17.6.8

Alaska Sea Life Center / IMS Improvements

JANUARY 1995 PROJECT UPDATE

OVERVIEW

The Alaska Sea Life Center / IMS Improvements project is developing high quality marine laboratory facilities in Seward that will provide new research opportunities for marine mammals, marine birds, fish, and invertebrates. A unique aspect of this $47.5 million project ($24.956 million funded by EVOS Trustee Council) is the integration of marine research facilities with a public aquarium featuring the marine ecosystem and research of the Gulf of Alaska. The facility is located on a seven acre waterfront site at Seward, Alaska on Resurrection Bay (60°-06'N, 149°-27'W) adjacent to the Seward Marine Center of the University of Alaska Fairbanks, School of Fisheries and Ocean Sciences, Institute of Marine Science. The improvements include wet and dry laboratories; marine mammal, bird, fish, and invertebrate tanks; naturalistic marine mammal and marine bird habitats; offices; library; and animal food preparation, surgery, necropsy, and quarantine. The wet laboratories, tanks, and habitat areas will be supplied by an extensive life support system with running sea water and fresh water. Research facilities will be available as soon as June, 1997.

RESEARCH OPPORTUNITIES

1. **Marine Mammals**

Sea Otter Pinnipeds

- Health & disease status
- Body condition
- Energy assimilation
- Hydrodynamics and diving physiology
- Development and testing of telemetry equipment
- Testing of immobilizing drugs
- Stable isotopes
- Radioisotopes
- Toxicology

2. **Marine Birds**

Seabirds Sea Ducks Shorebirds

- Health & disease status
- Feeding behavior

- Physiology
- Development and testing of telemetry equipment
- Stable isotopes
- Toxicology

3. **Fish & Invertebrates**

Salmon Herring Forage Fish Invertebrates

- Genetics
- Reproduction
- Prey/predator relationships
- Toxicology

PLANNED RESEARCH FACILITIES

1. Life Support System

Sea water

- Total capacity 5,000 gallons per minute
- Intake at 250 feet depth, Resurrection Bay.
- Salinity 30 - 33 ppt; temperature 4° - 8° C
- 200 gpm filtered and unfiltered sea water supplied to wet labs

Fresh water

- Total capacity 200 gallons per minute
- Groundwater source

2. Wet Labs

- Two 40' x 40' dividable wet labs
- Flexible grid design for water, electrical, and drain hookups
- 12' head room, overhead outside doors

3. Dry Labs

   - Four 14' x 20' dry labs
   - 40' x 40' central dry lab w/individual toxicology, isotope, and bacteriological labs; chemical and pharmacological dispensary
   - Work stations for computers, desks

4. Animal quarantine

   - Six climate controlled rooms, two for critical care

5. Surgical suite

   - Pre & post operative area
   - X-ray and darkroom
   - Scrub and degowning area
   - Surgery

6. Necropsy room

7. Animal food preparation and storage

8. Research tanks; partially protected from weather

   - 12 ft diam tank 4 ft deep 5 ft haul out
   - 35 ft diam tank 10 ft deep 5 ft haul out
   - 20 ft diam tank 5 ft deep 5 ft haul out
   - 40' x 60' oval 10 ft deep 10 ft haul out U/W viewing
   - (4) pens & pools 4 ft deep
   - (4) 4' x 12' diam tanks
   - (1) 4' x 30' diam tank
   - (8) 4' X 4' diam tanks

- (8) 3' x 3' x 12' outdoor raceways

9. Habitat tanks

• Steller sea lion	300,000 gal	12 ft deep	rock haulout
• Harbor seal	250,000 gal	12 ft deep	rock haulout
• Sea otter	150,000 gal	13 ft deep	rock haulout
• Marine birds	200,000 gal	18 ft deep	cliffs/burrows

10. Research library (2,000 sq ft)

11. Research & husbandry offices

- 18 private
- 12 semi-private
- Conference rooms

12. Support areas

- Freezers
- Dive locker
- Showers, laundry
- Centrifuges
- Data/communications network
- Wood shop, metal shop, electronics shop
- Storage
- Photographic darkroom
- 24 hour security & animal care

FACILITY OPERATIONS

The facility will be owned by the City of Seward and operated by the Seward Association for the Advancement of Marine Science, a non-profit corporation. Research activities will be coordinated by the University of Alaska Fairbanks, School of Fisheries and Ocean Sciences. Operational costs will be offset by aquarium visitation and private donations.

FURTHER INFORMATION

Contact: Kimbal Sundberg
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333 Raspberry Road
Anchorage, AK 99518-1599
Phone: 907-267-2334
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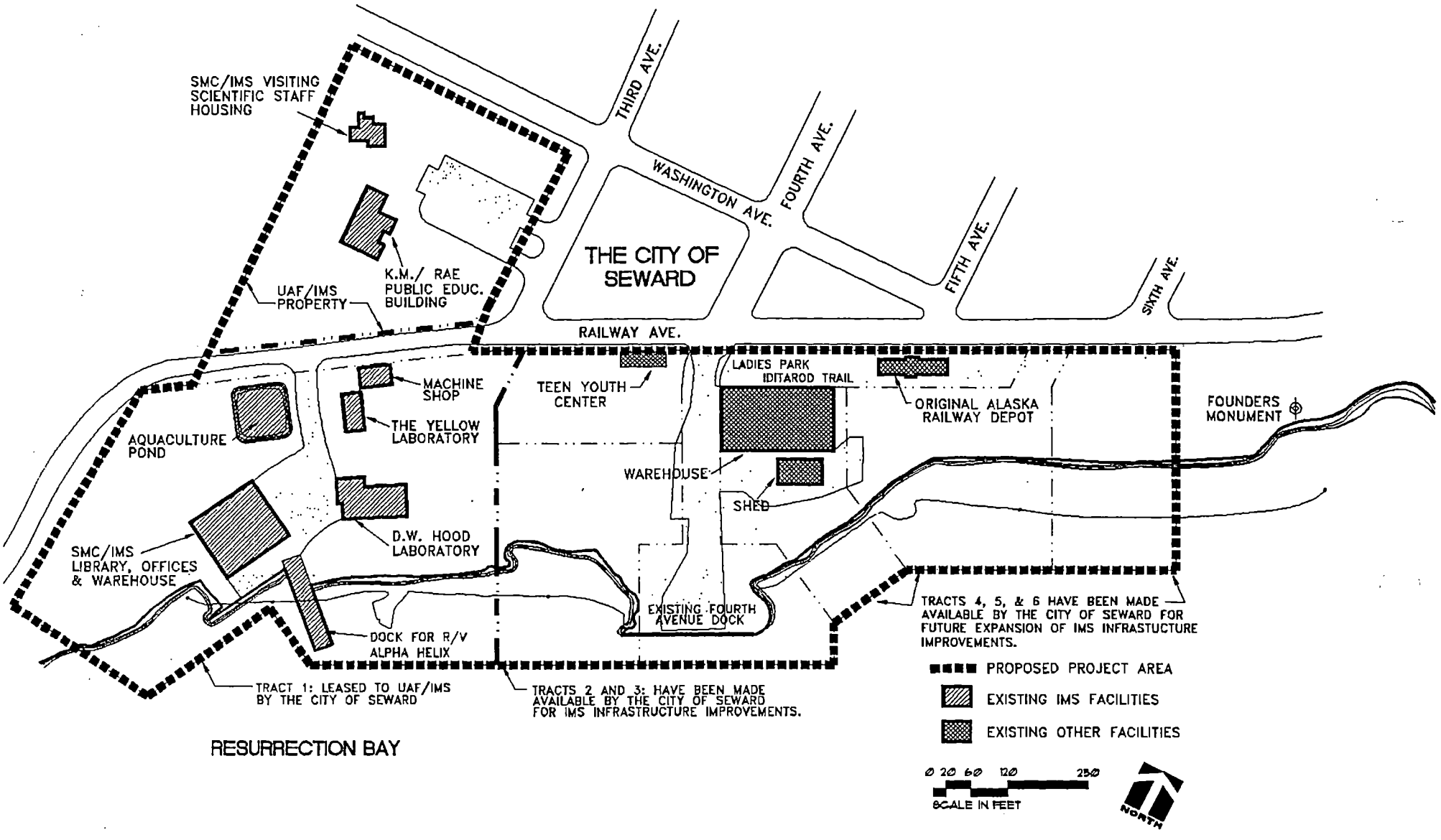
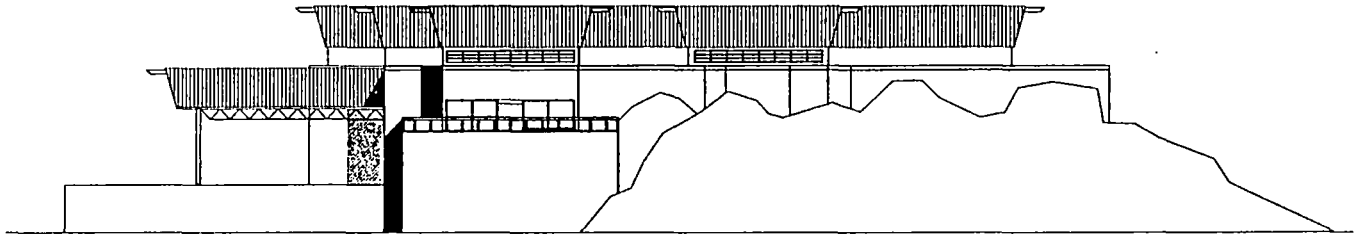


PROPOSED PROJECT AREA
INSTITUTE OF MARINE SCIENCE INFRASTRUCTURE IMPROVEMENTS

3/22/94



1 SOUTH ELEVATION
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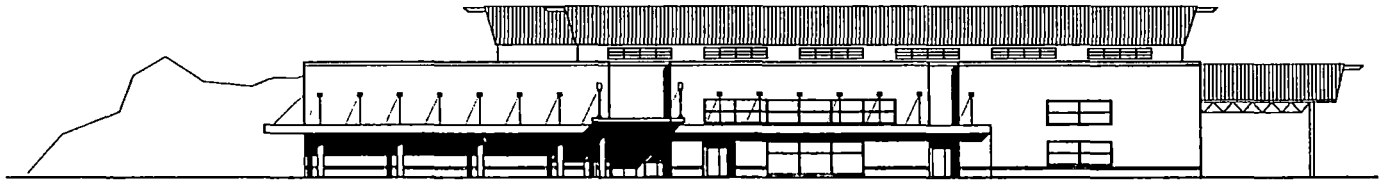

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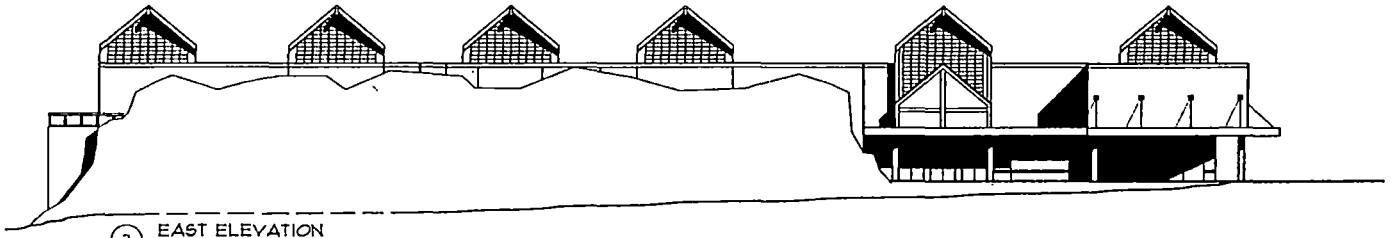

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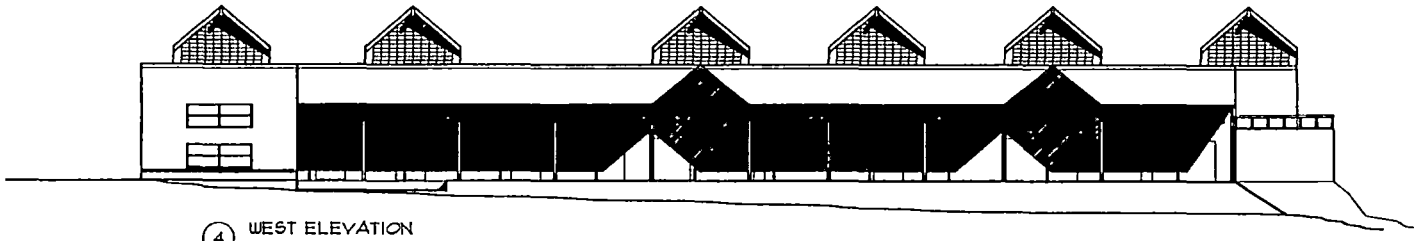


4 WEST ELEVATION
SCALE:

SAAMS

ALASKA SEALIFE CENTER
IMS INFRASTRUCTURE IMPROVEMENTS

'ARD, ALASKA

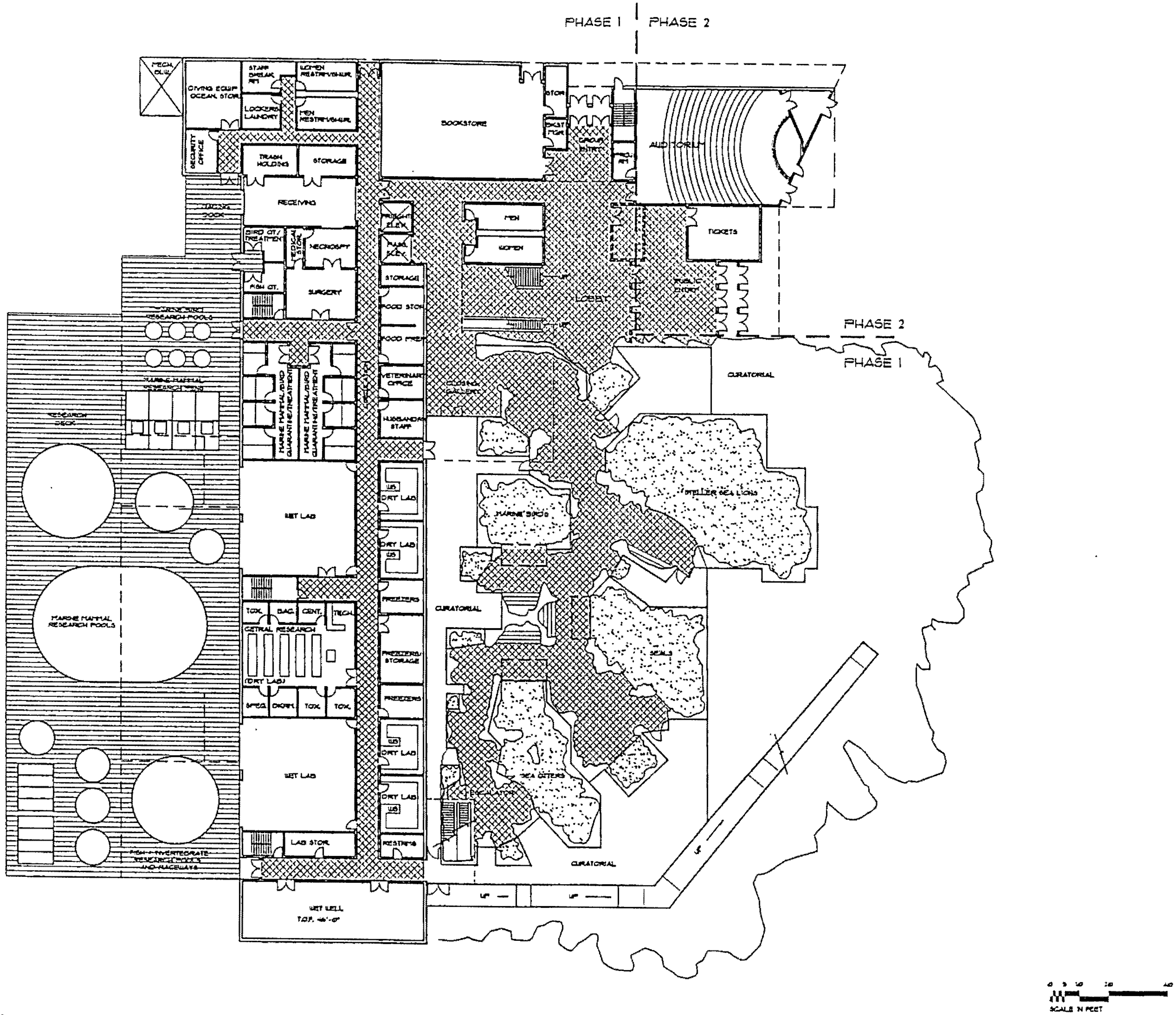
Cambridge Seven Associates, Inc.

LIVINGSTON STONE

PROJECT NO. 401.00
DRAWN BY: HAI
REVIEWED BY: LS
DATE SEPT 9, 1994

TITLE
ELEVATIONS

SHEET NO.



SAAMS

ALASKA SEALIFE CENTER
IMS INFRASTRUCTURE IMPROVEMENTS

SEWARD, ALASKA

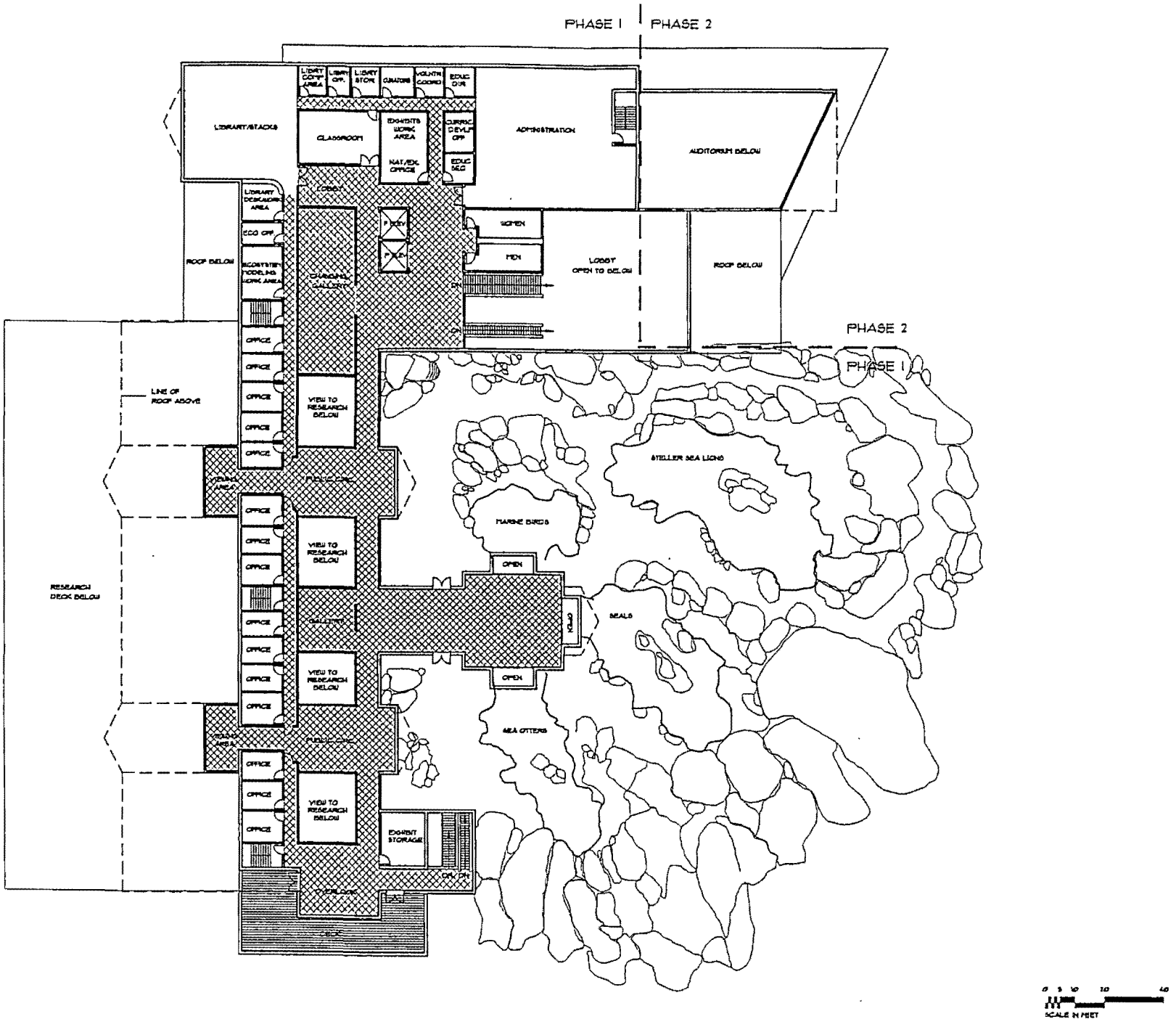
Cambridge Seven Associates, Inc.

LIVINGSTON SLONE

PROJECT NO. 401.00
DRAWN BY: HVO
REVIEWED BY:
DATE SEPT. 1, 1994

TITLE
MAIN LEVEL PLAN

SHEET NO.



SCALE IN FEET

SAAMS

ALASKA SEALIFE CENTER
IMS INFRASTRUCTURE IMPROVEMENTS

SEWARD, ALASKA

Cambridge Seven Associates, Inc.
Architects and Landscape Architects

LIVINGSTON SLONE
ARCHITECTURE
PLANNING

PROJECT NO. 401.00
DRAWN BY: HVO
REVIEWED BY:
DATE SEPT. 1, 1994

TITLE
SECOND FLOOR PLAN

SHEET NO.