

ASBESTOS MANAGEMENT PLAN PHASE REPORT

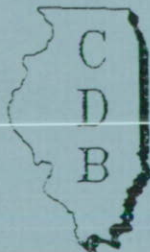
CDB PROJECT NO. 321-055-707

Elgin Mental Health Center
Illinois Department of Mental Health and Developmental Disabilities
Tunnel System
CDB Building No. BR00T
750 South State Street
Elgin, Kane County, Illinois 60123

STATE OF ILLINOIS
CAPITAL DEVELOPMENT BOARD
Springfield, Illinois

BY:
BELING CONSULTANTS
Professional Engineers
1001 16TH STREET
MOLINE, ILLINOIS 61265
(309) 757-9800

DATE: 10-27-92



DATE SIGN: 10-27-92

EXP. DATE: 11-30-92

IDPH LICENSE: 100-4819



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CAPITAL DEVELOPMENT BOARD BUILDING INVENTORY FORM 3

C.D.B. BUILDING NUMBER: Brook BUILDING NAME: Tunnel System

USING Department of Mental Health LOCATION: Elgin Mental Health Center
AGENCY: and Developmental Disabilities

BLDG. ADDRESS: 750 S. State St. CITY: Elgin

ZIP: 60123 COUNTY: Kane HOUSE/SENATE DISTRICT: _____

YEAR CONSTRUCTED: unknown GROSS SQ. FT. 35,620 TOTAL FLOORS: _____ FLOORS BELOW GRADE: A11

USE OF BUILDING WHEN CONSTRUCTED(C): Utility CURRENT PRIMARY USE (P): Utility CURRENT SECONDARY USE (S): _____

PREDOMINATE CONSTRUCTION TYPE: Concrete

FOR USING AGENCY USE ONLY: _____

BUILDING NOTES: _____

(FOR C.D.B. USE ONLY) ASBESTOS STATUS: _____

INTRODUCTION TO THE MANAGEMENT PLAN

A. Policy Statement

This Management Plan is intended to be a working document which will serve as a guide to staff, employees, occupants and visitors in minimizing the risk of exposure to asbestos fibers. The State of Illinois recognizes the serious health hazards associated with asbestos fibers. The State has conducted an inspection of this facility in order to determine whether asbestos is present, and if so, where the asbestos is located.

This Management Plan sets forth the recommended response actions for the ACM within this facility. Further, where required, an O & M Program has been established which will be implemented by facility staff.

This Plan has been reviewed by CDB, the Contracting Agency and the Using Agency and represents the policies and procedures to be implemented with respect to any ACM within this facility.

Dated: _____

Capital Development Board Representative

Dated: _____

Agency (Designated Person)

Dated: 10/27/92

Luc E. Youngberg
Management Planner

B. Applicable Standards

This Management Plan was developed in accordance with CDB's A/E Manual of Procedures for Asbestos Inspections and Management Plans. The IDPH Rules are the minimum standard referenced herein.

C. Asbestos as a Health Hazard

The adverse health effects of asbestos were first noted in the early 1900s. The early reports described asbestosis, a form of generalized scarring in the lungs, in workers occupationally exposed to asbestos. Later, in 1935, attention was also directed to lung cancer associated with asbestos exposure and, after a report from South Africa in 1960, it became apparent that exposure to asbestos was also associated with mesothelioma, a formerly very rare and unusual cancer of tissues lining the chest and abdominal cavity.

Currently, five important health effects have been associated with asbestos exposure. They are: lung cancer, mesothelioma, gastrointestinal cancer, asbestos related pleural disease, and asbestosis.

Lung Cancer - Lung cancer is now the most common cause of cancer in both men and women in the United States and cigarette smoking is clearly the major risk factor. Numerous epidemiological studies have demonstrated an unequivocal relationship of lung cancer with asbestos exposure in the workplace. Thirty-two studies of different occupationally exposed groups have demonstrated significant association between asbestos exposure and of lung cancer. Furthermore, an increase in asbestos exposure, expressed as concentration of asbestos fibers and duration of exposure in the workplace, appears to increase lung cancer rates. These data suggest that the dose response relationship is probably linear, but it is not yet known whether or not a threshold level of exposure exists below which no increased risk is found.

Of great importance is the observation that cigarette smoking appears to interact with asbestos in a multiplicative manner as to greatly increase the risk of developing lung cancer. Workplace asbestos exposure alone may increase the risk of lung cancer by 5 times. Asbestos exposure plus smoking, however, appears to increase the risk by about 50 times.

It has been shown that the greatest risk of developing lung cancer occurs at 20 or more years after the initial asbestos exposure. The existence of this latent period or lag time indicates that asbestos associated lung cancers will continue to occur in the future from exposures which happened in the past.

Mesothelioma - Mesothelioma is a cancer of the membranes lining the chest and abdominal cavity. Years ago, mesothelioma was a medical curiosity because it was so rare. When malignant mesothelioma is seen today, asbestos exposure is likely to have previously occurred.

The data linking asbestos exposure to mesothelioma is based upon many of the same epidemiological studies of workers that demonstrated an association between asbestos exposure and lung cancer. The findings are

somewhat different than for lung cancer. Lower non-occupational exposures have also been associated with mesothelioma in addition to occupational exposure. Therefore lower levels of exposure to asbestos as found in some non-occupational settings may give rise to mesothelioma. Secondly, the nature of the dose response relationship may be different from that of lung cancer. The risk continues to increase as the number of years since first exposure increases. In many cases, a latent period of more than 40 years has been described.

Gastrointestinal Cancer - Several of the epidemiological studies of workers occupationally exposed to asbestos have shown increased risks of gastrointestinal cancer including cancers of the colon, rectum, stomach and esophagus. The risk, however, does not appear to be as great as for lung cancer. To date, no association has been found between asbestos in drinking water and gastrointestinal cancer.

Asbestos Related Pleural Disease - This category of health effects includes fibrous and sometimes calcified plaques as well as diffuse thickening of the pleura and the pleural effusion. These are non-cancerous changes of the membranes surrounding the lungs and commonly occur many years after asbestos exposure. The presence of plaques suggests prior asbestos exposure but usually does not cause any symptoms or respiratory impairment.

Asbestosis - Asbestosis is a disabling lung disorder consisting of generalized scarring of the lungs which causes shortness of breath on exertion. Asbestosis has been described almost exclusively in workers with occupational exposure to high concentrations of asbestos-containing dusts. In asbestosis, there appears to be a very strong dose response relationship in that the greater the concentration of asbestos fibers, and the longer the duration of exposure, the greater the likelihood and severity of asbestosis.

As with the other asbestos related health effects, there is usually a time lag or latent period of several years before the development of disease. Once acquired, asbestosis tends to progress slowly, sometimes for years after asbestos exposure has ended.

ACCREDITATION OF MANAGEMENT PLANNER(S)

I, Gus E. Youngberg, prepared or supervised the preparation of this Asbestos Management Plan for TUNNEL SYSTEM at the Elgin Mental Health Center Facility.

I am licensed as a Management Planner by the State of Illinois and have attached verification of such below.

Signature: *Gus E. Youngberg* Date: 10/27/92
IDPH LICENSE NO. 100-0132

IDPH IDENTIFICATION CARD
FRONT

IDPH IDENTIFICATION CARD
BACK

State of Illinois A014048
Department of Public Health
LICENSE PERMIT, CERTIFICATION, REGISTRATION
RENEWED ASBESTOS PROFESSIONAL LICENSE

EXPIRATION DATE 05/15/93	CATEGORY 100	L.D. NUMBER 100 - 0132
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GUS YOUNGBERG
PROJECT MANAGER
INSPECTOR
MANAGEMENT PLANNER
AIR SAMPLING PROFESSIONAL

THE PERSON, FIRM OR CORPORATION WHOSE NAME APPEARS ON THIS CERTIFICATE HAS COMPLIED WITH THE PROVISIONS OF THE ILLINOIS STATUTES AND/OR RULES AND REGULATIONS AND IS HEREBY AUTHORIZED TO ENGAGE IN THE ACTIVITY INDICATED ON THE FACE OF THIS CARD.



ISSUED UNDER THE AUTHORITY OF
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC HEALTH

SIGNATURE OF LICENSEE

Gus Youngberg

NARRATIVE DESCRIPTION

PIPE TUNNELS

THE PIPE TUNNELS AT THE ELGIN MENTAL HEALTH FACILITY ARE CONSTRUCTED PRIMARILY OF Poured CONCRETE WALLS, ALTHOUGH OLDER SECTIONS ADJACENT TO THE CENTER BUILDING ARE OF LIMESTONE CONSTRUCTION. THE CEILINGS OF THE TUNNELS ARE OF EITHER CORRUGATED STEEL OR CONCRETE. APPROXIMATELY 4,490 FEET OF THE TUNNELS HAVE CONCRETE FLOORS AND APPROXIMATELY 4,415 FEET HAVE DIRT FLOORS. THE TOTAL LENGTH OF THE TUNNEL SYSTEM IS 8,905 FEET OR 1.69 MILES. WIDTH OF THE TUNNELS VARIES FROM 3' TO 8', AND HEIGHT VARIES FROM 4' TO 8'. DATE OF TUNNEL CONSTRUCTION IS UNKNOWN. GROSS SQUARE FOOTAGE IS APPROXIMATELY 35,620.

EXCLUDED FROM THIS SURVEY IS BURIED PIPE OR TUNNELS EXTENDING FROM DIETARY BUILDING TO THE MAIN TUNNEL SYSTEM, A BURIED TUNNEL FROM THE REHABILITATION CENTER TO THE OLD GENERAL HOSPITAL, TWO COLLAPSED TUNNELS (ASSEMBLY HALL TO VACANT WILSON BUILDING AND NURSES HOME TO THE VACANT WOOD BUILDING), AND ONE TUNNEL (T12-2) FOUND TO BE TOO HAZARDOUS TO ENTER DUE TO EXTREME HEAT.

PIPE SIZES WITHIN THE TUNNELS RANGE FROM 1" TO 24" DIAMETER.

9,505 LINEAR FEET 1"-4" PIPE INSULATION
15,995 LINEAR FEET 5"-10" PIPE INSULATION
1,090 LINEAR FEET OF 11"-15" PIPE INSULATION
3,835 LINEAR FEET 16"+ PIPE INSULATION

30,425 LINEAR FEET OF ASBESTOS-CONTAINING PIPE INSULATION

APPROXIMATELY 300 LINEAR FEET OF FIBERGLASS REPLACEMENT INSULATION WAS FOUND. IN GENERAL, THE PIPE INSULATION CONDITION WAS FOUND TO RANGE FROM LITTLE TO NO DAMAGE NORTH OF THE CENTER BUILDING AND ADJACENT TO ATC, FTC AND MEDICAL BUILDINGS TO 100% SIGNIFICANT DAMAGE IN TUNNELS T20-2, T14-1, T64-2, T23-1 AND T2-1. OF THE 30,425 LINEAR FEET OF PIPE INSULATION, 2,955 LINEAR FEET WAS FOUND TO HAVE SIGNIFICANT DAMAGE, 2500 LINEAR FEET OF DISTRIBUTED DAMAGE, WITH THE REMAINDER HAVE ONLY SLIGHT LOCALIZED DAMAGE. AT THE IMMEDIATE OPENING OF ALL MANHOLE ACCESS POINTS THE PIPING HAS SIGNIFICANT DAMAGE DUE TO PHYSICAL CONTACT AND WATER DAMAGE. AIR MOVEMENT IN THE TUNNELS VARIED FROM LOW TO MODERATE. AIR MOVEMENT INCREASED IN THE VICINITY OF TUNNEL ENTRANCE INTO THE BASEMENT OR CRAWLSPACE OF BUILDINGS.

C.D.B. BLDG. # <u>BROOT</u> FACILITY <u>Elgin Mental Health Center</u> BUILDING NAME <u>Pipe Tunnel</u>	C.D.B. PROJECT # <u>321-055-707</u> A/E FIRM <u>Beling Consultants</u> INSPECTION DATE: <u>7-25-89</u>
I D P H REPORT DESIGNATION	C D B PROTOCOL DESIGNATION
TPA TPB TPC TPD	BROOT-TPA BROOT-TPB BROOT-TPC BROOT-TPD
EXISTING DESIGNATION	UTILIZE FORMAT IN SECTION VII ITEM C OF "A/E MANUAL OF PROCEDURES FOR ASBESTOS INSPECTIONS & MANAGEMENT PLANS"

C.D.B. BLDG. # BROOT
FACILITY Elgin Mental Health Center
BUILDING NAME Pipe Tunnel

C.D.B. PROJECT # 321-055-707
AE FIRM Beling Consultants
INSPECTION DATE: 7-25-89

HOMOGENEOUS AREAS	DESCRIPTION	ACM			NOTES
		ASSUMED	POSITIVE	NEGATIVE	
TPA	Pipe Insulation (1"-4")		X		10% Chrysotile 30% Crocidolite
TPB	Pipe Insulation (5"-10")		X		20% Chrysotile 35% Crocidolite
TPC	Pipe Insulation(11"-15")		X		55% Chrysotile
TPD	Pipe Insulation (24")		X		50% Chrysotile

FORM 6 SUMMARY OF FINDINGS

MANAGEMENT PLAN PHASE III

BUILDING NAME PIPE TUNNELS

LIST IN ORDER OF RESPONSE ACTION NUMBER

C.D.B. BUILDING NUMBER BROOT

HOMOGENEOUS AREA	MATERIAL DESCRIPTION	ACM CONTENT (%)				DAMAGE ASSESSMENT								RESPONSE ACTION
		CHRYSOTILE	AMOSITE	OTHER	ASSUMED ACM	NO DAMAGE	SALENT	DAMAGE	SIGNIFICANT DAMAGE	NO POTENTIAL DAMAGE	POTENTIAL DAMAGE	POTENTIAL SIGNIFICANT DAMAGE	NUMBER	
TPA	Pipe Insulation 1"-4"	10%		30%		X	X	X		X		3	Continue O&M.*	
TPB	Pipe Insulation 5"-10"	20%		35%		X	X			X		3	Continue O&M.*	
TPC	Pipe Insulation 11"-15"	55%					X			X		3	Continue O&M.*	
TPD	Pipe Insulation 16+"	50%				X				X		3	Continue O&M.*	
													*Remove when practical and cost-effective.	

PIPE INFORMATION

Pipe Tunnels ROOM	PIPE	ELB	FT	DIA	CONDITION			COMMENTS
					SD	D	ND	
T3-1	1	-	140'	12"			X	21% Damage, Pipe Wrap
"	1	-	140'	6"			X	in good shape.
"	2	-	140'	4"			X	
T2-1	3	-	310	10"		20%		Age/Water Damage
"	2	-	310	4"	20%			Most ACM on Deck floor
"	1	-	310	6"	100%			
T12-2	1	-	110'	20"		10%		Distributed Age/water
"	1	-	110'	10"		15%		damage, Too hot to
"	1	-	110'	6"		5%		continue in tunnel
"	2	-	110'	4"		10%		more than 20'
T1-1	1	-	230'	20"		15%		Distributed Damage
"	1	-	230'	10"		15%		Too constricted to
"	1	-	230'	6"		15%		access fully.
"	2	-	230'	4"		15%		
T12-1	1	-	80'	10				Not Accessible
"	1	-	80'	6				
"	2	-	80'	4				
"								
T43-2	1	-	110	10"			X	Pipe Wrap in good shape
"	1	-	110	6"			X	"
"	2	-	110	4"			X	"
T43-1	1	-	250	10"		2%		some damage, small leaks
"	1	-	250	6"			X	Pipe Wrap in good shape
"	2	-	250	4"			X	"
T39-2	1	-	110'	20		5%		Some Age/Water Damage
	1	-	110'	10		5%		"
	2	-	110'	6"		5%		"
T39-1	1	-	90'	20"				
	1	-	90'	10"				
	2	-	90'	6"				
T56-2	2	-	70'	6"	20%			Water/age 20' ACM
	2	-	70'	4"	20%			on Deck.
T14-1	2	-	120'	6"	75%			Extensive age/water
	2	-	120'	4"	75%			damage, most on deck
T44-1	1	-	250'	20"			X	Pipe Wrap in good shape
	1	-	250'	10"			X	
	2	-	250'	6"			X	

PIPE INFORMATION

Pipe Tunnels ROOM	PIPE	ELB	FT	DIA	CONDITION			COMMENTS
					SD	D	ND	
T21-1	1	-	20'	6"	10%	10%		Approx 20' ACM on Deck
"	3	-	20'	4"	10%	10%		
T21-2	1	-	220'	6"	5%			LABEL K&M 85% MAG
"	4	-	220'	4"	5%	5%		
T22-1	1	-	40'	3"		5%		Approx 15' ACM on Deck
"	1	-	40'	6"		5%		
"	2	-	40'	4"	5%			
T23-2	1	-	45'	10"	15%	5%		Approx 25' ACM on Deck
"	2	-	45'	6"	5%	10%		
T23-1	2	-	25'	6"	100%			Approx 25' ACM on Deck
T23-3	1	-	185'	12"	20%	80%		Delamination/age
"	2	-	185'	6"	10%	30%		
T24-2	1	-	285'	12"	2%	5%		Delamination/Age 30' ACM
"	2	-	285'	6"		5%		on Deck
T24-1	2	-	25'	6"	40%			Age, 10' ACM on Deck
T17-3	1	-	70'	12"		1%		Most in good shape
"	2	-	70'	6"		1%		
T25-2	2	-	90'	6"		10%		Some ACM on Deck, Localized Damage
T25-1	2	-	25'	6"	20%			Distributed, 10' ACM on DECK.
T17-2	1	-	45'	8"		5%		Localized Damage
	2	-	45'	4"		5%		
T18-1	1	-	130'	8"	50%			Water/age Damage
T19-1	1	-	210'	8"		5%		age
"	1	-	210'	4"	2%			Localized Water Damage
T19-2	1	-	60'	8"		2%		Age
	1	-	60'	4"		2%		Age
T20-1	1	-	105'	8"		4%		
	1	-	105'	4"		2%		
T20-2	1	-	175'	10"	95%			Water/Age most on floor
	1	-	175'	4"	95%			"
T20-3	1	-	50'	10"	95%			Water/Age, Tunnel Dead end
T19-3	1	-	10'	8"	30%			Water/Age
	1	-	10'	4"		5%		

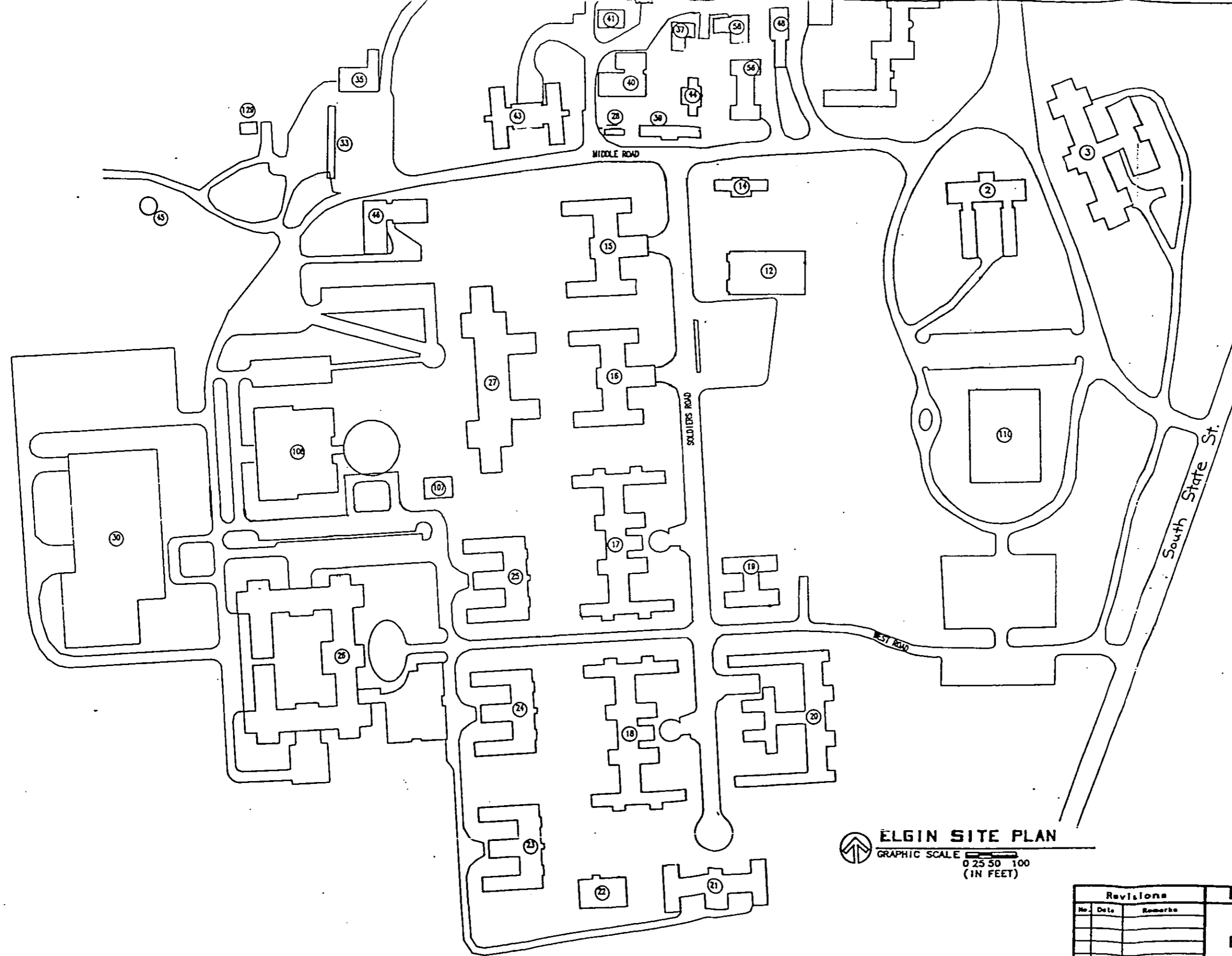
PIPE INFORMATION

Pipe Tunnels ROOM	PIPE	ELB	FT	DIA	CONDITION			COMMENTS
					SD	D	ND	
T26-2	1	-	120'	10"			X	Pipe Wrap in good Condition
"	1	-	120'	6"			X	
"	2	-	120'	4"			X	
T26-1	1	-	425'	20"		5%		10' of Distributed damage
"	1	-	425'	10"		2%		Some localized water
"	1	-	425'	6"		2%		damage from leaking
"	1	-	425'	4"		2%		Valve. & Joint
T108-1	2	-	55'	6"			X	
"	1	-	55'	10"			X	
"								
T107-1	2	-	15'	6"		5%		WATER DAMAGE
T27-3	1	-	140'	20"			X	All pipe wrap in good shape, no leaks
"	1	-	140'	10"			X	
"	1	-	140'	6"			X	
"	1	-	140'	4"			X	
T27-2	1	-	60'	10"		5%		Some Water damage
"	1	-	60'	6"		5%		"
"	2	-	60'	4"			21%	
T27-1	1	-	270'	20"				Pipe Wrap in good shape
"	1	-	270'	10"				"
"	1	-	270'	6"				"
"	2	-	270'	4"				"
T17-1	1	FG	100'	12"			X	Fiberglass Insulation
	1	FG	100'	10"			X	"
	1	FG	100'	6"			X	"
	1	FG	100'	20"			X	"
T16-2	1	-	530'	20"		3%		Some Water Damage from leaking Valves & Joints
	1	-	530'	12"		5%		
	1	-	530'	10"		5%		
	1	-	530'	6"		5%		
T16-1	1	-	40'	10"				
	1	-	40'	6"				
	2	-	40'	4"				
T15-1	1		40'	10"				
	1		40'	6"				
	2		40'	4"				

PIPE INFORMATION

Pipe Tunnels ROOM	PIPE	ELB	FT	DIA	CONDITION			COMMENTS
					SD	D	ND	
T58-1	1	-	50'	6"			X	Pipe Wrap in good
"	1	-	50'	4"			X	Shape.
T48-2	1	-	100'	6"			X	
"	1	-	100'	4"		X		4' of localized damage.
T48-1	1	-	95'	10"			X	Pipe Wrap in good shape
"	2	-	95'	6"			X	
T50-1	1	-	130'	20"			X	<1% Damage, Pipe Wrap
"	1	-	130'	10"			X	in good shape.
"	2	-	130'	6"			X	
T50-2			120'				X	No pipes, Storage.
T50-3	1	-	150'	24"	10%	10%		Water/Age Localized
"	1	-	150'	12"		10%		damage from Water leaks
"	1	-	150'	10"	5%	15%		
"	1	-	150'	4"	15%	10%		
T61-1	1	-	160'	12"	40%	20%		AGE/DELAMINATION
"	2	-	160'	6"	15%	60%		120' ACM on Deck

T72-2	1	-	90'	8"		10%		Age/Water Damage.
"	2	-	90'	4"		10%		20' ACM on Deck
T72-1	1	-	310'	8"		2%		Age/Water Damage
"	2	-	310'	4"		2%		
T71-2	1	-	20'	8"			<1%	Pipe Wrap in good shape
"	2	-	20'	4"			<1%	"
T71-1	1	-	320'	10"		5%		Age/Water Distributed
"	2	-	320'	6"	5%			most in good shape
"	2	-	320'	4"		5%		Some ACM on Deck
T70-1	1	-	90'	10"		5%		Most in Good shape, some
	1	-	90'	6"		5%		delamination
	1	-	90'	4"		5%		
T70-2	1	-	100	10"		5%		Most in Good shape, some
	1	-	100	6"		5%		delamination
	1	-	100	4"		5%		
T69-1	1	-	120'	10"			X	Pipe wrap in good shape
	1	-	120'	6"			X	
	2	-	120'	4"			X	
T69-2	1	-	100'	10"		5%		Age/Water some
	1	-	100'	6"		5%		delamination.
	2	-	100'	4"		5%		

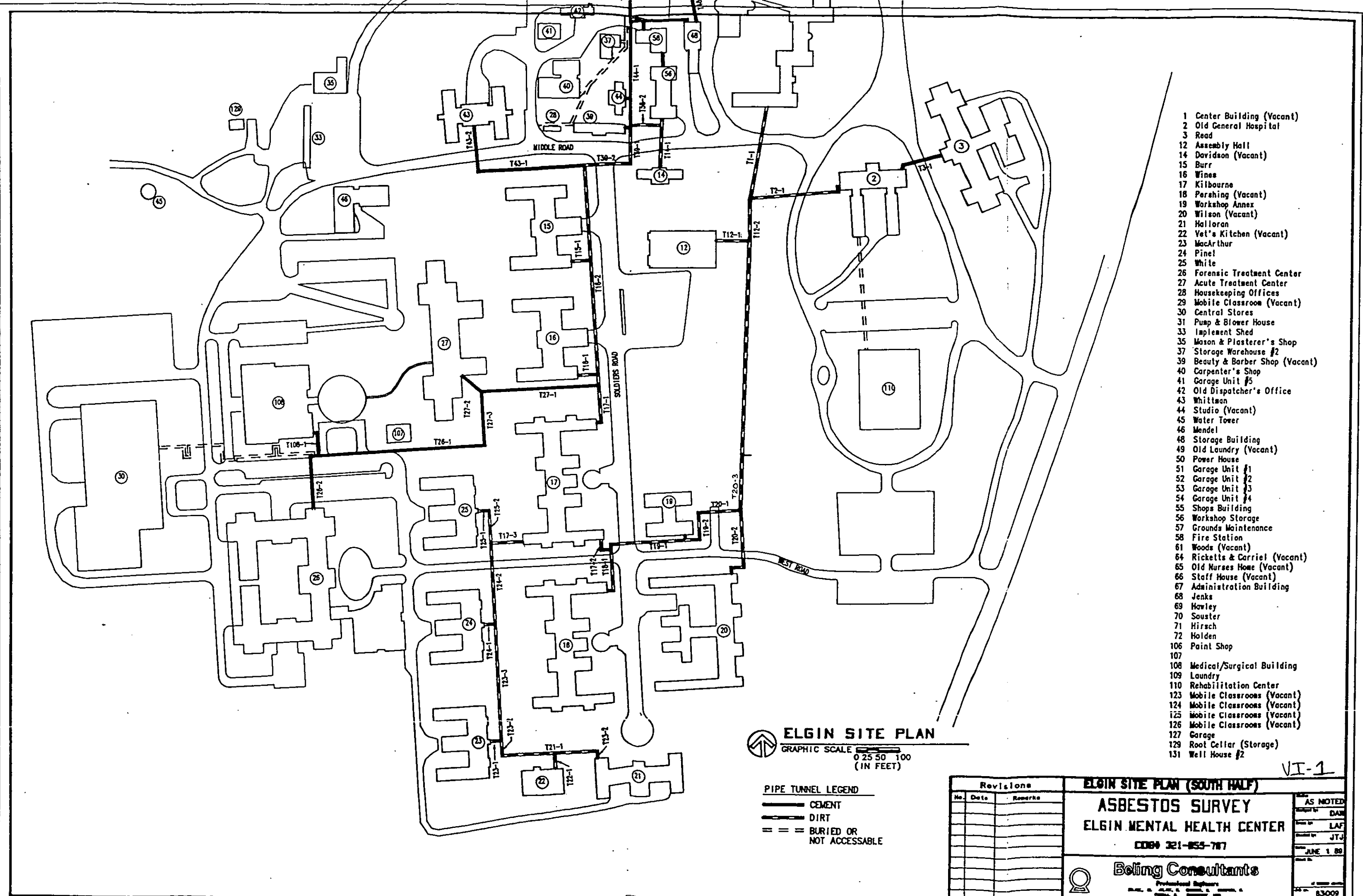


- 1 Center Building (Vacant)
- 2 Old General Hospital
- 3 Road
- 12 Assembly Hall
- 14 Davidson (Vacant)
- 15 Burr
- 16 Wines
- 17 Kilbourne
- 18 Parshing (Vacant)
- 19 Workshop Annex
- 20 Wilson (Vacant)
- 21 Halloran
- 22 Vel's Kitchen (Vacant)
- 23 MacArthur
- 24 Pinel
- 25 White
- 26 Forensic Treatment Center
- 27 Acute Treatment Center
- 28 Housekeeping Offices
- 29 Mobile Classroom (Vacant)
- 30 Central Stores
- 31 Pump & Blower House
- 33 Implement Shed
- 35 Mason & Plasterer's Shop
- 37 Storage Warehouse #2
- 39 Beauty & Barber Shop (Vacant)
- 40 Carpenter's Shop
- 41 Garage Unit #5
- 42 Old Dispatcher's Office
- 43 Whittman
- 44 Studio (Vacant)
- 45 Water Tower
- 46 Mendel
- 48 Storage Building
- 49 Old Laundry (Vacant)
- 50 Power House
- 51 Garage Unit #1
- 52 Garage Unit #2
- 53 Garage Unit #3
- 54 Garage Unit #4
- 55 Shops Building
- 56 Workshop Storage
- 57 Grounds Maintenance
- 58 Fire Station
- 61 Woods (Vacant)
- 64 Ricketts & Carriel (Vacant)
- 65 Old Nurses Home (Vacant)
- 66 Staff House (Vacant)
- 67 Administration Building
- 68 Jenks
- 69 Hawley
- 70 Souster
- 71 Hirsch
- 72 Holden
- 106 Paint Shop
- 107
- 108 Medical/Surgical Building
- 109 Laundry
- 110 Rehabilitation Center
- 123 Mobile Classrooms (Vacant)
- 124 Mobile Classrooms (Vacant)
- 125 Mobile Classrooms (Vacant)
- 126 Mobile Classrooms (Vacant)
- 127 Garage
- 129 Root Cellar (Storage)
- 131 Well House #2

ELGIN SITE PLAN
 GRAPHIC SCALE 0 25 50 100
 (IN FEET)

Revisions			ELGIN SITE PLAN (SOUTH HALF)	
No.	Date	Remarks	ASBESTOS SURVEY	
			ELGIN MENTAL HEALTH CENTER	
			CDM 321-855-787	
			Belting Consultants	
			Professional Engineers	
			AS NOTED	
			DAM	
			LAF	
			JT-J	
			JUNE 1 86	
			83009	

V-1



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- 48 Storage Building
- 49 Old Laundry (Vacant)
- 50 Power House
- 51 Garage Unit #1
- 52 Garage Unit #2
- 53 Garage Unit #3
- 54 Garage Unit #4
- 55 Shops Building
- 56 Workshop Storage
- 57 Grounds Maintenance
- 58 Fire Station
- 61 Woods (Vacant)
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- 127 Garage
- 129 Root Cellar (Storage)
- 131 Well House #2

ELGIN SITE PLAN
 GRAPHIC SCALE 0 25 50 100 (IN FEET)

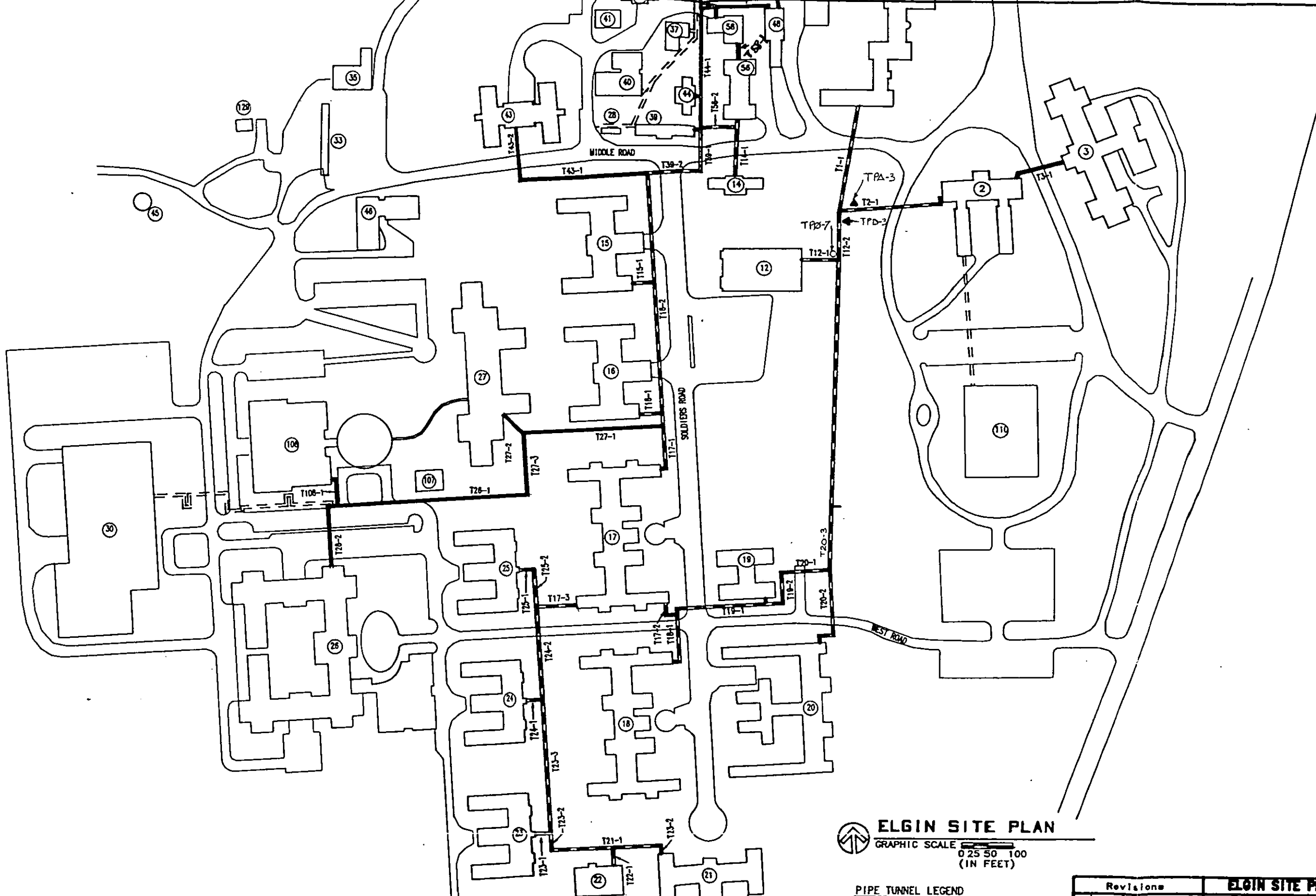
PIPE TUNNEL LEGEND
 ——— CEMENT
 - - - DIRT
 = = = BURIED OR NOT ACCESSABLE

Revisions		
No.	Date	Remarks

VI-1

ELGIN SITE PLAN (SOUTH HALF)
ASBESTOS SURVEY
ELGIN MENTAL HEALTH CENTER
 COB# 321-855-787

<p>Belting Consultants Professional Engineers 1000 ...</p>	<p>AS NOTED DAM LAF JTJ JUNE 1 88 83009</p>
---	--



- 1 Center Building (Vacant)
- 2 Old General Hospital
- 3 Road
- 12 Assembly Hall
- 14 Davidson (Vacant)
- 15 Burr
- 16 Wins
- 17 Kilbourne
- 18 Pershing (Vacant)
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ELGIN SITE PLAN
 GRAPHIC SCALE 0 25 50 100
 (IN FEET)

- PIPE TUNNEL LEGEND**
- CEMENT
 - - - DIRT
 - - - BURIED OR NOT ACCESSIBLE
 - ▲ SAMPLE LOCATION
 - PHOTO ONLY

Revisions		
No.	Date	Remarks

VI-3

ELGIN SITE PLAN (SOUTH HALF)

ASBESTOS SURVEY

ELGIN MENTAL HEALTH CENTER

COB# 321-855-787

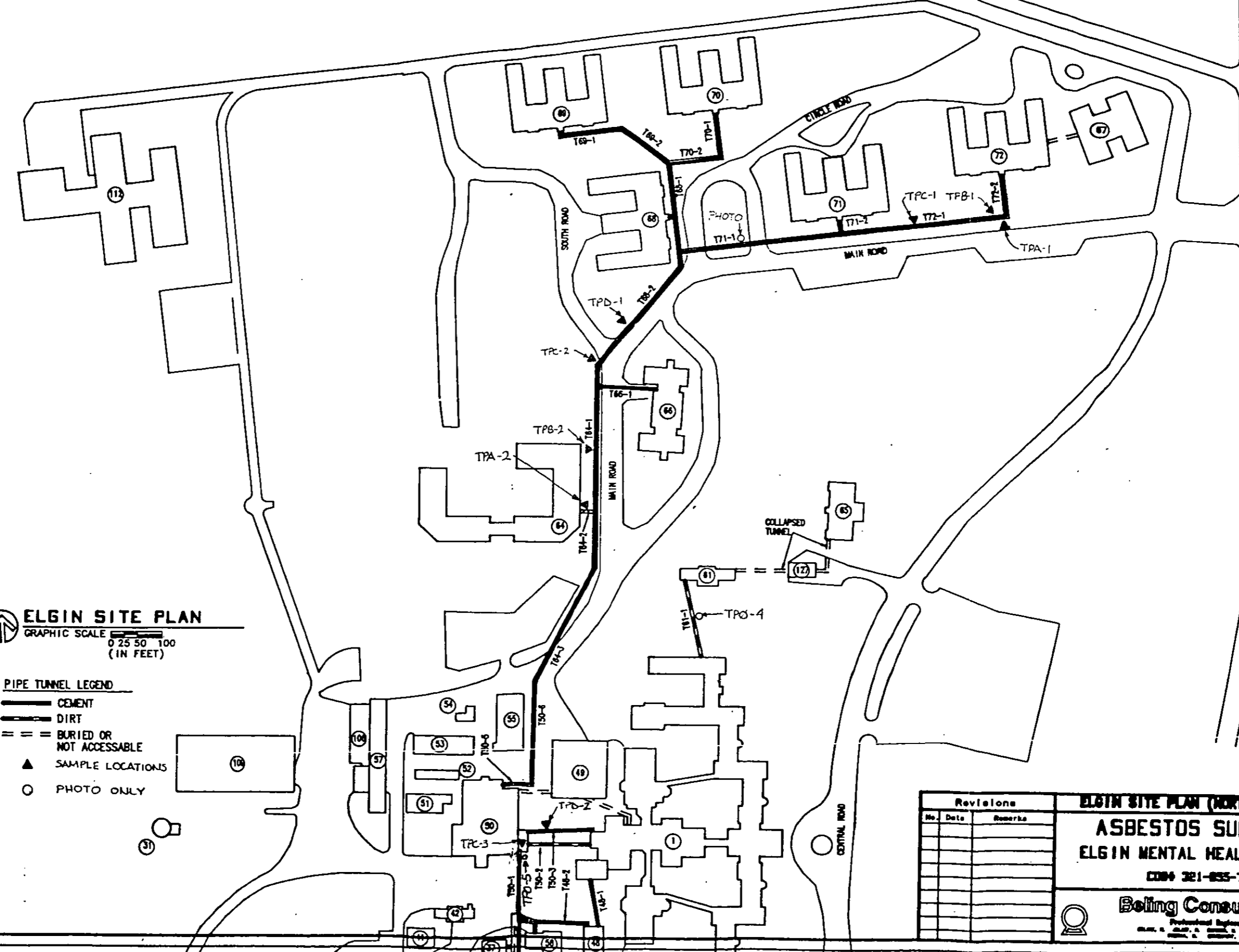
Beling Consultants

Professional Engineers
 BELING & ASSOCIATES, INC.
 1000 N. W. 10th St., Ft. Lauderdale, FL 33309

AS NOTED
Drawn by: DAK
Checked by: LAF
Reviewed by: JTJ
DATE: JUNE 1 89
Scale: 1" = 50'
Sheet No. 63009

ELGIN MENTAL HEALTH CENTER
 750 South State Street
 Elgin, Illinois 60123-7802
 (312) 742-1040

- 1 Center Building (Vacant)
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ELGIN SITE PLAN
 GRAPHIC SCALE 0 25 50 100
 (IN FEET)

PIPE TUNNEL LEGEND

- CEMENT
- - - DIRT
- = = = BURIED OR NOT ACCESSIBLE
- ▲ SAMPLE LOCATIONS
- PHOTO ONLY

Revisions		
No.	Date	Remarks

ELGIN SITE PLAN (NORTH HALF)

ASBESTOS SURVEY
ELGIN MENTAL HEALTH CENTER
 CD# 321-855-787

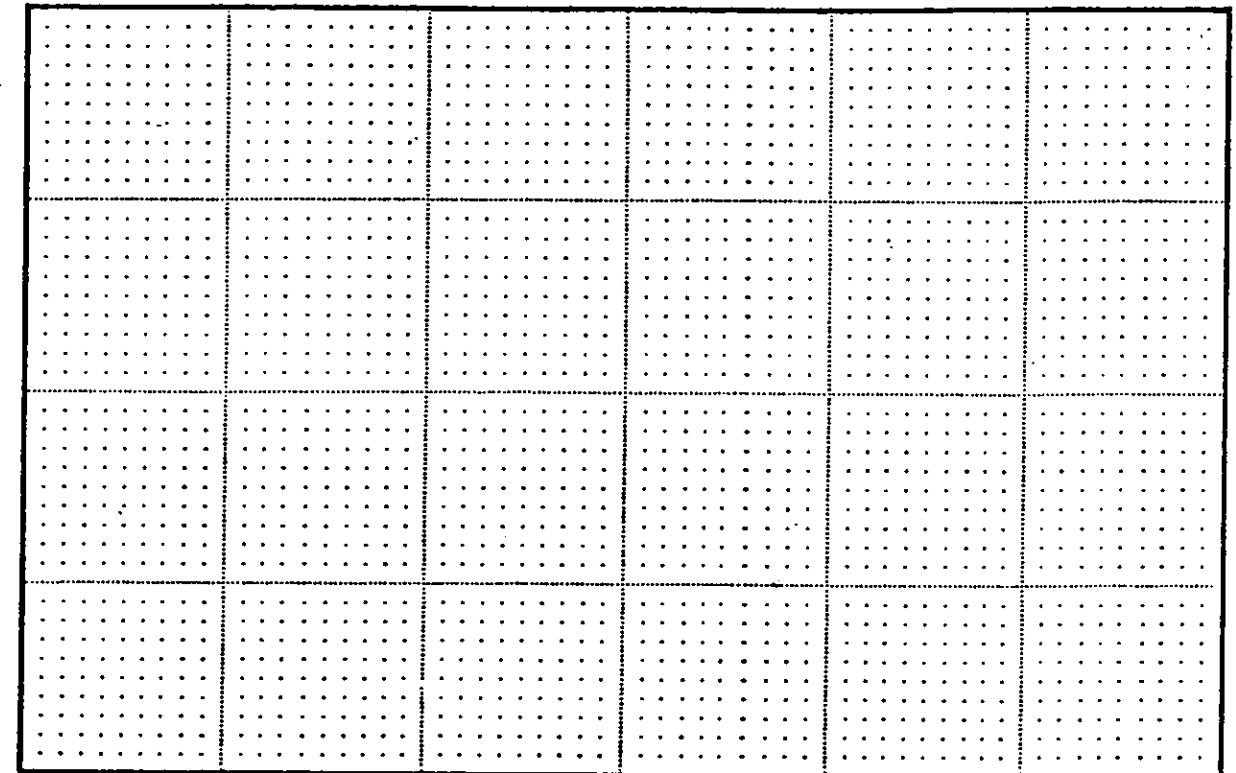
Being Consultants
 Professional Engineers
 1200 N. W. 10th St., Ft. Lauderdale, FL 33309

AS NOTED
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 JUNE 1 89
 83009

VI-4



Sample Area: _____
 Sample Area (sq. ft.): _____ Required No. Samples: _____
 Random Grid Number: _____ Scale: _____



INSTRUCTIONS FOR HOMOGENEOUS AREA, SAMPLE AND PHOTO NUMBERING SYSTEM

All homogeneous areas, samples, and photos shall be numbered using the following system:

1. HOMOGENEOUS AREAS.

The first series shall consist of the building number (if applicable).

The second series shall be three letters as follows:

The first letter designates the material type:

- M for Miscellaneous
- S for Surfacing
- T for Thermal

The second letter designates the location:

- F for Floor - (Miscellaneous)
- C for Ceiling - (Surfacing or Miscellaneous)
- W for Wall - (Surfacing or Miscellaneous)
- P for Plaster - Walls and Ceilings (Surfacing)
- P for Pipe - (Thermal)
- B for Boiler - (Thermal)
- T for Tank - (Thermal)
- F for Fire - (Thermal)
- D for Duct - (Thermal or Miscellaneous)
- M for Miscellaneous

The third letter designates the homogeneous area, with the first area designated as A and the remaining areas designated in alphabetical order.

2. SAMPLE NUMBERS.

Sample numbers contain the first and second series of numbers as described above for the numbering of homogeneous areas. The Sample Number also contains a third series of numbers which are the actual sample numbers for each homogeneous area, which are numbered consecutively starting with the number 1.

3. PHOTO NUMBERS.

Photo numbers utilize the sample number as described above.

Photos of salient, stored materials, labels, etc. which have no corresponding samples shall utilize the homogeneous area number, with a zero in place of the sample number, and then a letter such as A, B, C, etc.

RANDOM SAMPLE GRIDS

Sampling Area	Sampling Locations	Sampling Area	Sampling Locations	Sampling Area	Sampling Locations
1	9 8 1 2 7 6 5 3 4	7	5 8 1 4 3 6 2 7 9	13	8 5 2 3 6 9 7 1 4
2	8 7 1 3 9 5 4 2 6	8	5 7 1 6 3 4 2 8 9	14	4 1 6 3 9 7 8 5 2
3	4 1 7 2 9 6 8 5 3	9	3 8 4 9 2 7 5 8 1	15	3 5 6 9 2 8 7 4 1
4	6 1 8 5 9 3 2 7 4	10	5 7 3 8 1 6 2 9 4	16	4 8 3 2 5 9 7 1 6
5	6 4 3 1 5 8 9 2 7	11	5 1 6 3 4 9 7 8 2	17	8 2 7 4 5 3 1 9 6
6	7 4 3 6 1 5 2 9 8	12	7 1 9 2 4 5 6 8 3	18	2 5 9 6 1 8 4 7 3

INSPECTION DATE: 7/25/89
 SCHOOL/CLIENT: ELGIN MENTAL HEALTH CENTER
 BUILDING NAME: Pipe Tunnel
 Sample Area: BROOT-TPA
 Sample No.: BROOT-TPA: 1 TO 3
 Photo No.: BROOT-TPA 1 TO 3
 Inspector: Walter Wood

BELING CONSULTANTS, INC.

Sample Area: BROOT-TPA Inspection Date: 7/25/89
 School / Client: ELLEN MENTAL HEALTH CENTER
 Building Name: PIPE TUNNEL
 Address: 750 S. STATE
 Inspector: WARREN WARD Accreditation No.: 00100-C984
 Sample No.: BROOT-TPA 1 T03 Estimated Occupancy: 0

Type of Suspect Material

SURFACING	THERMAL SYSTEM	MISCELLANEOUS
<input type="checkbox"/> Acoustical Plaster	<input checked="" type="checkbox"/> Pipe	<input type="checkbox"/> Ceiling Tile
<input type="checkbox"/> Hard Plaster	<input type="checkbox"/> Tank	<input type="checkbox"/> Floor Tile
<input type="checkbox"/> Fireproofing	<input type="checkbox"/> Boiler	<input type="checkbox"/> Fire Door
<input type="checkbox"/> Other: _____	<input type="checkbox"/> Duct	<input type="checkbox"/> Non-Installed ACM
	<input type="checkbox"/> Other: _____	<input type="checkbox"/> Exterior Coverings
		<input type="checkbox"/> Other: _____

Description of Material Sampled: Pipe Insulation 1" to 4"
APPROX. 9,500 LF

Surrounding Areas:

Walls: Smooth Concrete Gypsum Board
 Textured Concrete Masonry
 Other _____

Floors: Concrete Carpet Tile Wood
 Other _____

Ceilings: Acoustic Tile Exposed Structure
 Textured Plaster Hard Plaster
 Other EXPOSED STRUCTURE

Condition of Material

Friable Non-Friable

Percent Damage: 0% 0% - 10% 10% - 25% over 25%

Extent of Damage: Localized Distributed

Type of Damage: None Age Water Physical

Description of Damage: Asbestos laying on deck

Disturbance Factors

1.) **Accessibility:**

Accessible of Building Occupants: Yes No

Accessible of Maintenance Personnel: Yes No

Height of Material from Floor: 5 feet

Existence of Barriers: Yes No

Suspended Ceiling Encapsulation Other: _____

2.) **Proximity to Areas Requiring Maintenance:**

<input checked="" type="checkbox"/> Electrical	<input type="checkbox"/> under 1 ft.	<input checked="" type="checkbox"/> 1 to 5 ft.	<input type="checkbox"/> over 5 ft.
<input type="checkbox"/> Mechanical	<input type="checkbox"/> under 1 ft.	<input type="checkbox"/> 1 to 5 ft.	<input type="checkbox"/> over 5 ft.
<input checked="" type="checkbox"/> Plumbing	<input checked="" type="checkbox"/> under 1 ft.	<input type="checkbox"/> 1 to 5 ft.	<input type="checkbox"/> over 5 ft.
<input type="checkbox"/> Other: _____	<input type="checkbox"/> under 1 ft.	<input type="checkbox"/> 1 to 5 ft.	<input type="checkbox"/> over 5 ft.

3.) **Ventilation System:**

Proximity to Ventilation / Air Plenum: under 5 ft. 5 to 10 ft. over 10 ft.

Supply Grille: Return Grille Exhaust

Air Movement: None Low Moderate Heavy

Describe: _____

4.) **Vibration:** None Low Moderate Heavy

Describe: Vibration CAUSED BY PIPE REPAIR

5.) **Activity / Use of Room / Area:**

Use of Room / Area: PIPE TUNNEL

Activity: None Low Moderate Heavy

Causes for Disturbance, If Any: PIPE LEAK OR REPAIR

Duration of Occupancy: None
 Low / Infrequent (0 to 2 hours)
 Moderate / Frequent (2 to 10 hours)
 High / Continual (10 to 24 hours)

Inspector's Assessment

1. Damaged or Significantly Damaged TSI
2. Damaged Surfacing ACM
3. Significantly Damaged Surfacing ACM
4. Damaged or Significantly Damaged Miscellaneous ACM
5. ACM With Potential for Damage
6. ACM With Potential for Significant Damage
7. Other Remaining Friable ACM

Type of Damage: None Age Water Physical

Severity of Damage: Low Moderate High

Extent or Spread of Damage: Localized Distributed

Probable Cause of Damage: AGE, WATER, PHYSICAL

Potential for Damage: Yes No

Potential for Significant Damage: Yes No

Explanation of Damage Assessment: leaks and deterioration of pipe insulation

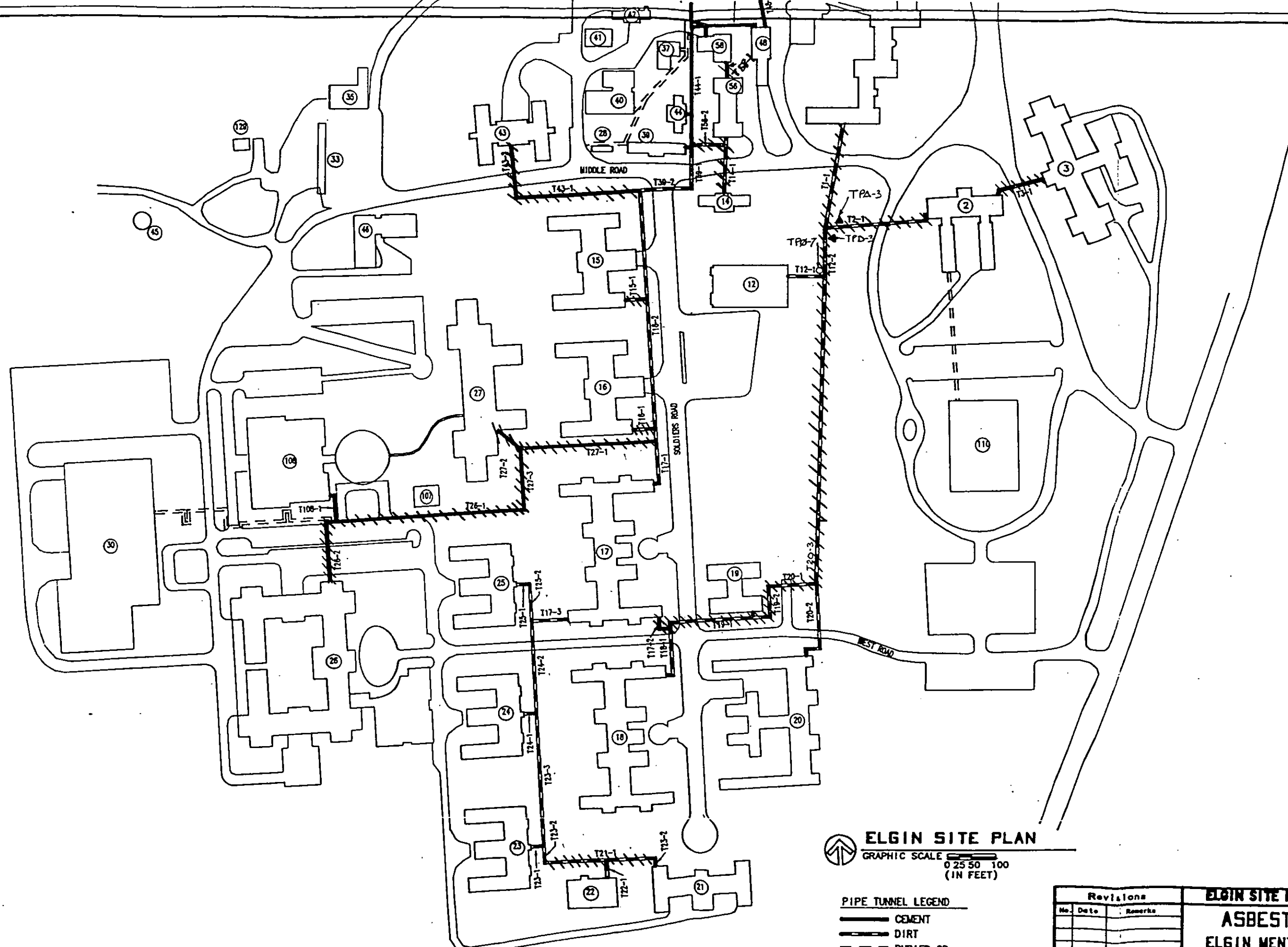
Damage Preventive Measures: Repair leaks and remove damaged areas

Comments: Damaged distributed throughout pipe tunnels

Test Results (Type - %)

Assumed 10 Chrysotile Amosite 30 Other: Crocidolite

Inspector's Signature: Warren Ward Date: 7/28/89



- 1 Center Building (Vacant)
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- 129 Root Cellar (Storage)
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ELGIN SITE PLAN
 GRAPHIC SCALE 0 25 50 100
 (IN FEET)

- PIPE TUNNEL LEGEND**
- CEMENT
 - - - DIRT
 - - - BURIED OR NOT ACCESSIBLE
 - ▲ SAMPLE LOCATION
 - PHOTO ONLY

▨ BROOK-TPA
 1"-4" PIPE
 INSULATION

Revisions		
No.	Date	Remarks

ELGIN SITE PLAN (SOUTH HALF)

ASBESTOS SURVEY

ELGIN MENTAL HEALTH CENTER

COB 321-853-787

Beling Consultants

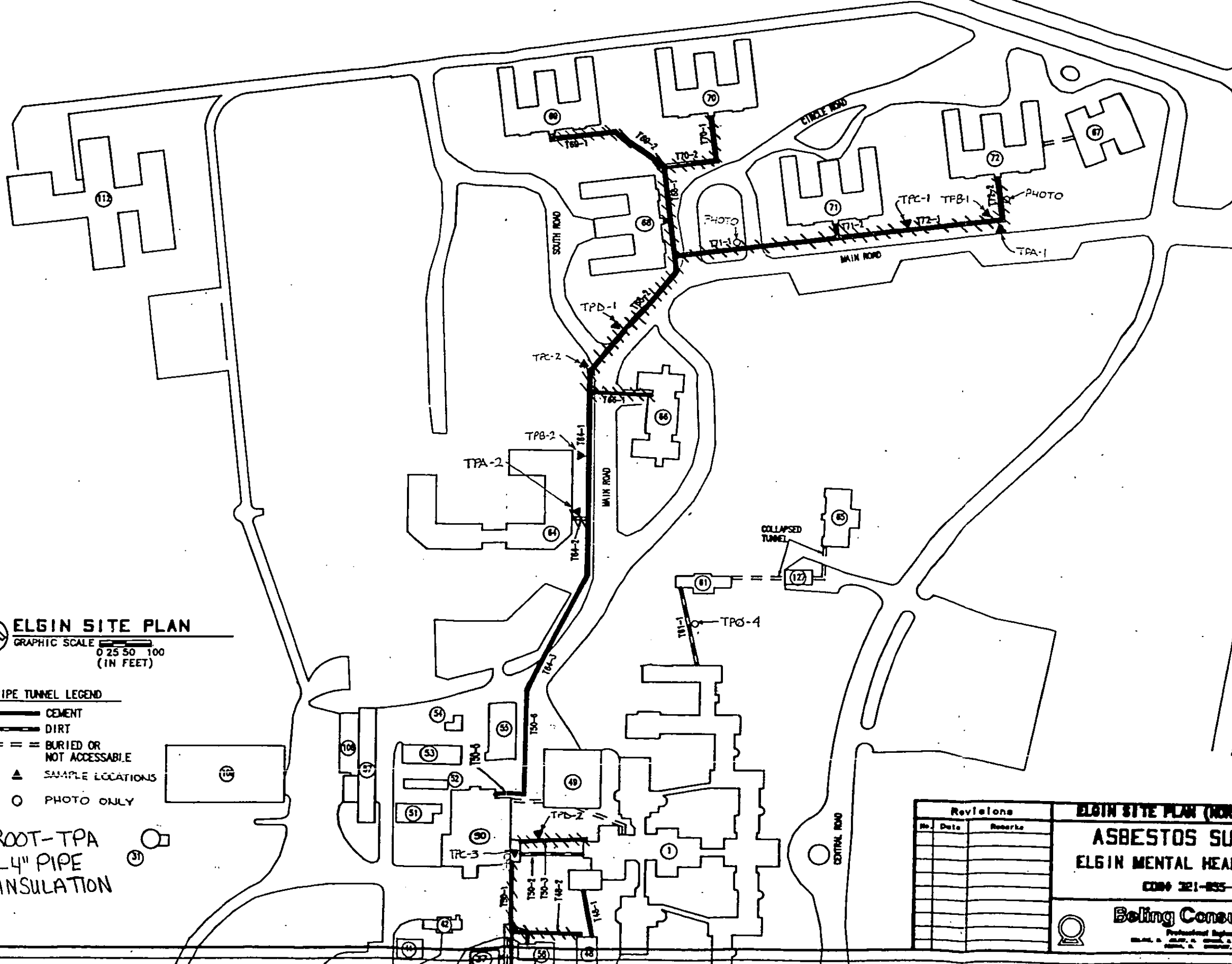
Professional Engineer
 State of New York
 License No. 10000

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DAM
LAF
JTJ
JUNE 1 89
83009

VII-2

ELGIN MENTAL HEALTH CENTER
 750 South State Street
 Elgin, Illinois 60123-7882
 (312) 742-1040

- 1 Center Building (Vacant)
- 2 Old General Hospital
- 3 Road
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ELGIN SITE PLAN
 GRAPHIC SCALE 0 25 50 100
 (IN FEET)

- PIPE TUNNEL LEGEND**
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 - ▲ SAMPLE LOCATIONS
 - PHOTO ONLY

BROOK-TPA
 1"-4" PIPE
 INSULATION

Revisions		
No.	Date	Remarks

VII-3

ELGIN SITE PLAN (NORTH HALF)

ASBESTOS SURVEY
 ELGIN MENTAL HEALTH CENTER
 CO# 321-835-707

Belting Consultants
 Professional Engineers
 1000 N. W. 10th St., Suite 100
 Ft. Lauderdale, FL 33309

AS NOTED
DAM
LAF
JTJ
JUNE 1 80
83009



Beling Consultants

LABORATORY REPORT

August 1, 1989

NIST/NVLAP ACCREDITATION NO. 1356 ASBESTOS SURVEY - BULK ASBESTOS REPORT

SAMPLES FROM: Elgin Mental Health
Center - Pipe Tunnel
DATE SAMPLED: July 26, 1989
DATE RECEIVED: July 28, 1989

DATE ANALYZED: July 28, 1989
ANALYST: Susan Edwards
JOB NUMBER: 83009

BELING SAMPLE # 24873
SAMPLE DESCRIPTION: White Fibrous Talc

FIELD # TPA-1

ASBESTIFORM MATERIAL PRESENT

CHRYSOTILE	10 %
AMOSITE	%
CROCIDOLITE	30 %
ANTHOPHYLLITE	%
ACTINOLITE	%
TOTAL % ASBESTOS	40 %

NON-ASBESTOS MATERIAL PRESENT

CELLULOSE	%
FIBROUS GLASS	%
SYNTHETIC POLYMER	%
BINDING MATERIAL	%
OTHER Talc	60 %
OTHER	%

BELING SAMPLE # 24874
SAMPLE DESCRIPTION: Not examined

FIELD # TPA-2

ASBESTIFORM MATERIAL PRESENT

CHRYSOTILE	%
AMOSITE	%
CROCIDOLITE	%
ANTHOPHYLLITE	%
ACTINOLITE	%
TOTAL % ASBESTOS	%

NON-ASBESTOS MATERIAL PRESENT

CELLULOSE	%
FIBROUS GLASS	%
SYNTHETIC POLYMER	%
BINDING MATERIAL	%
OTHER	%
OTHER	%

BELING SAMPLE # 24875
SAMPLE DESCRIPTION: Not examined

FIELD # TPA-3

ASBESTIFORM MATERIAL PRESENT

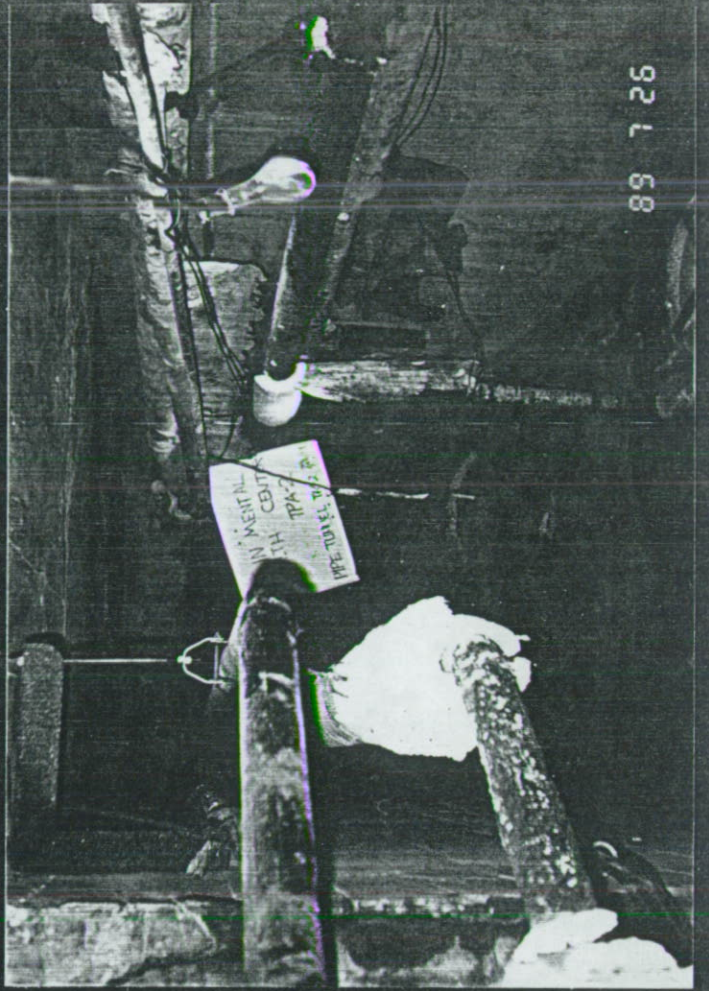
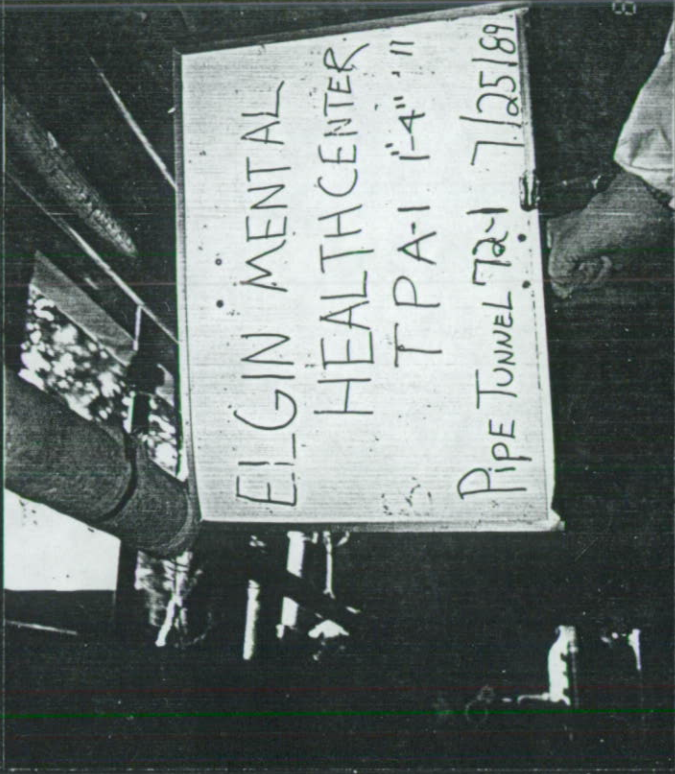
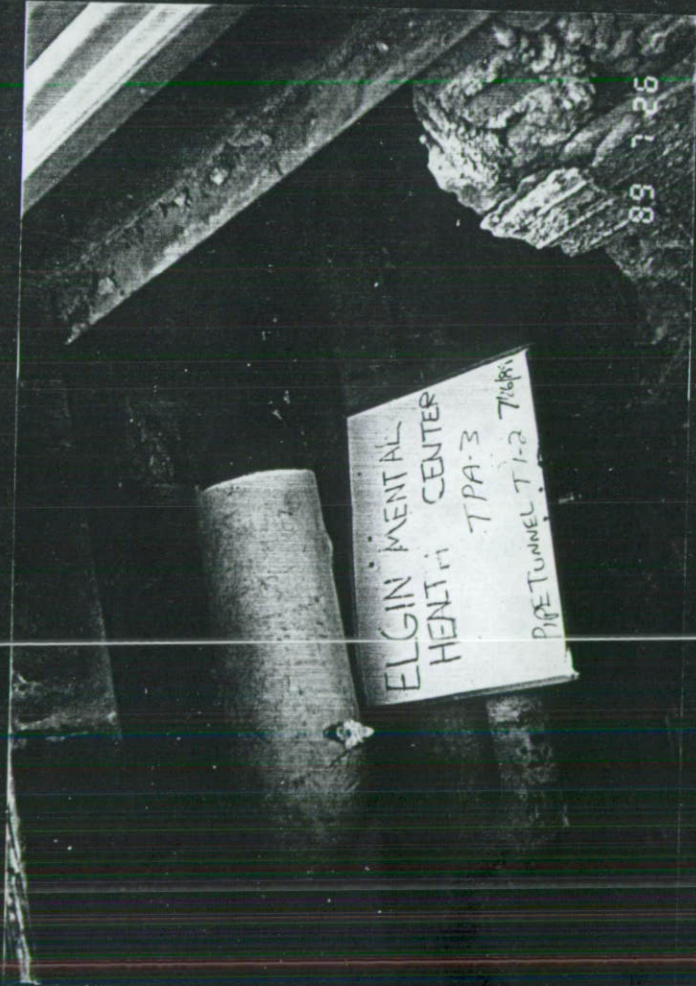
CHRYSOTILE	%
AMOSITE	%
CROCIDOLITE	%
ANTHOPHYLLITE	%
ACTINOLITE	%
TOTAL % ASBESTOS	%

NON-ASBESTOS MATERIAL PRESENT

CELLULOSE	%
FIBROUS GLASS	%
SYNTHETIC POLYMER	%
BINDING MATERIAL	%
OTHER	%
OTHER	%

1. Samples collected by Beling Consultants Asbestos Department.
2. Analyses performed using polarized light microscopy in accordance with the EPA Interim Method for determination of asbestos in bulk insulation samples; EPA-600/M4-82-020.
3. Samples will be retained minimum of 90 days unless notified by client.

Jeffery A. Wasson





BLDG NAME Pipe Tunnels CDB
BLDG NO. BROOT
HOMO AREA BROOT-TPA DESCRIPT Pipe Insulation 1"-4"
RESPONSE ACTION #3; Continue O & M. Scedule removal when practical
and cost effective, or reduce disturbance.

EXIST. COND. Damaged with localized areas of significant damage.

POT. FOR DAMAGE Yes; May be damaged by piping maintenance. Asbestos
pipe insulation may also be disturbed by physical activity in
areas of the tunnels where insulation has delaminated.

FRIABLE YES CONDITION DAMAGED
DISTURBANCE MODERATE AIR FLOW LOW

WHY Material is friable with areas of damage and localized
significant damage. Air flow is relatively low in the tunnel
area. Using the flow chart method (Form 5), response action
#3 is recommended.

PREVENTATIVE MEASURES Repair areas of damage. Keep outer covering
intact. Repair tunnel access (manholes) to prevent further damage
from water leakage.

O & M PROCEDURES Conduct periodic surveillance. Repair damaged
coverings with lag cloth and bridging encapsulant. Wear approved
respirator when entering and working in pipe tunnels.

HEALTH & SAFETY Develope and implement respirator program. Require
use of respirators anytime tunnels are entered. Conduct awareness
training for maintenance staff. Install partitions at tunnel entrances
into building basements to minimize air flow (if present).

ESTIMATED ASBESTOS REPAIR COST

CDB PROJECT NUMBER: 321-055-707

PROJECT NAME: Elgin Mental Health Center

PROJECT LOCATION: Elgin, Illinois

BUILDING NO. & NAME: Pipe Tunnel

HOMOGENEOUS AREA: BROOT T P A

REPAIR OF: Pipe Insulation

6610 LF. @ \$ 8.50 = \$ 56,185

APM

16 DAYS @ \$ 500 = \$ 8,000

ASP

16 DAYS @ \$ 400 = \$ 6,400

AIR TESTING

80 PCM'S @ \$ 25 = \$ 2,000

0 TEM'S @ \$ 200 = \$ 0

A/E FEES 7% = \$ 5,081

CONTINGENCY 10% = \$ 7,767

INDEMNIFICATION 5% = \$ 4,272

TOTAL ESTIMATED REPAIR COST = \$ 89,705

ESTIMATED ASBESTOS REMOVAL COST

CDB PROJECT NUMBER: 321-055-707

PROJECT NAME: Elgin Mental Health Center

PROJECT LOCATION: Elgin, Illinois

BUILDING NO. & NAME Pipe Tunnel

LOCATION OF REMOVAL: BROOT - TPA

REMOVAL OF: Pipe Insulation 1'-4"

9,505 @ \$ 32.95 = \$313,190

REPLACEMENT COST @ \$ 16.50 = \$156,833

APM

33 DAYS @ \$ 500 = \$ 16,500

ASP

33 DAYS @ \$ 400 = \$ 13,200

AIR TESTING

231 PCM'S @ \$ 25 = \$ 5,775

13 TEM'S @ \$ 200 = \$ 2,600

A/E FEES

7% \$ 508,098 = \$ 35,567

CONTINGENCY

10% \$ 543,665 = \$ 54,367

INDEMNIFICATION 5% \$ 598,032 = \$ 29,902

TOTAL ESTIMATED REMOVAL COST \$627,934

ESTIMATED ANNUAL ASBESTOS O&M COST

CDB PROJECT NUMBER: 321-055-707

PROJECT NAME: Elgin Mental Health Center

PROJECT LOCATION: Elgin, Illinois

BUILDING NO. & NAME: Pipe Tunnel

HOMOGENEOUS AREA DESIGNATION: BROOT - TPA

OPERATIONS & MAINTENANCE ON: Pipe Insulation 1"-4"

DESIGNATED PERSON

60 HRS. @ \$ 25 = \$ 1500

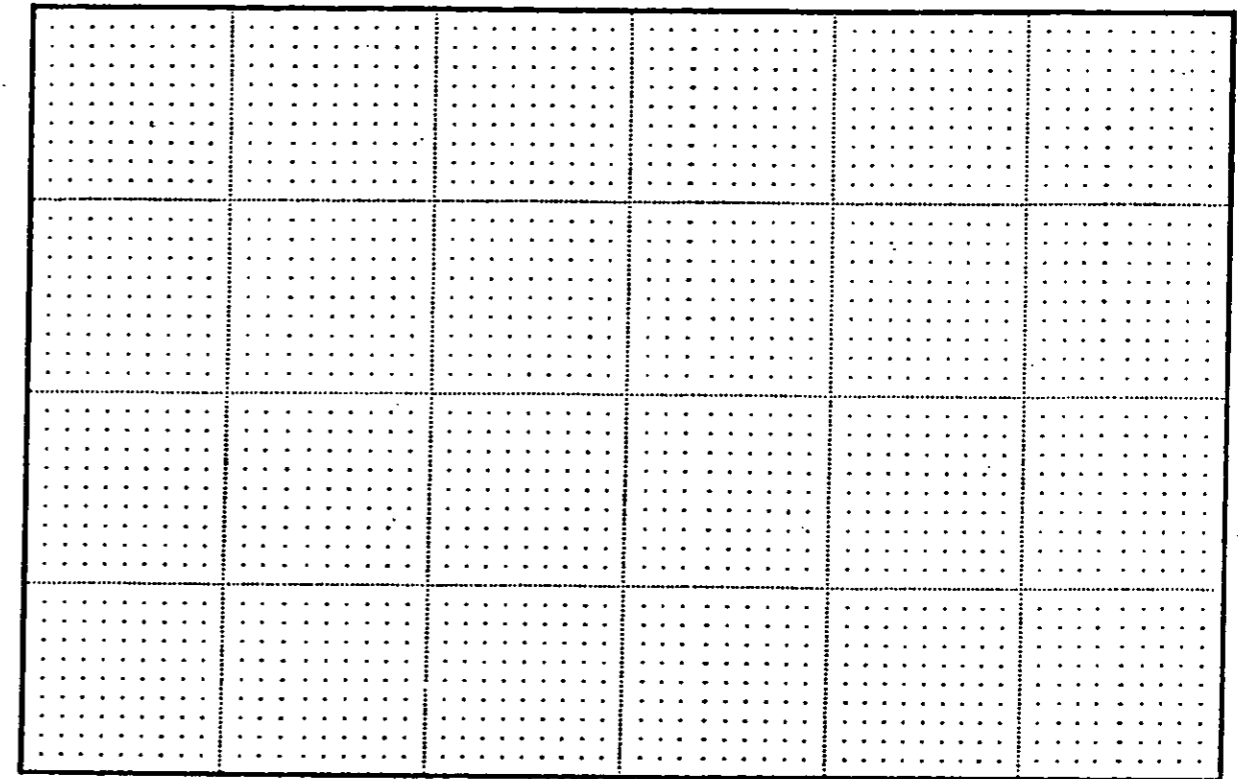
MATERIALS

Lag cloth; 50% \$ 1000 = \$ 500
Bridging Encap.

TOTAL ESTIMATED ANNUAL O & M COST = \$ 2000



Sample Area: _____
 Sample Area (sq. ft.): _____ Required No. Samples: _____
 Random Grid Number: _____ Scale: _____



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- F for Floor - (Miscellaneous)
- C for Ceiling - (Surfacing or Miscellaneous)
- W for Wall - (Surfacing or Miscellaneous)
- P for Plaster - Walls and Ceilings (Surfacing)
- P for Pipe - (Thermal)
- B for Boiler - (Thermal)
- T for Tank - (Thermal)
- F for Flue - (Thermal)
- D for Duct - (Thermal or Miscellaneous)
- M for Miscellaneous

The third letter designates the homogeneous area, with the first area designated as A and the remaining areas designated in alphabetical order.

2. SAMPLE NUMBERS.

Sample numbers contain the first and second series of numbers as described above for the numbering of homogeneous areas. The Sample Number also contains a third series of numbers which are the actual sample numbers for each homogeneous area, which are numbered consecutively starting with the number 1.

3. PHOTO NUMBERS.

Photo numbers utilize the sample number as described above.

Photos of egress, stored materials, labels, etc. which have no corresponding samples shall utilize the homogeneous area number, with a zero in place of the sample number, and then a letter such as A, B, C, etc.

RANDOM SAMPLE GRIDS

Sampling Area	Sampling Locations	Sampling Area	Sampling Locations	Sampling Area	Sampling Locations
1	9 8 1 2 7 6 5 3 4	7	5 8 1 4 3 6 2 7 9	13	8 5 2 3 8 9 7 1 4
2	8 7 1 3 9 5 4 2 6	8	5 7 1 6 3 4 2 8 9	14	4 1 6 3 9 7 8 5 2
3	4 1 7 2 9 6 8 5 3	9	3 6 4 9 2 7 5 8 1	15	3 5 6 2 2 6 7 4 1
4	6 1 8 5 9 3 2 7 4	10	5 7 3 8 1 6 2 9 4	16	4 8 3 2 5 9 7 1 6
5	6 4 3 1 5 8 9 2 7	11	5 1 6 3 4 9 7 8 2	17	8 2 7 4 5 3 1 9 6
6	7 4 3 8 1 5 2 9 8	12	7 1 9 2 4 5 6 8 3	18	2 5 9 6 1 8 4 7 3

INSPECTION DATE: 7/25/87
 SCHOOL / CLIENT: ELLIN MENTAL HEALTH CENTER
 BUILDING NAME: Pipe Tunnel
 Sample Area: BROOT-TPB
 Sample No.: BROOT-TPB 1 TO 2
 Photo No.: BROOT-TPB 1 TO 2
 Inspector: WARREN WARD

BELING CONSULTANTS, INC.

Sample Area: 7TH BRROT TPB Inspection Date: 7/25/89
 School / Client: ELGIN MENTAL HEALTH CENTER
 Building Name: Pipe Tunnel
 Address: 750 S State
 Inspector: Warren Ward Accreditation No.: CA100-C434
 Sample No.: 7TH BRROT TPB 1 TO 2 Estimated Occupancy: 0

Type of Suspect Material

SURFACING	THERMAL SYSTEM	MISCELLANEOUS
<input type="checkbox"/> Acoustical Plaster	<input checked="" type="checkbox"/> Pipe	<input type="checkbox"/> Ceiling Tile
<input type="checkbox"/> Hard Plaster	<input type="checkbox"/> Tank	<input type="checkbox"/> Floor Tile
<input type="checkbox"/> Fireproofing	<input type="checkbox"/> Boiler	<input type="checkbox"/> Fire Door
<input type="checkbox"/> Other: _____	<input type="checkbox"/> Duct	<input type="checkbox"/> Non-Installed ACM
	<input type="checkbox"/> Other: _____	<input type="checkbox"/> Exterior Coverings
		<input type="checkbox"/> Other: _____

Description of Material Sampled: Pipe Insulation 5" to 10"
APPROX. 17,920 LF

Surrounding Areas:

Walls: Smooth Concrete Gypsum Board
 Textured Concrete Masonry
 Other _____
 Floors: Concrete Carpet Tile Wood
 Other _____
 Ceilings: Acoustic Tile Exposed Structure
 Textured Plaster Hard Plaster
 Other EXPOSED STRUCTURE

Condition of Material

Friable Non-Friable
 Percent Damage: 0% 0% - 10% 10% - 25% over 25%
 Extent of Damage: Localized Distributed
 Type of Damage: None Age Water Physical
 Description of Damage: Pipe Insulation torn and missing

Disturbance Factors

1.) Accessibility:
 Accessible of Building Occupants: Yes No
 Accessible of Maintenance Personnel: Yes No
 Height of Material from Floor: 5 feet
 Existence of Barriers: Yes No
 Suspended Ceiling Encapsulation Other: _____

2.) Proximity to Areas Requiring Maintenance:

<input checked="" type="checkbox"/> Electrical	<input type="checkbox"/> under 1 ft.	<input checked="" type="checkbox"/> 1 to 5 ft.	<input type="checkbox"/> over 5 ft.
<input type="checkbox"/> Mechanical	<input type="checkbox"/> under 1 ft.	<input type="checkbox"/> 1 to 5 ft.	<input type="checkbox"/> over 5 ft.
<input checked="" type="checkbox"/> Plumbing	<input type="checkbox"/> under 1 ft.	<input checked="" type="checkbox"/> 1 to 5 ft.	<input type="checkbox"/> over 5 ft.
<input type="checkbox"/> Other: _____	<input type="checkbox"/> under 1 ft.	<input type="checkbox"/> 1 to 5 ft.	<input type="checkbox"/> over 5 ft.

3.) Ventilation System:

Proximity to Ventilation / Air Plenum: under 5 ft. 5 to 10 ft. over 10 ft.
 Supply Grille: Return Grille Exhaust
 Air Movement: None Low Moderate Heavy
 Describe: _____

4.) Vibration: None Low Moderate Heavy

Describe: VIBRATION CAUSED BY PIPE REPAIR

5.) Activity / Use of Room / Area:

Use of Room / Area: Pipe Tunnel
 Activity: None Low Moderate Heavy
 Causes for Disturbance, If Any: PIPE LEAK + REPAIR
 Duration of Occupancy: _____
 None
 Low / Infrequent (0 to 2 hours)
 Moderate / Frequent (2 to 10 hours)
 High / Continual (10 to 24 hours)

Inspector's Assessment

- 1. Damaged or Significantly Damaged TSI
- 2. Damaged Surfacing ACM
- 3. Significantly Damaged Surfacing ACM
- 4. Damaged or Significantly Damaged Miscellaneous ACM
- 5. ACM With Potential for Damage
- 6. ACM With Potential for Significant Damage
- 7. Other Remaining Friable ACM

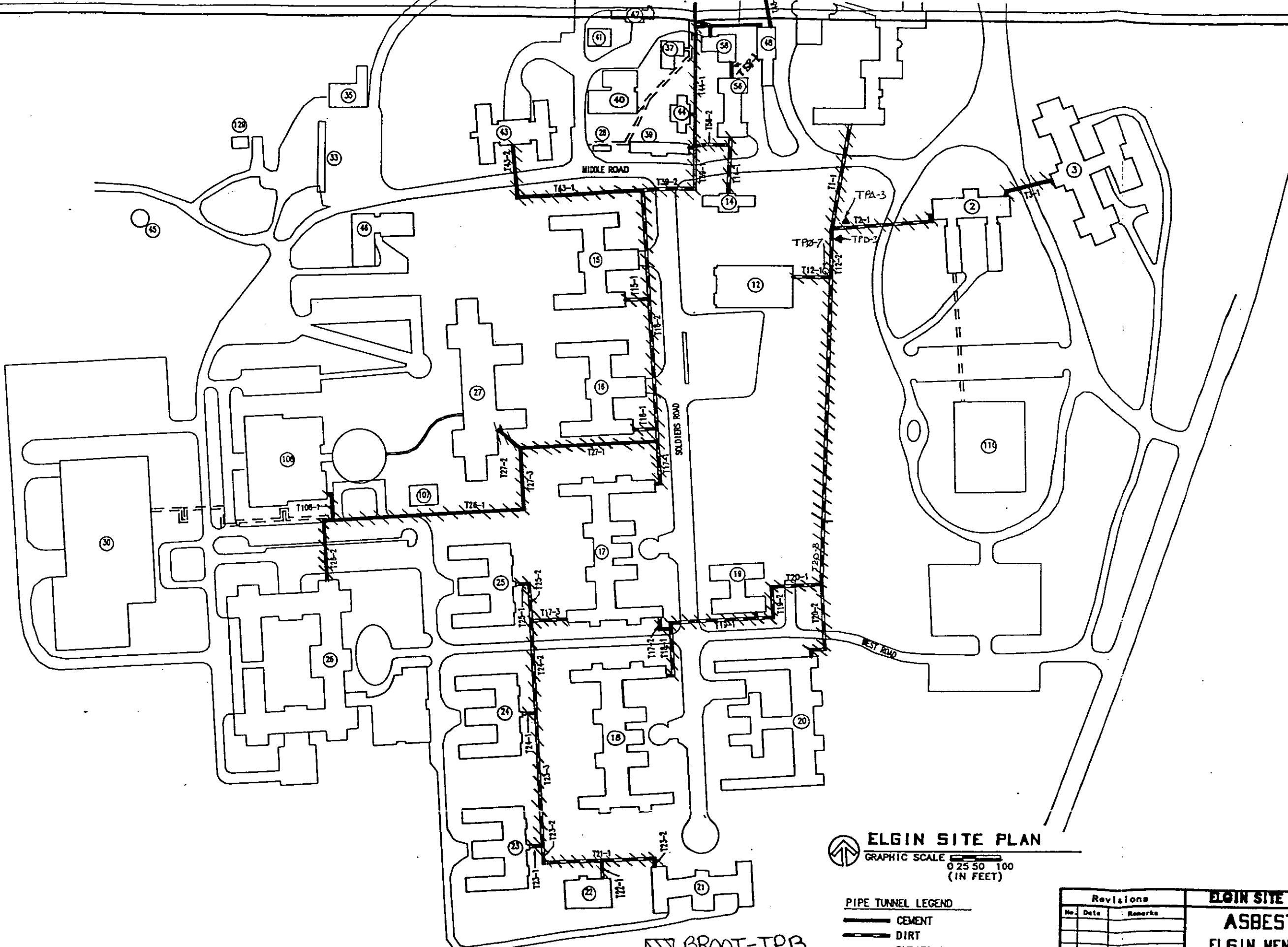
Type of Damage: None Age Water Physical
 Severity of Damage: None Low Moderate High
 Extent or Spread of Damage: Localized Distributed
 Probable Cause of Damage: AGE, WATER + PHYSICAL
 Potential for Damage: Yes No
 Potential for Significant Damage: Yes No
 Explanation of Damage Assessment: Pipe leaks and pipe deterioration

Damage Preventive Measures: Repair leaks and replace pipe deterioration

Comments: Damaged pipe distributed throughout pipe tunnels

Test Results (Type - %)
 Assumed 20 Chrysotile Amosite 35 Other: Crocidolite

Inspector's Signature: Warren Ward Date: 7/28/89



- 1 Center Building (Vacant)
- 2 Old General Hospital
- 3 Road
- 12 Assembly Hall
- 14 Davidson (Vacant)
- 15 Burr
- 16 Wines
- 17 Kilbourne
- 18 Pershing (Vacant)
- 19 Workshop Annex
- 20 Wilson (Vacant)
- 21 Halloran
- 22 Vet's Kitchen (Vacant)
- 23 MacArthur
- 24 Pinel
- 25 White
- 26 Forensic Treatment Center
- 27 Acute Treatment Center
- 28 Housekeeping Offices
- 29 Mobile Classroom (Vacant)
- 30 Central Stores
- 31 Pump & Blower House
- 33 Implement Shed
- 35 Mason & Plasterer's Shop
- 37 Storage Warehouse #2
- 39 Beauty & Barber Shop (Vacant)
- 40 Carpenter's Shop
- 41 Garage Unit #5
- 42 Old Dispatcher's Office
- 43 Whittman
- 44 Studio (Vacant)
- 45 Water Tower
- 45 Mendel
- 48 Storage Building
- 49 Old Laundry (Vacant)
- 50 Power House
- 51 Garage Unit #1
- 52 Garage Unit #2
- 53 Garage Unit #3
- 54 Garage Unit #4
- 55 Shops Building
- 56 Workshop Storage
- 57 Grounds Maintenance
- 58 Fire Station
- 61 Woods (Vacant)
- 64 Ricketts & Carriel (Vacant)
- 65 Old Nurses Home (Vacant)
- 66 Staff House (Vacant)
- 67 Administration Building
- 68 Jenks
- 69 Hawley
- 70 Souster
- 71 Hirsch
- 72 Holden
- 106 Paint Shop
- 107
- 108 Medical/Surgical Building
- 109 Laundry
- 110 Rehabilitation Center
- 123 Mobile Classrooms (Vacant)
- 124 Mobile Classrooms (Vacant)
- 125 Mobile Classrooms (Vacant)
- 126 Mobile Classrooms (Vacant)
- 127 Garage
- 129 Root Cellar (Storage)
- 131 Well House #2

ELGIN SITE PLAN
 GRAPHIC SCALE 0 25 50 100 (IN FEET)

BROOT-TPB
 5"-10" PIPE INSULATION

- PIPE TUNNEL LEGEND**
- CEMENT
 - - - DIRT
 - == BURIED OR NOT ACCESSIBLE
 - ▲ SAMPLE LOCATION
 - PHOTO ONLY

Revisions		
No.	Date	Remarks

ELGIN SITE PLAN (SOUTH HALF)

ASBESTOS SURVEY
ELGIN MENTAL HEALTH CENTER
 COB# 321-853-787

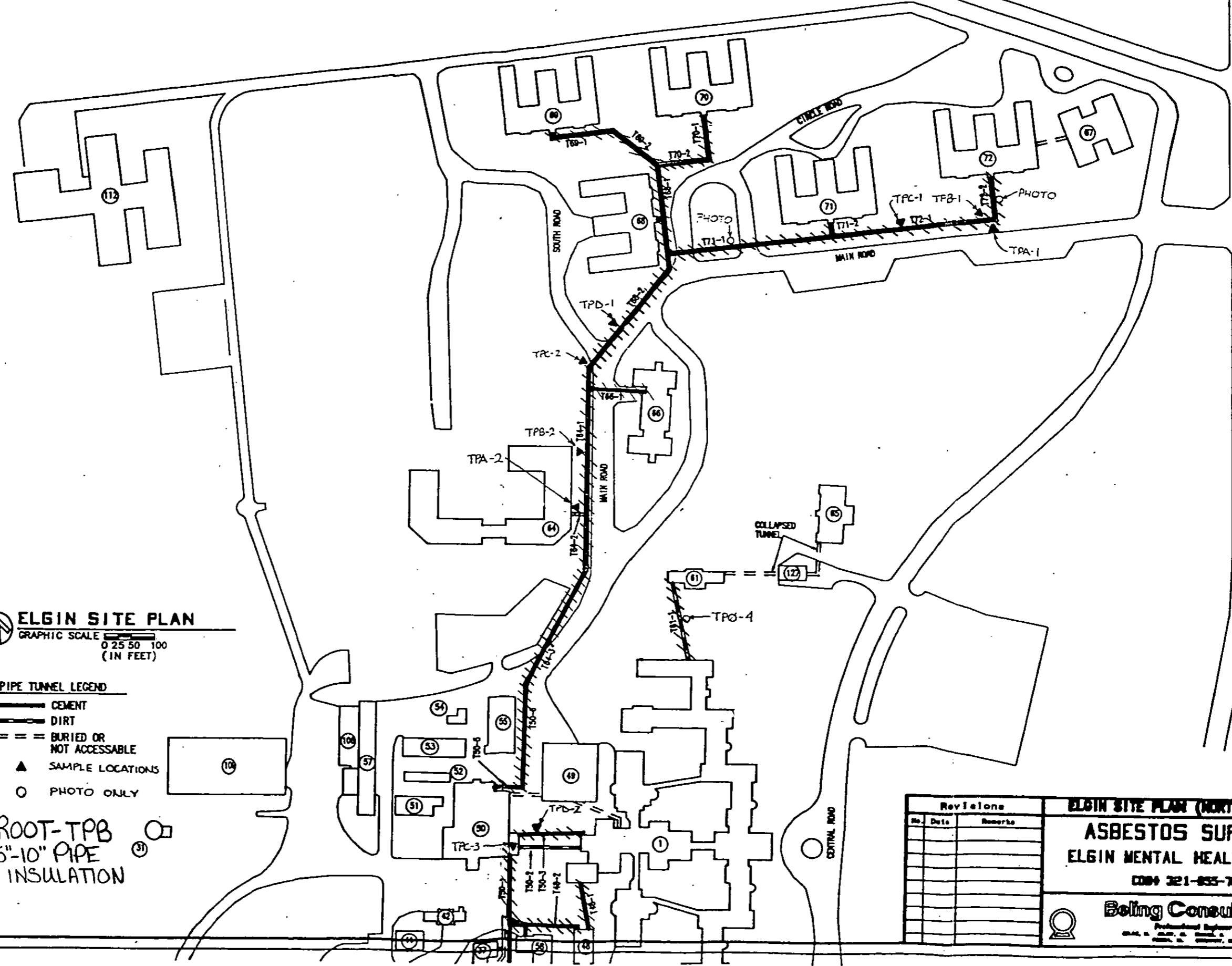
Boling Consultants
 Professional Engineers
 83009

AS NOTED
 DAM
 LAF
 JTJ
 JUNE 1 89

VII-12

ELGIN MENTAL HEALTH CENTER
 750 South State Street
 Elgin, Illinois 60123-7892
 (312) 742-1040

- 1 Center Building (Vacant)
- 2 Old General Hospital
- 3 Road
- 12 Assembly Hall
- 14 Davidson (Vacant)
- 15 Burr
- 16 Wine
- 17 Kilbourne
- 18 Parahing (Vacant)
- 19 Workshop Annex
- 20 Wilson (Vacant)
- 21 Halloran
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- 126 Mobile Classrooms (Vacant)
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- 129 Root Cellar (Storage)
- 131 Well House #2



ELGIN SITE PLAN
 GRAPHIC SCALE 0 25 50 100 (IN FEET)

- PIPE TUNNEL LEGEND**
- CEMENT
 - - - - DIRT
 - · · · BURIED OR NOT ACCESSIBLE
 - ▲ SAMPLE LOCATIONS
 - PHOTO ONLY

BROOT-TPB
 5"-10" PIPE INSULATION

Revisions		
No.	Date	Remarks

VII-13

ELGIN SITE PLAN (NORTH HALF)

ASBESTOS SURVEY
ELGIN MENTAL HEALTH CENTER
 COM 321-835-787

Being Consultants
 Professional Engineers
 1000 N. State St., Suite 100, Elgin, IL 60120

AS NOTED
DAM
LAF
JTJ
JUNE 1 88
83009



Beling Consultants

LABORATORY REPORT

August 1, 1989

NIST/NVLAP ACCREDITATION NO. 1356
ASBESTOS SURVEY - BULK ASBESTOS REPORT

SAMPLES FROM: Elgin Mental Health
Center - Pipe Tunnel
DATE SAMPLED: July 26, 1989
DATE RECEIVED: July 28, 1989

DATE ANALYZED: July 28, 1989
ANALYST: Susan Edwards
JOB NUMBER: 83009

BELING SAMPLE # 24876
SAMPLE DESCRIPTION: White Fibrous Talc

FIELD # TPB-1

ASBESTIFORM MATERIAL PRESENT

CHRYBOTILE	20 %
AMOSITE	%
CROCIDOLITE	35 %
ANTHOPHYLLITE	%
ACTINOLITE	%
TOTAL % ASBESTOS	55 %

NON-ASBESTOS MATERIAL PRESENT

CELLULOSE	%
FIBROUS GLASS	%
SYNTHETIC POLYMER	%
BINDING MATERIAL	%
OTHER Talc	45 %
OTHER	%

BELING SAMPLE # 24877
SAMPLE DESCRIPTION: Not examined

FIELD # TPB-2

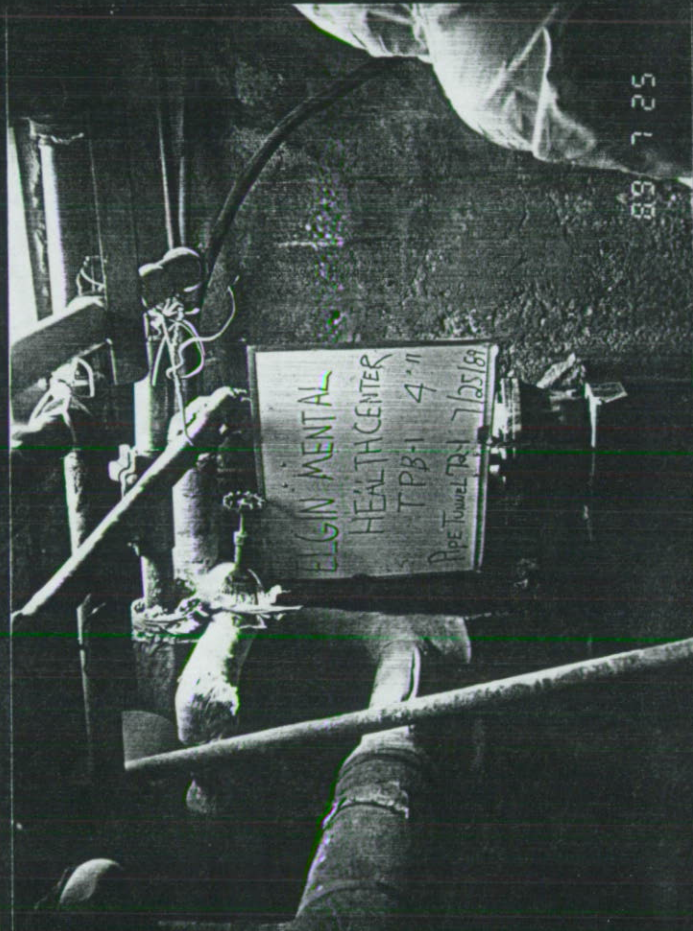
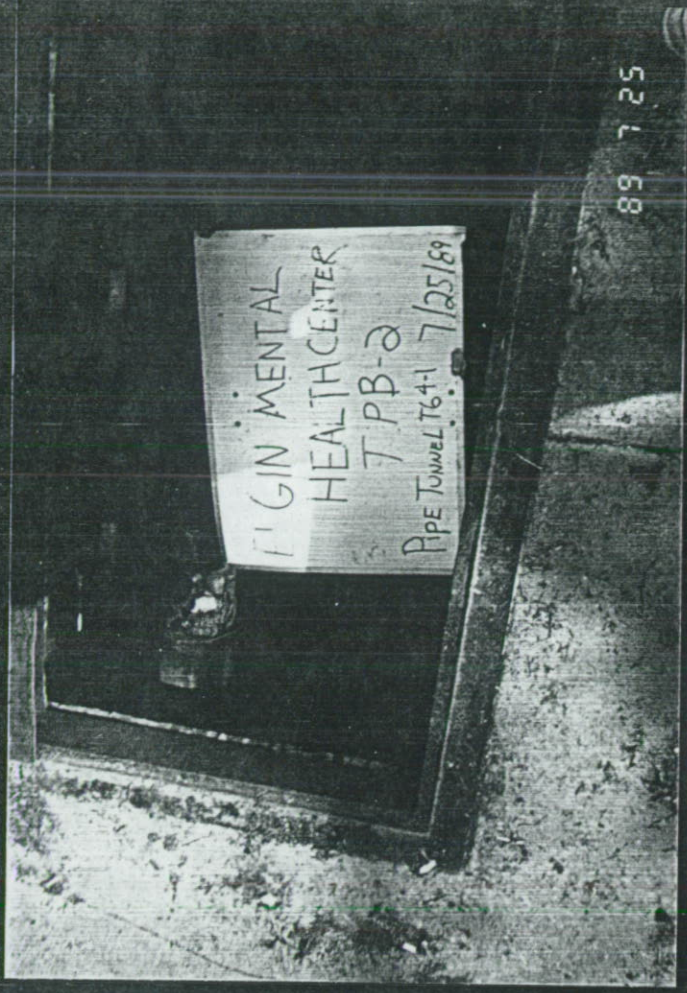
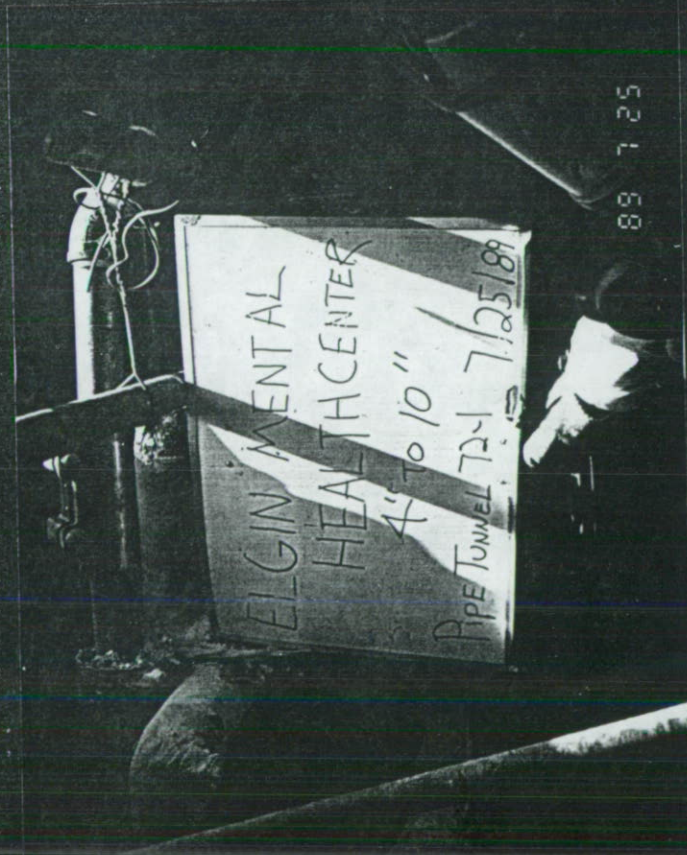
ASBESTIFORM MATERIAL PRESENT

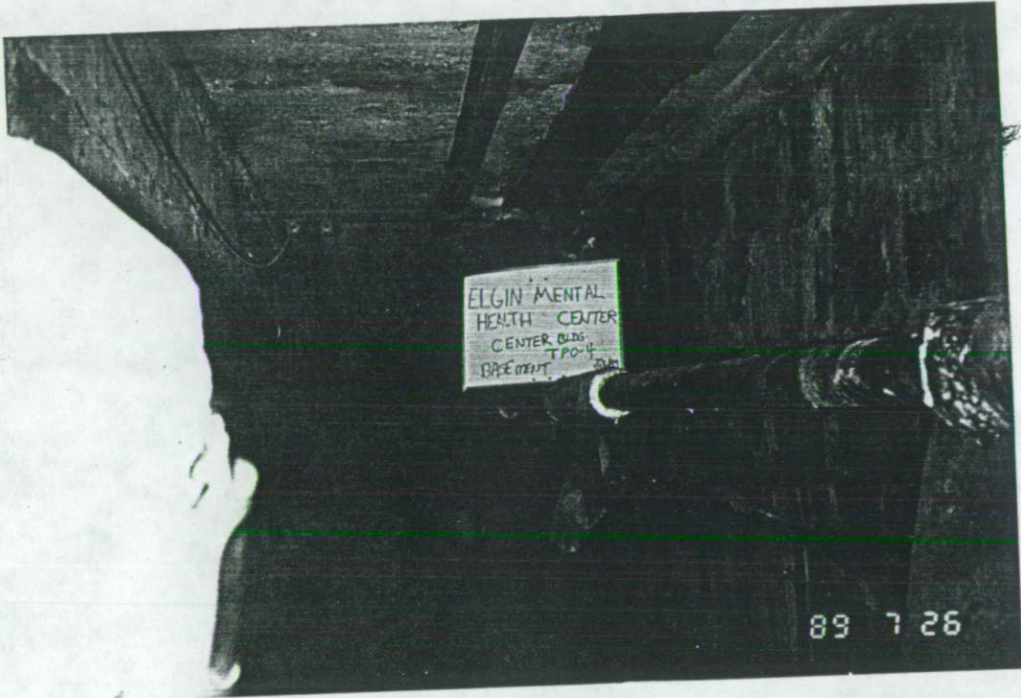
CHRYBOTILE	%
AMOSITE	%
CROCIDOLITE	%
ANTHOPHYLLITE	%
ACTINOLITE	%
TOTAL % ASBESTOS	%

NON-ASBESTOS MATERIAL PRESENT

CELLULOSE	%
FIBROUS GLASS	%
SYNTHETIC POLYMER	%
BINDING MATERIAL	%
OTHER	%
OTHER	%

1. Samples collected by Beling Consultants Asbestos Department.
2. Analyses performed using polarized light microscopy in accordance with the EPA Interim Method for determination of asbestos in bulk insulation samples; EPA-600/M4-82-020.
3. Samples will be retained minimum of 90 days unless notified by client.





BLDG NAME Pipe Tunnels CDB BLDG NO. BROOT
HOMO AREA BROOT- TPB DESCRIPT Pipe Insulation 5"-10"
RESPONSE ACTION #3; Continue O & M. Schedule removal when practical
and cost effective, or reduce disturbance.

EXIST. COND. Damaged with localized areas of significant damage.

POT. FOR DAMAGE Yes; May be damaged by piping maintenance. Asbestos
pipe insulation may also be disturbed by physical activity in
areas of the tunnels where insulation has delaminated.

FRIABLE YES CONDITION DAMAGED
DISTURBANCE MODERATE AIR FLOW LOW

WHY Material is friable with areas of damage and localized
significant damage. Air flow is relatively low in the tunnel
area. Using the flow chart method (Form 5), response action
#3 is recommended.

PREVENTATIVE MEASURES Repair areas of damage. Keep outer covering
intact. Repair tunnel access (manholes) to prevent further damage
from water leakage.

O & M PROCEDURES Conduct periodic surveillance. Repair damaged
coverings with lag cloth and bridging encapsulant. Wear approved
respirator when entering and working in pipe tunnels.

HEALTH & SAFETY Develop and implement respirator program. Require
use of respirators anytime tunnels are entered. Conduct awareness
training for maintenance staff. Install partitions at tunnel entrances
into building basements to minimize air flow (if present).

ESTIMATED ANNUAL ASBESTOS O&M COST

CDB PROJECT NUMBER: 321-055-707

PROJECT NAME: Elgin Mental Health Center

PROJECT LOCATION: Elgin, Illinois

BUILDING NO. & NAME: Pipe Tunnel

HOMOGENEOUS AREA DESIGNATION: BROOT - TPB

OPERATIONS & MAINTENANCE ON: Pipe Insultation 5"-10"

DESIGNATED PERSON

160 HRS. @ \$ 25 = \$ 4,000

MATERIALS

Lag cloth; 50% \$ 4,000 = \$ 2,000
Bridging Encap.

TOTAL ESTIMATED ANNUAL O & M COST = \$ 6,000

ESTIMATED ASBESTOS REPAIR COST

CDB PROJECT NUMBER: 321-055-707

PROJECT NAME: Elgin Mental Health Center

PROJECT LOCATION: Elgin, Illinois

BUILDING NO. & NAME: Pipe Tunnels

HOMOGENEOUS AREA: BROOT T P B

REPAIR OF: Pipe Insulation

15,995 LF. @ \$ 16.50 = \$ 263,918

APM

60 DAYS @ \$ 500 = \$ 30,000

ASP

60 DAYS @ \$ 400 = \$ 24,000

AIR TESTING

420 PCM'S @ \$ 25 = \$ 10,500

0 TEM'S @ \$ 200 = \$ 0

A/E FEES 7% = \$ 22,989

CONTINGENCY 10% = \$ 35,141

INDEMNIFICATION 5% = \$ 19,327

TOTAL ESTIMATED REPAIR COST = \$ 405,875

ESTIMATED ASBESTOS REMOVAL COST

CDB PROJECT NUMBER: 321-055-707

PROJECT NAME: Elgin Mental Health Center

PROJECT LOCATION: Elgin, Illinois

BUILDING NO. & NAME Pipe Tunnel

LOCATION OF REMOVAL: BROOT - TPB

REMOVAL OF: Pipe Insulation

17,920 @ \$ 55.30 = \$990,976

REPLACEMENT COST @ \$ 25.50 = \$456,960

APM

120 DAYS @ \$ 500 = \$ 60,000

ASP

120 DAYS @ \$ 400 = \$ 48,000

AIR TESTING

1200 PCM'S @ \$ 25 = \$ 30,000

52 TEM'S @ \$ 200 = \$ 10,400

A/E FEES

7% \$ 1,596,336 = \$ 111,744

CONTINGENCY

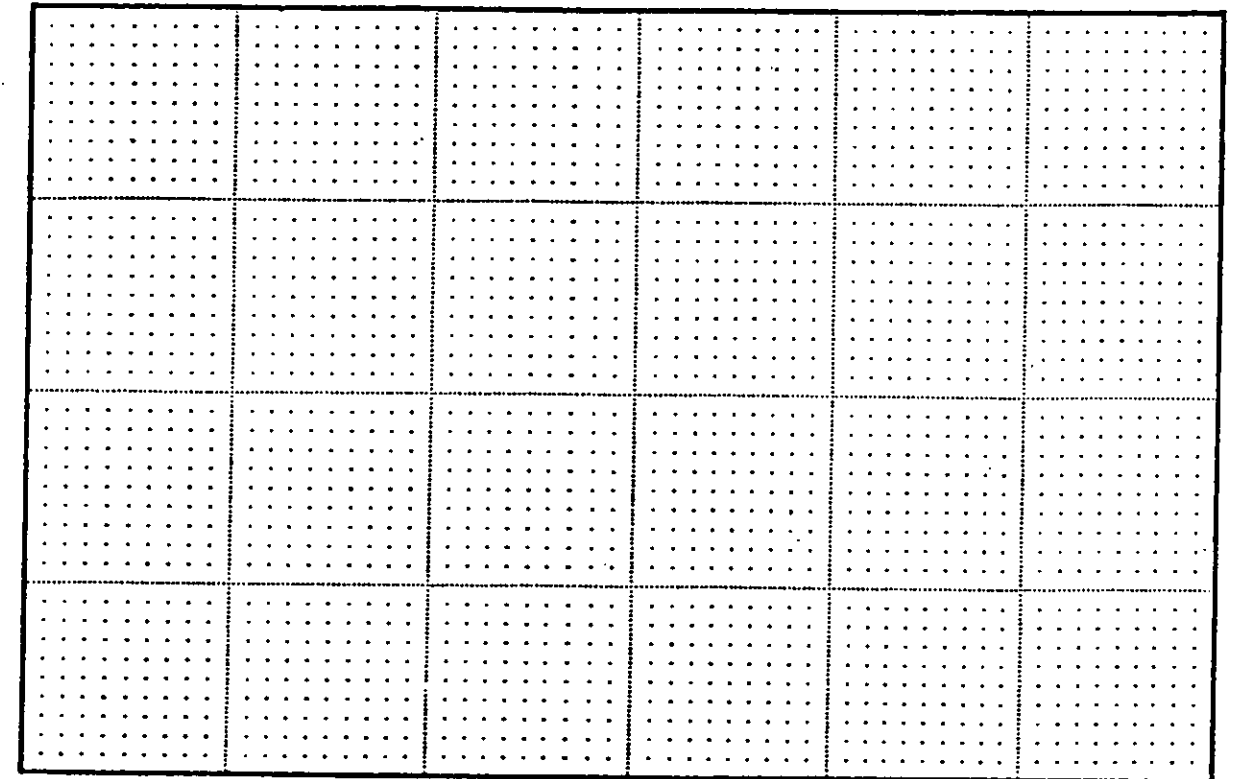
10% \$ 1,708,080 = \$ 170,808

INDEMNIFICATION 5% \$ 1,878,888 = \$ 93,944

TOTAL ESTIMATED REMOVAL COST \$1,972,832



Sample Area: _____
 Sample Area (sq. ft.): _____ Required No. Samples: _____
 Random Grid Number: _____ Scale: _____



INSTRUCTIONS FOR HOMOGENEOUS AREA, SAMPLE AND PHOTO NUMBERING SYSTEM

All homogeneous areas, samples, and photos shall be numbered using the following system:

1. HOMOGENEOUS AREAS.

The first series shall consist of the building number (if applicable).

The second series shall be three letters as follows:

The first letter designates the material type:

- M for Miscellaneous
- S for Surfacing
- T for Thermal

The second letter designates the location:

- F for Floor - (Miscellaneous)
- C for Ceiling - (Surfacing or Miscellaneous)
- W for Wall - (Surfacing or Miscellaneous)
- P for Plaster - Walls and Ceilings (Surfacing)
- P for Pipe - (Thermal)
- B for Boiler - (Thermal)
- T for Tank - (Thermal)
- F for Flue - (Thermal)
- D for Duct - (Thermal or Miscellaneous)
- M for Miscellaneous

The third letter designates the homogeneous area, with the first area designated as A and the remaining areas designated in alphabetical order.

2. SAMPLE NUMBERS.

Sample numbers contain the first and second series of numbers as described above for the numbering of homogeneous areas. The Sample Number also contains a third series of numbers which are the actual sample numbers for each homogeneous area, which are numbered consecutively starting with the number 1.

3. PHOTO NUMBERS.

Photo numbers utilize the sample number as described above.

Photos of solvents, stored materials, labels, etc. which have no corresponding samples shall utilize the homogeneous area number, with a zero in place of the sample number, and then a letter such as A, B, C, etc.

RANDOM SAMPLE GRIDS

Sampling Area	Sampling Locations	Sampling Area	Sampling Locations	Sampling Area	Sampling Locations
1	9 8 1 2 7 6 5 3 4	7	5 8 1 4 3 6 2 7 9	13	8 5 2 3 6 9 7 1 4
2	8 7 1 3 9 5 4 2 6	8	5 7 1 6 3 4 2 8 9	14	4 1 6 3 9 7 8 5 2
3	4 1 7 2 9 6 8 5 3	9	3 6 4 9 2 7 5 8 1	15	3 5 6 9 2 8 7 4 1
4	6 1 8 5 9 3 2 7 4	10	5 7 3 8 1 6 2 9 4	16	4 8 3 2 5 9 7 1 6
5	6 4 3 1 5 8 9 2 7	11	5 1 6 3 4 9 7 8 2	17	8 2 7 4 5 3 1 9 6
6	7 4 3 6 1 5 2 9 8	12	7 1 9 2 4 5 6 8 3	18	2 5 9 6 1 8 4 7 3

INSPECTION DATE: 7/26/89
 SCHOOL / CLIENT: ELGIN MENTAL HEALTH
 BUILDING NAME: PIPE TUNNEL
 Sample Area: ROOT-TPC
 Sample No.: ROOT-TPC 1 TO 3
 Photo No.: ROOT-TPC #3
 Inspector: WARREN WARD

BELING CONSULTANTS, INC.

Sample Area: BROOT-TPC Inspection Date: 7/26/89
 School / Client: ELGIN MENTAL HEALTH CENTER
 Building Name: PIPE TUNNEL
 Address: 750 S STATE ST. ELGIN IL.
 Inspector: WARREN WARD Accreditation No.: 00/00-C984
 Sample No.: BROOT-TPC-1 TO 3 Estimated Occupancy: 0

Type of Suspect Material

SURFACING	THERMAL SYSTEM	MISCELLANEOUS
<input type="checkbox"/> Acoustical Plaster	<input checked="" type="checkbox"/> Pipe	<input type="checkbox"/> Ceiling Tile
<input type="checkbox"/> Hard Plaster	<input type="checkbox"/> Tank	<input type="checkbox"/> Floor Tile
<input type="checkbox"/> Fireproofing	<input type="checkbox"/> Boiler	<input type="checkbox"/> Fire Door
<input type="checkbox"/> Other: _____	<input type="checkbox"/> Duct	<input type="checkbox"/> Non-Installed ACM
	<input type="checkbox"/> Other: _____	<input type="checkbox"/> Exterior Coverings
		<input type="checkbox"/> Other: _____

Description of Material Sampled: PIPE INSULATION 11"-15"
APPROX. 1,090 LF

Surrounding Areas:

Walls: Smooth Concrete Gypsum Board
 Textured Concrete Masonry
 Other _____
 Floors: Concrete Carpet Tile Wood
 Other DIRT OR CONCRETE
 Ceilings: Acoustic Tile Exposed Structure
 Textured Plaster Hard Plaster
 Other _____

Condition of Material

Friable Non-Friable
 Percent Damage: 0% 0% - 10% 10% - 25% over 25%
 Extent of Damage: Localized Distributed
 Type of Damage: None Age Water Physical
 Description of Damage: AGE PHYSICAL + WATER

Disturbance Factors

1.) Accessibility:
 Accessible of Building Occupants: Yes No
 Accessible of Maintenance Personnel: Yes No
 Height of Material from Floor: 5 feet
 Existence of Barriers: Yes No
 Suspended Ceiling Encapsulation Other: _____

2.) Proximity to Areas Requiring Maintenance:

<input checked="" type="checkbox"/> Electrical	<input type="checkbox"/> under 1 ft.	<input checked="" type="checkbox"/> 1 to 5 ft.	<input type="checkbox"/> over 5 ft.
<input type="checkbox"/> Mechanical	<input type="checkbox"/> under 1 ft.	<input type="checkbox"/> 1 to 5 ft.	<input type="checkbox"/> over 5 ft.
<input checked="" type="checkbox"/> Plumbing	<input type="checkbox"/> under 1 ft.	<input checked="" type="checkbox"/> 1 to 5 ft.	<input type="checkbox"/> over 5 ft.
<input type="checkbox"/> Other: _____	<input type="checkbox"/> under 1 ft.	<input type="checkbox"/> 1 to 5 ft.	<input type="checkbox"/> over 5 ft.

3.) Ventilation System:

Proximity to Ventilation / Air Plenum	<input type="checkbox"/> under 5 ft.	<input type="checkbox"/> 5 to 10 ft.	<input type="checkbox"/> over 10 ft.
Supply Grille	<input type="checkbox"/> Return Grille	<input type="checkbox"/> Exhaust	
Air Movement: <input checked="" type="checkbox"/> None	<input type="checkbox"/> Low	<input type="checkbox"/> Moderate	<input type="checkbox"/> Heavy

Describe: _____

4.) Vibration: None Low Moderate Heavy

Describe: VIBRATION MAY COME FROM PIPE REPAIR

5.) Activity / Use of Room / Area:

Use of Room / Area: PIPE TUNNEL
 Activity: None Low Moderate Heavy
 Causes for Disturbance, if Any: _____
 Duration of Occupancy:
 None
 Low / Infrequent (0 to 2 hours)
 Moderate / Frequent (2 to 10 hours)
 High / Continual (10 to 24 hours)

Inspector's Assessment

1. Damaged or Significantly Damaged TSI
 2. Damaged Surfacing ACM
 3. Significantly Damaged Surfacing ACM
 4. Damaged or Significantly Damaged Miscellaneous ACM
 5. ACM With Potential for Damage
 6. ACM With Potential for Significant Damage
 7. Other Remaining Friable ACM

Type of Damage: None Age Water Physical
 Severity of Damage: Low Moderate High
 Extent or Spread of Damage: Localized Distributed
 Probable Cause of Damage: AGE, WATER, PHYSICAL
 Potential for Damage: Yes No
 Potential for Significant Damage: Yes No
 Explanation of Damage Assessment: DAMAGED BY LEAKS + PIPE REPAIR

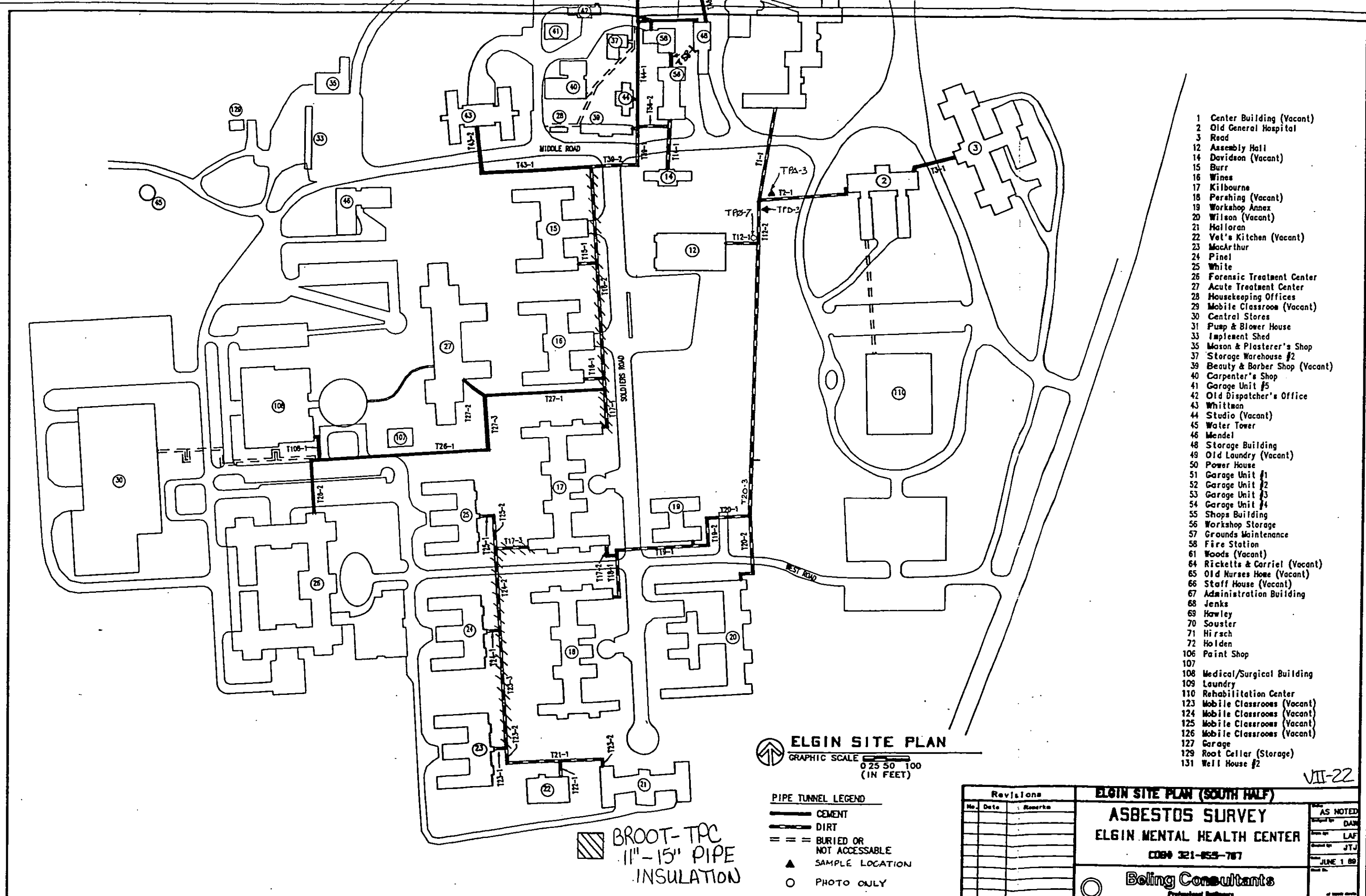
Damage Preventive Measures: REPAIR LEAKS + REMOVE

Comments: WRAP OR REMOVE INSULATION

Test Results (Type - %)

Assumed 55 Chrysotile Amosite Other: _____

Inspector's Signature: Warren Ward Date: 7/28/89



- 1 Center Building (Vacant)
- 2 Old General Hospital
- 3 Road
- 12 Assembly Hall
- 14 Davidson (Vacant)
- 15 Burr
- 16 Wines
- 17 Kilbourne
- 18 Pershing (Vacant)
- 19 Workshop Annex
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- 127 Garage
- 129 Root Cellar (Storage)
- 131 Well House #2

ELGIN SITE PLAN
 GRAPHIC SCALE 0 25 50 100 (IN FEET)

- PIPE TUNNEL LEGEND**
- CEMENT
 - - - DIRT
 - == BURIED OR NOT ACCESSABLE
 - ▲ SAMPLE LOCATION
 - PHOTO ONLY

▨ BROOK-TPC
 11"-15" PIPE INSULATION

Revisions	
No.	Date

ELGIN SITE PLAN (SOUTH HALF)

ASBESTOS SURVEY

ELGIN MENTAL HEALTH CENTER

COB 321-855-787

Beling Consultants

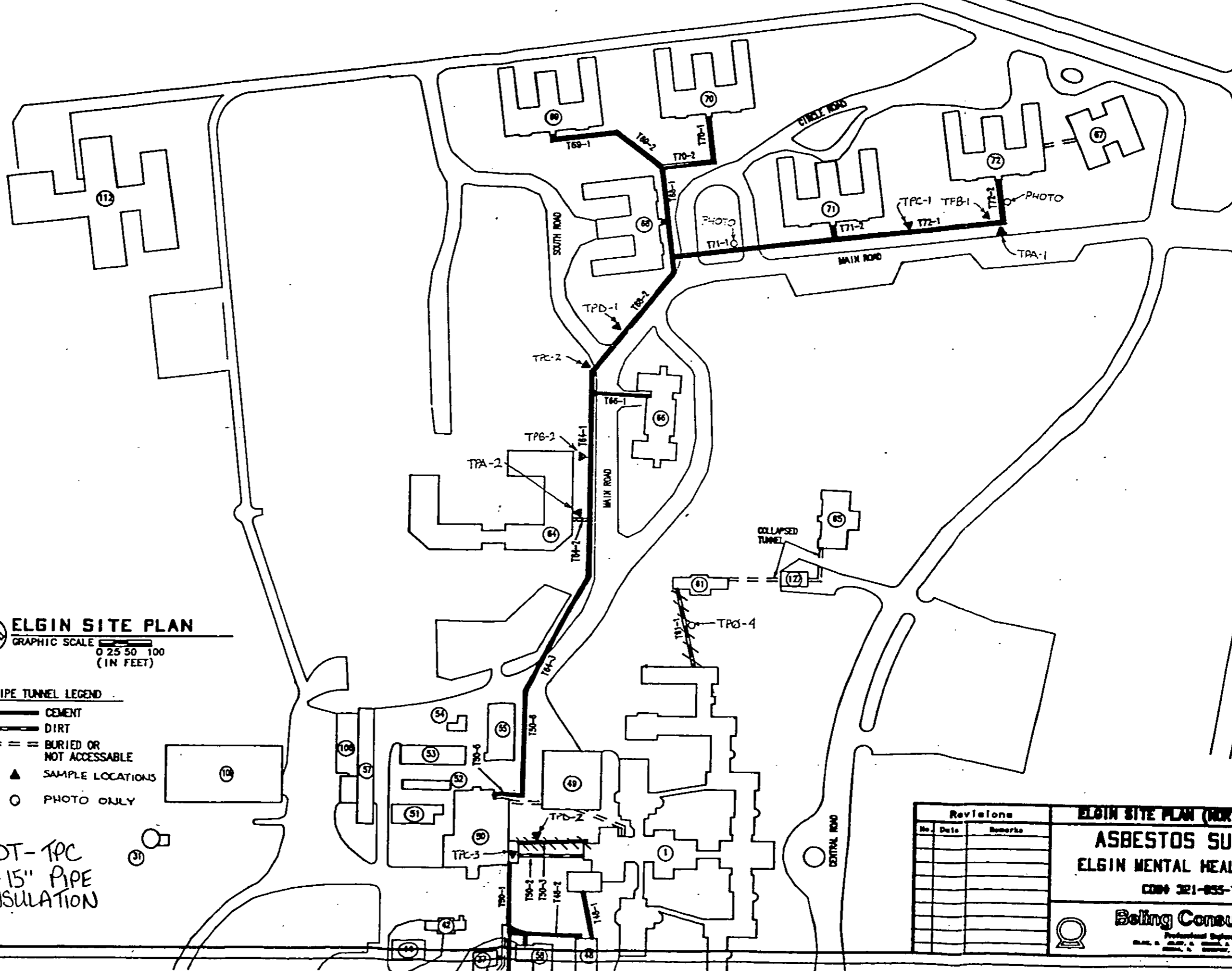
Professional Engineers
 BELING CONSULTANTS, INC.
 1000 N. W. 10th St., Ft. Lauderdale, FL 33309

AS NOTED
Drawn by: DAM
Checked by: LAF
Approved by: JTJ
JUNE 1 89

VII-22

ELGIN MENTAL HEALTH CENTER
 750 South State Street
 Elgin, Illinois 60123-7882
 (312) 742-1040

- 1 Center Building (Vacant)
- 2 Old General Hospital
- 3 Road
- 12 Assembly Hall
- 14 Davidson (Vacant)
- 15 Burr
- 16 Wines
- 17 Kilbourne
- 18 Pershing (Vacant)
- 19 Workshop Annex
- 20 Wilson (Vacant)
- 21 Halloran
- 22 Val's Kitchen (Vacant)
- 23 MacArthur
- 24 Pine
- 25 White
- 26 Forensic Treatment Center
- 27 Acute Treatment Center
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- 29 Mobile Classroom (Vacant)
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- 33 Implement Shed
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- 45 Water Tower
- 46 Mendel
- 48 Storage Building
- 49 Old Laundry (Vacant)
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- 53 Garage Unit #3
- 54 Garage Unit #4
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- 56 Workshop Storage
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- 58 Fire Station
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- 65 Old Nurses Home (Vacant)
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- 67 Administration Building
- 68 Jenks
- 69 Hawley
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- 72 Holden
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- 126 Mobile Classrooms (Vacant)
- 127 Garage
- 129 Root Celler (Storage)
- 131 Well House #2



ELGIN SITE PLAN
 GRAPHIC SCALE 0 25 50 100 (IN FEET)

PIPE TUNNEL LEGEND
 ——— CEMENT
 - - - - DIRT
 = = = BURIED OR NOT ACCESSABLE
 ▲ SAMPLE LOCATIONS
 ○ PHOTO ONLY

▨ BROOT-TPC
 11"-15" PIPE INSULATION

Revisions		
No.	Date	Remarks

VII-23

ELGIN SITE PLAN (NORTH HALF)
ASBESTOS SURVEY
ELGIN MENTAL HEALTH CENTER
 CD# 321-855-787

Being Consultants
 Professional Engineers
 1000 N. State Street, Suite 1000
 Elgin, Illinois 60120

AS NOTED
DAN
LAF
JTJ
JUNE 1 80
83009



Beling Consultants

LABORATORY REPORT

August 1, 1989

NIST/NVLAP ACCREDITATION NO. 1356
ASBESTOS SURVEY - BULK ASBESTOS REPORT

SAMPLES FROM:	Elgin Mental Health Center - Pipe Tunnel	DATE ANALYZED:	July 28, 1989
DATE SAMPLED:	July 26, 1989	ANALYST:	Susan Edwards
DATE RECEIVED:	July 28, 1989	JOB NUMBER:	83009

BELING SAMPLE # 24878
SAMPLE DESCRIPTION: White Fibrous Talc

FIELD # TPC-1

ASBESTIFORM MATERIAL PRESENT

CHRYBOTILE	55 %
AMOSITE	%
CROCIDOLITE	%
ANTHOPHYLLITE	%
ACTINOLITE	%
TOTAL % ASBESTOS	55 %

NON-ASBESTOS MATERIAL PRESENT

CELLULOSE	%
FIBROUS GLASS	%
SYNTHETIC POLYMER	%
BINDING MATERIAL	%
OTHER Talc	45 %
OTHER	%

1. Samples collected by Beling Consultants Asbestos Department.
2. Analyses performed using polarized light microscopy in accordance with the EPA Interim Method for determination of asbestos in bulk insulation samples; EPA-600/M4-82-020.
3. Samples will be retained minimum of 90 days unless notified by client.

Jeffrey A. Warner



Beling Consultants

LABORATORY REPORT

August 1, 1989

NIST/NVLAP ACCREDITATION NO. 1356
ASBESTOS SURVEY - BULK ASBESTOS REPORT

SAMPLES FROM: Elgin Mental Health
Center - Pipe Tunnel
DATE SAMPLED: July 26, 1989
DATE RECEIVED: July 28, 1989

DATE ANALYZED: July 28, 1989
ANALYST: Susan Edwards
JOB NUMBER: 83009

BELING SAMPLE # 24879
SAMPLE DESCRIPTION: Not examined

FIELD # TPC-2

ASBESTIFORM MATERIAL PRESENT

CHRYBOTILE	✓
AMOSITE	✓
CROCIDOLITE	✓
ANTHOPHYLLITE	✓
ACTINOLITE	✓
TOTAL % ASBESTOS	✓

NON-ASBESTOS MATERIAL PRESENT

CELLULOSE	✓
FIBROUS GLASS	✓
SYNTHETIC POLYMER	✓
BINDING MATERIAL	✓
OTHER	✓
OTHER	✓

BELING SAMPLE # 24880
SAMPLE DESCRIPTION: Not examined

FIELD # TPC-3

ASBESTIFORM MATERIAL PRESENT

CHRYBOTILE	✓
AMOSITE	✓
CROCIDOLITE	✓
ANTHOPHYLLITE	✓
ACTINOLITE	✓
TOTAL % ASBESTOS	✓

NON-ASBESTOS MATERIAL PRESENT

CELLULOSE	✓
FIBROUS GLASS	✓
SYNTHETIC POLYMER	✓
BINDING MATERIAL	✓
OTHER	✓
OTHER	✓

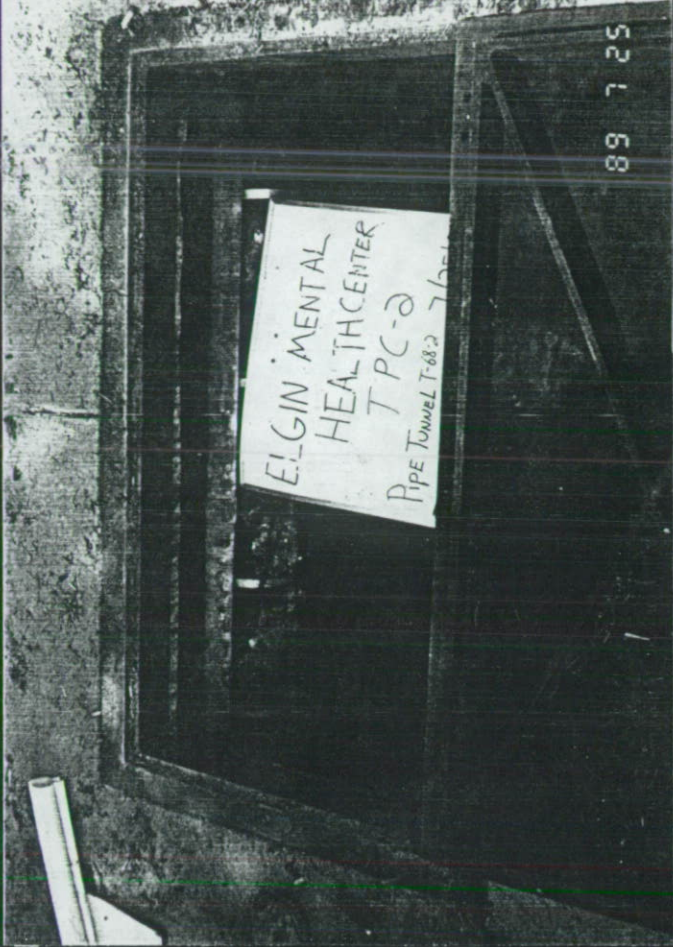
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Jeffery A. Wasson



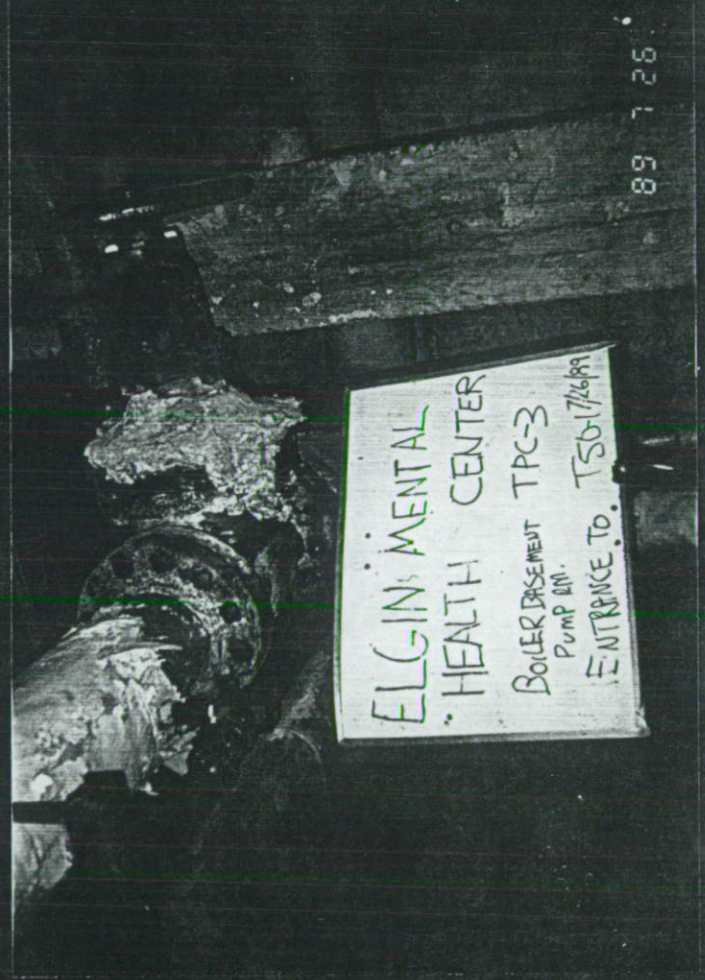
ELGIN MENTAL
HEALTH CENTER
TPC-1 8" II
PIPE TUNNEL 7/25/89

89 7 25



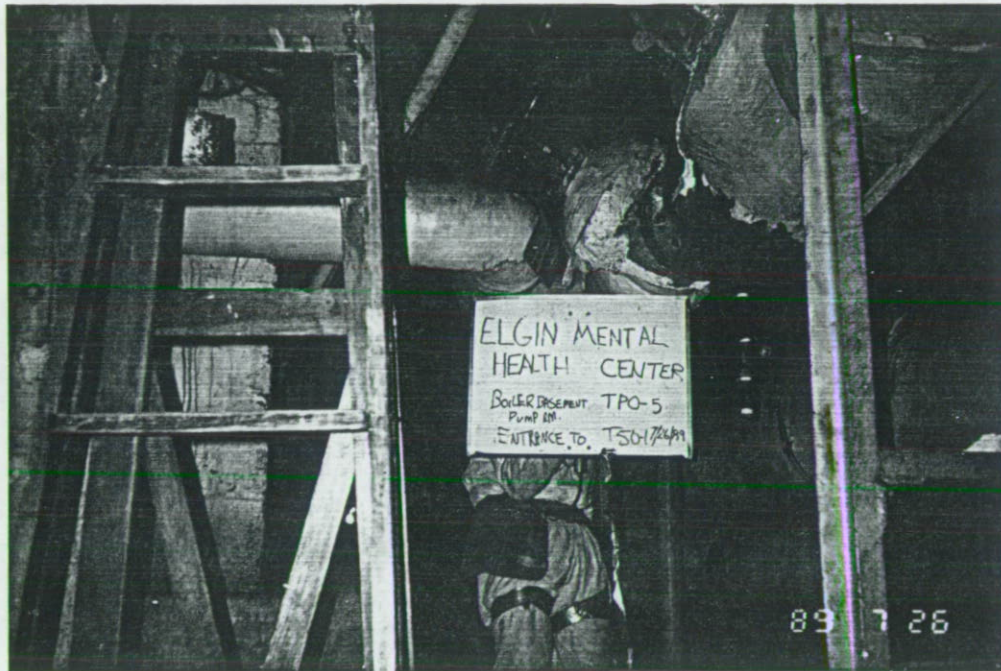
ELGIN MENTAL
HEALTH CENTER
TPC-2
PIPE TUNNEL 7/25/89

89 7 25



ELGIN MENTAL
HEALTH CENTER
BOILER BASEMENT TPC-3
PUMP RM.
ENTRANCE TO TSO 7/26/89

89 7 26



ELGIN MENTAL
HEALTH CENTER
BOILER ROOM TPO-5
PUMP IN
ENTRANCE TO TSOH/24/89

89 7 26

BLDG NAME Pipe Tunnels CDB
BLDG NO. BROOT
HOMO AREA BROOT- TPC DESCRIPT Pipe Insulation 11"-15"
RESPONSE ACTION #3; Continue O & M. Scedule removal when practical
and cost effective, or reduce disturbance. /

EXIST. COND. Damaged with localized areas of significant damage.

POT. FOR DAMAGE Yes; May be damaged by piping maintenance. Asbestos
pipe insulation may also be disturbed by physical activity in
areas of the tunnels where insulation has delaminated.

FRIABLE YES CONDITION DAMAGED
DISTURBANCE MODERATE AIR FLOW LOW

WHY Material is friable with areas of damage and localized
significant damage. Air flow is relatively low in the tunnel
area. Using the flow chart method (Form 5), response action
#3 is recommended.

PREVENTATIVE MEASURES Keep outer covering
intact. Repair tunnel access (manholes) to prevent further damage
from water leakage.

O & M PROCEDURES Conduct periodic surveillance. Repair damaged
coverings with lag cloth and bridging encapsulant. Wear approved
respirator when entering and working in pipe tunnels.

HEALTH & SAFETY Develope and implement respirator program. Require
use of respirators anytime tunnels are entered. Conduct awareness
training for maintenance staff. Install partitions at tunnel entrances
into building basements to minimize air flow (if present).

ESTIMATED ANNUAL ASBESTOS O&M COST

CDB PROJECT NUMBER: 321-055-707

PROJECT NAME: Inspection/Management Plan

PROJECT LOCATION: Elgin Mental Health Center

BUILDING NO. & NAME: BROOT - Pipe Tunnel

HOMOGENEOUS AREA DESIGNATION: BROOT - TPC

OPERATIONS & MAINTENANCE ON: 11"-15" Pipe Insulation

DESIGNATED PERSON

50 HRS. @ \$ 25 = \$ 1250

MATERIALS

Lag Cloth; 50% \$ 2,000 = \$ 1,000
Bridging Encap.

TOTAL ESTIMATED ANNUAL O & M COST = \$ 2,250

ESTIMATED ASBESTOS REMOVAL COST

CDB PROJECT NUMBER: 321-055-707

PROJECT NAME: Inspection/Management Plan

PROJECT LOCATION: Elgin Mental Health Center

BUILDING NO. & NAME BROOT - Pipe Tunnel

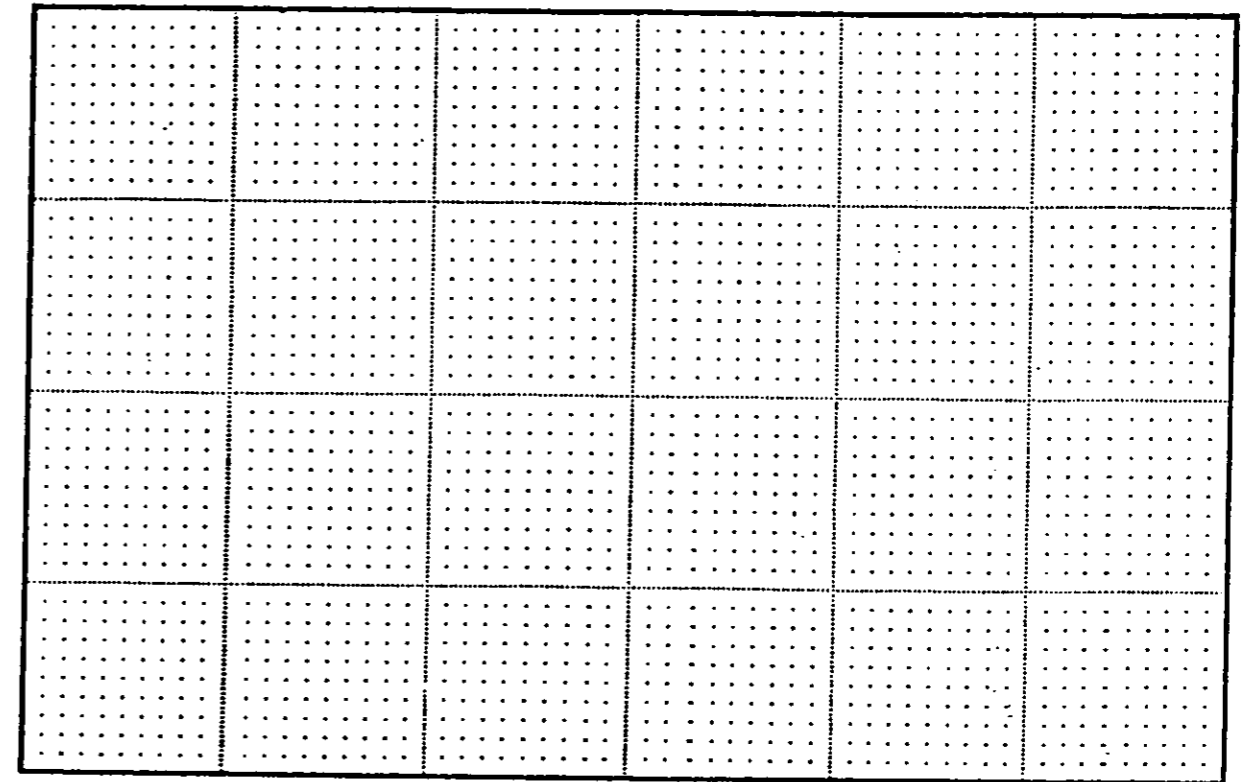
LOCATION OF REMOVAL: Tunnel

REMOVAL OF: BROOT - TPC 11"-15" Pipe Insulation

<u>1,090 L.F.</u>	@	\$ <u>55.30</u>	=	\$ <u>60,277</u>
REPLACEMENT COST	@	\$ <u>18.00</u>	=	\$ <u>19,620</u>
APM				
<u>10</u> DAYS	@	\$ <u>500</u>	=	\$ <u>5,000</u>
ASP				
<u>10</u> DAYS	@	\$ <u>400</u>	=	\$ <u>4,000</u>
AIR TESTING				
<u>100</u> PCM'S	@	\$ <u>20</u>	=	\$ <u>2,000</u>
<u>0</u> TEM'S	@	\$ <u>0</u>	=	\$ <u>0</u>
A/E FEES				
	7%	\$ <u>90,897</u>	=	\$ <u>6,363</u>
CONTINGENCY				
	10%	\$ <u>97,260</u>	=	\$ <u>9,726</u>
INDEMNIFICATION 5%				
		\$ <u>106,986</u>	=	\$ <u>5,349</u>
TOTAL ESTIMATED REMOVAL COST				\$ <u>112,335</u>



Sample Area: _____
 Sample Area (sq. ft.): _____ Required No. Samples: _____
 Random Grid Number: _____ Scale: _____



INSTRUCTIONS FOR HOMOGENEOUS AREA, SAMPLE AND PHOTO NUMBERING SYSTEM

All homogeneous areas, samples, and photos shall be numbered using the following system:

1. HOMOGENEOUS AREAS.

The first series shall consist of the building number (if applicable).

The second series shall be three letters as follows:

The first letter designates the material type:

- M for Miscellaneous
- S for Surfacing
- T for Thermal

The second letter designates the location:

- F for Floor - (Miscellaneous)
- C for Ceiling - (Surfacing or Miscellaneous)
- W for Wall - (Surfacing or Miscellaneous)
- P for Plaster - Walls and Ceilings (Surfacing)
- P for Pipe - (Thermal)
- B for Boiler - (Thermal)
- T for Tank - (Thermal)
- F for Flue - (Thermal)
- D for Duct - (Thermal or Miscellaneous)
- M for Miscellaneous

The third letter designates the homogeneous area, with the first area designated as A and the remaining areas designated in alphabetical order.

2. SAMPLE NUMBERS.

Sample numbers contain the first and second series of numbers as described above for the numbering of homogeneous areas. The Sample Number also contains a third series of numbers which are the actual sample numbers for each homogeneous area, which are numbered consecutively starting with the number 1.

3. PHOTO NUMBERS.

Photo numbers utilize the sample number as described above.

Photos of ealents, stored materials, labels, etc. which have no corresponding samples shall utilize the homogeneous area number, with a zero in place of the sample number, and then a letter such as A, B, C, etc.

RANDOM SAMPLE GRIDS

Sampling Area	Sampling Locations	Sampling Area	Sampling Locations	Sampling Area	Sampling Locations
1	9 8 1 2 7 6 5 3 4	7	5 8 1 4 3 6 2 7 9	13	8 5 2 3 6 9 7 1 4
2	8 7 1 3 9 5 4 2 6	8	5 7 1 6 3 4 2 8 9	14	4 1 6 3 9 7 8 5 2
3	4 1 7 2 9 6 8 5 3	9	3 6 4 9 2 7 5 8 1	15	3 5 6 9 2 8 7 4 1
4	6 1 8 5 9 3 2 7 4	10	5 7 3 8 1 6 2 9 4	16	4 8 3 2 5 9 7 1 6
5	6 4 3 1 5 8 9 2 7	11	5 1 6 3 4 9 7 8 2	17	8 2 7 4 5 3 1 9 6
6	7 4 3 6 1 5 2 9 8	12	7 1 9 2 4 5 6 8 3	18	2 5 9 6 1 8 4 7 3

INSPECTION DATE: 7/25/89
 SCHOOL / CLIENT: ELGIN MENTAL HEALTH CENTER
 BUILDING NAME: PIPE TUNNELS
 Sample Area: TPD
 Sample No.: TPD-1 to 3
 Photo No.: TPD-1 to 3
 Inspector: WARREN WARD

BELING CONSULTANTS, INC.

Sample Area: TDD Inspection Date: 7/25/89
 School / Client: ELGIN MENTAL HEALTH CENTER
 Building Name: PIPE TUNNEL
 Address: 750 S. STATE
 Inspector: WARREN WARD Accreditation No.: 00100-C984
 Sample No.: TDD-1 to 3 Estimated Occupancy: 0

Type of Suspect Material

SURFACING	THERMAL SYSTEM	MISCELLANEOUS
<input type="checkbox"/> Acoustical Plaster	<input checked="" type="checkbox"/> Pipe	<input type="checkbox"/> Ceiling Tile
<input type="checkbox"/> Hard Plaster	<input type="checkbox"/> Tank	<input type="checkbox"/> Floor Tile
<input type="checkbox"/> Fireproofing	<input type="checkbox"/> Boiler	<input type="checkbox"/> Fire Door
<input type="checkbox"/> Other: _____	<input type="checkbox"/> Duct	<input type="checkbox"/> Non-Installed ACM
	<input type="checkbox"/> Other: _____	<input type="checkbox"/> Exterior Coverings
		<input type="checkbox"/> Other: _____

Description of Material Sampled: PIPE INSULATION
APPROX. 3,685 LF

Surrounding Areas:

Walls: Smooth Concrete Gypsum Board
 Textured Concrete Masonry
 Other _____

Floors: Concrete Carpet Tile Wood
 Other _____

Ceilings: Acoustic Tile Exposed Structure
 Textured Plaster Hard Plaster
 Other Exposed structure

Condition of Material

Friable Non-Friable

Percent Damage: 0% 0% - 10% 10% - 25% over 25%

Extent of Damage: Localized Distributed

Type of Damage: None Age Water Physical

Description of Damage: LEAKS, RIPPED and missing insulation

Disturbance Factors

1.) **Accessibility:**

Accessible of Building Occupants: Yes No

Accessible of Maintenance Personnel: Yes No

Height of Material from Floor: 5 feet

Existence of Barriers: Yes No

Suspended Ceiling Encapsulation Other: _____

2.) **Proximity to Areas Requiring Maintenance:**

<input checked="" type="checkbox"/> Electrical	<input type="checkbox"/> under 1 ft.	<input checked="" type="checkbox"/> 1 to 5 ft.	<input type="checkbox"/> over 5 ft.
<input type="checkbox"/> Mechanical	<input type="checkbox"/> under 1 ft.	<input type="checkbox"/> 1 to 5 ft.	<input type="checkbox"/> over 5 ft.
<input checked="" type="checkbox"/> Plumbing	<input checked="" type="checkbox"/> under 1 ft.	<input type="checkbox"/> 1 to 5 ft.	<input type="checkbox"/> over 5 ft.
<input type="checkbox"/> Other: _____	<input type="checkbox"/> under 1 ft.	<input type="checkbox"/> 1 to 5 ft.	<input type="checkbox"/> over 5 ft.

3.) **Ventilation System:**

Proximity to Ventilation / Air Plenum under 5 ft. 5 to 10 ft. over 10 ft.

Supply Grille Return Grille Exhaust

Air Movement: None Low Moderate Heavy

Describe: _____

4.) **Vibration:** None Low Moderate Heavy

Describe: VIBRATION FROM PIPE REPAIR

5.) **Activity / Use of Room / Area:**

Use of Room / Area: PIPE TUNNEL

Activity: None Low Moderate Heavy

Causes for Disturbance, If Any: PIPE LEAK OR REPAIR

Duration of Occupancy:

None

Low / Infrequent (0 to 2 hours)

Moderate / Frequent (2 to 10 hours)

High / Continual (10 to 24 hours)

Inspector's Assessment

- 1. Damaged or Significantly Damaged TSI
- 2. Damaged Surfacing ACM
- 3. Significantly Damaged Surfacing ACM
- 4. Damaged or Significantly Damaged Miscellaneous ACM
- 5. ACM With Potential for Damage
- 6. ACM With Potential for Significant Damage
- 7. Other Remaining Friable ACM

Type of Damage: None Age Water Physical

Severity of Damage: Low Moderate High

Extent or Spread of Damage: Localized Distributed

Probable Cause of Damage: AGE, WATER + PHYSICAL

Potential for Damage: Yes No

Potential for Significant Damage: Yes No

Explanation of Damage Assessment: LEAKS and damaged pipe

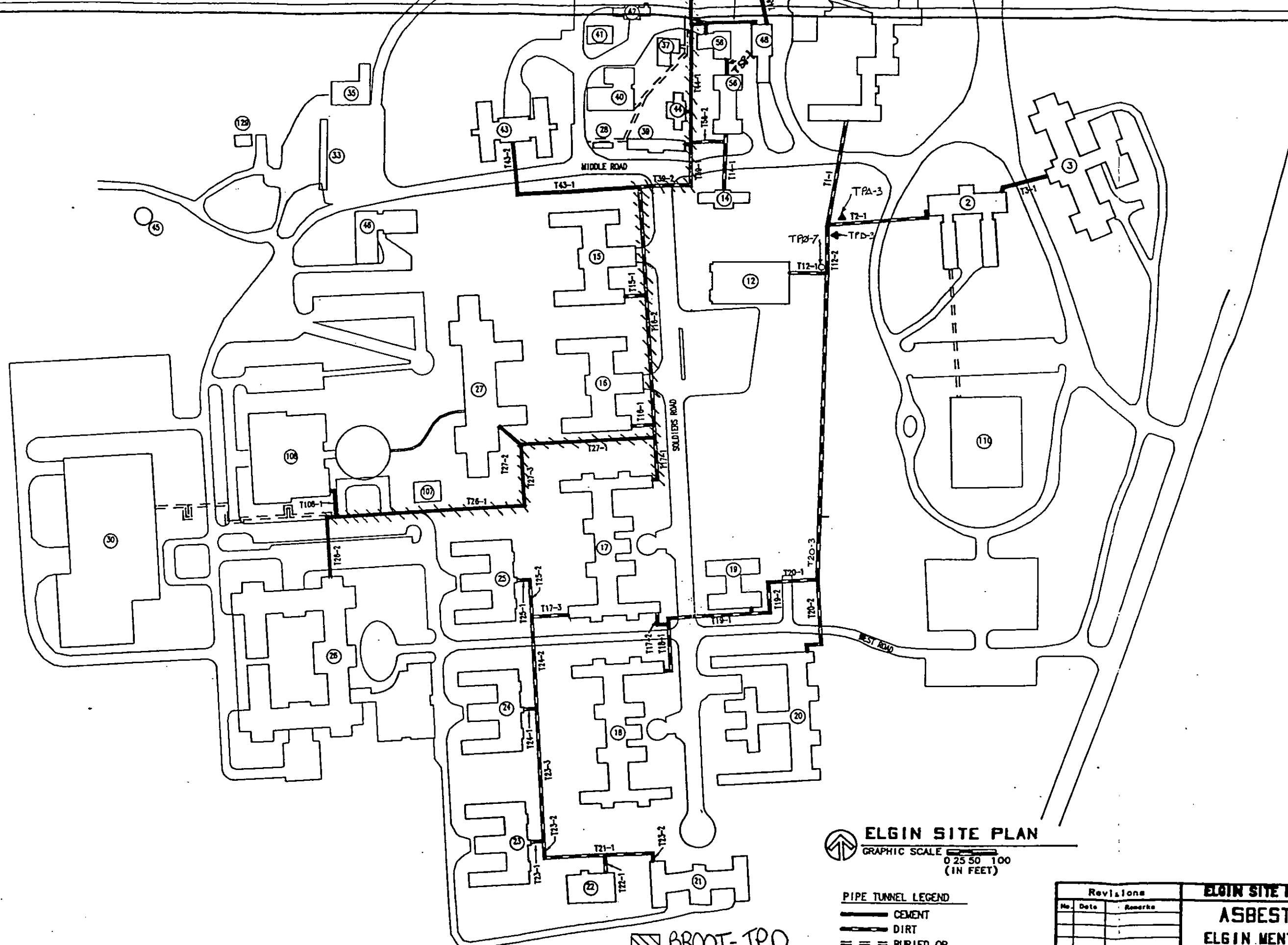
Damage Preventive Measures: Repair all damage to pipes

Comments: DISTRIBUTED DAMAGE THROUGHOUT PIPE TUNNEL

Test Results (Type - %)

Assumed 50 Chrysotile Amosite Other: _____

Inspector's Signature: Warren Ward Date: 7/28/89



- 1 Center Building (Vacant)
- 2 Old General Hospital
- 3 Road
- 12 Assembly Hall
- 14 Davidson (Vacant)
- 15 Burr
- 16 Wines
- 17 Kilbourne
- 18 Perahing (Vacant)
- 19 Workshop Annex
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- 127 Garage
- 129 Root Cellar (Storage)
- 131 Well House #2

ELGIN SITE PLAN
 GRAPHIC SCALE 0 25 50 100
 (IN FEET)

BROOK-TPD
 16" + PIPE
 INSULATION

- PIPE TUNNEL LEGEND**
- CEMENT
 - - - DIRT
 - == BURIED OR NOT ACCESSIBLE
 - ▲ SAMPLE LOCATION
 - PHOTO ONLY

Revisions		
No.	Date	Remarks

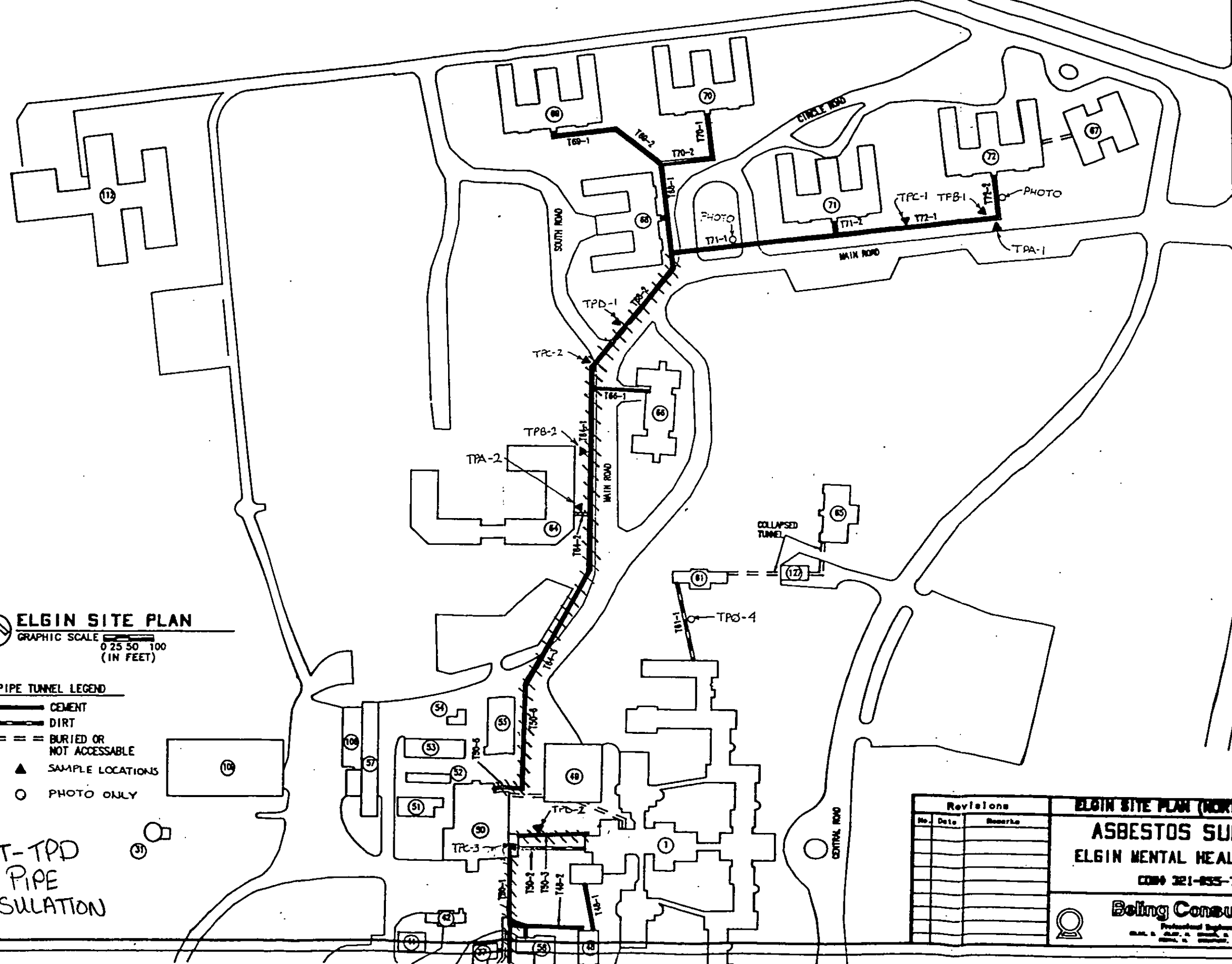
ELGIN SITE PLAN (SOUTH HALF)
ASBESTOS SURVEY
ELGIN MENTAL HEALTH CENTER
 CD# 321-855-787

Beling Consultants
 Professional Engineers
 1000 ...
 ...

VII-32
 AS NOTED
 DAN
 LAF
 JTJ
 JUNE 1 89
 83009

ELGIN MENTAL HEALTH CENTER
 750 South State Street
 Elgin, Illinois 60123-7802
 (312) 742-1040

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- 129 Root Cellar (Storage)
- 131 Well House #2



ELGIN SITE PLAN
 GRAPHIC SCALE 0 25 50 100 (IN FEET)

- PIPE TUNNEL LEGEND**
- CEMENT
 - - - DIRT
 - == BURIED OR NOT ACCESSIBLE
 - ▲ SAMPLE LOCATIONS
 - PHOTO ONLY

BROOT-TPD
 16" PIPE INSULATION

Revisions			ELGIN SITE PLAN (NORTH HALF)	
No.	Date	Remarks	ASBESTOS SURVEY	
			ELGIN MENTAL HEALTH CENTER	
			CON# 321-855-787	
			Being Consultants	
			Professional Engineers	
			AS NOTED	
			DAN	
			LAF	
			JTJ	
			JUNE 1 88	
			83009	

VII-33



Beling Consultants

LABORATORY REPORT

August 1, 1989

NIST/NVLAP ACCREDITATION NO. 1356
ASBESTOS SURVEY - BULK ASBESTOS REPORT

SAMPLES FROM: Elgin Mental Health
Center - Pipe Tunnel
DATE SAMPLED: July 26, 1989
DATE RECEIVED: July 28, 1989

DATE ANALYZED: July 28, 1989
ANALYST: Susan Edwards
JOB NUMBER: 83009

BELING SAMPLE # 24881
SAMPLE DESCRIPTION: White Fibrous Talc

FIELD # TPD-1

ASBESTIFORM MATERIAL PRESENT

NON-ASBESTOS MATERIAL PRESENT

CHRYBOTILE	50 %
AMOSITE	%
CROCIDOLITE	%
ANTHOPHYLLITE	%
ACTINOLITE	%
TOTAL % ASBESTOS	50 %

CELLULOSE	%
FIBROUS GLASS	%
SYNTHETIC POLYMER	%
BINDING MATERIAL	%
OTHER Talc	50 %
OTHER	%

1. Samples collected by Beling Consultants Asbestos Department.
2. Analyses performed using polarized light microscopy in accordance with the EPA Interim Method for determination of asbestos in bulk insulation samples; EPA-600/M4-82-020.
3. Samples will be retained minimum of 90 days unless notified by client.

Jeffery A. Warren



Beling Consultants

LABORATORY REPORT

August 1, 1989

NIST/NVLAP ACCREDITATION NO. 1356
ASBESTOS SURVEY - BULK ASBESTOS REPORT

SAMPLES FROM:	Elgin Mental Health Center - Pipe Tunnel	DATE ANALYZED:	July 28, 1989
DATE SAMPLED:	July 26, 1989	ANALYST:	Susan Edwards
DATE RECEIVED:	July 28, 1989	JOB NUMBER:	83009

BELING SAMPLE # 24882
SAMPLE DESCRIPTION: Not examined

FIELD # TPD-2

ASBESTIFORM MATERIAL PRESENT

CHRYBOTILE			X
AMOSITE			X
CROCIDOLITE			X
ANTHOPHYLLITE			X
ACTINOLITE			X
TOTAL % ASBESTOS			X

NON-ASBESTOS MATERIAL PRESENT

CELLULOSE			X
FIBROUS GLASS			X
SYNTHETIC POLYMER			X
BINDING MATERIAL			X
OTHER			X
OTHER			X

BELING SAMPLE # 24883
SAMPLE DESCRIPTION: Not examined

FIELD # TPD-3

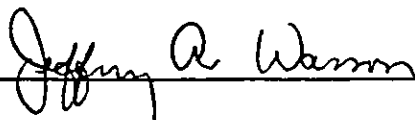
ASBESTIFORM MATERIAL PRESENT

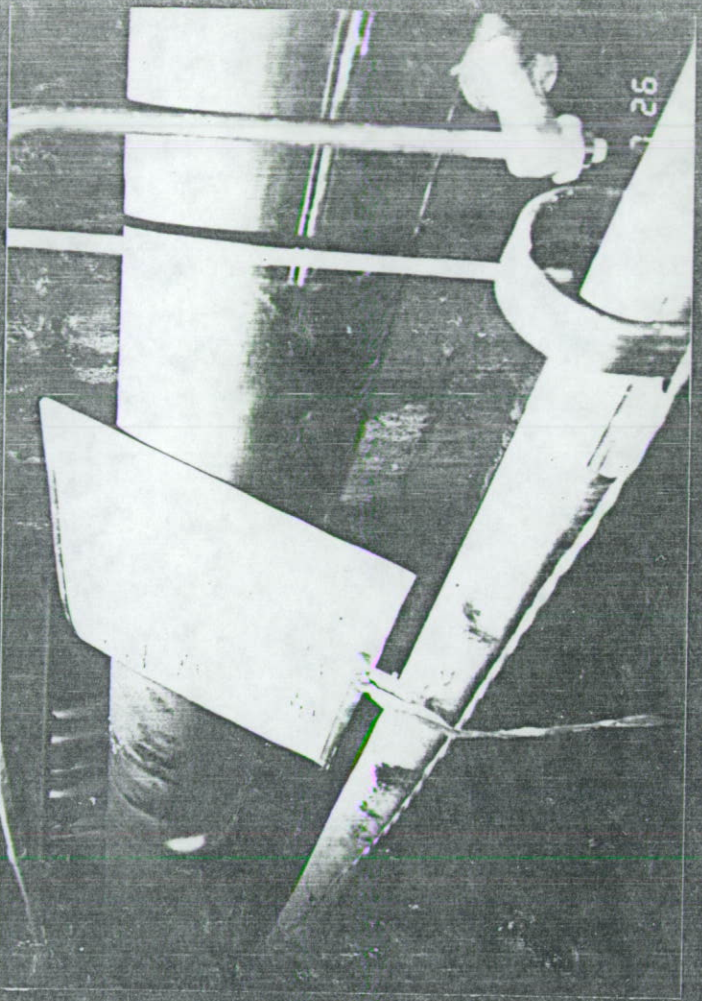
CHRYBOTILE			X
AMOSITE			X
CROCIDOLITE			X
ANTHOPHYLLITE			X
ACTINOLITE			X
TOTAL % ASBESTOS			X

NON-ASBESTOS MATERIAL PRESENT

CELLULOSE			X
FIBROUS GLASS			X
SYNTHETIC POLYMER			X
BINDING MATERIAL			X
OTHER			X
OTHER			X

1. Samples collected by Beling Consultants Asbestos Department.
2. Analyses performed using polarized light microscopy in accordance with the EPA Interim Method for determination of asbestos in bulk insulation samples; EPA-600/M4-82-020.
3. Samples will be retained minimum of 90 days unless notified by client.







BLDG NAME Pipe Tunnels CDB BLDG NO. BROOT
HOMO AREA BROOT-TPD DESCRIPT Pipe Insulation 16+"
RESPONSE ACTION #3; Continue O & M. Schedule removal when practical
and cost effective, or reduce disturbance.

EXIST. COND. Damaged with localized areas of significant damage.

POT. FOR DAMAGE Yes; May be damaged by piping maintenance. Asbestos
pipe insulation may also be disturbed by physical activity in
areas of the tunnels where insulation has delaminated.

FRIABLE YES CONDITION DAMAGED
DISTURBANCE MODERATE AIR FLOW LOW

WHY Material is friable with areas of damage and localized
significant damage. Air flow is relatively low in the tunnel
area. Using the flow chart method (Form 5), response action
#3 is recommended.

PREVENTATIVE MEASURES Keep outer covering
intact. Repair tunnel access (manholes) to prevent further damage
from water leakage.

O & M PROCEDURES Conduct periodic surveillance. Repair damaged
coverings with lag cloth and bridging encapsulant. Wear approved
respirator when entering and working in pipe tunnels.

HEALTH & SAFETY Develop and implement respirator program. Require
use of respirators anytime tunnels are entered. Conduct awareness
training for maintenance staff. Install partitions at tunnel entrances
into building basements to minimize air flow (if present).

ESTIMATED ANNUAL ASBESTOS O&M COST

CDB PROJECT NUMBER: 321-055-707

PROJECT NAME: Inspection/Management Plan

PROJECT LOCATION: Elgin Mental Health Center

BUILDING NO. & NAME: BROOT - Pipe Tunnel

HOMOGENEOUS AREA DESIGNATION: BROOT - TPD

OPERATIONS & MAINTENANCE ON: 16" + Pipe Insulation

DESIGNATED PERSON

60 HRS. @ \$ 25.00/hr. = \$ 1500

MATERIALS

Lag Cloth; 50% \$ 3000 = \$ 1500
Bridging Encap.

TOTAL ESTIMATED ANNUAL O & M COST = \$ 3000

ESTIMATED ASBESTOS REMOVAL COST

CDB PROJECT NUMBER: 321-055-707

PROJECT NAME: Inspection/Management Plan

PROJECT LOCATION: Elgin Mental Health Center

BUILDING NO. & NAME BROOT - Pipe Tunnel

LOCATION OF REMOVAL: Pipe Tunnel

REMOVAL OF: 16" + Pipe Insulation

3,835 L.F. @ \$ 55.30 = \$212,076

REPLACEMENT COST @ \$ 25.00 = \$ 95,875

APM

20 DAYS @ \$ 500 = \$10,000

ASP

20 DAYS @ \$ 400 = \$ 8,000

AIR TESTING

200 PCM'S @ \$ 20 = \$ 4,000

 TEM'S @ \$ = \$

A/E FEES

7% \$ 329,951 = \$ 23,097

CONTINGENCY

10% \$ 353,048 = \$ 35,305

INDEMNIFICATION 5% \$ 388,353 = \$ 19,418

TOTAL ESTIMATED REMOVAL COST \$407,771

CHAIN OF CUSTODY

ASBESTOS BULK SAMPLES

ELGIN PIPE TUNNEL

Sample I.D. Nos.: TPA 1+3 Date of Inspection 7/26/89
(Applicable to inspectors & labs only)
Name of Inspector: WARREN WARD Accreditation No.: 00100-C984
CDB Project No.: 321-055-707 CDB Project Name: ELGIN MENTAL
HEALTH CENTER
Project Location: ELGIN MENTAL HEALTH CENTER (KANE COUNTY)
(Including County)

RELINGUISHED BY:

RECEIVED BY:

1) Name (PRINT): WARREN WARD
Representing: BELING CONSULTANTS
Accreditation No.: 00100-C984
(If applicable)
Date & Time: 7/28/89 10:30A
Signature: Warren Ward

Name (PRINT): SUSAN EDWARDS
Representing: Beling Labs
Accreditation No.: #1356
(If applicable)
Date and Time: 7/28/89 10:30
Signature: Susan Edwards

2) Name (PRINT): _____
Representing: _____
Accreditation No.: _____
(If applicable)
Date & Time: _____
Signature: _____

Name (PRINT): _____
Representing: _____
Accreditation No.: _____
(If applicable)
Date and Time: _____
Signature: _____

3) Name (PRINT): _____
Representing: _____
Accreditation No.: _____
(If applicable)
Date & Time: _____
Signature: _____

Name (PRINT): _____
Representing: _____
Accreditation No.: _____
(If applicable)
Date and Time: _____
Signature: _____

CHAIN OF CUSTODY

ASBESTOS BULK SAMPLES

ELGIN PIPE TUNNEL

Sample I.D. Nos.: TPB 1 + 2

Date of Inspection 7/26/89
(Applicable to inspectors & labs only)

Name of Inspector: WARREN WARD

Accreditation No.: 00100-C984

CDB Project No.: 321-055-707

CDB Project Name: ELGIN MENTAL

HEALTH CENTER

Project Location: ELGIN MENTAL HEALTH CENTER (KANE COUNTY)
(Including County)

RELINGUISHED BY:

RECEIVED BY:

1) Name (PRINT): WARREN WARD
Representing: BELING CONSULTANTS
Accreditation No.: 00100-C984
(If applicable)
Date & Time: 7/28/89 10:30A
Signature: Warren Ward

Name (PRINT): Susan Edwards
Representing: Beling Labs
Accreditation No.: #1356
(If applicable)
Date and Time: 7/28/89 10:30 a
Signature: Susan Edwards

2) Name (PRINT): _____
Representing: _____
Accreditation No.: _____
(If applicable)
Date & Time: _____
Signature: _____

Name (PRINT): _____
Representing: _____
Accreditation No.: _____
(If applicable)
Date and Time: _____
Signature: _____

3) Name (PRINT): _____
Representing: _____
Accreditation No.: _____
(If applicable)
Date & Time: _____
Signature: _____

Name (PRINT): _____
Representing: _____
Accreditation No.: _____
(If applicable)
Date and Time: _____
Signature: _____

CHAIN OF CUSTODY

ASBESTOS BULK SAMPLES

ELGIN MENTAL HEALTH PIPE TUNNEL
Sample I.D. Nos.: TPC 1103 Date of Inspection 7/26/89
(Applicable to inspectors & labs only)
Name of Inspector: WARREN WARD Accreditation No.: 00100-C984
CDB Project No.: 321-055-707 CDB Project Name: ELGIN MENTAL HEALTH CENTER
Project Location: ELGIN MENTAL HEALTH CENTER (KANE COUNTY)
(Including County)

RELINGUISHED BY:

RECEIVED BY:

1) Name (PRINT): WARREN WARD
Representing: BELING CONSULTANTS
Accreditation No.: 00100-C984
(if applicable)
Date & Time: 7/28/89 10:30 A
Signature: Warren Ward

Name (PRINT): SUSAN EDWARDS
Representing: Beling Labs
Accreditation No.: #1356
(if applicable)
Date and Time: 7/28/89 10:30 A
Signature: Susan Edwards

2) Name (PRINT): _____
Representing: _____
Accreditation No.: _____
(if applicable)
Date & Time: _____
Signature: _____

Name (PRINT): _____
Representing: _____
Accreditation No.: _____
(if applicable)
Date and Time: _____
Signature: _____

3) Name (PRINT): _____
Representing: _____
Accreditation No.: _____
(if applicable)
Date & Time: _____
Signature: _____

Name (PRINT): _____
Representing: _____
Accreditation No.: _____
(if applicable)
Date and Time: _____
Signature: _____

CHAIN OF CUSTODY

ASBESTOS BULK SAMPLES

Sample I.D. Nos.: PIPE TUNNEL
TPD 1103 Date of Inspection 7/26/89
(Applicable to inspectors & labs only)

Name of Inspector: WARREN WARD Accreditation No.: 00100-C984

CDB Project No.: 321-055-707 CDB Project Name: ELGIN MENTAL
HEALTH CENTER

Project Location: ELGIN MENTAL HEALTH CENTER (KANE COUNTY)
(Including County)

RELINGUISHER BY:

RECEIVED BY:

1) Name (PRINT): WARREN WARD
Representing: BELING CONSULTANTS
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Representing: _____
Accreditation No.: _____
(if applicable)
Date and Time: _____
Signature: _____

3) Name (PRINT): _____
Representing: _____
Accreditation No.: _____
(if applicable)
Date & Time: _____
Signature: _____

Name (PRINT): _____
Representing: _____
Accreditation No.: _____
(if applicable)
Date and Time: _____
Signature: _____



ILLINOIS DEPARTMENT OF
PUBLIC HEALTH

A Healthier Today For A Better Tomorrow

Bernard J. Turnock, M.D., Director

I.D. #C0984

February 27, 1989

Warren T. Ward
4616 50th Avenue
Moline, IL 61265

Dear Mr. Ward:

Congratulations, you have met the requirements for approval as an accredited school inspector. Enclosed is your State of Illinois Department of Public Health, Accredited School Inspector Identification Card. Please sign and return the card to my attention, along with a 1" x 1" color photo of yourself (head and shoulders only). We will attach the photo and return your card as soon as possible.

If you have any questions, please do not hesitate to contact me at the Division of Environmental Health, 525 West Jefferson Street, Springfield, Illinois 62761, telephone (217) 782-3517.

Sincerely,

R. Kent Cook, AIA
Asbestos Abatement Program

roh/8724 & 8682B



I.D. Number 00100-C984

This is to certify that

WARREN T. WARD

has complied with the requirements of the Illinois Department of Public Health and is hereby authorized to engage in the activity indicated below.

02/02/89 Position Codes 02/02/90
Issued S C (I) PD MP Expiration

The University of Illinois at Chicago
School of Public Health

A3950

MIDWEST ASBESTOS INFORMATION CENTER

Certifies that **Warren Ward**

321-70-2863

Has Attended the Continuing Education Course

BUILDING INSPECTION

(Accredited under AHERA by EPA)

and Successfully Passed the Competency Exam



Date of Issuance 11/16/88

Date of Expiration 11/16/89

Audrey K. Gordon
Director
Continuing Education

Joseph A. Swody MD
Dean
School of Public Health



State of Illinois

A014048

Department of Public Health

LICENSE, PERMIT, CERTIFICATION, REGISTRATION

The person, firm or corporation whose name appears on this certificate has complied with the provisions of the Illinois Statutes and/or rules and regulations and is hereby authorized to engage in the activity as indicated below.

JOHN R. LUMPKIN, M.D.
DIRECTOR

Issued under the authority of
The State of Illinois
Department of Public Health

EXPIRATION DATE	CATEGORY	I. D. N. NUMBER
05/15/93	100	100 - 0132
GUS INSPECTOR MANAGEMENT PLANNER AIR SAMPLING PROFESSIONAL		

BUSINESS ADDRESS

GUS
211 W OAK
ELDRIGE
YOUNGBERG
IA 52748

THIS LICENSE IS NOT VALID IF YOUR IDPH
REFRESHER COURSE CERTIFICATE IS NOT CURRENT

Printed by Authority of the State of Illinois • 2/91 •

Mayhew Environmental Training Associates

Certificate Number
7ME031692007IR
Soc. Sec. # 479-34-9671

Accreditation Expires
03/16/93

This is to certify that

Gus Youngberg

has successfully completed

AHERA Asbestos Inspector Recertification Training

March 16, 1992 and passed the associated examination

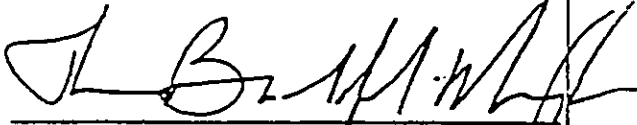
Conducted by:

on March 16, 1992 in Moline, Illinois.

 **META**

P.O. Box 786 Lawrence, Kansas 66044
1-800-444-6382

For further information contact: John Childers, Registrar



President

Mayhew Environmental Training Associates

Certificate Number
7ME031692007MPR
Soc. Sec. # 479-34-9671

Accreditation Expires
03/16/93

This is to certify that

Gus Youngberg

has successfully completed

AHERA Asbestos Management Planner Recertification Training

March 16, 1992 and passed the associated examination


on March 16, 1992 in Moline, Illinois.

Conducted by:

 **META**

P.O. Box 786 Lawrence, Kansas 66044
1-800-444-6382

For further information contact: John Childers, Registrar



President

X-4

State of Illinois AD11976
 Department of Public Health

LICENSE, PERMIT, CERTIFICATION, REGISTRATION

The person, firm or corporation whose name appears on this certificate has complied with the provisions of the Illinois Statutes and/or rules and regulations and is hereby authorized to engage in the activity as indicated below.

JOHN R. LUMPKIN, M.D.
 DIRECTOR

Issued under the authority of
 The State of Illinois
 Department of Public Health

EXPIRES 05/15/95	EXPIRES 100	EXPIRES 10/11/95
MARVIN L VAN METER		
PROJECT DESIGNER		

BUSINESS ADDRESS

MARVIN L VAN METER
 514 PYRE LAKE DRIVE
 SHERRARD IL 61281

THIS LICENSE IS NOT VALID IF YOUR
 TRAINING COURSE CERTIFICATE IS NOT CURRENT.

Printed by Authority of the State of Illinois • 2/81 •

DISPLAY THIS PART IN A
 CONSPICUOUS PLACE

REMOVE THIS CARD TO CARRY AS AN
 IDENTIFICATION

THE PERSON, FIRM OR CORPORATION WHOSE NAME APPEARS
 ON THIS CERTIFICATE HAS COMPLIED WITH THE PROVISIONS
 OF THE ILLINOIS STATUTES AND/OR RULES AND REGULATIONS
 AND IS HEREBY AUTHORIZED TO ENGAGE IN THE ACTIVITY
 INDICATED ON THE FACE OF THIS CARD.

ISSUED UNDER THE AUTHORITY OF
 STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC HEALTH

Marvin L Van Meter

02/21/92

MARVIN L VAN METER
 514 PYRE LAKE DRIVE
 SHERRARD IL 61281

THIS LICENSE IS NOT VALID IF YOUR
 TRAINING COURSE CERTIFICATE IS NOT CURRENT.

Mayhew Environmental Training Associates

Certificate Number
7ME031792014SR
Soc. Sec. # 489-64-5332

Accreditation Expires
03/17/93

This is to certify that

Marvin L. VanMeter

*has successfully completed
recertification requirements for*

AHERA Asbestos Contractor/Supervisor Training

March 17, 1992 and passed the associated examination

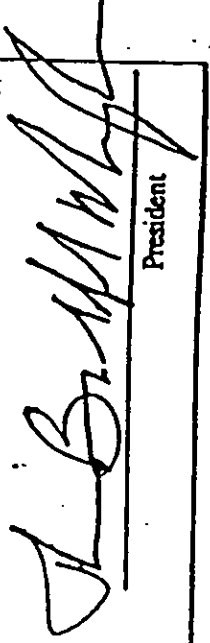
on March 17, 1992 in Moline, Illinois.

Conducted by:

◆◆META

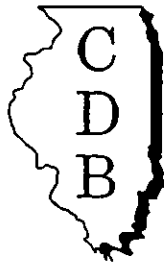
P.O. Box 786 Lawrence, Kansas 66044
1-800-444-6382

For further information contact John Childers, Registrar



President

APPENDIX C OF
A/E MANUAL OF PROCEDURES FOR
ASBESTOS INSPECTIONS & MANAGEMENT PLANS
STATE OF ILLINOIS
CAPITAL DEVELOPMENT BOARD



STANDARD O & M PROGRAM
FOR
ASBESTOS CONTAINING MATERIALS



March 1992

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I. INTRODUCTION

- A. The Federal Asbestos Hazard Emergency Response Act (AHERA) requires an Operation and Maintenance Program in all elementary and secondary school buildings which have been found to contain asbestos containing materials. The Operation and Maintenance Program contained herein is in accordance with AHERA and the Illinois Department of Public Health Rules and Regulations. Adherence to this program is mandatory for schools under Federal and State regulations.

The Capital Development Board recommends that this Operation and Maintenance Program be instituted by State agencies in all State-owned buildings.

- B. The responsibility for asbestos inspections and abatement in State owned buildings has been assigned by the Office of the Governor to the Capital Development Board. Under this authority, the O & M Plan for this facility has been prepared. Regulations include the Illinois Asbestos Abatement Act, chapter 22, para. 1401 and Rules and Regulations Title 77, chapter I, subchapter p part 855 Asbestos Abatement for Public and Private Schools in Illinois as amended and the USEPA NESHAP Regulations 40 CFR 61.140 dated November 20, 1990.

II. DESIGNATED PERSON

- A. The facility shall appoint a Designated Person to implement the Management Plan. If necessary, an assistant Designated Person may be appointed. The Designated Person shall:
1. Be in good health with no respiratory impairment, have an asbestos worker's medical exam and be approved by the agency fit to wear a respirator. It is preferable that the individual be a non-smoker.
 2. Be knowledgeable about the building(s) and its mechanical systems.
 3. Be the "Building Engineer" or "Head of Maintenance" or in a position to be informed about all repair and renovation activities within the building.
 4. Be on call for emergencies which may occur after normal working hours.
 5. Have successfully completed a Contractor Supervisor course and shall complete Form C-11.3.

- B. The Designated Person for this facility is:

Name: _____ Date Appointed: _____
Title: _____ Home Phone: _____
Address: _____ Phone: _____

- C. The Designated Person shall receive training concerning the following:
1. Health effects of asbestos
 2. Methods of detecting, identifying and assessing ACM
 3. Response actions
 4. How to implement an asbestos management plan
 5. Relevant Federal and State regulations concerning asbestos
- D. The following are the duties of the Designated Person:
1. Ensure Management Plans are available for inspection and that notification is sent in accord with Section C-3.
 2. Post warning labels in accord with Section C-4.
 3. Ensure all custodial and maintenance employees are trained in accord with Sections C-5.
 4. Document and maintain records of inspections and reinspections and implement response actions and Operations and Maintenance in accord with the Management Plan.

5. Maintain records in accord with Section C-6. Ensure that the facility's respirator program is enforced.
6. Schedule reinspections in accord with Section C-7.
7. Perform periodic surveillance in accord with Section C-8.
8. Ensure that cleaning is performed in accord with Section C-9.
9. Provide employees and workers who may come in contact with asbestos with information in accord with Section C-10.
10. Document and take appropriate action for any fiber release in accord with Section C-10.

III. NOTIFICATION; AVAILABILITY OF PLAN

- A. The Designated Person is responsible for ensuring that employees, workers, and other building occupants (or their parents or legal guardians) are notified in writing that the Management Plan is available for inspection. The written notification shall be given at least once a year. See example in Section C-11.2.
- B. The Designated Person shall attach copies of the initial notification and each annual notification to the Management Plan as an Appendix titled "Notification". Include a written statement documenting the procedures taken to complete the notification; a list of individuals who received the notification; and a dated copy of the letter.
- C. All persons requiring notification, occupying the facility after the initial notification, shall be provided with notification at beginning of employment or occupancy.
- D. A copy of the Management Plan shall be maintained in the administrative office, in room _____ of the _____ Building. The Management Plan is available, during normal business hours, without cost or restriction, for inspection by representatives of EPA, the State, the public, and all persons notified. A reasonable fee may be charged for copies of the Management Plan.
- E. Copies of the Management Plan shall also be maintained at the Office of the Director of the Department of _____ at _____, Illinois.

IV. WARNING LABELS

- A. Permanently affix an approved warning label on or adjacent to any friable or non-friable ACM and assumed ACM located in routine maintenance areas.
- B. All labels shall be in prominent visible locations until the ACM is removed. The warning label shall read, in print which is readily visible because of large size or bright color, as follows either:
 - 1. CAUTION: ASBESTOS. HAZARDOUS. DO NOT DISTURB WITHOUT PROPER TRAINING AND EQUIPMENT. (USEPA)

OR

 - 2. DANGER: CONTAINS ASBESTOS FIBERS. AVOID CREATING DUST. CANCER & LUNG DISEASE HAZARD. (OSHA)
- C. Access to routine maintenance areas that contain ACM shall be limited to authorized trained individuals. Document placement of warning labels.

v. TRAINING

- A. Different levels of training are required dependent on the employees' job classification and duties as they relate to possible asbestos exposure. All members of the maintenance and custodial staff who work in a building that contains ACM shall receive awareness training of at least two hours, whether or not they are required to work with the ACM. New custodial and maintenance employees shall be trained within 60 days after commencement of employment. As a minimum, training shall include:
1. Information regarding asbestos and its various uses and forms.
 2. Information on the health effects associated with asbestos exposure.
 3. Locations of ACM, identified throughout each building in which they work.
 4. Recognition of damage, deterioration and delamination of ACM.
 5. Name and telephone number of the Designated Person and the availability and location of the management plan.
- B. All maintenance and custodial staff who may disturb ACM shall complete an Asbestos Worker Training three-day course, pass the examination, and be licensed as asbestos workers by the Illinois Department of Public Health.
- C. All facilities having licensed workers shall also have a person trained and licensed as an asbestos supervisor. The Contractor/Supervisor Course is four days in length.

Complete Form C-11.3 in Section 11 for all trained personnel.

VI. RESPIRATOR PROGRAM

- A. All employees required to wear respirators shall be involved in a respirator program. These procedures cover the selection and use of respirators. Where practicable, the respirators should be assigned to individual workers for their exclusive use. Respirators and protective clothing will be provided by the agency when requested by the employee or required by law. Respirators shall be suitable for the purpose intended. Employees shall use the provided respiratory protection and protective clothing in accordance with instructions and training received. All employees shall comply with the USEPA WORKER PROTECTION RULE 40 CFR 763 SUBPART G and OSHA ASBESTOS CONSTRUCTION STANDARD 29 CFR 1926.58 as amended to date.
- B. MEDICAL SURVEILLANCE
1. Any employee exposed to at least 0.1 fibers per cc of asbestos for 30 or more calendar days per year, or any employee required to wear a respirator, must be in a medical surveillance program in compliance with the OSHA Standard for the construction industry 29 CFR 1926.58. The Medical Surveillance Program includes:
 - a. Mandatory medical questionnaires found in Appendix D of 29 CFR 1926.58.
 - b. An annual physical examination with emphasis on cardiovascular and gastro-intestinal systems.
 - c. An annual pulmonary function test with forced vital capacity and forced expiratory volume.
 2. All employees who may be exposed to asbestos fibers during the course of their employment while performing duties such as asbestos cleaning, asbestos repairs, asbestos removal, making asbestos inspections or monitoring asbestos abatement projects must pass an annual medical exam and shall wear a respirator whenever conditions may subject the employee to asbestos fiber exposure or inside an area designated for respirator use. The agency shall schedule and document that each employee working in the asbestos area has an annual medical examination. The physician shall review all medical reports for the physician's certification of the employee's fitness to wear a respirator. Persons should not be assigned to tasks requiring the use of respirators unless it has been determined that they are physically able to perform the work and use the equipment. All medical records shall become a part of the employee's permanent records and shall be maintained for thirty years from the employee's last date of employment by the agency.
- C. RESPIRATOR SELECTION
1. Respirators must be selected on the basis of the hazard to which the employee is expected to be exposed. Respirators are rated in multiples of the Personal Exposure Limit (PEL) 0.2 f/cc. Respirators shall be selected as follows:

- a. Up to 10 x PEL (2 f/cc) - half mask air-purifying with dual filters.
 - b. Over 10 x but less than 50 x PEL (2 - 10 f/cc) - full face powered air-purifying respirator (PAPR).
 - c. Over 50 x PEL (10 f/cc) - pressure demand air-line respirators or self-contained breathing apparatus (SCBA).
2. Pressure demand air-line respirators or self-contained breathing apparatus may be used to substitute for lower protection type respirators or if other conditions warrant this type of protection. An employee may request a PAPR in lieu of a half mask air-purifying respirator.

The agency shall provide a powered air purifying respirator in lieu of any negative pressure respirator whenever an employee chooses to use this type of respirator and it will provide adequate protection for the employee.

3. Facial hair interferes with the use of some types of respirators. Any employee having facial hair shall not use any respirator requiring a facial seal. Such employees shall instead utilize a hooded type, powered air-purifying respirator (PAPR), and shall not enter any area where the exposure concentration can reasonably be expected to exceed 10 f/cc. Whenever a hooded type PAPR is used, the employee shall operate the unit at its highest rated airflow and shall immediately exit any contaminated area at the first sign of reduced airflow or upon a unit low-battery signal.
4. Any problems with respirators shall immediately be brought to the Designated Person's attention.

D. RESPIRATOR TRAINING

1. All users of respirators shall be instructed in their selection, use and maintenance. Training shall include the opportunity to handle the respirator, have it fitted properly, test its face-piece-to-face seal, wear it in normal air for a familiarity period, and wear it in a test atmosphere. Every respirator wearer shall receive fitting instructions including demonstrations and practice in how the respirator should be worn, how to adjust it, and how to determine if it fits properly.
2. It is the employee's responsibility to ensure a proper fit each time the respirator is worn. Respirators shall not be worn when conditions prevent a good face seal. Such conditions may be a growth of beard, sideburns, a skull cap that projects under the face-piece, or temple pieces on glasses. Also, the absence of one or both dentures can seriously affect the fit of a facepiece. The agency shall conduct respirator fit testing to ensure that the respirator issued to the employee is fitted properly. Either quantitative or qualitative fit testing shall be conducted initially and at least every six months thereafter for each

employee who may wear a negative pressure respirator or whenever the facial configuration of the employee may change, such as:

- a. Weight change of 20 pounds or more.
- b. Significant facial scarring in the area of the facepiece seal.
- c. Significant dental changes; i.e., multiple extractions; without prosthesis, or acquiring dentures.
- d. Reconstructive or cosmetic surgery.
- e. Any other condition that may interfere with facepiece sealing.

The Designated Person shall document all respirator fit testing and provide a copy for the employee's permanent records maintained by the agency's Personnel Representative. Fit testing procedures shall be in conformance with Appendix C of 20 CFR 1926.58. Respirator inspection, fit test, and use records shall be completed by the wearer and maintained by the Designated Person.

E. CORRECTIVE EYEWEAR

Providing respiratory protection for individuals who wear corrective lenses is a serious problem. A proper seal cannot be established if the temple bars of eyeglasses extend through the sealing edge of the full facepiece. Systems have been developed for mounting corrective lenses inside full facepieces. When a worker must wear corrective lenses as part of the facepiece, the agency will furnish a facepiece with lenses fitted by qualified individuals to provide good vision, comfort, and a tight seal.

F. MAINTENANCE AND CARE OF RESPIRATORS

1. The program for maintenance and care of respirators shall be administered by the Designated Person and shall include the following: Inspection for defects (including a leak check), cleaning and disinfecting, repair, and storage. Equipment shall be properly maintained to retain its original effectiveness. All respirators shall be inspected by the employee before and after each use. A respirator that is not routinely used shall be inspected at least monthly.
2. Self-containing breathing apparatus shall be inspected monthly. Air and oxygen cylinders shall be fully charged according to the manufacturer's instructions. The employee shall determine that the regulator and warning devices function properly before and after each use.
3. Respirator inspection shall include a check of the tightness of connections and the condition of the facepiece, headbands, valves, connecting tube, and canisters. Rubber or elastomer parts shall be inspected for pliability and signs of deterioration. Individually assigned respirators shall be cleaned and disinfected by the employee as frequently as necessary. A record shall be kept of inspection dates and

findings for respirators maintained for emergency use. The Designated Person shall maintain all respirators for general and emergency use and will be responsible for instructing all employees in proper methods of cleaning and disinfecting the respirators.

4. Replacement or repairs shall be done only with parts designed for the respirator. No attempt shall be made to replace components or to make adjustment or repairs beyond the manufacturer's recommendations. Reducing or admission valves or regulators shall be returned to the manufacturer or to a manufacturer's certified technician for adjustment or repair.
5. Respirators shall be stored to protect against dust, sunlight, heat, extreme cold, excessive moisture, or damaging chemicals. Respirators for emergency use should be quickly accessible at all times and shall be stored in clearly marked compartments built for the purpose. Routinely used respirators, such as half mask respirators, may be placed in plastic bags. Respirators shall not be stored in such places as lockers or tool boxes unless they are in carrying cases or cartons. Respirators shall be packed or stored so that the facepiece and exhalation valve will rest in a normal position and function will not be impaired by the elastomer forced in an abnormal position.
6. The employee shall select proper respirator filters in accordance with the type of exposure expected. Dual protection filter canisters may be appropriate in some cases, e.g. asbestos dust (magenta) and organic vapors (black). The Designated Person shall maintain an adequate supply of filters.

G. RESPIRATOR USE

1. In areas which have atmospheres immediately dangerous to life and health, there are additional mandatory requirements not contained in this program. Comply with the requirements of OSHA 29 CFR 1910.134.
 2. Frequent random inspections shall be conducted by the Designated Person to assure that respirators are properly selected, used, cleaned and maintained.
 3. Employees shall wear a respirator and protective clothing whenever exposure to asbestos is probable and shall follow decontamination procedures in accord with the IDPH Rules.
- H. The respirator program shall be reviewed and evaluated by the Designated Person on a yearly basis to determine the continued effectiveness of the program.

VII. INSPECTION & REINSPECTION

- A. An inspection must be conducted before any renovation or demolition. Contact the CDB Asbestos Coordinator. State agencies may be authorized to conduct asbestos inspections using IDPH licensed staff or IDPH licensed consultants if the following measures are strictly adhered to:
1. Notification: The Capital Development Board shall be notified in writing before any asbestos inspections are performed.
 2. Inspectors: All inspectors shall be licensed by the Illinois Department of Public Health.
 3. Inspections: Perform all inspections in accord with the CDB A/E Manual of Procedures for Asbestos Inspections and Management Plans.
 4. Approval: Six (6) copies of the inspection report must be forwarded to CDB with a cover letter. CDB shall approve this preliminary report before further action is taken.
- B. If no asbestos is found the agency may be authorized by CDB to proceed with demolition or renovation of the building without further testing. If the project costs exceed \$10,000, CDB must be the contracting agency.
- C. At least once every three years after the date of the Management Plan a reinspection shall be conducted. Licensed inspectors shall conduct the reinspections in accord with requirements in the CDB "Reinspection Protocol".

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- C. At least once every three years after the date of the Management Plan a reinspection shall be conducted. Licensed inspectors shall conduct the reinspections in accord with requirements in the CDB "Reinspection Protocol".

VIII. PERIODIC SURVEILLANCE

- A. At least every six months, periodic surveillance shall be conducted of the facility. The periodic surveillance shall include a visual inspection of all areas that are identified as ACM or assumed ACM in the Management Plan. The individual conducting the periodic surveillance need not be a licensed inspector, but shall be trained to conduct the surveillance. Complete Form C-11.5 and include in the Management Plan.
- B. Evaluate the information from the periodic surveillance to determine if any change has occurred. The Designated Person shall contact a Management Planner if any change has occurred. All response actions shall be selected by licensed management planners and designed by licensed project designers.
- C. Additional periodic surveillance shall be conducted whenever repairs, renovations, or other activities are conducted in areas containing ACM or assumed ACM.

IX. CLEANING PROCEDURES

- A. Clean all areas of the building where friable ACM, damaged or significantly damaged thermal system insulation ACM, or friable suspected ACM are present at least once after the completion of the inspection and before the initiation of any response action, other than O & M activities or repair.
- B. Additional cleaning shall be performed if recommended by the Management Planner as part of a response action.
- C. The cleaning procedures include the following:
 1. Licensed workers shall be equipped with 1/2 face dual-cartridge high efficiency air purifying respirators, at a minimum.
 2. Clean using a combination of wet mopping or wiping and HEPA vacuuming.
 3. Irregular surfaces, such as curtains, books, furniture and carpeting should be cleaned using HEPA equipped vacuum cleaners. Many manufacturers offer several "nozzles" to make HEPA vacuuming of irregular surfaces less difficult. Carpet may be steam cleaned.
 4. Dispose of waste generated during cleaning as ACM.
 5. Complete Form C-11.6 for each cleaning and include in the Management Plan.

x. ACM DISTURBANCES AND PROCEDURES

EPA and OSHA have severe penalties for improper disturbance, removal or disposal of ACM. Therefore the following procedures shall be followed if materials are suspected to be ACM.

A. Stockpiled Materials

1. Agencies suspecting that stockpiled materials contain asbestos should:
 - a. not use such materials for facility maintenance.
 - b. not move or dispose of material until authorized to do so by CDB.
 - c. place warning signs in accord with Section C-4.
 - d. cover with one layer of 6-mil plastic sheeting.
 - e. complete form 9A in Appendix B and send to the CDB Asbestos Coordinator.
2. This includes 9" x 9" floor tile, 12" x 12" floor tile, ceiling panels, ceiling tile, boiler and fitting gaskets, roping for boiler gaskets, thermal insulations such as air cell or magnesium block, bags of asbestos insulation mix and transite asbestos cement board.
3. Depending on the size and circumstances CDB will either authorize trained personnel from the agency to properly dispose of the material or conduct an abatement project. In some instances CDB may instruct the agency to secure the asbestos in a storage area until the facility can be inspected.

B. Asbestos Abatement Projects

Any project exceeding \$10,000 must be conducted by CDB. For smaller projects it is appropriate for agencies to either contract for the abatement work or complete the work with staff. Unless the Agency has an IDPH licensed project designer on staff, project design shall be contracted for by CDB.

1. Must Notify EPA in accord with NESHAP.
2. Agencies classified as schools by IDPH must follow IDPH requirements.
3. All projects must be designed by a CDB prequalified IDPH licensed project designer and have CDB prequalified IDPH licensed asbestos project manager to observe the abatement and CDB prequalified IDPH licensed air sampling professional perform air sampling.
4. Projects not completed with staff requires a CDB prequalified IDPH licensed contractor.

5. Staff performing the work must be IDPH licensed workers and supervised by an IDPH licensed supervisor.
6. The agency must have a medical surveillance and respirator program in accord with Section C-6 for all employees working with asbestos.
7. The agency must provide staff with all appropriate tools, equipment, supplies, and personal protective equipment. A HEPA vacuum is required to be available for all abatement work.

C. Notification

1. Projects involving abatement of greater than three linear feet or three square feet of asbestos containing material require prior written permission of the Capital Development Board. The Agency shall submit the following information to the CDB Asbestos Coordinator:
 - a. Building name and CDB building number.
 - b. Location and amount of ACM present.
 - c. Procedures for abatement.
 - d. Names and IDPH license numbers for all Design Professionals and asbestos Abatement contractors to be utilized by the Contracting Agency.
 - e. Location of proposed "Disposal" or storage site.
2. Exception to prior written approval - Emergency projects do not require prior written permission from the Capital Development Board. Emergency projects are those involving public health, public safety, or where immediate expenditure is necessary for repairs to State property in order to protect against further loss or damage to State property, to prevent or minimize serious disruption in State services or to insure the integrity of State records. For emergency projects the Contracting Agency shall verbally notify the Capital Development Board of abatement work as soon as possible, or within three working days after the start of the project.

D. Regulations

1. Federal and Illinois laws and regulations that apply to asbestos abatement work are similar, regardless of the area size or the value of the work. State agencies that contract for asbestos abatement services under "local bidding" or "emergency" circumstances should not undertake such projects without assured quality control. These procedures are provided to assist in that regard.
 - a. All projects except small projects must be designed by a licensed Project Designer.
 - b. The contracting agency should follow all regulations in C-1.

- c. All response actions, including enclosure or encapsulation of ACM must be conducted and supervised by IDPH licensed persons.
 - d. The Designated Person shall ensure that prior written notice is provided and notice to EPA.
 - e. The Designated Person shall document all activities, including the Asbestos Project Manager's (APM) and Air Sampling Professional's (ASP) daily reports, and clearance air tests results and shall insert the record drawings which indicate the exact locations of any removal, encapsulation, or enclosure of ACM in the building's management plan.
 - f. The contracting agency shall provide CDB with written notification that the abatement work has been completed within 10 working days of its completion. Such notification shall include the date, location and nature of the work (emergency or other reason for abatement), the name and address of the contractor, the total value of the contract and a copy of the documentation described in e. above.
 - g. Include the Supplementary Conditions in accord with Section C-11 in the bidding and contract documents for all asbestos abatement projects.
 - h. The contracting agency should be thoroughly familiar with the Response Action Contractors' Indemnification Act.
2. **NOTE:** Any building regulated by IDPH (schools) must use an IDPH licensed abatement contractor to conduct any abatement except for roofing.

E. Removal of Intact Non Friable ACM

1. Non friable materials when removed intact pose little danger of asbestos fiber release. These procedures are issued to ensure worker protection and emission control during removal of all non friable materials including the following materials: Transite type materials such as roofing, siding, piping, sheeting, and cooling tower baffles; fire brick; stucco siding; and floor tile and other miscellaneous floor coverings. Non friable projects do not require the use of licensed contractors, but it is required that a Designated Person supervise the project and the work be completed by licensed workers. Roofing projects do not require licensed workers.
2. Regulated Area: - The agency shall:
 - a. Establish a regulated area in all work areas where non-friable ACM materials are to be removed, renovated, or repaired. The regulated areas shall be demarcated in a manner that minimizes the number of persons within the area and protects persons outside the area from exposure to air-borne concentrations of asbestos in excess of the

- permissible exposure limit. Access to the regulated areas shall be limited to authorized persons.
- b. Ensure that employees shall not eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the regulated areas.

3. Tools:

All powered tools, or high speed abrasive disc saws must be equipped with engineering controls that eliminate dust before they can be used for work related to asbestos. Compressed air can be used to remove asbestos only when it is used in conjunction with an enclosed ventilation system designed to capture the dust created by the compressed air.

4. Air Monitoring:

- a. State and Federal regulations require that all employers ensure that no employee is exposed to an airborne concentration of asbestos in excess of 0.2f/cc as an 8 hour time weighted average Personal Exposure Limit (PEL) or in excess of 1.0f/cc as averaged over a sampling period of 30 minutes Excursion Limit (EL). In addition, OSHA has an Action Level of 0.1f/cc which shall be a control level for these procedures. (NOTE: OSHA has proposed lowering the PEL to 0.1f/cc.)
- b. Air monitoring must be completed for each non-friable asbestos abatement project. The air monitoring shall be completed by an independent CDB prequalified IDPH licensed air sampling professional (ASP) employed by the A/E (where an A/E is involved) or by the contracting state agency.
 - (1) A minimum of three background samples shall be taken prior to the start of the work.
 - (2) Determinations of an employee's exposure shall be made from breathing zone air samples that are representative of both the 30 - minute short-term exposures (Excursion Limit) and the eight hour time weighted average of each employee.
 - (a) Representative 8-hour Time Weighted Average (TWA) employee exposure shall be determined on the basis of one or more samples representing full-shift exposure for employees in each work area.
 - (b) Representative 30-minute short-term employee exposures shall be determined on the basis of one or more samples representing 30-minute exposures associated with operations that are most likely to provide exposures above the excursion limit for employees in each work area.

(3) In addition to the breathing zone air samples, at least one sample each shall be taken daily in the following areas:

- (a) Work area.
- (b) Outdoors in a zone not suspected to be contaminated to be used as a background sample.
- (c) If the material being removed is adjacent to an intake of a ventilation system that must remain in operation during the removal, two samples within the ventilated area.
- (d) If any interior work area air tests indicate an air-borne asbestos fiber level above 0.1f/cc, additional air samples shall be taken in any area where contamination is possible and work shall be stopped until the work methods have been reviewed and revised to control fiber release. If any of the samples taken in (c) or in possible contaminated areas exceed 0.1f/cc, these areas shall be cleaned by HEPA vacuum or wet wiping.

c. If any of the interior air tests taken above indicate an air-borne asbestos fiber level above 0.01f/cc and are above the initial background levels, the ASP shall have the employees clean the area by wet wiping, and retest the area for clearance taking a minimum of two air samples. Once all tests fall below 0.01f/cc, the area may be reoccupied.

d. Upon completion of the removal, interior work areas shall be cleaned using HEPA vacuum or wet methods. Clearance testing will not be required.

5. Respirators:

Any time the PEL or excursion limit is exceeded or upon request of the worker, the employer shall provide the worker with a respirator and protective clothing and must provide decontamination facilities. Whenever respirators are used or required the employer must be able to provide evidence of worker training and respirator and medical surveillance programs. Whenever the PEL is exceeded, the site shall be posted with the following information: DANGER, ASBESTOS CANCER AND LUNG DISEASE HAZARD AUTHORIZED PERSONNEL ONLY, RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA.

6. Removal:

Materials shall be kept damp using a surfactant during removal, and shall be thoroughly wetted using a surfactant prior to disposal. Materials shall be handled to minimize

breaking. Enclosed chutes may be used for lowering thoroughly wetted roofing materials to ground level.

7. Disposal:

All ACM except roofing shall be bagged in two layers of 6-mil poly and transported to an EPA approved landfill in an enclosed truck or dumpster. Bulk roofing materials, thoroughly wetted, may be transported in an enclosed truck or dumpster.

8. Licensed Personnel:

All non-friable asbestos abatement projects, except roofing projects, exceeding three square feet or 3 lineal feet where the material cannot be removed intact, must be designed by a licensed asbestos project designer and require a licensed asbestos project manager. In addition, workers must be licensed by the Illinois Department of Public Health and a contractor supervisor licensed by the Illinois Department of Public Health must be present. It is recommended that roofing projects not designed by a licensed project designer have an observer with a knowledge of asbestos abatement procedures.

F. Floor Tile

1. Laboratory Analysis

- a. The laboratory analysis for the asbestos content of floor tile samples may not accurately reflect the percentage of asbestos fibers actually in the floor tile. The US EPA and others have documented that many of the asbestos fibers utilized in the manufacturing process are not optically visible by the methods normally used by laboratories in analyzing samples.
- b. The Capital Development Board recommends that agencies assume all floor tile and all mastics contain asbestos fibers and follow the maintenance methods given below until proper testing confirms that asbestos fibers are not present. Contact the CDB Asbestos Coordinator for the proper testing methods. These methods utilize a sample preparation process designed to help remove the vinyl binder matrix and filler material interferences. Other methods of testing floor tile and mastic are not as accurate and shall not be utilized.

2. Hazard Assessment:

All floor tile and mastic which has not tested negative by the methods described above shall be handled as asbestos containing materials. The following steps by a Management Planner shall be used in assessing the hazard posed by these materials and the action that shall be taken:

- a. Determine the potential for asbestos fiber release - Floor tile, even if in a slightly broken condition, is non-friable (has a low potential for fiber release). Normal activities in the area should not generate a fiber release.
- b. Prioritize the hazard - Since floor tile and mastics are non-friable materials they do not usually pose a hazard.
- c. Determine the action - The action for these materials is a continued Operations & Maintenance Program, replacing broken floor tiles as required. Removal of floor tile and mastic may be an appropriate action if other asbestos containing materials are to be removed in the same area.
- d. Assistance - The Capital Development Board staff is available to assist agencies in determining the potential for fiber release, prioritizing hazards and determining the correct response action.

3. Operations and Maintenance Program:

- a. Floor tile shall have a wet maintenance and wax or sealer program to protect the base material from abrasion and to seal and encapsulate broken edges. This program shall consist of waxing or sealing at least three times per year. This schedule shall be adjusted if the finish is worn off prior to the application of a new finish.
- b. Sanding, drilling, sawing, or other high speed abrasion of these materials is prohibited. These types of actions can only be performed by a licensed asbestos worker using appropriate protective equipment and engineering controls.
- c. The following guidelines shall be followed when stripping the wax or finish coat from floor coverings:
 - (1) Avoid stripping floors. Stripping of floors shall be done infrequently, no more than twice a year depending on the circumstances. The frequency shall be carefully considered as floor maintenance schedules or contracts are written or renewed.
 - (2) Properly train staff. Custodial and maintenance staff who strip floors shall be trained to safely use machines, pads, and floor chemicals.
 - (3) Follow appropriate work practices. Custodial and maintenance staff who strip floors shall follow appropriate work practices such as those recommended here, under informed supervision. Directions from floor tile and floor wax product manufacturers on proper maintenance procedures shall be consulted.
 - (4) Strip floors while wet. The floor should be kept wet during the stripping. Do not perform dry

stripping. Prior to machine operation, an emulsion of chemical stripper and water is applied to the floor with a mop to soften the wax or finish coat. After stripping and before application of new wax, the floor shall be cleaned using a wet mop. Mop heads used for this cleaning shall be washed for reuse or disposed of as asbestos containing material. The mop shall never be left to dry without washing.

- (5) Run machines at low speed. If a variable speed machine is used to remove the wax or finish coat, use a slow speed of 175 to 190 rpm.
- (6) Use the least abrasive pad to strip wax or finish from floors.
- (7) Do not over strip floors. Stop stripping as soon as the old surface coat is removed. Over stripping can damage the floor and may cause the release of asbestos fibers. Do not operate a floor machine with an abrasive pad on unwaxed or unfinished floors.
- (8) Conduct periodic surveillance in accord with Section C-8.

4. Removal:

- a. The US EPA and the Capital Development Board recommend asbestos containing floor tiles and mastics remain in place if the material is in good condition or can be adequately sealed. Removal of these materials should only be done at the end of the materials' life or whenever remodeling dictates. Improper removal of asbestos containing floor tiles and mastics could result in the release of asbestos fibers.
- b. Asbestos Floor Tile Removal Methods. Follow Small Disturbance procedures for area preparation. All ACM removed must be thoroughly wetted and double bagged in 6-mil properly labeled poly bags. Areas where the tile cannot be removed intact with methods such as given below must be completed as an asbestos abatement project.
 - (1) Heat
This procedure is applicable for small areas or single tiles. Apply heat with propane torch or heat gun. Keep moving to prevent burning. Lift tile with wide blade putty knife. Heat mastic and scrape away excess.
 - (2) Dry Ice
This procedure is applicable for small areas. CAUTION: thermal gloves are required for handling the dry ice to prevent frostbite. Apply large piece of dry ice to area to be removed. Move over tile to be removed. Popping sound

indicates loosening of tile. Remove mastic with heat as above.

(3) Water

This procedure is applicable for larger areas but may not be appropriate for wood floors. Prepare water by adding surfactant (wetting agent). Spray on area until heavy coverage occurs. Cover with plastic for 8 to 24 hours. Check for looseness. If not loose apply more water. If loose, raise tile with wide putty knife or long handled scraper using care not to break tiles. Remove mastic using heat.

- c. If it is necessary to remove mastic, extreme caution shall be utilized. Many mastic removers and solvents including the Citrus Turpene varieties, have a very low "Flash Point Rating" (less than 140 degrees Fahrenheit) and a very low "Lower Explosive Limit (less than one percent concentration in air). This means that less than one percent of the product's vapor needs to be in the air to create an explosive atmosphere. These products represent a fire and explosion hazard in confined spaces which normally occur during the removal of asbestos containing materials. Also, some solvents may be carcinogenic and may be solvent to the plastic bags usually used for containing asbestos waste. Some solvents have a strong odor and may cause nausea. Respirators may require both a vapor filter and an asbestos filter. All work utilizing mastic removers shall be conducted while the building is unoccupied.
- d. It is recommended that the use of mastic removers and solvents be limited to very small quantities or only products that have a flash point of 200 degrees Fahrenheit or higher be used.
- e. Federal and State laws require all agencies to obtain the Material Safety Data Sheet of all products used. Agencies must also comply with employee right to know laws. Agencies may contact the Capital Development Board for assistance in selection of proper removal products and methods.

G. Small Disturbances:

Use the following procedures for small-scale maintenance activities (less than 3 linear or 3 square feet which repairs ACM, disturbs ACM dust or debris, or disturbance of ACM is possible).

- 1. Obtain approval from the Designated Person before beginning work, all work shall be performed by licensed workers and be supervised by a licensed supervisor.

2. Schedule the work after normal working hours (nights or weekends), if possible, or control access to the work area. Doors shall be locked from the inside and signs posted to prevent unauthorized persons from entering the work area (e.g., "MAINTENANCE WORK IN PROGRESS, DO NOT ENTER", or, if the asbestos levels are high enough to trigger the OSHA Rule (the PEL or higher), "DANGER - ASBESTOS: CANCER AND LUNG DISEASE HAZARD: AUTHORIZED PERSONNEL ONLY: RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THE AREA"). Note, emergency exits must remain in operation.
3. The air handling system shall be shut off or temporarily modified to prevent the distribution of fibers from the work site to other areas in the building. Be sure that the electrical system is disconnected prior to misting.
4. Workers shall wear NIOSH approved respirators with HEPA filters and protective clothing, including a body suit, hood, boots, and gloves. Workers must wear personal monitors as required by OSHA unless previous experience with the same ACM and similar operations indicates that fiber levels are likely to be less than the PEL.
5. A 6-mil polyethylene plastic dropcloth shall be placed beneath the location of the maintenance work, extending at least 10 feet beyond all sides of the work site. (In the case of entry into the space above a suspended ceiling, the work site would be the area of the panels moved to gain access.) Alternatively, a rectangular enclosure constructed of 6-mil plastic on a frame can be positioned underneath the maintenance area to inhibit the spread of fibers from fallen ACM. (Mobile enclosures of this type are available commercially.)
6. If entry to the space above a suspended ceiling is necessary, the panels shall be moved carefully with as little movement as possible. The air above the opening, the top of the moved panel and all panels surrounding the opening, and the ACM likely to be disturbed shall be misted with a fine spray of amended water. Misting of the air helps fibers to settle quickly. Cleaning ceiling panels with a HEPA vacuum cleaner is also effective as long as care is taken not to vibrate panels and disturb the ACM.
7. Thermal System Repairs:
 - a. Many times thermal insulation can be easily repaired to prevent further release of asbestos fibers. Repairs can be made as follows:
 - (1) Spray the damaged area with a light coating of penetrating encapsulant.
 - (2) Fill any gouges or depressions with fiberglass or palm grade encapsulant.

- (3) Wrap or cover damaged area with a self setting lagging or lagging set in one coat of bridging encapsulant.
 - (4) Paint damaged area with two coats of bridging encapsulant.
 - b. Self setting lagging will not properly adhere if wetted with an amended water. These methods can also be utilized for repairing open ends of pipe insulation or repair of fitting insulation.
8. The maintenance renovation work form C-11.8 shall be completed for each area repaired. Air monitoring is required for any activity which approaches thirty minutes, unless all applicable procedures indicated in Appendix G of OSHA 1926.58 - Work Practices and Engineering Controls for Small Scale, Short-Duration Asbestos Renovation and Maintenance Activities Non-Mandatory are followed.
9. Glovebag Procedures
- a. The asbestos-containing insulation on piping shall be removed using IDPH glove bag techniques as necessary for the repairs. Perform all glovebag procedures using a NIOSH approved PAPR respirator, mini-enclosures, and negative air.
 - b. If a bag is ruptured during the repairs, work shall stop, the area should be sealed off, and all procedures recommended for large-scale asbestos removal shall be followed.
 - c. Plastic sheets (6-mil polyethylene) shall be cut and taped around any thermal insulation which might be disturbed. The plastic shall be misted with amended water before taping it shut. The plastic shall be taped to itself to avoid damaging the insulation.
10. During the course of the work, small pieces of ACM shall be collected by the HEPA-vacuum. This is best accomplished by placing the vacuum hose adjacent to the ACM being disturbed. Larger pieces shall be placed in a labeled plastic bag.
11. Upon completion of the work, any visible debris on the top of the suspended ceiling, on the drop cloth, on the floor, or anywhere else shall be collected by cleaning with a HEPA vacuum.
12. All equipment and tools shall be wiped with damp cloths or HEPA-vacuumed.
13. The plastic sheet shall be wiped with a damp cloth, carefully folded, and discarded as asbestos waste.
14. All debris, cloths, vacuum bags, and filters shall be discarded in sealed and labeled plastic bags as asbestos waste.

15. Workers shall vacuum their disposable suits before leaving the work site (or remove and discard them as asbestos waste and put on a clean disposable suit), proceed to a shower facility, shower with their respirators on, and clean their respirators while in the shower.
16. Install non-asbestos containing material to replace removed ACM.

H. Large Disturbances:

Maintenance activities which involve removal of three linear or square feet or more of asbestos-containing materials (e.g. several valves need attention in a utility room or block insulation needs to be removed for boiler repair) are large disturbances and shall be performed by IDPH licensed Asbestos Contractors and designed by an IDPH licensed asbestos project designer.

I. Fiber Release Episodes:

1. Custodial and maintenance workers shall immediately report in writing to the Designated Person the presence of debris, water or physical damage to the ACM, or any evidence of possible fiber release. The Designated Person shall call an abatement contractor or assign a trained in-house team to clean up debris and make repairs as soon as possible. If a contractor is to be used, a company shall be selected and retained by contract for quick response action as needed. Complete Form C-11.9 for each fiber release episode.
2. Minor Episodes (less than three linear feet, three square feet): Follow the applicable procedures for small disturbances.
3. Major Fiber Release Episode:

The Designated Person shall document that the procedures described below are followed in the event of a major fiber release episode (i.e. the falling or dislodging of more than three square or linear feet of friable ACM):

- a. Restrict entry into the area and post signs to prevent entry into the area by persons other than those necessary to perform the response action.
- b. Shut off or temporarily modify the air-handling system to prevent the distribution of fibers to other areas in the building.
- c. The response action for any major fiber release episode must be designed by an IDPH licensed project designer and conducted by a licensed asbestos abatement contractor.

XI. RECORDS, REPORTS & SAMPLE FORMS

These sample forms are examples of the types of records that must be kept by the Designated Person. Agencies may modify these forms if all information on these forms is included.

FACILITY LETTERHEAD

Date _____

SAMPLE LETTER

Dear Parent/Employee:

The building(s) of (insert facility name and address) has (have) been inspected for asbestos-containing building materials by a licensed inspector. In addition, an Asbestos Management Plan has been prepared by a Licensed Management Planner. The Inspection Report and Management Plan are on file in the facility office and are available for public review during business hours.

The reports state that asbestos-containing materials have (have not) been found. The condition and type of the asbestos are shown in the individual reports.

Copies of these reports are available upon notification of the facility administrator and payment of a fee to cover copying costs.

Sincerely,

(Individual's Name)
Designated Person

Note: Maintain this record indefinitely. Attach to the Management plan.

TRAINING

Facility Name _____

Employee Name _____

Employee Job Title _____

Completion Date of Training _____

Course Title _____

Course Provider and Location of Training _____

Number of Hours Completed in Training _____

Signature of Employee _____

Signature of Designated Person _____

Date _____

Attach copy of course completion certificate.

MEDICAL

Date: _____

Provider: _____

Approved for Respirator Use: Yes No

(authorized agency signature)

(employee's signature)

Note: Maintain these records for 30 years after employment ceases. Attach to the Management Plan.

RESPIRATOR INSPECTION / FIT TEST RECORD

Date: _____

Type: _____ ID No. _____

<u>INSPECTION*</u>	Before Use	After Use	Comments
Facepiece	_____	_____	_____
Inhalation Valve	_____	_____	_____
Exhalation Valve	_____	_____	_____
Headbands	_____	_____	_____
Cartridge Holder	_____	_____	_____
Cartridge/Canister	_____	_____	_____
Filter	_____	_____	_____
Harness	_____	_____	_____
Hose	_____	_____	_____
Gaskets	_____	_____	_____
Others	_____	_____	_____
Cleaned	_____	_____	_____
Disinfected	_____	_____	_____
Corrective Action Required	_____		

FIT TEST (See Pg. 2, C-11.4.2 for fit test procedures.)

Positive Pressure _____ Negative pressure _____

Ampule Fit Test _____ Irritant Smoke Test _____

Fit Test By _____ Date _____

Hours used _____

*Initial items completed

Employee Signature _____

RESPIRATOR TEST PROCEDURES

Positive Pressure Test:

- Exhalation valve or breathing tube, or both is closed off and wearer is instructed to exhale gently.
- The respirator has been properly donned if a slight positive pressure can be built up inside the facepiece without the detection of any outward leakage of air between the sealing surface of the facepiece and the wearer's face.
- For some respirators, this test method requires that the respirator wearer first remove the exhalation valve cover from the respirator and then replace it after completion of the test.

Negative Pressure Test

- The inlet opening of the respirator's canister(s), cartridge(s), or filter(s) is closed off by covering with the palm of the hand(s), by replacing the inlet seal on canister(s), or by squeezing a breathing tube or blocking its inlet so that it will not allow the passage of air.
- The wearer is instructed to inhale gently and hold his breath for at least 10 seconds.
- If the facepiece collapses slightly and no inward leakage of air into the facepiece is detected, it can be reasonably assured that the respirator has been properly donned and the exhalation valve and facepiece are not leaking.

Banana Oil Ampule fit-test (or Irritant Smoke Ampule)

1. ATTACH ORGANIC VAPOR CARTRIDGES TO RESPIRATOR (for banana oil only)
2. Place subject in testing tent.
3. Pop out swab at swab base.
4. Crush swab between fingers (or break off tips of smoke tube).
5. Hold crushed swab 2" to 3" from where facepiece seals to face (or aim irritant smoke at seals).
6. Have subject do OSHA movements (see 29 CFR 1926.58 Appendix C).

If the odor of "bananas" or "smoke" is detected, reposition facepiece or select another facepiece and test again.

PERIODIC SURVEILLANCE OF ASBESTOS CONTAINING MATERIALS

Building Name: _____ Room Number _____

CDB Building Number: _____ Room Name _____

Type of ACM:

1. Sprayed- or troweled on ceilings or walls
2. Sprayed- or troweled on structural members
3. Insulation on pipes, tanks, or boilers
4. Other (describe): _____

Has the material been encapsulated _____, enclosed _____,
neither _____?

Assessment--Note location of ACM and any changes in condition:
Photograph any areas that have changes and attach photo to this report.

1. Air plenum, air shaft, or air stream: _____

2. Physical damage: _____

3. Water damage: _____

4. Deterioration: _____

5. Accessibility of the material: _____

6. Activity near the material: _____

7. Other observations (including the condition of the encapsulant or
enclosure, if any): _____

SIGNED: _____ DATE: _____
(Person completing surveillance)

NOTE: Retain this form for three years after the next reinspection. Attach to
the Management Plan.

CLEANING RECORD

Building Name: _____ Room Number _____

CDB Building Number: _____ Room Name _____

1. Initial cleaning yes ___ no ___
Periodic cleaning yes ___ no ___

2. Date _____

3. Locations cleaned (within rooms) _____

4. Methods and equipment used to perform cleaning _____

5. Special equipment used _____

6. Name and Location of storage or disposal site of ACM _____

7. Type of worker protection used during cleaning _____

8. Name of each person performing the cleaning

PRINT	SIGNATURE	IDPH WORKERS LICENSE #
_____	_____	_____
_____	_____	_____
_____	_____	_____

SIGNED: _____ DATE: _____
(Designated Person)

NOTE: Retain this form for thirty years after employment separation of those involved. Attach to the Management Plan.

ILLINOIS CAPITAL DEVELOPMENT BOARD
Supplemental Conditions for Small and Emergency
Asbestos Abatement Projects

1. Bidders shall be licensed as Asbestos Abatement Contractors by the Illinois Department of Public Health (IDPH) and prequalified by the Capital Development Board.
2. All contractor's workers shall be licensed by IDPH. The contractor's supervisor shall be an IDPH licensed supervisor.
3. All work practices shall be in accordance with IDPH Rules and Regulations. All variances shall be approved by CDB. If the work affects an elementary or secondary school facility, CDB will obtain IDPH review of variance requests.
4. The contractor may not conduct any abatement work without authorization from the agency's designated Asbestos Project Manager (APM) who has the responsibilities and authority specified by the IDPH Rules and Regulations.
5. All air monitoring required by the contract or government regulation shall be conducted and paid for by the contractor. Laboratories shall meet IDPH standards and be prequalified by CDB.
6. All ACM wastes shall be properly disposed in an EPA approved landfill and the contractor shall furnish the contracting agency with written verification of the disposal.
7. This project is being conducted under the Response Action Contractors' Indemnification Act. The contracting agency will withhold 5% of each payment to the contractor in accord with the Indemnification Act. (Public Act 84-1445)

Agency: _____

Project #: _____

DATE: _____

Complete this form for each work order even if no asbestos is present.

MAINTENANCE/RENOVATION WORK

Building Name: _____ Room Number _____

CDB Building Number: _____ Room Name _____

1. Exact location of area involved (homogeneous area(s), location within room, etc.) _____

Starting Date: _____ Completion Date: _____

2. Is asbestos present in the area which you intend to do work?
Yes _____ No _____ (If no complete page 1 only and attach to Management Plan.)

If yes:

A. Worker informed ACM exist.

Workers Initials _____

B. Type of ACM present.

C. Worker agrees to avoid damaging ACM in any way including but not limited to, drilling, abrading, cutting, etc.

3. Is area restricted? Yes _____ No _____

If yes:

A. Worker informed area contains friable damaged ACM. _____

B. Access restricted to persons wearing respiratory equipment at all times. _____

C. Worker understands that asbestos is a recognized health hazard and that asbestos fibers can cause lung disease and cancer. _____

D. Worker assumes full responsibility for own protection and welfare when entering the restricted area and will hold the Facility harmless from any injury claim related to asbestos exposure. _____

4. Asbestos control methods to be used (i.e., glove-bag, HEPA vacuum, wet methods, etc.) _____

5. Protective equipment to be used (respirators, coveralls, etc.) _____

6. If ACM is to be removed, provide the name and location of storage or disposal site of the ACM. _____

7. NAMES OF EACH WORKER

PRINT	SIGNATURE	IDPH WORKERS LICENSE #
_____	_____	_____
_____	_____	_____
_____	_____	_____

8. FOR WORK TO BE COMPLETED BY CONTRACTORS:

Employer _____

Address _____

Print Name _____

Worker's Signature _____

9. Accepted by (Designated Person) _____ Date _____

Note: Retain this form for thirty years after the completion of work. If asbestos is present, retain for thirty years after the worker's employment separation. Attach to the Management Plan.

10. Complete this part if air samples are required.

Name of ASP: _____ License # _____

Signature: _____

Locations of samples collected: _____

Date samples collected: _____

Name and address of Laboratory: _____

Date of Analysis: _____

Results of Analysis: _____

Method of Analysis:
PCM _____ TEM _____

Name of Analyst: _____

Signature: _____

Attach copy of NVLAP certification.

FIBER RELEASE EPISODE REPORT

The presence of debris, water or physical damage to asbestos containing materials, or any evidence of fiber release shall be immediately reported to the Designated Person.

Building Name: _____ Room Number _____

CDB Building Number: _____ Room Name _____

1. Homogeneous area designation of fiber release. _____

2. Date _____ Reported By (print) _____

3. Description of episode _____

4. Was the ACM cleaned up according to IDPH approved procedures?
Yes ___ No ___ Describe the cleanup: _____

5. Name and location of storage or disposal site of ACM: _____

6. Results of air clearance testing: _____
Name of ASP _____ IDPH License No. _____
Complete Form C-11.8.3 if air samples are required.

NAMES OF PEOPLE PERFORMING WORK

PRINT	SIGNATURE	IDPH WORKERS LICENSE #
_____	_____	_____
_____	_____	_____
_____	_____	_____

SIGNED: _____ DATE: _____
(Designated Person)