

MEMORANDUM

CITY/BOROUGH OF JUNEAU
155 South Seward Street, Juneau, Alaska 99801

DATE: February 2, 1994

TO: Planning Commission Waterfront Committee

FROM: D. Scott Williams *DP*
Community Development

SUBJECT: Juneau Harbor Ship Handling Concerns
Additional Berthing
Right Angle Berthing Pier

FILE NO.: 4015

Ship handling or "space" issues within the Juneau Harbor have been of concern to the U.S. Coast Guard, CBJ Harbormaster, and tour operators for several years. With increasing tour ship activity the harbor has become crowded with ships at anchor and lightering operations. Moreover, incoming and departing ships have, on occasion, had to wind their way through those ships at anchor. Thus far, no collisions have taken place, although several operators have made complaints to the CBJ Harbormaster about traffic and maneuvering problems. Most maneuvering conflicts have been mitigated by scheduling the order of arrivals and departures.

A long time local pilot was asked about the crowding conditions and he suggested that the harbor is really only large enough to safely anchor one ship in the 600'-800' size. More than one ship may be at anchor if winds and current are constant, enough space is put between the ships, and a stern anchor is placed. NAVFAC 26.01, a Naval harbor design document used by the Coast Guard, indicates a ship of 600 feet in length needs 350 acres of anchorage for proper scope. Since the entire useable Juneau harbor is approximately 290 acres it is clear that any more than one ship at anchor is cause for safety concerns. Shifting wind or currents could cause ships to swing on their anchor and collide with neighboring ships. When two or more ships are at anchor coupled with floatplane operations, charter boat use, and support vessel operations, risk of collision increases dramatically.

The Coast Guard has general regulatory responsibility for harbor traffic and navigation and the CBJ harbormaster is responsible for public shore facilities. (Attached is a chart with the Coast Guard "safety zone" where only tourist ships may anchor including USCG citation). Tour companies are responsible for the safe handling of their vessels and



ships captains have, at their discretion, the authority to anchor anywhere within the established anchorage area, as defined by the Coast Guard. The number of tour ships using the harbor and anchoring is not strictly regulated. The Port Operations Chief with the Coast Guard has indicated that the tour operators have been "self policing" in the area of the number of boats and scheduling to avoid conflicts. The Operations Chief has the authority to limit the number of ships, should safety become questionable due to the number of ships or other harbor operations. The Operations Chief believes that five ships is the maximum number that the Juneau harbor can accommodate with the present facilities. Those include a mix of larger and smaller ships berthed and at anchor.

Presently, there is space for two medium to large ships to moor at shore facilities: the Juneau CBJ dock, that runs from the Merchant's Wharf to Taku Smokeries (2100 lineal feet). The federally owned subport dock is also available under certain circumstances, but the shallow water along the face of the dock precludes use by deep draft ships, without special preparations. In addition, the uplands area does not currently lend itself well to tour operations. Therefore, space is available for only two to three ships. All others entering the harbor must anchor. Juneau harbor is experiencing an average of three ships per day during the summer season, with an increasing number of days with five ships entering the harbor. In addition to an increasing number of ships, the average length is also increasing with reports of ships 1200 feet in length to make stops at Juneau in the near future.

Possible solutions for reducing harbor traffic problems would be to berth the ships at shore facilities; or require ships to anchor down channel or at other locations; or to limit the number of ships entering the area at any given time or some combination of these three. The following are suggestions for remedying the congested harbor problem:

- **additional berthing area could be provided at the subport, the proposed AJT dock, a facility at the Merchant's Wharf location, additional dock frontage from the subport facility to Gold Creek, Mt. Roberts Marine facility (smaller ships), UNOCAL dock and other locations not in the downtown area;**

The CBJ Harbormaster's office is presently negotiating with the federal government to use the subport dock for tour ship berthing after making city funded repairs and modifications. If an agreement is made, the subport facility becomes a third berthing space to be used in the near future. Measures to accommodate shoreside operations will be completed in cooperation with tour operators.

The AJT dock is still in its permitting and design stage and may be made available sometime in the 1996 tour season. The AJT dock would be located between the

Intermediate Vessel Float and Alaska Marine Lines barge loading facility near the rock dump. The AJT facility is expected to be 400 feet in length occupying 800 feet of waterfront. (See attached plan drawing)

The Mt. Roberts facility is in the design/land acquisition stage and could be available in the 1995 tour season. The Mt. Roberts facility is designed to be capable of mooring ships to about 300 feet. (See attached plan drawing)

The UNOCAL facility is generally not available for general moorage because of the fuel handling equipment and inherent hazards. Moored ships would interrupt fueling operations depending upon length of stay.

One proposal for additional berthing space is to design and build a "right angle" berthing pier suitable for berthing two ships. A similar facility was conceived in the Waterfront Plan for Juneau of 1973 (See attached plan drawing). The facility might be located southwest of the subport dock where the Delta-Western dock is now. The pier would be oriented down channel for ease of arrivals and departures for ships up to 1200 feet. The pier could be either pile supported or earth fill/sheet pile. Possible operational problems with such a facility would be local currents and wind, however, the pier's orientation and design could help mitigate most maneuvering difficulties. Water depth is presently shallow and would require dredging to accommodate deeper draft vessels.

No proposals for use of the Merchant's wharf frontage has been explored recently.

No proposals for ship berthing in Auke Bay have been explored recently.

- **tour operators could be required to anchor ships down channel south of the "Little Rock Dump" and lighter passengers to downtown facilities or Douglas, or anchor in Auke Bay and bus passengers to town or other points**

(for the immediate season, ships could be required to put down a stern anchor or have a tugboat standing on call);

Anchoring ships at other locations does not pose problems with the ships themselves as much as moving passengers to and from shore and points of interest. Plenty of anchorage exists beyond the Little rock dump down Thane Road, however, lightering passengers to Juneau would require considerably longer travel periods. Tour operators would be required to schedule visits accordingly to compensate for longer lightering trips. Marine conditions may also be an issue if a southeasterly wind is blowing causing rough seas.

The use of Auke Bay for anchoring will require a lightering dock and adequate pull-through and parking for buses and other land transportation. Anchoring in Auke Bay would increase bus traffic in the area and would require a re-arrangement of service suppliers to accommodate the ships.

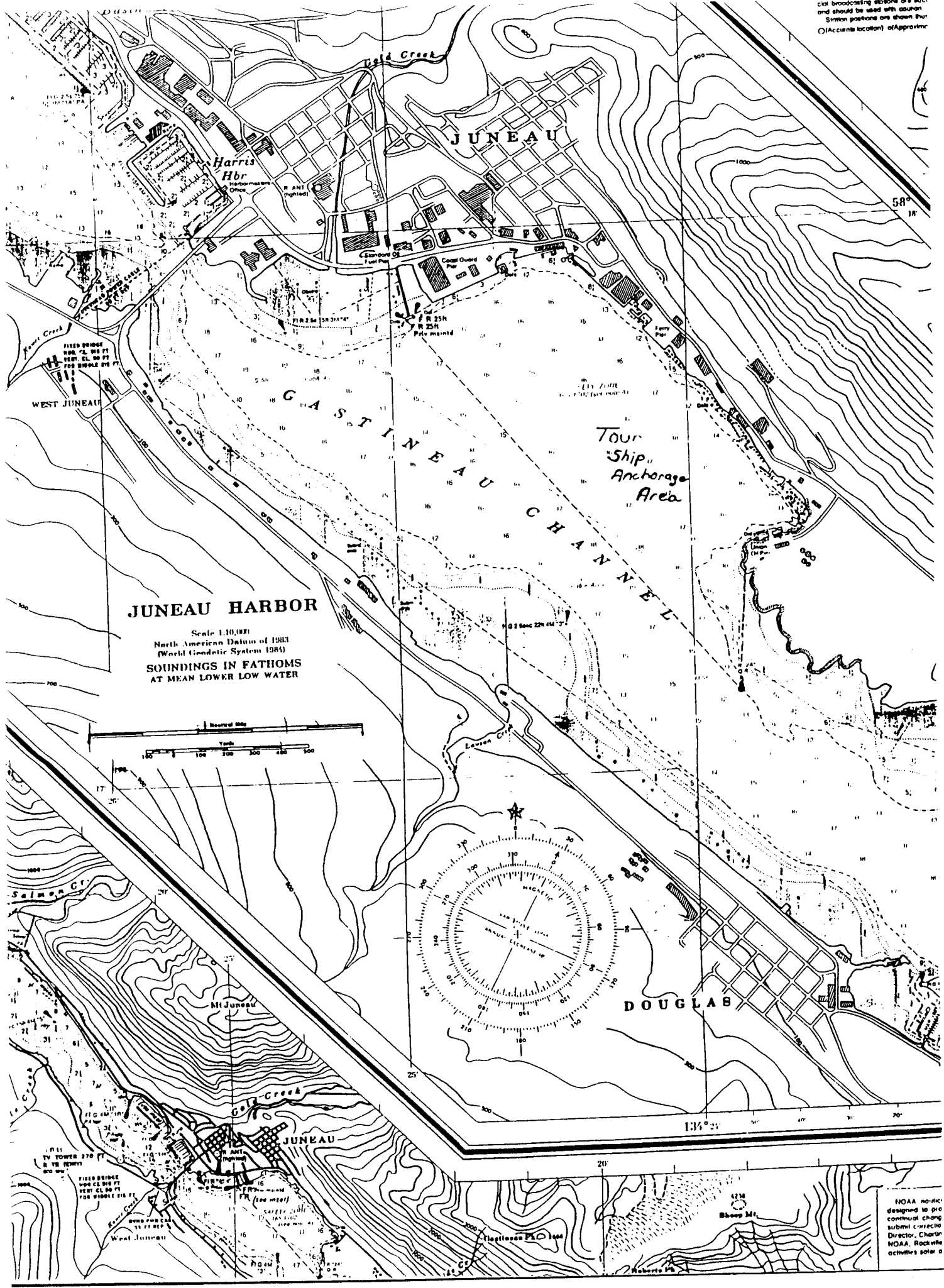
- **tour operators could be required to schedule ship visits so no more than one ship would be required to anchor on any given day.**

The Coast Guard has indicated their willingness to transfer authority of the harbor management of tour ships to the CBJ if requested.

Tour operators could be required to re-schedule arrivals and departures to maintain ship numbers that can be accommodated by berthing only, or berthing and one at anchor. Operators would be required to either decrease sailing or extend the tour season.

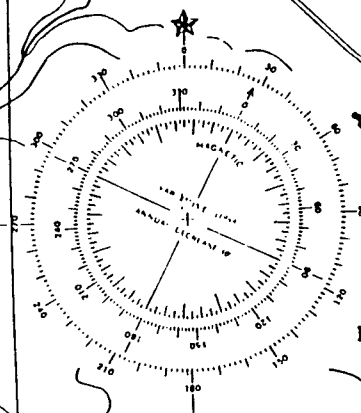
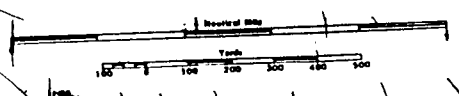
One option is to charge ships for berthing moorage and anchoring to be administered as a bid. Only an appropriate number of ships would be allowed per day based upon the amount of berthing available. The operator with the highest bid would be able to choose their schedule of visits for the season.

Color broadcasting stations are shown and should be used with caution. Station positions are shown but () (Approximate location) of Approximate



JUNEAU HARBOR

Scale 1:10,000
North American Datum of 1983
(World Geodetic System 1984)
SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER



NOAA nautical charts designed to provide continuous charting services. Director, Charting Division, NOAA, Rockville, Maryland.

