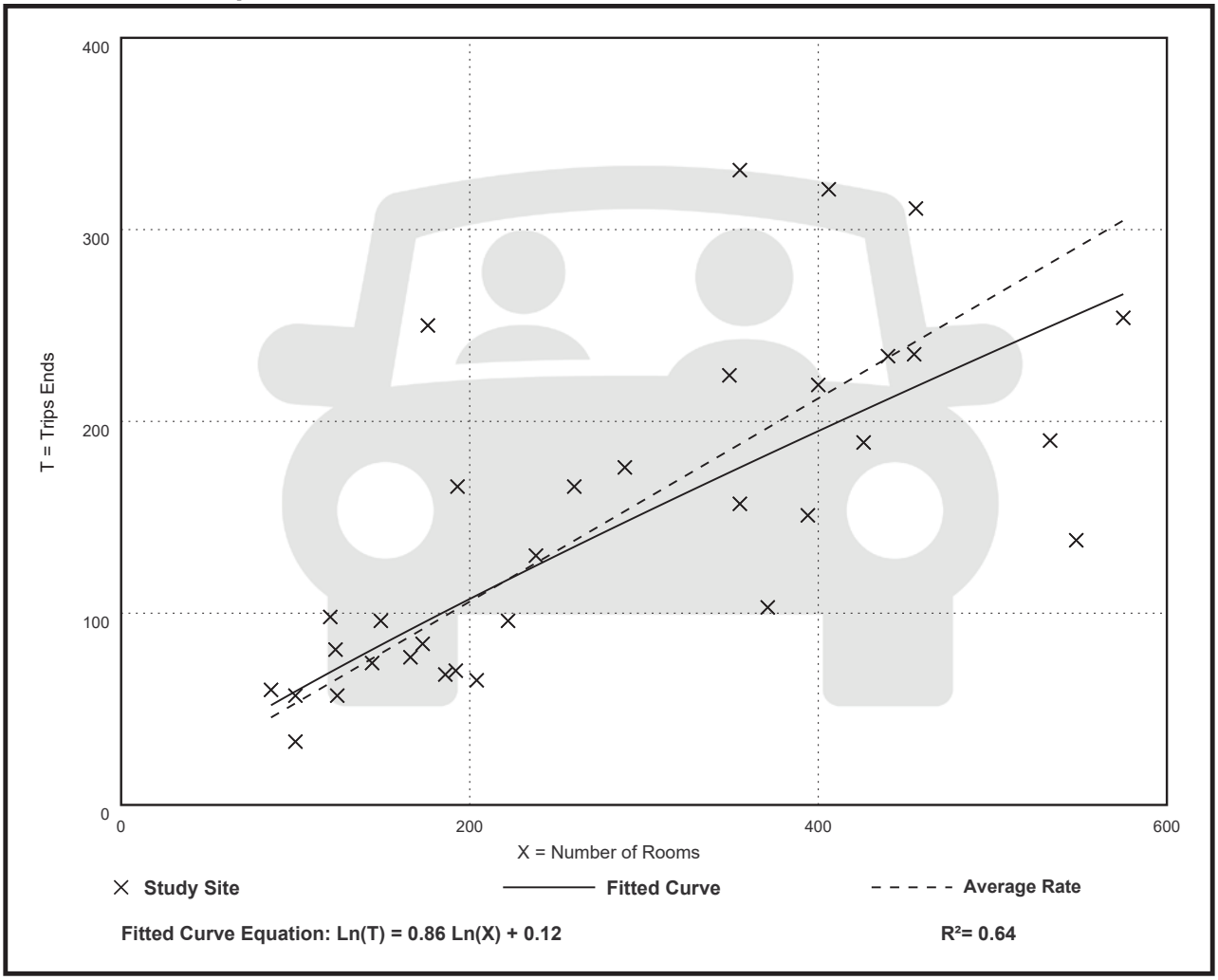
**Vehicle Trip Ends vs: Rooms**
**On a: Weekday,**
**AM Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 33
Avg. Num. of Rooms: 282
Directional Distribution: 53% entering, 47% exiting

## Vehicle Trip Generation per Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.53 | 0.25 - 1.42 | 0.21 |

## Data Plot and Equation




**Fitted Curve Equation: Ln(T) = 0.86 Ln(X) + 0.12**

**$R^2$= 0.64**

# Hotel
# (310)

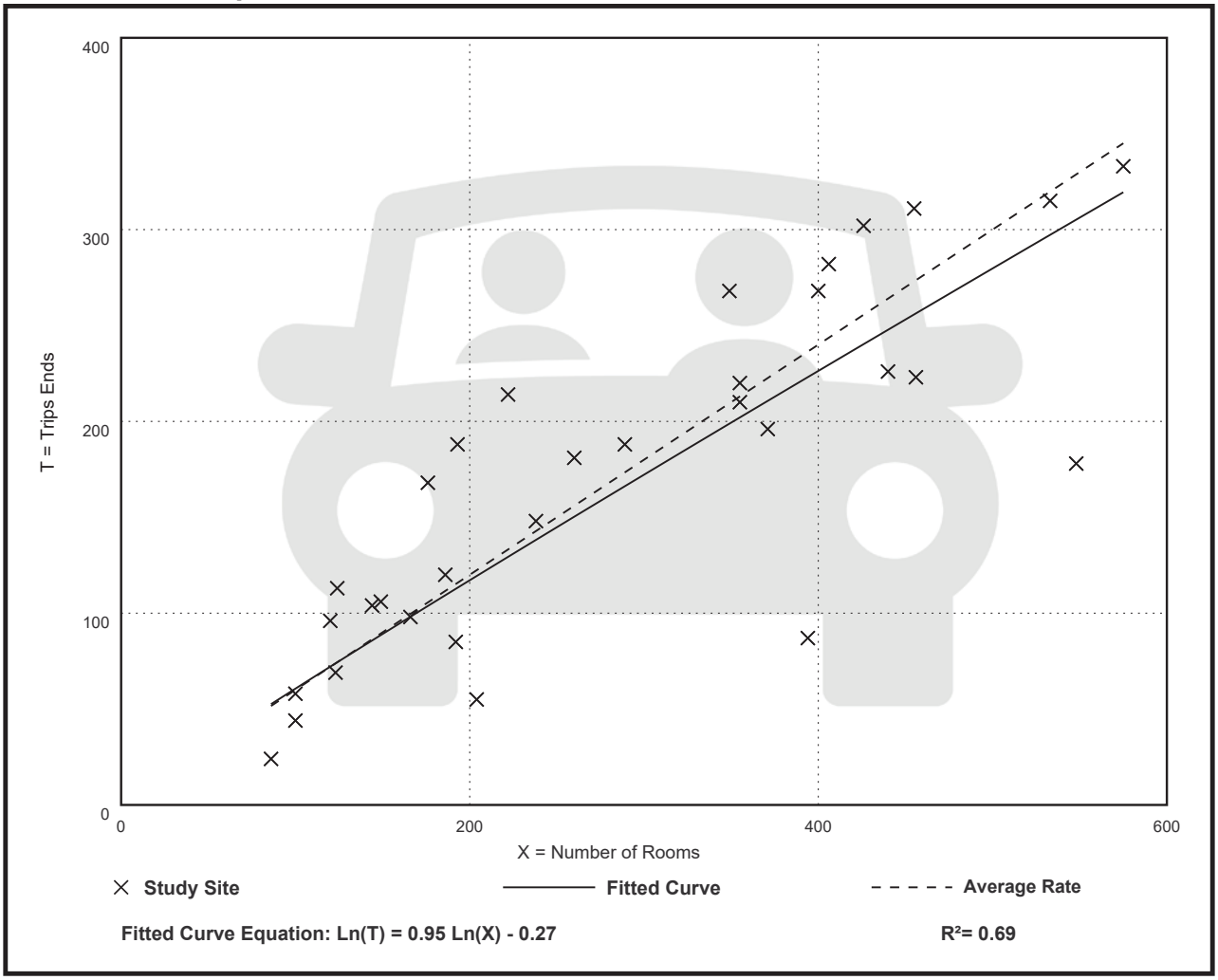
**Vehicle Trip Ends vs: Rooms**
**On a: Weekday,**
**PM Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 32
Avg. Num. of Rooms: 285
Directional Distribution: 58% entering, 42% exiting

## Vehicle Trip Generation per Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.60 | 0.22 - 0.97 | 0.18 |

## Data Plot and Equation




**Fitted Curve Equation: Ln(T) = 0.95 Ln(X) - 0.27**

**$R^2$= 0.69**

# Hotel
# (310)

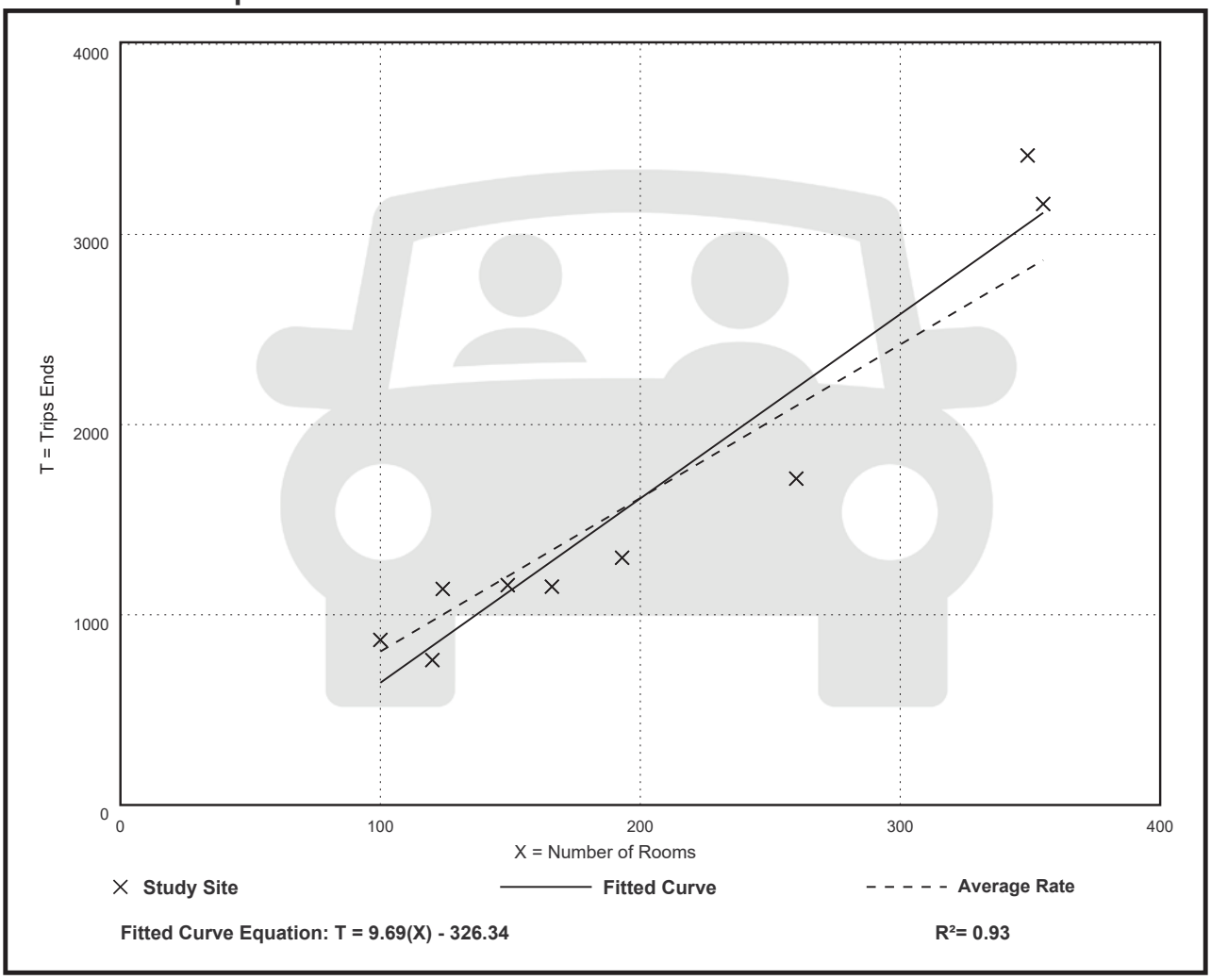
**Vehicle Trip Ends vs: Rooms**
**On a: Saturday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 9
Avg. Num. of Rooms: 202
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 8.07 | 6.35 - 9.79 | 1.35 |

## Data Plot and Equation




**Fitted Curve Equation: T = 9.69(X) - 326.34**

**$R^2$= 0.93**

# Hotel
# (310)

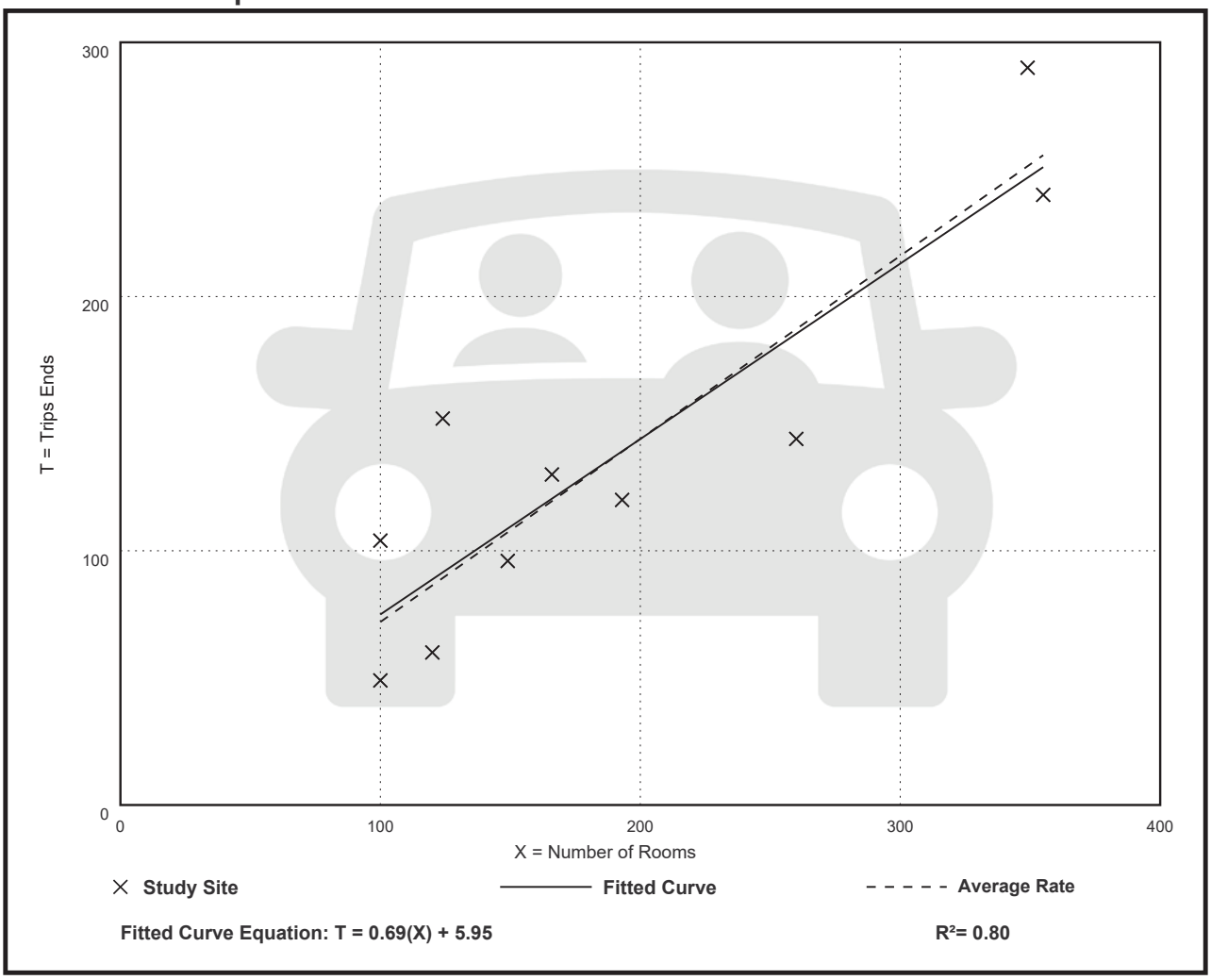
**Vehicle Trip Ends vs: Rooms**
**On a: Saturday, Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 10
Avg. Num. of Rooms: 192
Directional Distribution: 56% entering, 44% exiting

## Vehicle Trip Generation per Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.72 | 0.49 - 1.23 | 0.20 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.69(X) + 5.95**

**$R^2$= 0.80**

# Hotel
# (310)

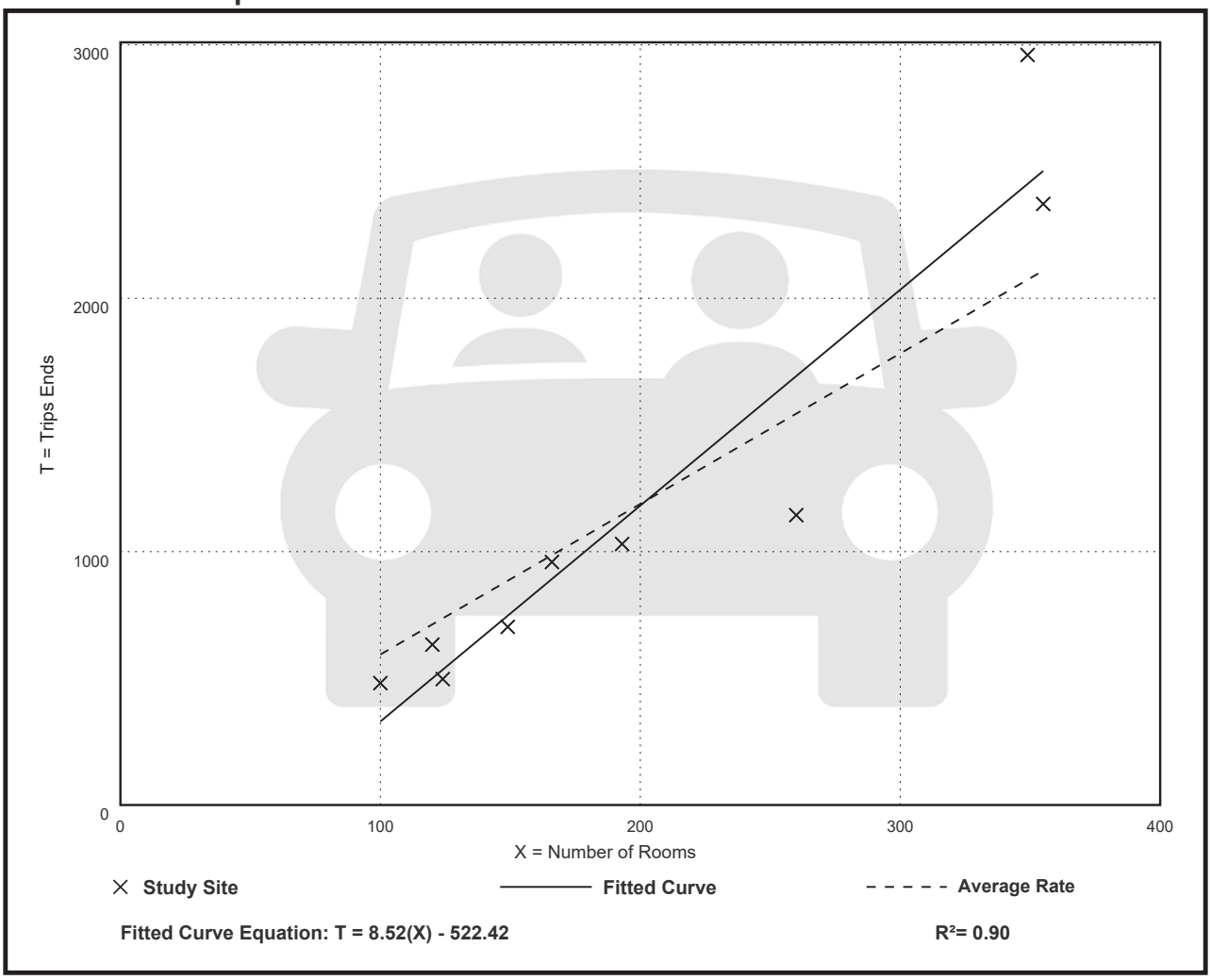
**Vehicle Trip Ends vs: Rooms**
**On a: Sunday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 9
Avg. Num. of Rooms: 202
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 5.94 | 4.01 - 8.48 | 1.58 |

## Data Plot and Equation




**Fitted Curve Equation: T = 8.52(X) - 522.42**

**$R^2$= 0.90**

# Hotel
# (310)

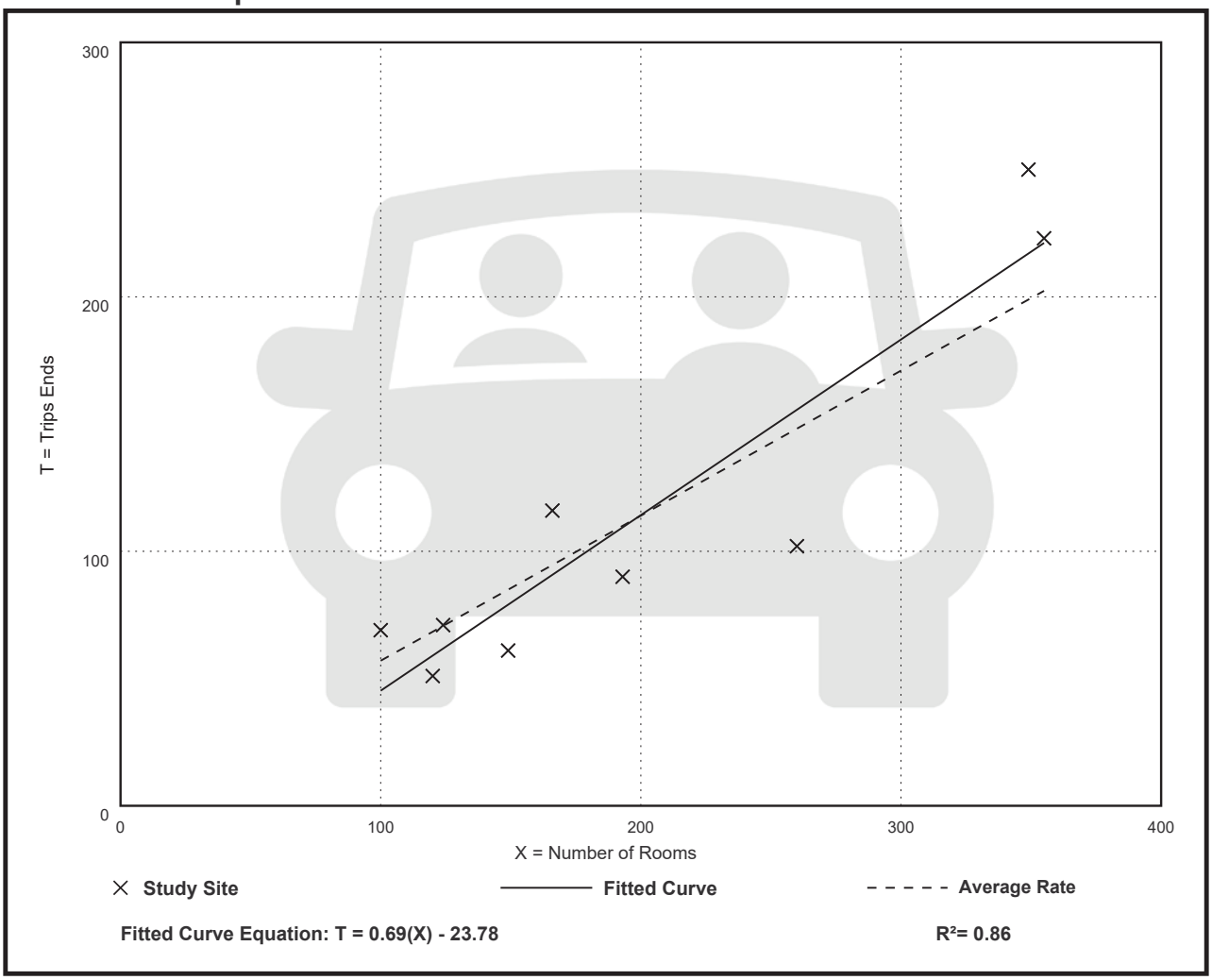
**Vehicle Trip Ends vs: Rooms**
**On a: Sunday, Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 9
Avg. Num. of Rooms: 202
Directional Distribution: 48% entering, 52% exiting

## Vehicle Trip Generation per Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.57 | 0.39 - 0.72 | 0.14 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.69(X) - 23.78**

**$R^2$= 0.86**

# Hotel
# (310)

**Vehicle Trip Ends vs: Occupied Rooms**
**On a: Weekday**

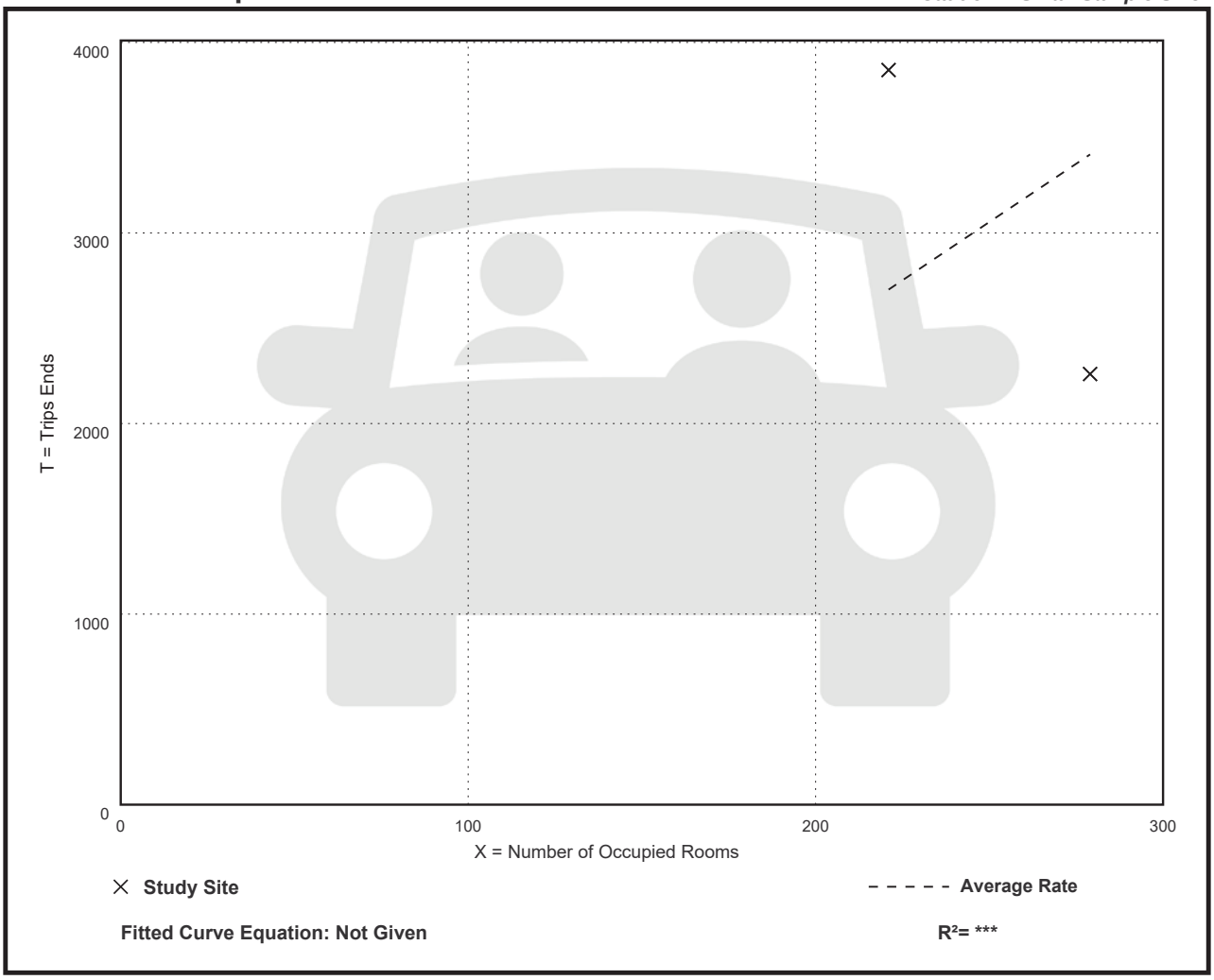
**Setting/Location: General Urban/Suburban**
Number of Studies: 2
Avg. Num. of Occupied Rooms: 250
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Occupied Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 12.23 | 8.10 - 17.44 | *** |

## Data Plot and Equation

***Caution – Small Sample Size***




**Fitted Curve Equation: Not Given**

**$R^2$= *****

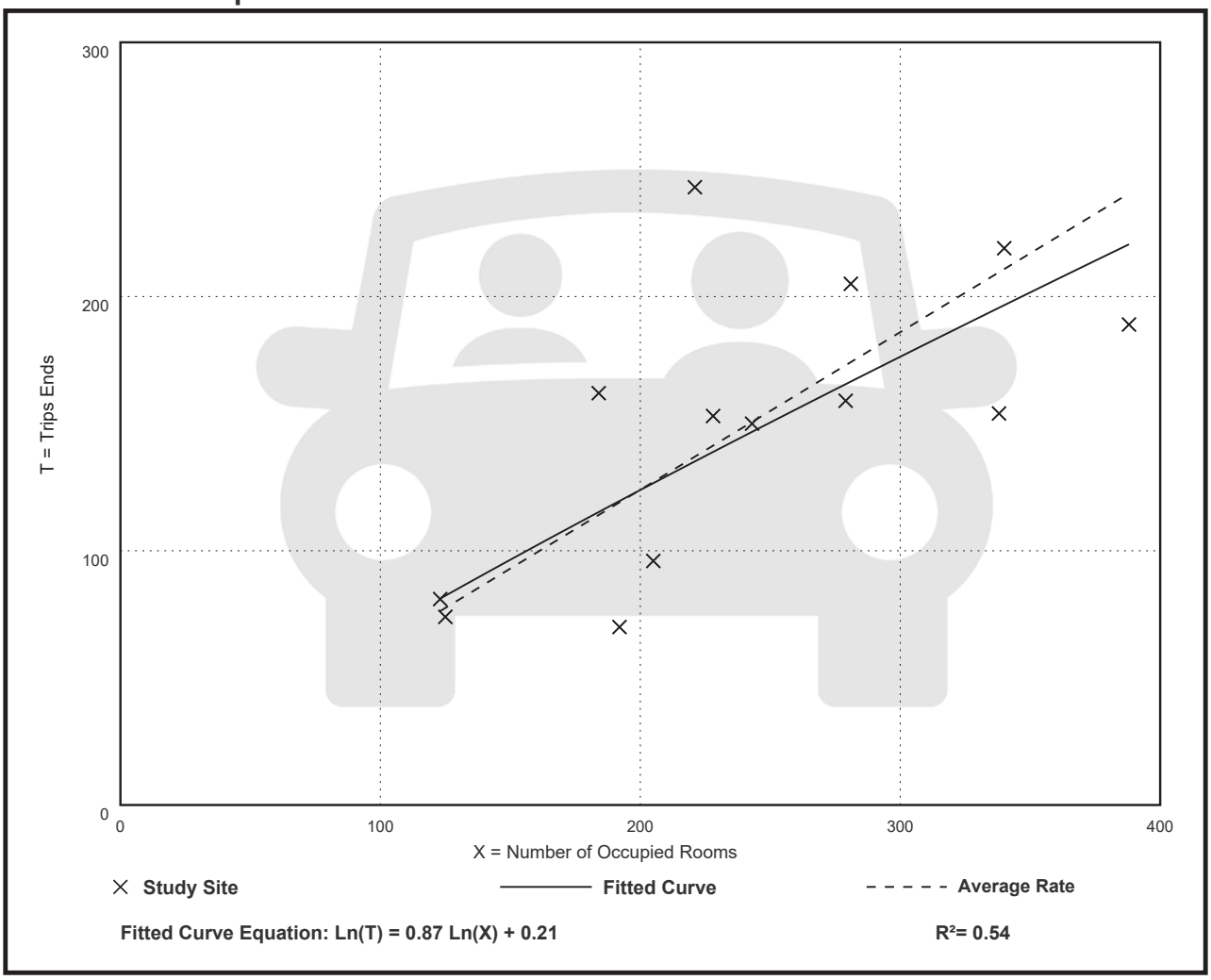
# Hotel
# (310)

**Vehicle Trip Ends vs: Occupied Rooms**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 7 and 9 a.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 13
Avg. Num. of Occupied Rooms: 242
Directional Distribution: 56% entering, 44% exiting

## Vehicle Trip Generation per Occupied Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.62 | 0.36 - 1.10 | 0.19 |

## Data Plot and Equation




**Fitted Curve Equation: Ln(T) = 0.87 Ln(X) + 0.21**

**$R^2$= 0.54**

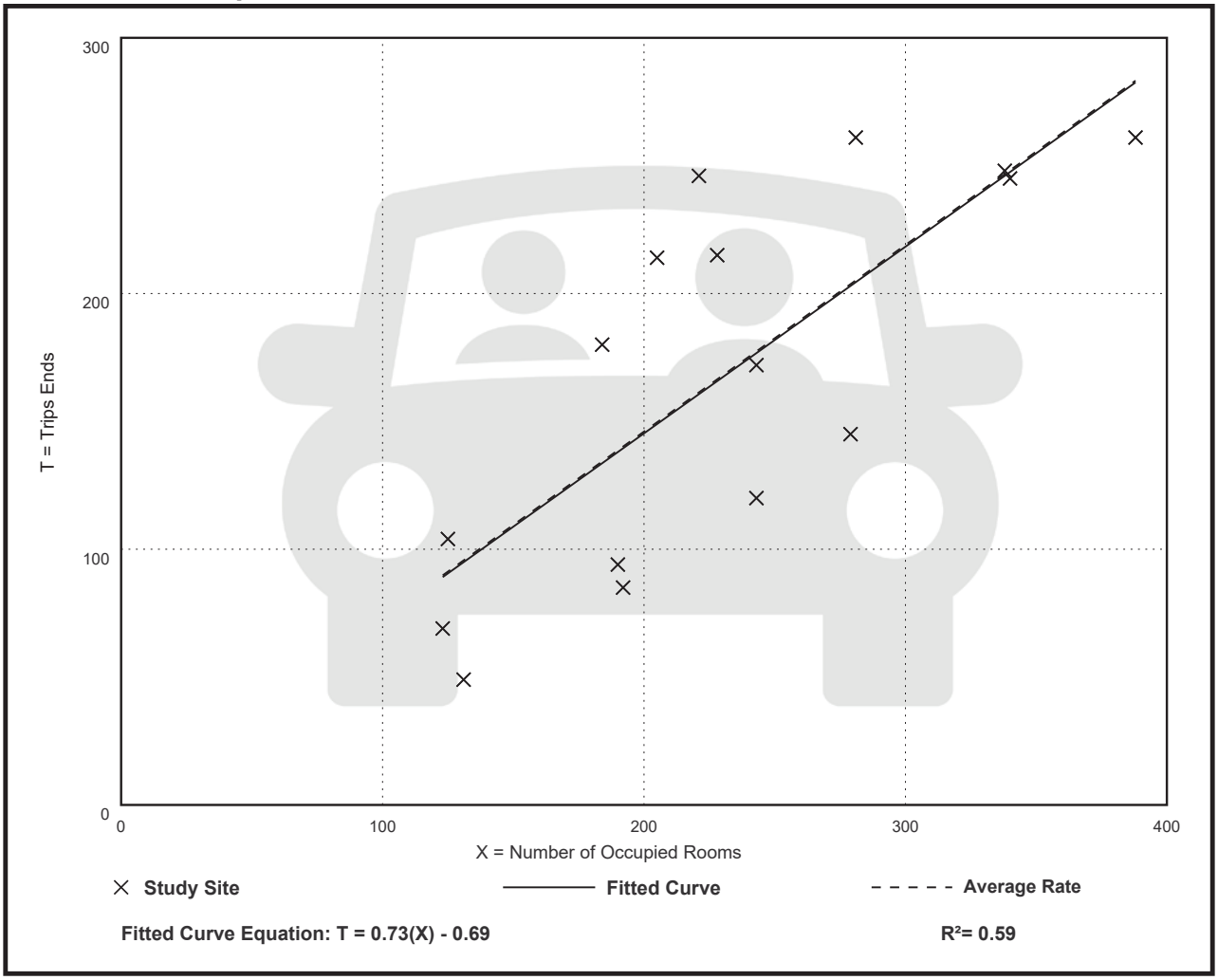
# Hotel
# (310)

**Vehicle Trip Ends vs: Occupied Rooms**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 4 and 6 p.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 16
Avg. Num. of Occupied Rooms: 232
Directional Distribution: 49% entering, 51% exiting

## Vehicle Trip Generation per Occupied Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.73 | 0.37 - 1.11 | 0.21 |

## Data Plot and Equation



# Hotel
# (310)

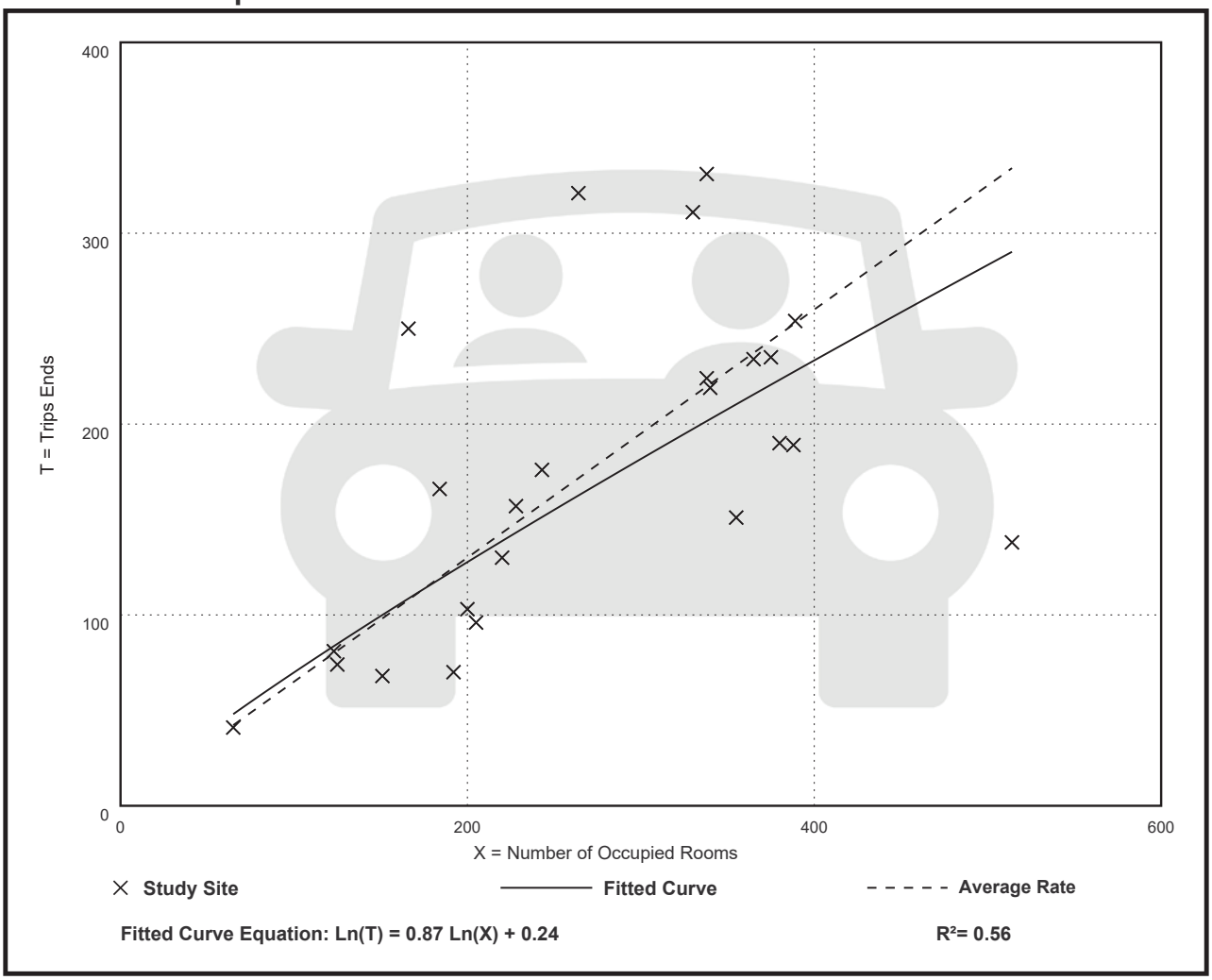
**Vehicle Trip Ends vs: Occupied Rooms**
**On a: Weekday,**
**AM Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 24
Avg. Num. of Occupied Rooms: 270
Directional Distribution: 54% entering, 46% exiting

## Vehicle Trip Generation per Occupied Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.65 | 0.27 - 1.51 | 0.26 |

## Data Plot and Equation




**Fitted Curve Equation: Ln(T) = 0.87 Ln(X) + 0.24**

**$R^2$= 0.56**

# Hotel
# (310)

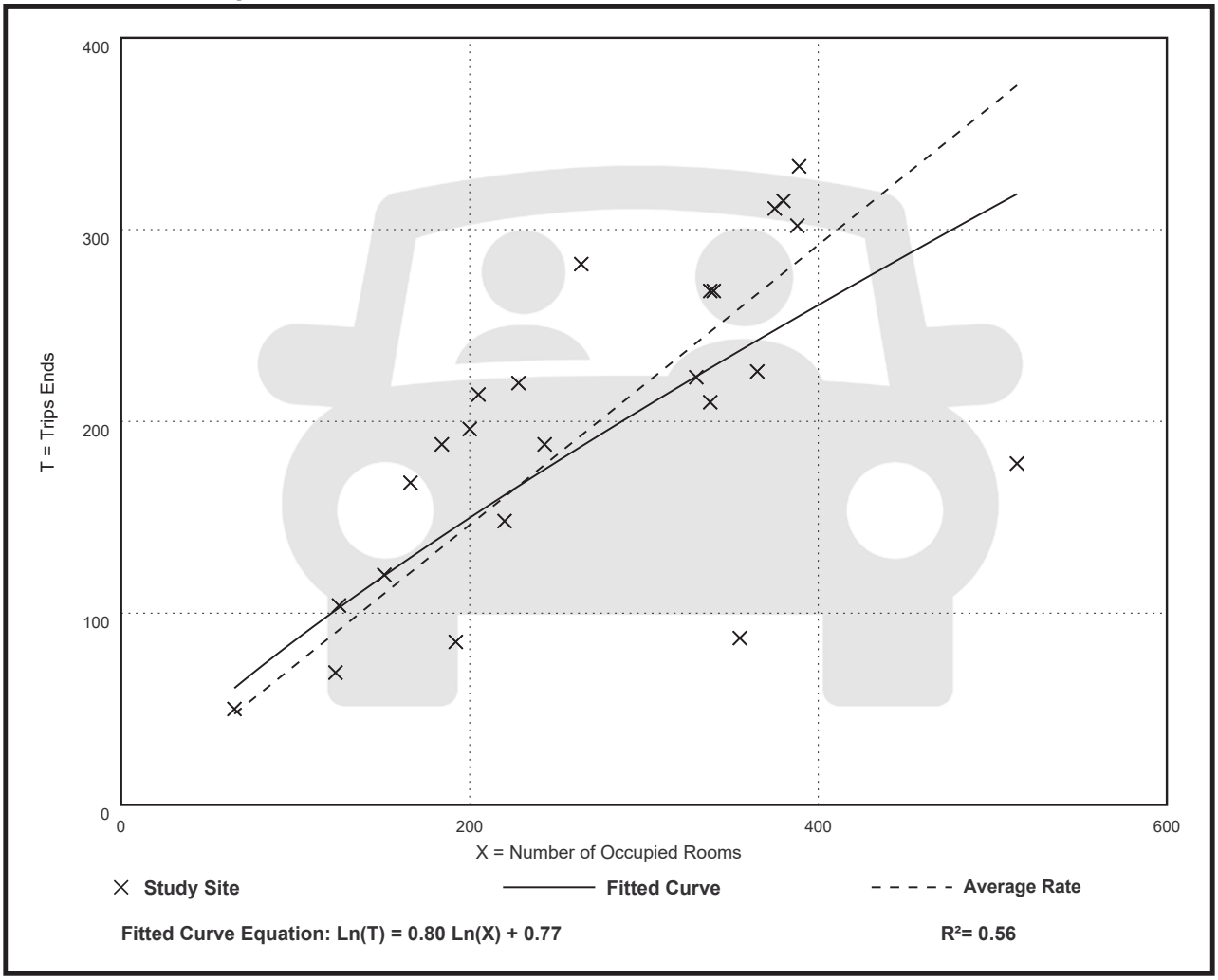
**Vehicle Trip Ends vs: Occupied Rooms**
**On a: Weekday,**
**PM Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 24
Avg. Num. of Occupied Rooms: 270
Directional Distribution: 57% entering, 43% exiting

## Vehicle Trip Generation per Occupied Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.73 | 0.25 - 1.07 | 0.22 |

## Data Plot and Equation




**Fitted Curve Equation: Ln(T) = 0.80 Ln(X) + 0.77**

**$R^2$= 0.56**

# Hotel
# (310)

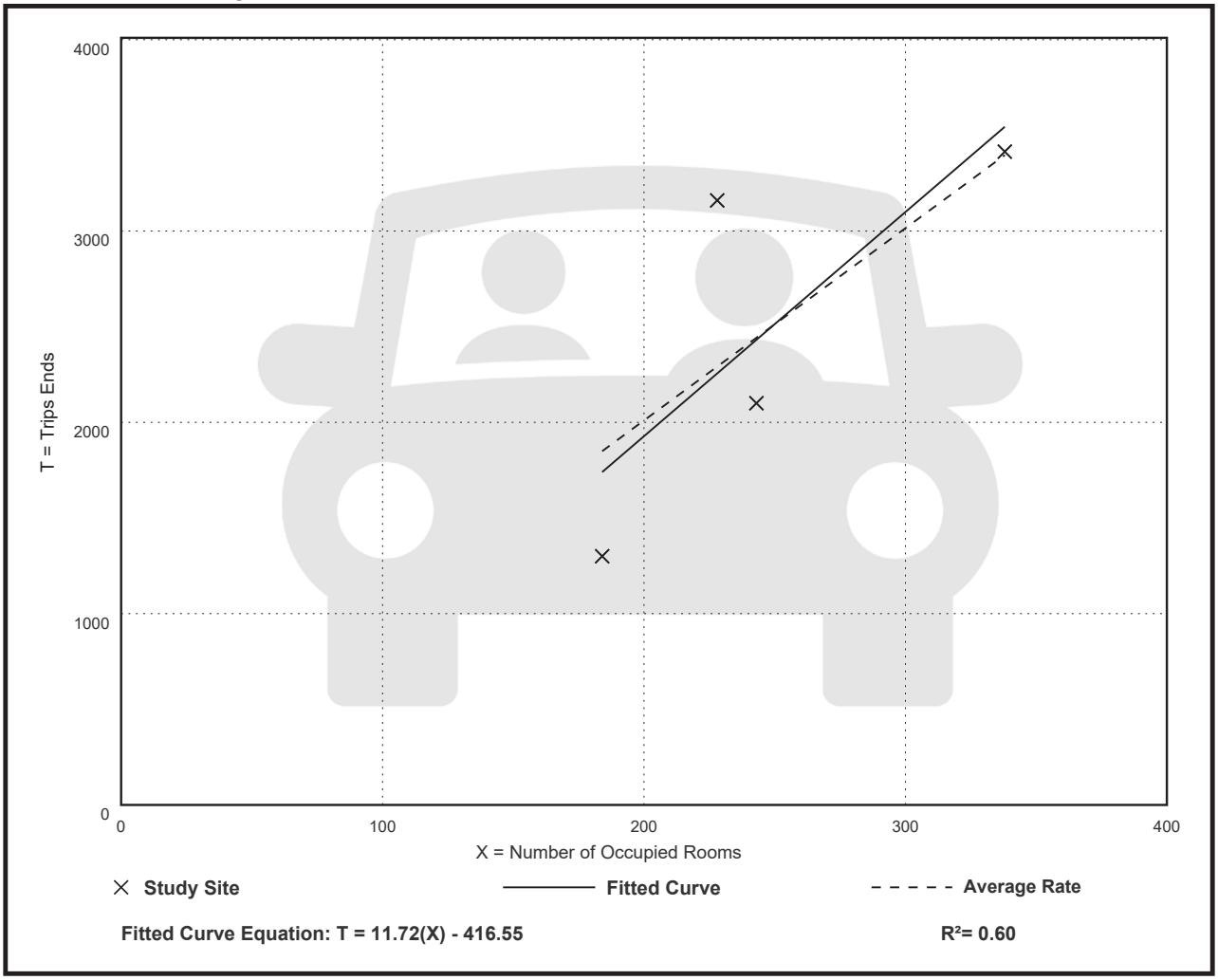
**Vehicle Trip Ends vs: Occupied Rooms**
**On a: Saturday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 4
Avg. Num. of Occupied Rooms: 248
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Occupied Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 10.05 | 7.07 - 13.86 | 2.70 |

## Data Plot and Equation




**Fitted Curve Equation: T = 11.72(X) - 416.55**

**$R^2$= 0.60**

# Hotel
# (310)

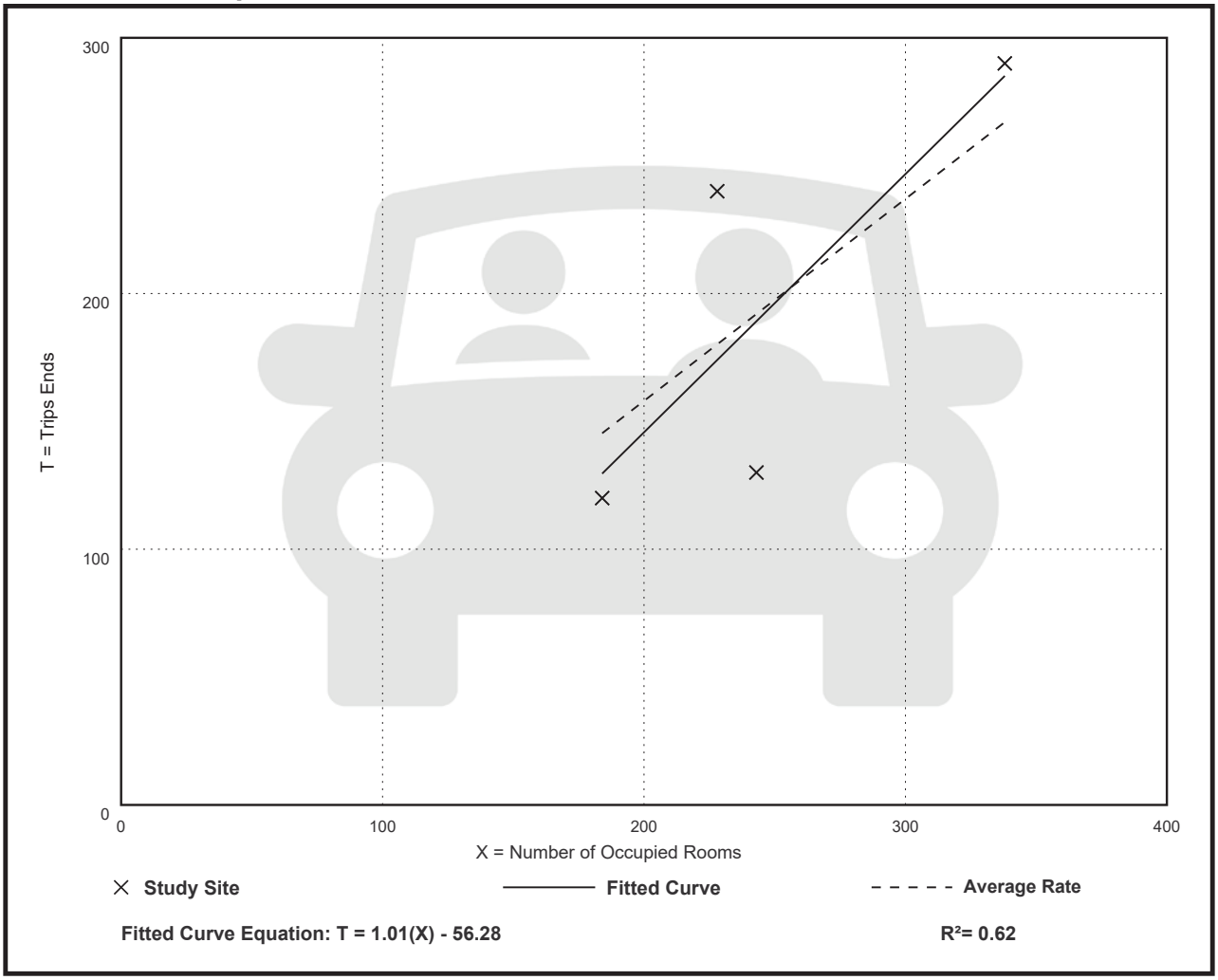
**Vehicle Trip Ends vs: Occupied Rooms**
**On a: Saturday, Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 4
Avg. Num. of Occupied Rooms: 248
Directional Distribution: 45% entering, 55% exiting

## Vehicle Trip Generation per Occupied Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.79 | 0.53 - 1.05 | 0.22 |

## Data Plot and Equation




**Fitted Curve Equation: T = 1.01(X) - 56.28**

**$R^2$= 0.62**

# Hotel
# (310)

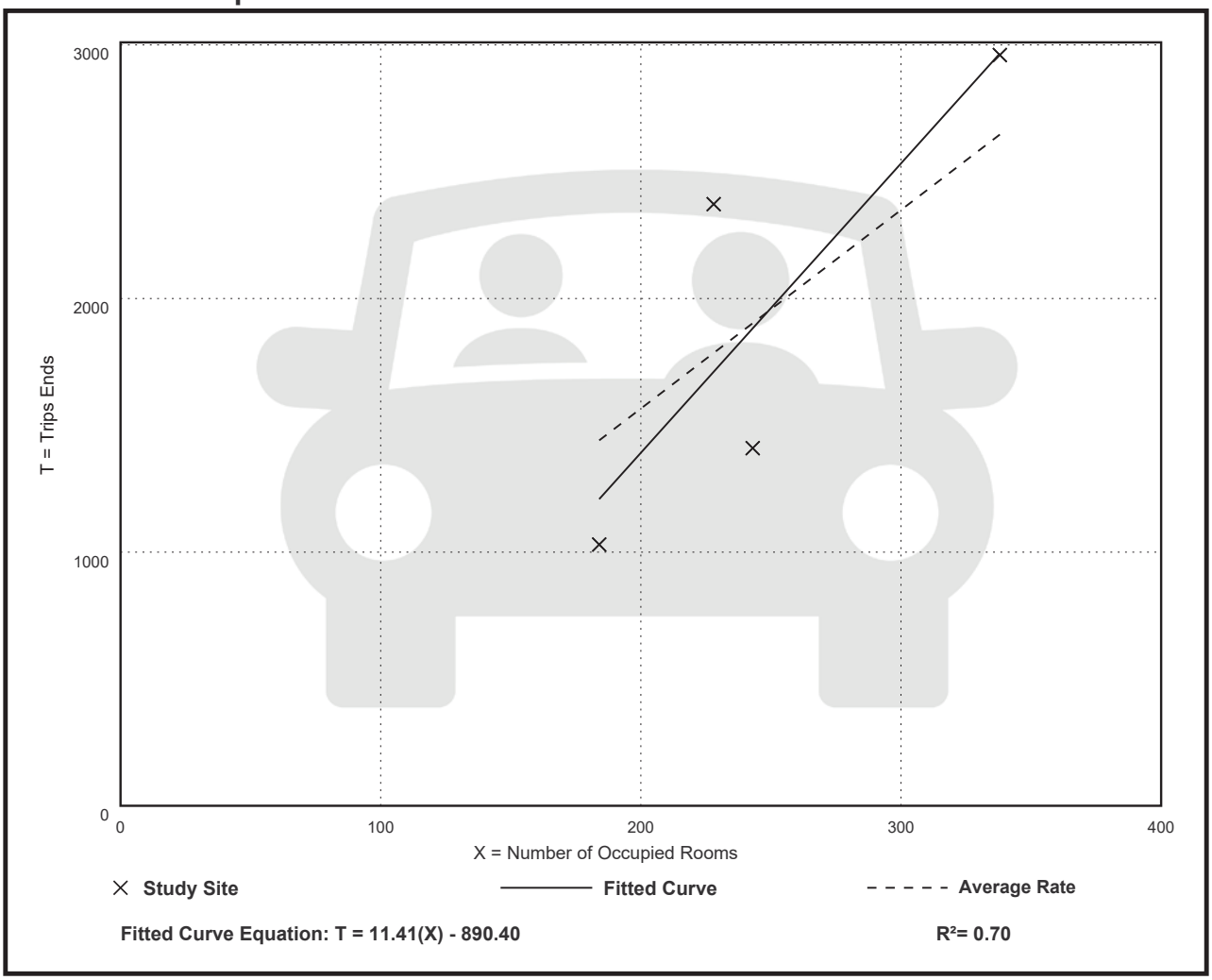
**Vehicle Trip Ends vs: Occupied Rooms**
**On a: Sunday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 4
Avg. Num. of Occupied Rooms: 248
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Occupied Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 7.83 | 5.60 - 10.40 | 2.23 |

## Data Plot and Equation




**Fitted Curve Equation: T = 11.41(X) - 890.40**

**$R^2$= 0.70**

# Hotel
# (310)

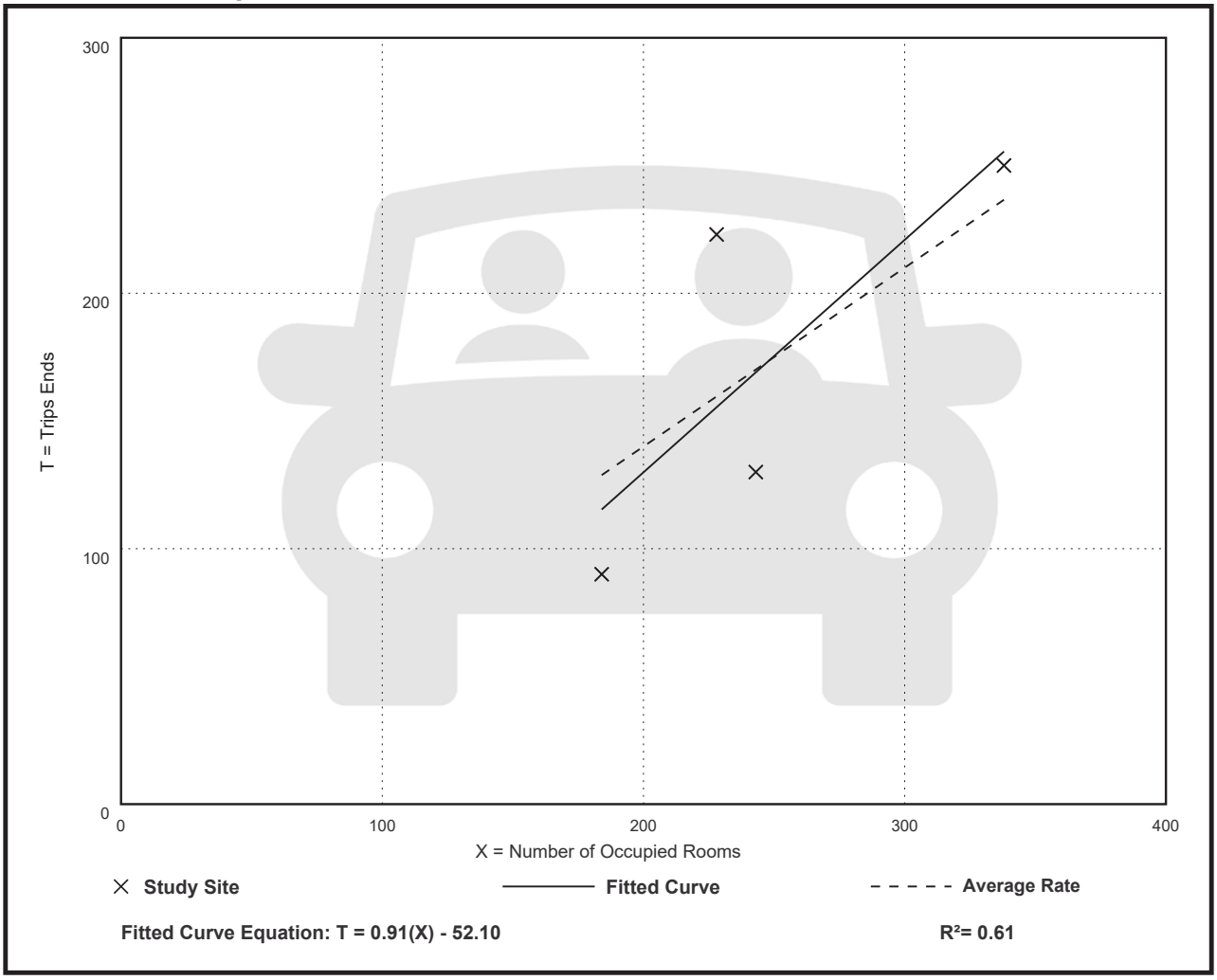
**Vehicle Trip Ends vs: Occupied Rooms**
**On a: Sunday, Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 4
Avg. Num. of Occupied Rooms: 248
Directional Distribution: 53% entering, 47% exiting

## Vehicle Trip Generation per Occupied Room

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.70 | 0.49 - 0.98 | 0.21 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.91(X) - 52.10**

**$R^2$= 0.61**

# Hotel
# (310)

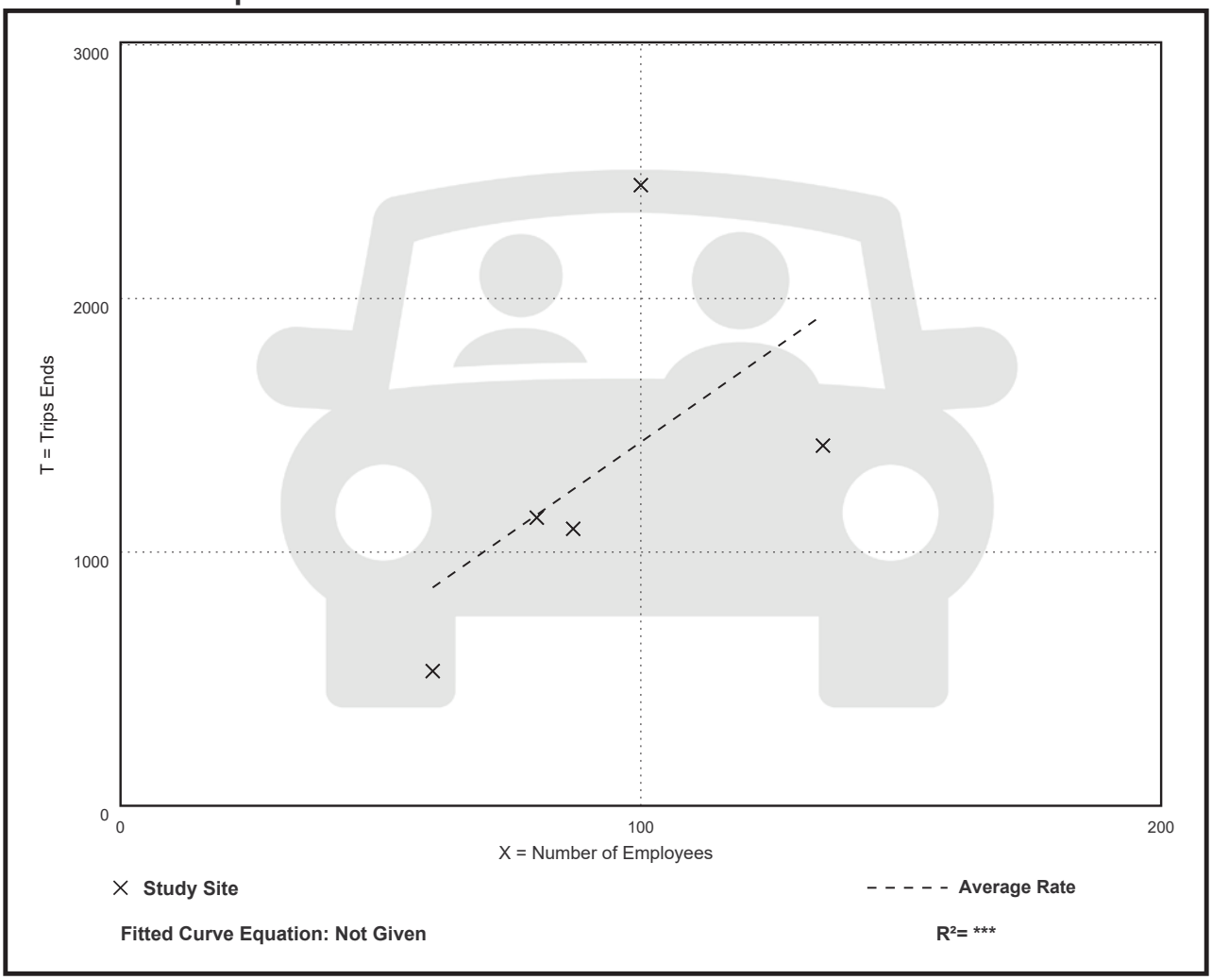
**Vehicle Trip Ends vs: Employees**
**On a: Weekday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Employees: 92
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Employee

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 14.34 | 8.85 - 24.47 | 6.22 |

## Data Plot and Equation




**Fitted Curve Equation: Not Given**

**$R^2$= *****

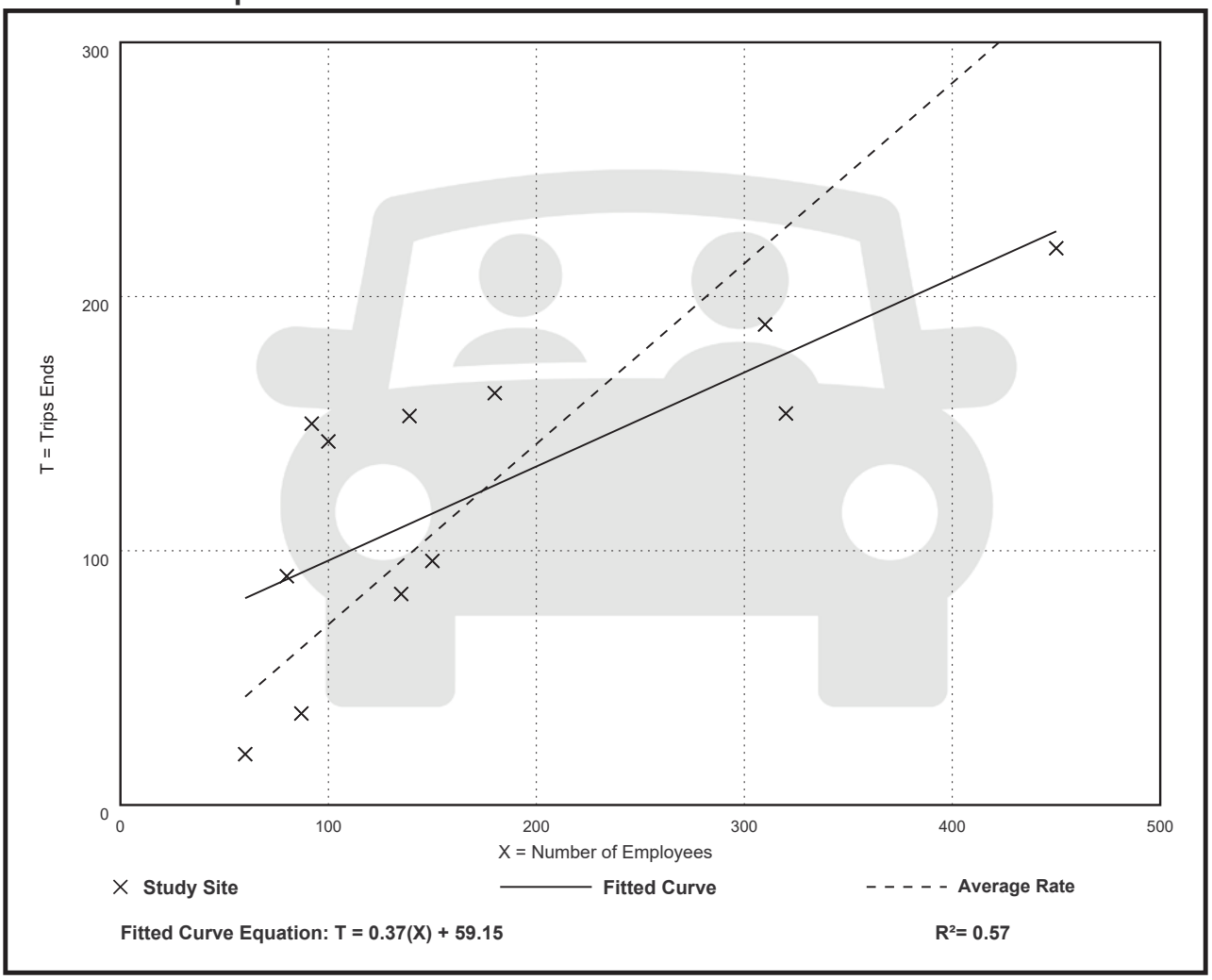
# Hotel
# (310)

**Vehicle Trip Ends vs: Employees**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 7 and 9 a.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 12
Avg. Num. of Employees: 175
Directional Distribution: 59% entering, 41% exiting

## Vehicle Trip Generation per Employee

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.71 | 0.33 - 1.63 | 0.35 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.37(X) + 59.15**

**$R^2$= 0.57**

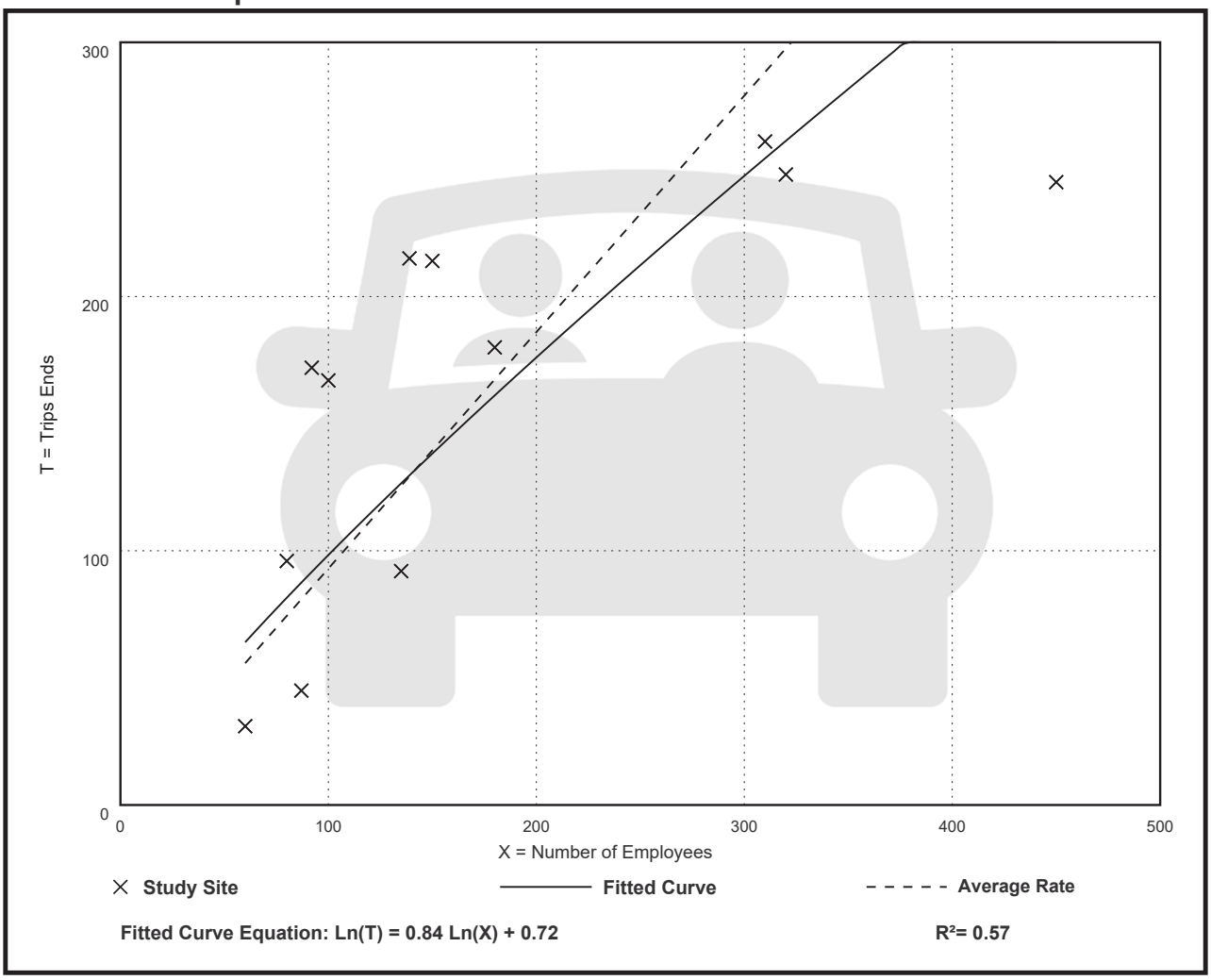
# Hotel
# (310)

**Vehicle Trip Ends vs: Employees**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 4 and 6 p.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 12
Avg. Num. of Employees: 175
Directional Distribution: 54% entering, 46% exiting

## Vehicle Trip Generation per Employee

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.93 | 0.52 - 1.87 | 0.42 |

## Data Plot and Equation




**Fitted Curve Equation: Ln(T) = 0.84 Ln(X) + 0.72**

**$R^2$= 0.57**

# Hotel
# (310)

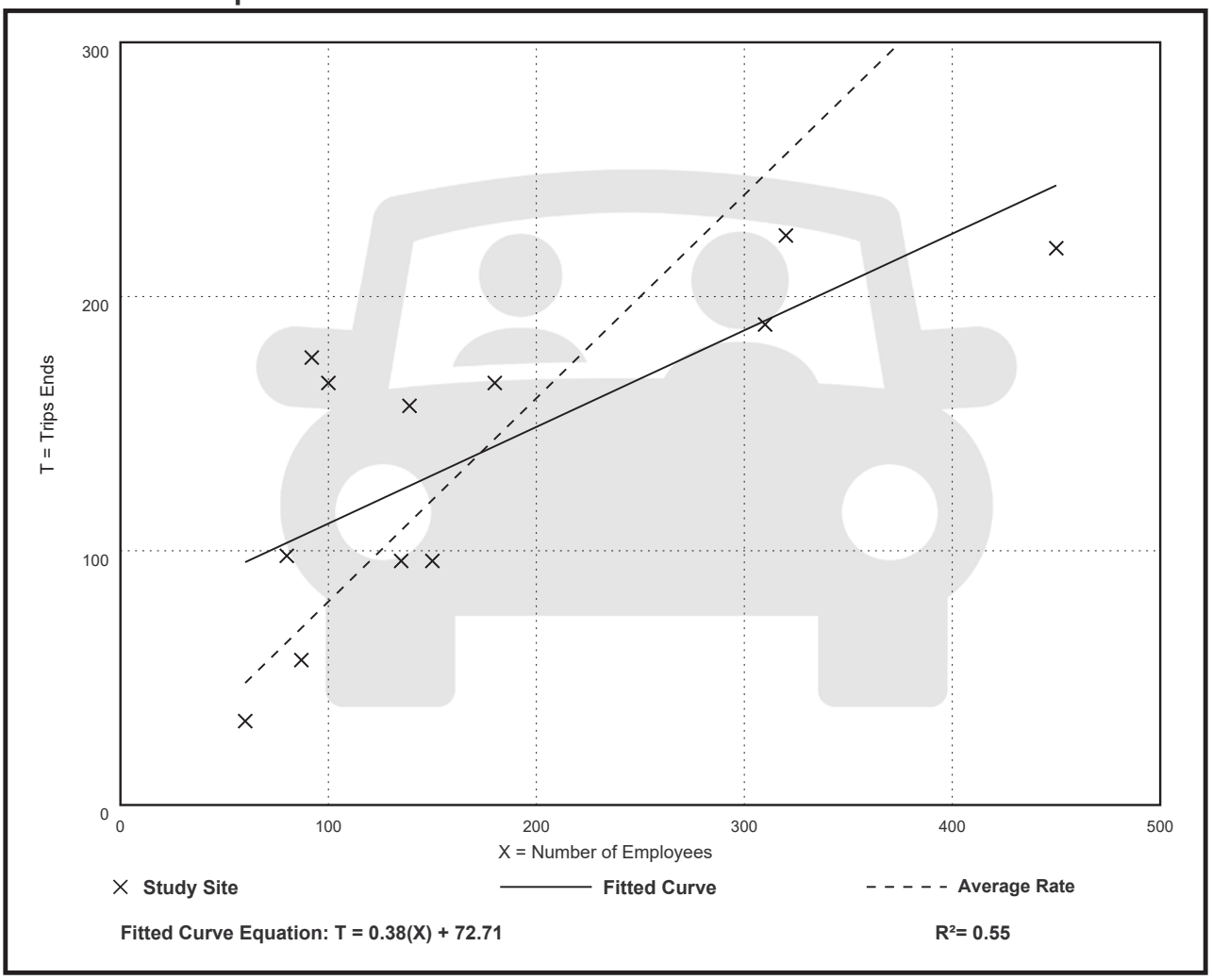
**Vehicle Trip Ends vs: Employees**
**On a: Weekday,**
**AM Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 12
Avg. Num. of Employees: 175
Directional Distribution: 55% entering, 45% exiting

## Vehicle Trip Generation per Employee

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.80 | 0.49 - 1.91 | 0.39 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.38(X) + 72.71**

**$R^2$= 0.55**

# Hotel
# (310)

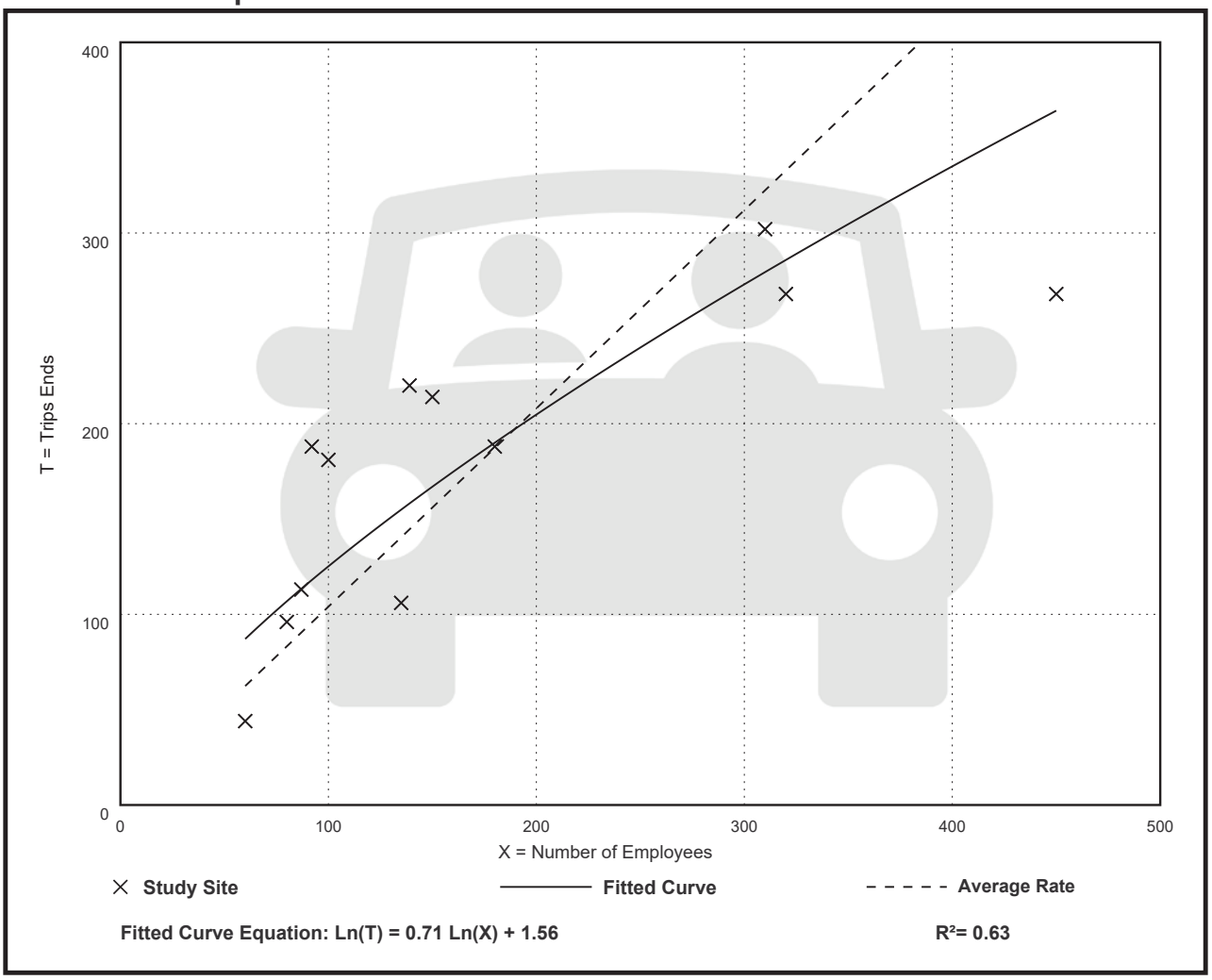
**Vehicle Trip Ends vs: Employees**
**On a: Weekday,**
**PM Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 12
Avg. Num. of Employees: 175
Directional Distribution: 59% entering, 41% exiting

## Vehicle Trip Generation per Employee

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 1.04 | 0.60 - 2.04 | 0.42 |

## Data Plot and Equation




**Fitted Curve Equation: Ln(T) = 0.71 Ln(X) + 1.56**

**$R^2$= 0.63**

# Hotel
# (310)

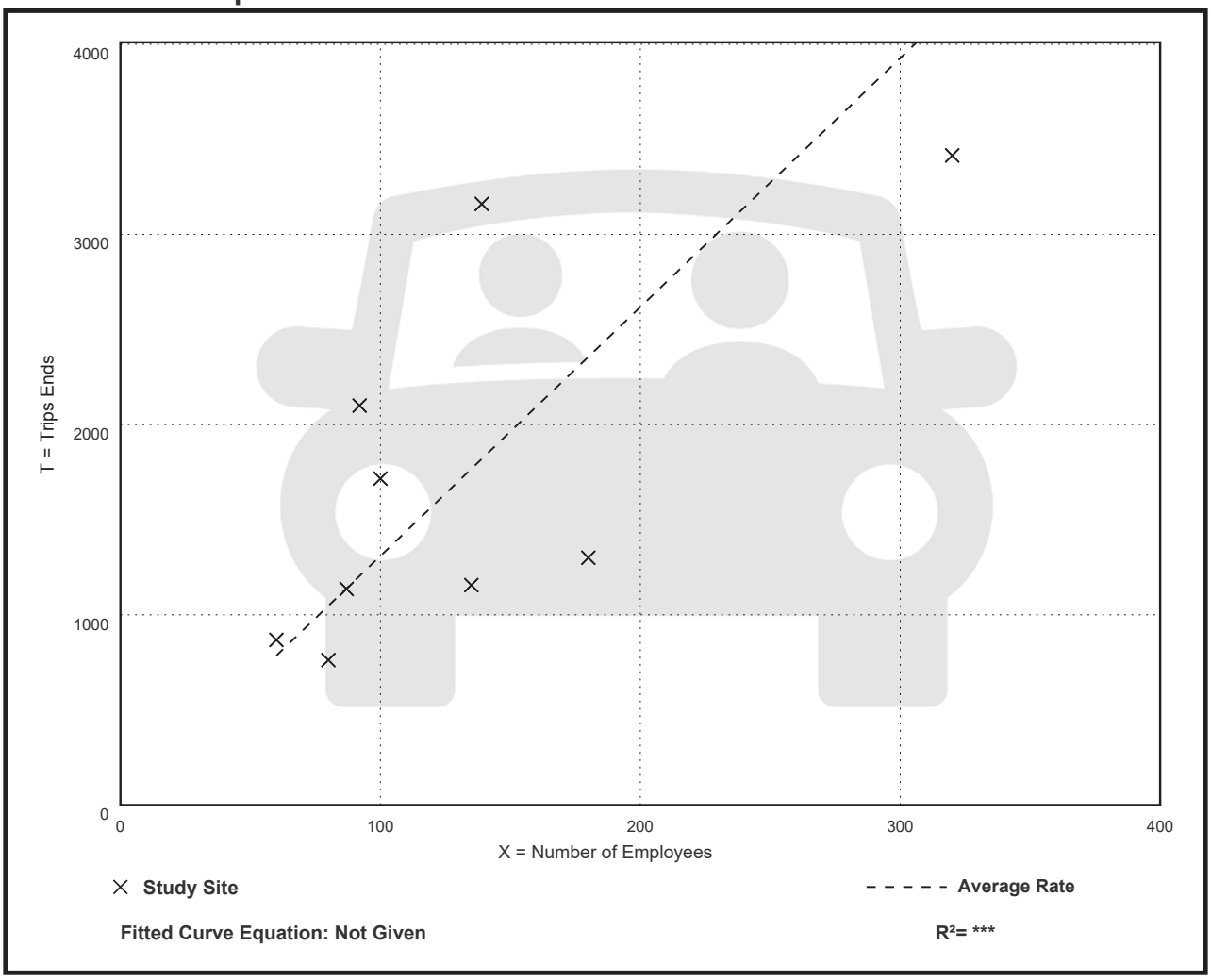
**Vehicle Trip Ends vs: Employees**
**On a: Saturday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 9
Avg. Num. of Employees: 133
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Employee

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 13.09 | 7.22 - 22.83 | 5.77 |

## Data Plot and Equation




**Fitted Curve Equation: Not Given**

**$R^2$= *****

# Hotel
# (310)

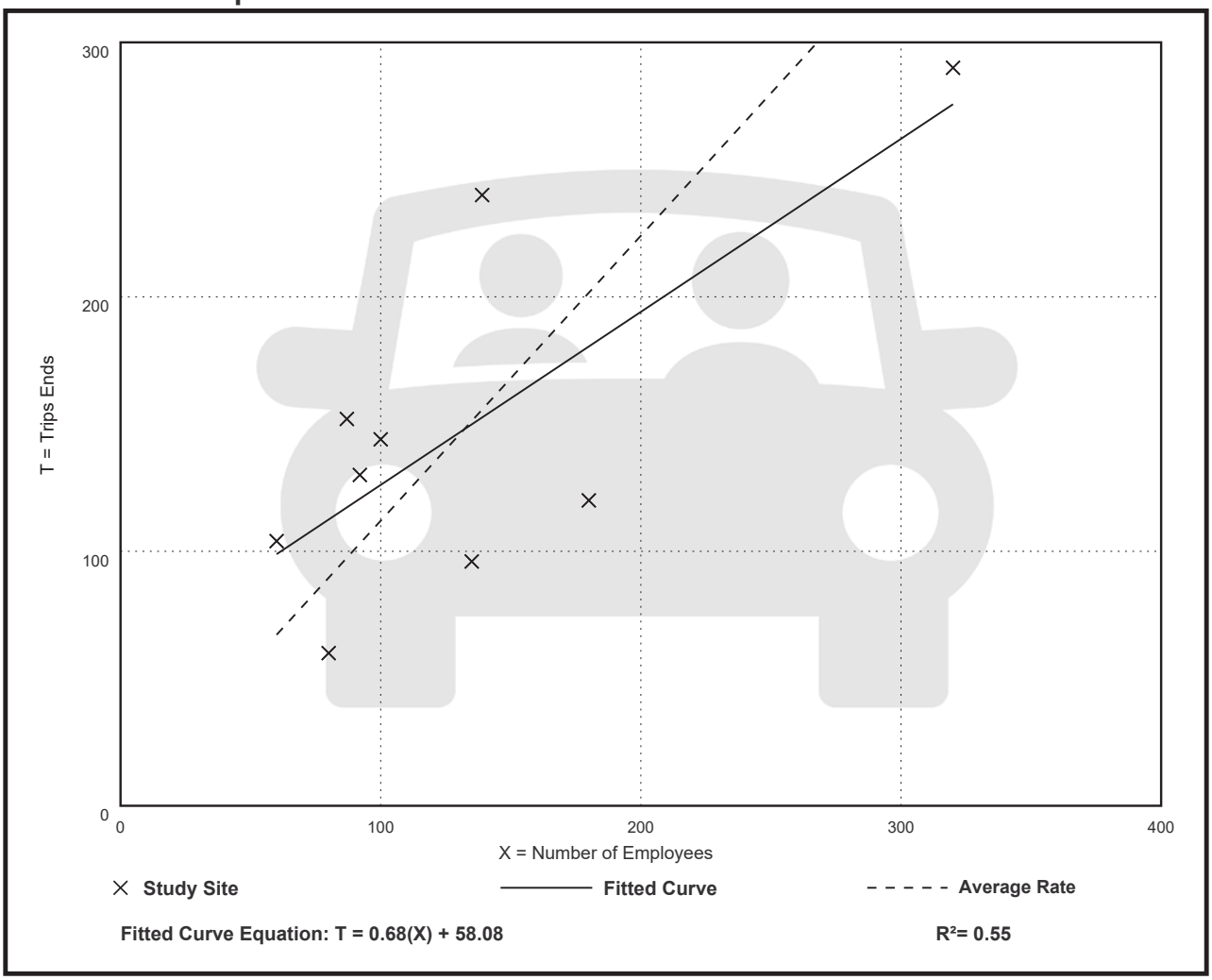
**Vehicle Trip Ends vs: Employees**
**On a: Saturday, Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 9
Avg. Num. of Employees: 133
Directional Distribution: 54% entering, 46% exiting

## Vehicle Trip Generation per Employee

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 1.12 | 0.67 - 1.75 | 0.45 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.68(X) + 58.08**

**$R^2$= 0.55**

# Hotel
# (310)

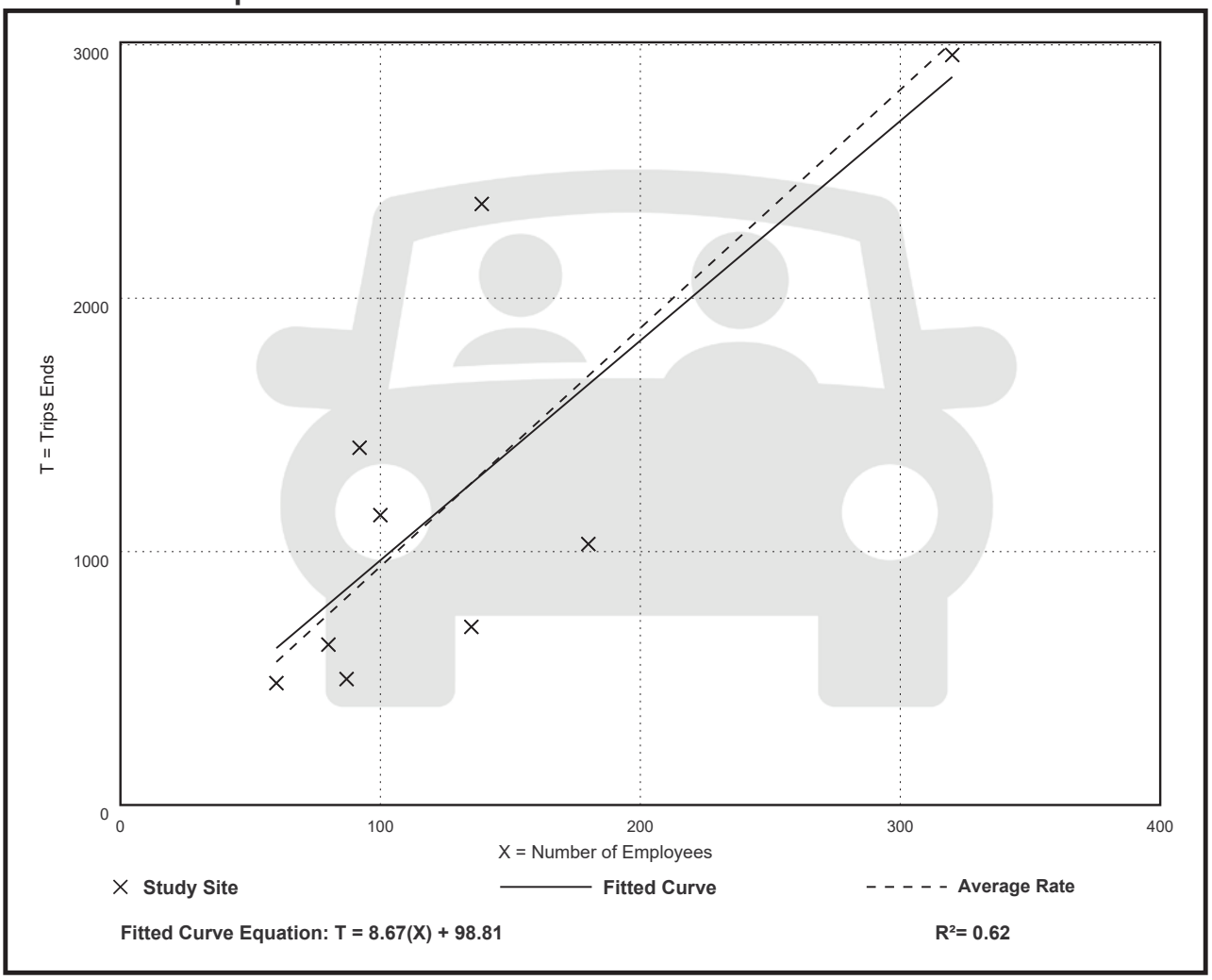
**Vehicle Trip Ends vs: Employees**
**On a: Sunday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 9
Avg. Num. of Employees: 133
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Employee

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 9.41 | 5.21 - 17.06 | 4.13 |

## Data Plot and Equation




**Fitted Curve Equation: T = 8.67(X) + 98.81**

**$R^2$= 0.62**

# Hotel
# (310)

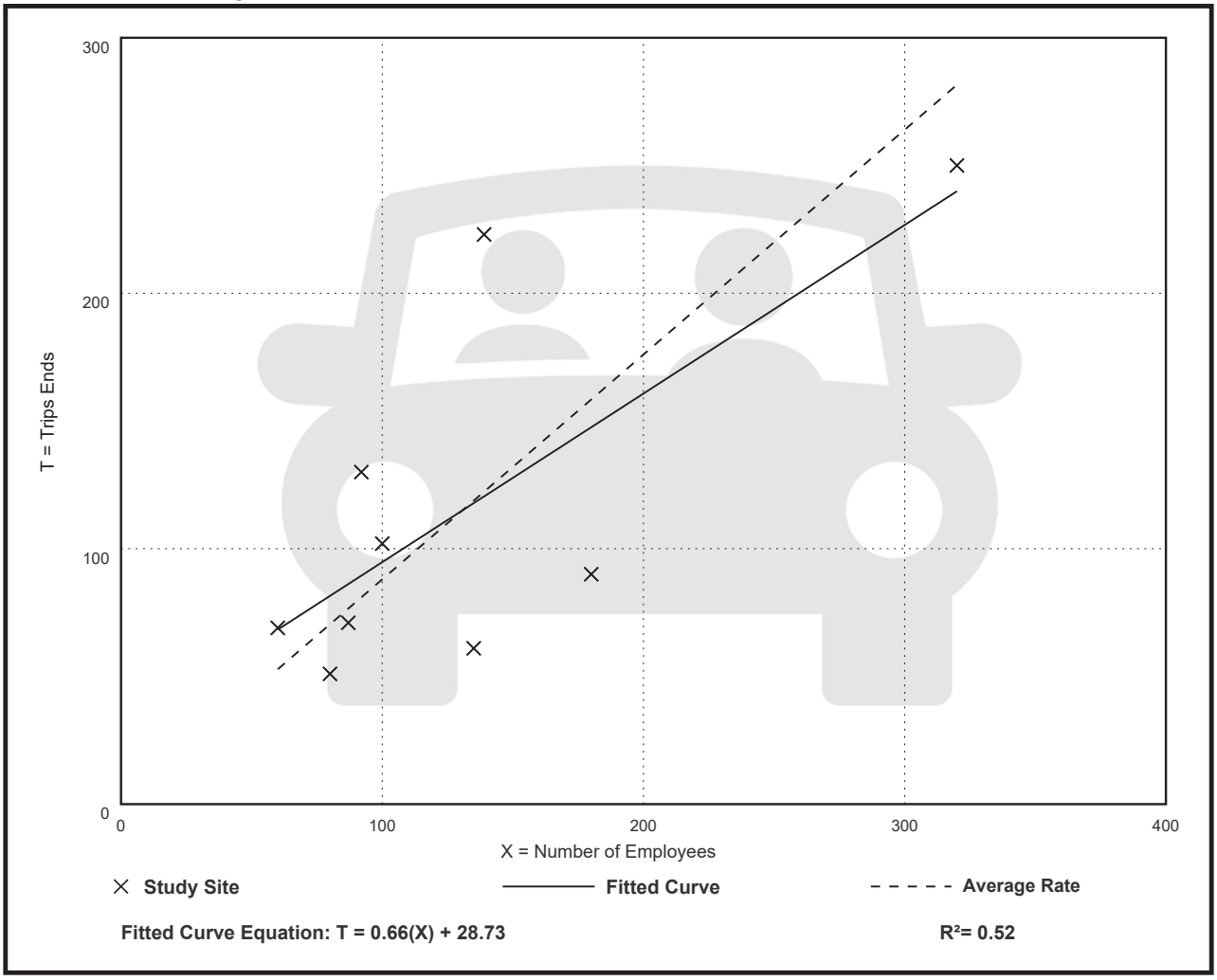
**Vehicle Trip Ends vs: Employees**
**On a: Sunday, Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 9
Avg. Num. of Employees: 133
Directional Distribution: 47% entering, 53% exiting

## Vehicle Trip Generation per Employee

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.88 | 0.45 - 1.60 | 0.39 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.66(X) + 28.73**

**$R^2$= 0.52**

## Employee Housing (Land Use Code 220: Residential, Multi-Family Housing Low Rise)

Follows this page

# Land Use: 220
# Multifamily Housing (Low-Rise)

## Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels). Various configurations fit this description, including walkup apartment, mansion apartment, and stacked townhouse.

- A walkup apartment typically is two or three floors in height with dwelling units that are accessed by a single or multiple entrances with stairways and hallways.
- A mansion apartment is a single structure that contains several apartments within what appears to be a single-family dwelling unit.
- A fourplex is a single two-story structure with two matching dwelling units on the ground and second floors. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.
- A stacked townhouse is designed to match the external appearance of a townhouse. But, unlike a townhouse dwelling unit that only shares walls with an adjoining unit, the stacked townhouse units share both floors and walls. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.

Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), affordable housing (Land Use 223), and off-campus student apartment (low-rise) (Land Use 225) are related land uses.

## Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

## Additional Data

For the three sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.72 residents per occupied dwelling unit.

For the two sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96.2 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip

generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For the three sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.72 residents per occupied dwelling unit.

***It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).***

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in British Columbia (CAN), California, Delaware, Florida, Georgia, Illinois, Indiana, Maine, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, and Washington.

## Source Numbers

188, 204, 237, 300, 305, 306, 320, 321, 357, 390, 412, 525, 530, 579, 583, 638, 864, 866, 896, 901, 903, 904, 936, 939, 944, 946, 947, 948, 963, 964, 966, 967, 1012, 1013, 1014, 1036, 1047, 1056, 1071, 1076

# Multifamily Housing (Low-Rise)
# Not Close to Rail Transit (220)

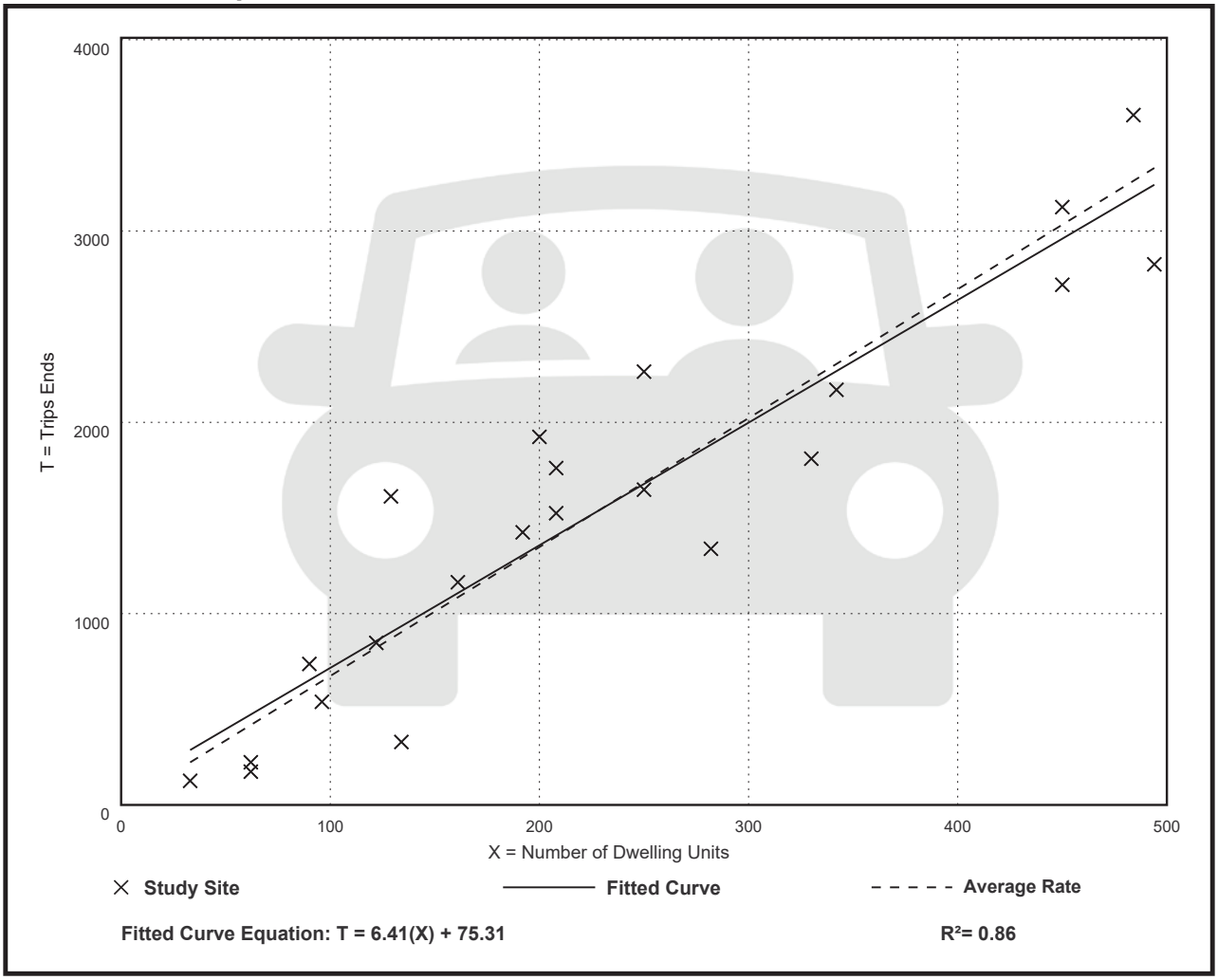
**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 22
Avg. Num. of Dwelling Units: 229
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 6.74 | 2.46 - 12.50 | 1.79 |

## Data Plot and Equation




**Fitted Curve Equation: T = 6.41(X) + 75.31**

**$R^2$= 0.86**

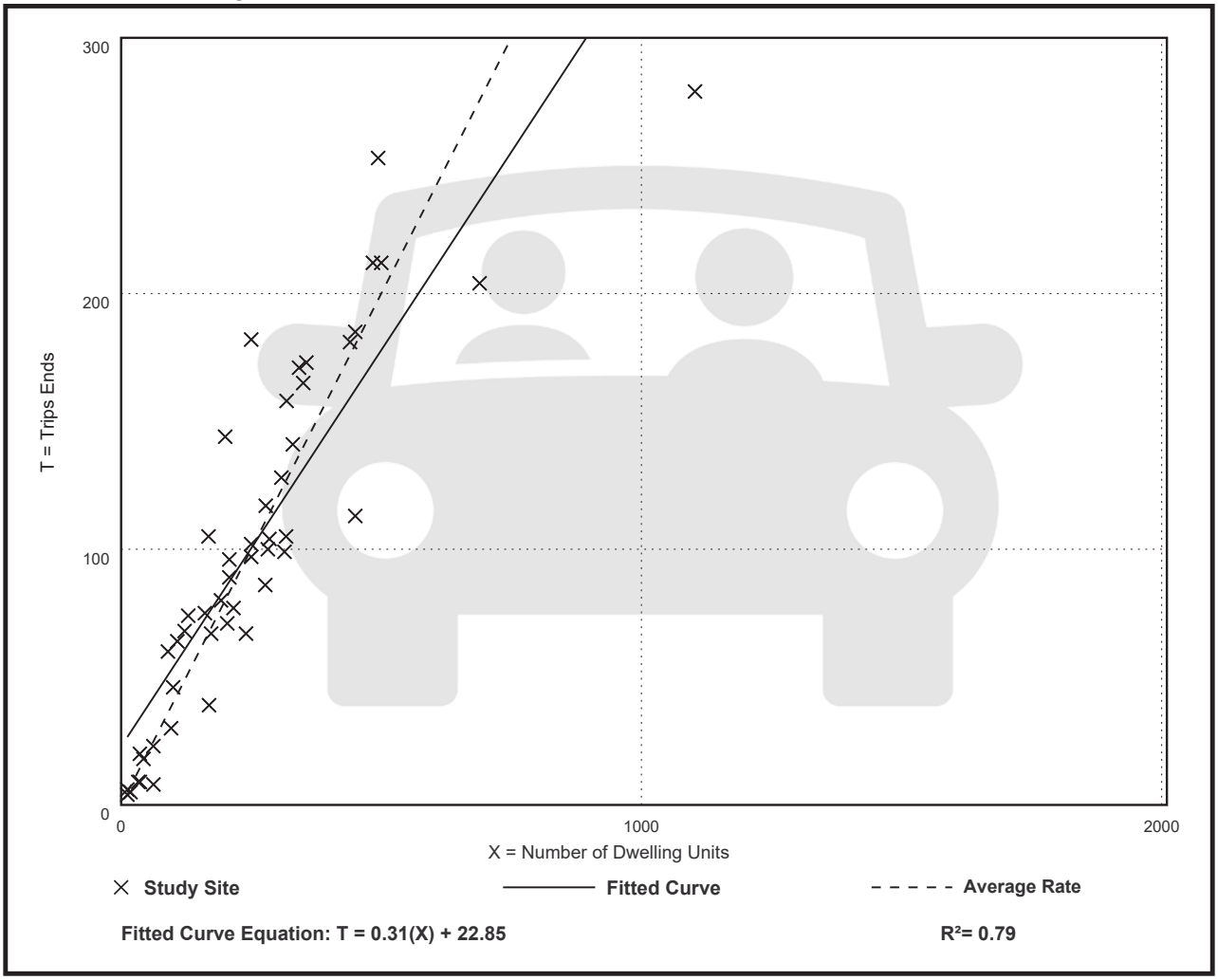
# Multifamily Housing (Low-Rise)
# Not Close to Rail Transit (220)

**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 7 and 9 a.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 49
Avg. Num. of Dwelling Units: 249
Directional Distribution: 24% entering, 76% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.40 | 0.13 - 0.73 | 0.12 |

## Data Plot and Equation



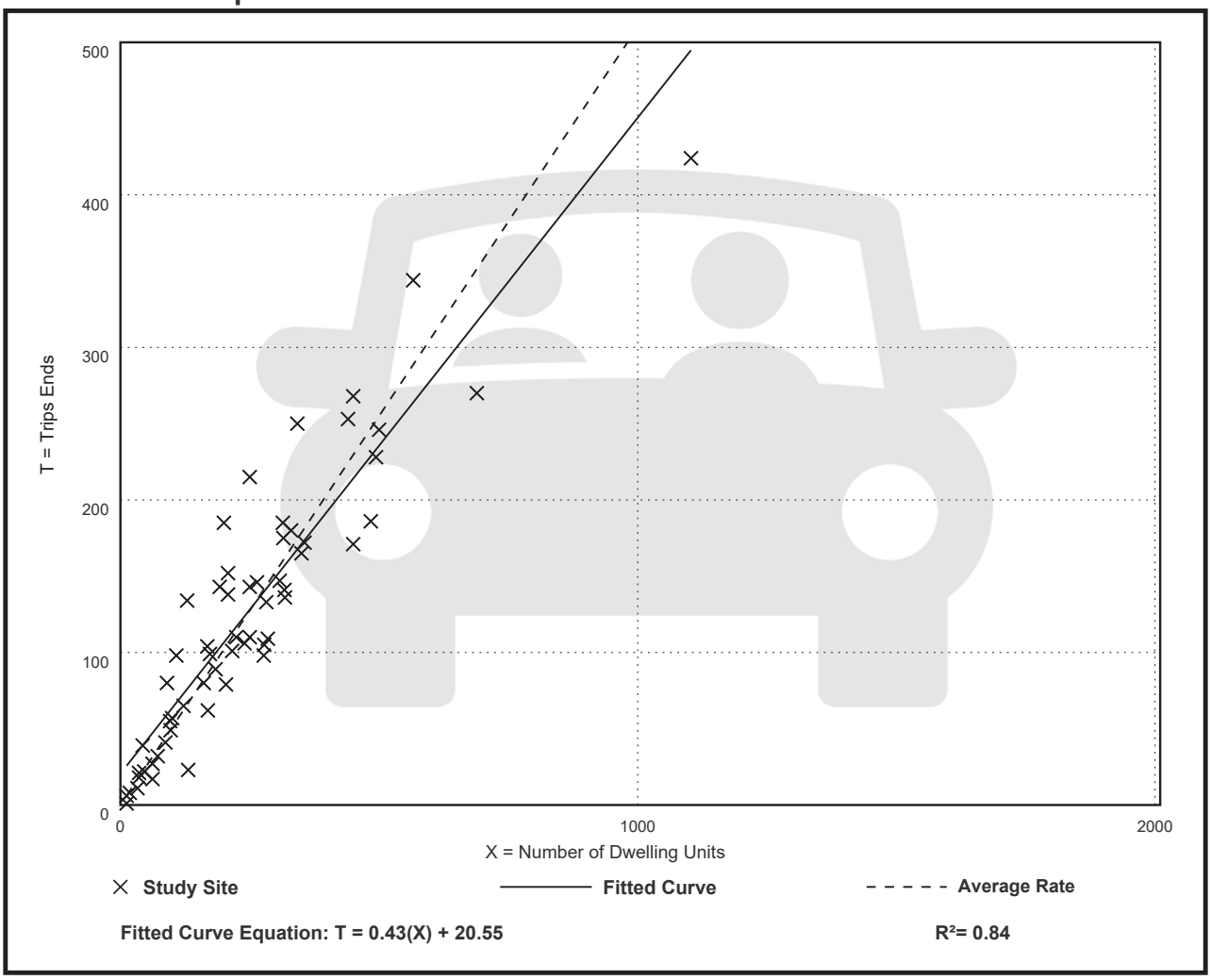
# Multifamily Housing (Low-Rise)
# Not Close to Rail Transit (220)

**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 4 and 6 p.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 59
Avg. Num. of Dwelling Units: 241
Directional Distribution: 63% entering, 37% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.51 | 0.08 - 1.04 | 0.15 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.43(X) + 20.55**

**$R^2$= 0.84**

# Multifamily Housing (Low-Rise)
# Not Close to Rail Transit (220)

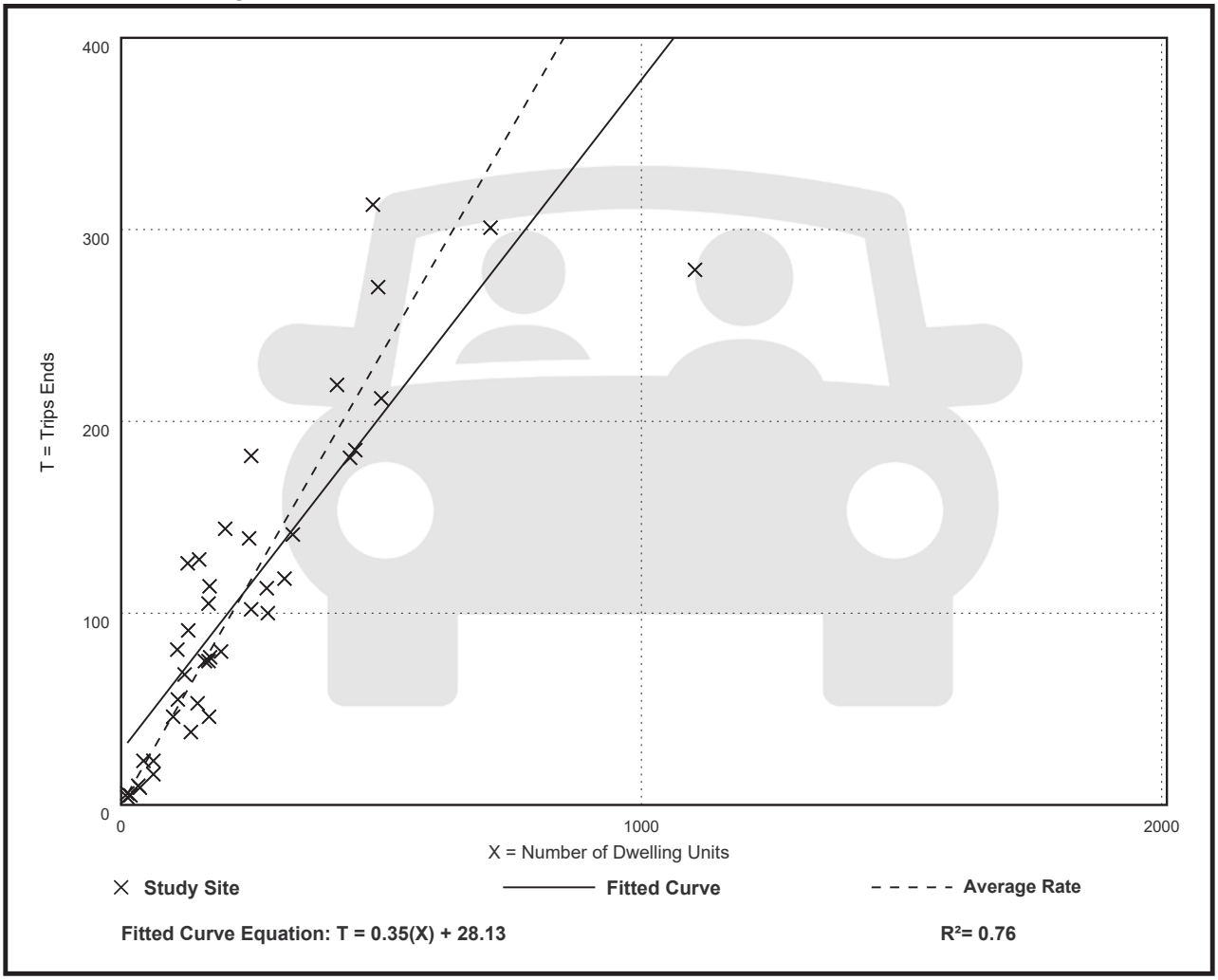
**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**AM Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 40
Avg. Num. of Dwelling Units: 234
Directional Distribution: 24% entering, 76% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.47 | 0.25 - 0.98 | 0.16 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.35(X) + 28.13**

**$R^2$= 0.76**

# Multifamily Housing (Low-Rise)
# Not Close to Rail Transit (220)

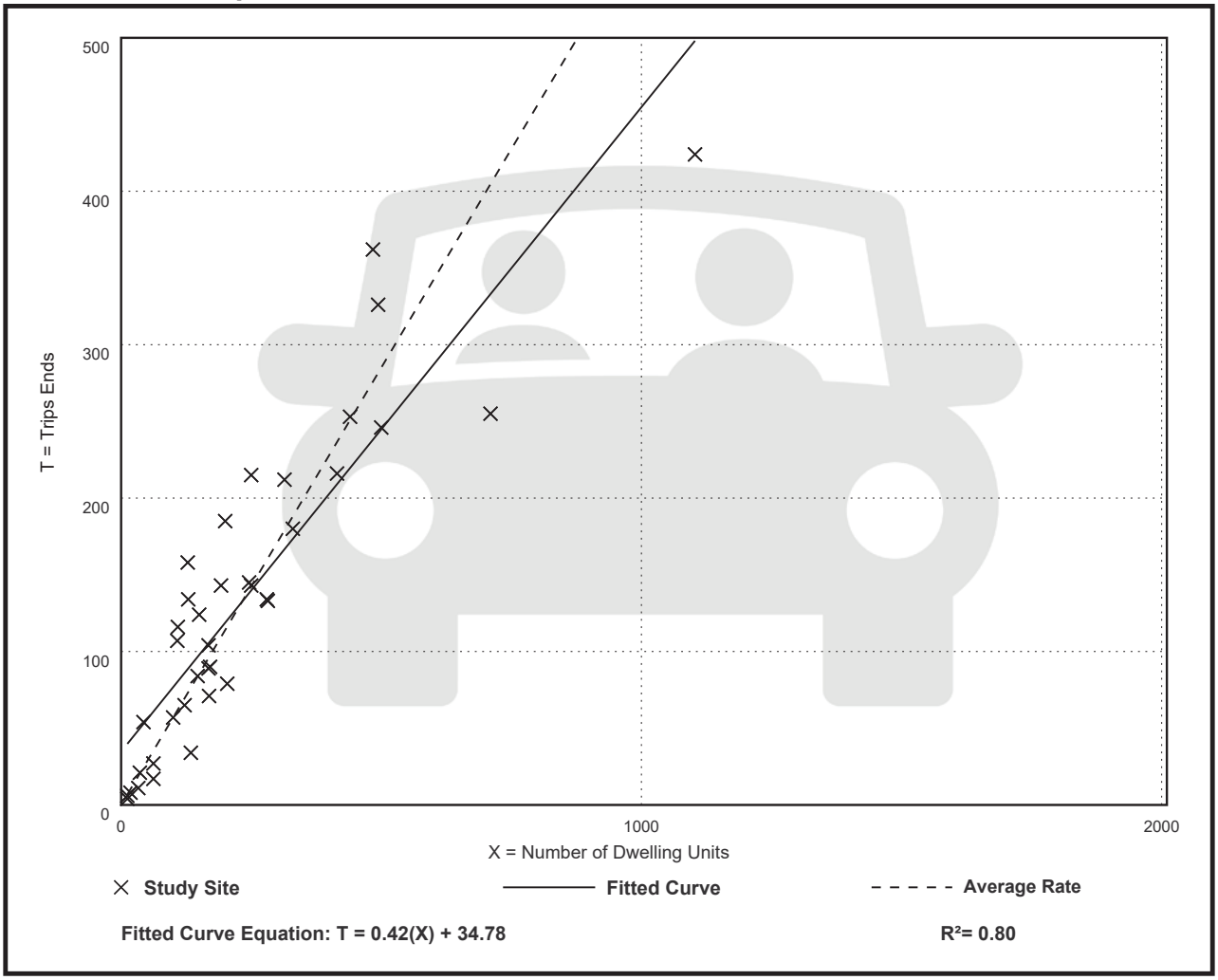
**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**PM Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 38
Avg. Num. of Dwelling Units: 231
Directional Distribution: 62% entering, 38% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.57 | 0.25 - 1.26 | 0.20 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.42(X) + 34.78**

**$R^2$= 0.80**

# Multifamily Housing (Low-Rise)
# Not Close to Rail Transit (220)

**Vehicle Trip Ends vs: Dwelling Units**
**On a: Saturday**

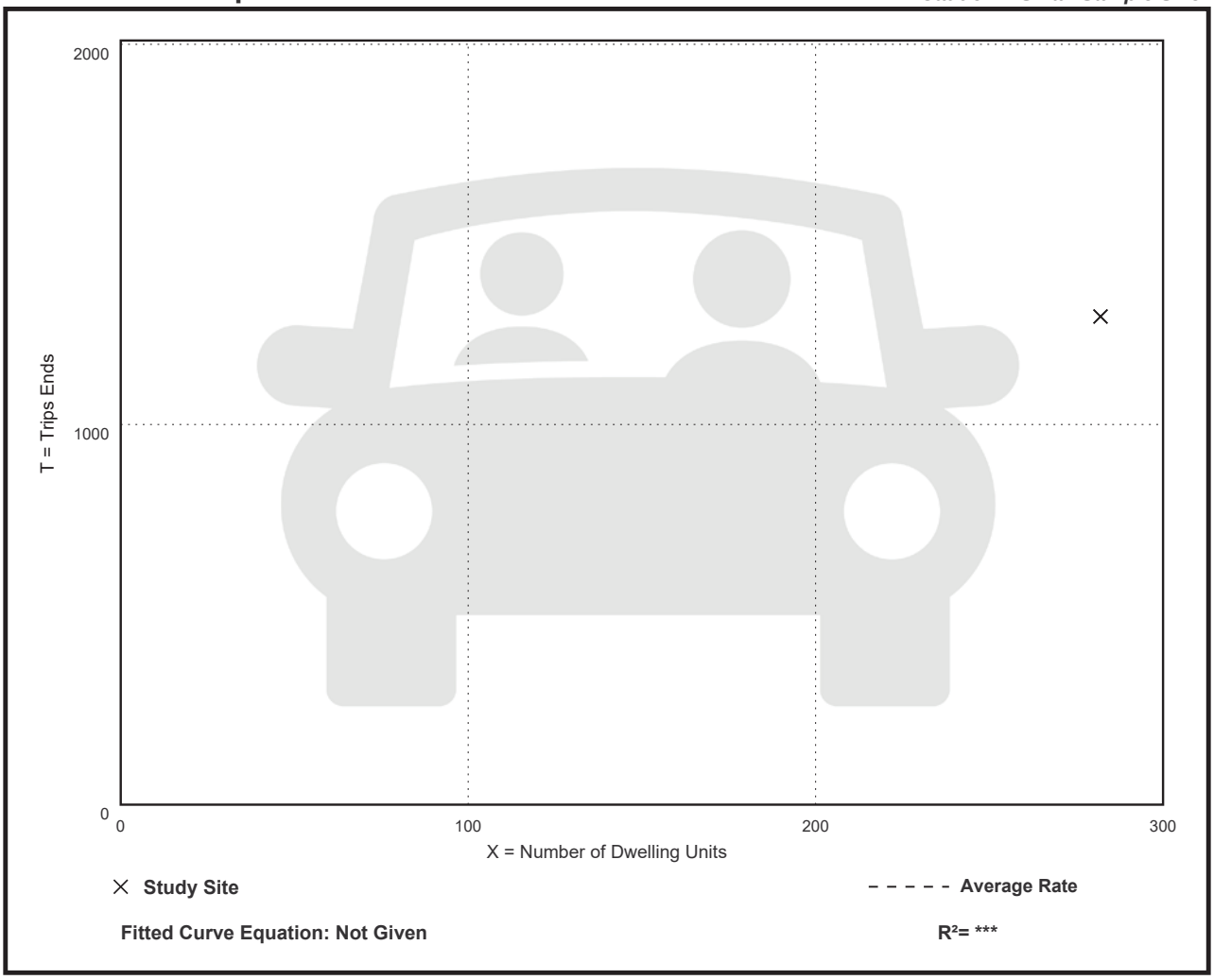
**Setting/Location: General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Dwelling Units: 282
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 4.55 | 4.55 - 4.55 | *** |

## Data Plot and Equation

***Caution – Small Sample Size***




**Fitted Curve Equation: Not Given**

**$R^2$= ***

# Multifamily Housing (Low-Rise)
# Not Close to Rail Transit (220)

**Vehicle Trip Ends vs: Dwelling Units**
**On a: Saturday, Peak Hour of Generator**

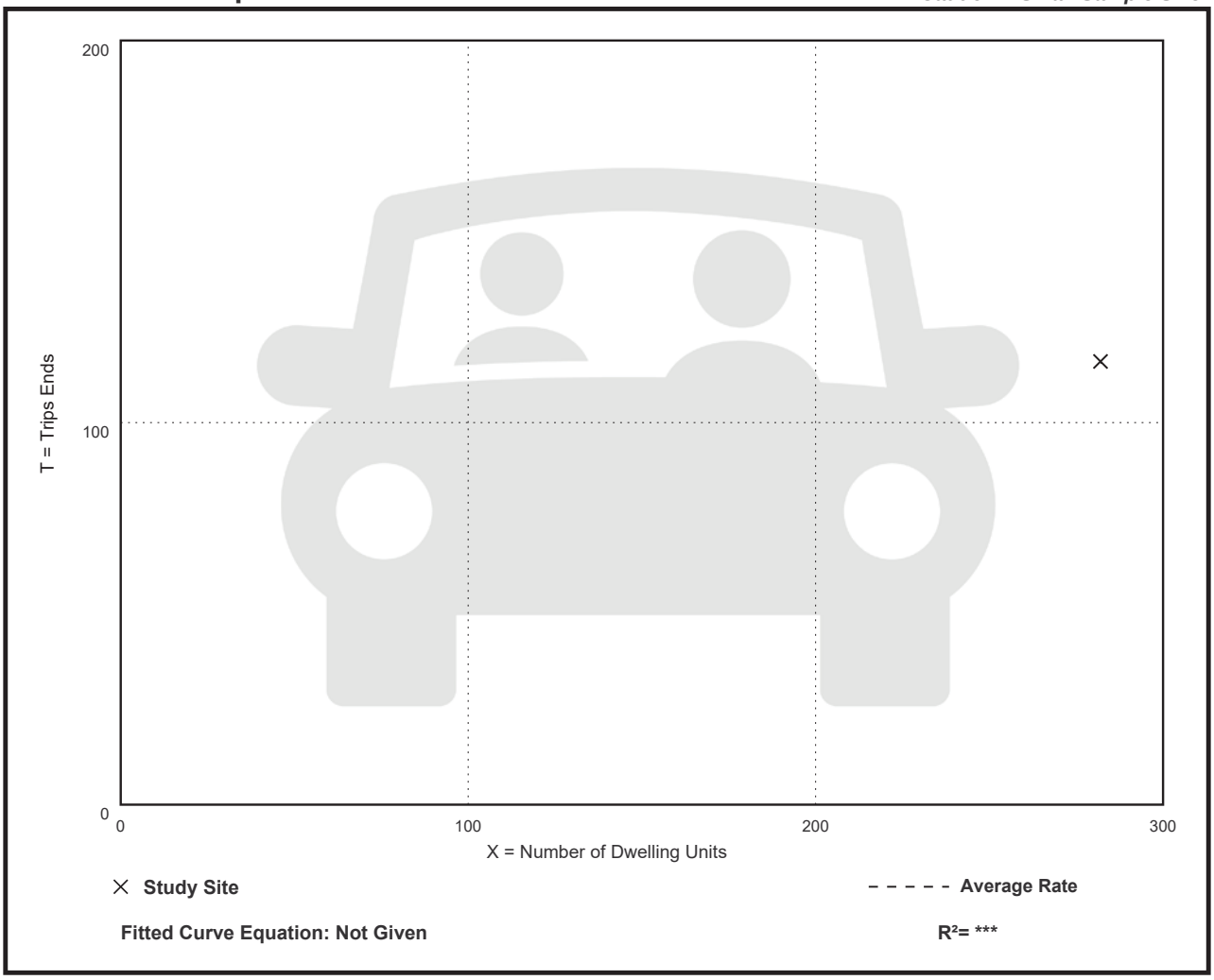
**Setting/Location: General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Dwelling Units: 282
Directional Distribution: Not Available

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.41 | 0.41 - 0.41 | *** |

## Data Plot and Equation

***Caution – Small Sample Size***




**Fitted Curve Equation: Not Given**

**$R^2$= ***

# Multifamily Housing (Low-Rise)
# Not Close to Rail Transit (220)

**Vehicle Trip Ends vs: Dwelling Units**
**On a: Sunday**

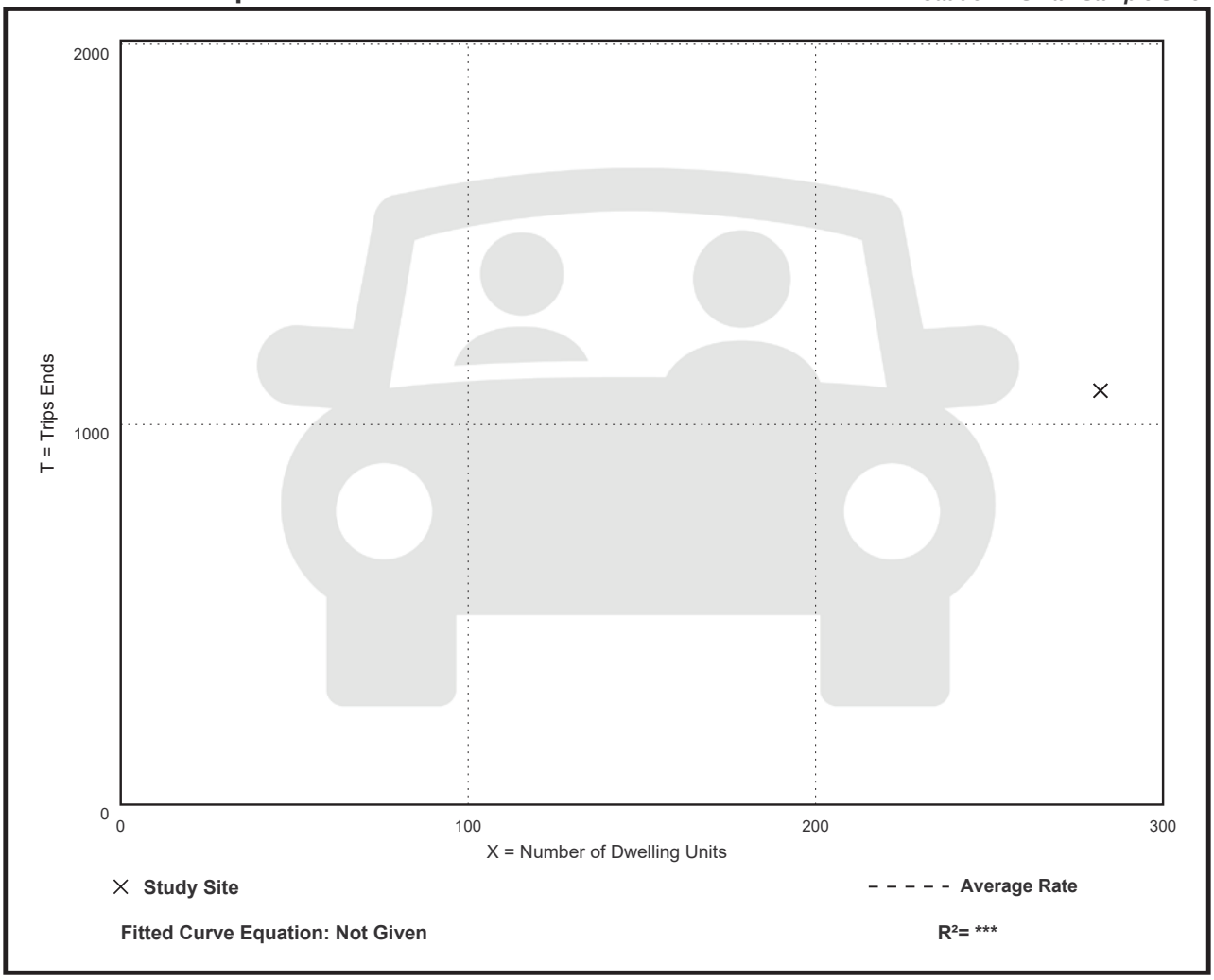
**Setting/Location: General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Dwelling Units: 282
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 3.86 | 3.86 - 3.86 | *** |

## Data Plot and Equation

***Caution – Small Sample Size***




**Fitted Curve Equation: Not Given**

**$R^2$= ***

# Multifamily Housing (Low-Rise)
# Not Close to Rail Transit (220)

**Vehicle Trip Ends vs: Dwelling Units**
**On a: Sunday, Peak Hour of Generator**

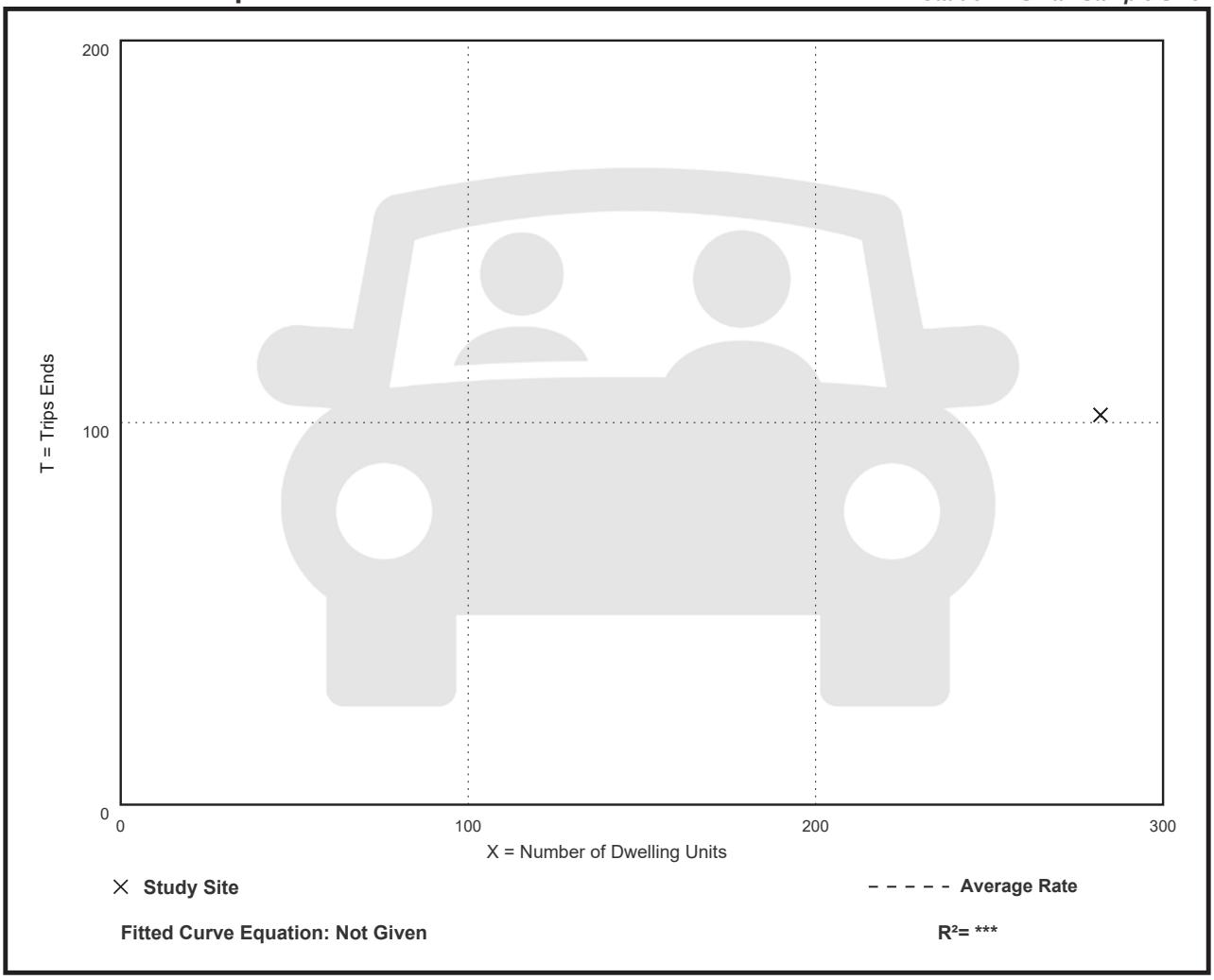
**Setting/Location: General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Dwelling Units: 282
Directional Distribution: Not Available

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.36 | 0.36 - 0.36 | *** |

## Data Plot and Equation

***Caution – Small Sample Size***




**Fitted Curve Equation: Not Given**

**$R^2$= ***

# Multifamily Housing (Low-Rise)
# Not Close to Rail Transit (220)

**Vehicle Trip Ends vs: Residents**
**On a: Weekday**

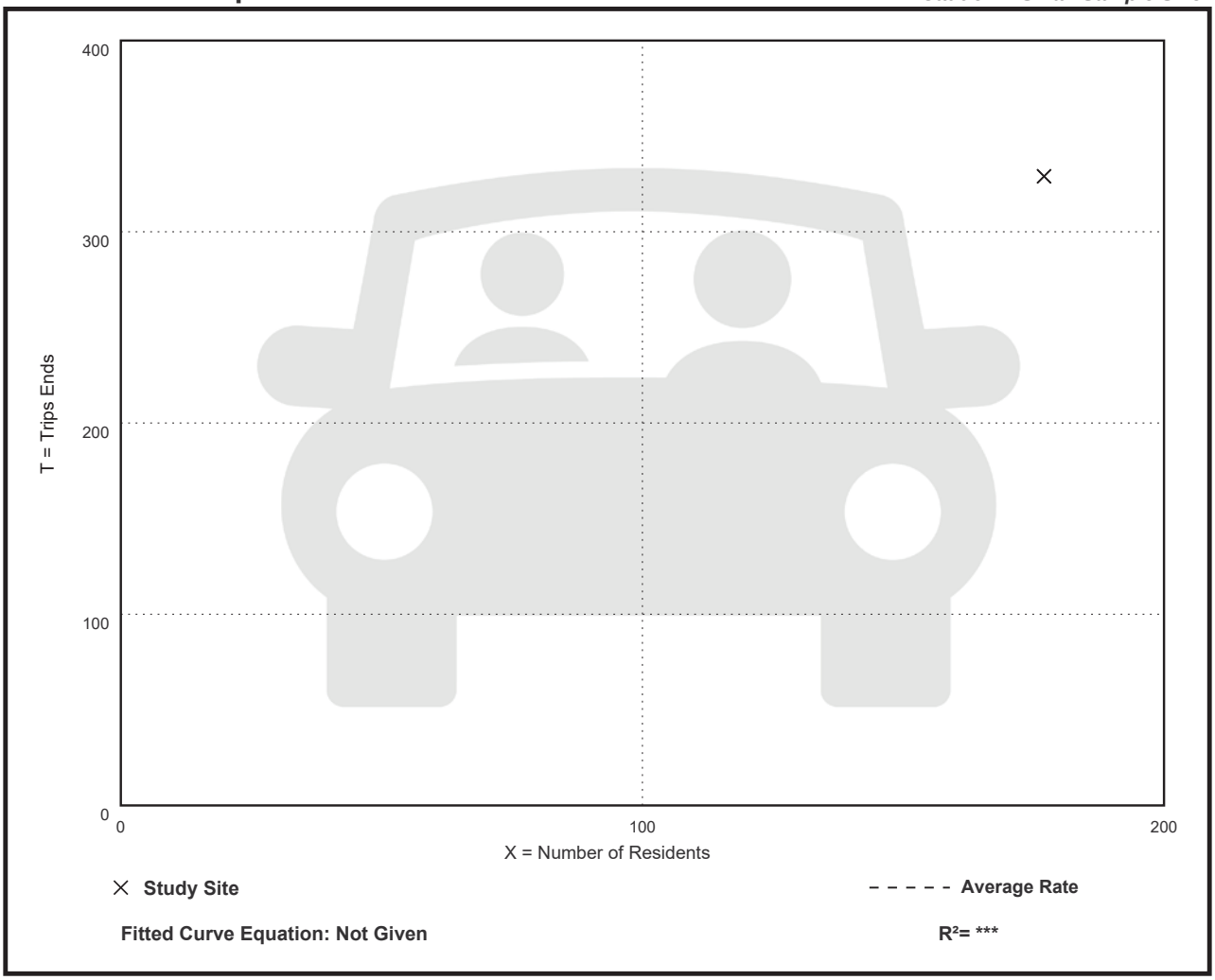
**Setting/Location: General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Residents: 177
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Resident

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 1.86 | 1.86 - 1.86 | *** |

## Data Plot and Equation

***Caution – Small Sample Size***



# Multifamily Housing (Low-Rise)
# Not Close to Rail Transit (220)

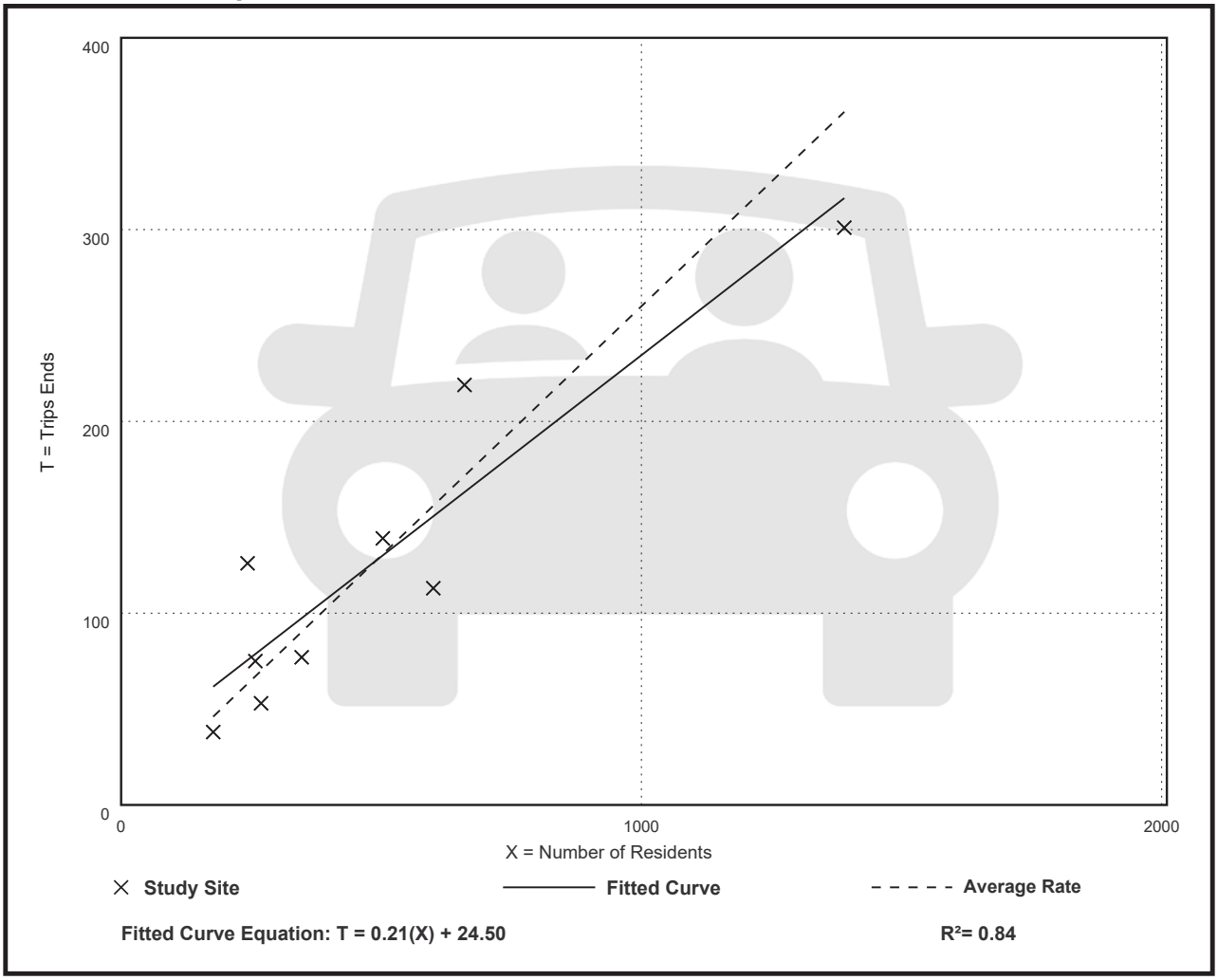
**Vehicle Trip Ends vs: Residents**
**On a: Weekday,**
**AM Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 9
Avg. Num. of Residents: 494
Directional Distribution: 17% entering, 83% exiting

## Vehicle Trip Generation per Resident

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.26 | 0.19 - 0.52 | 0.08 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.21(X) + 24.50**

**$R^2$= 0.84**

# Multifamily Housing (Low-Rise)
# Not Close to Rail Transit (220)

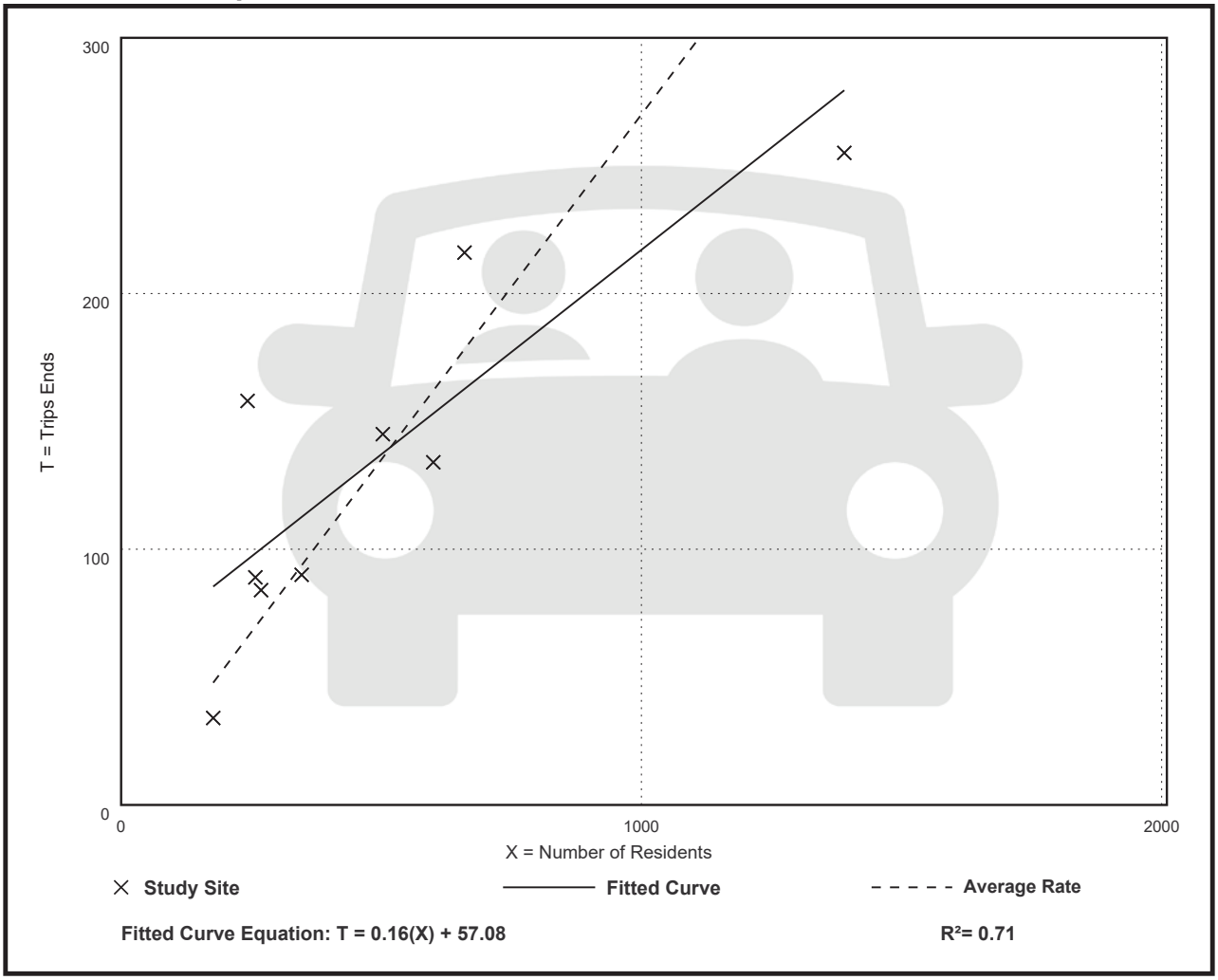
**Vehicle Trip Ends vs: Residents**
**On a: Weekday,**
**PM Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 9
Avg. Num. of Residents: 494
Directional Distribution: 66% entering, 34% exiting

## Vehicle Trip Generation per Resident

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.27 | 0.18 - 0.65 | 0.11 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.16(X) + 57.08**

**$R^2$= 0.71**

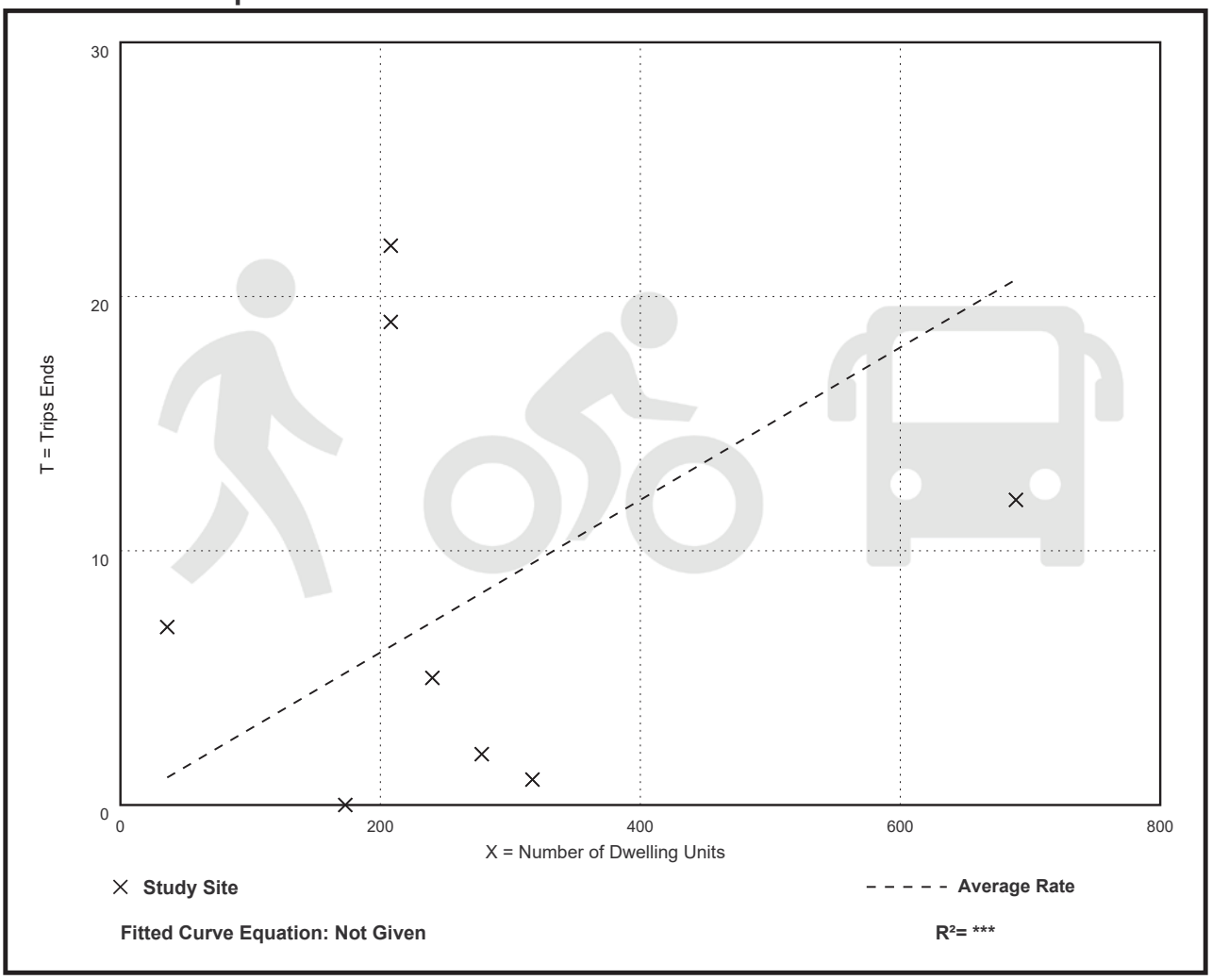
# Multifamily Housing (Low-Rise)
# Not Close to Rail Transit (220)

**Walk+Bike+Transit Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 7 and 9 a.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 8
Avg. Num. of Dwelling Units: 269
Directional Distribution: 43% entering, 57% exiting

## Walk+Bike+Transit Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.03 | 0.00 - 0.19 | 0.04 |

## Data Plot and Equation



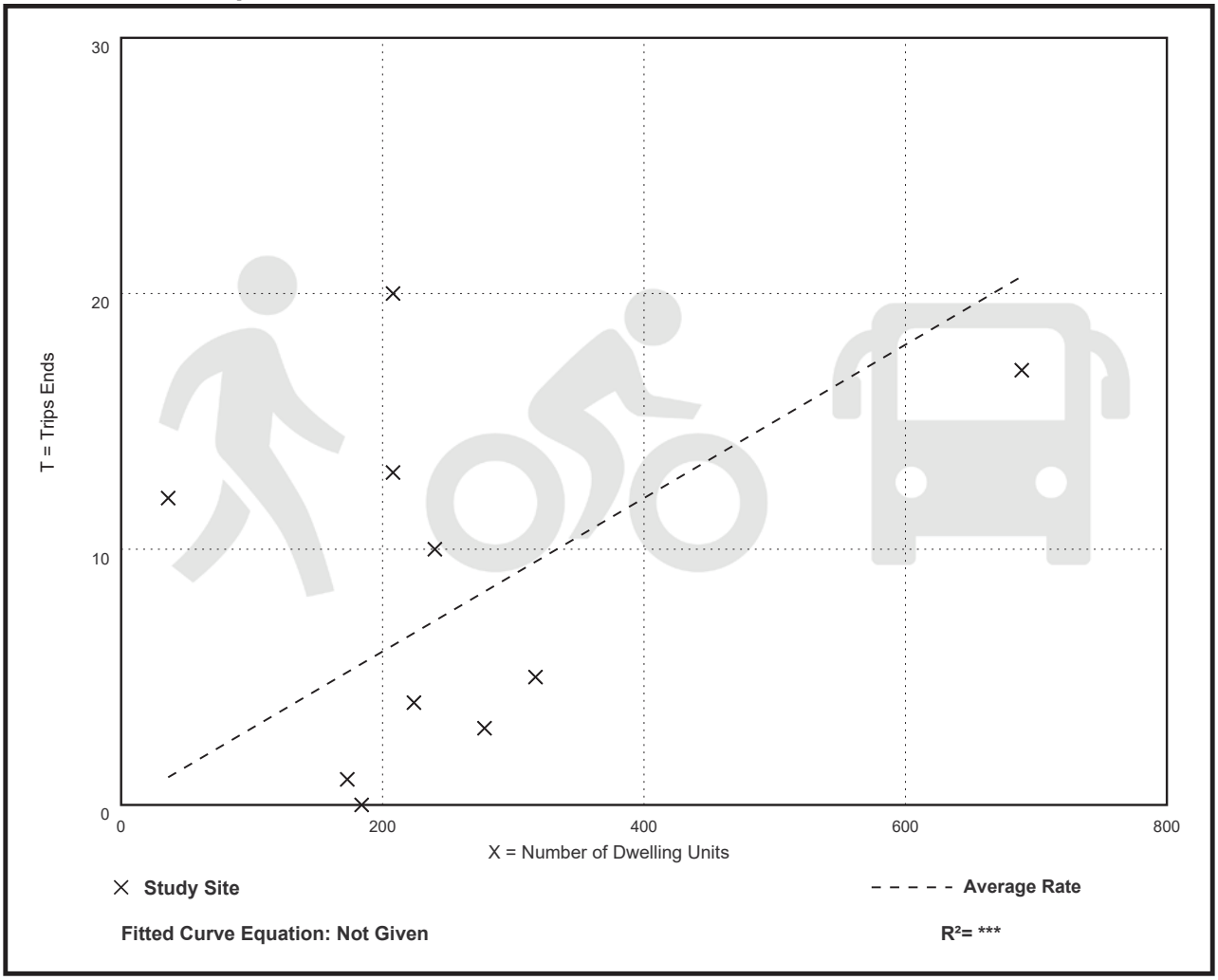
# Multifamily Housing (Low-Rise)
# Not Close to Rail Transit (220)

**Walk+Bike+Transit Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 4 and 6 p.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 10
Avg. Num. of Dwelling Units: 256
Directional Distribution: 50% entering, 50% exiting

## Walk+Bike+Transit Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.03 | 0.00 - 0.33 | 0.05 |

## Data Plot and Equation



# Multifamily Housing (Low-Rise)
# Close to Rail Transit (220)

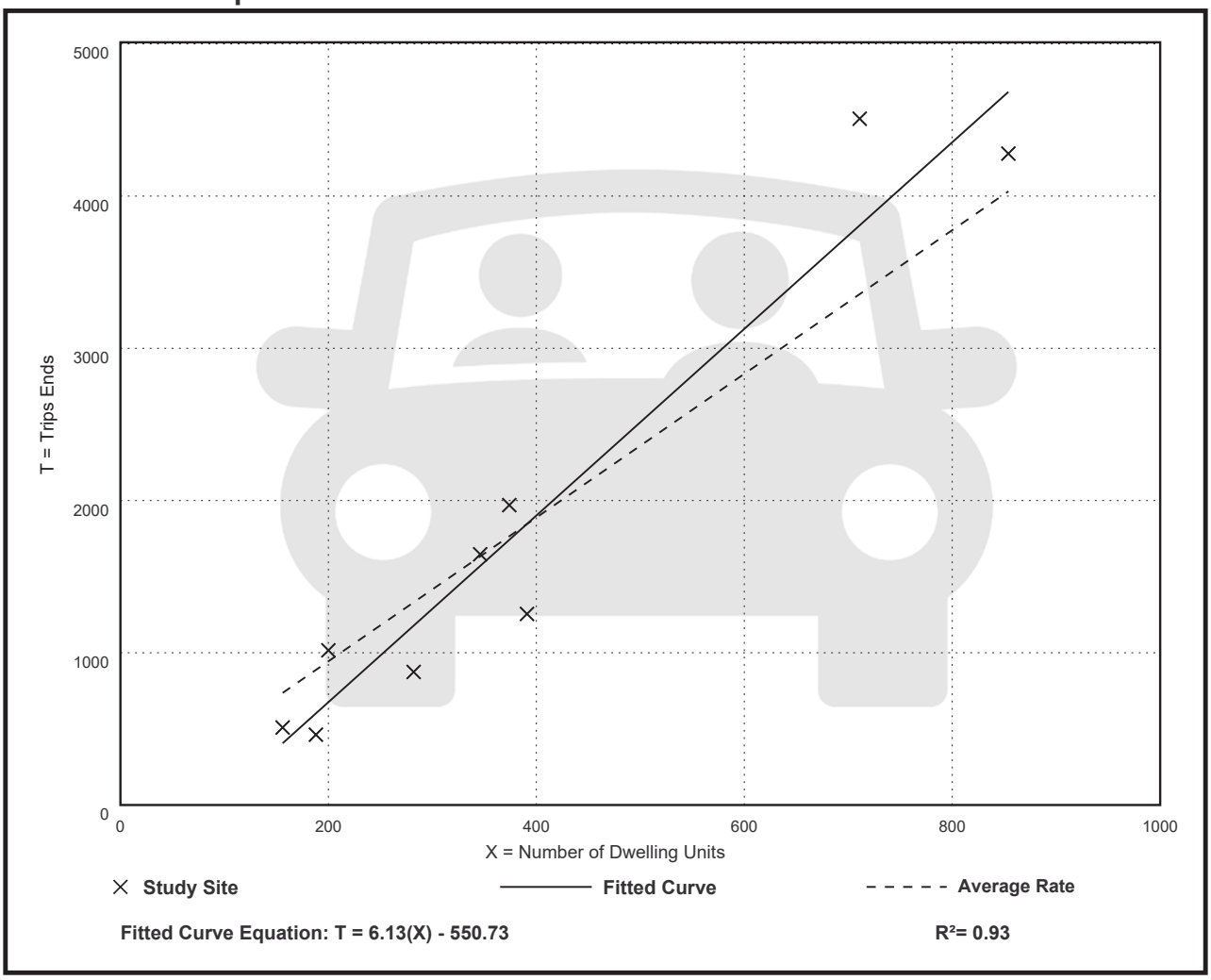
**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 9
Avg. Num. of Dwelling Units: 389
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 4.72 | 2.46 - 6.34 | 1.27 |

## Data Plot and Equation




**Fitted Curve Equation: T = 6.13(X) - 550.73**

**$R^2$= 0.93**

# Multifamily Housing (Low-Rise)
# Close to Rail Transit (220)

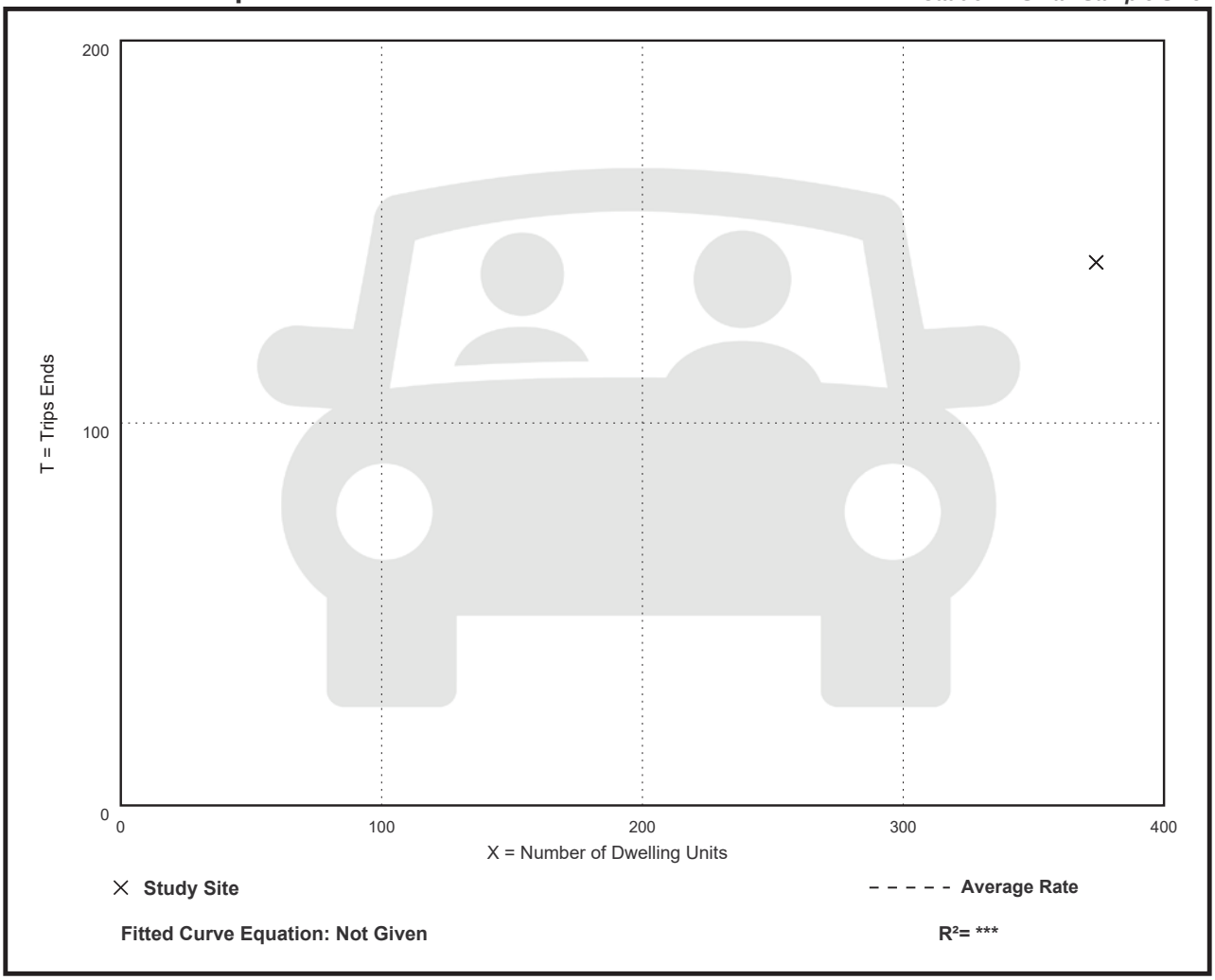
**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 7 and 9 a.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Dwelling Units: 374
Directional Distribution: 29% entering, 71% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.38 | 0.38 - 0.38 | *** |

## Data Plot and Equation

***Caution – Small Sample Size***




**Fitted Curve Equation: Not Given**

**$R^2$= ***

# Multifamily Housing (Low-Rise)
# Close to Rail Transit (220)

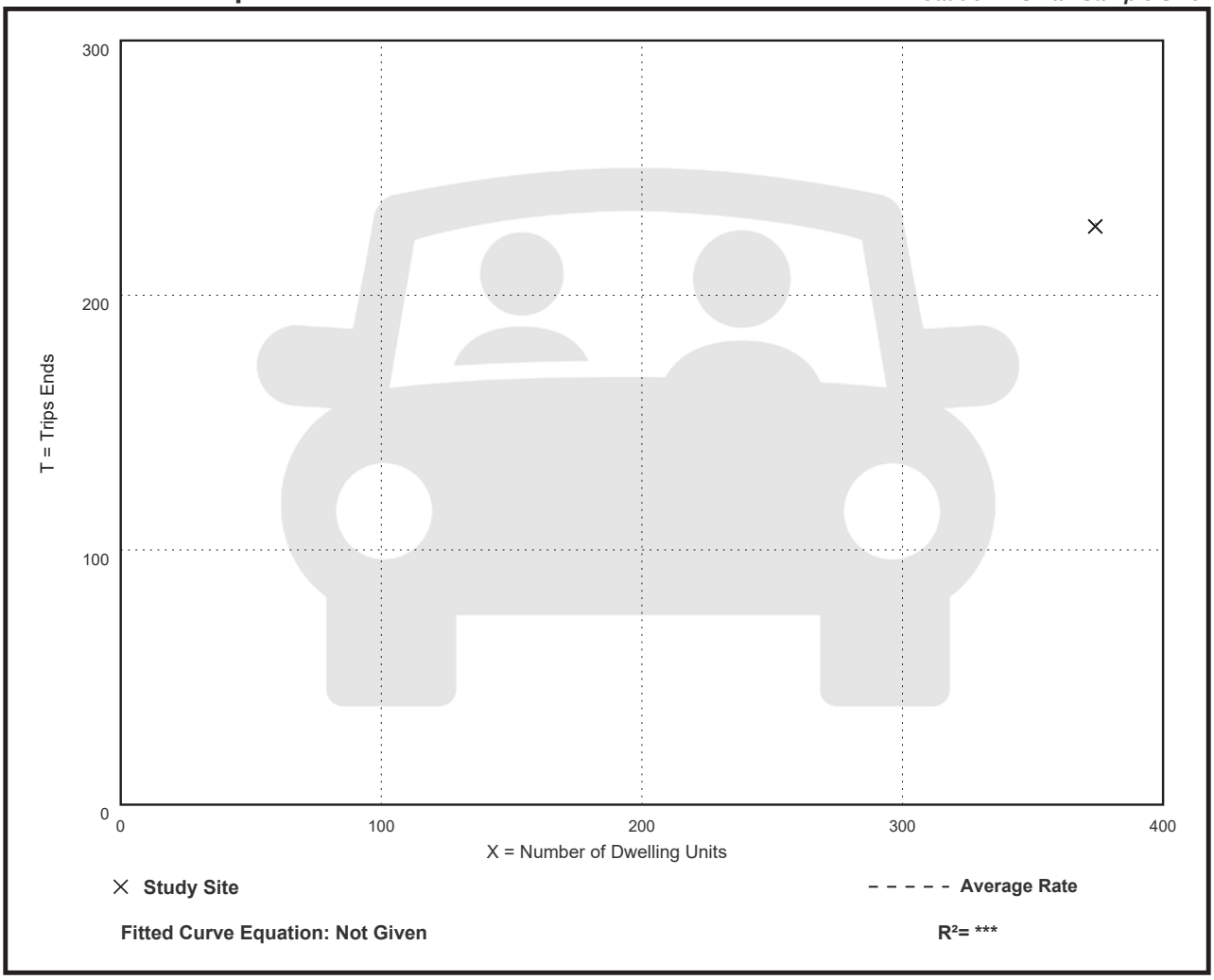
**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 4 and 6 p.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Dwelling Units: 374
Directional Distribution: 60% entering, 40% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.61 | 0.61 - 0.61 | *** |

## Data Plot and Equation

***Caution – Small Sample Size***




**Fitted Curve Equation: Not Given**

**$R^2$= ***

# Multifamily Housing (Low-Rise)
# Close to Rail Transit (220)

**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**AM Peak Hour of Generator**

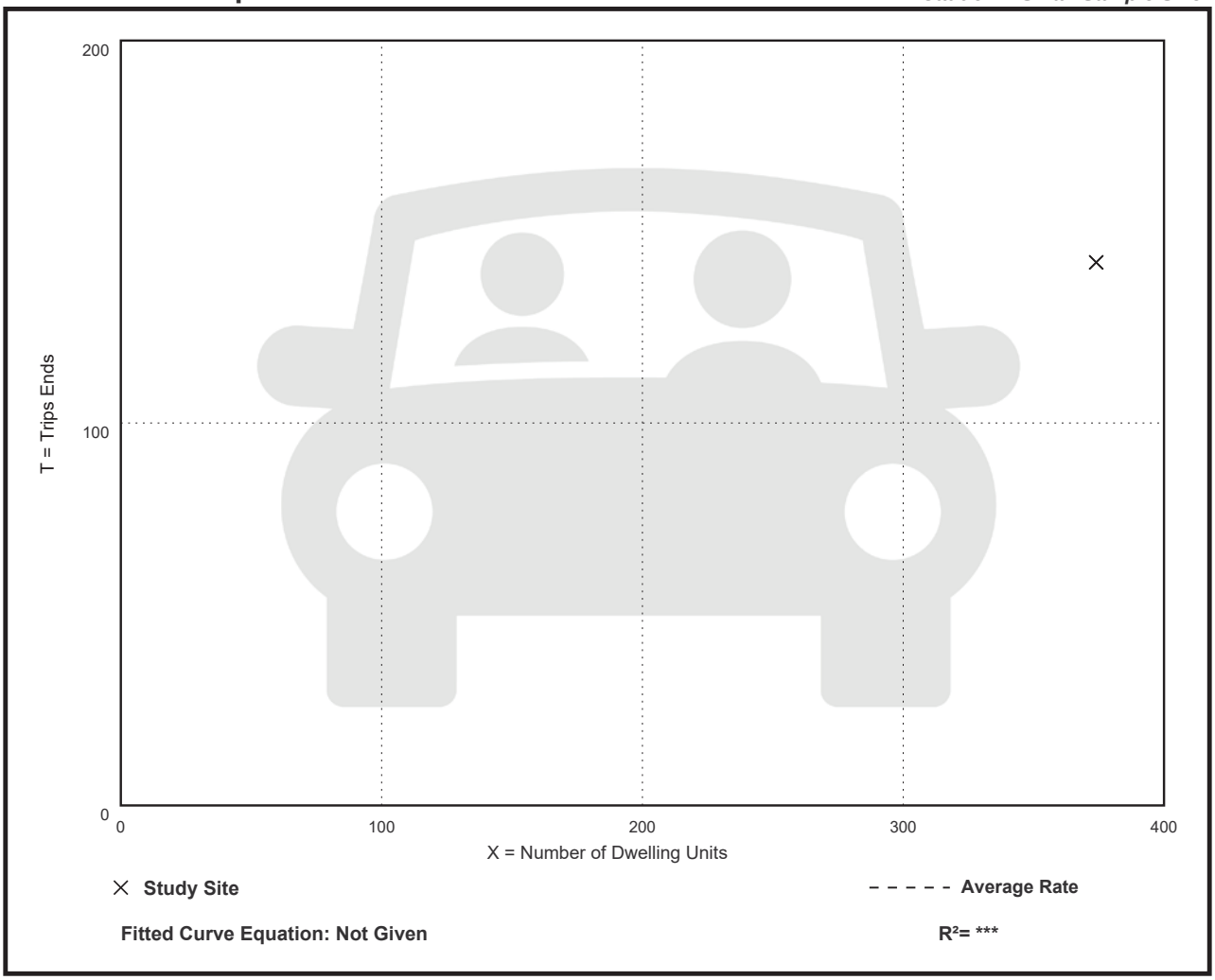
**Setting/Location: General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Dwelling Units: 374
Directional Distribution: 29% entering, 71% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.38 | 0.38 - 0.38 | *** |

## Data Plot and Equation

***Caution – Small Sample Size***




**Fitted Curve Equation: Not Given**

**$R^2$= ***

# Multifamily Housing (Low-Rise)
# Close to Rail Transit (220)

**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**PM Peak Hour of Generator**

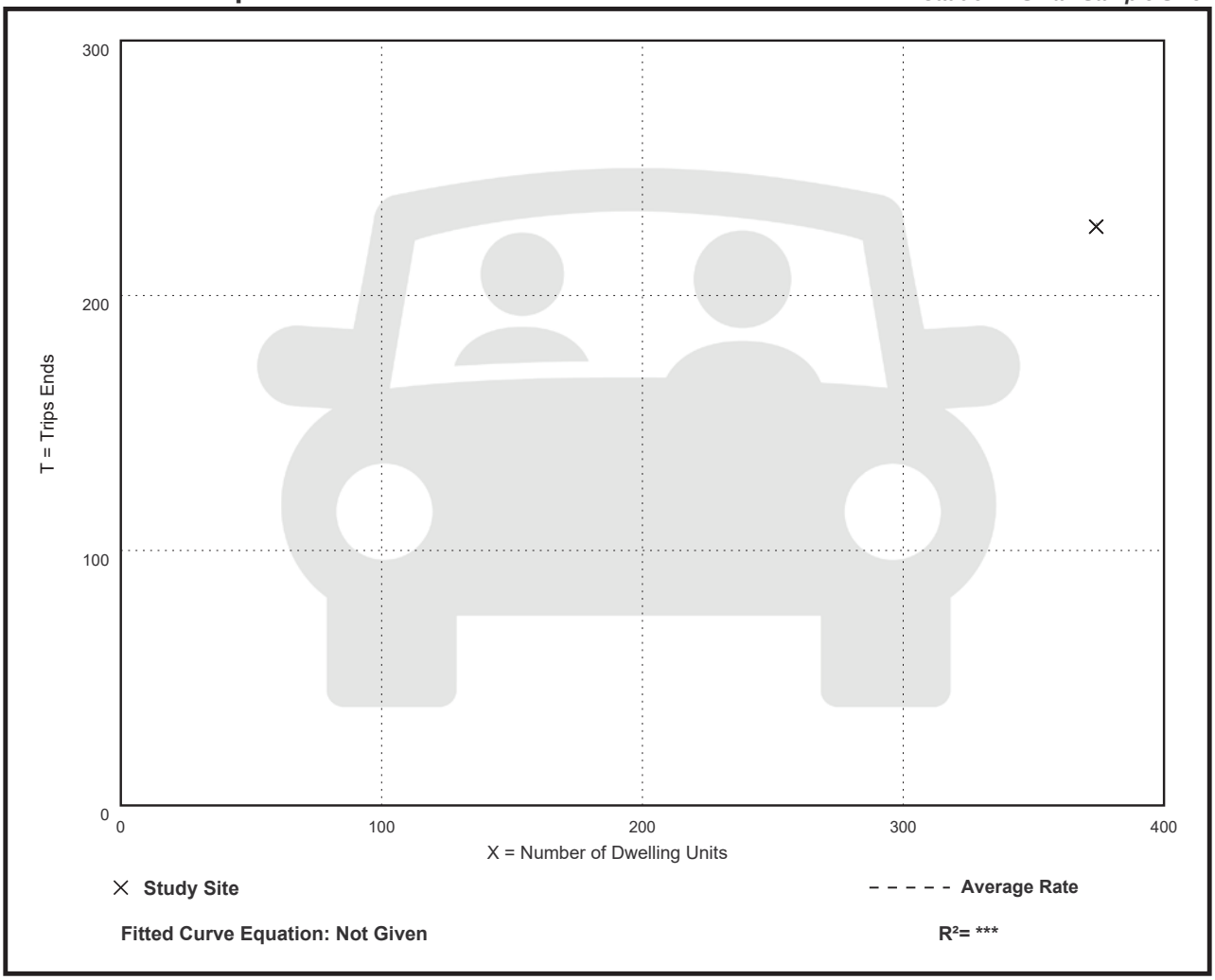
**Setting/Location: General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Dwelling Units: 374
Directional Distribution: 60% entering, 40% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.61 | 0.61 - 0.61 | *** |

## Data Plot and Equation

***Caution – Small Sample Size***




**Fitted Curve Equation: Not Given**

**$R^2$= ***

## Triplex (Land Use Code 215: Residential, Single-Family Attached Housing)

Follows this page

# Land Use: 215
# Single-Family Attached Housing

## Description

Single-family attached housing includes any single-family housing unit that shares a wall with an adjoining dwelling unit, whether the walls are for living space, a vehicle garage, or storage space.

## Additional Data

The database for this land use includes duplexes (defined as a single structure with two distinct dwelling units, typically joined side-by-side and each with at least one outside entrance) and townhouses/rowhouses (defined as a single structure with three or more distinct dwelling units, joined side-by-side in a row and each with an outside entrance).

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in British Columbia (CAN), California, Georgia, Illinois, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Dakota, Utah, Virginia, and Wisconsin.

## Source Numbers

168, 204, 211, 237, 305, 306, 319, 321, 357, 390, 418, 525, 571, 583, 638, 735, 868, 869, 870, 896, 912, 959, 1009, 1046, 1056, 1058, 1077

# Single-Family Attached Housing
# (215)

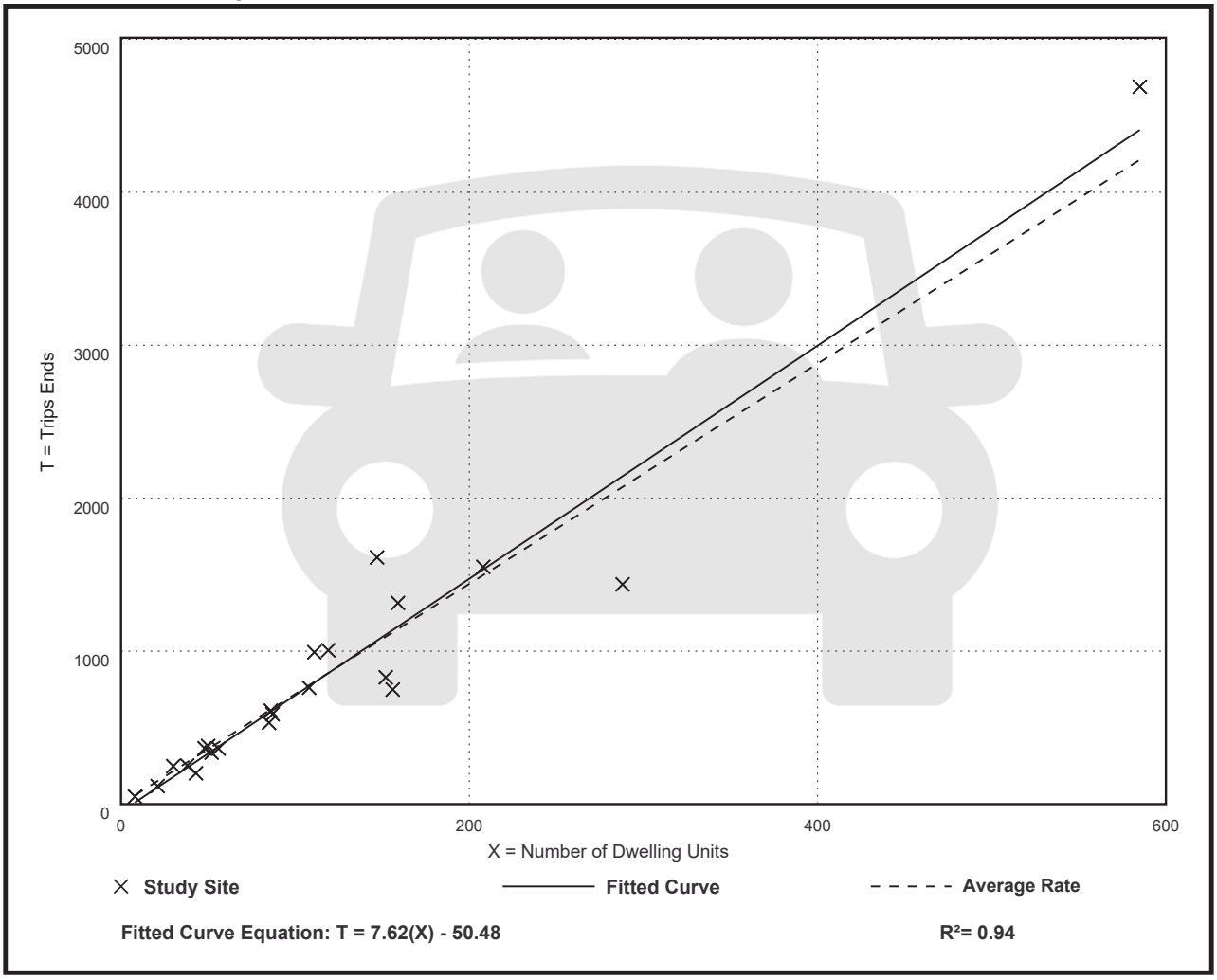
**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 22
Avg. Num. of Dwelling Units: 120
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 7.20 | 4.70 - 10.97 | 1.61 |

## Data Plot and Equation




**Fitted Curve Equation: T = 7.62(X) - 50.48**

**$R^2$= 0.94**

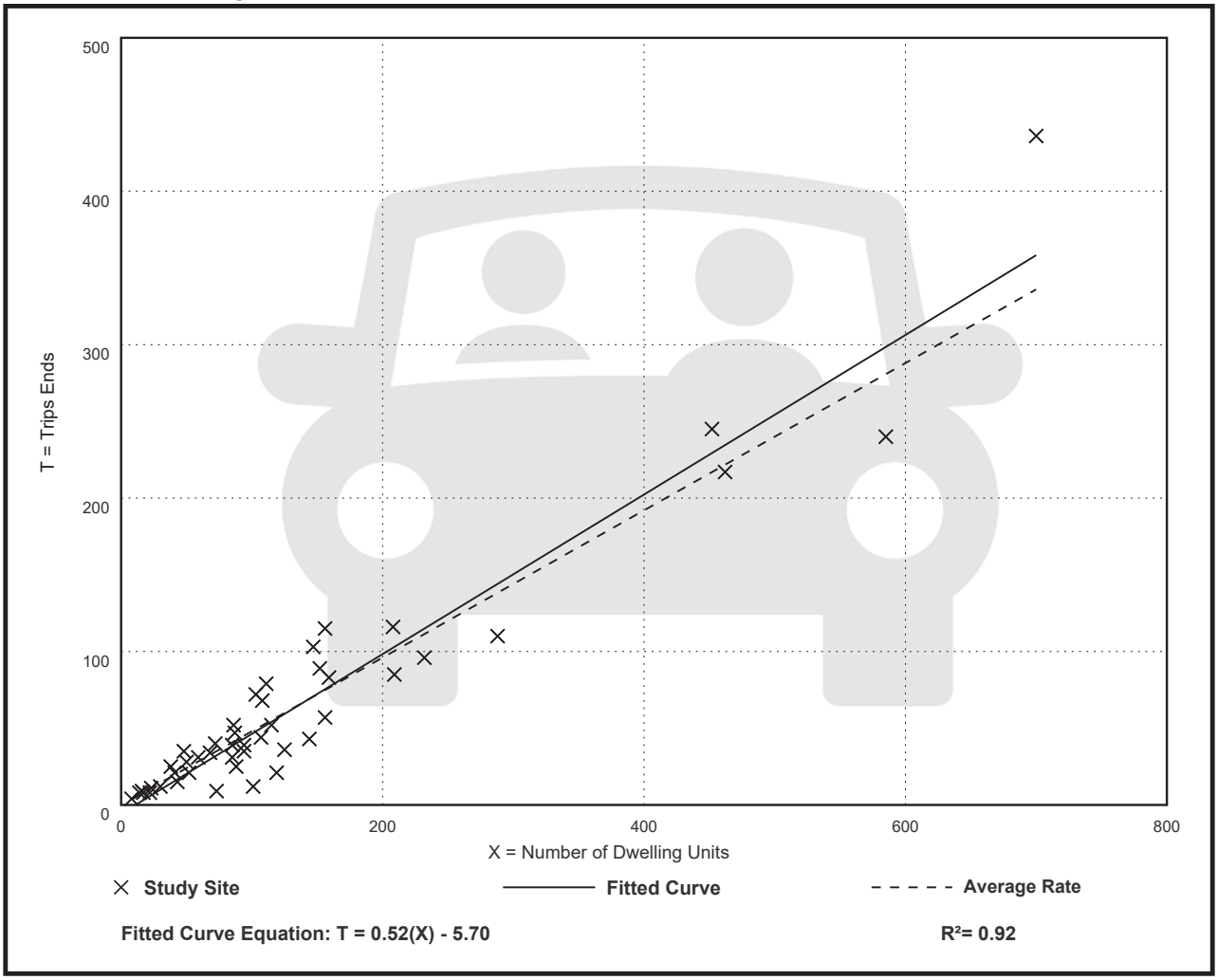
# Single-Family Attached Housing
# (215)

**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 7 and 9 a.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 46
Avg. Num. of Dwelling Units: 135
Directional Distribution: 31% entering, 69% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.48 | 0.12 - 0.74 | 0.14 |

## Data Plot and Equation




**Fitted Curve Equation: T = 0.52(X) - 5.70**

**$R^2$= 0.92**

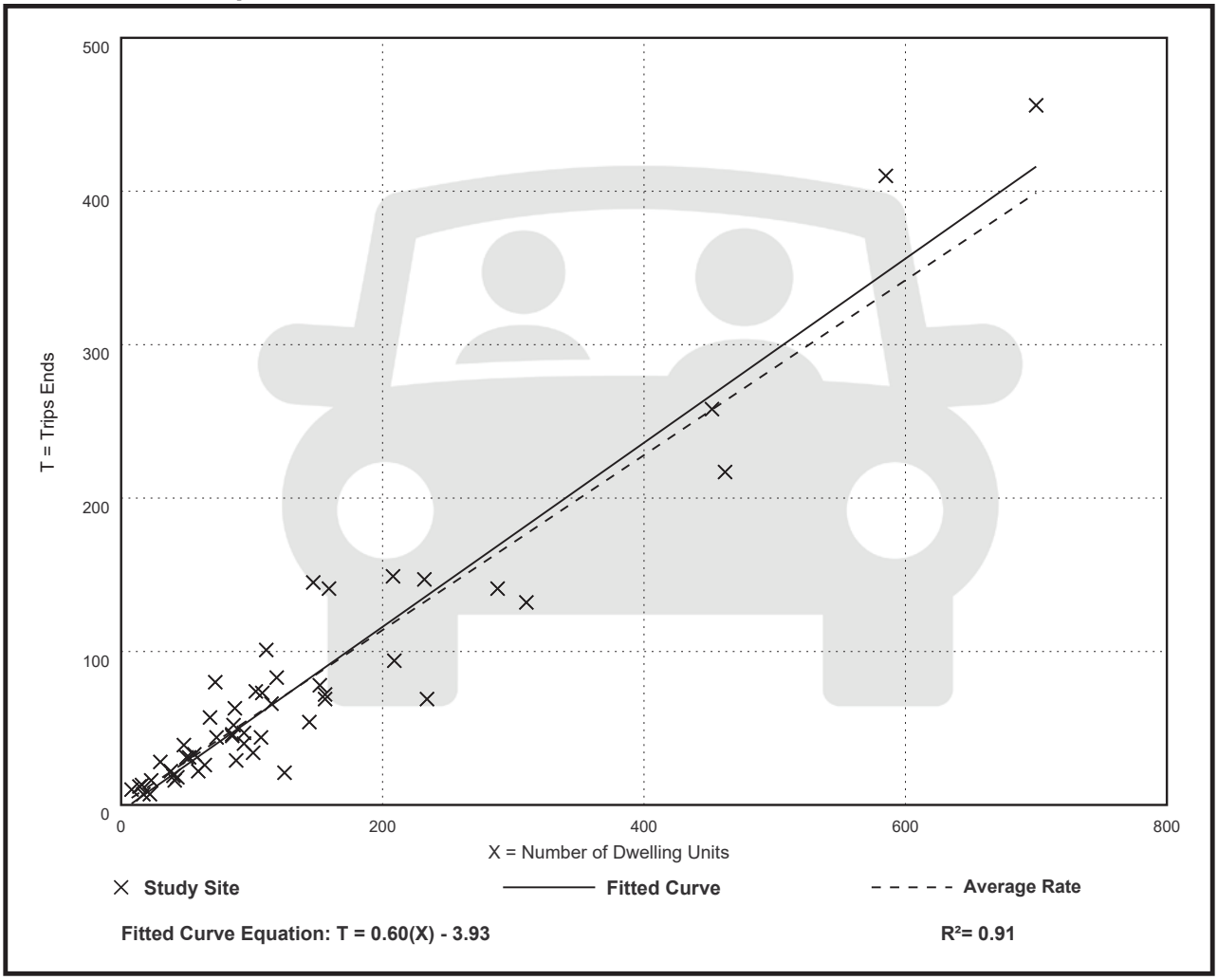
# Single-Family Attached Housing
# (215)

**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 4 and 6 p.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 51
Avg. Num. of Dwelling Units: 136
Directional Distribution: 57% entering, 43% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.57 | 0.17 - 1.25 | 0.18 |

## Data Plot and Equation



# Single-Family Attached Housing
# (215)

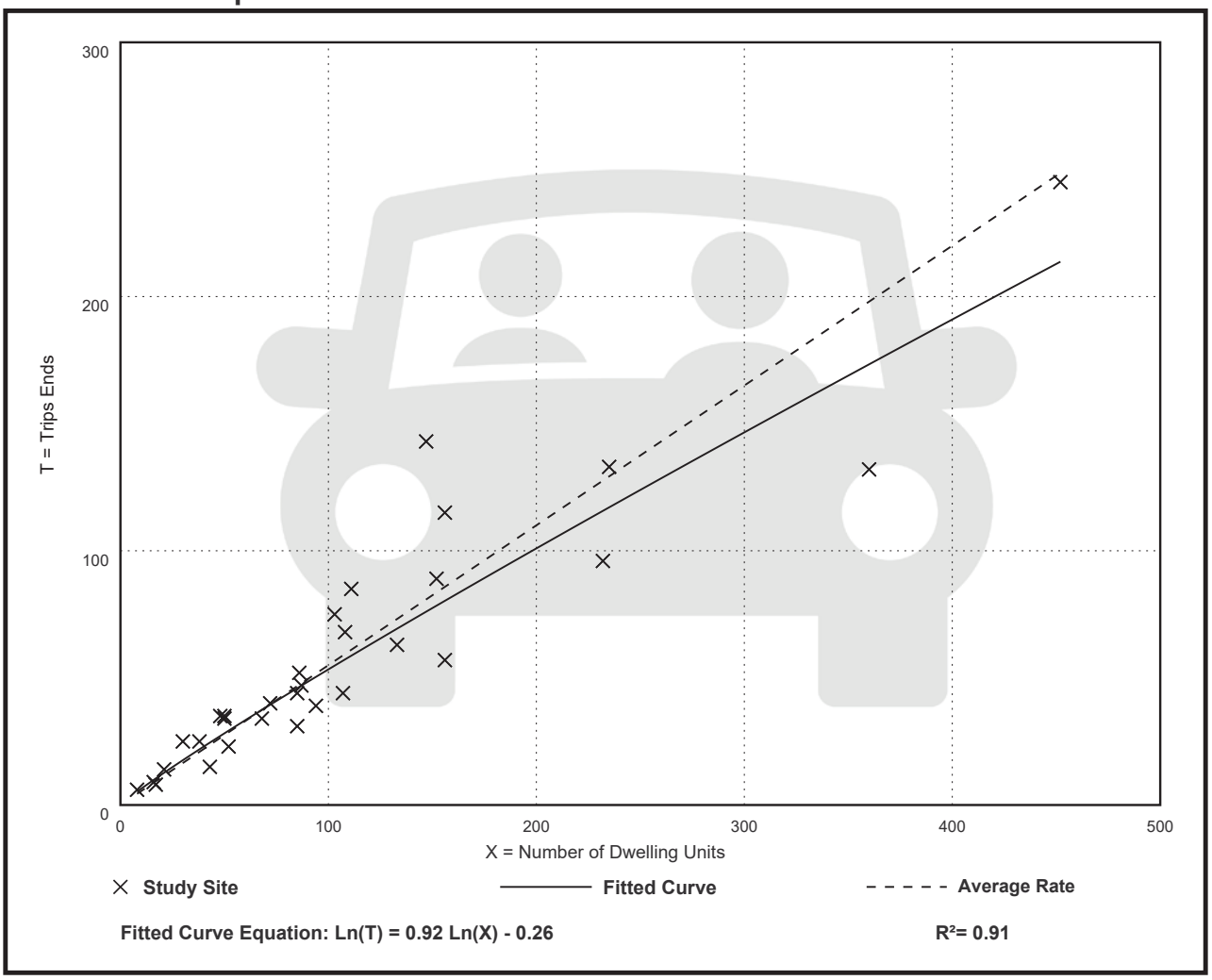
**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**AM Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 31
Avg. Num. of Dwelling Units: 110
Directional Distribution: 25% entering, 75% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.55 | 0.35 - 0.97 | 0.16 |

## Data Plot and Equation




**Fitted Curve Equation: Ln(T) = 0.92 Ln(X) - 0.26**

**$R^2$= 0.91**

# Single-Family Attached Housing
# (215)

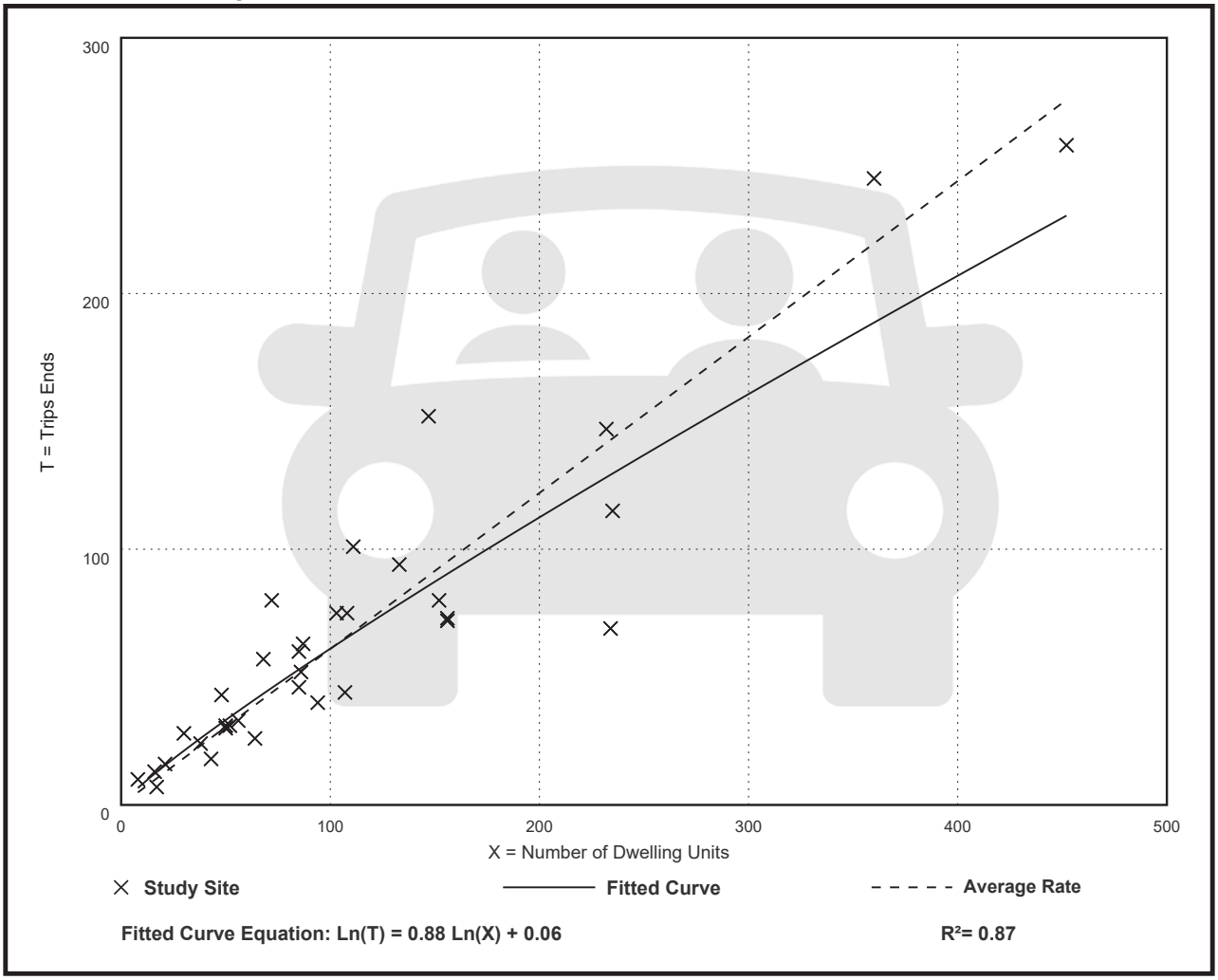
**Vehicle Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**PM Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 34
Avg. Num. of Dwelling Units: 110
Directional Distribution: 62% entering, 38% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.61 | 0.29 - 1.25 | 0.18 |

## Data Plot and Equation



# Single-Family Attached Housing
# (215)

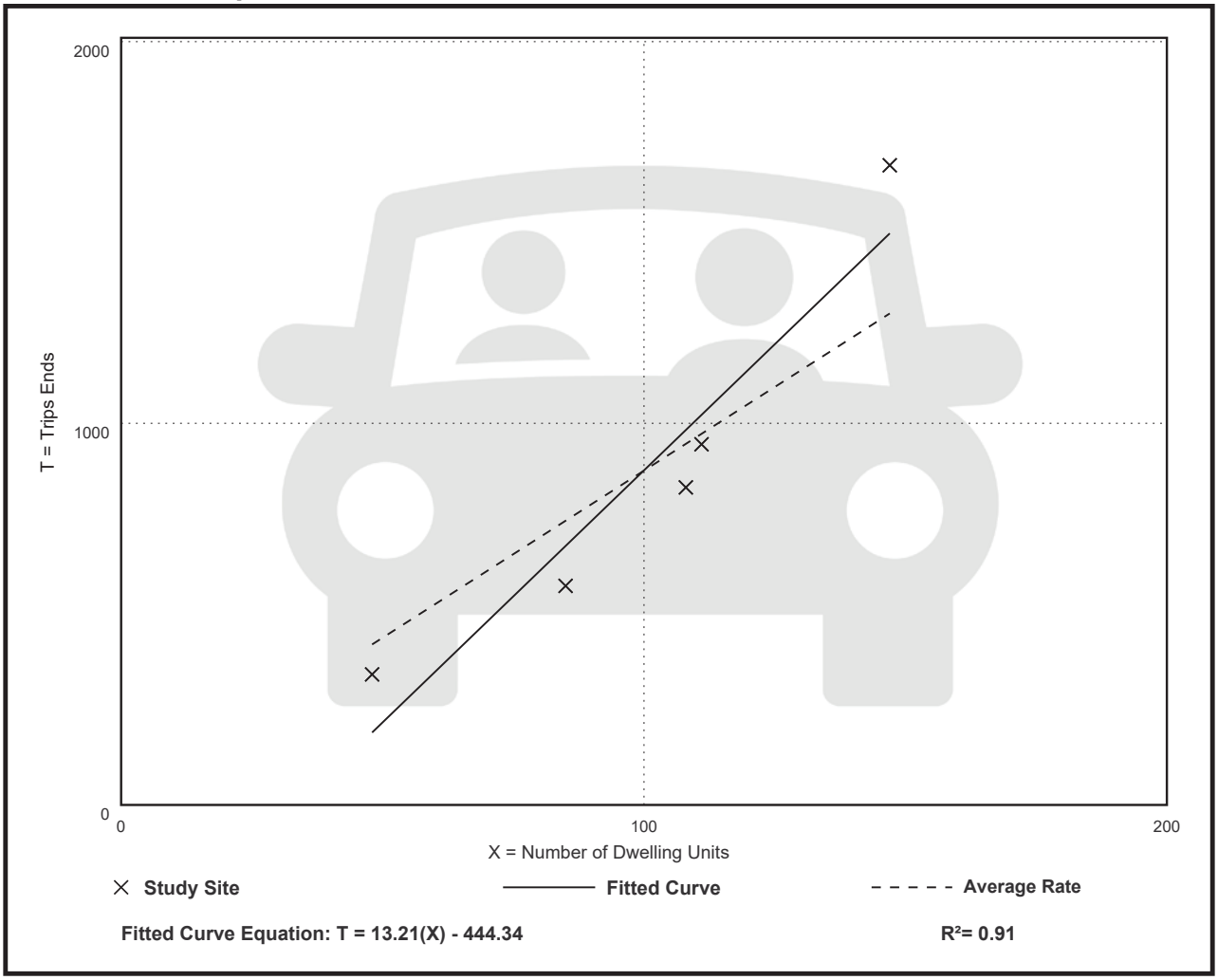
**Vehicle Trip Ends vs: Dwelling Units**
**On a: Saturday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Dwelling Units: 100
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 8.76 | 6.75 - 11.40 | 2.02 |

## Data Plot and Equation




**Fitted Curve Equation: T = 13.21(X) - 444.34**

**$R^2$= 0.91**

# Single-Family Attached Housing
# (215)

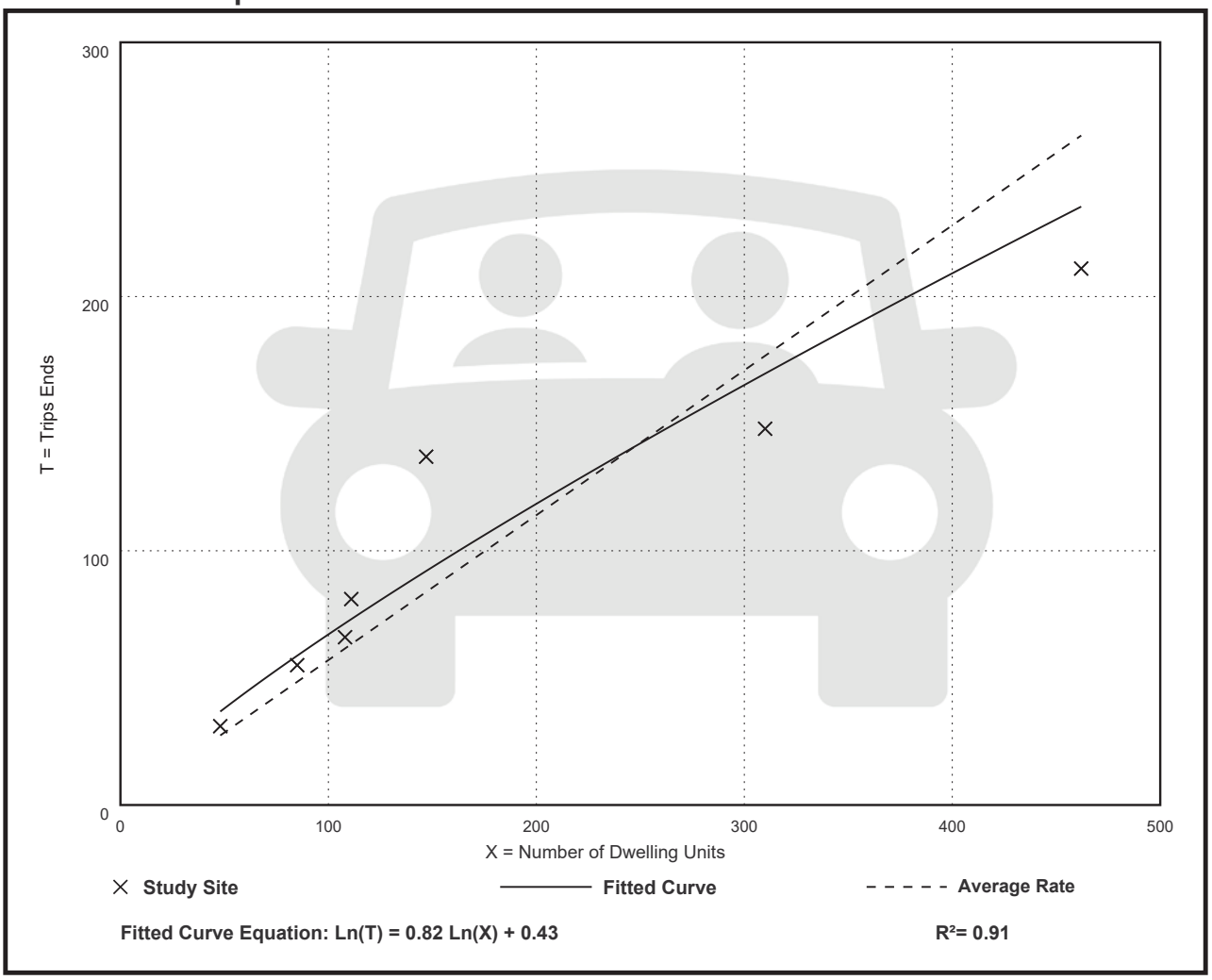
**Vehicle Trip Ends vs: Dwelling Units**
**On a: Saturday, Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 7
Avg. Num. of Dwelling Units: 182
Directional Distribution: 48% entering, 52% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.57 | 0.46 - 0.93 | 0.17 |

## Data Plot and Equation




**Fitted Curve Equation: Ln(T) = 0.82 Ln(X) + 0.43**

**$R^2$= 0.91**

# Single-Family Attached Housing
# (215)

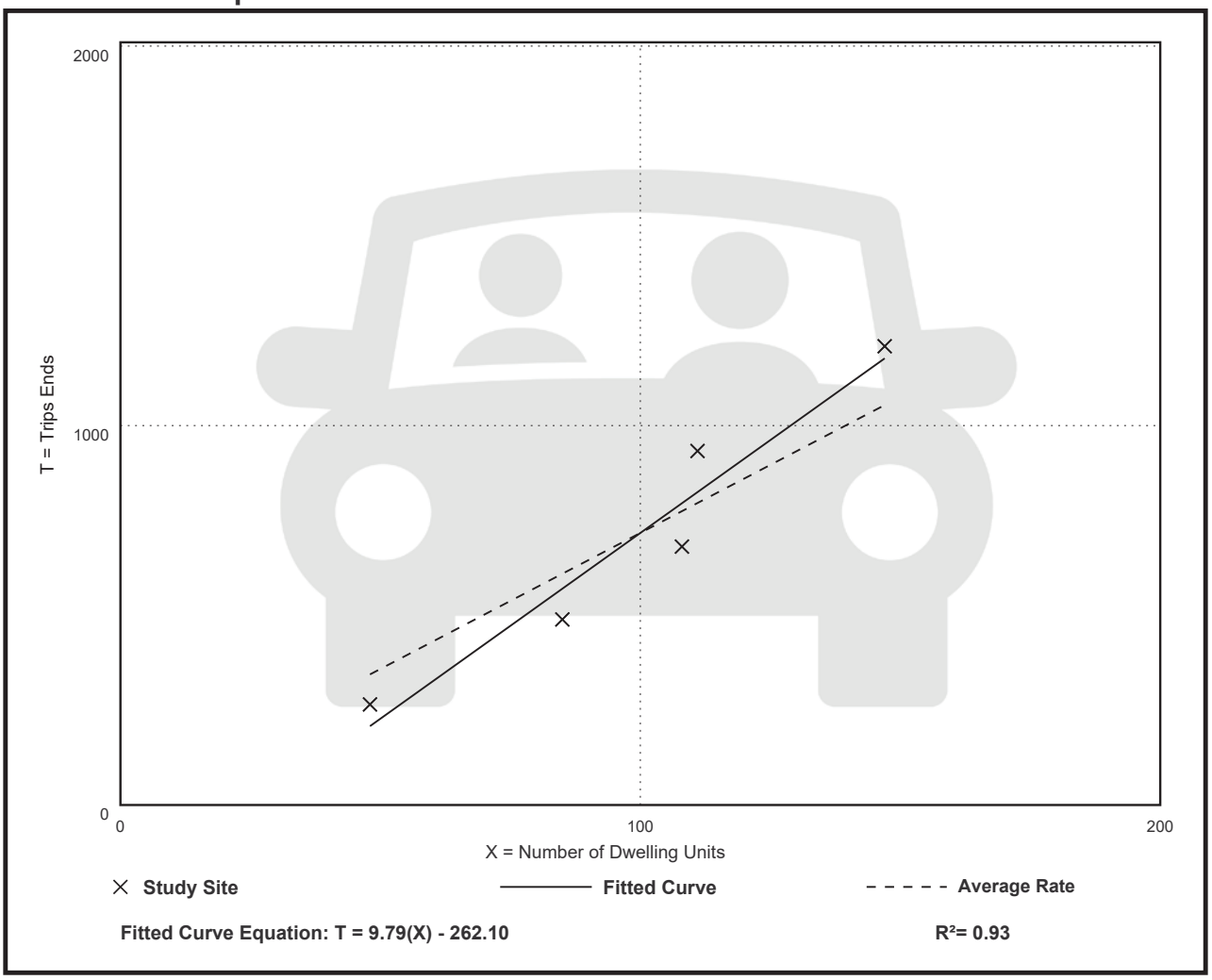
**Vehicle Trip Ends vs: Dwelling Units**
**On a: Sunday**

**Setting/Location: General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Dwelling Units: 100
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 7.17 | 5.52 - 8.41 | 1.34 |

## Data Plot and Equation




**Fitted Curve Equation: T = 9.79(X) - 262.10**

**$R^2$= 0.93**

# Single-Family Attached Housing
# (215)

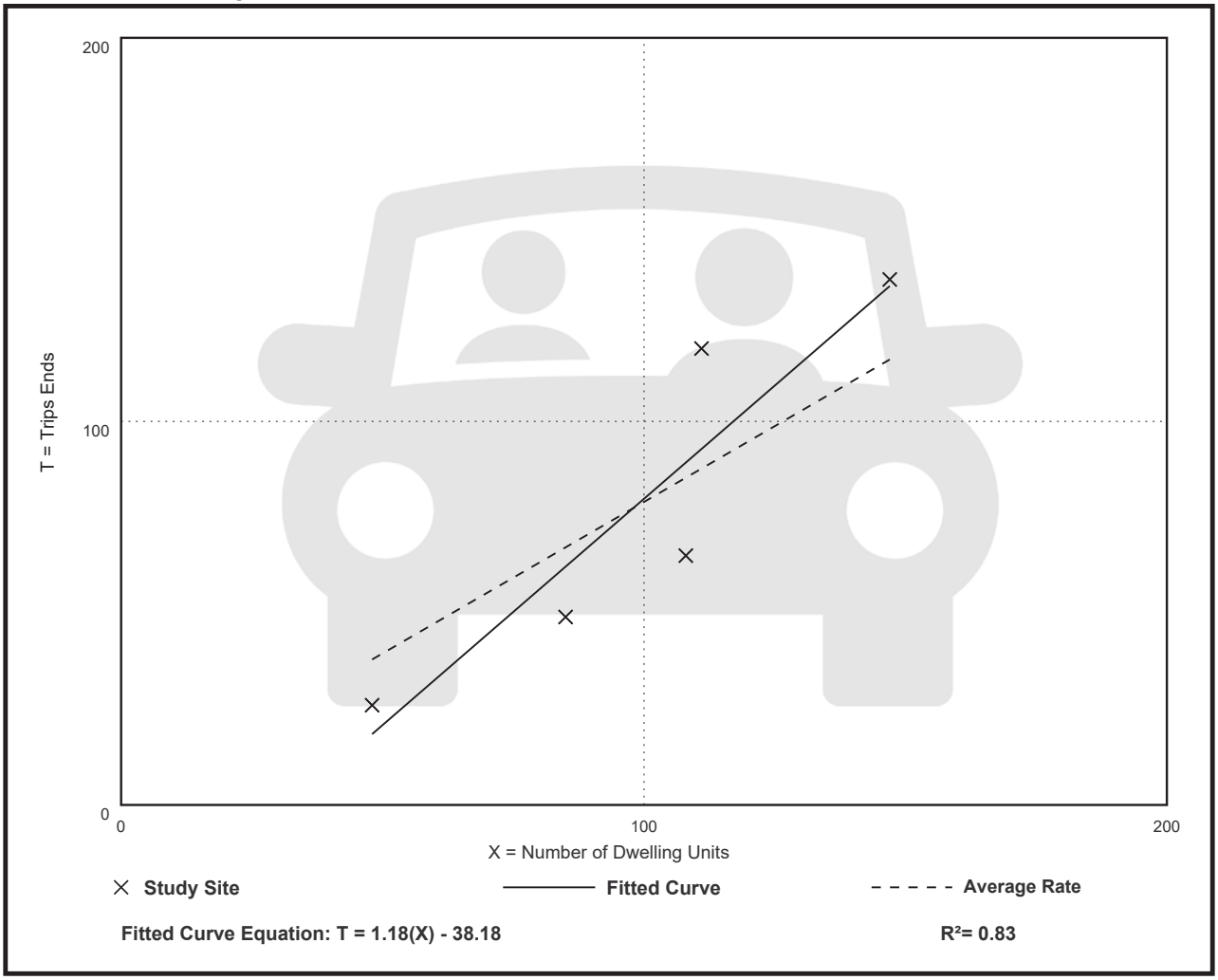
**Vehicle Trip Ends vs: Dwelling Units**
**On a: Sunday, Peak Hour of Generator**

**Setting/Location: General Urban/Suburban**
Number of Studies: 5
Avg. Num. of Dwelling Units: 100
Directional Distribution: Not Available

## Vehicle Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.79 | 0.54 - 1.07 | 0.24 |

## Data Plot and Equation




**Fitted Curve Equation: T = 1.18(X) - 38.18**

**$R^2$= 0.83**

# Single-Family Attached Housing
# (215)

**Vehicle Trip Ends vs: Residents**
**On a: Weekday**

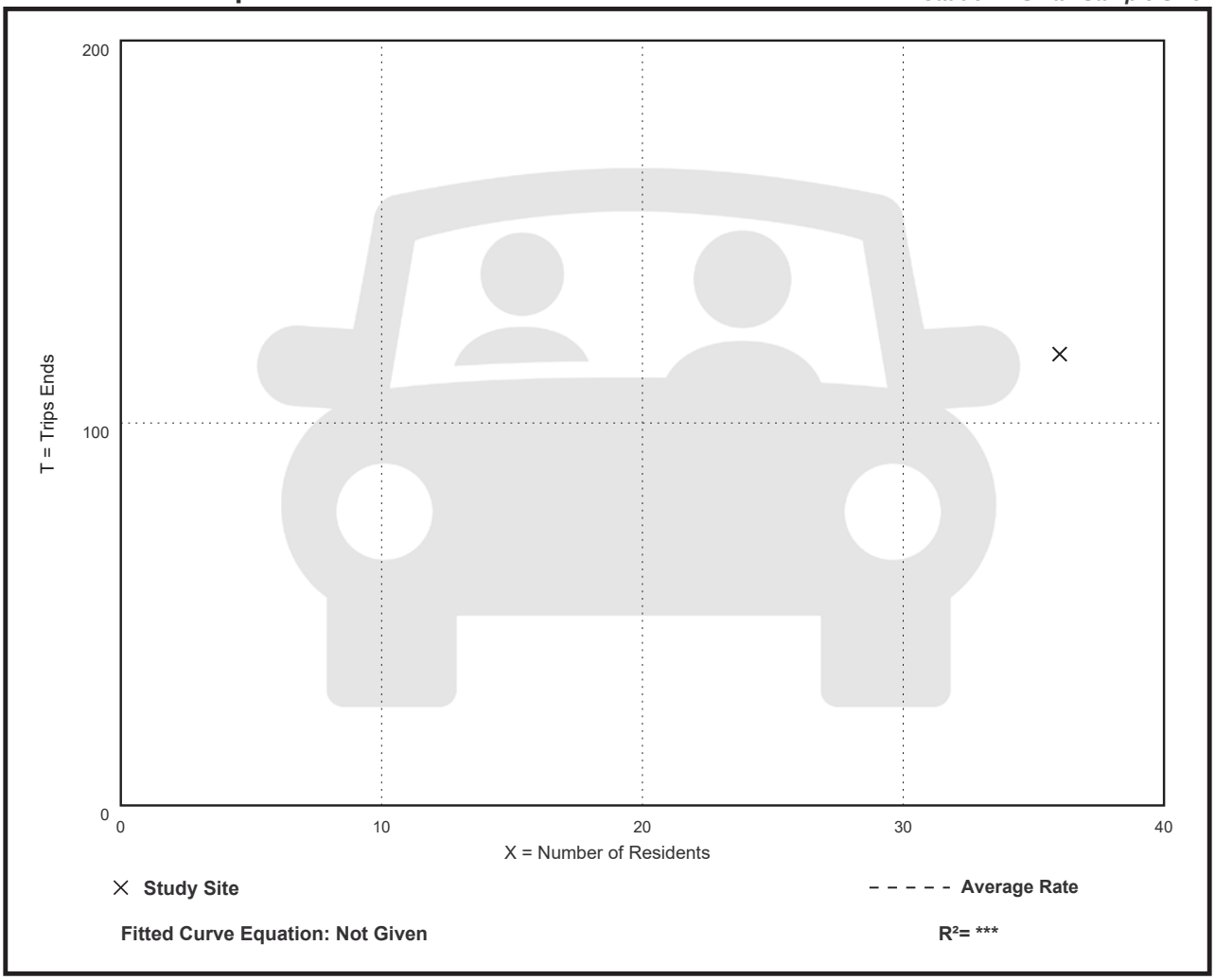
**Setting/Location: General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Residents: 36
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Resident

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 3.28 | 3.28 - 3.28 | *** |

## Data Plot and Equation

***Caution – Small Sample Size***




**Fitted Curve Equation: Not Given**

**$R^2$= *****

# Single-Family Attached Housing
# (215)

**Vehicle Trip Ends vs: Residents**
**On a: Weekday,**
**AM Peak Hour of Generator**

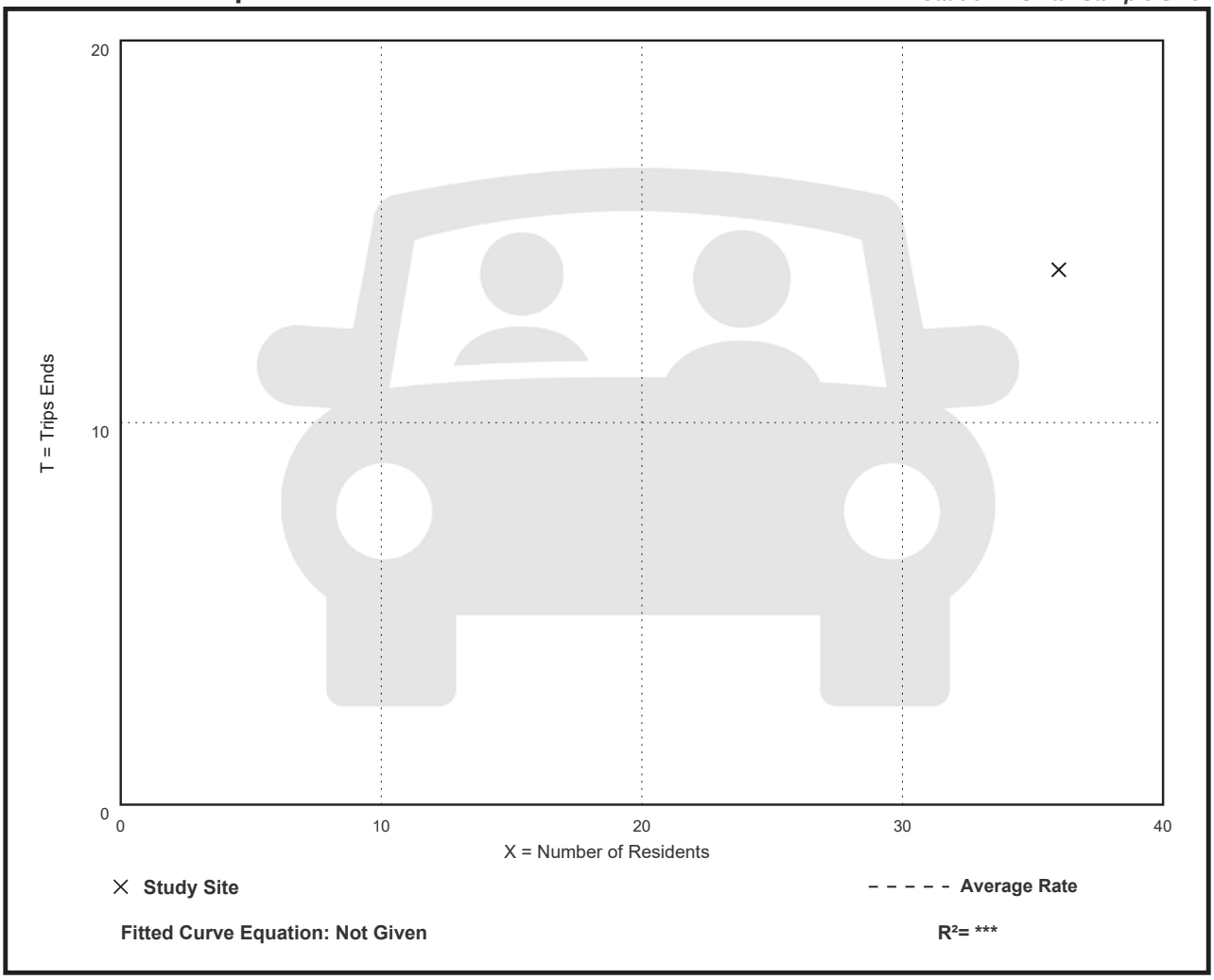
**Setting/Location: General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Residents: 36
Directional Distribution: Not Available

## Vehicle Trip Generation per Resident

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.39 | 0.39 - 0.39 | *** |

## Data Plot and Equation

***Caution – Small Sample Size***




**Fitted Curve Equation: Not Given**

**$R^2$= *****

# Single-Family Attached Housing
# (215)

**Vehicle Trip Ends vs: Residents**
**On a: Weekday,**
**PM Peak Hour of Generator**

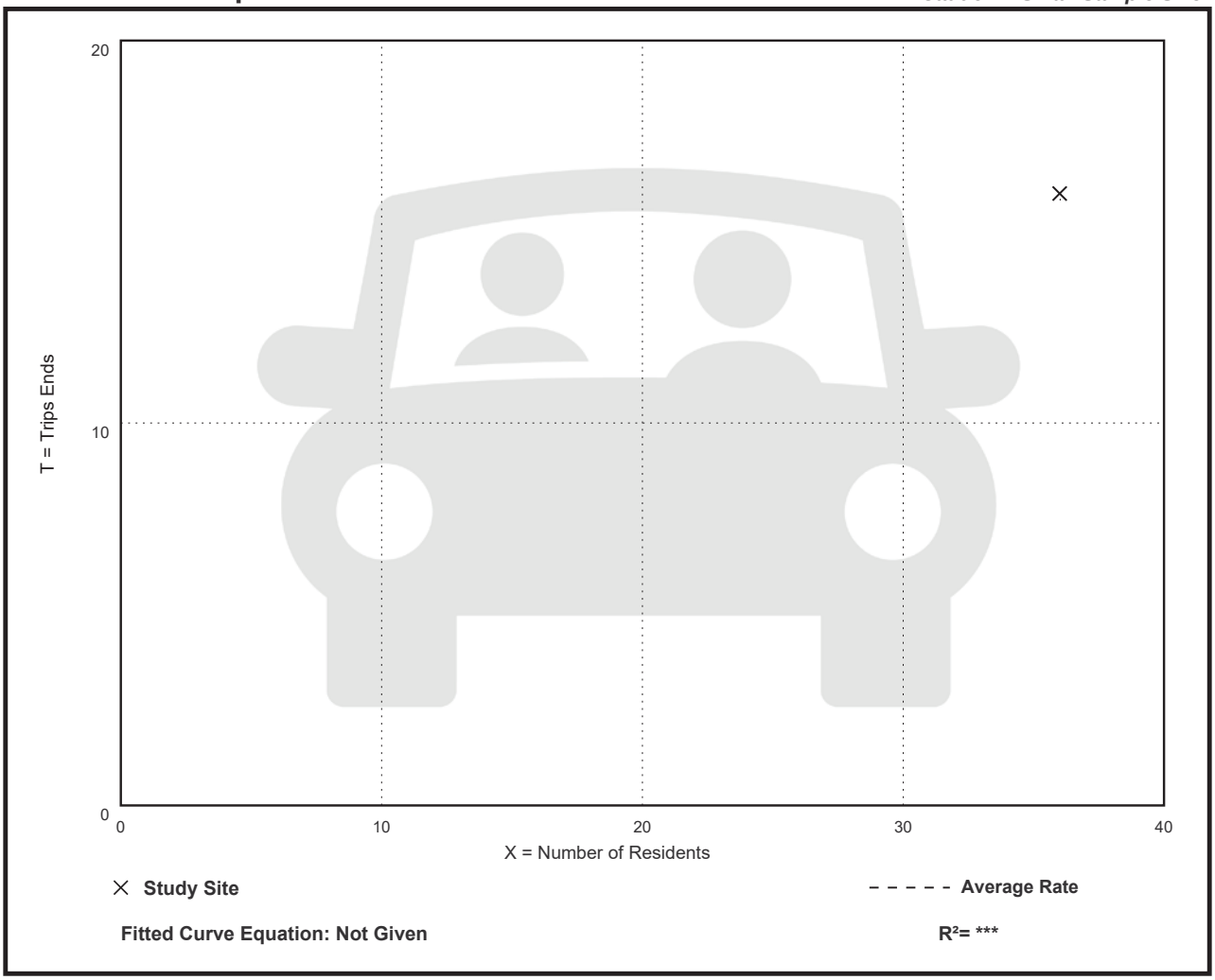
**Setting/Location: General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Residents: 36
Directional Distribution: Not Available

## Vehicle Trip Generation per Resident

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.44 | 0.44 - 0.44 | *** |

## Data Plot and Equation

***Caution – Small Sample Size***




**Fitted Curve Equation: Not Given**

**$R^2$= ***

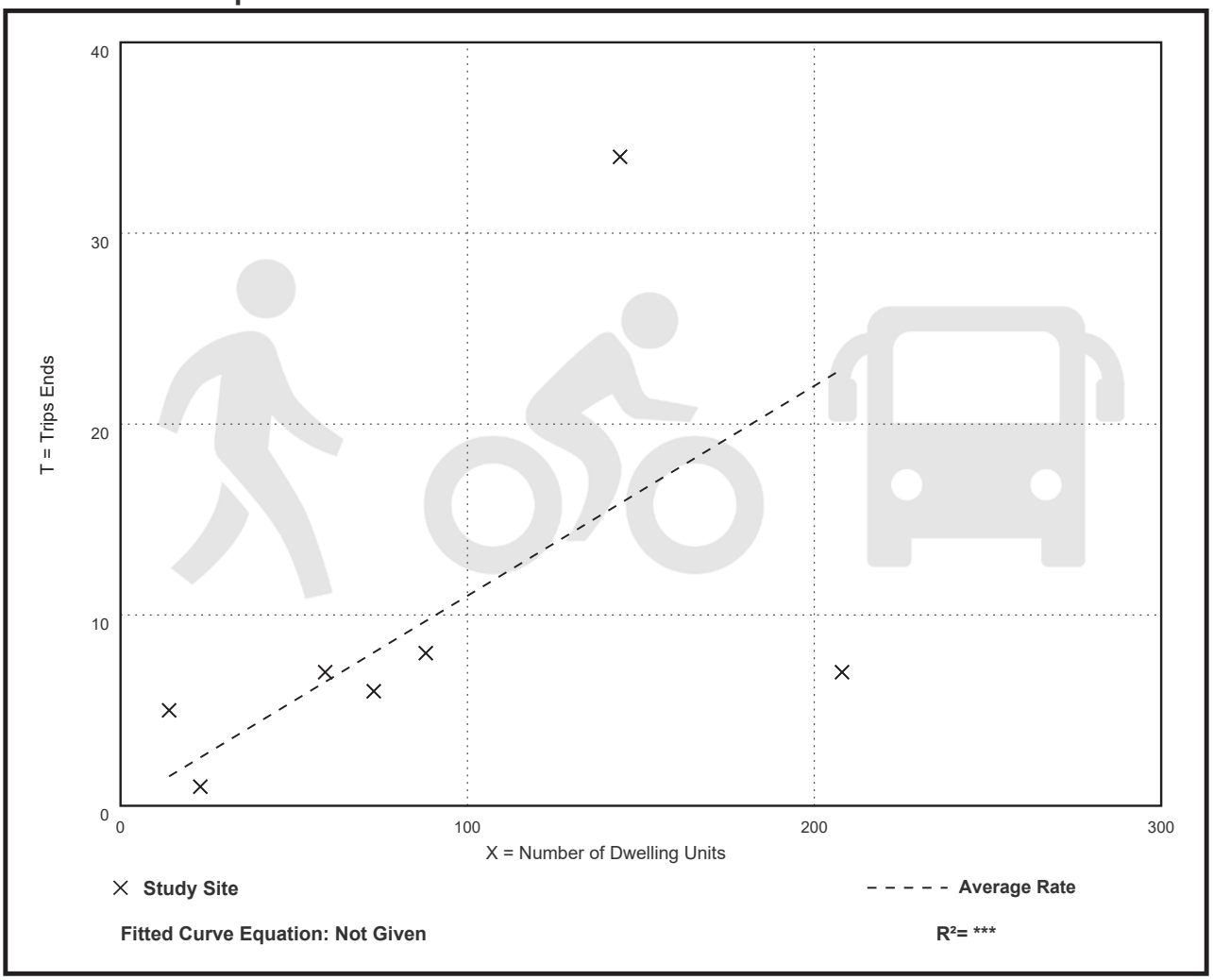
# Single-Family Attached Housing
# (215)

**Walk+Bike+Transit Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 7 and 9 a.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 7
Avg. Num. of Dwelling Units: 87
Directional Distribution: 75% entering, 25% exiting

## Walk+Bike+Transit Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.11 | 0.03 - 0.36 | 0.09 |

## Data Plot and Equation




**Fitted Curve Equation: Not Given**

**$R^2$= *****

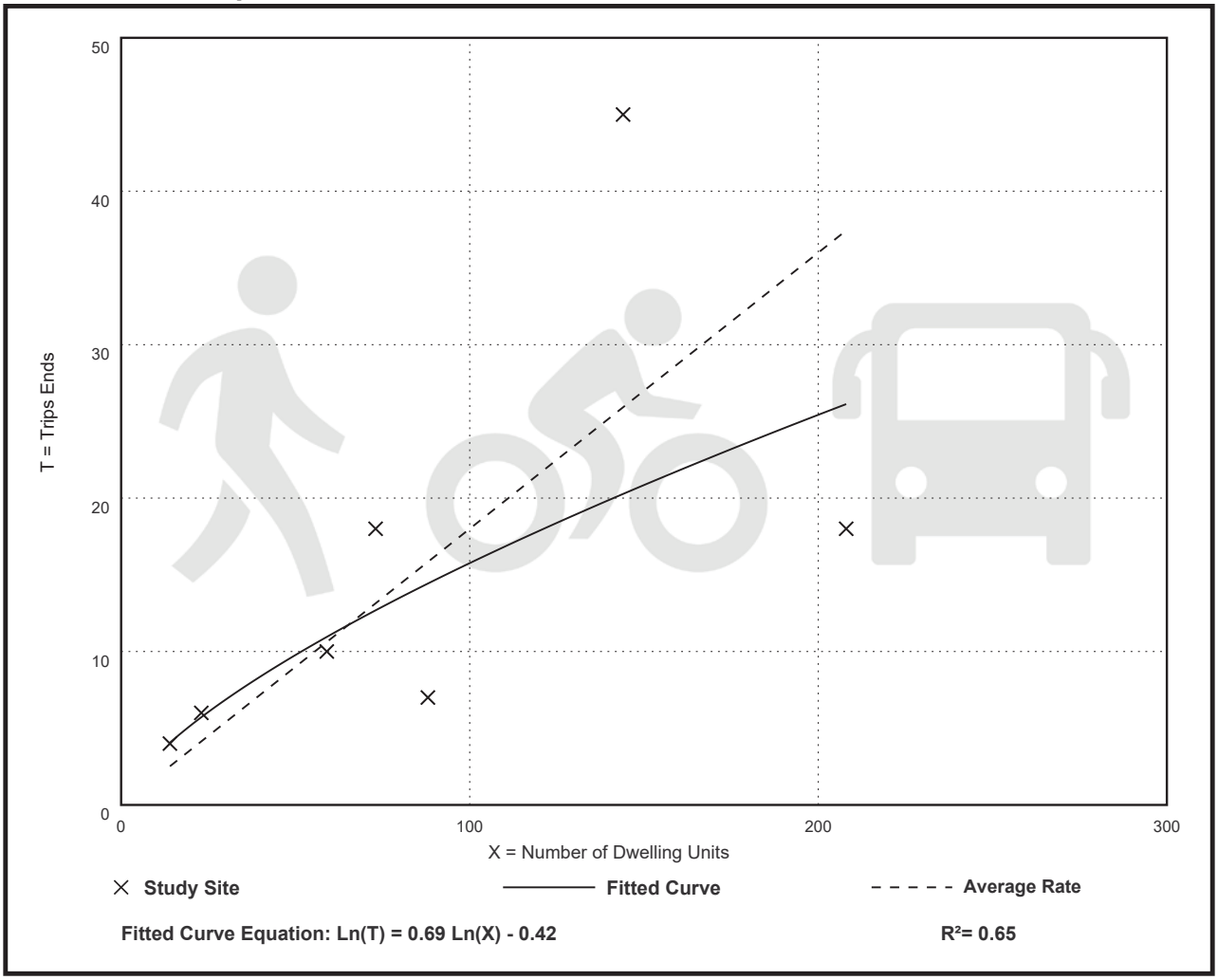
# Single-Family Attached Housing
# (215)

**Walk+Bike+Transit Trip Ends vs: Dwelling Units**
**On a: Weekday,**
**Peak Hour of Adjacent Street Traffic,**
**One Hour Between 4 and 6 p.m.**
**Setting/Location: General Urban/Suburban**
Number of Studies: 7
Avg. Num. of Dwelling Units: 87
Directional Distribution: 38% entering, 62% exiting

## Walk+Bike+Transit Trip Generation per Dwelling Unit

| Average Rate | Range of Rates | Standard Deviation |
|---|---|---|
| 0.18 | 0.08 - 0.31 | 0.11 |

## Data Plot and Equation

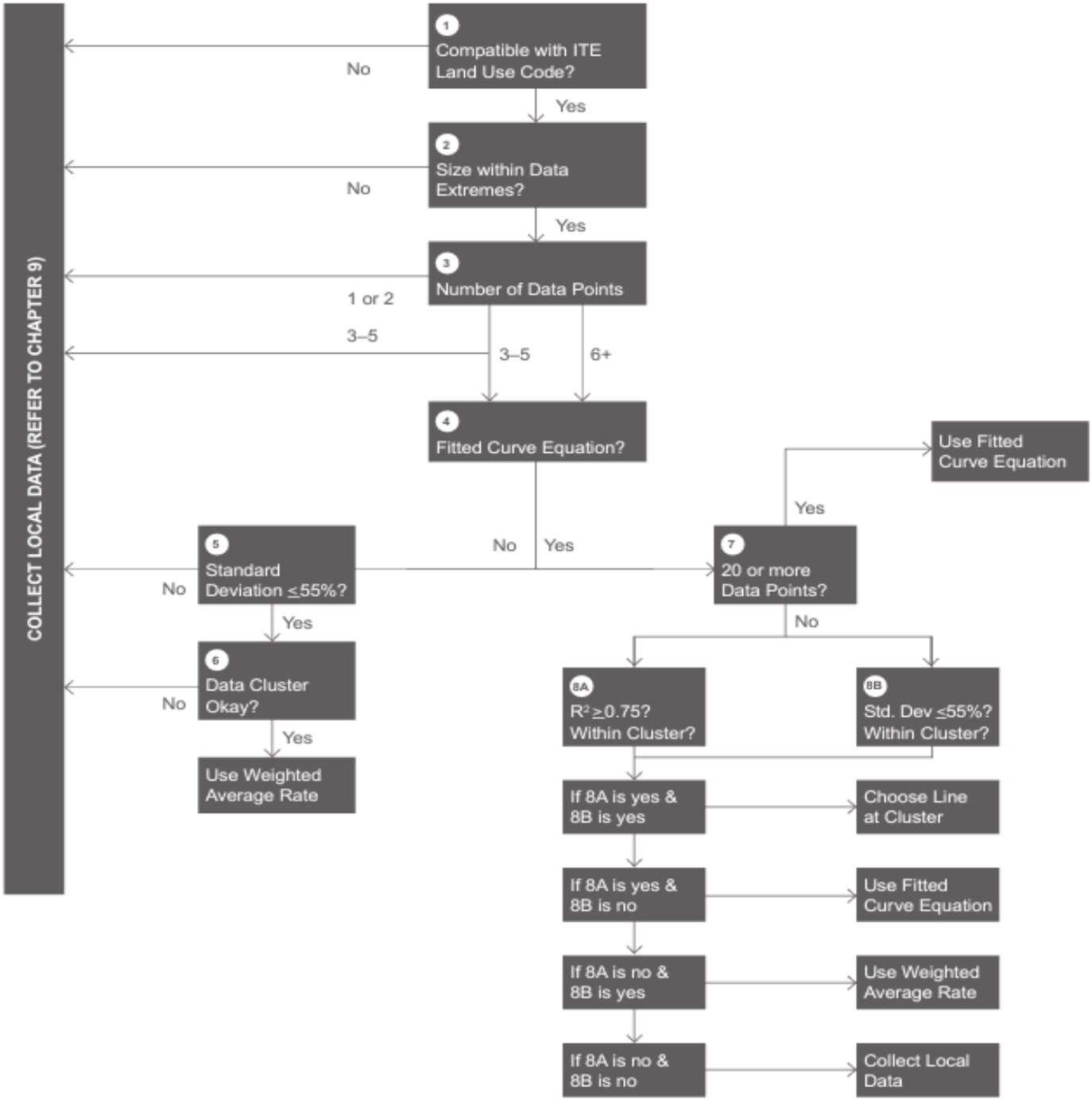



**Fitted Curve Equation: Ln(T) = 0.69 Ln(X) - 0.42**

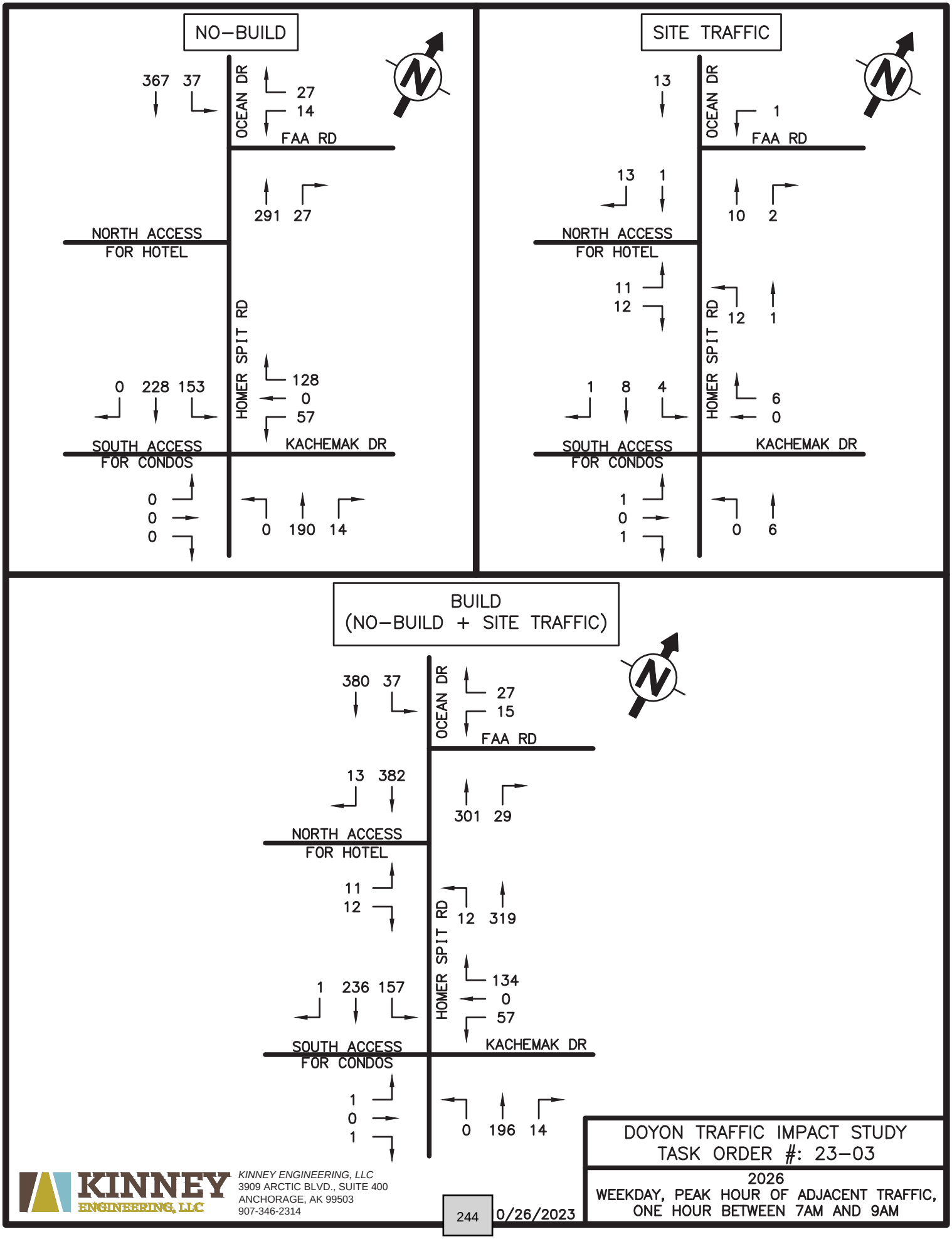
**$R^2$= 0.65**

# Attachment D: Trip Generation Handbook Method of Selecting Trip Generation Calculation: Average Rate or Equation

**Figure 4.2 Process for Selecting Average Rate or Equation in *Trip Generation Manual* Data**



# Attachment E: Peak Hour Cases No-Build, Site Traffic, Combined Turning Movement Counts



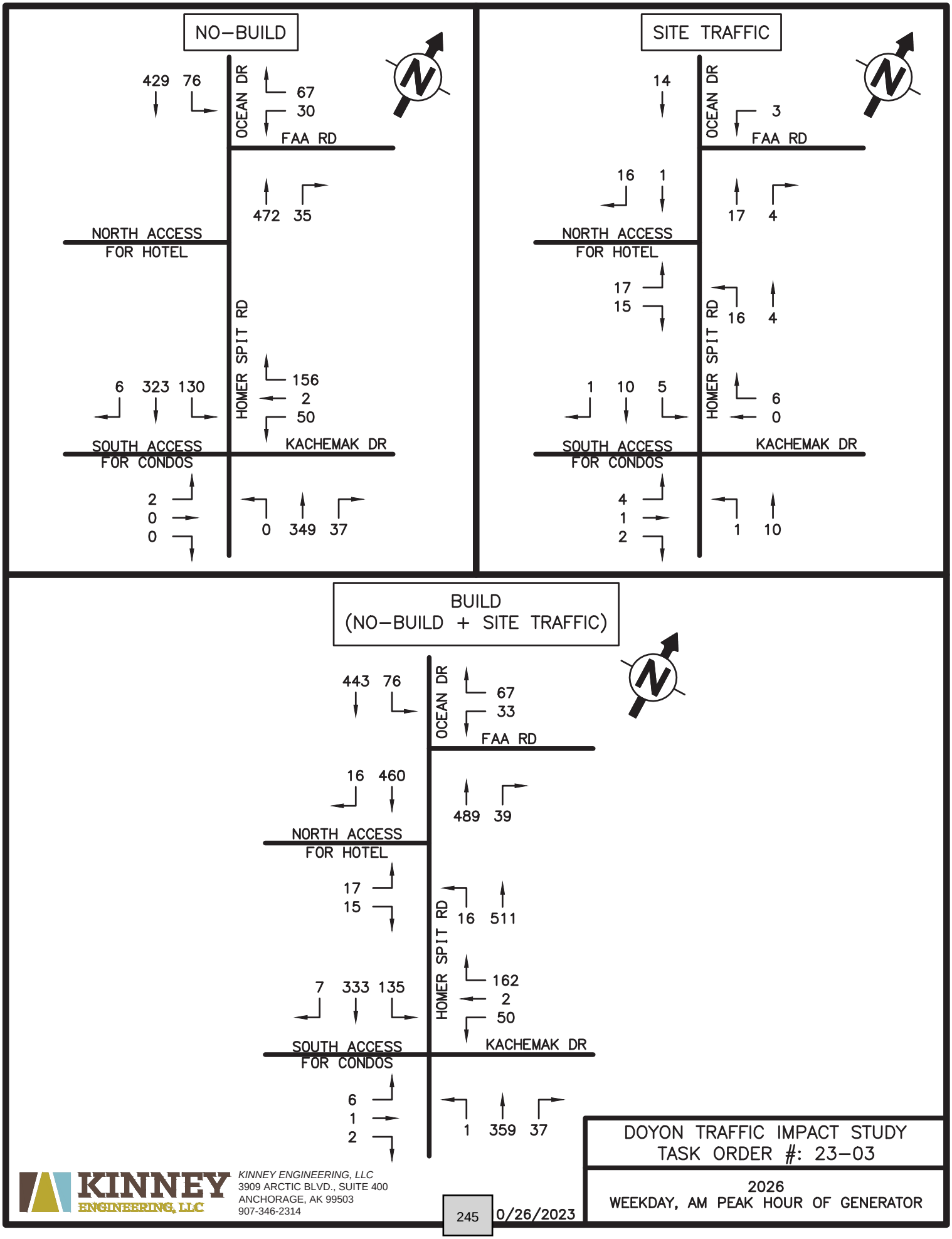

DOYON TRAFFIC IMPACT STUDY
TASK ORDER #: 23-03

2026
WEEKDAY, PEAK HOUR OF ADJACENT TRAFFIC,
ONE HOUR BETWEEN 7AM AND 9AM

KINNEY ENGINEERING, LLC
3909 ARCTIC BLVD., SUITE 400
ANCHORAGE, AK 99503
907-346-2314



0/26/2023



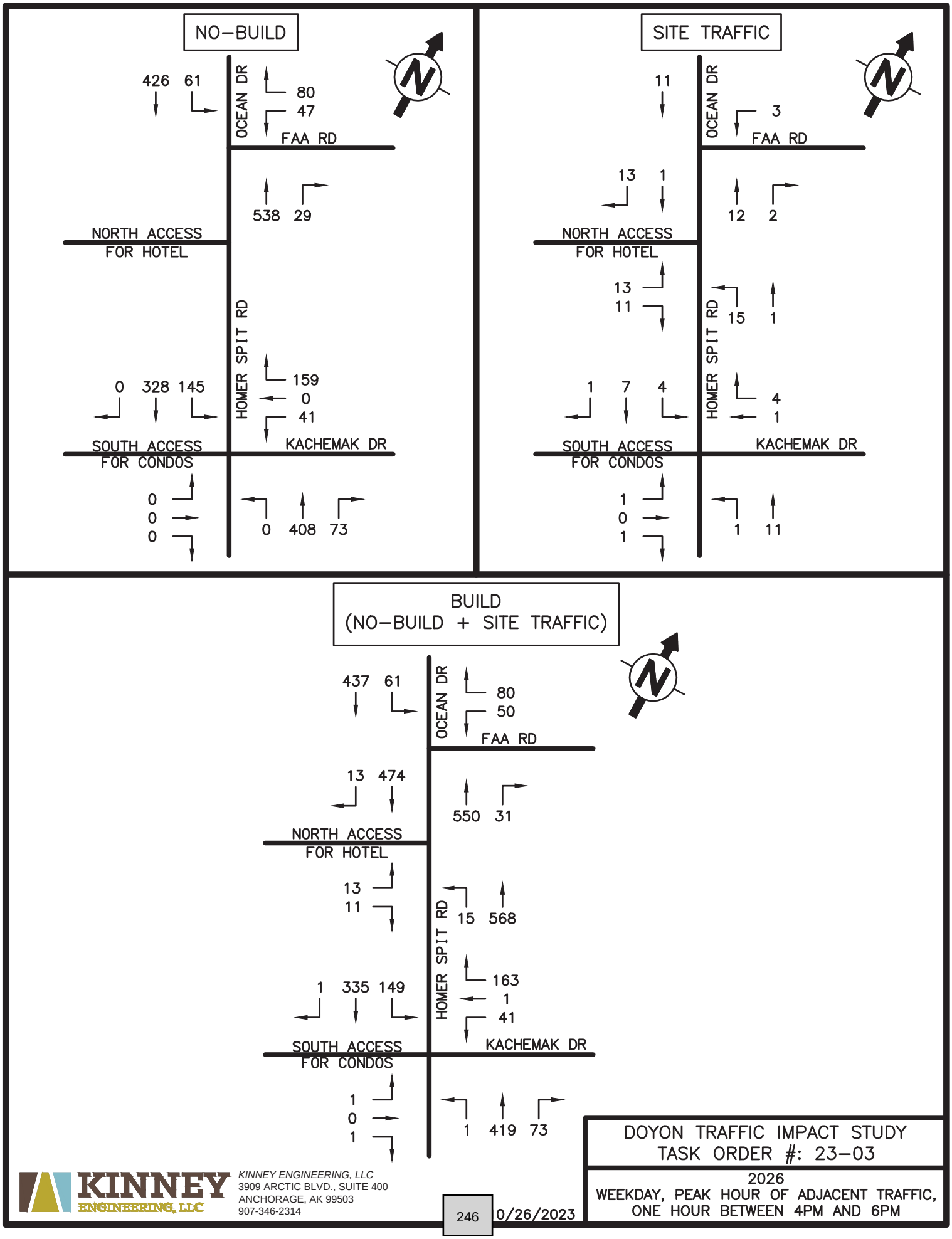

DOYON TRAFFIC IMPACT STUDY
TASK ORDER #: 23-03

2026
WEEKDAY, AM PEAK HOUR OF GENERATOR

KINNEY ENGINEERING, LLC
3909 ARCTIC BLVD., SUITE 400
ANCHORAGE, AK 99503
907-346-2314



0/26/2023



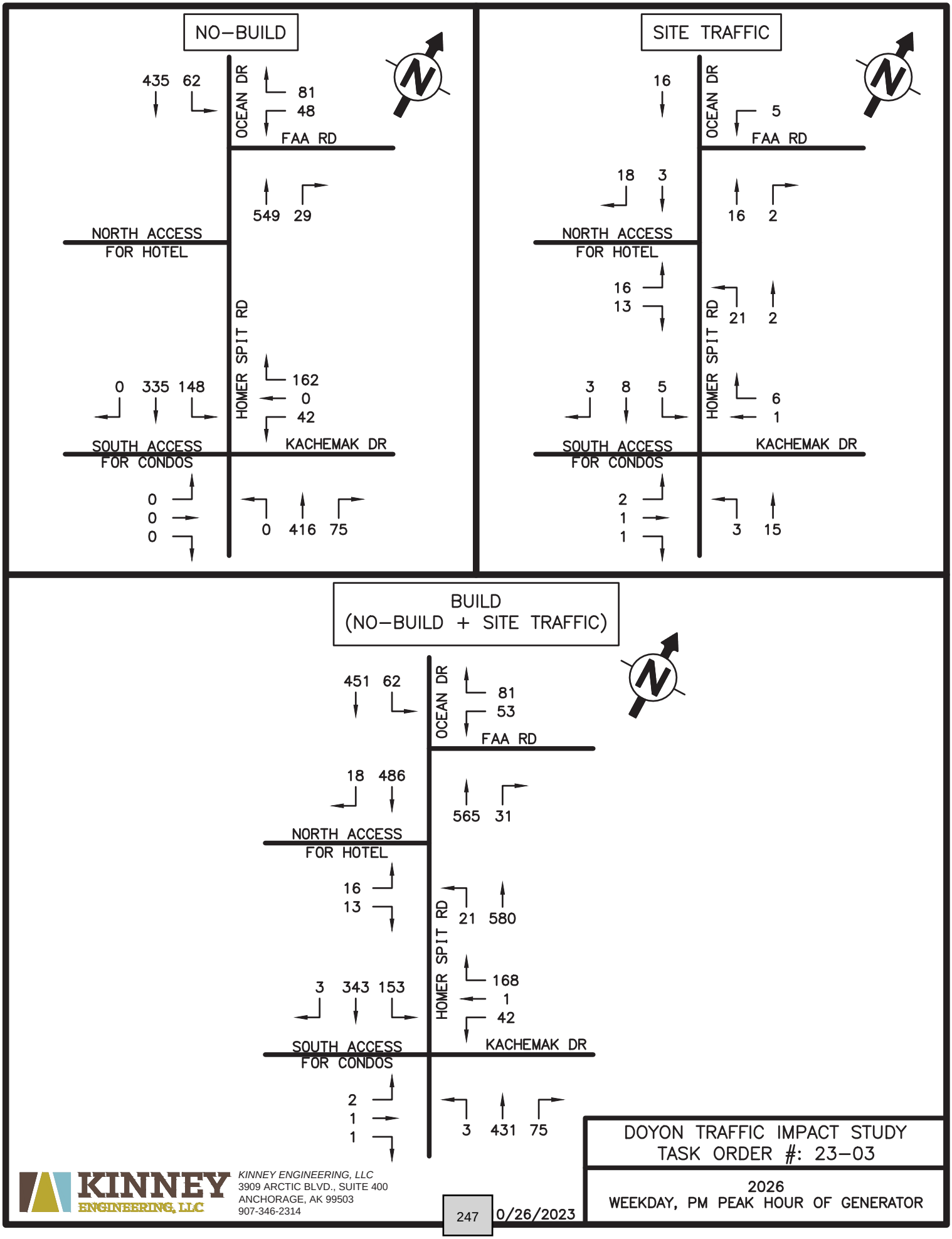

DOYON TRAFFIC IMPACT STUDY
TASK ORDER #: 23-03

2026
WEEKDAY, PEAK HOUR OF ADJACENT TRAFFIC,
ONE HOUR BETWEEN 4PM AND 6PM

KINNEY ENGINEERING, LLC
3909 ARCTIC BLVD., SUITE 400
ANCHORAGE, AK 99503
907-346-2314



0/26/2023



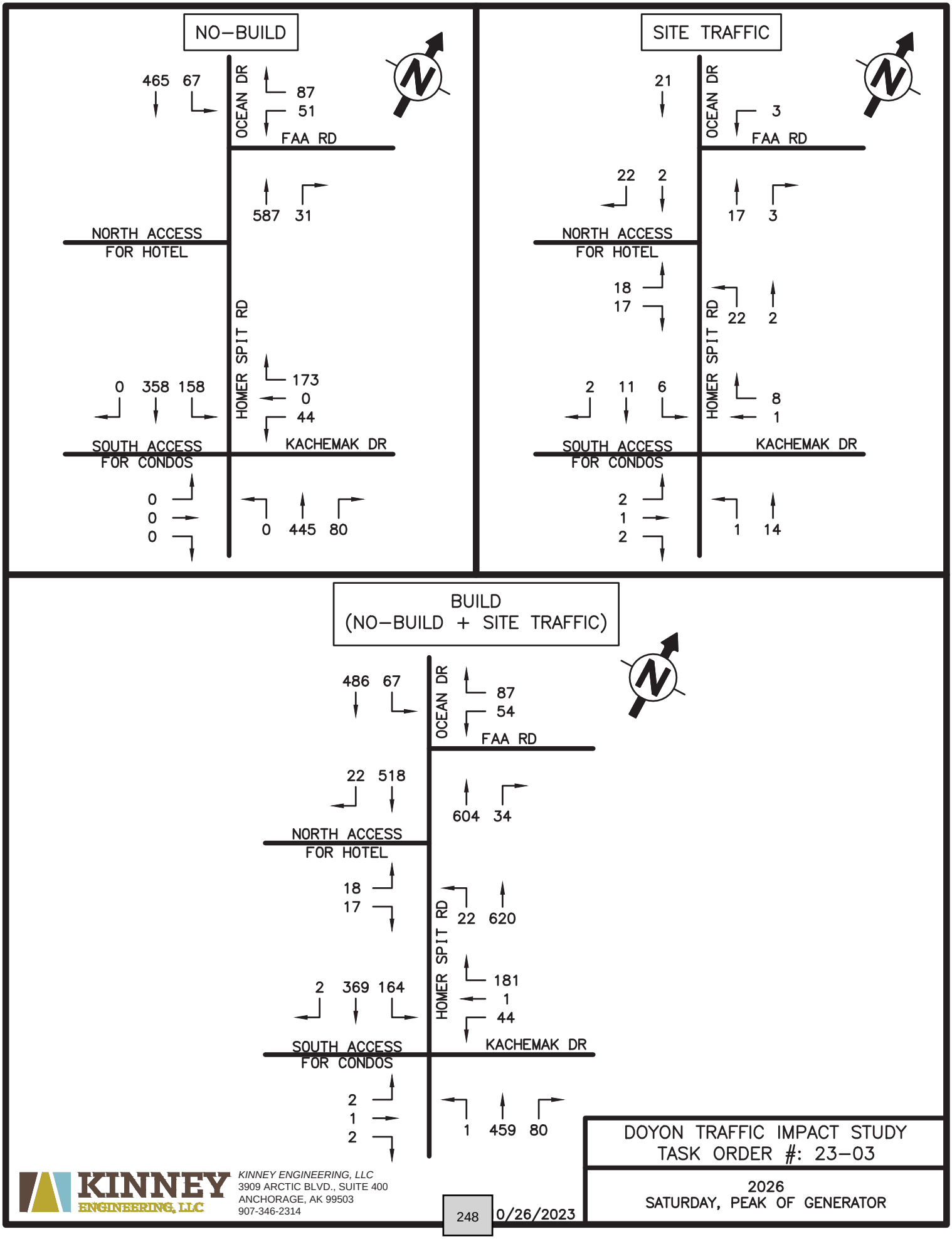

DOYON TRAFFIC IMPACT STUDY
TASK ORDER #: 23-03

2026
WEEKDAY, PM PEAK HOUR OF GENERATOR

KINNEY ENGINEERING, LLC
3909 ARCTIC BLVD., SUITE 400
ANCHORAGE, AK 99503
907-346-2314



0/26/2023




DOYON TRAFFIC IMPACT STUDY
TASK ORDER #: 23-03

2026
SATURDAY, PEAK OF GENERATOR

KINNEY ENGINEERING, LLC
3909 ARCTIC BLVD., SUITE 400
ANCHORAGE, AK 99503
907-346-2314



0/26/2023

# Attachment F: Highway Capacity Software Reports

# HCS Two-Way Stop-Control Report

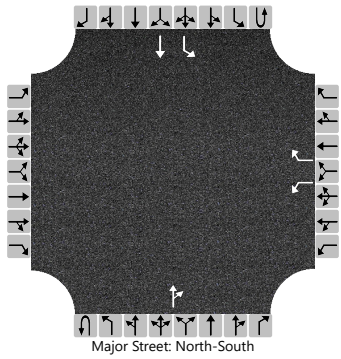
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 8am-9am(No-Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | FAA Road, Ocean Dr/Homer Spit Rd |
| Jurisdiction | Homer, Alaska |
| East/West Street | FAA Road |
| North/South Street | Ocean Dr/Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes




## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 0 | 0 | | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Configuration | | | | | | L | | R | | | | TR | | L | T | |
| Volume (veh/h) | | | | | | 14 | | 27 | | | 291 | 17 | | 37 | 367 | |
| Percent Heavy Vehicles (%) | | | | | | 5 | | 5 | | | | | | 8 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | No | | | | | | | | | | |
| Median Type \| Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 7.1 | | 6.2 | | | | | | 4.1 | | |
| Critical Headway (sec) | | | | | | 6.45 | | 6.25 | | | | | | 4.18 | | |
| Base Follow-Up Headway (sec) | | | | | | 3.5 | | 3.3 | | | | | | 2.2 | | |
| Follow-Up Headway (sec) | | | | | | 3.55 | | 3.35 | | | | | | 2.27 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | 15 | | 28 | | | | | | 39 | | |
| Capacity, c (veh/h) | | | | | | 340 | | 702 | | | | | | 1202 | | |
| v/c Ratio | | | | | | 0.04 | | 0.04 | | | | | | 0.03 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | 0.1 | | 0.1 | | | | | | 0.1 | | |
| Control Delay (s/veh) | | | | | | 16.1 | | 10.3 | | | | | | 8.1 | 0.2 | |
| Level of Service (LOS) | | | | | | C | | B | | | | | | A | A | |
| Approach Delay (s/veh) | | | | | | 12.3 | | | | | | | | 0.9 | | |
| Approach LOS | | | | | | B | | | | | | | | A | | |

## Pedestrian Level of Service

| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | | 0 | 10 | 10 |
| Two-Stage Crossing | | | No | No |
| Pedestrian Platooning | | | No | No |
| Conflicting Vehicular Flow (veh/h) | | | 711 | 732 |
| Average Delay (s) | | | 35.0 | 39.9 |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | 0.139 | 0.121 |
| Proportion of Dissatisfied Peds, P_D | | | 0.712 | 0.721 |
| Level of Service (LOS) | | | F | F |

# HCS Two-Way Stop-Control Report

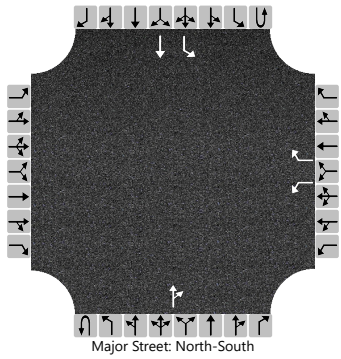
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 11am-12pm(No-Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | FAA Road, Ocean Dr/Homer Spit Rd |
| Jurisdiction | Homer, Alaska |
| East/West Street | FAA Road |
| North/South Street | Ocean Dr/Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes


Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 0 | 0 | | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Configuration | | | | | | L | | R | | | | TR | | L | T | |
| Volume (veh/h) | | | | | | 30 | | 67 | | | 472 | 35 | | 76 | 429 | |
| Percent Heavy Vehicles (%) | | | | | | 5 | | 5 | | | | | | 8 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | No | | | | | | | | | | |
| Median Type \| Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 7.1 | | 6.2 | | | | | | 4.1 | | |
| Critical Headway (sec) | | | | | | 6.45 | | 6.25 | | | | | | 4.18 | | |
| Base Follow-Up Headway (sec) | | | | | | 3.5 | | 3.3 | | | | | | 2.2 | | |
| Follow-Up Headway (sec) | | | | | | 3.55 | | 3.35 | | | | | | 2.27 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | 32 | | 71 | | | | | | 80 | | |
| Capacity, c (veh/h) | | | | | | 196 | | 529 | | | | | | 986 | | |
| v/c Ratio | | | | | | 0.16 | | 0.13 | | | | | | 0.08 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | 0.6 | | 0.5 | | | | | | 0.3 | | |
| Control Delay (s/veh) | | | | | | 26.9 | | 12.8 | | | | | | 9.0 | 0.5 | |
| Level of Service (LOS) | | | | | | D | | B | | | | | | A | A | |
| Approach Delay (s/veh) | | | | | | 17.2 | | | | | | | | 1.8 | | |
| Approach LOS | | | | | | C | | | | | | | | A | | |

| Pedestrian Level of Service | | | | |
|---|---|---|---|---|
| Approach | Eastbound | Westbound | Northbound | Southbound |
| Flow (ped/hr) | | 10 | 10 | 10 |
| Two-Stage Crossing | | No | No | No |
| Pedestrian Platooning | | No | No | No |
| Conflicting Vehicular Flow (veh/h) | | | 985 | 1028 |
| Average Delay (s) | | | 37.3 | 55.2 |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | 0.096 | 0.067 |
| Proportion of Dissatisfied Peds, P_D | | | 0.752 | 0.767 |
| Level of Service (LOS) | | | F | F |

# HCS Two-Way Stop-Control Report

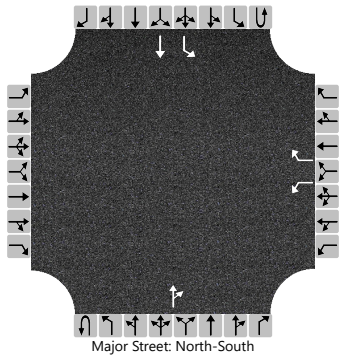
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 4:15pm-5:15pm(No-Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | FAA Road, Ocean Dr/Homer Spit Rd |
| Jurisdiction | Homer, Alaska |
| East/West Street | FAA Road |
| North/South Street | Ocean Dr/Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes




## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 0 | 0 | | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Configuration | | | | | | L | | R | | | | TR | | L | T | |
| Volume (veh/h) | | | | | | 47 | | 80 | | | 538 | 29 | | 61 | 426 | |
| Percent Heavy Vehicles (%) | | | | | | 5 | | 5 | | | | | | 8 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | No | | | | | | | | | | |
| Median Type \| Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 7.1 | | 6.2 | | | | | | 4.1 | | |
| Critical Headway (sec) | | | | | | 6.45 | | 6.25 | | | | | | 4.18 | | |
| Base Follow-Up Headway (sec) | | | | | | 3.5 | | 3.3 | | | | | | 2.2 | | |
| Follow-Up Headway (sec) | | | | | | 3.55 | | 3.35 | | | | | | 2.27 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | 49 | | 84 | | | | | | 64 | | |
| Capacity, c (veh/h) | | | | | | 190 | | 485 | | | | | | 934 | | |
| v/c Ratio | | | | | | 0.26 | | 0.17 | | | | | | 0.07 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | 1.0 | | 0.6 | | | | | | 0.2 | | |
| Control Delay (s/veh) | | | | | | 30.5 | | 14.0 | | | | | | 9.1 | 0.5 | |
| Level of Service (LOS) | | | | | | D | | B | | | | | | A | A | |
| Approach Delay (s/veh) | | | | | | 20.1 | | | | | | | | 1.6 | | |
| Approach LOS | | | | | | C | | | | | | | | A | | |

## Pedestrian Level of Service

| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | | 10 | 10 | 10 |
| Two-Stage Crossing | | No | No | No |
| Pedestrian Platooning | | No | No | No |
| Conflicting Vehicular Flow (veh/h) | | | 1045 | 1079 |
| Average Delay (s) | | | 37.2 | 57.2 |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | 0.091 | 0.062 |
| Proportion of Dissatisfied Peds, P_D | | | 0.758 | 0.773 |
| Level of Service (LOS) | | | F | F |

# HCS Two-Way Stop-Control Report

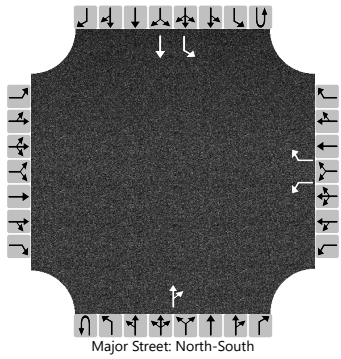
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 3pm-4pm(No-Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | FAA Road, Ocean Dr/Homer Spit Rd |
| Jurisdiction | Homer, Alaska |
| East/West Street | FAA Road |
| North/South Street | Ocean Dr/Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes




## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 0 | 0 | | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Configuration | | | | | | L | | R | | | | TR | | L | T | |
| Volume (veh/h) | | | | | | 48 | | 81 | | | 549 | 29 | | 62 | 435 | |
| Percent Heavy Vehicles (%) | | | | | | 5 | | 5 | | | | | | 8 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | No | | | | | | | | | | |
| Median Type \| Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 7.1 | | 6.2 | | | | | | 4.1 | | |
| Critical Headway (sec) | | | | | | 6.45 | | 6.25 | | | | | | 4.18 | | |
| Base Follow-Up Headway (sec) | | | | | | 3.5 | | 3.3 | | | | | | 2.2 | | |
| Follow-Up Headway (sec) | | | | | | 3.55 | | 3.35 | | | | | | 2.27 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | 51 | | 85 | | | | | | 65 | | |
| Capacity, c (veh/h) | | | | | | 183 | | 478 | | | | | | 924 | | |
| v/c Ratio | | | | | | 0.28 | | 0.18 | | | | | | 0.07 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | 1.1 | | 0.6 | | | | | | 0.2 | | |
| Control Delay (s/veh) | | | | | | 31.9 | | 14.2 | | | | | | 9.2 | 0.5 | |
| Level of Service (LOS) | | | | | | D | | B | | | | | | A | A | |
| Approach Delay (s/veh) | | | | | | 20.8 | | | | | | | | 1.6 | | |
| Approach LOS | | | | | | C | | | | | | | | A | | |

## Pedestrian Level of Service

| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | | 10 | 10 | 10 |
| Two-Stage Crossing | | No | No | No |
| Pedestrian Platooning | | No | No | No |
| Conflicting Vehicular Flow (veh/h) | | | 1066 | 1101 |
| Average Delay (s) | | | 37.2 | 58.0 |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | 0.089 | 0.059 |
| Proportion of Dissatisfied Peds, P_D | | | 0.761 | 0.776 |
| Level of Service (LOS) | | | F | F |

# HCS Two-Way Stop-Control Report

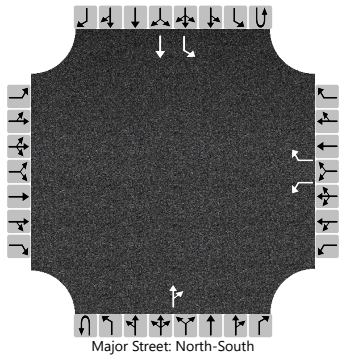
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 3pm-4pmSAT(No-Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | FAA Road, Ocean Dr/Homer Spit Rd |
| Jurisdiction | Homer, Alaska |
| East/West Street | FAA Road |
| North/South Street | Ocean Dr/Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes




## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 0 | 0 | | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Configuration | | | | | | L | | R | | | | TR | | L | T | |
| Volume (veh/h) | | | | | | 51 | | 87 | | | 587 | 31 | | 67 | 465 | |
| Percent Heavy Vehicles (%) | | | | | | 5 | | 5 | | | | | | 8 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | No | | | | | | | | | | |
| Median Type \| Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 7.1 | | 6.2 | | | | | | 4.1 | | |
| Critical Headway (sec) | | | | | | 6.45 | | 6.25 | | | | | | 4.18 | | |
| Base Follow-Up Headway (sec) | | | | | | 3.5 | | 3.3 | | | | | | 2.2 | | |
| Follow-Up Headway (sec) | | | | | | 3.55 | | 3.35 | | | | | | 2.27 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | 54 | | 92 | | | | | | 71 | | |
| Capacity, c (veh/h) | | | | | | 162 | | 453 | | | | | | 891 | | |
| v/c Ratio | | | | | | 0.33 | | 0.20 | | | | | | 0.08 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | 1.4 | | 0.7 | | | | | | 0.3 | | |
| Control Delay (s/veh) | | | | | | 37.9 | | 15.0 | | | | | | 9.4 | 0.6 | |
| Level of Service (LOS) | | | | | | E | | B | | | | | | A | A | |
| Approach Delay (s/veh) | | | | | | 23.4 | | | | | | | | 1.7 | | |
| Approach LOS | | | | | | C | | | | | | | | A | | |

## Pedestrian Level of Service

| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | | 10 | 10 | 10 |
| Two-Stage Crossing | | No | No | No |
| Pedestrian Platooning | | No | No | No |
| Conflicting Vehicular Flow (veh/h) | | | 1140 | 1178 |
| Average Delay (s) | | | 37.0 | 60.8 |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | 0.083 | 0.052 |
| Proportion of Dissatisfied Peds, P_D | | | 0.768 | 0.784 |
| Level of Service (LOS) | | | F | F |

# HCS Two-Way Stop-Control Report

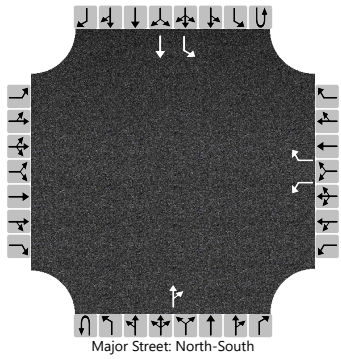
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 8am-9am(Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | FAA Road, Ocean Dr/Homer Spit Rd |
| Jurisdiction | Homer, Alaska |
| East/West Street | FAA Road |
| North/South Street | Ocean Dr/Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes




## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 0 | 0 | | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Configuration | | | | | | L | | R | | | | TR | | L | T | |
| Volume (veh/h) | | | | | | 15 | | 27 | | | 301 | 29 | | 37 | 380 | |
| Percent Heavy Vehicles (%) | | | | | | 5 | | 5 | | | | | | 8 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | No | | | | | | | | | | |
| Median Type \| Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 7.1 | | 6.2 | | | | | | 4.1 | | |
| Critical Headway (sec) | | | | | | 6.45 | | 6.25 | | | | | | 4.18 | | |
| Base Follow-Up Headway (sec) | | | | | | 3.5 | | 3.3 | | | | | | 2.2 | | |
| Follow-Up Headway (sec) | | | | | | 3.55 | | 3.35 | | | | | | 2.27 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | 16 | | 28 | | | | | | 39 | | |
| Capacity, c (veh/h) | | | | | | 326 | | 687 | | | | | | 1179 | | |
| v/c Ratio | | | | | | 0.05 | | 0.04 | | | | | | 0.03 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | 0.2 | | 0.1 | | | | | | 0.1 | | |
| Control Delay (s/veh) | | | | | | 16.6 | | 10.5 | | | | | | 8.2 | 0.2 | |
| Level of Service (LOS) | | | | | | C | | B | | | | | | A | A | |
| Approach Delay (s/veh) | | | | | | 12.7 | | | | | | | | 0.9 | | |
| Approach LOS | | | | | | B | | | | | | | | A | | |

## Pedestrian Level of Service

| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | | 0 | 10 | 10 |
| Two-Stage Crossing | | | No | No |
| Pedestrian Platooning | | | No | No |
| Conflicting Vehicular Flow (veh/h) | | | 747 | 756 |
| Average Delay (s) | | | 35.7 | 41.4 |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | 0.131 | 0.115 |
| Proportion of Dissatisfied Peds, P_D | | | 0.718 | 0.726 |
| Level of Service (LOS) | | | F | F |

# HCS Two-Way Stop-Control Report

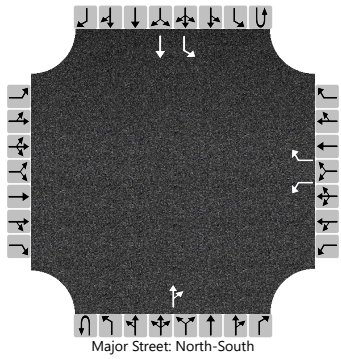
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 11am-12pm(Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | FAA Road, Ocean Dr/Homer Spit Rd |
| Jurisdiction | Homer, Alaska |
| East/West Street | FAA Road |
| North/South Street | Ocean Dr/Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes




## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 0 | 0 | | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Configuration | | | | | | L | | R | | | | TR | | L | T | |
| Volume (veh/h) | | | | | | 33 | | 67 | | | 489 | 39 | | 76 | 443 | |
| Percent Heavy Vehicles (%) | | | | | | 5 | | 5 | | | | | | 8 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | No | | | | | | | | | | |
| Median Type \| Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 7.1 | | 6.2 | | | | | | 4.1 | | |
| Critical Headway (sec) | | | | | | 6.45 | | 6.25 | | | | | | 4.18 | | |
| Base Follow-Up Headway (sec) | | | | | | 3.5 | | 3.3 | | | | | | 2.2 | | |
| Follow-Up Headway (sec) | | | | | | 3.55 | | 3.35 | | | | | | 2.27 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | 35 | | 71 | | | | | | 80 | | |
| Capacity, c (veh/h) | | | | | | 186 | | 515 | | | | | | 968 | | |
| v/c Ratio | | | | | | 0.19 | | 0.14 | | | | | | 0.08 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | 0.7 | | 0.5 | | | | | | 0.3 | | |
| Control Delay (s/veh) | | | | | | 28.7 | | 13.1 | | | | | | 9.1 | 0.6 | |
| Level of Service (LOS) | | | | | | D | | B | | | | | | A | A | |
| Approach Delay (s/veh) | | | | | | 18.2 | | | | | | | | 1.8 | | |
| Approach LOS | | | | | | C | | | | | | | | A | | |

## Pedestrian Level of Service

| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | | 10 | 10 | 10 |
| Two-Stage Crossing | | No | No | No |
| Pedestrian Platooning | | No | No | No |
| Conflicting Vehicular Flow (veh/h) | | | 1022 | 1061 |
| Average Delay (s) | | | 37.3 | 56.5 |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | 0.093 | 0.064 |
| Proportion of Dissatisfied Peds, P_D | | | 0.756 | 0.771 |
| Level of Service (LOS) | | | F | F |

# HCS Two-Way Stop-Control Report

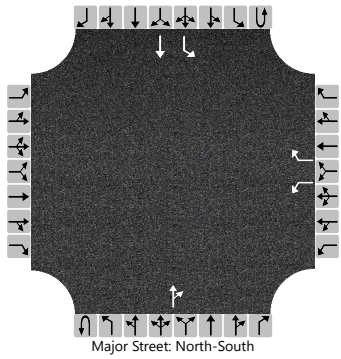
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 4:15pm-5:15pm(Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | FAA Road, Ocean Dr/Homer Spit Rd |
| Jurisdiction | Homer, Alaska |
| East/West Street | FAA Road |
| North/South Street | Ocean Dr/Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes




## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 0 | 0 | | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Configuration | | | | | | L | | R | | | | TR | | L | T | |
| Volume (veh/h) | | | | | | 50 | | 80 | | | 550 | 31 | | 61 | 437 | |
| Percent Heavy Vehicles (%) | | | | | | 5 | | 5 | | | | | | 8 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | No | | | | | | | | | | |
| Median Type \| Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 7.1 | | 6.2 | | | | | | 4.1 | | |
| Critical Headway (sec) | | | | | | 6.45 | | 6.25 | | | | | | 4.18 | | |
| Base Follow-Up Headway (sec) | | | | | | 3.5 | | 3.3 | | | | | | 2.2 | | |
| Follow-Up Headway (sec) | | | | | | 3.55 | | 3.35 | | | | | | 2.27 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | 53 | | 84 | | | | | | 64 | | |
| Capacity, c (veh/h) | | | | | | 183 | | 476 | | | | | | 922 | | |
| v/c Ratio | | | | | | 0.29 | | 0.18 | | | | | | 0.07 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | 1.1 | | 0.6 | | | | | | 0.2 | | |
| Control Delay (s/veh) | | | | | | 32.4 | | 14.2 | | | | | | 9.2 | 0.5 | |
| Level of Service (LOS) | | | | | | D | | B | | | | | | A | A | |
| Approach Delay (s/veh) | | | | | | 21.2 | | | | | | | | 1.6 | | |
| Approach LOS | | | | | | C | | | | | | | | A | | |

## Pedestrian Level of Service

| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | | 10 | 10 | 10 |
| Two-Stage Crossing | | No | No | No |
| Pedestrian Platooning | | No | No | No |
| Conflicting Vehicular Flow (veh/h) | | | 1072 | 1103 |
| Average Delay (s) | | | 37.2 | 58.1 |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | 0.088 | 0.059 |
| Proportion of Dissatisfied Peds, P_D | | | 0.761 | 0.776 |
| Level of Service (LOS) | | | F | F |

# HCS Two-Way Stop-Control Report

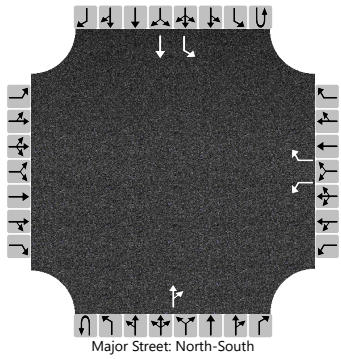
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 3pm-4pm(Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | FAA Road, Ocean Dr/Homer Spit Rd |
| Jurisdiction | Homer, Alaska |
| East/West Street | FAA Road |
| North/South Street | Ocean Dr/Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes


Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 0 | 0 | | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Configuration | | | | | | L | | R | | | | TR | | L | T | |
| Volume (veh/h) | | | | | | 53 | | 81 | | | 565 | 31 | | 62 | 451 | |
| Percent Heavy Vehicles (%) | | | | | | 5 | | 5 | | | | | | 8 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | No | | | | | | | | | | |
| Median Type \| Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 7.1 | | 6.2 | | | | | | 4.1 | | |
| Critical Headway (sec) | | | | | | 6.45 | | 6.25 | | | | | | 4.18 | | |
| Base Follow-Up Headway (sec) | | | | | | 3.5 | | 3.3 | | | | | | 2.2 | | |
| Follow-Up Headway (sec) | | | | | | 3.55 | | 3.35 | | | | | | 2.27 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | 56 | | 85 | | | | | | 65 | | |
| Capacity, c (veh/h) | | | | | | 175 | | 467 | | | | | | 909 | | |
| v/c Ratio | | | | | | 0.32 | | 0.18 | | | | | | 0.07 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | 1.3 | | 0.7 | | | | | | 0.2 | | |
| Control Delay (s/veh) | | | | | | 35.0 | | 14.4 | | | | | | 9.3 | 0.5 | |
| Level of Service (LOS) | | | | | | E | | B | | | | | | A | A | |
| Approach Delay (s/veh) | | | | | | 22.6 | | | | | | | | 1.6 | | |
| Approach LOS | | | | | | C | | | | | | | | A | | |

| Pedestrian Level of Service | | | | |
|---|---|---|---|---|
| Approach | Eastbound | Westbound | Northbound | Southbound |
| Flow (ped/hr) | | 10 | 10 | 10 |
| Two-Stage Crossing | | No | No | No |
| Pedestrian Platooning | | No | No | No |
| Conflicting Vehicular Flow (veh/h) | | | 1102 | 1135 |
| Average Delay (s) | | | 37.1 | 59.3 |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | 0.086 | 0.056 |
| Proportion of Dissatisfied Peds, P_D | | | 0.764 | 0.780 |
| Level of Service (LOS) | | | F | F |

# HCS Two-Way Stop-Control Report

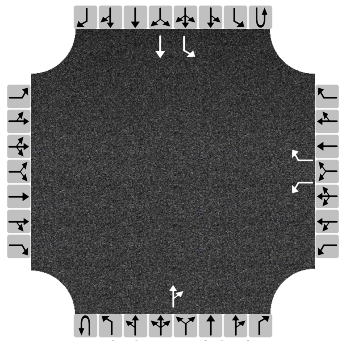
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 3pm-4pmSAT(Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | FAA Road, Ocean Dr/Homer Spit Rd |
| Jurisdiction | Homer, Alaska |
| East/West Street | FAA Road |
| North/South Street | Ocean Dr/Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes




## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 0 | 0 | | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 |
| Configuration | | | | | | L | | R | | | | TR | | L | T | |
| Volume (veh/h) | | | | | | 54 | | 87 | | | 604 | 34 | | 67 | 486 | |
| Percent Heavy Vehicles (%) | | | | | | 5 | | 5 | | | | | | 8 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | No | | | | | | | | | | |
| Median Type \| Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | | | | | 7.1 | | 6.2 | | | | | | 4.1 | | |
| Critical Headway (sec) | | | | | | 6.45 | | 6.25 | | | | | | 4.18 | | |
| Base Follow-Up Headway (sec) | | | | | | 3.5 | | 3.3 | | | | | | 2.2 | | |
| Follow-Up Headway (sec) | | | | | | 3.55 | | 3.35 | | | | | | 2.27 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | | | | 57 | | 92 | | | | | | 71 | | |
| Capacity, c (veh/h) | | | | | | 152 | | 441 | | | | | | 875 | | |
| v/c Ratio | | | | | | 0.37 | | 0.21 | | | | | | 0.08 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | 1.6 | | 0.8 | | | | | | 0.3 | | |
| Control Delay (s/veh) | | | | | | 42.0 | | 15.3 | | | | | | 9.5 | 0.6 | |
| Level of Service (LOS) | | | | | | E | | C | | | | | | A | A | |
| Approach Delay (s/veh) | | | | | | 25.5 | | | | | | | | 1.7 | | |
| Approach LOS | | | | | | D | | | | | | | | A | | |

## Pedestrian Level of Service

| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | | 10 | 10 | 10 |
| Two-Stage Crossing | | No | No | No |
| Pedestrian Platooning | | No | No | No |
| Conflicting Vehicular Flow (veh/h) | | | 1183 | 1218 |
| Average Delay (s) | | | 36.8 | 62.3 |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | 0.081 | 0.049 |
| Proportion of Dissatisfied Peds, P_D | | | 0.773 | 0.788 |
| Level of Service (LOS) | | | F | F |

# HCS Two-Way Stop-Control Report

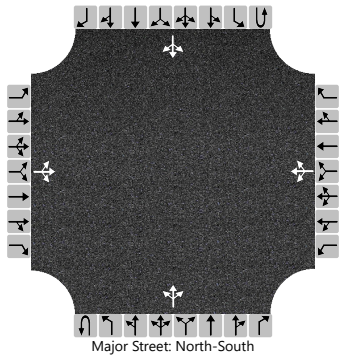
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 8am-9am(No-Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | Kachemak / Triplex Condo Driveway / Homer... |
| Jurisdiction | Homer, Alaska |
| East/West Street | Kachemak / Triplex Condo Driveway |
| North/South Street | Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes


Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration | | | LTR | | | | LTR | | | | LTR | | | | LTR | |
| Volume (veh/h) | | 0 | 0 | 0 | | 57 | 0 | 128 | | 0 | 190 | 14 | | 153 | 228 | 0 |
| Percent Heavy Vehicles (%) | | 3 | 3 | 3 | | 5 | 5 | 5 | | 6 | | | | 7 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | 0 | | | | 0 | | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | Undivided | | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 7.1 | 6.5 | 6.2 | | 7.1 | 6.5 | 6.2 | | 4.1 | | | | 4.1 | | |
| Critical Headway (sec) | | 7.13 | 6.53 | 6.23 | | 7.15 | 6.55 | 6.25 | | 4.16 | | | | 4.17 | | |
| Base Follow-Up Headway (sec) | | 3.5 | 4.0 | 3.3 | | 3.5 | 4.0 | 3.3 | | 2.2 | | | | 2.2 | | |
| Follow-Up Headway (sec) | | 3.53 | 4.03 | 3.33 | | 3.55 | 4.05 | 3.35 | | 2.25 | | | | 2.26 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | 0 | | | | 195 | | | 0 | | | | 161 | | |
| Capacity, c (veh/h) | | | 0 | | | | 761 | | | 1280 | | | | 1302 | | |
| v/c Ratio | | | | | | | 0.26 | | | 0.00 | | | | 0.12 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | | 1.0 | | | 0.0 | | | | 0.4 | | |
| Control Delay (s/veh) | | | | | | | 11.4 | | | 7.8 | 0.0 | 0.0 | | 8.2 | 1.2 | 1.2 |
| Level of Service (LOS) | | | | | | | B | | | A | A | A | | A | A | A |
| Approach Delay (s/veh) | | | | | 11.4 | | | | 0.0 | | | | 4.0 | | | |
| Approach LOS | | | | | B | | | | A | | | | A | | | |

## Pedestrian Level of Service

| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | 10 | 10 | 10 | 0 |
| Two-Stage Crossing | No | No | No | |
| Pedestrian Platooning | No | No | No | |
| Conflicting Vehicular Flow (veh/h) | | | 455 | |
| Average Delay (s) | | | 3.0 | |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | 0.643 | |
| Proportion of Dissatisfied Peds, P_D | | | 0.282 | |
| Level of Service (LOS) | | | D | |

# HCS Two-Way Stop-Control Report

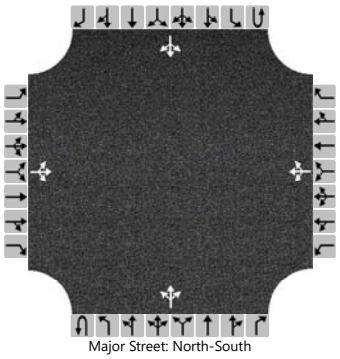
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 11am-12pm(No-Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | Kachemak / Triplex Condo Driveway / Homer... |
| Jurisdiction | Homer, Alaska |
| East/West Street | Kachemak / Triplex Condo Driveway |
| North/South Street | Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes



Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration | | | LTR | | | | LTR | | | | LTR | | | | LTR | |
| Volume (veh/h) | | 2 | 0 | 0 | | 50 | 2 | 156 | | 0 | 349 | 37 | | 130 | 323 | 6 |
| Percent Heavy Vehicles (%) | | 3 | 3 | 3 | | 5 | 5 | 5 | | 6 | | | | 7 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | 0 | | | | 0 | | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | Undivided | | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 7.1 | 6.5 | 6.2 | | 7.1 | 6.5 | 6.2 | | 4.1 | | | | 4.1 | | |
| Critical Headway (sec) | | 7.13 | 6.53 | 6.23 | | 7.15 | 6.55 | 6.25 | | 4.16 | | | | 4.17 | | |
| Base Follow-Up Headway (sec) | | 3.5 | 4.0 | 3.3 | | 3.5 | 4.0 | 3.3 | | 2.2 | | | | 2.2 | | |
| Follow-Up Headway (sec) | | 3.53 | 4.03 | 3.33 | | 3.55 | 4.05 | 3.35 | | 2.25 | | | | 2.26 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | 2 | | | | 219 | | | 0 | | | | 137 | | |
| Capacity, c (veh/h) | | | 139 | | | | 616 | | | 1169 | | | | 1106 | | |
| v/c Ratio | | | 0.02 | | | | 0.36 | | | 0.00 | | | | 0.12 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | 0.0 | | | | 1.6 | | | 0.0 | | | | 0.4 | | |
| Control Delay (s/veh) | | | 31.3 | | | | 14.0 | | | 8.1 | 0.0 | 0.0 | | 8.7 | 1.3 | 1.3 |
| Level of Service (LOS) | | | D | | | | B | | | A | A | A | | A | A | A |
| Approach Delay (s/veh) | 31.3 | | | | 14.0 | | | | 0.0 | | | | 3.4 | | | |
| Approach LOS | D | | | | B | | | | A | | | | A | | | |

| Pedestrian Level of Service | | | | |
|---|---|---|---|---|
| Flow (ped/hr) | 10 | 10 | 10 | 0 |
| Two-Stage Crossing | No | No | No | |
| Pedestrian Platooning | No | No | No | |
| Conflicting Vehicular Flow (veh/h) | | | 746 | |
| Average Delay (s) | | | 3.2 | |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | 0.994 | 0.742 | 0.639 | |
| Level of Service (LOS) | D | E | D | |

# HCS Two-Way Stop-Control Report

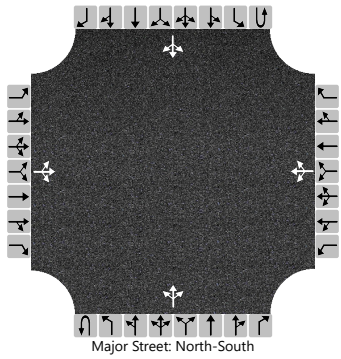
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 4:15pm-5:15pm(No-Built) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | Kachemak / Triplex Condo Driveway / Homer... |
| Jurisdiction | Homer, Alaska |
| East/West Street | Kachemak / Triplex Condo Driveway |
| North/South Street | Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes



Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration | | | LTR | | | | LTR | | | | LTR | | | | LTR | |
| Volume (veh/h) | | 0 | 0 | 0 | | 41 | 0 | 159 | | 0 | 408 | 73 | | 145 | 328 | 0 |
| Percent Heavy Vehicles (%) | | 3 | 3 | 3 | | 5 | 5 | 5 | | 6 | | | | 7 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | 0 | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 7.1 | 6.5 | 6.2 | | 7.1 | 6.5 | 6.2 | | 4.1 | | | | 4.1 | | |
| Critical Headway (sec) | | 7.13 | 6.53 | 6.23 | | 7.15 | 6.55 | 6.25 | | 4.16 | | | | 4.17 | | |
| Base Follow-Up Headway (sec) | | 3.5 | 4.0 | 3.3 | | 3.5 | 4.0 | 3.3 | | 2.2 | | | | 2.2 | | |
| Follow-Up Headway (sec) | | 3.53 | 4.03 | 3.33 | | 3.55 | 4.05 | 3.35 | | 2.25 | | | | 2.26 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | 0 | | | | 211 | | | 0 | | | | 153 | | |
| Capacity, c (veh/h) | | | 0 | | | | 564 | | | 1170 | | | | 1015 | | |
| v/c Ratio | | | | | | | 0.37 | | | 0.00 | | | | 0.15 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | | 1.7 | | | 0.0 | | | | 0.5 | | |
| Control Delay (s/veh) | | | | | | | 15.1 | | | 8.1 | 0.0 | 0.0 | | 9.2 | 1.7 | 1.7 |
| Level of Service (LOS) | | | | | | | C | | | A | A | A | | A | A | A |
| Approach Delay (s/veh) | | | | | | 15.1 | | | | 0.0 | | | | 4.0 | | |
| Approach LOS | | | | | | C | | | | A | | | | A | | |

## Pedestrian Level of Service

| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | 10 | 10 | 10 | 0 |
| Two-Stage Crossing | No | No | No | |
| Pedestrian Platooning | No | No | No | |
| Conflicting Vehicular Flow (veh/h) | | | 852 | |
| Average Delay (s) | | | 3.2 | |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | 0.636 | |
| Proportion of Dissatisfied Peds, P_D | | | 0.315 | |
| Level of Service (LOS) | | | D | |

# HCS Two-Way Stop-Control Report

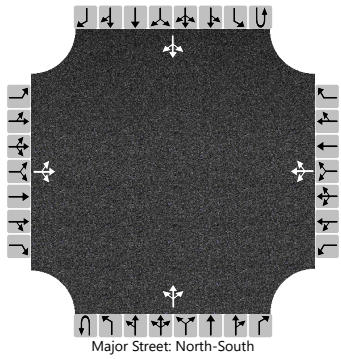
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 3pm-4pm(No-Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | Kachemak / Triplex Condo Driveway / Homer... |
| Jurisdiction | Homer, Alaska |
| East/West Street | Kachemak / Triplex Condo Driveway |
| North/South Street | Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes


Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration | | | LTR | | | | LTR | | | | LTR | | | | LTR | |
| Volume (veh/h) | | 0 | 0 | 0 | | 42 | 0 | 162 | | 0 | 416 | 75 | | 148 | 335 | 0 |
| Percent Heavy Vehicles (%) | | 3 | 3 | 3 | | 5 | 5 | 5 | | 6 | | | | 7 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | 0 | | | | 0 | | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | Undivided | | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 7.1 | 6.5 | 6.2 | | 7.1 | 6.5 | 6.2 | | 4.1 | | | | 4.1 | | |
| Critical Headway (sec) | | 7.13 | 6.53 | 6.23 | | 7.15 | 6.55 | 6.25 | | 4.16 | | | | 4.17 | | |
| Base Follow-Up Headway (sec) | | 3.5 | 4.0 | 3.3 | | 3.5 | 4.0 | 3.3 | | 2.2 | | | | 2.2 | | |
| Follow-Up Headway (sec) | | 3.53 | 4.03 | 3.33 | | 3.55 | 4.05 | 3.35 | | 2.25 | | | | 2.26 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | 0 | | | | 215 | | | 0 | | | | 156 | | |
| Capacity, c (veh/h) | | | 0 | | | | 547 | | | 1163 | | | | 1005 | | |
| v/c Ratio | | | | | | | 0.39 | | | 0.00 | | | | 0.15 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | | 1.9 | | | 0.0 | | | | 0.5 | | |
| Control Delay (s/veh) | | | | | | | 15.8 | | | 8.1 | 0.0 | 0.0 | | 9.2 | 1.8 | 1.8 |
| Level of Service (LOS) | | | | | | | C | | | A | A | A | | A | A | A |
| Approach Delay (s/veh) | | | | | 15.8 | | | | 0.0 | | | | 4.1 | | | |
| Approach LOS | | | | | C | | | | A | | | | A | | | |

## Pedestrian Level of Service

| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | 10 | 10 | 10 | 0 |
| Two-Stage Crossing | No | No | No | |
| Pedestrian Platooning | No | No | No | |
| Conflicting Vehicular Flow (veh/h) | | | 869 | |
| Average Delay (s) | | | 3.2 | |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | 0.636 | |
| Proportion of Dissatisfied Peds, P_D | | | 0.317 | |
| Level of Service (LOS) | | | D | |

# HCS Two-Way Stop-Control Report

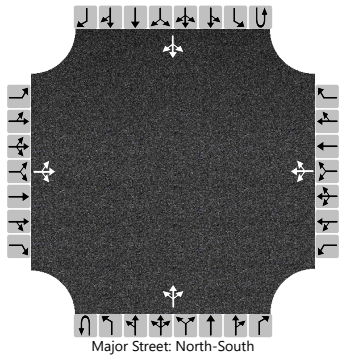
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 3pm-4pmSAT(No-Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | Kachemak / Triplex Condo Driveway / Homer... |
| Jurisdiction | Homer, Alaska |
| East/West Street | Kachemak / Triplex Condo Driveway |
| North/South Street | Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes



Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration | | | LTR | | | | LTR | | | | LTR | | | | LTR | |
| Volume (veh/h) | | 0 | 0 | 0 | | 44 | 0 | 173 | | 0 | 445 | 80 | | 158 | 358 | 0 |
| Percent Heavy Vehicles (%) | | 3 | 3 | 3 | | 5 | 5 | 5 | | 6 | | | | 7 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | 0 | | | | 0 | | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | Undivided | | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 7.1 | 6.5 | 6.2 | | 7.1 | 6.5 | 6.2 | | 4.1 | | | | 4.1 | | |
| Critical Headway (sec) | | 7.13 | 6.53 | 6.23 | | 7.15 | 6.55 | 6.25 | | 4.16 | | | | 4.17 | | |
| Base Follow-Up Headway (sec) | | 3.5 | 4.0 | 3.3 | | 3.5 | 4.0 | 3.3 | | 2.2 | | | | 2.2 | | |
| Follow-Up Headway (sec) | | 3.53 | 4.03 | 3.33 | | 3.55 | 4.05 | 3.35 | | 2.25 | | | | 2.26 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | 0 | | | | 228 | | | 0 | | | | 166 | | |
| Capacity, c (veh/h) | | | 0 | | | | 494 | | | 1139 | | | | 975 | | |
| v/c Ratio | | | | | | | 0.46 | | | 0.00 | | | | 0.17 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | | | | | 2.4 | | | 0.0 | | | | 0.6 | | |
| Control Delay (s/veh) | | | | | | | 18.4 | | | 8.2 | 0.0 | 0.0 | | 9.5 | 2.0 | 2.0 |
| Level of Service (LOS) | | | | | | | C | | | A | A | A | | A | A | A |
| Approach Delay (s/veh) | | | | | 18.4 | | | | 0.0 | | | | 4.3 | | | |
| Approach LOS | | | | | C | | | | A | | | | A | | | |

## Pedestrian Level of Service

| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | 10 | 10 | 10 | 0 |
| Two-Stage Crossing | No | No | No | |
| Pedestrian Platooning | No | No | No | |
| Conflicting Vehicular Flow (veh/h) | | | 929 | |
| Average Delay (s) | | | 3.1 | |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | 0.633 | |
| Proportion of Dissatisfied Peds, P_D | | | 0.322 | |
| Level of Service (LOS) | | | D | |

# HCS Two-Way Stop-Control Report

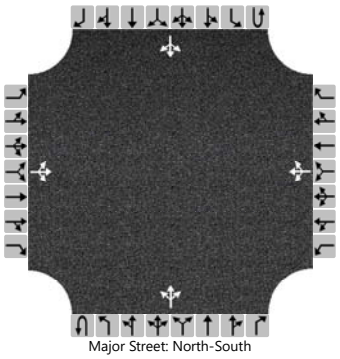
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 8am-9am(Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | Kachemak / Triplex Condo Driveway / Homer... |
| Jurisdiction | Homer, Alaska |
| East/West Street | Kachemak / Triplex Condo Driveway |
| North/South Street | Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes


Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration | | | LTR | | | | LTR | | | | LTR | | | | LTR | |
| Volume (veh/h) | | 1 | 0 | 1 | | 57 | 0 | 134 | | 0 | 196 | 14 | | 157 | 236 | 1 |
| Percent Heavy Vehicles (%) | | 3 | 3 | 3 | | 5 | 5 | 5 | | 6 | | | | 7 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | 0 | | | | 0 | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 7.1 | 6.5 | 6.2 | | 7.1 | 6.5 | 6.2 | | 4.1 | | | | 4.1 | | |
| Critical Headway (sec) | | 7.13 | 6.53 | 6.23 | | 7.15 | 6.55 | 6.25 | | 4.16 | | | | 4.17 | | |
| Base Follow-Up Headway (sec) | | 3.5 | 4.0 | 3.3 | | 3.5 | 4.0 | 3.3 | | 2.2 | | | | 2.2 | | |
| Follow-Up Headway (sec) | | 3.53 | 4.03 | 3.33 | | 3.55 | 4.05 | 3.35 | | 2.25 | | | | 2.26 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | 2 | | | | 201 | | | 0 | | | | 165 | | |
| Capacity, c (veh/h) | | | 332 | | | | 749 | | | 1270 | | | | 1295 | | |
| v/c Ratio | | | 0.01 | | | | 0.27 | | | 0.00 | | | | 0.13 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | 0.0 | | | | 1.1 | | | 0.0 | | | | 0.4 | | |
| Control Delay (s/veh) | | | 15.9 | | | | 11.6 | | | 7.8 | 0.0 | 0.0 | | 8.2 | 1.2 | 1.2 |
| Level of Service (LOS) | | | C | | | | B | | | A | A | A | | A | A | A |
| Approach Delay (s/veh) | | 15.9 | | | | 11.6 | | | | 0.0 | | | | 4.0 | | |
| Approach LOS | | C | | | | B | | | | A | | | | A | | |

| Pedestrian Level of Service | | | | |
|---|---|---|---|---|
| Flow (ped/hr) | 10 | 10 | 10 | 0 |
| Two-Stage Crossing | No | No | No | |
| Pedestrian Platooning | No | No | No | |
| Conflicting Vehicular Flow (veh/h) | | | 469 | |
| Average Delay (s) | | | 3.0 | |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | 0.997 | 0.759 | 0.643 | |
| Level of Service (LOS) | D | E | D | |

# HCS Two-Way Stop-Control Report

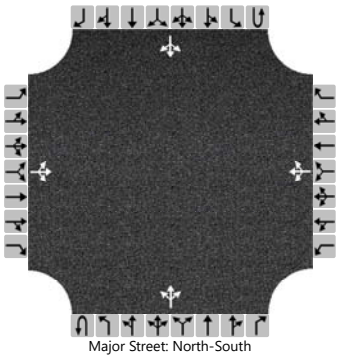
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 11am-12pm(Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | Kachemak / Triplex Condo Driveway / Homer... |
| Jurisdiction | Homer, Alaska |
| East/West Street | Kachemak / Triplex Condo Driveway |
| North/South Street | Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes



Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration | | | LTR | | | | LTR | | | | LTR | | | | LTR | |
| Volume (veh/h) | | 6 | 1 | 2 | | 50 | 2 | 162 | | 1 | 359 | 37 | | 135 | 333 | 7 |
| Percent Heavy Vehicles (%) | | 3 | 3 | 3 | | 5 | 5 | 5 | | 6 | | | | 7 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | 0 | | | | 0 | | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | Undivided | | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 7.1 | 6.5 | 6.2 | | 7.1 | 6.5 | 6.2 | | 4.1 | | | | 4.1 | | |
| Critical Headway (sec) | | 7.13 | 6.53 | 6.23 | | 7.15 | 6.55 | 6.25 | | 4.16 | | | | 4.17 | | |
| Base Follow-Up Headway (sec) | | 3.5 | 4.0 | 3.3 | | 3.5 | 4.0 | 3.3 | | 2.2 | | | | 2.2 | | |
| Follow-Up Headway (sec) | | 3.53 | 4.03 | 3.33 | | 3.55 | 4.05 | 3.35 | | 2.25 | | | | 2.26 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | 9 | | | | 225 | | | 1 | | | | 142 | | |
| Capacity, c (veh/h) | | | 162 | | | | 593 | | | 1158 | | | | 1096 | | |
| v/c Ratio | | | 0.06 | | | | 0.38 | | | 0.00 | | | | 0.13 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | 0.2 | | | | 1.8 | | | 0.0 | | | | 0.4 | | |
| Control Delay (s/veh) | | | 28.6 | | | | 14.7 | | | 8.1 | 0.0 | 0.0 | | 8.8 | 1.4 | 1.4 |
| Level of Service (LOS) | | | D | | | | B | | | A | A | A | | A | A | A |
| Approach Delay (s/veh) | 28.6 | | | | 14.7 | | | | 0.0 | | | | 3.5 | | | |
| Approach LOS | D | | | | B | | | | A | | | | A | | | |

| Pedestrian Level of Service | | | | |
|---|---|---|---|---|
| Flow (ped/hr) | 10 | 10 | 10 | 0 |
| Two-Stage Crossing | No | No | No | |
| Pedestrian Platooning | No | No | No | |
| Conflicting Vehicular Flow (veh/h) | | | 768 | |
| Average Delay (s) | | | 3.2 | |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | 0.983 | 0.735 | 0.639 | |
| Level of Service (LOS) | D | E | D | |

# HCS Two-Way Stop-Control Report

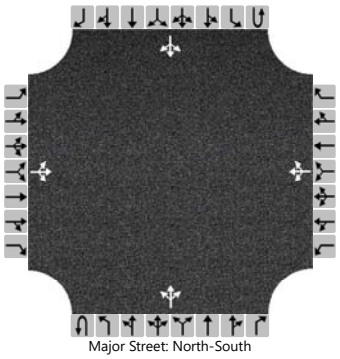
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 4:15pm-5:15pm(Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | Kachemak / Triplex Condo Driveway / Homer... |
| Jurisdiction | Homer, Alaska |
| East/West Street | Kachemak / Triplex Condo Driveway |
| North/South Street | Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes



Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration | | | LTR | | | | LTR | | | | LTR | | | | LTR | |
| Volume (veh/h) | | 1 | 0 | 1 | | 41 | 1 | 163 | | 1 | 419 | 73 | | 149 | 335 | 1 |
| Percent Heavy Vehicles (%) | | 3 | 3 | 3 | | 5 | 5 | 5 | | 6 | | | | 7 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | 0 | | | | 0 | | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | Undivided | | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 7.1 | 6.5 | 6.2 | | 7.1 | 6.5 | 6.2 | | 4.1 | | | | 4.1 | | |
| Critical Headway (sec) | | 7.13 | 6.53 | 6.23 | | 7.15 | 6.55 | 6.25 | | 4.16 | | | | 4.17 | | |
| Base Follow-Up Headway (sec) | | 3.5 | 4.0 | 3.3 | | 3.5 | 4.0 | 3.3 | | 2.2 | | | | 2.2 | | |
| Follow-Up Headway (sec) | | 3.53 | 4.03 | 3.33 | | 3.55 | 4.05 | 3.35 | | 2.25 | | | | 2.26 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | 2 | | | | 216 | | | 1 | | | | 157 | | |
| Capacity, c (veh/h) | | | 177 | | | | 544 | | | 1162 | | | | 1005 | | |
| v/c Ratio | | | 0.01 | | | | 0.40 | | | 0.00 | | | | 0.16 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | 0.0 | | | | 1.9 | | | 0.0 | | | | 0.6 | | |
| Control Delay (s/veh) | | | 25.6 | | | | 15.9 | | | 8.1 | 0.0 | 0.0 | | 9.2 | 1.8 | 1.8 |
| Level of Service (LOS) | | | D | | | | C | | | A | A | A | | A | A | A |
| Approach Delay (s/veh) | 25.6 | | | | 15.9 | | | | 0.0 | | | | 4.1 | | | |
| Approach LOS | D | | | | C | | | | A | | | | A | | | |

| Pedestrian Level of Service | | | | |
|---|---|---|---|---|
| Flow (ped/hr) | 10 | 10 | 10 | 0 |
| Two-Stage Crossing | No | No | No | |
| Pedestrian Platooning | No | No | No | |
| Conflicting Vehicular Flow (veh/h) | | | 872 | |
| Average Delay (s) | | | 3.2 | |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | 0.995 | 0.745 | 0.636 | |
| Level of Service (LOS) | D | E | D | |

# HCS Two-Way Stop-Control Report

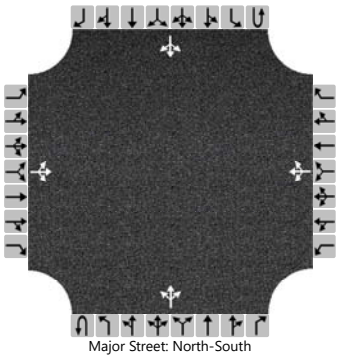
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 3pm-4pm(Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | Kachemak / Triplex Condo Driveway / Homer... |
| Jurisdiction | Homer, Alaska |
| East/West Street | Kachemak / Triplex Condo Driveway |
| North/South Street | Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes



Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration | | | LTR | | | | LTR | | | | LTR | | | | LTR | |
| Volume (veh/h) | | 2 | 1 | 1 | | 42 | 1 | 168 | | 3 | 431 | 75 | | 153 | 343 | 3 |
| Percent Heavy Vehicles (%) | | 3 | 3 | 3 | | 5 | 5 | 5 | | 6 | | | | 7 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | 0 | | | | 0 | | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | Undivided | | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 7.1 | 6.5 | 6.2 | | 7.1 | 6.5 | 6.2 | | 4.1 | | | | 4.1 | | |
| Critical Headway (sec) | | 7.13 | 6.53 | 6.23 | | 7.15 | 6.55 | 6.25 | | 4.16 | | | | 4.17 | | |
| Base Follow-Up Headway (sec) | | 3.5 | 4.0 | 3.3 | | 3.5 | 4.0 | 3.3 | | 2.2 | | | | 2.2 | | |
| Follow-Up Headway (sec) | | 3.53 | 4.03 | 3.33 | | 3.55 | 4.05 | 3.35 | | 2.25 | | | | 2.26 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | 4 | | | | 222 | | | 3 | | | | 161 | | |
| Capacity, c (veh/h) | | | 131 | | | | 518 | | | 1152 | | | | 992 | | |
| v/c Ratio | | | 0.03 | | | | 0.43 | | | 0.00 | | | | 0.16 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | 0.1 | | | | 2.1 | | | 0.0 | | | | 0.6 | | |
| Control Delay (s/veh) | | | 33.3 | | | | 17.1 | | | 8.1 | 0.0 | 0.0 | | 9.3 | 1.9 | 1.9 |
| Level of Service (LOS) | | | D | | | | C | | | A | A | A | | A | A | A |
| Approach Delay (s/veh) | 33.3 | | | | 17.1 | | | | 0.1 | | | | 4.2 | | | |
| Approach LOS | D | | | | C | | | | A | | | | A | | | |

| Pedestrian Level of Service | | | | |
|---|---|---|---|---|
| Flow (ped/hr) | 10 | 10 | 10 | 0 |
| Two-Stage Crossing | No | No | No | |
| Pedestrian Platooning | No | No | No | |
| Conflicting Vehicular Flow (veh/h) | | | 897 | |
| Average Delay (s) | | | 3.2 | |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | 0.992 | 0.738 | 0.635 | |
| Level of Service (LOS) | D | E | D | |

# HCS Two-Way Stop-Control Report

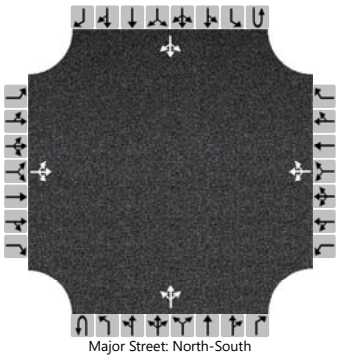
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 3pm-4pmSAT(Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | Kachemak / Triplex Condo Driveway / Homer... |
| Jurisdiction | Homer, Alaska |
| East/West Street | Kachemak / Triplex Condo Driveway |
| North/South Street | Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes


Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 1 | 0 | | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration | | | LTR | | | | LTR | | | | LTR | | | | LTR | |
| Volume (veh/h) | | 2 | 1 | 2 | | 44 | 1 | 181 | | 1 | 459 | 80 | | 164 | 369 | 2 |
| Percent Heavy Vehicles (%) | | 3 | 3 | 3 | | 5 | 5 | 5 | | 6 | | | | 7 | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | 0 | | | | 0 | | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | Undivided | | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 7.1 | 6.5 | 6.2 | | 7.1 | 6.5 | 6.2 | | 4.1 | | | | 4.1 | | |
| Critical Headway (sec) | | 7.13 | 6.53 | 6.23 | | 7.15 | 6.55 | 6.25 | | 4.16 | | | | 4.17 | | |
| Base Follow-Up Headway (sec) | | 3.5 | 4.0 | 3.3 | | 3.5 | 4.0 | 3.3 | | 2.2 | | | | 2.2 | | |
| Follow-Up Headway (sec) | | 3.53 | 4.03 | 3.33 | | 3.55 | 4.05 | 3.35 | | 2.25 | | | | 2.26 | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | 5 | | | | 238 | | | 1 | | | | 173 | | |
| Capacity, c (veh/h) | | | 131 | | | | 468 | | | 1126 | | | | 963 | | |
| v/c Ratio | | | 0.04 | | | | 0.51 | | | 0.00 | | | | 0.18 | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | 0.1 | | | | 2.8 | | | 0.0 | | | | 0.7 | | |
| Control Delay (s/veh) | | | 33.6 | | | | 20.4 | | | 8.2 | 0.0 | 0.0 | | 9.6 | 2.2 | 2.2 |
| Level of Service (LOS) | | | D | | | | C | | | A | A | A | | A | A | A |
| Approach Delay (s/veh) | 33.6 | | | | 20.4 | | | | 0.0 | | | | 4.4 | | | |
| Approach LOS | D | | | | C | | | | A | | | | A | | | |

| Pedestrian Level of Service | | | | |
|---|---|---|---|---|
| Flow (ped/hr) | 10 | 10 | 10 | 0 |
| Two-Stage Crossing | No | No | No | |
| Pedestrian Platooning | No | No | No | |
| Conflicting Vehicular Flow (veh/h) | | | 957 | |
| Average Delay (s) | | | 3.1 | |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | 0.991 | 0.724 | 0.632 | |
| Level of Service (LOS) | D | E | D | |

# HCS Two-Way Stop-Control Report

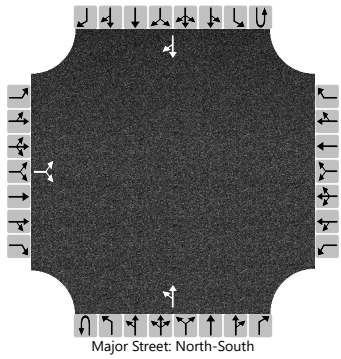
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 8am-9am(Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | Hotel Driveway / Homer Spit Rd |
| Jurisdiction | Homer, Alaska |
| East/West Street | Hotel Driveway |
| North/South Street | Ocean Dr/Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes



Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 1 | 0 | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration | | | LR | | | | | | | LT | | | | | | TR |
| Volume (veh/h) | | 11 | | 12 | | | | | | 12 | 319 | | | | 382 | 13 |
| Percent Heavy Vehicles (%) | | 3 | | 3 | | | | | | 7 | | | | | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | 0 | | | | | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 7.1 | | 6.2 | | | | | | 4.1 | | | | | | |
| Critical Headway (sec) | | 6.43 | | 6.23 | | | | | | 4.17 | | | | | | |
| Base Follow-Up Headway (sec) | | 3.5 | | 3.3 | | | | | | 2.2 | | | | | | |
| Follow-Up Headway (sec) | | 3.53 | | 3.33 | | | | | | 2.26 | | | | | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | 24 | | | | | | | 13 | | | | | | |
| Capacity, c (veh/h) | | | 458 | | | | | | | 1097 | | | | | | |
| v/c Ratio | | | 0.05 | | | | | | | 0.01 | | | | | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | 0.2 | | | | | | | 0.0 | | | | | | |
| Control Delay (s/veh) | | | 13.3 | | | | | | | 8.3 | 0.1 | | | | | |
| Level of Service (LOS) | | | B | | | | | | | A | A | | | | | |
| Approach Delay (s/veh) | | 13.3 | | | | | | | | 0.4 | | | | | | |
| Approach LOS | | B | | | | | | | | A | | | | | | |

## Pedestrian Level of Service

| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | 10 | | 0 | 0 |
| Two-Stage Crossing | No | | | |
| Pedestrian Platooning | No | | | |
| Conflicting Vehicular Flow (veh/h) | | | | |
| Average Delay (s) | | | | |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | | |
| Proportion of Dissatisfied Peds, P_D | | | | |
| Level of Service (LOS) | | | | |

# HCS Two-Way Stop-Control Report

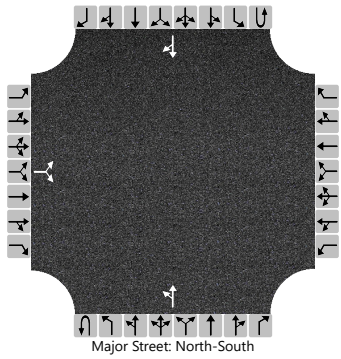
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 11am-12pm(Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | Hotel Driveway / Homer Spit Rd |
| Jurisdiction | Homer, Alaska |
| East/West Street | Hotel Driveway |
| North/South Street | Ocean Dr/Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes


Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 1 | 0 | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration | | | LR | | | | | | | LT | | | | | | TR |
| Volume (veh/h) | | 17 | | 15 | | | | | | 16 | 511 | | | | 460 | 16 |
| Percent Heavy Vehicles (%) | | 3 | | 3 | | | | | | 7 | | | | | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | 0 | | | | | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 7.1 | | 6.2 | | | | | | 4.1 | | | | | | |
| Critical Headway (sec) | | 6.43 | | 6.23 | | | | | | 4.17 | | | | | | |
| Base Follow-Up Headway (sec) | | 3.5 | | 3.3 | | | | | | 2.2 | | | | | | |
| Follow-Up Headway (sec) | | 3.53 | | 3.33 | | | | | | 2.26 | | | | | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | 34 | | | | | | | 17 | | | | | | |
| Capacity, c (veh/h) | | | 322 | | | | | | | 1019 | | | | | | |
| v/c Ratio | | | 0.10 | | | | | | | 0.02 | | | | | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | 0.3 | | | | | | | 0.1 | | | | | | |
| Control Delay (s/veh) | | | 17.5 | | | | | | | 8.6 | 0.2 | | | | | |
| Level of Service (LOS) | | | C | | | | | | | A | A | | | | | |
| Approach Delay (s/veh) | | 17.5 | | | | | | | | 0.5 | | | | | | |
| Approach LOS | | C | | | | | | | | A | | | | | | |

## Pedestrian Level of Service

| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | 10 | | 0 | 0 |
| Two-Stage Crossing | No | | | |
| Pedestrian Platooning | No | | | |
| Conflicting Vehicular Flow (veh/h) | | | | |
| Average Delay (s) | | | | |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | | |
| Proportion of Dissatisfied Peds, P_D | | | | |
| Level of Service (LOS) | | | | |

# HCS Two-Way Stop-Control Report

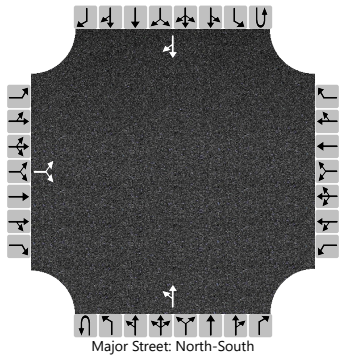
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 4:15pm-5:15pm(Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | Hotel Driveway / Homer Spit Rd |
| Jurisdiction | Homer, Alaska |
| East/West Street | Hotel Driveway |
| North/South Street | Ocean Dr/Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes




## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 1 | 0 | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration | | | LR | | | | | | | LT | | | | | | TR |
| Volume (veh/h) | | 13 | | 11 | | | | | | 15 | 568 | | | | 474 | 13 |
| Percent Heavy Vehicles (%) | | 3 | | 3 | | | | | | 7 | | | | | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | 0 | | | | | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 7.1 | | 6.2 | | | | | | 4.1 | | | | | | |
| Critical Headway (sec) | | 6.43 | | 6.23 | | | | | | 4.17 | | | | | | |
| Base Follow-Up Headway (sec) | | 3.5 | | 3.3 | | | | | | 2.2 | | | | | | |
| Follow-Up Headway (sec) | | 3.53 | | 3.33 | | | | | | 2.26 | | | | | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | 25 | | | | | | | 16 | | | | | | |
| Capacity, c (veh/h) | | | 296 | | | | | | | 1009 | | | | | | |
| v/c Ratio | | | 0.09 | | | | | | | 0.02 | | | | | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | 0.3 | | | | | | | 0.0 | | | | | | |
| Control Delay (s/veh) | | | 18.3 | | | | | | | 8.6 | 0.2 | | | | | |
| Level of Service (LOS) | | | C | | | | | | | A | A | | | | | |
| Approach Delay (s/veh) | | 18.3 | | | | | | | | 0.4 | | | | | | |
| Approach LOS | | C | | | | | | | | A | | | | | | |

## Pedestrian Level of Service

| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | 10 | | 0 | 0 |
| Two-Stage Crossing | No | | | |
| Pedestrian Platooning | No | | | |
| Conflicting Vehicular Flow (veh/h) | | | | |
| Average Delay (s) | | | | |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | | |
| Proportion of Dissatisfied Peds, P_D | | | | |
| Level of Service (LOS) | | | | |

# HCS Two-Way Stop-Control Report

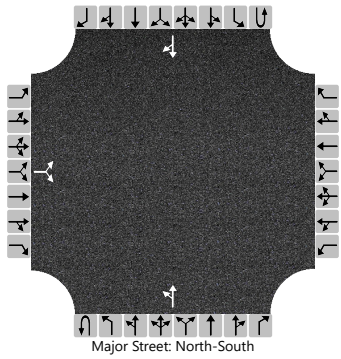
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 3pm-4pm(Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | Hotel Driveway / Homer Spit Rd |
| Jurisdiction | Homer, Alaska |
| East/West Street | Hotel Driveway |
| North/South Street | Ocean Dr/Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes




## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 1 | 0 | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration | | | LR | | | | | | | LT | | | | | | TR |
| Volume (veh/h) | | 16 | | 13 | | | | | | 21 | 580 | | | | 486 | 18 |
| Percent Heavy Vehicles (%) | | 3 | | 3 | | | | | | 7 | | | | | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | 0 | | | | | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 7.1 | | 6.2 | | | | | | 4.1 | | | | | | |
| Critical Headway (sec) | | 6.43 | | 6.23 | | | | | | 4.17 | | | | | | |
| Base Follow-Up Headway (sec) | | 3.5 | | 3.3 | | | | | | 2.2 | | | | | | |
| Follow-Up Headway (sec) | | 3.53 | | 3.33 | | | | | | 2.26 | | | | | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | 31 | | | | | | | 22 | | | | | | |
| Capacity, c (veh/h) | | | 277 | | | | | | | 994 | | | | | | |
| v/c Ratio | | | 0.11 | | | | | | | 0.02 | | | | | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | 0.4 | | | | | | | 0.1 | | | | | | |
| Control Delay (s/veh) | | | 19.6 | | | | | | | 8.7 | 0.3 | | | | | |
| Level of Service (LOS) | | | C | | | | | | | A | A | | | | | |
| Approach Delay (s/veh) | | 19.6 | | | | | | | | 0.6 | | | | | | |
| Approach LOS | | C | | | | | | | | A | | | | | | |

## Pedestrian Level of Service

| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | 10 | | 0 | 0 |
| Two-Stage Crossing | No | | | |
| Pedestrian Platooning | No | | | |
| Conflicting Vehicular Flow (veh/h) | | | | |
| Average Delay (s) | | | | |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | | |
| Proportion of Dissatisfied Peds, P_D | | | | |
| Level of Service (LOS) | | | | |

# HCS Two-Way Stop-Control Report

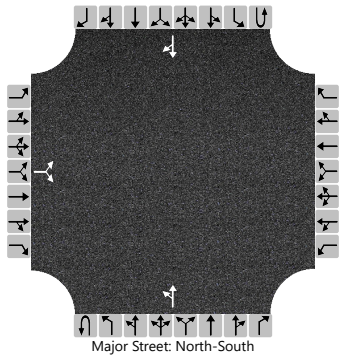
## General Information

| | |
|---|---|
| Analyst | Beau Collin |
| Agency/Co. | Kinney Engineering LLC |
| Date Performed | 10/24/2023 |
| Analysis Year | 2026 |
| Time Analyzed | 3pm-4pmSAT(Build) |
| Intersection Orientation | North-South |
| Project Description | Doyon Traffic Impact Study |

## Site Information

| | |
|---|---|
| Intersection | Hotel Driveway / Homer Spit Rd |
| Jurisdiction | Homer, Alaska |
| East/West Street | Hotel Driveway |
| North/South Street | Ocean Dr/Homer Spit Rd |
| Peak Hour Factor | 0.95 |
| Analysis Time Period (hrs) | 0.25 |

## Lanes


Major Street: North-South

## Vehicle Volumes and Adjustments

| Approach | Eastbound | | | | Westbound | | | | Northbound | | | | Southbound | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | U | L | T | R | U | L | T | R | U | L | T | R | U | L | T | R |
| Priority | | 10 | 11 | 12 | | 7 | 8 | 9 | 1U | 1 | 2 | 3 | 4U | 4 | 5 | 6 |
| Number of Lanes | | 0 | 1 | 0 | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration | | | LR | | | | | | | LT | | | | | | TR |
| Volume (veh/h) | | 18 | | 17 | | | | | | 22 | 620 | | | | 518 | 22 |
| Percent Heavy Vehicles (%) | | 3 | | 3 | | | | | | 7 | | | | | | |
| Proportion Time Blocked | | | | | | | | | | | | | | | | |
| Percent Grade (%) | | 0 | | | | | | | | | | | | | | |
| Right Turn Channelized | | | | | | | | | | | | | | | | |
| Median Type \| Storage | | Undivided | | | | | | | | | | | | | | |

## Critical and Follow-up Headways

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Base Critical Headway (sec) | | 7.1 | | 6.2 | | | | | | 4.1 | | | | | | |
| Critical Headway (sec) | | 6.43 | | 6.23 | | | | | | 4.17 | | | | | | |
| Base Follow-Up Headway (sec) | | 3.5 | | 3.3 | | | | | | 2.2 | | | | | | |
| Follow-Up Headway (sec) | | 3.53 | | 3.33 | | | | | | 2.26 | | | | | | |

## Delay, Queue Length, and Level of Service

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Flow Rate, v (veh/h) | | | 37 | | | | | | | 23 | | | | | | |
| Capacity, c (veh/h) | | | 260 | | | | | | | 962 | | | | | | |
| v/c Ratio | | | 0.14 | | | | | | | 0.02 | | | | | | |
| 95% Queue Length, $Q_{95}$ (veh) | | | 0.5 | | | | | | | 0.1 | | | | | | |
| Control Delay (s/veh) | | | 21.1 | | | | | | | 8.8 | 0.3 | | | | | |
| Level of Service (LOS) | | | C | | | | | | | A | A | | | | | |
| Approach Delay (s/veh) | | 21.1 | | | | | | | | 0.6 | | | | | | |
| Approach LOS | | C | | | | | | | | A | | | | | | |

## Pedestrian Level of Service

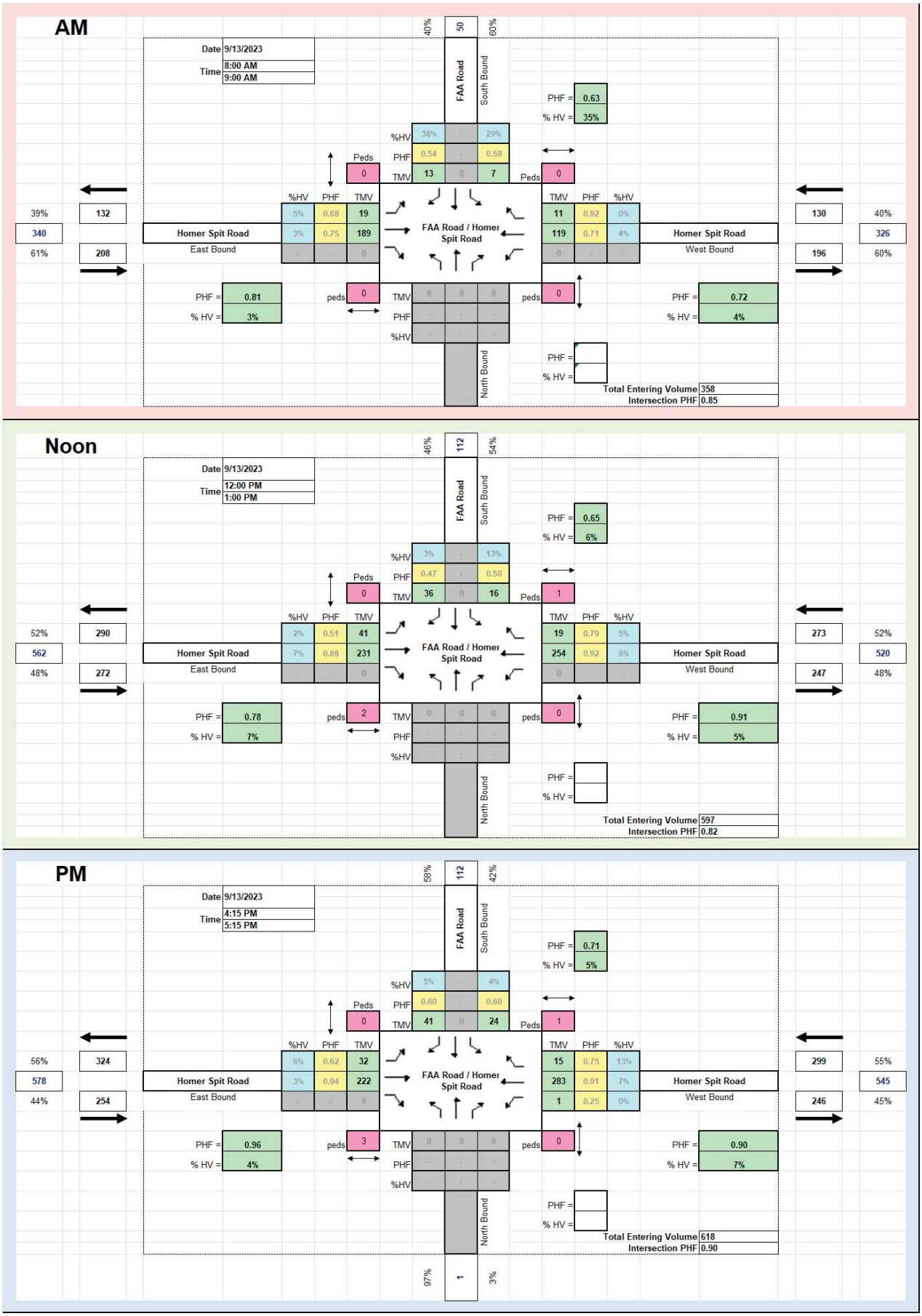
| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | 10 | | 0 | 0 |
| Two-Stage Crossing | No | | | |
| Pedestrian Platooning | No | | | |
| Conflicting Vehicular Flow (veh/h) | | | | |
| Average Delay (s) | | | | |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | | |
| Proportion of Dissatisfied Peds, P_D | | | | |
| Level of Service (LOS) | | | | |

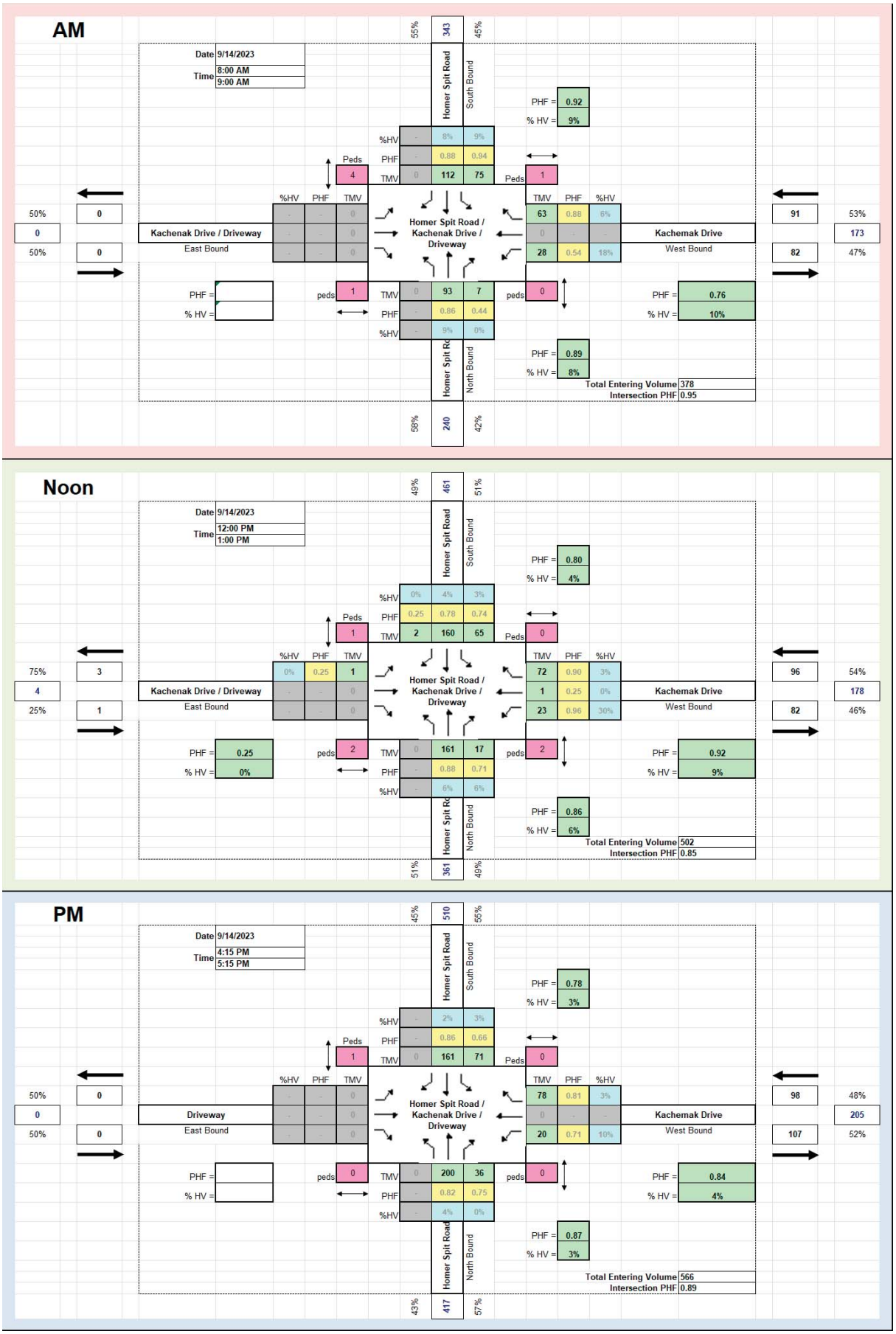
## Pedestrian Level of Service

| Approach | Eastbound | Westbound | Northbound | Southbound |
|---|---|---|---|---|
| Flow (ped/hr) | 10 | 10 | 10 | 0 |
| Two-Stage Crossing | No | No | No | |
| Pedestrian Platooning | No | No | No | |
| Conflicting Vehicular Flow (veh/h) | | | 957 | |
| Average Delay (s) | | | 3.1 | |
| Prob. of Non-Delayed Crossing, $P_{nd}$ | | | 0.632 | |
| Proportion of Dissatisfied Peds, P_D | | | 0.325 | |
| Level of Service (LOS) | | | D | |

# Attachment G: September 2022 Intersection Counts

Follows this page


AM
Date 9/13/2023
Time 8:00 AM
9:00 AM
FAA Road
South Bound
40% 50 60%
PHF = 0.63
% HV = 35%
%HV 38% - 29%
PHF 0.54 - 0.58
Peds 0
TMV 13 0 7
Peds 0
39% 132
340
61% 208
Homer Spit Road
East Bound
%HV PHF TMV
5% 0.68 19
3% 0.75 189
- - 0
FAA Road / Homer Spit Road
TMV PHF %HV
11 0.92 0%
119 0.71 4%
0 - -
Homer Spit Road
West Bound
130 40%
326
196 60%
PHF = 0.81
% HV = 3%
peds 0
TMV 0 0 0
PHF - - -
%HV - - -
peds 0
PHF = 0.72
% HV = 4%
PHF =
% HV =
North Bound
Total Entering Volume 358
Intersection PHF 0.85
Noon
Date 9/13/2023
Time 12:00 PM
1:00 PM
FAA Road
South Bound
46% 112 54%
PHF = 0.65
% HV = 6%
%HV 3% - 13%
PHF 0.47 - 0.50
Peds 0
TMV 36 0 16
Peds 1
52% 290
562
48% 272
Homer Spit Road
East Bound
%HV PHF TMV
2% 0.51 41
7% 0.86 231
- - 0
FAA Road / Homer Spit Road
TMV PHF %HV
19 0.79 5%
254 0.92 6%
0 - -
Homer Spit Road
West Bound
273 52%
520
247 48%
PHF = 0.78
% HV = 7%
peds 2
TMV 0 0 0
PHF - - -
%HV - - -
peds 0
PHF = 0.91
% HV = 5%
PHF =
% HV =
North Bound
Total Entering Volume 597
Intersection PHF 0.82
PM
Date 9/13/2023
Time 4:15 PM
5:15 PM
FAA Road
South Bound
58% 112 42%
PHF = 0.71
% HV = 5%
%HV 5% - 4%
PHF 0.60 - 0.60
Peds 0
TMV 41 0 24
Peds 1
56% 324
578
44% 254
Homer Spit Road
East Bound
%HV PHF TMV
6% 0.62 32
3% 0.94 222
- - 0
FAA Road / Homer Spit Road
TMV PHF %HV
15 0.75 13%
283 0.91 7%
1 0.25 0%
Homer Spit Road
West Bound
299 55%
545
246 45%
PHF = 0.96
% HV = 4%
peds 3
TMV 0 0 0
PHF - - -
%HV - - -
peds 0
PHF = 0.90
% HV = 7%
PHF =
% HV =
North Bound
Total Entering Volume 618
Intersection PHF 0.90
97% 1 3%


AM
Date 9/14/2023
Time 8:00 AM
9:00 AM
Homer Spit Road
South Bound
55%
343
45%
PHF = 0.92
% HV = 9%
%HV - 8% 9%
PHF - 0.88 0.94
Peds 4
TMV 0 112 75
Peds 1
%HV PHF TMV
TMV PHF %HV
50% 0
0
50% 0
Kachenak Drive / Driveway
East Bound
Homer Spit Road / Kachenak Drive / Driveway
0 0 0
63 0.88 6%
0 - -
28 0.54 18%
Kachemak Drive
West Bound
91 53%
173
82 47%
PHF =
% HV =
peds 1
TMV 0 93 7
PHF - 0.86 0.44
%HV - 9% 0%
peds 0
PHF = 0.76
% HV = 10%
Homer Spit Ro
North Bound
PHF = 0.89
% HV = 8%
Total Entering Volume 378
Intersection PHF 0.95
58%
240
42%
Noon
Date 9/14/2023
Time 12:00 PM
1:00 PM
Homer Spit Road
South Bound
49%
461
51%
PHF = 0.80
% HV = 4%
%HV 0% 4% 3%
PHF 0.25 0.78 0.74
Peds 1
TMV 2 160 65
Peds 0
%HV PHF TMV
TMV PHF %HV
75% 3
4
25% 1
Kachenak Drive / Driveway
East Bound
Homer Spit Road / Kachenak Drive / Driveway
0% 0.25 1
72 0.90 3%
1 0.25 0%
23 0.96 30%
Kachemak Drive
West Bound
96 54%
178
82 46%
PHF = 0.25
% HV = 0%
peds 2
TMV 0 161 17
PHF - 0.88 0.71
%HV - 6% 6%
peds 2
PHF = 0.92
% HV = 9%
Homer Spit Ro
North Bound
PHF = 0.86
% HV = 6%
Total Entering Volume 502
Intersection PHF 0.85
51%
361
49%
PM
Date 9/14/2023
Time 4:15 PM
5:15 PM
Homer Spit Road
South Bound
45%
510
55%
PHF = 0.78
% HV = 3%
%HV - 2% 3%
PHF - 0.86 0.66
Peds 1
TMV 0 161 71
Peds 0
%HV PHF TMV
TMV PHF %HV
50% 0
0
50% 0
Driveway
East Bound
Homer Spit Road / Kachenak Drive / Driveway
0 0 0
78 0.81 3%
0 - -
20 0.71 10%
Kachemak Drive
West Bound
98 48%
205
107 52%
PHF =
% HV =
peds 0
TMV 0 200 36
PHF - 0.82 0.75
%HV - 4% 0%
peds 0
PHF = 0.84
% HV = 4%
Homer Spit Road
North Bound
PHF = 0.87
% HV = 3%
Total Entering Volume 566
Intersection PHF 0.89
43%
417
57%

# Attachment H: HCS Signal Warrants- FAA Road-Ocean Drive-Homer Spit Road Intersection

Follows this page

# HCS Warrants Report

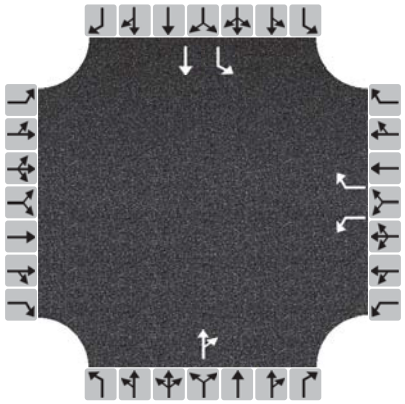
## Project Information

| | | | |
|---|---|---|---|
| Analyst | Kinney | Date | 10/29/2023 |
| Agency | KELLC | Analysis Year | 2006 |
| Jurisdiction | | Time Period Analyzed | Weekday, Summer |
| Project Description | FAA Road Ocean Homer Spit Warrants All WB movements | | |

## General

| | | | |
|---|---|---|---|
| Major Street Direction | North-South | Population < 10,000 | Yes |
| Starting Time Interval | 7 | Coordinated Signal System | No |
| Median Type | Undivided | Crashes (crashes/year) | 0 |
| Major Street Speed (mi/h) | 35 | Adequate Trials of Crash Exp. Alt. | No |
| Nearest Signal (ft) | 5000 | | |

## Geometry and Traffic



| Approach | Eastbound | | | Westbound | | | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Number of Lanes, N | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 |
| Lane Usage | | | | L | | R | | TR | | L | T | |
| Vehicle Volumes Averages (veh/h) | 0 | 0 | 0 | 29 | 0 | 51 | 0 | 389 | 28 | 51 | 357 | 0 |
| Pedestrian Averages (peds/h) | 0 | | | 0 | | | 0 | | | 0 | | |
| Gap Averages (gaps/h) | 0 | | | 0 | | | 0 | | | 0 | | |
| Delay (s/veh) | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| Delay (veh-hrs) | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |

## School Crossing and Roadway Network

| | | | |
|---|---|---|---|
| Number of Students in Highest Hour | 0 | Two or More Major Routes | No |
| Number of Adequate Gaps in Period | 0 | Weekend Counts | No |
| Number of Minutes in Period | 0 | 5-year Growth Factor (%) | 1 |

## Railroad Crossing

| | | | |
|---|---|---|---|
| Grade Crossing Approach | None | Rail Traffic (trains/day) | 4 |
| Highest Volume Hour with Trains | Unknown | High Occupancy Buses (%) | 0 |
| Distance to Stop Line (ft) | - | Tractor-Trailer Trucks (%) | 10 |

## Volume Summary

| Hour | Major Volume | Minor Volume | Total Volume | Peds/h | Gaps/h | 1A ( 70% ) | 1A ( 56% ) | 1B ( 70% ) | 1B ( 56% ) | 2 ( 70% ) | 3A ( 70% ) | 3B ( 56% ) | 4A ( 70% ) | 4B ( 56% ) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07 - 08 | 751 | 42 | 793 | 0 | 0 | No | No | No | No | No | No | No | No | No |
| 08 - 09 | 823 | 57 | 880 | 0 | 0 | No | No | No | Yes | No | No | No | No | No |
| 09 - 10 | 898 | 71 | 969 | 0 | 0 | No | No | Yes | Yes | No | No | No | No | No |
| 10 - 11 | 974 | 86 | 1060 | 0 | 0 | No | No | Yes | Yes | Yes | No | No | No | No |
| 11 - 12 | 1047 | 100 | 1147 | 0 | 0 | No | No | Yes | Yes | Yes | No | No | No | No |
| 12 - 13 | 1063 | 109 | 1172 | 0 | 0 | No | No | Yes | Yes | Yes | No | No | No | No |
| 13 - 14 | 1078 | 117 | 1195 | 0 | 0 | No | Yes | Yes | Yes | Yes | No | No | No | No |
| 14 - 15 | 1094 | 126 | 1220 | 0 | 0 | No | Yes | Yes | Yes | Yes | No | Yes | No | No |
| 15 - 16 | 1109 | 134 | 1243 | 0 | 0 | No | Yes | Yes | Yes | Yes | No | Yes | No | No |
| 16 - 17 | 1079 | 130 | 1209 | 0 | 0 | No | Yes | Yes | Yes | Yes | No | Yes | No | No |
| 17 - 18 | 0 | 0 | 0 | 0 | 0 | No | No | No | No | No | No | No | No | No |
| 18 - 19 | 0 | 0 | 0 | 0 | 0 | No | No | No | No | No | No | No | No | No |
| Total | 9916 | 972 | 10888 | 0 | 0 | 0 | 4 | 8 | 9 | 7 | 0 | 3 | 0 | 0 |

## Warrants

| | |
|---|---|
| ***Warrant 1: Eight-Hour Vehicular Volume*** | ✓ |
| A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or-- | |
| B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or-- | ✓ |
| 56% Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach) | |
| ***Warrant 2: Four-Hour Vehicular Volume*** | ✓ |
| Four-Hour Vehicular Volume (Both major approaches --and-- higher minor approach) | ✓ |
| ***Warrant 3: Peak Hour*** | ✓ |
| A. Peak-Hour Conditions (Minor delay -- and-- minor volume --and-- total volume) --or-- | |
| B. Peak-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach) | ✓ |
| ***Warrant 4: Pedestrian Volume*** | |
| A. Four Hour Volumes --or-- | |
| B. One-Hour Volumes | |
| ***Warrant 5: School Crossing*** | |
| Gaps Same Period --and-- | |
| Student Volumes | |
| Nearest Traffic Control Signal (optional) | ✓ |
| ***Warrant 6: Coordinated Signal System*** | |
| Degree of Platooning (Predominant direction or both directions) | |
| ***Warrant 7: Crash Experience*** | |
| A. Adequate trials of alternatives, observance and enforcement failed --and-- | |
| B. Reported crashes susceptible to correction by signal (12-month period) --and-- | |
| C. 56% Volumes for Warrants 1A, 1B, --or-- 4 are satisfied | ✓ |
| ***Warrant 8: Roadway Network*** | |
| A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2, or 3) --or-- | |
| B. Weekend Volume (Five hours total) | |
| ***Warrant 9: Grade Crossing*** | |
| A. Grade Crossing within 140 ft --and-- | |
| B. Peak-Hour Vehicular Volumes | |

# HCS Warrants Report

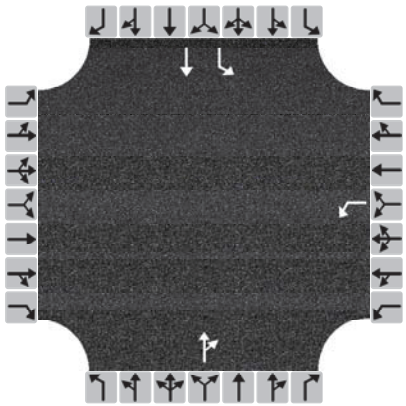
## Project Information

| | | | |
|---|---|---|---|
| Analyst | Kinney | Date | 10/29/2023 |
| Agency | KELLC | Analysis Year | 2-06 |
| Jurisdiction | | Time Period Analyzed | Weekday, Summer |
| Project Description | FAA Road Ocean Homer Spit Warrants WBLT Only | | |

## General

| | | | |
|---|---|---|---|
| Major Street Direction | North-South | Population < 10,000 | Yes |
| Starting Time Interval | 7 | Coordinated Signal System | No |
| Median Type | Undivided | Crashes (crashes/year) | 0 |
| Major Street Speed (mi/h) | 35 | Adequate Trials of Crash Exp. Alt. | No |
| Nearest Signal (ft) | 5000 | | |

## Geometry and Traffic



| Approach | Eastbound | | | Westbound | | | Northbound | | | Southbound | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | L | T | R | L | T | R | L | T | R | L | T | R |
| Number of Lanes, N | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 |
| Lane Usage | | | | L | | | | TR | | L | T | |
| Vehicle Volumes Averages (veh/h) | 0 | 0 | 0 | 29 | 0 | 0 | 0 | 389 | 28 | 51 | 357 | 0 |
| Pedestrian Averages (peds/h) | 0 | | | 0 | | | 0 | | | 0 | | |
| Gap Averages (gaps/h) | 0 | | | 0 | | | 0 | | | 0 | | |
| Delay (s/veh) | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |
| Delay (veh-hrs) | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | | |

## School Crossing and Roadway Network

| | | | |
|---|---|---|---|
| Number of Students in Highest Hour | 0 | Two or More Major Routes | No |
| Number of Adequate Gaps in Period | 0 | Weekend Counts | No |
| Number of Minutes in Period | 0 | 5-year Growth Factor (%) | 1 |

## Railroad Crossing

| | | | |
|---|---|---|---|
| Grade Crossing Approach | None | Rail Traffic (trains/day) | 4 |
| Highest Volume Hour with Trains | Unknown | High Occupancy Buses (%) | 0 |
| Distance to Stop Line (ft) | - | Tractor-Trailer Trucks (%) | 10 |

## Volume Summary

| Hour | Major Volume | Minor Volume | Total Volume | Peds/h | Gaps/h | 1A ( 70% ) | 1A ( 56% ) | 1B ( 70% ) | 1B ( 56% ) | 2 ( 70% ) | 3A ( 70% ) | 3B ( 56% ) | 4A ( 70% ) | 4B ( 56% ) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07 - 08 | 751 | 15 | 766 | 0 | 0 | No | No | No | No | No | No | No | No | No |
| 08 - 09 | 823 | 20 | 843 | 0 | 0 | No | No | No | No | No | No | No | No | No |
| 09 - 10 | 898 | 24 | 922 | 0 | 0 | No | No | No | No | No | No | No | No | No |
| 10 - 11 | 974 | 29 | 1003 | 0 | 0 | No | No | No | No | No | No | No | No | No |
| 11 - 12 | 1047 | 33 | 1080 | 0 | 0 | No | No | No | No | No | No | No | No | No |
| 12 - 13 | 1063 | 38 | 1101 | 0 | 0 | No | No | No | No | No | No | No | No | No |
| 13 - 14 | 1078 | 43 | 1121 | 0 | 0 | No | No | No | Yes | No | No | No | No | No |
| 14 - 15 | 1094 | 48 | 1142 | 0 | 0 | No | No | No | Yes | No | No | No | No | No |
| 15 - 16 | 1109 | 53 | 1162 | 0 | 0 | No | No | Yes | Yes | No | No | No | No | No |
| 16 - 17 | 1079 | 50 | 1129 | 0 | 0 | No | No | No | Yes | No | No | No | No | No |
| 17 - 18 | 0 | 0 | 0 | 0 | 0 | No | No | No | No | No | No | No | No | No |
| 18 - 19 | 0 | 0 | 0 | 0 | 0 | No | No | No | No | No | No | No | No | No |
| Total | 9916 | 353 | 10269 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 |

## Warrants

| | |
|---|---|
| ***Warrant 1: Eight-Hour Vehicular Volume*** | |
| A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or-- | |
| B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or-- | |
| 56% Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach) | |
| ***Warrant 2: Four-Hour Vehicular Volume*** | |
| Four-Hour Vehicular Volume (Both major approaches --and-- higher minor approach) | |
| ***Warrant 3: Peak Hour*** | |
| A. Peak-Hour Conditions (Minor delay -- and-- minor volume --and-- total volume) --or-- | |
| B. Peak-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach) | |
| ***Warrant 4: Pedestrian Volume*** | |
| A. Four Hour Volumes --or-- | |
| B. One-Hour Volumes | |
| ***Warrant 5: School Crossing*** | |
| Gaps Same Period --and-- | |
| Student Volumes | |
| Nearest Traffic Control Signal (optional) | ✓ |
| ***Warrant 6: Coordinated Signal System*** | |
| Degree of Platooning (Predominant direction or both directions) | |
| ***Warrant 7: Crash Experience*** | |
| A. Adequate trials of alternatives, observance and enforcement failed --and-- | |
| B. Reported crashes susceptible to correction by signal (12-month period) --and-- | |
| C. 56% Volumes for Warrants 1A, 1B, --or-- 4 are satisfied | |
| ***Warrant 8: Roadway Network*** | |
| A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2, or 3) --or-- | |
| B. Weekend Volume (Five hours total) | |
| ***Warrant 9: Grade Crossing*** | |
| A. Grade Crossing within 140 ft --and-- | |
| B. Peak-Hour Vehicular Volumes | |

# Attachment I: Draft Report Review Comments

Follows this page.

**Report REVIEW**

**PROJECT NAME: Lighthouse Development Traffic Impact Analysis Report**
**PROJECT NUMBER: N/A**

| | | |
|---|---|---|
| | **DATE: November 14, 2023**<br>**REVIEWER: DOT&PF, COH**<br>**SECTION: NA**<br>**PHONE: NA** | **Confirmation of action taken on comment by:**<br>**Randy Kinney, Kinney Engineering, LLC** |

**In Sheet No. column, use a 1 for General comments, X for estimate comments, Y - pg # for Specifications, and Z - pg # for DSR, and the alpha numeric pg # of Plan sheets (use an A if no Alpha is used on the plan sheets)**
**In the Section column below please use your assigned Functional group identifier: Right-of-Way = RW; Traffic Design = TD; Traffic Safety = TS; Highway Design = HD; Materials = M; Bridge Design = B; Survey = SC; Internal Review = QC; Construction = C; Utilities = U; Specifications = S; Review Engineer = RE; Maintenance = M&O; Environmental = ENV; Hydrology = HY.**

| Item No. | Sheet No. / Page No. DRAFT REPORT PAGE Numbers | Section/ Reviewer | Comment | Response | Meeting Note |
|---|---|---|---|---|---|
| 1) | Page 13, Section 4.1 Point Number 1, | TS-LeCroy | If a restaurant or bar were being considered, consider mentioning that here. Trip generation numbers for LU 310 cover this, so no additional trips anticipated. | We added other hotel attributes that were in the original August development plan and left out of the current plan. We also added this sentence to 7.1.3 summary paragraph "The proposed hotel will include lodging, restaurant, bar, and convention facilities described in LU 310." | |
| 2) | Page 15, Section 4.4, Paragraph 2 | TS-LeCroy | Concur with assumption. Consider internal pedestrian connectivity between hotel and condos. | We add the need for pedestrian connectivity on site because of the public attractions in the hotel including bars and restaurant. Also adding to recommendations. | |
| 3) | Page 18, Section 4.5.2, Paragraph 3 | TS-LeCroy | Later in the document, it describes that the south driveway will be realigned with Kachemak Bay Dr. | This section only describes the site plan as it was presented for TIA analysis. The realignment is in recommendations, but noted here as well with this revision. | |
| 4) | Page 24, Section 5.3.2, Paragraph 2 | TS-LeCroy | Expected to increase the number of non-motorized crossings of Homer Spit Rd to access the multiuse pathway along the east side of the spit, increasing conflict occurrences between VRU's and motorists. | Adding the observation of additional conflicts between Vulnerable Road Users and vehicles. | |
| 5) | Page 24, Section 5.3.4, | TS-LeCroy | Preservation projects do not provide capacity improvements. Some safety and pedestrian improvements are possible, but not guaranteed under the preservation project scope | We removed the term "capacity" from this sentence describing the project. | |

| | | |
|---|---|---|
| | **DATE: November 14, 2023**<br>**REVIEWER: DOT&PF, COH**<br>**SECTION: NA**<br>**PHONE: NA** | **Confirmation of action taken on comment by:**<br>**Randy Kinney, Kinney Engineering, LLC** |

| | | | | | |
|---|---|---|---|---|---|
| 6) | Page 31, Section 6.5.3, Paragraph 1 | TS-LeCroy | Good recommendation. | The subject of the comment, realign the south access driveway with Kachemak, will be restated in the recommendations as follows. "*The site plan shows the South Access Driveway is offset to the north of the Kachemak Drive approach. Revise the site plan to realign the South Access Driveway directly across from the Kachemak Drive approach to function as a four-leg intersection. Install stop sign control for the South Access Driveway.*" | |
| 7) | Page 38, Section 7.1.4, Paragraph 2 | TS-LeCroy | Agree. | No Action. | |
| 8) | Page 44, Section 8.1.2, Paragraph 1 | TS-LeCroy | 13 AAC 02.155(a) requires drivers to yield to pedestrians in a crosswalk. Pedestrian crossing conspicuity should help improvement driver yield compliance. | Adding this to the end of this paragraph. | |
| 9) | Page 57, Section 8.3.4 , Paragraph 2 | TS-LeCroy | Likely out of that project's scope. Could contact that project's manager to determine further. Addition of a turn lanes would impact the ped crossing distance for the existing crosswalk and require reconstruction of the crossing - unlikely. | Deleted reference to the Pavement Preservation Project. | |
| 10) | Page 66, Section 11.1.3, Paragraph 1 | TS-LeCroy | This would likely depend on the non-motorized trip origins and destinations on FAA Rd. Could this statement be expanded to support this change in mode assumption.<br><br>6.3 Table 2 shows low existing crossing demand here, but not peak season. | We added discussion on how this benefits the origins and destinations to north of Ocean Drive and how the new public-oriented facilities bar and restaurant at the hotel could draw folks from the neighborhoods. Also, the crossing point is the logical one since the intersection is configured as a tee, and this provide a wider pavement center area that can be used for refuges. | |

| | | |
|---|---|---|
| | **DATE: November 14, 2023**<br>**REVIEWER: DOT&PF, COH**<br>**SECTION: NA**<br>**PHONE: NA** | **Confirmation of action taken on comment by:**<br>**Randy Kinney, Kinney Engineering, LLC** |

| | | | | | |
|---|---|---|---|---|---|
| 11) | Page 75, Section 11.3, Point 5 | TS-LeCroy | I'm supportive of a RRFB installation at this location due to the expected increase in demand and its location within a speed transition zone.<br><br>Draft interim addenda has been provided that makes revisions to (incomplete, but intended as ATM) | We will add this to the recommendations. We are not including references or subject matter in the draft interim addenda as indicated in the transmittal email. | |
| 12) | Page 75, Section 11.3, Point 6 | TS-LeCroy | More than one lane required for ingress and egress. 23 ft (7m) width requirement for commercial driveways in the 1998 1190 Driveway Standards. | This was intended; we provide revised language to make this clear. | |
| 13) | Page 7, Section 1.0 Fourth Paragraph | COH-Foster | "Pedestrian" to "Pedestrians" | Revised | |
| 14) | Page 7, Section 1.0 2nd Bullet | COH-Foster | "to be compatible" to "for compatibility" | Revised | |
| 15) | Page 7, Section 1.0 2nd Bullet | COH-Foster | Substitute: "Construct a connection between the Lighthouse Village Development to Bay Avenue using the B Street right-of-way to allow walking and biking trips to use the lower volume, low speed Bay Avenue, for non-motorist trip segments." | Revised | |
| 16) | Page 10, Section 2.2 1st Paragraph | COH-Foster | Add "is" after "Report in first line of paragraph | Revised | |
| 17) | Page 13, Section 4.1 2nd paragraph, 2nd sentence | COH-Foster | Substitute: "The vacation of B Street right-of-way is not addressed in this TIA, and is assumed to go forward as part of the development." | Revised | |
| 18) | Page 14, Section 4.2 1st paragraph, 2nd sentence | COH-Foster | Substitute: "Parcel ID 17921015 is currently zoned Rural Residential and proposed by the applicant to be rezoned to General Commercial 1, aligning with the other two project parcels." | Revised | |
| 19) | Page 19, Section 5.1 Last Paragraph | COH-Foster | Add: "This TIA is also based on the premise that Parcel ID 17921015 is rezoned to General Commercial 1 from Rural Residential, aligning with the other two project parcels." | Revised | |

| | | |
|---|---|---|
| | **DATE: November 14, 2023**<br>**REVIEWER: DOT&PF, COH**<br>**SECTION: NA**<br>**PHONE: NA** | **Confirmation of action taken on comment by:**<br>**Randy Kinney, Kinney Engineering, LLC** |

| | | | | | |
|---|---|---|---|---|---|
| 20) | Page 41, Section 7.1.7 End of section | COH-Foster | Deleted last sentence. Add: "The Homer City Planner determined a TIA is required per Homer City Code 21.71.020 Application for Conditional Use Permit:<br>8. Any additional information the City Planner may require to determine whether the application satisfies the criteria for issuance of a permit." | Revised (final language altered) | |
| 21) | Page 67, Section 11.1.3 Second Bullet | COH-Foster | Substitute: "Construct a connection between the Lighthouse Village Development to Bay Avenue using the B Street right-of-way to allow walking and biking trips to use the lower volume, low speed Bay Avenue, for non-motorist trip segments." | Revised | |
| 22) | Page 75, Section 11.3 Second Bullet | COH-Foster | Substitute: "Construct a connection between the Lighthouse Village Development to Bay Avenue using the B Street right-of-way to allow walking and biking trips to use the lower volume, low speed Bay Avenue, for non-motorist trip segments." | Revised | |
| 23) | | | | | |

Kinney Engineering Revisions

A) In addition to the comments above, Kinney Engineering completed crash analysis and revised:

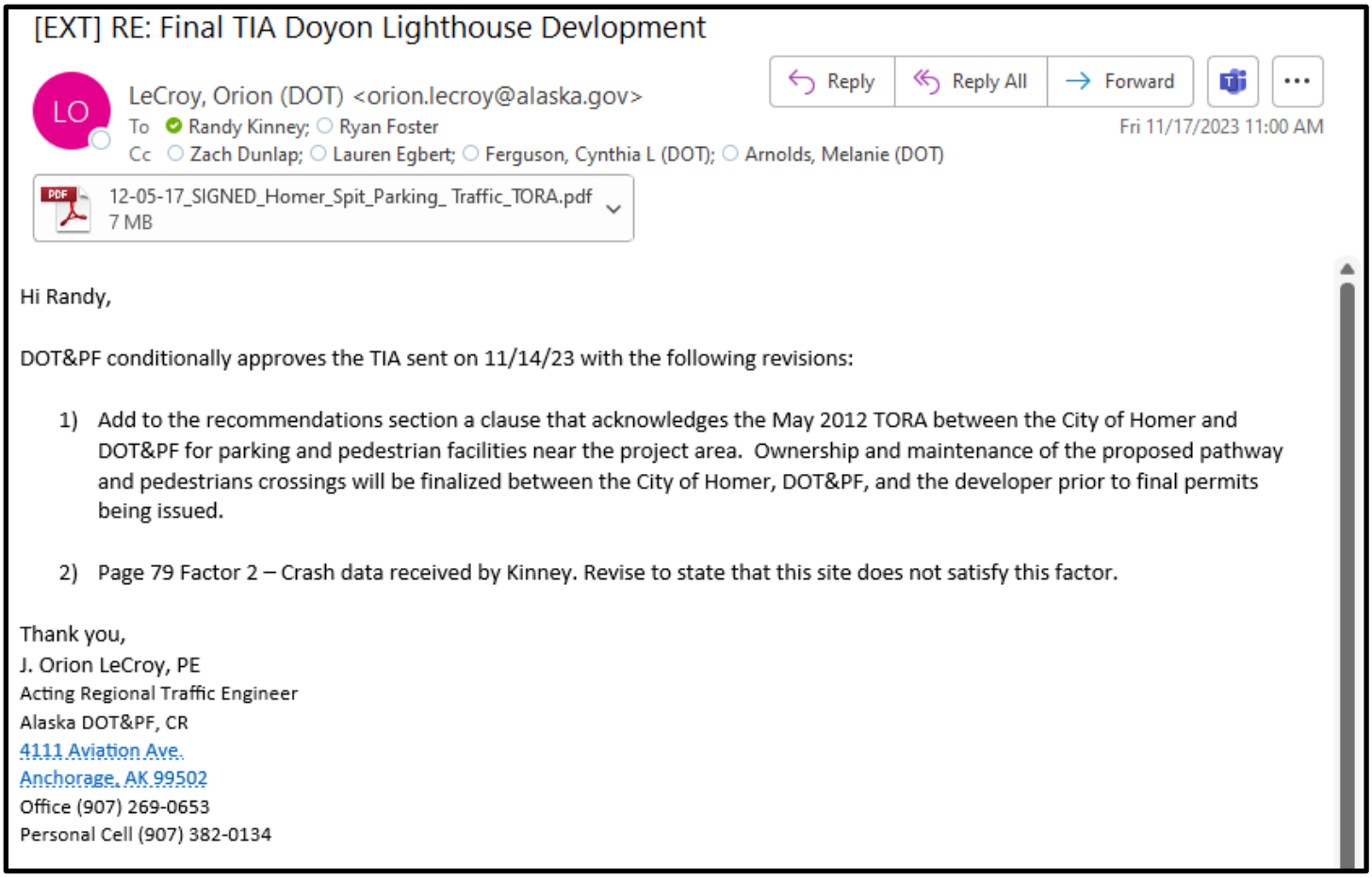
- Section 6.6
- Section 8.2.4
- Section 8.3.4

B) We had an internal review (by Scott Thomas) resulting in minor revisions that do not change the outcome or recommendations.

C) Scott did raise the question of driveway spacing. As a result, Kinney Engineering added a new section 4.6 Driveway Spacing (required new headings in Section 4). We find that the separation as proposed in the site plan is insufficient to meet PCM Table 1190-3 requirements. As a result shifting the north driveway to the north is required as well as realigning the south access with Kachemak Drive.

## Attachment J: Department of Transportation and Public Facilities Conditional Acceptance

November 17, 2023 email LeCroy to Kinney (email thread below acceptance message is not shown).



[EXT] RE: Final TIA Doyon Lighthouse Devlopment

LO

LeCroy, Orion (DOT) <orion.lecroy@alaska.gov>

To Randy Kinney; Ryan Foster

Cc Zach Dunlap; Lauren Egbert; Ferguson, Cynthia L (DOT); Arnolds, Melanie (DOT)

Reply | Reply All | Forward

Fri 11/17/2023 11:00 AM

12-05-17_SIGNED_Homer_Spit_Parking_ Traffic_TORA.pdf
7 MB

Hi Randy,

DOT&PF conditionally approves the TIA sent on 11/14/23 with the following revisions:

1) Add to the recommendations section a clause that acknowledges the May 2012 TORA between the City of Homer and DOT&PF for parking and pedestrian facilities near the project area. Ownership and maintenance of the proposed pathway and pedestrians crossings will be finalized between the City of Homer, DOT&PF, and the developer prior to final permits being issued.

2) Page 79 Factor 2 – Crash data received by Kinney. Revise to state that this site does not satisfy this factor.

Thank you,
J. Orion LeCroy, PE
Acting Regional Traffic Engineer
Alaska DOT&PF, CR
4111 Aviation Ave.
Anchorage, AK 99502
Office (907) 269-0653
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*Note: These requested revisions are included in this final report (November 18, 2023).*

# Lighthouse Village Development

## Preliminary Stormwater Report

Project #867-001
November 2023

Prepared By
Womer and Associates, Inc.
165 S. Howard St.
Spokane, WA 99201

# Table of Contents

# Drainage Summary

### 1.1 Purpose

This drainage report and all associated documents are intended to present the preliminary drainage analysis for the proposed development of the Lighthouse Village Development project located in Homer, Alaska. This report and analysis have been prepared in conformance with Homer's Stormwater & Meltwater Management and Mitigation stormwater criteria.

### 1.2 Existing Conditions

The proposed project intent is to construct a hotel and condominiums in Homer Alaska. This proposed development is referred to herein as Lighthouse Village Development or "project". The subject property is located west of the existing Homer Airport and on the west side of Homer Spit Road. The approximate project location is shown on the Vicinity Map, (See Appendix A-1). This property currently is occupied by a boat mechanic shop with boats parking on the site with gravel parking. There are also several small houses on the southern portion of the property with a boardwalk that provides a viewpoint of Kachemak Bay. The existing buildings have surrounding sections of asphalt and Portland cement pavement. The site has three generally flat levels and significant grade changes between each level. The property is densely covered with trees on the west portion where no development is currently located.

There is offsite stormwater runoff that is coming from B Street and Bay Avenue. This runoff has created a natural drainage ditch in the B Street Right-of Way. The ROW will be vacated, and the stormwater will be re-routed around the site and to the wetlands.

### 1.3 Existing Soil Conditions:

Shannon & Wilson, Inc. were contracted to do the geotechnical analysis of the site, (see Appendix B-1). 19 borings were done, depth ranging from 15 feet to 50 feet on the site and below is a summary of the soil analysis.

<u>Borings B-01 - B-05 and B-19</u>

- Encountered 12 to 17 feet of fill material overlaying estuarine deposits between 18-29 feet below grade.
- Fill material generally consisted of sand with silt and silty sand with occasional roots and organics.
- Estuarine deposits generally consisted of peat, various fine-grained soils, and sand.
- Groundwater encountered approximately 20 and 30 feet below grade.

Borings B-06 – B-14, and B-18

- Generally, these borings encountered silty sand with varying gravel content to poorly graded sand with gravel.
- Boring B-10 encountered a layer of silt 45 feet below grade.
- Groundwater encountered approximately 20 and 30 feet below grade.

Borings B-15 – B-17

- Encountered 2.5 feet of organic soil overlaying silty sand with gravel.
- B-15 & 16 encountered a layer of sandy silt approximately 24 feet below grade.
- No groundwater was encountered.

The hydrologic soil group in the project area is classified as group "D" soils. The ground water depth ranged from approximately 20 - 30 feet below the ground surface. Water levels may fluctuate by several feet seasonally and may vary during periods of high precipitation and rapid snow melt.

### 1.4 Developed Conditions:

The proposed project is to include a three-story hotel, employee housing and five triplex condominiums, parking areas, water and sewer utilities and landscaping. The footprint of the hotel will occupy a plan area of approximately 28,422 square feet, the employee housing footprint area is 13,050 square feet, and each condominium footprint is 6,464 square feet.

# Hydrology

## 2.0 Methodology

The Rational Formula method as described in Homer's stormwater manual was used pre-development and post development design rates. Per Homer's Stormwater Manual, it is required to base discharge rates on the 10-year design storm. HydroCAD Stormwater Software was used to size the detention pipe storage and orifice size for flow control release rate.

## 2.1 Pre-Development & Post-Development Conditions

**a. Pre-Development Condition:**
The existing project site is approximately 6.95 acres, of which approximately 4.28 acres is considered developable, and the rest is currently wetlands. The site has multiple buildings, gravel parking and drive access, heavily treed area, and a boardwalk. There is also off-site stormwater runoff that has a natural drainage path from B Street to the wetlands. Below is a summary of the pre-development conditions:

| Pre-Development Onsite Conditions (Hotel Site) | | |
|---|---|---|
| | Impervious Area (sq. ft.) | Pervious Area (sq. ft.) |
| Roof | 4,967 | - |
| Gravel | 59,156 | - |
| Wooded / Forest Land (2-6%) | - | 32,325 |
| Wooded / Forest Land (6+%) | - | 23,958 |
| Total | 64,123 | 56,283 |

| Pre-Development Onsite Conditions (Condo Site) | | |
|---|---|---|
| | Impervious Area (sq. ft.) | Pervious Area (sq. ft.) |
| Roof | 6,359 | - |
| Gravel | 24,479 | - |
| Dirt / Boardwalk | - | 9,583 |
| Meadow, Pasture, or Lawn (2-6%) | - | 15,156 |
| Wooded / Forest Land (6+%) | - | 10,454 |
| Total | 30,838 | 34,893 |

| Pre-Development Off Site Conditions (B Street & Bay Avenue) | | |
|---|---|---|
| | Impervious Area (sq. ft.) | Pervious Area (sq. ft.) |
| Gravel | 1,045 | - |
| Asphalt | 22,651 | - |
| Meadow, Pasture, or Lawn (2-6%) | - | 13,939 |
| Total | 23,696 | 13,939 |

**b. Post-Development Condition:**

The proposed development post-development conditions are below:

| Post-Development Conditions (Hotel Site Basin A) | | |
|---|---|---|
| | Impervious Area (sq. ft.) | Pervious Area (sq. ft.) |
| Asphalt | 44,500 | - |
| Concrete Sidewalk | 5,396 | - |
| Meadow, Pasture, or Lawn (2-6%) | - | 15,573 |
| Total | 49,896 | 15,573 |

| Post-Development Conditions (Hotel Site Basin B) | | |
|---|---|---|
| | Impervious Area (sq. ft.) | Pervious Area (sq. ft.) |
| Meadow, Pasture or Lawn (2-6%) | - | 18,046 |
| Roof | 33,457 | - |
| Wooded / Forest Land 6% | - | 3,437 |
| Total | 33,457 | 21,483 |

| Post-Development Conditions (Condo Site Basin A) | | |
|---|---|---|
| | Impervious Area (sq. ft.) | Pervious Area (sq. ft.) |
| Asphalt | 15,462 | - |
| Concrete | 7,721 | - |
| Roof | 16,161.25 | - |
| Meadow, Pasture or Lawn (2-6%) | - | 11,530.75 |
| Total | 39,344.25 | 11,530.75 |

# Design Summary

## 3.0 Rational Method / Calculation Summary

Below is a table summarizing the rational method calculations for pre-development and post-development conditions. The rainfall intensity used was the 10-year 3-hour storm (0.50 in/hr) that was given in the Homer Stormwater Manual.

Below is a summary of the pre-development and mitigated post development rates for the hotel and condominium site.

| Hotel Site Pre-Development & Mitigated Post-Development Rates | | |
|---|---|---|
| | Pre-Development Rate (cfs) | Post-Development Rate (cfs) |
| Existing Site Basin | 0.65 | - |
| Hotel Site Basin A | - | 0.19 |
| Hotel Site Basin B | - | 0.44 |
| Total | 0.65 | 0.63 |

| Condo Site Pre-Development & Post-Development Rates | | |
|---|---|---|
| | Pre-Development Rate (cfs) | Post-Development Rate (cfs) |
| Existing Site Basin | 0.44 | - |
| Condominium Site Basin | | 0.53 |
| Total | 0.44 | 0.53 |

<u>Hotel Site Analysis</u>

Stormwater for the hotel site will have two separate basins. In Basin A, the stormwater runoff will be collected via catch basins and piped to a treatment vault which then flows to an underground storage pipe. This pipe will have an orifice on the outlet end to provide flow control. The stormwater is gathered this way due to the site maximizing the parking lot, leaving little green space for swales. Basin B consists of the employee housing and hotel roof, and a collection pond

for the runoff from B Street and Bay Avenue. This runoff will be piped around the hotel and discharged into the creek. The pond will provide treatment before discharging to the wetlands, and the roofs will not require treatment since the roof won't be made from pollutant generating material. The mitigated post development rate for the hotel site is less than the pre-development rate which is required by Homer City Code.

Condominium Site Analysis

Although the pre-development rate is higher than the post-development rate, all the stormwater runoff will be drained to swales and will not be released from the site. This site has five condominiums and associated concrete driveways, and concrete sidewalks that will flow to the swales.

### 3.1 Temporary Erosion and Sediment Control

The site will have protective measures to prevent erosion and sediments from leaving the pre and post construction site such as:

- Silt Fence along the down grade construction limits
- Storm drain inlet protection fabrics in catch basins, drywells, and any other drainage structure.
- Construction entrance that consists of large rock to help remove dirt/mud from vehicles before leaving the construction site.
- All catch basins will have sumps to help gather/prevent sediments from traveling downstream.
- Treatment vault that gathers runoff from Hotel Site Basin A, treats the stormwater and gathers sediment.
- All outlets will have rip rap rock to prevent erosion.
- All disturbed areas will be seeded.

## REFERENCES

*Stormwater and Meltwater Management and Mitigation, A Handbook for Homer Alaska,* City of Homer, Alaska, 2007, Allegra Bukojemsky, RLA & David Scheer, March

*Homer City Code,* Title 21 ZONING AND PLANNING (codepublishing.com)

# Appendix A


Homer
Homer Airport
Site


Site

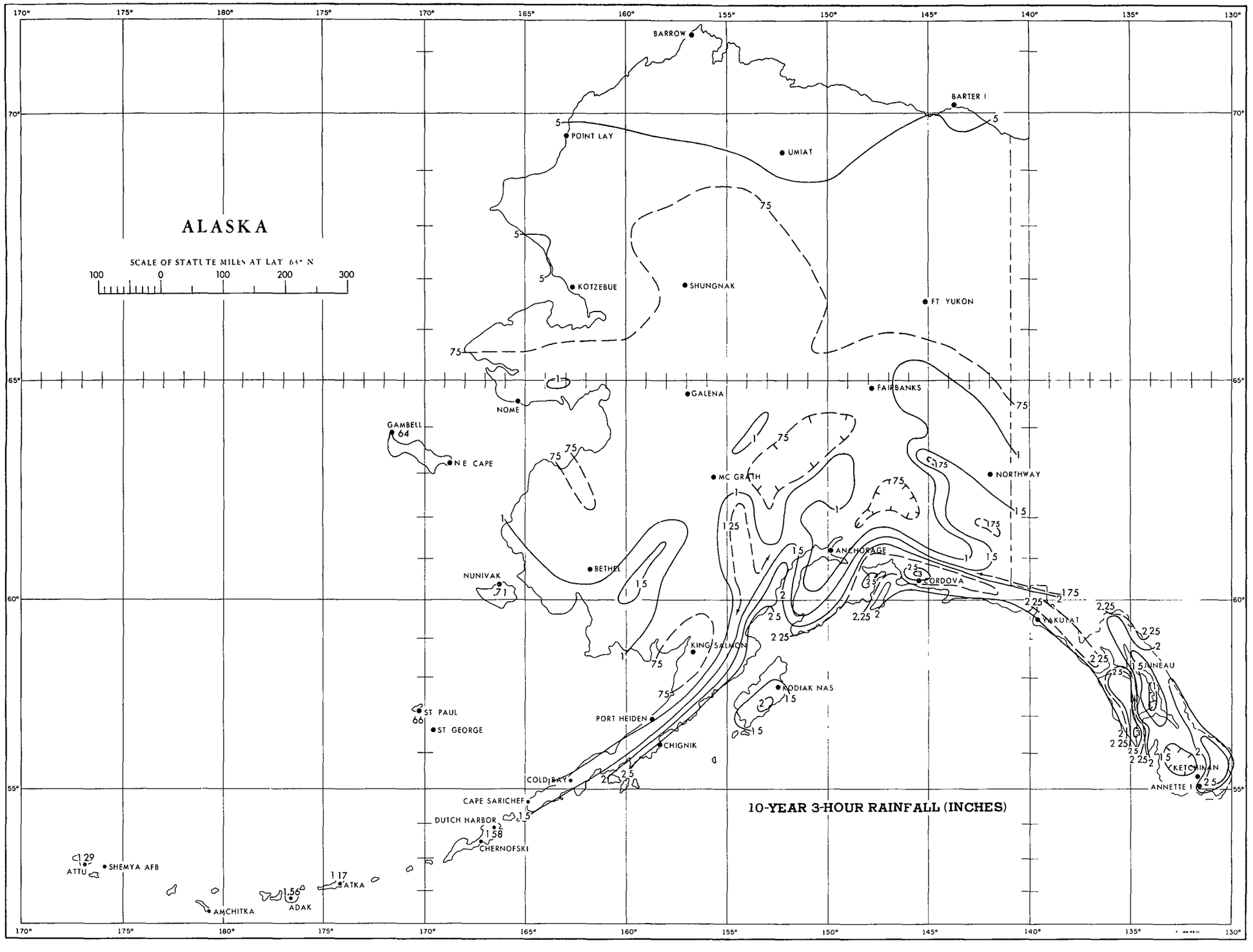


FIGURE 3-35.—10-yr. 3-hr. rainfall (in.).

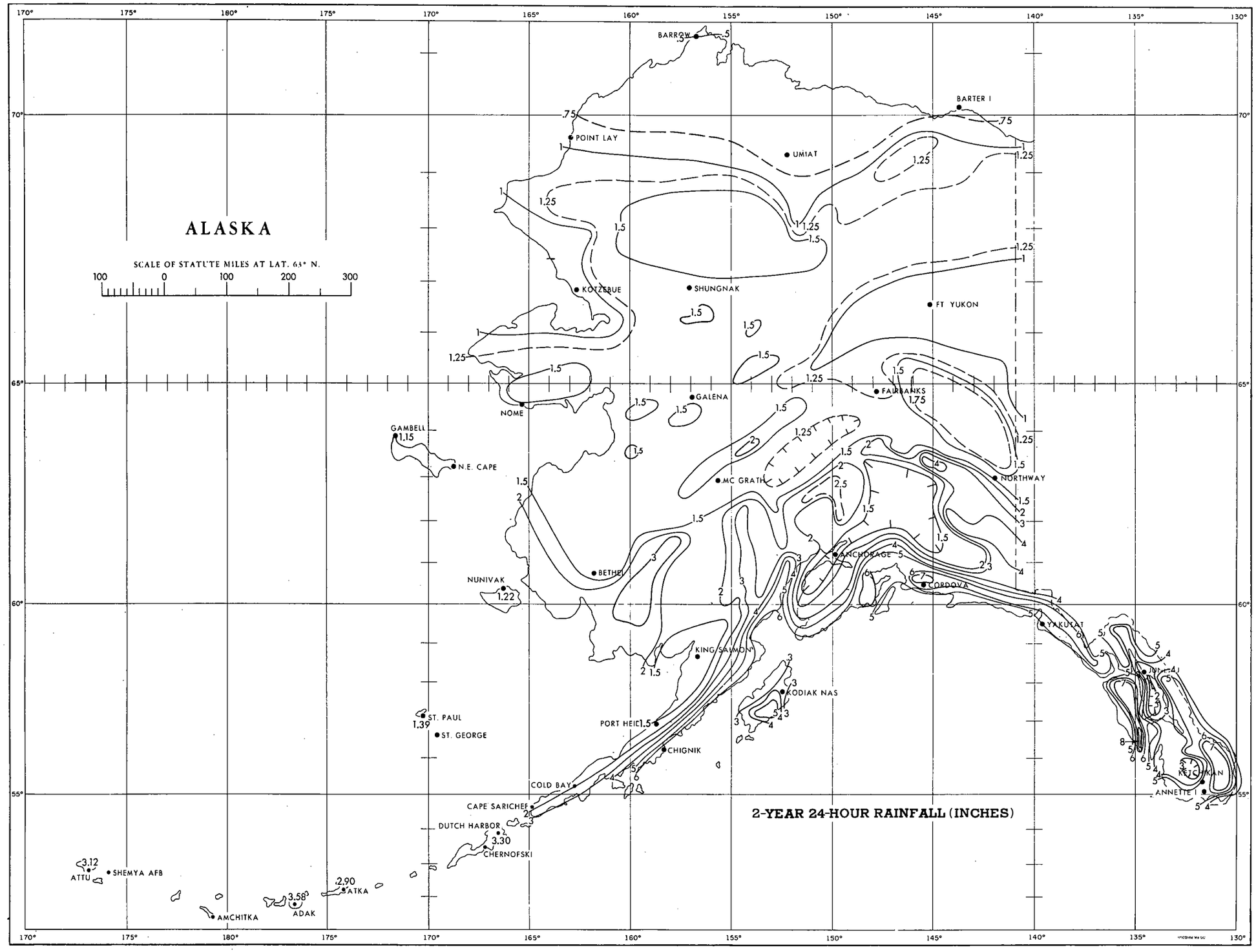


FIGURE 3–54.—2-yr. 24-hr. rainfall (in.).

EXISTING UTILITIES AND LOCATIONS SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR MUST RELY ON FIELD LOCATION INFORMATION PROVIDED BY THE RESPECTIVE UTILITIES.



811 Know what's below. Call before you dig.

north

30 0 30

SCALE: 1" = 30'

BAYVIEW ONE SIX FIVE (AMENDED)

LOT 165-B-1 LOT 165-B-2

BAY AVE. 50' ROW

N70°46'49"E 277.90

EXISTING CHAINLINK FENCE

RETAINING WALL

SEWER LIFT STATION

CONNX

UTILITY ENCLOSURE BLDG. NO EAVES QUANSET STYLE

12X20

BLDG. EAVES

BLDG. EAVES

PATIO

S29°50'54"E 92.85

50.00

S60°08'43"W

15' PUBLIC UTILITY EASEMENT PER HM 94-51

LOG FOUNDATION

FLAG POLE

N19°43'11"W 300.75

EXISTING CHAINLINK FENCE

EXISTING CHAINLINK FENCE

LOT 164-A

HOTEL SITE BASIN AREA

20' BUILDING SETBACK (TYP.)

AK DOT & PF ROW LEASE 21-006-1

S29°50'50"E 200.00

S60°08'36"W 20.00

HOMER SPIT ROAD

CENTERLINE

24" CMP

100' (R2)

MAILBOX KIOSK ON CONC. PAD

SEWER CLEANOUT

9.5X17' SHED ON SKIDS

BUSINESS SIGN W/BURIED ELEC. CONDUIT

KIOSK WITH CONC. PAD

FRAMED BLDG ON PILES

S70°46'46"W 263.11

BOARDWALK

SEWER LIFT STATION

KACHEMAK DR.

S29°50'50"E 155.76

LOT 164-B

CONDO SITE BASIN AREA

LIMITS OF GRAVE

WOOD RAIL FENCE

BIKEPATH

LOT 162

LOT 163

BAYVIEW SUBDIVISION

B STREET, 50' ROW

CORP. OF ENGINEERS PERMIT LINE

RETAINING WALL

EXISTING RETAING WALL

N19°43'11"W 453.61

RETAINING WALL AND LIMITS OF FILL ALSO UPPER LIMIT OF TIDAL FLOODING AND INUNDATION.

TIDAL INFLUENCED WETLANDS

STATE OF ALASKA (DNR)

PRE-DEVELOPMENT BASIN MAP

SCALE: 1" = 30'

| REVISIONS | | | |
|---|---|---|---|
| No. | Init. | Date | Description |
| | | | |

WOMER & ASSOCIATES
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165 S. Howard St., Spokane, Washington 99201
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LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK
PRE-DEVELOPMENT BASIN MAP

| | |
|---|---|
| Job No. | 867-001 |
| Date | 11/15/23 |
| Designed | CCE |
| Drawn | CCE |
| Checked | MPM |

EXH-1



WOMER CIVIL 2016.CTB
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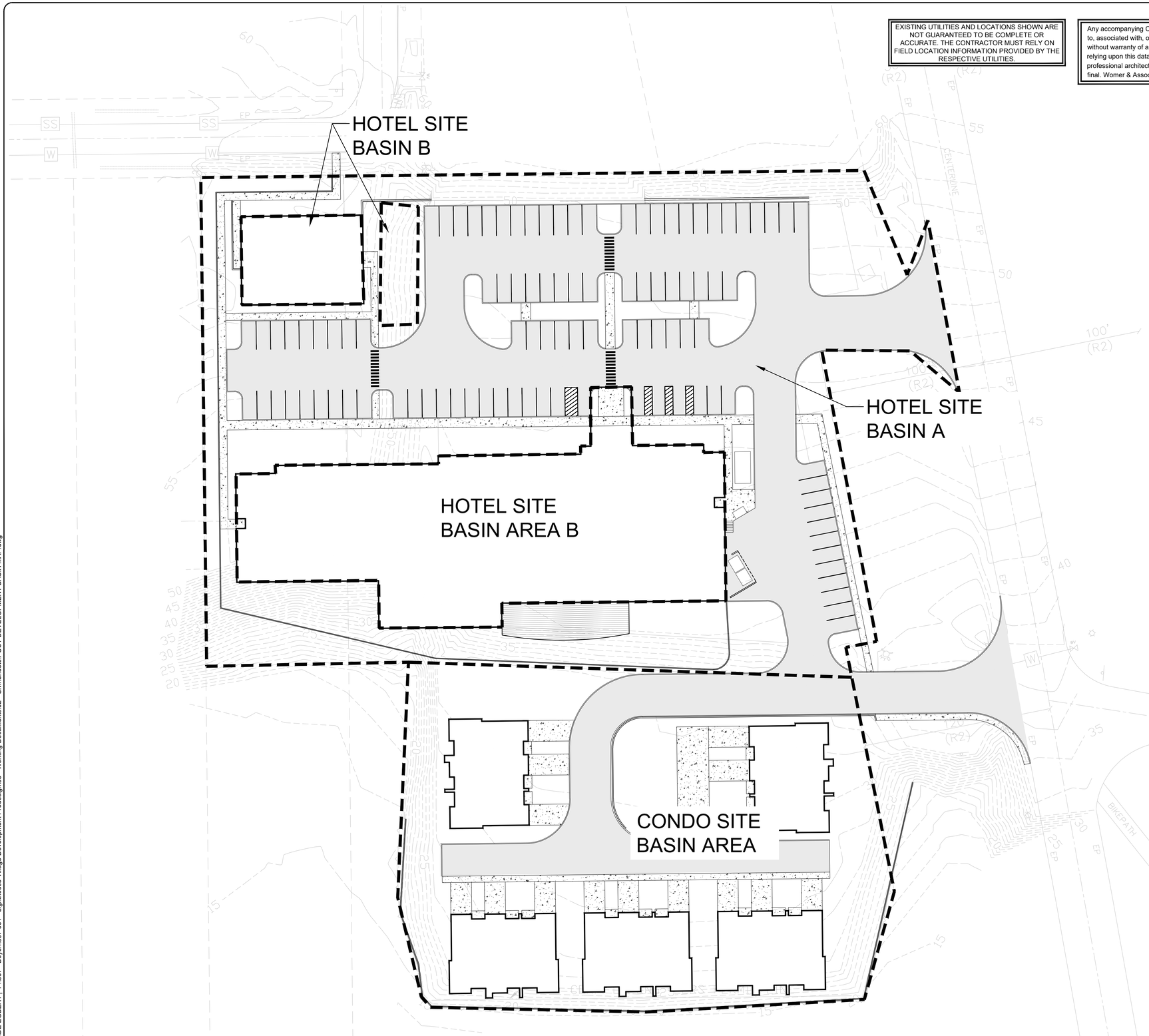
11/15/23 08:01 CADE EGBERT | P:\867 - Doyon\867-001 - Lighthouse Village Development Predesign\05 - Working Documents\02 - Civil\Sheets\PREDEVELOPMENT BASIN MAP.dwg

EXISTING UTILITIES AND LOCATIONS SHOWN ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE. THE CONTRACTOR MUST RELY ON FIELD LOCATION INFORMATION PROVIDED BY THE RESPECTIVE UTILITIES.



811 Know what's below. Call before you dig.




**POST DEVELOPMENT BASIN MAP**
SCALE: 1" = 30'

| REVISIONS | | | |
|---|---|---|---|
| No. | Init. | Date | Description |
| | | | |

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LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK
POST-DEVELOPMENT BASIN MAP

Job No. 867-001
Date 11/15/23

Designed CCE
Drawn CCE
Checked MPM

EXH-2

# Appendix B

SUBMITTED TO:
Doyon, Limited
11500 Sukdu Way, Suite 250
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AECC 125

GEOTECHNICAL DATA REPORT

# Lighthouse Village Development

HOMER, ALASKA

SHANNON & WILSON



October 2023

Shannon & Wilson No: 111320-200

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Submitted To: Doyon, Limited
11500 Sukdu Way, Suite 250
Anchorage, Alaska 99515
Attn: Zach Dunlap

Subject: GEOTECHNICAL DATA REPORT, LIGHTHOUSE VILLAGE DEVELOPMENT, HOMER, ALASKA

Shannon & Wilson prepared this report and participated in this project as a consultant to Doyon, Limited (Doyon). Our scope of services was specified in our May 19, 2023 proposal and approved by Patrick Duke of Doyon on May 30, 2023. This report presents the results of subsurface explorations and laboratory testing conducted by Shannon & Wilson, Inc. for the proposed new hotel development in Homer, Alaska. This geotechnical data report was prepared by the undersigned.

We appreciate the opportunity to be of service to you on this project and look forward to providing continued support as the project progresses. If you have questions concerning this report, or we may be of further service, please contact us.

Sincerely,

SHANNON & WILSON, INC.

Ryan Collins, CPG
Senior Geologist

RDC/KJG:KLB/rdc


Kyle Brennan, PE
Vice President

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## Tables



## Figures



## Appendices

# 1 INTRODUCTION

This report presents the results of subsurface explorations and laboratory testing conducted by Shannon & Wilson, Inc. at the proposed new hotel development in Homer, Alaska. To accomplish this, 19 borings were advanced at the site to evaluate and characterize the subsurface soil conditions. Selected soil samples recovered from the borings were tested in our Anchorage laboratory and SGS North America, Inc. (SGS). Presented in this report are descriptions of the site and project, subsurface explorations and laboratory test procedures, an interpretation of subsurface conditions, and preliminary geotechnical engineering considerations. This report is intended for use by Doyon, Limited, and their representatives.

# 2 SITE AND PROJECT DESCRIPTION

The project is located on an approximately 4.5-acre property located near the intersection of Homer Spit Road and Kachemak Drive in Homer, Alaska. According to the Kenai Penisula Borough online map viewer, the property comprises three adjoining parcels consisting of Lots 163, 164-A, and 164-B, of the Bayview Subdivision. The undeveloped B Street right-of way (ROW) separates Lots 163 and 164-A/B. Lot 163 comprises the western approximately 0.9 acres and was undeveloped and vegetated with moderately dense stands of evergreens and alders at the time of our explorations. Lots 164-A/B were graded flat and developed as an unpaved pad. Lot 164-A, which comprises the central and northern area of the combined property, is primarily used for boat and vehicle storage and contained an automotive repair shop and an art studio at the time of our explorations. Lot 164-B, which is south of Lot 164-A, contained a lighthouse, an old restaurant, and several cabins.

The topography of the project site is terraced into three distinct levels which are separated by 6- to 8-foot-tall slopes along each lot boundary. Each terrace level is relatively flat or gently sloped down toward the south. Based on a limited review of aerial imagery available online, the terraces appear to have been constructed sometime around 1980 by excavating soil from Lot 164-A and placing the excavated material as fill in a former intertidal area to create the current fill pad in Lot 164-B. Roughly 30 feet of relief exists between the northern portion of Lot 163 and the top of the fill pad in Lot 164-B. Prior to development, Lots 163 and 164-A appeared to be situated at the top of the roughly 30-foot-tall bluff slopes along the northern edge of Kachemak Bay and the Homer Spit, and Lot 164-B was primarily an

intertidal wetland area situated at the base of the bluffs, between the Homer Spit and Kachemak Bay.

Based on conceptual drawings, the proposed development includes demolishing existing structures, with the possible exception of the lighthouse building, and building a new hotel with a footprint of approximately 35,000 square feet. The primary concept being considered shows the hotel building occupying Lot 164-B and a portion of Lot 164-A. An alternate building location shows the hotel building situated fully on Lots 163 and 164-A. We understand the hotel building will likely range between three and five stories in height depending on allowances from the nearby Homer Airport and other considerations. The development may also include a separate employee housing building on Lot 163. Additional improvements to the site will likely include parking and access roads, utilities, improvements to the Alaska Department of Transportation & Public Facilities (DOT&PF) and City of Homer rights-of-way on the east and west sides of the property, and repair or replacement of existing retaining wall structures. A vicinity map showing the general project area is included as Figure 1. Figure 2 includes a site plan showing our boring locations, potential locations for the hotel building and proposed employee housing, and other prominent site features.

# 3 SUBSURFACE EXPLORATIONS

Subsurface explorations for the project consisted of advancing 19 borings, designated Borings B-1 through B-19, at the site between August 2 and August 12, 2023. The boring locations were selected to provide relatively even coverage of the site and the proposed hotel building. Two of the planned boring locations were also selected to be within areas with potential environmental concerns related to a heating oil storage tank and potential ground staining identified during a May 10, 2023 site visit. The planned boring near the existing heating oil storage tank adjacent to a cabin on the Lot 164-B could not be accessed due to existing utilities and space constraints for the drill rig and the boring (Boring B-05) was moved to a more accessible area to the south and treated as a geotechnical boring. The other location, related to potential surface staining identified in the boat storage area just north of Boring B-08, was relocated closer to the automotive shop after the previously identified, potentially stained area was observed again and deemed to be of less concern by our field representative. This boring is identified as Boring B-18.

The boring locations, shown in Figure 2, were recorded using a handheld global positioning system (GPS) with a reported accuracy of plus or minus 20 feet. It should be noted that GPS

accuracy may be affected by vegetative cover, geographic features, and other atmospheric anomalies. The surface elevations shown on the boring logs were estimated from topographic contours provided by the Kenai Peninsula Borough terrain viewer. Therefore, the boring locations shown on the site plan and the elevations reported on the boring logs should be considered approximate.

Drilling services for this project were provided by Discovery Drilling of Anchorage, Alaska, using a Geoprobe 7822DT drill rig. An experienced staff representative from our Anchorage office was present during drilling to locate the borings, observe drill action, collect samples, log subsurface conditions, and observe groundwater conditions. Prior to conducting explorations, Shannon & Wilson contacted the Call Locate Center to clear the boring locations of buried public utilities.

## 3.1 Geotechnical Drilling and Sampling

Borings B-01 through B-18 were advanced with 3 ¼-inch inner diameter (ID), continuous flight, hollow-stem augers to depths ranging from approximately 15 feet to 50 feet below ground surface (bgs). Boring B-19 was advanced using mud rotary techniques to 113 feet bgs. With the mud rotary technique, the boring is advanced using a 4.5-inch outer diameter (OD) casing advancer system with a 3 ⅞-inch diameter, wireline tricone bit and circulating a bentonite-based drilling fluid. As the fluid is pumped down the advancing hole it carries the cuttings out, controls the heaving of cohesionless soil, and helps stabilize the borehole walls.

As the borings were advanced, samples were generally recovered using Standard Penetration Test (SPT) methods at 2.5-foot intervals to 10 feet bgs and 5-foot intervals thereafter to the bottom of the boring. With the SPT method, samples are recovered by driving a 2-inch OD split-spoon sampler into the bottom of the advancing hole with blows of a 140-pound, auto hammer free falling 30 inches onto the drill rods. For each sample, the number of blows required to drive the sampler the final 12 inches of an 18-inch penetration into undisturbed soil is recorded. Where the sampler did not penetrate the full 18 inches (i.e., sampler refusal, where penetration resistance exceeded 50 blows for a 6-inch penetration or after 10 blows with zero penetration), our logs report the total blow count and corresponding penetration in inches. Blow counts are shown graphically on the boring log figures as "penetration resistance" and are displayed adjacent to sample depth. The penetration resistance values give a measure of the relative density (compactness) or consistency (stiffness) of cohesionless or cohesive soils, respectively. In addition to the split

spoon samples, a grab sample of the near-surface soils was collected from the auger cuttings in the upper 2 feet of the borings.

The soils encountered during drilling were observed and described in the field in general accordance with the classification system described by ASTM International (ASTM) D2488. Selected samples were tested in our laboratory to refine our soil descriptions in general accordance with the Unified Soil Classification System (USCS) presented in Figure 3 (3 sheets). Frost classifications were also estimated for samples based on laboratory testing (sieve analyses) and are shown on the boring logs. The frost classification system is presented in Figure 4. Summary logs of the borings are included in Figures 5 through 23.

At the completion of Borings B-01, B-03, B-06, B-10, and B-13, a 1-inch inner diameter (ID), polyvinyl chloride (PVC) well casing with a hand-slotted tip was installed in the boring to facilitate observation of groundwater levels after drilling. The annular space between the borehole walls and casing was backfilled with auger cuttings produced during drilling activity and the casing was allowed to stick up above the ground surface. Installation details for the observation wells are shown on the boring logs. Boring B-19 was completed by installing solid, 2.75-inch ID, acrylonitrile butadiene styrene (ABS) casing to facilitate downhole shear wave velocity testing. The annular space between the borehole wall and casing was filled with a cement-bentonite grout, mixed as specified in ASTM D7400, using a tremie pipe and then the drill string was removed with grout added as needed to keep the borehole topped off with grout. The casings were cut off approximately 3 feet above the ground surface. The remaining boreholes were backfilled using the auger cuttings produced during drilling.

## 3.2 Environmental Activities

Environmental field activities consisted of field screening soil samples collected during drilling and collection of analytical soil samples, where appropriate.

### 3.2.1 Field Screening

Soil samples recovered during drilling were "screened" for volatile organic vapors using a Thermo Instruments OVM 580B photoionization detector (PID) and a direct- or headspace screening technique. The PID was calibrated before screening activities with 100 parts per million (ppm) isobutylene standard gas. Headspace screening was only conducted in the predesignated environmental borings. In this method, screening is conducted by placing the field samples into re-sealable plastic bags, sealing the top, warming the sample to at least 40 degrees Fahrenheit, and screening within one hour of collection. Screening was

accomplished by inserting the PID sampling probe into the air space above the soil in the bag and recording the maximum value shown on the equipment readout display. Direct screening for samples collected from the remaining borings was conducted by creating an indentation in the soil of a fresh sample and taking a reading within the indentation. Note, direct screening was generally not conducted in saturated samples to protect the instrument electronics. Additionally, screening was not conducted in Borings B-15, B-16, and B-17 due to a malfunction with the PID instrument or in B-19, since water was used in the drilling process for that boring. Field screening results are presented on the boring logs and discussed briefly in Section 5.2.

### 3.2.2 Soil Sample Collection

Samples from Borings B-11, B-12 and B-14 had direct screening PID readings that were greater than the 10-ppm threshold established in the project proposal for triggering laboratory testing. Samples collected from the predesignated environmental borings for laboratory testing were not sent to the laboratory for analysis due to PID readings that are considered within typical background levels. The analytical sample jars for volatile analyses were collected first, followed by the non-volatile analytical sample jars, and finally the field screening sample. The analytical soil sample for volatile analysis was collected using methanol preservation. In accordance with the method, at least 50 grams of soil was placed into a pre-weighed, laboratory-supplied, 4-ounce jar. Afterward, 25 milliliters of reagent grade methanol were added to submerge the soil. The sample was transferred to the appropriate laboratory-supplied jar using decontaminated stainless-steel spoons and transferred to the laboratory in a cooler with ice packs using chain-of-custody procedures. The results of the analytical testing are discussed in Section 5.2. The SGS laboratory report is included in Appendix A.

## 3.3 Downhole Shear Wave Velocity Testing

Shear wave velocity testing was completed in Boring B-19 on August 17, 2023 by representatives from Shannon & Wilson. The testing was performed in general accordance with the procedures described in ASTM D7400. A shear wave beam, struck by a sledgehammer, was used as the shear wave source. To conduct the test, the beam is struck on either end to create a horizontal shearing force and generate the shear wave. The test is typically repeated on one end, two to four times, and then repeated on the opposite end of the beam in the same manner to produce an opposing wave. Data from each series was collected using a Geostuff BHG-3 borehole geophone connected to a Geometrics Geode 24-channel seismograph. The data are then combined or "stacked" to reduce the effects of background "noise" during processing. No filtering was used during data collection or

picking. Data was observed with varying high frequency filters after picking but picking was not changed based on the filtered data. Data were generally collected at five-foot intervals to approximately 113 feet bgs. Interpreted shear wave velocity results along with the calculated interval velocities are presented on Figure 26.

# 4 LABORATORY TESTING

Laboratory tests were performed on selected soil samples recovered from the borings to confirm our field classifications and to estimate the index properties of the typical materials encountered at the site. The laboratory testing was formulated with emphasis on determining gradation properties, natural water content, plasticity characteristics, and frost characteristics. Selected analytical samples were also tested to assess the presence of certain regulated substances in the soil and groundwater beneath the site.

## 4.1 Geotechnical Laboratory Testing

Water content tests were performed on each sample recovered from the borings. The tests were generally conducted according to procedures described in ASTM D2216. The results of the water content measurements are presented graphically on the boring logs presented in Figures 5 through 23.

Grain size classification (gradation) testing was performed to estimate the particle size distribution of selected samples from the borings. The gradation testing generally followed the procedures described in ASTM C117/136. The test results are presented in Figure 24 and summarized on the boring logs as percent gravel, percent sand, and percent fines. Percent fines on the boring logs are equal to the sum of the silt and clay fractions indicated by the percent passing the No. 200 sieve. Plasticity characteristics (Atterberg Limits results) are required to differentiate between silt and clay soils under USCS.

Atterberg Limits were evaluated for four samples of predominantly fine-grained soil to estimate plasticity characteristics. The tests generally followed procedures described in ASTM D4318. The results of these tests are presented on the boring logs and in Figure 25.

## 4.2 Analytical Testing

Three soil samples were submitted to SGS for analytical testing using chain-of-custody procedures. The soil samples selected for testing was based on elevated PID readings. The samples were analyzed for gasoline range organics (GRO) by Alaska Method (AK) 101,

diesel range organics (DRO) by AK 102, residual range organics (RRO) by AK 103, volatile organic compounds (VOCs) by Environmental Protection Agency (EPA) Method 8260D, and polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270D selective ion method (SIM). For quality control purposes, one methanol soil trip blank was submitted to the laboratory and analyzed for GRO and VOCs. The analytical soil sample results are summarized in Table 1. The laboratory report is provided in Appendix A.

# 5 SUBSURFACE CONDITIONS

The subsurface soil, groundwater, and environmental conditions encountered in our explorations are described in the following subsections and presented graphically on the boring logs included in Figures 5 through 23. The results of the analytical testing are summarized in Table 1 and SGS laboratory report is provided in Appendix A.

## 5.1 Soil Conditions

Because each lot has slightly different conditions and levels of development the paragraphs below are divided by lot.

Borings B-01, B-02, B-03, B-04, B-05, and B-19 were advanced through the fill pad on Lot 164-B. In general, these borings encountered approximately 12 to 17 feet of fill material overlying materials interpreted as estuarine deposits to depths ranging between 18 and 29 feet bgs. Fill materials generally consisted of sand with silt and silty sand with occasional pockets containing trace (less than about 5 percent by volume) amounts of roots and organics. Materials interpreted as estuarine deposits typically consisted of peat, various fine-grained soils, and silty sand. The estuarine deposits were underlain by sand and gravel with various amounts of fines and then silt, sandy silt, and clayey silt. Based on typical penetration resistance values ranging between about 4 and 10 blows per foot (bpf), the fill and estuarine soils are considered loose to medium dense, or soft to medium stiff, for granular and predominately fine-grained soils, respectively. Note, occasional higher and lower blow count values were recorded for discrete samples in this zone. The underlying soils are considered dense to very dense, or hard, for predominantly granular and cohesive, fine-grained soils respectively, with penetration resistance values ranging from 30 to greater than 50 bpf and frequent sampler refusal. Based on our laboratory testing, fines contents in the materials interpreted as fill ranged from 27 to 58 percent. Moisture contents ranged from 8 to 50 percent. Fines contents in the underlying native soils ranged between 6 and 87 percent. Based on Atterberg limits results on three samples tested from the estuarine unit, the material was classified as a silt with plasticity indices ranging between 14 and 19.

Atterberg limits results on one sample from the deeper fine-grained soils classified the material as clayey silt with a plasticity index of 4.

Borings B-06, B-07, B-08, B-09, B-10, B-11, B-12, B-13, B-14, and B-18 were advanced in Lot 164-A. In general, these borings encountered silty sand with varying gravel content to poorly graded sand with gravel. Boring B-10 encountered a layer of silt at approximately 45 feet bgs. Based on typical penetration resistance values ranging between 30 and greater than 50 bpf, the materials encountered by these borings were generally dense to very dense, except in Boring B-06, which encountered a layer of loose (less than 10 blows per foot) silty sand from the surface to approximately 23 feet bgs. These materials were interpreted as fill which was apparently extended out beyond the pre-development crest of the bluff and likely placed during construction of the fill pad on Lot 164-B. Based on our laboratory testing, fines contents ranged from 8 to 53 percent. Moisture contents ranged from 4 to 33 percent.

Borings B-15, B-16, and B-17 were advanced on Lot 163. In general, these borings encountered approximately 2.5 feet of organic soil overlying silty sand with gravel. Borings B-15 and B-16 encountered a layer of sandy silt at approximately 24 feet bgs that extended to the bottom of the borings. Based on typical penetration resistance values ranging between 20 to greater than 50 bpf, the materials encountered in these borings are generally considered medium dense to very dense. Based on our laboratory testing, fines contents ranged from 25 to 56 percent. Moisture contents ranged from 4 to 20 percent, except in the organic soils where moisture contents ranged from 50 to 100 percent.

## 5.2 Groundwater

Groundwater was encountered during drilling between approximately 20 and 30 feet bgs, except in Borings B-15, B-16, and B-17 which did not encounter groundwater. Static water levels were measured at 9.6 feet bgs in Boring B-01, 6.7 feet bgs in Boring B-03, 15.7 feet bgs in Boring B-06, and 18.3 feet bgs in Borings B-10 on August 11, 2023. Note, the static water levels measured in Borings B-01, B-03, and B-06 appear to be shallower than what would be expected based on the topography of the site. We believe these water levels may have been affected by significant rainfall or could represent groundwater perched within the silty fill soils. Additionally, some of the soils encountered beneath the site were silty and likely have a relatively low permeability, which could make groundwater levels difficult to discern during drilling. Note that water levels may fluctuate by several feet seasonally and may vary during periods of high precipitation and rapid snow melt.

## 5.3 Environmental Conditions

Soil samples recovered during drilling were field screened for volatile organics using a PID. Screening results in most borings registered between 0.0 and 2.0 ppm, including headspace readings from samples collected in the two environmental borings (Borings B-08 and B-18), except for several samples from Borings B-11, B-12, and B-14, which had PID readings above 10 ppm. The highest readings were recorded in samples recovered from 10 to 11.5 feet in Boring B-11 (22.4 ppm), 15 to 16.5 feet bgs in Boring B-12 (12.6 ppm), and 10 to 11.5 feet bgs in Boring B-14 (43.5 ppm). Based on these elevated PID readings, three analytical soil samples from the above sample intervals were collected and submitted for analytical testing. The samples were analyzed for GRO, DRO, RRO, PAHs, and VOCs. GRO, DRO, and RRO were detected in each soil sample analyzed at estimated concentrations less than the most stringent ADEC Method Two cleanup levels. GRO concentrations were similar to the GRO concentration detected in the trip and method blanks suggesting that the sample results may have been affected by laboratory biases or sample handling. Since the results are well below applicable ADEC cleanup levels the usability of the results should be unaffected. The remaining analytes were not detected. A summary of the soil analytical results is included in Table 1; the laboratory report is included in Appendix A.

# 6 SEISMIC CONDITIONS

Based on our explorations, the site may be divided into two zones for the purposes of site class determination. For the portion of the site situated on Lot 164-B, where relatively thick, loose fills and estuarine deposits were encountered from the ground surface to depths ranging between about 18 and 29 feet bgs, the Site Class according to the American Society of Civil Engineers 7-16, Minimum Design Loads for Buildings and Other Structures (ASCE 7-16) is D for a stiff soil profile based an average shear wave velocity of 780 feet per second in the upper 100 feet of the soil profile measured in Boring B-19. Average blow counts in borings advanced in Lots 163 and Lots 164-A, which are on top of the bluffs and do not contain loose fills or soft estuarine soils, are typically above 50 blows per foot; therefore, this portion of the site may have site characteristics more consistent with Site Class C.

Based on our explorations, slope failure, liquefaction, and surface rupture are unlikely in Lots 163 and 164-A where the soil profile was relatively dense; however, some of the sandier soils near the base of the estuarine deposits encountered beneath fill pad in Lot 164-B may be liquefiable or subject to strength loss during the design seismic event. These layers

appear to be relatively thin and localized to discrete areas but could result in seismically induced settlements at the ground surface during a design seismic event.

The exhibit below includes site coefficients for Site Class C and D based on our explorations. It should be noted that the values for Site Class D assume that ASCE 7-16 Section 11.4.8 Exception 2 applies and is followed by the structural engineer. Additional seismic hazard analyses may be required depending on the final design characteristics of the hotel building or if these exceptions are not applicable.

| Seismic Coefficients (2,475-year event) | Site Class C | Site Class D | Source |
|---|---|---|---|
| Acceleration Coefficient, (PGA) | 0.5(g) | 0.5 (g) | ASCE 7-16 Figure 22-10 |
| Spectral Acceleration Coefficient at Period of 0.2s, ($S_s$) | 1.5 (g) | 1.5 (g) | ASCE 7-16 Figure 22-3 |
| Spectral Acceleration Coefficient at Period of 1.0s, ($S_1$) | 0.609 (g) | 0.609 (g) | ASCE 7-16 Figure 22-4 |
| Site Factor at Zero Period, ($F_{pga}$) | 1.2 | 1.1 | ASCE 7-16 Table 11.8-1 |
| Site Factor for Short Period, ($F_a$) | 1.2 | 1.0 | ASCE 7-16 Table 11.4-1 |
| Site Factor for Long Period, ($F_v$) | 1.4 | 1.7 | ASCE 7-16 Ch. 21.3 |

Notes:
1 (g) acceleration due to gravity

# 7 PRELIMINARY GEOTECHNICAL CONSIDERATIONS

We understand that this project is in an early development phase and that proposed building locations and sizes have yet to be finalized. Based on our explorations and observations, the soil conditions at the site are expected to be highly variable. This variability is primarily associated with the transition between the upland areas (ie., Lots 163 and 164-A) and portions of the site where fills have been placed over former tidelands to create the fill pad on Lot 164-B.

The existing loose fills and underlying estuarine deposits encountered by our explorations in the filled portions of the site (ie., Lot 164-B) should be considered unsuitable for support of buildings, or other structures that are sensitive to settlement. There is a potential for adverse settlements caused by consolidation of loose, compressible, or organic soils once the building loads are applied; from long-term decay of organic material in the subsurface; and from seismically induced settlements related to pockets of potentially liquefiable soils. Because of the thickness and depth of unsuitable soils in this portion of the site, overexcavating the unsuitable materials and replacing the material with a structural fill is likely an unfeasible option in these areas. Consequently, deep foundations (likely driven

piles) are recommended for new structures constructed in this portion of the site to carry the building loads below the unsuitable soil layers. Pile types and sizes must be selected based on vertical and lateral load requirements, degree of fixity, settlement, and pile-driving considerations. The piles will likely need to be embedded at least 20 feet into dense soils below the loose soil layers to develop sufficient lateral, axial, and uplift support for moderately loaded, pile supported structures. Pile embedment will be dependent on the actual design loads. Additionally, buildings should not be supported on combinations of shallow and pile foundations due to the risk of differing settlement profiles and lateral load response.

New structures in the upland portions of the site, north of the pre-development bluff crest can likely be supported on conventional shallow concrete foundations as long as the upper layers of unsuitable soil are removed (organic, soft, or loose soils) and the footings bear directly on relatively firm, unyielding mineral soils. The minimum embedment for footings in heated buildings is typically 42 inches below the ground surface. This depth is increased to 60 inches for unheated structures.

We understand that retaining structures may also be constructed on site. Retaining structure design will need to account for the planned height of retained soils, the nature of the support material, and surcharge loading on the surface above the wall. On the south side of the lots, and in the transition zone between Lots 164-A and 164-B, poor support soil conditions and potential seismically induced settlement and/or liquefaction will need to be accounted for. Walls in these areas will likely need to consist of flexible cantilever walls (sheet pile, soldier pile and lagging, etc.) that extend into dense soils at depth. These types of walls typically require tiebacks when the free-standing height exceeds approximately 10 to 12 feet. Retaining structures on the north sides of the property in Lots 163 and 164-A can likely consist of concrete cantilever, gravity, or mechanically stabilized earth (MSE) wall structures due to the presence of competent, shallow soil support.

Preliminary recommendations and considerations herein are based on our interpretation of the subsurface data collected at the site, and our understanding of the project and preliminary design concepts at the time of this report. These considerations are intended to be used by the owner and its design team for preliminary design. Therefore, the recommendations contained in this report are generalized and preliminary in nature. This report is provided with the understanding that detailed engineering analysis will be conducted, and geotechnical engineering recommendations will be provided to support final design as the site layout and design progresses.

# 8 CLOSURE AND LIMITATIONS

This report was prepared for the exclusive use of our client and their representatives for evaluating the site as it relates to the geotechnical aspects discussed herein. The conclusions and interpretation contained in this report are based on site conditions as they presently exist. It is assumed that the exploratory borings are representative of the subsurface conditions throughout the site, i.e., the subsurface conditions everywhere are not significantly different from those disclosed by the explorations.

If, during construction, subsurface conditions different from those encountered in these explorations are observed or appear to be present, Shannon & Wilson, Inc. should be advised at once so that these conditions can be reviewed. If there is a substantial lapse of time between the submittal of this report and the start of work at the site, or if conditions have changed due to natural causes or construction operations at or adjacent to the site, it is recommended that this report be reviewed to determine the applicability of the conclusions considering the changed conditions and time lapse.

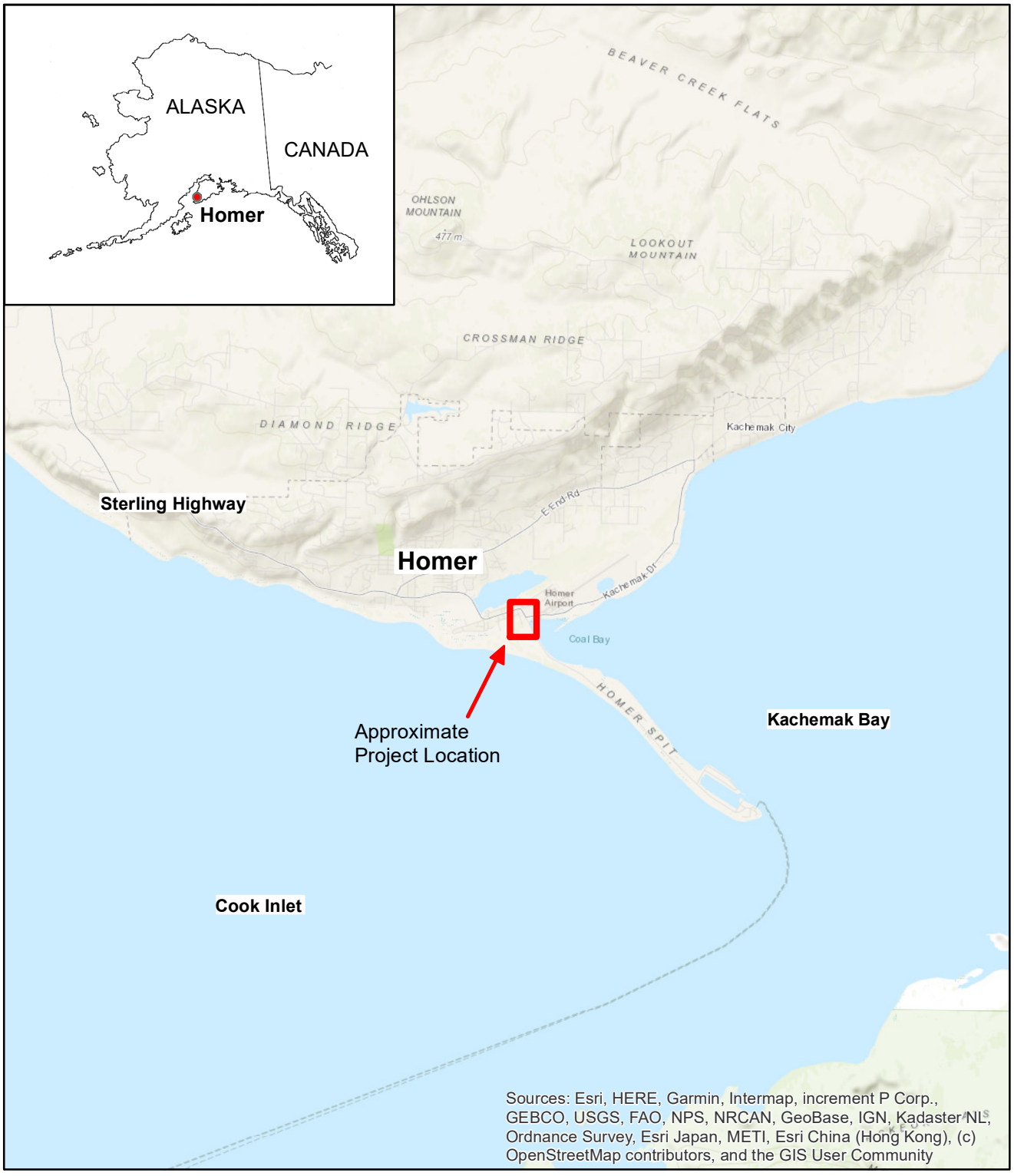
Unanticipated soil conditions are commonly encountered and cannot fully be determined by merely taking soil samples or advancing test holes. Such unexpected conditions frequently require that additional expenditures be made to attain a properly constructed project. Therefore, some contingency fund is recommended to accommodate such potential extra costs. Please read the Important Information section at the back of this report to reduce your project risks.

## TABLE 1 - SUMMARY OF SOIL ANALYTICAL RESULTS

| | | | | Sample ID^ and Soil Sample Depth in Feet Below Ground Surface (See Appendix A and Figure 2 ) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Boring B-11 | Boring B-12 | Boring B-14 | Quality Control |
| Analytical Method* | Analyte | ADEC Cleanup Level** | Units | B11S5 10-11.5 ft | B12S6 15-16.5 ft | B14S5 10-11.5 ft | STB - |
| 580B PID | PID Headspace Reading | - | ppm | 22.4 | 12.6 | 43.5 | - |
| AK 101 | Gasoline Range Organics (GRO) | 300 | mg/kg | 2.00 JB | 2.19 JB | 1.80 JB | 1.11 JB |
| AK 102 | Diesel Range Organics (DRO) | 250 | mg/kg | **24.6** | **21.4 J** | **20.2 J** | - |
| AK 103 | Residual Range Organics (RRO) | 11,000 | mg/kg | **103 J** | **120** | **111** | - |
| EPA 8260D (VOCs) | Varies | various | mg/kg | ND | ND | ND | ND |
| EPA 8270D SIM (PAHs) | Varies | various | mg/kg | ND | ND | ND | - |

Notes:

| | |
|---|---|
| ^ | = Sample ID number preceded by "111320" on the chain of custody form |
| * | = See Appendix A for compounds tested, methods, and laboratory reporting limits |
| ** | = ADEC soil cleanup level is most stringent cleanup level listed in Table B1 or B2, 18 AAC 75 (February 2023) |
| ADEC | = Alaska Department of Environmental Conservation |
| EPA | = Environmental Protection Agency |
| ND | = Analyte not detected |
| mg/kg | = Milligrams per kilogram |
| PAHs | = Polynuclear aromatic hydrocarbons |
| PID | = Photoionization detector |
| ppm | = Parts per million |
| VOCs | = Volatile organic compounds |
| **24.6** | = Analyte detected |
| - | = Not applicable or sample not tested for this analyte |
| B | = Analyte concentration is potentially affected by a method blank detection. |
| J | = Estimated concentration less than the limit of quantitation. See the SGS laboratory report for details. |

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## VICINITY MAP

October 2023 111320-200

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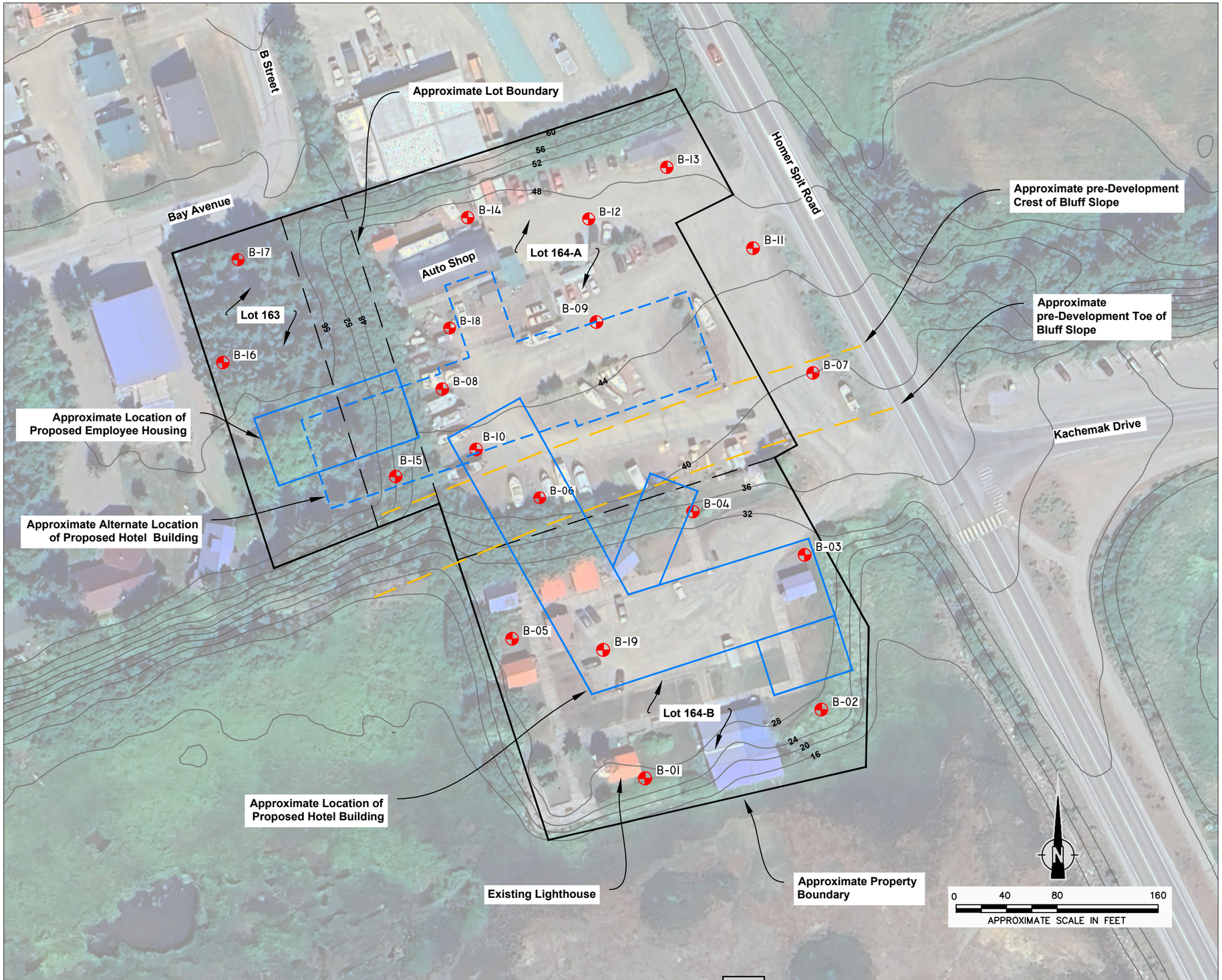
FIG. 1




## LEGEND

- B-01 Approximate Location of Boring B-1, Advanced by Shannon & Wilson, August 2023
- 28 / 16 Topographic Contours. 4-foot interval

## NOTES

1. Map adapted from aerial imagery provided by Google Earth, June 2022.
2. Elevation contours adapted from Kenai Peninsula Borough terrain viewer.
3. Approximate locations of proposed site features taken from drawings provided by Womer & Associates, August 2023

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**SITE PLAN**

October 2023 111320-200

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**FIG. 2**

*Shannon & Wilson, Inc. (S&W), uses a soil identification system modified from the Unified Soil Classification System (USCS). Elements of the USCS and other definitions are provided on this and the following pages. Soil descriptions are based on visual-manual procedures (ASTM D2488) and laboratory testing procedures (ASTM D2487), if performed.*

## S&W INORGANIC SOIL CONSTITUENT DEFINITIONS

| CONSTITUENT[2] | FINE-GRAINED SOILS (50% or more fines)[1] | COARSE-GRAINED SOILS (less than 50% fines)[1] |
|---|---|---|
| **Major** | ***Silt, Lean Clay, Elastic Silt,*** or ***Fat Clay***[3] | ***Sand*** or ***Gravel***[4] |
| **Modifying (Secondary)** Precedes major constituent | 30% or more coarse-grained: ***Sandy*** or ***Gravelly***[4] | More than 12% fine-grained: ***Silty*** or ***Clayey***[3] |
| **Minor** Follows major constituent | 15% to 30% coarse-grained: ***with Sand*** or ***with Gravel***[4] | 5% to 12% fine-grained: ***with Silt*** or ***with Clay***[3] |
| | 30% or more total coarse-grained *and* lesser coarse-grained constituent is 15% or more: ***with Sand*** or ***with Gravel***[5] | 15% or more of a second coarse-grained constituent: ***with Sand*** or ***with Gravel***[5] |

[1]All percentages are by weight of total specimen passing a 3-inch sieve.
[2]The order of terms is: *Modifying Major with Minor*.
[3]Determined based on behavior.
[4]Determined based on which constituent comprises a larger percentage.
[5]Whichever is the lesser constituent.

## MOISTURE CONTENT TERMS

| | |
|---|---|
| Dry | Absence of moisture, dusty, dry to the touch |
| Moist | Damp but no visible water |
| Wet | Visible free water, from below water table |

## STANDARD PENETRATION TEST (SPT) SPECIFICATIONS

| | |
|---|---|
| Hammer: | 140 pounds with a 30-inch free fall. Rope on 6- to 10-inch-diam. cathead 2-1/4 rope turns, > 100 rpm<br><br>NOTE: If automatic hammers are used, blow counts shown on boring logs should be adjusted to account for efficiency of hammer. |
| Sampler: | 10 to 30 inches long<br>Shoe I.D. = 1.375 inches<br>Barrel I.D. = 1.5 inches<br>Barrel O.D. = 2 inches |
| N-Value: | Sum blow counts for second and third 6-inch increments.<br>Refusal: 50 blows for 6 inches or less; 10 blows for 0 inches. |

*NOTE: Penetration resistances (N-values) shown on boring logs are as recorded in the field and have not been corrected for hammer efficiency, overburden, or other factors.*

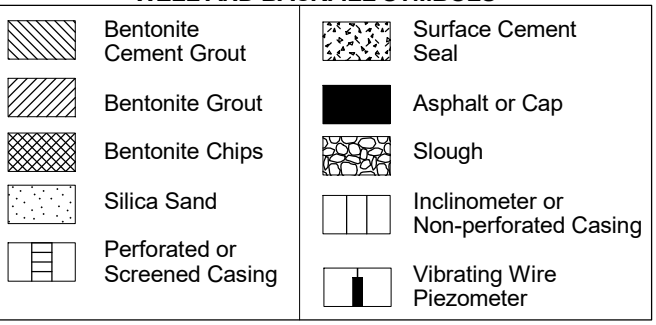
## PARTICLE SIZE DEFINITIONS

| DESCRIPTION | SIEVE NUMBER AND/OR APPROXIMATE SIZE |
|---|---|
| FINES | < #200 (0.075 mm = 0.003 in.) |
| SAND | |
| Fine | #200 to #40 (0.075 to 0.4 mm; 0.003 to 0.02 in.) |
| Medium | #40 to #10 (0.4 to 2 mm; 0.02 to 0.08 in.) |
| Coarse | #10 to #4 (2 to 4.75 mm; 0.08 to 0.187 in.) |
| GRAVEL | |
| Fine | #4 to 3/4 in. (4.75 to 19 mm; 0.187 to 0.75 in.) |
| Coarse | 3/4 to 3 in. (19 to 76 mm) |
| COBBLES | 3 to 12 in. (76 to 305 mm) |
| BOULDERS | > 12 in. (305 mm) |

## RELATIVE DENSITY / CONSISTENCY

| COHESIONLESS SOILS | | COHESIVE SOILS | |
|---|---|---|---|
| N, SPT, BLOWS/FT. | RELATIVE DENSITY | N, SPT, BLOWS/FT. | RELATIVE CONSISTENCY |
| < 4 | Very loose | < 2 | Very soft |
| 4 - 10 | Loose | 2 - 4 | Soft |
| 10 - 30 | Medium dense | 4 - 8 | Medium stiff |
| 30 - 50 | Dense | 8 - 15 | Stiff |
| > 50 | Very dense | 15 - 30 | Very stiff |
| | | > 30 | Hard |

## WELL AND BACKFILL SYMBOLS




## PERCENTAGES TERMS [1, 2]

| | |
|---|---|
| Trace | < 5% |
| Few | 5 to 10% |
| Little | 15 to 25% |
| Some | 30 to 45% |
| Mostly | 50 to 100% |

[1]Gravel, sand, and fines estimated by mass. Other constituents, such as organics, cobbles, and boulders, estimated by volume.

[2]Reprinted, with permission, from ASTM D2488 - 09a Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428. A copy of the complete standard may be obtained from ASTM International, www.astm.org.

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# SOIL DESCRIPTION AND LOG KEY

October 2023 111320-200

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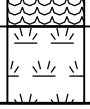
**FIG. 3**
Sheet 1 of 3

## UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)
## (Modified From USACE Tech Memo 3-357, ASTM D2487, and ASTM D2488)

| MAJOR DIVISIONS | | | GROUP/GRAPHIC SYMBOL | | TYPICAL IDENTIFICATIONS |
|---|---|---|---|---|---|
| COARSE-GRAINED SOILS *(more than 50% retained on No. 200 sieve)* | Gravels *(more than 50% of coarse fraction retained on No. 4 sieve)* | Gravel *(less than 5% fines)* | GW |  | Well-Graded Gravel; Well-Graded Gravel with Sand |
| | | | GP |  | Poorly Graded Gravel; Poorly Graded Gravel with Sand |
| | | Silty or Clayey Gravel *(more than 12% fines)* | GM |  | Silty Gravel; Silty Gravel with Sand |
| | | | GC |  | Clayey Gravel; Clayey Gravel with Sand |
| | Sands *(50% or more of coarse fraction passes the No. 4 sieve)* | Sand *(less than 5% fines)* | SW |  | Well-Graded Sand; Well-Graded Sand with Gravel |
| | | | SP |  | Poorly Graded Sand; Poorly Graded Sand with Gravel |
| | | Silty or Clayey Sand *(more than 12% fines)* | SM |  | Silty Sand; Silty Sand with Gravel |
| | | | SC |  | Clayey Sand; Clayey Sand with Gravel |
| FINE-GRAINED SOILS *(50% or more passes the No. 200 sieve)* | Silts and Clays *(liquid limit less than 50)* | Inorganic | ML |  | Silt; Silt with Sand or Gravel; Sandy or Gravelly Silt |
| | | | CL |  | Lean Clay; Lean Clay with Sand or Gravel; Sandy or Gravelly Lean Clay |
| | | Organic | OL |  | Organic Silt or Clay; Organic Silt or Clay with Sand or Gravel; Sandy or Gravelly Organic Silt or Clay |
| | Silts and Clays *(liquid limit 50 or more)* | Inorganic | MH |  | Elastic Silt; Elastic Silt with Sand or Gravel; Sandy or Gravelly Elastic Silt |
| | | | CH |  | Fat Clay; Fat Clay with Sand or Gravel; Sandy or Gravelly Fat Clay |
| | | Organic | OH |  | Organic Silt or Clay; Organic Silt or Clay with Sand or Gravel; Sandy or Gravelly Organic Silt or Clay |
| HIGHLY-ORGANIC SOILS | Primarily organic matter, dark in color, and organic odor | | PT |  | Peat or other highly organic soils (see ASTM D4427) |

NOTE: No. 4 size = 4.75 mm = 0.187 in.; No. 200 size = 0.075 mm = 0.003 in.

NOTES

1. Dual symbols *(symbols separated by a hyphen, i.e., SP-SM, Sand with Silt)* are used for soils with between 5% and 12% fines or when the liquid limit and plasticity index values plot in the CL-ML area of the plasticity chart. Graphics shown on the logs for these soil types are a combination of the two graphic symbols (e.g., SP and SM).

2. Borderline symbols *(symbols separated by a slash, i.e., CL/ML, Lean Clay to Silt; SP-SM/SM, Sand with Silt to Silty Sand)* indicate that the soil properties are close to the defining boundary between two groups.

Lighthouse Village Development
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**SOIL DESCRIPTION AND LOG KEY**

October 2023 111320-200

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**FIG. 3**
Sheet 2 of 3

## GRADATION TERMS

| | |
|---|---|
| Poorly Graded | Narrow range of grain sizes present or, within the range of grain sizes present, one or more sizes are missing (Gap Graded). Meets criteria in ASTM D2487, if tested. |
| Well-Graded | Full range and even distribution of grain sizes present. Meets criteria in ASTM D2487, if tested. |

## CEMENTATION TERMS[1]

| | |
|---|---|
| Weak | Crumbles or breaks with handling or slight finger pressure |
| Moderate | Crumbles or breaks with considerable finger pressure |
| Strong | Will not crumble or break with finger pressure |

## PLASTICITY[2]

| DESCRIPTION | VISUAL-MANUAL CRITERIA | APPROX. PLASITICTY INDEX RANGE |
|---|---|---|
| Nonplastic | A 1/8-in. thread cannot be rolled at any water content. | < 4 |
| Low | A thread can barely be rolled and a lump cannot be formed when drier than the plastic limit. | 4 to 10 |
| Medium | A thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. A lump crumbles when drier than the plastic limit. | 10 to 20 |
| High | It take considerable time rolling and kneading to reach the plastic limit. A thread can be rerolled several times after reaching the plastic limit. A lump can be formed without crumbling when drier than the plastic limit. | > 20 |

## ADDITIONAL TERMS

| | |
|---|---|
| Mottled | Irregular patches of different colors. |
| Bioturbated | Soil disturbance or mixing by plants or animals. |
| Diamict | Nonsorted sediment; sand and gravel in silt and/or clay matrix. |
| Cuttings | Material brought to surface by drilling. |
| Slough | Material that caved from sides of borehole. |
| Sheared | Disturbed texture, mix of strengths. |

## PARTICLE ANGULARITY AND SHAPE TERMS[1]

| | |
|---|---|
| Angular | Sharp edges and unpolished planar surfaces. |
| Subangular | Similar to angular, but with rounded edges. |
| Subrounded | Nearly planar sides with well-rounded edges. |
| Rounded | Smoothly curved sides with no edges. |
| Flat | Width/thickness ratio > 3. |
| Elongated | Length/width ratio > 3. |

## ACRONYMS AND ABBREVIATIONS

| | |
|---|---|
| ATD | At Time of Drilling |
| Diam. | Diameter |
| Elev. | Elevation |
| ft. | Feet |
| FeO | Iron Oxide |
| gal. | Gallons |
| Horiz. | Horizontal |
| HSA | Hollow Stem Auger |
| I.D. | Inside Diameter |
| in. | Inches |
| lbs. | Pounds |
| MgO | Magnesium Oxide |
| mm | Millimeter |
| MnO | Manganese Oxide |
| NA | Not Applicable or Not Available |
| NP | Nonplastic |
| O.D. | Outside Diameter |
| OW | Observation Well |
| pcf | Pounds per Cubic Foot |
| PID | Photo-Ionization Detector |
| PMT | Pressuremeter Test |
| ppm | Parts per Million |
| psi | Pounds per Square Inch |
| PVC | Polyvinyl Chloride |
| rpm | Rotations per Minute |
| SPT | Standard Penetration Test |
| USCS | Unified Soil Classification System |
| $q_u$ | Unconfined Compressive Strength |
| VWP | Vibrating Wire Piezometer |
| Vert. | Vertical |
| WOH | Weight of Hammer |
| WOR | Weight of Rods |
| Wt. | Weight |

## STRUCTURE TERMS[1]

| | |
|---|---|
| Interbedded | Alternating layers of varying material or color with layers at least 1/4-inch thick; singular: bed. |
| Laminated | Alternating layers of varying material or color with layers less than 1/4-inch thick; singular: lamination. |
| Fissured | Breaks along definite planes or fractures with little resistance. |
| Slickensided | Fracture planes appear polished or glossy; sometimes striated. |
| Blocky | Cohesive soil that can be broken down into small angular lumps that resist further breakdown. |
| Lensed | Inclusion of small pockets of different soils, such as small lenses of sand scattered through a mass of clay. |
| Homogeneous | Same color and appearance throughout. |

[1]Reprinted, with permission, from ASTM D2488 - 09a Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428. A copy of the complete standard may be obtained from ASTM International, www.astm.org.

[2]Adapted, with permission, from ASTM D2488 - 09a Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), copyright ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428. A copy of the complete standard may be obtained from ASTM International, www.astm.org.

Lighthouse Village Development
Homer, Alaska

# SOIL DESCRIPTION AND LOG KEY

October 2023

111320-200

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FIG.3
Sheet 3 of 3

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# FROST CLASSIFICATION

(after Municipality of Anchorage, 2007)

| GROUP | | 0.02 Mil. | P-200* | USC SYSTEM (based on P-200 results) |
|---|---|---|---|---|
| NFS | Sandy Soils | 0 to 3 | 0 to 6 | SW, SP, SW-SM, SP-SM |
| | Gravelly Soils | 0 to 3 | 0 to 6 | GW, GP, GW-GM, GP-GM |
| F1 | Gravelly Soils | 3 to 10 | 6 to 13 | GM, GW-GM, GP-GM |
| F2 | Sandy Soils | 3 to 15 | 6 to 19 | SP-SM, SW-SM, SM |
| | Gravelly Soils | 10 to 20 | 13 to 25 | GM |
| F3 | Sands, except very fine silty sands** | Over 15 | Over 19 | SM, SC |
| | Gravelly Soils | Over 20 | Over 25 | GM, GC |
| | Clays, PI>12 | | | CL, CH |
| F4 | All Silts | Over 15 | Over 19 | ML, MH |
| | Very fine silty sands** | | | SM, SC |
| | Clays, PI<12 | | | CL, CL-ML |
| | Varved clays and other fined grained, banded sediments | | | CL and ML<br>CL, ML, and SM;<br>SL, SH, and ML;<br>CL, CH, ML, and SM |

PI = Plasticity Index
P-200 = Percent passing the number 200 sieve
0.02 Mil. = Percent material below 0.02 millimeter grain size

*Approximate P-200 value equivalent for frost classification. Value range based on typical, well-graded soil curves.

** Very fine sand : greater than 50% of sand fraction passing the number 100 sieve



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**FROST CLASSIFICATION LEGEND**

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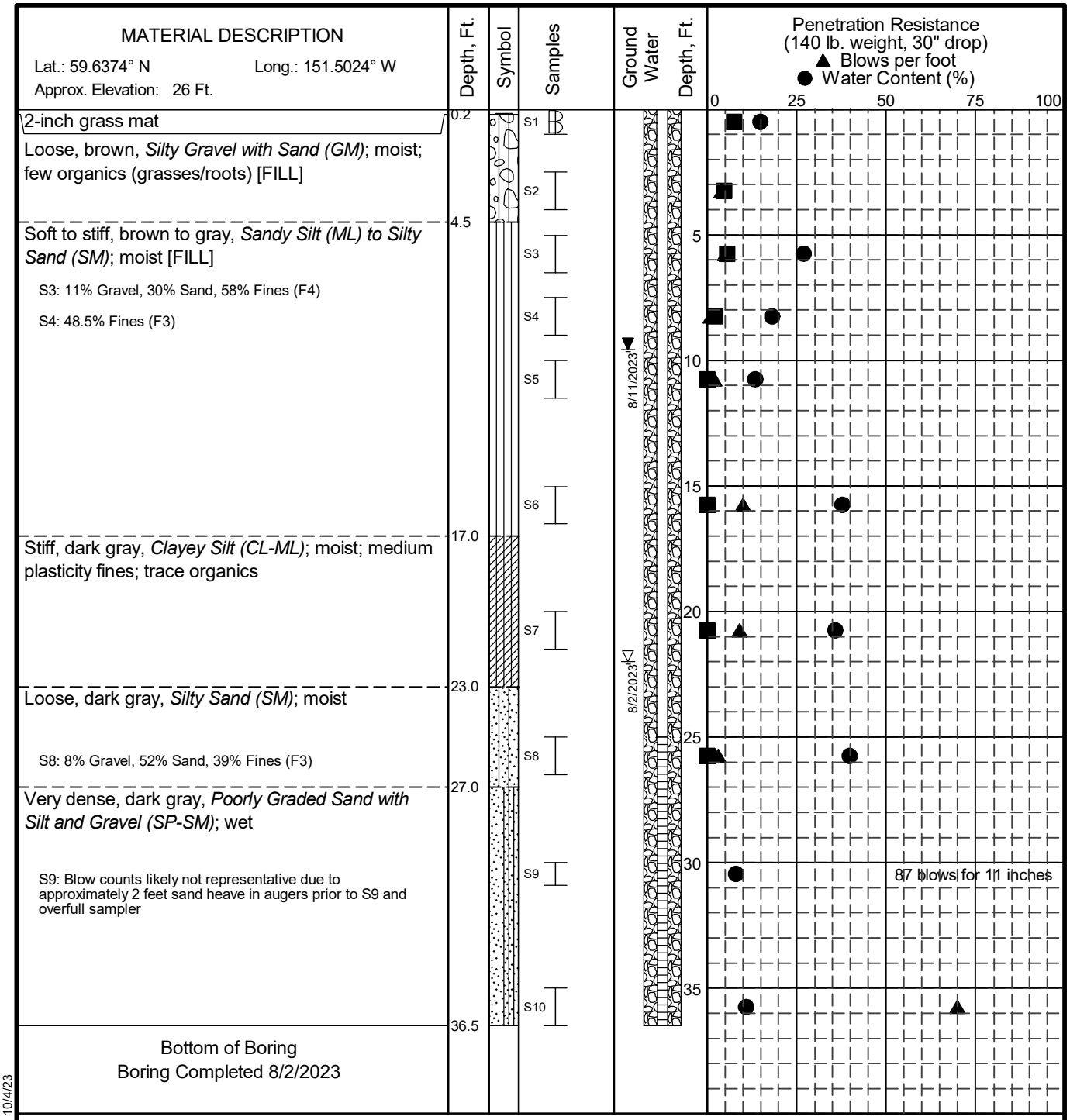
**FIG. 4**




LEGEND

- * Sample Not Recovered
- Grab Sample
- 2" O.D. Split Spoon Sample
- Ground Water Level At Time Of Drilling
- Static Water Level
- Blank Section, Cuttings Backfill
- Slotted Section, Cuttings Backfill

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

Lighthouse Village Development
Homer, Alaska

**LOG OF BORING B-01**

October 2023 111320-200

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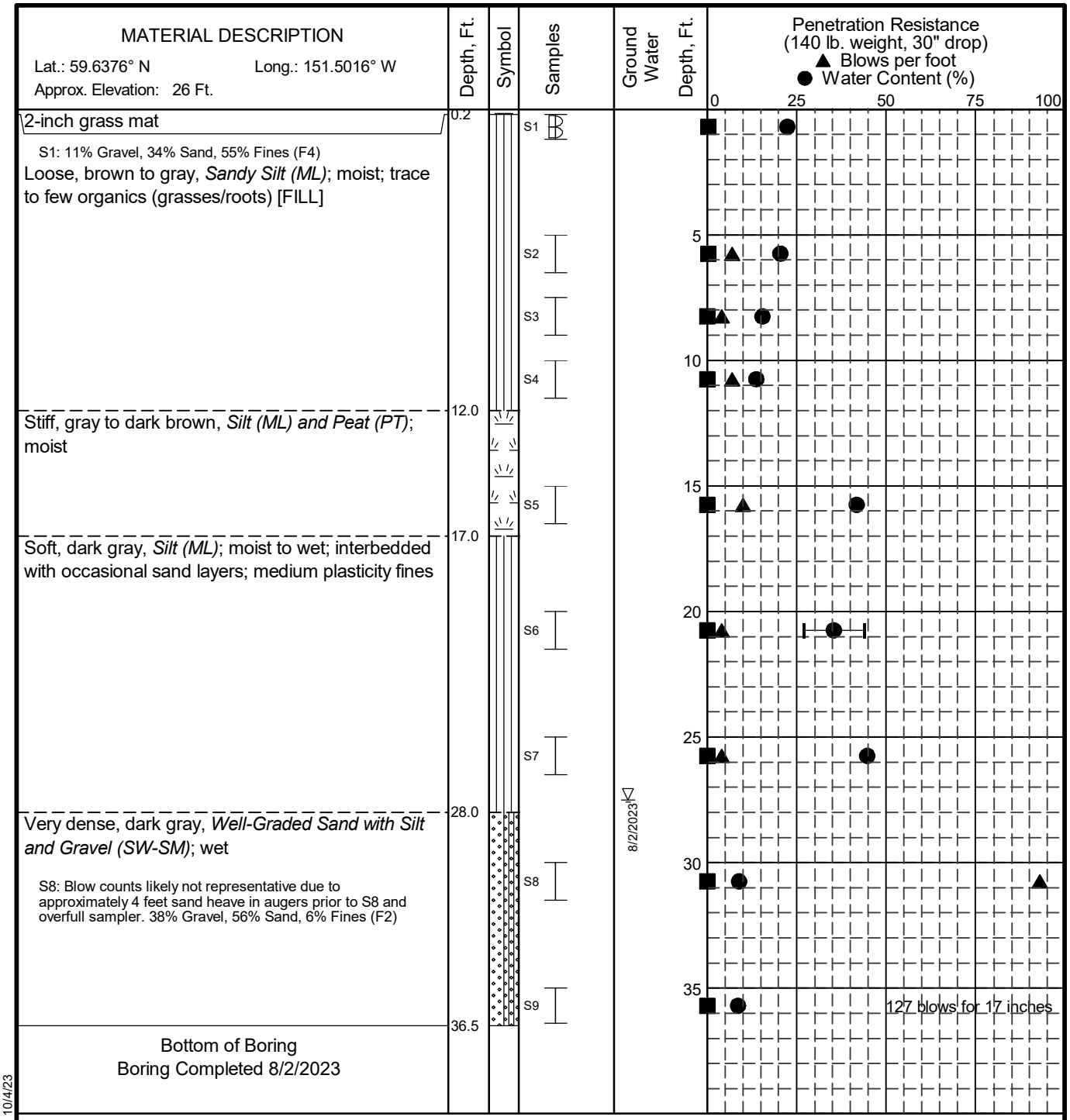
**FIG. 5**

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23



Version 1.0 - FINAL




LEGEND

* Sample Not Recovered
Grab Sample
2" O.D. Split Spoon Sample
Ground Water Level At Time Of Drilling

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

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Homer, Alaska

**LOG OF BORING B-02**

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**FIG. 6**

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23



Version 1.0 - FINAL

| MATERIAL DESCRIPTION | Depth, Ft. | Symbol | Samples |
|---|---|---|---|
| Lat.: 59.6379° N Long.: 151.5017° W<br>Approx. Elevation: 31 Ft. | | | |
| Approximately 2 to 3-inch grass mat | 0.3 | | S1 |
| Loose to medium dense, brown, *Sandy Silt (ML)*; moist; trace to few roots to 1 foot [FILL]<br>S2: 4% Gravel, 39% Sand, 57% Fines (F4) | | | S2 |
| Medium dense, brown, *Poorly Graded Sand with Silt and Gravel (SP-SM)*; moist [FILL] | 4.5 | | S3 |
| S4: 48% Gravel, 25% Sand, 28% Fines (F3)<br>Dense, gray-brown, *Silty Gravel with Sand (GM)*; moist [FILL] | 7.0 | | S4 |
| Loose, brown, *Silty Sand with Gravel (SM)*; moist [FILL] | 9.5 | | S5 |
| Medium stiff to stiff, dark brown to gray-brown, *Peat (PT)*; moist; contains few wood debris | 16.0 | | S6 S7 |
| Medium stiff, gray-brown, *Silt (ML)*; moist; medium plasticity fines<br>Boring was advanced to 26.5 feet bgs on 8/2/23 then moved 10 feet West and advanced to the final depth on 8/8/2023. | 23.0 | | S8 |
| Very dense, gray, *Well-Graded Gravel with Silt and Sand (GW-GM)*; wet<br>S9: 51% Gravel, 43% Sand, 6% Fines (F1) | 29.0 | | S9 |
| Very dense, gray, *Silty Sand (SM)*; wet | 33.0 | | S10 |
| CONTINUED NEXT PAGE | | | |

Ground Water Depth, Ft.: 8/11/2023, 8/8/2023

Penetration Resistance (140 lb. weight, 30" drop)
▲ Blows per foot
● Water Content (%)

0 25 50 75 100

99 blows for 11 inches

110 blows for 17 inches

0 10 20 30 40

■ PID Reading (ppm)

Plastic Limit ⊢●⊣ Liquid Limit
Natural Water Content

LEGEND

* Sample Not Recovered
Grab Sample
2" O.D. Split Spoon Sample
Ground Water Level At Time Of Drilling
Static Water Level
Blank Section, Cuttings Backfill
Slotted Section, Cuttings Backfill

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

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**LOG OF BORING B-03**

October 2023 111320-200

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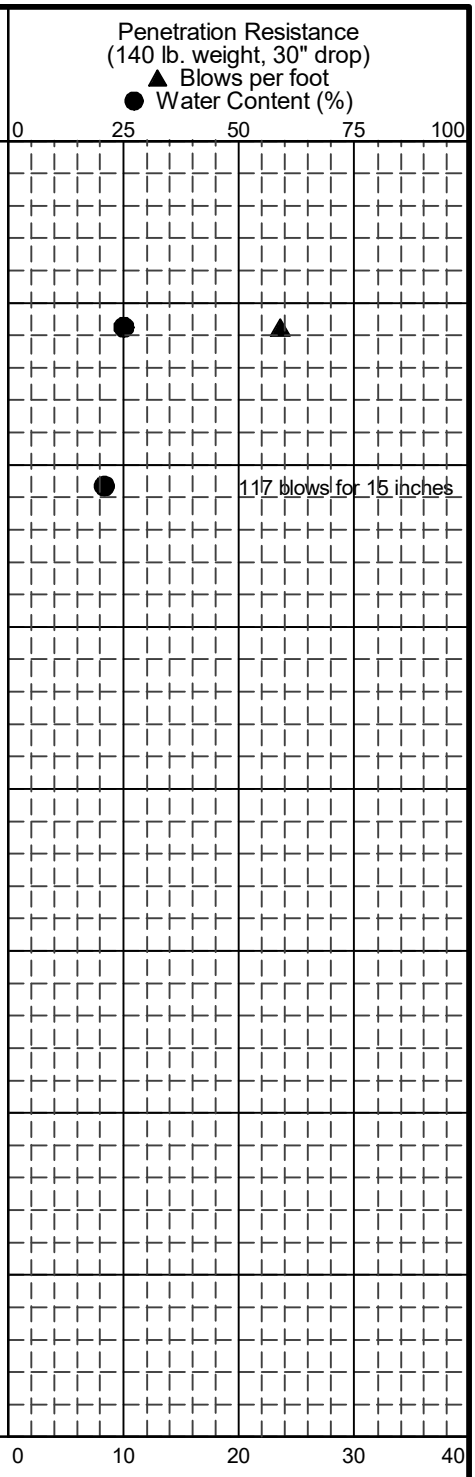
**FIG. 7**
Sheet 1 of 2

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23



Version 1.0 - FINAL

| MATERIAL DESCRIPTION | Depth, Ft. | Symbol | Samples | Ground Water Depth, Ft. |
|---|---|---|---|---|
| Lat.: 59.6379° N Long.: 151.5017° W<br>Approx. Elevation: 31 Ft. | | | | |
| Sample skipped at 40 feet due to sand heave<br>Very dense, gray, *Silty Sand (SM)*; wet | | | | |
| S11: Blow counts likely not representative due to approximately 5 feet sand heave in augers prior to S11 and overfull sampler | | | S11 | |
| S12: 19.1% Fines (F2) | | | S12 | |
| | 51.3 | | | |
| Bottom of Boring<br>Boring Completed 8/8/2023 | | | | |




LEGEND

| | |
|---|---|
| * Sample Not Recovered | Ground Water Level At Time Of Drilling |
| Grab Sample | Static Water Level |
| 2" O.D. Split Spoon Sample | Blank Section, Cuttings Backfill |
| | Slotted Section, Cuttings Backfill |

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

Lighthouse Village Development
Homer, Alaska

**LOG OF BORING B-03**

October 2023 111320-200

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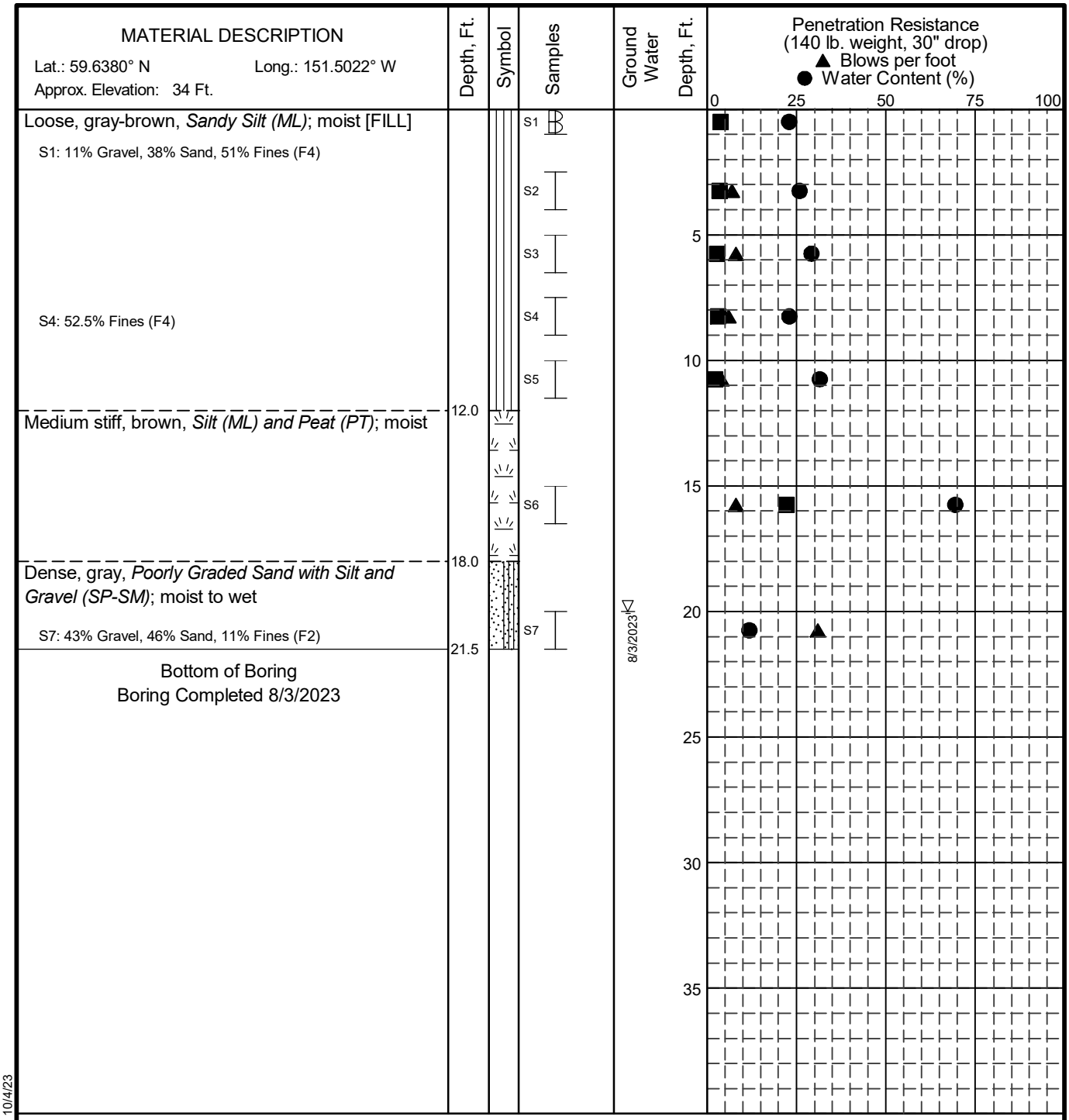
**FIG. 7**
**Sheet 2 of 2**

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23



Version 1.0 - FINAL




LEGEND

* Sample Not Recovered
Grab Sample
2" O.D. Split Spoon Sample
Ground Water Level At Time Of Drilling

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

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**LOG OF BORING B-04**

October 2023 111320-200

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**FIG. 8**

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23



Version 1.0 - FINAL

MATERIAL DESCRIPTION

Lat.: 59.6377° N Long.: 151.5029° W

Approx. Elevation: 30 Ft.

Loose, red-brown to gray, *Silty Sand (SM) to Sandy Silt (ML)*; moist [FILL]

S2: 54.6% Fines (F4)

11.0

Loose, brown and gray, *Silty Sand with Gravel (SM)*; moist [FILL]

13.0

Soft, brown and gray, *Silt (ML) and Peat (PT)*; moist; contains few organics (wood/roots)

17.0

Medium stiff, dark gray, *Silt with Sand (ML)*; moist; trace organics (wood debris)

22.0

Loose to medium dense, gray-brown, *Silty Sand (SM) grading to Poorly Graded Sand with Silt (SP-SM)*; moist to wet

S8: 35.9% Fines (F3)

S9: Blow counts may be biased high due to overfull sampler

31.5

Bottom of Boring

Boring Completed 8/3/2023

Depth, Ft.

Symbol

Samples: S1, S2, S3 *, S4, S5, S6, S7, S8, S9

Ground Water Depth, Ft.: 8/3/2023

Penetration Resistance
(140 lb. weight, 30" drop)
▲ Blows per foot
● Water Content (%)

0 25 50 75 100

5 10 15 20 25 30 35

Weight of Hammer

0 10 20 30 40

■ PID Reading (ppm)

Plastic Limit ⊢●⊣ Liquid Limit
Natural Water Content

LEGEND

* Sample Not Recovered

Grab Sample

2" O.D. Split Spoon Sample

▽ Ground Water Level At Time Of Drilling

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

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**LOG OF BORING B-05**

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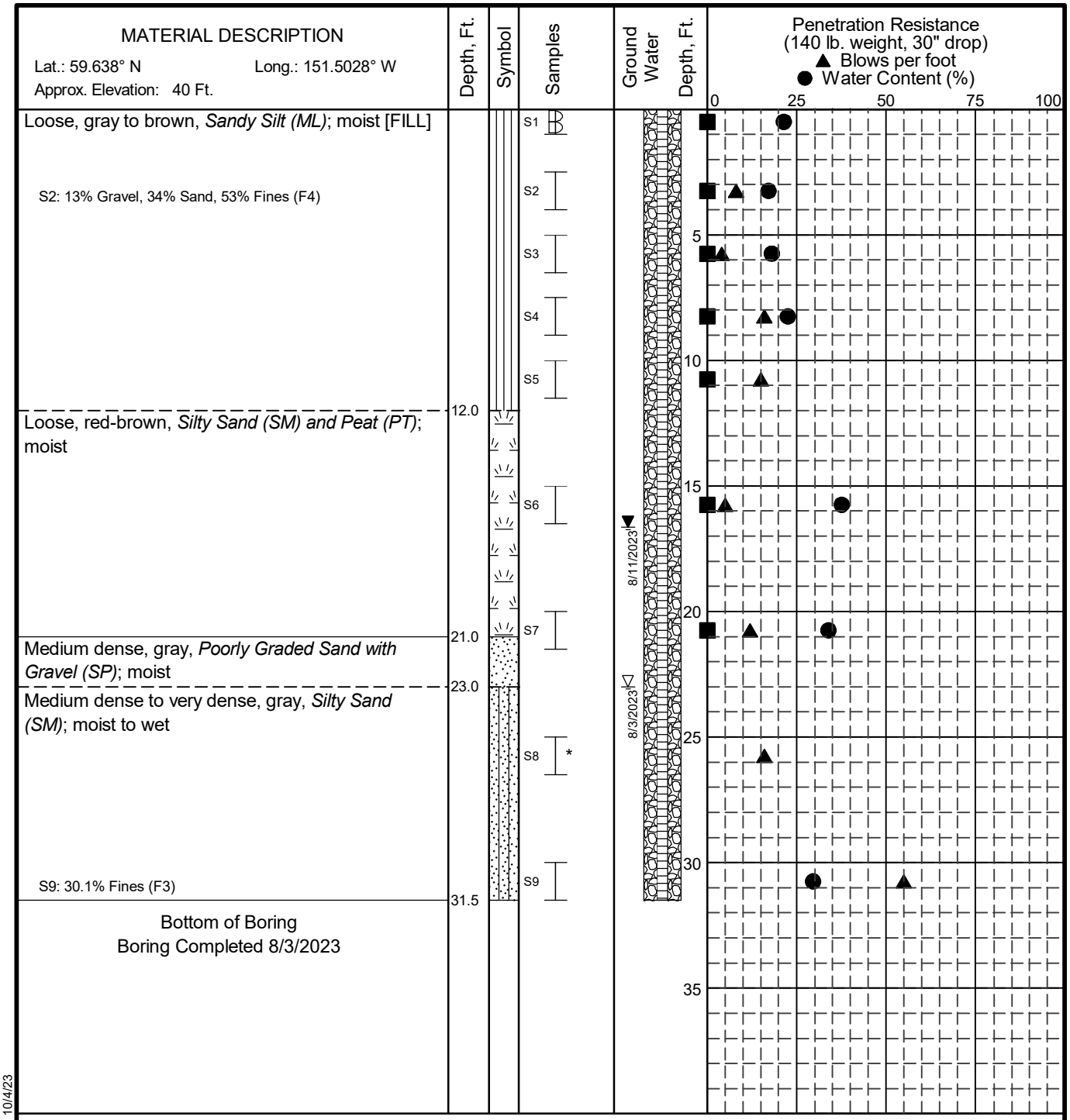
**FIG. 9**

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23



Version 1.0 - FINAL




LEGEND

- * Sample Not Recovered
- Grab Sample
- 2" O.D. Split Spoon Sample
- Ground Water Level At Time Of Drilling
- Static Water Level
- Blank Section, Cuttings Backfill
- Slotted Section, Cuttings Backfill

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

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**LOG OF BORING B-06**

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**FIG. 10**

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23



Version 1.0 - FINAL

| MATERIAL DESCRIPTION | Depth, Ft. | Symbol | Samples |
|---|---|---|---|
| Lat.: 59.6383° N Long.: 151.5017° W<br>Approx. Elevation: 40 Ft. | | | |
| Medium dense to dense, brown, *Poorly Graded Gravel with Silt and Sand (GP-GM)*; moist [FILL]<br>S1: 73% Gravel, 19% Sand, 8% Fines (F1) | | | S1, S2, S3* |
| | 10.0 | | S4 |
| Very dense, blue-gray, *Sandy Silt (ML)*; moist<br>S5: 66.9% Fines (F4) | | | S5 |
| | 15.4 | | S6* |
| Bottom of Boring<br>Boring Completed 8/3/2023 | | | |

Ground Water Depth, Ft.

Groundwater not encountered during drilling on 8/3/2023

Penetration Resistance
(140 lb. weight, 30" drop)
▲ Blows per foot
● Water Content (%)

0 25 50 75 100

50 blows for 5 inches

90 blows for 17 inches

50 blows for 4 inches

0 5 10 15 20 25 30 35

0 10 20 30 40

■ PID Reading (ppm)

Plastic Limit ⊢●⊣ Liquid Limit
Natural Water Content

LEGEND

* Sample Not Recovered
Grab Sample
2" O.D. Split Spoon Sample

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

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**LOG OF BORING B-07**

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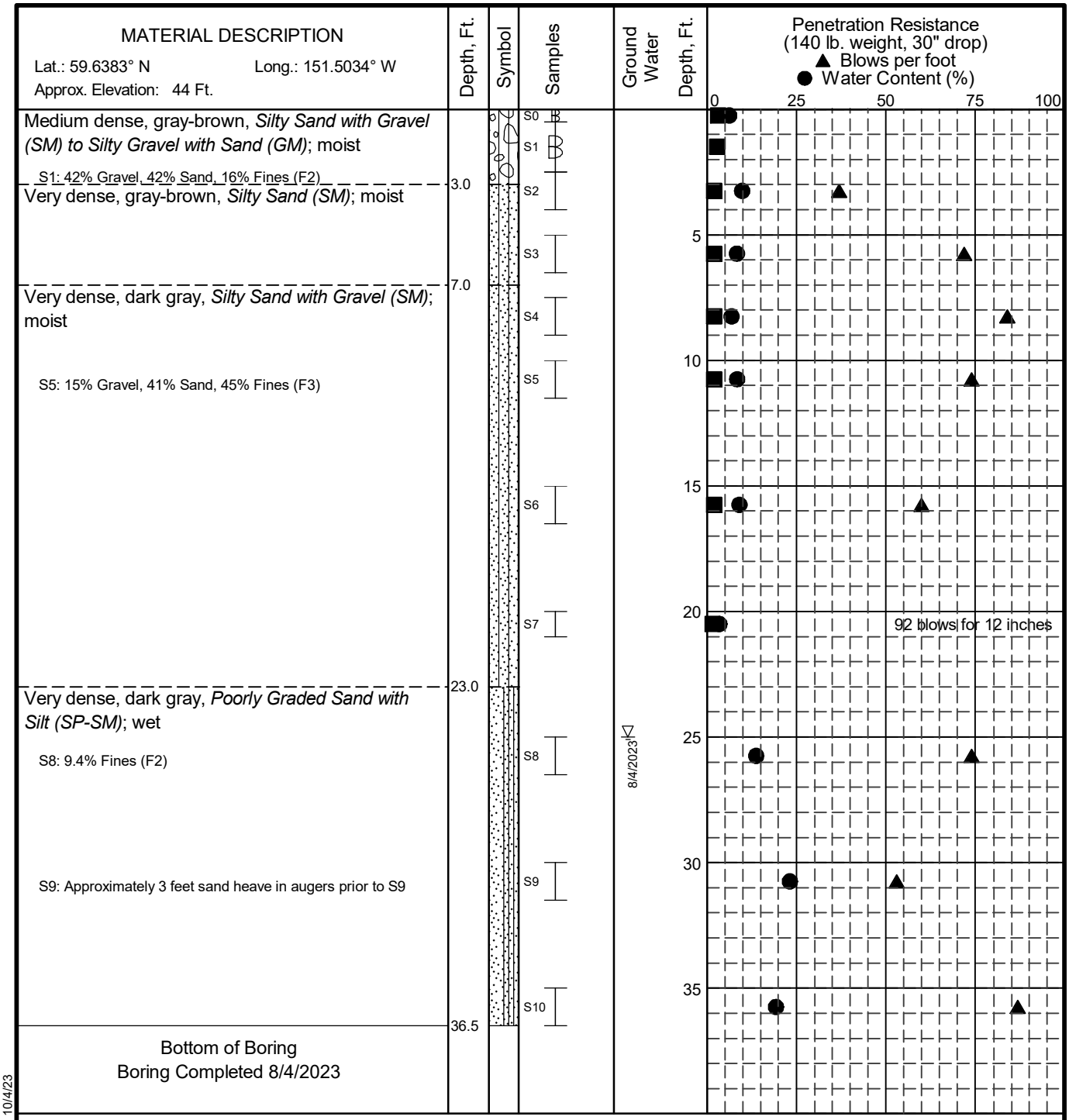
**FIG. 11**

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23




LEGEND

* Sample Not Recovered
Grab Sample
2" O.D. Split Spoon Sample
Ground Water Level At Time Of Drilling
PID Reading (ppm)
Plastic Limit — Liquid Limit
Natural Water Content

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

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Homer, Alaska

**LOG OF BORING B-08**

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**FIG. 12**

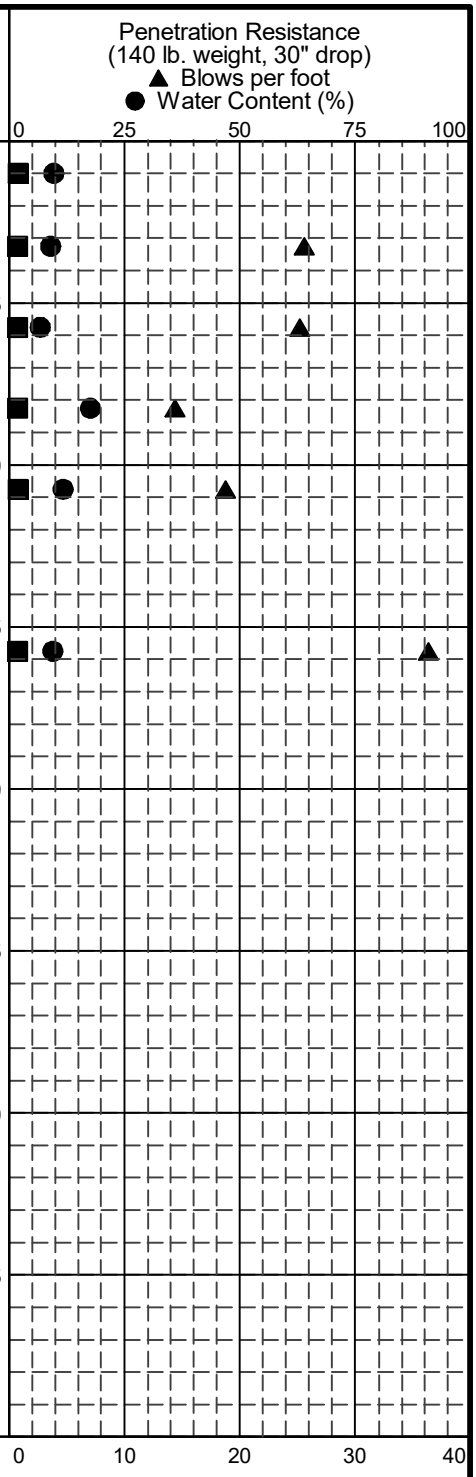
GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23



Version 1.0 - FINAL

| MATERIAL DESCRIPTION | Depth, Ft. | Symbol | Samples | Ground Water Depth, Ft. |
|---|---|---|---|---|
| Lat.: 59.6384° N Long.: 151.5028° W<br>Approx. Elevation: 44 Ft. | | | | |
| S1: 14% Gravel, 38% Sand, 48% Fines (F3)<br>Medium dense, brown to gray, *Silty Sand (SM)*; moist | 2.0 | | S1 | |
| Dense to very dense, brown to gray, *Silty Sand with Gravel (SM)*; moist | | | S2 | |
| S3: 26% Gravel, 35% Sand, 39% Fines (F3) | | | S3 | |
| | | | S4 | |
| | | | S5 | |
| | | | S6 | |
| Bottom of Boring<br>Boring Completed 8/5/2023 | 16.5 | | | |

Groundwater not encountered during drilling on 8/5/2023




LEGEND

* Sample Not Recovered
Grab Sample
2" O.D. Split Spoon Sample

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

Lighthouse Village Development
Homer, Alaska

**LOG OF BORING B-09**

October 2023 111320-200

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**FIG. 13**

MATERIAL DESCRIPTION

Lat.: 59.6381° N Long.: 151.5031° W

Approx. Elevation: 43 Ft.

Very dense, brown to gray, *Silty Sand with Gravel (SM)*; moist

S3: 20% Gravel, 40% Sand, 40% Fines (F3)

22.0

Dense to very dense, gray, *Silty Sand (SM)*; wet

S9: Approximately 3 feet sand heave in augers prior to S9

S10: 49.2% Fines (F3)

CONTINUED NEXT PAGE

Depth, Ft.

Symbol

Samples: S1, S2, S3, S4, S5, S6, S7, S8, S9, S10

Ground Water Depth, Ft.: 8/11/2023, 8/5/2023

Penetration Resistance
(140 lb. weight, 30" drop)
▲ Blows per foot
● Water Content (%)

0 25 50 75 100

5 10 15 20 25 30 35

84 blows for 10 inches

0 10 20 30 40

■ PID Reading (ppm)

Plastic Limit ⊢●⊣ Liquid Limit
Natural Water Content

LEGEND

* Sample Not Recovered
Grab Sample
2" O.D. Split Spoon Sample
Ground Water Level At Time Of Drilling
Static Water Level
Blank Section, Cuttings Backfill
Slotted Section, Cuttings Backfill

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

Lighthouse Village Development
Homer, Alaska

**LOG OF BORING B-10**

October 2023 111320-200

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**FIG. 14**
Sheet 1 of 2

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23



Version 1.0 - FINAL

MATERIAL DESCRIPTION

Lat.: 59.6381° N Long.: 151.5031° W

Approx. Elevation: 43 Ft.

Very dense, gray, *Silty Sand (SM)*; wet

45.8

Very dense, gray, *Silt (ML)*; wet

47.0

Very dense, gray, *Silty Sand (SM)*; wet

S13: 47.6% Fines (F3)

51.5

Bottom of Boring

Boring Completed 8/5/2023

Depth, Ft.

Symbol

Samples

S11

S12A

S12B

S13

Ground Water Depth, Ft.

Penetration Resistance
(140 lb. weight, 30" drop)
▲ Blows per foot
● Water Content (%)

0 25 50 75 100

45 50 55 60 65 70 75

0 10 20 30 40

■ PID Reading (ppm)

Plastic Limit ⊢●⊣ Liquid Limit
Natural Water Content

LEGEND

* Sample Not Recovered

Grab Sample

2" O.D. Split Spoon Sample

Ground Water Level At Time Of Drilling

Static Water Level

Blank Section, Cuttings Backfill

Slotted Section, Cuttings Backfill

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

Lighthouse Village Development
Homer, Alaska

**LOG OF BORING B-10**

October 2023 111320-200

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**FIG. 14**
**Sheet 2 of 2**

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23



Version 1.0 - FINAL

| MATERIAL DESCRIPTION | Depth, Ft. | Symbol | Samples |
|---|---|---|---|
| Lat.: 59.6386° N Long.: 151.5020° W<br>Approx. Elevation: 44 Ft. | | | |
| Medium dense to very dense, brown to gray, *Silty Sand with Gravel (SM)*; moist<br>S1: 15% Gravel, 44% Sand, 40% Fines (F3) | | | S1, S2, S3, S4, S5, S6 |
| | 15.7 | | |
| Bottom of Boring<br>Boring Completed 8/6/2023 | | | |

Ground Water Depth, Ft.

Groundwater not encountered during drilling on 8/6/2023

Penetration Resistance
(140 lb. weight, 30" drop)
▲ Blows per foot
● Water Content (%)

0 25 50 75 100

63 blows for 12 inches

10 blows for 17 inches

50 blows for 8 inches

0 5 10 15 20 25 30 35

0 10 20 30 40

■ PID Reading (ppm)

Plastic Limit ⊢●⊣ Liquid Limit
Natural Water Content

LEGEND

* Sample Not Recovered
Grab Sample
2" O.D. Split Spoon Sample

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

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**LOG OF BORING B-11**

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**FIG. 15**

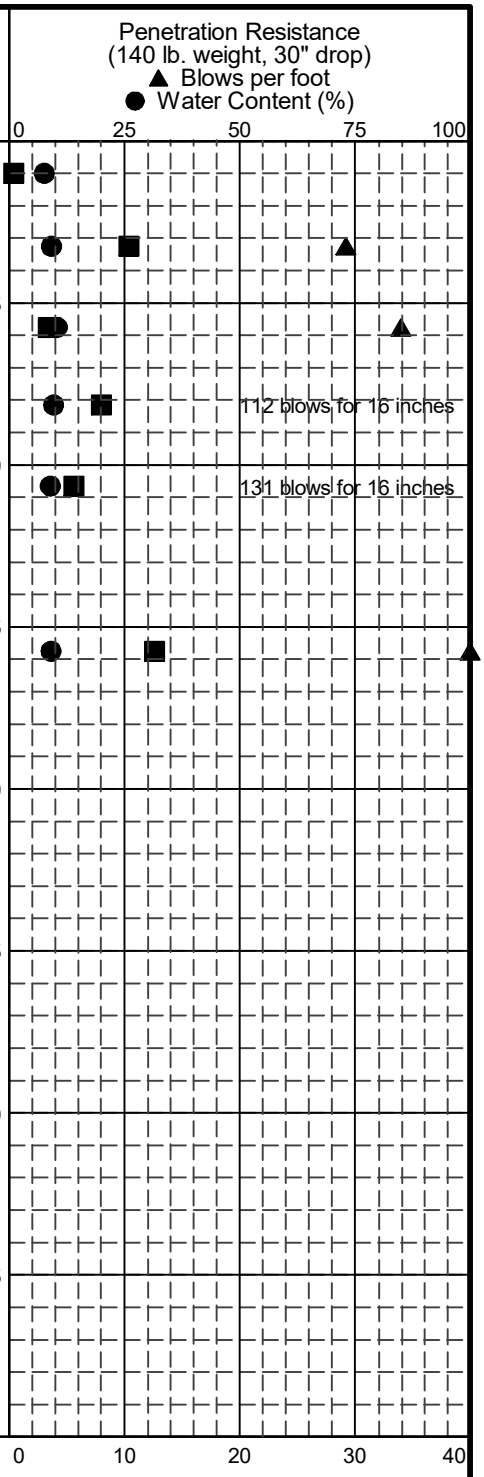
GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23



Version 1.0 - FINAL

| MATERIAL DESCRIPTION | Depth, Ft. | Symbol | Samples |
|---|---|---|---|
| Lat.: 59.6386° N Long.: 151.5026° W<br>Approx. Elevation: 47 Ft. | | | |
| Medium dense to very dense, brown to gray, *Silty Sand (SM) to Silty Sand with Gravel (SM)*; moist<br>S1: 21% Fines (F3)<br>S3: 17% Gravel, 36% Sand, 46% Fines (F3) | | | S1, S2, S3, S4, S5, S6 |
| Bottom of Boring<br>Boring Completed 8/6/2023 | 16.5 | | |

Ground Water Depth, Ft.: Groundwater not encountered during drilling on 8/6/2023




LEGEND

* Sample Not Recovered
Grab Sample
2" O.D. Split Spoon Sample

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

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**LOG OF BORING B-12**

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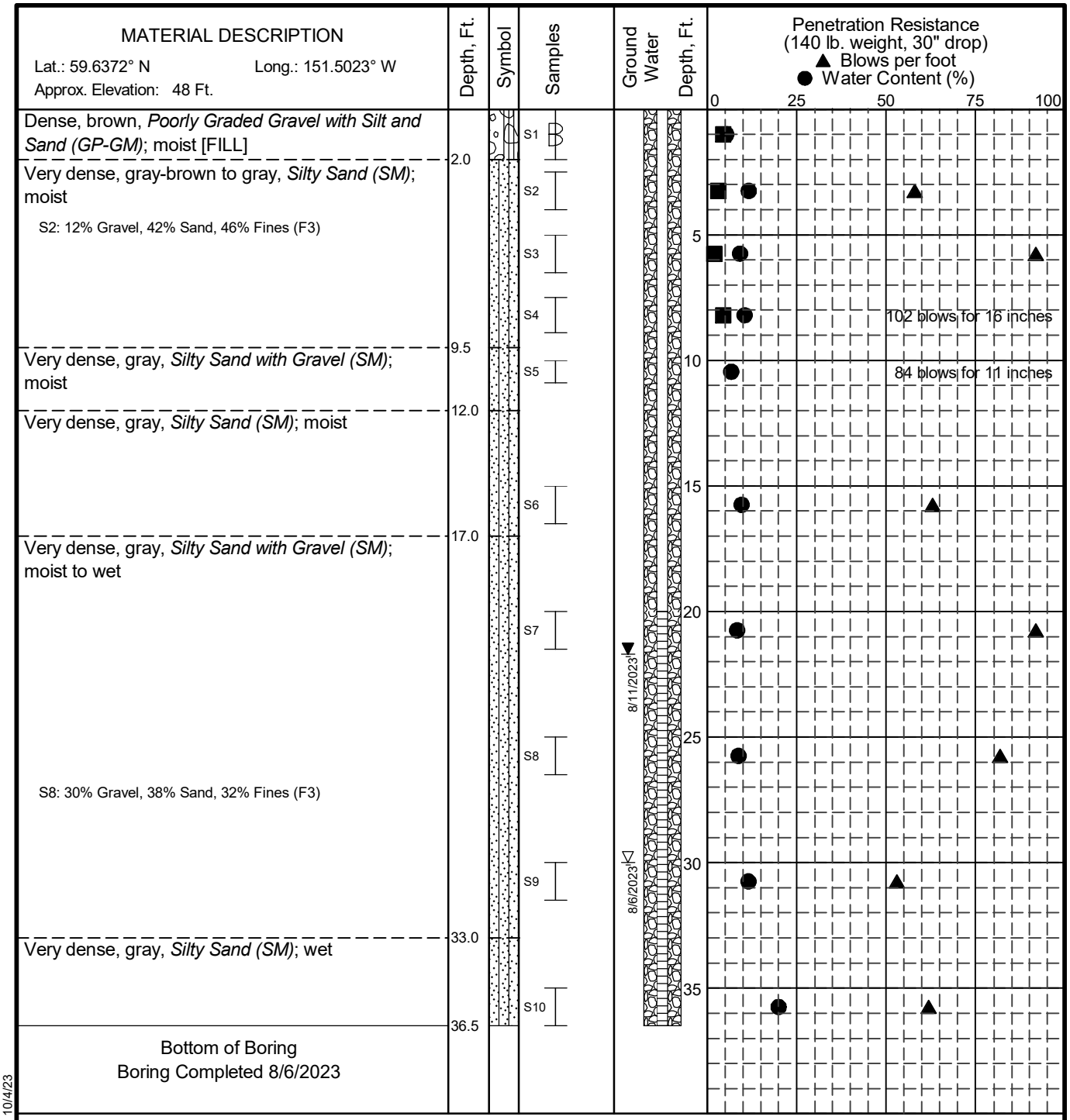
**FIG. 16**




LEGEND

- * Sample Not Recovered
- Grab Sample
- 2" O.D. Split Spoon Sample
- Ground Water Level At Time Of Drilling
- Static Water Level
- Blank Section, Cuttings Backfill
- Slotted Section, Cuttings Backfill

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

Lighthouse Village Development
Homer, Alaska

**LOG OF BORING B-13**

October 2023 111320-200

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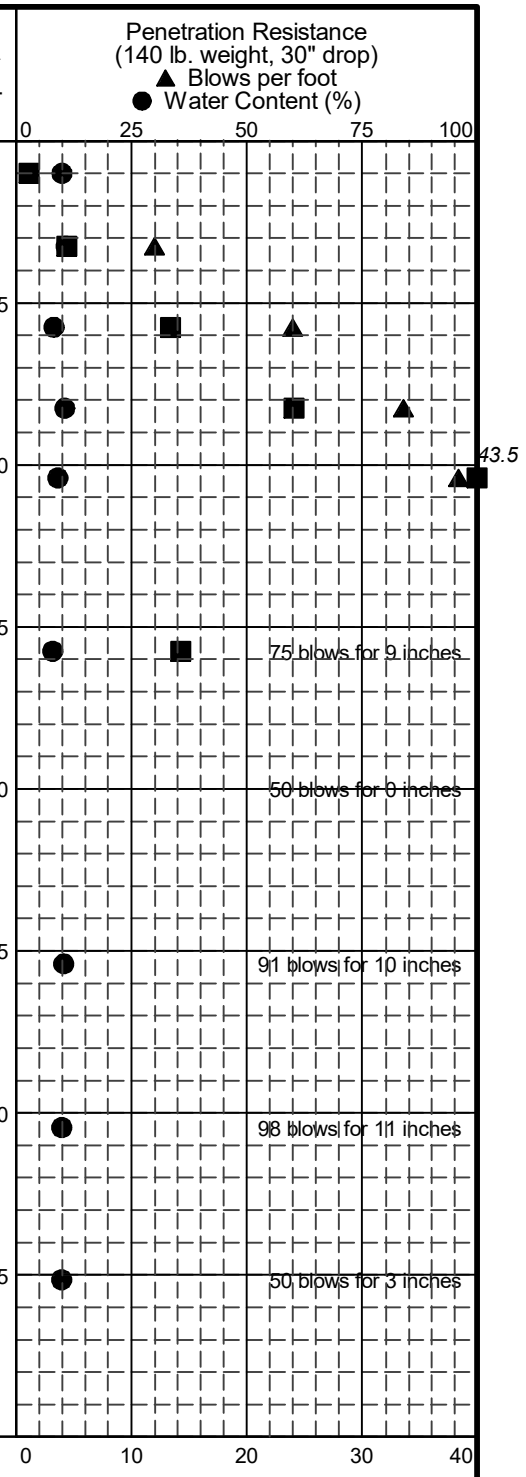
**FIG. 17**

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23



Version 1.0 - FINAL

| MATERIAL DESCRIPTION | Depth, Ft. | Symbol | Samples | Ground Water Depth, Ft. |
|---|---|---|---|---|
| Lat.: 59.6386° N Long.: 151.5031° W<br>Approx. Elevation: 47 Ft. | | | | |
| Medium dense, brown, *Silty Sand with Gravel (SM)*; moist<br>S1: 31% Gravel, 49% Sand, 20% Fines (F3) | 2.2 | | S1 | |
| Dense to very dense, brown to gray, *Silty Sand (SM)*; moist<br>S3: 42.2% Fines (F3) | | | S2, S3, S4, S5, S6, S7 * | |
| Very dense, gray, *Well-Graded Sand with Silt and Gravel (SW-SM)*; moist to wet<br>S9: 33% Gravel, 60% Sand, 7% Fines (F2) | 23.0 | | S8, S9 | 8/6/2023 ▽ |
| Bottom of Boring<br>Boring Completed 8/6/2023 | 35.3 | | S10 | |




LEGEND

* Sample Not Recovered
Grab Sample
2" O.D. Split Spoon Sample
▽ Ground Water Level At Time Of Drilling

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

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**LOG OF BORING B-14**

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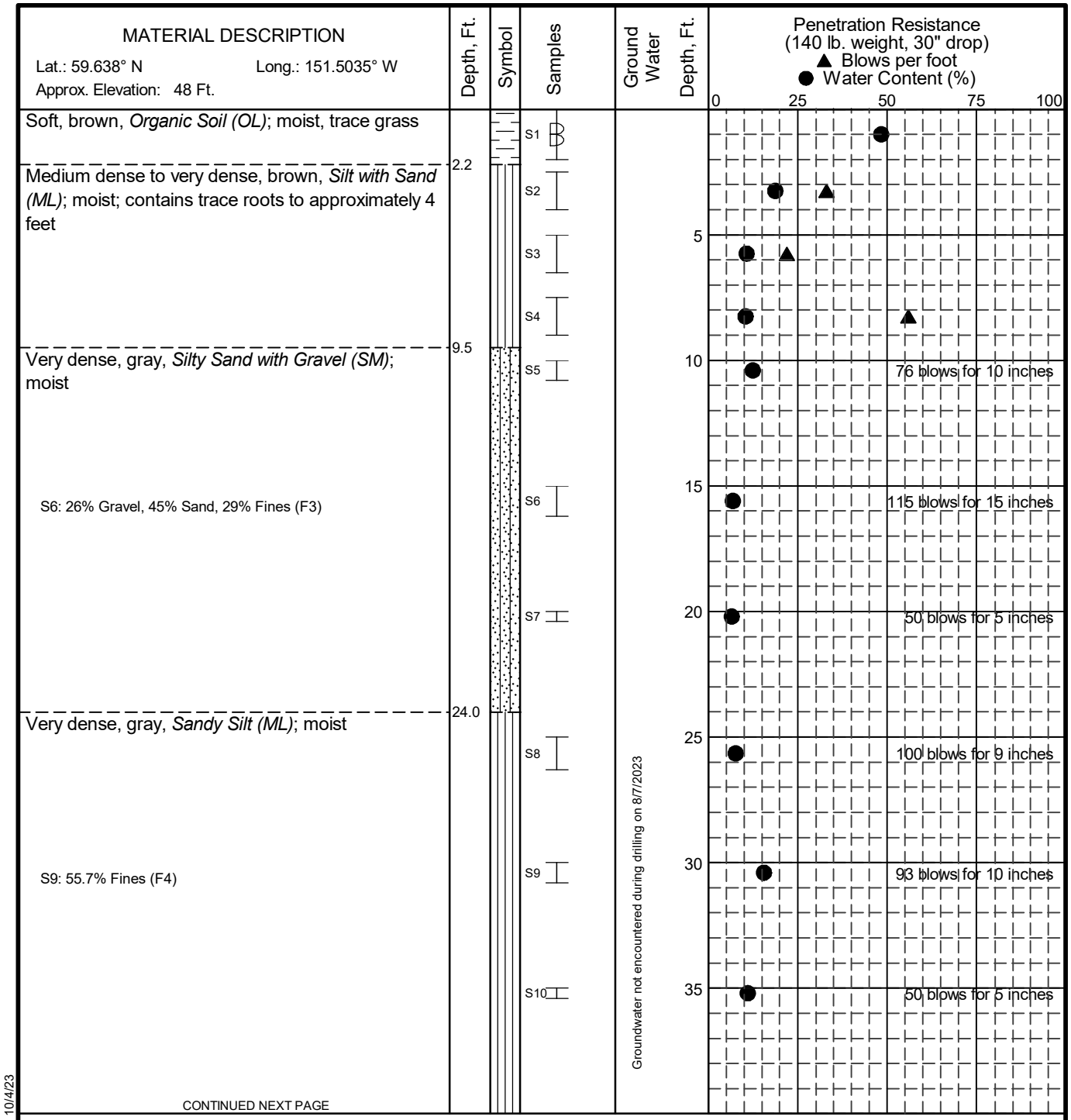
**FIG. 18**

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23



Version 1.0 - FINAL




LEGEND

* Sample Not Recovered
Grab Sample
2" O.D. Split Spoon Sample

Water Content (%)
Plastic Limit — Liquid Limit
Natural Water Content

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

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**LOG OF BORING B-15**

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**FIG. 19**
**Sheet 1 of 2**

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23



Version 1.0 - FINAL

| MATERIAL DESCRIPTION | Depth, Ft. | Symbol | Samples | Ground Water Depth, Ft. | Penetration Resistance (140 lb. weight, 30" drop) ▲ Blows per foot ● Water Content (%) |
|---|---|---|---|---|---|
| Lat.: 59.638° N Long.: 151.5035° W<br>Approx. Elevation: 48 Ft. | | | | | 0 25 50 75 100 |
| Very dense, gray, *Sandy Silt (ML)*; moist | 40.7 | | S11 | | 81 blows for 8 inches |
| Bottom of Boring<br>Boring Completed 8/7/2023 | | | | | |

Groundwater not encountered during drilling on 8/7/2023

45 50 55 60 65 70 75

0 25 50 75 100

● Water Content (%)

Plastic Limit ⊢●⊣ Liquid Limit

Natural Water Content

LEGEND

* Sample Not Recovered

Grab Sample

2" O.D. Split Spoon Sample

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

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**LOG OF BORING B-15**

October 2023 111320-200

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**FIG. 19**
**Sheet 2 of 2**

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23

| MATERIAL DESCRIPTION | Depth, Ft. | Symbol | Samples |
|---|---|---|---|
| Lat.: 59.6383° N Long.: 151.5042° W<br>Approx. Elevation: 57 Ft. | | | |
| Soft, brown, *Organic Soil (OL)*; moist; trace grass | | | S1 |
| Medium dense, gray-brown, *Silty Sand (SM)*; moist<br>S2: 36.4% Fines (F3) | 2.2 | | S2, S3, S4 |
| Medium dense to very dense, gray-brown, *Silty Sand with Gravel (SM)*; moist<br>S5: 24% Gravel, 41% Sand, 35% Fines (F3) | 9.5 | | S5, S6 |
| Very dense, gray, *Silty Sand (SM)*; moist | 17.0 | | S7 |
| Very dense, gray, *Sandy Silt (ML)*; moist<br>S8: 52.8% Fines (F4) | 25.0 | | S8, S9, S10 |
| Bottom of Boring<br>Boring Completed 8/7/2023 | 35.5 | | |

Ground Water Depth, Ft.: Groundwater not encountered during drilling on 8/7/2023

Penetration Resistance
(140 lb. weight, 30" drop)
▲ Blows per foot
● Water Content (%)

0 25 50 75 100

5 10 15 20 25 30 35

50 blows for 6 inches
88 blows for 10 inches
93 blows for 11 inches
77 blows for 10 inches

0 25 50 75 100

● Water Content (%)
Plastic Limit ⊢●⊣ Liquid Limit
Natural Water Content

LEGEND

* Sample Not Recovered
Grab Sample
2" O.D. Split Spoon Sample

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

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**LOG OF BORING B-16**

October 2023 111320-200

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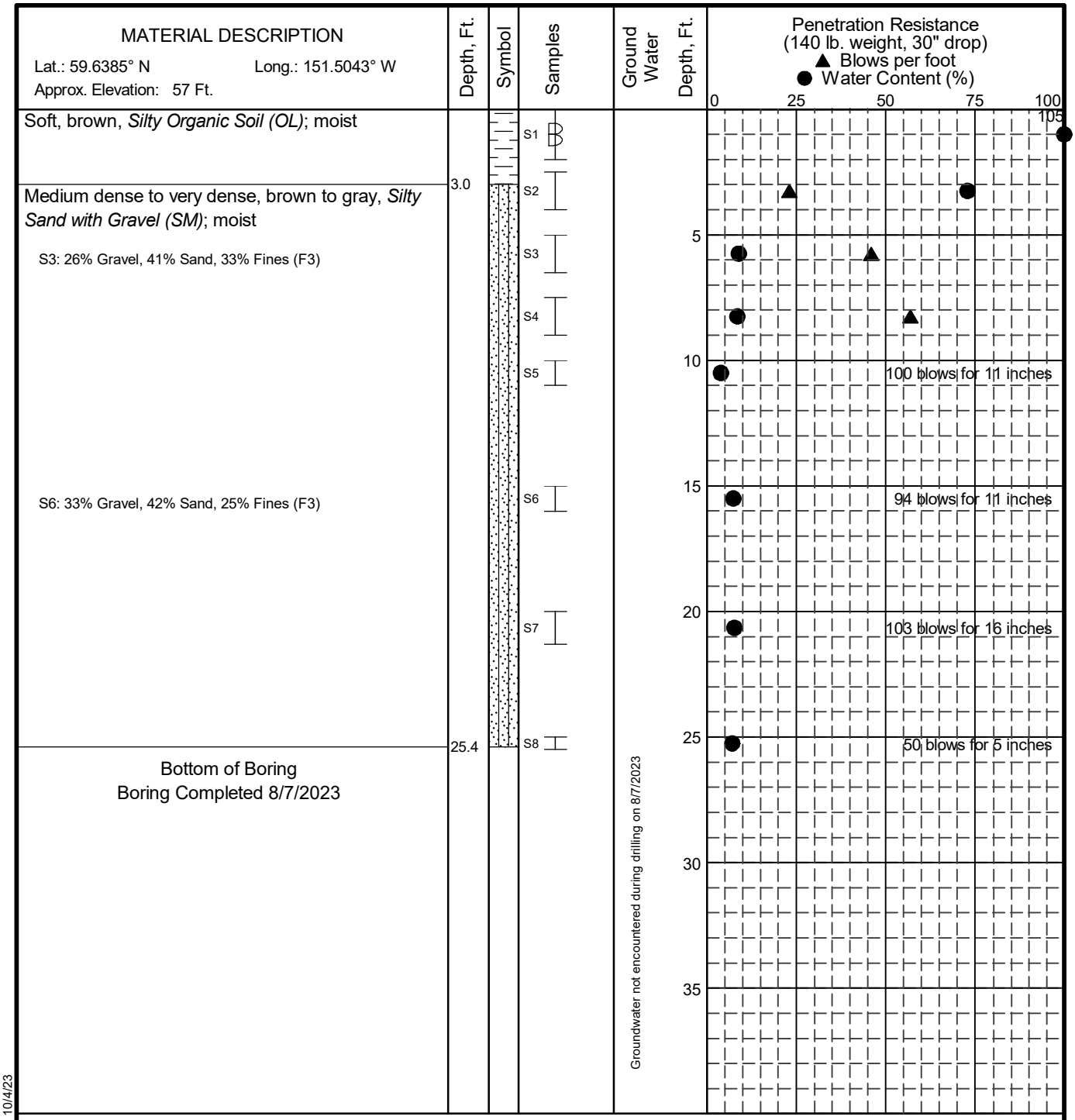
**FIG. 20**

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23



Version 1.0 - FINAL




LEGEND

* Sample Not Recovered
Grab Sample
2" O.D. Split Spoon Sample

Water Content (%)
Plastic Limit — Liquid Limit
Natural Water Content

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

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**LOG OF BORING B-17**

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**FIG. 21**

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23



Version 1.0 - FINAL

| MATERIAL DESCRIPTION | Depth, Ft. | Symbol | Samples |
|---|---|---|---|
| Lat.: 59.6384° N Long.: 151.5033° W<br>Approx. Elevation: 45 Ft. | | | |
| Medium dense, brown to gray, *Poorly Graded Sand with Silt and Gravel (SP-SM) to Silty Sand (SM)*; moist | | | S1 |
| | 3.0 | | S2 |
| Very dense, gray, *Silty Sand (SM)*; moist | | | S3 |
| | | | S4 |
| | | | S5 |
| | 11.5 | | |
| Bottom of Boring<br>Boring Completed 8/9/2023 | | | |

Ground Water Depth, Ft.

Groundwater not encountered during drilling on 8/9/2023

Penetration Resistance
(140 lb. weight, 30" drop)
▲ Blows per foot
● Water Content (%)

0 25 50 75 100

5 10 15 20 25 30 35

0 10 20 30 40

■ PID Reading (ppm)

Plastic Limit ⊢●⊣ Liquid Limit
Natural Water Content

LEGEND

* Sample Not Recovered
Grab Sample
2" O.D. Split Spoon Sample

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

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**LOG OF BORING B-18**

October 2023 111320-200

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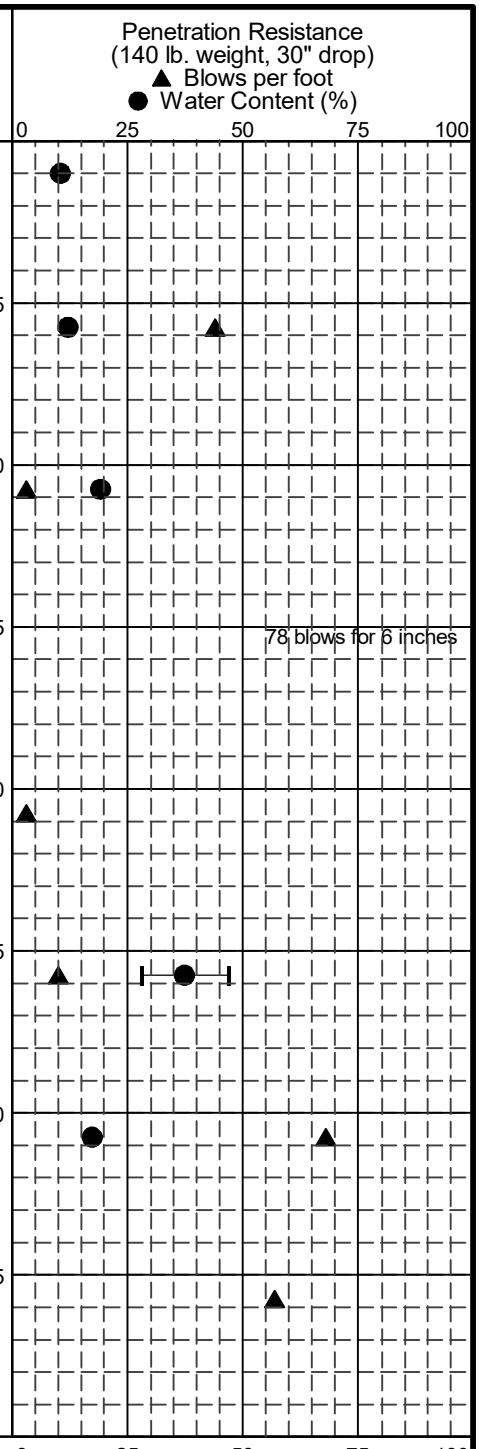
**FIG. 22**

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23

| MATERIAL DESCRIPTION<br>Lat.: 59.6377° N Long.: 151.5025° W<br>Approx. Elevation: 30 Ft. | Depth, Ft. | Symbol | Samples | Ground Water Depth, Ft. |
|---|---|---|---|---|
| Medium dense to dense, brown, *Silty Sand with Gravel (SM)*; moist [FILL] | | | S1 | |
| S2: 27% Gravel, 38% Sand, 35% Fines (F3) | | | S2 | |
| Loose, gray, *Silty Sand (SM)*, moist [FILL] | 7.0 | | S3 | |
| Wood | 14.5 | | S4 | |
| Soft to medium stiff, gray, *Sandy Silt (ML)*; moist; medium plasticity fines<br>Groundwater depth was difficult to discern due to drilling method and was estimated from compression wave test results. | 16.5 | | S5 * | 8/9/2023 |
| S6: 63.5% Fines (F4) | | | S6 | |
| Very dense, gray, *Poorly Graded Sand with Silt (SP-SM)*; moist | 27.0 | | S7 | |
| S7: Approximately 2 feet sand heave in augers prior to S7.<br>0% Gravel, 90% Sand, 10% Fines (F2) | | | | |
| S8: Approximately 5 feet sand heave in augers prior to S8 | | | S8 | |
| CONTINUED NEXT PAGE | | | | |




LEGEND

* Sample Not Recovered
Grab Sample
2" O.D. Split Spoon Sample
Ground Water Level At Time Of Drilling
Blank Casing, Annular Seal
● Water Content (%)
Plastic Limit — Liquid Limit
Natural Water Content

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

Lighthouse Village Development
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**LOG OF BORING B-19**

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**FIG. 23**
Sheet 1 of 3



Version 1.0 - FINAL

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23

| MATERIAL DESCRIPTION<br>Lat.: 59.6377° N Long.: 151.5025° W<br>Approx. Elevation: 30 Ft. | Depth, Ft. | Symbol | Samples | Ground Water Depth, Ft. | Penetration Resistance (140 lb. weight, 30" drop)<br>▲ Blows per foot<br>● Water Content (%) |
|---|---|---|---|---|---|
| Very dense, gray, *Poorly Graded Sand (SP)*; moist | | | S9 | | 104 blows for 17 inches |
| S9: Approximately 5 feet sand heave in augers prior to S9 | 43.0 | | | | |
| Dense to very dense, gray, *Sandy Silt (ML) to Silty Sand (SM)*; moist | | | | | |
| S10: 58% Fines (F4) | | | S10 | | |
| | | | S11 | | |
| | | | S12 | | |
| S13: 55.6% Fines (F4) | | | S13 | | |
| | | | S14 | | 99 blows for 17 inches |
| | | | S15 | | |
| CONTINUED NEXT PAGE | | | | | |

0 25 50 75 100

45 50 55 60 65 70 75

0 25 50 75 100

LEGEND

* Sample Not Recovered
Grab Sample
2" O.D. Split Spoon Sample

Ground Water Level At Time Of Drilling

Blank Casing, Annular Seal

● Water Content (%)
Plastic Limit — Liquid Limit
Natural Water Content

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

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**LOG OF BORING B-19**

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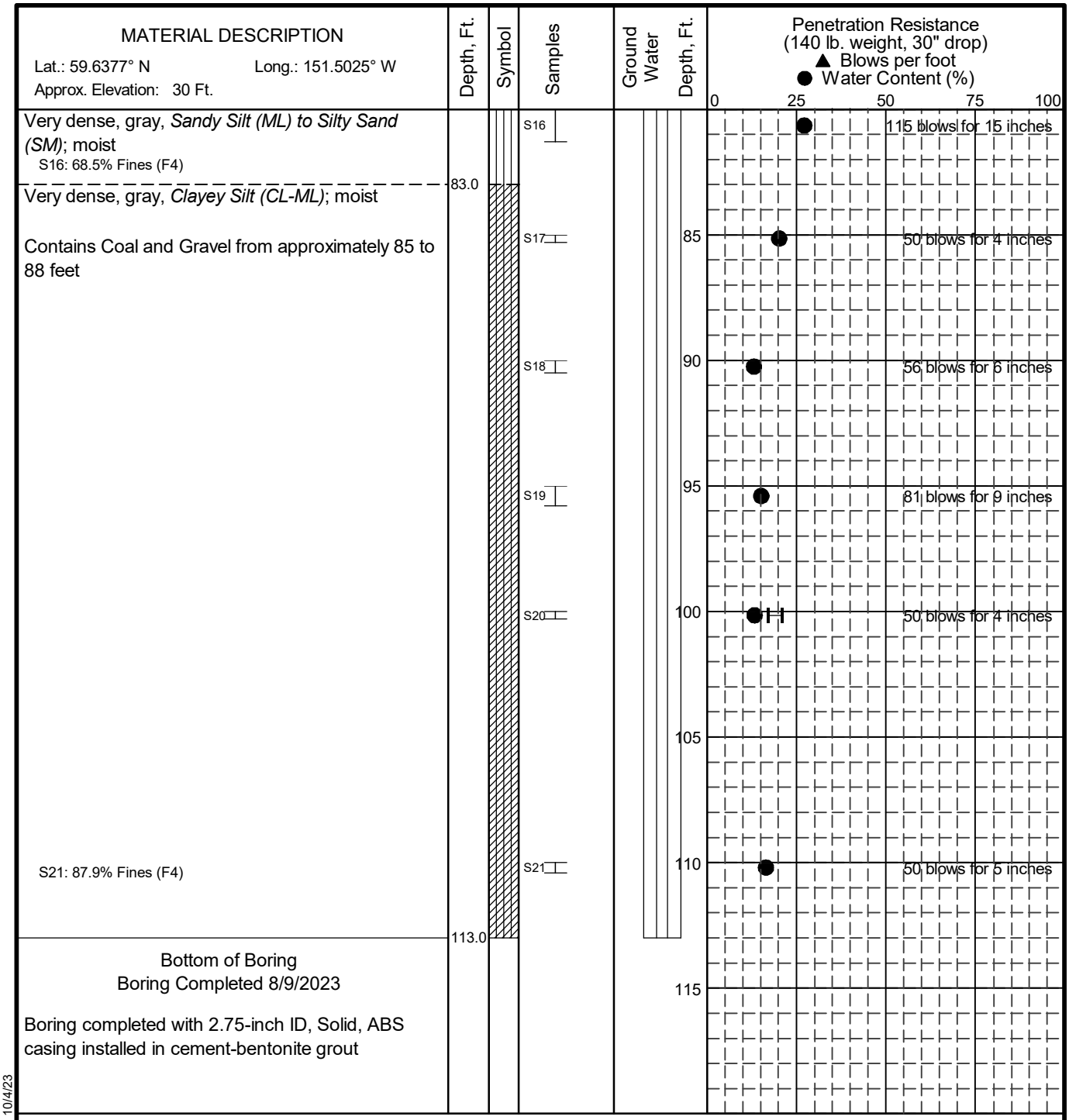
**FIG. 23**
Sheet 2 of 3



Version 1.0 - FINAL

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23




LEGEND

* Sample Not Recovered
Grab Sample
2" O.D. Split Spoon Sample
Ground Water Level At Time Of Drilling
Blank Casing, Annular Seal

● Water Content (%)
Plastic Limit — Liquid Limit
Natural Water Content

NOTES

1. The stratification lines represent the approximate boundaries between soil types, and the transition may be gradual.
2. The discussion in the text of this report is necessary for a proper understanding of the nature of subsurface materials.
3. Water level, if indicated above, is for the date specified and may vary.

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**LOG OF BORING B-19**

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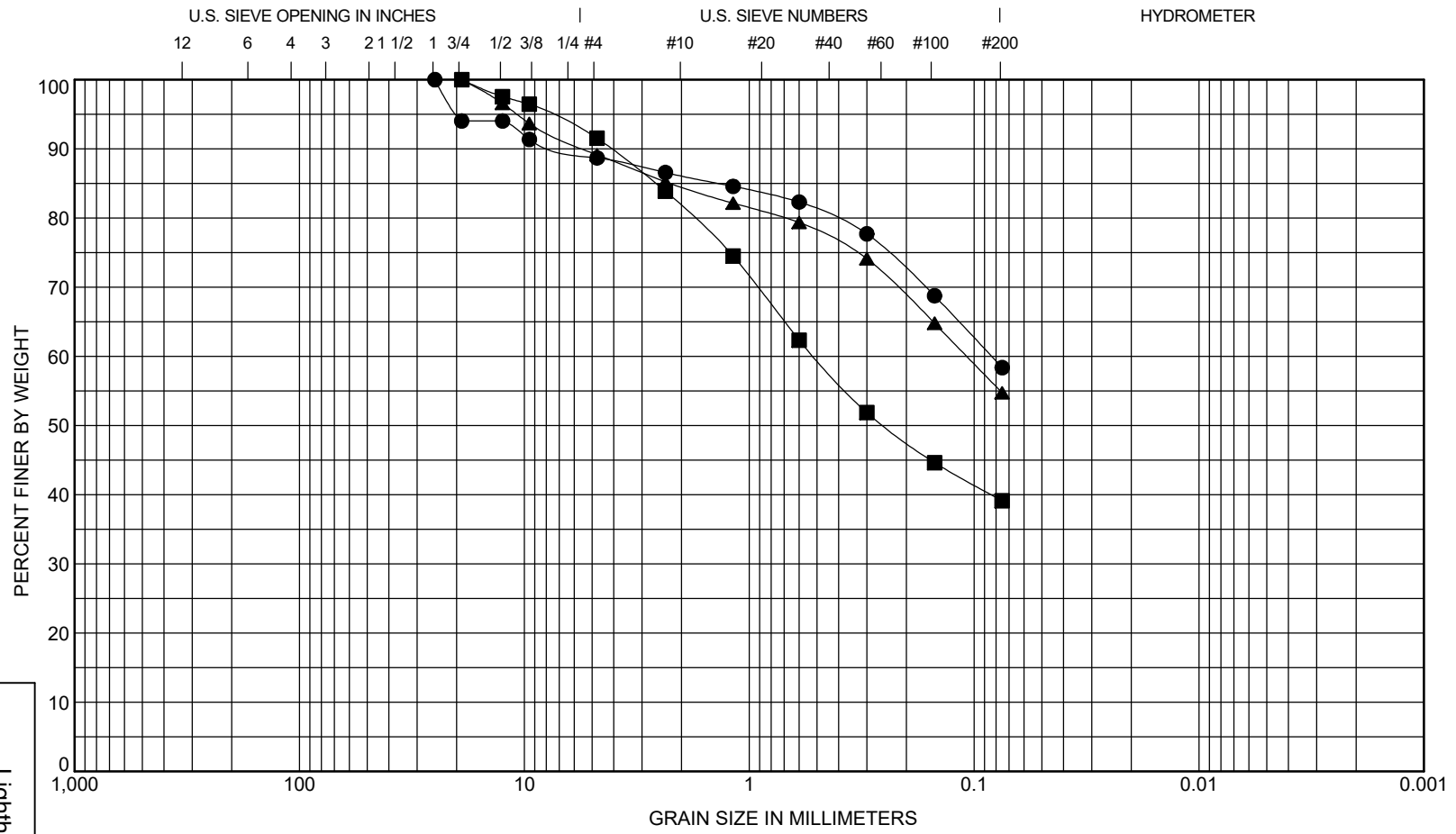
**FIG. 23**
Sheet 3 of 3

GEOTECHNICAL LOG GINT TEMPLATE7.GPJ S&W GEO1.GDT 10/4/23



Version 1.0 - FINAL




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Sample | | Depth, Ft | USCS Classification | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|---|
| ● | B-01 S3 | 5.0 - 6.5 | **Sandy Silt (ML)** | | | | | |
| ■ | B-01 S8 | 25.0 - 26.5 | **Silty Sand (SM)** | | | | | |
| ▲ | B-02 S1 | 0.0 - 1.5 | **Sandy Silt (ML)** | | | | | |

| Sample | | Depth, Ft | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|---|---|
| ● | B-01 S3 | 5.0 - 6.5 | **25** | **0.08** | | | **11** | **30** | **58** | |
| ■ | B-01 S8 | 25.0 - 26.5 | **19** | **0.51** | | | **8** | **52** | **39** | |
| ▲ | B-02 S1 | 0.0 - 1.5 | **19** | **0.1** | | | **11** | **34** | **55** | |

**GRAIN SIZE CLASSIFICATION**

Lighthouse Village Development
Homer, Alaska

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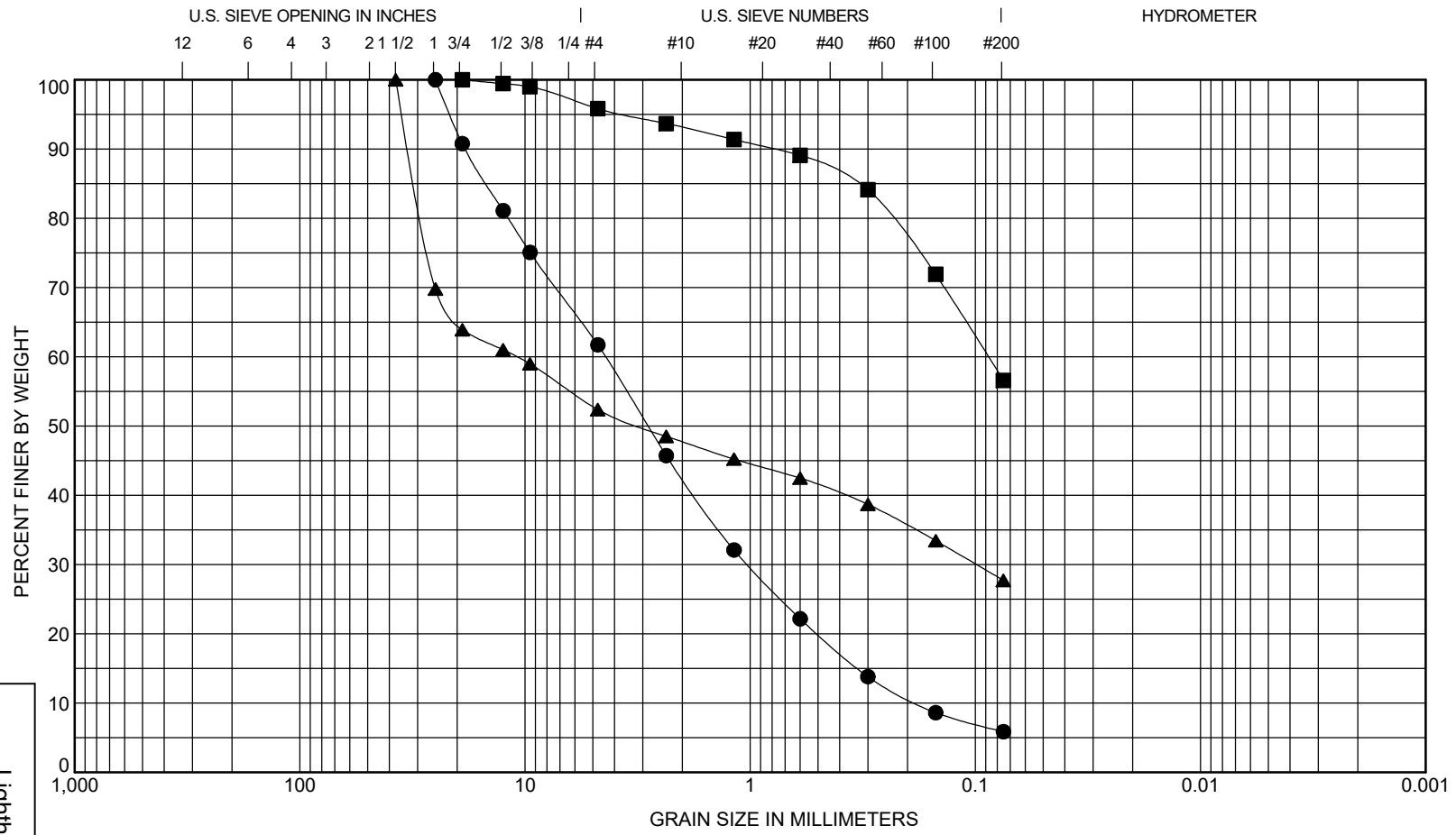
**FIG. 24**
**Sheet 1 of 10**




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| | Sample | Depth, Ft | USCS Classification | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|---|
| ● | B-02 S8 | 30.0 - 31.5 | **Well-Graded Sand with Silt and Gravel (SW-SM)** | | | | **1.3** | **24.4** |
| ■ | B-03 S2 | 2.5 - 4.0 | **Sandy Silt (ML)** | | | | | |
| ▲ | B-03 S4 | 7.5 - 9.0 | **Silty Gravel with Sand (GM)** | | | | | |

| | Sample | Depth, Ft | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|---|---|
| ● | B-02 S8 | 30.0 - 31.5 | **25** | **4.41** | **1.02** | **0.18** | **38** | **56** | **6** | |
| ■ | B-03 S2 | 2.5 - 4.0 | **19** | **0.09** | | | **4** | **39** | **57** | |
| ▲ | B-03 S4 | 7.5 - 9.0 | **37.5** | **10.9** | **0.1** | | **48** | **25** | **28** | |

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**GRAIN SIZE CLASSIFICATION**

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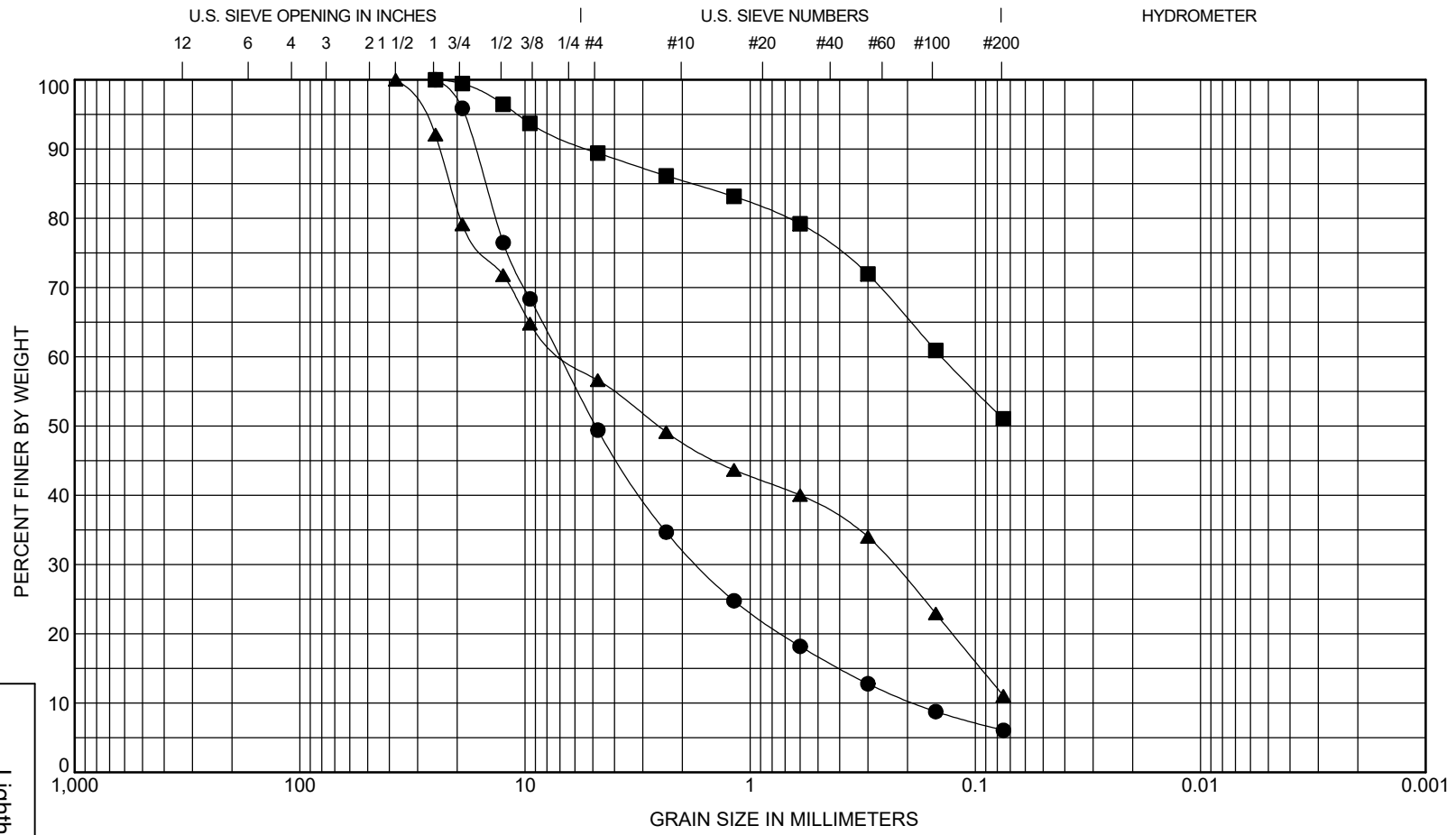
**FIG. 24**
**Sheet 2 of 10**




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Sample | | Depth, Ft | USCS Classification | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|---|
| ● | B-03 S9 | 30.0 - 31.5 | **Well-Graded Gravel with Silt and Sand (GW-GM)** | | | | **2.2** | **37.7** |
| ■ | B-04 S1 | 0.0 - 1.5 | **Sandy Silt (ML)** | | | | | |
| ▲ | B-04 S7 | 20.0 - 21.5 | **Poorly Graded Sand with Silt and Gravel (SP-SM)** | | | | **0.1** | **89.6** |

| Sample | | Depth, Ft | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|---|---|
| ● | B-03 S9 | 30.0 - 31.5 | **25** | **7** | **1.7** | **0.19** | **51** | **43** | **6** | |
| ■ | B-04 S1 | 0.0 - 1.5 | **25** | **0.14** | | | **11** | **38** | **51** | |
| ▲ | B-04 S7 | 20.0 - 21.5 | **37.5** | **6.3** | **0.23** | | **43** | **46** | **11** | |

Lighthouse Village Development
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**GRAIN SIZE CLASSIFICATION**

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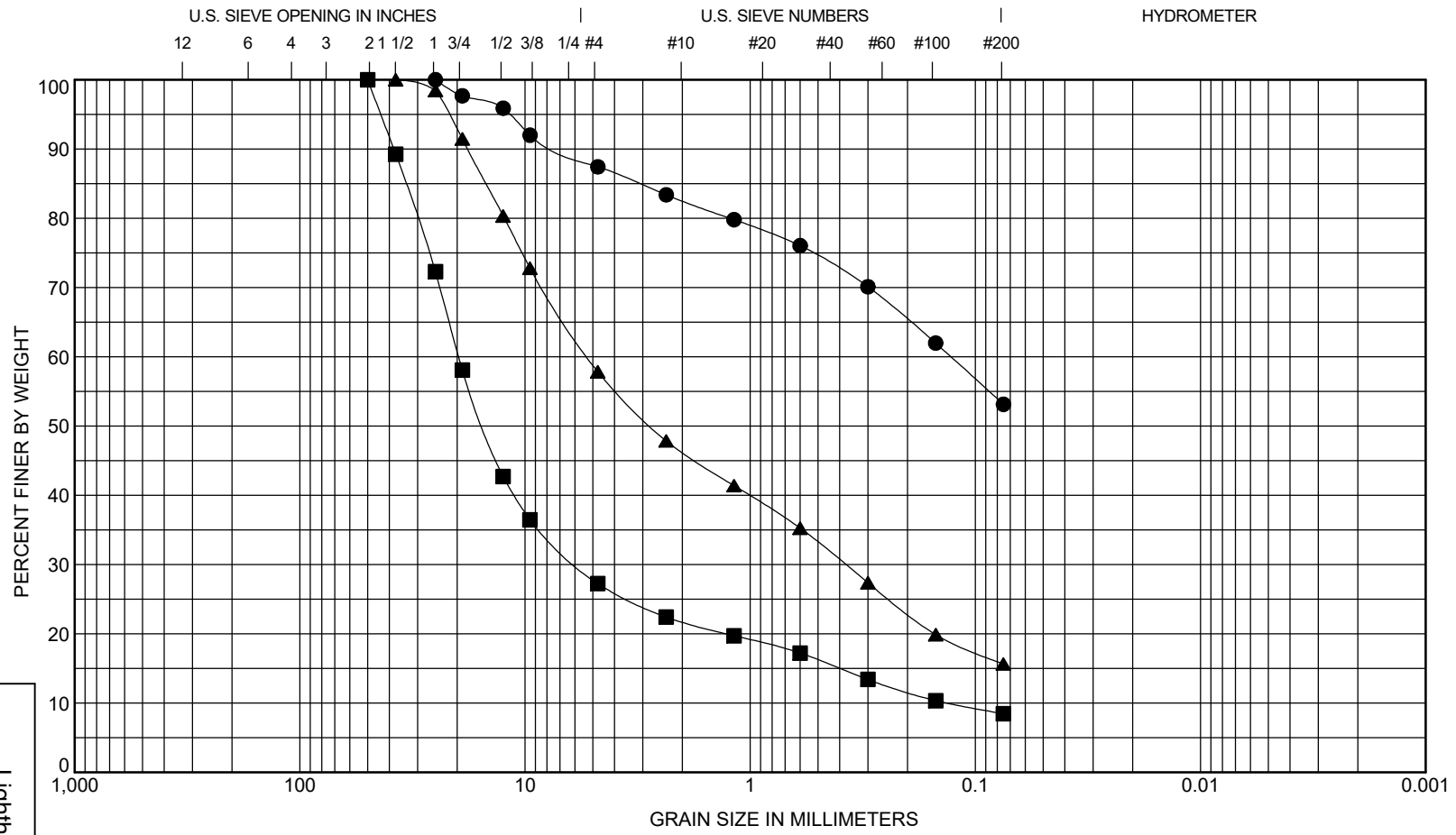
**FIG. 24**
**Sheet 3 of 10**




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Sample | | Depth, Ft | USCS Classification | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|---|
| ● | B-06 S2 | 2.5 - 4.0 | **Sandy Silt (ML)** | | | | | |
| ■ | B-07 S1 | 0.0 - 1.5 | **Poorly Graded Gravel with Silt and Sand (GP-GM)** | | | | **13.1** | **149.6** |
| ▲ | B-08 S1 | 0.0 - 1.5 | **Silty Sand with Gravel (SM) to Silty Gravel with Sand (GM)** | | | | | |

| Sample | | Depth, Ft | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|---|---|
| ● | B-06 S2 | 2.5 - 4.0 | **25** | **0.13** | | | **13** | **34** | **53** | |
| ■ | B-07 S1 | 0.0 - 1.5 | **50** | **19.72** | **5.84** | **0.13** | **73** | **19** | **8** | |
| ▲ | B-08 S1 | 0.0 - 1.5 | **37.5** | **5.2** | **0.38** | | **42** | **42** | **16** | |

**GRAIN SIZE CLASSIFICATION**

Lighthouse Village Development
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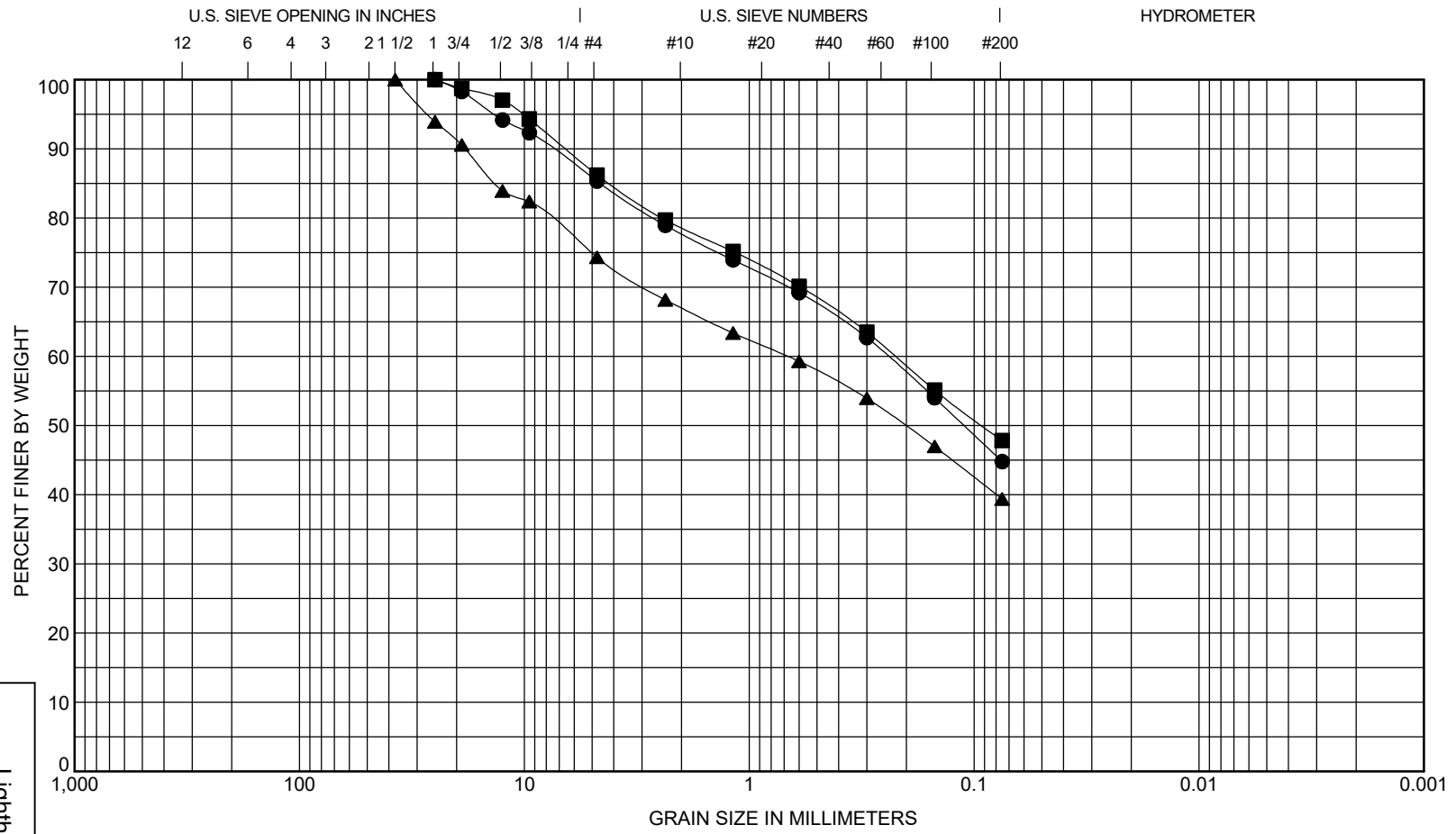
**FIG. 24**
**Sheet 4 of 10**




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Sample | | Depth, Ft | USCS Classification | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|---|
| ● | B-08 S5 | 10.0 - 11.5 | **Silty Sand with Gravel (SM)** | | | | | |
| ■ | B-09 S1 | 0.0 - 1.5 | **Silty Sand (SM)** | | | | | |
| ▲ | B-09 S3 | 5.0 - 6.5 | **Silty Sand with Gravel (SM)** | | | | | |

| Sample | | Depth, Ft | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|---|---|
| ● | B-08 S5 | 10.0 - 11.5 | **25** | **0.24** | | | **15** | **41** | **45** | |
| ■ | B-09 S1 | 0.0 - 1.5 | **25** | **0.22** | | | **14** | **38** | **48** | |
| ▲ | B-09 S3 | 5.0 - 6.5 | **37.5** | **0.6** | | | **26** | **35** | **39** | |

**GRAIN SIZE CLASSIFICATION**

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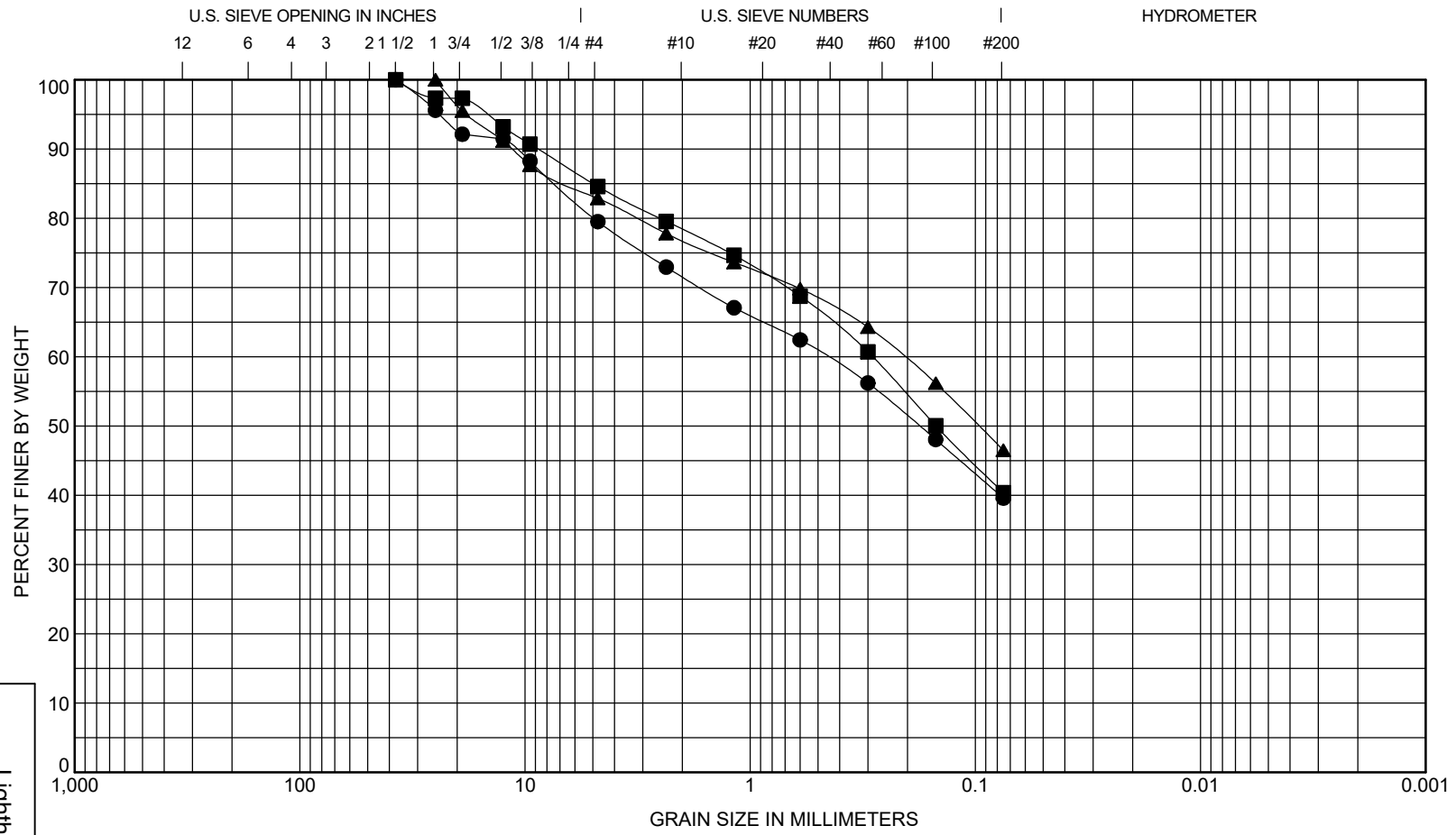
Lighthouse Village Development
Homer, Alaska

**FIG. 24**
**Sheet 5 of 10**




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Sample | | Depth, Ft | USCS Classification | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|---|
| ● | B-10 S3 | 5.0 - 6.5 | Silty Sand with Gravel (SM) | | | | | |
| ■ | B-11 S1 | 0.0 - 1.5 | Silty Sand with Gravel (SM) | | | | | |
| ▲ | B-12 S3 | 5.0 - 6.5 | Silty Sand with Gravel (SM) | | | | | |

| Sample | | Depth, Ft | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|---|---|
| ● | B-10 S3 | 5.0 - 6.5 | 37.5 | 0.46 | | | 20 | 40 | 40 | |
| ■ | B-11 S1 | 0.0 - 1.5 | 37.5 | 0.29 | | | 15 | 44 | 40 | |
| ▲ | B-12 S3 | 5.0 - 6.5 | 25 | 0.2 | | | 17 | 36 | 46 | |

# GRAIN SIZE CLASSIFICATION

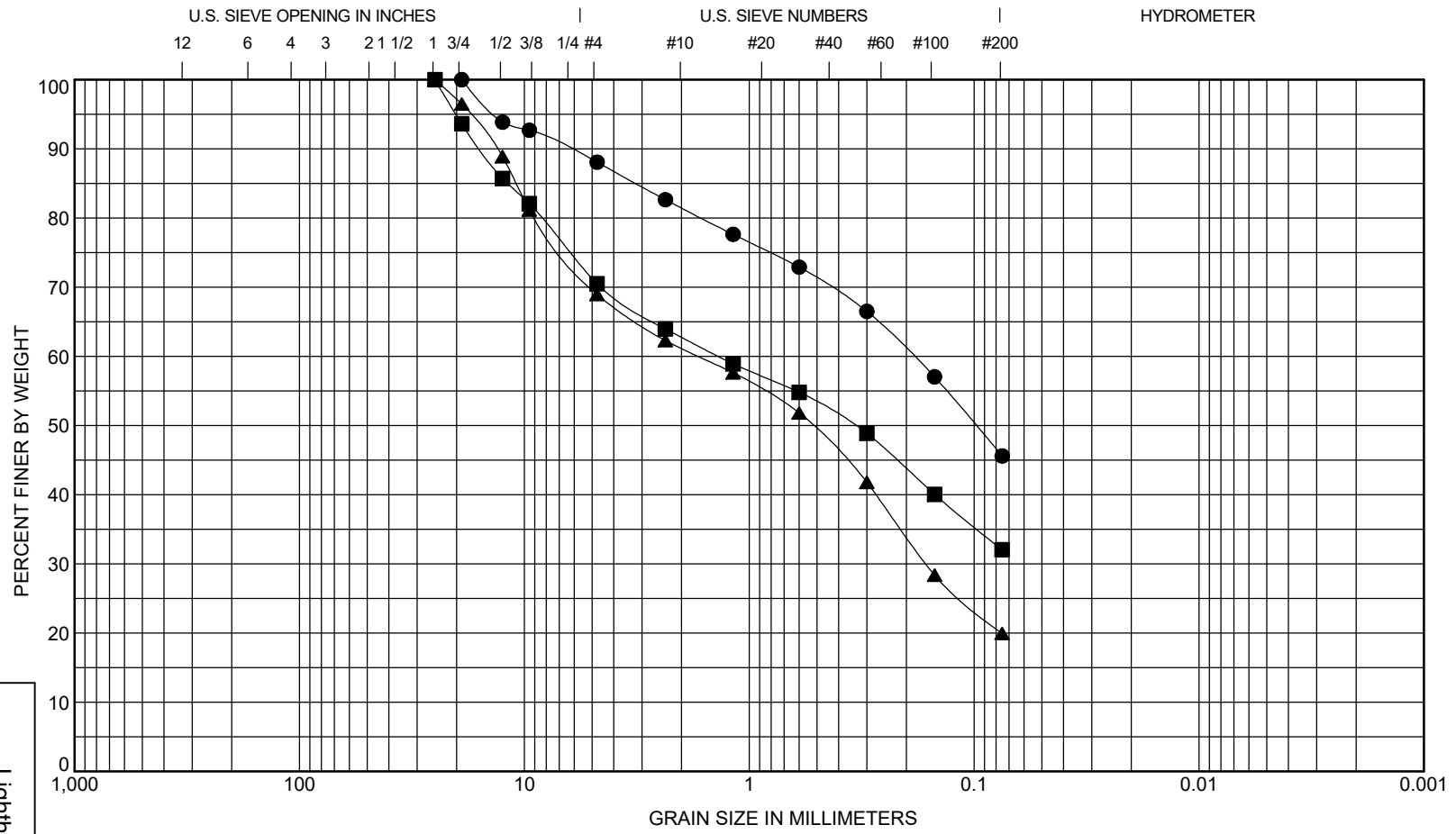
Lighthouse Village Development
Homer, Alaska

October 2023

111320-200

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

FIG. 24
Sheet 6 of 10




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| | Sample | Depth, Ft | USCS Classification | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|---|
| ● | B-13 S2 | 2.5 - 4.0 | **Silty Sand (SM)** | | | | | |
| ■ | B-13 S8 | 25.0 - 26.5 | **Silty Sand with Gravel (SM)** | | | | | |
| ▲ | B-14 S1 | 0.0 - 1.5 | **Silty Sand with Gravel (SM)** | | | | | |

| | Sample | Depth, Ft | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|---|---|
| ● | B-13 S2 | 2.5 - 4.0 | **19** | **0.19** | | | **12** | **42** | **46** | |
| ■ | B-13 S8 | 25.0 - 26.5 | **25** | **1.37** | | | **30** | **38** | **32** | |
| ▲ | B-14 S1 | 0.0 - 1.5 | **25** | **1.6** | **0.16** | | **31** | **49** | **20** | |

Lighthouse Village Development
Homer, Alaska

**GRAIN SIZE CLASSIFICATION**

October 2023

111320-200

SHANNON & WILSON, INC.
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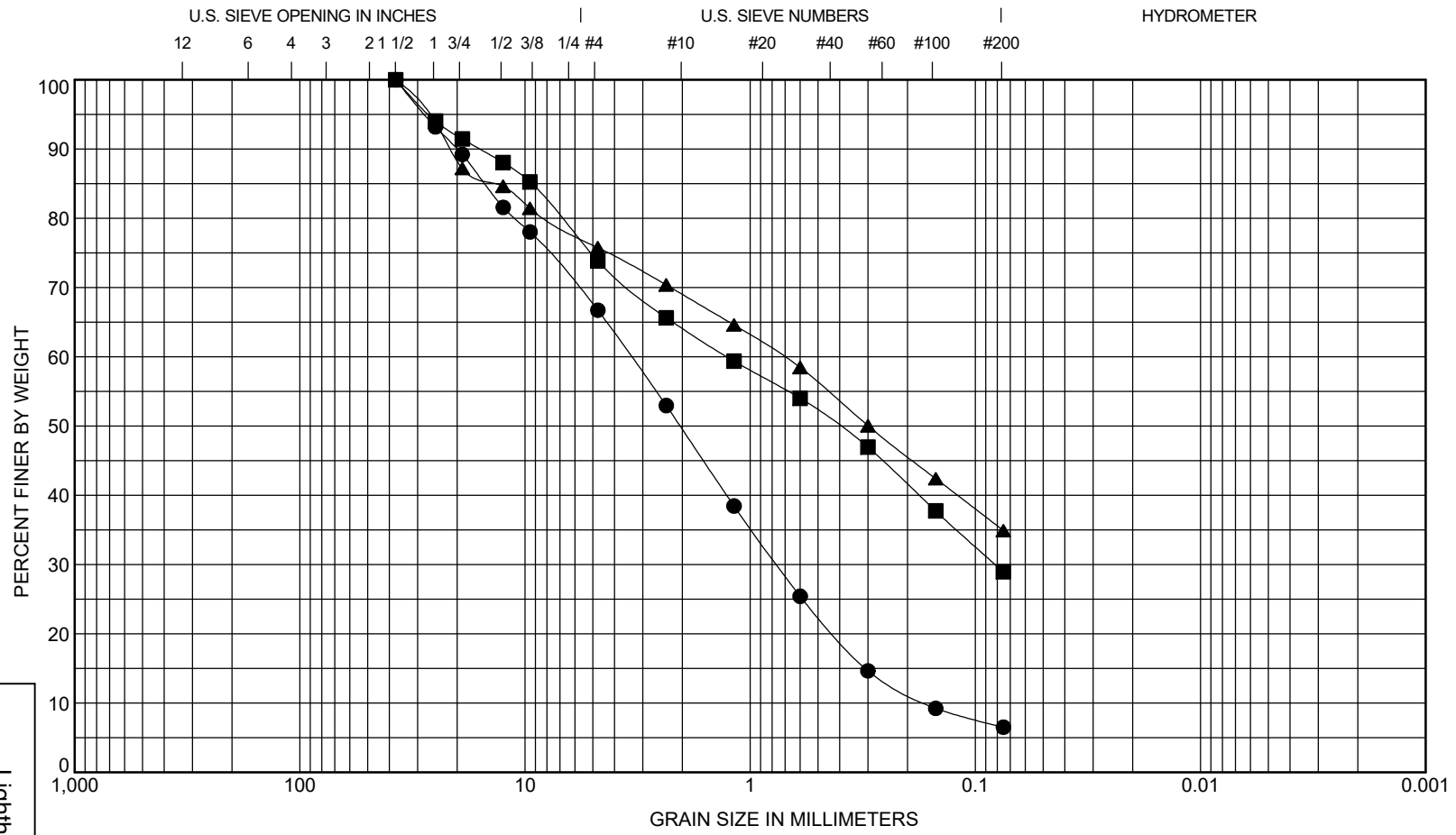
**FIG. 24**
Sheet 7 of 10




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| | Sample | Depth, Ft | USCS Classification | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|---|
| ● | B-14 S9 | 30.0 - 31.5 | **Well-Graded Sand with Silt and Gravel (SW-SM)** | | | | **1.0** | **20.4** |
| ■ | B-15 S6 | 15.0 - 16.5 | **Silty Sand with Gravel (SM)** | | | | | |
| ▲ | B-16 S5 | 10.0 - 11.5 | **Silty Sand with Gravel (SM)** | | | | | |

| | Sample | Depth, Ft | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|---|---|
| ● | B-14 S9 | 30.0 - 31.5 | **37.5** | **3.38** | **0.76** | **0.17** | **33** | **60** | **7** | |
| ■ | B-15 S6 | 15.0 - 16.5 | **37.5** | **1.27** | **0.08** | | **26** | **45** | **29** | |
| ▲ | B-16 S5 | 10.0 - 11.5 | **37.5** | **0.7** | | | **24** | **41** | **35** | |

**GRAIN SIZE CLASSIFICATION**

Lighthouse Village Development
Homer, Alaska

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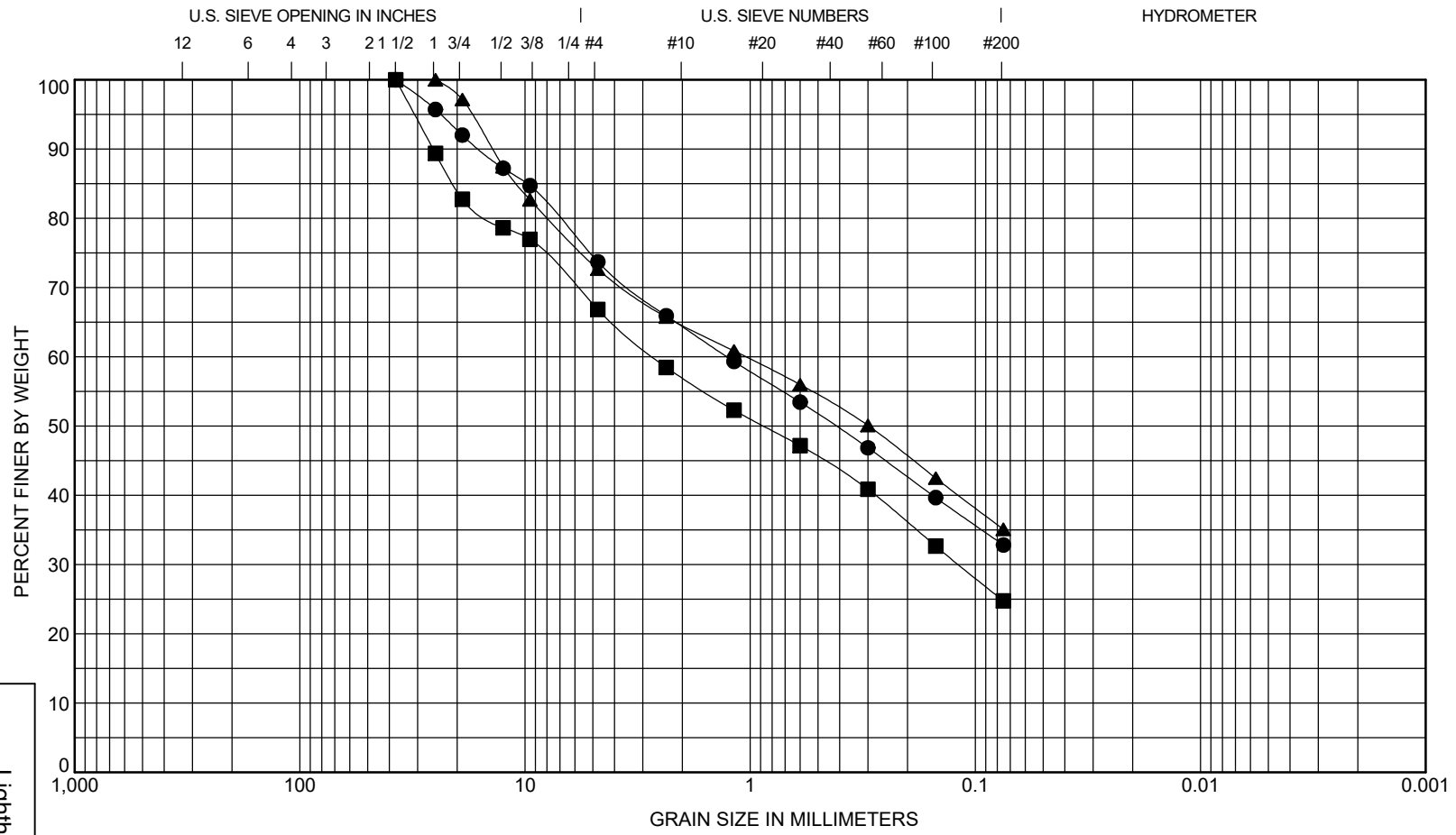
**FIG. 24**
**Sheet 8 of 10**




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| | Sample | Depth, Ft | USCS Classification | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|---|
| ● | B-17 S3 | 5.0 - 6.5 | **Silty Sand with Gravel (SM)** | | | | | |
| ■ | B-17 S6 | 15.0 - 16.5 | **Silty Sand with Gravel (SM)** | | | | | |
| ▲ | B-19 S2 | 5.0 - 6.5 | **Silty Sand with Gravel (SM)** | | | | | |

| | Sample | Depth, Ft | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|---|---|
| ● | B-17 S3 | 5.0 - 6.5 | **37.5** | **1.27** | | | **26** | **41** | **33** | |
| ■ | B-17 S6 | 15.0 - 16.5 | **37.5** | **2.68** | **0.12** | | **33** | **42** | **25** | |
| ▲ | B-19 S2 | 5.0 - 6.5 | **25** | **1.0** | | | **27** | **38** | **35** | |

**GRAIN SIZE CLASSIFICATION**

Lighthouse Village Development
Homer, Alaska

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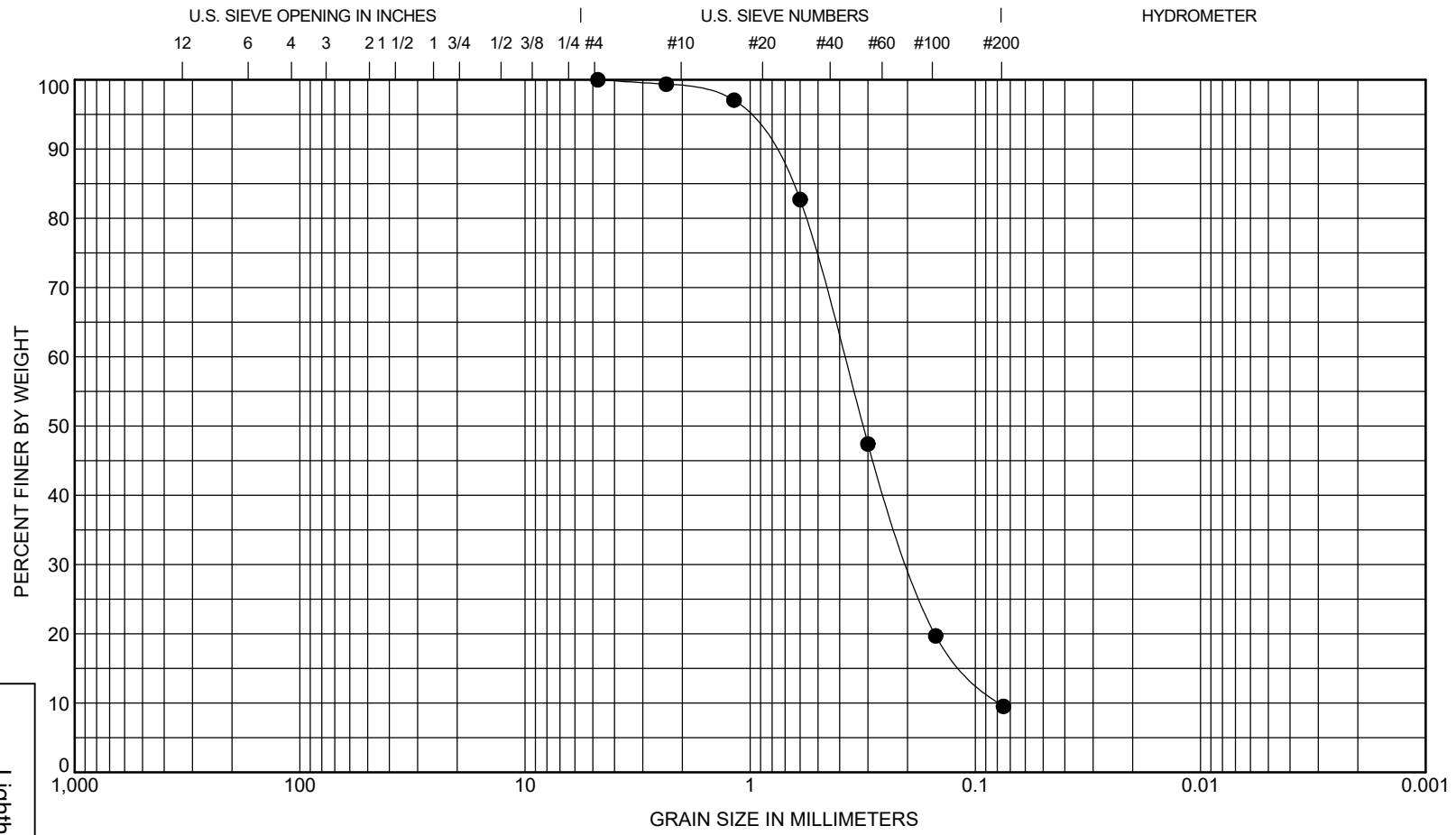
**FIG. 24**
**Sheet 9 of 10**




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Sample | Depth, Ft | USCS Classification | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● B-19 S7 | 30.0 - 31.5 | **Poorly Graded Sand with Silt (SP-SM)** | | | | **1.3** | **5.0** |
| | | | | | | | |
| | | | | | | | |

| Sample | Depth, Ft | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|---|
| ● B-19 S7 | 30.0 - 31.5 | **4.75** | **0.38** | **0.19** | **0.08** | **0** | **90** | **10** | |
| | | | | | | | | | |
| | | | | | | | | | |

Lighthouse Village Development
Homer, Alaska

**GRAIN SIZE CLASSIFICATION**

October 2023

111320-200

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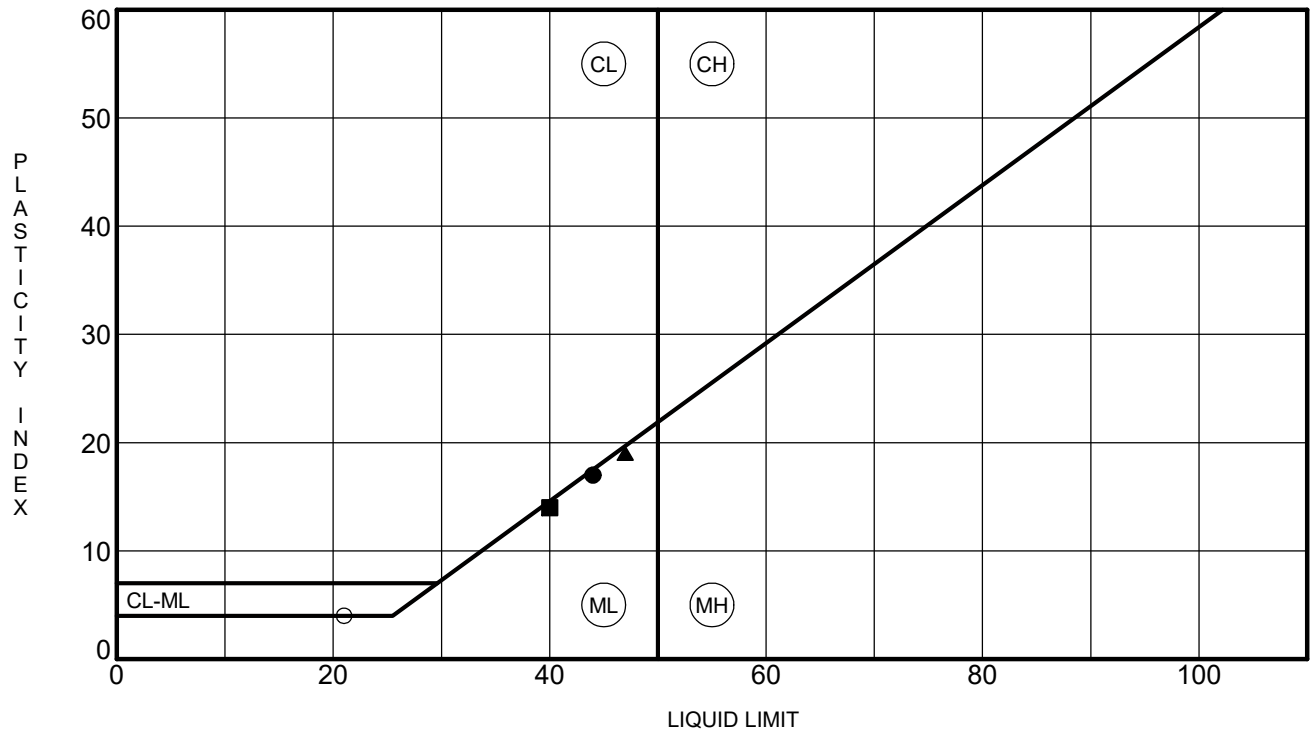
**FIG. 24**
Sheet 10 of 10




| Boring | | Depth, Ft | LL | PL | PI | Fines | Classification |
|---|---|---|---|---|---|---|---|
| ● | **B-02** | **20.0 - 21.5** | **44** | **27** | **17** | | **ML** |
| ■ | **B-03** | **25.0 - 26.5** | **40** | **26** | **14** | | **ML** |
| ▲ | **B-19** | **25.0 - 26.5** | **47** | **28** | **19** | | **ML** |
| ○ | **B-19** | **100.0 - 101.5** | **21** | **17** | **4** | | **CL-ML** |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
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| | | | | | | | |
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| | | | | | | | |

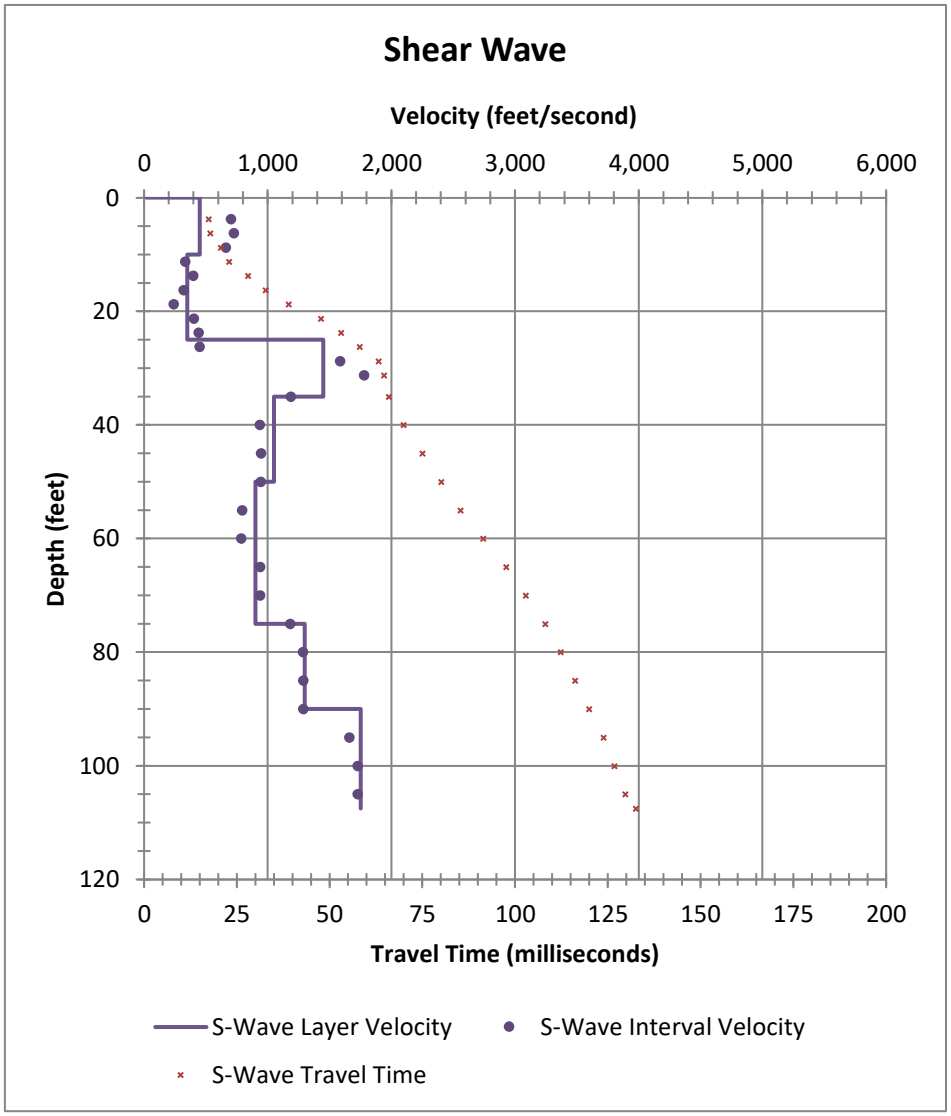
Lighthouse Village Development
Homer, Alaska

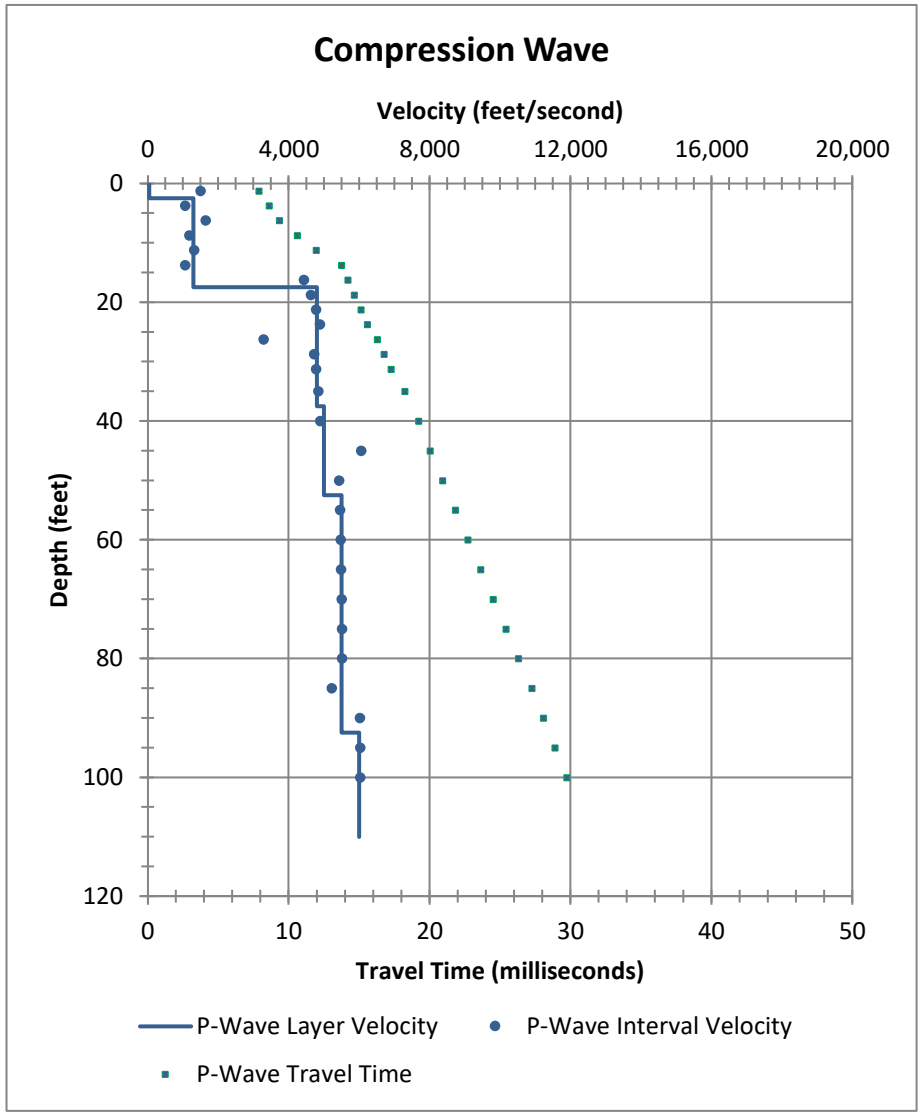
**ATTERBERG LIMITS RESULTS**

October 2023 111320-200

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

**FIG. 25**




$\bar{v}_s$ = 780 feet/second

1 $\bar{v}_s$ determined by Method A, Table C3.10.3.1-1 AASHTO LRFD Bridge Design Specifications 2012

2 S-Wave Layer Velocity determined by best fit of slope breaks from S-Wave Travel Time.

3 Shear wave values between 25 and 35 feet bgs are likely influenced by nearby stiff element such as a pile or glacial erractic, or may be influenced by inconsistency in the grout mix. Velocities are higher than those anticipated based on drilling observations.



Lighthouse Village Development
Homer, Alaska

**SHEAR AND COMPRESSION WAVE DATA**
**Boring B-19**

October 2023 111320-200

**SHANNON & WILSON, INC.**
Geotechnical and Environmental Consultants

**FIG. 26**

APPENDIX A: RESULTS OF ANALYTICAL TESTING

Appendix A

# Results of Analytical Testing

by SGS North America, Inc

## Laboratory Report of Analysis

To: Shannon & Wilson, Inc.
5430 Fairbanks St #3
Anchorage, AK 99518
561-2120

Report Number: **1234284**

Client Project: **Lighthouse Village Development**

Dear Ryan Collins,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Justin at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.

Justin Nelson
2023.09.01
07:48:13 -08'00'

Justin Nelson
Project Manager
Justin.Nelson@sgs.com

Date

## Case Narrative

SGS Client: **Shannon & Wilson, Inc.**
SGS Project: **1234284**
Project Name/Site: **Lighthouse Village Development**
Project Contact: **Ryan Collins**

Refer to sample receipt form for information on sample condition.

**MB for HBN 1862393 [VXX/40271] (1729020) MB**

8260D - Carbon tetrachloride detected above 1/2 LOQ in the MB. This analyte is not being reported above the LOQ in the associated DOD samples.

**LCS for HBN 1862393 [VXX/40271 (1729021) LCS**

8260D - LCS recoveries for carbon disulfide, trans-1,2-dichloroethene, and hexachlorobutadiene do not meet QC criteria. These analytes are not being reported above the LOQ in the associated samples.

**1234255003(1729022MS) (1729023) MS**

8260D - MS recoveries for several analytes do not meet QC criteria. These analytes were not detected above the LOQ in the associated PS.

**1234255003(1729022MSD) (1729024) MSD**

8260D - MS/MSD RPDs for dichlorodifluoromethane, 4-methyl-2-pentanone (MIBK), and 1,2,3-trichlorobenzene do not meet QC criteria. These analytes were not detected above the LOQ in the associated PS.
8260D - MSD recoveries for carbon disulfide, hexachlorobutadiene, and 1,2,3-trichlorobenzene do not meet QC criteria. These analytes were not detected above the LOQ in the associated PS.

**1234269046MS (1729322) MS**

8270D SIM - PAH MS recoveries for several analytes do not meet QC criteria. Refer to the LCS for accuracy requirements.

**1234269046MSD (1729323) MSD**

8270D SIM - PAH MSD recoveries for several analytes do not meet QC criteria. Refer to the LCS for accuracy requirements.
8270D SIM - PAH MS/MSD RPD for benzo[g,h,i]perylene does not meet QC criteria.

**LCS for HBN 1862556 [XXX/48434 (1729325) LCS**

AK102 - 5a-androstane does not meet QC criteria.

**LCSD for HBN 1862556 [XXX/4843 (1729326) LCSD**

AK102 - 5a-androstane does not meet QC criteria.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.



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## Report of Manual Integrations

| Laboratory ID | Client Sample ID | Analytical Batch | Analyte | Reason |
|---|---|---|---|---|
| **8270D SIM (PAH)** | | | | |
| 1729322 | 1234269046MS | XMS13860 | Anthracene | RP |
| 1729322 | 1234269046MS | XMS13860 | Benzo[a]pyrene | RP |
| 1729322 | 1234269046MS | XMS13860 | Benzo[b]Fluoranthene | RP |
| 1729322 | 1234269046MS | XMS13860 | Benzo[g,h,i]perylene | RP |
| 1729322 | 1234269046MS | XMS13860 | Benzo[k]fluoranthene | RP |
| 1729322 | 1234269046MS | XMS13860 | Chrysene | RP |
| 1729322 | 1234269046MS | XMS13860 | Dibenzo[a,h]anthracene | RP |
| 1729322 | 1234269046MS | XMS13860 | Fluoranthene | RP |
| 1729322 | 1234269046MS | XMS13860 | Indeno[1,2,3-c,d] pyrene | RP |
| 1729323 | 1234269046MSD | XMS13860 | Anthracene | RP |
| 1729323 | 1234269046MSD | XMS13860 | Benzo[a]pyrene | RP |
| 1729323 | 1234269046MSD | XMS13860 | Benzo[b]Fluoranthene | RP |
| 1729323 | 1234269046MSD | XMS13860 | Benzo[g,h,i]perylene | RP |
| 1729323 | 1234269046MSD | XMS13860 | Benzo[k]fluoranthene | RP |
| 1729323 | 1234269046MSD | XMS13860 | Chrysene | RP |
| 1729323 | 1234269046MSD | XMS13860 | Dibenzo[a,h]anthracene | RP |
| 1729323 | 1234269046MSD | XMS13860 | Fluoranthene | RP |
| 1729323 | 1234269046MSD | XMS13860 | Indeno[1,2,3-c,d] pyrene | RP |

Manual Integration Reason Code Descriptions

| Code | Description |
|---|---|
| O | Original Chromatogram |
| M | Modified Chromatogram |
| SS | Skimmed surrogate |
| BLG | Closed baseline gap |
| RP | Reassign peak name |
| PIR | Pattern integration required |
| IT | Included tail |
| SP | Split peak |
| RSP | Removed split peak |
| FPS | Forced peak start/stop |
| BLC | Baseline correction |
| PNF | Peak not found by software |

All DRO/RRO analysis are integrated per SOP.

Print Date: 08/31/2023 6:27:14PM

## Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indenmification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

| | |
|---|---|
| * | The analyte has exceeded allowable regulatory or control limits. |
| ! | Surrogate out of control limits. |
| B | Indicates the analyte is found in a blank associated with the sample. |
| CCV/CVA/CVB | Continuing Calibration Verification |
| CCCV/CVC/CVCA/CVCB | Closing Continuing Calibration Verification |
| CL | Control Limit |
| DF | Analytical Dilution Factor |
| DL | Detection Limit (i.e., maximum method detection limit) |
| E | The analyte result is above the calibrated range. |
| GT | Greater Than |
| IB | Instrument Blank |
| ICV | Initial Calibration Verification |
| J | The quantitation is an estimation. |
| LCS(D) | Laboratory Control Spike (Duplicate) |
| LLQC/LLIQC | Low Level Quantitation Check |
| LOD | Limit of Detection (i.e., 1/2 of the LOQ) |
| LOQ | Limit of Quantitation (i.e., reporting or practical quantitation limit) |
| LT | Less Than |
| MB | Method Blank |
| MS(D) | Matrix Spike (Duplicate) |
| ND | Indicates the analyte is not detected. |
| RPD | Relative Percent Difference |
| TNTC | Too Numerous To Count |
| U | Indicates the analyte was analyzed for but not detected. |

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

## Sample Summary

| Client Sample ID | Lab Sample ID | Collected | Received | Matrix |
|---|---|---|---|---|
| 111320 B 11 S5 | 1234284001 | 08/06/2023 | 08/15/2023 | Soil/Solid (dry weight) |
| 111320 B 12 S6 | 1234284002 | 08/06/2023 | 08/15/2023 | Soil/Solid (dry weight) |
| 111320 B 14 S5 | 1234284003 | 08/06/2023 | 08/15/2023 | Soil/Solid (dry weight) |
| 111320 STB | 1234284004 | 08/06/2023 | 08/15/2023 | Soil/Solid (dry weight) |

| Method | Method Description |
|---|---|
| 8270D SIM (PAH) | 8270 PAH SIM Semi-Volatiles GC/MS |
| AK102 | Diesel/Residual Range Organics |
| AK103 | Diesel/Residual Range Organics |
| AK101 | Gasoline Range Organics (S) |
| SM21 2540G | Percent Solids SM2540G |
| SW8260D | VOC 8260 (S) Field Extracted |



SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

## Detectable Results Summary

Client Sample ID: **111320 B 11 S5**
Lab Sample ID: 1234284001

**Semivolatile Organic Fuels**

| Parameter | Result | Units |
|---|---|---|
| Diesel Range Organics | 24.6 | mg/kg |
| Residual Range Organics | 103J | mg/kg |

**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Gasoline Range Organics | 2.00J | mg/kg |

Client Sample ID: **111320 B 12 S6**
Lab Sample ID: 1234284002

**Semivolatile Organic Fuels**

| Parameter | Result | Units |
|---|---|---|
| Diesel Range Organics | 21.4J | mg/kg |
| Residual Range Organics | 120 | mg/kg |

**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Gasoline Range Organics | 2.19J | mg/kg |

Client Sample ID: **111320 B 14 S5**
Lab Sample ID: 1234284003

**Semivolatile Organic Fuels**

| Parameter | Result | Units |
|---|---|---|
| Diesel Range Organics | 20.2J | mg/kg |
| Residual Range Organics | 111 | mg/kg |

**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Gasoline Range Organics | 1.80J | mg/kg |

Client Sample ID: **111320 STB**
Lab Sample ID: 1234284004

**Volatile Fuels**

| Parameter | Result | Units |
|---|---|---|
| Gasoline Range Organics | 1.11J | mg/kg |



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## Results of **111320 B 11 S5**

Client Sample ID: **111320 B 11 S5**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284001
Lab Project ID: 1234284

Collection Date: 08/06/23 09:13
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.0
Location:

## Results by **Polynuclear Aromatics GC/MS**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 13.7 | U | 27.3 | 6.82 | 13.7 | ug/kg | 1 | | 08/30/23 01:29 |
| 2-Methylnaphthalene | 13.7 | U | 27.3 | 6.82 | 13.7 | ug/kg | 1 | | 08/30/23 01:29 |
| Acenaphthene | 13.7 | U | 27.3 | 6.82 | 13.7 | ug/kg | 1 | | 08/30/23 01:29 |
| Acenaphthylene | 13.7 | U | 27.3 | 6.82 | 13.7 | ug/kg | 1 | | 08/30/23 01:29 |
| Anthracene | 13.7 | U | 27.3 | 6.82 | 13.7 | ug/kg | 1 | | 08/30/23 01:29 |
| Benzo(a)Anthracene | 13.7 | U | 27.3 | 6.82 | 13.7 | ug/kg | 1 | | 08/30/23 01:29 |
| Benzo[a]pyrene | 13.7 | U | 27.3 | 6.82 | 13.7 | ug/kg | 1 | | 08/30/23 01:29 |
| Benzo[b]Fluoranthene | 13.7 | U | 27.3 | 6.82 | 13.7 | ug/kg | 1 | | 08/30/23 01:29 |
| Benzo[g,h,i]perylene | 13.7 | U | 27.3 | 6.82 | 13.7 | ug/kg | 1 | | 08/30/23 01:29 |
| Benzo[k]fluoranthene | 13.7 | U | 27.3 | 6.82 | 13.7 | ug/kg | 1 | | 08/30/23 01:29 |
| Chrysene | 13.7 | U | 27.3 | 6.82 | 13.7 | ug/kg | 1 | | 08/30/23 01:29 |
| Dibenzo[a,h]anthracene | 13.7 | U | 27.3 | 6.82 | 13.7 | ug/kg | 1 | | 08/30/23 01:29 |
| Fluoranthene | 13.7 | U | 27.3 | 6.82 | 13.7 | ug/kg | 1 | | 08/30/23 01:29 |
| Fluorene | 13.7 | U | 27.3 | 6.82 | 13.7 | ug/kg | 1 | | 08/30/23 01:29 |
| Indeno[1,2,3-c,d] pyrene | 13.7 | U | 27.3 | 6.82 | 13.7 | ug/kg | 1 | | 08/30/23 01:29 |
| Naphthalene | 10.9 | U | 21.8 | 5.46 | 10.9 | ug/kg | 1 | | 08/30/23 01:29 |
| Phenanthrene | 13.7 | U | 27.3 | 6.82 | 13.7 | ug/kg | 1 | | 08/30/23 01:29 |
| Pyrene | 13.7 | U | 27.3 | 6.82 | 13.7 | ug/kg | 1 | | 08/30/23 01:29 |
| **Surrogates** | | | | | | | | | |
| 2-Methylnaphthalene-d10 (surr) | 92.7 | | 58-103 | | | % | 1 | | 08/30/23 01:29 |
| Fluoranthene-d10 (surr) | 92.6 | | 54-113 | | | % | 1 | | 08/30/23 01:29 |

## Batch Information

Analytical Batch: XMS13860
Analytical Method: 8270D SIM (PAH)
Analyst: HMW
Analytical Date/Time: 08/30/23 01:29
Container ID: 1234284001-A

Prep Batch: XXX48433
Prep Method: SW3550C
Prep Date/Time: 08/18/23 09:45
Prep Initial Wt./Vol.: 22.641 g
Prep Extract Vol: 5 mL

Print Date: 08/31/2023 6:27:21PM

J flagging is activated

## Results of **111320 B 11 S5**

Client Sample ID: **111320 B 11 S5**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284001
Lab Project ID: 1234284

Collection Date: 08/06/23 09:13
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.0
Location:

## Results by **Semivolatile Organic Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics | 24.6 | | 21.8 | 9.83 | 10.9 | mg/kg | 1 | | 08/31/23 00:43 |
| **Surrogates** | | | | | | | | | |
| 5a Androstane (surr) | 93.3 | | 50-150 | | | % | 1 | | 08/31/23 00:43 |

### Batch Information

Analytical Batch: XFC16636
Analytical Method: AK102
Analyst: T.L
Analytical Date/Time: 08/31/23 00:43
Container ID: 1234284001-A

Prep Batch: XXX48434
Prep Method: SW3550C
Prep Date/Time: 08/18/23 09:45
Prep Initial Wt./Vol.: 22.641 g
Prep Extract Vol: 5 mL

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Residual Range Organics | 103 | J | 109 | 46.9 | 54.5 | mg/kg | 1 | | 08/31/23 00:43 |
| **Surrogates** | | | | | | | | | |
| n-Triacontane-d62 (surr) | 95.3 | | 50-150 | | | % | 1 | | 08/31/23 00:43 |

### Batch Information

Analytical Batch: XFC16636
Analytical Method: AK103
Analyst: T.L
Analytical Date/Time: 08/31/23 00:43
Container ID: 1234284001-A

Prep Batch: XXX48434
Prep Method: SW3550C
Prep Date/Time: 08/18/23 09:45
Prep Initial Wt./Vol.: 22.641 g
Prep Extract Vol: 5 mL

Print Date: 08/31/2023 6:27:21PM

J flagging is activated

## Results of **111320 B 11 S5**

Client Sample ID: **111320 B 11 S5**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284001
Lab Project ID: 1234284

Collection Date: 08/06/23 09:13
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.0
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics | 2.00 | J | 2.93 | 0.879 | 1.47 | mg/kg | 1 | | 08/30/23 01:03 |
| **Surrogates** | | | | | | | | | |
| 4-Bromofluorobenzene (surr) | 111 | | 50-150 | | | % | 1 | | 08/30/23 01:03 |

## Batch Information

Analytical Batch: VFC16584
Analytical Method: AK101
Analyst: CWD
Analytical Date/Time: 08/30/23 01:03
Container ID: 1234284001-B

Prep Batch: VXX40334
Prep Method: SW5035A
Prep Date/Time: 08/06/23 09:13
Prep Initial Wt./Vol.: 56.333 g
Prep Extract Vol: 30.0557 mL

Print Date: 08/31/2023 6:27:21PM

J flagging is activated

SGS

Results of **111320 B 11 S5**

Client Sample ID: **111320 B 11 S5**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284001
Lab Project ID: 1234284

Collection Date: 08/06/23 09:13
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.0
Location:

Results by **Volatile GC/MS**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 11.7 | U | 23.4 | 7.27 | 11.7 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,1,1-Trichloroethane | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,1,2,2-Tetrachloroethane | 1.17 | U | 2.34 | 0.727 | 1.17 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,1,2-Trichloroethane | 0.585 | U | 1.17 | 0.586 | 0.585 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,1-Dichloroethane | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,1-Dichloroethene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,1-Dichloropropene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,2,3-Trichlorobenzene | 58.5 | U | 117 | 35.2 | 58.5 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,2,3-Trichloropropane | 1.17 | U | 2.34 | 0.727 | 1.17 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,2,4-Trichlorobenzene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,2,4-Trimethylbenzene | 58.5 | U | 117 | 35.2 | 58.5 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,2-Dibromo-3-chloropropane | 58.5 | U | 117 | 36.3 | 58.5 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,2-Dibromoethane | 0.880 | U | 1.76 | 0.879 | 0.880 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,2-Dichlorobenzene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,2-Dichloroethane | 1.17 | U | 2.34 | 0.821 | 1.17 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,2-Dichloropropane | 5.85 | U | 11.7 | 5.86 | 5.85 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,3,5-Trimethylbenzene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,3-Dichlorobenzene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,3-Dichloropropane | 5.85 | U | 11.7 | 3.63 | 5.85 | ug/kg | 1 | | 08/15/23 19:46 |
| 1,4-Dichlorobenzene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| 2,2-Dichloropropane | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| 2-Butanone (MEK) | 147 | U | 293 | 91.4 | 147 | ug/kg | 1 | | 08/15/23 19:46 |
| 2-Chlorotoluene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| 2-Hexanone | 70.5 | U | 141 | 70.3 | 70.5 | ug/kg | 1 | | 08/15/23 19:46 |
| 4-Chlorotoluene | 11.7 | U | 23.4 | 11.7 | 11.7 | ug/kg | 1 | | 08/15/23 19:46 |
| 4-Isopropyltoluene | 46.9 | U | 93.8 | 46.9 | 46.9 | ug/kg | 1 | | 08/15/23 19:46 |
| 4-Methyl-2-pentanone (MIBK) | 147 | U | 293 | 91.4 | 147 | ug/kg | 1 | | 08/15/23 19:46 |
| Acetone | 147 | U | 293 | 129 | 147 | ug/kg | 1 | | 08/15/23 19:46 |
| Benzene | 7.35 | U | 14.7 | 4.57 | 7.35 | ug/kg | 1 | | 08/15/23 19:46 |
| Bromobenzene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| Bromochloromethane | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| Bromodichloromethane | 1.17 | U | 2.34 | 0.727 | 1.17 | ug/kg | 1 | | 08/15/23 19:46 |
| Bromoform | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| Bromomethane | 11.7 | U | 23.4 | 9.38 | 11.7 | ug/kg | 1 | | 08/15/23 19:46 |
| Carbon disulfide | 58.5 | U | 117 | 36.3 | 58.5 | ug/kg | 1 | | 08/15/23 19:46 |
| Carbon tetrachloride | 7.35 | U | 14.7 | 4.57 | 7.35 | ug/kg | 1 | | 08/15/23 19:46 |
| Chlorobenzene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |

Print Date: 08/31/2023 6:27:21PM

J flagging is activated

## Results of **111320 B 11 S5**

Client Sample ID: **111320 B 11 S5**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284001
Lab Project ID: 1234284

Collection Date: 08/06/23 09:13
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.0
Location:

## Results by **Volatile GC/MS**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 117 | U | 234 | 72.7 | 117 | ug/kg | 1 | | 08/15/23 19:46 |
| Chloroform | 3.52 | U | 7.03 | 3.52 | 3.52 | ug/kg | 1 | | 08/15/23 19:46 |
| Chloromethane | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| cis-1,2-Dichloroethene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| cis-1,3-Dichloropropene | 7.35 | U | 14.7 | 4.57 | 7.35 | ug/kg | 1 | | 08/15/23 19:46 |
| Dibromochloromethane | 2.93 | U | 5.86 | 1.76 | 2.93 | ug/kg | 1 | | 08/15/23 19:46 |
| Dibromomethane | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| Dichlorodifluoromethane | 58.5 | U | 117 | 35.2 | 58.5 | ug/kg | 1 | | 08/15/23 19:46 |
| Ethylbenzene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| Freon-113 | 58.5 | U | 117 | 36.3 | 58.5 | ug/kg | 1 | | 08/15/23 19:46 |
| Hexachlorobutadiene | 11.7 | U | 23.4 | 7.27 | 11.7 | ug/kg | 1 | | 08/15/23 19:46 |
| Isopropylbenzene (Cumene) | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| Methylene chloride | 58.5 | U | 117 | 36.3 | 58.5 | ug/kg | 1 | | 08/15/23 19:46 |
| Methyl-t-butyl ether | 58.5 | U | 117 | 36.3 | 58.5 | ug/kg | 1 | | 08/15/23 19:46 |
| Naphthalene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| n-Butylbenzene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| n-Propylbenzene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| o-Xylene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| P & M -Xylene | 29.3 | U | 58.6 | 17.6 | 29.3 | ug/kg | 1 | | 08/15/23 19:46 |
| sec-Butylbenzene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| Styrene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| tert-Butylbenzene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| Tetrachloroethene | 7.35 | U | 14.7 | 4.57 | 7.35 | ug/kg | 1 | | 08/15/23 19:46 |
| Toluene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| trans-1,2-Dichloroethene | 14.7 | U | 29.3 | 9.14 | 14.7 | ug/kg | 1 | | 08/15/23 19:46 |
| trans-1,3-Dichloropropene | 7.35 | U | 14.7 | 4.57 | 7.35 | ug/kg | 1 | | 08/15/23 19:46 |
| Trichloroethene | 5.85 | U | 11.7 | 3.75 | 5.85 | ug/kg | 1 | | 08/15/23 19:46 |
| Trichlorofluoromethane | 29.3 | U | 58.6 | 17.6 | 29.3 | ug/kg | 1 | | 08/15/23 19:46 |
| Vinyl acetate | 58.5 | U | 117 | 36.3 | 58.5 | ug/kg | 1 | | 08/15/23 19:46 |
| Vinyl chloride | 0.469 | U | 0.938 | 0.293 | 0.469 | ug/kg | 1 | | 08/15/23 19:46 |
| Xylenes (total) | 44.0 | U | 87.9 | 26.7 | 44.0 | ug/kg | 1 | | 08/15/23 19:46 |
| **Surrogates** | | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 109 | | 71-136 | | | % | 1 | | 08/15/23 19:46 |
| 4-Bromofluorobenzene (surr) | 89.4 | | 55-151 | | | % | 1 | | 08/15/23 19:46 |
| Toluene-d8 (surr) | 99.8 | | 85-116 | | | % | 1 | | 08/15/23 19:46 |

Print Date: 08/31/2023 6:27:21PM

J flagging is activated

Results of **111320 B 11 S5**

Client Sample ID: **111320 B 11 S5**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284001
Lab Project ID: 1234284

Collection Date: 08/06/23 09:13
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.0
Location:

Results by **Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS22664
Analytical Method: SW8260D
Analyst: S.S
Analytical Date/Time: 08/15/23 19:46
Container ID: 1234284001-B

Prep Batch: VXX40267
Prep Method: SW5035A
Prep Date/Time: 08/06/23 09:13
Prep Initial Wt./Vol.: 56.333 g
Prep Extract Vol: 30.0557 mL

## Results of **111320 B 12 S6**

Client Sample ID: **111320 B 12 S6**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284002
Lab Project ID: 1234284

Collection Date: 08/06/23 11:03
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.3
Location:

## Results by **Polynuclear Aromatics GC/MS**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 13.4 | U | 26.9 | 6.74 | 13.4 | ug/kg | 1 | | 08/30/23 01:45 |
| 2-Methylnaphthalene | 13.4 | U | 26.9 | 6.74 | 13.4 | ug/kg | 1 | | 08/30/23 01:45 |
| Acenaphthene | 13.4 | U | 26.9 | 6.74 | 13.4 | ug/kg | 1 | | 08/30/23 01:45 |
| Acenaphthylene | 13.4 | U | 26.9 | 6.74 | 13.4 | ug/kg | 1 | | 08/30/23 01:45 |
| Anthracene | 13.4 | U | 26.9 | 6.74 | 13.4 | ug/kg | 1 | | 08/30/23 01:45 |
| Benzo(a)Anthracene | 13.4 | U | 26.9 | 6.74 | 13.4 | ug/kg | 1 | | 08/30/23 01:45 |
| Benzo[a]pyrene | 13.4 | U | 26.9 | 6.74 | 13.4 | ug/kg | 1 | | 08/30/23 01:45 |
| Benzo[b]Fluoranthene | 13.4 | U | 26.9 | 6.74 | 13.4 | ug/kg | 1 | | 08/30/23 01:45 |
| Benzo[g,h,i]perylene | 13.4 | U | 26.9 | 6.74 | 13.4 | ug/kg | 1 | | 08/30/23 01:45 |
| Benzo[k]fluoranthene | 13.4 | U | 26.9 | 6.74 | 13.4 | ug/kg | 1 | | 08/30/23 01:45 |
| Chrysene | 13.4 | U | 26.9 | 6.74 | 13.4 | ug/kg | 1 | | 08/30/23 01:45 |
| Dibenzo[a,h]anthracene | 13.4 | U | 26.9 | 6.74 | 13.4 | ug/kg | 1 | | 08/30/23 01:45 |
| Fluoranthene | 13.4 | U | 26.9 | 6.74 | 13.4 | ug/kg | 1 | | 08/30/23 01:45 |
| Fluorene | 13.4 | U | 26.9 | 6.74 | 13.4 | ug/kg | 1 | | 08/30/23 01:45 |
| Indeno[1,2,3-c,d] pyrene | 13.4 | U | 26.9 | 6.74 | 13.4 | ug/kg | 1 | | 08/30/23 01:45 |
| Naphthalene | 10.8 | U | 21.6 | 5.39 | 10.8 | ug/kg | 1 | | 08/30/23 01:45 |
| Phenanthrene | 13.4 | U | 26.9 | 6.74 | 13.4 | ug/kg | 1 | | 08/30/23 01:45 |
| Pyrene | 13.4 | U | 26.9 | 6.74 | 13.4 | ug/kg | 1 | | 08/30/23 01:45 |
| **Surrogates** | | | | | | | | | |
| 2-Methylnaphthalene-d10 (surr) | 86.2 | | 58-103 | | | % | 1 | | 08/30/23 01:45 |
| Fluoranthene-d10 (surr) | 89.9 | | 54-113 | | | % | 1 | | 08/30/23 01:45 |

## Batch Information

Analytical Batch: XMS13860
Analytical Method: 8270D SIM (PAH)
Analyst: HMW
Analytical Date/Time: 08/30/23 01:45
Container ID: 1234284002-A

Prep Batch: XXX48433
Prep Method: SW3550C
Prep Date/Time: 08/18/23 09:45
Prep Initial Wt./Vol.: 22.86 g
Prep Extract Vol: 5 mL

Print Date: 08/31/2023 6:27:21PM

J flagging is activated

## Results of **111320 B 12 S6**

Client Sample ID: **111320 B 12 S6**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284002
Lab Project ID: 1234284

Collection Date: 08/06/23 11:03
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.3
Location:

## Results by **Semivolatile Organic Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics | 21.4 | J | 21.6 | 9.70 | 10.8 | mg/kg | 1 | | 08/31/23 00:54 |
| **Surrogates** | | | | | | | | | |
| 5a Androstane (surr) | 90 | | 50-150 | | | % | 1 | | 08/31/23 00:54 |

### Batch Information

Analytical Batch: XFC16636
Analytical Method: AK102
Analyst: T.L
Analytical Date/Time: 08/31/23 00:54
Container ID: 1234284002-A

Prep Batch: XXX48434
Prep Method: SW3550C
Prep Date/Time: 08/18/23 09:45
Prep Initial Wt./Vol.: 22.86 g
Prep Extract Vol: 5 mL

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Residual Range Organics | 120 | | 108 | 46.3 | 54.0 | mg/kg | 1 | | 08/31/23 00:54 |
| **Surrogates** | | | | | | | | | |
| n-Triacontane-d62 (surr) | 92.1 | | 50-150 | | | % | 1 | | 08/31/23 00:54 |

### Batch Information

Analytical Batch: XFC16636
Analytical Method: AK103
Analyst: T.L
Analytical Date/Time: 08/31/23 00:54
Container ID: 1234284002-A

Prep Batch: XXX48434
Prep Method: SW3550C
Prep Date/Time: 08/18/23 09:45
Prep Initial Wt./Vol.: 22.86 g
Prep Extract Vol: 5 mL

Print Date: 08/31/2023 6:27:21PM

J flagging is activated

## Results of **111320 B 12 S6**

Client Sample ID: **111320 B 12 S6**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284002
Lab Project ID: 1234284

Collection Date: 08/06/23 11:03
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.3
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics | 2.19 | J | 3.78 | 1.14 | 1.89 | mg/kg | 1 | | 08/30/23 01:22 |
| **Surrogates** | | | | | | | | | |
| 4-Bromofluorobenzene (surr) | 117 | | 50-150 | | | % | 1 | | 08/30/23 01:22 |

## Batch Information

Analytical Batch: VFC16584
Analytical Method: AK101
Analyst: CWD
Analytical Date/Time: 08/30/23 01:22
Container ID: 1234284002-B

Prep Batch: VXX40334
Prep Method: SW5035A
Prep Date/Time: 08/06/23 11:03
Prep Initial Wt./Vol.: 41.351 g
Prep Extract Vol: 28.5841 mL

Print Date: 08/31/2023 6:27:21PM

J flagging is activated

SGS

Results of **111320 B 12 S6**

Client Sample ID: **111320 B 12 S6**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284002
Lab Project ID: 1234284

Collection Date: 08/06/23 11:03
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.3
Location:

Results by **Volatile GC/MS**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 15.2 | U | 30.3 | 9.38 | 15.2 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,1,1-Trichloroethane | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,1,2,2-Tetrachloroethane | 1.51 | U | 3.03 | 0.938 | 1.51 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,1,2-Trichloroethane | 0.755 | U | 1.51 | 0.757 | 0.755 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,1-Dichloroethane | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,1-Dichloroethene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,1-Dichloropropene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,2,3-Trichlorobenzene | 75.5 | U | 151 | 45.4 | 75.5 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,2,3-Trichloropropane | 1.51 | U | 3.03 | 0.938 | 1.51 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,2,4-Trichlorobenzene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,2,4-Trimethylbenzene | 75.5 | U | 151 | 45.4 | 75.5 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,2-Dibromo-3-chloropropane | 75.5 | U | 151 | 46.9 | 75.5 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,2-Dibromoethane | 1.14 | U | 2.27 | 1.14 | 1.14 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,2-Dichlorobenzene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,2-Dichloroethane | 1.51 | U | 3.03 | 1.06 | 1.51 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,2-Dichloropropane | 7.55 | U | 15.1 | 7.57 | 7.55 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,3,5-Trimethylbenzene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,3-Dichlorobenzene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,3-Dichloropropane | 7.55 | U | 15.1 | 4.69 | 7.55 | ug/kg | 1 | | 08/15/23 20:01 |
| 1,4-Dichlorobenzene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| 2,2-Dichloropropane | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| 2-Butanone (MEK) | 189 | U | 378 | 118 | 189 | ug/kg | 1 | | 08/15/23 20:01 |
| 2-Chlorotoluene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| 2-Hexanone | 91.0 | U | 182 | 90.8 | 91.0 | ug/kg | 1 | | 08/15/23 20:01 |
| 4-Chlorotoluene | 15.2 | U | 30.3 | 15.1 | 15.2 | ug/kg | 1 | | 08/15/23 20:01 |
| 4-Isopropyltoluene | 60.5 | U | 121 | 60.5 | 60.5 | ug/kg | 1 | | 08/15/23 20:01 |
| 4-Methyl-2-pentanone (MIBK) | 189 | U | 378 | 118 | 189 | ug/kg | 1 | | 08/15/23 20:01 |
| Acetone | 189 | U | 378 | 167 | 189 | ug/kg | 1 | | 08/15/23 20:01 |
| Benzene | 9.45 | U | 18.9 | 5.90 | 9.45 | ug/kg | 1 | | 08/15/23 20:01 |
| Bromobenzene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| Bromochloromethane | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| Bromodichloromethane | 1.51 | U | 3.03 | 0.938 | 1.51 | ug/kg | 1 | | 08/15/23 20:01 |
| Bromoform | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| Bromomethane | 15.2 | U | 30.3 | 12.1 | 15.2 | ug/kg | 1 | | 08/15/23 20:01 |
| Carbon disulfide | 75.5 | U | 151 | 46.9 | 75.5 | ug/kg | 1 | | 08/15/23 20:01 |
| Carbon tetrachloride | 9.45 | U | 18.9 | 5.90 | 9.45 | ug/kg | 1 | | 08/15/23 20:01 |
| Chlorobenzene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |

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Results of **111320 B 12 S6**

Client Sample ID: **111320 B 12 S6**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284002
Lab Project ID: 1234284

Collection Date: 08/06/23 11:03
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.3
Location:

Results by **Volatile GC/MS**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 152 | U | 303 | 93.8 | 152 | ug/kg | 1 | | 08/15/23 20:01 |
| Chloroform | 4.54 | U | 9.08 | 4.54 | 4.54 | ug/kg | 1 | | 08/15/23 20:01 |
| Chloromethane | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| cis-1,2-Dichloroethene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| cis-1,3-Dichloropropene | 9.45 | U | 18.9 | 5.90 | 9.45 | ug/kg | 1 | | 08/15/23 20:01 |
| Dibromochloromethane | 3.79 | U | 7.57 | 2.27 | 3.79 | ug/kg | 1 | | 08/15/23 20:01 |
| Dibromomethane | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| Dichlorodifluoromethane | 75.5 | U | 151 | 45.4 | 75.5 | ug/kg | 1 | | 08/15/23 20:01 |
| Ethylbenzene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| Freon-113 | 75.5 | U | 151 | 46.9 | 75.5 | ug/kg | 1 | | 08/15/23 20:01 |
| Hexachlorobutadiene | 15.2 | U | 30.3 | 9.38 | 15.2 | ug/kg | 1 | | 08/15/23 20:01 |
| Isopropylbenzene (Cumene) | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| Methylene chloride | 75.5 | U | 151 | 46.9 | 75.5 | ug/kg | 1 | | 08/15/23 20:01 |
| Methyl-t-butyl ether | 75.5 | U | 151 | 46.9 | 75.5 | ug/kg | 1 | | 08/15/23 20:01 |
| Naphthalene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| n-Butylbenzene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| n-Propylbenzene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| o-Xylene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| P & M -Xylene | 37.9 | U | 75.7 | 22.7 | 37.9 | ug/kg | 1 | | 08/15/23 20:01 |
| sec-Butylbenzene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| Styrene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| tert-Butylbenzene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| Tetrachloroethene | 9.45 | U | 18.9 | 5.90 | 9.45 | ug/kg | 1 | | 08/15/23 20:01 |
| Toluene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| trans-1,2-Dichloroethene | 18.9 | U | 37.8 | 11.8 | 18.9 | ug/kg | 1 | | 08/15/23 20:01 |
| trans-1,3-Dichloropropene | 9.45 | U | 18.9 | 5.90 | 9.45 | ug/kg | 1 | | 08/15/23 20:01 |
| Trichloroethene | 7.55 | U | 15.1 | 4.84 | 7.55 | ug/kg | 1 | | 08/15/23 20:01 |
| Trichlorofluoromethane | 37.9 | U | 75.7 | 22.7 | 37.9 | ug/kg | 1 | | 08/15/23 20:01 |
| Vinyl acetate | 75.5 | U | 151 | 46.9 | 75.5 | ug/kg | 1 | | 08/15/23 20:01 |
| Vinyl chloride | 0.605 | U | 1.21 | 0.378 | 0.605 | ug/kg | 1 | | 08/15/23 20:01 |
| Xylenes (total) | 57.0 | U | 114 | 34.5 | 57.0 | ug/kg | 1 | | 08/15/23 20:01 |
| **Surrogates** | | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 108 | | 71-136 | | | % | 1 | | 08/15/23 20:01 |
| 4-Bromofluorobenzene (surr) | 92.2 | | 55-151 | | | % | 1 | | 08/15/23 20:01 |
| Toluene-d8 (surr) | 99.2 | | 85-116 | | | % | 1 | | 08/15/23 20:01 |

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Results of **111320 B 12 S6**

Client Sample ID: **111320 B 12 S6**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284002
Lab Project ID: 1234284

Collection Date: 08/06/23 11:03
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.3
Location:

Results by **Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS22664
Analytical Method: SW8260D
Analyst: S.S
Analytical Date/Time: 08/15/23 20:01
Container ID: 1234284002-B

Prep Batch: VXX40267
Prep Method: SW5035A
Prep Date/Time: 08/06/23 11:03
Prep Initial Wt./Vol.: 41.351 g
Prep Extract Vol: 28.5841 mL

## Results of **111320 B 14 S5**

Client Sample ID: **111320 B 14 S5**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284003
Lab Project ID: 1234284

Collection Date: 08/06/23 12:10
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.6
Location:

## Results by **Polynuclear Aromatics GC/MS**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| 1-Methylnaphthalene | 13.5 | U | 27.0 | 6.74 | 13.5 | ug/kg | 1 | | 08/30/23 02:01 |
| 2-Methylnaphthalene | 13.5 | U | 27.0 | 6.74 | 13.5 | ug/kg | 1 | | 08/30/23 02:01 |
| Acenaphthene | 13.5 | U | 27.0 | 6.74 | 13.5 | ug/kg | 1 | | 08/30/23 02:01 |
| Acenaphthylene | 13.5 | U | 27.0 | 6.74 | 13.5 | ug/kg | 1 | | 08/30/23 02:01 |
| Anthracene | 13.5 | U | 27.0 | 6.74 | 13.5 | ug/kg | 1 | | 08/30/23 02:01 |
| Benzo(a)Anthracene | 13.5 | U | 27.0 | 6.74 | 13.5 | ug/kg | 1 | | 08/30/23 02:01 |
| Benzo[a]pyrene | 13.5 | U | 27.0 | 6.74 | 13.5 | ug/kg | 1 | | 08/30/23 02:01 |
| Benzo[b]Fluoranthene | 13.5 | U | 27.0 | 6.74 | 13.5 | ug/kg | 1 | | 08/30/23 02:01 |
| Benzo[g,h,i]perylene | 13.5 | U | 27.0 | 6.74 | 13.5 | ug/kg | 1 | | 08/30/23 02:01 |
| Benzo[k]fluoranthene | 13.5 | U | 27.0 | 6.74 | 13.5 | ug/kg | 1 | | 08/30/23 02:01 |
| Chrysene | 13.5 | U | 27.0 | 6.74 | 13.5 | ug/kg | 1 | | 08/30/23 02:01 |
| Dibenzo[a,h]anthracene | 13.5 | U | 27.0 | 6.74 | 13.5 | ug/kg | 1 | | 08/30/23 02:01 |
| Fluoranthene | 13.5 | U | 27.0 | 6.74 | 13.5 | ug/kg | 1 | | 08/30/23 02:01 |
| Fluorene | 13.5 | U | 27.0 | 6.74 | 13.5 | ug/kg | 1 | | 08/30/23 02:01 |
| Indeno[1,2,3-c,d] pyrene | 13.5 | U | 27.0 | 6.74 | 13.5 | ug/kg | 1 | | 08/30/23 02:01 |
| Naphthalene | 10.8 | U | 21.6 | 5.39 | 10.8 | ug/kg | 1 | | 08/30/23 02:01 |
| Phenanthrene | 13.5 | U | 27.0 | 6.74 | 13.5 | ug/kg | 1 | | 08/30/23 02:01 |
| Pyrene | 13.5 | U | 27.0 | 6.74 | 13.5 | ug/kg | 1 | | 08/30/23 02:01 |
| **Surrogates** | | | | | | | | | |
| 2-Methylnaphthalene-d10 (surr) | 89.2 | | 58-103 | | | % | 1 | | 08/30/23 02:01 |
| Fluoranthene-d10 (surr) | 90.7 | | 54-113 | | | % | 1 | | 08/30/23 02:01 |

## Batch Information

Analytical Batch: XMS13860
Analytical Method: 8270D SIM (PAH)
Analyst: HMW
Analytical Date/Time: 08/30/23 02:01
Container ID: 1234284003-A

Prep Batch: XXX48433
Prep Method: SW3550C
Prep Date/Time: 08/18/23 09:45
Prep Initial Wt./Vol.: 22.77 g
Prep Extract Vol: 5 mL

## Results of **111320 B 14 S5**

Client Sample ID: **111320 B 14 S5**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284003
Lab Project ID: 1234284

Collection Date: 08/06/23 12:10
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.6
Location:

## Results by **Semivolatile Organic Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Diesel Range Organics | 20.2 | J | 21.6 | 9.71 | 10.8 | mg/kg | 1 | | 08/31/23 01:04 |
| **Surrogates** | | | | | | | | | |
| 5a Androstane (surr) | 90.6 | | 50-150 | | | % | 1 | | 08/31/23 01:04 |

### Batch Information

Analytical Batch: XFC16636
Analytical Method: AK102
Analyst: T.L
Analytical Date/Time: 08/31/23 01:04
Container ID: 1234284003-A

Prep Batch: XXX48434
Prep Method: SW3550C
Prep Date/Time: 08/18/23 09:45
Prep Initial Wt./Vol.: 22.77 g
Prep Extract Vol: 5 mL

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Residual Range Organics | 111 | | 108 | 46.4 | 54.0 | mg/kg | 1 | | 08/31/23 01:04 |
| **Surrogates** | | | | | | | | | |
| n-Triacontane-d62 (surr) | 92.1 | | 50-150 | | | % | 1 | | 08/31/23 01:04 |

### Batch Information

Analytical Batch: XFC16636
Analytical Method: AK103
Analyst: T.L
Analytical Date/Time: 08/31/23 01:04
Container ID: 1234284003-A

Prep Batch: XXX48434
Prep Method: SW3550C
Prep Date/Time: 08/18/23 09:45
Prep Initial Wt./Vol.: 22.77 g
Prep Extract Vol: 5 mL

Print Date: 08/31/2023 6:27:21PM

J flagging is activated

## Results of **111320 B 14 S5**

Client Sample ID: **111320 B 14 S5**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284003
Lab Project ID: 1234284

Collection Date: 08/06/23 12:10
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.6
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics | 1.80 | J | 3.50 | 1.05 | 1.75 | mg/kg | 1 | | 08/30/23 01:41 |
| **Surrogates** | | | | | | | | | |
| 4-Bromofluorobenzene (surr) | 111 | | 50-150 | | | % | 1 | | 08/30/23 01:41 |

## Batch Information

Analytical Batch: VFC16584
Analytical Method: AK101
Analyst: CWD
Analytical Date/Time: 08/30/23 01:41
Container ID: 1234284003-B

Prep Batch: VXX40334
Prep Method: SW5035A
Prep Date/Time: 08/06/23 12:10
Prep Initial Wt./Vol.: 44.923 g
Prep Extract Vol: 28.7737 mL

Print Date: 08/31/2023 6:27:21PM

J flagging is activated

Results of **111320 B 14 S5**

Client Sample ID: **111320 B 14 S5**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284003
Lab Project ID: 1234284

Collection Date: 08/06/23 12:10
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.6
Location:

Results by **Volatile GC/MS**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 14.0 | U | 28.0 | 8.67 | 14.0 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,1,1-Trichloroethane | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,1,2,2-Tetrachloroethane | 1.40 | U | 2.80 | 0.867 | 1.40 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,1,2-Trichloroethane | 0.700 | U | 1.40 | 0.699 | 0.700 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,1-Dichloroethane | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,1-Dichloroethene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,1-Dichloropropene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,2,3-Trichlorobenzene | 70.0 | U | 140 | 42.0 | 70.0 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,2,3-Trichloropropane | 1.40 | U | 2.80 | 0.867 | 1.40 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,2,4-Trichlorobenzene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,2,4-Trimethylbenzene | 70.0 | U | 140 | 42.0 | 70.0 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,2-Dibromo-3-chloropropane | 70.0 | U | 140 | 43.4 | 70.0 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,2-Dibromoethane | 1.05 | U | 2.10 | 1.05 | 1.05 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,2-Dichlorobenzene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,2-Dichloroethane | 1.40 | U | 2.80 | 0.979 | 1.40 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,2-Dichloropropane | 7.00 | U | 14.0 | 6.99 | 7.00 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,3,5-Trimethylbenzene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,3-Dichlorobenzene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,3-Dichloropropane | 7.00 | U | 14.0 | 4.34 | 7.00 | ug/kg | 1 | | 08/15/23 20:17 |
| 1,4-Dichlorobenzene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| 2,2-Dichloropropane | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| 2-Butanone (MEK) | 175 | U | 350 | 109 | 175 | ug/kg | 1 | | 08/15/23 20:17 |
| 2-Chlorotoluene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| 2-Hexanone | 84.0 | U | 168 | 83.9 | 84.0 | ug/kg | 1 | | 08/15/23 20:17 |
| 4-Chlorotoluene | 14.0 | U | 28.0 | 14.0 | 14.0 | ug/kg | 1 | | 08/15/23 20:17 |
| 4-Isopropyltoluene | 56.0 | U | 112 | 55.9 | 56.0 | ug/kg | 1 | | 08/15/23 20:17 |
| 4-Methyl-2-pentanone (MIBK) | 175 | U | 350 | 109 | 175 | ug/kg | 1 | | 08/15/23 20:17 |
| Acetone | 175 | U | 350 | 154 | 175 | ug/kg | 1 | | 08/15/23 20:17 |
| Benzene | 8.75 | U | 17.5 | 5.45 | 8.75 | ug/kg | 1 | | 08/15/23 20:17 |
| Bromobenzene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| Bromochloromethane | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| Bromodichloromethane | 1.40 | U | 2.80 | 0.867 | 1.40 | ug/kg | 1 | | 08/15/23 20:17 |
| Bromoform | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| Bromomethane | 14.0 | U | 28.0 | 11.2 | 14.0 | ug/kg | 1 | | 08/15/23 20:17 |
| Carbon disulfide | 70.0 | U | 140 | 43.4 | 70.0 | ug/kg | 1 | | 08/15/23 20:17 |
| Carbon tetrachloride | 8.75 | U | 17.5 | 5.45 | 8.75 | ug/kg | 1 | | 08/15/23 20:17 |
| Chlorobenzene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |

Print Date: 08/31/2023 6:27:21PM

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Results of **111320 B 14 S5**

Client Sample ID: **111320 B 14 S5**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284003
Lab Project ID: 1234284

Collection Date: 08/06/23 12:10
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.6
Location:

Results by **Volatile GC/MS**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 140 | U | 280 | 86.7 | 140 | ug/kg | 1 | | 08/15/23 20:17 |
| Chloroform | 4.20 | U | 8.39 | 4.20 | 4.20 | ug/kg | 1 | | 08/15/23 20:17 |
| Chloromethane | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| cis-1,2-Dichloroethene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| cis-1,3-Dichloropropene | 8.75 | U | 17.5 | 5.45 | 8.75 | ug/kg | 1 | | 08/15/23 20:17 |
| Dibromochloromethane | 3.50 | U | 6.99 | 2.10 | 3.50 | ug/kg | 1 | | 08/15/23 20:17 |
| Dibromomethane | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| Dichlorodifluoromethane | 70.0 | U | 140 | 42.0 | 70.0 | ug/kg | 1 | | 08/15/23 20:17 |
| Ethylbenzene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| Freon-113 | 70.0 | U | 140 | 43.4 | 70.0 | ug/kg | 1 | | 08/15/23 20:17 |
| Hexachlorobutadiene | 14.0 | U | 28.0 | 8.67 | 14.0 | ug/kg | 1 | | 08/15/23 20:17 |
| Isopropylbenzene (Cumene) | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| Methylene chloride | 70.0 | U | 140 | 43.4 | 70.0 | ug/kg | 1 | | 08/15/23 20:17 |
| Methyl-t-butyl ether | 70.0 | U | 140 | 43.4 | 70.0 | ug/kg | 1 | | 08/15/23 20:17 |
| Naphthalene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| n-Butylbenzene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| n-Propylbenzene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| o-Xylene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| P & M -Xylene | 35.0 | U | 69.9 | 21.0 | 35.0 | ug/kg | 1 | | 08/15/23 20:17 |
| sec-Butylbenzene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| Styrene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| tert-Butylbenzene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| Tetrachloroethene | 8.75 | U | 17.5 | 5.45 | 8.75 | ug/kg | 1 | | 08/15/23 20:17 |
| Toluene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| trans-1,2-Dichloroethene | 17.5 | U | 35.0 | 10.9 | 17.5 | ug/kg | 1 | | 08/15/23 20:17 |
| trans-1,3-Dichloropropene | 8.75 | U | 17.5 | 5.45 | 8.75 | ug/kg | 1 | | 08/15/23 20:17 |
| Trichloroethene | 7.00 | U | 14.0 | 4.48 | 7.00 | ug/kg | 1 | | 08/15/23 20:17 |
| Trichlorofluoromethane | 35.0 | U | 69.9 | 21.0 | 35.0 | ug/kg | 1 | | 08/15/23 20:17 |
| Vinyl acetate | 70.0 | U | 140 | 43.4 | 70.0 | ug/kg | 1 | | 08/15/23 20:17 |
| Vinyl chloride | 0.560 | U | 1.12 | 0.350 | 0.560 | ug/kg | 1 | | 08/15/23 20:17 |
| Xylenes (total) | 52.5 | U | 105 | 31.9 | 52.5 | ug/kg | 1 | | 08/15/23 20:17 |
| **Surrogates** | | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 110 | | 71-136 | | | % | 1 | | 08/15/23 20:17 |
| 4-Bromofluorobenzene (surr) | 89.3 | | 55-151 | | | % | 1 | | 08/15/23 20:17 |
| Toluene-d8 (surr) | 99.1 | | 85-116 | | | % | 1 | | 08/15/23 20:17 |

Print Date: 08/31/2023 6:27:21PM

J flagging is activated

Results of **111320 B 14 S5**

Client Sample ID: **111320 B 14 S5**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284003
Lab Project ID: 1234284

Collection Date: 08/06/23 12:10
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):91.6
Location:

Results by **Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS22664
Analytical Method: SW8260D
Analyst: S.S
Analytical Date/Time: 08/15/23 20:17
Container ID: 1234284003-B

Prep Batch: VXX40267
Prep Method: SW5035A
Prep Date/Time: 08/06/23 12:10
Prep Initial Wt./Vol.: 44.923 g
Prep Extract Vol: 28.7737 mL

## Results of **111320 STB**

Client Sample ID: **111320 STB**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284004
Lab Project ID: 1234284

Collection Date: 08/06/23 00:00
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):
Location:

## Results by **Volatile Fuels**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Gasoline Range Organics | 1.11 | J | 2.51 | 0.752 | 1.26 | mg/kg | 1 | | 08/29/23 16:31 |
| **Surrogates** | | | | | | | | | |
| 4-Bromofluorobenzene (surr) | 110 | | 50-150 | | | % | 1 | | 08/29/23 16:31 |

## Batch Information

Analytical Batch: VFC16584
Analytical Method: AK101
Analyst: CWD
Analytical Date/Time: 08/29/23 16:31
Container ID: 1234284004-A

Prep Batch: VXX40333
Prep Method: SW5035A
Prep Date/Time: 08/06/23 00:00
Prep Initial Wt./Vol.: 49.883 g
Prep Extract Vol: 25 mL

Print Date: 08/31/2023 6:27:21PM

J flagging is activated

SGS

Results of **111320 STB**

Client Sample ID: **111320 STB**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284004
Lab Project ID: 1234284

Collection Date: 08/06/23 00:00
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):
Location:

Results by **Volatile GC/MS**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0 | U | 20.0 | 6.21 | 10.0 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,1,1-Trichloroethane | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,1,2,2-Tetrachloroethane | 1.00 | U | 2.00 | 0.621 | 1.00 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,1,2-Trichloroethane | 0.500 | U | 1.00 | 0.501 | 0.500 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,1-Dichloroethane | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,1-Dichloroethene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,1-Dichloropropene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,2,3-Trichlorobenzene | 50.0 | U | 100 | 30.1 | 50.0 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,2,3-Trichloropropane | 1.00 | U | 2.00 | 0.621 | 1.00 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,2,4-Trichlorobenzene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,2,4-Trimethylbenzene | 50.0 | U | 100 | 30.1 | 50.0 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,2-Dibromo-3-chloropropane | 50.0 | U | 100 | 31.1 | 50.0 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,2-Dibromoethane | 0.750 | U | 1.50 | 0.752 | 0.750 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,2-Dichlorobenzene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,2-Dichloroethane | 1.00 | U | 2.00 | 0.702 | 1.00 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,2-Dichloropropane | 5.00 | U | 10.0 | 5.01 | 5.00 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,3,5-Trimethylbenzene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,3-Dichlorobenzene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,3-Dichloropropane | 5.00 | U | 10.0 | 3.11 | 5.00 | ug/kg | 1 | | 08/15/23 19:33 |
| 1,4-Dichlorobenzene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| 2,2-Dichloropropane | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| 2-Butanone (MEK) | 126 | U | 251 | 78.2 | 126 | ug/kg | 1 | | 08/15/23 19:33 |
| 2-Chlorotoluene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| 2-Hexanone | 60.0 | U | 120 | 60.1 | 60.0 | ug/kg | 1 | | 08/15/23 19:33 |
| 4-Chlorotoluene | 10.0 | U | 20.0 | 10.0 | 10.0 | ug/kg | 1 | | 08/15/23 19:33 |
| 4-Isopropyltoluene | 40.1 | U | 80.2 | 40.1 | 40.1 | ug/kg | 1 | | 08/15/23 19:33 |
| 4-Methyl-2-pentanone (MIBK) | 126 | U | 251 | 78.2 | 126 | ug/kg | 1 | | 08/15/23 19:33 |
| Acetone | 126 | U | 251 | 110 | 126 | ug/kg | 1 | | 08/15/23 19:33 |
| Benzene | 6.25 | U | 12.5 | 3.91 | 6.25 | ug/kg | 1 | | 08/15/23 19:33 |
| Bromobenzene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| Bromochloromethane | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| Bromodichloromethane | 1.00 | U | 2.00 | 0.621 | 1.00 | ug/kg | 1 | | 08/15/23 19:33 |
| Bromoform | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| Bromomethane | 10.0 | U | 20.0 | 8.02 | 10.0 | ug/kg | 1 | | 08/15/23 19:33 |
| Carbon disulfide | 50.0 | U | 100 | 31.1 | 50.0 | ug/kg | 1 | | 08/15/23 19:33 |
| Carbon tetrachloride | 6.25 | U | 12.5 | 3.91 | 6.25 | ug/kg | 1 | | 08/15/23 19:33 |
| Chlorobenzene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |

Print Date: 08/31/2023 6:27:21PM

J flagging is activated

Results of **111320 STB**

Client Sample ID: **111320 STB**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284004
Lab Project ID: 1234284

Collection Date: 08/06/23 00:00
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):
Location:

Results by **Volatile GC/MS**

| Parameter | Result | Qual | LOQ/CL | DL | LOD | Units | DF | Allowable Limits | Date Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Chloroethane | 100 | U | 200 | 62.1 | 100 | ug/kg | 1 | | 08/15/23 19:33 |
| Chloroform | 3.00 | U | 6.01 | 3.01 | 3.00 | ug/kg | 1 | | 08/15/23 19:33 |
| Chloromethane | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| cis-1,2-Dichloroethene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| cis-1,3-Dichloropropene | 6.25 | U | 12.5 | 3.91 | 6.25 | ug/kg | 1 | | 08/15/23 19:33 |
| Dibromochloromethane | 2.50 | U | 5.01 | 1.50 | 2.50 | ug/kg | 1 | | 08/15/23 19:33 |
| Dibromomethane | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| Dichlorodifluoromethane | 50.0 | U | 100 | 30.1 | 50.0 | ug/kg | 1 | | 08/15/23 19:33 |
| Ethylbenzene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| Freon-113 | 50.0 | U | 100 | 31.1 | 50.0 | ug/kg | 1 | | 08/15/23 19:33 |
| Hexachlorobutadiene | 10.0 | U | 20.0 | 6.21 | 10.0 | ug/kg | 1 | | 08/15/23 19:33 |
| Isopropylbenzene (Cumene) | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| Methylene chloride | 50.0 | U | 100 | 31.1 | 50.0 | ug/kg | 1 | | 08/15/23 19:33 |
| Methyl-t-butyl ether | 50.0 | U | 100 | 31.1 | 50.0 | ug/kg | 1 | | 08/15/23 19:33 |
| Naphthalene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| n-Butylbenzene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| n-Propylbenzene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| o-Xylene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| P & M -Xylene | 25.1 | U | 50.1 | 15.0 | 25.1 | ug/kg | 1 | | 08/15/23 19:33 |
| sec-Butylbenzene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| Styrene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| tert-Butylbenzene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| Tetrachloroethene | 6.25 | U | 12.5 | 3.91 | 6.25 | ug/kg | 1 | | 08/15/23 19:33 |
| Toluene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| trans-1,2-Dichloroethene | 12.6 | U | 25.1 | 7.82 | 12.6 | ug/kg | 1 | | 08/15/23 19:33 |
| trans-1,3-Dichloropropene | 6.25 | U | 12.5 | 3.91 | 6.25 | ug/kg | 1 | | 08/15/23 19:33 |
| Trichloroethene | 5.00 | U | 10.0 | 3.21 | 5.00 | ug/kg | 1 | | 08/15/23 19:33 |
| Trichlorofluoromethane | 25.1 | U | 50.1 | 15.0 | 25.1 | ug/kg | 1 | | 08/15/23 19:33 |
| Vinyl acetate | 50.0 | U | 100 | 31.1 | 50.0 | ug/kg | 1 | | 08/15/23 19:33 |
| Vinyl chloride | 0.401 | U | 0.802 | 0.251 | 0.401 | ug/kg | 1 | | 08/15/23 19:33 |
| Xylenes (total) | 37.6 | U | 75.2 | 22.9 | 37.6 | ug/kg | 1 | | 08/15/23 19:33 |
| **Surrogates** | | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 97.7 | | 71-136 | | | % | 1 | | 08/15/23 19:33 |
| 4-Bromofluorobenzene (surr) | 97.9 | | 55-151 | | | % | 1 | | 08/15/23 19:33 |
| Toluene-d8 (surr) | 99.5 | | 85-116 | | | % | 1 | | 08/15/23 19:33 |

Print Date: 08/31/2023 6:27:21PM

J flagging is activated

Results of **111320 STB**

Client Sample ID: **111320 STB**
Client Project ID: **Lighthouse Village Development**
Lab Sample ID: 1234284004
Lab Project ID: 1234284

Collection Date: 08/06/23 00:00
Received Date: 08/15/23 10:43
Matrix: Soil/Solid (dry weight)
Solids (%):
Location:

Results by **Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS22666
Analytical Method: SW8260D
Analyst: S.S
Analytical Date/Time: 08/15/23 19:33
Container ID: 1234284004-A

Prep Batch: VXX40271
Prep Method: SW5035A
Prep Date/Time: 08/06/23 00:00
Prep Initial Wt./Vol.: 49.883 g
Prep Extract Vol: 25 mL

## Method Blank

Blank ID: MB for HBN 1862405 [SPT/11877]
Blank Lab ID: 1729088

Matrix: Soil/Solid (dry weight)

QC for Samples:
1234284001, 1234284002, 1234284003

## Results by **SM21 2540G**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Total Solids | 99.9 | | | | % |

## Batch Information

Analytical Batch: SPT11877
Analytical Method: SM21 2540G
Instrument:
Analyst: APS
Analytical Date/Time: 8/16/2023 8:22:00PM

Print Date: 08/31/2023 6:27:24PM

## Duplicate Sample Summary

Original Sample ID: 1234276007
Duplicate Sample ID: 1729089
QC for Samples:
1234284001

Analysis Date: 08/16/2023 20:22
Matrix: Soil/Solid (dry weight)

## Results by **SM21 2540G**

| NAME | Original | Duplicate | Units | RPD (%) | RPD CL |
|---|---|---|---|---|---|
| Total Solids | 81.0 | 78.9 | % | 2.60 | (< 15 ) |

## Batch Information

Analytical Batch: SPT11877
Analytical Method: SM21 2540G
Instrument:
Analyst: APS

Print Date: 08/31/2023 6:27:26PM

## Duplicate Sample Summary

Original Sample ID: 1234255009
Duplicate Sample ID: 1729090
QC for Samples:

Analysis Date: 08/16/2023 20:22
Matrix: Soil/Solid (dry weight)

## Results by **SM21 2540G**

| NAME | Original | Duplicate | Units | RPD (%) | RPD CL |
|---|---|---|---|---|---|
| Total Solids | 80.4 | 80.3 | % | 0.11 | (< 15 ) |

## Batch Information

Analytical Batch: SPT11877
Analytical Method: SM21 2540G
Instrument:
Analyst: APS

Print Date: 08/31/2023 6:27:26PM

## Duplicate Sample Summary

Original Sample ID: 1234284001
Duplicate Sample ID: 1729091
QC for Samples:
1234284001, 1234284002, 1234284003

Analysis Date: 08/16/2023 20:22
Matrix: Soil/Solid (dry weight)

## Results by **SM21 2540G**

| NAME | Original | Duplicate | Units | RPD (%) | RPD CL |
|---|---|---|---|---|---|
| Total Solids | 91.0 | 91.4 | % | 0.46 | (< 15 ) |

## Batch Information

Analytical Batch: SPT11877
Analytical Method: SM21 2540G
Instrument:
Analyst: APS

Print Date: 08/31/2023 6:27:26PM

## Method Blank

Blank ID: MB for HBN 1862369 [VXX/40267]
Blank Lab ID: 1728962

Matrix: Soil/Solid (dry weight)

QC for Samples:
1234284001, 1234284002, 1234284003

Results by **SW8260D**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 10.0U | 20.0 | 6.20 | 10.0 | ug/kg |
| 1,1,1-Trichloroethane | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| 1,1,2,2-Tetrachloroethane | 1.00U | 2.00 | 0.620 | 1.00 | ug/kg |
| 1,1,2-Trichloroethane | 0.500U | 1.00 | 0.500 | 0.500 | ug/kg |
| 1,1-Dichloroethane | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| 1,1-Dichloroethene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| 1,1-Dichloropropene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| 1,2,3-Trichlorobenzene | 50.0U | 100 | 30.0 | 50.0 | ug/kg |
| 1,2,3-Trichloropropane | 1.00U | 2.00 | 0.620 | 1.00 | ug/kg |
| 1,2,4-Trichlorobenzene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| 1,2,4-Trimethylbenzene | 50.0U | 100 | 30.0 | 50.0 | ug/kg |
| 1,2-Dibromo-3-chloropropane | 50.0U | 100 | 31.0 | 50.0 | ug/kg |
| 1,2-Dibromoethane | 0.750U | 1.50 | 0.750 | 0.750 | ug/kg |
| 1,2-Dichlorobenzene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| 1,2-Dichloroethane | 1.00U | 2.00 | 0.700 | 1.00 | ug/kg |
| 1,2-Dichloropropane | 5.00U | 10.0 | 5.00 | 5.00 | ug/kg |
| 1,3,5-Trimethylbenzene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| 1,3-Dichlorobenzene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| 1,3-Dichloropropane | 5.00U | 10.0 | 3.10 | 5.00 | ug/kg |
| 1,4-Dichlorobenzene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| 2,2-Dichloropropane | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| 2-Butanone (MEK) | 125U | 250 | 78.0 | 125 | ug/kg |
| 2-Chlorotoluene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| 2-Hexanone | 60.0U | 120 | 60.0 | 60.0 | ug/kg |
| 4-Chlorotoluene | 10.0U | 20.0 | 10.0 | 10.0 | ug/kg |
| 4-Isopropyltoluene | 40.0U | 80.0 | 40.0 | 40.0 | ug/kg |
| 4-Methyl-2-pentanone (MIBK) | 125U | 250 | 78.0 | 125 | ug/kg |
| Acetone | 125U | 250 | 110 | 125 | ug/kg |
| Benzene | 6.25U | 12.5 | 3.90 | 6.25 | ug/kg |
| Bromobenzene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| Bromochloromethane | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| Bromodichloromethane | 1.00U | 2.00 | 0.620 | 1.00 | ug/kg |
| Bromoform | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| Bromomethane | 10.0U | 20.0 | 8.00 | 10.0 | ug/kg |
| Carbon disulfide | 50.0U | 100 | 31.0 | 50.0 | ug/kg |
| Carbon tetrachloride | 6.21J | 12.5 | 3.90 | 6.25 | ug/kg |
| Chlorobenzene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| Chloroethane | 100U | 200 | 62.0 | 100 | ug/kg |
| Chloroform | 3.00U | 6.00 | 3.00 | 3.00 | ug/kg |
| Chloromethane | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| cis-1,2-Dichloroethene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| cis-1,3-Dichloropropene | 6.25U | 12.5 | 3.90 | 6.25 | ug/kg |

## Method Blank

Blank ID: MB for HBN 1862369 [VXX/40267]
Blank Lab ID: 1728962

Matrix: Soil/Solid (dry weight)

QC for Samples:
1234284001, 1234284002, 1234284003

## Results by **SW8260D**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Dibromochloromethane | 2.50U | 5.00 | 1.50 | 2.50 | ug/kg |
| Dibromomethane | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| Dichlorodifluoromethane | 50.0U | 100 | 30.0 | 50.0 | ug/kg |
| Ethylbenzene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| Freon-113 | 50.0U | 100 | 31.0 | 50.0 | ug/kg |
| Hexachlorobutadiene | 10.0U | 20.0 | 6.20 | 10.0 | ug/kg |
| Isopropylbenzene (Cumene) | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| Methylene chloride | 50.0U | 100 | 31.0 | 50.0 | ug/kg |
| Methyl-t-butyl ether | 50.0U | 100 | 31.0 | 50.0 | ug/kg |
| Naphthalene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| n-Butylbenzene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| n-Propylbenzene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| o-Xylene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| P & M -Xylene | 25.0U | 50.0 | 15.0 | 25.0 | ug/kg |
| sec-Butylbenzene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| Styrene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| tert-Butylbenzene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| Tetrachloroethene | 6.25U | 12.5 | 3.90 | 6.25 | ug/kg |
| Toluene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| trans-1,2-Dichloroethene | 12.5U | 25.0 | 7.80 | 12.5 | ug/kg |
| trans-1,3-Dichloropropene | 6.25U | 12.5 | 3.90 | 6.25 | ug/kg |
| Trichloroethene | 5.00U | 10.0 | 3.20 | 5.00 | ug/kg |
| Trichlorofluoromethane | 25.0U | 50.0 | 15.0 | 25.0 | ug/kg |
| Vinyl acetate | 50.0U | 100 | 31.0 | 50.0 | ug/kg |
| Vinyl chloride | 0.400U | 0.800 | 0.250 | 0.400 | ug/kg |
| Xylenes (total) | 37.5U | 75.0 | 22.8 | 37.5 | ug/kg |
| **Surrogates** | | | | | |
| 1,2-Dichloroethane-D4 (surr) | 106 | 71-136 | | 0 | % |
| 4-Bromofluorobenzene (surr) | 97 | 55-151 | | 0 | % |
| Toluene-d8 (surr) | 99.8 | 85-116 | | 0 | % |

## Batch Information

Analytical Batch: VMS22664
Analytical Method: SW8260D
Instrument: VQA 7890/5975 GC/MS
Analyst: S.S
Analytical Date/Time: 8/15/2023 12:24:00PM

Prep Batch: VXX40267
Prep Method: SW5035A
Prep Date/Time: 8/15/2023 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1234284 [VXX40267]
Blank Spike Lab ID: 1728963
Date Analyzed: 08/15/2023 12:39

Matrix: Soil/Solid (dry weight)

QC for Samples: 1234284001, 1234284002, 1234284003

## Results by **SW8260D**

Blank Spike (ug/kg)

| Parameter | Spike | Result | Rec (%) | CL |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 750 | 744 | 99 | ( 78-125 ) |
| 1,1,1-Trichloroethane | 750 | 769 | 103 | ( 73-130 ) |
| 1,1,2,2-Tetrachloroethane | 750 | 776 | 104 | ( 70-124 ) |
| 1,1,2-Trichloroethane | 750 | 825 | 110 | ( 78-121 ) |
| 1,1-Dichloroethane | 750 | 718 | 96 | ( 76-125 ) |
| 1,1-Dichloroethene | 750 | 761 | 102 | ( 70-131 ) |
| 1,1-Dichloropropene | 750 | 775 | 103 | ( 76-125 ) |
| 1,2,3-Trichlorobenzene | 750 | 673 | 90 | ( 66-130 ) |
| 1,2,3-Trichloropropane | 750 | 767 | 102 | ( 73-125 ) |
| 1,2,4-Trichlorobenzene | 750 | 665 | 89 | ( 67-129 ) |
| 1,2,4-Trimethylbenzene | 750 | 691 | 92 | ( 75-123 ) |
| 1,2-Dibromo-3-chloropropane | 750 | 767 | 102 | ( 61-132 ) |
| 1,2-Dibromoethane | 750 | 863 | 115 | ( 78-122 ) |
| 1,2-Dichlorobenzene | 750 | 705 | 94 | ( 78-121 ) |
| 1,2-Dichloroethane | 750 | 710 | 95 | ( 73-128 ) |
| 1,2-Dichloropropane | 750 | 760 | 101 | ( 76-123 ) |
| 1,3,5-Trimethylbenzene | 750 | 686 | 91 | ( 73-124 ) |
| 1,3-Dichlorobenzene | 750 | 693 | 92 | ( 77-121 ) |
| 1,3-Dichloropropane | 750 | 794 | 106 | ( 77-121 ) |
| 1,4-Dichlorobenzene | 750 | 697 | 93 | ( 75-120 ) |
| 2,2-Dichloropropane | 750 | 769 | 103 | ( 67-133 ) |
| 2-Butanone (MEK) | 2250 | 2120 | 94 | ( 51-148 ) |
| 2-Chlorotoluene | 750 | 705 | 94 | ( 75-122 ) |
| 2-Hexanone | 2250 | 2340 | 104 | ( 53-145 ) |
| 4-Chlorotoluene | 750 | 701 | 93 | ( 72-124 ) |
| 4-Isopropyltoluene | 750 | 662 | 88 | ( 73-127 ) |
| 4-Methyl-2-pentanone (MIBK) | 2250 | 2180 | 97 | ( 65-135 ) |
| Acetone | 2250 | 1910 | 85 | ( 36-164 ) |
| Benzene | 750 | 751 | 100 | ( 77-121 ) |
| Bromobenzene | 750 | 740 | 99 | ( 78-121 ) |
| Bromochloromethane | 750 | 732 | 98 | ( 78-125 ) |
| Bromodichloromethane | 750 | 800 | 107 | ( 75-127 ) |
| Bromoform | 750 | 768 | 102 | ( 67-132 ) |
| Bromomethane | 750 | 759 | 101 | ( 53-143 ) |

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1234284 [VXX40267]
Blank Spike Lab ID: 1728963
Date Analyzed: 08/15/2023 12:39

Matrix: Soil/Solid (dry weight)

QC for Samples: 1234284001, 1234284002, 1234284003

## Results by **SW8260D**

Blank Spike (ug/kg)

| Parameter | Spike | Result | Rec (%) | CL |
|---|---|---|---|---|
| Carbon disulfide | 1130 | 1230 | 110 | ( 63-132 ) |
| Carbon tetrachloride | 750 | 714 | 95 | ( 70-135 ) |
| Chlorobenzene | 750 | 736 | 98 | ( 79-120 ) |
| Chloroethane | 750 | 742 | 99 | ( 59-139 ) |
| Chloroform | 750 | 743 | 99 | ( 78-123 ) |
| Chloromethane | 750 | 742 | 99 | ( 50-136 ) |
| cis-1,2-Dichloroethene | 750 | 730 | 97 | ( 77-123 ) |
| cis-1,3-Dichloropropene | 750 | 838 | 112 | ( 74-126 ) |
| Dibromochloromethane | 750 | 775 | 103 | ( 74-126 ) |
| Dibromomethane | 750 | 753 | 100 | ( 78-125 ) |
| Dichlorodifluoromethane | 750 | 929 | 124 | ( 29-149 ) |
| Ethylbenzene | 750 | 716 | 96 | ( 76-122 ) |
| Freon-113 | 1130 | 1170 | 104 | ( 66-136 ) |
| Hexachlorobutadiene | 750 | 676 | 90 | ( 61-135 ) |
| Isopropylbenzene (Cumene) | 750 | 697 | 93 | ( 68-134 ) |
| Methylene chloride | 750 | 786 | 105 | ( 70-128 ) |
| Methyl-t-butyl ether | 1130 | 1130 | 100 | ( 73-125 ) |
| Naphthalene | 750 | 721 | 96 | ( 62-129 ) |
| n-Butylbenzene | 750 | 652 | 87 | ( 70-128 ) |
| n-Propylbenzene | 750 | 679 | 91 | ( 73-125 ) |
| o-Xylene | 750 | 727 | 97 | ( 77-123 ) |
| P & M -Xylene | 1500 | 1420 | 95 | ( 77-124 ) |
| sec-Butylbenzene | 750 | 647 | 86 | ( 73-126 ) |
| Styrene | 750 | 745 | 99 | ( 76-124 ) |
| tert-Butylbenzene | 750 | 665 | 89 | ( 73-125 ) |
| Tetrachloroethene | 750 | 747 | 100 | ( 73-128 ) |
| Toluene | 750 | 729 | 97 | ( 77-121 ) |
| trans-1,2-Dichloroethene | 750 | 722 | 96 | ( 74-125 ) |
| trans-1,3-Dichloropropene | 750 | 773 | 103 | ( 71-130 ) |
| Trichloroethene | 750 | 768 | 102 | ( 77-123 ) |
| Trichlorofluoromethane | 750 | 859 | 115 | ( 62-140 ) |
| Vinyl acetate | 750 | 796 | 106 | ( 50-151 ) |
| Vinyl chloride | 750 | 772 | 103 | ( 56-135 ) |
| Xylenes (total) | 2250 | 2150 | 96 | ( 78-124 ) |

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1234284 [VXX40267]
Blank Spike Lab ID: 1728963
Date Analyzed: 08/15/2023 12:39

Matrix: Soil/Solid (dry weight)

QC for Samples: 1234284001, 1234284002, 1234284003

## Results by **SW8260D**

Blank Spike (ug/kg)

| Parameter | Spike | Result | Rec (%) | CL |
|---|---|---|---|---|
| **Surrogates** | | | | |
| 1,2-Dichloroethane-D4 (surr) | 750 | | 94 | ( 71-136 ) |
| 4-Bromofluorobenzene (surr) | 750 | | 97 | ( 55-151 ) |
| Toluene-d8 (surr) | 750 | | 100 | ( 85-116 ) |

## Batch Information

Analytical Batch: **VMS22664**
Analytical Method: **SW8260D**
Instrument: **VQA 7890/5975 GC/MS**
Analyst: **S.S**

Prep Batch: **VXX40267**
Prep Method: **SW5035A**
Prep Date/Time: **08/15/2023 06:00**
Spike Init Wt./Vol.: 750 ug/kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 08/31/2023 6:27:32PM

## Matrix Spike Summary

Original Sample ID: 1728969
MS Sample ID: 1728973 MS
MSD Sample ID: 1728974 MSD

Analysis Date: 08/15/2023 15:14
Analysis Date: 08/15/2023 13:56
Analysis Date: 08/15/2023 14:12
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1234284001, 1234284002, 1234284003

## Results by **SW8260D**

| | | Matrix Spike (ug/kg) | | | Spike Duplicate (ug/kg) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Sample | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| 1,1,1,2-Tetrachloroethane | 11.6U | 869 | 871 | 100 | 869 | 859 | 99 | 78-125 | 1.40 | (< 20 ) |
| 1,1,1-Trichloroethane | 14.5U | 869 | 898 | 103 | 869 | 902 | 104 | 73-130 | 0.42 | (< 20 ) |
| 1,1,2,2-Tetrachloroethane | 1.16U | 869 | 882 | 101 | 869 | 886 | 102 | 70-124 | 0.50 | (< 20 ) |
| 1,1,2-Trichloroethane | 0.580U | 869 | 961 | 111 | 869 | 967 | 111 | 78-121 | 0.60 | (< 20 ) |
| 1,1-Dichloroethane | 14.5U | 869 | 839 | 97 | 869 | 851 | 98 | 76-125 | 1.50 | (< 20 ) |
| 1,1-Dichloroethene | 14.5U | 869 | 934 | 107 | 869 | 945 | 109 | 70-131 | 1.20 | (< 20 ) |
| 1,1-Dichloropropene | 14.5U | 869 | 902 | 104 | 869 | 904 | 104 | 76-125 | 0.26 | (< 20 ) |
| 1,2,3-Trichlorobenzene | 58.0U | 869 | 814 | 94 | 869 | 805 | 93 | 66-130 | 1.10 | (< 20 ) |
| 1,2,3-Trichloropropane | 1.16U | 869 | 846 | 97 | 869 | 859 | 99 | 73-125 | 1.60 | (< 20 ) |
| 1,2,4-Trichlorobenzene | 14.5U | 869 | 795 | 92 | 869 | 797 | 92 | 67-129 | 0.27 | (< 20 ) |
| 1,2,4-Trimethylbenzene | 58.0U | 869 | 787 | 91 | 869 | 790 | 91 | 75-123 | 0.29 | (< 20 ) |
| 1,2-Dibromo-3-chloropropane | 58.0U | 869 | 844 | 97 | 869 | 846 | 97 | 61-132 | 0.20 | (< 20 ) |
| 1,2-Dibromoethane | 0.870U | 869 | 1010 | 116 | 869 | 1010 | 117 | 78-122 | 0.63 | (< 20 ) |
| 1,2-Dichlorobenzene | 14.5U | 869 | 787 | 91 | 869 | 784 | 90 | 78-121 | 0.44 | (< 20 ) |
| 1,2-Dichloroethane | 1.16U | 869 | 807 | 93 | 869 | 816 | 94 | 73-128 | 1.10 | (< 20 ) |
| 1,2-Dichloropropane | 5.80U | 869 | 861 | 99 | 869 | 870 | 100 | 76-123 | 1.00 | (< 20 ) |
| 1,3,5-Trimethylbenzene | 10.8J | 869 | 774 | 88 | 869 | 773 | 88 | 73-124 | 0.12 | (< 20 ) |
| 1,3-Dichlorobenzene | 14.5U | 869 | 770 | 89 | 869 | 768 | 88 | 77-121 | 0.20 | (< 20 ) |
| 1,3-Dichloropropane | 5.80U | 869 | 934 | 107 | 869 | 939 | 108 | 77-121 | 0.51 | (< 20 ) |
| 1,4-Dichlorobenzene | 14.5U | 869 | 778 | 90 | 869 | 776 | 89 | 75-120 | 0.23 | (< 20 ) |
| 2,2-Dichloropropane | 14.5U | 869 | 927 | 107 | 869 | 933 | 107 | 67-133 | 0.69 | (< 20 ) |
| 2-Butanone (MEK) | 145U | 2610 | 2370 | 91 | 2610 | 2410 | 93 | 51-148 | 1.90 | (< 20 ) |
| 2-Chlorotoluene | 14.5U | 869 | 777 | 89 | 869 | 776 | 89 | 75-122 | 0.06 | (< 20 ) |
| 2-Hexanone | 69.5U | 2610 | 2720 | 104 | 2610 | 2690 | 103 | 53-145 | 1.10 | (< 20 ) |
| 4-Chlorotoluene | 11.6U | 869 | 767 | 88 | 869 | 766 | 88 | 72-124 | 0.21 | (< 20 ) |
| 4-Isopropyltoluene | 46.4U | 869 | 789 | 91 | 869 | 788 | 91 | 73-127 | 0.22 | (< 20 ) |
| 4-Methyl-2-pentanone (MIBK) | 145U | 2610 | 2480 | 95 | 2610 | 2500 | 96 | 65-135 | 0.60 | (< 20 ) |
| Acetone | 145U | 2610 | 2000 | 77 | 2610 | 2220 | 85 | 36-164 | 10.60 | (< 20 ) |
| Benzene | 7.25U | 869 | 864 | 100 | 869 | 867 | 100 | 77-121 | 0.32 | (< 20 ) |
| Bromobenzene | 14.5U | 869 | 805 | 93 | 869 | 795 | 91 | 78-121 | 1.30 | (< 20 ) |
| Bromochloromethane | 14.5U | 869 | 843 | 97 | 869 | 855 | 98 | 78-125 | 1.50 | (< 20 ) |
| Bromodichloromethane | 1.16U | 869 | 923 | 106 | 869 | 927 | 107 | 75-127 | 0.45 | (< 20 ) |
| Bromoform | 14.5U | 869 | 899 | 103 | 869 | 891 | 103 | 67-132 | 0.85 | (< 20 ) |
| Bromomethane | 11.6U | 869 | 884 | 102 | 869 | 907 | 104 | 53-143 | 2.60 | (< 20 ) |
| Carbon disulfide | 58.0U | 1300 | 1420 | 109 | 1300 | 1420 | 109 | 63-132 | 0.64 | (< 20 ) |
| Carbon tetrachloride | 7.25U | 869 | 856 | 99 | 869 | 848 | 98 | 70-135 | 0.95 | (< 20 ) |
| Chlorobenzene | 14.5U | 869 | 858 | 99 | 869 | 845 | 97 | 79-120 | 1.50 | (< 20 ) |

Print Date: 08/31/2023 6:27:33PM

## Matrix Spike Summary

Original Sample ID: 1728969
MS Sample ID: 1728973 MS
MSD Sample ID: 1728974 MSD

Analysis Date: 08/15/2023 15:14
Analysis Date: 08/15/2023 13:56
Analysis Date: 08/15/2023 14:12
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1234284001, 1234284002, 1234284003

## Results by **SW8260D**

| | | Matrix Spike (ug/kg) | | | Spike Duplicate (ug/kg) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Sample | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Chloroethane | 116U | 869 | 825 | 95 | 869 | 821 | 95 | 59-139 | 0.53 | (< 20 ) |
| Chloroform | 3.48U | 869 | 858 | 99 | 869 | 865 | 100 | 78-123 | 0.75 | (< 20 ) |
| Chloromethane | 14.5U | 869 | 805 | 93 | 869 | 794 | 91 | 50-136 | 1.30 | (< 20 ) |
| cis-1,2-Dichloroethene | 14.5U | 869 | 815 | 94 | 869 | 840 | 97 | 77-123 | 3.00 | (< 20 ) |
| cis-1,3-Dichloropropene | 7.25U | 869 | 968 | 111 | 869 | 974 | 112 | 74-126 | 0.65 | (< 20 ) |
| Dibromochloromethane | 2.90U | 869 | 916 | 105 | 869 | 914 | 105 | 74-126 | 0.23 | (< 20 ) |
| Dibromomethane | 14.5U | 869 | 865 | 100 | 869 | 874 | 101 | 78-125 | 1.00 | (< 20 ) |
| Dichlorodifluoromethane | 58.0U | 869 | 861 | 99 | 869 | 856 | 99 | 29-149 | 0.64 | (< 20 ) |
| Ethylbenzene | 14.5U | 869 | 834 | 96 | 869 | 831 | 96 | 76-122 | 0.29 | (< 20 ) |
| Freon-113 | 58.0U | 1300 | 1360 | 105 | 1300 | 1380 | 106 | 66-136 | 1.40 | (< 20 ) |
| Hexachlorobutadiene | 11.6U | 869 | 1120 | 129 | 869 | 1150 | 132 | 61-135 | 2.40 | (< 20 ) |
| Isopropylbenzene (Cumene) | 14.5U | 869 | 872 | 100 | 869 | 874 | 101 | 68-134 | 0.18 | (< 20 ) |
| Methylene chloride | 38.1J | 869 | 862 | 95 | 869 | 907 | 100 | 70-128 | 5.10 | (< 20 ) |
| Methyl-t-butyl ether | 58.0U | 1300 | 1260 | 97 | 1300 | 1260 | 97 | 73-125 | 0.18 | (< 20 ) |
| Naphthalene | 14.5U | 869 | 838 | 96 | 869 | 853 | 98 | 62-129 | 1.80 | (< 20 ) |
| n-Butylbenzene | 14.5U | 869 | 831 | 96 | 869 | 837 | 96 | 70-128 | 0.71 | (< 20 ) |
| n-Propylbenzene | 14.5U | 869 | 771 | 89 | 869 | 771 | 89 | 73-125 | 0.02 | (< 20 ) |
| o-Xylene | 14.5U | 869 | 857 | 99 | 869 | 858 | 99 | 77-123 | 0.01 | (< 20 ) |
| P & M -Xylene | 29.0U | 1740 | 1670 | 96 | 1740 | 1670 | 96 | 77-124 | 0.21 | (< 20 ) |
| sec-Butylbenzene | 14.5U | 869 | 750 | 86 | 869 | 757 | 87 | 73-126 | 0.93 | (< 20 ) |
| Styrene | 14.5U | 869 | 878 | 101 | 869 | 879 | 101 | 76-124 | 0.11 | (< 20 ) |
| tert-Butylbenzene | 14.5U | 869 | 750 | 86 | 869 | 751 | 86 | 73-125 | 0.18 | (< 20 ) |
| Tetrachloroethene | 7.25U | 869 | 902 | 104 | 869 | 897 | 103 | 73-128 | 0.62 | (< 20 ) |
| Toluene | 14.5U | 869 | 851 | 98 | 869 | 840 | 97 | 77-121 | 1.40 | (< 20 ) |
| trans-1,2-Dichloroethene | 14.5U | 869 | 875 | 101 | 869 | 919 | 106 | 74-125 | 4.90 | (< 20 ) |
| trans-1,3-Dichloropropene | 7.25U | 869 | 898 | 103 | 869 | 903 | 104 | 71-130 | 0.56 | (< 20 ) |
| Trichloroethene | 5.80U | 869 | 901 | 104 | 869 | 904 | 104 | 77-123 | 0.31 | (< 20 ) |
| Trichlorofluoromethane | 29.0U | 869 | 1090 | 125 | 869 | 982 | 113 | 62-140 | 10.00 | (< 20 ) |
| Vinyl acetate | 58.0U | 869 | 947 | 109 | 869 | 946 | 109 | 50-151 | 0.01 | (< 20 ) |
| Vinyl chloride | 0.464U | 869 | 823 | 95 | 869 | 828 | 95 | 56-135 | 0.64 | (< 20 ) |
| Xylenes (total) | 43.5U | 2610 | 2530 | 97 | 2610 | 2520 | 97 | 78-124 | 0.13 | (< 20 ) |
| **Surrogates** | | | | | | | | | | |
| 1,2-Dichloroethane-D4 (surr) | | 869 | 827 | 95 | 869 | 837 | 96 | 71-136 | 1.10 | |
| 4-Bromofluorobenzene (surr) | | 1210 | 1260 | 104 | 1210 | 1250 | 104 | 55-151 | 0.61 | |
| Toluene-d8 (surr) | | 869 | 883 | 102 | 869 | 878 | 101 | 85-116 | 0.53 | |

Print Date: 08/31/2023 6:27:33PM

## Matrix Spike Summary

Original Sample ID: 1728969
MS Sample ID: 1728973 MS
MSD Sample ID: 1728974 MSD

Analysis Date:
Analysis Date: 08/15/2023 13:56
Analysis Date: 08/15/2023 14:12
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1234284001, 1234284002, 1234284003

## Results by **SW8260D**

| | | Matrix Spike (%) | | | Spike Duplicate (%) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Sample | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |

## Batch Information

Analytical Batch: VMS22664
Analytical Method: SW8260D
Instrument: VQA 7890/5975 GC/MS
Analyst: S.S
Analytical Date/Time: 8/15/2023 1:56:00PM

Prep Batch: VXX40267
Prep Method: Vol. Extraction SW8260 Field Extracted L
Prep Date/Time: 8/15/2023 6:00:00AM
Prep Initial Wt./Vol.: 51.78g
Prep Extract Vol: 30.01mL

Print Date: 08/31/2023 6:27:33PM

## Method Blank

Blank ID: MB for HBN 1862393 [VXX/40271]
Blank Lab ID: 1729020

Ma,rti : Sotl/Soltx dkr( y etwg,h

QC for Samples:
1234284004

## ) esRl,s b( **SW8260D**

| Oarame,er | ) esRl,s | LUQ/CL | DL | LUD | u nt,s |
|---|---|---|---|---|---|
| 1Pl1Pl2-Te,racgloroe,gane | 10.0u | 20.0 | 6.20 | 10.0 | Rw/kw |
| 1Pl1Pl-Trtcgloroe,gane | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| 1Pl2Pl2-Te,racgloroe,gane | 1.00u | 2.00 | 0.620 | 1.00 | Rw/kw |
| 1Pl2Pl-Trtcgloroe,gane | 0.500u | 1.00 | 0.500 | 0.500 | Rw/kw |
| 1Pl-Dtcgloroe,gane | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| 1Pl-Dtcgloroe,gene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| 1Pl-Dtcgloropropene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| 1P2P3-Trtcglorobenzene | 50.0u | 100 | 30.0 | 50.0 | Rw/kw |
| 1P2P3-Trtcgloropropane | 1.00u | 2.00 | 0.620 | 1.00 | Rw/kw |
| 1P2P4-Trtcglorobenzene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| 1P2P4-Trtme,g( lbenzene | 50.0u | 100 | 30.0 | 50.0 | Rw/kw |
| 1P2-Dtbromo-3-cgloropropane | 50.0u | 100 | 31.0 | 50.0 | Rw/kw |
| 1P2-Dtbromoe,gane | 0.750u | 1.50 | 0.750 | 0.750 | Rw/kw |
| 1P2-Dtcglorobenzene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| 1P2-Dtcgloroe,gane | 1.00u | 2.00 | 0.700 | 1.00 | Rw/kw |
| 1P2-Dtcgloropropane | 5.00u | 10.0 | 5.00 | 5.00 | Rw/kw |
| 1P3P5-Trtme,g( lbenzene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| 1P3-Dtcglorobenzene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| 1P3-Dtcgloropropane | 5.00u | 10.0 | 3.10 | 5.00 | Rw/kw |
| 1P4-Dtcglorobenzene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| 2P2-Dtcgloropropane | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| 2-BR,anone dMEKh | 125u | 250 | 78.0 | 125 | Rw/kw |
| 2-Cgloro,olRene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| 2-Hei anone | 60.0u | 120 | 60.0 | 60.0 | Rw/kw |
| 4-Cgloro,olRene | 10.0u | 20.0 | 10.0 | 10.0 | Rw/kw |
| 4-Isoprop( l,olRene | 40.0u | 80.0 | 40.0 | 40.0 | Rw/kw |
| 4-Me,g( l-2-pen,anone dMIBKh | 125u | 250 | 78.0 | 125 | Rw/kw |
| Ace,one | 125u | 250 | 110 | 125 | Rw/kw |
| Benzene | 6.25u | 12.5 | 3.90 | 6.25 | Rw/kw |
| Bromobenzene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| Bromocglorome,gane | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| Bromoxtcglorome,gane | 1.00u | 2.00 | 0.620 | 1.00 | Rw/kw |
| Bromoform | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| Bromome,gane | 10.0u | 20.0 | 8.00 | 10.0 | Rw/kw |
| Carbon xtsRftxe | 50.0u | 100 | 31.0 | 50.0 | Rw/kw |
| Carbon ,e,racglortxe | 8.86J | 12.5 | 3.90 | 6.25 | Rw/kw |
| Cglorobenzene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| Cgloroe,gane | 100u | 200 | 62.0 | 100 | Rw/kw |
| Cgloroform | 3.00u | 6.00 | 3.00 | 3.00 | Rw/kw |
| Cglorome,gane | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| cts-1P2-Dtcgloroe,gene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| cts-1P3-Dtcgloropropene | 6.25u | 12.5 | 3.90 | 6.25 | Rw/kw |

## Method Blank

Blank ID: MB for HBN 1862393 [VXX/40271]
Blank Lab ID: 1729020

Ma,rti : Sotl/Soltx dkr( y etwg,h

QC for Samples:
1234284004

## ) esRl,s b( **SW8260D**

| Oarame,er | ) esRl,s | LUQ/CL | DL | LUD | u nt,s |
|---|---|---|---|---|---|
| Dtbromocglorome,gane | 2.50u | 5.00 | 1.50 | 2.50 | Rw/kw |
| Dtbromome,gane | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| DtcgloroxtflRorome,gane | 50.0u | 100 | 30.0 | 50.0 | Rw/kw |
| E,g( lbenzene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| Freon-113 | 50.0u | 100 | 31.0 | 50.0 | Rw/kw |
| Hei acglorobR,axtene | 10.0u | 20.0 | 6.20 | 10.0 | Rw/kw |
| Isoprop( lbenzene dCRmeneh | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| Me,g( lene cglortxe | 50.0u | 100 | 31.0 | 50.0 | Rw/kw |
| Me,g( l-,-bR,( l e,ger | 50.0u | 100 | 31.0 | 50.0 | Rw/kw |
| Napg,galene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| n-BR,( lbenzene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| n-Orop( lbenzene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| o-X( lene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| O & M -X( lene | 25.0u | 50.0 | 15.0 | 25.0 | Rw/kw |
| sec-BR,( lbenzene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| S,( rene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| ,er,-BR,( lbenzene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| Te,racgloroe,gene | 6.25u | 12.5 | 3.90 | 6.25 | Rw/kw |
| TolRene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| ,rans-1P2-Dtcgloroe,gene | 12.5u | 25.0 | 7.80 | 12.5 | Rw/kw |
| ,rans-1P3-Dtcgloropropene | 6.25u | 12.5 | 3.90 | 6.25 | Rw/kw |
| Trtcgloroe,gene | 5.00u | 10.0 | 3.20 | 5.00 | Rw/kw |
| TrtcgloroflRorome,gane | 25.0u | 50.0 | 15.0 | 25.0 | Rw/kw |
| Vtn( l ace,a,e | 50.0u | 100 | 31.0 | 50.0 | Rw/kw |
| Vtn( l cglortxe | 0.400u | 0.800 | 0.250 | 0.400 | Rw/kw |
| X( lenes d,o,alh | 37.5u | 75.0 | 22.8 | 37.5 | Rw/kw |
| **Surrogates** | | | | | |
| 1P2-Dtcgloroe,gane-D4 dsRrrh | 99.9 | 71-136 | | 0 | % |
| 4-BromoflRorobenzene dsRrrh | 96.3 | 55-151 | | 0 | % |
| TolRene-x8 dsRrrh | 95.3 | 85-116 | | 0 | % |

## Batch Information

Anal( ,tcal Ba,cg: VMS22666
Anal( ,tcal Me,gox: SW8260D
Ins,rRmen,: V) A Awtlen, GC/MS 7890B/5977A
Anal( s,: S.S
Anal( ,tcal Da,e/Ttme: 8/15/2023 12:24:00OM

Orep Ba,cg: VXX40271
Orep Me,gox: SW5035A
Orep Da,e/Ttme: 8/15/2023 6:00:00AM
Orep Int,tal W,./Vol.: 50 w
Orep Ei ,rac, Vol: 25 mL

Ortn, Da,e: 08/31/2023 6:27:34OM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1234284 [VXX40271]
Blank Spike Lab ID: 1729021
Date Analyzed: 08/15/2023 12:40

Matrix: Soil/Solid (dry weight)

QC for Samples: 1234284004

## Results by **SW8260D**

Blank Spike (ug/kg)

| Parameter | Spike | Result | Rec (%) | CL |
|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 750 | 778 | 104 | ( 78-125 ) |
| 1,1,1-Trichloroethane | 750 | 834 | 111 | ( 73-130 ) |
| 1,1,2,2-Tetrachloroethane | 750 | 689 | 92 | ( 70-124 ) |
| 1,1,2-Trichloroethane | 750 | 738 | 98 | ( 78-121 ) |
| 1,1-Dichloroethane | 750 | 788 | 105 | ( 76-125 ) |
| 1,1-Dichloroethene | 750 | 908 | 121 | ( 70-131 ) |
| 1,1-Dichloropropene | 750 | 799 | 107 | ( 76-125 ) |
| 1,2,3-Trichlorobenzene | 750 | 808 | 108 | ( 66-130 ) |
| 1,2,3-Trichloropropane | 750 | 682 | 91 | ( 73-125 ) |
| 1,2,4-Trichlorobenzene | 750 | 834 | 111 | ( 67-129 ) |
| 1,2,4-Trimethylbenzene | 750 | 684 | 91 | ( 75-123 ) |
| 1,2-Dibromo-3-chloropropane | 750 | 700 | 93 | ( 61-132 ) |
| 1,2-Dibromoethane | 750 | 793 | 106 | ( 78-122 ) |
| 1,2-Dichlorobenzene | 750 | 706 | 94 | ( 78-121 ) |
| 1,2-Dichloroethane | 750 | 766 | 102 | ( 73-128 ) |
| 1,2-Dichloropropane | 750 | 821 | 110 | ( 76-123 ) |
| 1,3,5-Trimethylbenzene | 750 | 695 | 93 | ( 73-124 ) |
| 1,3-Dichlorobenzene | 750 | 683 | 91 | ( 77-121 ) |
| 1,3-Dichloropropane | 750 | 707 | 94 | ( 77-121 ) |
| 1,4-Dichlorobenzene | 750 | 691 | 92 | ( 75-120 ) |
| 2,2-Dichloropropane | 750 | 897 | 120 | ( 67-133 ) |
| 2-Butanone (MEK) | 2250 | 2550 | 114 | ( 51-148 ) |
| 2-Chlorotoluene | 750 | 655 | 87 | ( 75-122 ) |
| 2-Hexanone | 2250 | 2100 | 94 | ( 53-145 ) |
| 4-Chlorotoluene | 750 | 658 | 88 | ( 72-124 ) |
| 4-Isopropyltoluene | 750 | 736 | 98 | ( 73-127 ) |
| 4-Methyl-2-pentanone (MIBK) | 2250 | 2570 | 114 | ( 65-135 ) |
| Acetone | 2250 | 2300 | 102 | ( 36-164 ) |
| Benzene | 750 | 818 | 109 | ( 77-121 ) |
| Bromobenzene | 750 | 730 | 97 | ( 78-121 ) |
| Bromochloromethane | 750 | 873 | 116 | ( 78-125 ) |
| Bromodichloromethane | 750 | 923 | 123 | ( 75-127 ) |
| Bromoform | 750 | 781 | 104 | ( 67-132 ) |
| Bromomethane | 750 | 806 | 107 | ( 53-143 ) |

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1234284 [VXX40271]
Blank Spike Lab ID: 1729021
Date Analyzed: 08/15/2023 12:40

Matrix: Soil/Solid (dry weight)

QC for Samples: 1234284004

## Results by **SW8260D**

Blank Spike (ug/kg)

| Parameter | Spike | Result | Rec (%) | | CL |
|---|---|---|---|---|---|
| Carbon disulfide | 1130 | 1530 | 136 | * | ( 63-132 ) |
| Carbon tetrachloride | 750 | 780 | 104 | | ( 70-135 ) |
| Chlorobenzene | 750 | 724 | 97 | | ( 79-120 ) |
| Chloroethane | 750 | 873 | 116 | | ( 59-139 ) |
| Chloroform | 750 | 786 | 105 | | ( 78-123 ) |
| Chloromethane | 750 | 770 | 103 | | ( 50-136 ) |
| cis-1,2-Dichloroethene | 750 | 839 | 112 | | ( 77-123 ) |
| cis-1,3-Dichloropropene | 750 | 943 | 126 | | ( 74-126 ) |
| Dibromochloromethane | 750 | 758 | 101 | | ( 74-126 ) |
| Dibromomethane | 750 | 877 | 117 | | ( 78-125 ) |
| Dichlorodifluoromethane | 750 | 817 | 109 | | ( 29-149 ) |
| Ethylbenzene | 750 | 725 | 97 | | ( 76-122 ) |
| Freon-113 | 1130 | 1410 | 125 | | ( 66-136 ) |
| Hexachlorobutadiene | 750 | 1030 | 137 | * | ( 61-135 ) |
| Isopropylbenzene (Cumene) | 750 | 728 | 97 | | ( 68-134 ) |
| Methylene chloride | 750 | 890 | 119 | | ( 70-128 ) |
| Methyl-t-butyl ether | 1130 | 1260 | 112 | | ( 73-125 ) |
| Naphthalene | 750 | 755 | 101 | | ( 62-129 ) |
| n-Butylbenzene | 750 | 728 | 97 | | ( 70-128 ) |
| n-Propylbenzene | 750 | 678 | 90 | | ( 73-125 ) |
| o-Xylene | 750 | 734 | 98 | | ( 77-123 ) |
| P & M -Xylene | 1500 | 1430 | 95 | | ( 77-124 ) |
| sec-Butylbenzene | 750 | 719 | 96 | | ( 73-126 ) |
| Styrene | 750 | 753 | 100 | | ( 76-124 ) |
| tert-Butylbenzene | 750 | 715 | 95 | | ( 73-125 ) |
| Tetrachloroethene | 750 | 782 | 104 | | ( 73-128 ) |
| Toluene | 750 | 695 | 93 | | ( 77-121 ) |
| trans-1,2-Dichloroethene | 750 | 950 | 127 | * | ( 74-125 ) |
| trans-1,3-Dichloropropene | 750 | 806 | 107 | | ( 71-130 ) |
| Trichloroethene | 750 | 832 | 111 | | ( 77-123 ) |
| Trichlorofluoromethane | 750 | 952 | 127 | | ( 62-140 ) |
| Vinyl acetate | 750 | 903 | 120 | | ( 50-151 ) |
| Vinyl chloride | 750 | 895 | 119 | | ( 56-135 ) |
| Xylenes (total) | 2250 | 2170 | 96 | | ( 78-124 ) |

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1234284 [VXX40271]
Blank Spike Lab ID: 1729021
Date Analyzed: 08/15/2023 12:40

Matrix: Soil/Solid (dry weight)

QC for Samples: 1234284004

## Results by **SW8260D**

Blank Spike (ug/kg)

| Parameter | Spike | Result | Rec (%) | CL |
|---|---|---|---|---|
| **Surrogates** | | | | |
| 1,2-Dichloroethane-D4 (surr) | 750 | | 96 | ( 71-136 ) |
| 4-Bromofluorobenzene (surr) | 750 | | 97 | ( 55-151 ) |
| Toluene-d8 (surr) | 750 | | 96 | ( 85-116 ) |

## Batch Information

Analytical Batch: **VMS22666**
Analytical Method: **SW8260D**
Instrument: **VRA Agilent GC/MS 7890B/5977A**
Analyst: **S.S**

Prep Batch: **VXX40271**
Prep Method: **SW5035A**
Prep Date/Time: **08/15/2023 06:00**
Spike Init Wt./Vol.: 750 ug/kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 08/31/2023 6:27:36PM

## Matrix Spike Summary

Original Sample ID: 1728922
6 S Sample ID: 172892M6 S
6 SD Sample ID: 1728923 6 SD

QC for Sampley: 12M82t 3993

4nalAyiy Dase: 9t 01/ 0292M 1/ :1/
4nalAyiy Dase: 9t 01/ 0292M 1M/ 5
4nalAyiy Dase: 9t 01/ 0292M 13:12
6 asrix: SolidOSoil (WesWeighs)

## Reyulsy bA **SW8260D**

| | | 6 asrix Spike (ug0kg) | | | Spike Duplicase (ug0kg) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parameser | Sample | Spike | Reyuls | Rec (%) | Spike | Reyuls | Rec (%) | CL | RPD (%) | RPD CL |
| 1,1,1,2-Tesrachloroeshane | 12.t U | 853 | 8/ 9 | 88 | 853 | 1929 | 195 | 7t -12/ | 7.59 | (< 29 ) |
| 1,1,1-Trichloroeshane | 15.9U | 853 | 1179 | 121 | 853 | 1129 | 115 | 7M-1M9 | 3.39 | (< 29 ) |
| 1,1,2,2-Tesrachloroeshane | 1.2t U | 853 | t 5t | 89 | 853 | t 7M | 81 | 79-123 | 9./ 1 | (< 29 ) |
| 1,1,2-Trichloroeshane | 9.539U | 853 | t t 3 | 82 | 853 | 8/ / | 88 | 7t -121 | 7.t 9 | (< 29 ) |
| 1,1-Dichloroeshane | 15.9U | 853 | 1959 | 119 | 853 | 1979 | 111 | 75-12/ | 9.5t | (< 29 ) |
| 1,1-Dichloroeshene | 15.9U | 853 | 1239 | 12t | 853 | 1199 | 113 | 79-1M1 | 12.19 | (< 29 ) |
| 1,1-Dichloropropene | 15.9U | 853 | 1989 | 11M | 853 | 19t 9 | 112 | 75-12/ | 9.t t | (< 29 ) |
| 1,2,M-Trichlorobenzene | 53.9U | 853 | 1199 | 113 | 853 | 1M79 | 132 * | 55-1M9 | 21./ 9 * | (< 29 ) |
| 1,2,M-Trichloropropane | 1.2t U | 853 | t 37 | t t | 853 | t 7/ | 81 | 7M-12/ | MM9 | (< 29 ) |
| 1,2,3-Trichlorobenzene | 15.9U | 853 | 1139 | 11t | 853 | 11t 9 | 122 | 57-128 | M79 | (< 29 ) |
| 1,2,3-TrimeshAlbenzene | 53.9U | 853 | 893 | 83 | 853 | 813 | 8/ | 7/ -12M | 1.19 | (< 29 ) |
| 1,2-Dibromo-M-chloropropane | 53.9U | 853 | t t 7 | 82 | 853 | t t t | 82 | 51-1M2 | 9.9M | (< 29 ) |
| 1,2-Dibromoeshane | 9.859U | 853 | 837 | 8t | 853 | 19M9 | 195 | 7t -122 | t .99 | (< 29 ) |
| 1,2-Dichlorobenzene | 15.9U | 853 | t 7/ | 81 | 853 | 897 | 83 | 7t -121 | M59 | (< 29 ) |
| 1,2-Dichloroeshane | 1.2t U | 853 | 1959 | 119 | 853 | 88/ | 19M | 7M-12t | 5.t 9 | (< 29 ) |
| 1,2-Dichloropropane | 5.39U | 853 | 1989 | 11M | 853 | 1989 | 11M | 75-12M | 9.13 | (< 29 ) |
| 1,M/ -TrimeshAlbenzene | 15.9U | 853 | 81/ | 8/ | 853 | 8M2 | 87 | 7M-123 | 1.89 | (< 29 ) |
| 1,M-Dichlorobenzene | 15.9U | 853 | t 85 | 8M | 853 | 897 | 83 | 77-121 | 1.29 | (< 29 ) |
| 1,M-Dichloropropane | 5.39U | 853 | t / / | t 8 | 853 | 818 | 8/ | 77-121 | 7.29 | (< 29 ) |
| 1,3-Dichlorobenzene | 15.9U | 853 | 819 | 8/ | 853 | 892 | 83 | 7/ -129 | 9.82 | (< 29 ) |
| 2,2-Dichloropropane | 15.9U | 853 | 1229 | 127 | 853 | 1219 | 125 | 57-1MM | 9.8/ | (< 29 ) |
| 2-Jusanone (6 BE) | 159U | 2t 89 | M239 | 112 | 2t 89 | M2/ 9 | 112 | / 1-13t | 9.33 | (< 29 ) |
| 2-Chlorosoluene | 15.9U | 853 | t t 2 | 82 | 853 | t 58 | 89 | 7/ -122 | 1.39 | (< 29 ) |
| 2-Kexanone | 75./ U | 2t 89 | 2/ 29 | t 7 | 2t 89 | 2529 | 81 | / M-13/ | 3.99 | (< 29 ) |
| 3-Chlorosoluene | 12.t U | 853 | t / / | t 8 | 853 | t 7/ | 81 | 72-123 | 2.M9 | (< 29 ) |
| 3-IyopropAlsoluene | / 1.9U | 853 | 8t 7 | 192 | 853 | 8t 3 | 192 | 7M-127 | 9.M8 | (< 29 ) |
| 3-6 eshAl-2-pensanone (6 IJE) | 159U | 2t 89 | Mi 79 | 123 | 2t 89 | 2t 29 | 87 | 5/ -1M | 2Mt 9 * | (< 29 ) |
| 4-cesone | 159U | 2t 89 | 2879 | 19M | 2t 89 | 2389 | t 5 | M5-153 | 17.79 | (< 29 ) |
| Jenzene | t .99U | 853 | 1119 | 11/ | 853 | 1989 | 11M | 77-121 | 1.59 | (< 29 ) |
| Jromobenzene | 15.9U | 853 | 8/ 1 | 88 | 853 | 83/ | 8t | 7t -121 | 9.5/ | (< 29 ) |
| Jromochloromeshane | 15.9U | 853 | 1139 | 11t | 853 | 1129 | 115 | 7t -12/ | 1.29 | (< 29 ) |
| Jromodichloromeshane | 1.2t U | 853 | 12M9 | 127 | 853 | 1299 | 12/ | 7/ -127 | 2.29 | (< 29 ) |
| Jromoform | 15.9U | 853 | 8M9 | 87 | 853 | 1929 | 195 | 57-1M2 | 8.19 | (< 29 ) |
| Jromomeshane | 12.t U | 853 | 11M9 | 117 | 853 | 1959 | 119 | / M-13M | 5.M9 | (< 29 ) |
| Carbon diyulfide | 53.9U | 13/ 9 | 2989 | 13/ * | 13/ 9 | 1829 | 1MM * | 5M-1M2 | t ./ 9 | (< 29 ) |
| Carbon sesrachloride | t .99U | 853 | 1179 | 121 | 853 | 19t 9 | 112 | 79-1M | 7.t 9 | (< 29 ) |
| Chlorobenzene | 15.9U | 853 | t 8t | 8M | 853 | 85t | 199 | 78-129 | 7.59 | (< 29 ) |

PrinsDase: 9t 0M10292M 5:27:M P6

## Matrix Spike Summary

Original Sample ID: 1728922
6 S Sample ID: 172892M6 S
6 SD Sample ID: 1728923 6 SD

QC for Sampley: 12M82t 3993

4nalAyiy Dase: 9t 01/ 0292M 1/ :1/
4nalAyiy Dase: 9t 01/ 0292M 1M/ 5
4nalAyiy Dase: 9t 01/ 0292M 13:12
6 asrix: SolidOSoil (WesWeighs)

## Reyulsy bA **SW8260D**

| | | 6 asrix Spike (ug0kg) | | | | Spike Duplicase (ug0kg) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Parameser | Sample | Spike | Reyuls | Rec (%) | | Spike | Reyuls | Rec (%) | | CL | RPD (%) | | RPD CL |
| Chloroeshane | 12t U | 853 | 11M9 | 117 | | 853 | 19/ 9 | 198 | | / 8-1M8 | 7./ 9 | | (< 29 ) |
| Chloroform | Mt 3U | 853 | 11/ 9 | 129 | | 853 | 19M9 | 197 | | 7t -12M | 19.89 | | (< 29 ) |
| Chloromeshane | 15.9U | 853 | 1919 | 193 | | 853 | t 3t | t t | | / 9-1M5 | 17.19 | | (< 29 ) |
| ciy-1,2-Dichloroeshene | 15.9U | 853 | 1119 | 11/ | | 853 | 1199 | 113 | | 77-12M | 1./ 9 | | (< 29 ) |
| ciy-1,M-Dichloropropene | t .99U | 853 | 12/ 9 | 128 | * | 853 | 19t 9 | 112 | | 73-125 | 13.19 | | (< 29 ) |
| Dibromochloromeshane | M18U | 853 | 823 | 85 | | 853 | 887 | 19M | | 73-125 | 7.59 | | (< 29 ) |
| Dibromomeshane | 15.9U | 853 | 11M9 | 117 | | 853 | 1129 | 115 | | 7t -12/ | 9.88 | | (< 29 ) |
| Dichlorodifluoromeshane | 53.9U | 853 | 8/ 3 | 88 | | 853 | 7M9 | 75 | | 28-138 | 25.59 | * | (< 29 ) |
| BshAlbenzene | 15.9U | 853 | 89M | 83 | | 853 | 872 | 191 | | 75-122 | 7.39 | | (< 29 ) |
| wreon-11M | 53.9U | 13/ 9 | 1899 | 1M2 | | 13/ 9 | 1589 | 117 | | 55-1M5 | 12.99 | | (< 29 ) |
| Kexachlorobusadiene | 12.t U | 853 | 13t 9 | 1/ 3 | * | 853 | 1/ 19 | 1/ 5 | * | 51-1M | 1./ 9 | | (< 29 ) |
| IyopropAlbenzene (Cumene) | 15.9U | 853 | 891 | 83 | | 853 | 858 | 191 | | 5t -1M8 | 7.M9 | | (< 29 ) |
| 6 eshAlene chloride | / 2.7F | 853 | 1159 | 11/ | | 853 | 1929 | 199 | | 79-12t | 1M19 | | (< 29 ) |
| 6 eshA-s-busAl esher | 53.9U | 13/ 9 | 1t M9 | 127 | * | 13/ 9 | 1599 | 111 | | 7M-12/ | 1MM9 | | (< 29 ) |
| Gaphshalene | 15.9U | 853 | 19M9 | 197 | | 853 | 19/ 9 | 198 | | 52-128 | 1.79 | | (< 29 ) |
| n-J usAlbenzene | 15.9U | 853 | 857 | 199 | | 853 | 8t 7 | 192 | | 79-12t | 2.19 | | (< 29 ) |
| n-PropAlbenzene | 15.9U | 853 | t 81 | 82 | | 853 | 812 | 8/ | | 7M-12/ | 2.39 | | (< 29 ) |
| o-XAlene | 15.9U | 853 | 813 | 8/ | | 853 | 87t | 192 | | 77-12M | 5.t 9 | | (< 29 ) |
| P & 6 -XAlene | Mt.8U | 18M9 | 1t 99 | 8M | | 18M9 | 1819 | 88 | | 77-123 | 5.M9 | | (< 29 ) |
| yec-J usAlbenzene | 15.9U | 853 | 835 | 8t | | 853 | 8/ 8 | 199 | | 7M-125 | 1.M9 | | (< 29 ) |
| SsArene | 15.9U | 853 | 822 | 85 | | 853 | 889 | 19M | | 75-123 | 7.29 | | (< 29 ) |
| sers-J usAlbenzene | 15.9U | 853 | 837 | 8t | | 853 | 8/ 5 | 88 | | 7M-12/ | 9.t 7 | | (< 29 ) |
| Tesrachloroeshene | t .99U | 853 | 877 | 191 | | 853 | 1929 | 195 | | 7M-12t | 3.19 | | (< 29 ) |
| Toluene | 15.9U | 853 | t 79 | 89 | | 853 | 8M9 | 87 | | 77-121 | 5.59 | | (< 29 ) |
| srany-1,2-Dichloroeshene | 15.9U | 853 | 1M79 | 132 | * | 853 | 1299 | 123 | | 73-12/ | 1MM9 | | (< 29 ) |
| srany-1,M-Dichloropropene | t .99U | 853 | 1959 | 198 | | 853 | 1959 | 119 | | 71-1M9 | 9.15 | | (< 29 ) |
| Trichloroeshene | 5.39U | 853 | 11M9 | 117 | | 853 | 1199 | 113 | | 77-12M | 2.t 9 | | (< 29 ) |
| Trichlorofluoromeshane | Mt.8U | 853 | 1239 | 128 | | 853 | 1159 | 129 | | 52-139 | 5.59 | | (< 29 ) |
| VinAl acesase | 53.9U | 853 | 11/ 9 | 129 | | 853 | 1219 | 125 | | / 9-1/ 1 | / .M9 | | (< 29 ) |
| VinAl chloride | 9./ 19U | 853 | 11/ 9 | 118 | | 853 | 19t 9 | 112 | | / 5-1M | 5.39 | | (< 29 ) |
| XAleney (sosal) | 3t .9U | 2t 89 | 2719 | 83 | | 2t 89 | 2t 89 | 199 | | 7t -123 | 5./ 9 | | (< 29 ) |
| **Surrogates** | | | | | | | | | | | | | |
| 1,2-Dichloroeshane-D3 (yurr) | | 853 | 87t | 191 | | 853 | 89t | 83 | | 71-1M5 | 7.39 | | |
| 3-J romofluorobenzene (yurr) | | 1279 | 1289 | 192 | | 1279 | 1MM9 | 19/ | | / / -1/ 1 | M39 | | |
| Toluene-dt (yurr) | | 853 | t / M | t 8 | | 853 | 82M | 85 | | t / -115 | 7.89 | | |

PrinsDase: 9t 0Mt0292M 5:27:Mt P6

## Matrix Spike Summary

Original Sample ID: 1728922
6 S Sample ID: 172892M6 S
6 SD Sample ID: 1728923 6 SD

4nalAyiy Dase:
4nalAyiy Dase: 9t 01/ 0292M 1M/ 5
4nalAyiy Dase: 9t 01/ 0292M 13:12
6 asrix: Solid0Soil (WesWeighs)

QC for Sampley: 12M82t 3993

## Reyulsy bA **SW8260D**

| Parameser | Sample | 6 asrix Spike (%) Spike | Reyuls | Rec (%) | Spike Duplicase (%) Spike | Reyuls | Rec (%) | CL | RPD (%) | RPD CL |
|---|---|---|---|---|---|---|---|---|---|---|

## Batch Information

4nalAsical Jasch: V6 S22555
4nalAsical 6eshod: SWt 259D
Inysrumens: VR4 4gilensHC06 S 7t 89J0 8774
4nalAys: S.S
4nalAsical Dase0Time: t 01/ 0292M 1:/ 5:99P6

Prep Jasch: VXX39271
Prep 6eshod: Vol. Bxsracsion SWt 259 wield Bxsracsed L
Prep Dase0Time: t 01/ 0292M 5:99:9946
Prep Inisial Ws0Vol.: 38.28g
Prep BxsracsVol: M1./ 2mL

PrinsDase: 9t 0M10292M 5:27:Mt P6

## Method Blank

Blank ID: MB for HBN 1863460 [VXX/40333]
Blank Lab ID: 1731374

Matrix: Soil/Solid (dry weight)

QC for Samples:
1234284004

## Results by **AK101**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Gasoline Range Organics | 1.32J | 2.50 | 0.750 | 1.25 | mg/kg |
| **Surrogates** | | | | | |
| 4-Bromofluorobenzene (surr) | 93.1 | 50-150 | | 0 | % |

## Batch Information

Analytical Batch: VFC16584
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: CWD
Analytical Date/Time: 8/29/2023 2:05:00PM

Prep Batch: VXX40333
Prep Method: SW5035A
Prep Date/Time: 8/29/2023 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1234284 [VXX40333]
Blank Spike Lab ID: 1731375
Date Analyzed: 08/29/2023 13:27

Spike Duplicate ID: LCSD for HBN 1234284 [VXX40333]
Spike Duplicate Lab ID: 1731376
Matrix: Soil/Solid (dry weight)

QC for Samples: 1234284004

## Results by **AK101**

| | Blank Spike (mg/kg) | | | Spike Duplicate (mg/kg) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Gasoline Range Organics | 12.5 | 13.8 | 111 | 12.5 | 13.3 | 106 | ( 60-120 ) | 4.00 | (< 20 ) |
| **Surrogates** | | | | | | | | | |
| 4-Bromofluorobenzene (surr) | 1.25 | | 96 | 1.25 | | 95 | ( 50-150 ) | 0.88 | |

## Batch Information

Analytical Batch: **VFC16584**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **CWD**

Prep Batch: **VXX40333**
Prep Method: **SW5035A**
Prep Date/Time: **08/29/2023 06:00**
Spike Init Wt./Vol.: 1.25 mg/kg Extract Vol: 25 mL
Dupe Init Wt./Vol.: 1.25 mg/kg Extract Vol: 25 mL



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## Method Blank

Blank ID: MB for HBN 1863461 (QC VVX4/ 334]
Blank Lab ID: 1731377

QC for Samples:
1234284/ / 1t 1234284/ / 2t 1234284/ / 3

Mairxd: SoxXSolx( y( rwg exh) iR

## u esUlis bw **AK101**

| Garameier | u esUlis | LPQXCL | DL | LPD | Onxis |
|---|---|---|---|---|---|
| c asolxne u anhe Prhanx s | 1J275 | 2J- / | / J7- / | 1J2- | mhXkh |
| **Surrogates** | | | | | |
| 4zBromoflUbroben%ene ysUrrR | 1/ 7 | - / z1- / | | / | 9 |

## Batch Information

Analwix al Bai. ) : [ FC16- 84
Analwix al Mei) o( : AK1/ 1
InsirUmeni: Ahxeni 78W A GIDXFID
Analwsi: CT D
Analwix al DaieXExme: 8X2WX2/ 23 11:28:/ / GM

Grep Bai. ) : [ VV4/ 334
Grep Mei) o( : ST - / 3- A
Grep DaieXExme: 8X2WX2/ 23 6:/ / :/ / AM
Grep Inxixal T iJX olJ - / h
Grep v dira. i [ ol: 2- mL

Gnxni Daie: / 8X81X2/ 23 6:27:4- GM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1234284 [VXX40334]
Blank Spike Lab ID: 1731378
Da5e t nalAyez: 08d2/ d2023 22:90

Spike Duplica5e ID: LCSD for HBN 1234284 [VXX40334]
Spike Duplica5e Lab ID: 173137/
s a5iM Soild Soliz xzrA( eiwg5h

%C for SaP pleR 1234284001Q1234284002Q1234284003

## 6eRul5RbA **AK101**

| | Blank Spike xPwdkwh | | | Spike Duplica5e xPwdkwh | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ) araPe5er | Spike | 6eRul5 | 6ecxmh | Spike | 6eRul5 | 6ecxmh | CL | 6) Dxmh | 6) D CL |
| GaRoline 6anwe OrwanicR | 12.9 | 13.7 | 110 | 12.9 | 13.- | 108 | x-0<120 h | 1.10 | xT 20 h |
| **Surrogates** | | | | | | | | | |
| 4<BroP ofluorobenyene xRurrh | 1.29 | | 109 | 1.29 | | 108 | x90<190 h | 2.30 | |

## Batch Information

t nalA5cal Ba5cg: **VFC16584**
t nalA5cal se5goz: **AK101**
InR5uPen5 **Agilent 7890A PID/FID**
t nalAR5 **CWD**

)repBa5cg: **VXX40334**
)repse5goz: **SW5035A**
)repDa5edWPe: **08/29/2023 06:00**
Spike Ini5E 5dVol.: 1.29 Pwdkw vM5rac5Vol: 29 PL
Dupe Ini5E 5dVol.: 1.29 Pwdkw vM5rac5Vol: 29 PL

) rin5Da5e: 08d81d2023 -:27:48) s

## Method Blank

Blank ID: MB for HBN 1862555 [XXX/48433]
Blank Lab ID: 1729320

Matrix: Soil/Solid (dry weight)

QC for Samples:
1234284001, 1234284002, 1234284003

## Results by **8270D SIM (PAH)**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| 1-Methylnaphthalene | 12.5U | 25.0 | 6.25 | 12.5 | ug/kg |
| 2-Methylnaphthalene | 12.5U | 25.0 | 6.25 | 12.5 | ug/kg |
| Acenaphthene | 12.5U | 25.0 | 6.25 | 12.5 | ug/kg |
| Acenaphthylene | 12.5U | 25.0 | 6.25 | 12.5 | ug/kg |
| Anthracene | 12.5U | 25.0 | 6.25 | 12.5 | ug/kg |
| Benzo(a)Anthracene | 12.5U | 25.0 | 6.25 | 12.5 | ug/kg |
| Benzo[a]pyrene | 12.5U | 25.0 | 6.25 | 12.5 | ug/kg |
| Benzo[b]Fluoranthene | 12.5U | 25.0 | 6.25 | 12.5 | ug/kg |
| Benzo[g,h,i]perylene | 12.5U | 25.0 | 6.25 | 12.5 | ug/kg |
| Benzo[k]fluoranthene | 12.5U | 25.0 | 6.25 | 12.5 | ug/kg |
| Chrysene | 12.5U | 25.0 | 6.25 | 12.5 | ug/kg |
| Dibenzo[a,h]anthracene | 12.5U | 25.0 | 6.25 | 12.5 | ug/kg |
| Fluoranthene | 12.5U | 25.0 | 6.25 | 12.5 | ug/kg |
| Fluorene | 12.5U | 25.0 | 6.25 | 12.5 | ug/kg |
| Indeno[1,2,3-c,d] pyrene | 12.5U | 25.0 | 6.25 | 12.5 | ug/kg |
| Naphthalene | 10.0U | 20.0 | 5.00 | 10.0 | ug/kg |
| Phenanthrene | 12.5U | 25.0 | 6.25 | 12.5 | ug/kg |
| Pyrene | 12.5U | 25.0 | 6.25 | 12.5 | ug/kg |
| **Surrogates** | | | | | |
| 2-Methylnaphthalene-d10 (surr) | 95.3 | 58-103 | | 0 | % |
| Fluoranthene-d10 (surr) | 96.7 | 54-113 | | 0 | % |

## Batch Information

Analytical Batch: XMS13860
Analytical Method: 8270D SIM (PAH)
Instrument: Agilent 8890 GC/MS SYA
Analyst: HMW
Analytical Date/Time: 8/30/2023 12:56:00AM

Prep Batch: XXX48433
Prep Method: SW3550C
Prep Date/Time: 8/18/2023 9:45:55AM
Prep Initial Wt./Vol.: 22.5 g
Prep Extract Vol: 5 mL

Print Date: 08/31/2023 6:27:52PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1234284 [XXX48433]
Blank Spike Lab ID: 1729321
Date Analyzed: 08/30/2023 01:12

Matrix: Soil/Solid (dry weight)

QC for Samples: 1234284001, 1234284002, 1234284003

## Results by **8270D SIM (PAH)**

Blank Spike (ug/kg)

| Parameter | Spike | Result | Rec (%) | CL |
|---|---|---|---|---|
| 1-Methylnaphthalene | 111 | 82.5 | 74 | ( 43-111 ) |
| 2-Methylnaphthalene | 111 | 84.1 | 76 | ( 39-114 ) |
| Acenaphthene | 111 | 86.6 | 78 | ( 44-111 ) |
| Acenaphthylene | 111 | 86.5 | 78 | ( 39-116 ) |
| Anthracene | 111 | 90.6 | 82 | ( 50-114 ) |
| Benzo(a)Anthracene | 111 | 97.9 | 88 | ( 54-122 ) |
| Benzo[a]pyrene | 111 | 101 | 91 | ( 50-125 ) |
| Benzo[b]Fluoranthene | 111 | 102 | 92 | ( 53-128 ) |
| Benzo[g,h,i]perylene | 111 | 99.5 | 90 | ( 49-127 ) |
| Benzo[k]fluoranthene | 111 | 100 | 90 | ( 56-123 ) |
| Chrysene | 111 | 99.2 | 89 | ( 57-118 ) |
| Dibenzo[a,h]anthracene | 111 | 108 | 97 | ( 50-129 ) |
| Fluoranthene | 111 | 92.4 | 83 | ( 55-119 ) |
| Fluorene | 111 | 94.7 | 85 | ( 47-114 ) |
| Indeno[1,2,3-c,d] pyrene | 111 | 102 | 92 | ( 49-130 ) |
| Naphthalene | 111 | 79.3 | 71 | ( 38-111 ) |
| Phenanthrene | 111 | 93.0 | 84 | ( 49-113 ) |
| Pyrene | 111 | 96.3 | 87 | ( 55-117 ) |
| **Surrogates** | | | | |
| 2-Methylnaphthalene-d10 (surr) | 111 | | 90 | ( 58-103 ) |
| Fluoranthene-d10 (surr) | 111 | | 94 | ( 54-113 ) |

## Batch Information

Analytical Batch: **XMS13860**
Analytical Method: **8270D SIM (PAH)**
Instrument: **Agilent 8890 GC/MS SYA**
Analyst: **HMW**

Prep Batch: **XXX48433**
Prep Method: **SW3550C**
Prep Date/Time: **08/18/2023 09:45**
Spike Init Wt./Vol.: 111 ug/kg Extract Vol: 5 mL
Dupe Init Wt./Vol.: Extract Vol:



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## Matrix Spike Summary

Original Sample ID: 1234269046
MS Sample ID: 1729322 MS
MSD Sample ID: 1729323 MSD

Analysis Date: 08/30/2023 5:47
Analysis Date: 08/30/2023 6:03
Analysis Date: 08/30/2023 6:20
Matrix: Soil/Solid (dry weight)

QC for Samples: 1234284001, 1234284002, 1234284003

## Results by **8270D SIM (PAH)**

| | | Matrix Spike (ug/kg) | | | | Spike Duplicate (ug/kg) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Parameter | Sample | Spike | Result | Rec (%) | | Spike | Result | Rec (%) | | CL | RPD (%) | | RPD CL |
| 1-Methylnaphthalene | 25.4U | 227 | 173 | 76 | | 227 | 161 | 71 | | 43-111 | 7.40 | | (< 20 ) |
| 2-Methylnaphthalene | 25.4U | 227 | 176 | 78 | | 227 | 168 | 74 | | 39-114 | 4.60 | | (< 20 ) |
| Acenaphthene | 25.4U | 227 | 160 | 71 | | 227 | 151 | 67 | | 44-111 | 5.70 | | (< 20 ) |
| Acenaphthylene | 25.4U | 227 | 153 | 67 | | 227 | 148 | 65 | | 39-116 | 3.30 | | (< 20 ) |
| Anthracene | 25.4U | 227 | 158 | 70 | | 227 | 156 | 69 | | 50-114 | 1.10 | | (< 20 ) |
| Benzo(a)Anthracene | 25.4U | 227 | 164 | 72 | | 227 | 164 | 72 | | 54-122 | 0.05 | | (< 20 ) |
| Benzo[a]pyrene | 25.4U | 227 | 116 | 51 | | 227 | 128 | 57 | | 50-125 | 10.00 | | (< 20 ) |
| Benzo[b]Fluoranthene | 25.4U | 227 | 145 | 64 | | 227 | 140 | 62 | | 53-128 | 3.40 | | (< 20 ) |
| Benzo[g,h,i]perylene | 25.4U | 227 | 93.4 | 41 | * | 227 | 75.7 | 33 | * | 49-127 | 21.10 | * | (< 20 ) |
| Benzo[k]fluoranthene | 25.4U | 227 | 137 | 60 | | 227 | 140 | 62 | | 56-123 | 2.50 | | (< 20 ) |
| Chrysene | 25.4U | 227 | 180 | 79 | | 227 | 173 | 76 | | 57-118 | 4.10 | | (< 20 ) |
| Dibenzo[a,h]anthracene | 25.4U | 227 | 106 | 47 | * | 227 | 97.7 | 43 | * | 50-129 | 7.70 | | (< 20 ) |
| Fluoranthene | 25.4U | 227 | 177 | 78 | | 227 | 174 | 77 | | 55-119 | 1.60 | | (< 20 ) |
| Fluorene | 25.4U | 227 | 192 | 85 | | 227 | 188 | 83 | | 47-114 | 2.00 | | (< 20 ) |
| Indeno[1,2,3-c,d] pyrene | 25.4U | 227 | 93.0 | 41 | * | 227 | 90.1 | 40 | * | 49-130 | 3.20 | | (< 20 ) |
| Naphthalene | 20.3U | 227 | 166 | 73 | | 227 | 160 | 70 | | 38-111 | 3.80 | | (< 20 ) |
| Phenanthrene | 25.4U | 227 | 173 | 77 | | 227 | 164 | 72 | | 49-113 | 5.70 | | (< 20 ) |
| Pyrene | 25.4U | 227 | 178 | 78 | | 227 | 177 | 78 | | 55-117 | 0.46 | | (< 20 ) |
| **Surrogates** | | | | | | | | | | | | | |
| 2-Methylnaphthalene-d10 (surr) | | 227 | 186 | 82 | | 227 | 184 | 81 | | 58-103 | 1.10 | | |
| Fluoranthene-d10 (surr) | | 227 | 196 | 86 | | 227 | 202 | 89 | | 54-113 | 3.10 | | |

## Batch Information

Analytical Batch: XMS13860
Analytical Method: 8270D SIM (PAH)
Instrument: Agilent 8890 GC/MS SYA
Analyst: HMW
Analytical Date/Time: 8/30/2023 6:03:00AM

Prep Batch: XXX48433
Prep Method: Sonication Extr Soil 8270 PAH SIM 5ml
Prep Date/Time: 8/18/2023 9:45:55AM
Prep Initial Wt./Vol.: 22.73g
Prep Extract Vol: 5.00mL

## Method Blank

Blank ID: MB for HBN 1862556 [XXX/48434]
Blank Lab ID: 1729324

Matrix: Soil/Solid (dry weight)

QC for Samples:
1234284001, 1234284002, 1234284003

## Results by **AK102**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Diesel Range Organics | 10.0U | 20.0 | 9.00 | 10.0 | mg/kg |
| **Surrogates** | | | | | |
| 5a Androstane (surr) | 96 | 60-120 | | 0 | % |

## Batch Information

Analytical Batch: XFC16636
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: T.L
Analytical Date/Time: 8/31/2023 12:12:00AM

Prep Batch: XXX48434
Prep Method: SW3550C
Prep Date/Time: 8/18/2023 9:45:41AM
Prep Initial Wt./Vol.: 22.5 g
Prep Extract Vol: 5 mL

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1234284 [XXX48434]
Blank Spike Lab ID: 1729325
Date Analyzed: 08/31/2023 00:23

Spike Duplicate ID: LCSD for HBN 1234284 [XXX48434]
Spike Duplicate Lab ID: 1729326
Matrix: Soil/Solid (dry weight)

QC for Samples: 1234284001, 1234284002, 1234284003

## Results by **AK102**

| | Blank Spike (mg/kg) | | | Spike Duplicate (mg/kg) | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | Spike | Result | Rec (%) | Spike | Result | Rec (%) | CL | RPD (%) | RPD CL |
| Diesel Range Organics | 1110 | 1150 | 104 | 1110 | 1130 | 102 | ( 75-125 ) | 1.90 | (< 20 ) |
| **Surrogates** | | | | | | | | | |
| 5a Androstane (surr) | 22.2 | | 126 * | 22.2 | | 123 | * ( 60-120 ) | 2.70 | |

## Batch Information

Analytical Batch: **XFC16636**
Analytical Method: **AK102**
Instrument: **Agilent 7890B R**
Analyst: **T.L**

Prep Batch: **XXX48434**
Prep Method: **SW3550C**
Prep Date/Time: **08/18/2023 09:45**
Spike Init Wt./Vol.: 22.2 mg/kg Extract Vol: 5 mL
Dupe Init Wt./Vol.: 22.2 mg/kg Extract Vol: 5 mL



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## Method Blank

Blank ID: MB for HBN 1862556 [XXX/48434]
Blank Lab ID: 1729324

Matrix: Soil/Solid (dry weight)

QC for Samples:
1234284001, 1234284002, 1234284003

## Results by **AK103**

| Parameter | Results | LOQ/CL | DL | LOD | Units |
|---|---|---|---|---|---|
| Residual Range Organics | 50.0U | 100 | 43.0 | 50.0 | mg/kg |
| **Surrogates** | | | | | |
| n-Triacontane-d62 (surr) | 103 | 60-120 | | 0 | - |

## Batch Information

Analytical Batch: XKC16636
Analytical Method: FT103
Instrument: Agilent 7890B R
Analyst: %L
Analytical Date/Time: 8/31/2023 12:12:00PM

Prep Batch: XXX48434
Prep Method: SW3550C
Prep Date/Time: 8/18/2023 9:45:41FM
Prep Initial Wt./Vol.: 22.5 g
Prep Extract Vol: 5 mL

Print Date: 08/31/2023 6:28:03PM

## Blank Spike Summary

Blank Spike ID: LCS for HBN 1234284 [VVV48434X
Blank Spike La0 ID: 1] 2b327
Da5e t nalAyez: d8/31/2d23 dd:23

Spike D9pliua5e ID: LCSD for HBN 1234284 [VVV48434X
Spike D9pliua5e La0 ID: 1] 2b32c
s a5iM Soil/Soliz xzrA( eiwg5h

%C for SaP pleR 1234284dd1Q1234284dd2Q1234284dd3

## 6eR9l5R0A **AK102**

| | Blank Spike xP w/kwh | | | Spike D9pliua5e xP w/kwh | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ) araP e5er | Spike | 6eR9l5 | 6eu xmh | Spike | 6eR9l5 | 6eu xmh | CL | 6) D xmh | 6) D CL |
| 6eRz9al 6anwe GrwaniuR | 111d | 113d | 1d2 | 111d | 11dd | bb | xcdC12d h | 2-7d | x 2d h |
| **Surrogates** | | | | | | | | | |
| nG riauon5aneQ2c2 xR9rrh | 22-2 | | b8 | 22-2 | | 1d7 | xcdC12d h | c-4d | |

## Batch Information

t nalA5ual Ba5ug: **XFC16626**
t nalA5ual s e5goz: **AK102**
InR59P en5 **Agilent 3780B 9**
t nalAR5 **RT**

) rep Ba5ug: **XXXL7L2L**
) rep s e5goz: **S4 2WW0C**
) rep Da5e/<iP e: **075l175 0/ 2 08:LW**
Spike Ini5T 5/Wol-: 22-2 P w/kw EM5rau5Wol: 7 P L
D9pe Ini5T 5/Wol-: 22-2 P w/kw EM5rau5Wol: 7 P L

) rin5Da5e: d8/31/2d23 c:28:dc) s

SGS

# SGS North America Inc.
# CHAIN OF CUSTODY RECORD

1234284

Profile #: 36544 Int.: CJW

**Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.**

Page ___ of ___

## Section 1

| | | | |
|---|---|---|---|
| CLIENT: | Shannon & Wilson | | |
| CONTACT: | Ryan Collins | PHONE #: | 907-433-3220 |
| PROJECT NAME: | Lighthouse Village Development | Project/Permit Number: 111320<br>NPDL Number(DOD): | |
| REPORTS TO: | Ryan Collins | E-MAIL: | ryan.collins@shanwil.com |
| INVOICE TO: | Ryan Collins | QUOTE #:<br>P.O. #: | |

## Section 2

| RESERVED for lab use | SAMPLE IDENTIFICATION | DATE mm/dd/yy | TIME HH:MM | MATRIX/ MATRIX CODE | # CONTAINERS | Sample Type (Comp / Grab / MI) | Analysis* AK101/8260 GRO/VOC (MeOH) | Analysis* AK102/103/8270 SIM PAH (None) | Analysis* (MeOH) | Analysis* (None) | REMARKS/LOC ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1AB | 111320 B 11 S5 | 8/6/2023 | 9:13 | Soil | 2 | Grab | X | X | | | |
| 2AB | 111320 B 12 S6 | 8/6/2023 | 11:03 | Soil | 2 | Grab | X | X | | | |
| 3AB | 111320 B 14 S5 | 8/6/2023 | 12:10 | Soil | 2 | Grab | X | X | | | |
| 4A | 111320 STB | 8/6/2023 | 9:00 | | 1 | | X | | | | Soil Trip Blank |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

NOTE: *The following analyses require specific method and/or compound list: BTEX, Metals, PFAS

Comments:

## Section 4

DOD Project? YES (NO)

Data Deliverables Requested

DataView Level 4 | SEDD | ERPIMS | EQUIS | Other:_____

**Turnaround Time Requested**

(Standard) Rush 10-DAY

Requested Rush Report Date:_____

**SGS Sample Receipt (Lab Use Only)**

Delivery Method: (Client) Commercial

Did each cooler have a corresponding COC? (Yes) No

Chain of Custody Seal Condition: INTACT BROKEN (ABSENT)

COC Seal Location(s):_____

## Section 5

| RELINQUISHED BY: | DATE: | TIME: | RECEIVED BY: | Cooler ID | Temperature (°C) | Therm. ID |
|---|---|---|---|---|---|---|
| Katarah Glashan | 8/14 | 4pm | Forrest Olson | 1. | 3.5 | 753 |
| | | | | 2. | | |
| | | | | 3. | | |
| | DATE 08/15/23 | TIME 1043 | RECEIVED BY | | | |

*If more than three coolers are received, or for documentation of non-compliant coolers, use form FS-0029.*

*Note: If temp. is outside 0-6° and samples were not taken <8 hours ago OR are waste samples, Client or PM should initial here or attach an email change order to proceed with analysis. If ice is present, note on form F102B.*

Initials:_____

Laboratory Use Only

451

http://www.sgs.com/terms-and-conditions



F083-Blank_COC_20181228

SGS

# SAMPLE RECEIPT FORM

1234284

| Project Manager Completion | | | | |
|---|---|---|---|---|
| Was all necessary information recorded on the COC upon receipt? (temperature, COC seals, etc.?) | Yes | No | N/A | |
| Was temperature between 0-6° C? | Yes | No | N/A | If "No", are the samples either exempt* or sampled <8 hours prior to receipt? |
| Were all analyses received within holding time*? | Yes | No | N/A | |
| Was a method specified for each analysis, where applicable? If no, please note correct methods. | Yes | No | N/A | |
| Are compound lists specified, where applicable? For project specific or special compound lists please note correct analysis code. | Yes | No | N/A | |
| If rush was requested by the client, was the requested TAT approved? | Yes | No | N/A | If "NO", what is the approved TAT? |
| If SEDD Deliverables are required, were Location ID's and an NPDL Number provided? | Yes | No | N/A | *If "NO", contact client for information.* |
| **Sample Login Completion** | | | | |
| Do ID's on sample containers match COC? | Yes | No | N/A | |
| If provided on containers, do dates/times collected match COC? | Yes | No | N/A | Note: If times differ <1 hr., record details below and login per COC. |
| Were all sample containers received in good condition? | Yes | No | N/A | |
| Were proper containers (type/mass/volume/preservative) received for all samples? **See form F-083 "Sample Guide"* | Yes | No | N/A | *Note: If 200.8/6020 Total Metals are received unpreserved, preserve and note HNO3 lot here:*<br>*If 200.8/6020 Dissolved Metals are received unpreserved, log in for LABFILTER and do not preserve.*<br>*For all non-metals methods, inform Project Manager.* |
| Were Trip Blanks (VOC, GRO, Low-Level Hg, etc.) received with samples, where applicable*? | Yes | No | N/A | |
| Were all VOA vials free of headspace >6mm? | Yes | No | N/A | |
| Were all soil VOA samples received field extracted with Methanol? | Yes | No | N/A | |
| Did all soil VOA samples have an accompanying unpreserved container for % solids? | Yes | No | N/A | |
| If special handling is required, were containers labelled appropriately? e.g. MI/ISM, foreign soils, lab filter, Ref Lab, limited volume | Yes | No | N/A | |
| For Rush/Short Holding time, was the lab notified? | Yes | No | N/A | |
| For any question answered "NO", was the Project Manager notified? | Yes | No | N/A | PM Initials: |
| Was Peer Review of sample numbering/labelling completed? | Yes | No | N/A | Reviewer Initials: JL. |

**Additional Notes/Clarification where Applicable, including resolution of "No" answers when a change order is not attached:**

## Sample Containers and Preservatives

| Container Id | Preservative | Container Condition | Container Id | Preservative | Container Condition |
|---|---|---|---|---|---|
| 1234284001-A | No Preservative Required | OK | | | |
| 1234284001-B | Methanol field pres. 4 C | OK | | | |
| 1234284002-A | No Preservative Required | OK | | | |
| 1234284002-B | Methanol field pres. 4 C | OK | | | |
| 1234284003-A | No Preservative Required | OK | | | |
| 1234284003-B | Methanol field pres. 4 C | OK | | | |
| 1234284004-A | Methanol field pres. 4 C | OK | | | |

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.
BU - The container was received with headspace greater than 6mm.
DM - The container was received damaged.
FR - The container was received frozen and not usable for Bacteria or BOD analyses.
IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.
NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.
PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
QN - Insufficient sample quantity provided.

IMPORTANT INFORMATION

# Important Information

## About Your Geotechnical/Environmental Report

IMPORTANT INFORMATION

## CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring with the consultant.

## THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors that were considered in the development of the report have changed.

## SUBSURFACE CONDITIONS CAN CHANGE.

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events and should be consulted to determine if additional tests are necessary.

## MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your consultant can work together to help reduce their impacts. Retaining

IMPORTANT INFORMATION

your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

## A REPORT'S CONCLUSIONS ARE PRELIMINARY.

The conclusions contained in your consultant's report are preliminary, because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

## THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

## BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.

Final boring logs developed by the consultant are based upon interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimating purposes. Some clients hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

## READ RESPONSIBILITY CLAUSES CLOSELY.

Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims

being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports, and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

**The preceding paragraphs are based on information provided by the ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland**

## Summary for Subcatchment 1S: Condo Site Pre Dev Basin

Runoff = 0.44 cfs @ 0.17 hrs, Volume= 0.107 af, Depth> 0.85"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-3.00 hrs, dt= 0.01 hrs
Rainfall Duration=180 min, Inten=0.50 in/hr

| Area (sf) | C | Description |
|---|---|---|
| 6,359 | 0.90 | |
| 24,479 | 0.70 | |
| 9,583 | 0.70 | |
| 10,454 | 0.25 | |
| 15,156 | 0.40 | |
| 66,031 | 0.58 | Weighted Average |
| 66,031 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 1.5 | 150 | 0.0200 | 1.67 | | **Sheet Flow,** Smooth surfaces n= 0.011 P2= 4.00" |
| 8.5 | 70 | 0.3000 | 0.14 | | **Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 4.00" |
| 10.0 | 220 | Total | | | |

## Summary for Subcatchment 3S: Hotel Site Pre-Dev Basin

Runoff = 0.65 cfs @ 0.22 hrs, Volume= 0.162 af, Depth= 0.71"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Rainfall Duration=180 min, Inten=0.50 in/hr

| Area (sf) | C | Description |
|---|---|---|
| 59,156 | 0.70 | Gravel surface, HSG D |
| 56,283 | 0.20 | Woods/grass comb., Fair, HSG D |
| 4,967 | 0.90 | Unconnected roofs, HSG D |
| 120,406 | 0.47 | Weighted Average |
| 120,406 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 12.8 | 300 | 0.0700 | 0.39 | | **Sheet Flow,** Grass: Short n= 0.150 P2= 4.00" |
| 0.3 | 45 | 0.2000 | 2.24 | | **Shallow Concentrated Flow,** Woodland Kv= 5.0 fps |
| 13.1 | 345 | Total | | | |

## Summary for Subcatchment 1S: Hotel Post Dev Basin A

Runoff = 0.59 cfs @ 0.09 hrs, Volume= 0.147 af, Depth= 1.17"
Routed to Pond 2P : Pipe Storage

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Rainfall Duration=180 min, Inten=0.50 in/hr

| Area (sf) | C | Description |
|---|---|---|
| 44,500 | 0.90 | Paved parking, HSG D |
| 5,396 | 0.90 | Unconnected pavement, HSG D |
| 5,801 | 0.40 | <50% Grass cover, Poor, HSG D |
| 9,772 | 0.40 | <50% Grass cover, Poor, HSG D |
| 65,469 | 0.78 | Weighted Average |
| 65,469 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.0 | | | | | **Direct Entry,** |

## Summary for Subcatchment 4S: Hotel Post Dev Basin B

Runoff = 0.44 cfs @ 0.09 hrs, Volume= 0.109 af, Depth= 1.04"

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Rainfall Duration=180 min, Inten=0.50 in/hr

| Area (sf) | C | Description |
|---|---|---|
| 33,457 | 0.90 | Roof, HSG D |
| 16,249 | 0.40 | Lawn / Grass, HSG D |
| 3,437 | 0.20 | Wood / Forest, HSG D |
| 1,797 | 0.40 | Swale, HSG D |
| 54,940 | 0.69 | Weighted Average |
| 54,940 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|---|---|---|---|---|---|
| 5.0 | | | | | **Direct Entry,** |

## Summary for Pond 2P: Pipe Storage

[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 1.503 ac, 0.00% Impervious, Inflow Depth = 1.17"
Inflow = 0.59 cfs @ 0.09 hrs, Volume= 0.147 af
Outflow = 0.19 cfs @ 3.06 hrs, Volume= 0.147 af, Atten= 68%, Lag= 178.0 min
Primary = 0.19 cfs @ 3.06 hrs, Volume= 0.147 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 8.02' @ 3.06 hrs Surf.Area= 0.013 ac Storage= 0.111 af

Plug-Flow detention time= 269.3 min calculated for 0.147 af (100% of inflow)
Center-of-Mass det. time= 269.2 min ( 361.7 - 92.5 )

| Volume | Invert | Avail.Storage | Storage Description |
|---|---|---|---|
| #1 | 0.50' | 0.124 af | **108.0" Round Pipe Storage** L= 85.0' |

| Device | Routing | Invert | Outlet Devices |
|---|---|---|---|
| #1 | Primary | 0.00' | **1.6" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads |

**Primary OutFlow** Max=0.19 cfs @ 3.06 hrs HW=8.01' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 0.19 cfs @ 13.63 fps)

## ***Review of comprehensive plan Land Use Chapter for CUP 23—08 RF 12.6.23***

**GOAL 1:** Guiding Homer's growth with a focus on increasing the supply and diversity of housing, protect community character, encouraging infill, and helping minimize global impacts of public facilities including limiting greenhouse gas emissions.

**Objective A:** Promote a pattern of growth characterized by a concentrated mixed-use center, and a surrounding ring of moderate-to-high density residential and mixed-use areas with lower densities in outlying areas.

***Staff:*** Goals of the Land Use Chapter of the Homer Comprehensive Plan include increasing the diversity of housing, encouraging infill, and supporting housing choice by supporting a variety of dwelling options (Chapter 4, Objectives A & C). This proposal promotes housing choice at a density that is appropriate for its proposed use.

**Objective B:** Develop clear and well-defined land use regulations and update the zoning map in support of the desired pattern of growth.

N/A – not associated with update of zoning map.

**Objective C:** Maintain high quality residential neighborhoods; promote housing choice by supporting a variety of dwelling options.

***Staff:*** Goals of the Land Use Chapter of the Homer Comprehensive Plan include increasing the diversity of housing, encouraging infill, and supporting housing choice by supporting a variety of dwelling options (Chapter 4, Objectives A & C). This proposal promotes housing choice at a density that is appropriate for its proposed use.

**Objective D:** Consider the regional and global impacts of development in Homer.

***Staff:*** The Comprehensive Plan states (Goal 1 Objective D Implementation Item 3): "Support planning and zoning regulations that promote land use strategies that include compact, mixed-use development, higher density development, and infill." The proposed planned unit development complies with the general land use pattern set out in the Comprehensive Plan and allows for greater mixed use opportunities.

**GOAL 2:** Maintain the quality of Homer's natural environment and scenic beauty.

**Objective A:** Complete and maintain a detailed "green infrastructure" map for the City of Homer and environs that presents an integrated functional system of environmental features

on lands in both public and private ownership and use green infrastructure concepts in the review and approval of development projects.

N/A – not associated with mapping.

**Objective B:** Continue to review and refine development standards and require development practices that protect environmental functions.

N/A – not associated with creation of development standards.

**Objective C:** Provide extra protection for areas with highest environmental value or development constraints.

N/A – Already developed area, no change in impact is proposed.

**Objective D:** Collaborate with jurisdictions outside the City of Homer, as well as state and federal agencies, to ensure that environmental quality is maintained.

***Staff:*** The City of Homer collaborated with the Alaska Department of Transportation on the review and approval of the Traffic Impact Analysis. Homer Spit Road is a Alaska DOT maintained road.

**GOAL 3:** Encourage high-quality buildings and site development that complement Homer's beautiful natural setting.

**Objective A:** Create a clear, coordinated regulatory framework that guides development.

***Staff:*** Goal 3, objective A implementation items are all directives to review and consider new policies and are not directly applicable to CUP's.

**Objective B**: Encourage high quality site design and buildings.

***Staff:*** The proposal supports high quality design via the submitted plans for the planned unit development, which are required to submit a Zoning Permit and meet City requirements for site development.

**GOAL 4:** Support the development of a variety of well-defined commercial/business districts for a range of commercial purposes.

**Objective A:** Encourage a concentrated, pedestrian oriented, attractive business/commerce district in the Central Business District (CBD) following the guidelines found in the Town Center Development Plan.

***Staff:*** The proposal is not found in the CBD.

**Objective B:** Discourage strip development along the Sterling Highway and major collectors/thoroughfares.

***Staff:*** The site plan for the planned unit development demonstrates that the proposal avoids traditional strip development with quality of design.

**Finding:**

The proposal is not contrary to the applicable land use goals and objectives of the Comprehensive Plan.

**CITY OF HOMER**
**PUBLIC HEARING NOTICE**
**PLANNING COMMISSION MEETING**

A public hearing on the matters below are scheduled for Wednesday, December 6, 2023 at 6:30 p.m. during the Regular Planning Commission Meeting. Participation is available virtually via Zoom webinar or in-person at Homer City Hall.

**AN ORDINANCE OF THE CITY COUNCIL OF HOMER, ALASKA AMENDING HOMER CITY CODE 21.10.030 AMENDING THE HOMER CITY ZONING MAP TO REZONE A PORTION OF THE RURAL RESIDENTIAL (RR) ZONING DISTRICT TO GENERAL COMMERCIAL 1 (GC1) ZONING DISTRICT.**

**The rezone from Rural Residential (RR) Zoning District to General Commercial 1 (GC1) is proposed for the following address:**

**1491 Bay Avenue**
**T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0000839 BAY VIEW SUB LOT 163**

**A request for Conditional Use Permit (CUP) 23-08, per HCC 21.24.030 (f), Planned Unit Developments. The applicant proposes a planned unit development consisting of a hotel, employee housing, and triplex residential units at the following addresses:**

**1563 Homer Spit Road**
**T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0940051 BAYVIEW SUB NO 6 LOT 164-A**

**1663 Homer Spit Road**
**T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0940051 BAYVIEW SUB NO 6 LOT 164-B**

**1491 Bay Avenue**
**T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0000839 BAY VIEW SUB LOT 163**

A copy of the proposals may be viewed at Homer City Hall, in the Clerk's Office Lobby on the lower level. In-person meeting participation is available in Cowles Council Chambers located downstairs at Homer City Hall, 491 E. Pioneer Ave., Homer, AK 99603.

To attend the meeting virtually, visit zoom.us and enter the Meeting ID & Passcode listed below. To attend the meeting by phone, dial any one of the following phone numbers and enter the Webinar ID & Passcode below, when prompted: 1-253-215-8782, 1-669-900-6833, (toll free) 888-788-0099 or 877-853-5247.

Meeting ID: 979 8816 0903
Passcode: 976062

Additional information regarding this matter will be available by 5pm on the Friday before the meeting. This information will be posted to the City of Homer online calendar page for December 1, 2023 at

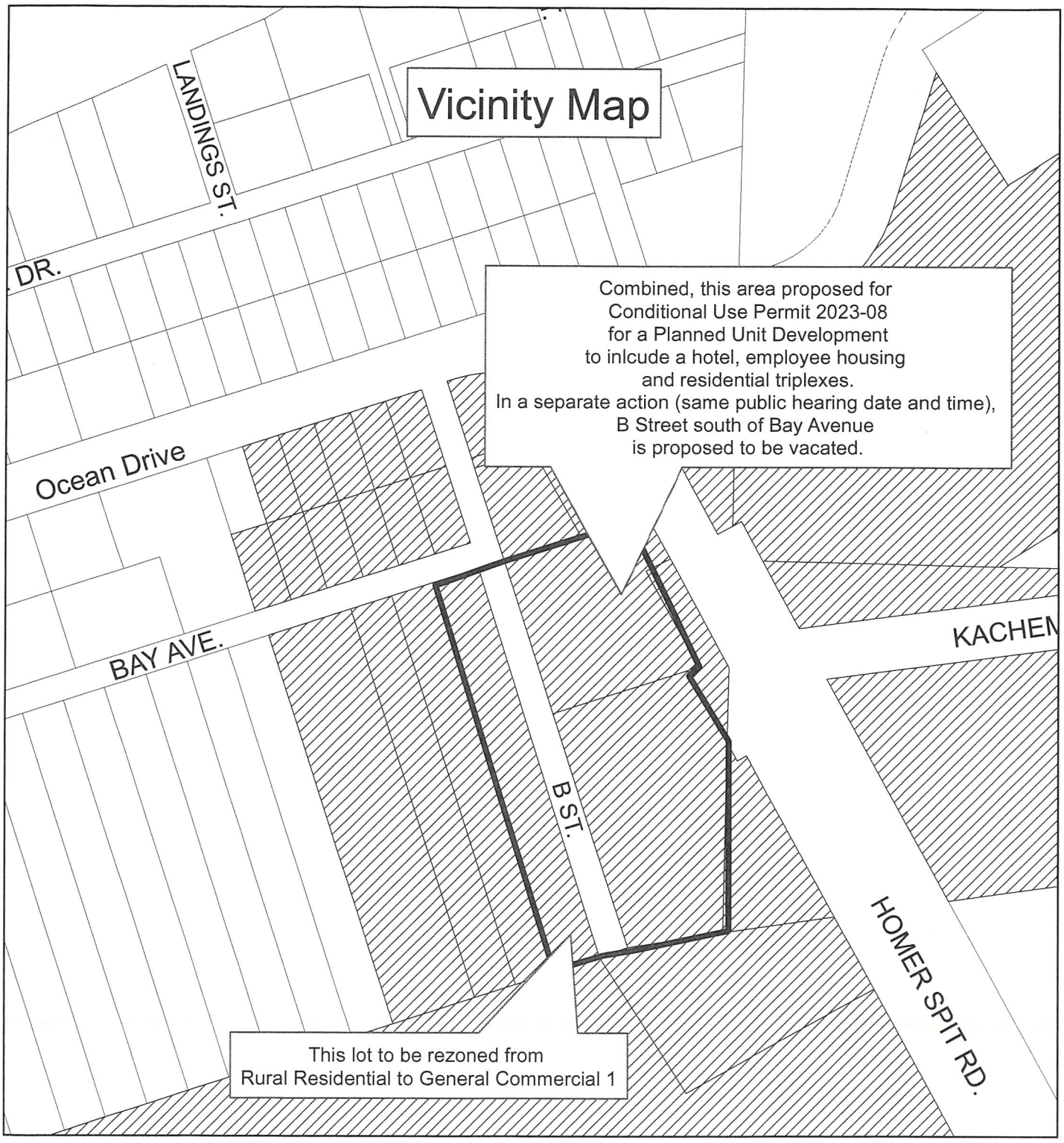
**CITY OF HOMER**
**PUBLIC HEARING NOTICE**
**PLANNING COMMISSION MEETING**

https://www.cityofhomer-ak.gov/calendar. It will also be available at the Planning and Zoning Office at Homer City Hall and at the Homer Public Library.

Written comments can be emailed to the Planning and Zoning Office at the address below, mailed to Homer City Hall at the address above, or placed in the Homer City Hall drop box at any time. Written comments must be received by 4pm on the day of the meeting.

If you have questions, contact Ryan Foster at the Planning and Zoning Office. Phone: (907) 435-3120, email: planning@ci.homer.ak.us or in-person at Homer City Hall.

**NOTICE TO BE SENT TO PROPERTY OWNERS WITHIN 300 FEET OF PROPERTY**




CITY OF HOMER - ALASKA - MARCH 31,1964

*City of Homer*
*Planning and Zoning Department*
11/20/23

## Proposed Rezone and Conditional Use Permit 2023-08

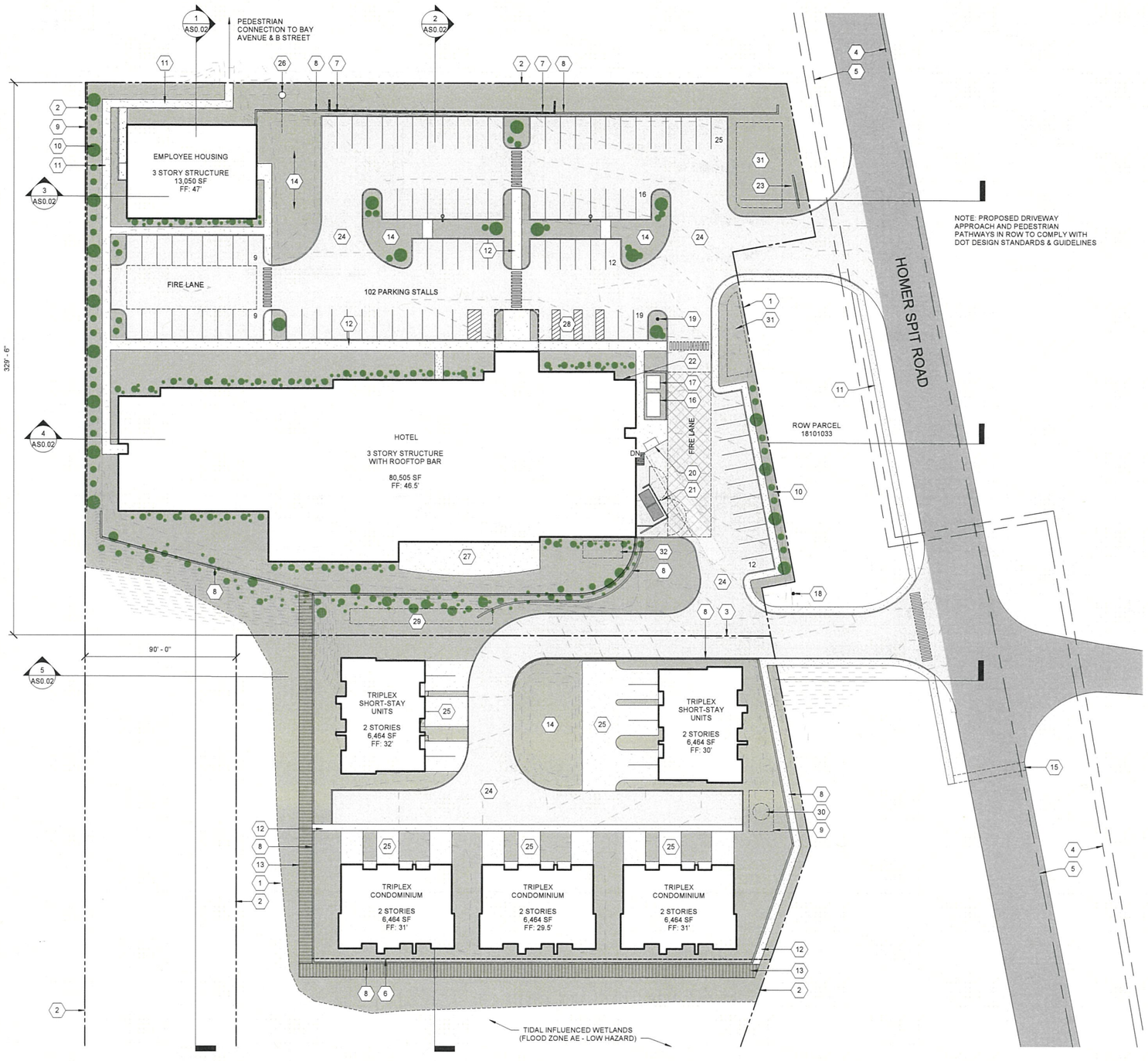
Public Hearing Notification
Lots within 300 feet are marked
and property owners notified

0 150 300 468 600 Feet

N

*Disclaimer:*
*It is expressly understood the City of Homer, its council, board, departments, employees and agents are not responsible for any errors or omissions contained herein, or deductions, interpretations or conclusions drawn therefrom.*


GENERAL COMMERCIAL 2
GENERAL COMMERCIAL 1
Ocean Drive
B Street
Kachemak Drive
LOT 163 BAYVIEW SUBD.
PROPOSED RE-ZONE RR TO GC1
Bay Avenue
469
Homer Spit Road
RURAL RESIDENTIAL
OPEN SPACE REC
0
200'
400'
GRAPHIC SCALE
PROPOSED RE-ZONE
LOT 163 BAYVIEW SUBD.
RR TO GC1
SEABRIGHT SURVEY + DESIGN
KENTON T. BLOOM, P.L.S.
1044 EAST ROAD, SUITE A
HOMER, ALASKA 99603
(907) 299-1091




## GENERAL NOTES

**EXISTING LOTS TO BE DEVELOPED:**
LOT 163
LOT 164-A
LOT 164-B
VACATED B-STREET ROW

**TOTAL SITE AREA:**
6.95 ACRES

**PROPOSED BUILDABLE AREA TO BE DEVELOPED:**
186,437 SF / 4.28 ACRES

**PROPOSED STRUCTURE SQUARE FOOTAGE:**
EMPLOYEE HOUSING: 13,050 SF
HOTEL: 80,505 SF
TRIPLEX UNITS: (5) 6,464 SF
TOTAL SF OF DEVELOPMENT: 125,875 SF

**CITY OF HOMER ZONING CODE:**
ZONE: GENERAL COMMERCIAL 1 (GC1)
BUILDING SETBACKS: 20' FROM ROW / 5' FROM OTHER LOTS
LOCATED IN OVERLAY ZONE DISTRICT: NO
LOCATED IN WETLAND LOCATION: NO
LOCATED IN FLOOD ZONE: YES (AE, LOW HAZARD)
LANDSCAPING REQUIREMENTS INCLUDE RIGHT-OF-WAY LANDSCAPED BUFFER ZONES.

**PUBLIC UTILITIES**
PUBLIC WATER AND SEWER IS PROVIDED TO SITE (CITY OF HOMER PUBLIC WORKS)

POWER IS PROVIDED TO SITE. 3-PHASE UPGRADE WILL BE REQUIRED (HOMER ELECTRIC ASSOCIATION)

**PARKING REQUIREMENTS:**
NORTH LOT PARKING REQUIRED PER HCC 21.55.090:
HOTEL - ONE PER GUEST ROOM @ 85 ROOMS = 85 STALLS
DORMITORY - 1 PER TWO BEDS @ 40 BEDS = 20 STALLS

NORTH LOT PARKING PROVIDED: TOTAL 102 STALLS

SOUTH LOT PARKING REQUIRED PER HCC 21.55.090:
DWELLINGS: TWO PER DWELLING UNIT (A REQUIRED PARKING SPACE MAY BE IN A GARAGE OR CARPORT IF THE STRUCTURE IS AT LEAST 12' WIDE, 20' LONG AND 8' HIGH) = 30 STALLS

SOUTH LOT PARKING PROVIDED: TOTAL 30 STALLS

## KEYNOTES

1 APPROXIMATE LIMITS OF CONSTRUCTION
2 PROPERTY LINE
3 PROPOSED PROPERTY LINE
4 EXISTING PUBLIC SEWER LINE
5 EXISTING PUBLIC WATER LINE
6 ARMY CORPS OF ENGINEERS PERMIT LINE
7 EXISTING RETAINING WALL
8 RETAINING WALL
9 SIGHT OBSCURING FENCE
10 LANDSCAPE BUFFER
11 PEDESTRIAN PATHWAY
12 CONCRETE SIDEWALK
13 PEDESTRIAN BOARDWALK
14 SWALE, SEE STORMWATER PLAN
15 EXISTING PEDESTRIAN CROSSWALK
16 GENERATOR
17 PAD MOUNT TRANSFORMER
18 EXISTING FIRE HYDRANT
19 FIRE HYDRANT
20 LOADING DOCK
21 TRASH ENCLOSURE
22 FDC CONNECTION POINT
23 MONUMENT SIGN
24 ASPHALT SURFACE
25 CONCRETE DRIVE AISLE
26 STORM / SEWER MANHOLE
27 CONCRETE PATIO
28 ACCESSIBLE PARKING STALLS
29 BELOW-GRADE STORMWATER STORAGE STRUCTURE
30 SANITARY SEWER LIFT STATION
31 SNOW REMOVAL AREA
32 BELOW-GRADE GREASE INTERCEPTOR

1 || ARCHITECTURAL SITE PLAN
AS0.01 SCALE: 1/32" = 1'-0"

| No. | Int. | Date | Description |
|---|---|---|---|
| | | | REVISIONS |

WOMER & ASSOCIATES
ARCHITECTURE ENGINEERING PLANNING
Suite 600 - 221 N. Wall St., Spokane, Washington 99201
TEL: (509) 534-4884 FAX: (509) 534-4943 www.wwomer.com

LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK

ARCHITECTURAL SITE PLAN

Job No. 867-001
Date 11.15.2023
Designed LRE
Drawn LRE
Checked LRE

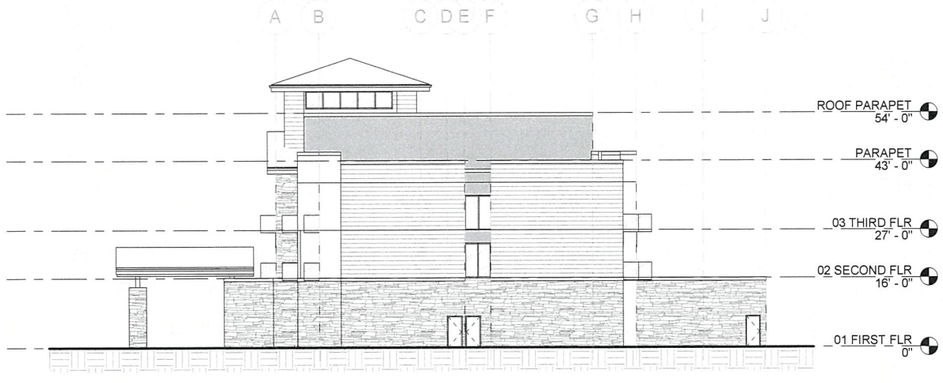
AS0.01


1 NORTH ELEVATION

A1.11 SCALE: 1/16" = 1'-0"

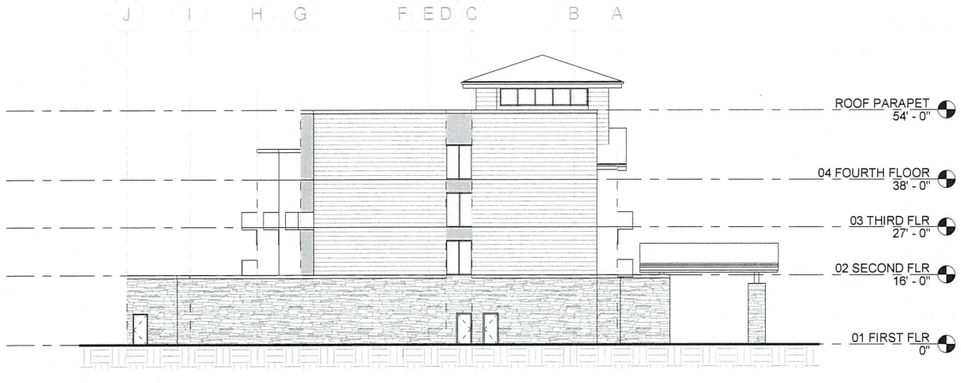

2 SOUTH ELEVATION

A1.11 SCALE: 1/16" = 1'-0"




3 WEST ELEVATION

A1.11 SCALE: 1/16" = 1'-0"




4 EAST ELEVATION

A1.11 SCALE: 1/16" = 1'-0"

## GENERAL NOTES

1 EXTERIOR ELEVATIONS ARE SCHEMATIC FOR PREDESIGN LEVEL PURPOSES ONLY

REVISIONS

| No. | Int. | Date | Description |
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WOMER & ASSOCIATES
ARCHITECTURE ENGINEERING PLANNING
Suite 600 - 221 N. Wall St. Spokane, Washington 99201
TEL: (509) 534-4884 FAX: (509) 534-4843 www.wwomer.com

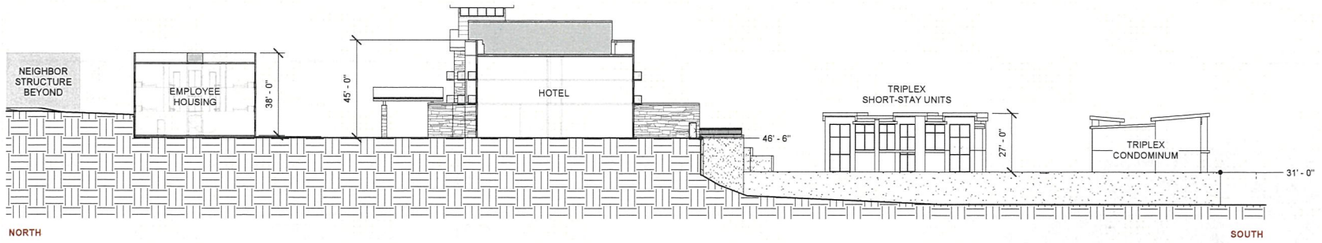

LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK

HOTEL - EXTERIOR ELEVATIONS

Job No. 867-001
Date 11.15.2023

Designed Designer
Drawn Author
Checked Checker

A1.11




1 ‖ SITE SECTION 1

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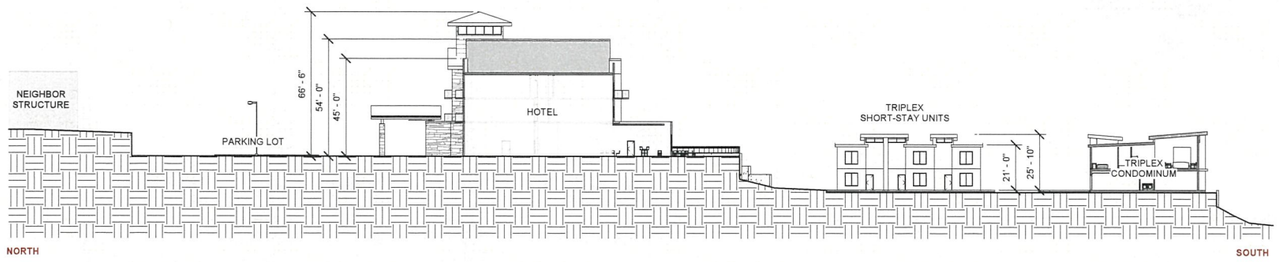


2 ‖ SITE SECTION 2

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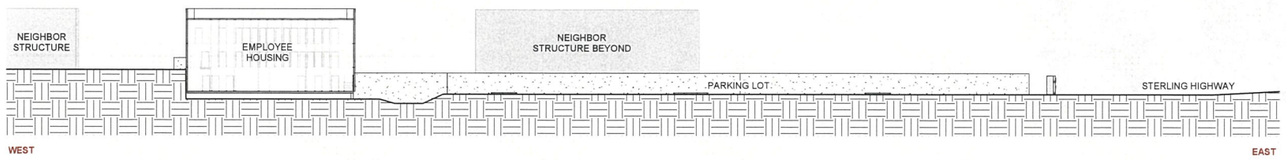


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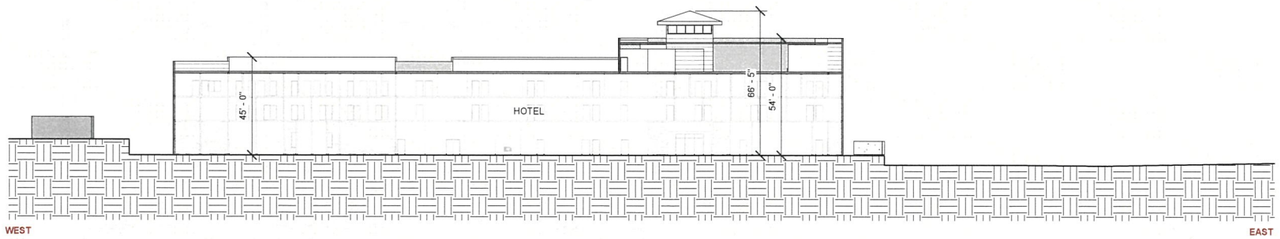
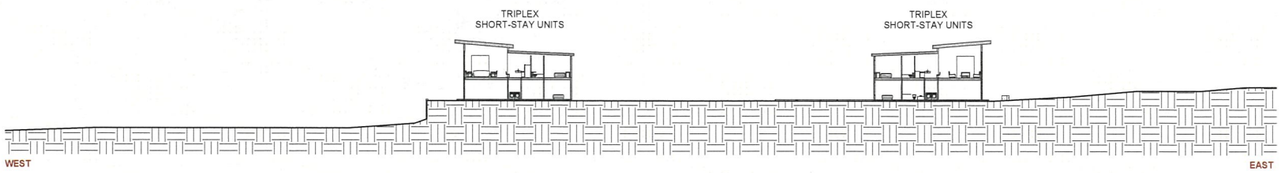



4 ‖ SITE SECTION 4

AS0.02 SCALE: 1/32" = 1'-0" REF:AS0.01




5 ‖ SITE SECTION 5

AS0.02 SCALE: 1/32" = 1'-0" REF:AS0.01



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LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK

ARCHITECTURAL SITE SECTIONS

Job No.: 867-001
Date: 11.15.2023

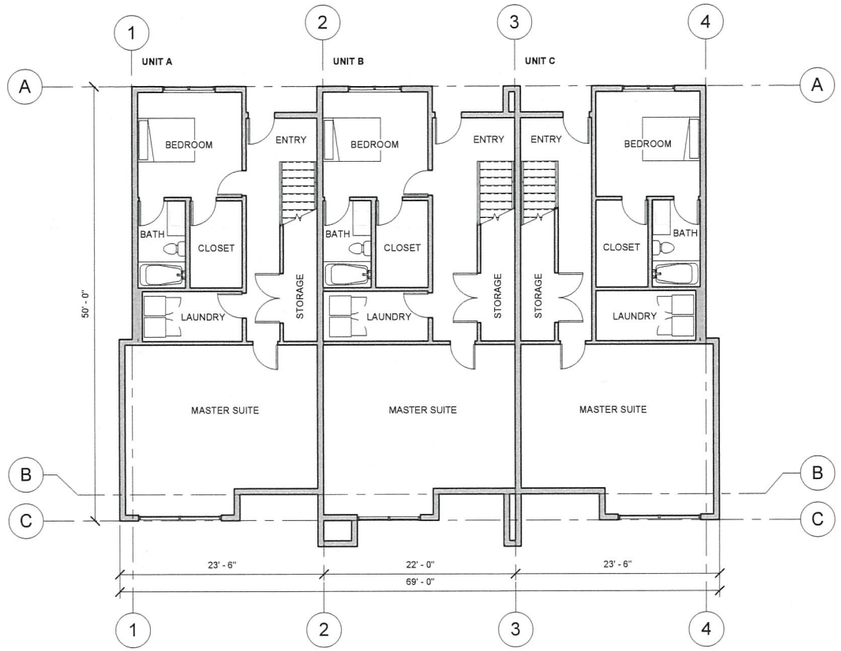
Designed LRE
Drawn LRE
Checked LRE

AS0.02

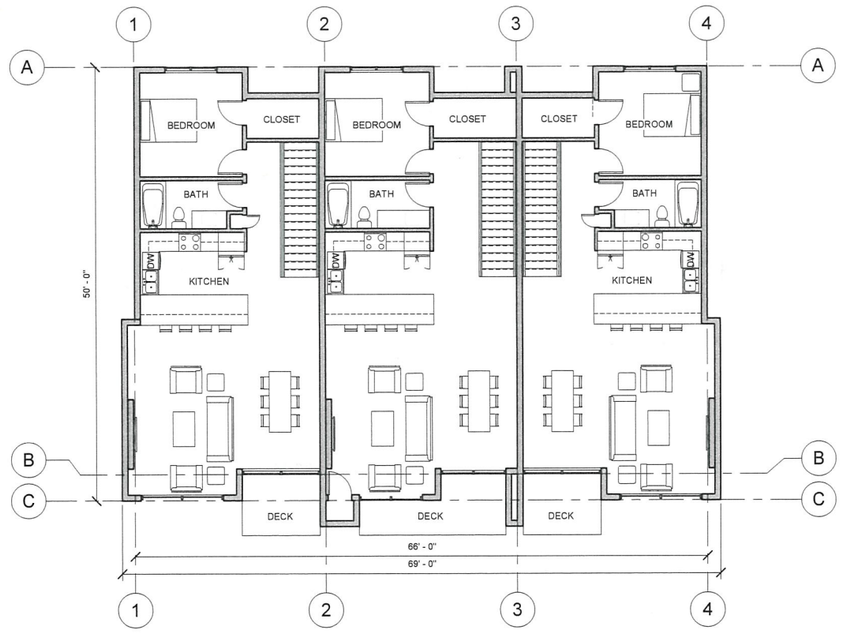
## BUILDING INFORMATION

**TOTAL BUILDING SF: 6,464 SF**

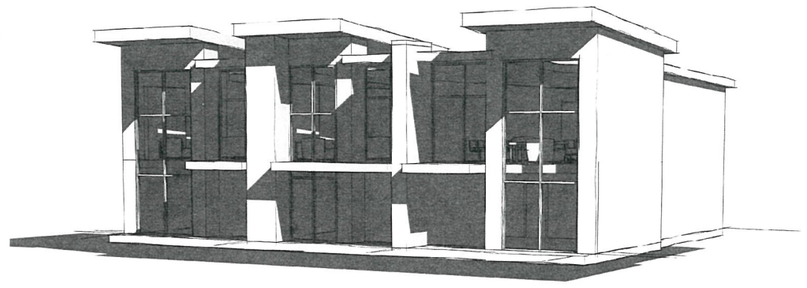
| | |
|---|---|
| 3,232 SF | FIRST FLOOR |
| 3,232 SF | SECOND FLOOR |
| **UNIT A:** | 2 STORIES \ 2,122 SF<br>3 BEDROOM<br>3 BATHROOM |
| **UNIT B:** | 2 STORIES \ 2,196 SF<br>3 BEDROOM<br>3 BATHROOM |
| **UNIT C:** | 2 STORIES \ 2,122 SF<br>3 BEDROOM<br>3 BATHROOM |



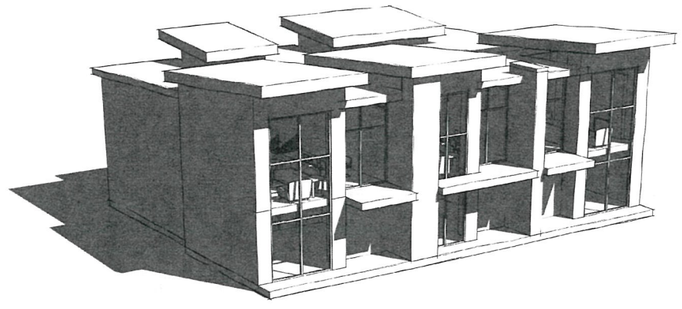

1 FIRST FLOOR
A3.02 SCALE: 1/8" = 1'-0"




2 SECOND FLOOR
A3.02 SCALE: 1/8" = 1'-0"



3 3D VIEW 1
A3.02 SCALE:



4 3D VIEW 2
A3.02 SCALE:



REVISIONS

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LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK

TRIPLEX SHORT STAY UNITS - FLOOR PLANS AND 3D MASSING VIEWS

Job No 876-001
Date 11.15.2023

Designed LRE
Drawn LRE
Checked LRE

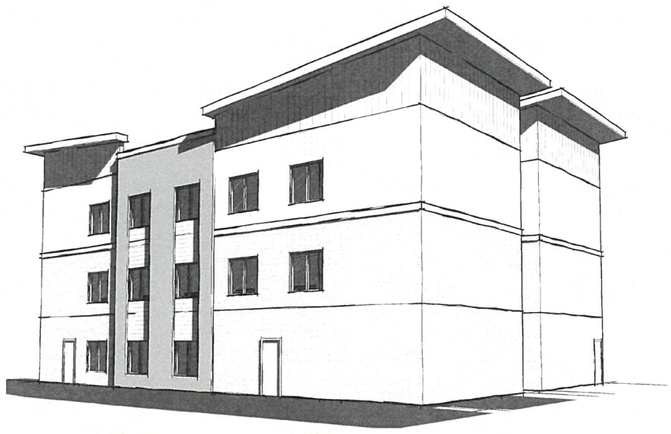
A3.02

## GENERAL NOTES

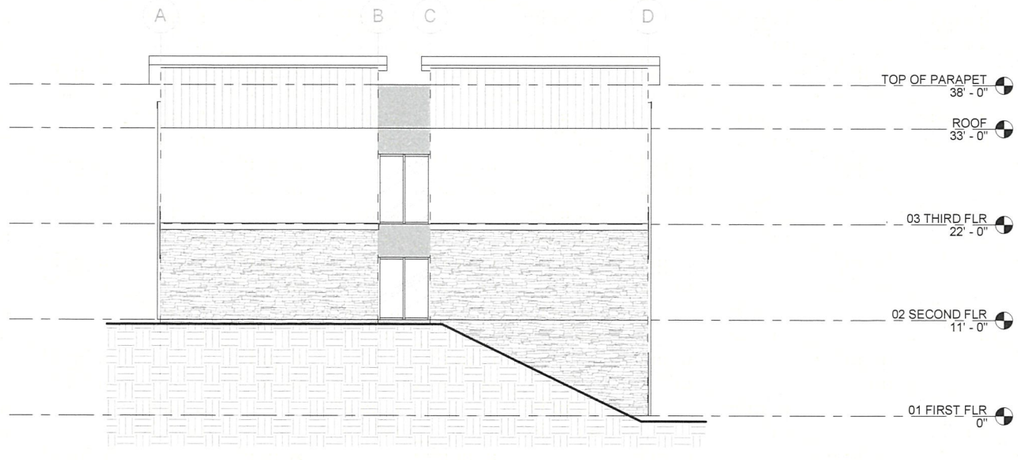
1 EXTERIOR ELEVATIONS ARE SCHEMATIC FOR PREDESIGN LEVEL PURPOSES ONLY


1 NORTH ELEVATION
A2.11 SCALE: 1/8" = 1'-0"

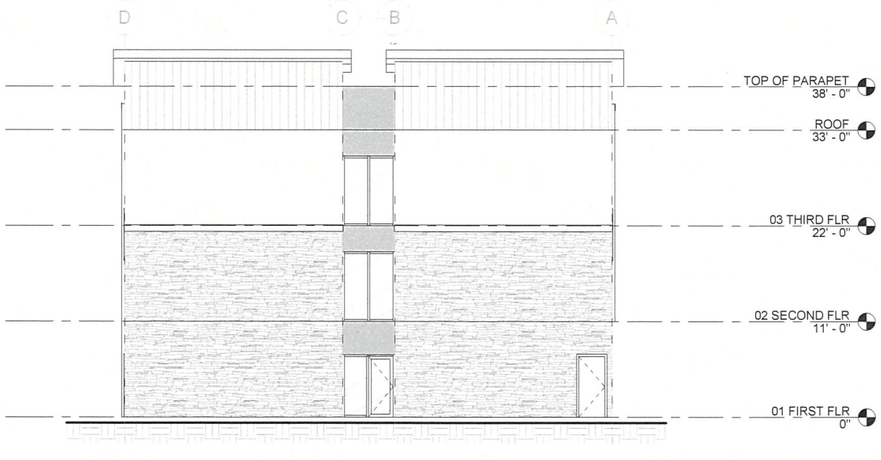

2 SOUTH ELEVATION
A2.11 SCALE: 1/8" = 1'-0"



5 3D View 1
A2.11 SCALE:




3 WEST ELEVATION
A2.11 SCALE: 1/8" = 1'-0"




4 EAST ELEVATION
A2.11 SCALE: 1/8" = 1'-0"



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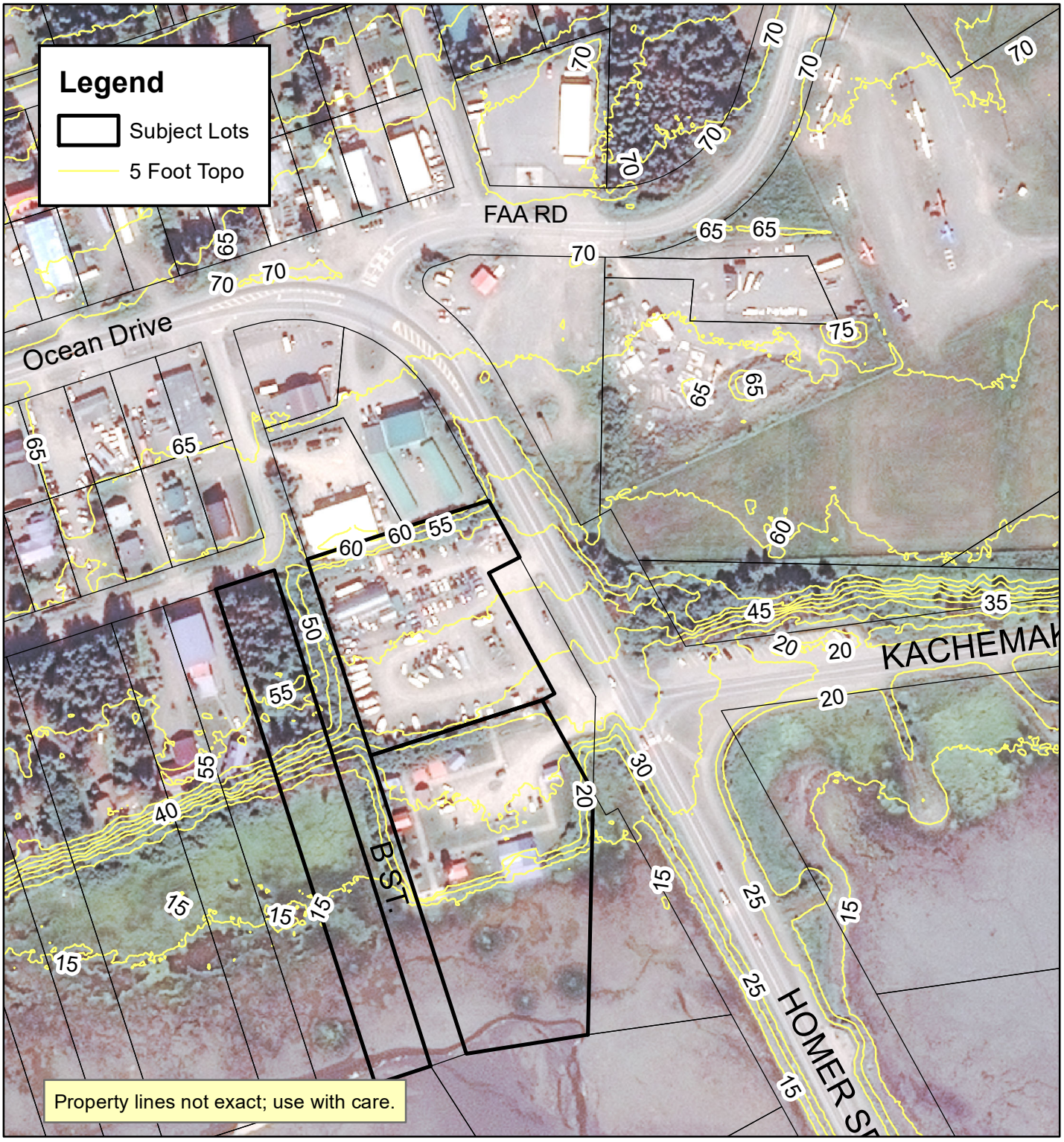
LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK

EMPLOYEE HOUSING - EXTERIOR ELEVATIONS & 3D MASSING VIEWS

Job No. 876-001
Date: 11.15.2023

Designed LRE
Drawn LRE
Checked LRE

A2.11




City of Homer
Planning and Zoning Department
11/20/23

**Aerial Map**

0 200 400 Feet

N

*Disclaimer:*
*It is expressly understood the City of Homer, its council, board, departments, employees and agents are not responsible for any errors or omissions contained herein, or deductions, interpretations or conclusions drawn therefrom.*

DOYON
Limited

# Lighthouse Village Development

December 6th, 2023

Homer, Alaska

476

# Doyon, Limited Who We Are

Doyon, Limited is the Alaska Native regional corporation for Interior Alaska with more than 20,500 shareholders.

Our mission is *to continually enhance our position as a financially strong Native corporation to promote the economic and social well-being of our shareholders and future shareholders, to strengthen our Native way of life, and to protect and enhance our land and resources.*

# Doyon, Limited Family of Companies


- Doyon operates a diverse Family of Companies.
- Across Alaska and beyond
- Using traditional values to guide our operations, our investments work to benefit the well-being of our shareholders, strengthen our Native way of life, and continually steward our tribal lands and resources for future generations.

# Architecture and Engineering

## Project Consulting Team

WOMER & ASSOCIATES ARCHITECTS • ENGINEERS

DOYON Limited

Architecture
Civil Engineering
Fire Protection

NELSON ENGINEERING, PC

Structural Engineering

RSA Engineering

Mechanical & Electrical Engineering


**Peroni Hospitality Consulting**

KINNEY ENGINEERING, LLC

Traffic Engineering

G[illegible]nical Engineering

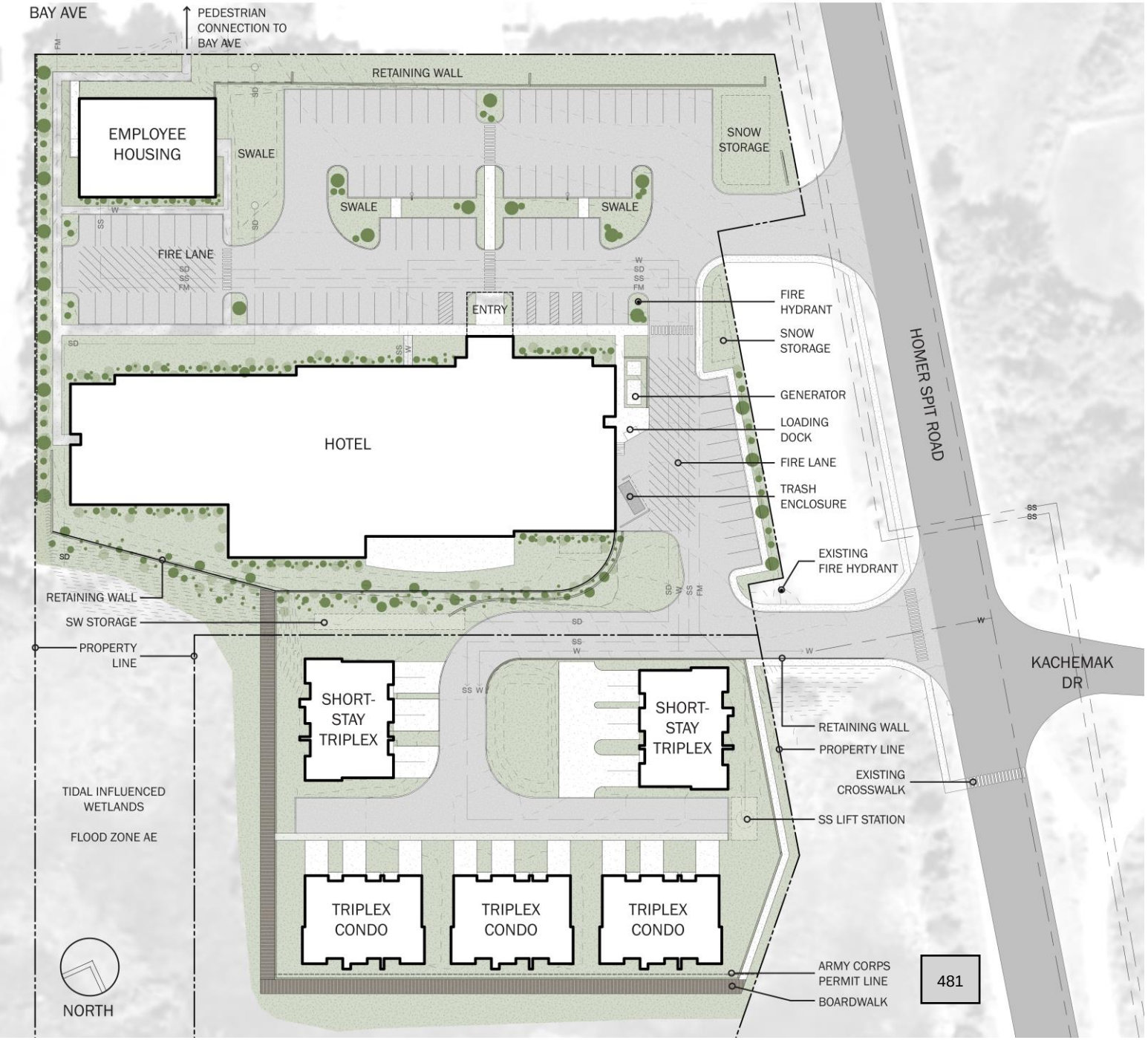
**Ability Surveys**

Land Surveying

**Seabright Survey & Design**

Land Surveying

# Lighthouse Village Development Project Overview



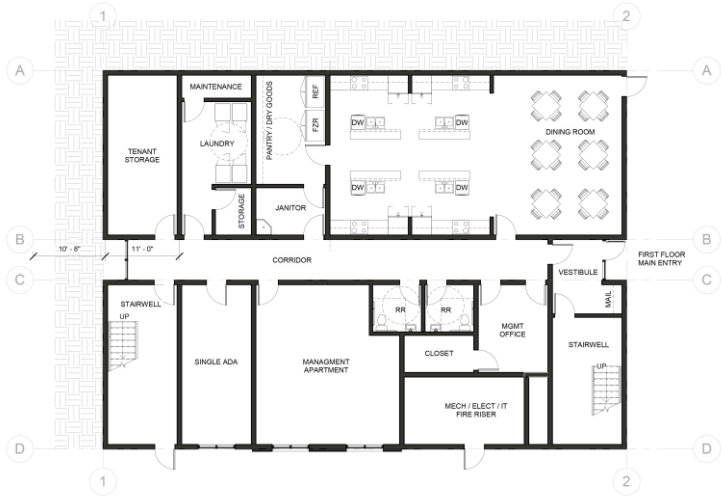

# Lighthouse Village Development

## Site Plan

# Lighthouse Village Hotel Exterior Rendering

# Lighthouse Village Hotel First Floor Plan

# Lighthouse Village Employee Housing Plans and Rendering

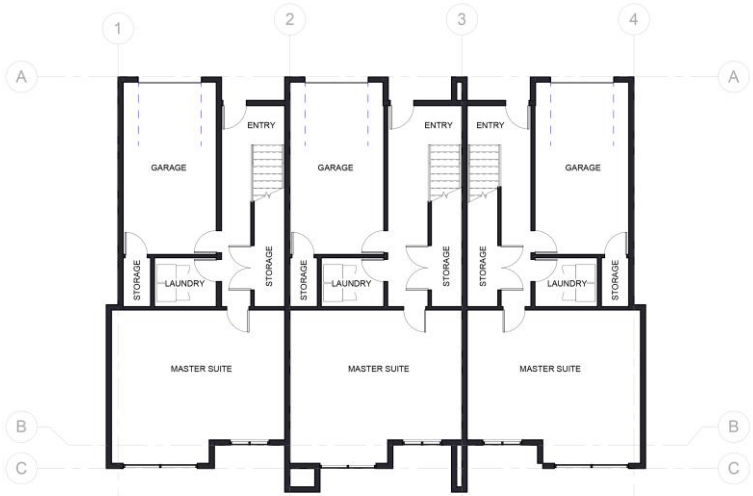



First Floor


Second / Third Floor

3D Rendering

# Lighthouse Village Triplex Units Plans and Rendering




First Floor


Second Floor

3D Rendering

# Lighthouse Village Development Site Overview

November 26, 2023

**TO:** CITY OF HOMER PLANNING AND ZONING COMMISSION
MEETING DECEMBER 6, 6:30 pm, CITY HALL
Re: DOYON, LIMITED PRESENTATION OF LIGHTHOUSE VILLAGE DEVELOPMENT FOR CONDITIONAL USE PERMIT (CUP)

In response to receiving Notice of Public Hearing and Notice of Subdivision including rezoning from Rural Residential to Commercial as residents within 500ft. of proposed complex, we have the following questions and comments:

- Will traffic from the proposed 200 bed hotel/conference center/restaurant/ employee housing be diverted to Bay Avenue via B Street? Where will employees park their cars? How much foot traffic will be on Bay Avenue? The residential Lot 163 proposed to be rezoned: Will it be the access to the back of Lighthouse Village property to avoid traffic access at the very congested Spit Road and Kachemak Drive? What of delivery truck traffic to service this large complex?

- Would a 4-way stop or traffic light be considered for the intersection of Spit Road and Kachemak Drive with added traffic (vehicles and coaches) from the hotel? Is there a recent Traffic Impact Study that was completed during the busy tourist season of June, July, and August of 2023? Results from a study completed in the winter are unacceptable.

- Potentially there could be 300-400 people at this complex during the summer. How will the City of Homer's utilities be impacted? What will this do to the stench we smell in the summer when we cross Beluga Lake?

- Will the Bird Viewing Platform be replaced for viewers for the WHSRN (Western Hemisphere Shorebird Reserve Network), annual Shorebird Festival, bird watchers in general, Mariner Park wetlands nesting area, etc? It must be noted that crane nesting in the wetlands has been documented since 1989. Please see Kachemak Crane Watch many YouTube videos of these cranes and other waterfowl in their habitat. How will construction of this huge complex affect the nesting? Will there be any mitigation of activity during the nesting period?

- Is there an Environmental Site Assessment Phase 1, 2, or 3 for possible soil contamination from past activities, with possible run-off into Mariner Park wetlands?

- Some 15 years ago, another hotel and/or condominium complex was proposed for this site. A Traffic ImpactStudy was performed then. Are the results of that study available to the public?

- The subject area of the proposed project is currently in Rural Residential zoning district. The Bay Avenue residents invested in Rural

Residential. How can an assumption that a ROW/easement can be vacated by anyone and a zoning designation be changed at will?

- Bay Avenue is a de facto pedestrian/cycle detour from the busy traffic on Ocean Drive. If traffic is diverted to Bay Avenue from the hotel/ conference center/restaurant employee housing now or in the future, how will the quality of the street be maintained with heavier travel? It is noted Bay Avenue and B Streets are on 50' wide Right of Ways that are considered insufficient width for the current residential and platting requirements by the City and other platting authorities.

- Is there sensitivity to soils being pushed into the wetlands? What stipulations might have been instituted in the original U.S. Army Corps Permit (after the fact when fill was pushed into the wetlands in the early 80's date?: Starvin Marvin's platform) to provide a bird viewing platform and walkway for public use? Is U.S. Army Corps of Engineers involved or will they be?

- What provisions does the project have to be sure the high value wetlands are not accessed by ATVs and guests' pets? The present neighborhood residents are mindful to keep animals and ATVs from disrupting ongoing waterfowl nesting And wildlife activity adjacent to this complex.

- Doyon owns a tourism coach business. Will coaches/buses bring guests to Homer on "Package/Bundle" purchases? Will the Borough and City be able to collect Sales taxes on "bundled tours"?

- Calculations indicate all of these structures in this complex will add up to 123,000 sq.ft. The Triplexes (15 units = 90 people)? Will their foundations be supported by pilings into the wetlands?

- The trail on the existing B Street Right of Way adjacent to Lot 163 has been used by residents for at least 37 years to view the wildlife activities on the high value wetlands.

Thank you for your consideration. Unfortunately, we are going stateside to a Celebration of Life for extended family. We will try our best to participate by ZOOM. Regardless, please enter this letter as our testimony to register our concern for the quality of our neighborhood and the potential damage that could be done with this very ambitious complex.

Jack and Susan Cushing
1423 Bay Avenue
Homer, AK. 99603

November 29, 2023

Dear members of the Planning Commission,

I have had a chance to take look at the Doyon project proposal and application to some degree, but not nearly enough to comb through it as it should be studied. Due to the enormity of the project and its complexity, it is extremely difficult to comment with detail in such a short time. This is a project that needs a great amount of study and attention by the affected adjacent neighborhoods and the greater Homer public because of its location and consequence to the fabric of this community.

Traffic and light pollution come to my mind immediately. Loss of precious large trees, more impermeable asphalt surface directly adjacent to Mariner Park where there is critical bird habitat that include critical feeding grounds for shorebirds during migration and nesting areas that need to be protected from light pollution, asphalt run-off, human activity, and noise.
I live on Kachemak Drive. That intersection onto Spit Road/Ocean Drive, in the summer especially, but now all year around, is clogged. Visibility is limited as there have been 2 lanes of cars on K-Drive, some coming out of the parking lot for the Spit Trail users, one waiting to turn north onto Ocean Drive and another waiting to go south onto the Spit Road. Out of frustration, some drivers rush out to beat oncoming traffic while bike riders and walkers are often not seen. There are no sidewalks on either of these intersecting very heavily trafficked entry points. Cross walks yes, but no extra width for non-motorized users. This is all where it is proposed to develop a formalized 4th entry point in that intersection. A light at that intersection is not required and not appealing, but dangerous without one. A 4-way stop, would be even less appealing. Flashing lights are visually objectionable.
Regarding the north entry/exit to the project near the curve of the Ocean Drive/FAA road, visibility is again a safety concern.
This project is incredibly consequential to the existing traffic problems, lighting, safety, habitat, views, and qualities of Homer. There are so many driveways and roads feeding in and out of Ocean Drive, creating frustrating bottlenecks at every intersection. Left hand turns especially so. Imagine Saturday Farmer's Market ingress and egress on or off Ocean Drive in the summer. With pedestrians, bikers, tourists, driveways at every business, this is a quagmire already.
While the applicant states 'benefits' to Homer and a supposed awareness of the specialness of this place, it seems this project is strictly a lucrative business in which to exploit a main access point smack dab in the middle of an already incredibly highly trafficked bottleneck.
The wording regarding the 5 triplexes is variable, i.e., 'dwellings', 'residences' and 'short term rentals'. Intention must be clear. Are these units for sale as timeshared condos? What exactly are they? And how to they help with housing in Homer as stated in the proposal introduction?
This proposal does not elaborate on the further development in the desired rural residential rezone to GC1 on Bay Ave. request. The totality of impact is not transparently presented for consideration.

*This area being along the tsunami evacuation route is further concern for safety in managing an evacuation should one truly be a danger. In fact, the 5 triplexes are within the inundation zone.

*We are grappling with short term rentals, seasonal and year-round housing.

*How many guests can Homer host? What is too much? This project will draw business from existing venues in Homer…….and then eventually add to an excessive over capacity this community can ill afford in sustaining a quality of life advertised and sought after.
Is it time to consider and lobby for a bed tax?

*We have not delved into an updated Comprehensive Plan; Homer's planning staff is reduced to one person who is still relatively new to Homer, and we are really trying to make this a more

pedestrian/bike friendly community. Much time has been spent on plat considerations and non-motorized connectivity.

*Because the proposed development is not a natural landform, having been filled back in the 80's, has there been a soils engineering study on it to assure stability for this intense usage?

*Does Homer's water supply meet the demands of a project like this in addition to full build out in this city?

*This project, as far as consideration for a Conditional Use Permit or Planned Unit Development is too large and too consequential to consider deciding on in one meeting. The public really needs more time to digest and refine this project. Surely the Planning Commission certainly needs more time.

*With discussion of a looming harbor expansion, coupled with a very high-density development application, this needs a lot more attention and consideration. Traffic has already been mentioned. Parking lot lighting, individual balcony lighting, walkways and all the standard lighting that goes into a project like this is extremely consequential in a big negative. The community is steering Homer to be a Dark Sky city. There are already big consequences to migrating birds on the Spit due to the harbor lights and large vessel lights anchored further out on the water. More and more lighting, especially at the water's edge, is extremely detrimental for birds. More and more lighting at the scale of the Doyon proposal is detrimental to our own precious dark skies. Noise and light pollution are increasing at an alarming rate.

*For CUP consideration, a project of this size and complexity requires further benefits and amenities for the community. What benefits will this CUP offer the city? Sidewalks, bike paths, bike racks, bird viewing platform. A free public shuttle system to and from the Spit. Commission of local art throughout and local input in general. Think of what was integrated into the Islands and Ocean Visitor's Center with art integrated at every level. Extensive landscaping. Visible public access to bird a viewing platform.
Loss of precious large trees, more impermeable asphalt surface directly adjacent to Mariner Park where there is critical bird habitat that include critical feeding grounds for shorebirds during migration and nesting areas that need to be protected from light pollution, asphalt run-off, human activity, and noise. Mitigations for these concerns must be addressed.

*A well thought out and coordinated development plan, considering the timing of construction, construction traffic, housing for construction people, noise of big equipment, cranes, delivery trucks. Timing and coordination are essential.

*Vacating the B Street right of way would come at a terrible cost to the city and community. This right of way is for city transportation. It has the potential of providing a beautiful non-motorized access to a public viewing platform. It is an asset far greater to the city than a development project that outsizes the private parcel the company currently owns. The community cost for private gain does not measure out. This project is obviously too big for the site and needs to be scaled down to a better fit for our community.

*Rezoning a rural residential lot to insert a GC1 development is detrimental to the neighborhood, impacting traffic, eliminating valuable tree cover and privacy. GC1 zoning on a coastline is bad planning and we already have plenty of it. Do we need to keep exacerbating what we know to be detrimental to coastline erosion by increased run off from increasing impermeable surfaces and depleting vegetation cover?

*The planning department is down to one person, a relatively new one for Homer, so any decision on this application cannot be made tonight.

*I urge you to postpone any decision on this CUP application on December 6th. This requires a deep discussion and a much slower pace than as presented.

Rika Mouw
Homer

**From:** Melissa Jacobsen
**To:** Ryan Foster; Renee Krause
**Subject:** FW: Re. CUP 23-08, B Street ROW vacate, 1491 Bay Avenue Rezone
**Date:** Wednesday, November 29, 2023 4:24:03 PM

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**From:** Michael Armstrong <wordfolk@gmail.com>
**Sent:** Wednesday, November 29, 2023 3:22 PM
**To:** Department Clerk <clerk@ci.homer.ak.us>
**Subject:** Re. CUP 23-08, B Street ROW vacate, 1491 Bay Avenue Rezone

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

To the Homer Planning Commission:

I am a member of the Kachemak Bay Shorebird Festival Committee and an active birder and have these comments on Doyon Corporation's proposed project at what has been called Lighthouse Village. These are my own comments and not those of the committee as a whole.

Three items related to the Lighthouse Village development project are on the agenda for the Dec. 6 meeting. The CUP has not been made available on the city website, and it is only available for inspection at the clerk's office. I do not feel the public has had sufficient time and opportunity to review the Conditional Use Permit and other documents. Given the scope and complexity of the project, I request that the public hearings be extended to the next Planning Commission meeting.

The project documents also lack information I believe the commission needs to make a decision on the project, as follows:

1) The CUP application notes that the project does affect wetlands and that the U.S. Army Corps of Engineers permit would be included in the rezoning application. I did not see that permit. That permit is necessary to understand if the proposed project meets the conditions set by the Corps.

2) The plat also notes that the original project received approval from the Alaska Department of the Environment, but the CUP does not include any of this documentation. That also should be available for review to see if the new project would adhere to state environmental regulations.

3) The CUP does not indicate if the project will include a viewing platform to replace the demolished platform at the southwest corner of the lower lot although there is a boardwalk shown. In an Aug. 23, 2023, email to Marilyn Sigman, President of the board of the Friends of Alaska National Wildlife Refuges, regarding continued bird viewing opportunities at Lighthouse Village, Julie Engebretsen wrote "The developer is aware of the value of the birdwatching platform to the community, and has expressed interest in continuing bird viewing from the property." Doyon Corporation has not provided information in its CUP

indicating how it will continue bird viewing from its property.

4) Apparently, prior owner Douglas Meeker built the viewing platform as part of a grant agreement with the Alaska Maritime National Wildlife Refuge. it is unclear if that grant agreement still applies to the property and the new owner. This matter merits further research.

5) The CUP application notes that stormwater will be routed from the northern lot "to a detention structure with treatment filters for filters" and that stormwater for the southern lot will "sheet flow into a centrally located swale, providing treatment and storage for stormwater runoff." The application does not specify the kind of treatment for this stormwater, including if there will be treatment for residue from vehicles parked in the lots. The former project had gravel parking lots while this project will have less-permeable asphalt parking lots. More information is needed on treatment of runoff that could include oil, gas, diesel, and other residue from parked vehicles.

6) Issues raised in the transportation study and how Doyon will respond also need to be considered.

The Kachemak Bay Shorebird Festival Committee has concerns about how the project will affect bird viewing and public access in general and during the shorebird migration at the new development. They also have concerns about the effect of the project on bird and wildlife habitat in Mariner Park Lagoon. The committee has not had sufficient time to review the project and comment on it as a committee. Extending the public hearing would allow the committee and other concerned organizations the opportunity to provide more informed comments on the project.

I respectfully ask for an extension of the public hearing and review process and that no decision on the three matters be made until at least the next Planning Commission meeting.

Best,

Michael Armstrong
65240 Diamond Ridge Road
Homer, Alaska 99603
wordfolk@gmail.com

P.O. Box 2994
Homer AK 99603

November 26, 2023

Homer Planning and Zoning Commission
City of Homer
491 E. Pioneer Avenue
Homer, AK 99603

Dear Planning and Zoning Commission Members:

I have concerns about the Lighthouse Village Development Project and the short span of time allowed for the public to study this development. I searched online for details when I heard about it on Facebook last week but was not successful. I understand it might be available on December 1st, but comments are due on November 29 to make it into the Commission's packet. Posting information at only City Hall for people to study is not adequate in our computer age. Given the short time for the public to study the proposal, it is now the holiday season, and many people are traveling Outside, I respectfully request that the public hearing be postponed until mid-January.

The Lighthouse Village Development is on land adjacent to a sensitive, important saltwater estuary that is part of the Kachemak Bay Critical Habitat Area and is a designated Western Hemisphere Shorebird Reserve Network site. The bird platform and its easy access for Shorebird Festival activities and year-round viewing is an important part of our tourism infrastructure. I do not see a viewing platform included in the hotel plans. It should be a required part of the plan. I do remember it was required years ago as mitigation when the site was illegally filled.

The Mariner Park Lagoon is a legally designated protected conservation area under the Kachemak Bay Critical Habitat Area and is managed as a conservation area for "passive" human use like bird watching and photography. This is protected wildlife habitat where shorebirds stop over, many nest, and a pair of sandhill cranes has been nesting in this estuary since 1989. It is incumbent on the City of Homer to make sure this habitat is protected from pollution, noise, excessive light, people or dogs entering the estuary from the hotel, or other problems from this new development that will degrade the adjacent wetland habitat. During construction what mitigations will be done to prevent disturbance to nesting birds in the Lagoon and prevent construction materials, soil, and trash from going beyond the construction site?

This development is large and heavy with a dense footprint on the fill. Is the fill adequate in depth? Will an earthquake with the additional weight cause fill to sluff into the Lagoon? Is a hefty retaining wall of some sort needed to prevent intrusion into the Lagoon?

With Climate Change and rising sea levels, many communities are reassessing what they allow to be built next to the ocean. This is a tsunami zone, not much above sea level. It will be vulnerable to a tsunami and as sea levels rise more, to a heavy storm surge and extreme high tide that coincide. It would make better sense for this site to be used for a project that does not put so many people onto this site all at once..

Another hazard is that this property sits in the path of take-offs and landings from the Homer Airport. Putting a hotel under the flight path is not a particularly good location because of this existing hazard. Down the road there will likely be expansions to the airport, increasing the hazards and airplane noise.

Traffic on the Spit is a confounding issue without adding this big development right at the beginning of the Spit. Summer traffic during busy weekends or holidays is so congested, finding a parking spot out on the Spit can be difficult. In a tsunami alert, trying to get vehicles off the Spit is going to be even more difficult with the traffic coming out of the Lighthouse Village development.

Turning left off Kachemak Drive onto the Spit Road is often very difficult in summer. With more traffic coming out of this new development, the misaligned intersections are problematic. This area will be a bottleneck in an emergency. What is the plan to mitigate these problems, and also make it a safe intersection for pedestrians to walk or cycle in the area, or to cross the Spit Road?

Water quality in the Lagoon is a huge concern. How will all the stormwater runoff from the paved parking and roof tops be managed so that it is collected, filtered, and not directed into the Lagoon? Oil and other vehicular substances are toxic to birds and fish. Any runoff from the development will eventually end up in the Bay, so it is vital to have a good stormwater system. The plan must include a system to collect all runoff since the surfaces outside will all likely be paved. Furthermore, will the current fill soils be tested for toxins from past developments on the site and then cleaned up if there are before construction begins?

The development will have a considerable number of rooms, 200 I believe, generating a lot of wastewater. Is Homer's sewer system in this area able to handle that much additional load all at once?

City water for the entire Lighthouse Village will be considerable. Does the City have the capacity to keep providing water to such large developments, especially if we have a drought period?

Are the five floors still at a height that the fire department can handle a fire in the building? Homer had a building height restriction, is that still in effect?

Light pollution in the surrounding area will likely be a concern. Hopefully all lighting will be directed downward and shaded so it does not extend outward to the adjoining residential area.

Being able to look seaward without nearby lights affecting the view is important to many people.

This project is better suited to a site that does not have so many transportation challenges and is not located in a tsunami zone and under an airport flight zone. The catastrophic disasters around the world from supersized storms, hurricanes, tornadoes, and floods to excessive heat and drought should be a wakeup call to us all that we cannot keep doing business as usual. Other cities around the world are heeding the wakeup call in coastal zones and moving development out of harm's way further inland. They are designing green coastlines that emphasize saving and enhancing coastal wetlands, marshes, and estuaries. This area was once a part of Mud Bay and the existing Mariner Park Lagoon. An illegal fill led to the first development in this location. Maybe it is time to take a step back and seriously question a development of this density in this location.

Respectfully submitted,

Nina Faust

**From:** Jack Wiles
**To:** Department Planning
**Subject:** Lighthouse Village CUP.
**Date:** Sunday, November 26, 2023 1:18:21 PM

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CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

The details of how mitigation measures work are unclear!  e.g. storm water and pollution into the wetlands.

The wetlands are an important birding area and a conservation easement should be established.

The traffic congestion at Kachemak Drive is a major concern!

Thx.

John Wiles

Sent from my iPad

City of Homer
www.cityofhomer-ak.gov

Planning
491 East Pioneer Avenue
Homer, Alaska 99603
Planning@ci.homer.ak.us
(p) 907-235-3106
(f) 907-235-3118

**Staff Report PL 23-061**

**TO:** Homer Planning Commission
**FROM:** Ryan Foster, City Planner
**MEETING:** December 6, 2023
**SUBJECT:** Application amending Zoning Map via Ordinance

**Requested Action:** Conduct a public hearing and recommend approval of the zoning map amendment to the Homer City Council

**GENERAL INFORMATION**
The applicant requests a change in zoning from Rural Residential, to General Commercial 1.

| | |
|---|---|
| Applicant: | Doyon, Limited<br>1 Doyon Place<br>Fairbanks, AK 99701 |
| Location: | 1491 Bay Avenue |
| Legal Description: | T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0000839 BAY VIEW SUB LOT 163 |
| Parcel ID: | 17921015 |
| Size of Existing Lot: | 1.35 acres |
| Zoning Designation: | Rural Residential District |
| Existing Land Use: | Vacant |
| Surrounding Land Use: | North: Residential<br>South: Vacant<br>East: B Street ROW & Commercial<br>West: Residential |

Comprehensive Plan: Goal 1 Objective D Implementation Item 3: "Support planning and zoning regulations that promote land use strategies that include compact, mixed-use development, higher density development, and infill."

| | |
|---|---|
| Wetland Status: | KWF Wetlands Assessment Tidal on southern half of the lot. |
| Flood Plain Status: | Zone AE 20 |
| Utilities: | Public utilities service the site. |
| Public Notice: | Notice was sent to 28 property owners of 26 parcels as shown on the KPB tax assessor rolls. |

**GENERAL INFORMATION**

This application proposes a zoning map amendment to move the General Commercial 1 District Boundary west to encompass the subject lot. The applicant proposes a planned unit development consisting of a hotel, employee housing, and triplex residential units at 1563 Homer Spit Road, 1663 Homer Spit Road, and 1491 Bay Avenue. The rezoning is necessary to allow for a mixed-use planned unit development (residential and commercial); the Rural Residential District only allows planned unit development with residential uses only.

**HCC 21.95.060 Review by Planning Commission**

a. The Planning Commission shall review each proposal to amend this title or to amend the official zoning map before it is submitted to the City Council.

b. Within 30 days after determining that an amendment proposal is complete and complies with the requirements of this chapter, the Planning Department shall present the amendment to the Planning Commission with the Planning Department's comments and recommendations, accompanied by proposed findings consistent with those comments and recommendations.

c. The Planning Department shall schedule one or more public hearings before the Planning Commission on an amendment proposal, and provide public notice of each hearing in accordance with Chapter 21.94 HCC.

d. After receiving public testimony on an amendment proposal and completing its review, the Planning Commission shall submit to the City Council its written recommendations regarding the amendment proposal along with the Planning Department's report on the proposal, all written comments on the proposal, and an excerpt from its minutes showing its consideration of the proposal and all public testimony on the proposal.

21.95.050 Planning Department review of zoning map amendment.

The Planning Department shall evaluate each amendment to the official zoning map that is initiated in accordance with HCC 21.95.020 and qualified under HCC 21.95.030, and may recommend approval of the amendment only if it finds that the amendment:

**a. Is consistent with the comprehensive plan and will further specific goals and objectives of the plan.**

**Applicant:** Doyon, Limited's proposal for a year-round hotel and condos in Homer, Alaska, is intricately woven into the city's comprehensive plan, a strategic roadmap designed to guide Homer's growth while safeguarding its distinct character. Anchored within the Land Use chapter of the project, the development seamlessly aligns with the overarching vision of the city, particularly the outlined goals of increasing housing supply and diversity (Goal 1) and maintaining the pristine quality of Homer's natural environment (Goal 2).

The plan envisions Homer as a city that respects its environment, boasting a unique and vibrant atmosphere that is both wonderful to live in and inspiring to visit. The proposed project contributes to this vision by adhering to the plan's emphasis on encouraging high-quality buildings and fostering a mix of well-defined commercial districts (Goal 3 and Goal 4). By promoting compact, walkable community development and integrating green infrastructure elements, the story goes beyond a mere real estate venture; it becomes a harmonious addition to the cityscape, echoing the plan's call for a balanced blend of development and open space.

The Land Use chapter specifically advocates for zoning concepts that encourage a variety of housing options, reflecting income and lifestyle diversity in Homer. Doyon, Limited's proposal aligns with this objective by presenting a mixed-use development that caters to diverse needs while respecting the natural landscape. The plan's proposed land use recommendations map, designed to clarify intended types of uses, resonates with the project's commitment to striking a balance between development density and preserving environmentally crucial areas.

Furthermore, the proposal dovetails with the plan's vision for an integrated system of green spaces, providing aesthetic and functional benefits to the community. By protecting corridors for trails, managing stormwater, preserving wildlife habitat, and maintaining viewsheds, the development becomes a housing solution and a contributor to the city's ecological well-being.

In essence, Doyon, Limited's development proposal mirrors the forward-thinking approach embedded in Homer's comprehensive plan, contributing to the city's economic vitality while ensuring that growth occurs in a manner that is both sustainable and in harmony with the community's values.

**Analysis:** The Comprehensive Plan states (Goal 1 Objective D Implementation Item 3): “Support planning and zoning regulations that promote land use strategies that include compact, mixed-use development, higher density development, and infill.” The proposed rezone is contiguous to the General Commercial 1 zoned properties at 1563 & 1663 Homer Spit Road, and complies with the general land use pattern set out in the Comprehensive Plan Land Use Recommendations Map. The General Commercial 1 district, with a proposed Conditional Use Permit Application for a Planned Use Development at this property, allows for greater mixed use opportunities. A currently vacant property will be consolidated with the existing General Commercial 1 properties.

> *Staff Finding:* The zoning change is consistent with the Comprehensive Plan and will support higher density mixed-use infill development.

**b. Applies a zoning district or districts that are better suited to the area that is the subject of the amendment than the district or districts that the amendment would replace, because either conditions have changed since the adoption of the current district or districts, or the current district or districts were not appropriate to the area initially.**

**Applicant:** Adjacent zoning districts are GC1 and RR. The proposed re-zone will facilitate land use that is compatible with adjacent GC1 development. Every effort is being made to segregate this development from the residential area to the west.

**Analysis:** Conditions have changed since the original adoption of the zoning district boundaries. The Ocean Drive/Homer Spit corridor consists of the majority of land zoned for General Commercial 1 in Homer, and much of it has already been developed. There is a strong demand for General Commercial 1 zoned properties, with limited availability of undeveloped commercial properties, especially larger parcels, in the City. This proposed rezone would provide much needed acreage for a commercial project.

> *Staff Finding:* The amendment would apply a zoning district that is better suited to the area because conditions have changed since the creation of the General Commercial 1 District boundaries.

**c. Is in the best interest of the public, considering the effect of development permitted under the amendment, and the cumulative effect of similar development, on property within and in the vicinity of the area subject to the amendment and on the community, including without limitation effects on the environment, transportation, public services and facilities, and land use patterns.**

**Applicant:** Consolidation of the properties allows a significant commercial investment to take place at the landmark location at the base of the Homer Spit. Benefit: complete renovation of a derelict site into a multi-million-dollar facility, increased employment opportunities with included employee housing option. The proposed development by Doyon, Limited holds great promise for enhancing property values in the area and contributing significantly to the local economy.

The development is separated from the adjacent property to the north by a retaining wall and difference in elevation. The development is separated from the adjacent property to the west by a 6’ sight obscuring fence and 10’ wide landscape buffer. The proposed development is carefully designed to be compatible with existing uses of the surrounding land. Through adherence to the planned unit development (PUD) regulations, the project aligns with the zoning district's provisions, ensuring that the mix of residential, commercial, and industrial elements integrates seamlessly into the existing landscape. The development plan considers the neighborhood's character, harmonizing scale, bulk, coverage, and density to preserve the desirable features of the surrounding area. By incorporating sustainable practices, on-site employee housing, and thoughtful design, the proposal aims to complement rather than disrupt the existing land uses, promoting a well-integrated and cohesive community.

**Analysis:** City water and sewer are available and access to 1491 Bay Ave would be via Homer Spit Road, an Alaska Department of Transportation maintained road. Full police and fire services are available. Public services and facilities are adequate to serve increased intensity land use. Development of this property via a Planned Unit Development with a hotel, workforce housing, and

tri-plex residences would increase infill within the community, and create more opportunities for mixed-use development that is difficult to come by since Homer has limited opportunity for larger scale mixed-use General Commercial 1 development.

> *Staff Finding:* The rezoning of this 1.35-acre lot that is contiguous to the General Commercial 1 is in the best interests of the public as it supports higher density mixed-use infill development.

**STAFF COMMENTS/RECOMMENDATIONS:**

Planning staff has reviewed the ordinance per 21.95.050 and recommends the Planning Commission conduct a public hearing, and recommend approval to the City Council.

**ATTACHMENTS**

1. Application
2. Petition
3. Map of Rezone
4. Public Notice
5. Public Comments

City of Homer
www.cityofhomer-ak.gov

Planning
491 East Pioneer Avenue
Homer, Alaska 99603
Planning@ci.homer.ak.us
(p) 907-235-3106
(f) 907-235-3118

# Rezoning Application

*For Staff Use Only*

| | |
|---|---|
| ***Fee Amount:*** ***Received by:*** | ***Planning Commission Public Hearing Date:*** |
| ***Date application accepted as complete:*** | ***HAPC approval or denial date:*** |

**APPLICANT INFORMATION**

Name: Doyon, Limited Phone Number: 907-375-4216

Address: 1 Doyon Place, Fairbanks AK, 99701

Property Owner (if different than applicant)

Name: Doyon Tourism, Inc. Phone Number: 907-375-4216

Address: 11500 Sukdu Way Anchorage, AK 99515

**PROPERTY INFORMATION** (if more than one lot, list on separate page)

Street Address: 1491 Bay Ave Lot size: 1.35 acres Tax parcel number: 17921015

Legal Description: Lot 163 Bay View Subdivision (HM 0000839)

**Circle one: Is City water available? YES/NO City Sewer? YES/NO Electrical Service? YES/NO**

What is the existing use of the property? Vacant

What is the proposed use of the property? Change the zoning for Lot 163 from Rural Residential to GC1. This rezone, along with the B St. right-of-way vacation will create 2 contiguous parcels with the existing commonly owned properties to the east. To be a hotel/condominium development with employee housing and parking in the northerly portion of the properties. There will be a 3-story hotel and 3 condominiums with 2 short-stay structures located on the southerly portion of the properties. No direct motorized access will be provided from the project to Bay Avenue or B Street.

What structures or land uses exist on the neighboring properties? (Examples: residential, commercial, vacant) List the zoning of these adjacent lots.

| | Structures/land use | Zoning |
|---|---|---|
| North: | Professional office building, Storage units, Waste management company, UPS Distribution Center | GC1 |

South: Tidelands, DOT, DNR — Open Space Rec

East: DNR, Homer Airport — GC2

West: Private residences, storage units, short term rentals — Rural Residential

1. What is the public need and why is this rezone justified?

Consolidation of the properties allows a significant commercial investment to take place at the landmark location at the base of the Homer Spit.

2. Describe the benefits and detriments of this proposed rezoning to:

(a) the community.

(b) the neighboring landowners.

(c) you, the property owner.

**Community**

Benefit: complete renovation of a derelict site into a multi-million dollar facility, increased employment opportunities with included employee housing option. The proposed development by Doyon, Limited holds great promise for enhancing property values in the area and contributing significantly to the local economy.

Detriment: N/A

**Neighboring landowners**

The development is separated from the adjacent property to the north by a retaining wall and difference in elevation. The development is separated from the adjacent property to the west by a 6' sight obscuring fence and 10' wide landscape buffer. The proposed development is carefully designed to be compatible with existing uses of the surrounding land. Through adherence to the planned unit development (PUD) regulations, the project aligns with the zoning district's provisions, ensuring that the mix of residential, commercial, and industrial elements integrates seamlessly into the existing landscape. The development plan considers the neighborhood's character, harmonizing scale, bulk, coverage, and density to preserve the desirable features of the surrounding area. By incorporating sustainable practices, on-site employee housing, and thoughtful design, the proposal aims to complement rather than disrupt the existing land uses, promoting a well-integrated and cohesive community.

**Property owner/developer**

Benefit: facilitates completion of step 1 in the proposed project timeline.

Detriment: N/A

3. Can the proposed land use be developed in a manner that is compatible with development in adjacent zoning districts? If so, how? What effect will this change have on the surrounding properties?

Adjacent zoning districts are GC1 and RR. The proposed re-zone will facilitate land use that is compatible with adjacent GC1 development. Every effort is being made to segregate this development from the residential area to the west.

4. Can the existing public facilities, services, and utilities accommodate the proposed use without any detrimental affect on adjacent zoning districts? If so, how?

Existing city services and other utilities are sufficient to provide for the needs of this development.

5. Would rezoning to a district allowing the proposed use permit other uses, which would not be compatible with adjacent land use?

No

6. How does this proposal relate to the Comprehensive Plan and purposes of the zoning regulations?

Doyon, Limited's proposal for a year-round hotel and condos in Homer, Alaska, is intricately woven into the city's comprehensive plan, a strategic roadmap designed to guide Homer's growth while safeguarding its distinct character. Anchored within the Land Use chapter of the project, the development seamlessly aligns with the overarching vision of the city, particularly the outlined goals of increasing housing supply and diversity (Goal 1) and maintaining the pristine quality of Homer's natural environment (Goal 2).

The plan envisions Homer as a city that respects its environment, boasting a unique and vibrant atmosphere that is both wonderful to live in and inspiring to visit. The proposed project contributes to this vision by adhering to the plan's emphasis on encouraging high-quality buildings and fostering a mix of well-defined commercial districts (Goal 3 and Goal 4). By promoting compact, walkable community development and integrating green infrastructure elements, the story goes beyond a mere real estate venture; it becomes a harmonious addition to the cityscape, echoing the plan's call for a balanced blend of development and open space.

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Furthermore, the proposal dovetails with the plan's vision for an integrated system of green spaces, providing aesthetic and functional benefits to the community. By protecting corridors for trails, managing stormwater, preserving wildlife habitat, and maintaining viewsheds, the development becomes a housing solution and a contributor to the city's ecological well-being.

In essence, Doyon, Limited's development proposal mirrors the forward-thinking approach embedded in Homer's comprehensive plan, contributing to the city's economic vitality while ensuring that growth occurs in a manner that is both sustainable and in harmony with the community's values.

7. How would the proposed change affect the public health safety and welfare of the surrounding area?

The proposed development by Doyon, Limited in Homer, Alaska, is conscientiously crafted to prioritize the health, safety, and welfare of the surrounding area and the city. The project adheres strictly to the established zoning regulations and city ordinances, ensuring that all aspects align with the community's well-being. Robust safety measures, both during construction and in the final built environment, have been incorporated to mitigate any potential risks. Additionally, the project emphasizes sustainable practices and environmental considerations to safeguard the local ecosystem's health. By engaging in comprehensive planning, Doyon, Limited aims to contribute positively to the community's welfare, creating a development that enhances the quality of life in the surrounding area without compromising safety or the city's overall health.

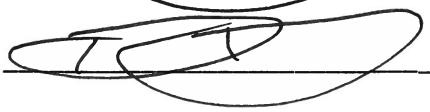
OTHER REQUIREMENTS

1. The applicant shall provide a map showing the area to be rezoned.
2. The applicant shall provide a petition, signed by a majority of the landowners within the proposed zoning area saying that they support the proposed change.

I hereby certify that the above statements and other information submitted are true and accurate to the best of my knowledge, and that I, as applicant, have the following legal interest in the property:

Owner of record, Doyon Tourism Inc, duly authorizes Patrick Duke, Senior Vice President & CFO to act for Doyon Tourism Inc, who has the following legal interest, Lot 163 Bay View Subdivision, and that the owner of record is knowledgeable of this application if I am not the owner. I also understand that this item will be scheduled for the Planning Commission Agenda only if all application materials are submitted.

Applicant Signature: 

Property Owner Signature: 

# Petition

| | |
|---|---|
| Proposed amendment: | The property at 1491 Bay Avenue consists of one 1.35 acre parcel. Currently the parcel is a part of the Rural Residential Zoning District. This request is to change the zoning of the entire property, T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0000839 BAY VIEW SUB LOT 163 to the General Commercial 1 District. |
| HCC 21.95.020(e)(3)(a) | "Each person signing this petition represents that the signer is a record owner of the lot whose description accompanies the signature; that the signer is familiar with the proposed zoning map amendment and the current zoning district of the lot; and that the signer supports the City Council's approval of the amendment." |
| Statement of Justification | This rezone along with the B St. right-of-way vacation will create 2 contiguous parcels with the existing commonly owned properties to the east. The amendment will facilitate development and land use that is compatible with the adjacent GC1 zoning district. |

| Printed Name | Signature of Property Owner or Designated Representative | Legal Description | Tax parcel number |
|---|---|---|---|
| Patrick Duke, SVP CFO |  | T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0000839 BAY VIEW SUB LOT 163 | 17921015 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**MY SIGNATURE MEANS I AM IN FAVOR OF THIS AMENDMENT**

GENERAL COMMERCIAL 1

GENERAL COMMERCIAL 2

LOT 163 BAYVIEW SUBD.
PROPOSED RE-ZONE RR TO GC1

RURAL RESIDENTIAL

OPEN SPACE REC

0 200' 400'

GRAPHIC SCALE

# PROPOSED RE-ZONE
# LOT 163 BAYVIEW SUBD.
# RR TO GC1


**SEABRIGHT SURVEY + DESIGN**
KENTON T. BLOOM, P.L.S.
1044 EAST ROAD, SUITE A
HOMER, ALASKA 99603
(907) 299-1091

GENERAL COMMERCIAL 2

Ocean Drive

GENERAL COMMERCIAL 1

B Street

Kachemak Drive

LOT 163 BAYVIEW SUBD.
PROPOSED RE-ZONE RR TO GC1

Bay Avenue

Homer Spit Road

RURAL RESIDENTIAL

OPEN SPACE REC

0 200' 400'

GRAPHIC SCALE

**PROPOSED RE-ZONE**
**LOT 163 BAYVIEW SUBD.**
**RR TO GC1**

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**CITY OF HOMER**
**PUBLIC HEARING NOTICE**
**PLANNING COMMISSION MEETING**

A public hearing on the matters below are scheduled for Wednesday, December 6, 2023 at 6:30 p.m. during the Regular Planning Commission Meeting. Participation is available virtually via Zoom webinar or in-person at Homer City Hall.

**AN ORDINANCE OF THE CITY COUNCIL OF HOMER, ALASKA AMENDING HOMER CITY CODE 21.10.030 AMENDING THE HOMER CITY ZONING MAP TO REZONE A PORTION OF THE RURAL RESIDENTIAL (RR) ZONING DISTRICT TO GENERAL COMMERCIAL 1 (GC1) ZONING DISTRICT.**

**The rezone from Rural Residential (RR) Zoning District to General Commercial 1 (GC1) is proposed for the following address:**

**1491 Bay Avenue**
**T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0000839 BAY VIEW SUB LOT 163**

**A request for Conditional Use Permit (CUP) 23-08, per HCC 21.24.030 (f), Planned Unit Developments. The applicant proposes a planned unit development consisting of a hotel, employee housing, and triplex residential units at the following addresses:**

**1563 Homer Spit Road**
**T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0940051 BAYVIEW SUB NO 6 LOT 164-A**

**1663 Homer Spit Road**
**T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0940051 BAYVIEW SUB NO 6 LOT 164-B**

**1491 Bay Avenue**
**T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0000839 BAY VIEW SUB LOT 163**

A copy of the proposals may be viewed at Homer City Hall, in the Clerk's Office Lobby on the lower level. In-person meeting participation is available in Cowles Council Chambers located downstairs at Homer City Hall, 491 E. Pioneer Ave., Homer, AK 99603.

To attend the meeting virtually, visit zoom.us and enter the Meeting ID & Passcode listed below. To attend the meeting by phone, dial any one of the following phone numbers and enter the Webinar ID & Passcode below, when prompted: 1-253-215-8782, 1-669-900-6833, (toll free) 888-788-0099 or 877-853-5247.

Meeting ID: 979 8816 0903
Passcode: 976062

Additional information regarding this matter will be available by 5pm on the Friday before the meeting. This information will be posted to the City of Homer online calendar page for December 1, 2023 at

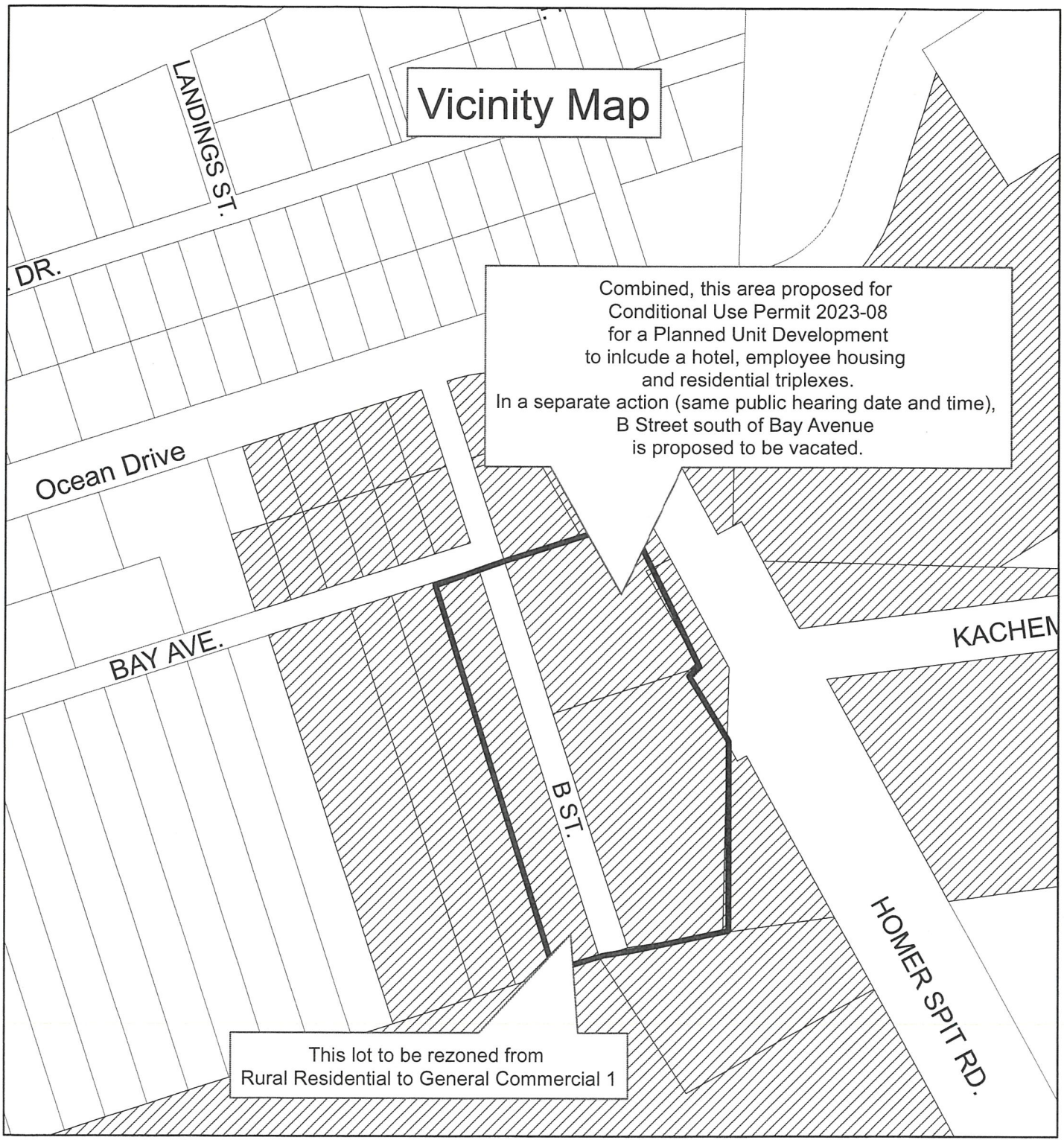
**CITY OF HOMER**
**PUBLIC HEARING NOTICE**
**PLANNING COMMISSION MEETING**

https://www.cityofhomer-ak.gov/calendar. It will also be available at the Planning and Zoning Office at Homer City Hall and at the Homer Public Library.

Written comments can be emailed to the Planning and Zoning Office at the address below, mailed to Homer City Hall at the address above, or placed in the Homer City Hall drop box at any time. Written comments must be received by 4pm on the day of the meeting.

If you have questions, contact Ryan Foster at the Planning and Zoning Office. Phone: (907) 435-3120, email: planning@ci.homer.ak.us or in-person at Homer City Hall.

**NOTICE TO BE SENT TO PROPERTY OWNERS WITHIN 300 FEET OF PROPERTY**




CITY OF HOMER - ALASKA - MARCH 31,1964

*City of Homer*
*Planning and Zoning Department*
11/20/23

## Proposed Rezone and Conditional Use Permit 2023-08

Public Hearing Notification
Lots within 300 feet are marked
and property owners notified

0 150 300 513 600 Feet

N

*Disclaimer:*
*It is expressly understood the City of Homer, its council, board, departments, employees and agents are not responsible for any errors or omissions contained herein, or deductions, interpretations or conclusions drawn therefrom.*


GENERAL COMMERCIAL 2
GENERAL COMMERCIAL 1
Ocean Drive
B Street
Kachemak Drive
LOT 163 BAYVIEW SUBD.
PROPOSED RE-ZONE RR TO GC1
Bay Avenue
514
Homer Spit Road
RURAL RESIDENTIAL
OPEN SPACE REC
0
200'
400'
GRAPHIC SCALE
PROPOSED RE-ZONE
LOT 163 BAYVIEW SUBD.
RR TO GC1
SEABRIGHT SURVEY + DESIGN
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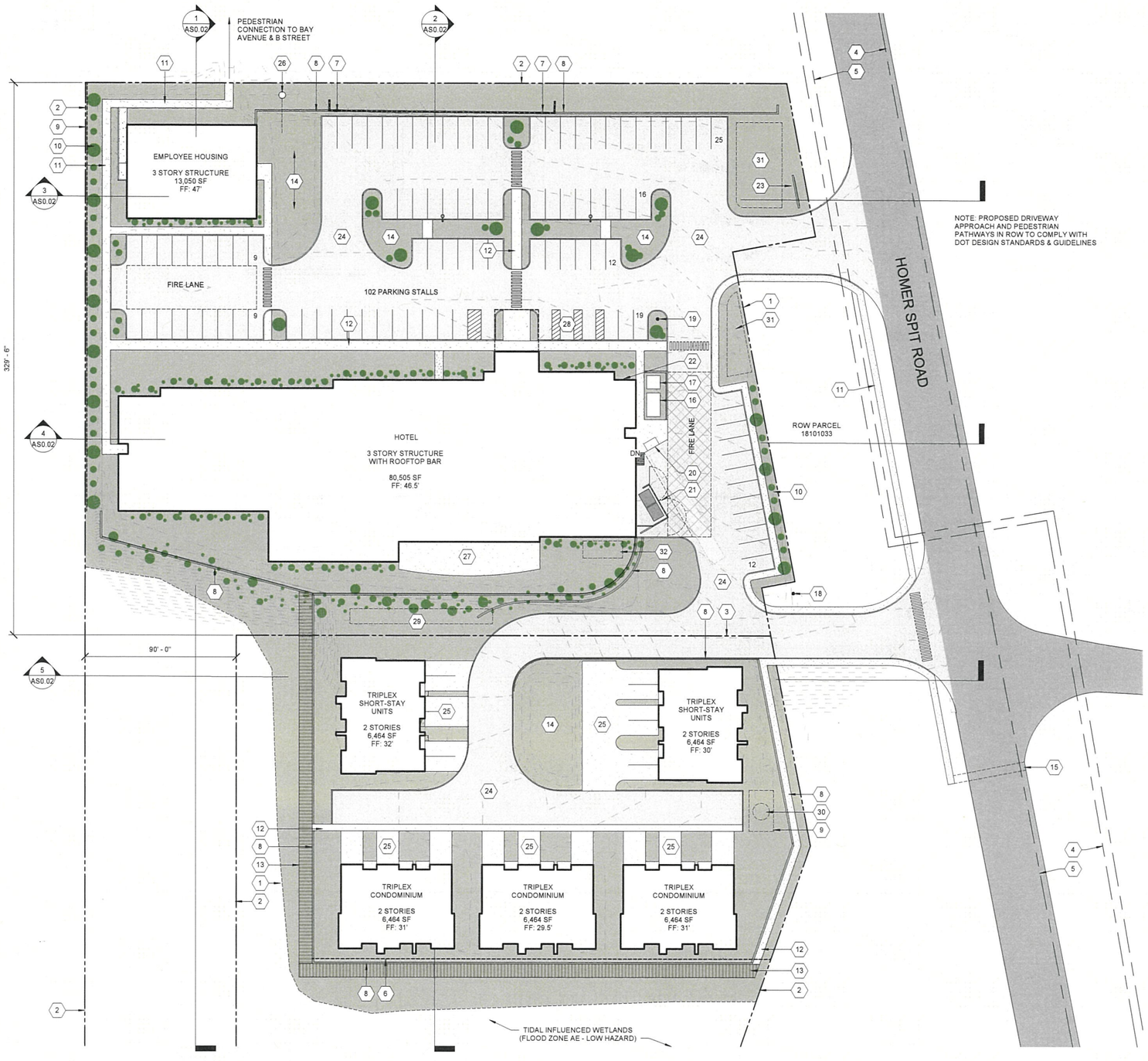


1 ARCHITECTURAL SITE PLAN
AS0.01 SCALE: 1/32" = 1'-0"

## GENERAL NOTES

**EXISTING LOTS TO BE DEVELOPED:**
LOT 163
LOT 164-A
LOT 164-B
VACATED B-STREET ROW

**TOTAL SITE AREA:**
6.95 ACRES

**PROPOSED BUILDABLE AREA TO BE DEVELOPED:**
186,437 SF / 4.28 ACRES

**PROPOSED STRUCTURE SQUARE FOOTAGE:**
EMPLOYEE HOUSING: 13,050 SF
HOTEL: 80,505 SF
TRIPLEX UNITS: (5) 6,464 SF
TOTAL SF OF DEVELOPMENT: 125,875 SF

**CITY OF HOMER ZONING CODE:**
ZONE: GENERAL COMMERCIAL 1 (GC1)
BUILDING SETBACKS: 20' FROM ROW / 5' FROM OTHER LOTS
LOCATED IN OVERLAY ZONE DISTRICT: NO
LOCATED IN WETLAND LOCATION: NO
LOCATED IN FLOOD ZONE: YES (AE, LOW HAZARD)
LANDSCAPING REQUIREMENTS INCLUDE RIGHT-OF-WAY LANDSCAPED BUFFER ZONES.

**PUBLIC UTILITIES**
PUBLIC WATER AND SEWER IS PROVIDED TO SITE (CITY OF HOMER PUBLIC WORKS)

POWER IS PROVIDED TO SITE. 3-PHASE UPGRADE WILL BE REQUIRED (HOMER ELECTRIC ASSOCIATION)

**PARKING REQUIREMENTS:**
NORTH LOT PARKING REQUIRED PER HCC 21.55.090:
HOTEL - ONE PER GUEST ROOM @ 85 ROOMS = 85 STALLS
DORMITORY - 1 PER TWO BEDS @ 40 BEDS = 20 STALLS

NORTH LOT PARKING PROVIDED: TOTAL 102 STALLS

SOUTH LOT PARKING REQUIRED PER HCC 21.55.090:
DWELLINGS: TWO PER DWELLING UNIT (A REQUIRED PARKING SPACE MAY BE IN A GARAGE OR CARPORT IF THE STRUCTURE IS AT LEAST 12' WIDE, 20' LONG AND 8' HIGH) = 30 STALLS

SOUTH LOT PARKING PROVIDED: TOTAL 30 STALLS

## KEYNOTES

1 APPROXIMATE LIMITS OF CONSTRUCTION
2 PROPERTY LINE
3 PROPOSED PROPERTY LINE
4 EXISTING PUBLIC SEWER LINE
5 EXISTING PUBLIC WATER LINE
6 ARMY CORPS OF ENGINEERS PERMIT LINE
7 EXISTING RETAINING WALL
8 RETAINING WALL
9 SIGHT OBSCURING FENCE
10 LANDSCAPE BUFFER
11 PEDESTRIAN PATHWAY
12 CONCRETE SIDEWALK
13 PEDESTRIAN BOARDWALK
14 SWALE, SEE STORMWATER PLAN
15 EXISTING PEDESTRIAN CROSSWALK
16 GENERATOR
17 PAD MOUNT TRANSFORMER
18 EXISTING FIRE HYDRANT
19 FIRE HYDRANT
20 LOADING DOCK
21 TRASH ENCLOSURE
22 FDC CONNECTION POINT
23 MONUMENT SIGN
24 ASPHALT SURFACE
25 CONCRETE DRIVE AISLE
26 STORM / SEWER MANHOLE
27 CONCRETE PATIO
28 ACCESSIBLE PARKING STALLS
29 BELOW-GRADE STORMWATER STORAGE STRUCTURE
30 SANITARY SEWER LIFT STATION
31 SNOW REMOVAL AREA
32 BELOW-GRADE GREASE INTERCEPTOR

| REVISIONS | | | |
|---|---|---|---|
| No. | Int. | Date | Description |

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LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK

ARCHITECTURAL SITE PLAN

Job No. 867-001
Date 11.15.2023
Designed LRE
Drawn LRE
Checked LRE

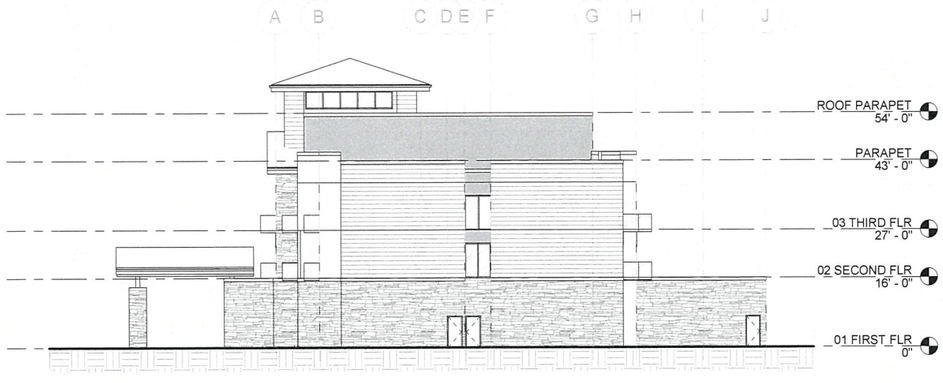
AS0.01


1 NORTH ELEVATION

A1.11 SCALE: 1/16" = 1'-0"

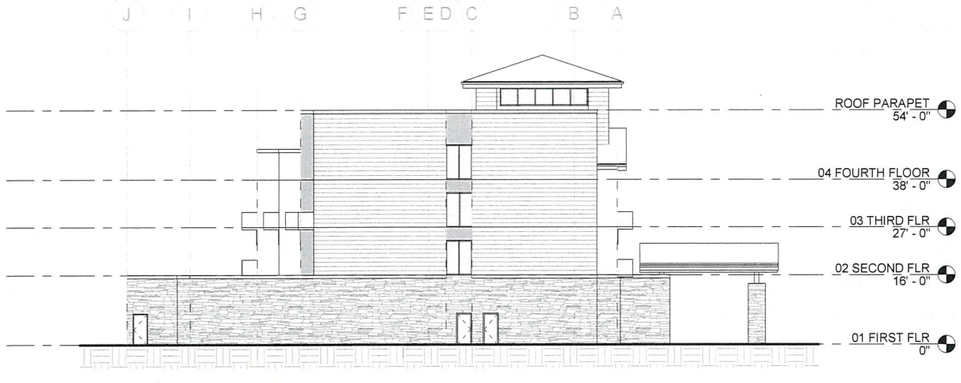

2 SOUTH ELEVATION

A1.11 SCALE: 1/16" = 1'-0"




3 WEST ELEVATION

A1.11 SCALE: 1/16" = 1'-0"




4 EAST ELEVATION

A1.11 SCALE: 1/16" = 1'-0"

## GENERAL NOTES

1 EXTERIOR ELEVATIONS ARE SCHEMATIC FOR PREDESIGN LEVEL PURPOSES ONLY

REVISIONS

| No. | Int. | Date | Description |
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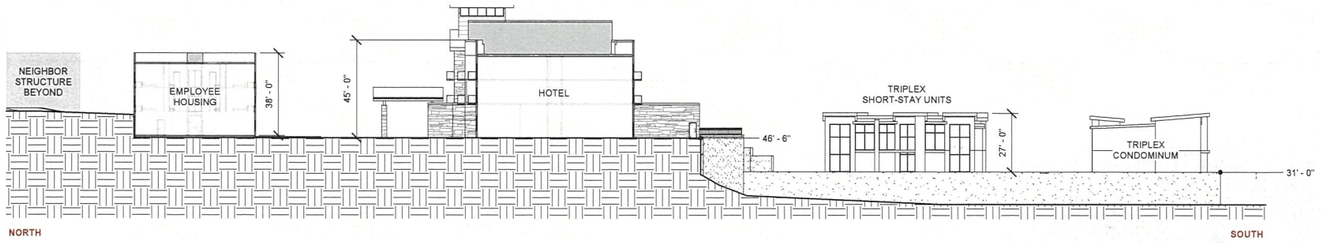
LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK

HOTEL - EXTERIOR ELEVATIONS

Job No. 867-001
Date 11.15.2023

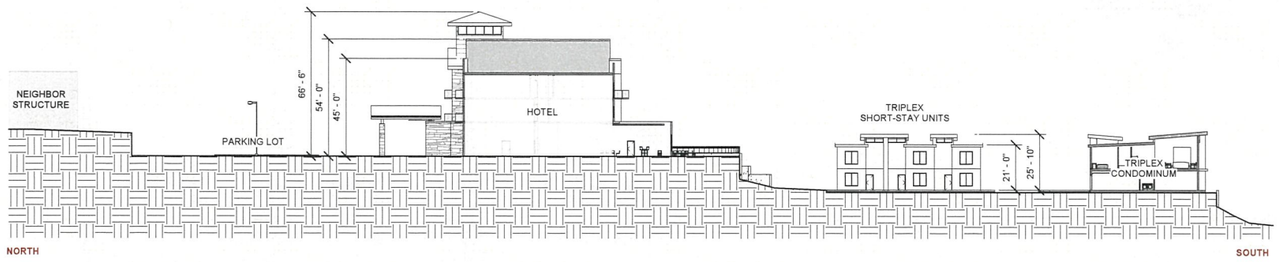
Designed Designer
Drawn Author
Checked Checker

A1.11



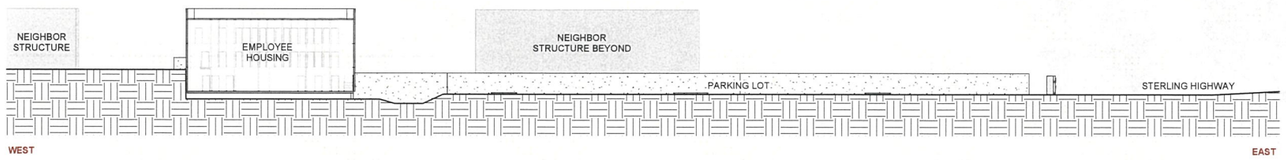

1 ‖ SITE SECTION 1

AS0.02 SCALE: 1/32" = 1'-0" REF:A2.01



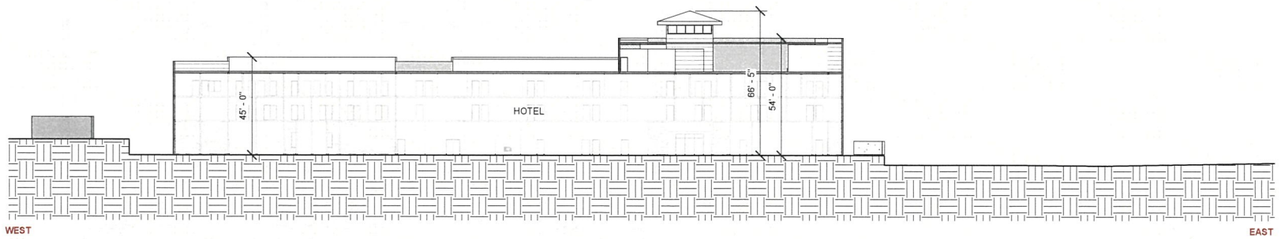

2 ‖ SITE SECTION 2

AS0.02 SCALE: 1/32" = 1'-0" REF:AS0.01



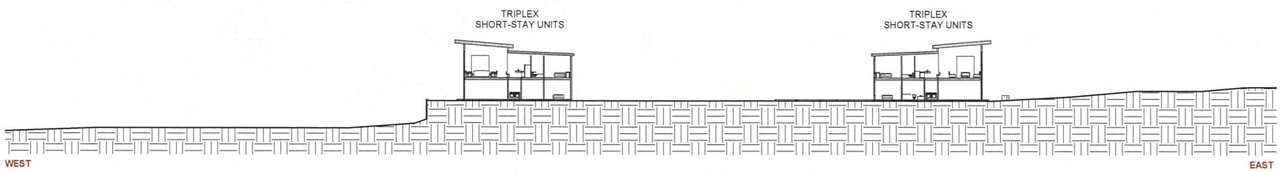

3 ‖ SITE SECTION 3

AS0.02 SCALE: 1/32" = 1'-0" REF:AS0.01




4 ‖ SITE SECTION 4

AS0.02 SCALE: 1/32" = 1'-0" REF:AS0.01




5 ‖ SITE SECTION 5

AS0.02 SCALE: 1/32" = 1'-0" REF:AS0.01



REVISIONS

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LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK

ARCHITECTURAL SITE SECTIONS

Job No.: 867-001
Date: 11.15.2023

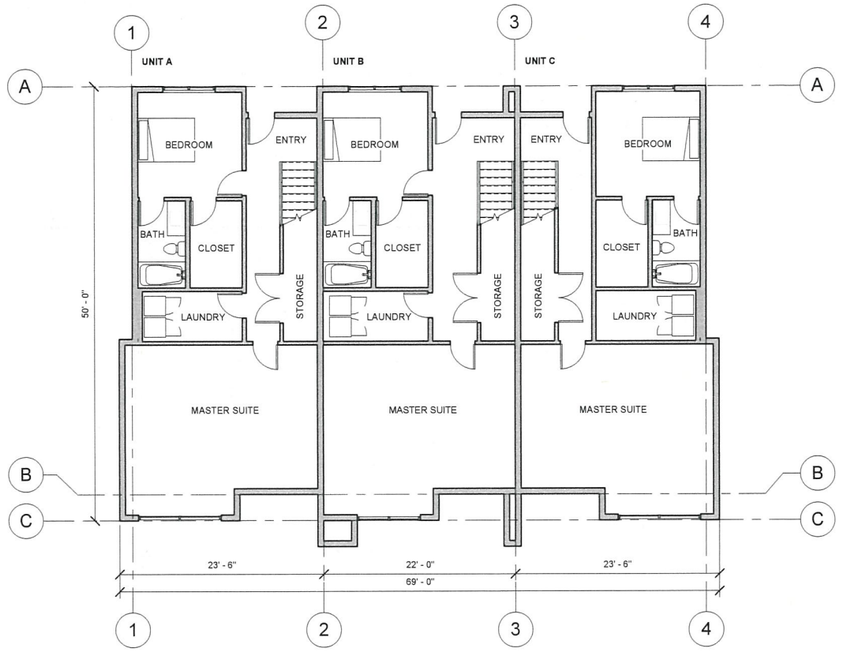
Designed LRE
Drawn LRE
Checked LRE

AS0.02

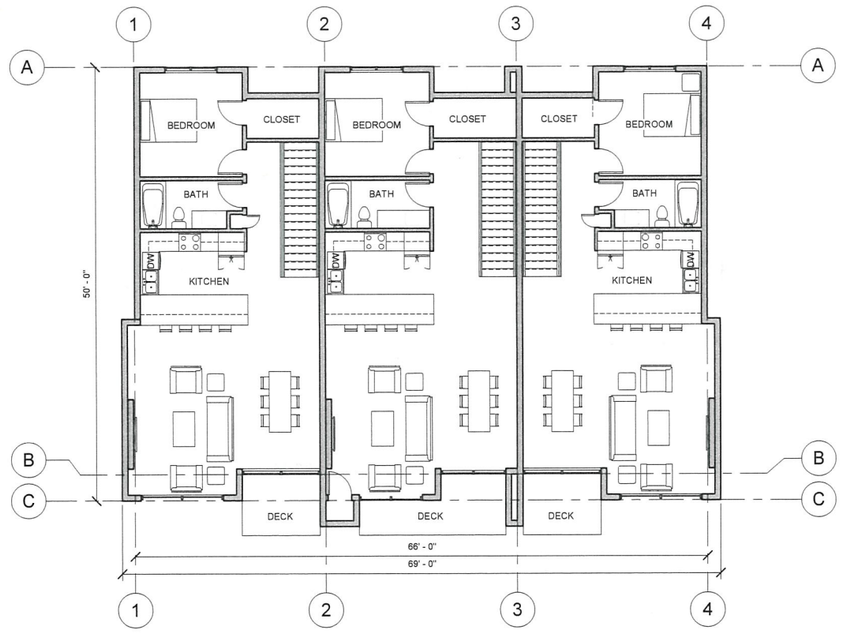
## BUILDING INFORMATION

**TOTAL BUILDING SF: 6,464 SF**

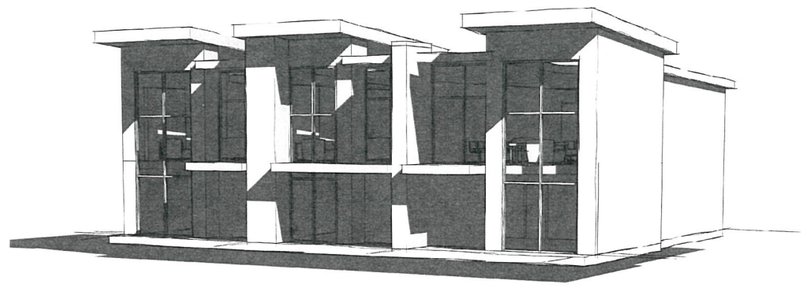
| | |
|---|---|
| 3,232 SF | FIRST FLOOR |
| 3,232 SF | SECOND FLOOR |
| **UNIT A:** | 2 STORIES \ 2,122 SF<br>3 BEDROOM<br>3 BATHROOM |
| **UNIT B:** | 2 STORIES \ 2,196 SF<br>3 BEDROOM<br>3 BATHROOM |
| **UNIT C:** | 2 STORIES \ 2,122 SF<br>3 BEDROOM<br>3 BATHROOM |



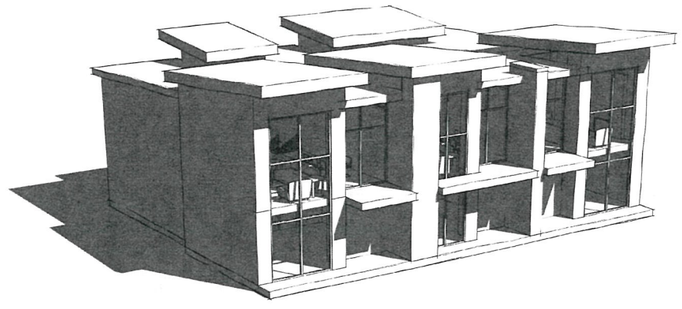

1 FIRST FLOOR
A3.02 SCALE: 1/8" = 1'-0"




2 SECOND FLOOR
A3.02 SCALE: 1/8" = 1'-0"



3 3D VIEW 1
A3.02 SCALE:



4 3D VIEW 2
A3.02 SCALE:

518

REVISIONS

| No. | Int. | Date | Description |
|---|---|---|---|
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LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK

TRIPLEX SHORT STAY UNITS - FLOOR PLANS AND 3D MASSING VIEWS

Job No 876-001
Date 11.15.2023

Designed LRE
Drawn LRE
Checked LRE

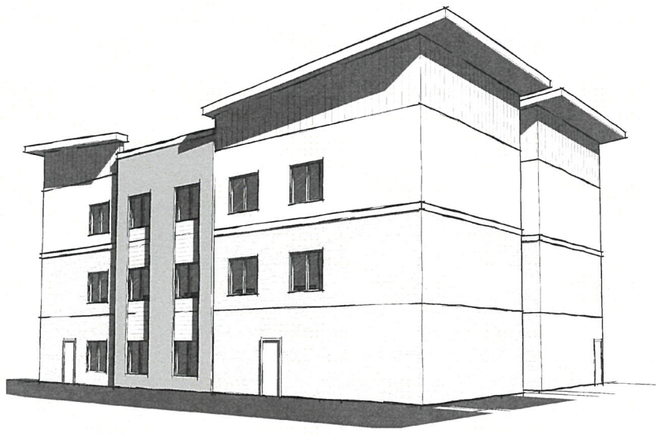
A3.02


1 NORTH ELEVATION

A2.11 SCALE: 1/8" = 1'-0"

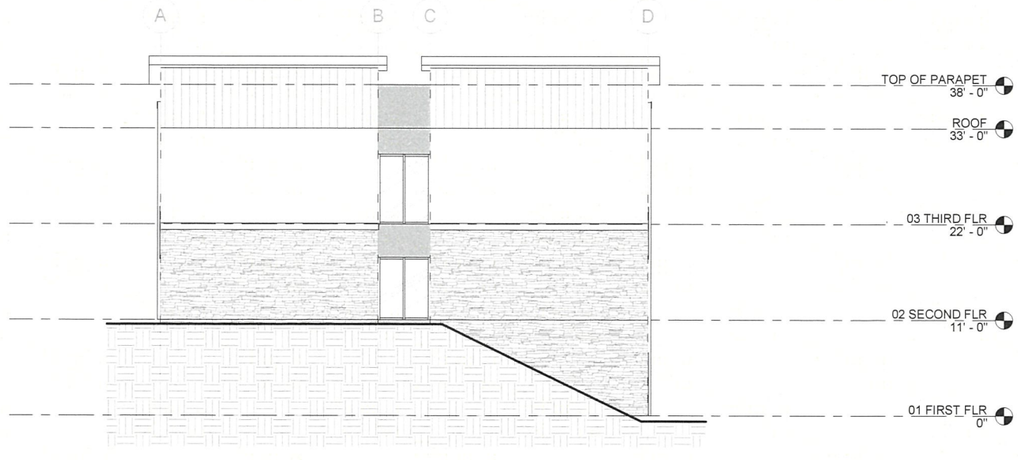

2 SOUTH ELEVATION

A2.11 SCALE: 1/8" = 1'-0"



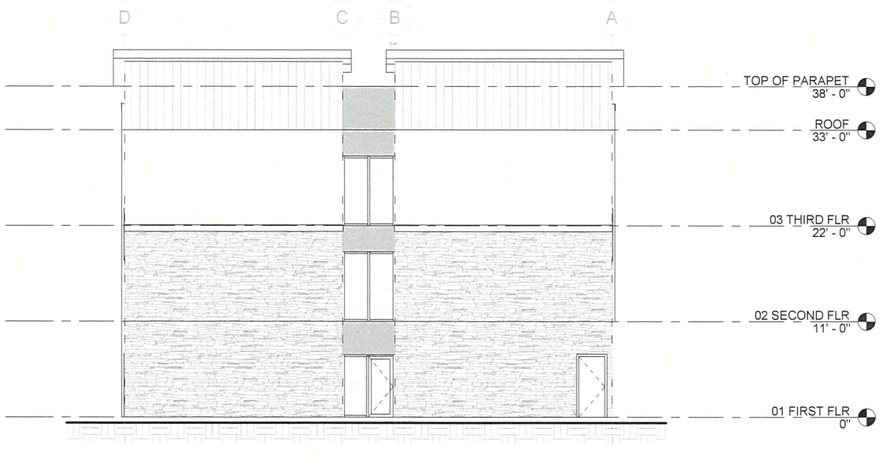
5 3D View 1

A2.11 SCALE:




3 WEST ELEVATION

A2.11 SCALE: 1/8" = 1'-0"




4 EAST ELEVATION

A2.11 SCALE: 1/8" = 1'-0"

## GENERAL NOTES

1 EXTERIOR ELEVATIONS ARE SCHEMATIC FOR PREDESIGN LEVEL PURPOSES ONLY

| No. | Int. | Date | REVISIONS Description |
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LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK

EMPLOYEE HOUSING - EXTERIOR ELEVATIONS & 3D MASSING VIEWS

Job No. 876-001
Date: 11.15.2023

Designed LRE
Drawn LRE
Checked LRE

A2.11

November 26, 2023

**TO:** CITY OF HOMER PLANNING AND ZONING COMMISSION
MEETING DECEMBER 6, 6:30 pm, CITY HALL
Re: DOYON, LIMITED PRESENTATION OF LIGHTHOUSE VILLAGE DEVELOPMENT FOR CONDITIONAL USE PERMIT (CUP)

In response to receiving Notice of Public Hearing and Notice of Subdivision including rezoning from Rural Residential to Commercial as residents within 500ft. of proposed complex, we have the following questions and comments:

- Will traffic from the proposed 200 bed hotel/conference center/restaurant/ employee housing be diverted to Bay Avenue via B Street? Where will employees park their cars? How much foot traffic will be on Bay Avenue? The residential Lot 163 proposed to be rezoned: Will it be the access to the back of Lighthouse Village property to avoid traffic access at the very congested Spit Road and Kachemak Drive? What of delivery truck traffic to service this large complex?

- Would a 4-way stop or traffic light be considered for the intersection of Spit Road and Kachemak Drive with added traffic (vehicles and coaches) from the hotel? Is there a recent Traffic Impact Study that was completed during the busy tourist season of June, July, and August of 2023? Results from a study completed in the winter are unacceptable.

- Potentially there could be 300-400 people at this complex during the summer. How will the City of Homer's utilities be impacted? What will this do to the stench we smell in the summer when we cross Beluga Lake?

- Will the Bird Viewing Platform be replaced for viewers for the WHSRN (Western Hemisphere Shorebird Reserve Network), annual Shorebird Festival, bird watchers in general, Mariner Park wetlands nesting area, etc? It must be noted that crane nesting in the wetlands has been documented since 1989. Please see Kachemak Crane Watch many YouTube videos of these cranes and other waterfowl in their habitat. How will construction of this huge complex affect the nesting? Will there be any mitigation of activity during the nesting period?

- Is there an Environmental Site Assessment Phase 1, 2, or 3 for possible soil contamination from past activities, with possible run-off into Mariner Park wetlands?

- Some 15 years ago, another hotel and/or condominium complex was proposed for this site. A Traffic ImpactStudy was performed then. Are the results of that study available to the public?

- The subject area of the proposed project is currently in Rural Residential zoning district. The Bay Avenue residents invested in Rural

Residential. How can an assumption that a ROW/easement can be vacated by anyone and a zoning designation be changed at will?

- Bay Avenue is a de facto pedestrian/cycle detour from the busy traffic on Ocean Drive. If traffic is diverted to Bay Avenue from the hotel/ conference center/restaurant employee housing now or in the future, how will the quality of the street be maintained with heavier travel? It is noted Bay Avenue and B Streets are on 50' wide Right of Ways that are considered insufficient width for the current residential and platting requirements by the City and other platting authorities.

- Is there sensitivity to soils being pushed into the wetlands? What stipulations might have been instituted in the original U.S. Army Corps Permit (after the fact when fill was pushed into the wetlands in the early 80's date?: Starvin Marvin's platform) to provide a bird viewing platform and walkway for public use? Is U.S. Army Corps of Engineers involved or will they be?

- What provisions does the project have to be sure the high value wetlands are not accessed by ATVs and guests' pets? The present neighborhood residents are mindful to keep animals and ATVs from disrupting ongoing waterfowl nesting And wildlife activity adjacent to this complex.

- Doyon owns a tourism coach business. Will coaches/buses bring guests to Homer on "Package/Bundle" purchases? Will the Borough and City be able to collect Sales taxes on "bundled tours"?

- Calculations indicate all of these structures in this complex will add up to 123,000 sq.ft. The Triplexes (15 units = 90 people)? Will their foundations be supported by pilings into the wetlands?

- The trail on the existing B Street Right of Way adjacent to Lot 163 has been used by residents for at least 37 years to view the wildlife activities on the high value wetlands.

Thank you for your consideration. Unfortunately, we are going stateside to a Celebration of Life for extended family. We will try our best to participate by ZOOM. Regardless, please enter this letter as our testimony to register our concern for the quality of our neighborhood and the potential damage that could be done with this very ambitious complex.

Jack and Susan Cushing
1423 Bay Avenue
Homer, AK. 99603

November 29, 2023

Dear members of the Planning Commission,

I have had a chance to take look at the Doyon project proposal and application to some degree, but not nearly enough to comb through it as it should be studied. Due to the enormity of the project and its complexity, it is extremely difficult to comment with detail in such a short time. This is a project that needs a great amount of study and attention by the affected adjacent neighborhoods and the greater Homer public because of its location and consequence to the fabric of this community.

Traffic and light pollution come to my mind immediately. Loss of precious large trees, more impermeable asphalt surface directly adjacent to Mariner Park where there is critical bird habitat that include critical feeding grounds for shorebirds during migration and nesting areas that need to be protected from light pollution, asphalt run-off, human activity, and noise.
I live on Kachemak Drive. That intersection onto Spit Road/Ocean Drive, in the summer especially, but now all year around, is clogged. Visibility is limited as there have been 2 lanes of cars on K-Drive, some coming out of the parking lot for the Spit Trail users, one waiting to turn north onto Ocean Drive and another waiting to go south onto the Spit Road. Out of frustration, some drivers rush out to beat oncoming traffic while bike riders and walkers are often not seen. There are no sidewalks on either of these intersecting very heavily trafficked entry points. Cross walks yes, but no extra width for non-motorized users. This is all where it is proposed to develop a formalized 4th entry point in that intersection. A light at that intersection is not required and not appealing, but dangerous without one. A 4-way stop, would be even less appealing. Flashing lights are visually objectionable.
Regarding the north entry/exit to the project near the curve of the Ocean Drive/FAA road, visibility is again a safety concern.
This project is incredibly consequential to the existing traffic problems, lighting, safety, habitat, views, and qualities of Homer. There are so many driveways and roads feeding in and out of Ocean Drive, creating frustrating bottlenecks at every intersection. Left hand turns especially so. Imagine Saturday Farmer's Market ingress and egress on or off Ocean Drive in the summer. With pedestrians, bikers, tourists, driveways at every business, this is a quagmire already.
While the applicant states 'benefits' to Homer and a supposed awareness of the specialness of this place, it seems this project is strictly a lucrative business in which to exploit a main access point smack dab in the middle of an already incredibly highly trafficked bottleneck.
The wording regarding the 5 triplexes is variable, i.e., 'dwellings', 'residences' and 'short term rentals'. Intention must be clear. Are these units for sale as timeshared condos? What exactly are they? And how to they help with housing in Homer as stated in the proposal introduction?
This proposal does not elaborate on the further development in the desired rural residential rezone to GC1 on Bay Ave. request. The totality of impact is not transparently presented for consideration.

*This area being along the tsunami evacuation route is further concern for safety in managing an evacuation should one truly be a danger. In fact, the 5 triplexes are within the inundation zone.

*We are grappling with short term rentals, seasonal and year-round housing.

*How many guests can Homer host? What is too much? This project will draw business from existing venues in Homer…….and then eventually add to an excessive over capacity this community can ill afford in sustaining a quality of life advertised and sought after.
Is it time to consider and lobby for a bed tax?

*We have not delved into an updated Comprehensive Plan; Homer's planning staff is reduced to one person who is still relatively new to Homer, and we are really trying to make this a more

pedestrian/bike friendly community. Much time has been spent on plat considerations and non-motorized connectivity.

*Because the proposed development is not a natural landform, having been filled back in the 80's, has there been a soils engineering study on it to assure stability for this intense usage?

*Does Homer's water supply meet the demands of a project like this in addition to full build out in this city?

*This project, as far as consideration for a Conditional Use Permit or Planned Unit Development is too large and too consequential to consider deciding on in one meeting. The public really needs more time to digest and refine this project. Surely the Planning Commission certainly needs more time.

*With discussion of a looming harbor expansion, coupled with a very high-density development application, this needs a lot more attention and consideration. Traffic has already been mentioned. Parking lot lighting, individual balcony lighting, walkways and all the standard lighting that goes into a project like this is extremely consequential in a big negative. The community is steering Homer to be a Dark Sky city. There are already big consequences to migrating birds on the Spit due to the harbor lights and large vessel lights anchored further out on the water. More and more lighting, especially at the water's edge, is extremely detrimental for birds. More and more lighting at the scale of the Doyon proposal is detrimental to our own precious dark skies. Noise and light pollution are increasing at an alarming rate.

*For CUP consideration, a project of this size and complexity requires further benefits and amenities for the community. What benefits will this CUP offer the city? Sidewalks, bike paths, bike racks, bird viewing platform. A free public shuttle system to and from the Spit. Commission of local art throughout and local input in general. Think of what was integrated into the Islands and Ocean Visitor's Center with art integrated at every level. Extensive landscaping. Visible public access to bird a viewing platform.
Loss of precious large trees, more impermeable asphalt surface directly adjacent to Mariner Park where there is critical bird habitat that include critical feeding grounds for shorebirds during migration and nesting areas that need to be protected from light pollution, asphalt run-off, human activity, and noise. Mitigations for these concerns must be addressed.

*A well thought out and coordinated development plan, considering the timing of construction, construction traffic, housing for construction people, noise of big equipment, cranes, delivery trucks. Timing and coordination are essential.

*Vacating the B Street right of way would come at a terrible cost to the city and community. This right of way is for city transportation. It has the potential of providing a beautiful non-motorized access to a public viewing platform. It is an asset far greater to the city than a development project that outsizes the private parcel the company currently owns. The community cost for private gain does not measure out. This project is obviously too big for the site and needs to be scaled down to a better fit for our community.

*Rezoning a rural residential lot to insert a GC1 development is detrimental to the neighborhood, impacting traffic, eliminating valuable tree cover and privacy. GC1 zoning on a coastline is bad planning and we already have plenty of it. Do we need to keep exacerbating what we know to be detrimental to coastline erosion by increased run off from increasing impermeable surfaces and depleting vegetation cover?

*The planning department is down to one person, a relatively new one for Homer, so any decision on this application cannot be made tonight.

*I urge you to postpone any decision on this CUP application on December 6th. This requires a deep discussion and a much slower pace than as presented.

Rika Mouw
Homer

**From:** Melissa Jacobsen
**To:** Ryan Foster; Renee Krause
**Subject:** FW: Re. CUP 23-08, B Street ROW vacate, 1491 Bay Avenue Rezone
**Date:** Wednesday, November 29, 2023 4:24:03 PM

---

**From:** Michael Armstrong <wordfolk@gmail.com>
**Sent:** Wednesday, November 29, 2023 3:22 PM
**To:** Department Clerk <clerk@ci.homer.ak.us>
**Subject:** Re. CUP 23-08, B Street ROW vacate, 1491 Bay Avenue Rezone

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

To the Homer Planning Commission:

I am a member of the Kachemak Bay Shorebird Festival Committee and an active birder and have these comments on Doyon Corporation's proposed project at what has been called Lighthouse Village. These are my own comments and not those of the committee as a whole.

Three items related to the Lighthouse Village development project are on the agenda for the Dec. 6 meeting. The CUP has not been made available on the city website, and it is only available for inspection at the clerk's office. I do not feel the public has had sufficient time and opportunity to review the Conditional Use Permit and other documents. Given the scope and complexity of the project, I request that the public hearings be extended to the next Planning Commission meeting.

The project documents also lack information I believe the commission needs to make a decision on the project, as follows:

1) The CUP application notes that the project does affect wetlands and that the U.S. Army Corps of Engineers permit would be included in the rezoning application. I did not see that permit. That permit is necessary to understand if the proposed project meets the conditions set by the Corps.

2) The plat also notes that the original project received approval from the Alaska Department of the Environment, but the CUP does not include any of this documentation. That also should be available for review to see if the new project would adhere to state environmental regulations.

3) The CUP does not indicate if the project will include a viewing platform to replace the demolished platform at the southwest corner of the lower lot although there is a boardwalk shown. In an Aug. 23, 2023, email to Marilyn Sigman, President of the board of the Friends of Alaska National Wildlife Refuges, regarding continued bird viewing opportunities at Lighthouse Village, Julie Engebretsen wrote "The developer is aware of the value of the birdwatching platform to the community, and has expressed interest in continuing bird viewing from the property." Doyon Corporation has not provided information in its CUP

indicating how it will continue bird viewing from its property.

4) Apparently, prior owner Douglas Meeker built the viewing platform as part of a grant agreement with the Alaska Maritime National Wildlife Refuge. it is unclear if that grant agreement still applies to the property and the new owner. This matter merits further research.

5) The CUP application notes that stormwater will be routed from the northern lot "to a detention structure with treatment filters for filters" and that stormwater for the southern lot will "sheet flow into a centrally located swale, providing treatment and storage for stormwater runoff." The application does not specify the kind of treatment for this stormwater, including if there will be treatment for residue from vehicles parked in the lots. The former project had gravel parking lots while this project will have less-permeable asphalt parking lots. More information is needed on treatment of runoff that could include oil, gas, diesel, and other residue from parked vehicles.

6) Issues raised in the transportation study and how Doyon will respond also need to be considered.

The Kachemak Bay Shorebird Festival Committee has concerns about how the project will affect bird viewing and public access in general and during the shorebird migration at the new development. They also have concerns about the effect of the project on bird and wildlife habitat in Mariner Park Lagoon. The committee has not had sufficient time to review the project and comment on it as a committee. Extending the public hearing would allow the committee and other concerned organizations the opportunity to provide more informed comments on the project.

I respectfully ask for an extension of the public hearing and review process and that no decision on the three matters be made until at least the next Planning Commission meeting.

Best,

Michael Armstrong
65240 Diamond Ridge Road
Homer, Alaska 99603
wordfolk@gmail.com

P.O. Box 2994
Homer AK 99603

November 26, 2023

Homer Planning and Zoning Commission
City of Homer
491 E. Pioneer Avenue
Homer, AK 99603

Dear Planning and Zoning Commission Members:

I have concerns about the Lighthouse Village Development Project and the short span of time allowed for the public to study this development. I searched online for details when I heard about it on Facebook last week but was not successful. I understand it might be available on December 1st, but comments are due on November 29 to make it into the Commission's packet. Posting information at only City Hall for people to study is not adequate in our computer age. Given the short time for the public to study the proposal, it is now the holiday season, and many people are traveling Outside, I respectfully request that the public hearing be postponed until mid-January.

The Lighthouse Village Development is on land adjacent to a sensitive, important saltwater estuary that is part of the Kachemak Bay Critical Habitat Area and is a designated Western Hemisphere Shorebird Reserve Network site. The bird platform and its easy access for Shorebird Festival activities and year-round viewing is an important part of our tourism infrastructure. I do not see a viewing platform included in the hotel plans. It should be a required part of the plan. I do remember it was required years ago as mitigation when the site was illegally filled.

The Mariner Park Lagoon is a legally designated protected conservation area under the Kachemak Bay Critical Habitat Area and is managed as a conservation area for "passive" human use like bird watching and photography. This is protected wildlife habitat where shorebirds stop over, many nest, and a pair of sandhill cranes has been nesting in this estuary since 1989. It is incumbent on the City of Homer to make sure this habitat is protected from pollution, noise, excessive light, people or dogs entering the estuary from the hotel, or other problems from this new development that will degrade the adjacent wetland habitat. During construction what mitigations will be done to prevent disturbance to nesting birds in the Lagoon and prevent construction materials, soil, and trash from going beyond the construction site?

This development is large and heavy with a dense footprint on the fill. Is the fill adequate in depth? Will an earthquake with the additional weight cause fill to sluff into the Lagoon? Is a hefty retaining wall of some sort needed to prevent intrusion into the Lagoon?

With Climate Change and rising sea levels, many communities are reassessing what they allow to be built next to the ocean. This is a tsunami zone, not much above sea level. It will be vulnerable to a tsunami and as sea levels rise more, to a heavy storm surge and extreme high tide that coincide. It would make better sense for this site to be used for a project that does not put so many people onto this site all at once..

Another hazard is that this property sits in the path of take-offs and landings from the Homer Airport. Putting a hotel under the flight path is not a particularly good location because of this existing hazard. Down the road there will likely be expansions to the airport, increasing the hazards and airplane noise.

Traffic on the Spit is a confounding issue without adding this big development right at the beginning of the Spit. Summer traffic during busy weekends or holidays is so congested, finding a parking spot out on the Spit can be difficult. In a tsunami alert, trying to get vehicles off the Spit is going to be even more difficult with the traffic coming out of the Lighthouse Village development.

Turning left off Kachemak Drive onto the Spit Road is often very difficult in summer. With more traffic coming out of this new development, the misaligned intersections are problematic. This area will be a bottleneck in an emergency. What is the plan to mitigate these problems, and also make it a safe intersection for pedestrians to walk or cycle in the area, or to cross the Spit Road?

Water quality in the Lagoon is a huge concern. How will all the stormwater runoff from the paved parking and roof tops be managed so that it is collected, filtered, and not directed into the Lagoon? Oil and other vehicular substances are toxic to birds and fish. Any runoff from the development will eventually end up in the Bay, so it is vital to have a good stormwater system. The plan must include a system to collect all runoff since the surfaces outside will all likely be paved. Furthermore, will the current fill soils be tested for toxins from past developments on the site and then cleaned up if there are before construction begins?

The development will have a considerable number of rooms, 200 I believe, generating a lot of wastewater. Is Homer's sewer system in this area able to handle that much additional load all at once?

City water for the entire Lighthouse Village will be considerable. Does the City have the capacity to keep providing water to such large developments, especially if we have a drought period?

Are the five floors still at a height that the fire department can handle a fire in the building? Homer had a building height restriction, is that still in effect?

Light pollution in the surrounding area will likely be a concern. Hopefully all lighting will be directed downward and shaded so it does not extend outward to the adjoining residential area.

Being able to look seaward without nearby lights affecting the view is important to many people.

This project is better suited to a site that does not have so many transportation challenges and is not located in a tsunami zone and under an airport flight zone. The catastrophic disasters around the world from supersized storms, hurricanes, tornadoes, and floods to excessive heat and drought should be a wakeup call to us all that we cannot keep doing business as usual. Other cities around the world are heeding the wakeup call in coastal zones and moving development out of harm's way further inland. They are designing green coastlines that emphasize saving and enhancing coastal wetlands, marshes, and estuaries. This area was once a part of Mud Bay and the existing Mariner Park Lagoon. An illegal fill led to the first development in this location. Maybe it is time to take a step back and seriously question a development of this density in this location.

Respectfully submitted,

Nina Faust

**From:** Jack Wiles
**To:** Department Planning
**Subject:** Lighthouse Village CUP.
**Date:** Sunday, November 26, 2023 1:18:21 PM

---



The details of how mitigation measures work are unclear!  e.g. storm water and pollution into the wetlands.

The wetlands are an important birding area and a conservation easement should be established.

The traffic congestion at Kachemak Drive is a major concern!

Thx.

John Wiles

Sent from my iPad

City of Homer
www.cityofhomer-ak.gov

Planning
491 East Pioneer Avenue
Homer, Alaska 99603
Planning@ci.homer.ak.us
(p) 907-235-3106
(f) 907-235-3118

**Staff Report 23-062**

TO: Homer Advisory Planning Commission
FROM: Ryan Foster, AICP, City Planner
DATE: December 6, 2023
SUBJECT: Vacation of B Street Right of Way South of Bay Avenue

**Requested Action:** Conduct a public hearing and make a recommendation on the vacation of B Street Right of Way south of Bay Avenue

**General Information:**

| | |
|---|---|
| Applicants: | Doyon, Limited<br>11500 Sukdu Way Suite 250<br>Anchorage, AK 99515<br><br>Doyon, Tourism<br>11500 Sukdu Way Suite 250<br>Anchorage, AK 99515<br><br>Seabright Survey + Design, 1044 East Road Suite A, Homer AK 99603 |
| Location: | B Street, South of Bay Avenue |
| Parcel ID: | 18101034, 18101035, 17921015 |
| Zoning Designation: | Rural Residential and General Commercial 1 |
| Existing Land Use: | The rural residential lot is vacant. The GC1 lots formerly held an auto wrecking yard/repair shop, boat storage, a restaurant and small shops. |
| Surrounding Land Use: | North: Peninsula Solid Waste shop, ministorage, rooming house<br>South: Mariner Lagoon<br>East: Homer Spit Road and airport properties<br>West: Residential |
| Comprehensive Plan: | Chapter 4 Goal 1 Objective A: Promote a pattern of growth characterized by a concentrated mixed use center, and a surrounding ring of moderate to high density residential and mixed-use areas with lower densities in outlying areas. |
| Wetland Status: | The 2005 wetland mapping shows no wetland areas. The area below the retaining wall is tidally influenced and ACOE permitting is required for any development activities. |
| Flood Plain Status: | Flood Zone AE 20 on southern section of the right of way |
| Utilities: | City water and sewer are available |
| Public Notice: | Notice was sent to 42 property owners of 47 parcels as shown on the KPB tax assessor rolls. |

**Analysis:** This vacation is within the Rural Residential District. This action would vacate B Street, south of Bay Avenue. Unlike other platting processes, the final approval of this vacation is decided by the Homer City Council. Staff recommends the Commission recommend approval of this vacation, contingent on public access being dedicated (discussion to follow).

City of Homer Code does not address right of way vacations, but the Kenai Peninsula Borough code does. The Borough holds platting authority and the Homer Planning Commission is advisory to the Borough on platting matters. Staff is using relevant portions of KPB code for an analysis of the right of way vacation.

> *KPB 20.70.170. - Vehicular access. The planning commission shall not approve the vacation of a right-of-way unless an equal or superior right-of-way for vehicular access exists or will be provided in exchange. Where two or more access points are necessary for large vacant or semi-vacant areas of land, the commission shall consider density, use, projected development, and maintain sufficient rights-of-way to serve potential use.*

**Staff Response**: The City of Homer determined this portion of B Street was "unsuitable for road construction" in Resolution 2006-50. Vehicle access directly from B Street to Homer Spit Road is unlikely due to slope.

*KPB 20.70.180. - Other access. Other lawful uses that exist or are feasible for the right-of-way shall be considered when evaluating a vacation request. When such uses exist or could exist within rights-of-way which are not suited for general road use, the commission shall not approve the vacation request, unless it can be demonstrated that equal or superior access is or will be available. The planning commission shall consider whether alternate uses present public safety issues which support approval of the vacation.*

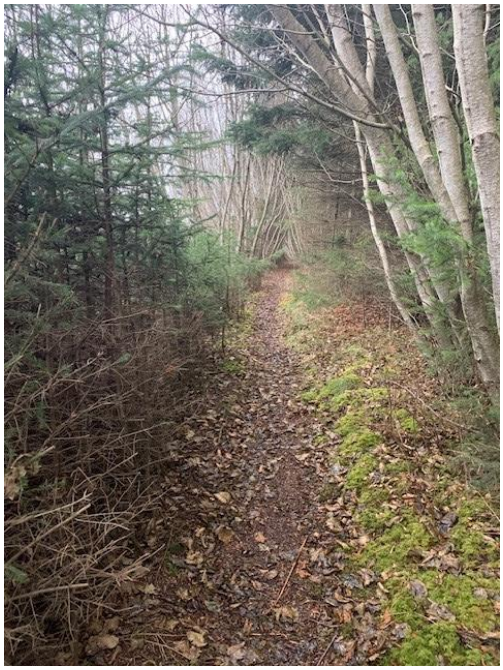
*KPB 20.70.200. - Waterfront access provisions. A right-of-way which serves to provide access to public waters shall not be vacated unless such a right-of-way is wholly impractical to all modes of transport including pedestrian or the use of such right-of-way causes damage to the right-of-way, adjacent properties, the waterbody or the watercourse, or threatens public safety which cannot otherwise be corrected and where such continued damage or threat would be contrary to the public interest.*

*KPB 20.70.210. - Other public areas. Dedications of land for use other than rights-of-way, which are considered for vacation, shall be approved only when it is in the public interest. The commission shall consider the intended purpose of the area, and any future uses of the area when making a decision. When a legitimate public purpose is or would be served by use of the area proposed for vacation, the commission shall not approve the vacation, unless the ownership of the land by the city or borough in a form other than dedicated would adequately serve the intended use.*

**Staff response:** There is an existing footpath from Bay Avenue south toward Kachemak Bay. Staff was unable to determine in the field if the trail was in the right of way or on private property. Due to removal of buildings and site work, staff was also unable to determine if the trail continues all the way to the tidal marsh, or if it turns east into the old lighthouse village site. The southern portion of

the right of way also held a bird viewing platform. The platform was partially on lot 164 and partially within the right of way. It is unclear if this was a permitted encroachment into the right of way; no city documentation or permits were found in City records. Regardless, the bird viewing platform has been demolished.

Looking South from Bay Ave



Trail looking east to Kachemak Drive

**Staff recommends:** The vacation of the right of way be conditional on the creation of a public access route to accommodate pedestrian and bicycle access from Bay Avenue to Homer Spit Road.

**Public Works Comments:** A drainage easement should be retained or accommodated for drainage from the Bay Avenue area.

**Staff Recommendation:**
Planning Commission recommends approval of the vacation with the following comments:

**Condition 1**: Creation of a public access route to accommodate pedestrian and bicycle access from Bay Avenue to Homer Spit Road.

**Condition 2:** Drainage Easement or conveyance for drainage from Bay Avenue south to Kachemak Bay.

**Attachments:**
1. Vacation petition
2. Public Notice
3. Aerial Map

Planning Department
144 N. Binkley Street, Soldotna, Alaska 99669 • (907) 714-2200 • (907) 714-2378 Fax

# PETITION TO VACATE PLATTED RIGHT OF WAY / PLATTED PUBLIC EASEMENT / PLATTED PUBLIC AREA

**PUBLIC HEARING REQUIRED**

Upon receipt of complete application with fees and all required attachments, a public hearing before the Planning Commission will be scheduled. The petition with all required information and attachments must be in the Planning Department at least 30 days prior to the preferred hearing date. By State Statute and Borough Code, the public hearing must be scheduled within 60 days of receipt of complete application.

Initially, a sketch may be included with the vacation petition for review by the Planning Commission. After the Planning Commission takes action on the vacation, a Subdivision Plat must be prepared by a licensed land surveyor. The plat will be processed in accordance with KPB 20.10.080. Platting authority is vested in the Planning Director.

## SUBMITTAL REQUIREMENTS

**A platted right of way vacation (ROWV) application will be scheduled for the next available planning commission meeting after a complete application has been received.**

☐ - $500 non-refundable fee to help defray costs of advertising public hearing. Plat fees will be in addition to the vacation fees.

☐ - City Advisory Planning Commission. Copy of minutes at which this item was acted on, along with a copy of City Staff Report.

☐ B St. platted public right of way proposed to be vacated was dedicated by the plat of Bayview Subdivision, filed as Plat No. 0000-839 in the Homer Recording District.

☐ - 3 copies of the plat or map showing the platted right of way to be vacated. Must not exceed 11 x 17 inches in size. Area to be vacated must be clearly depicted. Proposed alternative public access to be shown and labeled on the sketch.

☐ - REASON FOR VACATING The petitioner must attach a statement with reasonable justification for the vacation of the platted right of way / platted easement / platted public area.

| | | | | |
|---|---|---|---|---|
| Has the platted right of way been fully or partially constructed? | | Yes | ✓ | No |
| Is the platted right of way used by vehicles / pedestrians / other? | | Yes | ✓ | No |
| Is alternative right-of-way being provided? | | Yes | ✓ | No |
| Are there utility easements associated with the right of way to be vacated? | ✓ | Yes | | No |
| Is the platted right of way and or associated utility easement in use by any utility company? | | Yes | ✓ | No |
| If so, which utility provider? | | | | |

**LEGAL DESCRIPTION ADJOINING LAND:**

| | |
|---|---|
| Lot, Block, Subd. or street address<br>Lot 163 Bayview Subd., Lots 164-A & 164-B Bayview Subd. No. 6 | |
| Section, township, range Section 21, T6S, R13W | |
| City (if applicable) Homer | General area Base of Homer Spit |

**The petition must be signed by owners of a majority of the land affected by the platted right of way proposed to be vacated. Each petitioner must include address and legal description of his/her property. Attach additional signature sheets if needed.**

**Submitted by:**
**Land Owner**

| | |
|---|---|
| Name (printed): Doyon Tourism, Inc (Patrick Duke, SVP CFO) | Signature |
| e-mail: dunlapz@doyon.com | Address: 11500 Sukdu Way ANC AK 99515 |
| Owner of: Record | |

**Land Owner:**

| | |
|---|---|
| Name (printed): Doyon, Limited (Patrick Duke, SVP CFO) | Signature |
| e-mail: dunlapz@doyon.com | Address: 1 Doyon Place FAI AK 99701 |
| Owner of: Record | |

*FOR OFFICE USE ONLY*

RECEIVED BY _____ DATE SUBMITTED _____ KPB FILE # _____

**CITY OF HOMER PUBLIC HEARING NOTICE & NOTICE OF SUBDIVISION**
**PLANNING COMMISSION MEETING**

A public hearing on the matters below are scheduled for Wednesday, December 6, 2023 at 6:30 p.m. during the Regular Planning Commission Meeting. Participation is available virtually via Zoom webinar or in-person at Homer City Hall.

**A proposal to vacate the B Street right-of-way within the Bayview Subdivision N0. 6 (HM 94-51), located in the SW1/4 SEC. 21, T. 6 S., R. 13 W., S.M.**

Public notice is hereby given that a preliminary plat has been received proposing to subdivide or replat property. You are being sent this notice because you are an affected property owner within 500 feet of a proposed subdivision and are invited to comment.

Proposed subdivision under consideration is described as follows:

**Bayview Subdivision Lighthouse Village Replat, Preliminary Plat**

The location of the proposed subdivision affecting you is provided on the attached map. A preliminary plat showing the proposed subdivision may be viewed at the City of Homer Planning and Zoning Office. Subdivision reviews are conducted in accordance with the City of Homer Subdivision Ordinance and the Kenai Peninsula Borough Subdivision Ordinance. A copy of the Ordinance is available from the Planning and Zoning Office. **Comments should be guided by the requirements of those Ordinances.**

A copy of the proposals may be viewed at Homer City Hall, in the Clerk's Office Lobby on the lower level. In-person meeting participation is available in Cowles Council Chambers located downstairs at Homer City Hall, 491 E. Pioneer Ave., Homer, AK 99603.

To attend the meeting virtually, visit zoom.us and enter the Meeting ID & Passcode listed below. To attend the meeting by phone, dial any one of the following phone numbers and enter the Webinar ID & Passcode below, when prompted: 1-253-215-8782, 1-669-900-6833, (toll free) 888-788-0099 or 877-853-5247.

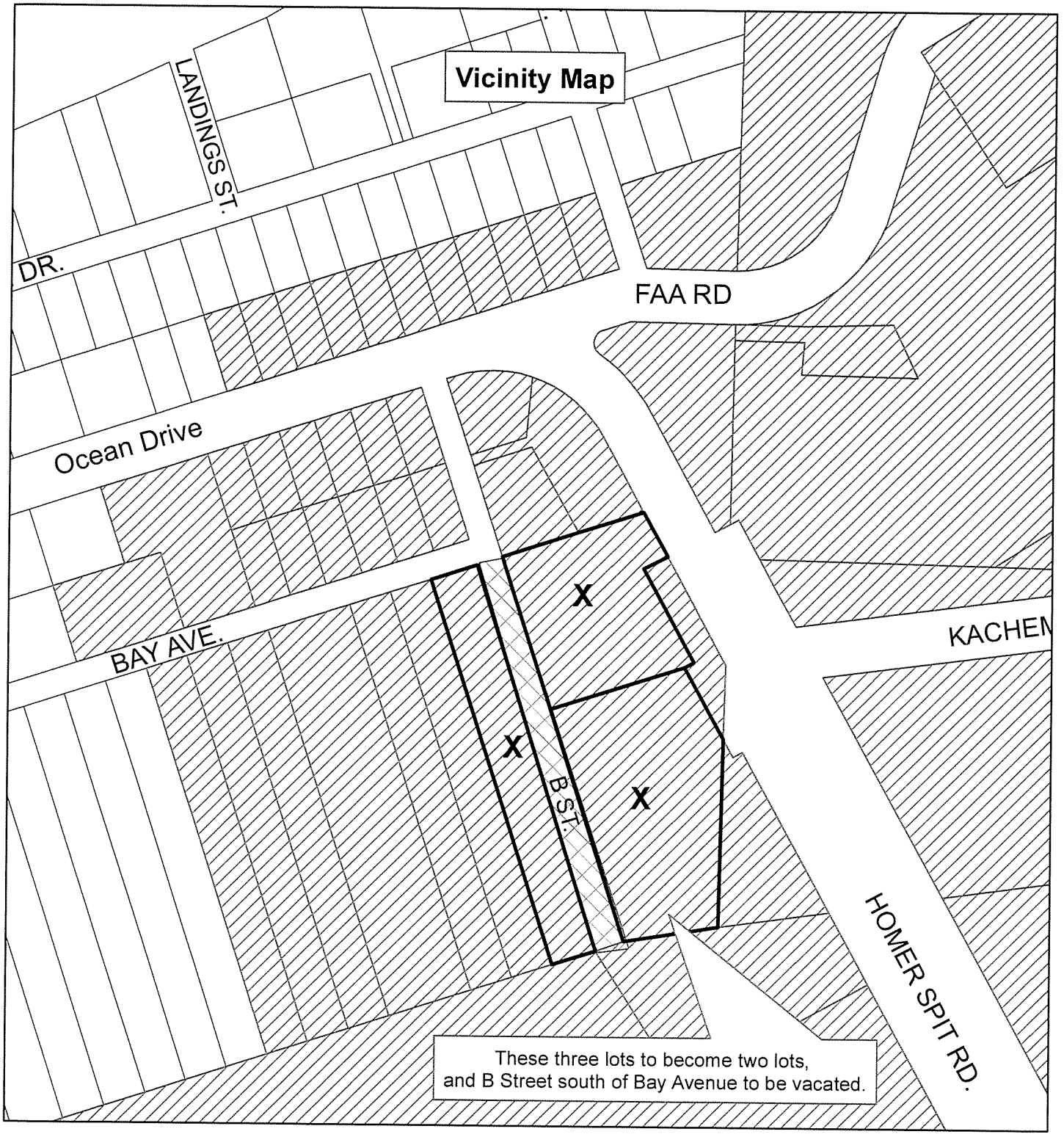
Meeting ID: 979 8816 0903
Passcode: 976062

Additional information regarding this matter will be available by 5pm on the Friday before the meeting. This information will be posted to the City of Homer online calendar page for December 1, 2023 at *https://www.cityofhomer-ak.gov/calendar*. It will also be available at the Planning and Zoning Office at Homer City Hall and at the Homer Public Library.

Written comments can be emailed to the Planning and Zoning Office at the address below, mailed to Homer City Hall at the address above, or placed in the Homer City Hall drop box at any time. Written comments must be received by 4pm on the day of the meeting.

If you have questions, contact Ryan Foster at the Planning and Zoning Office. Phone: (907) 435-3120, email: planning@ci.homer.ak.us or in-person at Homer City Hall.

**NOTICE TO BE SENT TO PROPERTY OWNERS WITHIN 500 FEET OF PROPERTY**
**Vicinity M[illegible] Reverse**




CITY OF HOMER · ALASKA · MARCH 31,1964

*City of Homer*
*Planning and Zoning Department*
11/20/23

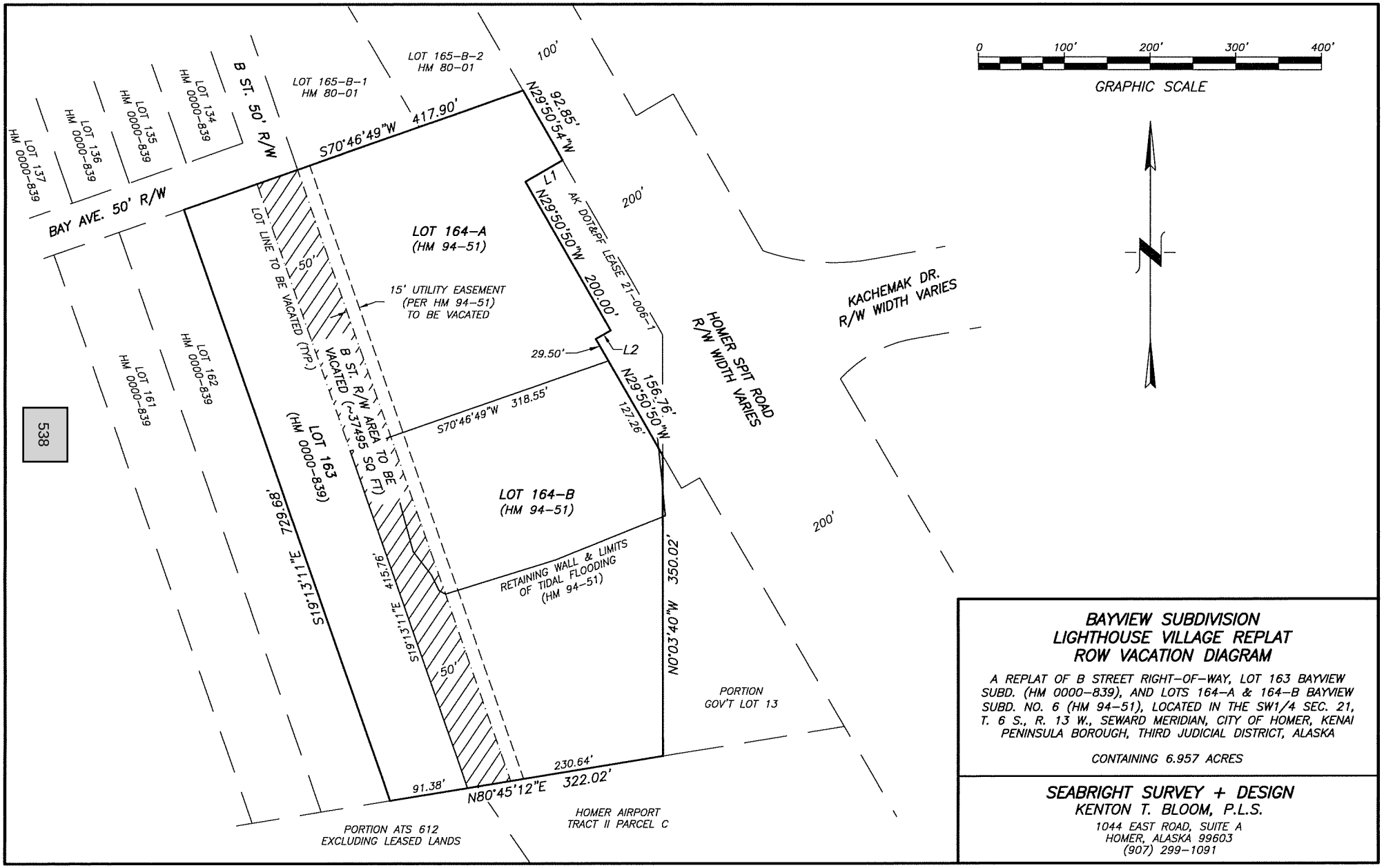
Vacation of a Portion of B Street and Bayview Sub Lighthouse Village Replat Preliminary Plat

Marked Lots are within 500 feet and property owners notified.

Feet
0 250 500

N

*Disclaimer:*
*It is expressly understood the City of Homer, its council, board, departments, employees and agents are not responsible for any errors or omissions contained herein, or deductions, interpretations or conclusions drawn therefrom.*




## BAYVIEW SUBDIVISION
## LIGHTHOUSE VILLAGE REPLAT
## ROW VACATION DIAGRAM

A REPLAT OF B STREET RIGHT-OF-WAY, LOT 163 BAYVIEW SUBD. (HM 0000-839), AND LOTS 164-A & 164-B BAYVIEW SUBD. NO. 6 (HM 94-51), LOCATED IN THE SW1/4 SEC. 21, T. 6 S., R. 13 W., SEWARD MERIDIAN, CITY OF HOMER, KENAI PENINSULA BOROUGH, THIRD JUDICIAL DISTRICT, ALASKA

CONTAINING 6.957 ACRES


**SEABRIGHT SURVEY + DESIGN**
KENTON T. BLOOM, P.L.S.
1044 EAST ROAD, SUITE A
HOMER, ALASKA 99603
(907) 299-1091

539

## NOTES

1. THE 15' FRONTING RIGHTS-OF-WAY AND THE 20' WITHIN 5' OF SIDE LOT LINES IS A UTILITY EASEMENT GRANTED THIS PLAT. NO PERMANENT STRUCTURES SHALL BE CONSTRUCTED OR PLACED WITHIN A UTILITY EASEMENT WHICH WOULD INTERFERE WITH THE ABILITY OF A UTILITY TO USE SAID EASEMENT.

2. THESE LOTS ARE SUBJECT TO CITY OF HOMER ZONING REGULATIONS. REFER TO HOMER CITY CODE FOR ALL CURRENT SETBACK AND SITE DEVELOPMENT RESTRICTIONS. OWNERS SHOULD CHECK WITH THE CITY OF HOMER PRIOR TO DEVELOPMENT ACTIVITIES.

3. ALL WASTEWATER DISPOSAL SYSTEMS SHALL COMPLY WITH EXISTING APPLICABLE LAWS AT THE TIME OF CONSTRUCTION.

4. NO ACCESS TO STATE MAINTAINED RIGHTS-OF-WAY PERMITTED UNLESS APPROVED BY THE STATE OF ALASKA DEPARTMENT OF TRANSPORTATION.

5. PROPERTY OWNER SHOULD CONTACT THE ARMY CORPS OF ENGINEERS PRIOR TO ANY ON-SITE DEVELOPMENT OR CONSTRUCTION ACTIVITY TO OBTAIN THE MOST CURRENT WETLAND DESIGNATION (IF ANY). PROPERTY OWNERS ARE RESPONSIBLE FOR OBTAINING ALL REQUIRED LOCAL, STATE, AND FEDERAL PERMITS.

6. STATE RIGHT-OF-WAY IS FROM STATE OF ALASKA DOT&PF RIGHT OF WAY MAP ALASKA PROJECT F-021-1(23) "HOMER SPIT" SHEET 1 & STATE OF ALASKA DOT&PF RIGHT OF WAY MAP ALASKA PROJECT QF-021-1(25) "HOMER BY-PASS" SHEET 8.

7. THE NATURAL MEANDERS OF MEAN HIGH WATER IS FOR AREA COMPUTATIONS ONLY. THE TRUE CORNERS BEING ON THE EXTENSION OF THE SIDELINES AND THE INTERSECTION WITH THE NATURAL MEANDERS.

8. THERE IS AN EASEMENT GRANTED TO DOUGLAS A. MEEKER FOR THE CONSTRUCTION, MAINTENANCE, AND USE OF THE RETAINING WALL WITHIN B ST. R/W RECORDED BK 227 PG 144 HRD.

## NOTARY'S ACKNOWLEDGMENT

FOR: _____

ACKNOWLEDGED BEFORE ME THIS____

DAY OF_____, 2024

_____

NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES_____

## NOTARY'S ACKNOWLEDGMENT

FOR: _____

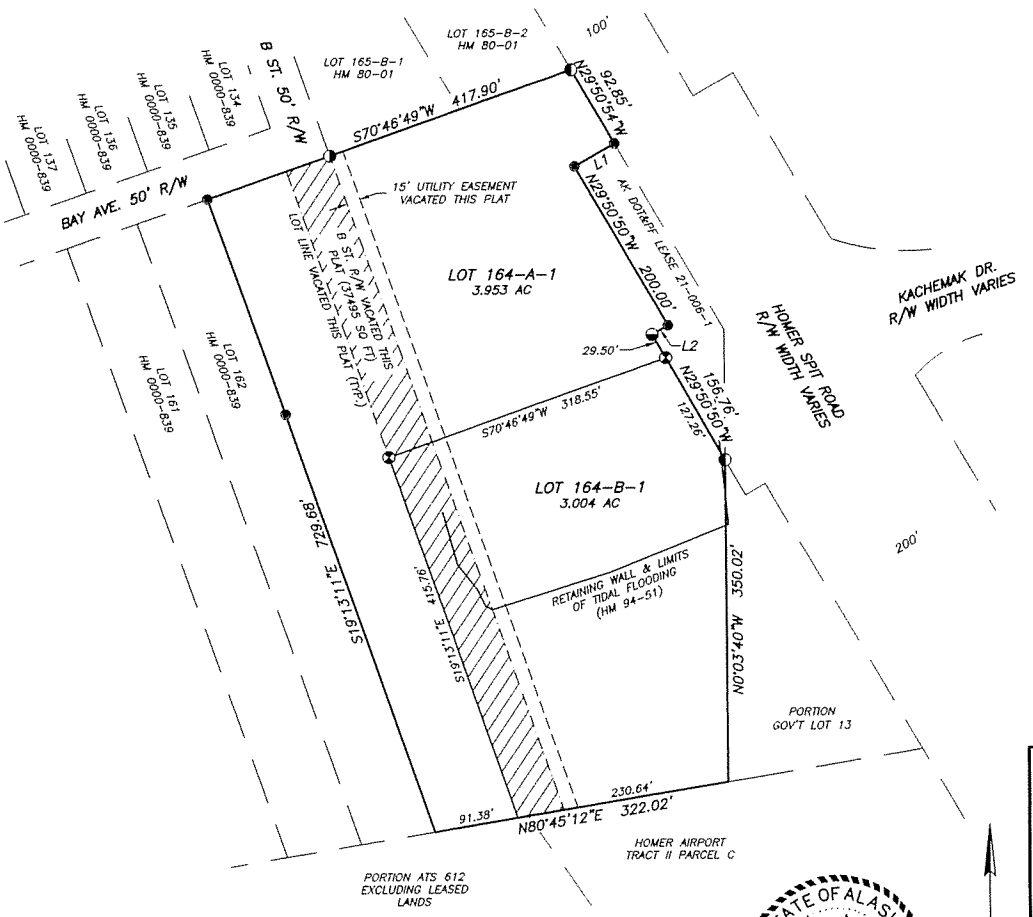
ACKNOWLEDGED BEFORE ME THIS____

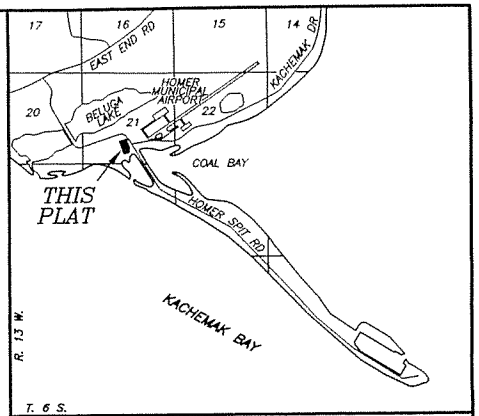
DAY OF_____, 2024

_____

NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES_____




## VICINITY MAP

SCALE: 1" = 1 MILE U.S.G.S. QUAD. SELDOVIA (C-4 & C-5)

## PLAT APPROVAL

THIS PLAT WAS APPROVED BY THE KENAI PENINSULA BOROUGH PLANNING COMMISSION AT THE MEETING OF

BY: _____ _____

AUTHORIZED OFFICIAL KENAI PENINSULA BOROUGH — DATE

## WASTEWATER DISPOSAL

PLANS FOR WASTEWATER DISPOSAL THAT MEET REGULATORY REQUIREMENTS ARE ON FILE AT THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION.

| LINE TABLE | | |
|---|---|---|
| LINE # | LENGTH | BEARING |
| L1 | 50.00' | N60°08'43"E |
| L2 | 20.00' | N60°08'36"E |

## LEGEND

- SET 2" AC 7968-S 2024
- 2" AC 7610-S 1994
- 2" AC 7610-S 1984
- 2" AC 3686-S 1989
- 5/8" REBAR

## CERTIFICATE OF OWNERSHIP

I HEREBY CERTIFY THAT DOYON, LIMITED IS THE OWNER OF THE REAL PROPERTY SHOWN AND DESCRIBED HEREON, THAT ON BEHALF OF DOYON, LIMITED, I HEREBY ADOPT THIS PLAN OF SUBDIVISION, AND BY MY FREE CONSENT DEDICATE ALL RIGHTS OF WAY AND PUBLIC AREAS TO PUBLIC USE, AND GRANT ALL EASEMENTS TO THE USE SHOWN HEREON.

AUTHORIZED SIGNATORY FOR: DOYON, LIMITED
11500 SUKDU WAY, SUITE 250
ANCHORAGE, AK 99515

FORMER LOTS 164-A & 164-B

## CERTIFICATE OF OWNERSHIP

I HEREBY CERTIFY THAT DOYON TOURISM, INC. IS THE OWNER OF THE REAL PROPERTY SHOWN AND DESCRIBED HEREON, THAT ON BEHALF OF DOYON TOURISM, INC., I HEREBY ADOPT THIS PLAN OF SUBDIVISION, AND BY MY FREE CONSENT DEDICATE ALL RIGHTS OF WAY AND PUBLIC AREAS TO PUBLIC USE, AND GRANT ALL EASEMENTS TO THE USE SHOWN HEREON.

AUTHORIZED SIGNATORY FOR: DOYON TOURISM, INC.
11500 SUKDU WAY, SUITE 250
ANCHORAGE, AK 99515

FORMER LOT 163

HOMER RECORDING DISTRICT — KPB FILE NO. 2023-XXX

# BAYVIEW SUBDIVISION LIGHTHOUSE VILLAGE REPLAT

A REPLAT OF B STREET RIGHT-OF-WAY, LOT 163 BAYVIEW SUBD. (HM 0000-839), AND LOTS 164-A & 164-B BAYVIEW SUBD. NO. 6 (HM 94-51), LOCATED IN THE SW1/4 SEC. 21, T. 6 S., R. 13 W., SEWARD MERIDIAN, CITY OF HOMER, KENAI PENINSULA BOROUGH, THIRD JUDICIAL DISTRICT, ALASKA

CONTAINING 6.957 ACRES

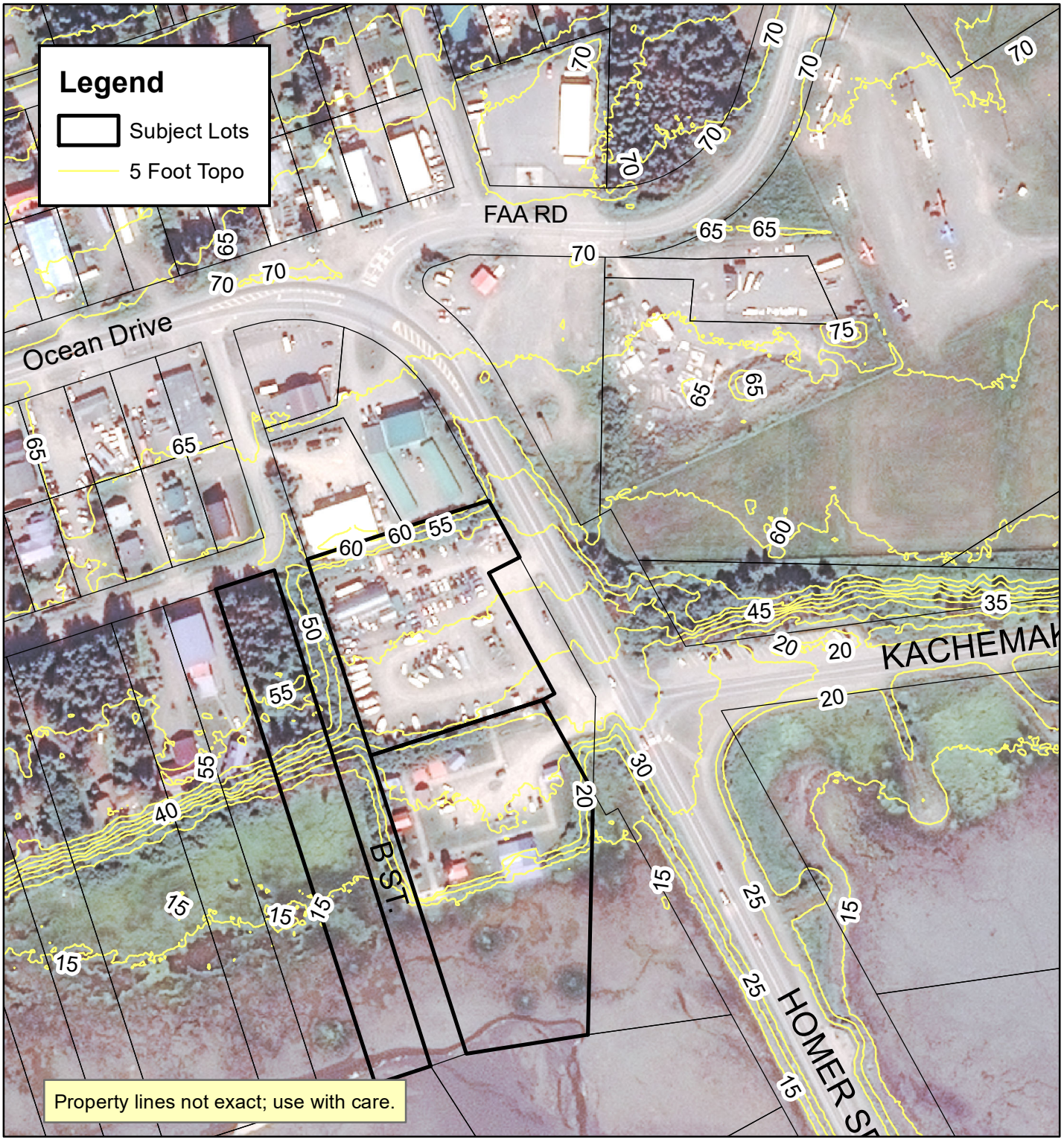

SEABRIGHT SURVEY + DESIGN
KENTON T. BLOOM, P.L.S.
1044 EAST ROAD, SUITE A
HOMER, ALASKA 99603
(907) 299-1091


CLIENTS: DOYON, LIMITED & DOYON TOURISM, INC.
11500 SUKDU WAY ANCHORAGE, AK 99515

| DRAWN BY: KK | CHKD BY: KB | JOB #2023-88 |
|---|---|---|
| DATE: 11/2023 | SCALE: 1"=100' | SHEET #1 OF 1 |

STATE OF ALASKA 49TH
Kenton T. Bloom
LS-7968
Registered Professional Land Surveyor

0 100' 200' 300' 400'
GRAPHIC SCALE




City of Homer
Planning and Zoning Department
11/20/23

**Aerial Map**

0 200 400 Feet

N

*Disclaimer:*
*It is expressly understood the City of Homer, its council, board, departments, employees and agents are not responsible for any errors or omissions contained herein, or deductions, interpretations or conclusions drawn therefrom.*

City of Homer
www.cityofhomer-ak.gov

Planning
491 East Pioneer Avenue
Homer, Alaska 99603
Planning@ci.homer.ak.us
(p) 907-235-3106
(f) 907-235-3118

**Staff Report 23-063**

TO: Homer Planning Commission
FROM: Ryan Foster, AICP, City Planner
DATE: December 6, 2023
SUBJECT: Conditional Use Permit (CUP) 23-09

---

**Synopsis:** The applicant requests a Conditional Use Permit (CUP) per HCC 21.14.030 (i), More than one building containing a permitted principal use on a lot. The applicant proposes a duplex and two single dwelling units at 1149 Virginia Lynn Way.

| | |
|---|---|
| Applicant: | Paul Hueper<br>3901 Pennock Street<br>Homer, AK 99603 |
| Location: | 1149 Virginia Lynn Way |
| Legal Description: | T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0610256 VIRGINIA LYN SUB LOT 55 |
| Parcel ID: | 17913304 |
| Size of Existing Lot: | 0.34 acres |
| Zoning Designation: | Urban Residential District |
| Existing Land Use: | Vacant |
| Surrounding Land Use: | North: Residential<br>South: Vacant<br>East: Vacant<br>West: Residential |
| Comprehensive Plan: | Chapter 4, Goal 1, Objective A: Promote a pattern of growth characterized by a concentrated mixed-use center, and a surrounding ring of moderate-to-high density residential and mixed-use areas with lower densities in outlying areas. |
| Wetland Status: | KWF Wetlands Assessment Discharge Slope on the property. |
| Flood Plain Status: | Not in a floodplain. |
| BCWPD: | Not within the Bridge Creek Watershed Protection District |
| Utilities: | Public utilities, water and sewer, do service the site. |
| Public Notice: | Notice was sent to 27 property owners of 32 parcels as shown on the KPB tax assessor rolls. |

**ANALYSIS:** The applicant proposes a duplex and two single dwelling units at 1149 Virginia Lynn Way.

PARKING: The applicant is required to provide 2 spaces per dwelling unit for a total of 8 spaces. If the units are one-bedroom the number of spaces required may be reduced by four spaces. The six required parking spaces are identified on the draft site plan for a duplex and two one-bedroom dwelling units.

DENSITY: The minimum lot size for single and duplex dwelling structures shall be a minimum of 7,500 square feet. The lot size is approximately 14,810 square feet. The minimum lot size is met.

**The criteria for granting a Conditional Use Permit is set forth in HCC 21.71.030, Review criteria, and establishes the following conditions:**

a. The applicable code authorizes each proposed use and structure by conditional use permit in that zoning district;

> **Analysis:** The following uses may be permitted in the Urban Residential District when authorized by conditional use permit issued in accordance with Chapter 21.71 HCC:
>
> HCC 21.14.030 (i.) More than one building containing a permitted principal use on a lot
>
> **Finding 1:** The structures and uses are authorized by the applicable code.

b. The proposed use(s) and structure(s) are compatible with the purpose of the zoning district in which the lot is located.

> HCC 21.14.010 Purpose. The Urban Residential District is primarily intended to provide a sound environment for medium-density residential occupancy including single-family, duplex and low-rise multiple-family dwellings of various types and designs and other compatible uses as provided in this chapter.
>
> **Applicant:** Urban residential was meant for higher densities of occupied living spaces…This design allows for higher densities, while maintaining a lot of open space.
>
> **Analysis:** The duplex and two single dwelling units are permitted uses with a conditional use permit per HCC 21.14.030 Conditional uses and structures. These uses are compatible with the Urban Residential Zoning District.

**Finding 2:** The proposed structures and uses are compatible with the purpose of the district.

c. The value of the adjoining property will not be negatively affected greater than that anticipated from other permitted or conditionally permitted uses in this district.

**Applicant:** Because of the house designs superior quality, available open space, and proposed layout… Overall, this design should improve property values.

**Analysis:** Many uses in the Urban Residential district have greater negative impacts than a duplex and two single dwelling units. Other permitted uses such as parks and playgrounds, home occupations, or schools, would have a similar impact on nearby property values.

**Finding 3:** A duplex and two single dwelling units are not expected to negatively impact the adjoining properties greater than other permitted or conditional uses.

d. The proposal is compatible with existing uses of surrounding land.

**Applicant:** These stylish small homes will flow nicely with the quality homes in the neighborhood.

**Analysis:** Existing uses of the surrounding land are currently residential to the north and west, and vacant lots to the south and east. All surrounding lots are zoned Urban Residential and roughly equal in shape and size. Residential uses are in character with the surrounding land uses.

**Finding 4:** The proposal is compatible with existing uses of surrounding land.

e. Public services and facilities are or will be, prior to occupancy, adequate to serve the proposed use and structure.

**Applicant:** Yes - easily.

**Analysis:** City sewer and water services are already provided to the property.

**Finding 5:** Water, sewer, and fire services are adequate to serve the proposed duplex and two single unit dwellings.

f. Considering harmony in scale, bulk, coverage and density, generation of traffic, the nature and intensity of the proposed use, and other relevant effects, the proposal will not cause undue harmful effect upon desirable neighborhood character.

**Applicant:** The total square footage of living space (with no garages) at 2560 sf should flow nicely with the neighborhood…Especially considering the zoning is urban residential. No – Virginia Lynn Way and Pennock Street can easily handle the volume of traffic.

**Analysis:** The project corresponds to the purpose statement, as it provides residential development at a density allowable in code. A duplex and two single dwelling units should not create harmful effects on neighborhood character.

**Finding 6:** The Commission finds the proposal will not cause undue harmful effect upon desirable neighborhood character.

g. The proposal will not be unduly detrimental to the health, safety or welfare of the surrounding area or the city as a whole.

**Applicant:** No – Not at all! Just the opposite…More housing means more affordable housing in Homer, which is desperately needed.

**Analysis:** The proposal does not introduce a use or a scale that is not reasonably anticipated by the rules, regulations, and infrastructure developed to service such a proposal.

**Finding 7:** The proposal will not be unduly detrimental to the health, safety or welfare of the surrounding area and the city as a whole when all applicable standards are met as required by city code.

h. The proposal does or will comply with the applicable regulations and conditions specified in this title for such use.

**Analysis:** The applicant is not requesting any exception to code. The project is able to comply with the applicable regulations and conditions when gaining a CUP and subsequent zoning permit for construction. The applicant will need to submit a U.S. Army Corps of Engineers Permit with the Zoning Permit Application due to the Discharge Slope wetlands located on the property.

**Finding 8:** The proposal will comply with applicable regulations and conditions specified in Title 21 when gaining the required permits.

**Condition 1:** Submit a U.S. Army Corps of Engineers Permit with the Zoning Permit Application.

i. The proposal is not contrary to the applicable land use goals and objectives of the Comprehensive Plan.

**Applicant:**

1)''Land Use Goal 1: This project is designed to "increase the supply and diversity of housing while projecting community character''.

2) The intent of Homer's Comprehensive Plan is to develop more ''compact developments in a way that enables the private sector to develop denser housing, particularly infill housing THAT IS ATTRACTIVE, WELL BUILT, AND FITS WELL WITHIN THE EXISTING HOMES''.

3) "More diverse housing areas and higher density mixed use residential".

4) "Accomodate income and lifestyle diversity in Home".

5) "Create balanced development and project environmentally important areas".

6) Land Use Goal 6: 11Support Community efforts to establish affordable housing".

7) Summary, paragraph 6: "Maintaining a stock of QUALITY HOUSING for middle and low income housing will be important for Homer's future, particularly for housing YOUNGER FAMILIES within the City" .

All of these points were pulled directly off of the Comprehensive Plan ... and have been the plan of the project right from the start. These points resonate with us!

The Comprehensive Plan matches very well with the intent and plan of this development:

1) A more compact developmejnt

2) Denser housing that is ATTRACTIVE ... yet having plenty of open space

3) WELL BUILT

4) Fits well with existing homes in the area

5) The style, design, and size of these homes fits well for younger families

**Analysis:** Goals of the Land Use Chapter of the Homer Comprehensive Plan include increasing the diversity of housing, encouraging infill, and supporting housing choice by supporting a variety of dwelling options (Chapter 4, Objectives A & C). This proposal promotes housing choice at a density that is appropriate for its proposed use.

**Finding 9:** The proposal is not contrary to the applicable land use goals and objects of the Comprehensive Plan. The proposal aligns with Chapter 4, Goal 1, Objectives A and

C and no evidence has been found that it is contrary to the applicable land use goals and objects of the Comprehensive Plan.

j. The proposal will comply with the applicable provisions of the Community Design Manual (CDM).

**Analysis:** Chapter 3, Outdoor Lighting is applicable to the Rural Residential District.

**Condition 2:** Outdoor lighting must be down lit per HCC 21.59.030 and the CDM.

**Finding 10:** Project will comply with the applicable provisions of the CDM.

**HCC 21.71.040(b).** b. In approving a conditional use, the Commission may impose such conditions on the use as may be deemed necessary to ensure the proposal does and will continue to satisfy the applicable review criteria. Such conditions may include, but are not limited to, one or more of the following:

**1. Special yards and spaces**: No specific conditions deemed necessary.
**2. Fences and walls:** No specific conditions deemed necessary.
**3. Surfacing of parking areas:** No specific conditions deemed necessary.
**4. Street and road dedications and improvements:** No specific conditions deemed necessary.
**5. Control of points of vehicular ingress and egress:** No specific conditions deemed necessary.
**6. Special provisions on signs:** No specific conditions deemed necessary.
**7. Landscaping:** No specific conditions deemed necessary.
**8. Maintenance of the grounds, building, or structures:** No specific conditions deemed necessary.
**9. Control of noise, vibration, odors or other similar nuisances**: No specific conditions deemed necessary.
**10. Limitation of time for certain activities:** No specific conditions deemed necessary.
**11. A time period within which the proposed use shall be developed:** No specific conditions deemed necessary.
**12. A limit on total duration of use:** No specific conditions deemed necessary.
**13. More stringent dimensional requirements,** such as lot area or dimensions, setbacks, and building height limitations. Dimensional requirements may be made more lenient by conditional use permit only when such relaxation is authorized by other provisions of the zoning code. Dimensional requirements may not be altered by conditional use permit when and to the extent other provisions of the zoning code expressly prohibit such alterations by conditional use permit.
**14. Other conditions necessary** to protect the interests of the community and surrounding area, or to protect the health, safety, or welfare of persons residing or working in the vicinity of the subject lot.

**PUBLIC WORKS COMMENTS:** None

**FIRE DEPARTMENT COMMENTS:** None

**PUBLIC COMMENTS:** None

**STAFF COMMENTS/RECOMMENDATIONS:**

Planning Commission approve CUP 23-09, **Staff Report 23-063** with findings 1-10 and the following conditions.

**Condition 1:** Submit a U.S. Army Corps of Engineers Permit with the Zoning Permit Application.

**Condition 2:** Outdoor lighting must be down lit per HCC 21.59.030 and the CDM.

**Attachments**
Application
Compliance Review of Homer Comprehensive Plan
Public Notice
Aerial Map

November 1st, 2023

To: Homer Planning and Zoning, the Planning Commission,
and the City of Homer City Council

From: Paul Hueper

Regarding: Conditional Use Permits

After much introspection and personal debate within myself, I have decided it would be in my best interest at this point to apply for Conditional Use permits on the property that I am
wanting to develop off of Virginia Lynn Way. As many of you may know, I am disappointed in the sudden change in zoning for my property under the Urban Residential Zoning. I had applied with ample time and in good faith last spring, only to have the rug pulled out from underneath me a month ago with the sudden changes in zoning. Because I was told I was tentatively approved by a City Planner, I moved forward with a massive investment in the purchase of materials and having the lot and buildings professionally surveyed. I was told by someone on the City Council that it was fully understood by the mayor and the council that if someone had paid their permitting fees and were acting in due diligence, that they would receive their permits. My permits would have been issued in August, had not everyone but Ryan left the planning office. Everything was greatly delayed...and all of a sudden, I am left hanging without building permits.

OK, to have peace with my beloved city and my neighbors, I have chosen to go the route of going for conditional use permits. Please understand...I am doing this under duress, and
not by a choosing of my own. If things come together with obtaining conditional use permits, for the sake of peace I will absorb the carrying cost and interest of the project, which has been backed up due to a lack of permitting. My feelings are this- nobody wins with a legal battle. I'm sure we can all agree on this point! I love the City of Homer, and I am choosing to walk peaceably with everyone. But at the same time, I want it understood that I am not happy with the process that I am stuck in, nor do I surrender any of my legal rights by choosing to go in the direction of conditional use permits.

I really feel strongly that the City of Homer would appreciate the project I am proposing! If you know anything about the projects I have developed over the years, I only know how to build quality, very attractive buildings that have been well thought out and beautifully and artistically designed by my gifted wife Marilyn, working alongside of an architect. I will only build very high quality, super attractive small homes that I can be proud of in the long run. I don't compromise quality and will only build under the term "code"...industrywide standard accepted building practices. I am teaming with Jesse Lye from Palmer, a close friend of 20 years who has built multi-million dollar homes in Anchorage for many years...the quintessential professional.

So again, under the guise of peace and harmony, I am asking the City to grant Conditional Use Permits as per my request. Your jobs are not easy...and I honor and respect all of your contributions to the City of Homer.

Much Appreciated,

By: Paul Hueper all Rights Reserved

Paul Hueper
November 1st, 2023

City of Homer
www.cityofhomer-ak.gov

Planning
491 East Pioneer Avenue
Homer, Alaska 99603
Planning@ci.homer.ak.us
(p) 907-235-3106
(f) 907-235-3118

**Applicant**

Name: PAUL HUEPER Phone No.: 907-299-1860

Address: 3901 PENNOCK ST. Email: AKWF@PM.ME

**Property Owner** (if different than the applicant):

Name: PAUL HUEPER Phone No.: 907-299-1860

Address: SAME Email:

**PROPERTY INFORMATION:**

Address: 149 VIRGINIA LYNN WAY Lot Size: .33 acres KPB Tax ID # 179-13-04

Legal Description of Property: VIRGINIA LYNN SUB, LOT 55

*For staff use:*

Date: Fee submittal: Amount

Received by: Date application accepted as complete

Planning Commission Public Hearing Date:

## Conditional Use Permit Application Requirements:

1. Site Plan - drawn to a scale of not less than 1" = 20' which shows existing and proposed structures, clearing, fill, vegetation and drainage
2. Right of Way Access Plan
3. Parking Plan
4. A map showing neighboring lots and a narrative description of the existing uses of all neighboring lots. (Planning staff can provide a blank map.)
5. This completed application form
6. Payment of application fee (nonrefundable)
7. Any other information required by Code or staff to review your project

**Circle Your Zoning District**

| | RR | UR | RO | CBD | TCD | GBD | GC1 | GC2 | MC | MI | EEMU | BCWPD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Level 1 Site Plan | x | x | x | | | x | | | x | | | x |
| Level 1 ROW Access Plan | x | x | | | | | | | x | | | |
| Level 1 Site Development Standards | x | x | | | | | | | | | | |
| Level 1 Lighting | | | x | x | x | x | x | x | x | x | x | |
| Level 2 Site Plan | | | x | x | x | | x | x | | x | x | |
| Level 2 ROW Access Plan | | | x | x | x | | x | x | | x | x | |
| Level 2 Site Development Standards | | | x* | x | x | x | x | x | | | x | |
| Level 3 Site Development Standards | | | | | | | | | x | x | | |
| Level 3 ROW Access Plan | | | | | | x | | | | | | |
| DAP/SWP questionnaire | | | | | x | x | x | x | | | x | |

**Circle applicable additional permits. Planning staff can assist with these questions.**

Y/(N) Are you building or remodeling a commercial structure, or multifamily building with more than three (3) apartments? If yes, Fire Marshal Certification is required.
Status: _____

Y/(N) Will development trigger a Development Activity Plan?
Application Status: _____

Y/(N) Will development trigger a Storm Water Plan?
Application Status: _____

(Y)/N Does the site contain wetlands? If yes, Army Corps of Engineers Wetlands Permit is required. Application Status: TINY SPOT - 1000 SF / NO IMPACT / NO PERMIT REQUIRED

Y/(N) Is development in a floodplain? If yes, a Flood Development Permit is required.

Y/(N) Does the project trigger a Community Design Manual review?
If yes, complete the design review application form. The Community Design Manual is online at: https://www.cityofhomer-ak.gov/planning/community-design-manual

Y/(N) Do the project require a traffic impact analysis?

Y/(N) Are there any nonconforming uses or structures on the property?

~~Y/N~~ N/A Have nonconforming uses or structures on the property been formally accepted by the Homer Advisory Planning Commission?

(Y)/N Does the site have a State or City driveway permit? Status: YES / COMPLETED

(Y)/N Does the site have active City water and sewer permits? Status: YES / COMPLETED

**Conditional Use Permit Application Questions.** Use additional sheets if necessary.

1. Currently, how is the property used? Are there buildings on the property? How many square feet? Uses within the building(s)?

THE SITE IS RAW LAND WITH NO COMPLETED BUILDINGS.

2. What is the proposed use of the property? How do you intend to develop the property? Attach additional sheet if needed. Provide as much information as possible.

FOUR VERY SMALL HOMES (720 SF. EACH), INCLUDING TWO INDIVIDUAL HOMES AND ONE DUPLEX (2 UNITS, 560 SF EACH). TOTAL - 2560 SF. LIVING SPACE. THERE WILL BE OVER TWICE THE REQUIRED OPEN SPACE, LEFT OVER AFTER BUILDING.

**Conditional Use Permit Review Criteria Information.** Use additional sheets if necessary. Per HCC 21.71.030 Review Criteria, the applicant must produce evidence sufficient to enable meaningful review of the application. Unless exceptions or other criteria are stated elsewhere in the Code, the application will be reviewed under these criteria:

a. What code citation authorizes each proposed use and structure by conditional use permit?
21.14.030.I - MORE THAN ONE BUILDING CONTAING A PERMITTED PRINCIPAL USE.

b. Describe how the proposed uses(s) and structures(s) are compatible with the purpose of the zoning district.
URBAN RESIDENTIAL WAS MEANT FOR HIGHER DENSITIES OF OCCUPIED LIVING SPACES... THIS DESIGN ALLOWS FOR HIGHER DENSITIES, WHILE MAINTAING A LOT OF OPEN SPACE.

c. How will your proposed project affect adjoining property values?
BECAUSE OF THE HOUSE DESIGNS' SUPERIOR QUALITY, AVAILABLE OPEN SPACE, AND PROPOSED LAYOUT... OVERALL, THIS DESIGN SHOULD IMPROVE PROPERTY VALUES

d. How is your proposal compatible with existing uses of the surrounding land?
THESE STYLISH, SMALL HOMES WILL FLOW NICELY WITH THE QUALITY HOMES IN THE NEIGHBORHOOD.

e. Are/will public services adequate to serve the proposed uses and structures?
YES - EASILY.

f. How will the development affect the harmony in scale, bulk, coverage and density upon the desirable neighborhood character, and will the generation of traffic and the capacity of surrounding streets and roads be negatively affected?
THE TOTAL SQUARE FOOTAGE OF LIVING SPACE (WITH NO GARAGES) AT 2560 SF. SHOULD FLOW NICELY WITH THE NEIGHBORHOOD... ESPECIALLY CONSIDERING THE ZONING IS URBAN RESIDENTIAL.
NO - VIRGINIA LYNN WAY AND PENNOCK STREET CAN EASILY HANDLE THE VOLUME OF TRAFFIC.

g. Will your proposal be detrimental to the health, safety or welfare of the surrounding area or the city as a whole?

NO - NOT AT ALL! JUST THE OPPOSITE... MORE HOUSING MEANS MORE AFFORDABLE HOUSING IN HOMER, WHICH IS DESPERATLY NEEDED.

h. How does your project relate to the goals of the Comprehensive Plan? Find the Comprehensive Plan on the City's website:
www.cityofhomer-ak.gov/planning/comprehensive-plan

"LAND USE GOAL 1: THIS PROJECT IS DESIGNED TO "INCREASE THE SUPPLY & DIVERSITY OF HOUSING WHILE PROTECTING COMMUNITY CHARACTER." (SEE "CONTINUED")

i. The Planning Commission may require special improvements. Are any of the following a component of the development plan, or are there suggestions on special improvements you would be willing to make? **Circle each answer and provide clarification on additional pages if Yes is selected.**

IF YES'S: ERV OPEN TO IMPROVING THE PROJECT!

1. (Y)/N Special yards and spaces
2. Y/N Fences, walls and screening
3. Y/N Surfacing of parking areas
4. Y/N Street and road dedications and improvements (or bonds)
5. (Y)/N Control of points of vehicular ingress and egress
6. Y/N Special provisions on signs
7. (Y)/N Landscaping
8. (Y)/N Maintenance of the grounds, buildings, or structures
9. Y/N Control of noise, vibration, odors, lighting, heat, glare, water and solid waste pollution, dangerous materials, material and equipment storage, or other similar nuisances
10. Y/N Time for certain activities
11. Y/N A time period within which the proposed use shall be developed
12. Y/N A limit on total duration of use
13. (Y)/N Special dimensional requirements such as lot area, setbacks, building height
14. Y/N Other conditions deemed necessary to protect the interest of the community

**Parking Questions.**

1. How many parking spaces are required for your development? 12
   If more than 24 spaces are required see HCC 21.50.030(f)(1)(b)
2. How many spaces are shown on your parking plan? 12
3. Are you requesting any reductions? NO

I hereby certify that the above statements and other information submitted are true and accurate to the best of my knowledge, and that I, as applicant, have the following legal interest in the property:

***CIRCLE ONE:*** Owner of record Lessee Contract purchaser

Per HCC 21.71.020(a)(9), if the applicant is not the owner of the subject lot, the owner's signed authorization grants the applicant authority to:
(a) apply for the conditional use permit, and
(b) bind the owner to the terms of the conditional use permit, if granted.

Applicant signature: _____ Date: 11-1-23

Property Owner signature: _____ Date: 11-1-23

h) How does your project relate to the goals of the Comprehensive Plan?

1) "Land Use Goal 1:This project is designed to "increase the supply and diversity
of housing while projecting community character".
2) The intent of Homer's Comprehensive Plan is to develop more "compact
developments in a way that enables the private sector to develop denser housing,
particularly infill housing THAT IS ATTRACTIVE, WELL BUILT, AND FITS WELL
WITHIN THE EXISTING HOMES".
3) "More diverse housing areas and higher density mixed use residential".
4) "Accomodate income and lifestyle diversity in Homer".
5) "Create balanced development and project environmentally important areas".
6) Land Use Goal 6: "Support Community efforts to establish affordable housing".
7) Summary, paragraph 6: "Maintaining a stock of QUALITY HOUSING for middle
and low income housing will be important for Homer's future, particularly for housing
YOUNGER FAMILIES within the City".

All of these points were pulled directly off of the Comprehensive Plan...
and have been the plan of the project right from the start.
These points resonate with us!

The Comprehensive Plan matches very well with the intent and plan of this development:
1) A more compact developmejnt
2) Denser housing that is ATTRACTIVE...yet having plenty of open space
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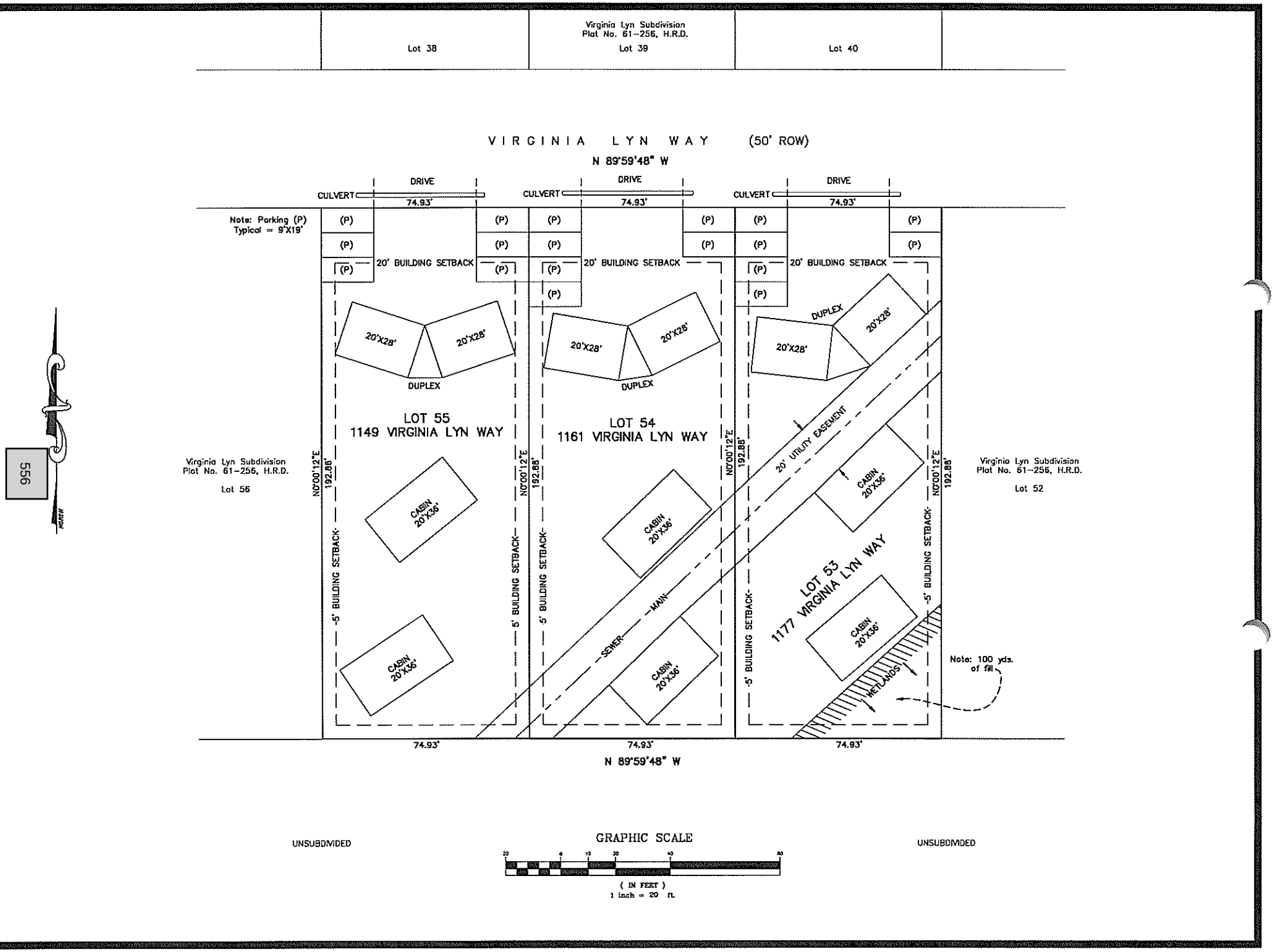
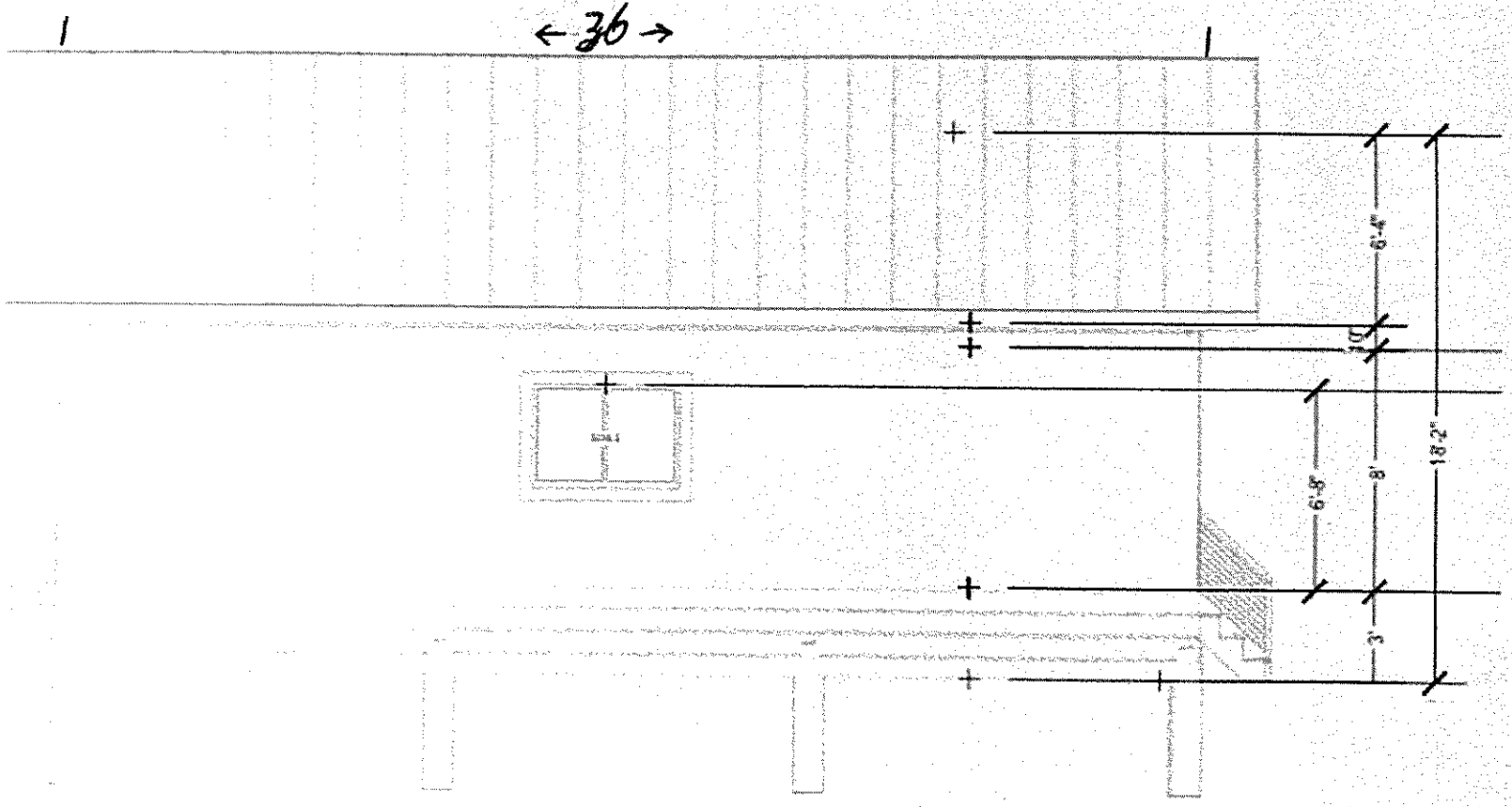
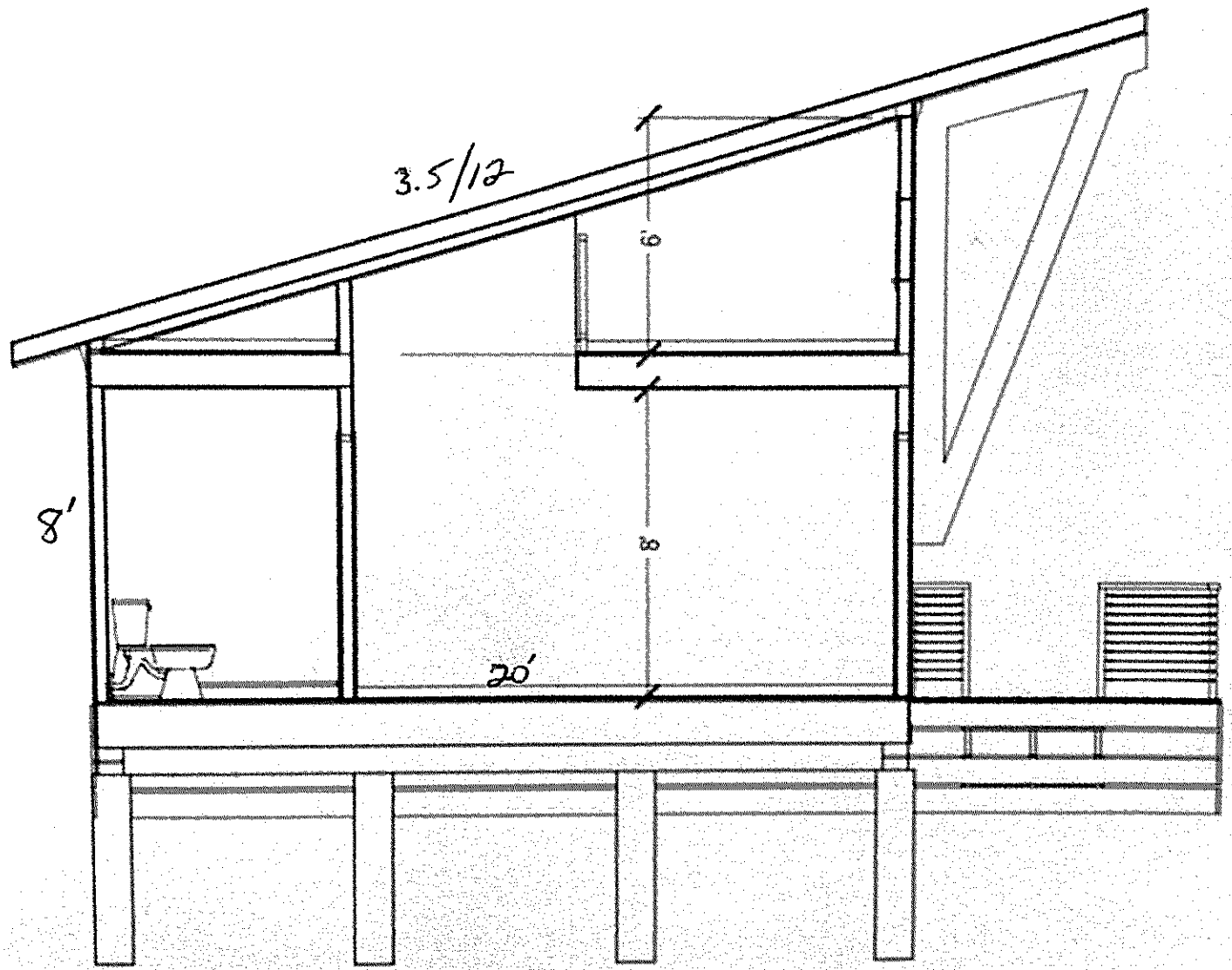

Lot 38
Virginia Lyn Subdivision
Plat No. 61-256, H.R.D.
Lot 39
Lot 40
VIRGINIA LYN WAY (50' ROW)
N 89°59'48" W
DRIVE
CULVERT
74.93'
Note: Parking (P)
Typical = 9'X19'
(P)
20' BUILDING SETBACK
20'X28'
DUPLEX
LOT 55
1149 VIRGINIA LYN WAY
LOT 54
1161 VIRGINIA LYN WAY
LOT 53
1177 VIRGINIA LYN WAY
Virginia Lyn Subdivision
Plat No. 61-256, H.R.D.
Lot 56
Lot 52
N0°00'12"E
192.88'
5' BUILDING SETBACK
CABIN
20'X36'
20' UTILITY EASEMENT
SEWER MAIN
WETLANDS
Note: 100 yds.
of fill
556
NORTH
UNSUBDIVIDED
UNSUBDIVIDED
GRAPHIC SCALE
( IN FEET )
1 inch = 20 ft.




EXTERIOR ELEVATION LEFT




CROSS SECTION ELEVATION

## ***Review of comprehensive plan Land Use Chapter for CUP 23—09 RF 12.6.23***

**GOAL 1:** Guiding Homer's growth with a focus on increasing the supply and diversity of housing, protect community character, encouraging infill, and helping minimize global impacts of public facilities including limiting greenhouse gas emissions.

**Objective A:** Promote a pattern of growth characterized by a concentrated mixed-use center, and a surrounding ring of moderate-to-high density residential and mixed-use areas with lower densities in outlying areas.

***Staff:*** This project supports Objective A pattern of growth and density, with moderate density on a small lot zoned Urban Residential.

**Objective B:** Develop clear and well-defined land use regulations and update the zoning map in support of the desired pattern of growth.

N/A – not associated with update of zoning map.

**Objective C:** Maintain high quality residential neighborhoods; promote housing choice by supporting a variety of dwelling options.

***Staff:*** The project consists of a duplex and two single-family dwellings, promoting housing choice and contributing to a quality neighborhood.

**Objective D:** Consider the regional and global impacts of development in Homer.

**Staff:** This project discourages sprawl with additional infill dwelling units at the scale and density of the Urban Residential zoning district and fits the moderate-density character planned just outside the city core.

**GOAL 2:** Maintain the quality of Homer's natural environment and scenic beauty.

**Objective A:** Complete and maintain a detailed "green infrastructure" map for the City of Homer and environs that presents an integrated functional system of environmental features on lands in both public and private ownership and use green infrastructure concepts in the review and approval of development projects.

N/A – not associated with mapping.

**Objective B:** Continue to review and refine development standards and require development practices that protect environmental functions.

N/A – not associated with creation of development standards.

**Objective C:** Provide extra protection for areas with highest environmental value or development constraints.

N/A – This area is under development, no change in impact is proposed.

**Objective D:** Collaborate with jurisdictions outside the City of Homer, as well as state and federal agencies, to ensure that environmental quality is maintained.

N/A – not associated with other jurisdictions.

**GOAL 3:** Encourage high-quality buildings and site development that complement Homer's beautiful natural setting.

**Objective A:** Create a clear, coordinated regulatory framework that guides development.

***Staff:*** Goal 3, objective A implementation items are all directives to review and consider new policies and are not directly applicable to CUP's.

**Objective B**: Encourage high quality site design and buildings.

***Staff:*** The proposal supports four new dwelling units that are required to submit a Zoning Permit and meet City requirements for site development.

**GOAL 4:** Support the development of a variety of well-defined commercial/business districts for a range of commercial purposes.

**Objective A:** Encourage a concentrated, pedestrian oriented, attractive business/commerce district in the Central Business District (CBD) following the guidelines found in the Town Center Development Plan.

***Staff:*** The proposal is not found in the CBD.

**Objective B:** Discourage strip development along the Sterling Highway and major collectors/thoroughfares.

***Staff:*** N/A – not associated with a commercial/business purpose.

**Finding:**

The proposal is not contrary to the applicable land use goals and objectives of the Comprehensive Plan.

**CITY OF HOMER**

**PUBLIC HEARING NOTICE - PLANNING COMMISSION MEETING**

Public hearings on the matters below are scheduled for Wednesday, December 6, 2023 at 6:30 p.m. during the Regular Planning Commission Meeting. Participation is available virtually via Zoom webinar or in-person at Homer City Hall.

**A request for Conditional Use Permit (CUP) 23-09, CUP 23-10, and CUP 23-11 per HCC 21.14.030 (i), More than one building containing a permitted principal use on a lot. The applicant proposes a duplex and two single dwelling units at each of the following addresses:**

**1149 Virginia Lynn Way**
**T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0610256 VIRGINIA LYN SUB LOT 55**

**1161 Virginia Lynn Way**
**T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0610256 VIRGINIA LYN SUB LOT 54**

**1177 Virginia Lynn Way**
**T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0610256 VIRGINIA LYN SUB LOT 53**

A copy of the proposals may be viewed at Homer City Hall, in the Clerk's Office Lobby on the lower level. In-person meeting participation is available in Cowles Council Chambers located downstairs at Homer City Hall, 491 E. Pioneer Ave., Homer, AK 99603.

To attend the meeting virtually, visit zoom.us and enter the Meeting ID & Passcode listed below. To attend the meeting by phone, dial any one of the following phone numbers and enter the Webinar ID & Passcode below, when prompted: 1-253-215-8782, 1-669-900-6833, (toll free) 888-788-0099 or 877-853-5247.

Meeting ID: 979 8816 0903
Passcode: 976062

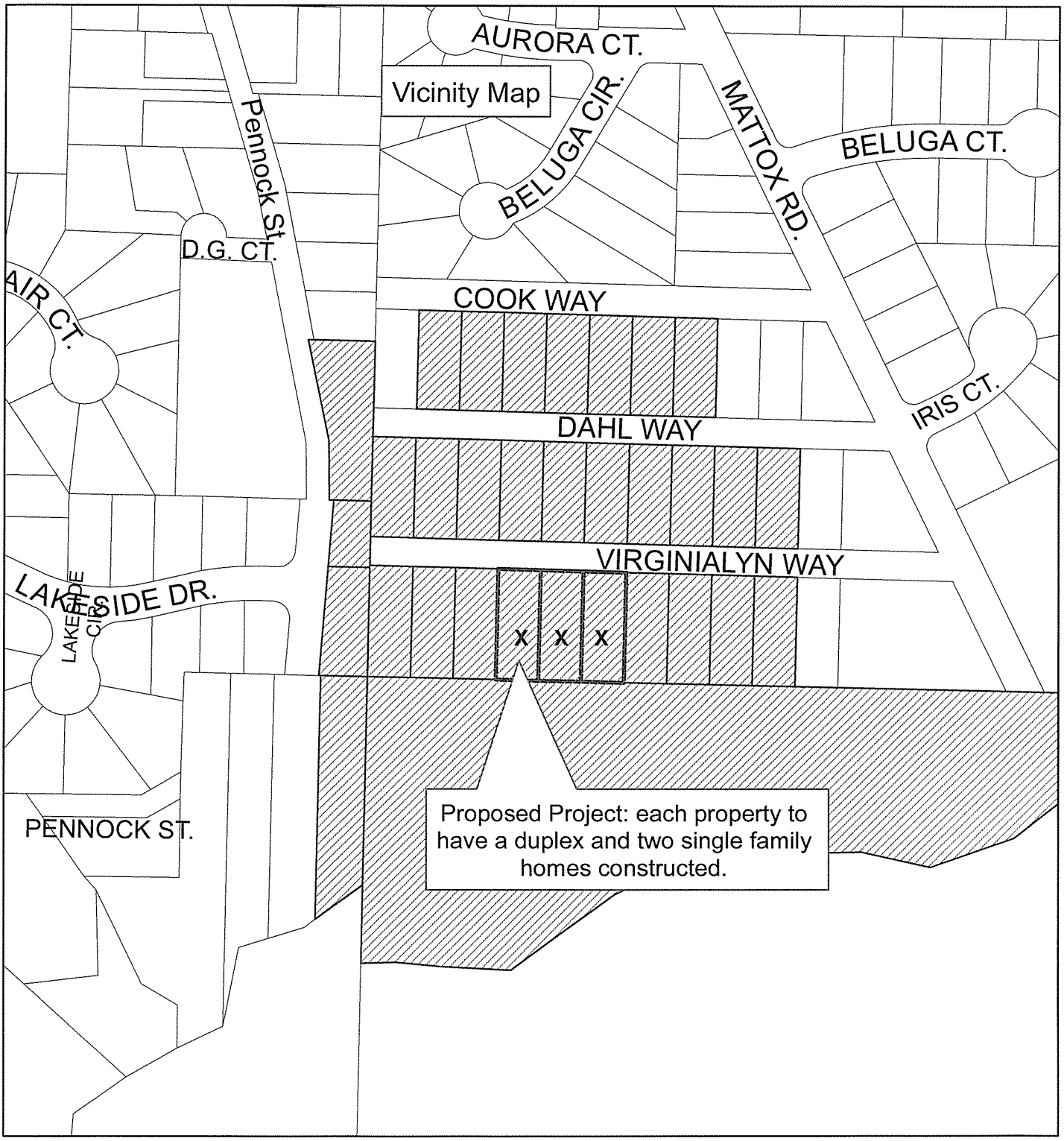
Additional information regarding this matter will be available by 5pm on the Friday before the meeting. This information will be posted to the City of Homer online calendar page for December 1, 2023 at *https://www.cityofhomer-ak.gov/calendar*. It will also be available at the Planning and Zoning Office at Homer City Hall and at the Homer Public Library.

Written comments can be emailed to the Planning and Zoning Office at the address below, mailed to Homer City Hall at the address above, or placed in the Homer City Hall drop box at any time. Written comments must be received by 4pm on the day of the meeting.

If you have questions, contact Julie Engebretsen at the Planning and Zoning Office. Phone: (907) 435-3119, email: planning@ci.homer.ak.us or in-person at Homer City Hall.

**NOTICE TO BE SENT TO PROPERTY OWNERS WITHIN 300 FEET OF PROPERTY**

**VICINITY MAP ON REVERSE**




CITY OF HOMER - ALASKA - MARCH 31, 1964

*City of Homer*
*Planning and Zoning Department*
November 16, 2023

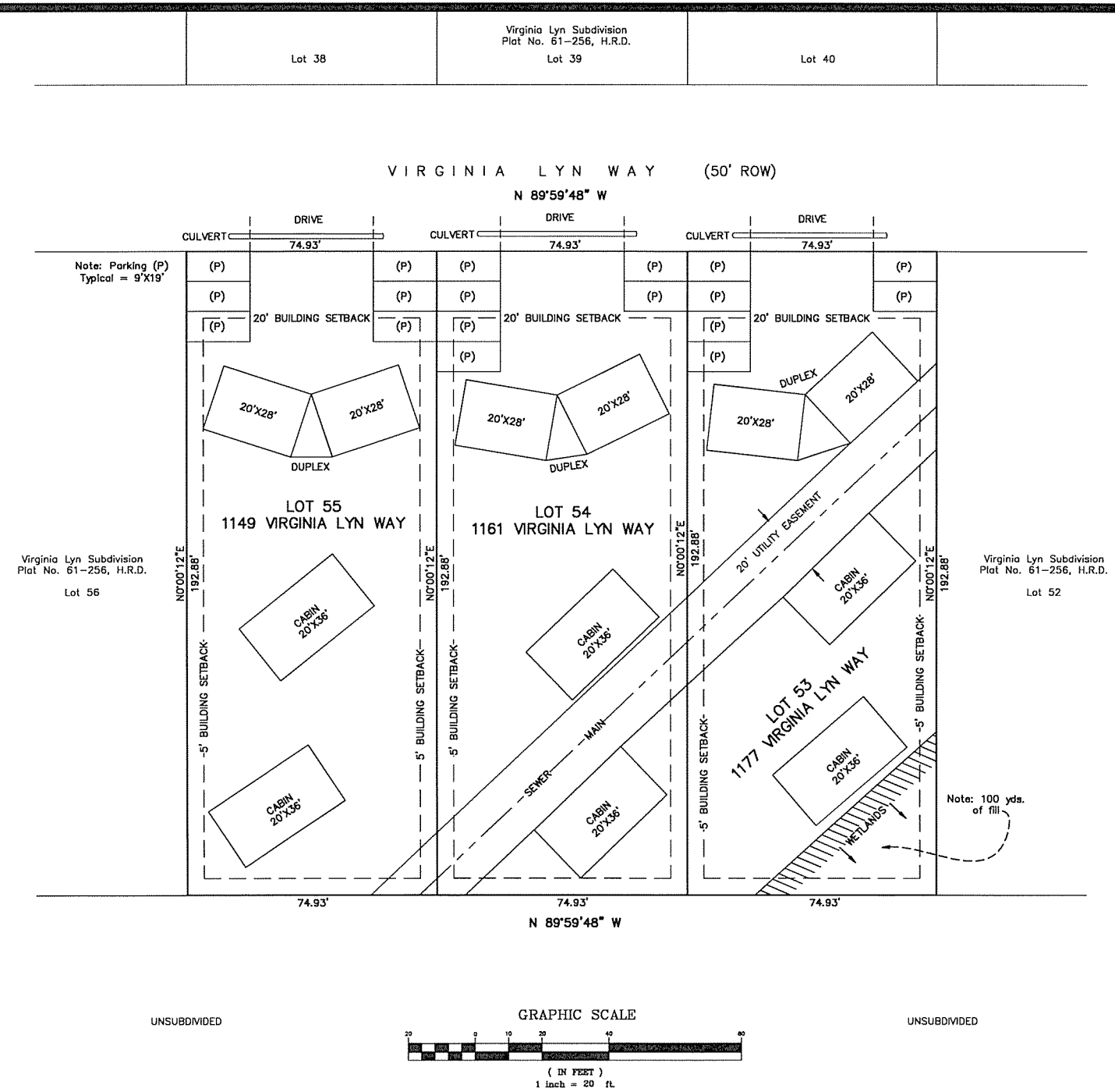
**Request for Conditional Use Permits (CUP) 2023-09, 2023-10, 2023-11**

Properties within 300 feet are marked and property owners notified.

0 150 300 600 Feet

N

*Disclaimer:*
*It is expressly understood the City of Homer, its council, board, departments, employees and agents are not responsible for any errors or omissions contained herein, or deductions, interpretations or conclusions drawn therefrom.*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Virginia Lyn Subdivision
Plat No. 61–256, H.R.D.
Lot 39
Lot 40
VIRGINIA LYN WAY (50' ROW)
N 89°59'48" W
DRIVE
CULVERT
74.93'
Note: Parking (P)
Typical = 9'X19'
(P)
20' BUILDING SETBACK
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DUPLEX
LOT 55
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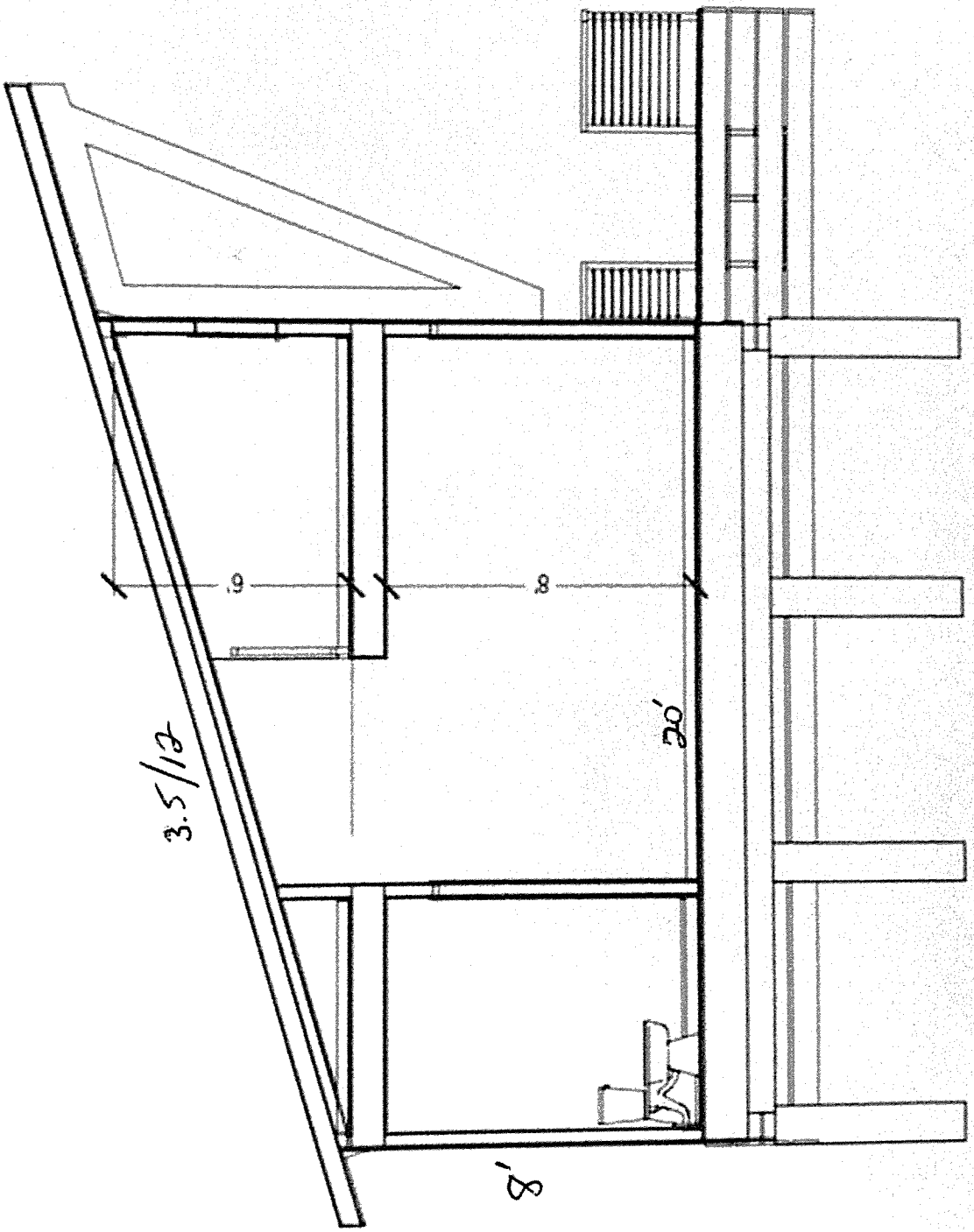


CROSS SECTION ELEVATION

**Vicinity Map, Google Earth**

City of Homer
www.cityofhomer-ak.gov

Planning
491 East Pioneer Avenue
Homer, Alaska 99603
Planning@ci.homer.ak.us
(p) 907-235-3106
(f) 907-235-3118

**Staff Report 23-064**

TO: Homer Planning Commission
FROM: Ryan Foster, AICP, City Planner
DATE: December 6, 2023
SUBJECT: Conditional Use Permit (CUP) 23-10

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**Synopsis** The applicant requests a Conditional Use Permit (CUP) per HCC 21.14.030 (i), More than one building containing a permitted principal use on a lot. The applicant proposes a duplex and two single dwelling units at 1161 Virginia Lynn Way.

| | |
|---|---|
| Applicant: | Paul Hueper<br>3901 Pennock Street<br>Homer, AK 99603 |
| Location: | 1161 Virginia Lynn Way |
| Legal Description: | T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0610256 VIRGINIA LYN SUB LOT 54 |
| Parcel ID: | 17913305 |
| Size of Existing Lot: | 0.34 acres |
| Zoning Designation: | Urban Residential District |
| Existing Land Use: | Vacant |
| Surrounding Land Use: | North: Residential<br>South: Vacant<br>East: Vacant<br>West: Vacant |
| Comprehensive Plan: | Chapter 4, Goal 1, Objective A: Promote a pattern of growth characterized by a concentrated mixed-use center, and a surrounding ring of moderate-to-high density residential and mixed-use areas with lower densities in outlying areas. |
| Wetland Status: | KWF Wetlands Assessment Discharge Slope on the property. |
| Flood Plain Status: | Not in a floodplain. |
| BCWPD: | Not within the Bridge Creek Watershed Protection District |
| Utilities: | Public utilities, water and sewer, do service the site. |
| Public Notice: | Notice was sent to 27 property owners of 32 parcels as shown on the KPB tax assessor rolls. |

**ANALYSIS:** The applicant proposes a duplex and two single dwelling units at 1161 Virginia Lynn Way.

PARKING: The applicant is required to provide 2 spaces per dwelling unit for a total of 8 spaces. If the units are one-bedroom the number of spaces required may be reduced by four spaces. The six required parking spaces are identified on the draft site plan for a duplex and two one-bedroom dwelling units.

DENSITY: The minimum lot size for single and duplex dwelling structures shall be a minimum of 7,500 square feet. The lot size is approximately 14,810 square feet. The minimum lot size is met.

**The criteria for granting a Conditional Use Permit is set forth in HCC 21.71.030, Review criteria, and establishes the following conditions:**

a. The applicable code authorizes each proposed use and structure by conditional use permit in that zoning district;

**Analysis:** The following uses may be permitted in the Urban Residential District when authorized by conditional use permit issued in accordance with Chapter 21.71 HCC:

HCC 21.14.030 (i.) More than one building containing a permitted principal use on a lot

**Finding 1:** The structures and uses are authorized by the applicable code.

b. The proposed use(s) and structure(s) are compatible with the purpose of the zoning district in which the lot is located.

HCC 21.14.010 Purpose. The Urban Residential District is primarily intended to provide a sound environment for medium-density residential occupancy including single-family, duplex and low-rise multiple-family dwellings of various types and designs and other compatible uses as provided in this chapter.

**Applicant:** Urban residential was meant for higher densities of occupied living spaces…This design allows for higher densities, while maintaining a lot of open space.

**Analysis:** The duplex and two single dwelling units are permitted uses with a conditional use permit per HCC 21.14.030 Conditional uses and structures. These uses are compatible with the Urban Residential Zoning District.

**Finding 2:** The proposed structures and uses are compatible with the purpose of the district.

c. The value of the adjoining property will not be negatively affected greater than that anticipated from other permitted or conditionally permitted uses in this district.

**Applicant:** Because of the house designs superior quality, available open space, and proposed layout… Overall, this design should improve property values.

**Analysis:** Many uses in the Urban Residential district have greater negative impacts than a duplex and two single dwelling units. Other permitted uses such as parks and playgrounds, home occupations, or schools, would have a similar impact on nearby property values.

**Finding 3:** A duplex and two single dwelling units are not expected to negatively impact the adjoining properties greater than other permitted or conditional uses.

d. The proposal is compatible with existing uses of surrounding land.

**Applicant:** These stylish small homes will flow nicely with the quality homes in the neighborhood.

**Analysis:** Existing uses of the surrounding land are currently residential to the north and west, and vacant lots to the south and east. All surrounding lots are zoned Urban Residential and roughly equal in shape and size. Residential uses are in character with the surrounding land uses.

**Finding 4:** The proposal is compatible with existing uses of surrounding land.

e. Public services and facilities are or will be, prior to occupancy, adequate to serve the proposed use and structure.

**Applicant:** Yes - easily.

**Analysis:** City sewer and water services are already provided to the property.

**Finding 5:** Water, sewer, and fire services are adequate to serve the proposed duplex and two single unit dwellings.

f. Considering harmony in scale, bulk, coverage and density, generation of traffic, the nature and intensity of the proposed use, and other relevant effects, the proposal will not cause undue harmful effect upon desirable neighborhood character.

**Applicant:** The total square footage of living space (with no garages) at 2560 sf should flow nicely with the neighborhood…Especially considering the zoning is urban residential. No – Virginia Lynn Way and Pennock Street can easily handle the volume of traffic.

**Analysis:** The project corresponds to the purpose statement, as it provides residential development at a density allowable in code. A duplex and two single dwelling units should not create harmful effects on neighborhood character.

**Finding 6:** The Commission finds the proposal will not cause undue harmful effect upon desirable neighborhood character.

g. The proposal will not be unduly detrimental to the health, safety or welfare of the surrounding area or the city as a whole.

**Applicant:** No – Not at all! Just the opposite…More housing means more affordable housing in Homer, which is desperately needed.

**Analysis:** The proposal does not introduce a use or a scale that is not reasonably anticipated by the rules, regulations, and infrastructure developed to service such a proposal.

**Finding 7:** The proposal will not be unduly detrimental to the health, safety or welfare of the surrounding area and the city as a whole when all applicable standards are met as required by city code.

h. The proposal does or will comply with the applicable regulations and conditions specified in this title for such use.

**Analysis:** The applicant is not requesting any exception to code. The project is able to comply with the applicable regulations and conditions when gaining a CUP and subsequent zoning permit for construction. The applicant will need to submit a U.S. Army Corps of Engineers Permit with the Zoning Permit Application due to the Discharge Slope wetlands located on the property.

**Finding 8:** The proposal will comply with applicable regulations and conditions specified in Title 21 when gaining the required permits.

**Condition 1:** Submit a U.S. Army Corps of Engineers Permit with the Zoning Permit Application.

i. The proposal is not contrary to the applicable land use goals and objectives of the Comprehensive Plan.

**Applicant:**

1)''Land Use Goal 1: This project is designed to "increase the supply and diversity of housing while projecting community character''.

2) The intent of Homer's Comprehensive Plan is to develop more ''compact developments in a way that enables the private sector to develop denser housing, particularly infill housing THAT IS ATTRACTIVE, WELL BUILT, AND FITS WELL WITHIN THE EXISTING HOMES''.

3) "More diverse housing areas and higher density mixed use residential".

4) "Accomodate income and lifestyle diversity in Home”.

5) "Create balanced development and project environmentally important areas".

6) Land Use Goal 6: 11Support Community efforts to establish affordable housing".

7) Summary, paragraph 6: "Maintaining a stock of QUALITY HOUSING for middle and low income housing will be important for Homer's future, particularly for housing YOUNGER FAMILIES within the City" .

All of these points were pulled directly off of the Comprehensive Plan ... and have been the plan of the project right from the start. These points resonate with us!

The Comprehensive Plan matches very well with the intent and plan of this development:

1) A more compact developmejnt

2) Denser housing that is ATTRACTIVE ... yet having plenty of open space

3) WELL BUILT

4) Fits well with existing homes in the area

5) The style, design, and size of these homes fits well for younger families

**Analysis:** Goals of the Land Use Chapter of the Homer Comprehensive Plan include increasing the diversity of housing, encouraging infill, and supporting housing choice by supporting a variety of dwelling options (Chapter 4, Objectives A & C). This proposal promotes housing choice at a density that is appropriate for its proposed use.

**Finding 9:** The proposal is not contrary to the applicable land use goals and objects of the Comprehensive Plan. The proposal aligns with Chapter 4, Goal 1, Objectives A and C and no evidence has been found that it is contrary to the applicable land use goals and objects of the Comprehensive Plan.

j. The proposal will comply with the applicable provisions of the Community Design Manual (CDM).

**Analysis:** Chapter 3, Outdoor Lighting is applicable to the Rural Residential District.

**Condition 2:** Outdoor lighting must be down lit per HCC 21.59.030 and the CDM.

**Finding 10:** Project will comply with the applicable provisions of the CDM.

**HCC 21.71.040(b).** b. In approving a conditional use, the Commission may impose such conditions on the use as may be deemed necessary to ensure the proposal does and will continue to satisfy the applicable review criteria. Such conditions may include, but are not limited to, one or more of the following:

**1. Special yards and spaces**: No specific conditions deemed necessary.
**2. Fences and walls:** No specific conditions deemed necessary.
**3. Surfacing of parking areas:** No specific conditions deemed necessary.
**4. Street and road dedications and improvements:** No specific conditions deemed necessary.

**5. Control of points of vehicular ingress and egress:** No specific conditions deemed necessary.
**6. Special provisions on signs:** No specific conditions deemed necessary.
**7. Landscaping:** No specific conditions deemed necessary.
**8. Maintenance of the grounds, building, or structures:** No specific conditions deemed necessary.
**9. Control of noise, vibration, odors or other similar nuisances**: No specific conditions deemed necessary.
**10. Limitation of time for certain activities:** No specific conditions deemed necessary.
**11. A time period within which the proposed use shall be developed:** No specific conditions deemed necessary.
**12. A limit on total duration of use:** No specific conditions deemed necessary.
**13. More stringent dimensional requirements,** such as lot area or dimensions, setbacks, and building height limitations. Dimensional requirements may be made more lenient by conditional use permit only when such relaxation is authorized by other provisions of the zoning code. Dimensional requirements may not be altered by conditional use permit when and to the extent other provisions of the zoning code expressly prohibit such alterations by conditional use permit.
**14. Other conditions necessary** to protect the interests of the community and surrounding area, or to protect the health, safety, or welfare of persons residing or working in the vicinity of the subject lot.

**PUBLIC WORKS COMMENTS:** None

**FIRE DEPARTMENT COMMENTS:** None

**PUBLIC COMMENTS:** None

**STAFF COMMENTS/RECOMMENDATIONS:**
Planning Commission approve CUP 23-10, **Staff Report 23-064** with findings 1-10 and the following conditions.

**Condition 1:** Submit a U.S. Army Corps of Engineers Permit with the Zoning Permit Application.

**Condition 2:** Outdoor lighting must be down lit per HCC 21.59.030 and the CDM.

**Attachments**
Application
Compliance Review of Homer Comprehensive Plan
Public Notice
Aerial Map

# City of Homer

www.cityofhomer-ak.gov

Planning
491 East Pioneer Avenue
Homer, Alaska 99603
Planning@ci.homer.ak.us
(p) 907-235-3106
(f) 907-235-3118


**Applicant**

Name: PAUL HUEPER Phone No.: 907-299-1860

Address: 3901 PENNOCK ST. Email: AKWF@PM.ME

**Property Owner** (if different than the applicant):

Name: SAME Phone No.: _____

Address: SAME Email: _____

**PROPERTY INFORMATION:**

Address: 1161 VIRGINIA LYNN WAY Lot Size: .33 acres KPB Tax ID # 179-133-05

Legal Description of Property: VIRGINIA LYNN SUB, LOT 54

*For staff use:*

Date: _____ Fee submittal: Amount _____

Received by: _____ Date application accepted as complete _____

Planning Commission Public Hearing Date: _____

## Conditional Use Permit Application Requirements:

1. Site Plan - drawn to a scale of not less than 1" = 20' which shows existing and proposed structures, clearing, fill, vegetation and drainage
2. Right of Way Access Plan
3. Parking Plan
4. A map showing neighboring lots and a narrative description of the existing uses of all neighboring lots. (Planning staff can provide a blank map.)
5. This completed application form
6. Payment of application fee (nonrefundable)
7. Any other information required by Code or staff to review your project

**Circle Your Zoning District**

| | RR | UR | RO | CBD | TCD | GBD | GC1 | GC2 | MC | MI | EEMU | BCWPD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Level 1 Site Plan | x | x | x | | | x | | | x | | | x |
| Level 1 ROW Access Plan | x | x | | | | | | | x | | | |
| Level 1 Site Development Standards | x | x | | | | | | | | | | |
| Level 1 Lighting | | | x | x | x | x | x | x | x | x | x | |
| Level 2 Site Plan | | | x | x | x | | x | x | | x | x | |
| Level 2 ROW Access Plan | | | x | x | x | | x | x | | x | x | |
| Level 2 Site Development Standards | | | x* | x | x | x | x | x | | | x | |
| Level 3 Site Development Standards | | | | | | | | | x | x | | |
| Level 3 ROW Access Plan | | | | | | x | | | | | | |
| DAP/SWP questionnaire | | | | | x | x | x | x | | | x | |

**Circle applicable additional permits. Planning staff can assist with these questions.**

Y/(N) Are you building or remodeling a commercial structure, or multifamily building with more than three (3) apartments? If yes, Fire Marshal Certification is required.
Status: _____

Y/(N) Will development trigger a Development Activity Plan?
Application Status: _____

Y/(N) Will development trigger a Storm Water Plan?
Application Status: _____

(Y)/N Does the site contain wetlands? If yes, Army Corps of Engineers Wetlands Permit is required. Application Status: TINY SPOT - 1000 SF / NO IMPACT / NO REQUIRED PERMIT

Y/(N) Is development in a floodplain? If yes, a Flood Development Permit is required.

Y/(N) Does the project trigger a Community Design Manual review?
If yes, complete the design review application form. The Community Design Manual is online at: https://www.cityofhomer-ak.gov/planning/community-design-manual

Y/(N) Do the project require a traffic impact analysis?

Y/(N) Are there any nonconforming uses or structures on the property?

~~Y/N~~ N/A Have nonconforming uses or structures on the property been formally accepted by the Homer Advisory Planning Commission?

(Y)/N Does the site have a State or City driveway permit? Status: YES / COMPLETED

(Y)/N Does the site have active City water and sewer permits? Status: YES / COMPLETED

**Conditional Use Permit Application Questions.** Use additional sheets if necessary.

1. Currently, how is the property used? Are there buildings on the property? How many square feet? Uses within the building(s)?

THE SITE IS RAW LAND WITH NO COMPLETED BUILDINGS.

2. What is the proposed use of the property? How do you intend to develop the property? Attach additional sheet if needed. Provide as much information as possible.

FOUR VERY SMALL HOMES (720 SF. EACH), INCLUDING TWO INDIVIDUAL HOMES AND ONE DUPLEX (2 UNITS, 560 SF EACH). TOTAL - 2560 SF. LIVING SPACE. THERE WILL BE OVER TWICE THE REQUIRED OPEN SPACE, LEFT OVER AFTER BUILDING.

**Conditional Use Permit Review Criteria Information.** Use additional sheets if necessary. Per HCC 21.71.030 Review Criteria, the applicant must produce evidence sufficient to enable meaningful review of the application. Unless exceptions or other criteria are stated elsewhere in the Code, the application will be reviewed under these criteria:

a. What code citation authorizes each proposed use and structure by conditional use permit?
21.14.030.I - MORE THAN ONE BUILDING CONTAING A PERMITTED PRINCIPAL USE.

b. Describe how the proposed uses(s) and structures(s) are compatible with the purpose of the zoning district.
URBAN RESIDENTIAL WAS MEANT FOR HIGHER DENSITIES OF OCCUPIED LIVING SPACES... THIS DESIGN ALLOWS FOR HIGHER DENSITIES, WHILE MAINTAING A LOT OF OPEN SPACE.

c. How will your proposed project affect adjoining property values?
BECAUSE OF THE HOUSE DESIGNS' SUPERIOR QUALITY, AVAILABLE OPEN SPACE, AND PROPOSED LAYOUT... OVERALL, THIS DESIGN SHOULD IMPROVE PROPERTY VALUES

d. How is your proposal compatible with existing uses of the surrounding land?
THESE STYLISH, SMALL HOMES WILL FLOW NICELY WITH THE QUALITY HOMES IN THE NEIGHBORHOOD.

e. Are/will public services adequate to serve the proposed uses and structures?
YES - EASILY.

f. How will the development affect the harmony in scale, bulk, coverage and density upon the desirable neighborhood character, and will the generation of traffic and the capacity of surrounding streets and roads be negatively affected?
THE TOTAL SQUARE FOOTAGE OF LIVING SPACE (WITH NO GARAGES) AT 2560 SF. SHOULD FLOW NICELY WITH THE NEIGHBORHOOD... ESPECIALLY CONSIDERING THE ZONING IS URBAN RESIDENTIAL.
NO - VIRGINIA LYNN WAY AND PENNOCK STREET CAN EASILY HANDLE THE VOLUME OF TRAFFIC.

g. Will your proposal be detrimental to the health, safety or welfare of the surrounding area or the city as a whole?

NO - NOT AT ALL! JUST THE OPPOSITE... MORE HOUSING MEANS MORE AFFORDABLE HOUSING IN HOMER, WHICH IS DESPERATLY NEEDED.

h. How does your project relate to the goals of the Comprehensive Plan? Find the Comprehensive Plan on the City's website:
www.cityofhomer-ak.gov/planning/comprehensive-plan

"LAND USE GOAL 1: THIS PROJECT IS DESIGNED TO "INCREASE THE SUPPLY & DIVERSITY OF HOUSING WHILE PROTECTING COMMUNITY CHARACTER." (SEE "CONTINUED")

i. The Planning Commission may require special improvements. Are any of the following a component of the development plan, or are there suggestions on special improvements you would be willing to make? **Circle each answer and provide clarification on additional pages if Yes is selected.**

HE YES's: 'ERY OPEN TO IMPROVING HE PROJECT!

1. (Y)/N Special yards and spaces
2. Y/N Fences, walls and screening
3. Y/N Surfacing of parking areas
4. Y/N Street and road dedications and improvements (or bonds)
5. (Y)/N Control of points of vehicular ingress and egress
6. Y/N Special provisions on signs
7. (Y)/N Landscaping
8. (Y)/N Maintenance of the grounds, buildings, or structures
9. Y/N Control of noise, vibration, odors, lighting, heat, glare, water and solid waste pollution, dangerous materials, material and equipment storage, or other similar nuisances
10. Y/N Time for certain activities
11. Y/N A time period within which the proposed use shall be developed
12. Y/N A limit on total duration of use
13. (Y)/N Special dimensional requirements such as lot area, setbacks, building height
14. Y/N Other conditions deemed necessary to protect the interest of the community

**Parking Questions.**

1. How many parking spaces are required for your development? 12
   If more than 24 spaces are required see HCC 21.50.030(f)(1)(b)
2. How many spaces are shown on your parking plan? 12
3. Are you requesting any reductions? NO

I hereby certify that the above statements and other information submitted are true and accurate to the best of my knowledge, and that I, as applicant, have the following legal interest in the property:

***CIRCLE ONE:*** Owner of record  Lessee  Contract purchaser

Per HCC 21.71.020(a)(9), if the applicant is not the owner of the subject lot, the owner's signed authorization grants the applicant authority to:
(a) apply for the conditional use permit, and
(b) bind the owner to the terms of the conditional use permit, if granted.

Applicant signature: Paul Hueper  Date: 11-1-23

Property Owner signature: Paul Hueper  Date: 11-1-23

h) How does your project relate to the goals of the Comprehensive Plan?

1) "Land Use Goal 1:This project is designed to "increase the supply and diversity
of housing while projecting community character".
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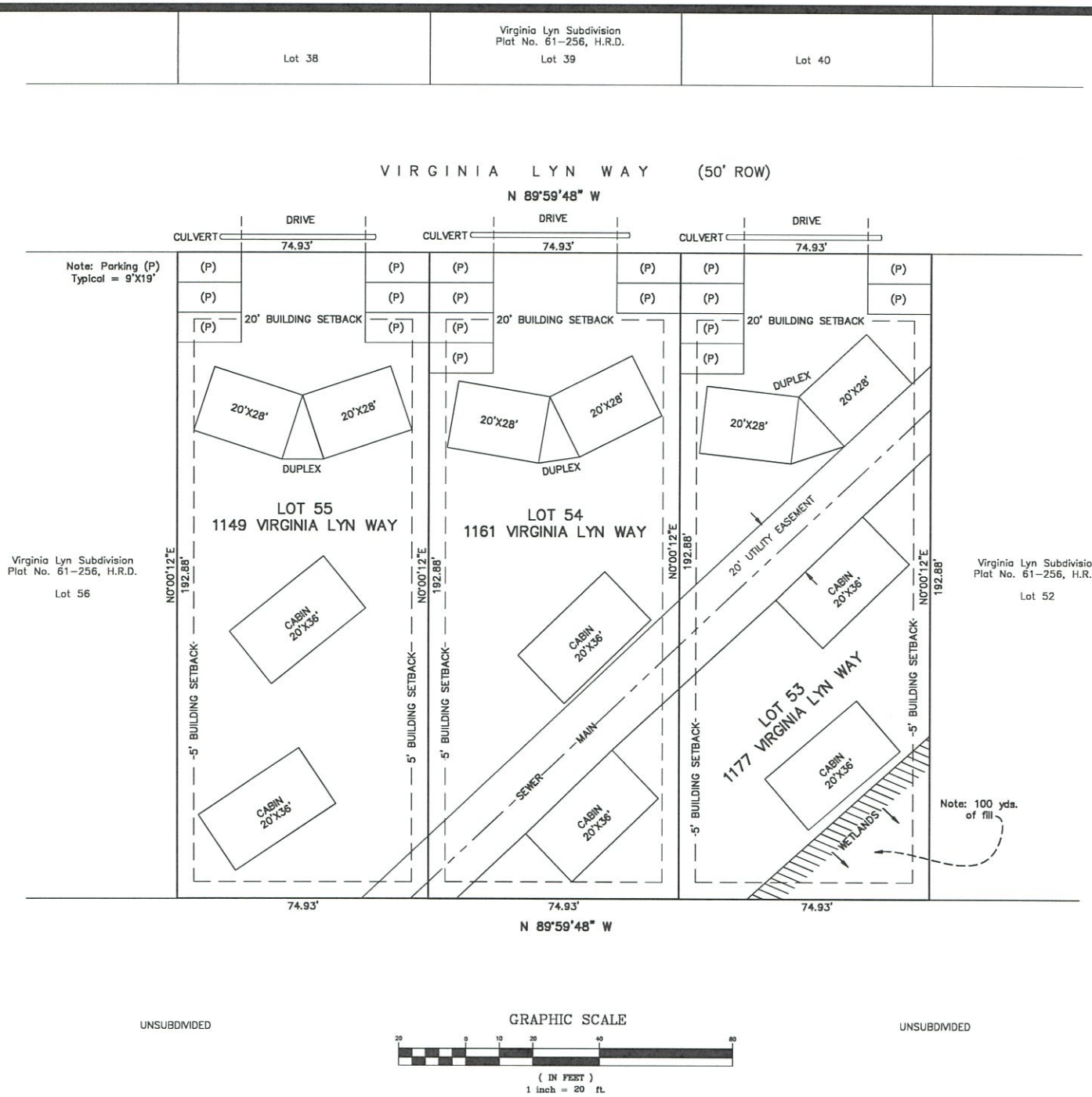
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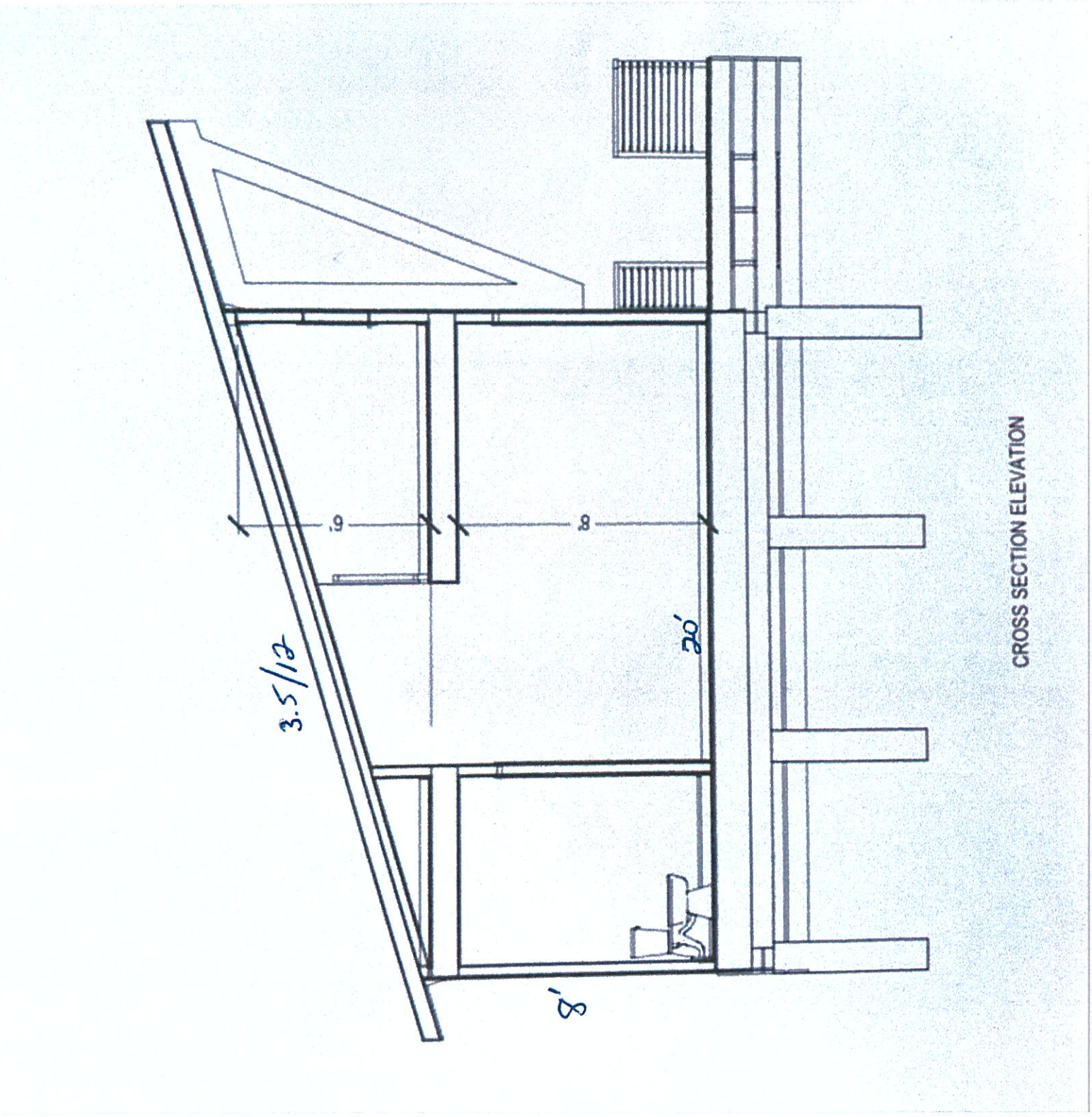
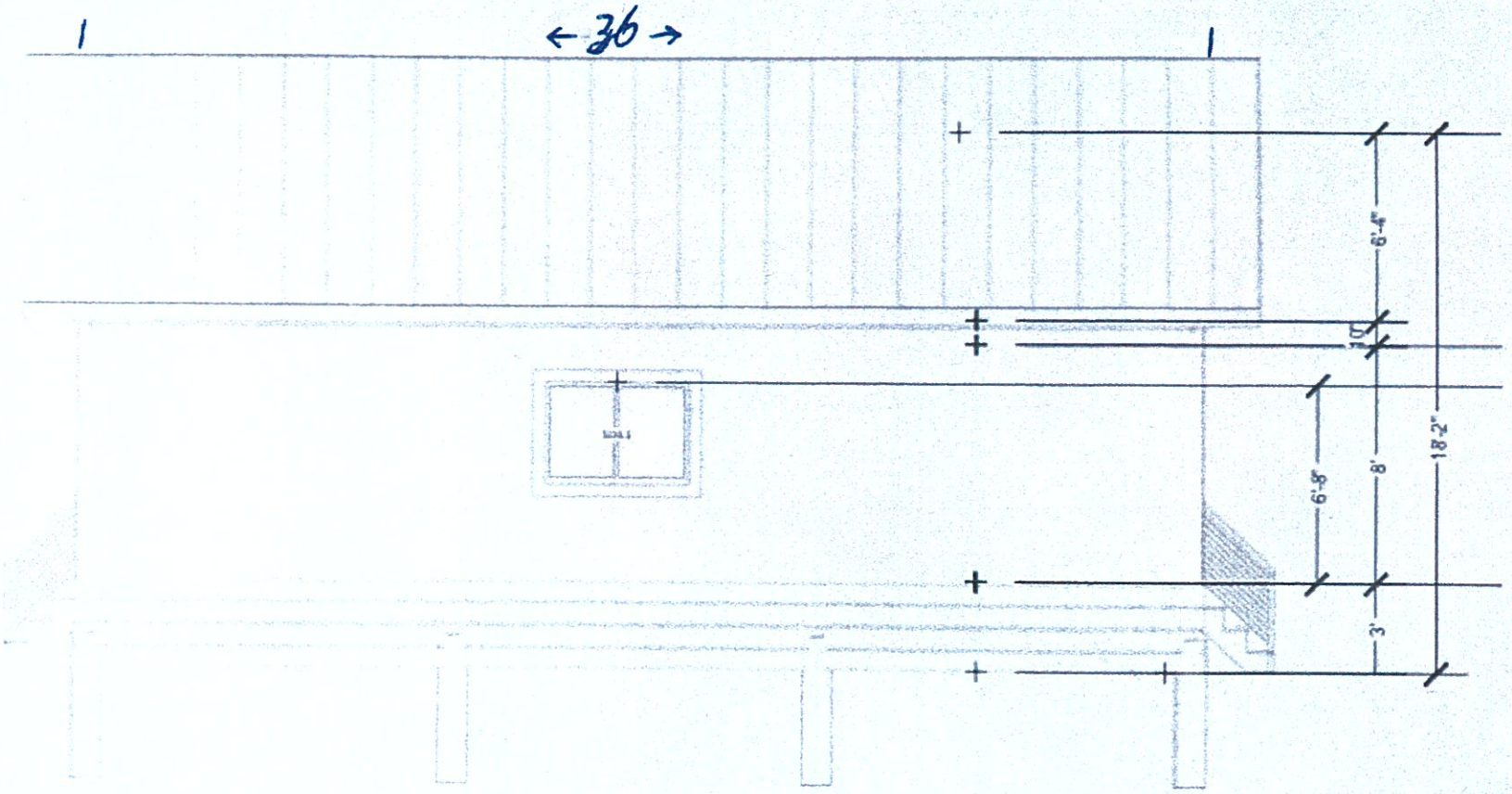
( IN FEET )
1 inch = 20 ft.




CROSS SECTION ELEVATION




EXTERIOR ELEVATION LEFT

November 1st, 2023

To: Homer Planning and Zoning, the Planning Commission,
and the City of Homer City Council

From: Paul Hueper

Regarding: Conditional Use Permits

After much introspection and personal debate within myself, I have decided it would be in my best interest at this point to apply for Conditional Use permits on the property that I am
wanting to develop off of Virginia Lynn Way. As many of you may know, I am disappointed in the sudden change in zoning for my property under the Urban Residential Zoning. I had applied with ample time and in good faith last spring, only to have the rug pulled out from underneath me a month ago with the sudden changes in zoning. Because I was told I was tentatively approved by a City Planner, I moved forward with a massive investment in the purchase of materials and having the lot and buildings professionally surveyed. I was told by someone on the City Council that it was fully understood by the mayor and the council that if someone had paid their permitting fees and were acting in due diligence, that they would receive their permits. My permits would have been issued in August, had not everyone but Ryan left the planning office. Everything was greatly delayed...and all of a sudden, I am left hanging without building permits.

OK, to have peace with my beloved city and my neighbors, I have chosen to go the route of going for conditional use permits. Please understand...I am doing this under duress, and
not by a choosing of my own. If things come together with obtaining conditional use permits, for the sake of peace I will absorb the carrying cost and interest of the project, which has been backed up due to a lack of permitting. My feelings are this- nobody wins with a legal battle. I'm sure we can all agree on this point! I love the City of Homer, and I am choosing to walk peaceably with everyone. But at the same time, I want it understood that I am not happy with the process that I am stuck in, nor do I surrender any of my legal rights by choosing to go in the direction of conditional use permits.

I really feel strongly that the City of Homer would appreciate the project I am proposing! If you know anything about the projects I have developed over the years, I only know how to build quality, very attractive buildings that have been well thought out and beautifully and artistically designed by my gifted wife Marilyn, working alongside of an architect. I will only build very high quality, super attractive small homes that I can be proud of in the long run. I don't compromise quality and will only build under the term "code"...industrywide standard accepted building practices. I am teaming with Jesse Lye from Palmer, a close friend of 20 years who has built multi-million dollar homes in Anchorage for many years...the quintessential professional.

So again, under the guise of peace and harmony, I am asking the City to grant Conditional Use Permits as per my request. Your jobs are not easy...and I honor and respect all of your contributions to the City of Homer.

Much Appreciated,

By: Paul Hueper
all Rights Reserved

Paul Hueper
November 1st, 2023

## ***Review of comprehensive plan Land Use Chapter for CUP 23—10 RF 12.6.23***

**GOAL 1:** Guiding Homer's growth with a focus on increasing the supply and diversity of housing, protect community character, encouraging infill, and helping minimize global impacts of public facilities including limiting greenhouse gas emissions.

**Objective A:** Promote a pattern of growth characterized by a concentrated mixed-use center, and a surrounding ring of moderate-to-high density residential and mixed-use areas with lower densities in outlying areas.

***Staff:*** This project supports Objective A pattern of growth and density, with moderate density on a small lot zoned Urban Residential.

**Objective B:** Develop clear and well-defined land use regulations and update the zoning map in support of the desired pattern of growth.

N/A – not associated with update of zoning map.

**Objective C:** Maintain high quality residential neighborhoods; promote housing choice by supporting a variety of dwelling options.

***Staff:*** The project consists of a duplex and two single-family dwellings, promoting housing choice and contributing to a quality neighborhood.

**Objective D:** Consider the regional and global impacts of development in Homer.

**Staff:** This project discourages sprawl with additional infill dwelling units at the scale and density of the Urban Residential zoning district and fits the moderate-density character planned just outside the city core.

**GOAL 2:** Maintain the quality of Homer's natural environment and scenic beauty.

**Objective A:** Complete and maintain a detailed "green infrastructure" map for the City of Homer and environs that presents an integrated functional system of environmental features on lands in both public and private ownership and use green infrastructure concepts in the review and approval of development projects.

N/A – not associated with mapping.

**Objective B:** Continue to review and refine development standards and require development practices that protect environmental functions.

N/A – not associated with creation of development standards.

**Objective C:** Provide extra protection for areas with highest environmental value or development constraints.

N/A – This area is under development, no change in impact is proposed.

**Objective D:** Collaborate with jurisdictions outside the City of Homer, as well as state and federal agencies, to ensure that environmental quality is maintained.

N/A – not associated with other jurisdictions.

**GOAL 3:** Encourage high-quality buildings and site development that complement Homer's beautiful natural setting.

**Objective A:** Create a clear, coordinated regulatory framework that guides development.

***Staff:*** Goal 3, objective A implementation items are all directives to review and consider new policies and are not directly applicable to CUP's.

**Objective B**: Encourage high quality site design and buildings.

***Staff:*** The proposal supports four new dwelling units that are required to submit a Zoning Permit and meet City requirements for site development.

**GOAL 4:** Support the development of a variety of well-defined commercial/business districts for a range of commercial purposes.

**Objective A:** Encourage a concentrated, pedestrian oriented, attractive business/commerce district in the Central Business District (CBD) following the guidelines found in the Town Center Development Plan.

***Staff:*** The proposal is not found in the CBD.

**Objective B:** Discourage strip development along the Sterling Highway and major collectors/thoroughfares.

***Staff:*** N/A – not associated with a commercial/business purpose.

**Finding:**

The proposal is not contrary to the applicable land use goals and objectives of the Comprehensive Plan.

**CITY OF HOMER**

**PUBLIC HEARING NOTICE - PLANNING COMMISSION MEETING**

Public hearings on the matters below are scheduled for Wednesday, December 6, 2023 at 6:30 p.m. during the Regular Planning Commission Meeting. Participation is available virtually via Zoom webinar or in-person at Homer City Hall.

**A request for Conditional Use Permit (CUP) 23-09, CUP 23-10, and CUP 23-11 per HCC 21.14.030 (i), More than one building containing a permitted principal use on a lot. The applicant proposes a duplex and two single dwelling units at each of the following addresses:**

**1149 Virginia Lynn Way**
**T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0610256 VIRGINIA LYN SUB LOT 55**

**1161 Virginia Lynn Way**
**T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0610256 VIRGINIA LYN SUB LOT 54**

**1177 Virginia Lynn Way**
**T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0610256 VIRGINIA LYN SUB LOT 53**

A copy of the proposals may be viewed at Homer City Hall, in the Clerk's Office Lobby on the lower level. In-person meeting participation is available in Cowles Council Chambers located downstairs at Homer City Hall, 491 E. Pioneer Ave., Homer, AK 99603.

To attend the meeting virtually, visit zoom.us and enter the Meeting ID & Passcode listed below. To attend the meeting by phone, dial any one of the following phone numbers and enter the Webinar ID & Passcode below, when prompted: 1-253-215-8782, 1-669-900-6833, (toll free) 888-788-0099 or 877-853-5247.

Meeting ID: 979 8816 0903
Passcode: 976062

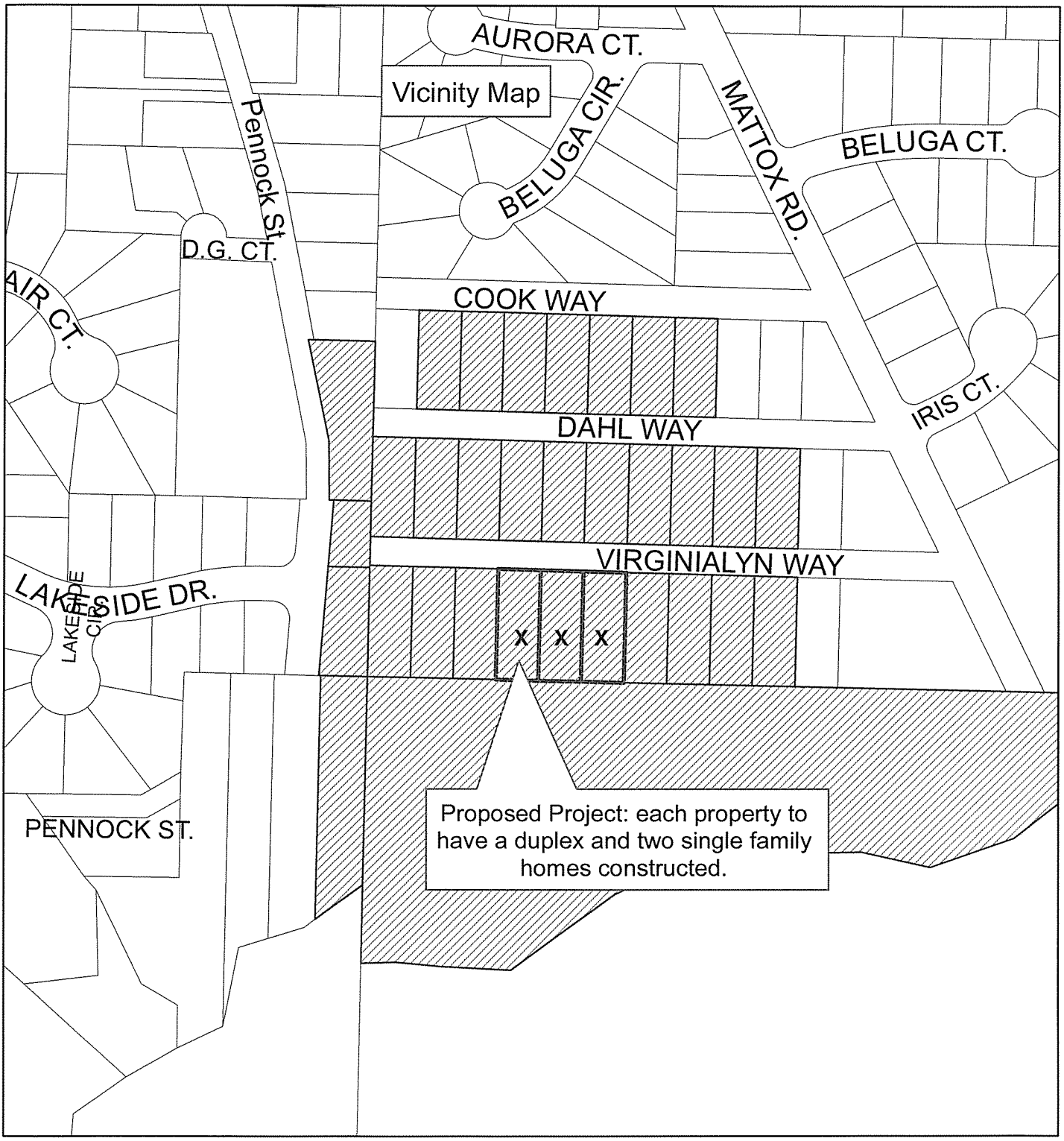
Additional information regarding this matter will be available by 5pm on the Friday before the meeting. This information will be posted to the City of Homer online calendar page for December 1, 2023 at *https://www.cityofhomer-ak.gov/calendar*. It will also be available at the Planning and Zoning Office at Homer City Hall and at the Homer Public Library.

Written comments can be emailed to the Planning and Zoning Office at the address below, mailed to Homer City Hall at the address above, or placed in the Homer City Hall drop box at any time. Written comments must be received by 4pm on the day of the meeting.

If you have questions, contact Julie Engebretsen at the Planning and Zoning Office. Phone: (907) 435-3119, email: planning@ci.homer.ak.us or in-person at Homer City Hall.

**NOTICE TO BE SENT TO PROPERTY OWNERS WITHIN 300 FEET OF PROPERTY**

**VICINITY MAP ON REVERSE**




CITY OF HOMER - ALASKA - MARCH 31, 1964

*City of Homer*
*Planning and Zoning Department*
November 16, 2023

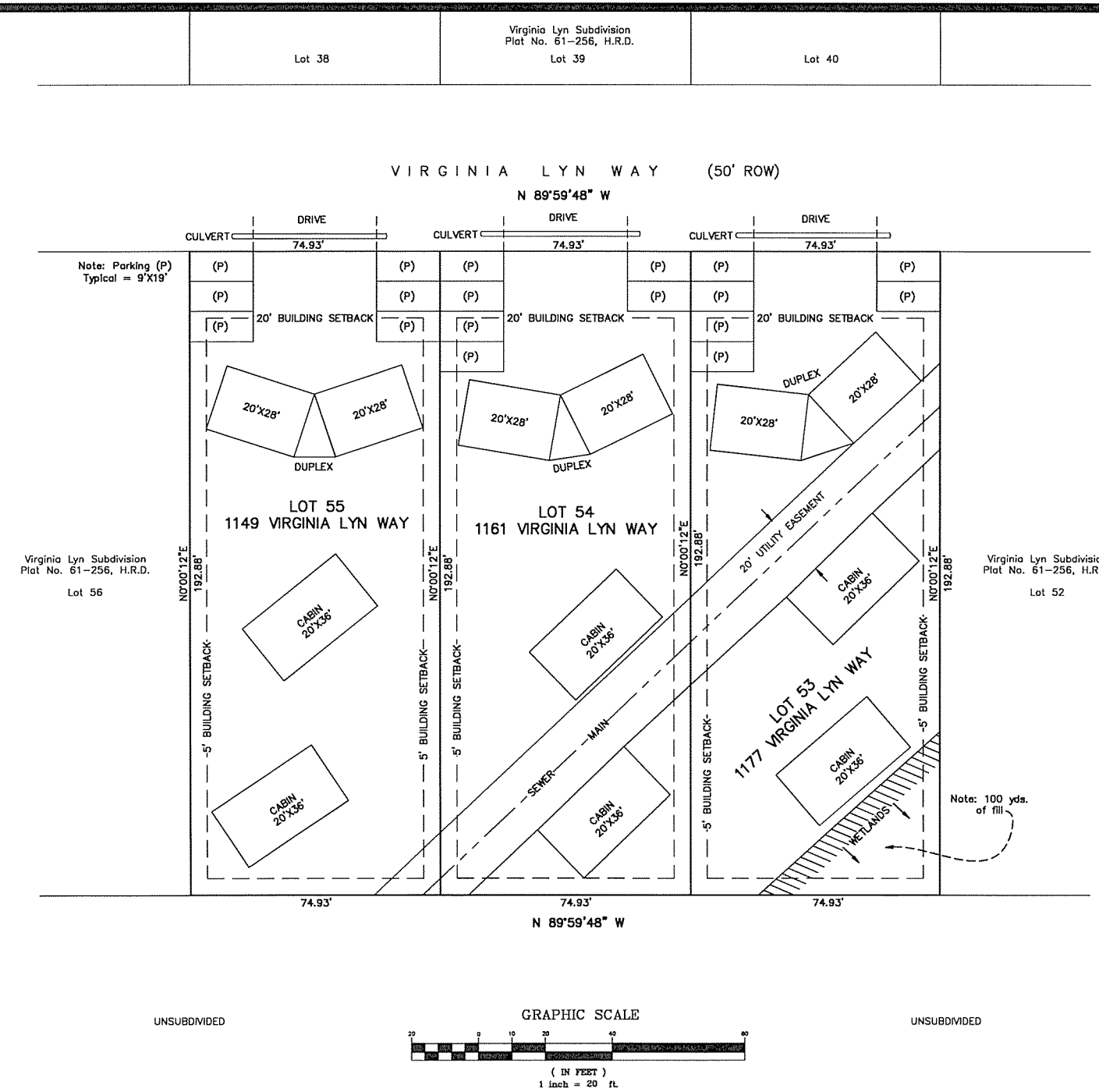
**Request for Conditional Use Permits (CUP) 2023-09, 2023-10, 2023-11**

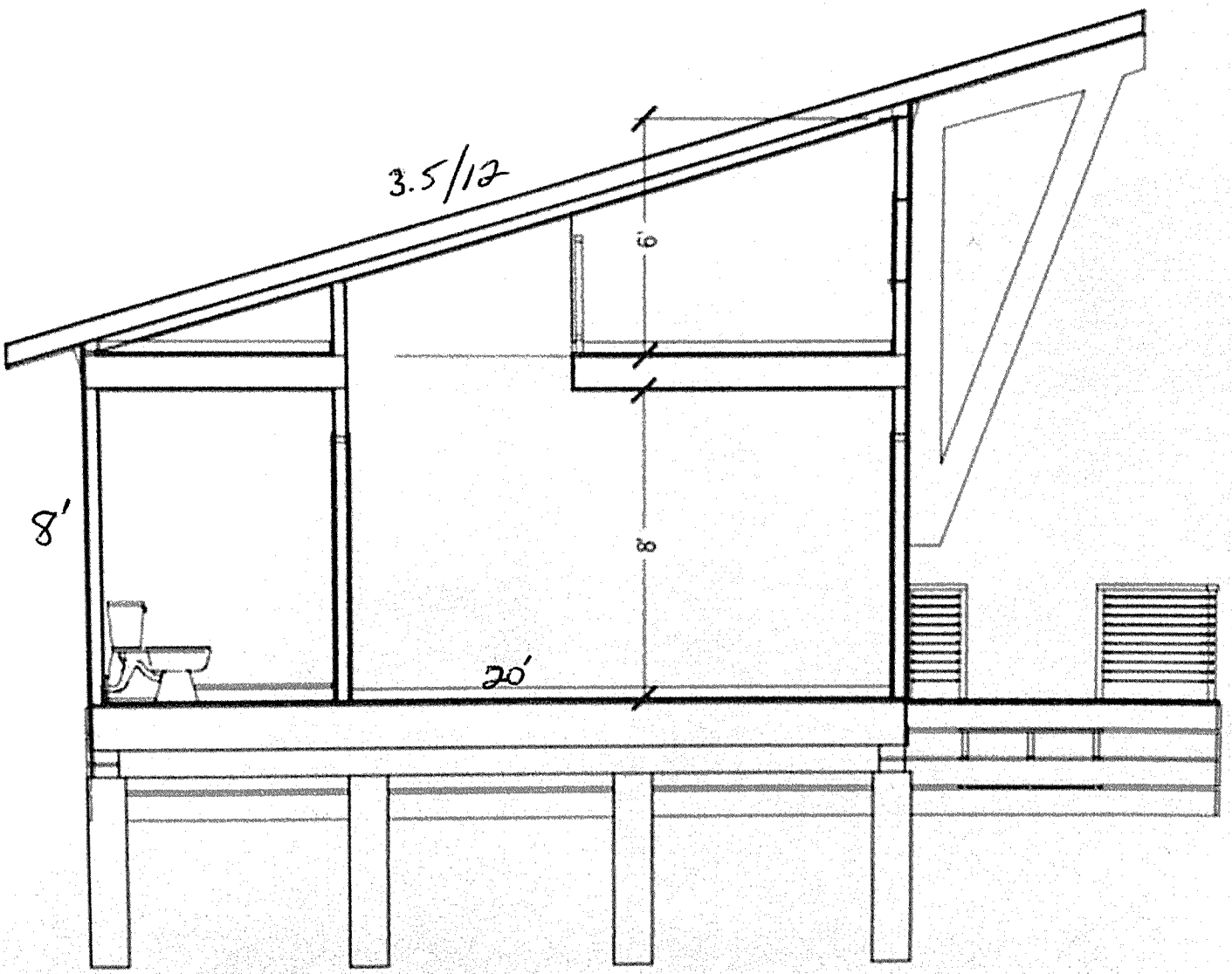
Properties within 300 feet are marked and property owners notified.

0 150 300 600 Feet

N

*Disclaimer:*
*It is expressly understood the City of Homer, its council, board, departments, employees and agents are not responsible for any errors or omissions contained herein, or deductions, interpretations or conclusions drawn therefrom.*


Lot 38
Virginia Lyn Subdivision
Plat No. 61-256, H.R.D.
Lot 39
Lot 40
VIRGINIA LYN WAY (50' ROW)
N 89°59'48" W
DRIVE
CULVERT
74.93'
Note: Parking (P)
Typical = 9'X19'
(P)
20' BUILDING SETBACK
20'X28'
DUPLEX
LOT 55
1149 VIRGINIA LYN WAY
LOT 54
1161 VIRGINIA LYN WAY
LOT 53
1177 VIRGINIA LYN WAY
CABIN
20'X36'
20' UTILITY EASEMENT
SEWER MAIN
N0°00'12"E
192.88'
5' BUILDING SETBACK
Virginia Lyn Subdivision
Plat No. 61-256, H.R.D.
Lot 56
Virginia Lyn Subdivision
Plat No. 61-256, H.R.D.
Lot 52
WETLANDS
Note: 100 yds.
of fill
74.93'
N 89°59'48" W
UNSUBDIVIDED
UNSUBDIVIDED
GRAPHIC SCALE
20 0 10 20 40 80
( IN FEET )
1 inch = 20 ft.
589
NORTH




CROSS SECTION ELEVATION

**Vicinity Map, Google Earth**

City of Homer
www.cityofhomer-ak.gov

Planning
491 East Pioneer Avenue
Homer, Alaska 99603
Planning@ci.homer.ak.us
(p) 907-235-3106
(f) 907-235-3118

**Staff Report 23-065**

TO: Homer Planning Commission
FROM: Ryan Foster, AICP, City Planner
DATE: December 6, 2023
SUBJECT: Conditional Use Permit (CUP) 23-11

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**Synopsis** The applicant requests a Conditional Use Permit (CUP) per HCC 21.14.030 (i), More than one building containing a permitted principal use on a lot. The applicant proposes a duplex and two single dwelling units at 1177 Virginia Lynn Way.

| | |
|---|---|
| Applicant: | Paul Hueper<br>3901 Pennock Street<br>Homer, AK 99603 |
| Location: | 1177 Virginia Lynn Way |
| Legal Description: | T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0610256 VIRGINIA LYN SUB LOT 53 |
| Parcel ID: | 17913306 |
| Size of Existing Lot: | 0.34 acres |
| Zoning Designation: | Urban Residential District |
| Existing Land Use: | Vacant |
| Surrounding Land Use: | North: Residential<br>South: Vacant<br>East: Vacant<br>West: Vacant |
| Comprehensive Plan: | Chapter 4, Goal 1, Objective A: Promote a pattern of growth characterized by a concentrated mixed-use center, and a surrounding ring of moderate-to-high density residential and mixed-use areas with lower densities in outlying areas. |
| Wetland Status: | KWF Wetlands Assessment Discharge Slope on the property. |
| Flood Plain Status: | Not in a floodplain. |
| BCWPD: | Not within the Bridge Creek Watershed Protection District |
| Utilities: | Public utilities, water and sewer, do service the site. |
| Public Notice: | Notice was sent to 27 property owners of 32 parcels as shown on the KPB tax assessor rolls. |

**ANALYSIS:** The applicant proposes a duplex and two single dwelling units at 1177 Virginia Lynn Way.

PARKING: The applicant is required to provide 2 spaces per dwelling unit for a total of 8 spaces. If the units are one-bedroom the number of spaces required may be reduced by four spaces. The six required parking spaces are identified on the draft site plan for a duplex and two one-bedroom dwelling units.

DENSITY: The minimum lot size for single and duplex dwelling structures shall be a minimum of 7,500 square feet. The lot size is approximately 14,810 square feet. The minimum lot size is met.

**The criteria for granting a Conditional Use Permit is set forth in HCC 21.71.030, Review criteria, and establishes the following conditions:**

a. The applicable code authorizes each proposed use and structure by conditional use permit in that zoning district;

> **Analysis:** The following uses may be permitted in the Urban Residential District when authorized by conditional use permit issued in accordance with Chapter 21.71 HCC:
>
> HCC 21.14.030 (i.) More than one building containing a permitted principal use on a lot
>
> **Finding 1:** The structures and uses are authorized by the applicable code.

b. The proposed use(s) and structure(s) are compatible with the purpose of the zoning district in which the lot is located.

> HCC 21.14.010 Purpose. The Urban Residential District is primarily intended to provide a sound environment for medium-density residential occupancy including single-family, duplex and low-rise multiple-family dwellings of various types and designs and other compatible uses as provided in this chapter.
>
> **Applicant:** Urban residential was meant for higher densities of occupied living spaces…This design allows for higher densities, while maintaining a lot of open space.
>
> **Analysis:** The duplex and two single dwelling units are permitted uses with a conditional use permit per HCC 21.14.030 Conditional uses and structures. These uses are compatible with the Urban Residential Zoning District.
>
> **Finding 2:** The proposed structures and uses are compatible with the purpose of the district.

c. The value of the adjoining property will not be negatively affected greater than that anticipated from other permitted or conditionally permitted uses in this district.

> **Applicant:** Because of the house designs superior quality, available open space, and proposed layout… Overall, this design should improve property values.

**Analysis:** Many uses in the Urban Residential district have greater negative impacts than a duplex and two single dwelling units. Other permitted uses such as parks and playgrounds, home occupations, or schools, would have a similar impact on nearby property values.

**Finding 3:** A duplex and two single dwelling units are not expected to negatively impact the adjoining properties greater than other permitted or conditional uses.

d. The proposal is compatible with existing uses of surrounding land.

**Applicant:** These stylish small homes will flow nicely with the quality homes in the neighborhood.

**Analysis:** Existing uses of the surrounding land are currently residential to the north and west, and vacant lots to the south and east. All surrounding lots are zoned Urban Residential and roughly equal in shape and size. Residential uses are in character with the surrounding land uses.

**Finding 4:** The proposal is compatible with existing uses of surrounding land.

e. Public services and facilities are or will be, prior to occupancy, adequate to serve the proposed use and structure.

**Applicant:** Yes - easily.

**Analysis:** City sewer and water services are already provided to the property.

**Finding 5:** Water, sewer, and fire services are adequate to serve the proposed duplex and two single unit dwellings.

f. Considering harmony in scale, bulk, coverage and density, generation of traffic, the nature and intensity of the proposed use, and other relevant effects, the proposal will not cause undue harmful effect upon desirable neighborhood character.

**Applicant:** The total square footage of living space (with no garages) at 2560 sf should flow nicely with the neighborhood…Especially considering the zoning is urban residential. No – Virginia Lynn Way and Pennock Street can easily handle the volume of traffic.

**Analysis:** The project corresponds to the purpose statement, as it provides residential development at a density allowable in code. A duplex and two single dwelling units should not create harmful effects on neighborhood character.

**Finding 6:** The Commission finds the proposal will not cause undue harmful effect upon desirable neighborhood character.

g. The proposal will not be unduly detrimental to the health, safety or welfare of the surrounding area or the city as a whole.

**Applicant:** No – Not at all! Just the opposite…More housing means more affordable housing in Homer, which is desperately needed.

**Analysis:** The proposal does not introduce a use or a scale that is not reasonably anticipated by the rules, regulations, and infrastructure developed to service such a proposal.

**Finding 7:** The proposal will not be unduly detrimental to the health, safety or welfare of the surrounding area and the city as a whole when all applicable standards are met as required by city code.

h. The proposal does or will comply with the applicable regulations and conditions specified in this title for such use.

**Analysis:** The applicant is not requesting any exception to code. The project is able to comply with the applicable regulations and conditions when gaining a CUP and subsequent zoning permit for construction. The applicant will need to submit a U.S. Army Corps of Engineers Permit with the Zoning Permit Application due to the Discharge Slope wetlands located on the property.

**Finding 8:** The proposal will comply with applicable regulations and conditions specified in Title 21 when gaining the required permits.

**Condition 1:** Submit a U.S. Army Corps of Engineers Permit with the Zoning Permit Application.

i. The proposal is not contrary to the applicable land use goals and objectives of the Comprehensive Plan.

**Applicant:**

1)''Land Use Goal 1: This project is designed to "increase the supply and diversity of housing while projecting community character''.

2) The intent of Homer's Comprehensive Plan is to develop more ''compact developments in a way that enables the private sector to develop denser housing, particularly infill housing THAT IS ATTRACTIVE, WELL BUILT, AND FITS WELL WITHIN THE EXISTING HOMES''.

3) "More diverse housing areas and higher density mixed use residential".

4) "Accomodate income and lifestyle diversity in Home”.

5) "Create balanced development and project environmentally important areas".

6) Land Use Goal 6: 11Support Community efforts to establish affordable housing".

7) Summary, paragraph 6: "Maintaining a stock of QUALITY HOUSING for middle and low income housing will be important for Homer's future, particularly for housing YOUNGER FAMILIES within the City" .

All of these points were pulled directly off of the Comprehensive Plan ... and have been the plan of the project right from the start. These points resonate with us!

The Comprehensive Plan matches very well with the intent and plan of this development:

1) A more compact developmejnt

2) Denser housing that is ATTRACTIVE ... yet having plenty of open space

3) WELL BUILT

4) Fits well with existing homes in the area

5) The style, design, and size of these homes fits well for younger families

**Analysis:** Goals of the Land Use Chapter of the Homer Comprehensive Plan include increasing the diversity of housing, encouraging infill, and supporting housing choice by supporting a variety of dwelling options (Chapter 4, Objectives A & C). This proposal promotes housing choice at a density that is appropriate for its proposed use.

**Finding 9:** The proposal is not contrary to the applicable land use goals and objects of the Comprehensive Plan. The proposal aligns with Chapter 4, Goal 1, Objectives A and C and no evidence has been found that it is contrary to the applicable land use goals and objects of the Comprehensive Plan.

j. The proposal will comply with the applicable provisions of the Community Design Manual (CDM).

**Analysis:** Chapter 3, Outdoor Lighting is applicable to the Rural Residential District.

**Condition 2:** Outdoor lighting must be down lit per HCC 21.59.030 and the CDM.

**Finding 10:** Project will comply with the applicable provisions of the CDM.

**HCC 21.71.040(b).** b. In approving a conditional use, the Commission may impose such conditions on the use as may be deemed necessary to ensure the proposal does and will continue to satisfy the applicable review criteria. Such conditions may include, but are not limited to, one or more of the following:

**1. Special yards and spaces**: No specific conditions deemed necessary.
**2. Fences and walls:** No specific conditions deemed necessary.
**3. Surfacing of parking areas:** No specific conditions deemed necessary.
**4. Street and road dedications and improvements:** No specific conditions deemed necessary.

**5. Control of points of vehicular ingress and egress:** No specific conditions deemed necessary.
**6. Special provisions on signs:** No specific conditions deemed necessary.
**7. Landscaping:** No specific conditions deemed necessary.
**8. Maintenance of the grounds, building, or structures:** No specific conditions deemed necessary.
**9. Control of noise, vibration, odors or other similar nuisances**: No specific conditions deemed necessary.
**10. Limitation of time for certain activities:** No specific conditions deemed necessary.
**11. A time period within which the proposed use shall be developed:** No specific conditions deemed necessary.
**12. A limit on total duration of use:** No specific conditions deemed necessary.
**13. More stringent dimensional requirements,** such as lot area or dimensions, setbacks, and building height limitations. Dimensional requirements may be made more lenient by conditional use permit only when such relaxation is authorized by other provisions of the zoning code. Dimensional requirements may not be altered by conditional use permit when and to the extent other provisions of the zoning code expressly prohibit such alterations by conditional use permit.
**14. Other conditions necessary** to protect the interests of the community and surrounding area, or to protect the health, safety, or welfare of persons residing or working in the vicinity of the subject lot.

**PUBLIC WORKS COMMENTS:** None

**FIRE DEPARTMENT COMMENTS:** None

**PUBLIC COMMENTS:** None

**STAFF COMMENTS/RECOMMENDATIONS:**
Planning Commission approve CUP 23-11, **Staff Report 23-065** with findings 1-10 and the following conditions.

**Condition 1:** Submit a U.S. Army Corps of Engineers Permit with the Zoning Permit Application.

**Condition 2:** Outdoor lighting must be down lit per HCC 21.59.030 and the CDM.

**Attachments**
Application
Compliance Review of Homer Comprehensive Plan
Public Notice
Aerial Map

# City of Homer

www.cityofhomer-ak.gov

Planning
491 East Pioneer Avenue
Homer, Alaska 99603
Planning@ci.homer.ak.us
(p) 907-235-3106
(f) 907-235-3118


**Applicant**

Name: PAUL HUEPER Phone No.: 907-299-1860

Address: 3901 PENNOCK ST. Email: AKWF@GM.ME

**Property Owner** (if different than the applicant):

Name: SAME Phone No.: _____

Address: SAME Email: _____

**PROPERTY INFORMATION:**

Address: 1177 VIRGINIA LYNN WAY Lot Size: .33 acres KPB Tax ID # 179-133-06

Legal Description of Property: VIRGINIA LYNN SUB LOT 53

*For staff use:*

Date: _____ Fee submittal: Amount _____

Received by: _____ Date application accepted as complete _____

Planning Commission Public Hearing Date: _____

## Conditional Use Permit Application Requirements:

1. Site Plan - drawn to a scale of not less than 1" = 20' which shows existing and proposed structures, clearing, fill, vegetation and drainage
2. Right of Way Access Plan
3. Parking Plan
4. A map showing neighboring lots and a narrative description of the existing uses of all neighboring lots. (Planning staff can provide a blank map.)
5. This completed application form
6. Payment of application fee (nonrefundable)
7. Any other information required by Code or staff to review your project

**Circle Your Zoning District**

| | RR | UR | RO | CBD | TCD | GBD | GC1 | GC2 | MC | MI | EEMU | BCWPD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Level 1 Site Plan | x | x | x | | | x | | | x | | | x |
| Level 1 ROW Access Plan | x | x | | | | | | | x | | | |
| Level 1 Site Development Standards | x | x | | | | | | | | | | |
| Level 1 Lighting | | | x | x | x | x | x | x | x | x | x | |
| Level 2 Site Plan | | | x | x | x | | x | x | | x | x | |
| Level 2 ROW Access Plan | | | x | x | x | | x | x | | x | x | |
| Level 2 Site Development Standards | | | x* | x | x | x | x | x | | | x | |
| Level 3 Site Development Standards | | | | | | | | | x | x | | |
| Level 3 ROW Access Plan | | | | | | x | | | | | | |
| DAP/SWP questionnaire | | | | x | x | x | x | x | | | x | |

**Circle applicable additional permits. Planning staff can assist with these questions.**

Y/(N) Are you building or remodeling a commercial structure, or multifamily building with more than three (3) apartments? If yes, Fire Marshal Certification is required.
Status: _____

Y/(N) Will development trigger a Development Activity Plan?
Application Status: _____

Y/(N) Will development trigger a Storm Water Plan?
Application Status: _____

(Y)/N Does the site contain wetlands? If yes, Army Corps of Engineers Wetlands Permit is required. Application Status: TINY SPOT - 1000 SF / NO IMPACT / NO REQUIRED PERMIT

Y/(N) Is development in a floodplain? If yes, a Flood Development Permit is required.

Y/(N) Does the project trigger a Community Design Manual review?
If yes, complete the design review application form. The Community Design Manual is online at: https://www.cityofhomer-ak.gov/planning/community-design-manual

Y/(N) Do the project require a traffic impact analysis?

Y/(N) Are there any nonconforming uses or structures on the property?

~~Y/N~~ N/A Have nonconforming uses or structures on the property been formally accepted by the Homer Advisory Planning Commission?

(Y)/N Does the site have a State or City driveway permit? Status: YES / COMPLETED

(Y)/N Does the site have active City water and sewer permits? Status: YES / COMPLETED

**Conditional Use Permit Application Questions.** Use additional sheets if necessary.

1. Currently, how is the property used? Are there buildings on the property? How many square feet? Uses within the building(s)?

THE SITE IS RAW LAND WITH NO COMPLETED BUILDINGS.

2. What is the proposed use of the property? How do you intend to develop the property? Attach additional sheet if needed. Provide as much information as possible.

FOUR VERY SMALL HOMES (720 SF. EACH), INCLUDING TWO INDIVIDUAL HOMES AND ONE DUPLEX (2 UNITS, 560 SF EACH). TOTAL - 2560 SF. LIVING SPACE. THERE WILL BE OVER TWICE THE REQUIRED OPEN SPACE, LEFT OVER AFTER BUILDING.

**Conditional Use Permit Review Criteria Information.** Use additional sheets if necessary. Per HCC 21.71.030 Review Criteria, the applicant must produce evidence sufficient to enable meaningful review of the application. Unless exceptions or other criteria are stated elsewhere in the Code, the application will be reviewed under these criteria:

a. What code citation authorizes each proposed use and structure by conditional use permit?
21.14.030.I - MORE THAN ONE BUILDING CONTAING A PERMITTED PRINCIPAL USE.

b. Describe how the proposed uses(s) and structures(s) are compatible with the purpose of the zoning district.
URBAN RESIDENTIAL WAS MEANT FOR HIGHER DENSITIES OF OCCUPIED LIVING SPACES... THIS DESIGN ALLOWS FOR HIGHER DENSITIES, WHILE MAINTAING A LOT OF OPEN SPACE.

c. How will your proposed project affect adjoining property values?
BECAUSE OF THE HOUSE DESIGNS' SUPERIOR QUALITY, AVAILABLE OPEN SPACE, AND PROPOSED LAYOUT... OVERALL, THIS DESIGN SHOULD IMPROVE PROPERTY VALUES

d. How is your proposal compatible with existing uses of the surrounding land?
THESE STYLISH, SMALL HOMES WILL FLOW NICELY WITH THE QUALITY HOMES IN THE NEIGHBORHOOD.

e. Are/will public services adequate to serve the proposed uses and structures?
YES - EASILY.

f. How will the development affect the harmony in scale, bulk, coverage and density upon the desirable neighborhood character, and will the generation of traffic and the capacity of surrounding streets and roads be negatively affected?
THE TOTAL SQUARE FOOTAGE OF LIVING SPACE (WITH NO GARAGES) AT 2560 SF. SHOULD FLOW NICELY WITH THE NEIGHBORHOOD... ESPECIALLY CONSIDERING THE ZONING IS URBAN RESIDENTIAL.
NO - VIRGINIA LYNN WAY AND PENNOCK STREET CAN EASILY HANDLE THE VOLUME OF TRAFFIC.

g. Will your proposal be detrimental to the health, safety or welfare of the surrounding area or the city as a whole?

NO- NOT AT ALL! JUST THE OPPOSITE... MORE HOUSING MEANS MORE AFFORDABLE HOUSING IN HOMER, WHICH IS DESPERATLY NEEDED.

h. How does your project relate to the goals of the Comprehensive Plan? Find the Comprehensive Plan on the City's website:
www.cityofhomer-ak.gov/planning/comprehensive-plan

LAND USE GOAL 1: THIS PROJECT IS DESIGNED TO "INCREASE THE SUPPLY & DIVERSITY OF HOUSING WHILE PROTECTING COMMUNITY CHARACTER." (SEE "CONTINUED")

i. The Planning Commission may require special improvements. Are any of the following a component of the development plan, or are there suggestions on special improvements you would be willing to make? **Circle each answer and provide clarification on additional pages if Yes is selected.**

HE YES's: ERY OPEN O IMPROVING HE PROJECT!

1. (Y)/N Special yards and spaces
2. Y/N Fences, walls and screening
3. Y/N Surfacing of parking areas
4. Y/N Street and road dedications and improvements (or bonds)
5. (Y)/N Control of points of vehicular ingress and egress
6. Y/N Special provisions on signs
7. (Y)/N Landscaping
8. (Y)/N Maintenance of the grounds, buildings, or structures
9. Y/N Control of noise, vibration, odors, lighting, heat, glare, water and solid waste pollution, dangerous materials, material and equipment storage, or other similar nuisances
10. Y/N Time for certain activities
11. Y/N A time period within which the proposed use shall be developed
12. Y/N A limit on total duration of use
13. (Y)/N Special dimensional requirements such as lot area, setbacks, building height
14. Y/N Other conditions deemed necessary to protect the interest of the community

**Parking Questions.**

1. How many parking spaces are required for your development? 12
   If more than 24 spaces are required see HCC 21.50.030(f)(1)(b)
2. How many spaces are shown on your parking plan? 12
3. Are you requesting any reductions? NO

I hereby certify that the above statements and other information submitted are true and accurate to the best of my knowledge, and that I, as applicant, have the following legal interest in the property:

***CIRCLE ONE:*** Owner of record  Lessee  Contract purchaser

Per HCC 21.71.020(a)(9), if the applicant is not the owner of the subject lot, the owner's signed authorization grants the applicant authority to:
(a) apply for the conditional use permit, and
(b) bind the owner to the terms of the conditional use permit, if granted.

Applicant signature: _____ Date: 11-1-23

Property Owner signature: _____ Date: 11-1-23

h) How does your project relate to the goals of the Comprehensive Plan?

1) "Land Use Goal 1:This project is designed to "increase the supply and diversity
of housing while projecting community character".
2) The intent of Homer's Comprehensive Plan is to develop more "compact
developments in a way that enables the private sector to develop denser housing,
particularly infill housing THAT IS ATTRACTIVE, WELL BUILT, AND FITS WELL
WITHIN THE EXISTING HOMES".
3) "More diverse housing areas and higher density mixed use residential".
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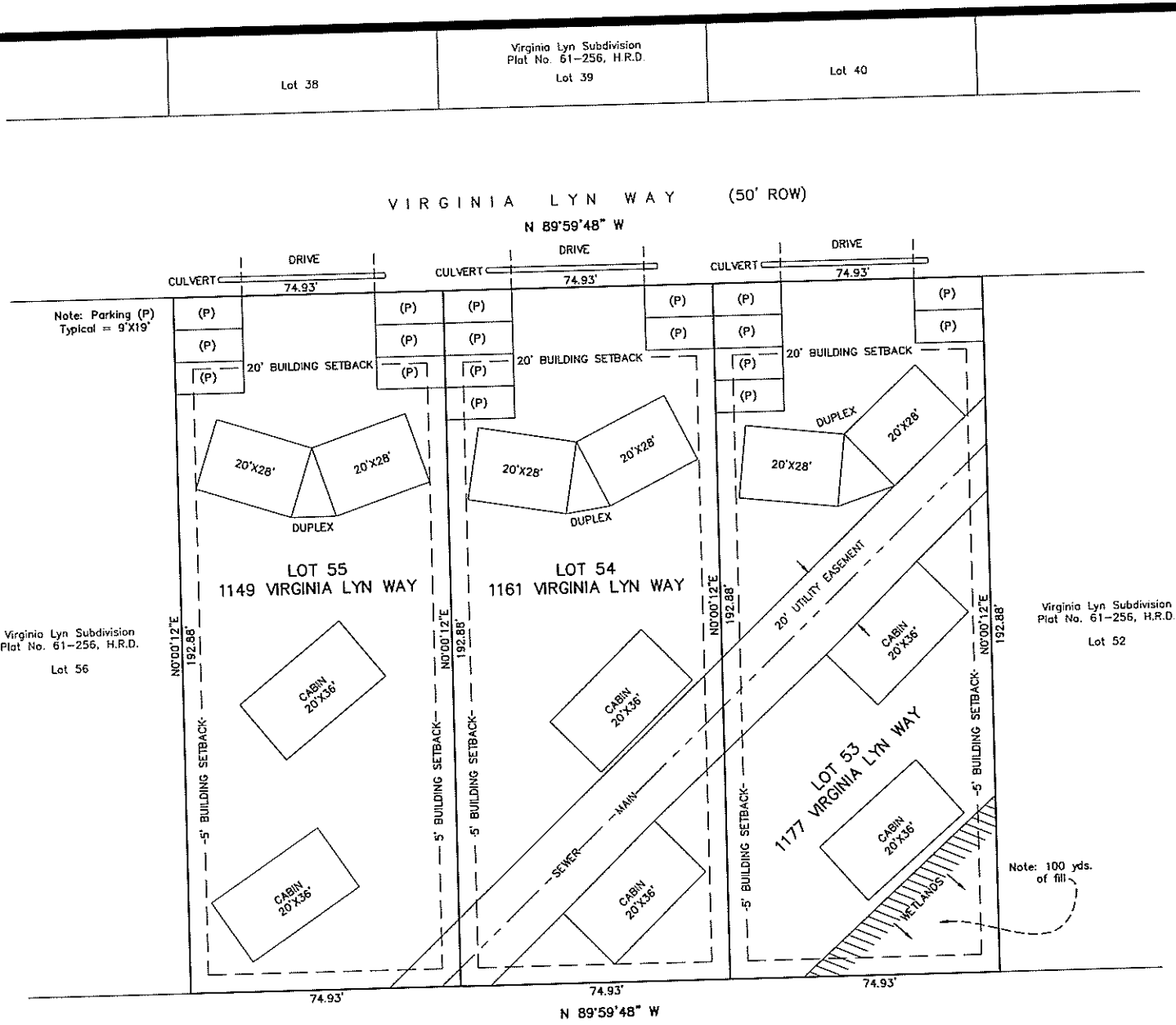
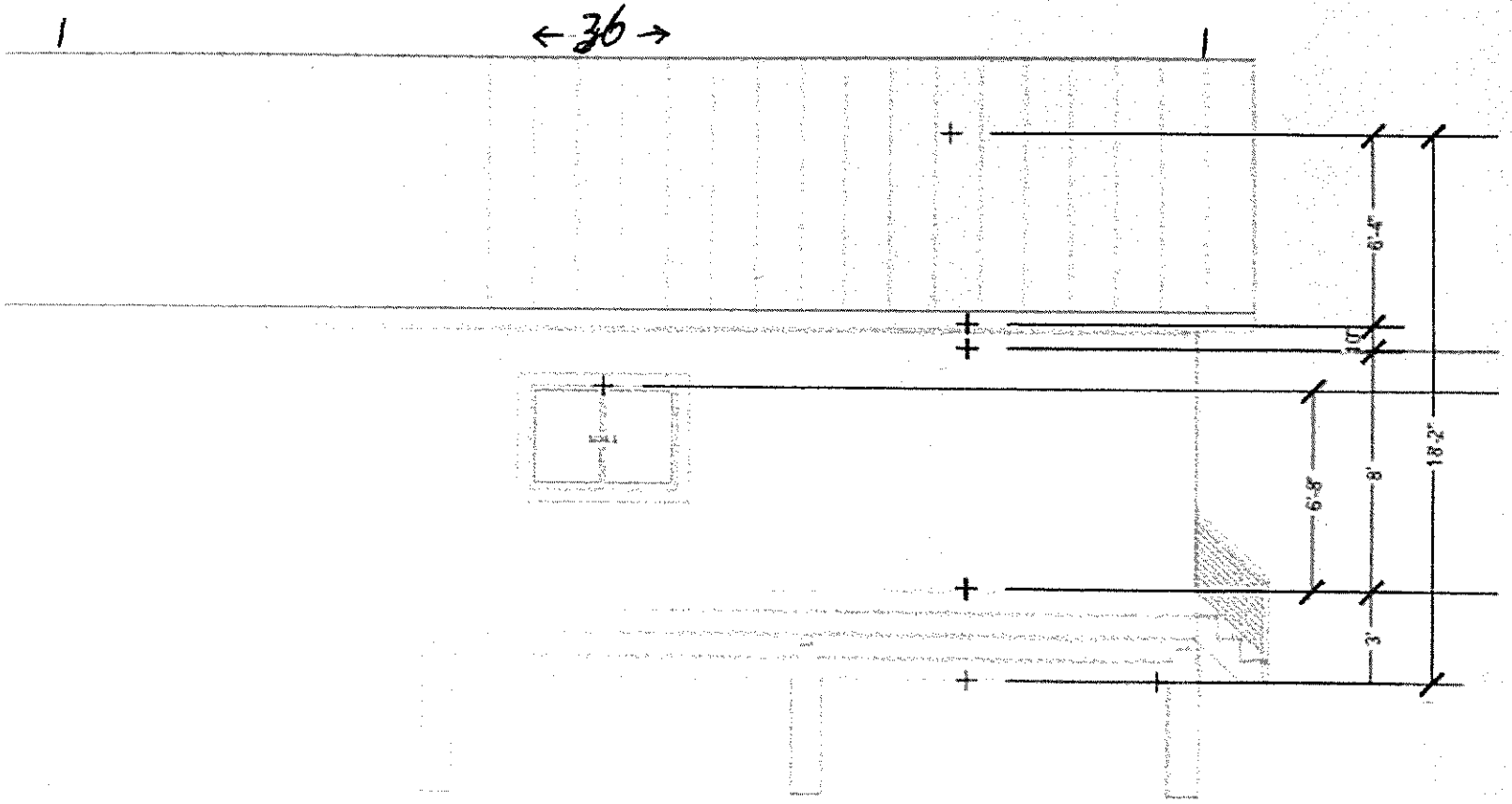
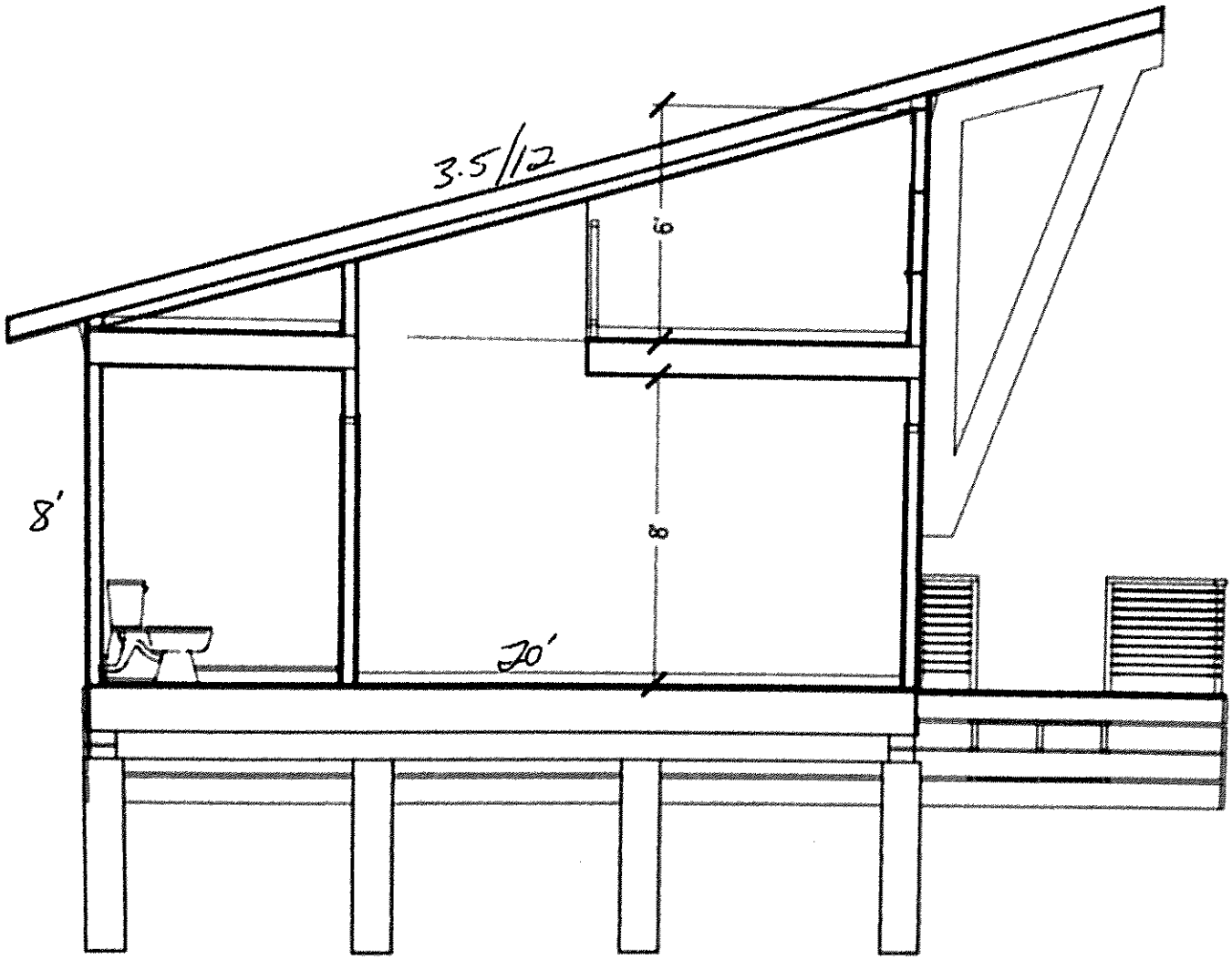
4) Fits well with existing homes in the area
5) The style, design, and size of these homes fits well for younger families


Lot 38
Virginia Lyn Subdivision
Plat No. 61-256, H.R.D.
Lot 39
Lot 40
VIRGINIA LYN WAY (50' ROW)
N 89°59'48" W
DRIVE
CULVERT
74.93'
Note: Parking (P)
Typical = 9'X19'
(P)
20' BUILDING SETBACK
20'X28'
DUPLEX
LOT 55
1149 VIRGINIA LYN WAY
LOT 54
1161 VIRGINIA LYN WAY
LOT 53
1177 VIRGINIA LYN WAY
CABIN
20'X36'
20' UTILITY EASEMENT
SEWER MAIN
N0°00'12"E
192.88'
-5' BUILDING SETBACK-
5' BUILDING SETBACK
Virginia Lyn Subdivision
Plat No. 61-256, H.R.D.
Lot 56
Virginia Lyn Subdivision
Plat No. 61-256, H.R.D.
Lot 52
Note: 100 yds.
of fill
WETLANDS
74.93'
N 89°59'48" W
UNSUBDIVIDED
UNSUBDIVIDED
GRAPHIC SCALE
( IN FEET )
1 inch = 20 ft.
604
NORTH




EXTERIOR ELEVATION LEFT

605




CROSS SECTION ELEVATION

November 1st, 2023

To: Homer Planning and Zoning, the Planning Commission,
and the City of Homer City Council

From: Paul Hueper

Regarding: Conditional Use Permits

After much introspection and personal debate within myself, I have decided it would be in my best interest at this point to apply for Conditional Use permits on the property that I am
wanting to develop off of Virginia Lynn Way. As many of you may know, I am disappointed in the sudden change in zoning for my property under the Urban Residential Zoning. I had applied with ample time and in good faith last spring, only to have the rug pulled out from underneath me a month ago with the sudden changes in zoning. Because I was told I was tentatively approved by a City Planner, I moved forward with a massive investment in the purchase of materials and having the lot and buildings professionally surveyed. I was told by someone on the City Council that it was fully understood by the mayor and the council that if someone had paid their permitting fees and were acting in due diligence, that they would receive their permits. My permits would have been issued in August, had not everyone but Ryan left the planning office. Everything was greatly delayed...and all of a sudden, I am left hanging without building permits.

OK, to have peace with my beloved city and my neighbors, I have chosen to go the route of going for conditional use permits. Please understand...I am doing this under duress, and
not by a choosing of my own. If things come together with obtaining conditional use permits, for the sake of peace I will absorb the carrying cost and interest of the project, which has been backed up due to a lack of permitting. My feelings are this- nobody wins with a legal battle. I'm sure we can all agree on this point! I love the City of Homer, and I am choosing to walk peaceably with everyone. But at the same time, I want it understood that I am not happy with the process that I am stuck in, nor do I surrender any of my legal rights by choosing to go in the direction of conditional use permits.

I really feel strongly that the City of Homer would appreciate the project I am proposing! If you know anything about the projects I have developed over the years, I only know how to build quality, very attractive buildings that have been well thought out and beautifully and artistically designed by my gifted wife Marilyn, working alongside of an architect. I will only build very high quality, super attractive small homes that I can be proud of in the long run. I don't compromise quality and will only build under the term "code"...industrywide standard accepted building practices. I am teaming with Jesse Lye from Palmer, a close friend of 20 years who has built multi-million dollar homes in Anchorage for many years...the quintessential professional.

So again, under the guise of peace and harmony, I am asking the City to grant Conditional Use Permits as per my request. Your jobs are not easy...and I honor and respect all of your contributions to the City of Homer.

Much Appreciated,

Paul Hueper
November 1st, 2023

## ***Review of comprehensive plan Land Use Chapter for CUP 23—11 RF 12.6.23***

**GOAL 1:** Guiding Homer's growth with a focus on increasing the supply and diversity of housing, protect community character, encouraging infill, and helping minimize global impacts of public facilities including limiting greenhouse gas emissions.

**Objective A:** Promote a pattern of growth characterized by a concentrated mixed-use center, and a surrounding ring of moderate-to-high density residential and mixed-use areas with lower densities in outlying areas.

***Staff:*** This project supports Objective A pattern of growth and density, with moderate density on a small lot zoned Urban Residential.

**Objective B:** Develop clear and well-defined land use regulations and update the zoning map in support of the desired pattern of growth.

N/A – not associated with update of zoning map.

**Objective C:** Maintain high quality residential neighborhoods; promote housing choice by supporting a variety of dwelling options.

***Staff:*** The project consists of a duplex and two single-family dwellings, promoting housing choice and contributing to a quality neighborhood.

**Objective D:** Consider the regional and global impacts of development in Homer.

**Staff:** This project discourages sprawl with additional infill dwelling units at the scale and density of the Urban Residential zoning district and fits the moderate-density character planned just outside the city core.

**GOAL 2:** Maintain the quality of Homer's natural environment and scenic beauty.

**Objective A:** Complete and maintain a detailed "green infrastructure" map for the City of Homer and environs that presents an integrated functional system of environmental features on lands in both public and private ownership and use green infrastructure concepts in the review and approval of development projects.

N/A – not associated with mapping.

**Objective B:** Continue to review and refine development standards and require development practices that protect environmental functions.

N/A – not associated with creation of development standards.

**Objective C:** Provide extra protection for areas with highest environmental value or development constraints.

N/A – This area is under development, no change in impact is proposed.

**Objective D:** Collaborate with jurisdictions outside the City of Homer, as well as state and federal agencies, to ensure that environmental quality is maintained.

N/A – not associated with other jurisdictions.

**GOAL 3:** Encourage high-quality buildings and site development that complement Homer's beautiful natural setting.

**Objective A:** Create a clear, coordinated regulatory framework that guides development.

***Staff:*** Goal 3, objective A implementation items are all directives to review and consider new policies and are not directly applicable to CUP's.

**Objective B**: Encourage high quality site design and buildings.

***Staff:*** The proposal supports four new dwelling units that are required to submit a Zoning Permit and meet City requirements for site development.

**GOAL 4:** Support the development of a variety of well-defined commercial/business districts for a range of commercial purposes.

**Objective A:** Encourage a concentrated, pedestrian oriented, attractive business/commerce district in the Central Business District (CBD) following the guidelines found in the Town Center Development Plan.

***Staff:*** The proposal is not found in the CBD.

**Objective B:** Discourage strip development along the Sterling Highway and major collectors/thoroughfares.

***Staff:*** N/A – not associated with a commercial/business purpose.

**Finding:**

The proposal is not contrary to the applicable land use goals and objectives of the Comprehensive Plan.

**CITY OF HOMER**

**PUBLIC HEARING NOTICE - PLANNING COMMISSION MEETING**

Public hearings on the matters below are scheduled for Wednesday, December 6, 2023 at 6:30 p.m. during the Regular Planning Commission Meeting. Participation is available virtually via Zoom webinar or in-person at Homer City Hall.

**A request for Conditional Use Permit (CUP) 23-09, CUP 23-10, and CUP 23-11 per HCC 21.14.030 (i), More than one building containing a permitted principal use on a lot. The applicant proposes a duplex and two single dwelling units at each of the following addresses:**

**1149 Virginia Lynn Way**
**T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0610256 VIRGINIA LYN SUB LOT 55**

**1161 Virginia Lynn Way**
**T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0610256 VIRGINIA LYN SUB LOT 54**

**1177 Virginia Lynn Way**
**T 6S R 13W SEC 21 SEWARD MERIDIAN HM 0610256 VIRGINIA LYN SUB LOT 53**

A copy of the proposals may be viewed at Homer City Hall, in the Clerk's Office Lobby on the lower level. In-person meeting participation is available in Cowles Council Chambers located downstairs at Homer City Hall, 491 E. Pioneer Ave., Homer, AK 99603.

To attend the meeting virtually, visit zoom.us and enter the Meeting ID & Passcode listed below. To attend the meeting by phone, dial any one of the following phone numbers and enter the Webinar ID & Passcode below, when prompted: 1-253-215-8782, 1-669-900-6833, (toll free) 888-788-0099 or 877-853-5247.

Meeting ID: 979 8816 0903
Passcode: 976062

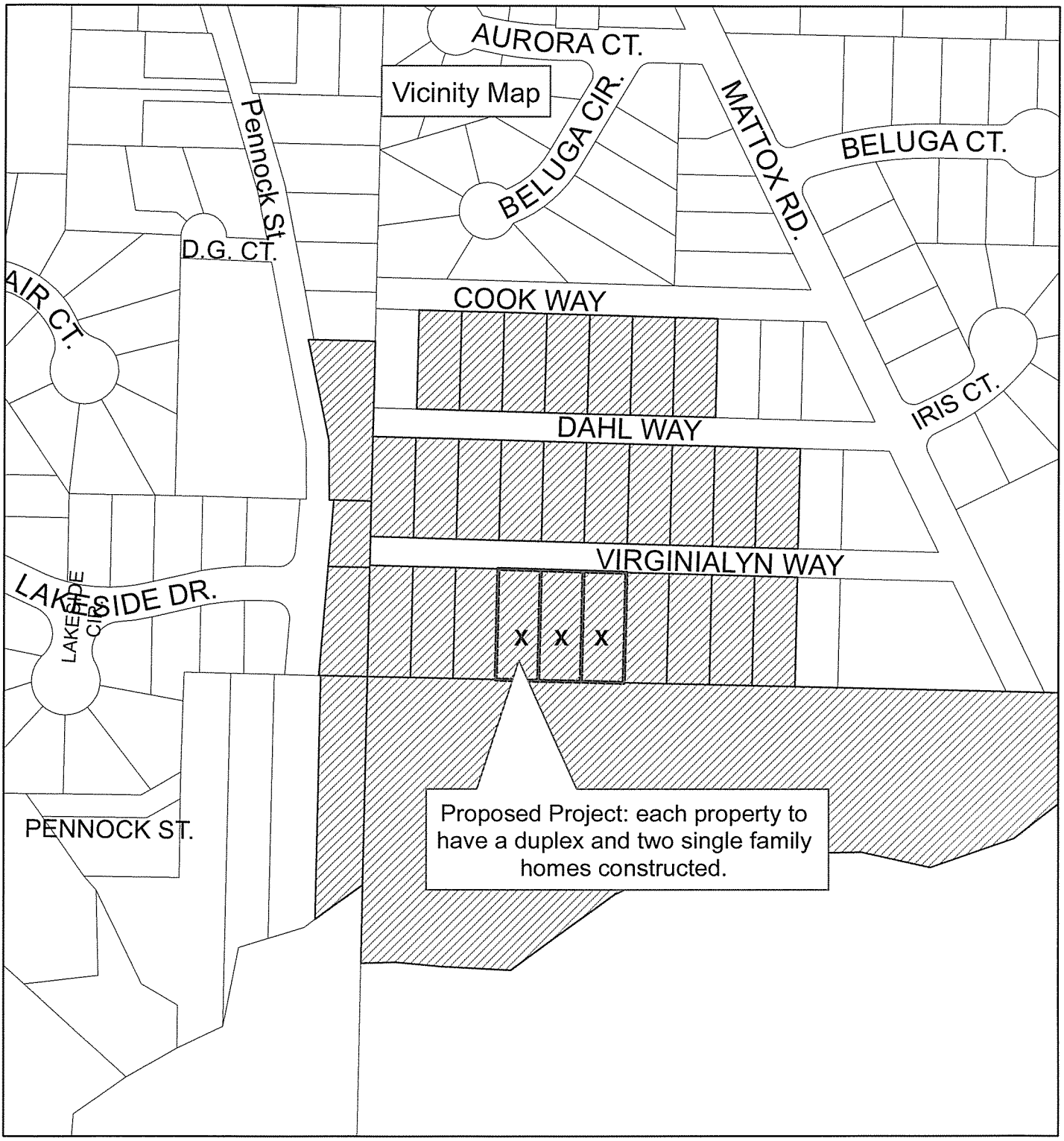
Additional information regarding this matter will be available by 5pm on the Friday before the meeting. This information will be posted to the City of Homer online calendar page for December 1, 2023 at *https://www.cityofhomer-ak.gov/calendar*. It will also be available at the Planning and Zoning Office at Homer City Hall and at the Homer Public Library.

Written comments can be emailed to the Planning and Zoning Office at the address below, mailed to Homer City Hall at the address above, or placed in the Homer City Hall drop box at any time. Written comments must be received by 4pm on the day of the meeting.

If you have questions, contact Julie Engebretsen at the Planning and Zoning Office. Phone: (907) 435-3119, email: planning@ci.homer.ak.us or in-person at Homer City Hall.

**NOTICE TO BE SENT TO PROPERTY OWNERS WITHIN 300 FEET OF PROPERTY**

**VICINITY MAP ON REVERSE**




CITY OF HOMER - ALASKA - MARCH 31, 1964

*City of Homer*
*Planning and Zoning Department*
November 16, 2023

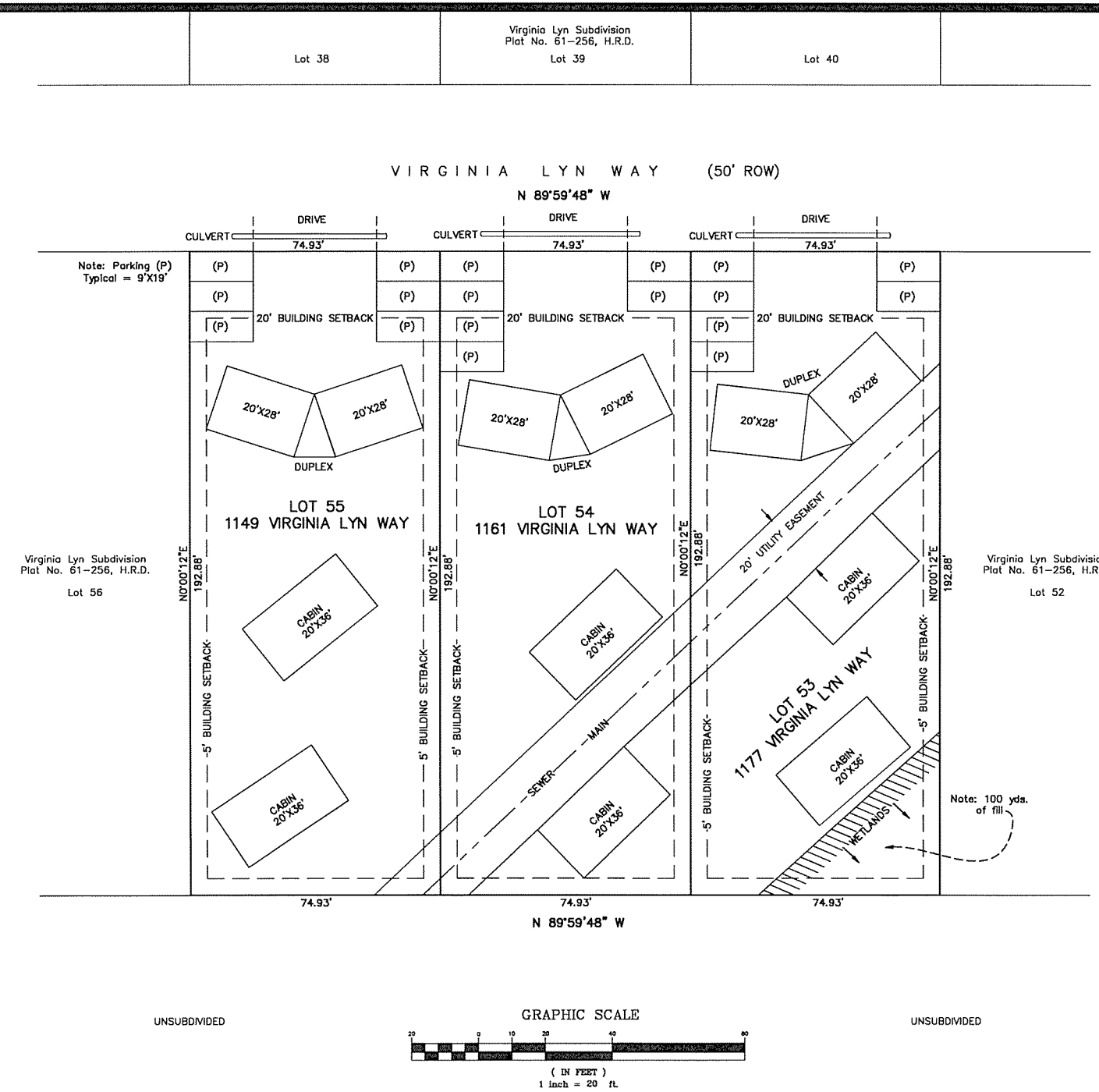
**Request for Conditional Use Permits (CUP) 2023-09, 2023-10, 2023-11**

Properties within 300 feet are marked and property owners notified.

0 150 300 600 Feet

N

*Disclaimer:*
*It is expressly understood the City of Homer, its council, board, departments, employees and agents are not responsible for any errors or omissions contained herein, or deductions, interpretations or conclusions drawn therefrom.*


Lot 38
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Lot 39
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VIRGINIA LYN WAY (50' ROW)
N 89°59'48" W
DRIVE
CULVERT
74.93'
Note: Parking (P)
Typical = 9'X19'
(P)
20' BUILDING SETBACK
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DUPLEX
LOT 55
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CABIN
20'X36'
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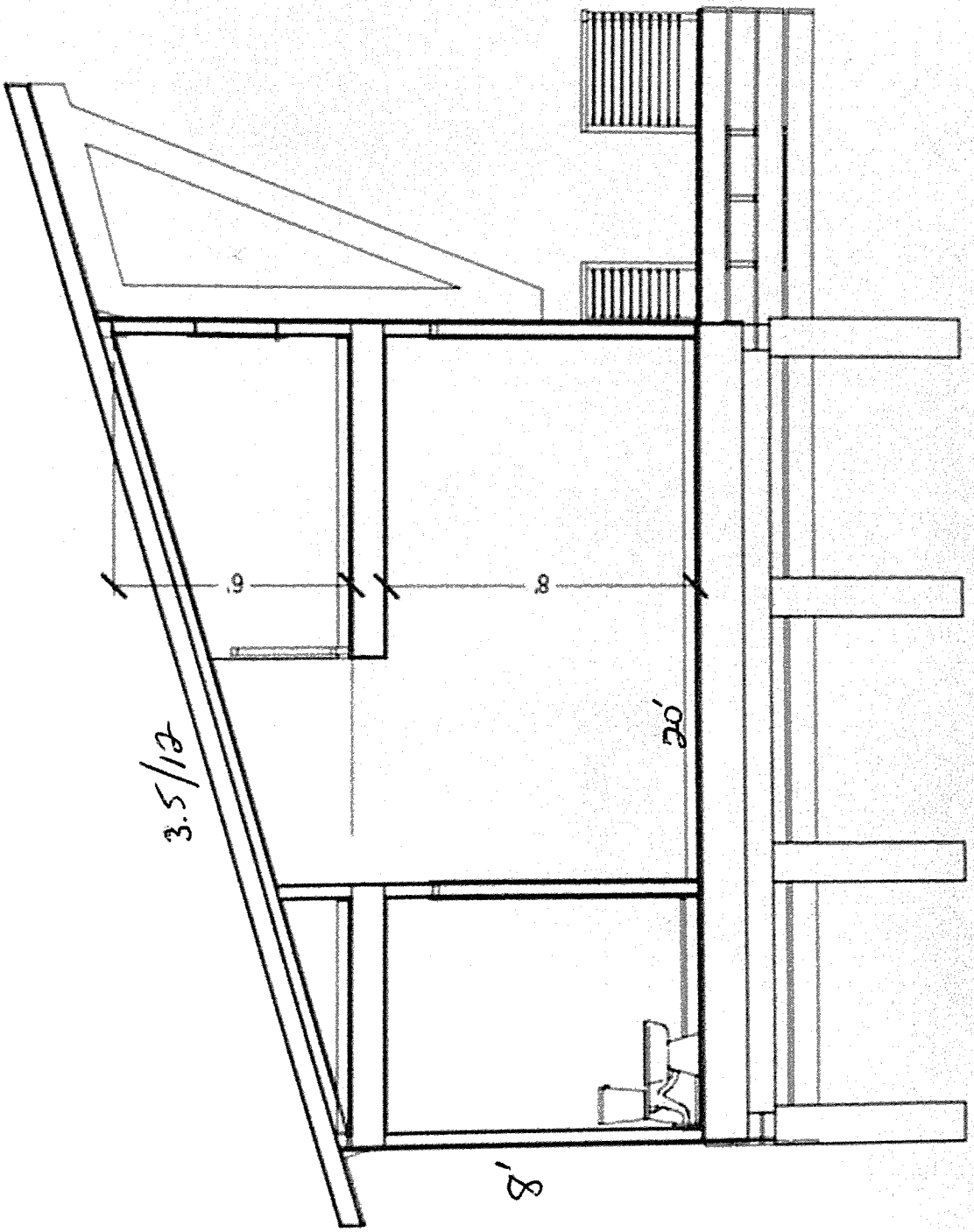
20' UTILITY EASEMENT
SEWER MAIN
WETLANDS
Note: 100 yds.
of fill
Virginia Lyn Subdivision
Plat No. 61–256, H.R.D.
Lot 56
Virginia Lyn Subdivision
Plat No. 61–256, H.R.D.
Lot 52
74.93'
N 89°59'48" W
UNSUBDIVIDED
UNSUBDIVIDED
GRAPHIC SCALE
20 0 10 20 40 60
( IN FEET )
1 inch = 20 ft.
614
NORTH




CROSS SECTION ELEVATION

**Vicinity Map, Google Earth**

City of Homer
www.cityofhomer-ak.gov

Planning
491 East Pioneer Avenue
Homer, Alaska 99603
Planning@ci.homer.ak.us
(p) 907-235-3106
(f) 907-235-3118

**Staff Report 23-066**

TO: Homer Planning Commission **23-066**
FROM: Ryan Foster, AICP, City Planner
DATE: 12/6/2023
SUBJECT: Bayview Subdivision Lighthouse Village Replat Preliminary Plat

**Requested Action:** Recommend approval of the preliminary plat, creating two larger lots out of three original lots and right of way area.

**General Information:**

| | | |
|---|---|---|
| Applicants: | Doyon, Limited<br>1 Doyon Place<br>Fairbanks, AK 99701 | Doyon Tourism, Inc.<br>11500 Sukdu Way Suite 250<br>Anchorage, AK 99515 |
| | Seabright Survey + Design, 1044 East Road Suite A, Homer AK 99603 | |
| Location: | Homer Spit Road, west of Kachemak Drive intersection | |
| Parcel ID: | 18101034, 18101035, 17921015 | |
| Size of Existing Lot(s): | 1.87, 2.70, 1.35 acres | |
| Size of Proposed Lots(s): | 3.953 and 3.004 acres | |
| Zoning Designation: | Rural Residential and General Commercial 1 | |
| Existing Land Use: | The rural residential lot is vacant. The GC1 lots have an auto wrecking yard/repair shop, boat storage, and formerly a restaurant and small shops on the southern lot. | |
| Surrounding Land Use: | North: Peninsula Solid Waste shop, ministorage, rooming house<br>South: Mariner Lagoon<br>East: Homer Spit Road and airport properties<br>West: Residential | |
| Comprehensive Plan: | Chapter 4 Goal 1 Objective A: Promote a pattern of growth characterized by a concentrated mixed use center, and a surrounding ring of moderate to high density residential and mixed-use areas with lower densities in outlying areas. | |
| Wetland Status: | The area south of the existing retaining wall is tidal marsh | |
| Flood Plain Status: | AE 20 | |
| BCWPD: | Not within the Bridge Creek Watershed Protection District. | |
| Utilities: | City water and sewer are available | |

| | |
|---|---|
| Public Notice: | Notice was sent to 42 property owners of 47 parcels as shown on the KPB tax assessor rolls. |

**Analysis:** This subdivision is within the Rural Residential and General Commercial 1 Zoning Districts. This plat accompanies the action of vacating the B Street Right of Way south of Bay Avenue, and reconfigures three smaller lots into two larger lots. The vacation of the street is a separate action and discussed in a separate staff report. If the vacation is approved, this preliminary plat would be the mechanism by which the property boundaries would legally change.

**Homer City Code 22.10.051 Easements and rights-of-way**

A. The subdivider shall dedicate in each lot of a new subdivision a 15-foot-wide utility easement immediately adjacent to the entire length of the boundary between the lot and each existing or proposed street right-of-way.

**Staff Response:** The plat meets these requirements. See plat note 1.

B. The subdivider shall dedicate in each lot of a new subdivision any water and/or sewer easements that are needed for future water and sewer mains shown on the official Water/Sewer Master Plan approved by the Council.

**Staff Response:** The plat meets these requirements. No additional easements are required for future infrastructure.

C. The subdivider shall dedicate easements or rights-of-way for sidewalks, bicycle paths or other non-motorized transportation facilities required by HCC 11.04.120.

**Staff Response:** The plat meets these requirements. No new streets are proposed therefore no non-motorized routes are required under this section of City Code.

D. The City Council may accept the dedication of easements or rights-of-way for non-motorized transportation facilities that are not required by subsection (c) of this section, if the City Council determines that accepting the dedication would be Consistent with the adopted plans of the City.

**Staff Response:** The plat meets these requirements.

**Preliminary Approval, per KPB code 20.25.070 Form and contents required**. The commission will consider a plat for preliminary approval if it contains the following information at the time it is presented and is drawn to a scale of sufficient size to be clearly legible.

A. Within the Title Block:

1. Names of the subdivision which shall not be the same as an existing city, town, tract or subdivision of land in the borough, of which a plat has been previously recorded, or so nearly the same as to mislead the public or cause confusion;
2. Legal description, location, date, and total area in acres of the proposed subdivision; and
3. Name and address of owner(s), as shown on the KPB records and the certificate to plat, and registered land surveyor;

**Staff Response:** The plat meets these requirements.

B. North point;

**Staff Response:** The plat meets these requirements.

C. The location, width and name of existing or platted streets and public ways, railroad rights-of-way and other important features such as section lines or political subdivisions or municipal corporation boundaries abutting the subdivision;

**Staff Response:** The plat meets these requirements.

D. A vicinity map, drawn to scale showing location of proposed subdivision, north arrow if different from plat orientation, township and range, section lines, roads, political boundaries and prominent natural and manmade features, such as shorelines or streams;

**Staff Response:** The plat meets these requirements.

E. All parcels of land including those intended for private ownership and those to be dedicated for public use or reserved in the deeds for the use of all property owners in the proposed subdivision, together with the purposes, conditions or limitation of reservations that could affect the subdivision;

**Staff Response:** The plat meets these requirements.

F. The names and widths of public streets and alleys and easements, existing and proposed, within the subdivision; [Additional City of Homer HAPC policy: Drainage easements are normally thirty feet in width centered on the drainage. Final width of the easement will depend on the ability to access the drainage with heavy equipment. An alphabetical list of street names is available from City Hall.]

**Staff Response:** The plat meets these requirements.

G. Status of adjacent lands, including names of subdivisions, lot lines, lock numbers, lot numbers, rights-of-way; or an indication that the adjacent land is not subdivided;

**Staff Response:** The plat meets these requirements.

H. Approximate location of areas subject to inundation, flooding or storm water overflow, the line of ordinary high water, wetlands when adjacent to lakes or non-tidal streams, and the appropriate study which identifies a floodplain, if applicable;

**Staff Response:** The plat does not meet these requirements. A plate note should be added stating a portion of the subdivision lies within an AE20 flood hazard area.

I. Approximate locations of areas subject to tidal inundation and the mean high water line;

**Staff Response:** The plat partially meets these requirements. Limits of tidal flooding are depicted per parent plat HM 94-51. Staff recommends depicting the limits of tidal inundation and mean high water across all lots.

J. Block and lot numbering per KPB 20.60.140, approximate dimensions and total numbers of proposed lots;

**Staff Response:** The plat meets these requirements.

K. Within the limits of incorporated cities, the approximate location of known existing municipal wastewater and water mains, and other utilities within the subdivision and immediately abutting thereto or a statement from the city indicating which services are currently in place and available to each lot in the subdivision;

**Staff Response:** The plat meets these requirements. A supplemental As-built of water and sanitary sewer lines has been provided.

L. Contours at suitable intervals when any roads are to be dedicated unless the planning director or commission finds evidence that road grades will not exceed 6 percent on arterial streets, and 10 percent on other streets;

**Staff Response:** The plat meets these requirements. No public roads are proposed.

M. Approximate locations of slopes over 20 percent in grade and if contours are shown, the areas of the contours that exceed 20 percent grade shall be clearly labeled as such;

**Staff Response:** The plat meets these requirements. An attachment with slopes over 20% has been provided.

N. Apparent encroachments, with statement indicating how the encroachments will be resolved prior to final plat approval; and

**Staff Response:** The plat meets these requirements.

O. If the subdivision will be finalized in phases, all dedications for through streets as required by KPB 20.30.030 must be included in the first phase.

**Staff Response:** The plat meets these requirements.

**Public Works Comments:**

1. A drainage easement should be retained or accommodated for drainage from the Bay Avenue area.
2. Work with Public Works on utility planning during the development and platting process.

**Staff Recommendation:**

Planning Commission recommend approval of the preliminary plat with the following comments:

1. A plat note should be added stating a portion of the subdivision lies within an AE20 flood hazard area.
2. Depict the limits of tidal inundation and mean high water across all lots.
3. Provide a drainage easement from B Street Right of Way and Bay Avenue to Kachemak Bay.
4. Work with Public Works on utility planning during the development and platting process.

**Attachments:**

1. Preliminary Plat
2. Supplemental As built
3. Steep slope supplemental
4. Public Notice
5. Aerial Map

## NOTES

1. THE 15' FRONTING RIGHTS-OF-WAY AND THE 20' WITHIN 5' OF SIDE LOT LINES IS A UTILITY EASEMENT GRANTED THIS PLAT. NO PERMANENT STRUCTURES SHALL BE CONSTRUCTED OR PLACED WITHIN A UTILITY EASEMENT WHICH WOULD INTERFERE WITH THE ABILITY OF A UTILITY TO USE SAID EASEMENT.

2. THESE LOTS ARE SUBJECT TO CITY OF HOMER ZONING REGULATIONS. REFER TO HOMER CITY CODE FOR ALL CURRENT SETBACK AND SITE DEVELOPMENT RESTRICTIONS. OWNERS SHOULD CHECK WITH THE CITY OF HOMER PRIOR TO DEVELOPMENT ACTIVITIES.

3. ALL WASTEWATER DISPOSAL SYSTEMS SHALL COMPLY WITH EXISTING APPLICABLE LAWS AT THE TIME OF CONSTRUCTION.

4. NO ACCESS TO STATE MAINTAINED RIGHTS-OF-WAY PERMITTED UNLESS APPROVED BY THE STATE OF ALASKA DEPARTMENT OF TRANSPORTATION.

5. PROPERTY OWNER SHOULD CONTACT THE ARMY CORPS OF ENGINEERS PRIOR TO ANY ON-SITE DEVELOPMENT OR CONSTRUCTION ACTIVITY TO OBTAIN THE MOST CURRENT WETLAND DESIGNATION (IF ANY). PROPERTY OWNERS ARE RESPONSIBLE FOR OBTAINING ALL REQUIRED LOCAL, STATE, AND FEDERAL PERMITS.

6. STATE RIGHT-OF-WAY IS FROM STATE OF ALASKA DOT&PF RIGHT OF WAY MAP ALASKA PROJECT F-021-1(23) "HOMER SPIT" SHEET 1 & STATE OF ALASKA DOT&PF RIGHT OF WAY MAP ALASKA PROJECT OF-021-1(25) "HOMER BY-PASS" SHEET 8.

7. THE NATURAL MEANDERS OF MEAN HIGH WATER IS FOR AREA COMPUTATIONS ONLY. THE TRUE CORNERS BEING ON THE EXTENSION OF THE SIDELINES AND THE INTERSECTION WITH THE NATURAL MEANDERS.

8. THERE IS AN EASEMENT GRANTED TO DOUGLAS A. MEEKER FOR THE CONSTRUCTION, MAINTENANCE, AND USE OF THE RETAINING WALL WITHIN B ST. R/W RECORDED BK 227 PG 144 HRD.

## PLAT APPROVAL

THIS PLAT WAS APPROVED BY THE KENAI PENINSULA BOROUGH PLANNING COMMISSION AT THE MEETING OF

BY: _____ _____
AUTHORIZED OFFICIAL — DATE
KENAI PENINSULA BOROUGH

## WASTEWATER DISPOSAL

PLANS FOR WASTEWATER DISPOSAL THAT MEET REGULATORY REQUIREMENTS ARE ON FILE AT THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION.

| LINE TABLE | | |
|---|---|---|
| LINE # | LENGTH | BEARING |
| L1 | 50.00' | N60°08'43"E |
| L2 | 20.00' | N60°08'36"E |

## LEGEND

- SET 2" AC 7968-S 2024
- 2" AC 7610-S 1994
- 2" AC 7610-S 1984
- 2" AC 3686-S 1989
- 5/8" REBAR

## NOTARY'S ACKNOWLEDGMENT

FOR: _____

ACKNOWLEDGED BEFORE ME THIS _____

DAY OF _____, 2024

_____
NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES _____

## NOTARY'S ACKNOWLEDGMENT

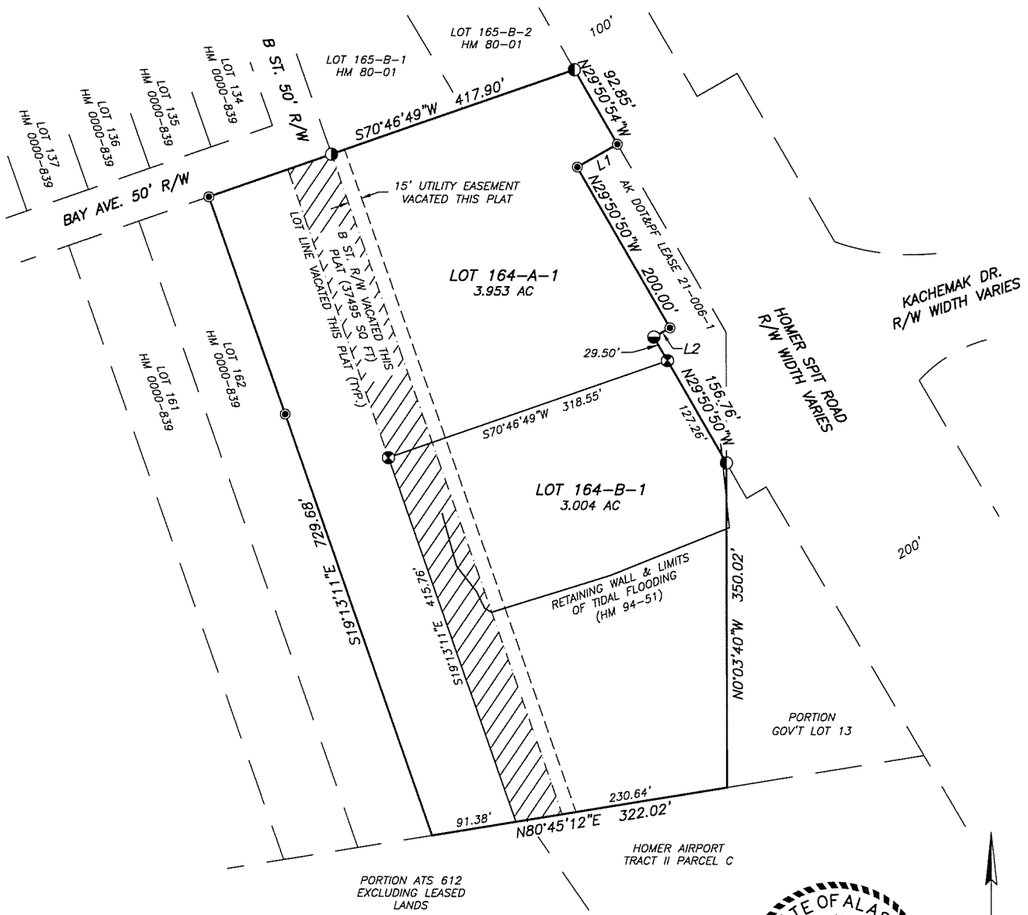
FOR: _____

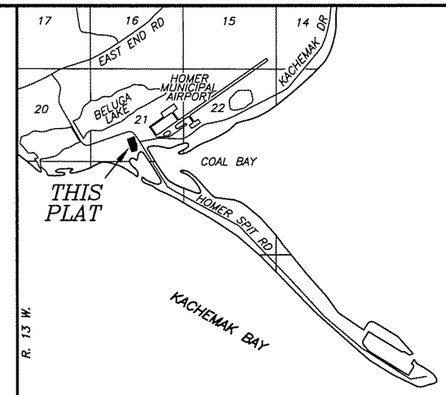
ACKNOWLEDGED BEFORE ME THIS _____

DAY OF _____, 2024

_____
NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES _____




## VICINITY MAP

SCALE: 1" = 1 MILE — U.S.G.S. QUAD. SELDOVIA (C-4 & C-5)

## CERTIFICATE OF OWNERSHIP

I HEREBY CERTIFY THAT DOYON, LIMITED IS THE OWNER OF THE REAL PROPERTY SHOWN AND DESCRIBED HEREON, THAT ON BEHALF OF DOYON, LIMITED, I HEREBY ADOPT THIS PLAN OF SUBDIVISION, AND BY MY FREE CONSENT DEDICATE ALL RIGHTS OF WAY AND PUBLIC AREAS TO PUBLIC USE, AND GRANT ALL EASEMENTS TO THE USE SHOWN HEREON.

AUTHORIZED SIGNATORY FOR: DOYON, LIMITED
11500 SUKDU WAY, SUITE 250
ANCHORAGE, AK 99515

FORMER LOTS 164-A & 164-B

## CERTIFICATE OF OWNERSHIP

I HEREBY CERTIFY THAT DOYON TOURISM, INC. IS THE OWNER OF THE REAL PROPERTY SHOWN AND DESCRIBED HEREON, THAT ON BEHALF OF DOYON TOURISM, INC., I HEREBY ADOPT THIS PLAN OF SUBDIVISION, AND BY MY FREE CONSENT DEDICATE ALL RIGHTS OF WAY AND PUBLIC AREAS TO PUBLIC USE, AND GRANT ALL EASEMENTS TO THE USE SHOWN HEREON.

AUTHORIZED SIGNATORY FOR: DOYON TOURISM, INC.
11500 SUKDU WAY, SUITE 250
ANCHORAGE, AK 99515

FORMER LOT 163

STATE OF ALASKA 49TH
Kenton T. Bloom
LS-7968
Registered Professional Land Surveyor

0 100' 200' 300' 400'
GRAPHIC SCALE

HOMER RECORDING DISTRICT — KPB FILE NO. 2023-XXX

# BAYVIEW SUBDIVISION LIGHTHOUSE VILLAGE REPLAT

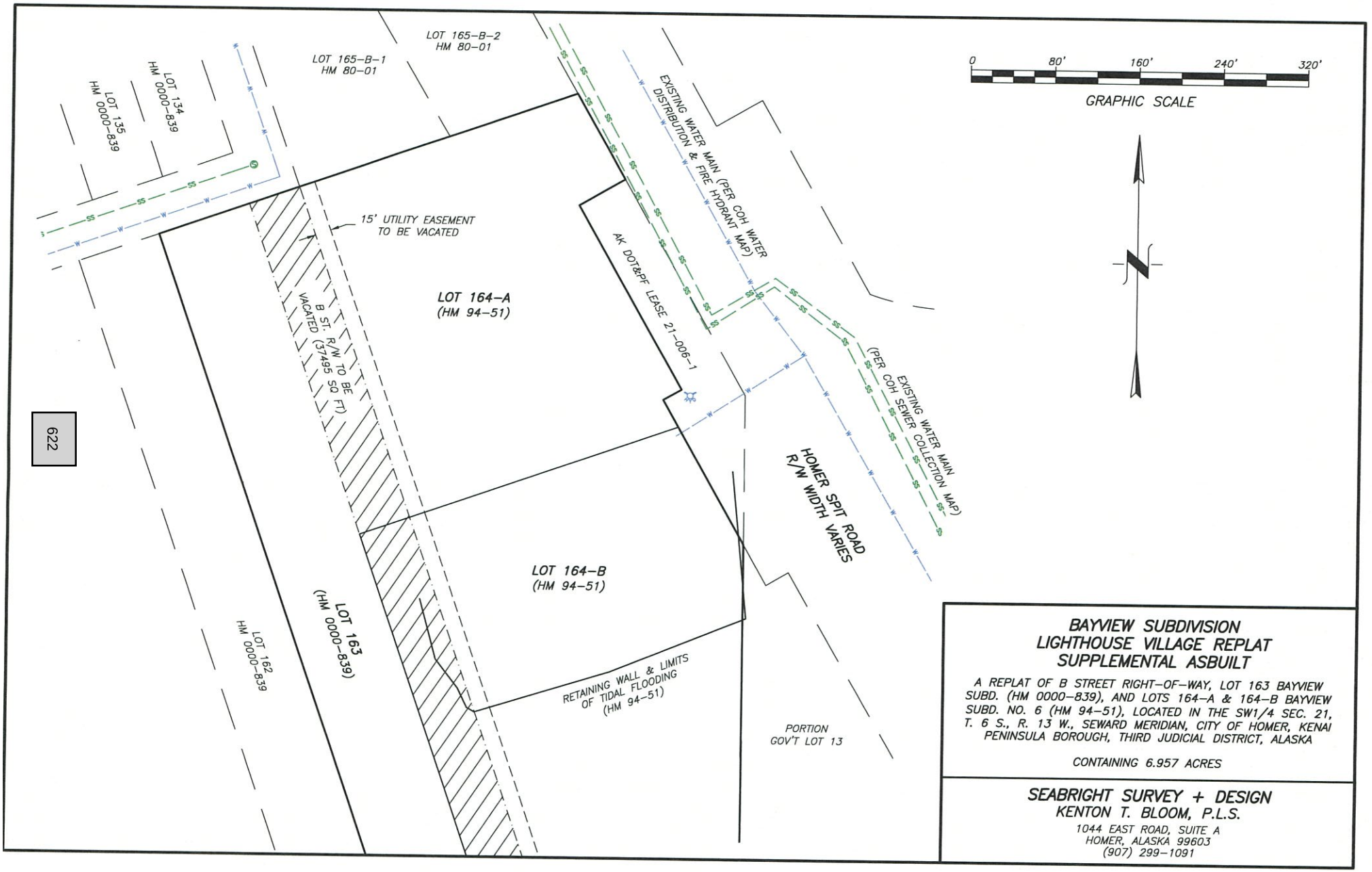
A REPLAT OF B STREET RIGHT-OF-WAY, LOT 163 BAYVIEW SUBD. (HM 0000-839), AND LOTS 164-A & 164-B BAYVIEW SUBD. NO. 6 (HM 94-51), LOCATED IN THE SW1/4 SEC. 21, T. 6 S., R. 13 W., SEWARD MERIDIAN, CITY OF HOMER, KENAI PENINSULA BOROUGH, THIRD JUDICIAL DISTRICT, ALASKA

CONTAINING 6.957 ACRES


SEABRIGHT SURVEY + DESIGN
KENTON T. BLOOM, P.L.S.
1044 EAST ROAD, SUITE A
HOMER, ALASKA 99603
(907) 299-1091


CLIENTS: DOYON, LIMITED & DOYON TOURISM, INC.
11500 SUKDU WAY ANCHORAGE, AK 99515

| DRAWN BY: KK | CHKD BY: KB | JOB #2023-88 |
|---|---|---|
| DATE: 11/2023 | SCALE: 1"=100' | SHEET #1 OF 1 |

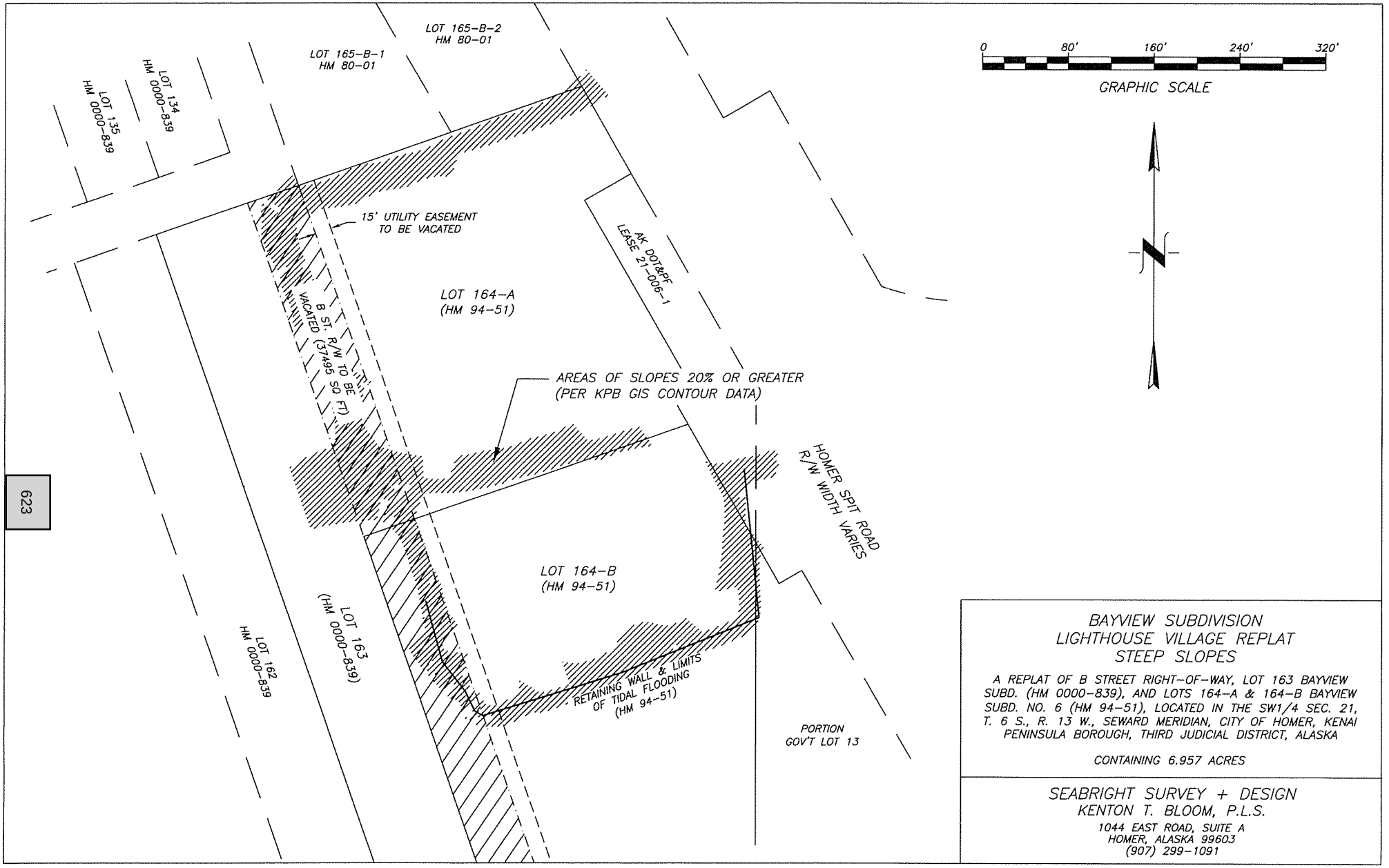



# BAYVIEW SUBDIVISION
# LIGHTHOUSE VILLAGE REPLAT
# SUPPLEMENTAL ASBUILT

A REPLAT OF B STREET RIGHT-OF-WAY, LOT 163 BAYVIEW SUBD. (HM 0000-839), AND LOTS 164-A & 164-B BAYVIEW SUBD. NO. 6 (HM 94-51), LOCATED IN THE SW1/4 SEC. 21, T. 6 S., R. 13 W., SEWARD MERIDIAN, CITY OF HOMER, KENAI PENINSULA BOROUGH, THIRD JUDICIAL DISTRICT, ALASKA

CONTAINING 6.957 ACRES


**SEABRIGHT SURVEY + DESIGN**
KENTON T. BLOOM, P.L.S.
1044 EAST ROAD, SUITE A
HOMER, ALASKA 99603
(907) 299-1091




623

# BAYVIEW SUBDIVISION
# LIGHTHOUSE VILLAGE REPLAT
# STEEP SLOPES

A REPLAT OF B STREET RIGHT-OF-WAY, LOT 163 BAYVIEW SUBD. (HM 0000-839), AND LOTS 164-A & 164-B BAYVIEW SUBD. NO. 6 (HM 94-51), LOCATED IN THE SW1/4 SEC. 21, T. 6 S., R. 13 W., SEWARD MERIDIAN, CITY OF HOMER, KENAI PENINSULA BOROUGH, THIRD JUDICIAL DISTRICT, ALASKA

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(907) 299-1091

**CITY OF HOMER PUBLIC HEARING NOTICE & NOTICE OF SUBDIVISION**
**PLANNING COMMISSION MEETING**

A public hearing on the matters below are scheduled for Wednesday, December 6, 2023 at 6:30 p.m. during the Regular Planning Commission Meeting. Participation is available virtually via Zoom webinar or in-person at Homer City Hall.

**A proposal to vacate the B Street right-of-way within the Bayview Subdivision N0. 6 (HM 94-51), located in the SW1/4 SEC. 21, T. 6 S., R. 13 W., S.M.**

---

Public notice is hereby given that a preliminary plat has been received proposing to subdivide or replat property. You are being sent this notice because you are an affected property owner within 500 feet of a proposed subdivision and are invited to comment.

Proposed subdivision under consideration is described as follows:

**Bayview Subdivision Lighthouse Village Replat, Preliminary Plat**

The location of the proposed subdivision affecting you is provided on the attached map. A preliminary plat showing the proposed subdivision may be viewed at the City of Homer Planning and Zoning Office. Subdivision reviews are conducted in accordance with the City of Homer Subdivision Ordinance and the Kenai Peninsula Borough Subdivision Ordinance. A copy of the Ordinance is available from the Planning and Zoning Office. **Comments should be guided by the requirements of those Ordinances.**

A copy of the proposals may be viewed at Homer City Hall, in the Clerk's Office Lobby on the lower level. In-person meeting participation is available in Cowles Council Chambers located downstairs at Homer City Hall, 491 E. Pioneer Ave., Homer, AK 99603.

To attend the meeting virtually, visit zoom.us and enter the Meeting ID & Passcode listed below. To attend the meeting by phone, dial any one of the following phone numbers and enter the Webinar ID & Passcode below, when prompted: 1-253-215-8782, 1-669-900-6833, (toll free) 888-788-0099 or 877-853-5247.

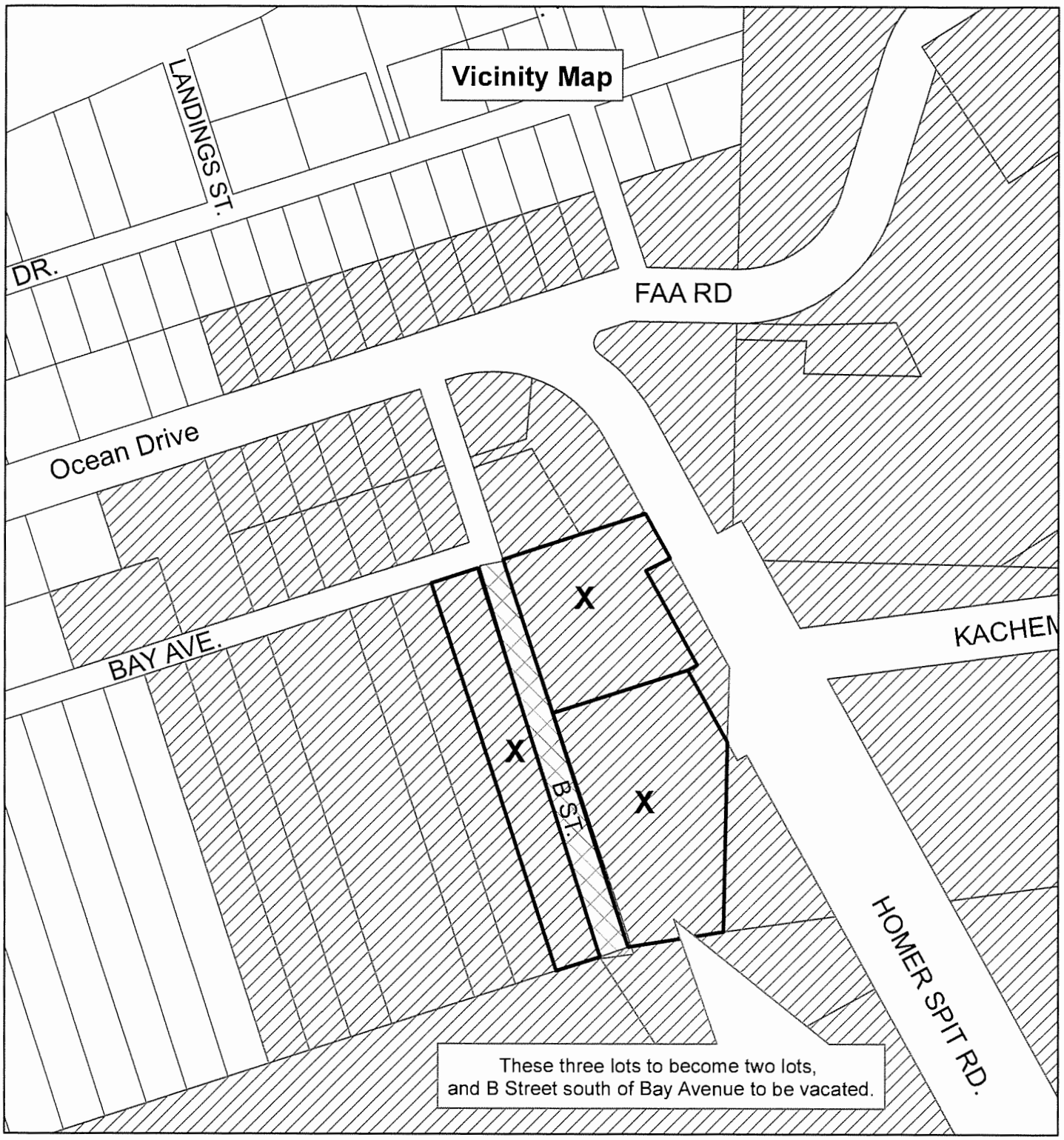
Meeting ID: 979 8816 0903
Passcode: 976062

Additional information regarding this matter will be available by 5pm on the Friday before the meeting. This information will be posted to the City of Homer online calendar page for December 1, 2023 at *https://www.cityofhomer-ak.gov/calendar*. It will also be available at the Planning and Zoning Office at Homer City Hall and at the Homer Public Library.

Written comments can be emailed to the Planning and Zoning Office at the address below, mailed to Homer City Hall at the address above, or placed in the Homer City Hall drop box at any time. Written comments must be received by 4pm on the day of the meeting.

If you have questions, contact Ryan Foster at the Planning and Zoning Office. Phone: (907) 435-3120, email: planning@ci.homer.ak.us or in-person at Homer City Hall.

**NOTICE TO BE SENT TO PROPERTY OWNERS WITHIN 500 FEET OF PROPERTY**
**Vicinity M[illegible] Reverse**




City of Homer
Planning and Zoning Department
11/20/23

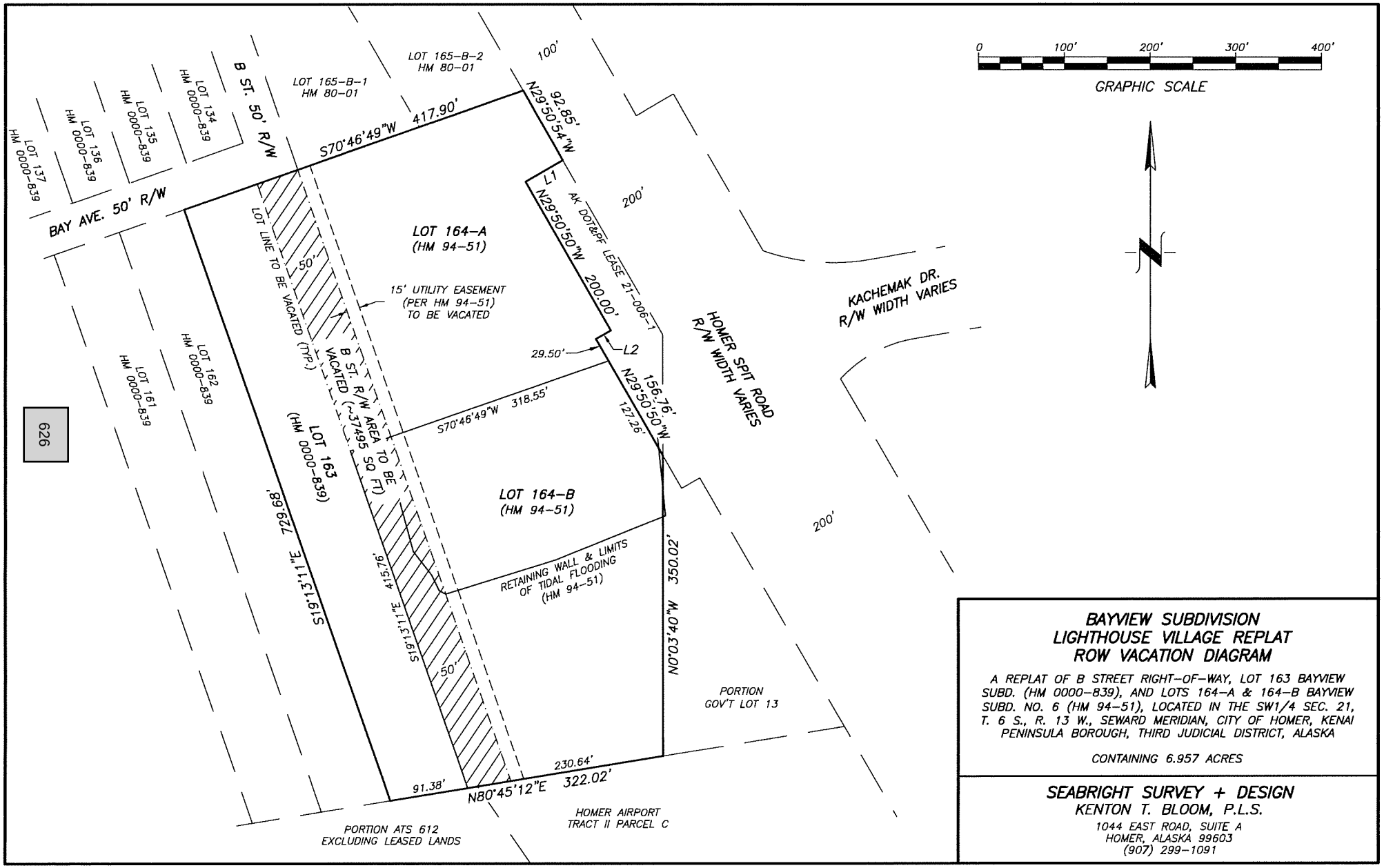
Vacation of a Portion of B Street and Bayview Sub Lighthouse Village Replat Preliminary Plat

Marked Lots are within 500 feet and property owners notified.

Feet
0 250 500

N

*Disclaimer:*
*It is expressly understood the City of Homer, its council, board, departments, employees and agents are not responsible for any errors or omissions contained herein, or deductions, interpretations or conclusions drawn therefrom.*




# BAYVIEW SUBDIVISION
# LIGHTHOUSE VILLAGE REPLAT
# ROW VACATION DIAGRAM

A REPLAT OF B STREET RIGHT-OF-WAY, LOT 163 BAYVIEW SUBD. (HM 0000-839), AND LOTS 164-A & 164-B BAYVIEW SUBD. NO. 6 (HM 94-51), LOCATED IN THE SW1/4 SEC. 21, T. 6 S., R. 13 W., SEWARD MERIDIAN, CITY OF HOMER, KENAI PENINSULA BOROUGH, THIRD JUDICIAL DISTRICT, ALASKA

CONTAINING 6.957 ACRES


SEABRIGHT SURVEY + DESIGN
KENTON T. BLOOM, P.L.S.
1044 EAST ROAD, SUITE A
HOMER, ALASKA 99603
(907) 299-1091

627

## NOTES

1. THE 15' FRONTING RIGHTS-OF-WAY AND THE 20' WITHIN 5' OF SIDE LOT LINES IS A UTILITY EASEMENT GRANTED THIS PLAT. NO PERMANENT STRUCTURES SHALL BE CONSTRUCTED OR PLACED WITHIN A UTILITY EASEMENT WHICH WOULD INTERFERE WITH THE ABILITY OF A UTILITY TO USE SAID EASEMENT.

2. THESE LOTS ARE SUBJECT TO CITY OF HOMER ZONING REGULATIONS. REFER TO HOMER CITY CODE FOR ALL CURRENT SETBACK AND SITE DEVELOPMENT RESTRICTIONS. OWNERS SHOULD CHECK WITH THE CITY OF HOMER PRIOR TO DEVELOPMENT ACTIVITIES.

3. ALL WASTEWATER DISPOSAL SYSTEMS SHALL COMPLY WITH EXISTING APPLICABLE LAWS AT THE TIME OF CONSTRUCTION.

4. NO ACCESS TO STATE MAINTAINED RIGHTS-OF-WAY PERMITTED UNLESS APPROVED BY THE STATE OF ALASKA DEPARTMENT OF TRANSPORTATION.

5. PROPERTY OWNER SHOULD CONTACT THE ARMY CORPS OF ENGINEERS PRIOR TO ANY ON-SITE DEVELOPMENT OR CONSTRUCTION ACTIVITY TO OBTAIN THE MOST CURRENT WETLAND DESIGNATION (IF ANY). PROPERTY OWNERS ARE RESPONSIBLE FOR OBTAINING ALL REQUIRED LOCAL, STATE, AND FEDERAL PERMITS.

6. STATE RIGHT-OF-WAY IS FROM STATE OF ALASKA DOT&PF RIGHT OF WAY MAP ALASKA PROJECT F-021-1(23) "HOMER SPIT" SHEET 1 & STATE OF ALASKA DOT&PF RIGHT OF WAY MAP ALASKA PROJECT QF-021-1(25) "HOMER BY-PASS" SHEET 8.

7. THE NATURAL MEANDERS OF MEAN HIGH WATER IS FOR AREA COMPUTATIONS ONLY. THE TRUE CORNERS BEING ON THE EXTENSION OF THE SIDELINES AND THE INTERSECTION WITH THE NATURAL MEANDERS.

8. THERE IS AN EASEMENT GRANTED TO DOUGLAS A. MEEKER FOR THE CONSTRUCTION, MAINTENANCE, AND USE OF THE RETAINING WALL WITHIN B ST. R/W RECORDED BK 227 PG 144 HRD.

## NOTARY'S ACKNOWLEDGMENT

FOR: _____

ACKNOWLEDGED BEFORE ME THIS ____

DAY OF _____, 2024

_____

NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES _____

## NOTARY'S ACKNOWLEDGMENT

FOR: _____

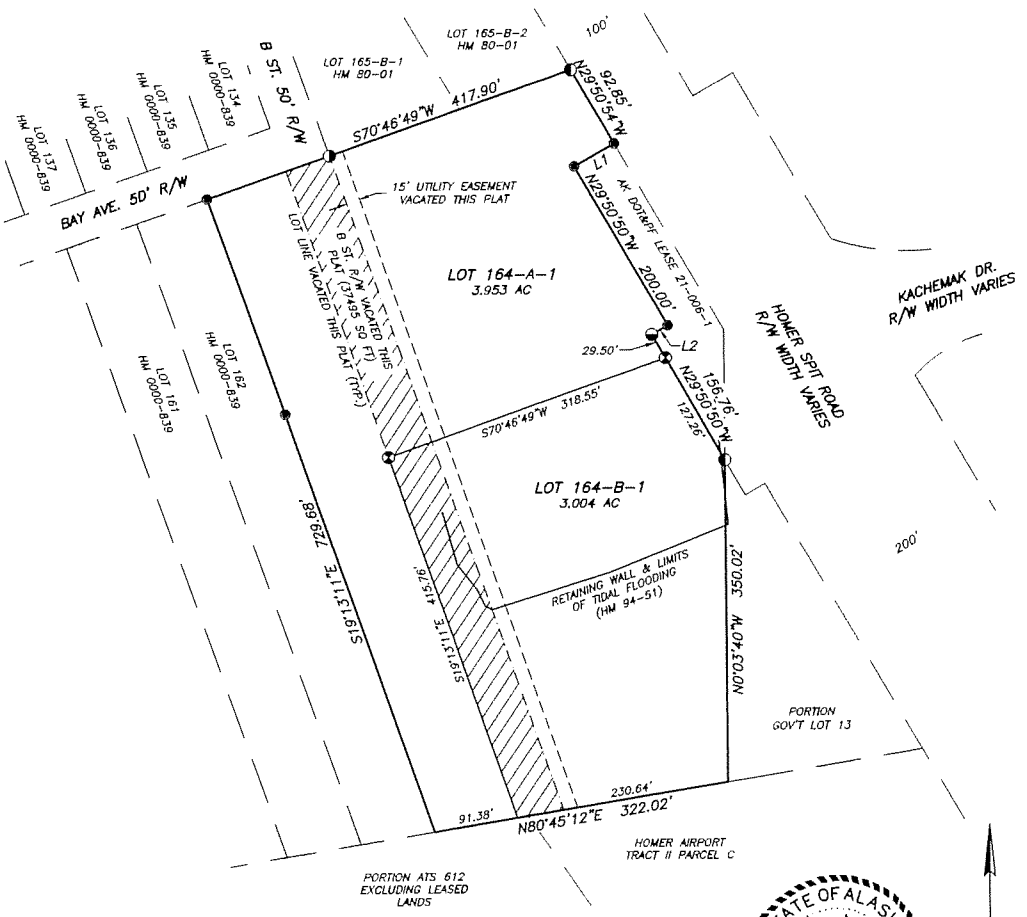
ACKNOWLEDGED BEFORE ME THIS ____

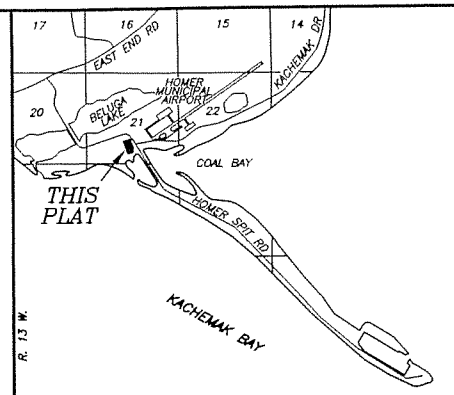
DAY OF _____, 2024

_____

NOTARY PUBLIC FOR ALASKA

MY COMMISSION EXPIRES _____




## VICINITY MAP

SCALE: 1" = 1 MILE U.S.G.S. QUAD. SELDOVIA (C-4 & C-5)

## PLAT APPROVAL

THIS PLAT WAS APPROVED BY THE KENAI PENINSULA BOROUGH PLANNING COMMISSION AT THE MEETING OF

BY: _____ _____

AUTHORIZED OFFICIAL KENAI PENINSULA BOROUGH — DATE

## WASTEWATER DISPOSAL

PLANS FOR WASTEWATER DISPOSAL THAT MEET REGULATORY REQUIREMENTS ARE ON FILE AT THE DEPARTMENT OF ENVIRONMENTAL CONSERVATION.

| LINE TABLE | | |
|---|---|---|
| LINE # | LENGTH | BEARING |
| L1 | 50.00' | N60°08'43"E |
| L2 | 20.00' | N60°08'36"E |

## LEGEND

- SET 2" AC 7968-S 2024
- 2" AC 7610-S 1994
- 2" AC 7610-S 1984
- 2" AC 3686-S 1989
- 5/8" REBAR

## CERTIFICATE OF OWNERSHIP

I HEREBY CERTIFY THAT DOYON, LIMITED IS THE OWNER OF THE REAL PROPERTY SHOWN AND DESCRIBED HEREON, THAT ON BEHALF OF DOYON, LIMITED, I HEREBY ADOPT THIS PLAN OF SUBDIVISION, AND BY MY FREE CONSENT DEDICATE ALL RIGHTS OF WAY AND PUBLIC AREAS TO PUBLIC USE, AND GRANT ALL EASEMENTS TO THE USE SHOWN HEREON.

AUTHORIZED SIGNATORY FOR: DOYON, LIMITED
11500 SUKDU WAY, SUITE 250
ANCHORAGE, AK 99515

FORMER LOTS 164-A & 164-B

## CERTIFICATE OF OWNERSHIP

I HEREBY CERTIFY THAT DOYON TOURISM, INC. IS THE OWNER OF THE REAL PROPERTY SHOWN AND DESCRIBED HEREON, THAT ON BEHALF OF DOYON TOURISM, INC., I HEREBY ADOPT THIS PLAN OF SUBDIVISION, AND BY MY FREE CONSENT DEDICATE ALL RIGHTS OF WAY AND PUBLIC AREAS TO PUBLIC USE, AND GRANT ALL EASEMENTS TO THE USE SHOWN HEREON.

AUTHORIZED SIGNATORY FOR: DOYON TOURISM, INC.
11500 SUKDU WAY, SUITE 250
ANCHORAGE, AK 99515

FORMER LOT 163

HOMER RECORDING DISTRICT — KPB FILE NO. 2023-XXX

# BAYVIEW SUBDIVISION LIGHTHOUSE VILLAGE REPLAT

A REPLAT OF B STREET RIGHT-OF-WAY, LOT 163 BAYVIEW SUBD. (HM 0000-839), AND LOTS 164-A & 164-B BAYVIEW SUBD. NO. 6 (HM 94-51), LOCATED IN THE SW1/4 SEC. 21, T. 6 S., R. 13 W., SEWARD MERIDIAN, CITY OF HOMER, KENAI PENINSULA BOROUGH, THIRD JUDICIAL DISTRICT, ALASKA

CONTAINING 6.957 ACRES

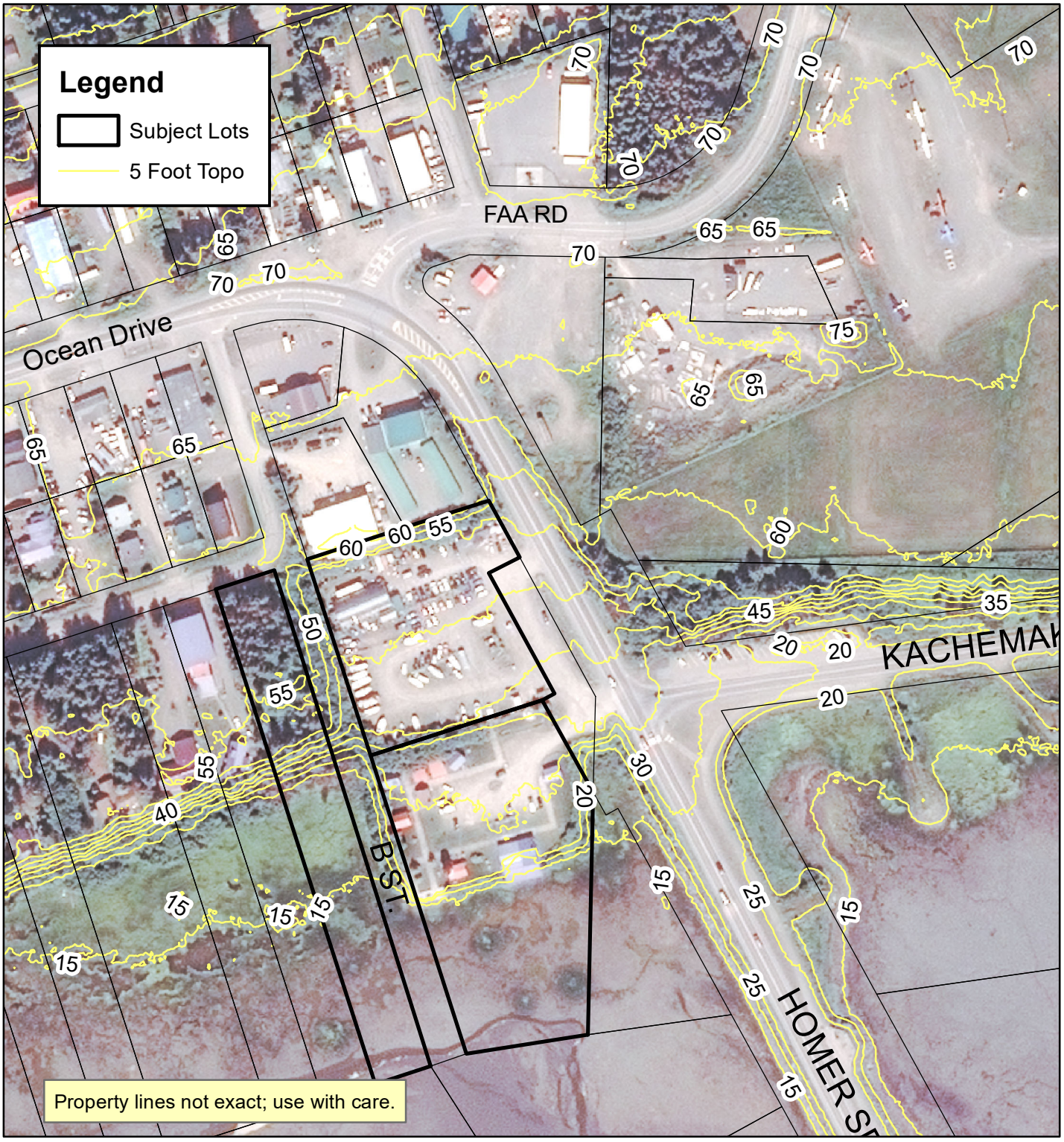

SEABRIGHT SURVEY + DESIGN
KENTON T. BLOOM, P.L.S.
1044 EAST ROAD, SUITE A
HOMER, ALASKA 99603
(907) 299-1091


CLIENTS: DOYON, LIMITED & DOYON TOURISM, INC.
11500 SUKDU WAY ANCHORAGE, AK 99515

| DRAWN BY: KK | CHKD BY: KB | JOB #2023-88 |
|---|---|---|
| DATE: 11/2023 | SCALE: 1"=100' | SHEET #1 OF 1 |

STATE OF ALASKA 49TH
Kenton T. Bloom
LS-7968
Registered Professional Land Surveyor

0 100' 200' 300' 400'
GRAPHIC SCALE




City of Homer
Planning and Zoning Department
11/20/23

**Aerial Map**

0 200 400 Feet

N

*Disclaimer:*
*It is expressly understood the City of Homer, its council, board, departments, employees and agents are not responsible for any errors or omissions contained herein, or deductions, interpretations or conclusions drawn therefrom.*

**PLANNING COMMISSION**
**2024 Calendar**

| | AGENDA ITEM DEADLINES | MEETING DATE | COMMISSIONER SCHEDULED TO REPORT | CITY COUNCIL MEETING FOR REPORT* | ANNUAL TOPICS FOR AGENDA AND EVENTS PLANNED |
|---|---|---|---|---|---|
| **JANUARY** | 12/13/23 Public Hearing Items<br>12/15/23 Preliminary Plat Submittals<br>12/22/23 Regular Agenda Items | 01/03/24 | | Monday,<br>01/08/24<br>6:00 p.m. | • |
| | 12/27/23 Public Hearing Items<br>12/29/23 Prelim Plat Items<br>01/05/24 Regular Agenda Items | 01/17/24 | | Monday<br>01/22/24<br>6:00 p.m. | • |
| **FEBRUARY** | 01/17/24 Public Hearing Items<br>01/19/24 Prelim Plat Items<br>01/26/24 Regular Agenda Items | 02/07/24 | | Monday<br>02/12/24<br>6:00 p.m. | • NFIP Staff Training |
| | 01/31/24 Public Hearing Items<br>02/02/24 Prelim Plat items<br>02/09/24 Regular Agenda Items | 02/21/24 | | Monday<br>02/26/24<br>6:00 p.m. | • |
| **MARCH** | 02/14/24 Public Hearing Items<br>02/16/24 Prelim Plat Items<br>02/23/24 Regular Agenda Items | 03/06/24 | | Monday<br>03/11/24<br>6:00 p.m. | • |
| | 02/28/24 Public Hearing Items<br>03/01/24 Prelim Plat Items<br>03/08/24 Regular Agenda Items | 03/20/24 | | Tuesday<br>03/26/24<br>6:00 p.m. | |
| **APRIL** | 03/13/24 Public Hearing Items<br>03/15/24 Prelim Plat Items<br>03/22/24 Regular Agenda Items | 04/03/24 | | Monday<br>04/08/24<br>6:00 p.m. | |
| | 03/27/24 Public Hearing Items<br>03/29/24 Prelim Plat Items<br>04/05/24 Regular Agenda Items | 04/17/24 | | Monday<br>04/22/24<br>6:00 p.m. | • APA National Planning Conference |
| **MAY** | 04/10/24 Public Hearing Items<br>04/12/24 Prelim Plat Items<br>04/19/24 Regular Agenda Items | 05/01/24 | | Monday<br>05/13/24<br>6:00 p.m. | • |
| | 04/24/24 Public Hearing Items<br>04/26/24 Prelim Plat Items<br>05/03/24 Regular Agenda Items | 05/15/24 | | Tuesday<br>05/28/24<br>6:00 p.m. | • |
| **JUNE** | 05/15/24 Public Hearing Items<br>05/17/24 Prelim Plat Items<br>05/24/24 Regular Agenda Items | 06/05/24 | | Monday<br>06/10/24<br>6:00 p.m. | • Reappointment Applications will be sent out by the Clerk |
| | 05/29/24 Public Hearing Items<br>05/31/24 Prelim Plat Items<br>06/07/24 Regular Agenda Items | 06/19/24 | | Monday<br>06/24/24<br>00 p.m. | |

| | | | | | |
|---|---|---|---|---|---|
| **JULY** | 06/26/24 Public Hearing Items<br>06/28/24 Prelim Plat Items<br>07/05/24 Regular Agenda Items | 07/17/24 | | Monday<br>07/22/24<br>6:00 p.m. | • Reappointment Application Due to the Clerk |
| **AUGUST** | 07/17/24 Public Hearing Items<br>07/19/24 Prelim Plat Items<br>07/26/24 Regular Agenda Items | 08/07/24 | | Monday<br>08/12/24<br>6:00 p.m. | • Election of Officers<br>• Capital Improvement Plan Presentation by Jenny Carroll |
| | 07/31/24 Public Hearing Items<br>08/02/24 Prelim Plat Items<br>08/09/24 Regular Agenda Items | 08/21/24 | | Monday<br>08/26/24<br>6:00 p.m. | • Training – Conducted by the City Clerk |
| **SEPTEMBER** | 08/14/24 Public Hearing Items<br>08/16/24 Prelim Plat Items<br>08/23/24 Regular Agenda Items | 09/04/24 | | Monday<br>09/09/24<br>6:00 p.m. | |
| | 08/28/24 Public Hearing Items<br>08/30/24 Prelim Plat Items<br>09/06/24 Regular Agenda Items | 09/18/24 | | Monday<br>09/23/24<br>6:00 p.m. | |
| **OCTOBER** | 09/11/24 Public Hearing Items<br>09/13/24 Prelim Plat Items<br>09/20/24 Regular Agenda Items | 10/02/24 | | Monday<br>10/14/24<br>6:00 p.m. | |
| | 09/25/24 Public Hearing Items<br>09/27/24 Prelim Plat Items<br>10/04/24 Regular Agenda Items | 10/16/24 | | Monday<br>10/28/24<br>6:00 p.m. | • Annual Meeting Schedule |
| **NOVEMBER** | 10/16/24 Public Hearing Items<br>10/18/24 Prelim Plat Items<br>10/25/24 Regular Agenda Items | 11/06/24 | | Tuesday<br>11/12/24<br>6:00 p.m. or<br>Monday<br>11/25/24<br>6:00 p.m. | |
| **DECEMBER** | 11/13/24 Public Hearing Items<br>11/15/24 Prelim Plat Items<br>11/20/24 Regular Agenda Items | 12/04/24 | | No Meetings for Council in December | |

*The Commission's opportunity to give their report to City Council is scheduled for the Council's regular meeting following the Commission's regular meeting, under Agenda Item 8 – Announcements/ Presentations/ Borough Report/Commission Reports. Reports are the Commission's opportunity to give Council a brief update on their work. Attend via Zoom or in Person.

# City of Homer

*www.cityofhomer-ak.gov*

Office of the City Manager
491 East Pioneer Avenue
Homer, Alaska 99603
citymanager@cityofhomer-ak.gov
(p) 907-235-8121 x2222
(f) 907-235-3148


## Memorandum

| | |
|---|---|
| TO: | Mayor Castner and Homer City Council |
| FROM: | Rob Dumouchel, City Manager |
| DATE: | November 8, 2023 |
| SUBJECT: | City Manager's Report for November 13, 2023 Council Meeting |

**Pioneer Avenue Trick or Treat**

Pioneer Avenue was bustling with trick-or-treaters for Halloween. The Homer Chamber of Commerce planned the event, and the City processed the special event permit and participated at two different locations: City Hall and the Fire Hall. The City also supported trick-or-treat operations in the Mountain View/Bayview neighborhood. Both Police and Fire crews worked to control the flow of traffic and keep everybody safe.

**Champion Work Plan Follow Up**

At the October 23rd Council Meeting, Council picked out a number of projects/themes that they wanted to "champion." I have been working with staff to follow up on the creation of these Council champion teams. I've been working my way through the list of topics and connecting with the teams.

- Harbor Expansion – Staff is working with Councilmembers Lord and Hansen to develop a resolution that will be before Council at your next meeting. An informational memo from the champions is included in the meeting packet.
- HERC Site/Recreation – Staff has been working on the requests in Resolution 23-118 related to alternative site analysis for a future recreation facility. We will be looking to get together soon with the Council Champions.

- Finance – Staff has been getting geared up to fulfill the requests in Resolution 23-120 related to finance. I have reached out the Champions and suggested a meeting to discuss vision for this topic once Councilmember Davis is available to meet.
- Business Licenses – I met with the Mayor, Councilmember Venuti, and Economic Development Chair Karin Marks to discuss the concept and vision. Once that is firmed up, I expect we'll bring a memo to Council to discuss the merits of the Champions' proposal.
- Stormwater – I have reached out to the Champions to let them know that I wanted to wait for the new Public Works Director to arrive before we start working on the knowledge download from Jan.
- Lands Policy – I've spoken individually with the Mayor and Councilmember Davis, but we haven't met as a team yet. On this topic, the annual Land Allocation Plan update should start making the rounds to Commissions in early 2024.

**Siren Update from KPB**

Many may remember that the Kenai Peninsula Borough's Office of Emergency Management worked this year to replace tsunami notification sirens throughout the Borough. Technicians are making a final pass on each installation to test the system to ensure it is functioning correctly. Technicians are tentatively scheduled to conduct this work in Homer on November 14th and the testing will be done one pole at a time.

**Landfill Fire Response**

On October 20th, Homer Volunteer Fire and Western Emergency Services (WES) responded as mutual aid to Kachemak Emergency Services (KESA) to assist in fire suppression operations at the construction and demolition cell of the Homer Landfill. Homer responded with seven personnel who operated an engine and two tankers. Upwards of 60,000 gallons of water was required to put out the fire.

**Follow Up to Ordinance 23-21(S)(A)**

Ordinance 23-21(S)(A) was voted down by Council, however, there was support to revisit the topic and use recommendations provided by the Planning Commission as a way to move the core concept of the ordinance forward. City Planner Ryan Foster will be working d eloping solutions in line with the recommendation

table that accompanied ordinance 23-21(S)(A) and will be collaborating with the original sponsors to get it ready for consideration by the full Council at a later date.

**Harbor Parking and Camping Operations Update**

At the most recent Port & Harbor Commission meeting, Harbormaster Matt Clarke provided an update regarding the parking and camping operations for this past summer season. Parking revenues totaled approximately $190,000 by the end of September. Camping on the Spit, management of which was reassigned this year from Public Works, generated approximately $195,000 in revenues. There are still some operational and funding source questions to be worked out between the Enterprise and General Fund in the shift of Spit camping to the Harbor, but overall I'm seeing that experiment as a success. The Harbor operations team was very well equipped to take on the challenge and we able to maintain a higher level of control and satisfaction for internal and external stakeholders. The Harbormaster's full report is attached to this report. I will continue to work with the Harbor and Public Works to further dial in this change for the 2024 season.

**KPEDD Visit**

On November 3rd I participated in a meeting with Kenai Peninsula Economic Development District (KPEDD) staff and City Managers from around the Kenai Peninsula to discuss local economic development topics as well as KPEDD-specific updates related to the retirement of Tim Dillon who will be replaced in 2024 by Cassidy Cameron. Tim and Cassidy will be visiting with the Council at your next regular meeting.

Attachments:
November Employee Anniversaries
General Fund Expenditure Report through October 2023
Memorandum re: Grant Summary Update
Harbormaster's Parking and Camping Report
Alaska Small Business Development Quarterly Report

City of Homer
www.cityofhomer-ak.gov

Office of the City Manager
491 East Pioneer Avenue
Homer, Alaska 99603
citymanager@cityofhomer-ak.gov
(p) 907-235-8121 x2222
(f) 907-235-3148

# Memorandum

TO: MAYOR CASTNER AND CITY COUNCIL

FROM: Andrea Browning

DATE: November 13, 2023

SUBJECT: November Employee Anniversaries

I would like to take the time to thank the following employees for the dedication, commitment and service they have provided the City and taxpayers of Homer over the years.

| | | | |
|---|---|---|---|
| **Dave Shealy** | **Police** | **26** | **Years** |
| **Jenna deLumeau** | **Finance** | **14** | **Years** |
| **Ian Overson** | **Police** | **12** | **Years** |
| **Cinda Nofziger** | **Library** | **2** | **Years** |

General Fund
Expenditure Report
Actuals through October 2023
33% Fiscal Year Elapsed

**Current Fiscal Analysis**

| | FY24 ADOPTED BUDGET | FY24 YTD ACTUAL $ | FY24 YTD ACTUAL % |
|---|---|---|---|
| **Revenues** | | | |
| Property Taxes | $ 4,115,085 | $ 3,388,579 | 82% |
| Sales and Use Taxes | 8,939,282 | 3,554,945 | 40% |
| Permits and Licenses | 43,797 | 13,025 | 30% |
| Fines and Forfeitures | 10,303 | 130 | 1% |
| Use of Money | 0 | 76,227 | |
| Intergovernmental | 746,338 | 90,570 | 12% |
| Charges for Services | 396,890 | 197,521 | 50% |
| Other Revenues | - | 52,697 | |
| Airport | 198,448 | 76,551 | 39% |
| Operating Transfers | 1,728,989 | - | 0% |
| **Total Revenues** | **$ 16,179,131** | **$ 7,450,244** | **46%** |
| **Expenditures & Transfers** | | | |
| Administration | $ 2,288,320 | $ 598,981 | 26% |
| Clerks/Council | 927,024 | 233,648 | 25% |
| Planning | 387,478 | 86,142 | 22% |
| Library | 1,079,132 | 351,868 | 33% |
| Finance | 898,578 | 243,623 | 27% |
| Fire | 1,881,175 | 567,048 | 30% |
| Police | 4,282,603 | 1,494,619 | 35% |
| Public Works | 3,512,438 | 1,056,952 | 30% |
| Airport | 229,618 | 56,663 | 25% |
| City Hall, HERC | 179,040 | 52,554 | 29% |
| Non-Departmental | 179,000 | 79,000 | 44% |
| Total Operating Expenditures | $ 15,844,405 | $ 4,821,099 | 30% |
| Transfer to Other Funds | | | |
| Leave Cash Out | $ 221,360 | $ - | 0% |
| Other | 103,366 | - | 0% |
| Total Transfer to Other Funds | $ 324,725 | $ - | 0% |
| Transfer to CARMA | | | |
| General Fund Fleet CARMA | $ - | $ - | 0% |
| General Fund CARMA | - | - | 0% |
| Seawall CARMA | 10,000 | - | 0% |
| Total Transfer to CARMA Funds | $ 10,000 | $ - | 0% |
| **Total Expenditures & Transfers** | **$ 16,179,131** | **$ 4,821,099** | **30%** |
| **Net Revenues Over (Under) Expenditures** | **$ 0** | **$ 2,629,146** | |

**These numbers are preliminar[illegible]re subject change**

Water and Sewer Fund
Expenditure Report
Actuals through October 2023
33% Fiscal Year Elapsed

**Current Fiscal Analysis**

| | FY24 ADOPTED BUDGET | FY24 YTD ACTUAL $ | FY24 YTD ACTUAL % |
|---|---|---|---|
| **Revenues** | | | |
| Water Fund | $ 2,369,005 | $ 916,796 | 39% |
| Sewer Fund | 1,948,388 | 784,306 | 40% |
| **Total Revenues** | **$ 4,317,393** | **$ 1,701,102** | **39%** |
| **Expenditures & Transfers** | | | |
| Water | | | |
| Administration | $ 309,507 | $ 118,940 | 38% |
| Treatment Plant | 684,568 | 230,078 | 34% |
| System Testing | 33,000 | 10,917 | 33% |
| Pump Stations | 115,707 | 35,317 | 31% |
| Distribution System | 372,744 | 120,494 | 32% |
| Reservoir | 19,025 | 5,597 | 29% |
| Meters | 285,597 | 19,282 | 7% |
| Hydrants | 214,533 | 68,194 | 32% |
| Sewer | | | |
| Administration | $ 303,612 | $ 118,809 | 39% |
| Plant Operations | 836,304 | 253,322 | 30% |
| System Testing | 18,000 | 4,878 | 27% |
| Lift Stations | 216,060 | 63,909 | 30% |
| Collection System | 306,884 | 79,928 | 26% |
| Total Operating Expenditures | $ 3,715,541 | $ 1,129,665 | 30% |
| Transfer to Other Funds | | | |
| Leave Cash Out | $ 15,769 | $ - | 0% |
| GF Admin Fees | - | - | 0% |
| Other | 22,945 | - | 0% |
| Total Transfer to Other Funds | $ 38,714 | $ - | 0% |
| Transfers to CARMA | | | |
| Water | $ 309,001 | $ - | 0% |
| Sewer | 254,138 | - | 0% |
| Total Transfer to CARMA Funds | $ 563,138 | $ - | 0% |
| **Total Expenditures & Transfers** | **$ 4,317,393** | **$ 1,129,665** | **26%** |
| **Net Revenues Over(Under) Expenditures** | **$ 0** | **$ 571,437** | |

Port and Harbor Fund
Expenditure Report
Actuals through October 2023
33% Fiscal Year Elapsed

**Current Fiscal Analysis**

| | FY24 ADOPTED BUDGET | FY24 YTD ACTUAL $ | FY24 YTD ACTUAL % |
|---|---|---|---|
| **Revenues** | | | |
| Administration | $ 614,164 | $ 297,522 | 48% |
| Harbor | 3,961,361 | 2,769,044 | 70% |
| Pioneer Dock | 307,804 | 130,815 | 42% |
| Fish Dock | 578,477 | 382,401 | 66% |
| Deep Water Dock | 182,426 | 39,230 | 22% |
| Outfall Line | 4,800 | - | 0% |
| Fish Grinder | 7,390 | 8,398 | 114% |
| Load and Launch Ramp | 130,000 | 57,063 | 44% |
| **Total Revenues** | **$ 5,786,422** | **$ 3,684,472** | **64%** |
| **Expenditures & Transfers** | | | |
| Administration | $ 1,143,305 | $ 494,034 | 43% |
| Harbor | 1,609,487 | 501,782 | 31% |
| Pioneer Dock | 86,345 | 29,417 | 34% |
| Fish Dock | 747,966 | 217,745 | 29% |
| Deep Water Dock | 104,705 | 35,759 | 34% |
| Outfall Line | 13,500 | 3,280 | 24% |
| Fish Grinder | 27,682 | 23,831 | 86% |
| Harbor Maintenance | 533,783 | 157,046 | 29% |
| Main Dock Maintenance | 51,393 | 15,189 | 30% |
| Deep Water Dock Maintenance | 61,893 | 17,515 | 28% |
| Load and Launch Ramp | 138,815 | 46,528 | 34% |
| Total Operating Expenditures | $ 4,518,876 | $ 1,542,127 | 34% |
| Transfer to Other Funds | | | |
| Leave Cash Out | $ 73,867 | $ - | 0% |
| GF Admin Fees | - | - | 0% |
| Debt Service | 0 | - | 0% |
| Other | 375,092 | - | 0% |
| Total Transfer to Other Funds | $ 448,959 | $ - | 0% |
| Transfers to Reserves | | | |
| Harbor | $ 818,588 | $ - | 0% |
| Load and Launch Ramp | - | - | 0% |
| Total Transfer to Reserves | $ 818,588 | $ - | 0% |
| **Total Expenditures & Transfers** | **$ 5,786,422** | **$ 1,542,127** | **27%** |
| **Net Revenues Over(Under) Expenditures** | **$ 0** | **$ 2,142,345** | |

# MEMORANDUM

**City Manager Report: Grant Update**

**Item Type:** Informational Memorandum

**Prepared For:** Mayor and City Council

**Date:** November 8, 2023

**From:** Special Projects & Communications Coordinator Carroll

**Through:** Rob Dumouchel, City Manager

This is an informational memo to provide an update on Federal and State grant applications submitted or in process in support of City of Homer projects. New actions/information since the September 20, 2023 Grant Update are highlighted in yellow on the attached chart.

Highlights include:

Homer Float System Replacement Project (HOMER FREIGHT)

MARAD has made its 2023 Port Infrastructure Development Program (PIDP) award selections. Unfortunately, Homer was not one of the projects selected. The winning projects in Alaska all serve underserved communities; three of the funded projects were submitted under PIDP last year and were not funded. Three were submitted under RAISE, were not funded and were resubmitted under PIDP this year. One project would have lost substantial state and other funding sources without being able to leverage a PIDP award this year.

After reviewing the winning projects, HDR consultants who assisted with the Homer FREIGHT application reported that Homer's project and application was equally as strong as those awarded. Staff will request a detailed debrief of the FREIGHT project to see if there are ways to better portray the project and to help inform a decision on whether to resubmit an application next year.

Brownfield Multipurpose Grant Application

Economic Development Manager Engebretsen, with grant editing support from Special Projects Coordinator Carroll recently submitted a Brownfield Multipurpose grant application to the Environmental Protection Agency for Federal discretionary funds to continue hazardous materials assessment efforts, conduct remediation and development clean up alternatives for the HERC site. Two other Brownfield sites in Homer's downtown are included in the grant's scope (former gas station on Pioneer Avenue and the HEA property on Snowbird Street), through the priority site is the HERC site.

Successful Awards

The City was recently awarded two grants through the Alaska Division of State Homeland Security and Emergency Management. Awards have been offered from the FY23 State Homeland Security Program for improvements to the City's public safety communication system and from the Hazard Mitigation Grant Program to replace the City's raw water transmission mains. Ordinances to accept these funds are on November 13, 2023 agenda. More information about these projects are provided in the Ordinances section of the meeting packet.

RAISE

Almost a year has passed since the City started developing a Federal RAISE application in support of non-motorized transportation planning and design; the RAISE program is anticipated to reopen for another round in late November (if the schedule is not delayed by a potential government shutdown). The City's FY23 REACH application received a High Merit rating. Staff is evaluating capacity to not only update and resubmit the REACH (Realizing Equitable, Accessible Connectivity in Homer) project application, but also to implement the project should it be funded.

| FY23 Project Supported | TPC | Grant Fund | Grant Funds Req | Match/Local Cost | Status | Notes |
|---|---|---|---|---|---|---|
| **Slope Stability-<br>Erosion Mitigation Program** | | | | | | |
| Kachemak Drive Peatland Water Quality Improvement (Kahcemak Sponge) | $4,388,791 | NOAA Habitat Conservation<br>KBNERSS led/City partner | $ 1,188,275.00<br>(land acquistion) | $ 418,000.00<br>(land acquisition | Submitted<br>Awarded 4/1/2023<br>Award Executed | UAA accepted award; sent sub-award agreement to City<br>Ord 23-46 to accept sub-award introduced 6/26/23<br>Grant is for Kachemak Drive peatlands acquisition |
| Beluga Slough Stormwater Treatment System | $ 690,000.00 | Alaska Clean Water Actions | $ 153,307.00 | $ 107,182.00 | Submitted 11/9/2022<br>Awarded 3/1/2023<br>Accepted via Ord 23-16(S) | City Council approved grant agreement Ord<br>City costs in-kind + elibigle for funds from ADEC<br>Clean Water Revolving Loan Fund |
| **Transportation** | | | | | | |
| Transportation Planning | $ 960,000.00 | Safe Streets For All<br>KPB Applic/City partner | $ 960,000.00 | $ 23,000.00<br>(in-kind) | Award announced<br>KPB executing grant agreement | Application approved Reso 22-063 |
| ~~Non-Motorized Trans Network~~ (REACH Project) | $ 1,500,000.00 | ~~Fed RAISE Planning Grant~~ | $ 1,500,000.00 | $ - | Submitted 2/28/2023<br>NOT FUNDED 6/28/23 | HDR application support Reso 22-087 approved<br>Project support Reso 23-012 approved<br>Application made it to Secretary of Transportation Desk<br>Not awarded but deemed a Merit Application; encouraged to apply again next FY. |
| | | | | | | |
| Homer All-Ages & Abilities Pedestrian Pathway | $ 3,900,000.00 | State of AK<br>Transportation Alternatives (TAP) | $ 3,432,000.00 | $ 468,000.00 | Submitted 2/15/2023<br>Advanced to final round:<br>Public Evaluation Board (PEB)<br>Awaiting DOT cost estimate<br>(AK DOT&PF manages/constructs project) | HAPP sections in PW's 5-year road plan<br>Project support Reso 23-011 approved<br>Date of PEB Review pending<br>Unknown award date; Perf period end date June '25<br>($500,000 set aside in HART for grant matching) |
| Main Street Rehab/ Sidewalk South | $ 4,200,000.00 | State of AK<br>Community Transportation Program (CTP) | $ 3,696,000.00 | $ 504,000.00 | Submitted 2/15/2023<br>Advanced to final round:<br>Public Evaluation Board (PEB)<br>Awaiting DOT cost estimate<br>(AK DOT&PF manages/constructs project) | Main St in 7-10 year horizon in PW Road Plan<br>Project support Reso 23-011 approved<br>Date of PEB Review pending<br>Unknown award date; Perf period end date June '25<br>($500,000 set aside in HART for grant matching) |
| **Port & Harbor** | | | | | | |
| ~~Float Systems 4 & 1 Replacemer~~ | $ 59,289,547.00 | ~~Fed Port Infrastructure Development Projects (PIDP)~~ | $47,135,190 | $ 12,154,357.00<br>(20.5% match) | Submitted 4/28/2023<br>NOT FUNDED 11/1/2023 | HDR application support Ord 23-12 aprpoved<br>Council approved project support Reso 4/24/2023<br>Could apply for PIDP or RAISE '24 if '23 unsuccessful<br>Added to STIP as illustrative project<br>Revenue bond or TIFIA loan for match |
| | | Municipal Harbor Grant | | | Grant for construction only<br>must complete design to apply | If funded, leverages State match to lower<br>City match on Federal PIDP Grant |

Grant Activity Update 11/8/2023

| FY23 Project Supported | TPC | Grant Fund | Grant Funds Req | Match/Local Cost | Status | Notes |
|---|---|---|---|---|---|---|
| Float Systems 4 & 1 Replace | | Denali Commission Grant | | | Application not begun<br>Due date 4/14/24 | Can be used as non-Federal Match<br>May not be competitive - $1M max award<br>Could apply in '24 for Design/Engineering |
| Fish Grinding Building Replace & Drainage Improvements | $ 374,978.00 | ADFG Dingle-Johnson | $ 250,000.00 (preliminary) | $ 93,744.50 (preliminary) | Submitted 7/12/2022<br>Preliminary award announced 7/7/2023 | Finalizing project cost estimate and award amount<br>$100,000 allocated in FY23 City Capital Budget; for final design and partial match; additional match to meet 25% of construction cost may be necessary<br>Ordinance to accept the grant forth coming |
| **Building Code Development** | $ 587,500.00 | State BRIC Sub-Grant (Building Resilient Infrastructure & Communities) | $ 470,000.00 | $ 117,500.00 (covered by State of Alaska) | Submitted 12/21/2022<br>Accepted for further review<br>Awaiting decision | Council Approved application Reso 22-086<br>As a sub-applic State covers local match |
| **Parks & Recreation** | | | | | | |
| Bayview Park Renovations | $ 139,230.00 | State of AK<br>Healthy & Equitable Community Round 2 | $ 74,919.00 | $ 52,314.00<br>Addl redistribution funds requested | Submitted 4/24/2023<br>Awarded 5/8/2023<br>Accepted via Ord 23-36 | Council Approved Resolution 23-031<br>$12,000 donation from Kach Bay Rotary<br>Additional funds from HART approved in COH Cap budget |
| HERC HazMat Assessement & Remediation | | EPA Multipurpose Brownfield Federal Discretionary Grant | $1,000,000 | | Submitted 11/13/2023 | Council Approved Resolution 23-117 |
| **Utilities - Infrastructure Resilience** | | | | | | |
| Spit Road Erosion Mitigation | $ 1,812,052.00 | Federal PROTECT Grant | $ 1,812,052.00 | - | Submitted 8/18/2023<br>Awaiting Decision | Application requested planning funds for Homer Spit Erosion Mitigation. City of Homer is project sponsor, but if awarded City will enter MOU with DOT to implement grant activities |
| Raw Water Transmission Main | | FEMA Disaster Mitigation | $ 1,988,650.00 (direct project costs) | - | Submitted 1/30/2020<br>Obligating Award Document Recd 11/3/2023 | 4/11/23: Responded to latest FEMA request for information<br>5/2/23: Congressional Delegation approved award<br>7/11/23: FEMA Received Period of Performance Waiver<br>11/13 Ordinance to accept the grant to be consdered by City Council |
| **IT - Communications** | | | | | | |
| Cybersecurity (City-wide Cybersecurity Assessment and Remote Backup System for Cybersecurity Response & Recovery) | $ 252,794.00 | AK Division of Homeland Securi<br>FY22 State & Local Cyberscurity Grant Program | $ - | $ 252,794.00 | Submitted 8/31/2023<br>Awaiting Decision | |
| Public Safety Communications (HPD Backup Repeater & Radio Equip HVFD APX-600 Radio Upgrade) | $ 119,046.56 | AK Division of Homeland Securi<br>FY23 State Homeland Security Grant Program | $ 88,196.56 | $ - | Submitted 1/31/2023<br>Prelim Award Announcement 9/18/2023<br>Obligating Award Document Recd | 11/13 Ordinance to accept the grant to be consdered by City Council |

designates grants awarded  designates grants NOT awarded  designates updates since the 9/20/23 grant update

## 2023 Ramp 1 - 4 Parking Revenue

Marina Account #17770

Memorial Day to Labor Day

Past Year Comparison

| | Ramp 1 | Ramp 2 | Ramp 3 | Ramp 4 | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 | 2006 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **May** | 723.23 | $2,030.60 | $769.59 | $296.71 | **$3,820.13** | $2,837.28 | $1,414.00 | $1,200.74 | $1,535.84 | $1,255.50 | $1,046.25 | $599.85 | $1,478.99 | $654.87 | $745.25 | $710.68 | $683.72 | $590.00 | $362.78 | $359.95 | $560.54 | $155.54 |
| No. of Sales: | 78 | 219 | 83 | 32 | **412** | 612 | 305 | 254 | 331 | 270 | 225 | 129 | 237 | 132 | 144 | 136 | 130 | | | | | |
| **June** | $4,293.00 | $11,840.52 | $4,348.63 | $1,316.64 | **$21,798.79** | $18,261.47 | 10416.32* | $4,093.64 | $7,131.68 | $6,268.20 | $5,593.95 | $4,849.95 | $4,466.29 | $4,007.70 | $3,479.72 | $3,587.02 | $3,114.86 | $3,394.00 | $2,784.09 | $3,250.56 | $3,853.54 | $4,027.06 |
| No. of Sales: | 463 | 1277 | 469 | 142 | **2,351** | **3,939** | 2,247 | 883 | 1,537 | 1,348 | 1,203 | 1,043 | 800 | 789 | 698 | 694 | 613 | | | | | |
| | | | | Subtotal | **$25,618.92** | $21,098.75 | $11,830.32 | $5,294.38 | $8,667.52 | $7,523.70 | $6,640.20 | $5,449.80 | $5,945.28 | $4,662.57 | $4,224.97 | $4,297.70 | $3,798.58 | | | | | |
| **July** | $5,961.98 | $17,913.77 | $7,297.17 | $3,356.51 | **$34,529.44** | $22,735.27 | $23,880.39 | $7,723.68 | $10,982.88 | $10,629.90 | $9,048.90 | $8,579.25 | $8,414.81 | $8,643.86 | $6,368.68 | $6,268.65 | $8,041.97 | $7,783.75 | $5,891.39 | $6,185.02 | $7,324.48 | $7,893.35 |
| No. of Sales: | 643 | 1932 | 787 | 362 | **3,724** | 4,904 | 5,151 | 1,666 | 2,367 | 2,286 | 1,946 | 1,845 | 1,545 | 1,655 | 1,253 | 1,230 | 1,575 | | | | | |
| | | | | Subtotal | **$60,148.36** | $43,834.02 | $35,710.71 | $13,018.06 | $19,650.40 | $18,153.60 | $15,689.10 | $14,029.05 | $14,360.09 | $13,306.43 | $10,593.65 | $10,566.35 | $11,840.55 | | | | | |
| **August** | $4,867.87 | $13,722.76 | $4,765.88 | $1,872.97 | **$25,229.49** | $19,003.24 | $18,810.38 | $5,697.73 | $8,129.28 | $6,400.01 | $5,910.15 | $6,198.45 | $5,613.61 | $6,325.25 | $4,018.83 | $3,696.34 | $3,993.71 | $4,643.00 | $3,939.28 | $3,921.73 | $4,001.81 | $4,849.64 |
| No. of Sales: | 525 | 1480 | 514 | 202 | **2,721** | 4,099 | 4,057 | 1,229 | 1,752 | 1,376 | 1,271 | 1,333 | 1,062 | 1,133 | 816 | 730 | 795 | | | | | |
| | | | | Subtotal | **$85,377.84** | $62,837.26 | $54,521.09 | $18,715.79 | $27,779.68 | $24,553.61 | $21,599.25 | $20,227.50 | $19,973.70 | $19,631.68 | $14,612.48 | $14,262.69 | | | | | | |
| **September** | $361.61 | $1,168.29 | $370.89 | $101.99 | **$2,002.78** | $2,475.66 | $2,800.19 | $1,010.67 | $250.56 | $753.49 | $702.15 | $855.60 | $812.60 | $144.19 | $123.71 | $203.72 | $374.65 | $395.00 | $449.28 | $421.38 | $538.02 | $521.10 |
| No. of Sales: | 39 | 126 | 40 | 11 | **216** | 534 | 604 | 218 | 54 | 162 | 151 | 184 | 144 | 28 | 25 | 44 | 74 | | | | | |
| | | | | **Year Total** | **$87,380.63** | $65,312.92 | $57,321.28 | $19,726.46 | $28,030.24 | $25,307.10 | $22,301.40 | $21,083.10 | $20,786.30 | $19,775.87 | $14,736.19 | $14,466.41 | $16,208.91 | $16,805.75 | $10,642.73 | $ 14,138.64 | $16,278.39 | $17,446.69 |
| | | | | | | | | | | | | | 2015-2016 | 2014-2015 | 2013-2014 | 2012-2013 | 2011-2012 | 2010-2011 | 2009-2010 | 2008-2009 | 2007-2008 | 2006-2007 |
| | | | | **Sales Total** | **9,424** | 14,088 | 12,364 | 4,250 | 6,041 | 5,442 | 4,796 | 4,534 | xx% inc. | 5% inc. | 26% inc. | 2% inc. | 11% dec. | 4% dec. | 20% inc. | 5% dec. | 13% dec. | 6% dec. |

*** June 2021, new paid parking area added between ramp 1 and 2, increase of $5/per day paid parking by 70+ spaces**

****May 2023, parking per day increased from $5 to $10/per day**

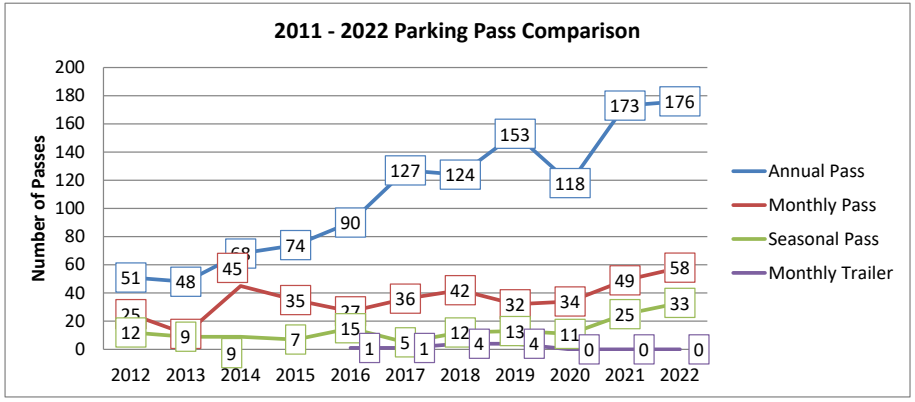
## 2023 Parking Pass Revenues

Marina Account #17770

* Weekly Pass offered starting 6/15/19

| | Vehicle Pass Revenue | Trailer Pass Revenue | Reg Long Term | RSV/TA Long Term | Monthly Less Than 20'L | Monthly Over 20'L | Weekly Long Term | Seasonal Pass | Seasonal Monthly | 1 Hour Max Business Pass | Monthly Trailer | Month Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **January** | $5,290.30 | | 26 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 32 |
| **February** | $1,313.51 | | 5 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 10 |
| **March** | $1,658.97 | | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 |
| **April** | $4,424.49 | | 7 | 8 | 0 | 0 | 4 | 10 | 0 | 0 | 0 | 29 |
| **May** | $12,231.75 | | 27 | 15 | 10 | 2 | 10 | 21 | 0 | 0 | 0 | 85 |
| **June** | $9,296.31 | | 20 | 6 | 20 | 1 | 10 | 15 | 0 | 0 | 0 | 72 |
| **July** | $2,569.75 | | 7 | 2 | 7 | 2 | 21 | 0 | 0 | 0 | 0 | 39 |
| **August** | $633.42 | | 0 | 0 | 2 | 2 | 15 | 0 | 0 | 0 | 0 | 19 |
| **September** | $479.55 | | 1 | 2 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 6 |
| **October** | $0.00 | | | | | | | | | | | 0 |
| **November** | $0.00 | | | | | | | | | | | 0 |
| **December** | $0.00 | | | | | | | | | | | 0 |
| **2023 Total** | $37,898.05 | $0.00 | 102 | 41 | 42 | 7 | 63 | 46 | 0 | 0 | 0 | 301 |
| 2022 Total | $40,756.65 | | 134 | 42 | 53 | 5 | 73 | 29 | 4 | 0 | 0 | 340 |
| 2021 Total | $35,714.31 | $0.00 | 118 | 55 | 45 | 4 | 54 | 18 | 7 | 0 | 0 | 301 |
| 2020 Total | $28,554.78 | $0.00 | 106 | 31 | 36 | 3 | 46 | 11 | | 0 | 0 | 233 |
| 2019 Total | $28,628.08 | $651.00 | 98 | 55 | 31 | 1 | 32 | 11 | | 2 | 4 | 234 |
| 2018 Total | $25,435.23 | $700.00 | 85 | 39 | 42 | 0 | N/A | 10 | | 2 | 4 | 182 |
| 2017 Total | $23,019.12 | $70.00 | 82 | 45 | 36 | 0 | N/A | 5 | | N/A | 1 | 169 |
| 2016 Total | $18,968.12 | $140.00 | 56 | 34 | 27 | 0 | N/A | 15 | | N/A | 1 | 133 |
| 2015 Total | $15,256.04 | n/a | 48 | 26 | 35 | 0 | N/A | 7 | | N/A | n/a | 116 |
| 2014 Total | $15,804.91 | n/a | 47 | 21 | 39 | 6 | N/A | 9 | | N/A | n/a | 122 |
| 2013 Total | $10,358.26 | n/a | 33 | 15 | 10 | 1 | N/A | 9 | | N/A | n/a | 68 |
| 2012 Total | $10,511.70 | n/a | 32 | 19 | 25 | 0 | N/A | 12 | | N/A | n/a | 88 |
| 2011 Total | $12,372.16 | n/a | 40 | 28 | n/a | n/a | N/A | 10 | | N/A | n/a | 78 |

* July Seasonal Pass= 3 additional conversions from annual, rev already caught in annual + $50x3



## 2023 Qualitative Analysis of Parking Management on the Homer Spit

### *Introduction*

In 2023, the Port & Harbor department acquired and implemented the UpSafety parking management software system. This marked a significant shift from manual and outdated parking management methods to a modern, cloud-based solution. The new system introduced various technological advancements, including the integration of existing Luke II pay kiosks, mobile pay & text-to-park options, wireless X-2 mobile enforcement devices, and ALPR license plate recognition technology, transforming the parking experience for customers, visitors and staff. This analysis focuses on the impact of these changes, challenges, and future trends in parking management on the Homer Spit.

### *Parking Technology Improvements*

The implementation of the UpSafety parking management software system represents a major step forward in parking management on the Homer Spit. The new system not only streamlines parking operations but also enhances the user experience. Customers can now conveniently pay for parking using various methods, including in-field Luke II pay kiosks, the flexibility mobile payment, and text-to-pay via cell phone, supporting digital permitting and phasing out tangible paper permits that were previously produced and obtained at the harbormaster's office and displayed on the vehicle. This transition to modern technology has reduced the reliance on manual record-keeping using 3-ring binders and Excel spreadsheets, increasing the efficiency and accuracy of parking management.

### *Enforcement and Compliance*

Parking enforcement on the Homer Spit has been significantly improved with the use of technology. Homer municipal code supports writing citations to vehicle license plates, phasing out previous citation methods requiring vehicle registered owner information. Parking enforcement staff equipped with X-2 mobile electronic enforcement devices can monitor vehicles in real-time, checking for compliance with daily fees and vehicle parking & camping permits. The advanced license plate recognition (ALPR) technology further enhances enforcement by scanning license plates to verify permit compliance and check for infractions. The system integrates GPS location and time-stamped photos to ensure accuracy of enforcement in parking lots with time sensitive limits or restrictions. Citations are generated on site by the parking enforcement officer using the X-2 device and its integrated thermal printer. All citation information generated in the field is automatically saved to UpSafety's cloud-based software and is immediately available to parking administration for processing. The convenience of online payment, appeals, and adjudication through a web-based portal has streamlined the citation process, reducing staff time and the need for in-person interactions at the harbormaster's office.

### *Parking Options and User Groups*

The Homer Spit accommodates a diverse range of parking user groups, including recreational boaters, commercial fishermen, commercial charter & passenger vessel crew and customers, upland businesses owners and employees, tourists, day-use recreators, across the bay residents, and regulatory entity personnel. Our variety of parking options caters to these groups' distinct needs, from short-term parking time limits to long-term parking permits without designating or reserving parking to any specific user group. In 2023, the port & harbor took over management of the Fishing Hole & Mariner Park

campgrounds which provide approximately 150 spaces for RV parking and camping. Additionally, we now manage parking enforcement and revenue collection at the Homer Airport terminal which provides parking for approximately 200 vehicles.

### *Challenges and Inefficiencies*

Several inefficiencies and challenges have been identified in the current parking management system on the Homer Spit. Maintaining sufficient parking lot space and mitigating vehicle congestion is our primary challenge. In April 2023, we created an additional "overflow" parking lot containing space for approximately 100 vehicles located at the intersection of Outer Dock Road & Homer Spit Road. This lot offers free parking for up to seven consecutive days.

One measure we currently use to deter demand and drive down congestion is the administration of daily fee parking which requires users to make cost-based decisions involving their parking needs. The affordability of daily fee parking is a financial challenge for many employees working on the Homer Spit.

A second method of congestion mitigation includes the implementation of time limits in high use areas creating greater vehicle turn over. In 2023, a section of the parking lot between the steel grid and Fish Dock Road was changed from 7-day parking to 3-hour parking in order to improve vehicle turnover and access adjacent to the businesses operating in the vicinity.

A significant inefficiency driving space availability for vehicle parking is the allowance of RV and oversized vehicles in the heavily utilized parking lots along Homer Spit Road between ramps 1 and 5. RVs and over-sized vehicles require extra wide spaces and turning lanes which, in-turn, reduce available space for standard vehicle parking.

Other challenges include the inefficiencies associated with gravel parking lots. Many of our gravel parking lots have basic, above-grade, methods addressing drainage and run-off which foster potholes and puddles. Ramps 3 to 5 and the boathouse pavilion require drainage ditches bordering Homer Spit Road that consume potential usable parking space. Lack of permanent, uniform striping and delineation on gravel parking surfaces reduce efficient space utilization. Finally, some of our current parking lot time limits may not align with peak demand. All of these issues contribute to parking congestion and dissatisfaction among user groups, particularly represented among boat owners and employees of local business.

### *Revenue Generation and Budget Considerations*

The Port & Harbor generates revenue from the collection of parking and camping fees. These revenues should be used to support future parking lot improvements, growth and expansion of fee-based parking, and the required administration & enforcement. Parking and camping revenues also have the potential to support bond obligations for future capital projects. In April of 2023, the city manager assigned the port & harbor management responsibilities of the Fishing Hole, Mariner Park, and Tent Camp West campgrounds in order bolster enterprise revenues. Daily fee parking rates were increased from $5/day to $10/day and RV camping fees were increased from $20/day to $30/day. Parking revenues totaled approximately $190,000 YTD in September. The port & harbor sold approximately 7,100 individual camping permits totaling $195,000 YTD as of September. The assignment of Homer Spit campgrounds came quickly and without budget preparation. Campgrounds management require variety of basic operating expenses, including facilities maintenance, utilities, camp fee compliance enforcement,

general administration, grounds keeping, signage, refuse disposal and sanitation. It is imperative to strike a balance between revenue generation and sustainable management to meet these financial needs.

### *Future Trends and Diversification*

Several trends are driving the future diversification and use of parking lots on the Homer Spit. Trends in usage impacting demand for parking include the broad growth in the tourism & recreation sector, shore-based tour bus operations originating from other communities with destination on the Homer Spit, the increasing growth and presence of commercial passenger vessels in the small boat harbor, the vehicles associated with their crews and customers, and the need to streamline parking lot traffic flow involving passenger drop-off and pick-up, the multi-purpose use of the barge ramp terminal supporting cargo & passenger vessel operations and the need to accommodate cargo storage and lay-down operations combined with passenger vessel parking needs, growth in ridership and vehicle parking demand near ramp 7 associated with SVT's Kachemak Voyager, cruise ship lightering operations inside the small boat harbor, and event-based parking, such as festivals and special events.

Special consideration should be given to the east side of the Fishing Hole Campground and its dual-purpose use that includes our Marine Repair Facility supporting vessel haul-out and repair. What is the future of a campground that doubles over as a boat yard – or visa versa? Remember, there is only one place to haul-out and work on large vessels on the southern Kenai Peninsula and there are several campgrounds operating in the Homer area.

Near future improvements to parking lots to consider should include the paving of our high-use parking lots in order to improve space efficiency and the quality of the parking experience for the end-user in exchange for daily fee payments. Changes warranting reduction of boat trailer parking time limits and/or the implementation daily fee parking may be more aligned and reflective of current demand.

Finally, not-so-distant future issues to contemplate addressing congestion mitigation should include remote park & ride operations, public transit, and parking garages. These trends necessitate proactive planning and infrastructure improvements to accommodate the increasing demand for parking.

### *Conclusion*

The implementation of the UpSafety parking management software system represents a significant step forward in parking management, operations and growth on the Homer Spit. However, it also highlights various challenges and opportunities for improvement. Striking a balance between revenue generation, user satisfaction, and environmental responsibility will be crucial for the long-term success of parking management on the Homer Spit. Addressing inefficiencies, accommodating various user groups, and staying responsive to evolving trends will be essential in managing our unique parking needs.

# Business Analysis: Homer Spit Campground Operations

In 2023, the City Manager assigned the Port & Harbor responsibilities involving campground operations on the Homer Spit, including the Fishing Hole campground, Mariner Park campground, and the Tent Camp West beach site. This assignment comes with a complex array of responsibilities, staffing, equipment, budget considerations, and several challenges and concerns that need to be addressed. Let's analyze these components:

**Staffing Requirements:**

1. **Parking Enforcement Officers:** Responsible for camp fee compliance, registration, servicing pay kiosks, and revenue collection.
2. **Harbor Assistants:** Responsible for grounds keeping and sanitation of the public fish cleaning station at the Fishing Hole campground.
3. **Port Maintenance:** Maintenance of gazebos, pavilions, and fish cleaning stations.
4. **Parks Staff:** Grounds keeping, brush removal, and lawn mowing.
5. **Public Works Equipment Operators:** Responsible for surface maintenance and drainage.
6. **Public Works Building Maintenance & Custodial:** Cleaning and maintenance of the Fishing Hole restroom.
7. **Campground Hosts:** Responsible for providing information to the general public.
8. **Port & Harbor Administrative Staff:** Responsible for revenue collection and expense tracking.
9. **Homer Police Department:** Enforcement as needed.
10. **Refuse & Sanitation Contractors:** Responsible for trash and sanitation services.

**Equipment Requirements:**

1. **Parking Enforcement Vehicles**
2. **Pick-up Trucks & Carcass Trailers**
3. **Graders**, **Snow Plows & Sanders**
4. **Port Maintenance Trucks**
5. **Private Contractor Trash Dump Trucks**
6. **Luke II pay station kiosks & X-2 mobile enforcement devices**
7. **Lawn Mowers, Weed Whackers, Pressure Washers, and Paint Stripers**
8. **Signage & Delineation**
9. **Mariner Park Campground Host Trailer**
10. **Porta Potties & Handwash Stations**

11. **Trash Receptacles**
12. **Picnic Tables & Fire Rings**

**Operating Expenses and Revenues:**

- **2023 YTD Camp Fee Revenues:** $200,000 for RV & beach camping.
- **Estimated Total Operating Expenses:** $63,700
- **Employee & Staffing Wages:** $30,000
- **Utilities Expenses:** $3,500
- **Vehicle Expenses:** $4,000
- **Picnic Tables & Fire Rings:** $3,000
- **Refuse, Sanitation, and Recycling:** $5,000
- **Campground Hosts Stipends:** $5,200
- **Cleaning Supplies:** $2,000
- **T2 & UpSafety Software:** $9,000
- **Signage:** $2,000

**Challenges and Concerns:**

1. **Land Designation:** Defining what land(s) are considered campgrounds and what land(s) are parks.
2. **Responsibilities:** Clarifying the responsibilities of Port & Harbor, Parks, and Public Works within campgrounds and parks.
3. **Tariff Updates:** Identifying campground land use, rules, and user fees/rates.

**Budget:**

Developing a budget for Port & Harbor's campground operations, which should cover revenues, employee wages, equipment, operating and maintenance expenses, and fixed infrastructure and capital investments.

**Capital Improvements:**

Consider the 2024 Homer Spit Campgrounds Renovations provided in the COH's capital improvement plan. This project was identified by Public Works and its Park's division.

Should future campground capital improvement projects be funded by the port & harbor enterprise?

**Marine Repair Facility vs. Campground:**

Determining the future of the portion of the Fishing Hole (Pier 1 Theatre East) campground that also serves as the Marine Repair Facility.

**Bottom Line Analysis:**

What is the minimum acceptable profit margin that justifies Port & Harbor's involvement in campground operations? The time and resources dedicated to campgrounds should be weighed against the core responsibilities of Port & Harbor.

In summary, the management of campgrounds on the Homer Spit involves a diverse set of interdepartmental responsibilities, resource allocation, and potential for revenue generation. To make this endeavor successful, it's crucial to address the challenges, establish clear departmental responsibilities, and determine the financial viability and impact on core Port & Harbor operations.

# Homer Spit Campground Renovations

**Project Description and Benefit:** The Mariner Park and Fishing Hole campgrounds are situated on the Homer Spit. Their waterfront locations and close proximity to recreational activities and visitor support services make the campgrounds very popular with both Alaskans and out-of-state visitors. City campgrounds are heavily used in the summer and shoulder seasons, hosting over roughly 20,000 campers annually and generating up to $200,000 in revenue through camping fees.

The campgrounds are primitive. Campers use porta potties and have no means of hand washing. Campsites are pot holed, poorly marked and without tent pads. Many lack picnic tables and fire rings.

This renovation project greatly improves the camping experience and makes it easier to maintain the campgrounds to a higher standard of cleanliness and safety. Renovations include installing hand wash stations, grading campgrounds, delineating and labeling campsites, developing tent pads in tent camping areas and installing picnic tables and fire rings at sites that currently lack these basic amenities. Mariner Park Campground would also benefit from landscaping.

Completing these renovations bring the campgrounds to a minimum standard to keep them healthy, attractive and competitive. Visitors have a choice of where to stay on the Kenai Peninsula. We anticipate these upgrades will attract new visitors and motivate existing visitors to extend their stays or come back. Summer and shoulder season visitors contribute significantly to Homer's overall economy through their patronage of local businesses throughout their stay.

**Plans and Progress:** This project is 80% shovel ready.

**Total Project Cost:** $95,000

| | |
|---|---|
| Mariner Park Campground | $50,000 |
| Fishing Hole Campground | $45,000 |

**Schedule:** 2025-2026

**Priority Level:** 2

Mariner Campground at the base of the Homer Spit.

October 24, 2023

City of Homer
491 E. Pioneer Ave
Homer, AK 99603

Dear Mayor Castner, City Council, and City Staff,

This letter serves as our quarterly report for the period July 1 to September 30, 2023. During the quarter, the Alaska SBDC received the results from the national SBDC accreditation, with Robert Green and the Homer office receiving exemplary marks and noted as a model that should be replicated across the country. This past year, 81% of Homer clients chose to meet in-person with Robert, indicating a strong preference from local business owners and entrepreneurs to have this service in their community. After the quarter, Robert remains on pace to log the most hours of advising by the SBDC to the Homer area in a year. Here is a summary of deliverables to the Homer community during the quarter (year):

Client Hours: 132.8 (498.3)
Total Clients: 55 (108)
New Businesses Started or Bought: 2 (6)
Jobs Supported: 56 (236)
Capital Infusion: $0 ($293,000)
Client Surveys: 100% positive (100% positive)

This report provides lists of the top advising topics and top industries obtaining technical assistance from the Alaska SBDC in Homer. Assistance to entrepreneurs looking to start new businesses and work supporting existing businesses were the top topics this quarter. There was a relatively even split among industries, with retailers moving into the top spot this quarter, followed by food services.

Topics
1. Start-up Assistance: 51.5 hrs (39%)
2. General Management: 40.1 hrs (30%)
3. Financing/Capital: 15.0 hrs (11%)
4. Business Planning: 8.8 hrs (7%)
5. Buy/Sell Business: 8.0 hrs (6%)

Industries
1. Retailers: 25.8 (19%)
2. Food Services: 22.4 hrs (17%)
3. Administrative: 14.8 hrs (11%)
4. Healthcare: 14.6 hrs (11%)
5. Fishing: 13.8 hrs (10%)

We would like to thank the City of Homer for their support of the Homer Business Advisor position. The $10,000 funding provided by the mayor and city council is critical in retaining the Homer SBDC office in 2024. We greatly appreciate the knowledge, experience, and consistency Robert Green brings to efforts in Homer. Please do not hesitate to contact us if you have any questions.

Sincerely,

DocuSigned by:
98AFA012679B4D7...
Jon Bittner
Executive Director
Alaska SBDC

# City of Homer

*www.cityofhomer-ak.gov*

Office of the City Manager
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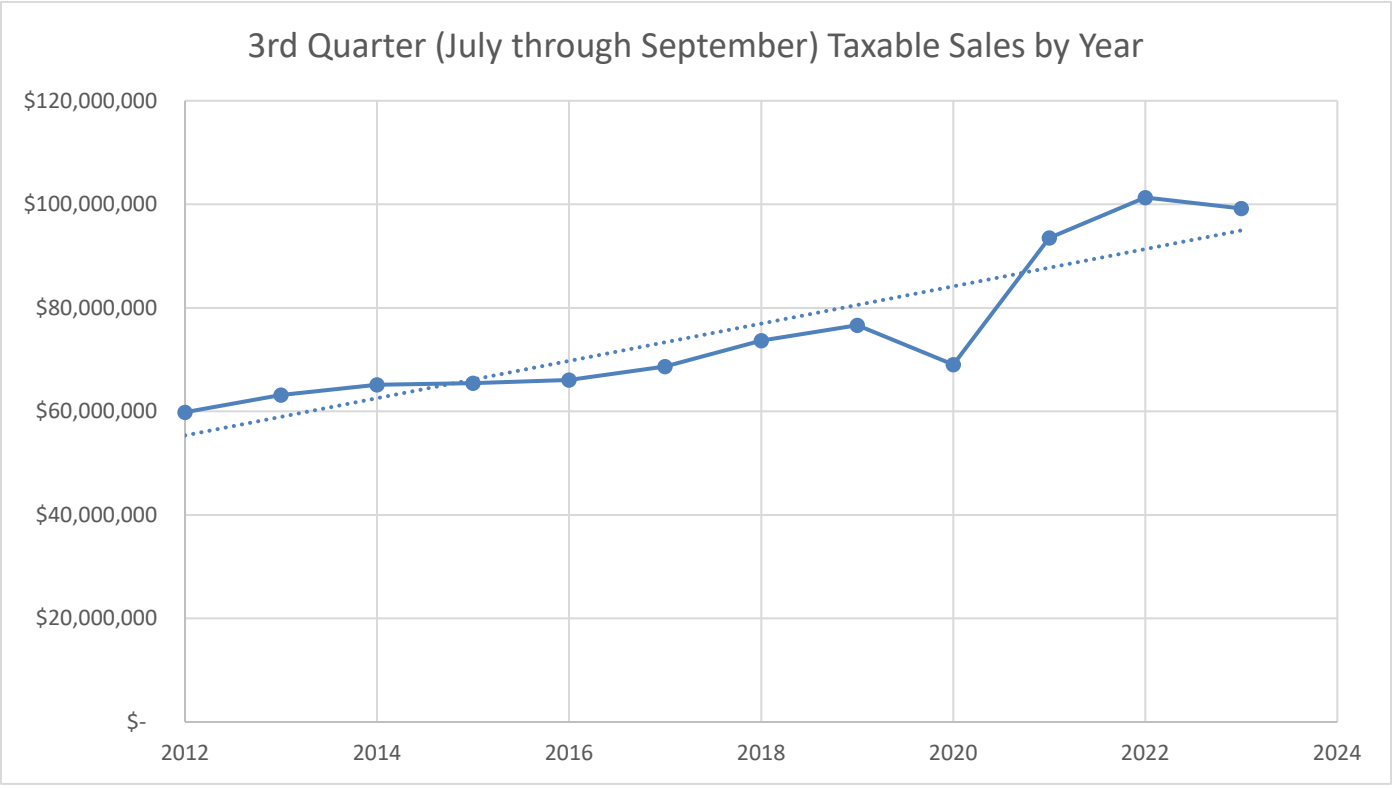
citymanager@cityofhomer-ak.gov
(p) 907-235-8121 x2222
(f) 907-235-3148


## Memorandum

| | |
|---|---|
| TO: | Mayor Castner and Homer City Council |
| FROM: | Rob Dumouchel, City Manager |
| DATE: | November 21, 2023 |
| SUBJECT: | City Manager's Report for November 27, 2023 Council Meeting |

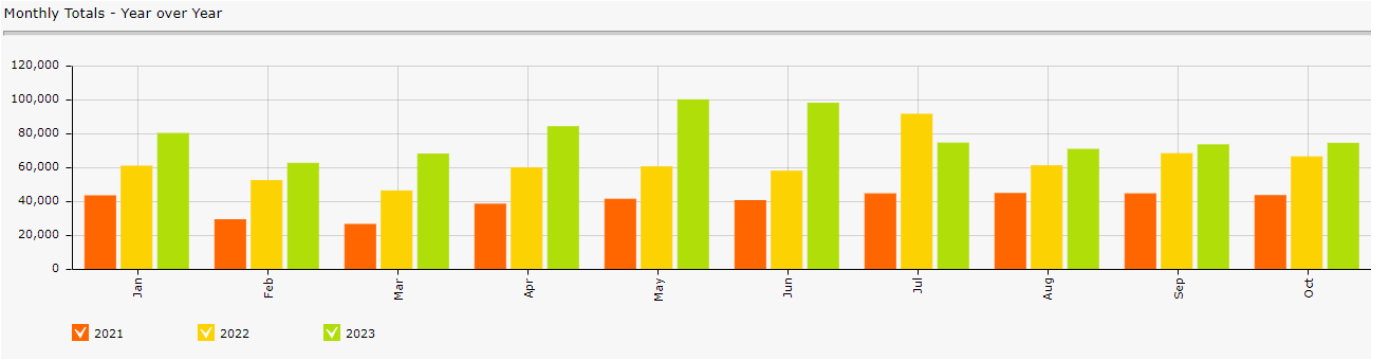
**First Quarter Sales Tax Update**

The 2023 summer season saw small decreases in taxable revenues when compared to the year prior. You may remember that the fourth quarter of FY23 (April 2023 through June 2023) experienced an approximately 4.8% decline in taxable sales that many have attributed to the poor weather we experienced this summer. The first quarter of fiscal year 2024 (July 2023 through September 2023) was relatively better than Q4 FY23, but still approximately 2% behind the taxable sales of the year prior. It's worth mentioning that despite the small decline, it is still the second best quarter of all time behind only Q1 FY23.




The Q1 FY24 performance puts us approximately $101k behind FY23 in revenues (~$63k to the General Fund, the rest split between HART, HAWSP, and the Police Station). The good news is that, as mentioned in a prior manager's report, other streams of income are pacing ahead of our expectations. Property taxes are expected to beat our budgeted numbers ($4.4M expected based on KPB assessor's office data versus $4.1M budgeted

for FY24) and the remote seller's sales tax revenues are continuing to show growth (June through October revenue reports from ARSSTC show $293k in revenue which is 67% of the $435k budgeted for FY24).




*2021 to 2023 Year over year graph of remote sales tax revenues for January through October*

**Lighthouse Village Development Project**

The City's Planning Division received permit applications related to a proposed development to take place across three parcels near the base of the Homer Spit (1563 Homer Spit Road and 1491 Bay Avenue). The project proposes development of a hotel, employee housing, and triplex residential units. The following applications have been submitted for the Lighthouse Village Development project:

- Conditional Use Permit (CUP) 23-08 for Planned Unit Development (Homer City Code 21.24.030 (f)); the application includes the following:
  - CUP application for a Planned Unit Development
  - Development plans
  - Traffic impact analysis
  - Preliminary stormwater report
- Application to rezone one parcel (1491 Bay Avenue) from Rural Residential (RR) to General Commercial 1 (GC1) zone district.
- Proposal to vacate the B Street right-of-way within the Bayview Subdivision NO. 6 (HM 94-51), located in the SW1/4 SEC. 21, T. 6 S., 13 W., S.M.
- Proposed subdivision, Bayview Subdivision Lighthouse Village Replat, Preliminary Plat

These applications are scheduled for the Planning Commission's regular meeting on December 6th. The applications are currently available for public review in the Clerk's Office lobby and the agenda packet will be published on December 1, 2023. The site plan overview is attached to this report.

**Short Term Rental Ordinance Update**

Following the introduction of Ordinance 23-61 which would create a short term rental (STR) program, we've already had some positive stakeholder engagement experiences. The Economic Development Commission had a well-attended meeting featuring a fair amount of constructive public comment on the draft ordinance. Economic Development Manager Julie Engebretsen and I were also able to meet with representatives from the Homer Bed and Breakfast Association to discuss the proposal. Julie will also be speaking at a Guiding Growth event soon. More opportunities are on the way for public engagement on the topic, but we're off to a great start.

Attachments:
December Employee Anniversaries

FY24 Q1 Financials
Homer Harbor Expansion Monthly Report
Lighthouse Village Development Site Plan

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# Memorandum

TO: MAYOR CASTNER AND CITY COUNCIL

FROM: Andrea Browning

DATE: November 27, 2023

SUBJECT: December Employee Anniversaries

I would like to take the time to thank the following employees for the dedication, commitment and service they have provided the City and taxpayers of Homer over the years.

| | | | |
|---|---|---|---|
| **Mark Robl** | **Police** | **39** | **Years** |
| **Bryan Hawkins** | **Port** | **24** | **Years** |
| **Todd Cook** | **Public Works** | **14** | **Years** |
| **Sean Perry** | **Police** | **9** | **Years** |
| **Mike Zelinski** | **Public Works** | **9** | **Years** |
| **Josh Mershon** | **Port** | **4** | **Years** |
| **Regina Johanos** | **Library** | **3** | **Years** |
| **Jenna Luchaco** | **Public Works** | **2** | **Years** |
| **Del Masterhan** | **Port** | **2** | **Years** |
| **Matt Dominguez** | **IT** | **1** | **Year** |

General Fund
Expenditure Report
Actuals through September 2023
25% Fiscal Year Elapsed

| | Current Fiscal Analysis | | |
|---|---|---|---|
| | FY24 ADOPTED BUDGET | FY24 Q1 ACTUAL | |
| | | $ | % |
| **Revenues** | | | |
| Property Taxes | $ 4,115,085 | $ 2,402,479 | 58% |
| Sales and Use Taxes | 8,939,282 | 2,510,608 | 28% |
| Permits and Licenses | 43,797 | 11,705 | 27% |
| Fines and Forfeitures | 10,303 | 90 | 1% |
| Use of Money | 0 | 51,141 | |
| Intergovernmental | 746,338 | 2,513 | 0% |
| Charges for Services | 396,890 | 189,618 | 48% |
| Other Revenues | - | 52,617 | |
| Airport | 198,448 | 54,135 | 27% |
| Operating Transfers | 1,728,989 | - | 0% |
| **Total Revenues** | **$ 16,179,131** | **$ 5,274,906** | **33%** |
| **Expenditures & Transfers** | | | |
| Administration | $ 2,288,320 | $ 474,407 | 21% |
| Clerks/Council | 927,024 | 182,410 | 20% |
| Planning | 387,478 | 71,555 | 18% |
| Library | 1,079,132 | 274,341 | 25% |
| Finance | 898,578 | 187,993 | 21% |
| Fire | 1,881,175 | 448,434 | 24% |
| Police | 4,282,603 | 1,123,435 | 26% |
| Public Works | 3,512,438 | 807,157 | 23% |
| Airport | 229,618 | 41,779 | 18% |
| City Hall, HERC | 179,040 | 45,624 | 25% |
| Non-Departmental | 179,000 | 79,000 | 44% |
| Total Operating Expenditures | $ 15,844,405 | $ 3,736,135 | 24% |
| Transfer to Other Funds | | | |
| Leave Cash Out | $ 221,360 | $ - | 0% |
| Other | 103,366 | - | 0% |
| Total Transfer to Other Funds | $ 324,725 | $ - | 0% |
| Transfer to CARMA | | | |
| General Fund Fleet CARMA | $ - | $ - | 0% |
| General Fund CARMA | - | - | 0% |
| Seawall CARMA | 10,000 | - | 0% |
| Total Transfer to CARMA Funds | $ 10,000 | $ - | 0% |
| **Total Expenditures & Transfers** | **$ 16,179,131** | **$ 3,736,135** | **23%** |
| **Net Revenues Over (Under) Expenditures** | **$ 0** | **$ 1,538,771** | |

**These numbers are preliminar**  **re subject change**

Water and Sewer Fund
Expenditure Report
Actuals through September 2023
25% Fiscal Year Elapsed

**Current Fiscal Analysis**

| | FY24 ADOPTED BUDGET | FY24 Q1 ACTUAL $ | FY24 Q1 ACTUAL % |
|---|---|---|---|
| **Revenues** | | | |
| Water Fund | $ 2,369,005 | $ 738,522 | 31% |
| Sewer Fund | 1,948,388 | 632,372 | 32% |
| **Total Revenues** | **$ 4,317,393** | **$ 1,370,894** | **32%** |
| **Expenditures & Transfers** | | | |
| Water | | | |
| Administration | $ 309,507 | $ 101,539 | 33% |
| Treatment Plant | 684,568 | 184,108 | 27% |
| System Testing | 33,000 | 6,269 | 19% |
| Pump Stations | 115,707 | 21,220 | 18% |
| Distribution System | 372,744 | 90,517 | 24% |
| Reservoir | 19,025 | 2,223 | 12% |
| Meters | 285,597 | 15,105 | 5% |
| Hydrants | 214,533 | 52,457 | 24% |
| Sewer | | | |
| Administration | $ 303,612 | $ 102,932 | 34% |
| Plant Operations | 836,304 | 175,972 | 21% |
| System Testing | 18,000 | 2,927 | 16% |
| Lift Stations | 216,060 | 47,077 | 22% |
| Collection System | 306,884 | 60,079 | 20% |
| Total Operating Expenditures | $ 3,715,541 | $ 862,426 | 23% |
| Transfer to Other Funds | | | |
| Leave Cash Out | $ 15,769 | $ - | 0% |
| GF Admin Fees | - | - | 0% |
| Other | 22,945 | - | 0% |
| Total Transfer to Other Funds | $ 38,714 | $ - | 0% |
| Transfers to CARMA | | | |
| Water | $ 309,001 | $ - | 0% |
| Sewer | 254,138 | - | 0% |
| Total Transfer to CARMA Funds | $ 563,138 | $ - | 0% |
| **Total Expenditures & Transfers** | **$ 4,317,393** | **$ 862,426** | **20%** |
| **Net Revenues Over(Under) Expenditures** | **$ 0** | **$ 508,468** | |

Port and Harbor Fund
Expenditure Report
Actuals through September 2023
25% Fiscal Year Elapsed

**Current Fiscal Analysis**

| | FY24 ADOPTED BUDGET | FY24 Q1 ACTUAL $ | FY24 Q1 ACTUAL % |
|---|---|---|---|
| **Revenues** | | | |
| Administration | $ 614,164 | $ 231,070 | 38% |
| Harbor | 3,961,361 | 2,225,313 | 56% |
| Pioneer Dock | 307,804 | 107,807 | 35% |
| Fish Dock | 578,477 | 332,034 | 57% |
| Deep Water Dock | 182,426 | 32,144 | 18% |
| Outfall Line | 4,800 | - | 0% |
| Fish Grinder | 7,390 | 6,463 | 87% |
| Load and Launch Ramp | 130,000 | 58,972 | 45% |
| **Total Revenues** | **$ 5,786,422** | **$ 2,993,801** | **52%** |
| **Expenditures & Transfers** | | | |
| Administration | $ 1,143,305 | $ 353,573 | 31% |
| Harbor | 1,609,487 | 403,890 | 25% |
| Pioneer Dock | 86,345 | 22,838 | 26% |
| Fish Dock | 747,966 | 164,732 | 22% |
| Deep Water Dock | 104,705 | 22,786 | 22% |
| Outfall Line | 13,500 | 1,470 | 11% |
| Fish Grinder | 27,682 | 19,020 | 69% |
| Harbor Maintenance | 533,783 | 126,168 | 24% |
| Main Dock Maintenance | 51,393 | 12,540 | 24% |
| Deep Water Dock Maintenance | 61,893 | 13,939 | 23% |
| Load and Launch Ramp | 138,815 | 39,226 | 28% |
| Total Operating Expenditures | $ 4,518,876 | $ 1,180,182 | 26% |
| Transfer to Other Funds | | | |
| Leave Cash Out | $ 73,867 | $ - | 0% |
| GF Admin Fees | - | - | 0% |
| Debt Service | 0 | - | 0% |
| Other | 375,092 | - | 0% |
| Total Transfer to Other Funds | $ 448,959 | $ - | 0% |
| Transfers to Reserves | | | |
| Harbor | $ 818,588 | $ - | 0% |
| Load and Launch Ramp | - | - | 0% |
| Total Transfer to Reserves | $ 818,588 | $ - | 0% |
| **Total Expenditures & Transfers** | **$ 5,786,422** | **$ 1,180,182** | **20%** |
| **Net Revenues Over(Under) Expenditures** | **$ 0** | **$ 1,813,619** | |

**These numbers are preliminar**  **re subject change**

# MEMORANDUM

**Homer Harbor Expansion Study Monthly Written Update**

| | |
|---|---|
| **Item Type:** | Informational Memorandum |
| **Prepared For:** | Mayor and City Council |
| **Date:** | November 21, 2023 |
| **From:** | Jenny Carroll, Special Projects and Communications Coordinator |
| **Through:** | Rob Dumouchel, City Manager and Bryan Hawkins, Port Director |

**Purpose:** This memorandum provides the Homer Harbor Expansion Study monthly written update to Homer City Council per Resolution 23-037.

**The U.S. Army Corps of Engineers (USACE) Project Development Team (PDT)** finalized and provided the City with the Project Management Plan (PMP), which defines study costs and timeline for deliverables. The PMP is provided as backup to a *Resolution Regarding the Homer Harbor Expansion Additional Funding and Management Plan*, which will be considered by City Council at the November 27, 2023 Regular City Council meeting. Please note that the USACE Pacific Ocean Division recommended that the PMP adhere to the initially set milestone dates for the study, despite being aware that they won't be met due to the Federal funding gap. The milestone dates in the PMP will be updated once continuation funding is secured. In the interim, these dates will underscore the necessity of securing continuation Federal funding to fulfill USACE deliverables up the USACE chain of command.

The PDT has slowed their work pace on the HHE study. The scheduled team meetings are now once per month rather than weekly. During this work reduction period, the USACE PDT:

- held Environmental Stakeholder Working Group meeting on September 28, 2023;
- is coordinating with USACE's Engineer Research & Development Center's Ecological Modeling Team to organize and conduct a two-day Ecological Modeling Workshop;
- is working on vertical team approval for the Homer Small Boat Harbor Vessel Economic Survey;
- is coordinating with agencies and making preparations to be ready for environmental field work and proposed geotechnical work.

**HDR – Owner Representative:** HDR activities will slow down parallel to the USACE. Since the last report, they:

- compiled and submitted a cost estimate for proposed geotechnical work to the USACE;

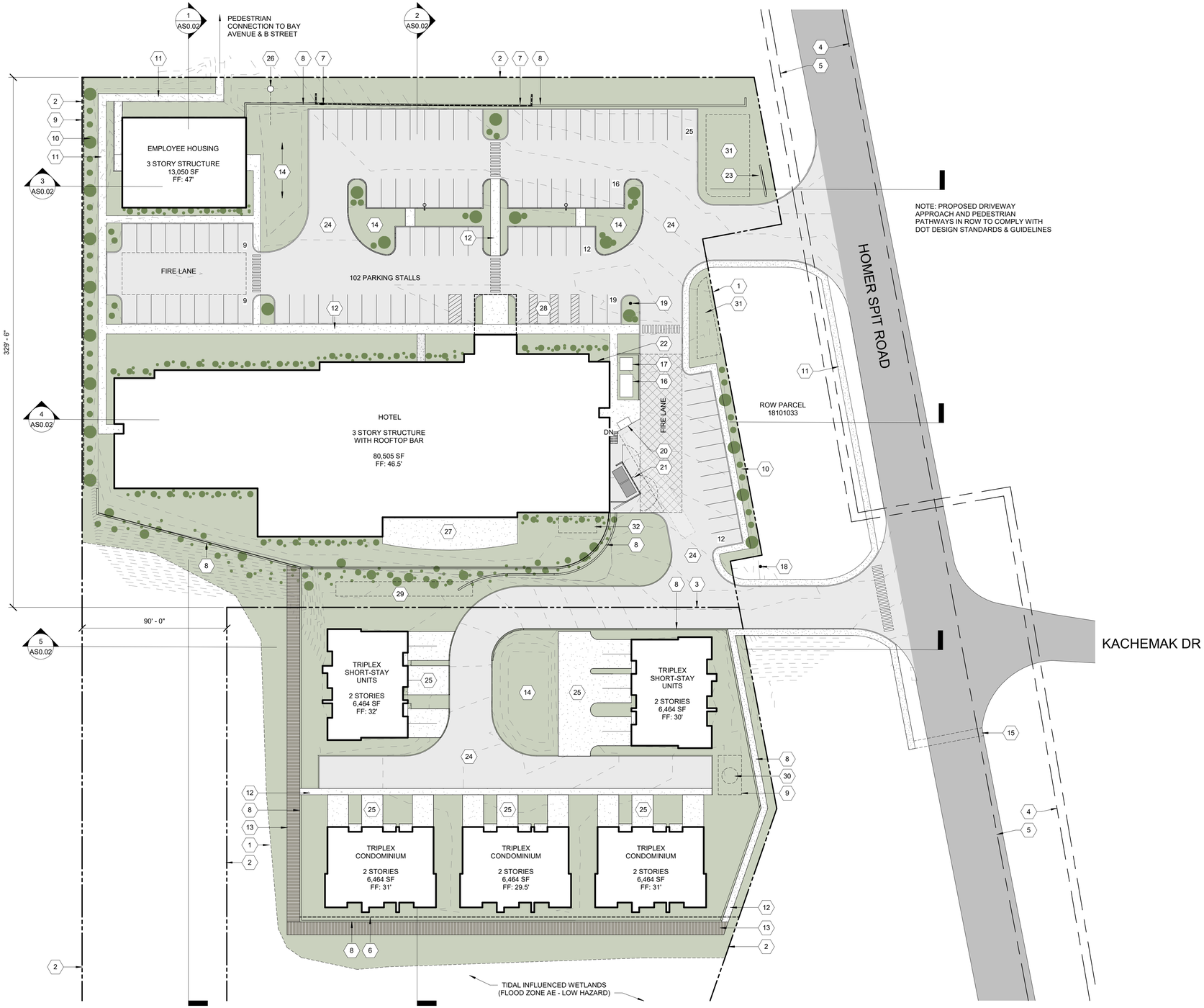
- continued to advance the Coastal Numerical Modeling (waves, tides/storm surge, sediment transport) of existing (baseline) conditions. Plan to complete baseline conditions analysis by the end of year;
- met with the Port & Harbor Advisory Commission to review the HHE Communications Plan;
- assist City staff to implement Communications Plan and continue to maintain and update HHE website.

**City of Homer:**

- City staff prepared informational materials for the October 23 Committee of the Whole Council discussion of HHE next steps;
- Two HHE Council 'champions', Storm Hansen and Rachel Lord were assigned;
- At Council direction, staff prepared a draft Resolution regarding HHE next steps for review and editing by the Mayor and Council champions;
- City staff worked with the Mayor and Council champions to address a request from Governor Dunleavy's office to formally request additional State HHE General Investigation matching funds in the Governor's FY25 budget. The finalized request letter was provided as backup documentation to Memorandum CC-23-254, submitted by Councilmembers Hansen and Lord for the November 13, 203 City Council meeting.
- Communications/outreach: Information and updates about the study are being disseminated through the City's monthly newsletter and the Homer Harbor Expansion website. Email notifications were sent to inform mailing list subscribers about opportunities to provide public input during City Council meetings addressing the HEE General Investigation. The pace of social media outreach has temporarily slowed down due to staff turnover in the City Manager's office.

**RECOMMENDATION:**

Informational Only.




1 ARCHITECTURAL SITE PLAN

AS0.01 SCALE: 1/32" = 1'-0"

## GENERAL NOTES

**EXISTING LOTS TO BE DEVELOPED:**
LOT 163
LOT 164-A
LOT 164-B
VACATED B-STREET ROW

**TOTAL SITE AREA:**
6.95 ACRES

**PROPOSED BUILDABLE AREA TO BE DEVELOPED:**
186,437 SF / 4.28 ACRES

**PROPOSED STRUCTURE SQUARE FOOTAGE:**
EMPLOYEE HOUSING: 13,050 SF
HOTEL: 80,505 SF
TRIPLEX UNITS: (5) 6,464 SF
TOTAL SF OF DEVELOPMENT: 125,875 SF

**CITY OF HOMER ZONING CODE:**
ZONE: GENERAL COMMERCIAL 1 (GC1)
BUILDING SETBACKS: 20' FROM ROW / 5' FROM OTHER LOTS
LOCATED IN OVERLAY ZONE DISTRICT: NO
LOCATED IN WETLAND LOCATION: NO
LOCATED IN FLOOD ZONE: YES (AE, LOW HAZARD)
LANDSCAPING REQUIREMENTS INCLUDE RIGHT-OF-WAY LANDSCAPED BUFFER ZONES.

**PUBLIC UTILITIES**
PUBLIC WATER AND SEWER IS PROVIDED TO SITE (CITY OF HOMER PUBLIC WORKS)

POWER IS PROVIDED TO SITE. 3-PHASE UPGRADE WILL BE REQUIRED (HOMER ELECTRIC ASSOCIATION)

**PARKING REQUIREMENTS:**
NORTH LOT PARKING REQUIRED PER HCC 21.55.090:
HOTEL - ONE PER GUEST ROOM @ 85 ROOMS = 85 STALLS
DORMITORY - 1 PER TWO BEDS @ 40 BEDS = 20 STALLS

NORTH LOT PARKING PROVIDED: TOTAL 102 STALLS

SOUTH LOT PARKING REQUIRED PER HCC 21.55.090:
DWELLINGS: TWO PER DWELLING UNIT (A REQUIRED PARKING SPACE MAY BE IN A GARAGE OR CARPORT IF THE STRUCTURE IS AT LEAST 12' WIDE, 20' LONG AND 8' HIGH) = 30 STALLS

SOUTH LOT PARKING PROVIDED: TOTAL 30 STALLS

## KEYNOTES

1 APPROXIMATE LIMITS OF CONSTRUCTION
2 PROPERTY LINE
3 PROPOSED PROPERTY LINE
4 EXISTING PUBLIC SEWER LINE
5 EXISTING PUBLIC WATER LINE
6 ARMY CORPS OF ENGINEERS PERMIT LINE
7 EXISTING RETAINING WALL
8 RETAINING WALL
9 SIGHT OBSCURING FENCE
10 LANDSCAPE BUFFER
11 PEDESTRIAN PATHWAY
12 CONCRETE SIDEWALK
13 PEDESTRIAN BOARDWALK
14 SWALE, SEE STORMWATER PLAN
15 EXISTING PEDESTRIAN CROSSWALK
16 GENERATOR
17 PAD MOUNT TRANSFORMER
18 EXISTING FIRE HYDRANT
19 FIRE HYDRANT
20 LOADING DOCK
21 TRASH ENCLOSURE
22 FDC CONNECTION POINT
23 MONUMENT SIGN
24 ASPHALT SURFACE
25 CONCRETE DRIVE AISLE
26 STORM / SEWER MANHOLE
27 CONCRETE PATIO
28 ACCESSIBLE PARKING STALLS
29 BELOW-GRADE STORMWATER STORAGE STRUCTURE
30 SANITARY SEWER LIFT STATION
31 SNOW REMOVAL AREA
32 BELOW-GRADE GREASE INTERCEPTOR

REVISIONS

| No. | Int. | Date | Description |
|---|---|---|---|
| | | | |


WOMER & ASSOCIATES
ARCHITECTURE ENGINEERING PLANNING
Suite 600 - 221 N. Wall St., Spokane, Washington 99201
TEL: (509) 534-4884 FAX: (509) 534-4943 www.womer.com


LIGHTHOUSE VILLAGE DEVELOPMENT
DOYON, LIMITED
1563 & 1663 HOMER SPIT ROAD, HOMER, AK

ARCHITECTURAL SITE PLAN

Job No.: 867-001
Date: 11.15.2023

Designed LRE
Drawn LRE
Checked LRE

AS0.01

**FOR A POWERFUL EXAMPLE** of how the future is often unexpected, consider the smartphone. When these devices first became popular in the mid-2000s, few planners (or others, for that matter) had the foresight and imagination to realize that within a decade, mobile computing would send our cities in a whole new direction.

Think about it: what was once a simple communication device has revolutionized urban transportation through ridesharing and micromobility (Uber, Via), housing (Airbnb), and gig work (Upwork, Fiverr). One technology unlocked a series of changes and consequences for cities.

Planners, traditionally focused on the changes their plans and policies guide, often don't fully anticipate how shifts happening in the world around them can significantly affect their communities.

**BUT MAYBE THEY NEED TO START.**

This smartphone example comes from Petra Hurtado, PHD, director of research and foresight at APA. It showcases the ways that what's inconceivable today could become commonplace—and perhaps highly disruptive—tomorrow. Hurtado's work seeks to bring what's called "futures literacy" to the planning profession.

Planners might argue that their work already focuses on the future. But traditional plans are based on existing data, the patterns of the past, and the assumptions of today. That means they are, by definition, reactive. Hurtado's key insight is that planners need to become comfortable with making plans that are less prescriptive. Planning work—and indeed the profession itself—needs to recalibrate its focus to agility and preparedness for multiple possible futures, as well as on developing the infrastructure needed to be resilient in the face of whatever comes.

"Even though we make plans for the future, we don't always consider the future—or better, multiple plausible futures—in our plans, which is a big issue," Hurtado says.

Planners can acquire the skill of futures literacy and a mindset that, while no one can predict the future, we can prepare for it by combining hindsight, insight, and foresight.

## WHAT IS FUTURES LITERACY?

**IN AN ERA** of rapid economic, technological, and demographic shifts, buffeted and catalyzed by climate change, planners need to adopt a more forward-thinking approach to their work, one that can rapidly evolve and adapt.

Futures literacy is "the skill that allows people to better understand the role of the future in what they see and do," according to UNESCO, which calls futures literacy a key 21st-century skill. "Being futures literate empowers the imagination, enhances our ability to prepare, recover, and invent as changes occur." APA, through its Upskilling Initiative, has also identified futures literacy as an important skill for planners as they address the challenges and opportunities of a changing and uncertain world.

Developing futures literacy will help planners make sense of the future, understand drivers of change that are outside of one's control, and prepare for what may lead to success or failure, Hurtado says. It can also help planners be "comfortable with—and even confident about—uncertainty," she adds.

The concept of futures thinking and related foresight practices initially emerged during the post-WWII period. The concept of strategic foresight was initially embraced by Cold War military planners seeking to game out potential conflicts and de-escalate during the era of superpower conflict.

Soon, the methodology would make its way to corporate America, where leaders sought to future-proof products, business strategies, and their companies and get a better sense of shifting consumer sentiment. It's since been adopted by myriad organizations, including UNESCO, which is working to integrate futures literacy into school curricula.

> Traditional plans are based on existing data, the patterns of the past, and the assumptions of today. That means they are, by definition, reactive.

## PLANNING WITH FORESIGHT

NOW FUTURES LITERACY has come to the planning profession, and Hurtado and other proponents suggest planners adopt a series of concepts and methodologies in their work. She calls this practicing foresight, which starts with the future and then reverse engineers what needs to happen today to get to the most desirable outcome. This is different from visioning, which starts with the present and creates goals for the future.

"Local governments are a perfect place for foresight," agrees author and professional futurist Rebecca Ryan, who often consults with cities on long-range planning. "If you start your foresight project for a city based on historical numbers, at best, you're going to get a rinse-and-repeat of your current outcomes. And [worst], you're going to be completely flat-footed for any disruption. Just a 1 percent change, compounded over 20 years, can be huge." There are multiple approaches and methodologies to practicing foresight. (*The Future: A Very Short Introduction* by Jennifer Gidley is a good resource on the history of foresight, futures studies, and futures literacy.)

The most important components when planning with foresight and the most relevant to planning are:

**LISTEN TO LEARN MORE**

Robert Goodspeed, ACP, professor and author, shares how exploratory scenario planning can be used to prepare for possible alternative futures in an APA Podcast episode. Scan the QR code below or go to planning.org/podcasts to listen.

TREND SCANNING: researching existing, emerging, and potential future trends (including societal, technological, environmental, economic, and political trends, or STEEP) and related drivers of change

SIGNAL SENSING: identifying developments in the far future and in adjacent fields outside the conventional planning space that might impact planning

FORECASTING: estimating future trends

SENSE MAKING: connecting trends and signals to planning to explore how they will impact cities, communities, and the way planners do their work

SCENARIO PLANNING: creating multiple plausible futures

BACKCASTING: understanding what needs to happen today to be prepared for multiple plausible futures

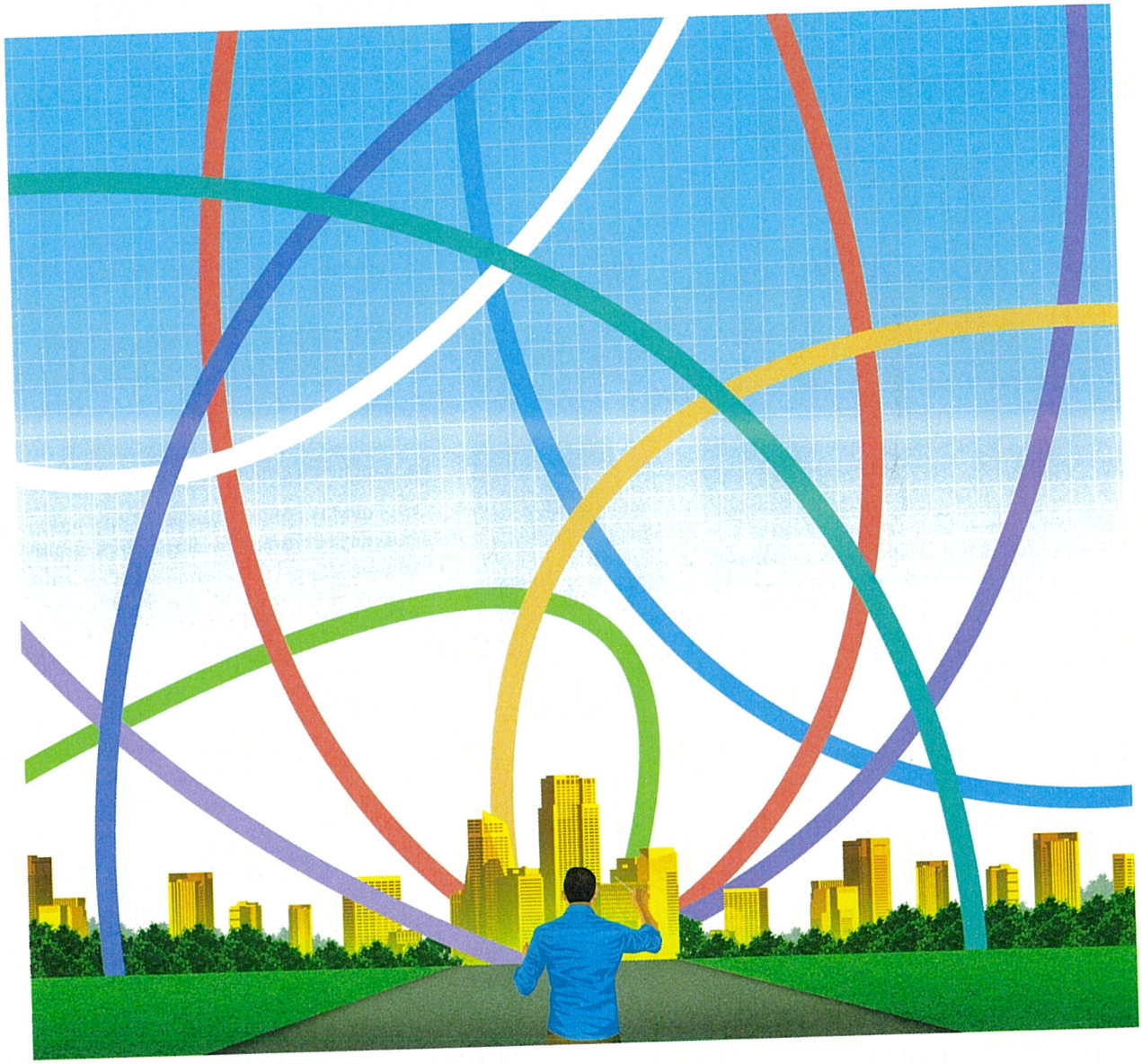
Adopting this kind of strategic foresight should encourage local planning agencies to move from innovating as a response to a crisis to innovating because it's an ingrained part of organizational culture. That also implies that creativity and openness to new ideas are also key to success.

"I do believe that if we want to shape the future, we also need to be able to imagine it. This is about institutionalizing imagination as a very powerful planning tool," Hurtado says.

Also critical is the incorporation of many diverse perspectives into the process. Engaging the community—and every facet of the community—strengthens the results.

"By inviting people into this conversation to look at the challenging things that could go wrong, they realize that inaction is not an option," Ryan says. "That's important in a political environment. Very often, with these really wicked problems, we just kick the can down the road."

Exploratory scenario planning (XSP) can be a particularly useful tool in foresight work because it helps create possible alternative futures. "The methods are based on an open-ended, qualitative exercise of conducting research



and brainstorming about the forces that are going to shape the future of what we're planning," says Robert Goodspeed, AICP, an associate professor at the University of Michigan's Taubman College of Architecture and Urban Planning.

The Twin Cities, Minneapolis and St. Paul, used scenario planning in the Metropolitan Council's 2050 regional planning process, which Hurtado commended for pushing through local policy changes. These exercises can create powerful civic visions that help coalesce political support and achieve clarity around policy.

## TREND SCANNING

PART OF FORESIGHT practice is becoming knowledgeable about current and emerging drivers of change. Some of the trend scanning that planners may need is already being done. Hurtado and her team meet quarterly with the Trend Scouting Foresight Community, a group of experts and leading thinkers from numerous disciplines. Their work is compiled annually in the *Trend Report for Planners*, in partnership with the Lincoln Institute of Land Policy.

Planners need to evaluate trends based on their certainty and the effect they are likely to have, then prioritize which ones deserve more focus. That approach invites planners to focus on a range of outcomes, as opposed to only planning for one future and hoping everything works out.

Take the emerging trend of urban air mobility, which might get rated as high-certainty and high-impact in big cities, where this technology is already being tested. (The Federal Aviation Administration plans to allow flying taxis by 2028.) Planners in those cities may want to start preparing for how to equitably and sustainably integrate these emerging systems into the existing transportation network. However, for a rural community, this technology might get rated as low-certainty and medium-impact. In those areas, a topic like lab-made meat might get more attention.

## FORESIGHT IN ACTION

IN CALGARY, ALBERTA, the city government has been using strategic foresight for nearly a decade, catalyzed by a catastrophic regional flood in 2013. This weather event made clear to the planning team that they needed to be nimbler and more resilient.

In Calgary's approach, the process starts with a core team that scans for trends and produces internal research. Those results get filtered through all city departments to assist with planning that is innovative and tech-focused, as well as "agile to emerging stresses, shocks, and opportunities," according to the future-focused Calgary website.

Strategic foresight has helped influence all aspects of city planning there—including economic development and post-COVID transportation plans—with a particular focus on adapting to shifts toward digitalization, preparing for climate change, and reinforcing trust in government. There's even a report assessing the top trends for 2035.

"For economic development, this allows us to make sure we have the people skills and educational attainment we need," says Heather Galbraith, Calgary's strategic foresight program lead. Whereas the team used to think, "we'll figure it out as long as we get the businesses to come here," she says, "this new process allows us to really interrogate our strategies and have mechanisms in place to make sure we have what's needed to be successful in the future."

Planning may be criticized for rigidity or trying to create a sense of certainty when cities require agility and dynamism. Planners can respond by building more flexibility into their long-range planning, Hurtado argues, providing mechanisms and milestones within plans that allow for pivots and rapid shifts depending on the changing world.

Planning departments may view this as a daunting task, but Hurtado recommends that departments of any size consult existing resources, including APA's work on foresight and the *Trend Reports for Planners*. These approaches aren't about bold predictions. They are a means to get comfortable with change and be prepared for uncertainty.

"There's no right or wrong," Hurtado says. "It's a very humble type of work, because next year, everything may change."

**FORESIGHT PLANNING RESOURCES**

Planners can tap into APA resources on foresight planning, including guides on the process, courses on using the future to create dynamic plans, reports on climate-focused uses of these methodologies, and an expanding library of additional resources. Scan the QR code below or go to planning.org/foresight.

Planners can build more flexibility into their long-range planning, providing mechanisms and milestones within plans that allow for pivots and rapid shifts depending on the changing world.

*Patrick Sisson is a Los Angeles–based writer and reporter focused on the tech, trends, and policies that shape cities.*

# CITY OF HOMER NEWSLETTER

VOL. III - ISSUE IV | DECEMBER 2023

## WHAT'S INSIDE?

MONTHLY NEWSLETTER FROM THE OFFICE OF THE CITY MANAGER

*Happy Holidays*

**FROM THE CITY OF HOMER**

## SISTER CITY 40TH ANNIVERSARY

In 2024, Homer will celebrate the 40th anniversary of our Sister City relationship with Teshio, Hokkaido Japan! The oath of sistership was signed on April 7, 1984. To mark the milestone, Homer will be hosting delegates from Teshio. The dates of the visit are still to be determined, so stay tuned for updates!

Meanwhile, several events are in the works to enhance the experience of the delegate's visit to Homer. One of those will be a traditional performance of Taiko drums performed by local youth who participate in the Japanese Club. This Club gives youth the opportunity to learn about another culture by learning the language, participating in Japanese traditions and exchanges with youth from Homer's Sister City.

On November 13th, the Japanese Club students from West Homer Elementary and Paul Banks Elementary visited Homer City Council to highlight their preparations for the anniversary celebration.

*Youth in Homer's Japanese Club addressing Homer City Council on November 13th*

Under the guidance of Megumi Beams, the youth addressed the Mayor and Councilmembers in Japanese and displayed the cardboard [illegible]s they have crafted to practice their Taiko drumming. *Continued on page 3.*





Discover something new today and see the latest City project updates information! Learn about ways community members can get involved at City Hall and in the Homer community.

## Follow us on Social Media

- City Hall: **@cityofhomerak**
- Parks & Recreation: **@homerparksandrec**
- Homer Public Library: **@homerpubliclibrary**
- Homer Police: **@homerpolice**
- Fire Department: **@HomerVolFireDept**

## Subscribe to the Monthly Newsletter

**Click Here to Subscribe**

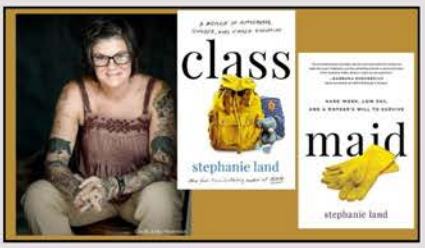
# LIBRARY EVENTS

## VIRTUAL AUTHOR TALKS

Zoom in and listen to your favorite authors talk about their latest books. For a complete list of Upcoming Speakers, go to **libraryc.org/homerlibrary/upcoming.**

**December 5 at 3 pm**
Let's Talk World Building with YA Fantasy Fiction Superstar Author
**Victoria Aveyard**


**December 12 at 10 am**
Motherhood, Hunger, and Higher Education: An Author Talk with
**Stephanie Land**




## SPECIAL & ONGOING EVENTS

**Food Pantry Donation Collection**
From mid-November to mid-December, the library will accept donations of nonperishable food for the Food Pantry. We hope that all members of our community will enjoy a healthy and well-fed holiday season.


**Councilmember Conversations**
Noon to 1 pm, the second Tuesday of each month, September - May, at the Homer Public Library.

**December 12: Rachel Lord**

CHECK OUT MORE LIBRARY PROGRAMS AND EVENTS

**Homer Public Library**
500 Hazel Street - 907-235-3180
circ@ci.homer.ak.us
www.cityofhomer-ak.gov/library

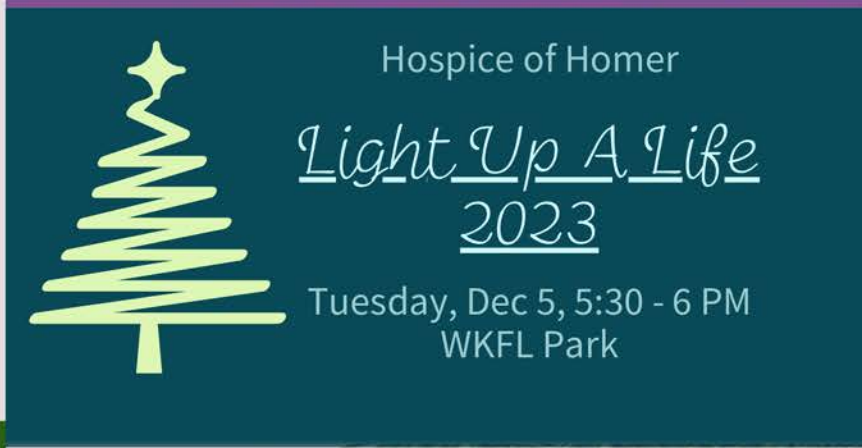
# COMMUNITY CORNER

*What's happening around the City of Homer*

### Holiday Festivities

'Tis the season to celebrate with friends and family. Homer has lots to do this season. Be sure to seek out fun things to do in the community.



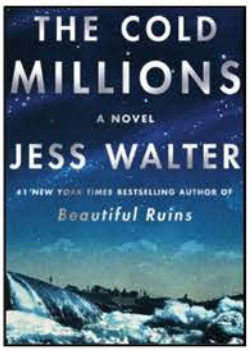


# LIBRARY

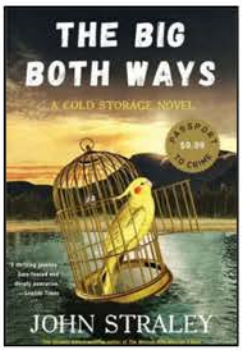
## THE BIG READ

**Homer has two Big Read titles for 2024:**

**The Cold Millions by Jess Walter**




**The Big Both Ways by John Straley**




Homer public Library is gearing up for the Big Read in January and February! There are two Big Read titles in 2024: The Cold Millions by Jess Walter and The Big Both Ways by John Straley. The theme focusses on the early 20th-century history of the Northwest and Alaska, including the treatment of women, indigenous peoples, the working poor, and free speech.

Over a six-week period in January and February 2024, the community will be invited to participate in book clubs and events that promote curiosity, conversation, and engagement with the book, the library, and the community. Go to the Friends of the Homer Library website for a list of events for each book. The Friends of the Library have provided dozens of copies of each for anyone who wants to read them before January. They are available at the Library front desk.

The National Endowment for the Arts (NEA) Big Read is an annual community reading program. Each book is chosen specifically to spark meaningful conversations and to build stronger connections within the community. Arts Midwest provides grants to non-profit organizations to fund the program. It is a special opportunity to celebrate literature and share the love of reading! You can find more information about the NEA Big Read at:
**About the National Endowment for the Arts Big Read | National Endowment for the Arts**

## SISTER CITY 40TH ANNIVERSARY, CONTINUED FROM PAGE 1

A fundraising effort is underway to help support the anniversary celebration, including the purchase of actual Taiko drums for the Japanese Club and to be part of the anniversary performance. City Council passed a Resolution on November 27th to create a designated donation fund that will allow residents, visitors, businesses and organizations within the community to actively participate and contribute to the 40th anniversary celebration. More details to come on how the community can contribute to this fund.

The Teshio delegates have expressed how they are looking forward to the opportunity to exchange cultures and help the new generation become global citizens through the anniversary celebration. Mayor Ken Castner's closing comments after the presentation echoed this sentiment:

*Japanese Club member with their handmade Taiko drum (left) and introducing themselves in Japanese to Homer City Council on November 13th*

"Kids. Thank you all for coming. It's always great to have a full house here at the City Council chambers. I hope you all grow up and learn how to be great citizens, vote, and maybe even run for office, or be on a commission or help with sister cities or help everything. Community is what makes Homer great, and you are wonderful additions to the community. So thank you, thank you, thank you! Pay attention to your instructors, grow up to be smart and prosperous. Thank you."

As Homer enters into this time of celebration, we hope to raise interest and share knowledge across both cultures. We will keep you posted on upcoming celebration events.

# PUBLIC WORKS

## GRANT AWARDED FOR CITY WATER MAIN PROJECT

We are pleased to report that the City has been awarded a Hazard Mitigation Grant Program grant from the Alaska Division of Homeland Security & Emergency Management in the amount of $2.1 million to replace the City's Raw Water Transmission Mains.

The project will enhance the resilience of City's drinking water supply by replacing the two 47-year old cast iron raw water transmission mains that transfer water from Bridge Creek Reservoir (the city's drinking water source) to the water treatment plant. The existing cast iron pipes, brittle and corrosive in the areas acidic soil, are particularly susceptible to earthquake damage that could threaten the City's drinking water supply. Over the last several years, seismic events have necessitated small repairs to the raw water mains, underscoring the need for the replacement project.

The cast iron mains will be replaced with seismically-resilient High Density Polyethylene (HDPE) pipe, significantly mitigating potential damage by earthquakes or other natural disasters.

The replacement pipes will also have a larger diameter, optimizing the water flow from Bridge Creek Reservoir to the water treatment plant. This enhancement will supply the maximum daily flow rate of raw water to the treatment plant, with some room to spare to accommodate any future expansions of the facility.

Thanks to the FEMA Hazard Mitigation Grant program for helping the City create a more resilient and sustainable water infrastructure.

## HOMER HAZARD MITIGATION PLAN

### EARTHQUAKES

The purpose of the City's Local Hazard Mitigation Plan (LMHP) is to provide a long-term strategy to reduce disaster losses and minimize damage caused by natural disasters.

As you may have noticed, earthquakes happen frequently in the state of Alaska. According to the 2018 State of Alaska Hazard Mitigation Plan, on average, Alaska has on "great" earthquake (magnitude 8 or higher) every 13 years. one magnitude 7-8 every year, and six magnitude 6-7 earthquakes every year. Homer has a 5% probability of severe shaking in Homer in the next 50 years.

One long-term strategy identified in Homer's LHMP to mitigate earthquake damage is seismic retrofits to vulnerable facilities, like the one planned for the Raw Water Transmission Mains.

Individual households can also do things to mitigate loss and damage. Knowing what to do ahead of time can help you respond quickly and prevent severe injury. The Centers for Disease Control and Prevention (CDC) share practical tips on how to respond in case of an earthquake.


Click here to learn more
**Stay Safe During an Eathquake**

Find the Local Hazard Mitigation Plan on the City's website:
**City of Homer Local Hazard Mitigation Plan**

# PUBLIC WORKS

## WHEN IT SNOWS.....

Winter means snow, and when it falls Homer Public Works crews will be out working hard to keep our roads and sidewalks passable and safe. It's a big job! The City clears over 100 lane miles of City streets and certain State roads as well. It takes 14 hours to clear all of Homer's roads, so plows start early -- at 4 am. We are reminding residents about how to help make the clearing process more efficient and safe for both the equipment operators and your property.

### PROTECT YOU PROPERTY FROM GETTING PLOWED!

**How do I do that?** Keep roads and Right-of-Ways clear, so snow plows and sanding trucks can do their job and keep roads safe for everyone. If not, unfortunately, you could be fined.

- Blocking the Right-of-Way and Roads is prohibited.
  - Keep everything out of the Right-of-Way and off roads.
  - Do not push snow into roadways or into the Right-of-Way.

**What is the Right of Way?** It's the roads, sidewalks and also the space between the road and your property that is used for utilities, channeling of storm water via ditches, area for the City to store plowed snow and accessing roads for maintenance.

**Other helpful tips:**

- Check the City website for road closures and winter advisories
- Be prepared! Carry a kit in your car in case you get stranded

The Alaska Department of Transportation and Public Facilities clears approximately 20 miles of state roadways within the City of Homer. These roads include the Sterling Hwy., West Hill Rd., East Hill Rd., East End Road, Kachemak Drive, Homer Spit Road, Ocean Drive and Lake Street between Pioneer Ave and the By-Pass. Call DOT/PF @ 235-5217 for further information concerning their roads maintenance.

# PUBLIC SAFETY CORNER

**In this section, we aim to keep readers informed about the latest developments in public safety in the community. Whether it's news about crime prevention, emergency preparedness, or updates on local law enforcement activities, we've got you covered. Our goal is to promote a safe and secure environment for all community members and visitors of Homer, and we believe that staying informed is a crucial part of achieving that. Read on to learn more about what's happening in public safety in Homer.**

## TIPS FOR A FIRE-SAFE HOLIDAY SEASON

The holidays present an increased risk of home fires--often involving Christmas trees, candles and decorations. Most of these home fires, though, can be prevented during the holidays and beyond. Here are a few basic tips to make sure your holidays are happy and bright -- and not in the flashing-siren kind of way.

### DID YOU KNOW?

**More than one-third** of home decoration fires are started by candles.

**More than 2 of every 5** decoration fires happen because decorations are placed too close to a heat source.

### DID YOU KNOW?

**Almost one-third** of home Christmas tree fires are cause by electrical problems.

While Christmas tree fires are not common, they are **more likely to be serious** when they do.

A heat source too close to the tree causes **more than one in five** of the fires.

### WHEN YOU DECK THE HALLS

Check those sets of lights you pull out of storage to insure they have been UL tested and that they don't have any broken or cracked sockets, frayed or bare wires, or loose connections. If damaged, discard and replace them.

Do not connect more than three standard-size sets of lights per single extension cord, and always turn off Christmas lights before leaving home or going to bed.

If you use candles for decorations, make sure they are in stable holders and place them where they cannot be easily knocked down. Be attentive; don't go to bed or leave the house with candles burning.

### WHEN YOU TRIM YOUR TREE

Set your tree up away from heat sources (including fireplaces or heat vents). The heat will dry out the tree, causing it to be more easily ignited by heat, flame or sparks.

Add water to the tree stand and add water daily. A dry tree is dangerous because it catches fire easily. Check out this video link if you need convincing!

Take your tree down soon after the holiday. The National Fire Protection Association reports that half of home Christmas tree fires occur between December 22nd and January 5th. When disposing of your tree, never put tree branches or needles in a fireplace or wood-burning stove. It can result in a chimney fire.


*Demonstration video by the National Institute of Standards & Technology*

## MONTHLY TSUNAMI SIREN TESTS RESUME DEC 6TH

The Kenai Peninsula Borough Office of Emergency Management (OEM) has completed the tsunami siren upgrade project. Now that all equipment has been installed and tested, they will begin automated testing at 1:00 PM on December 6th. These tests will occur monthly on the first Wednesday of the month, rather than weekly as with the previous system. These tests help to ensure the proper functioning of the sirens and familiarize residents with the alert signal in case of an emergency.

# PORT & HARBOR

## STAFF PARTICIPATE IN ETT TRAINING

Homer Port and Harbor staff recently completed a four-day Emergency Technician Training (ETT) conducted by Samantha Cunningham, the Assistant EMS Chief at Homer Volunteer Fire Department. The course is important for our frontline staff who may have to provide emergency medical care to others as a part of their job. Topics included how to recognize and treat symptoms of heart attack, stroke, poison, overdose, hypothermia and cold related injuries as well as treatment for burns and a variety of other medical conditions.

# HOMER HARBOR EXPANSION

## STUDY UPDATE

At their November 27 meeting, City Council unanimously passed Resolution 23-130 which confirms the City's support for the continuation of the Homer Harbor Expansion General Investigation study.

The Resolution agreed to the US Army Corps of Engineers addition of geotechnical investigation and ship simulation to the scope of the study and states the City's intent to fund 25% of the increased cost of the General Investigation due to those additions. The advantages of completing geotechnical work during the feasibility study is that it provides the best information to:

- inform decisions about the amount of breakwater material needed,
- inform choices about the design and location within the project area of the preferred alternative, and
- provide solid information on which to better evaluate project feasibility.

The State of Alaska partnered with the City, covering half of the local match requirement to initiate the General Investigation. The Resolution also support the City seeking additional match support from the State of Alaska. The City has reached out to Governor Dunleavy and Representative Sarah Vance's offices with a request. You can read the Resolution and listen to the meeting discussion at **https://www.cityofhomer-ak.gov/citycouncil/city-council-regular-meeting-303.**

The USACE project development team has entered a work reduction period due to the temporary Federal funding Gap. During this period USACE PDT:

- held Environmental Stakeholder Working Group meeting on September 28, 2023;
- is coordinating with USACE's Engineer Research & Development Center's Ecological Modeling Team to organize and conduct a two-day Ecological Modeling Workshop;
- is working on vertical team approval for the Homer Small Boat Harbor Vessel Economic Survey;
- is coordinating with agencies and making preparations to be ready for environmental field work and proposed geotechnical work.

Work-in-Kind by HDR, the City's contracted Owner Representative, has slowed parallel to the USACE. They have compiled and submitted a cost estimate for proposed geotechnical work to the USACE, and plan to complete the Coastal Numerical Modeling (waves, tides/storm surge, sediment transport) of existing conditions analysis by the end of year.

Stay connected with the study at **www.homerharb[illegible]ansion.com**!

# COMMUNITY RECREATION

## FUN AT THE SKI & WINTER GEAR SWAP AND TELLURIDE MOUNTAINFILM ON TOUR

Community Recreation hosted the Annual Ski & Winter Gear Swap on Wednesday, November 8th and paired the evening with the engaging Telluride Mountainfilm Show at the Homer High School Theatre. It was a great success! An estimated 300 people attended the ski swap and 150 stayed to watch the films. The event was also successful in raising funds for support local youth organizations, including the Homer High School Cross Country Ski Team, the Homer Middle School "AK to DC" group and Homer Wilderness Leaders (aka HOWL). All in all it was a complete success and we are already have ideas how to enhance this awesome community event next year. Ideas are even brewing to help the community get ready for summer time fun and recreation by potentially offering a "Bike and Summer Gear Swap" event in the spring of 2024. Stay tuned!

## COMMUNITY REC ACTIVITIES

Looking for fun activities over winter break? Check out **Youth Tumbling Classes** for toddlers, beginners and intermediate tumblers being offered December 19 - 28. The beginning class focusses on building basic foundational skills -- no tumbling experience necessary. The intermediate class will reinforce and grow foundational skills and help participants move confidently through difficult skills including connecting multiple tumbling skills. Participants must register with the instructor in advance. Please contact Michelle at 907-529-9766 or **mkeinak@gmail.com**.

Community Rec is also excited to announce that the **Inlet Winds Community Band** is restarting this spring -- in early February to be exact! The band will be led by director Eric Simondsen and assistant director Mary Simondsen. The program they have selected consists of some of the director's favorite pieces for concert band that are fun and exciting to play. Rehearsals are on Mondays February through April, culminating in a community performance on Saturday, April 13th. To sign up, **complete an online form** prior to February 6, 2023 to indicate your interest so that Mary and Eric can prepare the sheet music for you prior to the first rehearsal. If you are unable to access the form, you may sign-up at the first reh[illegible].

# POLICE DEPARTMENT

## TOY DRIVE

'Tis the season of giving, and this year, we're on a mission to ignite joy in the hearts of even more Homer families! Join us for the Champions for Children Toy Drive, a spectacular event brought to you by the partnership of the Homer Police Department and the Homer Chamber of Commerce.

Be part of the magic by generously contributing toys and sporting goods. The spirit of giving knows no bounds, and you can drop off your donations at HPD, the Chamber, or any of our designated locations throughout Homer.

Ensure your donations reach us by December 10th so we can spread the cheer just in time for the most wonderful time of the year! Let's make this holiday season one for the books!


## OFFICER BORDNER GRADUATES LAW ENFORCEMENT TRAINING ACADEMY

We are pleased to announce that Bradley Bordner graduated from the Alaska Law Enforcement Training academy on Friday November 17. Bradley was hired on to the police force in July. As a graduating recruit, he successfully completed more than 1,000 hours of training over the course of 16 weeks of basic Alaska Law Enforcement Training. Schooling included intensive instruction in law enforcement-related topics, physical fitness, and many scenario-based exercises designed to prepare entry-level police officers for successful careers in Alaska law enforcement. Congratulations Bradley!

*At left: Bradley receiving his certificate of completion from the Alaska Law Enforcement Training Academy*

*At right: Police Chief Robl swearing Oficer Bradley in.*

## FIRST RESPONDERS CLASS

First responders are always on the front lines supporting the community through risky and often traumatic situations. After their work is done, however, some emotions that can be hard to deal with, can linger. Homer Police Department sponsored a class on Saturday, November 18 for all first responders in our area to train emergency responders on how to deal with that emotional trauma.

The class covered important topics for responders on how to cope with and prevent Stress, Burnout and PTSD. The class was taught by Lisa Schmitter from Aurora Counseling and Consultation. Lisa is trained to help businesses and organizations educate, process, and understand trauma. She has worked as a mental health consultant for Head Start, the police, state troopers, schools, and fire departments.

## November Anniversaries

Thanks to the following staff members for your dedication, commitment and service to the City and to the taxpayers of Homer!

| | | |
|---|---|---|
| Mark Robl | Police | 39 Years |
| Bryan Hawkins | Port | 24 Years |
| Todd Cook | Public Works | 14 Years |
| Sean Perry | Police | 9 Years |
| Mike Zelinski | Public Works | 9 Years |
| Josh Mershon | Port | 4 Years |
| Regina Johanos | Library | 3 Years |
| Jenna Luchaco | Public Works | 2 Years |
| Del Masterhan | Port | 2 Years |
| Matt Dominquez | IT | 1 Year |

## *Farewell*

We wish a fond farewell to Public Works Director/City Engineer Jan Keiser who will be retiring in January. Jan, was raised on the Kenai Peninsula, received engineering degrees from the University of Alaska and served as Homer's first City Engineer in the early 1980's.

After leaving to pursue a law degree she says she "got seduced by the weather" and lived in the Seattle area for about 35 years. She'd frequently return to Homer to visit her mother and step-dad, Connie and Bob Creal.

Luckily for Homer, in early 2020, Jan saw and responded to the advertisement for the Public Works Director position and accepted the job. Jan moved back with her husband, Kim Zook, and started working for the City in March 2020.

In her tenure since coming back, Jan has advanced water-sewer utility expansion and sidewalk and trail improvements on major Homer roads and to new subdivisions. One of Jan's favorite projects has been to develop Homer's Green Infrastructure Storm Water Management System, which involves using native wetlands and peatlands to remove sediment, hydrocarbons and other contaminants from storm water. She's been instrumental in creating the Kachemak Sponge and Bunnell Avenue Green Infrastructure Storm Water Management Projects. Upon her retirement, Jan and her husband will take what she calls "an epic retirement trip" to watch whales in Mexico. After returning to their Homer home, Jan expects to get involved with various non-profit organizations that support missions she cares about.

# EMPLOYEE HIGH FIVE!

Ralph Skorski, Homer's Water Meter Technician, recently became certified as a Level 2 Waste Water Collections Technician. To earn this certificate, Ralph completed a college-level class from California State University, Sacramento, had earned the required number of years of job experience and passed a rigorous examination.

Ralph's commitment to continuing education enhances his ability to provide excellent public service, and helps the City comply with AK Department of Environmental Conservation requirements for maintaining qualified staff; that is, the ADEC requires municipalities of a certain size to maintain a staff with specified levels of certification. Congratulations and thank you Ralph!

# MEET CITY STAFF

Lori Pond began working as the Assistant to the City Manager in October. We are happy to have her on board!

She recently moved to Homer from South Carolina to be closer to family. Lori's background is in banking, financial planning, and human resources. Outside of work she enjoys ballroom dancing, hiking, baking, gardening, and home improvement projects. "Homer has always felt like home. I am so happy to finally live here. Everyone has been so welcoming and I look forward to learning more about this special corner of the world."

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# CITY OF HOMER ROSTER

**Mayor** - Ken Castner (2024)

**City Council**
Donna Aderhold (2024)
Jason Davis (2025)
Shelley Erickson (2024)
Storm P. Hansen (2025)
Rachel Lord (2026)
Caroline Venuti (2026)

**City Staff Leadership**
Rob Dumouchel, City Manager
Melissa Jacobsen, MMC, City Clerk/Deputy Director of Administration
Mark Robl, Chief of Police
Bill Jirsa, Chief Technology Officer
Julie Engebretsen, Economic Development Manager
Elizabeth Walton, Finance Director
Mark Kirko, Fire Chief
Dave Berry, Library Director
Andrea Browning, Personnel Director
Bryan Hawkins, Port Director
Jan Keiser, Public Works Director/City Engineer
Ryan Foster, City Planner
Mike Illg, Community Recreation Manager

**Commissions and Boards**
ADA Advisory Board
Economic Development Advisory Commission
Library Advisory Board
Parks, Art, Recreation and Culture Advisory Commission
Planning Commission
Port and Harbor Advisory Commission

# MUNICIPAL ART COLLECTION

Old Homer Fire Station, housed upstairs in the current fire station.

This watercolor was painted by Toby Tyler.

Learn more about the municipal art collection at:
**www.cityofhomer-ak.gov/prac/city-homer-municipal-art-collection**

# STAY CONNECTED TO CITY COUNCIL

Go to **cityofhomer-ak.gov/cityclerk/stay-connected-city-council** to find instructions on how to listen, provide testimony, and participate in the meetings via Zoom.

## UPCOMING MEETINGS

Please note: Homer City Council will not be meeting in December. Their next regularly scheduled meeting is January 8, 2024

**December**

| | | |
|---|---|---|
| **6** | **5:30 pm** | **Planning Commission Worksession** |
| **6** | **6:30 pm** | **Planning Commission Regular Meeting** |
| **13** | **5:30 pm** | **Port & Harbor Advisory Commission Regular Meeting** |
| **19** | **5 pm** | **ADA Advisory Board Regular Meeting** |

In observance of the Christmas and New Year holidays, City of Homer offices will be closed Monday, Dec 26th and Monday, Jan 2nd.

**We extend best wis[illegible]all for a safe and h[illegible] holiday seas[illegible]**

# JOIN OUR TEAM

- Find current job listings for the City of Homer
- Sign up for Job Alerts
- Apply Online at: **cityofhomerak.applicantpro.com/jobs**

**CURRENT JOB LISTINGS**

**Assistant or Associate Planner**

**Firefighter/ Basic Emergency Responder or Firefighter/ALS EMT/ Driver Operator or Fire Captain/ ALS EMT**

**ABOUT THIS NEWSLETTER**

The City of Homer Newsletter is published monthly. For questions or comments, please contact the Office of the City Manager at **citymanager@ci.homer.ak.us**.

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