



State of Alaska
Department of Fish and Game
Sportfish Division

Nomination Form
Anadromous Waters Catalog

5

Region Southeastern

USGS Quad(s) Juneau B-2

Anadromous Waters Catalog Number of Waterway _____

Name of Waterway _____

☐ USGS Name

☐ Local Name



Addition



Deletion



Correction



Backup Information

For Office Use

Nomination # 10-809

Revision Year: 2011

Revision to: Atlas

Both

Revision Code: F-2

Fisheries Scientist

Date

9/1
Habitat Operations Manager

Date

28 Sept 10
AWC Project Biologist

Date

Cartographer

Date

OBSERVATION INFORMATION

Species	Date(s) Observed	Spawning	Rearing	Present	Anadromous
coho salmon	07/20/2007		✓	✓	✓
coho salmon	08/31/2010		✓	✓	✓

IMPORTANT: Provide all supporting documentation that this water body is important for the spawning, rearing or migration of anadromous fish, including: number of fish and life stages observed; sampling methods, sampling duration and area sampled; copies of field notes; etc. Attach a copy of a map showing location of mouth and observed upper extent of each species, as well as other information such as: specific stream reaches observed as spawning or rearing habitat; locations, types, and heights of any barriers; etc.

Comments:

This stream flows into the east side of Auke Lake and was found to contain coho salmon by Carl Schrader in July of 2007. I surveyed and trapped the stream in August of 2010 and captured one more coho above the location of the previously trapped fish. A total of 2 coho salmon were captured.

Coordinates (Lat,Long): Upper(58.380128,-134.62881) Lower(58.381208,-134.6304)

one
Single Fish observed, once in 2007, one in 2010

Name of Observer (please print):

Tess Quinn

Signature:

146.63.139.55 (Web Nomination)

Date: 09/27/2010

Agency:

Address:

PO Box 35032 PO Box 35032

Juneau, AK 99803

This certifies that in my best professional judgment and belief the above information is evidence that this waterbody should be included in or deleted from the Anadromous Waters Catalog.

Signature of Area Biologist: _____

Date: _____

Revision 02/08

Name of Area Biologist (please print): _____

Johnson, J D (DFG)

From: Quinn, Tess (DFG)
Sent: Monday, September 27, 2010 2:22 PM
To: Johnson, J D (DFG)
Cc: 'John_Hudson@fws.gov'; 'Shannon Seifert'
Subject: Correction to East Auke Lake Stream nomination

Hello,

In the nomination report I sent out earlier today I neglected to give credit to the Fish and Wildlife Service for setting the trap that captured the coho at waypoint 55. I simply pulled the trap and recorded the fish. My apologies for the exclusion.

Thanks,

Tess Quinn
Fish and Wildlife Tech IV
Alaska Department of Fish and Game
Division of Habitat
(907) 465-1635



MEMORANDUM

STATE OF ALASKA

Department of Natural Resources
Office of Habitat Management and Permitting

TO: Jackie Timothy
Juneau Area Manager
OHMP

DATE: July 31, 2007

FILE NO:

THRU:

SUBJECT: Auke Lake Trail Fish Trapping
Sect. 23, T. 40 S., R. 65 E. (Juneau B-2)
Lat. 58.381° N., Long. 134.631° W

FROM: Carl Schrader
Habitat Biologist

TELEPHONE NO: 465-4287

The City and Borough of Juneau and University of Alaska have proposed to upgrade the foot trail along the south and east shore of Auke Lake (Anadromous Stream #111-50-10420-0010). Auke Lake supports populations of sockeye, coho, chum and pink salmon, cutthroat trout, and Dolly Varden char. The project would widen the existing trail and re-route a portion of the trail farther inland. Floating walkways would be used for observation platforms and to avoid disturbance to some large trees and sensitive habitats. The trail crosses numerous small streams that flow into the lake, which the applicant has proposed to cross using mostly 24" diameter corrugated plastic culverts. None of these streams are documented as supporting anadromous fish. The purpose of the trip was to determine which of the streams crossed by the trail support fish and require crossing structures designed for fish passage.

On Friday, July 20 Tess Quinn and I hiked the existing trail beginning at the parking area near the floatplane dock to determine if there are streams that might support fish. We had three minnow traps (1/4" mesh) to place in likely fish streams. We trapped fish in two streams; several other streams we considered likely to support fish. Tess returned July 25 and set traps overnight in streams along both the existing and proposed trail alignment. Stream crossing locations are identified sequentially based on the plan sheets provided in the application and field notes (see attached plan sheets). GPS fixes were taken at some locations, but were not generally available because of the tree cover.

1st Crossing (Plan Sheet 4) This stream is located in wetlands and is about 2 feet wide and 4 inches deep. It crosses Glacier Highway through a 24" CMP culvert about 50 feet upstream of the trail (Photo 1). Above the highway the stream is about 1 foot wide and comes down a hillside on private land. On July 20 we set a trap about 15 feet above the trail (58.38089° N, 134.63075° W, WGS-84). The trap was in for 2 hours and caught 2 Dolly Varden char (110 mm and 90 mm). We trapped the site again (Trap #1) July 25-26 overnight (20 hrs) and caught 1 cutthroat trout (120 mm) and 1 Dolly Varden char (85mm).

Conclusion: this stream supports *cutthroat trout* and *Dolly Varden char* and requires a structure designed for fish passage.



Photo 1. Culvert above 1st Crossing



Photo 2. Upper trap location at 2nd Crossing

2nd Crossing (Plan Sheet 4) This stream is in wetlands and is about 4 feet across and 4 inches deep at the crossing. July 20 we set a trap for an hour and a half about 50 feet upstream of the crossing (58.38072° N, 134.62961 W) and caught 1 coho (50 mm), 2 Dolly Varden (75 mm), and 9 Dolly Varden (55 mm). (See Photo 2) We set a trap July 25 (Trap #2) at the same location and caught 24 Dolly Varden char (50-80mm). A second trap 10' below the crossing caught 4 Dolly Varden (60-100mm).

Conclusion: this stream supports *coho salmon* and *Dolly Varden char* and requires a structure designed for fish passage.

3rd Crossing (Plan Sheet 5) This crossing is located at the head of a slough of Auke Lake where the stream is about 5 feet wide and was nearly dry. We observed salmon fry in the slough below the crossing, but the stream was too shallow to trap above the crossing. Based on vegetation, this slough floods under the trail crossing at higher lake levels, and is therefore considered anadromous.

Conclusion: this is an *anadromous fish stream* and requires a structure designed for fish passage.



Photo 4. 3rd trail crossing



Photo 5. Slough of directly below 3rd crossing

4th Crossing (Plan Sheet 10) The stream at this location flows under roots beneath the trail and is about 18" wide above the trail crossing (Photo 6 below). A trap (Trap #3) set overnight July 25 did not catch fish.

Conclusion: this stream was not documented to support, however fish may be present under higher flow conditions. *A crossing designed for fish passage is recommended.*



Photo 6. Above 4th crossing



Photo 7. 5th Crossing on existing trail

5th Crossing (Plan Sheet 12 – near flag #155) The new alignment heads uphill just before this point, with the new crossing about 150' above the existing trail. We set a trap July 20 in this stream under the boardwalk on the existing trail (Photo 7 above). The stream is about 2 feet wide and a foot deep at the crossing. The trap was in for about an hour and a half and caught no fish. A second trap (Trap #4) placed here overnight July 25 also came up empty. Trap #5 set overnight just below the intersection of the new alignment also did not catch fish. We were baffled, because this stream appears to be a good fish stream.

Conclusion: fish were not documented in this stream, however fish may be present under higher flow conditions. *A crossing designed for fish passage is recommended.*

6th Crossing (Plan Sheet 12) We placed traps July 25 overnight just below the existing trail crossing (Trap #6) and just below the new alignment (Trap #12). The lower trap caught a cutthroat trout (90mm) and a Dolly Varden char (85mm). The trap above the wetland at the new alignment caught 10 Dolly Varden char (20-30mm). (Photo 8 below).

Conclusion, this stream supports *Dolly Varden char*; *a crossing designed for fish passage is required.*



Photo 8. 6th Crossing above wetlands



Photo 9. Below 9th Crossing

7th Crossing (Plan Sheet 13) A trap (#11) set overnight July 25 just below a stringer bridge on the existing trail caught no fish. Upstream near the new alignment the stream turns into a seep and is not fish habitat.

Conclusion: this crossing *does not need to be designed for fish passage.*

8th Crossing (Plan Sheet 13) The crossing on the new alignment is in a wetland that is too shallow to support fish.

Conclusion: this stream *does not need to be designed for fish passage.*

9th Crossing (Plan Sheet 14) The new alignment crosses a shallow stream in a wetland. Trap # 7 set here overnight did not catch fish. However, a trap (Trap # 8) about 50' below the trail caught 5 Dolly Varden char (20-30 mm). (See photo 9 above). We believe that the reason we caught fish below but not above the new alignment is because we were using a 1/8" mesh trap at the lower site, but 1/4" mesh at the upper location. These small fish could easily slip through the larger mesh trap. There was no obvious blockage to fish passage between the lower trap location and the trail crossing.

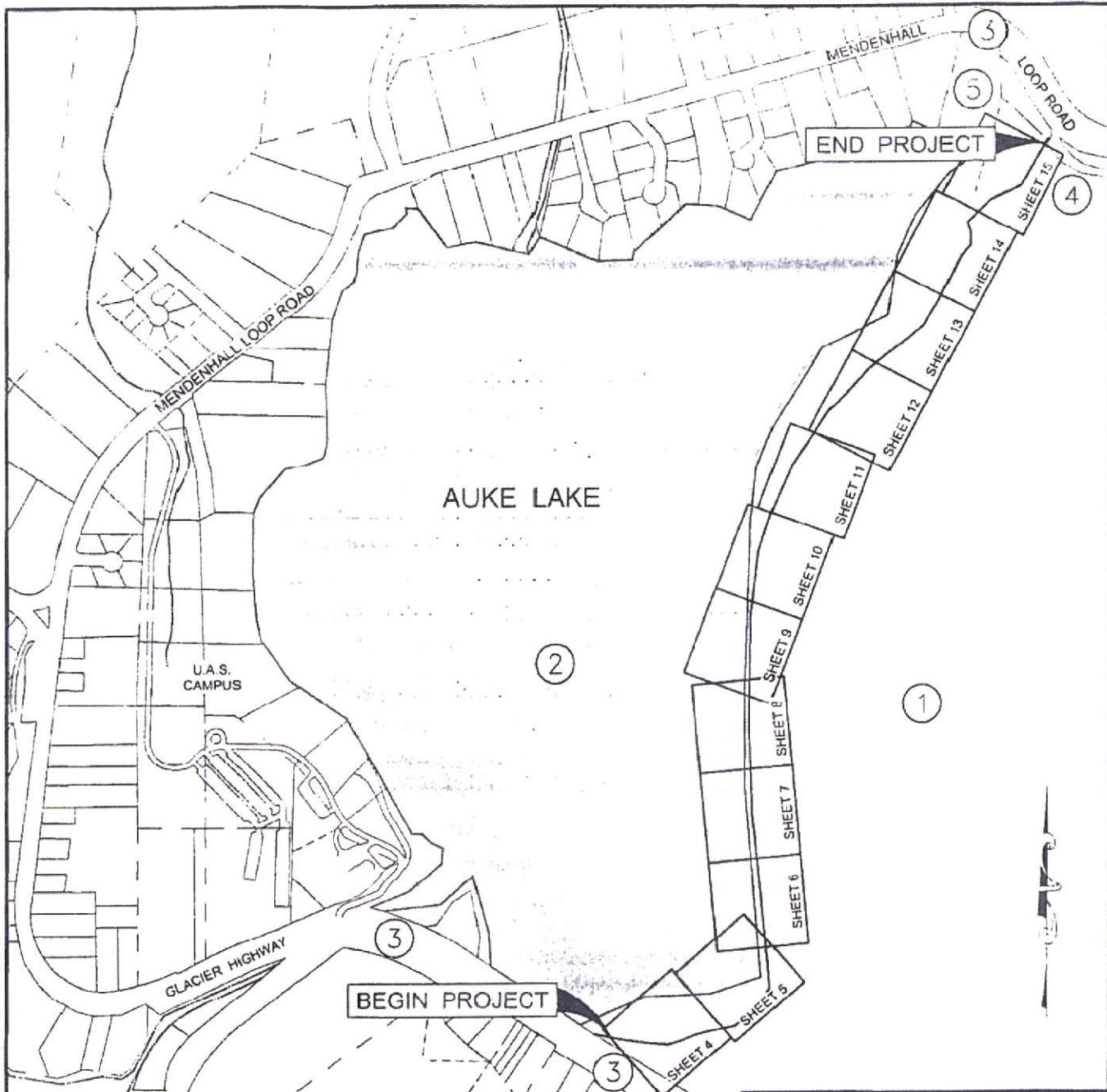
Conclusion: this stream crossing *should be designed for fish passage.*

10th Crossing (Plan Sheet 15) The 10th and last crossing before the Goat Hill trailhead is a small ephemeral stream that we don't consider fish habitat. Trap #9 set overnight above the existing trail about 100' up from the lake caught a cutthroat trout (80mm). A second trap (Trap # 10) about 20' below the existing trail caught 3 cutthroats (60-75mm) and 1 Dolly Varden (75mm).

Conclusion: the stream at the new trail crossing *does not need to be designed for fish passage.*

CC: Al Ott, DNR-OHMP, Fairbanks
Tess Quinn, DNR-OHMP, Juneau
Mark Fink, ADF&G, Anchorage
Brian Glynn, ADF&G, Juneau
Joe Donohue, DNR-OPMP, Juneau
Sadie Wright, DNR-OPMP, Juneau
Joran Freeman, DEC, Juneau

PACKET



Adjacent Property Owners and Sheet Key Map

N.T.S

Property Owners

- ① CITY AND BOROUGH OF JUNEAU
- ② STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES
- ③ STATE OF ALASKA DEPT. OF TRANSPORTATION AND PUBLIC FACILITIES
- ④ SCOTT L. JOHNSON
- ⑤ DAVID & DONNA HANNA

UNIVERSITY OF ALASKA SOUTHEAST AUKE LAKE TRAIL IMPROVEMENTS

IN: AUKE LAKE

AT: JUNEAU, ALASKA

APPLICANTS: CITY & BOROUGH OF JUNEAU
155 SOUTH SEWARD STREET
JUNEAU, AK 99801

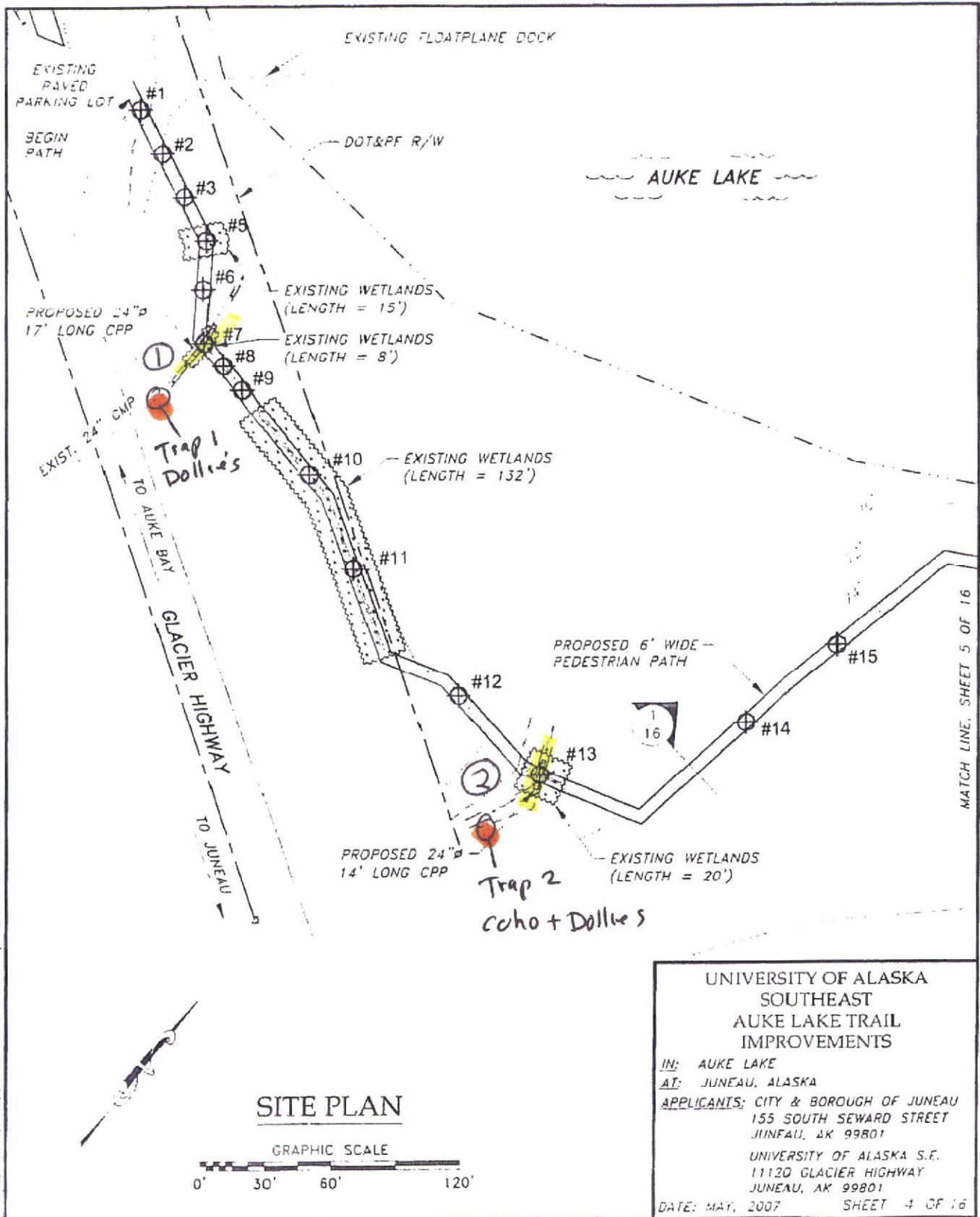
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11120 GLACIER HIGHWAY
JUNEAU, AK 99801

DATE: MAY, 2007

SHEET 2 OF 16

R&M PROJ. No. 051374

PACKET



SITE PLAN

UNIVERSITY OF ALASKA SOUTHEAST AUKE LAKE TRAIL IMPROVEMENTS

IN: AUKE LAKE

AT: JUNEAU, ALASKA

APPLICANTS: CITY & BOROUGH OF JUNEAU
155 SOUTH SEWARD STREET
JUNEAU, AK 99801

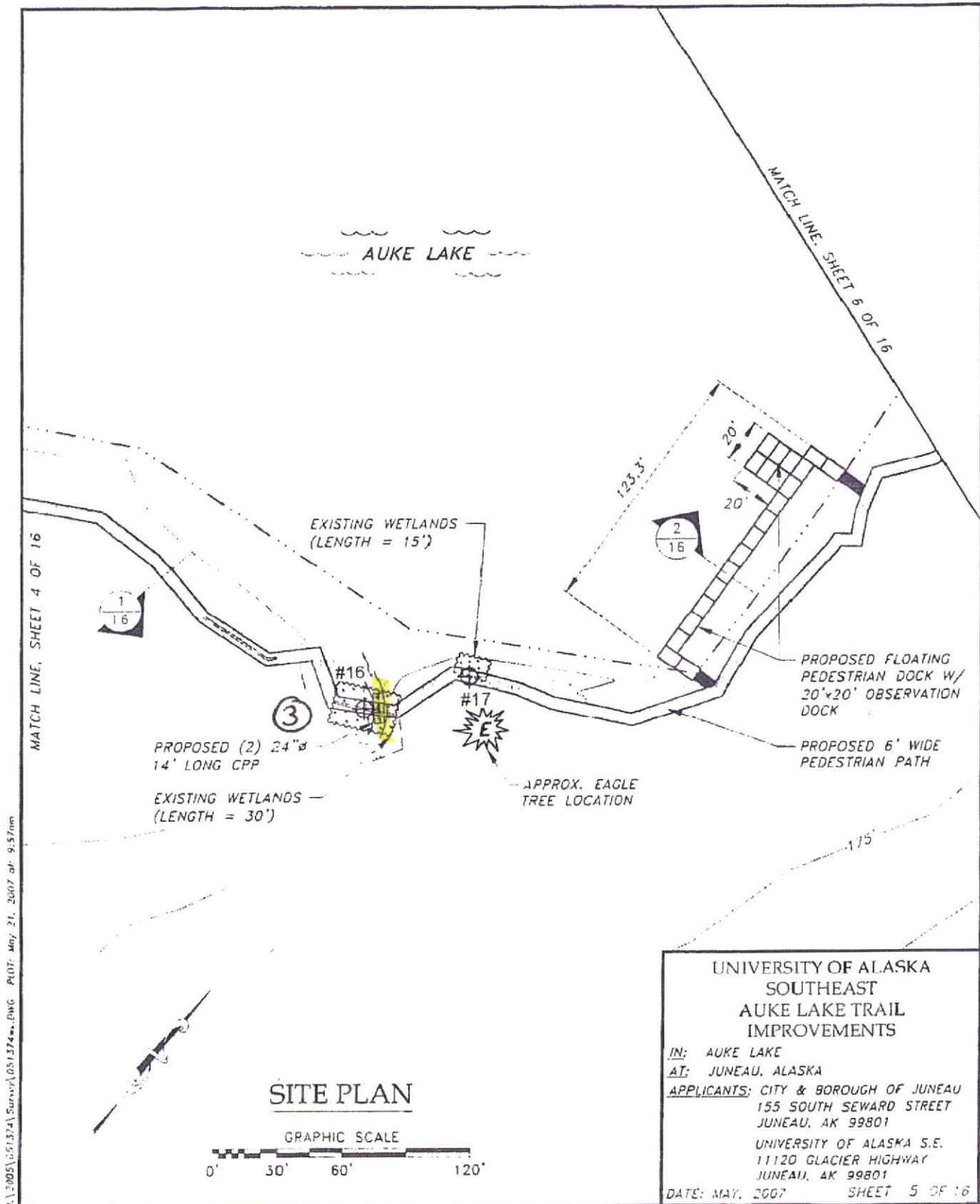
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11120 GLACIER HIGHWAY
JUNEAU, AK 99801

DATE: MAY, 2007

SHEET 4 OF 16

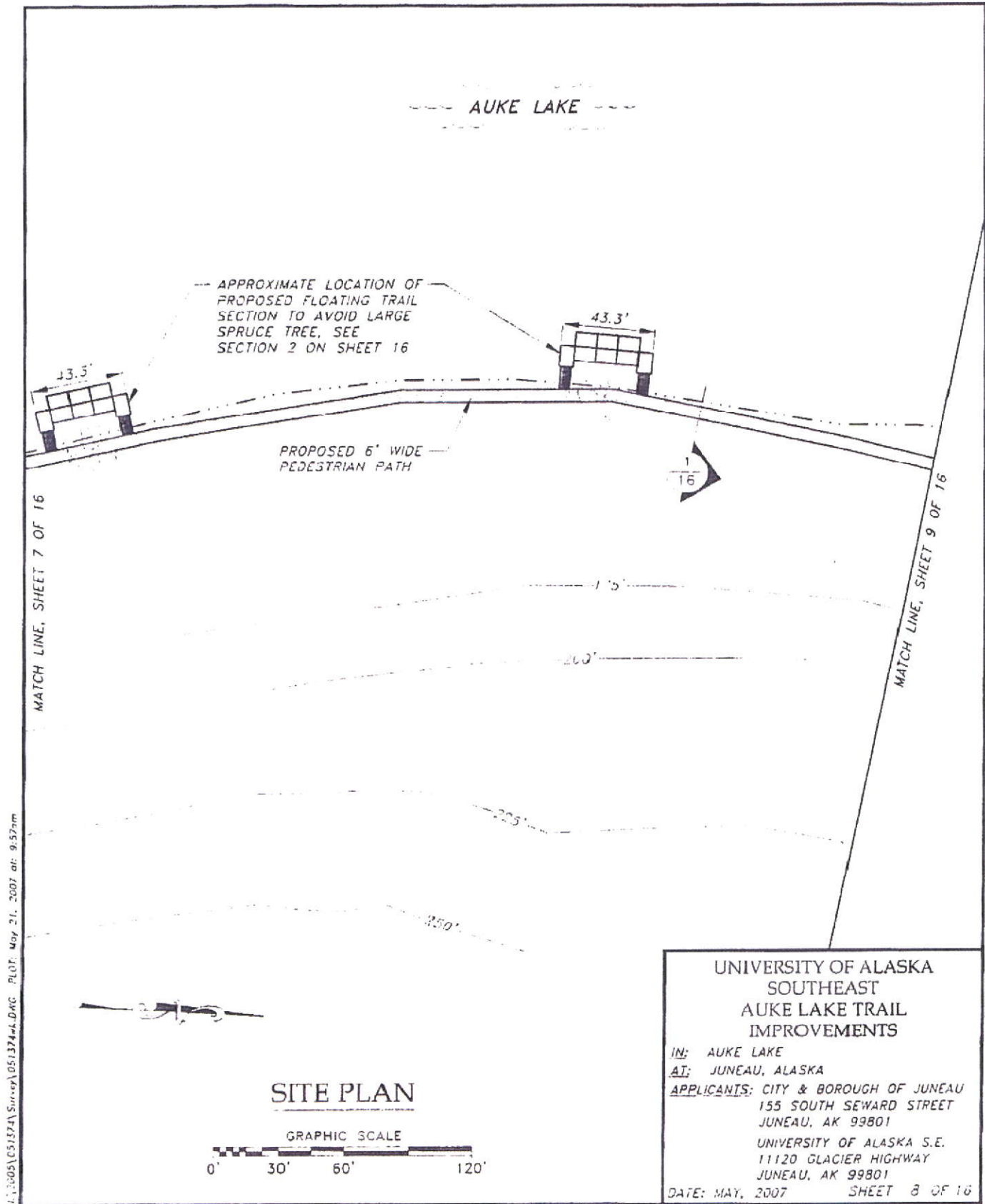
R&M PROJ. No. 051374

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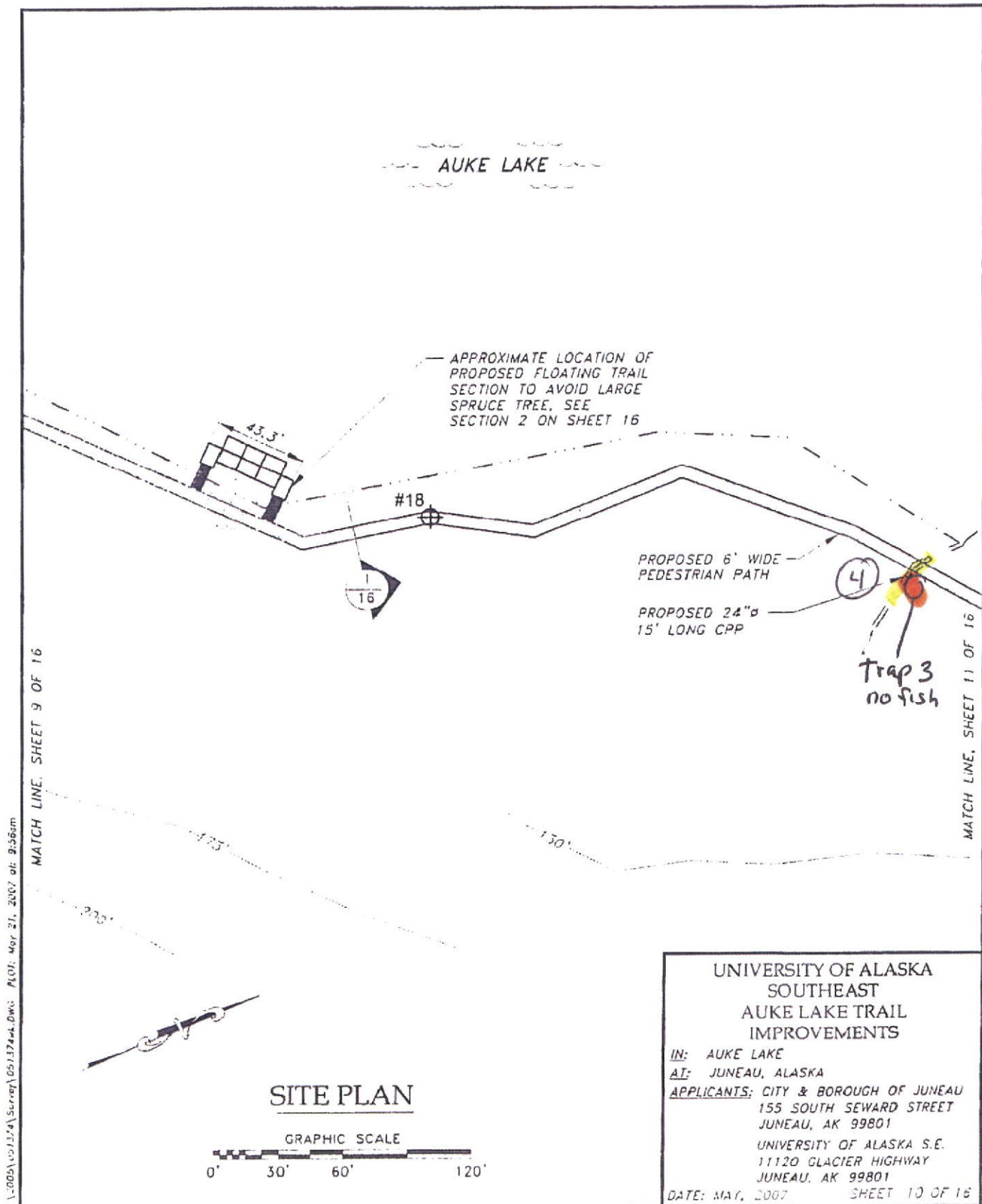


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PACKET

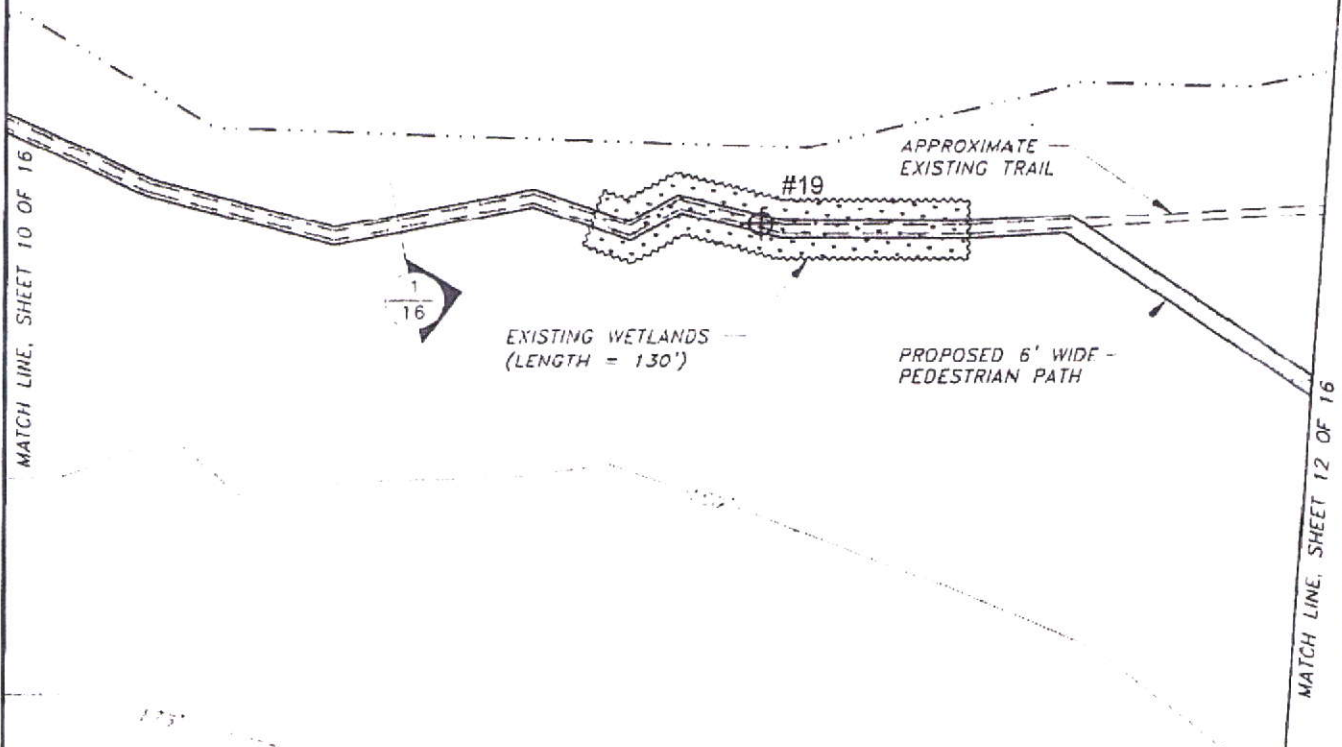


PACKET



PACKET

AUKE LAKE



SITE PLAN



UNIVERSITY OF ALASKA SOUTHEAST AUKE LAKE TRAIL IMPROVEMENTS

IN: AUKE LAKE

AT: JUNEAU, ALASKA

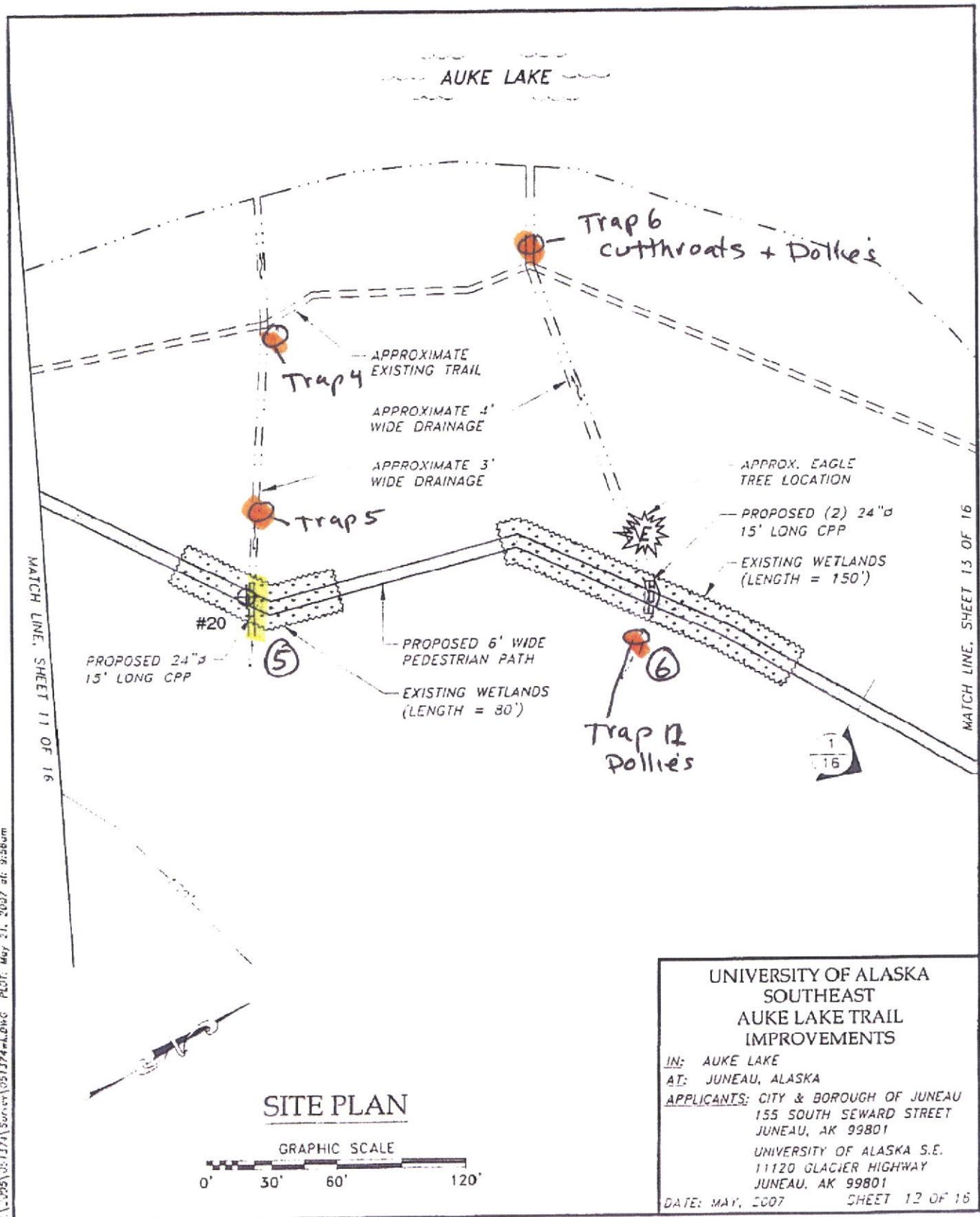
APPLICANTS: CITY & BOROUGH OF JUNEAU
155 SOUTH SEWARD STREET
JUNEAU, AK 99801

UNIVERSITY OF ALASKA S.E.
11120 GLACIER HIGHWAY
JUNEAU, AK 99801

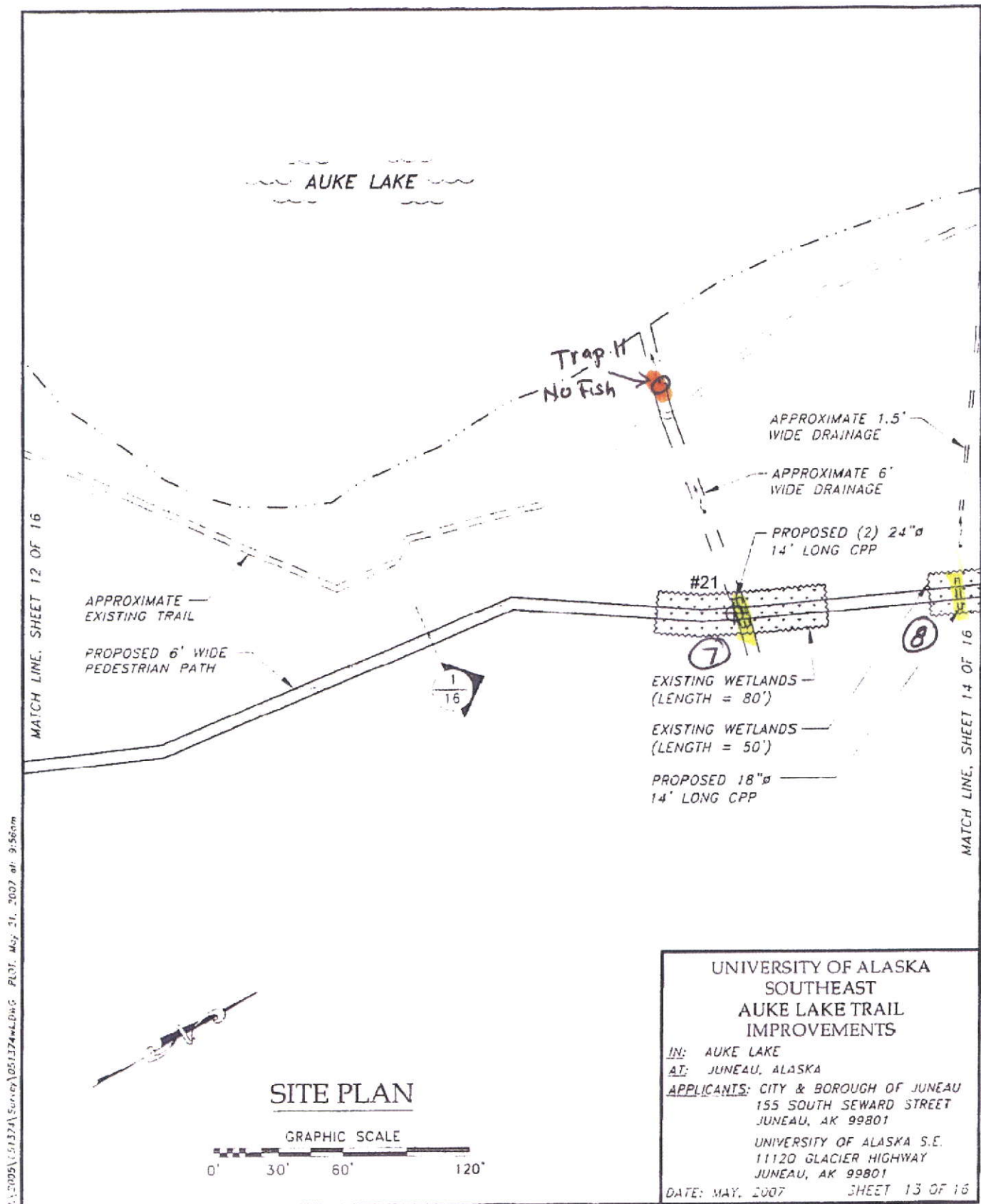
DATE: MAY, 2007

SHEET 11 OF 16

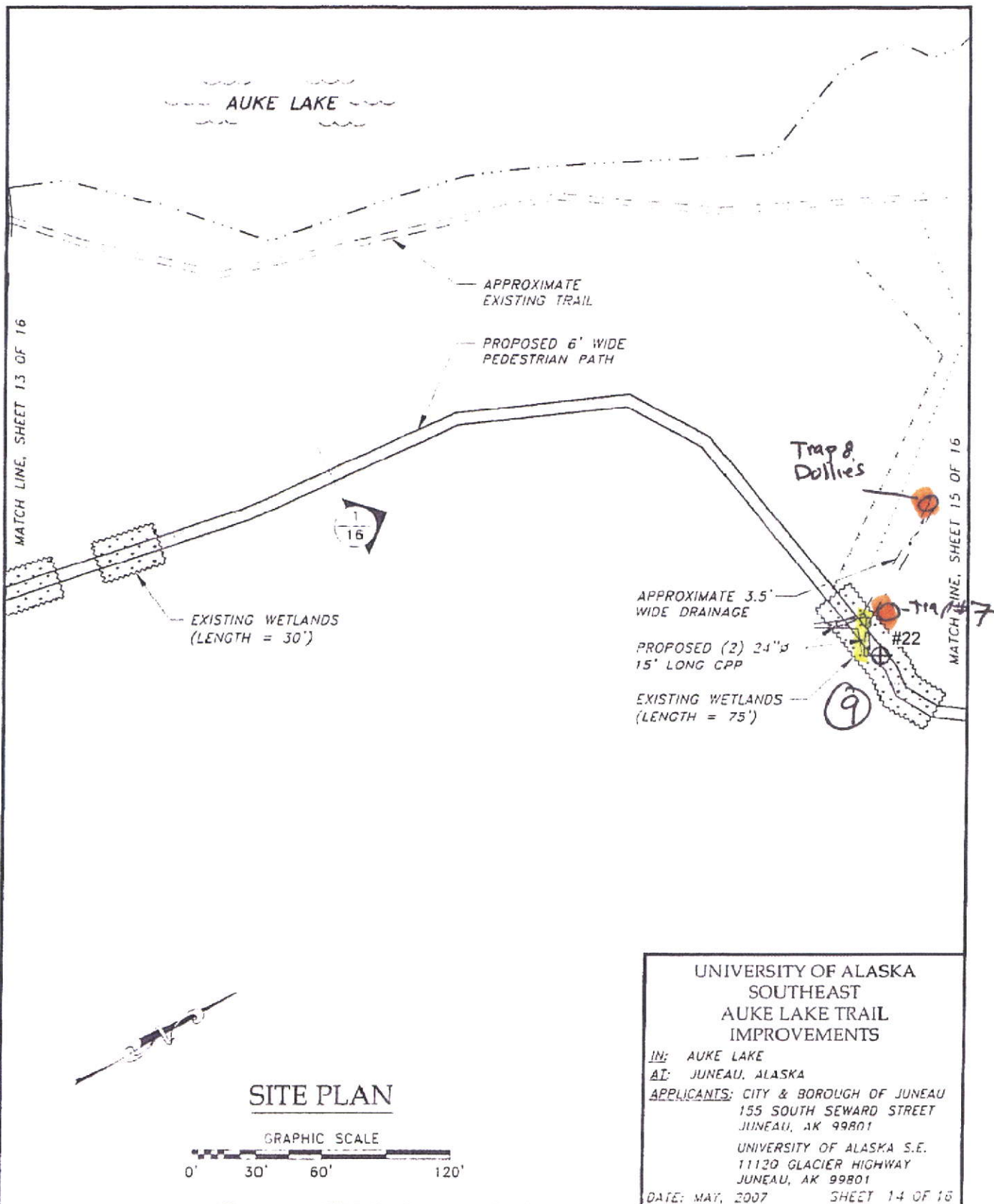
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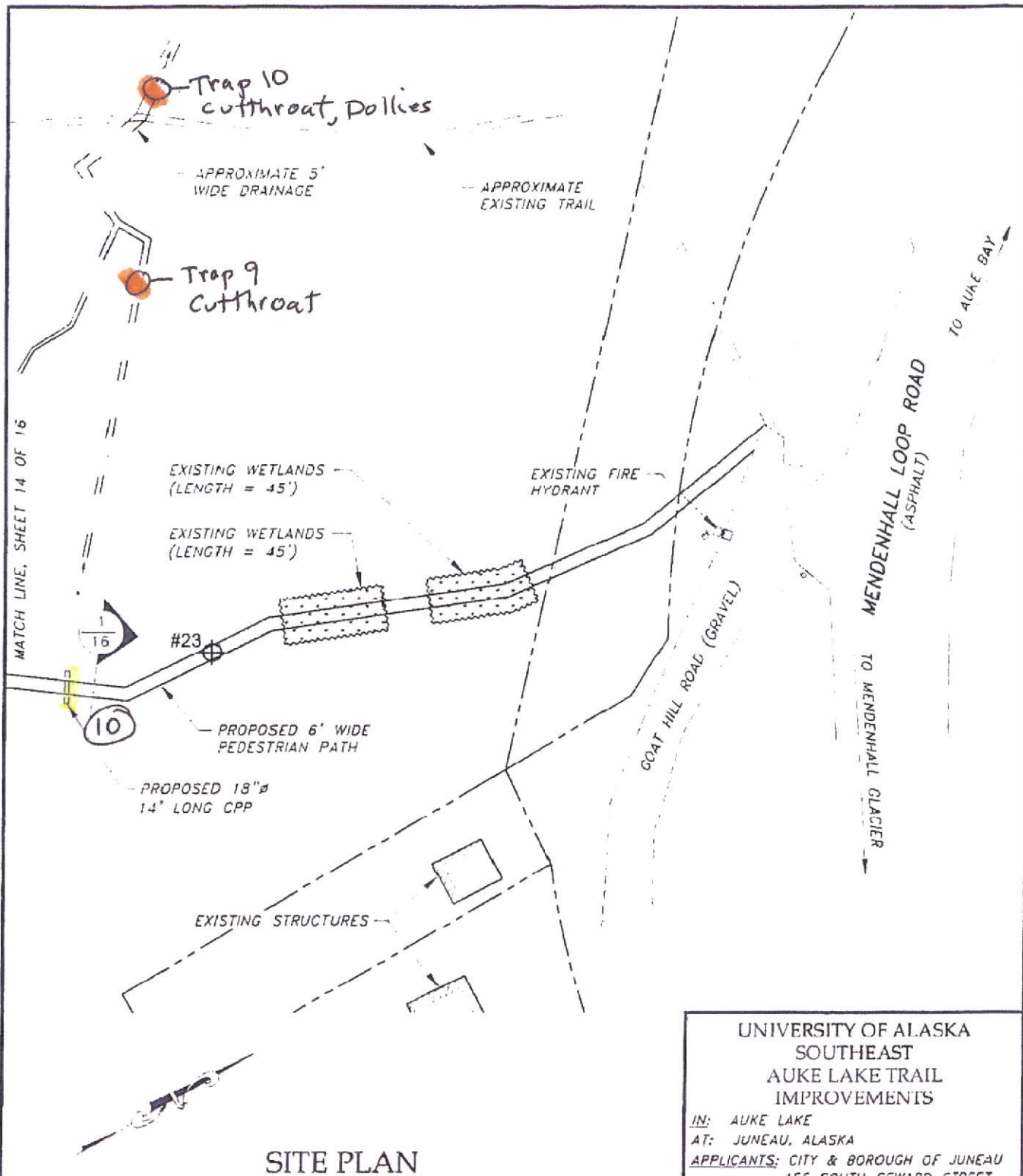
PACKET



PACKET



PACKET



SITE PLAN



UNIVERSITY OF ALASKA SOUTHEAST AUKE LAKE TRAIL IMPROVEMENTS

IN: AUKE LAKE

AT: JUNEAU, ALASKA

APPLICANTS: CITY & BOROUGH OF JUNEAU
155 SOUTH SEWARD STREET
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DATE: MAY, 2007

SHEET 15 OF 16

R&M PROJ. No. 051374

East Auke Lake Stream Addition

This stream was previously trapped by habitat biologist Carl Schrader in July of 2007. Carl trapped one coho salmon at (58.38072, -134.62961), but further trapping efforts weren't taken until August 2010. I went back in August 2010 and trapped one coho salmon in a baited minnow trap at waypoint 55. The following table and map provide trapping efforts and location of traps, features, and the coordinates of the upper and lower extent of anadromy. Carl's trip report with trapping details accompanies this document.

WAYPOINT	LAT	LONG_	DESCRIPTION	EFFORT	SPECIES
53	58.381208	-134.6304	MOUTH OF STREAM INTO AUKE LAKE. BEGIN TRACK LINE		
54	58.380797	-134.62969	SET TRAP IN SMALL POOL. LOTS OF SUBSURFACE FLOWS THROUGH ROOT WADS AND VEGETATION UP TO THIS POINT.	MINNOW TRAP	8DV
55	58.380128	-134.62881	PULLED TRAP SET BY F&W ALONG HIGHWAY LAST WEEK	MINNOW TRAP	1CO, 7DV
56	58.379941	-134.62733	END SURVEY. STEEP CHANNEL, FLOWS JUST A TRICKLE, NOWHERE TO SET TRAP.		
57	58.380085	-134.62819	SET TRAP IN VERY SHALLOW POOL UNDER MOSSY LOG. WATER JUST A TRICKLE.	MINNOW TRAP	EMPTY
58	58.388966	-134.62444	POINT AT BRIDGE ACROSS TRAIL		
59	58.389379	-134.62499	SET TRAP AT PLANK ON OLD TRAIL. PREVIOUSLY CAUGHT DV WITH CARL SCHRADER.	MINNOW TRAP	EMPTY
60	58.389303	-134.62527	2' VERTICAL FALLS AT LAKESHORE. BARRIER TO JUVENILES		





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Division of Habitat
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