

**NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM**

(Type all entries - complete applicable sections)

STATE: Pennsylvania
COUNTY: Allegheny
FOR NPS USE ONLY
ENTRY DATE JUN 25 1974

1. NAME

COMMON:
Monongahela Incline

AND/OR HISTORIC:

2. LOCATION

STREET AND NUMBER:
Grandview Ave. at Wyoming Ave.

CITY OR TOWN:
Mt. Washington, Pittsburgh

CONGRESSIONAL DISTRICT:
14th

STATE:
Pennsylvania

CODE:
42

COUNTY:
Allegheny

CODE:
003

3. CLASSIFICATION

CATEGORY (Check One)	OWNERSHIP	STATUS	ACCESSIBLE TO THE PUBLIC
<input type="checkbox"/> District <input type="checkbox"/> Site <input type="checkbox"/> Building <input checked="" type="checkbox"/> Structure <input type="checkbox"/> Object	<input checked="" type="checkbox"/> Public <input type="checkbox"/> Private <input type="checkbox"/> Both	<input checked="" type="checkbox"/> Occupied <input type="checkbox"/> Unoccupied <input type="checkbox"/> Preservation work in progress	Yes: <input checked="" type="checkbox"/> Restricted <input type="checkbox"/> Unrestricted <input type="checkbox"/> No

PRESENT USE (Check One or More as Appropriate)

<input type="checkbox"/> Agricultural	<input type="checkbox"/> Government	<input type="checkbox"/> Park	<input checked="" type="checkbox"/> Transportation	<input type="checkbox"/> Comments
<input type="checkbox"/> Commercial	<input type="checkbox"/> Industrial	<input type="checkbox"/> Private Residence	<input type="checkbox"/> Other (Specify)	
<input type="checkbox"/> Educational	<input type="checkbox"/> Military	<input type="checkbox"/> Religious		
<input type="checkbox"/> Entertainment	<input type="checkbox"/> Museum	<input type="checkbox"/> Scientific		

4. OWNER OF PROPERTY

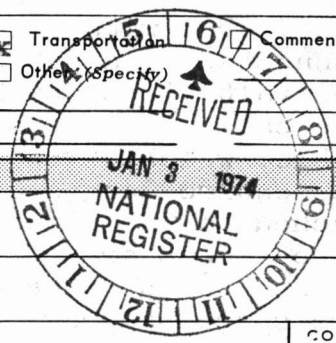
OWNER'S NAME:
Port Authority of Allegheny County

STREET AND NUMBER:
121 Seventh St.

CITY OR TOWN:
Pittsburgh

STATE:
Pennsylvania

CODE:
42



5. LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.:
Allegheny County Courthouse

STREET AND NUMBER:
414 Grant St.

CITY OR TOWN:
Pittsburgh

STATE:
Pennsylvania

CODE:
42

6. REPRESENTATION IN EXISTING SURVEYS

TITLE OF SURVEY:
Landmark Architecture of Allegheny County

DATE OF SURVEY: **1967** Federal State County Local

DEPOSITORY FOR SURVEY RECORDS:
Pittsburgh History and Landmark Foundation

STREET AND NUMBER:
Old Post Office, Allegheny Sq. West

CITY OR TOWN:
Pittsburgh

STATE:
Pennsylvania

CODE:
42

SEE INSTRUCTIONS

STATE: Pennsylvania

COUNTY: Allegheny

ENTRY NUMBER: JUN 25 1974

FOR NPS USE ONLY

DATE

7 DESCRIPTION

CONDITION	(Check One)					
	<input type="checkbox"/> Excellent	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Fair	<input type="checkbox"/> Deteriorated	<input type="checkbox"/> Ruins	<input type="checkbox"/> Unexposed
	(Check One)			(Check One)		
	<input checked="" type="checkbox"/> Altered	<input type="checkbox"/> Unaltered	<input type="checkbox"/> Moved	<input checked="" type="checkbox"/> Original Site		

DESCRIBE THE PRESENT AND ORIGINAL (if known) PHYSICAL APPEARANCE

The Monongahela Incline runs from Carson Street near Smithfield Bridge to Grandview Avenue on Mount Washington. The original Monongahela Incline railway track was constructed of wood with wire cables, and built at an angle of 38° on a 71.5° grade. It was operated by steam power. The original steam power plant of the Monongahela Incline was just across from the present station on Grandview Ave. The cables were supported by ornate pulley wheels on an overhead trellis. The original two tracks had a five foot gauge with 'T' rails, and forty pounds to the yard. The track now uses four-hundred and ninety oak ties with 60 pounds 'T' rail.

In 1882, Samuel Diescher, who assisted in the design of the original incline, rebuilt it, replacing the original wood structure with iron.

In 1884 a wider vehicular incline plane was built adjacent to the passenger plane. In 1935 the passenger plane was rebuilt and electrified by the Otis Elevator Company.

"The mechanical operation consists of a large steel drum with grooved surface mounted on a rotating shaft connected by a set of reduction gears to two 200 horse power 600 volt direct current motors. Each car is attached to the cable drum by a flexible steel rope called the pull cable, which is supported on grooved sheave wheels over the entire length of the track." The pull cable is attached to the undercarriage of the West car, then makes three loops around the driving sheaves and then is attached to the undercarriage of the East car. These wheels are spaced approximately thirty feet apart. When the cable drum is rotated, one pull cable winds on the drum while the other winds off, giving the uphill motion to one car and the opposite to the other.

"In addition to the two pull cables, a single cable known as the safety cable is attached to both cars. This safety cable is also supported by a grooved sheave wheels and passes around a large sheave wheel which is anchored at the top of the plane. This allows the weight of one car to be balanced against the weight of the other, the purpose being only to support the cars in case of failure of either or both pull-cables." Both cables are the same size: 1 1/4" diameter, 6x19 Seale construction, regular lay, mild plow steel.

In 1959 a parking lot was added at its lower station and a viewing platform at the top along side the station house.

Now, three-compartment cars permanently attached to their own safety and hauling cable run parallel to each other. Each of the three compartments is horizontal and each is on a separate level. The upper station

SEE INSTRUCTIONS

NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM

(Continuation Sheet)

STATE	Pennsylvania	
COUNTY	Allegheny	
FOR NPS USE ONLY		
ENTRY NUMBER	JUN 23 1974	DATE

Delete and substitute page 7.(2) per 8/28/74 letter from state.

(Number all entries)

7.(1) Monongahela Incline-Description- cont.

car begins its descent from an altitude of 370 feet, the lower station car simultaneously ascends the track. They travel at a speed of six mph or six and one half feet per second accomplishing the 640 feet of railway track in approximately one minute and forty-five seconds.

The engines consist of two 52 horse power, 120 volt direct current motors either of which is capable of driving the pulling cable sheaves.

After the incline was taken over by Port Authority of Allegheny County (PAT) in 1964, a closed circuit television system was installed for more efficient operation. The operator at Grandview Control Room can open and close doors at lower level station and monitor passengers as they arrive and depart at the lower level.

The station houses on both the upper and lower levels are not original to the incline but seem to have been altered to coincide with the mechanical changes of the incline itself. The present Grandview station is a simple wood structure with a pitched roof. The Carson Street station is apparently contemporary to the 1884 alteration of the incline. The vehicular station is no longer extant. Architecturally, it is a simplified example of the Second Renaissance Revival style. It is basically symmetrical, two stories built with stone keystones and cope stones. The hipped roof has a small brick and wood cupola with a finial. The brick is used creatively to rusticate the entire ground story front facade and around the second story windows. French, neo-classic stone ornament caps the corner pier.



NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM

(Continuation Sheet)

STATE Pennsylvania	
COUNTY Allegheny	
FOR NPS USE ONLY	
ENTRY NUMBER	DATE

(Number all entries)

1. (2)

Description:

The vehicular incline and its stations were removed in 1935. The passenger station houses on both the upper and lower levels date from the 1884 rebuilding of the incline. The present Carson Street station is a simplified example of the Second Renaissance Revival style. It is basically symmetrical, two stories, built with keystones and coping stones. The hipped roof has a small brick and wood cupola with a finial. The brick is used to rusticate the entire ground story front facade and the second story windows. A stone ornament of French Neo Classic design caps the corner piers.

8. SIGNIFICANCE

PERIOD (Check One or More as Appropriate)

- | | | | |
|--|---------------------------------------|--|---------------------------------------|
| <input type="checkbox"/> Pre-Columbian | <input type="checkbox"/> 16th Century | <input type="checkbox"/> 18th Century | <input type="checkbox"/> 20th Century |
| <input type="checkbox"/> 15th Century | <input type="checkbox"/> 17th Century | <input checked="" type="checkbox"/> 19th Century | |

SPECIFIC DATE(S) (If Applicable and Known) **1869, rebuilt in 1882**

AREAS OF SIGNIFICANCE (Check One or More as Appropriate)

- | | | | |
|---|---|--|--|
| <input type="checkbox"/> Aboriginal | <input type="checkbox"/> Education | <input type="checkbox"/> Political | <input type="checkbox"/> Urban Planning |
| <input type="checkbox"/> Prehistoric | <input type="checkbox"/> Engineering | <input type="checkbox"/> Religion/Philosophy | <input type="checkbox"/> Other (Specify) _____ |
| <input type="checkbox"/> Historic | <input type="checkbox"/> Industry | <input type="checkbox"/> Science | _____ |
| <input type="checkbox"/> Agriculture | <input type="checkbox"/> Invention | <input type="checkbox"/> Sculpture | _____ |
| <input type="checkbox"/> Architecture | <input type="checkbox"/> Landscape Architecture | <input type="checkbox"/> Social/Humanitarian | _____ |
| <input type="checkbox"/> Art | <input type="checkbox"/> Literature | <input type="checkbox"/> Theater | _____ |
| <input type="checkbox"/> Commerce | <input type="checkbox"/> Military | <input checked="" type="checkbox"/> Transportation | _____ |
| <input type="checkbox"/> Communications | <input type="checkbox"/> Music | | _____ |
| <input type="checkbox"/> Conservation | | | _____ |

STATEMENT OF SIGNIFICANCE

Pittsburgh's inclines played an inherent role in the growth patterns of the city. Pittsburgh's housing problems were unique. Because the mills and factories were located along the river beds, little available land was left for housing. Therefore, houses had to be built on the surrounding hills. Inclines facilitated this housing development. Inclines or Steilbahn's, as they were called by German immigrants who lived on Coal Hill (now Mt. Washington), featured a unique mode of rapid transit to hilltop residents going to and from work. In 1865, a group of local businessmen formed the Monongahela Inclined Plane Company, Inc. It was chartered on April 24, 1867, to build and operate a passenger carrying inclined plane between West Carson Street and Mt. Washington at a cost of \$50,000. J.S. Kirk, a civil engineer was engaged to make a survey for its exact location. John Endres assisted by Samuel Diescher in the building of the plane. Diescher built ten of the seventeen local planes. He also built other planes in Minnesota, Ohio, West Virginia and South America. John Roebling was in charge of the cable specifications for the plane.

On May 28, 1870 the incline initiated operations. In 1884 an adjacent vehicular plane was built. This vehicular plane ceased operation in 1935.

The incline exists today as a quaint and important entity in the city's mass transit system. Each year, nearly one-half million commuters ride the incline. The Monongahela Inclined Plane is one of the two inclines still operating in Pittsburgh, with the other being the Duquesne Incline.

SEE INSTRUCTIONS



9. MAJOR BIBLIOGRAPHICAL REFERENCES

"Modern Hill Climbing," Scientific American, Vol. XLIII, No. 12, September 18, 1880.

Van Trump, James D. and Arthur P. Ziegler JR.
Landmark Architecture of Allegheny County, Pittsburgh:
 Pittsburgh History and Landmarks Foundation, 1967, p. 156

"The Monongahela Incline," Port Authority of Allegheny County," pamphlet
 Ohler, Samuel R., Pittsburgh's Inclines, 1970

10. GEOGRAPHICAL DATA

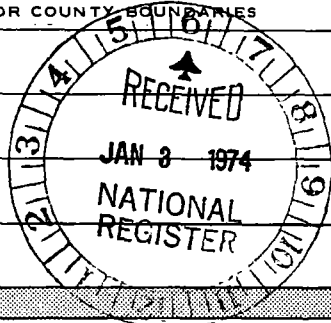
LATITUDE AND LONGITUDE COORDINATES DEFINING A RECTANGLE LOCATING THE PROPERTY				O R	LATITUDE AND LONGITUDE COORDINATES DEFINING THE CENTER POINT OF A PROPERTY OF LESS THAN TEN ACRES				
CORNER	LATITUDE		LONGITUDE		LATITUDE		LONGITUDE		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
NW	°	'	"	40°	25'	55"	80°	00'	20"
NE	°	'	"						
SE	°	'	"						
SW	°	'	"						

17/584360
 4475950
 CD

APPROXIMATE ACREAGE OF NOMINATED PROPERTY: **one**

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE:	CODE	COUNTY	CODE



SEE INSTRUCTIONS

11. FORM PREPARED BY

NAME AND TITLE:
James D. Van Trump, Research Director

ORGANIZATION: **Pittsburgh History and Landmarks Foundation** DATE: **March, 1973**

STREET AND NUMBER:
Old Post Office, Allegheny Square West

CITY OR TOWN: **Pittsburgh** STATE: **Pennsylvania** CODE: **42**

12. STATE LIAISON OFFICER CERTIFICATION NATIONAL REGISTER VERIFICATION

<p>As the designated State Liaison Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service. The recommended level of significance of this nomination is:</p> <p>National <input type="checkbox"/> State <input type="checkbox"/> Local <input checked="" type="checkbox"/></p> <p>Name: <u>William J. Wewer</u> Title: <u>Executive Director, Penna. Historical and Museum Commission</u> Date: <u>12/21/72</u></p>	<p>I hereby certify that this property is included in the National Register.</p> <p><u>Arthur Wewer</u> Director, Office of Archeology and Historic Preservation</p> <p>Date: <u>6/25/74</u></p> <p>ATTEST:</p> <p><u>Charles Adams</u> Keeper of The National Register</p> <p>Date: <u>4/21/74</u></p>
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PROPERTY Monongahela Incline STATE Penn.

Allegheny

WORKING NUMBER 1.3.74.19

74001742

TECH REVIEW
PHOTOS 2
MAPS 1

CONTROL REVIEW Wat. & App. Calc. has been checked
OK
Cm
1.4
74

HISTORIAN
ARCHITECTURAL HISTORIAN Interesting
Accept
J. Thorman
2/28/74

ARCHEOLOGIST TOWNER
Well written form. Accept
Eud
3/5/74

REVIEW UNIT CHIEF
Accept
Cole
6/19/74

BRANCH CHIEF

KEEPER
Accept
Thorman
for meeting
6/21/74

National Register Write-up 2/19/75

Send-back 5.24.74

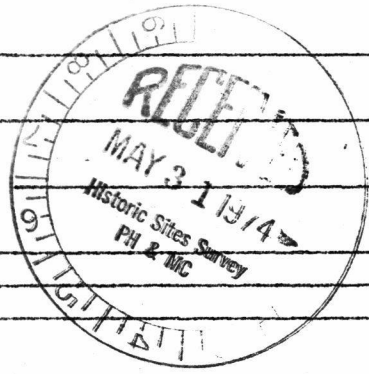
Federal Register entry August 6, 1974

Re-submit 6.17.74

Entered JUN 25 1974

The attached National Register Inventory-Nomination form is being returned to your office for clarification of the information indicated below.

- 1. Name. _____
 - 2. Location. _____
 - 3. Classification. _____
 - 4. Owner of Property. _____
 - 5. Location of Legal Description. _____
 - 6. Representation in Existing Surveys. _____
 - 7. Description. _____
 - 8. Statement of Significance. _____
 - 9. Bibliography. _____
 - 10. Geographical Data.
 - a. Longitude and Latitude Coordinates. can't be checked.
 - b. Acreage. Corrected - DMB 6-11-74
 - 11. Form Prepared By. _____
 - 12. Certification. _____
- Photographic Coverage. _____



Map Coverage. Please use a map bearing an identified system of coordinates, preferably an original USGS, which allows us to check latitude-longitude.

Other. Precise location unclear because of large ink marks. Please use cross marks to identify property of less than 10 acres. Do not draw rectangle unless boundaries enclose 10 or more acres.
Clarification or correction of the above items must be made prior to the initiation of our professional review. Correction of these technical errors does not necessarily insure that the nomination will then satisfy the National Register criteria in full.

Thank you for your attention to the above items checked. Thanks,
SIGNED: Charles Offenberg



MONONGAHELA INCLINED PLANE

Monongahela Incline

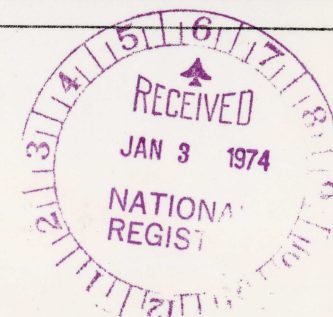
Allegheny Co.

FORM 10-301 A
(6/72)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
**NATIONAL REGISTER OF HISTORIC PLACES
PROPERTY PHOTOGRAPH FORM**

(Type all entries - attach to or enclose with photograph)

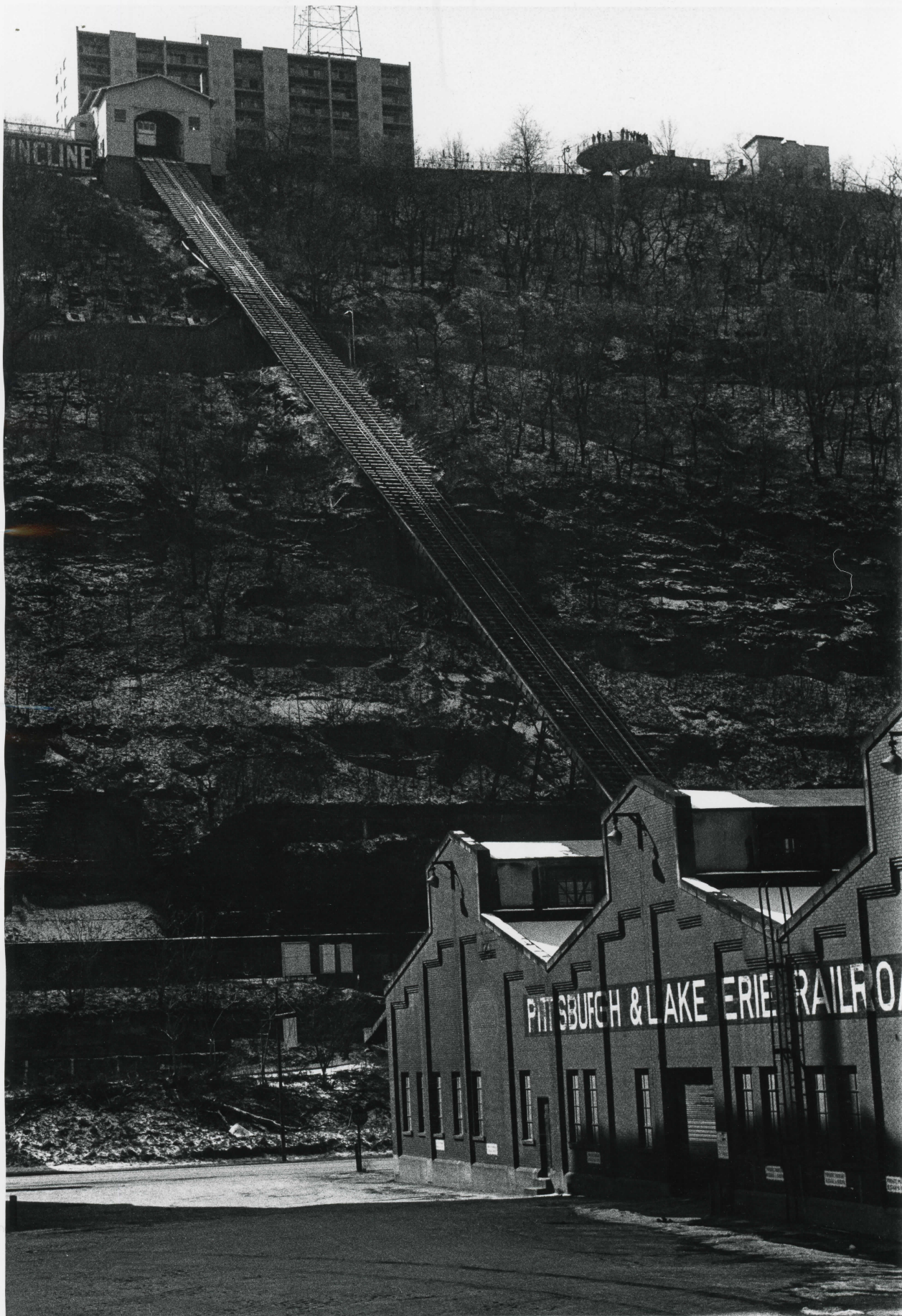
1. NAME		
COMMON Monongahela Incline	AND/OR HISTORIC	NUMERIC CODE (Assigned by NPS) JUN 2 1974
2. LOCATION		
STATE Pennsylvania	COUNTY Allegheny	TOWN Pittsburgh
STREET AND NUMBER Grandview Avenue at Wyoming Avenue		
3. PHOTO REFERENCE		
PHOTO CREDIT Pittsburgh History and Landmarks Foundation	DATE 1973	NEGATIVE FILED AT Pittsburgh History and Landmarks Foundation
4. IDENTIFICATION		
DESCRIBE VIEW, DIRECTION, ETC. View of lower station from the Northeast.		
# 1032		



GPO 932-009

PROPERTY OF THE NATIONAL REGISTER

1



Allegheny Co

Monongahela Incline

FORM 10-301 A
(6/72)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL REGISTER OF HISTORIC PLACES
PROPERTY PHOTOGRAPH FORM

(Type all entries - attach to or enclose with photograph)

1. NAME		
COMMON	AND/OR HISTORIC	NUMERIC CODE (Assigned by NPS)
Monongahela Incline		JUN 25 1974
2. LOCATION		
STATE	COUNTY	TOWN
Pennsylvania	Allegheny	Pittsburgh
STREET AND NUMBER		
Grandview Avenue at Wyoming Avenue		
3. PHOTO REFERENCE		
PHOTO CREDIT	DATE	NEGATIVE FILED AT
Pittsburgh History and Landmarks Foundation	1973	Pittsburgh History and Landmarks Foundation
4. IDENTIFICATION		
DESCRIBE VIEW, DIRECTION, ETC.		
View of track from the North		
#282		



GPO 932-009

PROPERTY OF THE NATIONAL REGISTER

2#

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL REGISTER OF HISTORIC PLACES
PROPERTY MAP FORM
(Type all entries - attach to or enclose with map)

1. NAME

COMMON

Monongahela Incline

AND/OR HISTORIC

NUMERIC CODE (Assigned by NPS)

25 1974

2. LOCATION

STATE

Pennsylvania

COUNTY

Allegheny

TOWN

Pittsburgh

STREET AND NUMBER

Grandview Avenue at Wyoming Avenue

3. MAP REFERENCE

SOURCE

USGS 7.5' Series

Pittsburgh West Quadrangle

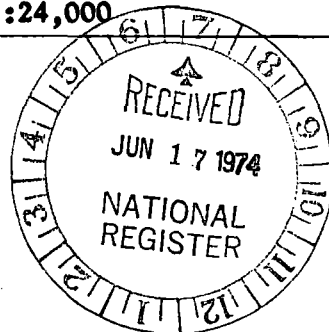
DATE

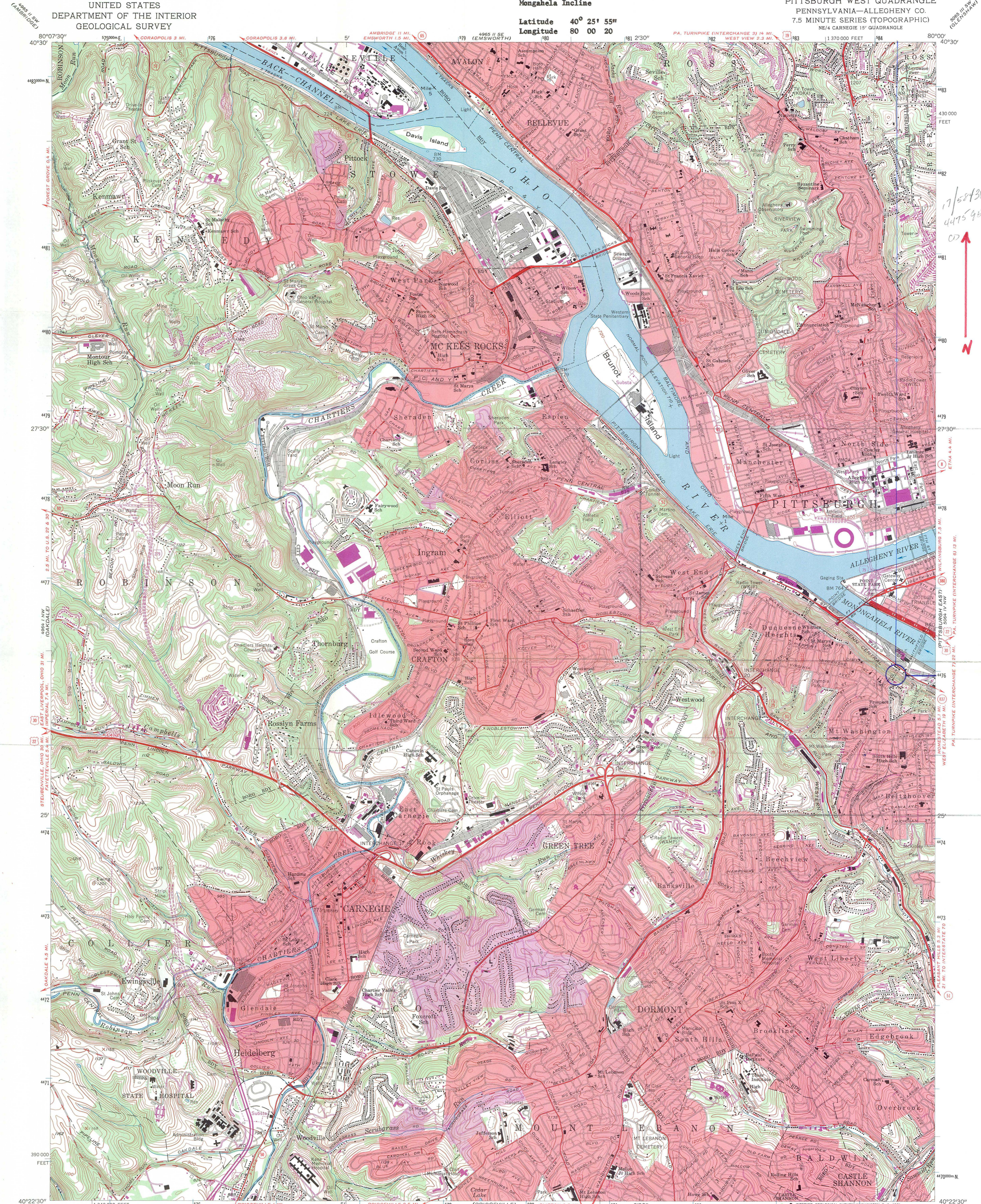
1960, 1969

SCALE

1:24,000

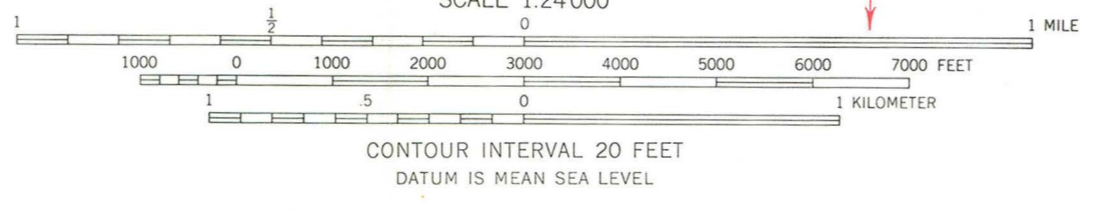
REQUIREMENTS: PROPERTY BOUNDARIES, WHERE REQUIRED, AND NORTH ARROW:





Mapped, edited, and published by the Geological Survey
Control by USGS, USC&GS, USCE, and the City of Pittsburgh
Topography by planetable surveys 1925-1941, and 1948
Revised 1960
Polyconic projection. 1927 North American datum
10,000-foot grid based on Pennsylvania coordinate system, south zone
1000-meter Universal Transverse Mercator grid ticks,
zone 17, shown in blue
Red tint indicates areas in which only landmark buildings are shown
Revisions shown in purple compiled from aerial
photographs taken 1969. This information not
field checked
Purple tint indicates extension of urban areas

UTM GRID AND 1969 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET



ROAD CLASSIFICATION

Heavy-duty	Light-duty
Medium-duty	Unimproved dirt
Interstate Route	U.S. Route
	State Route

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, WASHINGTON, D.C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

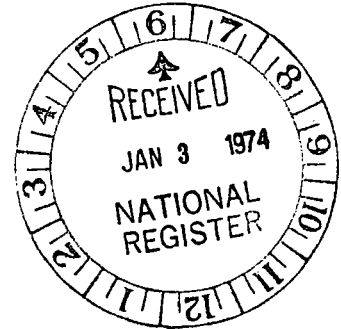
PITTSBURGH WEST, PA.
NE/4 CARNEGIE 15' QUADRANGLE
N4022.5-W8000/7.5
1960
PHOTOREVISED 1969
AMS 4964.1 NE-SERIES V831



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION
WILLIAM PENN MEMORIAL MUSEUM AND ARCHIVES BUILDING
BOX 1026 HARRISBURG, PENNSYLVANIA 17108

December 21, 1973

Dr. William J. Murtagh
Keeper of the National Register
National Park Service
Department of the Interior
18th and C Streets, N.W.
Washington, D. C. 20240



Dear Dr. Murtagh:

Enclosed for your review and consideration are nominations to the National Register of Historic Places for the following properties:

✓ Monongahela Incline
Lafayette's Quarters
Old Dorm-Lutheran Theological Seminary
John B. McCormick House
Captain William Vicary House
Isaac Manchester House
Emmanuel Episcopal Church
Pughtown Village Historic District

Should you have any questions regarding these nominations, please let us know.

Sincerely yours,

William J. Wewer
Executive Director
State Historic Preservation
Officer

Enclosures

ENTRIES IN THE NATIONAL REGISTER

STATE **PENNSYLVANIA**

Date Entered **JUN 25 1974**

<u>Name</u>	<u>Location</u>
Monongahela Incline	Mt. Washington Allegheny County

Also Notified

**Hon. Hugh Scott
Hon. Richard S. Schweiker
Hon. William S. Moorhead
Regional Director, Mid Atlantic
Region**

**State Historic Preservation Officer
Mr. William J. Weaver
Executive Director
Pennsylvania Historical and
Museum Commission
Box 1026
Harrisburg, Pennsylvania 17120**

PR

MMott/rlw

6/25/74



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION
WILLIAM PENN MEMORIAL MUSEUM AND ARCHIVES BUILDING
BOX 1026
HARRISBURG, PENNSYLVANIA 17108

August 28, 1974

Ms. Beth Grosvenor
Branch of Publications
National Register of Historic Places
National Park Service
Department of the Interior
18th & C Streets, N.W.
Washington, D. C. 20240

RE: Monongahela Incline
Allegheny County

Dear Ms. Grosvenor:

In order to clarify the statements regarding the vehicular incline and its stations, I would suggest that you delete the last paragraph in the description section of this nomination. Both the vehicular incline and its stations were removed in 1935. I am enclosing a supplemental sheet which more clearly describes the present state of the incline.

If I can be of any further assistance, please let me know.

Sincerely,

A handwritten signature in cursive script that reads "William K. Watson".

William K. Watson
Historic Sites Survey

Enclosure

WKW/pjs