DOCKS AND HARBORS OPERATIONS MEETING AGENDA

October 22, 2025 at 5:00 PM

Port Office Conference Room/Zoom Webinar

https://juneau.zoom.us/j/89946313413?pwd=hDTt9MUmByTGFEyGGYIaTGDEEjqam0.1
Passcode:826541 Webinar ID: 899 4631 3413

A. CALL TO ORDER

B. ROLL CALL: James Becker, Tyler Emerson, Clayton Hamilton, Robert Horchover, Matt Leither, Nick Orr, Mark Ridgway, Annette Smith, and Shem Sooter.

C. PORT DIRECTOR REQUESTS FOR AGENDA CHANGES

D. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS

E. APPROVAL OF MINUTES

1. August 21, 2025

F. ITEMS FOR INFORMATION/DISCUSSION

2. US Army Corps of Engineers – Update on Statter Harbor Breakwater Recapitalization

Presentation by Erin Stockdale & Michael Rouse

Committee Discussion/Public Comment

3. Cruise Ship Underwater Hull Maintenance

Presentation by Ben Eisentstein (ADEC)

Committee Discussion/Public Comment

4. CBJ Legislative Priorities List - D&H Board Input

Presentation by Port Director

Committee Discussion/Public Comment

5. Board Planning, Retreat Goals and Organizational Improvements

Presentation by Port Director

Committee Discussion/Public Comment

6. Goldbelt Seadrome Property Request

Presentation by Port Director/Goldbelt Inc.

G. STAFF, COMMITTE, AND MEMBER REPORTS

H. COMMITTEE ADMINISTRATIVE MATTERS

I. ADJOURNMENT

DOCKS AND HARBORS OPERATIONS MEETING

August 21, 2025 at 5:00 PM

Port Office Conference Room/Zoom Webinar

A. CALL TO ORDER – Mr. Orr called the meeting to order at 5:00 PM

B. ROLL CALL: James Becker, Matt Leither, Nick Orr, Mark Ridgway, and Shem Sooter.

Absent: Tyler Emerson, Clayton Hamilton, Robert Horchover, and Annette Smith.

Also in attendance: Carl Uchytil-Port Director, Matthew Cresswell-Harbormaster, Matthew Sill-Port Engineer, Melody Musick-Administrative Officer, Leah Narum-New Administrative Officer, Justin Kanouse – DOWL, Nichole Lynch – CBJ Law, and Elias Hastings – Goldbelt (attend via zoom).

C. PORT DIRECTOR REQUESTS FOR AGENDA CHANGES – none.

D. PUBLIC PARTICIPATION ON NON-AGENDA ITEMS

Elias Hastings of Juneau said he was calling on behalf of Goldbelt to inquire about Docks and Harbors' interest in purchasing parcels along the Seadrome property. He recognized that many of the board members were new to the board and that this was maybe the first they had heard of this proposal. Goldbelt was interested in building an area complimentary to downtown Juneau and its waterfront.

E. APPROVAL OF MINUTES

1. **June 11th, 2025 -** Approved unanimously.

F. ITEMS FOR INFORMATION/DISCUSSION

2. **Little Rock Dump Secure Storage – Update**

Mr. Uchytil introduced Justin Kanouse from DOWL Engineering. He said that this has been an ongoing effort between the Board and Docks & Harbor staff to come up with an area that could complement the commercial fishing operators' needs for storage. There is some storage near Aurora Harbor office and that they would be looking at storage near the Rock Dump. Mr. Uchytil said that Docks and Harbors had DOWL do some preliminary work, and they are between 65-95% of completion.

Presentation by Justin Kanouse (DOWL): Mr. Kanouse shared some screen shots of the area off Thane Road, in the Little Rock Dump, (Sheet C-201) and the area currently used for dock storage. He said as Mr. Uchytil indicated that they were a little more than 65% of the plan from what the plan shows. He said they are basically taking the existing roadway and not moving it. He said it's best to keep the roadway intact, helping the grade of the roadway as it needs a bit of resurfacing. Mr. Kanouse said there would be extra traffic in the area (Sheet C-202) and referred to an outline of the pad. There's going to be a little bit

of filling and then a flat pad. The pad will drain towards the roadway side and there's existing material that will be moved and organized in an area that is close. The fencing will be like what is used at the airport with some lighting in the corners. There will be a D1 pad to place materials for the fishermen and other users that may want to use the area for storage and a 20 ft. slide gate at the front that will be secured. The fence will have barbed wire at the top, posts every 10 feet and a key card for entry. The pad needs to be built up a little for some drainage, a pipe going across but that the plans were straightforward. He said the size and shape of the area with the filling of the pad needs to be done soon so that the least number of items get moved. He said keeping in mind the costs, they recognized there are some existing items in the area that don't need to be moved or fixed. Sheet C-400 and following sheets show details of the fencing, the electrical details for the lights on timers. Cost estimates (page 27) are around $565K and they are looking at other alternatives for the typical sections of the view from the road.

Committee Discussion/Public Comment:

Mr. Uchytil asked for clarification on how big the storage area was going to be.

Mr. Kanouse showed the Conex boxes that might describe the size of the area. He said initially they were asked to look at around half an acre facility. That size was bigger than what they determined necessary for the project. The fenced area was around a third of an acre as the contours of the ground fit better with the design. He said there's still a little space for snow removal. He said the sizes for the width was approximately 80 feet by 150 feet long. In the area, there are 40-foot Conex boxes, and it would be possible for multiple Conex boxes to be stacked and still have room to turn around.

Mr. Uchytil asked for an explanation of cost estimates for the electrical at approximately $190K. He asked if it's necessary to have electrical to move forward and does the facility have to have power?

Mr. Kanouse said if used during daylight hours that it would not require power. The gate is a sliding gate so it could be manually operated. Electrical is considered in the design so that at dusk in the wintertime, that the area is useable. He said light poles are expensive and that they could be excluded from the project, however it would affect when it could be useable. It could impose safety issues for those using space. Electrical can be excluded from the project; however, he felt that security would be impeded.

Mr. Orr commented that it would exclude someone from damaging property in the middle of the night. Lights coming on in an area would provide security and functionality for the people inside.

Mr. Kanouse said light poles would allow for future security poles to be set up and running a conduit was a low cost. Future expansion into the area with security cameras or other electronics, an extra conduit could be added at low cost.

Mr. Orr asked if this area is a success, do we have room to expand?

Mr. Kanouse said there would be some additional civil work. He explained that to get the topography that they were using at a 4% slope, and there would be some of the edge work that would need to be graded so that it sheds away and drains. With a higher pocket than the ground is now, they'll need it to be higher than the existing ground and there would need to be a pipe to go across. He said in looking at the snow storage space nearby, the area has been capped with Geotech structural fabric with 2-foot fill on top. A pad that isn't paved, allows for some movement that happens over time and is an excellent use of the area.

Mr. Orr asked, according to the photo, "could there be expansion to the south?"

Mr. Kanouse responded yes that it would require more rock filling. He advised that expansion could not take place towards the ocean as that would cause the need for an Army Corps permit. The Alaska Department of Transportation currently has avalanche protection. There are options for expansion to the south and some more structural work. (Sheet C-200) The Little Rock Dump has snow deposited there in the wintertime. He pointed out sludge cells that were capped with 2 feet of fill. There's more real estate that could be used but it would require a lot more filter and more money.

Mr. Uchytil said he wanted the Board to be aware of the design, the costs of the Little Rock Dump's plans. That area is basically being used as a bone yard for cut-off pilings and timbers. The previous Board thought this was a good use of Docks and Harbors efforts. He said the Board would need to weigh in on the project. He indicated that a market analysis had not been done. Initially they thought it would be less than half a million dollars. There is time for the Board to think about the project, and he'd like to see the discussion continue.

Mr. Sooter asked if there was loss of space in the Aurora harbor.

Mr. Uchytil said not necessarily. He said that it was better to use the current space at Little Rock Dump. Docks and Harbors had an opportunity to recapitalize the harbor office to clean things up.

Mr. Sooter said that he thought the use of the Little Rock Dump space was a good idea. He agreed it probably cost more than anticipated but liked the idea of the simple electrical design and the rolling gate with possible key fobs.

Mr. Orr asked what the anticipated ongoing maintenance costs would be.

Mr. Uchytil responded that if Docks and Harbors put in the Conex boxes, we could control it. He anticipated the biggest need would come from commercial fishmen to lay down gill nets. He said they have talked about building racks for gill net storage, etc.

Mr. Creswell said that Docks and Harbors have a well utilized harbor. He said many of those items have been impounded and there have been some ongoing costs for upkeep and maintenance. He said having a storage area is great for users of the harbor. He asked if storage users have a piece of heavy equipment, is that the responsibility of the harbor or the person using the storage. He said, if it's the harbors, then the service is only offered so many hours per day or on appointment. He wanted the Board to know of additional costs,

for the equipment, repurposing of equipment and that there should be full transparency. There would be a little bit more costs associated with storage at the Little Rock Dump. He wondered if there was enough demand from the commercial fishing fleet to support this and expressed concern for the daily management of a remote facility.

Mr. Uchytil said he liked the idea of cleaning the space up.

Mr. Leither said that he liked the idea of a space with Conex boxes but was concerned about the not having lights. It seems like a big investment though since we don't know what the market is.

Mr. Becker said there was a need but that each person using the facility needs to be responsible for their area and thought the Conex boxes were a good idea.

Mr. Uchytil said there was a need for making site improvements prior to putting Conex boxes in.

Mr. Creswell added the question does the average gillnetter need a 20-foot or a 40-foot Conex box. He also asked who was responsible for sharing gear in the Conex box.

Mr. Becker asked if you got a Conex box with a little bit of land, could a gillnetter build a shed there?

Mr. Creswell responded that that depends on the type of gear. He assumed the Conex boxes would be stacked close together to maximize space. Some pallets could be stored so that an individual could store crab pots or net reels or sections for bait shacks.

Mr. Sooter asked whether he had got a lot of inquiries about storage space.

Mr. Creswell responded not a lot, but Docks and Harbors currently meet their needs. He said with more space we could meet more of the needs but because there wasn't a market research analysis, he wasn't sure what the exact need was. He said with the usage at Aurora Harbor storage right now, the crane dock and the existing loader would be appealing to more people needing that service.

Mr. Sooter asked Mr. Creswell what the staff's opinion on the project was.

Mr. Creswell said that he understood that staff thought it was remote and that it was going to require staff time and equipment to operate effectively.

Mr. Orr asked if we anticipated DOWL going 100% on the plans moving forward.

Mr. Uchytil responded that DOWL will probably finish up around September 22 with the final plans and specs. At that point, the Board needs to give directions on whether to advertise or not advertise the project. They could advertise, knowing they might not have a contractor that would be awarded the project, but he said that's not the best thing to do. He said in September, they would ask the Board if they wanted to advertise based on the projected cost.

3. Law 101 for Board Members

Presentation by Nicole Lynch: Ms. Lynch referred to the power point slides and said that the Law Dept is here to help answer questions. The Law Department contains on the civil service end, 4 attorneys and 3 administrative staff. There are 2 prosecutors and 2 paralegals on the criminal side. Ms. Lynch said that under CBJ Charter, the municipal attorney is appointed by the Assembly, and then, under code, the attorneys provide legal assistance to any boards, commissions, the assembly and all departments. She said they are housed at the Sealaska building, suite 202. She said that packet contained her phone number and email. The CBJ is defined under Alaska statute, under Title 29, that cities and boroughs are categorized into home rule or general law that includes like first, second, third class borough and then first and second-class cities, homeroom municipalities like Juneau have delegated authority for all aspects of government with a few limited exceptions. By comparison, a general law municipality does not have charters, their powers are specifically conferred by law by the state. Home rule cities have all powers unless it's an exception through the State and then for preemption the state law trumps. State trumps CBJ laws, for example, annexing land the state has reserved that power for them, so the city is preempted by State law. The laws that guide the Board's work on the board are the CBJ charter code and the department regulations. Docks and Harbors have their own Bylaws and those were updated in December 2023. She said the Bylaws include the assembly rules of procedure and Robert's Rules of Order for parliamentary procedure.

Mr. Uchytil asked what the difference was between code and regulation.

Ms. Lynch replied a code is through ordinance passed by the Assembly, and regulations are passed by the department, so they're more like a policy that's been given authority through the code. She said if it's a regulation, it still requires Assembly approval.

Mr. Uchytil added that code dictates the board's behavior and what they are authorized to do, including following the rules in managing the harbors, fees, or all regulations.

Ms. Lynch said of Alaska statutes specifically title 29 relates to the municipal government and the Open Meeting Act. She said the board's authority comes from CBJ Charter 3.21 and was created in 1984. She said Code Title 85, waters and harbors, and the board specific section is 502 general powers. She said that Docks and Harbors is an enterprise board or an empowered board, so they have more authority than an advisory board. She said because they were established in charter, they can make decisions and have broader authority than advisory boards which were created by the Assembly. The Open Meetings Act applies to every member of the board, which is also known as Sunshine Laws. Ms. Lynch said it requires all government meetings to be open to the public, and the public must have notice of meetings, and that includes where the meeting is when, where and why. She said that's why we publish the agendas at least 24 hours in advance. That is a general rule that CBJ follows, but CBJ strives to provide the public with a week's notice for meeting agendas, so that the public has a reasonable opportunity to be heard at all regular and special meetings. Occasionally there's a need for an executive session where the publication is excluded, but that's very limited to specific topics and deliberations so no

action can occur during an executive session. The board will confer and then come out of executive session and during the public session, motions can be made and action taken.

Mr. Becker asked if the board could declare all or only executive sessions.

Ms. Lynch replied that you can, but it must be noted on your agenda that you're going to have an executive session. She said that's what a lot of boards do so it's always an option. She said if it's a topic that would affect CBJ finances, like negotiating for your bargaining unit, you could go into an executive session to negotiate on the terms and conditions of that contract. She said another reason could be the reputation and character of a person who may be prejudiced. She said for example, if you are doing the evaluation of the director, you can go into executive session, but the director must receive notice that you are going to be discussing them. She said the director also can say they would prefer the discussion to be made public as that's their prerogative.

Mr. Becker asked if a major financial issue is discussed, such as whether we want to buy something or sell something or we can go into executive session.

Ms. Lynch replied yes, unless it has an adverse impact on CBJ's finances it couldn't be competitive. If you lease land, you can't go into executive session to discuss the amount that you are leasing the land. It would need to be made public. The discussion in executive session would be about what is fair market value. Other issues that may lead to an executive session would be judicial matters, such as appeal decisions, or whether the board is considering a litigation strategy, setting planners, negotiations and trial. Ms. Lynch gave an overview of what qualifies as a meeting. A meeting is when there are three or more present and discussing an issue that the board has the authority to act upon, that qualifies a meeting. She said for subcommittees, where there's a committee made up of fewer members, in that case, there needs to be a majority of members present. An example, like a three-member subcommittee, two people are discussing a topic, that's considered a full board.

Mr. Uchytil said it the Bylaws it is called a standing committee.

Ms. Lynch said that for a nine-member board to have a meeting, a majority had to be present to have a quorum. Ms. Lynch explained the Open Meetings Act (OMA) are best practices. The purpose was to ensure that the deliberations of the board are done in public. It's best to limit private conversations on issues that aren't related to the board. She expressed caution to any conversation that is not board related and that if the public does see discussion of topics in the minutes that would be a violation. She said boards should avoid serial meetings which are going from person to person to person and talking about the same topic. Board members should not "reply all" to emails unless they are related to administrative matters such as setting meeting time, dates, Google Docs, etc. Any actions taken in violation of the OMA, the board would have to review the actions, and they'd need to do them again. She said if there's ever an event such as a ribbon cutting ceremony where all board members are invited, the best practice would be to invite the public. Ms. Lynch said under the Public Records Act, every person has a right to inspect public records unless an exception applies and there's a strong presumption in

favor of disclosure. She said Law advises against using non-CBJ emails. She said each Board member has been given a dot gov email address so they should be using that instead of their personal emails. She said if you do use your personal email, board members must cc: their dot gov email address. She said that if there is a public record request, it's much easier to gather the information to provide to the public through dot gov emails.

Mr. Uchytil said the reason why the city wants board members to use the dot gov email address is that IT can mine all that data and collect information to the records request. The downside to board members not checking the dot gov email is that if members of the public come to them directly it is difficult to receive that information.

Ms. Lynch said if a member of the public asks any questions specifically to work on an issue before the board, she advised that the board member respond to the constituent individually then by "reply all". When you send them to the constituent you should also cc the Port Administrative Officer. The Administrative Officer can provide information to the rest of the board, subject to the proper procedures. Conflicts of interest can occur, as board members are municipal officers. Board members are prohibited from using their position to gain a benefit, to secure employment or contracts for themselves, their company or family or act with your personal financial interests. Board members may not deliberate or vote on any matter in which they have a conflict. These conflicts are specifically focused on personal or financial gain and the appearance of inquiry as well. If there is a conflict that members should declare it at a board meeting. The chair will determine whether there is a conflict or not. If any board member objects to what the chair has determined, they can say so and then the board will vote on whether they believe there's a conflict. She said her office was available to seek advice should a conflict come up.

Mr. Uchytil clarified that just because board members are users of the harbor and they pay for the use of the harbor that doesn't mean they need to recuse themselves. He also said it is the Chair that determines whether a board member should recuse themselves from an issue.

Ms. Lynch reiterated that when there's a conflict of interest, if in doubt call the CBJ Law Department. Open meetings are all about public trust, being fair and transparency. Parliamentary Procedure has to do with the order of rules, first is Docks and Harbors Bylaws. If there's nothing on that issue in the Bylaws then you would go by the Assembly rules of procedure. The Assembly rules do not dictate how something is done, then the Board would go by Robert's Rules of Order. Ms. Lynch said that she was working on a packet for the board that has some documents that she thought would be helpful as well as assembly rules. Rules keep the meetings running smoothly. Typically, the Chair or another board member, or the Director is well versed in the rules and can assist if there's any questions that come up during the meeting. The Board usually has an administrator or staff liaison, that person can assist as well as the city attorney's office. The rules are set forth in the Board Bylaws, the Assembly rules of procedure and then when they're not addressed, go to Robert's Rules of Order. The purpose of the motion is to introduce items

to the committee for consideration, provide discussion and then vote. For example, a Board member makes the motion to forward these Bylaws to be Assembly. The Board's rules do not require a motion to be seconded. The chair will then state the motion and see if there's an objection and if there's no objection the motion passes. If there is an objection, the person objecting will typically state why they object, such as, "I object for the person's purposes of discussion". She said that person may want to discuss the issue more or object to the purposes of an amendment. Motions are voted by voice, generally, once discussed, once the discussion is ended, if there's an amendment that is stated and voted on, only two amendments can occur at one time. If there is a motion and someone amends it, and then someone else wants to make another amendment, the vote was on the last amendment. The Board would vote in the First Amendment and then vote on the original motion. After a motion has been made with amendments to the original motion and there are more complications to the motion, such as tabling or postponing, this may require discussion with the chair or legal counsel. It's best to state exactly what you want to do. A discussion is typically reserved for when there's an emergency matter that needs to be taken up. Tabling of a motion happens when the board can address the other issue. If the tabled item is not brought up at the next board meeting, then it's dead. That motion can't come before the board again, unless it's slightly changed, or there's new board members added. The motion for the project can now come back for discussion, if that's appropriate. The last page of the packet lists resources, such as Mr. Uchytil is a resource along with the City Clerk, and the Law Department.

Committee Discussion/Public Comment - None

4. Harbor ADA Requirements

Presentation by Port Director: Mr. Uchytil said that Docks and Harbors received an email from Carmen Katasse saying that she had a suggestion that would potentially transform lives. She said her husband was diagnosed with pulmonary fibrosis. Her husband's life has changed dramatically, and he now relies on a walker, wheelchairs and portable oxygen for mobility. Their plan was to leave their boat in Statter Harbor at Floast D, where they pay the monthly fees as her husband loves to fish. The walk to and from the boat had become daunting after returning from a recent fishing trip. Ms. Katasse said that a few adjustments at the docks and harbor facilities could become beacons of inclusivity and compassion. She proposed painting a few reserved parking spaces for 3-4 boats under 30 feet near the ramp, near the transient space and designating them as handicapped parking. She suggested that the boats display a handicapped permit. Mr. Uchytil said that's when they investigated the ADA guidelines attached to the packet.

Mr. Sill added that for both Harris and Statter Harbor, ADA requires having an accessible route and who an individual gets on and off the boats using bull rails. There are several requirements for slopes and grades that allow vertical bumps which in our docks appear fine. He For Statter Harbor, it worked out that six stalls would be defined as ADA accessible stalls. He's looking at an area for those handicapped accessible stalls and he showed a diagram that referenced the area. To be ADA compliant, there can be only 4

feet of obstruction for every 10 feet of bull rail. This is what Aurora Harbor has, but currently Statter Harbor does not. The process is that they're looking into establishing six stalls within Statter and ensuring that the bull rails meet this five-foot opening requirement for a 40-foot stall to meet code. Mr. Sill quoted from the Accessible Boating Facilities handout that "Accessible slips do not need to be marked and are not reserved in the same way as accessible vehicle parking spaces. For example, facilities should hold the accessible spot open for people with disabilities until others, all other slips are filled. At that point, the slip may be made available for general use." He said they are working on the ADA compliance standards.

Mr. Uchytil said Mr. Creswell, the Harbormaster, could address the issues of what Docks and Harbors currently does to accommodate those with special needs.

Mr. Creswell said Statter Harbor has got a lot of requests over the years relating to ADA accessibility. Looking at the launch ramp, there are ADA spots which meet the requirements. As far as boat mortgage is concerned there are a few customers with mobility issues, so there are some areas below the office to the left of the horseshoe. That area had been painted blue, and they had two customers that would frequent the harbors to use that float to moor. The float was also used as a work float, so that if a vessel needed maintenance, then they could use it. He said those two customers have since moved on and it has been some time since there has been a need for ADA accessibility. It is their goal to meet the needs of customers. He felt that they could accommodate the needs of those with mobility issues in this circumstance. They keep wheelchairs at the harbor office for those who may need them.

Mr. Orr asked whether docks and harbors could put the same set up that is at Amalga Harbor at Douglas Harbor with some stanchions. He said it was something that could take place in the future since there's no bull rail there.

Mr. Creswell offered that if a community member backs their boat right to where the pavement goes out and ramp starts, it's an easy step right over the boat. He said that he wanted to publicize this procedure to let others know that it works well.

Committee Discussion/Public Comment- None

5. Board Planning, Retreat Goals, and Organizational Improvements

Presentation by Port Director: Mr. Uchytil said that there even though the Ops agenda was light tonight, that didn't mean that Docks and Harbors weren't hard at work. He wanted to start planning for retreat, goals for the board moving forward. Typically, the board meets on the last Thursday, and the Ops meeting is the third Wednesday of the month. According to the Bylaws, the annual meeting is the last Thursday of the July. It didn't have to be at five o'clock and it didn't have to be the dates selected. He wanted Docks and Harbor staff to work with the board so that they could all be proud of the work. He was not trying to put Mr. Hamilton on the spot but he did get an email from him. Mr. Hamilton said that he regretted informing Mr. Uchytil that he couldn't attend the July meeting due

to the ongoing salmon season. Mr. Hamilton said in the email that it was frustrating not to be able to participate in the organization, the new board, and the fact that this happens in July precludes participation by anyone involved in salmon or most other fisheries. Mr. Hamilton said it was frustrating because the fishing fleet is an integral part of the community economy and harbor usage. Mr. Hamilton said the development of the harbor facilities impacts his industry directly. Mr. Hamilton said during his time on the board over the last year, he has seen an impressive amount of coordination and outreach by the harbor staff in other industries. He said he would like to see the fishing fleet similarly supported. Mr. Hamilton said he looked forward to continuing to work with the board on that. Mr. Uchytil asked how the staff can do a better job and outreach the commercial fishing industry.

Mr. Orr asked whether Mr. Hamilton had offered suggestions about when he would rather have the meeting or how he would like to proceed.

Mr. Uchytil said he responded that he was sorry Mr. Hamilton was having difficulty attending the meeting and asked if he had any recommendations to make the meetings more accessible in the summer. He said they did move the Ops meetings to Thursday and asked Mr. Hamilton if there were any other recommendations on how Docks and Harbors could provide better coordination with the commercial fishing fleet.

Mr. Becker said that he thought the fishing closed on Wednesday.

Mr. Sooter asked when the fish openings were. He said, “aren’t Openings normally a Sunday through Wednesday.”

Mr. Becker said yes, typically it’s Sunday through Wednesday.

Mr. Uchytil said that he wanted to emphasize the outreach to commercial fishing industries. He asked how we can do better as a board and staff as a community.

Mr. Becker suggested that Mr. Hamilton could let the board know when he’s at the peak of the fishing season.

Mr. Leither commented that at today’s meeting they had talked about commercial fisherman storage for a half hour, and he wished they’d had Mr. Hamilton’s input.

Mr. Uchytil said that he assumed that the board and members want to continue with the proposed schedule for the rest of the calendar year. He wondered if the Board wanted to do an exercise in project prioritization over the next few months. Although there were only five board members there tonight, he was looking for direction from the Board on what projects they would like to prioritize.

<u>Committee Discussion:</u>

Mr. Orr said he liked the project prioritization exercise that was done last year at the retreat. It was helpful to the extent that members brought their ideas and members found resources to get some projects done.

Mr. Ridgway said the second year he was on board and participated in the retreat, he felt it was a good use of time. It would be good to get an overview of the last couple of years of prioritizations. He asked if Mr. Uchytil and staff got together to discuss new issues that would be helpful as it assists in continuity of what was a priority for the board two years ago and what is relevant now.

Mr. Sooter said he thought the first year, they had skipped the retreat, but they had one the second year. It was good use of time and felt they met their objectives and goals.

Ms. Musick posted on screen a list of 2024 list of prioritizations from staff and board members for CIP projects with a schedule for the fiscal year. She said this schedule could be sent out as they're thinking about project priorities and potential scheduling for the next board retreat with new board members.

Mr. Sooter and Mr. Orr asked that these be sent to all the board members.

Public Comment: None

G. STAFF, COMMITTE, AND MEMBER REPORTS

Mr. Uchytil said because they had no action items for next week, he asked that the Port Engineer and Harbormaster report this week.

MR. SILL REPORTED:

- Aurora Harbor: is demolishing the trestle and they have poured about half of the concrete abutment for the new approach on the north end. Western Marine Construction is working on the float fabricator, building floats quickly, about one float a day. The project is on schedule. Two float fabricators, Matheus Lumber and Transpac Marina, are both building floats for this project. Floats are projected to be done by October 1st so that they can drive pilings.
- Electrical issues in Aurora Harbor: They are working with some electrical engineers/electricians to track down some current leaks on the H float.
- PND Engineering: Has been working on designs for the drive down float at Aurora Harbor. The way the grant works, NEPA, which is the federal permitting, Docks and Harbors needs a 35% plan to complete the process. Before MARAD signs the grant agreement paying for the whole project, Docks and Harbors needs to get the environmental permitting and basic design done.
- Statter Harbor, Phase III: the uplands improvement project is progressing quickly. Dawson requested that they start work early and work around the tour buses using the site. They are pouring sidewalks, pouring curb and gutters, installing catch basins, putting conduits to the ground and doing a tremendous amount of work.
- Taku Harbor: Improvements are quiet right now and we are waiting until Spring 2026. The gangways are being fabricated. Cost estimates are in the works for refurbishing the dock, a cheaper refurbishment and replacement of the dock.

- Reroofing the Statter Harbor office: We are still in the process of tracking down the sheet metal for the roof. They are hoping to have that done before the weather settles in.
- Core Samples at Statter Harbor: Mr. Sill will be meeting with the Army Corps of Engineers soon to discuss the proposal for geotechnical investigation. He said they will be discussing the equipment that will be used for the core drilling.

Mr. Creswell Reported:

- End of Season Meeting: The Yacht Club has been rented for the end of the season meeting with tour and commercial operators. In the afternoon there will be an end of the summer cookout to recognize staff and all the work that they have been doing.
- IPS/Parking system: They have been making progress with the parking meter system error where it says that a customer has paid for parking, but the charge is never charged to their credit card statement. It's a system issue and he has raised the question with IPS about the reimbursement of Docks and Harbors for lost revenue. He is waiting for a response from the organization.
- Crab opening: There is currently a crab opening which appears to be a success.
- Statter Harbor: launch ramp has been busy with the launching and retrieval of boats. Ninety-seven percent of the feedback was amazing, and the flow of the traffic appears to be going well. Staff at Statter Harbor continue to do a lot of concrete repairs at the intersections, especially around the C and D float, with the movement and damage to the floats. Staff are building bridges to get access to the area.
  They have been meeting with Morris Engineering Group to install power pedestal boxes to add two more receptacles for power. This will make it easier for those in the Harbor to access. Morris Engineering Group will be giving Docks and Harbors two proposals. One for inexpensive ways to get power to customers and another for adding more power, if needed, to more customers.
- Harris Harbor: Staff from Aurora Harbor started repairs to railing stairs at the grid in Harris harbor and ran into some technical issues. The current term contractor Carver Construction was able to assist with that. Although Docks and Harbors staff are highly competent, they are not certified carpenters or electricians so that is why they brought in the professionals.
- Douglas Harbor: Docks and Harbors is working with contractors on grating and other projects such as breaks and drainage issues.
- Port Field Office: The flow of traffic is going well, and he's been meeting with Mr. Hinton when concerns arise. There has been less this year. Seasonal staff are heading back to college and school, and they have prepared for that.
- UAS Kayak Ramp and Interns: Mr. Norbryhn met with UAS representative about building a kayak rack at the kayak launch ramp. This is part of the agreement with UAS for the reduced lease rate for the downtown Boat Yard. So far, they have had five interns and that program will continue into the winter.
- New Administrative Officer: Ms. Leah Narum will be stepping in as the new Administrative Officer. Leah worked at Statter Harbor for about 2 years. Ms. Musick's

last day will be next Monday, August 25, 2025. Mr. Uchytil added that Ms. Musick has been an asset to the Department. Mr. Uchytil added that Ms. Narum is very capable and competent.

- Boat Lift: A new boat lift is being shipped from Canada next week.
- Coghlan cut/Whale Watching Fleet issue: Mr. Creswell has been in a consulting compacity to solve the issue of slowing down at the Coghlan cut.
- Live Aboard Vessels: Hot Berthing signup will begin September 2nd.
- Impounding Vessels: Docks and Harbors are moving forward on the process of impounding two vessels that do not meet seaworthiness as of September 12th. They have been working with resources to hook those individuals up with housing and support services to get their boats running. One of the patrons has been offered to have their vessels haul-out so they won't lose the vessel to impound.
- Last Cruise ship date: October 15. The season starts to slow around September 15.
- Salmon Derby: The Salmon Derby was a success thanks to the Territorial Sportsman. Communications went well prior to the derby and staff have a system in place for making it successful despite the weather. The new weigh-in station in Auke Bay appeared to work well.

Mr. Uchytil Reported:

- Boat Lift: We don't know whether Docks and Harbor will be impacted by the tariffs associated with the Boat Lift. The purchase was about $315,000.
- Coghlan Cut: We got a response from CBJ lawyers and the Coast Guard about making that area a no wake zone. It has been suggested the CBJ could regulate a no wake zone in waters outside the harbor. Mr. Uchytil said that is not true. The Coast Guard has indicated that they may be willing to make a rule to regulate certain passes if the city requests it. It takes years, however, for the Coast Guard to make a rule-making change. He said the Harbormaster, Mr. Creswell, was working with the Southeast Alaska Whale Watching Association (SEAWA) to monitor and police themselves.
- AAHPA: The Alaska Association of Harbormasters and Port Administrators conference will be in town the week of October 20 and Docks and Harbor staff have been spending time on it. Docks and Harbors staff are proud of how we execute our operations. We will work with the City Manager and various departments. During one of the sessions, they are proposing to have an Ops Committee Meeting at the Elizabeth Peratrovich Hall so that participants of the conference can see how our Board operates.
- Grants: Alaska Dept. of Transportation awarded a grant that was submitted last year. Docks and Harbors is a recipient of $1.4 million awarded for a drive down so that will cover half of our local match. He said they did not get the $500,000 grant funds for the zinc anodes. He said next year they are ready to apply for future grants.
- STORIS Visit: The Coast Guard cutter STORIS was commissioned in August. Mr. Becker & Mr. Leither had the opportunity to ride from Auke Bay to downtown. The ceremony was well attended by VIP's from the Deputy Secretary of Homeland Security, Senator Dan Sullivan, Representative Nick Begich, Representatives from Florida and Mississippi, and representatives from the Coast Gurd.

Mr. Sooter said he would like to bring up the Goldbelt Seadrome property at the next meeting and before the board gets into budget season.

H. COMMITTEE ADMINISTRATIVE MATTERS:

6. Next Docks and Harbors Board Meeting- August 28th, 2025-Cancelled
Next Docks and Harbors Operations and Planning Committee Meeting- September 17th, 2025

I. ADJOURNMENT BY MR. SOOTER AT 7:00PM

Hull Maintenance Procedure for Cruise Ships in Alaskan Waters

SUBSEA GLOBAL SOLUTIONS

Document No	HM-FRE-ALA	Rev	Rev. 2/June, 2025
Uncontrolled Copy		Controlled Copy		Org. Date	Nov. 30, 2016

SGS PROPRIETARY INFORMATION

Prior to use, ensure this document is the most recent revision by checking the Master Document List. To request a change, submit a Document Change Request to the Document Control Representative.

Approvals

The signatures below certify that this procedure has been reviewed and accepted, and demonstrates that the signatories are aware of all the requirements contained herein and are committed to ensuring their provision.

	Name	Signature	Position	Date
Prepared by	Uwe Aschemeier		Sr. Welding Engineer	Nov. 28, 2016
Reviewed by	Brook Reinking		Director Special Projects	Nov. 30, 2016
Approved by	Kevin Peters		VP of Strategic Business Development	Nov. 30, 2016
Approved by	Karl Lander		Environmental Services Director	June 29, 2025

Amendment Record

This procedure is reviewed to ensure its continuing relevance to the systems and process that it describes. A record of contextual additions or omissions is given below:

Page No.	Context	Revision	Date
ANNEX	Annex was updated with current documents	1	Dec. 14, 2016
5, 6	Update of Ports	2	29 June 2025
6,7	Update of References	2	29 June 2025
13	Update of Contact Information	2	29 June 2025
21	Addition of C-ROV cleaning technology	2	29 June 2025

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1. Introduction

This application proposal has been prepared by Subsea Global Solutions (SGS) for the Alaska Department of Environmental Conservation and Alaska Fish and Game invasive species Department, Alaska in support of a request to perform in-water hull cleaning of Cruise vessels resulting in “the discharge of contaminants to the coastal marine area resulting from commercial vessel in-water hull cleaning operations” (non-notified) within the confines of Alaska waters.

The undertaking of in-water cleaning operations is based on a case by case scenario following a biosecurity risk and paint condition assessment of a vessel. This does not refer to any specific sampling or analysis that has to be carried out in advance. The processes put forward in this proposal have been successfully utilized by SGS for other in-water cleaning and biosecurity responses within North and Central America and the Caribbean.

This request is driven predominantly by industry and government agency requirements domestically and internationally. These include approaches to risk reductions associated with bio-fouling contamination and spread of invasive species, reductions of atmospheric emissions and vessel operator’s requirements to improve operating efficiencies and maintain clean vessel regimes with compliance to company environmental and international policies.

Based on previous experience and consents held SGS is confident that the proposed procedures and methodologies meet the requirements of the guidelines of the Alaska Department of Environmental Conservation and Alaska Fish and Game invasive species Department.

All ships have some degree of biofouling, even those which may have been recently cleaned or had a new application of an anti-fouling coating system. Studies have shown that the biofouling process begins within the first few hours of a ship's immersion in water. The biofouling that may be found on a ship is influenced by a range of factors, like water quality, water temperature, itinerary and others.

Implementing practices to control and manage biofouling can greatly assist in reducing the risk of the transfer of invasive aquatic species. Such management practices can also improve a ship's hydrodynamic performance and can be effective tools in enhancing energy efficiency and reducing air emissions from ships.

The best management practice is to clean the hull before Micro fouling, the slime layer of bacteria and algae has turned into a layer of seaweed, or other forms of Marco fouling. This stage corresponds to approximately 12% of resistance added to the resistance after dry-docking. In the micro fouling stages very soft brushes (for example, softer than the bristles of a toothbrush) can be used, ensuring the anti-fouling paint will not be damaged.

After the macro stage and further on harder brushes would be required to effectively remove the fouling. Even though these more rigid brushes can easily remove the seaweed they will likely remove some of the anti-fouling. This may result in an increased hull resistance even after the cleaning.

It is, therefore, recommended that the ship's hull is cleaned when practical by soft methods if significant micro fouling occurs. In-water cleaning will also reduce the risk of spreading invasive aquatic species by preventing macro fouling accumulation.

1.1 Location

This document describes underwater ship husbandry activities to be performed in Ketchikan and Skagway, Alaska.

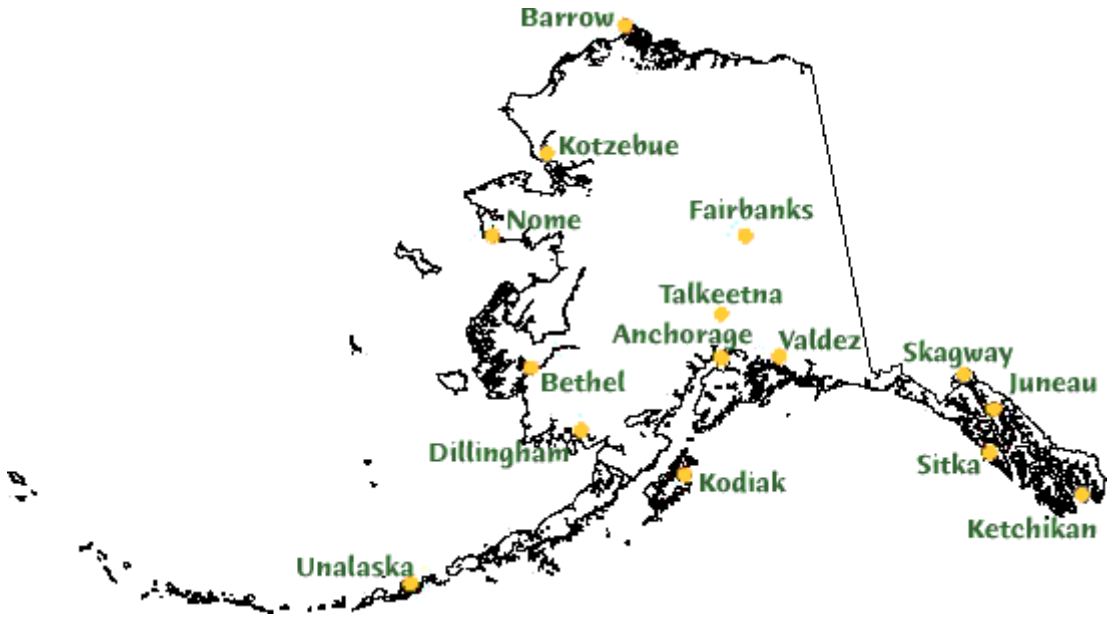

Fig. 1 Alaska

1.1.1 Alaska

Alaska Is a U.S. state situated in the northwest extremity of the North American continent. Bordering the state to the east is the Canadian territory of Yukon and the Canadian province of British Columbia, the Arctic Ocean to the north, and the Pacific Ocean to the west and south, with Russia further west across the Bering Strait. Alaska is the largest state in the United States by area, the 4th least populous and the least densely populated of the 50 United States. Approximately half of Alaska's 735,132 residents live within the Anchorage metropolitan area. Alaska's economy is dominated by the oil, natural gas, and fishing industries, resources which it has in abundance. Tourism is also a significant part of the economy.

Although it had been occupied for thousands of years by indigenous peoples, from the 18th century onward, European powers considered the territory of Alaska ripe for exploitation and trade. The United States purchased Alaska from the Russian Empire on March 30, 1867, for 7.2 million U.S. dollars at approximately two cents per acre ($4.74/km^2). The area went through several administrative changes before becoming organized as a territory on May 11, 1912. It was admitted as the 49th state of the U.S. on January 3, 1959.[5]

1.1.1.1 Ketchikan

Ketchikan is a city in the Ketchikan Gateway Borough, Alaska, and is the southeasternmost city in the state. As of the 2020 U.S. Census, Ketchikan had a population of 8,192, making it the sixth-most populous city in Alaska. When including surrounding census-designated places within the borough—such as North Tongass and South Tongass communities accessible primarily via the Tongass Highway and water routes—the total borough population was 13,948 in 2020. Incorporated on August 25, 1900, Ketchikan holds the distinction of being the earliest continuously incorporated city in Alaska, due to municipal consolidations elsewhere in the state. Located on Revillagigedo Island, named in 1793 by British explorer Captain George Vancouver,

Ketchikan is a key stop on Alaska cruise itineraries throughout the summer season. It is also strategically positioned for marine services, including hull maintenance and logistics for vessels transiting the Inside Passage and serves as a secondary location fo Subsea Global Solutions seasonal hull cleaning services.

1.1.1.2 Juneau

Juneau is the capital city of Alaska and the second-largest city in the United States by land area, located in the panhandle region on the Gastineau Channel and Alaskan mainland. As of the 2020 U.S. Census, Juneau had a population of 32,255, making it the third-most populous city in the state. Unique among U.S. state capitals, Juneau is accessible only by boat or plane, with no direct road connections to the rest of Alaska or the continental U.S. Incorporated on October 4, 1880, following the discovery of gold in the area, Juneau combines historic charm with modern governance as the state's political hub. The city sits at the base of Mount Roberts and is adjacent to the vast Juneau Icefield, home to the famous Mendenhall Glacier. Juneau is a major cruise ship destination from late spring through early fall and serves as a primary season location for hull cleaning operations for Subsea Global Solutions .

1.1.1.3 Skagway

Skagway is a small but historically significant city in Southeast Alaska, known for its Gold Rush past and preserved 19th-century charm. With a population of 1,240 as of the 2020 Census, it swells dramatically during the summer cruise season. Located at the northern end of the Inside Passage and accessible by road, sea, and air, Skagway is a popular cruise ship port offering access to the scenic White Pass & Yukon Route Railway and trailheads of the historic Chilkoot Trail. Skagway is on the cruise ship schedule through the summer season and is used as a secondary location for hull cleaning services.

1.1.1.4 Sitka

Sitka is a historic coastal city in Southeast Alaska, located on Baranof Island and surrounded by the stunning scenery of the Tongass National Forest. With a population of 8,458 as of the 2020 U.S. Census, it is Alaska's fourth-most populous city. Once the capital of Russian America, Sitka blends rich Indigenous Tlingit heritage with Russian colonial history. The city is a frequent stop for cruise ships during the summer season, offering visitors opportunities to explore cultural landmarks, wildlife, and nearby volcanic landscapes. Sitka's sheltered harbors also support marine services and is a secondary location for hull cleaning services.

2. References

Title & Description
SGS Diver Safe Practices Manual
SGS OIL SPILL PREVENTION, RESPONSE AND CLEAN UP PROCEDURE
Record of Anti-Fouling Systems
US EPA NPDES Vessel General Permit, Section 2.2.23
Clean Water Act (CWA)
Fuel Conservation through Managing Hull Resistance, Proceedings of the Motorship Propulsion Conference, Copenhagen April 26th, 2006, Torben Munk, M.Sc., Propulsion Dynamics Inc. (PDI)
Wikipedia
thefreedictionary.com
Focus on IMO, Anti-fouling systems, 2002
2023 Guidelines for the Control and Management of Ships' Biofouling to Minimize the Transfer of Invasive Aquatic Species" (adopted as Resolution MEPC.378(80))

Guidance on in-water cleaning of ships' biofouling (MEPC.1/Circ.918)

3. Terms & Definitions

Term	Definition
EPA	Environmental Protection Agency
MEPC	Marine Environment Protection Committee (part of the IMO)
NRCA	Natural Resources Conservation Authority
NEPA	National Environment and Planning Agency
IMO	International Maritime Organization

ANTI-FOULING SYSTEM	A coating, paint, surface treatment, surface, or device that is used on a ship to control or prevent attachment of unwanted organisms.
ANTI-FOULING COATING SYSTEM	The combination of all component coatings, surface treatments (including primer, sealer, binder, anti-corrosive and anti-fouling coatings) or other surface treatments, used on a ship to control or prevent attachment of unwanted aquatic organisms.
International Anti-Fouling System Certificate	Ships of 400 GT and above engaged in international voyages, excluding fixed or floating platforms, FSUs, and FPSOs, shall be issued after inspection and survey an international Anti-Fouling System Certificate together with a Record of Anti-Fouling Systems. The IMO (International Maritime Organization requires vessels to carry the International Anti-Fouling System Certificate on board. A sample can be found in the Annex of this document.
FOULING RELEASE COATING (silicone, biocide free)	Fouling release is an antifouling paint, free from biocides. It is normally silicone-based and leaves a surface on which organisms have trouble attaching. The efficiency depends on the speed of the vessel; when the vessel increases speed, the organisms fall off.
IN-WATER CLEANING	The physical removal of biofouling from a ship while in the water.
NICHE AREAS	Areas on a ship that may be more susceptible to biofouling due to different hydrodynamic forces, susceptibility to coating system wear or damage, or being inadequately, or not, painted, e.g., sea chests, bow thrusters, propeller shafts, inlet gratings, dry-dock support strips, etc.
FOULING	Fouling is an unwanted growth of biological material - such as barnacles and algae - on a surface immersed in water. Together soft (non-calcareous) and hard (Calcareous) fouling organisms, form a fouling community.
SOFT FOULING	Examples of soft (non-calcareous) fouling organisms are seaweed, hydroids, algae and biofilm "slime".
HARD FOULING	Hard (Calcareous) fouling organisms include barnacles, encrusting bryozoans, molluscs, polychaete and other tube worms, and mussels.
MICRO-FOULING	A precursor to macro fouling is the micro-fouling caused by bacteria, fungi and other microscopic organisms.
MACRO-FOULING	Macro fouling has been defined as the attachment and subsequent growth of a community of visible plants and animals on structures and vessels exposed to water.
POLLUTION	Pollution is the introduction of containments into the natural environment that has harmful or poisonous effects.
POLLUTANTS	A substance or condition that contaminates air, water, or soil. Pollutants can be artificial substances, such as pesticides and PCBs, or naturally occurring substances, such as oil or carbon dioxide, that occur in harmful concentrations in a given environment. Heat transmitted to natural waterways through warm-water discharge from power plants and uncontained radioactivity from nuclear wastes are also considered pollutants.
SLIME	Slime is present on the immersed areas of most ships and is recognized not to be a major source of translocation of invasive species. On a newly exposed surface the fouling process usually begins with the formation of a slime film which is produced by bacteria and diatoms. The bacteria which form slime films are present in sea water at all times of the year, though their numbers vary within wide limits depending upon

	available organic matter, temperature, and degree of pollution. A slime film may, therefore, be expected whenever a surface is submerged, but there are marked seasonal variations in its rate of development. The importance of slime films is twofold: they may influence directly the attachment of other organisms; and they may decompose paint materials or otherwise alter the activity of a paint. Slime film may favour the attachment of several species of macroscopic animals.
PLANKTON	Plankton (singular plankter) are any organisms that live in the water column and are incapable of swimming against a current. [1] They provide a crucial source of food to many large aquatic organisms, such as fish and whales. These organisms include drifting animals, plants, archaea, algae, or bacteria that inhabit the pelagic zone of oceans, seas, or bodies of fresh water. Plankton are defined by their ecological niche rather than phylogenetic or taxonomic classification
ZOOPLANKTON	Small floating or weakly swimming animals that drift with water currents and, with phytoplankton, make up the planktonic food supply on which almost all oceanic organisms ultimately depend (see plankton). Included are many animals, from single-celled radiolarians to the eggs or larvae of herrings, crabs, and lobsters. Permanent plankton (holoplankton), such as protozoans and copepods, spend their lives as plankton. Temporary plankton (meroplankton), such as young starfish, clams, worms, and other bottom-dwelling animals, live and feed as plankton until they become adults. (thefreedictionary.com)
PHYTHOPLANKTON	Plankton consists of free-floating algae, protists, and cyanobacteria. Phytoplankton form the beginning of the food chain for aquatic animals and fix large amounts of carbon, which would otherwise be released as carbon dioxide
NONINDIGENOUS SPECIES (NIS)	Also known as “introduced”, “exotic” or “alien” species, nonindigenous species in aquatic ecosystems may be transported to new regions through various human activities. In coastal environments, commercial shipping has been one of the most important mechanisms for invasion. Once established, NIS can cause ecological, economic and human health problems in the receiving environment. (2011 Biennial report of the California Marine Invasive Species Program, produced for the California State Legislature).
HULL	The immersed shell of a vessel including appendages and niche areas.
VERTICAL SIDES	The sections of the vessel plating located horizontally between the aft and forward of vessel which runs vertically from below the water line to the turn of the bilge keel.
BILGE KEEL(S)	Are typically fixed fins that are designed to help stabilise a vessel and reduce its tendency to roll.
NICHE AREAS	Susceptible to bio-fouling due to the different hydrodynamic forces, antifouling wear/damage or unable to be protected by an antifouling system. Includes sea chest (intakes), dry-dock support strips, thrusters (bow & stern).
FLAT BOTTOM	The flat span of plating that forms the bottom of the hull.
WATER LINE	The line at which the hull meets the water surface; it is also the name of a special marking that is known as the national Load Line or Plimsoll Line. This is positioned amidships, and indicates the draft of the ship and the legal limit to which a ship may be loaded for specific water types and temperatures.

DRY DOCK SUPPORT STRIPS	Locations of the supporting block placements during a vessels dry docking, these are typically located along the flat bottom and unprotected by anti-fouling applications.

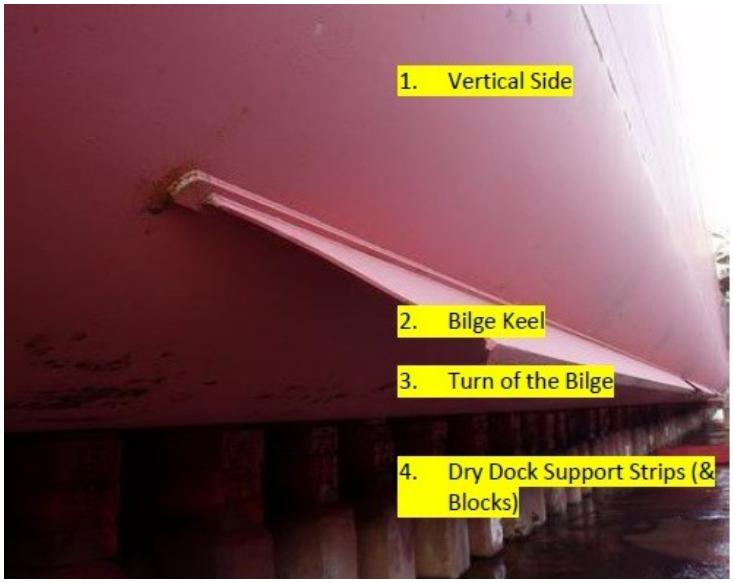

Fig. 2 Dry Docked Vessel

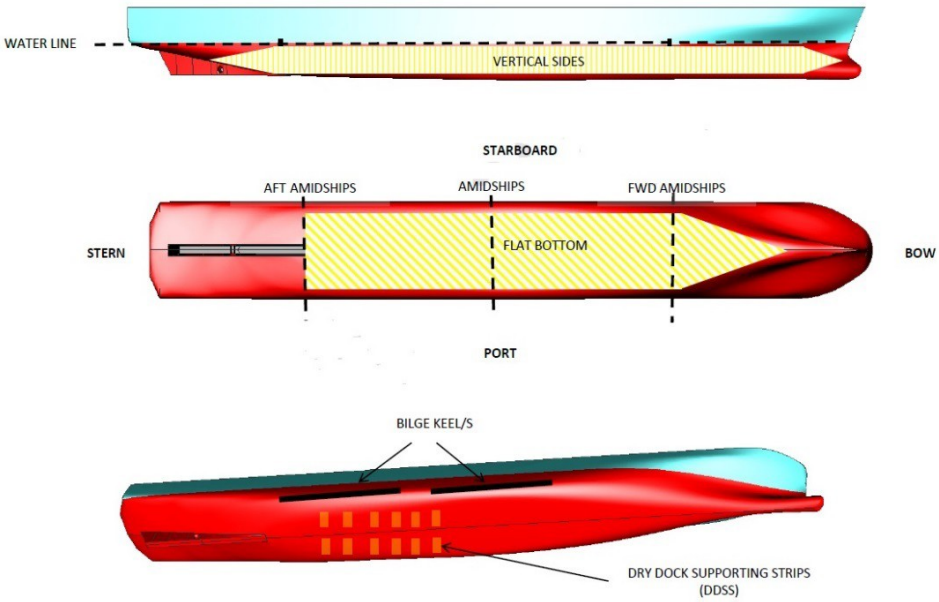

Fig. 3 Example of Vessel Hull Layout

(Source: NEW ZEALAND DIVING AND SALVAGE LTD RESOURCE CONSENT APPLICATION FOR HULL CLEANING ACTIVITIES 2012)

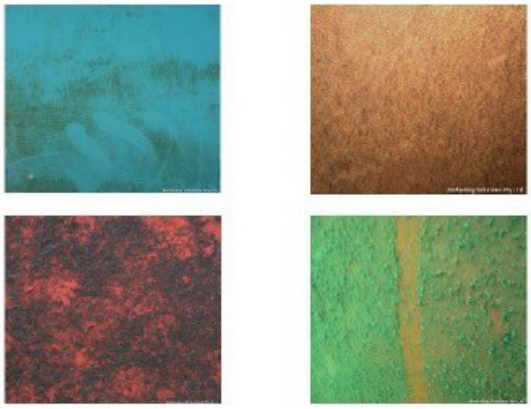

Fig. 4 Example Micro Fouling

(Source: Draft Antifouling and In-water Cleaning Guidelines MAF Discussion Paper No: 2011/13)

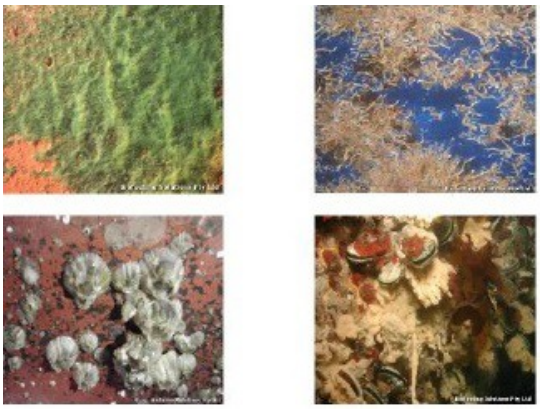

Fig. 5 Example Macro Fouling

(Source: Draft Antifouling and In-water Cleaning Guidelines MAF Discussion Paper No: 2011/13)

4. Scope & Purpose

This document describes underwater ship husbandry activities to be performed on cruise ships while in Alaska waters:

- To remove only micro-fouling, i.e. soft fouling organisms (slime and light grass) from Cruise ship hulls, while the vessel is waterborne.
- The selection of appropriate cleaning brush or sponge rigidity to prevent damage to and release of antifouling coatings into the water column.
- To perform hull maintenance operations only on paints complainant to IMO International Convention on the Control of Harmful Anti-Fouling Systems on Ships, which prohibits the use of harmful organotin in anti-fouling paints used on cruise ships.

This document furthermore describes the methods employed by SGS and its Partners to minimize the discharge of fouling during hull maintenance operations while the vessels are waterborne.

This document does **NOT** address the cleaning of hard fouling. Hard fouling/ Macro Marine fouling if found on any cruise ship will be documented with photos and will not be cleaned in any Alaskan ports, but only offshore.

The purpose of this procedure is to ensure that in-water hull maintenance on cruise ships will only be performed when:

- Only micro fouling is present. (slime and light grass)
- The antifouling coating is suitable for cleaning.
- The cleaning method does not damage the coating surface.
- Discharges from the cleaning will meet local and federal water quality standards.

Micro Fouling

Fig. 6 Hull partially covered in slime

Macro Fouling

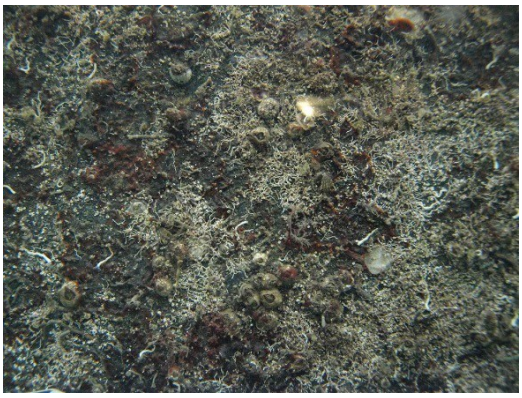

Fig. 7 Extensive fouling

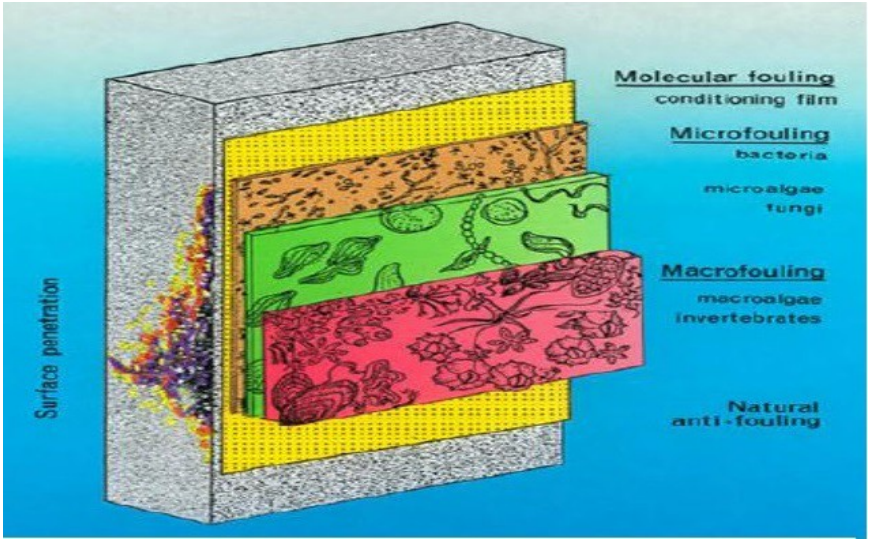

Fig. 8 Stages of Marine Growth

(Source: 2010. SNAME Climate Change and Ships; Presentation: Kane. D; Propulsion Dynamics)

5. Responsibilities

SGS Environmental Services department is responsible to prepare a procedure listing all required operations.

SGS Operation department in the SGS US Westcoast office will review this procedure, and responsible to ensure that only trained and competent crew members will be utilized for hull maintenance operations using only tested and approved cleaning systems

SGS Management is responsible to approve the procedure.

SGS Dive Team is required to perform the work in accordance with the procedure and report possible discrepancies and suggestions to improve the procedure to the engineering department.

SGS Global Account Manager, Cruise is responsible for sending yearly hull maintenance schedule on all cruise ships slotted to be cleaned during the Alaska Season to DEC.WQ.Cruise@alaska.gov for review and approval. Information included for each

ship: Name of vessel / IMO number, copy of International Anti-Fouling System Certificate, location in Alaska where hull maintenance is planned, Date hull maintenance is planned, Date of ships last hull cleaning including most resent hull inspection report.

SGS Operations department will give write notice by email to DEC.WQ.Cruise@alaska.gov before any of the scheduled hull cleaning take place. Confirmation by return email is required from the DEC before a hull cleaning can be approved.

SGS Operations department will confirm with Cruise Ship Environmental officer that all local and state authorities have been notified prior to date of cleaning.

SGS Operations department will send to DEC.WQ.Cruise@alaska.gov a copy of final report with photos of the completed hull maintenance after each cleaning.

6. GENERAL FACILITY / BUSINESS INFORMATION

6.1 Owner Information

Company Name:	Subsea Global Solutions, LLC.
Company Address:	12062 NW 27th Ave Miami, Fl. 33167
	+1 305 571 9700 (24 Hrs)
Contact Names & Phone Numbers:	Mr. Karl Lander, Environmental Services Director
	Cell: +1-971-322-6076
	Ms. Stephanie Montano, Global Account Manager, Cruise
	Cell: +1-562-481-2479

6.2 Facility/Business Details

Over the last 30 years, Subsea Global Solutions, has developed testing and cleaning techniques for underwater hull cleaning in the cruise ship industry, as well as State of the Art hull cleaning machines and vehicles to meet the ever-changing AF products in the market, in partnership with the major paint manufactures.

6.3 Service Agreement

Currently SGS has multiyear contracts with Carnival Corp including all 12 Cruise ship brands under Carnival management, Norwegian Cruise Lines, Prestige Cruise Lines, RCCL, Disney Cruise Lines and Celebrity Cruise lines. The underwater Maintenance program SGS has in place with Cruise lines is part of the overall plan for the Cruise industry to reduce their air emissions by 20% over the next 5 years and is a key part of Cruise Company's Vessel Biofouling Management on hull fouling.

6.4 Training

The SGS group employs 80 full time divers worldwide who are all trained in and perform hull cleaning operations in 8 locations to date as well SGS as a vetted partner program to meet the needs of a worldwide fleet agreement with Cruise

lines. In the past, hull maintenance in the State of Alaska has mainly been carried out by SGS vetted Partner Alaska Commercial Divers (ACD) based in Ketchikan, Alaska. ACD have met all the necessary training requirements as a vetted partner to include having their divers train at SGS head office in Miami, Florida.

All SGS personnel including personal of vetted partners are responsible for pollution prevention, not just on hull cleaning operations,

Personnel undertake in-water cleaning are aware of regulations and requirements for the conduct of in-water cleaning, including regulations regarding the discharge of chemicals into the marine environment and the location of sensitive areas (such as marine protected areas).

Dive teams are trained to perform cleaning operations and are familiar with the relevant clause for Underwater Ship Husbandry and Hull Fouling Discharges of the VGP (Clause 2.2.23 Underwater Ship Husbandry and Hull Fouling Discharges, VGP).

Training of personnel involved in hull cleaning operations includes instructions on the application of biofouling management and treatment procedures. Instructions are also being provided on the following:

- Maintenance of appropriate records and logs;
- Impacts of invasive aquatic species from ships' biofouling;
- Benefits to the ship of managing biofouling and the threats posed by not applying management procedures;
- Biofouling management measures and associated safety procedures;
- Relevant health and safety issues.

Fig. 9 35,000 GAL training Tank

Fig. 10 Class Room Training

6.4.1 Diver Operators

Diver operators performing hull cleaning activities receive class room training covering besides the operation of hull cleaning equipment, cleaning procedures and the above listed curriculum, the class room training covers also hull components, various types of bio fouling and coating systems.

Before the diver operators are allowed to perform the hull cleaning operations, they receive in depth on the job training.

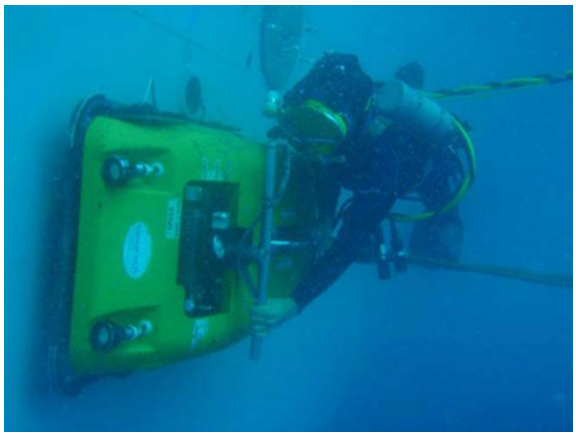

Fig. 11 Diver Operator operating Hull Maintenance Equipment on Hull

6.4.2 Management Personnel

The management involved with hull cleaning operations, can look back to years of experience in hull cleaning, coatings and underwater ship husbandry. Furthermore; management personnel are also serving on tasks groups and committees associated with biofouling, hull cleaning and coatings.

7. Reasons for In-Water Cleaning

Historically the reasons behind hull cleaning operations have been due to the performance and fuel saving returns to the vessel operator. While this is still an influencing factor, we have now seen changes in attitudes regarding biosecurity risks and atmospheric pollution that now contribute to the decision for maintaining a ship's hull in the micro stage of fouling.

7.1 Environmental & Compliance

- Spread of non-indigenous species (NIS) port to port is curtailed or prevented; particularly when vessels are cleaned regularly;
- Regular cleaning can assist in the maintenance of paint system reducing the potential accumulation of pollutants and contamination;
- Supports vessel operators who are complying with Resolution MEPC.378(80)) Guidelines for the Control and Management of Ships' Biofouling to Minimize the Transfer of Invasive Aquatic Species"
- Supports and assist with local authorities' compliance and regulations;
- Can assist with maintaining safe maneuverability consistency and speed while entering ports;
- Reduced power requirements and fuel usage; The Energy Efficiency Design Index (EEDI) was made mandatory for new ships and the Ship Energy Efficiency Management Plan (SEEMP) for all ships at MEPC 62 (July 2011) with the adoption of amendments to MARPOL Annex VI (resolution MEPC.203(62)), by Parties to MARPOL Annex VI. This was the first legally binding climate change treaty to be adopted since the Kyoto Protocol.

- Provides information to paint companies regarding the practical (real life) effectiveness of applied systems;
- Protection of marine reserves through clean hull operations.

7.2 Efficiency & Cost Saving

Due to the scaled resistance that fouling creates on the performance and operation of a vessel the following points highlight the benefits from a regularly maintained hull condition.

- Increase in operating speed;
- Reduced fuel consumption due to less power requirements;
- Lower maintenance and wear costs through a reduction in potential vibrations attributed to fouling build up;
- Minimal downtime to perform in-water cleaning during port calls;
- Extends intervals for dry-docking requirements and reduces off hire costs;
- Cost of repainting saved;

8. Safety

All SGS diving activities including vetted partners are conducted in accordance with our SGS Safe Practices Manual, which includes practices of OSHA, U.S. Coast Guard, U.S. Navy, industrial equipment codes, as well as scientific data from university, government, and industrial sources.

8.1 Pre Dive Meeting

A pre-dive meeting will be held by the responsible dive supervisor at the beginning of every dive activity to discuss the dive plan and to establish communication channels between the dive supervisor, the vessel and port authorities.

Lock-out and tag-out procedures will be discussed and executed. Depending on the location the divers will be working on, underwater machinery in the vicinity of the work needs to be locked-out and tagged-out. Depending on the vessel, underwater machinery to be locked-out and tagged-out could be, but is not limited to steering gear, turning gear, thrusters and so on.

Besides dive safety aspects, specifics to hull maintenance operations will also be discussed, points to be discussed, but not limited to, are:

- How the initial survey of the hull condition is conducted.
- Photos to be taken of the fouling before any cleaning operations start.
- Determine the brushes to be used.

8.2 Pre Dive Checklist

During the pre-dive meeting, the pre dive checklist will be completed and signed by the vessel's management team and the dive supervisor.

8.3 Emergencies

If the health or the safety of the diver is at risk, due to unforeseeable situations, or if the vessel or port authorities need the diver to be out of the water, the dive supervisor will order the diver out of the water.

The diver can be out of the water within a time frame of 20 minutes, after the dive supervisor received the call to abandon the dive. All diving operations are done with full communication to dive station on surface, **Scuba diving is not allowed on any underwater job.**

9. Coating Systems

In October 2001, IMO adopted a new International Convention on the Control of Harmful Anti-Fouling Systems and entered into force 2008. The resolution called for a global prohibition of the application of organotin compounds (TBT/ Tributyltin) in anti-fouling systems gave gradually decreased in the amount of Biocides they can add to AF paint systems added to the extended period ship are now remaining in the water between dry docks undesirable amounts of biofouling accumulate far more rapidly than ever before during the intended lifetime of the anti-fouling system. To maintain a ship as free of biofouling as practical, it is imperative that ships undertake in-water inspection, cleaning and maintenance.

The hull of vessels that are coated with self-polishing type coatings will not be cleaned within the first 365 days after paint application as a minimum, as recommended per Section 2.2.23 Underwater Ship Husbandry Discharges, of the Vessel General Permit (VGP), published by the US Environmental Protection Agency (EPA).

Modern antifouling technologies include coatings that are not self-polishing rely on other mechanisms to keep surfaces free of biofouling. “Foul-release” coatings provide surface characteristics (“non-stick” surfaces) that prevent the attachment of biofouling organisms or cause the attachment to fail when the vessel moves. Fouling-release coatings based on fluorinated polymers and on silicone have been developed and tested, with silicone-based coatings proving the most effective. However, these coatings are less robust than SPC Type antifouling coatings and are prone to damage by conventional, abrasive in-water hull cleaning methods. In contrast, another type of biocide-free coating, surface treated coatings are Hard coatings or glass flake coatings (STCs) they are formulated to be extremely durable. Unlike other coatings, they are designed to be cleaned regularly underwater as part of planned maintenance to maintain hull efficiency and minimize the risk of transferring invasive aquatic species.

10. Advanced Hull Cleaning Systems

To maintain the integrity of the paint and prevent pollution, SGS uses only environmentally friendly hull cleaning systems equipped with the most appropriate cleaning brushes that have pasted paint panel testing with the R&D departments of the paint manufactures. The divers follow company procedures that are developed from paint panel testing to determine the most appropriate brushes to use depending on the type of paint and micro fouling.

Underwater cleaning services can be performed pier or ship based. If cleaning operations are being performed from the vessel, divers will utilize the vessel’s shell lock doors.

10.1 Hull Cleaning Vehicles

10.1.1 Mini-Pamper Hull-Cleaning Vehicle

The Mini Pamper cleaning system allows for full height adjustment of the hydraulically driven twin brush system. This allows total control of the brush tension on the hull and also allows the diver to hoover the brushes off the hull when

the vehicle is stopped or riding over clean areas. The hover mode where the brushes are just above the surface of the coating creates a water vortex and removes the slime coating without making contact with the surface of the paint.

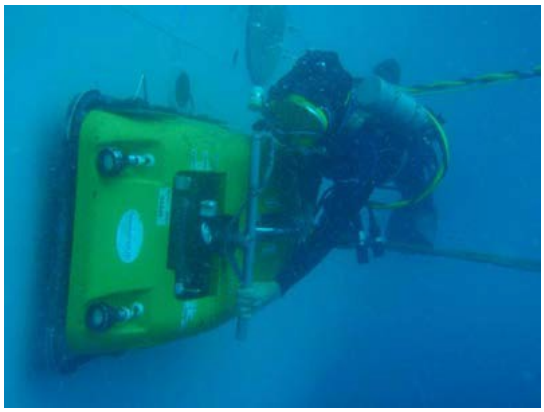

Fig. 12 and Fig. 13 Diver Cleaning Intersleek with the Mini-Pamper Hull Cleaning Vehicle

10.1.2 Triton V

Build in 1993, the first prototype of the Triton V was built by divers for divers.

Fig. 14 The Chassis of the Triton V is Built from Type 316 Stainless Steel

The application of the common hydraulic rail system incorporated into the Triton V suspension gives the Triton V the ability to track the hull keeping the brushes parallel to the painted surface each wheel is independently controlled hydraulically this allows the Triton V to actively adjust for any indentations in the shell plating as well as curvature in the ship's hull, preventing the brushes from accidently damaging the coating system. The common hydraulic rail suspension can also be used to hover the brushes off the hull when the vehicle is stopped as well. Allowing for the perfect balance between the brush pressure and drive wheel contact against the hull.

To drive the vehicle over the hull, the "Triton V" is equipped with 3 wheels with forward and reverse drive which are mounted on hydraulic cylinders.

The forward and reverse drive mode allows maximum cleaning efficiency and minimum diver/operator strain. In neutral position the brushes are automatically lifted from the hull, preventing damage to the coating system.

The machine is held in position against the vessel by use of brushes with a diameter of 400 mm. Rotational speed of the brushes is 450 RPM and the force of the suction is 45 KG per brush.

The pressure on the brushes can be adjusted by the diver. Due to the exact center of gravity, the machine is easy to handle for the diver. The cleaning path is 1-meter-wide and depending on the type of marine growth/diver experience, about 700 square meters can be treated per hour.

The machine is able to clean beyond the forward and aft draft mark.

The system is driven by a hydraulic power pack. The length of the umbilical between machine and power pack is 100 meters.

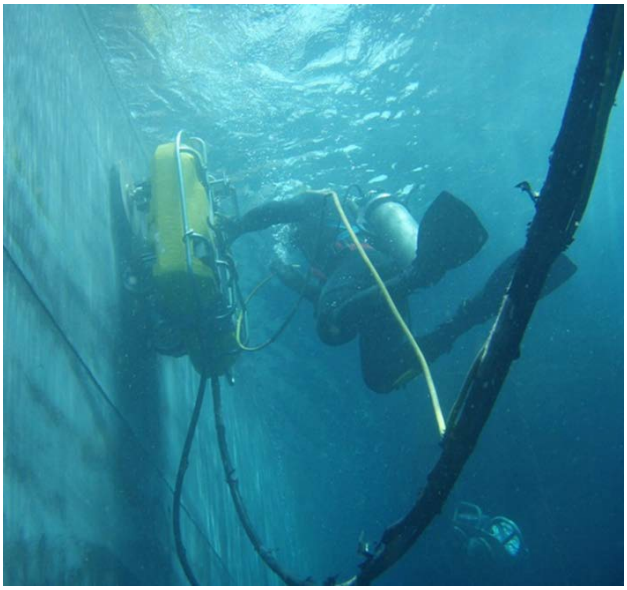

Fig. 15 Triton V

Fig. 16 Triton V Hull Cleaning Vehicle – Side View

Fig. 17 Triton V Hull Cleaning Vehicle – Top View

Fig. 18 Hydraulic Unit

Fig. 19 Hydraulic Hose

Fig. 20 Advanced Hull Cleaning System complete with Cleaning Vehicle, Hoses and Power Unit

Fig. 21 Advanced electric Hull Cleaning System complete with Cleaning Vehicles, Hoses, Power Unit and Power Distribution Box

10.1.3 C-ROV (Cleaning Remotely Operated Vehicle

Designed in 2017 and built by Subsea Global Solutions, the C-ROV cleaning system is a double head remotely operated underwater Hull Cleaning brush cart. The system allows for full height adjustment of the hydraulically driven double-brush system. This allows total control of the brush tension on the hull and allows the operator to hover the brushes off the hull when the vehicle is stopped or riding over clean areas with no mechanical contact between the brushes and the hull. The hover mode where the brushes are just above the surface of the coating creates a water vortex and removes the slime coating without contacting the surface of the anti-fouling system.

The C-ROV is operated from an operator station located topside. Two live video channels allow the operator to see fore and aft as the four-wheeled cart is directed along the hull's surface. The C-ROV can be deployed from the pier, a workboat, or from the vessel itself.

Fig. 24 C-ROV with umbilical

Fig. 25 C-ROV Topside

Fig. 26 C-ROV underside

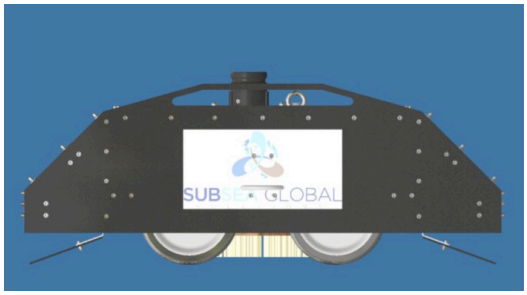

Fig. 27 C-ROV side view (no shroud)

10.2 Power

SGS's advanced hull cleaning equipment is powered by a mobile electric system through a power distribution center, which allows for worldwide transport. Power can be supplied through the ship's power or through an external shore power system. This system is designed to be emissions free.

10.2.1 Power Distribution Centre

SGS's distribution center will distribute the power from the vessel or shore based power supply to the advanced hull cleaning system. Providing an emissions free operation.

10.3 Hydraulic Fluid

Within SGS's hydraulic system the environmentally aware hydraulic fluid Mobil EAL 224H is used. The hydraulic fluid is formulated from selected, high-quality, high-VI vegetable oils satisfying the stringent criteria for biodegradability and toxicity.

10.4 Brushes

10.4.1 Brushes

Brushes to be used are an integral part of SGS's advanced hull cleaning systems. These nylon brushes are fitted to the machine to create the required water vortex friction needed to remove the slime coating. Fouling release coating is designed to only hold a slime growth as all other types of marine fouling is unable to stay adhered to the coating while the vessel is underway over 14 knots speed.

Brushes to be used for hull cleaning can be made from Polyester, Polyester Bristle (Light Duty), Polyester Bristle (Heavy Duty), Nylon Bristles, Polypropylene and designed to direct the flow outward from the machine.

Fig. 28 Intersleek Brushes

Fig. 29 Light-Duty Polyester

Fig. 30 Heavy-Duty Polyester

10.4.2 Pads

Pads fabricated from terry cloth rags can be used for hand-wiping smaller areas.

11. Cleaning Procedure

11.1 Introduction

The purpose of this procedure is to help to maintain the integrity of the vessel hull paint, to prevent pollution and to protect the environment, by not allowing Micro fouling to advance into Macro fouling or hard fouling.

Through continued hull maintenance, cleaning can be performed at a micro/fouling stage. Since slime films may influence directly the attachment of other organisms, early cleaning can prevent the invasion of nonindigenous species in aquatic ecosystems.

Through cleaning at the slime/micro fouling stage, hull performance is optimized and the loss of coating into the water column is no longer an issue, since there is no need to clean as aggressively, medium brush tension is all that is needed for micro fouling. Ships that are not under a maintenance program have a high risk growing Macro fouling over time.

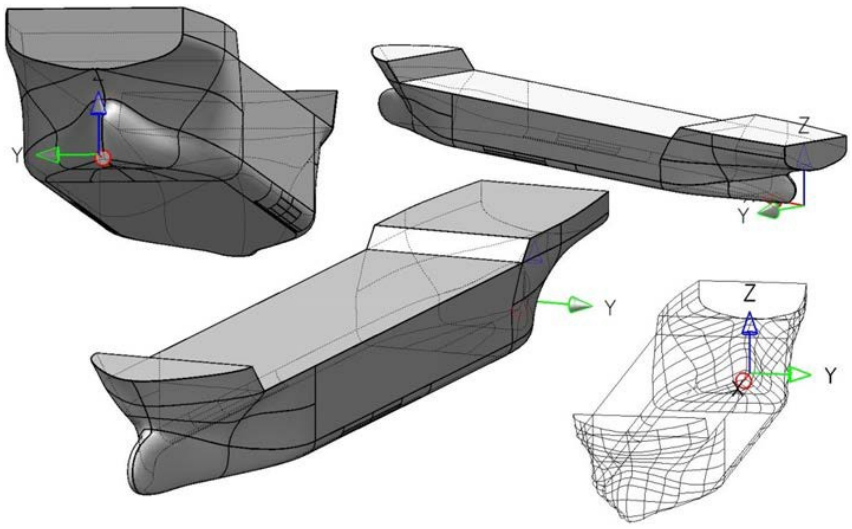

Fig. 31 Example of a Vessel Hull Layout

11.2 Review of Records

11.2.1 Record of Anti-Fouling Systems

Per IMO (International Maritime Organization) ships are required to carry an IAFS (International Anti-Fouling System) Certificate. The IAFS Certificate carries the information on the particulars of the ship and a series of checkboxes to indicate if an anti-fouling system controlled under Annex I of AFS 2001 has or has not been applied, removed or been covered with a sealer coat, and if an anti-fouling system controlled under Annex I of AFS 2001 was applied on the ship prior to or after the date specified in AFS 2001.

The validity of the IAFS Certificate should be confirmed by verifying that the IAFS Certificate is properly completed and signed/endorsed by the Administration, or by a recognized organization (RO) and stating that the required survey has been performed. In reviewing the IAFS Certificate, particular attention should be given to verifying that the initial survey matches the dry dock period listed in the ship's log(s) and that only one box should be marked.

The Record of Anti-Fouling Systems should be inspected to ensure that the records are attached to the IAFS Certificate and are up-to-date. The most recent record must correlate with the correct check box on the IAFS Certificate.

Prior to perform hull cleaning, the "Record of Anti-Fouling Systems" will be reviewed for every vessel to be cleaned to ensure that only coating systems have been vetted to SGS hull cleaning systems throw panel testing or OEM approval from the paint manufactures.

The "FORM OF THE CERTIFICATE AND RECORD FOR ANTI-FOULING SYSTEMS" and an example of an "INTERNATIONAL ANTI-FOULING SYSTEM CERTIFICATE" issued by a recognized organization (RO) can be found in Annex A and B.

11.2.2 Review of Recent Photographs/Video of Hull Fouling Conditions

All cruise ships that are on the Alaska itinerary scheduled to be cleaned have to be part of the fleet hull management program where they are receiving hull inspections with photo documentation every 6 months. The most recent hull inspection report for all cruise ships slotted to be cleaned in Alaska will be sent to **DEC.WQ.Cruise@alaska.gov** for review and approval.

If requested by the vessels owner, Port Authorities and/or regulatory requirements, pictures or video footage of the harbour bottom directly below and in the general vicinity where the ship will be moored will be reviewed.

11.2.3 Review of the Vessel's Itinerary

The biofouling that may be found on a ship is influenced by a range of factors, such as places visited and trading routes as well as specific operating profile, including factors such as operating speeds, ratio of time underway compared with time alongside, moored or at anchor, and where the ship is located when not in use (e.g., open anchorage or estuarine port).

The itinerary of the vessel will be reviewed prior to cleaning operations to take place.

11.3 Pollution Prevention

All employees are responsible for pollution prevention, not just on hull cleaning operations, but on all work performed by SGS.

11.3.1 Pollution from Cleaning System

As mentioned in 10.3, the hydraulic fluid is formulated from selected, high-quality, high-VI vegetable oils satisfying the stringent criteria for biodegradability. These oils do not pose any harm to the environment in the quantity contained in our systems. All our systems contain less than 50 liters of oil.

If hydraulic fluid is introduced into the water, the spill will be handled in accordance with SGS' OIL SPILL PREVENTION, RESPONSE AND CLEAN UP PROCEDURE. As a precaution Biodegradable oils spills will be treated same as a petroleum based oil spill.

11.4 Quality Assurance

11.4.1 Review of Documentation

Verification of the International Anti-Fouling System Certificate, hull inspection report and the itinerary of the vessel will be performed prior to any hull cleaning operations by SGS and/or Local Authorities.

11.4.2 Pre-Inspection Dive

During the inspection dive divers will reconfirm the type marine fouling is consistent with past hull report and verify the type of growth to confirm that only slime and micro-fouling is present and to ensure that no macro-fouling will be cleaned.

11.4.3 Photographic/Video Survey

Hull cleanings are documented through photos and/or video before and after the cleaning takes place. The records on cleanings are maintained until the vessel has completed a dry dock. and the new hull coating system is applied.

11.5 Hull Cleaning Methods

During the cleaning the diver will routinely monitor the performance of the cleaning and its impact on the coating system. Cleaning shall not result in scratches or swirl marks on the surfaces or abrasion of edges, corners, seams, welds, rivet or bolt heads, that expose on extend into the underlying layer of coating.

The calcareous deposit formed on the dielectric shield shall be preserved.

Cleaning of an impressed current cathodic protection system anode with power tools is prohibited.

Visible devices may be placed in the vicinity of impressed current anodes, reference cells, and dielectric shields to guard these items against damage during the cleaning operation. The location of these items shall be obtained from the ship's dry docking drawing and ship's engineer prior to commencing the cleaning operation. The shield area is approximately 16 feet wide by 13 feet high with the anodes located in the geometric center.

Choosing a brush or disc that efficiently removes the micro fouling while minimizing the potential to cause damage to the underlying ship system is paramount.

11.6 In-Water Inspection, Cleaning and Maintenance

11.6.1 Introduction

Despite effective antifouling systems being installed, bio-fouling may still accumulate in some areas. In order to maintain a vessel in a clean state in-water inspection, cleaning and maintenance may at times be necessary. In-water cleaning will only be undertaken in Alaska when the ship meets the following criteria:

- When the biofouling is still at the slime layer (micro fouling) stage to prevent further fouling.
- When the antifouling coating system meets the requirements of the IMO Antifouling Convention.
- When macro biofouling is already dead due to prior treatment.
- When the cleaning is being undertaken for niche areas.
- When the cleaning does not unacceptably damage the anti-fouling system. Any cleaning should be undertaken using equipment that has passed paint panel testing and is approved by the coatings supplier in order to prevent any damage.

11.6.2 In-Water Cleaning and Maintenance

***NOTE: Prior to any hull cleaning operations in Alaska, the local authorities, Alaska Department of Environmental Conservation and Alaska Fish and Game invasive species Department must first give approval after evaluating the paint specification and most resent hull inspection report. Local port authority's will be included in the approval proses.** Ships with biocide-free underwater coatings or hard coatings will require regular in-water cleaning to maintain hull efficiency and remove the risk of transferring invasive aquatic species.

Where anti-fouling coating systems are damaged as a result of grounding, collision or mechanical impact, in-water repair of the coating system should be considered for the area of damage if practicable, even if the area of damage is relatively minor.

Damaged sea chest grates should be repaired or replaced as needed. Care should be taken to ensure that MGPSs are operating effectively to prevent accumulation of bio-fouling. If steam blow-out pipes are fitted within sea chests, regular use may minimize growth in the sea chest.

Propellers "should" be regularly polished to a Rupert A finish or better to maintain operational efficiency and to prevent bio-fouling. Exposed propeller shafts should be cleaned at the same time as the propeller. While undertaking propeller polishing divers should inspect all niche areas for bio-fouling.

11.6.3 Niche Areas

It is recommended that ship operators identify niche areas on the ship that may accumulate biofouling to enable these areas to be effectively targeted during inspections.

Areas may include the following:

- Propellers, thrusters and propulsion units.
- Sea chests boxes.
- Rudder stocks and hinges.
- Stabilizer fin apertures.
- Rope guards, stern tube seals and propeller shafts.
- Cathodic protection anodes.

- Anchor chains and chain lockers.
- Free flood spaces inherent to the ships' design.
- Sea chest and thruster tunnel grates.
- Echo sounders and velocity probes.
- Overboard discharge outlets and sea inlets.
- Areas prone to anti-fouling coating system damage or grounding (e.g., areas of the hull damaged by fenders when alongside, leading edges of bilge keels and propeller shaft "y" frames).

11.7 Type of Fouling and Brushes Required

Soft fouling typically algae, slime and grasses, have a minimum effect on the coating systems and the performance of the ship.

11.7.1 Soft Fouling

The dominant organisms in this stage of fouling are slime and grass.

Slime	Formation of slime is the first step in the fouling process. Almost any object immersed in seawater rapidly accumulates a coating of slime, consisting of bacteria, fungi, protozoa, and algae. Bacteria frequently are attached within one-half hour of wetting the surface, and slime can often be felt by hand within an hour. The coating of slime is smooth and generally follows hull contours.
Grass and other Soft Fouling	Grass is a form of multi-cellular green and brown algae. It forms most heavily near the water-line, where adequate light is available for photosynthesis. It is less evident as depth increases, and the dominant color changes from green to brown.
BRUSHES:	Polyester Brushes: Polyester, Polyester Bristle (Light Duty) or Polyester Bristle (Heavy Duty); for Intersleek coating, light duty plastic bristle brushes with bristles in vane orientation only.

12. Documentation

At the completion of the cleaning operation, individual reports will be provided to the client and Alaska Department of Environmental Conservation and Alaska Fish and Game Invasive Species Department. The reports will include the vessels name, type vessel, cleaning method’s used, fouling identifications, results of cleaning, photographs.

12. Annex

12.1 "INTERNATIONAL ANTI-FOULING SYSTEM CERTIFICATE" Form

29.1.2004 EN Official Journal of the European Union C 25 E/153

Wednesday 20 November 2002

ANNEX II

FORMS OF THE CERTIFICATE AND RECORD FOR ANTI-FOULING SYSTEMS

The international certificate and the record of anti-fouling systems shall be drawn up in the form set out below.

Where these forms are used only ***for ships that are not submitted to the surveys and certification requirements of regulation 1 of Annex 4 of the AFS-Convention***, references to the AFS-Convention may be deleted.

INTERNATIONAL ANTI-FOULING SYSTEM CERTIFICATE
(This certificate shall be supplemented by a record of anti-fouling systems)

(Official seal) (State)

Issued under the provisions of [the International Convention on the control of harmful anti-fouling systems on ships and] (1) *European Parliament and Council* Regulation (EC) No .../2002 of ... on the *prohibition* of organotin compounds on ships

under the authority of the Government of ..... (name of the State)

by ..... (person or *organisation authorised*)

When a Certificate has been previously issued, this Certificate replaces the certificate dated .....

Particulars of ship (2): .....

Name of ship: .....

Distinctive number or letters: .....

Port of registry: .....

Gross tonnage: .....

IMO number (3):

An anti-fouling system controlled under Annex 1 to the Convention [and Regulation ...] has not been applied during or after construction of this ship .....

An anti-fouling system controlled under Annex 1 to the Convention [and Regulation ...] has been applied on this ship previously, but has been removed by ..... (insert name of the facility) on (date) .....

An anti-fouling system controlled under Annex 1 to the Convention [and Regulation ...] has been applied on this ship previously, but has been covered with a sealer coat applied by ..... (insert name of the facility) on (date) .....

An anti-fouling system controlled under Annex 1 was applied on this ship prior to 1 January 2003, but must be removed or covered with a sealer coat prior to 1 January 2008.

THIS IS TO CERTIFY THAT:

1. the ship has been surveyed in accordance with [regulation 1 of Annex 4 to the Convention and] *European Parliament and Council* Regulation ... on the *prohibition* of organotin compounds on ships; and
2. the survey shows that the anti-fouling system on the ship complies with the applicable requirements of [Annex 1 to the Convention and] (4) *European Parliament and Council* Regulation ... on the *prohibition* of organotin compounds on ships.

Issued at: .....

(Place of issue of Certificate)

.....

..... (Date of issue) ..... (Signature of *authorised official issuing the Certificate*) .....

Date of completion of the survey on which this certificate is issued: .....

(1) May be deleted for ships engaged only on voyages within one Member State.
(2) Alternatively, the particulars of the ship may be placed horizontally in boxes.
(3) In accordance with the Ship Identification Number Scheme adopted by the International Maritime Organization.
(4) May be deleted for ships engaged only on voyages within one Member State.

C 25 E/154 Official Journal of the European Union EN 29.1.2004

Wednesday 20 November 2002

RECORD OF ANTI-FOULING SYSTEMS

This Record shall be permanently attached to the International Anti-Fouling System Certificate

Particulars of ship: .....

Name of ship: .....

Distinctive number or letters: .....

IMO number: .....

Details of anti-fouling system(s) applied: .....

Type(s) of anti-fouling system(s) used: .....

Date(s) of application of anti-fouling system(s): .....

Name(s) of company(ies) and facility(ies)/location(s) where applied: .....

Name(s) of anti-fouling system manufacturer(s): .....

Name(s) and colour(s) of anti-fouling system(s): .....

Active ingredient(s) and their Chemical Abstract Service Registry Number (CAS number(s)): .....

Type(s) of sealer coat, if applicable: .....

Name(s) and colour(s) of sealer coat applied, if applicable: .....

Date of application of sealer coat: .....

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at: ..... (Place of issue of Record)

(Date of issue): .....

(Signature of *authorised* official issuing the record): .....

Endorsement of the Records (1):

THIS IS TO CERTIFY that a survey required accordance with [regulation 1(1)(b) of Annex 4 to the Convention and] *point* 2.1 of Annex I of *European Parliament and Council* Regulation (EC) *No* .../2002 *of* ... *on the prohibition* of organotin compounds on ships found that the ship was in compliance with the [Convention and the] Regulation

Details of anti-fouling system(s) applied: .....

Type(s) of anti-fouling system(s) used: .....

Date(s) of application of anti-fouling system(s): .....

Name(s) of company(ies) and facility(ies) location(s) where applied: .....

Name(s) of anti-fouling system manufacturer(s): .....

Name(s) and colour(s) of anti-fouling system(s): .....

Active ingredient(s) and their CAS number(s): .....

Type(s) of sealer coat, if applicable: .....

Name(s) and colour(s) of sealer coat applied, if applicable: .....

Date of application of sealer coat: .....

Signed: ..... (Signature of *authorised* official issuing the Record)

Place: .....

Date (2): .....

(Seal or stamp of the authority)

(1) This page of the Record shall be reproduced and added to the Record as considered necessary by the administration.
(2) Date of completion of the survey on which this endorsement is made.

12.2 Certificate and Record for Anti Fouling Systems

DET NORSKE VERITAS

DNV Id No:

Date of issue:

INTERNATIONAL ANTI-FOULING SYSTEM CERTIFICATE

Issued under the provisions of the International Convention on the Control of Harmful Anti-Fouling Systems on Ships (the Convention)

under the authority of the Government of

THE COMMONWEALTH OF THE BAHAMAS

by **Det Norske Veritas AS**

Particulars of Ship

Name of Ship: .....

Distinctive Number or Letters: .....

Port of Registry: .....

Gross Tonnage: .....

IMO Number: .....

When a Certificate has been previously issued, this Certificate replaces the Certificate dated: **2011-10-31**

☐ An Anti-Fouling System controlled under Annex 1 to the Convention has not been applied during or after construction of this ship

☒ An Anti-Fouling System controlled under Annex 1 to the Convention has been applied on this ship previously, but has been removed by **Lisnave Estaleiros Navais, Portugal (side bottom except stern area)** on **May 2006**

☒ An Anti-Fouling System controlled under Annex 1 to the Convention has been applied on this ship previously, but has been covered with a sealer coat applied by **Lisnave Estaleiros Navais, Portugal (stern area and flat bottom)** on **May 2006**

☐ An Anti-Fouling System controlled under Annex 1 to the Convention was applied on this ship prior to **(date)** [1] but will be removed or covered with a sealer coat prior to **(date)** [2]

THIS IS TO CERTIFY:

1. the ship has been surveyed in accordance with regulation 1 of Annex 4 to the Convention, and
2. the survey shows that the anti-fouling system on the ship complies with the applicable requirements of Annex 1 to the Convention.

Completion date of survey on which this Certificate is based: **2010-06-03**

Issued at **Høvik, Norway** on **2012-01-13**

for **Det Norske Veritas AS**

K.O. Hurlen

Kjellaug Oppedal Hurlen
Head of Section

1 Date of entry into force of the control measure.
2 Date of expiration of any implementation period specified in article 4(2) or Annex 1.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.

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DNV Id No:
Date of issue:

RECORD OF ANTI-FOULING SYSTEMS

Details of Anti-Fouling System(s) applied

Type(s) of Anti-Fouling System(s) used:	**Organotin-free foul release anti fouling system; Organotin-free self polishing anti fouling system**
Date(s) of application of Anti-Fouling System(s):	**May 2006**
Name(s) of company(ies) and Facility(ies)/location(s) where applied:	**Lisnave Estaleiros Navais, Portugal**
Name(s) of Anti-Fouling System manufacturer(s):	**International Marine Coatings**
Name(s) and colour(s) of Anti-Fouling System(s):	**Side bottom (except stern area): Intersleek 757, grey; Side bottom (stern area) and Flat bottom: Intersmooth 460 SPC, dark red / brown**
Active ingredient(s) and their Chemical Abstract Service Registry Number (CAS number(s)):	**Zinc Pyrithione (CAS No. 13463-41-7); Copper(1)oxide (CAS No. 1317-39-1)**
Type(s) of sealer coat, if applicable:	**Epoxy primer**
Name(s) and colour(s) of sealer coat applied, if applicable:	**Intergard 263, grey (stern area and flat bottom)**
Date of application of sealer coat:	**May 2006**

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at Høvik, Norway on 2012-01-13

for **Det Norske Veritas AS**

Mari Bjørnstad
Surveyor

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DNV Id No:
Date of issue:

Endorsement No. 1
A full-term Endorsement of the Record has been issued.

Place: **Høvik, Norway** Date: **2012-01-13**

Signature:
Stamp Surveyor, Det Norske Veritas AS

Endorsement No. 2
A short-term Endorsement of the Record has been issued.
A full-term Endorsement of the Record will follow to replace the short-term within 5 months.

Place: Date:

Signature:
Stamp Surveyor, Det Norske Veritas AS

Endorsement No. 3
A short-term Endorsement of the Record has been issued.
A full-term Endorsement of the Record will follow to replace the short-term within 5 months.

Place: Date:

Signature:
Stamp Surveyor, Det Norske Veritas AS

Endorsement No. 4
A short-term Endorsement of the Record has been issued.
A full-term Endorsement of the Record will follow to replace the short-term within 5 months.

Place: Date:

Signature:
Stamp Surveyor, Det Norske Veritas AS

Endorsement No. 5
A short-term Endorsement of the Record has been issued.
A full-term Endorsement of the Record will follow to replace the short-term within 5 months.

Place: Date:

Signature:
Stamp Surveyor, Det Norske Veritas AS

Endorsement No. 6
A short-term Endorsement of the Record has been issued.
A full-term Endorsement of the Record will follow to replace the short-term within 5 months.

Place: Date:

Signature:
Stamp Surveyor, Det Norske Veritas AS

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12.3 MSDS (Material Safety Data Sheet) and Specifications for MOBIL EAL 224H Hydraulic Oil

ExxonMobil

Product Name: MOBIL EAL 224H
Revision Date: 13 Nov 2009
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MATERIAL SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: MOBIL EAL 224H
Product Description: Plant/Vegetable Oil
Product Code: 201560105010, 601831-00, 973407
Intended Use: Hydraulic fluid

COMPANY IDENTIFICATION

Supplier: EXXON MOBIL CORPORATION
3225 GALLOWS RD.
FAIRFAX, VA. 22037 USA

24 Hour Health Emergency	609-737-4411
Transportation Emergency Phone	800-424-9300
ExxonMobil Transportation No.	281-834-3296
Product Technical Information	800-662-4525, 800-947-9147
MSDS Internet Address	http://www.exxon.com, http://www.mobil.com

SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

Reportable Hazardous Substance(s) or Complex Substance(s)

Name	CAS#	Concentration*
2,6-DI-TERT-BUTYLPHENOL	128-39-2	< 2.5%

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

SECTION 3 HAZARDS IDENTIFICATION

This material is not considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

POTENTIAL HEALTH EFFECTS

Low order of toxicity. Excessive exposure may result in eye, skin, or respiratory irritation. High-pressure injection under skin may cause serious damage.

NFPA Hazard ID:	Health:	0	Flammability:	1	Reactivity:	0
HMIS Hazard ID:	Health:	0	Flammability:	1	Reactivity:	0

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 4 FIRST AID MEASURES

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Product Name: MOBIL EAL 224H
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Inhalation

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

SKIN CONTACT

Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion

First aid is normally not required. Seek medical attention if discomfort occurs.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: Pressurized mists may form a flammable mixture.

Hazardous Combustion Products: Smoke, Fume, Aldehydes, Sulfur Oxides, Incomplete combustion products, Oxides of carbon

FLAMMABILITY PROPERTIES

Flash Point [Method]: >221C (430F) [ASTM D-92]
Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D
Autoignition Temperature: N/D

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

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Product Name: MOBIL EAL 224H
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US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

SPILL MANAGEMENT

Land Spill: Stop leak if you can do it without risk. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do it without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING

Avoid contact with skin. Prevent small spills and leakage to avoid slip hazard.

Static Accumulator: This material is a static accumulator.

STORAGE

Do not store in open or unlabelled containers.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits/standards for materials that can be formed when handling this product: When mists / aerosols can occur, the following are recommended: 5 mg/m³ - ACGIH TLV, 10 mg/m³ - ACGIH STEL, 5 mg/m³ - OSHA PEL.

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

PERSONAL PROTECTION

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Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

Respiratory Protection: If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:
No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:
Chemical resistant gloves are recommended.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:
Chemical/oil resistant clothing is recommended.

Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS
See Sections 6, 7, 12, 13.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

GENERAL INFORMATION
Physical State: Liquid
Color: pale yellow
Odor: Characteristic
Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION
Relative Density (at 15 C): 0.921
Flash Point [Method]: >221C (430F) [ASTM D-92]
Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D
Autoignition Temperature: N/D

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Boiling Point / Range: N/D
Vapor Density (Air = 1): N/D
Vapor Pressure: [N/D at 20 °C]
Evaporation Rate (N-Butyl Acetate = 1): N/D
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): N/D
Solubility in Water: Negligible
Viscosity: 36.78 cSt (36.78 mm²/sec) at 40 C | 8.33 cSt (8.33 mm²/sec) at 100C
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION
Freezing Point: N/D
Melting Point: N/A
Pour Point: -34°C (-29°F)

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Excessive heat. High energy sources of ignition.

MATERIALS TO AVOID: Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Route of Exposure	Conclusion / Remarks
Inhalation	
Toxicity (Rat): LC50 > 5000 mg/m³	Minimally Toxic. Based on assessment of the components.
Irritation: No end point data.	Negligible hazard at ambient/normal handling temperatures. Based on assessment of the components.
Ingestion	
Toxicity (Rat): LD50 > 2000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Skin	
Toxicity (Rabbit): LD50 > 2000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Irritation (Rabbit): Data available.	Mildly irritating to skin with prolonged exposure. Based on assessment of the components.
Eye	
Irritation (Rabbit): Data available.	May cause mild, short-lasting discomfort to eyes. Based on assessment of the components.

CHRONIC/OTHER EFFECTS
For the product itself:
Repeated and/or prolonged exposure may cause irritation to the skin, eyes, or respiratory tract.

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Additional information is available by request.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = NTP CARC	3 = IARC 1	5 = IARC 2B
2 = NTP SUS	4 = IARC 2A	6 = OSHA CARC

SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Not expected to be harmful to aquatic organisms.

PERSISTENCE AND DEGRADABILITY

Biodegradation:

Majority of components -- Expected to be readily biodegradable.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products. Even though this product is biodegradable, it must not be indiscriminately discarded into the environment.

REGULATORY DISPOSAL INFORMATION

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrositivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

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SECTION 14 TRANSPORT INFORMATION

LAND (DOT) : Not Regulated for Land Transport

LAND (TDG) : Not Regulated for Land Transport

SEA (IMDG) : Not Regulated for Sea Transport according to IMDG-Code

AIR (IATA) : Not Regulated for Air Transport

SECTION 15 REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

NATIONAL CHEMICAL INVENTORY LISTING: AICS, IECSC, DSL, EINECS, ENCS, KECI, PICCS, TSCA

EPCRA: This material contains no extremely hazardous substances.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: None.

SARA (313) TOXIC RELEASE INVENTORY: This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

SECTION 16 OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:
No revision information is available.

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Mobil

Print Find a PDS Find a MSDS

Mobil EAL 224H

Hydraulic Fluid

Product Description

Mobil EAL 224H is a premium performance environmentally aware hydraulic fluid designed to provide outstanding performance in hydraulic and circulation systems operating at moderate conditions. It provides excellent anti-wear and film strength characteristics necessary for hydraulic systems operating under high load and high pressures. Its 12-stage rating in the FZG Gear Load test demonstrates a high level of protection against wear and scuffing and the suitability of this product to protect gears and bearings used in conjunction with hydraulic systems. Mobil EAL 224H provides excellent protection against corrosion and ensures very good multi-metal compatibility allowing its use in systems employing various metallurgy that may be used in pump and component designs. It also provides very good thin oil film protection against rusting. In addition to its exceptional performance capability, it satisfies the requirements for ready biodegradability and non-toxicity making it a desirable product where leakage or spillage of conventional oils could result in damage to the environment.

It is formulated from select, high-quality, high-VI vegetable oils and a specifically engineered additive system to meet or exceed the performance requirements of most hydraulic pump and system builders while satisfying the stringent criteria for biodegradability and toxicity.

Features and Benefits

Mobil EAL 224H provides excellent anti-wear, lubricity, and film strength performance in hydraulic and circulation systems operating under moderate operating conditions. The ready biodegradability and virtually non-toxic nature of this product makes it an excellent choice where leakage or spillage could enter environmentally sensitive areas. The inadvertent leakage of spillage of this product in environmentally sensitive areas could result in easier clean-up and lower remediation costs.

Features	Advantages and Potential Benefits
Ready Biodegradability and Non-Toxicity	Reduces potential for environmental damage Lowers potential remediation and clean-up costs caused by spills or leakage Becomes an integral part of plant environmental program
Outstanding Load-Carrying and Anti-Wear Properties	Protects system components against wear and scuffing Provides long equipment life
Exceptional Corrosion Protection	Reduces corrosion of internal system components
Excellent Multi-Metal Compatibility	Will not react with steel or copper alloys
Good Elastomer Compatibility	Works well with same elastomers used with conventional mineral based oils. No need for special seals or elastomers

Applications

- Hydraulic systems where spills or leakage could result in damage to the environment
- In systems where readily biodegradable and virtually non-toxic fluids may be required
- Gear systems requiring either an ISO VG 32 or 46 oil with mild extreme-pressure characteristics
- Systems containing servo-valves
- Hydraulic systems operating with oil temperatures in the range of 0 F to 180 F
- Marine and mobile equipment operating in environmentally sensitive areas
- Circulation systems operating under mild to moderate service conditions
- Industrial hydraulic systems where leaked or spilled fluids could get into plant effluent
- Air line oilers and some limited oil-mist generating systems
- Air-over-hydraulic fluid systems operating in environmentally sensitive areas

Specifications and Approvals

Mobil EAL 224H recommended for use in applications requiring:
Environmentally friendly characteristics
Anti-wear protection
Compatibility with system components

Typical Properties

Mobil EAL 224H	
Viscosity, ASTM D 445	
cSt @ 40° C	36.78

Mobil EAL 224H

cSt @ 100° C	8.3
Viscosity Index, ASTM D 2270	212
Specific Gravity @ 15° C/15° C, ASTM D 1298	0.921
FZG Gear Test, DIN 51354, Fail Stage	12
4-Ball Wear, ASTM D 4172, 40 kg, 93° C, 600 rpm Scar Diameter., mm	0.35
Pour Point, °C, ASTM D 97	-34
Flash Point, °C, ASTM D 92	294
Vickers V-104C Pump Wear, ASTM D2882, mg	10
Biodegradability, CO2 Conversion, EPA 560/6-82-003, wt %	>70
Aquatic Toxicity, LC50, Trout, OECD 203, ppm	>5000

Health and Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application and the recommendations provided in the Material Safety Data Sheet (MSDS) are followed. MSDS's are available upon request through your sales contract office, or via the Internet. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

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Fairfax, VA 22037

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Typical Properties are typical of those obtained with normal production tolerance and do not constitute a specification. Variations that do not affect product performance are to be expected during normal manufacture and at different blending locations. The information contained herein is subject to change without notice. All products may not be available locally. For more information, contact your local ExxonMobil contact or visit www.exxonmobil.com
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12.4 Paint Certificates / Paint Specifications

DNV

DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. **K-4107**

Holder of Certificate
Jotun A/S
SANDEFJORD, Norway

This is to certify that the
TBT-Free Anti-Fouling Systems

with type designation(s)
SeaQuantum Classic, SeaQuantum Plus, SeaQuantum Plus S and SeaQuantum Ultra

is found to comply with
Det Norske Veritas' Type Approval Programme 1-602.3, 2009, Anti-Fouling Systems

Application
Organo-tin free self-polishing hydrolysing type anti-fouling system.

Høvik, 2010-03-03
for Det Norske Veritas AS

Helge Drange
Head of Section

DET NORSKE VERITAS * 1864 *

DNV local office:
Sandefjord

This Certificate is valid until
2014-06-30

Gisle Hersvik
Surveyor

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

DET NORSKE VERITAS AS, Veritasveien 1, NO-1322 Høvik, Norway, Tel.: +47 67 57 99 00, Fax: +47 67 57 99 11, Org.No. NO 945 748 931 MVA www.dnv.com
Form No.: 20.100a Issue: October 2009 Page 1 of 3

Certificate No.: K-4107
File No.: 335.30
Job Id.: 262.1-009280-1

DNV

Product description

Organo-tin free self-polishing hydrolysing type anti-fouing paint; **SeaQuantum Classic, SeaQuantum Plus, SeaQuantum Plus S and SeaQuantum Ultra.**

Colours:
The product may be available in various colours. Please contact the local Jotun representative for details.

Active ingredients:

Cuprous oxide	CAS No. 1317-39-1
Cuprous Pyrithione	CAS No. 14915-37-8

Manufactured by

Jotun Paints Europe Ltd., Stather Road, Flixborough, Scunthorpe, DN15 8RR, United Kingdom

DNV local office: Sheffield

Responsibility

The Holder of Certificate takes the responsibility that both design and production are in compliance with Rules, Standards and/or Regulations listed on page 1 of this certificate.

Application/Limitation

The issuance of this certificate is solely connected to the control of the Anti-Fouling System, AFS, with regard to compliance with the International Convention on the Control of Harmful Anti-Fouling Systems on Ships.

It does not cover verification of surface preparation, corrosion protection, fire, health and safety precautions, durability of the AFS or environmental properties other than regulated by the Convention.

Type Approval documentation

Email from Jotun A/S of 2010-01-22, incl. letter of 2010-01-22, Application for Type Approval of 2020-01-22, TDS, MSDS and Test Reports from Molab as of 2008-09-05 and SINTEF of 2002-09-18.

Tests carried out

Type Testing carried out according to **Type Approval documentation**, with the following test results, ref. Test Reports from Molab as of 2008-09-05 and SINTEF of 2002-09-18:

SeaQuantum Classic LR:	0,070% (No TBT-compounds detected)
SeaQuantum Classic DR:	0,084% (No TBT-compounds detected)
SeaQuantum Plus DR:	0,083% (No TBT-compounds detected)
SeaQuantum Plus S:	0,040% (No TBT-compounds detected)
SeaQuantum Ultra LR:	<0,015% (No TBT-compounds detected)

Marking of product

Product shall be marked with *manufacturer's name*; **Jotun Paints Europe Ltd., Scunthorpe, UK** and *type designation*.

Certificate Retention/Renewal Survey

The scope of the Retention/Renewal Survey is to verify that the conditions stipulated for the Type Approval is complied with and that no alterations are made to the product design or choice of materials.

Survey to be performed after two (2) years (Certificate Retention Survey) and at renewal after four (4) years (Certificate Renewal Survey).

Certificate No.: K-4107
File No.: 335.30
Job Id.: 262.1-009280-1

The main elements of the survey are:

- Ensure that **Type Approval documentation** is available.
- Review design, materials, production process, and performance with respect to possible changes, in order to ensure compliance with **Type Approval documentation** and/or referenced material specifications.
- Ensure traceability between manufacturer's product marking and the DNV Type Approval Certificate.

END OF CERTIFICATE

Technical Data Sheet

JOTUN
Jotun Protects Property

SeaLion Repulse

Product description

This is a three component nano repellent, elastomeric silicone fouling release coating. It is biocide free and provides excellent fouling protection and hull performance. This is achieved by a smooth, low friction surface reducing hull deterioration and speed loss. To be used as finish coat in immersed environments. Suitable on approved primers and tie coats on aluminium and carbon steel substrates.

Typical use

Marine:
Recommended for under water hull in newbuilding and drydocking. Specially designed as a premium solution for vessels trading at medium to high speed or activity. It has high gloss and excellent colour stability providing long term aesthetics appearance. Specially suitable for specific trades and where the focus is long term hull protection. The product is suitable for long service periods and can be used up to 60 months as a part of a complete coating system.

Protective:
Specially designed for offshore constructions and outside hull for static installations.

Typical trade

Designed for both global and coastal trade.

Colours

red, grey, blue, black

Product data

Property	Test/Standard	Description
Solids by volume	ISO 3233	72 ± 2 %
Flash point	ISO 3679 Method 1	27 °C
Density	calculated	1 kg/l
VOC-US/Hong Kong	US EPA method 24 (tested)	254 g/l
VOC-EU	IED (2010/75/EU) (calculated)	280 g/l
VOC-China	GB/T 23985-2009 (ISO 11890-1) (tested)	262 g/l

The provided data is typical for factory produced products, subject to slight variation depending on colour.
All data is valid for mixed paint.

Film thickness per coat

Typical recommended specification range

Dry film thickness	150	µm
Wet film thickness	210	µm
Theoretical spreading rate	4,8	m²/l

Date of issue: 30 August 2016 Page: 1/4

This Technical Data Sheet supersedes those previously issued.
The Technical Data Sheet (TDS) is recommended to be read in conjunction with the Safety Data Sheet (SDS) and the Application Guide (AG) for this product. For your nearest local Jotun office, please visit our website at www.jotun.com

Technical Data Sheet
SeaLion Repulse

JOTUN
Jotun Protects Property

Surface preparation

To secure lasting adhesion to the subsequent product all surfaces shall be clean, dry and free from any contamination.

Surface preparation summary table

	Surface preparation	
Substrate	**Minimum**	**Recommended**
Coated surfaces	Clean, dry and undamaged compatible coating (ISO 12944-4 6.1)	Clean, dry and undamaged compatible coating (ISO 12944-4 6.1)

Application

Application methods

The product can be applied by

Spray:	Use airless spray. Care should be taken to avoid overspray onto other areas.
Brush:	May be used. Care must be taken to achieve the specified dry film thickness.
Roller:	May be used. Care must be taken to achieve the specified dry film thickness.

Product mixing ratio (by volume)

SeaLion Repulse Comp A	17 part(s)
SeaLion Repulse Comp B	0,7 part(s)
SeaLion Repulse Comp C	0,75 part(s)

Thinner/Cleaning solvent

Do not add thinner.

Cleaning solvent: Jotun Thinner No. 7

Guiding data for airless spray

Nozzle tip (inch/1000):	15-21
Pressure at nozzle (minimum):	210 bar/3000 psi

Date of issue: 30 August 2016 Page: 2/4

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Technical Data Sheet
SeaLion Repulse

JOTUN
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Drying and Curing time

Substrate temperature	0 °C	10 °C	15 °C	23 °C	40 °C
Surface (touch) dry	8 h	6 h	5 h	3 h	1 h
Dried/cured for immersion	36 h	28 h	24 h	20 h	16 h

Drying and curing times are determined under controlled temperatures and relative humidity below 85 %, and at average of the DFT range for the product.

Surface (touch) dry: The state of drying when slight pressure with a finger does not leave an imprint or reveal tackiness.

Dried/cured for immersion: Minimum time before the coating can be permanently immersed in sea water.

Induction time and Pot life

Paint temperature	23 °C	40 °C
Pot life	1 h	30 min

Recommended type of primer

Anticorrosive primer system suitable for purpose with Safeguard Universal ES or Safeguard Plus as a sealer coat/ tie coat.
Recommended tie coat for the subsequent antifouling coat is:
SeaLion Tiecoat

Packaging (typical)

	Volume (litres)	Size of containers (litres)
SeaLion Repulse Comp A	17	20
SeaLion Repulse Comp B	0.7	0.75
SeaLion Repulse Comp C	0.75	1

The volume stated is for factory made colours. Note that local variants in pack size and filled volumes can vary due to local regulations.

Storage

The product must be stored in accordance with national regulations. Keep the containers in a dry, cool, well ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care.

Shelf life at 23 °C

SeaLion Repulse Comp A	24 month(s)
SeaLion Repulse Comp B	24 month(s)

Date of issue: 30 August 2016 Page: 3/4

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Technical Data Sheet
SeaLion Repulse

JOTUN
Jotun Protects Property

SeaLion Repulse Comp C	24 month(s)

In some markets commercial shelf life can be dictated shorter by local legislation. The above is minimum shelf life, thereafter the paint quality is subject to re-inspection.

Caution

This product is for professional use only. The applicators and operators shall be trained, experienced and have the capability and equipment to mix/stir and apply the coatings correctly and according to Jotun's technical documentation. Applicators and operators shall use appropriate personal protection equipment when using this product. This guideline is given based on the current knowledge of the product. Any suggested deviation to suit the site conditions shall be forwarded to the responsible Jotun representative for approval before commencing the work.

Health and safety

Please observe the precautionary notices displayed on the container. Use under well ventilated conditions. Do not inhale spray mist. Avoid skin contact. Spillage on the skin should immediately be removed with suitable cleanser, soap and water. Eyes should be well flushed with water and medical attention sought immediately.

Colour variation

When applicable, products primarily meant for use as primers or antifoulings may have slight colour variations from batch to batch. Such products may fade and chalk when exposed to sunlight and weathering.

Disclaimer

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the given data without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.

Date of issue: 30 August 2016 Page: 4/4

This Technical Data Sheet supersedes those previously issued.
The Technical Data Sheet (TDS) is recommended to be read in conjunction with the Safety Data Sheet (SDS) and the Application Guide (AG) for this product. For your nearest local Jotun office, please visit our website at www.jotun.com

Intersleek® 1000

International

Biocide-free fouling control coating

Product Description

Intersleek® 1000 is the first fouling control coating to use a patented technology that incorporates bio-renewable raw material to deliver enhanced vessel performance throughout the dry-docking cycle. Based on patented technology, Lanion enables hulls coated with Intersleek® 1000 to maintain an ultra-smooth surface, reducing drag and lowering a vessel's fuel consumption and emissions.

Intersleek® 1000 is a new product, tested on a full vessel with 5-year track record of proven fouling control and vessel performance.

Eligible for carbon credits through the award-winning Gold Standard Intersleek Carbon Credit methodology.

Key Features

- Based on patented bio-renewable technology enhancing the environmental impact of fouling control products*
- Ultra-smooth surface providing reduced drag and lower fuel consumption* rewarded through the issuance of carbon credits
- Can be applied over existing antifouling systems without the need for full blast, reducing time and costs for conversion to the Intersleek® system
- Biocide-free and high volume solids (72%) offers enhanced environmental profile*

** In comparison to our traditional biocidal antifouling products*

Product Information

Colour	BXA100 - White, BXA101 - Grey, BXA102 - Blue, BXA107 - Red, BXA109 - Black
Surface preparation	Must be applied over approved primer system and Intersleek® tiecoat (**Intersleek® 737 or 731**). Can be applied direct to most antifouling systems using Intersleek® linkcoat (**Intersleek® 717 or 7180**), and also to all intact Intersleek® finishes except Intersleek® 1100SR.
Volume solids	72% ± 2% (ISO 3233 : 1998)
Typical film thickness	150 microns dry (208 microns wet)
Hard dry	5 hours @ 25°C
Minimum application temperature	10°C
Method of application	Airless Spray, Brush

For each of our products the relevant Product Data Sheet, Material Safety Data Sheet and package labelling comprise an integral information system about the product in question. Copies of our Product Data Sheets and Material Safety Data Sheets are available on request or from our website.

Unless otherwise agreed in writing, all products supplied and technical advice or recommendations given are subject to the Conditions of Sale of our supplying company and the provisions of the relevant product data sheet.

LANION

In-Service Performance

PCC after 54 months trading in Eastern Mediterranean Sea

PCC after 54 months trading in Eastern Mediterranean Sea

PCC after 54 months trading in Eastern Mediterranean Sea

To find out more visit: www.international-marine.com

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Global Marine Coatings Headquarters
International Paint Singapore Pte Ltd, 21, Tuas South Street 3, Singapore 638023. Call: +65 6594 8800 Fax: +65 6594 8897

AkzoNobel

Intersleek® 1000

International

Biocide-free fouling control coating

LANION Technology

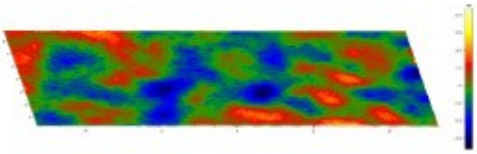
Intersleek® 1000 is the first fouling control coating to use a patented technology that incorporates bio-renewable raw material. It is comprised of a number of structurally similar long chain waxy sterols, which are responsible for the foul release properties of Intersleek® 1000.

This technology is also used in a number of other industries from the personal care and medical sectors where it is used to improve skin condition and healing rate to the industrial sector where it is used as a lubricant or to protect ferrous surfaces.

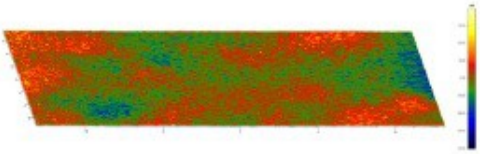
Low Hull Roughness

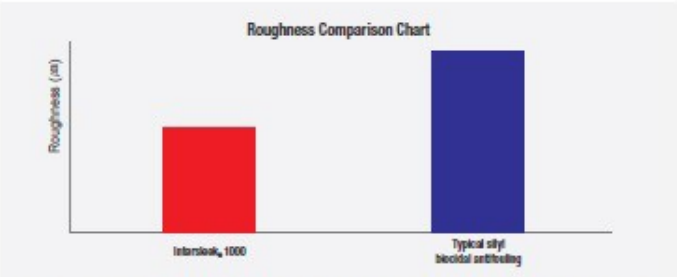
Low hull roughness and smooth films are key to reducing drag, and improving vessel efficiency.

Intersleek® 1000



Typical silyl biocidal antifouling





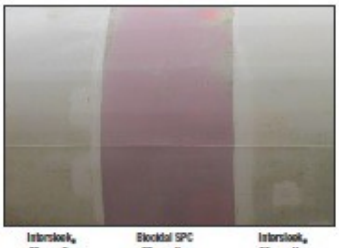
Using a technique called blue light interferometry accurately measures micro physical roughness of the coating. Intersleek® 1000 is significantly smoother than typical Silyl biocidal antifoulings.

In-Service Performance

Ro-Ro ferry operating in Australasian waters for 22 months.

Intersleek® Biocidal SPC

Container vessel after 37 months in-service, compared with biocidal self-polishing copolymer antifouling



Intersleek® 62 months | Biocidal SPC 27 months | Intersleek® 62 months

LNG after 62 months in-service compared with 27 months biocidal self-polishing copolymer antifouling, trading between Gulf waters and Japan

Unless otherwise agreed in writing, all products supplied and technical advice or recommendations given are subject to the Conditions of Sale of our supplying company and the provisions of the relevant product data sheet.

To find out more visit: www.international-marine.com

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Global Marine Coatings Headquarters
International Paint Singapore Pte Ltd, 21, Tuas South Street 3, Singapore 638023. Call: +65 6594 8800 Fax: +65 6594 8897

AkzoNobel

12.5 Vessel General Permit (VGP)

EPA encourages vessel operators to consider four stroke engines instead of two stroke engines for vessels generating wet exhaust that are covered under this permit. Use of a four stroke engine may minimize the discharge of pollutants to waters subject to this permit. Where vessels utilize two stroke engines, environmentally acceptable lubricants (as defined in Appendix A of this permit) must be used unless technologically infeasible. If technologically infeasible, the vessel owner/operator must document in their recordkeeping documentation why they are not using environmentally acceptable lubricants.

2.2.22 Sonar Dome Discharge

The water inside the sonar dome shall not be discharged into waters subject to this permit for maintenance purposes. Vessel operators should not use biofouling chemicals that are bioaccumulative for the exterior of sonar domes when non-bioaccumulative alternatives are available.

2.2.23 Underwater Ship Husbandry and Hull Fouling Discharges

Vessel owners/operators must minimize the transport of attached living organisms when traveling into U.S. waters from outside the U.S. economic zone or between Captain of the Port (COTP) zones. Management measures to minimize the transport of attached living organisms include selecting an appropriate anti-foulant management system and maintaining that system, in water inspection, cleaning, and maintenance of hulls, and thorough hull and other niche area cleaning when a vessel is in drydock.

Whenever possible, rigorous hull-cleaning activities should take place in drydock, or at a land-based facility where the removal of fouling organisms or spent antifouling coatings paint can be contained. If water-pressure-based systems are used to clean the hull and remove old paint, you must use facilities which treat the washwater prior to discharging to waters subject to this permit in order to remove the antifouling compound(s) and fouling growth from the washwater. If mechanical means (scraping, etc.) are used to clean the hull and remove old paint, the materials removed from the hull during that process must be collected and disposed of properly (e.g., onshore). These materials must not be allowed to contaminate nearby waters.

Vessel owners/operators who remove fouling organisms from hulls while the vessel is waterborne must employ methods that minimize the discharge of fouling organisms and antifouling hull coatings. These shall include:

- Use of appropriate cleaning brush or sponge rigidity to minimize removal of antifouling coatings and biocide releases into the water column;
- Limiting use of hard brushes and surfaces to the removal of hard growth; and
- When available and feasible, use of vacuum or other control technologies to minimize the release or dispersion of antifouling hull coatings and fouling organisms into the water column.

Vessel owners/operators must minimize the release of copper-based antifoulant paints during vessel cleaning operations. Cleaning of hull surfaces coated with copper-based antifoulant paint must not result in any visible cloud or plume of paint in the water; if a visible cloud or plume of

paint develops, shift to a softer brush or less abrasive cleaning technique. A plume or cloud of paint can be noted by the presence of discoloration or other visible indication that is distinguishable from hull growth or sediment removal. Production of a plume or cloud of sediment or hull growth is normal in some cases during vessel hull cleaning, but this plume or cloud must be substantially paint free (e.g., paint should not be clearly identifiable in the plume or cloud). When feasible, attempts must be made to minimize the release of fouling organisms and antifouling systems (including copper-based coatings) into surrounding waters.

Vessels that use copper-based anti-fouling paint must not clean the hull in copper-impaired waters within the first 365 days after paint application unless there is a significant visible indication of hull fouling. EPA maintains a list of copper-impaired waters on its webpage at www.epa.gov/npdes/vessels. If you clean before 365 days after paint application in copper-impaired waters, you must document in your recordkeeping documentation why this early cleaning was necessary.

2.2.24 Welldeck Discharges

Welldeck discharges that contain graywater from smaller vessels should not be discharged within waters subject to this permit except in cases of emergency. Welldeck discharges from washdown of gas turbine engines may not be discharged within waters subject to this permit. Welldeck discharges from equipment and vehicle washdowns must be free from garbage and must not contain oil in quantities that may be harmful as defined in 40 CFR Part 110.

2.2.25 Graywater Mixed with Sewage from Vessels

The commingled discharge of graywater mixed with sewage from vessels must comply with the effluent limits for graywater discharge in Part 2.2.15 or Part 5 of this permit if applicable. Though not a requirement of this permit, vessel owner/operators are advised that all discharges commingled with sewage must meet the requirements set forth in section 312 of the CWA and its implementing regulations found at 40 CFR Part 140 and 33 CFR Part 159. Hence, discharges of graywater mixed with sewage must meet both standards to be in compliance with the CWA.

2.2.26 Exhaust Gas Scrubber Washwater Discharge

Exhaust gas scrubber washwater discharge must not contain oil, including oily mixtures, in quantities that may be harmful as determined in accordance with 40 CFR Part 110. Sludge or residues generated in treating exhaust gas scrubber washwater discharge must not be discharged in waters subject to this permit and must be delivered ashore to adequate reception facilities.

In addition, owner/operators of vessels with exhaust gas cleaning systems that result in washwater discharges must meet the numeric effluent limits found in Part 2.2.26.1 and the monitoring requirements found in Part 2.2.26.2 this permit. These limits are consistent with the IMO washwater guidelines set forth in section 10 for Exhaust Gas Cleaning (EGC) Systems (resolution MEPC.184(59)). Among other things, these guidelines recommend the establishment of limits for concentrations of pollutants in the effluent.

12.6 Paint Approval Letters

Information from
Technical Sales Support

JOTUN

Information on underwater cleaning of SeaLion coatings

SeaLion is a "Fouling Release Coating" (FRC). These coatings are very flexible silicone coating types, with performance depending on their smooth surface. They are more vulnerable than self polishing antifouling systems toward scratches from for example under water cleaning. Several companies have developed cleaning methods especially suitable for FRC. Most of the equipment traditionally used for underwater cleaning is developed for more robust and less vulnerable self polishing antifouling systems. It is therefore important that under water cleaning work on FRC is specified with equipment designed for this use.

FRC is biocide free coatings, so slime will form on the surface and fouling will increase when the vessel is not moving. The release of fouling from the surface is depending on speed. During lay-up conditions slime fouling will prevent the formation of hard fouling. If slime fouling is removed the risk of hard fouling development will increase. Hard fouling is prone to damage the FRC coating during cleaning, regular inspection and early cleaning is therefore recommended to reduce the risk of such damages.

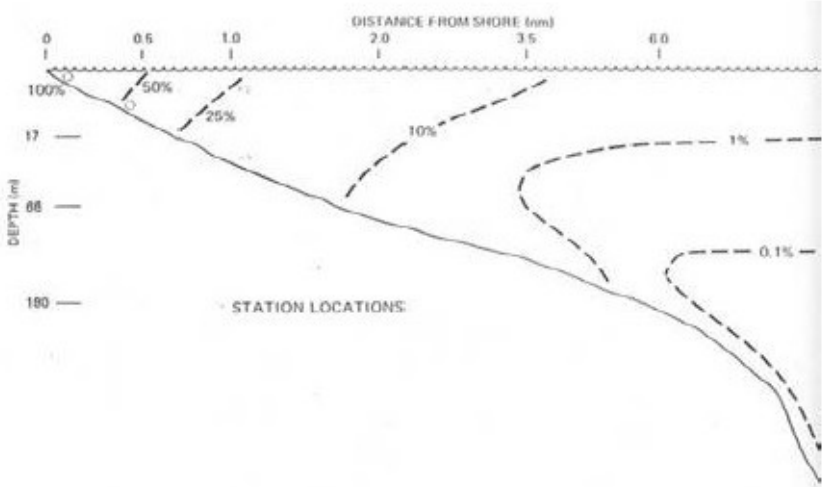

FIGURE 2: FOULING RATE DIMINUTION
Diminution of fouling rate with depth and distance from shore, South Florida. Dashed lines connect points of equal percentage of maximum dry weight per 450 cm^2 per year.

Figure 1: Example of fouling intensity decrease with distance from the coast

Document identification:	TSS-TI-029	Prepared by:	Helge Røed
Date:	01.03.2012	Approved by:	Tormod Svartdal
Version:	2	Number of pages	1 of 2

Typical conditions leading to increased drag from fouling are influenced by vessel operation, it is therefore important that these considerations are taken into planning of vessel operation. This will reduce the risk of unnecessary UW cleaning:

Conditions more exposed to development of fouling:

- Out of service (idle) at the wrong place – see figure 1. and 2.
- Long time outfitting
- Too low speed
- Too low voyage factor
- Too much trade in coastal areas

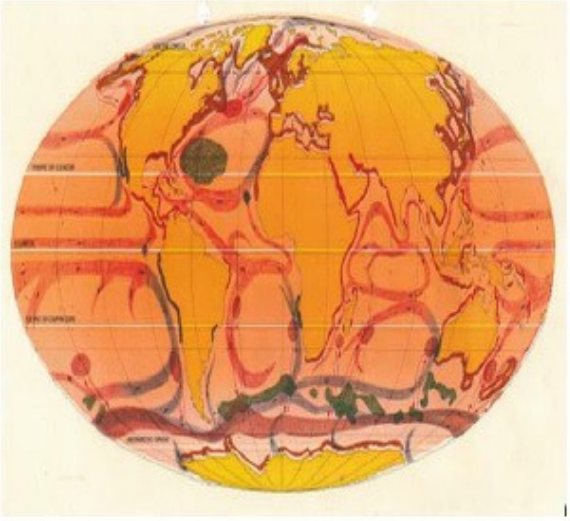

Figure 2: Types of fouling variations world wide

!!! Remember the preferred method for cleaning a hull with FRC coating is running the vessel at high speed for long enough time to self clean.

If necessary use mechanical methods for cleaning. Typically the methods available are based on under water jetting or soft brushes specially designed for cleaning of FRC.

Example of companies with suitable equipment and procedures for underwater cleaning of FRC:

- UMC International, UK - www.umc.co.uk
- Sub Sea Solution (Miami Divers) - www.subseasolutions.com
- Cleanhull AS, Norway - www.cleanhull.no
- Underwater Shipcare Pte Ltd, Singapore - www.uwsc.com.sg
- SCAMP Contractors Limited, UK - www.scampnetwork.com

Document identification:	TSS-TI-029	Prepared by:	Helge Røed
Date:	01.03.2012	Approved by:	Tormod Svartdal
Version:	2	Number of pages	2 of 2

International. Bulletin

WORLDWIDE MARINE BULLETIN – GENERAL NO 617 **25TH JANUARY 2010**

UNDERWATER CLEANING COMPANIES FOR INTERSLEEK COATED VESSELS

The Worldwide Marine Laboratories and Regional Technical teams have carried out an evaluation of underwater cleaning companies on Intersleek coated panels in accordance with internal testing procedures.

A document detailing the status of these companies is available via the link below, or the Worldwide Technical Operations SharePoint Site. The document contains the following information:

1) Companies and specified equipment that have successfully completed the panel testing procedure
2) Companies that have purchased equipment that has successfully completed the panel testing procedure
3) Map showing location of the above companies

http://mpva.coatings.intra/sites/bu/TOD/Intersleek%20Underwater%20Cleaning/Underwater%20Cleaning%20-%20Revision%201.pdf

The Worldwide Technical Operations SharePoint Site also contains general information on specific locations with regard to underwater inspections and cleaning.

http://mpva.coatings.intra/sites/bu/TOD/Lists/Underwater%20cleaning%20and%20inspection/AllItems.aspx

If you need any information regarding the above please contact:-

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Marine Technical Operations Manager
Tel: +44 (0)191 401 2590
mailto: colin.watson@akzonobel.com

Marine Coatings

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AkzoNobel

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AkzoNobel
Tomorrow's Answers Today

30th March 2010

To whom it may concern,

International Paint Intersleek® Underwater Cleaning Equipment Evaluation

Miami Divers has purchased the following equipment from UMC International plc. This equipment has successfully completed International Paint's Intersleek® underwater cleaning panel tests when operated by UMC International plc., using the following equipment and set-up parameters.

Company	Contact Details	Equipment Tested	Operational Bases
Miami Divers	2994 N Miami Ave Miami, FL 33127-3903, United States Tel: +1 305-571-5005 E-mail: office@miamidiver.com Web: www.miamidiver.com	Mini-pamper With Silicon Coating Cleaning Brush	Miami Curacao Panama California

International Paint recommends that the vessel operator using this cleaning company checks that the correct equipment and suitably trained personnel are provided.

Yours faithfully
For and on behalf of International Paint Ltd.

Colin Watson
Worldwide Marine Technical Operations Manager

It is advised that only the specific equipment under the same operating conditions that were evaluated in the testing process and operated by trained experienced personnel should be used when cleaning Intersleek® vessels.
Whilst every effort has been made to ensure that any of our recommended Underwater Cleaning Contractors ("UWCC") comply with all relevant protocols of International Paint Limited ("International") to the extent permitted by law, International accepts no responsibility whatsoever for any loss, damage or other liability arising from the UWCC's actions.

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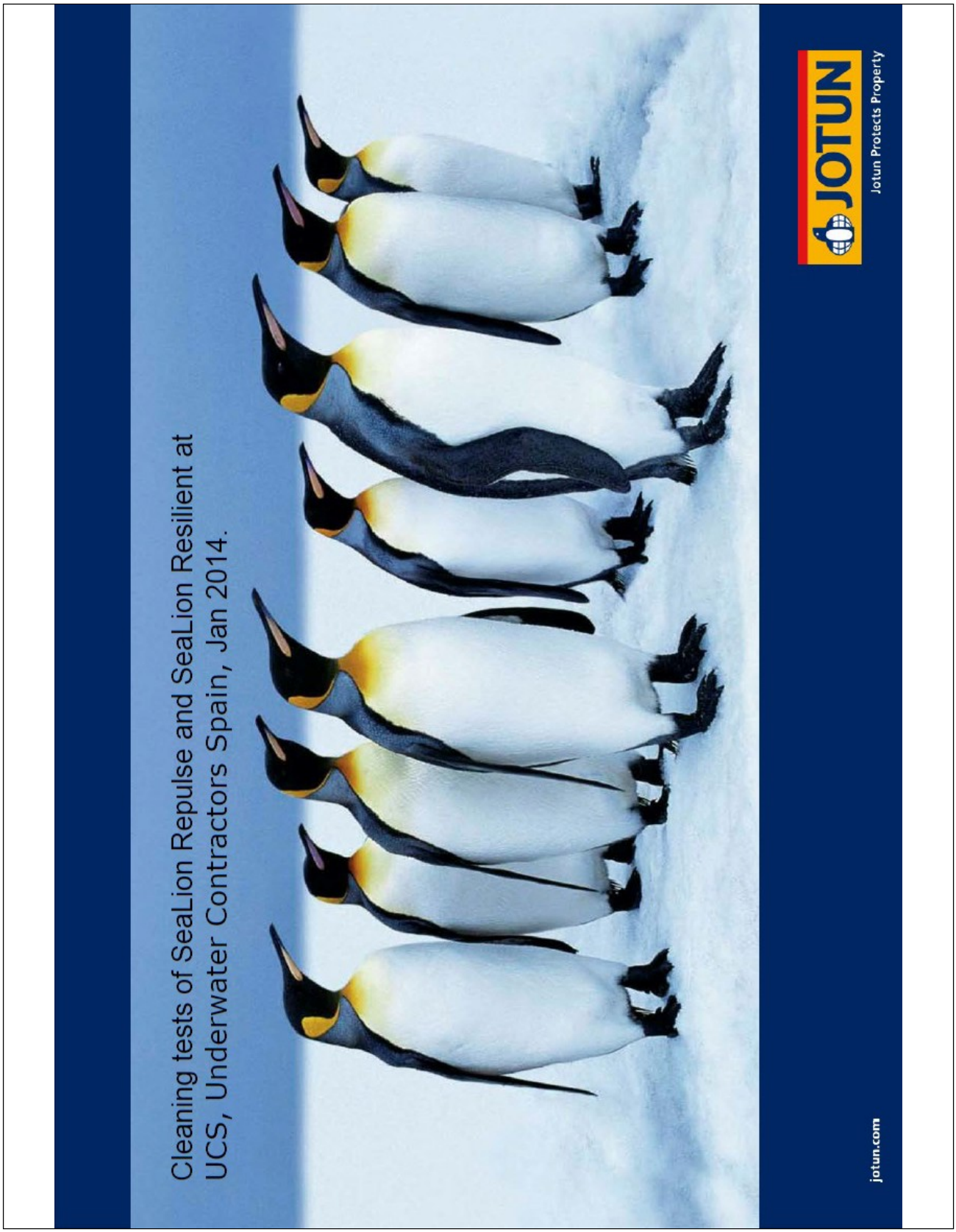
Registered Office 26th Floor, Portland House, Bressenden Place, London SW1E 5BG

International.

12.7 Paint Panel Test Report



Marine Coatings, R&D Antifouling Laboratory, Fouling Release Coatings (FRC)

UCS, about the company and connections to SGS

From Internet

- UCS (Underwater Contractors Spain) offer global solutions through associated partners in Scandinavia, Benelux, Canada and the United States.
- UCS offers ship repair, diving services and other resources.
- Subsea Global Solutions (SGS) requested help from UCS to test cleaning of Jotun coatings
- SGS, globally formed corporation consisting of Miami Diver LLC, Miami Diver Panama, Miami Diver International, Parker Diving Service LLC and Trident BV.
- SGS is able to mobilize quickly anywhere throughout the world

Marine Coatings, R&D Antifouling Laboratory, Fouling Release Coatings (FRC)

Position of immersed panels, Algeciras, Spain.

JOTUN

Confidential

3 Marit Seim / 29/11/2016

Marine Coatings, R&D Antifouling Laboratory, Fouling Release Coatings (FRC)

Position of immersed steel panels

- Panels faced north
- 5 meters below surface
- Steel panels are mounted on marine plywood
- Low fouling pressure
- Immersed mid October, 2013
- Removed Jan 27, 2014
- Planned reimmersed early feb 2014

JOTUN

4 Marit Seim / 29/11/2016 Confidential

Marine Coatings, R&D Antifouling Laboratory, Fouling Release Coatings (FRC)

Paw Jakobsen and Trident 5

- Paw Jakobsen showing Trident 5, the cleaning robot
- A diver runs the Trident 5 along the hull side.
- Different brushes can be used depending on type of coating and fouling.
- Trident 5 is able to collect 60 – 90 % of removed fouling depending on cleaning speed and other adjustments on the robot
- Because of slippery surface of FRC the wheels on Trident 5 are covered whit filt to achieve friction and grip to surface
- A new cleaning robot developed by UCS will improve both % reclamation, cleaning efficiency and soft handling of coating.
- Some of the improvements are belts (a more gentle touch to coating surface) and improved damper system

5 Marit Seim / 29/11/2016 Confidential

Marine Coatings, R&D Antifouling Laboratory, Fouling Release Coatings (FRC)

SeaLion Repulse out of water

- One panel is lost during immersion in sea
- Slime and algae
- Fouling level as expected on FRC
- Easy to remove fouling by hand

JOTUN

6 Marit Seim / 29/11/2016 Confidential

Marine Coatings, R&D Antifouling Laboratory, Fouling Release Coatings (FRC)

SeaLion Resilient out of water

- Slime and algae, easy to remove fouling by hand
- Same fouling level as seen for SeaLion Repulse

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Marine Coatings, R&D Antifouling Laboratory, Fouling Release Coatings (FRC)

Cleaning in test tank

- Diver start Trident 5 on the opposite wall of tank and adjust settings before cleaning testpanels
- Start Trident 5 before testpanels and run well over testpanels before stopping

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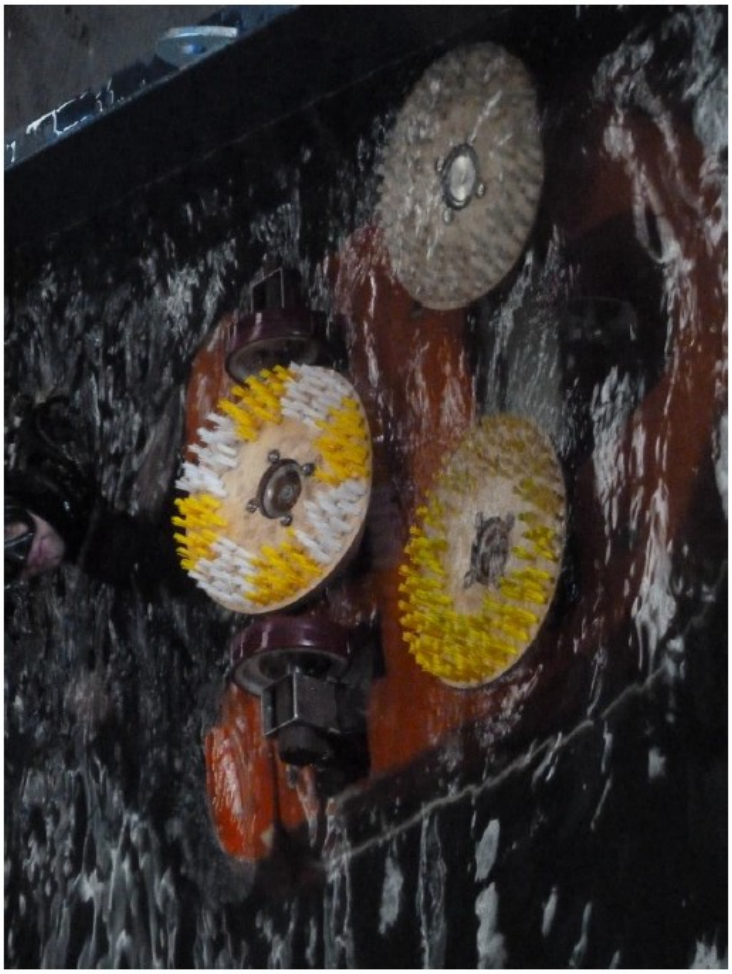
Marine Coatings, R&D Antifouling Laboratory, Fouling Release Coatings (FRC)

Testbrushes, SeaLion Resilient



Three different brushes were tested on SeaLion Resilient, soft, medium and hard.

Optimum brushes for FRC are made of polypropylene (PP) and have rounded ends.

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Marine Coatings, R&D Antifouling Laboratory, Fouling Release Coatings (FRC)

Testbrushes, SeaLion Repulse

Different types of silicon brushes (FRC brushes) were used on SeaLion Repulse

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Marine Coatings, R&D Antifouling Laboratory, Fouling Release Coatings (FRC)

Imprints for surface evaluation after cleaning of SeaLion Resilient

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Marine Coatings, R&D Antifouling Laboratory, Fouling Release Coatings (FRC)

Results, cleaning of SeaLion Repulse

- The coating was easy to clean although it had dried for one night
- No coating damage from cleaning

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Marine Coatings, R&D Antifouling Laboratory, Fouling Release Coatings (FRC)

Results, cleaning of SeaLion Repulse

- The coating was easy to clean although it had dried for one night
- No coating damage from cleaning

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Marine Coatings, R&D Antifouling Laboratory, Fouling Release Coatings (FRC)

Conclusions – Sum Up

- Low fouling pressure, only slime and algae on test panels
- Both SeaLion Repulse and SeaLion Resilient was easily cleaned by Trident 5.
- Coating had no visual damages after cleaning.

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Marine Coatings, R&D Antifouling Laboratory, Fouling Release Coatings (FRC)

Further work

UCS

- Exchange two panels with new uncleaned testpanels and
- reimmerse ASAP
- and follow up on fouling of panels

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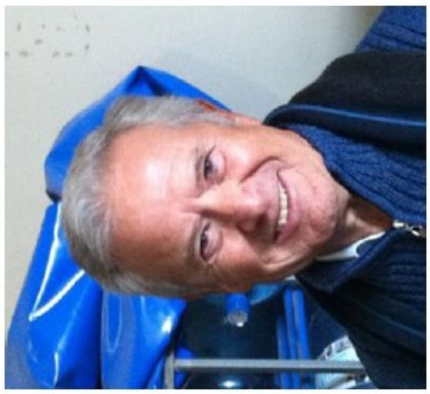
- Use surface profiler and check surface of imprints
- Evaluate the cleaned panels under microscope
- Maybe also reimmerse panels in Malaysia

Marine Coatings, R&D Antifouling Laboratory, Fouling Release Coatings (FRC)

People make it happen!



From Jotun Spain: Antonio Gómez, former technical manager.

Also Marcos Gómez Rupérez, Jotun Representative, joined in the cleaning experiments.

The team from UCS together with Jotun representatives Helge and Marit.

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Engineering & Public Works Department
Marine View Building, Juneau, AK 99801
907-586-0800

MEMORANDUM

DATE: **September 29, 2025**

TO: **CBJ Boards and Commissions**

FROM: **Denise Koch, Engineering and Public Works Director**

THROUGH: **CBJ Public Works and Facilities Committee**

SUBJECT: **DRAFT FY2027 CBJ Legislative Capital Priority List: Feedback Needed by October 24, 2025**

The Engineering & Public Works Department requests your input on the draft fiscal year (FY) 2027 Legislative Capital Priority list by October 24, 2025. Please e-mail your requests to denise.koch@juneau.gov

The Legislative Capital Priorities list is not a direct funding request. It is a way to articulate larger or more complicated funding needs for major projects to the Legislature, the federal delegation, and the public. This list represents the CBJ Assembly's large-scale capital priorities for a given year.

All CBJ boards and commissions are invited to provide input on their **top two projects** that they would like to see on the list. They can submit formal support or input on existing projects and project priorities and/or nominate a new project(s). Input may also include recommendations to ***remove*** an existing project from this list. The information that your board or commission provides will be considered by the Assembly as they prioritize the list for the next fiscal year.

New this year – Gold Creek Flume: The Gold Creek Flume is a 2,080 ft flood control channel in downtown Juneau constructed in the 1950s by the US Army Corps of Engineers (USACE). The flume has exceeded the design life for concrete structures of its kind, and the structural integrity of the flume is rapidly deteriorating, with significant scouring and erosion, exposed rebar, and evidence of failing channel walls. CBJ Engineering & Public Works and USACE have identified that the flume structure requires complete rehabilitation and other improvements to increase structural resilience and allow for long-term maintenance. However, Juneau has not experienced the dry and warm conditions required to effectively repair the concrete channel for several years. A concrete dividing wall must be installed to channel the water away from the repairs so that the project may be completed in phases.

$12M - $15M is needed for project construction. CBJ currently has funding to begin planning and preliminary design in FY26.

Removed this year – Aurora Harbor Drive Down Float: This project is fully funded and under design. No further appropriation is required.

Guidelines and recommendations for input:

- A prioritized list is only useful if there is the discipline to keep it manageable and relevant. Please keep that in mind when making your recommendations.
- Please limit your recommendations to nominating and/or endorsing only your *top two projects*. This will make your input more actionable for the Assembly.
- If your body would like to propose a new project, please use the Legislative Priorities Project Nomination form linked here: https://www.surveymonkey.com/r/HSTMPQV
- To be eligible, a project needs to provide a capital asset with a life of more than 20 years and have a total project cost of over $1 million (review the appendix of the draft list, 'Everything you wanted to know about the CBJ Legislative Capital Priorities' for more information).

FY2027

LEGISLATIVE CAPITAL PRIORITIES

DRAFT

CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

September 2025
DRAFT

Development Schedule

FY2027 Legislative Capital Priorities - City & Borough of Juneau

ACTION	FY27 TIMELINE
Introduce FY27 LCP process, timeline to PWFC. PWFC provide guidance to CBJ Boards & Commissions.	September 29, 2025
Prepare and distribute draft LCP to CBJ Boards, Commissions & advisory groups for review and input.	October 1, 2025
Input for new draft requested by:	October 24, 2025
Presentations to Boards and Commissions:	Planning Commission Introduction: October 14, 2025
Administrative Review & Compilation	October/November 2025
SRRC 2nd Review (with input and new projects)	October 28, 2025
Homework: Assembly Ranks Priorities	Due November 20, 2025
Assembly Review - Committee of the Whole	December 1, 2025
Assembly Introduction	December 15
Assembly Adoption	January 2026
Distribute Priorities	February-March 2026

Glacial Outburst Flood Response, Mitigation & Preparedness

AMOUNT REQUESTED: $25M

AMOUNT SECURED: $11.155M(CBJ)

TOTAL PROJECT COST: TBD

PROJECT DESCRIPTION & UPDATE:
The Mendenhall Valley has experienced multiple years of record glacial lake outburst floods (GLOF) from Suicide Basin. Scientists indicate that full basin releases, and continued catastrophic flooding, are likely. CBJ is considering all available short and long-term solutions to mitigate the potential widespread damage from future releases. While more information is required to determine the estimated costs of the selected solutions, the funding need will be significant and ongoing.

The August 2024 event released 16 billion gallons of water over a short period of time causing widespread flooding, evacuations and damage to 290 homes. The August 2025 event was even larger (higher lake stage and faster rate of release), however, the first installation of HESCO barriers (Phase 1 and 1A) as a short-term mitigation solution reduced the potential impact from over 750 homes to less than 50. However, the existing HESCO barriers sustained damage and will need significant repairs. CBJ is working with the USACE Advanced Measures program to assist with rebuilding and repairing Phase 1 and Phase 1A.Additional new sections of HESCO barriers will likely also be needed (e.g. Phase 2) to mitigate against larger future events. On September 22, 2025 the Assembly introduced an ordinance to transfer $5M in CIP funds to cover $1M for HESCO repairs and $4M for new sections of HESCO barriers. However, Phase 2 overall may cost as much as $19M (rough order of magnitude).

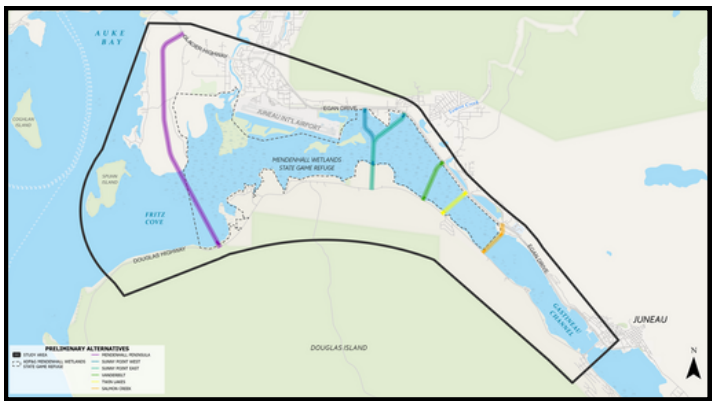
CBJ requested a USACE General Investigation (GI) to determine long-term, permanent mitigation solutions. This multi-year study requires a $3M for local match, which the Assembly appropriated in Sept 2024. Federal funding ($4.75M) to support the (GI) was approved in the American Relief Act of Dec 2024. USACE is aiming to commence construction for a mid-term solution as early as the end of 2027. That project will require a yet to be identified amount of local match.

TIMELINE: CBJ and our tribal and community partners are pursuing all available and applicable flood fighting and flood mitigation measures for implementation as soon as possible. This includes the project to update inundation mapping. Permanent solutions could require up to 7-10 years, however, the Alaska Congressional Delegation is working with USACE to expedite the process where possible.

WHO WILL MAINTAIN AND OPERATE? CBJ, possibly others depending on location & mitigation activity.

PROJECT GOAL: Public safety, disaster preparedness, affordable housing, economic development

Juneau Douglas North Crossing (JDNC)



AMOUNT REQUESTED: $3M

AMOUNT SECURED: $26.13M ($2M for PEL; $2.4M CBJ; $7M CDS; $16.454M USDOT RAISE)

ESTIMATED TOTAL PROJECT COST: $300M-$550M (Depending on alternative)

PROJECT DESCRIPTION & UPDATE:

The construction of a second crossing from mainland Juneau to Douglas Island has been a priority for the community since the early 1980s. This alternative access is crucial for enhancing safety and providing redundancy in the event the Juneau-Douglas bridge becomes impassable. Currently, if the bridge were to fail or become obstructed, Douglas Island residents would be stranded, emergency services would be hindered, and access to the local hospital would be cut off. Beyond safety, the proposed Juneau Douglas North Crossing will reduce travel times to North and West Douglas and improve access to larger tracts of land suitable for housing and development.

With support from Senator Murkowski, the City and Borough of Juneau (CBJ) received $7 million in Congressionally Directed Spending (CDS) for FY23. These funds are being utilized to perform analysis and public outreach efforts conducted through the Planning & Environmental Linkages (PEL) study. More information can be found at JDNorthCrossing.com.

Additionally, CBJ was awarded a 2023 USDOT RAISE grant of $16.454 million, which will fund the project through the design phase. Once a preferred alternative is selected, CBJ plans to apply for Federal Highway construction funding. The requested $3 million will be allocated for a funding gap caused by inflation that was not covered by previous funding sources.

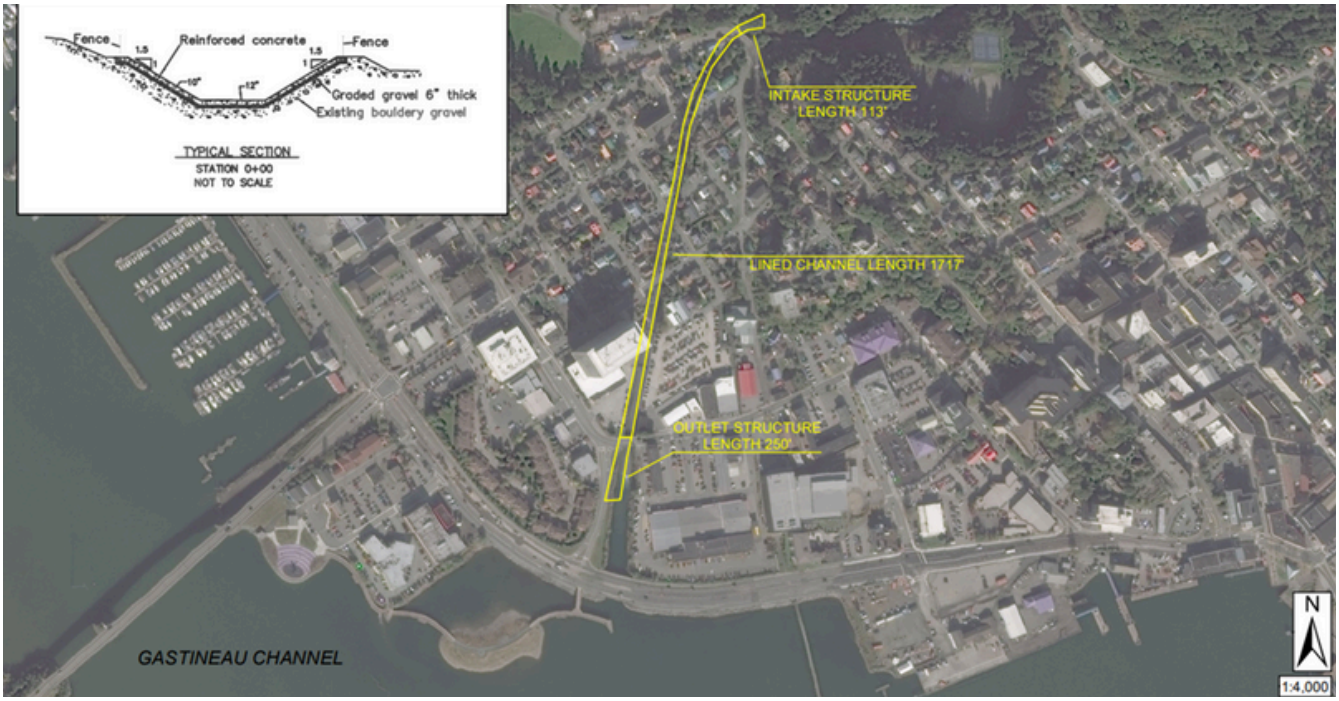
PUBLIC PROCESS: Through the PEL process, which was completed in July 2025, the Alaska Department of Transportation & Public Facilities (DOT&PF), in collaboration with DOWL, conducted numerous stakeholder and public meetings, surveys, and listening sessions to gather input on public sentiment and potential project alternatives. DOT&PF and CBJ are currently working together to award a consultant contract for the National Environmental Policy Act review phase, which will incorporate a comprehensive public engagement process.

TIMELINE: NEPA and Design phases are set to commence in fall 2025 and conclude in fall 2027.

WHO WILL MAINTAIN AND OPERATE? Alaska DOT&PF

PROJECT GOAL: Community safety, housing, and economic development.

Gold Creek Flood Control Rehabilitation



AMOUNT REQUESTED: $12-15M

TOTAL PROJECT COST: $16M

PROJECT DESCRIPTION & UPDATE: Constructed in the 1950's by the US Army Corps of Engineers (USACE), the Gold Creek Flume (a 2080ft flood control channel) has exceeded the design life for concrete structures of its kind. The structural integrity of the flume is rapidly deteriorating, with significant scouring and erosion, exposed rebar, and evidence of failing channel walls, including the wall adjacent to the Federal Building.

The Gold Creek flume requires a complete rehabilitation of the structure, including a full width structural overlay, reinforcements, and improvements to increase structural resilience and allow for long-term maintenance. Juneau has not experienced the dry and warm conditions required to effectively repair the concrete channel for several years. A concrete dividing wall must be installed to channel the water away from the repairs so that the project may be completed in phases when optimal weather conditions allow.

Without these repairs, the Juneau Federal Building and the surrounding support services are at risk of flooding and bank collapse due to the increased volume and frequency of high-velocity rain events.

TIMELINE: Due to the pressing need, CBJ will begin the planning and design work in FY26 with existing funding. Once funding is secured, project implementation could be completed within three years, but is heavily reliant on dry weather.

WHO WILL MAINTAIN AND OPERATE? CBJ

PROJECT GOAL: Flood mitigation, safety, security and resilience of Juneau's downtown core.

Mendenhall Wastewater Treatment Plant: Fats, Oil, Grease & Grit Removal

AMOUNT REQUESTED: $6.3M

TOTAL PROJECT COST: $6.3M

PROJECT DESCRIPTION & UPDATE:
Fats, Oils and Grease (FOG) requires special treatment, typically prior to the treatment basin. The foam from FOG degrades plant performance at the Mendenhall Treatment Plant. This project would install a grease collection vessel with a skimmer and vortex vessel to control incoming grease and finer grit. The Mendenhall Treatment Plant is currently operating under a Compliance Order by Consent with the State due to permit violations. Removing FOG before it disrupts the treatment process will assure more consistent plant performance. This project will design and construct the FOG and grit removal equipment.

TIMELINE: Once funding is secured, design and construction within 30 months.

WHO WILL MAINTAIN AND OPERATE? CBJ

PROJECT GOAL: Permit compliance, reduce treatment costs, and extend the useful life of the plant.

Telephone Hill Redevelopment

AMOUNT REQUESTED: $2M

AMOUNT SECURED: $5.5M

TOTAL PROJECT COST: ($10M placeholder)

PROJECT DESCRIPTION & UPDATE: The project will prepare roughly three acres of CBJ owned property in downtown Juneau. This acreage includes the parking garage, park, switchback trail, and Transit Center. We anticipate developing 1.4 acres of that area for housing. This project will include removal of hazardous materials and environmental cleanup, demolition of existing structures, site preparation, utility and infrastructure upgrades, and re-subdivision. The outcome of this project will be independent buildable lots which are sized appropriately for redevelopment with infrastructure that can be utilized to maximize the density and the property will be redeveloped to meet the goals of the Assembly and the state capital.

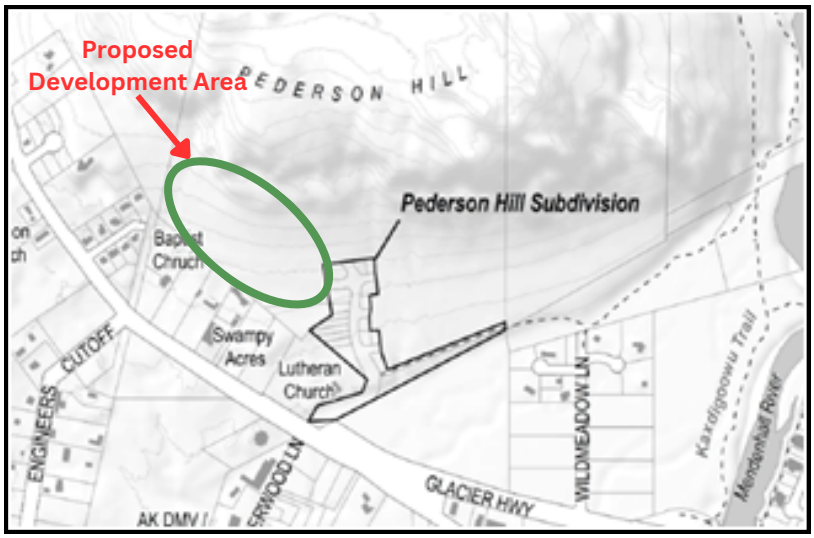
PUBLIC PROCESS: Since the third quarter of 2023, the CBJ has held public meetings to encourage community dialogue regarding this project, completed an online community survey, and funded consultants to complete a Telephone Hill Place Guide that provides direction on redevelopment of the property. The CBJ Assembly will continue to provide the public opportunities to comment on this project. There will be opportunities for public comment to the Planning Commission and to the Assembly during as this project moves forward.

TIMELINE: An inventory of utilities, property and hazards is currently underway. The Telephone Hill Place Guide which provides direction on redevelopment of the property is complete. The property is now partially vacated and CBJ is working to inventory hazardous wastes. Demolition of existing structures is scheduled to begin in the first quarter of 2026. Request for proposals from redevelopment partners and proposals will likely begin once the hazardous wastes removal and demolition plan is approved.

WHO WILL MAINTAIN AND OPERATE? CBJ

PROJECT GOAL: Redevelop over 1.4 acres of high-density zoned property in the center of downtown Juneau for the highest use, including housing.

Pederson Hill Housing Development



AMOUNT REQUESTED: $1M

AMOUNT SECURED: $1.5M (1% Voter-Approved Sales Tax)

TOTAL PROJECT COST: $5M-$15M

PROJECT DESCRIPTION & UPDATE: The requested funding will provide for the construction of a secondary access road to the Pederson Hill Subdivision. The Tlingit Haida Regional Housing Authority (THRHA) is activity developing the remainder of Phase 1B and 1C. Any additional development will require a second access route for public safety and emergency response. This second access is an expensive requirement which needs to be funded before any future housing units can be planned on this CBJ property. This second access will make available up to 26 acres of CBJ owned property, which is zoned for 10 housing units per acre. Once this road is constructed the land will be available for development and sold for housing. The Assembly has also expressed interest in providing land at this location to the US Coast Guard at this location for housing.

PUBLIC PROCESS:
There will be an opportunity for public comment to the Planning Commission during planning processes and public comment to the Assembly during all phases of development. The Assembly will encourage comments from the local workforce, housing providers and stakeholders.

TIMELINE: Design and alignment study are underway. A draft alignment is expected in September 2025. Work on a preliminary subdivision plat will begin in spring 2026.

WHO WILL MAINTAIN AND OPERATE? CBJ, USCG, private homeowners and developers could all have opportunities on the 26 acres.

PROJECT GOAL: Housing. Increase workforce and market rate housing, partner with the USCG to provide housing for service members, public private partnerships that create housing, large tracks and individual lots for housing.

Bartlett Emergency Department (ED) Renovation/Expansion

AMOUNT REQUESTED: $2M

AMOUNT SECURED: $8M ($4M BRH Reserves, $4M CDS)

TOTAL PROJECT COST: $10M-$12M

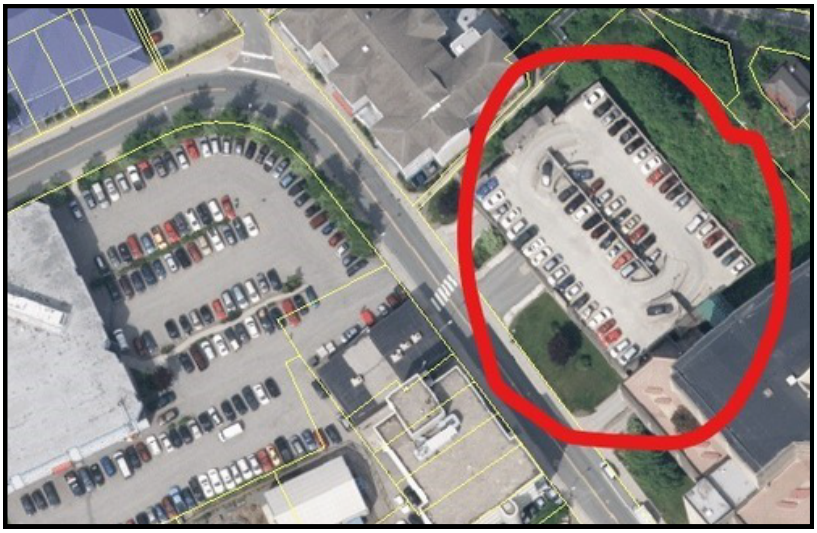
PROJECT DESCRIPTION & UPDATE:
This project will expand the footprint of the existing ED, and renovate existing ED spaces, to improve patient access, patient flow, and patient and employee safety. Renovations will increase patient privacy, while mechanical and electrical upgrades will allow for new negative pressure exam space. Patients will have access to safer care, while improved space adjacencies will help ensure patients get to the appropriate level of care in a more efficient and timely manner. With other recent improvements in Bartlett's healthcare portfolio, including expanded behavioral health services and the additional of post-acute services, this project will improve medical care to the community across the healthcare continuum.

This project is currently in the 65% design phase. A Construction Manager at Risk (CMAR) contract has been awarded to Cornerstone Construction. Bartlett has approximately $4M set aside for this project, and Senator Murkowski added $4M as Congressionally Designated Spending in the approved FY24 appropriation bill.

TIMELINE: Once funding is secured, design and construction completed within 18-24 months.
WHO WILL MAINTAIN AND OPERATE? Bartlett Regional Hospital

PROJECT GOAL: Improve access to, and the quality of emergency medical care in the community.

Aak'w Village District Parking
(Formerly N. SOB)



AMOUNT REQUESTED: $38M

AMOUNT SECURED: $10M ($5M SOA; $5M CBJ Voter Approved Sales Tax)

TOTAL PROJECT COST: $50M+

PROJECT DESCRIPTION & UPDATE: Building a garage with greater capacity would expand parking for State employees, the Legislature, and the Aak'w Village District, freeing up current parking lots for development and infill. This parking garage provides parking for the State of Alaska, just North of the State Office Building. The current garage was constructed in 1974 and in need of major repairs. The initial idea was to expand the garage to almost twice the size by adding several additional floors. However, the structural investigation found the structural members to be significantly smaller than shown in the available construction plans. Options to increase parking will be more expensive than originally projected.

PUBLIC PROCESS: This project was designated as a CBJ Legislative Priority in 2021, 2022, 2023 and 2024.

TIMELINE: Architect provided feasibility and cost estimate.

WHO WILL MAINTAIN AND OPERATE? TBD

PROJECT GOAL: State/Legislative parking, Aak'w Village District infill development.

Juneau School District-Wide Security & Safety Upgrades

AMOUNT REQUESTED: $2M

TOTAL PROJECT COST: $2M

PROJECT DESCRIPTION & UPDATE:
This project will upgrade security cameras and camera monitoring systems, secure entryways, brush clearing, perimeter lighting, emergency egress lighting, back-up generators, and secured property. This project will increase the Juneau School District's security presence, which will help to deter vandalism, theft, and other criminal activities. The security and safety of our staff, students, and community is our main priority, and with this project upgrade, the District feels that it is taking the necessary steps to bring our facilities into the technology age. The Security Upgrade project is oriented around securing our entry ways and school sites by adding systems that would slow down or deter a person from entering such as in the case of a active shooter or critical incident.

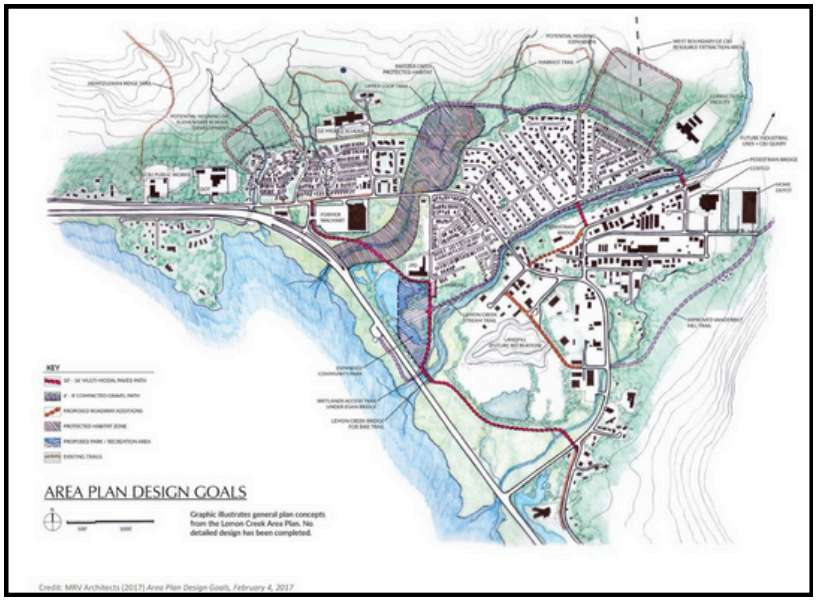
PUBLIC PROCESS: Begin design within 3 months of available funding. 35% review (and 3% expenditure) 4 months from start; 65% review (and 5% expenditure); 9 months from start; construction begins 14 months from start (25% expenditure); construction completed 28 months from start (100% expenditure).

TIMELINE: A district-wide assessment was completed in January 2025. Staff training and procedures have already been implemented as a result of the security assessment.Once funding is secured, design and implementation would roll out over 18-36 months depending on facility recommendations.

WHO WILL MAINTAIN AND OPERATE? Juneau School District

PROJECT GOAL: Security and safety of district facilities.

Lemon Creek Multimodal Path



AMOUNT REQUESTED: $12M

AMOUNT SECURED: $2.23M

TOTAL PROJECT COST: $15M

PROJECT DESCRIPTION & UPDATE:
The requested funding would construct a multimodal path in Lemon Creek that connects residents to schools, shopping, jobs and services. CBJ received a USDOT Reconnecting Communities planning grant for FY24 that will include robust public engagement, route selection and preliminary design. The Assembly has appropriated $1.15M to advance design of the project as well as potential match for construction grant opportunities. The full route would connect the Glacier Highway / Vanderbilt intersection to Alaway Avenue and then on to Glacier Highway (near U-Haul). This would provide direct access to the two largest mobile home parks in the community.
CBJ also received FHWA FY23 Safe Streets for All (SS4A) supplemental planning funds for additional community planning and analysis of pedestrian, cyclist and motorist safety, and submitted an application for US EPA Community Change Grant funding to complete engineering, environmental review and construction of the first two phases of the project.

PUBLIC PROCESS: This project has been identified as a priority by the 2017 Lemon Creek Area Plan adopted into the Comprehensive Plan. Designated as the number one Legislative Capital Priority in 2021 and 2022, and the 8th priority in 2023 and 2024.

TIMELINE: FY25 (ongoing) route analysis, public outreach, planning and preliminary design. Once full funding is secured, 18-24 months for design and construction.

WHO WILL MAINTAIN AND OPERATE? CBJ

PROJECT GOAL: Advance long term goal of a new non-motorized route, connect Lemon Creek to recreational opportunities in the wetlands.

Statter Harbor Wave Attenuator

(Formerly "Auke Bay New Breakwater")

AMOUNT REQUESTED: $5M

AMOUNT SECURED: $2.2M (CBJ commitment)

TOTAL PROJECT COST: TBD ($100M placeholder)

PROJECT DESCRIPTION & UPDATE:
The requested funding would allow for the preliminary planning and design phases, including permit acquisition. This opens the opportunity for the construction of a new breakwater at the end of Statter Harbor. The current facility has achieved it's useful life and needs to be replaced. The new facility would allow for more moorage and provide economic stimulus to the community. CBJ would be the local sponsor for the US Army Corps of Engineers, who is federally responsible for the feasibility analysis, design and construction of the breakwater. Local match is required under federal law and is available through Docks & Harbors. Senator Murkowski has added $600K as Congressionally Designated Spending in the FY25 appropriation bill and is awaiting Congressional action. The US Army Corps of Engineering feasibility study kicked off in September 2024. This will be a three-to-four-year planning effort which requires federal funding each year. Senator Murkowski has submitted a $600K CDS in the FY26 Budget to continue supporting the project. CBJ Docks & Harbors has sufficient in-house match

PUBLIC PROCESS: Identified as a Legislative Priority for FY2023, FY2024, FY2025 & FY2026.

T**IMELINE:** Once funding is secured, 3 year design and construction timeline.

WHO WILL MAINTAIN AND OPERATE? CBJ

PROJECT GOAL: Increase moorage and recapitalization of aging infrastructure.

Shore Power at Dock 16B

AMOUNT REQUESTED: $20M

AMOUNT SECURED: $13M Marine Passenger Fees

TOTAL PROJECT COST: $60-70M for two docks.

PROJECT DESCRIPTION & UPDATE: The project would fund construction of the electrical infrastructure (substation, feeder cables, batteries, etc.) and shore power infrastructure (submarine cables, power connection floats, cable positioning devices) at the two CBJ-owned cruise ship docks. The electrical infrastructure could also service ground transportation as it transitions to electric vehicles. The project benefits the community by improving air quality and reducing noise pollution from cruise ships that connect to shore power while hoteling in port, and by upgrading the electrical infrastructure at Juneau's waterfront. The elimination of ship GHG emissions furthers the community's climate action goals of switching from fossil fuels to renewable hydropower as well as enables the cruise lines to better meet their sustainability goals. The project benefits the tourism sector of the community. While the full project includes two docks, the amount requested this year with the amount secured would fund the completion of one dock. It is unlikely that federal grant funding will be available for this project in the near future. CBJ has entered a MOA with AELP to design this system. AELP has contracted with an electrical engineering company from Pasadena, CA in August 2025.

TIMELINE: Preconstruction phase to be completed by 2025. Construction phase to be completed by 2027 pending availability of funding.

WHO WILL MAINTAIN AND OPERATE? CBJ

PROJECT GOAL: Reduce emissions, improve air quality and economic development.

Eaglecrest Employee & Tourism Workforce Housing

AMOUNT REQUESTED: $12M

TOTAL PROJECT COST: $12M

PROJECT DESCRIPTION & UPDATE:
The project would develop onsite workforce housing to assist with recruitment and retention of summer and winter employees. Possibilities will exist for other summer tourism or service industry workers to be housed. As the labor market tightens and finding entry level service and ski area workers becomes increasingly difficult, the availability of housing will be critical to meeting our staffing needs. Affordable workforce housing located at Eaglecrest will help to attract the next generation of residents to Juneau and support the growth of the winter tourism economy so that it can support the conversion of summer tourism and service industry workers into more stable year around employment opportunities.

Northwind Architects was contracted to develop the designs and cost estimates for a 96 bedroom modular workforce housing unit that could be located and expanded upon at Eaglecrest. Site specific engineering will need to be performed using the current preliminary engineered design for the modular dormitory as a jumping off point.

T**IMELINE:** Once funding is secured, 18-24 month design and construction timeline.

WHO WILL MAINTAIN AND OPERATE? Eaglecrest Ski Area

PROJECT GOAL: Increase recruitment and retention while helping to manage tourism growth in Juneau.

Capital Civic Center

AMOUNT REQUESTED: $10M

AMOUNT SECURED: $24.5M

TOTAL PROJECT COST: $60M

PROJECT DESCRIPTION & UPDATE:
The Capital Civic Center will function as a multi-use civic and conference facility to enhance Juneau's prominence as a regional center for art, culture, and community engagement while attracting broad-based use and pride in Alaska's Capital City. Completion of the Capital Civic Center is envisioned in four phases. This project addresses Phases II only.

The completed Capital Civic Center consists of two phases. The first phase, completed in late 2023, renovated the existing ballrooms and installed new sound and HVAC systems. Phase II creates a stand-alone wing (joined to Centennial Hall by a shared lobby) that includes a community hall; a 299-seat theater with raked seating, state-of-the art lighting and professional acoustics; a multi-use event space; and an art gallery.
Demolition of Juneau's former armory will offer additional parking and improved access.
The new facility will serve as an expanded center for emergencies, including shelter in the event of a natural disaster. In January 2025 the Assembly agreed to provide up to $1M to The Partnership to advance the project to 95% design. CBJ entered into a Memorandum of Agreement with The Partnership in June 2025 to establish roles and responsibilities during the design process, as well as to effectively manage CBJ's financial contribution.

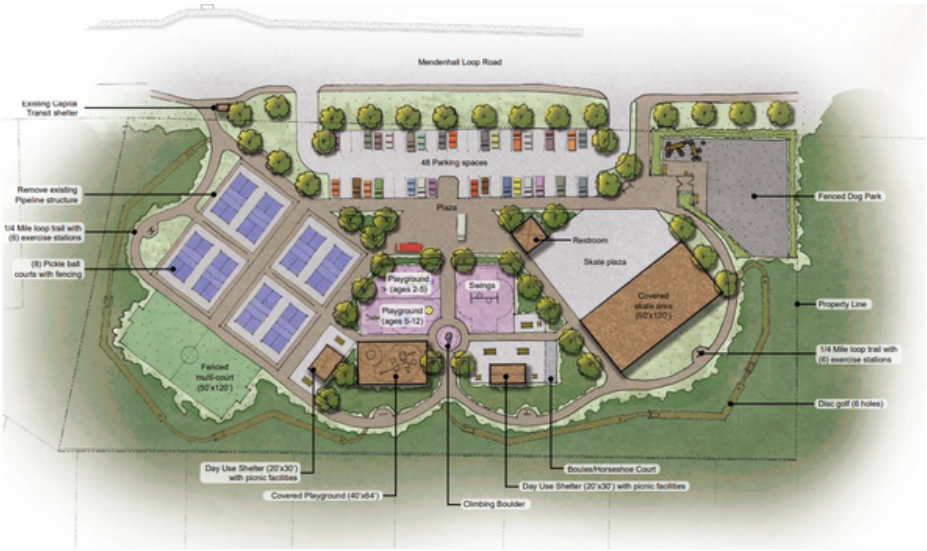
PUBLIC PROCESS: Conceptual studies and outreach for Centennial Hall were performed in June of 2019. Upgrades to the ballroom at Centennial Hall were completed in August 2023. The performing arts elements (new JACC) also received public input throughout the development of design for a standalone facility. Merging the two facilities into a large, single, facility was presented to the Assembly in 2020. The Assembly funded conceptual design in late 2021, appropriating $2M to advance the project. Northwind and JYW Architects teamed up for design and worked with stakeholders to consolidate space and find design efficiencies, resulting in the newly proposed phased approach. Further parking impact analysis has been recommended as the latest plans include a loss of 49+ parking spaces.

TIMELINE: Once funding is secured, 3-3.5 year design and construction timeline.

WHO WILL MAINTAIN AND OPERATE? CBJ

PROJECT GOAL: Support convention, arts and visitor economy.

Jackie Renninger Park Development & Pipeline Skatepark Improvements



AMOUNT REQUESTED: $15M

AMOUNT SECURED: $1.075M

TOTAL PROJECT COST: $16M

PROJECT DESCRIPTION & UPDATE: This project will implement the Jackie Renninger Memorial Park Master Plan, completed in early 2025, to expand access to outdoor recreation and open space for one of Juneau's most underserved and densely populated areas of town. The 4.6-acre site currently includes the Pipeline Skate Park and a small public restroom, but lacks a full neighborhood park. This project will change that by providing safe, convenient access to high-quality amenities, including an upgraded covered skate park and skate plaza, dedicated pickleball courts, Juneau's first covered playground, day-use shelters, and more–bringing much-needed community resources to the Mendenhall Valley.

PUBLIC PROCESS: In 2022, the Assembly appropriated funding to develop a master plan for Jackie Renninger Park, which was completed in early 2025 following multiple public and user group meetings. This process resulted in a conceptual design that is now being advanced into 35% design documents. As part of this phase, the contractor will continue to hold public meetings to gather input and share progress as the designs develop.

TIMELINE: Once funding is secured, within 2 years of start date.

WHO WILL MAINTAIN AND OPERATE? CBJ

PROJECT GOAL: To provide the first dedicated community park for the Mendenhall Valley that offers diverse amenities for multiple user groups of all ages in one of Juneau's most underserved neighborhoods.

Waterfront Juneau Douglas City Museum

AMOUNT REQUESTED: $2M

AMOUNT SECURED: $2M (CBJ Voter Approved Sales Tax)

TOTAL PROJECT COST: $12M

PROJECT DESCRIPTION & UPDATE:
This project will construct a new museum on the waterfront to house art and other local collections. The museum will leverage its waterfront location to become a destination for visitors and locals. It will also free up the current museum adjacent to the State Capitol for expansion of the Capitol campus.

PUBLIC PROCESS: Identified as Legislative Priority in FY2023 & FY2024.

T**IMELINE:** Once funding is secured, 2-3 year design and construction timeline.

WHO WILL MAINTAIN AND OPERATE? CBJ

PROJECT GOAL: Grow the arts in Juneau and expand the Capitol campus.

West Douglas Extension

AMOUNT REQUESTED: $4M

TOTAL PROJECT COST: $7.5M

PROJECT DESCRIPTION & UPDATE:
This project will continue construction of the gravel surface pioneer road from near the current end of the Douglas Highway to Hilda Point. The road will promote development to support the future homeporting of the USCG icebreaker, increase opportunities for recreational access to public lands, and enable closer access to new growth development areas that are identified in the CBJ Comprehensive Plan. Road access will assist land owners in their on-the-ground investigations required for formulating future development plans.

PUBLIC PROCESS: West Douglas Roadway corridor alignment has been approved by Assembly and Planning Commission. This project has been identified as priority 'New Growth Area' by CBJ Comprehensive Plan and West Douglas Conceptual Plan.

T**IMELINE:** Once funding is secured, 18-24 month design and construction timeline.

WHO WILL MAINTAIN AND OPERATE? CBJ

PROJECT GOAL: Support long-term development.

North Douglas Boat Ramp Expansion

AMOUNT REQUESTED: $250,000
TOTAL PROJECT COST: $30M

PROJECT DESCRIPTION & UPDATE:
Requested funding would accomplish the first steps to expanding the North Douglas Launch Ramp Facility. These include planning, research and permitting to initiate the project.

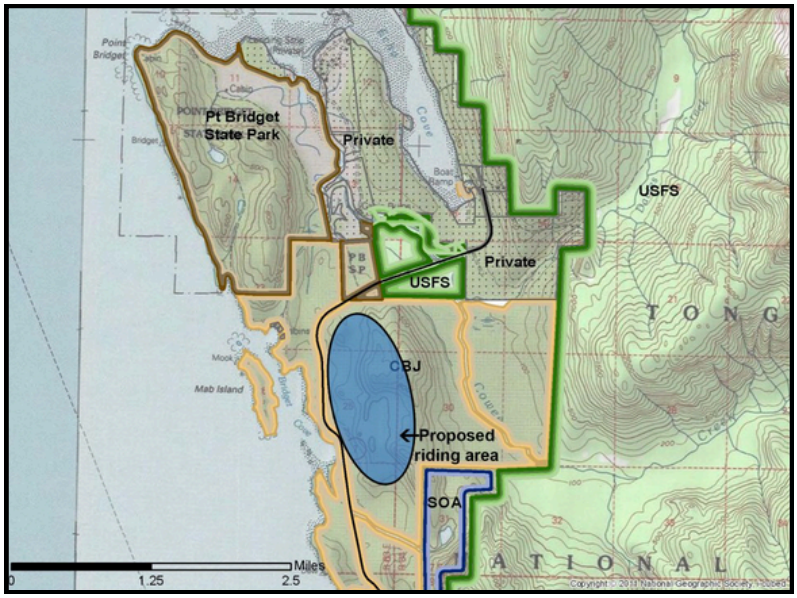
PUBLIC PROCESS: Docks and Harbors has solicited public input on the concept.

T**IMELINE:** Once funding is secured, 18-24 month design and construction timeline.

WHO WILL MAINTAIN AND OPERATE? CBJ

PROJECT GOAL: Improve safety and expand boating access & transportation.

Off-Road Vehicle (ORV) Park Development



AMOUNT REQUESTED: $4.75M

AMOUNT SECURED: $1.25M

TOTAL PROJECT COST: $6M

PROJECT DESCRIPTION & UPDATE: This project addresses longstanding unmet demand for sustainable off-road vehicle (ORV) recreation by creating a dedicated venue for riding and training opportunities, reducing impacts on sensitive habitats, and minimizing user conflicts. As the second summer of construction wraps up in fall 2025, completed work includes the parking lot and approximately three of the planned five miles of trail that have been cleared and grubbed. By the end of the season, about three-quarters of a mile of trail is expected to be graveled and rideable.

PUBLIC PROCESS: A multi-year public process has been completed and design, permitting, and development of the 35-Mile ORV Riding Park is underway. This process includes stakeholders such as the Juneau Off-Road Association (JORA), Trail Mix, Inc., conservation organizations, and citizen advisory boards. The Planning Commission approved a conditional use permit for the facility in 2023.

TIMELINE: Phase one of construction is anticipated to take 3-4 years, with the second summer of work scheduled to wrap up in fall 2025.

WHO WILL MAINTAIN AND OPERATE? CBJ

PROJECT GOAL: To meet growing demand for off-road vehicle recreation, avoid user conflicts, reduce ongoing damage to sensitive resources and landscapes, and stimulate economic activity by creating new opportunities for outdoor recreation that do not currently exist in Juneau.

APPENDIX

Everything You Always Wanted to Know About the CBJ Legislative Capital Priorities List

by Katie Koester, City Manager

Q: What are the Legislative Capital Priorities?

A: The CBJ Legislative Capital Priorities (LCP) is a document that lays out community priorities for capital projects, including a project description, rationale for why it's needed (benefits to the community), description of progress to date (money raised, plans drawn up, etc.), and estimated total cost. For CBJ projects, additional information is provided on the timeline for completion. Facilities that have alternative funding streams are not included on this list: for example, the Airport, or projects that can be funded through Passenger Fees. See graphic on the following page for a diagram of how the different plans and lists relate to each other.

NOTE: Inclusion on the Legislative Capital Priorities is not a funding request. From CBJ's standpoint, it is a mechanism to prioritize projects and raise awareness of a needed project to increase chances of funding from various sources. Nominating a project for inclusion in the LCP should not be thought of as a request for municipal funding.

Q: Are the "legislative priorities" the same as the Capital Improvement Plan?

A: No, they are a prioritized list of projects that are pulled from various CBJ plans, including the Comprehensive Plan, Area Plans, and the Six-year Capital Improvement Plan. The Legislative Priorities are "short list" of projects on which CBJ will focus particular attention during the upcoming legislative session and with the federal delegation. (The goal is to get at least partial funding for a project included in the state capital budget or federal earmark.)

CBJ's "short list" of Legislative Priorities should have a limited number of projects on it. An attempt is made to phase projects so that funding requests range in size depending on available funds and objective. For the State Legislature, project descriptions are inputted into an online system lawmakers use to prioritize funding requests (CAPSIS). These are due in February. Federal priorities are also solicited by the delegation through an online platform. The Assembly will designate projects that have a nexus with federal funding opportunities for submission to the delegation through the Legislative Priority process.

Q: What is a capital project?

A: A capital project is a major, non-recurring budget item that results in a fixed asset (like a building, road, parcel of land, or major piece of equipment) with a useful life of 20-50 years. Designing and building a new library is a capital project. Planning and implementing an after-school reading program is not a capital project. Most of the projects in the LCP are CBJ projects, but some are community projects spearheaded by a non-profit organization or state or federal agency (e.g., Alaska DOT). To be included on the LCP projects must have an estimated total project cost of at least $1,000,000.

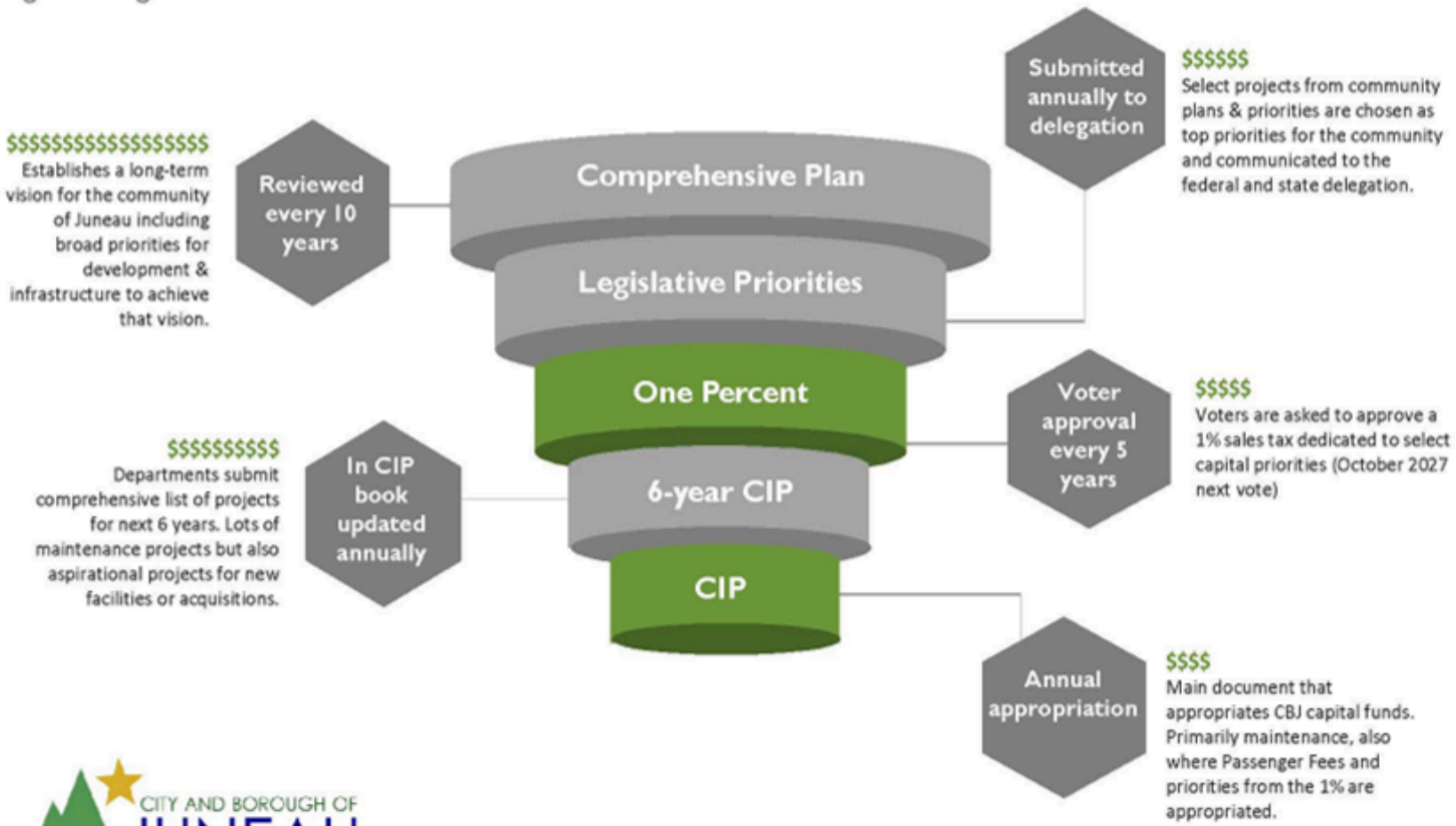
Q: Is the Legislative Capital Priorities list just "wish list," and if so, what's the point of writing one?

A: The Legislative Priorities list does include projects that are aspirational, and as such may have items that are so large or expensive, that it is hard to imagine completion in the near future. However, articulating these priorities helps guide the Assembly and the community through small steps that lead up to the larger goal and advocate towards a common goal. It will take time and discipline to keep the list an accurate and living document.

There are several reasons to include longer term projects on the Legislative Priority List, even when it seems like little progress is being made in accomplishing projects: 1) It helps focus attention on community needs. 2) It helps groups raise money for projects if the sponsor can say that the project has been identified as a community priority in the CIP. 3) Typically the more priority a municipality places on a project, the greater the chances it for a legislative appropriation.

CBJ Lists, Plans and Priorities

How do the many CBJ lists of projects, plans and priorities relate to each other? This diagram shows how each document informs the one bellow it. The dollar signs represents the general volume of funds needed, but only the green rings are lists that come with the commitment of actual dollars.



CITY AND BOROUGH OF JUNEAU
ALASKA'S CAPITAL CITY

Port of Juneau

155 Heritage Way • Juneau, AK 99801
(907) 586-0292 Phone • (907) 586-0295 Fax

From: Carl Uchytil
Port Director

To: Docks & Harbor Board

Via: Docks & Harbor Operations-Planning Committee

Date: March 19th, 2025

Re: SEADROME PROPERTY APPRAISAL

---

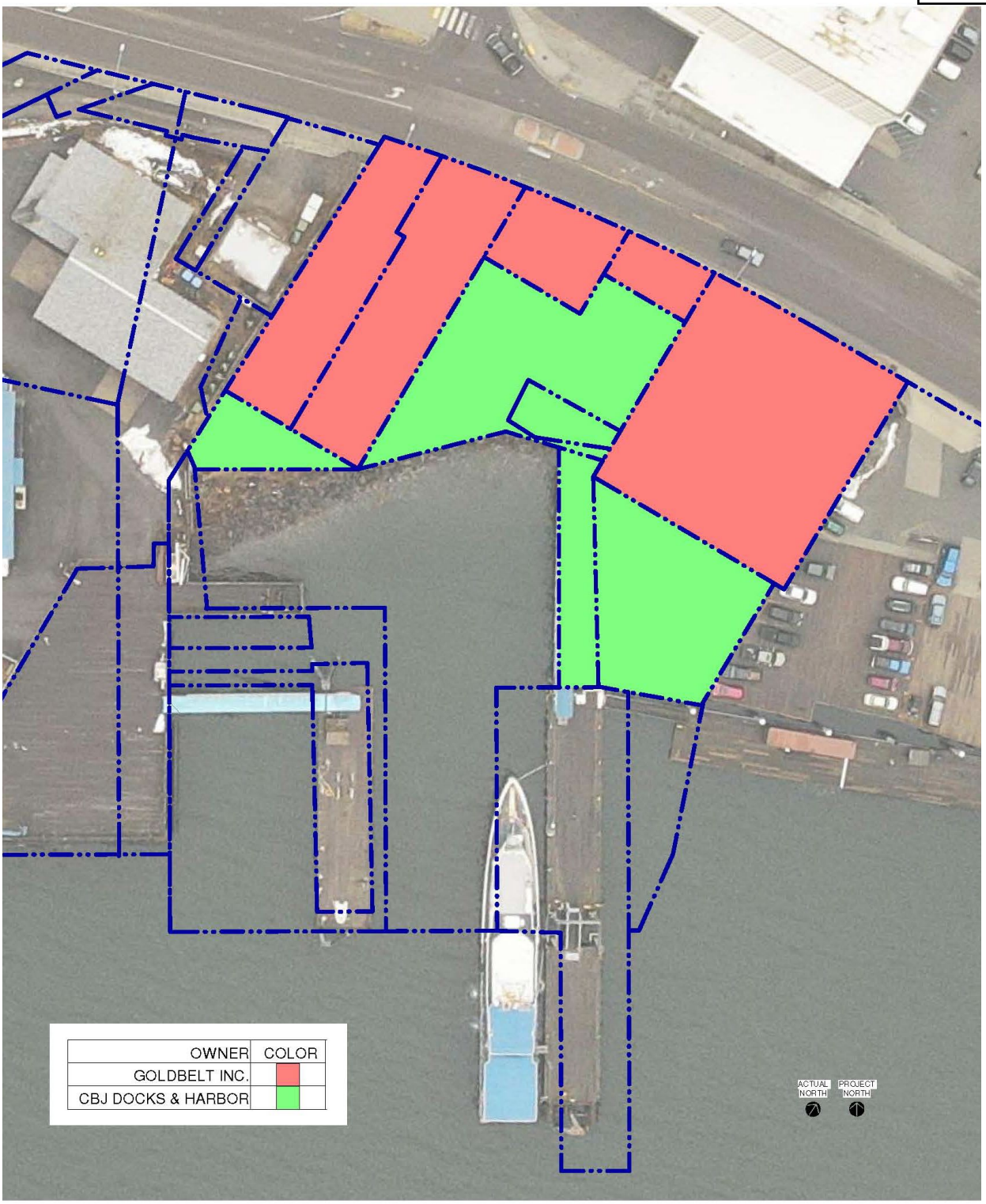
1. Goldbelt, Inc has been contemplating redevelopment of the Seadrome Building and adjacent properties since at least 2022. The project has been complicated due to the uplands site of the Seadrome Building (76 Egan Drive) surrounded by quilt work of small parcels owned by Goldbelt (dba Cultural Preservation, Inc.) and by CBJ (managed by Docks & Harbors). Goldbelt's plans appear to be solidified to where business negotiations with Docks & Harbors are appropriate. The following Docks & Harbors' meetings have had discussions pertaining to the Goldbelt's Seadrome property development:

    a. July 20, 2022 (Operations-Planning Committee) – Seadrome Development Plan
    b. November 9, 2022 (Ops-Planning Committee) – Authority for Negotiated Land Sale
    c. November 17, 2022 (Board Meeting) – Authority for Negotiated Land Sale
    d. December 19, 2022 (Assembly LHED Committee) - Authority for Negotiated Land Sale
    e. March 22, 2023 (Ops-Planning Committee) – Seadrome Property Exchange
    f. April 25, 2024 (Board Meeting) - Seadrome Property Swap/Sale
    g. August 21, 2024 (Ops-Planning Committee) – Seadrome Building Land Needs
    h. August 25, 2024 (Board Meeting) – Initiate appraisal & establish process
    i. September 18, 2024 (Ops-Meeting) – Seadrome Property Development Property Request
    j. September 26, 2024 (Board Meeting) – Direct Negotiations for Negotiated Land Sale
    k. December 2, 2024 (Assembly LHED Committee) - Direct Negotiations for Negotiated Land Sale
    l. January 6, 2024 (Assembly Meeting) authorization for Direct Negotiations under Title 53.09.260(a)

2. The direction provided from the September 2024 Board meeting was to consider sale of the Docks & Harbors managed and CBJ owned property around the Seadrome Building. Our term contract appraiser, Horan & Company, completed its appraisal determining the fair market value of the property requested by Goldbelt to be $630,903.
3. With direction from the Docks & Harbors Board, next steps would be to request CBJ Law draft a Purchase & Sales agreement to convey the nearly 15,000 sq feet of CBJ owned property to Goldbelt.

#

Encl: (1) Seadrome Property map
(2) Conceptual Rendering Proposal for new Goldbelt Seadrome Building
(3) Appraisal dated February 28, 2025


OWNER
COLOR
GOLDBELT INC.
CBJ DOCKS & HARBOR
ACTUAL NORTH
PROJECT NORTH

Seadrome Marina Proposal for Docks & Harbors – Goldbelt, Inc.

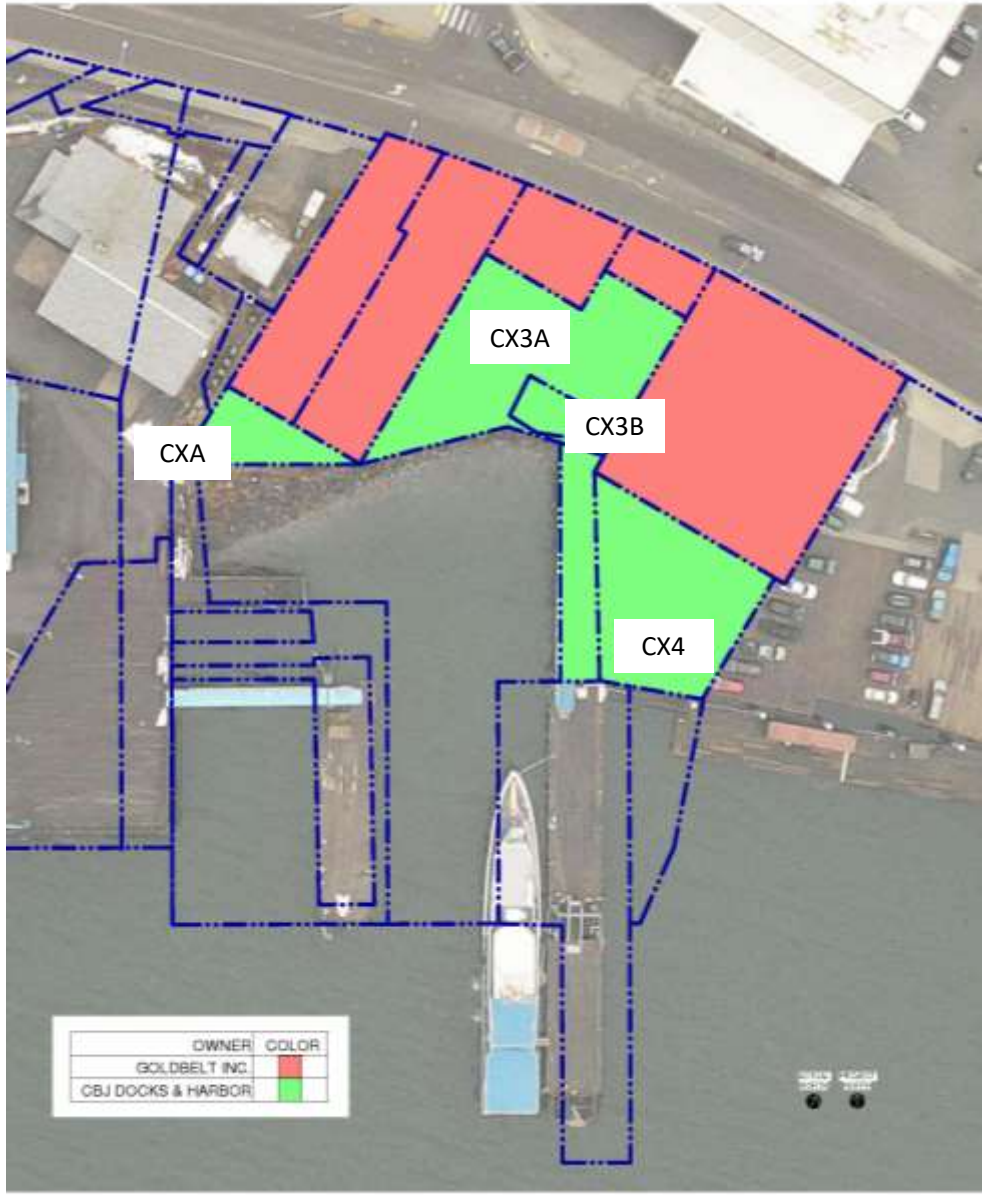
Introduction:

- CBJ Docks & Harbors (D&H) and Goldbelt have an opportunity to create better space for a new Seadrome facility.
- The first step is a property purchase agreement between Goldbelt and CBJ D&H to create a more useful and unified property, not infringed upon by setback codes.
- Improved property configurations will support multiple small cruise ship companies' operations.
- New property layout will plan for a Seawalk that leads to the Egan Drive crosswalk.
- Goldbelt will rebuild the Seadrome building on the expanded site, establishing an iconic Alaskan Native facility on the waterfront to better support visitors.

Actions:

1. Goldbelt and D&H enter direct negotiations, ultimately resulting in a property purchase agreement to optimize land for an expanded Goldbelt-owned property.
2. Goldbelt demolishes the existing building and builds an improved facility on the newly consolidated parcels.
   - Meets Waterfront Design guidelines, Lands Management Plan, Subport Revitalization Plan, and Small Cruise Ship Master Plan.
   - The facility will host mixed-use spaces that are complimentary to the waterfront.

Property Purchase Proposal



CBJ DH To Goldbelt	Exchange Parcel	SF Area	Unit Value	Total Value
Parcel B	CX3A Upland	4,900	$65	$318,500
Parcel B	CX3B Sloping/Tideland	2,098	$26	$54,548
Part Parcel C+Cone	CX4 Sloping/Tideland	6,650	$26	$172,900
Parcel A	CXA Upland	1,307	$65	$84,955
Total to CBJ D&H				$630,903

- Goldbelt is requesting that the Docks & Harbors Planning Commission enter direct negotiations for the sale of these parcels to move this process to the next steps.
- This expanded footprint would allow Goldbelt the opportunity and authority to build a facility to the size that is profitable.
- In this option, Goldbelt would purchase the CBJ owned parcels for $630,903*.

*Pending an updated appraisal.

Site Plan Proposal

SHEET TITLE:
SITE PLAN CONCEPT

SHEET NO.
A04
09.12.2024

CONCEPT PHASE
New Seadrome Marina Building
GOLDBELT

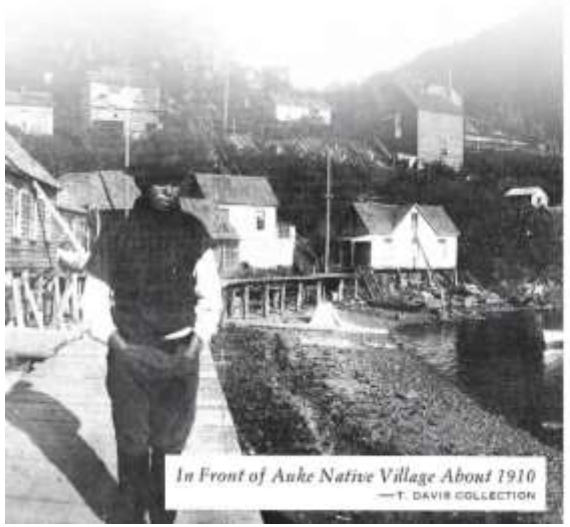
MRV ARCHITECTS

Improved Site Benefits:

- Efficiency of space for the new Goldbelt building footprint.
- Meets CBJ's various Plans and Guidelines
- Future improvements can be added efficiently – Seawalk construction and upland expansion will funnel visitors to the Egan Drive crosswalk

Cultural and City Planning Benefits:

- The new Seadrome building will be a cultural centerpiece, featuring prominent Alaska Native art.
  - This space will serve to educate visitors on aspects of local native history
  - Arriving ships will be able to view the building and accompanying local art in a way that will provide pride for the native community and Juneau residents
- The improved facility will provide an ideal arrival point to Juneau, with links to the Seawalk, the Áak'w Kwáan District, the SLAM, expanded Centennial Hall, hotels, and shopping centers.
- The new building will also feature an attractive mix of offices, a restaurant, and other amenities.



Seadrome Marina Proposal for Docks & Harbors – Goldbelt, Inc.

Market Value
of 14,944 SF portion of ATS 3
Goldbelt land Purchase
Seadrome Marina
76 Egan Drive
Juneau, Alaska

Looking east along uplands towards gangway and tidelands proposed to be purchased by Goldbelt for possible expansion of the Seadrome Marina. Photos taken February 17th 2025.

Prepared For:	Carl J. Uchytil, PE, Port Director City and Borough of Juneau Docks and Harbors 155 S. Seward Street Juneau, Alaska 99801
Prepared By:	Charles E. Horan, MAI Horan & Company, LLC 403 Lincoln Street, Suite 210 Sitka, Alaska 99835
Effective Date:	February 17th 2025
Report Date:	February 28th 2025
File Number:	25-014

HORAN & COMPANY

REAL ESTATE APPRAISERS/CONSULTANTS

CHARLES E. HORAN, MAI/JOSHUA C. HORAN/ SLATER M. FERGUSON

403 LINCOLN STREET, SUITE 210, SITKA, ALASKA 99835
Phone: (907) 747-6666 Charles@akhoran.com

February 28th 2025

Carl J. Uchytil, PE, Port Director
Attn: Melody Musick VIA email: Melody.Musick@juneau.gov
City and Borough of Juneau Docks and Harbors
155 S. Seward Street
Juneau, Alaska 99801

RE: Market Value of 14944 SF portion of ATS 3 Goldbelt land Purchase Seadrome Marina
76 Egan Drive, Juneau, Alaska; File 25-014

Dear Mr. Uchytil,

At your request, I estimated the Market Value of the 14,955 SF of land being negotiated for sale to Goldbelt Inc. This land is comprised of upland and tidal/submerged land areas adjacent to the land owned by Goldbelt. Goldbelt currently leases some of the land being appraised. They constructed upland and marine improvements and subleased some of these lands. The appraisal assumes that the lease terms have no effect on the fee simple land as valued. It is a hypothetical condition of the appraisal that the land is not improved with the lessee's constructed improvements. Based on my analysis, the current fee simple value of the land is estimated as of February 17th 2025 as follows:

$630,903

Your attention is invited to the remainder of this report which sets forth the Assumptions and Limiting Conditions, Certification of Appraisal, and the most pertinent data considered in estimating the market value of the subject property.

If you have any questions or comments, please feel free to contact me at your convenience.

Respectfully Submitted,

Charles E. Horan, MAI
Horan & Company, LLC

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- Certification
- Subject Photos
- Tideland to Upland Ratio Study
- Comparable Sales
- Qualifications of Charles E. Horan, MAI

1 INTRODUCTION

1.1 IDENTIFICATION OF PROPERTY

FIGURE 1.1 – SUBJECT LAND OUTLINED IN GREEN

The subject of this report is land owned by the City and Borough of Juneau (CBJ) authorised for negotiated sale to Goldbelt Inc. for possible expansion of its marina facility. The land is identified in Figure 1.1 as parcels CX3A Upland, CX3B Sloping/Tideland, CX4 submerged land, CXA Upland totaling 14,955 SF.

1.2 PURPOSE OF THE APPRAISAL

The purpose of the appraisal is to provide an estimate of market value for the identified property. It is an implied condition of the assignment that the current long-term lease of the land held by Goldbelt (dba Cultural Preservation Inc) from CBJ has no effect on the value. Also, the improvements constructed and owned by Goldbelt on the land are not considered in the valuation. On behalf of a proposal from Goldbelt, Docks and Harbors desires to negotiate the sale of that certain property which is a portion of ATS FR 3 as demarcated in it Figure 1.1. The intended use of the appraisal is for these negotiations. The intended users are the CBJ Docks and Harbors decision makers and Goldbelt Inc. This appraisal is not intended for any other use or any other users.

1.3 PROPERY INSPECTION & EFFECTIVE DATE

The appraiser discussed the project with the land manager Steven Sahlender, VP Alaska Group, Goldbelt by phone February 27th 2025. The appraiser has reviewed the property on numerous occasions in relation to prior appraisals and other work in the area. Joshua Horan inspected and photographed the property February 17th 2025 with the prospective purchasers' representative, Elias Hastings.

The last inspection date February 17th 2025 is the effective date of appraisal.

1.4 PROPERTY HISTORY AND OWNERSHIP

The property is owned by the City and Borough of Junea. It had been leased for many years, mostly recently a 35 year land lease was entered into between the CBJ and Cultural Preservation Inc a wholly owned subsidiary of Goldbelt Inc, in June of 1996. The 35 year lease would expire in 2031 with one remaining 35 year option to renew at similar terms. This lease encompasses about 19,916 SF of which the subject is part. Part of the subject is also outside this lease area. The lease is subject to five year rental adjustments, most recently effective June of 2023. The rental adjustment is based on the current market value of the land at a contract rate of 9% per year. That adjustment indicated the uplands value at $65/ SF and the tidelands and sloping lands at $26/SF.

Goldbelt has operated a small three story wood frame office building and small ship and sightseeing tour Marina. This Marina has been operated in conjunction with adjacent tidelands from Merchants Wharf. Goldbelt intends to develop the property into a small cruise ship terminal on the tidelands with the construction of a multi story commercial building on the adjacent submerged lands and uplands that would accommodate the terminal use, retail, perhaps offices, restaurants and other possible uses to be defined in the future. Goldbelt's current plan is to secure the real estate rights before completing final feasibility and design plans.

1.5 SCOPE OF WORK

The titled interests are assumed fee simple. No title report was provided to the appraiser. The appraiser understands the property is currently under lease which expires in 2031 and has an additional 35-year option to extend. It is an assumption of this appraisal that the lease would have no effect on the value as fee simple unencumbered interest.

The character of the property has been determined through various drawings provided by several departments of the City and Borough of Juneau and the property owner/lessee. The appraiser has made walk through inspections of the property from time to time during the years 2012 – 2023. Most recently Joshua Horan, Real Estate Appraiser inspected the property February 17th 2025.

There are a variety of marine improvements on the property constructed by Goldbelt such as piling, docks, gangways, piers, floats, etc. There are site improvements including pavement and sidewalks that extend to the lease lands from adjacent fee owned Goldbelt land. There is a Petro Services agreement for fuel tank and dispensing lines to the dock on the subject leased land. These improvements were constructed by and are owned by the lessee or its sub-lessee. The land is valued as though it is vacant for development. It is a hypothetical condition of this appraisal that the leased land is unimproved.

The direct sales comparison approach will be used to develop the land value as if it is cleared and available for highest and best use development. The competing market neighborhood area is nearly 90% built out and vacant land sales are not readily available. Comparable transactions were identified through interviews with knowledgeable participants in the real estate markets such as appraisers, other lessors and lessees, discussions with municipal property assessment personnel and others who are familiar with the real estate market in Southeast Alaska. We identified similarly-used properties in the communities throughout Southeast Alaska. Transaction information was collected from reliable sources, such as the state archives, the Multiple Listing Service, the CBJ Assessor's Office, and our database which has over 30 years of historic observations of waterfront and tidelands transactions.

From our extensive inventory of property sales and land leases in the market area. We will select the most indicative values based on capitalized land leases and land sales to develop a square foot value of the upland and tideland characteristics of the property.

1.6 ASSUMPTIONS AND LIMITING CONDITIONS

This appraisal is made subject to the following **hypothetical conditions (HC)** and **extraordinary assumptions (EA)** in addition to the more general assumptions and limiting conditions. The use of hypothetical conditions and extraordinary assumptions may alter assignment results.

HC-1 It is a hypothetical condition of this appraisal that the land is unimproved and that is vacant and available for development to the highest and best use.

HC-2 It is a hypothetical condition of this appraisal that land is not subject to the current CBJ land lease or any other leases or encumbrances to the fee title to the land.

EA-1 It is an extraordinary assumption that the land areas are as estimated and described in this appraisal relative to its size and upland and tideland characteristics.

This appraisal is also expressly subject to the following assumptions and/or conditions:

1. It is assumed the data, maps, and descriptive data furnished by the client or its representative are accurate and correct. Photos, sketches, maps, and drawings in this appraisal report are for visualizing the property only and are not to be relied upon for any other use. They may not be to scale.

2. The valuations are based on information and data from sources believed reliable, correct, and accurately reported. No responsibility is assumed for false data provided by others.
3. No responsibility is assumed for building permits, zone changes, engineering, or any other services or duty connected with legally utilizing the subject property. No responsibility is assumed for matters legal in character or nature. No opinion is rendered as to title, which is assumed to be good and marketable. All existing liens, encumbrances, and assessments have been disregarded unless otherwise noted, and the property is appraised as though free and clear, having responsible ownership and competent management. It is assumed that the title to the property is marketable. No investigation to this fact has been made by the appraiser.
4. The property described herein has been examined exclusively for the purpose of identification and description of the real property. The objective of our data collection is to develop an opinion of the Highest and Best Use of the subject property and make meaningful comparisons in the valuation of the property. The appraisers' observations and reporting of the subject land or improvements are for the appraisal process and valuation purposes only and should not be considered as a warranty of any component of the property. This appraisal assumes that the subject is structurally sound and all components are in working condition.
5. This appraisal report may note any significant adverse conditions (such as needed repairs, depreciation, the presence of hazardous wastes, toxic substances, etc.) discovered during the data collection process in performing the appraisal. Unless otherwise stated in this appraisal report, we have no knowledge of any hidden or unapparent physical deficiencies or adverse conditions of the property (such as, but not limited to, needed repairs, deterioration, the presence of hazardous wastes, toxic substances, adverse environmental conditions, etc.) that would make the property less valuable, and have assumed that there are no such conditions and make no guarantees or warranties, express or implied. We will not be responsible for any such conditions that do exist or for any engineering or testing that might be required to discover whether such conditions exist. Because we are not experts in the field of environmental hazards, this appraisal report must not be considered as an environmental assessment of the property. We obtained the information, estimates, and opinions furnished by other parties and expressed in this appraisal report from reliable public and/or private sources that we believe to be true and correct. It is assumed that no conditions existed that were undiscoverable through normal diligent investigation which would affect the use and value of the property. No engineering report was made by or provided to the appraisers.
6. The client is the party or parties who engage an appraiser in a specific assignment. A party receiving a copy of this report from the client does not, as a consequence, become a party to the appraiser-client relationship. Any person who receives a copy of this appraisal report as a consequence of disclosure requirements that apply to an appraiser's client does not become an intended user of this report unless the client specifically identified them at the time of the assignment. The appraiser's written

consent and approval must be obtained before this appraisal report can be conveyed by anyone to the public through advertising, public relations, news, sales, and other media.

7. The appraisal report may not be properly understood without access to the entire report. The appraisal is to be considered in its entirety, the use of only a portion thereof will render the appraisal invalid.
8. Any distribution of the valuation in the report between land, improvements, and personal property applies only under the existing program of utilization. The separate valuations for land, building, and chattel must not be used in conjunction with any other appraisal and is invalid if so used.
9. One (or more) of the signatories of this appraisal report is a member or associate member of the Appraisal Institute. The bylaws and regulations of the Institute require each member and candidate to control the use and distribution of each appraisal report signed by such member or candidate. Therefore, except as hereinafter provided, the party for whom this appraisal report was prepared may distribute copies of this appraisal report in its entirety to such third parties as selected by the party for whom this appraisal report was prepared; however, selected portions of this appraisal report shall not be given to third parties without the prior written consent of the signatories of this appraisal report. Further, neither all nor any part of this appraisal report shall be disseminated to the general public by the use of advertising media, public relations media, news media, sales media, or other media for public communication without the prior written consent of signatories of this appraisal report.
10. The appraisers shall not be required to give testimony or appear in court by reason of this appraisal with reference to the property described herein unless prior arrangements have been made.

1.7 TERMINOLOGY

Market Value The most widely accepted components of market value are incorporated in the following definition:

The most probable price that the specified property interest should sell for in a competitive market after a reasonable exposure time, as of a specified date, in cash, or in terms equivalent to cash, under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, for self-interest, and assuming that neither is under duress.

The Dictionary of Real Estate Appraisal, 6th Edition, Appraisal Institute, Pg. 141-143.

The estimate of exposure time is 18 months due to the special purpose nature of the property.

Extraordinary Assumption

An assumption, directly related to a specific assignment, which, if found to be false, could alter the appraiser's opinions or conclusions. Extraordinary assumptions presume as fact otherwise uncertain information about physical, legal, or economic characteristics of the subject property; or about conditions external to the property such as market conditions or trends; or about the integrity of data used in an analysis.

Hypothetical Condition

A condition, directly related to a specific assignment, which is contrary to what is known by the appraiser to exist on the effective date of the assignment results, but is used for the purpose of analysis. Comment: Hypothetical conditions are contrary to known facts about physical, legal, or economic characteristics of the subject property, such as market conditions or trends; or about the integrity of data used in an analysis. (USPAP, 2016-2017 ed.)

The Dictionary of Real Estate Appraisal, 6th Edition, Appraisal Institute, Page 113

If it is found that the extraordinary assumption or hypothetical condition is different than stated this may impact the estimated value.

Definition of Market Rent

The most probable rent that a property should bring in a competitive and open market reflecting all conditions and restrictions of a specified lease agreement. including the rental adjustment and revaluation, permitted uses, use restrictions, expense obligations, term, concessions, renewal and purchase options, and tenant improvements.
The Dictionary of Real Estate Appraisal, 6th Edition, Appraisal Institute, Page 140

2 MARKET ANALYSIS

2.1 JUNEAU AREA ANALYSIS

The demand for real property is driven by population, which is in large part driven by employment. The state government is still the largest employer, but is shrinking. Employment overall is on the rise since the high of 2019. Population has been nearly flat since 2018 after a decline from 2015.

2.2 SUBJECT MARKET AREA

FIGURE 2.1- SHOWING SUBJECT LOCATION AND MAJOR DOCKS IN THE JUNEAU HARBOR.

Juneau's downtown waterfront has developed over the past several decades in response to the increasing cruise ship tourism to the area. Among the various developments to accommodate this increased growth, the City and Borough Juneau Docks and Harbors (CBJ-DH) reconfigured its land with the adjacent Archipelago Group for shared development and improvement of the waterfront area as reflected in the Figure 2.2; Downtown Waterfront Improvement Phase I. Among other things, it provides for a bus drop off facility. It was completed in May of 2021. Yet to be completed Phase II calls for a shelter and restroom building. The area is referred to as the Peratrovich Plaza. The Marine Park is being rebuilt as part of the Parks and Recreation initiative. As of early 2025 no additional development has occurred on the site. It has been suggested that this site may be put on the market. There has been talk about the city acquiring an interior part of the site for a museum funded with tourism tax funds. Currently there's no imminent development prospects, but this site would be suited for additional retail restaurant tourism related activities.

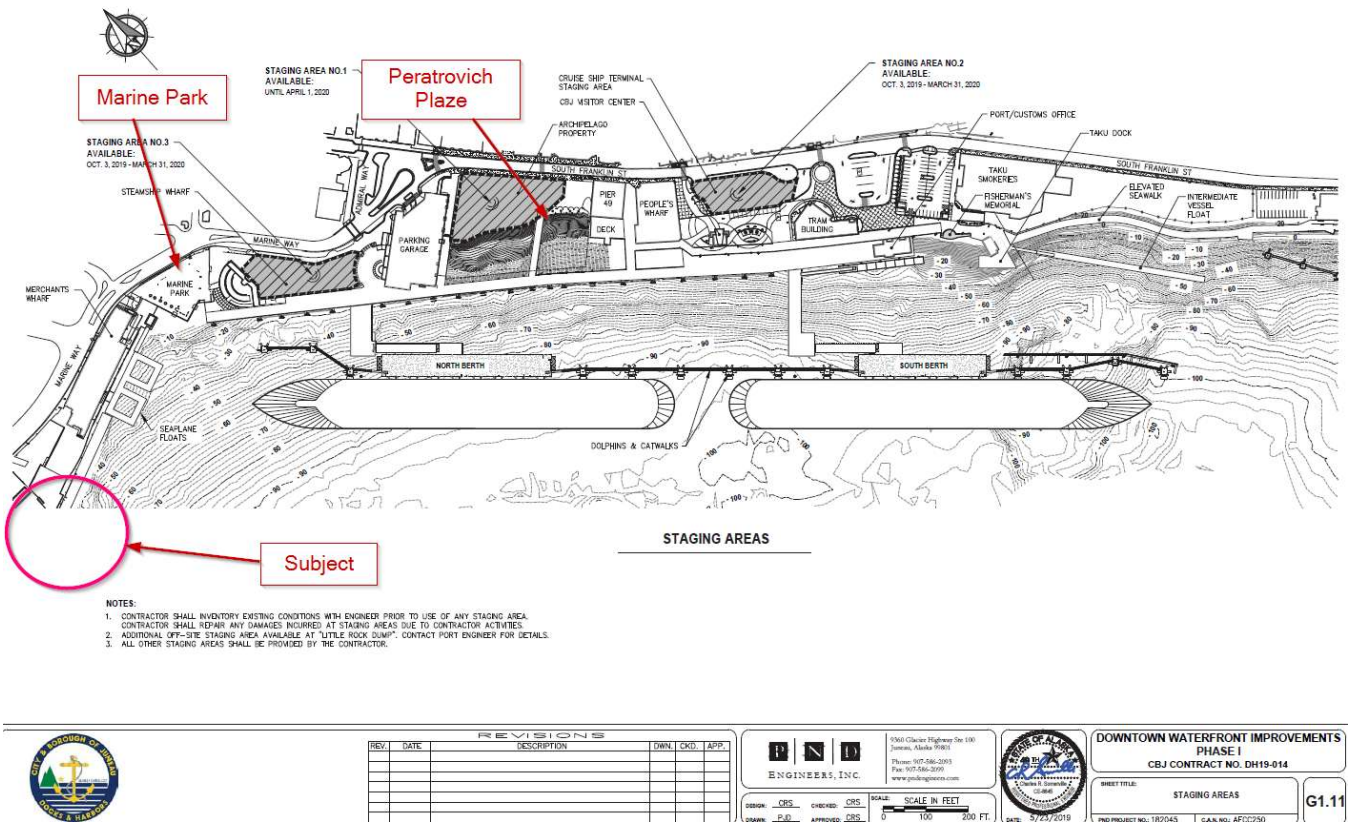


FIGURE 2.2 – PHASE I WATERFRONT REDEVELOPMENT SHOWING STAGING AREAS. NOTE – SUBJECT JUST WEST OF MERCHANTS WHARF.

Tourism has recovered significantly for the independent traveler and more recently in 2023 for the cruise ship passenger. Actual passenger counts for 2022 is 92% of the previous high in 2019. Cruise ship passenger visitation to the port has approached 1.7 million annually in 2023 and appears to have leveled out. Figure 2.3. This is a reflection of the community's capacity to intake cruise ship passenger tourism. Local plans point to a possibility of the 5th cruise ship dock, Auke Landing, in development planning by Huna Totem Corporation at the old sub port

site just to the east, see Figure 2.1 showing NCL purchase. As envisioned, this would provide additional retail and commercial oriented towards tourism and local destination-oriented commerce opportunities.

Education, government, fishing, and other industries that have lagged in the last several years appear to be recovering if not returned to prior levels. State Government continues to shrink but may be leveling off.

Overall, the market improved significantly in 2022. It is expected that prices would be stable or moderately increasing in some parts of the commercial real estate sector.

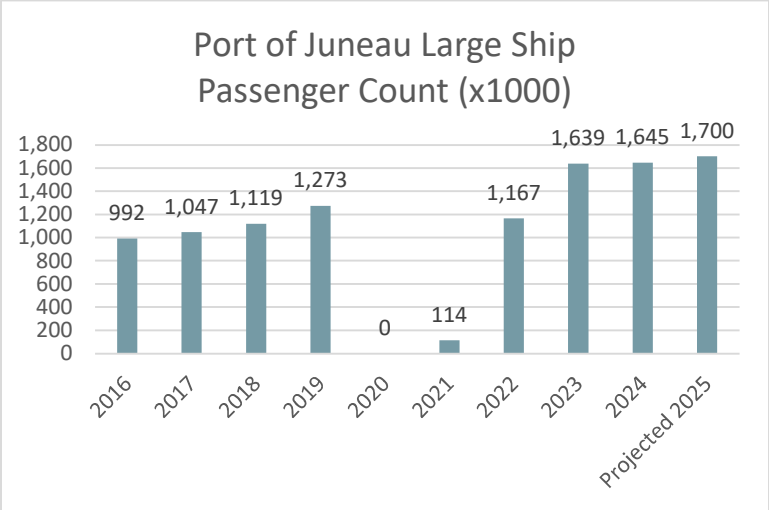
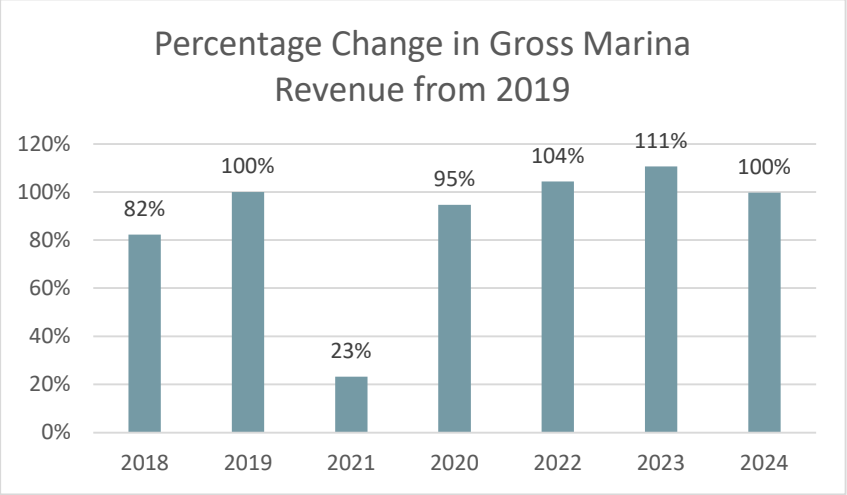


Figure 2.3 Cruise ship passenger count provided by CBJ Docks and Harbor Department, and Cruise Line Agencies of Alaksa.

Seadrome Marina

The subject property is located on the Juneau Harbor waterfront beyond the dense traffic generated by cruise ships. It provides a nearby deep-water marina for large yachts, small tourism vessels and sea planes. It is the most heavily used small cruise ship dock in the Juneau harbor area. The subject has the advantage of convenience for most tour operators that would work out of this property. While use of the subject is limited by the water-oriented zoning, its close proximity to the tourism traffic is ideal.

Based on confidential gross revenue, the percentage of change using 2019 as a base is displayed in the following Figure 3.4. It shows a leveling over the last several years. The Marina is in a great location, the downtown Juneau harbor. Past analysis has shown that 150 to 200 small ships stop in Juneau each year. The subject garners about 50% of the market. Marinas of this type are augmented by onshore businesses and are generally owner occupied. This indicates that the demand for the subject would be stable over the past several years.



2.3 ZONING

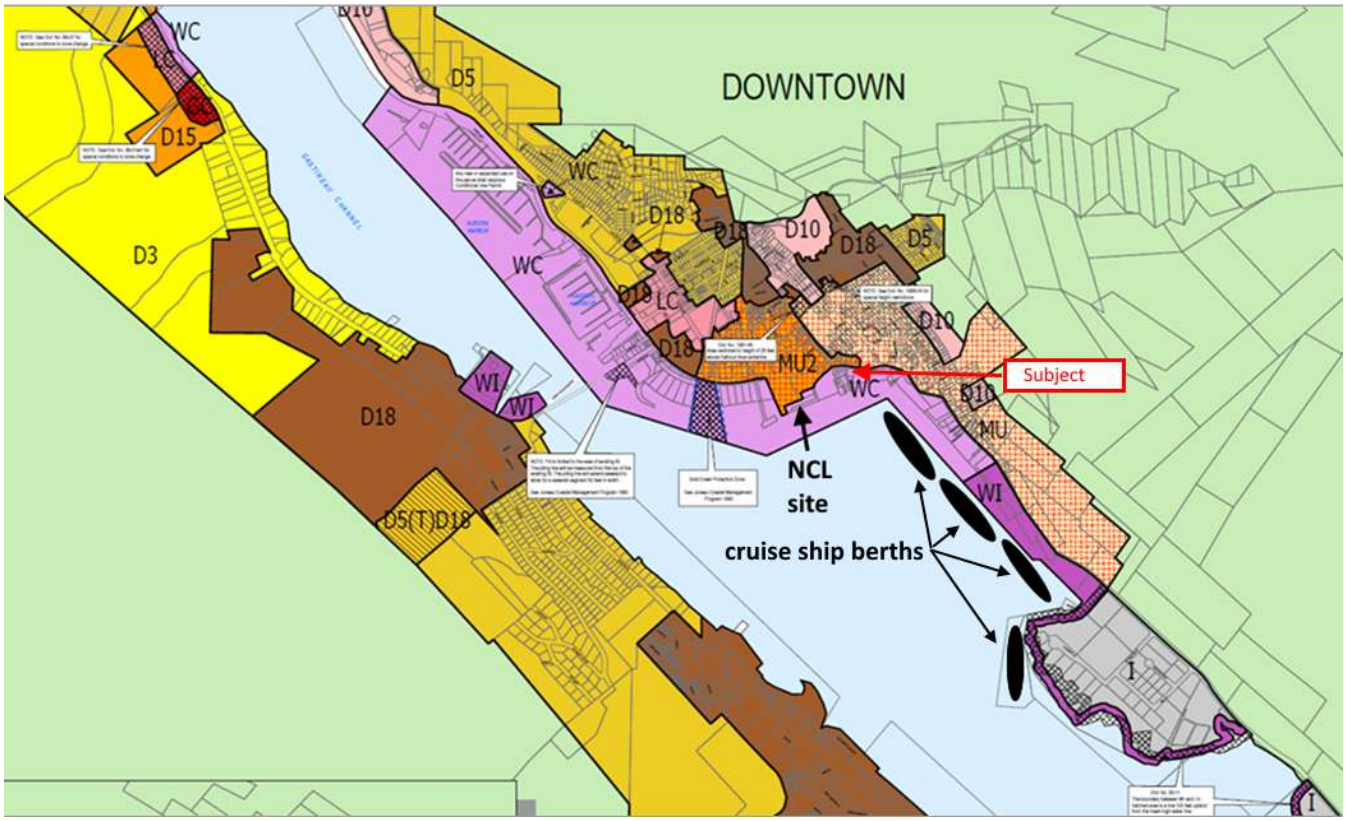


FIGURE 2.5 - Zoning Map. Source: CBJ Downtown Juneau & Douglas Zoning Map as of September 29, 2015 annotated by Horan & Company.

The property is zoned Waterfront Commercial (WC). The WC, Waterfront Commercial District, is intended to provide both land and water space for uses which are directly related to or dependent upon a marine environment. Such activities include private boating, commercial freight and passenger traffic, commercial fishing, floatplane operations, and retail services directly linked to a maritime clientele. Other uses may be permitted if water-dependent or water-oriented.

2.4 PARKING DISTRICTS

The parking ordinance changed in March of 2022. The subject was in the former Parking District PD2, which allowed owners or property developers a reduction in the parking requirements of up to 30%. The new "No Parking Required" Area establishes an area where properties can be developed with no requirement for parking which in many cases enhances their development potential. The subject is in the Town Center Parking Area which addresses many issues that had to be dealt with on an individual basis and caused some confusion and development constraints within the area. For instance, it establishes the distance that off-site parking can be provided for development on a certain site. There is still a fee in lieu of opportunity to satisfy parking requirements. There is a mechanism for joint use parking where the requirement can be satisfied with parking provided at different times of day for instance evening theater users can get credit for the same space with daytime office users. The parking space requirements were reduced 50% to 100% of the standard requirement depending on the use. Still many uses require parking to make them feasible to achieve the best economic rent for offices, some residential and some retail for instance.

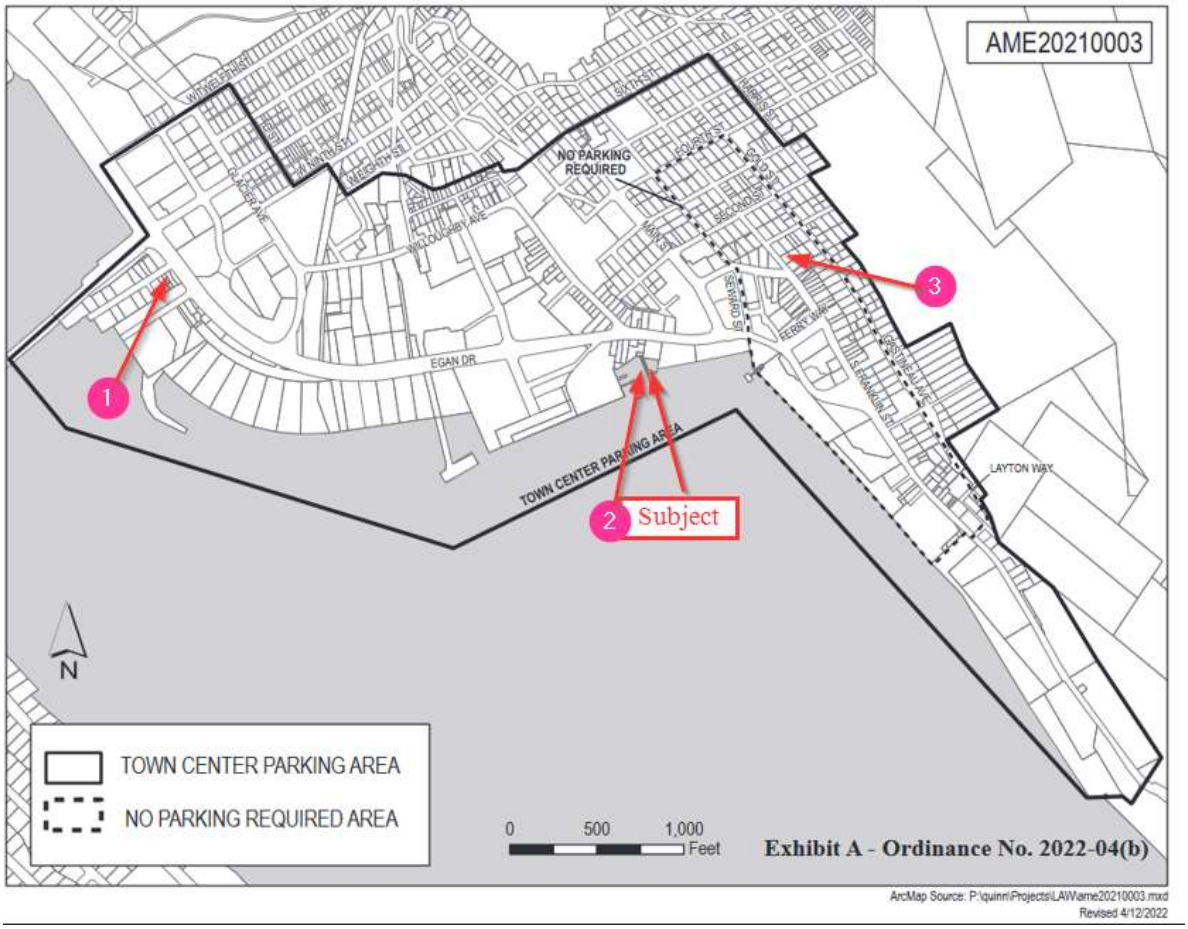


FIGURE 2.6 - PARKING DISTRICT MAP SHOWING THE SUBJECT AND COMPARABLES LOCATIONS.

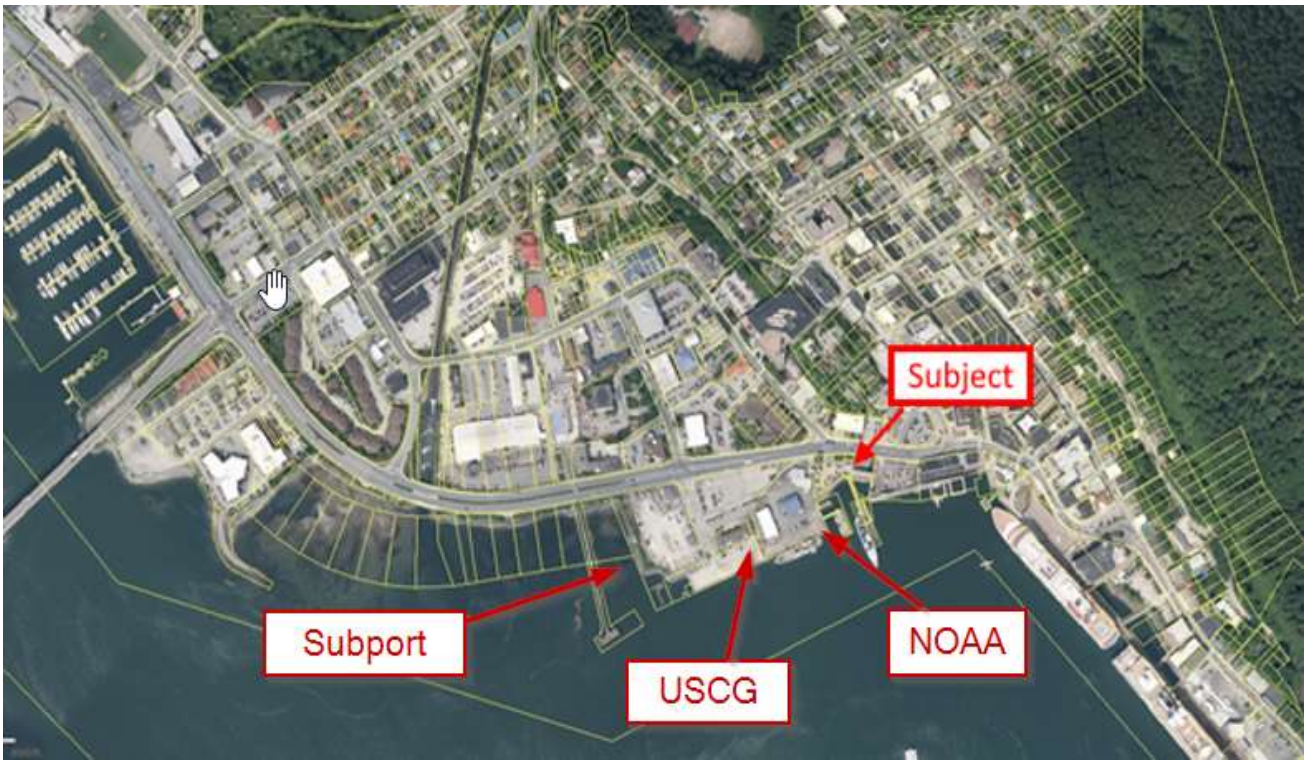


FIGURE 2.7 - CBJ GIS OVERVIEW MAP OF DOWNTOWN COMMERCIAL AREA AND INNER HARBOR AREA

3 PROPERTY DESCRIPTION

3.1 SITE DESCRIPTION

Goldbelt Corporation is the controlling entity of Cultural Preservation, Inc. which owns and leases property at 76 Egan Drive, Juneau, Alaska known as the Seadrome Building and Marina. They have fee ownership of lots 1 through 5, Block 76 Tidelands Addition Subdivision to ATS 3 Plat 340, JRD. These are level commercial at grade "uplands" of about 21,801 SF of land fronting Egan Drive used for parking and the small three-story wood frame office building on Lot 5. There is an additional 19,919 SF of filled and unfilled tidelands, the subject of this appraisal, leased from the City and Borough of Juneau for a marina outlined in blue in the figure below. There are also approximately 14,400 SF of submerged lands leased from Merchants Wharf which extends the marina use. The entire tract controlled by the property owner and lessee, is over 56,000 SF, as generally outlined in Figure 3.1.

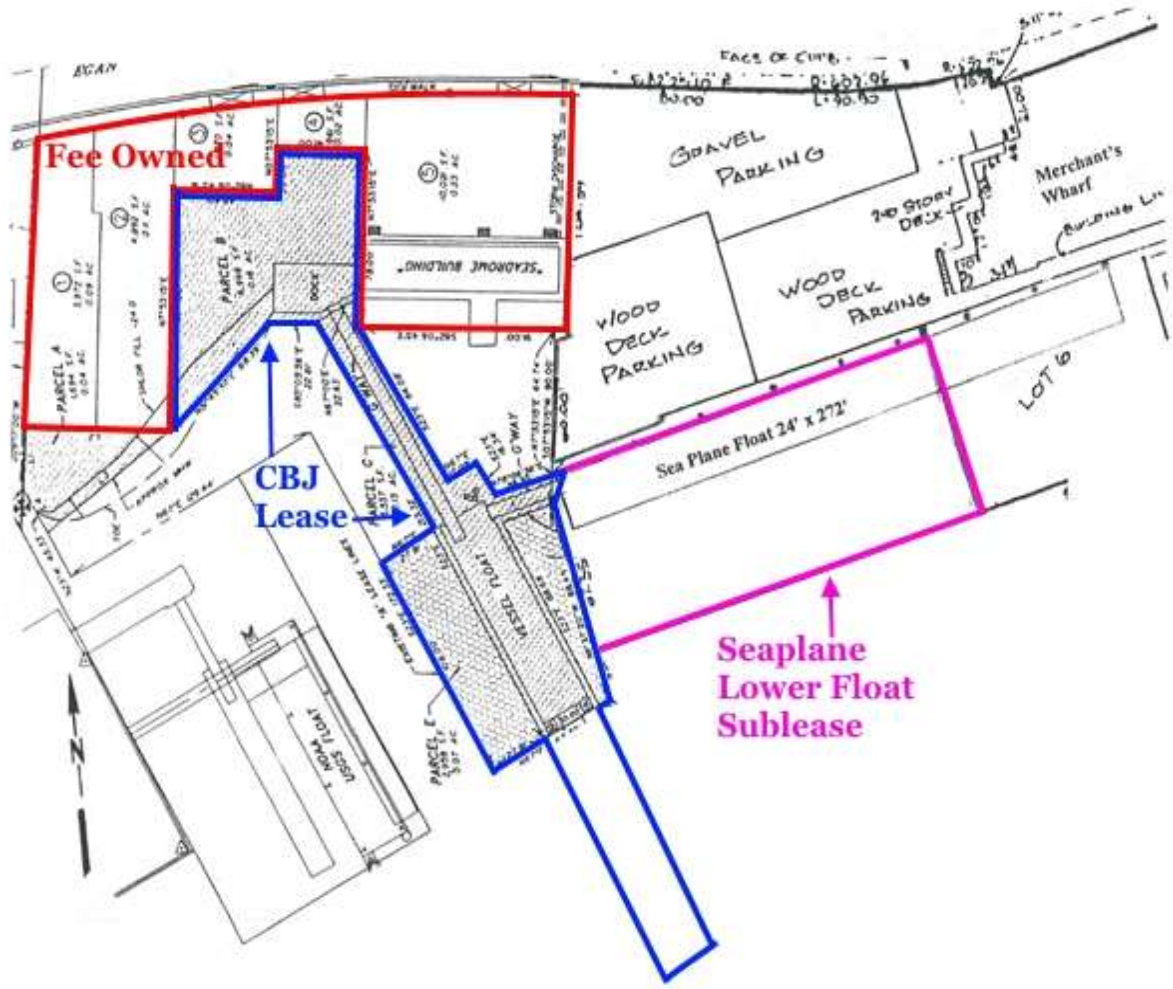


FIGURE 3.1 - SHOWING EXTENT OF LANDS UNDER CONTROL OF OWNER GOLDBELT-CULTURAL PRESERVATION, INC. THE SUBJECT LEASED LANDS OUTLINED IN BLUE

The Subject Property

By contrast to the lands owned and controlled through leases by Goldbelt, as shown above, the proposed acquisition parcels are identified in Figure 3.2 below in green.

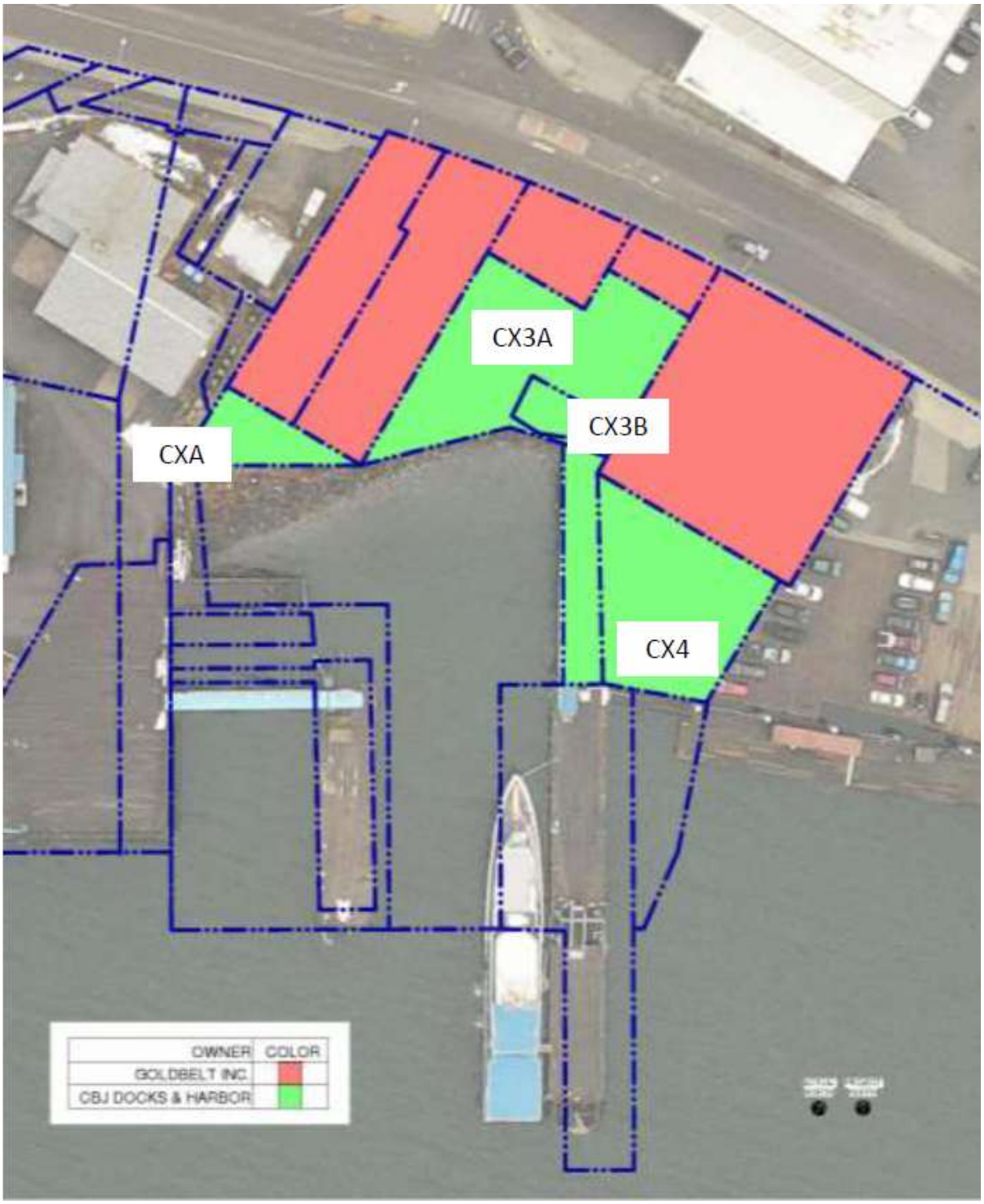


FIGURE 3.2 EXHIBIT SHOWING LANDS TO BE ACQUIRED/APPRAISED IN GREEN.

Subject Site Size and Characteristics

The proposed acquisition includes uplands which are filled, leveled at road grade. The balance of the land is sloping or submerged tidelands totaling 15,016 SF. The total lease area is 19,916 SF. These site characteristics have different market value attributes. They are summarized by site attributes in the following table.

Table 3.1 -Summary Areas to be Acquired by Upland and Tideland Character

Label	Upland	Sloping or Submerged Tideland	Total
CX3A	4,900 SF		4,900 SF
CX3B		2,098 SF	2,098 SF
CX4		6,650 SF	6,650 SF
CXA	1,307 SF		1,307 SF
Totals	6,207 SF	8,748 SF	14,955 SF

Site Improvements -Not Included in Valuation

The subject leased land is improved as a marina with piling, gangways, piers, floats, etc. There are site improvements including pavement and sidewalks that extended from the adjacent fee owned uplands. There is the Petro Services short term agreement for fuel tank and dispensing lines to the dock on the subject leased land. These improvements were constructed by and are owned by the lessee or its sub-lessee. The land is valued as though it is vacant and unimproved.

Access and Off-Site Improvements

Road access is along Egan Drive, a paved, divided, four-lane highway with concrete curbs, gutters, and storm drainage. No on-street parking is available adjacent to or near the subject. This is a heavily trafficked road. The site has water access through tidelands to the deep water of Gastineau Channel to the south. There is pedestrian access through the upland lot from the sidewalk. The subject has excellent deep-water access from Juneau's harbor for boats or floatplanes.

Utilities

City sewer, water and private utilities including power, trash collection, phone, cable and fuel are available to the subject through the adjacent Lots.

Easements and Restrictions

There are no known easements or platted site restrictions that would influence the typical square foot value for the purpose of our analysis.

3.2 ASSESSED VALUATION

The leasehold lands appraised herein, owned by CBJ Docks & Harbor, parcel number 1C070K760021, ATS 3 FR, is $906,327 for 2024. This includes the improvement value of the floats and other marine improvements. This does not include the fee owned adjacent lands.

4 VALUATION

4.1 HIGHEST AND BEST USE

The reasonably probable use of property that results in the highest value. The four criteria that the highest and best use must meet are legal permissibility, physical possibility, financial feasibility, and maximum productivity.

The Dictionary of Real Estate Appraisal, 6th Edition, Appraisal Institute, Page 109

The highest and best use for the subject lands would be those allowable uses in the Waterfront Commercial (WC) zone, which include "uses which are directly related to or dependent upon a marine environment." The commercial waterfront uses to the east include retail sales and other activities oriented towards cruise ship tourism.

Historically, this waterfront site had been developed for docking boats for the owner's tourism operation. Since that time, the owner dropped that business and operates as a marina for other small tour operators, yacht moorage, etc. The subject upland area supports the logistics of loading and unloading passengers.

The subject location has proven attractive for its deep-water access close to the cruise ship docks which generate high traffic. The subject is in the Town Center Parking Area district which allows flexible parking requirements. Its demand would be superior to nearby commercial uses without these advantages.

The maximally profitable use is for a marine oriented waterfront development similar to the existing use. The highest and best use of the uplands is to support the marina, small ship terminal use, parking and loading areas.

4.2 LAND VALUATION

In this section, the typical SF market value will be estimated. The direct sales comparison approach is utilized in the subject instance. Commercial land sales and capitalized land rents in the immediate area were considered for estimating the square foot value of the subject. For valuation purposes, the two site components; level land at road grade (upland) and sloping/tidelands (tideland) are considered for their contributory value of the overall site. The following transactions were found to be most helpful in our analysis. We will estimate the market value of the uplands. We have determined[1] that the tidelands value is at 40% of the unit value of the uplands. We have then adjusted the concluded value of the uplands by this ratio (40%) to determine the contributory value of the tidelands.

[1] See addenda for the Tideland Value Ratio study. The subjects are rated as well functioning tidelands at 40%.

Table 4.1 – Summary of Sales Used to Estimate the Value of the Subject Uplands						
Comp #	*Address*	*Date*	*Indicated Price*	*SF Size*	*Price /SF*	*Comment*
1-12239	1000 Harbor Way	10/2023	$118,510	4,814	$24.62	Total Sale
			$37,050	741	$50.00	Upland
			$81,460	4073	$20.00	Tideland
2-5011	76 Egan DR	06/2023	*$710000	19,916	$35.60	Total Value
			*$318,500	4900	$65.00	Upland
			*$390500	5,016	$26.00	Tideland
3- 12423	109 S Franklin St	6/2023	$2,660,000	11,048	$240.77	Upland

*Capitalized Land Rent at contract rate of 9%.

Quantitative Adjustments

Quantitative Adjustments are made for the rental **Comp 2** which is the recently adjusted market rent on the subject property for the tideland lease area. This market rent was adjusted to $63,900 which is 9% of the estimated land value which working backwards had been calculated at $65/SF for the uplands and $26/SF for tidelands. It is noted that the estimated value of the tidelands is 40% of the unit value of the uplands. These unit values will be used as the adjusted unit values in our analysis.

Comp 2 was a negotiated sale where the filled uplands and tidelands were separately estimated to contribute $50/SF and $20/SF respectively. It is noted that the unit value of the tidelands is 40% of the unit value of the uplands. This is also the case with the subject.

Our analysis will develop a unit value of the uplands. The remaining portion of the subject lands will be added at a ratio of 40% of the upland unit value.

Comp 3 is the purchase of a building of $1,160,000. The building was torn down and retaining walls were constructed for another $1,500,000. This sale is adjusted to $2,660,000 for what would be characterized as uplands. About 75% of the site is usable at road grade.

Qualitative Analysis

The remaining elements of comparison, change in market conditions, conditions of sale, location, and development potential parking district are made in a qualitative manner since discrete adjustments discerned from the market to make quantitative adjustments are not reliably available.

The overall value will be based on our analysis of the upland comparable (comp) unit value. The sloping and submerged tidelands will be added at a unit value of 40% of the concluded upland value. The upland values are considered on a qualitative basis relative to their being superior, inferior or similar to the subject due to these differences. The indicated price per SF is qualitatively ranked in the following discussion. If a comparable attribute is superior to the

subject, a minus rating of -1, -2, or -3 is made, depending on its severity. Conversely, if a comparable attribute is inferior to the subject, a plus rating is made to weigh this with other attributes towards the subject with a +1, +2, or +3, depending on the severity. The gradation of weighting 1 to 3 is used since all qualitative attributes are not, in the appraiser's opinion, equally weighted within the market.

The **market conditions** are similar among all the transactions which all occurred in 2023. The market has not changed since this time.

Conditions of sale is rated similar between the subject as appraised. Each of the transactions were based on rational market criteria of competitive sales or supported by appraisal or other economically driven market-related factors considered by the grantors, grantees or the lessors and lessees. Therefore, the transactions are all rated similar for property rights.

Property rights are considered similar among the transactions as there were no significant inhibitions to use of these properties for their highest and best use.

Location considers site prominence as exposure to pedestrian or vehicular traffic and ease of access. Comps 1 is away from the town core and considered inferior +1. Comp 2 is at the subject location and similar. Comp 3 is embedded in the town core which is experiencing increasing pedestrian cruise ship passenger flow as compared to the subject. It is superior -2.

Development potential is somewhat related to location but reflects the heightened demand as compared to the subject. In regards to perceived development potential, Comp 1 is inferior +1 as it does not have any potential for waterfront development. Comp 2 is similarly on the water as it is part of the subject. Comp 3 has some unusable land but also has a great potential demand due to its flexibility for tourism development. On balance it is rated similar to the subject.

Parking is a critical issue in downtown Juneau. The subject and Comps 1 and 2 are located in the Downtown Center Parking Area which has significantly reduced parking requirements from the other areas of town. These are all rated similar in this regard. Comp 3 on the other hand is in an area that has no parking requirements making the land more valuable, all things being equal, since it does not require part of its site to be dedicated to parking. It is rated superior -1.

Summary and Relative Ranking

The rankings discussed above relative to the upland SF values compared to the subject are summarized in the following Table 4.2 for the subject uplands.

Table 4.2 – Qualitative Rating Grid Upland SF Values							
Characteristics	**Subject**	**Comp 1 #12239 1000 Harbor**		**Comp 2 #5011 76 Egan Dr**		**Comp 3 #12423 109 S. Franklin St.**	
Indicated Upland Value		$37,050		$318,500		$2,660,000	
Size (SF) Tot 19,916 SF	6,207 SF UL	741 SF		4,900 SF		11,048 SF	
Indicated SF Value of Upland	Solve	$50.00/SF		$65.00/SF		$240.77/SF	
Market Condition (Time)	2/2025	10/2023	0	6/2023	0	6/2023	0
Condition of Sale	Typical	Similar	0	Similar	0	Similar	0
Property Rights	Fee	Similar	0	Similar	0	Similar	0
Location	Good Prominence	Inferior	+1	Similar	0	Superior	-2
Development Potential	Good, Comm. Marine	Similar	0	Similar	0	Similar	0
Parking District	Town Center	Similar	0	Similar	0	Superior	-1
Net Rating		Inferior	+1	Similar	0	Superior	-3
The Subject Value Is:		More Than $50.00/SF		Similar to $65.00/SF		Much Less Than $240.77/SF	

If a comparison is ***Superior***, a Minus rating of -1, -2, or -3 is given depending on severity.
If a comparison is ***Inferior***, a Plus rating of +1, +2, or +3 is given depending on severity.

The data brackets the subject with a broad range between $50/SF and $240/SF. The higher end of the range is based on costs which may be higher than what is expected for a feasible highest and best use. This is the least comparable to the subject, setting the upper limit. Comp 1 at $50/ SF is closer but inferior in value. The recent lease rent adjustment reflected by

Comp 2 is given most weight. The indicated value of the upland is $65.00/SF. The contributory value of the tideland and sloping lands are 40% of this amount or $26.00/SF.

Conclusion of Land Value

Based on the foregoing conclusions, the estimated land value as of the effective date February 17th 2025 is summarized in the table below.

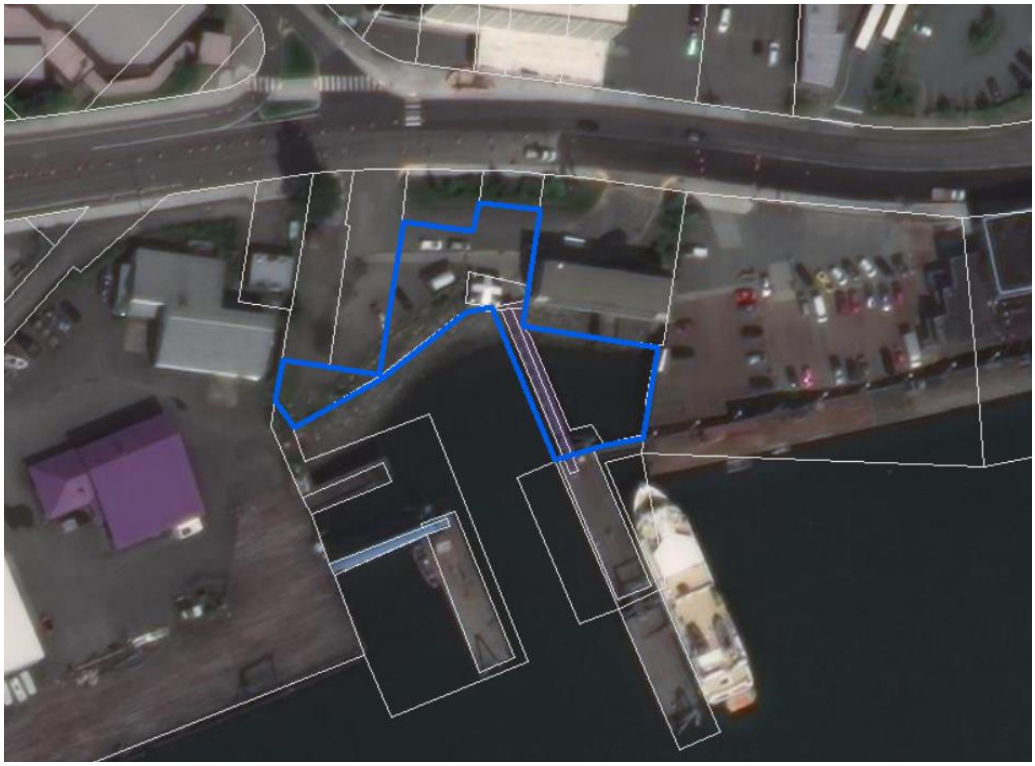
Summary Land Value Calculation			
Site Characteristics	Area	Unit Value	Value
Uplands	6,207 SF	$65.00/SF	$403,455
Tide & Sloping	8,748SF	$26.00/SF	$227,448
Total	14,955SF	$42.19/SF	$630,903

The indicated value of the land proposed for acquisition is $630,903

ADDENDA

APPRAISAL REPORT
REAL ESTATE APPRAISAL

Of
Sea Drome Marina



76 Egan Drive,
Juneau, Alaska
99801

As of
April 30, 2025

Prepared For
Mr. Elias Hastings
Goldbelt Incorporated
3025 Clinton Drive
Juneau, AK, 99801

Prepared by
RAMSEY APPRAISAL RESOURCE
Roger Ramsey, AK-APRG570

File Name:
25-016

RAMSEY APPRAISAL RESOURCE

(907) 723-2936

10615 Horizon Drive
Juneau,
AK, 99801

rogerramsey@mac.com

May 12, 2025

Mr. Elias Hastings
Goldbelt Incorporated
3025 Clinton Drive
Juneau, AK 99801

Re: Appraisal Report, Real Estate Appraisal
Sea Drome Marina
76 Egan Drive, Juneau,
Alaska, 99801

File Name: 25-016

Dear Mr. Hastings:

At your request, I have prepared an appraisal for the above referenced property, which may be briefly described as follows:

The subject property is 14,955 SF of property that includes uplands, tidelands, and submerged lands. Some of the subject area is leased by Goldbelt Inc. Through the years Goldbelt has built and maintained marine and upland improvements on the subject property. These improvements are not included in this valuation and the subject property will be appraised with the hypothetical condition that it is vacant. While the subject is currently encumbered by a lease, this appraisal assumes that the current lease in place has no effect on the value of the subject property.

Please reference page 10 of this report for important information regarding the scope of research and analysis for this appraisal, including property identification, inspection, highest and best use analysis, and valuation methodology.

I certify that I have no present or contemplated future interest in the property beyond this estimate of value. The appraiser has not performed any services regarding the subject within the three-year period immediately preceding acceptance of this assignment.

Your attention is directed to the Limiting Conditions and Assumptions section of this report (page 7). Acceptance of this report constitutes an agreement with these conditions and assumptions. In particular, I note the following:

Hypothetical Conditions:

- It is a hypothetical condition that the land is vacant and available for development to its highest and best use.
- it is a hypothetical condition that the land is not encumbered by any leases.

Extraordinary Assumptions:

- It is an extraordinary assumption that the land areas are as estimated and described in this appraisal

Based on the appraisal described in the accompanying report, subject to the Limiting Conditions and Assumptions, Extraordinary Assumptions and Hypothetical Conditions (if any), I have made the following value conclusion(s):

Current As Is Market Value:
The "As Is" market value of the Fee Simple estate of the property, as of April 30, 2025, is

Five Hundred Ninety Thousand Dollars ($590,000)

The market exposure time preceding April 30, 2025 would have been 6 months and the estimated marketing period as of April 30, 2025 is 6 months.

Respectfully submitted,
Ramsey Appraisal Resource

Roger Ramsey
AK-APRG570

MARKET VALUE APPRAISAL OF SEADROME BUILDING AND MARINA. GOLDBELT AND CBJ LAND EXCHANGE 76 EGAN DRIVE, JUNEAU, ALASKA

Subject tideland looking west from Merchants Wharf, November 17, 2022

PREPARED FOR: Carl Uchytil, PE, Port Director
City and Borough of Juneau Docks and Harbors
155 S. Seward Street
Juneau, Alaska 99801

PREPARED BY: Charles Horan, MAI
Horan & Company, LLC
403 Lincoln Street, Suite 210
Sitka, Alaska 99835

EFFECTIVE DATE: February 21, 2023

REPORT DATE: February 27, 2023

OUR FILE NO.: 22-044

HORAN & COMPANY

REAL ESTATE APPRAISERS/CONSULTANTS

CHARLES E. HORAN MAI / JOSHUA C. HORAN / SLATER M. FERGUSON

403 LINCOLN STREET, SUITE 210, SITKA, ALASKA 99835

PHONE NUMBER: (907)747-6666 FAX NUMBER: (907)747-7417 commercial@horanappraisals.com

February 27, 2023

Carl Uchytil, P.E., Port Director
City and Borough of Juneau Docks and Harbors
155 S. Seward Street
Juneau, Alaska 99801 Via email: teena.larson@juneau.org

Re: Market Value Appraisal of Seadrome Building and Marina. Goldbelt and CBJ Land Exchange 76 Egan Drive, Juneau, Alaska. Our File # 22-044.

Dear Mr. Uchytil,

We have worked with your staff and Steven Sahlender, VP of the Alaska Group with Goldbelt and his staff to develop an equal value exchange of lands around Goldbelt's Seadrome Marina. Assisted by site information provided by RESPEC surveyors, the Port Engineer and I have worked to develop an equal value exchange configuration which preserves the highest and best use functionality of the land to both parties with marine and street front access. After analyzing the market and making several iterations of exchange configurations I have determined the following value conclusions of the exchange as of the effective date, February 21st 2023.

Goldbelt conveys to CBJ	SF Area	Unit value	Land Value
Upland Parts of Lots 1 & 2	6,252	$65	$406,380
Tideland Part of Lot 2	70	$26	$1,820
Total Goldbelt Land	6,322		**$408,200**
CBJ conveys to Goldbelt	SF Area	Unit value	Land Value
Upland behind Lots 3 & 4	3,400	$65	$221,000
Tidelands west of Lot 5	550	$26	$14,300
Tidelands south of Lot 5	6,650	$26	$172,900
Total CBJ lands	10,600		**$408,200**

Your attention is invited to the attached report which explains this analysis in more detail and includes the most pertinent data considered in estimating the market value. This appraisal is intended to comply with the rules and regulations as set forth by the Uniform Standards of Professional Appraisal Practice (USPAP) and the City and Borough of Juneau's appraisal instructions.

If you have any questions or comments, please feel free to contact us at your convenience.

Sincerely,

Charles E. Horan, MAI
Horan & Company, LLC

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Certification of Appraiser
Photo Orientation Map
Subject Photos
Site Survey Seadrome
CBJ Land Lease
Petro – Goldbelt Agreement
Petro Amendment #1
Tideland Value Ratios
A;asla Tode;amds <arlet Remt
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1 INTRODUCTION

1.1 BACKGROUND AND SUMMARY OF CONCLUSIONS

Goldbelt Corporation is the controlling entity of Cultural Preservation, Inc. which owns and leases property at 76 Egan Drive, Juneau, Alaska Seadrome Building and Marina. They have fee ownership of lots 1 through 5, Block 76 Tidelands Addition Subdivision to ATS 3 Plat 340, JRD. These are level at grade "uplands, 21,801 SF of commercial the land fronting Egan Drive used for parking and the small three-story wood frame office building on Lot 5. There is an additional 19,919 SF of filled and unfilled tidelands leased from the City and Borough of Juneau for a marina outlined in blue in the figure below. There are also approximately 14,400 SF of submerged lands leased from Merchants Wharf which extends the marina use. The entire tract controlled by the property owner Cultural Preservation Inc. is over 56,000 SF, as generally outlined in Figure 1.1

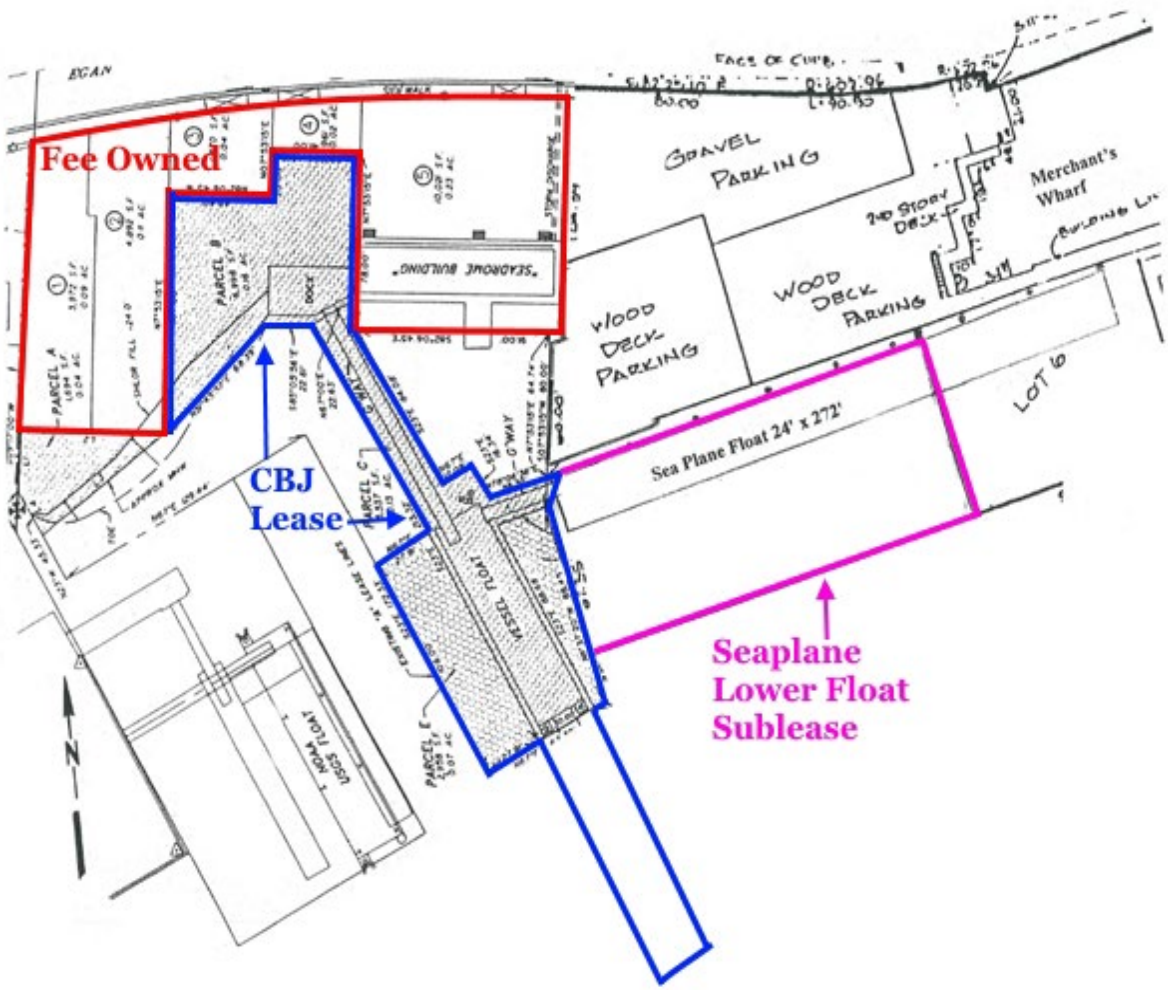


FIGURE 1.1 - Showing extent of lands under control of owner Goldbelt/Cultural Preservation, Inc.

Synopsis of Land Leases and Agreements

About 19,916 SF of land blue-lined "CBJ Lease" in Fig. 1.1 are leased from the City and Borough of Juneau based on a 35-year lease that began June 1, 1996 which has one additional 35-year option to renew. The annual rent is adjusted to market every five years based on 9% of the estimated market value. It was last reviewed in June 2018 confirming the current rent of $56,327.58.

The tidelands seaward of Merchants Wharf are leased from the Merchants Wharf based on the 2018 agreement. They also have an agreement for the use of the float on those tidelands with another entity. These agreements have been ongoing for many years. This area is accessed by the CBJ lease.

The site is improved with a small three-story office building paved parking landscaping and other site amenities.

There is a use agreement between Goldbelt and Petro Marine Services for the installation of a diesel fuel system for the purpose of fueling marine vessels. The tanks are above ground inside temporary concrete barriers with fuel lines running down the ramp to the docks. This March of 2015 agreement was amended in June of 2016 allowing a 10 year term expiring in 2025 with automatic one year options to extend.

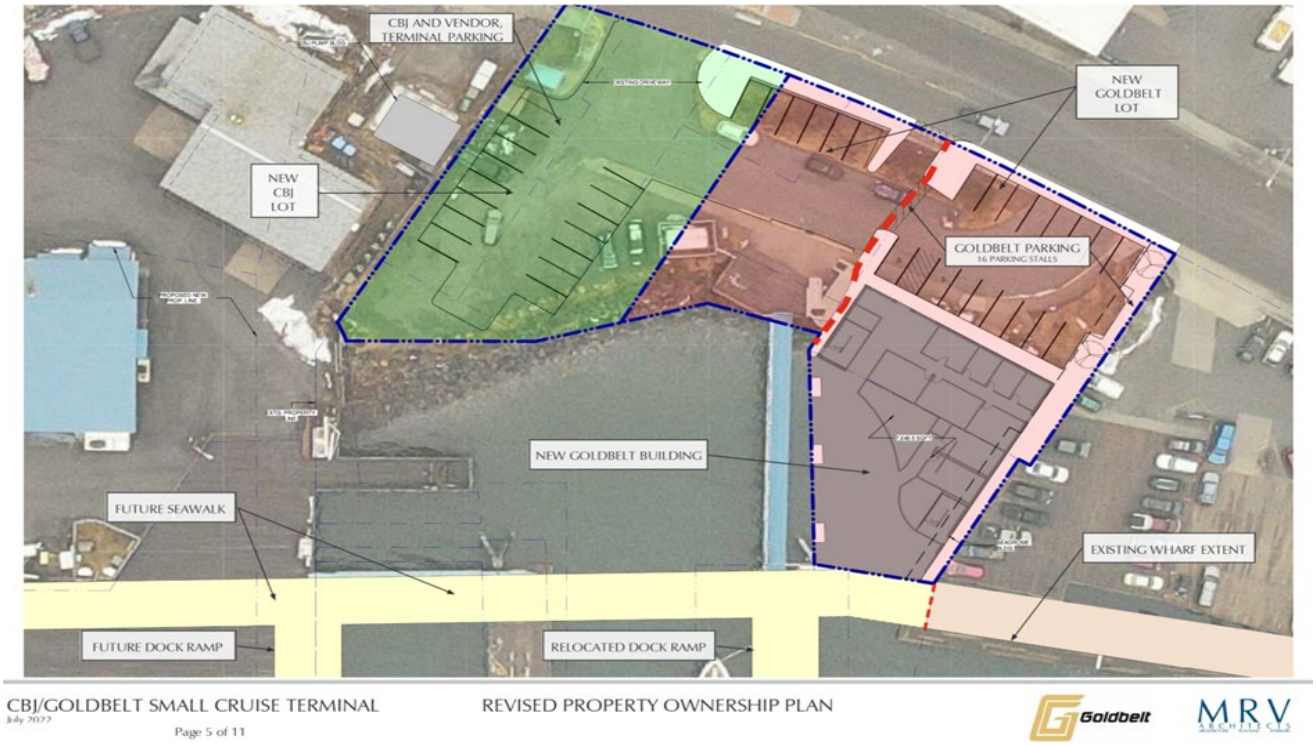


FIGURE 1.2 - Goldbelt's initial envisioned expansion July 2022

The Proposed Exchange

Goldbelt wishes to expand its upland improvements with a small cruise ship terminal building developed over tidelands seaward of this existing building as noted in Figure 1.2 above. This concept is intended to allow a tie in to the future Seawalk concept. Goldbelt desires to acquire additional land for this purpose and proposes to trade it's uplands for the value of these tidelands.

To initiate the process Goldbelt suggested an exchange configuration that looked something like what is presented in Figure 1.3 below. The idea was to develop an exchange configuration that would be close to equal value. The suggested configuration below puts more valuable level uplands owned by Goldbelt on the CBJ side of the exchange balance requiring several iterations of modifications to develop an even value exchange.

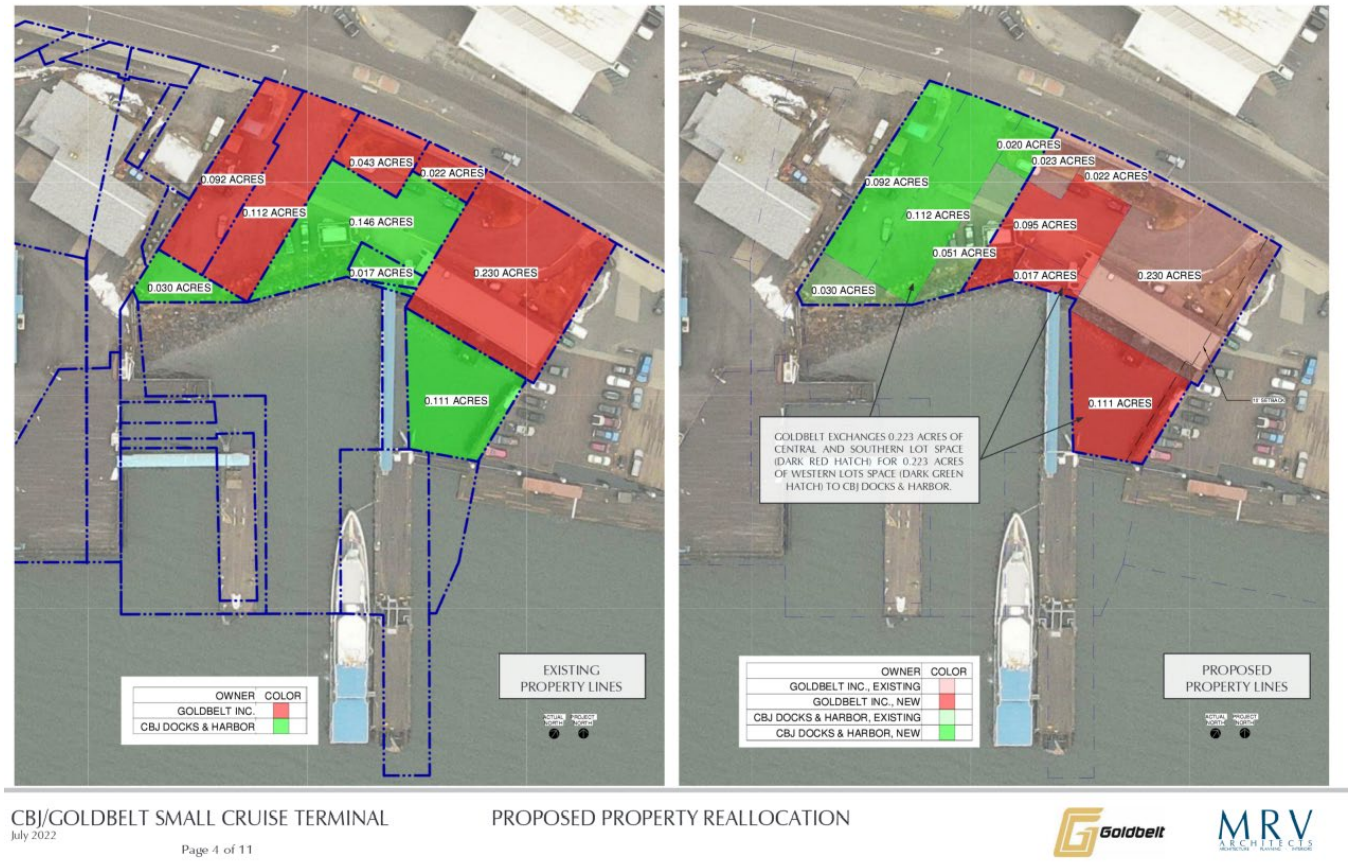


FIGURE 1.3 - initial exchange suggestion which put too much valuable land from Goldbelt to CBJ on the exchange balance.

As the process developed Goldbelt obtained detailed survey information about the land. The appraiser performed an analysis of the valuation contribution of land characteristics. It was concluded that the highest and best use of the land was similar for both of the property ownerships. It was determined that the sloping and tidal lands had a SF unit value of 40% of the upland unit value. This developed a ratio that for every 1 SF of upland traded, 2.5 SF of tidelands would be required or the reciprocal for every SF of tideland traded 0.40 SF of upland would be required. This ratio and analysis are supported in the valuation section of this report.

After several iterations of possible exchange configurations, the following was concluded to give equal utility to each parties pursuit of highest and best used development of the land.

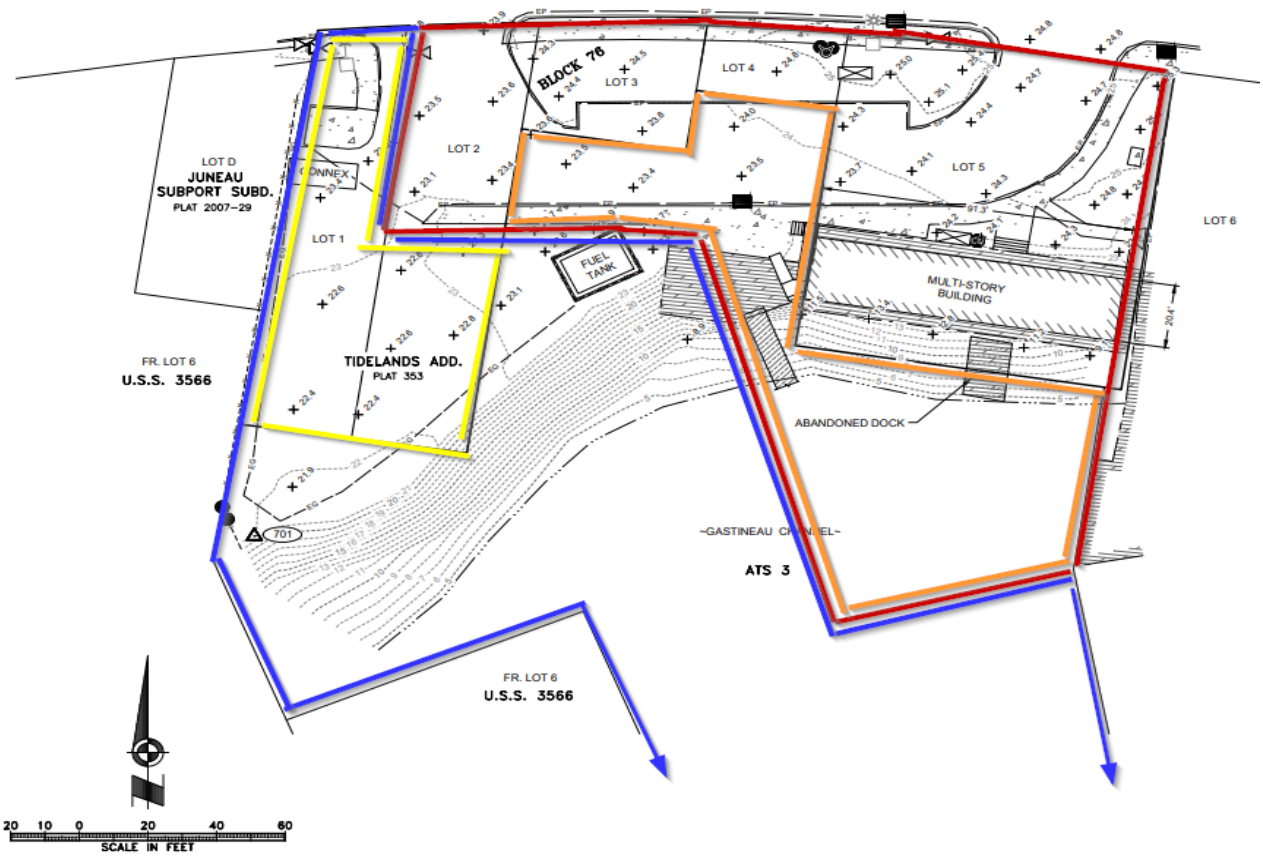


FIGURE 1.4 - Concluded exchange configuration showing CBJ receiving Goldbelt land outlined in yellow and Goldbelt receiving CBJ land outlined in orange. This makes the final ownership configuration reflected in CBJ outline in blue which extends into the harbor and covers the existing CBJ Goldbelt lease areas for which the city enjoys market rent. The final configured Goldbelt parcel is outlined in red.

Conclusion Traded Land Values

Goldbelt conveys to CBJ	SF Area	Unit Value	Land Value
Upland Parts of Lots 1 & 2	6,252	$65	$406,380
Tideland Part of Lot 2	70	$26	$1,820
Total Goldbelt Land	6,322		**$408,200**
CBJ conveys to Goldbelt	SF Area	Unit Value	Land Value
Upland behind Lots 3 & 4	3,400	$65	$221,000
Tidelands west of Lot 5	550	$26	$14,300
Tidelands south of Lot 5	6,650	$26	$172,900
Total CBJ lands	10,600		**$408,200**

1.2 INTENDED USERS AND INTENDED USE

The purpose of this appraisal is to estimate the square foot market value of those lands under consideration for exchange and to assist the exchanging parties in developing a near equal exchange of the identified lands based on their values as expressed by these market unit values. For these purposes certain reasonable hypothetical conditions are made part of this assignment such as that the lots are subdivided and marketable and unimproved ready for development to their highest and best use. Also, certain assumptions are made that there is no legal encumbrances by titled interest, lease or agreements would offset the values as calculated.

The Intended use of this appraisal as to assist the parties in an equal value exchange. The **Intended users** are the City and Borough of Juneau Harbor Board, Docks and Harbor management and subsequent decision makers involved in the exchange. The appraisal is not intended for any other users or any other use.

Please see the addenda for the summary of assumptions and conditions, certification of appraisal, definitions and other important information relative to the appraisal analysis.

1.3 INSPECTION & EFFECTIVE DATE

Charles Horan, MAI inspected and photographed the property on November 17th 2023. The property was also viewed on February 21, 2023. This latter date February 21st 2023 is the effective date of the appraisal.

1.4 SCOPE OF WORK

This appraisal analysis is for land only as though the site is hypothetically vacant and available for highest and best use development. The character of the land is based on a site survey performed by RESPEC. The character the land was differentiated as uplands, generally the land at the top of the slope of the filled areas at near road grade, and tidelands, which in this case include sloping lands and tidal flooded or submerged lands below.

The land is appraised as if vacant and available for development to its highest and best use. It is an extraordinary assumption that the easements, leases and agreements which are described

in this report do not inhibit the value attributed to the various exchange parcels. It is assumed the current land lease between the CBJ and Goldbelt will be revised to accommodate the new lot lines. No complete legal description or current title status report to the land has been provided to the appraiser. It is understood that the land will be surveyed into a legal site prior to conveyance.

The land value as hypothetically vacant will be estimated on the contributory square foot value of each of the exchange components of the land as uplands and tidelands.

The most direct way to estimate market value of the land is the sales comparison approach. Sales prices or annual rents have been analyzed as the primary indicators of value in the subject's competitive market. The market unit of comparison for this property is price per square foot. In some instances, leases were capitalized to indicate the fee value. A land capitalization rate of 8%[1] is used unless a contract rent is being converted and states otherwise. The income approach and depreciated cost approach were considered, but not applicable in the subject instance. The appraisal conforms to the Uniform Standards of Professional Appraisal Practice (USPAP).

A thorough search of the market has been made for comparable transactions including interviews with realtors, consultations with the southeast and statewide Multiple Listing Services, a review of the assessor's files on sales transactions, lenders, government agencies and others who regularly participate in the real estate market. To the extent possible, we have interviewed buyers, sellers or other knowledgeable parties to the transactions as more fully described in our market data sheets contained in the addenda.

Our office maintains market data information on sales, transfers and on a geographic location basis for those rural properties not connected to a road system and those connected. Within each of these areas, the data is further segmented into commercial and residential properties. Within these divisions of separation are divisions for zoning and whether the properties are waterfront or upland parcels. Horan & Company, LLC maintains and continually updates this library of sale transactions throughout Alaska by region and has done so for over 30 years.

1.5 ASSUMPTIONS AND LIMITING CONDITIONS

This appraisal is made based on the following **hypothetical conditions (HCs)** and **extraordinary assumptions (EAs).**

HC1 It is a hypothetical condition of this appraisal that the land as appraised is a legal subdivided marketable sites in fee simple title allowing the highest and best use of each ownership.

[1] See adenda for Alaska Tidelands Valuation And Rent Market

HC 2 The value is for land only. The value disregards site improvements which are present.

EA1 It is an extraordinary assumption that the lot size and portions are as outlined in this report. It's understood that the final square footage may very somewhat which could be adjusted by the client or by an amended appraisal.

EA2 It is an extraordinary assumption that easements, leases and agreements which are known and outlined in this report do not inhibit the value attributed to the various exchange parties. It is assumed current land lease between the CBJ and Goldbelt will be revised to accommodate the new lot lines.

This appraisal and valuation contained herein are also expressly subject to the scope of work and the following assumptions and/or conditions:

1. It is assumed the data, maps and descriptive data furnished by the client or its representative are accurate and correct. Photos, sketches, maps, and drawings in this appraisal report are for visualizing the property only and are not to be relied upon for any other use. They may not be to scale.
2. The valuation is based on information and data from sources believed reliable, correct and accurately reported. No responsibility is assumed for false data provided by others.
3. No responsibility is assumed for building permits, zone changes, engineering or any other services or duty connected with legally utilizing the subject property. No responsibility is assumed for matters legal in character or nature. No opinion is rendered as to title, which is assumed to be good and marketable. All existing liens, encumbrances, and assessments have been disregarded unless otherwise noted, and the property is appraised as though free and clear, having responsible ownership and competent management. It is assumed that the title to the property is marketable. No investigation to this fact has been made by the appraiser.
4. The property described herein has been examined exclusively for the purpose of identification and description of the real property. The objective of our data collection is to develop an opinion of the highest and best use of the subject property and make meaningful comparisons in the valuation of the property. The appraiser's observations and reporting of the subject land or improvements are for the appraisal process and valuation purposes only and should not be considered as a warranty of any component of the property. This appraisal assumes (unless otherwise specifically stated) that the subject is structurally sound and all components are in working condition.
5. This appraisal report may note any significant adverse conditions (such as needed repairs, depreciation, the presence of hazardous wastes, toxic substances, etc.) discovered during the data collection process in performing the appraisal. Unless otherwise stated in this appraisal report, the appraiser has no knowledge of any hidden or unapparent physical deficiencies or adverse conditions of the property (such

as but not limited to, needed repairs, deterioration, the presence of hazardous wastes, toxic substances, adverse environmental conditions, etc.) that would make the property less valuable, and have assumed that there are no such conditions and make no guarantees or warranties, express or implied. The appraiser will not be responsible for any such conditions that do exist or for any engineering or testing that might be required to discover whether such conditions exist. Because the appraiser is not an expert in the field of environmental hazards, this appraisal report must not be considered as an environmental assessment of the property. The appraiser obtained the information, estimates, and opinions furnished by other parties and expressed in this appraisal report from reliable public and/or private sources believes it to be true and correct. It is assumed that no conditions existed that were undiscoverable through normal diligent investigation which would affect the use and value of the property. No engineering report was made by or provided to the appraiser.

6. The Client is the party or parties who engage an appraiser in a specific assignment. A party receiving a copy of this report from the client does not, as a consequence, become a party to the appraiser-client relationship. Any person who receives a copy of this appraisal report as a consequence of disclosure requirements that apply to an appraiser's client does not become an intended user of this report unless the client specifically identified them at the time of the assignment.

7. The appraisal report may not be properly understood without access to the entire report. The appraisal is to be considered in its entirety, the use of only a portion thereof will render the appraisal invalid.

8. Any distribution of the valuation in the report between land, improvements, and personal property applies only under the existing program of utilization. The separate valuations for land, building, and chattel must not be used in conjunction with any other appraisal and is invalid if so used.

9. One (or more) of the signatories of this appraisal report is a member or associate member of the Appraisal Institute. The bylaws and regulations of the Institute require each member and candidate to control the use and distribution of each appraisal report signed by such member or candidate. Therefore, except as hereinafter provided, the party for whom this appraisal report was prepared may distribute copies of this appraisal report in its entirety to such third parties as selected by the party for whom this appraisal report was prepared; however, selected portions of this appraisal report shall not be given to third parties without the prior written consent of the signatories of this appraisal report. Further, neither all nor any part of this appraisal report shall be disseminated to the general public by the use of advertising media, public relations media, news media, sales media, or other media for public communication without the prior written consent of signatories of this appraisal report.

10. The appraiser shall not be required to give testimony or appear in court by reason of this appraisal with reference to the property described herein unless prior arrangements have been made.

1.6 DEFINITIONS

Market Value

The most probable price that a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

- Buyer and seller are typically motivated;
- Both parties are well informed or well advised, and acting in what they consider their best interests;
- A reasonable time is allowed for exposure in the open market;
- Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
- The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

The Dictionary of Real Estate Appraisal, 5th Edition, Appraisal Institute, Page 123

The estimated market exposure time is 18 to 24 months.

Extraordinary Assumption

An assumption, directly related to a specific assignment, as of the effective date of the assignment results, which, if found to be false, could alter the appraiser's opinions or conclusions.

Comment: Extraordinary assumptions presume as fact otherwise uncertain information about physical, legal, or economic characteristics of the subject property; or about conditions external to the property, such as market conditions or trends; or about the integrity of data used in an analysis. (USPAP, 2016-2017 ed.)

Dictionary of Real Estate Appraisal, Sixth Edition, Page 83-84.

Hypothetical Condition

1. A condition that is presumed to be true when it is known to be false. (SVP)
2. A condition, directly related to a specific assignment, which is contrary to what is known by the appraiser to exist on the effective date of the assignment results, but is used for the purpose of analysis. Comment: Hypothetical conditions are contrary to known facts about physical, legal, or economic characteristics of the subject property, such as market conditions or trends; or about the integrity of data used in an analysis. (USPAP, 2016-2017 ed.)

The Dictionary of Real Estate Appraisal, 6th Edition, Appraisal Institute, Page 113

The use of an extraordinary assumption or a hypothetical condition if found to be otherwise could impact appraisers' analysis and conclusions.

2 AREA ANALYSIS

2.1 JUNEAU AREA ANALYSIS

Please see the addenda for the expanded Juneau Area Analysis. The population and employment in Juneau have been declining over the last few years but it appears that the decline is diminishing. The population is aging. There is a housing shortage with prices rising due to supply and demand issues as well as inflationary pressure for materials. There have been no large-scale multifamily housing projects developed for the last several years. It appears that feasibility for new rental housing may be difficult. With the increase in values for condominiums and other forms of home ownership, there may be some more potential in the future for this type of feasible housing. It's beyond the scope of this report to make this determination at this time.

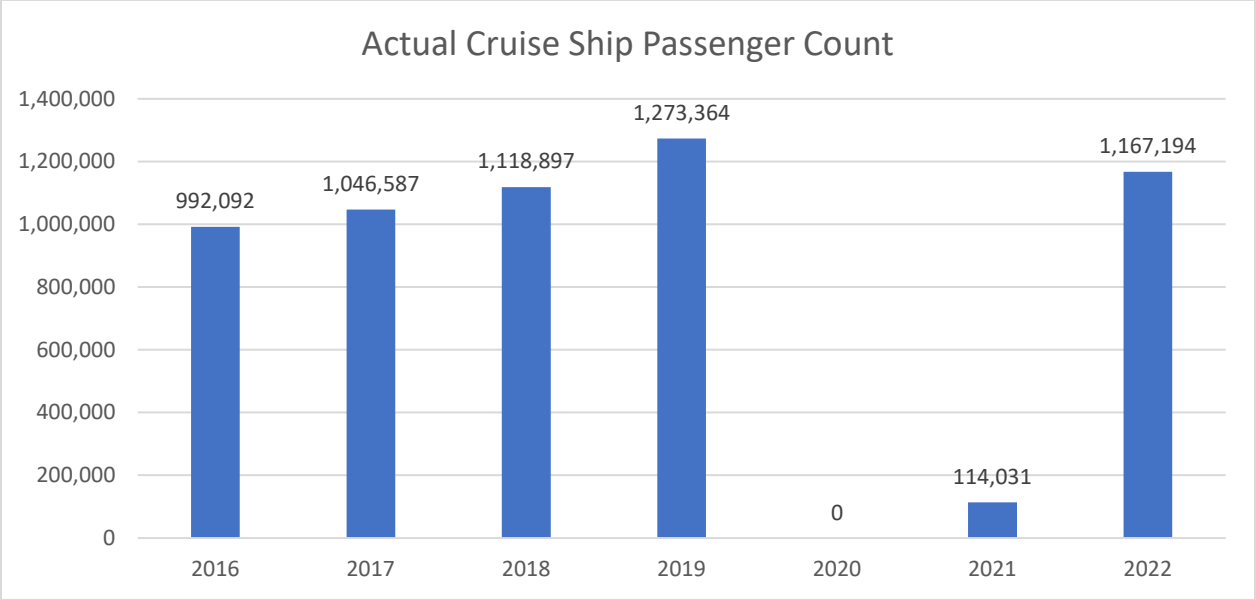


Figure 2.1 - Actual cruise ship passenger count provided by CBJ Docks and Harbor Department, the Tide Line November 2022 newsletter.

Tourism has recovered significantly for the independent traveler and more recently, just this year for the cruise ship passenger. Actual passenger count for 2022 is 92% of the previous high in 2019. It appears it will improve next year. Tourism-related sales are also rebounding as seen in gross tax receipts but not near the levels previously seen in 2019. The independent travel market appears to be stronger based on bed tax receipts which in 2022 may have outpaced the 2019 season. Education, government, fishing, and other industries that have lagged in the last several years appears to be recovering if not to prior levels. State Government continues to shrink but may be leveling off.

Overall, the current market in 2022 is positive. It is expected that prices would be stable or moderately increasing in some parts of the commercial real estate sector.

2.2 NEIGHBORHOOD ANALYSIS

The subject property is located on the Juneau Harbor waterfront beyond the dense traffic generated by cruise ships. However, it provides a nearby deep-water marina for large yachts, small tourism vessels and sea planes. The subject has the advantage of convenience for most tour operators that would work out of this property. While use of the subject is limited by the water-oriented zoning, its close proximity to the tourism traffic.

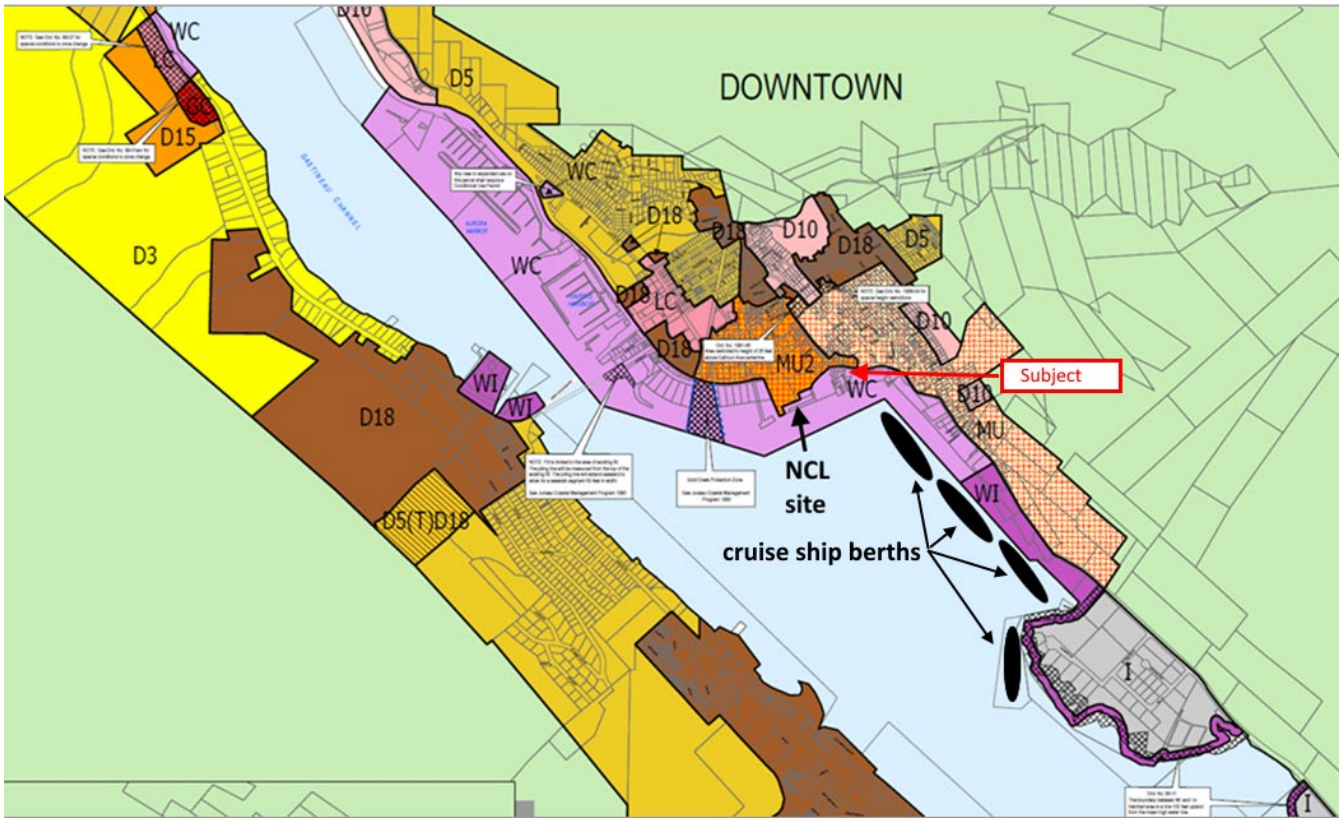


FIGURE 2.2 - Zoning Map. Source: CBJ Downtown Juneau & Douglas Zoning Map as of September 29, 2015 annotated by Horan & Company.

Zoning

The property is zoned Waterfront Commercial (WC). The WC, Waterfront Commercial District, is intended to provide both land and water space for uses which are directly related to or dependent upon a marine environment. Such activities include private boating, commercial freight and passenger traffic, commercial fishing, floatplane operations, and retail services directly linked to a maritime clientele. Other uses may be permitted if water-dependent or water-oriented.

Parking Districts

The parking ordinance changed in March of 2022. The subject was in the former Parking District PD2, which allowed owners or property developers a reduction in the parking requirements up to 30%. The new No Parking Required Area establishes an area where properties can be developed with no requirement for parking which in many cases enhances their development potential. The subject is in the Town Center Parking Area which addresses many issues that had to be dealt with on an individual basis and caused some confusion and development constraints within the area. For instance, it establishes the distance that off-site parking can be provided for development on a certain site. There is still a fee in lieu of opportunity to satisfy parking requirements. There is a mechanism for joint use parking where the requirement can be satisfied with parking provided at different times of day for instance evening theater users can get credit for the same space with daytime office users. The parking space requirements were reduced ranging 50% to 100% of the standard requirement depending on the use. Still many uses require parking to make them feasible to achieve the best economic rent for offices, some residential and some retail for instance.

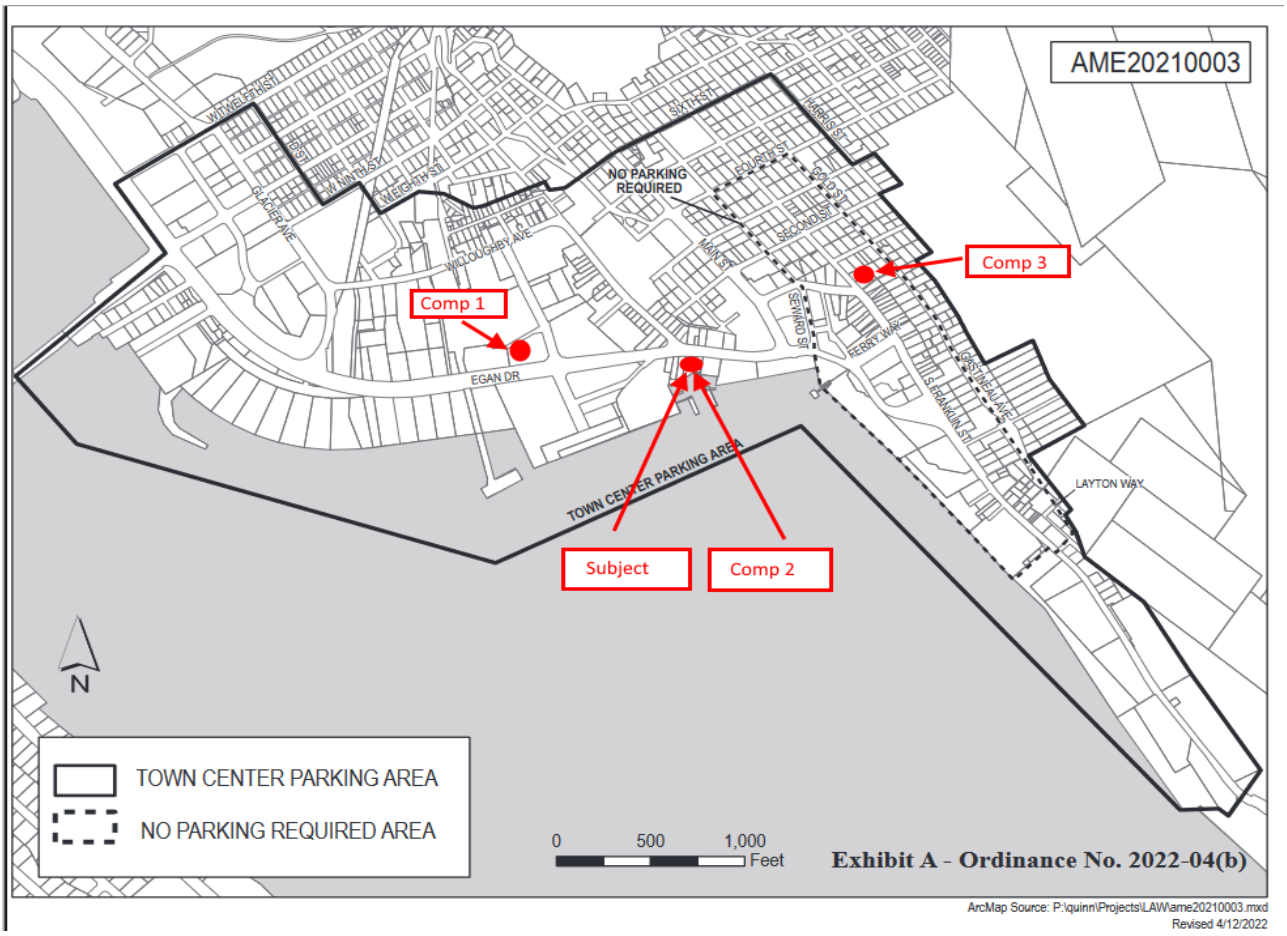


FIGURE 2.3 - Parking District Map showing the subject and Comps.

Juneau Harbor Waterfront

The Long Range Waterfront Master Plan established in 2004, which became part of the Juneau comprehensive plan, calls for a sea walk to pass through these parcels connecting the broader neighborhood by an elevated walkway from the cruise ship docks on South Franklin Street to the 8th Street office complex. This project has steadily progressed in phases. The most recent Seawalk phase was completed from the 8th Street office complex to Gold Creek, just west of the subject.

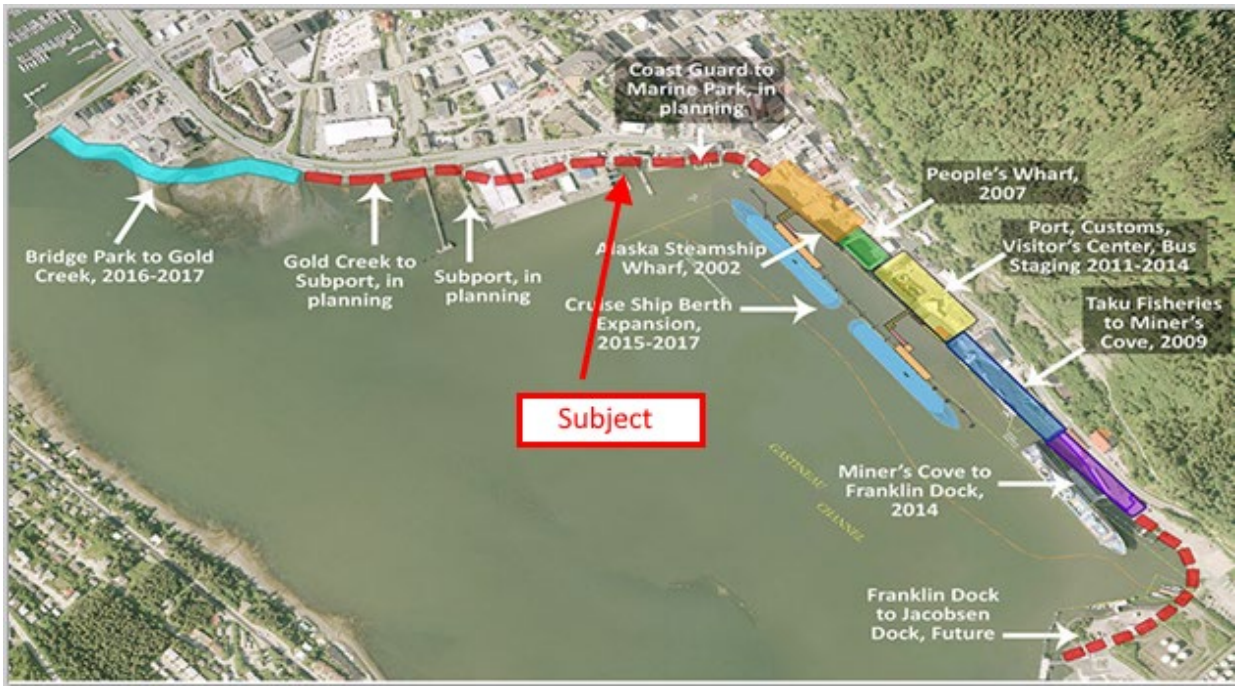


FIGURE 2.4 - Seawalk timeline concept from CBJ website.

The subject has historically been used for small cruise ships. It is well situated to comply with the waterfront development concept for small to midsize ship harbor and marina use. The CBJ cruise ship docks are just east of the subject beyond the Merchants Wharf which is used for floatplane tourism and the subject marina which employs part of the Merchants Wharf tidelands frontage. Just West of the subject is a small NOAA dock and the US Coast Guard dock beyond. Apparently Juneau has been notified they will possibly be home porting an ice breaker which may involve redevelopment of this government property to the west. Further west is the NCL purchase of 2.9 acres of land on which they envision the development of Juneau Harbors 5th large cruise ship dock. The Juneau Waterfront Plan and its overarching Comprehensive Plan have been modified to allow this to happen in the Subport area. All these waterfront dock properties are in high demand at this time due to the growing number of cruise ship visitation to the port of Juneau. This activity demonstrates that the demand for the subject property is very good.

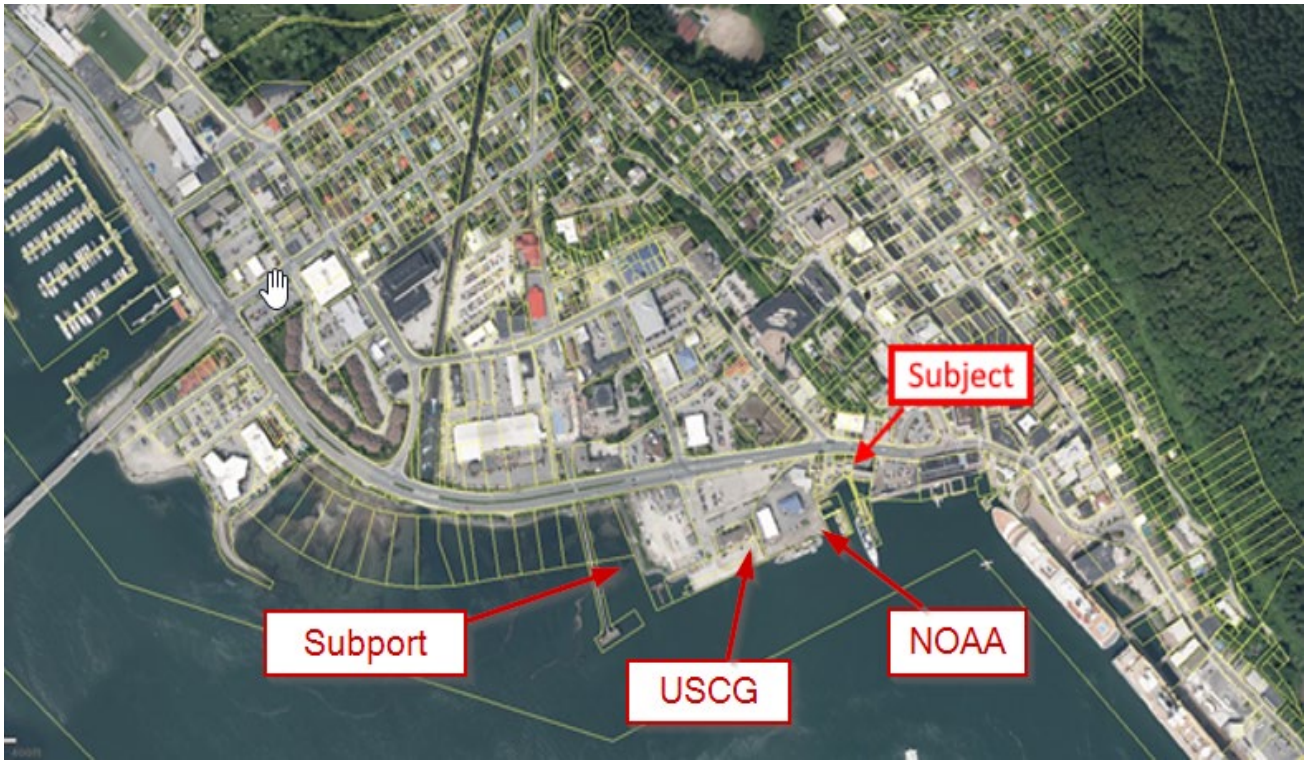


Figure 2.5 - CBJ GIS overview map of downtown commercial area and inner harbor area

3 PROPERTY DESCRIPTION

3.1 SITE DESCRIPTION

The purpose of the appraisal is to estimate the typical SF land value for the for the properties owned by the proponents of the exchange which we will call CBJ lands and Goldbelt lands. The present configuration and context of these parcels are as indicated in

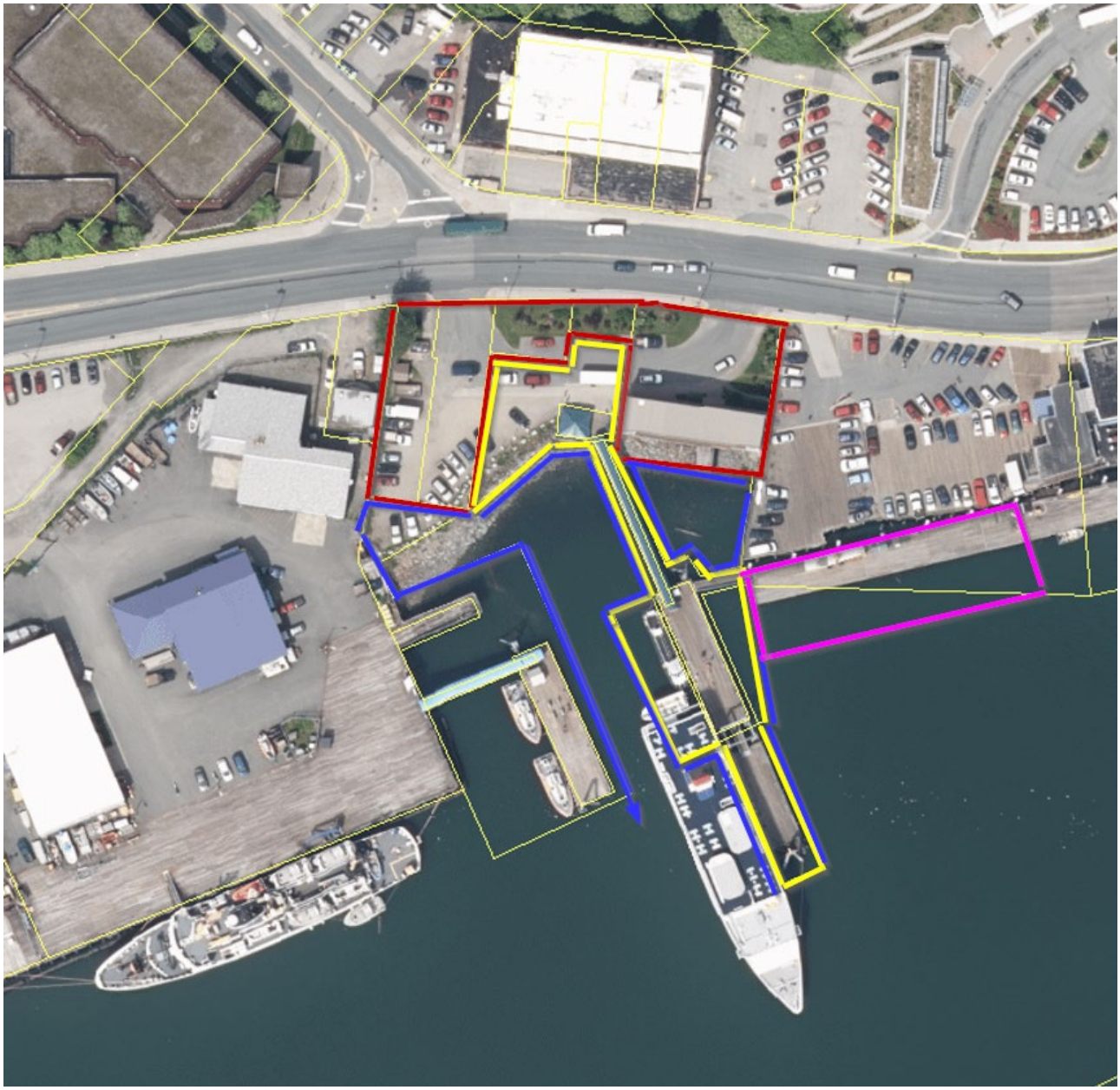


Figure 3.1 - The red lines embrace those lands currently owned by Goldbelt. The blue and yellow embrace those lands owned by the CBJ. The yellow is leased from CBJ to Goldbelt.

Character of larger land area

The lands are considered as equally situated economic units. In other words, the CBJ is not penalized for not having frontage on Egan Drive nor is Goldbelt penalized for not having access to the waterfront without a land lease from the CBJ. Overall the land has about 250 feet of frontage on Egan Drive. The upland area at grade extends 70 feet to 150 feet south toward the sloping tidelands. The tidelands influence extends another 300 feet or more into the deep water of Juneau Harbor.

The land influenced by the exchange areas is roughly outlined in Figure 3.1. This consists of about 48,000 SF of the CBJ lands of which 6000 SF more or less is classified as uplands (about 12%). Goldbelt has about 20,000[2] square feet of land of which is roughly 16,700 square feet classified as uplands (84%).

The fill soil is level at road grade and assumed to be competent for most economic highest and best uses based on the neighborhood and historic development on the site. The sloping tidelands appear to be adequate as well as they currently support a pile driven marine float and ramp structure capable of mooring small to midsize vessels.

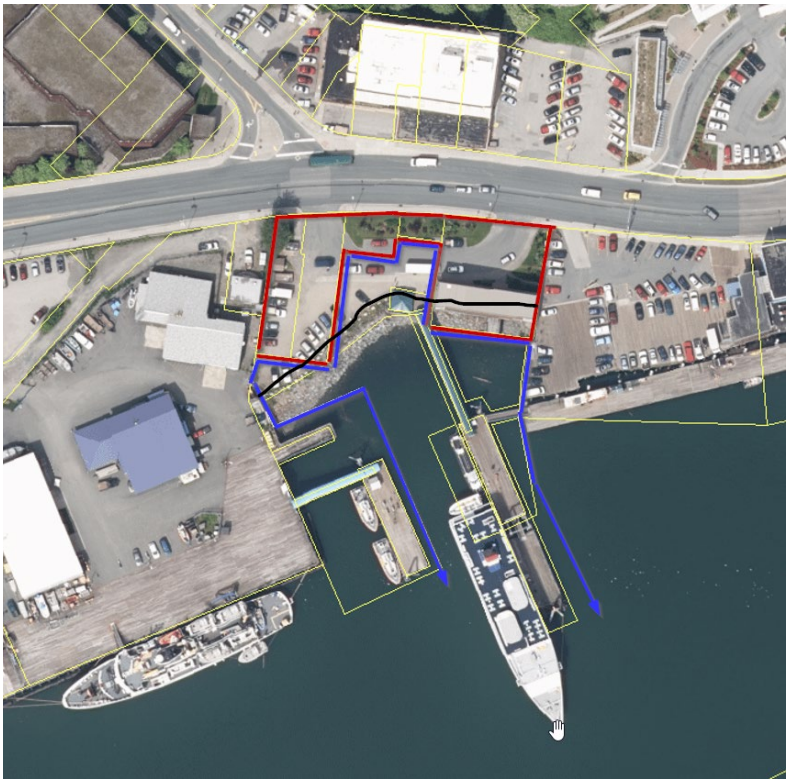


Figure 3.2 rough outline of land ownership, Goldbelt in red CBJ in blue. This also notes rough approximation of top of fill line.

Utilities

All utilities available in the City and Borough of Juneau are available to the site, including water, sewer, telephone, cable television, electric power, etc.

Access and Off-Site Improvements

Road access is along Egan Drive, a paved, undivided, four-lane highway with concrete curbs, gutters, and storm drainage. No on-street parking is available adjacent to or near the subject.

[2] Goldbelt has title to about 21,801 SF in Lots 1 through 5 Block 76 of the Juneau Townsite Addition. In about 2017 1,823 SF were conveyed as a perpetual easement to the State of Alaska DOT leaving a net effective land area of just under 20,000 SF.

This is a heavily trafficked road. The site has water access through tidelands to the deep water of Gastineau Channel to the south.

Assessed Valuation and Taxes

The subject is carried as two parcels by the assessor with the following Parcel IDs;

1C070K760010, Legal Description Tidelands Addition Block 76 Lots 1, 2, & 3, and
1C070K760020, Legal Description Tidelands Addition Block 76 Lots 4 & 5.

The total value for both parcels owned in fee is $2,138,565 for the 2022 assessment.

The leasehold interest in the tidelands, owned by CBJ Docks & Harbor, parcel number 1C070K760021, ATS 3 FR, is $954,030 for 2022.

This includes the improvement value of the floats and other marine improvements. The total value for all three parcels is $3,092,595. The taxes for all three would be $32,658 based on a current mill rate of 10.56.

Easements and Other Restrictions

There are no known easements or platted site restrictions that would influence the typical square foot value for the purpose of our analysis. We have already addressed the existence of the land lease and other agreements which do not impact our square foot value analysis.

3.2 IDENTIFIED EXCHANGE LANDS

The exchange lands have been analyzed for their site characteristics as filled or tidelands as previously defined. The CBJ Port Engineer, in consultation with the appraiser, has defined an approximate equal value exchange. The character of these lands are also informed by the topographical survey performed by RESPEC surveyors. The following figure identifies those lands..

This analysis notes that Goldbelt would convey approximately 6,322 SF of land and that the CBJ would convey approximately 10,600 SF land. The breakout is summarized in the following table.

Figure 3.3 Drawing by Matthew D. Sill, P.E. Port Engineer, Port of Juneau which summarizes the size and shapes of lands that will create an approximate equal exchange.

Goldbelt Conveys to CBJ	
Upland Parts of Lots 1 & 2	6252 SF
Tideland Part of Lot 2	70 SF
Total Goldbelt land	6322 SF

CBJ conveys to Goldbelt	
Upland behind Lots 3 & 4	3400 SF
Tidelands west of Lot 5	550 SF
Tidelands south of Lot 5	6650 SF
Total CBJ lands	10600 SF

The newly configured sites would approximate the shapes shown in Figure 3.4 below.

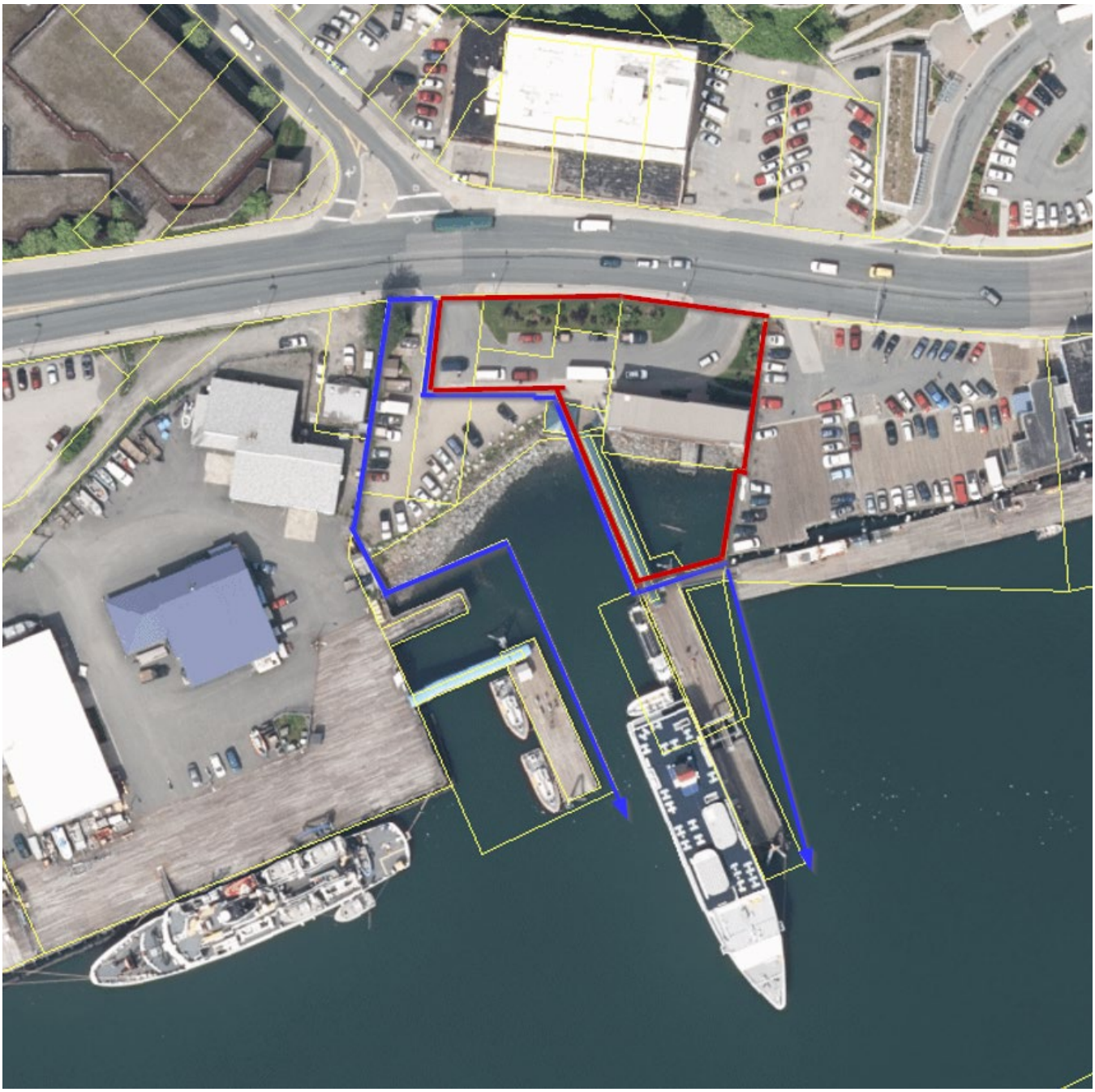


Figure 3.4 showing newly configured land ownerships. Note CBJ lease to Goldbelt is not indicated.

4 VALUATION

4.1 HIGHEST AND BEST USE

Highest and best use is defined as "the reasonably probable and legal use of vacant land or an improved property that is physically possible, appropriately supported, financially feasible, and that results in the highest value. The four criteria the highest and best use must meet are legal permissibility, physical possibility, financial feasibility, and maximum productivity. Alternatively, the probable use of land or improved property specific with respect to the user and timing of the use–that is adequately supported and results in the highest present value.

The Dictionary of Real Estate Appraisal, 5th Edition, Appraisal Institute, page 93

The highest and best use for the subject lands would be those allowable uses in the Waterfront Commercial (WC) zone, which include "uses which are directly related to or dependent upon a marine environment." The commercial waterfront uses to the east include retail sales and other activities oriented towards cruise ship tourism.

Historically, this waterfront site had been developed for docking boats for the owner's tourism operation. Since that time, the owner dropped that business and operates as a marina for other small tour operators, yacht moorage, etc. The subject upland area supports the logistics of loading and unloading passengers, and the office building on the rear part of Lot 5.

The subject location has proven attractive for its deep-water access close to the cruise ship docks which generate high traffic. The subject is in the Town Center Parking Area district which allows flexible parking requirements. Its demand would be superior to nearby commercial uses without these advantages.

The maximally profitable use is for a marine oriented waterfront development similar to the existing use. The highest and best use of the uplands is to support the marina, small ship terminal use, parking and loading areas.

4.2 LAND VALUATION

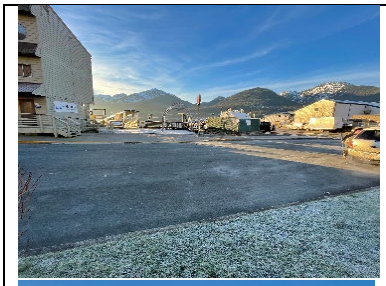
In this section, the typical SF market value will be estimated. The direct sales comparison approach is utilized in the subject instance. Commercial land sales and capitalized land rents in the immediate area were considered for estimating the square foot value of the subject. For valuation purposes the two site components; level land at road grade (upland) and sloping/tidelands (tideland) are considered for their contributory value of the overall site. The following transactions were found to be most helpful in our analysis. We will estimate the market value of the uplands. We have determined[3] that the tidelands value is a 40% of the unit value of the uplands. We have then adjusted the concluded value of the uplands by this ratio (40%) to determine the contributory value of the tidelands.

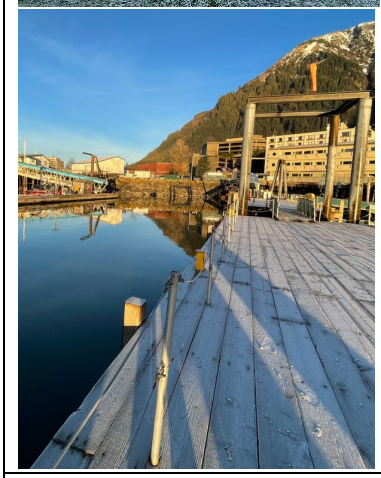
[3] See addenda for the Tideland Value Ratio study. The subjects are rated as well functioning tidelands at 40%.

Table 4.1 – Summary of Sales Used to Estimate the Value of the Subject Uplands						
Comp #	Address	Date	Indicated Price	SF Size	Price /SF	Comment
1-1494	360 Egan DR	07/2020	*$1,173,520	29,338	$40.00	Level land at grade
2-5011	98 Egan DR	06/2018	*$625,862	19,916	$31.43	Mixed Tide & upland
	Upland		*$360,047	6,998	$51.45	Upland
	Tideland		*$265,815	12,918	$20.58	Tideland
3A-11509	127 S Franklin St.	12/2021	$1,350,000	16,204	$83.31	5,000SF near Rd Grade
3B-12181	139 S Franklin St.	04/2022	$171,000	3,217	$53.16	At Rd Grade
3	S Franklin St.	04/2022	$1,521,000	19,421	$78.32	Mixed Topo

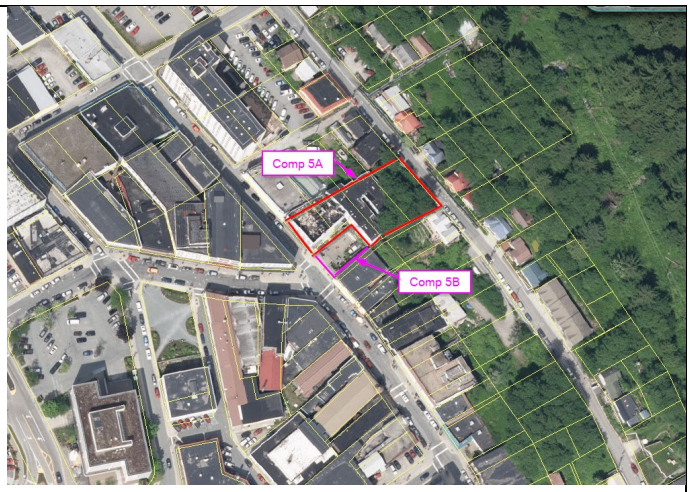
*Capitalized Land Rent

Comp1 is across the street a block away from the subject. It is a renewal of a long-term ground rent that was negotiated in mid-2020. The market has improved somewhat since then. This comp will be analyzed as a capitalized rent.





Comp 2 is also in capitalized land lease of the Goldbelt Tidelands lease from 2018. The market has improved since that time. This comp has the components of uplands and tidelands as does the subject reflecting a 40% ratio of tidelands unit value to uplands.



Comp 3 A&B represents two separate purchasers of adjacent properties that are interrelated by easement access and other issues. The first purchase in December of 2021 was for the bulk of the property that has excellent frontage on S Franklin St and benches behind to steep lands accessible off Gastineau Ave. The purchaser felt this transaction was related and should be considered part of the subsequent purchase of a small City Park/land remnant in April of 2022. The price for this latter purchase reflects the high-value frontage on S Franklin Street but also significant discounts for easement encumbrances for AEL&P utilities and access easements which favor the first purchased land. This is a good reflection of high-value core commercial real estate in downtown Juneau. It is superior to the subject in its location and current development potential for tourism retail.

Quantitative Adjustments

Quantitative Adjustments are made for the rental **Comps 1 and 2** whereby these annual rents are capitalized to indicate market value which is then expressed as a price per SF. The rents are capitalized at the contract rate if applicable or a market rate of 8%. This market rate estimate of 8% is supported by our study in the addenda, Land Lease Rent Percentage Rate Market.

Comp 2 has elements of filled uplands and tidelands as does the subject. This capitalized rent is further broken out based on an allocation that the tidelands at 40% of the unit value of uplands. This ratio is supported by market analysis contained in the Addenda, Tideland Value Ratios. This is also the case with the subject. Our analysis will develop a unit value of the uplands. The remaining portion of the subject lands will be added at a ratio of 40% of the upland unit value.

Comp 3 is the purchase of two adjoining sites in downtown Juneau on S Franklin St. They were considered one site by the buyer. The smaller site (Comp 3B), purchased four months later, was a City Park that the City preferred to sell to the adjacent property owner (Comp 3A) since the City site (Comp 3B) was encumbered by an access easement that favored the previously purchase site (Comp 3A). They are analyzed as one transaction for the purpose of estimating the contributory unit value of the upland.

Qualitative Analysis

The remaining elements of comparison, change in market conditions, conditions of sale, location, and development potential are made in a qualitative manner since discrete adjustments discerned from the market to make quantitative adjustments are not reliably available.

The upland sales are considered on a qualitative basis relative to their being superior, inferior or similar to the subject due to these differences. The indicated price per SF is qualitatively ranked in the following discussion. If a comparable attribute is superior to the subject, a minus rating of -1, -2, or -3 is made, depending on its severity. Conversely, if a comparable attribute is inferior to the subject, a plus rating is made to weigh this with other attributes towards the subject with a +1, +2, or +3, depending on the severity. The gradation of weighting 1 to 3 is used since all qualitative attributes are not, in the appraiser's opinion, equally weighted within the market.

The **market conditions** have changed over the last five years. Prior to the pandemic in early 2020, the market had been relatively stable. The pandemic introduced considerable market uncertainty into 2021. As time went forward, it appeared that travel and some of the other pandemic restrictions may be loosening up even though the COVID virus remained a persistent threat. 2022 begin to see a recovery in the overall economic conditions with increases in sales, employment, and gross earnings in certain market segments which had suffered. There were inflationary pressures that began to be exhibited in 2022. The transactions prior to 2022 are considered inferior by +1 for Comps 1 and 2.

Conditions of sale is rated similar between the subject as appraised prior to adjustments for contract risk conditions which will be discussed after concluding the value as though unaffected by those conditions. Each of the comparables was based on rational market criteria of competitive sales or supported by appraisal or other economically driven market-related factors considered by the grantors, grantees or the lessors and lessees. Therefore, the transactions are all rated similar for property rights.

Location considers site prominence as exposure to pedestrian or vehicular traffic and ease of access. Comps 1 and 2 are on Egan Drive and rated similar for location. Comp 3 is located on South Franklin street by Front Street in a high-traffic pedestrian area. The purchase was motivated by this traffic and the retail sales it could subsequently generate. It is rated superior by – 1.

Development potential is somewhat related to location but reflects the heightened demand for the subject for the possibility of developing a very large cruise ship dock off-site. Although this possibility was not a certainty at the effective date of the appraisal, it was considered probable at some time and was seen in the market as a stimulating motivation for a higher price. In regard to perceived development potential Comps 1 is inferior +1 as it does not have any potential for waterfront development. Comp 2 is similarly on the water, it is part of the

subject. Comp 3 is inferior +1 in its development potential due to only 42% (~8,217 SF of 19,421 SF) of the site near street grade and immediately developable. This site does have more immediate near-term possibility for developing retail income as related to the size of the site.

Parking is a critical issue in downtown Juneau. The subject and Comps 1 and 2 are located in the Downtown Center Parking Area which has significantly reduced parking requirements from the other areas of town. These are all rated similar in this regard. Comp 3 on the other hand is in an area that has no parking requirements making the land more valuable, all things being equal, since it does not require part of its site to be dedicated to parking. It is rated superior -1.

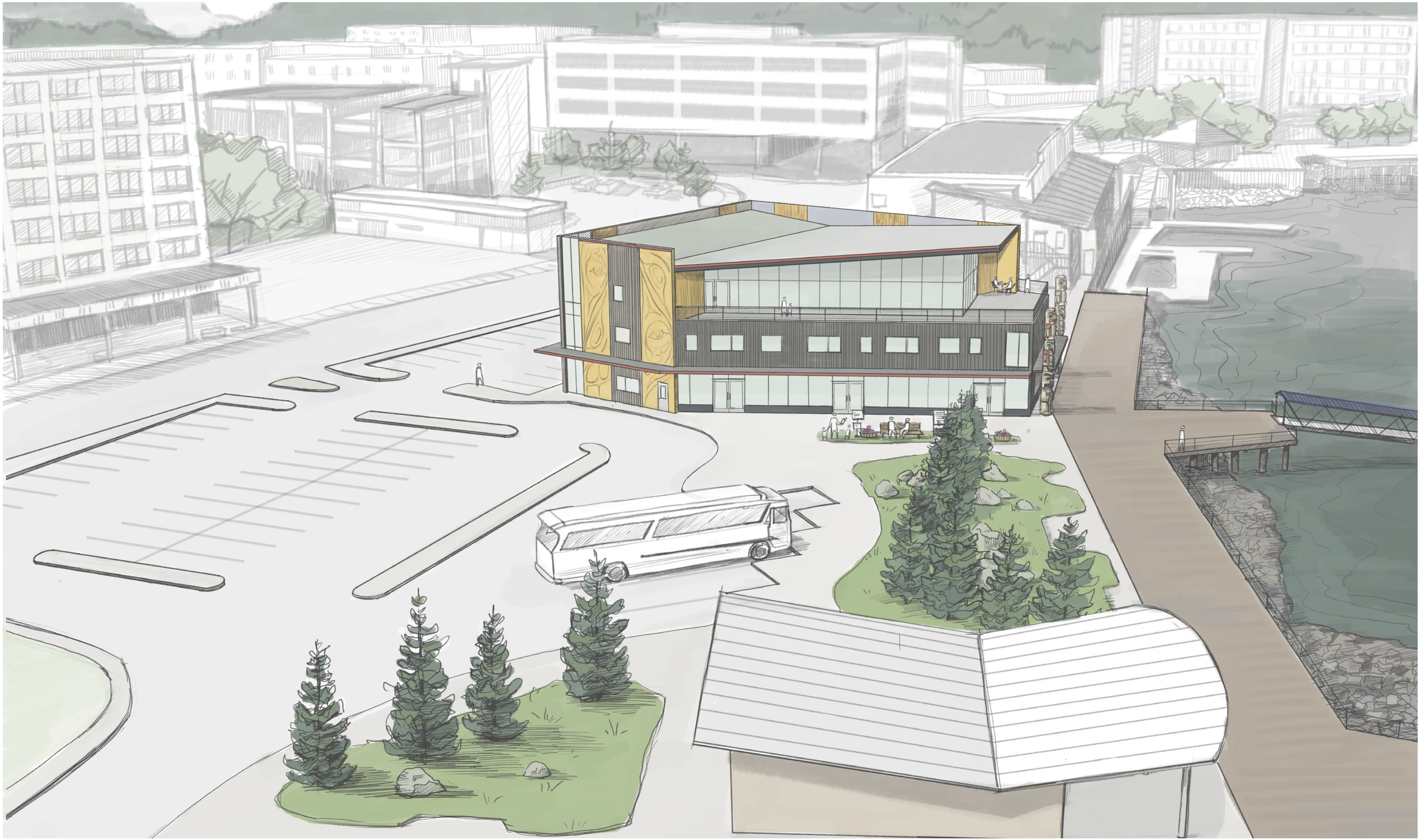
Summary and Relative Ranking

The rankings discussed above relative to their SF values compared to the subject are summarized in the following Table 4.2 for the subject uplands.

Characteristic	Subject	Comp 1 - #1494 360 Egan Dr		Comp 2 #5011 98 Egan Dr		Comp 3 #11509 & 12181 S. Franklin St.	
Annual Rent	N/A	Confidential		$56,325		NA	
Indicated Value	N/A	$1,173,520		See Discussion		$1,521,000	
Size (SF)	40,000 SF 20,000 SF	29,338 SF		6,998 SF (19,916 SF) tot		19,421 SF	
Indicated SF Value of Upland	Solve	$40.05/SF		$51.45/SF		78.32/SF	
Market Condition (Time)	8/2022	7/2020	+1	6/2018	+1	4/2022	0
Condition of Sale	Typical	Similar	0	Similar	0	Similar	0
Property Rights	Fee	Similar	0	Similar	0	Similar	0
Location	Good Prominence	Similar	0	Similar	0	Superior	-1
Development Potential	Good, Comm. Marine	Inferior	+1	Similar	0	Inferior	+1
Parking District	Town Center	Similar	0	Similar	0	Superior	-1
Net Rating		Inferior	+2	Inferior	+1	Superior	-1
The Subject Value Is:		More Than $40.00/SF		More Than $51.45/SF		Less Than $78.32/SF	

If a comparison is ***Superior***, a Minus rating of -1, -2, or -3 is given depending on severity.
If a comparison is ***Inferior***, a Plus rating of +1, +2, or +3 is given depending on severity.

The data brackets the subject fairly well between $40.00/SF and nearly $78.32/SF; the midpoint of this range is $59.16/SF. Less weight is given to the lower end of the range. Less comparable indicators, Comp 2 is the subject capitalized rental value that has not changed for many years. It is a low indicator of value. The market range is closer to $51.45/SF and $78.32/SF. The central point of this range is $64.89/SF. This higher end of the range is a more recent reflection of the market and is given the most weight. The indicated value of the upland is $65.00/SF. The contributory value of the sloping and tidelands are 40% of this amount or $26.00/ SF.



OVERALL LONG RANGE SMALL CRUISE CONCEPT RENDERING

Goldbelt

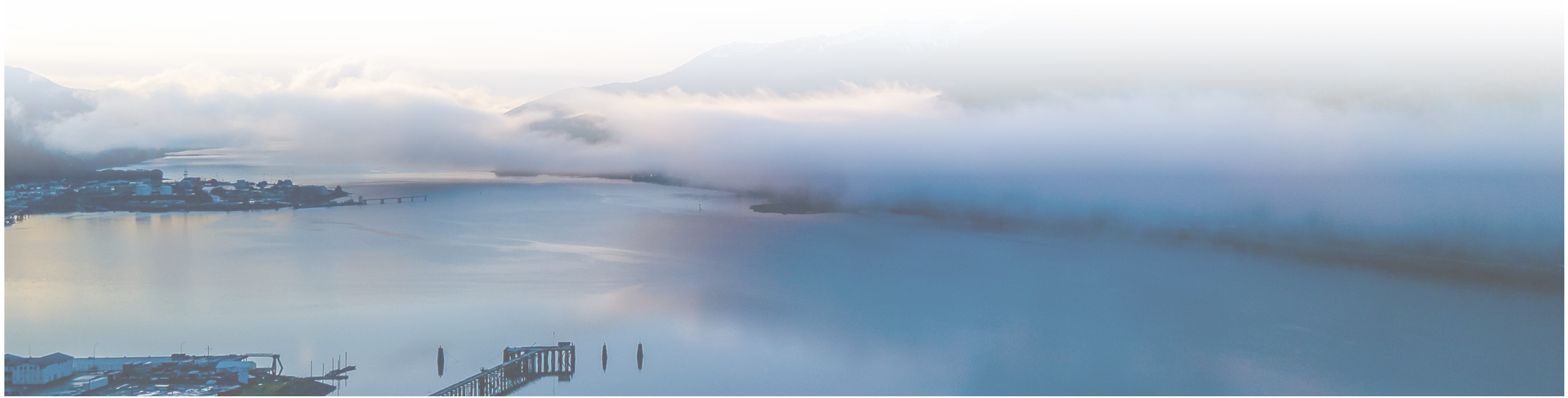
MRV ARCHITECTS

- CBJ Docks and Harbors and Goldbelt have the opportunity to create a new Small Cruise Ship Terminal, as recommended in the PND analysis of 2021.

- The first step is an even land exchange between Goldbelt and the CBJ to create more useful and unified property for both parties.

- Improved property configurations support a workable terminal now with existing dock and upland staging, while supporting future expansion for a second CBJ dock, seawalk, and expanded parking.

- Goldbelt will rebuild the Seadrome building on an expanded site, establishing an iconic Alaskan Native facility on the waterfront to support visitors better.



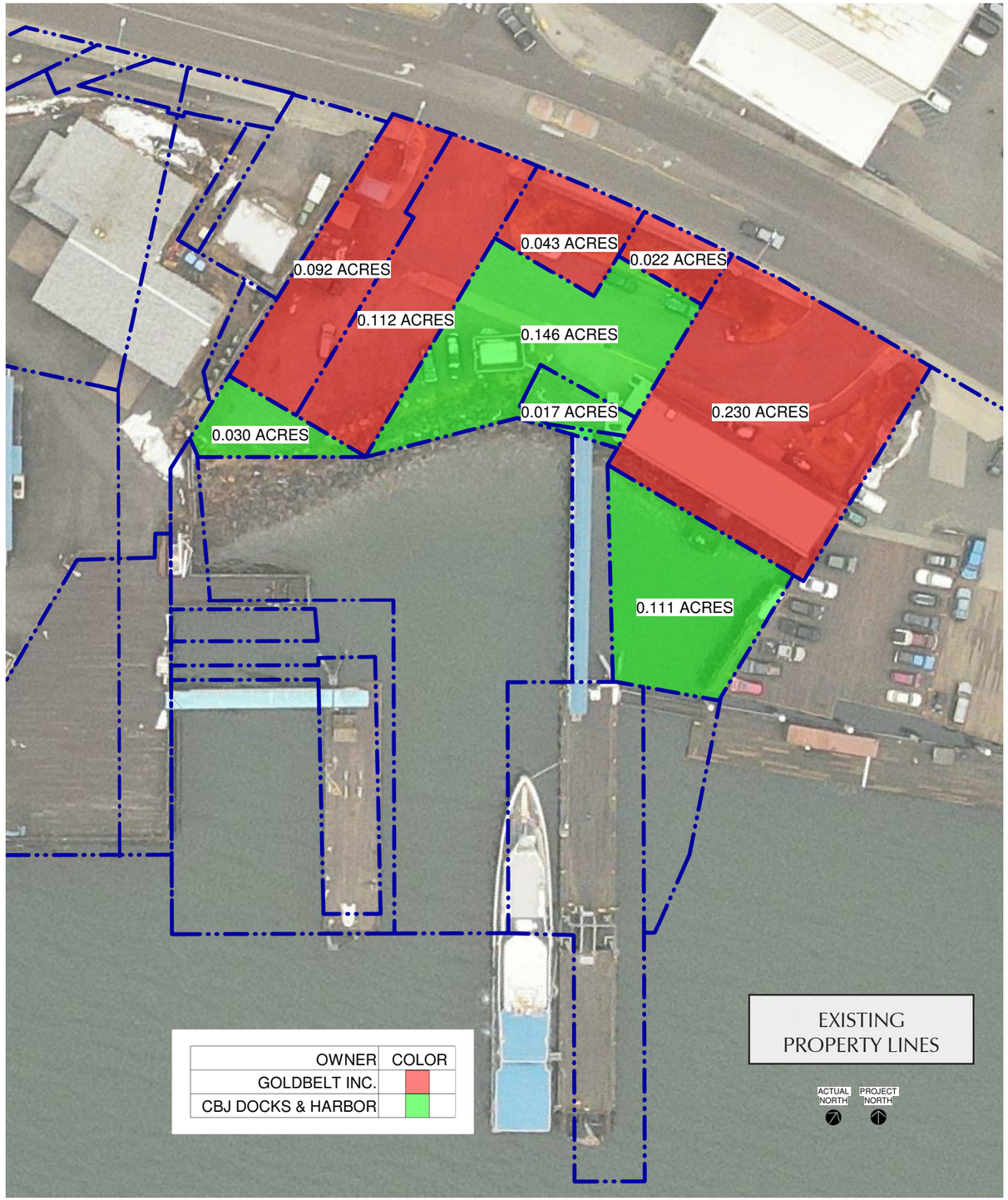
ACTIONS:

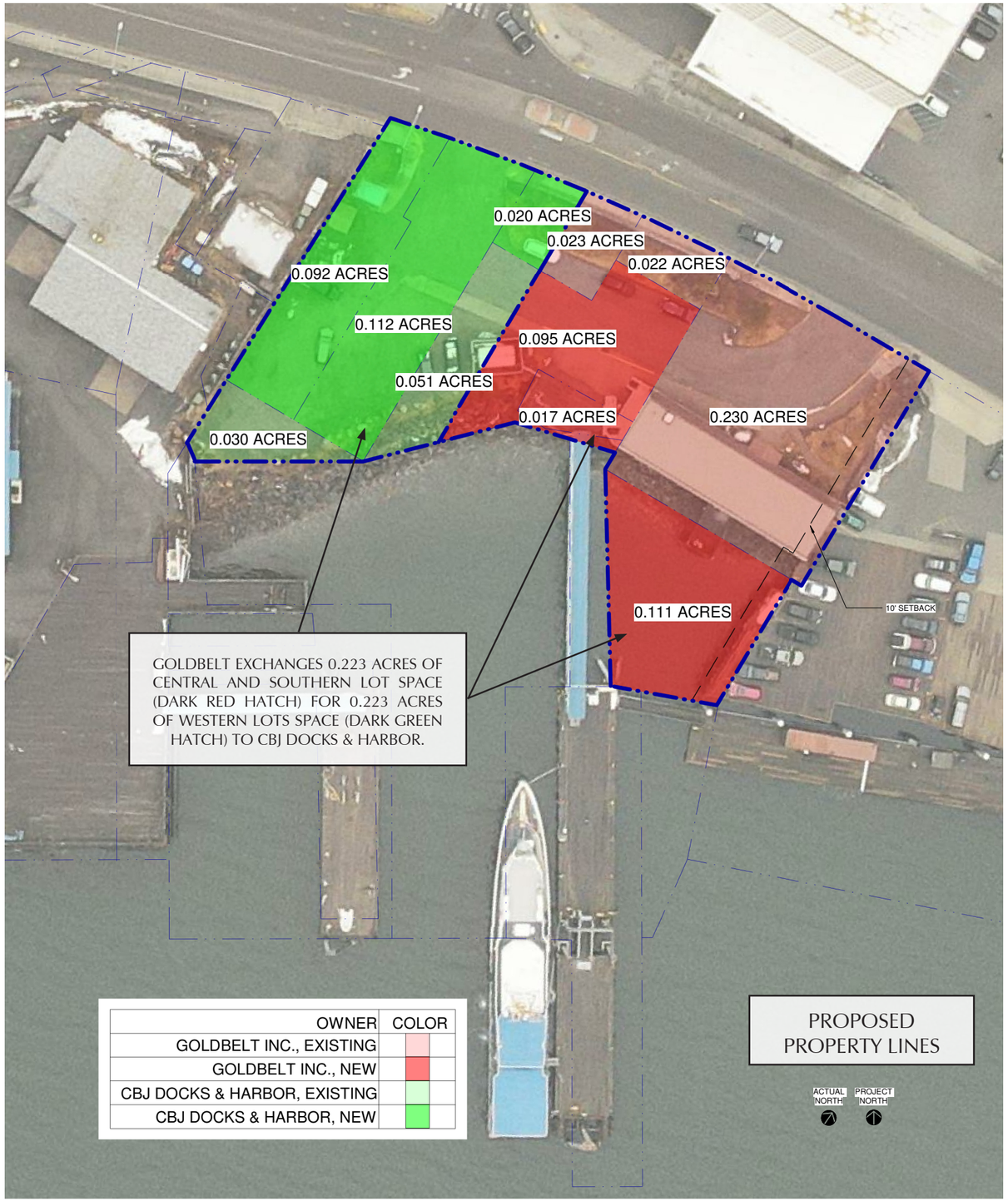
1. An equal property exchange is made to optimize CBJ and Goldbelt lots, and the consolidated properties are replatted.

2. The existing Goldbelt Dock is transferred to CBJ Ownership, and reconstructed further seaward to align with the future Seawalk location.

3. Goldbelt demolishes the existing Seadrome Building and builds an improved facility closer to the water on the new consolidated Goldbelt property.

4. The existing uplands are modified into expanded parking and staging for the Small Cruise Ship dock, with a portion dedicated to Goldbelt building parking.

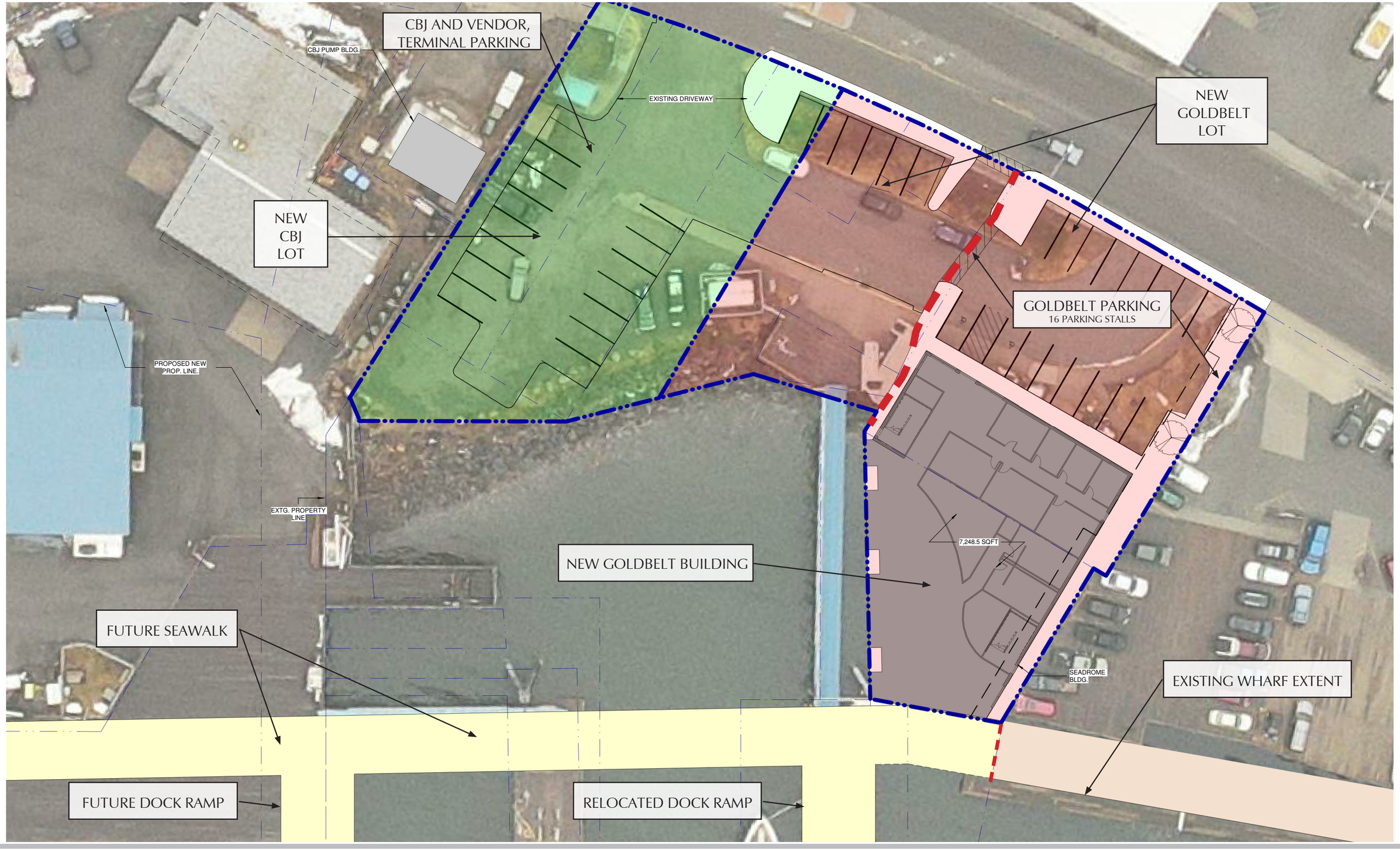




CBJ/GOLDBELT SMALL CRUISE TERMINAL

July 2022

PROPOSED PROPERTY REALLOCATION



CBJ/GOLDBELT SMALL CRUISE TERMINAL

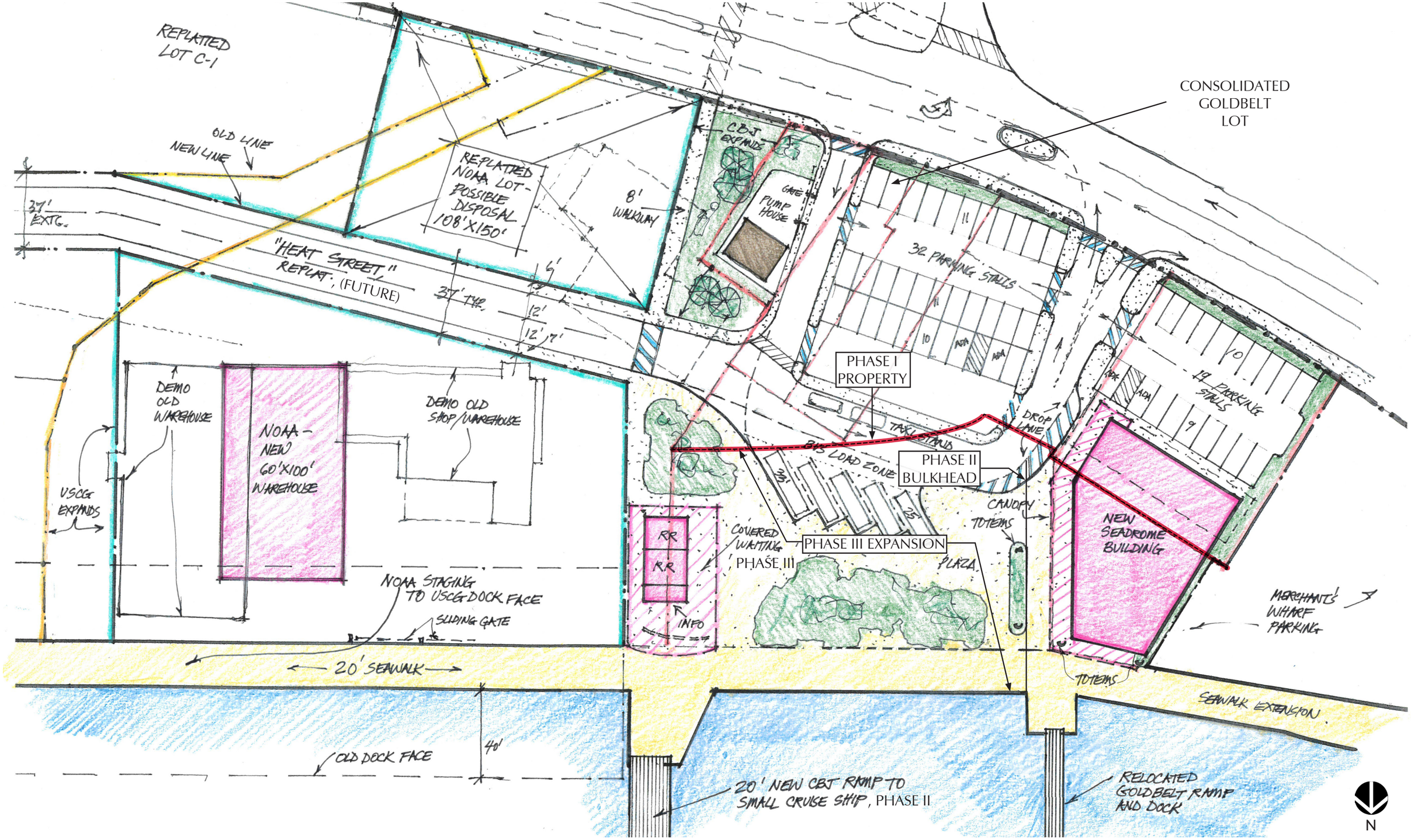
July 2022

REVISED PROPERTY OWNERSHIP PLAN

The Site works for Current Needs – Dock and Uplands can provide parking and bus staging needed for the small cruise ship dock and Goldbelt operations from existing property.

Future Improvements Can Be Added Efficiently – Seawalk construction and upland fill expansion work well to meet Master Plan recommendations

- Future Upland Expansion will provide more parking, improved bus staging, and significant recreational landscaped areas adjoining the Seawalk.
- A second CBJ Small Cruise Ship Dock is supported by the expanded bus staging and parking.



CBJ/GOLDBELT SMALL CRUISE TERMINAL

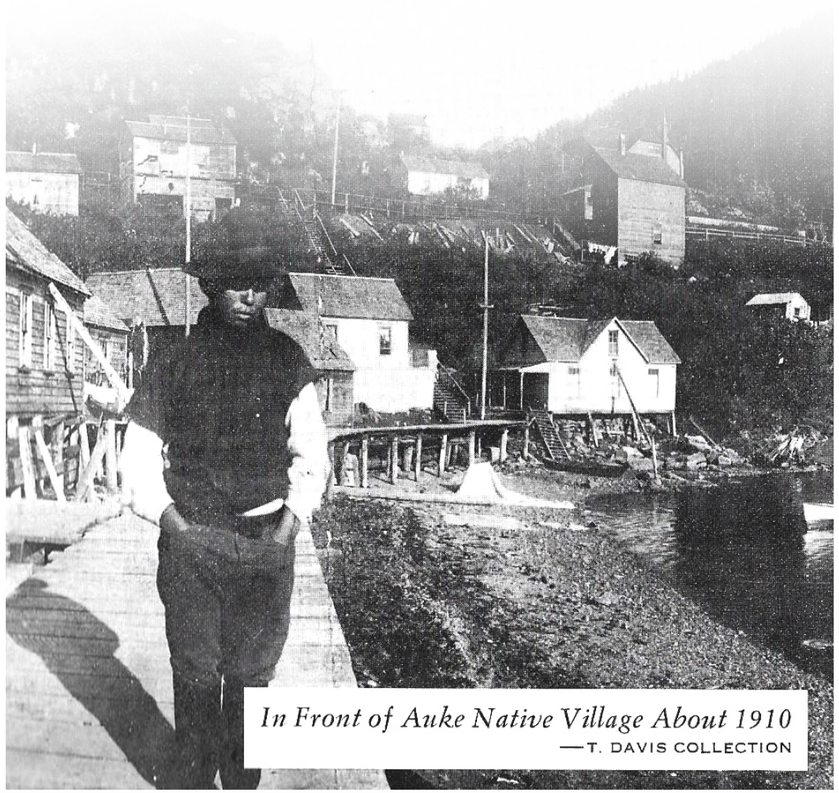
July 2022

CURRENT AND FUTURE PHASING

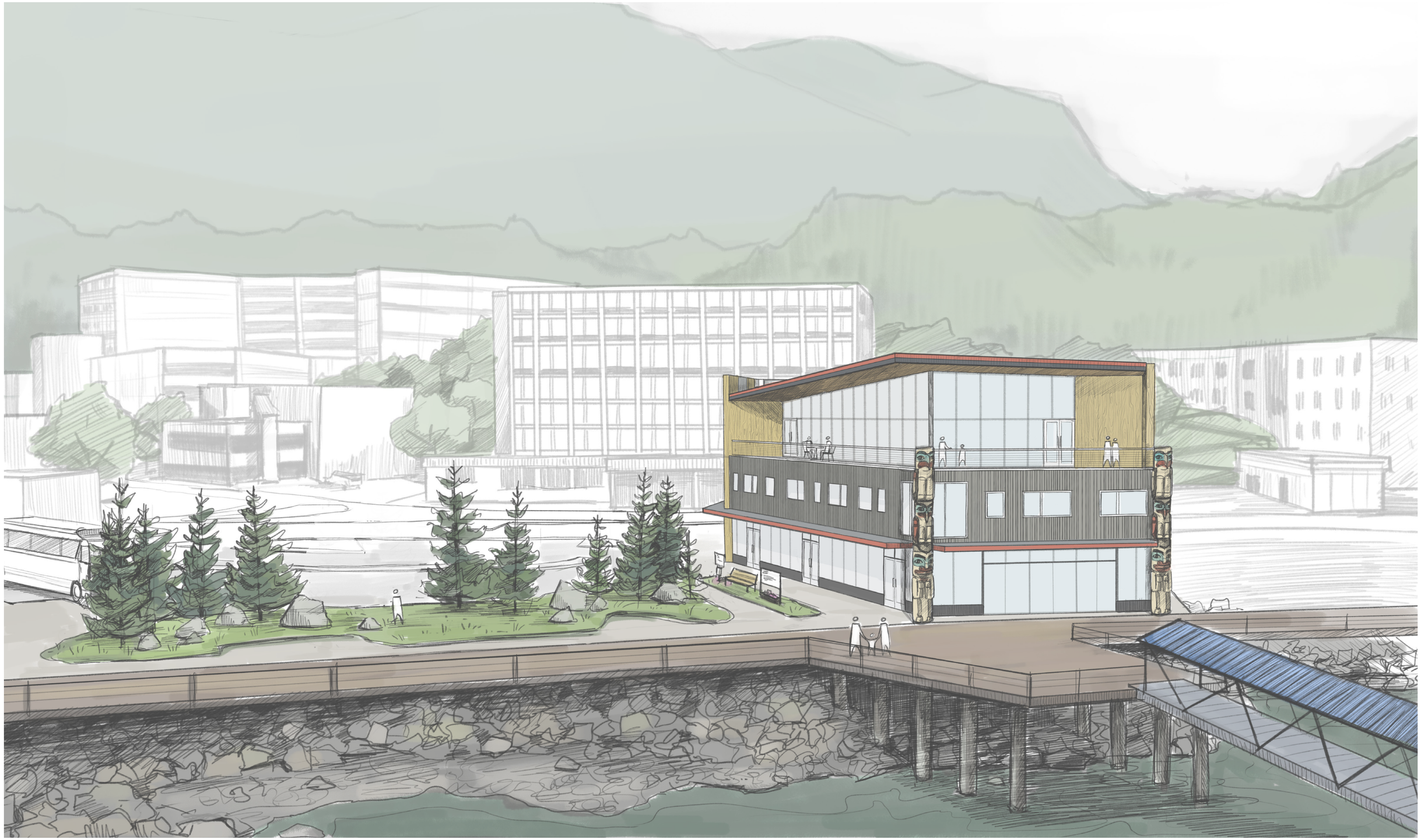
- Goldbelt and our partnering Alaska Native entities represent the First People of this land, and care deeply about this land.

- The new Goldbelt Building will be a cultural centerpiece, with prominent Alaska Native art celebrated on all sides of the building, providing a unique avenue to display local culture, educate our visitors, and help build a strong and vibrant community.

- The new Building will provide the first Alaska Native art visible on approach by ship, creating a beautiful arrival point to Juneau, while providing cultural identity and pride for Goldbelt shareholders and residents.



In Front of Auke Native Village About 1910
—T. DAVIS COLLECTION



CBJ/GOLDBELT SMALL CRUISE TERMINAL

July 2022

LONG RANGE WATER APPROACH VIEW

- The improved Small Cruise Ship Terminal will provide an ideal arrival point for the City and Borough of Juneau, with links to the Seawalk, the Áak'w K̲wáan District, the SLAM, expanded Centennial Hall, hotels, and shopping.

- The new Goldbelt Building will provide improved services for visitors and community on the first floor, with an attractive mix of offices and amenities, such as a restaurant, on the upper levels.

- Visitors to a small cruise ship terminal owned and operated by Goldbelt will receive an education and an experience worthy of a world-class destination.

- Future upland improvements will reduce the traffic impact on the downtown core, with quick access from Egan Drive, and a link via Heat Street to accommodate traffic leaving downtown.

NEW GOLDBELT BUILDING RENDER FROM EGAN

Conclusion Exchange Values

Based on the foregoing the exchange lands are valued as follows.

Goldbelt conveys to CBJ	SF area	Unit value	Land Value
Upland Parts of Lots 1 & 2	6,252	$65	$406,380
Tideland Part of Lot 2	70	$26	$1,820
Total Goldbelt Land	6,322		**$408,200**
CBJ conveys to Goldbelt	SF area	Unit value	Land Value
Upland behind Lots 3 & 4	3,400	$65	$221,000
Tidelands west of Lot 5	550	$26	$14,300
Tidelands south of Lot 5	6,650	$26	$172,900
Total CBJ lands	10,600		**$408,200**

ADDENDA