Site Survey
Old Homer Intermediate School
Homer, Alaska

July 1, 1998

Prepared for:
Kenai Peninsula Borough
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Condition Survey
Old Homer Intermediate School

Part I - Introduction

General:

The Kenai Peninsula Borough is currently investigating the feasibility of leasing out the Old Homer Intermediate School to parties interested in using the facility as a private school.

In response to the Kenai Peninsula Borough Request for Proposal for a Site Survey of the Old Homer Intermediate School, Marvin Ungerecht, of Architects Alaska traveled to Homer on February 16, 1998 to take a look at the school. Due to budget limitations for the survey work, Mr. Ungerecht undertook a detailed site investigation during the pre-proposal site visit. Upon Mr. Ungerecht's return to Anchorage, a team of consultants was selected for the project proposal. The Architects Alaska Team included:

Architects Alaska	Architectural
Marvin Ungerecht,	Project Manager
Hays, Zietlow and Associates	Mechanical and Electrical Engineering
Calvin Hays	Project Mechanical Engineer
Tom Zietlow	Project Electrical Engineer
BBFM Engineers	Structural Engineering
Forrest Braun	Project Structural Engineer
Environmental Health Sciences	Hazardous Materials Consultants
Bob French	Project Haz. Mat. Architect
HMS, Inc.	Cost Estimating Consultants
Ehsan Moghul	Project Estimator

Based upon the KPB Request for Proposal and the pre-proposal site visit, Architects Alaska developed a preliminary work plan and fee proposal to accomplish the Old Homer Intermediate School Condition Survey Work. The Professional Service Request for Proposal was submitted to the Kenai Peninsula Borough on February 19, 1998. The proposed scope of work was subsequently revised to incorporate on-site hazardous materials testing and Architects Alaska was selected to complete the condition survey on the basis of the revised work plan as follows:

1.1 Travel (Architectural and Hazardous Material Consultants Only): This element includes travel to and from the Homer Intermediate School Site. Given the budget limitations, travel to the site was limited to *Architects Alaska*'s pre-proposal site visit and the Hazardous Materials Consultants trip to the site, after Notice to Proceed, to conduct lead and hazardous materials samples.

1.2 On-site ADA/Condition Survey Audit/Hazardous Materials Audit (Architectural and Hazardous Materials Consultants Only): Given the budget limitations, *Architects Alaska* undertook a detailed site investigation while it made its pre-proposal site visit. The site visit included a detailed ADA survey audit, data gathering for the condition survey, and a detailed photographic survey of the existing building. The Hazardous Materials Consultant was scheduled to undertake a trip to the site after Notice to Proceed, to take lead and hazardous materials samples. No other site visits by other consultants were scheduled. All condition survey work was to be completed from data gathered on those two site visits.

1.3 Develop Photo's, Print Documents, Distribute Documents (Architect): Photo's have been developed, full sets of existing documents were copied, and the AHERA plan, and inspection reports, were copied and distributed to consultants. Included in this task was time required to organize documents and have photo copies made and distributed to consultants.

1.4 Document and Code Compliance Review (Each Discipline): This task includes the time required for each discipline to review distributed plans, documents, reports and photo's and do a detailed code compliance review.

1.5 Dialog with KPB Maintenance Dept. (Each Discipline): After each discipline has reviewed the documents and documented code compliance issues, this task includes the time required for a telephone review of any specific knowledge that the KPB Homer Maintenance Dept. has with regard to known architectural, mechanical, electrical, or structural system, material, and/or equipment deficiencies.

1.6 Draft Existing Condition Survey Report (Each Discipline): This task includes the time required to prepare a draft report of the existing facility conditions, deficiencies and required upgrade requirements with regard to architectural, structural, mechanical, electrical and hazardous materials disciplines.

1.7 ADA Report (Architectural Only): This task includes the time required to complete an ADA report documenting barriers to access and required upgrade requirements. The raw data has already been collected for this effort.

1.8 Compile and Publish Condition/ADA Survey Report (Architectural Only): The architect to utilize digital copies of consultant reports and combine into a single condition/ADA survey report.

1.9 Prepare Order of Magnitude Estimates (All disciplines as required): Prepare construction cost estimate for accomplishing facility upgrade work as outlined in the Condition/ADA survey report. For comparison purposes, prepare an estimate of facility demolition costs.

1.10 Prepare Draft RFP (Architectural Only): Architect to prepare a draft RFP, in the Kenai Peninsula Borough Format that will be utilized to solicit public proposals for the Old Homer Intermediate School facility lease, upgrade and occupation.

1.11 Submit 95% Package to Owner for Review (Architectural Only): Architect to make copies of 95% package including survey audit reports and estimates and forward to the Kenai Peninsula Borough for the Borough's review.

1.12 Make Final Corrections (Architectural Only): The architect to review Owner comments and make corrections as required.

Architectural, structural, mechanical, electrical and hazardous materials consultants observations, and recommendations for the upgrade of the Old Homer Intermediate School follow in Part II of this report.

Preliminary drawings have been developed to help quantify the work and have been included in Part III. An order of magnitude cost estimate for the upgrade work is included in Part IV. Attachments in Part V include the ADA condition survey, and hazardous materials lab reports.

Site Survey
Old Homer Intermediate School
Homer, Alaska

Part II - Existing Building Condition Survey

Architectural Narrative

General

The Kenai Peninsula Borough is currently investigating the feasibility of leasing out the Old Homer Intermediate School to parties interested in using the facility as a private school.

Architects Alaska was retained by the Kenai Peninsula Borough to undertake a site investigation of the existing four classroom facility of approximately 7,000 sq. ft. and prepare a report on building code and ADA compliance issues and on hazardous materials and life safety issues. Based upon the site investigation, Architects Alaska is to prepare a cost comparison between the upgrade work required to re-occupy the educational facility vs. the demolition of the facility.

With these goals in mind, the building was visited by Mr. Marvin Ungerecht of Architects Alaska on February 16, 1998. Marvin undertook a detailed site investigation during the pre-proposal site visit. Observations and recommendations were made with the assumption that the proposed facility will be upgraded and leased out as an educational facility.

Codes and Standards:

Renovation work on the Old Homer Intermediate School would be required to comply with the following codes and standards:

- 1994 Edition - Uniform Building Code
- 1994 Edition - Uniform Fire Code
- 1994 Edition - Uniform Mechanical Code
- 1994 Edition - Uniform Plumbing Code
- Current Edition - National Electric Code
- Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities

Uniform Building Code/Uniform Fire Code Analysis

Existing Square Footage	6,974 sq. ft.
Construction Type	Type V-Non Rated *
Occupancy Group	E-1
Automatic Sprinkler System	None Existing (Required by State of Alaska Amendment to the UBC)

Side yard separation	a) Exceeds twenty feet on all sides b) All exterior walls are 1 hr. rated bearing walls c) All openings are non-rated.
Allowable Height (Table 5B)	One Story (40 ft. max.)
Allowable Area (Table 5B)	9,100 sq. ft.
Allowable Area Increase	9,100 sq. ft. (Separated on all sides)
Allowable Area (bldg. footprint)	18,200 sq. ft. > 3,685 sq. ft. (O.K.)
Added story increase	18,200 sq. ft.
Total allowable area	36,400 sq. ft. > 6,974 sq. .ft. (O.K.)

The existing building is classified as Type V Non-rated primarily because the existing steel beams are unprotected. An E-1 occupancy of type V Non-rated construction is only permitted to be one story in height. In order to bring the existing building into compliance with the Uniform Building Code (UBC), either the beams and columns will need to be protected with one-hour rated assemblies so the building can be classified as Type V One-hour construction, or an automatic sprinkler system will need to be added to allow for the second story per UBC Section 506 for maximum height of building increases.

The State of Alaska requires that all new or altered E-1 Occupancies have an automatic sprinkler system. Since the building has been unoccupied for some time the State Fire Marshal's Office has indicated that they will insist on an automatic sprinkler system in the facility before they would permit the building to be re-opened as an educational E-1 Occupancy. This being the case, an automatic sprinkler system will be required as part of the upgrade work, but this will permit the second story without upgrading the building to Type V One-hour construction.

Corridor walls will need to be upgraded to one-hour wall assemblies. The existing single layer of gypsum wall board protection at the steel beams at the corridor walls does not provide the required one-hour rated wall assembly. This can upgraded fairly easily by installing a one hour shaft cavity wall system on either the classroom side or the corridor side of the beam above the suspended acoustical tile ceiling systems. The existing pipe columns will also need to be protected in a similar fashion at four locations in Corridor 006 and four locations in Corridor 104.

The existing rated solid core doors in hollow metal frames are adequate, however smoke gaskets will need to be added at all doors opening into the Corridors 006 and 104.

In general the existing building complies with other requirements of the Uniform Building Code (UBC) and the Uniform Fire Code (UFC). Penetrations of rated walls (duct, conduit, piping penetrations, etc.) will need to be carefully sealed with rated sealant systems throughout the facility.

Americans with Disabilities Act Accessibility Guidelines (ADAAG) Analysis

The existing Old Homer Intermediate School currently does not have Accessible Parking (Element 1), an Exterior Accessible Route (Element 4), an Accessible Entrance and Entrance

Doors (Element 8), Accessible Exterior or Interior Signage (Elements 10 and 11), an Interior Accessible Route (Element 12), Accessible Toilet Rooms (Element 14), Accessible Interior Doors (Element 17), Accessible Drinking Fountains (Element 18), and the audible and visual alarms are not mounted at the required height.

Please see the attached ADA Survey Audit for Homer Intermediate School with a detailed description of existing barriers to access and the attached drawings (Sketch No's 3 through 7) showing possible solutions to the required upgrade work. Clearly upgrade work that will be required will need to include creating an accessible parking area with two spaces, and an exterior accessible route to an accessible building entrance. Also required will be a new accessible exterior entrance, an interior accessible route which will need to include an elevator providing access between floors, and new accessible unisex toilet rooms on each floor. The existing doors at program spaces will need to be made accessible with lever handled hardware and closers will need to be adjusted for access. The existing drinking fountains will need to be replaced with accessible hi-low drinking fountains on each floor and the existing audible and visual alarms will need to be lowered so that they are 80 inches above the finish floor. New alarms will need to be added to the toilet rooms.

Existing Condition Survey Observations

Existing Exterior Wall System: Typical exterior wall construction consists of steel columns and beams, with a 6" thick non-bearing concrete wall. Exterior walls are generally insulated with 2" thick rigid insulation and are finished on the inside with painted cement asbestos board. Two inches of rigid insulation and 5/8" gypsum wall board has been adhered to the original exterior wall construction at some locations at the east end of the building during 1976 renovation work.

A large portion of the exterior wall surface on the north and south elevations consists of insulated glazing units set in wood frames. Window openings are approximately 6' high x 16' long with the sill set at 3'-6" above finish floor on the lower level and approximately 8' high x 16' long with the sill set at 2'-6" above finish floor on the upper level. There are two of these large window openings in each of the four classrooms.

Existing Interior Wall System: In general, interior walls are 6" concrete masonry units (CMU), except for plumbing chase walls, furred walls at recessed locker units, and a couple 6" thick concrete shear walls adjacent to the stairs 02 and 011. The plumbing chase walls (west wall at Boy's Toilet 09 and Girls Toilet 107) are 2x wood frame construction with 5/8" gypsum wall board and prefinished cement asbestos board on one side. The opposite wall on classroom sides of the plumbing chase and at furred walls for recessed lockers, are also 2x wood frame construction with 5/8" gypsum wall board and prefinished cement asbestos board on the finish side.

Interior partitions generally continue up to the bottom of steel beams or up to the underside of the cast-in-place concrete floor or roof slab where the walls are not on beam lines.

Existing Interior Openings: Existing interior doors are of solid core wood doors, set in hollow metal frames. All existing doors opening up to the corridor are appropriately rated, although new smoke gaskets need to be added at all locations.

Existing Floors: Existing floors are generally concrete with carpet over 9" x 9" vinyl asbestos tile (VAT). The VAT and mastic are assumed to be asbestos containing materials. At some locations in each classroom, the old VAT has been replaced with 12" x 12" vinyl composition tile (VCT). The VCT has been tested and appears to be free of asbestos, however they may have been installed over the old mastic which is assumed to be an asbestos containing material.

Existing Ceiling Assembly: The existing ceiling at classroom, corridor, stair and office areas, is a suspended acoustical tile ceiling system. The ceiling system is directly hung and is on a 24" x 48" grid. Ceilings at Toilet, Janitor, Storage and Boiler rooms is exposed concrete, painted.

The existing height of the suspended acoustical tile ceiling is approximately 10 feet above finish floor at the upper level and 9'-0" above finish floor at the lower level. The ceilings generally appear to be in good condition.

Existing Roof and Roofing Assembly: The existing roof structure is a cast-in-place concrete slab supported on steel beams. The existing roof structure appears to be in good condition except for at the roof edges where water has penetrated under the roof membrane and has gone through freeze and thaw cycles causing some concrete cracking and spalling at roof edges.

The concrete cracking and spalling is a condition that needs to be fixed. The roof edge needs to be flashed and repaired so that water doesn't penetrate to the concrete where it can go through freeze and thaw cycles. It may also make sense to install a metal soffit underneath the roof overhang, just to ensure that no one could be injured by a piece of falling concrete, should some of the existing loose concrete fall. Please reference Sketch No. 8, attached.

The existing roofing assembly consists of an asphaltic built up roofing system on top of rigid insulation. In areas that were visible, the most recent asphalt roofing layer(s) are beginning to "alligator" and the felts are becoming exposed, although the roofing investigation was relatively limited due to snow on the roof. It may make sense to consider resurfacing the existing roof fairly soon.

Structural Narrative

The existing two story structural system is composed of cast-in-place concrete floor and roof slabs over steel beams. Steel columns embedded in cast-in-place concrete pilasters integral with the cast-in-place walls support the steel beams on the exterior walls, while pipe columns support the steel beams at interior corridor wall locations. The foundations are concrete strip footings at the perimeter with pads at the column locations. The lower level floor is of concrete slab-on-grade construction.

Based on observations of the Architect, and photographic documentation, the basic structure appears to be sound with no signs of distress in the existing framing system. However, the roof eaves are deteriorating due to exposure to water and freeze-thaw cycles in the exposed concrete. The concrete eave should have all loose concrete removed down to sound material and new concrete grout placed to reconstruct the eave. Reinforcing in the eave may need to be cleaned of rust to prevent future spalling. The roofing should be extended over the eave to provide protection to the concrete.

The modifications suggested by the report can be performed on the existing structure without adversely affecting the performance of the existing structural system. The elevator/entry addition can be constructed either of concrete to match the existing system, or of wood framed construction.

Mechanical Narrative

General

The building mechanical systems appear to consist of plumbing, heating, fuel oil, ventilation, and control systems. The building was originally constructed in the early 1950's and the mechanical systems were significantly remodeled in the 1976. The remodel drawings indicate that most of the original mechanical systems were removed and replaced with the exception of the boiler, water heater, and portions of the waste and vent system. Subsequent to the 1976 remodel, the original water heater has been removed and replaced with an electric type unit.

Plumbing

Fixtures: Plumbing fixtures appear to be commercial grade, china fixtures and in relatively good condition. China fixtures typically have a long life and should be acceptable for continued use. The fixture trim appears to be in marginal condition and may need to be replaced. The fixtures do not appear to be ADA compliant.

Water: The building is served by an existing 2" water service which serves a cold water distribution system to the building hot water heater and plumbing fixtures throughout the building. The cold water piping systems appears to be a copper system which has relatively long life and should be in fairly good condition. If galvanized water piping is located anywhere within the building it should be checked for condition. Galvanized water piping systems are more subject to early failure than copper pipe systems.

Hot Water: Potable hot water is produced by a 50 gallon, electric hot water heater which serves a hot water distribution system to applicable plumbing fixtures. The electric hot water heater is more expensive to operate than other fuel sources (such as fuel oil), however, there are relatively few fixtures served with hot water and it would not be economical to replace the water heater. The hot water system does not include a recirculating system which should not be a problem due to the relatively short run of hot water piping to the stacked fixture groups.

Waste & Vent: The waste and vent piping systems appear to be commercial grade cast iron systems which typically have a long life and should be acceptable for continued use.

Heating

Heat Generation: The building heating system consists of an oil fired boiler serving a perimeter hydronic heating system. The existing boiler appears to be a old fire tube boiler manufactured by Birchfield and is probably near the end of its useful life.

Fuel Systems: The fuel oil system consists of an exterior, buried, fuel oil storage tank which serves a day tank within the boiler room. The day tank serves the oil fired boiler and a standby generator also located in the boiler room. The condition of the buried fuel tank and piping system is unknown. If buried fuel oil tank and piping systems are from original construction, they are probably in poor condition and may be leaking. The existing buried fuel tank location appears to conflict with a new and required accessible entrance for the building. Most likely the buried fuel tank will need to be removed, replaced, and relocated to prevent conflict with the new accessible entrance.

Heat Distribution: The heating distribution system consists of a circulating hot water piping system which serves finned tube radiation at classrooms, unit ventilators at classrooms, finned tube radiation at miscellaneous spaces, and cabinet unit heaters at entry vestibules. The heating distribution system appears to be in relatively good condition and should be acceptable for continued use.

Ventilation

Classroom Ventilation: Classroom ventilation is provided by unit ventilators located at each individual classroom space. The unit ventilators are mounted on top of classroom casework and draw outside air through a wall mounted louver. Unit ventilators are used primarily in school facilities and are used primarily due to their low cost to install. Unit ventilators are a functional method of providing ventilation to the space, however, they can tend to be noisy and difficult to control.

Toilet Ventilation: Toilet room ventilation is provided by ceiling mounted exhaust grilles located at each toilet room which is ducted to a roof mounted exhaust fan. The roof exhaust fan appears to be in marginal condition and is reported to be deficient in exhaust capacity. It is likely that the exhaust system will need to be replaced.

Corridor Openings: Each classroom and toilet room is provided with a relief air opening into the ceiling space above the corridor (according to record drawings). It appears that the openings are to serve as a relief path for outside air pressure relief from the classrooms and makeup air for the exhaust from toilet rooms. The corridor openings are provided with fire dampers. These openings are in violation of present code restrictions which do not allow the corridor to be used as an air plenum (UMC Section 601.1) and openings into a fire rated exit corridor are required to

be protected by combination fire and smoke dampers (UBC Section 713). This type of code violation is considered a life safety issue and the State Fire Marshal may require the system to be upgraded to present code requirements.

Relief Air Path: The building does not appear to have a relief air path to the outside for pressure relief of outside air supplied by the unit ventilators located at classroom spaces. This may not be a problem, but I have seen circumstances where the building pressure will increase to the point where doors will blow open and door closers will not operate correctly.

Generator Ventilation: The standby generator is presently located in the boiler room and does not appear to have a means of radiator cooling other than air within the boiler room space. A heat rejection and outside air cooling system should be provided to prevent high temperatures in the space during generator operation.

Fire Protection

Existing Condition: The building presently does not have a sprinkler system.

Future Requirements: The State Fire Marshal has made a ruling that all educational occupancies require fire protection sprinkler systems. The building is presently served by a two inch water service which will be inadequate to provide fire water flow to a sprinkler system. A new water service will be required from the nearest utility main with adequate flow and pressure. Attached information provided by the City of Homer, Public Works Department indicates that the nearest water main with sufficient capacity is approximately 150 feet east of the existing school building. The existing service main is 10 inch with a 6 inch capped branch line presently in place.

Controls

The existing control system is a pneumatic type control system serving pneumatic thermostats and pneumatic control devices such as control valves and damper actuators. The pneumatic control system is served by a pneumatic air compressor located in the boiler room. The pneumatic control system appears to be in adequate condition and should be acceptable for continued use.

Electrical Narrative

Electrical Distribution System

The underground electrical service to this facility is supplied by a three-phase four-wire utility feed from an adjacent pad mounted transformer at a nominal voltage of 120/208 volts. The 200 amp main electrical distribution panel was installed during the 1976 remodel. Consequent to this remodel a 15 kW three-phase diesel standby generator, transfer switch and standby panel has been installed to support vital facility systems during an extended loss of commercial utility power. The age and apparent condition of this equipment indicates that it is operational and should not necessitate replacement at this time.

Lighting Systems

Classroom Lighting: Typically the classrooms are illuminated with grid mounted fluorescent fixtures with acrylic lenses. The classroom fixture lay out provides a calculated average illumination level of 112 foot-candles at a work surface 2'6" above floor level. Each classroom is provided with multiple level switching which allows the illumination level to be reduced 50% (55 fc) if so desired. The Illuminating Engineering Society of North America (IES) recommends maintained illumination levels between 20 and 50 foot-candles for general educational classrooms and reading, however this is subjectively dependent upon the occupants visual comfort level and the specific tasks commonly performed. In reference to this, the existing lighting is suitable and efficient for general classroom illumination. If the prolonged use of video display terminals (VDT's) becomes prevalent in these spaces, the tenant may wish to consider the installation of new fixtures specifically designed to reduce vertical illumination and consequent screen glare and eyestrain.

Corridor Lighting: Typically the corridors are illuminated with grid mounted fluorescent fixtures with acrylic lenses. The lay out provides a calculated average illumination level of 42 foot-candles at a work surface 2'6" above floor level. The Illuminating Engineering Society of North America (IES) recommends a maintained illumination levels between 10 and 20 foot-candles for stairways and corridors. In reference to this, the existing lighting is suitable and efficient for general corridor illumination.

Exterior Lighting: Building mounting high intensity discharge (HID) style fixtures provides exterior illumination. Typically this is the most efficient means for general area illumination, and the fixtures themselves appear to be in fair condition. Site lighting poles present on the site appear to be supplied from the adjacent facilities.

Emergency Lighting: A means of emergency illumination, as required by UBC Section 1012, is presently not provided in the exit corridors and stairwells. The most economic solution to this would be to install self-contained emergency lighting units in the corridors and stairwells. It appears that six units would be adequate to provide sufficient levels of emergency egress illumination.

Exit Signage: The existing exit signs appear to be original equipment from the 1976 remodel. These signs were provided with integral emergency batteries to provide emergency illumination in compliance with UBC 1013, however due to the age of the units they are likely no longer capable of providing the required 90 minutes of illuminations as required by NEC Article 700-12(e). The most economic long-term solution to remedy this deficiency would probably be to replace the existing signs entirely with LED illuminated exit signs with emergency battery backup.

Power Systems

Three duplex receptacles are provided on the exterior wall of each classroom, and one quadraplex receptacle is provided on the corridor wall of each classroom. There is no Code requirement that

additional receptacle be installed in the classrooms, however the future occupants may find it inconvenient that there are no receptacles on the end walls.

Specialty Systems

Fire Alarm System: The present fire alarm system is an Edwards (General Signal) conventional zone type system. Heat detectors are provided in the corridors and classrooms and appear to be installed in compliance with their listed area of coverage. It is reported that the system is tested yearly and is operational. The pull stations are mounted approximately 60" AFF, which does not maintain compliance with ADA recommendations, which requires that they be installed at a maximum of 54" for side access and a maximum of 48" for front access. The pull stations can be easily lowered with surface mounted raceway. The quantity and location of the fire alarm signaling devices (horns and strobes) will not provide sound and illumination levels in compliance with current NFPA requirements and ADA recommendations. Additional annunciator alarm module(s), power supplies, and batteries may be required to supply the additional horn-strobes required to maintain NFPA and ADA compliance alarm signal levels.

Telephone System: There is presently no central phone system for the facility. It appears that dedicated lines are run from the phone termination board in the mechanical room to voice outlets throughout the facility.

Clock and Public Address System: There is presently a combination clock-public address station in each classroom. The clocks are battery powered with no central control. The speakers and call stations are presently connected to the master controller in an adjacent building. To maintain stand-alone operation of the public address system, a master control station would be required for this facility.

Miscellaneous

It was observed in the above ceiling space that a number of junction boxes had the covers removed and the power conductors exposed. In additional some raceways appear to require additional support and the grid mounted lighting fixtures should be supported independently from the ceiling grid, as is suitable for seismic zone 4 construction.

Hazardous Materials Narrative

General

Asbestos-containing materials (ACM), Polychlorinated biphenyl's (PCBs), Mercury, and lead-containing materials (LCM) were located in the building. The controlled removal and disposal of some of these materials will be required to allow the safe operation of demolition and/or renovation activities.

The asbestos materials were in good condition and do not pose a hazard when undisturbed. Removal within a contained area would be required to allow safe renovation and/or demolition work to take place. Based on the site inspection and sampling and the AHERA management plan, the following materials contain asbestos: Boiler insulation, boiler breeching insulation, boiler room pipe insulation, cement asbestos board (CAB), CAB mastics, joint compound, chimney fire brick, roofing mastics, window frame caulking, window glazing compound, lab counter top, floor tile, floor tile mastics, fire door insulation, and sheet vinyl flooring. Removal of some of these materials within containments, using protected and trained workers will be required for completion of renovation and/or demolition activities. Additional sampling of concealed materials (requiring destructive methods) is recommended prior to demolition or renovation activities.

Light fixture ballast and lamp removal will be required for all fluorescent light fixtures which will be demolished. The ballasts contain PCBs and the lamps contain mercury. If the fixtures will not be replaced, no special removal will be required and they will not pose a hazard. No leaking ballasts which could pose a hazard were observed during the inspection. The PCB ballasts and lamps must be disposed of outside the state of Alaska in an approved landfill. Some site and worker protection procedures are required during ballast and lamp removal, however, full containments are not required.

The only LCMs located during the survey were paints, solders on pipe joints and fittings, and lead pipe joint caulking on sewer lines. Twenty year old solders typically contained lead. Sampling confirmed that building paints contain lead. All LCMs were in good to fair condition and do not pose a hazard during normal operation of the building. After initial testing in a contained work area is completed, it is probable that any required disturbance of LCMs will be allowed to be performed by unprotected general construction labor, using specific engineering controls (i.e. specially equipped tools, ventilation controls, or wet methods). Testing of LCM waste will be required to determine if the or painted debris will need to be disposed of as hazardous waste. Hazardous material must be shipped out of state for disposal.

The purpose of this report is to describe the survey and inspection results and to discuss the asbestos, lead, mercury and PCB materials located in the building.

The entire building was subject to inspection and limited sampling of suspect materials. All suspect materials suspect of containing lead, asbestos, mercury or PCBs were noted and appropriate samples were taken.

The majority of the materials inspected in the building were in good condition. Normal operations and maintenance procedures should not pose a health hazard for workers or building occupants.

Construction Phasing Impacts

The PCB and mercury abatement work, initial lead testing, and asbestos abatement work will be required to be conducted as independent portions of the project. This means specially trained and protected workers will perform the work (not general construction labor) in an area where access will be restricted to specific personnel only.

Asbestos

Construction materials containing asbestos were used extensively in buildings constructed between 1900 and 1985, so that most existing buildings contain some asbestos. The School building which is the subject of this report was designed and constructed prior to 1970. The AHERA management plan was reviewed and additional suspect materials were sampled by EHS-Alaska during the site survey, and the results are listed below.

ASBESTOS-CONTAINING MATERIALS	PERCENT ASBESTOS
Sheet vinyl - janitor's closets	positive*
Vinyl asbestos tile - classrooms and storage rooms	positive*
Boiler insulation	positive*
Boiler breeching insulation	positive*
Fire door insulation	assumed*
Cement asbestos board (CAB) - stairwells, classrooms and halls	positive*
Cement asbestos board mastic (no access)	Assumed
Pipe insulation - boiler room	positive*
Concrete damp proofing (no access) - inside of exterior walls	Assumed
Lab counter top - first floor counter top	Assumed
Chimney fire brick	Assumed
9" x 9" vinyl asbestos floor tile (under carpet) - hallways and classrooms	10
Black mastic under floor tile	10
Joint compound - throughout building	2.5
White window frame sealant - exterior	8.0
Black and silver roof mastics	10
White window glazing compound - exterior	6.8
Boiler gaskets	None detected (ND)*
Ceiling tiles	ND*
Brown cove base mastic	ND
Light brown cove base mastic	ND
Cloth stair tread material	ND
Stair tread mastic	ND
Cloth cover on fiberglass pipe insulation	ND
Yellow flooring mastic	ND
Dark brown cove base mastic	ND
Gypsum wallboard	ND
2' x 4' drop ceiling tile	ND
12" x 12" new white vinyl floor tile	ND
New black mastic under 12" x 12" floor tile	ND
Fix-all on floor	ND
Brown mastic above 12" x 12" ceiling tile	ND
New roofing mastics	ND
Gray roof penetration sealant	ND

* Materials identified in AHERA management plan

EPA classifies GWB and joint compound as one system. Thus, if asbestos is only present in the joint compound and not in the GWB, the system has less than 1 %. Materials with less than 1 % asbestos are not covered by AHERA. However, OSHA 1926.1101 does consider joint compound to be an independent component of the wall system. Thus, if joint compound contains asbestos, any joint compound disturbance must be performed by trained and protected workers under controlled conditions.

The majority of the asbestos material observed was in good condition, but would become a hazard if it was disturbed or removed improperly. All disturbance of asbestos materials should be conducted by trained and protected workers.

Regulatory Impacts - Asbestos

Current regulations: 1) restrict the use or installation of most asbestos-containing materials (ACM) in buildings; 2) specify work practices for handling ACM in buildings; and 3) require a "good faith" inspection of renovation/demolition sites so that workers won't carelessly be exposed to asbestos.

The presence of asbestos in a building does not mean that the health of construction workers or building occupants is necessarily endangered. The hazard which asbestos potentially creates occurs only when the ACM becomes damaged so that asbestos fibers are released into the air. Asbestos fibers may be released when building demolition or renovation activities disturb ACM; consequently, the regulations have established work practices, exposure monitoring, and worker training requirements.

EPA and OSHA regulations require: 1) that the building owner notify the EPA prior to asbestos removal operations; 2) that regulated ACM only be removed by trained workers using wet removal techniques; 3) that worker monitoring be performed to document airborne exposure to asbestos; and 4) that no visible emissions of dust are allowed during removal, transportation, or disposal of EPA regulated ACM. EPA regulated ACM includes all asbestos-containing materials except non-friable floor tiles and roofing materials (Category 1 non-friable materials) and cement-asbestos panels and pipes (Category 2 non-friable materials). All ACMs are regulated by OSHA.

Many waste disposal sites will not accept building debris which contains asbestos of any kind. The asbestos waste will most likely need to be shipped to either Kenai or Anchorage for disposal. Anchorage and Kenai have landfills permitted to accept asbestos waste. The landfill should be contacted prior to disposal to determine any site specific packaging and handling requirements. Burning of asbestos-containing waste is prohibited.

Lead

The AHERA management plan does not address lead-containing paints or other lead-containing materials, therefore sampling was required to determine if any of the building paints contained

lead. Selective sampling of a cross section of the different paint types (listed below) was conducted. The laboratory results are listed below.

LEAD-CONTAINING PAINTS, LOCATION	LEAD (PPM*)
Blue and red paint on interior walls	590
Brown / cream / black paint layers on interior door frames	4,000
Light blue and cream paint layers on interior window frames	35,000
Light and dark cream paint layers on exterior	360
Brown paint on exterior window frames	14,000
Solder on copper piping	Assumed
Pipe joint caulking on sewer piping	Assumed

* PPM = parts per million

It is assumed the old solder and pipe joint caulking contains lead. These may be impacted for mechanical upgrades, demolition, or tie ins.

No other suspect materials that may contain lead were observed in the building.

Regulatory Impacts - Lead

The essential conditions that the lead regulations establish are:

1. Permissible exposure limits and action levels for airborne lead aerosols.
2. Record keeping requirements.
3. Worker training requirements.
4. Work practices and procedures.
5. Worker and workplace monitoring requirements.

These requirements are similar to the worker protection requirements for asbestos, although there is no requirement for state certification of lead workers.

Lead is a hazardous material and under several conditions lead-containing construction wastes cannot be disposed of in Alaska. The Resource Conservation and Recovery Act requires that lead wastes be tested to verify that they are non-hazardous, before they can be disposed of outside of a hazardous waste disposal facility. The behavior of wastes during the TCLP tests is fairly sensitive to the lead content in the waste, how the waste was created (fines, sweepings, vacuum cleaner emptyings, etc. are usually "hazardous"); and how the waste was handled (burning almost always creates a hazardous waste).

If it can be verified that the disturbance, demolition and removal of lead painted surfaces, using engineering controls to reduce dust, do not expose workers above the action level of 30 $\mu g/m^3$, then costly worker and site protection methods are not required. Usually a pilot lead disturbance project is set up to establish the lead exposure that will occur for each individual demolition or

renovation task. The results from the pilot abatement project can be used to determine the level of worker protection, if any, that is required.

Regardless of the airborne lead levels, the debris is required to be separated from normal construction waste, stored in a secure location in poly sheeting, and tested to determine the disposal requirements. If waste materials are classified as hazardous they will need to be disposed of in a hazardous waste disposal site. There are no hazardous waste disposal sites in Alaska, thus, hazardous waste will need to be shipped out of state.

Lead in construction is a relatively new issue, there is not a body of good data relating lead content of paint to worker exposure or to disposal requirements. The problem is complicated by the fact that lead is still being used as a pigment in many paints, although at lower concentrations. The OSHA regulations do not establish a lower limit for the lead content of materials below which the materials are considered benign. This is the same approach they took with asbestos--its up to the employer to show that the employees are not being exposed. There are no exceptions to the OSHA worker protection requirements.

PCB Containing Light Fixture Ballasts

Polychlorinated Biphenyl's (PCBs), are oily liquids used in transformers, capacitors, switches and light fixture ballasts as a non-conducting liquid for thermal insulation purposes.

The AHERA management plan does not address PCBs, therefore, inspection of the light fixture ballasts was undertaken to determine which fixture ballasts must be treated as hazardous material.

Proper disposal of light fixtures ballasts containing PCBs, and any corresponding contaminated components, must be handled by trained personnel to prevent exposure or contamination of workers, occupants, or the environment.

PCB-containing fluorescent light fixture ballasts were the only materials observed in the building that are suspected of containing PCBs. Representative inspection of the ballasts of all light fixture types was conducted. All ballasts inspected were not marked by the manufacture as being PCB free. Thus, all fixture ballasts are assumed to contain PCBs and will need to be treated as hazardous material if demolished.

Regulatory Impacts - PCB Ballasts

The Federal, and state laws require trained workers to remove, handle, transport, and dispose of all PCB-containing or contaminated materials.

There are no air monitoring requirements during removal of PCB-containing materials, but there are very specific work practices to ensure no PCB contamination of the building or the environment occurs.

The only way to guarantee ballasts are PCB free (besides testing) is if the ballasts are marked as PCB free by the manufacturer. If ballasts are not marked, they are assumed to be PCB-containing.

Worker protection procedures have been established which require protective equipment, full bodysuits, gloves, face shields, aprons, et cetera. Decontamination of all materials used for removal, personal, and environmental protection is also required.

An EPA approved disposal site is required for the disposal of hazardous materials. As with hazardous lead-containing materials, the PCB waste must be shipped to an out of state approved disposal site.

Mercury Containing Fluorescent Lamps

The AHERA management plan does not address mercury, therefore, inspection of the light fixture lamps and thermostats was undertaken to determine which items must be treated as hazardous material.

The only suspect mercury-containing items observed in the facility were the tubes of the fluorescent light fixtures. These light fixture tubes were located throughout the facility and were typically in 4 foot, 2 bulb fixtures.

Proper removal and disposal of fluorescent lamps, and any corresponding contaminated components, must be handled by trained personnel to prevent exposure or contamination of workers, occupants, or the environment.

Regulatory Impacts

The U.S. Environmental Protection Agency, the U.S. Department of Labor, and the State of Alaska have promulgated regulations that apply to the generation, handling, control, transportation, and disposal of hazardous materials. Mercury is listed as a hazardous material and therefore falls under these regulations. Workers handling mercury must have HAZMAT training and wear proper protective equipment.

There are no air monitoring requirements during removal of mercury-containing materials, but there are very specific work practices to ensure no mercury contamination of the building or the environment occurs.

Depending on the age of the light fixtures, the fixture tubes may pass the TCLP test for hazardous waste. The tubes should be combined and tested to determine if the tubes will be considered hazardous waste.

Additionally, there are no hazardous waste disposal sites in Alaska. All fixture tubes which do not pass the TCLP test need to be packaged appropriately and shipped to an EPA approved hazardous waste disposal site in the lower 48.

Renovation Recommendations

Upgrade Work - UBC/UMC/NEC/NFPA: Upgrade work required for compliance with the Uniform Building Code includes the following:

1. An automatic sprinkler system will need to be added for compliance with the state of Alaska amendment requiring an automatic sprinkler system for educational facilities. This will however, take care of the added story increase allowing a second story in Type V-N construction for an E-1 occupancy. Provide a new water service and automatic sprinkler system throughout the facility, in accordance with UBC and NFPA requirements.

2. The corridor walls will need to be upgraded to one-hour wall assemblies by installing a one hour rated shaft cavity wall system on the corridor side of the wall above the suspended acoustical tile ceiling system. This should also cover over the existing corridor relief air openings.

3. The existing pipe column enclosures at the corridors on the first and second floors, four locations on each floor, will need to protected as required to provide a one-hour rated assembly.

4. Smoke gaskets will need to be added to all corridor doors.

5. All penetrations through the new shaft cavity wall above the ceiling at the corridor walls and all penetrations of existing rated walls (boiler room, storage rooms, etc.) will need to be carefully sealed with rated sealant systems.

6. A relief path should be provided from each classroom space to the exterior. The path could utilize the operable windows, however this is not an optimal method. A better solution would be to install a roof hood with control and backdraft dampers serving each classroom space. The lower classrooms would require a vertical duct chased through the upper classroom areas, most likely at the recessed locker area in each classroom.

7. The existing toilet room exhaust fans should be removed and replaced with new units of sufficient capacity. The existing ductwork appears adequate.

8. Provide a ducted radiator exhaust to the exterior through a wall louver or hood, and separate cooling air intake opening. The openings should be provided with appropriate control dampers to modulate and maintain space temperature based on thermostat control.

9. Replace existing exit signs at 6 locations with new LED illuminated exit signs.

10. Install six (6) self contained emergency lighting units in the corridors and stairwells as required by UBC to provide emergency egress illumination.

11. Replace junction box covers where they are missing at above ceiling locations. Provide additional raceway support as required.

12. Provide seismic support for light fixtures throughout the facility.

Upgrade Work - ADA: Upgrade work required for compliance with the Americans with Disabilities Act includes the following:

1. Provide two accessible parking spaces (Element 1) as required for compliance with ADA. See Sketch No. 3, attached.

2. Provide a 5' wide concrete sidewalk, exterior accessible route to the main building entrance and from the main building entrance to the playground (Element 4) as required for compliance with ADA. See Sketch No. 3, attached.

3. Provide a new accessible entrance and entrance doors (Element 8) as required for compliance with ADA. See Sketch No's. 4 through 7, attached. Remove and replace the existing fuel oil tank. Install the new tank in a suitable location away from the new construction work.

4. Provide accessible signage, interior and exterior, (Elements 10 and 11) as required for compliance with ADA.

5. Provide an interior accessible route to all program spaces (Elements 12, 22 & 23) as required for compliance with ADA. This will require the addition of an elevator or an enclosed ramp. The elevator will probably be more cost effective, and the elevator machine room can probably be put under the stair in existing Storage Room 010. See Sketch No's. 4 through 7, attached.

6. Provide a unisex toilet room on each floor (Element 14) as required for compliance with ADA. See Sketch No's. 4 through 7, attached.

7. Provide lever handled hardware and adjust closers to make interior doors accessible (Element 17) as required for compliance with ADA.

8. Remove the existing drinking fountains and provide a new hi-lo drinking fountain on each floor (Element 18) as required for compliance with ADA. See Sketch No's. 6 and 7, attached.

9. Lower the audible and visual alarms in the corridors to 80" above finish floor with surface mounted raceways and install new audible and visual alarms in the toilet rooms (four locations) (Element 27) as required for compliance with ADA. Verify that the existing strobes and alarms are in compliance with ADA and NFPA requirements. Lower the fire alarm pull stations from 60" to 54" above finish floor with surface mounted raceways.

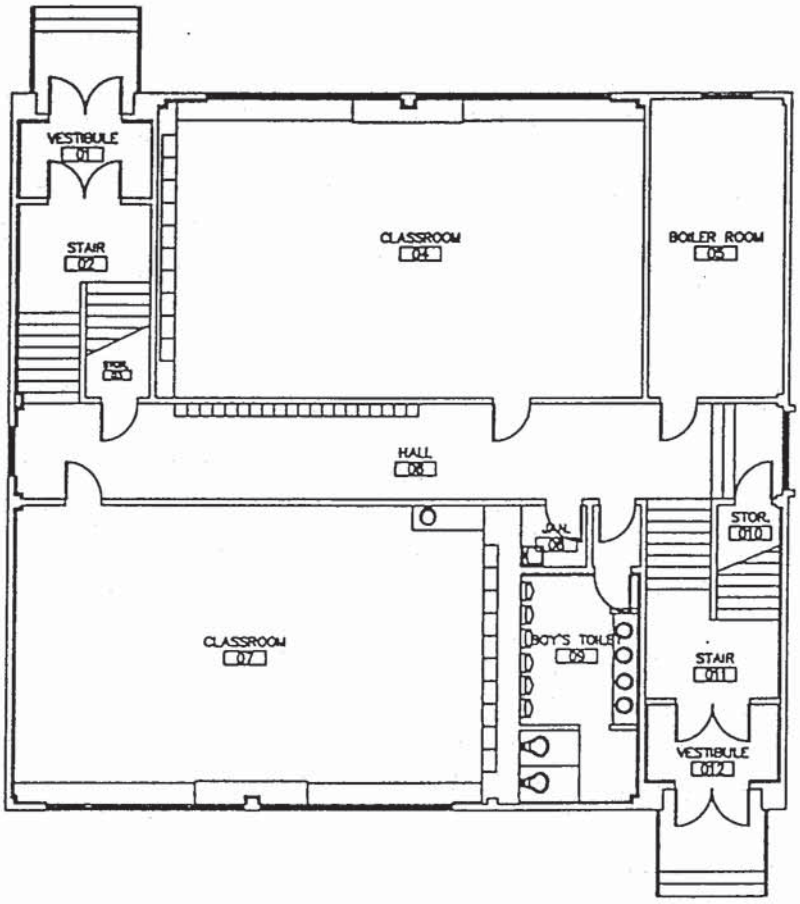
Upgrade Work - Life Safety: Upgrade work required for resolution of life-safety issues include the following:

1. Remove the existing loose concrete at the roof edges down to sound material and place new concrete grout as required to reconstruct the eave. Reinforcing may need to be cleaned of rust to prevent future spalling. The roofing should be extended over the eave to provide protection to the concrete. A new prefinished roof edge flashing, and metal soffit should be installed and stripped in to provide a water tight roof edge system as shown on Sketch No. 8.

Interface with Hazardous Materials: Wherever upgrade work interfaces with hazardous materials, hazardous materials abatement should be undertaken in accordance with all applicable State and Federal Regulations as outlined in the hazardous materials narrative.

Site Survey
Old Homer Intermediate School
Homer Alaska

Part III - Preliminary Drawings Outlining General Scope of Required Upgrade Work



EXISTING FIRST FLOOR

SCALE: 1/16" = 1'-0"

NORTH

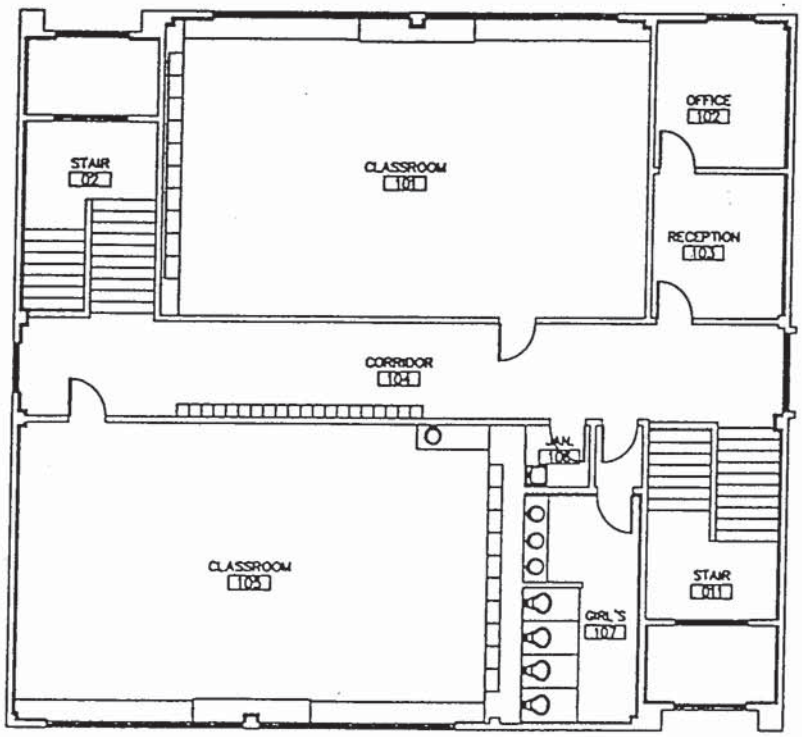
Architects Alaska

SITE SURVEY

HOMER INTERMEDIATE SCHOOL

DATE: 4/15/98

SKETCH NO. 1



EXISTING SECOND FLOOR

SCALE: 1/16" = 1'-0"

NORTH

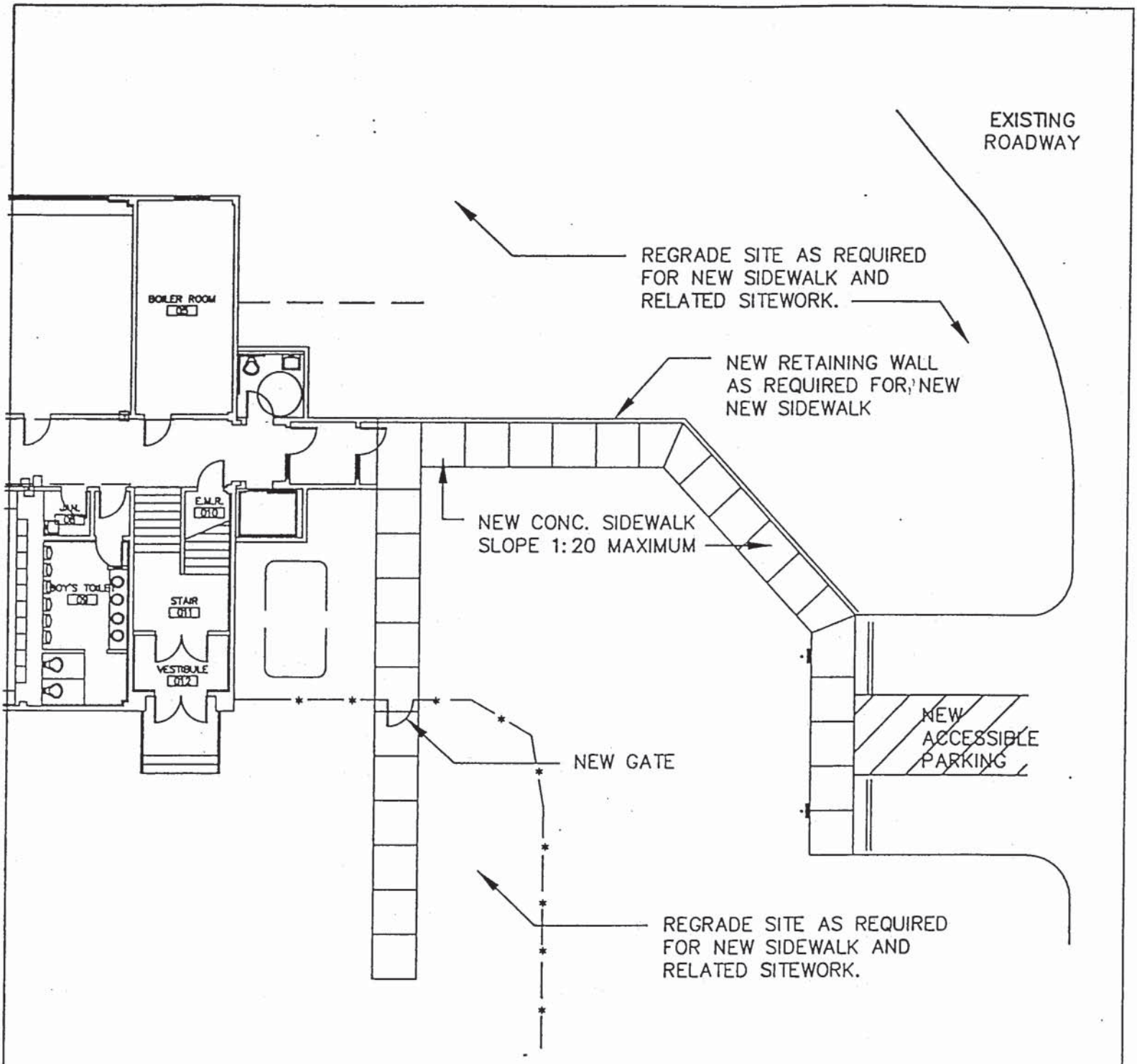
Architects Alaska

SITE SURVEY

HOMER INTERMEDIATE SCHOOL

DATE: 4/15/98

SKETCH NO. 2

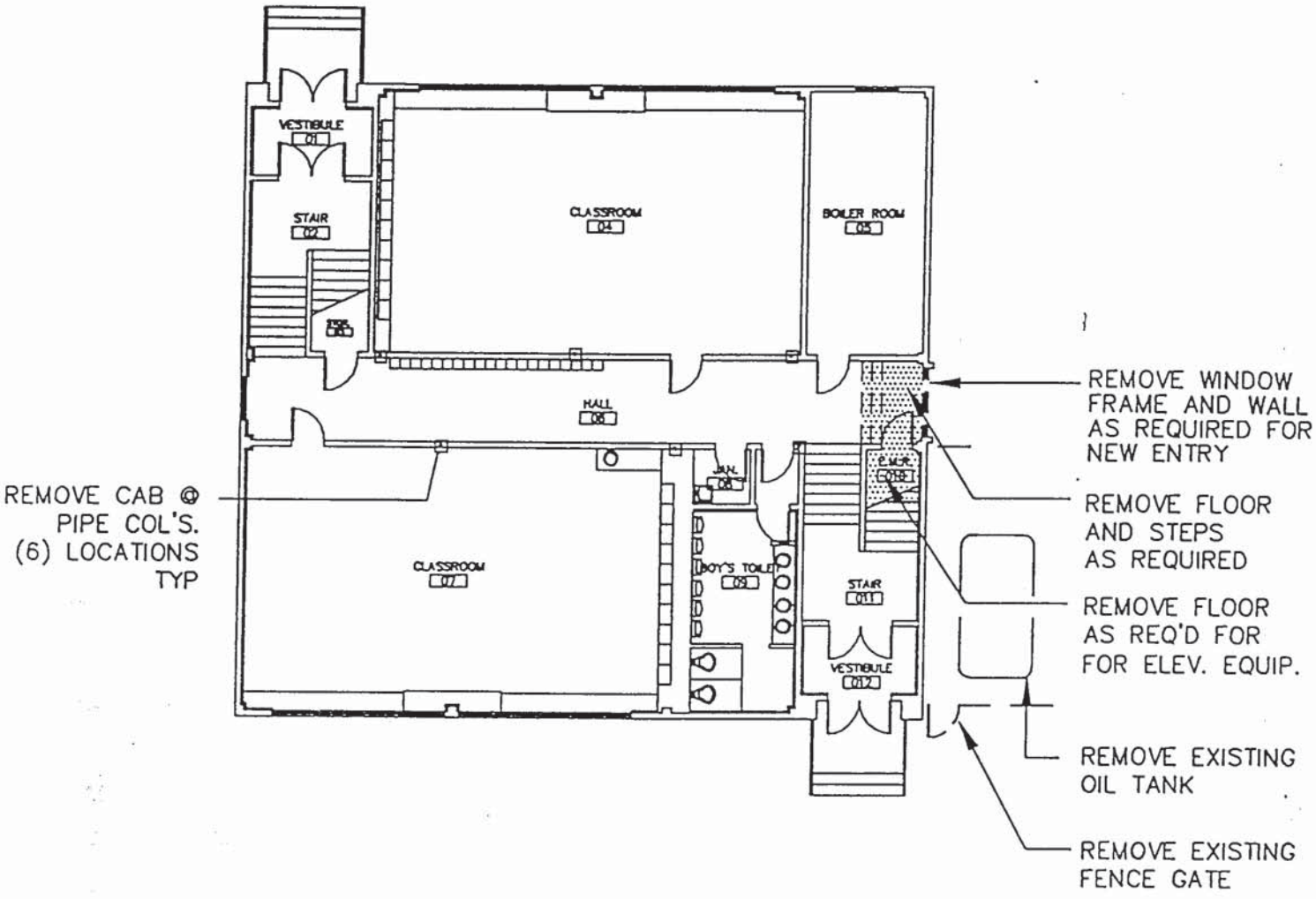


PROPOSED SITE IMPROVEMENTS

SCALE: 1/16" - 1'-0"

NORTH

Architects Alaska	SITE SURVEY HOMER INTERMEDIATE SCHOOL	DATE: 4/15/98 SKETCH NO. 2

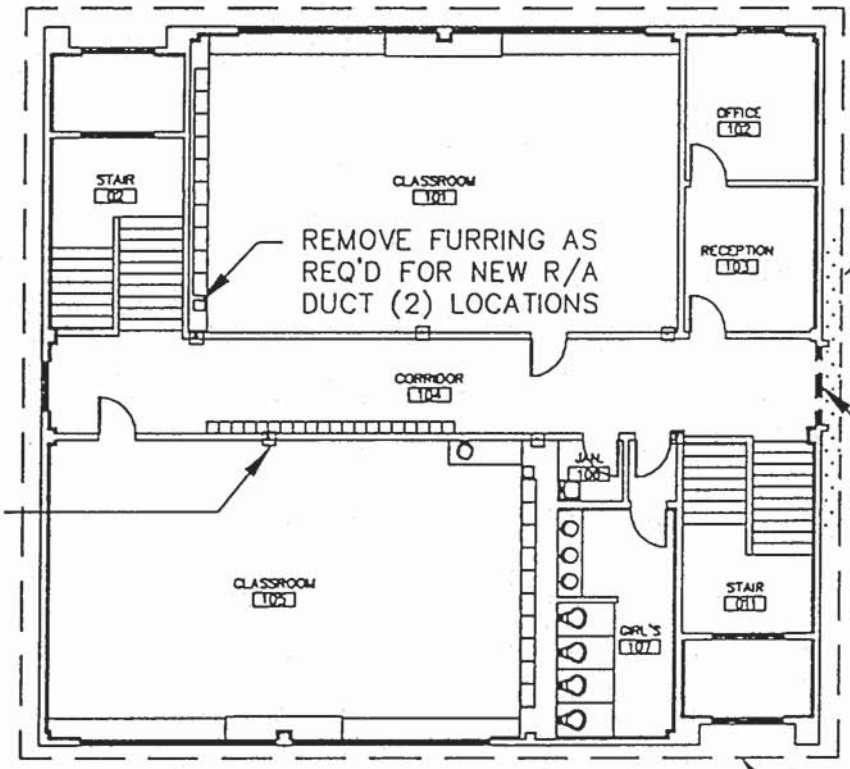


FIRST FLOOR DEMOLITION

SCALE: 1/16" = 1'-0"

NORTH

Architects Alaska	SITE SURVEY HOMER INTERMEDIATE SCHOOL	DATE: 4/15/98 SKETCH NO. A



REMOVE FURRING AS REQ'D FOR NEW R/A DUCT (2) LOCATIONS

REMOVE EXIST ROOF OVERHANG AS REQUIRED FOR NEW WORK

REMOVE EXISTING WINDOW, FRAME AND WALL AS REQUIRED FOR NEW WORK

REMOVE ~~NEW~~ CAB @ PIPE COL'S (6) LOCATIONS TYP

REMOVE LOOSE, SPALLING CONCRETE AT ROOF O.H.

SECOND FLOOR DEMOLITION

SCALE: 1/16" = 1'-0"

NORTH

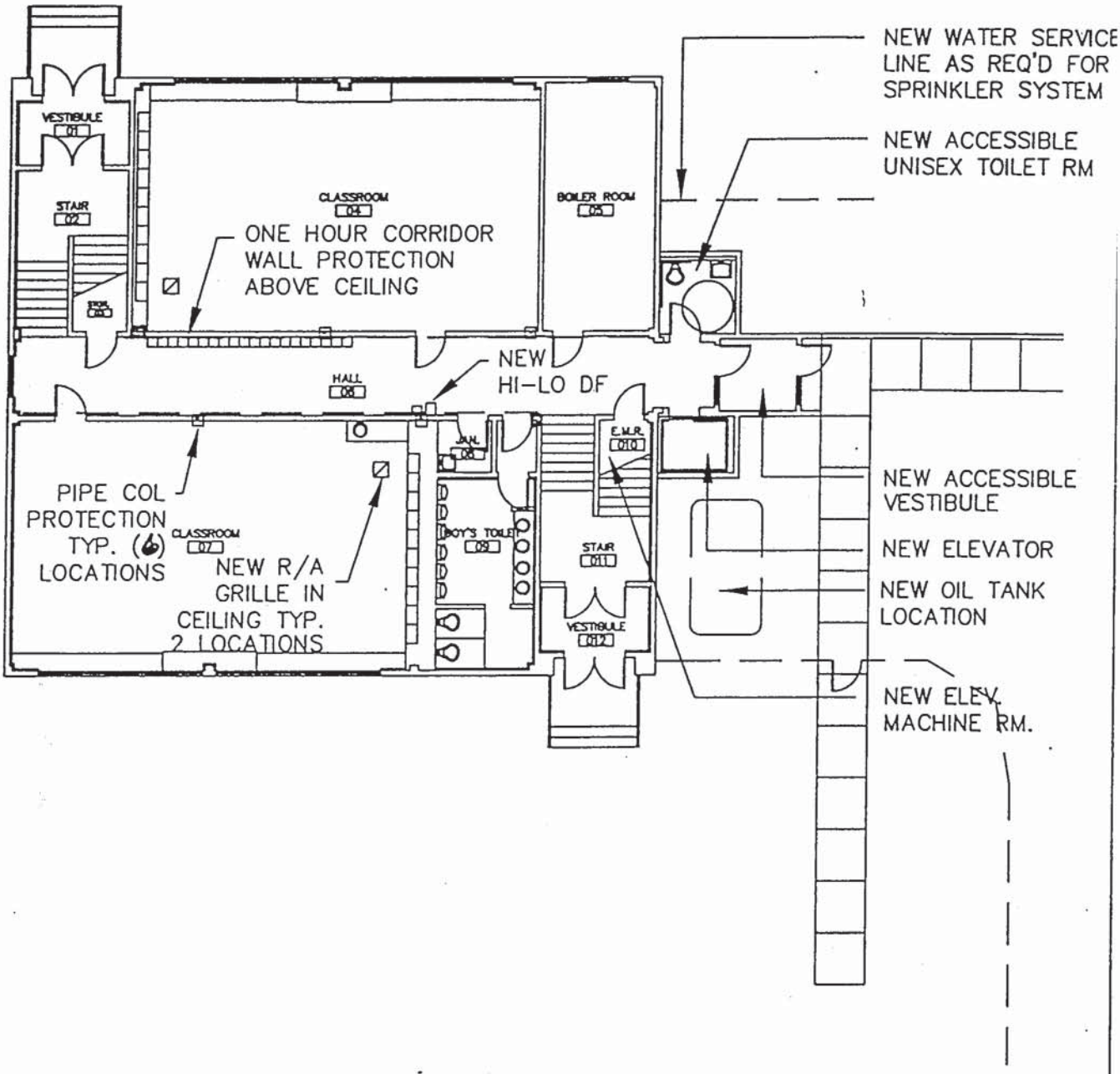
Architects Alaska

SITE SURVEY

HOMER INTERMEDIATE SCHOOL

DATE: 4/15/98

SKETCH NO. 5

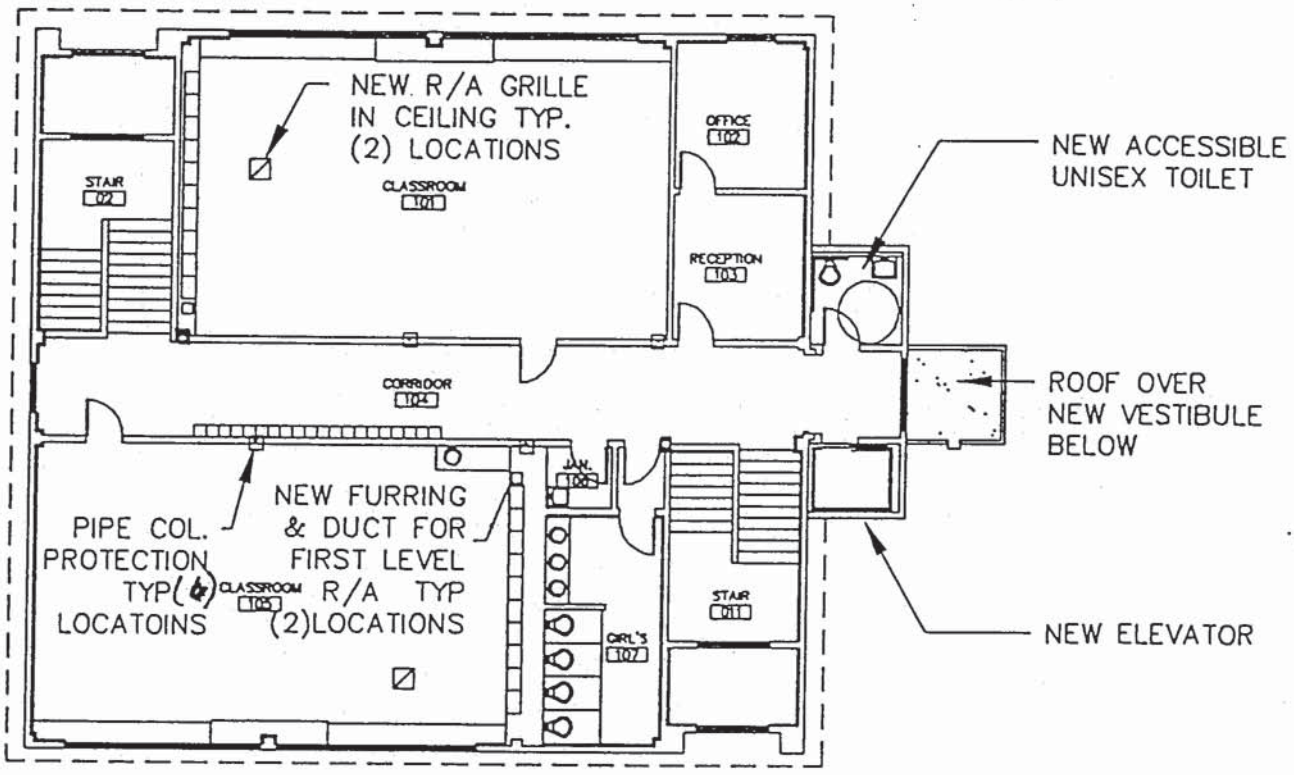


PROPOSED FIRST FLOOR PLAN

SCALE: 1/16" - 1'-0"

NORTH

Architects Alaska	SITE SURVEY HOMER INTERMEDIATE SCHOOL	DATE: 4/15/98 SKETCH NO. C

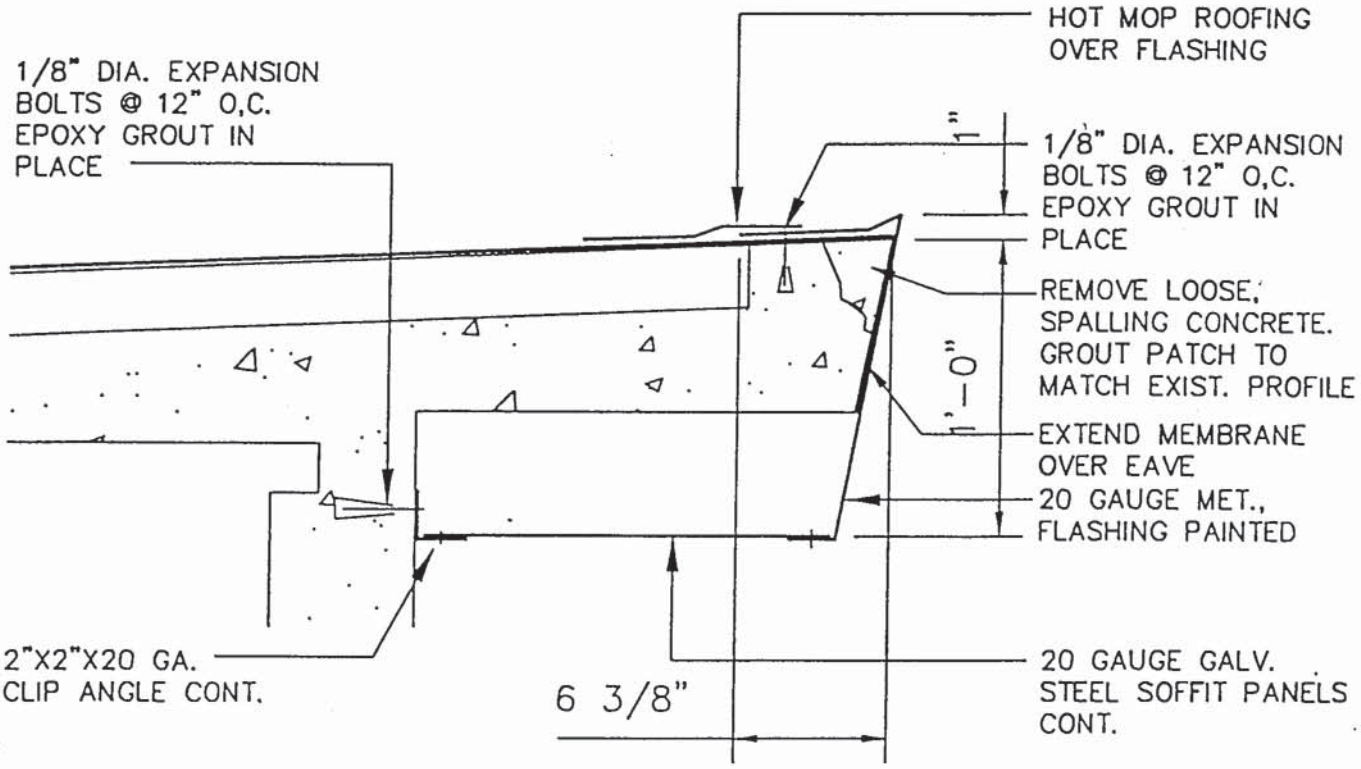


PROPOSED SECOND FLOOR PLAN

SCALE: 1/16" - 1'-0"

NORTH

Architects Alaska	SITE SURVEY HOMER INTERMEDIATE SCHOOL	DATE: 4/15/98 SKETCH NO. 1



ROOF FLASHING DETAIL

SCALE: 1 1/2" = 1'-0"

Architects Alaska	SITE SURVEY HOMER INTERMEDIATE SCHOOL	DATE: 4/15/98 SKETCH NO. 9

Site Survey
Old Homer Intermediate School
Homer, Alaska

Part IV - Cost Estimate

The Kenai Peninsula Borough has requested that comparative cost estimates be prepared for the renovation of the existing facility for occupancy as an educational facility, and for the demolition of the existing facility.

The attached construction cost estimates have included a 15% design contingency for the renovation project and a 5% design contingency for the demolition project. We have found that this type of preliminary "order of magnitude" estimate needs to include some cushion for unknown elements that will become apparent as design progresses in greater detail. The 5% design contingency recognises that the likelyhood of surprise is less for the demolition project than for the renovation project.

There are also other project related costs which need to be budgeted by the Borough and/or any potential Lessee. These costs include a construction contingency, A/E fees, administrative costs, and furniture, fixtures and equipment costs.

This cost estimate includes an estimate of project related costs using some fairly traditional percentages of the construction cost. These costs can be adjusted up or down depending on the approach taken to design and construction of the demolition or upgrade project. The construction contingency might be used, for instance, to take care of soil remediation, if it is found that the old buried fuel tank has leaked, or if soils at the new foundation are unsuitable for the new addition foundation. A/E fees may be higher or lower, depending on the actual scope of the project, and on the type of documents being prepared (Bidding documents vs Plan Review Documents with a negotiated contract). Administrative costs include accounting, legal, plan review and permit fees, Lessor or Lessee project manager costs, etc. These could be adjusted up or down based on who is responsible for administering the contract for the renovation work.

Old Homer Intermediate School Renovation - Project Cost Estimate

Construction Cost (See Estimate Attached)	$325,800	
Construction Contingency (10%)	$32,580	
Total Construction Cost (Budget)		$358,380
A/E Fees - Design Phase (10%)	$35,800	
A/E Fees - Construction Phase (5%)	$17,900	
Administrative Costs (10%)	$35,800	
FF&E Costs (5%)	$17,900	
Total Project Fees		$107,400
Total Project Cost - Renovation		$465,780

Old Homer Intermediate School Demolition - Project Cost Estimate

Construction Cost (See Estimate Attached)	$138,550	
Construction Contingency (10%)	$13,850	
Total Construction Cost (Budget)		$152,400
A/E Fees - Design Phase (10%)	$15,250	
A/E Fees - Construction Phase (5%)	$7,600	
Administrative Costs (10%)	$15,250	
FF&E Costs (N/A)	$0	
Total Project Fees		$38,100
Total Project Cost - Demolition		$190,500

HMS # 98041

CONSTRUCTION COST ESTIMATE
BUDGETARY OLD HOMER
INTERMEDIATE SCHOOL
REMODEL/DEMOLISH
HOMER, ALASKA

COST CONSULTANT

HMS, Inc.
4103 Minnesota Drive
Anchorage, Alaska 99503

(907) 561-1653
(907) 562-0420 FAX

ARCHITECT

Architects Alaska
411 W. 4th Avenue, Ste. 200
Anchorage, Alaska 99501

April 14, 1998

NOTES

This estimate is based on (8) 8 1/2"x11" remodel drawings, "as-builts" and condition survey report dated April 1993, and prepared by Architects Alaska of Anchorage, Alaska.

This estimate is priced using A.S. Title wage rates and current materials and equipment prices.

It is assumed that this project will receive competitive bids for remodel or demolition in Summer 1998. With construction to complete within (5) months for remodel work or (1) month for demolition.

This is a statement of probable construction cost only and actual bids will vary depending on final documents, bidding climate and competition.

This estimate excludes A/E fees, management costs on selective Hazmat removal in Option B.

GROSS FLOOR AREA

	Existing	New Addition	TOTAL
FIRST FLOOR	3,712 SF	240 SF	3,952 SF
SECOND FLOOR	3,712 SF	192 SF	3,904 SF
TOTAL:	7,424 SF	432 SF	7,856 SF

OLD HOMER INTERMEDIATE SCHOOL
HOMER, ALASKA
BUDGETARY CONSTRUCTION COST ESTIMATE

DATE: 4/14/98

HMS Project No.: 98041

SUMMARY

		OPTION A Remodel/Addition		OPTION B Demolish
01 - SITEWORK				
• Hazmat Removal		$ 10,520		$ 22,316
• General Demolition and Improvements		21,070		
• Site Mechanical		12,093		
• Building Demolition and Disposal				91,289
02 - SUBSTRUCTURE		5,347		
03 - SUPERSTRUCTURE		5,059		
04 - EXTERIOR CLOSURE		20,065		
05 - ROOF SYSTEMS		7,197		
06 - INTERIOR CONSTRUCTION		28,065		
07 - CONVEYING SYSTEMS		38,500		
08 - MECHANICAL		56,655		
09 - ELECTRICAL		19,368		
10 - EQUIPMENT		460		
11 - SPECIAL EQUIPMENT				
SUBTOTAL:		224,399		113,605
12 - GENERAL OVERHEAD AND PROFIT	25.00%	56,100	15.00%	17,041
13 - CONTINGENCY - DESIGN UNKNOWNS	15.00%	42,075	5.00%	6,532
- ESCALATION TO SUMMER 1998 BID	1.00%	3,226	1.00%	1,372
ESTIMATED CONSTRUCTION COST:		$ 325,800		$ 138,550
$/SF		$ 41.47 /SF		$ 18.66 /SF
GFA		7,856 SF		7,424 SF

HMS Project No.: 98041

01 - SITEWORK OPTION A - REFURBISH BUILDING	QUANTITY	UNIT	UNIT RATE $	ESTIMATED COST $
HAZMAT REMOVAL				
Note: Remove only incidental to remodeling Rest leave in-tact				
Drain oil, remove 400 gallon, fuel oil tank and dispose as Hazmat material	1	EA	750.00	750
Backfill hole with NFS	16	CY	18.50	296
Remove gypboard joint compound ceiling	48	SF	2.00	96
Remove window with mastic, 6'4"x6'10"	1	EA	300.00	300
Ditto, 6'4"x8'0"	1	EA	350.00	350
Remove wall CAB for mechanical chases, etc.	140	SF	2.50	350
Remove floor tile and mastics at new connection	72	SF	2.25	162
Lead exposure assessment	1	LS	1,500.00	1,500
Air monitoring	5	DAYS	425.00	2,125
Mobilization/demobilization, ACM removal equipment, etc.	1	LOT	1,500.00	1,500
AMC disposal and inspection fee	1	TON	85.00	85
Subtotal:				7,514
Subcontractor's Overhead and Profit	40.00%			3,006

TOTAL ESTIMATED COST: $ 10,520

HMS Project No.: 98041

01 - SITEWORK OPTION A - GENERAL DEMOLITION AND IMPROVEMENTS	QUANTITY	UNIT	UNIT RATE $	ESTIMATED COST $
DEMOLITION				
Remove single door and frame	1	EA	75.00	75
Sawcut and remove concrete floor and steps	72	SF	22.50	1,620
Ditto roof overhang	30	SF	27.00	810
Ditto wall for grille	10	SF	25.00	250
Remove ceiling tiles for 1 hour walls, sprinklers and seismic bracing and store for reuse	7,424	SF	0.42	3,118
Remove 4'0" gate at fence	1	EA	55.00	55
SITE IMPROVEMENTS				
Cut fence and install new 4'0" man gate	1	EA	400.00	400
Infil 4'0"x6'0" man gate opening with fence	1	EA	150.00	150
New 6"x30" high above grade concrete retaining wall and foundation	74	LF	75.50	5,587
4" concrete sidewalk over NFS fill	744	SF	3.60	2,678
2" AC pavement including excavation and backfill	700	SF	2.80	1,960
Wheel stops	2	EA	105.00	210
Aisle marking	160	SF	1.20	192
Handicapped accessible parking sign and post	2	EA	130.00	260
Regrade site and revegetate	6,736	SF	0.55	3,705
TOTAL ESTIMATED COST:				$ 21,070

HMS Project No.: 98041

01 - SITEWORK OPTION A - GENERAL DEMOLITION AND IMPROVEMENTS	QUANTITY	UNIT	UNIT RATE $	ESTIMATED COST $
SITE MECHANICAL				
New 400 gallon double wall buried fuel oil tank including excavation and backfill	1	EA	2,350.00	2,350
Fuel oil supply and return piping in double containment pipe, connected to tank and building	24	LF	32.00	768
4" DI buried sprinkler water line	150	LF	28.50	4,275
4" gate valve	1	EA	670.00	670
4" building connection and wall sleeve	1	EA	230.00	230
4" line tap main connection of tee	1	EA	3,800.00	3,800

TOTAL ESTIMATED COST: $ 12,093

HMS Project No.: 98041

OPTION A 02 - SUBSTRUCTURE	QUANTITY	UNIT	UNIT RATE $	ESTIMATED COST $
FOUNDATIONS				
Strip footings including excavation and backfill	66	LF	23.75	1,568
8" CMU walls, dampproofed and insulated ditto	150	SF	12.60	1,890
8" ditto un-insulated	48	SF	10.20	490
Connection to existing footings/walls	4	EA	50.00	200
SLAB-ON-GRADE				
4" reinforced concrete slab our NFS fill	218	SF	3.85	839
4" ditto at existing entry/steps	72	SF	5.00	360

TOTAL ESTIMATED COST: $ 5,347

HMS Project No.: 98041

OPTION A 03 - SUPERSTRUCTURE	QUANTITY	UNIT	UNIT RATE $	ESTIMATED COST $
SECOND FLOOR				
Metal deck and framing	128	SF	12.50	1,600
Concrete topping and mesh reinforcement	128	SF	3.50	448
Connection to existing slab	16	LF	10.00	160
ROOF				
Metal deck and framing	256	SF	10.20	2,611
Connection to existing	24	LF	10.00	240

TOTAL ESTIMATED COST: $ 5,059

OPTION A 04 - EXTERIOR CLOSURE	QUANTITY	UNIT	UNIT RATE $	ESTIMATED COST $
8" CMU walls - painted	1,056	SF	10.50	11,088
2"x4" furring, 2" rigid insulation and 5/8" gypboard	1,056	SF	4.50	4,752
3'0"x7'0" insulated glazed door, frame and hardware	1	EA	1,150.00	1,150
3'0"x7'0" sidelight	1	EA	750.00	750
6'0"x8'0" window	1	EA	2,100.00	2,100
Combustion air louver grille (1)	10	SF	22.50	225

TOTAL ESTIMATED COST: $ 20,065

HMS Project No.: 98041

OPTION A 05 - ROOF SYSTEMS	QUANTITY	UNIT	UNIT RATE $	ESTIMATED COST $
5/8" WR gypboard, 6" rigid insulation and EPDM roof at new roof	256	SF	6.75	1,728
Match to existing	24	LF	2.50	60
Cut and patch existing roof for new exhaust hood penetration (1)	5	SF	35.00	175
New 18" girth metal fascia bolted to existing concrete overhang	234	LF	8.50	1,989
Hot mop roofing over flashing and existing roof	234	LF	3.50	819
Metal soffit attached to metal fascia and bolted to wall with clip angle	351	SF	5.70	2,001
Roof scuppers	5	EA	85.00	425

TOTAL ESTIMATED COST: $ 7,197

HMS Project No.: 98041

OPTION A 06 - INTERIOR CONSTRUCTION	QUANTITY	UNIT	UNIT RATE $	ESTIMATED COST $
PARTITIONS/DOORS				
Shaft wall at elevator	136	SF	6.50	884
4" metal stud/gypboard wall at addition	288	SF	4.80	1,382
Extend existing corridor wall above ceilings to underside concrete slab with shaft wall construction	416	SF	7.10	2,954
Roof hood shaft walls	192	SF	6.50	1,248
Encase columns with rated enclosure	576	SF	6.85	3,946
Seal wall cavities with rated sealant system	1,184	SF	1.50	1,776
3'0"x7'0" hollow metal glazed single door, frame and hardware	1	EA	930.00	930
3'0"x7'0" hollow metal door, frame and hardware	3	EA	685.00	2,055
3'0"x7'0" sidelight	1	EA	620.00	620
Lever handle hardware to existing door	13	EA	125.00	1,625
Add smoke gaskets to corridor doors	13	EA	85.00	1,105
FLOOR FINISH				
Sheet vinyl flooring	392	SF	2.85	1,117
Rubber base	110	LF	1.70	187
WALL FINISH				
Paint new and patched walls	1,868	SF	0.80	1,494

HMS Project No.: 98041

OPTION A 06 - INTERIOR CONSTRUCTION	QUANTITY	UNIT	UNIT RATE $	ESTIMATED COST $
CEILINGS				
New suspended acoustical ceiling system in addition	305	SF	2.80	854
Reinstall existing tiles	6,680	SF	0.53	3,540
New tiles to replace damaged tiles (10%)	772	SF	1.60	1,235
SPECIALTIES				
Unisex toilet accessories	2	RMS	350.00	700
Signs at new doors	5	EA	32.50	163
Miscellaneous specialties	1	LOT	250.00	250

TOTAL ESTIMATED COST: **$ 28,065**

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OPTION A 07 - CONVEYING SYSTEMS	QUANTITY	UNIT	UNIT RATE $	ESTIMATED COST $
Holeless hydraulic elevator complete with gear, equipment and controls, serving (2) floors for 12'0" rise	1	EA	38,500.00	38,500

TOTAL ESTIMATED COST: $ 38,500

OPTION A 08 - MECHANICAL	QUANTITY	UNIT	UNIT RATE $	ESTIMATED COST $
PLUMBING				
Water closet - ADA	2	EA	670.00	1,340
Wall hung lavatory - ADA	2	EA	585.00	1,170
Remove existing drinking fountain	2	EA	140.00	280
New hi-low ADA drinking fountain	2	EA	1,125.00	2,250
Plumbing rough-in for new fixtures connected to existing	4	EA	1,350.00	5,400
Ditto for drinking fountains	2	EA	525.00	1,050
Cut and patch slab for sewer line at new toilet	8	LF	50.00	400
HVAC				
Cabinet unit heater including piping connected to existing system	1	EA	1,650.00	1,650
Ditto fin tube baseboard	20	LF	70.00	1,400
Roof hood, fan and back draft damper for classroom relief path	1	EA	1,250.00	1,250
Duct work for above	20	LF	65.00	1,300
Remove existing toilet exhaust fans	2	EA	75.00	150
New fans connected to existing duct work	2	EA	650.00	1,300
New toilet fans in new toilets	2	EA	380.00	760
Duct work and wall cap to above	2	EA	300.00	600
Ducted radiator exhaust for generator	10	LF	78.00	780
Cooling air intake grille	1	EA	140.00	140

OPTION A 08 - MECHANICAL	QUANTITY	UNIT	UNIT RATE $	ESTIMATED COST $
HVAC (Continued)				
Modulating damper to radiator	1	EA	285.00	285
New controls for new equipment tied into existing	1	LOT	5,000.00	5,000
Sprinkler riser and valves	1	LOT	2,800.00	2,800
4" backflow preventer	1	EA	3,200.00	3,200
Wet pipe sprinkler system	7,856	SF	2.85	22,390
Test and balance systems	16	HRS	110.00	1,760

TOTAL ESTIMATED COST: $ 56,655

09- ELECTRICAL	QUANTITY	UNIT	UNIT RATE $	ESTIMATED COST $
SERVICE AND DISTRIBUTION				
New 225 amp panel connected to MDP	1	EA	3,400.00	3,400
Feeder, conductor and grounding	1	LOT	1,500.00	1,500
LIGHTING AND POWER				
New HPS exterior fixture, wall mounted	1	EA	415.00	415
Fluorescent fixtures in addition	8	EA	195.00	1,560
Replace missing junction box covers	40	EA	12.50	500
Standard receptacle	4	EA	55.00	220
GFIC receptacle	2	EA	75.00	150
Ditto weatherproof	1	EA	90.00	90
Single pole switch	2	EA	55.00	110
Elevator motor connection and disconnect	1	EA	970.00	970
Exhaust fan motor connection and thermal switch	4	EA	110.00	440
Roof hood relief fan ditto	1	EA	130.00	130
Remove existing exit signs and replace with LED type	6	EA	255.00	1,530
New self contained emergency lighting units	6	EA	370.00	2,220
Conduit and wiring	485	LF	6.50	3,153

09- ELECTRICAL	QUANTITY	UNIT	UNIT RATE $	ESTIMATED COST $
SPECIAL SYSTEMS				
Lower audible and visual alarms in corridors with surface mounted raceway and connect to existing system	6	EA	170.00	1,020
Ditto fire alarm pull station	4	EA	140.00	560
New audible/visual alarms including conduit and wiring connected to existing system	4	EA	350.00	1,400

TOTAL ESTIMATED COST: $ 19,368

HMS Project No.: 98041

OPTION A 10- EQUIPMENT	QUANTITY	UNIT	UNIT RATE $	ESTIMATED COST $
Rubber entry mat (1)	40	SF	11.50	460

TOTAL ESTIMATED COST: $ 460

HMS Project No.: 98041

OPTION B- DEMOLISH BUILDING 01 - SITEWORK - HAZMAT REMOVAL	QUANTITY	UNIT	UNIT RATE $	ESTIMATED COST $
HAZMAT REMOVAL				
Note: Most of Hazmat to be demolished in-tact except following -				
Boiler and insulation	1	EA	1,500.00	1,500
Pipe at breeching insulation	30	LF	15.00	450
Fire doors	4	EA	150.00	600
Fluroscent fixtures	110	EA	38.00	4,180
Mobolization - demobilization ACM removal equipment, etc.	1	LS	4,000.00	4,000
Air monitoring	5	DAYS	425.00	2,125
Lead exposure assement	1	EA	1,500.00	1,500
Disposal cost - PCB	3	BBL	500.00	1,500
Asbestos debris	1	TON	85.00	85
Subtotal:				15,940
Subcontractor's Overhead and Profit	40.00%			6,376

TOTAL ESTIMATED COST: $ 22,316

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OPTION B- DEMOLISH BUILDING 01 - SITEWORK - DEMOLITION AND DISPOSAL	QUANTITY	UNIT	UNIT RATE $	ESTIMATED COST $
Cut and remove concrete steps (2)	98	SF	5.50	539
Disconnect utilities and demolish two story concrete framed building complete with Hazmat intact, cap and abandon utilities in-place	89,088	CF	0.48	42,762
Grub up and remove foundation walls and footings 24" deep	244	LF	10.00	2,440
Backfill footings	136	CY	18.50	2,516
Grade site and revegetate	4,830	SF	0.55	2,657
Dispose debris at local landfill including inspection fee	475	TONS	85.00	40,375

TOTAL ESTIMATED COST: $ 91,289

Site Survey
Old Homer Intermediate School
Homer, Alaska

Part V - Appendix

- Homer Intermediate School - ADA Survey Audit
- Homer Intermediate School - Hazardous Material Bldg. Survey

Site Survey
Old Homer Intermediate School
Homer, Alaska

Appendix
Part V - A

Homer Intermediate School - ADA Survey Audit

Date of Audit: 04/14/98
Audit By: Marvin Ungerecht
Facility: Homer Intermediate School
Location: Homer, Alaska

1 - PARKING

SECTION REQUIREMENTS

4.1.2(5)(a) If parking areas are provided for employees or visitors, or both, then accessible spaces complying with 4.6 shall be provided in each such parking area (or in more convenient areas) in minimum quantities shown in table. **(assumed 25 to 50 parking spaces in main lot)**

4.1.2(5)(b) One in every 8 accessible spaces but not less than 1 shall be a van accessible space and so designated.

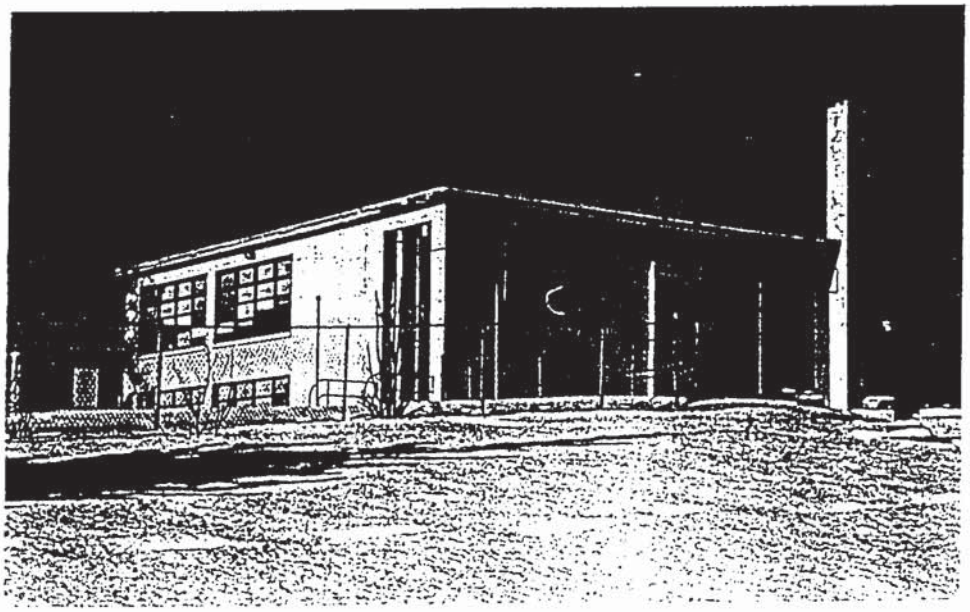
4.6:

4.6.2 Accessible parking spaces serving a particular building shall be located on the shortest accessible route of travel from adjacent parking to an accessible entrance. In buildings with multiple accessible entrances with adjacent parking, accessible parking spaces shall be dispersed and located closest to the accessible entrances.

4.6.3 Accessible Parking spaces shall be at least 96 in. wide. Access aisles (Min. 60 in. except 96 in min. for van access aisle) shall be part of an accessible route to the building or facility entrance. Parked vehicle overhangs shall not reduce the clear width of an accessible route. Parking spaces and access aisles shall be level with surface slopes not exceeding 2%. in all directions.

4.6.4 Accessible parking spaces shall be designated as reserved by a sign showing the symbol of accessibility. Van accessible spaces shall be designated "Van Accessible" mounted below symbol of access. Signs shall be located so they cannot be obscured by vehicle parked in space.

Solution: **Two accessible parking spaces required. Provide the new accessible parking spaces, at the east end of the building, in a location where the grade is suitable for access without ramps (sidewalk with less than 1:20 slope). One of the two new accessible parking spaces to be van accessible and so designated. There will only be one accessible entrance added to the existing building, therefore the accessible spaces will not need to be dispersed. See Sketch 3 attached.**



3 - PASSENGER LOADING ZONE

SECTION REQUIREMENTS

4.1.2(5)(c) If passenger loading zones are provided, then at least one passenger loading zone shall comply with 4.6.

Solution: **I assumed that there would be no passenger loading zones for the old intermediate school, and that this would not apply.**

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Audit By: Marvin Ungerecht
Facility: Homer Intermediate School
Location: Homer, Alaska

4 - EXTERIOR ACCESSIBLE ROUTE

SECTION REQUIREMENTS

4.3.2(1) At least one accessible route shall be provided within the boundary of the site from public transportation stops (if applicable), accessible parking, and accessible passenger loading zones (if applicable), and public streets or sidewalks (if applicable), to the accessible building entrance they serve. The accessible route shall, to the maximum extent feasible, coincide with the route for the general public.

4.3.3 The minimum clear width of an accessible route shall be 36 in. except at doors (see 4.13). Figure 7(a) and (b) for minimum clear width required at turns around obstructions.

4.3.4 If an accessible route has less than 60 in. clear width, then passing spaces at least 60 in. by 60 in. shall be located at reasonable intervals not to exceed 200 ft. A "T" intersection of walks or corridors is an acceptable passing place.

4.5.1 Ground and floor surfaces along accessible routes shall be stable, firm, slip-resistant, and shall comply with 4.5.

4.5.2 Changes in level up to 1/4" may be vertical. Changes in level between 1/4" and 1/2" shall be beveled with slope no greater than 1:2. See Figure 7(c) & (d). Changes in level greater than 1/2" shall be accomplished by means of a ramp. See 4.7 and 4.8. **(Note: A ramp is not required if the change in level has a constant slope of less than 5% or 1:20)**

Solution: **Provide one accessible route from the new accessible parking at the east end of the building to the new accessible building entrance. The accessible route to be a 5' wide concrete sidewalk, with broom finish, and a maximum slope of 5%. Ditto, accessible route to playground area. See Sketch 3.**

5 - CURB RAMPS

SECTION REQUIREMENTS

4.7.1 Curb ramps shall be provided wherever an accessible route crosses a curb.

4.7.2 Slopes of curb ramps shall comply with 4.8.2. (1:12). See Fig. 11. Transitions from curb ramp to walks, gutters, or streets shall be flush and free of abrupt changes. Max. slope of adjoining walks, gutters, or streets shall not exceed 1:20.

4.7.3 The minimum width of a curb ramp shall be 36" exclusive of flared sides.

4.7.4 Surfaces of curb ramps shall be stable, firm, slip-resistant, and shall be without changes in level exceeding 1/4" (abrupt) or 1/2" (beveled 1:2) per 4.5.1 and 4.5.2.

4.7.5 If a curb ramp is located where pedestrians must walk across the ramp, it shall have flared sides at 1:10 max. curb ramps with returned curbs may be used where pedestrians would not normally walk across the ramp. See Fig. 12 (a) & (b).

4.7.6 Built up curb ramps shall be located so that they don't project into traffic. See Fig. 13.

4.7.7 A curb ramp shall have a detectable warning complying with 4.29.2 (truncated cones/contrasting colors). The detectable warning shall extend full depth and width of curb ramp.

4.7.8 Curb ramps shall be located to prevent their obstruction by parked vehicles.

Solution: **Curb ramps will not be required if the elevation of the new accessible route sidewalk and the new accessible parking is at the same elevation. Wheel stops will be required to keep vehicles from blocking the accessible route. See Sketch 3.**

If a standard sidewalk curb is desired, in order to eliminate the use of wheelstops (snow removal problem) then a curb ramps complying with 4.7.2 through 4.9 will be required. This will require that truncated cones be utilized on the curb ramp, and that the sidewalk be at least 6 feet wide to accomodate a standard 6" curb height.

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Location: Homer, Alaska

6 - RAMPS

SECTION REQUIREMENTS

4.8.1 Any part of an accessible route with a slope greater than 1:20 shall be considered a ramp and shall comply with 4.8.

4.8.2 The least possible slope shall be used for any ramp. In new construction, the max. slope is 1:12 and the maximum rise is 30". Existing sites and buildings may have ramps with slopes and rises in accordance with 4.1.6(3)(a) if space limitations prohibit the use of a 1:12 slope or less.

4.1.6(3)(a): 1:10 to 1:12 for 6" max. rise.
1:8 to 1:10 for 3" max. rise.
A slope steeper than 1:8 is not allowed.

4.8.3 Min. clear width of ramp shall be 36".

4.8.4 Ramps shall have level landings at top and bottom and shall have the following features:
(1) Landing at least as wide as ramp to it.
(2) Landing length at least 60" clear.
(3) If ramp changes direction at landings, the minimum landing size shall be 60" by 60".
(4) If doorway occurs at landing, then the area in front of the doorway shall comply. (See #8 Exterior Doors and #17 Interior Doors.)

4.8.5 If ramp has a rise greater than 6" or a horizontal run greater than 72", then it shall have handrails on both sides. Handrails are not required on curb ramps or adj. to seating in assembly areas. Handrails shall be 1.25" to 1.5" diameter; with 1.5" clear to wall per Fig. 39, and have the following features:
(1) Handrails both sides of ramp. Inside handrail on switch-back ramps shall be continuous.
(2) Extend handrails min. 12" beyond top and bottom of ramp segments, parallel with surface.
(3) 1.5" clear space between handrail & wall.
(4) Continuous gripping surface.
(5) Top of gripping surface mounted 34" to 38" above ramp surface.
(6) Ends of handrails shall be rounded or return smoothly to floor, wall or post.
(7) Handrails shall not rotate within their fittings.

4.8.6 The cross slope shall not exceed 2%. Ramp surfaces shall be stable, firm, slip-resistant, and shall be without changes in level exceeding 1/4" (abrupt) or 1/2" (beveled 1:2). **(Note that exterior ramps should either be roofed or ramp surface should be grated per 4.5.4 and then kept free of the accumulation of water, ice and snow per 4.5.1 & 4.8.8)**

4.8.7 Ramps and landings with drop-offs shall have curbs, walls, railings, or projecting surfaces that prevent people from slipping off the ramp. Curbs shall be 2" high min. See Fig. 17.

4.8.8 Outdoor ramps and their approaches shall be designed so that water will not accumulate on walking surfaces.

The problems associated with the construction of exterior ramps in Alaska and maintaining them in a condition that is free of the accumulation of water, ice and snow makes ramps an expensive option where the vertical elevations exceed 4 or 5 feet as is the case at Homer Intermediate. The lineal feet of ramp and landings required for the 12 ft. floor to floor height would be 164 ft. not including the top and bottom landings (12ft. ht. x 12ft/ft. of ht. + a 5 ft. landing for ever 30" change in elevation x 4 landings req.). The enclosure required for this type of ramp would be approximately 650 to 700 square feet of structure. An elevator and elevator equipment room requires approximately 125 sq. ft. of structure.

7 - PLATFORM LIFT

SECTION REQUIREMENTS

4.1.6(3)(g) Under special provisions for existing buildings, platform lifts complying with 4.11 and applicable state and local codes, may be used as a part of an accessible route. The use of lifts is limited to Exception 4 of 4.1.3(5).

Note: In alterations of existing facilities, private organizations do have the option of utilizing platform lifts to provide program access per 4.1.6(3)(g). Government agencies however, cannot use any of the elevator exemptions. As a consequence, since both the leassor and leasee are fully liable under ADA, an elevator or ramp will need to be installed in order to provide required program access.

8 - ENTRANCE AND EXTERIOR DOORS

SECTION REQUIREMENTS

4.1.3(7)(a) At each accessible entrance to a building or facility, at least one door or one leaf at double doors shall comply with 4.13.

4.1.6(1)(h) There shall be at least one accessible entrance, per 4.13, so long as every area containing a primary function in the building is accessible to an accessible entrance.

4.1.3(9) Where a required exit from an occupiable level above or below a level of accessible discharge is not accessible, an area of rescue assistance per 4.3.11 shall be provided on each level (in a number equal to each inaccessible required exit.) **Note: Where an elevator is provided to each level, that is a required exit and no area of rescue assistance shall be required.**

4.13:

4.13.6 Maneuvering Clearance: Min. clearances on doors that are not automatic or power-assisted shall be as shown in Fig. 25. The floor or ground area within the required clearances shall be level and clear.

4.13.7 The min. space between two doors in series shall be 48" plus the width of any door swinging into the space. **Note: The vestibule is only 6' wide and needs to be 7' wide.**

4.13.8 Thresholds shall not exceed 1/2" in height and shall be beveled at 1:2.

4.13.9 Handles, pulls, latches, locks and other operating devises on accessible doors shall have a shape that is easy to grasp w/one hand and does not require tight grasping, pinching or twisting of the wrist to operate. Lever-operated, push-type and U-shaped hardware OK. Hardware mounting height: 48" AFF maximum.

4.13.10 Door Closers Sweep Time: 3 sec. from 70 degrees to a point 3 inches from the latch.

4.13.11 Door Opening Force:
(1) Exterior Doors: 8.5 lbs.
(2) Interior Doors: 5 lbs.

Solution: **Since the existing entry doors are split level entries, there wasn't any easy way to make the existing entries accessible. It would be possible to tie an existing entry into a new elevator lobby and install a 3 stop elevator, however this would require a larger building addition than is necessary and would require a more expensive 3 stop elevator with elevator doors on two sides of the elevator. The existing vestibules would also need to be made wider, and the foot grate removed and replaced with an accessible grate or filled in entirely. An exterior accessible route would still be required to the existing porches.**

It was felt that developing a new accessible entry on the east end of the building would be the most cost effective way to provide for parking, an exterior accessible route (without ramps), an accessible exterior entry and entry vestibule, and provide access at a location that would work well with an accessible elevator. Please reference Sketch No. 6 attached for the proposed new accessible exterior entrance.

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Location: Homer, Alaska

10 - EXTERIOR SIGNAGE

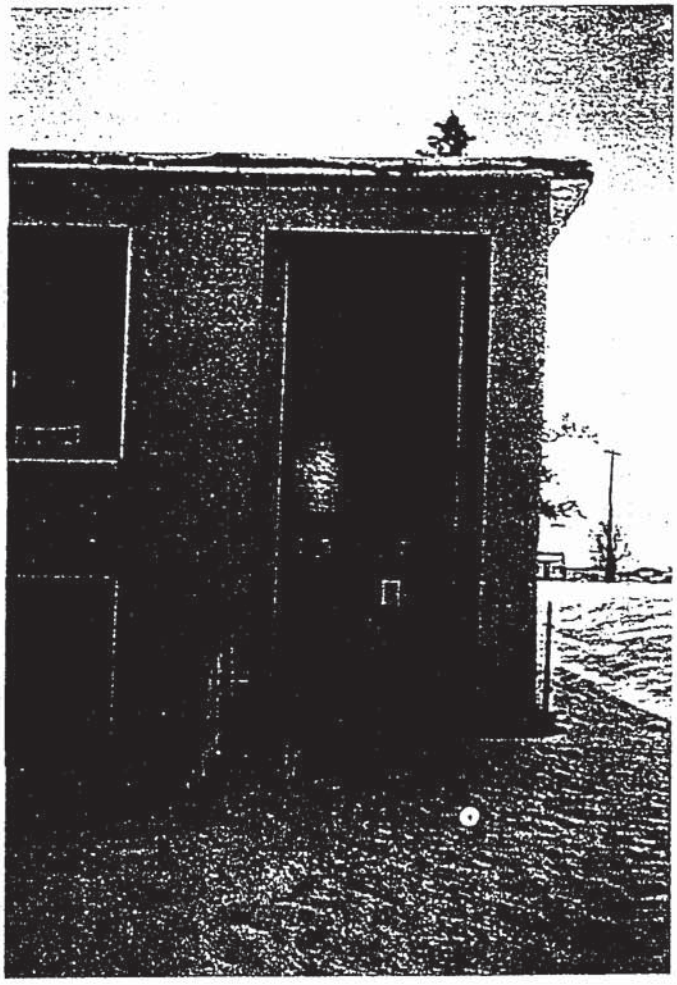
SECTION REQUIREMENTS

4.1.2(7) Exterior Elements of accessible facilities which shall be identified by the International Symbol of Accessibility and which shall comply with 4.30.7 are:

(a) **See Element 1. for Parking signage requirements.**

(c) Accessible entrances when not all are accessible. All inaccessible entrances shall have directional signage to indicate the route to the nearest accessible entrance, such that a person will not be required to retrace the approach route from the inaccessible entrance.

Solution: **Provide directional signage at two non-accessible entries.**



Date of Audit: 04/14/98
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Location: Homer, Alaska

11 - INTERIOR SIGNAGE

SECTION REQUIREMENTS

4.1.3(16) Required building signage shall comply with 4.30 as specified. Building directories, menus, and all other signs which are temporary are not required to comply.

4.30:

4.30.2 Letters and numbers on signs shall have a width-to-height ratio between 3:5 and 1:1 and a stroke-width-to-height ratio between 1:5 and 1:10.

4.30.3 Characters and numbers on signs shall be sized according to the viewing distance from which they are to be read. The minimum height is measured using an upper case X. Lower case characters are permitted.
Signs @ 80" AFF: 3" high minimum.
Room signs @ 60" AFF: 5/8" high min./2" high max.

4.30.4 Letters and numerals shall be raised 1/32", upper case, sans serif or simple serif type and shall be accompanied with Grade 2 Braille. Raised characters shall be 5/8"-2" high. Pictograms shall be accompanied by the equivalent verbal description placed directly below the pictogram. The pictogram shall be 6" by 6" minimum.

4.30.5 The characters and background of signs shall be eggshell, matte, or non-glare finish. Characters and symbols shall contrast with their background- either light on dark background or dark on light background.

4.30.6 Where permanent identification is provided for rooms and spaces, signs shall be installed on the wall adjacent to the latch side of the door. Where there is no wall space to the latch side of the door, including at double leaf doors, signs shall be placed on the nearest adjacent wall. Mounting height shall be 60" AFF. to the centerline of the sign. Mounting location of such sign shall be so that a person may approach within 3" of signage without encountering protruding objects or standing within the swing of a door.

(a) Signs which designate permanent rooms and spaces shall comply with 4.30

Solution: **if permanent signage is installed identifying rooms or room numbers, then that signage should comply with 4.30.2 through 4.30.7.**

(b) Other signs which provide direction to, or information about, functional spaces of the building shall comply with 4.30.2, 4.30.3, and 4.30.5.

Solution: **If signage is installed that provides direction to, or information about, functional spaces of the building, that signage should comply with 4.30.2 4.30.3 and 4.30.5.**

(c) Accessible toilet and bathing facilities when not all are accessible shall be identified by the International Symbol of Accessibility and signage complying with 4.30.2, 4.30.3, 4.30.5, and 4.30.7 shall be provided at all non-accessible facilities indicating the location of the nearest accessible toilet room.

Solution: **Provide Interior signage at the new unisex toilet rooms on the first and second levels, and directional signage at the non-accessible toilet rooms on the first and second floors.**

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Location: Homer, Alaska

12 - INTERIOR ACCESSIBLE ROUTE

SECTION REQUIREMENTS

4.1.3(1) At least one accessible route shall connect accessible building or facility entrances with all accessible spaces and elements within the building or facility. **See Elements 22 and 23 for Elevator requirements. See Sketch No's. 6 and 7 for proposed new elevator location.**

4.3.3 The minimum clear width of an accessible route shall be 36 in. except at doors (see 4.13). Figure 7(a) and (b) for minimum clear width required at turns around obstructions.

4.3.4 If an accessible route has less than 60 in. clear width, then passing spaces at least 60 in. by 60 in. shall be located at reasonable intervals not to exceed 200 ft. A "T" intersection of corridors is an acceptable passing place.

4.4.2 All circulation spaces shall have 80"min. clear head room.

4.5.1 Floor surfaces along accessible routes shall be stable, firm, slip-resistant.

4.5.2 Changes in level up to 1/4" may be vertical. Changes in level between 1/4" and 1/2" shall be beveled with slope no greater than 1:2. See Figure 7(c) & (d). Changes in level greater than 1/2" shall be accomplished by means of a ramp. See 4.7 and 4.8.

4.5.3 If carpet is used on floor surface, then it shall be securely attached, have a firm backing, and have a tight texture. The max. pile thickness shall be 1/2". Exposed edges shall be attached and have edge trim complying with 4.5.2.

Solution: **Existing pile height and exposed edges generally appear to be in compliance with ADA. If new carpets or floor finishes are selected, they must comply with the requirements of ADA. Please note that removal of existing carpets and/or VCT will likely require hazardous materials abatement procedures.**

4.5.4 If gratings are located in walking surfaces, then they shall have spaces no greater than 1/2" wide in one direction. Long dimension shall be placed perpendicular to direction of travel.

Solution: **The existing gratings should be replaced with compliant gratings even though they are not in the accessible route. This could help individuals with canes.**

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14 - TOILET ROOMS

SECTION REQUIREMENTS

4.1.6(3)(e)(i) Where it is technically infeasible to comply with 4.22 or 4.23, the installation of at least one unisex toilet/bathroom per floor, located in the same area as the existing toilet facilities, will be permitted in lieu of modifying existing toilet facilities to be accessible. Each unisex toilet room shall contain one water closet complying with 4.16 and one lavatory complying with 4.19, and the door shall have a privacy latch.

(ii) Where it is technically infeasible to install a required standard stall (Fig. 30(a)), or where other codes prohibit reduction of the fixture count (i.e., removal of a water closet in order to create a double-wide stall), either alternate stall (Fig. 30(b)) may be provided in lieu of the standard stall.

4.22.2 Doors to accessible toilet rooms shall comply with 4.13. **(Toilet Rooms on both floors do not comply)**

4.22.3 Accessible fixtures and controls req. in 4:22.4, 5, 6 & 7 shall be on an accessible route. **(Toilet Rooms on both floors do not comply)** An unobstructed turning space per 4.2.3 shall be provided within accessible toilet room. Req. clear floor space, accessible route and turning space may overlap.

4.22.4 If toilet stalls are provided, then at least one shall be a standard toilet stall complying with 4.17 and figure 30; where 6 or more stalls are provided, in addition to the stall complying with 4.17.3, at least one stall 36" wide with an outward swinging, self-closing door and parallel grab bars complying with Fig. 30(d) and 4.26 shall be provided. **(Toilet Rooms on both floors do not comply)**

4.13.5 Toilet Stall Doors shall have clear width 32" minimum. **(Toilet Rooms on both floors do not comply)**

4.13.9 Toilet Stall handles, pulls, latches, locks, and other operating devices on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, pinching or twisting of the wrist to operate. Lever-operated, push-type, and U-shaped hardware OK. Hardware mounting height: 48" AFF maximum. **(Toilet Rooms on both floors do not comply)**

4.16.2 Clear floor space for water closets not in stalls shall comply with Fig 28 with either right or left hand approach. **(N/A)**

4.16.3 W.C. height: 17" to 19" to top of seat. (Fig. 29) **(Toilet Rooms on both floors do not comply)**

4.16.4 Grab Bars shall be 1-1/4" - 1-1/2" diameter per 4.26 with 1-1/2" clear space to wall, mtd. at 33"-36" high. Back grab bar shall be 36"L. and side grab bar shall be 42"L., 12" from back wall, per figure 29. **(Toilet Rooms on both floors do not comply)**

4.16.5 Flush controls shall be hand operated and shall comply with 4.27.4, (one hand w/o tight grasping, pinching or twisting of wrist; 5 lbs force max.) mounted on wide side of toilet area, no more than 44" AFF.

4.16.6 T.P. dispensers shall be installed within reach per Fig. 29(b). Dispensers that control delivery or do not permit continuous flow, shall not be used.

4.17.4 In standard stalls the front partition and at least one side partition shall provide a toe clearance of at least 9" AFF. If depth of stall is greater than 60" then toe clearance is not required.

4.26.2 Grab bars shall be 1 1/4" to 1 1/2" dia. or equivalent gripping surface. Clear space between wall and grab bar shall be 1.5". See Fig. 39.

4.26.3 Structural strength. If strength appears inadequate review 4.26.3.

4.26.4 Handrails, grab bars and adjacent wall surfaces shall be free of sharp or abrasive elements.

4.18.2 Urinals shall be stall type or wall-hung with an elongated rim at a maximum of 17" AFF.

4.18.3 Clear floor space 30" by 48" shall be provided in front of urinals to allow forward approach. This clear space shall adjoin or overlap an accessible route and shall comply with 4.2.4. See Fig. 4.

4.18.4 Flush controls shall be hand operated or automatic and shall comply with 4.27.4 (5 lb. pull maximum), and shall be mounted no more than 44" AFF.

4.19.2 Lavatories shall be mtd. with the rim or counter surface no higher than 34". Provide 29" clearance to the bottom of the apron. Knee space shall comply with figure 31. **(Toilet Rooms on both floors do not comply)**

4.19.3 Lavatories shall have a clear floor space of 30" x 48" per Fig. 32.

4.19.4 Hot water and drain pipes under lavatories shall be insulated or otherwise configured to protect against contact. There shall be no sharp or abrasive surfaces under lavatories.

4.19.5 Faucets shall be lever operated, push-type, or electronically controlled complying with 4.27.4. (One hand, without tight grasping, pinching or twisting of the wrist, 5 lb. maximum). **(Toilet Rooms on both floors do not comply)**

4.19.6 Mirrors shall be mounted with the bottom edge of reflecting surface no higher than 44" AFF. **(Toilet Rooms on both floors do not comply)**

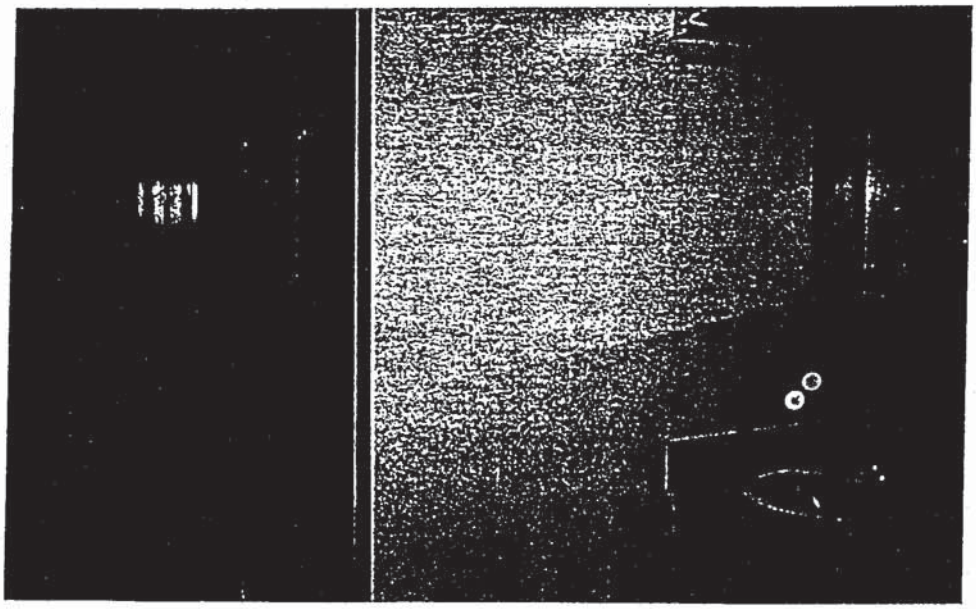
4.27.2 All controls and dispensers shall have clear floor space complying with 4.2.4 that allows a forward or parallel approach shall be provided at controls, dispensers, receptacles, and other operable equipment. See Fig. 4.

4.27.3 The highest operable part of controls, dispensers, receptacles, and other operable equipment shall be no higher than 48" with a forward reach and 54" with a side reach.

4.27.4 Controls and operating mechanisms shall be operable with one hand, without tight grasping, pinching or twisting of the wrist, 5 lb. maximum.

Solution: **The access doors to the existing toilet rooms aren't wide enough. The vestibules aren't deep enough. There is not adequate maneuvering clearance at the boys toilet door adjacent to the sink wing wall. There is not adequate maneuvering clearance to the water closet area in the boys toilet room. The knee spaces are not adequate at the lavatories, etc.**

Provide one unisex toilet per floor, located in the same general area as the existing toilet facilities, as shown on Sketch 6 and 7. This will be significantly less expensive than getting an accessible boys and girls toilet on each floor. Each unisex toilet room shall contain one water closet complying with 4.16 and one lavatory complying with 4.19, and the door shall have a privacy latch.



Date of Audit: 04/14/98
Audit By: Marvin Ungerecht
Facility: Homer Intermediate School
Location: Homer, Alaska

17 - INTERIOR DOORS

SECTION REQUIREMENTS

4.1.3(7) Within a building or facility, at least one door (or one leaf at double doors) at each accessible space and all doors that are part of an accessible route shall comply with 4.13.

4.13:

4.13.5 Required clear width: 32" min. with door open 90 degrees, measured between face of door and opposite stop. See Fig. 24 (a) through (e). (5/8" stop OK in existing door openings) **Bathroom doors do not comply, new unisex toilets to be added.**

4.13.6 Maneuvering Clearance: Min. clearances on doors that are not automatic or power-assisted shall be as shown in Fig. 25. The floor or ground area within the required clearances shall be level and clear. **Bathroom doors do not comply, new unisex toilets to be added.**

4.13.7 The min. space between two doors in series shall be 48" plus the width of any door swinging into the space per Fig. 26. **Bathroom doors do not comply, new unisex toilets to be added.**

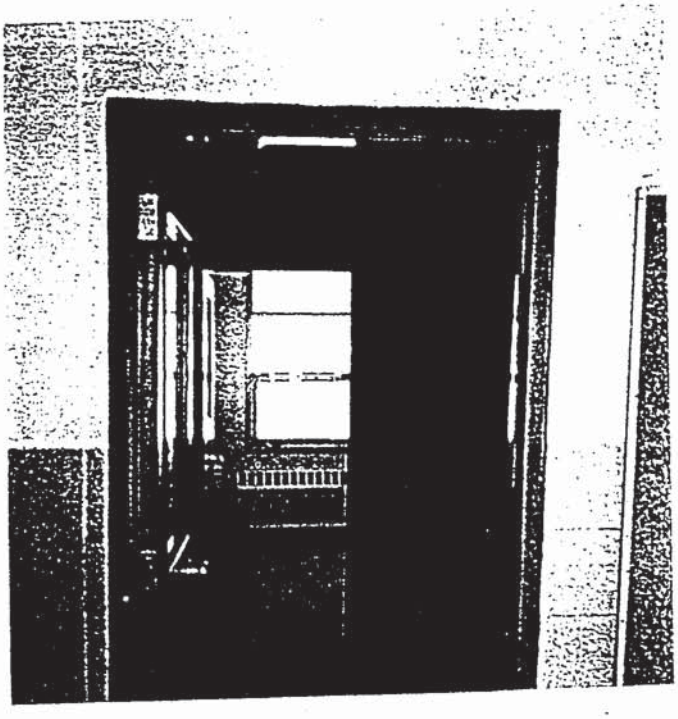
4.13.9 Handles, pulls, latches, locks and other operating devises shall have a shape that is easy to grasp w/ one hand and does not require tight grasping, pinching or twisting of the wrist to operate. Lever-operated, push-type and U-shaped hardware OK. Hardware shall be mounted at 48" AFF maximum. **(Note all interior doors at program spaces, including classrooms, bathrooms, and the administrative area are in non-compliance.)**

4.13.10 Door closers sweep time: 3 seconds max.

4.13.11 Door Opening Force:
(3) Interior Doors: 5 lbs. max.

4.13.12 Automatic and power assisted doors, if used, shall comply with this section.

Solution: **Provide lever handled latch or locksets as required at 4 classroom doors, 2 bathroom doors, and at the door to reception 103 and office 102. Adjust closers for a second sweep time (maximum) and for a 5 lb. max. door opening force.**



18 - DRINKING FOUNTAINS

SECTION REQUIREMENTS

4.1.3(10)(a) Where only one drinking fountain is provided on a floor there shall be a drinking fountain which is accessible to individuals who use wheelchairs in accordance with 4.15 and one accessible to those who have difficulty bending or stooping. **(Provide hi-lo fountain**; one per 4.15 and one at standard height; one per 4.15 and a water cooler; or other method to accommodate both groups).

4.15:

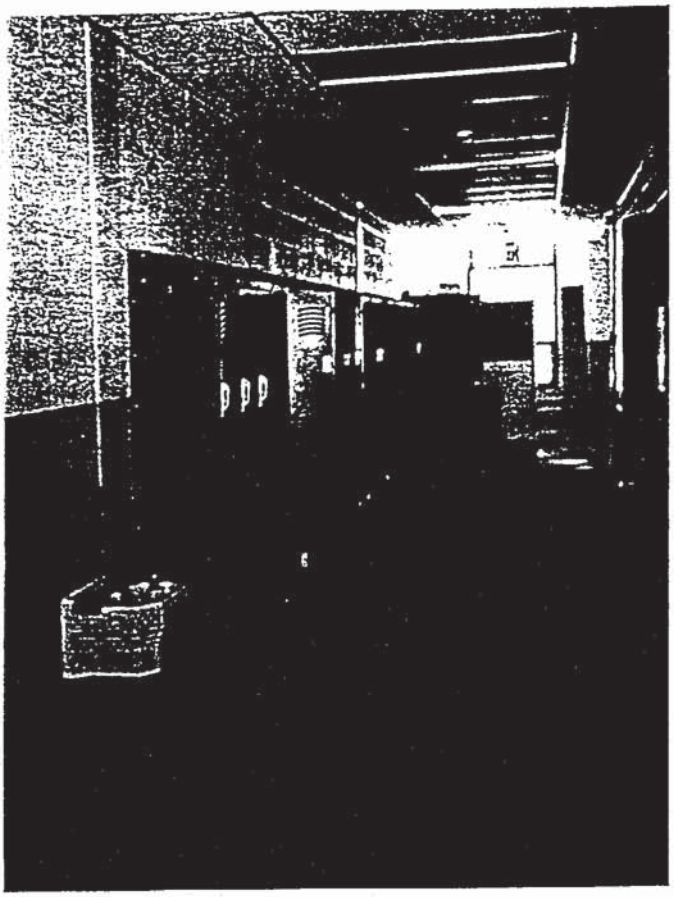
4.15.2 D. F. spout shall be mounted at 36"H. max.

4.15.3 D. F. spout shall be located in front of unit with water flow trajectory nearly parallel to front of unit. Flow of water 4" high min. (for insertion of cup).

4.15.4 Controls per 4.27.4 (one hand; **w/o tight grasp, pinching or twisting of wrist**; 5 lbs. max.) located at front or side near front edge.

4.15.5(1) Wall and post-mounted D.F. units **shall have a clear knee space between the bottom of the apron and the floor of 27" high**, 30" wide, 17" to 19" deep. See Fig. 27. Min. clear floor space shall be 30" x 48" for forward approach.

Solution: **Remove the existing drinking fountains on each floor and provide new hi-low fountain at each location.**



22 - ELEVATOR ENTRANCE

SECTION REQUIREMENTS

In order to make the facility accessible, and because the Kenai Peninsula Borough, as a public entity, cannot utilize any of the elevator exemptions, an elevator complying with Elements 22 and 23 will be required for the Old Homer Intermediate School.

4.1.3(5) One passenger elevator complying with 4.10 shall serve each level, including mezzanines, in all multi-story buildings and facilities.
Note: Government facilities are not permitted to use elevator exception 1. They must provide an elevator or a ramp.

4.10:

4.10.2 Elevator operation shall be automatic. Each car shall be automatically self leveling, with 1/2" maximum tolerance of over or under travel.

4.10.3 Hall Call Buttons shall be centered at 42" AFF. Such call buttons shall have visual signals to indicate when each call is registered and when each call is answered. Call buttons shall be a minimum of 3/4" in the smallest dimension. The button designating the up direction shall be on top See Fig. 20. Buttons shall be raised or flush. Objects mounted beneath hall call buttons shall not project into the elevator lobby more than 4".

4.10.4 Hall Lanterns. A visible and audible signal shall be provided at each hoistway entrance to indicate which car is answering a call. Audible signals shall sound once for the up direction and twice for the down direction or shall have verbal annunciators that say "up" or "down". Visible signals shall have the following features:
(1) Hall lantern fixtures shall be mounted so that their centerline is at least 72" AFF. (2) Visual elements shall be at least 2-1/2" in the smallest dimension. (3) Signals shall be visible from the vicinity of hall call buttons, and conforming to the above requirements, shall be acceptable.

4.10.5 All elevator hoistway entrances shall have raised and Braille floor designations provided on both jambs. The centerline of the characters shall be 60" AFF. Characters shall be 2" in height and letters and numerals shall be raised 1/32", upper case, sans serif or simple serif type and shall be accompanied with Grade 2 Braille.

4.10.6 Elevator Doors shall open and close automatically. They shall be provided with a safety door edge or a reopening device that will stop and reopen a car door and hoistway door automatically if the door becomes obstructed by an object or person. The device shall be capable of completing these operations without requiring contact for an obstruction passing through the opening at heights of 5" and 29" AFF. Door reopening devices shall remain effective for at least 20 seconds, and then it may close per ASME A17.1-1990.

4.10.7 The minimum acceptable time from notification that a car is answering a call until the doors of car start to close is 5 seconds.

4.10.8 The minimum time for elevator doors to remain open in response to a car call shall be 3 seconds.

23 - ELEVATOR CAB

In order to make the facility accessible, and because the Kenai Peninsula Borough, as a public entity, cannot utilize any of the elevator exemptions, an elevator complying with Elements 22 and 23 will be required for the Old Homer Intermediate School.

SECTION REQUIREMENTS

4.10.9 The floor area of elevator cars shall be 51" x 80" w/36" wide door for a double door unit and 68" x 51" w/36" wide door for a single door unit per Fig. 22.

4.10.10 Illumination level at car controls, platform, and car threshold and landing: 5 fc. minimum.

4.10.11 Car control panel shall have the following:

(1) All control buttons shall be at least 3/4" mininum, raised or flush.

(2) All control buttons shall be designated by Braille and by raised standard alphabet characters for letters, arabic characters for numerals, or standard symbols as shown in Fig. 23a. Raised and Braille characters shall comply with 4.30. The call button for the main entry floor shall be designated by a raised star at the left of the floor designation. All raised designations for control buttons shall be placed immediately to the left of the button to which they apply. Applied plates are OK. Floor buttons shall be provided with visual indicators. to show when call is registered. The visual indicators shall be extinguished when each call is answered.

(3) All floor buttons shall be no higher than 54" AFF for side approach and 48" AFF for forward approach. Emergency controls, including emergency alarm and stop shall be grouped at the bottom of the panel and shall have their centerlines no less than 35" AFF. See Fig. 23.

(4) Controls shall be located on a front wall if cars have center opening doors, and at the side or front wall if cars have side opening doors. See Fig 23.

4.10.13 Car Position Indicator shall be provided above the car control panel or over the door to show the position of the elevator in the hoistway. As the car passes or stops at a floor served by the elevators, the corresponding numerals shall illuminate, and an audible signal shall sound. Numerals shall be a minimum of 1/2" high. Audible signals: 20 db. An automatic verbal announcement of the floor number at which a car stops or passes may be substituted for the audible signal.

4.10.14 If provided, emergency two-way communication systems between the elevator and a point outside the hoistway shall comply with ASME A17.1-1990. The highest operable part of a two-way communication system shall be a maximum of 48" AFF. It shall be identified by raised lettering and symbol per 4.30 and located adjacent to the device. If the system uses a handset, then the cord must be 29" long minimum. If system is in closed compartment, the compartment door hardware shall comply with 4.27 (one hand, w/o tight grasp, pinching or twisting of wrist, 5 lbs. pull max.). The emergency intercommunication system shall not require voice communication.

27 - ALARMS

SECTION REQUIREMENTS

4.1.3(14) If emergency warning systems are provided, then they shall include both audible and visual alarms per 4.28.

4.28:

4.28.1 Alarms shall be provided in restrooms, lobbies, hallways, and any other common use area. **There are currently no alarms in the restrooms.**

4.28.2 Audible alarms shall be at least 15db above surrounding sound levels or with a duration of 60 seconds at 5db above the maximum surround sound level, but shall not exceed 120db.

4.28.3 Visual alarms shall be of a type that complies with this section and shall be no more than 50' from any point in a room or corridor, or in assembly areas greater than 100' across, can be placed along the perimeter at 100' max. intervals. **Alarms shall be mounted at 80" above finish floor or 6" below the ceiling, whichever is lower.**

Solution: **Add ADA compliant horn/strobes in the existing toilet rooms, and in the new unisex toilet rooms. Lower the existing hornstrobes to 80" above finish floor and verify that the four existing horn/strobe units comply with ADA. Repair or replace existing horn/strobes if they are not in compliance with ADA.**

Site Survey
Old Homer Intermediate School
Homer, Alaska

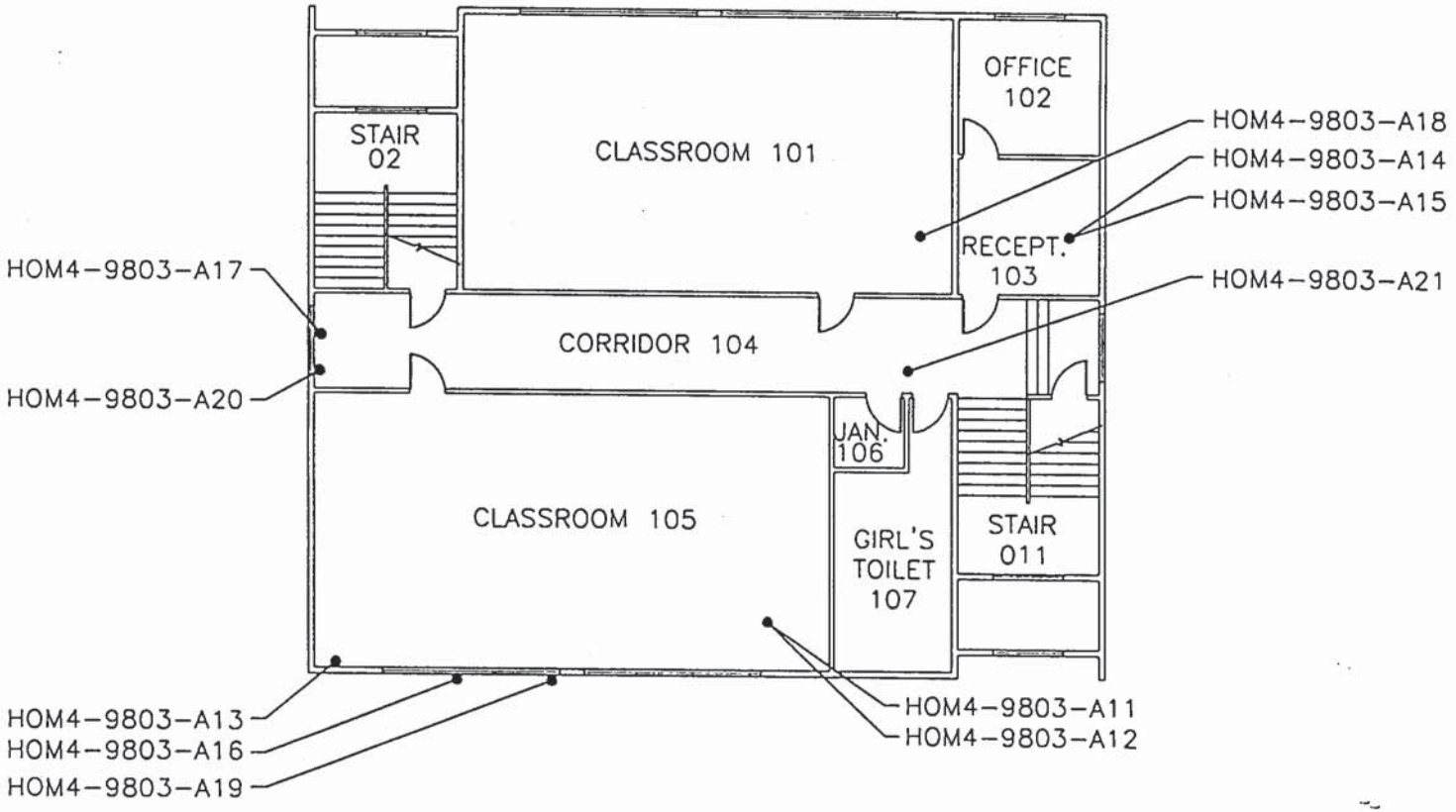
Appendix
Part V - B

Homer Intermediate School - Hazardous Material Bldg. Survey

LEGEND

HOM4-9803-A00 ASBESTOS SAMPLE LOCATIONS

HOM4-9803-L00 LEAD SAMPLE LOCATIONS



1 / S 2 SECOND FLOOR PLAN

1/16" = 1' 0"

EHS ALASKA INCORPORATED
ENGINEERING, HEALTH & SAFETY CONSULTANTS

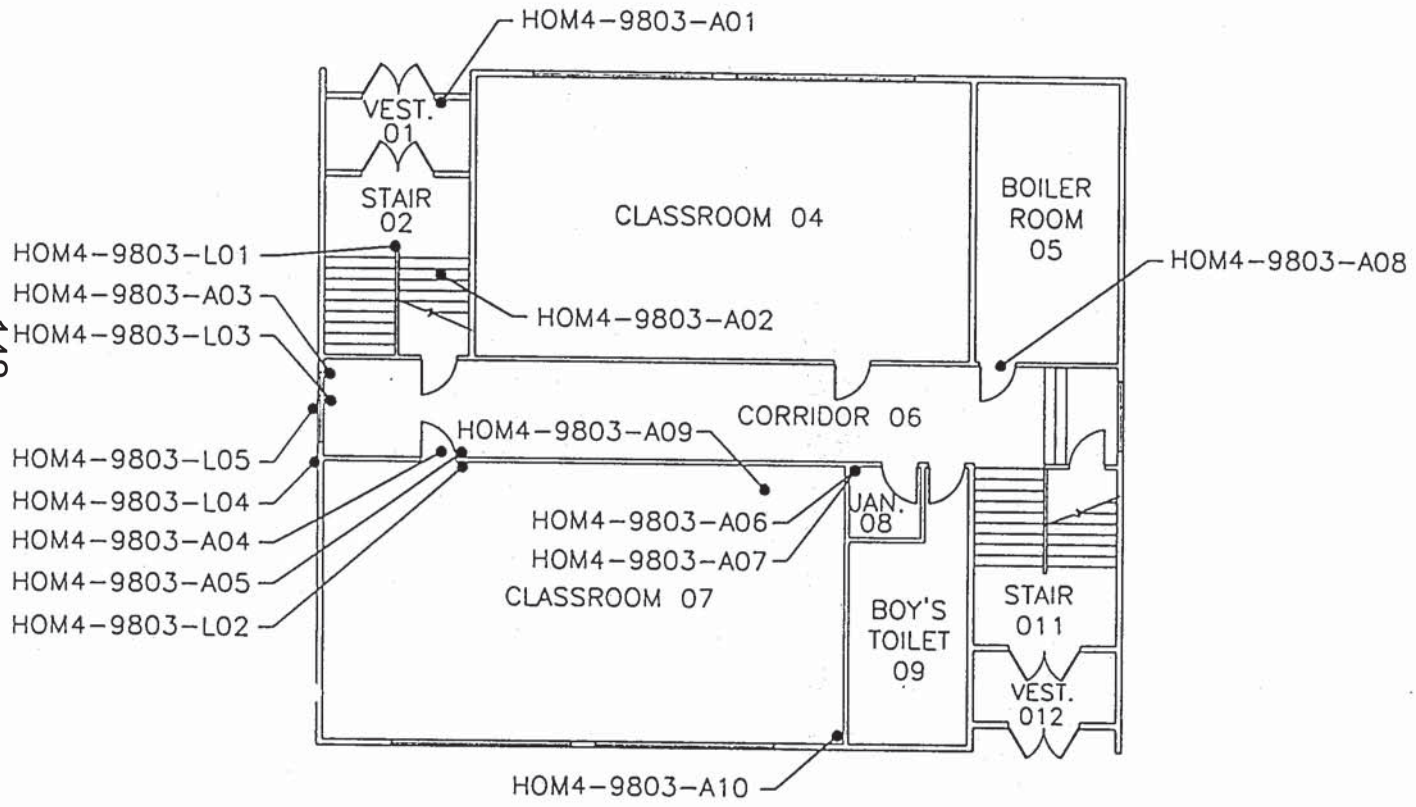
KENAI PENINSULA BOROUGH
HOMER 4 CLASSROOM BUILDING
HOMER, ALASKA
HAZARDOUS MATERIAL BLDG. SURVEY

PROJECT NO.	4169-01-01
DESIGNED:	ASB
DRAWN:	WGB
CHECKED:	TBS
SCALE:	1/16"=1'0"
DWG. TITLE:	SURVEY
JOB No.	4169-01
DATE:	4/29/98

S-2
of 2

LEGEND

- HOM4-9803-A00 ASBESTOS SAMPLE LOCATIONS
- HOM4-9803-L00 LEAD SAMPLE LOCATIONS



1 / S 1 FIRST FLOOR PLAN

1/16" = 1' 0"

142

EHS ALASKA INCORPORATED
ENGINEERING, HEALTH & SAFETY CONSULTANTS

KENAI PENINSULA BOROUGH
HOMER 4 CLASSROOM BUILDING
HOMER, ALASKA
HAZARDOUS MATERIAL BLDG. SURVEY

PROJECT NO.	4169-01-01
DESIGNED:	ASB
DRAWN:	WGB
CHECKED:	TBS
SCALE:	1/16"=1'0"
DWG. TITLE:	SURVEY
JOB No.	4169-01
DATE:	4/29/98

S-1
of 2

EHS ALASKA INCORPORATED
Environmental Health Sciences-Alaska, Inc.
10928 Eagle River Road, Suite 202, Eagle River, AK 99577-8052
(907) 694-1383 • (907) 694-1382 fax

CHAIN OF CUSTODY RECORD/FIELD SURVEY DATA

FIELD COLLECTION DATE: 3-26-98	JOB #: 4169-01-01	MATERIAL TYPE: (Circle) ASBESTOS LEAD	TOTAL QUANTITIES: 5
PROJECT NAME: KPB - HOMER 4 CLASSR.	BULK ANALYSIS REQUESTED: (Circle) PLM / PLM DUST / TEM BULK / LEAD TCLP / LEAD PPM		
FACILITY: 4 CLASSROOM BUILDING	DISPOSAL: USUAL	TURNAROUND: 3 DAYS	

SPECIAL INSTRUCTIONS:

COLLECTED BY (signature) TONY SLATONBAKKER	SELECTED LABORATORY IATL	COMMENTS:
PRINTED NAME T-5270-13	SAMPLES ACCEPTED BY	
CERT# AHERA# FED EX	DATE/TIME	
SHIPPING METHOD	ANALYST'S SIGNATURE	
COURIER (signature) DATE/TIME	DATE	

SAMPLE ID	SAMPLE DESCRIPTION, (COLOR, MATERIAL TYPE, LAYERS, FRIABILITY)	LOCATION/COMMENTS (INCLUDING PHOTO/XREF)	RESULTS PPM
1. HOMA-9803-L01	BLUE + RED PAINTS	INTERIOR CONCRETE WALLS	590
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:		
2. HOMA-9803-L02	BROWN/CREAM/BLACK PAINTS	INTERIOR DOOR FRAME	4,000
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:		
3. HOMA-9803-L03	LIGHT BLUE + CREAM PAINTS	INTERIOR WINDOW FRAME	35,000
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:		
4. HOMA-9803-L04	LIGHT + DARK CREAM PAINTS	EXTERIOR ON CONCRETE	360
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:		
5. HOMA-9803-L05	BROWN PAINT	EXT WINDOW FRAME W. SIDE	14,000
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:		
6.			
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:		
7.			
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:		
8.		3/16	
MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:		

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EHS-A95

IATL International Asbestos Testing Laboratories

Chain of Custody / Transmittal
PRELIMINARY RESULTS
Lead Analysis

Client: EHS Alaska Inc.

Facility:

Project No.: 4169-01-01

Client Contact:

Telephone:

FAX: (907) 694-1382

DATE: 4-1-98

Analysis: Atomic Absorption Spectroscopy (Flame / Furnace)

Method: ASTM 3335-85a (Paint Wipe) / NIOSH 7082 (Air)
EPA SW846 (Soil) / EPA 200.7 ASTM D3359-90D (Water)

Lab Contact: Frank Ehrenfeld
(609) 231-9449

Turn Around Time: 3day

RUN #: 98-0401

See the attached chain of custody or sample log for results of sample analysis.

DW = Dry weight correction required due to > than 5% weight from water.
VD = Void. Damage to Filter.
ID = Insufficient Sampling Data.
- Wipes. Area sampled assumed to be 1.0 square ft.
- Air filters Results reported in total milligrams.

FB = Method requires submittal of blank(s).
ML = Multi layered sample. May cause inconsistant results.
* = Insufficient Sample Provided to Perform QC / ReAnalysis (<200mg)
** = Insufficient Sample Provided to Analyze (<50mg)
*** = Matrix / Substrate Interference Possible

These preliminary results are issued by IATL to expedite procedures by clients based upon the above data. IATL assumes that all of the sampling methods and data upon which these results are based, has been accurately supplied by the client. These results may not have been reviewed by the Laboratory Director. Final Certificate of Analysis will follow these preliminary results. The signed COA is to be considered the official results. All EPA, HUD, and NJDEP conditions apply.

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Environmental Health Sciences-Alaska, Inc.
10928 Eagle River Road, Suite 202, Eagle River, AK 99577-8052
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CHAIN OF CUSTODY RECORD/FIELD SURVEY DATA

Page 1 of 1

FIELD COLLECTION DATE: 3-26-98	JOB #: 4169-01-01	MATERIAL TYPE: (Circle) ASBESTOS LEAD	TOTAL QUANTITIES: 5
PROJECT NAME: ICPB - HOMER 4 CLASSR.	BULK ANALYSIS REQUESTED: (Circle) PLM / PLM DUST / TEM BULK / LEAD TCLP / LEAD PPM		
FACILITY: 4 CLASSROOM BUILDING	DISPOSAL: USUAL	TURNAROUND: 3 DAYS	

SPECIAL INSTRUCTIONS:

Tony Slatonbarker
COLLECTED BY (signature)
TONY SLATONBARKER
PRINTED NAME
T-5270-13
CERT# AHERA#
FED EX
SHIPPING METHOD
COURIER (signature)
DATE/TIME

IATL
SELECTED LABORATORY
SAMPLES ACCEPTED BY
DATE/TIME
ANALYST'S SIGNATURE
DATE

RECEIVED
MAR 27 1998

COMMENTS:
% Pb

SAMPLE ID	SAMPLE DESCRIPTION, (COLOR, MATERIAL TYPE, LAYERS, FRIABILITY)	LOCATION/COMMENTS (INCLUDING PHOTOCODE)	RESULTS
1. HOM4-9803-L01 MATL. CONDITION: GOOD FAIR POOR	BLUE + RED PAINTS 720452 DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	INTERIOR CONCRETE WALLS	0.059
2. HOM4-9803-L02 MATL. CONDITION: GOOD FAIR POOR	BROWN/CREAM/BLACK PAINTS 720453 DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	INTERIOR DOOR FRAME	0.40
3. HOM4-9803-L03 MATL. CONDITION: GOOD FAIR POOR	LIGHT BLUE + CREAM PAINTS 720454 DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	INTERIOR WINDOW FRAME	3.5 *
4. HOM4-9803-L04 MATL. CONDITION: GOOD FAIR POOR	LIGHT + DARK CREAM PAINT 720455 DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	EXTERIOR ON CONCRETE	0.036 ~~0.0021~~
5. HOM4-9803-L05 MATL. CONDITION: GOOD FAIR POOR	BROWN PAINT 720456 DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	EXT WINDOW FRAME W. SIDE	1.4
6. Analyzed JAN 4/1/98 MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:		
7. MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:		
8. MATL. CONDITION: GOOD FAIR POOR	DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:		

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EHS-875

5/11/6.50

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(907) 694-1383 • (907) 694-1382 fax

CHAIN OF CUSTODY RECORD/FIELD SURVEY DATA

Page 1 of ___

FIELD COLLECTION DATE: 3-24-98	JOB #: 4169-01-01	MATERIAL TYPE: (Circle) ~~ASBESTOS~~ LEAD	TOTAL QUANTITIES: 21
PROJECT NAME: KPB - 4 CLASSROOM SUB	BULK ANALYSIS REQUESTED: (Circle) PLM PLM DUST / TEM BULK / LEAD TCLP / LEAD PPM		
FACILITY: HOMER 4 CLASSROOM BLDG	DISPOSAL: USUAL	TURNAROUND: 3 DAYS	

SPECIAL INSTRUCTIONS:

COLLECTED BY (signature)	SELECTED LABORATORY: IATL	COMMENTS: ND = NONE DETECTED
PRINTED NAME: TONY SLATONBARKER	SAMPLES ACCEPTED BY:	
CERT# AHERA#: T-5270-13	DATE/TIME: 7	
SHIPPING METHOD: FED EX	ANALYST'S SIGNATURE:	
COURIER (signature)	DATE: 4-1-98	
DATE/TIME		4.14.98

SAMPLE ID	SAMPLE DESCRIPTION, (COLOR, MATERIAL TYPE, LAYERS, FRIABILITY)	LOCATION/COMMENTS (INCLUDING PHOTO/XREF)	RESULTS
1. HOM4-9803-A01	LIGHT BROWN COVE BASE MASTIC	ENTRY 720699	ND
2. HOM4-9803-A02	RUBBER FLOOR CLOTH BACKING & MASTIC	STAIRS 720700	ND
3. HOM4-9803-A03	CLOTH COVER ON FG INS.	END ~~BASEMENT~~ HALL 1ST FLOOR 720701	ND
4. HOM4-9803-A04	9X9 VAT, BLACK MASTIC & YELLOW CARPET MASTIC	~~BASEMENT~~ HALL FIRST FLOOR 720702	TLE - 10% YNAS - ND 8NAS - 10%
5. HOM4-9803-A05	DRK & LT BRWN COVE MASTIC	1ST FLOOR HALL 720703	ND
6. HOM4-9803-A06	BROWN COVE BASE MASTIC	JAN CLOSET 1ST FLOOR 720704	ND
7. HOM4-9803-A07	YELLOW SHEET VINYL MASTIC	1ST FLOOR JAN CLOSET 720705	ND
8. HOM4-9803-A08	GYPSUM WALLBOARD	BOILER ROOM 720706	ND

Each sample: MATL. CONDITION: (GOOD) FAIR POOR; DAMAGE POTENTIAL: (LO, MED, HI) — WATER: AIR: VIBRATION: CONTACT: ✓

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EHS-9/95

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(907) 694-1383 • (907) 694-1382 fax

FIELD SURVEY DATA (*continued*)

PROJECT NAME: KPB - HOMER 4 CLASS. | JOB # ~~FACILITY:~~ 4169-01-01

~~JOB NUMBER:~~ 4 CLASSROOM BUILDING | DATE: 3-24-98 | COLLECTED BY: SLATOHBARKER

SAMPLE ID	SAMPLE DESCRIPTION, (COLOR, MATERIAL TYPE, LAYERS, FRIABILITY)	LOCATION/COMMENTS (INCLUDING PHOTO/XREF)	RESULTS
HOM4-9803-A09 MATL. CONDITION: (GOOD) FAIR POOR	2X4 DROP CEILING TILE WORMY PATTERN DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT: L	CLASSROOM 7 720707	ND
HOM4-9803-A10 MATL. CONDITION: (GOOD) FAIR POOR	JOINT COMPOUND DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT: ✓	" 720708	1.9%
HOM4-9803-A11 MATL. CONDITION: (GOOD) FAIR POOR	BLACK MASTIC / FIXALL / GRAY CONC. DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT:	CLASSROOM 105 720709	ND
HOM4-9803-A12 MATL. CONDITION: (GOOD) FAIR POOR	12X12 WHITE VCT + BLACK MASTIC DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT: ✓	" 720710	ND
HOM4-9803-A13 MATL. CONDITION: (GOOD) FAIR POOR	JOINT COMPOUND DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT: ✓	" 720711	2.5%
HOM4-9803-A14 MATL. CONDITION: (GOOD) FAIR POOR	BROWN CEILING TILE MASTIC DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT: ✓	ROOM 103 ABOVE PROP CEILING 720712	ND
HOM4-9803-A15 MATL. CONDITION: (GOOD) FAIR POOR	GRAY/BROWN GWB DAMAGE POTENTIAL: (LO, MED, HI) WATER: AIR: VIBRATION: CONTACT: ✓	" 720713	ND
HOM4-9803-A16 MATL. CONDITION: (GOOD) FAIR POOR	WHITE WINDOW FRAME SEALANT DAMAGE POTENTIAL: (LO, MED, HI) WATER: ✓ AIR: ✓ VIBRATION: CONTACT:	S. SIDE EXTERIOR 720714	8%
HOM4-9803-A17 MATL. CONDITION: (GOOD) FAIR POOR	BLACK & SILVER ROOF MASTIC DAMAGE POTENTIAL: (LO, MED, HI) WATER: ✓ AIR: ✓ VIBRATION: CONTACT:	BY LADDER 720715	10%
HOM4-9803-A18 MATL. CONDITION: (GOOD) FAIR POOR	NEW BLACK ROOF MASTIC - DAMAGE POTENTIAL: (LO, MED, HI) WATER: ✓ AIR: VIBRATION: CONTACT:	SEAMS OF TAR PAPER SHEET ROOF 720716	ND
HOM4-9803-A19 MATL. CONDITION: (GOOD) FAIR POOR	WHITE WINDOW GLAZING COMPOUND DAMAGE POTENTIAL: (LO, MED, HI) WATER: ✓ AIR: ✓ VIBRATION: CONTACT:	S SIDE EXTERIOR 720717	6.8%
HOM4-9803-A20 MATL. CONDITION: (GOOD) FAIR POOR	OLD BLACK ROOF MASTIC DAMAGE POTENTIAL: (LO, MED, HI) WATER: ✓ AIR: ✓ VIBRATION: CONTACT: ✓	BY LADDER 720718	ND
HOM4-9803-A21	GRAY PENETRATION SEALANT.	AT ROOF HOOD 720719	~~ND~~

IATL International Asbestos Testing Laboratories

16000 Horizon Way Unit 100 Mt. Laurel, NJ 0805-
Telephone: 609-231-9449 Fax: 609-231-9818

CERTIFICATE OF ANALYSIS

Client: EHS Alaska Incorporated
10928 Eagle River Rd., Ste 202
Eagle River AK 99577

Report Date: 04/06/1998
Project: KPB-4 Classroom SUR,3/24/98
Project No.: 4169-01-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 720699 **Material Description:** Tan Mastic
Client No.: HOM49803A01 **Location:** Entry

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	5	Wollastonite	95

Lab No. 720700 **Material Description:** Black/White Fibrous
Client No.: HOM49803A02 **Location:** Mat'l W/Tan Mastic Stairs

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	55	Fibrous Glass	45

Lab No. 720700 **Material Description:** Black/White Fibrous
Client No.: HOM49803A02 **Location:** Mat'l W/Tan Mastic Stairs

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Tan Mastic
From Above

Lab No. 720701 **Material Description:** Tan/White/Blue
Client No.: HOM49803A03 **Location:** Fibrous Material End 1st Floor Hall

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	75	Fibrous Glass	25

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NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. Before this material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative TEM.

Analysis Performed By: Becky Huntzinger
Becky Huntzinger

Approved By: Frank E. Ehrenfeld, III

Date: APR 0 1 1998

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Project No.: 4169-01-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 720702 **Material Description:** Brown FloorTile With
Client No.: HOM49803A04 **Location:** Tan/Black Mastic First Floor Hall

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
10	Chrysotile	None Detected	None Detected	90

Brown Floor Tile

Lab No. 720702 **Material Description:** Brown FloorTile With
Client No.: HOM49803A04 **Location:** Tan/Black Mastic First Floor Hall

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Tan Mastic
From Above

Lab No. 720702 **Material Description:** Brown FloorTile With
Client No.: HOM49803A04 **Location:** Tan/Black Mastic First Floor Hall

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
10	Chrysotile	None Detected	None Detected	90

Black Mastic
From Above

Lab No. 720703 **Material Description:** Brown/Tan Mastic
Client No.: HOM49803A05 **Location:** 1st Floor Hall

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Brown Mastic

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Analysis Performed By: Becky Hunt 149 **Approved By:** Frank E. Ehrenfeld, III

Date: APR 0 1 1998

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Project No.: 4169-01-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 720703 **Material Description:** Brown/Tan Mastic
Client No.: HOM49803A05 **Location:** 1st Floor Hall

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	5	Wollastonite	95

Tan Mastic
From Above

Lab No. 720704 **Material Description:** Brown Mastic
Client No.: HOM49803A06 **Location:** Jan Closet,1st Floor

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No. 720705 **Material Description:** Tan NonFibrous Mat'l
Client No.: HOM49803A07 **Location:** 1st Floor,Jan Closet

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	Trace	Cellulose	100

Lab No. 720706 **Material Description:** Tan/White Sheetrock
Client No.: HOM49803A08 **Location:** Boiler Room

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	20	Cellulose	80

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Analysis Performed By: Becky Hunting 150 **Approved By:** Frank E. Ehrenfeld, III

Date:

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Project No.: 4169-01-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 720707 **Material Description:** Grey/White Ceil.Tile
Client No.: HOM49803A09 **Location:** Classroom 7

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	45	Fibrous Glass	30
		25	Cellulose	

Lab No. 720708 **Material Description:** OffWhite Jt.Compound
Client No.: HOM49803A10 **Location:** Classroom 7

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
PC 1.9	Chrysotile	None Detected	None Detected	PC 98.1

Lab No. 720709 **Material Description:** Grey/White Plaster
Client No.: HOM49803A11 **Location:** W/Black Mastic Classroom 105

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No. 720709 **Material Description:** Grey/White Plaster
Client No.: HOM49803A11 **Location:** W/Black Mastic Classroom 105

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	10	Synthetic	90
Black Mastic				
From Above				

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Performed By: Becky Hunt

Approved By: Frank E. Ehrenfeld, III

Date:

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BULK SAMPLE ANALYSIS SUMMARY

Lab No. 720710 **Material Description:** OffWhite Floor Tile
Client No.: HOM49803A12 **Location:** With Black Mastic Classroom 105

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No. 720710 **Material Description:** OffWhite Floor Tile
Client No.: HOM49803A12 **Location:** With Black Mastic Classroom 105

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	5	Synthetic	95
Black Mastic				
From Above				

Lab No. 720711 **Material Description:** OffWhite Jt.Compound
Client No.: HOM49803A13 **Location:** Classroom 105

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
PC 2.5	Chrysotile	None Detected	None Detected	PC 97.5

Lab No. 720712 **Material Description:** Tan Mastic
Client No.: HOM49803A14 **Location:** Room 103 Above Drop Ceiling

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Performed By: Becky Hunt

Approved By: Frank E. Ehrenfeld, III

Date:

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BULK SAMPLE ANALYSIS SUMMARY

Lab No. 720713 **Material Description:** Tan Sheetrock
Client No.: HOM49803A15 **Location:** Room 103 Above Drop Ceiling

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	65	Cellulose	35

Lab No. 720714 **Material Description:** Tan Window Glaze
Client No.: HOM49803A16 **Location:** S. Side Exterior

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
PC 8.0	Chrysotile	None Detected	None Detected	92

Lab No. 720715 **Material Description:** Black/Silver
Client No.: HOM49803A17 **Location:** Roof Material By Ladder

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
10	Chrysotile	None Detected	None Detected	90

Lab No. 720716 **Material Description:** Black Roof Material
Client No.: HOM49803A18 **Location:** Seams Of Tar Paper Sheets On Roof

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Performed By: Becky Huntzinger **Approved By:** F. Ehrenfeld

Date: [illegible] Becky Huntzinger Frank E. Ehrenfeld, III
Laboratory Director

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Project No.: 4169-01-01

BULK SAMPLE ANALYSIS SUMMARY

Lab No. 720717 **Material Description:** White Window Glaze
Client No.: HOM49803A19 **Location:** S.Side Exterior

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
PC 6.8	Chrysotile	None Detected	None Detected	PC 93.2

Lab No. 720718 **Material Description:** Black Roof Material
Client No.: HOM49803A20 **Location:** By Ladder

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No. 720719 **Material Description:** Black Tar
Client No.: HOM49803A21 **Location:** At Roof Hood

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	12	Cellulose	88

NIST-NVLAP No. 1165 **NY-DOH No. 11021** **AIHA Lab No. 444**

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Analysis Performed By: Becky Hunt

Approved By: Frank E. Ehrenfeld, III
Laboratory Director

Date: APR 0 1 1998