

**DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF SEWERS**

331.000

**INTRA-DEPARTMENT
MEMORANDUM**

June 5, 1984

TO: DOUGLAS SMITH, P.E., ACTING CHIEF, ENGINEERING REVIEW SECTION
FROM: FRANK SAIA, P.E., ACTING CHIEF, SEWER MAINTENANCE
SUBJECT: W.T.C... 776-DEY STREET, ESCALATOR UNDERPASS AT CHURCH STREET
BOROUGH OF MANHATTAN D.S.M.#83-114D

In response to your request dated 10/31/84, attached is a report prepared by E.A. Britton, A.E.T., Division of Sewer Maintenance, pertaining to the above referenced location.

rl
FRANK SAIA, P.E.,
Acting Chief
Division of Sewer Maintenance
Bureau of Sewers

cc: DiMartino
Saia
Vogel/Cassidy
Desposito/Supt.
Long/Jackson
Yard
Britton (with photos)
Nagy ✓
Gabriele
File
EB/sk

DISPATCHED

JUN 12 1984

**WATER POLLUTION CONTROL
MAIL ROOM**

DSM #83-114D

331.000

June 5, 1984

REPORT FOR THE RECORD

RE: W.T.C. 776 Dey Street Escalator Underpass at
Church Street, Borough of Manhattan

Responding to a request from the Engineering Review Section (D.S.M) an inspection of the sewer at the above captioned location was conducted by personnel from this Division. (Prompt assistance for a stream shut-down was also offered by Consolidated Edison - William Headey, telephone 576-3758). The following observations were made:

Both 4" vit. spurs (see photos #1, #2, & sketch #1) were observed at m.h. #2 as shown on sketch #1. They were both located 26" apart on the south face of this sewer manhole. 'Spur' 'X' showed definite indication of having a flow (miniscule amount of debris in pipe at this visit - 2:00am), and is therefore connected and alive. The source of flow in this 4" connection could not be readily ascertained, however it is speculated that the connection was made at a non-public service utility of the E.N.Y. Savings Bank which is located on the south west corner of this intersection. The other spur remains as shown in picture #2 is unconnected.

Structurally, both m.h. #2 & #3 are in extremely poor condition (photos #3 & #8). They are both deluged with 3/4" average vertical and horizontal cracks. The section of sewer between m.h. #2 & #3 was inspected internally in its entirety. It was generally in good structural & flow conditions. Upstream and extending to about 40' downstream is 3' 6" x 2' 4" elliptical R.C.P. At approximately midway from the sewer invert on the westerly side of this sewer section, there is a 1/4" longitudinal crack (see photo #4) which extends from m.h. #2 to about 20' downstream. This condition does not appear to impact greatly on the overall structural integrity of the sewer.

Adjoining the approximated limit of the concrete section, is a 3' 6" x 2' 4" elliptical cast iron sewer (see photos #5, #6, #7) which extends to about 25' downstream. At its point of termination, the identical size sewer is constructed of brick (see photo #6, & #7). At the time of this visit, there was approximately 4" of unobstructed sewage flow. There was also a zero silt deposition.

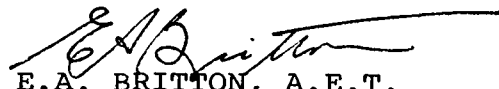
(2)

331.000

6/5/84

Re: W.T.C. 776 Dey Street Escalator Underpass at
Church St., Manhattan

Through a verbal discourse with one of the engineers (Mike Nagy, P.E.) from the Engineering Review Section, it was revealed that m.h. #2 along with specific portions of the R.C.P. section will be replaced by the contractor installing the subway escalator. This Division will now only have to address the deteriorated condition of m.h. #3. The cause of the multiple cracking at this manhole can be attributed to vibrations originating from the adjacent subway. Since this manhole is in an imminent state of collapse, it is recommended that this manhole be reconstructed under the next available City Wide Requirement Contract.



E.A. BRITTON, A.E.T.
Division of Sewer Maintenance
Bureau of Sewers

EB/sk

SM-107
Rev. 7/80

DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF SEWERS
DIVISION OF SEWER MAINTENANCE

5/30/84
EAB

NOTIFICATION OF REQUIRED REPAIRS TO SEWERS

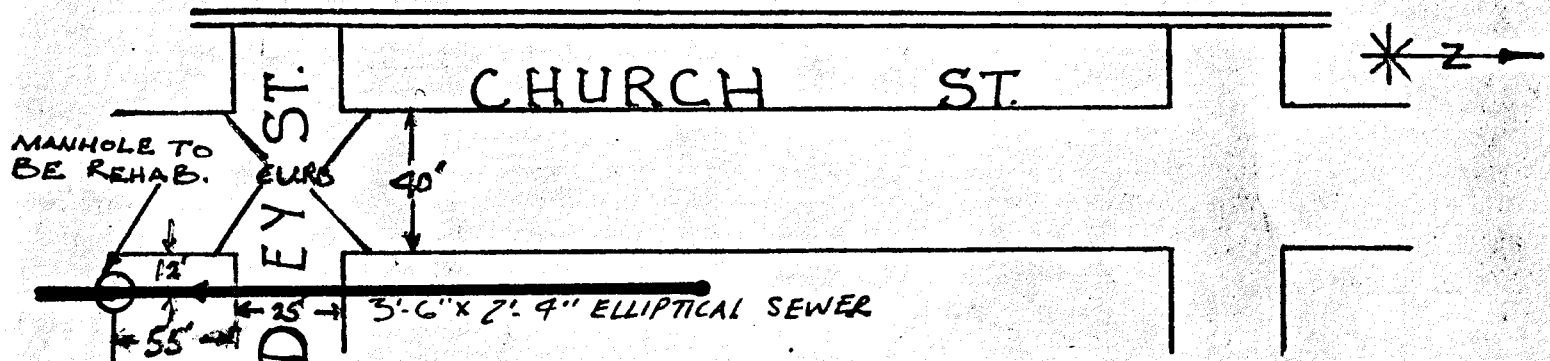
TO: CHIEF, DIVISION OF SEWER CONSTRUCTION DIVISION OF SEWER CONSTRUCTION NO. _____
FROM: CHIEF, DIVISION OF SEWER MAINTENANCE
RE: BOROUGH OF MANHATTAN

PLEASE BE ADVISED THAT I HAVE INSPECTED AND EXAMINED THE SEWER LOCATED AT

INTERSECTION OF CHURCH & DEY STREETS

AND FOUND THE FOLLOWING CONDITION TO EXIST: MULTIPLE CRACKS

IN MANHOLE LOCATED SOUTH OF INTERSECTION ON E. SIDEWALK OF CHURCH STREET.



(SHOW STREET NAMES, LOCATION OF MANHOLES AND BREAKS, AND ALL OTHER PERTINENT INFORMATION)

POWER RODDING MACHINE

USED ON: _____

MANHOLE
SEWER: TYPE

MATERIAL

SIZE

DEPTH (FT.)

BRICK

~ 17 FT.

5-3-84

DATE INSPECTED

FOREMAN
ENGINEER

M-1
DISTRICT

CONTRACT:

- ☐ QUEENS VIT. PIPE
☒ CITYWIDE RECONSTRUCTION
☐ BROOKLYN CEMENT PIPE
☐ BROOKLYN VIT. PIPE

PUMPING INFORMATION:

- ☐ PUMPING REQUIRED
☐ PERIODIC PUMPING REQUIRED
☐ NO PUMPING REQUIRED

SUPERINTENDENT/SEWER SERVICES

5/31/84
DATE PREPARED

CHIEF, DIVISION OF SEWER MAINTENANCE

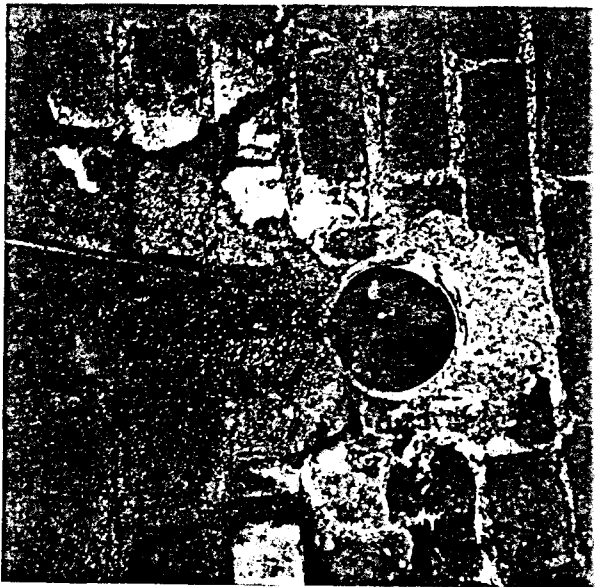
6/4/84
DATE APPROVED

cc: DiMartino
Pocci
Oliver1/Supt.

cc: Skelly (5)
Ortiz/Henry (5)
Romano

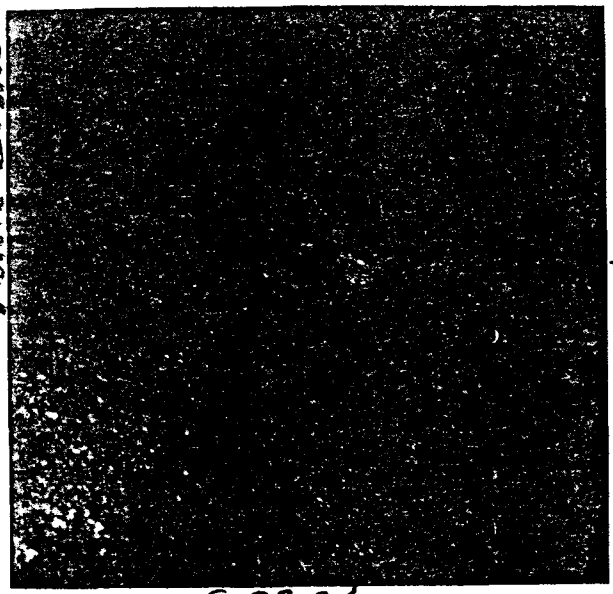
cc: Long
Yard
File

OVER →



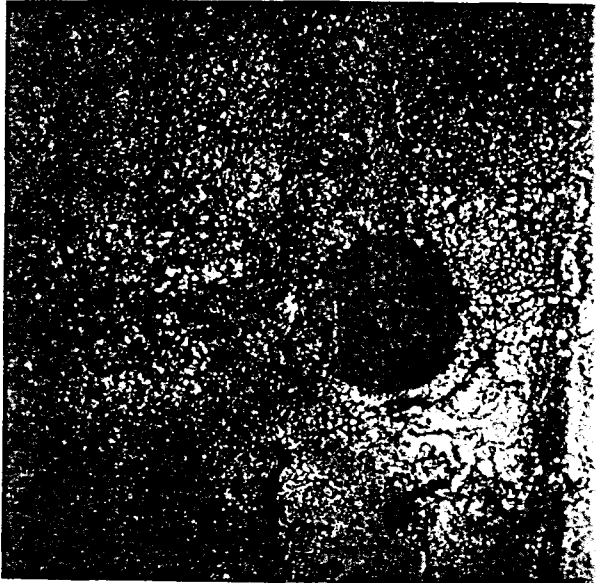
5.22.84

4" VIT "SPUR" SHOWING H₂O RESIDUE - CONNECTION WAS MADE AT THIS POINT. (CHUCK - UG 41.11mm) #1



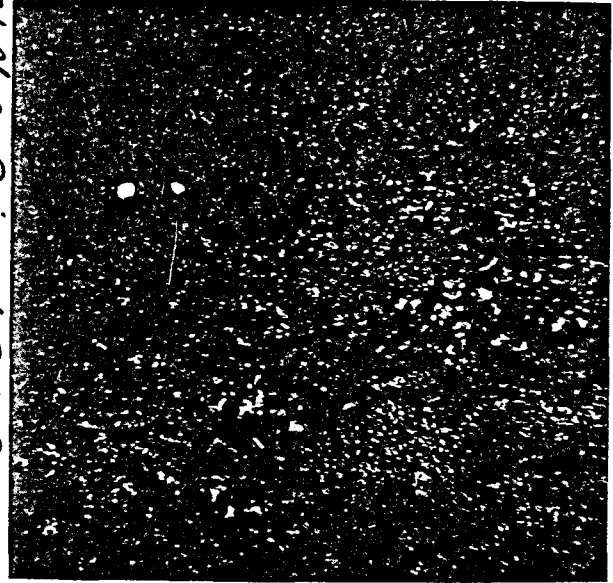
5.22.84

CONNECTION IS SEVERE EXTENDING FROM MH #2 TO MIDPOINT TOWARDS MH #3. #4



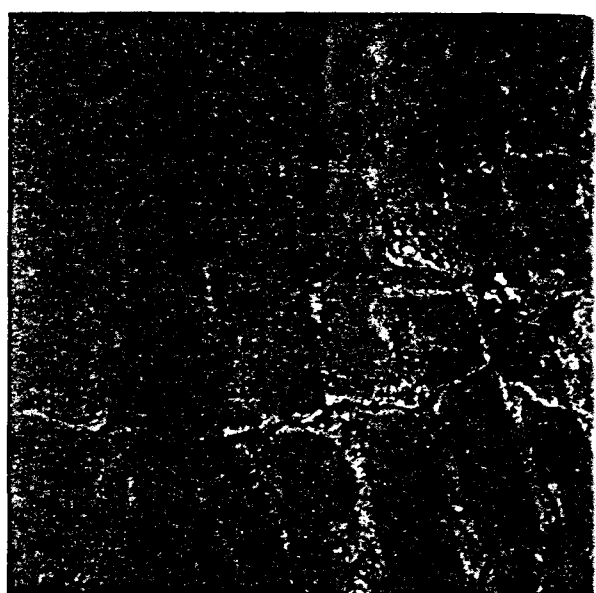
5.22.84

4" VIT. SPUR WITH INTERIOR DEPTH of only 28" - THIS SPUR REMAINS UNCONNECTED (CHUCK - UG 41.11mm) #2



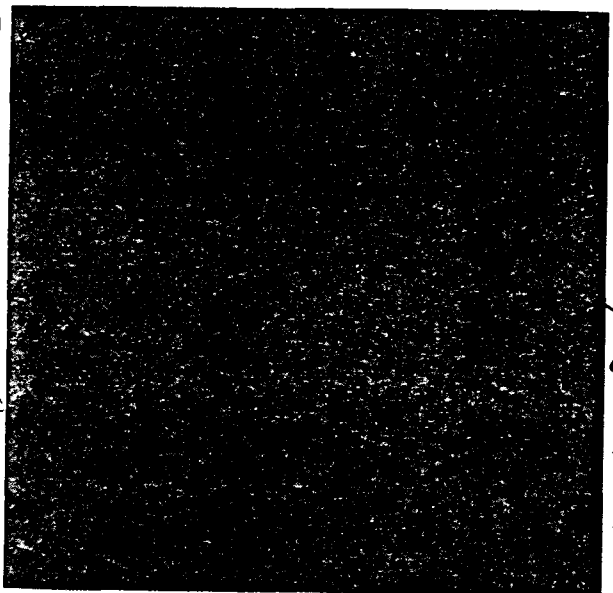
5.22.84

STARTING POINT of C.I. PIPE SHOWING R.C.P. UPSTREAM. #5



5.22.84

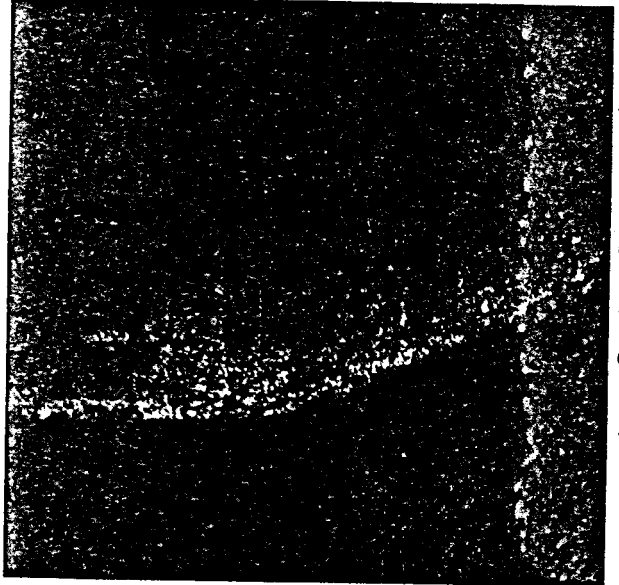
1/4" WIDE LONGITUDINAL CRACK AT MH #2. (CHUCK - UG 41.8. 17mm) #3



5.22.84

TERMINAL POINT of C.I. PIPE SHOWING BRICK SEWER DOWN. STEAM. EXISTING LOOKING SOUTH. #6

CHECK. DET ST. WASH.

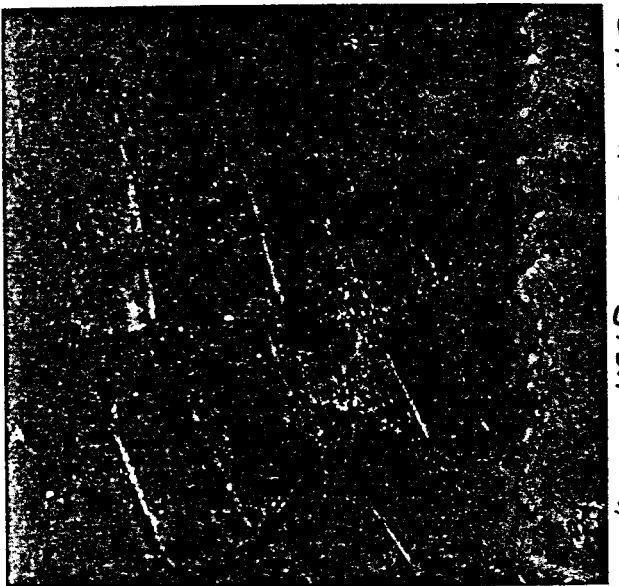


5.22.84

TERMINATING POINT of C.I. PIPE
SHOWING BRICK SEWER DOUGHTY.
DESTROYED WORKING 100TH.

(#7)

CHECK. DET ST. WASH.



5.22.84

1/4" WIDE JOINTING / CRACKS
AT AND #8 CURCH THIS ALSO
WATER / CRACKS

(#8)

#83-114D

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF SEWERS
INTER - DEPARTMENT
MEMORANDUM

October 31, 1983

LOU
Abrams
Pg. 134-A

TO: FRANK OLIVERI, P.E., CHIEF, DIVISION OF SEWER MAINTENANCE
FROM: MAGDI FARAG, P.E., CHIEF, ENGINEERING REVIEW SECTION
SUBJECT: W.T.C. 776-DEY STREET ESCALATOR-UNDERPASS AT CHURCH STREET,
BOROUGH OF MANHATTAN

This office is currently evaluating a strategy for replacement of an existing 3'-6" X 2'-4" sewer which conflicts with the proposed escalator underpass.

To properly consider alternatives it will be necessary to inspect the interior of the sewer to ascertain the following:

- a) In the Dey Street Manhole (shown on the attached sketch); Verify the two (2) 6" spurs. Are the spurs live, and if so, what do they service?
- b) Obtain an accurate sketch of the cross sectional dimensions of the special fabricated Cast Iron Elliptical section.

During the recent "Downtown Manhattan" inspections this location was not inspected because of excessive steam. It will probably be necessary to arrange for a steam shutdown or positive ventilation during the inspection.

cc: DiMartino
Novotny
Farag
Nagy
Suspense
MN:lp

Magdi Farag
MAGDI FARAG, P.E., CHIEF
Engineering Review Section

83 NOV 1 PM 3:01

RECEIVED
DIV. SEWER MAINTENANCE

E57 SIDE

20.8
18.0

E57 SIDE

21.20.0
11.10.8

MHW EL 100

ORIGINAL
SECTION

4 INCHES

PROFILE

SCALE

Q 510-317+2100

MHW EL 100
New 3-6.2.2-8
New 3-6.2.2
Sewer
Sewer

Brick

EL 100.30

concrete

Brick

concrete

Brick

concrete

Brick

concrete

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concrete

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EL 100.30

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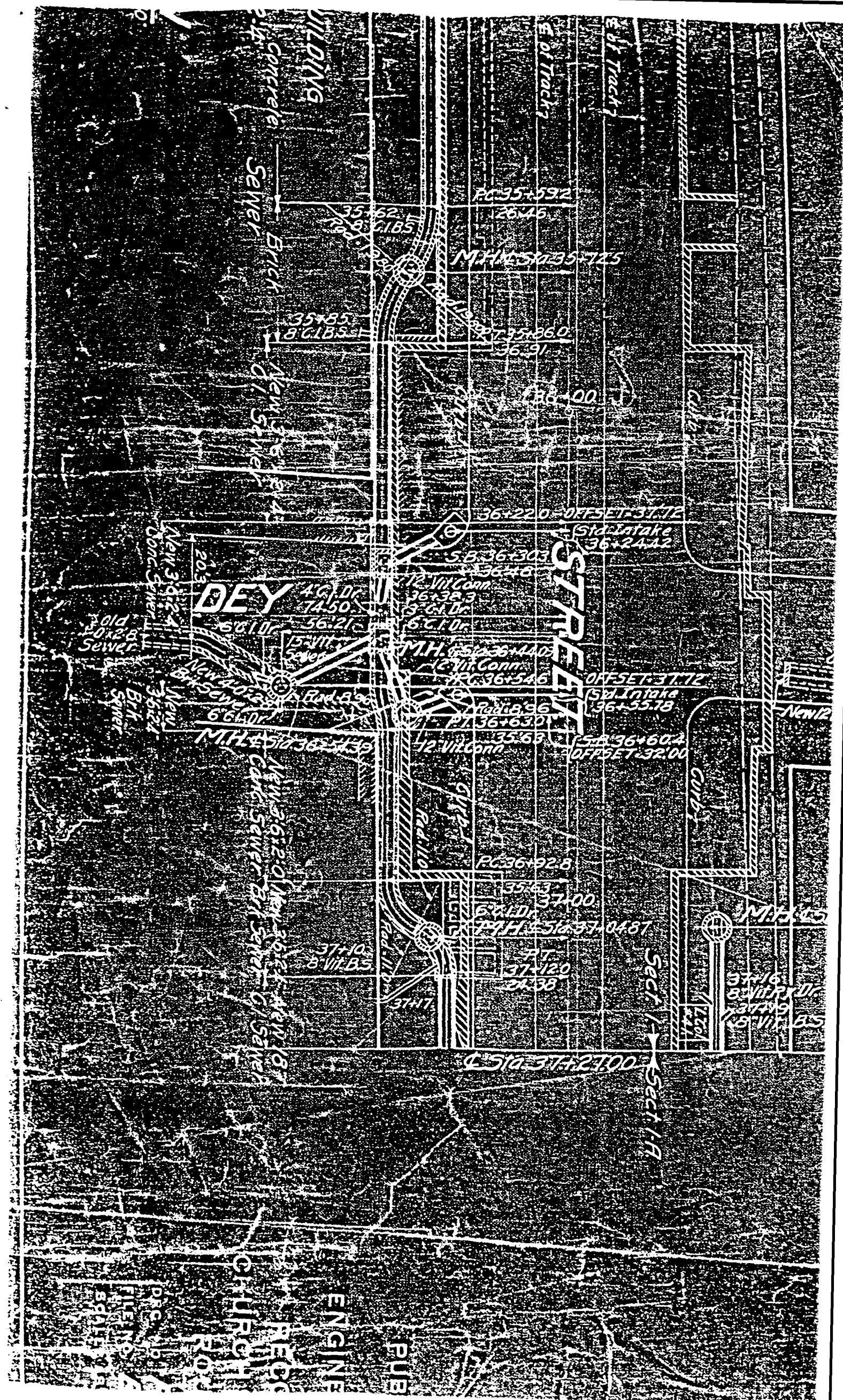
EL 100.30

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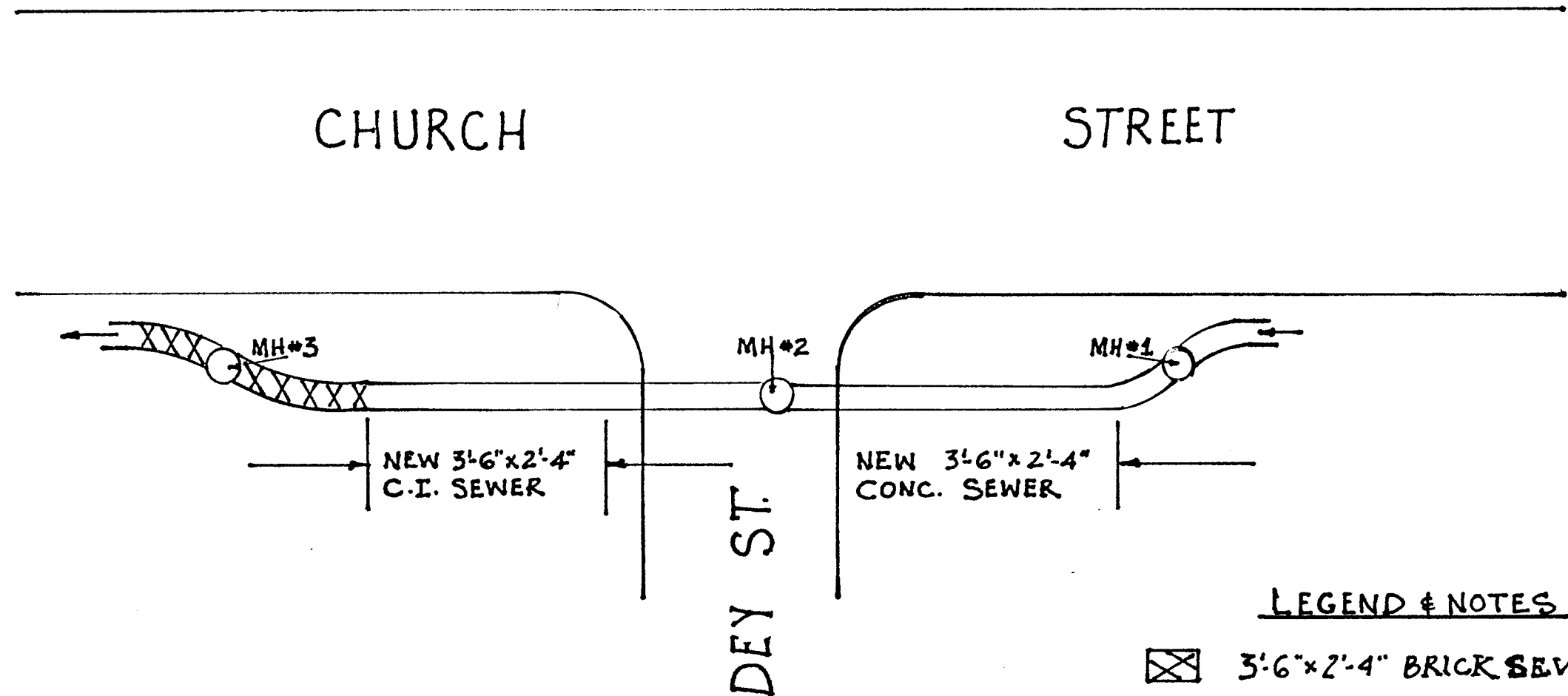
EL 100.30

EL 100.30

EL 100.30



WORLD TRADE CENTER



LEGEND & NOTES

 3'-6" x 2'-4" BRICK SEWER

1. ALL SEWER SECTIONS ARE ELLIPTICAL.
2. BOTH M.H. #2 & #3 ARE DETERIORATED - MULTIPLE CRACKS.

N.T.S.

SKETCH #2

D.S.M # 83-114D • W.T.C. 776-DEY STREET ESCALATOR AT CHURCH ST., MANH. • E.A. BRITTON

EST SIDE

20:0
10:0

EST SIDE

21:20:0
17:18:0

4" VIT. SPURS AT
MH # 2 (SEE SKETCH #2)

M.H.W. EL. 100

New 15" VIT. SEWER

EL. 510

Sta. 37+27.00

M.H.W. EL. 100

New 3:6x2:0 Sewer

New 3:6x2:4 Sewer

Concrete Brick C1

Brick C1 Pipe

Concrete Brick

PROFILE

SCALE

Old 40x38 VIT. Sewer 40x38 BR 54

EL. 116.6

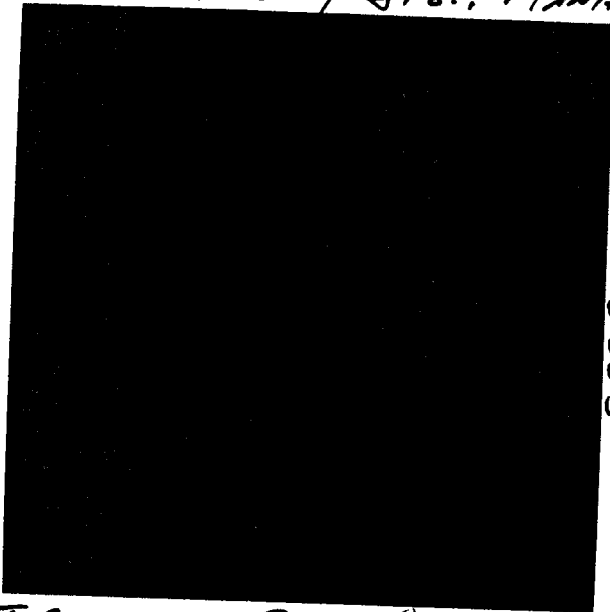
EL. 124

SKETCH #1

D.S.M. # 83-114P

CHURCH-DEY STS. MANH.

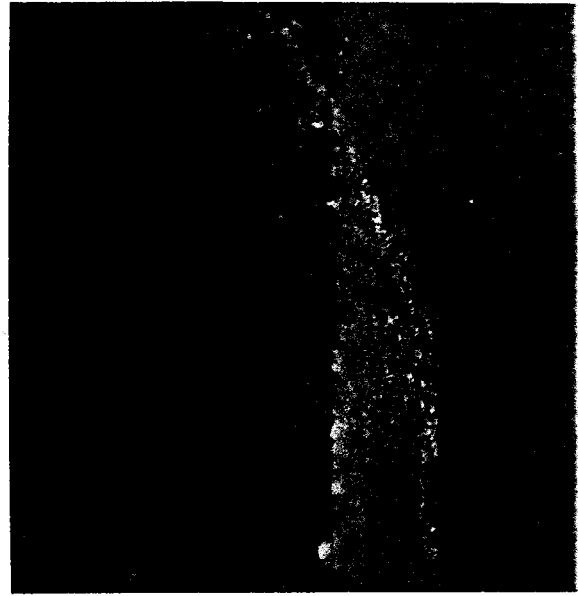
CHURCH-DEY STS., MANH



5-22-84

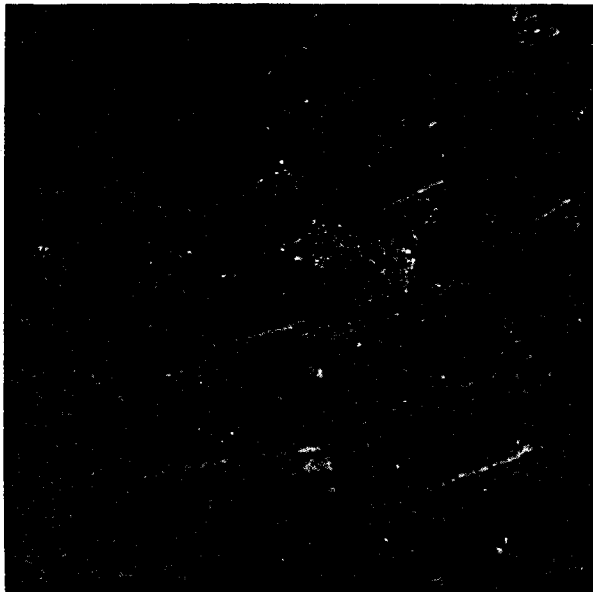
TERMINATING POINT of C.I. PIPE
SHOWING BRICK SEWER DOWN-
STREAM, EASTSIDE LOOKING SOUTH. (#6)

CHURCH-DEY STS., MANH



TERMINATING POINT of C.I. PIPE
SHOWING BRICK SEWER DOWNST-
WESTSIDE LOOKING SOUTH. (#7)

CHURCH-DEY STS., MANH.



5-22-84

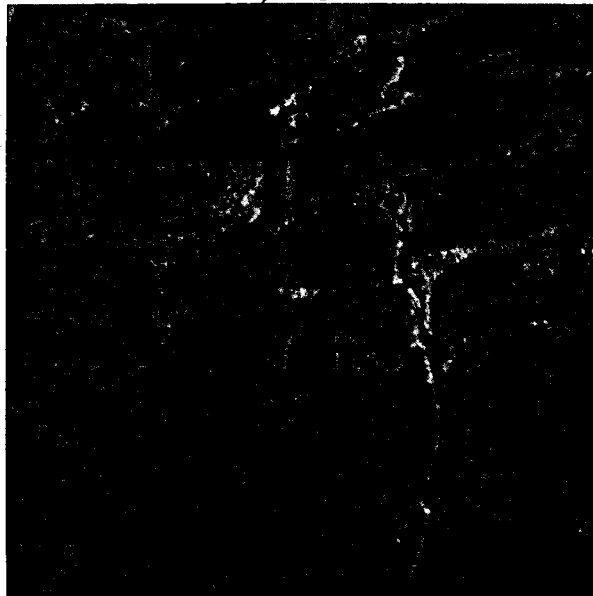
1/4" WIDE LONGITUDINAL CRACKS
AT MH #3 WHICH HAS ALSO
LATERAL CRACKS (#8)

CHURCH-DEY STS., MANH.



4" VIT. SPUR WITH INTERIOR
DEPTH OF ONLY 28" - THIS SPI
REMAINS UNCONNECTED (#2)

CHURCH-DEY STS., MANH.



5-22-84

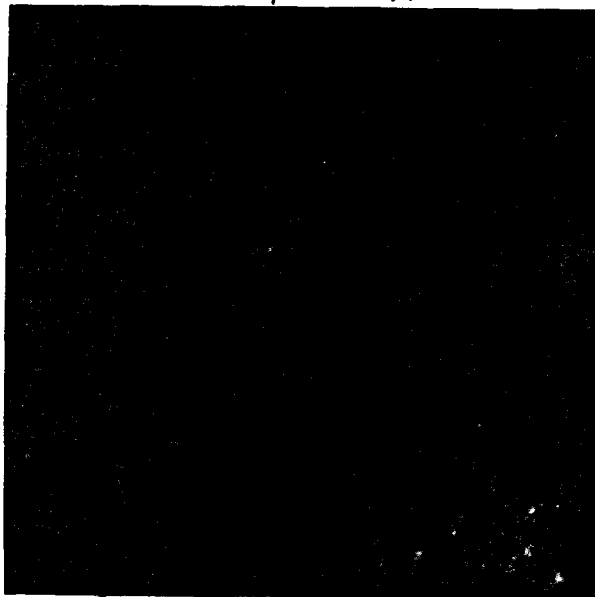
1/4" WIDE LONGITUDINAL CRACKS
AT MH #2. (#3)

DSM #83-114P



4" VIT "SPUR" SHOWING H2O
RESIDUE - CONNECTION WAS
MADE AT THIS POINT. (#1)

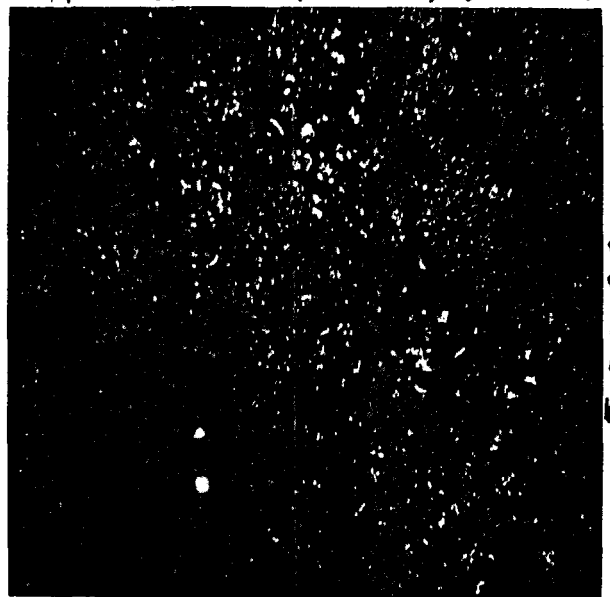
CHURCH - DEY ST., MANH.



5-22-84

LONGITUDINAL
CRACK IN SEWER
EXTENDING FROM MH#2 TO
MIDPOINT TOWARD MH#3. (4)

CHURCH - DEY ST., MANH.



STARTING POINT of C.I. PIPE
SHOWING R.C.P. UPSTREAM.

(45)