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

City of Homer
Agenda

Public Works Campus Task Force
Wednesday, August 11, 2021 at 4:30 PM
Cowles Council Chambers and via Zoom
Webinar ID: 990 6794 3833 Password: 716429

CALL TO ORDER, 4:30 P.M.

AGENDA APPROVAL

PUBLIC COMMENTS UPON MATTERS ALREADY ON THE AGENDA

APPROVAL OF MINUTES

A. Regular Meeting Minutes for July 28, 2021

VISITORS/PRESENTATIONS

REPORTS

PENDING BUSINESS

A. Draft Final Memorandum to City Council re: Executive Summary

B. Draft Final City of Homer Public Works Campus Tsunami Hazard Report

C. Draft Final Task Force Presentation to City Council - Review and Approval

NEW BUSINESS

A. Next Steps

INFORMATIONAL MATERIALS

COMMENTS OF THE AUDIENCE

COMMENTS OF CITY STAFF

COMMENTS OF THE TASK FORCE

ADJOURNMENT

All meetings scheduled to be held via Zoom Webinar and in person in the City Hall Cowles Council Chambers located at 491 E. Pioneer Avenue, Homer, Alaska.

Session 21-10, a Regular Meeting of the Public Works Campus Task Force was called to order by Chair Donna Aderhold at 4:32 p.m. on July 28, 2021 via Zoom Webinar from the City Hall Conference Room Upstairs located at 491 E. Pioneer Avenue, Homer, Alaska. One seat is vacant due to resignation.

PRESENT: MEMBERS ENGEBRETSEN, SLONE, VENUTI, KEISER, ADERHOLD, BARNWELL

STAFF: RENEE KRAUSE, DEPUTY CITY CLERK

AGENDA APPROVAL

Chair Aderhold requested a motion.

VENUTI/BARNWELL MOVED TO APPROVE THE AGENDA AS PRESENTED.

There was no discussion.

VOTE. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

PUBLIC COMMENTS UPON MATTERS ALREADY ON THE AGENDA

Angie Newby, Real Estate Broker for the City of Homer, provided information on how she can facilitate the purchase of property for the city in the future for the possible relocation of the Public Works Campus. She provided some guidelines that are followed by the City in their purchases of property and the availability of commercial property within the city limits.

Ms. Newby responded to questions regarding appraisal values and assessed property values; current status of commercial real estate sales is not an overheated market like the residential real estate market.

APPROVAL OF MINUTES

A. Regular Meeting Minutes for July 14, 2021

Chair Aderhold requested a motion to approve the minutes of July, 14, 2021.

VENUTI/BARNWELL MOVED TO APPROVE THE MINUTES OF THE JULY 14, 2021 MEETING.

There was no discussion.

VOTE. NON-OBJECTION. UNANIMOUS CONSENT.

Motion carried.

VISITORS/PRESENTATIONS

REPORTS

Chair Aderhold read into the record that the Task Force's final report is now scheduled for the August 23, 2021 regular meeting as there are time sensitive items that need to be on the August 9, 2021 City Council meeting.[1]

PENDING BUSINESS

A. Draft Memorandum for the Final Report to City Council
   - Final Revision Draft
   - Draft Memorandum from Member Slone and Member Keiser

Chair Aderhold introduced the item by reading of the title and requested clarification from Deputy City Clerk Krause.

Deputy City Clerk Krause explained that pages 10-14 in the packet was the final version of the memorandum containing the edits of Member Slone and Member Keiser. This memorandum was submitted by Member Keiser.
The document in the packet on pages 15-18 contained all three recommended versions from Member Slone to the memorandum. Ms. Krause stated that it was included as a reference for the Task Force. She further stated for clarification that Member Slone provided further edits to the memorandum and these are provided as a laydown for this meeting.

Chair Aderhold facilitated discussion and the Task Force addressed the Memorandum section by section amending the following:

Introduction and Background Section of Memorandum:
- Second paragraph remove duplicated "A" first word
- Second paragraph, sixth line, replaced the word "obviating" with the words "severely restricting"

Task Force Evaluation & Recommendations:
- Under Section III. Ranking Scale Delete Second and Third Sentence in their entirety.
- Clarification was provided on the ranking scale and it was noted that the table was on page 70 of the packet.

B. Draft Final Report to City Council on Tsunami Risk to Public Works Campus
   - Exhibits proposed to be included (not in prioritized order)

Chair Aderhold introduced the item by reading the title and requested clarification on the documents in the packet.

Deputy City Clerk Krause provided the following clarification:

[1] Information from the City Manager through Deputy City Clerk Krause

- Draft document incorporating all edits was on pages 19-25.
- Pages 26-38 contained the original draft with all edits shown.
- Member Slone submitted additional edits that were provided as a laydown for this meeting and were not addressed in either draft in the packet.

Chair Aderhold facilitated discussion and additional edits to the draft document on pages 26-38 of the packet as follows:

- Line 13, Correct elevation should reflect 35 feet and the correct terminology for high tide
- Line 52 through 59 bullet points
- Line 64, change the word "hard" to "identify"
- Line 64-66, delete and replace with "If Homer is struck by an unexpected geological event then the City could incur significant long-term costs in terms of private and municipal property damage, as well as potential loss of life."
- Line 81-82 Delete sentence and replace with "Just as we cannot predict earthquakes or landslides with any accuracy, in the same manner we cannot predict a tsunami."
- Line 87-88, Change the word "could" to "would"
    - The Task Force did not agree with adding a sentence regarding the effect of submarine landslides to the Homer Spit citing that it was irrelevant to the Public Works Campus.
- Commissioner Barnwell brought forward the terminology used in the report was maximum wave height above Mean Higher High Water (MHHW). This is defined as the average of the higher high water height of each tidal day observed over the national tidal datum.
    - Line 13 would be edited to read 35 feet Mean Higher High Water
    - This is not 35 feet above zero
    - Referring to the Inundation Map and the 35 foot is just above that so it takes into account that MHHW
    - Reference the terminology so that the general public can use it Member Engebretsen will provide some terminology for them to use in the report.
- Line 159, correct the word "is" to "in"
- Line 162 incorporate with Line 161, edit to read "and too few in number"
- Line 169, Delete the words "The City" and the "s" from the word "take" and the period at the end.
- Line 173 add the word "entire" in front of the words "Public Works Facility" for more clarity
- Line 176-179, Order is as suggested, add the word "strategies"
- Line 181 -188 correct all capitalization

Chair Aderhold called for a recess at 5:35 p.m. The meeting was called back to order at 5:41 p.m.

Chair Aderhold continued the discussion and editing noting that Member Slone suggested removing the comma after the word danger in line 185. Member Slone noted that there were several grammatical edits that he would like to recommend.

A brief discussion ensued on focusing on addressing the substance edits and to leave the final edit to one person as it was too difficult to perform by committee.

Chair Aderhold continued the editing by progressing to page 32 of the packet and addressing the following:

- Line 199, add the words "worst case" before tsunami
- Line 221-222, remove "sand and gravel"
- Line 222, insert the word "essential" before the word equipment
- Line 224, recommended adding the words "such as rolling stock and the Maintenance Shop" after the word campus
    - Appears redundant since items are listed in the previous bullet point
    - Is the Mechanic's Shop and Motor Pool Shop two different or the same
        - Different shops one is used for repair of the vehicles and the other is used for the equipment operators to bring in the equipment to get it ready for use – such as installing chains, etc.
- Line 224, Change the word "essential" to "these"

Member Engebretsen requested clarification on the recommendation to relocate the Mechanic's Shop to the Heath Street location and this is the first time that she fully understood the Motor Pool Shop is a separate facility. She then provided a scenario of her understanding.

Member Keiser explained that the Motor Pool would also be moved to the new location.

Member Engebretsen noted that they did not make the connection in their memorandum to Council or in the document.

Member Keiser recommended that they amend the bullet point, Relocate the Campus, reflect that information regarding two of the most critical spaces are the shop for the mechanics and the separate shop for the operators both of which are being recommended to be moved.

Member Engebretsen then noted that her presentation will show that by moving those services to the new location, it would open the area at the existing facility for the use of the Parks and Building Maintenance Departments.

Member Keiser concurred stating that all heavy equipment maintenance will be moved to the new location and those working with small engines will stay in the existing facility.

- Line 222, Add the words "Mechanics Shop"
- Line 220, rename the title to "Relocate the Mission Critical Portions of the Campus"
- Include the equipment barns in the listing
- Address the capitalization of the word tsunami throughout the document
- Address the capitalization of the word department throughout the document
- Line 275 to 286 were previously identified on line 166-179 and there are differences
    - Remove Lines 275 through 286 due to redundancy
    - Removing these lines negates the explanation of the defined goals of two and three
    - Further review and comparison the lines 166-188 should be deleted as it is too early in the document, additional comments on removing the Lines 157 through 188
- Line 305, Insert the Table from page 70 in the packet
- Remove as Exhibit Memorandum on pages 68-70 of the packet

- Line 308, Section reflects the memorandum on pages 57-59 of the packet and that memorandum should be removed as an exhibit.
    - Paragraph defining the Motor Pool similar to the Mechanics Sop to provide clarification
    - Paragraph on the magnitude of scale to aide in the visualization of the space required is needed
        - Incorporating the square footage information provided on pages 60-62
- Line 314, delete the words, "The purpose of this Memorandum is to identify" and insert the words, "The Task Force identified"
- Lines 310-313, Morph some of the content into the following paragraph that starts at Line 314 and delete remaining verbiage.
- Line 425-426, Delete the verbiage up to "The Task Force"
- Line 428, delete the words as a practicable matter"
- Line 430, Add language, "This recommendation allows for the Parks and Building Maintenance Departments to be relocated from the Homer Education & Recreation Complex (HERC) to the existing Public Works Campus Facility" or similar language.
    - Change the language to "Following the Task Force recommendations will allow for the Parks and Building Maintenance Departments to be relocated to the existing Public Works Campus"

Chair Aderhold confirmed that when they decide on the final recommendations they will be copied to the final draft. She then confirmed that the Clerk will compile the document with all edits and submit for final review and proofing and the document will then go into the packet for Task Force review and approval.

NEW BUSINESS

A. Draft PowerPoint Presentation to City Council

Chair Aderhold introduced the item by reading of the title and invited Member Engebretsen to provide her draft PowerPoint presentation.

Member Engebretsen provided the following information while showing her draft slides to the Task Force:

- Cover page
- Recommendation first
    - Level of Specificity will be provided later in the report
- Background
    - Tsunami Report
    - Task Force Formed
- Research
- Site Selection process
- Considerations
- Conclusion
    - Moving only a portion of public works
    - Value in using the existing facility

- HERC information
- Next Steps

Member Engebretsen reported that she envisions no more than ten slides at three minutes per slide.

Member Barnwell recalled a former employer who was a Colonel and he strongly emphasized that a presentation should be no more than eight slides.

Chair Aderhold recalled a photo of a piece of equipment that could not fit into the Mechanic's shop which would be a great focal point showing that they have outgrown the facility.

Deputy City Clerk Krause suggested a different color pallet.

Member Barnwell requested that Julie schedule a time that they can meet to review and discuss the presentation the week of August 2, 2021.

B. Next Steps

Chair Aderhold reviewed the following for the next meeting:

- Review of final draft memorandum and report
- Review of final draft presentation
- The task Force will disband after the final report to Council unless directed by Council to perform additional work.
- The next meeting will be available by hybrid as well even from the Council Chambers.

INFORMATIONAL MATERIALS

COMMENTS OF THE AUDIENCE

COMMENTS OF THE CITY STAFF

Deputy City Clerk Krause commented that it was a very good meeting, the Task Force got through a heck of a lot of materials, and it is really appreciated.

COMMENTS OF THE TASK FORCE

Member Venuti appreciated being able to attend the meeting in this manner and as long as the numbers of COVID are high she will choose to attend meetings by Zoom. She acknowledged that it was a long meeting but is energized and really appreciates everyone being here.

Member Slone was unable to unmute his connection to comment.

Member Barnwell commented good meeting, a lot of work we got it done. He additionally thanked Member Engebretsen and Deputy City Clerk Krause for their long hours.

Member Keiser commented that she was so impressed by everyone and their attention to details and support. Thank you.

Member Engebretsen commented that it was great to get to the finish line and after participating on two task forces now it is most difficult at the end to get the wording how you want to present your work, so she expressed her appreciation for the effort and believed it would be really nice to present this information to Council.

Chair Aderhold tried Member Slone one more time but he was still unable to be un-muted. She then thanked him for hanging on and enduring the technological issues to attend meetings and encouraged him to stick in there and providing his comments in writing so the Task Force had them to work with.

ADJOURNMENT
There being no further business to come before the Task Force the meeting adjourned at 7:15 p.m. The next regular meeting is scheduled for Wednesday, August 11, 2021 at 4:30 p.m. at the City Hall Cowles Council Chambers located at 491 E. Pioneer Avenue, Homer, Alaska.

_____
RENEE KRAUSE, MMC, DEPUTY CITY CLERK

Approved:_____

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MEMORANDUM

Commented [DA1]: Does this need to get a number?

Commented [RK2R1]: No Memorandum accompany reports from Advisory bodies do not get assigned numbers

TO: MAYOR CASTNER AND HOMER CITY COUNCIL

FROM: PUBLIC WORKS CAMPUS TASK FORCE

THRU: RENEE KRAUSE, MMC, DEPUTY CITY CLERK II

DATE: AUGUST 23, 2021

SUBJECT: FINAL REPORT AND RECOMMENDATIONS OF THE PUBLIC WORKS CAMPUS TASK FORCE

INTRODUCTION & BACKGROUND

The Alaska Division of Geological and Geophysical Surveys (ADGGS) published updated tsunami and inundation maps for communities in Kachemak Bay, including Homer in 2019. Based on modeling a wide variety of earthquake generating tsunami scenarios, ADGGS concluded that a worst case scenario for Homer would be a tsunami of 35 feet above Mean Higher High Water (MHHW). In the event of the worst case scenario, the Homer Public Works Campus, along with the Homer Spit and other low lying areas of the city, would be inundated.

A tsunami that inundates the Public Works Campus (Campus) would preclude Public Works staff from accessing the Campus until tsunami waters recede. Equipment and materials needed to respond to tsunami and earthquake damage would likely be damaged or destroyed by tsunami waves. Thus, when a tsunami warning sounds, Public Works staff immediately begin evacuating major pieces of heavy machinery and other mobile equipment from its campus to higher ground. Materials, equipment, and supplies that are not easy to move are left behind during these evacuations. If a tsunami occurred, these assets could be damaged or lost, severely restricting the Public Works Department's ability to respond to damage that would inevitably occur around the City.

In response to the ADGGS inundation maps, the Homer City Council included a new Public Works Facility on its Capital Improvement Plan as a high priority with a preliminary estimated cost of approximately $12 million (Exhibit A). However, this was done before an assessment of the risk to the existing Campus from a worst-case scenario tsunami was made. To remedy this, the City Manager and Public Works Director sponsored Resolution 20-125 asking Homer City Council to form a Public Works Campus Task Force for the purpose of evaluating this risk and providing recommendations back to the City Council (Exhibits B and C). The resolution passed unanimously on November 23, 2020 and the Public Works Campus Task Force (Task Force) was formed. The enabling resolution identified specific goals and objectives for the Task Force. Members were approved by City Council on January 11, 2021.

TASK FORCE EVALUATION & RECOMMENDATIONS

Goal 1

The first goal of the Task Force was to evaluate the risks of personal injury, property damage and loss of life in the event of a tsunami impacting the Campus. The Task Force reviewed the ADGGS tsunami inundation maps and methodology report, interviewed authors of the maps and report and discussed the potential risks of a tsunami to the environment, workers, City operations, and City equipment (Exhibit D).

Commented [DA3]: Will these be attached to this memo or to the report? Should we reference exhibits in this memo? Make sure lettering correct.

Based on the ADGGS maps, report, and author interviews, the Task Force determined that, while the risk cannot be quantified because of limitations in the available data for Alaska, the current location of the Campus is vulnerable to a tsunami (Exhibit E). Based on the assessment evaluation and possible mitigation options, the Task Force determined that the greatest risk of a tsunami inundating the Public Works Campus would be the damage and loss of buildings, equipment, and materials, particularly equipment and materials that would be needed to help the City rebuild and recover from the earthquake/tsunami event.

The Task Force discussed possible mitigation strategies that could protect buildings, equipment and materials from tsunami inundation. The strategies and their potential pros and cons are summarized as follows:

- Create tsunami resistant seawalls or mounds on the perimeter of the Campus
    - This solution was tried in Japan and failed during the 2011 Tohoku earthquake and tsunami because the structures were designed for a smaller event than occurred. Because the structures were too small, the damage in some instances was greater than may have occurred without the structures in place.
    - Seawalls or mounds placed around the current location of the Public Works Campus would likely not be practicable because of the size of the infrastructure that would be needed and because the underlying fill material is not designed to resist the type of inundation that could occur and could fail.
- Construct tsunami resistant buildings and infrastructure in the same location
    - This type of solution is typically used for port facilities, roads and bridges that cannot be moved outside of a tsunami zone.
    - The option does not take into account the potential damage to equipment and materials unless tsunami resistant buildings were constructed to house all of it .
- Relocate the Mission Critical Portions of the Campus
    - Important resources such as the City fueling station, rolling stock, piping, culverts, Mechanics Shop, Motor Pool Shop and equipment, and other essential equipment and materials would no longer be vulnerable to loss or damage during a tsunami.

- Relocating these portions of the Campus outside the tsunami zone, while expensive, would allow Public Works Staff to focus on supporting earthquake/tsunami response and recovery efforts rather than focusing on lost/damaged equipment and materials needed in the response.

Goal 1 Recommendation: The Public Works Campus and the critical equipment housed there should be relocated to the extent practicable. (Note: The Sewer Treatment Plant cannot be relocated).

Goals 2 and 3

The second goal of the Task Force was to develop strategies of mitigating the identified risks. Based on the Goal 1 Recommendation to move the Public Works Campus outside the tsunami zone, the Task Force focused on strategies to address that recommendation. The third goal of the Task Force entailed developing a system for evaluating the strategies. Because these goals were interdependent, the Task Force is presenting them together.

Tsunami Mitigation Strategies (Goal 2)

Strategy #1 – Limp Along. This is the "do nothing" strategy. The City continues to operate how we've been operating, evacuating the equipment when a tsunami warning sounds and hoping for the best.

Strategy #2 – Lock, Stock & Barrel. With this strategy, plans would be put into motion to relocate the Campus as a priority.

Strategy #3 – Long Term Incremental. With this strategy, the risk to the Campus is acknowledged and a long term plan is put in place to relocate the campus incrementally; that is, property is purchased, a campus layout is designed, and the City seeks funding for the project costs, possibly, building features of the facility a step at a time.

Evaluation Criteria (Goal 3)

Criteria should be (a) measurable and (b) easy to define. The Task Force developed the following criteria to evaluate the strategies:

Criterion #1 – Cost/Benefit Analysis. It is not enough to compute the expected costs of a particular strategy; we must also quantify the expected benefits because in some situations the costs may be high but the benefits are higher. We did not compute a finite numerical Cost/Benefit Ratio. Rather, we discussed and deliberated on the perceived merits of the benefits in comparison with the perceived costs. A high score means the perceived benefits are more valuable than the perceived costs.

Criterion #2 – Public Works' Mission. This criterion considers the extent to which the strategy (a) preserves the ability of the Public Works Department to perform its essential mission(s) in emergencies, (b) supports the Department's ability to support the City's maintenance needs over the long term, and (c) enables the Department to continue to serve as an integrated system (that is, the

various functional units are housed on a single campus). A high score means the strategy allows the Department to efficiently and cost effectively fulfill its mission over the long term.

Criterion #3 – Funding. This criterion considers the extent to which funding strategies are available to support a particular mitigation strategy. A high score means a reasonable source of funding is probably available.

Criterion #4 – Phasing. This criterion considers the extent to which the implementation of the mitigation strategy can be phased over time. A high score means the strategy can be phased in a feasible and affordable manner.

Criterion #5 – Timeliness. This criterion considers the extent to which taking action sooner rather than later would add value by generating benefits or avoid lost opportunity. A high score means taking action in a timely manner is important.

Criterion #6 – Public perception. This criterion involves the strategy's ability to generate favorable public perception and support. A high score means the strategy can probably be designed to generate public support.

Ranking Scale for Tsunami Mitigation Strategies

The Task Force ranked the criteria according to the degree to which the mitigation strategy adds value to the Public Works Department and the Community.

Low – The mitigation strategy scores low for the criterion, meaning the strategy adds little value to the Department or the Community. This yields 0 points.

Medium – The mitigation strategy scores in the middle of the range for the criterion, meaning while strategy may value to either the Department or the Community, it does not add value to both. This yields 50 points.

High – The mitigation strategy scores high in the criterion, meaning the strategy adds high value to the Department and the Community. This yields 100 points.

Of the three mitigation strategies, the Long Term Incremental Plan has the highest beneficial score.

Goal 2 and 3 Recommendation: Move forward with the Long Term Incremental strategy which includes developing a long term plan to move the Campus, identifying and acquiring a relocation site outside the tsunami zone, designing the new Campus, and moving facilities and equipment as funding and requirements allow. The Task Force evaluated the requirements for a relocated Public Works Campus (Exhibit F).

ADDITIONAL CONSIDERATIONS –OBSOLESCENSE

The Task Force identified functional inefficiencies of the existing Public Works Campus. We discussed and considered this factor, which we considered to be a problem of obsolescence, in the evaluation and

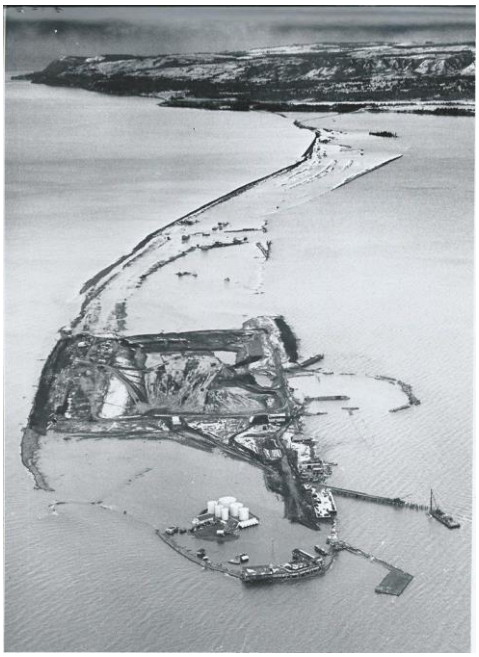
development of our final recommendations to the City Council. The functional inefficiencies were identified as follows:

1. The existing bays in the Mechanics Shop are too small to accommodate the larger pieces of the City's rolling stock and will not accommodate newer equipment in the future.
2. There are not enough working bays in the Mechanics Shop to allow for efficient working space. Industry standard is 1.5 bays per mechanic. The City has less than one bay for each mechanic.
3. The Motor Pool Shop, used by the as a dry temperate working and storage space for heavy equipment in winter is too small for the diversity of required activity.
4. The existing Public Works facility houses the Water/Sewer crew's shop in a very limited space, even though the City's water/sewer infrastructure has expanded due to private development and Special Assessment Districts
5. Several Public Works functions are currently housed in both of the Homer Education and Recreation Complex (HERC) buildings because there is no room for them at the Public Works Campus. When the HERC building is finally demolished, these functions will have no place to go.
6. The existing fueling depot serves all of the City's rolling stock with gasoline and diesel fuel.

FINAL RECOMMENDATIONS

The Task Force recommends the Long Term Incremental Plan be adopted as best suited to serve the long term public maintenance needs of Homer.

Additionally, the Task Force recommends the City Council review the pending obsolescence of the Campus Facilities and Maintenance assets. Obsolescence would also be best served by adopting the Long Term Incremental Plan.



Homer Spit, March 1964 Photo by the Bureau of Land Management

~~Hazards to the~~ City of Homer Public Works Campus Tsunami Hazard Report

RISKS, MITIGATION STRATEGIES, AND RECOMMENDATIONS

Public Works Campus Task Force | Resolution 20-125 | August 2021
Recommendations from the Task Force submitted August 23, 2021

INTRODUCTION & BACKGROUND

The Alaska Division of Geological and Geophysical Surveys (ADGGS) published updated tsunami and inundation maps for communities in Kachemak Bay, including Homer, in 2019. Based on modeling a wide variety of earthquake generating tsunami scenarios, ADGGS concluded that a worst case scenario for Homer would be a tsunami of 35 feet above Mean Higher High Water (MHHW)[1] elevation. In the event of the worst case scenario, the Homer Public Works Campus, along with the Homer Spit and other low lying areas of the city, would be inundated.

A tsunami that inundates the Public Works Campus would preclude Public Works staff from accessing the Campus until tsunami waters recede. Equipment and materials needed to respond to tsunami and earthquake damage would likely be damaged or destroyed by tsunami waves. Thus, when a tsunami warning sounds, Public Works staff immediately begin evacuating major pieces of heavy machinery and other mobile equipment from its campus to higher ground. Materials, equipment, and supplies that are not easy to move are left behind during these evacuations. If a tsunami occurred, these assets could be damaged or lost, severely restricting the Public Works Department's ability to respond to damage that would inevitably occur around the City.~~Because a tsunami that inundates the Public Works Campus would preclude Public Works staff from accessing the Campus until tsunami waters recede and equipment and materials needed to respond to tsunami and earthquake damage would likely be damaged or destroyed by tsunami waves, Public Works staff immediately begin evacuating major pieces of heavy machinery and other mobile equipment from its campus to higher ground. Materials, equipment, and supplies that are not easy to move are left behind during these evacuations, resulting in vulnerability to responding to an earthquake that generates a tsunami.~~

In response to the ADGGS inundation maps, the Homer City Council included a new Public Works Facility on its Capital Improvement Plan as a high priority with a preliminary estimated cost of approximately $12 million (see Exhibit A *Capital Improvement Plan Project Page*). However, the new facility was added without a risk assessment to the existing Public Works Campus from a worst-case scenario tsunami. To remedy this the City Manager and Public Works Director sponsored Resolution 20-125 (see Exhibit B *Resolution 20-125* Exhibit C *Memorandum 20-194 from the Public Works Director re: Public Works Campus Task Force*) requesting Homer City Council form a Public Works Campus Task Force to evaluate the risk and provide recommendations back to the City Council. The resolution passed unanimously on November 23, 2020 and the task force was formed and members were approved by City Council on January 11, 2021.

PURPOSE & SCOPE

City Council created the Public Works Campus Task Force through Resolution 20-125 for the following:

[1] This is defined as the average of the higher high water height if each tidal day observed over the national tidal datum.

1. Evaluate the risks of personal injury, property damage, and loss of life in the event of a tsunami impacting the Public Works Campus.
2. Develop a system for evaluating and cataloguing risks.
3. Develop strategies for mitigating the identified risks.
4. Estimate short and long term costs for mitigation of the risks.
5. Submit a report on recommendations to include a summary of the evaluation process and preferred options.

CONTRIBUTING MEMBERS

Donna Aderhold, City Council Member, Chair
Caroline Venuti, City Council Member, Task Force Member
Janette Keiser, PE, Director of Public Works, Task Force Member
Julie Engebretsen, Deputy City Planner, Task Force Member
Jacob Argueta, City Resident, Task Force Member
Larry Slone, City Resident, Task Force Member
Charles Barnwell, City Resident, Task Force Member
Renee Krause, Deputy City Clerk, Task Force Staff Support

RESOURCES

- Report of Investigation 2018 -5 v.2 Updated Tsunami Inundation Maps for Homer and Seldovia, Alaska
- Maps created by Charles Barnwell, GIS Manager, Kinney Engineering, LLC using the LiDAR information provided in the report
- A presentation and discussion roundtable with two of the authors of the 2018 report, Drs. Elena N. Suleimani and J. Barrett Salisbury was hosted.
- Studied the City of Homer 2018 All Hazards Mitigation Plan
- Community Tsunami Preparedness 2011 by the COMET Program - http://kejian1.cmatc.cn/vod/comet/emgmt/community/navmenu.php.htm

RISK ANALYSIS

Risk is made up of two parts: the probability of something going wrong and the negative consequences if it does. Risks can be hard to identify let alone prepare for and manage. If Homer is struck by an unexpected geological event, the City could incur significant long-term costs in terms of private and municipal property damage, as well as potential loss of life.

Similarly, overestimating or overreacting to risk can create panic and do more harm than good. By approaching risks in a logical manner, the City of Homer can identify what can and cannot be controlled, tackling potential problems with measured and appropriate action.

Assessing tsunami threats at a specific location in Alaska is difficult. Some of the uncertainties include the following:

- Incomplete knowledge about past tsunamis, including their sources, characteristics, and frequencies.
- Poorly understood details about near-field and far-field hazards that affect coastal communities.
- Among the factors affecting tsunamis are the geology/geography of the area such as bathymetry, topography, potential for earthquakes, and/or landslides and submarine slumps.
- Uncertainty about future tsunami events.

Just as we cannot predict earthquakes or landslides with any accuracy, in the same manner we cannot predict a tsunami. Once an earthquake occurs, our ability to detect and monitor tsunamis is still somewhat limited due to the scarcity of deep ocean sensors and tide gauges. Additionally, how high the waves will be once the tsunami hits the shore and what effects they will have are complicated questions influenced by a number of factors. We can confidently state that while the probability may appear low, the consequences and ramifications would be catastrophic should a tsunami event occur in Homer. For example, the entire Spit and elevations up to 35 feet above MHHW along the City shoreline would be flooded in certain tsunami scenarios.

PRIMARY TSUNAMI IMPACTS

A main concern regarding tsunami impact is damage to structures and infrastructure from wave force, flooding, and floating debris. Anything in the path of a tsunami such as docks, structures, vehicles, and utility poles has the potential to become a battering ram as the water repeatedly surges and retreats. The damage potential increases if the tsunami arrives during conditions that are already producing high water such as a high tide.

Even small tsunamis can induce strong currents in harbors and bays, alter channel depths, or cause water to be more turbulent, which can compound an already dangerous situation. The landscape and fresh (potable) water supplies can be degraded due to salt water intrusion.

SECONDARY TSUNAMI IMPACTS

Secondary impacts of tsunamis may include the following:

- Hazardous spills
- Fires
- Large amounts of debris, which, in addition to blocking access and being expensive to clean up, can cause injuries during response and recovery
- Disease outbreaks
- Post-traumatic stress disorder (both short-term and long-term)

- Damage to the local economy (e.g., tourism, agriculture, fishing)
- Loss of equipment and supplies
- Shortage of personnel
- Destruction of critical infrastructure
- Loss of critical infrastructure such as water/sewer utilities and roads

PUBLIC WORKS DEPARTMENT MISSION CRITICAL OPERATIONS

The Public Works Department performs the following mission critical operations for the City:

- Maintains and repairs the City's roads, drainage, water distribution, wastewater collection, buildings and facilities, and motor vehicles
- Places utilities in street rights-of-way
- Works with developers in conjunction with the Planning Department on proposed subdivisions, land use variances, right-of-way vacations, zoning changes, and building site plans
- Maintains records on all City facilities and issues all right-of-way permits, including utility, driveway, and water/sewer permits
- Reviews all plats and storm water plans and oversees the construction of new subdivisions
- Manages the planning, design, permitting, and construction inspection of the City's capital projects

If the Public Works Department's ability to continue mission critical operations is impaired by a tsunami, the City's ability to recover will be impaired.

TASK FORCE EVALUATION & RECOMMENDATIONS – PART A OF THE MITIGATION STRATEGY REPORT

Goal 1

The first goal of the Task Force was to evaluate the risks of personal injury, property damage, and loss of life in the event of a tsunami impacting the Public Works Campus. The Task Force reviewed the ADGGS tsunami inundation maps and methodology report, interviewed authors of the maps and report, and discussed the potential risks of a tsunami to the environment, workers, City operations, and City equipment. Exhibit D *Memorandum from the Public Works Task Force RE: Risk Catalog and Evaluation, including Spreadsheet* presents the Task Force's tsunami impact evaluation.

Based on the ADGGS maps (see Exhibit E *Inundation Map dated May 26, 2021*), report, and author interviews, the Task Force determined that, while the risk cannot be quantified because of limitations in available data for Alaska, the current location of the Public Works Campus is vulnerable to a worst-case tsunami. Based on the assessment evaluation and possible mitigation options, the Task Force determined that the greatest risk of a tsunami inundating the Public Works Campus would be the damage and loss of buildings, equipment,

and materials, particularly equipment and materials that would be needed to help the city recover following the earthquake/tsunami event.

The Task Force discussed possible solutions to protect buildings, equipment, and materials from tsunami inundation. The solutions and their potential pros and cons are summarized as follows:

- Create tsunami resistant seawalls or mounds on the perimeter of the Campus
    - This solution was tried in Japan and failed during the 2011 Tohoku earthquake and tsunami because the structures were designed for a smaller event than occurred. Because the structures were too small, the damage in some instances was greater than may have occurred without the structures in place.
    - Seawalls or mounds placed around the current location of the Public Works Campus would likely not be practicable because of the size of the infrastructure that would be needed and because the underlying fill material is not designed to resist the type of inundation that could occur and could fail.

- Construct tsunami resistant buildings and infrastructure in the same location
    - This type of solution is typically used for port facilities and roads and bridges that cannot be moved outside of a tsunami zone.
    - The option does not take into account the potential damage to equipment and materials unless tsunami resistant buildings were constructed to house all of it.

- Relocate the Mission Critical Portions of the Campus
    - Important resources such as the city fueling station, rolling stock, piping, culverts, Mechanic's Shop, Motor Pool Shop and equipment, and other essential equipment and materials would no longer be vulnerable to loss or damage during a tsunami.
    - Relocating these portions of the Campus outside the tsunami zone, while expensive, would allow Public Works Staff to focus on supporting earthquake/tsunami response and recovery efforts rather than focusing on lost and damage equipment and materials needed in the response.

Goal 1 Recommendation: The Public Works Campus and the critical nature of the equipment stored there should be relocated to the extent practicable (the sewer treatment plant cannot be relocated).

Goals 2 and 3

The second goal of the Task Force was to develop strategies for mitigating the identified risks. Based on the goal 1 recommendation to move the Public Works Campus outside the tsunami zone, the Task Force focused on strategies to address that recommendation. The third goal of the Task Force entailed developing a system for evaluating the strategies. Because these goals were interdependent the Task Force is presenting them together.

Tsunami Mitigation Strategies (Goal 2)

Strategy #1 – Limp Along. This is the "do nothing" strategy. ~~-~~The City~~We~~ continue~~s~~ to operate how we've been operating, evacuating the equipment when a tsunami warning sounds and hoping for the best.

Strategy #2 – Lock, Stock & Barrel. With this strategy, plans are put into motion to relocate the Public Works Campus as a priority.

Strategy #3 – Long Term Incremental. ~~-~~With this strategy, the risk to the Public Works Campus is acknowledged and a long-term plan is put in place to relocate the campus incrementally; that is, property is purchased, a campus layout is designed, and the City seeks funding for the project costs; possibly building features of the facility a step at a time.

Evaluation Criteria (Goal 3)

Criteria should be (a) measurable and (b) easy to define. The Task Force developed the following criteria to evaluate the strategies:

Criterion #1 – Cost/Benefit Analysis. It is not enough to compute the expected costs of a particular strategy; we must also quantify the expected benefits because in some situations the costs may be high but the benefits are higher. We did not compute a finite numerical Cost/Benefit Ratio. Rather, we discussed and deliberated on the perceived merits of the benefits in comparison with the perceived costs. A high score means the perceived benefits are more valuable than the perceived costs.

Criterion #2 – Public Works' Mission. This criterion considers~~e~~ extent to which the strategy (a) preserves the ability of the Public Works Department to perform its essential mission(s) in emergencies, (b) supports the Department's ability to support the City's maintenance needs over the long term, and (c) enables the Department to continue to serve as an integrated system (that is, the various functional units are housed on a single campus). A high score means the strategy allows the Department to efficiently and cost effectively fulfill its mission over the long term.

Criterion #3 – Funding. ~~The~~ This criterion considers the extent to which funding strategies are available to support a particular mitigation strategy. A high score means a reasonable source of funding is probably available.

Criterion #4 – Phasing. This criterion ~~relates to~~considers the extent to which the implementation of the mitigation strategy can be phased over time. A high score means the strategy can be phased in a feasible and affordable manner.

Criterion #5 – Timeliness. This criterion ~~relates to~~considers the extent to which taking action sooner rather than later would add value by generating benefits or avoid lost opportunity. A high score means taking action in a timely manner is important.

Criterion #6 – Public perception. This criterion involves the strategy's ability to generate favorable public perception and support. A high score means the strategy can probably be designed to generate public support.

Ranking Scale for Tsunami Mitigation Strategies

The Task Force ranked the criteria according to the degree to which the mitigation strategy adds value to the Public Works Department and the Community.

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Low – The mitigation strategy scores low for the criterion, meaning the strategy adds little value to the Department or the Community. This yields 0 points.

Medium – The mitigation strategy scores in the middle of the range for the criterion, meaning while strategy may value to either the Department or the Community, it does not add value to both. This yields 50 points.

High – The mitigation strategy scores high in the criterion, meaning the strategy adds high value to the Department and the Community. This yields 100 points.

Strategy Ranking				
Criterion		Limp Along	Lock, Stock, & Barrel	Long Term Incremental
#1	Cost Benefit Analysis	Low/0	Medium/50	High/100
#2	Supports PW Mission	Low/0	High/100	High/100
#3	Funding Available	High/100	Low/0	Medium/50
#4	Can be Phased	Low/0	Low/0	High/100
#5	Timeliness	Low/0	High/100	High/100
#6	Would general favorable public perception & support	Medium/50	Low/0	High/100
	Total Score:	150	250	550

Of the three mitigation strategies, the Long Term Incremental Plan has the highest beneficial score.

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Goal 2 and 3 Recommendation: Move forward with the Long Term Incremental strategy which includes developing a long term plan to move the Public Works Campus, identifying and acquiring a relocation site outside the tsunami zone, designing the new Campus, and moving facilities and equipment as funding and requirements allow. The Task Force evaluated the acreage, slope, and general location requirements for a relocated Public Works Campus which is summarized in Exhibit F *Memorandum to the Public Works Task Force RE: Site Selection Review*.

ADDITIONAL CONSIDERATIONS: OBSOLESCENCE – PART B OF THE MITIGATION STRATEGY REPORT

The Task Force identified other issues related to the functionality of the existing Public Works Campus besides the fact the facility is located in the tsunami inundation zone. For context, consider the City's infrastructure has increased over time – every new subdivision adds roads, ditches, water/sewer lines, hydrants, manholes, and other appurtenances, all of which need testing, preventive maintenance, and repair. In 2020, the City had the following infrastructure:

- 59 miles of water line, an increase of 12 miles since 2016
- 63.5 miles of sewer line, an increase of 7.5 miles since 2016
- 435 fire hydrants, an increase of 66 hydrants since 2016
- 30 pressure reducing stations, an increase of 6 stations since 2016
- 829 manholes
- 17.62 miles of gravel roads
- 29.02 miles of paved roads

Further, there have been over 100 new water/sewer connection permits and over 100 new driveway permits issued in the past two years. All of these new services require resources to support – staff time and supplies.

Many facilities located at the Public Works Campus are too small for the size and abundance of modern vehicles and equipment, described as follows:

1. The existing bays in the Mechanic's Shop are too small to accommodate the larger pieces of the City's rolling stock that we already own. For example, one of the Homer Volunteer Fire Department fire trucks cannot fit in the Shop and allow the door to close. Further, there is barely enough headroom for this vehicle. Fire trucks are getting larger and as they do, working on them in the existing Shop becomes problematic. Also, while the Public Works Department's Vactor Truck[2] fits in the Shop, there is not enough room to walk around the vehicle to efficiently work on it. When two of the City's larger vehicles are in the Shop, the working space around them is so limited the working environmental is inefficient and cumbersome, which can create safety hazards.

   This problem will be exacerbated as the City retires obsolete equipment and acquires replacements. This is because the modern equipment is simply larger than the older models.

[2] A Vactor Truck is like a wet-dry vacuum cleaner on wheels and steroids. It has a large on-board water reservoir and a pump, which allows it to either flush out sediments in a storm drain manhole or suck out waste water from a sewage lift station. It is the workhorse of the Department's Fleet, heavily used by the road crew and the water/sewer crew.

For example, we will be purchasing a new grader in 2021. The smallest new grader available on the market is larger than the largest grader the City currently has. If the City acquires a new grader model that is comparable in power and capability to the one that is retiring, which is needed, the new model will not fit in the shop.

2. There are not enough working bays in the Mechanic's Shop, which is where the actual repair and rebuilding of equipment and rolling stock takes place. The industry standard is to have 1 ½ bays for every mechanic for safe, efficient working space. The City employs three mechanics, which, by this standard, means 4½ bays are required. The Mechanic's Shop has two. A typical day sees both bays occupied by equipment under repair. A complete repair could easily take multiple shifts, while the mechanics wait for parts or a diagnosis. This means the damaged vehicle is stuck in the shop taking up space, which adversely impacts efficiency. An extra bay would allow the mechanics to start working on other equipment, while they are waiting to finish the repairs on the one stuck in the shop.

3. The Motor Pool Shop is another area in the Public Work Building that gets overcrowded. This space is used by the Operators as a dry, temperate working space, for example, to install or repair tire chains for the graders. The space is also used for dry, temperate storage of equipment and supplies that can't freeze. For example, some of the heavy equipment, which is crucial for winter road and utility maintenance, needs to be stored where it does not freeze – such as the sand trucks and the Vactor Truck. If these units are left in the open, the sand on the sand trucks and the water in the Vactor truck freezes, making the equipment useless. The existing Motor Pool Shop is too small to hold all of the equipment that needs warm storage, so the Mechanic's Shop is often used for this purpose as well, which means a piece of equipment needing repair must be hauled out of the Mechanic Shop so a sanding truck can be stored there overnight. This is extremely inefficient and creates safety hazards.

4. The existing Public Works facility houses the Water/Sewer crew's shop. The Water/Sewer Technicians repair pumps, valves, and other appurtenances in this space. This ability to make in-house repairs is critical to maintaining fully functioning systems. This space contains spare parts, work tables, and tools. The City's water/sewer system has grown with new main extensions and new services, which has increased the need for inventory and work space. This is particularly true because much of Homer's water/sewer infrastructure has aged and needs regular maintenance and repair to keep it functional.

   If the Mechanic's Shop, Motor Pool Shop, and rolling stock were relocated to a higher elevation, the Public Works Department could expand the water/sewer shop space at the existing campus. We would keep an inventory of spare parts and critical materials at the higher elevation so we would have something to work with in the event of an emergency but leave the lower value or more portable stuff at the existing campus. This would mitigate the risk of loss to our utility system, while still making beneficial use of our existing space.

5. Several Public Works functions are currently housed in both of the Homer Education & Recreation Complex (HERC) buildings because there is no room for them at the Public Works Campus. Both Building Maintenance and Parks use space at the HERC buildings for office, workshop, and storage space. At some point, the HERC buildings will be demolished and replaced with a Community Recreation Center. We do not know where we will transfer these functions to when the HERC site is no longer available.

   One option is to shift them to the existing Public Works Campus, once the Mechanic Shops and rolling stock are relocated. We could use the existing space to store wood for picnic table repairs, landscaping materials, janitorial supplies, and the other materials Building Maintenance and Parks need to do their work. While this equipment and materials costs money, it does not have the same degree of high-value criticality as the tools and equipment in the Mechanics Shops and is more portable.

6. The existing fueling depot serves all of the City's rolling stock with gasoline and diesel fuel. The depot consists of underground fuel storage tanks, which are equipped with cathodic protection; that is, anodes to slow down the rate of corrosion on the tanks. The facility is regulated by the Alaska Department of Environmental Conservation (ADEC) and one of the permit conditions is that the anodes must be inspected every three years by a 3rd party inspector. The inspector conducts a test to determine if the anodes are still working. If we do not pass the test, ADEC will void the City's permit.

   The test was last performed June 24, 2021, and our anodes barely passed. The inspector did not recommend replacing the anodes because he believes the tanks are probably already corroded. He opined that the fueling system needed to be replaced. Not only is corrosion probably present, but the software system is no longer supported by any vendor. When it goes down, the system will not dispense fuel. The Public Works Department is increasingly challenged to keep it operating. When it does dispense fuel, they are not always sure whose account it is being charged to.

   Funds, in the amount of $185,000, have been appropriated to design/construct a replacement fueling depot. The Fuel Island Replacement Project would involve above-ground fuel storage tanks, which would eliminate the potential for corrosion and soils contamination as well as enable the system to be relocated, in the event the Public Works Campus was relocated outside the Tsunami Inundation Zone. Because the cost of the replacement fueling depot would be funded separately, the estimated cost of the new Public Works Facility does not include the cost of the fuel depot.

FINAL RECOMMENDATIONS

The Task Force recommends the Long Term Incremental Plan be adopted as best suited to serve the long term public maintenance needs of Homer.

Additionally, the Task Force recommends the City Council review the pending obsolescence of the Campus Facilities and Maintenance assets. Obsolescence would also be best served by adopting the Long Term Incremental Plan.

EXHIBITS

A. Capital Improvement Plan Project Page 2021-2026 (Updated)
B. Resolution 20-125, Creating a Public Works Campus Task Force and Establishing Scope of Work
C. Memorandum 20-194 from Public Works Director re: Public Works Campus Task Force
D. Memorandum from Public Works Campus Task Force re: Risk Catalog and Evaluation, including Spreadsheet
E. Inundation Map dated May 26, 2021
F. Memorandum to the Public Works Task Force re: Site Selection Review

City of Homer Capital Improvement Plan • 2022-2027

New Public Works Facility

Project Description & Benefit: The Public Works Department, located at the bottom of Heath Street, has outgrown its facilities. Additionally, the new Tsunami Inundation map shows the potential for a 30' high wave moving through the complex. The Public Works facility and associated heavy equipment is critical infrastructure for response and recovery activities before, during and after a disaster.

To be best prepared to safeguard public health and safety, Homer City Council in 2020 appointed a Public Works Campus Task Force to help evaluate the risks of personal injury, property damage and loss of life after a tsunami, develop strategies for mitigating identified risks and make recommendations to Council on possible mitigation options.

a new site and administrative/maintenance support infrastructure for Public Works should be developed. Building maintenance (located in HERC 2) may soon need a new location as well.

Based on an evaluation of current and future needs, it is expected that a new site containing all Public Works maintenance facilities would require 4.6 acres. Ideally, this site would be located outside the tsunami inundation zone, within or close to the Central Business District, and compatible with adjacent land uses. The facility will be sized to provide for current and future administrative and customer support personnel; road, drainage, building, water, sewer, motor pool maintenance activities; and equipment/materials storage

To be updated after Public Works Campus Task Force report to Council.

The existing Public Works site could be converted into public summer use open space (adjacent to the animal shelter, Beluga Slough, and conservation land) and provide space for environmentally sensitive snow storage in the winter.

Plans & Progress: This project will most likely be completed in three phases consisting of concept design and property acquisition, full design and construction. The proposed timeframe is to prepare a concept design in 2022/2023; purchase property in 2025; design facility in 2026/2027; begin construction in 2029, with a new facility ready in 2030. Availability of funding would change these time periods.

Total Project Cost: $12,050,000

2021-2022 (Concept Design):	$ 50,000
2022-2025 (Property Acquisition, Facility Design & Construction	$12,000,000

Priority Level: 2

City of Homer existing Public Works facility.

PHASE		
Acquire Property		**$ 1,200,000**

Create Development Plan		
Survey	$ 15,000	
Geotechnical exploration	$ 20,000	
Conceptual Design	$ 50,000	
Phasing Approach	$ 2,500	
Funding Strategy	$ 2,500	
Total - Development Plan		**$ 90,000**

Develop New Fuel Depot

Design new Fuel Depot	$ 15,000	
Install new Fuel Depot	$ 185,000	
Total - New Fuel Depot		**$ 200,000**

Relocate Rolling Stock & Support Services to new location

Design new Mechanics' Shop	$ 375,000	
Construct new Mechanics' Shop	$ 3,750,000	
Design new Equipment Barns	$ 75,000	
Construct new Equipment Barns	$ 750,000	
Total - Mechanics' Shop & Rolling Stock		**$ 4,950,000**

Develop offices at new location

Design new admin & engineering space	$ 135,000	

Construct new admin & engineering space	$ 1,350,000		
Total - Develop new office space		**$**	**1,485,000**
TOTAL - NEW CAMPUS		**$**	**7,925,000**
Move out of HERC			
Relocate Building Maintenance & Parks to old PW Campus	$ 50,000		
Expand W/S Maintenance in old PW Campus	$ 50,000		
Total Move out of HERC		**$**	**100,000**
Total PW Campus		$	8,025,000

CITY OF HOMER
HOMER, ALASKA

City Manager/
Public Works Director

RESOLUTION 20-125

A RESOLUTION OF THE CITY COUNCIL OF HOMER, ALASKA, CREATING A PUBLIC WORKS CAMPUS TASK FORCE AND ESTABLISHING THE SCOPE OF WORK AND PARAMETERS UNDER WHICH THE TASK FORCE WILL CONDUCT ITS WORK.

WHEREAS, In 2019, the Alaska Division of Geological and Geophysical Surveys published updated Tsunami Inundation Maps for Homer; and

WHEREAS, The information for these maps was derived by numerically modeling worst-case scenarios of inundation from tsunami waves generated by earthquakes and submarine landslides, including local underwater slope failure scenarios for Kachemak Bay; and

WHEREAS, The maximum landslide-generated tsunami, as modeled, shows the existing Heath Street campus of the City's Public Works Department could be flooded by as much as 16.4 – 32.8 feet; and

WHEREAS, Under some scenarios, the first wave could appear within one hour after the earthquake and further, landslide-generated waves could hit low-lying areas while the ground was still shaking from an earthquake; and

WHEREAS, Currently, when a Tsunami Warning is issued, Public Works personnel immediately begin evacuating major pieces of heavy machinery and other mobile equipment from its campus to higher ground and the evacuation process takes at least forty-five minutes; and

WHEREAS, The Department does not currently evacuate materials and supplies, which would be needed in the event an earthquake or tsunami causes damage to the City's water, sewer or road infrastructure; and

WHEREAS, The estimated costs to properly prepare for such recovery, by creating stockpiles of necessary materials, supplies and equipment, would be substantial; and

WHEREAS, For these reasons, risks of personal injury, property damage and even loss of life could be high, either during the tsunami event itself or during recovery.

NOW, THEREFORE, BE IT RESOLVED that the City Council of Homer, Alaska, hereby creates the Public Works Campus Task Force for the following purposes:

1. Goal #1 – Evaluate the risks of personal injury, property damage and loss of life in the event a tsunami floods the Public Works Campus.
    a. Scope of Work –
        i. Review the findings of the 2019 Updated Maximum Estimated Tsunami Inundation report published by the Alaska Division of Geological & Geophysical Surveys
        ii. Develop system for evaluating risks
        iii. Catalog and evaluate risks
    b. Deliverables – Report of Findings of probable risks
    c. Timeframe – Report to be submitted by January 31, 2021
2. Goal #2 – Develop strategies for mitigating identified risks
    a. Scope of Work –
        i. For each risk identified under Goal #1, identify strategies for mitigation, including estimated short term and long term costs
    b. Deliverables – Report summarizing strategies and cost estimates
    c. Timeframe – Report to be submitted by February 28, 2021
3. Goal #3 – Make recommendations.
    a. Scope of Work –
        i. Develop system for evaluating strategies
        ii. Evaluate strategies
    b. Deliverables – Report summarizing evaluation process and identifying preferred options
    c. Timeframe – Report to be submitted by March 31, 2021

BE IT FURTHER RESOLVED the Public Works Campus Task Force will be made up of 7 members, with 3 City Residents, 2 Councilmembers, and 2 City Staff.

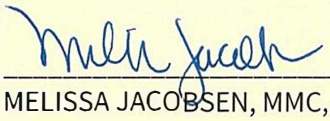
BE IT FURTHER RESOLVED, The Mayor will nominate appointees to the Task Force from a list of applicants; nominees must be approved by City Council. All appointees shall serve at the pleasure of the Council and may be removed from their position by a majority of the Council at any time without cause.

PASSED AND ADOPTED by the Homer City Council on this 23rd day of November, 2020.

CITY OF HOMER

KEN CASTNER, MAYOR

ATTEST:



MELISSA JACOBSEN, MMC, CITY CLERK

Fiscal Note: Staff time and advertising.

City of Homer
www.cityofhomer-ak.gov

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Homer, AK 99603
publicworks@cityofhomer-ak.gov
(p) 907- 235-3170
(f) 907-235-3145

Memorandum 20-194

TO: City Council

THROUGH: Rob Dumouchel, City Manager

FROM: Janette Keiser, Director of Public Works

DATE: November 16, 2020

SUBJECT: Public Works Campus Task Force

Issue: In 2019, the Alaska Division of Geological and Geophysical Surveys ("AK DGGS") published updated Tsunami Inundation Maps for Homer, showing that a landslide-generated tsunami could flood the existing Heath Street campus of the City's Public Works Department by as much as 16.4 – 32.8 feet. If this is true, risks of personal injury, property damage and even death are high. We are requesting that a Task Force be convened to deliberate on the risks, develop mitigation strategies and make recommendations for action.

Background: The DGGS updated its Tsunami Inundation Maps for Homer by numerically modeling worst-case scenarios of inundation from tsunami waves generated by earthquakes and submarine landslides, including local underwater slope failure scenarios for Kachemak Bay. The model computes not only the projected height of an earthquake- or landslide-triggered tsunami, but also the time of arrival. The DGGS studied multiple scenarios, using different variables such as distance of the earthquake/landslide from Homer, possible volume of rock/earth displacement, tides, etc. Under some scenarios, the first wave could appear within one hour after the earthquake. Further, waves generated from earthquake-induced landslides could hit low-lying areas while the ground was still shaking from the earthquake. The model projects the maximum landslide-generated tsunami could flood the existing Heath Street campus of the City's Public Works Department by as much as 16.4 – 32.8 feet.

Such flooding could heavily damage millions of dollars of buildings, heavy equipment, materials and supplies on the Public Works campus. Worse, substantial damage would undermine our ability to help the City recover after a tsunami event. Our heavy equipment could be ruined from salt water intrusion, stockpiled materials could be washed away, and our buildings could be rendered uninhabitable. Because of these risks, Public Works employees have a standard protocol when a Tsunami Warning is issued. All available personnel immediately deploy to the campus and begin evacuating major pieces of heavy machinery and other mobile equipment to higher ground. Currently, our evacuation site is on the west end of Heath Ave, behind Safeway. This site is above the Inundation Zone. The evacuation process takes at least forty-five minutes for the equipment alone.

Currently, we do not try to evacuate anything from the buildings – no tools, spare parts or anything from our extensive inventory of pipe, water meters, culverts, etc. Our fuel depot, which services all City rolling stock, consists of underground storage tanks with above-ground pumps and controls. This The fuel could become contaminated and the electronic elements could become inoperable. This means we would have little to work with in the event we would be called up to repair water line breaks, fix roads, or otherwise help the City recover from earthquake-induced damage.

We recently conducted an in-house round table to talk about this. We looked at what we would need to stay functional. We considered these questions:

- What would most likely happen in the way of damaged infrastructure?
- What would we need to do to restore functionality of damaged infrastructure?
- What would we need?

Our goal was to identify equipment, materials and supplies we could stash in some location off the Public Works Campus so we would have something to work with, in the event the worst-case scenario occurred. We concluded that it would cost hundreds of thousands, if not millions, of dollars to be properly prepared. And, worse, even if we created such stock piles, we would have no base of operations. We are the arms, legs and muscles of the City's emergency recovery response team and we would be, for all practical purposes, unable to function. We concluded that if the Inundation Maps are right, the risks of personal injury, property damage and even loss of life could be high, either during the tsunami event itself or during recovery. We need a better plan!

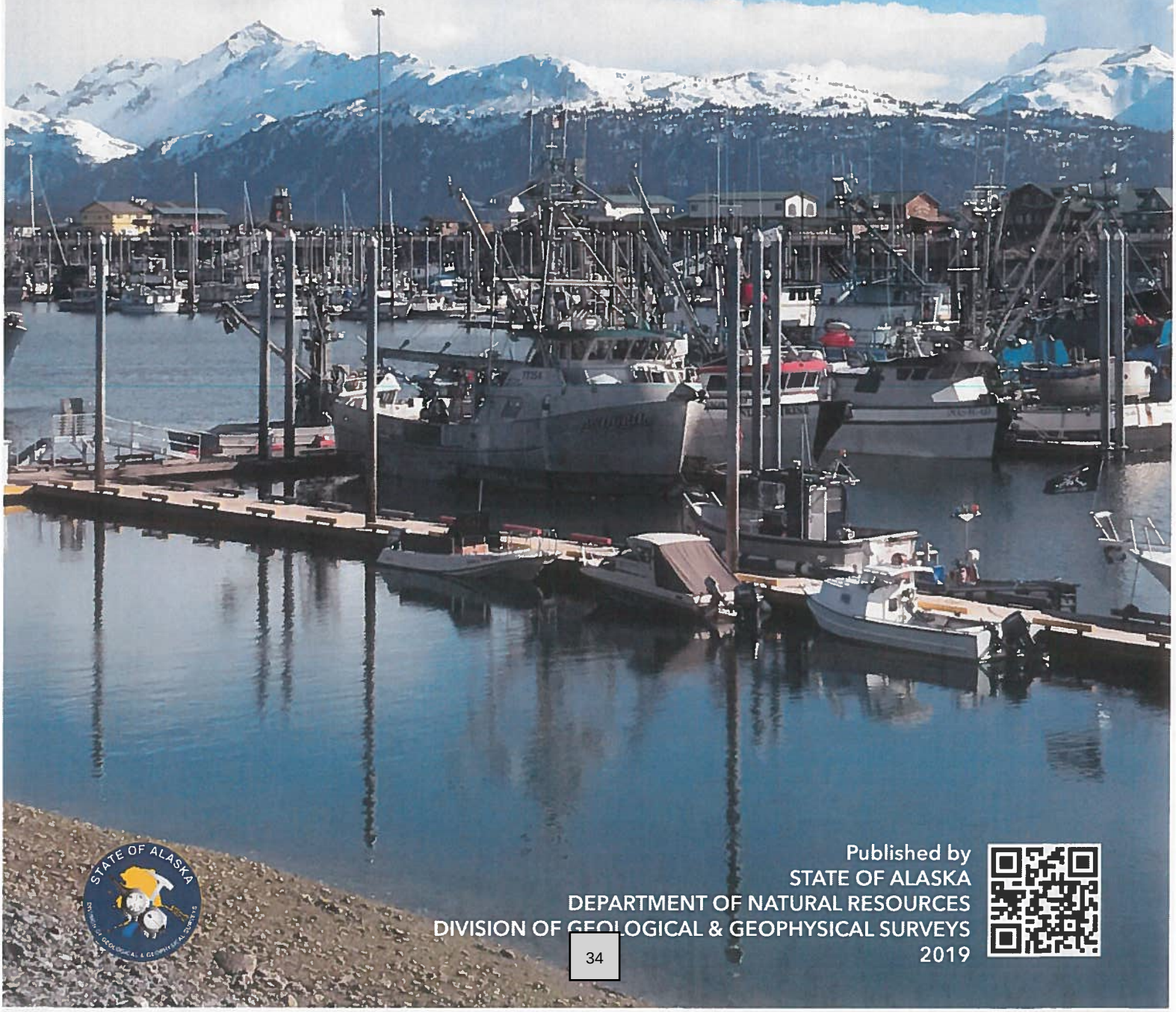
Action Recommended:

We propose that a Task Force be created to evaluate the risks, deliberate about mitigation strategies and make an action plan for addressing the risks of maintaining the status quo.

Report of Investigation 2018-5 v. 2

UPDATED TSUNAMI INUNDATION MAPS FOR HOMER AND SELDOVIA, ALASKA

E.N. Suleimani, D.J. Nicolsky, and J.B. Salisbury



Published by
STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS
2019

to develop maps of composite flow depths. We superpose all scenarios by selecting the maximum computed flow depth value at each grid point. Figures 26 and 27 show the composite tectonic flow depths over dry land for the town of Homer and for Homer Spit, respectively. The residential areas north and south of the tidal flats, areas north of Beluga Lake, some airport facilities, and a section of Kachemak Drive are all inside the inundation zone, with flow depths ranging from 3 to 5 m (10 to 16 ft). Composite tectonic flow depths on Homer Spit reach 5 m (16 ft). Figure 28 shows the composite tectonic flow depths over dry land in Seldovia. A significant part of the waterfront and the airport area are inside the inundation zone, with flow depths ranging from 1 to 5 m (3.3 to 16 ft).

The numerical simulations reveal that, for some scenarios, the first wave could arrive at Homer and Seldovia within one hour after the earthquake. As demonstrated by the time series data shown in appendix figures A3 and B3, significant wave activity could continue in the area for at least 12 hours after the earthquake, and the predicted average time interval between successive waves is 45 minutes to 1.5 hours.

Landslide Scenarios

While tectonically generated waves may not inundate the coast of Kachemak Bay for up to an hour after an earthquake, landslide-generated waves could hit low-lying areas while the ground is still shaking (Coulter and Migliaccio, 1966; Wilson and Tørum, 1968). Additionally, some landslide-generated waves can occur without an earthquake and therefore without any warning. We assume that slide-prone unconsolidated deposits are initially at rest, and ground shaking triggers

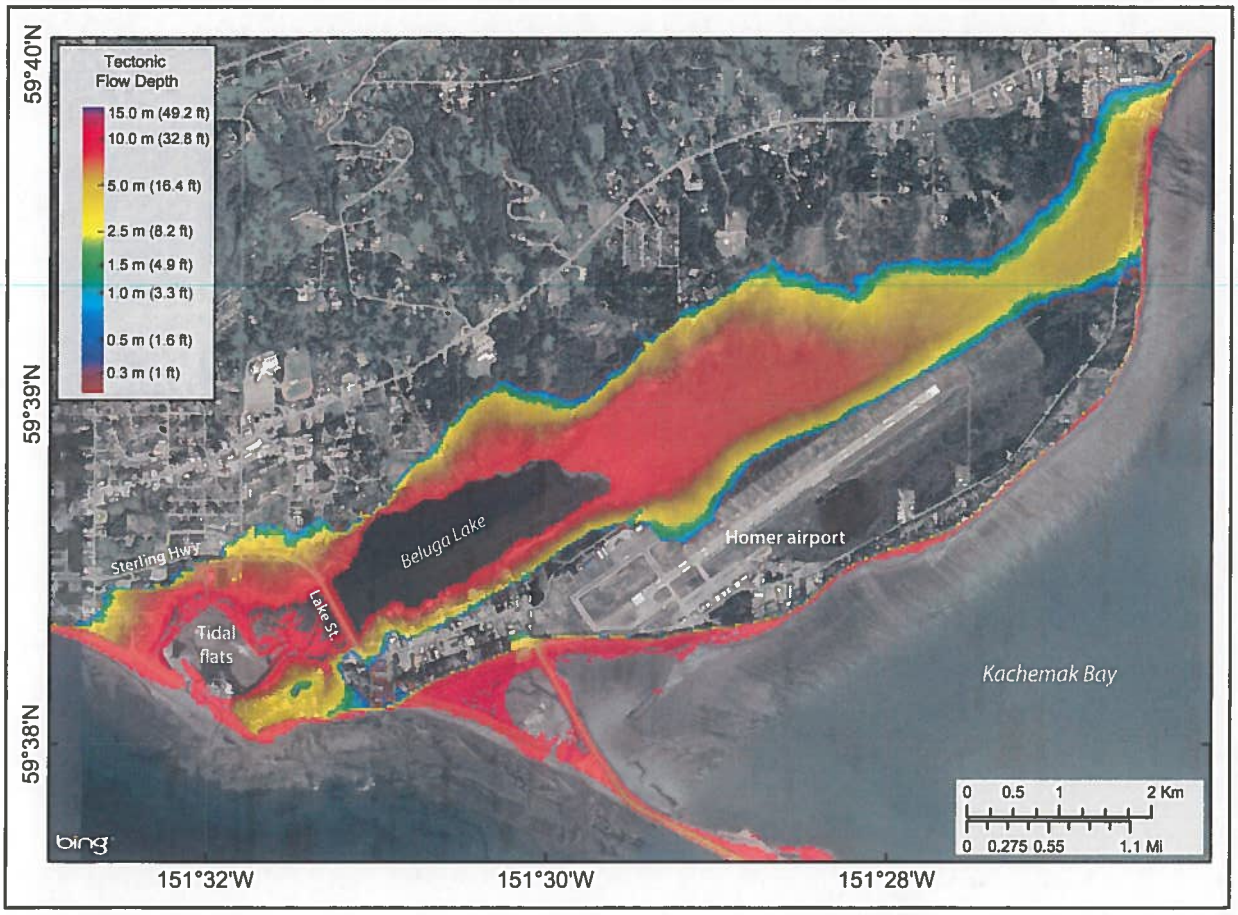


Figure 26. Modeled maximum composite flow depth over dry land for all tectonic scenarios for the town of Homer.

From: [redacted]
To: [redacted]; [redacted]
Subject: FW: Equipment photo
Date: Tuesday, November 17, 2020 9:03:03 AM

Here's another photo of the evacuated equipment on Hazel Ave.

Cheers,
Jan

Sent from my T-Mobile 4G LTE Device
Get Outlook for Android

Exhibit D

City of Homer
www.cityofhomer-ak.gov

491 East Pioneer Avenue
Homer, Alaska 99603
(p) 907-235-8121
(f) 907-235-3140

MEMORANDUM

To: Mayor Castner and the Homer City Council
From: Public Works Campus Task Force
RE: Risk Catalogue and Evaluation
Date: April 30, 2021

Introduction
Resolution 20-125 set out three goals for the task force to address and make recommendations to Council. To date, the group has held eight meetings. The purpose of this memo is to provide a report of our activities so far.

Goal #1: Evaluate the risks of personal injury, property damage and loss of life in the event a tsunami floods the Public Works Campus.

a. **Scope of work:**
   i. **Review the findings of the 2019 Updated Maximum Estimates Tsunami Inundation report published by the Alaska Division of Geological and Geophysical Surveys**
   ii. **Develop a system for evaluating risks**
   iii. **Catalogue and evaluate risks**
b. **Deliverable: Report of findings of probable Risks**

<u>Tsunami Report Evaluation</u>
The Task Force reviewed the Tsunami report, and then heard a presentation by Drs. Suleimani[1] and Salisbury, two of the report authors. The Task Force learned that even a low level of water can cause extreme damage. Unlike a typical wave, a Tsunami is like a fast flooding tide that continues for hours and hours. It carries an immense amount of debris, so between the strong flood and the amount of debris, it's very damaging. The report determined a number of tsunami scenarios that would cause catastrophic damage to coastal areas of Homer.

We quizzed Drs. Suleimani and Salisbury about the probability of the "worst case scenario" happening. They said it was impossible to say because the data in Alaska are not well enough developed to determine the probability of occurrence. This is why they use the "worst case scenario"

[1] Elena Suleimani, Ph.D.
Research Analyst & Tsunami Modeler
Alaska Earthquake Center, University of Alaska Fairbanks

Barrett Salisbury, Ph.D.
Neotectonic Geologist, Engineering Section
Division of Geological & Geophysical Surveys

approach. Dr. Suleimani said it's up to the communities to decide what to do with this information; that is, to decide (a) what would be at risk if the worst case scenario occurred and (b) what the community wanted to do to address the risks. For this reason, we focused on identifying the risks that may be suffered if the worst case scenario happened at the Public Works Campus.

The elevation of the Public Works parking lot is 30 feet. In the worst case scenario, the water could reach 50 feet high, leaving the campus inundated with 20 feet of water. In lesser scenarios, hours long fast moving flood waters could erode the fill that Public Works sits on, causing the loss of the parking lot and potentially threatening the structural stability of the buildings. Additional potential outcomes are discussed in the attached Risk Table.

Catalogue and Evaluate Risks

The Task Force developed a spreadsheet of risks by type of risk – environmental, harm to workers, harm to Public Works operations, and overall negative impacts to city services, in the event a tsunami flooded the Public Works Campus. The draft table is attached here. In addition to gathering input from task force members, we used the All Hazard Mitigation Plan to further consider risks to the facility. The risks evaluated are specific to the Public Works campus in case of tsunami - a regional earthquake will be felt city wide and the impacts are not specific to Public Works.

Another issue this process raised is opportunity cost. If Public Works personnel were not moving equipment during every tsunami warning, workers could be helping with the evacuation of people from low lying areas. In the event of a tsunami and damage to the campus, Public Works staff would be needed to respond to that facility, rather than taking part in the city wide response that will surely be needed. Rather than having the resources to participate in the city emergency response and recovery, the facility will require those resources and personnel to stabilize operations.

Conclusion of Goal 1 work:

The Public Works Campus is critical City infrastructure and lies within the maximum tsunami inundation zone. At an elevation of 30 feet, the campus is in a vulnerable location. Planning for the mitigation of a tsunami event can include short and long term strategies. The Task Force recommends, among other solutions, the long term replacement of the Public Works Campus at a higher elevation.

Next Steps

The Task Force will continue its work as outlined in Resolution 20-125. Risk mitigation strategies for short and long term implementation will be provided, with associated costs. The group intends to have the strategies and costs, a report on Goal 2 and deliverables, for a future Council meeting.

Attachments

1. **Map**
2. **Risks Spreadsheet**
3. **Resolution 20-125**

4/21/21 WS draft PWTF

Risks, Evaluation and Mitigation

	A	B	C	D
1	**Impacted Group**	**Potential Risk/Outcome**	**Evaluation**	**Mitigation Options**
2	**Environment**	Calcium Chloride storage	Flooding would have localized impact for 1 week to one month. CC Causes acute toxicity but would be quickly dispersed by a Tsunami	Store at a higher elevation (easy to replenish in a new location over time). Alternately, accept the loss of sand pile and lose the ability to provide sanding services.
3		Fueling depot for all city vehicles	Could cause a fuel spill	Move fuel depot
4		Toxicity to people and the environment from chemicals stored at PW, and potential impact on salmon, shorebirds and nearby area	Some oil and hydraulic fluids are stored at PW, but in relatively low quantities (its not a tank farm). Could have short term affect but not expected to cause long term damage. Tsunami would dissipate quickly.	None needed
5		RV holding tank storage	Loss of service	Create a new higher elevation RV dump location
6		Sewer treatment plant flooding and raw sewage escapement	Sewage spills, but cleanup of facility is possible	Facility can not be reasonably moved.
7				
8	**Workers**	All PW administration and mechanics are located on site	All administrative support and operations for PW would immediately need a new location, along with work stations, phones and IT capabilities	Remote work, or re-home administrative functions in other city facilities. Disruptive to PW and citywide operations.
9		Potential loss of life	Early Warning System provides warning, would take time for water to reach PW, and reach a flood elevation.	PW emergency operations protocol could better track who is on site or do a final sweep at evac. Threat is from the evacuation process, injury or accident during evacuation
10		All employees and rolling stock is evacuated during every Tsunami event warning. Takes about 45 minutes.	Staff could be helping with the effort to evacuate the public, freeing up other emergency responders.	In an emergency, injuries are likely and would pull emergency responders away from traffic control and evacuation efforts.

4/21/21 WS draft PWTF

Risks, Evaluation and Mitigation

	A	B	C	D
1	**Impacted Group**	**Potential Risk/Outcome**	**Evaluation**	**Mitigation Options**
11	**Workers**	Traffic risk for workers and the public as all the rolling stock is evacuated	PW is able to provide its own flagger and traffic control if needed. This is not a pinch point for evacuation operations for staff or the public.	Evacuation goes pretty well because we do it fairly often. Can provide a flagger if needed. Equipment evacuation is smooth; it's the pipes valves tools that cant be evacuated, along with frozen in equipment such as summer parks items. Have started some stashes of water valves etc. but don't have pipe storage, etc.
12		Opportunity Cost. How could PW staff be helping if they were not moving equipment? How could they be helping with response?	Could be providing traffic control! Monitoring water/sewer infrastructure, could be helping dispatch and other emergency responders. Could help evacuate low lying areas, or spit equipment. Could revise emergency management plan so PW is a resource, and better plan for utilities	
13				
14	**City operations**	Loss of fueling depot	Immediate need to switch to local service stations. Likely to have fuel shortages for our rolling stock, including ambulances and fire trucks.	Backup fuel storage in another location, move fuel island. Needed for all disasters and in case of supply chain disruptions
15		Loss of PW mechanic services due to loss of personal and city tools, parts, materials and shop space	There is substantial investment in the mechanic shop that would be difficult to replace on short notice	Hire out repair services (light vehicles only). Services may not be available or have the expertise needed for emergency vehicles. Short term solution only? No solution?
16		Disruption to sewer treatment operations	Cleanup would be required, but the facility could be repaired	Not looking to relocate because the alternatives are not feasible. The deep shafts would remain... may need repair/electric etc. but the concrete shafts are stable.

4/21/21 WS draft PWTF

Risks, Evaluation and Mitigation

	A	B	C	D
1	**Impacted Group**	**Potential Risk/Outcome**	**Evaluation**	**Mitigation Options**
17	**City operations**	Loss of all PW administrative offices	Loss of historical files, including all city projects, paper plans are not replaceable… decades of projects…..	Scan plan sheets and institute electronic records management.
18		Radio and communication systems would be impacted	PRV stations/water system impacted. Reduction in city phone service redundancy which could affect non-emergency phone calls to dispatch	Losing electronics for PRV and lift stations means losing the ability to identify leaks, water breaks, and pump water and pump sewers. Would require people on the ground to do it manually.
19		Ability to supply bulk water at Public Works would be reduced	There are currently two private bulk water providers who could supply water trucks if the water system was functional.	If needed, water can be provided via fire hydrants or at the Water Treatment Plant, depending on the nature of the service disruption.
20		Loss of rolling stock	Higher value stock rolls first during an evacuation. Lower value stock does not moved - stuff on a trailer, or harder to move like the asphalt machine. Easy to move stuff goes, equipment that does not move does not get evacuated.	Quantify what is not rolling: 20-25% of equipment might not be moveable (repairs, etc.) A few supplies would be frozen in although most are under sheds
21		Parks equipment doesn't move in an evacuation. Loss of lawnmowers, brush cutters, snow blowers, bobcat, traffic signs etc.	We have learned from doing the vaccine events that having enough traffic control people and cones, signs etc. is critical to safe large scale operations.	Mobilize the cone and sign trailer as part of an evacuation. Consider storing some supplies off site.
22	**Equipment**	Loss of sand pile	Would not be able to sand roads. Use stockpile for road and water and sewer repairs, especially in winter. Would hinder repair capability.	Store sand pile in a different location
23		Loss of other equipment and materials	Loss of culverts and other materials used for repairs	Consider storing some items (say in a connex) on higher ground.

	A	B	C	D
1	**Impacted Group**	**Potential Risk/Outcome**	**Evaluation**	**Mitigation Options**
24		Loss of motor pool equipment shop	Elimination of capacity to fix police and fire vehicles, could lose whatever apparatus is currently under repaid such as an ambulance	
25		Leaving equipment in an unsecured area after evacuation leaves it vulnerable to vandalism	Currently there are people at PW most of the time, but the site is unsecured. Pipes etc. are more secured (connexes)	Currently the equipment is out of sight, out of mind, so people don't see the equipment. If its moved to Hazel, its much more visible to people. Emergencies bring out the best and worst in people.
26		After initial phase, could equipment go someplace else (mitigation) can we re-house it around the city? Effect on operations?	Fragmenting affect on operations during the response/recovery timeframe, until a new PW facility could be established.	
27				

Legend--Tsunami Scenarios*

- Max Inundation (all scenarios)
- Scenario 7
- Scenario 5
- Scenario 3
- Area flooded in max inundation

* Data Source=DGGS

Map Date: 04/30/21
Data Sources: KPB, COH, DGGS (GIS data, elevation), Esri satellite imagery 2020.
Map by: C.E.Barnwell

Legend
- Major Roads
- Streets

N

0 300 600 1,200 Feet

0 65 130 260 Meters

City of Homer
PUBLIC WORKS CAMPUS TASK FORCE
MAP 1--TSUNAMI ZONES
& EXISTING PUBLIC WORKS

City of Homer
www.cityofhomer-ak.gov
491 East Pioneer Avenue
Homer, Alaska 99603
(p) 907-235-8121
(f) 907-235-3140

MEMORANDUM

To: Public Works Task Force
From: Julie Engebretsen, TF member
RE: Site Selection Review
Date: May 12, 2021

Resolution Task Goal #3: Make Recommendations

- Develop system for evaluating strategies
- Evaluate strategies
- Deliverables: Report summarizing evaluation process and identifying preferred options

RECAP: At the last meeting, the task force moved that Public Works Director Kaiser and myself would provide an outline of what the requirements are for a suitable public works property, to be further supplemented by a GIS report.

Process

I began by researching properties for sale in Homer, and also used my knowledge of Homer properties to identify vacant lots or areas that could be re-developed. I based decisions on lot size, zoning, and if there property was or had been recently for sale. Attached is a map of preliminary potential sites.

Upon further analysis, some were too steep to be reasonably developed for a public works building. For example, there is a lot of vacant land on Greatland Street, but the slope would require a lot of dirt work and expense and the shape of the lots and the presence of a creek doesn't lend itself to easy development for our purposes. I walked parts of the CBD to look at property and determine which merited a field visit with Director Kaiser. I also visited property in the Commercial Park Subdivision, basically south of the Down East/Bayweld area out East End. While there is acreage with full utilities available, the roads are not paved, and it's a long way for equipment to travel to reach 'headquarters.' Seems like a lot of machine and employee time would be wasted if this location was used.

Meanwhile, Jan had an architect make a scale map of the site on Lake Street, and put the existing PW building on it. For reference, the existing PW administration building and mechanics area is about 17,000 square feet, similar to the Homer Public Library. Pole barns and equipment storage will take additional space, but it gave her a rough idea of what property is needed as a starting point for lot analysis. From the architect's analysis, the area of the current building would fit. She is now working on fitting the fuel island and equipment storage on that site.

Field Trip

Jan and I met on Thursday May 6th to conduct a field visit. During that time we determined the following site selection factors:

- Location outside the Tsunami Zone
- Location with good street access and not using Pioneer Ave as a main thoroughfare for all heavy equipment
- Centrally located in Homer/Central Business District zoning.
- Location with adjacent land uses that would not be unreasonably affected by having Public Works as a neighbor.
- Relatively flat land. All sites have some slope, some more than others.

We visited three locations.

1."Waddell property" at the intersections of Snowbird, Grubstake and Lake Street. Con: The property is right on the edge of the Tsunami Zone… It does not seem reasonable to move the campus for so little elevation gain.

2. "Lake Street Lot". This is the property proposed by Carey Meyer. The pros include most of the land is for sale, and it is big enough for a scaled down PW facility. To the south, the neighboring land use is Homer Electric Association's storage yard.

3. "Town Center North." This lot would have heavy equipment accessing Pioneer Avenue, which is not desirable, and would require purchasing additional land for a Main Street access. Additionally, the property has a fair amount of slope. It would be better suited to a land use that didn't require such a large, flat footprint. Last, this property is zoned Town Center, which does not allow a public works campus use. Changing the zoning would also entail changing the Comprehensive Plan. These are possible, but would likely meet public resistance.

We further discussed the land on Greatland Street (too sloped) and the HERC site. The HERC site was studied by the HERC Task Force. While it is a larger flat site, there are higher and better uses for this property. The pros and cons of the HERC site could be further discussed by the full Task Force.

Conclusions

- The sand pile at public works is a source of a lot of equipment noise, and takes a large flat area. Leaving the pile where it is may be a reasonable solution. Similarly, snow storage would remain at its current location. This would allow a new Public Works facility to be on a smaller lot, and have less impact on adjoining properties.
- If the old Public Works building remains in place, all the heavy equipment, repair shop, materials storage and offices could move 'up town.' Parks maintenance and building maintenance could remain or be re-located to the existing building. This would allow the City of move out of the HERC 2 building.
- The lot on Lake Street is for sale, and is the best fit for PW at this point. There are additional lots that are not for sale, but are not heavily developed. Perhaps the City could pursue a first right of refusal agreement on those lands.

Requested Action: What are the next steps the Task Force would like to take?

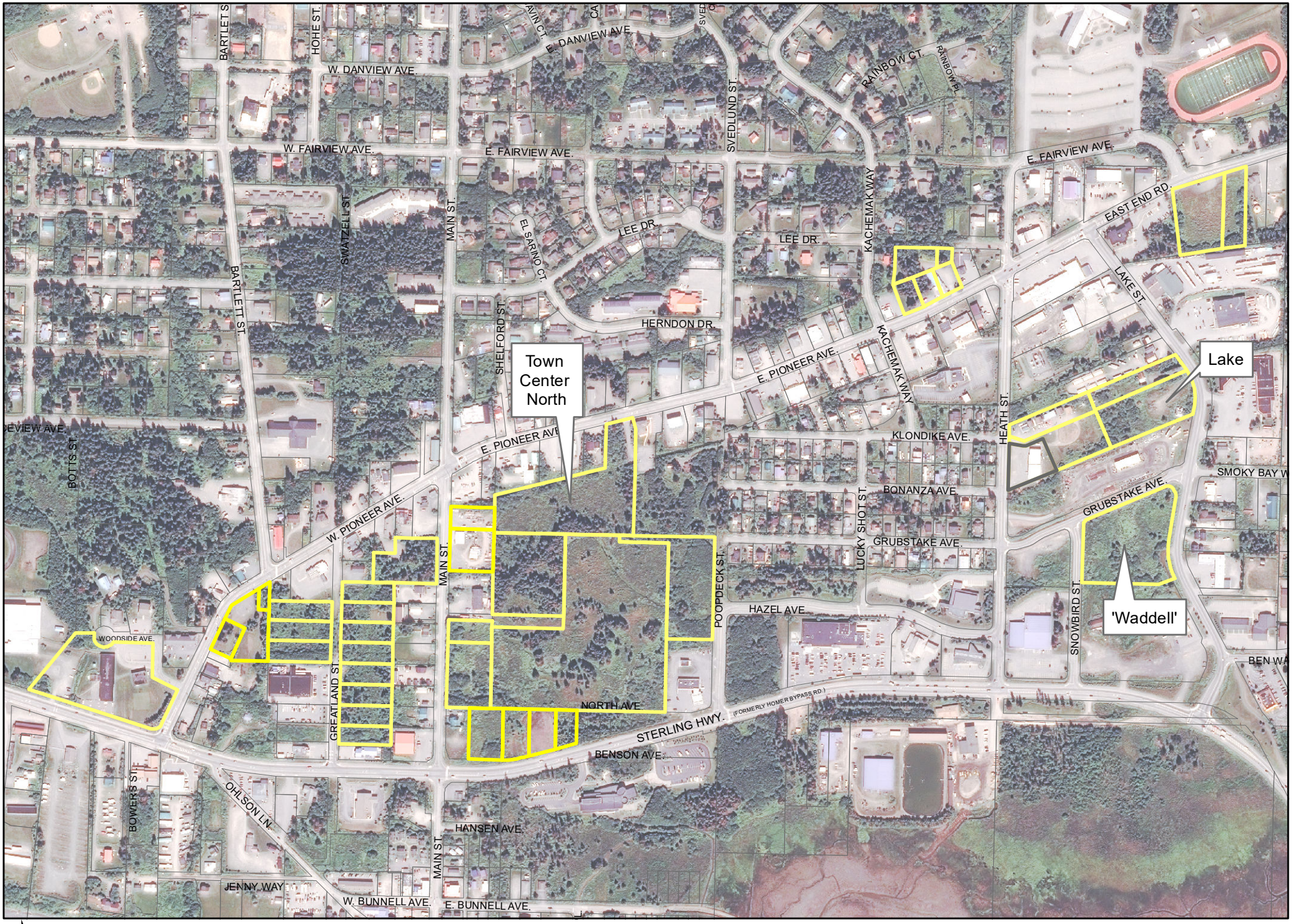
~Task Force members could visit these sites

~We can share observations at the next meeting.

~I can write a more fleshed out ‘report’ based on your observations and this memo, for a June agenda.

Attachments

1. Potential Sites Map
2. 5/3/21 Draft site plan/very basic space planning
3. Real Estate Listings


Town Center North
Lake
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BARTLETT ST.
HOHE ST
W. DANVIEW AVE.
E. DANVIEW AVE
SVEDLUND ST.
RAINBOW CT.
RAINBOW PL
W. FAIRVIEW AVE.
E. FAIRVIEW AVE.
SWATZELL ST.
MAIN ST.
EL SARINO CT.
LEE DR.
KACHEMAK WAY
EAST END RD.
LAKE ST
HERNDON DR.
SHELFORD ST.
E. PIONEER AVE.
HEATH ST.
KLONDIKE AVE.
BOTTS ST.
W. PIONEER AVE.
BONANZA AVE.
GRUBSTAKE AVE.
LUCKY SHOT ST.
POOPDECK ST.
HAZEL AVE.
SNOWBIRD ST.
WOODSIDE AVE.
GREATLAND ST.
NORTH AVE.
STERLING HWY.
(FORMERLY HOMER BYPASS RD.)
BENSON AVE.
BOWERS ST.
OHLSON LN.
HANSEN AVE.
JENNY WAY
W. BUNNELL AVE.
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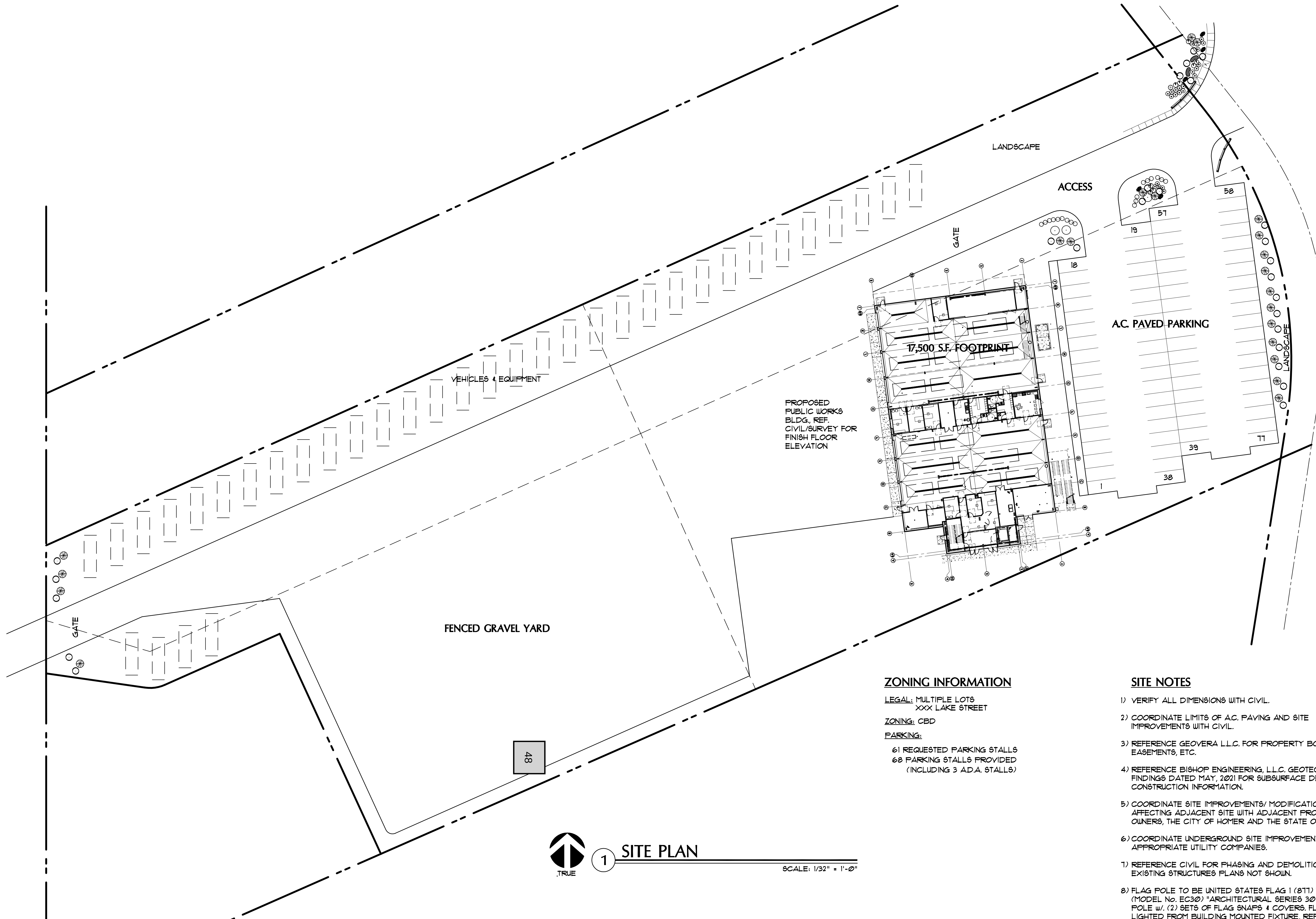
Potential Site Selection 5/6/2021



ZONING INFORMATION

LEGAL: MULTIPLE LOTS
XXX LAKE STREET

ZONING: CBD

PARKING:

61 REQUESTED PARKING STALLS
68 PARKING STALLS PROVIDED
(INCLUDING 3 A.D.A. STALLS)

SITE NOTES

1) VERIFY ALL DIMENSIONS WITH CIVIL.

2) COORDINATE LIMITS OF A.C. PAVING AND SITE IMPROVEMENTS WITH CIVIL.

3) REFERENCE GEOVERA L.L.C. FOR PROPERTY BOUNDARIES, EASEMENTS, ETC.

4) REFERENCE BISHOP ENGINEERING, L.L.C. GEOTECHNICAL FINDINGS DATED MAY, 2021 FOR SUBSURFACE DESIGN AND CONSTRUCTION INFORMATION.

5) COORDINATE SITE IMPROVEMENTS/ MODIFICATIONS AFFECTING ADJACENT SITE WITH ADJACENT PROPERTY OWNERS, THE CITY OF HOMER AND THE STATE OF ALASKA.

6) COORDINATE UNDERGROUND SITE IMPROVEMENTS WITH APPROPRIATE UTILITY COMPANIES.

7) REFERENCE CIVIL FOR PHASING AND DEMOLITION OF EXISTING STRUCTURES PLANS NOT SHOWN.

8) FLAG POLE TO BE UNITED STATES FLAG 1 (877) 734-2458 (MODEL No. EC30) "ARCHITECTURAL SERIES 30 FT. SATIN POLE w/. (2) SETS OF FLAG SNAPS & COVERS. FLAG TO BE LIGHTED FROM BUILDING MOUNTED FIXTURE, REF. ELECTRICAL.

1 SITE PLAN

SCALE: 1/32" = 1'-0"

48

LAWRENCE H. PEEK
ARCHITECTS
3715 Ben Walters Lane Homer, Alaska 99603
907.399.PEEK (7335) lhpeek7336@gmail.com

City of Homer Public Works Facilities
XXX Street
Homer, Alaska 99603
SITE PLAN

Date:	5/3/21
Drawn:	LHP
Check:	LHP
Project:	21009

SHEET:
A1.1
Of x

Residential - Confidential **2 Properties**

		Price / Status / MLS #	Area	Current Price	Beds	Baths	SF-Res	Garage #	List/Sold Price Sqft	Listing Member	Listing Office	Building Area Source
1		**$547,000** 279 W Pioneer Avenue 255 & 305 Homer, AK 99603 Active / 20-7490	490	547,000					NA / NA		Kachemak Group Real Estate	
2		**$575,000** 3877 Lake Street Homer, AK 99603 Active / 20-12259	490	575,000					NA / NA		Kachemak Group Real Estate	

Address: 279 W Pioneer Avenue 255 & 305

Listing #	20-7490	**Price-List**	$ 547,000
Status	Active	**Near**	Homer
Zip Code	99603	**Type**	Land
Acres	1.57	**Subdivision Plat Type**	Fee Simple
Assessed Value $		**Down Payment**	
Grid # (Muni Anch)	N/A	**Latitude**	59.643928
Longitude	-151.547532		

Area: 490 - Homer
Borough/Census Area: 1B - Kenai Peninsula Borough
Region: 1 - Southcentral Alaska Region
Zoning: CBD - Central Business District

School-Elementary	Paul Banks/Homer	**School-Middle**	Homer	**School-High**	Homer
SF-Lot	68,390	**Acres**	1.57	**Remote Description**	
Grid # (Muni Anch)	N/A	**Tax Map #-Mat-Su**	N/A	**Tax ID**	17515216, 17515217, 17515218
Taxes (Estimated)	$ 2,475	**Tax Year**	2019	**Foreclosure/Bank Own**	No

Directions: From the Sterling Hwy. turn onto Pioneer Ave. The property is on the right

Legal: Bunnells L68S Portion, Bunnells L67 the Nly160ft of the Sly 235ft thereof & Bunnells L68 The North PO

Public Remarks: Large rare high traffic parcel on Pioneer Ave. with over 400 FT. of road frontage CBD zoning, large gravel pad and views of Kachemak Bay. The possibilities are endless.

Vacant Land Type: Commercial; Residential	**Topography:** Level; Gently Rolling **View Type:** Bay; Mountains **Wtrfrnt-Access Near:** None **Wtrfrnt-Frontage:** None **Utilities:** Elec - On Site; Nat Gas - On Site; Sewer - On Site; Pub Wtr - On Site; Electric-Overhead	**Access:** Government **Road Maintenance:** Road Mntd All Year **Mortgage Info:** Min EM Deposit: 10,000 **Documents:** Docs Posted on MLS

Land Features: In City Limits; DSL/Cable Available; Curb & Gutters; Gravel Pad; Highway Frontage; Southern Exposure; Stub Out - Sewer; Stub Out - Water; View; Trees - Sparse

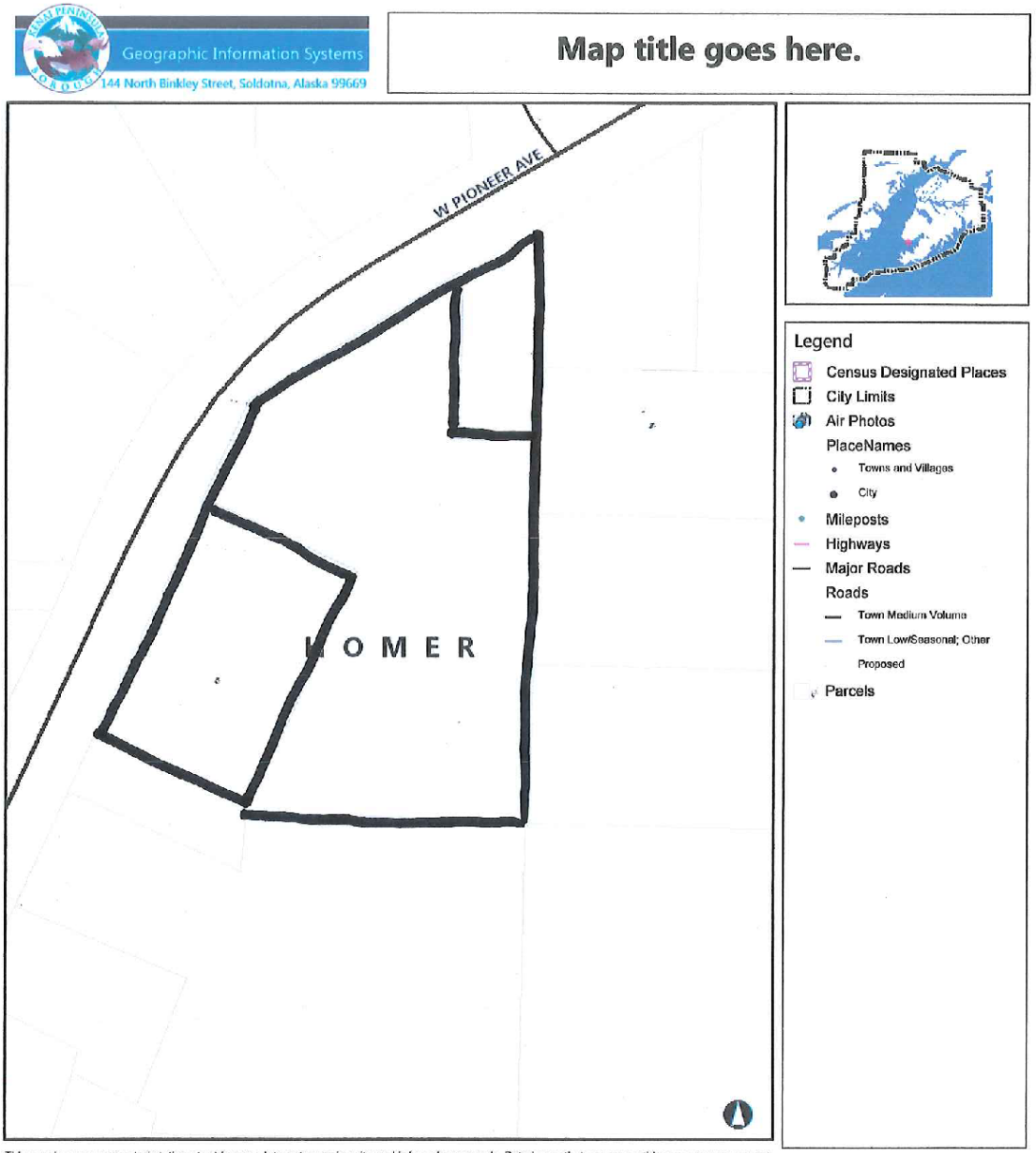
Agent Days On Market	343	**Commission Type**	%	**Commission to SO**	4.00

LO: Kachemak Group Real Estate(907) 235-7733

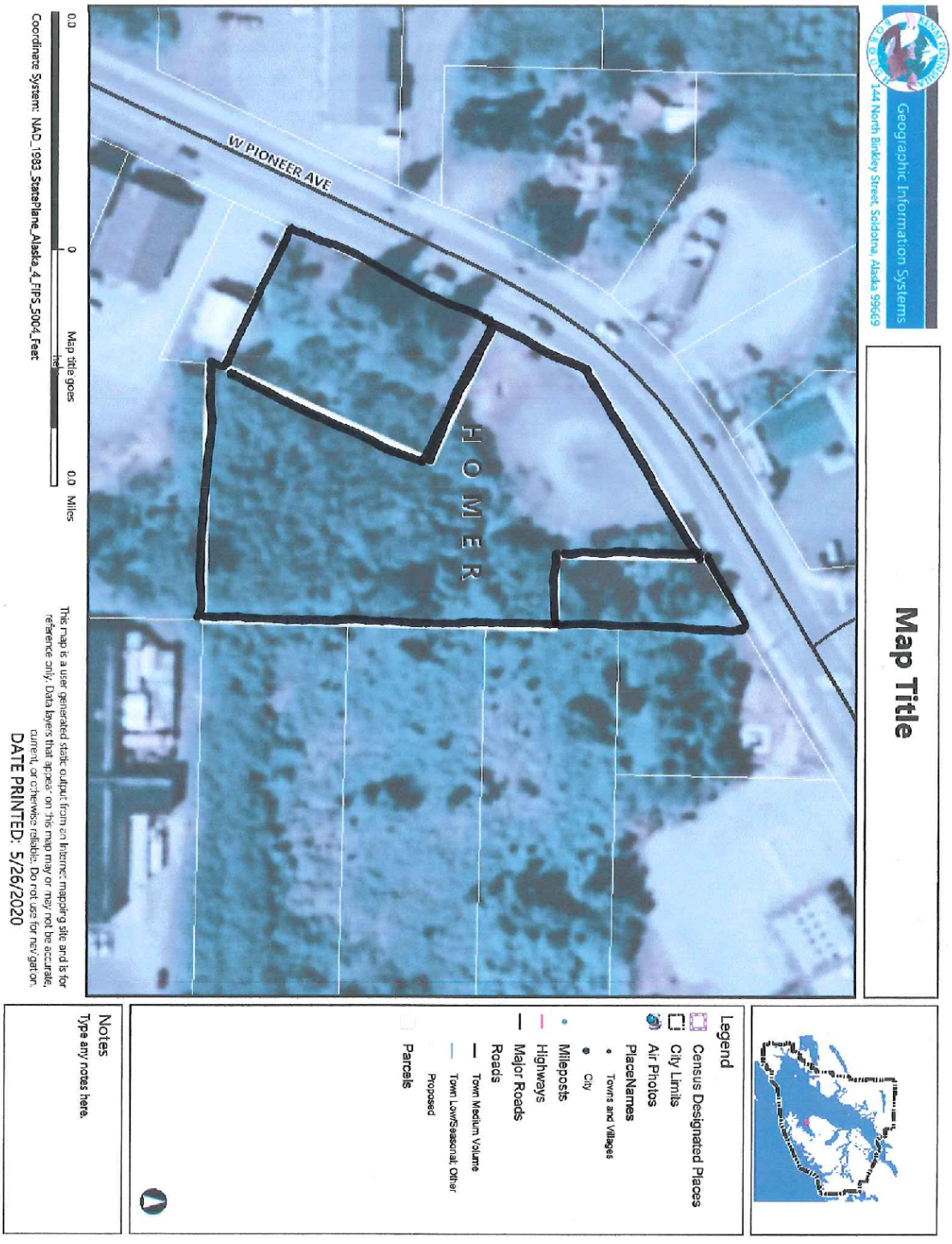
Provided as a courtesy of
Allen R Jantzi
Kachemak Group Real Estate
320 W Pioneer Ave #100
Homer, AK 99603

Mobile - (907) 399-8080
Direct - (907) 399-8080
Office - (907) 235-7733
allen@kachemakgroup.com

Documents for MLS # 20-7490 279 W Pioneer Avenue 255 & 305, Homer, AK 99603 $547,000



MLS # 20-7490 279 W Pioneer Avenue 255 & 305, Homer, AK 99603 **$547,000**



Photos for MLS # 20-7490 279 W Pioneer Avenue 255 & 305, Homer, AK 99603 $547,000

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Address: 3877 Lake Street

Listing #	20-12259	**Price-List**	$ 575,000
Status	Active	**Near**	Homer
Zip Code	99603	**Type**	Land
Acres	2.03	**Subdivision Plat Type**	Fee Simple
Assessed Value $		**Down Payment**	
Grid # (Muni Anch)	N/A	**Latitude**	59.646604
Longitude	-151.523709		

Area: 490 - Homer
Borough/Census Area: 1B - Kenai Peninsula Borough
Region: 1 - Southcentral Alaska Region
Zoning: CBD - Central Business District

School-Elementary	Paul Banks/Homer	**School-Middle**	Homer	**School-High**	Homer
SF-Lot	88,426	**Acres**	2.03	**Remote Description**	
Grid # (Muni Anch)	N/A	**Tax Map #-Mat-Su**	N/A	**Tax ID**	17711022
Taxes (Estimated)	$ 3,936	**Tax Year**	2020	**Foreclosure/Bank Own**	No

Directions: Sterling Hwy. to Lake St. Turn North on Lake St. Property is on the left.

Legal: T 6S R 13W SEC 20 Seward Meridian HM That PTN OF W1/2 NE1/4 Lying East Of Carl Sholin #5

Public Remarks: Large commercial parcel located on a high traffic street. Retail, office, condos. The possibilities are endless. Buyer to verify CBD Zoning.

Vacant Land Type: Commercial	**Topography:** Level **View Type:** Mountains **Wtrfrnt-Access Near:** None **Wtrfrnt-Frontage:** None **Utilities:** Nat Gas - Adj Site; Elec - On Site; Sewer - On Site; Telephone - On Site; Pub Wtr - On Site	**Access:** Maintained; Government; Paved **Road Maintenance:** Road Mntd All Year **Mortgage Info:** Min EM Deposit: 10,000 **Documents:** Docs Posted on MLS

Land Features: In City Limits; DSL/Cable Available; Highway Frontage; Multi-Family Ok; Road Service Area; Southern Exposure

Agent Days On Market	275	**Commission Type**	%	**Commission to SO**	3.00

LO: Kachemak Group Real Estate(907) 235-7733

Provided as a courtesy of
Allen R Jantzi
Kachemak Group Real Estate
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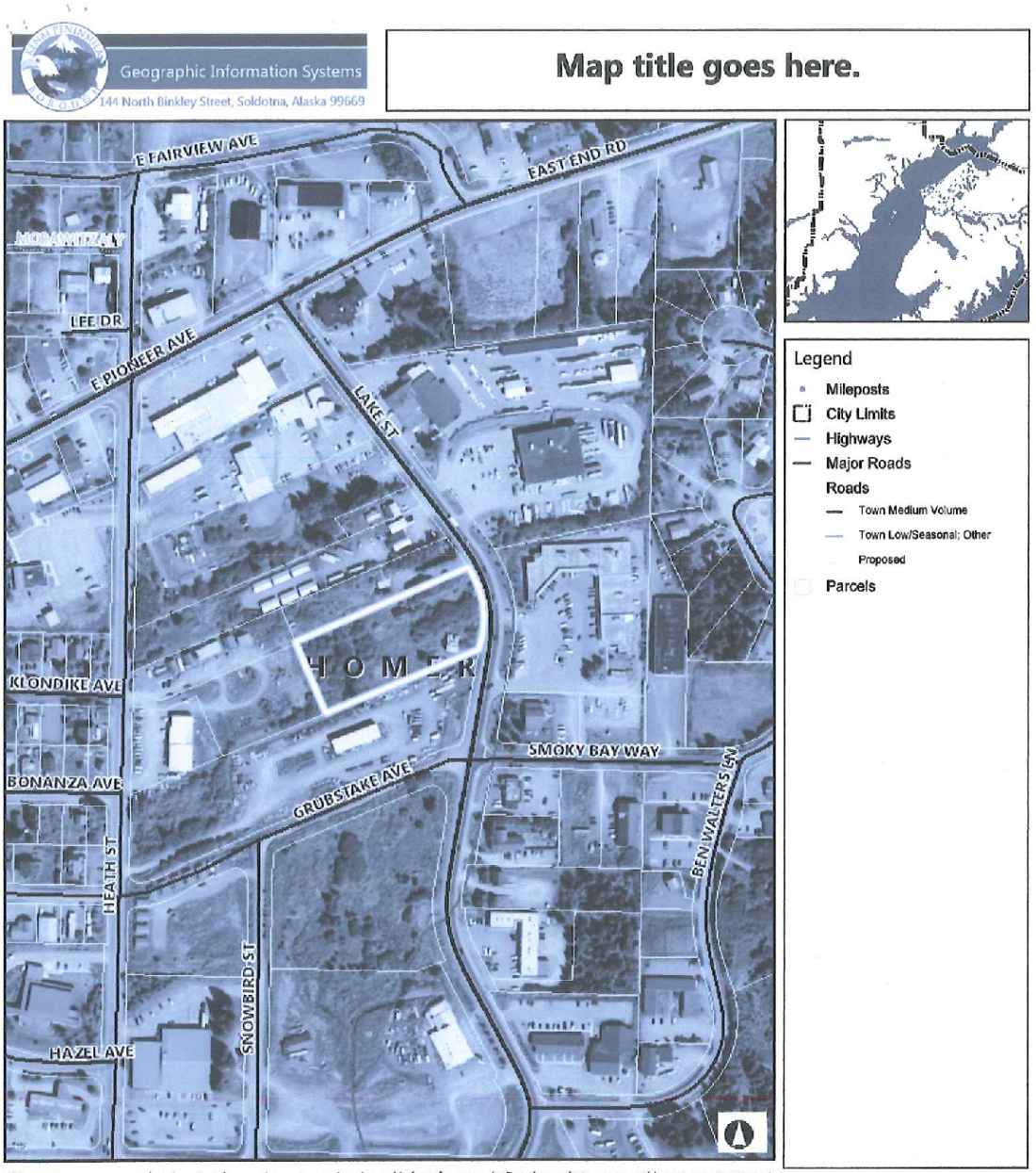
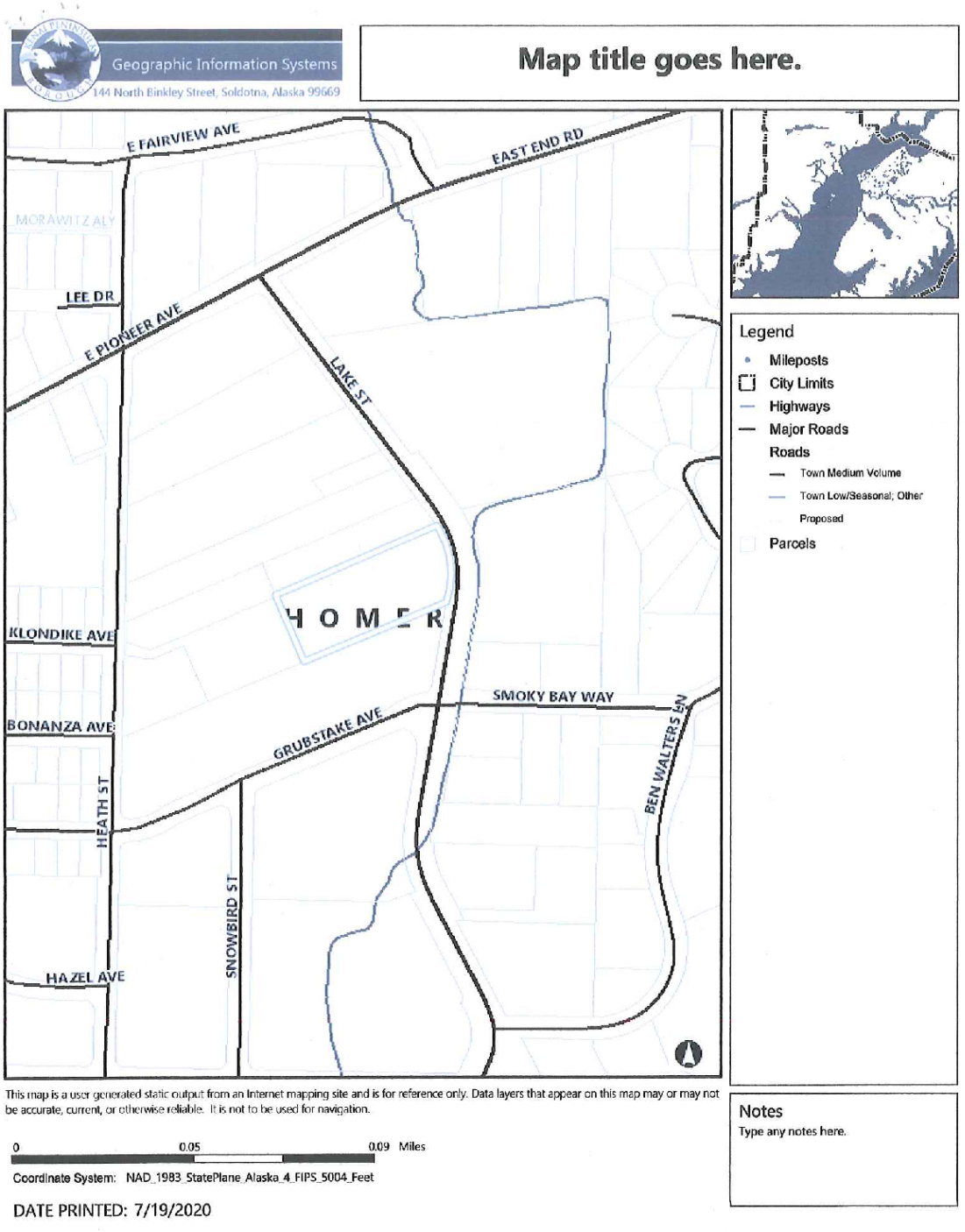
Homer, AK 99603

Mobile - (907) 399-8080
Direct - (907) 399-8080
Office - (907) 235-7733
allen@kachemakgroup.com

Documents for MLS # 20-12259 3877 Lake Street, Homer, AK 99603 $575,000




Geographic Information Systems
144 North Binkley Street, Soldotna, Alaska 99669
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EAST END RD
MORAWITZ ALY
LEE DR
E PIONEER AVE
LAKE ST
HOMER
KLONDIKE AVE
SMOKY BAY WAY
BONANZA AVE
GRUBSTAKE AVE
BEN WALTERS LN
HEATH ST
SNOWBIRD ST
HAZEL AVE
Legend
Mileposts
City Limits
Highways
Major Roads
Roads
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This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. It is not to be used for navigation.
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DATE PRINTED: 7/19/2020
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Photos for MLS # 20-12259 3877 Lake Street, Homer, AK 99603 $575,000

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